

**TM 5-3805-264-14&P**

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**OPERATOR'S, UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT  
MAINTENANCE MANUAL**

**WITH**

**REPAIR PARTS AND SPECIAL TOOLS LISTS**

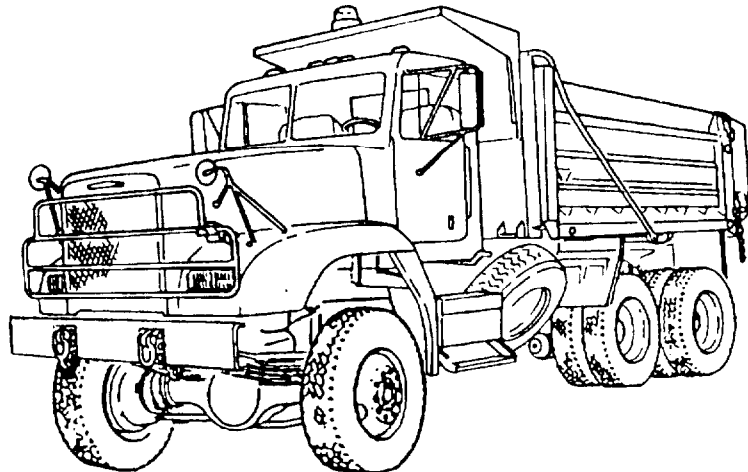
**FOR**

**TRUCK, DUMP, HEAVY, BODY  
M917A1**

**(NSN 3805-01-431-1165)**

**AND**

**M917A1 W/MCS (MATERIAL CONTROL SYSTEM)  
(NSN 3805-01-432-8249)**



Approved for public release: distribution is unlimited.

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**HEADQUARTERS, DEPARTMENT OF THE ARMY  
DECEMBER 1997**



**FOR INFORMATION ON FIRST AID, REFER TO FM 21-11.****WARNING****CARBON MONOXIDE (EXHAUST GASES) CAN KILL!**

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

Carbon monoxide occurs in exhaust fumes of internal combustion engines. Carbon monoxide can become dangerously concentrated under conditions of inadequate ventilation. The following precautions must be observed to ensure safety of personnel when engine of dump truck is operated.

1. DO NOT operate engine in enclosed areas.
2. DO NOT idle engine for long periods without maintaining adequate ventilation in cab,
3. DO NOT drive dump truck with inspection plates or cover plates removed.
4. BE ALERT at all times for exhaust poisoning symptoms. They are:
  - Headache
  - Dizziness
  - Sleepiness
  - Loss of muscular control
5. If you see another person with exhaust poisoning symptoms:
  - Remove person from area.
  - Expose to fresh air.
  - Keep person warm.
  - Do not permit physical exercise.
  - Administer cardiopulmonary resuscitation (CPR), if necessary.
  - Notify a medic.
6. BE AWARE. The field protective mask for nuclear-biological-chemical (NBC) protection will not protect you from carbon monoxide poisoning.

**THE BEST DEFENSE AGAINST CARBON MONOXIDE POISONING IS GOOD VENTILATION!**

**WARNING**

**CARGO COVER OPERATION**

Observe the following safety regulations when operating cargo cover:

- Never operate cargo cover under obstructions, such as trees and power lines.
- Ensure that all personnel are clear of rear of dump body and the immediate area of the cover
- Ensure that chain cover is in place.
- Keep all clothing away from moving parts.
- DO NOT cover load with crank handle installed.

Failure to follow this warning may result in death or injury to personnel.

**WARNING**

**CLEANING AGENTS**

- Dry cleaning solvent, P-D-680, is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. To prevent this, refer to TM 9-247 for further instructions.

**WARNING**

**COMPRESSED AIR**

Compressed air used for cleaning or drying purposes, or for clearing restrictions, should never exceed 30 psi (207 kPa). Wear protective clothing (goggles/shield, gloves, etc.) and use caution to avoid injury to personnel.

**WARNING**

**DUMP BODY OPERATION**

- Ensure that parking brake is set before loading dump truck (TM 9-2320-363-10). If parking brake is not set, dump truck could roll or shift position. Failure to follow this warning may result in death or injury to personnel or damage to equipment.
- Stand clear of dump body during loading operation. Material being loaded could fall on personnel standing too close. Failure to follow this warning may result in death or injury to personnel.
- NEVER unlock tailgate or operate MCS tailgate or gates, or operate hydraulic control lever in cab without first ensuring that all personnel are clear of dump body. Failure to follow this warning may result in injury to personnel.
- NEVER raise dump body without first checking for overhead obstructions such as trees and power lines. Ensure that overhead clearance is sufficient. Failure to follow this warning may cause death or injury to personnel.

<b>WARNING</b>
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**DUMP BODY OPERATION (Con't)**

- NEVER raise dump body more than half way with tailgate or MCS gates closed. If dump body is raised fully without opening tailgate/MCS gates, dump truck center of gravity will shift rearward. Dump truck could tip, causing injury to personnel or damage to equipment.
- DO NOT park on a slope. Park on level ground only. Parking on a slope could cause load to shift and dump truck to tip over. Failure to follow this warning may result in death or injury to personnel or damage to equipment.
- DO NOT attempt to dump in high wind. High winds may disperse aggregate. High winds may also cause dump truck to roll over when dump body is raised. Failure to follow this warning may result in death or injury to personnel or damage to equipment.
- Stay at controls while dumping. If dump body leans or shifts to one side, lower it immediately and check for one of the following:
  - underinflated or flat tires
  - tires sinking in soft soil
  - load shifting to one side of body
  - high or gusty wind
  - weak or broken leaf spring

If one of these or any other problems are found, do not continue dumping until the problem is corrected. Failure to follow this warning may result in death or injury to personnel or damage to equipment.
- DO NOT try to loosen a sticky load by pulling forward or backward and braking abruptly. Injury to personnel or damage to equipment may result.

<b>WARNING</b>
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**HAZARDOUS WASTE DISPOSAL**

When servicing this vehicle, performing maintenance, or disposing of materials such as engine coolant, transmission fluid, lubricants, battery acids or batteries, and CARC paint, consult your Unit/Local Hazardous Waste Disposal Center or safety office for local regulatory guidance. If further information is needed, please contact the Army Environmental Hotline at 1-800-872-3845.

<b>WARNING</b>
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**HEAVY COMPONENTS**

Use extreme caution when handling heavy parts. Lifting device is required when parts weigh over 50 lb (23 kg) for a single person lift, over 100 lb (45 kg) for a two person lift, and over 150 lb (68 kg) for a three or more person lift. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.



### HYDRAULIC SYSTEM

- DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.



### MATERIAL CONTROL SYSTEM (MCS)

- Use extreme caution when adjusting MCS gate openings. NEVER adjust gate openings when gates are open. Failure to follow this warning could result in injury to personnel.
- Keep hands and feet away from gate openings at all times. Failure to follow this warning could result in injury to personnel.
- DO NOT stand or walk behind dump truck when it is dumping or in raised position. When using MCS remote control, always walk or stand to side of dump body. Failure to follow this warning may result in personnel injury.
- DO NOT connect or disconnect MCS remote control when dump body is being raised or lowered. Failure to follow this warning may cause personnel injury.
- When connected, MCS remote control overrides cab control unit. When remote control is disconnected, cab control activates. To avoid inadvertent opening or closing of gates, ALWAYS check gate positions and position of toggle switches on both cab and remote controls before plugging in or unplugging remote control. Toggle switches should be in CLOSED position. Failure to follow this warning may cause personnel injury.



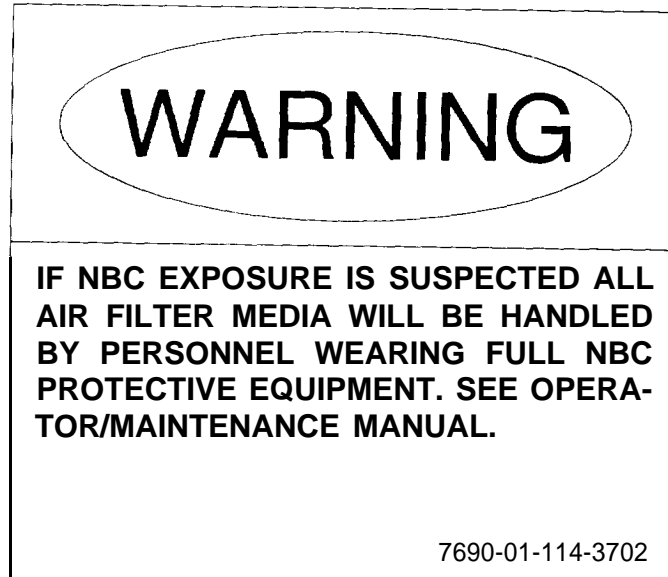
### WORK SAFETY

- Unless otherwise specified, perform all maintenance with dump truck on level ground. transmission in N (Neutral), parking brake set, and engine off. Failure to follow this warning may result in personnel injury.
- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.
- Although battery ground cable must be connected in order to test electrical circuit voltage, disconnect battery ground cable before performing resistance tests or replacing parts. This will prevent shock to personnel, and damage to parts and equipment.
- DO NOT touch heat shrinkable tubing for at least 30 seconds after heating. Heat shrinkable tubing is hot and will burn you.
- Hydraulic cylinder sleeves may extend downward as hydraulic cylinder is lifted. Expect sleeve movement any time hydraulic cylinder is handled. Failure to do so may result in serious injury to personnel.
- DO NOT disconnect tailgate release or MCS air lines while chassis or MCS air systems are pressurized. Air system pressure must be released before air lines are disconnected. A line disconnected under pressure may cause personnel injury.



**NBC EXPOSURE**

If NBC exposure is suspected, all air filter media should be handled by personnel wearing protective equipment. Consult your NBC Officer or NBC NCO for appropriate handling or disposal procedures.



**To order this NBC decal use:**

National Stock Number (NSN) 7690-01-114-3702

Part Number (PN) - 12296626

Commercial and Government Entity Code (CAGEC) 19207





TECHNICAL MANUAL  
TM 5-3805-264-14&P

HEADQUARTERS  
DEPARTMENT OF THE ARMY  
Washington, D.C., 30 December 1997

**OPERATOR'S, UNIT, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL  
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FOR  
TRUCK, DUMP, HEAVY, BODY  
M917A1  
(NSN 3805-01-431-1165)  
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M917AI W/MCS (MATERIAL CONTROL SYSTEM)  
(NSN 3805-01-432-8249)**

Current as of 30 September 1997

Approved for Public Release; Distribution is Unlimited

**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 Bank Forms) or DA Form 2028-2, located in the back of this manual, direct to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-AC-NML, Rock Island, Illinois 61299-7630. A reply will be furnished to you.

You may also provide DA Form 2028-2 information to TACOM via datafax or e-mail.

- TACOM's datafax number for AMSTA-AC-NML is: DSN 793-0726 or Commercial (309) 782-0726
- TACOM's e-mail address is: amsta-ac-nml@ria-emh2.army.mil

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## HOW TO USE THIS MANUAL

This manual is designed to help you operate and maintain the M917A1 and M917A1 w/MCS Dump Truck Body.

### FEATURES OF THIS MANUAL:

- A table of contents is provided at the beginning of this manual. An index of all paragraphs contained within a section is found at the beginning of each section.
- WARNINGS, CAUTIONS, NOTES, subject headings, and other important information are highlighted in **BOLD** print as a visual aid.

### WARNING

**A WARNING indicates a hazard which can result in death or serious injury.**

### CAUTION

**A CAUTION is a reminder of safety practices or directs attention to usage practices that may result in damage to equipment.**

### NOTE

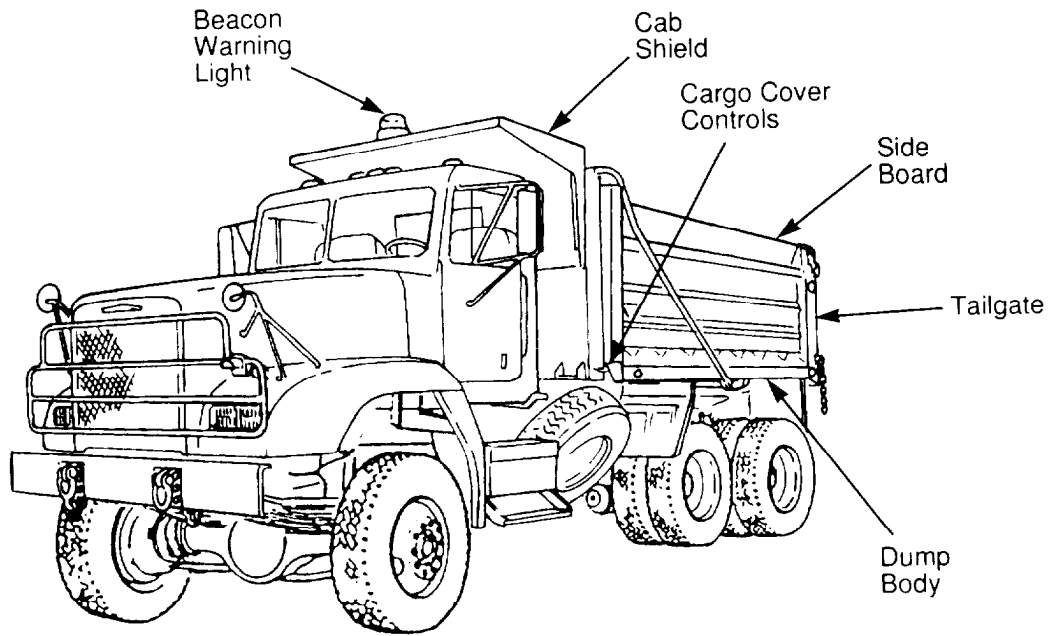
**A NOTE is a statement containing information that will make the procedure easier to perform.**

- Statements and words of particular importance are printed in CAPITAL LETTERS to create emphasis.
- Instructions are located with illustrations that show the specific task on which the operator or mechanic is working.
- Dashed leader lines used in illustrations indicate that called out items are not visible (i.e., they are located within the structure). Dashed leader lines in the Lubrication Chart indicate that lubrication is required on BOTH sides of the equipment.
- Technical instructions include metric units in addition to standard units. A metric conversion chart is provided on the inside back cover.

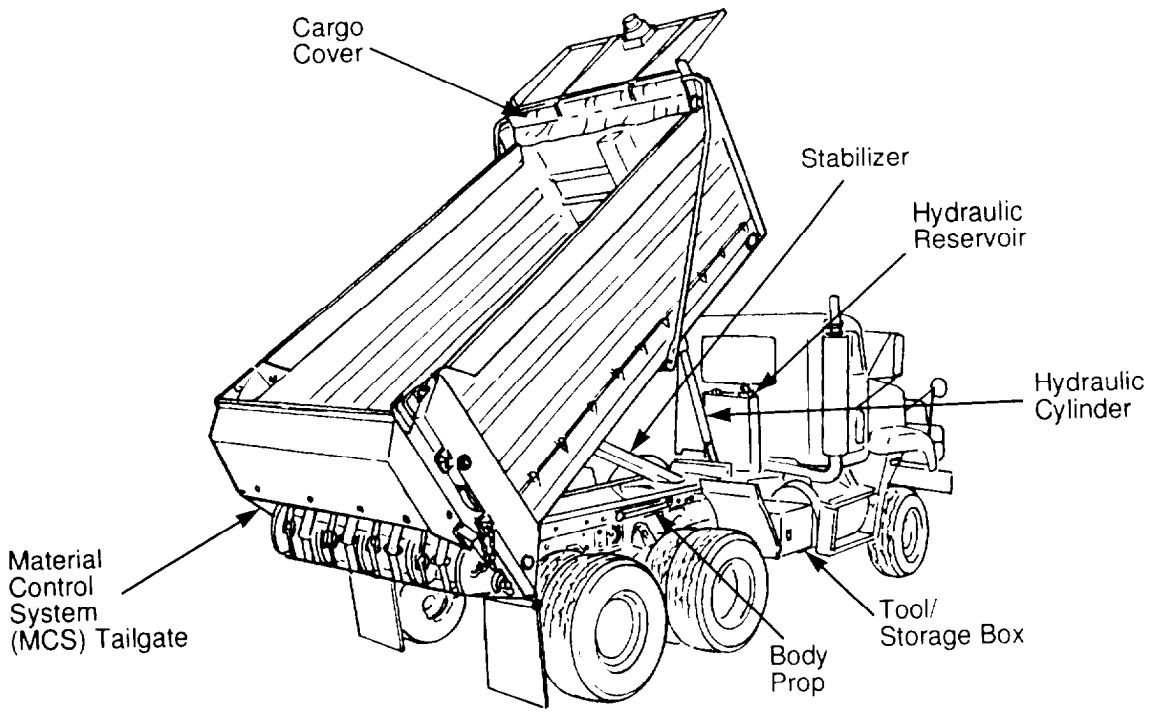
An alphabetical index is provided at the end of the manual to assist in locating information not readily found in the Table of Contents.

### FOLLOW THESE GUIDELINES WHEN YOU USE THIS MANUAL:

- Read through this manual and become familiar with its contents before attempting to operate or maintain the dump truck body.
- A warning summary is provided at the beginning of this manual and should be read before attempting to operate or maintain the dump truck body.
- Within a chapter or section, headings are used to help group the material to assist in quickly finding tasks. Read all preliminary information found at the beginning of each task. After completing a task, ALWAYS perform the follow-on maintenance at the end of the task.



**M917A1**



**M917A1 W/MCS**

# CHAPTER 1 INTRODUCTION

## Section I. GENERAL INFORMATION

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### 1-1. SCOPE.

#### NOTE

**Refer to TM 9-2320-363-10, TM 9-2320-363-20, TM 9-2320-363-34, and TM 9-2320-363-24P for operation, maintenance and repair parts and special tools list for the M917A1 and M917A1 w/MCS chassis.**

- a. **Type of Manual.** Operator's, Unit, Direct Support, and General Support Maintenance Manual with Repair Parts and Special Tools Lists.
- b. **Equipment Name and Model Number.** Truck, Dump, Heavy, Body: 6 x 6, 14 Cu Yd, On-Off Highway, M917A1 and M917A1 w/MCS.
- c. **Purpose Equipment.** Used by engineering and construction units to transport and dump or spread aggregate, hot mix asphalt or similar materials.

### 1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pam 738-750, (*Functional User's Manual for the Army Maintenance Management System*) as contained in the Maintenance Management Update.

### 1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE.

Refer to TM 750-244-3 for procedures for destruction of Army materiel to prevent enemy use.

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**1-4. PREPARATION FOR STORAGE OR SHIPMENT.**

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Refer to Chapter 4. Section X, for instructions for preparing the dump truck body for storage or shipment.

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**1-5. OFFICIAL NOMENCLATURE, NAMES, DESIGNATIONS, AND ABBREVIATIONS.**

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**NOTE**

Refer to MIL-STD-12D for standard abbreviations.

<b>Official Name</b>	<b>Common Name or Abbreviation</b>
Army Oil Analysis Program . . . . .	AOAP
Central Tire Inflation System . . . . .	CTIS
Corrosion Prevention and Control . . . . .	CPC
Material Control System . . . . .	MCS
Power Take-Off . . . . .	PTO

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**1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs).**

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If your dump truck needs improvement, let us know. Send us an SF Form 368 (*Product Quality Deficiency Report*). You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Mail it to us at: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-AC-NML, Rock Island. IL 61299-7630. We'll send you a reply.

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**1-7. WARRANTY INFORMATION.**

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The vehicles are warranted by Freightliner Corporation in accordance with TB 9-2320-363-15. Warranty starts on the date found in block 23, DA Form 2408-9 in the logbook. Report all defects in workmanship to your supervisor, who will take appropriate action through your Unit Maintenance shop.

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**1-8. SAFETY, CARE, AND HANDLING.**

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a. **First Aid.** For first aid information refer to FM 21-11, *First Aid for Soldiers*.

b. **Personnel Safety Precautions.**

(1) Read and become familiar with all WARNINGS in the warning summary at the front of this manual.

(2) Pay attention to WARNING decals on the dump body. These provide safety instructions and identify specific hazards which, if not followed, may result in serious injury or death to personnel.

(3) Throughout this manual, WARNINGS and CAUTIONS are given immediately preceding the procedural steps to which they apply. Read these WARNINGS and CAUTIONS and follow them exactly.

(4) When performing maintenance, protect yourself against injury. Wear protective gear such as safety goggles or lenses, safety shoes, rubber apron, gloves, etc.

(5) Notify others in the area if you are handling flammable materials. Know the location of fire extinguishers and emergency procedures in case of accident or fire.



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**1-8. SAFETY, CARE, AND HANDLING (Con't).**

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(6) Before performing maintenance, ensure that dump truck is secured against movement. Park vehicle on level ground, place transmission in N (Neutral), and set parking brake (TM 9-2320-363-10). If parking brake is not functioning, chock wheels.

(7) NEVER work under raised dump body unless body props are used to prop it safely in the raised position.

(8) When lifting heavy parts, have someone help you. Ensure that lifting or jacking equipment is working properly, is of sufficient capacity for the assigned task, and is secure against slipping.

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**1-9. CORROSION PREVENTION AND CONTROL (CPC).**

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a. CPC of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements made to prevent the problem in future items.

b. While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

c. If a corrosion problem is identified, it can be reported using SF 368 (*Product Quality Deficiency Report*). Use of key words such as "corrosion," "rust," "deterioration," or "cracking" will ensure that the information is identified as a CPC problem. The form should be submitted to the address specified in DA Pam 738-750.

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### 1-10. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES.

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a. The M917A1 and M917A1 w/MCS dump truck body consists of a steel body designed to transport and dump or spread aggregate, hot mix asphalt or similar materials. A sealed, open-loop hydraulic system raises and lowers the dump body. The hydraulic system operates on pressure supplied by a gear pump that is mounted directly to the transmission's PTO.

b. The dump body has a 14 cubic yard (10.7 m<sup>3</sup>), 18.5 ton (16.8 metric ton) capacity. It is constructed of heavy duty steel with an abrasion resistant floor.

c. Wooden side boards along the top on both sides of the dump body add height to help prevent spillage when hauling material.

d. The dump body is equipped with a cargo cover that is easily operated by one person.

e. The operator's instrument panel inside the vehicle cab has a Body Up and a Body (Transport) Lock indicator light. These lights allow monitoring of the dump body's status without leaving the cab.

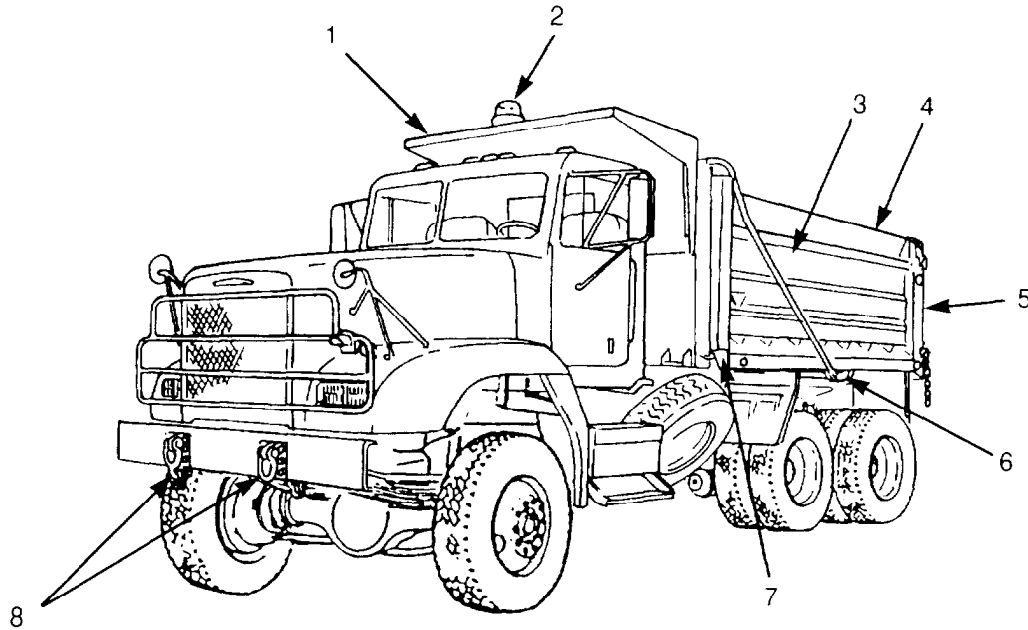
f. The chassis has limited off-road capabilities with a CTIS (TM 9-2320-363-10). This provides a wide variety of terrain in which the dump truck can operate.

g. The M917A1 and M917A1 w/MCS are the same except for the tailgate configuration.

(1) The M917A1 has a double-acting tailgate, which opens at the top or bottom, with chains to adjust the tailgate opening. The tailgate is unlocked and locked by operating the tailgate release control valve lever on the instrument panel inside the cab.

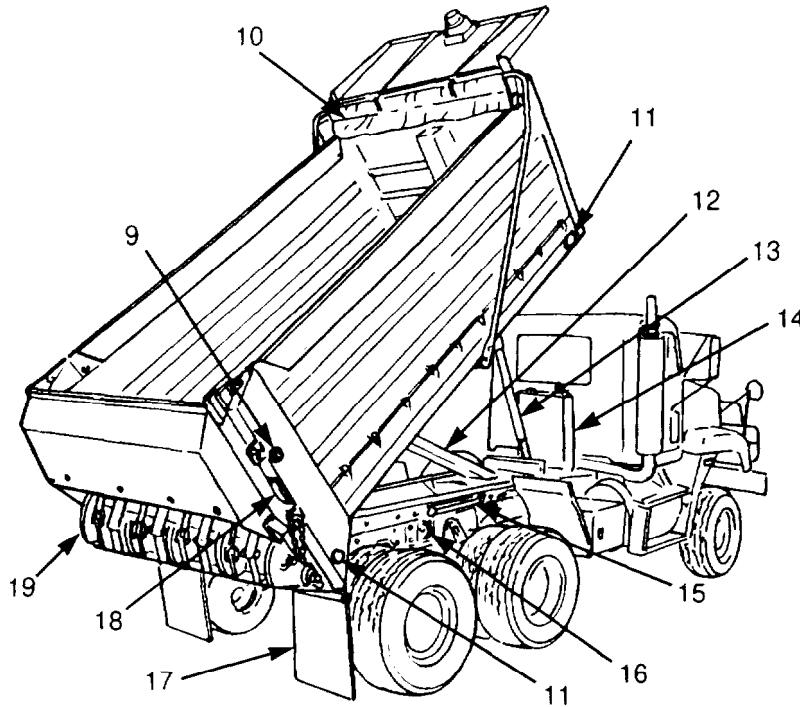
(2) The M917A1 w/MCS has a tailgate with dual-function capability. It is equipped with an MCS with four independently controlled gates. It can also be operated as a top-hinged tailgate.

**1-11. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.**



Key	Component	Description
1	Cab Shield	Protects cab during loading operations.
2	Beacon Warning Light	Rotating amber strobe light alerts other vehicles of presence of dump truck.
	Dump Body	Bed constructed of steel used for hauling aggregate, hot mix asphalt, and other materials.
4	Side Boards	Wooden boards add height to sides of dump body to help prevent spillage when hauling material.
5	Tailgate	Double-acting tailgate, opened at top or bottom with chains to adjust opening.
6	Cable Guides	Vehicle lifting cables pass through guides to maintain correct center of balance and to protect dump body from damage.
7	Cargo Cover Controls	Consist of crank handle and control handle. Extend and retract cargo cover.
8	Lift/Tie-Down Shackles	Provide lift and tie-down points for dump truck.

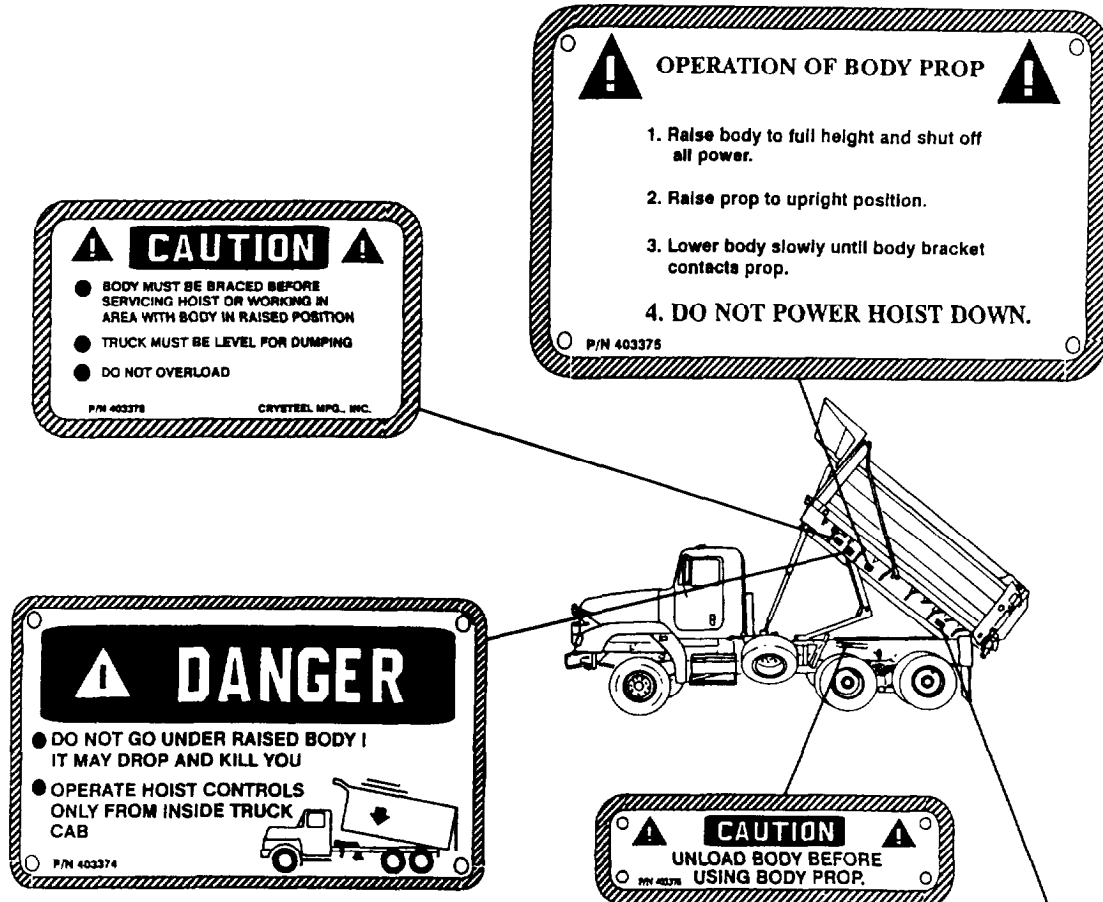
1-11. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (Con't).



Key	Component	Description
9	Marker Clearance Lights	Indicate presence of dump body.
10	Cargo Cover	Prevents spillage of dump body contents.
11	Reflectors	Mark outline of dump body.
12	Stabilizer	Maintains stability of raised dump body.
13	Hydraulic Cylinder	Hydraulic cylinder raises and lowers dump body.
14	Hydraulic Reservoir	Contains hydraulic fluid.
15	Body Props	Support raised, EMPTY dump body for inspection and maintenance.
16	Lifting Eyes	Provide lift points for dump truck.
17	Mud Flaps	Prevent dirt and mud from tires from spraying passers-by or other vehicles.
18	Taillights	Include tail, stop, and turn signal lights. Backup lights are located only in chassis-mounted taillights (TM 9-2320-363-10).
19	MCS Tailgate (M917A1 w/MCS)	Has four electro-pneumatically controlled gates which allow for controlled spreading of material. Can also operate like a standard tailgate.

1-12. LOCATION AND CONTENTS OF PLATES, DECALS, AND STENCILS.

a. Plates.



Manufactured by  
CRYSTEEL MFG., Inc  
Late Crystal 60N

LUBRICATION DATA - M917A1 & M917A1MCS

INTERVAL	ITEM	DESCRIPTION	SERVICE	LUBE POINTS	LUBRICANT
DAILY	5	HOIST OIL RESERVOIR	CF		DEHDD
MONTHLY	1	TAILGATE HINGE PIN	L	2	GAA
MONTHLY	2	BODY PROP	L	2	GAA
MONTHLY	3	TRAVEL LOCK	L	4	GAA
MONTHLY	4	STABILIZER	L	5	GAA
OC	6	HOIST OIL FILTER	CH		

**LUBRICATION KEY**

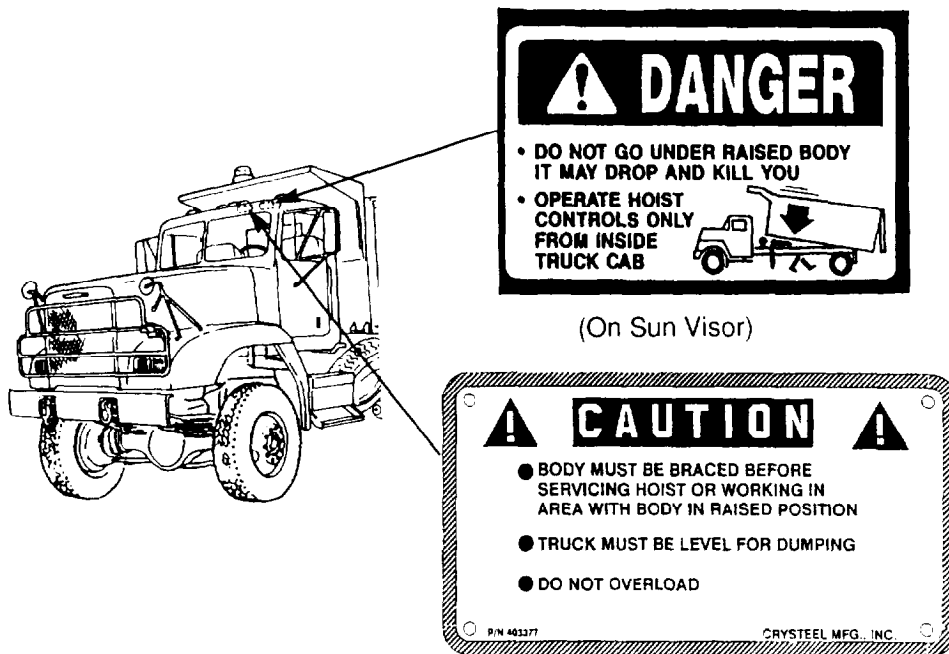
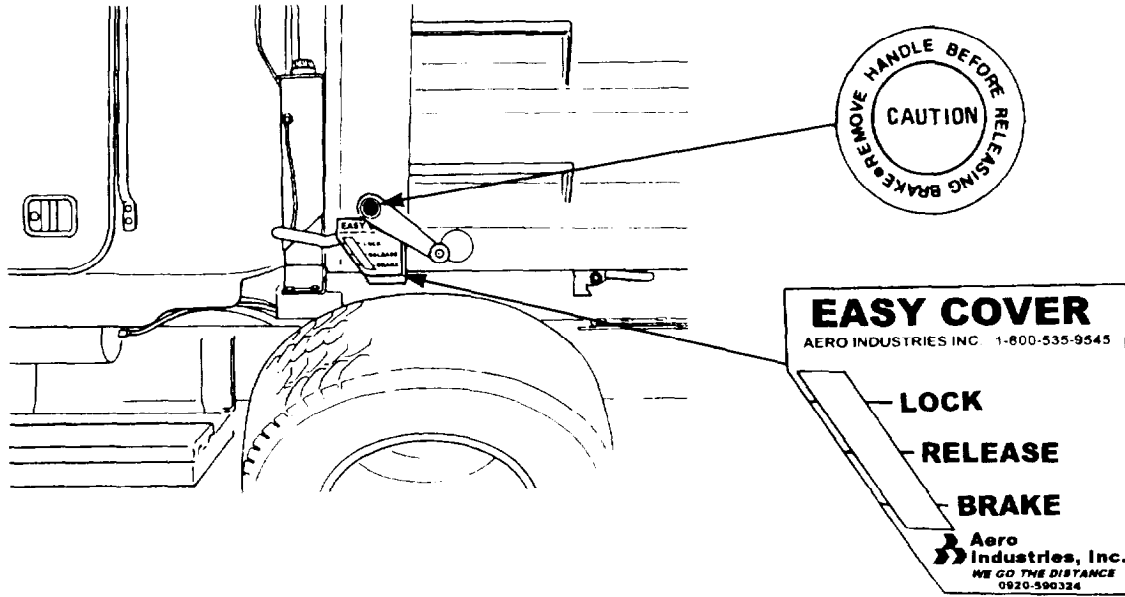
C CHECK  
 F FILL  
 L LUBRICATE  
 CH CHANGE  
 B BOTH SIDES

DEHDD LUBRICATING OIL, INTERNAL COMBUSTION  
 FACTORY SERVICE (MIL-L-2104)  
 GAA GREASE, AUTOMOTIVE & ARTILLERY (MIL-G-10924)  
 ON CONDITION  
 SEE OPERATORS MANUAL

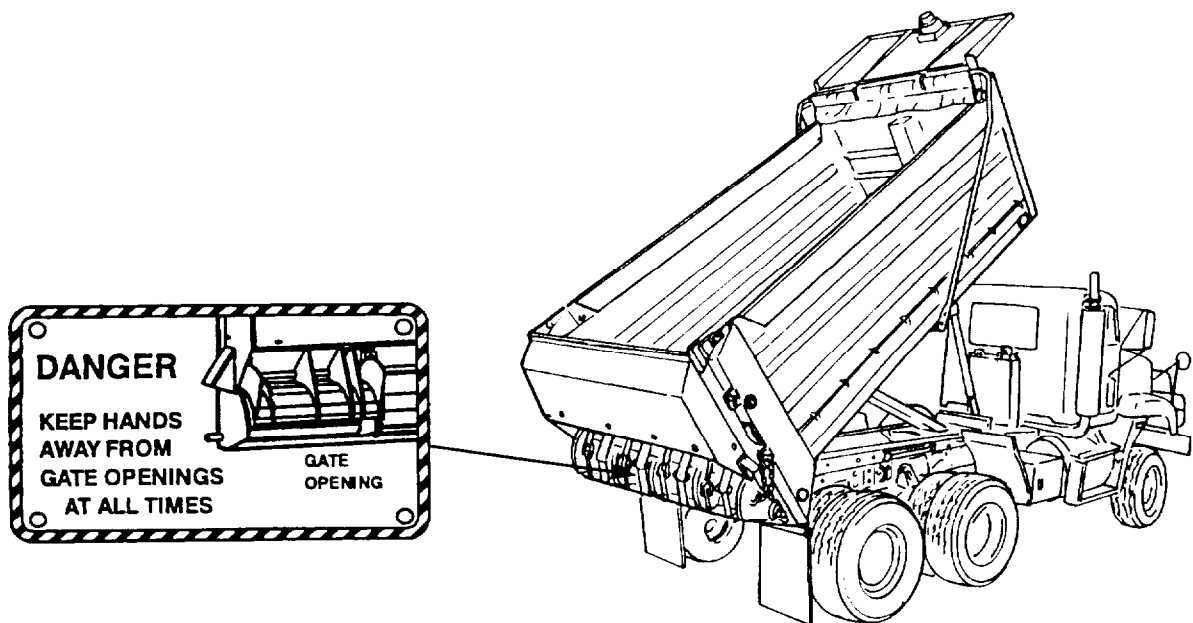
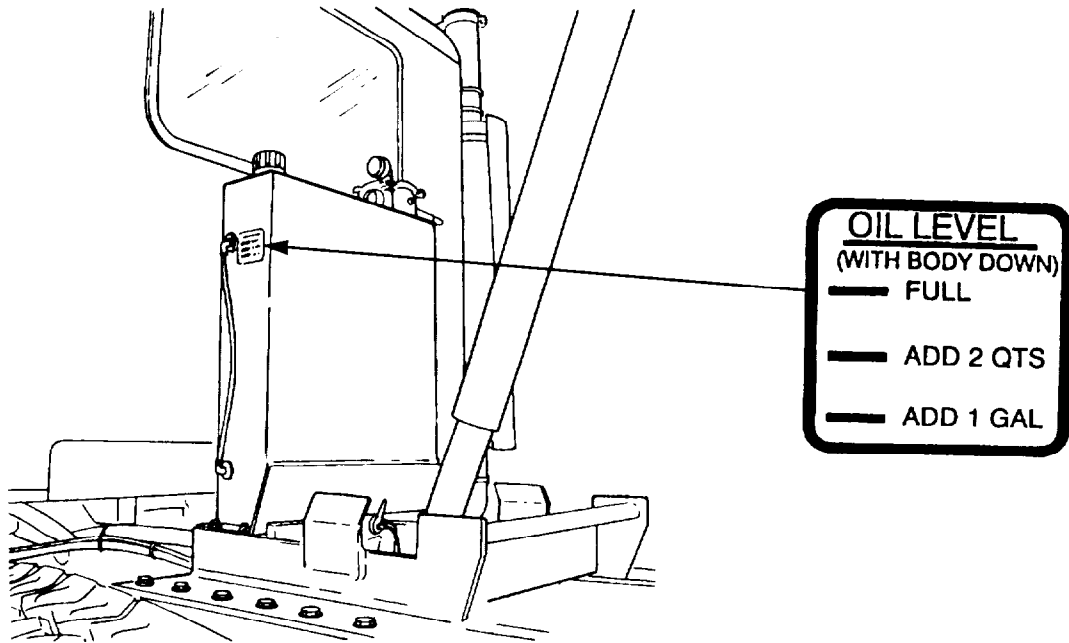
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1-12. LOCATION AND CONTENTS OF PLATES, DECALS, AND STENCILS (Con't).

b. Decals.



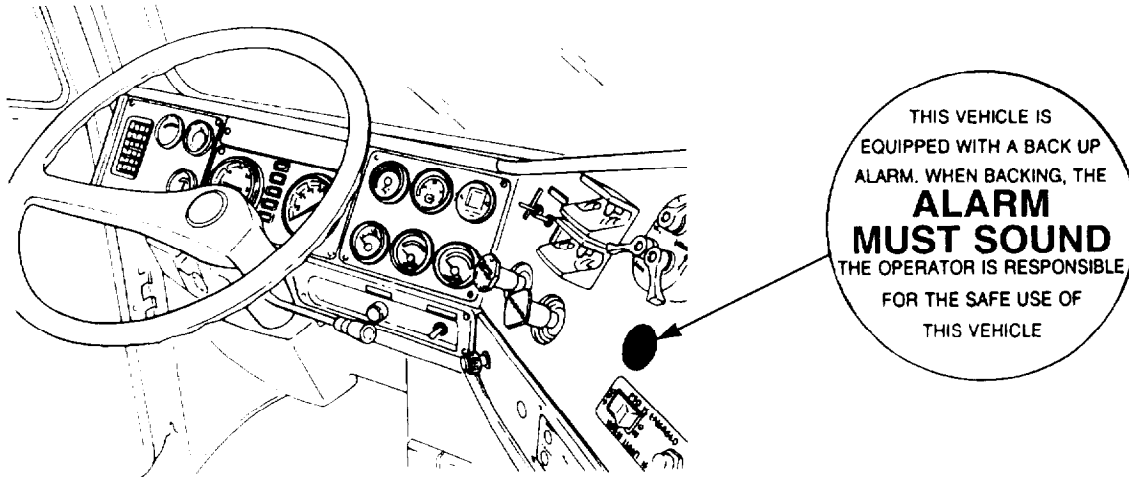
1-12. LOCATION AND CONTENTS OF PLATES, DECALS, AND STENCILS (Con't).



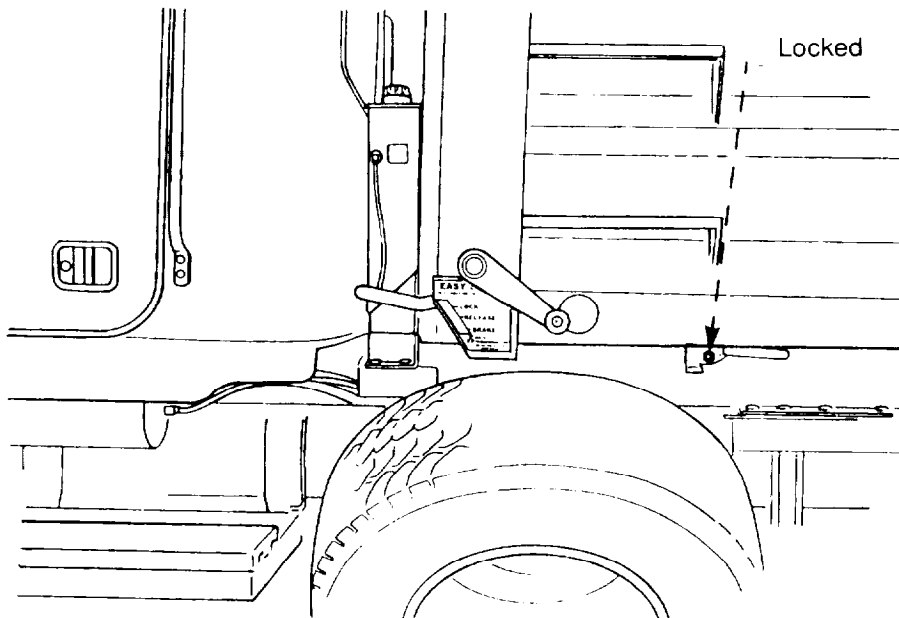
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1-12. LOCATION AND CONTENTS OF PLATES, DECALS, AND STENCILS (Con't).

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c. Stencils.





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**1-13. DIFFERENCES BETWEEN MODELS.**

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- a. The M917A1 and M917A1 w/MCS are the same except for tailgate configuration.
- b. The M917A1 tailgate opens from the bottom for normal dumping. Adjustment chains allow for adjustment of tailgate opening.
- c. The M917A1 w/MCS tailgate has four electro-pneumatically operated gates, controlled by a control unit mounted on the shift tower inside the cab or by a hand-held remote control that plugs into a receptacle on either side of the MCS tailgate. This allows controlled spreading of material. The MCS tailgate also operates as a standard tailgate, opening at the bottom.

---

**1-14. EQUIPMENT DATA.**

---

**Models** **M917A1 and M917A1 w/MCS**

VEHICLE DIMENSIONS:

Overall Length:	
M917A1 .....	303.8 in. (771.7 cm)
M917A1 w/MCS .....	316.8 in. (804.7 cm)
Overall Height .....	143 in. (363 cm)
Overall Width .....	102 in. (259 cm)
Wheelbase .....	174 in. (442 cm)
Ground Clearance .....	9 in. (22.9 cm)
Turning Diameter .....	38.9 ft (11.9 m)

VEHICLE WEIGHTS:

GVWR .....	68,000 lb (30,872 kg)
Curb Weight:	
M917A1 (Empty) .....	29,454 lb (13,372 kg)
M917A1 w/MCS (Empty) .....	31,472 lb (14,288 kg)

DUMP BODY:

Capacity .....	14 cu yd (10.7 m <sup>3</sup> )
Load Capability .....	18.5 tons (16.8 metric tons)
Length .....	13.5 ft (411 cm)
Width:	
Inside .....	87 in. (221 cm)
Outside .....	96 in. (244 cm)
Height:	
Sides .....	40 in. (102 cm)
Front .....	62 in. (157 cm)
Rear .....	48 in. (122 cm)
Cargo Cover:	
Model .....	M400 AERO, side mount
Operation .....	Crank handle

**1-14. EQUIPMENT DATA (Con?).**

**Models**

**M917A1 and M917A1 w/MCS**

MCS TAILGATE (M917A1 W/MCS):

Operation . . . . .	Inside cab control unit or remote control
Actuation . . . . .	Electro/pneumatic
Gates . . . . .	Four (4)

HYDRAULIC SYSTEM:

Operation . . . . .	PTO driven
---------------------	------------

Reservoir:

Capacity . . . . .	12.75 gal. (48.21)
Hydraulic Fluid . . . . .	Lubricating oil, OE/HDO 10, MIL-L-2104 or OEA, MIL-L-46167

Hydraulic Pump:

Type . . . . .	Gear
Operating Pressure. . . . .	2500 psi (17,238 kPa)

Hydraulic Filter:

Type . . . . .	10-micron cartridge element
Service Indicator. . . . .	Service indicator gage
Location . . . . .	Mounted on reservoir

Hydraulic Control Valve:

Type . . . . .	Single spool, three (3) ports
Location . . . . .	Integral with hydraulic pump
Relief Valve Setting. . . . .	2500 psi (17,238 kPa)

Hydraulic Cylinder:

Weight. . . . .	400 lb (181.6 kg)
Operating Pressure. . . . .	2500 psi (17,238 kPa)
Stroke . . . . .	124 in. (315 cm)
Stages . . . . .	Three (3) double- acting stages

## Section III. PRINCIPLES OF OPERATION

Paragraph Number	Paragraph Title	Page Number
1-15.	Electrical System . . . . .	1-13
1-16.	Dump Body . . . . .	1-13
1-17.	Hydraulic System . . . . .	1-16

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### 1-15. ELECTRICAL SYSTEM.

---

- a. The dump body electrical system consists of wiring harnesses that connect to the vehicle's chassis wiring harnesses.
- b. The dump body harnesses connect to:
  - (1) Lights. Taillights and marker clearance lights (one on each side of dump body and three in light cluster at rear hinge) are located on dump body. Beacon warning light is located on cab shield.
  - (2) Instrument Panel Indicator/Warning Lights and Related Switches. Body Up and Body (Transport) Lock indicator lights are located on instrument panel in cab. Body Up and Transport Lock switches are located on cylinder support frame.
  - (3) MCS Tailgate (M917A1 w/MCS). Solenoid-controlled air cylinders open and close MCS gates.

---

### 1-16. DUMP BODY.

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- a. **Dump Body Assembly.**
  - (1) The dump body is a welded assembly of heavy gage steel with bolt-on assemblies and components. It is 13.5 ft (411 cm) long with 14 cu yd (10.7 m<sup>3</sup>), 18.5 ton (16.8 metric ton) capacity.
  - (2) The dump body is attached to the truck frame at the rear hinge. Other attachment points are at the stabilizer and the hydraulic cylinder.
  - (3) An abrasion resistant steel bed resists wear and denting.
  - (4) A bolt-on cab shield protects the cab. The beacon warning light is mounted on the cab shield.
  - (5) Wooden side boards along the top on both sides of the dump body add height to help prevent spillage when hauling material.
  - (6) The dump body has an interlocking under structure.
- b. **Stabilizer.**
  - (1) A hinged stabilizer, mounted between the truck frame and the dump body, adds stability as the dump body is raised.
  - (2) Five grease fittings on the stabilizer allow for lubrication.
- c. **Body Props.**
  - (1) Use of body props permit inspection or maintenance to be safely performed underneath an empty raised dump body.
  - (2) Body props are located on outside of truck frame. When not in use, they are stowed in the horizontal position.

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## 1-16. DUMP BODY (Con't).

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(3) A grease fitting on each body prop pivot point allows for lubrication.

d. **Lubrication-Free Bearings.** There are composite, lubrication-free bearings with removable pins at the rear hinge and at the hydraulic cylinder pivot points.

e. **Transport Lock.**

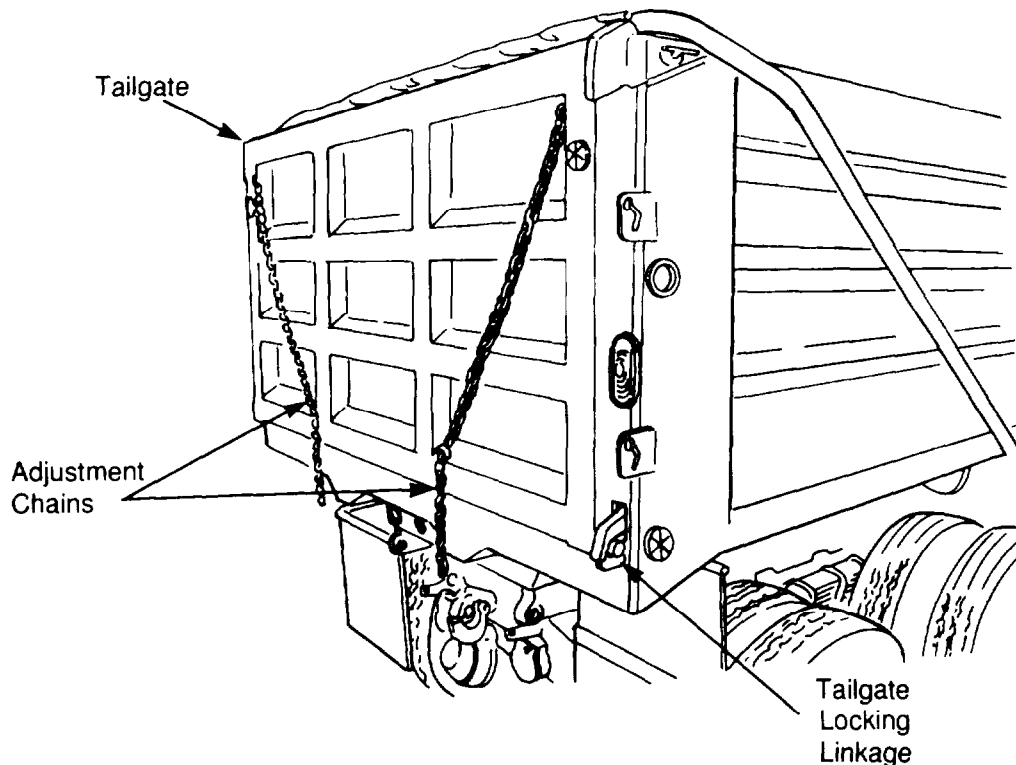
(1) A manually-operated transport lock is mounted on the left side of the dump body, near the front; it locks and unlocks the dump body from the truck frame. For normal operation, it is unlocked.

(2) The transport lock is placed in the locked position when the dump truck is being lifted and transported. This actuates a transport lock switch, which disengages the PTO, thereby preventing the PTO from operating to power the hydraulic cylinder.

f. **Cargo Coverw.** A cargo cover helps prevent the load from spilling out. It is extended or retracted using the control handle or the removable crank handle.

g. **Tailgate Configuration.** The M917A1 and M917A1 w/MCS differ in tailgate configuration:

(1) **M917A1.**

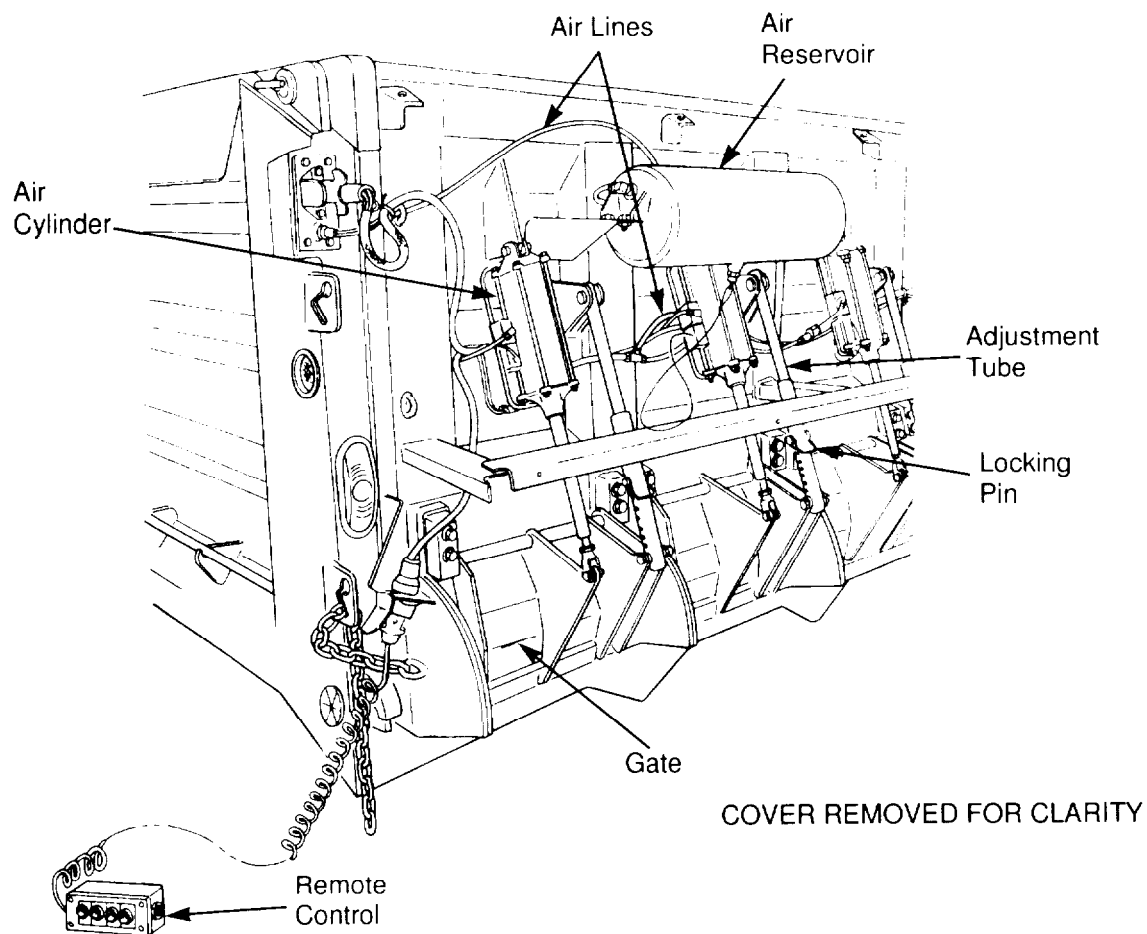


(a) The M917A1 uses a nine-panel conventional tailgate that opens from the bottom to dump the load. Adjustment chains, mounted to the tailgate, control the tailgate opening for spreading operations.

(b) A tailgate release control valve lever, located on the instrument panel inside the cab, controls the tailgate release air cylinder mounted under the dump body to unlock and lock the tailgate at the bottom.

## 1-16. DUMP BODY (Con't).

### (2) M917A1 w/MCS.



(a) The MCS tailgate has four openings (gates) that are electro-pneumatically controlled by a cab control unit or a hand-held remote control. Each gate can be opened and closed independently of the other gates.

(b) Compressed air, plumbed from the chassis' air system and stored in an air reservoir mounted on the MCS tailgate, opens and closes the gates using solenoid-controlled air cylinders.

(c) Gate opening adjustments are made at each gate, using an adjustment tube with a locking pin that can be moved to different holes in the tube. The lower the pin placement, the larger the gate opening. The top pin placement locks the gate closed.

(d) The remote control has a coiled cable that plugs into a receptacle on the left or right side of the MCS tailgate. It is operated by a person walking alongside the dump body, while the operator inside the cab is dumping the load. When plugged in, the remote control overrides the control unit inside the cab.

(e) The MCS tailgate can also operate as a conventional tailgate, opening from the bottom.

---

## 1-17. HYDRAULIC SYSTEM.

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- a. The hydraulic system powers the hydraulic cylinder, which raises and lowers the dump body
- b. Major components of the hydraulic system are:

- (1) **Hydraulic Pump.**

- (a) The gear pump is mounted directly to the vehicle PTO. It supplies the system with a working pressure of 2500 psi (17,238 kPa) with approximately 1200 rpm input speed from the PTO.

- (b) There is one port at the rear of the pump. It is connected to the bottom of the reservoir and receives, through a suction hose, hydraulic fluid from the reservoir.

- (2) **Control Valve.**

- (a) The control valve is an integral part of the hydraulic pump. It is a single spool type with the control spool linked mechanically to the hydraulic control lever in the cab.

- (b) When the hydraulic control lever is pulled back, the control valve routes hydraulic fluid through port B to the hydraulic cylinder. This extends the cylinder and raises the dump body.

- (c) When the hydraulic control lever is pushed forward, the control valve routes hydraulic fluid through port A to the hydraulic cylinder. This retracts the hydraulic cylinder and lowers the dump body.

- (d) A third control valve port returns hydraulic fluid through the filter and into the reservoir.

- (e) The control valve has a **relief valve which is set at 2500 psi (17,238 kPa).**

- (3) **Hydraulic Cylinder.**

- (a) The hydraulic cylinder is a three-stage telescoping cylinder with a 124 in. (315 cm) stroke.

- (b) The bottom of the hydraulic cylinder is attached by a pivot pin to the cylinder support frame.

- (c) The collar of the hydraulic cylinder is attached by pivot pins to the dump body inside the long beam at the front of the dump body.

- (d) The pivot pins at the top and bottom of the cylinder allow the cylinder to pivot as it is extended and retracted. Composite lubrication-free bearings at these pivot points ensure smooth, maintenance-free operation.

- (4) **Hydraulic Filter.**

- (a) The filter is located on top of the reservoir. It filters hydraulic fluid as it returns to the reservoir through the return line from the control valve.

- (b) The filter element is made of 10-micron synthetic material. A filter service indicator gage indicates when the filter needs replacing.

- (c) The filter has a by-pass feature.

- (5) **Hydraulic Reservoir.**

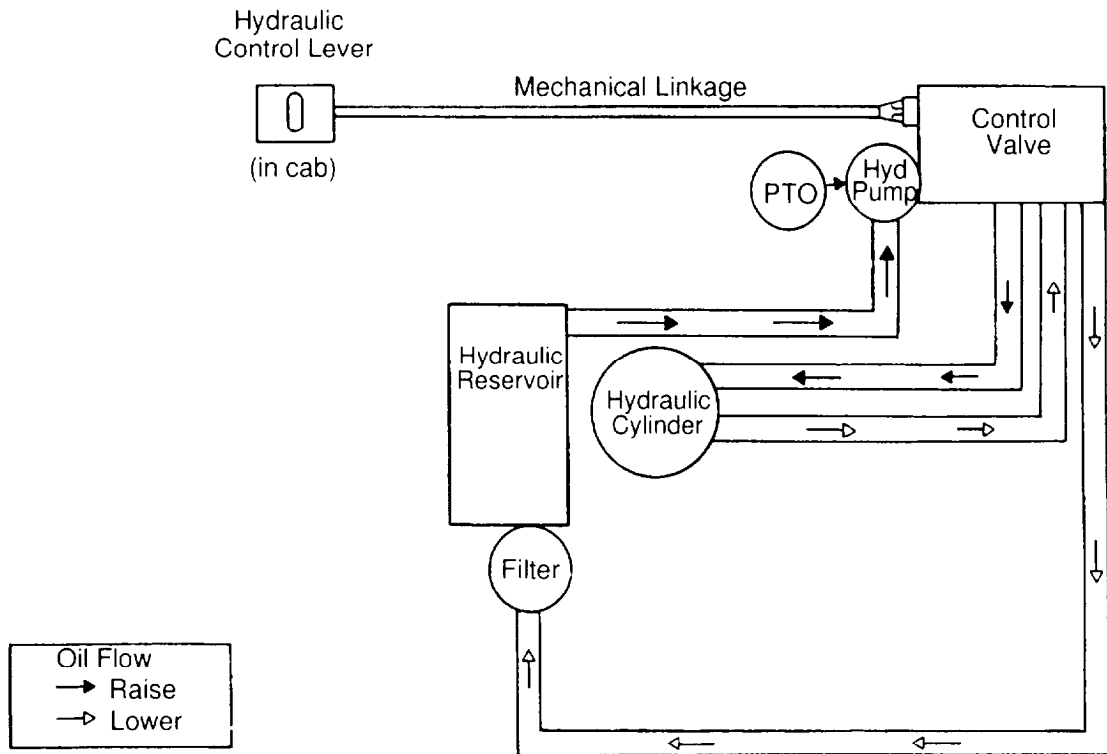
- (a) The reservoir is an all steel container with a 12.75 gal. (48.21) capacity.

- (b) It is mounted upright, bolted to the hydraulic cylinder mount, between the hydraulic cylinder and the vehicle cab.

- (c) The fill cap is also a breather and a strainer. It must be kept clean at all times.

**1-17. HYDRAULIC SYSTEM (Con't).**

(d) The oil level in the reservoir can be seen through the sight tube on the outside of the reservoir. An oil level decal, mounted adjacent to the sight tube is marked FULL, ADD 2 QTS, and ADD 1 GAL.





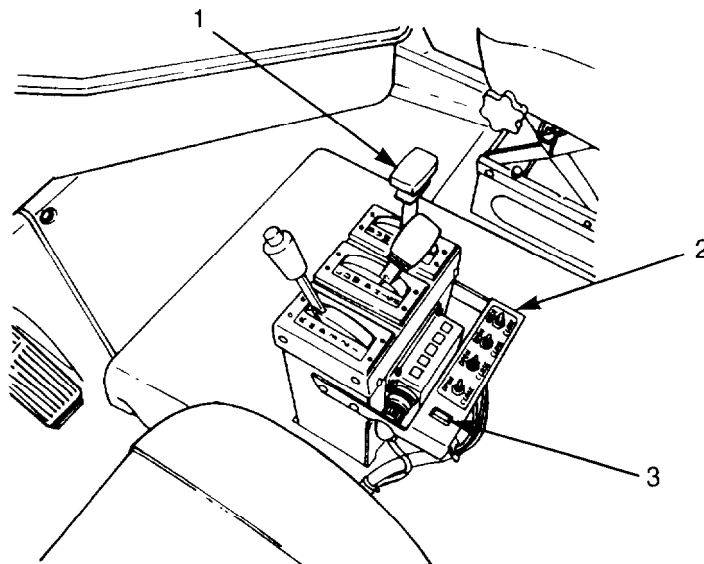


## CHAPTER 2 OPERATING INSTRUCTIONS

### Section I. DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

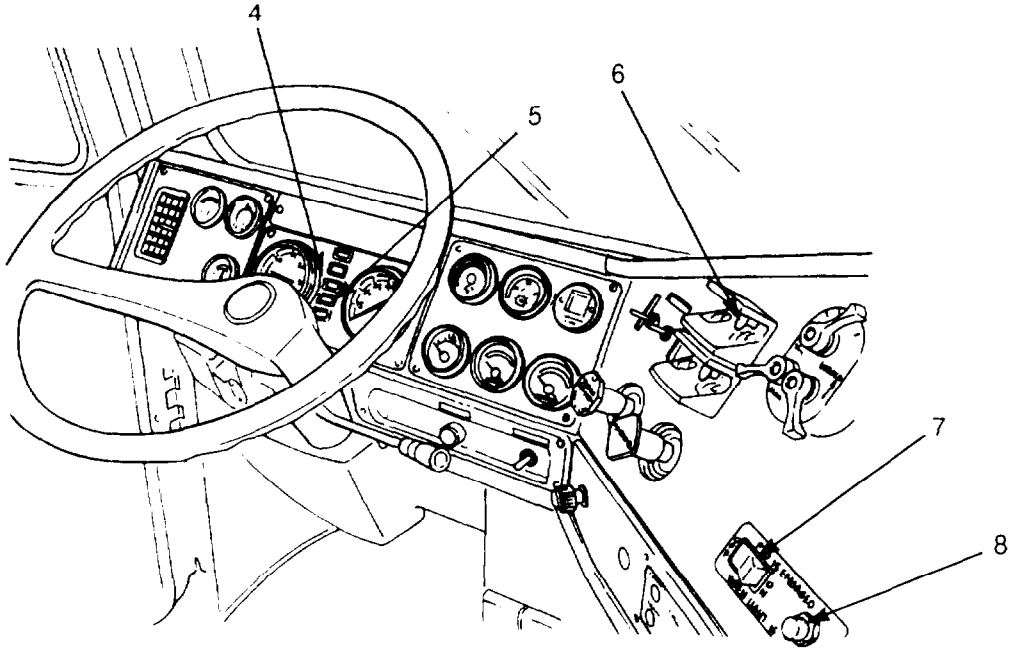
Paragraph Number	Paragraph Title	Page Number
2-1.	Cab-Mounted Controls and Indicators .....	2-1
2-2.	External Controls and Indicators .....	2-3

#### 2-1. CAB-MOUNTED CONTROLS AND INDICATORS.



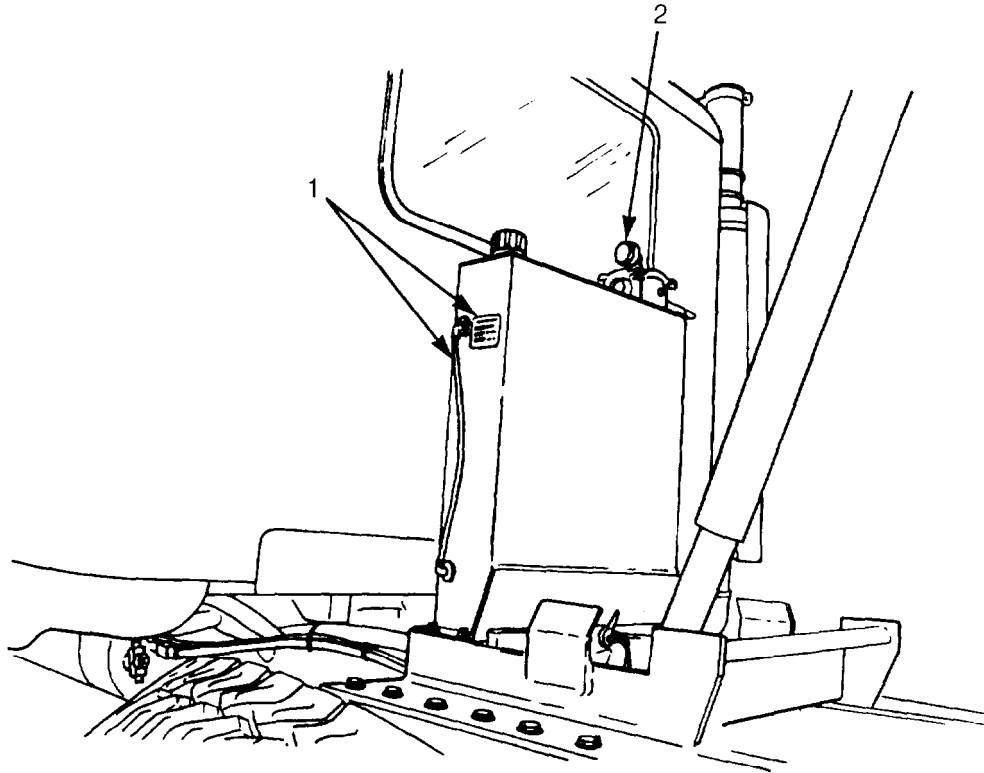
Key	Control or Indicator	Function
1	Hydraulic Control Lever	Raises and lowers dump body. Squeeze T-handle together and pull lever back to UP position to raise dump body. Push lever forward to DOWN position to lower dump body. Place in N (Neutral) detent position to stop dump body movement.
2	MCS Control Unit (M917A1 w/MCS)	Four toggle switches control LEFT, LEFT CENTER, RIGHT CENTER, and RIGHT MCS gates. Move switch(es) forward to OPEN position and rearward to CLOSE position.
3	MCS Indicator Light (M917A1 w/MCS)	Red light indicates MCS has power.

2-1. CAB-MOUNTED CONTROLS AND INDICATORS (Con't).



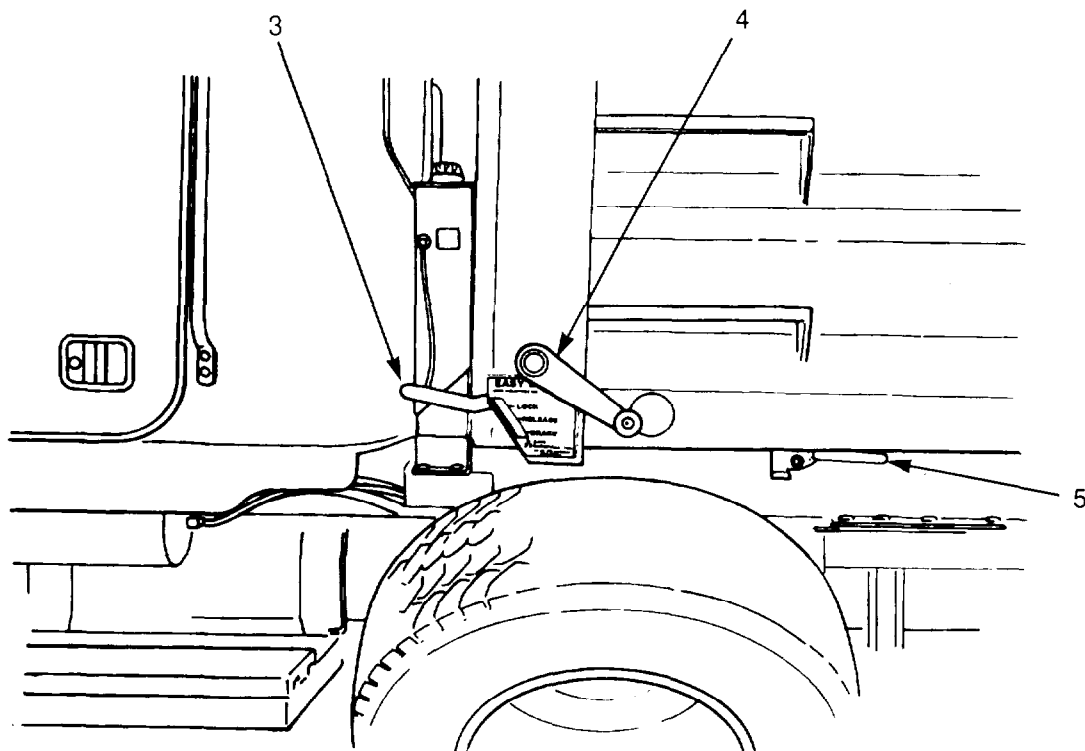
Key	Control or Indicators	Function
4	Body Up Indicator Light	Red light comes on when dump body is raised. Turns off when dump body is down and in contact with truck frame.
5	Body (Transport) Lock Indicator Light	Red light comes on when dump body is locked to truck frame in preparation for dump truck transport. Alerts driver that dump body will not raise.
6	Tailgate Release Control Valve Lever	Air-activated lever controls tailgate release air cylinder to unlock and lock tailgate. Left position is UNLOCK; right position is LOCK.
7	PTO Switch	Engages PTO when turned ON. PTO will not operate unless main light switch is in SER DRIVE or STOP LIGHT position.
8	PTO Indicator Light	Red light comes on when PTO is engaged.

**2-2. EXTERNAL CONTROLS AND INDICATORS.**



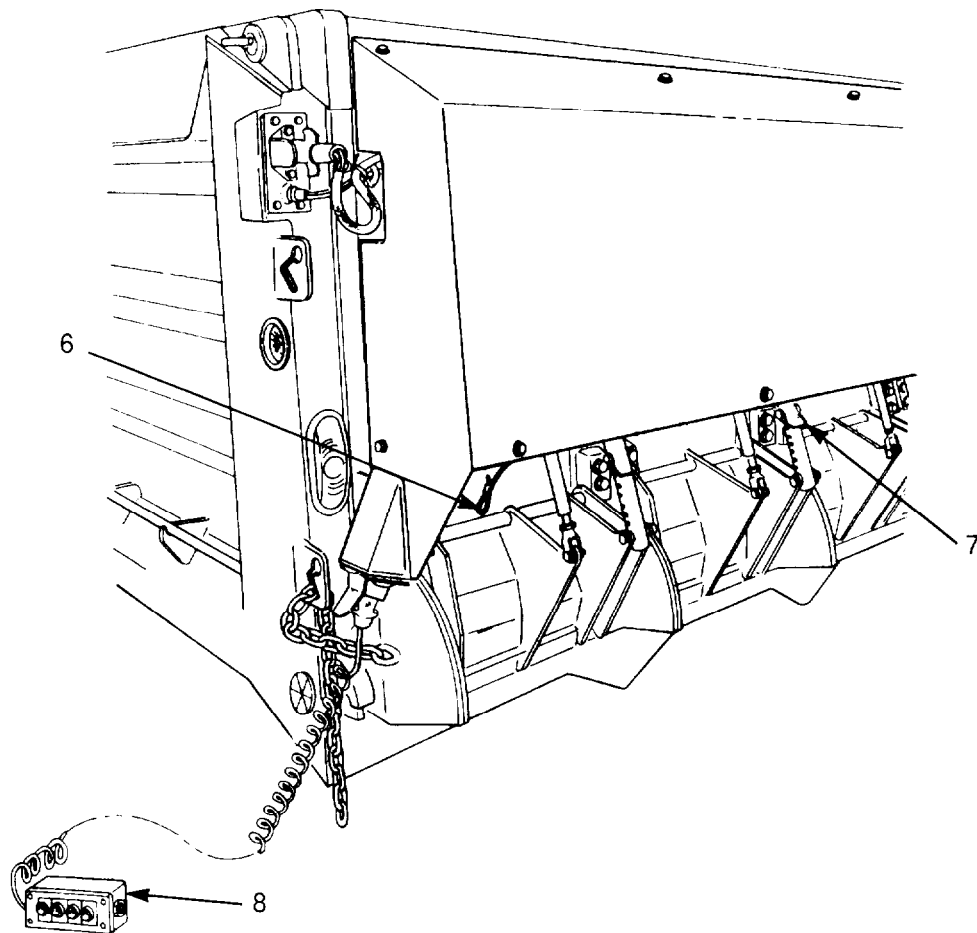
Key	Control or Indicators	Function
1	Hydraulic Reservoir Sight Tube and Oil Level Decal	Sight tube shows level of hydraulic fluid in reservoir. Oil level decal is marked FULL, ADD 2 QTS, and ADD 1 GAL.
2	Hydraulic Filter Service Indicator Gage	Indicates serviceability of hydraulic filter.

2-2. EXTERNAL CONTROLS AND INDICATORS (Con't).



Key	Control or Indicators	Function
3	Cargo Cover Control Handle	Provides braking action for cargo cover as it extends to cover load. Positions are LOCK, RELEASE, and BRAKE.
4	Cargo Cover Crank Handle	Turn clockwise to retract cargo cover and uncover load. When not in use, handle is stowed in storage pouch and placed in BII box.
5	Transport Lock	Locks dump body to truck frame. Unlocked during normal operation. Locked for transporting of dump truck. Unlocked position is at 3 o'clock. Locked position is at 6 o'clock. A locking pin holds transport lock in desired position.

2-2. EXTERNAL CONTROLS AND INDICATORS (Con't).



Key	Control or Indicators	Function
6	MCS Air Reservoir Cable Pull (M917A1 w/MCS)	Drains MCS air reservoir, when pulled.
7	Adjustment Tube Locking Pin (M917A1 w/MCS)	Controls amount of MCS gate opening. The lower the pin placement, the larger the gate opening. Top pin placement locks gate closed.
8	MCS Remote Control (M917A1 w/MCS)	Plugs into receptacle at left or right of MCS tailgate. Four toggle switches control LEFT, LEFT CENTER, RIGHT CENTER, and RIGHT MCS gates. Move switch(es) to OPEN or CLOSED positions. When not in use, remote control is stowed in storage pouch and placed in BII box.

## Section II. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Paragraph Number	Paragraph Title	Page Number
2-3.	General . . . . .	2-6
2-4.	Explanation of Table Entries. . . . .	2-6
2-5.	General PMCS Procedures . . . . .	2-7
Table 2-1.	Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body . . . . .	2-9

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### 2-3. GENERAL.

---

**NOTE**

**Refer to TM 9-2320-363-10 for Operator PMCS for the dump truck chassis.**

To ensure that the dump truck is ready for operation at all times, it must be inspected on a regular basis so that defects may be found and corrected before they result in serious damage, equipment failure, or injury to personnel. Table 2-1 contains systematic instructions on inspections, adjustments, and corrections to be performed by the operator crew to keep your equipment in good operating condition and ready for its primary mission.

---

### 2-4. EXPLANATION OF TABLE ENTRIES.

---

- a. **Item Number (Item No.) Column.** Numbers in this column are for reference. When completing DA Form 2404 (Equipment Inspection and Maintenance Worksheet), include the item number for the check/service indicating a fault. Item numbers also appear in the order that you must perform checks and services for the interval listed.
- b. **Interval Column.** This column tells you when you must perform the procedure in the procedure column.
  - (1) *Before* procedures must be done before you operate the dump truck.
  - (2) *During* procedures must be done while you are operating the dump truck
  - (3) *After* procedures must be done immediately after you have operated the dump truck.
  - (4) *Weekly* procedures must be done once each week.
  - (5) *Monthly* procedures must be done once each month.
- c. **Location, Item to Check/Service Column.** This column provides the location and item to be checked or serviced.

**NOTE**

**The WARNINGS and CAUTIONS appearing in your PMCS table should always be observed. WARNINGS and CAUTIONS appear before applicable procedures. You must observe these WARNINGS to prevent serious injury to yourself and others, and CAUTIONS to prevent your equipment from being damaged.**

- d. **Procedure Column.** This column gives the procedure you must perform to check or service the item listed in the Item to Check/Service column to know if the equipment is ready or available for its intended mission or for operation. You must perform the procedure at the time stated in the interval column.

---

## 2-4. EXPLANATION OF TABLE ENTRIES (Con't).

---

e. **Not Fully Mission Capable If: Column.** information in this column tells you what faults will keep your equipment from being capable of performing its primary mission. If you make check and service procedures that show faults listed in this column, do not operate the equipment. Follow standard operating procedures for maintaining the equipment or reporting equipment failure.

---

## 2-5. GENERAL PMCS PROCEDURES.

---

a. Always perform PMCS 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. If the dump truck does not perform as required, refer to the appropriate troubleshooting procedure in Chapter 3, Section II.

b. if anything looks wrong and you can't fix it, write it on your DA Form 2404. If you find something seriously wrong, IMMEDIATELY report it to your supervisor.

c. Before performing preventive maintenance, read all the checks required for the applicable interval and prepare all the tools you need to make all the checks. You'll always need a rag (Item 15, Appendix F) or two.

**WARNING**

**Dry cleaning solvent P-D-680 is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-130°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.**

(1) **Keep It Clean.** Dirt, grease, oil, and debris get in the way and may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (Item 18, Appendix F) on all metal surfaces. Use detergent (Item 8, Appendix F) and water when you clean rubber or plastic.

(2) **Deterioration, Rust, and Corrosion.**

(a) Be alert for deterioration of plastic and rubber materials. Report it to your supervisor.

(b) Check metal parts of vehicle for rust and corrosion. If any bare metal or corrosion exists, clean and apply a light coat of oil (Item 14, Appendix F). Report it to your supervisor.

(3) **Bolts, Nuts, and Screws.** Check bolts, nuts, and screws for obvious looseness, missing, bent, or broken condition. You can't try them all with a tool, of course, but look for chipped paint, bare metal, or rust around bolt heads. If you find one you think is loose, report it to your supervisor.

(4) **Welds.** Look for loose or chipped paint, rust, or gaps where parts are welded together. If you find a bad weld, report it to your supervisor.

(5) **Electric Wires and Connectors.** Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and ensure that the wires are in good condition.

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## 2-5. GENERAL PMCS PROCEDURES (Con't).

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(6) Hoses and Fluid Lines. Look for wear, damage, and signs of leaks. Ensure that clamps and fittings are tight. Wet spots indicate leaks, of course, but a stain around a fitting or connector can also mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, report it to your supervisor.

(7) Fluid Leakage. It is necessary for you to know how fluid leakage affects the status of your dump truck. 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 PMCS

Class I	Leakage indicated by wetness or discoloration, but not great enough to form drops.
Class II	Leakage great enough to form drops, but not enough to cause drops to drip from the item being checked/inspected.
Class III	Leakage great enough to form drops that fall from the item being checked/inspected.

**Operation is allowable with Class I and Class II leakage. WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR. When operating with Class I or Class II leaks, check fluid levels more frequently. Class III leaks must be reported immediately to your supervisor. Failure to do this will result in damage to vehicle and/or components.**



Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body.

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
			<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;"> <p><b>WARNING</b></p> </div> <p>Unless otherwise specified, perform all preventive maintenance checks with dump truck on level ground, transmission in N (Neutral), parking brake set, and engine off. Failure to follow this warning may result in personnel injury.</p> <p style="text-align: center;"><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Review all <b>WARNINGS</b>, <b>CAUTIONS</b>, and <b>NOTES</b> before performing PMCS and operating the dump truck.</li> <li>• Perform all PMCS checks if:               <ol style="list-style-type: none"> <li>a. You are the assigned operator but have not operated the dump truck since the last Weekly inspection.</li> <li>b. You are operating the dump truck for the first time.</li> </ol> </li> </ul>	

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:	
		Item To Check/Service			
1	Before	FRONT AND LEFT SIDE Overall View	Check under vehicle for evidence of hydraulic fluid leakage.	Class III hydraulic fluid leaks are evident.	
2	Before	INSIDE CAB Cargo Cover Crank Handle	Check that crank handle is stowed in storage pouch in BII box.		
3	Before	Startup	<p style="text-align: center;"><b>NOTE</b></p> <p><b>Dump truck's chassis air system controls both models' tailgate locking mechanism and supplies air to the M917A1 w/MCS tailgate.</b></p> <p>a. Start engine and fully pressurize air system (TM 9-2320-363-10).</p> <p>b. Listen for air leaks on chassis and at rear of dump body.</p>		b. Air leakage is evident.
4	During	Dump Body Controls and Indicators	a. Check hydraulic control lever (1) and MCS control unit (3) (M917A1 w/ MCS) for proper operation.		a. Hydraulic control lever malfunctions. MCS control unit malfunctions and is required for mission.

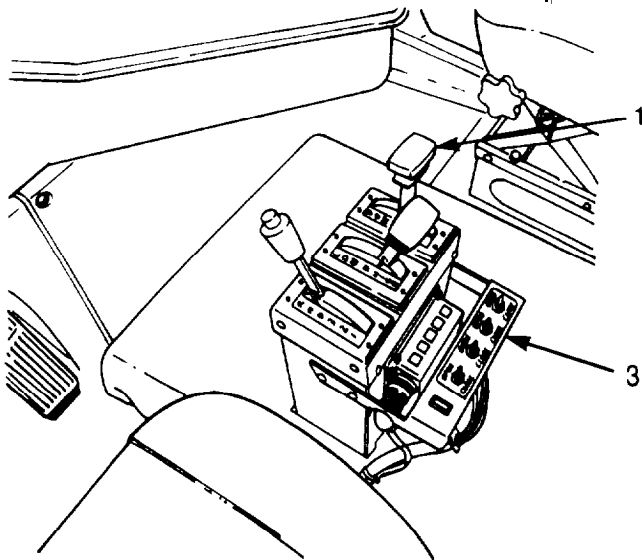


Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

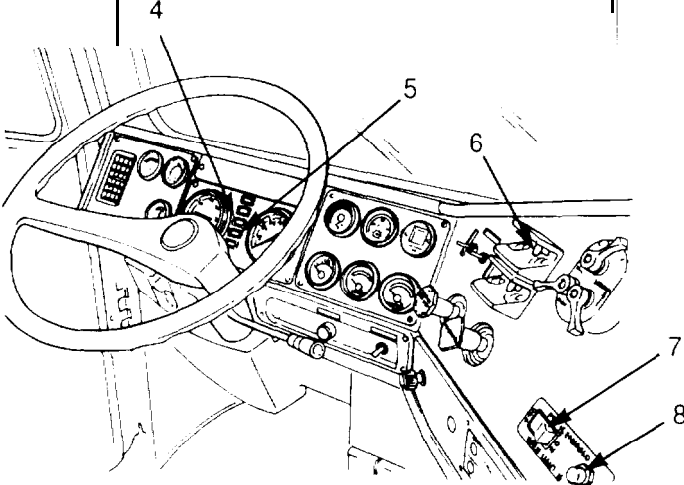
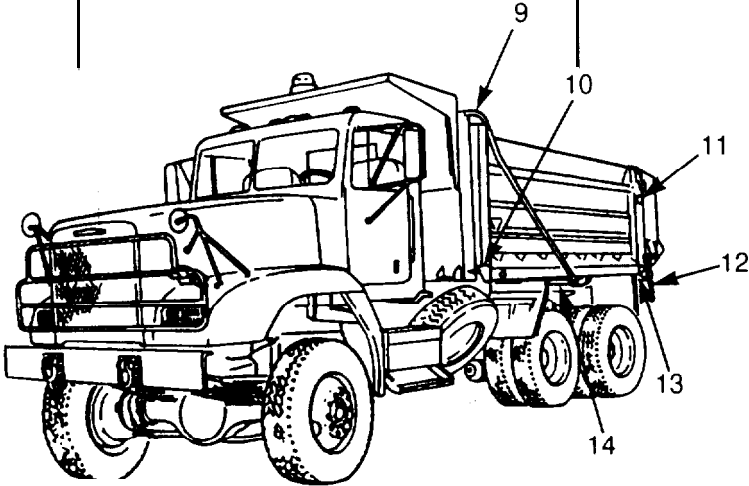
Item No.	Interval	Location	Procedure	Not Fully Mission Capable
		Item To Check/Service		
4 (Cont)	During	Dump Body Controls and Indicators	<p>b. Monitor body up and body (transport) lock indicator lights (4 and 5), tailgate release control valve lever (6), and PTO switch (7) and indicator light (8) for proper operation.</p> 	b. Any body control malfunctions.
5	During	Overall Leakage FRONT AND LEFT SIDE	<p>Be alert for evidence of hydraulic fluid leakage.</p> <p style="text-align: center;"><b>NOTE</b></p> <p><b>Begin After PMCS checks with dump body lowered and engine off.</b></p>	Class III hydraulic fluid leaks are evident.
6	After	Overall View	a. Check under vehicle for evidence of hydraulic fluid leakage.	a. Class III hydraulic fluid leaks are evident.

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location		Procedure	Not Fully Mission Capable If:
		Item To Check/Service			
6 (Con't)	After	Overall View		<p>b. Check dump body for obvious damage that would impair operation: e.g., missing or damaged cargo cover controls (10), marker clearance light (11), body prop (14), and adjustment chain (12) at tailgate.</p>	<p>b. Damage that would impair operation is evident.</p>
					
7	After	Transport Lock		<p>Check that transport lock (15) is at 3 o'clock UNLOCKED position. If locked, remove pin (16), move transport lock counterclockwise to 3 o'clock position, and reinstall pin.</p>	

**Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).**

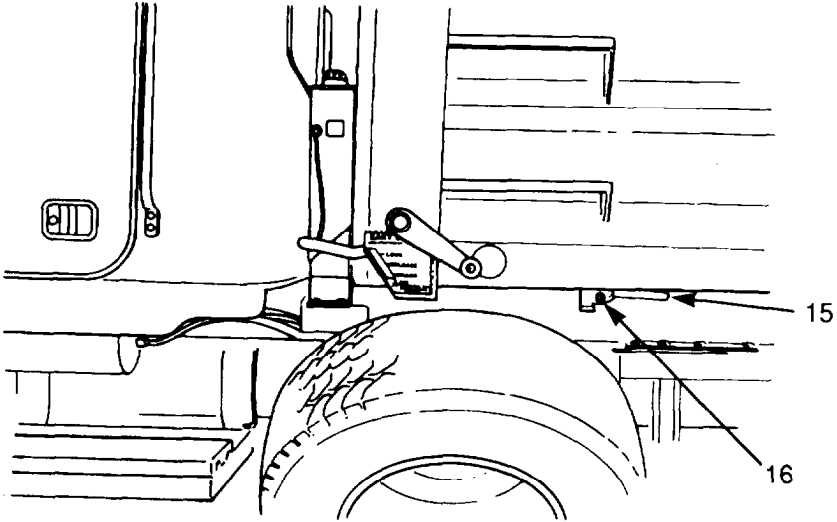
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
7 (Con't)	After	Transport Lock		
8	After	Cargo Cover	<p>a. Operate cargo cover controls (10) and check for smooth operation (paragraph 2-14).</p> <p>b. Inspect cargo cover for looseness of mounting to support frame (9), and cuts or tears to cover. Inspect support frame for damage.</p> <p>c. After operating cargo cover controls (10), ensure that crank handle is stowed in storage pouch in BII box.</p>	<p>a. Cargo cover does not extend or retract properly.</p> <p>b. Cargo cover mounting is loose or cover is cut or torn. Support frame is damaged.</p>
9	After	Tailgate Locking Linkage	<p>Check for damage to tailgate locking linkage (13).</p>	<p>Tailgate locking linkage is damaged.</p>

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Check/ Service	Procedure	Not Fully Mission Capable If:
10	After	<b>REAR AND RIGHT SIDE</b>  <b>Overall View</b>	a. Check under vehicle for evidence of hydraulic fluid leakage.  b. Check dump body for obvious damage that would impair operation: e.g., missing or damaged marker clearance lights (11), taillight (17), body prop (14), and adjustment chain (12) at tailgate.	a. Class III hydraulic fluid leaks are evident.  b. Damage that would impair operation is evident.
11	After	<b>Tailgate Locking Linkage</b>	Check for damage to tailgate locking linkage (13).  <p style="text-align: center;"><b>NOTE</b></p> <b>Perform the following After PMCS checks with engine on and air system fully pressurized.</b>	Tailgate locking linkage is damaged.
12	After	<b>Tailgate Release Lever</b>	Operate tailgate release control valve lever (6) inside cab (paragraph 2-1). Check that tailgate unlocks and locks properly.	Tailgate will not unlock or lock.

**Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).**

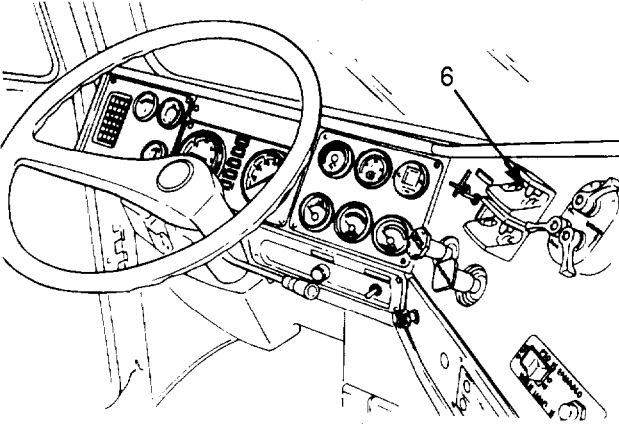
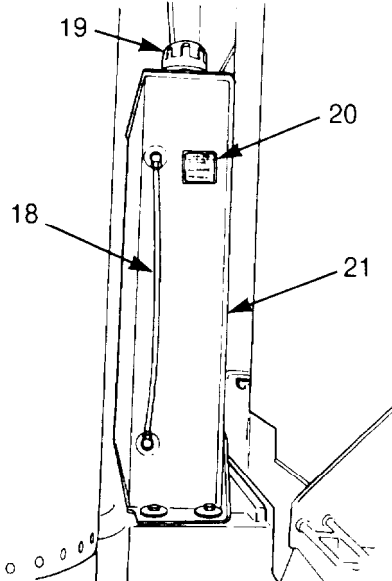
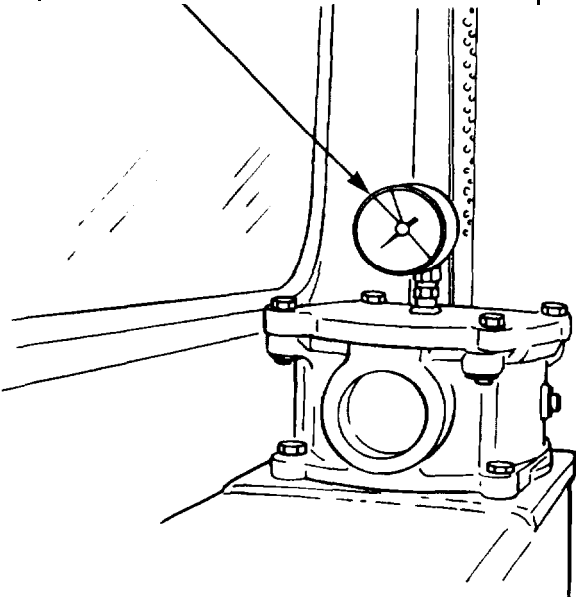
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
12 (Con't)	After	Trailgate Release Lever		
13	After	Hydraulic Reservoir	<p>a. With engine off and dump body lowered, check sight tube (18) to determine level of hydraulic oil in reservoir (21). Level should be even with FULL mark on oil level decal (20). If level is low, remove fill cap (19). Remove any debris from strainer with a clean rag. Add oil (Item 12 or 13, Appendix F) through fill cap opening until level is even with FULL mark on decal. Install fill cap (Chapter 3, Section I).</p> 	

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
13 (con't)	After	Hydraulic Reservoir	<p>3. Run engine at idle speed and engage PTO (TM 9-2320-363-10). Check filter service indicator gage (22). If gage needle is in RED zone, hydraulic oil filter element needs replacing. Notify your supervisor.</p> 	



**Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con?).**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
14	After	MCS Tail-gate (M917A1 w/MCS)	a. Remove locking pins (24) from top hole in adjustment tubes (25) and place in bottom hole.	

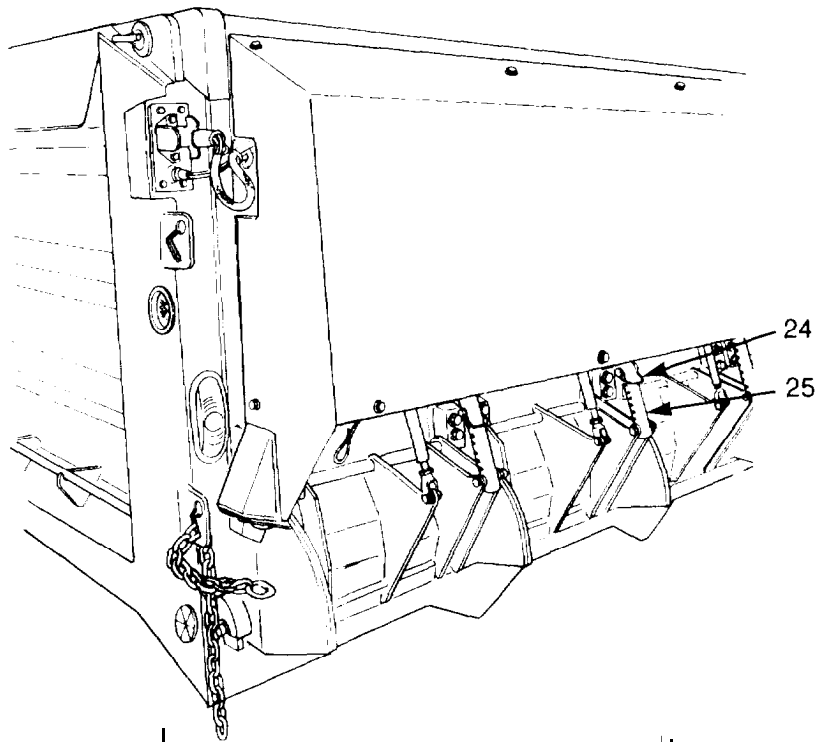


Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

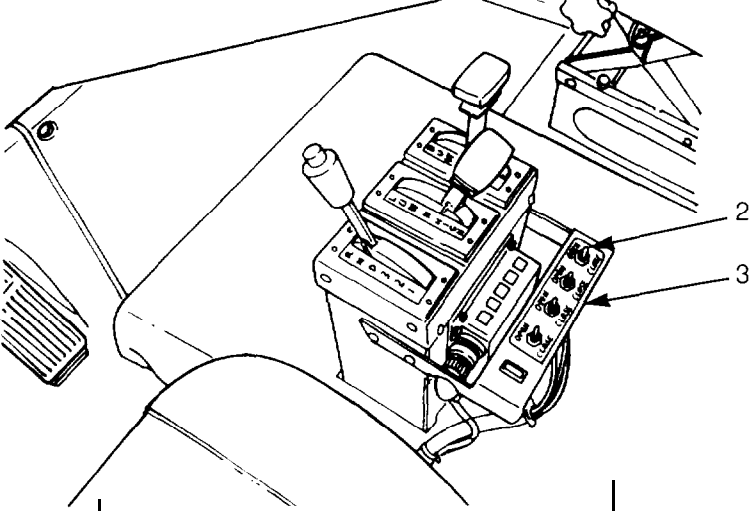
Item No.	Interval	Location Check/Service	Procedure	Not Fully Mission Capable If:
1 4 (Con't)	After	MCS Tailgate (M917A1 w/MCS)	<p>b. Operate MCS control unit (3) inside cab (paragraph 2-1). Check that appropriate MCS gate (26) opens and closes as each toggle switch (2) is operated.</p>  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> <p><b>WARNING</b></p> </div> <p>When connected, MCS remote control overrides cab control unit. When remote control is disconnected, cab control activates. To avoid inadvertent opening or closing of gates, ALWAYS check gate positions and position of toggle switches on both cab and remote controls before plugging in or unplugging remote control. Toggle switches should be in CLOSED position. Failure to follow this warning may cause personnel injury.</p> <p>c. Plug MCS remote control (28) into c. receptacle (29) at either side of MCS tailgate (23). Check that appropriate MCS gate (26) opens and closes as each toggle switch (27) is operated.</p> <p>d. Remove locking pins (24) from bottom hole and install in top hole of adjustment tubes (25).</p>	<p>b. MCS control unit does not open or close gates and is required for mission.</p> <p>MCS remote control does not work and is required for mission.</p>

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

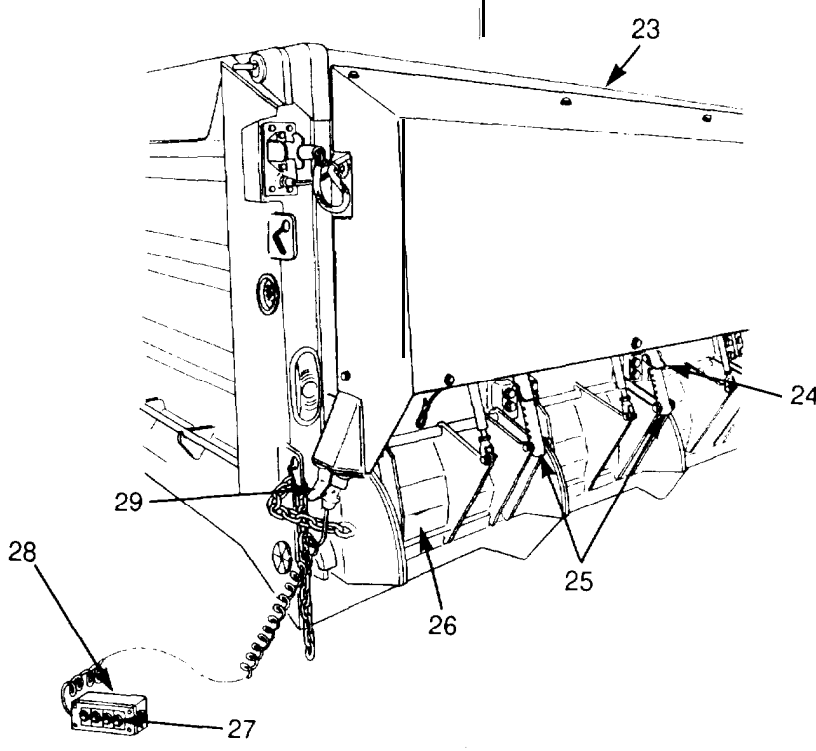
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
14 (Con't)	After	MCS Tail-gate (M917A1 w/MCS)		
15	After	Body Props	<p style="text-align: center;"><b>WARNING</b></p> <p><b>NEVER</b> work under a raised dump body unless it is secured in the raised position with body props and dump body is <b>EMPTY</b>. Failure to follow this warning may result in death or injury to personnel.</p> <p>Raise dump body and support with body props (paragraph 2-15). Check that body props function properly and do not bind.</p>	Body props do not function, bind, or do not support dump body.

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MS Body (Con't).

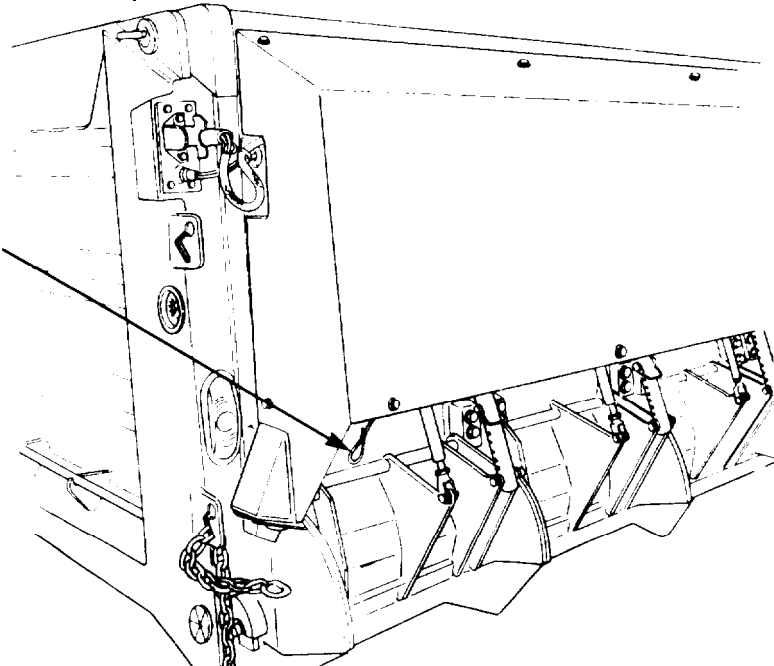
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
16	After	Air Reservoir (M917A1 w/MCS)	<p><b>NOTE</b></p> <p>Perform the following <b>After</b> PMCS check with engine off.</p> <p>Pull cable pull (30) and drain air reservoir. Release cable pull when all air has drained.</p>	
				

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

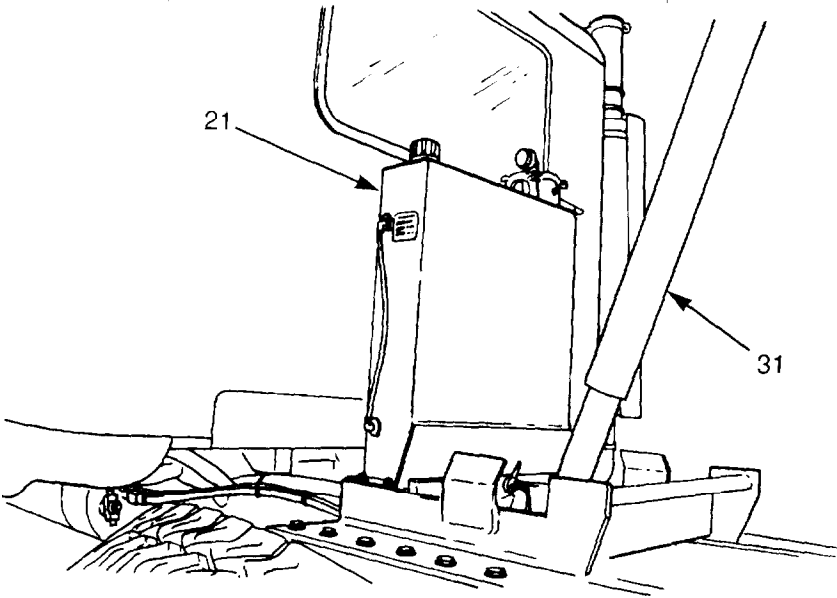
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
17	Weekly	Hydraulic System	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">WARNING</div> <p><b>NEVER</b> work under a raised dump body unless it is secured in the raised position with body props and dump body is <b>EMPTY</b>. Failure to follow this warning may result in death or injury to personnel.</p> <ol style="list-style-type: none"> <li>a. Raise dump body and support with body props (paragraph 2-15).</li> <li>b. Inspect hydraulic cylinder (31), hydraulic reservoir (21), and hydraulic lines and fittings for loose mounting, leaks or damaged components.</li> <li>c. Remove body props and lower dump body (paragraph 2-15).</li> </ol>	<ol style="list-style-type: none"> <li>b. Damage to components or Class III hydraulic fluid leaks are evident.</li> </ol>
				

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
18	Monthly	Body Props	<div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 0 auto;">WARNING</div> <p><b>NEVER</b> work under a raised dump body unless it is secured in the raised position with body props and dump body is <b>EMPTY</b>. Failure to follow this warning may result in death or injury to personnel.</p> <ol style="list-style-type: none"> <li>a. Raise dump body and support on body props (paragraph 2-15).</li> <li>b. Apply grease (Item 10, Appendix F) to grease fitting (32) on each body prop (14).</li> </ol>	

**Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).**

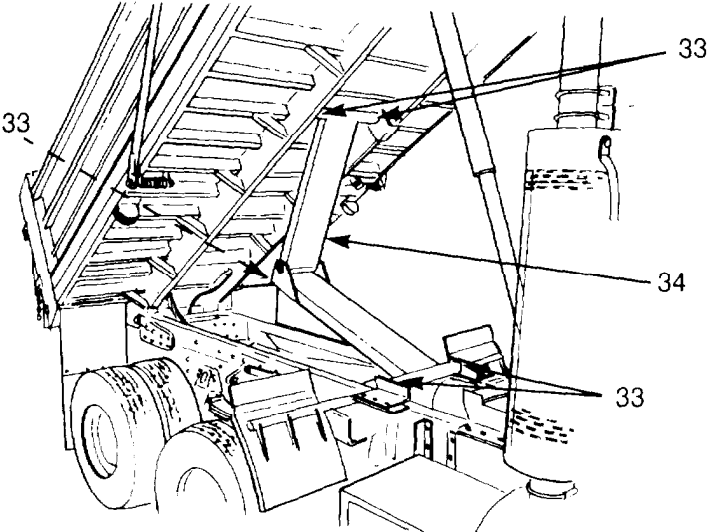
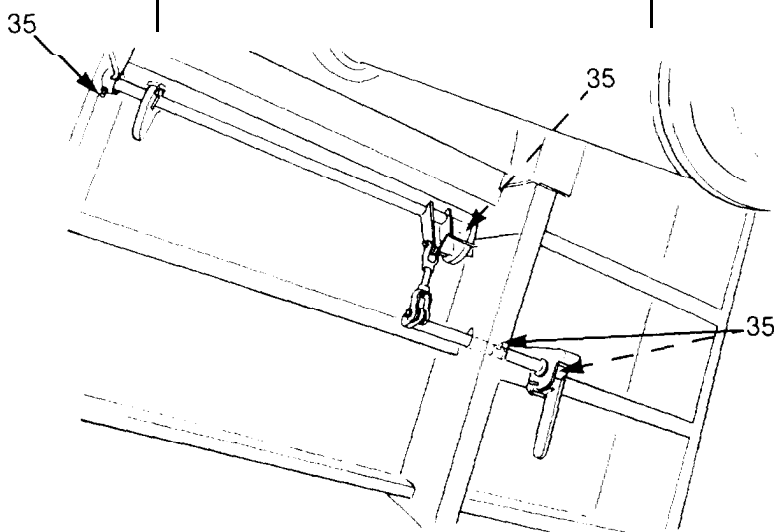
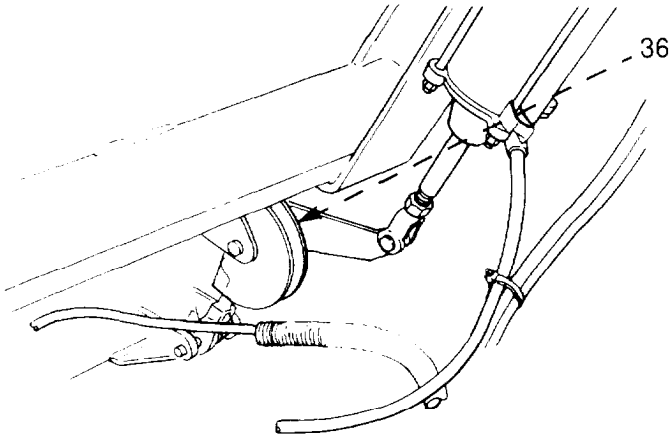
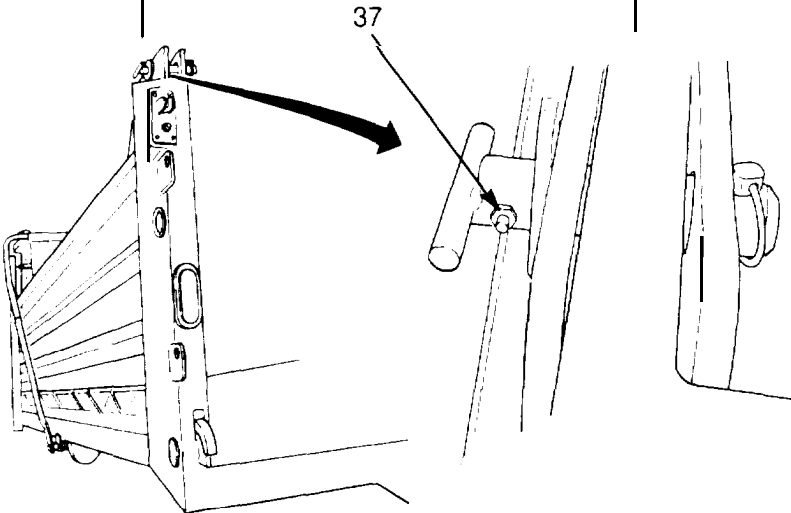
Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
19	Monthly	Stabilizer	<p>Apply grease (Item 10, Appendix F) to five grease fittings (33) on stabilizer (34). There are two grease fittings at top and bottom crosses and one grease fitting a center hinge.</p> 	
20	Monthly	Transport Lock	<p>Apply grease (Item 10, Appendix F) to four transport lock grease fittings (35).</p> 	

Table 2-1. Operator Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
21	Monthly	Tailgate Locking Linkage	<p>a. Apply grease (Item 10, Appendix F) to tailgate locking linkage grease fitting (36).</p> 	
22	Monthly	Tailgate Hinge Pins	<p>b. Remove body props and lower dump body (paragraph 2-15). Apply grease (Item 10, Appendix F) to each tailgate hinge pin grease fitting (37).</p> 	



## Section III. OPERATION UNDER USUAL CONDITIONS

Paragraph Number	Paragraph Title	Page Number
2-6.	Scope . . . . .	2-25
2-7.	Preparing to Load Dump Body . . . . .	2-25
2-8.	Loading Dump Body. . . . .	2-26
2-9.	Transporting Load . . . . .	2-26
2-10.	Dumping Load . . . . .	2-27
2-11.	Adjusting Tailgate Opening . . . . .	2-31
2-12.	Adjusting MCS Gate Openings (M917A1 w/MCS)	2-32
2-13.	Controlled Spreading (M917A1 w/MCS) . . . . .	2-34
2-14.	Operating Cargo Cover . . . . .	2-36
2-15.	Operating Body Props . . . . .	2-38

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### 2-6. SCOPE.

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**NOTE**

**Refer to TM 9-2320-363-10 for operating instructions for the dump truck chassis.**

- a. This section provides instructions on operating the M917A1 and M917A1 w/MCS dump truck body under usual conditions.
- b. Refer to Section IV of this chapter for operating instructions under unusual conditions.
- c. Before, during, and after operation, perform applicable Operator PMCS (Chapter 2, Section II)

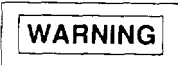
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### 2-7. PREPARING TO LOAD DUMP BODY.

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- a. As required, clean dump body of material previously carried (paragraph 3-5).
- b. Ensure that tailgate (M917A1 and M917A1 w/MCS) is closed (paragraph 2-1). If operating an M917A1 w/MCS, ensure that MCS gates are closed (paragraph 2-1 or 2-2).

With engine running, ensure that dump body is fully lowered by checking body up indicator light on instrument panel (paragraph 2-1). Light must be off. Lower dump body, if raised (paragraph 2-10).



**DO NOT park on a slope. Park on level ground only. Parking on a slope could cause load to shift and dump truck to tip over. Failure to follow this warning may result in death or injury to personnel or damage to equipment.**

- d. Position dump body for loading:
  - (1) Position dump truck on firm level ground at a location convenient for loading.
  - (2) If dump body is to be loaded using a hopper, check clearance before pulling under hopper, Position dump truck with hopper above center of dump body,

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## 2-7. PREPARING TO LOAD DUMP BODY (Con?).

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**WARNING**

**Ensure that parking brake is set before loading dump truck (TM 9-2320-363-10). If parking brake is not set, dump truck could roll or shift position. Failure to follow this warning may result in death or injury to personnel or damage to equipment.**

- e. Set parking brake (TM 9-2320-363-10).
- f. Disengage PTO, if engaged (TM 9-2320-363-10).

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## 2-8. LOADING DUMP BODY.

---

**WARNING**

**Stand clear of dump body during loading operation. Material being loaded could fall on personnel standing too close. Failure to follow this warning may result in death or injury to personnel.**

- a. Clear all personnel from around dump truck.

**CAUTION**

**Load dump body evenly. Material must not be heaped so high that it spills over sides of body. Do NOT overload. Failure to follow this caution may damage equipment.**

- b. Load dump body. Ensure that material is loaded evenly.
- c. Cover load with cargo cover (paragraph 2-14)

---

## 2-9. TRANSPORTING LOAD.

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**CAUTION**

**Do not transport load with PTO engaged. Always disengage PTO when hydraulic power is no longer needed. If PTO is engaged while dump truck is transporting a load, severe damage to hydraulic pump, PTO or transmission will result.**

- a. Avoid sudden stops turns or accelerations. This may cause load to shift.
- b. During off-road operation, avoid terrain with side slope.

Use vehicle's CTIS to change tire pressures as road conditions change. Use CTIS in EMER (emergency) mode if dump truck becomes stuck (TM 9-2320-363-10).

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**2-10. DUMPING LOAD.**


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**WARNING**

- **DO NOT attempt to dump in high wind. High winds may disperse aggregate. High winds may also cause dump truck to roll over when dump body is raised. Failure to follow this warning may result in death or injury to personnel or damage to equipment.**
- **Stay at controls while dumping. If dump body leans or shifts to one side, lower it immediately and check for one of the following:**
  - underinflated or flat tires
  - tires sinking in soft soil
  - load shifting to one side of body
  - high or gusty wind
  - weak or broken leaf spring

**If one of these or any other problems are found, do not continue dumping until the problem is corrected. Failure to follow this warning may result in death or injury to personnel or damage to equipment.**
- **DO NOT park on a slope. Park on level ground only. Parking on a slope could cause load to shift and dump truck to tip over. Failure to follow this warning may result in death or injury to personnel or damage to equipment.**

**NOTE**

- **This paragraph describes dumping a load through the tailgate opening of either model dump truck.**
  - **For instructions on controlled spreading using the M917A1 w/MCS gates, refer to paragraph 2-13.**
  - **Assistance is required for this operation. Driver inside cab operates dumping controls. Assistant driver monitors area around dump body.**
- a. **Preparing to Dump**
- (1) Position dump truck on level ground. Set parking brake (TM 9-2320-363-10).
  - (2) Walk around dump truck and check the following:
    - (a) Wheels are on firm level ground.
    - (b) Dump truck is not leaning to one side
    - (c) Area behind tailgate is clear.
    - (d) Overhead clearance is sufficient.
    - (e) Transport lock is unlocked (3 o'clock position) (paragraph 2-2).

**2-10. DUMPING LOAD (Con't).**

(3) Secure mud flaps (1) out of way on hooks (2) when stockpiling or when dumping into a spreader.

**CAUTION**

**Adjustment chains are intended for use only during spreading operations. If used when stockpiling, damage to chains or tailgate may result.**

(4) Adjust tailgate opening if required (paragraph 2-11).

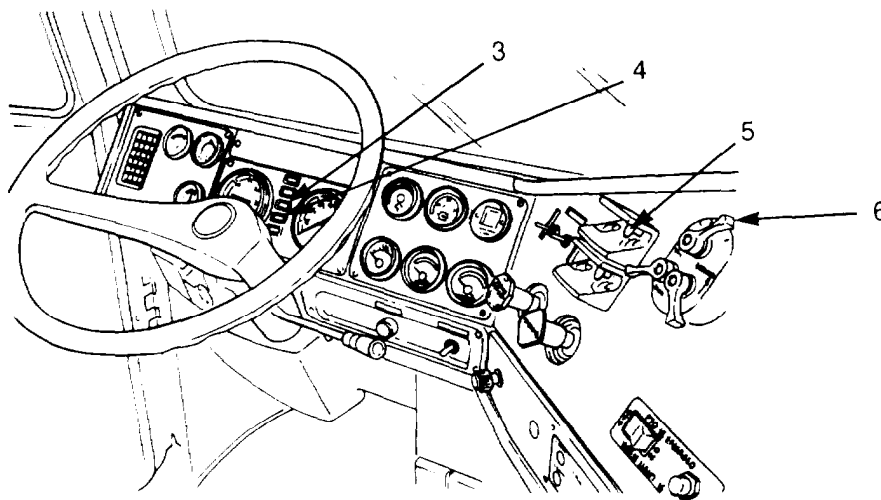
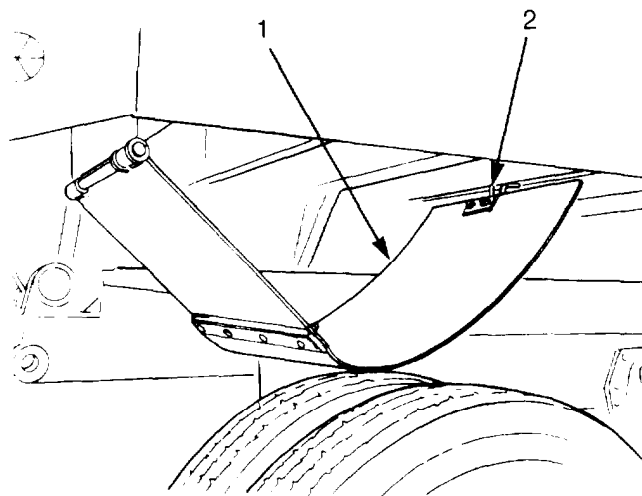
(5) Uncover load (paragraph 2-14).

(6) Start engine (TM 9-2320-363-10).

(7) Place main light switch (6) is in SER DRIVE or STOP LIGHT position (TM 9-2320-363-10).

(8) Engage PTO (TM 9-2320-363-10).

(9) Check that body (transport) lock indicator light (4) is not lit.



**WARNING**

**NEVER unlock tailgate or operate MCS gates, or operate hydraulic control lever in cab without first ensuring that all personnel are clear of dump body. Failure to follow this warning may result in injury to personnel.**

**CAUTION**

**Ensure that tailgate latches are fully opened before raising dump body. Failure to follow this caution could result in damage to equipment.**

---

**2-10. DUMPING LOAD (Con't).**


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(10) Slide tailgate release control valve lever (5) left to UNLOCK position. Check that tailgate is unlatched.

b. **Raising Dump Body.**

**WARNING**

- **NEVER** raise dump body more than half way with tailgate or MCS tailgate closed. If dump body is raised fully without opening tailgate, dump truck center of gravity will shift rearward. Dump truck could tip, causing injury to personnel or damage to equipment.
- **NEVER** raise dump body without first checking for overhead obstructions such as trees and power lines. Ensure that overhead clearance is sufficient. Failure to follow this warning may cause death or injury to personnel.

(1) Sound horn if tactical situation permits.

**NOTE**

**Speed of dump body movement when it is being raised may be controlled with accelerator pedal.**

(2) Squeeze T-handle together and pull hydraulic control lever (7) back to UP position. Body up indicator light (3) should come on as dump body is raised.

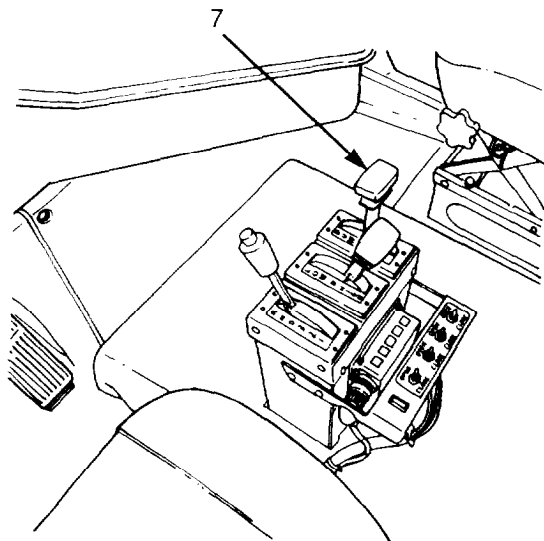
**WARNING**

**DO NOT** try to loosen a sticky load by pulling forward or backward and braking abruptly. Injury to personnel or damage to equipment may result.

**NOTE**

**Dump body will stop automatically when hydraulic cylinder is fully extended or when hydraulic control lever is placed in N (Neutral) position.**

(3) Return hydraulic control lever (7) to N (Neutral) position when dump body is fully raised or has reached desired height,



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2-10. DUMPING LOAD (Con't).

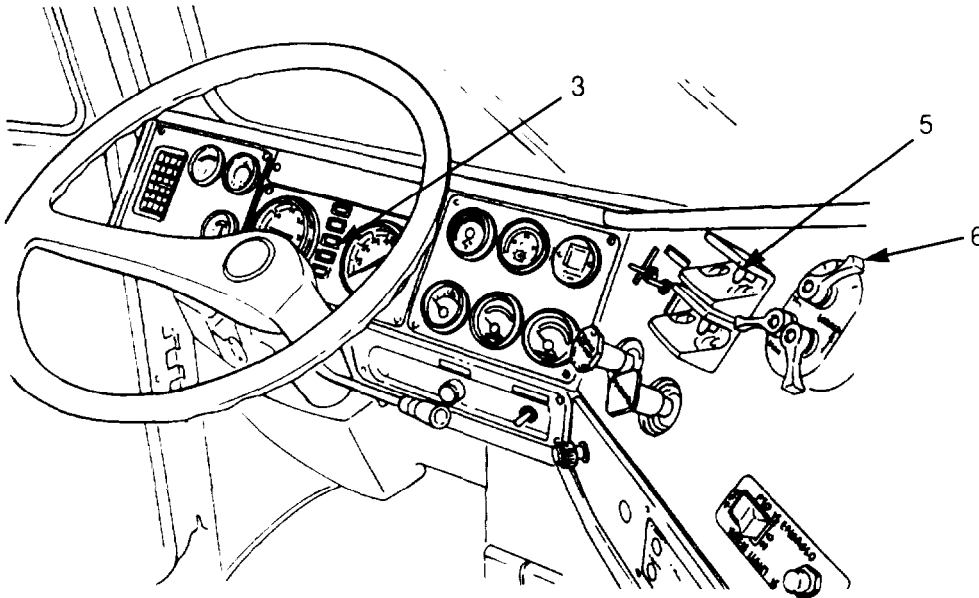
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c. Lowering Dump Body.

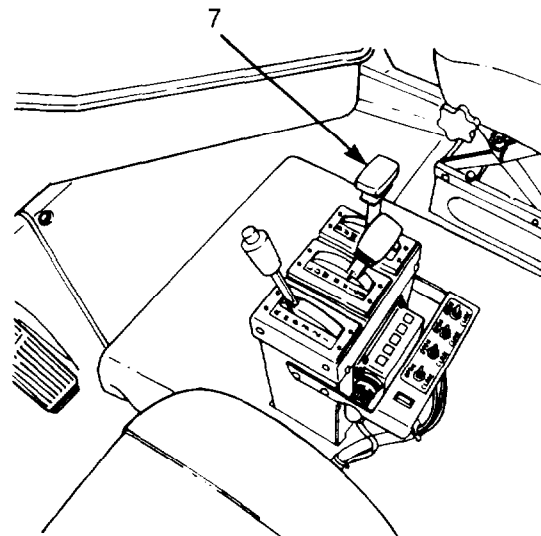
**CAUTION**

Dump body must be lowered onto truck frame with engine running at idle speed. Failure to follow this caution may damage hydraulic cylinder or dump body.

(1) With engine at idle speed, squeeze T-handle together and push hydraulic control lever (7) forward to DOWN position. Body up indicator light (3) should turn off when dump body contacts truck frame.



(2) Return hydraulic control lever (7) to N (Neutral) position.



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## 2-10. DUMPING LOAD (Con't).

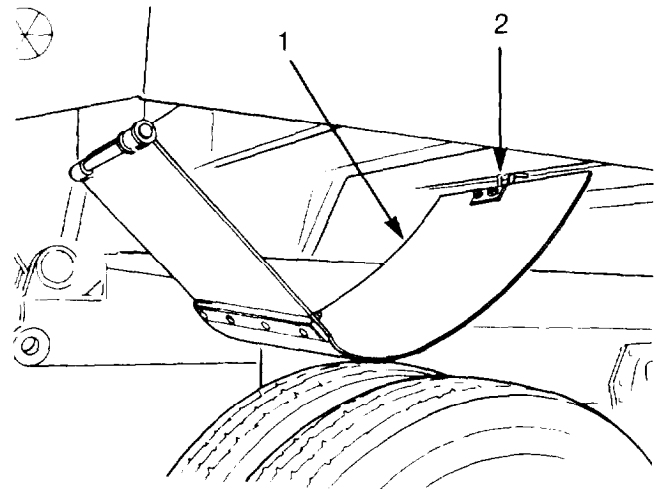
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### d. After Dumping.

**CAUTION**

Always disengage PTO when hydraulic power is no longer needed. If PTO is engaged while dump truck is transporting a load, severe damage to hydraulic pump, PTO or transmission will result.

- (1) Disengage PTO (TM 9-2320-363-10).
- (2) Turn off main light switch (6).
- (3) Slide tailgate release control valve lever (5) right to LOCK position.
- (4) As required, release mud flaps (1) from stowed position on hooks (2).



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## 2-11. ADJUSTING TAILGATE OPENING.

---

**WARNING**

Use extreme caution when adjusting tailgate opening. NEVER adjust tailgate opening when tailgate is open. Failure to follow this warning could result in injury to personnel.

**CAUTION**

Adjustment chains are intended for use only during spreading operations. If used when stockpiling, damage to chains or tailgate may result.

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## 2-11. ADJUSTING TAILGATE OPENING (Con't).

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### NOTE

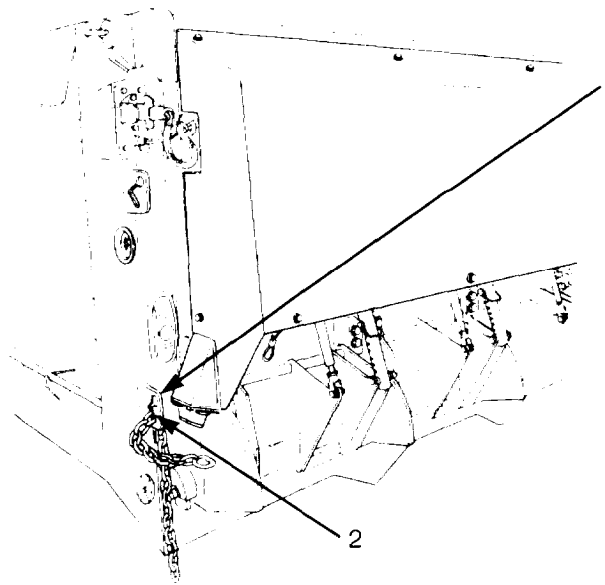
To reduce interference between tailgate chain and tailgate locking linkage, chain must pass through chain latch from the outside inward.

- a. In preparation for dumping load, with tailgate closed, lift chain out of slot (2) of chain latch (1).

### NOTE

**Adjustment must be made equally on both sides of tailgate.**

- b. Lengthen or shorten chain length by pulling links through chain latch (1).
- c. Secure adjustment by sliding chain into slot (2).



---

## 2-12. ADJUSTING MCS GATE OPENINGS (M917A1 W/MCS).

---

**WARNING**

- Use extreme caution when adjusting MCS gate openings. NEVER adjust gate openings when gates are open. Failure to follow this warning could result in injury to personnel.
- Keep hands and feet away from gate openings at all times. Failure to follow this warning could result in injury to personnel.

### NOTE

**Adjust MCS gate openings with engine on and MCS air system pressurized.**

- a. When dump truck is transporting a load or when it is parked, MCS gates must be kept locked. Gates are locked by placing locking pins (2) in top hole in adjustment tubes (1).



---

**2-12. ADJUSTING MCS GATE OPENINGS (M917A1 W/MCS) (Con't).**

---

b. In preparation for controlled spreading, with dump body down and MCS gates closed, remove locking pins (2) from top hole in adjustment tubes (1).

**CAUTION**

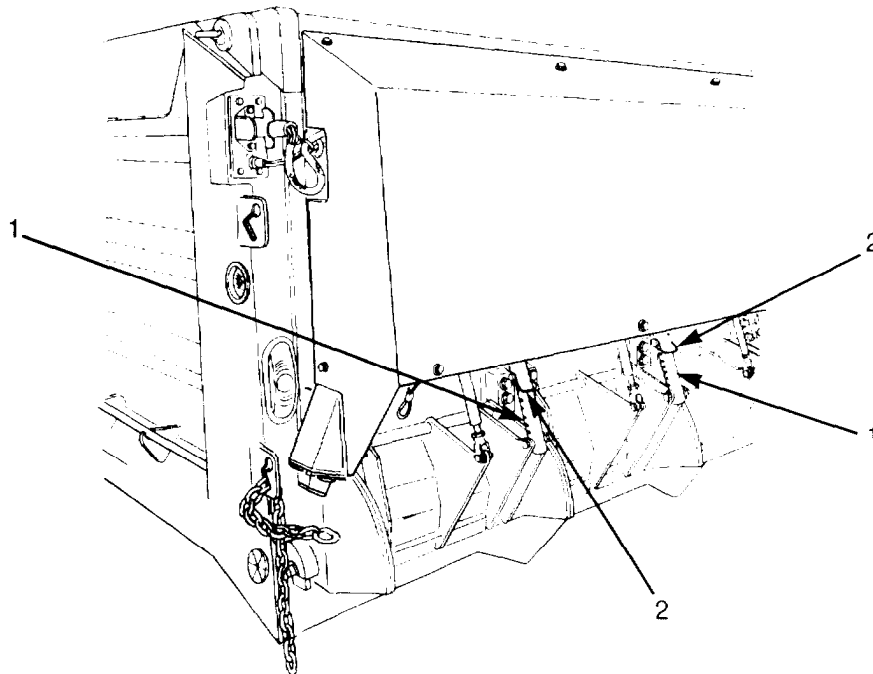
Outer right and outer left side adjustment tube locking pins must be installed with pin heads to outside. If incorrectly installed, end of pins will protrude and become bent.

**NOTE**

To achieve desired spreading pattern, each gate opening can be adjusted individually.

c. Install locking pin (2) in desired hole in adjustment tube (1). The lower the pin placement, the larger the gate opening.

d. When controlled spreading is completed, after gates have been closed and dump body is down, return locking pins (2) to top hole in adjustment tubes (1) to lock gates closed.



---

## 2-13. CONTROLLED SPREADING (M917A1 W/MCS).

---

**WARNING**

- **DO NOT connect or disconnect MCS remote control when dump body is being raised or lowered. Failure to follow this warning may cause personnel injury.**
- **When connected, MCS remote control overrides cab control unit. When remote control is disconnected, cab control activates. To avoid inadvertent opening or closing of gates, ALWAYS check gate positions and position of toggle switches on both cab and remote controls before plugging in or unplugging remote control. Toggle switches should be in CLOSED position. Failure to follow this warning may cause personnel injury.**
- **DO NOT stand or walk behind dump truck when it is dumping or in raised position. When using MCS remote control, always walk or stand to side of dump body. Failure to follow this warning may result in personnel injury.**
- **Keep hands and feet away from gate openings at all times. Failure to follow this warning could result in injury to personnel.**

**NOTE**

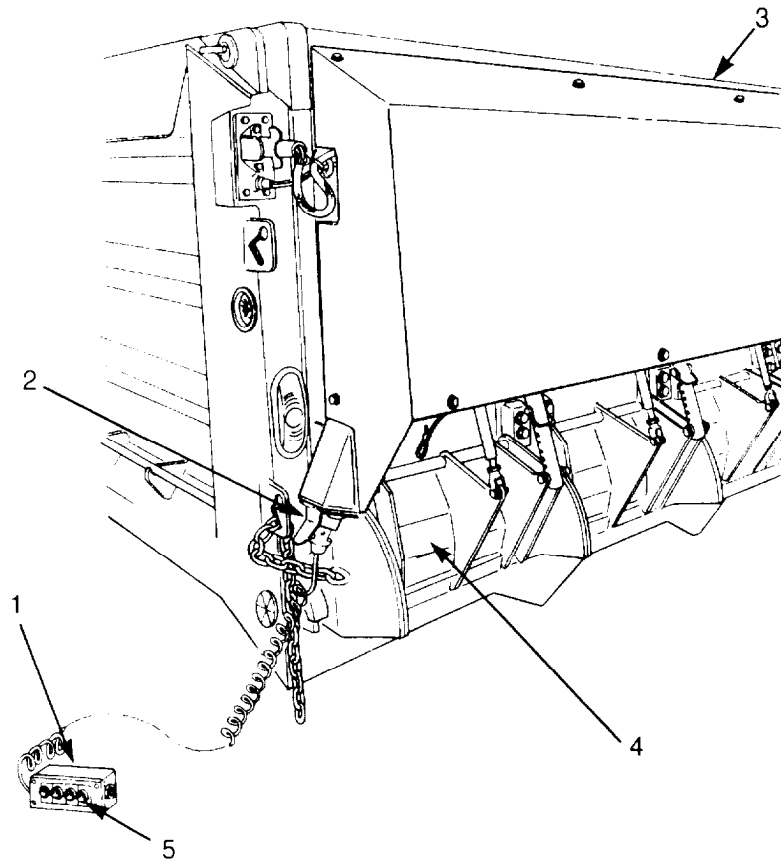
- **Operation requires two personnel, driver and assistant driver.**
  - **Follow general dumping instructions in paragraph 2-10, with minor differences. Differences will be pointed out as they occur.**
- a. Follow instructions in paragraph 2-10 to prepare to dump, except for the following steps:
    - (1) Do NOT unlock tailgate.
    - (2) Adjust MCS gate openings (paragraph 2-12).
  - b. Ensure that toggle switches on MCS control unit inside cab are in CLOSE position (paragraph 2-1).
  - c. Remove MCS remote control (1) from stowage. Ensure that toggle switches (5) are in CLOSED position. Plug remote control into receptacle (2) at right or left side of MCS tailgate (3).
  - d. Move toggle switches (5) to OPEN position. Depending on desired spreading pattern, all gates (4) or selected gates may be opened.
  - e. Raise dump body 2-3 ft (61-91 cm) and stop. Material should begin to spill out through gates (4).
  - f. Have driver pull forward with transmission in first gear (TM 9-2320-363-10). Maintain a steady speed not to exceed 3 mi/h (5 km/h). Have assistant driver check thickness of dumped material to determine if gate openings need adjusting.
  - g. If adjustment is needed, stop dump truck, lower dump body, close gates (4), place transmission in N (Neutral), and set parking brake. Adjust MCS gate openings (paragraph 2-12).
  - h. Maintain a steady speed until all material has been spread. Raise dump body periodically to keep material flowing evenly through gates (4).

---

**2-13. CONTROLLED SPREADING (M917A1 W/MCS) (Con't).**

---

- i. Close gates (4) by moving toggle switches (5) to CLOSED position.
- j. Lower dump body (paragraph 2-10).
- k. Unplug MCS remote control (1) from receptacle (2). Stow remote control in storage pouch and place in BII box.
- l. Lock gates closed by returning adjustment tube locking pins to top hole in tubes (paragraph 2-12).
- m. Perform after dumping steps, as applicable (paragraph 2-10).



---

## 2-14. OPERATING CARGO COVER.

---

**WARNING**

Observe the following safety regulations when operating cargo cover:

- Never operate system under obstructions, such as trees and power lines.
- Ensure that all personnel are clear of rear of dump body and the immediate area of the cover.
- Ensure that chain cover is in place.
- Keep all clothing away from moving parts.
- DO NOT cover load with crank handle installed.

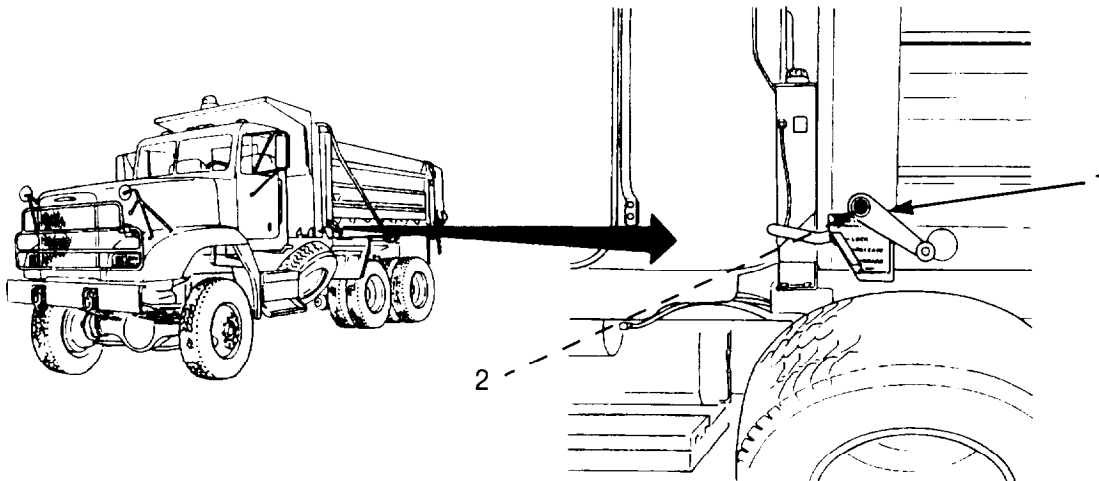
Failure to follow this warning may result in death or injury to personnel.

**CAUTION**

DO NOT attempt to uncover load without first removing any snow or water that has accumulated on cargo cover. Cargo cover may be damaged if this caution is not followed.

a. **Uncovering Load.**

- (1) Remove crank handle (1) from storage pouch in BII box.
- (2) Install crank handle (1) on crank shaft (2). Turn handle clockwise to roll up cargo cover. You can stop at any time and mechanism will hold cover in place.
- (3) Stop cranking when cargo cover is completely rolled up.
- (4) Remove crank handle (1) and stow.



---

**2-14. OPERATING CARGO COVER (Con't).**

---

**b. Covering Load.****WARNING**

**DO NOT cover load with crank handle installed. Failure to follow this warning may result in injury to personnel.**

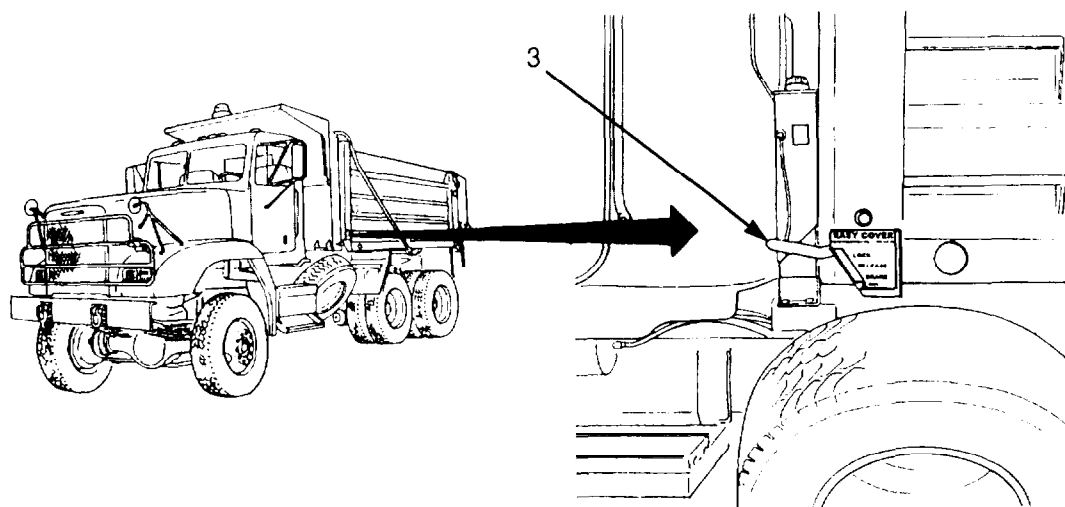
- (1) Ensure that crank handle (1) is NOT installed.
- (2) Quickly pull cargo cover control handle (3) to farthest down BRAKE position.

**CAUTION**

**DO NOT let go of cargo cover control handle until cargo cover is fully over load. Handle provides braking action for cargo cover swing. If you let go of handle before cargo cover is over load, damage to crank assembly may result.**

(3) Carefully lift cargo cover control handle (3) toward RELEASE position until cargo cover begins to move. Keep hand on handle so that cover moves slowly. If cargo cover moves too fast, pull handle down slightly to apply brakes.

(4) When cargo cover is fully over load, release cargo cover control handle (3). Handle will return to top LOCK position.



## 2-15. OPERATING BODY PROPS.

**WARNING**

**NEVER** work under a raised dump body unless it is secured in the raised position with body props and dump body is **EMPTY**. Failure to follow this warning may result in death or injury to personnel.

**NOTE**

- Use body props to support a raised, **EMPTY** dump body for inspection or maintenance.
- Refer to paragraph 2-10 for operation of hydraulic control lever to raise and lower dump body.

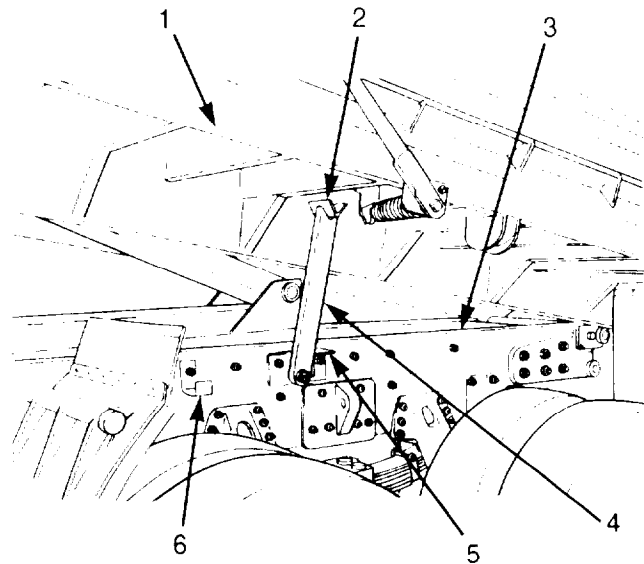
a. **Utilizing Body Props.**

(1) Start engine, place main light switch in SER DRIVE or STOP LIGHT position, and engage PTO (TM 9-2320-363-10).

(2) Check that transport lock is unlocked (paragraph 2-1).

(3) Raise dump body (1).

(4) Raise body prop (4) on each side of vehicle chassis (3) until prop contacts stop (5).



**CAUTION**

**Dump body must be lowered onto body props with PTO disengaged. Failure to follow this caution may damage body props, hydraulic cylinder or dump body.**

(5) Turn off main light switch and disengage PTO (TM 9-2320-363-10). Operate hydraulic control lever to lower dump body (1) until body props (4) firmly engage V-brackets (2).

b. **Stowing Body Props.**

(1) Start engine, place main light switch in SER DRIVE or STOP LIGHT position, and engage PTO (TM 9-2320-363-10).

(2) Raise dump body (1) until body props (4) are clear of V-brackets (2).

(3) Swing body props (4) down to stowed position in stowage brackets (6).

(4) With engine at idle speed, lower dump body (1).

(5) Turn off main light switch, disengage PTO, and shut down engine (TM 9-2320-363-10).

## Section IV. OPERATION UNDER UNUSUAL CONDITIONS

Paragraph Number	Paragraph Title	Page Number
2-16.	Operation in Windy Weather .....	2-39
2-17.	Operation in Rainy or Snowy Weather. ....	2-39
2-18.	Operation in Cold Weather. ....	2-39

### 2-16. OPERATION IN WINDY WEATHER.

**WARNING**

**DO NOT attempt to dump in high wind. High winds may disperse aggregate, causing injury to personnel or damage to equipment. High winds may also cause dump truck to roll over when bed is raised. Failure to follow this warning could result in death or injury to personnel or damage to equipment.**

In moderate winds use cargo cover to keep material from blowing out of dump bed.

### 2-17. OPERATION IN RAINY OR SNOWY WEATHER.

- a. In rainy or snowy weather use cargo cover to keep loads dry. Wet loads may stick, making dumping difficult.

**CAUTION**

**DO NOT leave cargo cover extended over an empty dump body. DO NOT attempt to uncover load without first removing any snow or water that has accumulated on cargo cover. Cargo cover may be damaged if this caution is not followed.**

- b. Remove any accumulated snow or water from cargo cover before attempting to uncover load

### 2-18. OPERATION IN COLD WEATHER.

Cold weather presents special problems because cold oil and hydraulic components should not be operated to capacity until the system has warmed up. This can be accomplished by performing the following steps:

- a. Engage PTO (TM 9-2320-363-10) while engine is warming up. Run engine at idle speed.
- b. Clear all personnel from around the dump body.
- c. Operate hydraulic control lever and check operation of dump body at low engine rpms to verify normal operation (paragraph 2-10). Keep in mind that oil has not been circulated through the hydraulic cylinder.
- d. Lower dump body and place hydraulic control lever in N (Neutral) position (paragraph 2-10).





## CHAPTER 3 OPERATOR MAINTENANCE

---

### Section I. LUBRICATION INSTRUCTIONS

- a. Lubrication instructions are in Appendix J of this manual.
- b. All lubrication instructions are mandatory.

## Section II. OPERATOR TROUBLESHOOTING PROCEDURES

Paragraph Number	Paragraph Title	Page Number
3-1.	General .....	3-2
3-2.	Explanation of Columns.. ..	3-2
3-3.	Troubleshooting Symptom Index .....	3-3
Table 3-1.	Operator Troubleshooting. ....	3-4

---

### 3-1. GENERAL.

---

- a. This section provides information for identifying and correcting malfunctions that you may find while operating the dump truck body.
- b. The Troubleshooting Symptom Index (paragraph 3-3) lists common malfunctions which may occur and refers you to the proper page in Table 3-1 for a troubleshooting procedure.
- c. If you are unaware of the location of an item mentioned in troubleshooting, refer to paragraphs 1-11, 2-1 or 2-2.
- d. Before performing troubleshooting, read and follow all safety instructions found in the warning summary at the front of this manual.
- e. This section cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed, or is not corrected by the listed corrective actions notify your supervisor.
- f. When troubleshooting a malfunction:
  - (1) Locate the symptom or symptoms in paragraph 3-3 that best describes the malfunction. If the appropriate symptom is not listed, notify your supervisor.
  - (2) Turn to the page in Table 3-1 where the troubleshooting procedures for the malfunction in question are described. Headings at the top of each page show how each troubleshooting procedure is organized: Malfunction, Test or Inspection (in step number order), and Corrective Action.
  - (3) Perform each step in the order listed until the malfunction is corrected and the item being inspected is operational. DO NOT perform any maintenance task unless the troubleshooting procedure tells you to do so.

---

### 3-2. EXPLANATION OF COLUMNS.

---

The columns in Table 3-1 are defined as follows:

- (1) **MALFUNCTION.** A visual or operational indication that something is wrong with the equipment.
- (2) **TEST OR INSPECTION.** A procedure to isolate the problem in a system or component.
- (3) **CORRECTIVE ACTION.** A procedure to correct the problem.

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**3-3. TROUBLESHOOTING SYMPTOM INDEX.**

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	<b>Troubleshooting Procedure Page</b>
<b>DUMP BODY TROUBLESHOOTING</b>	
HYDRAULIC SYSTEM	
Dump Body Raises and Lowers Sluggishly.. .....	3-6
Dump Body Will Not Lower When Hydraulic Control Lever is Placed in DOWN Position .....	3-6
Dump Body Will Not Raise When Hydraulic Control Lever is Placed in UP Position .....	3-5
MCS (M917A1 W/MCS)	
MCS Gate Will Not Operate.. .....	3-4
MCS Gate Will Not Operate With Driver's Controls.. .....	3-4
MCS Gate Will Not Operate With Remote Control .....	3-4
MCS Gate(s) Open or Close When Remote Control Is Connected.. .....	3-5
TAILGATE (M917A1 AND M917A1 W/MCS)	
Tailgate Assembly Lock Will Not Release .....	3-5

**Table 3-1. Operator Troubleshooting.**

---

<b>MALFUNCTION</b>
<b>TEST OR INSPECTION</b>
<b>CORRECTIVE ACTION</b>

---

*MCS (M917A1 W/MCS)*

**1. MCS GATE WILL NOT OPERATE.**

- Step 1. Check position of MCS gate(s) adjustment tube locking pins.  
Position locking pin(s) to desired operating position (paragraph 2-12).
- Step 2. Check that all air reservoir draincocks are closed.  
Close all draincocks.
- Step 3. Start engine and check for possible air leaks at air reservoirs, hoses, fittings, and MCS gate air cylinders.  
Notify Unit Maintenance of any leaks
- Step 4. MCS gate still fails to operate.  
Notify Unit Maintenance.

**2. MCS GATE WILL NOT OPERATE WITH DRIVER'S CONTROLS.**

- Step 1. Check if MCS remote control is connected to left or right side of MCS tailgate.  
Disconnect MCS remote control from MCS gate.
- Step 2. Check position of MCS gate(s) adjustment tube locking pins.  
Position locking pin(s) to desired operating position (paragraph 2-12).
- Step 3. Check that all air reservoir draincocks are closed.  
Close all draincocks.
- Step 4. Start engine and check for possible air leaks at air reservoirs, hoses, fittings, and MCS gate air cylinders.  
Notify Unit Maintenance of any leaks.
- Step 5. MCS gate still fails to operate.  
Notify Unit Maintenance.

**3. MCS GATE WILL NOT OPERATE WITH REMOTE CONTROL.**

- Step 1. Check if MCS remote control is properly connected to left or right side of MCS tailgate.  
Connect remote control to MCS tailgate,
- Step 2. Check position of MCS gate(s) adjustment tube locking pins.  
Position locking pin(s) to desired operating position (paragraph 2-12).

**Table 3-1. Operator Troubleshooting (Con't).**

<b>MALFUNCTION</b>	<b>TEST OR INSPECTION</b>	<b>CORRECTIVE ACTION</b>
	Step 3.	Check that all air reservoir draincocks are closed.  Close all draincocks.
	Step 4.	Start engine and check for possible air leaks at air reservoirs, hoses, fittings, and MCS gate air cylinders.  Notify Unit Maintenance of any leaks.
	Step 5.	MCS gate still fails to operate.  Notify Unit Maintenance.
<b>4.</b>	<b>MCS GATE(S) OPEN OR CLOSE WHEN REMOTE CONTROL IS CONNECTED.</b>	
	Step 1.	Check position of remote control toggle switches.  Position toggle switches to CLOSED position.
	Step 2.	Control gate(s) still opens or closes when remote control is connected.  Notify Unit Maintenance.
<i>TAILGATE (M917A1 AND M917A1 W/MCS)</i>		
<b>5.</b>	<b>TAILGATE ASSEMBLY LOCK WILL NOT RELEASE.</b>	
	Step 1.	Check that all air reservoir draincocks are closed  Close all draincocks.
	Step 2.	Start engine and check for possible air leaks at air reservoirs, hoses, fittings, and tailgate locking air cylinder.  Notify Unit Maintenance of any leaks.
<i>HYDRAULIC SYSTEM</i>		
<b>NOTE</b>		
<b>To prevent overfilling hydraulic reservoir, do NOT add hydraulic fluid when dump body is raised.</b>		
<b>6.</b>	<b>DUMP BODY WILL NOT RAISE WHEN HYDRAULIC CONTROL LEVER IS PLACED IN UP POSITION.</b>	
	Step 1.	Check position of main light switch.  Place main light switch in SER DRIVE or STOP LIGHT position (TM 9-2320-363-10).
	Step 2.	Check if PTO is engaged.  Engage PTO (TM 9-2320-363-10).

Table 3-1. Operator Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	Step 3.	Check the hydraulic oil level in sight tube on reservoir. Add hydraulic oil if necessary (Chapter 3, Section I).
	Step 4.	Check position of dump body transport lock. Place transport lock in UNLOCKED position (paragraph 2-2).
	Step 5.	Dump body still will not raise. Notify Unit Maintenance.
<b>7.</b>	<b>DUMP BODY RAISES AND LOWERS SLUGGISHLY.</b>	
	Step 1.	Check the hydraulic oil level in sight tube on reservoir. Add hydraulic oil if necessary (Chapter 3, Section I).
	Step 2.	Check hydraulic oil filter service indicator gage. Notify Unit Maintenance if gage is in the RED zone.
	Step 3.	Check hydraulic system for leaks. Notify Unit Maintenance if a leak is present.
	Step 4.	Check for binding and inadequate lubrication at dump body, hydraulic cylinder, and stabilizer pivot points. Lubricate pivot points (Chapter 3, Section I).
	Step 5.	Dump body still raises and lowers sluggishly. Notify Unit Maintenance.
<b>8.</b>	<b>DUMP BODY WILL NOT LOWER WHEN HYDRAULIC CONTROL LEVER IS PLACED IN DOWN POSITION.</b>	
	Step 1.	Check for deployed body props. Stow body props (paragraph 2-15).
	Step 2.	Check for obstructions. Remove obstructions.
<b>NOTE</b>		
<b>Do NOT overfill hydraulic reservoir. ONLY add enough hydraulic oil to safely lower the dump body. Recheck hydraulic oil with dump body in lowered position. Add or drain oil as necessary (Chapter 3, Section I).</b>		
	Step 3.	Check the hydraulic oil level in sight tube on reservoir. Add hydraulic oil if necessary (Chapter 3, Section I).
	Step 4.	Dump body still will not lower. Notify Unit Maintenance.

## Section III. OPERATOR MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
3-4.	General .....	3-7
3-5.	Cleaning .....	3-7

---

### 3-4. GENERAL.

---

Lubrication and cleaning are the only maintenance procedures performed by the operator, Required lubrication is specified in Chapter 3, Section I.

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### 3-5. CLEANING.

---

a. Road grime, mud, dust, salt, and material deposits inside dump body reduce payload and cause corrosion. Clean dump body whenever these materials begin to accumulate.

(1) With dump body completely lowered, use tailgate release control valve lever to release tailgate (paragraph 2-1).

(2) Use a high pressure stream of water to clean the interior and outer sides,

(3) Use a stiff broom or brush and detergent (Item 8, Appendix F) to remove remaining dirt from interior and outer sides.

(4) Raise dump body and support it with body props (paragraph 2-15). Rinse inside of box. Clean underside of dump body with a high pressure stream of water.

(5) Use a stiff broom or brush and detergent (Item 8, Appendix F) to remove remaining dirt from underside of dump body.

(6) Leave dump body raised until it is thoroughly dry.

(7) When dry, lower dump body. Close and secure tailgate

b. Cargo cover may be cleaned as required using a high pressure stream of water.





**CHAPTER 4  
UNIT MAINTENANCE**

**Section I. REPAIR PARTS; SPECIAL TOOLS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT**

Paragraph Number	Paragraph Title	Page Number
4-1.	Common Tools and Equipment .....	4-1
4-2.	Special Tools, TMDE, and Support Equipment .....	4-1
4-3.	Repair Parts.. .....	4-1

**4-1. COMMON TOOLS AND EQUIPMENT.**

For authorized common tools and equipment, refer to Appendix I, *Tool Identification List*, and to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

**4-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.**

Special tools are listed and illustrated in the *Repair Parts and Special Tools List (RPSTL)*, Appendix C. TMDE and support equipment are listed in the *Maintenance Allocation Chart (MAC)*, Appendix B.

**4-3. REPAIR PARTS.**

Repair parts are listed and illustrated in Appendix C of this manual.

## Section II. SERVICE UPON RECEIPT

Paragraph Number	Paragraph Title	Page Number
4-4.	General . . . . .	4-2
4-5.	Inspection Instructions . . . . .	4-2
4-6.	Servicing Instructions. . . . .	4-2

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### 4-4. GENERAL.

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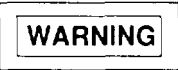
When a new, used, or reconditioned M917A1 or M917A1 w/MCS is first received, determine whether it has been properly prepared for service and is in condition to perform its mission. Follow the inspection instructions in paragraph 4-5 and servicing instructions in paragraph 4-6.

---

### 4-5. INSPECTION INSTRUCTIONS.

---

- a. Read and follow all instructions on DD Form 1397.
- b. Remove all straps plywood, tape, seals wrapping, or any other shipping material.



**Dry cleaning solvent, P-D-680, is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.**

If any exterior parts are coated with rust preventive compound, remove with dry cleaning solvent (Item 18, Appendix F) and rags (Item 15, Appendix F).

- d. Inspect the equipment for any damage incurred during shipment. Also check to see if the equipment has been modified.
- e. Check the equipment against the packing slip to ensure that the shipment is complete. Report any discrepancies.

---

### 4-6. SERVICING INSTRUCTIONS.

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- a. Perform all Unit maintenance PMCS. Schedule the next PMCS on DD Form 314.
- b. Perform all lubrication regardless of interval, as described in Lubrication Instructions, Chapter 3, Section I.
- c. Report any problems on DA Form 2404.

## Section III. GENERAL MAINTENANCE INSTRUCTIONS

Paragraph Number	Paragraph Title	Page Number
4-7.	General. . . . .	4-3
4-8.	Work Safety . . . . .	4-4
4-9.	Cleaning Instructions . . . . .	4-4
4-10.	Preservation of Parts . . . . .	4-5
4-11.	Painting. . . . .	4-5
4-12.	Inspection Instructions . . . . .	4-6
4-13.	Disassembly and Assembly Instructions . . . . .	4-6
4-14.	Lubrication Instructions. . . . .	4-6
4-15.	Application of Adhesives . . . . .	4-7
4-16.	Standard Tool Requirements . . . . .	4-7
4-17.	Tagging Wires and Hoses . . . . .	4-8
4-18.	Soldering . . . . .	4-8
4-19.	Heat Shrinkable Tubing . . . . .	4-8
4-20.	Electrical Ground Points. . . . .	4-9
4-21.	Lines and Ports. . . . .	4-10
4-22.	Antiseize Tape . . . . .	4-10
4-23.	Tubes and Compression Fittings . . . . .	4-11
4-24.	Fluid Disposal . . . . .	4-11
4-25.	Service Replacement Parts and Kits . . . . .	4-12
4-26.	Welding. . . . .	4-12
4-27.	Electrical Repair . . . . .	4-12

---

### 4-7. GENERAL.

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a. These general maintenance instructions contain general shop practices and specific methods you must be familiar with to properly maintain the equipment. You should read and understand these practices and methods before performing any maintenance procedures.

b. Before beginning a task, find out how much repair, modification, or replacement is needed to fix the equipment. Sometimes the reason for equipment failure can be seen right away and complete teardown is not necessary. Disassemble equipment only as far as necessary to repair or replace damaged parts.

c. In some cases a part may be damaged during removal. If the part appears to be good, and other parts behind it are not defective, leave it in place and continue with the procedure. Here are a few simple rules:

- (1) Do not remove dowel pins or studs unless loose, bent, broken, or otherwise damaged.
- (2) Do not remove bearings or bushings unless damaged. If you need to remove them to access parts behind, carefully pull out bearings and bushings.
- (3) Replace all gaskets, lockwashers, self-locking nuts, seals, cotter pins, and preformed packings.

---

#### 4-7. GENERAL (Con't).

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- d. The following "Initial Setup" information applies to all maintenance procedures:
  - (1) Resources are not listed unless they apply to the procedure.
  - (2) "Personnel Required" is listed only if more than one mechanic is required to complete the procedure.
- e. All tags and forms attached to the equipment must be checked to learn the reason for removal of equipment from service. Modification Work Orders (MWOs) and Technical Bulletins (TBs) must also be checked for equipment changes and updates.

---

#### 4-8. WORK SAFETY.

---

- a. Before beginning a procedure, think about the safety risks and hazards to yourself and to others. Wear protective gear such as safety goggles or lenses, safety shoes rubber apron, or gloves.
- b. Before beginning a procedure, ensure that the following conditions have been observed, unless otherwise specified:
  - (1) Vehicle should be parked on level ground with parking brake set.
  - (2) Transmission must be in N (Neutral)
  - (3) Engine must be off and, unless otherwise indicated, cool.
  - (4) Components must be at operating temperature to be tested
- c. Immediately clean up spilled fluids to avoid slipping
- d. When lifting heavy parts. have someone help you. Ensure that lifting equipment or jack is working properly. that it meets weight requirement of part being lifted, and that it is securely fastened to part.
- e. Always use power tools carefully

---

#### 4-9. CLEANING INSTRUCTIONS.

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**WARNING**

**Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment. To prevent this, refer to TM 9-247 for further instructions.**

- a. **General.** Cleaning instructions will be the same for the majority of parts and components which make up the equipment. The following applies to all cleaning operations:
  - (1) Clean all parts before inspection, after repair, and before assembly
  - (2) Keep hands free of grease which can collect dust, dirt and grit
  - (3) After cleaning, all parts should be covered or wrapped to protect them from dust and dirt. Parts that are subject to rust should be lightly oiled after cleaning (paragraph 4-10).

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## 4-9. CLEANING INSTRUCTIONS (Con't).

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### b. Castings, Forgings, and Machined Metal Parts.

**WARNING**

Dry cleaning solvent, P-D-680, is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.

- (1) Clean inner and outer surfaces with dry cleaning solvent (Item 18, Appendix F) and dry with clean rags (Item 15, Appendix F).
- (2) Remove grease and accumulated deposits with a scrub brush (Item 3, Appendix F).

**WARNING**

Compressed air used for cleaning or drying purposes, or for clearing restrictions, should never exceed 30 psi (207 kPa). Wear protective clothing (goggles/shield, gloves, etc.) and use caution to avoid injury to personnel.

- (3) Clear all threaded holes with compressed air to remove dirt and cleaning fluids.

**CAUTION**

**DO NOT wash oil seals, electrical cables, and flexible hoses with dry cleaning solvent or mineral spirits. Serious damage or destruction of material will result.**

- c. Oil Seals, Electrical Cables, and Flexible Hoses. Wash oil seals, electrical cables, and flexible hoses with a solution of detergent (Item 8, Appendix F) and water. and wipe dry with a clean rag (Item 15, Appendix F).
- d. General Cleaning Covered by Other Manuals. Refer to TM 9-247, *Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals.*

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## 4-10. PRESERVATION OF PARTS.

---

Unpainted metal parts that will not be installed immediately after cleaning should be covered with a thin coat of lubricating oil (Item 14, Appendix F).

---

## 4-11. PAINTING.

---

On painted areas where paint has been removed, paint in accordance with procedures outlined in TM 43-0139 and TB 43-0209.

---

## 4-12. INSPECTION INSTRUCTIONS.

---

### NOTE

**All damaged areas should be marked for repair or replacement.**

- a. All components and parts must be carefully checked to determine if they are serviceable for use, can be repaired, or must be scrapped.
- b. Inspect drilled and tapped (threaded) holes for the following:
  - (1) Wear, distortion, cracks, and any other damage in or around holes.
  - (2) Threaded areas for wear distortion (stretching) and evidence of cross-threading.
- c. Inspect metal lines, flexible lines or hoses, and metal fittings and connectors for the following:
  - (1) Metal lines for sharp kinks, cracks, bad bends, and dents.
  - (2) Flexible lines or hoses for fraying, evidence of leakage, and loose metal fittings or connectors.
  - (3) Metal fittings and connectors for thread damage and worn or rounded hex heads.
- d. Inspect castings, forging, and machined metal parts for the following:
  - (1) Machined surfaces for nicks, burrs, scoring, grooves, raised metal wear, and other damage.
  - (2) Inner and outer surfaces for breaks and cracks.
- e. Inspect bearings in accordance with TM 9-214.

---

## 4-13. DISASSEMBLY AND ASSEMBLY INSTRUCTIONS.

---

Follow these general practices when performing disassembly and assembly procedures:

- (1) Keep major components together whenever possible and practical.
- (2) Tag hoses, electrical wires, cables, and harnesses to identify them and aid during installation.
- (3) Keep related parts together for identification purposes.
- (4) Temporarily install attaching hardware such as screws, bolts, washers, and nuts to prevent loss.
- (5) Only disassemble to the point of the problem.
- (6) Ensure that parts are clean and lubricated before assembly.

---

## 4-14. LUBRICATION INSTRUCTIONS.

---

Refer to Chapter 3, Section I for detailed, illustrated instructions on proper lubrication. Some general practices to remember:

- (1) Use the correct lubricant.
- (2) Keep lubricants clean.
- (3) Clean all fittings prior to lubrication.
- (4) Lubricate clean, disassembled, and new parts to prevent rust (paragraph 4-10).

---

#### 4-15. APPLICATION OF ADHESIVES.

---

a. **General.** Adhesives are recommended in some tasks to ensure and strengthen seals. The following information describes their correct use and application.

b. **Silicone Sealant.** Silicone sealant (Item 16, Appendix F) is used to seal parts against moisture. Use the following instructions when applying:

- (1) Anytime a seal is broken, the part must be thoroughly cleaned to remove any remaining sealing compound and dirt.
- (2) Thoroughly clean surface before applying sealant.
- (3) When applying sealant, ensure that the area is completely covered. Press sealant into and around parts as necessary.
- (4) Silicone sealant will set in 15-30 minutes depending on temperature and humidity.

c. **Loctite Adhesive.** Loctite adhesive (Item 1, Appendix F) provides a seal against leakage and a resistance to loosening when used in the assembly of threaded, slip-fitted, or press-fitted parts. Always use grade of Loctite adhesive specified and never use when other retaining means are provided, such as lockwires, lockwashers, lockplates, and fasteners. DO NOT use Loctite adhesive on brass fittings, plugs or items that need frequent servicing, or when operating temperature exceeds 300°F (149°C). Apply Loctite adhesive as follows:

- (1) Before application, clean threads to remove oil, grease, and metal chips
- (2) Apply Loctite adhesive to second and third threads. DO NOT apply to first thread to ensure system cleanliness.
- (3) Loctite adhesive will dry in 6-24 hours at room temperature.
- (4) Adjustments for elbows, gages, and valves can be made up to 24 hours after application without affecting the seal.

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#### 4-16. STANDARD TOOL REQUIREMENTS.

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a. The following are general practices regarding the use of tools:

- (1) Always use the proper tool kit and tools for the procedure being performed.
- (2) Ensure that tools are clean and lubricated to reduce wear and to prevent rust.
- (3) Keep track of tools. Do not be careless with them.
- (4) Return tools to toolbox when finished with repair or maintenance.
- (5) Return toolboxes and tools to tool storage when not in use.
- (6) Inventory tools before and after each use.

b. Some maintenance tasks may require special or fabricated tools. The "Initial Setup" of the procedure will specify any special or fabricated tools needed to perform that procedure. Use these special tools only for the maintenance procedures for which they are designed or called out. If you are unfamiliar with a required tool, see your supervisor.

---

## 4-17. TAGGING WIRES AND HOSES.

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- a. Use marker tags (Item 19, Appendix F) to identify all electrical wires, lines, and any other parts which may be hard to identify or replace later. Fasten tags to parts during removal by wrapping wire fasteners around or through parts and twisting ends together. Position tags to be out of the way during cleaning, inspection, and repair. Mark tags with a pencil, pen, or marker.
- b. Whenever possible, identify electrical wires with the number of the terminal or wire to which it connects. If no markings can be found, tag both wires or wire and terminal, and use the same identifying mark for both. If you cannot tag a wire because it must fit through a small hole or you cannot reach it, write down the description of the wire and the point to which it connects or draw a simple diagram on paper. Be sure to write down enough information so you will be able to properly connect the wires during assembly. If you need to identify a loose wire, look for identifying numbers near the end of the wire, stamped on a permanent metal tag. Compare this number to wire number on the appropriate electrical schematic.
- c. Identify lines when you are taking off more than one line at the same time. Mark tags with points to which lines and hoses must be connected. If it is not obvious which end of a line goes where, tag each end of the line.
- d. Identify and tag other parts as required by name and installed location.

---

## 4-18. SOLDERING.

---

**CAUTION**

**Use low wattage soldering gun when soldering electrical wires, connectors, terminal lugs, and receptacles. High wattage soldering guns may damage parts by overheating.**

- a. Solder connection must be bright and clean before soldering. Remove dirt and grease with a wire brush (Item 4, Appendix F) or a pocket knife (Item 8, Appendix I). Solder used must be of lead alloy (Item 17, Appendix F) with soldering flux (Item 9, Appendix F). All wires, parts, and soldering gun (Item 7, Appendix I) must be tinned for good connection and maximum transfer of heat.
- b. To prevent overheating damage to electrical parts when soldering and unsoldering connections, hold bare wire, lead, or terminal lug close to soldering point with long roundnose pliers (Item 8, Appendix I). Pliers act as heat sink and absorb excess heat.

---

## 4-19. HEAT SHRINKABLE TUBING.

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Use the heat shrinkable tubing (Item 23, Appendix F) to insulate soldered and crimped electrical connections as follows:

- (1) Cut desired length of new heat shrinkable tubing twice the length of the connection to be covered.
- (2) Slide the heat shrinkable tubing onto the wire and out of the way before making electrical connection.
- (3) After making electrical connection, slide heat shrinkable tubing into place over electrical connection.



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#### 4-19. HEAT SHRINKABLE TUBING (Con't).

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**WARNING**

**DO NOT touch heat shrinkable tubing for at least 30 seconds after heating. Heat shrinkable tubing is hot and will burn you.**

(4) Hold hot air blow gun (Item 2, Appendix I) 4-5 in. (10.2-12.7 cm) away from heat shrinkable tubing and apply heat for approximately 30 seconds. Stop applying heat as soon as heat shrinkable tubing forms to the shape of the electrical connection.

---

#### 4-20. ELECTRICAL GROUND POINTS.

---

Many electrical problems are the result of poor ground connection. You can ensure that ground connections are good by performing the following steps:

**WARNING**

**Although battery ground cable must be connected in order to test electrical circuit voltage, disconnect battery ground cable before performing resistance tests or replacing parts. This will prevent shock to personnel, and damage to parts and equipment.**

(1) Remove hardware connecting ground cable terminal lug to ground point.

**WARNING**

**Dry cleaning solvent, P-D-680, is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.**

(2) Clean mounting hardware, ground cable terminal lugs, and ground point with dry cleaning solvent (Item 18, Appendix F) and scrub brush (Item 3, Appendix F).

(3) Remove any rust with wire brush (Item 4, Appendix F).

(4) Look for cracks, loose terminal lugs, and stripped threads. Replace any defective parts.

(5) Install hardware connecting ground cable terminal lug to ground point. Ensure that all hardware is tight.

---

## 4-21. LINES AND PORTS.

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To keep dirt from contaminating fluid systems when removing and installing lines, perform the following steps:

- (1) Clean fittings and surrounding area before disconnecting lines
- (2) Cover, cap, plug, or tape lines and ports after disconnecting lines. Use cap and plug set (item 1, Appendix I) on hydraulic lines. When these are not available, use hand-carved wooden plugs, clean rags (Item 15, Appendix F), duct tape (Item 21, Appendix F), or other similar materials to prevent dirt from entering system.
- (3) Ensure that new and used parts are clean before installing.
- (4) Wait to remove cover, cap, plug, or tape from lines and ports until just before installing lines.

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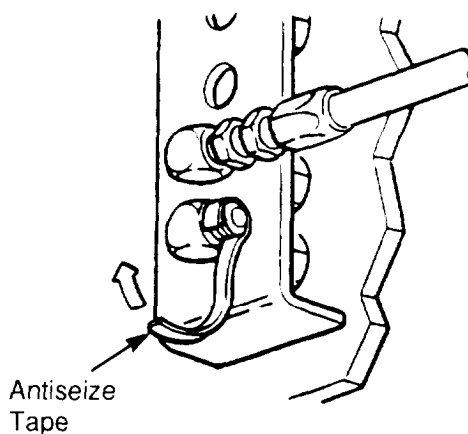
## 4-22. ANTISEIZE TAPE.

---

- **DO NOT use antiseize tape on air lines. Damage to air valves may result if antiseize tape is used.**
- **Apply antiseize tape only to pipe threads of male fittings of hydraulic system.**

When connecting hydraulic lines and fittings without compression sleeves or packings, antiseize tape (Item 20, Appendix F) may be used to keep connections from leaking. Use as follows:

- (1) Ensure that threads are clean and dry.
- (2) Start antiseize tape one or two threads from small or leading edge of fitting, joining tape together with an overlap of about 1/8 in. (3.18 mm) for fittings with fine threads. For fittings with coarse threads, tape should be wrapped around threads two or three times.
- (3) Tightly wrap antiseize tape in same direction as you would tighten a nut. Tape must be pressed into threads without cutting or ripping.



**CAUTION**

**DO NOT exceed specified torque or use power tools to tighten fittings taped with antiseize tape. Over tightening could damage fitting threads and cause connection to leak.**

- (4) Using hand tools, tighten fittings to specified torque.

---

#### 4-23. TUBES AND COMPRESSION FITTINGS.

---

a. Tubes with inverted nuts and compression fittings are designed for one time assembly. Once assembled, they must be replaced as a unit if any parts are found defective. Used parts may not seal properly when used with new ones.

b. Used tube assemblies in good condition can be installed to their original location without leaking.

c. Assemble new tubes, compression sleeves, and inverted nuts as follows:

(1) Slide inverted nut onto end of tube.

(2) Slide compression sleeve onto end of tube.

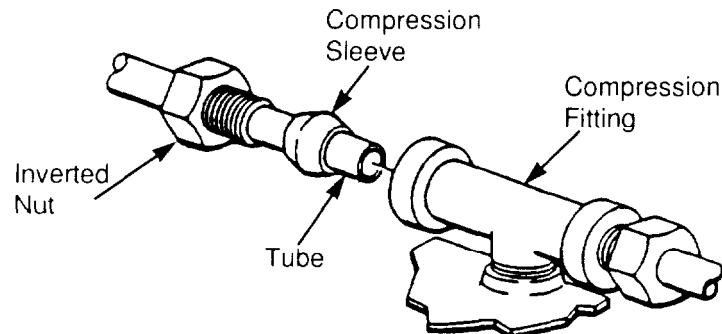
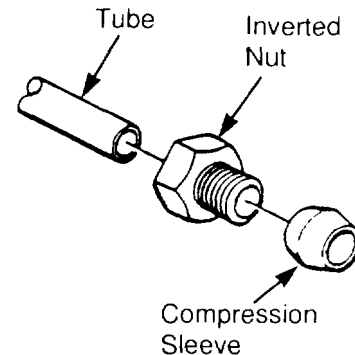
(3) Repeat previous two steps for other end of tube as required.

d. Install new tube assemblies as follows:

(1) Insert end of tube as far as it will go into compression fitting to which tube is being installed.

(2) Twist inverted nut into compression fitting and tighten inverted nut against compression sleeve with open-end wrench (Item 8, Appendix I). Compression sleeve will clamp down around tube and conform to internal surface of compression fitting and inverted nut.

(3) Repeat previous two steps for other end of tube as required.




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#### 4-24. FLUID DISPOSAL.

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**WARNING**

When servicing this vehicle, performing maintenance, or disposing of materials such as engine coolant, transmission fluid, lubricants, battery acids or batteries and CARC paint, consult your Unit/Local Hazardous Waste Disposal Center or safety office for local regulatory guidance. If further information is needed, please contact the Army Environmental Hotline at 1-800-872-3845.

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#### 4-25. SERVICE REPLACEMENT PARTS AND KITS.

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Many service replacement parts are available in standard sizes as well as various undersized and/or oversized sizes. Service kits for reconditioning certain parts and service sets, which include all parts necessary to complete a procedure, are also available.

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#### 4-26. WELDING.

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**CAUTION**

**Before welding, the following components must be disconnected: DDEC ECU, ABS ECU, CTIS ECU, Datalogger, and batteries (TM 9-2320-363-20). If welding on a trailer, it must be uncoupled from dump truck. Failure to follow this caution may damage electronic components.**

Refer to TM 9-237, *Operator's Manual for Welding Theory and Application*, for instructions on welding components.

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#### 4-27. ELECTRICAL REPAIR.

---

- a. **General.** Specific electrical system maintenance tasks are covered in Chapter 4, Section VI of this manual.
- b. **Wiring Harness and Cable Repair.** Wiring harness and cable repair for the dump truck body is the same as for the dump truck chassis. Refer to instructions in Chapter 3 of TM 9-2320-363-20.

## Section IV. UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Paragraph Number	Paragraph Title	Page Number
4-28.	General . . . . .	4-13
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4-31.	General PMCS Procedures . . . . .	4-15
4-32.	PMCS Initial Setup. . . . .	4-16
4-33.	Lubrication Data. . . . .	4-17
Table 4-1.	Lubrication Data. . . . .	4-17
4-34.	Mandatory Replacement Parts. . . . .	4-18
Table 4-2.	Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body . . . . .	4-19

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### 4-28. GENERAL.

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#### NOTE

**Refer to TM 9-2320-363-20 for Unit PMCS for the dump truck chassis.**

To ensure that the dump truck body is ready for operation at all times, it must be lubricated and inspected on a regular basis so that defects may be found before they result in serious damage, equipment failure, or injury to personnel. Table 4-1 lists the types, amounts, and temperature ranges of the lubricants required for specified intervals. Table 4-2 contains systematic instructions on lubrications inspections, adjustments, and corrections to be performed by Unit Maintenance to keep your equipment in good operating condition and ready for its primary mission.

---

### 4-29. EXPLANATION OF TABLE ENTRIES.

---

a. **Item Number (Item No.) Column.** Numbers in this column are for reference. When completing DA Form 2404 (*Equipment Inspection and Maintenance Worksheet*), include the item number for the check/service indicating a fault. Item numbers also appear in the order you must perform checks and services for the interval listed.

b. **Interval Column.** This column tells you when you must perform the procedure in the procedure column.

(1) *Semiannual* procedures must be done once every six months

(2) *Annual* procedures must be done once each year.

c. **Location, Item to Check/Service Column.** This column identifies the location and the item to be checked or serviced.

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## 4-29. EXPLANATION OF TABLE ENTRIES (Con't).

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### NOTE

The **WARNINGS** and **CAUTIONS** appearing in your PMCS table should always be observed. **WARNINGS** and **CAUTIONS** appear before applicable procedures. These **WARNINGS** and **CAUTIONS** must be observed to prevent serious injury to yourself and others or to prevent your equipment from being damaged.

d. **Procedure Column.** This column gives the procedure you must perform to check or service the item listed in the Item to Check/Service column to know if the equipment is ready or available for its intended mission or for operation. You must perform the procedure at the time stated in the interval column.

e. **Not Fully Mission Capable If: Column.** Information in this column tells you what fault will keep your equipment from being capable of performing its primary mission. If you make check and service procedures that show faults listed in this column the equipment is not mission-capable. Follow standard operating procedures for maintaining the equipment or reporting equipment failure.

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## 4-30. GENERAL LUBRICATION PROCEDURES.

---

### NOTE

Refer to Appendix J, **Lubrication Instructions**, for Lubrication Chart, key, localized views, and procedural notes.

a. Recommended intervals are based on normal conditions of operation, temperature, and humidity. When operating under extreme conditions, lubricants should always be changed more frequently. When in doubt, notify your supervisor.

b. Keep all lubricants in a closed container and store in a clean, dry place away from extreme heat or cold. Keep container covers clean and do not allow dust, dirt, or other foreign material to mix with lubricants. Keep all lubrication equipment clean and ready for use.

c. Maintain a good record of all lubrication performed and report any problems noted during lubrication. Refer to DA Pam 738-750 for maintenance forms and procedures to record and report any findings.

d. Keep all external parts of equipment not requiring lubrication free of lubricants. Before lubrication, wipe lubrication fittings with a clean rag (Item 15, Appendix F). After lubrication, wipe off excess oil or grease to prevent accumulation of foreign matter.

e. Refer to FM 9-207 for lubrication instructions in cold weather.

f. Refer to AR 70-12 for use of standardized lubricants.

g. Hydraulic oil filter element will be changed when:

(1) it is known to be contaminated or clogged.

(2) it is directed by Army Oil Analysis Program (AOAP) laboratory analysis.

h. Hydraulic oil must be sampled initially at 90 days of operation, as prescribed by DA Pam 738-750. Thereafter, it is sampled annually unless AOAP results dictate otherwise.

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## 4-31. GENERAL PMCS PROCEDURES.

---

- a. Always perform PMCS 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. If any deficiency is discovered, perform the appropriate troubleshooting task in Section V of this chapter. If any component or system is not serviceable, or if the given service does not correct the deficiency, notify your supervisor.
- b. Before performing preventive maintenance, read all the checks required for the applicable interval and prepare all tools needed to make all checks. Have several clean rags (Item 15, Appendix F) handy. Perform ALL inspections at the applicable interval.

**WARNING**

**Dry cleaning solvent, P-D-680, is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and seek medical attention.**

- (1) **Keep It Clean.** Dirt, grease, oil, and debris get in the way and may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (Item 18, Appendix F) on all metal surfaces. Use dishwashing compound (Item 5, Appendix F) and water when you clean rubber, plastic, and painted surfaces.
- (2) **Deterioration, Rust, and Corrosion.**
  - (a) Be alert for deterioration of plastic and rubber materials. Report it to your supervisor
  - (b) Check metal parts for rust and corrosion. If any bare metal or corrosion exists, clean and apply a light coat of lubricating oil (Item 14, Appendix F). Report it to your supervisor.
- (3) **Bolts, Nuts, and Screws.** Check bolts, nuts, and screws for obvious looseness, missing, bent, or broken condition. You can't try them all with a tool, but look for chipped paint, bare metal, or rust around bolt heads. If you find one you think is loose, tighten it.
- (4) **Welds.** Look for loose or chipped paint, rust, or gaps where parts are welded together. If you find a bad weld, report it to your supervisor.
- (5) **Electric Wires and Connectors.** Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connectors and ensure that the wires are in good condition.
- (6) **Hydraulic Hoses and Lines.** Look for wear, damage, and signs of leaks. Ensure that clamps and fittings are tight. Wet spots indicate leaks, but a stain around a fitting or connector can also mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, correct it if authorized by the Maintenance Allocation Chart (Appendix B). If not authorized, notify your supervisor.
- (7) **Fluid Leakage.** It is necessary for you to know how fluid leakage affects the status of your dump truck. 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.

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#### 4-31. GENERAL PMCS PROCEDURES (Con't).

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##### Leakage Definitions for Unit PMCS

Class I	Leakage indicated by wetness or discoloration, but not great enough to form drops.
Class II	Leakage great enough to form drops, but not enough to cause drops to drip from the item being checked/inspected.
Class III	Leakage great enough to form drops that fall from the item being checked/inspected.

**CAUTION**

Operation is allowable with Class I and Class II leakage. **WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR.** When operating with Class I or Class II leaks, check fluid levels more frequently. Class III leaks must be reported immediately to your supervisor. Failure to do this will result in damage to vehicle and/or components.

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#### 4-32. PMCS INITIAL SETUP.

---

a. **General.**

- (1) This paragraph lists tools, materials, and personnel required for PMCS and lubrication.
- (2) Mandatory replacement parts for PMCS and lubrication are listed in paragraph 4-34.

b. **Tools.**

- (1) Drain pan (Item 4, Appendix I).
- (2) General mechanic's tool kit (Item 8, Appendix I).

c. **Materials.**

- (1) AOAP sampling kit
- (2) Corrosion preventive (Item 7, Appendix F)
- (3) Dishwashing compound (Item 5, Appendix F)
- (4) Detergent (Item 8, Appendix F)
- (5) Lubricating oil, OEA (Item 12, Appendix F)
- (6) Lubricating oil, OE/HDO 10 (Item 13, Appendix F)
- (7) Lubricating oil, OE/HDO 30 (Item 14, Appendix F)
- (8) Rags (Item 15, Appendix F)
- (9) Dry cleaning solvent (Item 18, Appendix F)

d. **Personnel.**

- (1) Driver/Operator
- (2) Unit Maintenance Mechanic



**4-33. LUBRICATION DATA.**

Table 4-1. Lubrication Data.

SEMIANNUAL LUBRICANTS		
Lubricant/Component	Refill Capacity	Expected Temperatures*
<b>WD-40</b> Corrosion Preventive <ul style="list-style-type: none"> <li>• Cargo Cover Chain</li> <li>• Cargo Cover Roller Shaft Bearings</li> </ul>	As Required	ALL TEMPERATURES
* For arctic operation. refer to FM 9-207.		

ANNUAL LUBRICANTS		
Lubricant/Component	Refill Capacity	Expected Temperatures*
<b>OE/HDO (MIL-L-2104)</b> Oil, Lubricating, ICE, Tactical	12.75 gal. (48.2 l)	OE/HDO-10:      +6°F to +122°F (-14°C to +50°C)
<b>OEA (MIL-L-46167)</b> Oil, Lubricating, ICE, Arctic <ul style="list-style-type: none"> <li>• Hydraulic Reservoir</li> </ul>		OEA:                -67°F to +32°F (-55°C to 0°C)
<b>WD-40</b> Corrosion Preventive <ul style="list-style-type: none"> <li>• Cargo Cover Chain</li> <li>• Cargo Cover Roller Shaft Bearings</li> </ul>	As Required	ALL TEMPERATURES
For arctic operation, refer to FM 9-207.		

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**4-34. MANDATORY REPLACEMENT PARTS.**

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**NOTE**

Refer to Appendix C for more information on mandatory replacement parts.

**ANNUAL**

<b><u>Nomenclature</u></b>	<b><u>Qty</u></b>	<b><u>(CAGEC) P/N</u></b>	<b><u>NSN</u></b>
Filter element, hydraulic oil	1	(5X050) 403366	4330-01-K65-5972
Preformed packing, filter housing cover	1	(60827) 251-70-BN	5330-01-447-4034

Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body,

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
1	Semi-annual	Tailgate Operation	<div style="border: 1px solid black; padding: 2px; text-align: center; margin-bottom: 10px;"><b>WARNING</b></div> <p>Unless otherwise specified, perform all lubrication and preventive maintenance checks with dump truck on level ground, transmission in N (Neutral), parking brake set, and engine off. Failure to follow this warning may result in personnel injury.</p> <p style="text-align: center;"><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• Perform all Operator PMCS, (Chapter 2, Section II) as appropriate, while performing Item No. 1-4 checks. Drive at least 5 mi (8 km) to give enough time to detect malfunctions.</li> <li>• Dump truck's chassis air system activates both models' tailgate locking mechanism and interfaces with MCS air system on the M917A1 w/MCS to operate the MCS tailgate.</li> </ul> <p>a. Start engine and fully pressurize vehicle air systems (TM 9-2320-363-10). Listen for air leaks.</p> <p>b. Operate tailgate release control valve lever in cab (paragraph 2-1). Check that tailgate unlocks and locks.</p>	a. Air leaks are present.

Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
2	Semi-annual	MCS Tail-gate Operation (M917A1 w/MCS)	Check operation of MCS gates (paragraph 2-13). Listen for air leaks.	Air leaks are present.
3	Semi-annual	Hydraulic System Operation	<p>Raise and lower dump body and check for smooth operation (paragraph 2-10). Be alert for hydraulic fluid leaks.</p> <div style="border: 1px solid black; padding: 5px; text-align: center; width: fit-content; margin: 10px auto;"> <p><b>WARNING</b></p> </div> <p><b>Observe the following safety regulations when operating cargo cover:</b></p> <ol style="list-style-type: none"> <li>a. Never operate system under obstructions, such as trees and power lines.</li> <li>b. Ensure that all personnel are clear of rear of dump body and the immediate area of the cover.</li> <li>c. Ensure that chain cover is in place.</li> <li>d. Keep all clothing away from moving parts.</li> <li>e. DO NOT cover load with crank handle installed.</li> </ol> <p>Failure to follow this warning may result in death or injury to personnel.</p>	Class III hydraulic fluid leaks are present.

**Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
4	Semi-annual	Cargo Cover	<p>a. Operate cargo cover and check for smooth operation (paragraph 2-14).</p> <p>b. Remove chain cover (paragraph 4-66). Inspect chain for dirt, corrosion or other damage. Check for proper chain adjustment. Replace chain if damaged (paragraph 4-66).</p> <p>c. Lubricate chain sparingly with corrosion preventive (Item 7, Appendix F).</p> <p>d. Lubricate roller shaft bearings (1) at left and right side roll-up bar mounting brackets (2). Apply corrosion preventive (Item 7, Appendix F) sparingly.</p> <p>e. Install chain cover (paragraph 4-66)</p>	

The diagram illustrates the location of the roller shaft bearings on the cargo cover mechanism. On the left, a side view of the truck shows the cargo cover. An arrow points from the cover to a detailed cross-sectional view of the roller shaft assembly. In this detail, '1' points to the roller shaft bearing and '2' points to the mounting bracket.

Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
5	Semi-annual	Dump Body	<p>a. With dump body down, inspect dump body and tailgate for cracks, breaks, bends, weld breaks, wear, and missing or loose bolts.</p> <p>b. Inspect for corrosion in accordance with TM 43-0213.</p>	
6	Semi-annual	Body Props	<p>Inspect body props for binding or damage. Replace if damaged (paragraph 4-61).</p> <p style="text-align: center;"><b>WARNING</b></p> <p>NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.</p>	
7	Semi-annual	Hydraulic Reservoir, Fill Cap Vent	<p>a. Raise dump body and support with body props (paragraph 2-15).</p> <p>b. Remove fill cap from reservoir. Clean fill cap vent in accordance with Chapter 4. Section III. <i>General Maintenance Instructions</i>. Install fill cap.</p> <p style="text-align: center;"><b>WARNING</b></p> <p>DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body prop before lines disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.</p> <p>c. Inspect all hydraulic lines, fittings, and components for signs of leaks. Tighten any connections that are loose. Ensure that hydraulic lines are supported. Replace any damaged component.</p>	

Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

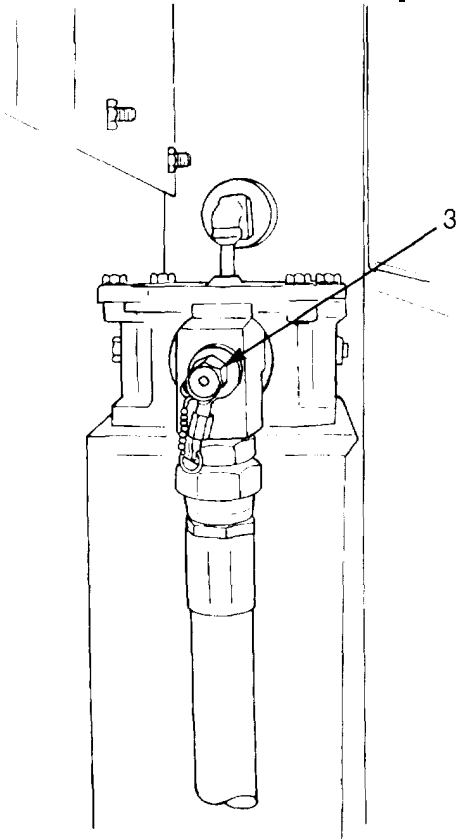
Item	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
8	Semi-annual	Stabilizer	<p style="text-align: center;"><b>WARNING</b></p> <p>NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.</p> <p>Inspect stabilizer for loose mounting or damage. If damaged, notify Direct Support Maintenance.</p>	
9	Semi-annual	Tailgate Release Air Cylinder Lines	<p style="text-align: center;"><b>WARNING</b></p> <p>NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.</p> <p>With vehicle air system pressurized. check air lines. fittings, and tailgate release air cylinder under dump body for loose mounting, leaks or damage. A solution of detergent (Item 8, Appendix F) and water applied to lines and fittings will help locate leaks.</p>	
10	Semi-annual	Tailgate Locking Linkage	<p style="text-align: center;"><b>WARNING</b></p> <p>NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.</p> <p>Inspect tailgate locking linkage for breaks, bends, cracks, corrosion. and loose mounting.</p>	

Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).

Item No.	Interval	Location Item To Check/ Service	Procedure	Not Fully Mission Capable If:
11	Semi-annual	Frame and Crossmembers	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">WARNING</div> <p><b>NEVER work under a raised-dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.</b></p> <p>a. Inspect dump body frame and crossmembers for cracks, breaks, bends, weld breaks, wear, and missing or loose bolts and rivets.</p> <p>b. Inspect for corrosion in accordance with TM 43-0213.</p> <p>c. Remove body props and lower dump body (paragraph 2-15).</p>	
12	Annual	Decals and Stencils	<p>Check all decals and stencils to ensure legibility.</p> <p style="text-align: center;"><b>NOTE</b></p> <p>Hydraulic oil must be sampled initially at 90 days of operation, as prescribed by DA Pam 738-750. Thereafter, it is sampled annually unless AOAP results indicate otherwise.</p>	
13	Annual	<u>Hydraulic Reservoir</u> , AOAP Sampling Valve	<p>Take sample of hydraulic oil.</p> <p>a. Start engine. place main light switch in SER DRIVE or STOP LIGHT position, and engage PTC (TM 9-2320-363-10). Run engine for 3-5 minutes.</p> <p>b. Remove cap from discharge port. Clean sampling valve (3) with a clean rag (Item 15, Appendix F).</p> <p>c. Turn knob of sampling valve 1/4 turn clockwise and collect approximately 2 oz (60 ml) into a suitable container. Discard oil.</p>	

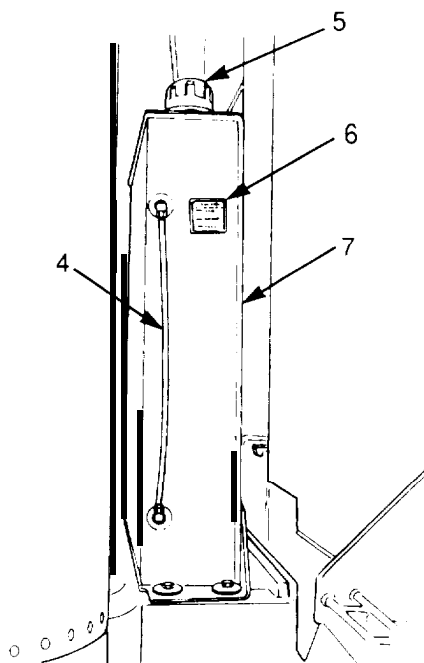


**Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/Service		
13 (Con't)	Annual	Hydraulic Reservoir, AOAP Sampling Valve	<p>d. Collect oil sample into clean sample bottle to approximately 1/2 in. (1.3 cm) below neck of sample bottle.</p> <p>e. Install cap on discharge port and check for leaks.</p> 	

**Table 4-2. Unit Preventive Maintenance Checks and Services (PMCS) for M917A1 and M917A1 w/MCS Body (Con't).**

Item No.	Interval	Location	Procedure	Not Fully Mission Capable If:
		Item To Check/ Service		
14	Annual	Hvdraulic Reservoir	<p>a. With dump body down and engine off, remove magnetic drain plug from underside of reservoir (7). Drain hydraulic oil into a suitable container.</p> <p>b. Remove fill cap (5). Remove strainer from reservoir (7) (paragraph 4-74). Clean strainer and reinstall.</p> <p>c. Replace hydraulic oil filter element (paragraph 4-75).</p> <p>3. Clean drain plug and reinstall.</p> <p style="text-align: center;"><b>NOTE</b></p> <p><b>Hydraulic reservoir capacity is 12.75 gal. (48.2 l). Do NOT overfill.</b></p> <p>e. Fill reservoir (7) with lubricating oil (Item 12 or 13, Appendix F) until level of fluid in sight tube (4) is at FULL mark as indicated on oil level decal (6). Install fill cap (5).</p>	



## Section V. UNIT TROUBLESHOOTING PROCEDURES

Paragraph Number	Paragraph Title	Page Number
4-35.	General .....	4-27
4-36.	Explanation of Columns .....	4-27
4-37.	Troubleshooting Symptom Index .....	4-28
Table 4-3.	Unit Troubleshooting .....	4-29

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### 4-35. GENERAL.

---

a. This section provides information for identifying and correcting malfunctions that you may find while operating and maintaining the dump truck body.

b. The Troubleshooting Symptom Index (paragraph 4-37) lists common malfunctions which may occur and refers you to the proper page in Table 4-3 for a troubleshooting procedure.

c. If you are unaware of the location of an item mentioned in troubleshooting, refer to paragraphs 1-11, 2-1 or 2-2.

d. Before performing troubleshooting, read and follow all safety instructions found in the warning summary at the front of this manual.

e. This section cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed, or is not corrected by the listed corrective actions, notify your supervisor,

f. When troubleshooting a malfunction:

(1) Locate the symptom or symptoms in paragraph 4-37 that best describes the malfunction. If the appropriate symptom is not listed, notify your supervisor.

(2) Turn to the page in Table 4-3 where the troubleshooting procedures for the malfunction in question are described. Headings at the top of each page show how each troubleshooting procedure is organized: Malfunction, Test or Inspection (in step number order), and Corrective Action.

(3) Perform each step in the order listed until the malfunction is corrected and the item being inspected is operational. DO NOT perform any maintenance task unless the troubleshooting procedure tells you to do so.

---

### 4-36. EXPLANATION OF COLUMNS.

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The columns in Table 4-3 are defined as follows:

- (1) MALFUNCTION. A visual or operational indication that something is wrong with the equipment
- (2) TEST OR INSPECTION. A procedure to isolate the problem in a system or component.
- (3) CORRECTIVE ACTION. A procedure to correct the problem.

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**4-37. TROUBLESHOOTING SYMPTOM INDEX.**

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	Troubleshooting Procedure Page
<b>DUMP BODY TROUBLESHOOTING</b>	
HYDRAULIC SYSTEM	
Dump Body Lowers With Hydraulic Control Lever in the Neutral Position and PTO Disengaged .....	4-32
Dump Body Lowers With Hydraulic Control Lever in the Neutral Position and PTO Engaged .....	4-32
Dump Body Raises and Lowers Sluggishly .....	4-32
Dump Body Raises With Hydraulic Control Lever in the Neutral Position and PTO Engaged . .	4-32
Dump Body Will Not Raise and/or Lower .....	4-31
MCS (M917A1 W/MCS)	
MCS Gate Will Not Operate .....	4-29
MCS Gate Will Not Operate With Driver's Controls .....	4-29
MCS Gate Will Not Operate With Remote Control .....	4-30
MCS Gates Open or Close When Remote Control is Connected. ....	4-30
One or More MCS Gates Will Not Open or Close Properly .....	4-31
TAILGATE (M917A1 and M917A1 w/MCS)	
Tailgate Assembly Lock Will Not Release .....	4-31

Table 4-3. Unit Troubleshooting.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<i>MCS (M917A1 W/MCS)</i>		
<b>1. MCS GATE WILL NOT OPERATE.</b>		
	Step 1. Check for air leaks throughout vehicle (chassis) air system.	Tighten or replace leaking or damaged air system components (TM 9-2320-363-20).
	Step 2. Check for leaking air hoses, fittings, or valves on MCS tailgate.	Tighten or replace leaking or damaged air hoses and fittings (paragraph 4-59).
	Step 3. Check for leaking or damaged MCS air reservoir.	Replace MCS air reservoir (paragraph 4-55)
	Step 4. Check for leaking or damaged MCS air cylinder.	Replace or repair MCS air cylinder (paragraph 4-56, 4-57. or 4-58).
<b>2. MCS GATE WILL NOT OPERATE WITH DRIVER'S CONTROLS.</b>		
	Step 1. Check for air leaks throughout vehicle (chassis) air system.	Tighten or replace leaking or damaged air system components (TM 9-2320-363-20)
	Step 2. Check MCS tailgate for leaking or damaged air system components	Tighten or replace leaking or damaged components (paragraphs 4-55 thru 4-59).
<b>NOTE</b>		
<b>For assistance in troubleshooting an MCS electrical malfunction, refer to wiring diagrams (paragraph 4-49).</b>		
	Step 3. Check MCS fuse for continuity.	Replace damaged fuse (TM 9-2320-363-20).
	Step 4. Check driver's MCS control unit switches for voltage and continuity.	Replace damaged switches (paragraph 4-42).
	Step 5. Check truck-to-MCS tailgate wiring harness for voltage and continuity.	Repair or replace damaged truck-to-MCS tailgate wiring harness (paragraph 4-47).
	Step 6. Check MCS tailgate wiring harness and air cylinder solenoids for voltage and continuity.	Repair or replace damaged MCS tailgate wiring harness (paragraph 4-48). Replace damaged MCS air cylinder solenoids (paragraph 4-57).

Table 4-3. Unit Troubleshooting (Con't).

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**MALFUNCTION**

**TEST OR INSPECTION**

**CORRECTIVE ACTION**

---

**3. MCS GATE WILL NOT OPERATE WITH REMOTE CONTROL.**

- Step 1. Check for air leaks throughout vehicle (chassis) air system.  
Tighten or replace leaking or damaged air system components (TM 9-2320-363-20).
- Step 2. Check MCS tailgate for leaking or damaged air system components.  
Tighten or replace leaking or damaged components (paragraphs 4-55 thru 4-59).

**NOTE**

**For assistance in troubleshooting an MCS electrical malfunction, refer to wiring diagrams (paragraph 4-49).**

- Step 3. Check MCS fuse for continuity.  
Replace damaged fuse (TM 9-2320-363-20).
- Step 4. Check MCS remote control switches for voltage and continuity.  
Replace damaged switches (paragraph 4-43).  
Replace damaged remote control.
- Step 5. Check MCS remote control cable for voltage and continuity.  
Replace damaged remote control cable (paragraph 4-43).
- Step 6. Check truck-to-MCS tailgate wiring harness for voltage and continuity.  
Repair or replace damaged truck-to-MCS tailgate wiring harness (paragraph 4-47).
- Step 7. Check MCS tailgate wiring harness and MCS air cylinder solenoids for voltage and continuity.  
Repair or replace damaged MCS tailgate wiring harness (paragraph 4-48).  
Replace damaged MCS air cylinder solenoids (paragraph 4-57).

**4. MCS GATES OPEN OR CLOSE WHEN REMOTE CONTROL IS CONNECTED.**

**NOTE**

**For assistance in troubleshooting an MCS electrical malfunction, refer to wiring diagrams (paragraph 4-49).**

- Step 1. Check MCS remote control switches for voltage and continuity.  
Replace damaged switches (paragraph 4-43).  
Replace damaged remote control.

**Table 4-3. Unit Troubleshooting (Con't).**

<b>MALFUNCTION</b>	<b>TEST OR INSPECTION</b>	<b>CORRECTIVE ACTION</b>
	Step 2.	Check MCS remote control cable for voltage and continuity. Replace damaged remote control cable (paragraph 4-43).
	Step 3.	Check MCS tailgate wiring harness and MCS air cylinder solenoids for voltage and continuity Repair or replace damaged MCS tailgate wiring harness (paragraph 4-48). Replace damaged MCS air cylinder solenoids (paragraph 4-57).
<b>5. ONE OR MORE MCS GATES WILL NOT OPEN OR CLOSE PROPERLY.</b>		
	Step 1.	Check MCS tailgate for leaking or damaged air system components. Tighten or replace and leaking or damaged components (paragraphs 4-55 thru 4-59).
	Step 2.	Check MCS tailgate for damaged gates. Replace damaged gate (paragraph 4-54).
	Step 3.	Check MCS tailgate for damaged gate adjustment tubes and locking pins. Replace damaged adjustment tube (paragraph 4-60).
<i>TAILGATE (M917A1 AND M917A1 W/MCS)</i>		
<b>6. TAILGATE ASSEMBLY LOCK WILL NOT RELEASE.</b>		
	Step 1.	Check for air leaks throughout vehicle (chassis) air system. Tighten or replace leaking or damaged air system components (TM 9-2320-363-20).
	Step 2.	Check for damaged or leaking tailgate release air cylinder. Repair or replace tailgate release air cylinder (paragraph 4-51 or 4-58).
	Step 3.	Check for damaged tailgate locking linkage. Notify Direct Support.
<i>HYDRAULIC SYSTEM</i>		
<b>7. DUMP BODY WILL NOT RAISE AND/OR LOWER.</b>		
	Step 1.	Check if Power Take-Off (PTO) is operating properly. Check PTO operation (TM 9-2320-363-10).
	Step 2.	Check for damaged hydraulic hoses. Replace damaged hydraulic hoses (paragraph 4-72).
	Step 3.	Check for damaged or out of adjustment hydraulic control lever cable Adjust hydraulic control lever cable (paragraph 4-71) Replace damaged hydraulic control lever cable (paragraph 4-71).

Table 4-3. Unit Troubleshooting (Con?).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
	Step 4.	Dump body still will not operate properly. Notify Direct Support.
<b>8. DUMP BODY RAISES WITH HYDRAULIC CONTROL LEVER IN THE NEUTRAL POSITION AND PTO ENGAGED.</b>	Step 1.	Check for damaged or out of adjustment hydraulic control lever cable. Adjust hydraulic control lever cable (paragraph 4-71) Replace damaged hydraulic control lever cable (paragraph 4-71)
	Step 2.	Dump body still will not operate properly Notify Direct Support.
<b>9. DUMP BODY LOWERS WITH HYDRAULIC CONTROL LEVER IN THE NEUTRAL POSITION AND PTO ENGAGED.</b>	Step 1.	Check for damaged or out of adjustment hydraulic control lever cable. Adjust hydraulic control lever cable (paragraph 4-71). Replace damaged hydraulic control lever cable (paragraph 4-71).
	Step 2.	Dump body still will not operate properly. Notify Direct Support.
<b>10. DUMP BODY LOWERS WITH HYDRAULIC CONTROL LEVER IN THE NEUTRAL POSITION AND PTO DISENGAGED.</b>	Step 1.	Check for damaged or out of adjustment hydraulic control lever cable. Adjust hydraulic control lever cable (paragraph 4-71). Replace damaged hydraulic control lever cable (paragraph 4-71).
	Step 2.	Dump body still will not operate properly. Notify Direct Support.
<b>11. DUMP BODY RAISES AND LOWERS SLUGGISHLY.</b>	Step 1.	Check hydraulic filter service indicator gage. Service hydraulic oil filter (paragraph 4-75).
	Step 2.	Check engine idle speed (TM 9-2320-363-20).
	Step 3.	Check for damaged hydraulic hoses. Replace damaged hydraulic hoses (paragraph 4-72).
	Step 4.	Check for binding bearings at pivot points of dump body, hydraulic cylinder, and stabilizer, Notify Direct Support



## Section VI. ELECTRICAL SYSTEM MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
4-38.	Body Up Switch Replacement .....	4-33
4-39.	Transport Lock Switch Replacement .....	4-35
4-40.	Taillight Replacement. ....	4-37
4-41.	Marker Clearance Light Replacement .....	4-38
4-42.	MCS Control Unit Maintenance (M917A1 w/MCS). ....	4-39
4-43.	MCS Remote Control Repair (M917A1 w/MCS) .....	4-42
4-44.	Body Up and Transport Lock Switches Wiring Harness Maintenance. ....	4-47
4-45.	Beacon Warning Light Wiring Harness Maintenance. ....	4-49
4-46.	Lights Wiring Harness Maintenance. ....	4-52
4-47.	Truck-to-MCS Tailgate Wiring Harness Maintenance (M917A1 w/MCS). ...	4-54
4-48.	MCS Tailgate Wiring Harness Maintenance (M917A1 w/MCS) .....	4-58
4-49.	Wiring Diagrams .....	4-62

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### 4-38. BODY UP SWITCH REPLACEMENT.

---

This task covers:

a. Removal

b. Installation

---

Initial Setup.

**Equipment Conditions:**

- I Dump body raised and supported on body props (paragraph 2-15).
- I Batteries disconnected (TM 9-2320-363-20).

**Tools/Test Equipment:**

- I General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)

**General Safety instructions:**

I NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.

**WARNING**

**NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.**

---

## 4-38. BODY UP SWITCH REPLACEMENT (Con't).

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### a. REMOVAL

#### NOTE

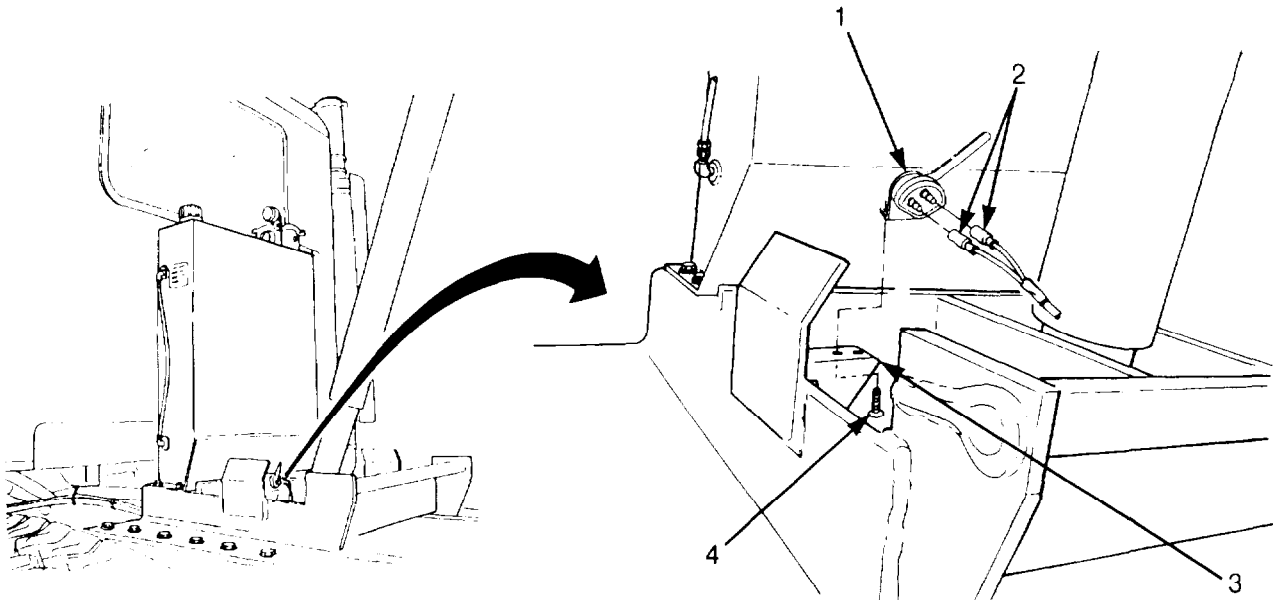
Wires should be tagged before disconnecting (paragraph 4-17).

1. Disconnect two wiring harness leads (2) from body up switch (1).

#### NOTE

To ensure proper installation, note switch lever position.

2. Remove two screws (4) and body up switch (1) from cylinder support frame (3).



### b. INSTALLATION

1. Install body up switch (1) on cylinder support frame (3) with two screws (4).
2. Connect two wiring harness leads (2) to body up switch (1).

#### FOLLOW-ON TASKS:

- Connect batteries (TM 9-2320-363-20).
- Remove body props and lower dump body (paragraph 2-15).
- Check operation of body up switch (paragraph 2-1).

---

## 4-39. TRANSPORT LOCK SWITCH REPLACEMENT.

---

*This task covers:*

a. Removal

b. Installation

*Initial Setup:*

### Equipment Conditions:

- Dump body raised and supported on body props (paragraph 2-15).
- Batteries disconnected (TM 9-2320-363-20).

### Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)

### Materials/Parts:

- Tie wraps (as required)

### General Safety instructions:

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.

**WARNING**

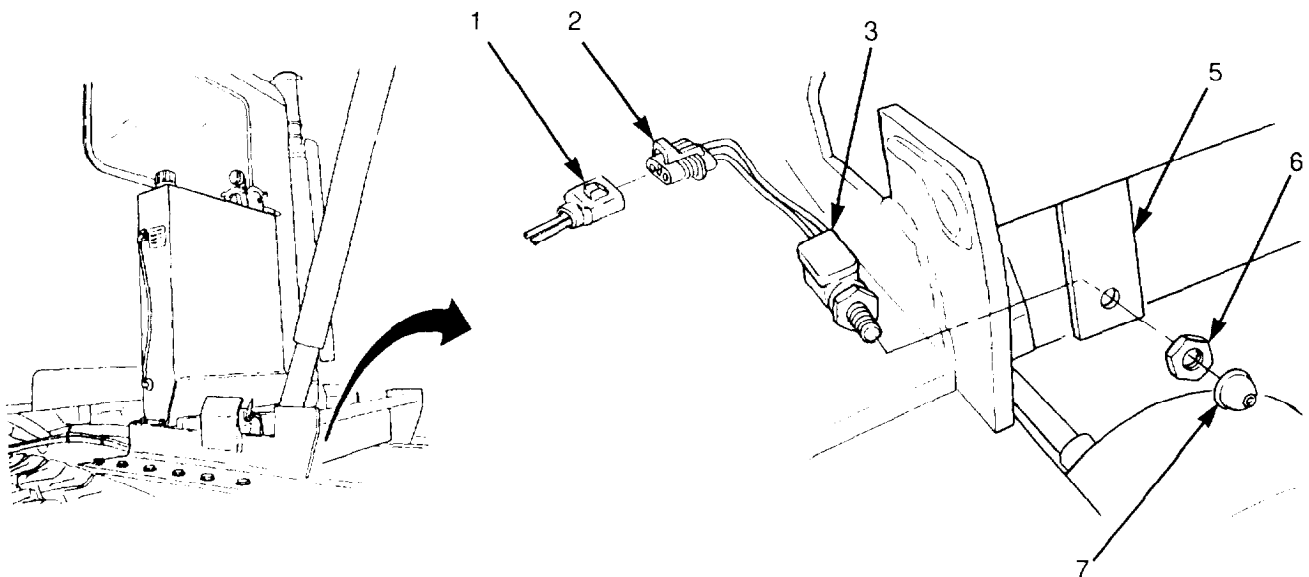
**NEVER** work under a raised dump body unless it is secured in the raised position with body props and dump body is **EMPTY**. Failure to follow this warning may result in death or injury to personnel.

**a. REMOVAL**

### NOTE

**Note location of tie wraps prior to removal to aid in installation.**

1. Disconnect transport lock switch connector (2) from wiring harness connector (1).
2. Remove button (7), nut (6), and transport lock switch (3) from chassis mount (5).



---

## 4-39. TRANSPORT LOCK SWITCH REPLACEMENT (Con't).

---

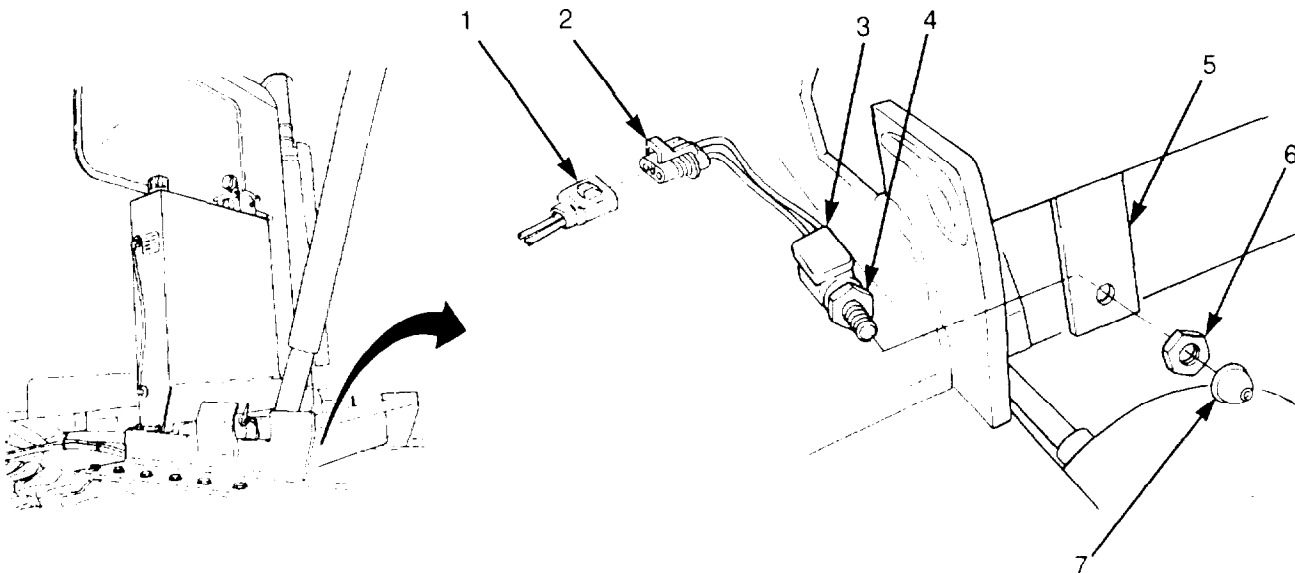
### NOTE

To ensure proper installation, note position of jamnut on transport lock switch.

3. Remove jamnut (4) from transport lock switch (3).

### b. INSTALLATION

1. Install jamnut (4) on transport lock switch (3) in same position as noted during removal.
2. Position transport lock switch (3) through hole in chassis mount (5) and install nut (6) and button (7).
3. Connect transport lock switch connector (2) to wiring harness connector (1).
4. Install new tie wraps, as required.



### FOLLOW-ON TASKS:

- Connect batteries (TM 9-2320-363-20).
- Remove body props and lower dump body (paragraph 2-15)
- Check operation of transport lock switch (paragraph 2-1).

---

## 4-40. TAILLIGHT REPLACEMENT.

---

This task covers:

- a. Removal b. Installation

Initial Setup:

**Equipment Conditions:**

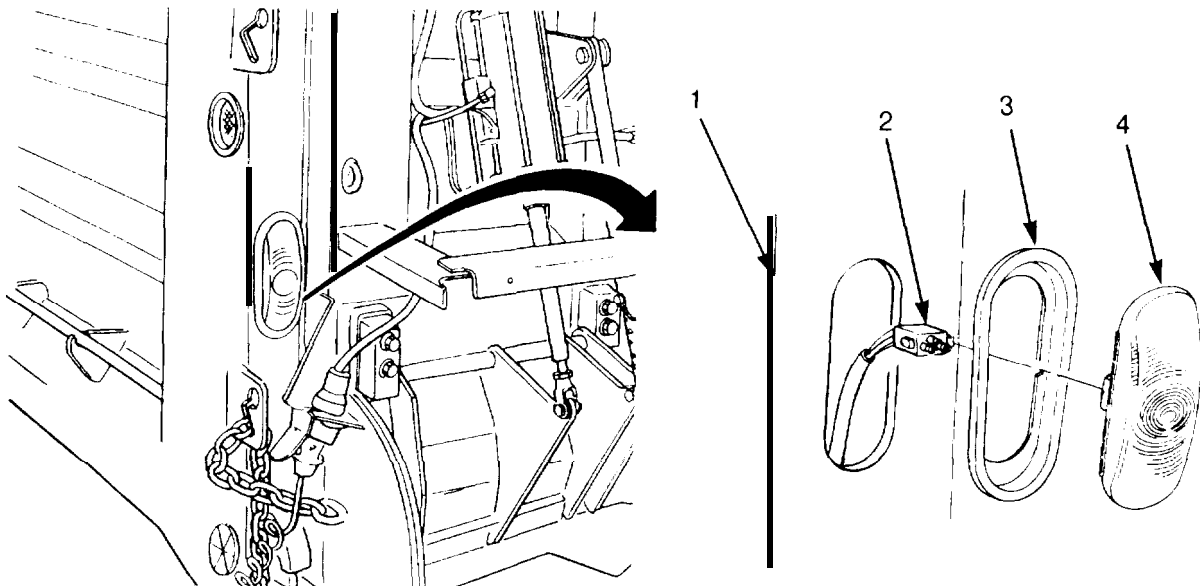
- Batteries disconnected (TM 9-2320-363-20).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

### a. REMOVAL

1. Remove taillight (4) from grommet (3).
2. Disconnect lights wiring harness connector (2) from taillight (4). Remove taillight.
3. Remove grommet (3) from dump body (1).



### b. INSTALLATION

1. Install grommet (3) in dump body (1).
2. Connect lights wiring harness connector (2) to taillight (4).
3. Install taillight (4) in grommet (3).

**FOLLOW-ON TASKS:**

- Connect batteries (TM 9-2320-363-20).
- Check operation of taillight (TM 9-2320-363-10).

---

## 4-41. MARKER CLEARANCE LIGHT REPLACEMENT.

---

*This task covers:*

- a. Removal
- b. Installation

---

*Initial Setup.*

**Equipment Conditions:**

- Batteries disconnected (TM 9-2320-363-20).

**Tools/Test Equipment:**

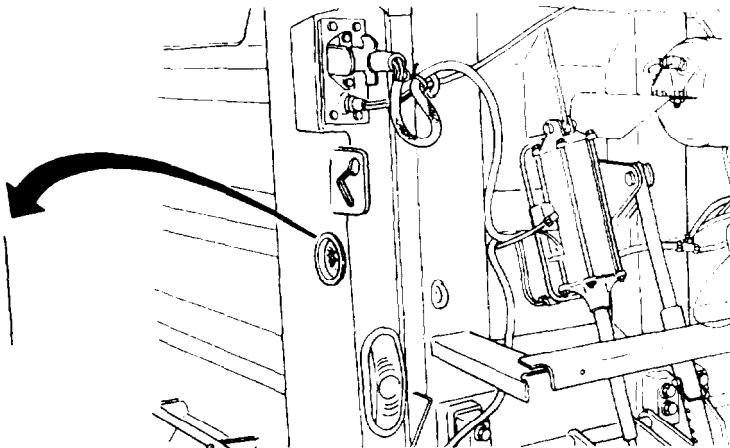
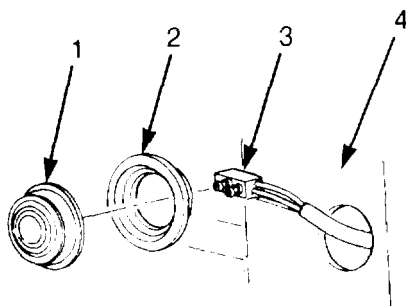
- General mechanic's tool kit (Item 8, Appendix I)
- 

**NOTE**

There is a marker clearance light on each side of dump body and a cluster of three marker clearance lights on bracket at rear hinge. Replacement of a dump body marker clearance light is shown.

**a. REMOVAL**

1. Remove marker clearance light (1) from grommet (2).
2. Disconnect lights wiring harness connector (3) from back of marker clearance light (1). Remove marker clearance light.
3. Remove grommet (2) from dump body (4).



**b. INSTALLATION**

1. install grommet (2) in dump body (4).
2. Connect lights wiring harness connector (3) to back of marker clearance light (1).
3. Install marker clearance light (1) in grommet (2).

**FOLLOW-ON TASKS:**

- Connect batteries (TM 9-2320-363-20).
- Check operation of marker clearance lights (TM 9-2320-363-10).

---

## 4-42. MCS CONTROL UNIT MAINTENANCE (M917A1 W/MCS).

---

This task covers:

- |                            |                 |
|----------------------------|-----------------|
| a. Removal                 | d. Assembly     |
| b. Disassembly             | e. Installation |
| c. Cleaning and Inspection |                 |

Initial Setup:

**Equipment Conditions:**

- . Batteries disconnected (TM 9-2320-363-20).

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)

**Tools/Test Equipment:**

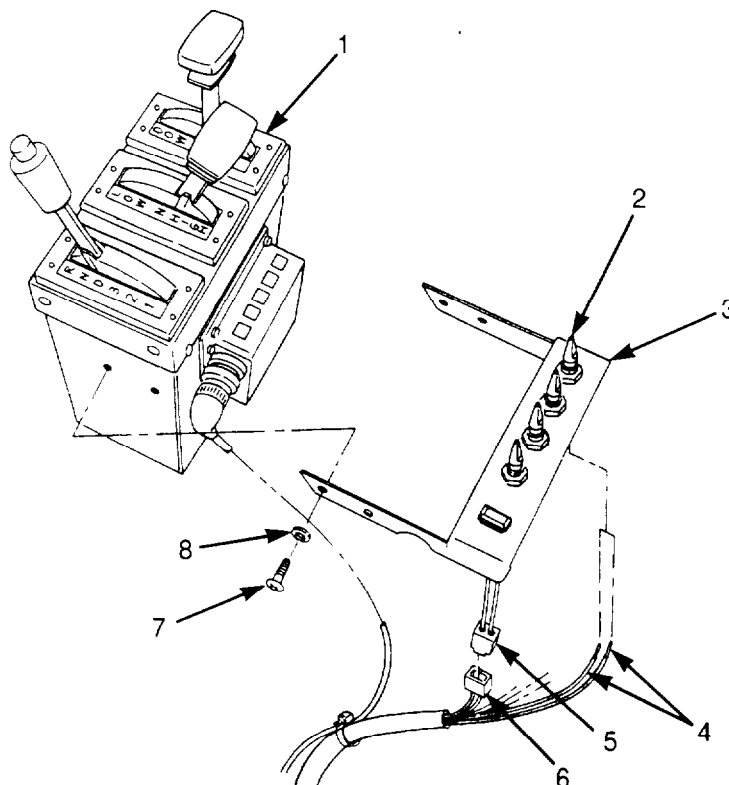
- . General mechanic's tool kit (Item 8, Appendix I)

**a. REMOVAL**

**NOTE**

**Wires should be tagged before disconnecting (paragraph 4-17).**

1. Remove four screws (7), washers (8), and MCS control unit (3) from shift tower (1).
2. Disconnect indicator light connector (5) from wiring harness connector (6).
3. Disconnect four wiring harness leads (4) from toggle switches (2). Remove MCS control unit (3).



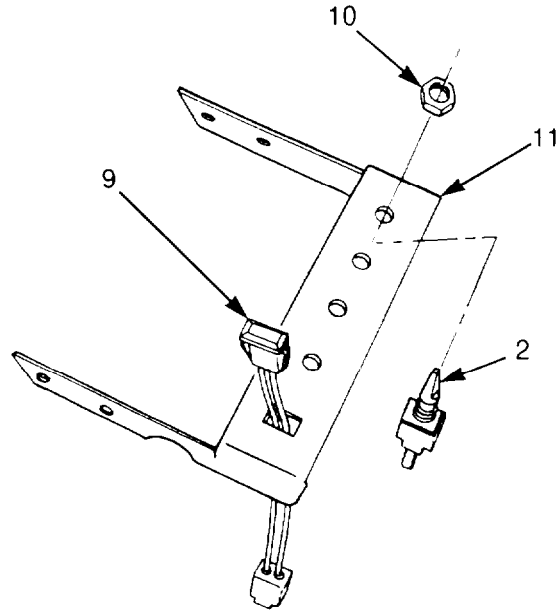
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## 4-42. MCS CONTROL UNIT MAINTENANCE (M917A1 W/MCS) (Con't).

---

### b. DISASSEMBLY

1. Remove indicator light (9) from bracket (11).
2. Remove four nuts (10) and toggle switches (2) from bracket (11).



### c. CLEANING AND INSPECTION

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

### d. ASSEMBLY

1. Install four toggle switches (2) to bracket (11) with four nuts (10).
2. Install indicator light (9) to bracket (11).

### e. INSTALLATION

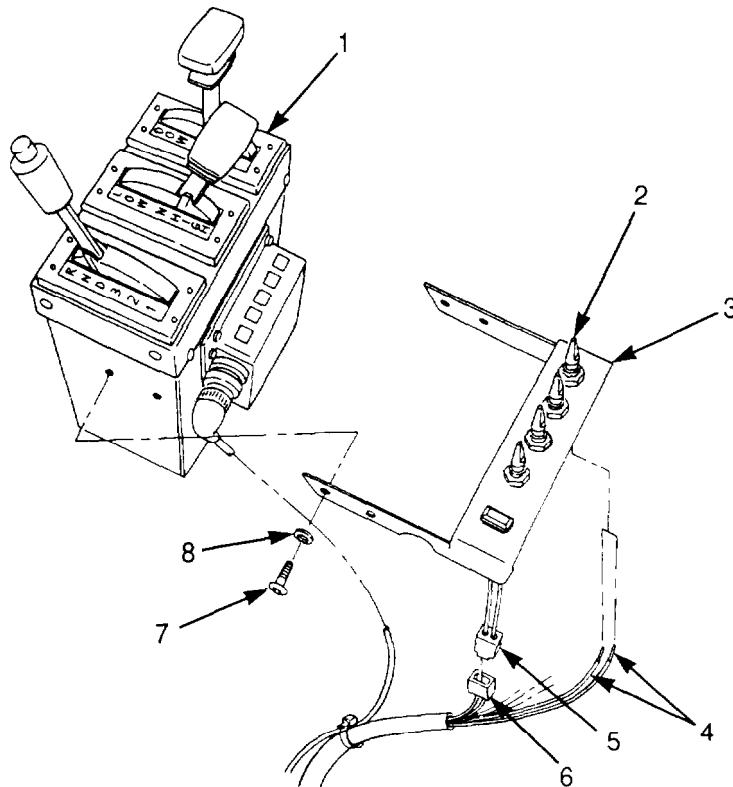
1. Connect four wiring harness leads (4) to toggle switches (2).
2. Connect wiring harness connector (6) to indicator light connector (5).
3. Install MCS control unit (3) on shift tower (1) with four washers (8) and screws (7).



---

**4-42. MCS CONTROL UNIT MAINTENANCE (M917A1 W/MCS) (Con't).**

---

**FOLLOW-ON TASKS**

- Connect batteries (TM 9-2320-363-20).
- Check operation of MCS control unit (paragraph 2-1).

---

## 4-43. MCS REMOTE CONTROL REPAIR (M917A1 W/MCS).

---

*This task covers:*

- a. Disassembly
- b. Cleaning and Inspection
- c. Assembly

---

*Initial Setup*

**Equipment Conditions:**

- MCS remote control disconnected from MCS tail-gate (paragraph 2-13).

**Materials/Parts:**

- \* Marker tags (Item 19, Appendix F)
- One gasket

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

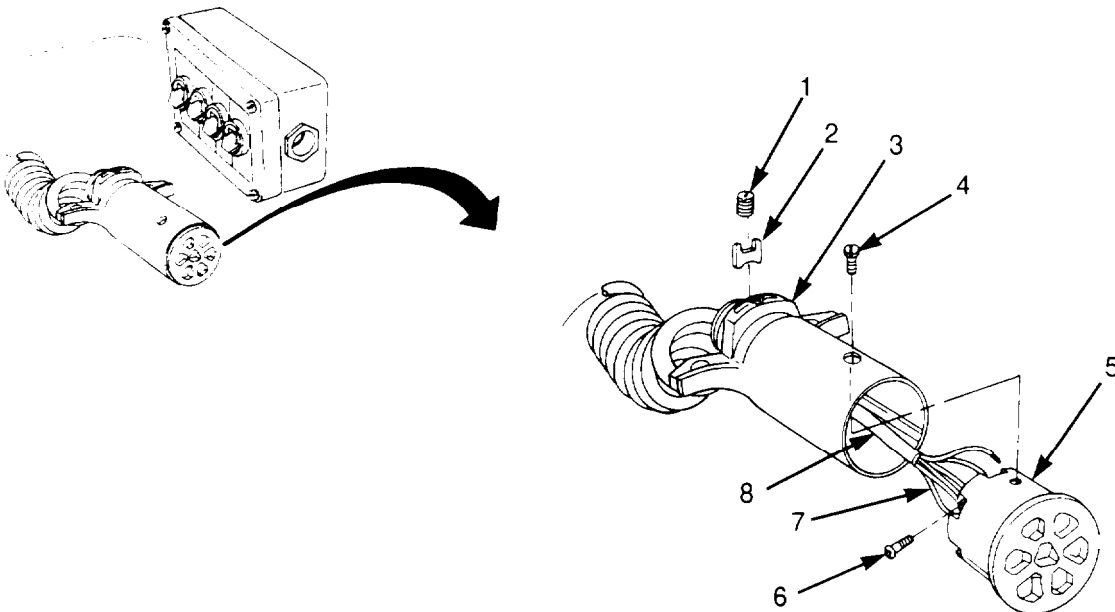
---

### a. DISASSEMBLY

**NOTE**

- Wires should be tagged and wire color noted before disconnecting (paragraph 4-17).
- Perform steps 1 thru 3 to disassemble plug-in connector.

1. Remove screw (4) screw (1), and clamp (2) from connector housing (3).
2. Pull connector (5) outward and remove seven screws (6) to remove connector and connector housing (3) from wires of cable (8).
3. Remove jumper wire (7).



---

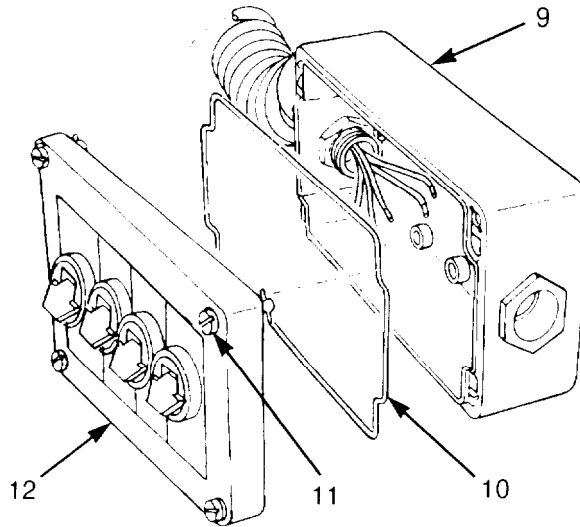
**4-43. MCS REMOTE CONTROL REPAIR (M917A1 W/MCS) (Con't).**

---

**NOTE**

**Perform steps 4 thru 10 to disassemble control box.**

4. Loosen four twist-lock screws (11) and remove cover (12) from control box (9).
5. Remove gasket (10) from cover (12). Discard gasket.



**NOTE**

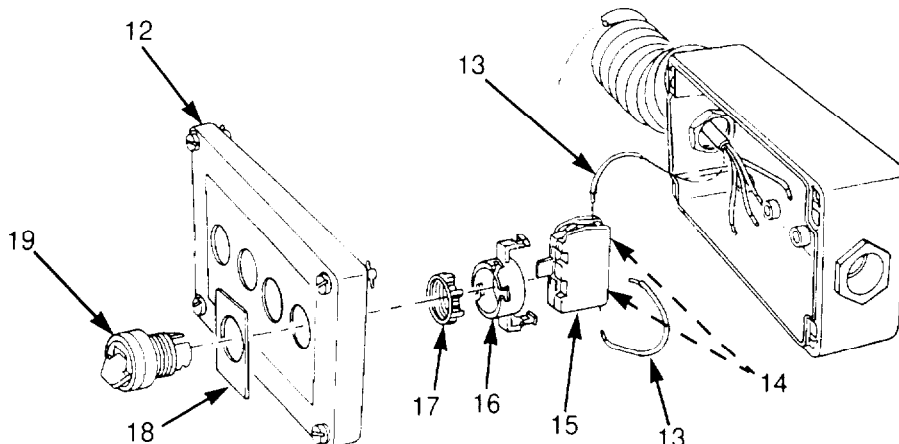
**Perform steps 6 thru 8 for each of four switches.**

6. Loosen two screws (14) and disconnect two wires (13) from switch (15).

**NOTE**

**Note position of switch and retainer for assembly.**

7. Remove switch (15) and retainer (16) from switch housing (19).
8. Remove ring (17), switch housing (19), and data plate (18) from cover (12).

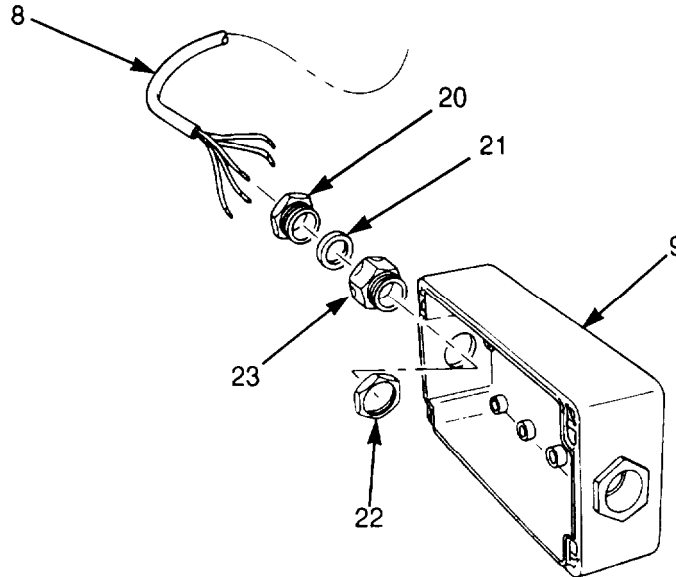


---

**4-43. MCS REMOTE CONTROL REPAIR (M917A1 W/MCS) (Con't).**

---

9. Remove locking plug (20), grommet (21), and cable (8) from control box (9).
10. Remove nut (22) and bushing (23).



**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. ASSEMBLY**

**NOTE**

**Perform steps 1 thru 7 to assemble control box.**

1. Install bushing (23) and nut (22) to control box (9).
2. Install end of cable (8), grommet (21), and locking plug (20).

---

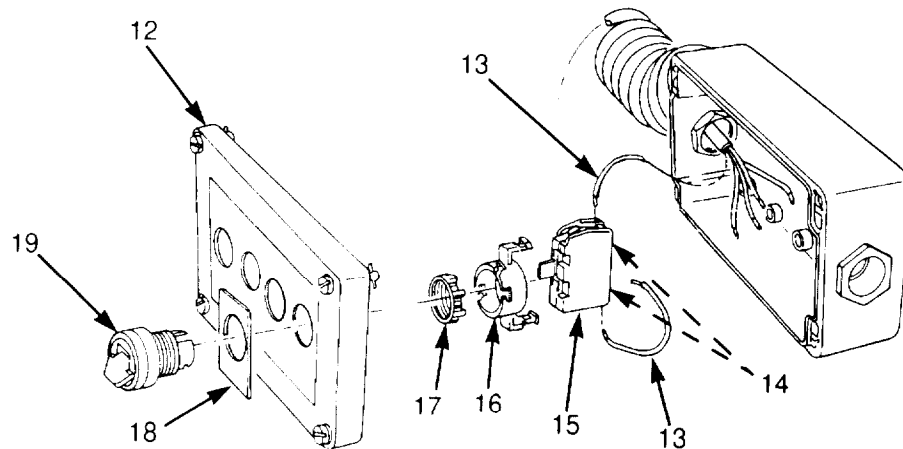
**4-43. MCS REMOTE CONTROL REPAIR (M917A1 W/MCS) (Con't).**


---

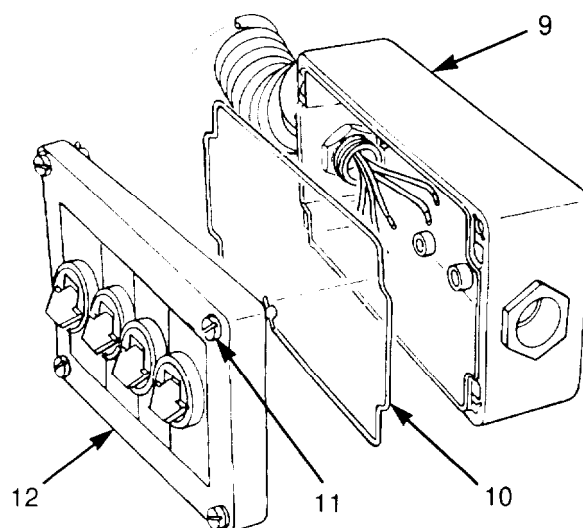
**NOTE**

**Perform steps 3 thru 5 for each of four switches.**

3. Install data plate (18), switch housing (19), and ring (17) to cover (12).
4. Install retainer (16) and switch (15) to switch housing (19).
5. Connect two wires (13) to switch (15) and tighten two screws (14).



6. Install new gasket (10) to cover (12).
7. Install cover (12) to control box (9) and tighten four twist-lock screws (1 1).

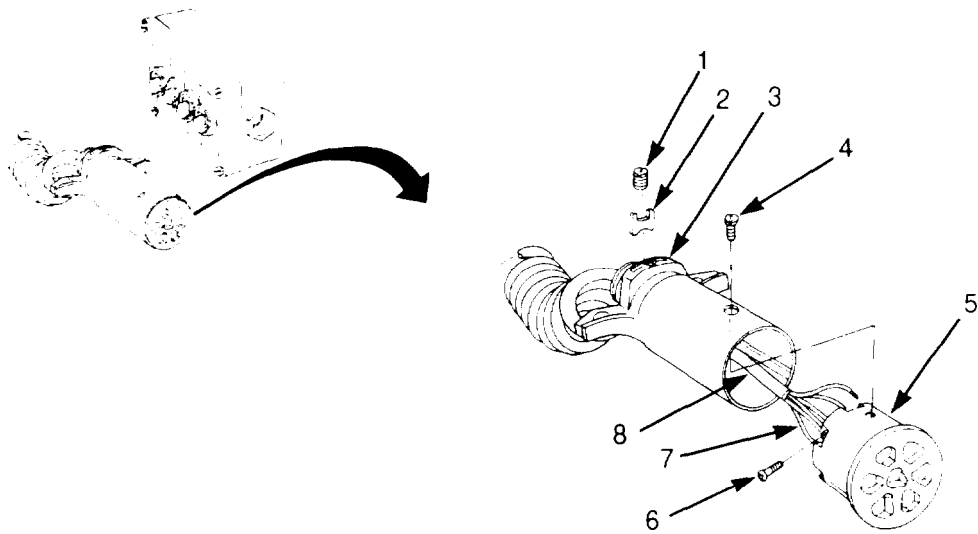


---

**4-43. MCS REMOTE CONTROL REPAIR (M917A1 W/MCS) (Con't).**

---

8. Install jumper wire (7) to connector (5).
9. With cable (8) thru connector housing (3), install connector (5) to wires of cable with seven screws (6). Push connector into connector housing.
10. Install clamp (2), screw (1), and screw (4).



**FOLLOW-ON TASKS:**

- Check operation of MCS remote control (paragraph 2-13).

---

## 4-44. BODY UP AND TRANSPORT LOCK SWITCHES WIRING HARNESS MAINTENANCE.

---

*This task covers.*

- |            |                 |
|------------|-----------------|
| a. Removal | c. Installation |
| b. Repair  |                 |

---

*Initial Setup:*

### Equipment Conditions:

- Dump body raised and supported on body props (paragraph 2-15).
- Batteries disconnected (TM 9-2320-363-20).

### Tools/Test Equipment:

- General mechanic's tool kit (item 8, Appendix I)

### Materials/Parts:

- Marker tags (Item 19, Appendix F)
- Tie wraps

### General Safety Instructions:

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
- 

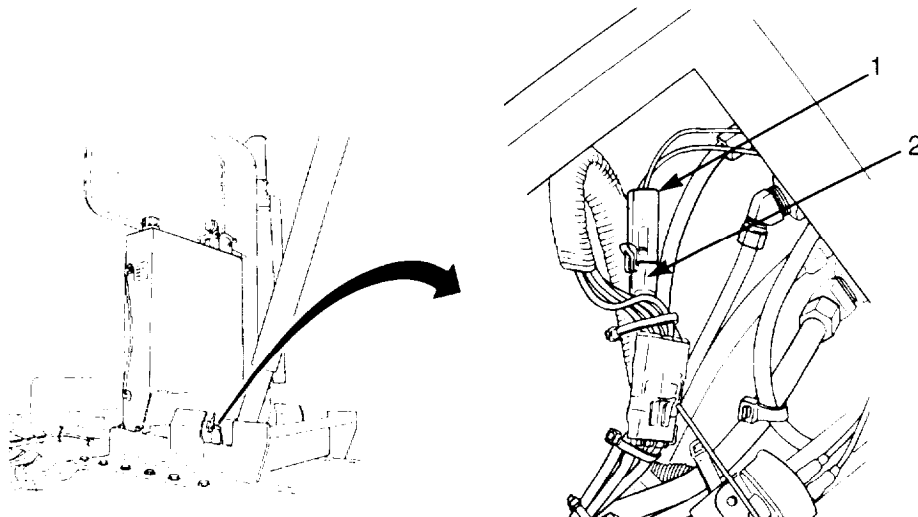
**WARNING**

NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.

**a. REMOVAL**

### NOTE

- Wires should be tagged before disconnecting (paragraph 4-17).
  - Note location of tie wraps and routing of wiring harness prior to removal to aid in installation.
1. Remove tie wraps and discard.
  2. Disconnect transport lock switch connector (1) from wiring harness connector (2).

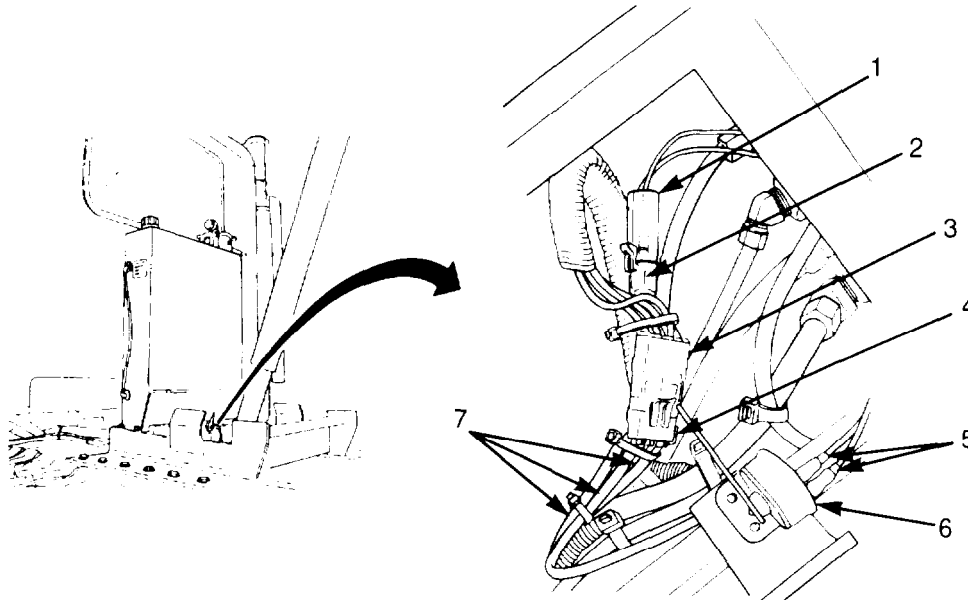


---

**4-44. BODY UP AND TRANSPORT LOCK SWITCHES WIRING HARNESS MAINTENANCE (Con't).**

---

3. Disconnect two wiring harness leads (5) from body up switch (6).
4. Disconnect wiring harness connector (4) from chassis wiring harness connector (3) and remove wiring harness (7).



**b. REPAIR**

**NOTE**

**Wiring harness need not be removed from vehicle to make repairs.**

Repair wiring harness in accordance with instructions in Chapter 4, Section III, General Maintenance Instructions.

**c. INSTALLATION**

1. Connect wiring harness connector (4) to chassis wiring harness connector (3).
2. Connect two wiring harness leads (5) to body up switch (6).
3. Connect transport lock switch connector (1) to wiring harness connector (2).
4. Secure wiring harness (7) with new tie wraps

**FOLLOW-ON TASKS:**

- Connect batteries (TM 9-2320-363-20).
- Check operation of body up and transport lock switches (paragraph 2-1).



---

**4-45. BEACON WARNING LIGHT WIRING HARNESS MAINTENANCE.**


---

*This task covers:*

- |            |                 |
|------------|-----------------|
| a. Removal | c. Installation |
| b. Repair  |                 |

*Initial Setup:*

**Equipment Conditions:**

- Dump body raised and supported on body props (paragraph 2-15).
- Batteries disconnected (TM 9-2320-363-20).

**Materials/Parts (Con't):**

- Locknuts (as required)
- Tie wraps (as required)

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**General Safety Instructions:**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.

Materials/Parts:

- Marker tags (Item 19, Appendix F)
- 

**WARNING**

**NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.**

**a. REMOVAL**

**NOTE**

- Wires should be tagged before disconnecting (paragraph 4-17).
- Note location of tie wraps and routing of wiring harness prior to removal to aid in installation.

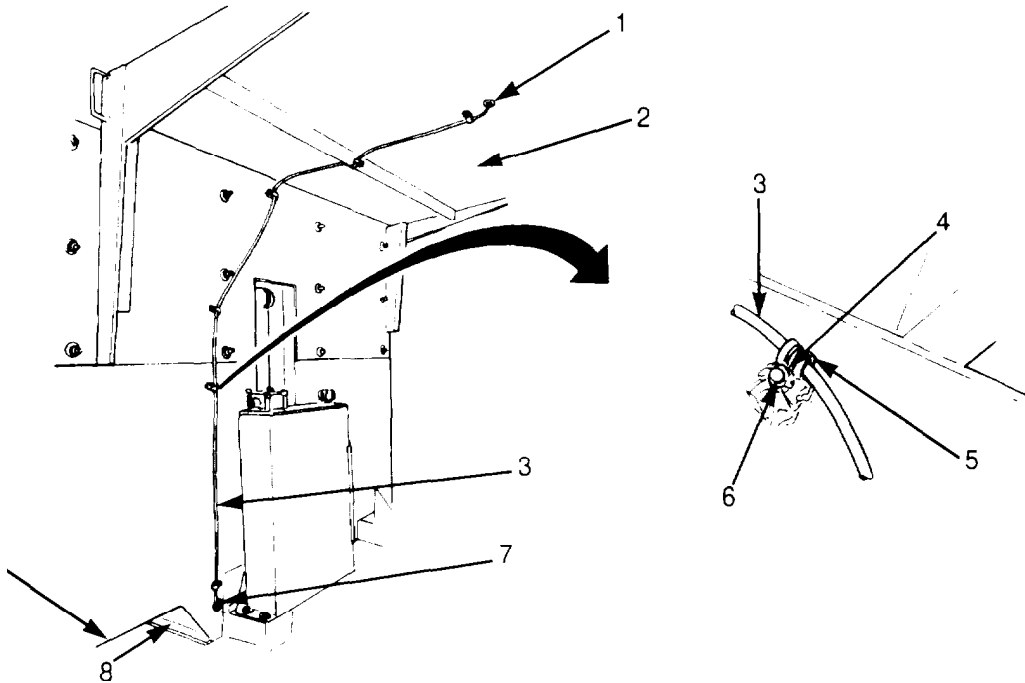
1. At beacon warning light, disconnect two wiring harness connectors from beacon warning light connectors.

---

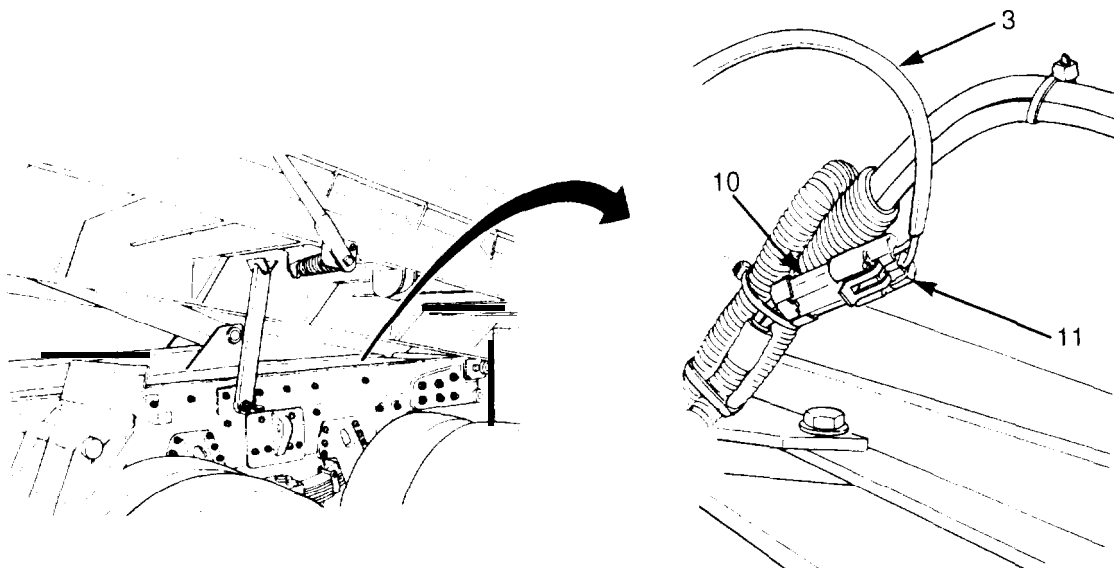
**4-45. BEACON WARNING LIGHT WIRING HARNESS MAINTENANCE (Con't).**

---

2. Remove wiring harness (3) from cab shield grommet (1).
3. Remove locknuts (4) and clamps (5) securing wiring harness (3) to welded studs (6) on cab shield (2) and dump body (9). Discard locknuts.
4. Remove wiring harness (3) from grommet (7) at front right side of dump body (9).
5. Repeat step 3 to release wiring harness (3) from welded studs on inner surface of right side dump body frame rail (8). Discard locknuts.



6. Disconnect wiring harness connector (11) from chassis wiring harness connector (10).
7. Remove wiring harness (3)



---

**4-45. BEACON WARNING LIGHT WIRING HARNESS MAINTENANCE (Con't).**

---

**b. REPAIR****NOTE**

Wiring harness need not be removed from vehicle to make repairs.

Repair wiring harness in accordance with instructions in Chapter 4, Section III, General Maintenance Instructions.

**c. INSTALLATION**

1. Position wiring harness (3) between points of connection.
2. Connect wiring harness connector (11) to chassis wiring harness connector (10).
3. Route wiring harness (3) along inner surface of right side dump body frame rail (8) and through grommet (7) at front of right side dump body (9).
4. Route wiring harness (3) up dump body (9) and cab shield (2) Secure with clamps (5) and new locknuts (4) on welded studs (6).
5. Secure wiring harness (3) along inner surface of right side dump body frame rail (8) with clamps (5) and new locknuts (4) on welded studs (6).
6. Install wiring harness (3) through cab shield grommet (1).
7. Connect two wiring harness connectors to beacon warning light connectors.
8. Install new tie wraps.

**FOLLOW-ON TASKS:**

- Connect batteries (TM 9-2320-363-20).
- Remove body props and lower dump body (paragraph 2-15).
- Check operation of beacon warning light (TM 9-2320-363-10).

---

## 4-46. LIGHTS WIRING HARNESS MAINTENANCE.

---

*This task covers:*

- a. Removal
- b. Repair
- c. Installation

---

Initial Setup:

**Equipment Conditions:**

- Dump body raised and supported on body props (paragraph 2-15).
- Batteries disconnected (TM 9-2320-363-20).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Marker tags (item 19, Appendix F)
- Tie wraps (as required)

**General Safety Instructions:**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.

**WARNING**

NEVER work under a raised dump body unless it is **secured in the raised position** with body props and dump body is EMPTY. Failure to **follow this warning may result** in death or injury to personnel.

**a. REMOVAL**

**NOTE**

- Wires should be tagged before disconnecting (**paragraph 4-17**).
- Note location of tie wraps and routing of wiring **harness prior to removal to aid** in installation.

1. Remove two wiring harness terminal leads from backup alarm (TM 9-2320-363-20).
2. Remove taillight from each side of dump body and disconnect wiring harness (paragraph 4-40).
3. Remove marker clearance light from each side of dump body and disconnect wiring harness (paragraph 4-41).
4. Disconnect wiring harness leads (2) from three marker clearance lights (3) at rear hinge light bracket (7).
5. Disconnect wiring harness connector (5) from chassis wiring harness connector (6) and remove wiring harness (4) from dump body (1).

**b. REPAIR**

**NOTE**

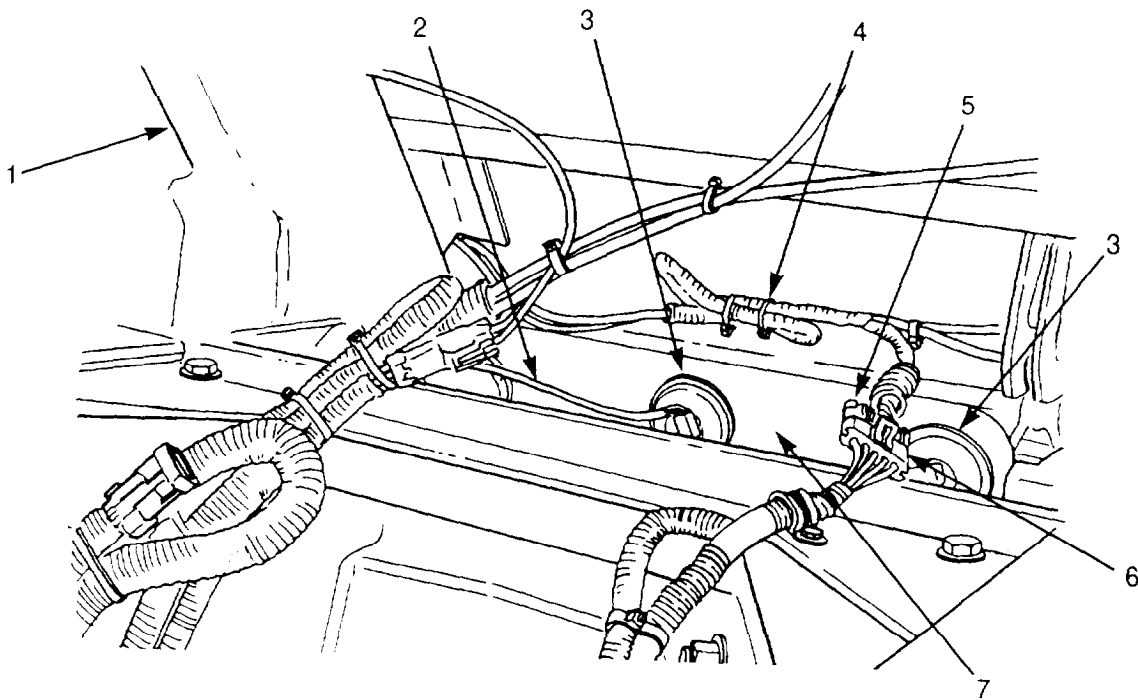
**Wiring harness need not be removed from vehicle to make repairs.**

Repair wiring harness in accordance with instructions in Chapter 4, Section III, *General Maintenance Instructions*.

---

**4-46. LIGHTS WIRING HARNESS MAINTENANCE (Con't).**


---


**c. INSTALLATION**

1. Position wiring harness (4) between points of connection, routing it along channels and openings in dump body (1).
2. Connect wiring harness connector (5) to chassis wiring harness connector (6).
3. Connect wiring harness leads (2) to three marker clearance lights (3) at rear hinge light bracket (7).
4. Connect wiring harness to each taillight and install taillights (paragraph 4-40).
5. Connect wiring harness to marker clearance light on each side of dump body and install lights (paragraph 4-41).
6. Install two wiring harness terminal leads to backup alarm (TM 9-2320-363-20).
7. Install new tie wraps.

**FOLLOW-ON TASKS:**

- Connect batteries (TM 9-2320-363-20).
- Remove body props and lower dump body (paragraph 2-15).
- Check operation of dump body lights and backup alarm (TM 9-2320-363-1 0).

---

## 4-47. TRUCK-TO-MCS TAILGATE WIRING HARNESS MAINTENANCE (M917A1 W/ MCS).

---

This task covers:

- a. Removal
- b. Repair
- c. Installation

---

Initial Setup.

### Equipment Conditions:

- Dump body raised and supported on body props (paragraph 2-15).
- Batteries disconnected (TM 9-2320-363-20).

### Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)

### Materials/Parts:

- Marker tags (Item 19, Appendix F)
- Two self-locking nuts
- Tie wraps (as required)

### General Safety Instructions:

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.

**WARNING**

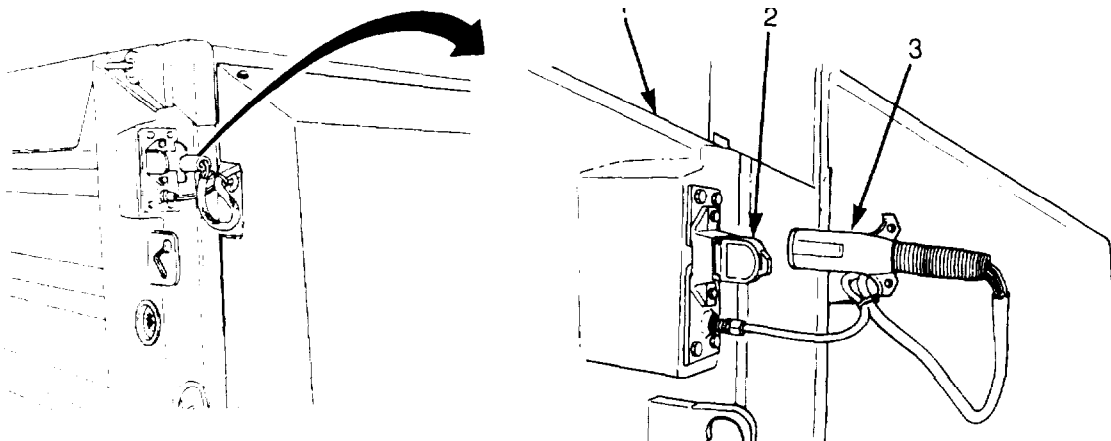
**NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.**

**a. REMOVAL**

### NOTE

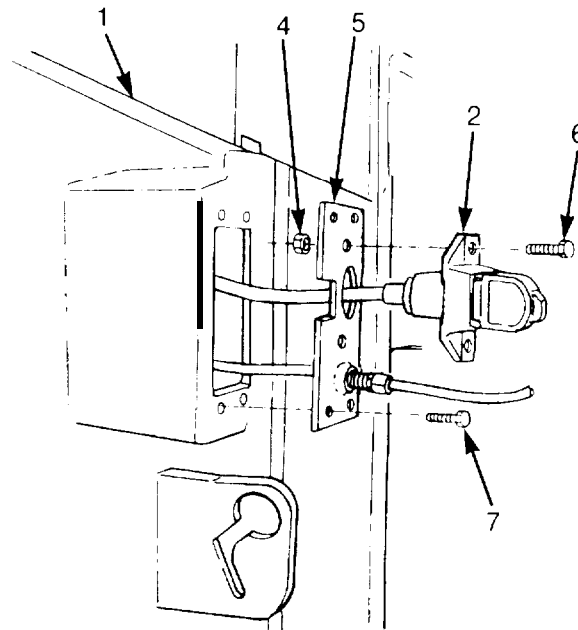
- Wires should be tagged before disconnecting (paragraph 4-17).
- Note location of tie wraps and routing of wiring harness prior to removal to aid in installation.

1. Disconnect MCS tailgate wiring harness connector (3) from truck-to-MCS tailgate wiring harness receptacle (2) at left dump body pillar (1).

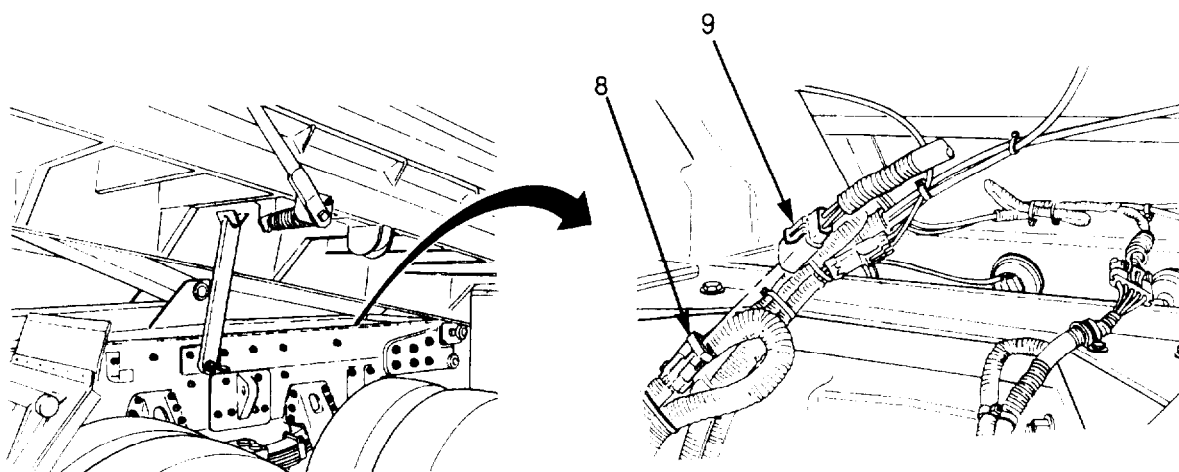


#### 4-47. TRUCK-TO-MCS TAILGATE WIRING HARNESS MAINTENANCE (M917A1 W/MCS) (Con't).

2. Remove four screws (7) and pull cover plate (5) away from dump body pillar (1).
3. Remove two self-locking nuts (4) and screws (6) securing truck-to-MCS tailgate wiring harness receptacle (2) to cover plate (5). Discard self-locking nuts.



4. Disconnect truck-to-MCS tailgate wiring harness (9) from chassis wiring harness (8).
5. Remove truck-to-MCS tailgate wiring harness (9).



---

**4-48. MCS TAILGATE WIRING HARNESS MAINTENANCE (M917A1 W/MCS).**

---

This task covers.

- a. Removal
- b. Repair
- c. Installation

---

Initial Setup:

**Equipment Conditions:**

- Batteries disconnected (TM 9-2320-363-20).
- MCS tailgate cover removed (paragraph 4-53).

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)
- Four self-locking nuts
- Tie wraps (as required)

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

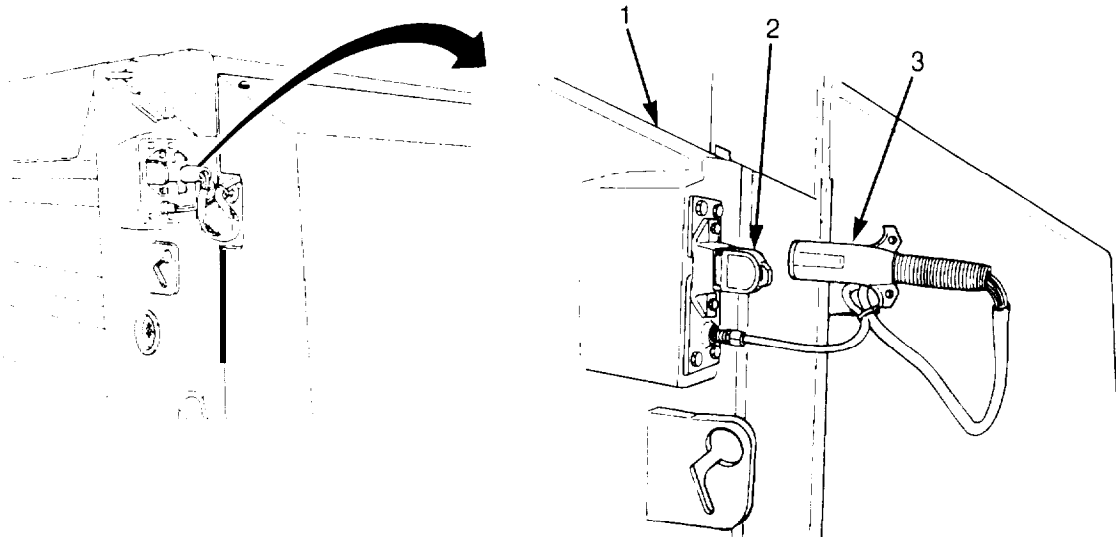
---

**a. REMOVAL**

**NOTE**

- Wires should be tagged before disconnecting (paragraph 4-17).
- Note location of tie wraps and routing of wiring harness prior to removal to aid in installation.

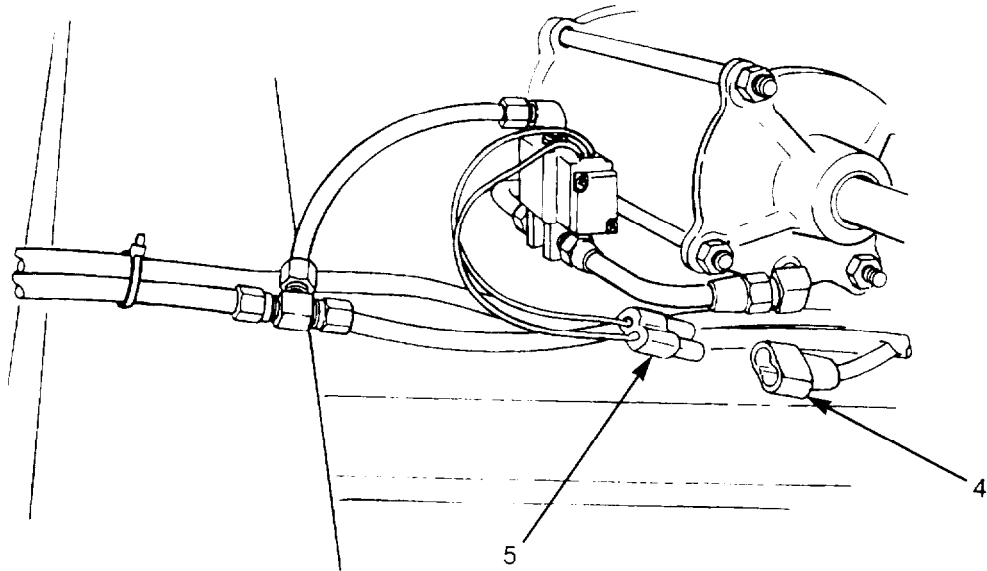
1. Disconnect wiring harness connector (3) from truck-to-MCS tailgate wiring harness receptacle (2) at left dump body pillar (1).



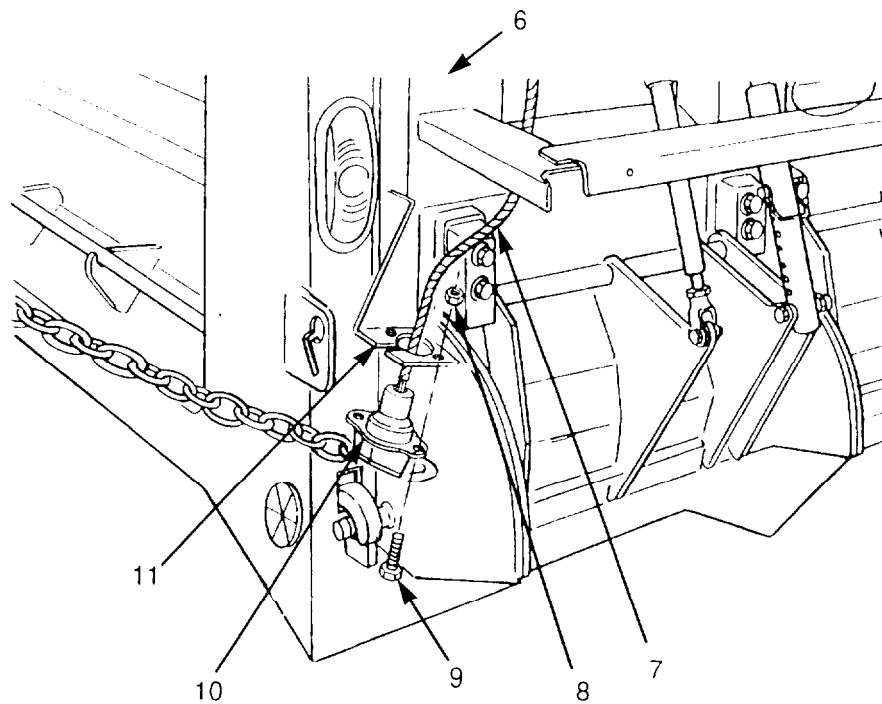


**4-48. MCS TAILGATE WIRING HARNESS MAINTENANCE (M917A1 W/MCS) (Con't).**

2. Disconnect wiring harness connector (4) from each air cylinder solenoid connector (5)



3. On each side of MCS tailgate (6), remove two self-locking nuts (8) and screws (9) securing wiring harness receptacle (10) to tailgate weldment (11). Discard self-locking nuts.
4. Remove wiring harness (7) from MCS tailgate (6).



---

**4-48. MCS TAILGATE WIRING HARNESS MAINTENANCE (M917A1 W/MCS) (Con't).**

---

**b. REPAIR**

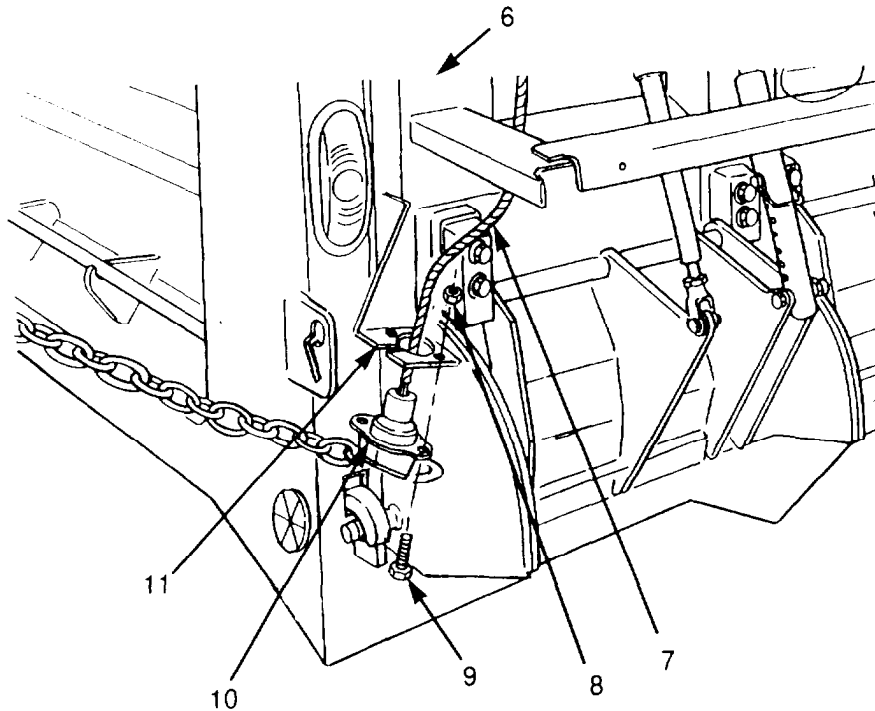
**NOTE**

**Wiring harness need not be removed from vehicle to make repairs.**

Repair wiring harness in accordance with instructions in Chapter 4, Section III, General Maintenance Instructions.

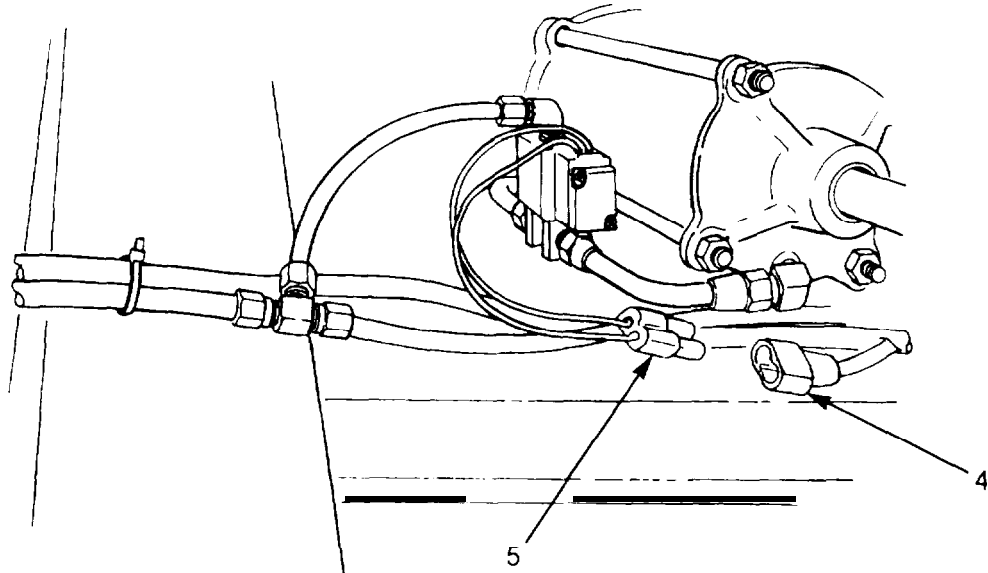
**c. INSTALLATION**

1. Position wiring harness (7) on MCS tailgate (6) between points of connection.
2. On each side of MCS tailgate (6), position wiring harness receptacle (10) on tailgate weldment (11) and secure with two screws (9) and new self-locking nuts (8).

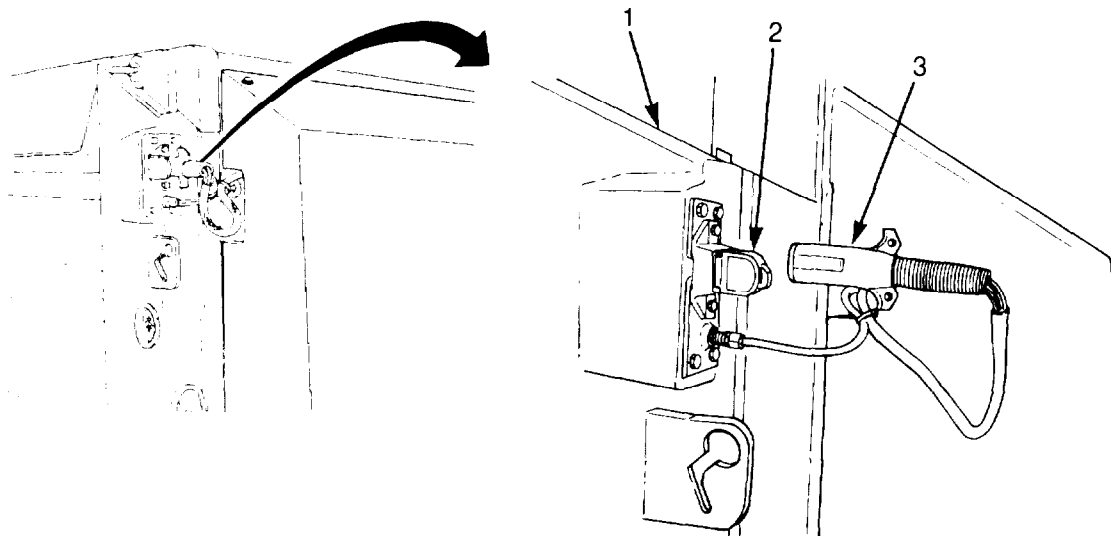


**4-48. MCS TAILGATE WIRING HARNESS MAINTENANCE (M917A1 W/MCS) (Con't).**

3. Connect wiring harness connector (4) to each air cylinder solenoid connector (5).



4. Connect wiring harness connector (3) to truck-to-MCS tailgate wiring harness receptacle (2) at left dump body pillar (1).

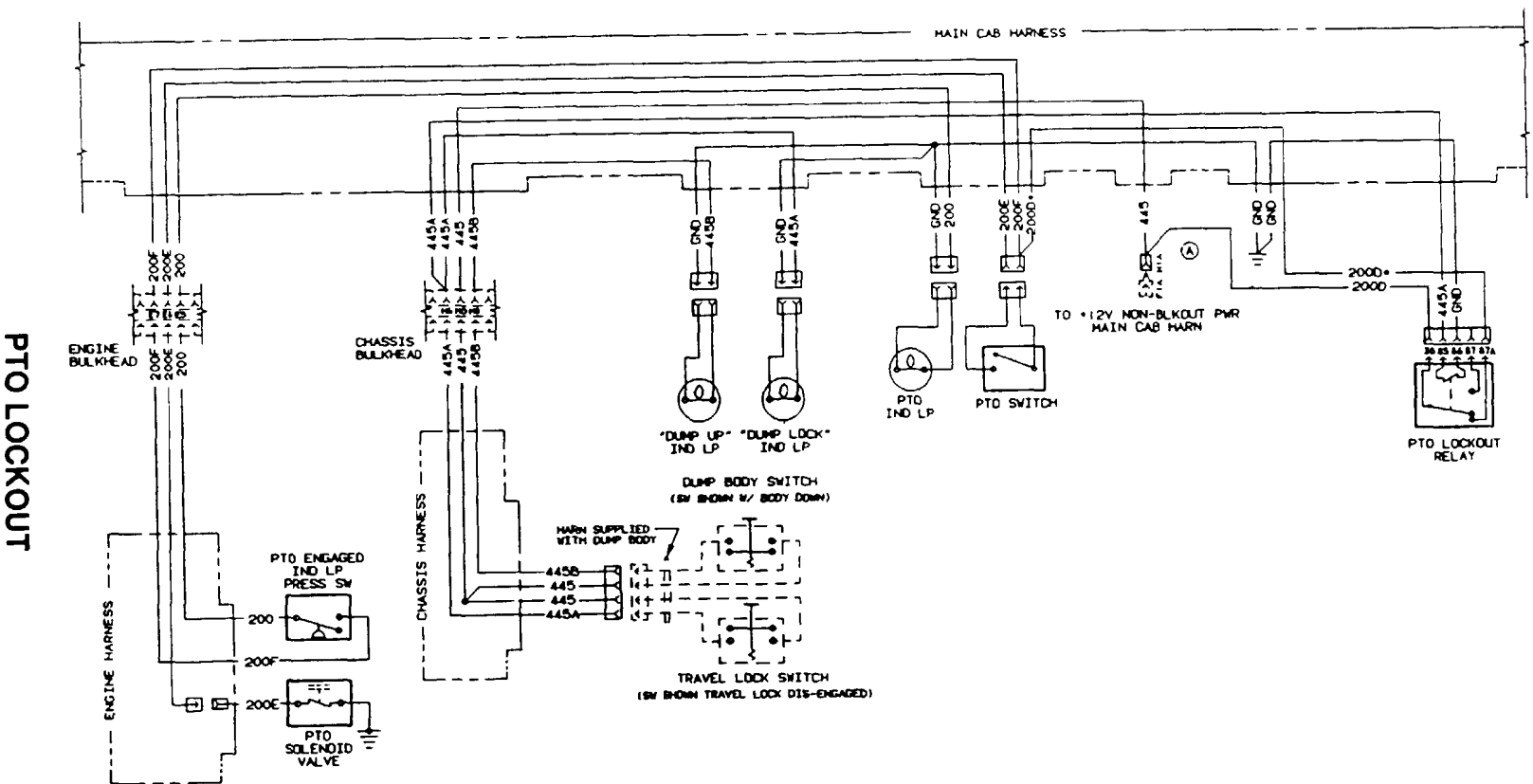


5. Install new tie wraps.

**FOLLOW-ON TASKS:**

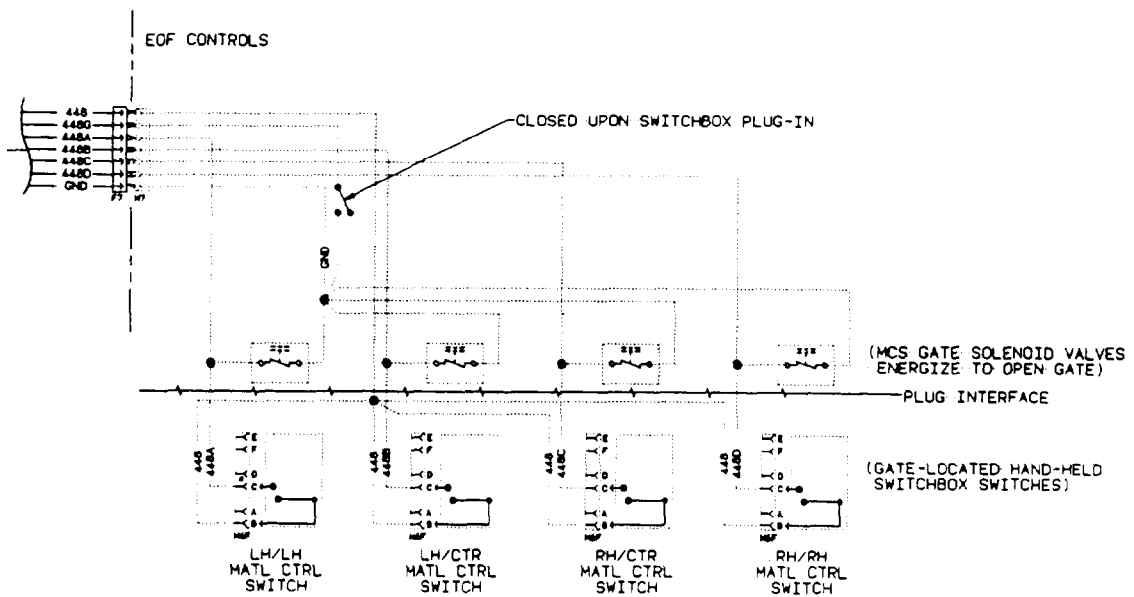
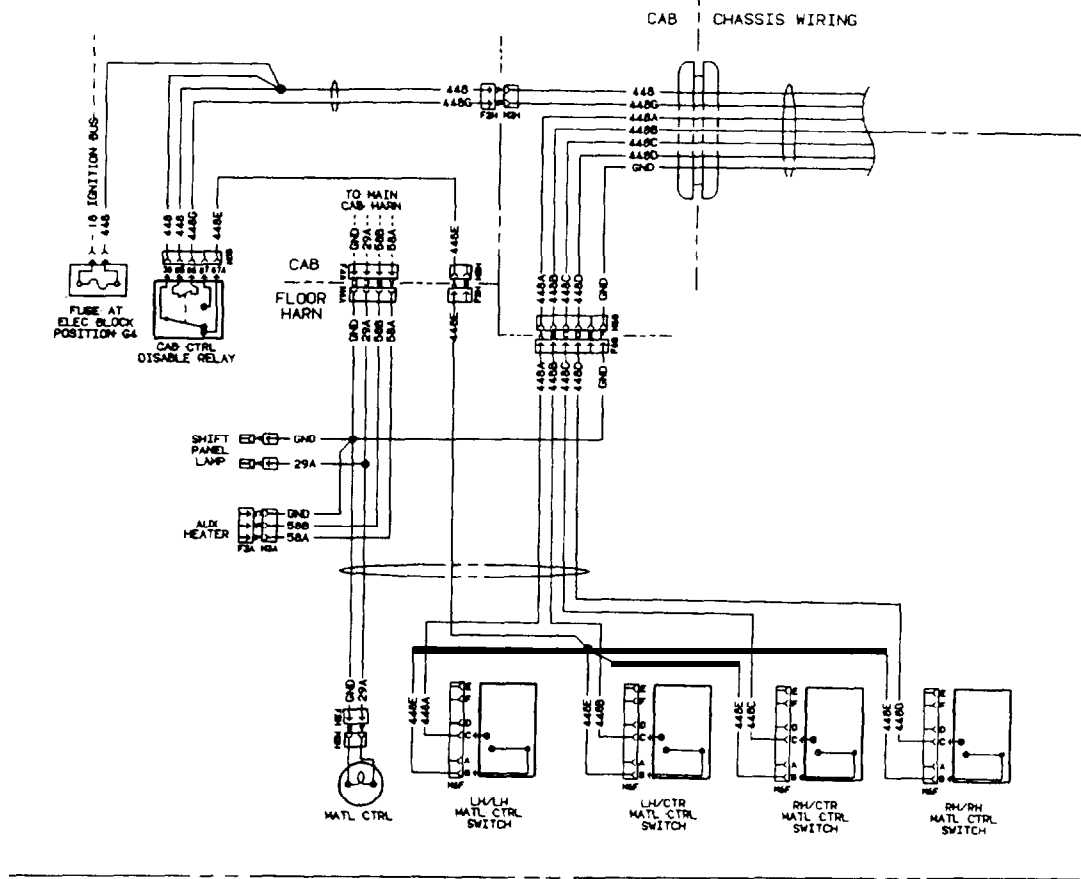
- Connect batteries (TM 9-2320-363-20).
- Start vehicle (TM 9-2320-363-10).
- Check operation of MCS tailgate using cab-mounted MCS control unit and remote control (paragraphs 2-1 and 2-2).
- Install MCS tailgate cover (paragraph 4-53).

4-49. WIRING DIAGRAMS.



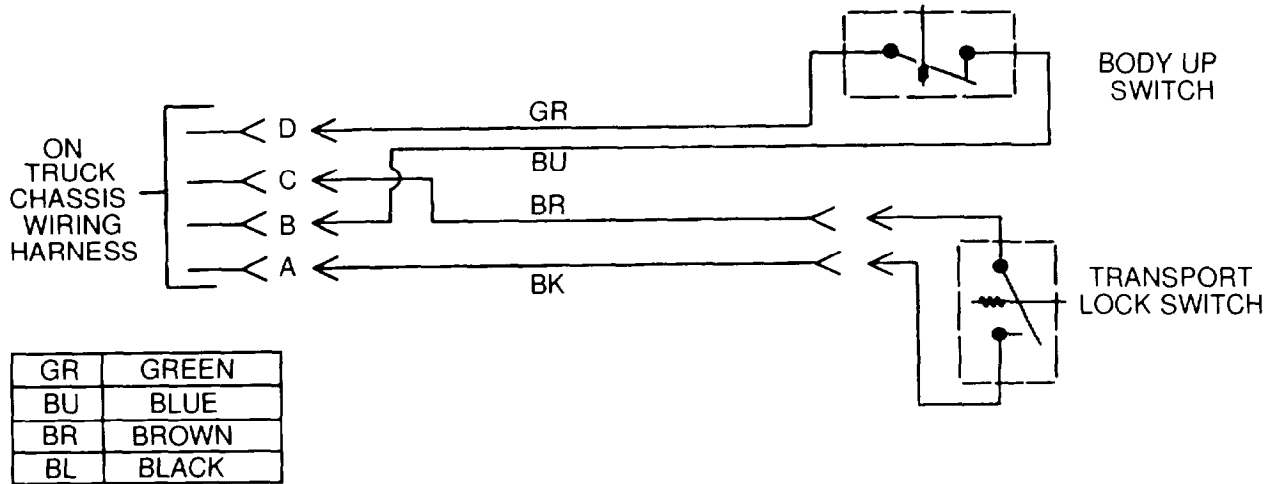
PTO LOCKOUT

4-49. WIRING DIAGRAMS (Con't).

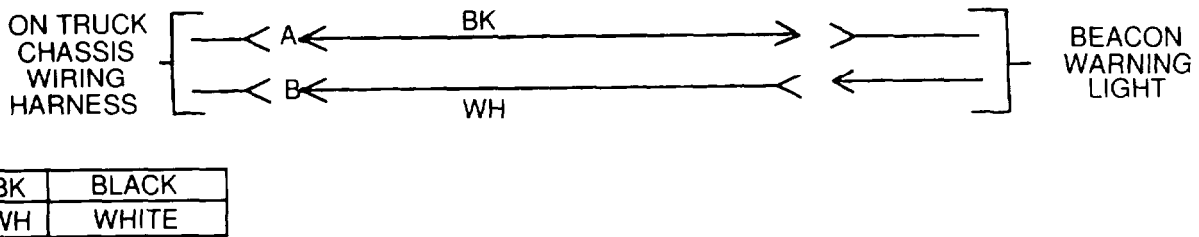


MCS (M917A1 W/MCS)

4-49. WIRING DIAGRAMS (Con't).

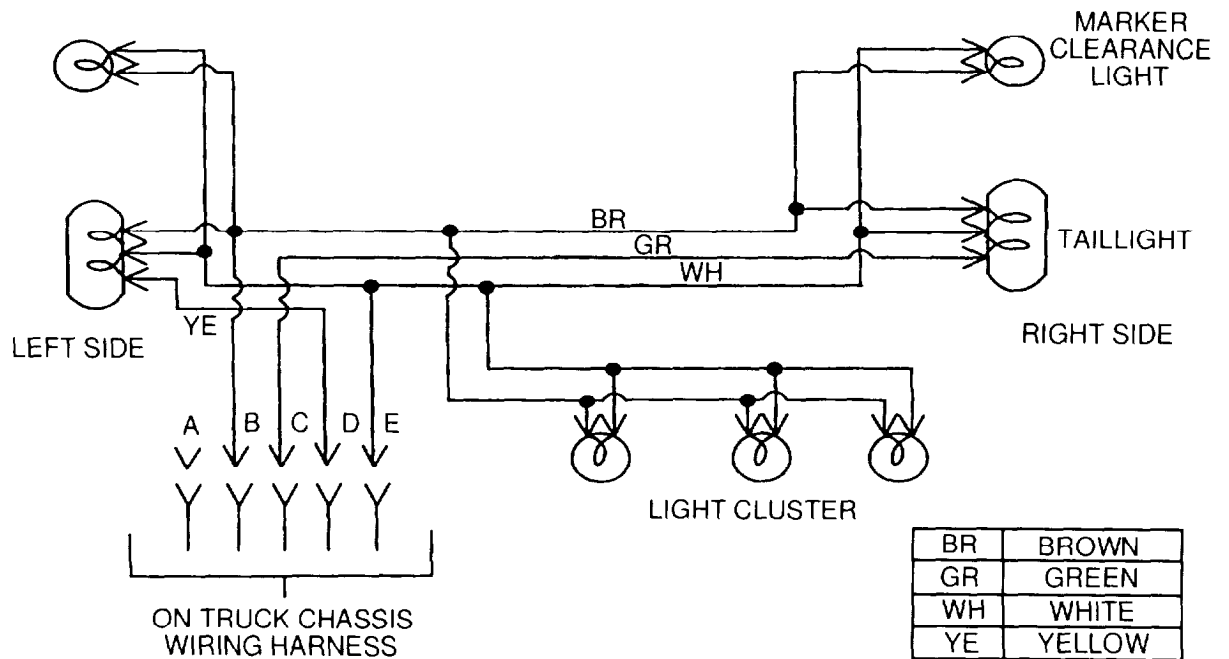


BODY UP AND TRANSPORT LOCK SWITCHES



BEACON WARNING LIGHT

4-49. WIRING DIAGRAMS (Con't).



DUMP BODY TAILLIGHTS AND MARKER CLEARANCE LIGHTS

## Section VII. DUMP BODY MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
4-50.	Tailgate Replacement (M917A1) .....	4-66
4-51.	Tailgate Release Air Cylinder Replacement. ....	4-68
4-52.	MCS Tailgate Replacement (M917A1 w/MCS) .....	4-70
4-53.	MCS Tailgate Cover Replacement (M917A1 w/MCS) .....	4-73
4-54.	MCS Gate Replacement (M917A1 w/MCS) .....	4-75
4-55.	MCS Air Reservoir Replacement (M917A1 w/MCS) .....	4-77
4-56.	MCS Air Cylinder Replacement (M917A1 w/MCS) .....	4-79
4-57.	MCS Air Cylinder Solenoid Assembly Maintenance (M917A1 w/MCS) .....	4-82
4-58.	Tailgate Release/MCS Air Cylinder Repair .....	4-86
4-59.	Tailgate Release/MCS Air Lines and Fittings Replacement. ....	4-89
4-60.	MCS Adjustment Tube Replacement (M917A1 w/MCS) .....	4-91
4-61.	Body Prop Replacement .....	4-93
4-62.	Cab Shield Replacement .....	4-94
4-63.	Mud Flap Replacement .....	4-97

### 4-50. TAILGATE REPLACEMENT (M917A1).

This task covers:

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

*Initial Setup:*

**Equipment Conditions:**

- Tailgate release control valve lever in UNLOCKED position (paragraph 2-1).
- Tailgate chains released (paragraph 2-11).

**General Safety Instructions:**

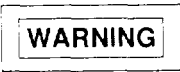
- Use extreme caution when handling heavy parts.

**Personnel Required:** Two

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Lifting slings (three) (Item 6, Appendix I)
- Suitable lifting device

**a. REMOVAL**



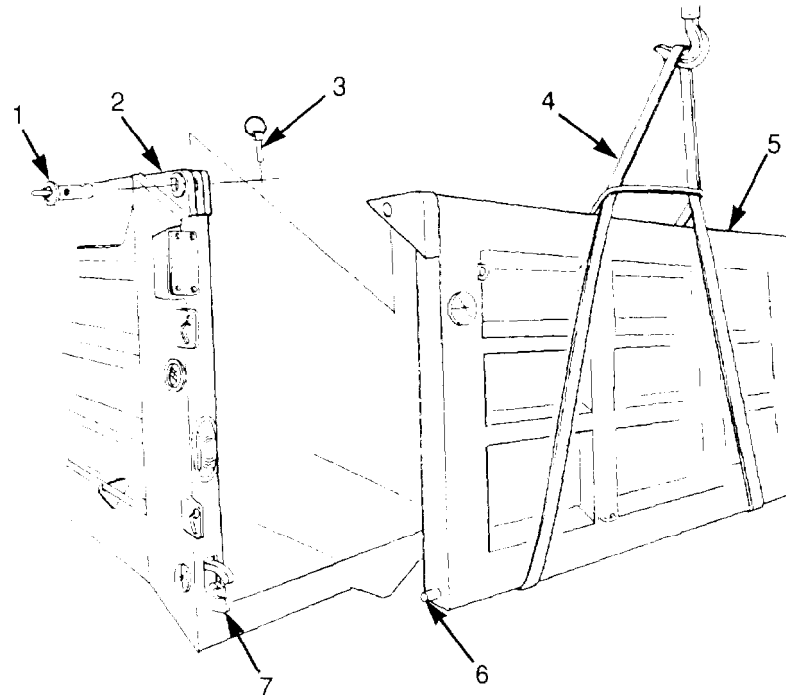
**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

1. Attach lifting slings (4) to tailgate (5) and remove slack from lifting slings.
2. Remove lynch pins (3) and hinge pins (1) from each side of tailgate (5).



## 4-50. TAILGATE REPLACEMENT (M917A1) (Con't).

- Lift tailgate (5) from dump body (2) and place tailgate in a safe work area.



### b. CLEANING AND INSPECTION

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

### c. INSTALLATION

Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.

- Raise tailgate (5) to dump body (2).
- Position tailgate (5) so that bottom pins (6) are resting on dump body stops (7) and tailgate hinge pin holes are aligned with dump body hinge pin holes.
- Install hinge pins (1) and lynch pins (3) to each side of tailgate (5).
- Remove lifting slings (4) from tailgate (5).

#### **FOLLOW-ON TASKS:**

- Lubricate tailgate hinge pins (Chapter 3, Section I),
- Start engine and pressurize air systems (TM 9-2320-363-10).
- Set tailgate release control valve lever to LOCKED position (paragraph 2-1).
- Latch tailgate chains (paragraph 2-11).

---

## 4-51. TAILGATE RELEASE AIR CYLINDER REPLACEMENT.

---

This task covers:

- a. Removal
- b. Cleaning and Inspection
- c. Installation

---

Initial Setup:

**Equipment Conditions:**

- Tailgate release control valve lever in UNLOCKED position (paragraph 2-1).
- Dump body raised and supported on body props (paragraph 2-15).
- Chassis air system drained (TM 9-2320-363-10).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)
- Two cotter pins

**Personnel Required:** Two

General Safety Instructions:

- I NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
- I DO NOT disconnect air lines while air system is pressurized.

**WARNING**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.
- DO NOT disconnect air lines while air system is pressurized. Air system pressure must be released before air lines are disconnected. A line disconnected under pressure may cause personnel injury.

**a. REMOVAL**

**NOTE**

**Hoses should be tagged before removal (paragraph 4-17).**

1. Disconnect two air lines (4) from two elbows (3) and remove elbows from air cylinder (5).

**NOTE**

**Note position of nut at air cylinder piston shaft clevis to ensure proper adjustment of air cylinder on installation.**

2. Remove cotter pin (8) and pin (6) to remove air cylinder (5) from tailgate release lever (7). Discard cotter pin.
3. Remove cotter pin (9) and pin (2) to remove air cylinder (5) from dump body (1). Discard cotter pin.

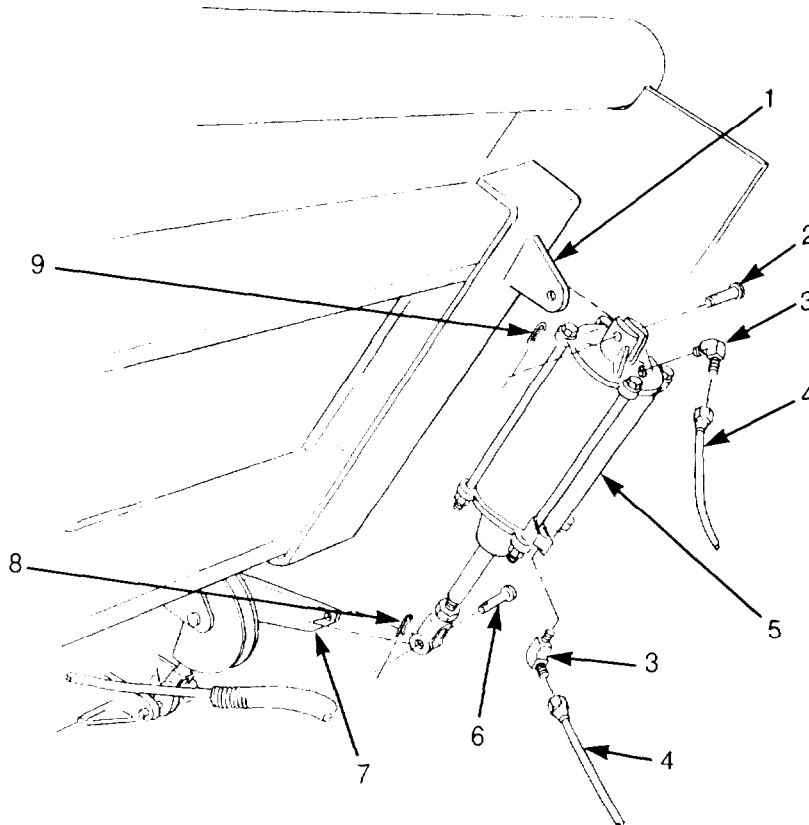
**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, General Maintenance Instructions.

---

**4-51. TAILGATE RELEASE AIR CYLINDER REPLACEMENT (Con't).**


---



<b>c. INSTALLATION</b>
------------------------

1. Install air cylinder (5) to dump body (1) with pin (2) and new cotter pin (9).

**NOTE**

**Ensure that position of nut at air cylinder piston shaft clevis is the same as noted during removal, to ensure proper adjustment of air cylinder on installation.**

2. Install air cylinder (5) to tailgate release lever (7) with pin (6) and new cotter pin (8).
3. Install two elbows (3) to air cylinder (5). Connect two air lines (4) to elbows.

**FOLLOW-ON TASKS:**

- Start engine and pressurize air system (TM 9-2320-363-10).
- Remove body props and lower dump body (paragraph 2-15).
- Set tailgate release control valve lever to LOCKED position (paragraph 2-1).

---

## 4-52. MCS TAILGATE REPLACEMENT (M917A1 W/MCS).

---

This task covers:

- a. Removal
- b. Cleaning and Inspection
- c. Installation

---

Initial Setup:

### Equipment Conditions:

- MCS remote control disconnected (paragraph 2-2).
- Tailgate release control valve lever in UNLOCKED position (paragraph 2-1).
- Chassis air system drained (TM 9-2320-363-10).
- MCS air system drained (Chapter 2, Section II, Operator PMCS).
- Tailgate chains released (paragraph 2-11).

### Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)
- Lifting slings (three) (Item 6, Appendix I)
- Suitable lifting device

### Personnel Required: Two

### General Safety Instructions:

- DO NOT disconnect air lines while air system is pressurized.
- Use extreme caution when handling heavy parts.

---

### a. REMOVAL

1. Disconnect MCS tailgate wiring harness connector (3) from receptacle (10).

**WARNING**

**DO NOT disconnect air lines while air system is pressurized. Air system pressure must be released before air lines are disconnected. A line disconnected under pressure may cause personnel injury.**

2. Disconnect MCS air line (9).

**WARNING**

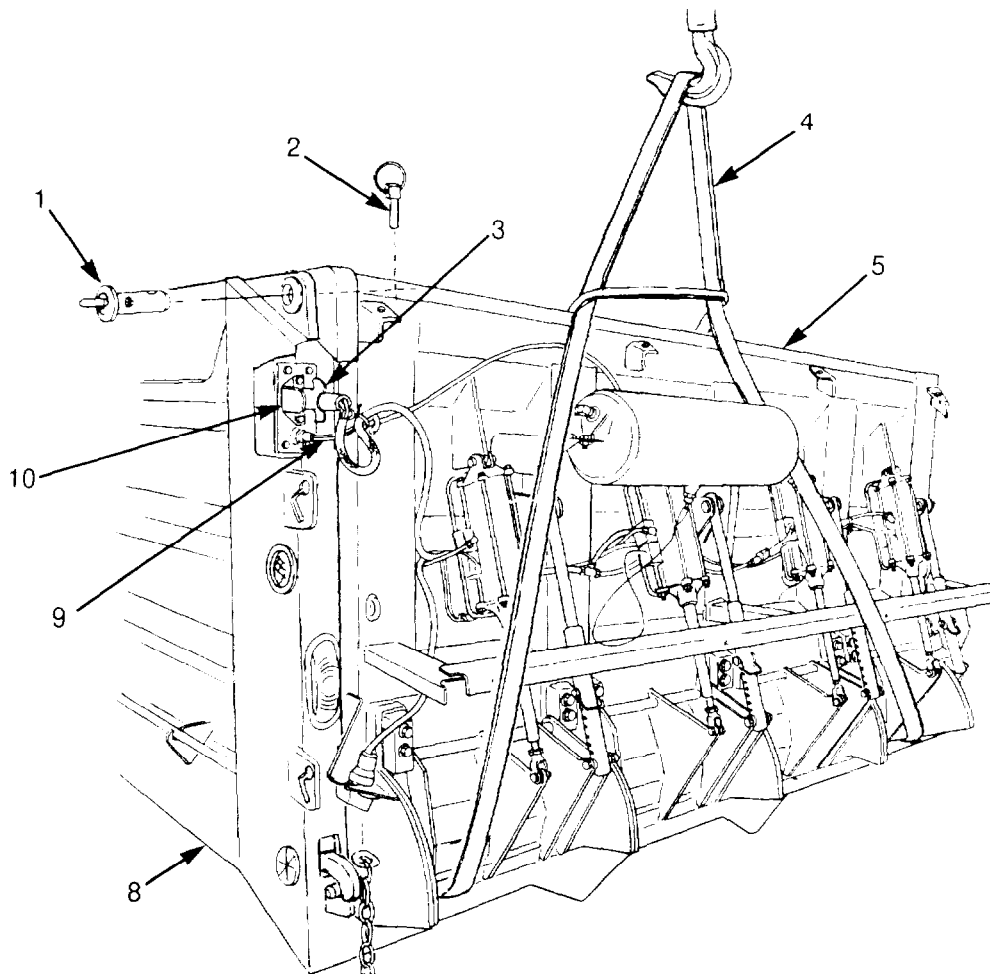
**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

3. Attach lifting slings (4) to MCS tailgate (5) and remove slack from lifting slings.
4. Remove lynch pins (2) and hinge pins (1) from each side of MCS tailgate (5).
5. Lift MCS tailgate (5) from dump body (8) and place tailgate in a safe work area.

### b. CLEANING AND INSPECTION

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

4-52. MCS TAILGATE REPLACEMENT (M917A1 W/MCS) (Con't).



**c. INSTALLATION**

**WARNING**

Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.

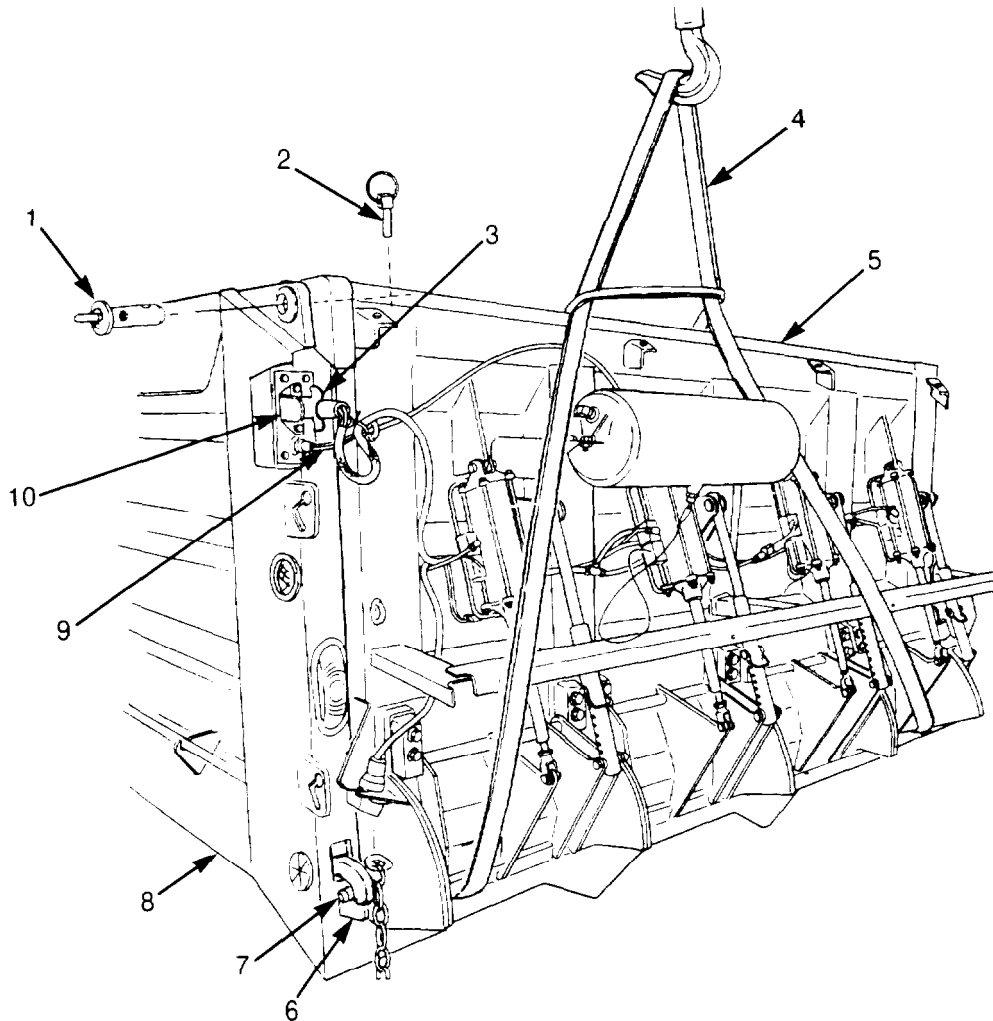
1. Raise MCS tailgate (5) to dump body (8).

---

**4-52. MCS TAILGATE REPLACEMENT (M917A1 W/MCS) (Con't).**

---

2. Position MCS tailgate (5) so that bottom pins (7) are resting on dump body stops (6) and tailgate hinge pin holes are aligned with dump body hinge pin holes.
3. Install hinge pins (1) and lynch pins (2) to each side of MCS tailgate (5).
4. Remove lifting slings (4) from MCS tailgate (5).
5. Connect MCS air line (9).
6. Connect MCS tailgate wiring harness connector (3) to receptacle (10).



**FOLLOW-ON TASKS:**

- Lubricate tailgate hinge pins (Chapter 3, Section I).
- Start engine and pressurize air systems (TM 9-2320-363-10).
- Set tailgate release control valve lever to LOCKED position (paragraph 2-1).
- Check operation of MCS gates using cab-mounted control unit (paragraph 2-1).
- Check operation of MCS gates using MCS remote control (paragraph 2-2).
- Latch tailgate chains (paragraph 2-11).

**4-53. MCS TAILGATE COVER REPLACEMENT (M917A1 W/MCS).**

*This task covers:*

- a. Removal
- b. Cleaning and Inspection
- c. Installation

*Initial Setup:*

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- One self-locking nut

**Personnel Required:** Two

**General Safety Instructions:**

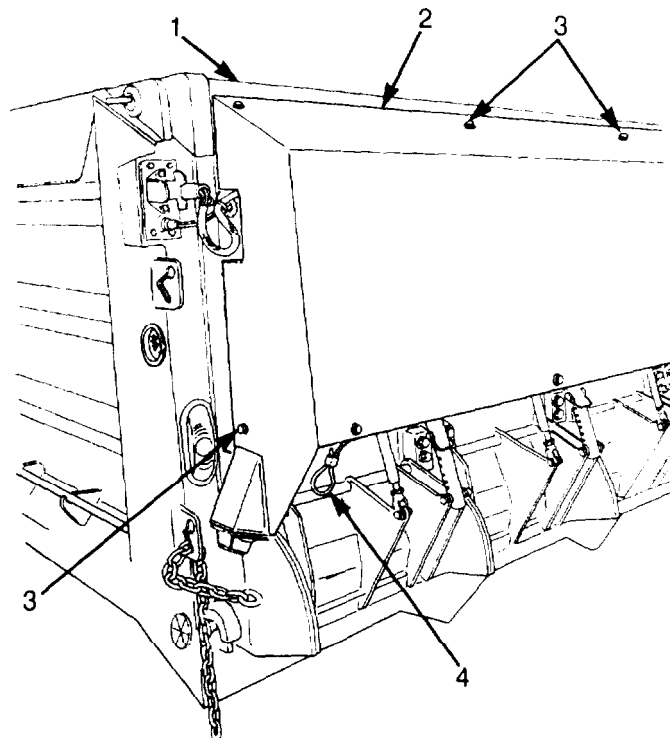
- Use extreme caution when handling heavy parts.

**WARNING**

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury to personnel or damage to equipment.**

**a. REMOVAL**

1. Remove self-locking nut, screw, clamp, and release air reservoir draincock lanyard (4) from MCS tailgate cover (2). Discard self-locking nut.
2. Remove ten self-tapping screws (3) and MCS tailgate cover (2) from MCS tailgate (1).



---

**4-53. MCS TAILGATE COVER REPLACEMENT (M917A1 W/MCS) (Con't).**

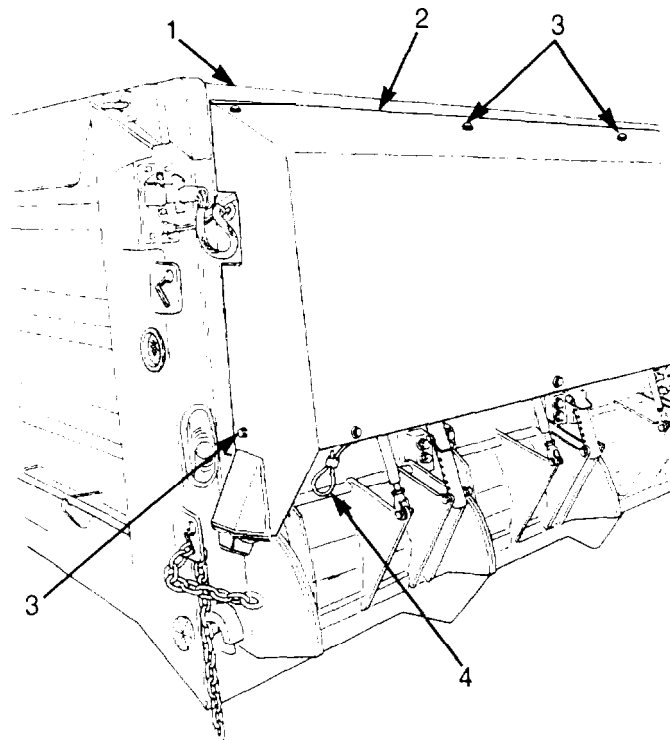
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**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. INSTALLATION**

1. Aline screw holes on MCS tailgate cover (2) with screw holes on MCS tailgate (1).
2. Install and tighten ten self-tapping screws (3).
3. Secure air reservoir draincock lanyard (4) to MCS tailgate cover (2) with clamp, screw, and new self-locking nut.





**4-54. MCS GATE REPLACEMENT (M917A1 W/MCS).**

*This task covers:*

- a. Removal
- b. Cleaning and Inspection
- c. Installation

*Initial Setup:*

**Equipment Conditions:**

- MCS adjustment tube removed (paragraph 4-60).
- MCS air cylinder removed (paragraph 4-56).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

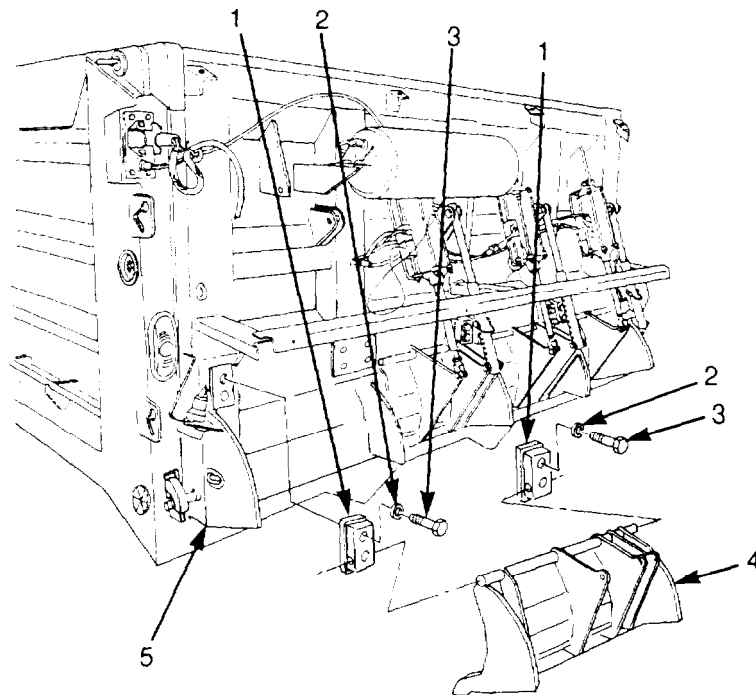
**Materials/Parts:**

- Four lockwashers

**Personnel Required:** Two

**a. REMOVAL**

1. Remove four screws (3), lockwashers (2), MCS gate (4), and two brackets (1) from tailgate (5). Discard lockwashers.
2. Remove two brackets (1) from MCS gate (4)



**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

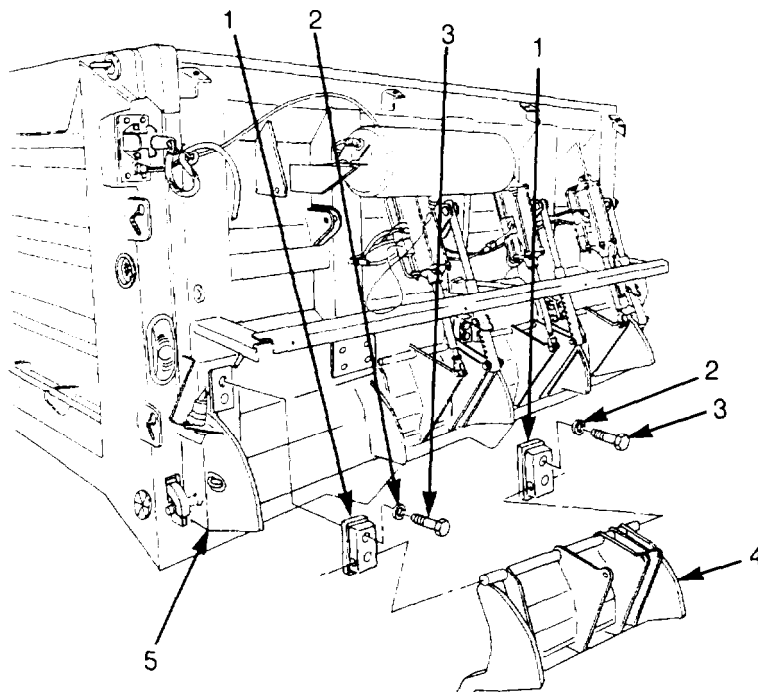
---

#### 4-54. MCS GATE REPLACEMENT (M917A1 W/MCS) (Con't).

---

**c. INSTALLATION**

1. Position two brackets (1) on MCS gate (4).
2. Install two brackets (1) and MCS gate (4) to tailgate (5) with four new lockwashers (2) and screws (3).



**FOLLOW-ON TASKS:**

- Install MCS adjustment tube (paragraph 4-60).
- Install MCS air cylinder (paragraph 4-56).

---

## 4-55. MCS AIR RESERVOIR REPLACEMENT (M917A1 W/MCS).

---

This task covers:

- |            |                 |
|------------|-----------------|
| a. Removal | b. Installation |
|------------|-----------------|

---

Initial Setup:

**Equipment Conditions:**

- Chassis air system drained (TM 9-2320-363-10).
- MCS air system drained (Chapter 2, Section II, *Operator PMCS*).
- MCS tailgate cover removed (paragraph 4-53).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)
- Four locknuts

**Personnel Required:** Two

**General Safety Instructions:**

- DO NOT disconnect air lines while air system is pressurized.

**a. REMOVAL**

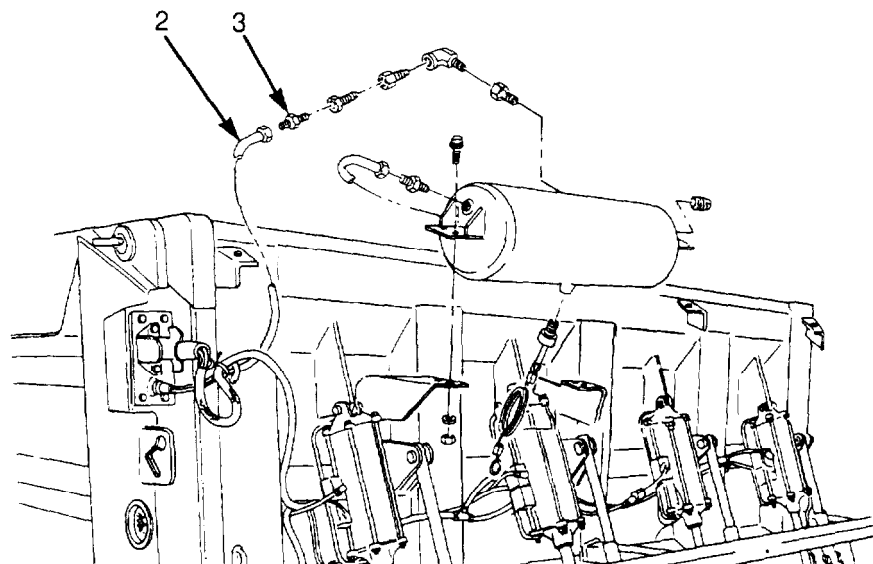
**WARNING**

**DO NOT** disconnect air lines while air system is pressurized. Air system pressure must be released before air lines are disconnected. A line disconnected under pressure may cause personnel injury.

**NOTE**

Hoses should be tagged before removal (paragraph 4-17).

1. Disconnect air supply hose (2) from adapter (3).



---

**4-55. MCS AIR RESERVOIR REPLACEMENT (M917A1 W/MCS) (Con't).**

---

2. Disconnect air hose (4) from adapter (8).
3. Remove four locknuts (14), flatwashers (15), screws (10), and air reservoir (11) from welded brackets (1). Discard locknuts.
4. Remove adapter (3), bushing (5), check valve (6), elbow (7), and reducer (9) from air reservoir (11).
5. Remove adapter (8) from air reservoir (11).
6. Remove draincock with lanyard (13) and plug (12) from air reservoir (11).

<b>b. INSTALLATION</b>
------------------------

1. Install draincock with lanyard (13) and plug (12) to air reservoir (11).
2. Install adapter (8) to air reservoir (11).
3. Install reducer (9), elbow (7), check valve (6), bushing (5) and adapter (3) to air reservoir (11).
4. Install air reservoir (11) to welded brackets (1) with four screws (10), flatwashers (15), and new locknuts (14).
5. Connect air hose (4) to adapter (8).
6. Connect air supply hose (2) to adapter (3).

**FOLLOW-ON TASKS:**

- Start engine and pressurize air systems (TM 9-2320-363-10).
- Check for leaks.
- Check operation of MCS tailgate (paragraph 2-13).
- Install MCS tailgate cover (paragraph 4-53).

## 4-56. MCS AIR CYLINDER REPLACEMENT (M917A1 W/MCS).

This task covers..

- a. Removal
- b. Cleaning and Inspection
- c. Installation

*Initial Setup:*

### Equipment Conditions:

- Chassis air system drained (TM 9-2320-363-10).
- MCS air system drained (Chapter 2, Section II, Opera for PMCS)
- MCS tailgate cover removed (paragraph 4-53).

### Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)

### Materials/Parts:

- Two cotter pins
- Tie wraps (as required)

### Personnel Required: Two

### General Safety Instructions:

- DO NOT disconnect air lines while air system is pressurized.

### a. REMOVAL

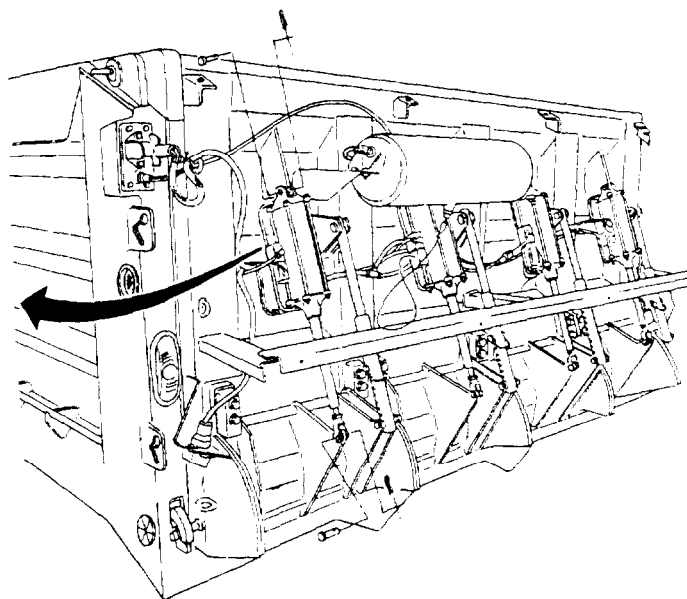
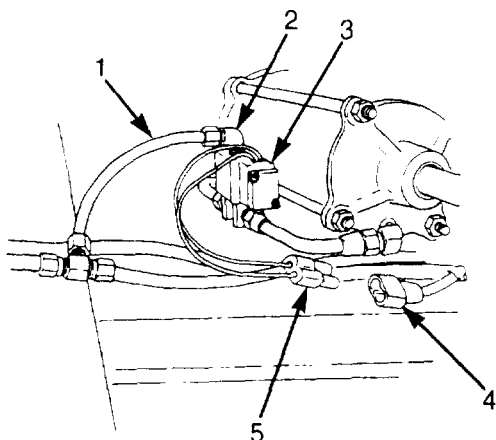
### WARNING

**DO NOT disconnect air lines while air system is pressurized. Air system pressure must be released before air lines are disconnected. A line disconnected under pressure may cause personnel injury.**

### NOTE

**Note location of tie wraps prior to removal to aid in installation.**

1. Disconnect solenoid connector (5) from MCS tailgate wiring harness connector (4).
2. Disconnect air line (1) from elbow (2). If damaged, remove elbow from air cylinder solenoid (3).



---

**4-56. MCS AIR CYLINDER REPLACEMENT (M917A1 W/MCS) (Con't).**

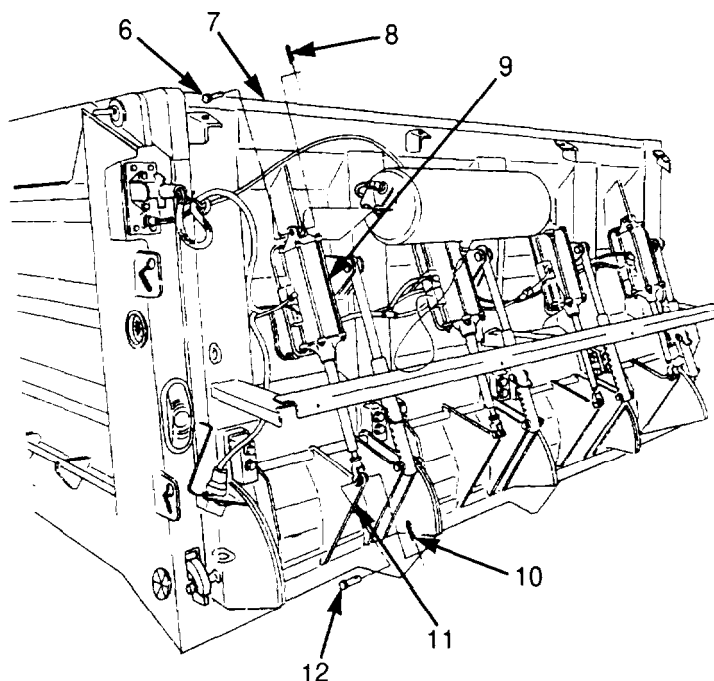
---

3. Remove cotter pin (10) and pin (12) to remove air cylinder (9) from MCS gate (11). Discard cotter pin.

**NOTE**

**Note position of nut at air cylinder piston shaft clevis to ensure proper adjustment of air cylinder on installation.**

4. Remove cotter pin (8) and pin (6) to remove air cylinder (9) from MCS tailgate (7). Discard cotter pin.



**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. INSTALLATION**

**NOTE**

**Ensure that position of nut at air cylinder piston shaft clevis is the same as noted during removal, to ensure proper adjustment of air cylinder on installation.**

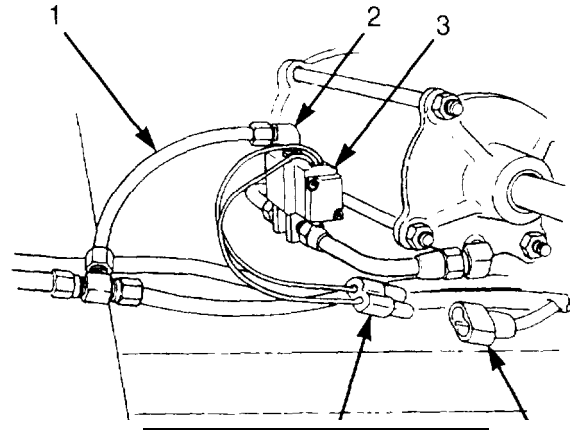
1. Install air cylinder (9) to MCS tailgate (7) with pin (6) and new cotter pin (8).
2. Install air cylinder (9) to MCS gate (11) with pin (12) and new cotter pin (10).

---

**4-56. MCS AIR CYLINDER REPLACEMENT (M917A1 W/MCS (Con't)).**

---

3. If removed, install elbow (2) to air cylinder solenoid (3). Connect air line (1) to elbow.
4. Connect solenoid connector (5) to MCS tailgate wiring harness connector (4).



5. Install new tie wraps as required

**FOLLOW-ON TASKS:**

- Start engine and pressurize air systems (TM 9-2320-363-10).
- Check for leaks.
- Check operation of MCS tailgate (paragraph 2-13).
- install MCS tailgate cover (paragraph 4-53).

---

## 4-57. MCS AIR CYLINDER SOLENOID ASSEMBLY MAINTENANCE (M917A1 W/MCS).

---

*This task covers:*

- |                            |                 |
|----------------------------|-----------------|
| a. Removal                 | d. Assembly     |
| b. Disassembly             | e. Installation |
| c. Cleaning and Inspection |                 |

---

*Initial Setup:*

**Equipment Conditions:**

- MCS air cylinder removed (paragraph 4-56).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

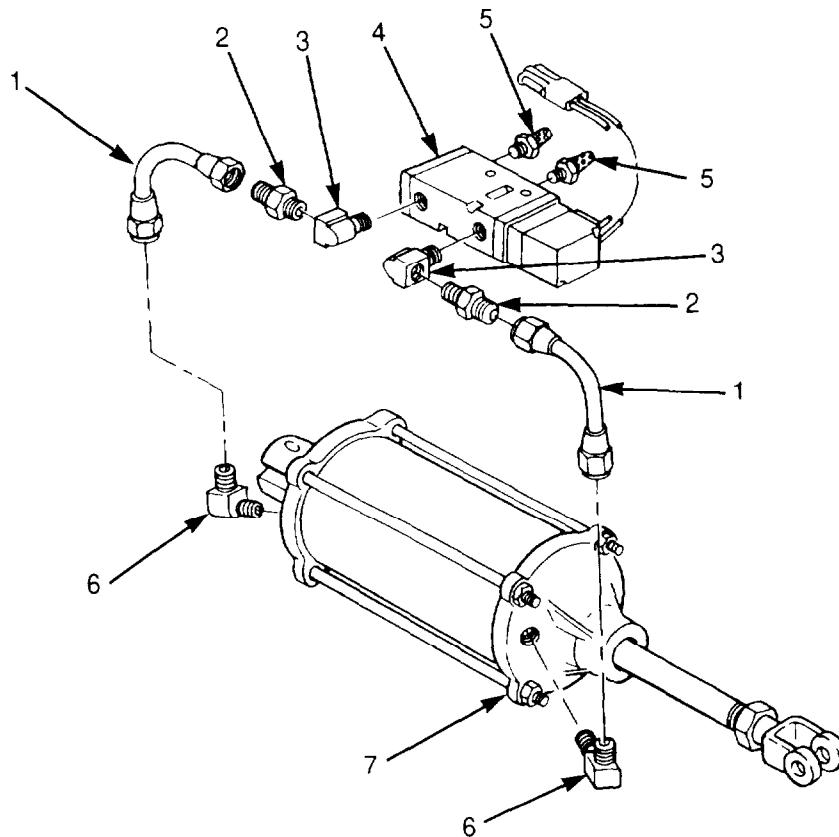
- Pipe sealing compound (Item 6, Appendix F)
  - Ball bearing grease (Item 11, Appendix F)
  - One solenoid repair kit
- 

<b>a. REMOVAL</b>
-------------------

**NOTE**

**Note position of elbows, tubes, and solenoid assembly for installation.**

1. Disconnect two tubes (1) from elbows (6) and remove elbows from MCS air cylinder (7).
2. Remove two tubes (1), adapters (2), and elbows (3) from solenoid assembly (4).
3. Remove two filters (5) from solenoid assembly (4).





## 4-57. MCS AIR CYLINDER SOLENOID ASSEMBLY MAINTENANCE (M917A1 W/MCS) (Con't).

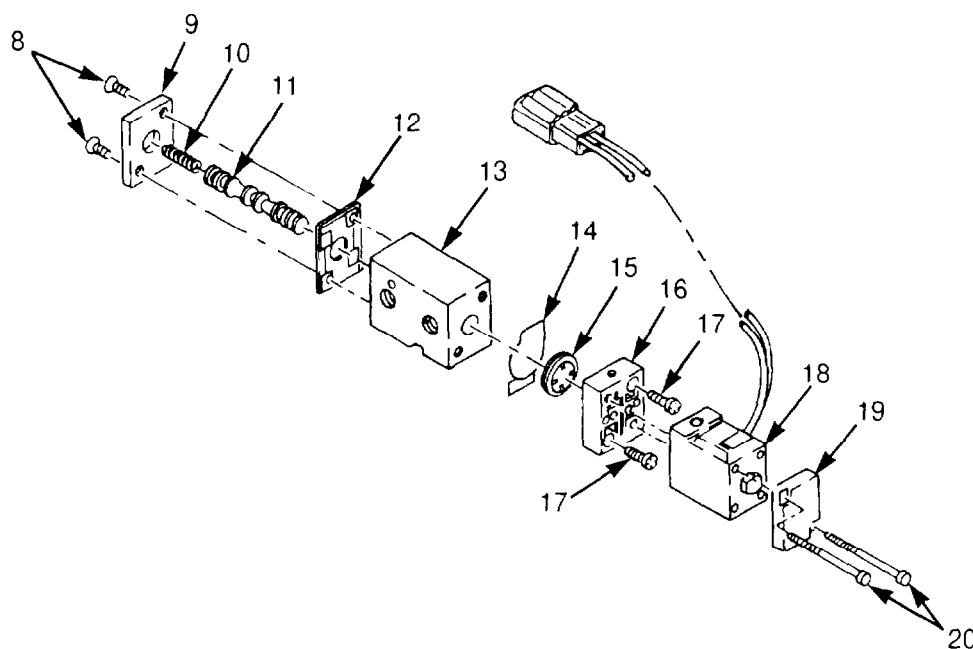
### b. DISASSEMBLY

1. Remove two screws (20), end cap (19), and solenoid (18).
2. Remove two screw/lockwasher assemblies (17) and block (16) from valve body (13).

#### NOTE

**Note position of piston assembly for assembly.**

3. Remove gasket (14) and piston assembly (15) from block (16). Discard gasket and piston assembly.
4. Remove two screws (8), end cover (9), end cover gasket (12), return spring (10), and spool assembly (11) from valve body (13). Discard end cover gasket, return spring, and spool assembly.



### c. CLEANING AND INSPECTION

Clean and inspect components in accordance with Chapter 4, Section III, General *Maintenance* Instructions.

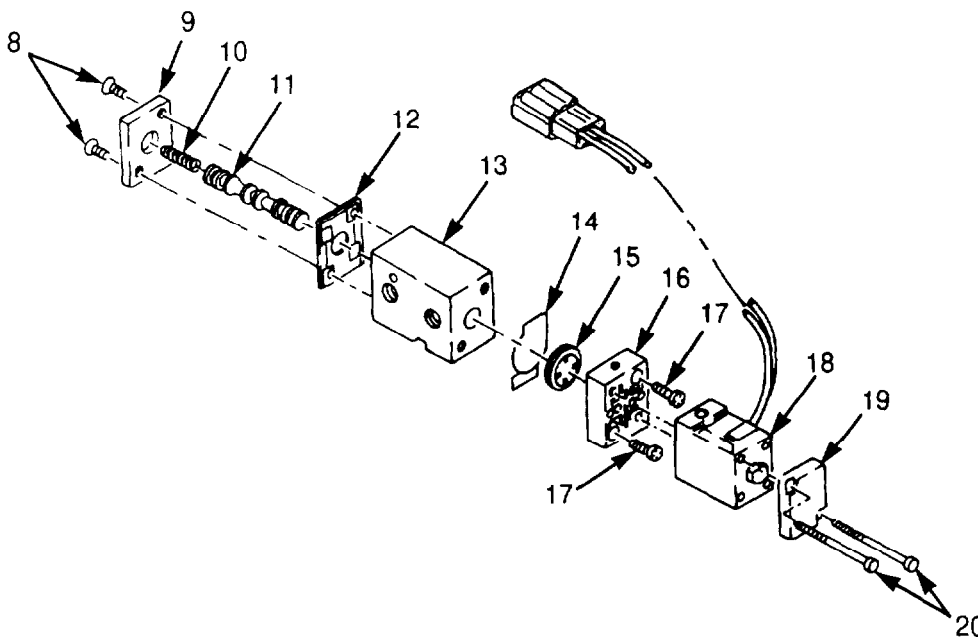
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**4-57. MCS AIR CYLINDER SOLENOID ASSEMBLY MAINTENANCE (M917A1 W/MCS)  
(Con't).**

---

**d. ASSEMBLY**

1. Lightly apply grease to bore of valve body (13).
2. Install new spool assembly (11), new return spring (10), new end cover gasket (12), and end cover (9) to valve body (13) with two screws (8).
3. Lightly apply grease to new piston assembly (15).
4. Install new piston assembly (15) and new gasket (14) to block (16).
5. Install block (16) to valve body (13) with two screw/lockwasher assemblies (17).
6. Install solenoid (18) and end cap (19) to block (16) with two screws (20).



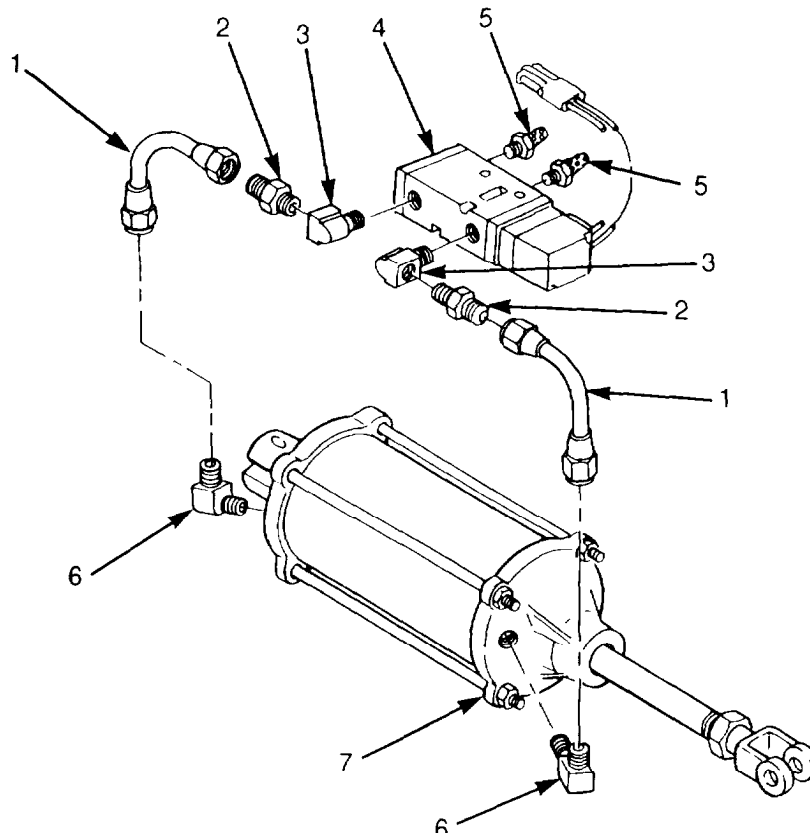
**e. INSTALLATION**

1. Install two filters (5) to solenoid assembly (4).
2. Apply pipe sealing compound to pipe threads of two elbows (3) and two adapters (2).
3. Install two elbows (3), adapters (2), and tubes (1) to solenoid assembly (4).
4. Apply pipe sealing compound to pipe threads of two elbows (6).
5. Install two elbows (6) and tubes (1) to MCS air cylinder (7).

---

**4-57. MCS AIR CYLINDER SOLENOID ASSEMBLY MAINTENANCE (M917A1 W/MCS)  
(Con't).**

---

**FOLLOW-ON TASKS:**

- Install MCS air cylinder (paragraph 4-56).

---

## 4-58. TAILGATE RELEASE/MCS AIR CYLINDER REPAIR.

---

*This task covers.*

- a. Disassembly
- b. Cleaning and Inspection
- c. Assembly

---

*Initial Setup.*

**Equipment Conditions:**

- Tailgate release/MCS air cylinder removed (paragraph 4-51 or 4-56).
- MCS air cylinder solenoid assembly removed (paragraph 4-57).

**Materials/Parts:**

- Bali bearing grease (Item 11, Appendix F)
- Two preformed packings
- Two seals
- Five locknuts

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

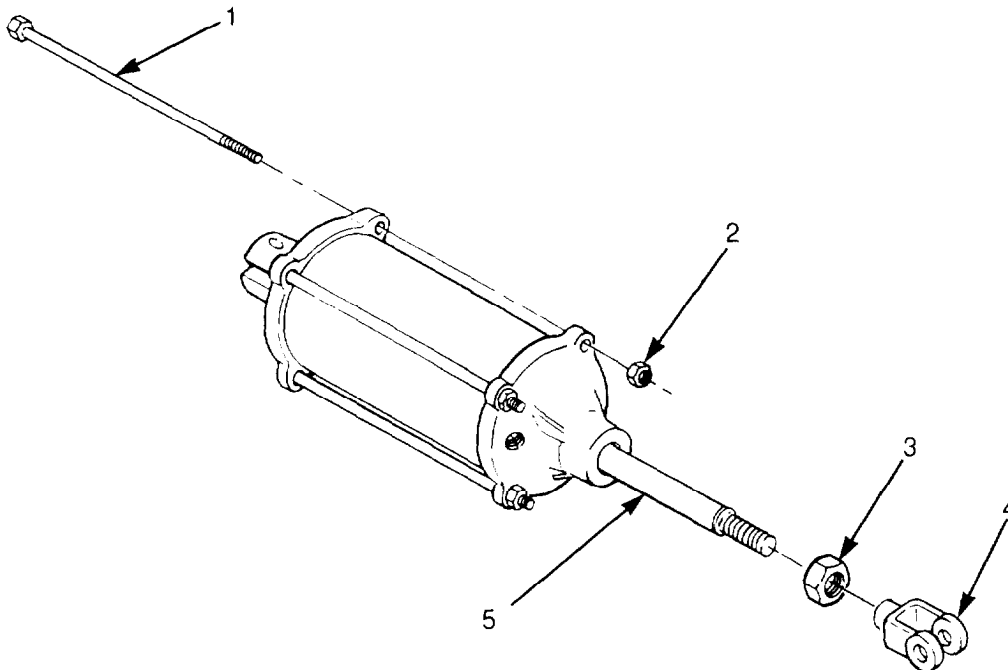
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**a. DISASSEMBLY**

**NOTE**

**Note position of nut at air cylinder piston shaft clevis to ensure proper adjustment of air cylinder on installation.**

1. Remove clevis (4) and nut (3) from piston shaft (5) of air cylinder.
2. Remove four locknuts (2) and tie-rods (1). Discard locknuts.



---

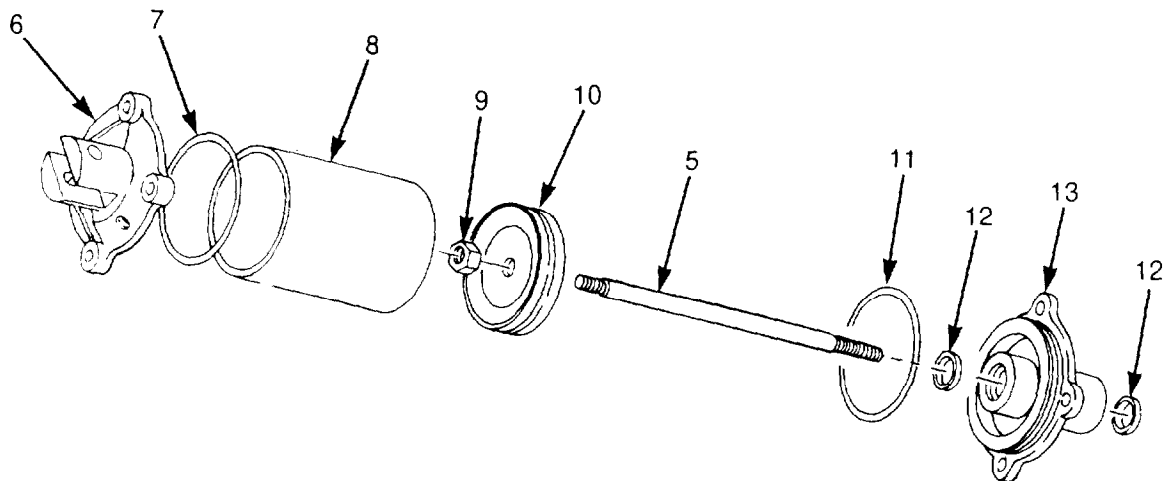
**4-58. TAILGATE RELEASE/MCS AIR CYLINDER REPAIR (Con't).**


---

**NOTE**

**Note position of front and rear cover for assembly.**

3. Remove front cover (13), rear cover (6) and piston shaft (5) from cylinder tube (8).
4. Remove preformed packing (11) and two seals (12) from front cover (13). Discard preformed packing and seals.
5. Remove preformed packing (7) from rear cover (6). Discard preformed packing.
6. Remove locknut (9) and piston (10) from piston shaft (5). Discard locknut.



<b>b. CLEANING AND INSPECTION</b>
-----------------------------------

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

<b>c. ASSEMBLY</b>
--------------------

1. Install piston (10) to piston shaft (5) with new locknut (9).
2. Apply grease to new preformed packing (7) and install new preformed packing to rear cover (6).
3. Apply grease to two new seals (12) and press two new seals into front cover (13).
4. Apply grease to new preformed packing (11) and install new preformed packing to front cover (13).
5. Apply grease to piston (10) and piston shaft (5). Install piston shaft, rear cover (6), and front cover (13) to cylinder tube (8).

---

**4-58. TAILGATE RELEASE/MCS AIR CYLINDER REPAIR (Con't).**

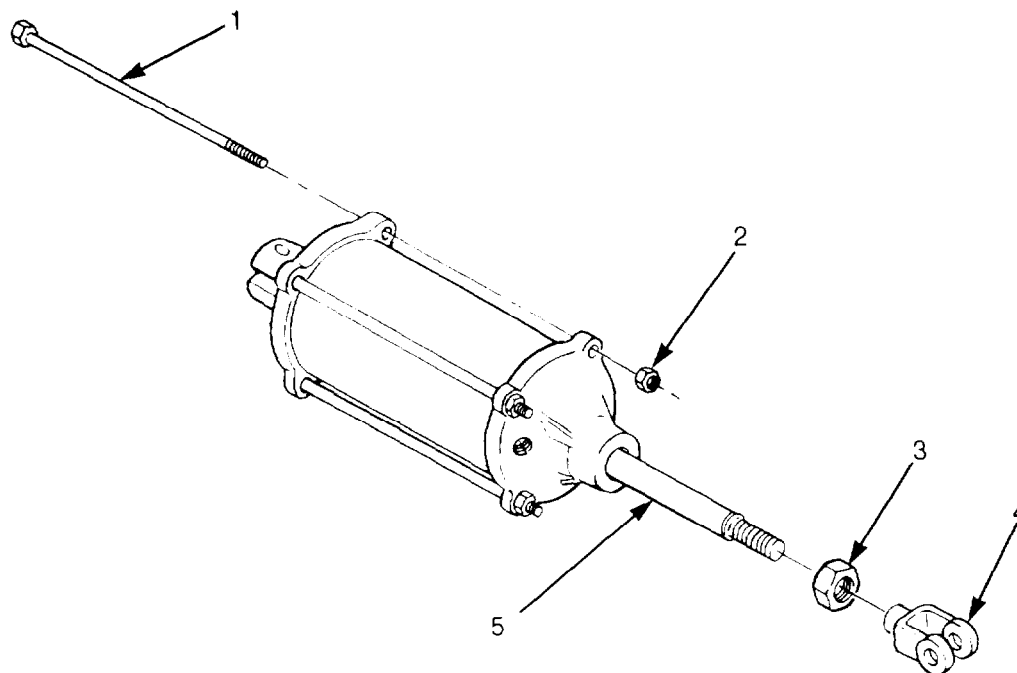
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6. Install four tie-rods (1) and new locknuts (2).

**NOTE**

**Ensure that position of nut at air cylinder piston shaft clevis is the same as noted during disassembly, to ensure proper adjustment of air cylinder on installation.**

7. Install nut (3) and clevis (4) to piston shaft (5).



**FOLLOW-ON TASKS:**

- Install MCS air cylinder solenoid assembly (paragraph 4-57).
- Install tailgate release/MCS air cylinder (paragraph 4-51 or 4-56)

---

## 4-59. TAILGATE RELEASE/MCS AIR LINES AND FITTINGS REPLACEMENT.

---

*This task covers:*

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

---

*Initial Setup:*

**Equipment Conditions:**

- Chassis air system drained (TM 9-2320-363-10).
- MCS air system drained (Chapter 2, Section II, Operator *PMCS*).
- MCS tailgate cover removed, if replacing MCS air lines (paragraph 4-53).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)
- Tie wraps (as required)

**General Safety Instructions:**

- DO NOT disconnect air lines while air system is pressurized.
- 

<b>a. REMOVAL</b>
-------------------

<b>WARNING</b>
----------------

**DO NOT disconnect air lines while air system is pressurized. Air system pressure must be released before air lines are disconnected. A line disconnected under pressure may cause personnel injury.**

**NOTE**

- Replacement of tailgate release or MCS air lines is the same. Replacement of an MCS air line is shown.
- Air lines should be tagged before removal (paragraph 4-17).
- Note location of tie wraps prior to removal to aid in installation.

---

## 4-59. TAILGATE RELEASE/MCS AIR LINES AND FITTINGS REPLACEMENT (Con't).

---

1. If removing an air line, disconnect each end of air line (1) at fitting (2).
2. If removing a fitting, disconnect all air lines (1) from fitting (2).

### b. CLEANING AND INSPECTION

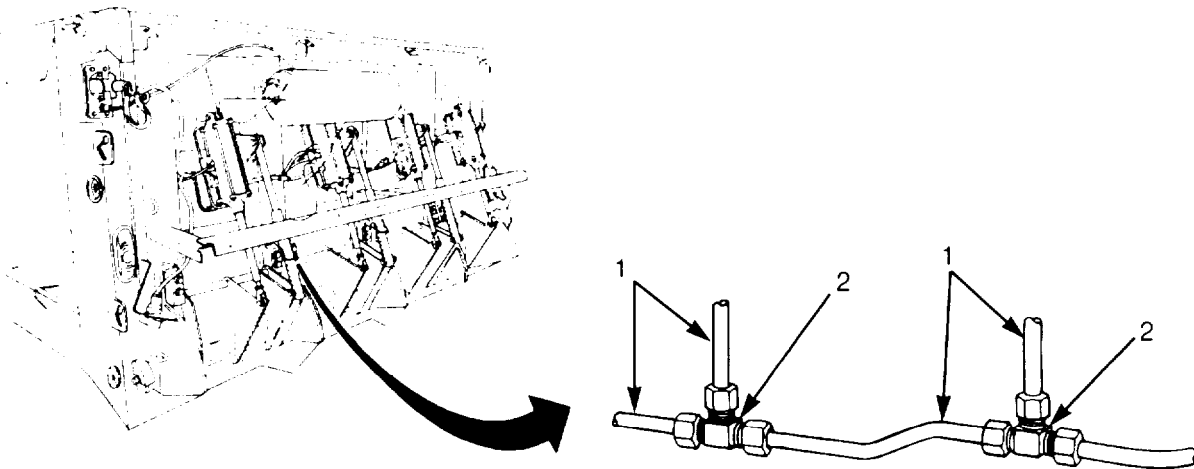
Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

### c. INSTALLATION

#### NOTE

For information on manufacturing air lines, refer to Appendix G, *Illustrated List of Manufactured Items*.

1. If installing a fitting, connect all air lines (1) to fitting (2).
2. If installing an air line, connect each end of air line (1) to fitting (2).
3. Install new tie wraps as required.



#### **FOLLOW-ON TASKS:**

- Start engine and pressurize air systems (TM 9-2320-363-10).
- Operate tailgate release control valve lever or MCS gates (paragraph 2-1 or 2-13). Check for leaks.
- Install MCS tailgate cover, if removed (paragraph 4-53).



---

## 4-60. MCS ADJUSTMENT TUBE REPLACEMENT (M917A1 W/MCS).

---

*This task covers.*

a. Removal

b. Installation

---

*Initial Setup:*

**Equipment Conditions:**

- MCS gates closed (paragraph 2-13).
- Chassis air system drained (TM 9-2320-363-10).
- MCS air system drained (Chapter 2, Section II. Operator PMCS)
- MCS tailgate cover removed (paragraph 4-53).

**Tools/Test Equipment:**

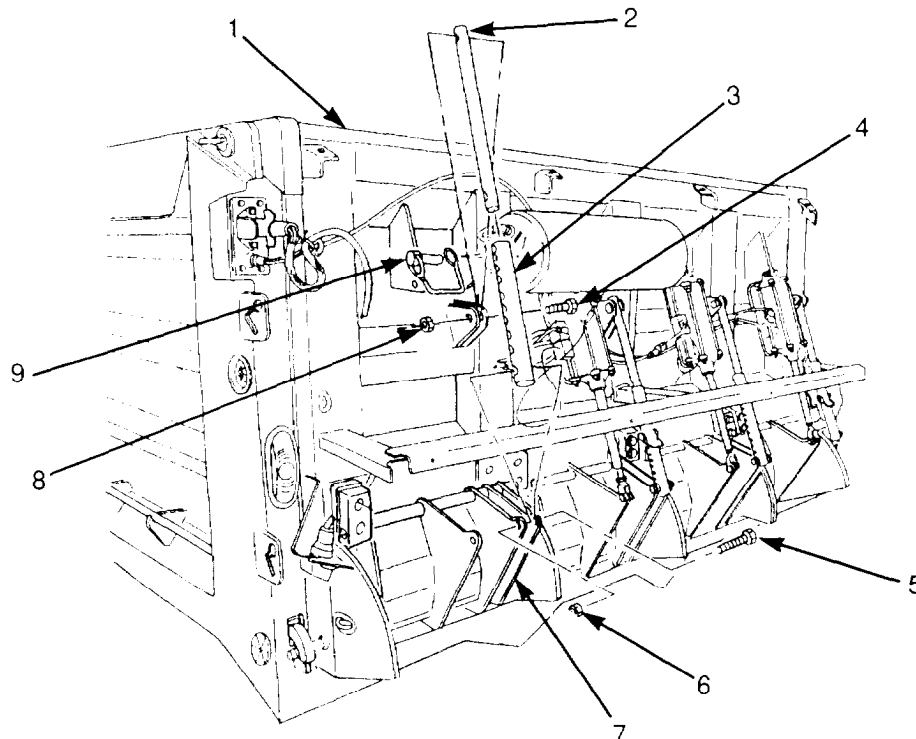
- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Two locknuts
- 

**a. REMOVAL**

1. Remove locking pin (9) from adjustment tube (3).
2. Remove locknut (6), screw (5), and adjustment tube (3) from MCS gate (7). Discard locknut
3. Remove locknut (8), screw (4), and upper tube (2) from MCS tailgate (1). Discard locknut.



---

## 4-60. MCS ADJUSTMENT TUBE REPLACEMENT (M917A1 W/MCS) (Con't).

---

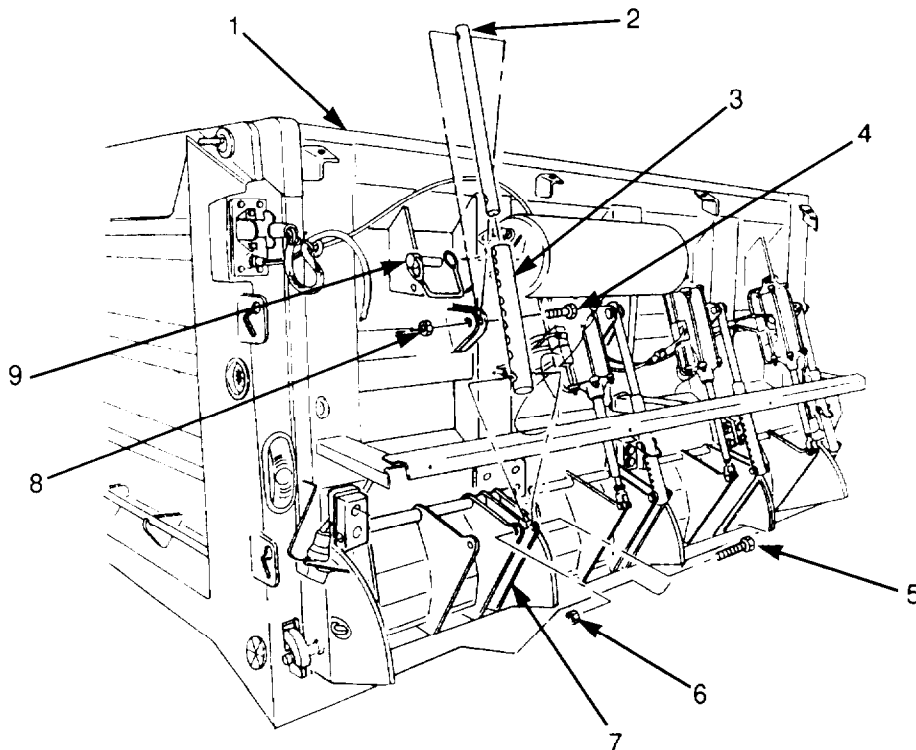
**b. INSTALLATION**

1. Install upper tube (2) to MCS tailgate (1) with screw (4) and new locknut (8).
2. Position adjustment tube (3) over upper tube (2). Install adjustment tube to MCS gate (7) with screw (5) and new locknut (6).

**CAUTION**

**Outer right and outer left side adjustment tube locking pins must be installed with pin heads to outside. If incorrectly installed, end of pins will protrude and become bent.**

3. Install locking pin (9) to adjustment tube (3).



**FOLLOW-ON TASKS**

- Check operation of MCS adjustment tube (paragraph 2-12)
- Install MCS tailgate cover (paragraph 4-53).

## 4-61. BODY PROP REPLACEMENT.

This task covers

a. Removal

b. Installation

*Initial Setup:*

### Tools/Test Equipment:

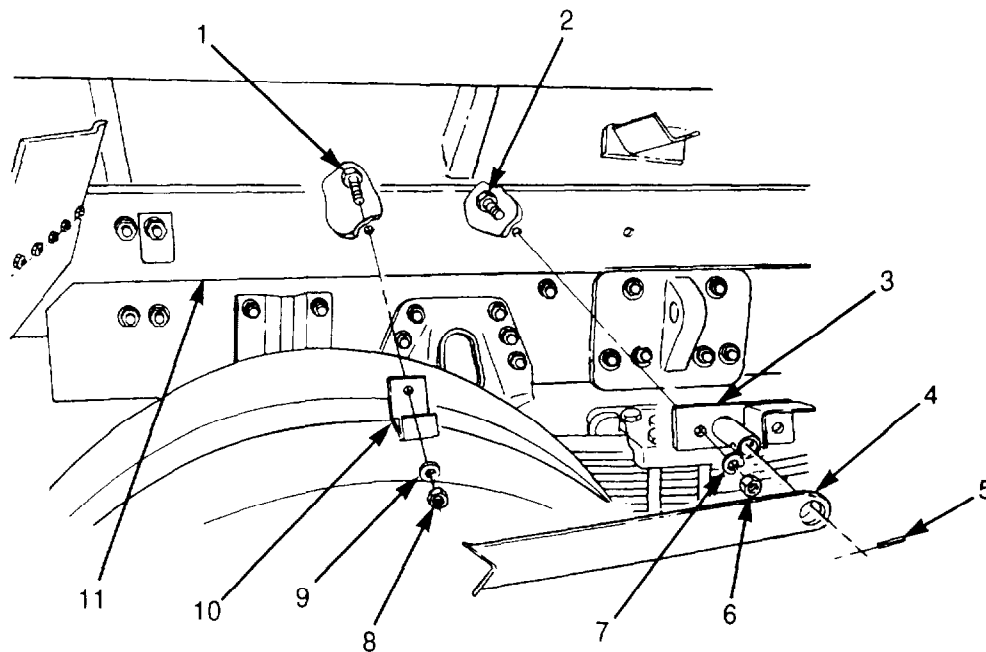
- General mechanic's tool kit (Item 8, Appendix I)

### Materials/Parts:

- One spring pin
- Three lockwashers

### a. REMOVAL

1. Remove spring pin (5) and body prop (4) from pivot bracket (3). Discard spring pin.
2. Remove two nuts (6), lockwashers (7) screws (2) and pivot bracket (3) from frame (11). Discard lockwashers.
3. Remove nut (8), lockwasher (9) screw (1), and support bracket (10) from frame (11). Discard lockwasher.



### b. INSTALLATION

1. Install support bracket (10) to frame (11) with screw (1) new lockwasher (9) and nut (8).
2. Install pivot bracket (3) to frame (11) with two screws (2), new lockwashers (7), and nuts (6).
3. With body prop (4) positioned above support bracket (10), install body prop to pivot bracket (3) with new spring pin (5).

### **FOLLOW-ON TASKS:**

- Lubricate body prop (Chapter 3, Section I).



---

**4-62. CAB SHIELD REPLACEMENT (Con't).**

---

**WARNING**

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

3. Attach lifting slings (2) to cab shield (1) and remove slack from lifting slings.
4. Remove six locknuts (9), 12 washers (8), and six screws (7) from outside edges of cab shield (1) and dump body (6). Discard locknuts.
5. Remove two locknuts (5) four washers (4), and two screws (3) from top of cab shield (1) and dump body (6). Discard locknuts.
6. Lift cab shield (1) from dump body (6) and place cab shield in a safe work area

**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. INSTALLATION****WARNING**

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

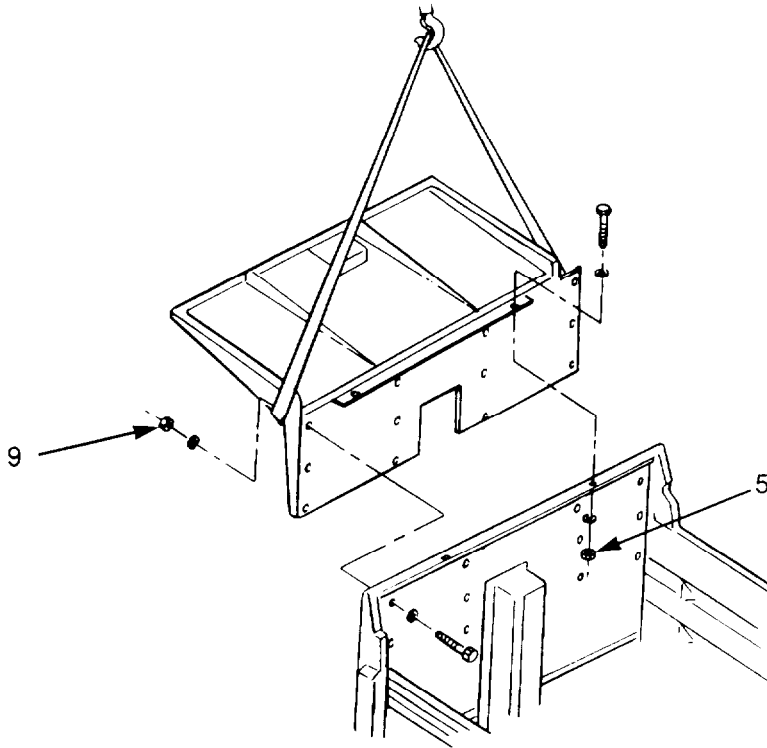
1. Raise cab shield (1) to dump body (6).
2. Install two screws (3), four washers (4), and two new locknuts (5) to top of cab shield (1) and dump body (6).
3. Install six screws (7), 12 washers (8), and six new locknuts (9) to outside edges of cab shield (1) and dump body (6).
4. Remove lifting slings (2) from cab shield (1).
5. Raise and support dump body on body props (paragraph 2-15).
6. Install six screws (7) 12 washers (8), and six new locknuts (9) to center of cab shield (1) and dump body (6).

---

**4-62. CAB SHIELD REPLACEMENT (Con't).**

---

7. Torque 12 locknuts (9) and two locknuts (5) to 150 ft-lb. (203 N•m).



**FOLLOW ON TASKS:**

- Install beacon warning light wiring harness to cab shield (paragraph 4-45).
- Remove body props and lower dump body (paragraph 2-15).
- Install beacon warning light (TM 9-2320-363-10).

---

**4-63. MUD FLAP REPLACEMENT.**

---

*This task covers:*

a. Removal

b. Installation

---

*Initial Setup:*

**Tools/Test Equipment:**

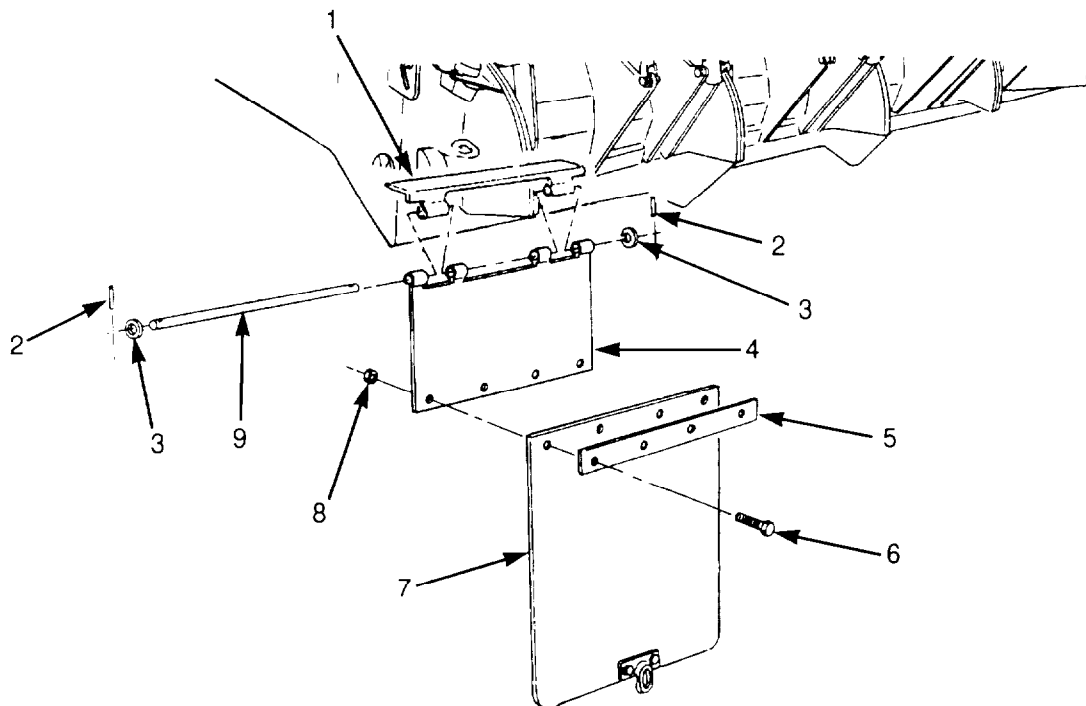
- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Two spring pins
  - Six locknuts
- 

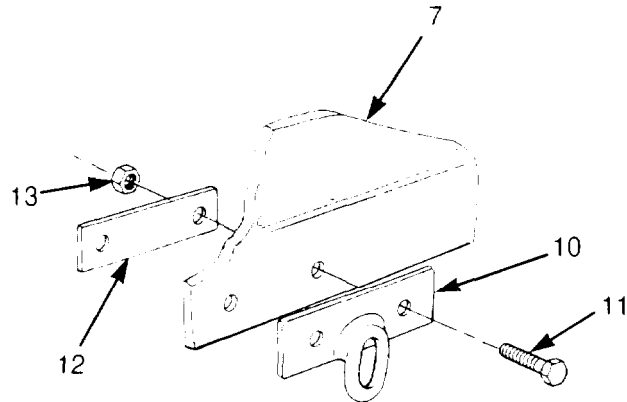
**a. REMOVAL**

1. Remove four locknuts (8), screws (6) plate (5), and mud flap (7) from mounting plate (4). Discard locknuts.
2. Remove two spring pins (2), washers (3), and shaft (9) and separate mounting plate (4) from weldment (1). Discard spring pins.



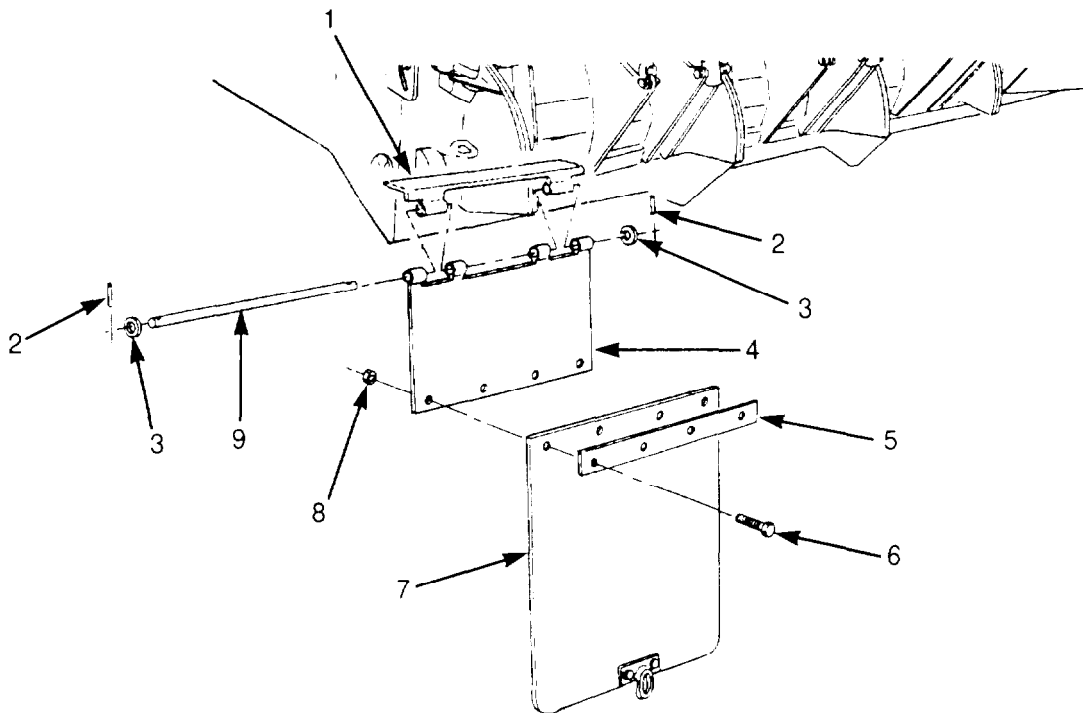
**4-63. MUD FLAP REPLACEMENT (Con't).**

3. Remove two locknuts (13) screws (11), anchor plate (12), and mounting plate (10) from mud flap (7). Discard locknuts.



**b. INSTALLATION**

1. Install mounting plate (10) and anchor plate (12) to mud flap (7) with two screws (11) and new locknuts (13).
2. Install mounting plate (4) to weldment (1) on dump body with shaft (9) two washers (3), and new spring pins (2) through shaft.
3. Install mud flap (7) and plate (5) to mounting plate (4) with four screws (6) and new locknuts (8).





## Section VIII. DUMP BODY ACCESSORY ITEMS MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
4-64.	Cargo Cover Replacement. ....	4-99
4-65.	Cargo Cover Crank Assembly Maintenance .....	4-101
4-66.	Cargo Cover Chain and Sprockets Replacement. ....	4-104
4-67.	Cargo Cover Support Frame and Roll-Up Bar Replacement .....	4-108
4-68.	Reflector Replacement. ....	4-111
4-69.	Data Plate Replacement. ....	4-112

### 4-64. CARGO COVER REPLACEMENT.

*This task covers:*

a. Removal

b. Installation

*Initial Setup:*

**Tools/Test Equipment:**

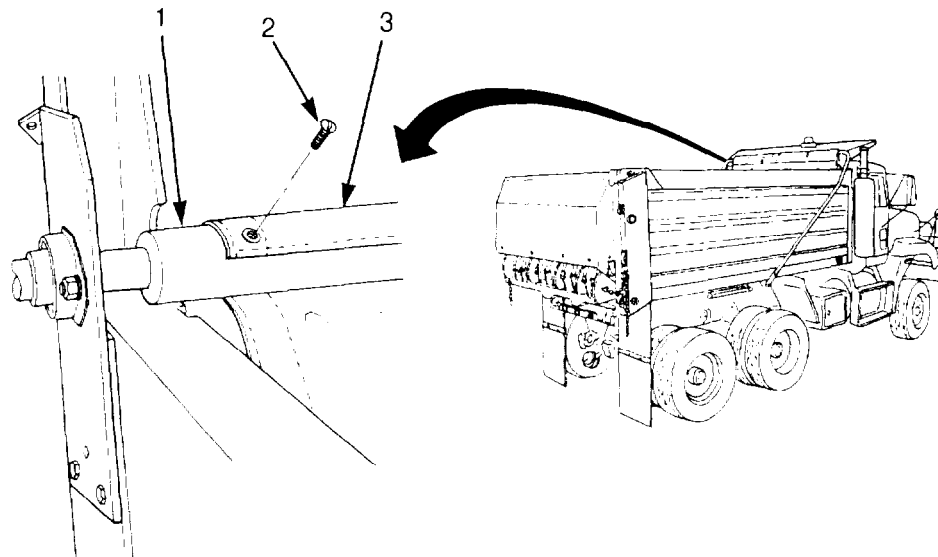
- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Two locknuts

**a. REMOVAL**

1. Extend cargo cover (3) over dump body (paragraph 2-14). Release control handle and manually unwind cargo cover to access screws (2).
2. Remove six screws (2) holding cargo cover (3) to roll-up bar (1).

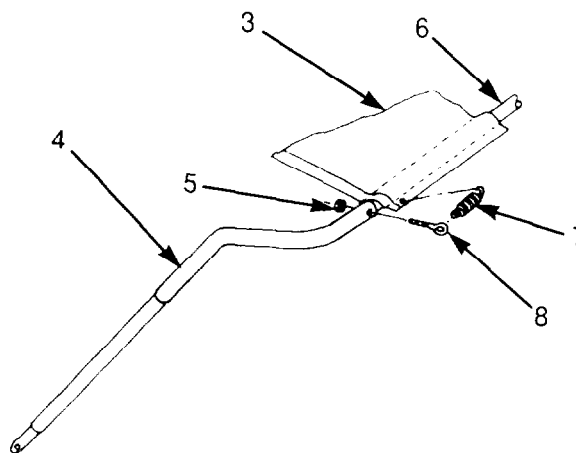
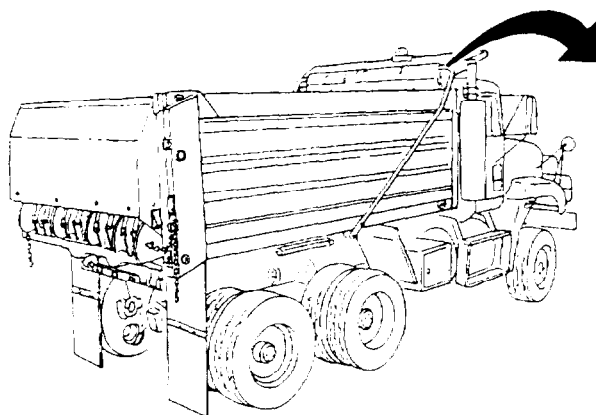


**4-64. CARGO COVER REPLACEMENT (Con't).**

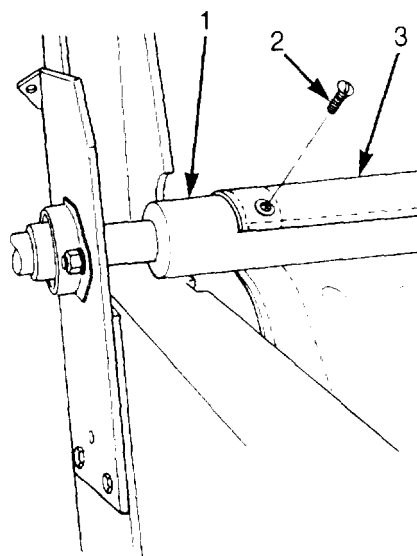
3. Uncrimp and remove centering springs (7) from eye bolts (8) and from grommets in cargo cover (3).
4. Remove two locknuts (5) and eye bolts (8) from cross arm (6) and connecting arms (4). Discard locknuts.
5. Remove cross arm (6) from connecting arms (4). Slide cross arm from cargo cover (3). Remove cargo cover.

**b. INSTALLATION**

1. Install cross arm (6) through pocket in cargo cover (3).
2. Install cross arm (6) into each connecting arm (4) and secure with two eye bolts (8) and new locknuts (5).
3. Attach two centering springs (7) to eye bolts (8) and to grommets in cargo cover (3). Crimp spring ends.



4. Pull cargo cover (3) to roll-up bar (1). Pass cover UNDER roll-up bar and secure to roll-up bar with six screws (2).
5. Fully retract cargo cover (3) (paragraph 2-14).



**4-65. CARGO COVER CRANK ASSEMBLY MAINTENANCE.**

This task covers:

- |                            |                 |
|----------------------------|-----------------|
| a. Removal                 | d. Assembly     |
| b. Disassembly             | e. Installation |
| c. Cleaning and Inspection |                 |

*Initial Setup.*

**Equipment Conditions:**

- Cargo cover extended and crank handle removed (paragraph 2-14).

**Materials/Parts:**

- One locknut
- Two pushnuts

**Tools/Test Equipment:**

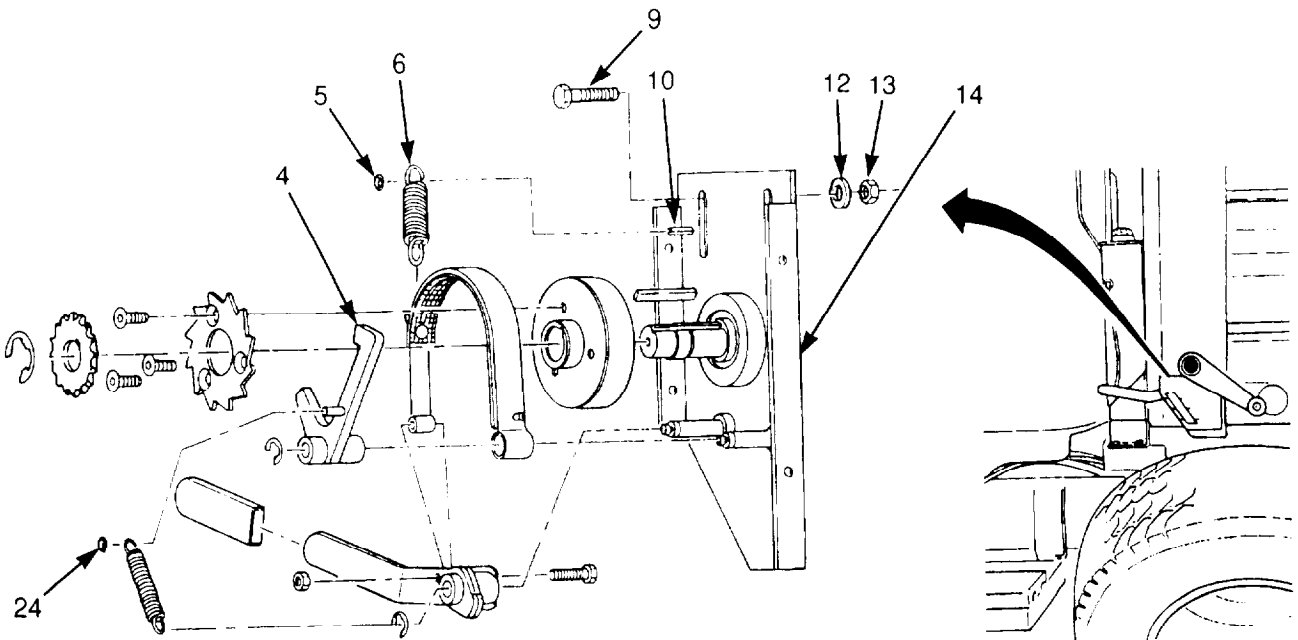
- General mechanic's tool kit (Item 8, Appendix I)

**a. REMOVAL**

1. Remove chain from sprockets (paragraph 4-66)
2. Remove two nuts (13), washers (12), screws (9) and crank assembly baseplate (14) from dump body.

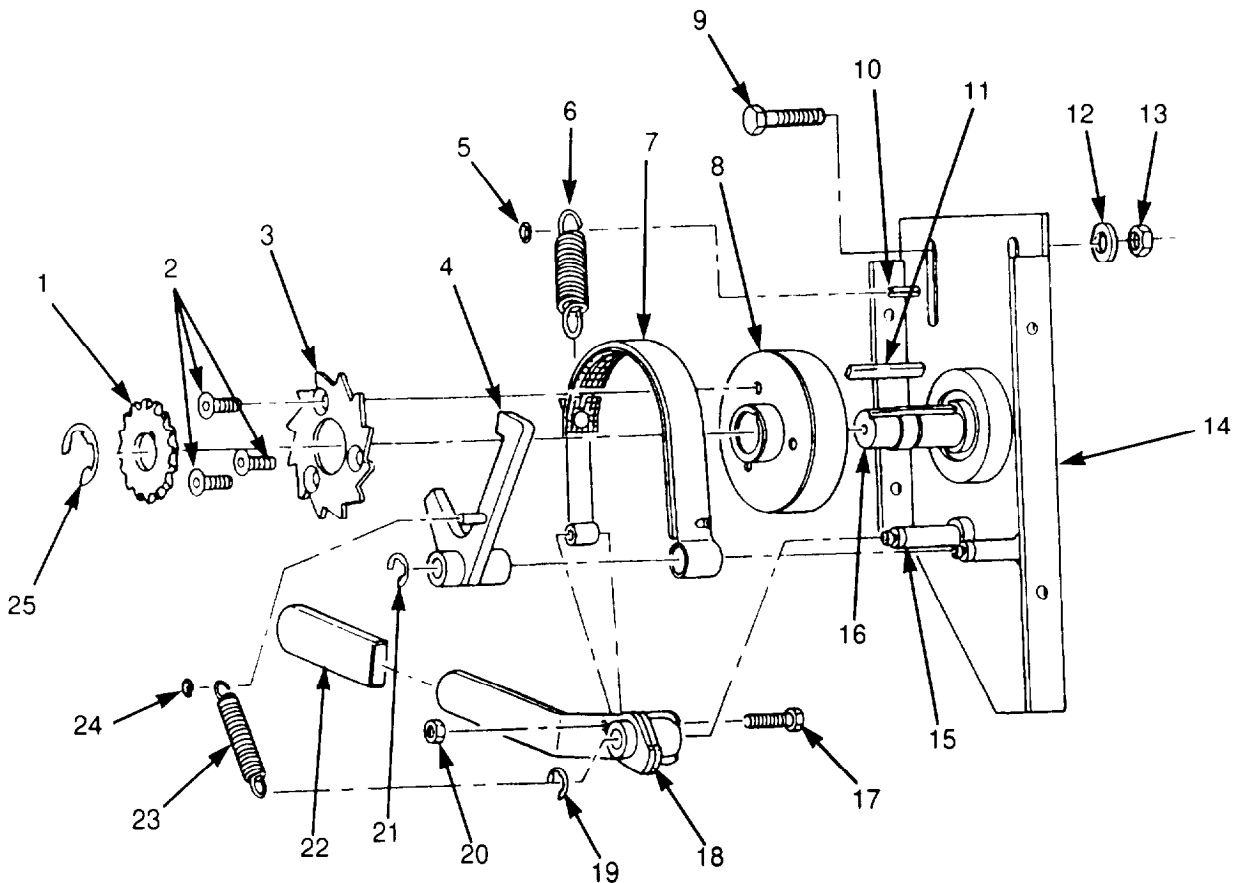
**b. DISASSEMBLY**

1. Remove pushnut (5) from crank assembly baseplate stud (10). Remove brake band spring (6) and discard pushnut.
2. Remove pushnut (24) from brake pawl (4). Discard pushnut.



**4-65. CARGO COVER CRANK ASSEMBLY MAINTENANCE (Con't).**

3. Remove retaining ring (19) from control handle (18). Remove brake pawl spring (23). Discard retaining ring if damaged.
4. Remove retaining ring (21) and brake pawl (4) from pivot shaft (15). Discard retaining ring if damaged.
5. Remove control handle (18) and brake band (7) from crank assembly baseplate (14). Remove locknut (20) and screw (17) from control handle and brake band. Discard locknut. Replace handle grip (22) if damaged.
6. Remove retaining ring (25) from crank shaft (16). Remove chain sprocket (1) from shaft. Discard retaining ring if damaged.
7. Remove three screws (2) and ratchet (3) from brake drum (8).
8. Remove brake drum (8) and key (11) from crank shaft (16).



**c. CLEANING AND INSPECTION**

Clean and inspect all components in accordance with Chapter 4, Section III, General Maintenance Instructions.

---

**4-65. CARGO COVER CRANK ASSEMBLY MAINTENANCE (Con't).**

---

**d. ASSEMBLY**

1. Install key (11) and brake drum (8) on crank shaft (16).
2. Position ratchet (3) on brake drum (8) and secure with three screws (2).
3. Install chain sprocket (1) on crank shaft (16) with retaining ring (25).
4. Attach brake band (7) to control handle (18) with screw (17) and new locknut (20).
5. Position brake band (7) over brake drum (8). Position control handle (18) on pivot shaft (15)
6. Install brake pawl (4) on crank assembly baseplate (14) with retaining ring (21).
7. Install brake pawl spring (23) between control handle (18) and brake pawl (4). Secure brake pawl spring to pawl with new pushnut (24). Secure to control handle with retaining ring (19).
8. Install brake band spring (6) between brake band (7) and crank assembly baseplate stud (10). Secure with new pushnut (5).

**e. INSTALLATION**

1. Install crank assembly baseplate (14) on dump body with two screws (9) washers (12), and nuts (13). Do not tighten screws.
2. Install chain to sprockets and tighten screws (9) (paragraph 4-66).

**FOLLOW-ON TASKS:**

- Check operation of cargo cover (paragraph 2-14).
- Fully retract cargo cover (paragraph 2-14).

---

## 4-66. CARGO COVER CHAIN AND SPROCKETS REPLACEMENT.

---

*This task covers:*

- a. Removal
- b. Cleaning and Inspection
- c. Installation

---

*Initial Setup:*

**Equipment Conditions:**

- Cargo cover extended and crank handle removed (paragraph 2-14).

**Materials/Parts:**

- Corrosion preventive (Item 7, Appendix F)
- Four starwashers

**Tools/Test Equipment:**

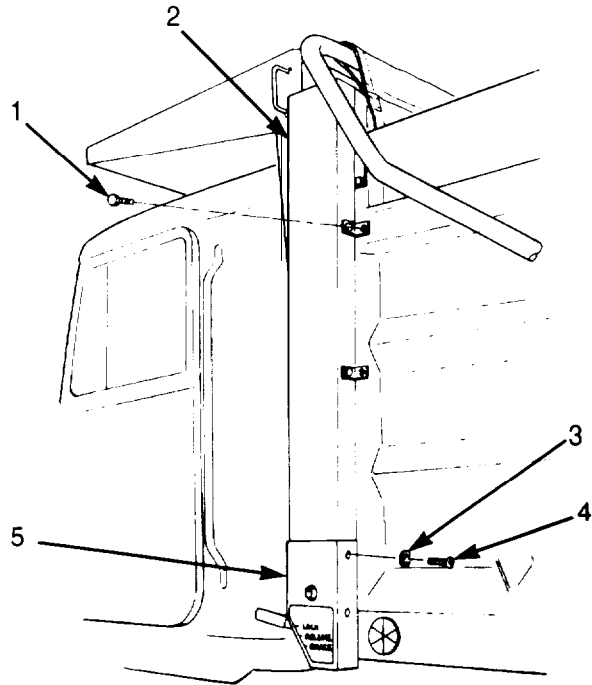
- General mechanic's tool kit (Item 8, Appendix I)
- 

a. <b>REMOVAL</b>
-------------------

**NOTE**

**Perform steps 1, 2, 3, and 5 to remove chain from sprockets.**

1. Remove four screws (4), star-washers (3), and crank assembly cover (5). Discard starwashers.
2. Remove four screws (1) and chain cover (2).

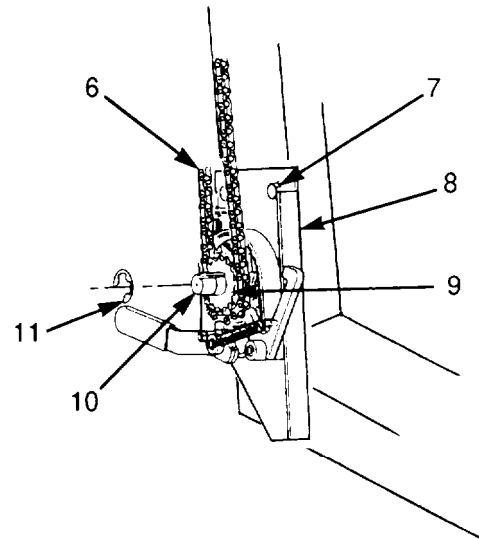


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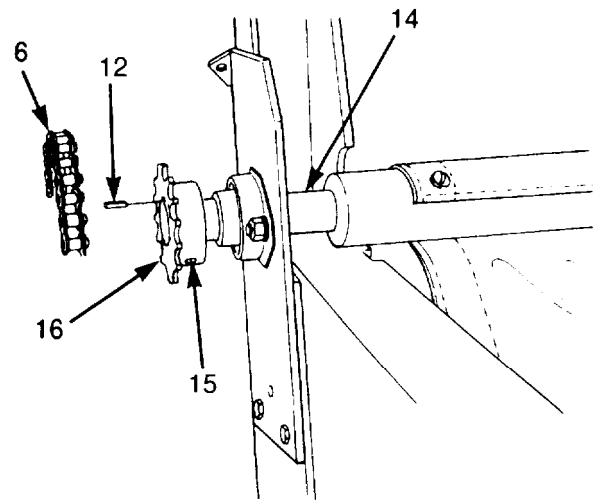
**4-66. CARGO COVER CHAIN AND SPROCKETS REPLACEMENT (Con't).**


---

3. Loosen crank assembly baseplate mounting screws (7). Raise crank assembly baseplate (8) and remove chain (6) from sprocket (9).
4. Remove retaining ring (11) and sprocket (9) from crankshaft (10). Discard retaining ring if damaged.



5. Remove chain (6) from sprocket (16).
6. Loosen set screw (15) and remove sprocket (16) with sprocket alignment key (12) from roll-up bar (14).



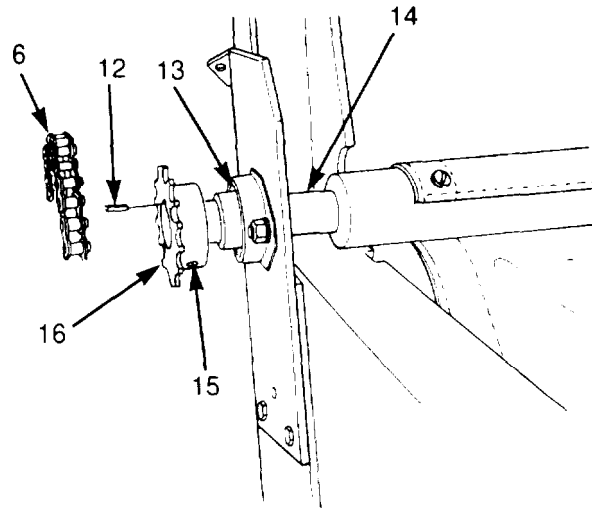
<b>b. CLEANING AND INSPECTION</b>
-----------------------------------

Clean and inspect all components in accordance with Chapter 4, Section III, General *Maintenance Instructions*.

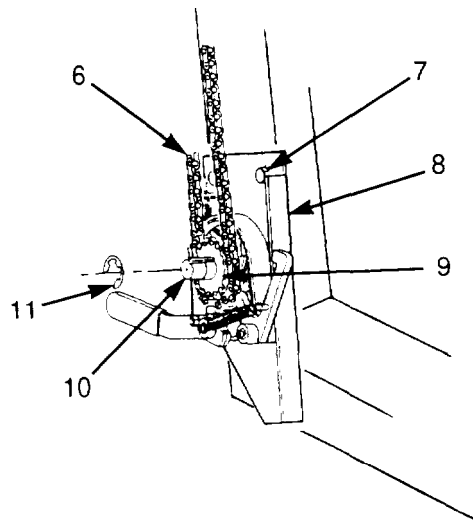
**4-66. CARGO COVER CHAIN AND SPROCKETS REPLACEMENT (Con't).**

**c. INSTALLATION**

1. Install sprocket alignment key (12) and sprocket (16) on roll-up bar (14). Tighten set screw (15).
2. Position chain (6) over sprocket (16).



3. Install sprocket (9) on crankshaft (10) with retaining ring (11).
4. Raise baseplate (8) and position chain (6) under sprocket (9). Lower baseplate to put tension on chain. Tighten mounting screws (7).
5. Apply corrosion preventive sparingly to chain (6) and to roller shaft bearings (13) on both ends of roll-up bar (14).



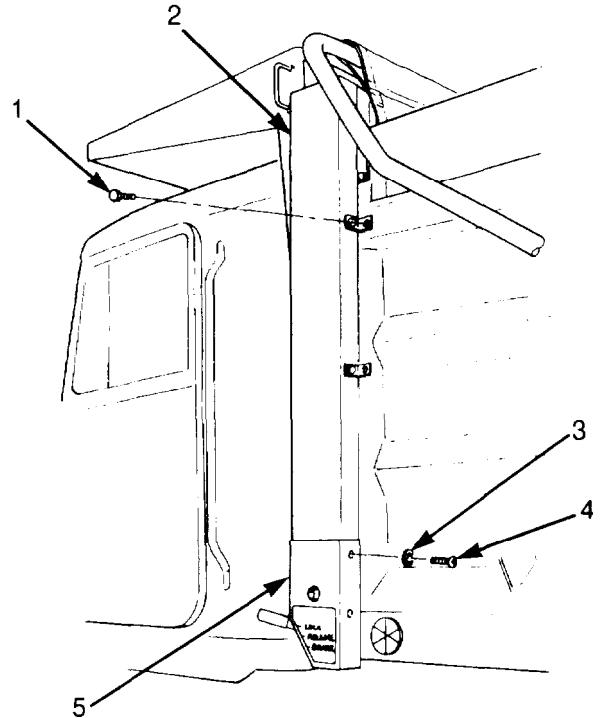


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**4-66. CARGO COVER CHAIN AND SPROCKETS REPLACEMENT (Con't).**

---

6. Install chain cover (2) with four screws (1).
7. Install crank assembly cover (5) with four new starwashers (3) and screws (4).

**FOLLOW-ON TASKS:**

- Check operation of cargo cover (paragraph 2-14).
- Fully retract cargo cover (paragraph 2-14).

## 4-67. CARGO COVER SUPPORT FRAME AND ROLL-UP BAR REPLACEMENT.

This task covers:

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

Initial Setup:

**Equipment Conditions:**

- Cargo cover removed (paragraph 4-64).
- Cargo cover chain removed (paragraph 4-66).

**Materials/Parts:**

- One locknut
- One spring pin
- Five lockwashers

**Tools/Test Equipment:**

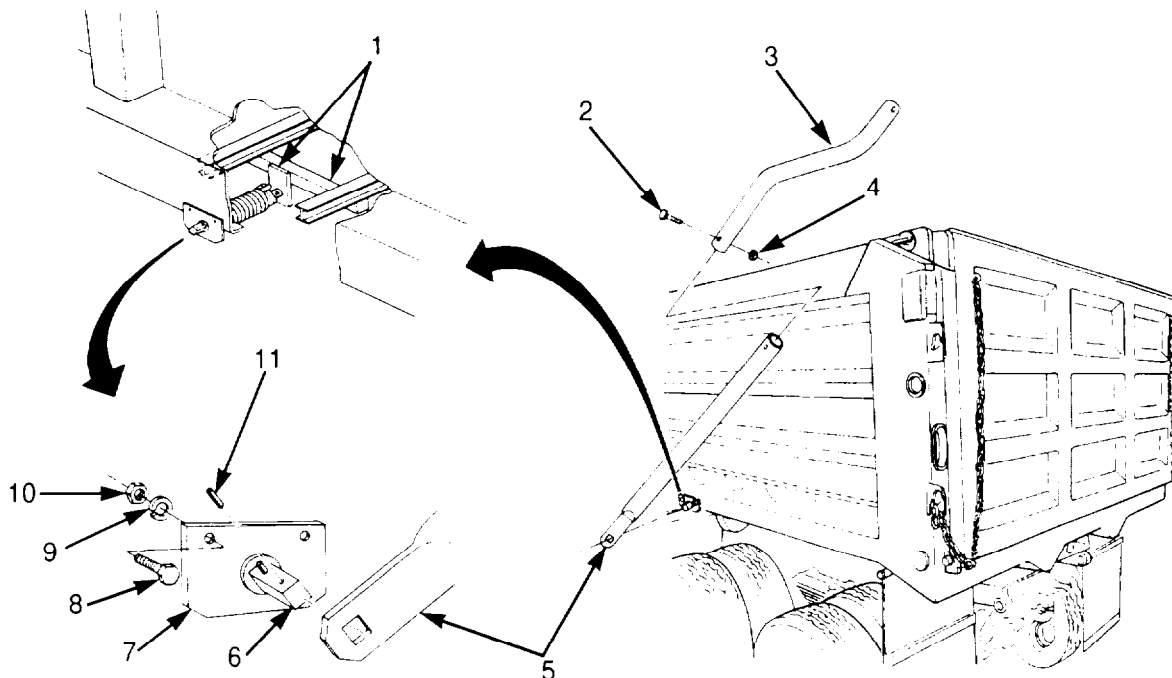
- General mechanic's tool kit (Item 8, Appendix I)

**NOTE**

Left and right side components of cargo cover support frame are removed and installed the same way; left side is illustrated.

**a. REMOVAL**

1. Remove spring pin (11) from shaft (6) on spring assembly (7). Remove swing arm (5) from shaft. Discard spring pin.
2. Remove locknut (4) and screw (2) and separate swing arm (5) and connecting arm (3). Discard locknut.
3. Remove two nuts (10), lockwashers (9), and screws (8) from spring assembly (7). Remove spring assembly from dump body and from welded shaft support bar and tube (1). Discard lockwashers.

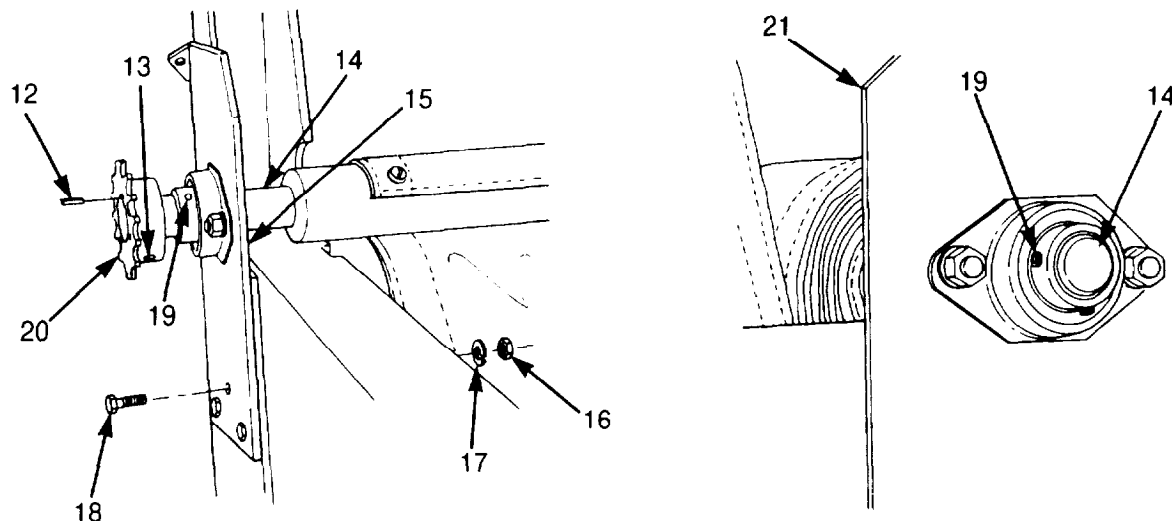


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**4-67. CARGO COVER SUPPORT FRAME AND ROLL-UP BAR REPLACEMENT (Con't).**


---

4. Loosen set screw (13) and remove sprocket (20) with sprocket alignment key (12) from roll-up bar (14).



5. Remove three nuts (16), lockwashers (17), and screws (18) from left mounting bracket (15) and dump body. Discard lockwashers.
6. Loosen set screw (19) at each end of roll-up bar (14). Remove left mounting bracket (15) and roll-up bar. Slide bracket from roll-up bar.

<b>b. CLEANING AND INSPECTION</b>
-----------------------------------

Clean and inspect all components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

<b>c. INSTALLATION</b>
------------------------

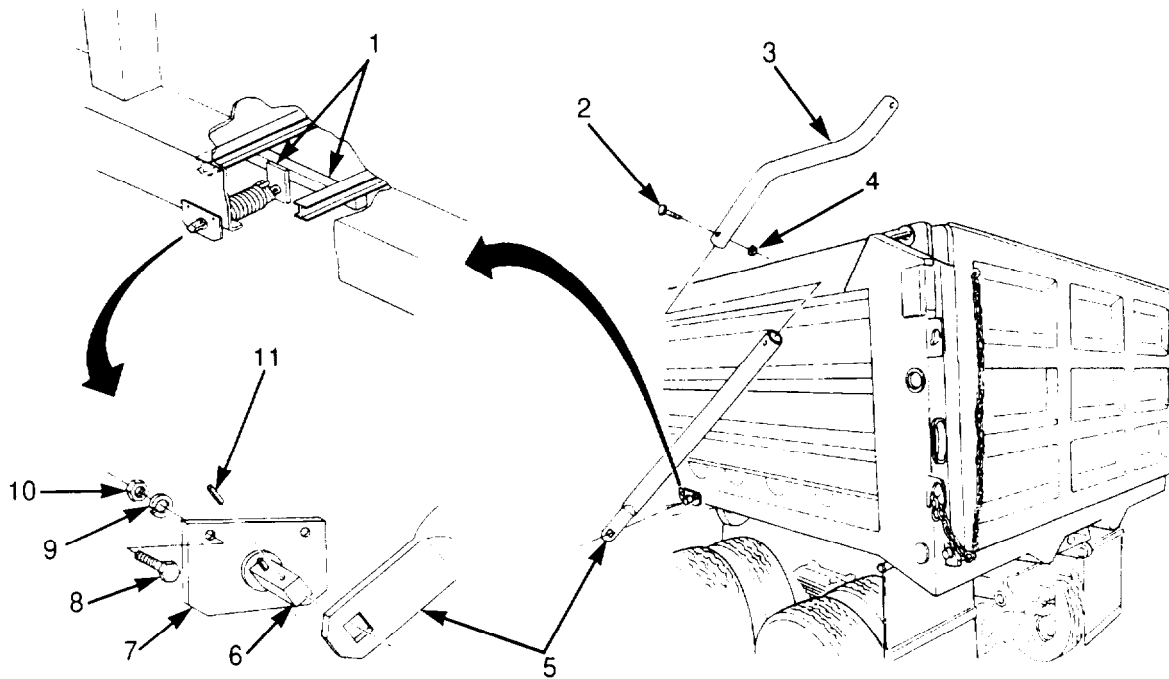
1. Install left mounting bracket (15) on roll-up bar (14). Position roll-up bar on dump body and through right mounting bracket (21).
2. Install three screws (18) new lockwashers (17), and nuts (16) to left mounting bracket (15) and dump body.
3. Loosen set screw (19) at each end of roll-up bar (14) and center bar between left and right mounting brackets (15 and 21). Tighten set screws.
4. Install sprocket alignment key (12) and sprocket (20) on roll-up bar (14). Tighten set screw (13).

---

**4-67. CARGO COVER SUPPORT FRAME AND ROLL-UP BAR REPLACEMENT (Con't).**

---

5. Install spring assembly (7) on dump body and through welded shaft support bar and tube (1) with two screws (8), new lockwashers (9), and nuts (10).
6. Connect swing arm (5) and connecting arm (3) with screw (2) and new locknut (4).
7. Install swing arm (5) on spring assembly shaft (6). Install new spring pin (11) through shaft.



**FOLLOW - ON TASKS;**

- Install cargo cover chain (paragraph 4-66).
- Install cargo cover (paragraph 4-64).
- Check operation of cargo cover (paragraph 2-14).
- Fully retract cargo cover (paragraph 2-14).

---

**4-68. REFLECTOR REPLACEMENT.**

---

*This task covers..*

- a. Removal
- b. Cleaning

- c. Installation
- 

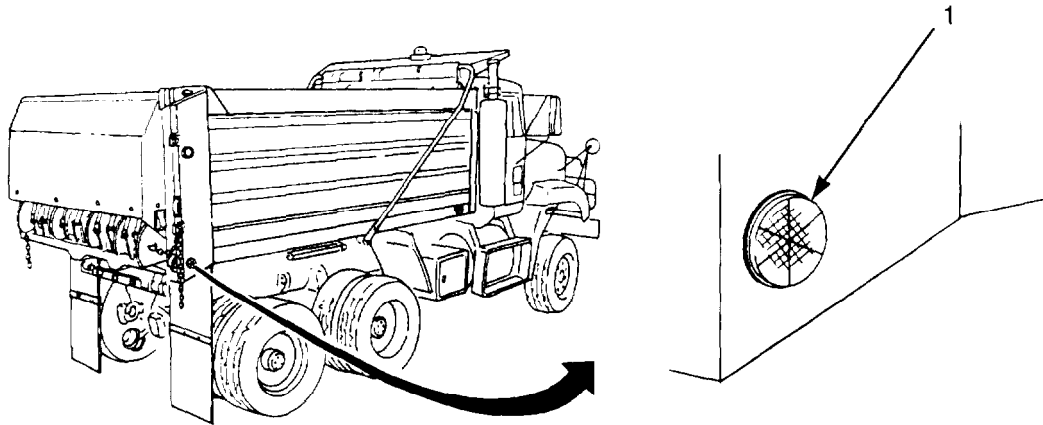
*Initial Setup:*

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- 

**a. REMOVAL**

Remove reflector (1) from dump body or tailgate.

**b. CLEANING**

Clean reflector mounting surface in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. INSTALLATION**

Remove backing paper from reflector (1). Install reflector on dump body or tailgate.

---

## 4-69. DATA PLATE REPLACEMENT.

---

*This task covers:*

a. Removal

b. Installation

---

**Initial Setup:**

**Tools/Test Equipment:**

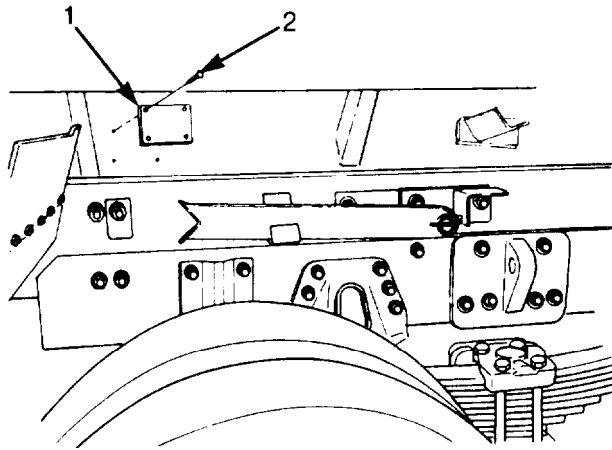
- General mechanic's tool kit (Item 8, Appendix I)

**Materials/Parts:**

- Four drive screws
- 

**a. REMOVAL**

Remove four drive screws (2) and data plate (1) from dump body. Discard drive screws.



**b. INSTALLATION**

Install data plate (1) on dump body with four new drive screws (2).

## Section IX. HYDRAULIC SYSTEM MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
4-70.	Hydraulic Control Lever Replacement .....	4-113
4-71.	Hydraulic Control Lever Cable Replacement .....	4-123
4-72.	Hydraulic Hoses and Fittings Replacement .....	4-132
4-73.	Hydraulic Reservoir Replacement .....	4-136
4-74.	Hydraulic Reservoir Repair. ....	4-139
4-75.	Hydraulic Oil Filter Element Replacement .....	4-141
4-76.	Hydraulic Oil Filter Service Indicator Gage Replacement .....	4-143

### 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT.

*This task covers:*

- |            |                 |
|------------|-----------------|
| a. Removal | b. Installation |
|------------|-----------------|

*Initial Setup:*

**Equipment Conditions:**

- CTIS electronic control unit (ECU) removed (TM 9-2320-363-20).
- MCS control unit removed (M917A1 w/MCS) (paragraph 4-42).

**Materials/Parts:**

- Marker tags (Item 19, Appendix F)
- Six lockwashers

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I).

**References:**

- TM 9-2320-363-10

**a. REMOVAL**

**NOTE**

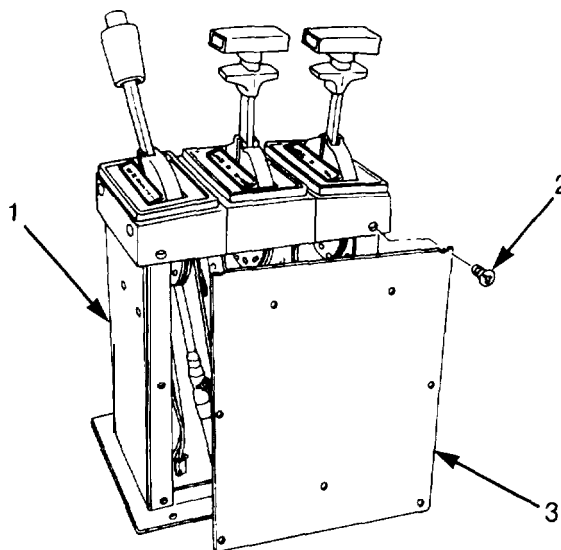
**Wires and cables should be tagged before removal (paragraph 4-17).**

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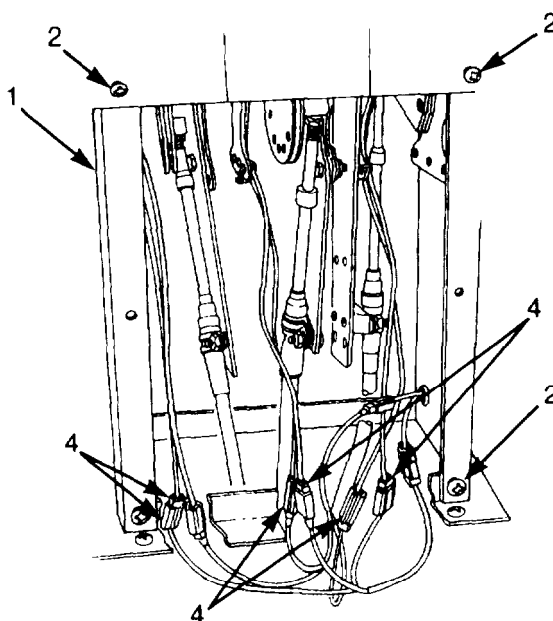
## 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).

---

1. Remove six screws (2) and rear access panel (3) from shift tower (1).
2. Repeat step 1 for front access panel.



3. To keep shift tower (1) rigid, reinstall two top and two bottom screws (2) on front and rear of shift tower (1).
4. Disconnect six connectors (4) from shift tower jumper harness connectors.





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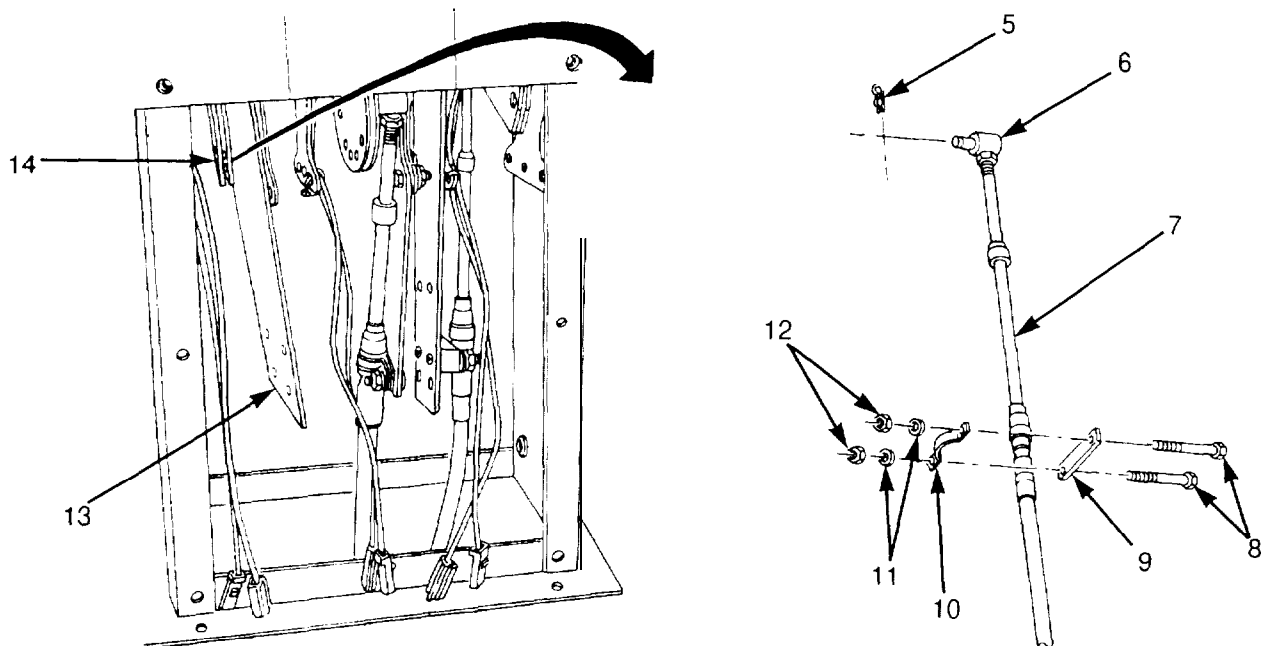
**4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).**

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**NOTE**

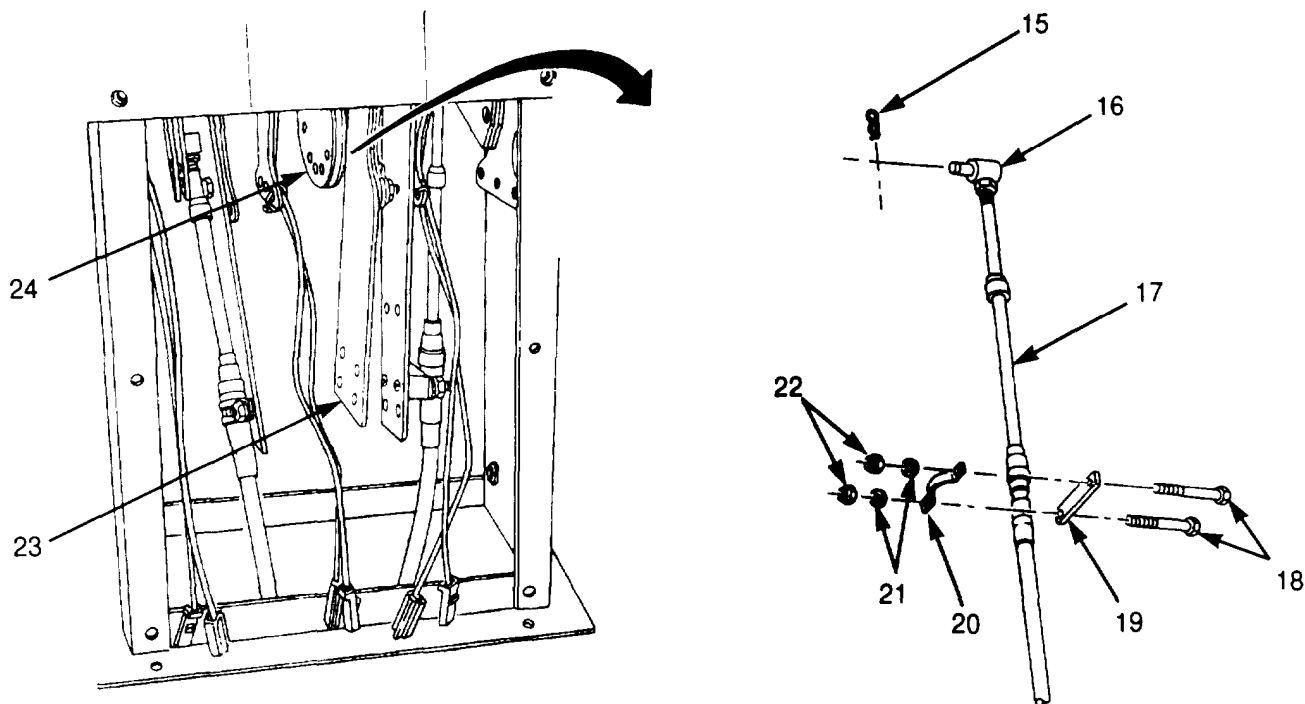
To ease installation, note mounting position of cable pivot pins and hold-down clamps prior to disconnecting cables.

5. Place transmission selector lever in D (Drive) position (TM 9-2320-363-10).
6. Tag transmission shift cable (7).
7. Remove two nuts (12), lockwashers (11), screws (8), clamp (10), and spacer (9) from bracket (13). Discard lockwashers.
8. Remove retaining pin (5) from pivot pin (6) and pivot pin from bracket (14)



## 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).

9. Place transfer case selector lever in N (Neutral) position (TM 9-2320-363-10).
10. Tag transfer case shift cable (17).
11. Remove two nuts (22), lockwashers (21), screws (18), clamp (20), and spacer (19) from bracket (23). Discard lockwashers.
12. Remove retaining pin (15) from pivot pin (16) and pivot pin from bracket (24).

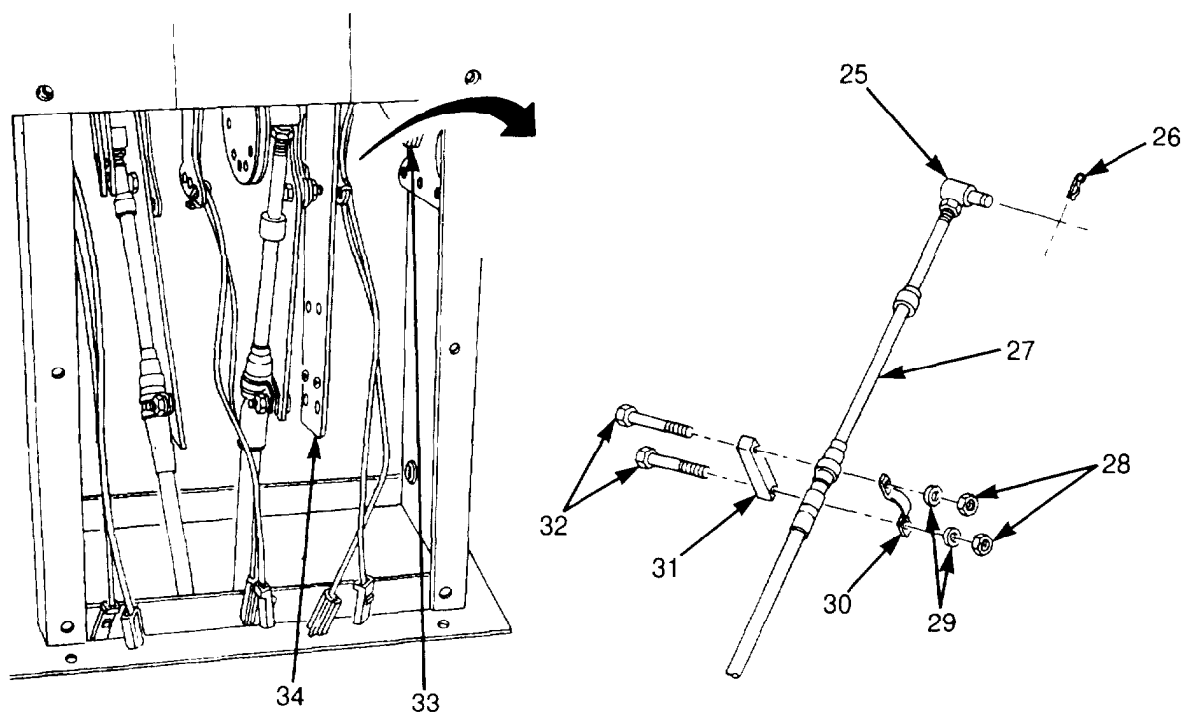


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**4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).**

---

13. Place hydraulic control lever in DOWN position (paragraph 2-1).
14. Tag hydraulic control cable (27).
15. Remove two nuts (28), lockwashers (29), screws (32), clamp (30), and spacer (31) from bracket (34). Discard lockwashers.
16. Remove retaining pin (26) from pivot pin (25) and pivot pin from bracket (33).

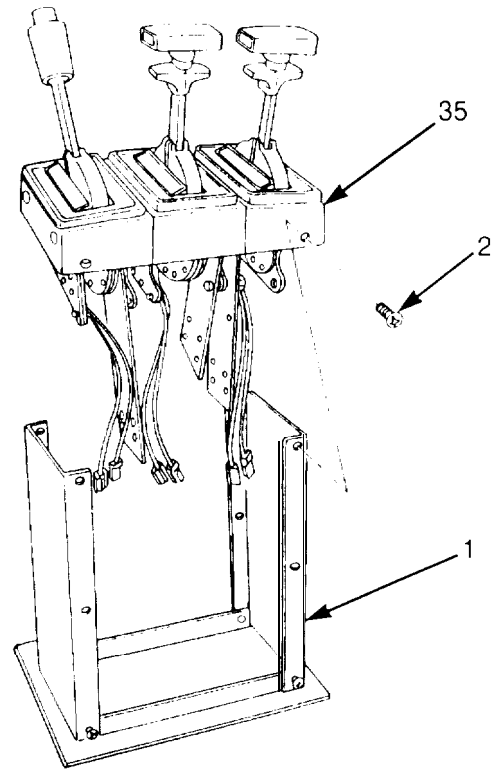


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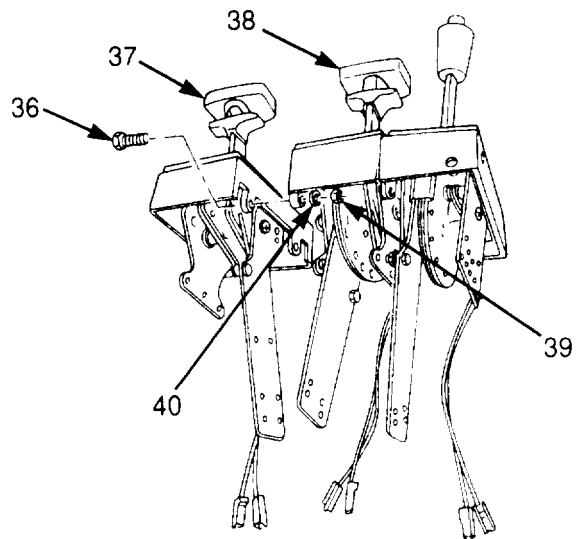
## 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con?).

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17. Remove two top screws (2) from front and rear of shift tower (1).
18. Lift handle assemblies (35) from shift tower (1).



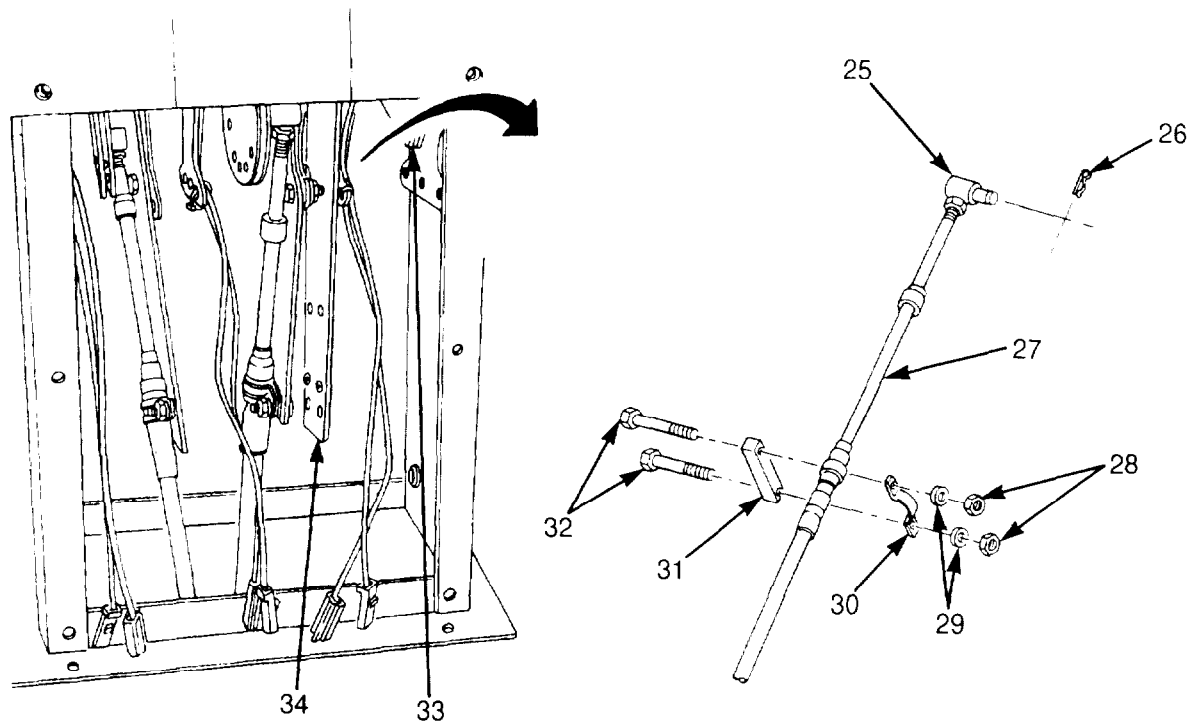
19. Separate hydraulic control lever (37) from transfer case selector lever (38) by removing two bolts (36), flatwashers (40), and nuts (39).



## 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).

### b. INSTALLATION

1. Install hydraulic control lever (37) to transfer case selector lever (38) with two bolts (36), flatwashers (40), and nuts (39).
2. Position handle assemblies (35) on shift tower (1).
3. To keep shift tower (1) rigid, install two top screws (2) on front and rear of shift tower.
4. With hydraulic control lever in DOWN position, install hydraulic control cable pivot pin (25) in bracket (33) and secure with retaining pin (26).
5. Install spacer (31), cable (27) clamp (30), two screws (32) new lockwashers (29), and nuts (28) to bracket (34).
6. Place hydraulic control lever in N (Neutral) position (paragraph 2-1)

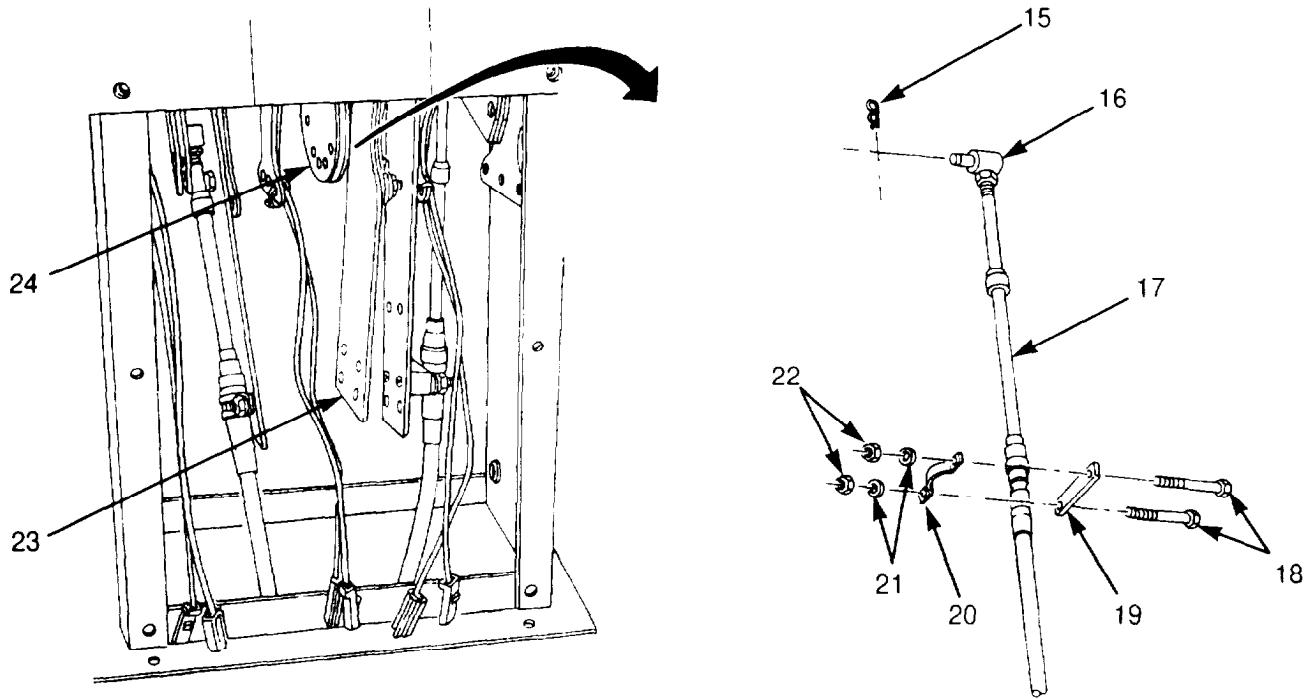


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#### 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).

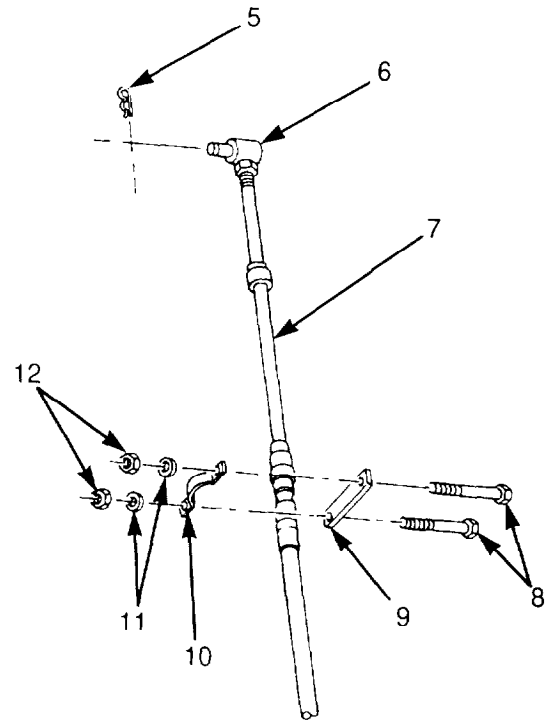
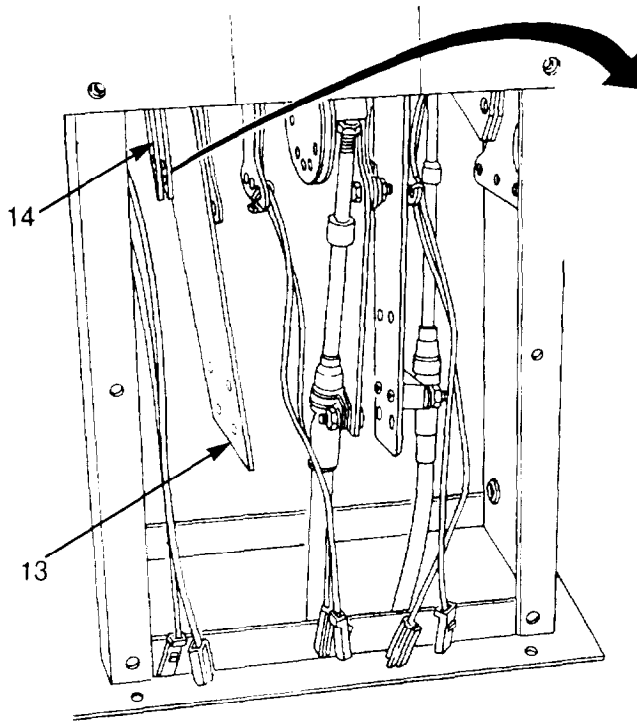
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7. Install transfer case control cable pivot pin (16) in bracket (24) and secure with retaining pin (15).
8. Install spacer (19), cable (17) clamp (20), two screws (18), new lockwashers (21), and nuts (22) to bracket (23).

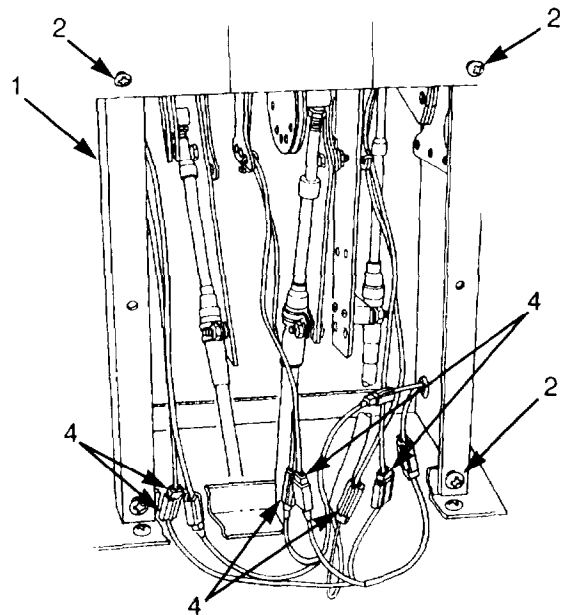


9. With transmission selector lever in D (Drive) position, install transmission control cable pivot pin (6) in bracket (14) and secure with retaining pin (5).
10. Install spacer (9) cable (7) clamp (10), two screws (8), new lockwashers (11), and nuts (12) to bracket (13).

4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).



11. Place transmission selector lever in N (Neutral) position (TM 9-2320-363-10).
12. Connect six connectors (4) to shift tower jumper harness connectors.
13. Remove two top and two bottom screws (2) on front and rear of shift tower (1).

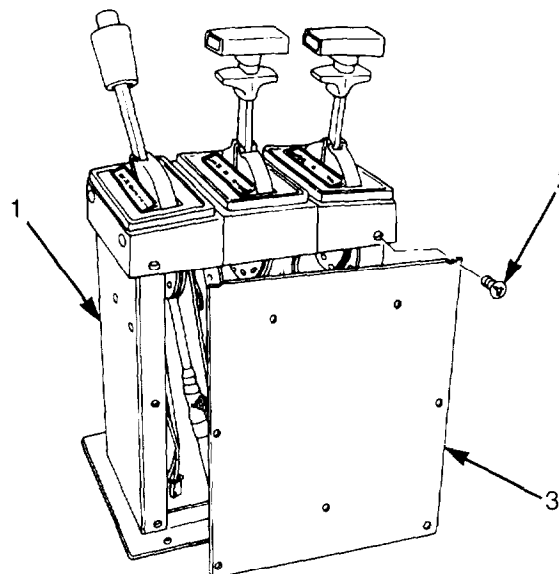


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#### 4-70. HYDRAULIC CONTROL LEVER REPLACEMENT (Con't).

---

14. Install rear access panel (3) and six screws (2).
15. Repeat step 14 for front access panel.



#### **FOLLOW-ON TASKS:**

- Install MCS control unit (M917A1w/MCS) (paragraph 4-42).
- Install CTIS electronic control unit (ECU) (TM 9-2320-363-20).



---

## 4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT.

---

*This task covers:*

a. Removal

b. Installation

---

*Initial Setup.*

### Equipment Conditions:

- Wheels blocked (TM 9-2320-363-10).
- CTIS electronic control unit (ECU) removed (TM 9-2320-363-20).
- MCS control unit removed (M917A1 w/MCS) (paragraph 4-42).

### Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)

### Materials/Parts:

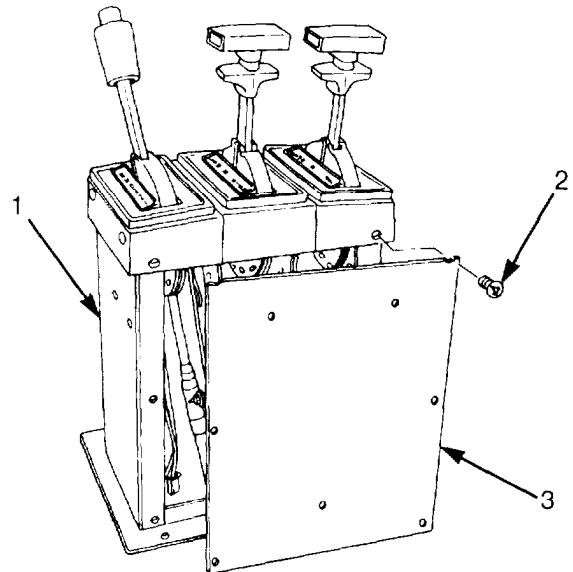
- Marker tags (Item 19, Appendix F)
- One cotter pin
- Eight lockwashers

### References:

- TM 9-2320-363-10
  - TM 9-2320-363-20
- 

### a. REMOVAL

1. Remove six screws (2) and rear access panel (3) from shift tower (1).
2. Repeat step 1 to remove front access panel from shift tower.
3. To keep shift tower rigid, reinstall two top and two bottom screws (2) on front and rear of shift tower (1).



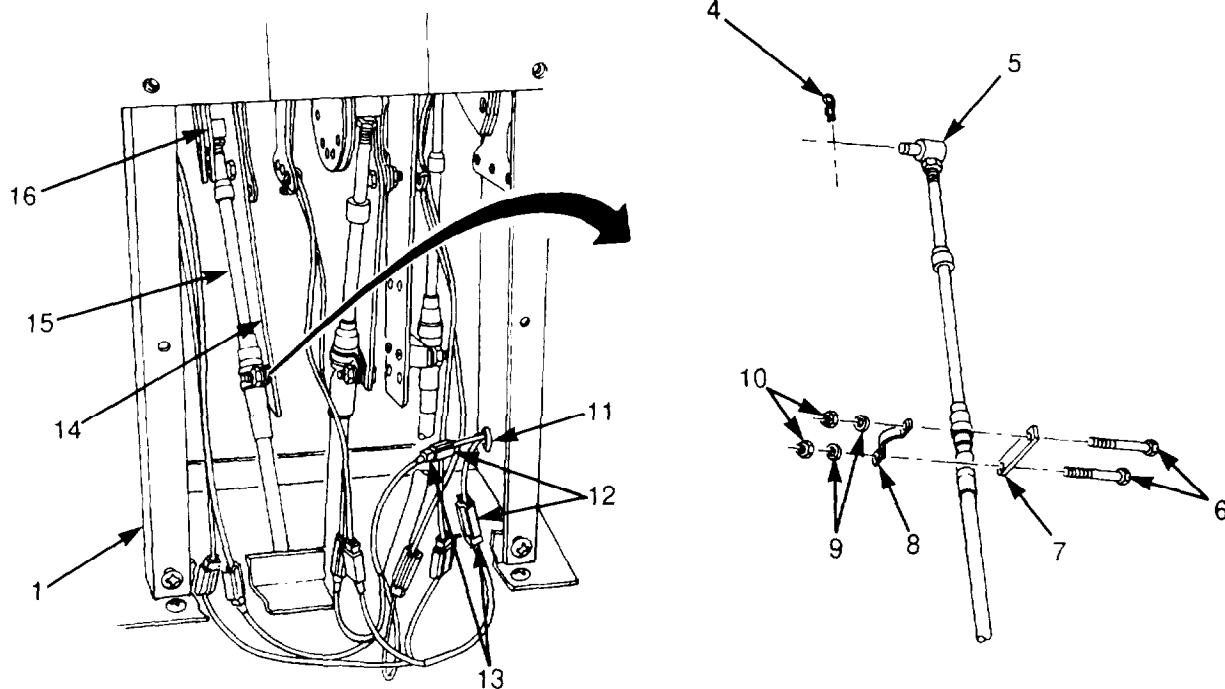
## 4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).

4. Tag and disconnect shift tower jumper harness power and ground connectors (13) from cab harness power and ground connectors (12).
5. Remove grommet (11) and cab harness power and ground connectors (12) from shift tower (1).

### NOTE

**To ease installation, note mounting position of cable pivot pins and hold-down clamps prior to disconnecting cables.**

6. Place transmission selector lever in D (Down) position (TM 9-2320-363-10).
7. Tag transmission shift cable (15).
8. Remove two nuts (10), lockwashers (9), screws (6), clamp (8), and spacer (7) from bracket (14). Discard lockwashers.
9. Remove retaining pin (4) from pivot pin (5) and pivot pin from bracket (16).

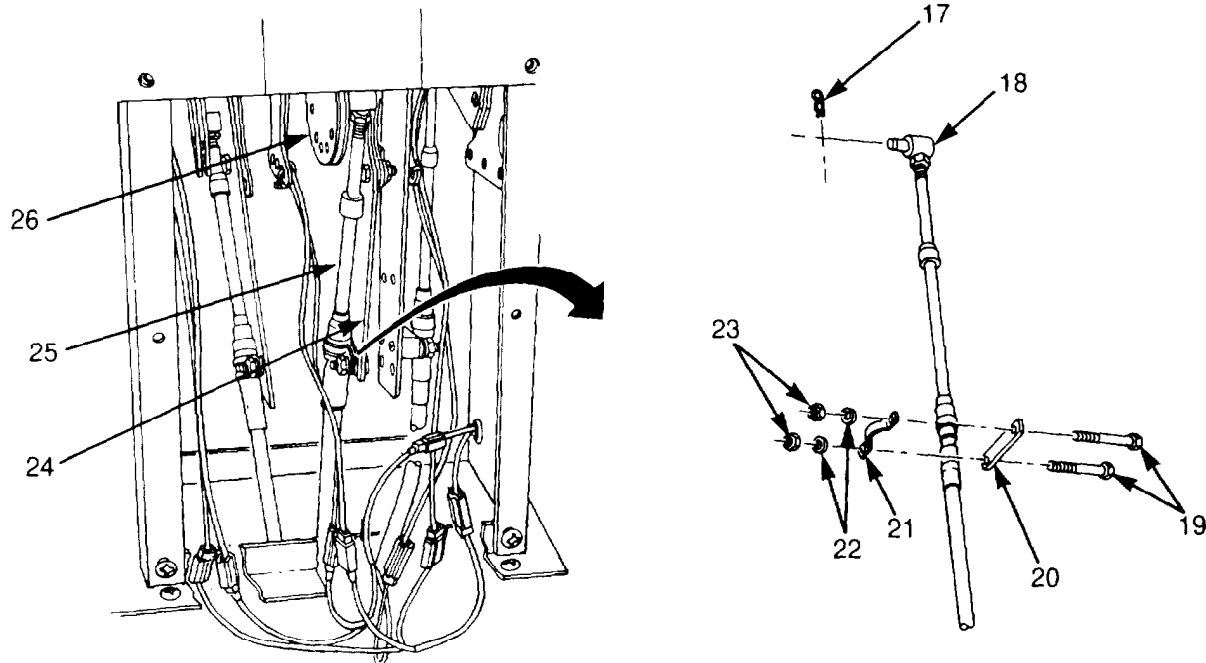


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**4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).**

---

10. Place transfer case selector lever in N (Neutral) position (TM 9-2320-363-10).
11. Tag transfer case shift cable (25).
12. Remove two nuts (23), lockwashers (22), screws (19), clamp (21), and spacer (20) from bracket (24). Discard lockwashers.
13. Remove retaining pin (17) from pivot pin (18) and pivot pin from bracket (26).

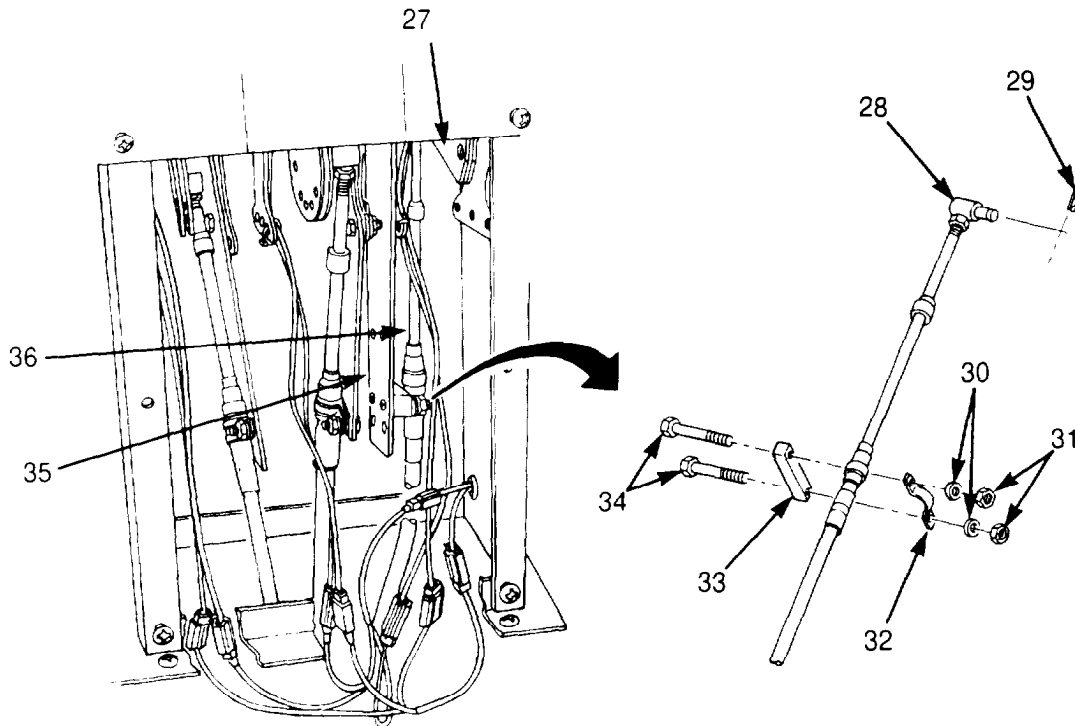


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#### 4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).

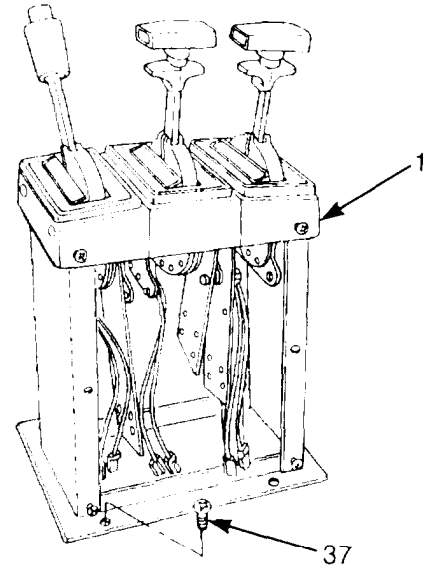
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14. Place hydraulic control lever in DOWN position (paragraph 2-1).
15. Tag hydraulic control lever cable (36).
16. Remove two nuts (31), lockwashers (30), screws (34), clamp (32), and spacer (33) from bracket (35). Discard lockwashers.
17. Remove retaining pin (29) from pivot pin (28) and pivot pin from bracket (27).

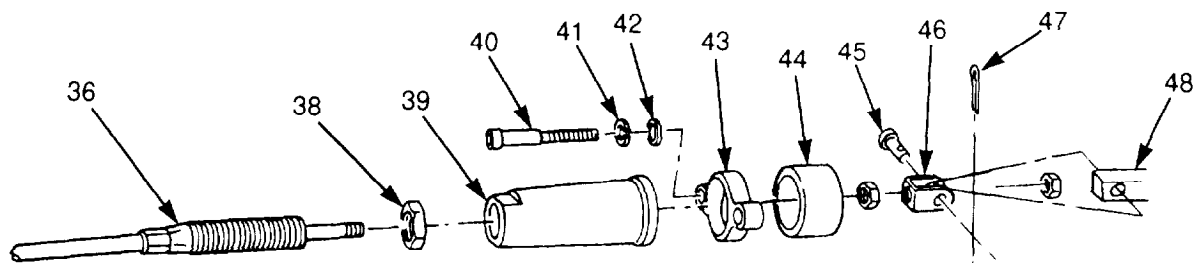


**4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).**

18. Remove four screws (37) and shift tower (1) from cab floor.
19. Remove transmission tunnel access cover (TM 9-2320-363-20).



20. At hydraulic pump, turn jam nut (38) over entire length of threads on cable (36)
21. Remove two screws (40), flatwashers (42), and lockwashers (41) from flange clamp (43). Discard lockwashers.
22. Slide flange clamp (43) away from bonnet (39)
23. Unscrew bonnet (39) and slide spacer (44) along cable (36) until cable bracket (46) can be accessed.
24. Remove cotter pin (47) and clevis pin (45) from hydraulic pump actuator (48). Discard cotter pin.

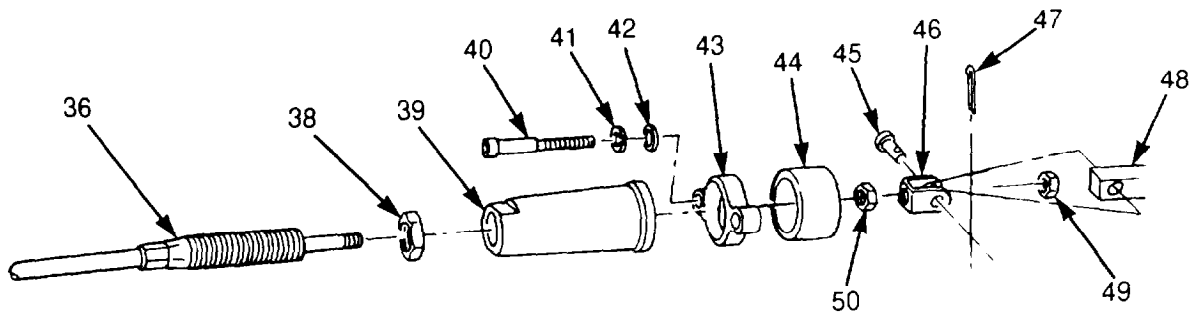


**4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).**

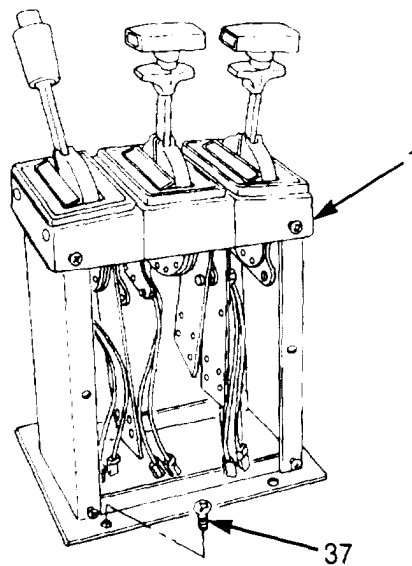
25. Remove nut (49) and cable bracket (46).
26. Count number of threads from end of cable (36) to nut (50).
27. Remove nut (50).

**b. INSTALLATION**

1. Install nut (50) onto cable (36) same number of threads as removal.
2. Slide cable bracket (46) onto cable (36) and install nut (49).
3. Position cable bracket (46) onto hydraulic pump actuator (48) and install clevis pin (45) and new cotter pin (47).
4. Slide spacer (44), screw bonnet (39) and slide flange clamp (43) over cable bracket (46).
5. Install two screws (40), flatwashers (42) and new lockwashers (41) to flange clamp (43).
6. Slide jam nut (38) onto cable (36).
7. Tighten jam nut (38) against flange clamp (43).
8. Install transmission tunnel access cover (TM 9-2320-363-20).

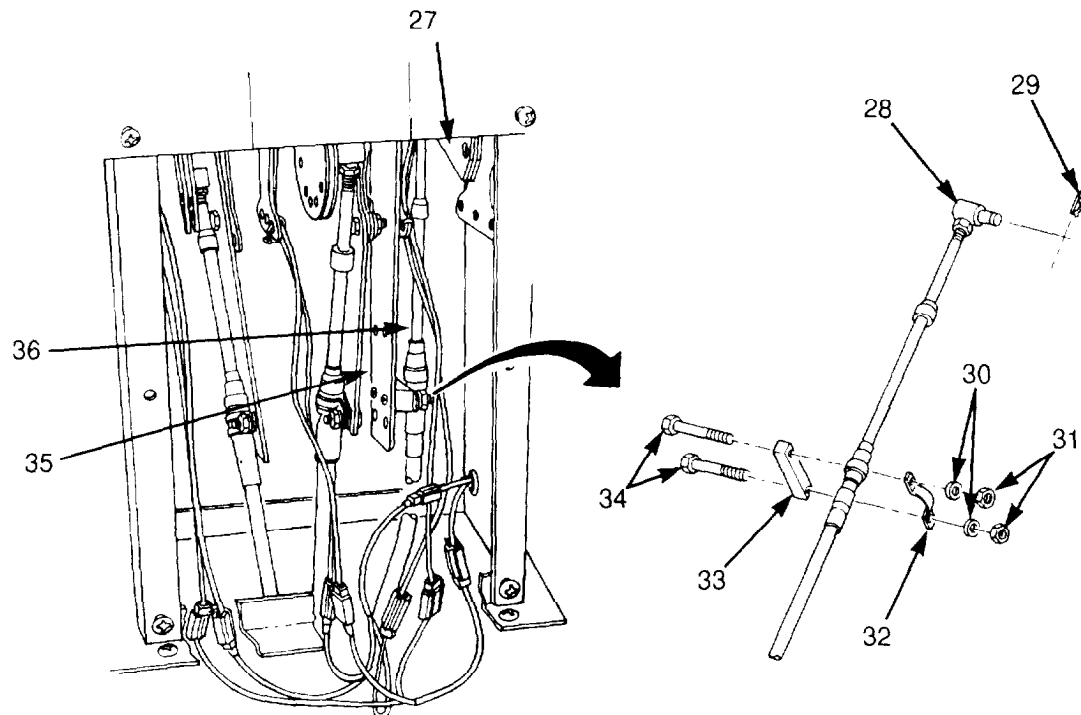


9. Install four screws (37) securing shift tower (1) to cab floor.



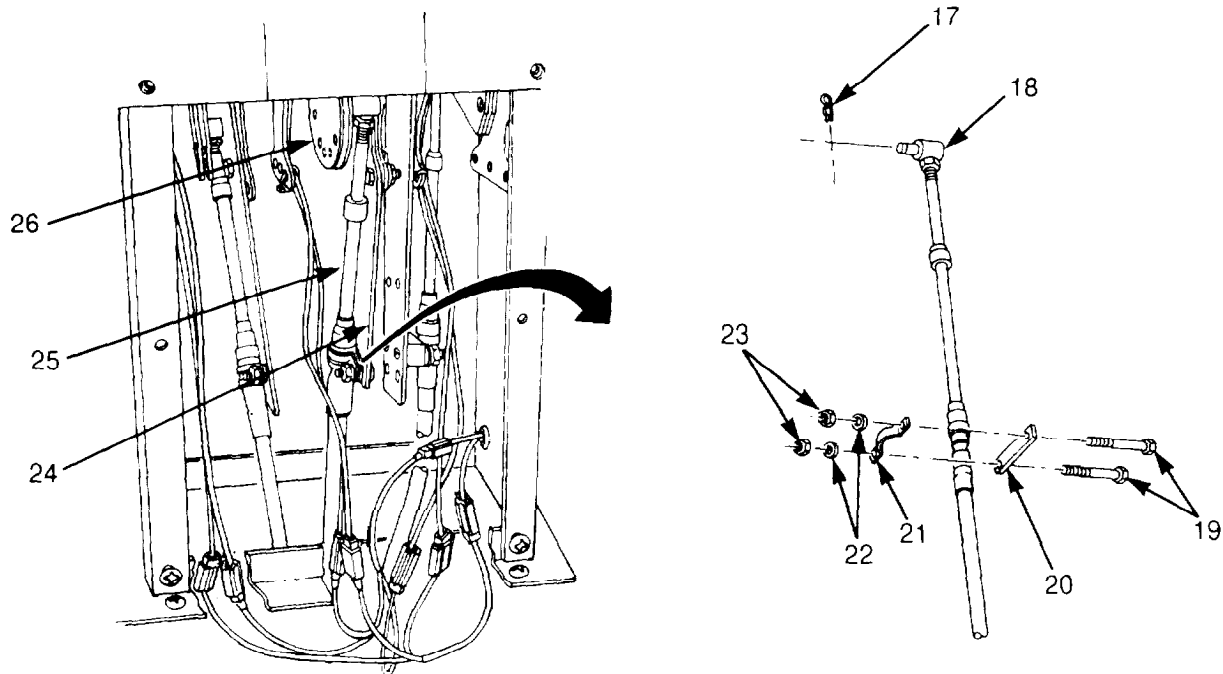
#### 4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).

10. Install spacer (33), hydraulic control lever cable (36), clamp (32), two screws (34), new lockwashers (30), and nuts (31) to bracket (35).
11. Place hydraulic control lever in DOWN position (paragraph 2-1).
12. By hand, push end of cable (36) in as far as it will go and install pivot pin (28) in same hole in bracket (27) as removed. If this cannot be achieved, perform step 14.
13. Release hand pressure from cable (36). Force of hydraulic pump actuator will cause hydraulic control lever to N (Neutral) position.
14. Loosen nut at pivot pin (28) and rotate pivot pin in desired direction. Tighten nut.
15. Repeat steps 12 thru 14 until pivot pin (28) can be installed in same hole in bracket (27) as removed with cable (36) pushed in all the way. Install retaining pin (29).



## 4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).

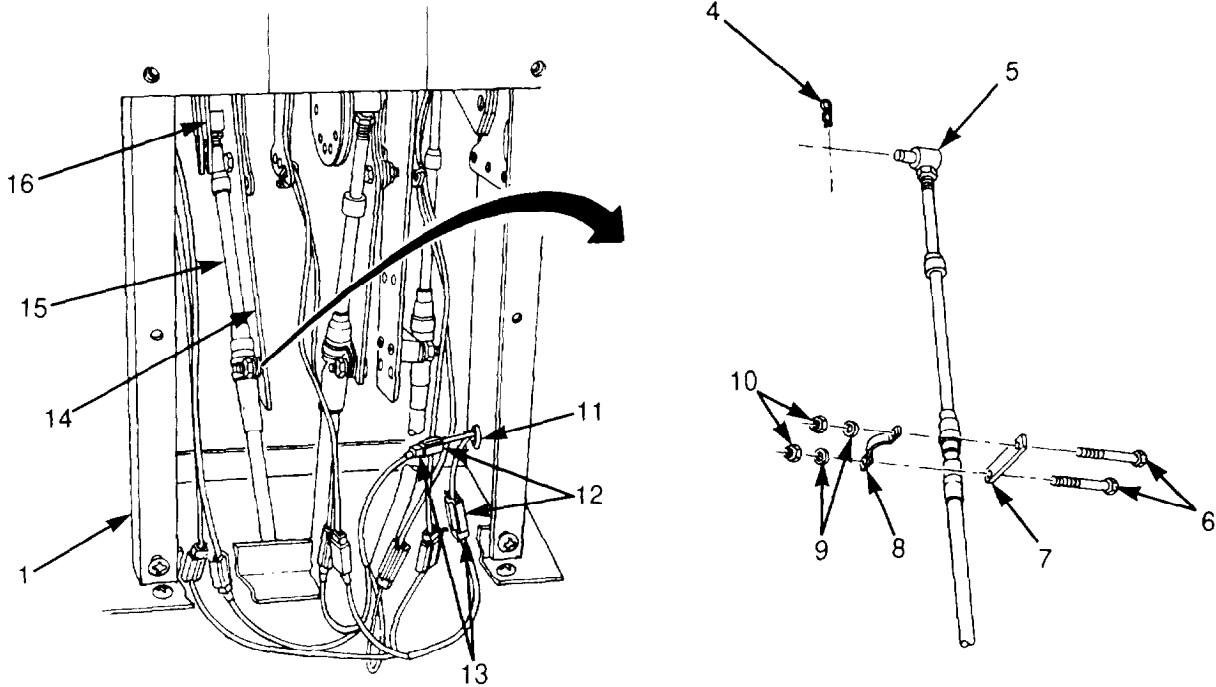
16. With transfer case selector lever in N (Neutral) position, install pivot pin (18) in bracket (26) and secure with retaining pin (17). Remove tag from cable (25).
17. Install spacer (20), cable (25) clamp (21), two screws (19), new lockwashers (22), and nuts (23) to bracket (24).



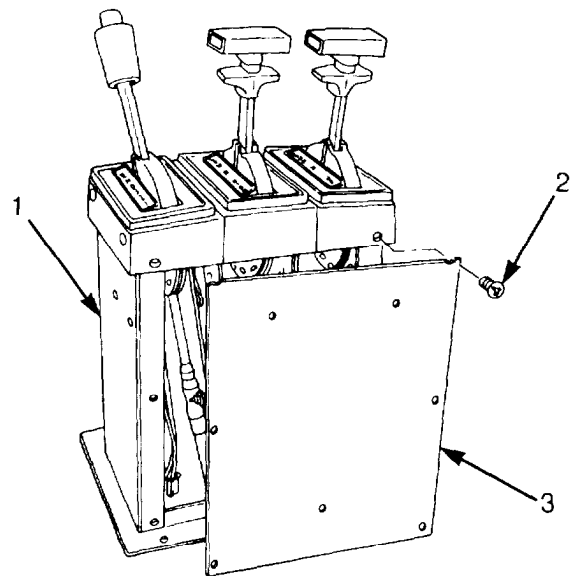
18. With transmission selector lever in D (Down) position, install pivot pin (5) in bracket (16) and secure with retaining pin (4). Remove tag from cable (15).
19. Install spacer (7), cable (15), clamp (8), two screws (6), new lockwashers (9), and nuts (10) to bracket (14).
20. Place transmission selector lever in N (Neutral) position (TM 9-2320-363-10).
21. Feed cab harness power and ground connectors (12) into shift tower (1) and install grommet (11).
22. Connect shift tower jumper harness power and ground connectors (13) to cab harness power and ground connectors (12). Remove tags.



**4-71. HYDRAULIC CONTROL LEVER CABLE REPLACEMENT (Con't).**



23. Remove two top and two bottom screws (2) from front and rear of shift tower (1).
24. Install six screws (2) and rear access panel (3).
25. Repeat step 24 for front access panel.



**FOLLOW-ON TASKS:**

- Install MCS control unit (M917A1 w/MCS) (paragraph 4-42).
- Install CTIS electronic control unit (ECU) (TM 9-2320-363-20).

---

## 4-72. HYDRAULIC HOSES AND FITTINGS REPLACEMENT.

---

*This task covers:*

- a. Removal
- b. Cleaning and Inspection
- c. Installation

---

*Initial Setup:*

**Equipment Conditions:**

- Dump body raised and supported on body props (paragraph 2-15).
- Hydraulic oil drained (Chapter 3, Section I).
- Transmission tunnel access cover removed (TM 9-2320-363-20).

**Materials/Parts:**

- Rags (Item 15, Appendix F)
- Marker tags (Item 19, Appendix F)
- Antiseize tape (Item 20, Appendix F)
- Tie wraps (as required)

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)
- Adjustable wrench (Item 10, Appendix I)

**General Safety Instructions:**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
- DO NOT disconnect hydraulic lines while engine is running.

---

**WARNING**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.
- DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.

**a. REMOVAL**

**CAUTION**

Hoses and ports in hydraulic components should be plugged to prevent contamination of hydraulic system (paragraph 4-21).

**NOTE**

- Hoses should be tagged before removal (paragraph 4-17).
- Use a suitable container to catch any draining hydraulic fluid. Ensure that all spills are cleaned up.
- Remove hose support clamps and tie wraps as necessary.
- Perform steps 1 thru 3 to remove suction hose and fittings.

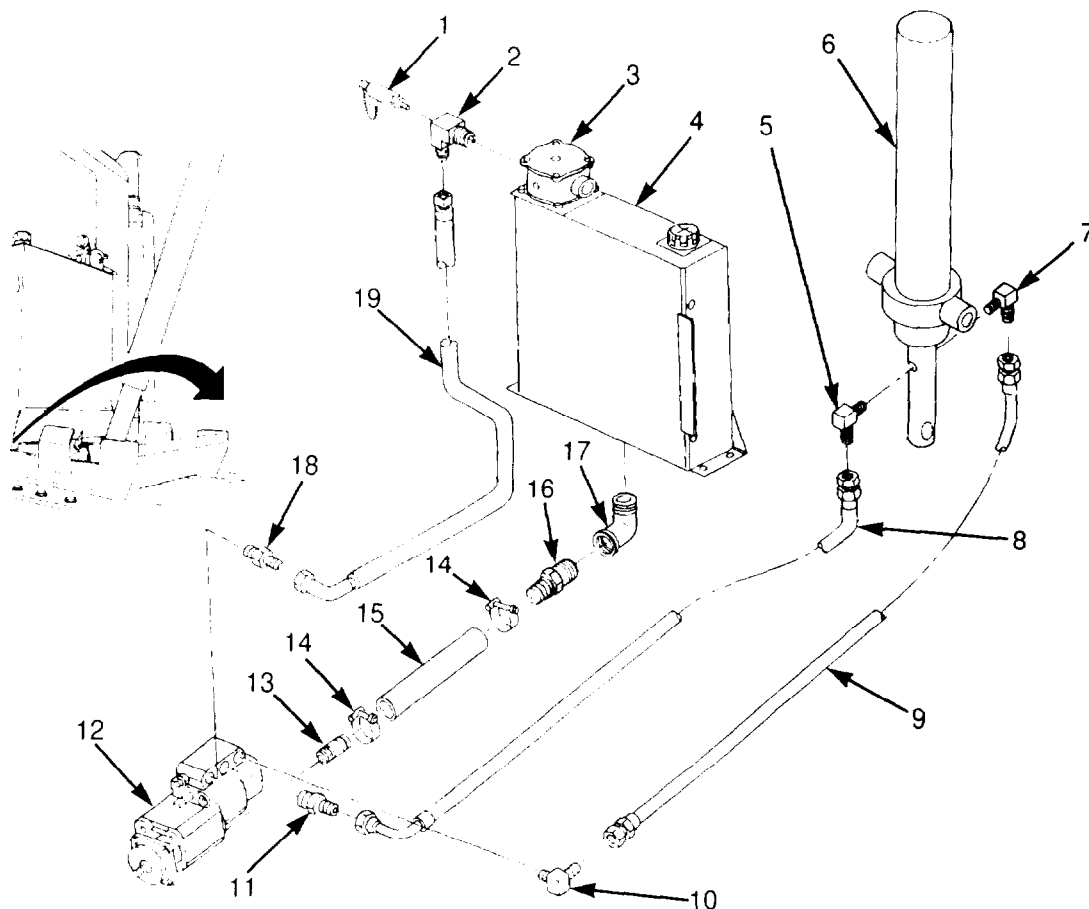
**4-72. HYDRAULIC HOSES AND FITTINGS REPLACEMENT (Con't).**

1. Loosen two clamps (14) and remove suction hose (15) and two clamps from adapter (13) and hose barb (16).
2. Remove adapter (13) from hydraulic pump (12).
3. Remove hose barb (16) and elbow (17) from bottom of hydraulic reservoir (4).

**NOTE**

**Perform steps 4 thru 7 to remove return hose and fittings.**

4. Remove return hose (19) from adapter (18) and tee (2).
5. Remove adapter (18) from hydraulic pump (12).
6. Remove oil sampling valve (1) from tee (2).
7. Remove tee (2) from filter housing (3).



**NOTE**

**Perform steps 8 thru 11 to remove two hydraulic cylinder hoses and fittings.**

8. Remove hose (8) from adapter (11) and elbow (5).
9. Remove hose (9) from elbow (10) and elbow (7).
10. Remove adapter (11) and elbow (10) from hydraulic pump (12).
11. Remove elbow (5) and elbow (7) from hydraulic cylinder (6).

**4-72. HYDRAULIC HOSES AND FITTINGS REPLACEMENT (Con't).**

**b. CLEANING AND INSPECTION**

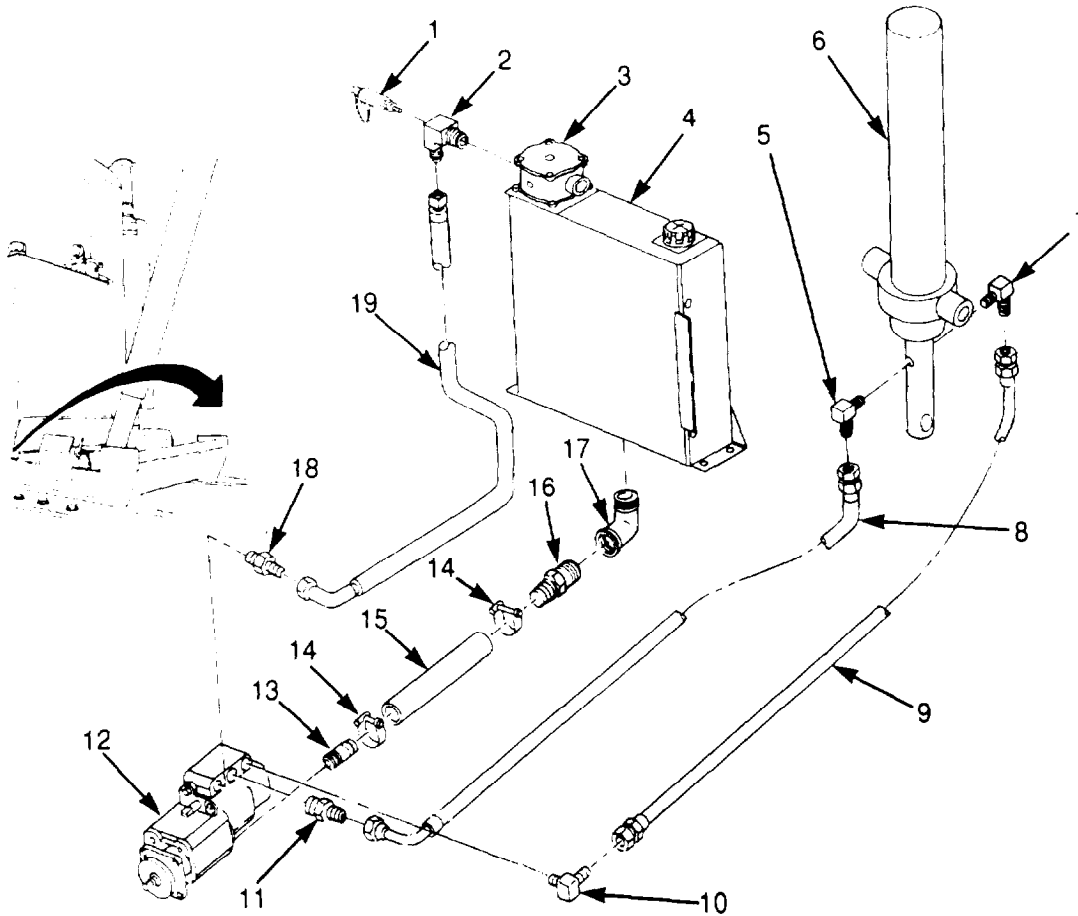
Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. INSTALLATION**

**NOTE**

- Use antiseize tape on all pipe threads (paragraph 4-22).
- Install hose support clamps and new tie wraps as necessary.
- Perform steps 1 thru 4 to install two hydraulic cylinder hoses and fittings.

1. Install elbow (5) and elbow (7) to hydraulic cylinder (6).
2. Install elbow (10) and adapter (11) to hydraulic pump (12).
3. Install hose (9) to elbow (7) and elbow (10).
4. Install hose (8) to adapter (11) and elbow (5).



---

**4-72. HYDRAULIC HOSES AND FITTINGS REPLACEMENT (Con't).**

---

**NOTE****Perform steps 5 thru 7 to install suction hose.**

5. Install elbow (17) and hose barb (16) to bottom of hydraulic reservoir (4).
6. Install adapter (13) to hydraulic pump (12).
7. Install suction hose (15) and two clamps (14) to adapter (13) and hose barb (16). Tighten clamps

**NOTE****Perform steps 8 thru 11 to install return hose and fittings.**

8. Install tee (2) on filter housing (3).
9. Install oil sampling valve (1) on tee (2).
10. Install adapter (18) to hydraulic pump (12).
11. Install return hose (19) to adapter (18) and tee (2).

**FOLLOW-ON TASKS:**

- Install transmission tunnel access cover (TM 9-2320-363-20)
- Fill hydraulic reservoir (Chapter 3, Section I).

---

## 4-73. HYDRAULIC RESERVOIR REPLACEMENT.

---

*This task covers:*

- a. Removal
- b. Cleaning and Inspection
- c. Installation

---

*Initial Setup:*

**Equipment Conditions:**

- Dump body raised and supported on body props (paragraph 2-1 5).
- Hydraulic oil drained (Chapter 3, Section I).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)
- Nylon sling (Item 6, Appendix I)
- Adjustable wrench (Item 10, Appendix I)
- Torque wrench (Item 11, Appendix I)
- Suitable lifting device

**Materials/Parts:**

- Rags (Item 15, Appendix F)

**Materials/Parts (Con't):**

- Antiseize tape (Item 20, Appendix F)
- Four locknuts
- Four lockwashers

**Personnel Required:** Two

**General Safety instructions:**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
- DO NOT disconnect hydraulic lines while engine is running.
- Use extreme caution when handling heavy parts.

---

**WARNING**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.
- DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.

**a. REMOVAL**

**CAUTION**

Hoses and ports in hydraulic components should be plugged to prevent contamination of hydraulic system (paragraph 4-21).

**NOTE**

- Hoses should be tagged before removal (paragraph 4-17).
- Use a suitable container to catch any draining hydraulic fluid. Ensure that all spills are cleaned up.

1. Disconnect hydraulic return hose (4) from tee (2).

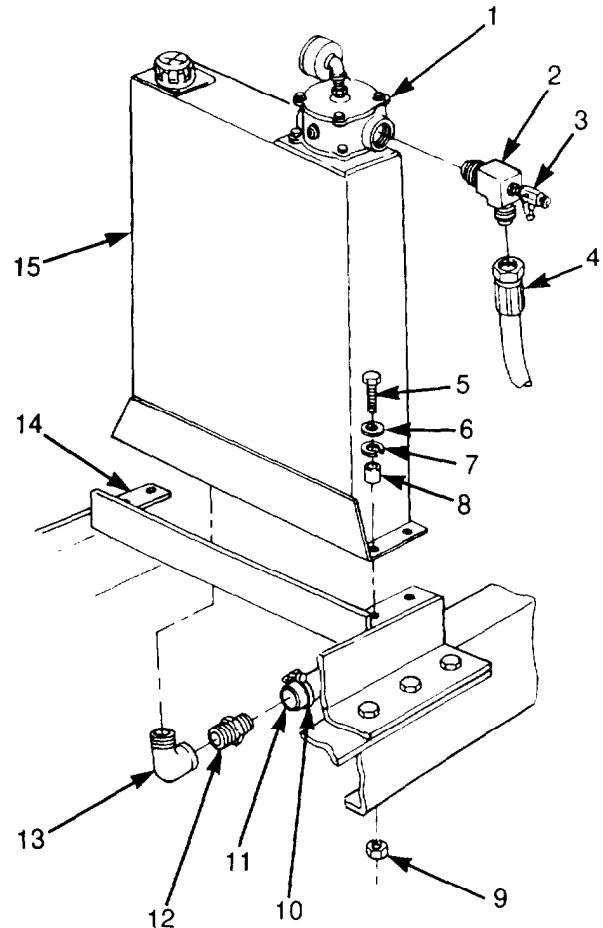
## 4-73. HYDRAULIC RESERVOIR REPLACEMENT (Con't).

2. Remove tee (2) with oil sampling valve (3) from filter housing (1).
3. Loosen clamp (10) and disconnect suction hose (11) from hose barb (12).
4. Remove hose barb (12) and elbow (13) from hydraulic reservoir (15).
5. Attach a nylon sling and suitable lifting device to hydraulic reservoir (15). Take up slack in sling.
6. Remove four locknuts (9), spacers (8), lockwashers (7), washers (6), and screws (5). Discard locknuts and lockwashers.

**WARNING**

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury to personnel or damage to equipment.**

7. Remove hydraulic reservoir (15) from cylinder support frame (14).



**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

## 4-73. HYDRAULIC RESERVOIR REPLACEMENT (Con't).

### c. INSTALLATION

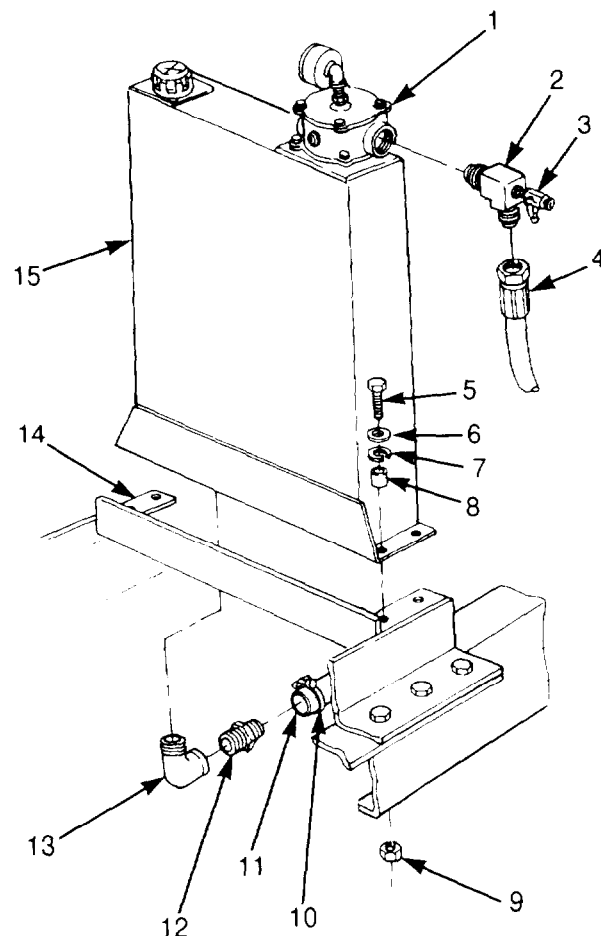
#### WARNING

Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury to personnel or damage to equipment.

#### NOTE

Use antiseize tape on all pipe threads (paragraph 4-22).

1. Attach a nylon sling and suitable lifting device to hydraulic reservoir (15). Take up slack in sling.
2. Position hydraulic reservoir (15) on cylinder support frame (14).
3. Install four screws (5) washers (6), new lock-washers (7), spacers (8), and new locknuts (9). Torque locknuts to 100-110 lb.-ft. (136-149 N•m). Remove nylon sling.
4. Install elbow (13) and hose barb (12) to hydraulic reservoir (15).
5. Connect suction hose (11) to hose barb (12) and tighten clamp (10).
6. Install tee (2) with oil sampling valve (3) to filter housing (1).
7. Connect hydraulic return hose (4) to tee (2).



#### FOLLOW-ON TASKS:

- Fill hydraulic reservoir (Chapter 3, Section I).
- Remove body props and lower dump body (paragraph 2-15).



**4-74. HYDRAULIC RESERVOIR REPAIR.**

*This task covers.*

- a. Disassembly
- b. Cleaning and Inspection
- c. Assembly

*Initial Setup:*

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)

**Materials/Parts:**

- Lubricating oil (Item 12 or 13, Appendix F)

**Materials/Parts (Con't):**

- Rags (Item 15, Appendix F)
- Antiseize tape (Item 20, Appendix F)
- One preformed packing
- One seal

**a. DISASSEMBLY**

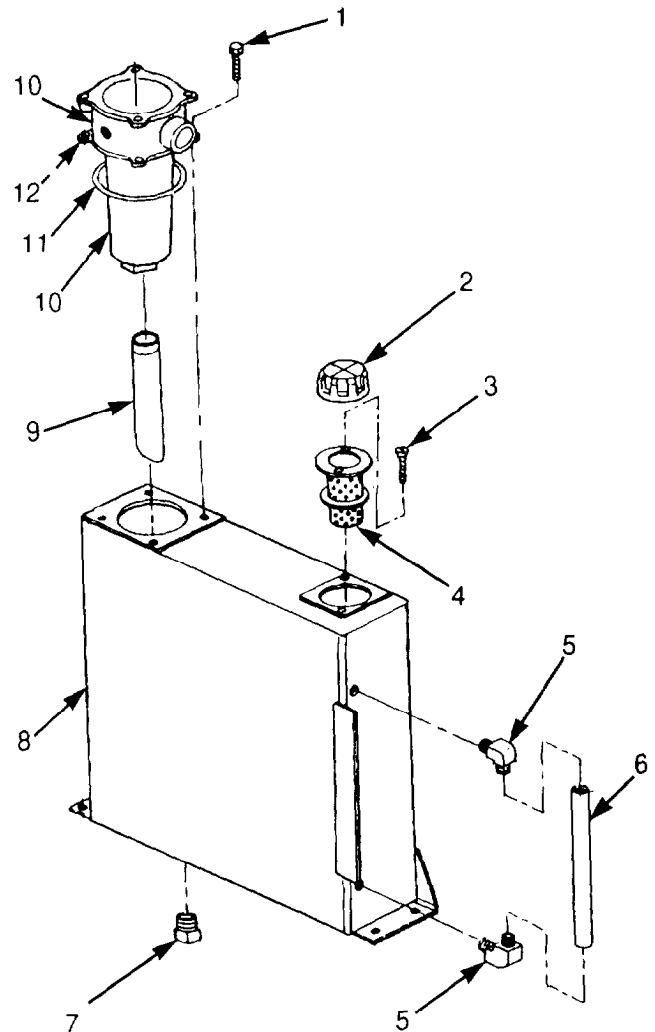
**CAUTION**

Ports in reservoir should be plugged to prevent contamination of hydraulic system (paragraph 4-21).

1. Remove hydraulic oil filter service indicator gage (paragraph 4-76).
2. Remove hydraulic oil filter element (paragraph 4-75).
3. Remove four screws (1) and filter housing (10) from hydraulic reservoir (8).
4. Remove pipe (9) from filter housing (10)
5. Remove seal (1 1) from filter housing mounting flange. Discard seal.
6. Separate filter housing (10) and remove preformed packing (12). Discard preformed packing.
7. Remove fill cap (3), six screws (2), and strainer (4).
8. Remove sight tube (6) and two elbows (5)
9. Remove drain plug (7).

**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.



## 4-74. HYDRAULIC RESERVOIR REPAIR (Con't).

### c. ASSEMBLY

#### NOTE

Use antiseize tape on all pipe threads (paragraph 4-22).

1. Install drain plug (7).

#### NOTE

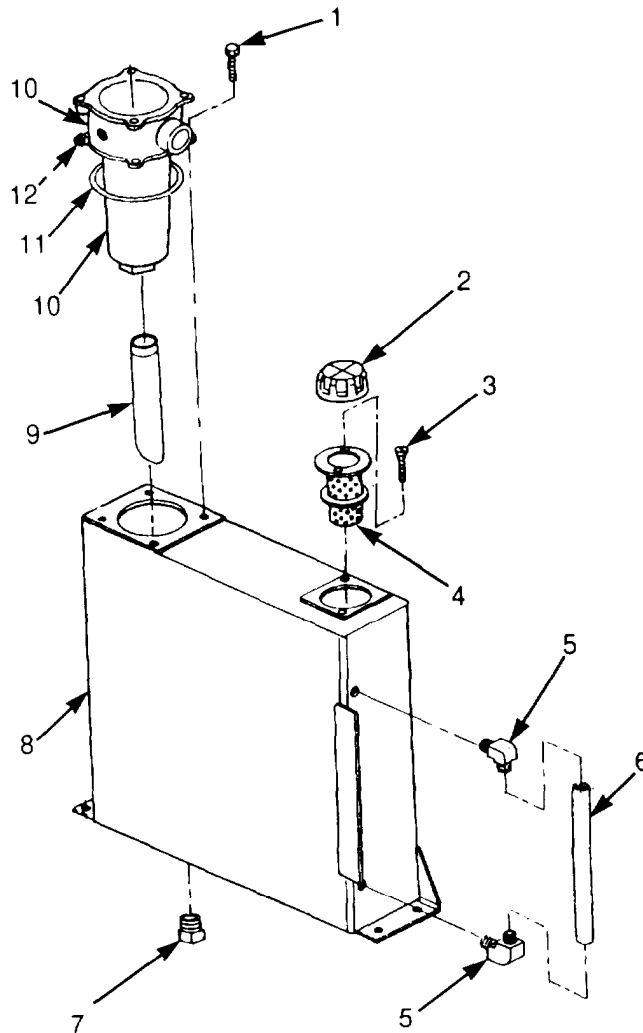
For information on manufacturing sight tube, refer to Appendix G, illustrated *List of Manufactured Items*.

2. Install two elbows (5) and sight tube (6) to hydraulic reservoir (8).
3. Install strainer (4) with six screws (2). Install fill cap (3).

#### NOTE

Apply a light coat of lubricating oil to preformed packing and seal as they are assembled.

4. Assemble filter housing (10) with new preformed packing (12).
5. Install new seal (1 1) in filter housing mounting flange.
6. Install pipe (9) to filter housing (10).
7. Install filter housing (10) to hydraulic reservoir (8) with four screws (1).
8. Install hydraulic oil filter element (paragraph 4-75).
9. Install hydraulic oil filter service indicator gage (paragraph 4-76).



---

## 4-75. HYDRAULIC OIL FILTER ELEMENT REPLACEMENT.

---

*This task covers:*

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

---

*Initial Setup:*

**Equipment Conditions:**

- Dump body raised and supported on body props (paragraph 2-15).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)

**Materials/Parts:**

- Lubricating oil (Item 12 or 13, Appendix F)
- Rags (Item 15, Appendix F)

**Materials/Parts (Con't):**

- One oil filter element
- One preformed packing

**General Safety Instructions:**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
  - DO NOT disconnect hydraulic lines while engine is running.
- 

**WARNING**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.
- DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.

## 4-75. HYDRAULIC OIL FILTER ELEMENT REPLACEMENT (Con't).

### a. REMOVAL

#### CAUTION

**Ports in reservoir should be plugged to prevent contamination of hydraulic system (paragraph 4-21).**

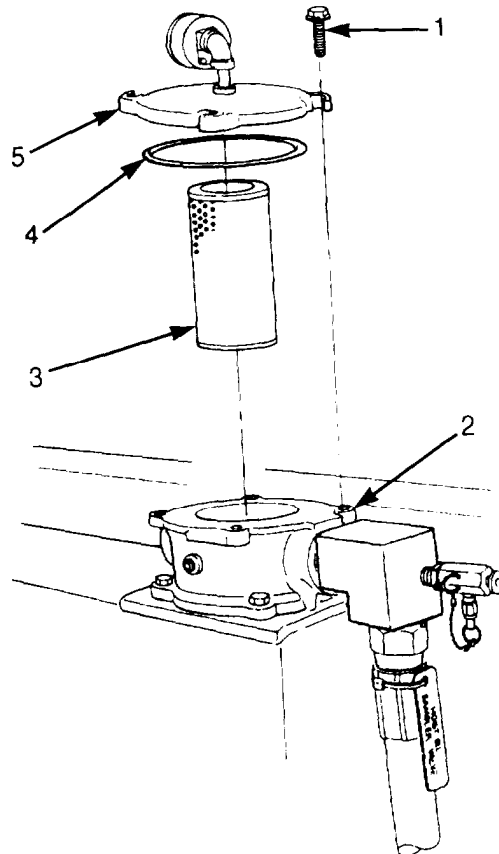
1. Loosen four screws (1), rotate filter housing cover (5), and lift cover from filter housing (2).
2. Remove oil filter element (3) and discard.
3. Remove preformed packing (4) from groove in filter housing cover (5). Discard preformed packing.

### b. CLEANING AND INSPECTION

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

### c. INSTALLATION

1. Coat new preformed packing (4) with lubricating oil and install in groove of filter housing cover (5).
2. Install new oil filter element (3) to filter housing (2).
3. Install filter housing cover (5) to filter housing (2) with four screws (1).



#### FOLLOW-ON TASKS:

- Remove body props and lower dump body (paragraph 2-15).
- Fill hydraulic reservoir as necessary (Chapter 3, Section I).

**4-76. HYDRAULIC OIL FILTER SERVICE INDICATOR GAGE REPLACEMENT.**

*This task covers.*

- |                            |                 |
|----------------------------|-----------------|
| a. Removal                 | c. Installation |
| b. Cleaning and Inspection |                 |

*Initial Setup:*

Equipment Conditions:

- Dump body raised and supported on body props (paragraph 2-15).

Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)

Materials/Parts:

- Rags (Item 15, Appendix F)

Materials/Parts (Con't):

- Antiseize tape (Item 20, Appendix F)

General Safety Instructions:

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
- DO NOT disconnect hydraulic lines while engine is running.

**WARNING**

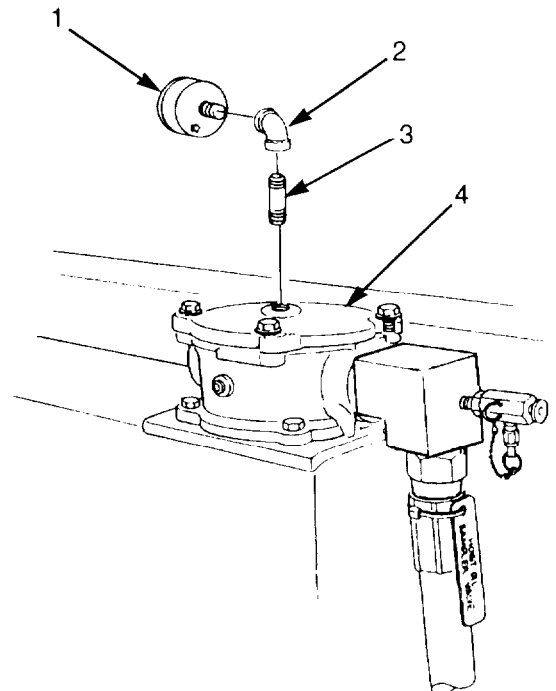
NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.

DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.

**a. REMOVAL****CAUTION**

Ports in reservoir should be plugged to prevent contamination of hydraulic system (paragraph 4-21).

1. Remove gage (1) from elbow (2).
2. Remove elbow (2) and nipple (3) from filter housing cover (4).



---

## 4-76. HYDRAULIC OIL FILTER SERVICE INDICATOR GAGE REPLACEMENT (Con't).

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### b. CLEANING AND INSPECTION

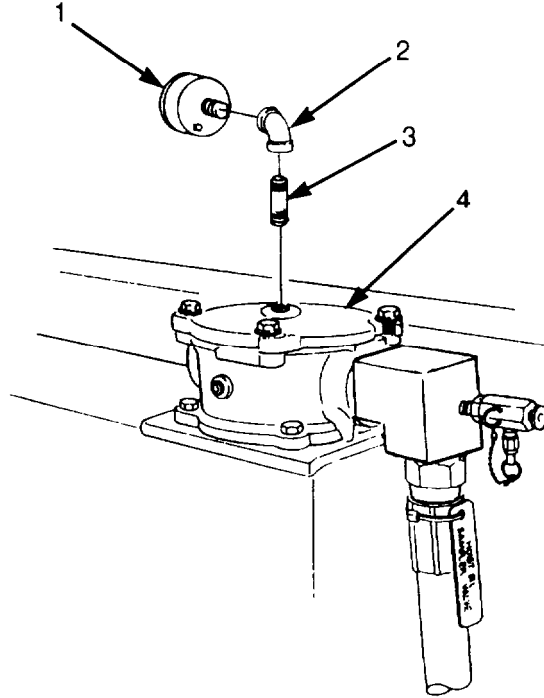
Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

### c. INSTALLATION

#### NOTE

**Use antiseize tape on all pipe threads (paragraph 4-22).**

1. Apply antiseize tape to pipe threads of nipple (3) and install nipple and elbow (2) to filter housing cover (4).
2. Install gage (1) to elbow (2).



#### FOLLOW-ON TASKS:

- Remove body props and lower dump body (paragraph 2-15).

**Section X. PREPARATION FOR STORAGE OR SHIPMENT**

Paragraph Number	Paragraph Title	Page Number
4-77.	General . . . . .	4-145
4-78.	Definition of Administrative Storage . . . . .	4-145
4-79.	Preparation of Equipment for Administrative Storage . . . . .	4-145
4-80.	Care of Equipment in Administrative Storage. . . . .	4-147
Table 4-4.	Exercise Schedule.. . . . .	4-147
4-81.	Procedures for Common Components and Miscellaneous Items . . . . .	4-148
4-82.	Removal of Equipment from Administrative Storage . . . . .	4-148
4-83.	Preparation of Equipment for Shipment. . . . .	4-148

**4-77. GENERAL.**

- a. This chapter contains requirements and procedures for administrative storage of equipment that is issued to and in use by Army activities worldwide.
- b. The requirements specified herein are necessary to maintain equipment in administrative storage in such a way as to achieve the maximum readiness condition.
- c. Equipment that is placed in administrative storage should be capable of being readied to perform its mission within a 24-hour period, or as other-wise may be prescribed by the approving authority. Before equipment is placed in administrative storage, a current Preventive Maintenance Checks and Services (PMCS) should be completed and deficiencies corrected.
- d. Report equipment in administrative storage as prescribed for all reportable equipment.
- e. Perform inspections, maintenance services, and lubrication as specified herein.
- f. Records and reports to be maintained for equipment in administrative storage are those prescribed by DA Pam 738-750 for equipment in use.
- g. A 10% variance is acceptable on time used to determine the required maintenance actions.
- h. Accomplishment of applicable PMCS, as mentioned throughout this chapter, will be on a semi-annual basis.

**4-78. DEFINITION OF ADMINISTRATIVE STORAGE.**

The placement of equipment in administrative storage can be for short periods of time when a shortage of maintenance effort exists. Items should be ready for use within the time factors as determined by the directing authority. During the storage period, appropriate maintenance records will be kept.

**4-79. PREPARATION OF EQUIPMENT FOR ADMINISTRATIVE STORAGE.**

- a. **Storage Site.**
  - (1) Select the best available site for administrative storage. Separate stored equipment from equipment in use. Conspicuously mark the area "Administrative Storage".
  - (2) Covered space is preferred.

---

## 4-79. PREPARATION OF EQUIPMENT FOR ADMINISTRATIVE STORAGE (Con't).

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(3) Open sites should be improved hardstand, if available. Unimproved sites should be firm, well-drained, and free of excessive vegetation.

b. **Storage Plan.**

(1) Store equipment so as to provide maximum protection from the elements and to provide access for inspection, maintenance, and exercising. Anticipate removal or deployment problems and take suitable precautions.

(2) Take into consideration environmental conditions, such as extreme heat or cold; high humidity; blowing sand, dust, or loose debris; soft ground; mud; heavy snows; or any combination thereof, and take adequate precautions.

(3) Establish a fire plan and provide for adequate fire fighting equipment and personnel.

c. **Maintenance Services and Inspections.**

(1) **Maintenance Services.** Prior to storage, perform the next scheduled PMCS.

(2) **Inspection.** Inspect and approve the equipment prior to storage. Do not place nonmission-capable equipment in storage.

d. **Correction of Shortcomings and Deficiencies.** Correct all shortcomings and deficiencies prior to storage, or obtain a deferment from the approving authority.

e. **Lubrication.** Lubricate equipment in accordance with Chapter 3, Section I.

f. **General Cleaning, Painting, and Preservation.**

**CAUTION**

**DO NOT direct water under pressure against unsealed electrical systems or any exterior opening. Failure to follow this caution may result in damage to equipment.**

(1) **Cleaning.** Clean the equipment of dirt, grease, and other contaminants, but do not use vapor degreasing.

(2) **Painting.** Remove rust and damaged paint by scraping, wire brushing, sanding, or buffing. Sand to a smooth finish and spot paint as necessary (TB 43-0209).

(3) **Preservation.** After cleaning and drying, immediately coat unpainted metal surfaces with oil or grease, as appropriate.

**NOTE**

- **Place a piece of barrier material (Item 2, Appendix F) between desiccant bags and metal surfaces.**
- **Air circulation under draped covers reduces deterioration from moisture or heat.**

(4) **Weatherproofing.** Sunlight, heat, moisture (humidity), and dirt tend to accelerate deterioration. Install all covers authorized for the equipment. Close and secure all openings except those required for venting and draining. Seal openings to prevent the entry of rain, snow, or dust. Insert desiccant when complete seal is required. Place equipment, and provide blocking or framing, to allow for ventilation and water drainage. Support cover away from item surfaces which may rust, rot, or mildew.



---

**4-80. CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE.**

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a. **Maintenance Services.** After equipment has been placed in administrative storage, inspect, service, and exercise as specified herein.

b. **Inspection.** Inspection will usually be visual and must consist of at least a walkaround examination of all equipment to detect any deficiencies. Inspect equipment in open storage weekly and equipment in covered storage monthly. Inspect all equipment immediately after any severe storm or environmental change. The following are examples of things to look for during a visual inspection:

- (1) Low or flat tires.
- (2) Coolant, fuel, or oil leaks.
- (3) Condition of preservatives, seals, and wraps.
- (4) Corrosion or other deterioration.
- (5) Missing or damaged parts.
- (6) Water in compartments.
- (7) Any other readily recognizable shortcomings or deficiencies.

c. **Repair During Administrative Storage.** Keep equipment in an optimum state of readiness. Accomplish the required services and repairs as quickly as possible. Whenever possible, perform all maintenance on-site.

d. **Exercising.** Exercise equipment in accordance with Table 4-4, Exercise Schedule, and the following instructions.

(1) **Vehicle Major Exercise.** Depreserve equipment by removing only that material restricting exercise. Close all drains, remove blocks, and perform all BEFORE operational checks. Make several right and left 90° turns. Make several hard braking stops without skidding. While exercising, and when it is safe and convenient, operate all other functional components and perform all DURING and AFTER operational checks.

(2) **Scheduled Services.** Scheduled services will include inspection per subparagraph b and will be conducted in accordance with Chapter 4, Section IV, Unit Preventive Maintenance Checks and Services (PMCS). Lubricate in accordance with instructions in Chapter 3, Section I.

(3) **Corrective Action.** Immediately take action to correct shortcomings and deficiencies noted. Record inspection and exercise results on DA Form 2404. Record and report all maintenance actions on DA Form 2407. After exercising, restore the preservation to the original condition. Replenish lubricants used during exercising and note the amount on DA Form 2408.

Table 4-4. Exercise Schedule.

Weeks	2	4	6	8	10	12	14	16	18	20	22	24
Scheduled Services												X
Major Exercise												X

e. **Rotation.** Rotate items in accordance with any rotational plan that will keep the equipment in an operational condition and reduce the maintenance effort.

---

#### 4-81. PROCEDURES FOR COMMON COMPONENTS AND MISCELLANEOUS ITEMS.

---

- a. **Tires.** Visually inspect tires during each walkaround inspection. This inspection includes checking tires with a tire gage. Inflate, repair, or replace as necessary those found to be low, damaged, or excessively worn. Mark inflated and repaired tires with a crayon for checking at the next inspection.
- b. **Batteries.** Leave batteries in place in equipment. Disconnect battery cables (TM 9-2320-363-20). Ensure that batteries are fully charged when equipment is stored and are returned to a full charge during each equipment exercising.
- c. **Seals.** Seals may develop leaks during storage or shortly thereafter. If leaking persists, refer to the applicable maintenance section in this manual for corrective maintenance procedures.

---

#### 4-82. REMOVAL OF EQUIPMENT FROM ADMINISTRATIVE STORAGE.

---

- a. **Activation.** Restore the equipment to normal operating condition in accordance with the instructions contained in Chapter 4, Section II.
- b. **Servicing.** Resume the maintenance service schedule in effect at the commencement of storage or service the equipment before the scheduled dates in order to produce a staggered maintenance workload.

---

#### 4-83. PREPARATION OF EQUIPMENT FOR SHIPMENT.

---

- a. Refer to FM 55-21, TM 55-601, and TM 743-200-1 for additional instructions on processing, storage, and shipment of materiel.
- b. Vehicles that have been removed from storage for shipment do not have to be reprocessed if they will reach their destination within the administrative storage period. Reprocess only if inspection reveals any corrosion or if anticipated in-transit weather conditions make it necessary.
- c. When a vehicle is received and has already been processed for domestic shipment, as indicated on DD Form 1397, it does not have to be reprocessed for storage unless corrosion and deterioration are found during the inspection upon receipt. List on SF Form 364 all discrepancies found because of poor preservation, packaging, packing, marking, handling, loading, storage, or excessive preservation. Repairs that cannot be handled by the receiving unit must have tags attached listing needed repairs. A report of these conditions will be submitted by the unit commander for action by an ordnance maintenance unit.

## CHAPTER 5 DIRECT SUPPORT MAINTENANCE

### Section I. DUMP BODY MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
5-1.	Dump Body and Stabilizer Replacement .....	5-1
5-2.	Cylinder Support Frame Replacement. ....	5-7

#### 5-1. DUMP BODY AND STABILIZER REPLACEMENT.

*This task covers:*

- |            |                 |
|------------|-----------------|
| a. Removal | b. Installation |
|------------|-----------------|

*Initial Setup:*

**Equipment Conditions:**

- Chassis-to-dump body air lines disconnected (paragraph 4-59).
- Chassis-to-dump body electrical harnesses disconnected (paragraphs 4-44 thru 4-47).
- Mud flaps removed (paragraph 4-63).

**Tools /Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Nylon slings (Item 6, Appendix I)
- Torque wrench (Item 12, Appendix I)
- Suitable lifting device with chains

**Materials/Parts:**

- Fourteen locknuts
- Wooden blocks

**Personnel Required:** Three

**References:**

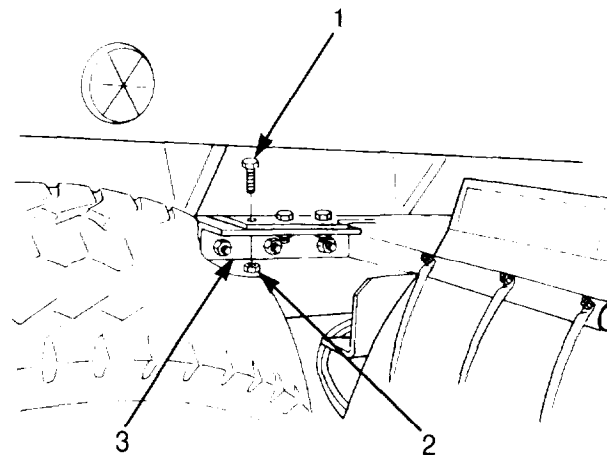
- TM 9-2320-363-10
- TM 9-237

**General Safety instructions:**

- Use extreme caution when handling heavy parts.
- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.

**a. REMOVAL**

1. Remove six locknuts (2) and screws (1) from left and right angle brackets (3). Discard locknuts.

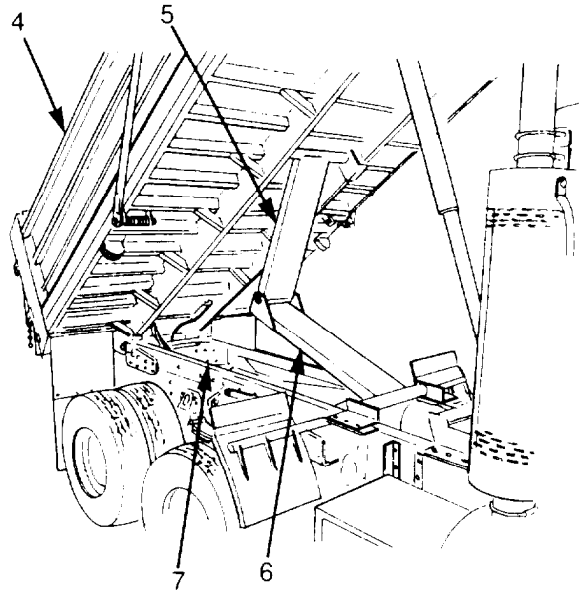


**5-1. DUMP BODY AND STABILIZER REPLACEMENT (Con't).**

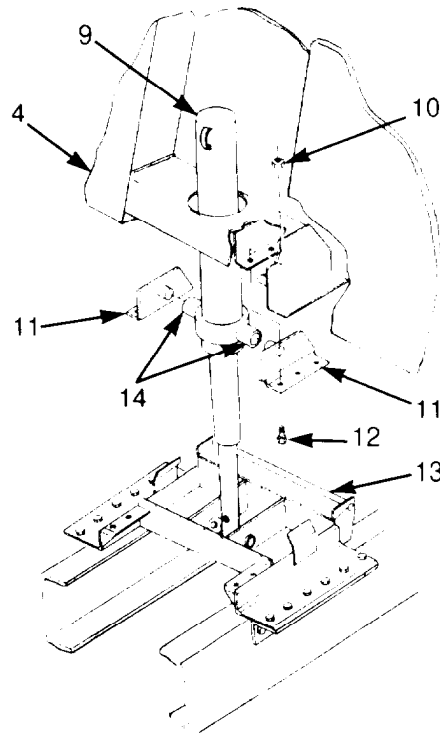
2. Working from underside of vehicle, secure lower half (6) of stabilizer to upper half (5) and to dump body (4) using a suitable chain or nylon strap.

**WARNING**

- **Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**
  - **NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.**
3. Raise front of dump body (4) and support on body props (paragraph 2-15) using a suitable lifting device and chains.

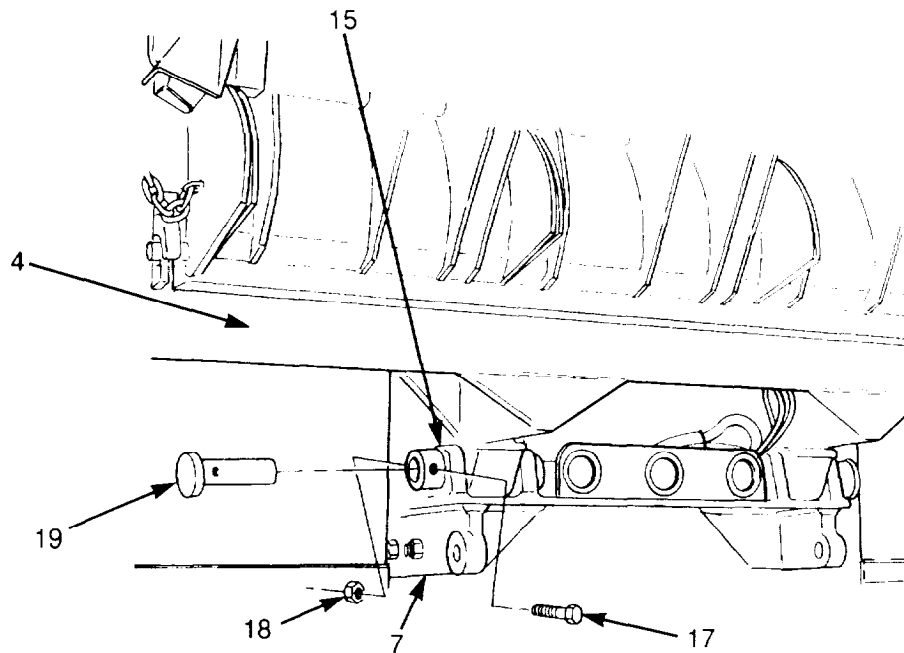


4. Remove six locknuts (10) and screws (12) from left and right mounting brackets (11). Remove brackets from hydraulic cylinder pivots (14). Discard locknuts.
5. Disengage PTO (TM 9-2320-363-10). Lower hydraulic cylinder (9) by placing hydraulic control lever in cab in DOWN position (paragraph 2-1). With hydraulic cylinder lowered, place wooden blocks between base of cylinder and cylinder support frame (13) to provide support.



## 5-1. DUMP BODY AND STABILIZER REPLACEMENT (Con't).

6. Using suitable lift and chains, lower front of dump body (4).
7. Attach suitable lift and chains at four corners of dump body (4). Take up slack in chains with lift.
8. Remove two locknuts (18) and screws (17) from rear hinge (15) and hinge pins (19). Discard locknuts
9. Remove left and right hinge pins (19) from rear hinge (15).



### WARNING

Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.

### NOTE

Before removing dump body from vehicle chassis, perform a trial lift to ensure body is balanced and will lift straight and level from vehicle chassis.

10. Remove dump body (4) from vehicle chassis (7). Place dump body on suitable supports and remove lifting device and chains.

### CAUTION

Before welding, the following components must be disconnected: DDEC ECU, ABS ECU, CTIS ECU, Datalogger, and batteries (TM 9-2320-363-20). Failure to follow this caution may damage electronic components.

11. If stabilizer is damaged, it may be removed at this time (TM 9-237)

5-1. DUMP BODY AND STABILIZER REPLACEMENT (Con?).

**b. INSTALLATION**

**WARNING**

Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.

**CAUTION**

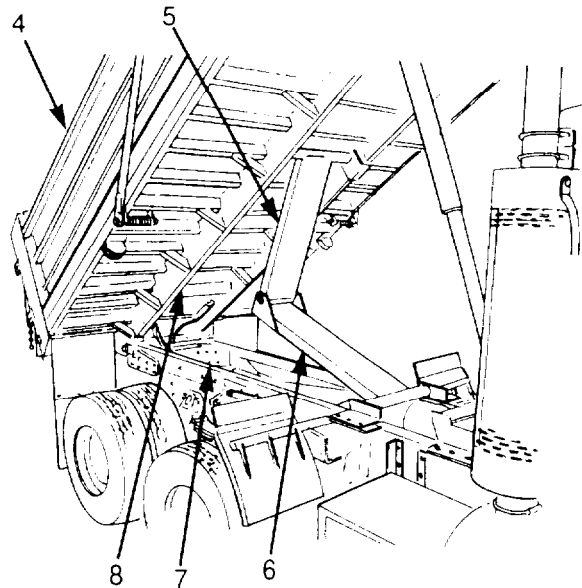
Before welding, the following components must be disconnected: DDEC ECU, ABS ECU, CTIS ECU, Datalogger, and batteries (TM 9-2320-363-20). Failure to follow this caution may damage electronic components.

1. If removed, install stabilizer (TM 9-237).
2. Secure lower half (6) of stabilizer to upper half (5) and to dump body (4) using a suitable chain or nylon strap.

**NOTE**

Before lifting dump body, perform a trial lift to ensure body is balanced and will lift straight and level.

3. Attach suitable lift and chains at four corners of dump body (4). Take up slack in chains with lift.



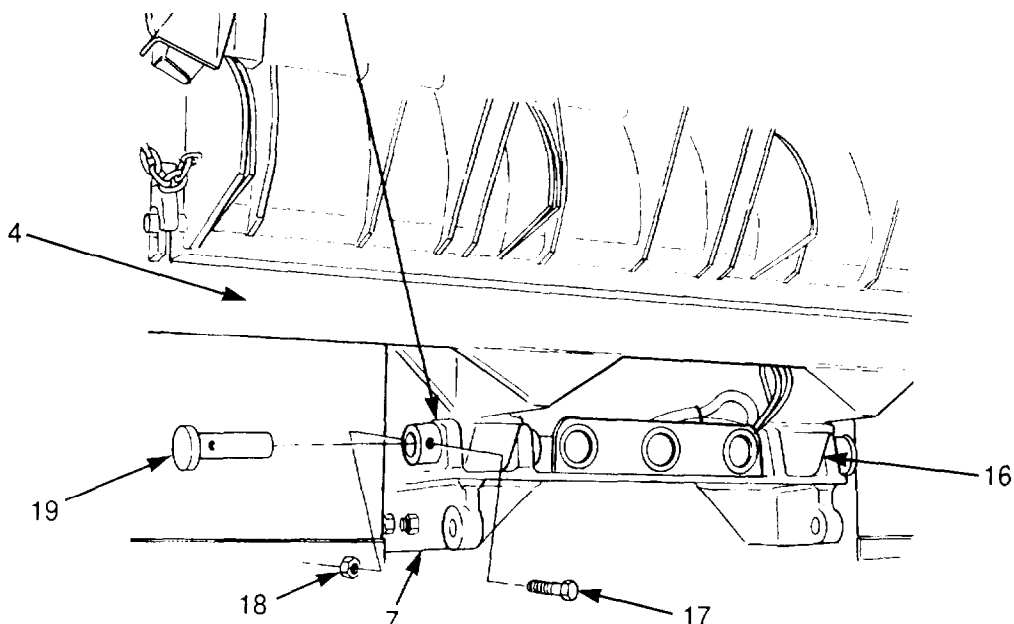
**NOTE**

When positioning dump body on vehicle chassis, pay close attention to hydraulic cylinder positioning and rear hinge assembly alignment.

4. Lift dump body (4) and position over vehicle chassis (7). Lower body until rear hinge (15) and hinge pads (16) are aligned and hydraulic cylinder is properly positioned in recess at front of dump body.

**5-1. DUMP BODY AND STABILIZER REPLACEMENT (Con't).**

5. Install left and right hinge pins (19) in rear hinge (15).
6. Install two screws (17) and new locknuts (18) in rear hinge (15) and hinge pins (19).
7. Lower dump body (4) onto vehicle chassis (7). Remove lifting chains from rear of dump body.

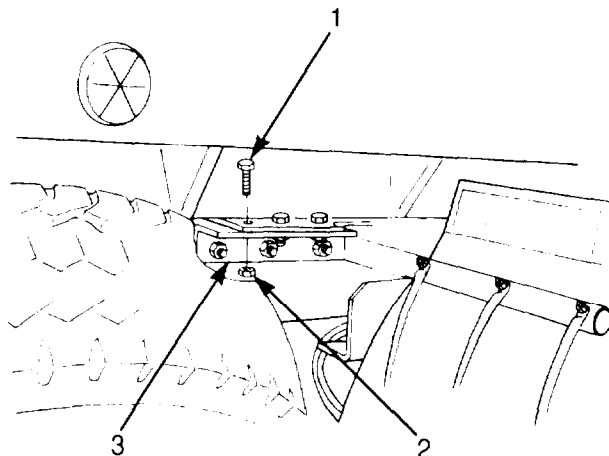


8. Working from underside of vehicle, release lower half (6) and upper half (5) of stabilizer from bottom of dump body (4).

**NOTE**

**It may be necessary to raise front of dump body to aline stabilizer with chassis mounting holes.**

9. Raise front of dump body (4) and position wooden blocks between dump body frame rails (8) and vehicle chassis (7).
10. Aline lower half of stabilizer mounting surface to angle brackets (3). Install six screws (1) and new locknuts (2) in left and right angle brackets. Torque locknuts to 150 lb.-ft. (203 N•m).
11. Lift front of dump body (4) remove wooden blocks, position body props in raised position, and lower body onto props (paragraph 2-15).



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## 5-1. DUMP BODY AND STABILIZER REPLACEMENT (Con't).

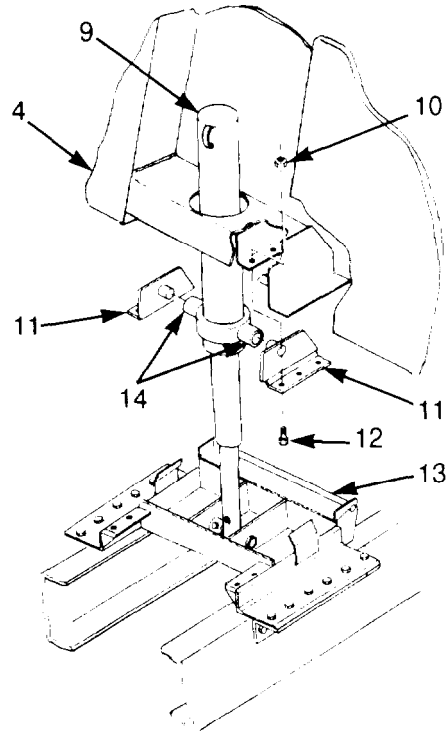
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12. Install left and right mounting brackets (11) on cylinder pivots (14).

**NOTE**

**It may be necessary to raise and/or lower front of dump body to aline mounting brackets to dump body.**

13. Aline mounting brackets (1 1) with mounting surface of dump body (4).
14. Install six screws (12) and new locknuts (10) to secure mounting brackets (11) to dump body (4). Torque locknuts to 150 lb.-ft. (203 N•m).
15. Remove dump body (4) from body props and lower body (paragraph 2-15).
16. Remove lifting device and chains from dump body (4).



**FOLLOW-ON TASKS:**

- Connect chassis-to-dump body air lines (paragraph 4-59).
- Connect chassis-to-dump body electrical harnesses (paragraphs 4-44 thru 4-47).
- Install mud flaps (paragraph 4-63).



## 5-2. CYLINDER SUPPORT FRAME REPLACEMENT.

This task covers:

- a. Removal b. Installation

*Initial Setup:*

### Equipment Conditions:

- Body up switch removed (paragraph 4-38).
- Hydraulic reservoir removed (paragraph 4-73).
- Hydraulic cylinder removed (paragraph 5-6).

### Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)
- Nylon slings (Item 6, Appendix I)

### Tools/Test Equipment (Con't):

- Torque wrench (Item 12, Appendix I)
- Suitable lifting device

### Materials/Parts:

- Twenty-four locknuts

### Personnel Required: Three

### General Safety Instructions:

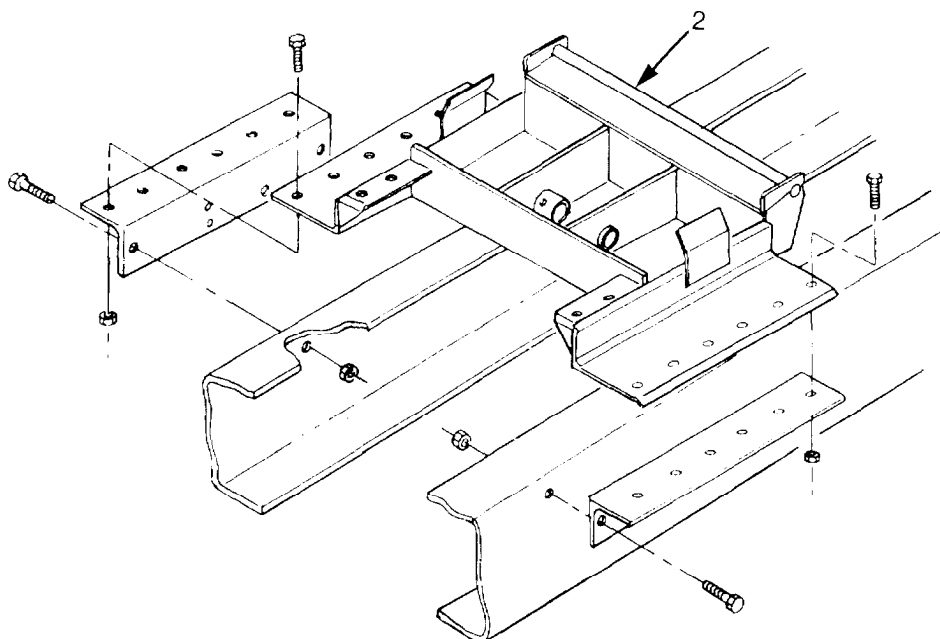
- Use extreme caution when handling heavy parts.

### a. REMOVAL

#### WARNING

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

1. Attach slings to cylinder support frame (2) and attach slings to lifting device. Take up slack in slings with lift.



## 5-2. CYLINDER SUPPORT FRAME REPLACEMENT (Con't).

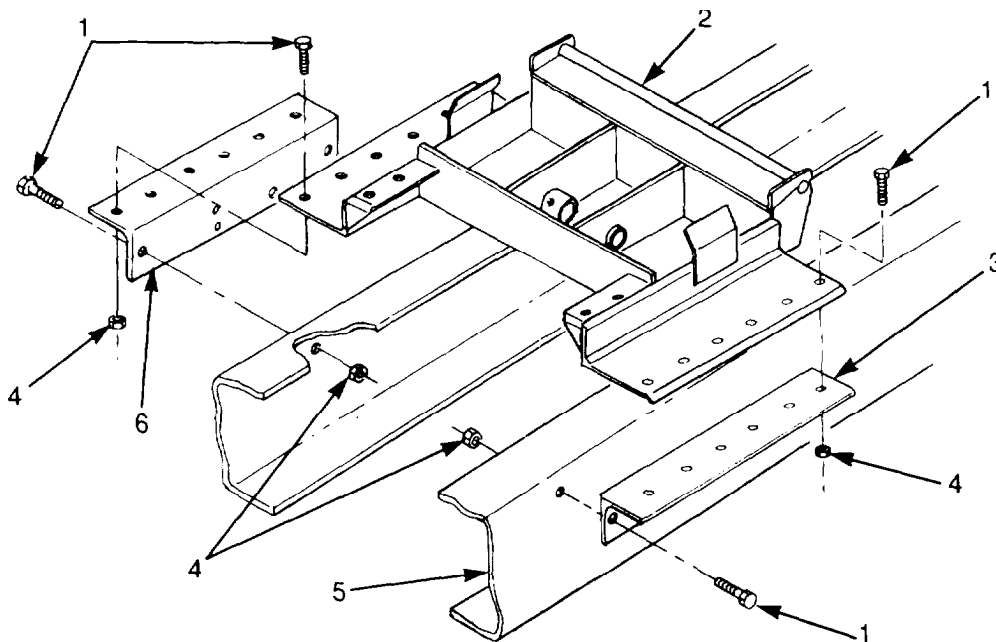
2. Remove 24 locknuts (4), screws (1), left angle bracket (3), and right angle bracket (6) from cylinder support frame (2) and vehicle chassis (5). Discard locknuts.
3. Remove cylinder support frame (2) from vehicle chassis (5) and move frame to safe work area. Remove

### b. INSTALLATION

#### WARNING

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

1. Attach slings to cylinder support frame (2) and attach slings to lifting device. Take up slack in slings with lift.
2. Lift cylinder support frame (2) and position on vehicle chassis (5).
3. Install right angle bracket (6) and left angle bracket (3) to vehicle chassis (5) and cylinder support frame (2) with 24 screws (1) and new locknuts (4).
4. Torque locknuts (4) to 200 lb.-ft. (271 N•m).



#### FOLLOW-ON TASKS:

- Install hydraulic cylinder (paragraph 5-6).
- Install hydraulic reservoir (paragraph 4-73).
- Install body up switch (paragraph 4-38).

## Section II. DUMP BODY ACCESSORY ITEMS MAINTENANCE

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### 5-3. CARGO COVER REPAIR.

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Repair cargo cover in accordance with FM 10-16, *General Fabric Repair*.

### Section III. HYDRAULIC SYSTEM MAINTENANCE

Paragraph Number	Paragraph Title	Page Number
5-4.	Hydraulic Pump Replacement .....	5-10
5-5.	Hydraulic Pump Repair. ....	5-14
5-6.	Hydraulic Cylinder Replacement .....	5-20
5-7.	Hydraulic Cylinder Repair. ....	5-23

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#### 5-4. HYDRAULIC PUMP REPLACEMENT.

---

*This task covers:*

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

---

*Initial Setup:*

**Equipment Conditions:**

- Hydraulic oil drained (Chapter 3, Section I).
- Transmission tunnel access cover removed (TM 9-2320-363-20).
- Hydraulic control lever cable disconnected from hydraulic pump (paragraph 4-71).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)
- Adjustable wrench (Item 10, Appendix I)
- Torque wrench (Item 11, Appendix I)

**Materials/Parts:**

- Rags (Item 15, Appendix F)
- Marker tags (Item 19, Appendix F)
- Antiseize tape (Item 20, Appendix F)
- Four lockwashers

**Personnel Required: Two**

**General Safety Instructions:**

- DO NOT disconnect hydraulic lines while engine is running.
- Use extreme caution when handling heavy parts.

**WARNING**

DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.

**a. REMOVAL**

**CAUTION**

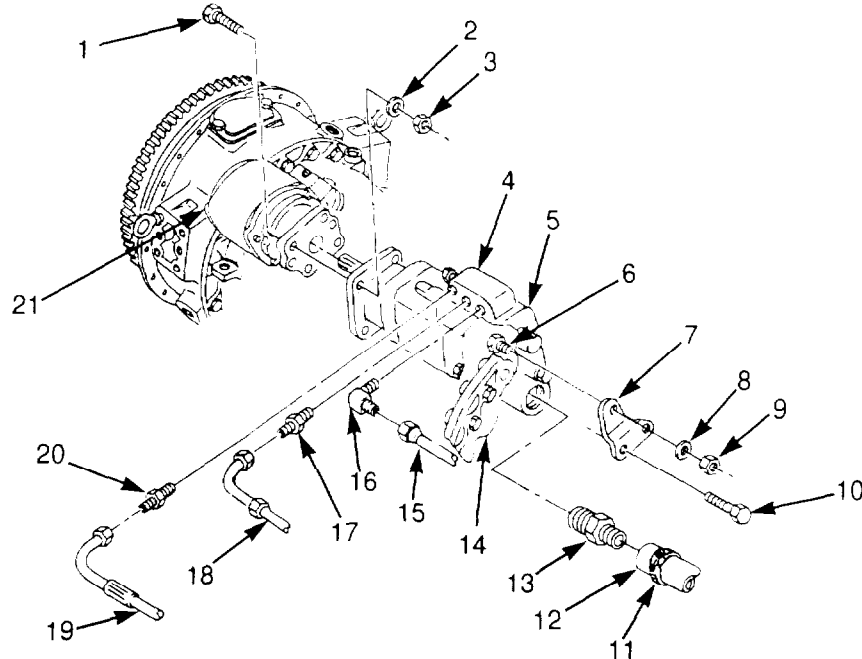
Hoses and ports in hydraulic components should be plugged to prevent contamination of hydraulic system (paragraph 4-21).

## 5-4. HYDRAULIC PUMP REPLACEMENT (Con't).

### NOTE

- Hoses should be tagged before removal (paragraph 4-17).
- A suitable container should be used to catch any draining hydraulic fluid. Ensure that all spills are cleaned up.

1. Loosen clamp (11) and disconnect suction hose (12) from adapter (13).
2. Remove adapter (13) from hydraulic pump (5).
3. Disconnect hose (19) from adapter (20). Disconnect hose (18) from adapter (17).
4. Remove adapters (17 and 20) from control valve (4).
5. Disconnect hose (15) from elbow (16).
6. Remove elbow (16) from control valve (4).
7. Remove nut (9) and washer (8) from stud (6) of hydraulic pump (5).



8. Remove two screws (10) and support bracket (7) from transmission housing (14)

### WARNING

Use extreme caution when handling heavy parts. Lifting device is required when parts weigh over 50 lb (23 kg) for a single person lift. Failure to follow this warning may cause injury to personnel or damage to equipment.

9. Remove four nuts (3), lockwashers (2), screws (1), and hydraulic pump (5) from PTO (21). Discard lockwashers.

## 5-4. HYDRAULIC PUMP REPLACEMENT (Con't).

### b. CLEANING AND INSPECTION

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instruction.5*

### c. INSTALLATION

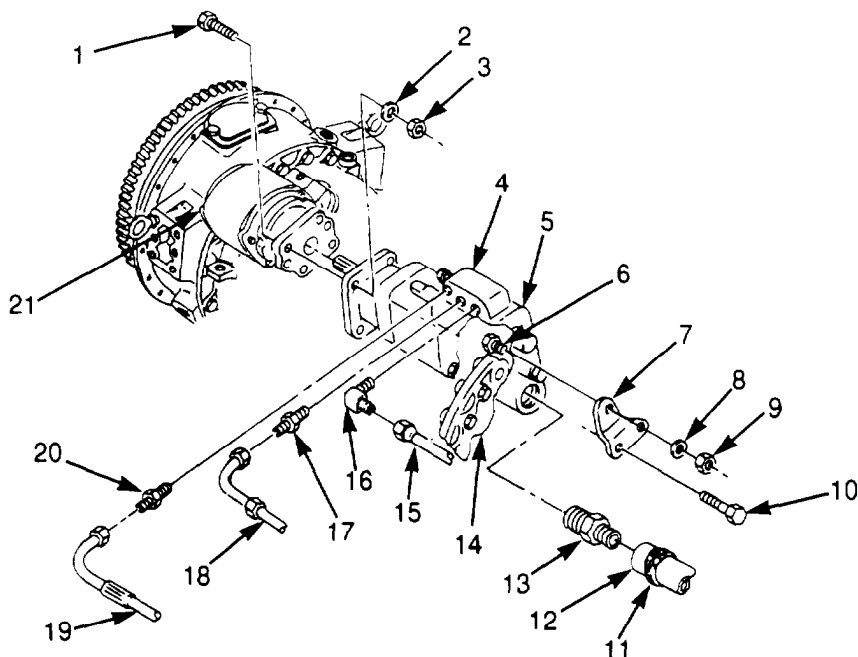
#### WARNING

Use extreme caution when handling heavy parts. Lifting device is required when parts weigh over 50 lb (23 kg) for a single person lift. Failure to follow this warning may cause injury to personnel or damage to equipment.

#### NOTE

Use antiseize tape on all pipe threads (paragraph 4-22).

1. Install hydraulic pump (5) to PTO (21) with four screws (1), new lockwashers (2), and nuts (3).
2. Install support bracket (7) to transmission housing (14) with two screws (10). Torque screws to 70-80 lb.-ft. (95-108 N•m).
3. Install washer (8) and nut (9) to stud (6) of hydraulic pump (5).
4. Install elbow (16) to control valve (4).
5. Connect hose (15) to elbow (16).



---

**5-4. HYDRAULIC PUMP REPLACEMENT (Con't).**

---

6. Install adapters (17 and 20) to control valve (4).
7. Connect hoses (18 and 19) to adapters (17 and 20).
8. Install adapter (13) to hydraulic pump (5).
9. Connect suction hose (12) to adapter (13) and tighten clamp (11).

**FOLLOW-ON TASKS:**

- Fill hydraulic reservoir (Chapter 3, Section I).
- Connect hydraulic control lever cable to hydraulic pump (paragraph 4-71)
- Install transmission tunnel access cover (TM 9-2320-363-20).

## 5-5. HYDRAULIC PUMP REPAIR.

This task covers:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>a. Disassembly</li> <li>b. Cleaning and Inspection</li> </ul> | <ul style="list-style-type: none"> <li>c. Assembly</li> </ul> |
|--|---|

initial Setup:

Equipment Conditions:

- Hydraulic pump removed (paragraph 5-4)

Tools/Test Equipment:

- General mechanic's tool kit (Item 8, Appendix I)
- Machinist's vise (Item 9, Appendix I)
- Torque wrench (Item 12, Appendix I)
- Socket wrench set (Item 13, Appendix I)
- Deep well socket, 7/8 x 3/4 in. drive

Materials/Parts:

- l Grease (Item 10, Appendix F)

Materials/Parts (Con't):

- Lubricating oil (Item 13, Appendix F)
- Rags (Item 15, Appendix F)
- One lip seal
- One retaining ring
- Two check assemblies
- Two gasket seals
- Two ring seals
- Four roller bearings
- Twelve pocket seals

General Safety Instructions:

- Use extreme caution when handling heavy parts.

### a. DISASSEMBLY

#### WARNING

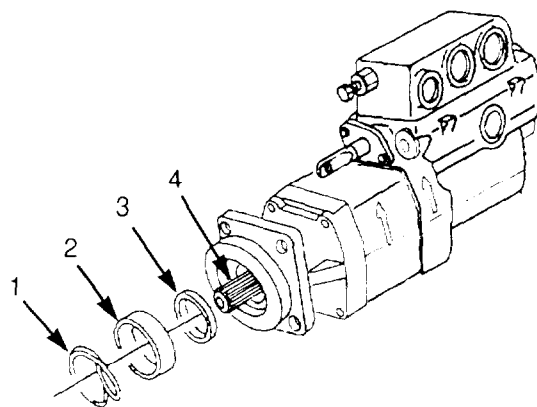
Use extreme caution **when handling heavy parts**. Lifting device is required when parts weigh over 50 lb (23 kg) for a single person lift. Failure to follow this warning may cause injury to personnel or damage to equipment.

**Remove dirt from outside of hydraulic pump. Perform repair in a clean work area to prevent contaminants from causing equipment failure.**

#### NOTE

Mark castings of pump to aid in assembly.

1. Remove retaining ring (1), spacer (2), and seal retainer (3) from drive shaft (4). Discard retaining ring.





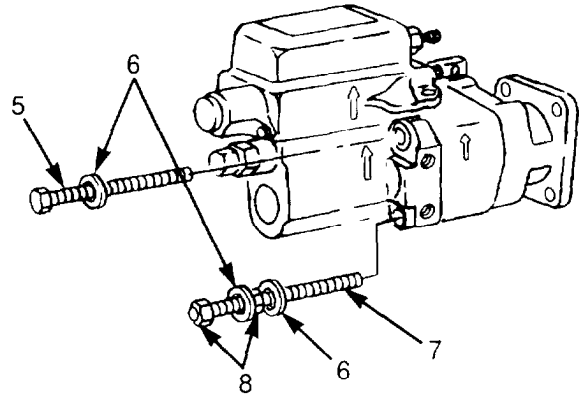
## 5-5. HYDRAULIC PUMP REPAIR (Con't).

2. Secure hydraulic pump in vise and remove three screws (5), two nuts (8), and five washers (6) securing pump housings.

**NOTE**

**Note stud location for assembly.**

3. Remove stud (7).



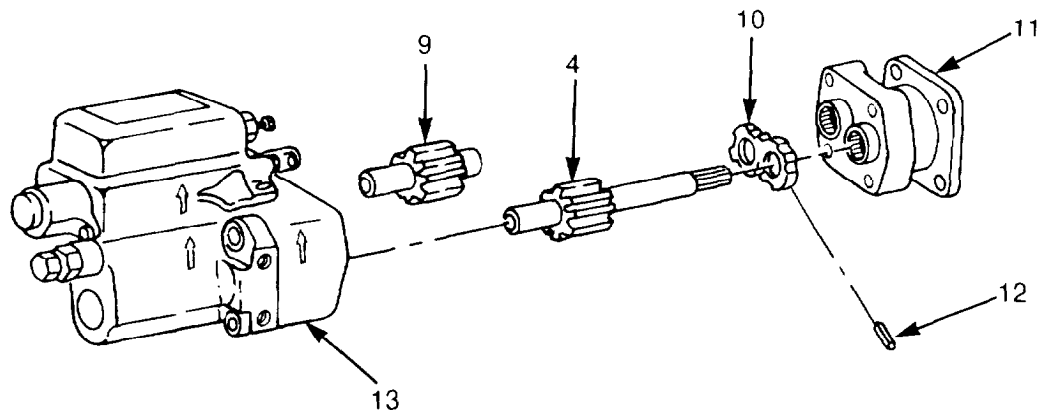
**CAUTION**

**Internal surfaces and parts of hydraulic pump are machined to strict manufacturing tolerances. Care must be taken not to damage machined surfaces.**

**NOTE**

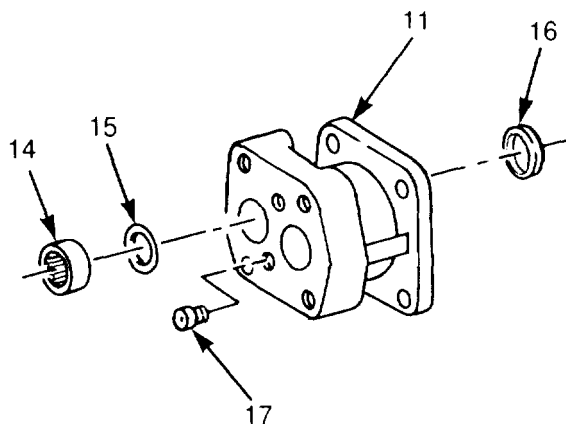
**Drive shaft and gearshaft may slide out with end housing.**

4. Place hydraulic pump on clean, flat surface and separate end housing (11) from gear housing (13).
5. Remove drive shaft (4) and gearshaft (9) from end housing (11).
6. Remove thrust plate (10) from end housing (11). Remove six pocket seals (12) from thrust plate. Discard pocket seals.

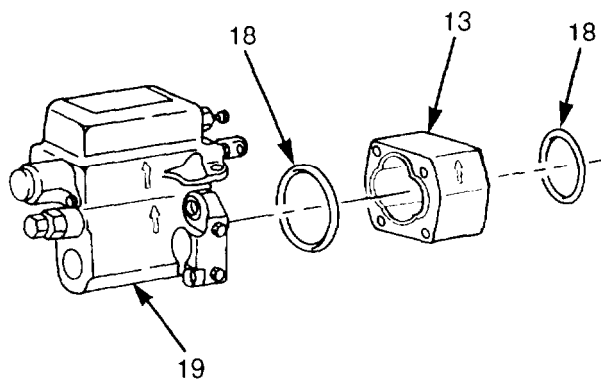


## 5-5. HYDRAULIC PUMP REPAIR (Con't).

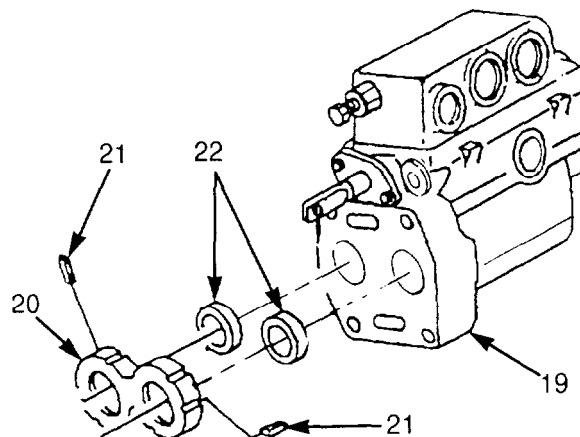
7. Remove two check assemblies (17) from end housing (11). Discard check assemblies.
8. Remove two roller bearings (14), ring seals (15), and lip seal (16) from end housing (11). Discard roller bearings, ring seals, and lip seal.



9. Remove gear housing (13) from pump housing (19). Remove two gasket seals (18) from gear housing. Discard gasket seals.



10. Remove thrust plate (20) and six pocket seals (21) from pump housing (19). Discard pocket seals.
11. Remove two roller bearings (22). Discard roller bearings.



**5-5. HYDRAULIC PUMP REPAIR (Con't).**

**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions* and the following:

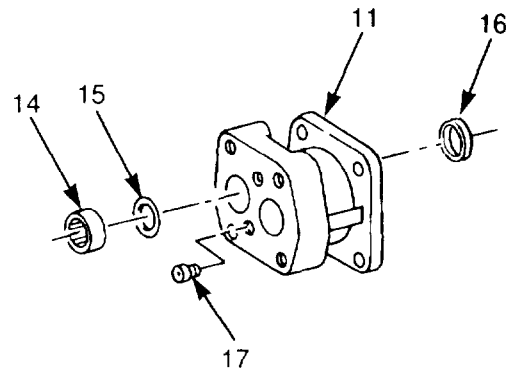
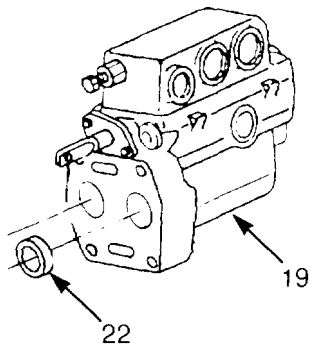
- (a) Inspect drive shaft and gearshaft for scoring or grooving on teeth. Any scoring, grooving, or burring of outside diameter of teeth requires replacement of shafts as a set. If shafts are replaced, roller bearings must also be replaced.
- (b) Inspect thrust plates for wear, pitting, or discoloration. If found, replace thrust plates.

**c. ASSEMBLY**

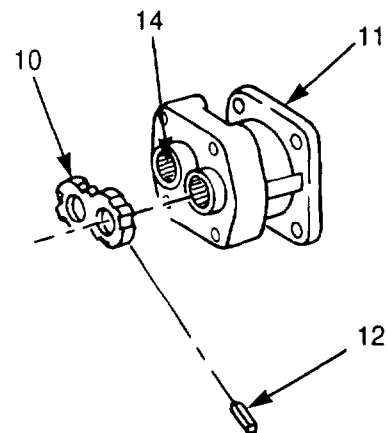
**NOTE**

**Apply a light coat of lubricating oil to surfaces of components as they are assembled.**

1. Press two new roller bearings (22) into pump housing (19). Press two new ring seals (15) and new roller bearings (14) into end housing (11).
2. Press new lip seal (16) into drive shaft side of end housing (11).
3. Install two new check assemblies (17) to end housing (11).



4. Cut two pocket seals (12) 3/16 in. (4.8 mm) long and place in center slots of thrust plate (10). Use light grease to hold in place. Place thrust plate, with pocket seals facing machined surface, over bearings (14) of end housing (11) and tap to about 1/32 in. (0.8 mm) from machined surface.
5. Insert remaining four pocket seals (12) into place around thrust plate (10). Tap thrust plate down onto machined surface. Cut excess seal from thrust plate.



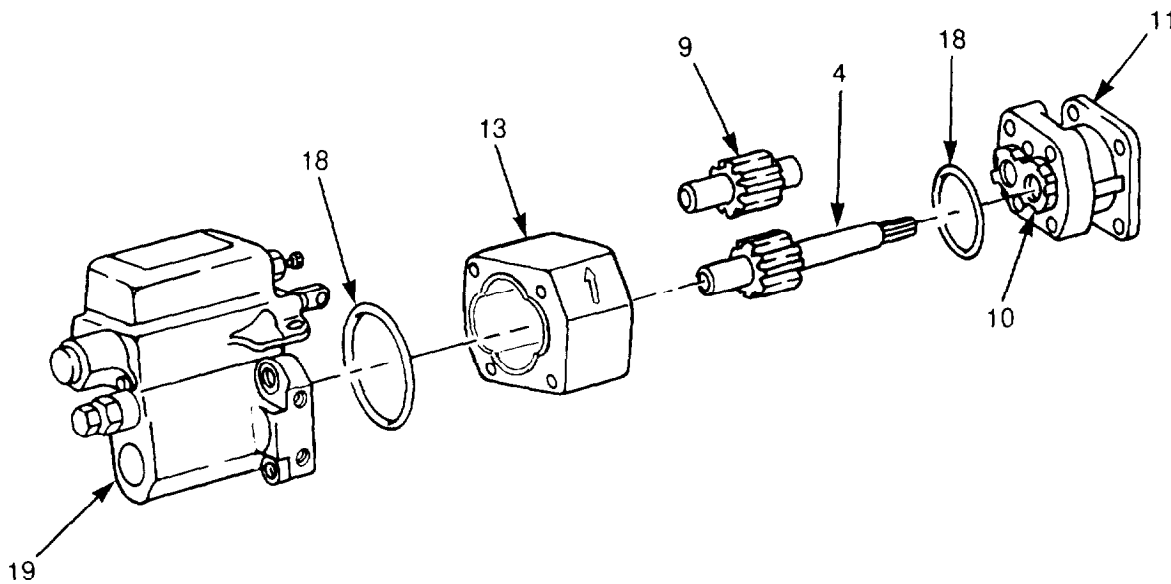
**5-5. HYDRAULIC PUMP REPAIR (Con't).**

6. Repeat step 5 for thrust plate on pump housing (19).
7. Install pump housing (19) in vise with machined surface facing up.

**NOTE**

**Use scribe marks from disassembly to properly assemble pump housings. Light tapping with rubber hammer may be required to seat housings in place.**

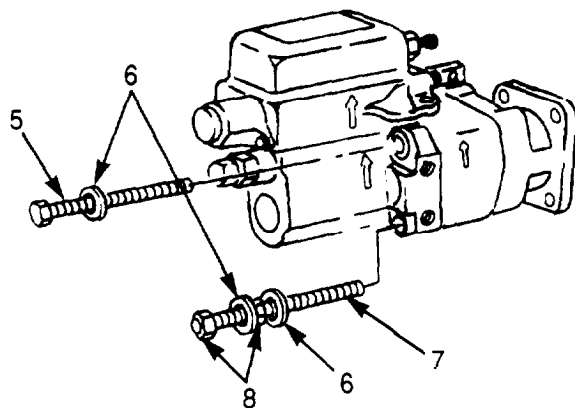
8. Install new gasket seal (18) in gear housing (13) and place gear housing on pump housing (19).
9. Install drive shaft (4) and gearshaft (9) into gear housing (13). Check for free turning of gears.
10. Install new gasket seal (18) on gear housing (13). Apply light coat of grease to drive shaft (4).
11. Place end housing (11) over drive shaft (4) and carefully press housing in place seating gears against thrust plate (10).



**NOTE**

**Ensure that stud is installed in correct location as noted in disassembly.**

12. Install three screws (5) three washers (6), stud (7), washer (6), and nut (8) in place to secure pump housings. Tighten screws and stud in crisscross pattern and torque to 200 lb.-ft. (271 N•m). Check for free shaft movement by turning drive shaft (4) with a wrench.
13. Install one washer (6) and nut (8) on stud (7) and tighten by hand.

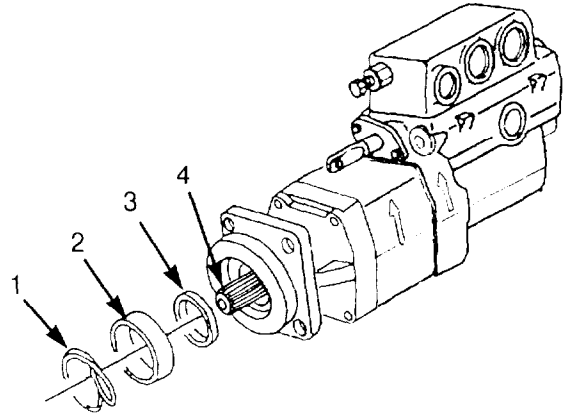


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**5-5. HYDRAULIC PUMP REPAIR (Con't).**

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14. Install seal retainer (3), spacer (2), and new retaining ring (1) on drive shaft (4).

**FOLLOW-ON TASKS:**

- Install hydraulic pump (paragraph 5-4).

---

**5-6. HYDRAULIC CYLINDER REPLACEMENT.**

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*This task covers:*

- a. Removal
- b. Cleaning and Inspection
- c. Installation

---

*Initial Setup:*

**Equipment Conditions:**

- Dump body raised and supported on body props (paragraph 2-15).
- Cab shield removed (paragraph 4-62).
- Hydraulic oil drained (Chapter 3, Section I).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Cap and plug set (Item 1, Appendix I)
- Nylon sling (Item 6, Appendix I)
- Suitable lifting device

**Materials/Parts:**

- Rags (Item 15, Appendix F)
- Marker tags (Item 19, Appendix F)

**Materials/Parts (Con't):**

- One locknut
- Two lockwashers

**Personnel Required:** Three

**General Safety Instructions:**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY.
- DO NOT disconnect hydraulic lines while engine is running.
- Use extreme caution when handling heavy parts.
- Hydraulic cylinder sleeves may extend downward as hydraulic cylinder is lifted.

**WARNING**

- NEVER work under a raised dump body unless it is secured in the raised position with body props and dump body is EMPTY. Failure to follow this warning may result in death or injury to personnel.
- DO NOT disconnect hydraulic lines while engine is running. Engine must be shut down and dump body fully lowered or supported on body props before lines are disconnected. Escaping hydraulic fluid under pressure can penetrate the skin, causing serious injury to personnel.

**a. REMOVAL**

Hoses and ports in hydraulic components should be plugged to prevent contamination of hydraulic system (paragraph 4-21).

**NOTE**

- Hoses should be tagged before removal (paragraph 4-17).
- A suitable container should be used to catch any draining hydraulic fluid. Ensure that all spills are cleaned up.

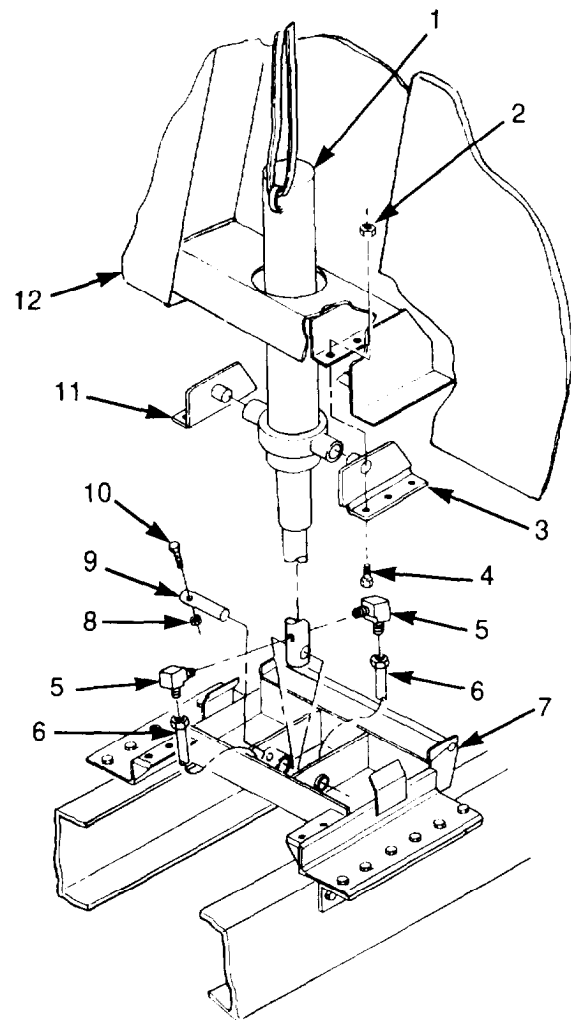
1. At lower end of hydraulic cylinder (1), disconnect hose assemblies (6) from elbows (5). Remove elbows.

## 5-6. HYDRAULIC CYLINDER REPLACEMENT (Con't).

### WARNING

Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.

2. Install lifting sling through loop in hydraulic cylinder (1) and attach lifting sling to lifting device.
3. Remove locknut (8) screw (10), and pivot pin (9) from cylinder support frame (7) and hydraulic cylinder (1). Discard locknut.
4. While holding hydraulic cylinder (1) securely, remove six locknuts (2), screws (4), and left and right mounting brackets (3 and 11) from dump body (12). Discard locknuts.



5. Remove left and right mounting brackets (3 and 11) from hydraulic cylinder (1).

### WARNING

- Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.
  - Hydraulic cylinder sleeves may extend downward as hydraulic cylinder is lifted. Expect sleeve movement any time hydraulic cylinder is handled. Failure to do so may result in serious injury to personnel.
6. Remove hydraulic cylinder (1) from vehicle. Move hydraulic cylinder to a safe work area.

## 5-6. HYDRAULIC CYLINDER REPLACEMENT (Con't).

### b. CLEANING AND INSPECTION

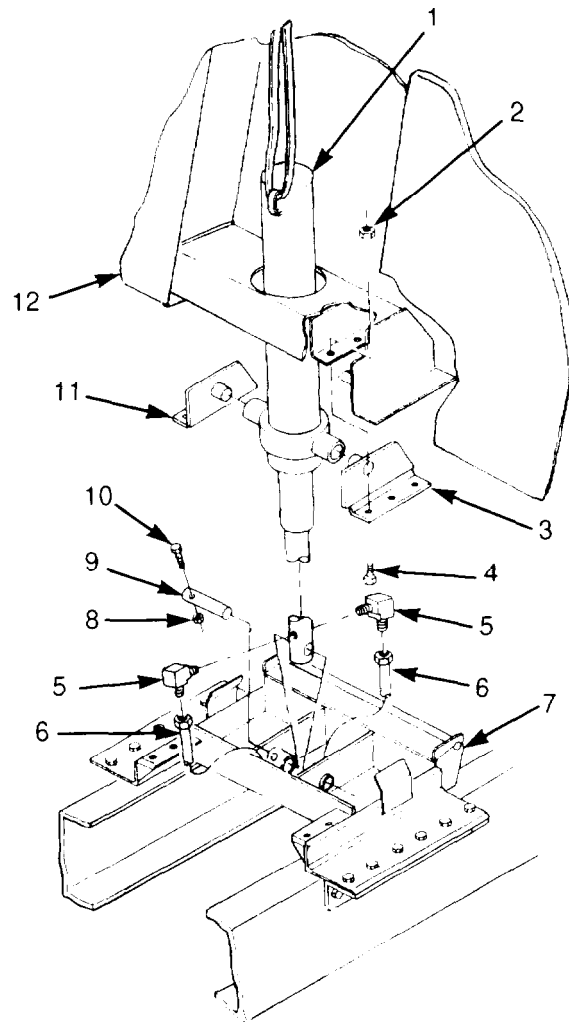
Clean and inspect components in accordance with Chapter 4, Section III, General Maintenance Instructions.

### c. INSTALLATION

#### WARNING

**Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause death or injury to personnel or damage to equipment.**

1. Install lifting sling through loop in hydraulic cylinder (1) and attach lifting sling to lifting device.
2. Position hydraulic cylinder (1) to vehicle.
3. While holding hydraulic cylinder (1) securely, position left and right mounting brackets (3 and 11) to hydraulic cylinder (1).
4. Install left and right mounting brackets (3 and 11) to dump body (12) with six screws (4) and new locknuts (2).
5. Install lower end of hydraulic cylinder (1) to cylinder support frame (7) with pivot pin (9), screw (10), and new locknut (8).
6. Remove lifting sling from lifting device and hydraulic cylinder (1).
7. Install two elbows (5) to lower end of hydraulic cylinder (1). Connect two hose assemblies (6) to elbows.



#### **FOLLOW-ON TASKS:**

- Fill hydraulic reservoir (Chapter 3, Section I).
- Remove body props and lower dump body (paragraph 2-15).
- Install cab shield (paragraph 4-62).



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## 5-7. HYDRAULIC CYLINDER REPAIR.

---

*This task covers:*

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>a. Disassembly</li> <li>b. Cleaning and Inspection</li> </ul> | <ul style="list-style-type: none"> <li>c. Assembly</li> </ul> |
|--|---|

---

*Initial Setup:*

**Equipment Conditions:**

- Hydraulic cylinder removed (paragraph 5-6).

**Tools/Test Equipment:**

- General mechanic's tool kit (Item 8, Appendix I)
- Pliers, retaining ring (Item 5, Appendix I)
- Nylon sling (Item 6, Appendix I)
- Seal installer, 3 in. (Item 4, Appendix B)
- Seal installer, 4 in. (Item 5, Appendix B)
- Seal installer, 5 in. (Item 6, Appendix B)
- Hydraulic cylinder disassembly tool (Appendix G)
- Suitable lifting device

**Materials/Parts:**

- Lubricating oil (Item 13, Appendix F)
- Rags (Item 15, Appendix F)
- Marker tags (Item 19, Appendix F)
- Masking tape (Item 22, Appendix F)
- One parts kit

**Personnel Required: Two**

**General Safety Instructions:**

- Use extreme caution when handling heavy parts.
  - Hydraulic cylinder sleeves may extend downward as hydraulic cylinder is lifted.
- 

**a. DISASSEMBLY**

**WARNING**

- Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury to personnel or damage to equipment.
- Hydraulic cylinder sleeves may extend downward as hydraulic cylinder is lifted. Expect sleeve movement any time hydraulic cylinder is handled. Failure to do so may result in serious injury to personnel.

**CAUTION**

Perform hydraulic cylinder repair in a clean work area to prevent contaminants from causing equipment failure.

**NOTE**

A suitable container should be used to catch any draining hydraulic fluid. Ensure that all spills are cleaned up.

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## 5-7. HYDRAULIC CYLINDER REPAIR (Con't).

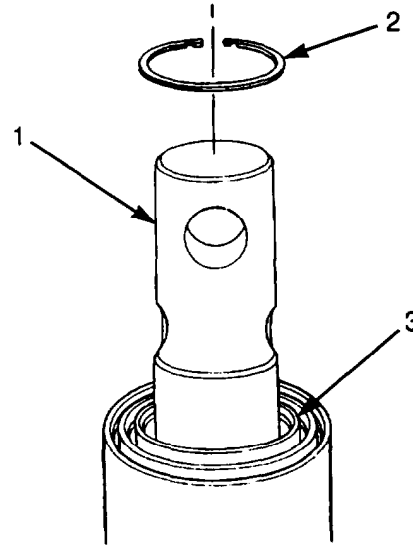
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1. Using overhead lifting device with nylon sling, move hydraulic cylinder assembly to a vertical position with plunger (1) facing upward. Securely block hydraulic cylinder in vertical position.

**NOTE**

**Perform steps 2 thru 10 to remove plunger from sleeve.**

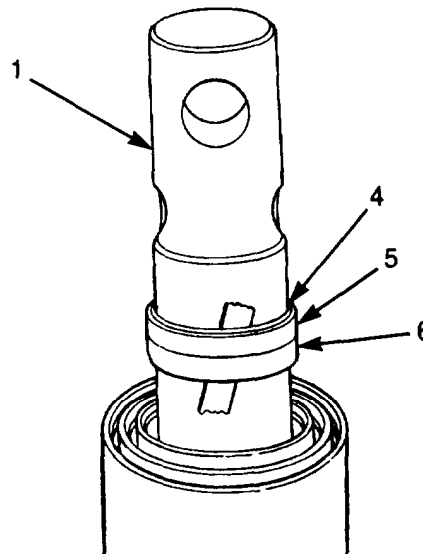
2. Remove retaining ring (2) from sleeve (3).



**NOTE**

- Retaining rings, piston rings, seals, wear rings, guide rings, wipers, and wiper retainers should be noted by name and installed position immediately after removal and replacement parts from parts kit tagged (paragraph 4-17) to aid in installation.
- Wiper retainer and seal should come out as plunger is lined a few inches. If not, apply a three-inch strip of tape at a 45 degree angle to a cleaned section of plunger. Lower and again lift plunger to remove wiper retainer and seal.

3. Lift plunger (1) to expose wiper retainer (5) and seal (6). Lower plunger and remove nylon sling. Remove wiper retainer and seal from plunger. Remove wiper (4) from wiper retainer. Discard wiper, wiper retainer, and seal. Remove tape from plunger, if used.

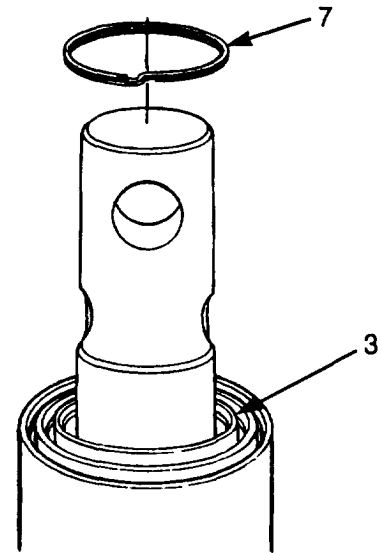


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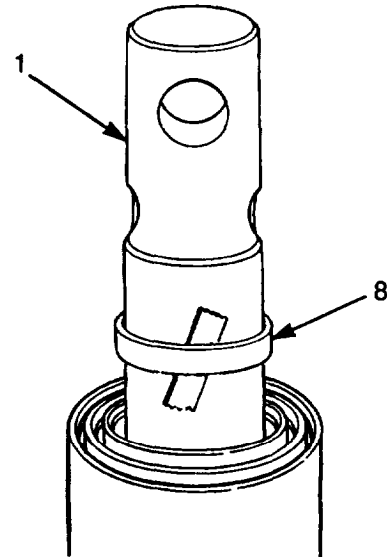
**5-7. HYDRAULIC CYLINDER REPAIR (Con't).**

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4. Remove spiral retaining ring (7) from sleeve (3). Discard spiral retaining ring.



5. Using overhead lifting device with nylon sling, raise plunger (1) a few inches and apply tape to a cleaned section of plunger.
6. Lower and lift plunger (1) to expose bottom guide ring (8). Remove tape.
7. Lower plunger (1) and remove nylon sling. Remove bottom guide ring (8) from plunger. Discard bottom guide ring.



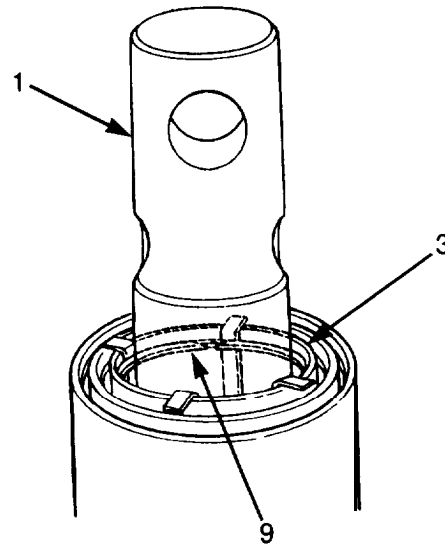
**5-7. HYDRAULIC CYLINDER REPAIR (Con't).**

8. Using two small screwdrivers, remove bottom retaining ring (9) from groove of sleeve (3). Position four hydraulic cylinder disassembly tools, equally spaced, between bottom retaining ring and sleeve.

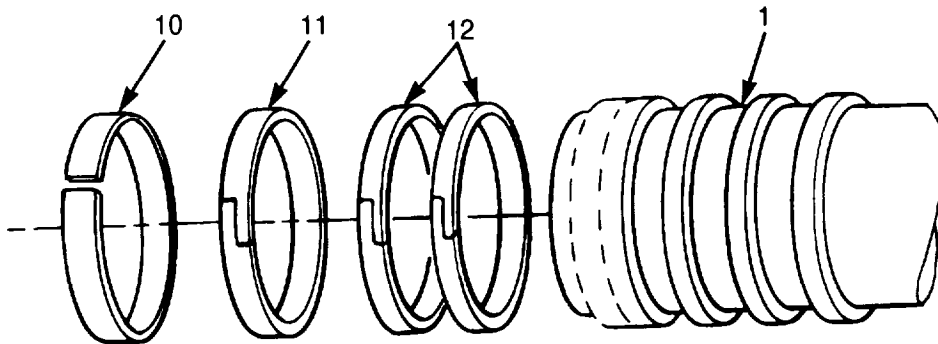
**NOTE**

**Hydraulic cylinder disassembly tools will fall free as plunger, with bottom retaining ring, is removed from sleeve.**

9. Remove plunger (1) from sleeve (3). Remove nylon sling and bottom retaining ring (9) from plunger.



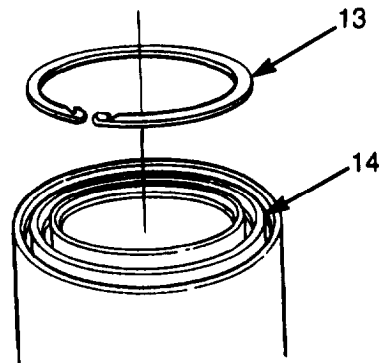
10. Remove wear ring (10), piston ring (11), and two piston rings (12) from other end of plunger (1). Discard wear ring.



**NOTE**

**Perform steps 11 thru 18 to remove next sleeve.**

11. Remove retaining ring (13) from sleeve (14).

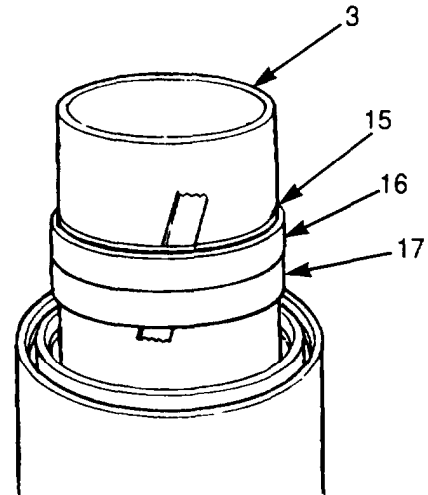


5-7. HYDRAULIC CYLINDER REPAIR (Con't).

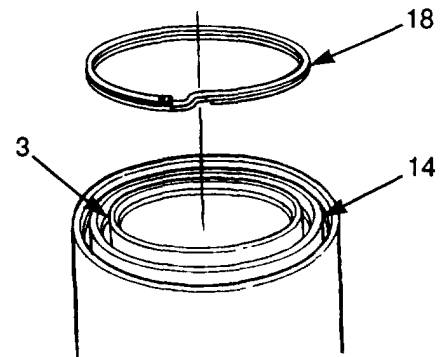
NOTE

Hydraulic cylinder may be positioned horizontally and tipped to extend sleeve. Wiper retainer and seal should come out as sleeve is extended a few inches. If not, apply a three-inch strip of tape at a 45 degree angle to a cleaned section of sleeve. Retract and again extend sleeve to remove wiper retainer and seal.

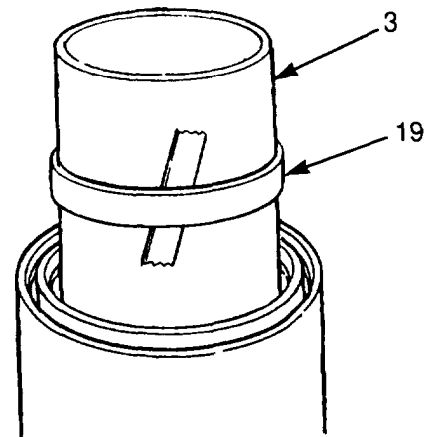
12. Extend sleeve (3) to expose wiper retainer (16) and seal (17). Remove wiper retainer and seal from sleeve. Remove wiper (15) from wiper retainer. Discard wiper, wiper retainer, and seal. Remove tape from sleeve, if used.



13. Retract sleeve (3). Remove spiral retaining ring (18) from sleeve (14). Discard spiral retaining ring.

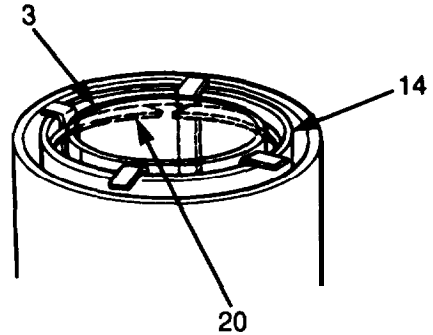


14. Extend sleeve (3) a few inches and apply tape to a cleaned section of sleeve.
15. Retract and extend sleeve (3) to expose bottom guide ring (19). Remove and discard bottom guide ring.



**5-7. HYDRAULIC CYLINDER REPAIR (Con?).**

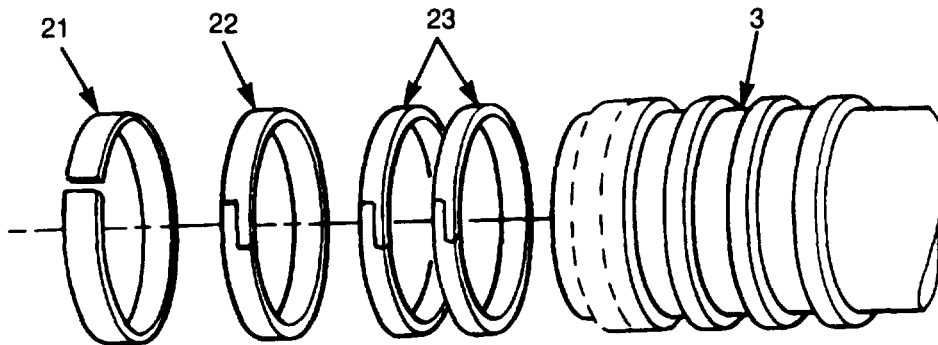
16. Using two small screwdrivers, remove bottom retaining ring (20) from groove of sleeve (14). Position four hydraulic cylinder disassembly tools, equally spaced, between bottom retaining ring and sleeve.



**NOTE**

**Hydraulic cylinder disassembly tools will fall free as sleeve, with bottom retaining ring, is removed from larger sleeve.**

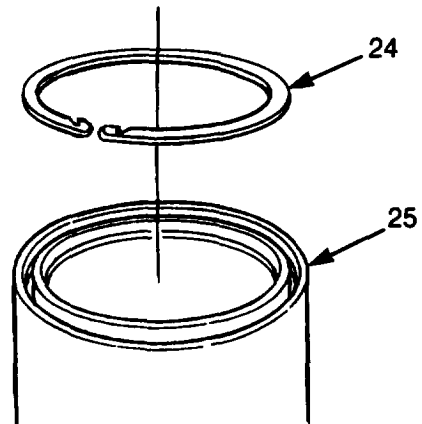
17. Remove sleeve (3) from sleeve (14). Remove bottom retaining ring (20) from sleeve (3).
18. Remove wear ring (21), piston ring (22), and two piston rings (23) from other end of sleeve (3). Discard wear ring.



**NOTE**

Perform steps 19 thru 26 to remove next sleeve.

19. Remove retaining ring (24) from barrel (25).

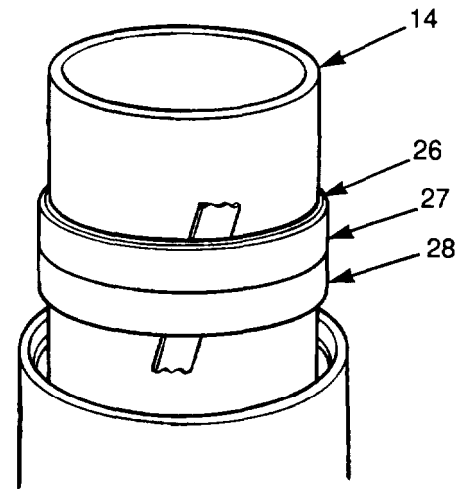


5-7. HYDRAULIC CYLINDER REPAIR (Con't).

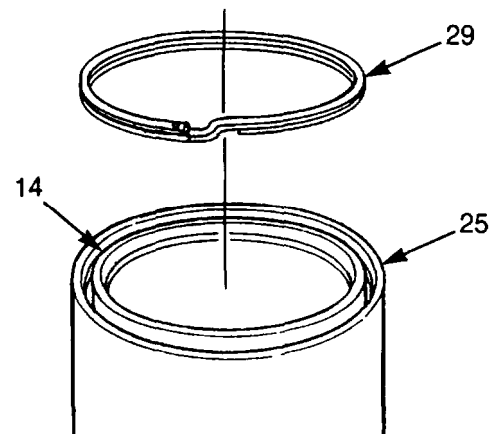
NOTE

Wiper retainer and seal should come out as sleeve is extended a few inches. If not, apply a three-inch strip of tape at a 45 degree angle to a cleaned section of sleeve. Retract and again extend sleeve to remove wiper retainer and seal.

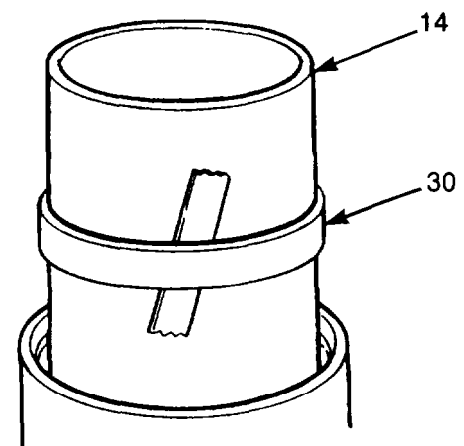
20. Extend sleeve (14) to expose wiper retainer (27) and seal (28). Remove wiper retainer and seal from sleeve. Remove wiper (26) from wiper retainer. Discard wiper, wiper retainer, and seal. Remove tape from sleeve, if used.



21. Retract sleeve (14). Remove spiral retaining ring (29) from barrel (25). Discard spiral retaining ring.



22. Extend sleeve (14) a few inches and apply tape to a cleaned section of sleeve.
23. Retract and extend sleeve (14) to expose bottom guide ring (30). Remove and discard bottom guide ring.

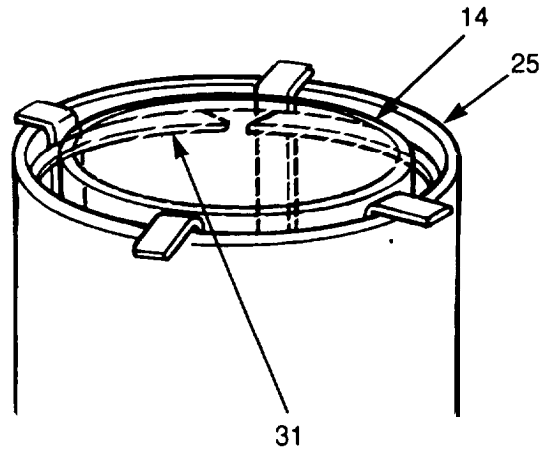


## 5-7. HYDRAULIC CYLINDER REPAIR (Con't).

24. Using two small screwdrivers, remove bottom retaining ring (31) from groove of barrel (25). Position four hydraulic cylinder disassembly tools, equally spaced, between bottom retaining ring and barrel.

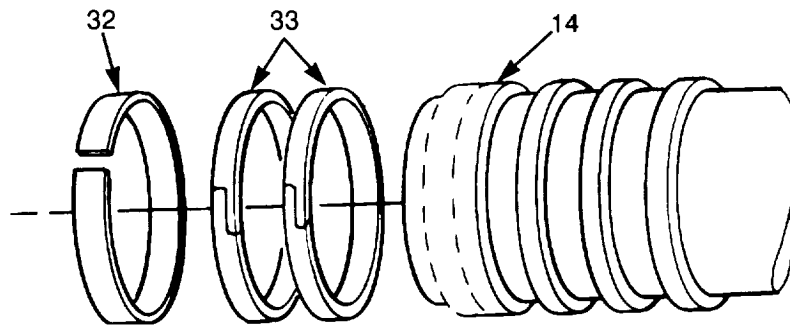
**NOTE**

**Hydraulic cylinder disassembly tools will fall free as sleeve, with bottom retaining ring, is removed from barrel.**

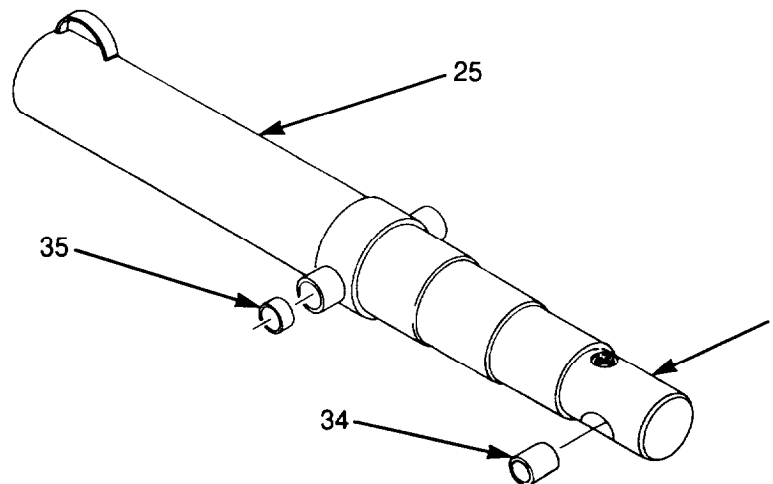


25. Remove sleeve (14) from barrel (25). Remove bottom retaining ring (31) from sleeve.

26. Remove wear ring (32) and two piston rings (33) from other end of sleeve (14). Discard wear ring.



27. If worn or damaged, remove two bushings (35) from barrel (25) and bushing (34) from plunger (1).





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**5-7. HYDRUALIC CYLINDER REPAIR (Con't).**


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**b. CLEANING AND INSPECTION**

Clean and inspect components in accordance with Chapter 4, Section III, *General Maintenance Instructions*.

**c. ASSEMBLY**
**WARNING**

- Use extreme caution when handling heavy parts. Keep clear of heavy parts supported only by lifting device. Failure to follow this warning may cause injury to personnel or damage to equipment.
- Hydraulic cylinder sleeves may extend downward as hydraulic cylinder is lifted. Expect sleeve movement any time hydraulic cylinder is handled. Failure to do so may result in serious injury to personnel.

**NOTE**

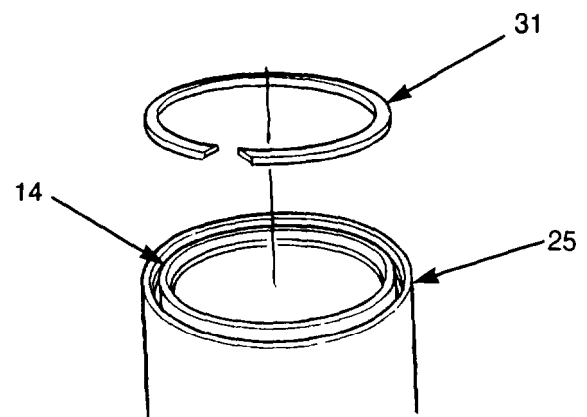
- Apply a light coat of lubricating oil to surfaces of components as they are assembled.
- Assemble hydraulic cylinder starting with the largest diameter sleeve and working inward.

1. If removed, install two bushings (35) to barrel (25) and bushing (34) to plunger (1).

**NOTE**

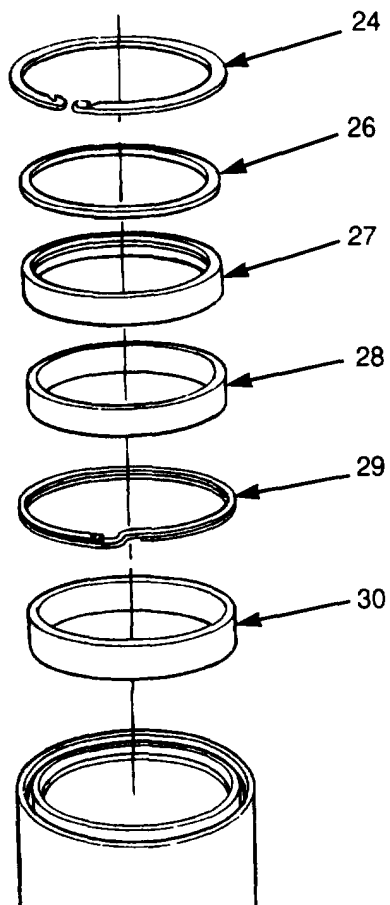
**Perform steps 2 thru 7 to install largest diameter sleeve.**

2. With hydraulic cylinder components in horizontal position, install two piston rings (33) and new wear ring (32) to sleeve (14).
3. Install sleeve (14) to barrel (25) and install bottom retaining ring (31) to barrel using 5 in. seal installation tool.



## 5-7. HYDRAULIC CYLINDER REPAIR (Con't).

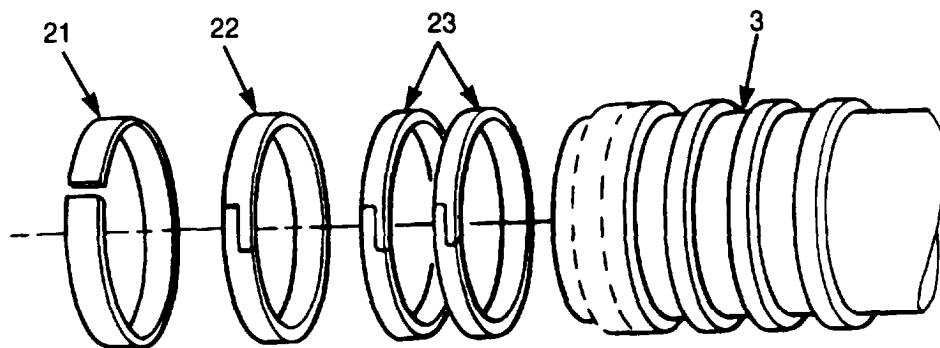
4. Install new bottom guide ring (30) and new spiral retaining ring (29).
5. Install new seal (28).
6. Install new wiper (26) to new wiper retainer (27) and install wiper retainer.
7. Install retaining ring (24).



**NOTE**

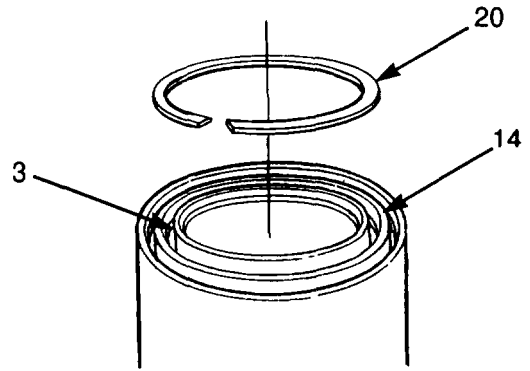
**Perform steps 6 thru 13 to install next sleeve.**

8. Install two piston rings (23), piston ring (22), and new wear ring (21) to sleeve (3).

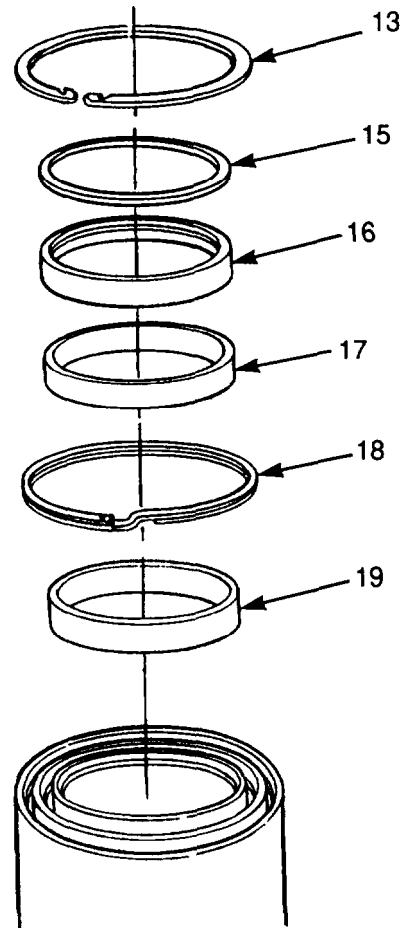


**5-7. HYDRAULIC CYLINDER REPAIR (Con't).**

9. Install sleeve (3) to sleeve (14) and install bottom retaining ring (20) to sleeve (14) using 4 in. seal installation tool.



10. Install new bottom guide ring (19) and new spiral retaining ring (18).
11. Install new seal (17).
12. Install new wiper (15) to new wiper retainer (16) and install wiper retainer.
13. Install retaining ring (13).



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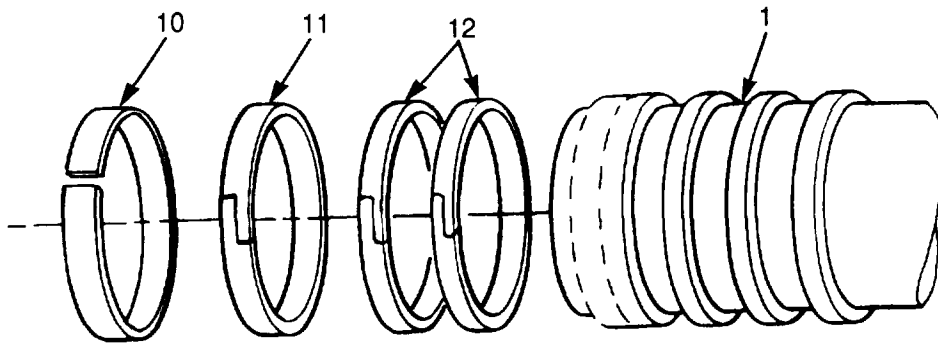
**5-7. HYDRAULIC CYLINDER REPAIR (Con't).**

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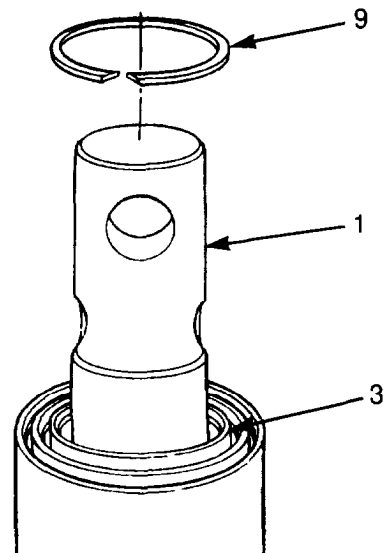
**NOTE**

**Perform steps 14 thru 19 to install plunger.**

14. Install two piston rings (12), piston ring (11), and new wear ring (10) to plunger (1).



15. Install plunger (1) to sleeve (3) and install bottom retaining ring (9) to sleeve using 3 in. seal installation tool.

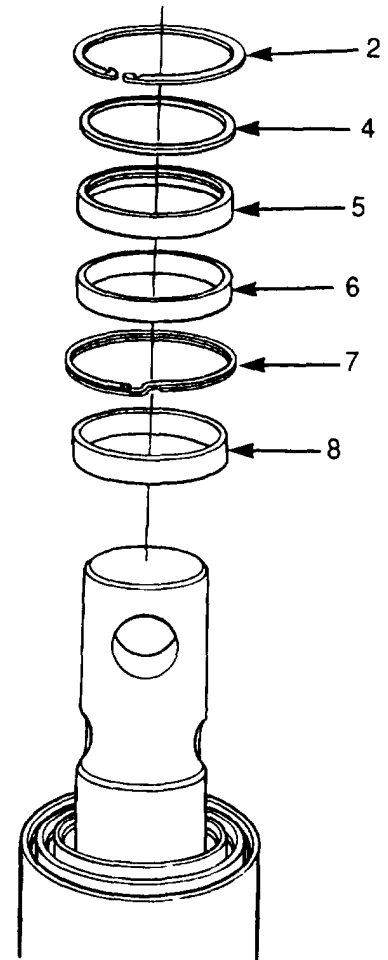


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**5-7. HYDRAULIC CYLINDER REPAIR (Con't).**

---

16. Install new bottom guide ring (8) and new spiral retaining ring (7).
17. Install new seal (6).
18. Install new wiper (4) to new wiper retainer (5) and install wiper retainer.
19. Install retaining ring (2).

**FOLLOW-ON TASKS:**

- Install hydraulic cylinder (paragraph 5-6).



## CHAPTER 6 GENERAL SUPPORT MAINTENANCE

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There is no General Support Maintenance for the M917A1 and M917A1 w/MCS dump truck body.





## APPENDIX A REFERENCES

### A-1. SCOPE.

This appendix lists all forms, field manuals, technical manuals, and other publications referenced in this manual and that apply to the operation and maintenance of the M917A1 and M917A1 w/MCS Dump Truck Body.

### A-2. PUBLICATION INDEX.

DA Pam 25-30, *Consolidated Index of Army Publications and Blank Forms*, should be consulted frequently for latest changes or revisions and for new publications relating to material covered in this technical manual.

### A-3. FORMS.

Refer to DA Pam 738-750, *Functional Users Manual for the Army Maintenance Management System (TAMMS)*, for instructions on the use of maintenance forms.

Equipment Control Record .....	DA Form 2408-9
Equipment Inspection and Maintenance Worksheet. ....	DA Form 2404
Equipment Log Assembly (Records). ....	DA Form 2408
Maintenance Request .....	DA Form 2407
Preventive Maintenance Schedule and Record .....	DD Form 314
Processing and Deprocessing Record for Shipment, Storage and Issue of Vehicles and Spare Engines. ....	DD Form 1397
Product Quality Deficiency Report. ....	SF Form 368
Recommended Changes to Equipment Technical Publications .....	DA Form 2028-2
Recommended Changes to Publications and Blank Forms .....	DA Form 2028
Report of Discrepancy (ROD) .....	SF Form 364

### A-4. FIELD MANUALS.

Basic Cold Weather Manual .....	FM 31-70
Chemical and Biological Contamination Avoidance .....	FM 3-3
Field Behavior of NBC Agents (Including Smoke and Incendiaries) .....	FM 3-6
First Aid for Soldiers .....	FM 21-11
General Fabric Repair, .....	FM 10-16
NBC Decontamination. ....	FM 3-5
NBC Protection. ....	FM 3-4
Northern Operations.. ....	FM 31-71
Operation and Maintenance of Ordnance Materiel in Cold Weather (0° F to -65° F) .....	FM 9-207

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**A-4. FIELD MANUALS (Con't).**

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Operational Terms and Symbols. . . . . FM 101-5-1  
 Railway Operating and Safety Rules. . . . . FM 55-21  
 Visual Signals . . . . . FM 21-60

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**A-5. TECHNICAL BULLETINS.**

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AOAP Army Oil Analysis Program Guide for Leaders and Users. . . . . TB 43-0211  
 Color, Marking, and Camouflage Painting of Military Vehicles,  
 Construction Equipment, and Materiel Handling Equipment . . . . . TB 43-0209  
 Corrosion Prevention and Control Including Rustproofing Procedures  
 for Tactical Vehicles and Trailers. . . . . TB 43-0213  
 Equipment Improvement Report and Maintenance Digest  
 (U.S. Series Army Tank-Automotive Command) Tank-Automotive Equipment . . . TB 43-0001-39 Series  
 Warranty Program for M915 Family of Vehicles . . . . . TB 9-2320-363-15

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**A-6. TECHNICAL MANUALS.**

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Direct and General Support Maintenance Manual for M915 Family of Vehicles, Chassis . . . TM 9-2320-363-34  
 Inspection, Care, and Maintenance of Antifriction Bearings . . . . . TM 9-214  
 Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance  
 Materiel and Related Materials Including Chemicals. . . . . TM 9-247  
 Operator's Manual for M915 Family of Vehicles, Chassis. . . . . TM 9-2320-363-10  
 Operator's Manual for Welding Theory and Application . . . . . TM 9-237  
 Painting Instructions for Army Materiel . . . . . TM 43-0139  
 Procedures for Destruction of Equipment to Prevent Enemy Use  
 (Mobility Equipment Command) . . . . . TM 750-244-3  
 Railcar Loading Procedures . . . . . TM 55-601  
 Storage and Materials Handling . . . . . TM 743-200-1  
 Unit, Direct Support, and General Support Repair Parts and  
 Special Tools List for M915 Family of Vehicles, Chassis . . . . . TM 9-2320-363-24P  
 Unit Maintenance Manual for M915 Family of Vehicles, Chassis . . . . . TM 9-2320-363-20

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**A-7. OTHER PUBLICATIONS.**

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Army Medical Department Expendable/Durable Items . . . . . CTA 8-100  
 Expendable/Durable Items (Except Medical, Class V,  
 Repair Parts, and Heraldic Items). . . . . CTA 50-970  
 Fuels and Lubricants Standardization Policy for Equipment Design, Operation, and Logistic  
 Support . . . . . AR 70-12  
 Military Standard Abbreviations for Use on Drawings, Specifications,  
 Standards, and in Technical Documents . . . . . MIL-STD-12D  
 Prevention of Motor Vehicle Accidents . . . . . AR 385-55

## APPENDIX B MAINTENANCE ALLOCATION CHART

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### Section I. INTRODUCTION

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#### B-1. THE ARMY MAINTENANCE SYSTEM MAINTENANCE ALLOCATION CHART (MAC).

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- a. This introduction (Section I) provides a general explanation of all maintenance and repair functions authorized at various maintenance levels under the standard Army Maintenance system concept.
- 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, which are shown on the MAC in column (4) as:
  - Unit- includes two subcolumns, C (Operator/Crew) and O (Unit) Maintenance.
  - Direct Support includes an F subcolumn.
  - General Support- includes an H subcolumn.
  - Depot- includes a D subcolumn.
- 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.

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#### B-2. MAINTENANCE FUNCTIONS.

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Maintenance functions are 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/end item and comparing those characteristics with prescribed standards.
- c. **Service.** Operations required periodically to keep an item in proper operating condition; e.g., 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 position, or by setting the operating characteristics to specified parameters.
- e. **Aline.** To adjust specified variable elements of an item to bring about optimum or desired performance.
- f. **Calibrate.** To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
- 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 fixing onto position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

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## B-2. MAINTENANCE FUNCTIONS (Con't).

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h. **Replace.** To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and assigned maintenance level is shown as the 3d position code of the SMR code.

i. **Repair.** The application of maintenance services<sup>1</sup> including fault location/troubleshooting<sup>2</sup>, removal/installation, and disassembly/assembly<sup>3</sup> procedures, and maintenance actions<sup>4</sup> 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 the 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 (e.g., hours/miles) considered in classifying Army equipment/components.

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## 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.

b. **Column (2)-Component/Assembly.** Column 2 contains the item names of components, assemblies, subassemblies, 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 detailed explanation of these functions, see paragraph B-2).

### NOTE

**When a complete replace or repair task performed at higher level maintenance includes lower level maintenance tasks (equipment condition/follow-on tasks), the lower level work time figures in the MAC must be added to the higher level work time shown in the MAC to determine the total to accomplish that maintenance function.**

---

1. Services-Inspect, test, service, adjust, aline, calibrate, and/or replace.
2. Fault location/troubleshooting-The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).
3. Disassembly/assembly-The step-by-step breakdown (taking apart) of a spare/function group coded item to the level of its least component, that is assigned an SMR code for the level or maintenance under consideration (i.e., identified as maintenance significant).
4. Actions-Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

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**B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II (Con't).**


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d. **Column (4) - Maintenance Level.** Column 4 specifies each level of maintenance authorized to perform each function listed in Column 3, by indicating a work time required (expressed as man-hours in whole hours or decimals) in the appropriate subcolumn. This work-time 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 are shown for each level. The work-time figure represents the average time required to restore an item (assembly, sub-assembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (equipment condition/follow-on tasks) (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

C - Operator or Crew Maintenance

O - Unit Maintenance

F - Direct Support Maintenance

L - Specialized Repair Activity (SRA)<sup>5</sup>

H - General Support Maintenance

D - Depot Maintenance

e. **Column (5) - Tools and Test Equipment Reference Code.** Column 5 specifies, by code, those common tool sets (not individual tools), common TMDE, and special tools, special TMDE, and special support equipment required to perform the designated function. Codes are keyed to Tools and Test Equipment in Section III.

f. **Column (6)- Remarks.** When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks contained in Section IV.

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**B-4. EXPLANATION OF COLUMNS IN TOOLS AND TEST EQUIPMENT REQUIREMENTS, SECTION III.**


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a. **Column (1) - Tool or Test Equipment Reference Code.** The tool or 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 Stock Number.** The National Stock Number of the tool or test equipment.

e. **Column (5) - Tool Number.** The manufacturer's part number, model number, or type number.

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**B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.**


---

a. **Column (1) - Remarks Code.** The code recorded in Section II, column (6).

b. **Column (2) - Remarks.** This column, along with the related codes, clarifies maintenance and inspection functions by different MOS involved in maintaining some components.

5. This maintenance level is not included in Section II, column (4) of the MAC. Functions to this level of maintenance are identified by a work-time figure in the "H" column of Section II, column (4), and an associated reference code is used in the Remarks column (6). This code is keyed to Section IV, Remarks, and the SRA complete repair application is explained there.

**Section II. MAINTENANCE ALLOCATION CHART**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks
			Unit		DS	GS	Depot		
			C	O	F	H	D		
<b>06</b>	<b>Electrical System</b>								
0608	Miscellaneous Items								
	Control Unit, MCS	Inspect Replace Repair	0.1	0.5 1.0			1 1		
0609	Lights								
	Taillight	Inspect Replace	0.1	0.3			1		
	Marker Clearance Light	Inspect Replace	0.1	0.3			1		
0610	Sending Units and Warning Switches	Replace		0.3			1		
0613	Hull or Chassis Wiring Harness								
	Harness, Lights	Replace Repair		1.0 0.3			1 1,2		
	Harnesses, MCS	Replace Repair		0.5 0.5			1 1,2		
	Harness, Body Up/Transport Lock	Replace Repair		0.3 0.3			1 1,2		
<b>18</b>	<b>Body, Cab, Hood, and Hull</b>								
1810	Cargo Body								
	Dump Body Assembly	Replace Repair			4.0 1.0		1,3 1,3		
	Cylinder Support Frame	Replace			1.0		1,3		

**Section II. MAINTENANCE ALLOCATION CHART (Con't)**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks
			Unit		DS	GS	Depot		
			C	O	F	H	D		
1810 (Con't)	<i>Cargo Body</i>								
	Tailgate, MCS	Inspect	0.1						
		Replace		1.0				1,2	
		Repair		0.5				1,2	
	Air Cylinder, Tailgate Release	Replace		0.5				1	
		Repair		0.8				1	
	Air Cylinder, MCS	Replace		0.5				1	
		Repair		1.0				1	
	Air Lines/Hoses	Replace		0.5				1	
<b>22</b>	<b><i>Body, Chassis, and Hull Accessory Items</i></b>								
2201	<i>Canvas, Rubber, or Plastic Items</i>								
	Cargo Cover	Inspect	0.1						
		Replace		0.5				1	
		Repair			0.5			3	
	Support Frame/Rollers	Replace		0.7				1	
		Repair		0.7				1	
	Crank Assembly	Replace		0.7				1	
		Repair		1.0				1	
2210	<i>Data Plates and Instruction Holders</i>	Replace		0.3				1	

**Section II. MAINTENANCE ALLOCATION CHART (Con't)**

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks
			Unit		DS	GS	Depot		
			C	O	F	H	D		
<b>24</b>	<b><i>Hydraulic and Fluid Systems</i></b>								
2401	<i>Pump and Motor</i>								
	Hydraulic Pump Assembly	Replace Repair			1.0 1.0			1,3 1,3	
2403	<i>Hydraulic Controls and/or Manual Controls</i>								
	Dump Control Assembly	Replace Repair		0.5 0.1				1 1	
2406	<i>Strainers, Filters, Lines, and Fittings</i>								
	Filter Assembly	Service Replace Repair		0.3 0.5 0.3				1 1 1	
	Hoses/Fittings	Replace		0.3				1,2	
2407	<i>Hydraulic Cylinders</i>								
	Cylinder Assembly	Replace Repair			2.0 2.0			1,3 1,3,4,5,6,	
2408	<i>Liquid Tanks or Reservoirs</i>								
	Reservoir Assembly	Replace Repair		0.5 0.5				1,2	



**Section III. TOOLS AND TEST EQUIPMENT REQUIREMENTS**

Tool or Test Equipment Reference Code	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	O, F, H	Tool Kit, General Mechanic's: Auto, motive SC 5180-90-CL-N26	5180-00-177-7033	W33004
2	O	Shop Equipment, Automotive Maintenance and Repair: Common No. 1, Less Power SC 4910-95-CL-A74	4910-00-754-0654	W32593
3	F,H	Shop Equipment, Automotive Maintenance and Repair: Field Maintenance, Basic, Less Power SC 4910-95-A31  SPECIAL TOOLS	4910-00-754-0705	T24660
4	F	Installer, Seal: 3-Inch		J42381
5	F	Installer, Seal: 4-Inch		J42382
6	F	Installer, Seal: 5-Inch		J42383

**Section IV. REMARKS**

None.



## APPENDIX C REPAIR PARTS AND SPECIAL TOOLS LISTS (RPSTL)

### Section I. INTRODUCTION

#### C-1. SCOPE.

This Repair Parts and Special Tools Lists (RPSTL) lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Unit, Direct Support, and General Support Maintenance of the M917A1 and M917A1 w/MCS Dump Truck Body. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the Source, Maintenance and Recoverability (SMR) codes.

#### C-2. GENERAL.

In addition to Section I, introduction, this RPSTL is divided into the following sections:

a. **Section II. Repair Parts List.** A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed by item name sequence at the end of the section. Repair part kits are listed separately in their own functional group within Section II. Repair parts for repairable special tools are also listed in this section. Items listed are shown on the associated illustration(s)/figure(s).

b. **Section III. Special Tools List.** A list of special tools special TMDE and other special support equipment authorized by this RPSTL [as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column] for the performance of maintenance. Not applicable. Refer to TM 9-2320-363-24P.

c. **Section IV. Cross-Reference Indexes.** A list, in National Item Identification Number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National Stock Numbers (NSN) and part numbers are cross-referenced to each illustration/figure and item number appearance.

#### C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III).

- a. **ITEM NO - Column (1).** Indicates the number used to identify items called out in the illustration.
- b. **SMR CODE - Column (2).** The SMR code is a five-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:

Source Code	Maintenance Code		Recoverability Code
XXxxx	xxXXX		xxxxX
1 st two positions	3d position	4th position	5th position
How you get an item.	Who can install, replace or use the item.	Who can do complete repair* on the item.	Who determines disposition action on an unserviceable item.

\* *Complete Repair:* Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

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**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (Con't).**

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(1) **Source Code.** The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

<u>Code</u>	<u>Application/Explanation</u>
PA PB PC** PD PE PF PG	<p>Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the maintenance category indicated by the code entered in the third position of the SMR code.</p> <p style="text-align: center;"><i>**Items coded PC are subject to deterioration.</i></p> <p>.....</p>
KD KF KB	<p>Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.</p> <p>.....</p>
MO- Made at UM/AVUM Level MF- Made at DS/AVUM Level MH- Made at GS Level ML- Made at Specialized Repair Activity (SRA) MD- Made at Depot	<p>Items with these codes are not to be requested/requisitioned individually. They must be made from bulk materiel which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk materiel group of the repair parts list in this RPSTL. If the item is authorized to you by the third position of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.</p> <p>.....</p>
AO- Assembled by UM/AVUM Level AF- Assembled by DS/AVUM Level AH- Assembled by GS Level AL Assembled by SRA AD Assembled at Depot	<p>Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the third position code of the SMR code authorizes you to replace the items, but the source code indicates that the item is assembled at a higher level, order the item from the higher level of maintenance</p>

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**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (Con't).**

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**NOTE**

**Cannibalization of controlled exchange, when authorized, may be used as a source of supply for items with the following source codes, except for those source coded "XA".**

<u>Code</u>	<u>Application/Explanation</u>
XA . . . . .	DO NOT requisition an "XA"-coded item. Order its next higher assembly.
XB. . . . .	In an "XB" item is not available from salvage, order it using the CAGEC and part number given.
XC. . . . .	Installation drawing, diagram, instruction sheet or field service drawing that is identified by manufacturer's part number.
XD. . . . .	Item is not stocked. Order an "XD"-coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

(2) **Maintenance Code.** Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance:

<u>Code</u>	<u>Application/Explanation</u>
C . . . . .	Operator or Crew Maintenance done within Unit Maintenance or aviation unit maintenance.
O . . . . .	Unit Maintenance or aviation unit can remove, replace, and use the item.
F . . . . .	Direct Support Maintenance or aviation intermediate maintenance can remove, replace, and use the item.
H . . . . .	General Support Maintenance can remove, replace, and use the item.
L . . . . .	Specialized Repair Activity (SRA) can remove, replace, and use the item.
D . . . . .	Depot Maintenance can remove, replace, and use the item.

**NOTE**

**Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.**

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized "Repair" functions). The maintenance code in the fourth position will indicate authorization to one of the following levels of maintenance:

<u>Code</u>	<u>Application/Explanation</u>
O . . . . .	Unit Maintenance or aviation unit maintenance is the lowest level that can do complete repair of the item.
F . . . . .	Direct Support Maintenance or aviation intermediate maintenance is the lowest level that can do complete repair of the item.

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**C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (Con't).**

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<u>Code</u>	<u>Application/Explanation</u>
H . . . . .	General Support Maintenance is the lowest level that can do complete repair of the item.
L . . . . .	Specialized Repair Activity (SRA) is the lowest level that can do complete repair of the item.
D . . . . .	Depot Maintenance is the lowest level that can do complete repair of the item.
Z . . . . .	Nonreparable. No repair is authorized.
B . . . . .	No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B"-coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) **Recoverability Code.** Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR code as follows:

<u>Code</u>	<u>Application/Explanation</u>
Z . . . . .	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
O . . . . .	Reparable item. When uneconomically reparable, condemn and dispose of the item at Unit Maintenance or aviation unit maintenance.
F . . . . .	Reparable item. When uneconomically reparable, condemn and dispose of the item at Direct Support Maintenance or aviation intermediate maintenance.
H . . . . .	Reparable item. When uneconomically reparable, condemn and dispose of the item at General Support Maintenance.
D . . . . .	Reparable item. When beyond lower level repair capability, return to Depot Maintenance. Condemnation and disposal of item not authorized below Depot Maintenance.
L . . . . .	Reparable item. Condemnation and disposal of item not authorized below Specialized Repair Activity (SRA).
A . . . . .	Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. **NSN - Column (3).** Lists the National Stock Number assigned to the item. Use the NSN for requests/requisitions.

d. **CAGEC - Column (4).** The Commercial and Government Entity (CAGE) Code (C) is a five-digit alphanumeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

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### C-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) (Con't).

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#### NOTE

**When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered.**

e. **PART NUMBER - Column (5).** Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity) which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

f. **DESCRIPTION AND USABLE ON CODE (UOC) - Column (6).** This column includes the following information:

- (1) The Federal item name and, when required, a minimum description to identify the item.
- (2) Physical security classification. Not applicable.
- (3) Items that are included in kits and sets are listed below the name of the kit or set.
- (4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.
- (5) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.
- (6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC). Not Applicable.
- (7) The Usable On Code, when applicable (see paragraph 5, Special Information).
- (8) In the Special Tools List section, the Basis of Issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipment supported exceeds density spread indicated in the Basis of Issue, the total authorization is increased proportionately.
- (9) The statement "END OF FIGURE" appears just below the last item description in Column 6 for a given figure in both Section II and Section III.

g. **QTY - Column.** The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration/figure, which is prepared for a functional group, subfunctional group, group or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

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### C-4. EXPLANATION OF COLUMNS (SECTION IV).

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a. National Sock Number (NSN) Index.

(1) **STOCK NUMBER Column.** This column lists the NSN by National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN (i.e., NSN 5305-01-674-1467). When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) **FIG. Column.** This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

(3) **ITEM Column.** The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. **Part Number Index.** Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

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**C-4. EXPLANATION OF COLUMNS (SECTION IV) (Con't).**

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(1) **CAGEC Column.** The Commercial and Government Entity (CAGE) Code (C) is a five-digit alphanumeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) **PART NUMBER Column.** Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity) which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

(3) **STOCK NUMBER Column.** This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and CAGEC columns to the left.

(4) **FIG. Column.** This column lists the number of the figure where the item is identified/located in Section II and Section III.

(5) **ITEM Column.** The item number assigned to the item as it appears in the figure referenced in the FIG. column.

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**C-5. SPECIAL INFORMATION.**

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a. **Usable On Code.** The Usable On Code appears in the lower left corner of the DESCRIPTION column heading. Usable on codes are:

7A1	M917A1
7E1	M917A1 w/MCS

b. **Fabrication Instruction.** Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk materials are also referenced in the Description column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured or fabricated are found in Appendix G.

c. **Assembly Instruction.** Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in Chapters 4 and 5. Items that make up the assembly are listed immediately following the assembly item entry or reference is made to an applicable figure.

d. **Kits.** Line item entries for repair kits appear in Group 9401 in Section II.

e. **Index Numbers.** Items which have the word BULK in the FIG. column will have an index number shown in the item column. This index number is a cross-reference between the National Stock Number Index, the Part Number Index, and the bulk material list in Section II.

f. **Associated Publications.** The publications listed below pertain to the M915 Family of Vehicles and its components:

<u>Publication</u>	<u>Short Title</u>
TM 9-2320-363-10	Operator's Manual for M915 Family of Vehicles
TM 9-2320-363-20	Unit Maintenance Manual for M915 Family of Vehicles
TM 9-2320-363-34	Direct Support and General Support Maintenance Manual for M915 Family of Vehicles
TM 9-2320-363-24P	Unit, Direct Support, and General Support RPSTL for M915 Family of Vehicles



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**C-6. HOW TO LOCATE REPAIR PARTS.**

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a. **When National Stock Number or Part Number is Not Known:**

(1) **First.** Using the Table of Contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) **Second.** Find the figure covering the assembly group or subassembly group to which the item belongs.

b. **When National Stock Number or Part Number is Known:**

(1) **First.** Using the National Stock Number Index or Part Number Index, find the pertinent NSN or part number. The NSN Index is in National Item Identification Number (NIIN) sequence [paragraph C-4a.(1)]. The part numbers in the Part Number index are listed in ascending alphanumeric sequence (paragraph C-4b.). Both indexes cross-reference you to the illustration/figure and item number of the item you are looking for.

(2) **Second.** Turn to the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

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**C-7. ABBREVIATIONS.**

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For standard abbreviations see MIL-STD-12D, *Military Standard Abbreviations for Use on Drawings, Specifications, Standards, and in Technical Documents.*

<b><u>Abbreviations</u></b>	<b><u>Explanation</u></b>
NIIN .....	National Item Identification Number (consists of the last 9 digits of the NSN)
RPSTL.....	Repair Parts and Special Tools Lists

1	4
2-13	5-13

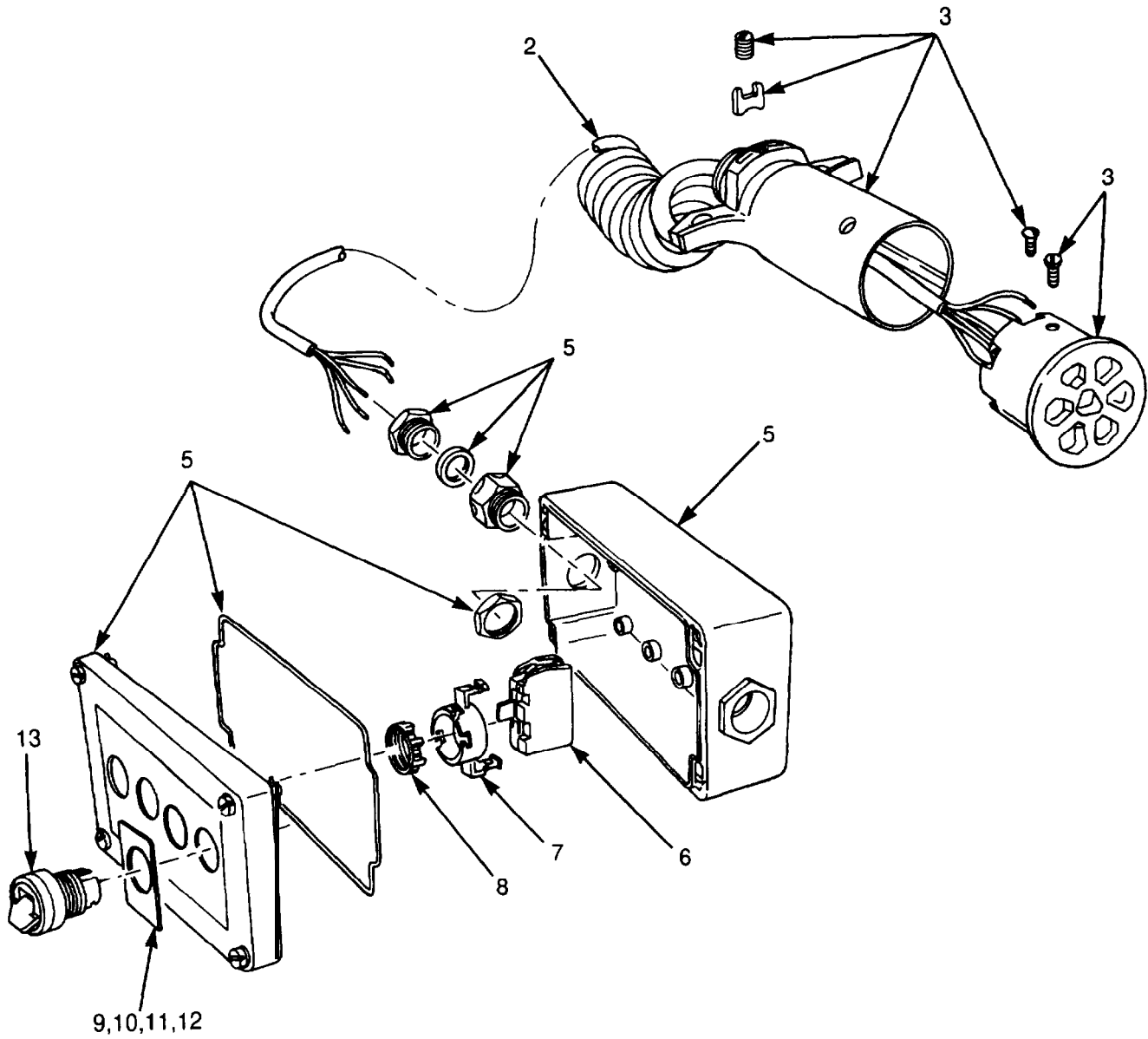


Figure 1. Control Unit Assembly, MCS.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					GROUP 06 ELECTRICAL SYSTEM	
					GROUP 0608 MISCELLANEOUS ITEMS	
					FIG. 1 CONTROL UNIT ASSEMBLY, MCS	
1	PBOOO		5X050	128214	CABLE ASSEMBLY,CONT UOC:7E1	1
2	PAOZZ		5X050	403412	.CABLE,ELECL COILED UOC:7E1	1
3	PAOZZ	5935008563513	77326	11-700	.CONNECTOR,PLUG,ELEC UOC:7E1	1
4	PFOOO		7J764	BNT22002	.SWITCH,ASSEMBLY UOC:7E1	1
5	PAOZZ		7J764	BNT220	..COVER,ACCESS UOC:7E1	1
6	PAOZZ		7J764	23E10	..CONNECTOR BODY,MODU UOC:7E1	4
7	PAOZZ		7J764	231E	..CLIP,ELECTRICAL UOC:7E1	4
8	XDOZZ		7J764	CM10P	..NUT,GLAND,ELECTRICA UOC:7E1	4
9	PAOZZ		7J764	WE11H415E	..PLATE,IDENTIFICATIO LEFT UOC:7E1	1
10	PAOZZ		7J764	WE11H416E	.. PLATE,IDENTIFICATIO LEFT CENTER UOC:7E1	1
11	PAOZZ		7J764	WE11H417E	..PLATE,IDENTIFICATIO RIGHT CENTER UOC:7E1	1
12	PAOZZ		7J764	WE11H418E	.. PLATE,IDENTIFICATIO RIGHT UOC:7E1	1
13	PAOZZ		7J764	C21PA03	.. SWITCH,TOGGLE,ELEC UOC:7E1	4

END OF FIGURE

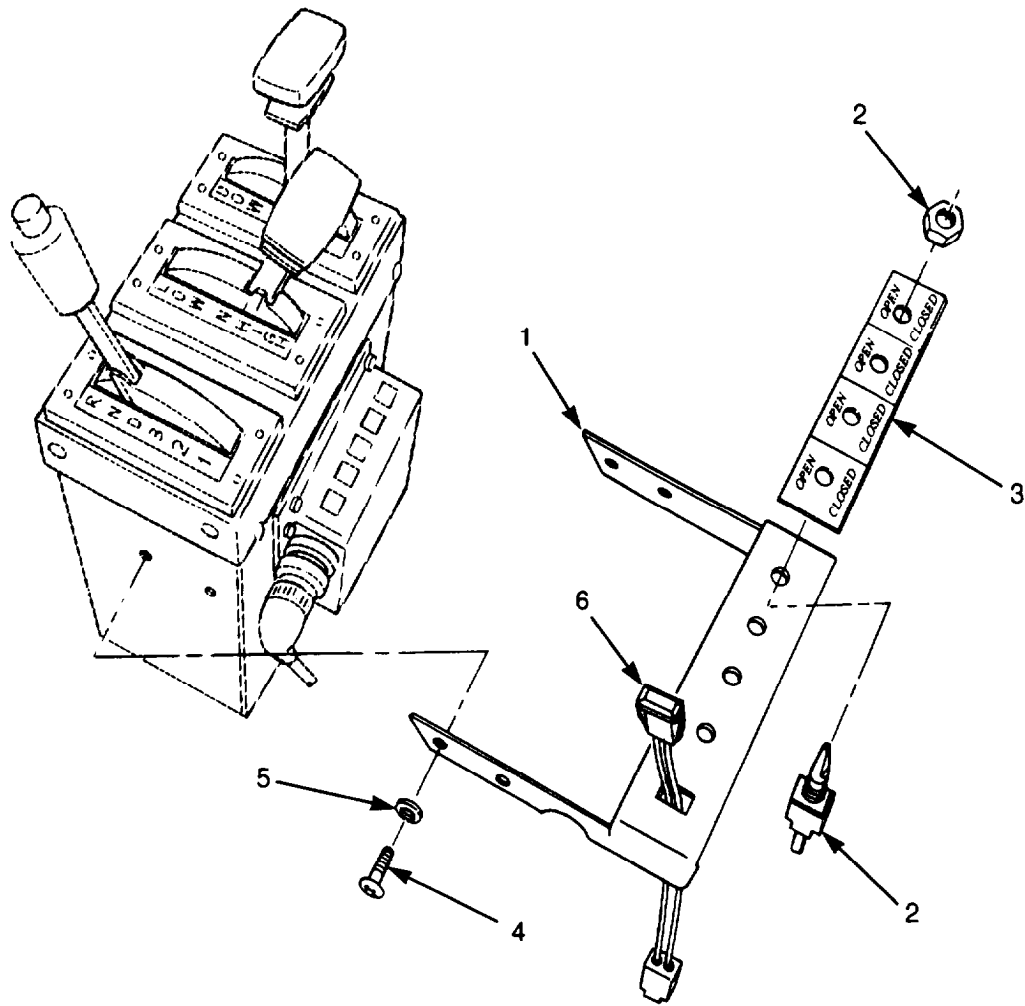


Figure 2. Control Switches, MCS.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
GROUP 0608 MISCELLANEOUS ITEMS						
FIG. 2 CONTROL SWITCHES, MCS						
1	XDOZZ		64678	06-24618-000	BRACKET, SWITCH PANE UOC:7E1	1
2	PAOZA	5930013320680	64678	681 545 07 22	SWITCH, TOGGLE UOC:7E1	4
3	XDOZZ		64678	24-00783-000	4X-MAT'L CTRL LABEL UOC:7E1	1
4	PAOZZ		64678	23-10864-706	SCREW, MACHINE 1/4-20 X 0.75 IN UOC:7E1	4
5	PAOZZ	5310003470021	99321	3507	WASHER, FLAT 1/4" UOC:7E1	4
6	PAOZZ		64678	06-22309-048	LIGHT, INDICATOR MATERIAL CONTROL UOC:7E1	1

END OF FIGURE

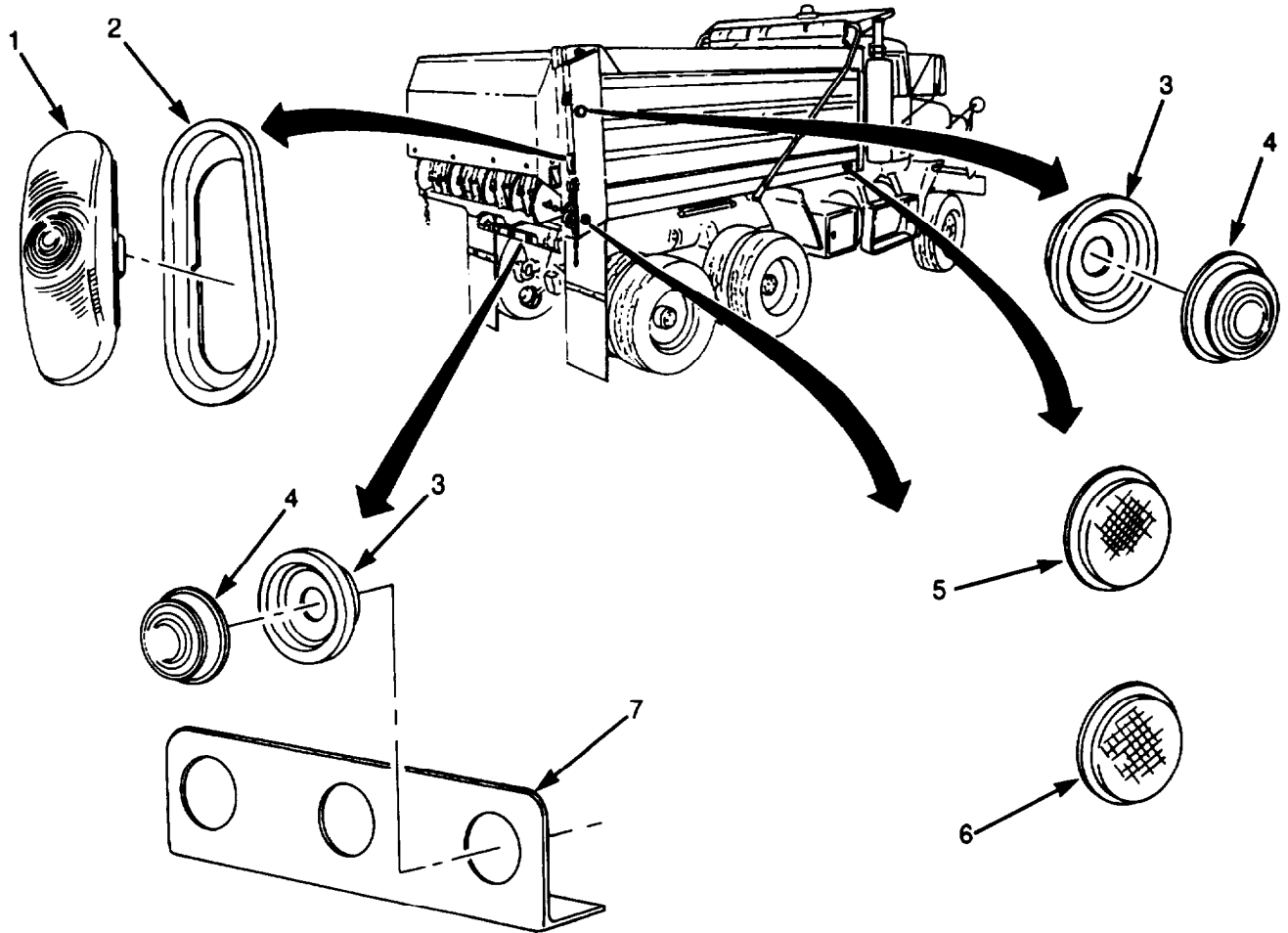


Figure 3. Taillights, Marker Lights and Reflectors.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					GROUP 0609 LIGHTS	
					FIG. 3 TAILLIGHTS, MARKER LIGHTS AND REFLECTORS	
1	PAOZZ	6220010865691	13548	60202R	STOP LIGHT-TAILLIGH STOP/TURN/TAIL LIGHT ASSY	2
2	PAOZZ	5325011636558	13548	60700	GROMMET, NONMETALLIC	2
3	PAOZZ	5325012833513	12662	142-18	GROMMET	5
4	PAOZZ	6220010950011	13548	10004R	LIGHT, MARKER, CLEAR	5
5	PAOZZ	6220014459978	12662	B490A	REFLECTOR, LIGHT AMBER	4
6	PAOZZ	6220014459981	12662	B490R	REFLECTOR, LIGHT RED	2
7	PFOZZ	5340014457781	5X050	238021	BRACKET, ANGLE	1
					END OF FIGURE	

1  
2-11

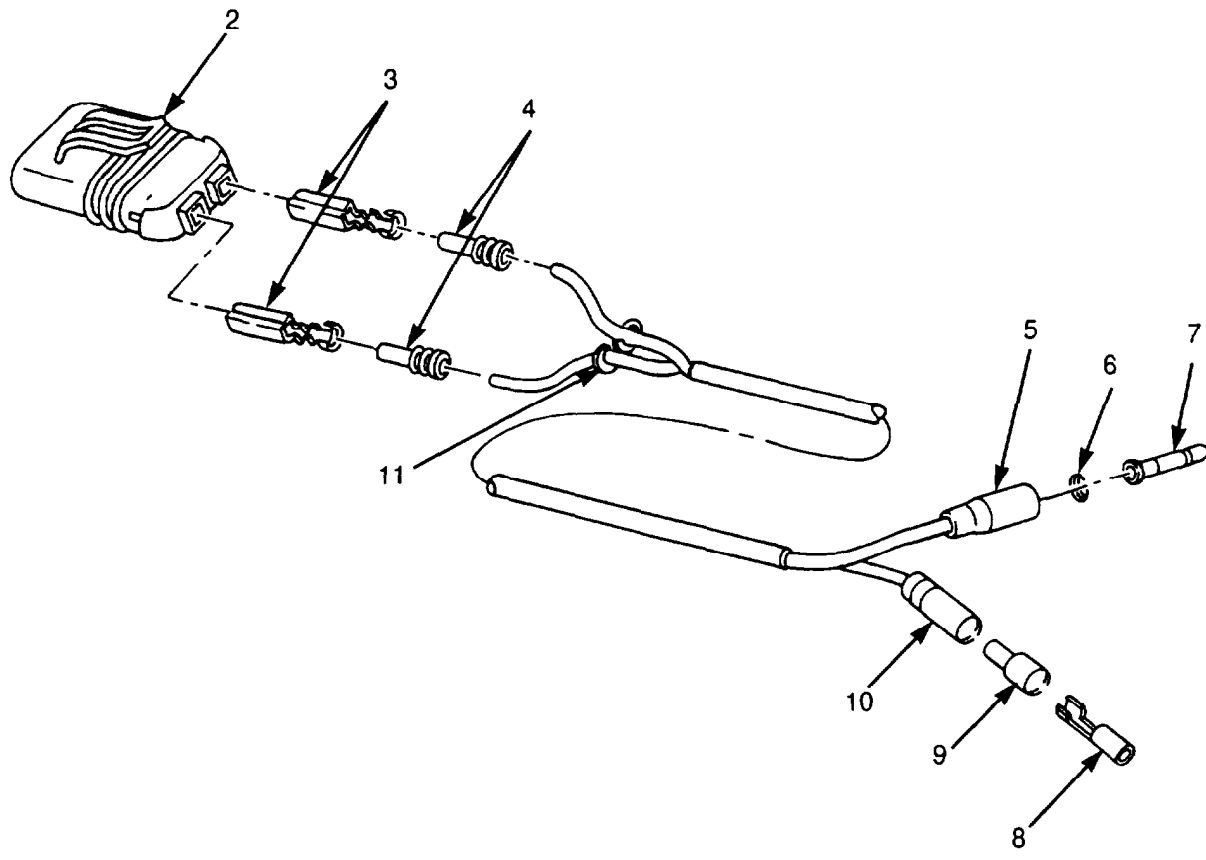


Figure 4. Wiring Harness, Beacon Light.



SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					GROUP 0609 LIGHTS	
					FIG. 4 WIRING HARNESS, BEACON LIGHT	
1	PAOZZ	6150014459130	5X050	403255	WIRING HARNESS,BRAN BEACON LIGHT	1
2	PAOZZ	5935013087866	77060	15300027	.CONNECTOR BODY,PLUG	1
3	XDOZZ		77060	12129493	.TERMINAL,FEMALE	2
4	PAOZZ	5975012268078	77060	12010293	.BOOT,DUST AND MOIST	2
5	PAOZZ	5975012304370	5A910	8338566	.CABLE NIPPLE,ELECTR	1
6	PAOZZ	5310008338567	19207	8338567	.WASHER,SLOTTED	1
7	PAOZA	5999000572929	19204	572929	.CONTACT,ELECTRICAL NO. 14 WIRE	1
					GAGE	
8	PAOZZ	5940003996676	19207	8338564	.TERMINAL ASSEMBLY	1
9	PAOZZ	5970008338562	19207	8338562	.INSULATOR,BUSHING	1
10	PAOZZ	5935008338561	19207	8338561	.SHELL,ELECTRICAL CO	1
11	PAOZZ	5340013326696	77060	1530 0014	.STRAP,RETAINING	1

END OF FIGURE

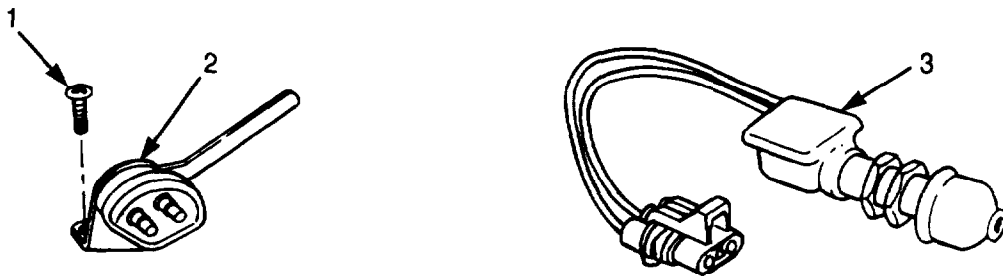


Figure 5. Bodyup and Transport Lock Switches.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
					GROUP 0610 SENDING UNITS AND WARNING SWITCHES	
					FIG. 5 BODYUP AND TRANSPORT LOCK SWITCHES	
1	PAOZZ	5305009897434	96906	MS35207-263	SCREW,MACHINE 10-32X0.50	2
2	PAOZZ	5930013360919	13445	8486	SWITCH,LEVER	1
3	PAOZZ	5930014460980	5X050	129871	SWITCH,PUSH-PULL TRAVEL LOCK SWITCH	1

END OF FIGURE

1  
2-6

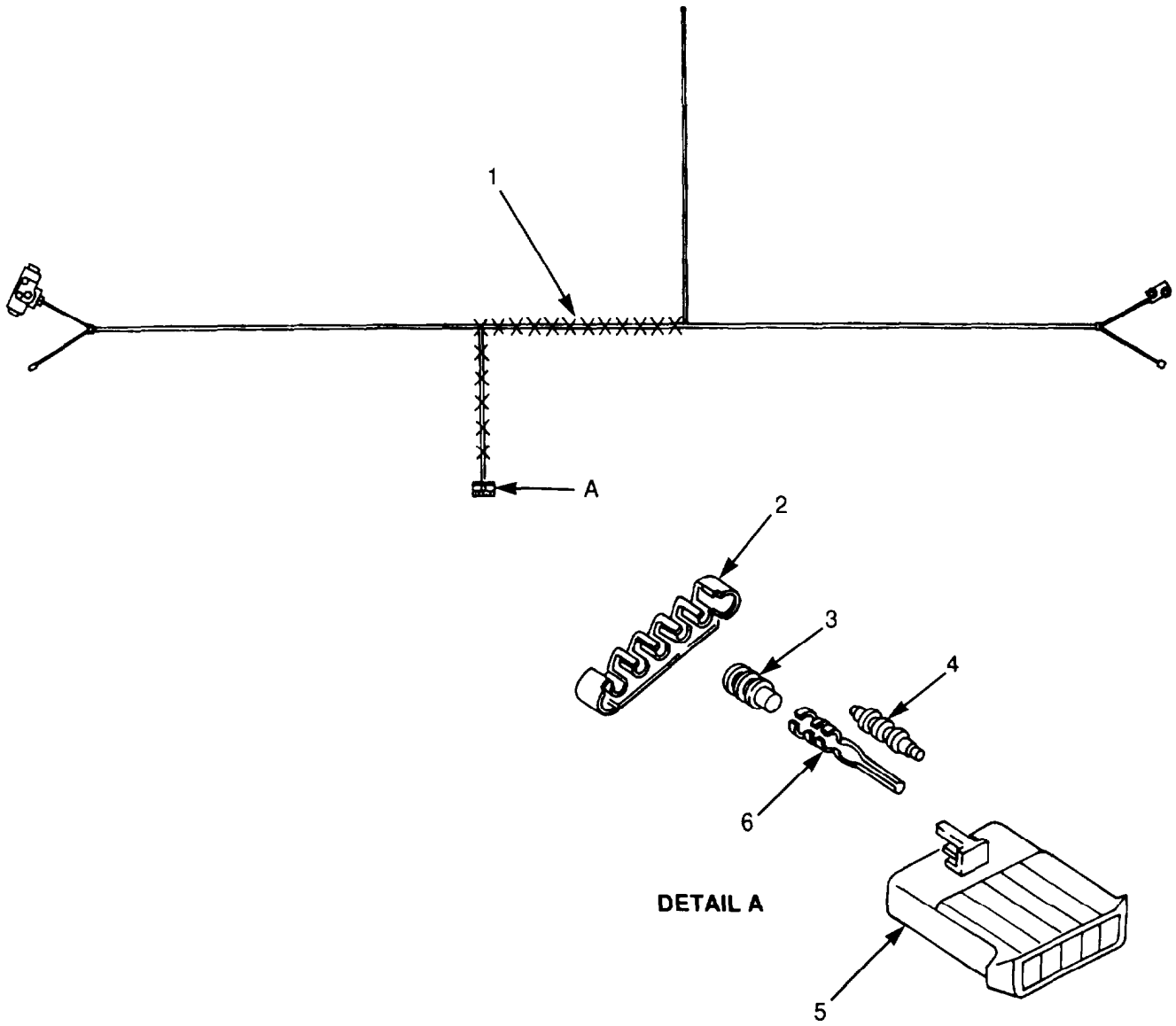


Figure 6. Wiring Harness, Dump Body Lights.

**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 0613 HULL OR CHASSIS WIRING HARNESS	
					FIG. 6 WIRING HARNESS, DUMP BODY LIGHTS	
1	PAOOZ	6150014466345	5X050	403254	WIRING HARNESS,BRAN DUMP BODY LIGHTS	1
2	XDOZZ		77060	12084673	.LOCK,SECONDARY	1
3	PAOZZ	5975013105011	77060	12015323	.BOOT,DUST AND MOIST	4
4	PAOZZ	5975013399574	77060	1201 0300	.BOOT,DUST AND MOIST	1
5	XDOZZ		77060	12085036	.CONNECTOR,HOUSING	1
6	XDOZZ		77060	12048159	.TERMINAL,MALE	4

END OF FIGURE

1	12
2-8	13-18

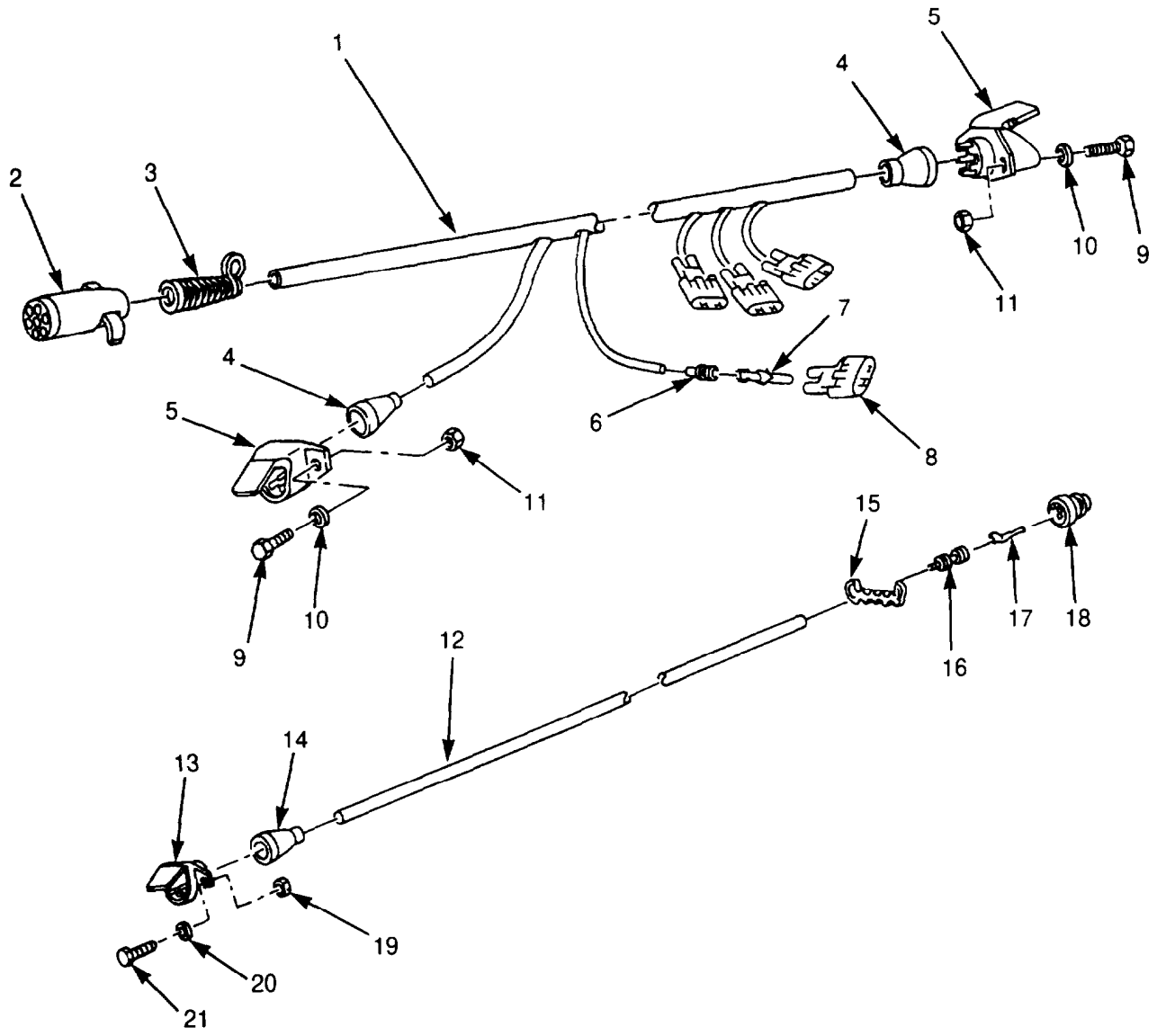


Figure 7. MCS Gate Harness and MCS Power Harness.

## SECTION II

TM5-3805-264-14&amp;P

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 0613 HULL OR CHASSIS WIRING HARNESS	
					FIG. 7 MCS GATE HARNESS AND MCS POWER HARNESS	
1	PA000		5X050	403484	WIRING HARNESS, BRA UOC:7E1	1
2	PAOZZ	5935008563513	77326	11-700	.CONNECTOR,PLUG,ELEC UOC:7E1	1
3	XDOZZ		77326	11-763	.SPRING,HELICAL,COMP UOC:7E1	1
4	PAOZZ	5975013556985	77326	11-761	.BOOT,DUST AND MOIST UOC:7E1	2
5	PAOZZ	5935001534397	77326	11-720	.CONNECTOR,RECEPTACL UOC:7E1	2
6	PAOZZ	5975013105011	77060	12015323	.BOOT,DUST AND MOIST UOC:7E1	8
7	PAOZZ	5999014229740	19207	12420936	.CONTACT,ELECTRICAL UOC:7E1	8
8	PAOZZ	5935012145259	77060	12015792	.CONNECTOR BODY,PLUG UOC:7E1	4
9	PAOZZ	5305000680508	80204	B1821BH025C075N	SCREW,CAP,HEXAGON H 1/4-20X0.75 UOC:7E1	4
10	PAOZZ	5310008238804	96906	MS27183-9	WASHER,FLAT 1/4 UOC:7E1	4
11	PAOZZ	5310000614650	96906	MS51943-31	NUT,SELF-LOCKING,HE 1/4-20 UOC:7E1	4
12	PA000		5X050	403248	HARNESS ASSEMBLY UOC:7E1	1
13	PAOZZ	5935001534397	77326	11-720	.CONNECTOR,RECEPTACL UOC:7E1	1
14	PAOZZ	5975013556985	77326	11-761	.BOOT,DUST AND MOIST UOC:7E1	1
15	XDOZZ		77060	12066304	.CONNECTOR,LOCKING UOC:7E1	1
16	XDOZZ		77060	1204 8086	.BOOT,DUST AND MOIST UOC:7E1	7
17	PAOZZ	5940013661563	77060	12048074	.TERMINAL,QUICK DISC UOC:7E1	7
18	XDOZZ		77060	1204 7938	.CONNECTOR,PLUG,ELEC UOC:7E1	1
19	PAOZZ	5310000614650	96906	MS51943-31	NUT,SELF-LOCKING,HE UOC:7E1	2
20	PAOZZ	5310008238804	96906	MS27183-9	WASHER,FLAT UOC:7E1	2
21	PAOZZ	5305000680508	80204	B1821BH025C075N	SCREW,CAP,HEXAGON H UOC:7E1	2

END OF FIGURE

1  
2-4

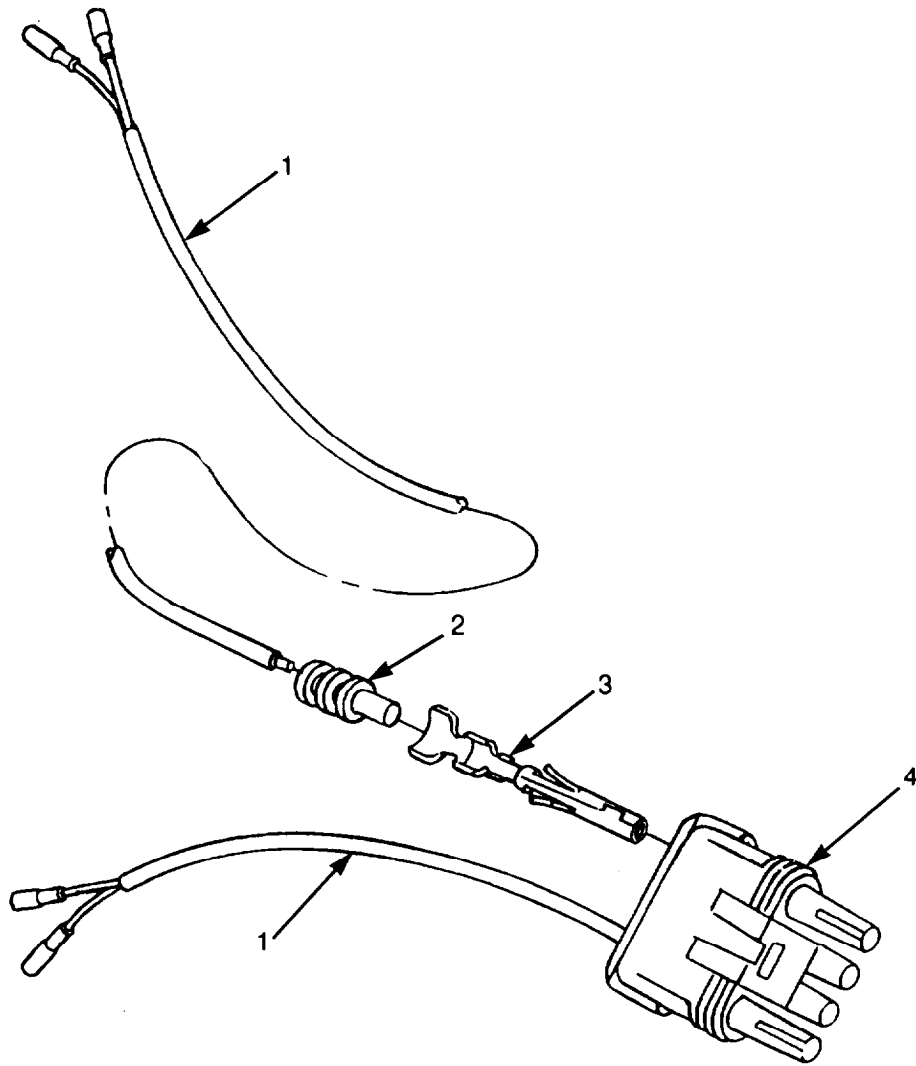


Figure 8. Bodyup/Transport Lock Harness.



**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES (UOC)	(7) QTY
					GROUP 0613 HULL OR CHASSIS WIRING HARNESS	
					FIG. 8 BODYUP/TRANSPORT LOCK HARNESS	
1	PAOOZ	6150014466344	5X050	403256	WIRING HARNESS, BRA	1
2	PAOZZ	5975012268078	77060	12010293	.BOOT,DUST AND MOIST	4
3	PAOZZ	5999014229740	19207	12420936	.CONTACT,ELECTRICAL	4
4	PAOZZ	5935013088599	77060	1201 5797	.CONNECTOR BODY,PLUG	1

END OF FIGURE

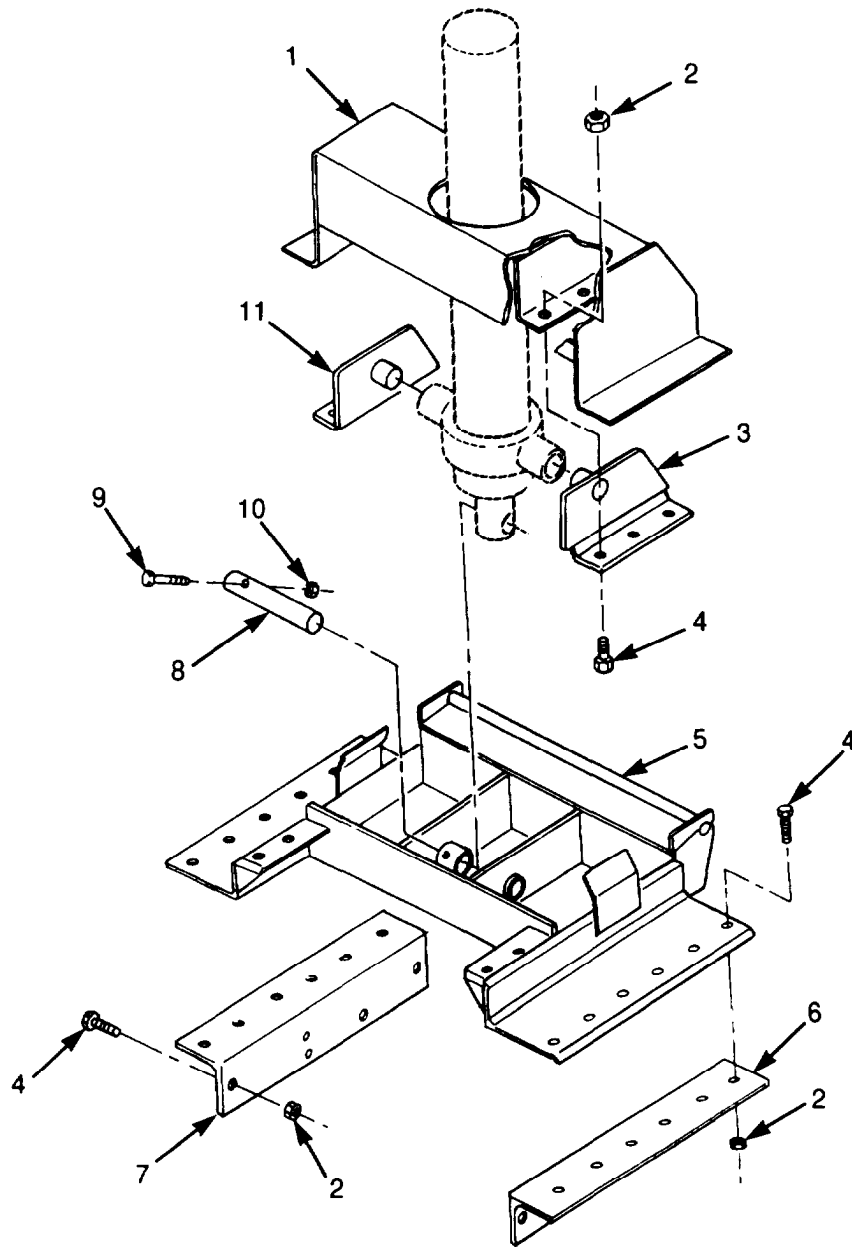


Figure 9. Cylinder Support Frame and Brackets.

**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
GROUP 18 BODY, CAB, HOOD, AND HULL						
GROUP 1810 CARGO BODY						
FIG. 9 CYLINDER SUPPORT FRAME AND BRACKETS						
1	XDFZZ		5X050	128129	COVER ASSY,UPPER	1
2	PAFZZ	5310000614651	96906	MS51943-43	NUT,SELF-LOCKING,HE 5/8-11	30
3	PFFZZ	5340014459486	5X050	128130	BRACKET,MOUNTING L.H	1
4	PAFZZ	5305007247222	80204	B1821BH063C200N	SCREW,CAP,HEXAGON H 5/8-11X2.0	30
5	XDFZZ		5X050	126617	CRADLE ASSEMBLY	1
6	XDFZZ		5X050	237386	BRACKET,ANGLE,LH L.H	1
7	XDFZZ		5X050	237387	BRACKET,ANGLE,RH R.H	1
8	PFFZZ	5315014463121	5X050	208047	PIN,SHOULDER,HEADLE	1
9	PAFZZ	5305000712076	80203	B1821BH050C325N	SCREW,CAP,HEXAGON H 1/2-13X3.25	1
10	PAFZZ	5310004883989	96906	MS51933-39	NUT,SELF-LOCKING,HE 1/2-13	1
11	PFFZZ		5X050	12R131	BRACKET,MOUNTING R.H	1

END OF FIGURE

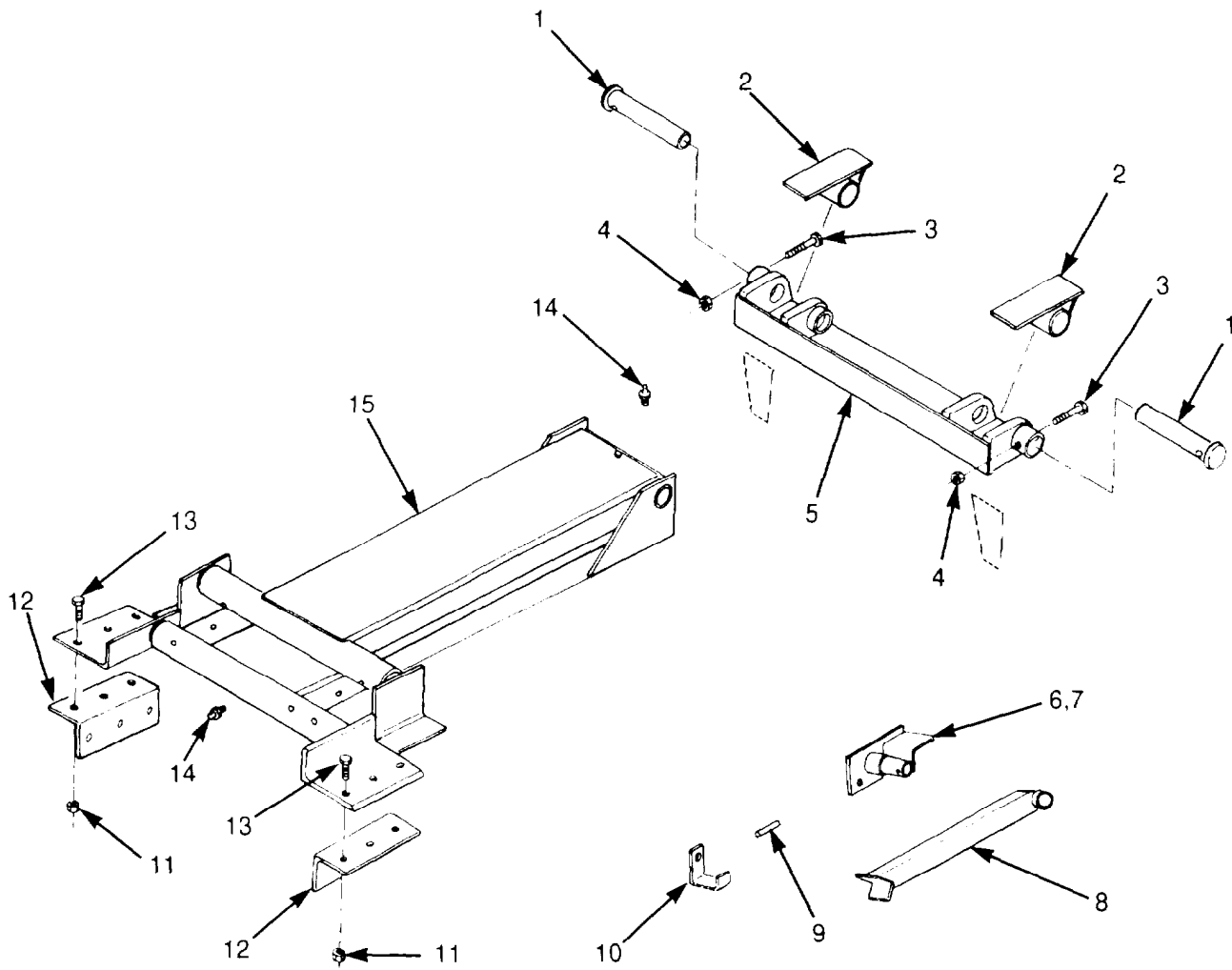


Figure 10. Stabilizer and Rear Hinge.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
GROUP 1810 CARGO BODY						
FIG 10 STABILIZER AND REAR HINGE						
1	PFFZZ	5315014470480	5X050	127170	PIN,STRAIGHT,HEADED	2
2	XDFZZ		5X050	110543	HINGE ASSY,UPPER	2
3	PAFZZ	5305009474358	80204	51821BH075C400N	SCREW,CAP,HEXAGON H 3/4-10X4.00	2
4	PAFZZ	5310004093333	96906	MS51943-45	NUT,SELF-LOCKING,HE 3/4-10	2
5	XDFZZ		5X050	128125	HINGE ASSY,LOWER	1
6	XDOZZ		5X050	129305	PIVOT ASSY,LH L.H	1
7	XDOZZ		5X050	129306	PIVOT ASSY,RH R.H	1
8	PGOZZ	2510014461842	5X050	128126	FRAME,STRUCTURAL,VE.	2
9	PAOZZ	5315007218370	80205	NAS561-8-48	PIN,SPRING 1/4X3.00	2
10	XDOZZ		5X050	239693	BRACKET,SUPPORT	2
11	PAFZZ	5310000614651	96906	MS51943-43	NUT,SELF-LOCKING,HE 5,.8-11.	12
12	XDFZZ		5X050	239694	BRACKET,ANGLE	2
13	PAFZZ	5305007247222	80204	B1821BH063C200N	SCREW,CAP,HEXAGON H 5/8-11X2.00	12
14	PAOZZ	4730000504208	96906	MS15003-1	FITTING,LUBRICATION 1/8 NPT.	5
15	XDFZZ		5X050	127838	STABILIZER ASSY	1

END OF FIGURE

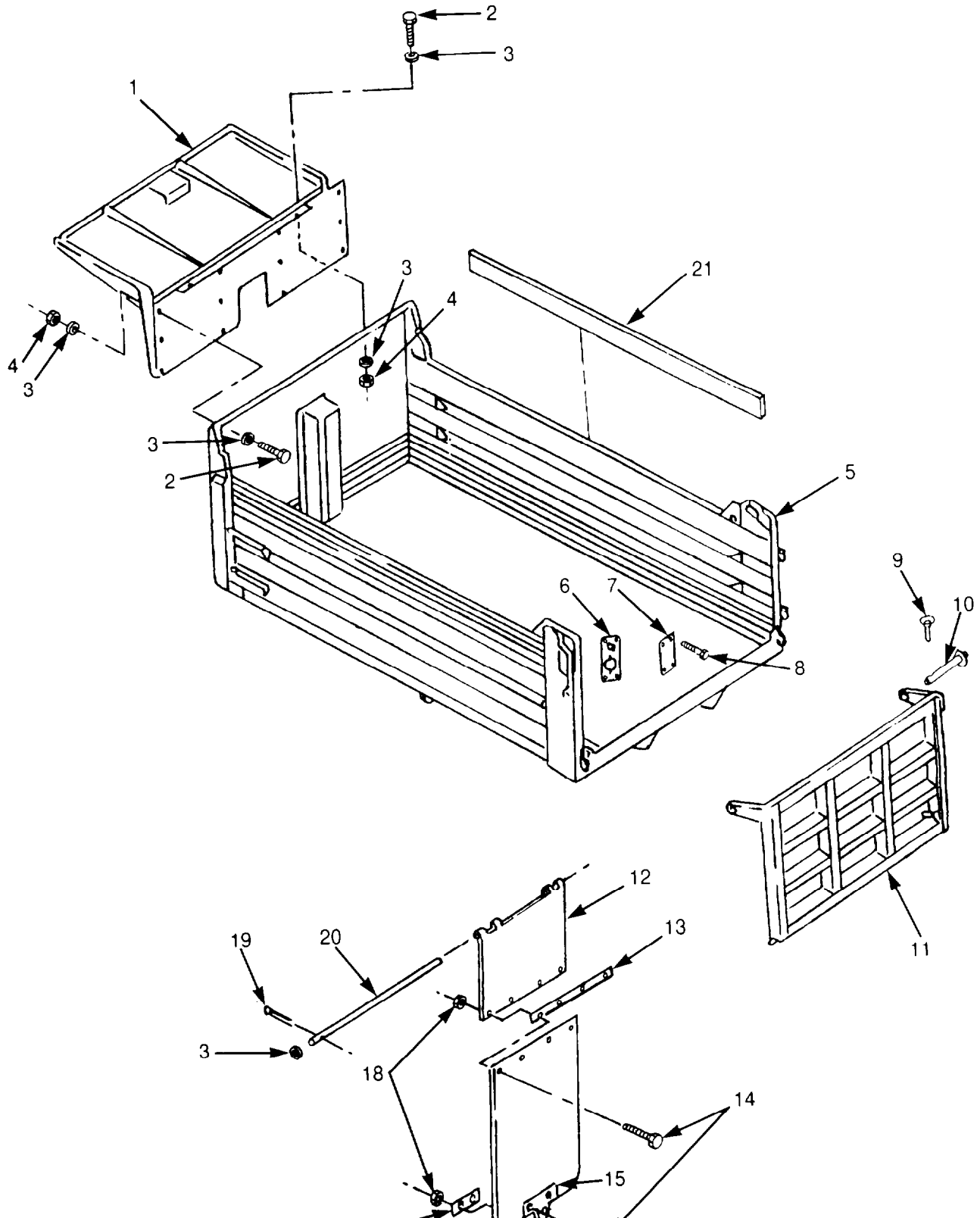


Figure 11. Dump Body Assembly.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 1810 CARGO BODY						
FIG. 11 DUMP BODY ASSEMBLY						
1	XDOZZ		5X050	129568	CABSHIELD ASSEMBLY	1
2	PAOZZ	5305007247222	80204	B1821BH063C200N	SCREW,CAP,HEXAGON H 5/8-11 X 2.00	14
3	PAOZZ	5310000039174	62793	104J005-28	WASHER,FLAT 5/8	28
4	PAOZZ	5310000614651	96906	MS51943-43	NUT,SELF-LOCKING,HE 5/8-11	14
5	XDFFF		5X050	126426	DUMP BOX W/STD GATE UOC:7A1	1
5	XDFFF		5X050	126427	DUMP BOX W/MCS GATE WITH MCS GATE UOC:7E1	1
6	PFOZZ		5X050	127373	.COVER,ACCESS UOC:7E1	1
7	PFOZZ	5340014488998	5X050	236569	.DOOR,ACCESS UOC:7A1	1
8	PAOZZ	5305011622358	45152	1354190	.SCREW,TAPPING 5/16X3/4	4
9	PAOZZ	5315014470479	OPXJ7	63-04	.LYNCH PIN	2
10	PAOZZ	5315014470481	5X050	117122	.PIN,STRAIGHT,HEADED	2
11	XDOZZ		5X050	127892	.TAILGATE ASSEMBLY STANDARD UOC:7A1	1
12	PAOZA	5340014465137	5X050	127852	PLATE,MOUNTING	2
13	PAOZA	5340014464927	5X050	237409	PLATE,MOUNTING	2
14	PAOZZ	5305007252317	80204	B1821BH038C150N	SCREW,CAP,HEXAGON H 3/8-16X1.50	12
15	PAOZZ	5340014460947	5X050	129732	PLATE,MOUNTING	2
16	PAOZZ	2540014466831	9X737	B30LXP	GUARD,SPLASH,VEHICU	1
17	XDOZZ		5X050	245352	PLATE,ANCHOR,FLAP	2
18	PAOZZ	5310009359021	96906	MS51943-35	NUT,SELF-LOCKING,HE 3/8-16	12
19	PAOZZ	5315008098786	96906	MS16562-51	PIN,SPRING 3/16X1.25	4
20	PAOZZ	3040014462413	5X050	237410	SHAFT,STRAIGHT	2
21	MOOZZ		5X050	403345X148.75	SIDEBOARD 2.0 X 8.0 X 148.75 IN, MAKE FROM BULK PN: MILL2037 (81349).	2

END OF FIGURE

1  
2-14

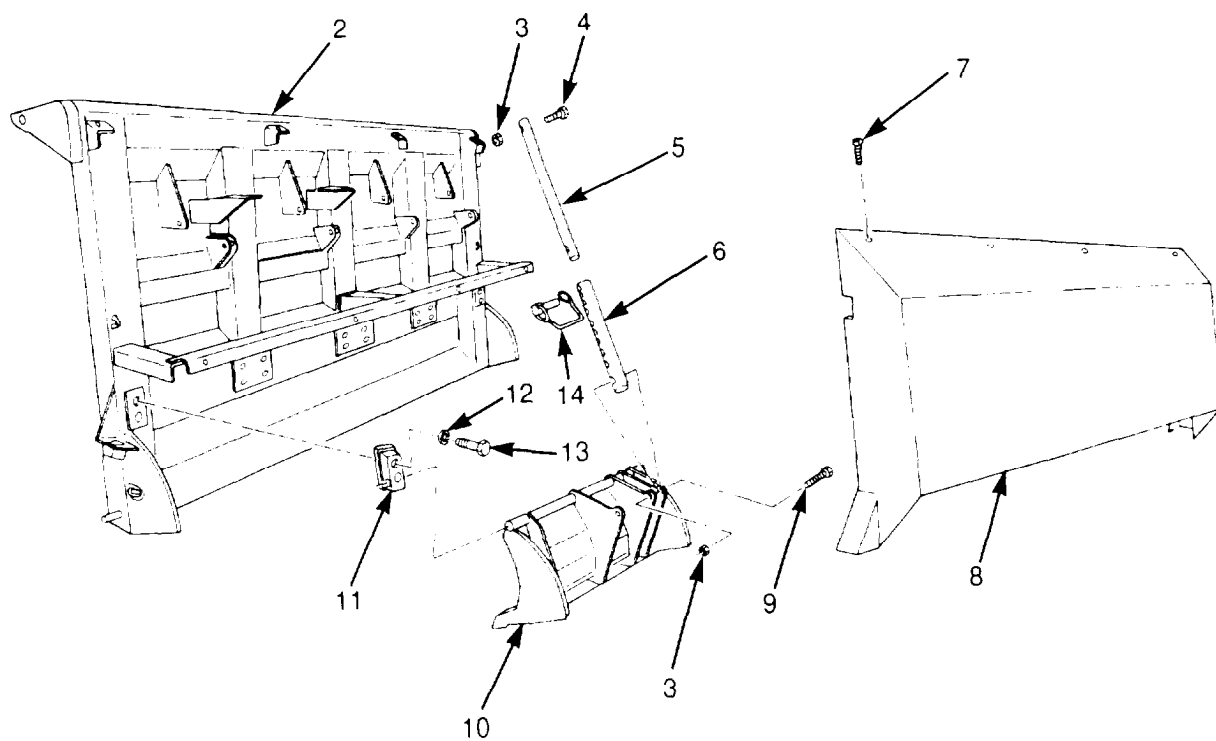


Figure 12. MCS Tailgate Assembly.



**SECTION II**

**TM53805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
GROUP 1810 CARGO BODY						
FIG. 12 MCS TAILGATE ASSEMBLY						
1	XD000		5X050	129651	TAILGATE ASSEMBLY MCS TYPE UOC:7E1	1
2	XDOZZ		5X050	129652	.TAILGATE BARE MCS GATE UOC:7E1	1
3	PAOZZ	5310004883889	96906	MS51943-39	.NUT,SELF-LOCKING,HE 1/2-13 UOC:7E1	8
4	PAOZZ	5305000712071	80204	B1821BH050C200N	.SCREW,CAP,HEXAGON H 1/2-13X2.00 UOC:7E1	4
5	PAOZZ		5X050	239974	.TUBE,METALLIC UOC:7E1	4
6	PAOZZ		5X050	239973	.TUBE,METALLIC UOC:7E1	4
7	PAOZZ	5305012895000	96906	MS51871-13	.SCREW,TAPPING 3/8X3/4 UOC:7E1	10
8	PFOZZ		5X050	129653	.COVER,ACCESS. UOC:7E1	1
9	PAOZZ	5305000712076	80204	B1821BH050C325N	.SCREW,CAP,HEXAGON H 1/2-13X3.25 UOC:7E1	4
10	XDOZZ		5X050	129528	.GATE,MCS UOC:7E1	4
11	PFOZZ		5X050	239963	.BRACKET,EYE,ROTATIN UOC:7E1	8
12	PAOZZ	5310008206653	52793	CW7435-57C	.WASHER,LOCK 5/8 UOC:7E1	16
13	PAOZZ	5305007247228	80204	B1821BH063C300N	.SCREW,CAP,HEXAGON H 5/8-11X3.00 UOC:7E1	16
14	PAOZZ		50620	38-22LP	.PIN,LOCK 3/8 X 2-1/2 IN. SQ. SPRING UOC:7E1	4

END OF FIGURE

2	20
3-22	21

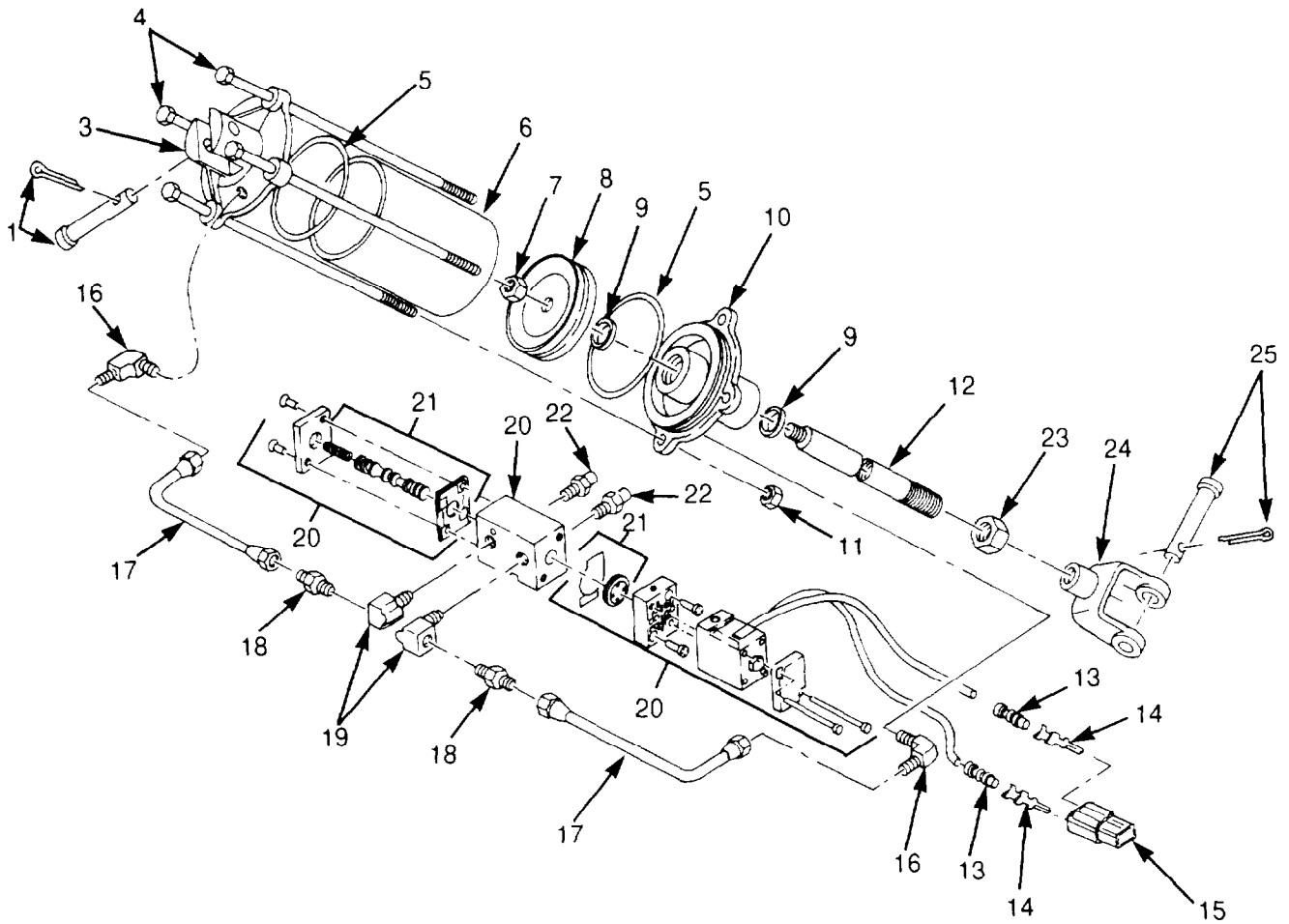


Figure 13. Air Cylinder Assembly.

## SECTION II

TM5-3805-264-14&amp;P

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
GROUP 1810 CARGO BODY						
FIG. 13 AIR CYLINDER ASSEMBLY						
1	PAOZZ	5315014469177	79146	019070	PIN,COTTER 1/8 X 1 INCH	1
2	PAOOZ		5X050	403607	CYLINDER,ACTUATING, QTY= 1 M917A1	1
2	PAOOZ		5X050	131341	QTY=5 M917A1MCS, PLAIN CYLINDER ASSY, CYLINDER,ACTUATING, ITEMS 3 THROUGH 22 UOC:7E1	4
	XAOZZ		5X050	403633	.COVER,REAR	1
4	PFOZA		5X050	403643	.TIE ROD,TENSIONING	4
4A	PFOZZ		5X050	403644	.SCREW	4
5	PAOZA		5X050	403638	.PACKINC,PREFORMED	2
6	XAOZZ		5X050	403627	.TUBE,CYLINDER	1
7	PAOZZ		5X050	403632	.RETAINING NUT 1/2-20	1
8	PAOZZ		5X050	403626	.PISTON	1
9	PAOZZ		5X050	403637	.SEAL,PLAIN	2
10	XAOZZ		5X050	403630	.COVER,FRONT	1
11	XAOZZ		96906	MS51922...	.NUT,SELF-LOCKING,HE 5/16-18	4
12	PAOZZ		5X050	403641	.PISTON ROD	1
13	PAOZZ	5975013105011	77060	12015323	.BOOT,DUST AND MOIST UOC:7E1	2
14	PAOZA	5999014064110	77060	12123583	.CONTACT,ELECTRICAL UOC:7E1	2
15	PAOZZ	5935012144163	77060	1201 0973	.CONNECTOR BODY,PLUG UOC:7E1	1
16	PAOZZ	4730014229420	79146	017017	.ELBOW,PIPE 0.25 IN UOC:7E1	2
17	MOOZZ		79146	010029X12+/ UOC:7E1	.TUBE,COPPER 12+/- IN. CUT TO FIT, MAKE FROM BULK P/N: 020003-7 (79146)	2
18	XAOZZ		79146	012037 UOC:7E1	.ADAPTER,STRAIGHT,PI 3/8X1/4 IN	2
19	XAOZZ		79146	012091 UOC:7E1	.ELBOW,PIPE TO TUBE 3/8X1/4 IN	2
20	PAOOO		5X050	403645 UOC:7E1	.VALVE,REGULATING,FL	1
21	XAOZZ		79146	320155 UOC: 7E1	.. REPAIR KIT,ELECTRIC	1
22	XAOZZ		79146	C30084. UOC: 7E1	.FILTER,ELEMENT,AIR	2
23	PAOZZ		5X050	403642	NUT, JAM 5/8-18	1
24	PAOZZ		5X050	403634	CLEVIS,ROD END	1
25	XAOZZ		79146	019067.	PIN,STRIGHT,HEADED 1/2 X 1-11/32 IN. INCLUDES COTTER PIN 1/8 X 1 IN	1

END OF FIGURE

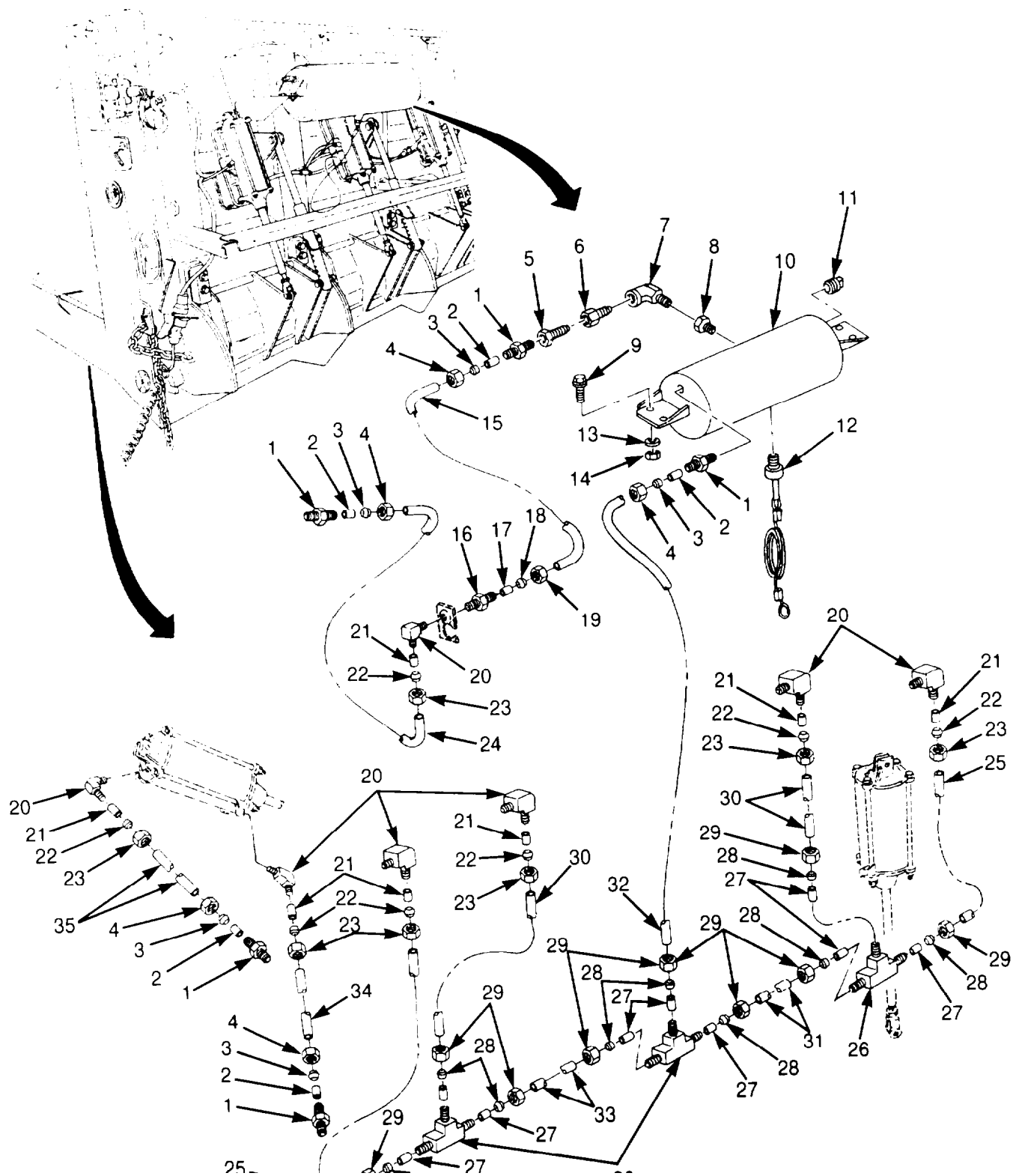


Figure 14. Air Tank, Lines and Fittings.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 1810 CARGO BODY						
FIG. 14 AIR TANK, LINES AND FITTINGS						
1	PAOZZ	4730010969128	93061	68NTA-6-6	ADAPTER,STRAIGHT,PI QTY=2 7A1, QTY=3 7E1	4
2	PAOZZ	4730010564990	93061	63NTA-6	.INSERT, TUBE FITTING	
3	PAOZA	4730010485260	93061	60NTA6	.SLEEVE,COMPRESSION	1
3	PAOZA	4730010487873	93061	61NTA-6	.NUT,TUBE COUPLING	1
5	PAOZZ	4730000444035	79470	C3109X8X6	BUSHING,PIPE	1
6	PAOZZ		79146	320001	UOC:7E1 VALVE,CHECK	1
7	PAOZZ	4730002892357	30780	2102-8-8	UOC:7E1 ELBOW,PIPE	1
8	PFOZZ	4730002783888	30780	0102-12-8	UOC:7E1 REDUCER,PIPE	
9	PAOZZ	5305000680510	80204	B1821BH038C100N	SCREW, CAP,HEXAGON H 3/8 16X1.00	4
10	PFOZZ		79146	035055	UOC:7E1 TANK,PRESSURE	
11	PAOZZ	4730000575555	30780	01HP-6	UOC:7E1 PLUG,PIPE 3/8	
12	PAOZZ	4820014184232	79146	032135	UOC:7E1 COCK,POPPET DRAIN	1
13	PAOZZ	5310000806004	96906	MS27183-14	UOC:7E1 WASHER,FLAT 3/8	4
14	PAOZZ	5310009359021	96906	MS51943-35	UOC:7A1 NUT ,SELF-LOCKING,HE 3/8 16	4
15	MOOZZ		5X050	245538X66	UOC:7E1 TUBE, NYLON 66 IN. MAKE FROM BULK PN: NT10006 (79470)	1
16	PAOZZ	4730010625570	93061	66NTA 6-4	UOC:7E1 ADAPTER,STRAIGHT,P1	
17	PAOZZ	4730010564990	93061	63NTA-6	UOC:7E1 .INSERT,TUBE FITTING	
18	PAOZA	4730010485260	93061	60NTA-6	UOC:7E1 .SLEEVE,COMPRESSION	1
19	PAOZA	4730010487873	93061	61PJTA-6	UOC:7E1 .NUT,TUBE COUPLING	1
20	PAOZZ	4730012443552	93061	VS269NTA-6-4	UOC:7E1 ELBOW,PIPE TO TUBE QTY=2 7A1, QTY=7 7E1	7
21	PAOZZ	4730010564990	93061	63NTA-6	.INSERT,TUBE FITTING	1
22	PAOZA	4730010485260	93061	60NTA-6	.SLEEVE,COMPRESSION,	1
23	PAOZA	4730010487873	93061	61NTA-6	.NUT,TUBE COUPLING	1
24	MOOZZ		5X050	245544X144	UOC:7E1 TUBE,NYLON 144 IN. MAKE FROM BULK PN: NT10006 (79470)	
25	MOOZZ		5X050	245542X31	UOC:7E1 TUBE,NYLON 31 IN. MAKE FROM BULK PN: NT10006 (79470)	2
26	PAOZZ	4730011343571	93061	264NTA-6	UOC:7E1 TEE,TUBE	3

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
27	PAOZZ	4730010564990	93061	63NTA-6	UOC:7E1 .INSERT,TUBE FITTING	1
28	PAOZA	4730010485260	93061	60NTA-6	.SLEEVE,COMPRESSION	1
29	PAOZA	4730010487873	93061	61NTA-6	.NUT,TUBE COUPLING	1
30	MOOZZ		5X050	245543X9	TUBE,NYLON 9 IN. MAKE FROM BULK PN: NT10006 (78470)	2
31	MOOZZ		5X050	245540X17	UOC:7E1 TUBE,NYLON 17 IN. MAKE FROM BULK PN: NT10006 (79470)	1
32	MOOZZ		5X050	245539X21	UOC:7E1 TUBE,NYLON 21 IN. MAKE FROM BULK PN: NT10006 (79470)	1
33	MOOZZ		5X050	245541X8	UOC:7E1 TUBE,NYLON 8 IN. MAKE FROM BULK PN: NT10006 (79470)	1
34	MOOZZ		5X050	245786X36	UOC:7E1 TUBE,NYLON 36 IN. MAKE FROM BULK PN: NT10006 (79470)	1
35	MOOZZ		5X050	245787X38	TUBE,NYLON 38 IN. MAKE FROM BULK PN: NT10006 (79470)	1

END OF FIGURE



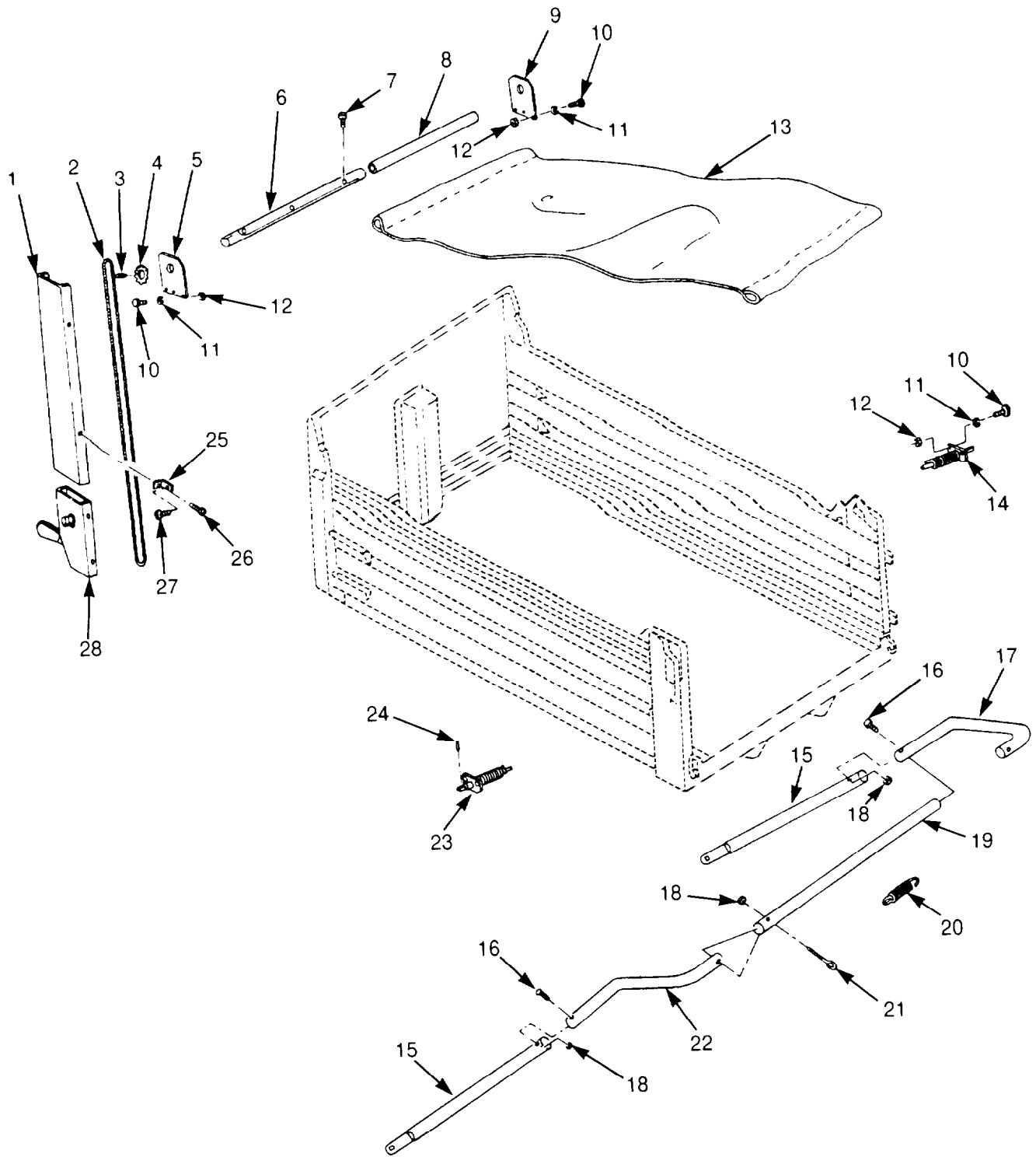


Figure 15. Cargo Cover and Component Parts (Sheet 1 of 2).



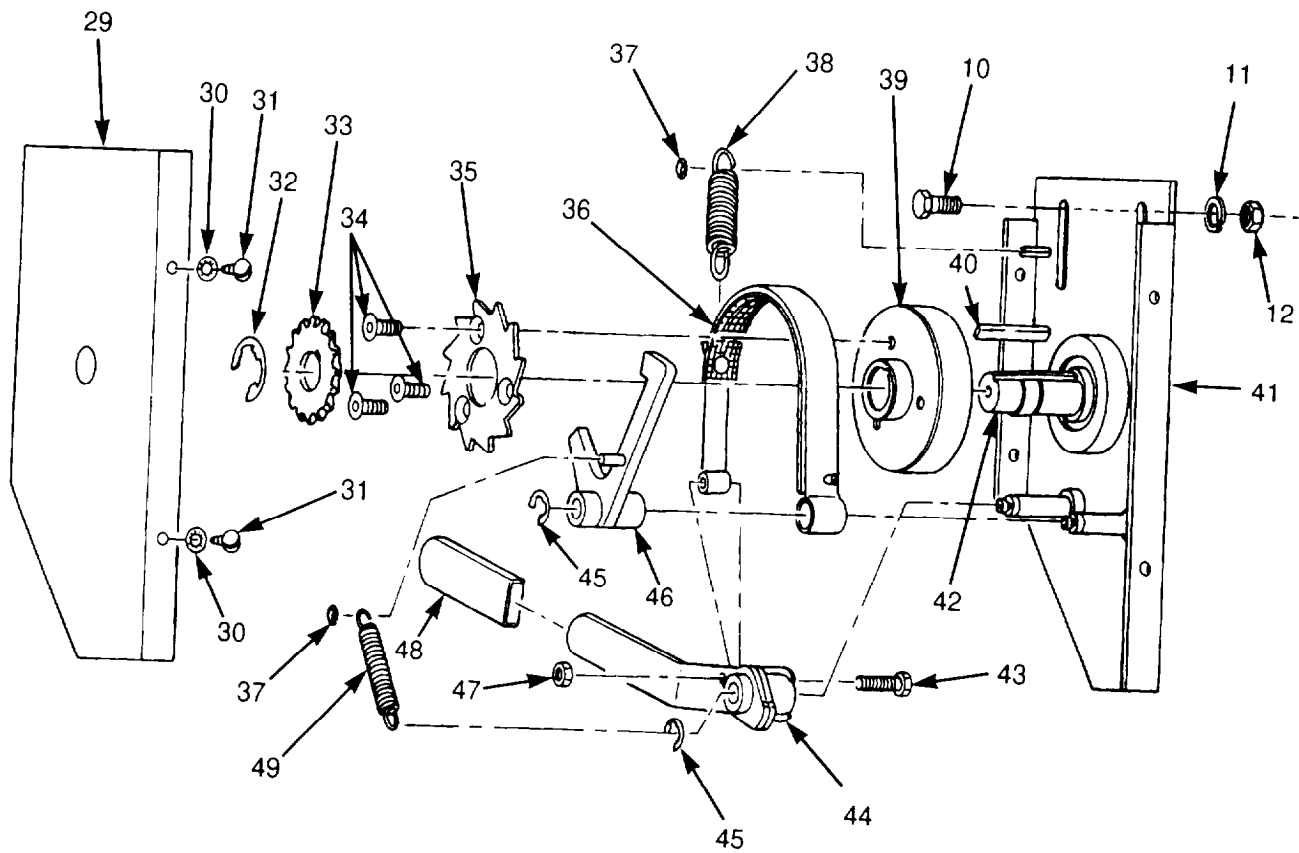


Figure 15. Cargo Cover and Component Parts (Sheet 2 of 2).



SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 22 BODY, CHASSIS, AND HULL ACCESSORY ITEMS						
GROUP 2201 CANVAS, RUBBER OR PLASTIC ITEMS						
FIG. 15 CARGO COVER AND COMPONENT PARTS						
1	PFOZZ		5B752	0311-960597	COVER,ACCESS	1
2	PAOZZ	3020014466412	5B752	0720-603557	CHAIN,ROLLER #40 X 168 IN	1
3	PAOZZ	5315014466724	5B752	0840-618512	KEY,WOODRUFF 1/4X1 1/2 IN	1
4	PAOZZ	3020014466409	5B752	0750-619594	SPROCKET,WHEEL	1
5	PFOZZ		5B752	0311-960306	PLATE,MOUNTING RIGHT SIDE	1
6	PFOZZ	5340014459481	5B752	0311-960273	CONTROL ROD LEFT SIDE	1
7	PAOZZ	5305009881725	96906	MS35206-281	SCREW,MACHINE 1/4-20X0.75	6
8	PFOZZ		5B752	0311-960267	CONTROL ROD RIGHT SIDE	1
9	PFOZZ		5B752	0311-960305	PLATE,MOUNTING LEFT SIDE	1
10	PAOZZ	5305000680510	80204	B1821BH038C100N	SCREW,CAP,HEXAGON H 3/8-16X1.00	12
11	PAOZZ	5310006379541	96906	MS35338-46	WASHER,LOCK 3/8 IN	12
12	PAOZZ	5310007320558	96906	MS51967-8	NUT,PLAIN,HEXAGON 3/8-16	12
13	PAOZZ		5B752	ECT 13 CRY	TARPAULIN	1
14	PAOZZ	5360014463122	5B752	0311-960278	SPRING,SPIRAL TORSI RIGHT SIDE	1
15	PAOZZ	3040014463790	5B752	0311-960280	SHAFT,SHOULDERED	2
16	PAOZZ	5305000712513	80204	B1821BH025C250N	SCREW,CAP,HEXAGON H 1/4-20X2.50	2
17	PAOZZ		5B752	0311-860590	CONTROL ROD RIGHT SIDE	1
18	PAOZZ	5310013336436	64678	23-10340-125	NUT,SELF-LOCKING,AS 1/4-20	4
19	PAOZZ	3040014463793	5B752	0311-860591	SHAFT,STRAIGHT REAR	1
20	PAOZZ	5360014467903	5B752	0715-619601	SPRING,HELICAL,COMP 4 IN	2
21	PAOZZ	5306009577531	10266	213 1-4 20X2 1-2	BOLT,EYE 1/4-20X2.50	2
22	PAOZZ	5340014460902	5B752	0311-860589	CONTROL ROD LEFT SIDE	1
23	PAOZZ	5360014463194	5B752	0311-960276	SPRING,SPIRAL,TORSI LEFT SIDE	1
24	PAOZZ	5315014475712	5B752	0835-691616	PIN,SPRING 1/4 X 1 5/8 IN	2
25	PFOZZ	5340014464859	5B752	0311-860599	BRACKET,ANGLE	4
26	PAOZZ	5305014468972	5B752	0825-670460	SCREW #14 X 1.00 IN	4
27	PAOZA	5305001156081	53047	D15263-1	SCREW,TAPPING #14 X 0.50 IN	8
28	PAOOZ	5340014475838	5B752	0311-960356	CRANK,HAND	1
29	PFOZZ		5B752	0311-860596	.COVER,ACCESS	1
30	PAOZZ	5310005501130	96906	MS35333-40	.WASHER,LOCK 1/4 IN	4
31	PAOZZ	5305009881725	96906	MS35206-281	SCREW,MACHINE 1/4-20x0.75	4
32	PAOZZ	5325005307968	96906	MS16624-1100	.RING,RETAINING 1 IN. EXTERNAL	1
33	PAOZZ	3020014466405	5B752	0750-619592	.SPROCKET WHEEL	1
34	PAOZZ	5305009847353	96906	MS35191-306	.SCREW,MACHINE 5/16-24X0.75	3
35	PAOZZ	3020014463785	5B752	0311-860740	.RATCHET,WHEEL	1
36	PAOZZ	2530014463340	5B752	0311-960739	.BRAKE BAND AND LINI	1
37	PAOZZ	5310011430542	11862	3909063	.PUSH ON NUT 1/4 IN	2
38	PAOZZ	5360014464054	5B752	0715-619800	.SPRING,HELICAL,COMP	1
39	PAOZZ	3040014464689	5B752	0311-860730	.BRAKE,DRUM	1
40	PFOZZ	5315014488804	5B752	0840-618513	.KEY,WOODRUFF 6MM X 2.25 IN	1
41	XAOZZ		5B752	0311-860743	.PLATE,BASE CRANK	1
42	PFOZZ	3040014463782	5B752	0311-860732	.SHAFT,SHOULDERED	1
43	PAOZZ	5305010750957	96906	MS51849-100	.SCREW,MACHINE 1/4-20X1.50	1

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
44	PFOZZ	5340014459354	5B752	0311-960736	. HANDLE,MANUAL CONTR	1
45	PAOZZ	5325008037301	96906	MS16624-1050	. RING,RETAINING 1/2 IN. EXTERNAL	2
46	PFOZZ	3040014464684	5B752	0311-960728	. PAWL	1
47	PAOZZ	5310000614650	96906	MS51943-31	. NUT,SELF-LOCKING,HE 1/4-20	1
48	PAOZZ	5340014457778	5B752	0765-618830	. GRIP,HANDLE	1
49	PAOZZ	5360014463190	5B752	0715-619602	. SPRING,HELICAL,COMP	1

END OF FIGURE



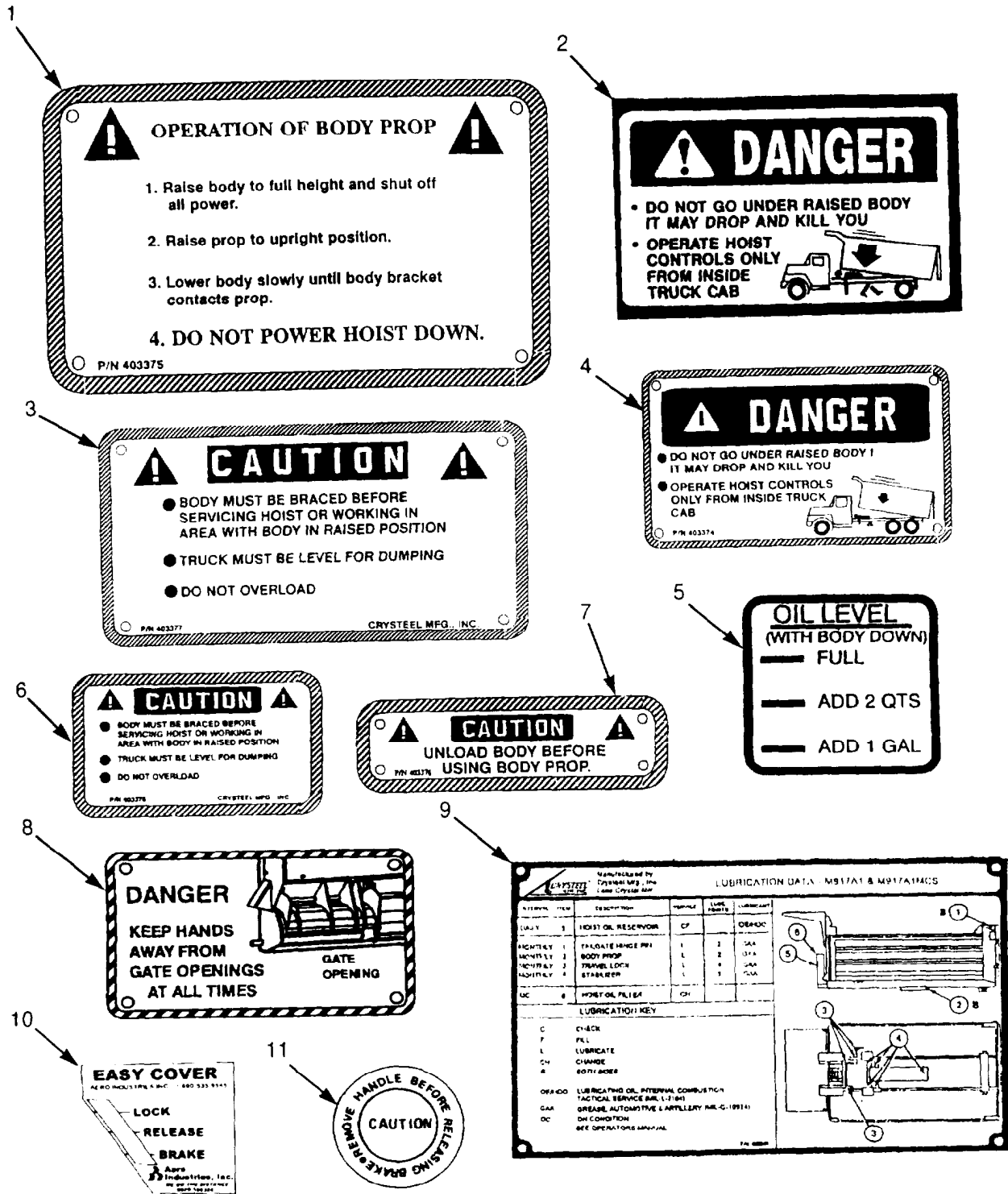


Figure 16. Decals.

SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
					GROUP 2210 DATA PLATES AND INSTRUCTION HOLDERS	
					FIG. 16 DECALS	
1	PAOZZ	7690014458976	5X050	403375	MARKER,IDENTIFICATI CAUTION, BODY PROP	2
2	PAOZZ	7690014459903	5X050	403374	MARKER, IDENTIFICATI DANGER	2
3	PAOZZ	7690014459933	5X050	403377	MARKER,IDENTIFICATI CAUTION	2
4	PAOZZ	7690014459897	5X050	401577	MARKER,IDENTIFICATI DANGER	1
5	PAOZZ	7690014458961	5X050	403492	MARKER,IDENTIFICATI OIL LEVEL	1
6	PAOZZ	7690014458967	5X050	403378	MARKER,IDENTIFICATI CAUTION	1
7	PAOZZ	7690014458973	5X050	403376	MARKER,IDENTIFICATI CAUTION, BODY PROP	2
8	PAOZZ		5X050	403514	PLATE,CONSTRUCTION DANGER GATE OPENING MCS UOC:7E1	4
9	PAOZZ		5X050	403541	PLATE,IDENTIFICATIO	1
10	PAOZZ		5B752	0920-590324	DECAL	1
11	PAOZZ		5B752	0920-590325	DECAL	1

END OF FIGURE





## SECTION II

## TM53805-264-14&amp;P

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
GROUP 24 HYDRAULIC AND FLUID SYSTEMS						
GROUP 2401 PUMP AND MOTOR						
FIG. 17 HYDRAULIC PUMP ASSEMBLY						
1	PAFFF		13829	308 9310 156	PUMP, HYDRAULIC	1
2	PAFZZ	5325007688563	13829	391-2686-063	.RIN, RETAINING	1
3	PAFZZ	5365013614609	13829	391 3383 069	.SPACER, SLEEVE	1
4	PAFZZ	5365012360717	13829	391 3381 040	.SPACER, RING	1
5	PAFZZ	5330012360469	82338	391 2883 119	.SEAL, PLAIN ENCASED	1
6	XAOZZ		13829	308 5030 201	.COVER, SHAFT END HOU	1
7	PAFZZ	4820012817854	13829	391 3681 001	.VALVE, CHECK	2
8	PAFZZ	5330012122222	38335	25316	.GASKET	2
9	PAFZZ	3110012602561	13829	391-0381-906	.BEARING, ROLLER, NEED	2
10	PAFZZ	5330308091052	13829	391 2882 051	.SEAL, NONMETALLIC ST	12
11	PAFZZ	3120013284294	13823	391-2185-913	.BEARING, WASHER, THRU	2
12	PAFZZ	3040014462408	13823	312 2920 130	.GEARSHAFT, SPUR 2.0 INCH	1
13	PAFZZ	5330013408159	13829	391 2884 019	.SEAL, PLAIN	2
14	XAOZZ		13829	308 8020 901	.HOUSING, GEAR	1
15	XAFZZ		13829	308 9414 024	.COVER, PORT END HOUS	1
16	PAFZZ	5310013408353	13829	391 3782 146	.WASHER, FLAT	5
17	PAFZZ	5305014471330	13829	391 1401 382	.SCREW, CAP, SOCKET HE 2 IN	3
18	PAFZZ	5310013408088	13829	391 1451 115	.NUT, PLAIN, HEXAGON	2
19	PAFZZ	5307014467531	13829	391 1125 437	.STUD, PLAIN	1
20	PAFZZ	5365014460280	13829	391 3283 052	.SPACER, SLEEVE	1

END OF FIGURE

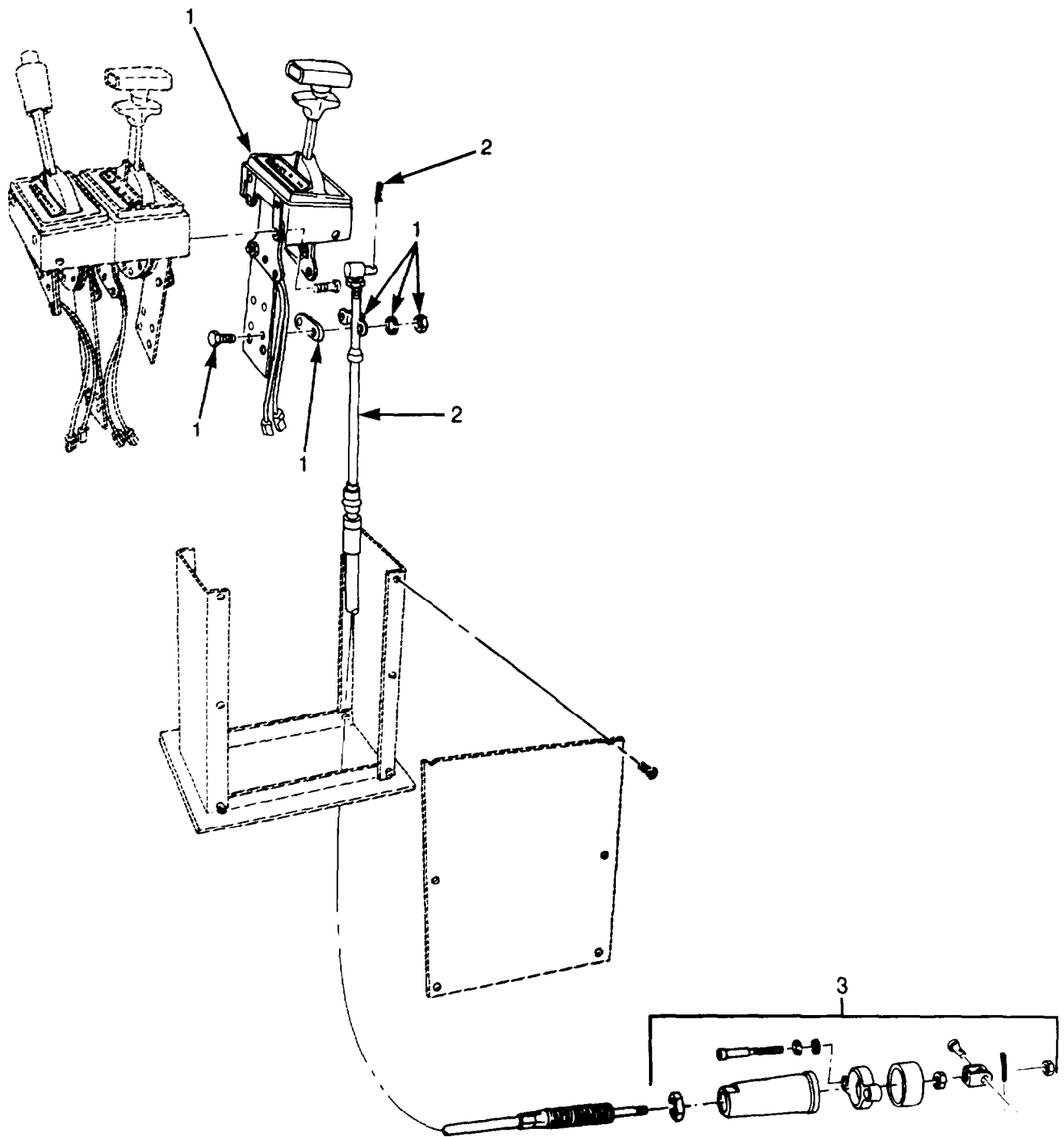


Figure 18. Dump Control and Cable

**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
GROUP 2403 HYDRAULIC CONTROLS AND/OR MANUAL CONTROLS						
FIG. 18 DUMP CONTROL AND CABLE						
1	PAOZZ	2590014427238	60602	55940-4	CONTROL ASSEMBLY,PU	1
2	PFOZZ	2590014457883	60602	45884-48	CONTROL ASSEMBLY,PU	1
3	PAOZZ	4820014468874	04710	01-5000-35	PARTS KIT,VALVE	1

END OF FIGURE

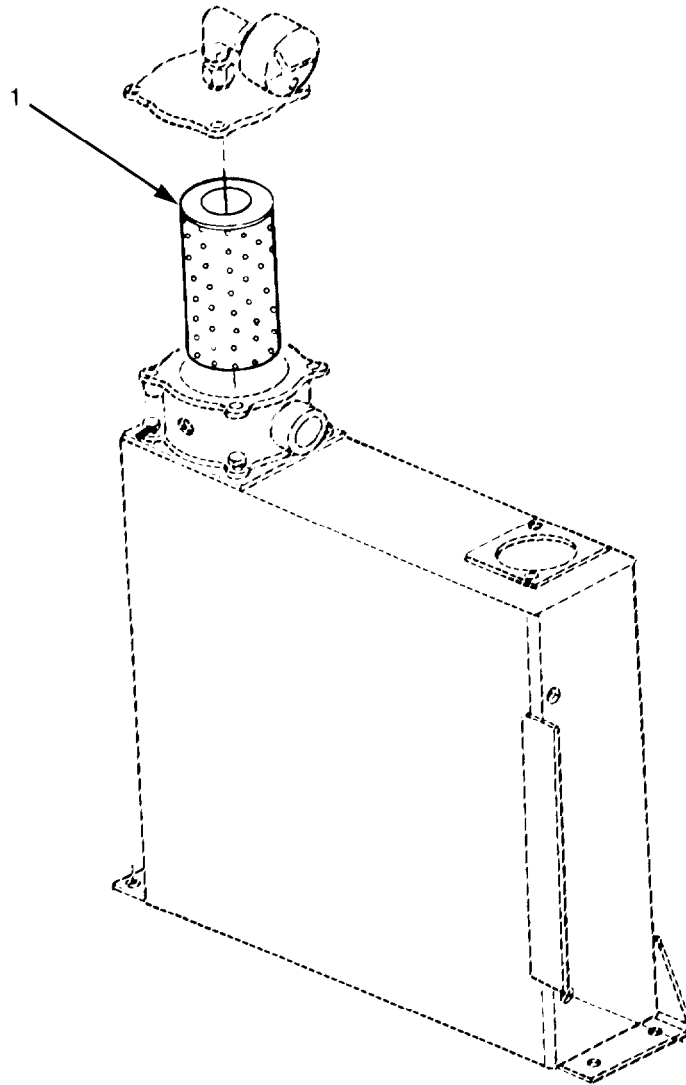


Figure 19. Filter Element, Hydraulic.

**SECTION II**

**TM5-3805-264-14&P**

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR			PART		
NO	CODE	NSN	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY

GROUP 2406 STRAINERS, FILTERS, LINES  
AND FITTINGS, ETC.

FIG. 19 FILTER ELEMENT, HYDRAULIC

1	PAOZZ	4330014463337	5X050	403366	FILTER ELEMENT,FLUI 10 MICRON	1
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END OF FIGURE

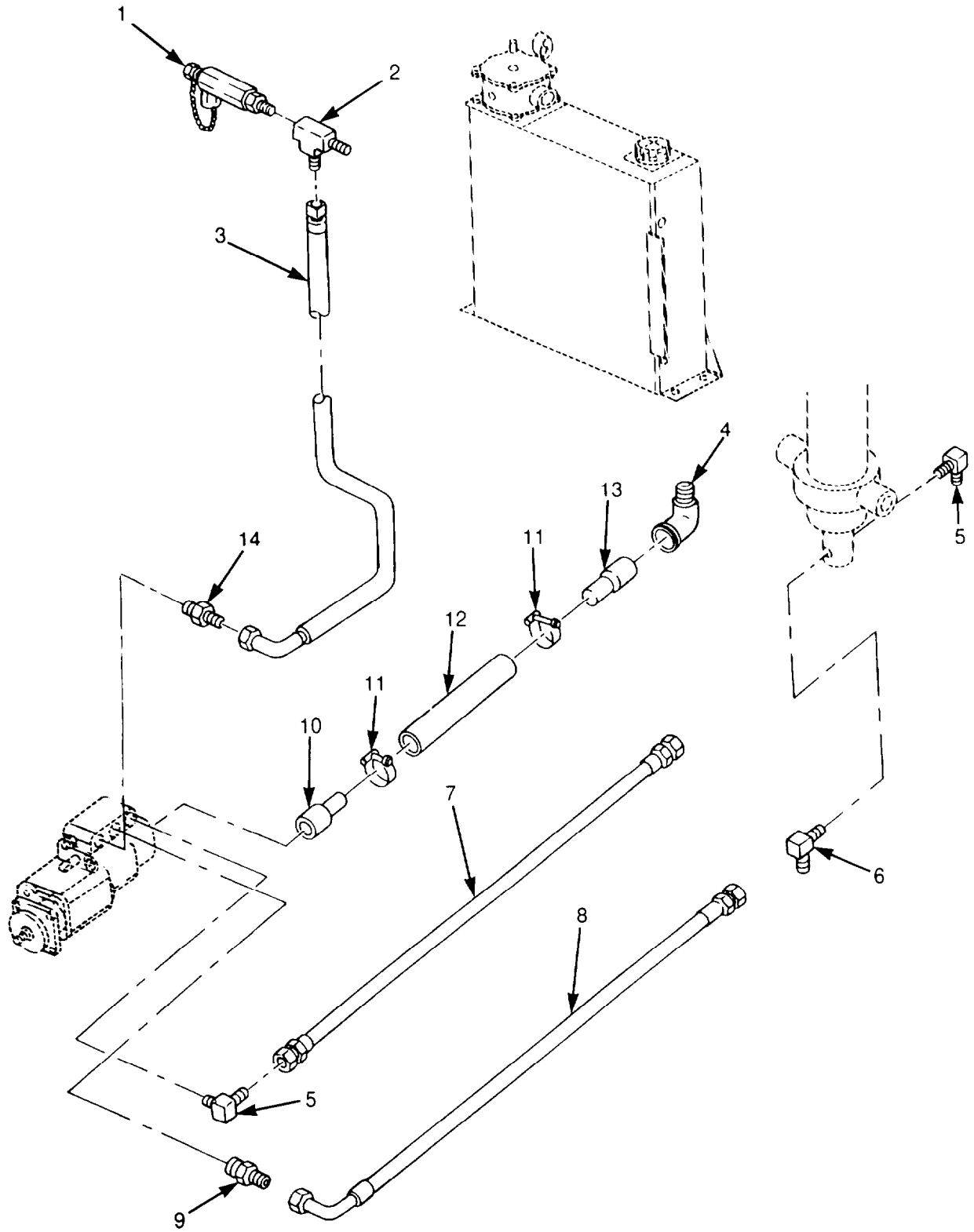


Figure 20. Hydraulic Hoses and Fittings.

**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
GROUP 2406 STRAINERS, FILTERS, LINES AND FITTINGS, ETC.						
FIG. 20 HYDRAULIC HOSES AND FITTINGS						
1	PAFZZ	4820012988416	81349	M81940/2-1	VALVE,BLEEDER,HYDRA	1
2	PAOZZ		5X050	239932	TEE,PIPE	1
3	PAOZZ	4720014461508	5X050	403459	HOSE ASSEMBLY,NONME	1
4	PAOZZ	4730010285540	30780	1-1/2 CDS	ELBOW,PIPE	1
5	PAOZZ	4730010117736	96906	MS51527-A12	ELBOW,TUBE TO BOSS	2
6	PAOZZ	4730008225609	00624	MS51527A8	ELBOW,TUBE TO BOSS	1
7	PAOZZ	4720014461481	5X050	403458	HOSE ASSEMBLY,NONME	1
8	PAOZZ	4720014461541	5X050	403457	HOSE ASSEMBLY,NONME	1
9	PAOZZ	4730010464034	30780	0503-12-8	ADAPTER,STRAIGHT,TU	1
10	PAOZZ	4730014462112	60827	FT-1215-ZP	ADAPTER,STRAIGHT,PI	1
11	PAOZZ	4730014462107	9X737	HC150	CLAMP,HOSE 1.91-2.22 INCH	2
12	PAOZZ	4720014461729	5X050	403456	HOSE,NONMETALLIC 1.50 ID X 24.00 INCH	1
13	PAOZZ	4730014463255	60827	FT-150-ZP	HOSE BARB	1
14	PAOZZ	4730001731881	96906	MS51525A12-16	ADAPTER,STRAIGHT,TU	1

END OF FIGURE

1  
2-14

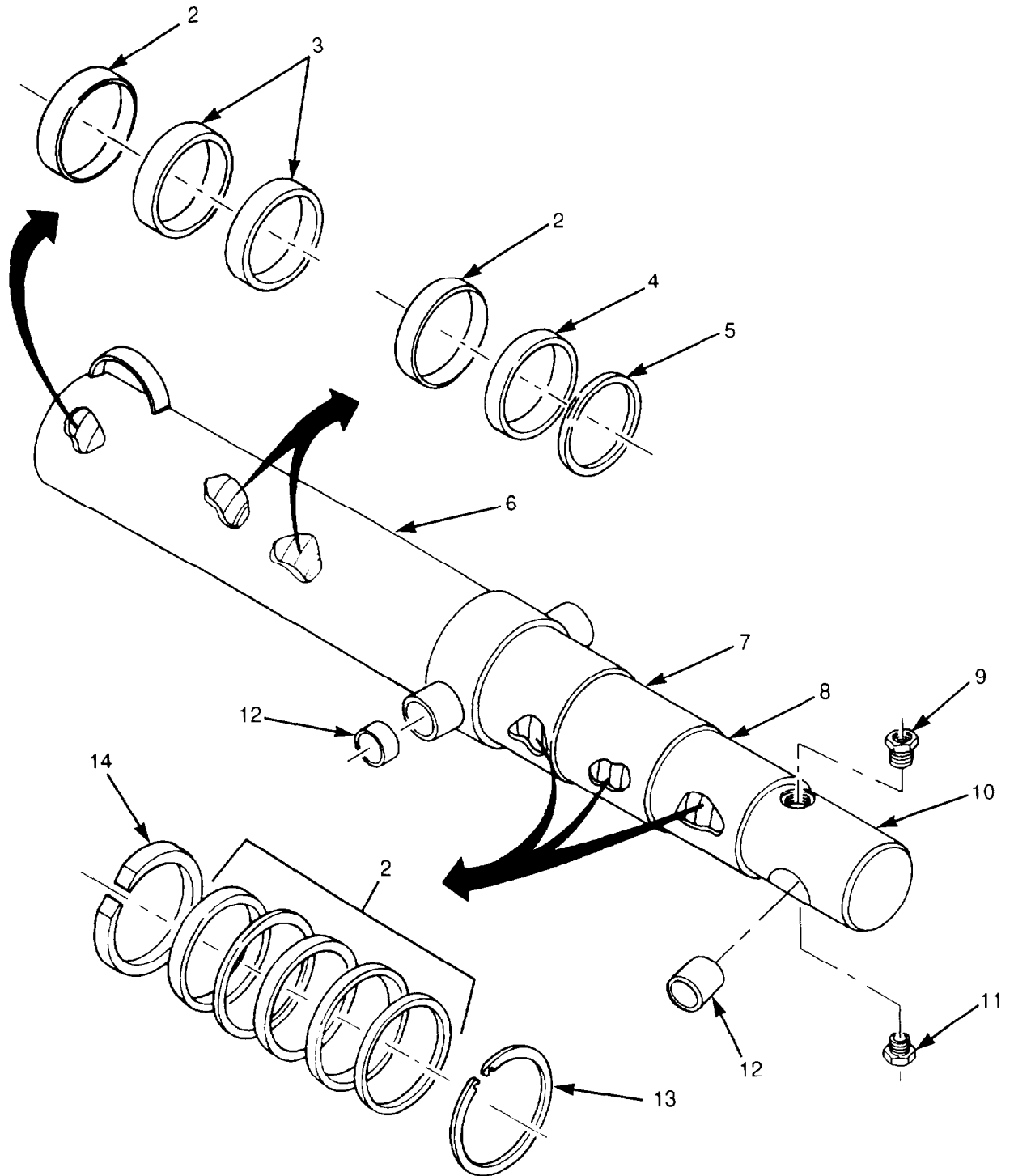


Figure 21. Cylinder Assembly, Hoist.



SECTION II			TM5-3805-264-14&P			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
#GROUP 2407 HYDRAULIC CYLINDERS						
FIG. 21 CYLINDER ASSEMBLY, HOIST						
1	PFFFZ	3040014463620	5X050	403236	CYLINDER,TELESCOPIC	1
2	PAFZA	5330014471113	02249	034-55008-53118	.PARTS KIT,SEAL REPL INCLUDES ALL WEAR RINGS, GUIDE RINGS, RET. RINGS, WIPERS, RET. WIPERS, U-CUP SEALS	1
3	PAFZZ	3040014464665	02249	B12071-0500	.RING,PISTON 5 INCH	2
4	PAFZZ	3040014366277	02249	B12071-0400	.RING,PTSTON 4 INCH	1
4	PAFZZ	3040014466274	02249	B12071-0300	.RING,PISTON 3 INCH	1
5	PAFZZ	3040014466280	02249	0263914	.RING,PISTON 3.5 INCH	1
5	PAFZZ		02249	0263984	.RING,PISTON 4.5 INCH	2
6	XDFZZ		02249	002-55074-04844	.BARREL ASSEMBLY	1
7	XDFZZ		02249	062-50049-04752	.SLEEVE ASSY 5 INCH	1
8	XDFZZ		02249	062-40044-04689	.SLEEVE ASSY 4 INCH	1
9	PAFZZ	5365013403898	01276	900598-12S	.PLUG,MACHINE THREAD 1 1/16-12, WITH O-RING	1
10	XDFZZ		02249	063-30135-04992	.PLUNGER ASSY 3 INCH	1
11	PAFZZ	5365012174133	01276	900598-8S	.PLUG,MACHINE THREAD 3/4-16, WITH O-RING	1
12	PAFZZ	5365014464322	02249	035-17002-00225	.BUSHING,NONMETALLIC	3
13	PAFZZ	5325014464351	02249	083-10005-00562	.RING,RETAINING 5 INCH	1
13	PAFZZ	5325014464052	02249	083-50003-00462	.RING,RETAINING 4 INCH	1
13	PAFZZ	5325014464053	02249	083-50003-00362	.RING,RETAINING 3 INCH	1
14	PAFZZ	5325014469182	02249	B9971-00550	.RING,RETAINING 5 INCH	1
14	PAFZZ	5325014469204	02249	083-50002-00450	.RING,RETAINING 4 INCH	1
14	PAFZZ	5325014469210	02219	083-50002-00350	.RING,RETAINING 3 INCH	1

END OF FIGURE

2-17 3-7

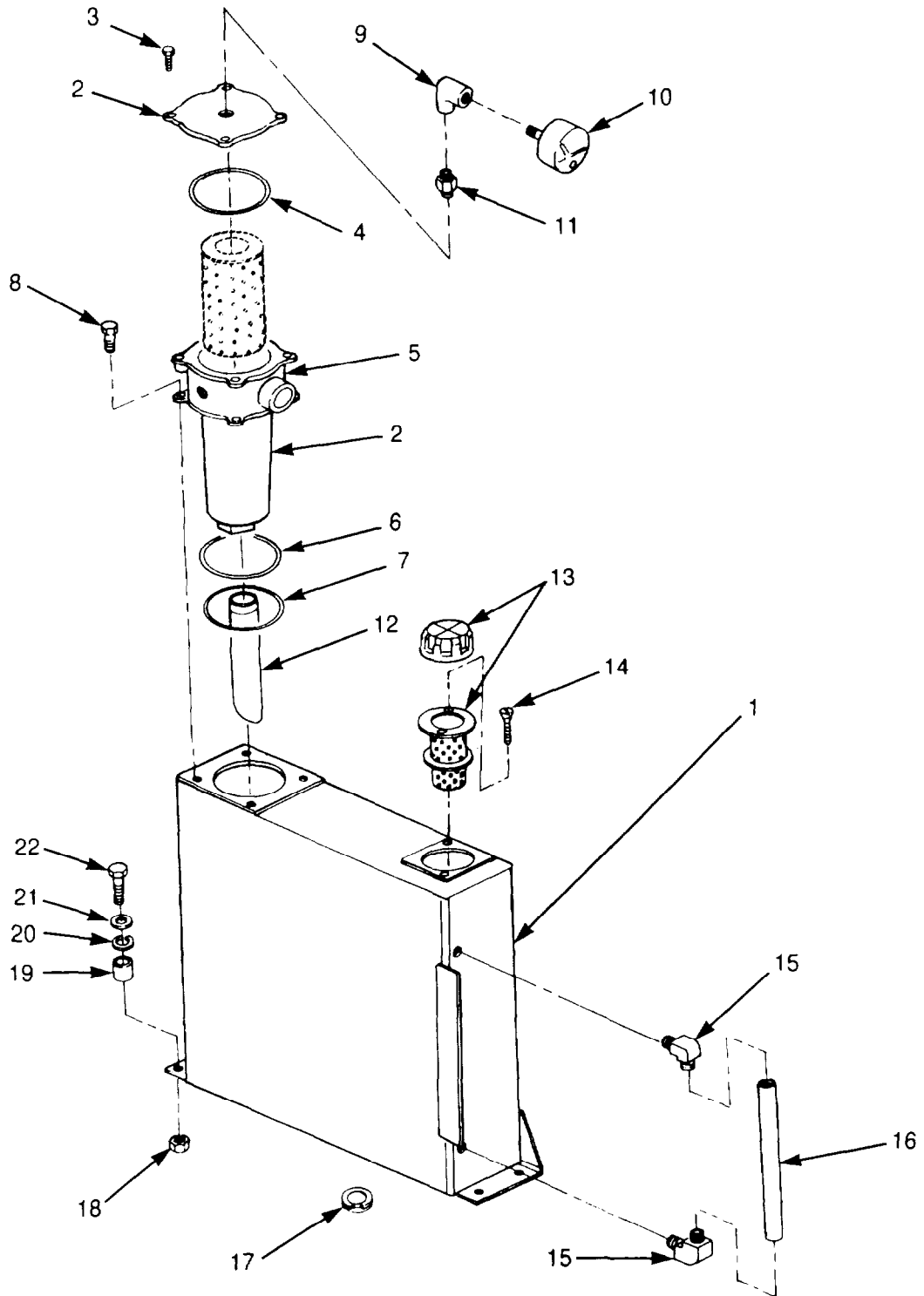


Figure 22. Hydraulic Reservoir Assembly.

**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
GROUP 2408 LIQUID TANKS OR RESERVOIRS						
FIG. 22 HYDRAULIC RESERVOIR ASSEMBLY						
1	PG00Z	2590014470748	5X050	126615	TANK,OIL,HYDRAULIC	1
2	PFOOZ	2940014463570	5X050	403365	.ADAPTER,HOUSING	1
3	PAOZZ	5306012719425	60827	PS-0001	..BOLT,SELF-LOCKING 5/16-18X1.00 INCH	4
4	PAOZA	5330014474034	60827	251-70-BN	.. PACKING,PREFORMED	1
5	XAOZZ		60827	TR-1200-01	..HOUSING,PORT	1
6	PAOZA	5330014474040	60827	246-70-BN	.. PACKING,PREFORMED	1
7	PAOZA	5330014473098	60827	TSS-355-70-BN	.. PACKING,PREFORMED	1
8	PAOZZ	5305000680510	80204	B1821BH038C100N	.SCREW,CAP,HEXAGON H 3/8-16X1.00	4
9	PAOZZ	4730002041272	30780	2102-2-2	.ELBOW,PIPE	1
10	PAOZZ	6685014471188	5X050	403367	.GAGE,DIFFERENTIAL,D	1
11	PAOZZ	4730009213624	96906	MS51953-6	.NIPPLE,PIPE 1/8NPT X 1.50	1
12	XDOZZ		5X050	403368	.PIPE,SPECIAL 1.50 X 18.75 INCH	1
13	PAOZZ	2590014461903	5X050	403246	.CAP,FILLER OPENING	1
14	PAOZZ	5305009931848	96906	MS35207-265	.SCREW,MACHINE 10-32X0.75	6
15	PAOZZ	4730000686616	79470	69X6	.ELBOW,PIPE TO TUBE	2
16	MOOZZ		5X050	239635X1.50	.TUBE,SIGHT 3/8 OD X 1.50 FT, MAKE FROM BULK PN: PT24006NA (79470)	1
17	PAOZZ	4730011547939	70433	4057031	.PLUG,PIPE,MAGNETIC 3/4 NPT, MAGNETIC	1
18	PAFZZ	5310004883889	96906	MS51943-39	NUT,SELF-LOCKING.HE	4
19	XDOZZ		5X050	237379	SPACER	4
20	PAOZZ	5310005847888	96906	MS35338-51	WASHER,LOCK 3/4	4
21	PAOZZ	5310008098533	96906	MS27183-23	WASHER,FLAT 3/4	4
22	PAOZZ	5305000712071	80204	B1821BH050C200N	SCREW,CAP,HEXAGON H 1/2-13X2.00	4

END OF FIGURE



**SECTION II**

**TM5-3805-264-14&P**

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES(UOC)	(7) QTY
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GROUP 95 GENERAL USE STANDARDIZED PARTS

GROUP 9501 HARDWARE SUPPLIES AND BULK MATERIEL, COMMON

FIG. BULK

1	PAOZZ	5510002559269	81349	MILL2037	LUMBER,HARDWOOD	V
2	PAOZZ		79146	020003-7	TUBE,METALLIC 3/8 IN. OD COPPER UOC:7E1	V
3	PAOZZ	4720009254955	79470	PT24006NA	TUBING,NONMETALLIC 3 / 8 O D	V

END OF FIGURE

**BULK-1**



## SECTION IV

## TM5-3805-264-14&amp;P

## CROSS-REFERENCE INDEXES

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER	FIG.	ITEM
	FIG.	ITEM			
5310-00-003-9174	11	3	5330-00-809-1052	17	10
4730-00-044-4035	14	5	5310-00-809-8533	22	21
4730-00-050-4208	10	14	5315-00-809-8786	11	19
5999-00-057-2929	4	7	5310-00-820-6653	12	12
4730-00-057-5555	14	11	4730-00-822-5609	20	6
5310-00-061-4650	7	11	5310-00-823-8804	7	10
	7	19		7	20
	15	47	5935-00-833-8561	4	10
5310-00-061-4651	9	2	5970-00-833-8562	4	9
	10	11	5310-00-833-8567	4	6
	11	4	5935-00-856-3513	1	3
5305-00-068-0508	7	9		7	2
	7	21	4730-00-921-3624	22	11
5305-00-068-0510	14	9	4720-00-925-4955	BULK	3
	15	10	5310-00-935-9021	11	18
	22	8		14	14
4730-00-068-6616	22	15	5305-00-947-4358	10	3
5305-00-071-2071	12	4	5306-00-957-7531	15	21
	22	22	5305-00-984-7353	15	34
5305-00-071-2076	9	9	5305-00-988-1725	15	7
	12	9		15	31
5305-00-071-2513	15	16	5305-00-989-7434	5	1
5310-00-080-6004	14	13	5305-00-993-1848	22	14
5305-00-115-6081	15	27	4730-01-011-7736	20	5
5935-00-153-4397	7	5	4730-01-028-5540	20	4
	7	13	4730-01-046-4034	20	9
4730-00-173-1881	20	14	4730-01-048-5260	14	3
4730-00-204-1272	22	9		14	18
5510-00-255-9269	BULK	1		14	22
4730-00-278-3888	14	8		14	28
4730-00-289-2357	14	7	4730-01-048-7873	14	4
5310-00-347-0021	2	5		14	19
5940-00-399-6676	4	8		14	23
5310-00-409-3333	10	4		14	29
5310-00-488-3889	9	10	4730-01-056-4990	14	2
	12	3		14	17
	22	18		14	21
5325-00-530-7968	15	32		14	27
5310-00-550-1130	15	30	4730-01-062-2570	14	16
5310-00-584-7888	22	20	5305-01-075-0957	15	43
5310-00-637-9541	15	11	6220-01-086-5691	3	1
5315-00-721-8370	10	9	6220-01-095-0011	3	4
5305-00-724-7222	9	4	4730-01-096-9128	14	1
	10	13	4730-01-134-3571	14	26
	11	2	5310-01-143-0542	15	37
5305-00-724-7228	12	13	4730-01-154-7939	22	17
5305-00-725-2317	11	14	5305-01-162-2358	11	8
5310-00-732-0558	15	12	5325-01-163-6558	3	2
5325-00-768-8563	17	2	5330-01-212-2222	17	8
5325-00-803-7301	15	45	5935-01-214-4163	13	15

## SECTION IV

## TM5-3805-264-14&amp;F

## CROSS-REFERENCE INDEXES

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		STOCK NUMBER		
	FIG.	ITEM		FIG.	ITEM
5935-01-214-5259	7	8	7690-01-445-9897	16	4
5365-01-217-4133	21	11	7690-01-445-9903	16	2
5975-01-226-8078	4	4	7690-01-445-9933	16	3
	8	2	6220-01-445-9978	3	5
5975-01-230-4370	4	5	6220-01-445-9981	3	6
5330-01-236-0469	17	5	5365-01-446-0280	17	20
5365-01-236-0717	17	4	5340-01-446-0902	15	22
4730-01-244-3552	14	20	5340-01-446-0947	11	15
3110-01-260-2561	17	9	5930-01-446-0980	5	3
5306-01-271-9425	22	3	4723-01-446-1481	20	7
4820-01-281-7854	17	7	4720-01-446-1508	20	3
5325-01-283-3513	3	3	4720-01-446-1541	20	8
5305-01-289-5000	12	7	4720-01-446-1729	20	12
4820-01-298-8416	20	1	2510-01-446-1842	10	8
5935-01-308-7866	4	2	2590-01-446-1903	22	13
5935-01-308-8599	8	4	4730-01-446-2107	20	11
5975-01-310-5011	6	3	4730-01-446-2112	20	10
	7	6	3040-01-446-2408	17	12
	13	13	3040-01-416-2413	11	20
3120-01-328-4294	17	11	5315-01-446-3121	9	8
5930-01-332-0680	2	2	5360-01-146-3122	15	14
5340-01-332-6696	4	11	5360-01-446-3190	15	49
5310-01-333-6536	15	18	5360-01-446-3194	15	23
5930-01-336-0919	5	2	4730-01-446-3255	20	13
5975-01-339-9574	6	4	3330-01-146-3337	19	1
5365-01-340-3898	21	9	2530-01-446-3340	15	36
5310-01-340-4088	17	18	2940-01-146-3570	22	2
5330-01-340-8159	17	13	3040-01-146-3620	21	1
5310-01-310-8353	17	16	3040-01-446-3782	15	42
5975-01-355-6985	7	4	3020-01-446-3785	15	35
	7	14	3040-01-446-3790	15	15
5365-01-361-4609	17	3	3040-01-446-3793	15	19
5940-01-366-1563	7	17	5325-01-446-4051	21	13
5999-01-406-4110	13	14	5325-01-446-4052	21	13
4820-01-418-4232	14	12	5325-01-446-4053	21	13
4730-01-422-9420	13	16	5360-01-446-4054	15	38
5999-01-422-9740	7	7	5365-01-446-4322	21	12
	8	3	3040-01-446-4665	21	3
2590-01-442-7238	18	1	3340-01-446-4684	15	46
5340-01-445-7778	15	48	3040-01-446-4689	15	39
5340-01-445-7781	3	7	5340-01-446-4859	15	25
2590-01-445-7883	18	2	5340-01-446-4927	11	13
7690-01-445-8961	16	5	5340-01-446-5137	11	12
7690-01-445-8967	16	6	3040-01-446-6274	21	4
7690-01-445-8973	16	7	3040-01-446-6277	21	4
7690-01-445-8976	16	1	3030-01-446-6280	21	5
6150-01-445-9130	4	1	6150-01-446-6344	8	1
5340-01-445-9354	15	44	6150-01-446-6345	6	1
5340-01-445-9481	15	6	3020-01-446-6415	15	33
5340-01-445-9486	9	3	3020-01-446-6409	15	4



**SECTION II****TM5-3805-264-14&P**

## CROSS-REFERENCE INDEXES

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		FIG.	ITEM
	FIG.	STOCK NUMBER		
3020-01-446-6412	15	2		
5315-01-116-6724	15	3		
2540-01-346-6831	11	16		
5307-01-446-7531	17	19		
5360-01-446-7903	15	20		
4820-01-446-8874	18	3		
5305-01-446-8972	15	26		
5315-01-446-9177	13	1		
5325-01-446-9182	21	14		
5325-01-446-9204	21	14		
5325-01-446-9210	21	14		
5315-01-417-0479	11	9		
5315-01-447-0480	10	1		
5315-01-447-0481	11	10		
2590-01-447-0748	22	1		
5330-01-447-1113	21	2		
6685-01-447-1188	22	10		
5305-01-447-1330	17	17		
3040-01-447-2738	13	2		
5330-01-447-4034	22	4		
5330-01-447-4010	22	6		
5315-01-447-5712	15	24		
5340-01-447-5838	15	28		
5315-01-448-8804	15	40		
5340-01-448-8998	11	7		
7690-01-449-1447	16	11		
7690-01-449-1470	16	10		

## SECTION IV

## TM5-3805-264-14&amp;P

## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
7J764	BNT220			1	5
7J764	BNT22002			1	4
02249	B12071-0303	3040-01-446-6274		21	4
02249	B12071-0400	3040-01-446-6277		21	4
02249	B12071-0500	3040-01-446-4665		21	3
80204	B1821BH025C075N	5305-00-068-0508		7	9
				7	21
80204	B1821BH025C250N	5305-00-071-2513		15	16
80204	B1821BH038C100N	5305-00-068-0510		14	9
				15	10
				22	8
80204	B1821BH038C150N	5305-00-725-2317		11	14
80204	B1821BH050C200N	5305-00-071-2071		12	4
				22	22
80204	B1821BH050C325N	5305-00-071-2076		9	9
				12	9
80204	B1821BH063C200N	5305-00-724-7222		9	4
				10	13
				11	2
80204	B1821BH063C300N	5305-00-724-7228		12	13
80204	B1821BH075C400N	5305-00-947-4358		10	3
9X737	B30LXP	2540-01-436-6831		11	16
12662	B490A	6220-01-445-9978		3	5
12662	B490R	6220-01-445-9981		3	6
02249	B9971 00550	5325-01-446-9182		21	14
7J764	CM10P			1	8
52793	CW7435-57C	5310-00-820-6653		12	12
7J764	C21PA03			1	13
79470	C3109X8X6	4730-00-044-4035		14	5
53047	D15263-1	5305-00-115-6081		15	27
5B752	ECT 13 CRY			15	13
60827	FT-1215-ZP	4730-01-446-2112		20	10
60827	FT-150-ZP	4730-01-446-3255		20	13
9X737	HC150	4730-01-446-2107		20	11
81349	MILL2037	5510-00-255-9269		BULK	1
96906	MS15003-1	4730-00-050-4208		10	14
96906	MS16562-51	5315-00-809-8786		11	19
96906	MS16624-1050	5325-00-803-7301		15	45
96906	MS16624-1100	5325-00-530-7968		15	32
96906	MS27183-14	5310-00-080-6004		14	13
96906	MS27183-23	5310-00-809-8533		22	21
96906	MS27183-9	5310-00-823-8804		7	10
				7	20
96906	MS35191-306	5305-00-984-7353		15	34
96906	MS35206-281	5305-00-988-1725		15	7
				15	31
96906	MS35207-263	5305-00-989-7434		5	1
96906	MS35207-265	5305-00-993-1848		22	14
96906	MS35333-40	5310-00-550-1130		15	30
96906	MS35338-46	5310-00-637-9541		15	11
96906	MS35338-51	5310-00-584-7888		22	20

## SECTION IV

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## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
96906	MS51525A12-16		4730-00-173-1881	20	14
96906	MS51527-A12		4730-01-011-7736	20	5
00624	MS51527A8		4730-00-822-5609	20	6
96906	MS51849-100		5305-01-015-0957	15	43
96906	MS51871-13		5305-01-289-5000	12	7
96906	MS51922...			13	11
96906	MS51943-31		5310-00-061-4650	7	11
				7	19
				15	47
96906	MS51943-35		5310-00-935-9021	11	18
				14	14
96906	MS51943-39		5310-00-488-3889	9	10
				12	3
				22	18
96906	MS51943-43		5310-00-061-4651	9	2
				10	11
				11	4
96906	MS51943-45		5310-00-409-3333	10	4
96906	MS51953-6		6730-00-921-3624	22	11
96906	MS51967-8		5310-00-732-0558	15	12
81349	M81940/2-1		4820-01-298-8416	20	1
80205	NAS561-E-48		5315-00-721-8370	10	9
60827	PS-0001		5306-01-271-9425	22	3
79470	PT24006NA		4720-00-925-4955	BULK	3
60827	TR-1200-01			22	5
60827	TSS-355-70-BN			22	7
93061	VS269NTA-6-4		4730-01-244-3552	14	20
7J764	WE11H415E			1	9
7J764	WE11H416E			1	10
7J764	WE11H417E			1	11
7J764	WE11H418E			1	12
02249	002-55074-04844			21	6
04710	01-5000-35		4820-01-446-8874	18	3
30780	01HP-6		4730-00-057-5555	14	11
79146	010029x12+/-			13	17
30780	0102-12-8		4730-00-278-3888	14	8
79146	012037.			13	18
79146	012091.			13	19
79146	017017		4730-01-422-9420	13	16
79146	019067.			13	25
79146	019070		5315-01-446-9177	13	1
79146	020003-7			BULK	2
02249	0263914		3040-01-446-6280	21	5
02249	0263984			21	5
79146	030084.			13	22
5B752	0311-860589		5340-01-446-0902	15	22
5B752	0311-860590			15	17
5B752	0311-860591		3040-010-446-3793	15	19
5B752	0311-860596			15	29
5B752	0311-860599		5340-01-446-4859	15	25
5B752	0311-860730		3040-01-446-4689	15	39

## SECTION IV

## TM5-3805-264-14&amp;P

## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
5B752	0311-860732		3040-01-446-3782	15	42
5B752	0311-860740		3020-01-446-3785	15	35
5B752	0311-860743			15	41
53752	0311-960267			15	8
5B752	0311-960273		5340-01-445-9481	15	6
5B752	0311-960276		5360-01-446-3194	15	23
5B752	0311-960278		5360-01-446-3122	15	14
5B752	0311-960280		3040-01-446-3790	15	15
5B752	0311-960305			15	9
5B752	0311-960306			15	5
5B752	0311-960356		5340-01-447-5838	15	28
5B752	0311-960597			15	1
5B752	3311-960728		3040-01-446-4684	15	46
5B752	0311-960736		5340-01-445-9354	15	44
5B752	0311-960739		2530-01-446-3340	15	36
79146	032135		4820-01-418-4232	14	12
02249	034-55008-53118		5330-01-441-1113	21	2
02249	035-17002-00225		5365-01-446-4322	21	12
19146	035055			14	10
30780	0503-12-8		4730-01-046-4034	20	9
64678	06 22309 -048			2	6
64678	06-24618-000			2	1
02249	062-40044-04689			21	8
02249	062-50049-04752			21	7
02249	063-30135-04992			21	10
5B752	0715-619601		5360-01-446-7903	15	20
5B752	0715-619602		5360-01-446-3190	15	49
5B752	0715-619800		5360-01-446-4054	15	38
5B752	0720-603557		3020-01-446-6412	15	2
5B752	0750-619592		3020-01-446-6405	15	33
5B752	0750-619594		3020-01-446-6409	15	4
5B752	0765-618830		5340-01-445-7778	15	48
5B752	0825-670460		5305-01-446-8972	15	26
02249	083-10005-00562		5325-01-446-4051	21	13
02249	083-50002-00350		5325-01-446-9210	21	14
02249	083-50002-00450		5325-01-446-9204	21	14
02249	083-50003-00362		5325-01-446-4053	21	13
02249	083-50003-00462		5325-01-446-4052	21	13
5B752	0835-691616		5315-01-447-5712	15	24
5B752	0840-618512		5315-01-446-6724	15	3
5B752	0843-618513		5315-01-448-8804	15	40
5B752	0920-590324		7690-01-449-1470	16	10
5B752	0920-590325		7690-01-449-1447	16	11
30780	1-1/2 CDS		4730-01-028-5540	20	4
13548	10004R		6220-01-095-0011	3	4
62793	104J005-28		5310-00-003-9174	11	3
77326	11-700		5935-00-856-3513	1	3
				7	2
77326	11-720		5935-00-153-4397	7	5
				7	13
77326	11-761		5975-01-355-6985	7	4

## SECTION IV

## TM5-3805-264-14&amp;P

## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
77326	11-761		5975-01-355-6985	7	14
77326	11-763			7	3
5X050	110543			10	2
5X050	117122		5315-01-447-0481	11	10
77060	1201 0300		5975-01-339-9574	6	4
77060	1201 0973		5935-01-214-4163	13	15
77060	1201 5797		5935-01-308-8599	6	4
77060	12010293		5975-01-226-8078	4	3
				6	2
77060	12015323		5975-01-310-5011	6	3
				7	6
				13	13
77060	12015712		5935-01-214-5259	7	8
77060	1204 7938			7	18
77060	12124 8086			7	16
77060	12048074		5940-01-366-1563	7	17
77060	12048159			6	6
77060	12066304			7	15
77060	12084673			6	2
77060	12085036			6	5
77060	12124582		5999-01-406-4110	13	14
77060	12129493			4	3
19207	12420936		5999-01-422-9740	7	7
				8	3
5X050	126426			11	5
5X050	126427			11	5
5X050	126615		2590-01-447-0738	22	1
5X050	126617			9	5
5X050	127170		5315-01-447-0480	10	1
5X050	127373			11	6
5X050	127838			10	15
5X050	127852		5340-01-446-5137	11	12
5X050	127892			11	11
5X050	128125			10	5
5X050	128126		2510-01-446-1842	10	8
5X050	128129			9	1
5X050	128130		5340-01-445-9486	9	3
5X050	128131			9	11
5X050	128214			1	1
5X050	129305			10	6
5X050	129306			10	7
5X050	129528			12	10
5X050	129568			11	1
5X050	129651			12	1
5X050	129652			12	2
5X050	129653			12	8
5X050	129732		5340-01-446-0947	11	15
5X050	129871		5930-01-446-0980	5	3
5X050	131341			13	2
45152	1354190		5305-01-162-2358	11	8
12662	142-18		5325-01-283-3513	3	3

## SECTION IV

## TM5-3805-264-14&amp;P

## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
77060	1530 0014		5340-01-332-6696	4	11
77060	15300027		5935-01-308-7866	4	2
5X050	208047		5315-01-446-3121	9	8
30780	2102-2-2		4730-00-204-1272	22	9
30780	2102-8-8		4730-00-289-2357	14	7
10266	213 1-4 20X2 1-2		5306-00-957-7531	15	21
64678	23-10340-125		5310-01-333-6436	15	18
64678	23-10864-706			2	4
75764	23E10			1	6
75764	231E			1	7
5X050	236569		5340-01-448-8998	11	7
5X050	237379			22	19
5X050	237386			9	6
5X050	237387			9	7
5X050	237409		5340-01-446-4927	11	13
5X050	237410		3040-01-446-2413	11	20
5X050	238021		5340-01-445-7781	3	7
5X050	239635X1.50			22	16
5X050	239693			10	10
5X050	239694			10	12
5X050	239932			20	2
5X050	239963			12	11
5X050	239973			12	6
5X050	239974			12	5
64678	24-00783-000			2	3
5X050	245352			11	17
5X050	245538X66			14	15
5X050	245539X21			14	32
5X050	245540X17			14	31
5X050	245541X8			14	33
5X050	245542X31			14	25
5X050	245543X9			14	30
5X050	245544X144			14	24
5X050	245786X36			14	34
5X050	245787X38			14	35
60827	246-70-BN		5330-01-447-4040	22	6
60827	251-70-BN		5330-01-447-4034	22	4
38335	25316		5330-01-212-2222	17	8
93061	264NTA- 6		4730-01-134-3571	14	26
13829	308 5030 201			17	6
13829	308 8020 901			17	14
13829	308 9310 156			17	1
13829	308 9414 024			17	15
13829	312 2920 130		3040-01-446-2408	17	12
79146	320001			14	6
79146	320155.			13	21
99321	3507		5310-00-347-0021	2	5
50620	38-22LP			12	14
11862	3909063		5310-01-143-0542	15	37
13829	391 1401 382		5305-01-447-1330	17	17
13829	391 1425 437		5307-01-446-7531	17	19

## SECTION IV

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## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
13829	391 1451 115		5310-01-340-8088	17	18
13829	391 2882 051		5330-00-809-1052	17	10
82338	391 2883 119		5330-01-236-0469	17	5
13829	391 2884 019		5330-01-340-8159	17	13
13829	391 3283 052		5365-01-446-0280	17	20
13829	391 3381 040		5365-01-236-0717	17	4
13829	391 3383 069		5365-01-361-4609	17	3
13829	391 3681 001		4820-01-281-7854	17	7
13829	391 3782 146		5310-01-340-8353	17	16
13829	391-0381-906		3110-01-260-2561	17	9
13829	391-2185-913		3120-01-328-4294	17	11
13829	391-2686-063		5325-00-768-8563	17	2
5X050	401577		7690-01-445-9897	16	4
5X050	403236		3040-01-446-3620	21	1
5X050	403246		2590-01-446-1903	22	13
5X050	403248			7	12
5X050	403254		6150-01-446-6345	6	1
5X050	403255		6150-01-445-9130	4	1
5X050	403256		6150-01-446-6344	8	1
5X050	403345X148.75			11	21
5X050	403365		2940-01-446-3570	22	2
5X050	403366		4330-01-446-3337	19	1
5X050	403367		6685-01-447-1188	22	10
5X050	403368			22	12
5X050	403374		7690-01-445-9903	16	2
5X050	403375		7690-01-445-8976	16	1
5X050	403376		7690-01-445-8973	16	7
5X050	403377		7690-01-445-9933	16	3
5X050	403378		7690-01-445-8967	16	6
5X050	403412			1	2
5X050	403456		4720-01-446-1729	20	12
5X050	403457		4720-01-446-1541	20	8
5X050	403458		4720-01-446-1481	20	7
5X050	403459		4720-01-446-1508	20	3
5X050	403484			7	1
5X050	403492		7690-01-445-8961	16	5
5X050	403514			16	8
5X050	403541			16	9
5X050	403607		3040-01-447-2738	13	2
5X050	403626			13	8
5X050	403627			13	6
5X050	403630			13	10
5X050	403632			13	7
5X050	403633			13	3
5X050	403634			13	24
5X050	403637			13	9
5X050	403638			13	5
5X050	403641			13	12
5X050	403642			13	23
5X050	403643			13	4
5X050	403644			13	4A

## SECTION IV

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## CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
5X050	403645			13	20
70433	4057031		4730-01-154-7939	22	17
60602	45884-48		2590-01-445-7883	18	2
60602	55940-4		2590-01-442-7238	18	1
19204	572929		5999-00-057-2929	4	7
93061	60NTA-6		4730-01-048-5260	14	18
				14	22
				14	28
93061	60NTA6		4730-01-048-5260	14	3
13548	60202R		6220-01-086-5691	3	1
13548	60700		5325-01-163-6558	3	2
93061	61NTA-6		4730-01-048-7873	14	4
				14	19
				14	23
				14	29
OPXJ7	63-04		5315-01-447-0479	11	9
93061	63NTA-6		4730-01-056-4990	14	2
				14	17
				14	21
				14	27
93061	68NTA-6-4		4730-01-062-2570	14	16
93061	68NTA-6-6		3730-01-096-9128	14	1
64678	681 545 07 22		5930-01-332-0680	2	2
79470	69X6		4730-00-068-6616	22	15
19207	8338561		5935-00-833-8561	4	10
19207	8338562		5970-00-833-8562	4	9
19207	8338564		5940-00-399-6676	4	8
5A910	8338566		5975-01-230-4370	4	5
19207	8338567		5310-00-833-8567	4	6
13445	8486		5930-01-336-0919	5	2
01276	900598-125		5365-01-340-3898	21	9
01276	900598-8S		5365-01-217-4133	21	11



## APPENDIX D

### COMPONENTS OF END ITEM (COEI) AND BASIC ISSUE ITEMS (BII) LISTS

---

#### Section I. INTRODUCTION

---

##### D-1. SCOPE.

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- a. This appendix lists Components of End Item (COEI) and Basic Issue Items (BII) for the M917A1 and M917A1 w/MCS Dump Truck Body to help you inventory items required for safe and efficient operation.
- b. Refer to TM 9-2320-363-10 for COEI and BII related to the dump truck chassis.

##### D-2. GENERAL.

---

The COEI and BII Lists are divided into the following sections:

- a. **Section II. Components of End Item.** This listing is for informational purposes only and is not authority to requisition replacements. These items are part of the end item, but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Illustrations are furnished to assist you in identifying the items.
- b. **Section III. Basic Issue Items.** These are the minimum essential items required to place the truck in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the truck during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII, based on TOE/MTOE authorization of end item.

##### D-3. EXPLANATION OF COLUMNS.

---

Below is an explanation of columns found in the tabular listings:

- a. **Column (1) - Illustration Number (Illus Number).** This column indicates the number of the illustration that shows the item.
- b. **Column (21) - National Stock Number.** Indicates the National Stock Number (NSN) assigned to the item and will be used for requisitioning purposes.
- c. **Column (13) - Description and Usable On Code.** Indicates the Federal item name and, if required, a minimum description in parentheses to identify and locate the item. The entry for each item ends with the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number. Usable On Code indicates the vehicle to which the item is assigned. Usable on codes for the M917A1 and M917A1 w/MCS are:

<u>Usable On Code</u>	<u>Model</u>
7A1	M917A1
7E1	M917A1 w/MCS

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**D-3. EXPLANATION OF COLUMNS (Con't).**

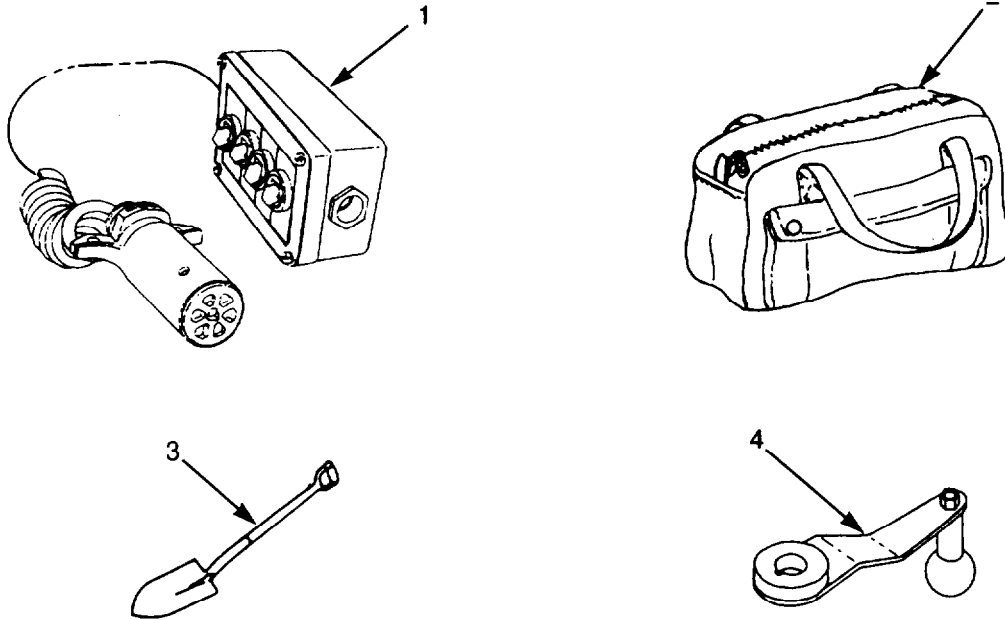
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- d. **Column (4) - Unit of Issue (U/I)**. Indicates how the item is issued for the National Stock Number shown in Column (2).
- e. **Column (5) - Quantity Rewired (Qty/Rad\)**. Indicates the quantity of the item authorized to be used with the equipment.

**Section II. COMPONENTS OF END ITEM**

There are currently no COEI assigned.

**Section III. BASIC ISSUE ITEMS**



(1) Illus Number	(2) National Stock Number	(3) Description (CAGEC) Part Number	(4) Usable On Code	(5) U/I	(6) QtY Rqd
1		Control Unit Assembly, MCS (in tool pouch in Bll storage box) (5X050) 128214	7E1	EA	1
2	5140-00-329-4306	Pouch, Mechanics Tool (in Bll storage box) (80049) 50J8016	7A1,7E1	EA	1
3	5120-00-293-3336	Shovel, Hand, Rd Pt, D-Hdl, Short Size 2 (19207) 11655784	7A1,7E1	EA	1
4		Tarp, Crank Handle (in tool pouch in Bll storage box) (58752) 0311-960301	7A1,7E1	EA	1



**APPENDIX E  
ADDITIONAL AUTHORIZATION LIST**

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Refer to TM 9-2320-363-10.



## APPENDIX F EXPENDABLE AND DURABLE ITEMS LIST

---

### Section I. INTRODUCTION

---

#### F-1. SCOPE.

---

This appendix lists expendable and durable items you will need to operate and maintain the M917A1 and M917A1 w/MCS Dump Truck Body. This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, *Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items)*, or CTA 8-100, *Army Medical Department Expendable/Durable Items*.

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#### F-2. EXPLANATION OF COLUMNS.

---

a. **Column (1) - Item Number.** This number is assigned to the entry in the listing and is referenced in the "Initial Setup" of maintenance paragraphs or narrative instructions to identify the material needed (e.g., Dry cleaning solvent, Item 18, Appendix F).

b. **Column (2) - Level.** This column identifies the lowest level of maintenance that requires the listed item.

- C - Operator/Crew
- O - Unit 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) - Item Name, Description, Commercial and Government Entity Code (CAGEC). Part Number.** Indicated the Federal Item Name and, if required, a description to identify the item, The last line for each item indicates the Commercial and Government Entity Code (CAGEC) in parentheses followed by the part number, if applicable.

e. **Column (5) - Unit of Measure (U/M)/Unit of Issue (U/I).** 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 as shown in the Army Master Data File (AMDF), requisition the lowest unit of issue that will satisfy your requirements.

**Section II. EXPENDABLE AND DURABLE ITEMS LIST**

(1) Item Number	(2) Level	(3) National Stock Number	(4) Item Name, Description, (CAGEC), Part Number	(5) U/M U/I
1	O	8040-01-024-6991	ADHESIVE: Loctite, Minute Bond 312 (05972) 31231  50 Milliliter Bottle	ml
2	O	8135-00-171-0930	BARRIER MATERIAL: Greaseproof, Waterproofed Flexible (81349) MIL-B-121  100 Yard Roll	yd
3	O	7920-00-061-0038	BRUSH: Scrub (81348) H-B-1490-7-P1	ea
4	O	7920-00-900-3577	BRUSH: Wire (17987) 3577	ea
5	O	7930-00-899-9534	COMPOUND: Dishwashing, Hand (83421) 7930-00-899-9534  5 Gallon Can	gl
6	O	8030-01-054-0740	COMPOUND: Sealing, Pipe (05972) 592-31  50 Cubic Centimeter Tube	cc
7	O	8030-01-418-9006	CORROSION PREVENTIVE (09137) WD-40  Box of 12 Aerosol Cans, 9 Ounces Each	oz
8	O	7930-00-282-9699	DETERGENT: General Purpose, Liquid (83421) 7930-00-282-9699  1 Gallon Can	gl
9	O	3439-00-255-9935	FLUX: Soldering, TY1 Form A (58536) A-A-51145  1 Pound Can	lb



**Section II. EXPENDABLE AND DURABLE ITEMS LIST (Con't)**

(1) Item Number	(2) Level	(3) National Stock Number	(4) Item Name, Description, (CAGEC), Part Number	(5) U/M U/I
10	C	9150-01-197-7693 9150-01-197-7688 9150-01-197-7690 9150-01-197-7689 9150-01-197-7692 9150-01-197-7691	GREASE: Automotive and Artillery, GAA (81349) MIL-G-10924  14 Ounce Cartridge 2 1/4 Ounce Tube 13/4 Pound Can 6 1/2 Pound Can 35 Pound Pail 120 Pound Drum	oz oz lb lb lb lb
11	O	9150-00-076-1574	GREASE: Ball Bearing (73219) 9150-00-076-1574  5 Pound Can	lb
12	C	9150-00-402-4478 9150-00-402-2372 9150-00-491-7197	OIL: Lubricating, Internal Combustion Engine, Arctic, OEA (81349) MIL-L-46167  1 Quart Can 5 Gallon Can 55 Gallon Drum	qt gl cd
13	C	9150-00-189-6727 9150-00-186-6668 9150-00-191-2772	OIL: Lubricating, Internal Combustion Engine, OE/HDO 10 (81349) MIL-L-2104  1 Quart Can 5 Gallon Can 55 Gallon Drum	qt gl gl
14	C	9150-00-186-6681 9150-00-188-9858 9150-00-189-6729	OIL: Lubricating, Internal Combustion Engine, OE/HDO 30 (81349) MIL-L-2104  1 Quart Can 5 Gallon Can 55 Gallon Drum	qt gl gl
15	C	7920-00-205-1711	RAG: Wiping (64067) 7920-00-205-1711  50 Pound Bale	lb

**Section II. EXPENDABLE AND DURABLE ITEM LIST (Con't)**

(1) Item Number	(2) Level	(3) National Stock Number	(4) Item Name, Description, (CAGEC), Part Number	(5) U/M U/I
16	F	8040-00-833-9563	SEALANT: Adhesive, Silicone Rubber (94833)52498  5 Ounce Tube	kt
17	O	3439-00-247-6921 3439-00-265-7102	SOLDER: Lead Alloy (81348) QQ-S-571  1 Pound Bar 1 Pound Spool/Roll	lb lb
18	C	6850-00-110-4498 6850-00-664-5685 6850-00-281-1985 6850-00-274-5421 6850-00-285-8011	SOLVENT: Dry Cleaning, Type II (81348) PD630  1 Pint Can 1 Quart Can 1 Gallon Can 5 Gallon Can 55 Gallon Drum	pt qt gl gl gl
19	O	9905-00-537-8954	TAG: Marker (64067) 9905-00-537-8854  50 each	ea
20	O	8030-00-889-3535	TAPE: Antiseize, 1/2 Inch Width (81755) P5025-2R  260 Inch Roll	in.
21	O	5640-00-103-2254	TAPE: Duct, 2 Inch Width (39428) 1791K70  80 Yard Roll	yd
22	F	5970-00-682-8538	TAPE: Pressure Sensitive Adhesive, Masking, Flat 1 Inch Width (76892) MANSON -1-2  60 Yard Roll	yd
23	O	5970-00-815-1295	TUBING: Heat Shrinkable (81349) M23053/5-106-0	ft

## APPENDIX G

### ILLUSTRATED LIST OF MANUFACTURED ITEMS

#### Section I. INTRODUCTION

##### G-1. SCOPE.

- a. This appendix includes complete instructions for making items authorized to be manufactured or fabricated.
- b. A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the paragraph which covers fabrication criteria.
- c. All bulk materials needed for manufacture of an item are listed by Part Number and Cage Code or specification number.
- d. Only items requiring complicated manufacturing instructions are illustrated.

Table G-I. Manufactured Items Part Number Cross-Reference Index.

Part Number	Name	Paragraph
010029x12	Tube, MCS, Air Cylinder	G-3
239635X1.5	Tube, Sight, Hyd. Reservoir	G-6
245538X66	Tube, Air, MCS Tailgate	G-4
245539x21	Tube, Air, MCS Tailgate	G-4
245540X17	Tube, Air, MCS Tailgate	G-4
245541X8	Tube, Air, MCS Tailgate	G-4
245542X31	Tube, Air, MCS Tailgate	G-4
245543X9	Tube, Air, MCS Tailgate	G-4
245544X144	Tube, Air, MCS Tailgate	G-4
245786X36	Tube, Air, Tailgate Release	G-2
245787X38	Tube, Air, Tailgate Release	G-2
403345X148.75	Board, Side, Dump Body	G-5
N/A	Disassembly Tool, Hydraulic Cylinder	G-7

## Section II. MANUFACTURING INSTRUCTIONS

---

### G-2. TAILGATE RELEASE AIR CYLINDER TUBES.

---

- a. Fabricate from bulk Part Number NT10006 (79470) 3/8 in. OD nonmetallic tubing.
- b. Cut to 36 in. long to make Part Number 245786X36.
- c. Cut to 38 in. long to make Part Number 245787X38.

---

### G-3. MCS AIR CYLINDER TUBE.

---

- a. Fabricate from bulk Part Number 020003-7 (79146), 3/8 in. OD copper tubing.
- b. Cut to approximately 12 in. long, then cut to fit and flare ends to make Part Number 010029X12.
- c. Two required per each MCS air cylinder.

---

### G-4. MCS TAILGATE AIR TUBES.

---

- a. Fabricate from bulk Part Number NT10006 (79470), 3/8 in. OD nonmetallic tubing.
- b. Cut to 66 in. long to make Part Number 245538X66.
- c. Cut to 21 in. long to make Part Number 245539X21.
- d. Cut to 17 in. long to make Part Number 245540X17.
- e. Cut to 8 in. long to make Part Number 245541X8.
- f. Cut to 31 in. long to make Part Number 245542X31.
- g. Cut to 9 in. long to make Part Number 245543X9.
- h. Cut to 144 in. long to make Part Number 245544X144.

---

### G-5. DUMP BODY SIDE BOARD.

---

- a. Fabricate from bulk Part Number MILL2037 (81349), 2.0 in. x 8.0 in. rough sawn hardwood.
- b. Cut to fit 148.75 in. long to make Part Number 403345X148.75.
- c. Two required per dump body.

---

### G-6. HYDRAULIC RESERVOIR SIGHT TUBE.

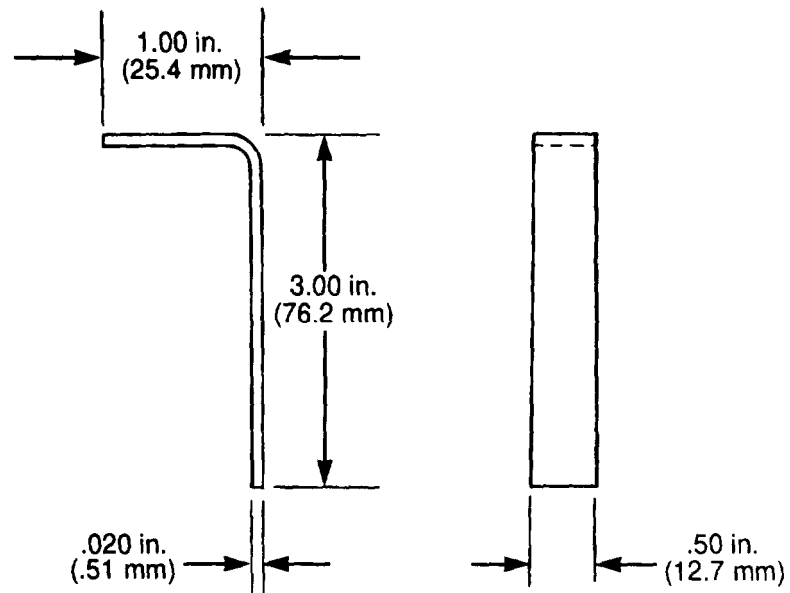
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- a. Fabricate from bulk Part Number PT 24006NA (79470), 318 in. OD clear tubing.
- b. Cut to 1.50 ft long to make Part Number 239635X1.50.

---

**G-7. HYDRAULIC CYLINDER DISASSEMBLY TOOL.**

---



1. Fabricate from .020 in. shim stock.
2. All dimensions are approximate.
3. Four required.



## APPENDIX H TORQUE LIMITS

---

### H-1. SCOPE.

---

This appendix lists standard torque values, as shown in Table H-1, and provides general information for applying torque. Special torque values and tightening sequences are indicated in the maintenance procedures for applicable components.

---

### H-2. GENERAL.




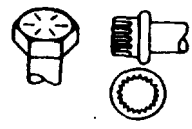
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- a. Always use the torque values listed in Table H-1 when the maintenance procedure does not give a specific torque value.
- b. Unless otherwise indicated, standard torque tolerance shall be  $\pm 10\%$ .
- c. Torque values listed are based on clean, dry threads. Reduce torque by 10% when engine oil is used as a lubricant. Reduce torque by 20% if new plated capscrews are used.
- d. Capscrews threaded into aluminum may require reductions in torque of 30% or more of Grade 5 capscrew torque. Capscrew threaded into aluminum must also attain two capscrew diameters of thread engagement.

**CAUTION**

**If replacement capscrews are of higher grade than originally supplied, use torque specifications for the original. This will prevent equipment damage due to over-torquing.**

Table H-1. Torque Limits.

Current Usage	Much Used	Much Used	Used at Times	Used at Times
Quality of Material	Indeterminate	Minimum Commercial	Medium Commercial	Best Commercial
SAE Grade Number	1 or 2	5	6 or 7	8
Capscrew Head Markings				
Manufacturer's marks may vary				
These are all SAE Grade 5 (3 line)				
Capscrew Body Size Inches - Thread	Torque lb.-ft. (N•m)	Torque lb.-ft. (N•m)	Torque lb.-ft. (N-m)	Torque lb.-ft. (N-m)
1/4 20	5 (7)	8 (11)	10 (14)	12 (16)
1/4 28	6 (8)	10 (14)		14 (19)
5/16 18	11 (15)	17 (23)	19 (26)	24 (33)
5/16 24	13 (18)	19 (26)		27 (37)
3/8 16	18 (24)	31 (42)	34 (46)	44 (60)
3/8 24	20 (27)	35 (47)		49 (66)
7/16 14	28 (38)	49 (66)	55 (75)	70 (95)
7/16 20	30 (41)	55 (75)		78 (106)
1/2 13	39 (53)	75 (102)	85 (115)	105 (142)
1/2 20	41 (56)	85 (115)		120 (163)
9/16 12	51 (69)	110 (149)	120 (163)	155 (210)
9/16 18	55 (75)	120 (163)		170 (231)
5/8 11	83 (113)	150 (203)	167 (226)	210 (285)
5/8 18	95 (129)	170 (231)		240 (325)
3/4 10	105 (142)	270 (366)	280 (380)	375 (508)
3/4 16	115 (156)	295 (400)		420 (569)
7/8 9	160 (217)	395 (536)	440 (597)	605 (820)
7/8 14	175 (237)	435 (590)		675 (915)
1 8	235 (319)	590 (800)	660 (895)	910 (1234)
1 14	250 (339)	660 (895)		990 (1342)



## APPENDIX I TOOL IDENTIFICATION LIST

### Section I. INTRODUCTION

#### I-1. GENERAL.

This appendix lists tools you will need to maintain the dump truck body. This listing is for informational purposes only and is not authority to requisition the tools. Common tools are found in the supply catalogs and special tools are found in the Maintenance Allocation Chart (MAC).

#### I-2. DEFINITION OF COLUMNS.

- a. **Column (1) - Item Number (No.).** This number is assigned to the entry in the listing and is referenced in the "Initial Setup" of maintenance paragraphs or narrative instructions to identify the tool needed (e.g., General mechanic's tool kit, Item 8, Appendix I).
- b. **Column (2) - Item Name.** Indicates the tool or tool set name and, if required, a description to identify the tool.
- c. **Column (3) - National Stock Number.** This is the National Stock Number (NSN) assigned to the tool. Use it to request or requisition the tool.
- d. **Column (4) - (CAGEC) Part Number.** When no NSN is available, a Commercial and Government Entity Code (CAGEC) followed by a part number will be used where possible.
- e. **Column (5) - Reference.** Indicates the technical manual or supply catalog in which the tool can be found.

### Section II. TOOL IDENTIFICATION LIST

(1) Item No.	(2) Item Name	(3) National Stock Number	(4) (CAGEC) Part Number	(5) Reference
1	Cap and Plug Set	5340-00-450-5718	(19207) 10935405	
2	Gun, Air Blow	4940-00-333-5541	(17431) DGA520	SC 4910-95-CL-A74
3	Multimeter, Digital	6625-01-139-2512	(80058) AN/PSM-45	SC 4900-95-CL-A74
4	Pan, Drain	4910-00-387-9592	(05463) 450	SC 4910-95-CL-A74
5	Pliers, Retaining Ring: internal, 3.062-6.250 in.	5120-00-293-0186	(33287) J-6843-01	
6	Sling, Nylon	2835-01-078-2081	(91796) 4-8FTX2IN	
7	Soldering Gun	3439-00-618-6623	(97049) D550-3	SC 4910-95-CL-A74
8	Tool Kit, General Mechanic's, Automotive	5180-00-177-7033	(50980) SC 5180-90-CL-N26	SC 5180-90-CL-N26
9	Vise, Machinist's	5120-00-293-1439	(79416) 504M2	SC 4910-95-CL-A74

**Section II. TOOL IDENTIFICATION LIST (Con't)**

(1) Item No.	(2) Item Name	(3) National Stock Number	(4) (CAGEC) Part Number	(5) Reference
10	Wrench, Adjustable: 0-3 5/8 in. jaw opening	5120-00-264-3793	(24617) 2117080	SC 4910-95CL-A74
11	Wrench, Torque: 1/2 in. drive, 0-175 lb.-ft. capacity	5120-00-640-6364	(08194) 1753LDF	SC 491 0-95-CL-A74
12	Wrench, Torque: 3/4 in. drive, 0-600 lb.-ft. capacity	5120-01-336-1773	(55719) TE602A	SC 491 0-95CL-A72
13	Wrench Set, Socket: 3/4 in. drive	5120-00-204-1999	(06542) FEDSTD353	SC 4910-95-CL-A72

## APPENDIX J

### LUBRICATION INSTRUCTIONS

---

#### J-1. GENERAL.

---

##### NOTE

- These instructions are mandatory.
- The M917A1 and M917A1 w/ MCS Dump Truck Body is enrolled In the Army Oil Analysis Program (AOAP) for the purpose of sampling hydraulic oil. Sampling of oil at specified intervals is performed at the Unit Maintenance level (Chapter 4, Section IV, Unit (PMCS) and In accordance with TB 43-0211.
- Lubrication of M917A1 and M917A1 w/MCS chassis Is In TM 9-2320-363-10 and TM 9-2320-363-20.
  - a. The M917A1 and M917A1 w/MCS Dump Truck Body must receive lubrication with approved lubricants at recommended intervals in order to be mission-ready at all times.
  - b. Hydraulic oil/filter are changed by Unit Maintenance annually or at interval determined under the AOAP (TB 43-0211).
  - c. The Lubrication Chart shows lubrication points, items to be lubricated, the required lubricants, and recommended intervals for lubrication. Any special lubrication instructions required for specific components are contained in the NOTES section of the chart.
  - d. The KEY provides information needed to select the proper lubricant for various temperature ranges and uses, and identifies the capacities and intervals.
  - e. Recommended intervals are based on normal conditions of operation, temperature, and humidity. When operating under extreme conditions, lubricants should always be changed more frequently. When in doubt, notify your supervisor.

#### J-2. SPECIFIC LUBRICATION INSTRUCTIONS.

---

- a. Keep all lubricants in a closed container and store in a clean, dry place away from extreme heat. Keep container covers clean and do not allow dust, dirt, or other foreign material to mix with lubricants. Keep lubrication equipment clean and ready for use.
- b. Maintain a record of lubrication performed and report any problems noted during lubrication. Refer to DA Pam 738-750 for maintenance forms and procedures to record and report any findings.
- c. Keep all external parts of equipment not requiring lubrication free of lubricants. After lubrication, wipe off excess lubricant to prevent accumulation of foreign matter.
- d. Refer to FM 9-207 for lubrication instructions in cold weather.

LUBRICATION CHART

TRUCK, DUMP, HEAVY, BODY  
M917A1  
(NSN 3805-01-431-1165)  
AND  
M917A1 W/MCS (MATERIAL CONTROL SYSTEM)  
(NSN 3805-01-432-8249)

This Lubrication Chart is for operator/crew (C) and Unit Maintenance (O). Lubrication intervals (on-condition or hard time) are based on normal operation. Lubricate more during constant use and less during inactive periods. Use correct grade of lubricant for seasonal temperature expected.

For equipment under manufacturer's warranty, hard time oil service intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (e.g., longer than usual operating hours, extended idling periods, extreme dust, etc.).

**WARNING**

**Dry cleaning solvent, P-D-680, is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash**

**point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.**

Clean area around lubrication points with dry cleaning solvent (Item 18, Appendix F) or equivalent before lubricating equipment. After lubrication, wipe off excess lubricant to prevent accumulation of foreign matter.

Before you start your lubrication service:

**ALWAYS**

- a. Clean area around lubrication point before lubricating.
- b. Use the Lubrication Chart as your guide.

**NEVER**

- a. Use wrong type/grade lubricant.
- b. Use too much lubricant.

**M917A1 AND M917A1 W/MCS**

**LUBRICANT • INTERVAL**

**INTERVAL • LUBRICANT**

Cargo Cover Chain  
(Oil Can Point)  
(Note 1a) (O)

WD-40

S

Transport Lock Linkage  
(4 Fittings)  
(View A and Note 2) (C)

GAA

M

Hydraulic Reser-  
voir (Check Level  
and Fill)  
(View B and Note  
3a) (C)

OE/  
HDO  
or OEA

D

Hydraulic Reser-  
voir (Drain and  
Refill)  
(View B and Note  
3b) (O)

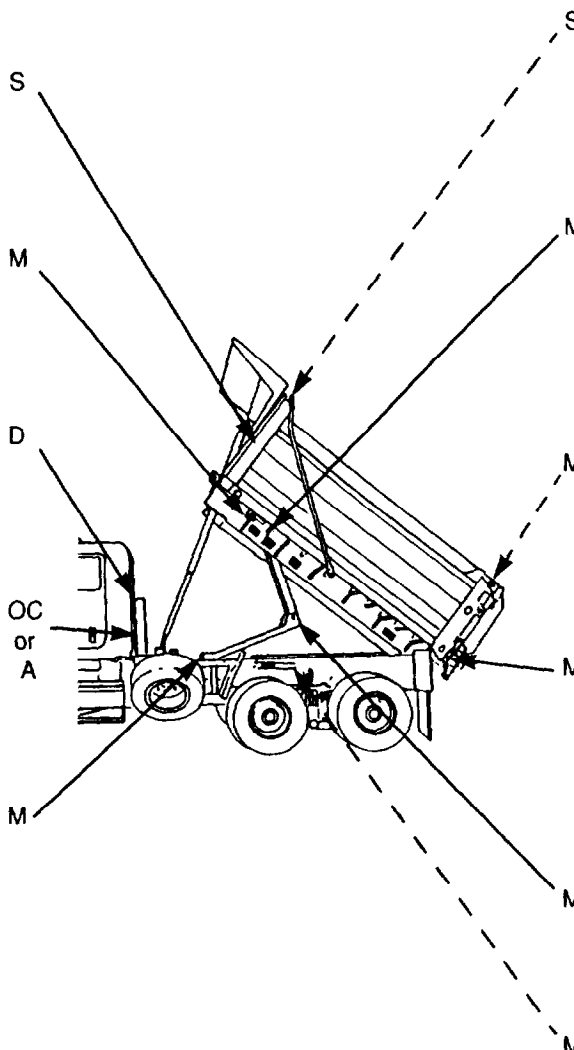
OE/  
HDO  
or OEA

OC  
or  
A

Stabilizer Bottom  
Cross (2 Fittings)  
(View C and Note  
4) (C)

GAA

M



WD-40 Cargo Cover  
Roller Shaft  
Bearings  
(Oil Can Point)  
(View D and  
Note 1b) (O)

GAA Stabilizer Top  
Cross (2 Fittings)  
(View C and  
Note 4) (C)

GAA Tailgate Hinge  
Pins (1 Fitting  
Each) (View E  
and Note 5) (C)

GAA Tailgate Locking  
Linkage (1 Fit-  
ting) (View F  
and Note 6) (C)

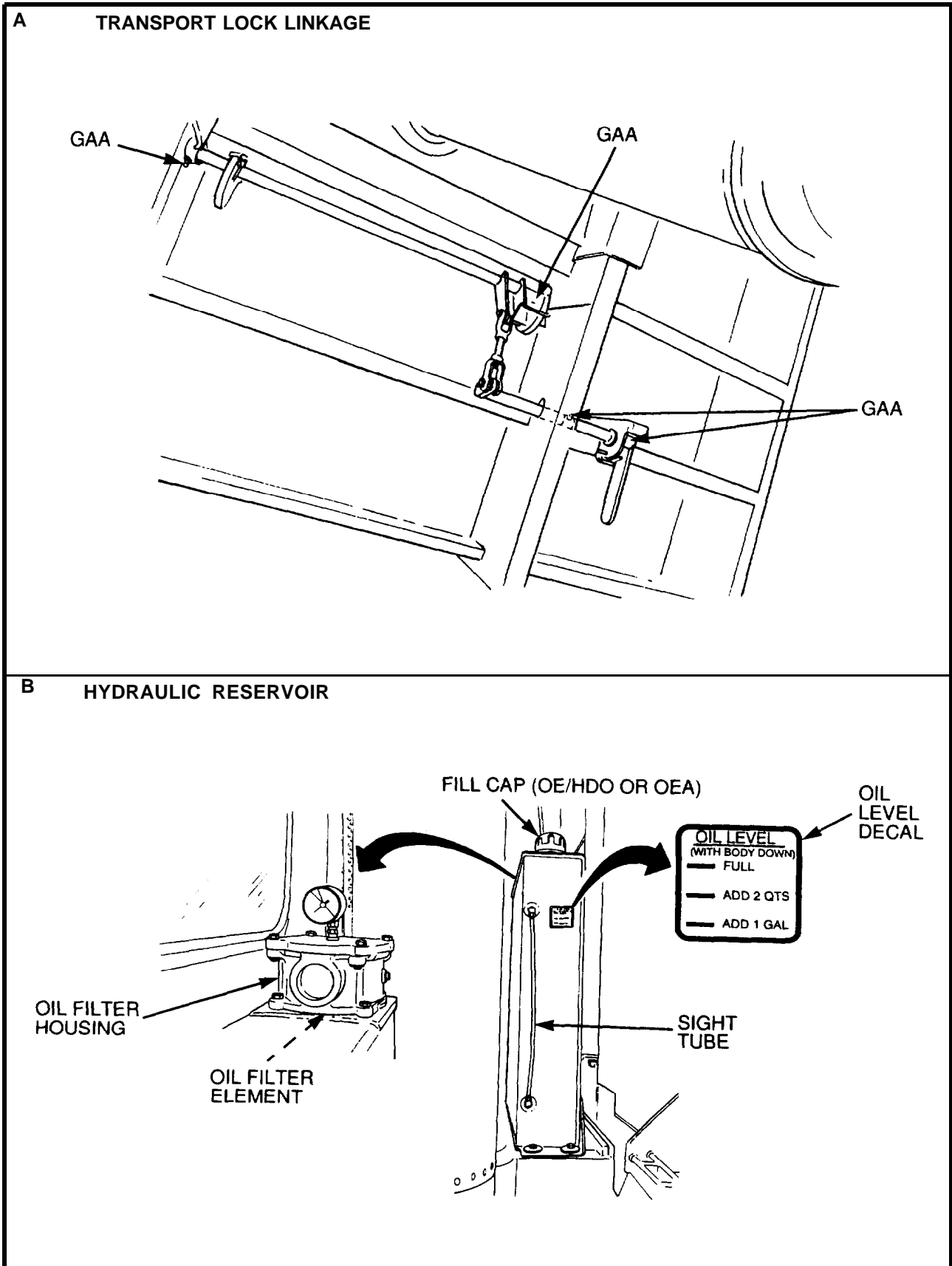
GAA Stabilizer Center  
Hinge (1 Fitting)  
(View C and  
Note 4) (C)

GAA Body Props  
(1 Fitting Each)  
(View G and  
Note 7)(C)

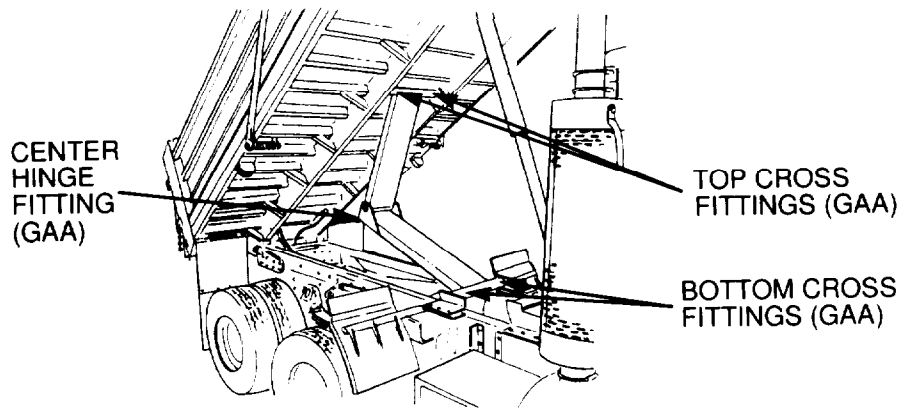
- KEY -

Lubricant/ Component	Refill Capacity	Expected Temperatures*			Intervals
		+6°F to +122°F (-14°C to +50°C)	-4°F to +50°F (-20°C to +10°C)	-67°F to +32°F (-55°C to 0°C)	
<b>OE/HDO (ML-L-2104)</b> Lubricating Oil, ICE, Tactical  <b>OEA (ML-L-46167)</b> Lubricating Oil, ICE, Arctic • Hydraulic Reser- voir	12.75 gal. (48.2 l)	OE/HDO 10	OE/HDO 10	OEA	D - Daily M-Monthly S-Semi- annual OC-On Condition
<b>GAA (MIL-G-10924)</b> Grease, Automotive and Artillery • Body Props • Stabilizer • Transport Lock Linkage • Tailgate Hinge Pins • Tailgate Locking Linkage	AS Required	ALL TEMPERATURES			
<b>WD-40</b> Corrosion Preventive • Cargo Cover Chain • Cargo Cover Roller Shaft Bear- ings	As Required	ALL TEMPERATURES			

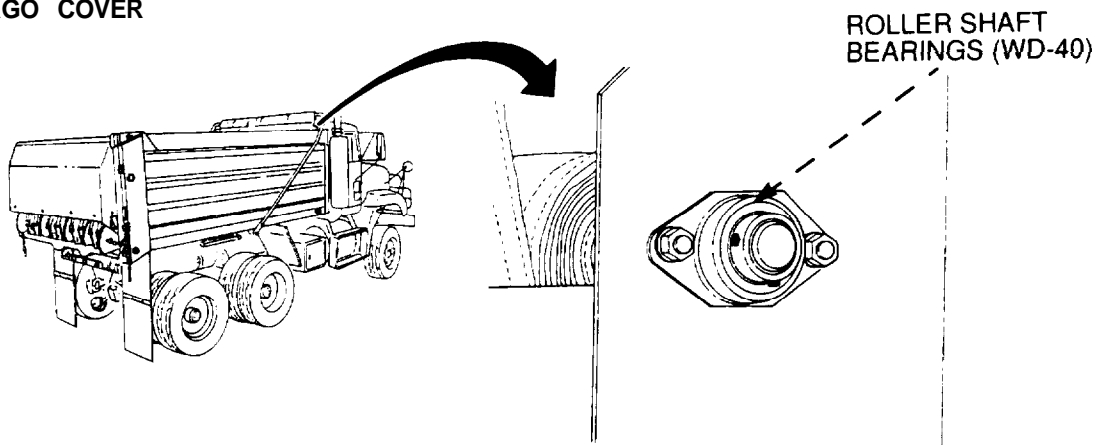
\* For arctic operation, refer to FM 9-207.



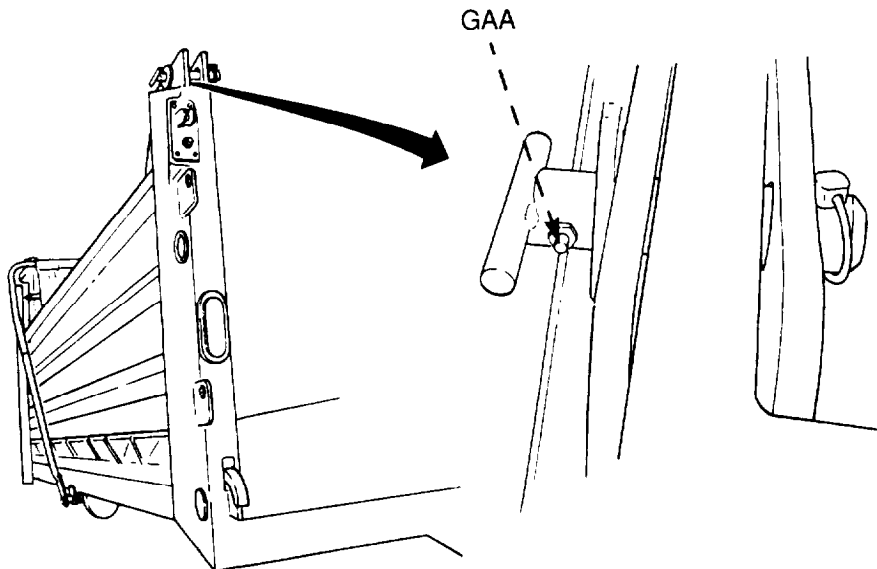
**C STABILIZER**



**D CARGO COVER**

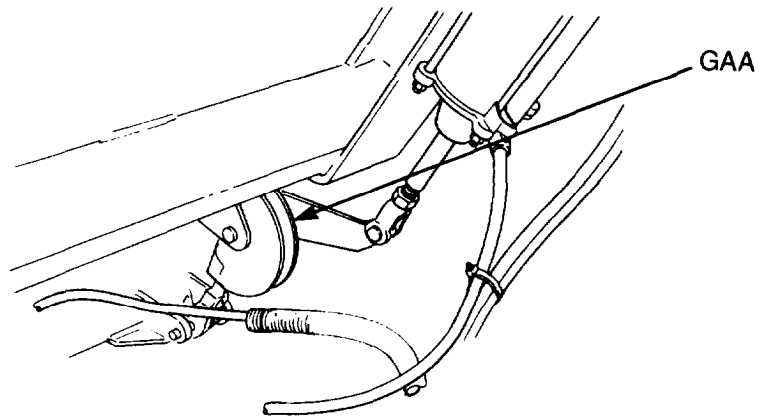


**E TAILGATE HINGE PINS**

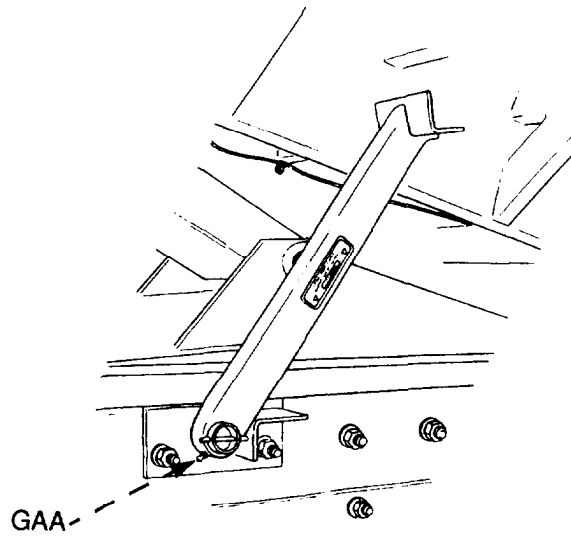




F TAILGATE LOCKING LINKAGE



G BODY PROPS



**NOTES:**

1. **CARGO COVER.**

- a. Semiannually, remove chain cover. Clean chain as required and lubricate sparingly with corrosion preventive. Install chain cover (paragraph 4-66).
- b. Semiannually, lubricate roller shaft bearings at roll-up bar mounting brackets. Apply corrosion preventive sparingly.

2. **TRANSPORT LOCK LINKAGE.**

- a. Monthly, raise dump body and support on body props (paragraph 2-15). Apply GAA to four lubrication fittings on linkage. Remove dump body from body props and lower.
- b. Remove locking pin and operate transport lock. Reinstall locking pin with transport lock at 3 o'clock position (paragraph 2-2).

3. **HYDRAULIC RESERVOIR.**

- a. Daily, with dump body down, vehicle parked on level ground, and engine off, check sight tube to determine level of hydraulic oil in reservoir. Level should be even with FULL mark on oil level decal. If low, remove fill cap, remove any debris from strainer, and clean fill cap and strainer with a clean rag (Item 15, Appendix F). Add OE/HDO or OEA through fill cap opening to bring oil level up to FULL mark. DO NOT overfill.

**NOTE**

- **If reservoir must be filled while dump body is raised and supported on body props, level of oil should be at bottom of sight tube.**
- **Whenever hydraulic oil filter service indicator shows RED, hydraulic oil filter element must be replaced.**

- b. Annually, with dump body down, remove magnetic drain plug from underside of reservoir and drain all oil. Remove and clean fill cap and strainer. Install strainer (paragraph 4-74). Replace hydraulic oil filter element (paragraph 4-75). Clean drain plug and install. Fill reservoir with OE/HDO or OEA until level in sight tube is at FULL mark on oil level decal. DO NOT overfill.

4. **STABILIZER.** Monthly, raise dump body and support on body props (paragraph 2-15). Apply GAA to five lubrication fittings on stabilizer. Remove dump body from body props and lower.

5. **TAILGATE HINGE PINS.** Monthly, apply GAA to each tailgate hinge pin lubrication fitting.

6. **TAILGATE LOCKING LINKAGE.** Monthly, apply GAA to tailgate locking linkage lubrication fitting.

7. **BODY PROPS.** Semiannually, raise dump body and support on body props (paragraph 2-15). Apply GAA to each body prop lubrication fitting.

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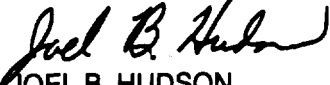
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10-1		4	
		10	

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

Item 5 is pointing at wrong object.  
Item 2, when ordering from parts list, this item does not come as a flat washer. Please give the correct P/N for this flat washer.

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*John Doe*

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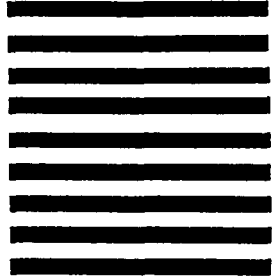
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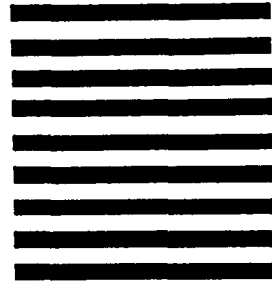
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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter=10 Millimeters=0.01 Meters=0.3937 Inches  
 1 Meter=100 Centimeters=1000 Millimeters=39.37 Inches  
 1 Kilometer=1000 Meters=0.621 Miles

WEIGHTS

1 Gram=0.001 Kilograms=1000 Milligrams=0.035 Ounces  
 1 Kilogram=1000 Grams=2.2 Lb  
 1 Metric Ton=1000 Kilograms=1 Megagram=1.1 Short Tons

LIQUID MEASURE

1 Milliliter=0.001 Liters=0.0338 Fluid Ounces  
 1 Liter=1000 Milliliters=33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Centimeter=100 Sq Millimeters=0.155 Sq Inches  
 1 Sq Meter=10,000 Sq Centimeters=10.76 Sq Feet  
 1 Sq Kilometer=1,000,000 Sq Meters=0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter=1000 Cu Millimeters=0.06 Cu Inches  
 1 Cu Meter=1,000,000 Cu Centimeters=35.31 Cu Feet

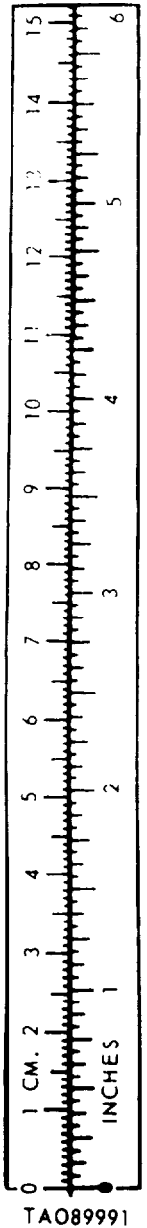
TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$   
 212° Fahrenheit is equivalent to 100° Celsius  
 90° Fahrenheit is equivalent to 32.2° Celsius  
 32° Fahrenheit is equivalent to 0° Celsius  
 $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
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

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
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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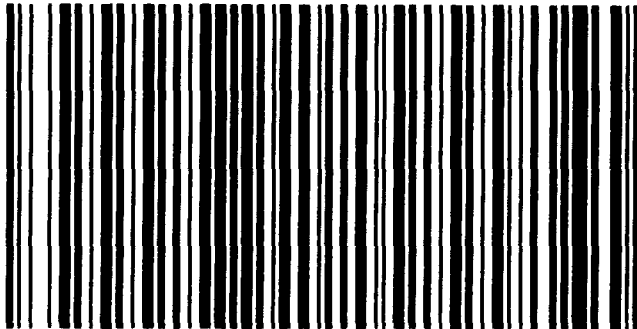
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USAPDC- S LABEL		Zone	



00047392044\*

PIN: 076098-000