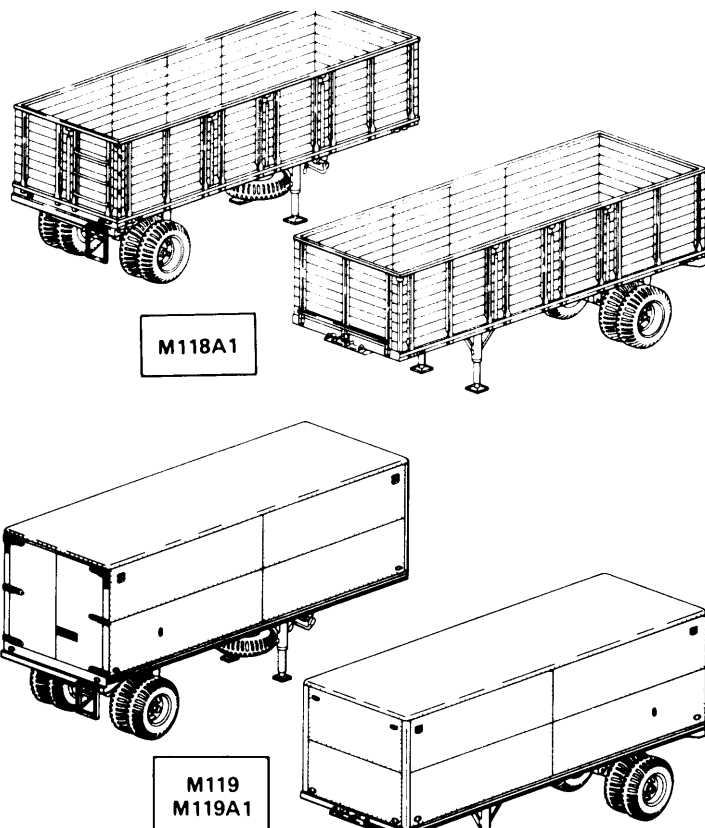


TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)



**SEMITRAILER, STAKE: 6-TON,
2-WHEEL, M118A1
(NSN 2330-00-572-6221);
SEMITRAILER, VAN: CARGO,
6-TON, 2-WHEEL, M119
(NSN 2330-00-835-8122);
SEMITRAILER, VAN: CARGO,
6-TON, 2-WHEEL, M119A1
(NSN 2330-00-679-5582)**

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PAGE F-1

HEADQUARTERS, DEPARTMENT OF THE ARMY

FEBRUARY 1986

CHANGE

NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D. C., 11 June 1992

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE (INCLUDING
REPAIR PARTS AND SPECIAL TOOLS LIST)**

FOR

**SEMITRAILER, STAKE: 6-TON, 2-WHEEL,
M118A1 (NSN 2330-00-572-6221)**

**SEMITRAILER, VAN: CARGO, 6-TON, 2-WHEEL,
M119 (NSN 2330-00-835-8122)**

**SEMITRAILER, VAN: CARGO, 6-TON, 2-WHEEL,
M119A1 (NSN 2330-00-679-5582)**

Current as of 1 November 1991

TM 9-2330-210-14&P dated 6 February 1986, is changed as follows:

1. Remove old pages and insert new pages.

2. New or changed material is indicated by a vertical bar in the margin of the page or by a vertical bar adjacent to the TA number.

Remove Pages

*I through 1-2
2-17 and 2-18
4-1 and 4-2
4-5 through 4-8
4-85 through 4-88
4-155 and 4-156
5-9 through 5-12
5-17 and 5-18
A-1 and A-2
B-7 through B-9f(B-10 blank)
Appendix F (in its entirety)
Index 3 and Index 4*

Insert Pages

*i through 1-2
2-17 and 2-18
4-1 and 4-2
4-5 through 4-8
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5-9 through 5-12
5-17 and 5-18
A-1 and A-2
B-7 through B-91(B-10 blank)
Appendix F (in its entirety)
Index 3 and Index 4*

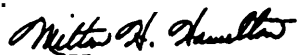
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Official:



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*Administrative Assistant to the
Secretary of the Army*

01593

GORDON R. SULLIVAN

*General, United States Army
Chief of staff*

Distribution

To be distributed in accordance with DA Form 12-39-E (Block 0692) Operator, Unit Direct Support and General Support maintenance requirements for TM9-2330-210-14&P.

WARNING**USING DRYCLEANING SOLVENT**

Drycleaning solvent P-D-680 is toxic and flammable. 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 flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.

WARNING**DRAINING HIGH-PRESSURE AIR**

Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

WARNING**COUPLING/UNCOUPLING**

All personnel not involved in coupling/uncoupling operation must stand clear of towing vehicle and semitrailer. Serious injury or loss of life could result.

WARNING**NONOPERATIONAL LIGHTS**

Do not operate semitrailers with any burned-out or missing lights. Not being seen could result in injury to personnel and damage to equipment.

WARNING**ASBESTOS DUST**

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

WARNING**BRAKE AIR CHAMBER SPRING**

The return spring inside the air chamber is under tension. The two halves of the chamber must be clamped together in a vise before removing all of the screws and nuts that hold it together. Failure to do so could cause serious injury to personnel.

WARNING

USE OF COMPRESSED AIR

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety eye goggles or face shield to prevent injury when using compressed air.

WARNING

IMPROPER CLEANING METHODS

Improper cleaning methods and use of unauthorized cleaning liquids or solvent can injure personnel and damage equipment. Refer to TM 9-247.

WARNING

IMPROPERLY SEATED LOCKRING

Improperly seated lockring could blow off. Never attempt to seat a lockring when tire is inflated. Serious injury or loss of life could result.

WARNING

Ensure wheels of semitrailer are chocked to prevent movement when handbrake is released.

WARNING

Before moving semitrailer, make sure that all loose equipment is properly stowed away, and that nothing will be dragging on the ground. If semitrailer is loaded, ensure load is properly secured. Injury to personnel or damage to equipment could result.

Technical Manual }
No. 9-2330-210-14&P }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC 6 February 1986

Operator's, Organizational, Direct Support,
and General Support Maintenance (Including
Repair Parts and Special Tools List)

**SEMITRAILER, STAKE: 6-TON, 2-WHEEL,
MI 18A1 (NSN 2330-00-572-6221);
SEMITRAILER, VAN: CARGO, 6-TON, 2-WHEEL,
MI 19 (NSN 2330-00-835-8122);
SEMITRAILER, VAN: CARGO, 6-TON, 2-WHEEL,
M119A1 (NSN 2330-00-679-5582)**

Current as of 1 November 1991

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be sent to you.

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I This manual supersedes TM 9-2330-210-24P, 13 July 1973 and TM 9-2330-210-14, 2 February 1961; including all changes.

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HOW TO USE THIS MANUAL

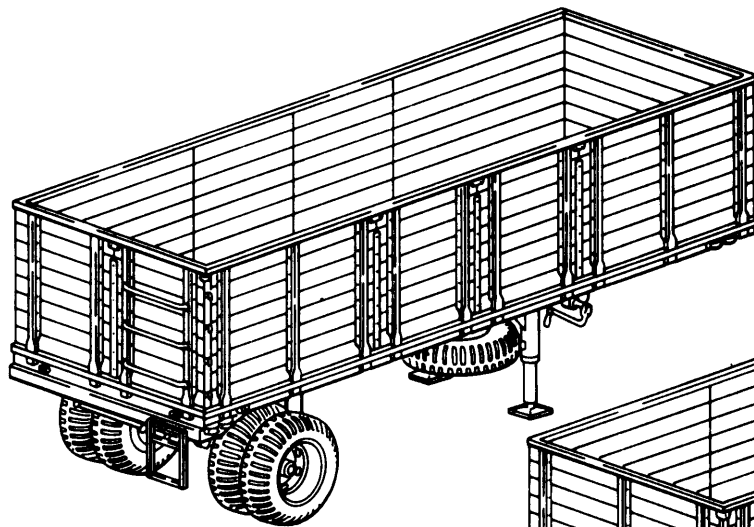
This manual is designed to help you operate and maintain the MI 18 and MI 19 series semitrailers. The front cover table of contents is provided for quick reference to important information. There is also an index, located in the back of this manual, for use in locating specific items of information.

Measurements in this manual are given in both US standard and metric units. A metric to US standard conversion chart can be found on the Inside back cover.

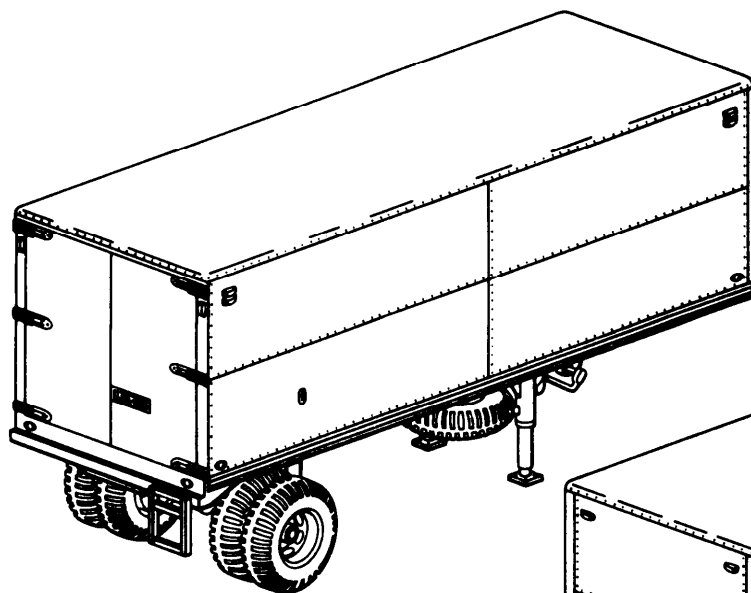
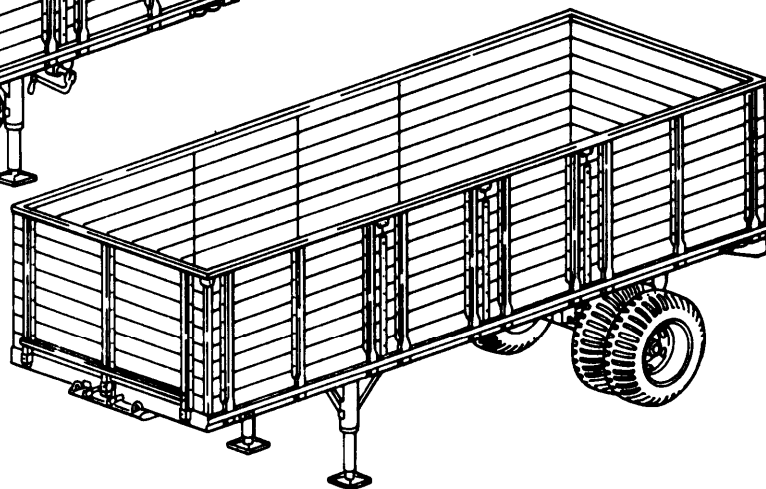
Read all preliminary information found at the beginning of each task. It has important information and safety instructions you must follow before beginning the task.

Warning pages are located in the front of this manual. You should read the warnings before operating or doing maintenance on the equipment.

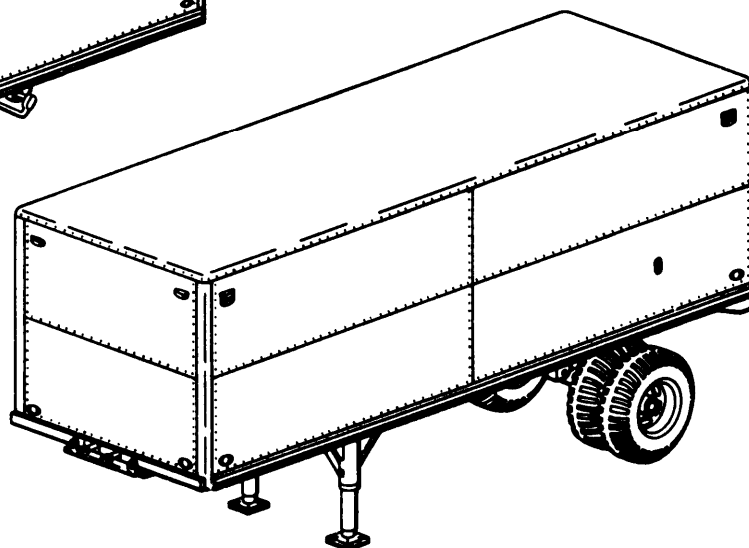
A subject index appears at the beginning of each chapter listing sections that are included in that chapter. A more specific subject index is located at the beginning of each section to help you find the exact paragraph you're looking for.



M118A1



M119
M119A1



CHAPTER 1

INTRODUCTION

OVERVIEW

The purpose of this chapter is to acquaint you with the semitrailers' size, shape, major equipment, and how the semitrailers' systems work.

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Section 1. GENERAL INFORMATION

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SCOPE

These instructions are published for the information and guidance of the operator, and organizational, direct support, and general support maintenance personnel responsible for the operation, inspection, care, maintenance, and repair of the M118A1 and M119 series cargo semitrailer.

MAINTENANCE FORMS AND RECORDS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-6, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive Command).

PREPARATION FOR STORAGE AND SHIPMENT

See chapter 4, section XIV for instructions on preparation for storage and shipment.

EQUIPMENT IMPROVEMENT REPORT AND MAINTENANCE DIGEST (EIR MD)

The quarterly Equipment Improvement Report and Maintenance Digest, TB 43-0001-39 series, contains valuable field information on the equipment covered in this manual. The information in the TB 43-0001-39 series is compiled from some of the Equipment improvement Reports that you prepared on the vehicle covered in this manual. Many of these articles result from comments, suggestions, and improvement recommendations that you submitted to the EIR program. The TB 43-0001-39 series contains information on equipment improvements, minor alterations, proposed Modification

EQUIPMENT IMPROVEMENT REPORT AND MAINTENANCE DIGEST (EIR MD) - CONTINUED

Work Orders (MWO'S), warranties (if applicable), actions taken on some of your DA Form 2028's (Recommended Changes to Publications), and advance information on proposed changes that may affect this manual. The information will help you in doing your job better and will help in keeping you advised of the latest changes to this manual. Also refer to DA PAM 25-30, Consolidated Index of Army Publications and Blank Forms, and appendix A, References, of this manual.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your semitrailer needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Tank-Automotive Command, ATTN: AMSTA-MP, Warren, MI 48397-5000. We will send you a reply.

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Equipment Data	1-8	Location and Description of Major Components	1-3

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

CHARACTERISTICS

- Primary towing vehicle is the 2 1/2-ton, 6 by 6, M48, truck tractor
- Has a single axle with dual wheels and leaf spring suspension system
- Has a 24-volt electrical system
- M119 semitrailer has a full airbrake system
- M1 18A1 and M1 19A1 semitrailers have air-over-hydrauiic brake systems

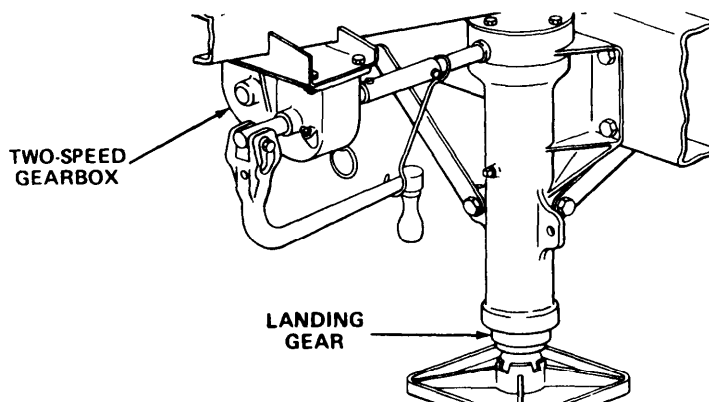
CAPABILITIES AND FEATURES

Payload Maximum	
Cross-country	12,000 lb (5448 kg)
Highway	16,200 lb (7354.8 kg)
Speed Limits Maximum	
Highway	50 mph (80.5 km/h)
Cross-county	30 mph (48.3 km/h)

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

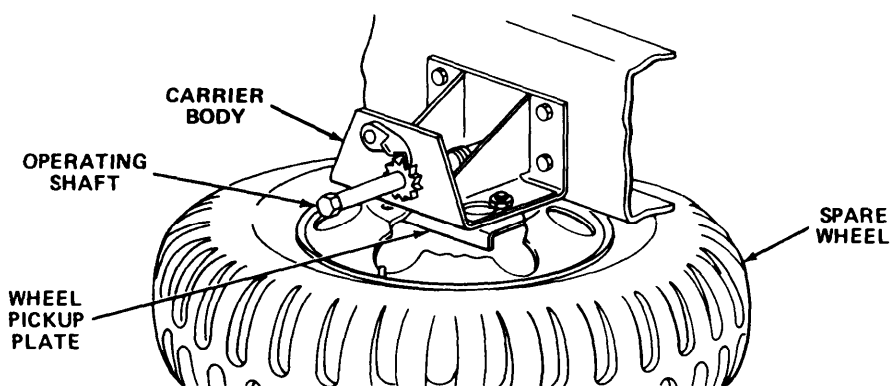
LANDING GEAR

The landing gear shown here is typical of all models. It is used to support the semitrailer when uncoupled from the towing vehicle. A two-speed gearbox enables the landing gear to be extended or retracted rapidly when in high gear. The low gear enables the landing gear to be extended or retracted to raise or lower the semitrailer for coupling operation.



SPARE WHEEL STORAGE ASSEMBLY

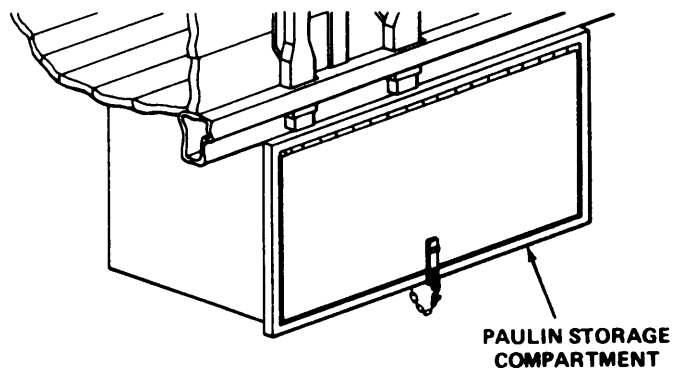
The spare wheel storage assembly shown here is typical of all models. It is designed so that lifting of the spare wheel by hand is not necessary. It is located on the right side of the semitrailer and consists of a spare wheel carrier body, an operating shaft, cable, and a wheel pickup plate.



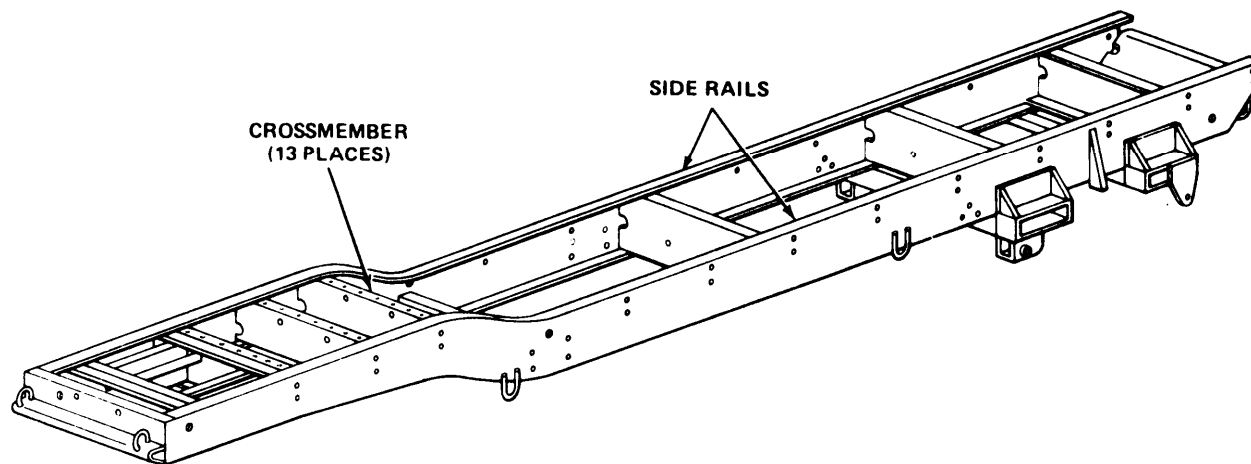
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED

PAULIN STORAGE COMPARTMENT

The M118A1 semitrailer has a paulin storage compartment used to store the paulin when not in use. It is located on the left side, forward of the axle, and is attached to the chassis.

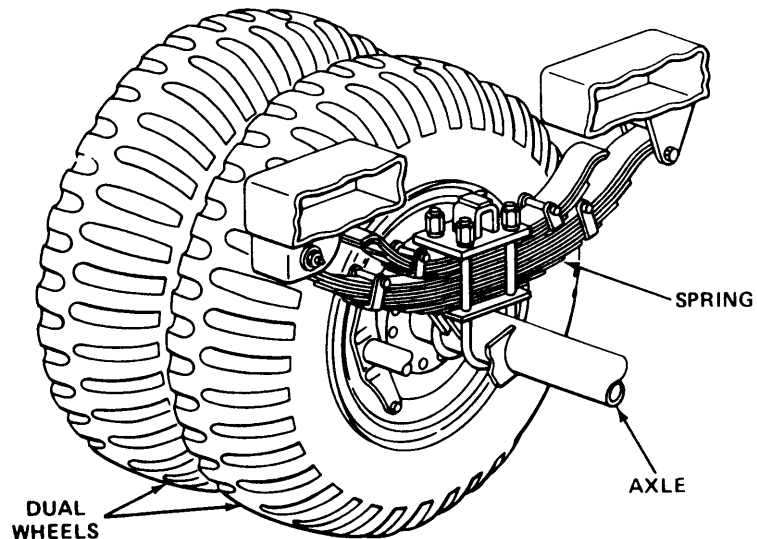


The chassis frame is made of 2 pressed-steel channel side rails, reinforced by 13 pressed-steel crossmembers. All members are welded at right angles to form an integral frame assembly.

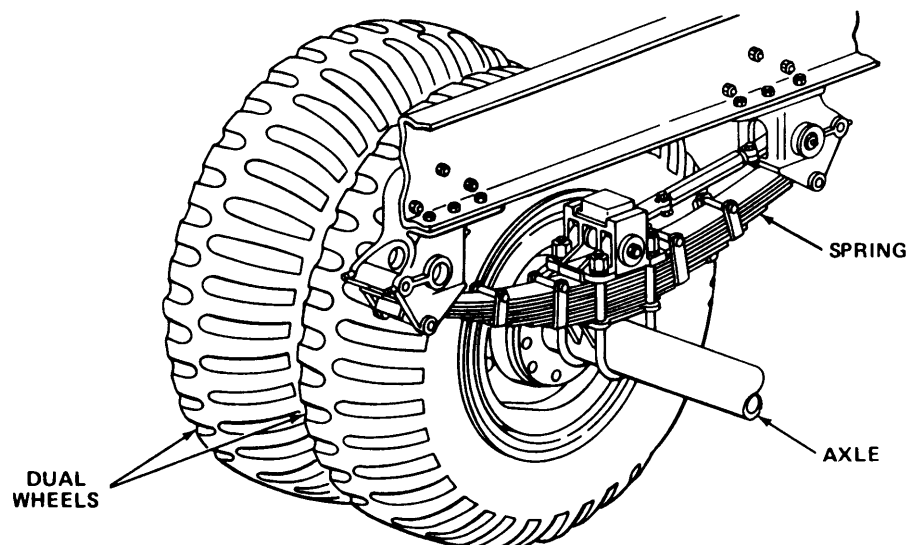


LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED**SUSPENSION, M119**

The chassis frame of the M119 semitrailer is supported by semi-elliptical springs mounted on an axle, which is supported by dual wheels. The spring is composed of 15 leaves.

**SUSPENSION, M118A1 AND M119A1**

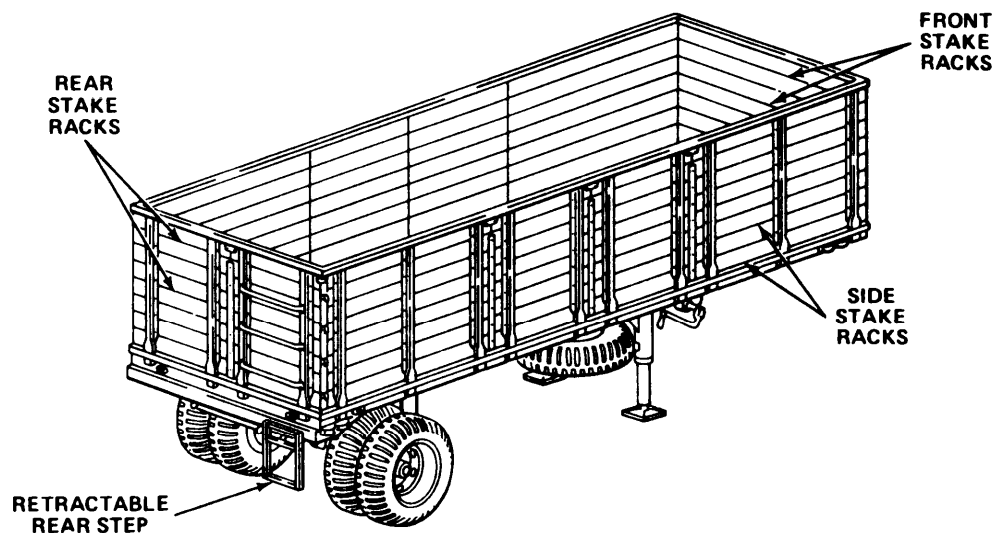
The chassis frame of the M118A1 and M119A1 semitrailers are supported by a suspension assembly (dolly) that is readily removable for air transport of the semitrailer. It is attached to the chassis by 23 bolts and consists of springs, axle, dual wheels, and a suspension frame assembly. Each spring consists of 11 leaves.



LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED

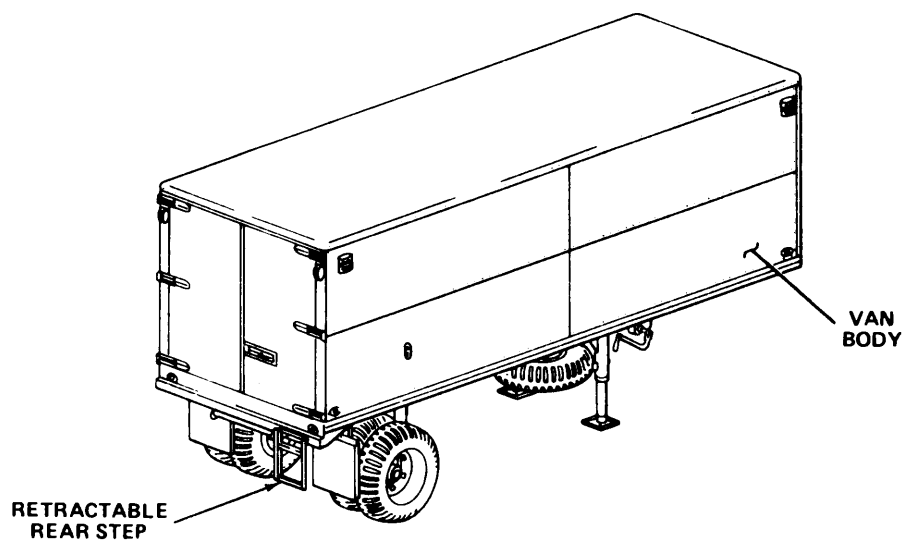
BODY, M118A1

The body of the M118A1 semitrailer is an open-type body (flat bed) with detachable side, front, and rear stake racks. A retractable rear step is incorporated in the right-rear corner of the semitrailer.



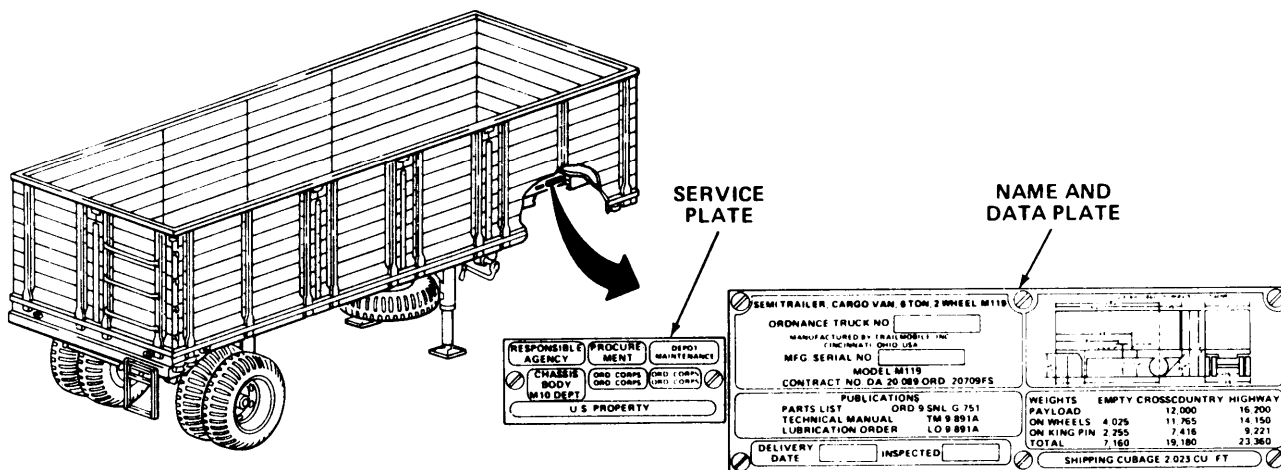
BODY, M119 SERIES

The body of the M 119 series semitrailers are closed-type van bodies. Retractable rear steps are also incorporated in the right-rear corner of the semitrailers.



LOCATION AND DESCRIPTION OF DATA PLATES

The name and data plate for all semitrailer models are located on the right side of the chassis frame above the pickup plate. They list the manufacturer's name, model and serial number, ordnance stock number, contract number, parts manual number, and technical manual numbers. They also list the lubrication order and weight and dimension data. The service plate for all semitrailer models are located next to the name and data plate. It lists the responsibility for procurement and depot maintenance.



DIFFERENCES BETWEEN MODELS

	M118A1	M119	M119A1
Body Type			
Flatbed	X		
Cargo van		X	X
Brake System			
Full air		X	
Air over hydraulic	X		X
Suspension			
Removable dolly	X		X

EQUIPMENT DATA

TIRES

Size	9.00 x 20
Number of plies	Eight
Pressure maximum	50 psi (345 kPa)
Number	Eight

ELECTRICAL SYSTEM

volts	24
-------	----

DIMENSIONS OUTSIDE

Length (overall)	
M118A1	22 ft 11 3/4 in. (700.4 cm)
M119, M119A1	22 ft 10 5/8 in. (697.5 cm)
Width (overall)	
M118A1	7 ft 10 3/4 in. (240.7 cm)
M119, M119A1	7 ft 11 3/4 in. (243.2 cm)
Height (overall)	
M118A1	8 ft 7 3/16 in. (262.1 cm)
M119, M119A1	11 ft 7/8 in. (337.5 cm)

DIMENSIONS INSIDE

Length	
M118A1	22 ft 2 1/2 in. (676.9 cm)
M119, M119A1	22 ft (670.6 cm)
Width	
M118A1	7 ft 4 1/2 in. (224.8 cm)
M119, M119A1	7 ft 5 7/8 in. (228.3 cm)
Height	
M118A1	4 ft (121.9 cm)
M119, M119A1	6ft 5 7/8 in. (197.8 cm)

WEIGHT ON WHEELS

Empty	
M118A1	4825 lb (2190.6 kg)
M119, M119A1	4925 lb (2235.9 kg)
Cross country (maximum)	
M118A1	7475 lb (3393.7 kg)
M119, M119A1	11,765 lb (5341.3 kg)
Highway (maximum)	
M118A1	9281 lb (4213.6 kg)
M119, M119A1	14,159 lb (6428.2 kg)

EQUIPMENT DATA - CONTINUED**WEIGHT ON KINGPIN**

Empty	
M118A1	2315 lb (1051 kg)
M119, M119A1	2255 lb (1023.8 kg)
Cross country (maximum)	
M118A1	7475 lb (3393.7 kg)
M119, M119A1	7415 lb (3366.4 kg)
Highway (maximum)	
M118A1	9281 lb (4213.6 kg)
M119, M119A1	9221 lb (4186.3 kg)

WEIGHT TOTALS

Empty	
M118A1	7140 lb (3241.6 kg)
M119, M119A1	7180 lb (3259.7 kg)
Cross country (loaded)	
M118A1	19,140 lb (8689.6 kg)
M119, M119A1	19,120 lb (8680.5 kg)
Highway (loaded)	
M118A1	23,340 lb (10,596.4 kg)
M119, M119A1	23,380 lb (10,614.5 kg)

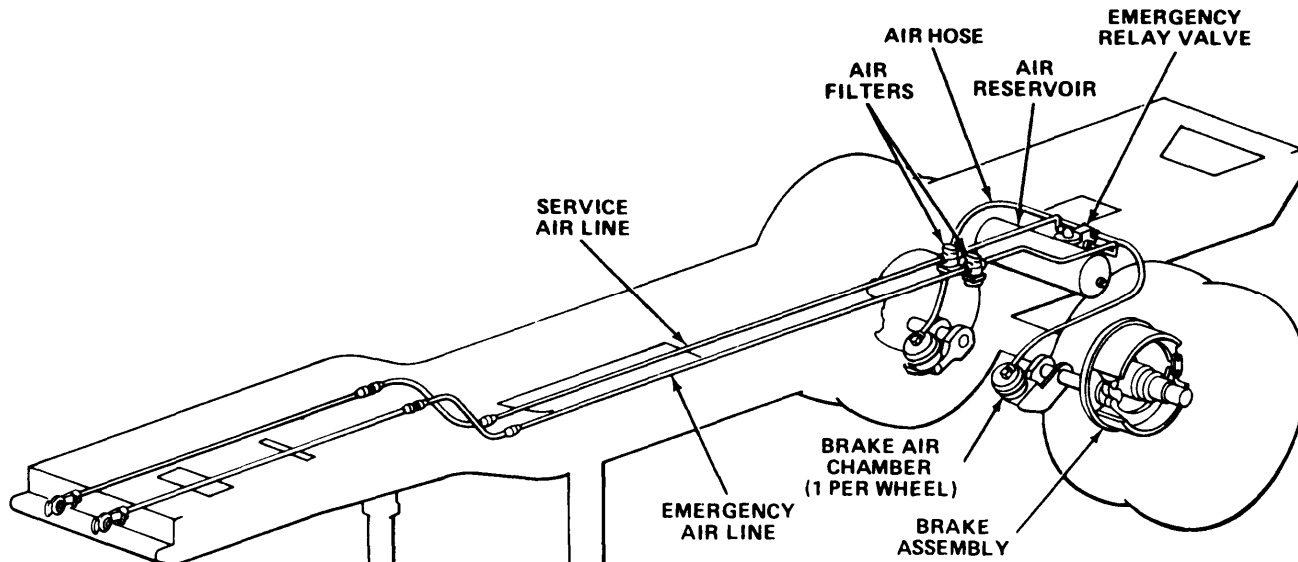
PAYLOAD, MAXIMUM

Cross country	
M118A1	12,000 lb (5448 kg)
M119, M119A1	11,960 lb (5429.8 kg)
Highway	
M118A1	16,200 lb (7354.8 kg)
M119, M119A1	16,200 lb (7354.8 kg)

Section III. PRINCIPLES OF OPERATION

	Page		Page
Electrical System, M118A1	1-12	Service Brake System, M118A1 and M119A1	1-11
Electrical System, MI 19 and M119A1	1-13	Service Brake System, M119	1-10
Landing Gear	1-14		

SERVICE BRAKE SYSTEM, M119



Emergency Air Line – The emergency air line supplies air to the semitrailer to fill the air reservoir, and provides air pressure for brake application.

Air Reservoir – The air reservoir stores air under pressure which is used for brake application.

Service Air Line – The service air line provides an air passage from the towing vehicle which activates the relay valve for service brake operation.

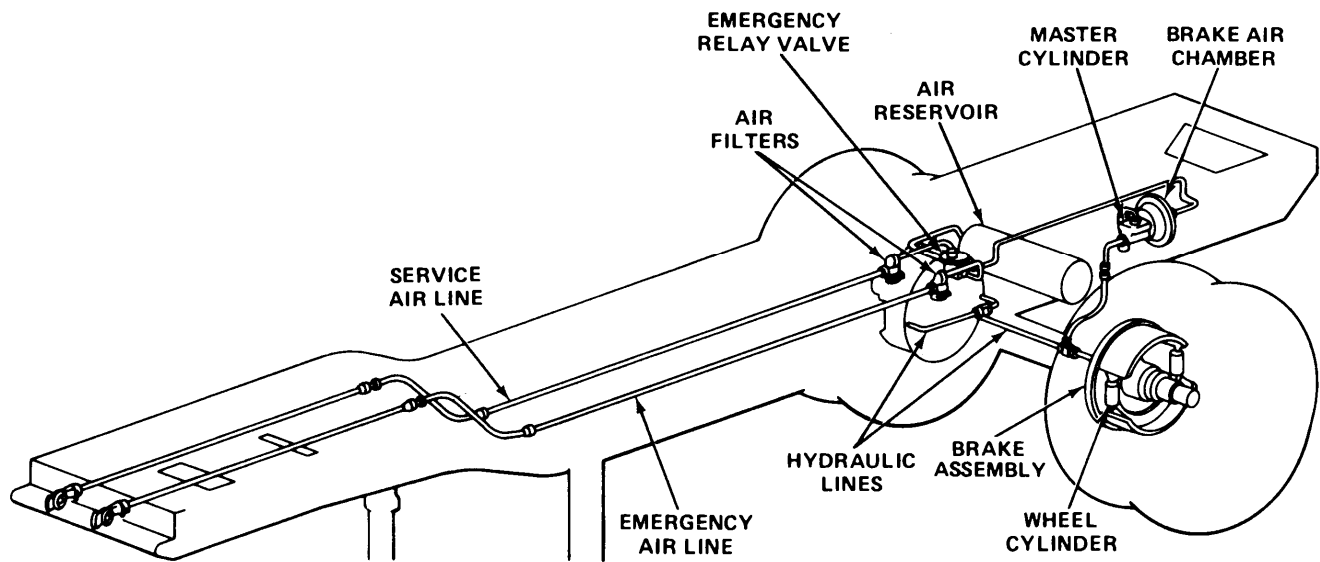
Emergency Relay Valve – The emergency relay valve directs and vents air to apply and release service brakes. In the event of a breakaway or trailer separation from towing vehicle, it will automatically apply the service brakes to stop the semitrailer.

Brake Air Chamber – The brake air chamber converts air pressure to mechanical motion and transfers that motion through linkage to the brake assembly.

Brake Assembly - The brake assembly creates friction to slow or stop the semitrailer.

Airhoses – The airhoses interconnect the air reservoir and brake air chambers.

Air Filters – The air filters remove moisture and debris from the air supplied by the towing vehicle.

SERVICE BRAKE SYSTEM, M118A1 AND M119A1

Emergency Air Line – The emergency air line supplies air to the semitrailer to fill the air reservoir, and provides air pressure for brake application.

Air Reservoir – The air reservoir stores air under pressure which is used for brake application.

Service Air Line - The service air line provides an air-pressure signal from the towing vehicle which activates the emergency relay valve.

Emergency Relay Valve – The emergency relay valve directs and vents air to apply and release the service brakes. In the event of a breakaway or trailer separation from the towing vehicle, it will automatically apply the service brakes to stop the semitrailer.

Brake Air Chamber - The brake air chamber converts air pressure to mechanical motion which activates the master cylinder.

Master Cylinder – The master cylinder converts the mechanical motion of the brake air chamber into hydraulic pressure.

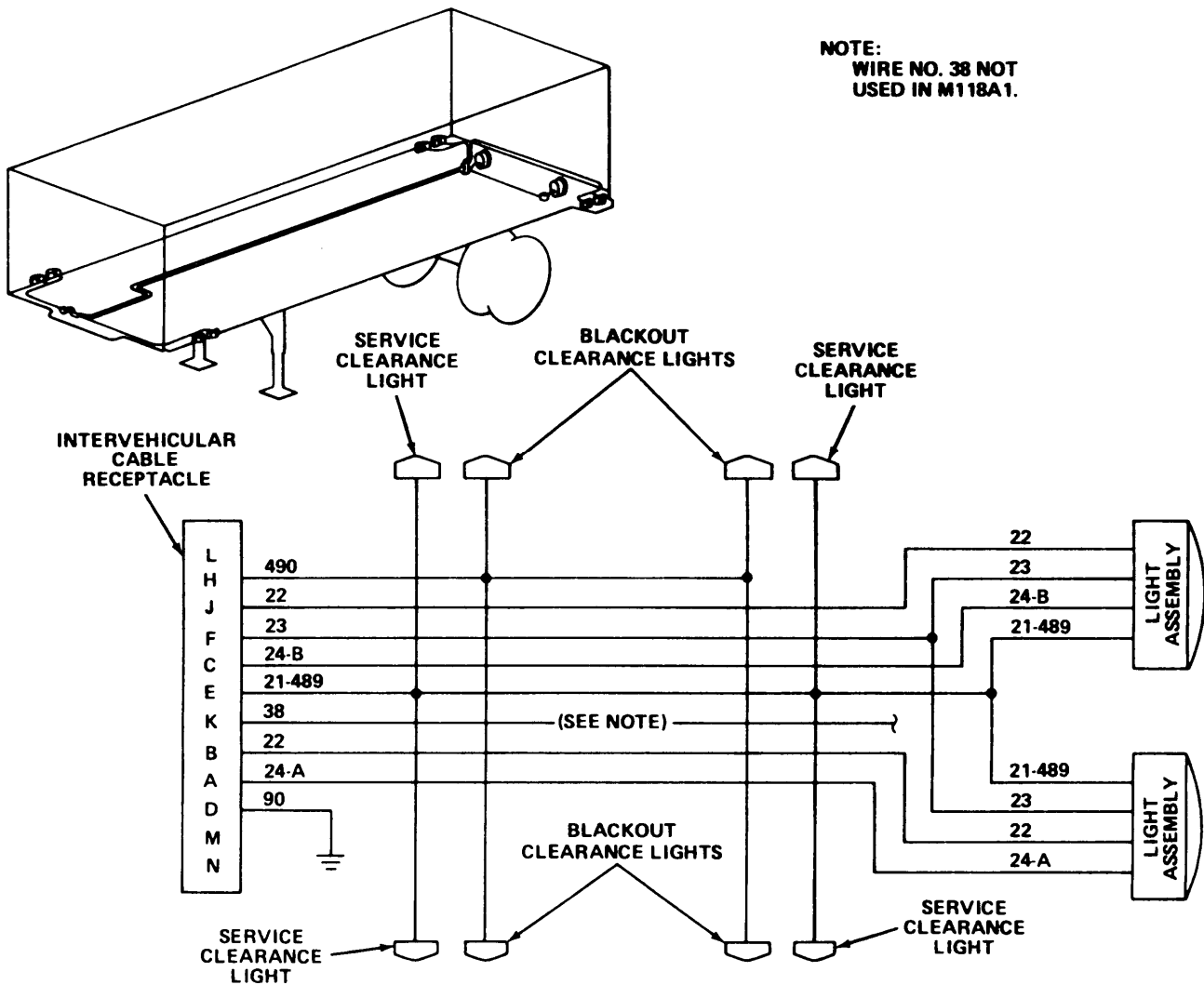
Wheel Cylinders – The wheel cylinders convert the hydraulic pressure of the master cylinder into mechanical motion which activates the brake assembly.

Brake Assembly – The brake assembly creates friction to slow or stop the semitrailer.

Air Filters – The air filters remove moisture and debris from the air supplied by the towing vehicle.

Hydraulic Lines – The hydraulic lines transmit pressure from the master cylinder to the wheel cylinders to operate the brake assemblies.

ELECTRICAL SYSTEM, M118A1



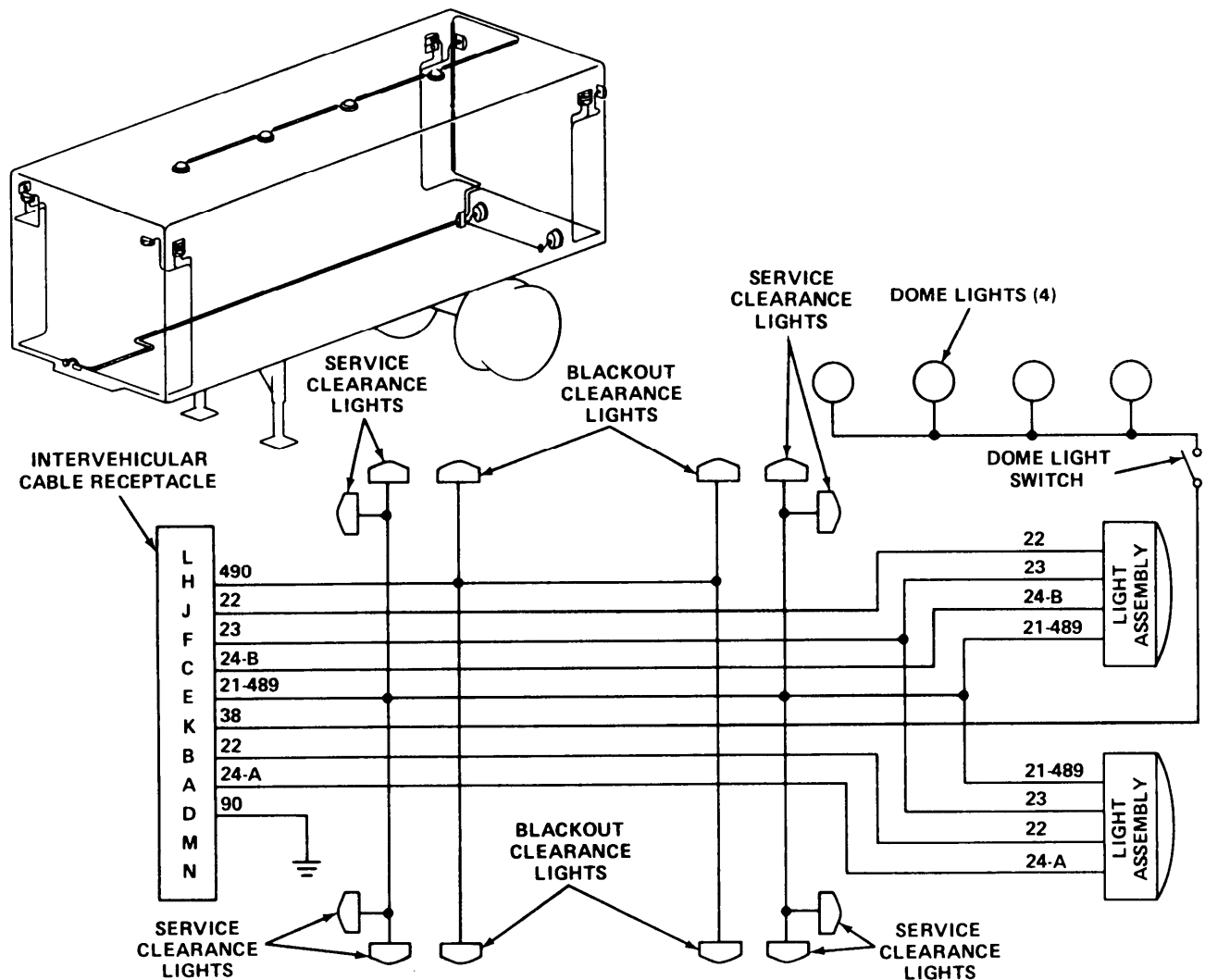
Intervehicular Cable Receptacle – The intervehicular cable receptacle provides connection of the towing vehicle intervehicular cable to the semitrailer electrical system.

Main Harness – The main harness transmits electrical power to the lights.

Light Assemblies – The light assemblies provide service taillight, service stoplight, left- and right-turn signal, blackout taillight, and blackout stoplight. These lights all work in conjunction with the towing vehicle lights.

Clearance Lights – The semitrailer has a total of eight clearance lights, four of which are blackout clearance lights. These lights work in conjunction with the towing vehicle lights.

ELECTRICAL SYSTEM, M119 AND M119A1



Intervehicular Cable Receptacle - The intervehicular cable receptacle provides connection of the towing vehicle intervehicular cable to the semitrailer electrical system.

Main Harness - The main harness transmits electrical power to the lights.

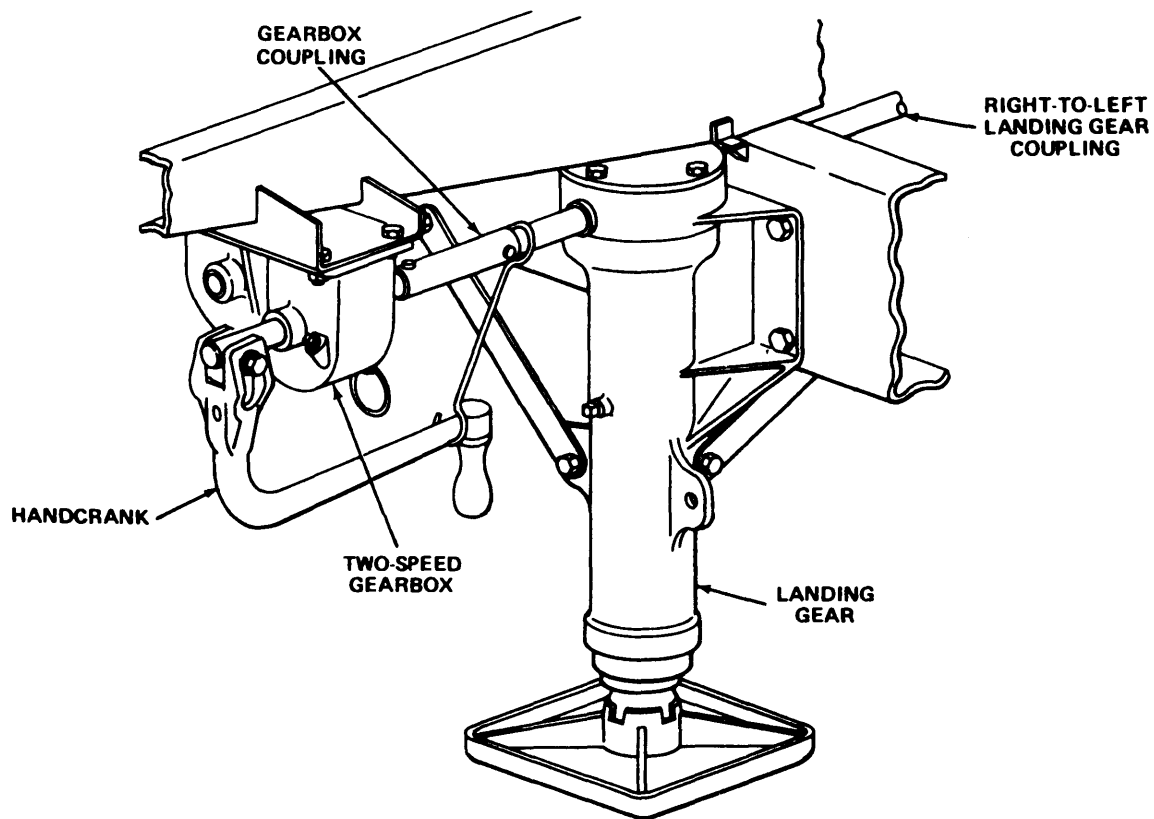
Light Assemblies - The light assemblies provide service taillight, service stoplight, left- and right-turn signal, blackout taillight, and blackout stoplight. These lights all work in conjunction with the towing vehicle lights.

Clearance Lights - The semitrailer has a total of 12 clearance lights, four of which are blackout clearance lights. These lights work in conjunction with the towing vehicle lights.

Dome Lights, M119 and M119A1 - The dome lights are wired with a body wiring harness and are powered by the towing vehicle.

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LANDING GEAR



Handcrank – The handcrank is used to operate the two-speed gearbox.

Two-Speed Gearbox - The high gear provides for fast extension and retraction of the landing gear when not supporting the semitrailer. The low gear provides greater power for raising the front end of the semitrailer when the landing gear is being used for support.

Gearbox Coupling – The gearbox coupling connects the two-speed gearbox to the landing gear.

Right-to-Left Landing Gear Coupling – The right-to-left landing gear coupling interconnects the right and left landing gears to allow them to operate together as one unit.

Landing Gear – The landing gear retracts and extends vertically to provide support for the front of the semitrailer.

CHAPTER 2

OPERATING INSTRUCTIONS

OVERVIEW

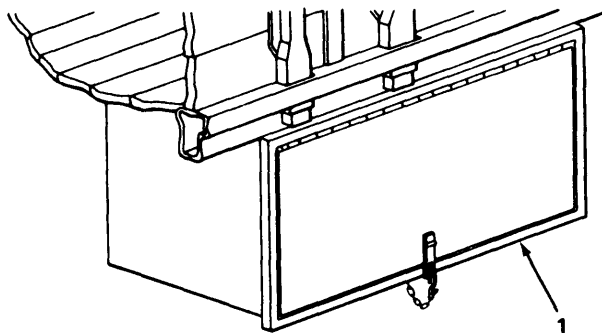
This chapter shows and describes the trailer controls and contains operator/crew level preventive maintenance procedures. There are instructions for coupling trailer to towing vehicle, driving, stopping, and backing, operation in both usual and unusual conditions, and other information to help you understand and better operate the trailer.

	Page
Section I. Description and Use of Operator's Controls and Indicators	2-1
Section II. Operator/Crew Preventive Maintenance Checks and Services (PMCS)	2-8
Section III. Operation Under Usual Conditions	2-12
Section IV. Operation Under Unusual Conditions	2-18

Section 1. DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

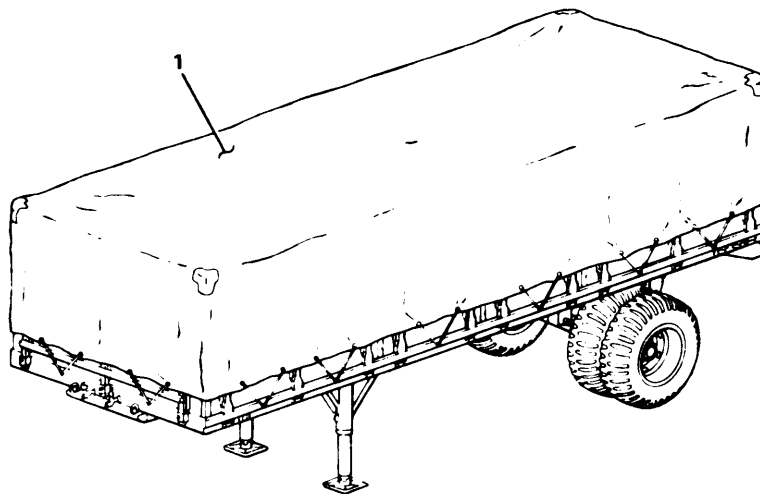
	Page		Page
Air Reservoir Draincock	2-6	Paulin, M118A1	2-2
Chock Blocks	2-4	Paulin Storage Compartment, M118A1	2-1
Dome Light, M119 Series	2-3	Retractable Rear Step	2-2
Doors and Locks, M119 Series	2-5	Spare Wheel Storage Assembly	2-7
Handbrake	2-4	Trailer-to-Towing Vehicle Connectors	2-6
Landing Gear	2-3		

PAULIN STORAGE COMPARTMENT, M118A1



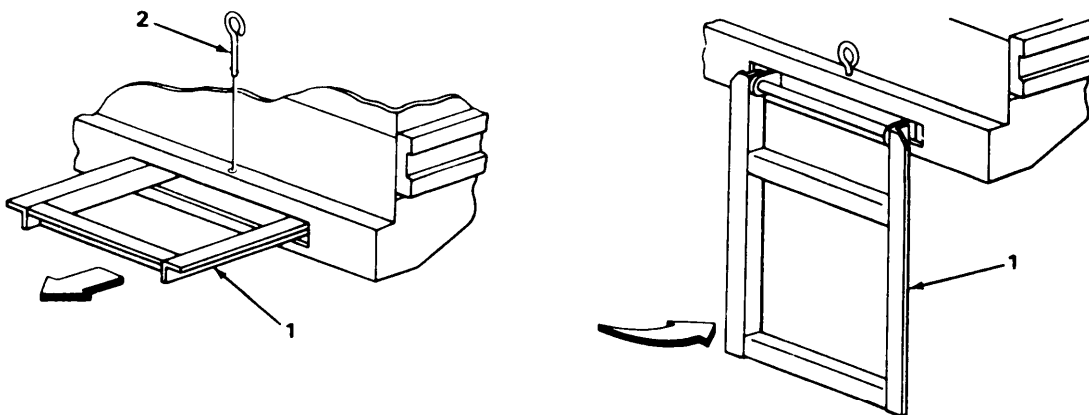
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
	Storage compartment	Provides storage for paulin when not in use.

PAULIN, M118A1



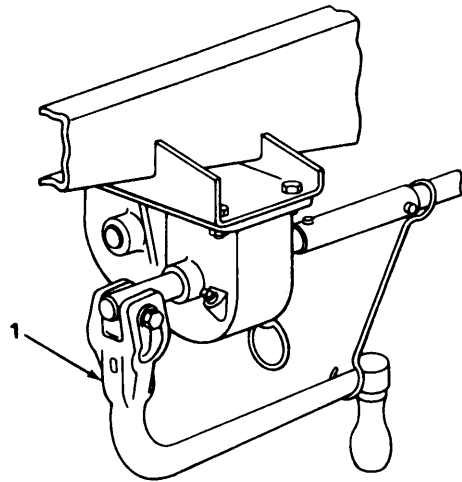
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Paulin	Provides protection for cargo when loaded on stake rack body.

RETRACTABLE REAR STEP



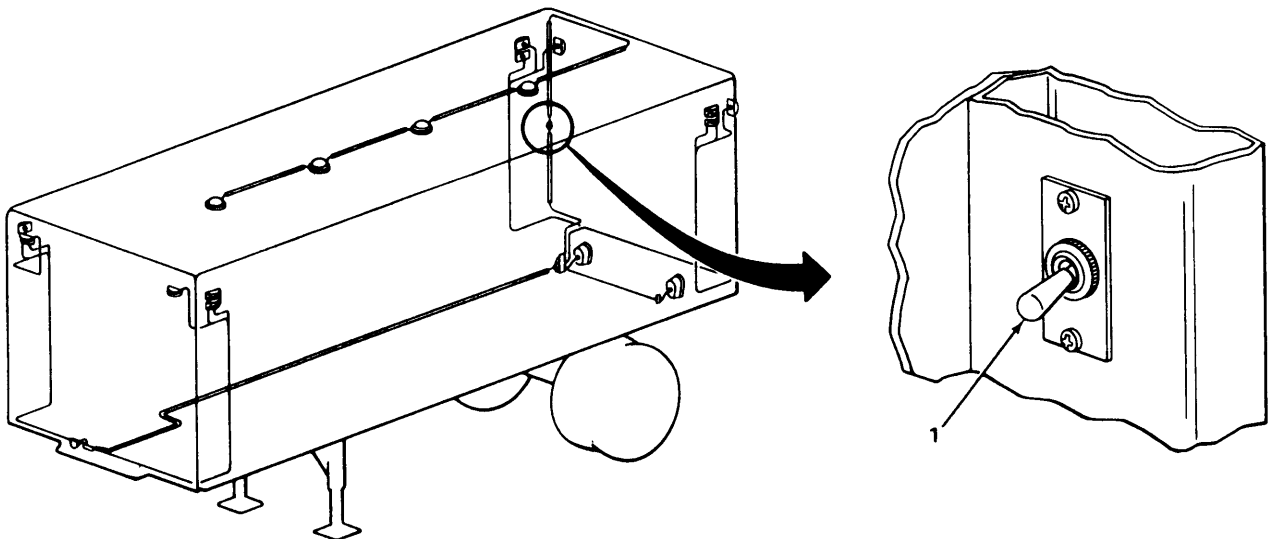
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Rear step	Provides easy access to van body or stake rack body semitrailer.
2	LockPin	Locks rear step in position.

LANDING GEAR



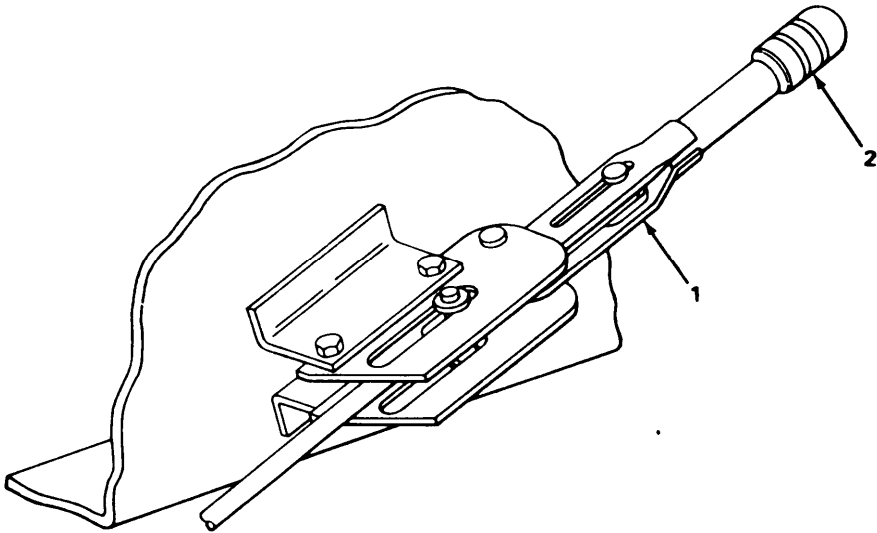
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Handcrank	Operates two-speed gearbox to extend or retract landing gear.

DOME LIGHT, M119 SERIES



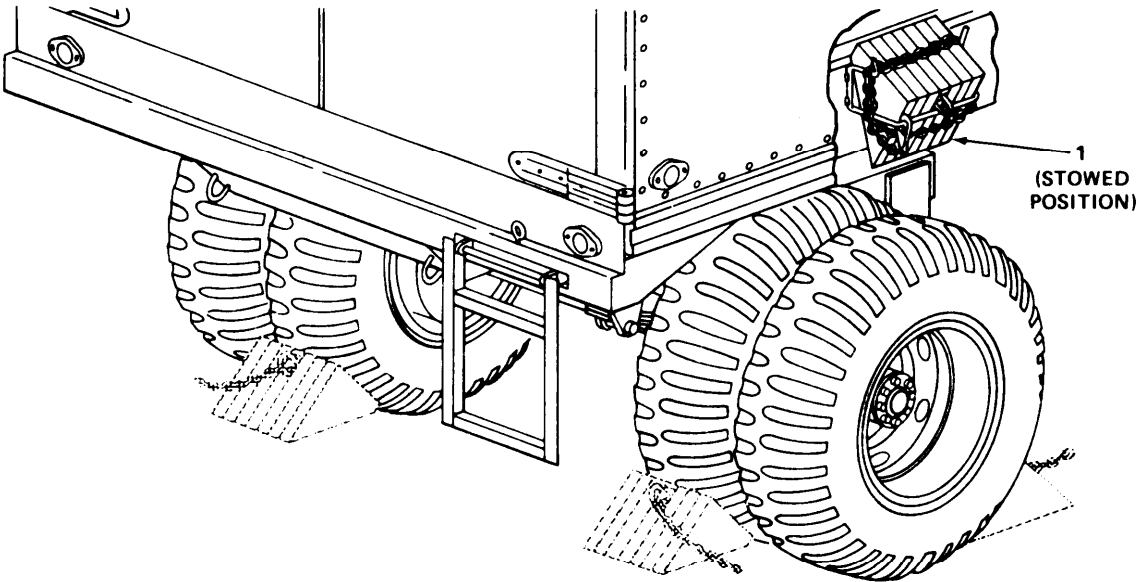
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Dome light switch	Turns on dome light from within semitrailer.

HANDBRAKE



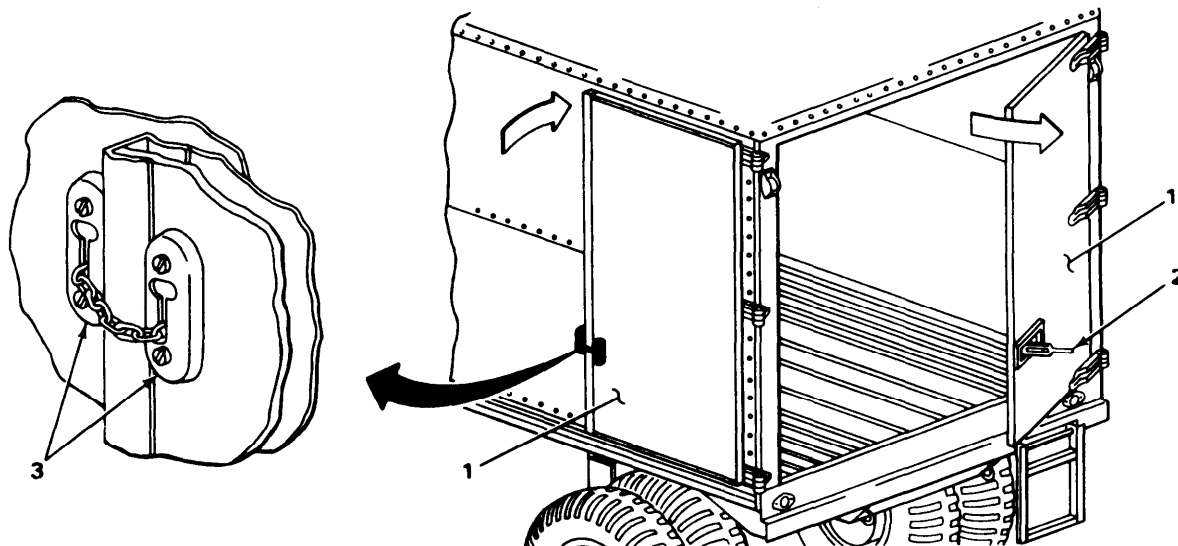
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Handbrake lever assembly	Mechanically applies brakes when semitrailer is parked.
2	Adjusting knob	Used to adjust linkage for proper brake application.

CHOCK BLOCKS



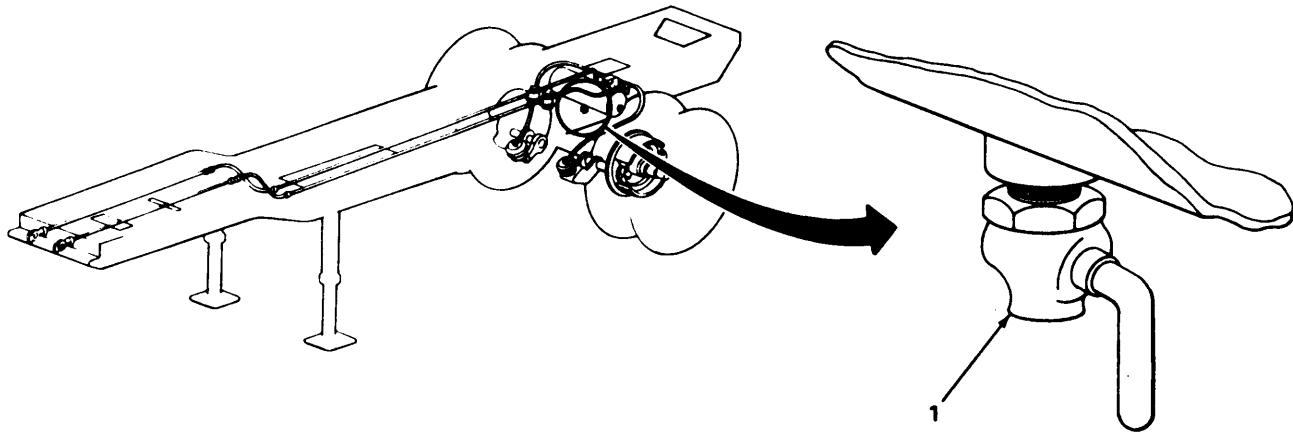
CHOCK BLOCKS - CONTINUED

KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Chock blocks	Prevent semitrailer from accidentally moving when parked.

DOORS AND LOCKS, M1 19 SERIES

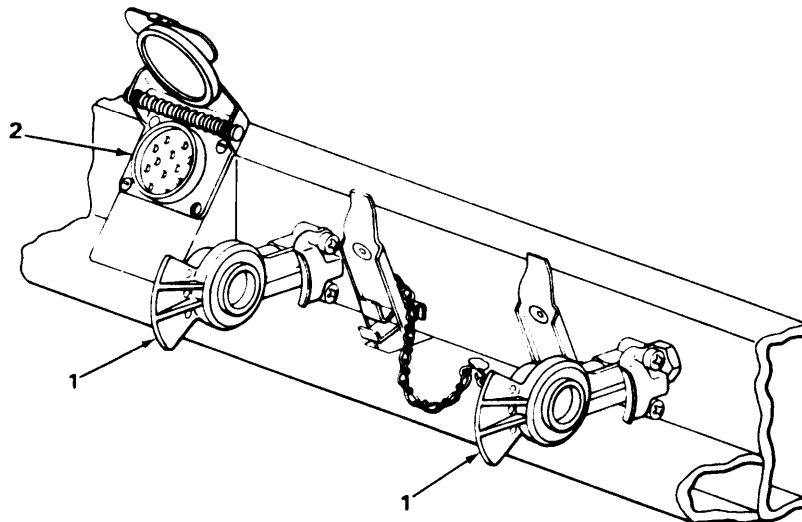
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Doors	Provide access into cargo van body.
2	Door lock handle and latch	Provides a means to close and lock doors.
3	Door hold-open chain and retainer	Holds doors in open position.

AIR RESERVOIR DRAINCOCK



KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Draincock	Used to drain any accumulation of moisture and for releasing air pressure in the event of locked brakes.

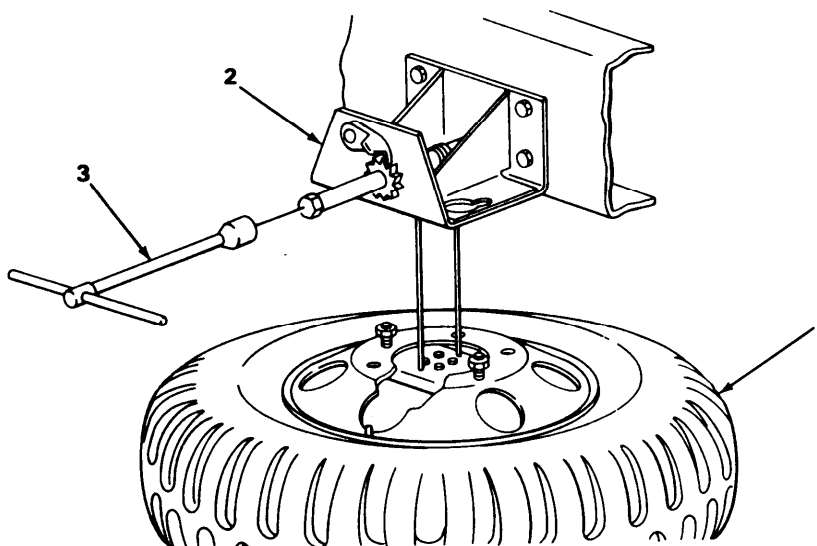
TRAILER-TO-TOWING VEHICLE CONNECTORS



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TRAILER-TO-TOWING VEHICLE CONNECTORS - CONTINUED

KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Gladhands	Couplings that connect towing vehicle service and emergency air supply hoses to semitrailer.
2	Intervehicular cable receptacle	Permits connection of towing vehicle intervehicular electrical cable to semitrailer electrical system.

SPARE WHEEL STORAGE ASSEMBLY

KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Spare wheel	A replacement for damaged or flat tire.
2	Storage assembly	Used to raise and lower spare wheel for storage or use.
3	Wheel lug wrench	Used to operate storage assembly.

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

	Page		Page
General	2-8	PMCS Column Description	2-9
Leakage Definitions	2-9	Special Instructions	2-8
Operator/Crew Preventive Maintenance Checks and Services	2-10		

GENERAL

This section contains instructions for performing PMCS on the semitrailer. The procedure lists checks, services, and criteria to ensure that the trailer is prepared for operation. Perform the checks and services at the specified intervals, keeping in mind the following guidelines:

Do before (B) PMCS before operating the vehicle.

Do during (D) PMCS while operating the vehicle. Monitor the vehicle and its related parts while they are being operated.

Do after (A) PMCS after operating the vehicle.

SPECIAL INSTRUCTIONS

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

Always do your preventive maintenance checks and services in the same order so they get to be a habit. Once you've had some practice, you'll spot anything wrong in a hurry.

If anything looks wrong and you can't fix it, write it on your DA Form 2404 and report it to organizational maintenance.

When you do your PMCS, take along the tools you need to make all the checks. You always need a rag or two.

Drycleaning solvent P-D-680 is toxic and flammable. 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 flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.

Keep it Clean. Dirt, grease, oil, and debris may cover up a serious problem. Clean as you work and as needed. Use drycleaning solvent P-D-680 on all metal surfaces. Use soap and water to clean rubber and plastic material.

Bolts, Nuts, and Screws. Check that they are not loose, missing, bent, or broken. Report loose or missing nuts, bolts, and screws to organizational maintenance.

SPECIAL INSTRUCTIONS - CONTINUED

Welds. Look for gaps where parts are welded together. Report bad welds to organizational maintenance.

Electric Wires and Connectors. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Report loose connections and faulty wiring to organizational maintenance.

Hoses and Air Lines. Look for wear, damage, or leaks. Make sure clamps and fittings are tight. If a leak comes from a loose fitting or connector, or if something is broken or worn out, notify organizational maintenance.

LEAKAGE DEFINITIONS

Fluid leaks affect the operational status of the trailer. The following are definitions of the types/classes of leakage needed to determine the status of the trailer. Become familiar with them. When in doubt, notify your supervisor.

Class I – Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.

Class II – Leakage of fluid great enough to form drops, but not enough to cause drops to fall.

Class III – Leakage of fluid great enough to form drops that fall.

CAUTION

When operating with class I or II leaks, check fluid levels more often than that required in the PMCS. Hydraulic brake systems with leaks will stop working if fluid levels are not maintained.

Equipment operation is allowable with minor leaks (class 1 or II). Consideration must be given to the fluid capacity of the trailer hydraulic system. Notify your supervisor when in doubt.

Class III leaks must be reported to your supervisor or organizational maintenance.

PMCS COLUMN DESCRIPTION

Item No. – The order that PMCS should be performed.

Interval – Tells when each check is to be performed.

Item To Be Inspected – Lists the check to be performed.

Equipment is Not Ready/Available If - Has an entry only when the trailer should not be operated or accepted with that problem.

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES

B-BEFORE OPERATION

D-DURING OPERATION

A-AFTER OPERATION

ITEM NO.	INTERVAL			ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
	B	D	A		
1.				<p>WHEELS AND TIRES</p> <p align="center"><u>WARNING</u></p> <p>Improperly seated lockring could blow off. Never attempt to seat a lockring when tire is inflated. Serious injury or loss of life could result.</p> <ul style="list-style-type: none"> ● a. Check for proper mounting of wheel assembly lockrings. ● b. Remove any glass, nails, or other debris embedded in tread or between dual wheels. ● c. Check tires for obvious damage such as cuts, bruises, bulges, and flats. ● d. Adjust inflation pressure to 50 psi (345 kPa). 	<p>Not properly seated.</p> <p>Tires are unserviceable.</p>
2.				<p>SPARE WHEEL AND TIRE</p> <ul style="list-style-type: none"> ● a. Check for proper mounting and condition of tire. ● b. Adjust spare tire inflation pressure to 50 psi (345 kPa). 	<p>Tire is unserviceable.</p>
3.				<p>FRAME AND SUSPENSION</p> <p>Check for cracks or broken welds.</p>	<p>Cracks or broken welds are present.</p>
4.				<p>LIGHTS AND REFLECTORS</p> <ul style="list-style-type: none"> ● a. Check for damage or looseness of lights, lenses, and reflectors. 	

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES - CONTINUED

B-BEFORE OPERATION

D-DURING OPERATION

A-AFTER OPERATION

ITEM NO.	INTERVAL			ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
	B	D	A		
5.		●		b. Check for proper operation. BODY, STAKE RACK, M118A1 ONLY	Taillights, marker lights, or reflectors are not serviceable.
6.	●			Check for proper installation and operation. BODY, CARGO VAN, M119 SERIES ONLY	
	●			a. Check for loose or damaged panels.	
	●			b. Check for proper operation of cargo doors and lock mechanism.	Door will not close and lock.
7.				RETRACTABLE REAR STEP	
	●			Check for proper operation.	
8.				BRAKE SYSTEM	
	●	●		a. Check for leakage of brake fluid from master cylinder, hydraulic brake lines, fittings, and wheel cylinders (M118A1 and M119A1 only).	A class III leak is present.
		●		b. Check for leaking brake air system (page 3-9).	Pressure drop is excessive.
		●		c. Check for proper operation of service brakes.	Brakes do not operate properly.
	●			d. Check for proper adjustment and operation of handbrake (page 3-3).	
9.				LANDING GEAR	
	●		●	Check for proper alinement, mounting, and general condition.	Landing gear is loose, bent, or inoperative.

OPERATOR CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES - CONTINUED

B-BEFORE OPERATION

D-DURING OPERATION

A-AFTER OPERATION

ITEM NO.	INTERVAL			ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
	B	D	A		
10.	●			PAULIN AND STORAGE COMPARTMENT	
	●			a. Check paulin for holes, tears, and general condition.	
	●			b. Check storage compartment door for proper operation and latching.	
11.	●			INTERVEHICULAR ELECTRICAL CABLE RECEPTACLE	
	●			a. Check for proper mounting and general condition.	
		●		b. Check for proper connection between intervehicular electrical cable and receptacle.	
12.	●			KINGPIN AND PICKUP PLATE	
	●			Check for contaminated lubricants and for proper lubrication.	
13.		●		AIR RESERVOIR DRAIN	
		●		a. Open draincock and allow any accumulation of moisture to drain.	
	●			b. Close draincock.	

Section III. OPERATION UNDER USUAL CONDITIONS

Page

Page

After Use 2-16

Preparation for Operation 2-13

Operation 2-15

PREPARATION FOR OPERATION

1. Perform all before (B) operator/crew preventive maintenance checks and services.

COUPLING/UNCOUPLING

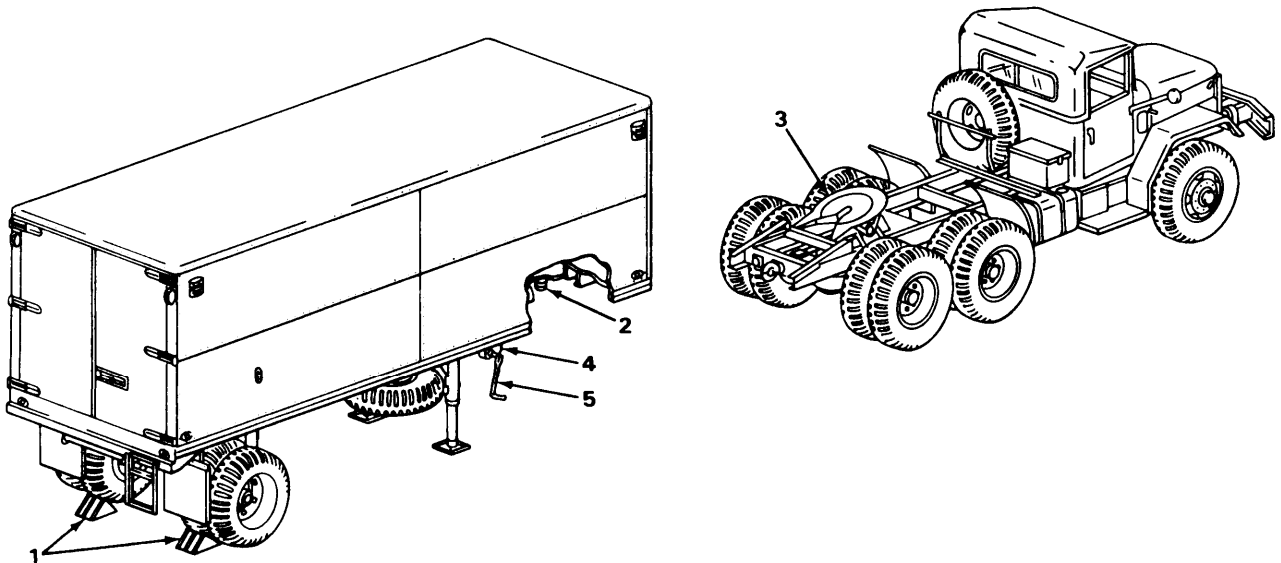
All personnel not involved in coupling/uncoupling operation must stand clear of towing vehicle and semitrailer. Serious injury or loss of life could result.

2. Review all towing vehicle operating instructions to prepare for coupling operation.
3. Set handbrake to applied position (M119 only) and place two chock blocks (1) behind outside wheels of semitrailer.

CAUTION

Have a ground guide direct you during any backing operation of towing vehicle. Damage to equipment could result.

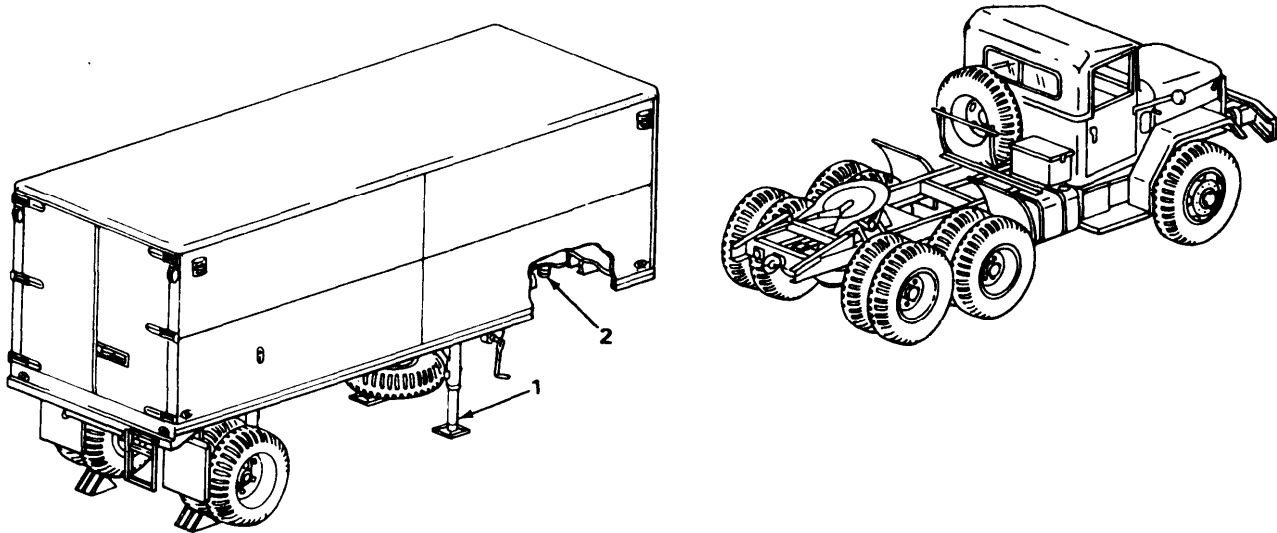
4. Aline towing vehicle with semitrailer and slowly back towing vehicle to a distance of about 2 feet from front of semitrailer and stop.
5. Ensure kingpin (2) is properly alined with fifth-wheel jaws (3) of towing vehicle and that fifth-wheel jaws are open.
6. Ensure semitrailer is at proper height to allow towing vehicle to back under for coupling. To raise or lower semitrailer, engage two-speed gearbox (4) into low gear by pushing in hand-crank (5). With two-speed gearbox in low gear, turn handcrank (5) to raise or lower semitrailer as required.



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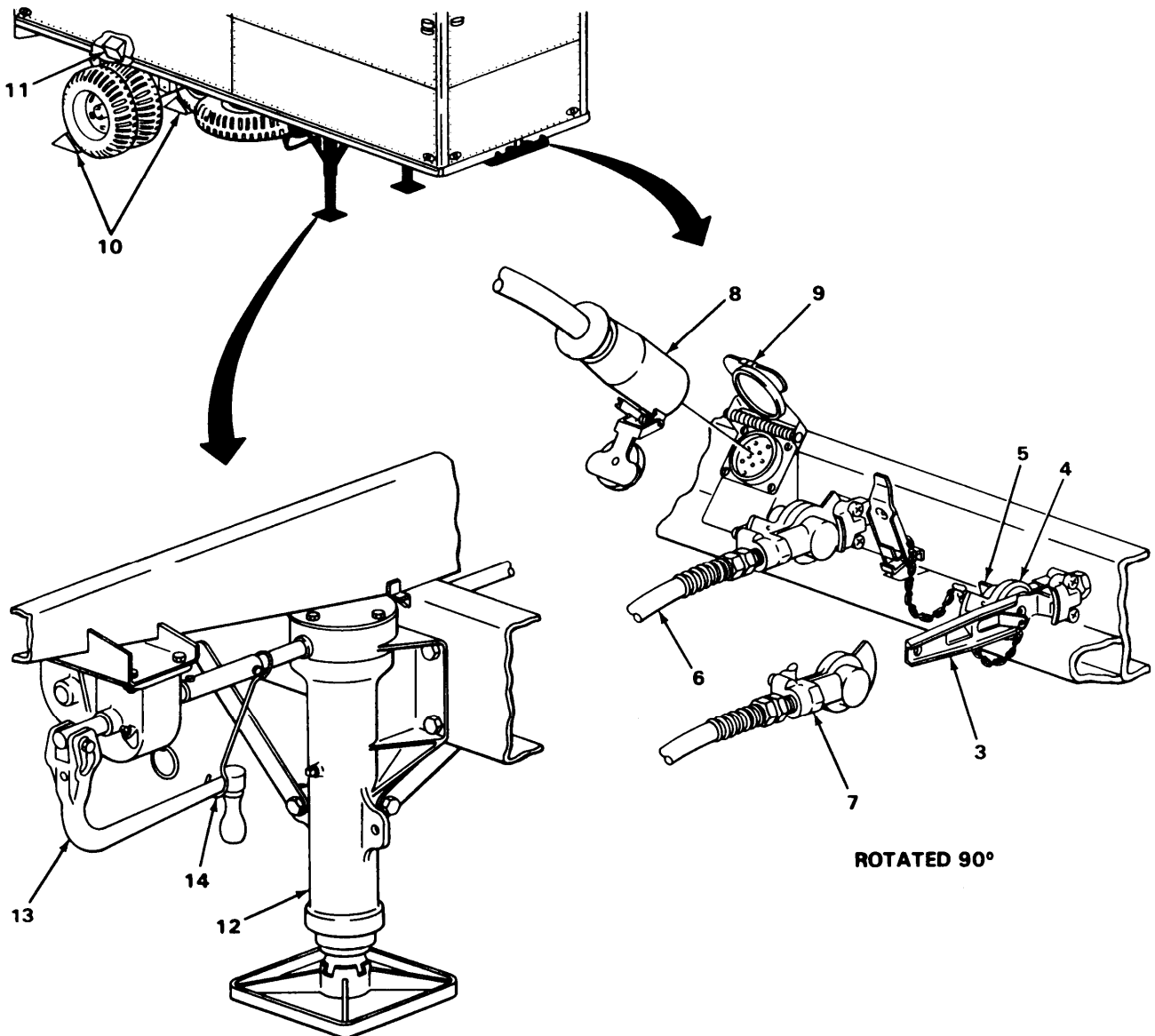
PREPARATION FOR OPERATION - CONTINUED

7. Slowly back towing vehicle under semitrailer, causing landing gear (1) to be raised a few inches off the ground until firm contact is felt with kingpin (2). When proper contact is made, fifth-wheel jaws will automatically close.
8. Check for positive coupling by checking fifth-wheel jaw release handle has returned to locked position, and attempt to drive towing vehicle out from under semitrailer.
9. If towing vehicle and semitrailer fail to couple, slowly drive towing vehicle out from under semitrailer and repeat steps 2 through 8.



10. Remove dummy couplings (3) from gladhands (4) on semitrailer, and place on storage clips (5).
11. Connect emergency airhose (6) and service airhose (7) to gladhands (4) of semitrailer.
12. Connect intervehicular electrical cable (8) of towing vehicle to receptacle (9) on semitrailer.
13. Turn on towing vehicle air supply to pressurize brake system of semitrailer.
14. Remove chock blocks (10) from behind semitrailer tires and place them in storage racks (11).
15. Raise landing gear (12) to its fully retracted position. To raise landing gear, pull handcrank (13) out to engage the two-speed gearbox into high gear. With two-speed gearbox in high gear, turn handcrank (13) counterclockwise to raise landing gear. Place handcrank (13) at its lowest point of swing and stow it in its holder (14).

PREPARATION FOR OPERATION - CONTINUED



OPERATION

WARNING

Before moving semitrailer, make sure that all loose equipment is properly stowed away, and that nothing will be dragging on the ground. If semitrailer is loaded, ensure load is properly secured. Injury to personnel or damage to equipment could result.

GENERAL

Perform all during (D) operator/crew preventive maintenance checks and services. These checks and services should also be performed periodically throughout the entire operation of the semitrailer.

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OPERATION - CONTINUED

DRIVING

When driving the towing vehicle coupled to a semitrailer, the overall length of the unit must be kept in mind when turning corners or passing other vehicles. Backing is also affected because the unit is hinged at the coupling point.

TURNING

Refer to FM 21-305.

STOPPING

Refer to FM 21-305.

BACKING

Refer to FM 21-305.

PARKING

When parking for extended periods, both the towing vehicle and the semitrailer handbrakes should be applied. Do not use the service brakes for long-term parking. If the semitrailer is parked on a hill, the chock blocks should also be positioned to prevent accidental movement of the semitrailer while parked.

LOADING

Load capacity depends on whether the semitrailer is to be operated on highway or cross-country terrain. The maximum load of 16,200 lb (7354.8 kg) highway, or 12,000 lb (5448 kg) cross country, should never be exceeded. All loads must be evenly distributed over the semitrailer floor.

AFTER USE

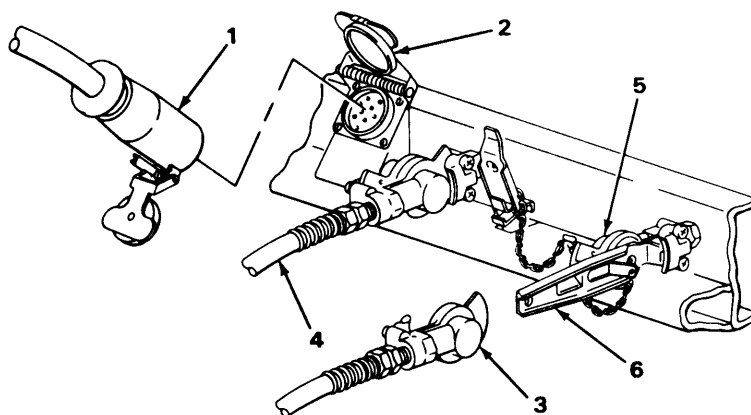
WARNING

COUPLING/UNCOUPLING

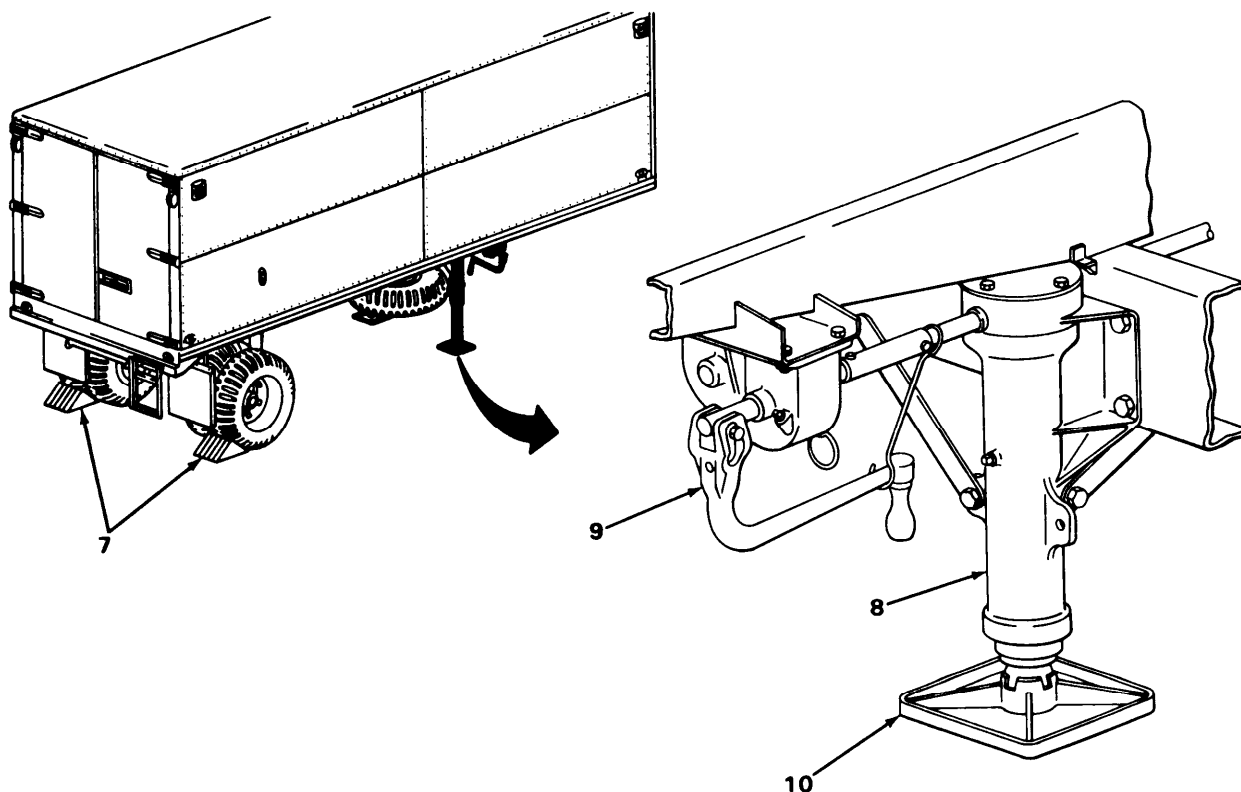
All personnel not involved in coupling/uncoupling operation must stand clear of towing vehicle and semitrailer. Serious injury or loss of life could result.

1. Review all towing vehicle operating instructions to prepare for uncoupling operation.
2. The area selected for uncoupling should be level, solid ground, and provide protection for the semitrailer if weather condition should change. See Operation Under Unusual Condition (page 2-18).
3. Disconnect intervehicular electrical cable (1) from receptacle (2) on semitrailer.
4. Disconnect service airhose (3) and emergency airhose (4) from gladhands (5).
5. Connect dummy couplings (6) to gladhands (5).

AFTER USE - CONTINUED



6. Set handbrake to applied position (MI 19 only) and place chock blocks (7) in front of wheels.
7. Lower landing gear (8) by pulling handcrank (9) out to engage two-speed gearbox into high gear. Turn handcrank (9) until pads (10) are a few inches off ground.
8. Move fifth-wheel jaw release handle of towing vehicle to open position. Refer to towing vehicle operating instructions.
9. Slowly drive towing vehicle out from under semitrailer and park a safe distance away.
10. Remove one chock block (7) from in front of wheel and place it behind the same wheel.
11. Perform all after (A) operator/crew preventive maintenance checks and services.



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Section IV. OPERATION UNDER UNUSUAL CONDITIONS

	Page		Page
Fording	2-18	Operation in Saltwater Areas	2-18
Operation in Extreme Cold	2-18	Operation in Sandy or Dusty Areas	2-18
Operation in Mud	2-18	Operation In Snow	2-18

OPERATION IN EXTREME COLD

1. See Lubrication Chart (page 4-2) for proper lubricants to be used during extreme cold weather.
2. Extreme cold weather can cause insulation material on electrical wire to crack, causing short circuits. Construction materials can become hard and brittle and easily damaged or broken.
3. When parking for long or short periods, park in a sheltered area out of the wind, and clean off any buildup of ice or snow. Tires and landing gear could freeze to the ground. During extreme cold weather, place a footing of planks or brush under the tires and landing gear when parking for long periods of time. Tires must also be kept properly inflated because underinflated tires will freeze, resulting in flat spots.

OPERATION IN SANDY OR DUSTY AREAS

1. Clean, inspect, and lubricate more often in dusty or sandy areas.
2. Reduce tire pressure to 28 psi (193 kPa) for operation in soft sand.
3. Return tire pressure to 50 psi (345 kPa) after operation in soft sand.

OPERATION IN SALTWATER AREAS

1. Saltwater will cause rapid rust or corrosion to develop. Clean, inspect, and lubricate more often than scheduled.
2. See Fording.

OPERATION IN SNOW

1. Refer to FM 9-207 and FM 21-305 for special instructions on driving hazards in snow.
2. Reduce tire pressure to 28 psi (193 kPa) for operation in snow.

OPERATION IN MUD

Thoroughly clean and lubricate all parts contaminated by mud as soon as possible after operation in mud. Pack wheel bearings if necessary.

FORDING

Instructions pertaining to fording for towing vehicle are also applicable to semitrailers.

CHAPTER 3

OPERATOR MAINTENANCE

OVERVIEW

This chapter contains the lubrication and troubleshooting maintenance instructions and procedures authorized at operator level.

		Page
Section I.	Lubrication Instructions	3-1
Section II.	Operator Troubleshooting Procedures.....	3-1
Section III.	Operator Maintenance Procedures	3-3

Section I. LUBRICATION INSTRUCTIONS

For lubrication under usual and unusual conditions, see Lubrication Chart (page 4-2).

Section II. OPERATOR TROUBLESHOOTING PROCEDURES

	Page		Page
Explanation of Columns	3-1	Operator Troubleshooting	3-2
General	3-1	Symptom Index.....	3-1

GENERAL

This section lists the common malfunctions that you may find during the operation of the semitrailer and its components. Perform the test, inspection, and corrective action in the order listed.

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

EXPLANATION OF COLUMNS

Malfunction. Visual or operational indication that something is wrong with the semitrailer.

Test or Inspection Procedure to isolate the problem to a component or system.

Corrective Action. Procedure to correct the problem.

SYMPTOM INDEX

The symptom index is provided as a guide to the troubleshooting procedure that will help you solve the problem you are having.

Page

BRAKES

Brakes will not engage	3-2
Brakes will not release	3-2

SYMPTOM INDEX - CONTINUED

ELECTRICAL SYSTEM

All lamps fail to light	3-2
One or more (but not all) lamps fail to light	3-2

OPERATOR TROUBLESHOOTING

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ALL LAMPS FAIL TO LIGHT.

- Step 1. Ensure that lights are turned on.
- Turn on lights in the towing vehicle.
- Step 2. Check for proper connection of intervehicular electrical cable and receptacle.
- Reconnect cable and receptacle.

2. ONE OR MORE (BUT NOT ALL) LAMPS FAIL TO LIGHT.

- Check for loose connectors at affected light.
- Reconnect loose connectors.

BRAKES

3. BRAKES WILL NOT ENGAGE.

- Step 1. Check for closed air valves on towing vehicle.
- Open valves.
- Step 2. Check for open draincock on semitrailer air resevoir.
- Close draincock.
- Check for proper connection of emergency and service airhoses.

Section III. OPERATOR MAINTENANCE PROCEDURES

	Page		Page
Handbrake, M119	3-3	Wheel and Tire	3-6
Operational Air Leak Check	3-9	Spare Wheel and Tire	3-4

NOTE

Personnel are listed only if the task requires more than one technician. If Personnel Required is not listed, one technician can do the task.

HANDBRAKE, M119

This task covers:

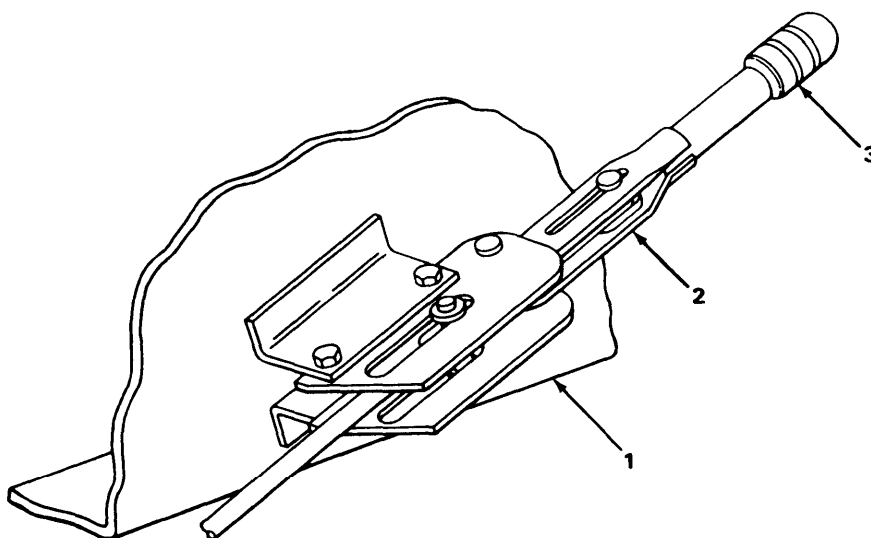
Adjustment

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

ADJUSTMENT

- | | | |
|------------------------|---------------------|---|
| 1. Chassis (1) | Handbrake lever (2) | Release. |
| 2. Handbrake lever (2) | Adjusting knob (3) | Turn to tighten or loosen adjustment as required. |

When properly adjusted, additional force will be required to move handbrake lever beyond halfway point of travel towards the applied position.



TASK ENDS HERE

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SPARE WHEEL AND TIRE

This task covers:

- a. Removal (page 3-4)
 - b. Installation (page 3-4)
-

INITIAL SETUP

Tools

Wrench, wheel lug

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

REMOVAL

- | | | |
|---------------------------------|----------------------|--|
| 1. Spare wheel carrier body (1) | Two nuts (2) | Using wheel lug wrench (3), loosen.
Do not remove. |
| 2. Operating shaft (4) | Wheel lug wrench (3) | Position on end of operating shaft. |

CAUTION

Be certain locking pawl is engaged in ratchet to avoid personal injury.

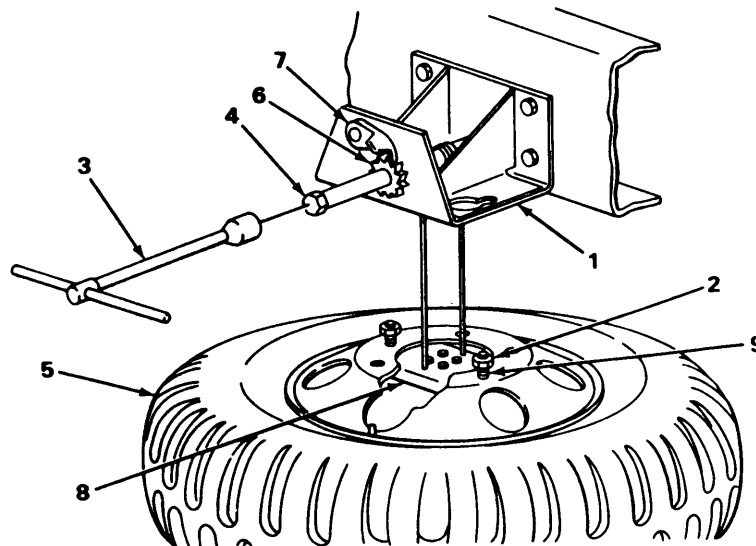
- | | | |
|---------------------------------|------------------------|---|
| 3. Spare wheel carrier body (1) | Wheel and tire (5) | Rotate and align nuts with holes in carrier body. |
| 4. Ratchet (6) | Locking pawl (7) | Using wheel lug wrench, turn operating shaft clockwise slightly and disengage locking pawl from ratchet.
Hold pressure on wheel lug wrench. |
| 5. Spare wheel carrier body (1) | Wheel and tire (5) | Slowly release pressure on wheel lug wrench allowing wheel and tire to come down. |
| 6. Wheel pickup plate (8) | Two nuts (2) | Take off. |
| 7. Wheel and tire (5) | Wheel pickup plate (8) | Take off. |

INSTALLATION

- | | | |
|---------------------------------|--------------------|---|
| 8. Spare wheel carrier body (1) | Wheel and tire (5) | Position under spare wheel carrier body with wheel disk up. |
|---------------------------------|--------------------|---|

SPARE WHEEL AND TIRE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9. Wheel and tire (5)	Wheel pickup plate (8)	Position inside wheel with studs (9) through wheel stud holes.
10. Wheel pickup plate (8)	Two nuts (2)	Place on studs. Do not tighten.
11. Ratchet (6)	Locking pawl (7)	Engage locking pawl into ratchet.
12. Spare wheel carrier body (1)	Wheel and tire (5)	a. Using wheel lug wrench, raise wheel and tire up to spare wheel carrier body. b. Guide nuts through holes in carrier body. c. Rotate wheel and tire slightly, moving studs into slots of spare wheel carrier body.
13.	Two nuts (2)	Using wheel lug wrench, tighten.



TASK ENDS HERE

WHEEL AND TIRE

This task covers:

- a. Removal (page 3-6)
 - b. Installation (page 3-8)
-

INITIAL SETUP

Tools

Jack, hand, hydraulic, 5-ton
Wrench, wheel lug

Equipment Condition

Semitrailer parked on level ground with hand-brake in applied position.

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

REMOVAL

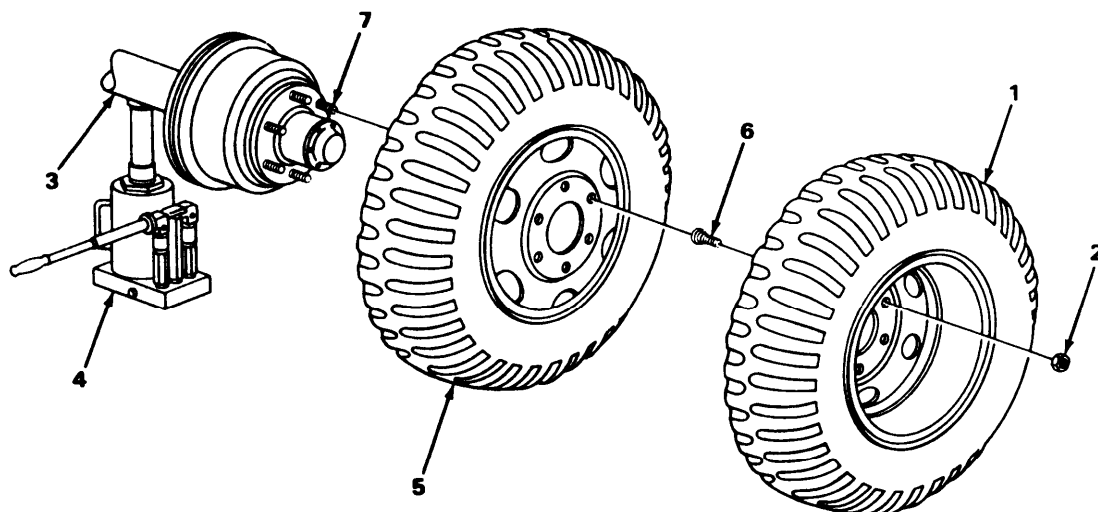
NOTE

If wheel and tire is to be replaced with spare wheel and tire, remove spare wheel before jacking up semitrailer (page 3-4).

- | | | |
|------------------------|-------------------------------|--|
| 1. Wheel and tire (1) | Six nuts (2) | Using wheel lug wrench, loosen.
Do not take off. |
| 2. Axle (3) | 5-ton hydraulic hand jack (4) | a. Position 5-ton hydraulic hand jack under axle near wheels and tires to be taken off.
b. Using 5-ton hydraulic hand jack, raise axle so wheels and tires are 1 inch off the ground. |
| 3. Wheel and tire (1) | Six nuts (2) | Using wheel lug wrench, take off. |
| 4. Inner stud nuts (6) | Wheel and tire (1) | Take off. |

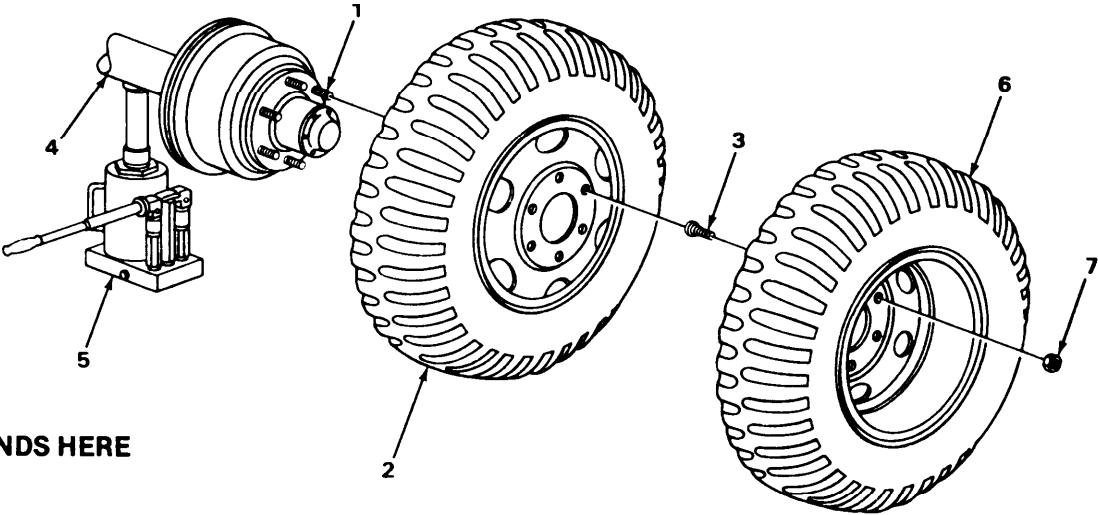
WHEEL AND TIRE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5. Axle (3)	5-ton hydraulic hand jack (4)	Lower axle so wheel contacts ground.
6. Wheel and tire (5)	Six inner stud nuts (6)	Using wheel lug wrench, loosen.
7. Axle (3)	5-ton hydraulic hand jack (4)	Using 5-ton hydraulic hand jack, raise axle so wheel and tire (5) are 1 inch off the ground.
8. Wheel and tire (5)	Six inner stud nuts (6)	Using wheel lug wrench, take off.
9. Wheel studs (7)	Wheel and tire (5)	Take off.



WHEEL AND TIRE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
10. Wheel studs (1)	Wheel and tire (2)	Position on wheel studs with wheel disk out.
11. Wheel and tire (2)	Six inner stud nuts (3)	Using wheel lug wrench, put on.
12. Axle (4)	5-ton hydraulic hand jack (5)	Lower axle so wheel and tire (2) contact ground.
13. Wheel and tire (2)	Six inner stud nuts (3)	Using wheel lug wrench, alternately tighten inner stud nuts.
14. Axle (4)	5-ton hydraulic hand jack (5)	Using 5-ton hydraulic hand jack, raise axle so wheel and tire (2) are 1 inch off the ground.
15. Six inner stud nuts (3)	Wheel and tire (6)	Position on inner stud nuts.
16. Wheel and tire (6)	Six nuts (7)	Using wheel lug wrench, put on.
17. Axle (4)	5-ton hydraulic hand jack (5)	Lower axle so wheel and tire (6) contact ground.
18. Wheel and tire (6)	Six nuts (7')	Using wheel lug wrench, alternately tighten nuts.
19. Axle (4)	5-ton hydraulic hand jack (5)	Remove.



TASK ENDS HERE

OPERATIONAL AIR LEAK CHECK

This task covers:

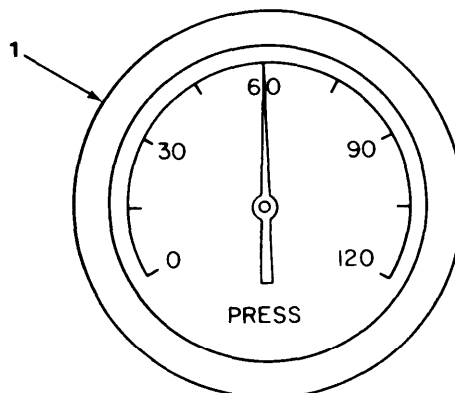
Testing

INITIAL SETUP

Equipment Condition

Semitrailer properly coupled to an operating towing vehicle (page 2-13).

LOCATION	ITEM	ACTION REMARKS
TESTING		
1. Towing vehicle	Air pressure gage (1)	Watch for reading of 65 to 120 psi (448 to 827 kPa).
2.	Service brakes	Push brakes down to applied position.
3.	Engine	Shut down.
	Air pressure gage (1)	Watch pressure gage for 2 minutes. Pressure drop on gage must not exceed 10 percent of pressure when engine was shut down. Notify organizational maintenance to check for system leaks if pressure drop is excessive.



NOTE

FOLLOW-ON MAINTENANCE: Uncouple semitrailer from towing vehicle (page 2-13).

TASK ENDS HERE

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CHAPTER 4

ORGANIZATIONAL MAINTENANCE

OVERVIEW

This chapter contains all the maintenance authorized to be performed by organizational maintenance.

		Page
Section I.	Lubrication Instructions	4-1
Section II.	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	4-4
Section III.	Service Upon Receipt	4-4
Section IV.	Organizational Preventive Maintenance Checks and Services (PMCS)	4-6
Section V.	Organizational Troubleshooting Procedures	4-8
Section VI.	General Maintenance Instructions	4-13
Section VII.	Electrical System	4-15
Section VIII.	Brake System	4-69
Section IX.	Hub and Brakedrum	4-144
Section X.	Frame and Towing Attachments	4-153
Section XI.	Tires and Tubes	4-155
Section XII.	Body	4-156
Section XIII.	Miscellaneous Accessories	4-178
Section XIV.	Preparation for Storage and Shipment	4-181

Section I. LUBRICATION INSTRUCTIONS

	Page		Page
Lubrication Chart	4-2	Lubrication Instructions	4-1

LUBRICATION INSTRUCTIONS

Keep all lubricants in closed containers and store in a clean, dry place away from extreme heat. Keep container covers clean and allow no dust, dirt, or other foreign material to mix with lubricants. Keep all lubrication equipment clean and ready for use.

Keep all external parts or equipment not requiring lubrication free of lubricants. Before lubricating the equipment, wipe all lubrication points free of dirt and grease. After servicing lubrication points, wipe off excess lubricant to prevent accumulation of foreign matter.

Service lubrication points at the proper intervals is specified in the lubrication chart, The intervals specified are based on vehicle operation under usual conditions. Modification of the recommended intervals may be required for vehicle operation under unusual conditions. Refer to TM 9-207 for lubrication instructions in temperatures below 0°F (-1 8°C). Clean and inspect all lubrication points after operating in mud, dust, sand, or other unusual conditions. Lubricate the trailer in accordance with the lubrication chart.

LUBRICATION CHART

**SEMITRAILER, STAKE: 6-TON, 2-WHEEL, M118A1
(NSN 2330-00-572-6221); SEMITRAILER, VAN: CARGO,
6-TON, 2-WHEEL, M119 (NSN 2330-00-835-8122);
SEMITRAILER, VAN: CARGO, 6-TON, 2-WHEEL, M119A1
(NSN 2330-00-679-5582)**

Hard-time intervals and related man-hour times are based on normal operation. The man-hour time specified is the time you need to do all services prescribed for a particular interval. Change the interval if your lubricants are contaminated or if you are operating equipment under adverse conditions, including longer-than-usual operating hours. The interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken.

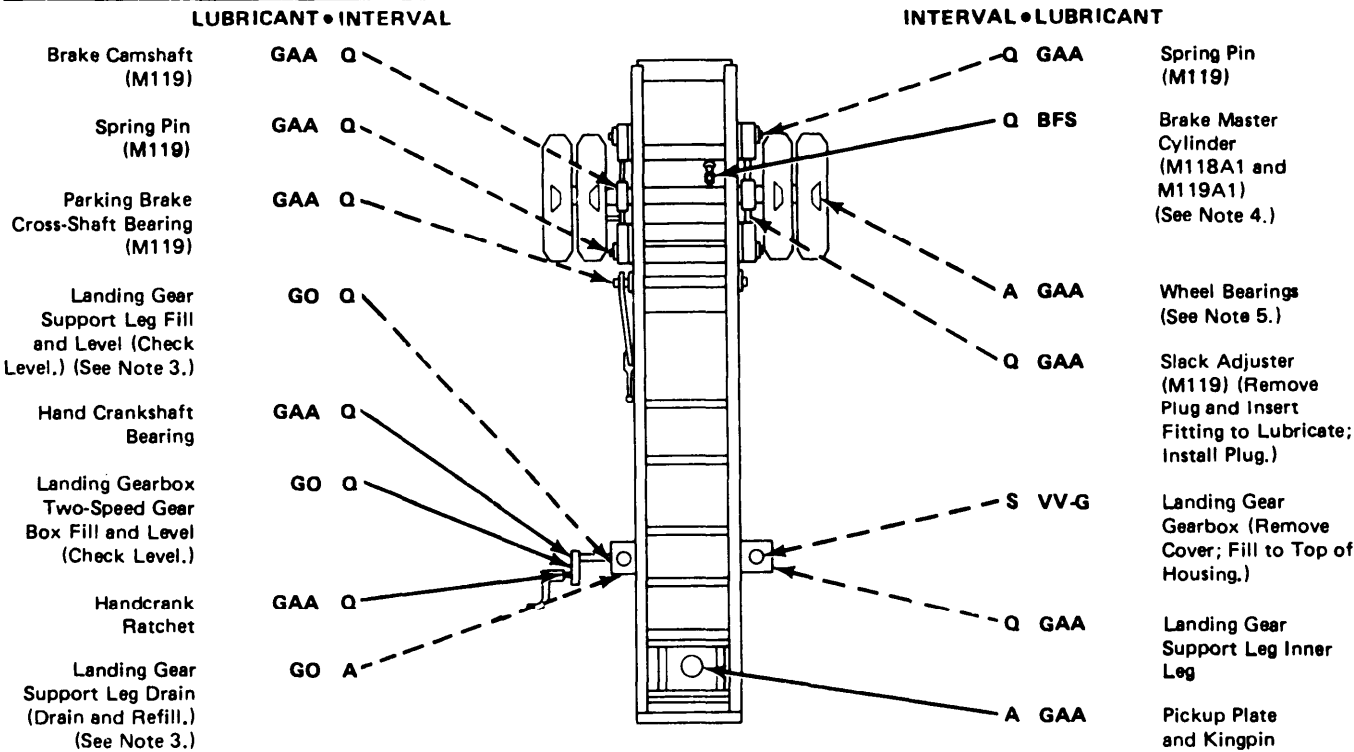
Dotted leader lines indicate lubrication is required on both sides of the equipment.

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 flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.

WARNING

Drycleaning solvent P-D-680 is toxic and flammable.

Clean all fittings and area around lubricating points with drycleaning solvent P-D-680 or equivalent before lubricating.



TOTAL MAN-HOURS*

INTERVAL	MAN-HOURS
A	2.6
Q	1.6
S	0.5

*The time specified is the item required to perform all services at the particular interval.

-KEY-

LUBRICANTS	CAPACITY	EXPECTED TEMPERATURES			INTERVALS
		ABOVE +15° F (ABOVE -9° C)	+40° TO -15° F (+4° TO -26° C)	+40° TO -65° F (+4° TO -54° C)	
GO — Lubricating oil, gear, multipurpose — Landing gear support leg — Landing gearbox two-speed gearbox	1 1/2 qt (1.4 L) (Each leg) 1/2 pt (0.236 L)	GO 80W/90	GO 80W/90	GO 75W	Q — Quarterly S — Semiannually A — Annually
VV-G — Grease — Landing gear gearbox		ALL TEMPERATURES			
PL — Lubricating oil, preservative — Oilcan points (See Note 2.)		PL (Medium)	PL (Special)	PL (Special)	
BFS — Brake fluid, silicone, automotive — Brake master cylinder		ALL TEMPERATURES			
GAA — Grease, automotive and artillery		ALL TEMPERATURES			

For Arctic operation, refer to FM 9-207

For Arctic operation, refer to FM 9-207

*See Note 6 for lubricant specification number.

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -15° F (-26° C). Remove lubricants prescribed in key for temperatures above -15° F (-26° C). Remove with lubricants specified in key for temperatures below -15° F (-26° C).

2. OILCAN POINTS. Quarterly lubricate all brake linkage, parking brake handle, all door hinges, latches, landing gear foot screw, tire carrier, and all retaining pins with PL.

3. LANDING GEAR SUPPORT LEG. Clean and remove oil filler plug. Fill through oil filler hole. Annually disassemble legs, clean reservoir, assemble, and fill reservoir.

4. MASTER CYLINDER FLUID LEVEL. Every 3 months, check fluid level. Add fluid to within 1/2 inch from top of cylinder.

5. WHEEL BEARINGS. Annually remove wheels, clean, and inspect all parts; replace damaged or worn parts; repack bearings and assemble.

6. LUBRICANTS. The following is a list of lubricants with military symbols and applicable specification numbers:

GO	MIL-L-2105
PL-M	MIL-L-3150
PL-S	VV-L-800
VV-G	VV-G-632
BFS	MIL-B-46176
GAA	MIL-G-10924
(SD), Type II	P-D-680

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

	Page		Page
Common Tools and Equipment	4-4	Special Tools, TMDE, and	
Repair Parts	4-4	Support Equipment	4-4

COMMON TOOLS AND EQUIPMENT

Refer to the Modified Table of Organization and Equipment (MTOE) for authorized common tools and equipment applicable to your unit.

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

No special tools, TMDE, or support equipment are required to maintain the trailer.

REPAIR PARTS

Repair parts are listed and illustrated in appendix F of this manual.

Section III. SERVICE UPON RECEIPT

	Page		Page
Preliminary Servicing and Adjustment of Equipment	4-5	Service Upon Receipt of Materiel	4-4

SERVICE UPON RECEIPT OF MATERIEL

This task covers:

- a. Unpacking (page 4-4)
- b. Checking unpacked equipment (page 4-5)

INITIAL SETUP

Tools	Materials/Parts
Cutter, strap Puller, nail	Rags (item 9, appendix E) Solvent, drycleaning, P-D-680 (item 10, appendix E)

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

UNPACKING

- | | | |
|------------|--------------|-----------------------------------|
| 1. Trailer | DD Form 1397 | Read and follow all instructions. |
|------------|--------------|-----------------------------------|

SERVICE UPON RECEIPT OF MATERIEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
2.	Metal straps, plywood, tape, seals, and wrappings	Using strap cutter and nail puller, remove all straps, plywood, tape, seals, and wrappings.

CHECKING UNPACKED EQUIPMENT**WARNING**

Drycleaning solvent P-D-680 is toxic and flammable. 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 flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (58°C). If you become dizzy while using solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.

3. Semitrailer	Coated exterior parts	Using drycleaning solvent and rags, remove rust preventive compound.
4.	Semitrailer	a. Inspect equipment for damage incurred during shipment. b. if equipment has been damaged, report damage. c. Check to see if equipment has been modified.
5.	Equipment packing list	a. Check equipment against packing list to see if shipment is complete. b. Report all discrepancies in accordance with instructions in DA PAM 738-750.

TASK ENDS HERE**PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT**

Perform the operator/crew and organizational preventive maintenance checks and services (PMCS) as described on pages 2-8 and 44.

Lubricate all lubrication points as shown in the Lubrication Chart (page 4-2), regardless of interval.

Schedule the next preventive maintenance checks and services on DD Form 314, Preventive Maintenance Schedule and Record.

Report all problems on SF Form 364 if the deficiencies appear to involve unsatisfactory design.

Perform a break-in road test of 25 mi (40.2 km) at a maximum speed of 50 mph (80.5 km/h).

Section IV. ORGANIZATIONAL PREVENTIVE MAINTENANCE
CHECKS AND SERVICES (PMCS)

	Page		Page
General	4-6	PMCS Column Description	4-7
Organizational Preventive Maintenance Checks and Services	4-7	Special Instructions	4 8

GENERAL

The semitrailer must be inspected systematically to ensure that it is ready for operation at all times. Inspection will allow defects to be discovered and corrected before they result in serious damage or failure. This section contains a tabulated list of preventive maintenance checks and services to be performed by organizational maintenance personnel. All deficiencies and corrective actions will be recorded on DA Form 2404.

Do your semiannual (S) PMCS once each 6 months.

Do your annual (A) PMCS once each year.

SPECIAL INSTRUCTIONS

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

Always do your preventive maintenance checks and services in the same order so they get to be a habit. Once you've had practice, you will spot anything wrong in a hurry.

If anything looks wrong and you can't fix it, write it down on your DA Form 2404 and notify your supervisor.

When you do your preventive maintenance, take along the tools you need to make all the checks. You always need a rag or two.

WARNING

Drycleaning solvent P-D-660 is toxic and flammable. 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 flashpoint for type #1 drycleaning solvent is 100°F (36°C) and for type #2 is 138°F (58°C). If you become dizzy while using solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.

NOTE

When you are doing any PMCS or routine checks, keep in mind the warnings and cautions.

Routine checks, like those listed below, are not listed in the PMCS checks. They are things that you should do any time you see they must be done. If you find a routine check {n your PMCS, it is because other operators reported problems with this Item.

SPECIAL INSTRUCTIONS - CONTINUED

Keep it Clean. Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use drycleaning solvent P-D-680 to clean metal surfaces. Use soap and water when cleaning rubber or plastic material.

Bolts, Nuts, and Screws. Check that they are not loose, missing, bent, or broken. You can't try them all with a tool, but look for chipped paint, bare metal, or rust around boltheads. Tighten any that you find loose.

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

Electric Wires and Connectors. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Tighten loose connections and make sure wires are in good condition.

Hoses and Lines. Look for wear, damage, and leaks. Make sure clamps and fittings are tight. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, either correct it or report it to direct support maintenance. (Refer to Maintenance Allocation Chart, appendix B.)

PMCS COLUMN DESCRIPTION

Item No. - The order that PMCS should be performed, and also used as a source of item numbers for the TM number column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, when recording results of PMCS.

Interval - Tells when each task is to be performed.

Item to be Inspected - Lists the checks to be performed.

ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

S-SEMIANNUALLY

A-ANNUALLY

ITEM NO.	INTERVAL		ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, REPLACED, OR ADJUSTED AS NEEDED
	S	A	
			NOTE Perform operator/crew PMCS prior to or in conjunction with organizational PMCS.
1.	●		FRAME Look for cracks, bent members, or broken welds.
2.	●		BRAKE MASTER CYLINDER Check fluid level in master cylinder. Fill to within 1/2 inch from top.

ORGANIZATIONAL MAINTENANCE CHECKS AND SERVICES - CONTINUED

S-SEMIANNUALLY

A-ANNUALLY

ITEM NO.	INTERVAL		ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, REPLACED, OR ADJUSTED AS NEEDED
	S	A	
3.		<ul style="list-style-type: none"> • • 	WHEEL BEARINGS a. Remove wheel hubs and bearings (page 4-144). b. Clean, inspect, and repack wheel bearings.
4.		<ul style="list-style-type: none"> • • 	BRAKE ASSEMBLY a. Clean, inspect, and repair or replace internal brake parts as required (page 4-13). b. Adjust brakeshoes (page 4-69).
5.	<ul style="list-style-type: none"> • • 		WHEELS AND TIRES a. Tighten wheel nuts alternately until all are wrench tight. b. Check tires for wear and possible damage; check tread depth. Refer to TM 9-2610-200-14.
6.	<ul style="list-style-type: none"> • 		SUSPENSION Check for bent or cracked spring leaves, loose mounting, and worn bushings.

Section V. ORGANIZATIONAL TROUBLESHOOTING PROCEDURES

	Page		Page
Explanation of Columns	4-9	Organizational Troubleshooting	4-9
General	4-6	Symptom Index.....	4-9

GENERAL

The table in this section lists the common malfunctions that maybe found during the operation or maintenance of the trailer or components. Do the tests or inspections and corrective action in the order listed.

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

Semitrailer must be hooked to a fully operational towing vehicle when performing electrical and brake system tests.

EXPLANATION OF COLUMNS

Malfunction. Visual or operational indication that something is wrong with your trailer.

Test or Inspection. Procedure used to isolate the problem to a system or a component.

Corrective Action. Procedure used to correct the problem.

SYMPTOM INDEX

The symptom index is provided as a quick way to get you to the troubleshooting procedure that will help you solve the problem that you are having.

Page

BRAKE SYSTEM

Brakes will not release	4-12
No brakes or weak brakes	4-13

ELECTRICAL SYSTEM

Ail lights dim or flickering	4-12
One or more dome lights fail to light, M119 and M119A1	4-9
One or more marker lights fail to light	4-10
One or more taillights fail to light	4-11

NOTE

See the electrical schematics on pages 1-12 and 1-13 when performing any electrical troubleshooting.

ORGANIZATION TROUBLESHOOTING

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ONE OR MORE DOME LIGHTS FAIL TO LIGHT, M119 AND M119A1.

Step 1. Check affected lamps.

Remove and replace as required (page 4-31).

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

1. ONE OR MORE DOME LIGHTS FAIL TO LIGHT, M119 AND M119A1 - CONTINUED

Step 2. Check continuity between lamp socket and frame of body.

If no continuity exists, remove and clean mating surfaces (page 4-13).

Step 3. Check continuity between center post of lamp socket and related light assembly plug connector.

If no continuity exists, remove and replace dome light (page 4-31).

Step 4. With dome light switch on, check for 24 volts at end of body wire harness.

If 24 volts are present, replace dome light (page 4-31).

Step 5. With dome light switch on and 24 volts present at switch terminal from cable No. 36, check for 24 volts at switch terminal to dome lights. See schematic (page 1-13).

If 24 volts are not present, replace dome light switch (page 4-16 or 4-17).

Step 6. Check body wire harness leading to dome light switch for 24 volts.

If 24 volts are present, replace front body wire harness leading to dome lights.

If 24 volts are not present, see malfunction 3, step 4 (page 4-11).

2. ONE OR MORE MARKER LIGHTS FAIL TO LIGHT.

Step 1. Check affected lamps.

Remove and replace as required.

Step 2. Check continuity between lamp socket and body frame.

If no continuity exists, remove and clean mating surfaces (page 4-13).

Step 3. Check for continuity between center post of lamp socket and related light assembly plug connector.

If no continuity exists, remove and replace marker light (page 4-19).

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

Step 4. Check body wire harness leading to marker light for 24 volts.

If 24 volts are present, remove and replace marker light (page 4-19).

If 24 volts are not present, see malfunction 3, step 4.

3. ONE OR MORE TAILLIGHTS FAIL TO LIGHT.

Step 1. Check affected lamps.

Remove and replace the following as required:

Composite light (page 4-28).

Service and blackout taillight and stoplight (page 4-22).

Blackout stoplight (page 4-25).

Step 2. Check continuity between lamp socket and semitrailer frame.

If no continuity exists, remove and clean mating surfaces (page 4-13).

Step 3. Check continuity between center post of lamp socket and related light assembly plug connector.

If no continuity exists, remove and replace affected light assembly.

Step 4. With towing vehicle light switch on, check for 24 volts in related plug connectors of chassis wire harness (page 4-35).

If 24 volts are present, replace affected taillight assembly on body wire harness.

Step 5. Disconnect intervehicular cable and check for 24 volts at intervehicular cable plug pins (page 4-37).

If 24 volts are present at all pins, replace chassis wire harness (page 4-33).

If 24 volts are not present at all pins, refer to towing vehicle maintenance TM.

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

4. ALL LIGHTS DIM OR FLICKERING.

- Step 1. Check for continuity between terminal lug of ground wire number 90 and forward frame member.

If no continuity exists, remove and clean mating surfaces (page 4-13).

- Step 2. Check for continuity between terminal lug of ground wire number 90 and pin for wire harness receptacle.

If no continuity exists, replace ground wire number 90 (page 4-65).

- Step 3. Check intervehicular cable ground.

Refer to towing vehicle maintenance TM.

BRAKES

5. BRAKES WILL NOT RELEASE.

- Step 1. Check fluid level in master cylinder (M118A1 and M119A1).

Fill to proper level as required (page 4-2).

Bleed brakes (page 4-99).

- Step 2. Check emergency relay valve for proper operation.

Replace emergency relay valve if not operating properly (page 4-121 or 4-123).

- Step 3. Check brake air chamber for proper push rod travel (MI 19). See Major Adjustment, page 4-77.

Adjust service brakes as required (page 4-77).

- Step 4. Check handbrake cable linkage for binding.

Replace as required (page 4-69).

- Step 5. Check to see if service brake is frozen during cold weather.

Heat brake assembly and brakedrum to thaw.

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

6. NO BRAKES OR WEAK BRAKES.

Step 1. Check fluid level in master cylinder (M118A1 and M119A1).

Fill to proper level as required (page 4-2).

Bleed brake (page 4-99).

Step 2. Check emergency relay valve for proper operation.

Replace emergency relay valve as required (page 4-121 or 4-123).

Step 3. Check brake air chamber for excessive push rod travel (MI 19). See Major Adjustment, page 4-77.

Adjust service brakes as required (page 4-77).

Step 4. Check for worn brake lining.

Replace brakeshoes as required (page 4-69).

Section VI. GENERAL MAINTENANCE INSTRUCTIONS

	Page		Page
Cleaning instructions	4-13	Inspection instructions	4-15
General	4-13		

GENERAL

Each maintenance section provides instructions for organizational maintenance personnel. The following initial setup information applies to all procedures.

Resources required are not listed unless they apply to the procedure.

Personnel are listed only if the task requires more than one technician. If Personnel Required is not listed, one technician can do the task.

CLEANING INSTRUCTIONS

WARNING

Improper cleaning methods and use of unauthorized cleaning liquids or solvent can injure personnel and damage equipment. Refer to TM 9-247.

CLEANING INSTRUCTIONS - CONTINUED

Cleaning instructions will be the same for the majority of parts and components that make up the semitrailer. The importance of cleaning must be thoroughly understood by maintenance personnel. Care and effort are required in cleaning. Dirt and foreign material are a constant threat to satisfactory maintenance. The following apply to all cleaning, inspection, repair, and assembly operations.

1. Clean all parts before inspection, after repair, and before assembly.
2. Keep hands free of grease, which can collect dust, dirt, or grit.
3. After cleaning, cover or wrap all parts to protect them from dust and dirt. Lightly oil parts that are subject to rust.

STEAM CLEANING

Protect all electrical equipment that can be damaged by the steam or moisture before steam cleaning the exterior of the semitrailer.

Place disassembled parts in a suitable container to steam clean.

After cleaning, dry and cover (or lightly oil) all parts subject to rust.

CASTINGS, FORGINGS, AND MACHINED METAL PARTS

WARNING

Drycleaning solvent P-D-680 is toxic and flammable. 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 flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.

Clean inner and outer surfaces with drycleaning solvent.

Remove grease and accumulated deposits with a stiff bristle brush.

Check machined surfaces for scoring or obvious damage.

WARNING

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. Compressed air used for cleaning purposes shall not exceed 30 psi (207 kPa). User must wear safety eye goggles or face shield to prevent injury when using compressed air.

Blow out all threaded holes with compressed air to remove dirt and cleaning fluid.

CLEANING INSTRUCTIONS - CONTINUED**ELECTRICAL CABLES, FLEXIBLE HOSES, AND OIL SEALS****CAUTION**

Washing oil seals, electrical cables, and flexible hoses with drycleaning solvents or mineral spirits will cause serious damage or destroy the material.

Wash electrical cables and flexible hoses with water and soap solution, and wipe dry. Oil seals are generally damaged during removal, so cleaning will not be necessary because new seals will be used on assembly.

BEARINGS

Refer to TM 9-214 for instructions covering care and maintenance of antifriction bearings.

INSPECTION INSTRUCTIONS

All components and parts must be checked carefully to determine if they are serviceable for reuse, can be repaired, or must be scrapped.

DRILLED AND THREADED HOLES AND SURFACES

Inspect for wear, distortion, cracks, or any other damage in or around holes and threaded surfaces. Inspect threaded areas for wear, distortion, or evidence of crossthreading. Mark all damaged areas for repair or replacement.

METAL LINES, FLEXIBLE LINES (HOSES), AND METAL FITTINGS

Inspect metal lines for sharp kinks, cracks, bad bends, or bad dents. Inspect flexible lines for fraying, evidence of leakage, or loose metal fittings or connectors.

BUSHINGS

Inspect bushings for excessive wear, elongation, or grooving.

Section VII. ELECTRICAL SYSTEM

	Page		Page
Blackout Stoplight.....	4-25	Dome Light, M119 and M119A1	4-31
Blackout Stoplight, Lamp and		Dome Light Harness, M119	4-54
Lens	4-26	Dome Light Switch, M119	4-17
Body Harness, M118A1	4-58	Dome Light Switch, M119A1	4-16
Body Harnesses, M119	4-43	Marker and Clearance Light	4-19
Body Harness, M119A1	4-60	Service and Blackout Taillight	
Chassis Harness, M118A1 and		and Stoplight	4-22
M119A1	4-38	Service and Blackout Taillight	
Chassis Harness, M119	4-33	and Stoplight, Lamp and Lens	4-24
Composite Light	4-28	Wire Harness Repair	4-65
Composite Light, Lamp and Lens	4-29		

DOMELIGHT SWITCH, M119A1

This task covers:

- a. Removal (page 4-16)
- b. Installation (page 4-16)

INITIAL SETUP**Tools**

Pliers, slip-joint, 6-inch
Screwdriver, cross-tip, number two
Screwdriver, flat-tip, 3/8-inch

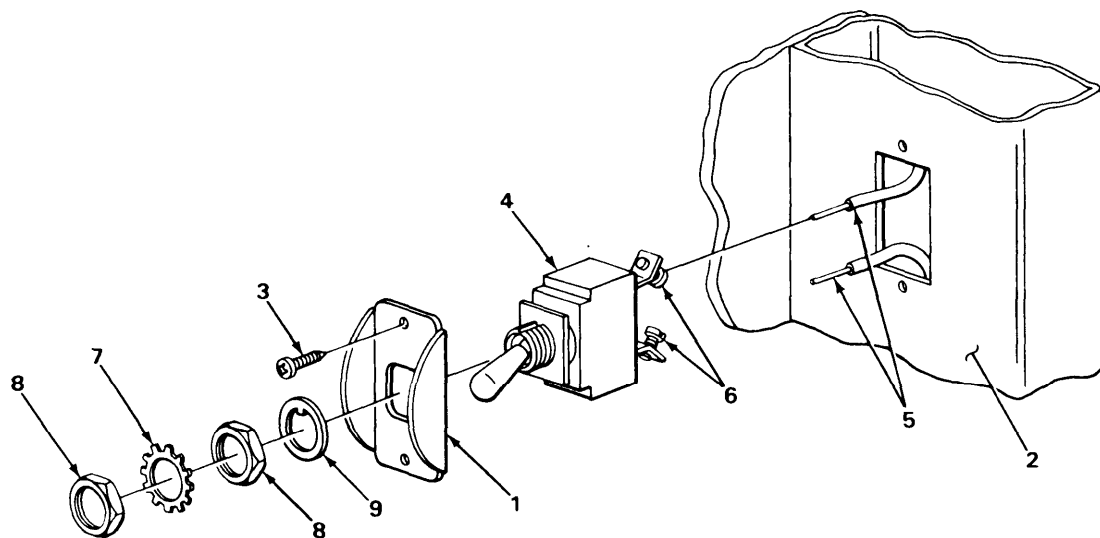
Materials/Parts

Tape, antiseizing (item 12, appendix E)

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Switch guard (1) to body wall (2)	Two screws (3)	Using number two cross-tip screwdriver, take off.
2. Body wall (2)	Switch guard (1) and switch (4)	Take off. Switch is still attached to two wires (5).
3. Two wires (5) to switch (4)	Two screws (6)	Using 3/8-inch flat-tip screwdriver, loosen.
4. Two screws (6)	Two wires (5)	Take off. Two wires should be secured with antiseizing tape to body wall.
5. Switch (4) to switch guard (1)	Lockwasher (7), two nuts (8), and key washer (9)	Using 6-inch slip-joint pliers, take off.
6. Switch guard (1)	Switch (4)	Take off.
INSTALLATION		
7. Switch guard (1)	Switch (4)	Place in position.
8. Switch (4) to switch guard (1)	Lockwasher (7), two nuts (8), and key washer (9)	Using 6-inch slip-joint pliers, screw in and tighten.
9. Two screws (6)	Two wires (5)	Place in position.

DOME LIGHT SWITCH, M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
10. Two wires (5) to switch (4)	Two screws (6)	Using 3/8-inch flat-tip screwdriver, tighten.
11. Body wall (2)	Switch guard (1) and switch (4)	Place in position.
12. Switch guard (1) to body wall (2)	Two screws (3)	Using number two cross-tip screwdriver, screw in and tighten.



TASK ENDS HERE

DOMESTIC LIGHT SWITCH, M119

This task covers:

- a. Removal (page 4-18)
- b. Installation (page 4-18)

INITIAL SETUP

Tools

Pliers, slip-joint, 6-inch
Screwdriver, cross-tip, number two
Screwdriver, flat-tip, 3/8-inch

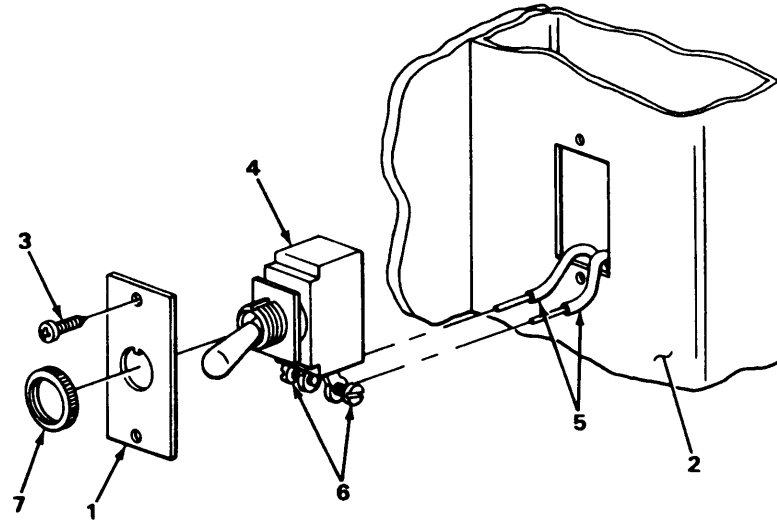
Materials/Parts

Tape, antiseizing (item 12, appendix E)

DOME LIGHT SWITCH, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Switch plate (1) to body wall (2)	Two screws (3)	Using number two cross-tip screwdriver, unscrew and take off.
2. Body wall (2)	Switch plate (1) and switch (4)	Pull from position. Switch is attached to wires (5).
3. Two wires (5) to switch (4)	Two screws (6)	Using W-inch flat-tip screwdriver, loosen. Two wires should be secured with antiseizing tape to body wall.
4. Two screws (6)	Two wires (5)	Take off.
5. Switch (4) to switch plate (1)	Knurled nut (7)	Using 6-inch slip-joint pliers, remove.
6. Switch plate (1)	Switch (4)	Take off.
INSTALLATION		
7. Switch plate (1)	Switch (4)	Place in position.
8. Switch (4) to switch plate (1)	Knurled nut (7)	Using 6-inch slip-joint pliers, put on.
9. Two screws (6)	Two wires (5)	Place in position.
10. Two wires (5) to switch (4)	Two screws (6)	Using 3/8-inch flat-tip screwdriver, tighten.
11. Body wall (2)	Switch plate (1) and switch (4)	Place in position.
12. Switch plate (1) to body wall (2)	Two screws (3)	Using number two cross-tip screwdriver, screw in and tighten.

DOME LIGHT SWITCH, M119 - CONTINUED



TASK ENDS HERE

MARKER AND CLEARANCE LIGHT

This task covers:

- | | |
|--------------------------------------|---|
| a. Lamp and lens removal (page 4-20) | c. Light installation (page 4-20) |
| b. Light removal (page 4-20) | d. Lamp and lens installation (page 4-21) |
-

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/8-inch

Materials/Parts

Lamps (as required)

MARKER AND CLEARANCE LIGHT - CONTINUED

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

NOTE

The following procedures are typical of all service and blackout marker and clearance lights used on all models.

LAMP AND LENS REMOVAL

1. Door (1) to mounting plate (2)	Two screws (3)	Using 3/8-inch flat-tip screwdriver, unscrew and take off.
2. Mounting plate (2)	Door (1)	Take off.
3. Door (1) to lens (4)	Two nuts (5)	Using 3/8-inch flat-tip screwdriver, pry off.
4. Door (1)	Lens (4)	Take off.
5. Socket (6)	Lamp (7)	Take out by pushing in and turning counter-clockwise. Discard bad lamp.

LIGHT REMOVAL

6. Mounting plate (2) to cargo body (8)	Four screws (9)	Using 3/8-inch flat-tip screwdriver, unscrew and take out.
7. Cargo body (8)	Mounting plate (2)	Pull from position.
8. Clip (10)	Plug connectors (11 and 12)	a. Pull out. b. Pull apart. Remove mounting plate.
9. Cargo body (8)	Gasket (13)	Take off.

LIGHT INSTALLATION

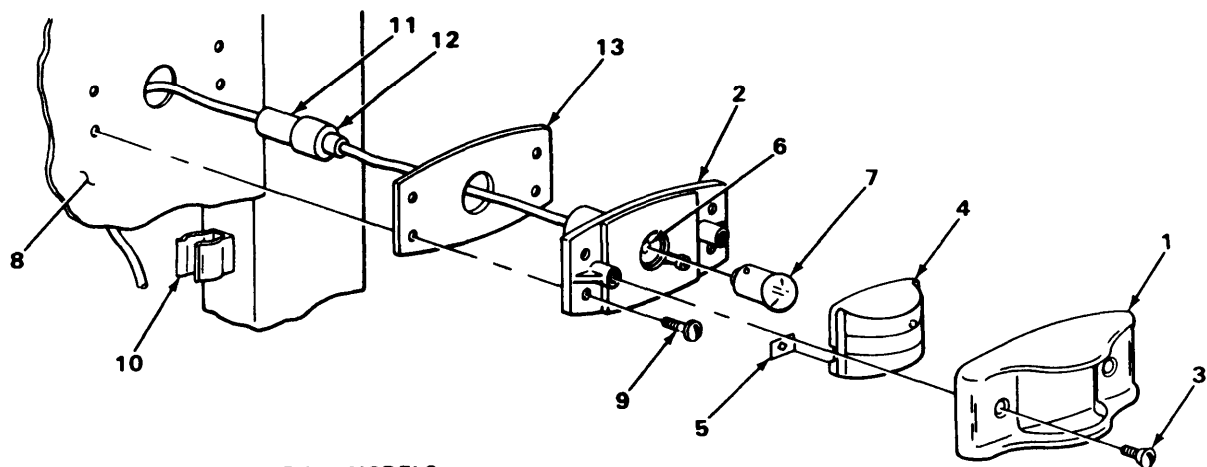
10. Cargo body (8)	Gasket (13)	Place in position.
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MARKER AND CLEARANCE LIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
11. Clip (10)	Plug connectors (11 and 12)	Plug together and snap into position.
12. Cargo body (8)	Mounting plate (2)	Place in position.
13. Mounting plate (2) to cargo body (8)	Four screws (9)	Using 3/8-inch flat-tip screwdriver, screw in and tighten.

LAMP AND LENS INSTALLATION

14. Socket (6)	Lamp (7)	Put into place by pushing in and turning clockwise.
15. Door (1)	Lens (4)	Put in place.
16. Door (1) to lens (4)	Two nuts (5)	Push onto install.
17. Mounting plate (2)	Door (1)	Place in position.
18. Door (1) to mounting plate (2)	Two screws (3)	Using 3/8-inch flat-tip screwdriver, screw in and tighten.

**TYPICAL OF ALL MODELS****TASK ENDS HERE**

SERVICE AND BLACKOUT TAILLIGHT AND STOPLIGHT

This task covers:

- a. Removal (page 4-22)
- b. Installation (page 4-23)

INITIAL SETUP

Tools	Materials/Parts
Handle, ratchet, 3/8-inch drive Socket, 3/8-inch drive, 9/16-inch	Grommet (if required) Tags, marker (if required) (item 11, appendix E)

LOCATION	ITEM	ACTION	REMARKS
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NOTE

There are two light configurations used. One configuration uses two lamps and is used on the right side of the MI 19 only. The other configuration uses three lamps and is used on all other models except those equipped with composite lights (page 4-28).

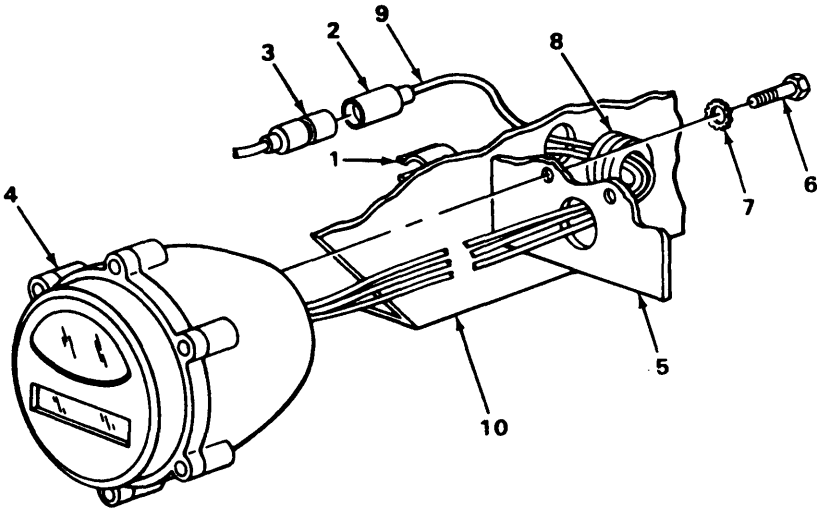
If numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.

REMOVAL

1. Clip (1)	Connectors (2 and 3)	a. Pull out. b. Pull apart.
2. Light (4) to bracket (5)	Two bolts (6) and two lockwashers (7)	Using 9/16-inch socket and ratchet handle with 3/8-inch drive, unscrew and take off.
3. Grommet (8)	Light harness (9)	Pull through.
4. Bracket (5)	Light (4)	Take off.
5. Frame rail (10)	Grommet (8)	Take off only if necessary. Discard grommet.

SERVICE AND BLACKOUT TAILLIGHT AND STOPLIGHTS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
6. Frame rail (10)	New grommet (8)	Put in position.	
7. Bracket (5)	Light (4)	Place in position.	
8. Grommet (8)	Light harness (9)	Pull through.	
9. Light (4) to bracket (5)	Two bolts (6) and two lockwashers (7)	Using 9/16-inch socket and ratchet handle with 3/8-inch drive, screw in and tighten.	
10. Clip (1)	Connectors (2 and 3)	Join together and push into position.	Match numbers on tags.



TASK ENDS HERE

SERVICE AND BLACKOUT TAILLIGHT AND STOPLIGHT, LAMP AND LENS

This task covers:

- a. Removal (page 4-24)
- b. Installation (page 4-24)

INITIAL SETUP

Tools	Materials/Parts
Screwdriver, flat-tip, 3/8-inch	Lamps (three required) Packing

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

NOTE

There are two light configurations used. One configuration uses two lamps and is used on the right side of the MI 19 only. The other configuration uses three lamps and is used on all other models except those equipped with composite lights (page 4-28).

REMOVAL

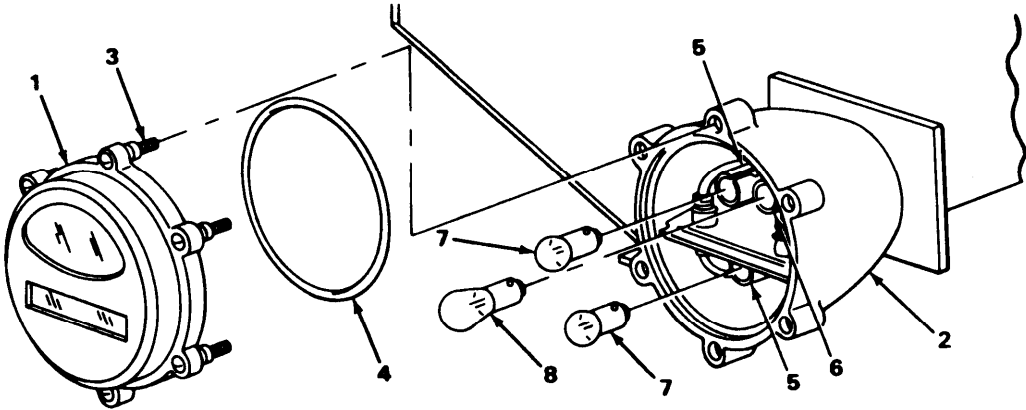
1. Door (1) to light body (2)	Six captive screws (3)	Using 3/8-inch flat-tip screwdriver, loosen.
2. Light body (2)	Door (1) and packing (4)	Take off. Discard packing.
3. Sockets (5 and 6)	Lamps (7 and 8)	Take out by pushing in and turning counterclockwise. Discard lamps.

INSTALLATION

4. Sockets (5 and 6)	New lamps (7 and 8)	Put in by pushing in and turning clockwise.
5. Light body (2)	Door (1) and new packing (4)	Place in position.

SERVICE AND BLACKOUT TAILLIGHT AND STOPLIGHT, LAMP AND LENS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
6. Door (1) to light body (2)	Six captive screws (3)	Using 3/8-inch flat-tip screwdriver, tighten.



TASK ENDS HERE

BLACKOUT STOPLIGHT

This task covers:

- a. Removal (page 4-26)
- b. Installation (page 4-28)

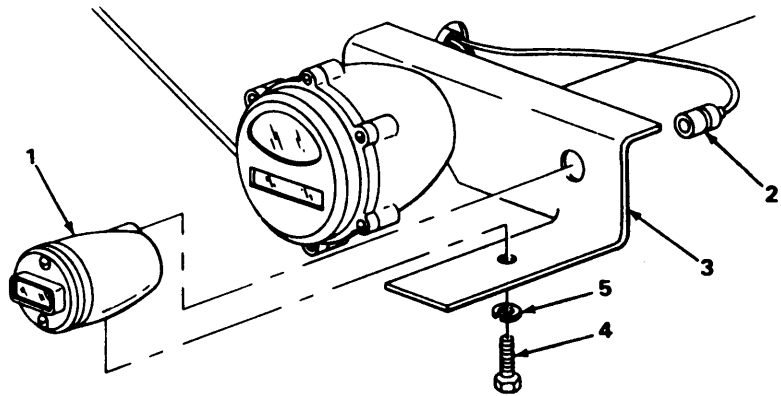
INITIAL SETUP

Tools

- Handle, ratchet, 3/8-inch drive
- Socket, 3/8-inch drive, 1/2-inch

BLACKOUT STOPLIGHT - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Blackout stoplight (1)	Plug connector (2)	Pull out.	
2. Bracket (3) to blackout stoplight (1)	Bolt (4) and lockwasher (5)	Using 1/2-inch socket and ratchet handle with 3/8-inch drive, unscrew and take off.	
3. Bracket (3)	Blackout stoplight (1)	Take off.	
INSTALLATION			
4. Bracket (3)	Blackout stoplight (1)	Place in position.	
5. Bracket (3) to blackout stoplight (1)	Bolt (4) and lockwasher (5)	Using 1/2-inch socket and ratchet handle with 3/6-inch drive, screw in and tighten.	
6. Blackout stoplight (1)	Plug connector (2)	Plug in.	



TASK ENDS HERE

BLACKOUT STOPLIGHT, LAMP AND LENS

This task covers:

- a. Removal (page 4-27)
- b. Installation (page 4-27)

TA23396S

BLACKOUT STOPLIGHT, LAMP AND LENS- CONTINUED

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/8-inch

Materials/Parts

Gasket
Lamp

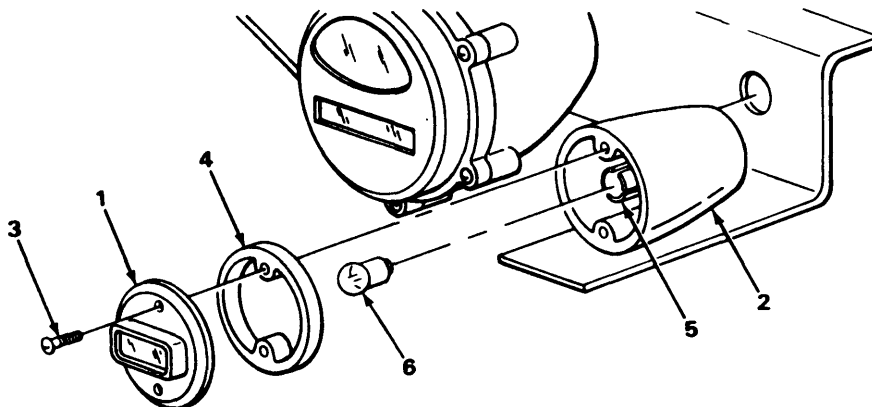
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

- | | | |
|----------------------------------|-------------------------|--|
| 1. Door (1) to light housing (2) | Two screws (3) | Using 3/8-inch flat-tip screwdriver, unscrew and take off. |
| 2. Light housing (2) | Door (1) and gasket (4) | Take off.
Discard gasket. |
| 3. Socket (5) | Lamp (6) | Take out by pushing in and turning counterclockwise.
Discard lamp. |

INSTALLATION

- | | | |
|----------------------------------|-----------------------------|--|
| 4. Socket (5) | New lamp (6) | Put in by pushing in and turning clockwise. |
| 5. Light housing (2) | Door (1) and new gasket (4) | Place in position. |
| 6. Door (1) to light housing (2) | Two screws (3) | Using 3/8-inch flat-tip screwdriver, screw in and tighten. |



TASK ENDS HERE

COMPOSITE LIGHT

This task covers:

- a. Removal (page 4-28)
- b. Installation (page 4-28)

INITIAL SETUP

Tools	Materials/Parts
Screwdriver, flat-tip, 3/8-inch Wrench, open-end, 9/16-inch	Grommet Tags, marker (if required) (item 11, appendix E)

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

REMOVAL

NOTE

If numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.

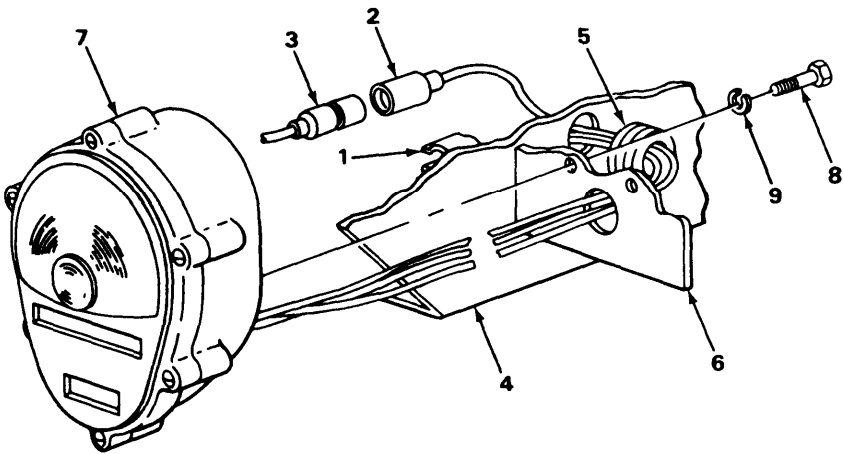
1. Clips (1)	Four plug connectors (2 and 3)	a. Pull out. b. Pull apart.
2. Frame rail (4)	Grommet (5)	Using 3/8-inch flat-tip screwdriver, take out. Discard grommet.
3.	Four plug connectors (2)	Draw through hole in frame rail.
4. Bracket (6) to light (7)	Two capscrews (8) and two lock-washers (9)	Using 9/16-inch open-end wrench, unscrew and take off.
5. Bracket (6)	Light (7)	Take off.

INSTALLATION

6. Bracket (6)	Light (7)	Place in position.
7. Bracket (6) to light (7)	Two capscrews (8) and two lock-washers (9)	Using 9/16-inch open-end wrench, screw in and tighten.

COMPOSITE LIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
8. Frame rail (4)	Four plug connectors (2)	Pass through hole in frame rail.
9. Frame rail (4)	New grommet (5)	Using 3/8-inch flat-tip screwdriver, push into place.
10. Clips (1)	Four plug connectors (2 and 3)	a. Match wire identification bands and connect. b. Insert in clips.



TASK ENDS HERE

COMPOSITE LIGHT, LAMP AND LENS

This task covers:

- a. Removal (page 4-30)
- b. Installation (page 4-30)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/8-incti

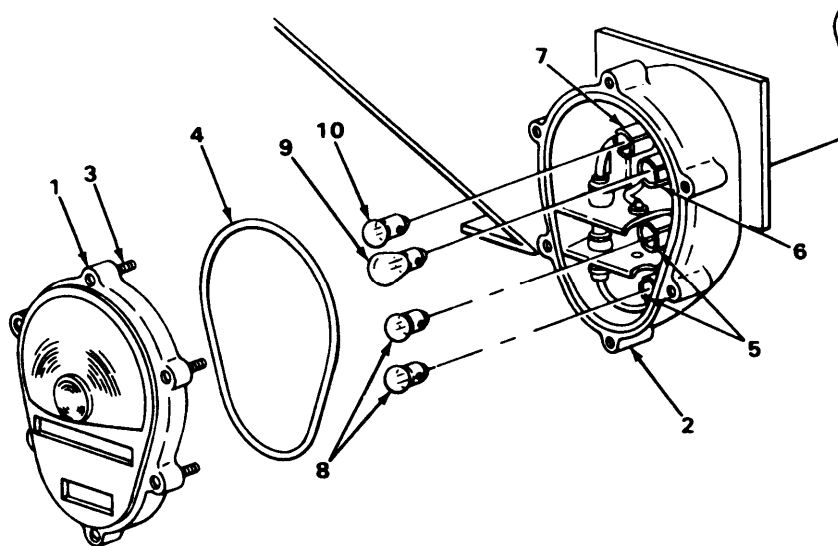
Materials/Parts

Lamps (four required)
Packing

TA233970

COMPOSITE LIGHT, LAMP AND LENS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Door (1) to light body (2)	Six captive screws (3)	Using 3/8-inch flat-tip screwdriver, fully loosen.
2. Light body (2)	Door (1) and packing (4)	Take off. Discard packing.
3. Sockets (5,6, and 7)	Lamps (8, 9, and 10)	Take out by pushing in and turning counter-clockwise. Discard lamps.
INSTALLATION		
4. Sockets (5,6, and 7)	New lamps (8, 9, and 10)	Install by pushing in and turning clockwise.
5. Light body (2)	Door (1) and new packing (4)	Place in position.
6. Door (1) to light body (2)	Six captive screws (3)	Using 3/8-inch flat-tip screwdriver, tighten.



TASK ENDS HERE

DOME LIGHT, M119 AND M119A1

This task covers:

- | | |
|---|--|
| a. Lamp and lens removal
(page 4-31) | c. Light installation (page 4-32) |
| b. Light removal (page 4-32) | d. Lamp and lens installation
(page 4-32) |

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/8-inch

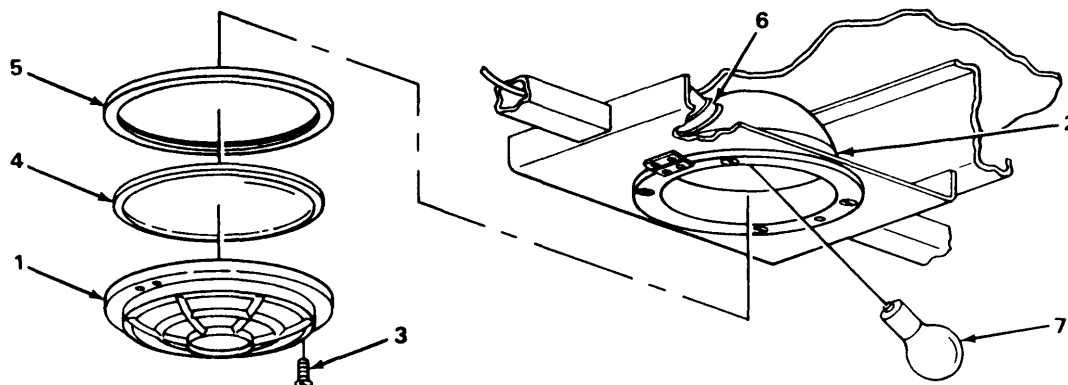
Materials/Parts

Gasket
Lamp

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

LAMP AND LENS REMOVAL

- | | | |
|----------------------------------|----------------------------|---|
| 1. Door (1) to
light body (2) | Screw (3) | Using 3/8-inch flat-tip screwdriver, un-
screw and take out.
Hold door closed. |
| 2. Light body (2) | Door (1) | Slowly open.
Hold lens (4) in door. |
| 3. Door (1) | Lens (4) and
gasket (5) | Take off.
Discard gasket. |
| 4. Socket (6) | Lamp (7) | Remove by pushing in and turning counter-
clockwise.
Discard lamp. |

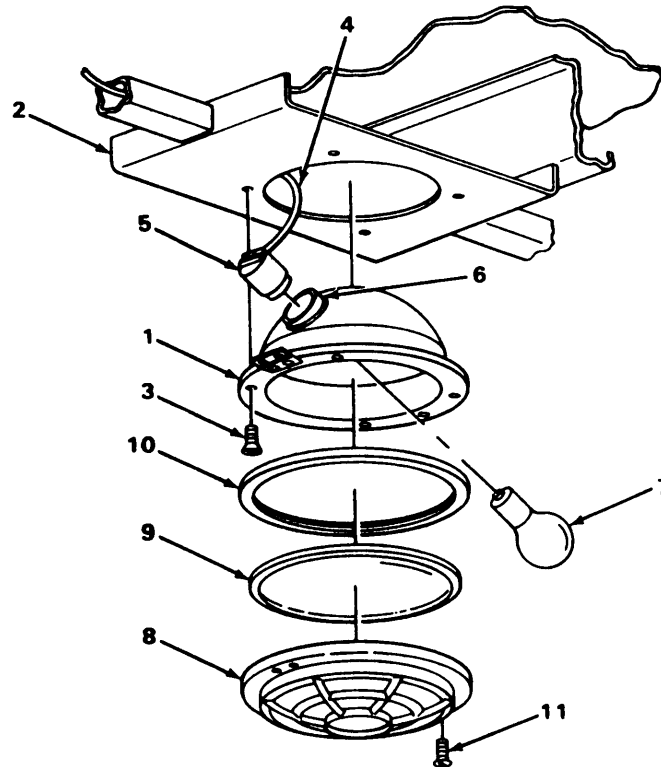


TA233972

DOME LIGHT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
LIGHT REMOVAL		
5. Light body (1) to bracket (2)	Four screws (3)	Using 3/8-inch flat-tip screwdriver, unscrew and take out.
6. Bracket (2)	Light body (1)	Lower from position. Light body is connected to wire lead (4).
7. Wire lead (4) to light body (1)	Socket (5)	Pull off to disconnect.
LIGHT INSTALLATION		
8. Wire lead (4) to light body (1)	Socket (5)	Push on to connect.
9. Bracket (2)	Light body (1)	Place in position.
10. Light body (1) to bracket (2)	Four screws (3)	Using 3/8-inch flat-tip screwdriver, screw in and tighten.
LAMP AND LENS INSTALLATION		
11. Socket (6)	New lamp (7)	Install by pushing in and turning counterclockwise.
12. Door (8)	Lens (9) and new gasket (10)	Place in position.
13. Light body (1)	Door (8)	Close. Check that lens and gasket are positioned properly.
14. Door (8) to light body (1)	Screw (11)	Using 3/6-inch flat-tip screwdriver, screw in and tighten.

DOME LIGHT, M119 AND M119A1 - CONTINUED



TASK ENDS HERE

CHASSIS HARNESS, M119

This task covers:

- a. Removal (page 4-34)
- b. Installation (page 4-36)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number two
Wrench, open-end, 3/8-inch

Materials/Parts

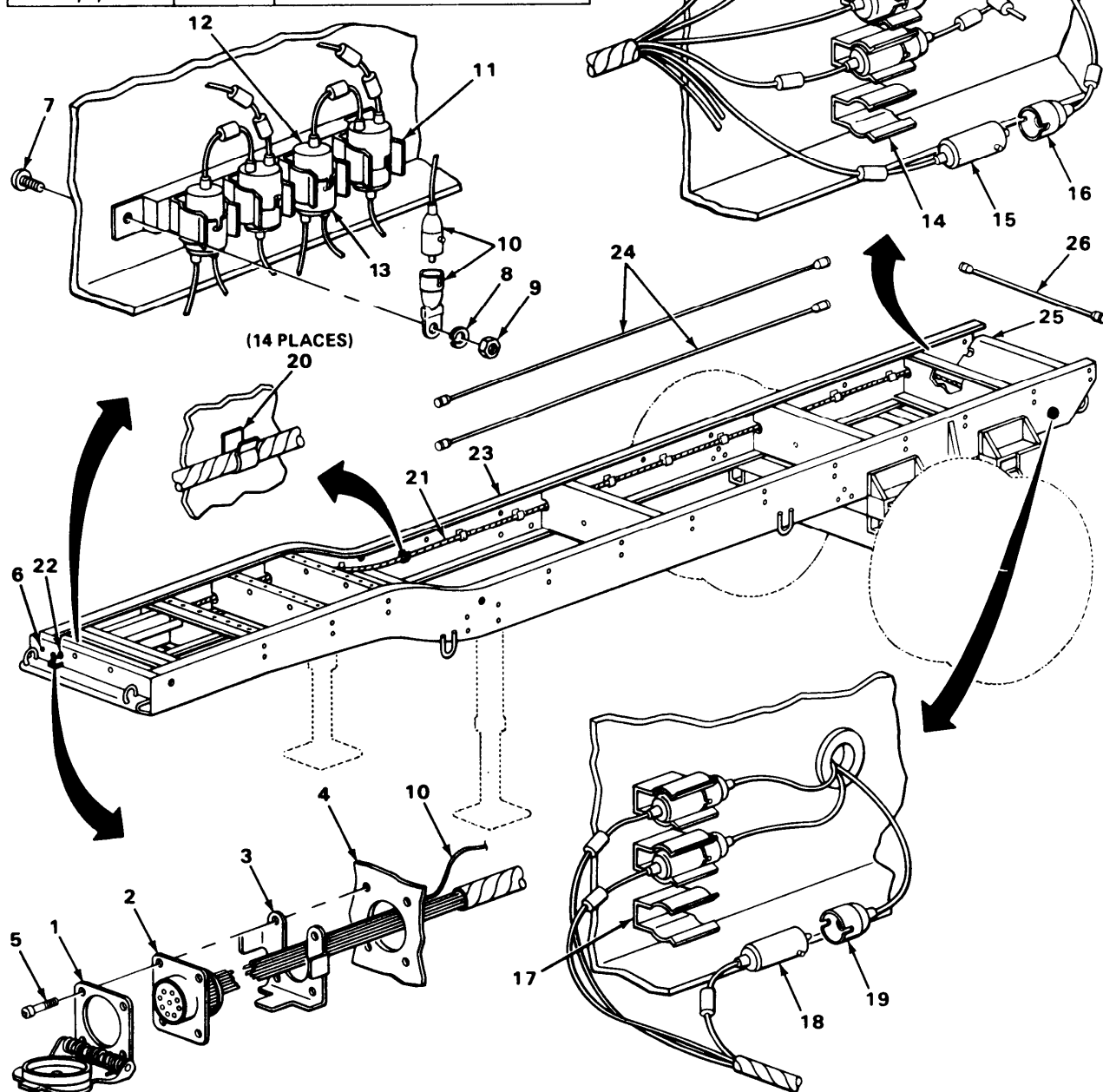
Tags, marker (if required) (item 11,
appendix E)

CHASSIS HARNESS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Cover(1), receptacle (2), and polarizing bracket (3) to bracket (4)	Four screws (5)	Using number two cross-tip screwdriver, unscrew and take out.
2. Bracket (4)	Cover (1)	Take off.
3.	Receptacle (2) and polarizing bracket (3)	Pull out.
NOTE		
If numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.		
4. Front cross-member (6)	Screw (1), lock-washer (8), nut (9), and lead (10)	Using number two cross-tip screwdriver and 3/8-inch open-end wrench, unscrew and take off.
5. Clip (11)	Four mated connectors (12 and 13)	a. Pull out. b. Pull apart.
6. Clip (14)	Six mated connectors (15 and 16)	a. Pull out. b. Pull apart.
7. Clip (17)	Three mated connectors (18 and 19)	a. Pull out. b. Pull apart.
8. 14 clamps (20)	Harness (21)	Take off.
9. Front cross-member (6)	Harness (21)	Pull harness from chassis through receptacle hole (22).
10. Right frame rail (23)	Two harnesses (24)	Take away from clamps.
11. Rear cross-member (25)	Harness (26)	Take away from clamps.

CHASSIS HARNESS, M119 - CONTINUED

CONTACT IDENTIFICATION MARK ON RECEPTACLE	CIRCUIT NUMBER ON CABLE	SERVES
A	24A	LEFT BLACKOUT TAILLIGHT
B AND J	22	SERVICE STOPLIGHTS
C	24B	RIGHT BLACKOUT TAILLIGHT
D	90	GROUND
E	21 - 489	SERVICE CLEARANCE LIGHTS AND TAILLIGHTS
F	23	BLACKOUT STOPLIGHTS
H	490	BLACKOUT CLEARANCE LIGHTS
K	38	DOME LIGHTS (M119 AND M119A1)
L,M,N	BLANK	



TA233974

CHASSIS HARNESS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
12. Rear crossmember (1)	Harness (2)	Put in clamps.
13. Right frame rail (3)	Two harnesses (4)	Put in clamps.
14. Front cross-member (5)	Harness (6)	Push into chassis through receptacle hole (7). Start at end of harness that is opposite receptacle.
15. 14 clamps (8)	Harness (6)	Put in.
16. Clip (9)	Three mated connectors (10 and 11)	a. Match identification tags between connectors. b. Push together and snap into position.
17. Clip (12)	Six mated connectors (13 and 14)	a. Match identification tags between connectors. b. Push together and snap into position.
18. Clip (15)	Four mated connectors (16 and 17)	a. Match identification tags between connectors. b. Push together and snap into position.
19. Front cross-member (5)	Screw (18), lock-washer (19), nut (20), and lead (21)	Using number two cross-tip screwdriver and 3/8-inch open-end wrench, screw in and tighten.
20. Bracket (22)	Polarizing bracket (23) and receptacle (24)	Push into position.
21.	Cover (25)	Place into position.
22. Receptacle (24), cover (25), and polarizing bracket (23) to bracket (22)	Four screws (26)	Using number two cross-tip screwdriver, screw in and tighten.

CHASSIS HARNESS, M118A1 AND M119A1

This task covers:

- a. Body receptacle removal (page 4-38)
- b. Harness removal (page 4-38)
- c. Harness installation (page 4-40)
- d. Body receptacle installation (page 4-42)

INITIAL SETUP

Tools	Materials/Parts
Screwdriver, cross-tip, number two Screwdriver, flat-tip, 3/8-inch Wrench, open-end, 3/8-inch	Tags, marker (item 11, appendix E)

LOCATION	ITEM	ACTION REMARKS
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BODY RECEPTACLE REMOVAL

1. Body receptacle (1)	Body harness plug (2)	Unscrew and take off.
2. Body receptacle (1) to frame rail (3)	Four screws (4), four nuts (5), four lockwashers (6), and ground wire (7)	Using 3/8-inch open-end wrench and number two cross-tip screwdriver, unscrew and take off.
3. Body receptacle (1) to chassis harness (8)	Three connector shells (9 and 10)	Pull apart.
4. Frame rail (3)	Body receptacle (1)	Take off.

HARNESS REMOVAL

5. Intervehicular receptacle (11) to front cross-member (12)	Four screws (13), four nuts (14), four lockwashers (15), and ground lead (16)	Using 3/8-inch open-end wrench and number two cross-tip screwdriver, unscrew and take off.
6. Intervehicular receptacle (11)	Cover (17)	Take off.

NOTE

If numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.

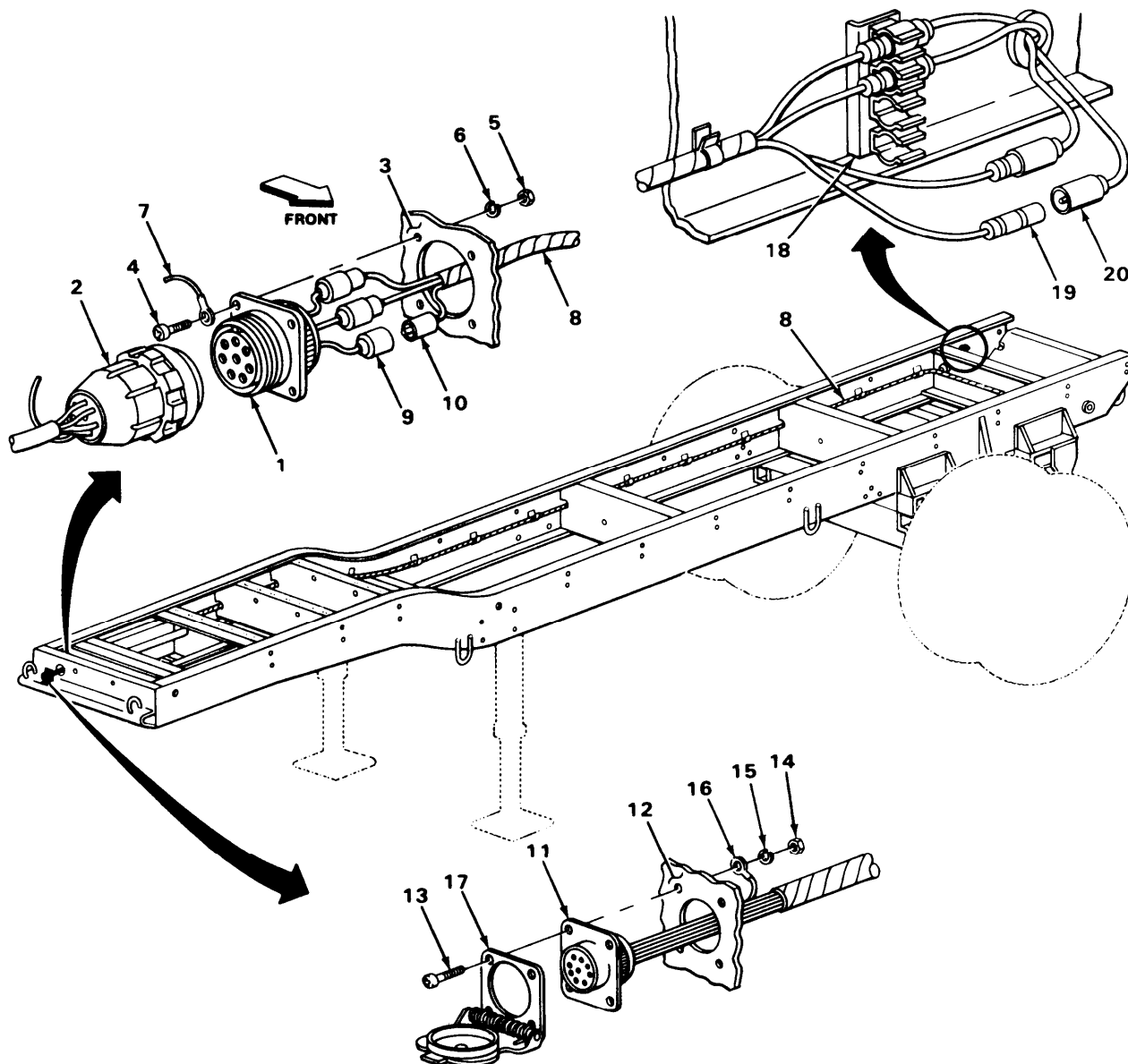
CHASSIS HARNESS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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7. Clip (18)

Four connector
shells (19 and 20)

a. Pull out.
b. Pull apart.



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CHASSIS HARNESS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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HARNESS REMOVAL – CONTINUED**NOTE**

Models equipped with composite lights will have four wire terminals in step 8. All others will have three.

8. Clip (1)	Connector shells (2 and 3)	a. Pull out. b. Pull apart.
9. Nine clamps (4)	Chassis harness (5)	Pull out.
10. Crossmember (6)	Two grommets (7)	Using 3/8-inch flat-tip screwdriver, pry out. Pry out toward front side of crossmember.
11.	Chassis harness (5)	Pull out through holes in crossmember (6).
12. Chassis harness (5)	Two grommets (7)	Take out.
13. Crossmembers (8)	Chassis harness (5)	Pull through toward front of trailer.
14. Conduit (9) and receptacle hole (10)	Chassis harness (5)	Pull out through conduit and then through receptacle hole.

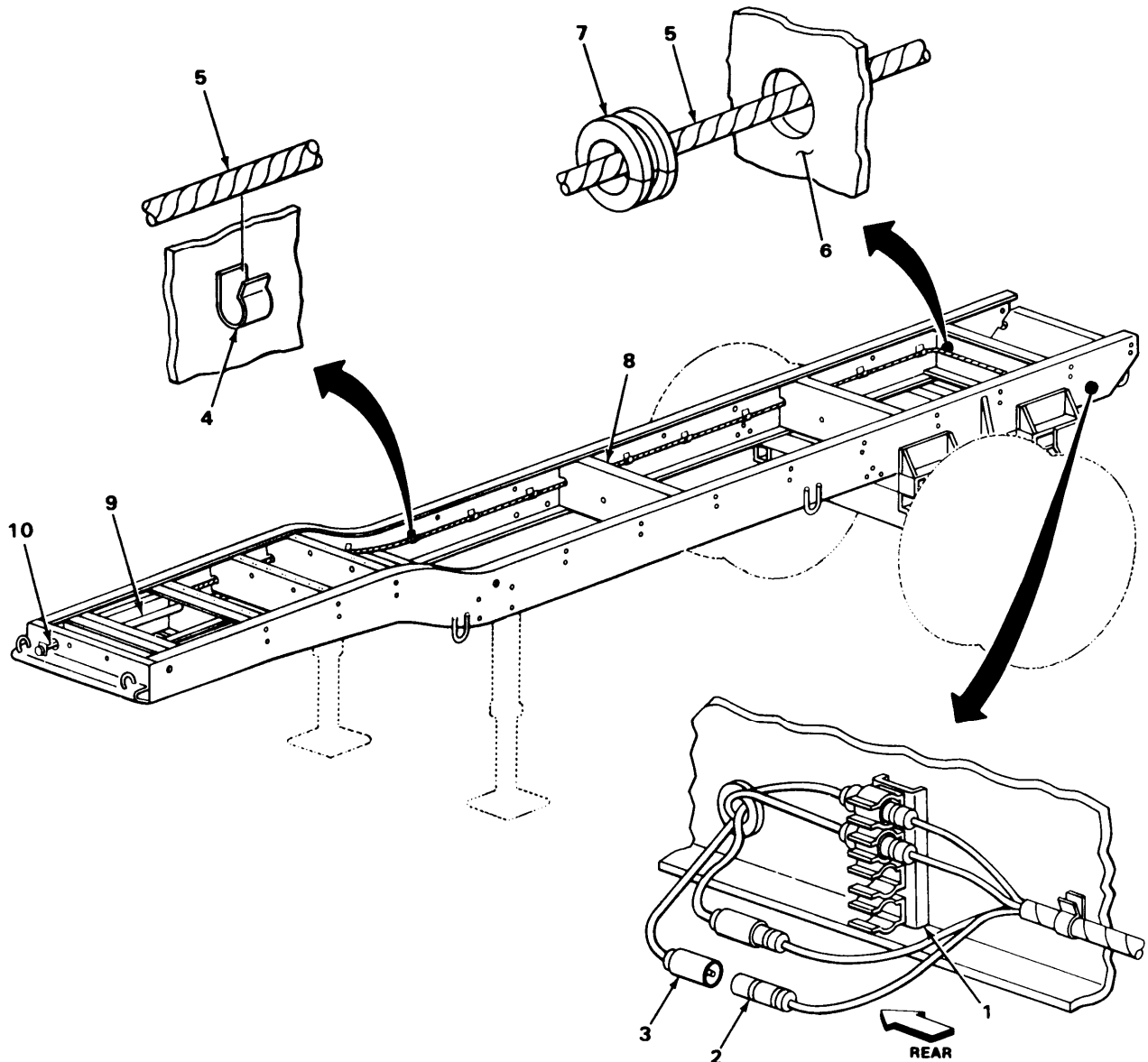
HARNESS INSTALLATION

15. Conduit (9) and receptacle hole (10)	Chassis harness (5)	Push in through receptacle hole and then through conduit.
16. Crossmembers (8)	Chassis harness (5)	Pull through toward rear of trailer,
17. Chassis harness (5)	Two grommets (7)	Put in.
18. Crossmember (6)	Chassis harness (5)	a. Place in position. b. Pull through holes at either end.

CHASSIS HARNESS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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19. Crossmember (6)	Two grommets (7)	Using 3/8-inch flat-tip screwdriver, put in.
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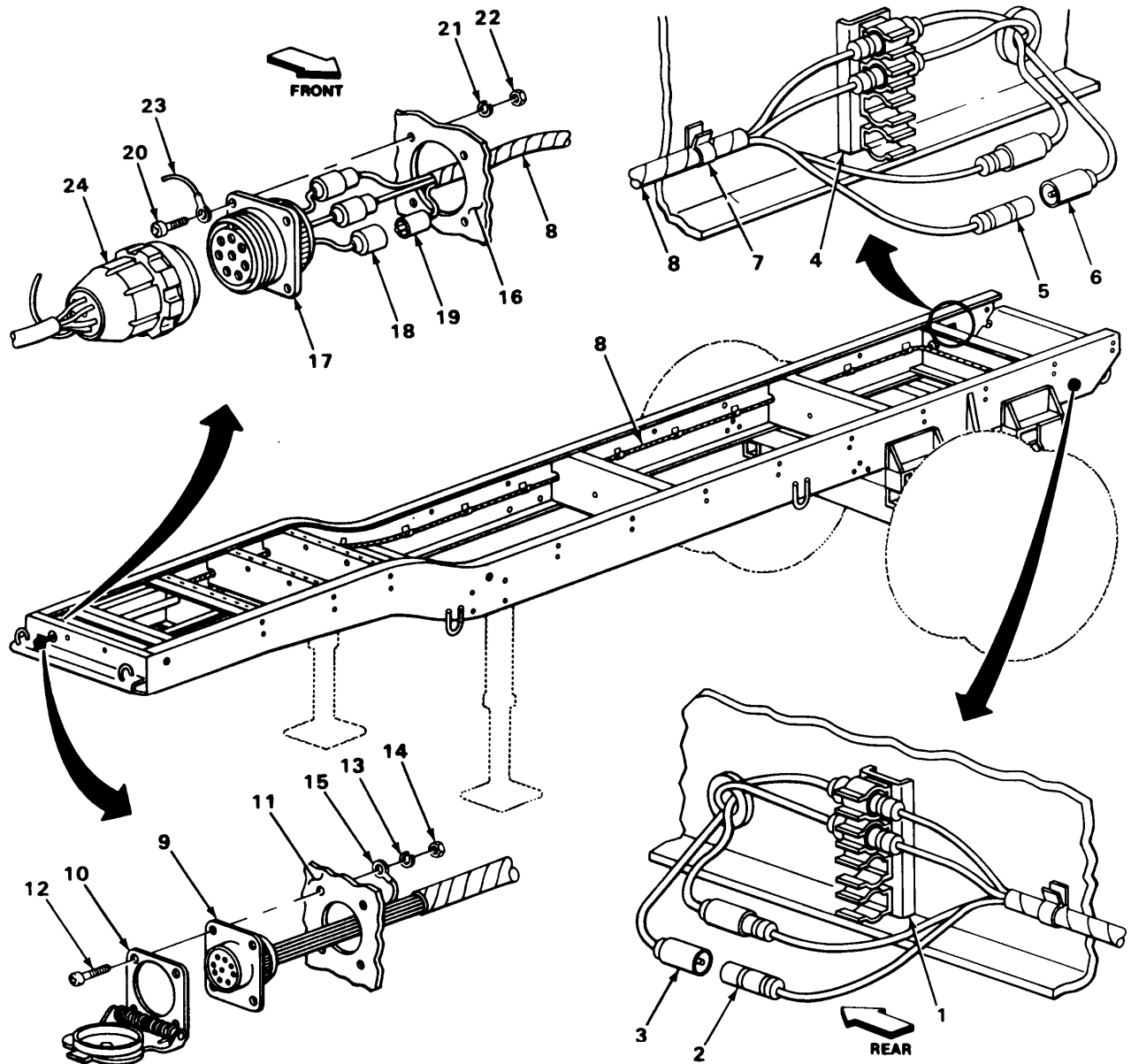
CHASSIS HARNESS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
HARNESS INSTALLATION – CONTINUED		
NOTE		
Models equipped with composite lights will have four wire terminals in step 20. All others will have three.		
20. Clip (1)	Connector shells (2 and 3)	a. Using marker tags, match connectors. b. Join and snap into place.
21. Clip (4)	Four connector shells (5 and 6)	a. Using marker tags, match connectors. b. Join and snap into place.
22. Nine clamps (7)	Chassis harness (8)	Place in position.
23. Intervehicular receptacle (9)	Cover (10)	Place in position.
24. Intervehicular receptacle (9) to front cross-member (n)	Four screws (12), four lockwashers (13), four nuts (14), and ground wire (15)	Using number two cross-tip screwdriver and 3/8-inch open-end wrench, screw in and tighten.

BODY RECEPTACLE INSTALLATION

25. Frame rail (16)	Body receptacle (17)	Place in position.
26. Body receptacle (17)	Three connector shells (18 and 19)	a. Using marker tags, match connectors. b. Join together.
27. Body receptacle (17) to frame rail (16)	Four screws (20), four lockwashers (21), four nuts (22), and ground lead (23)	Using number two cross-tip screwdriver and 3/8-inch open-end wrench, screw in and tighten.
28. Body receptacle (17)	Body harness plug (24)	Plug in and screw on outer shell.

CHASSIS HARNESS, M118A1 AND M119A1 - CONTINUED



TASK ENDS HERE

BODY HARNESSES, M119

This task covers:

- | | |
|--------------------------------------|---|
| a. Front harness removal (page 4-44) | c. Rear harness installation (page 4-48) |
| b. Rear harness removal (page 4-46) | d. Front harness installation (page 4-50) |

BODY HARNESSES, M119 - CONTINUED

INITIAL SETUP

Tools	Equipment	Condition
Screwdriver, flat-tip, 3/8-inch	Interior panels A, C, D, H, J, L, and N	removed (page 4-156).
Materials/Parts	Doorframe removed (page 4-157).	
Tags, marker (item 11, appendix E)		

LOCATION	ITEM	ACTION	REMARKS
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FRONT HARNESS REMOVAL

NOTE

if numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.

Clip and accompanying harness connectors are accessible through handhole in fifth-wheel plate.

1. Clip (1)	Connector shells (2 and 3)	a. Pull out. b. Pull apart.
2.	Connector shells (4 and 5)	a. Pull out. b. Pull apart.
3.	Connector shells (6 and 7)	a. Pull out. b. Pull apart.
4. Connector shell (7)	Wire lead (8)	Pull out and disconnect.
5. Connector shell (5)	Wire lead (9)	Pull out and disconnect.

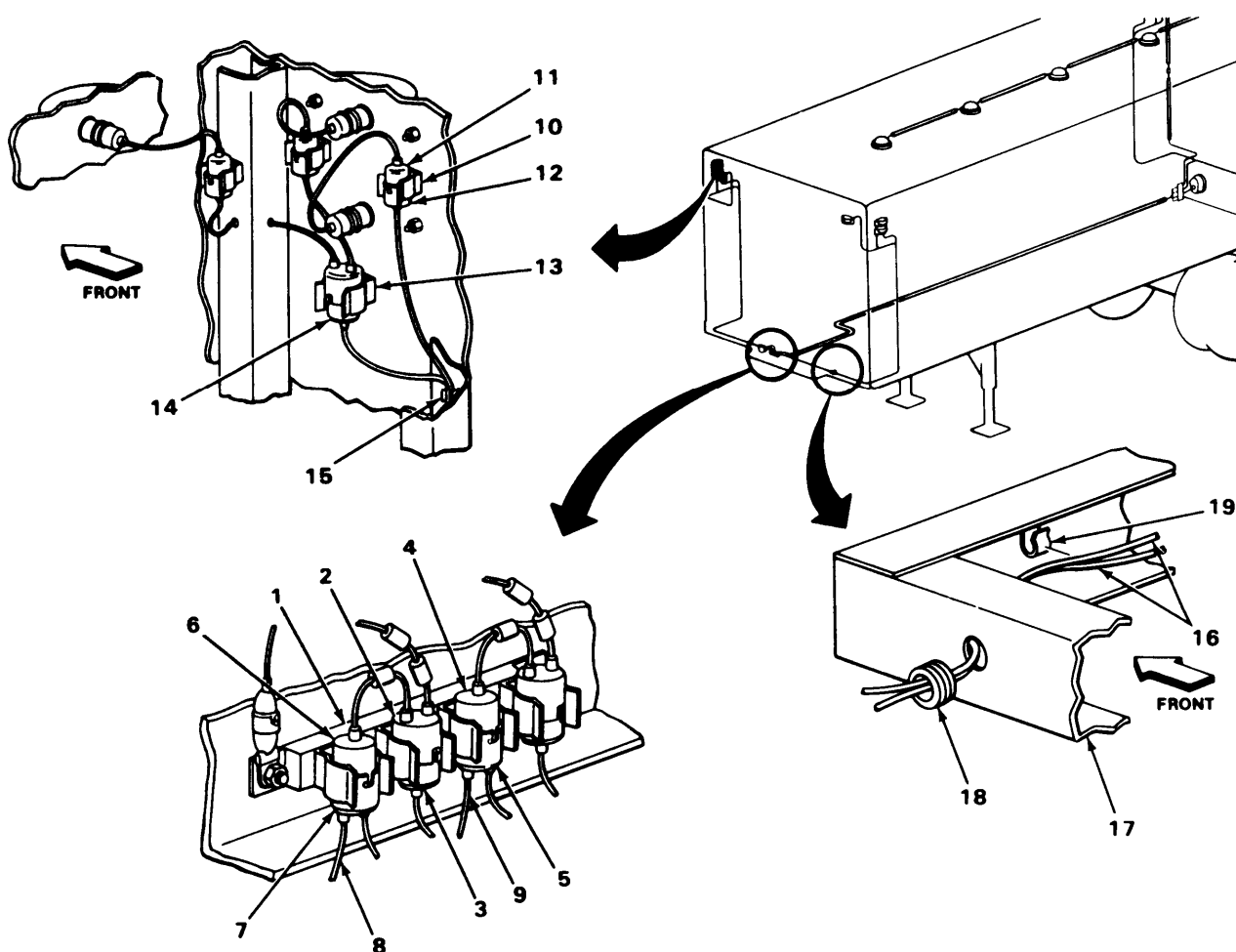
NOTE

Steps 6 thru 8 are typical for the left and right side. Do one side; then repeat steps for the other side.

6. Three clips (10)	Three connector shells (11 and 12)	Pull out and disconnect.
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BODY HARNESSSES, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
7. Clip (13)	Connector (14)	Pull out. Do not separate shells.
8. Two clamps (15)	Harness (16)	Take out.
9. Left frame rail (17)	Grommet (18)	Using 3/8-inch flat-tip screwdriver, pry out.
10. Clamp (19)	Harness (16)	Take out.

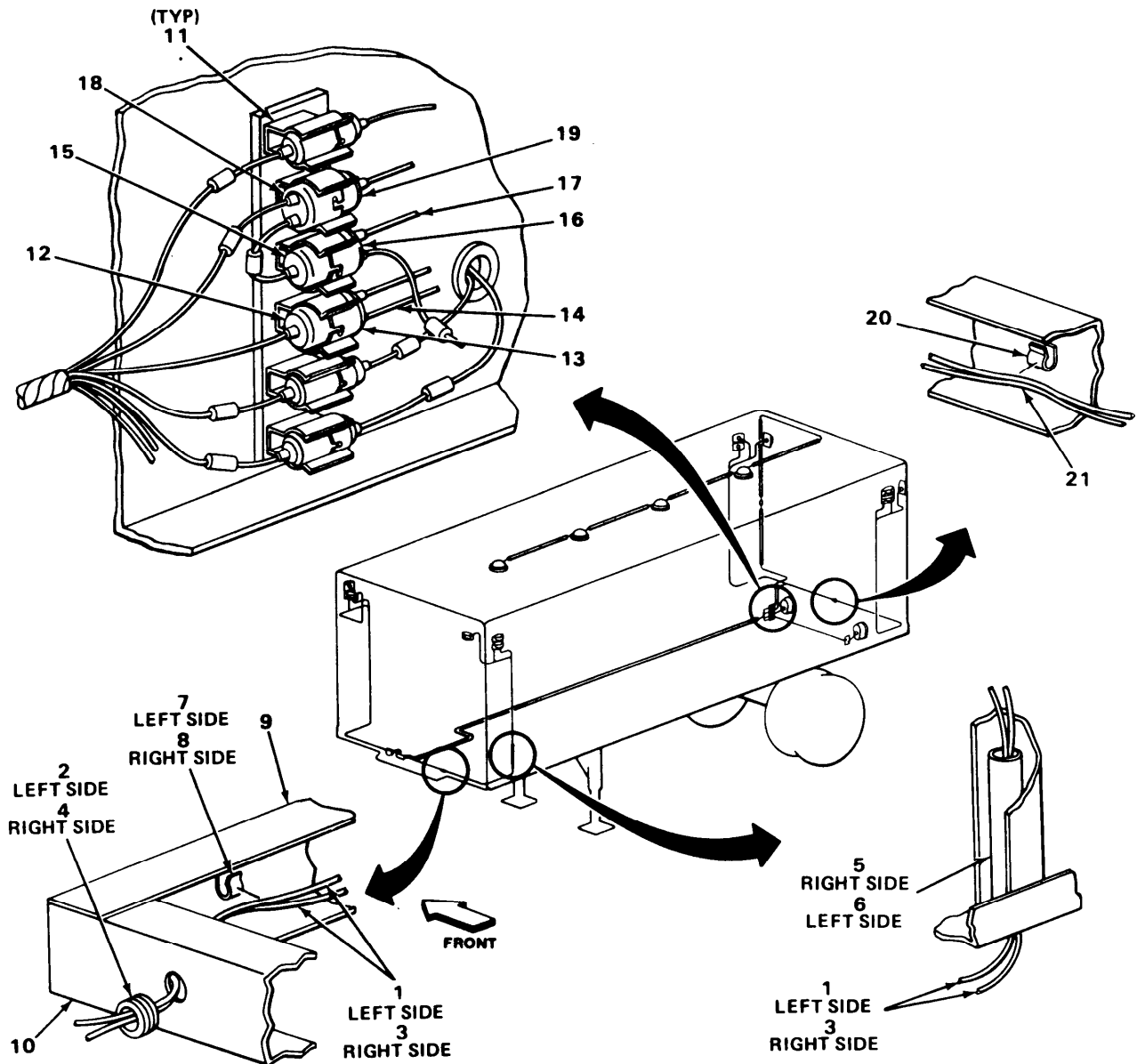


BODY HARNESES, M119- CONTINUED

LOCATION	ITEM	ACTION REMARKS
FRONT HARNESS REMOVAL- CONTINUED		
11. Harness (1)	Grommet (2)	Using 3/8-inch flat-tip screwdriver, pry out.
12. Harness (3)	Grommet (4)	Using 3/8-inch flat-tip screwdriver, pry out.
13. Conduit (5)	Harness (3)	Pull out to remove from body.
14. Conduit (6)	Harness (1)	Pull out to remove from body.
15. Two clamps (7)	Harness (1)	Take off.
16. Two clamps (8)	Harness (3)	Take off.
17. Right frame rail (9)	Harness (3)	Pull out.
18. Left frame rail (10)	Harness (1)	Pull out.
REAR HARNESS REMOVAL		
19. Clip(n)	Connector shells (12 and 13)	a. Pull out. b. Pull apart.
20. Connector shell (13)	Wire lead (14)	Pull out and disconnect.
21. Clip(n)	Connector shells (15 and 16)	a. Pull out. b. Pull apart.
22. Connector shell (16)	Wire lead (17)	Pull out and disconnect.
23. Clip (11)	Connector shells (18 and 19)	a. Pull out. b. Pull apart.

BODY HARNESSES, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
24. Five clamps (20)	Two harnesses (21)	Take off.



BODY HARNESES, M119 - CONTINUED

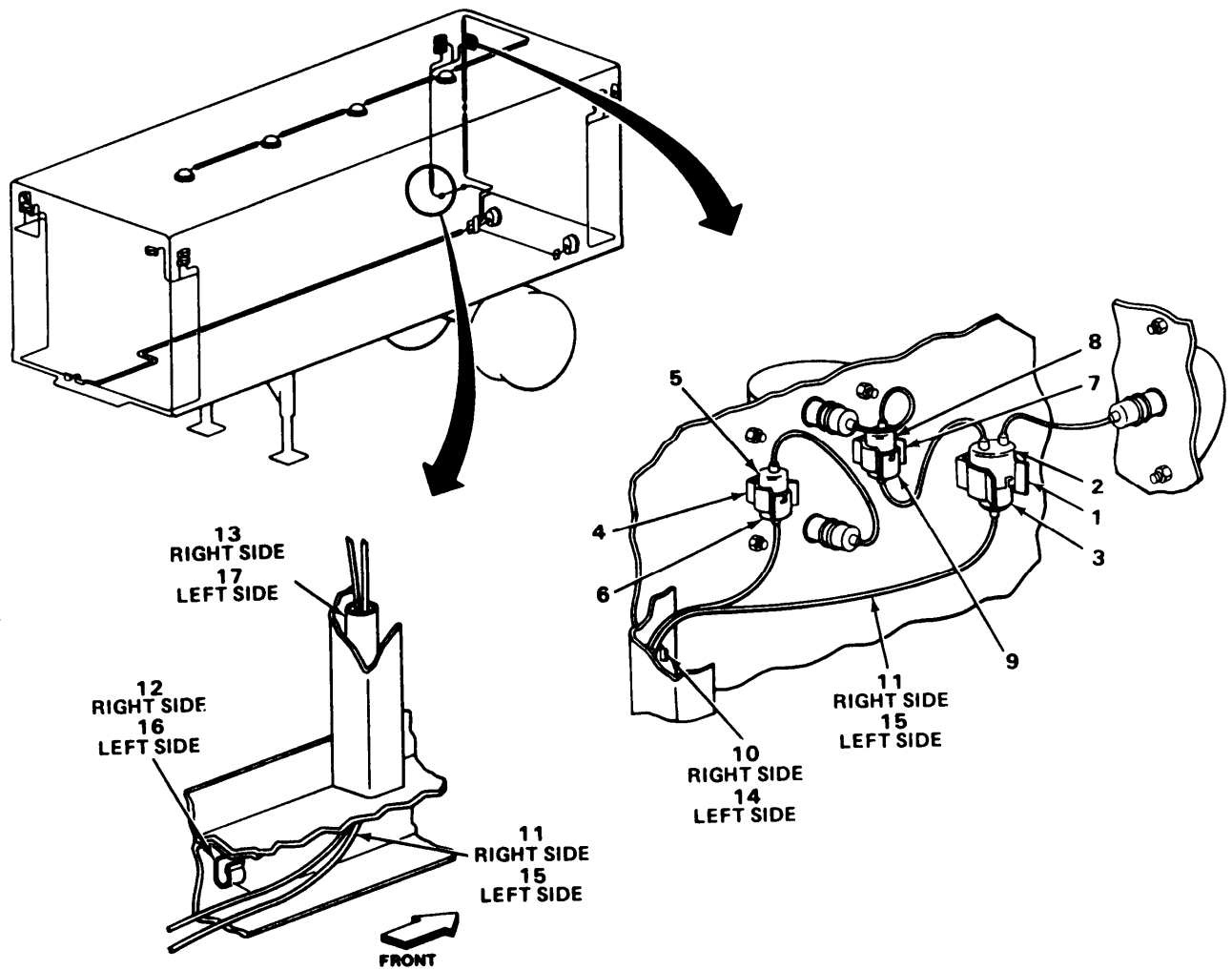
LOCATION	ITEM	ACTION REMARKS
REAR HARNESS REMOVAL– CONTINUED		
NOTE		
Steps 25 thru 27 are typical for the right and left sides. Do one side; then repeat steps for the other side.		
25. Clip (1)	Connector shells (2 and 3)	a. Pull out. b. Pull apart.
26. Clip (4)	Connector shells (5 and 6)	a. Pull out. b. Pull apart.
27. Clip (7)	Connector shells (8 and 9)	Pull out. Do not separate connector shells.
28. Two clamps (10)	Harness (11)	Take off.
29. Two clamps (12)	Harness (11)	Take off.
30. Conduit (13)	Harness (11)	Slide out and remove harness.
31. Two clamps (14)	Harness (15)	Take off.
32. Two clamps (16)	Harness (15)	Take off.
33. Conduit (17)	Harness (15)	Slide out and remove harness.
REAR HARNESS INSTALLATION		
34. Conduit (17)	Harness (15)	Slide through and place harness in position.
35. Two clamps (16)	Harness (15)	Place in position.
36. Two clamps (14)	Harness (15)	Place in position.
37. Conduit (13)	Harness (11)	Slide through and place harness in position.

BODY HARNESSSES, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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38. Two clamps (12) Harness (11) Place in position.

39. Two clamps (10) Harness (11) Place in position.



BODY HARNESES, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS

REAR HARNESS INSTALLATION - CONTINUED**NOTE**

Steps 40 thru 42 are typical for the right and left sides. Do one side; then repeat steps for the other side.

40.	Clip (1)	Connector shells (2 and 3)	Push into place.
41.	Clip (4)	Connector shells (5 and 6)	Join together and push into place.
42.	Clip (7)	Connector shells (8 and 9)	Join together and push into place.
43.	Five clamps (10)	Two harnesses (11)	Place in position.
44.	Clip (12)	Connector shells (13 and 14)	Join together and push into place.
45.	Connector shell (15)	Wire lead (16)	Push into position.
46.	Clip (12)	Connector shells (15 and 17)	Join together and push into place.
47.	Connector shell (18)	Wire lead (19)	Push into position.
48.	Clip (12)	Connector shells (18 and 20)	Join together and push into place.

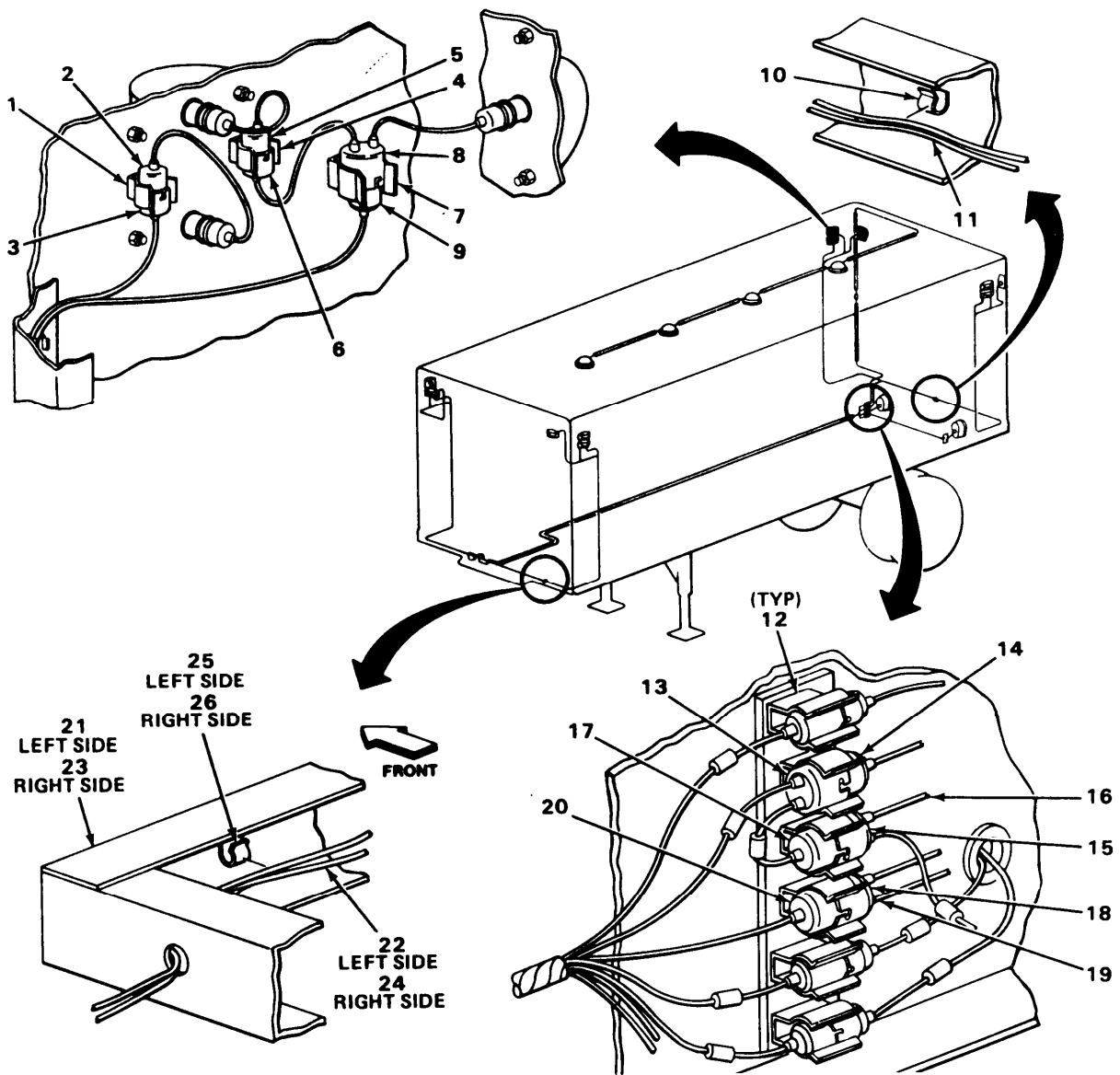
FRONT HARNESS INSTALLATION

49.	Left frame rail (21)	Harness (22)	Push through and place in position.
50.	Right frame rail (23)	Harness (24)	Push through and place in position.
51.	Two clamps (25)	Harness (24)	Put in place.

BODY HARNESSSES, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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52. Two clamps (26)	Harness (22)	Put in place.	
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BODY HARNESSES, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
FRONT HARNESS INSTALLATION – CONTINUED		
53. Conduit (1)	Harness (2)	Push through and into body.
54. Conduit (3)	Harness (4)	Push through and into body.
55. Harness (2)	Grommet (5)	Place in position.
56. Right frame rail (6)	Grommet (5)	Using 3/8-inch flat-tip screwdriver, place in position.
57. Harness (2)	Grommet (7)	Place in position.
58. Clamp (8)	Harness (2)	Place in position.
59. Left frame rail (9)	Grommet (7)	Using 3/8-inch flat-tip screwdriver, place in position.

NOTE

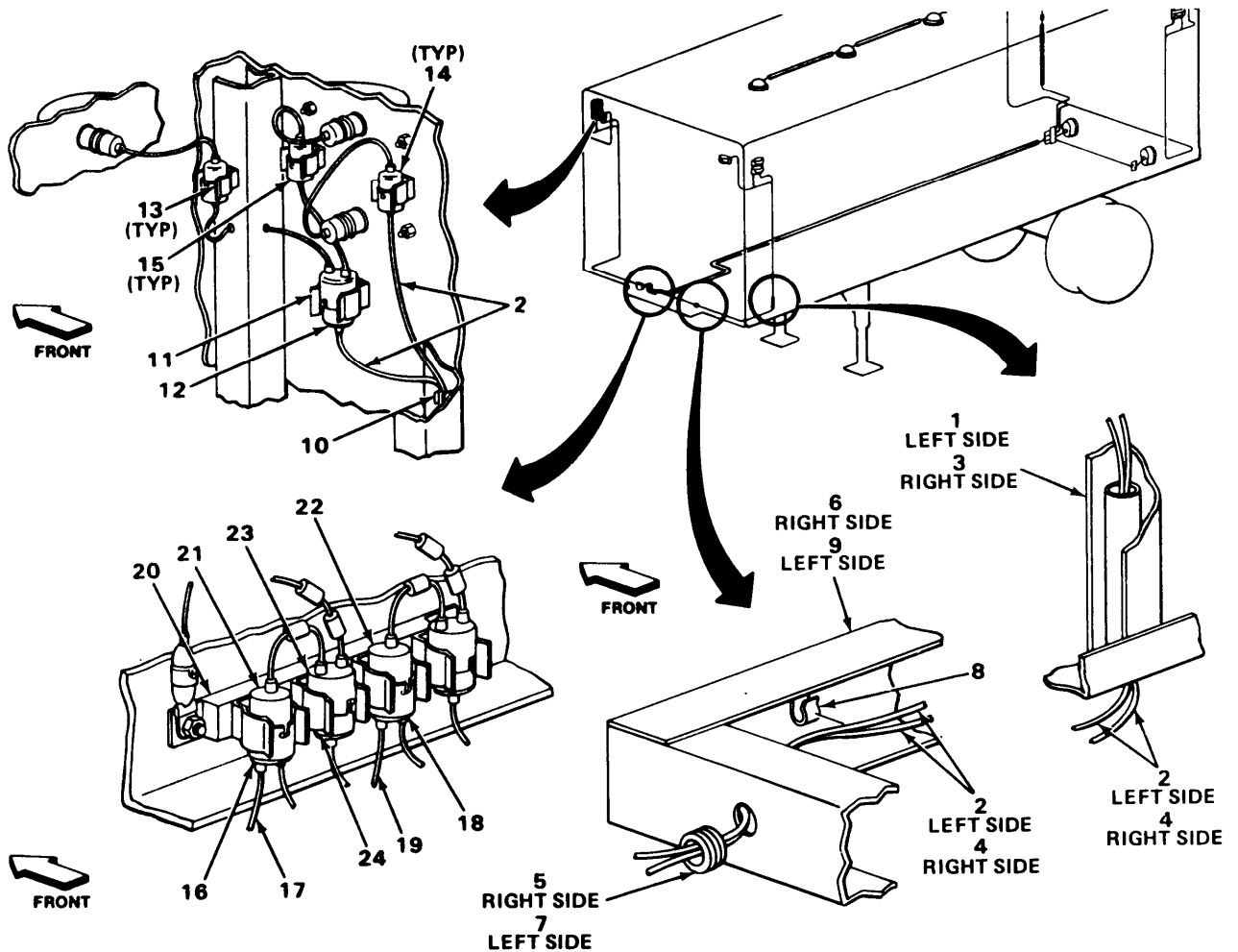
Steps 60 thru 62 are typical for left and right side. Do one side; then repeat steps for other side.

60. Two clamps (10)	Harness (2)	Place in position.
61. Clip (11)	Connector	Push into place.
62. Three clips (13)	Three connector shells (14 and 15)	Join together and push into place. Use marker tags to match connectors.
63. Connector shell (16)	Wire lead (17)	Push into position.
64. Connector shell (18)	Wire lead (19)	Push into position.
65. Clip (20)	Connector shells (16 and 21)	Join together and push into place.
66.	Connector shells (18 and 22)	Join together and push into place.

BODY HARNESSSES, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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67. Clip (20)	Connector shells (23 and 24)	Join together and push into place.	
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NOTE

FOLLOW-ON MAINTENANCE:

1. Install interior panels A, C, D, H, J, L, and N (page 4-156).
2. Install doorframe (page 4-157).

TASK ENDS HERE

TA233983

DOME LIGHT HARNESS, M119

This task covers:

- a. Removal (page 4-54)
- b. Installation (page 4-56)

INITIAL SETUP

Equipment Condition

Interior panels G and N removed
(page 4-156).
Dome light switch removed (page 4-17).
Doorframe removed (page 4-157).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1. Clip (1)	Connector shells (2 and 3)	a. Pull out. b. Pull apart.
2. Two clamps (4)	Harness (5)	Take off.
3. Clip (6)	Connector shells (7 and 8)	a. Pull out. b. Pull apart.
4. Connector shell (8)	Harness (5)	Pull out and disconnect.
5. Three clamps (9)	Harness (5)	Remove.
6. Conduit (10)	Harness (5)	Pull out in rearward direction.
7. Two bushings (11)	Harness (5)	Pull out. Harness is in two pieces.
8. Clip (12)	Connector shells (13 and 14)	a. Pull out. b. Pull apart.
9. Connector shell (14)	Harness (15)	Pull and disconnect.

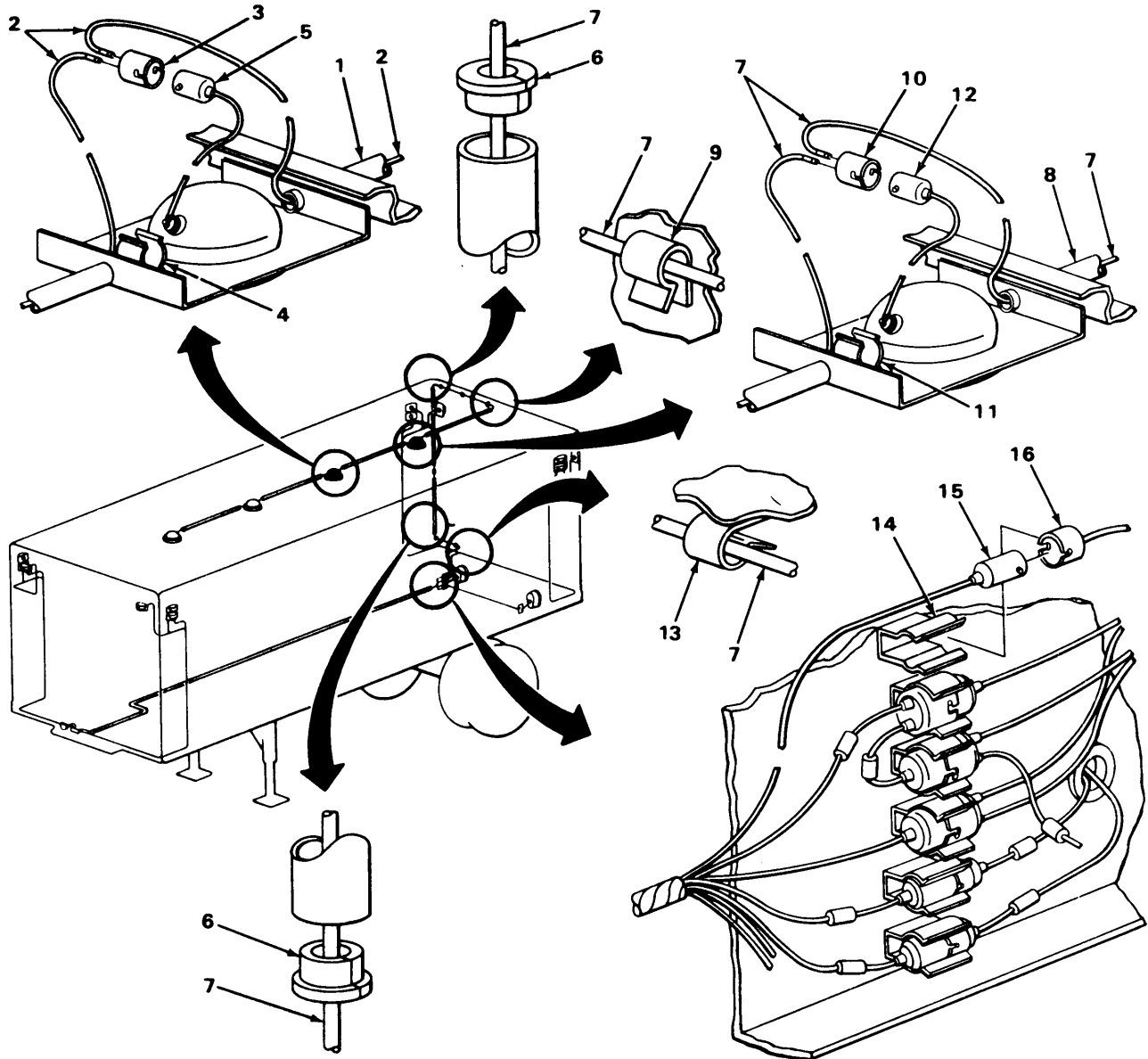
DOMELIGHT HARNESS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
11. Conduit (1)	Harness (2)	Pull through and into position.
12. Connector shell (3)	Harness (2)	Push into place.
13. Clip (4)	Connector shells (3 and 5)	Join together and push into place.
NOTE		
Repeat steps 11 thru 13 to install remaining two harnesses (2) between dome lights.		
14. Two bushings (6)	Harness (7)	Push through and into position in body.
15. Conduit (8)	Harness (7)	Pull through in forward direction.
16. Three clamps (9)	Harness (7)	Place in position.
17. Connector shell (10)	Harness (7)	Push into place.
18. Clip(n)	Connector shells (10 and 12)	Join together and push into place.
19. Two clamps (13)	Harness (7)	Place in position.
20. Clip (14)	Connector shells (15 and 16)	Join together and push into place.

NOTE

If harness (7) is a replacement, cut it into two pieces where dome light switch is mounted. Splice two cut ends so that switch can be installed.

DOME LIGHT HARNESS, M119 - CONTINUED

**NOTE**

FOLLOW-ON MAINTENANCE:

1. Install interior panels G and N (page 4-156).
2. Install doorframe (page 4-157).
3. Install dome light switch (page 4-17).

TASK ENDS HERE

BODY HARNESS, M118A1

This task covers:

- a. Removal (page 4-58)
- b. Installation (page 4-58)

INITIAL SETUP**Tools**

Screwdriver, flat-tip, 3/8-inch
Wrench, box-end, 3/8-inch

Materials/Parts

Tags, marker (item 11, appendix E)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL**NOTE**

If numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.

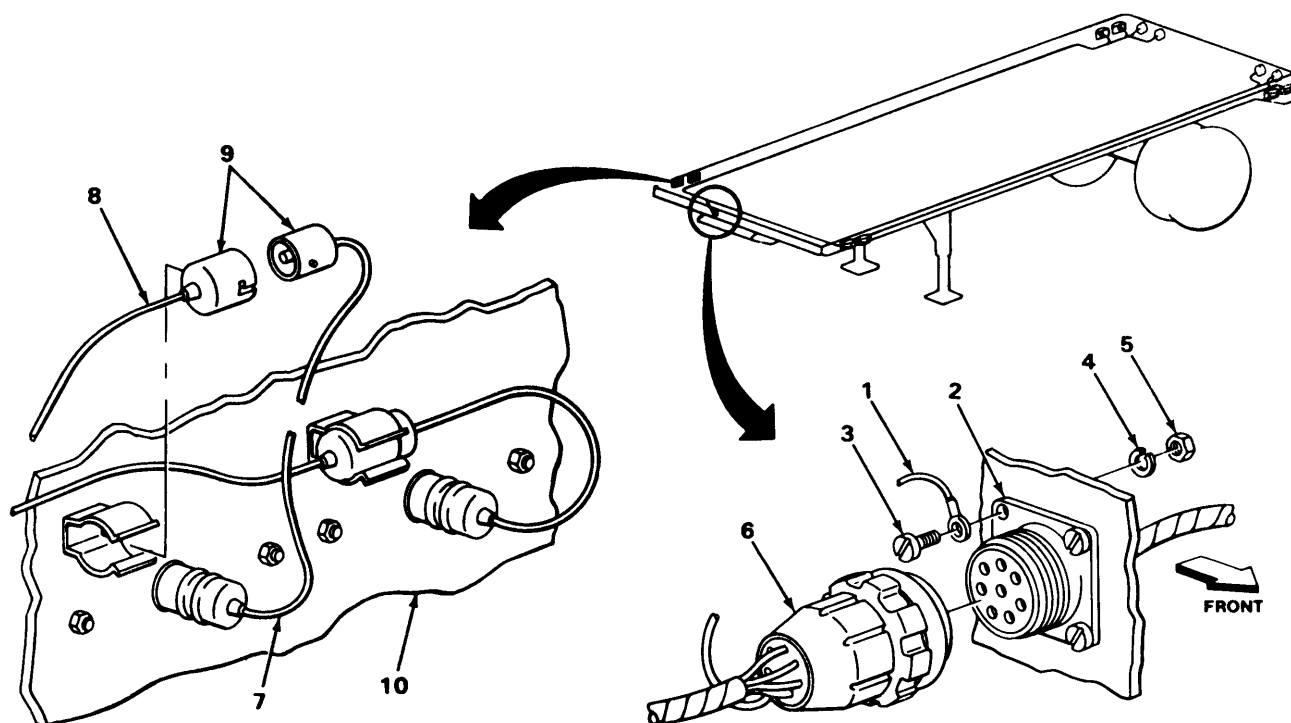
- | | | |
|--|---|--|
| 1. Body harness ground wire (1) to body receptacle (2) | Screw (3), lock-washer (4), and nut (5) | Using 3/8-inch flat-tip screwdriver and 3/8-inch box-end wrench, unscrew and take off. |
| 2. Body receptacle (2) | Body harness ground wire (1) | Take off. |
| 3. | Body harness plug (6) | Unscrew and take off. |
| 4. Clearance light plug wire (7) to body harness (8) | 12 connectors (9) | Take apart. |
| 5. Body (10) | Body harness (8) | Take out. |

INSTALLATION

- | | | |
|--|------------------------------|--|
| 6. Body (10) | Body harness (8) | Place in position. |
| 7. Clearance light plug wire (7) to body harness (8) | 12 connectors (9) | a. Using marker tags, match connectors.
b. Join together. |
| 8. Body receptacle (2) | Body harness ground wire (1) | Place in position. |

BODY HARNESS, M118A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
9. Body harness ground wire (1) to body receptacle (2)	Screw (3), lock-washer (4), and nut (5)	Using 3/8-inch flat-tip screwdriver and 3/8-inch box-end wrench, screw in and tighten.
10. Body harness plug (6) to body receptacle (2)	Body harness plug (6)	Plug in and screw on outer shell.



TASK ENDS HERE

BODY HARNESS, M119A1

This task covers:

- a. Removal (page 4-60)
- b. Installation (page 4-82)

INITIAL SETUP

Tools	Equipment Condition
Screwdriver, flat-tip, 3/8-inch Wrench, box-end, 3/8-inch	Interior panels E, D, C, B, and A, removed (page 4-156). Doorframe removed (page 4-157). Dome light switch removed (page 4-16).
Materials/Parts	
Tags, marker (item 11, appendix E)	

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

If numbered wire identification bands are not legible or are missing, identify wires with marker tags. See page 4-65 for installation of new wire identification bands.

1. Ground wire (1) to body receptacle (2)	Screw (3), lock- washer (4), and nut (5)	Using 3/8-inch flat-tip screwdriver and 3/8-inch box-end wrench, remove.
2. Body receptacle (2)	Ground wire (1)	Take off.
3.	Body harness plug (6)	Unscrew and take off.
4. Body harness (7) to trailer floor (8)	Grommet (9)	Using 3/8-inch flat-tip screwdriver, pry out.
5. Trailer floor (8)	Grommet (9)	Take from harness.
6.	Body harness (7)	Pull through into trailer.
7. Dome lights raceway (10)	10 clips (11) and cover (12)	Using 3/8-inch flat-tip screwdriver, take off.

BODY HARNESS, M119A1 - CONTINUED

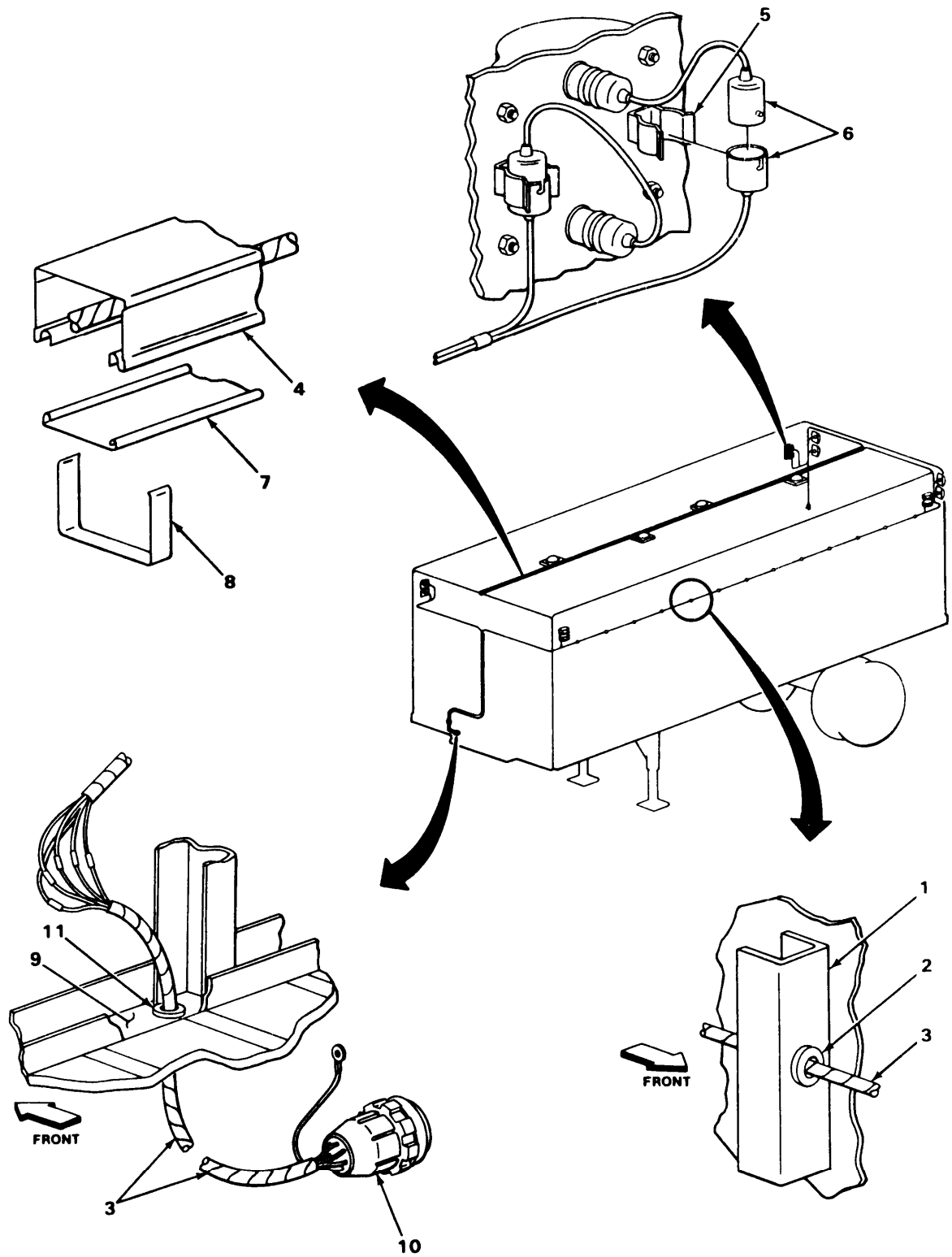
LOCATION	ITEM	ACTION REMARKS
8. Dome lights raceway (10)	Body harness (7)	Take out.
9. Clips (13)	16 connectors (14)	a. Pull out. b. Pull apart.

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BODY HARNESS, M119A1 - CONTINUED

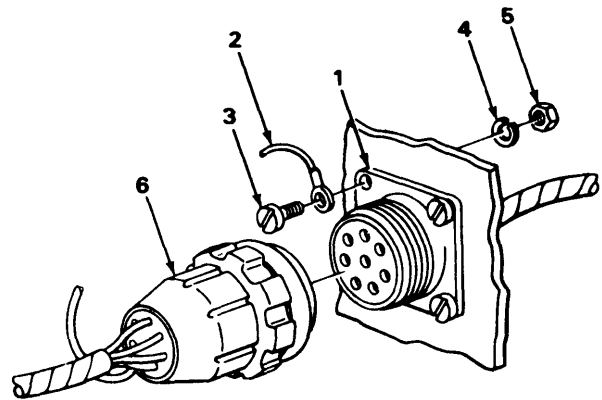
LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
10. Wall members (1)	18 grommets (2)	Using 3/8-inch flat-tip screwdriver, pry out.
11. Body harness (3)	18 grommets (2)	Take away from harness.
12. Wall members (1)	Body harness (3)	Pull out toward front of trailer and remove from trailer.
INSTALLATION		
13. Wall members (1)	Body harness (3)	Pull in toward rear of trailer and place in position.
14. Dome lights raceway (4)	Body harness (3)	Place in position.
15. Body harness (3)	18 grommets (2)	Place in position.
16. 18 wall members (1)	18 grommets (2)	Using 3/8-inch flat-tip screwdriver, place in position.
17. Clips (5)	16 connectors (6)	Join together and snap into place. Using marker tags, match connectors.
18. Dome lights raceway (4)	Cover (7) and 10 clips (8)	Using 3/8-inch flat-tip screwdriver, place in position.
19. Trailer floor (9)	Body harness plug (10)	Push through.
20. Body harness (3)	Grommet (11)	Place in position.
21. Trailer floor (9)	Grommet (11)	Using 3/8-inch flat-tip screwdriver, place in position.

BODY HARNESS, M119A1 - CONTINUED



BODY HARNESS, M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION – CONTINUED			
22. Body receptacle (1)	Body harness ground wire (2)	Place in position.	
23. Body harness ground wire (2) to body receptacle (1)	Screw (3), lock-washer (4), and nut (5)	Using 3/8-inch flat-tip screwdriver and 3/8-inch box-end wrench, install.	
24. Body receptacle (1)	Body harness plug (6)	Place in position.	
25.	Body harness plug (6)	Plug in and screw on outer shell.	



NOTE

FOLLOW-ON MAINTENANCE:

- 1. Install dome light switch (page 4-16).
- 2. Install doorframe (page 4-157).
- 3. Install interior panels E, D, C, B, and A (page 4-156).

TASK ENDS HERE

WIRE HARNESS REPAIR

This task covers:

- | | |
|--|--|
| <ul style="list-style-type: none"> a. Numbered wire identification band replacement (page 4-65) b. Male connector repair (page 4-66) | <ul style="list-style-type: none"> c. Female connector repair (page 4-66) d. Ring terminal replacement (page 4-67) e. Receptacle repair (page 4-68) |
|--|--|

INITIAL SETUP

Tools

Crimping tool, connector
Die set, metal stamping
Hammer, ball-peen, 3-pound
Iron, soldering
Pliers, diagonal-cutting
Pliers, slip-joint, 6-inch
Screwdriver, flat-tip, 3/8-inch

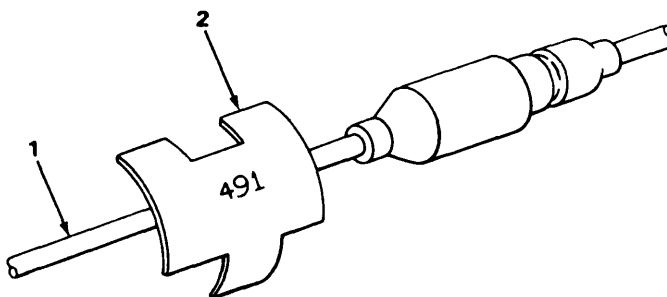
Materials/Parts

Contact, male or female (as required)
Identification bands (if required)
Retainer (if required)
Ring terminal (as required)
Shell, male or female (if required)

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

NUMBERED WIRE IDENTIFICATION BAND REPLACEMENT

- | | | |
|------------------|-----------------------------|--|
| 1. Wire lead (1) | Identification band (2) | Using 3/8-inch flat-tip screwdriver, open tabs and take off. |
| 2. | New identification band (2) | Using metal stamp die set and 3-pound ball-peen hammer, mark with proper number. |
| 3. | New identification band (2) | <ul style="list-style-type: none"> a. Place in position. b. Using connector crimping tool, bend tabs over. |



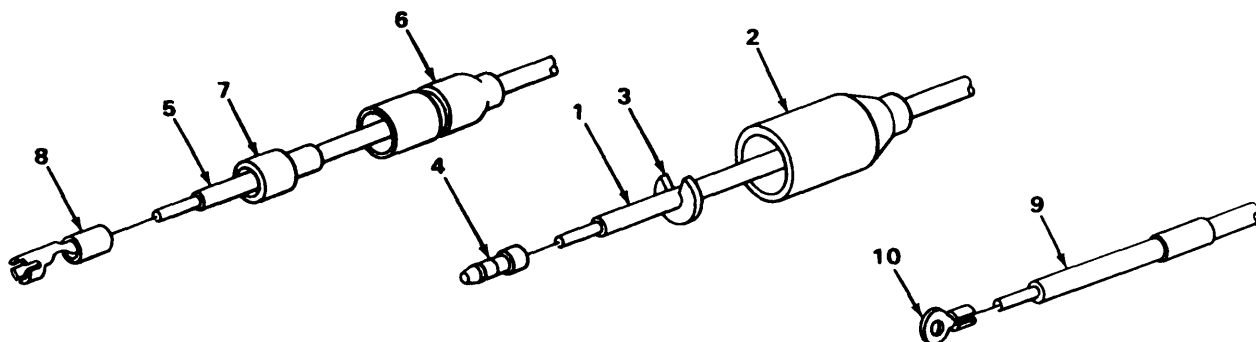
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WIRE HARNESS REPAIR -CONTINUED

LOCATION	ITEM	ACTION REMARKS
MALE CONNECTOR REPAIR		
4. Wire (1)	Shell (2)	Slide back.
5.	Retainer (3)	Take off.
6.	Contact (4)	Using diagonal-cutting pliers, cut off. Discard.
7.	Shell (2)	Remove. Discard if unserviceable.
8.	Wire (1)	Using diagonal-cutting pliers, strip off insulation equal to depth of new contact.
9.	Shell (2)	Slide on. Install new shell if required.
10.	New contact (4)	a. Place in position on end of wire. b. Using connector crimping tool, crimp.
11.	Retainer (3)	Put on.
12.	Shell (2)	Slide over retainer and contact.
FEMALE CONNECTOR REPAIR		
13. Wire (5)	Shell (6) and retainer (7)	Slide back.
14.	Contact (8)	Using diagonal-cutting pliers, cut off. Discard.
15.	Shell (6) and retainer (7)	Take off. Discard if unserviceable.
16.	Wire (5)	Using diagonal-cutting pliers, strip off insulation equal to depth of new contact.

WIRE HARNESS REPAIR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
17.	Shell (6) and retainer (7)	Slide on. Install new shell and retainer if required.
18.	New contact (8)	a. Place in position on end of wire (5). b. Using connector crimping tool, crimp. Install new contact as required.
19.	Shell (6) and retainer (7)	Slide over contact (8).
RING TERMINAL REPLACEMENT		
20. Wire (9)	Terminal (10)	Using diagonal-cutting pliers, take off. Discard.
21.	Wire (9)	Using diagonal-cutting pliers, strip off insulation equal to depth of new terminal.
22.	New terminal (10)	a. Place in position on end of wire. b. Using terminal crimping tool, crimp.



WIRE HARNESS REPAIR - CONTINUED

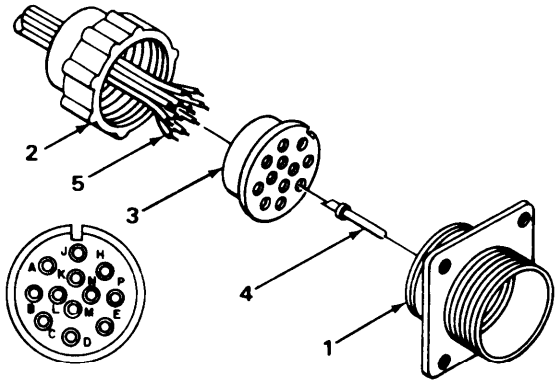
LOCATION	ITEM	ACTION	REMARKS
RECEPTACLE REPAIR			
23. Connector (1)	Nut (2)	Using 6-inch slip-joint pliers, take off.	
24.	Grommet (3)	Take out.	
25. Grommet (3)	Pins (4)	Pull out of grommet.	
26. Pins (4)	Wire leads (5)	Take off by melting solder with soldering iron.	

NOTE

Only unsolder the leads that need to be repaired.

27. Pins (4)	Wire leads (5)	a. Heat the solder well in pins. b. While solder is hot, insert wire leads into it.
28. Grommet (3)	Pins (4)	Insert pins into grommet. Follow chart below to put pins in proper location.
29. Connector (1)	Grommet (3)	Put grommet into connector.
30.	Nut (2)	Using 6-inch slip-joint pliers, screw on.

CONTACT IDENTIFICATION MARK ON RECEPTACLE	CIRCUIT NUMBER ON CABLE	SERVES
A	24A	LEFT BLACKOUT TAILLIGHT
B AND J	22	SERVICE STOPLIGHTS
C	24B	RIGHT BLACKOUT TAILLIGHT
D	90	GROUND
E	21 - 489	SERVICE CLEARANCE LIGHTS AND TAILLIGHTS
F	23	BLACKOUT STOPLIGHTS
H	490	BLACKOUT CLEARANCE LIGHTS
K	38	DOMELIGHTS (M119 AND M119A1)
L, M, N	BLANK	



TASK ENDS HERE

Section VIII. BRAKE SYSTEM

	Page		Page
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HANDBRAKE LEVER AND LINKAGE, M119

This task covers:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. Disassembly (page 4-70) b. Assembly (page 4-72) | <ul style="list-style-type: none"> c. Adjustment (page 4-75) |
|---|---|
-

INITIAL SETUP

Tools

Handle, ratchet, 3/8-inch drive
Pliers, diagonal-cutting
Pliers, slip-joint, 6-inch
Socket, 3/8-inch drive, 9/16-inch
Socket, 3/8-inch drive, 3/4-inch
Wrench, open-end, 7/16-inch

Tools - Continued

Wrench, open-end, 9/16-inch
Wrench, open-end, 3/4-inch

Materials/Parts

Cotter pins (as required)

WARNING

Ensure wheels of semitrailer are chocked to prevent movement when handbrake is released.

HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
1. Handbrake lever (1) to clevis rod (2)	Pin (3), two flat-washers (4), and cotter pin (5)	Using diagonal-cutting pliers, remove. Discard cotter pin.
2. Clevis (6) to lever (7)	Pin (8) and cotter pin (9)	Using diagonal-cutting pliers, take out. Discard cotter pin.
3. Lever (7) to hand-brake lever (1)	Clevis rod (2) with clevis (6)	Take off.
4. Clevis rod (2)	Clevis (6) and nut (10)	Using 3/4-inch open-end wrench, loosen nut, unscrew and take off.
5. Handbrake lever (1) to brackets (11)	Two screws (12), two lockwashers (13), and two nuts (14)	Using 9/16-inch open-end wrench, 9/16-inch socket, and ratchet handle with 3/8-inch drive, unscrew and take off.
6. Brackets (11)	Handbrake lever (1)	Take off.
7. Lever (7)	Screw (15), lock-washer (16), and nut (17)	Using 3/4-inch open-end wrench, 3/4-inch socket, and ratchet handle with 3/8-inch drive, unscrew and take off.
8. Shaft (18)	Lever (7) and key (19)	Take off.
9. Clevis rod (20) to shaft (18)	Pin (21) and cotter pin (22)	Using diagonal-cutting pliers, take off. Discard cotter pin.
10. Clevis (23) to lever (24)	Pin (25) and cotter pin (26)	Using diagonal-cutting pliers, take out. Discard cotter pin.
11. Lever (24) to shaft (18)	Clevis rod (20) with clevis (23)	Take off.
12. Clevis rod (20)	Clevis (23) and nut (27)	Using 3/4-inch open-end wrench, loosen nut, unscrew and take off.

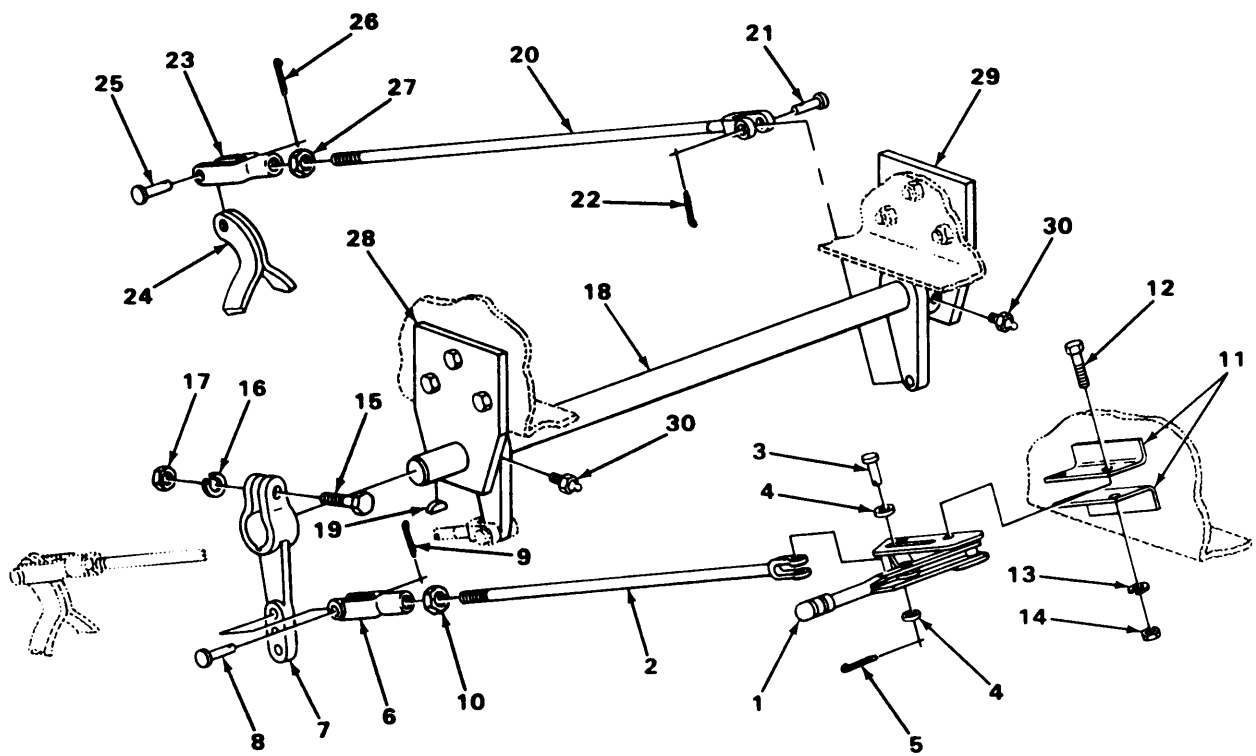
NOTE

Repeat steps 9 thru 12 for opposite side.

HANDBRAKE LEVER AND LINKAGE M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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13. Brackets (28 and 29)	Two fittings (30)	Using 7/16-inch open-end wrench, unscrew and take out.
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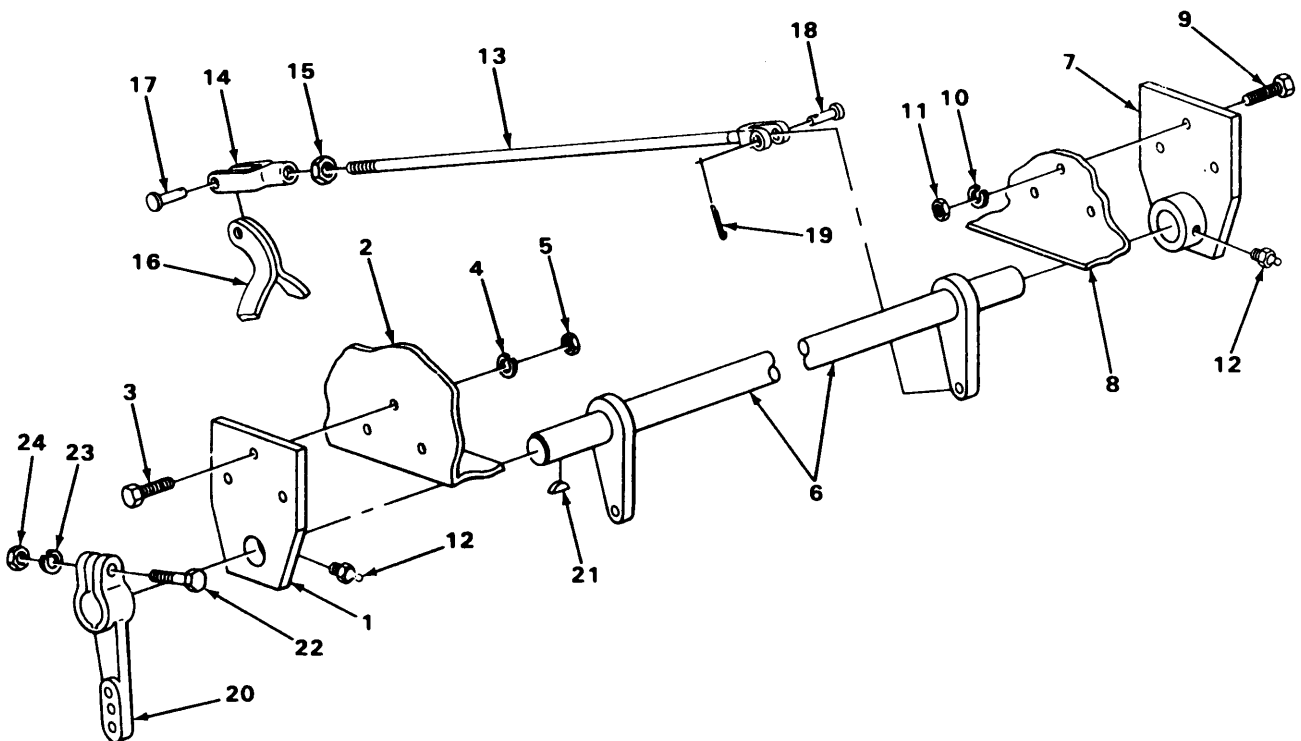


HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
14. Bracket (1) to right frame rail (2)	Three screws (3), three lockwashers (4), and three nuts (5)	Using 9/16-inch open-end wrench, 9/16-inch socket, and ratchet handle with 3/8-inch drive, unscrew and take off.
15. Shaft (6)	Bracket (1)	Slide off.
16. Bracket (7)	Shaft (6)	Slide out.
17. Bracket (7) to left frame rail (8)	Three screws (9), three lockwashers (10), and three nuts (11)	Using 9/16-inch open-end wrench, 9/16-inch socket, and ratchet handle with 3/8-inch drive, unscrew and take off.
18. Left frame rail (8)	Bracket (7)	Take off.
ASSEMBLY		
19. Left frame rail (8)	Bracket (7)	Place in position.
20. Bracket (7) to left frame rail (8)	Three screws (9), three lockwashers (10), and three nuts (11)	Using 9/16-inch open-end wrench, 9/16-inch socket, and ratchet handle with 3/8-inch drive, screw in and tighten.
21. Bracket (7)	Shaft (6)	Slide into position.
22. Shaft (6)	Bracket (1)	Slide on.
23. Bracket (1) to right frame rail (2)	Three screws (3), three lockwashers (4), and three nuts (5)	Using 9/16-inch open-end wrench, 9/16-inch socket, and ratchet handle with 3/8-inch drive, screw in and tighten.
24. Brackets (1 and 7)	Two fittings (12)	Using 7/16-inch open-end wrench, screw on and tighten.
25. Clevis rod (13)	Clevis (14) and nut (15)	a. Screw on nut. b. Screw clevis onto clevis rod about halfway.
26. Lever (16) to shaft (6)	Clevis rod (13) with clevis (14)	Place in position.

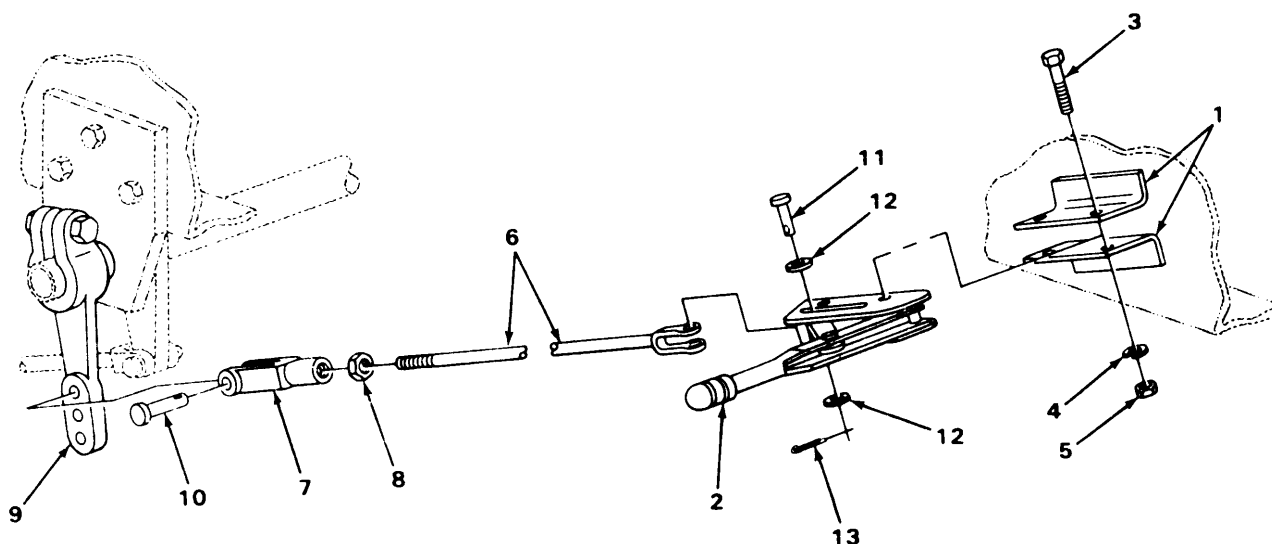
HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
27. Clevis (14) to lever (16)	Pin (17)	Slide into position. Do not install cotter pin at this time.
28. Clevis rod (13) to shaft (6)	Pin (18) and new cotter pin (19)	Using 6-inch slip-joint pliers, put in.
<p style="text-align: center;">NOTE</p> <p style="text-align: center;">Repeat steps 25 thru 28 for opposite side.</p>		
29. Shaft (6)	Lever (20) and key (21)	Place in position.
30. Lever (20)	Screw (22), lock-washer (23), and nut (24)	Using 3/4-inch open-end wrench, 3/4-inch socket, and ratchet handle with 3/8-inch drive, screw in and tighten.



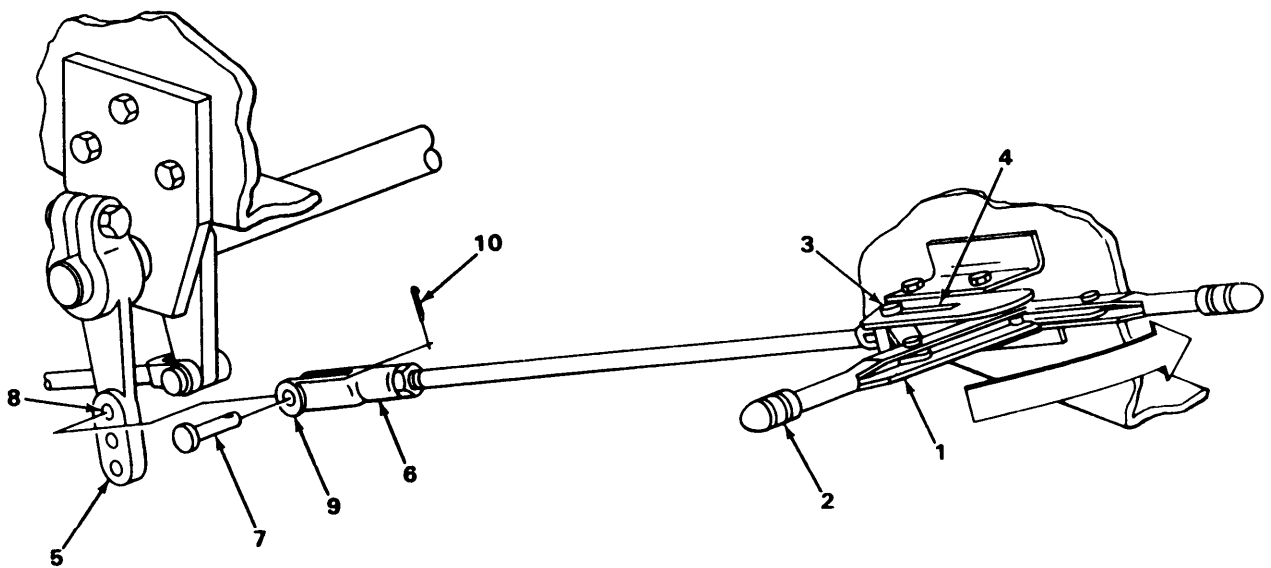
HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY – CONTINUED		
31. Bracket (1)	Handbrake lever (2)	Place in position.
32. Handbrake lever (2) to bracket (1)	Two screws (3), two lockwashers (4), and two nuts (5)	Using 9/16-inch open-end wrench, 9/16- inch socket, and ratchet handle with 3/8- inch drive, screw in and tighten.
33. Clevis rod (6)	Clevis (7) and nut (8)	a. Screw on nut. b. Screw on clevis. Leave parts loose.
34. Lever (9) to handbrake lever (2)	Clevis rod (6) with clevis (7)	Place in position.
35. Clevis (7) to lever (9)	Pin (10)	Slide into position. Do not install new cotter pin at this time.
36. Handbrake lever (2) to clevis rod (6)	Pin (11), two flat washers (12), and new cotter pin (13)	Using 6-inch slip-joint pliers, put in.



HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT		
<p style="text-align: center;">NOTE</p> <p>Before adjusting handbrake linkage, it is necessary to adjust both service brakes (page 4-77).</p> <p>Handbrake lever must be in released position.</p>		
37. Handbrake lever (1)	Adjusting knob (2)	a. Turn counterclockwise until pin (3) reaches top of slot (4). b. Move handbrake lever to applied position.
38. Lever (5) to clevis (6)	Pin (7)	Take out.
39. Lever (5)	Clevis (6)	Rotate in direction required to allow pivot holes (8 and 9) to line up.
40. Lever (5) to clevis (6)	Pin (7) and new cotter pin (10)	Using 6-inch slip-joint pliers, put in.

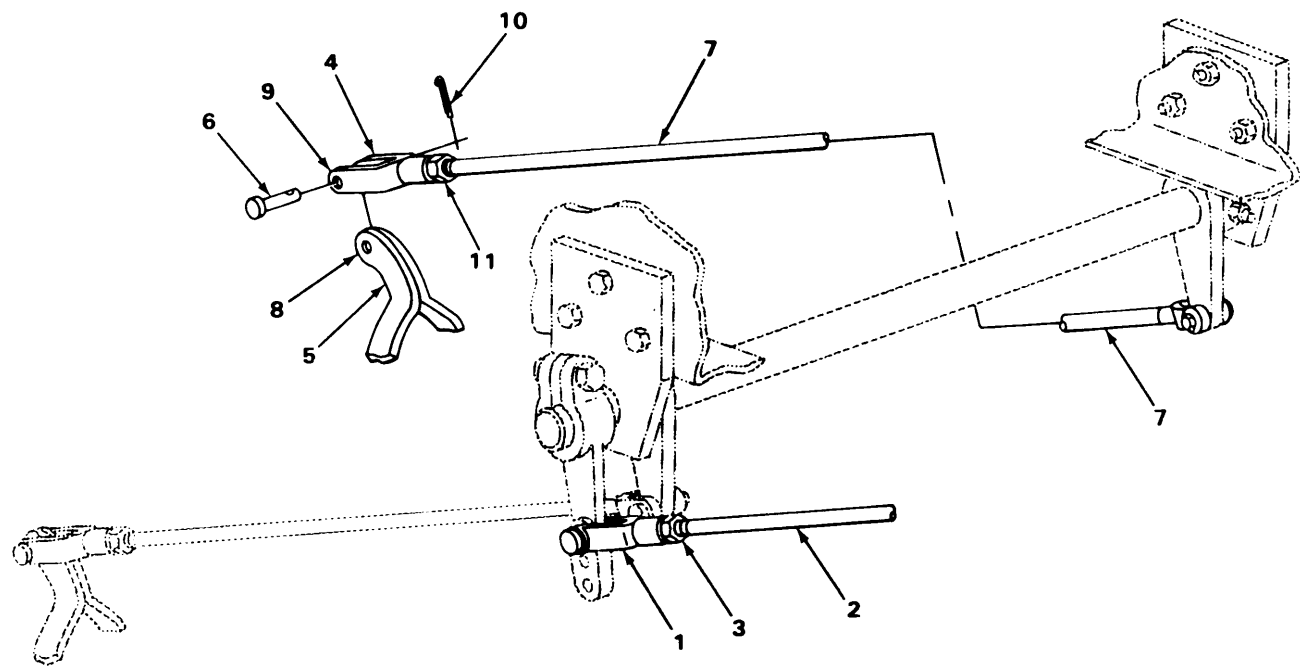


HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT – CONTINUED		
41. Clevis (1) to clevis rod (2)	Nut (3)	Using 3/4-inch open-end wrench, tighten.
42. Clevis (4) to lever (5)	Pin (6)	Take out.
43. Clevis rod (7)	Clevis (4)	Rotate in direction required to allow pivot holes (8 and 9) to line up.
44. Clevis (4) to lever (5)	Pin (6) and new cotter pin (10)	Using 6-inch slip-joint pliers, put in.
45. Clevis (4) to clevis rod (7)	Nut (11)	Using 3/4-inch open-end wrench, tighten.

NOTE

Repeat steps 42 thru 45 for opposite side.



HANDBRAKE LEVER AND LINKAGE, M119 - CONTINUED**NOTE**

FOLLOW-ON MAINTENANCE: Adjust handbrake (page 3-3).

TASK ENDS HERE**SERVICE BRAKE, M119**

This task covers:

- | | |
|------------------------------------|---------------------------------|
| a. Disassembly (page 4-77) | d. Major adjustment (page 4-80) |
| b. Inspection criteria (page 4-78) | e. Minor adjustment (page 4-84) |
| c. Assembly (page 4-78) | |
-

INITIAL SETUP**Tools**

Gage, feeler, 0.005-inch
 Pliers, brake-repair
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Ruler, 6-inch
 Screwdriver, flat-tip, 3/8-inch
 Wrench, open-end, 1/2-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 1 1/16-inch
 Wrench, socket-head, 1/8-inch

Materials/Parts

Cotter pins (as required)

Equipment Condition

Hub and brakedrum removed
 (page 4-144).

DISASSEMBLY**WARNING**

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

NOTE

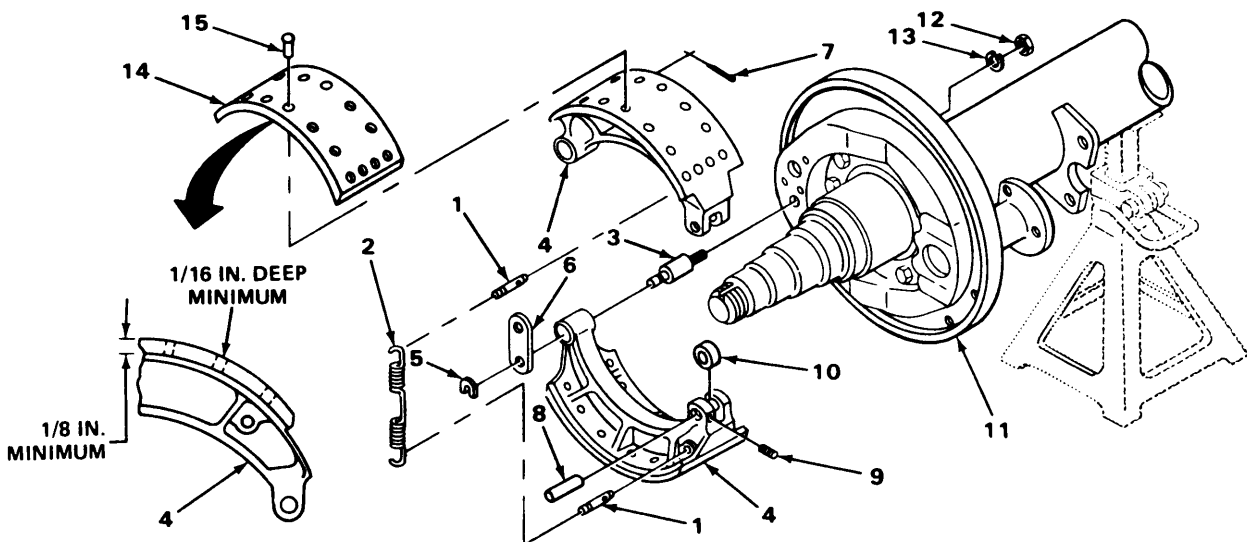
If service brake is being disassembled for the purpose of brakeshoe replacement, only steps 1 thru 3 of disassembly procedure apply.

SERVICE BRAKE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY – CONTINUED		
1. Two pins (1)	Spring (2)	Using brake-repair pliers, take off.
2. Two shoulder pins (3) to two brakeshoes (4)	Two slotted washers (5) and brake link (6)	Using 3/8-inch flat-tip screwdriver, take off.
3. Two shoulder pins (3)	Two brakeshoes (4)	Take off.
4. Two brakeshoes (4)	Two pins (1) and two cotter pins (7)	Using diagonal-cutting pliers, take off. Discard cotter pins.
5. Two straight shafts (8) to two brakeshoes (4)	Two setscrews (9)	Using 1/8-inch socket-head wrench, take out.
6. Two brakeshoes (4)	Two straight shafts (8) and two sleeve bearings (10)	Take off.
7. Backing plate (11) to two shoulder pins (3)	Two nuts (12) and two lockwashers (13)	Using 1 1/16-inch open-end wrench, take off.
8. Backing plate (11)	Two shoulder pins (3)	Take off.
INSPECTION CRITERIA		
9. Two brakeshoes (4)	Lining (14) and rivets (15)	a. Inspect brakeshoes for cracks. b. Inspect lining for cracks or looseness to brakeshoes. c. Using 6-inch ruler, check that linings have a minimum thickness of 1/8 inch (3.2 mm). d. Using 6-inch ruler, check that rivets have a minimum depth of 1/16 inch (1.8 mm) below surface of linings.
ASSEMBLY		
10. Backing plate (11)	Two shoulder pins (3)	Place in position.

SERVICE BRAKE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
11. Backing plate (11) to two shoulder pins (3)	Two nuts (12) and two lockwashers (13)	Using 1 1/16-inch open-end wrench, screw in and tighten.
12. Two brakeshoes (4)	Two straight shafts (8) and two sleeve bearings (10)	Put on.
13. Two straight shafts (8) to two brakeshoes (4)	Two setscrews (9)	Using 1/8-inch socket-head wrench, screw in and tighten.
14. Two brakeshoes (4)	Two pins (1) and two new cotter pins (7)	Using 6-inch slip-joint pliers, put in.



SERVICE BRAKE, M119 - CONTINUED

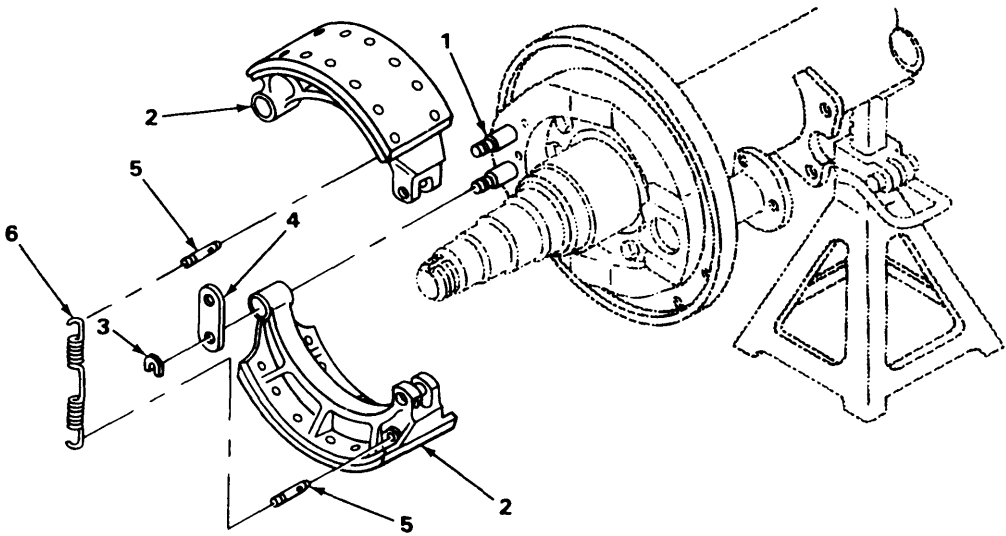
LOCATION	ITEM	ACTION	REMARKS
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ASSEMBLY – CONTINUED

NOTE

If service brake was disassembled for the purpose of brakeshoe replacement, only steps 15 thru 17 of assembly procedure apply.

- | | | |
|---|--|--|
| 15. Two shoulder pins (1) | Two brakeshoes (2) | Place in position. |
| 16. Two shoulder pins (1) to two brakeshoes (2) | Two slotted washers (3) and brake link (4) | a. Place in position.
b. Using 6-inch slip-joint pliers, squeeze ends of slotted washer to tighten. |
| 17. Two pins (5) | Spring (6) | Using brake-repair pliers, put on. |



MAJOR ADJUSTMENT

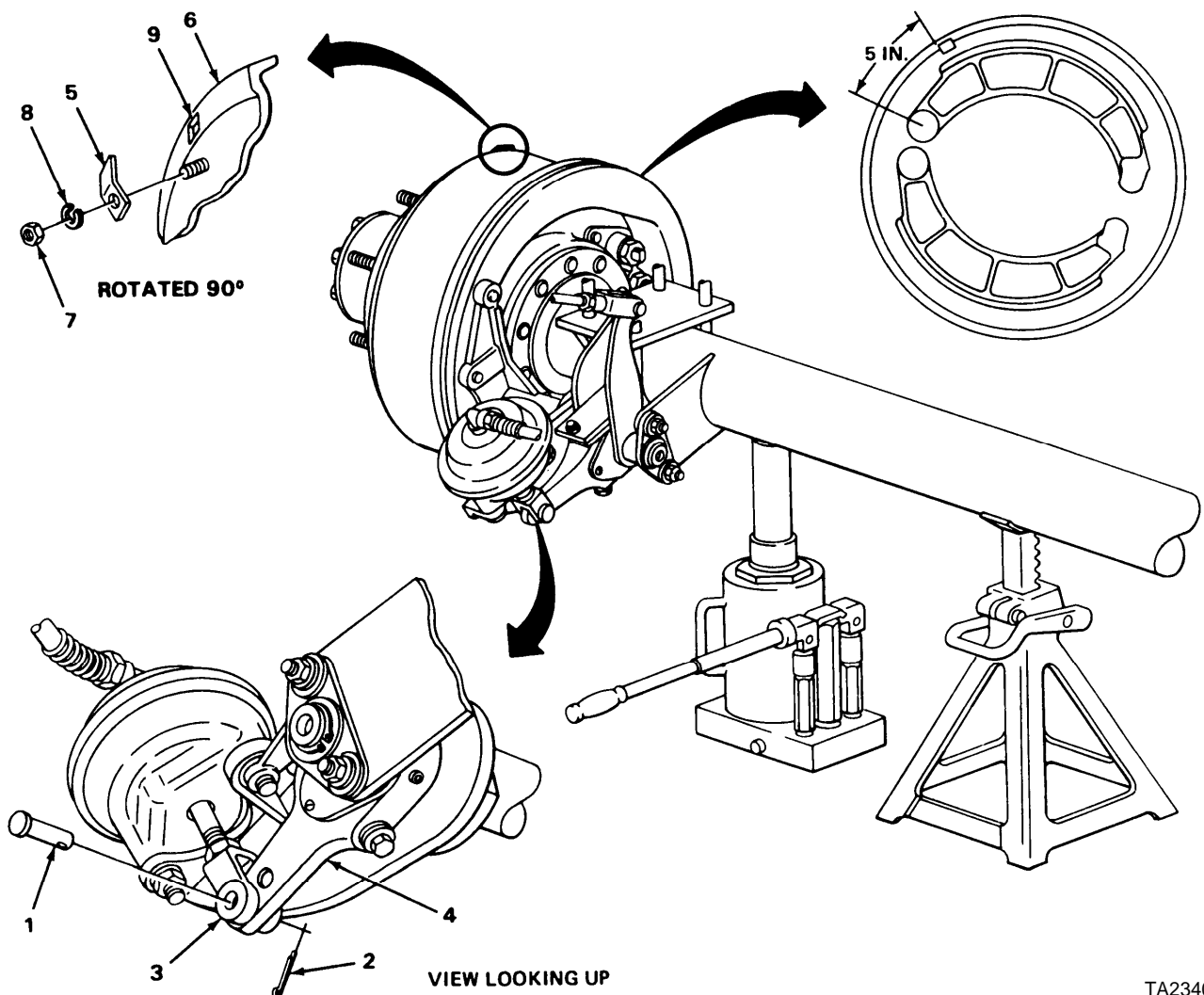
Install hub and brakedrum (page 4-144).

NOTE

When new brakeshoes are installed, each brakeshoe must be adjusted to center brake-shoes in relation to brakedrum. This is termed a major adjustment. To compensate for normal brake wear, see Minor Adjustment (page 4-84).

SERVICE BRAKE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
18. Pin (1)	Cotter pin (2)	Using diagonal-cutting pliers, take out. Discard cotter pin.
19. Clevis (3) to slack adjuster (4)	Pin (1)	Take out.
20. Cover (5) to brakedrum (6)	Nut (7) and lockwasher (8)	Using 5/8-inch open-end wrench, unscrew and take off.
21. Brakedrum (6)	Cover (5)	Take off.
22.	Inspection hole (9)	Rotate to position 1 1/2 inches from anchor pin of top shoe.



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SERVICE BRAKE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
MAJOR ADJUSTMENT – CONTINUED		
23. Backing plate (1) to shoulder pin (2)	Nut (3)	Using 1/2- and 1 1/16-inch open-end wrenches, loosen while holding shoulder pin.
24. Brakedrum (4)	Inspection hole (5)	Insert 0.005-inch feeler gage.
25. Backing plate (1)	Shoulder pin (2)	Using 1/2-inch open-end wrench, turn until a slight drag on 0.005-inch feeler gage is felt.
26. Backing plate (1) to shoulder pin (2)	Nut (3)	Using 1/2- and 1 1/16-inch open-end wrenches, tighten while holding shoulder pin.

NOTE

Repeat steps 22 thru 26 for bottom shoe.

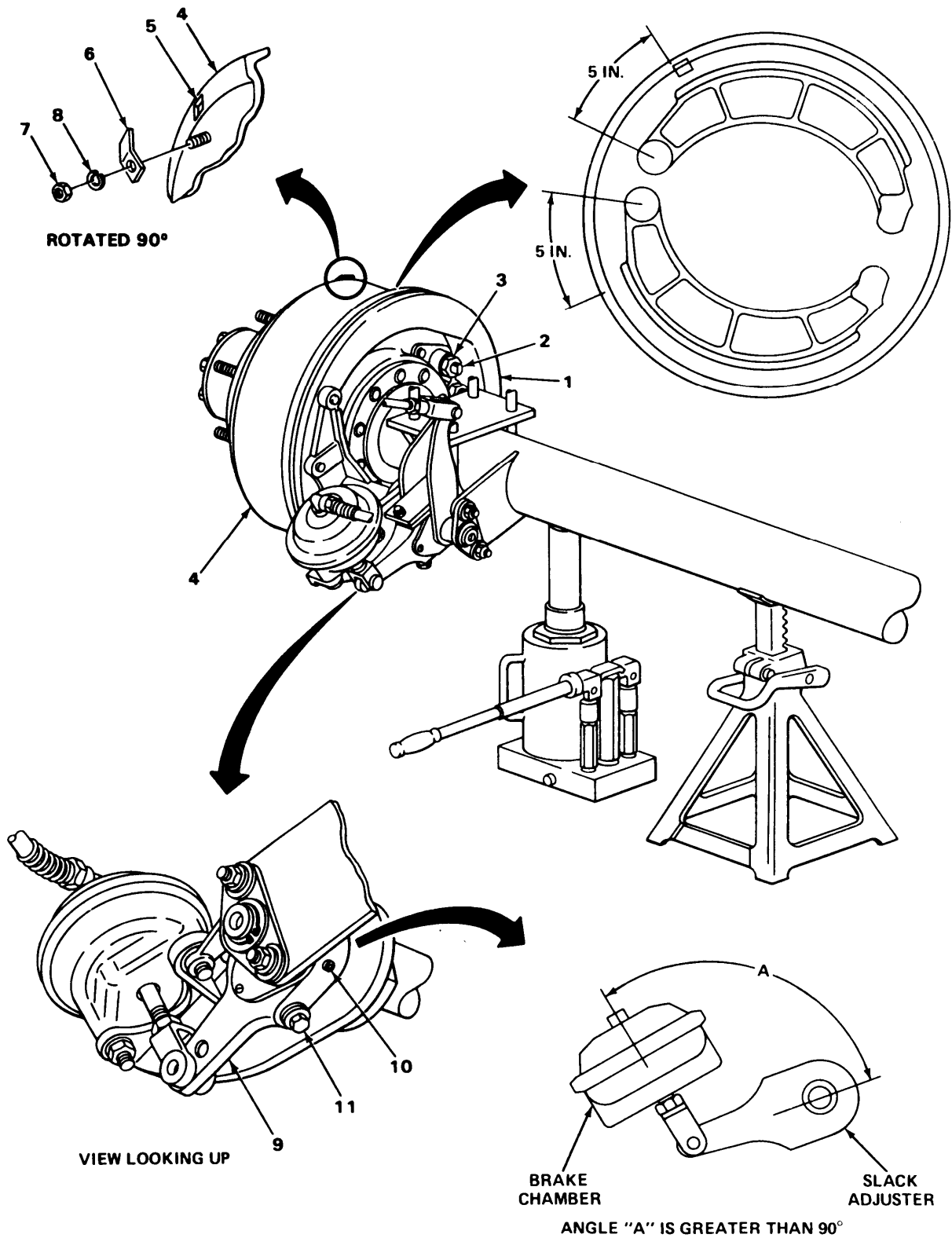
27. Brakedrum (4)	Cover (6)	Place in position.
28. Cover (6) to brakedrum (4)	Nut (7) and lockwasher (8)	Using 5/8-inch open-end wrench, screw on and tighten.

NOTE

The purpose of steps 29 thru 31 is to obtain correct initial relationship of slack adjuster to brake chamber. When correctly adjusted, slack adjuster and brake chamber rod should make an angle of slightly greater than 90 degrees.

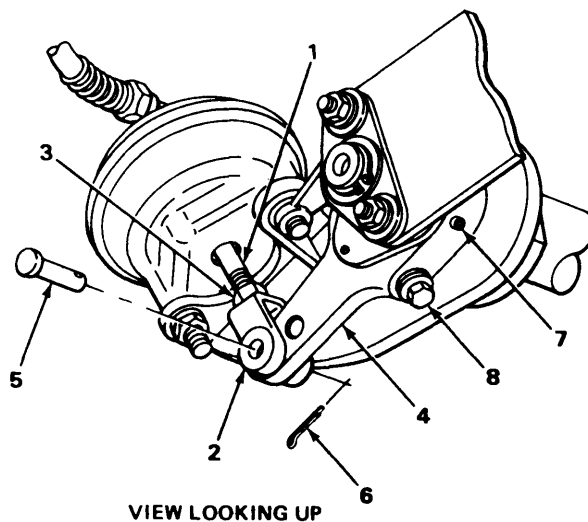
29. Slack adjuster (9)	Pipe plug (10)	Using 1/8-inch socket-head wrench, loosen.
30.	Adjusting nut (11)	Rotate in direction required to obtain proper position of slack adjuster.
31.	Pipe plug (10)	Using 1/8-inch socket-head wrench, tighten.

SERVICE BRAKE, M119 - CONTINUED



SERVICE BRAKE, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
MAJOR ADJUSTMENT - CONTINUED			
32. Brake chamber rod (1) to clevis (2)	Nut (3)	Using 3/4-inch open-end wrench, loosen.	
33. Brake chamber rod (1)	Clevis (2)	Rotate to lengthen or shorten to proper length.	Hole in clevis should just aline with hole in slack adjuster (4).
34. Clevis (2) to slack adjuster (4)	Pin (5) and new cotter pin (6)	Using 6-inch slip-joint pliers, put in.	
MINOR ADJUSTMENT			
35. Slack adjuster (4)	Plug (7)	Using 1/8-inch socket-head wrench, unscrew and take out.	
36.	Nut (8)	a. Turn clockwise until wheel and tire just lock. b. Turn counterclockwise until wheel and tire just rotate freely.	
37.	Plug (7)	Using 1/8-inch socket-head wrench, screw in and tighten.	



SERVICE BRAKE, M119 - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Install wheels and tires (page 3-6).
2. Adjust handbrakes (page 3-3).

TASK ENDS HERE**SERVICE BRAKE, M118A1 AND M119A1**

This task covers:

- | | |
|------------------------------------|---------------------------------------|
| a. Brakeshoe removal (page 4-85) | d. Spider assembly (page 4-88) |
| b. Inspection criteria (page 4-86) | e. Brakeshoe installation (page 4-88) |
| c. Spider disassembly (page 4-86) | f. Adjustment (page 4-90) |

INITIAL SETUP**Tools**

Adjusting tool, brakeshoe
 Gage, feeler, 0.010-inch
 Handle, ratchet, 3/8-inch drive
 Pliers, brake-repair
 Ruler, 6-inch
 Screwdriver, flat-tip, 3/8-inch
 Socket, 3/8-inch drive, 7/16-inch
 Socket, 3/8-inch drive, 9/16-inch
 Wrench, open-end, 9/16-inch

Equipment Condition

Hub and brakedrum removed
 (page 4-144).

LOCATION	ITEM	ACTION	REMARKS
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BRAKESHOE REMOVAL**WARNING**

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

SERVICE BRAKE, M118A1 AND M119A1 - CONTINUED

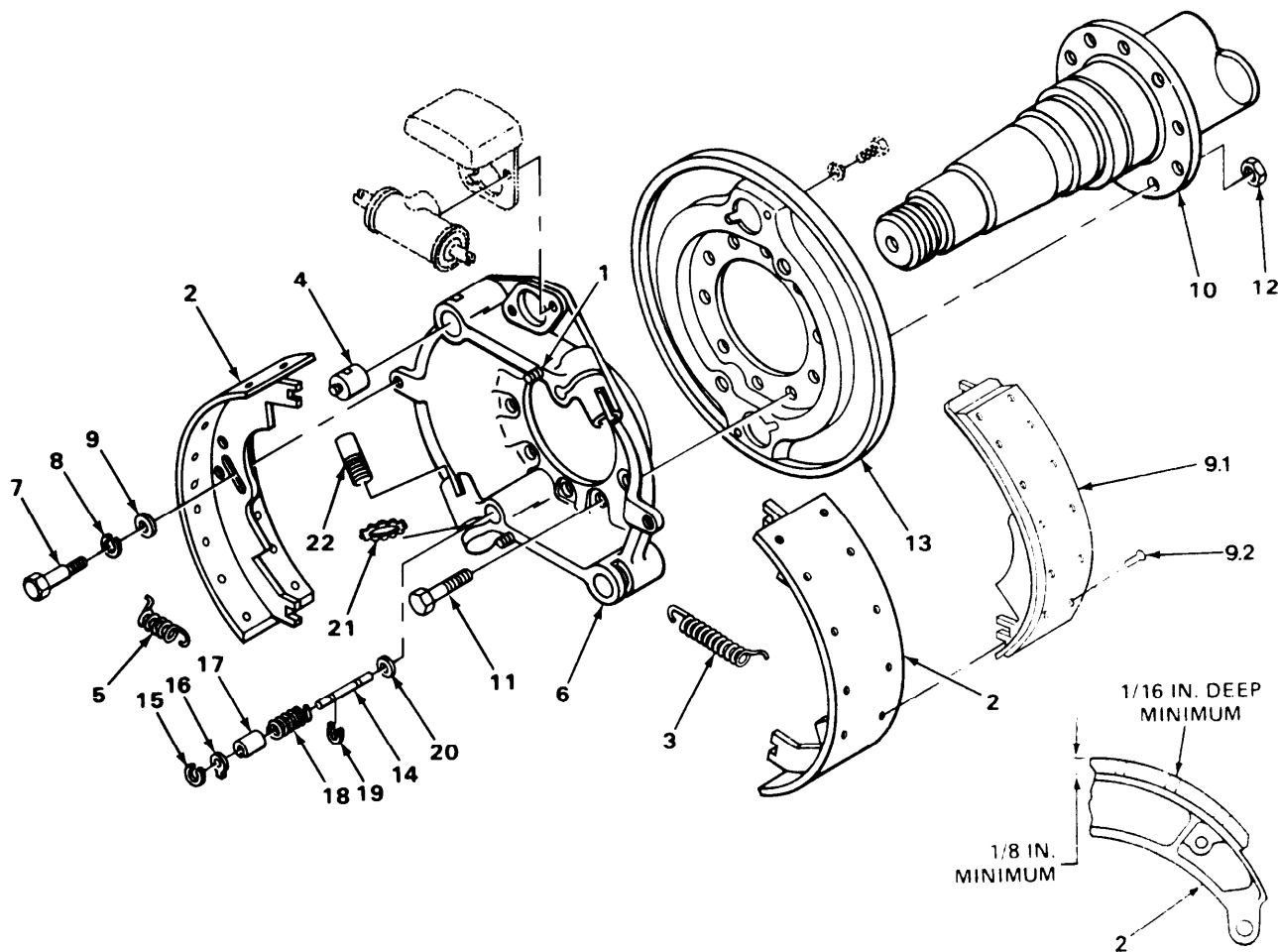
LOCATION	ITEM	ACTION REMARKS
BRAKESHOE REMOVAL – CONTINUED		
1. Two pins (1) to two brakeshoes (2)	Two springs (3)	Using brake-repair pliers, take off.
2. Two pivots (4) to two brakeshoes (2)	Two springs (5)	Using brake-repair pliers, take off.
3. Two brakeshoes (2) to spider (6)	Two screws (7), two lockwashers (8), and two flat washers (9)	Using 7/16-inch socket and ratchet handle with 3/8-inch drive, unscrew and take off.
4. Spider (6)	Two brakeshoes (2)	Take off.
INSPECTION CRITERIA		
4.1. Two brakeshoes (2)	Linings (9.1) and rivets (9.2)	a. Inspect brakeshoes for cracks. b. Inspect lining for cracks or looseness to brakeshoes. c. Using 6-inch ruler, check that linings have a minimum thickness of 1/8 inch (3.2 mm). d. Using 6-inch ruler, check that rivets have a minimum depth of 1/16 inch (1.8 mm) below surface of linings.
SPIDER DISASSEMBLY		
5. Spider (6)	Two pivots (4)	Take off.
NOTE		
Remove wheel cylinders (page 4-98).		
6. Backing plate (13) to axle (10)	10 screws (11) and 10 nuts (12)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, unscrew and take out.
7. Axle (10)	Spider (6) and backing plate (13)	Take off.
8. Stud (14) to spider (6)	Retaining ring (15)	Using 3/8-inch flat-tip screwdriver, take off.
9. Spider (6)	Stud (14), key washer (16), sleeve (17), gear (18), split washer (19), and packing (20)	Take off. Rotate gear (21) and adjusting screw (22) as parts are withdrawn.

SERVICE BRAKE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
10. Stud (14)	Key washer (16), sleeve (17), gear (18), split washer (19), and packing (20)	Take off.
11. Spider (6)	Adjusting screw (22)	Using 3/8-inch flat-tip screwdriver, unscrew and take off.
12.	Gear (21)	Take off.

NOTE

Repeat steps 8 thru 12 for opposite side of spider.



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SERVICE BRAKE, M118A1 AND M119A1 - CONTINUED

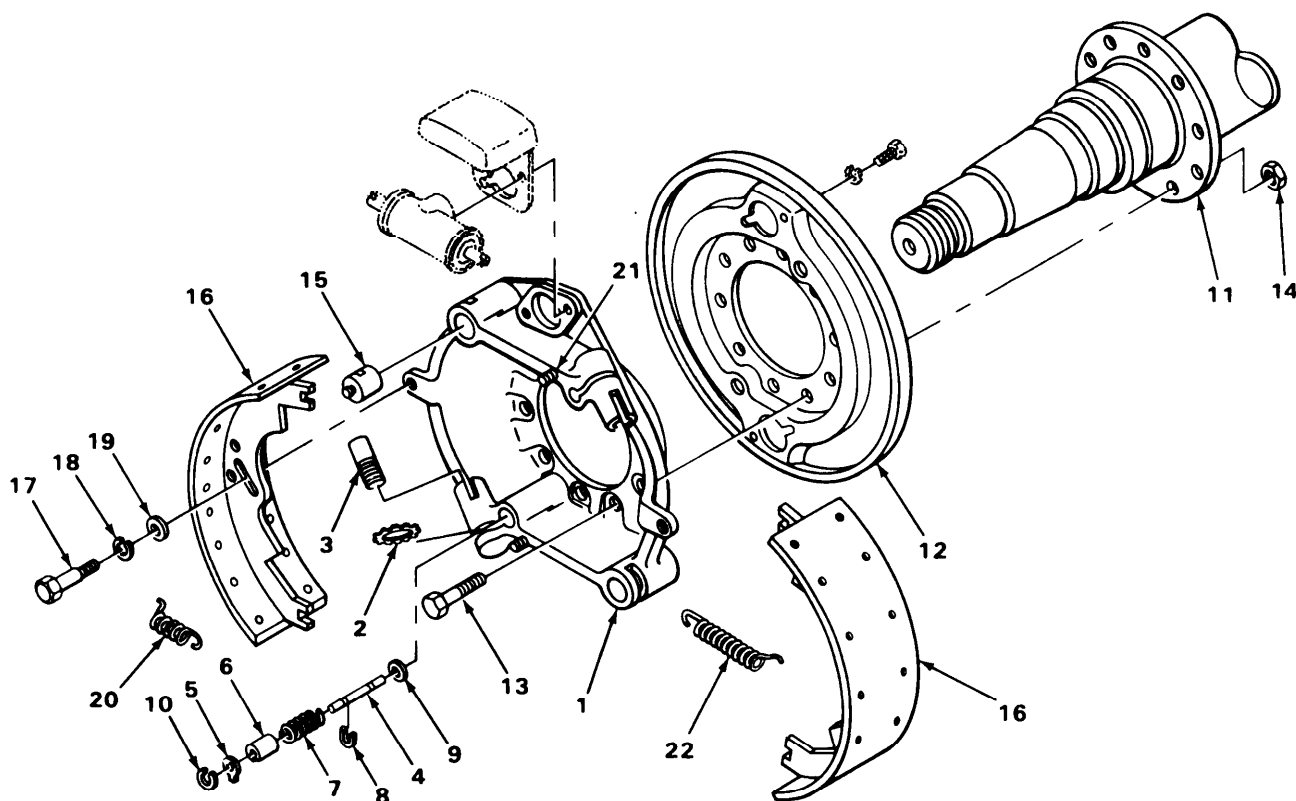
LOCATION	ITEM	ACTION REMARKS
SPIDER ASSEMBLY		
13. Spider (1)	Gear (2)	Place in position.
14.	Adjusting screw (3)	Using 3/8-inch flat-tip screwdriver, screw into spider. Adjusting screw is keyed to gear.
15. Stud (4)	Key washer (5), sleeve (6), gear (7), split washer (8), and packing (9)	Place in position.
16. Spider (1)	Stud (4), key washer (5), sleeve (6), gear (7), split washer (8), and packing (9)	Place in position.
17. Stud (4) to spider (1)	Retaining ring (10)	Using 3/8-inch flat-tip screwdriver, push on.
NOTE		
Repeat steps 13 thru 17 for opposite side of spider.		
18. Axle (11)	Spider (1) and backing plate (12)	Place in position.
19. Spider (1) to axle (11)	10 screws (13) and 10 nuts (14)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, screw in and tighten.
NOTE		
Install wheel cylinders (page 4-98).		
20. Spider (1)	Two pivots (15)	Place in position.
BRAKESHOE INSTALLATION		
21. Spider (1)	Two brakeshoes (16)	Place in position.

SERVICE BRAKE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
22. Two brakeshoes (16) to spider (1)	Two screws (17), two lockwashers (18), and two flat washers (19)	Using 7/16-inch socket and ratchet handle with 3/8-inch drive, screw in and tighten.
23. Two pivots (15) to two brakeshoes (16)	Two springs (20)	Using brake-repair pliers, put on.
24. Two pins (21) to two brakeshoes (16)	Two springs (22)	Using brake-repair pliers, put on.

NOTE

Install hub and brakedrum (page 4-144).

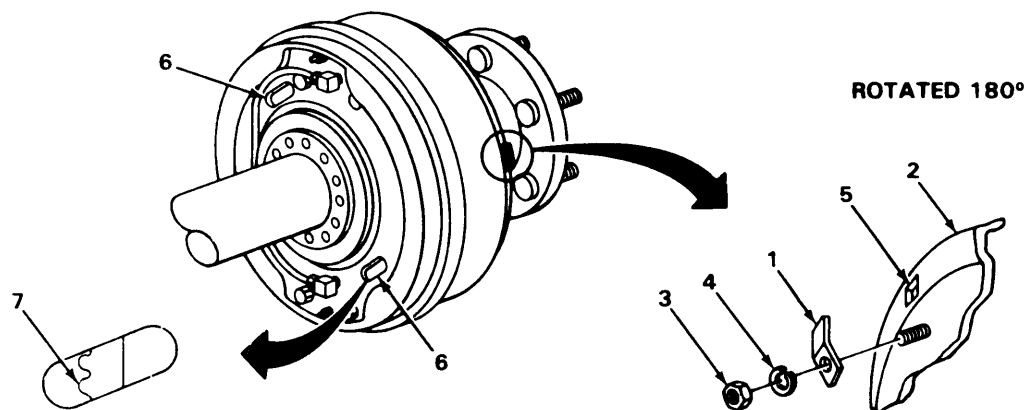


SERVICE BRAKE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT		
NOTE		
Steps 25 thru 28 apply to optional service brake. Steps 29 thru 32 apply to anchor-type service brake.		
25. Cover (1) to brakedrum (2)	Nut (3) and lockwasher (4)	Using 9/16-inch socket and ratchet handle with 3/8-inch drive, unscrew and take off.
26. Brakedrum (2)	Cover (1)	Take off.
27.	Inspection hole (5)	a. Aline with adjusting slot (6). b. Insert 0.010-inch feeler gage.
28. Slot (6)	Helical gear (7)	Using brakeshoe adjusting tool, turn in direction necessary to expand brakeshoes and obtain clearance of 0.010 between brakeshoe and brakedrum.

NOTE

Repeat steps 27 and 28 for opposite brakeshoe.

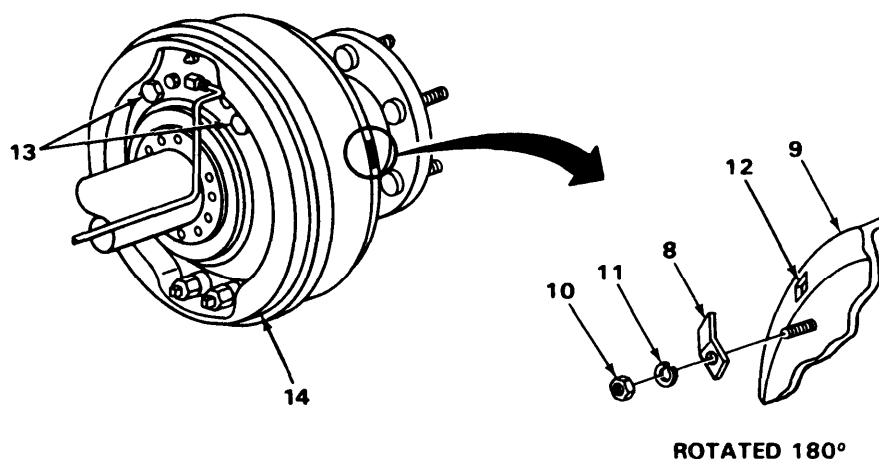


SERVICE BRAKE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
29. Cover (8) to brakedrum (9)	Nut (10) and lockwasher (11)	Using 9/16-inch socket and ratchet handle with 3/8-inch drive, unscrew and take off.
30. Brakedrum (9)	Cover (8)	Take off.
31.	Inspection hole (12)	a. Aline with adjusting stud (13). b. Insert 0.010-inch feeler gage.
32. Backing plate (14)	Adjusting stud (13)	Using 7/16-inch socket and ratchet handle with 3/8-inch drive, turn in direction necessary to obtain a slight drag on 0.010-inch feeler gage.

NOTE

Repeat steps 29 thru 32 for opposite brakeshoe.

**NOTE****FOLLOW-ON MAINTENANCE:**

1. Install wheel and tire (page 3-6).
2. Bleed brakes (page 4-99).

TASK ENDS HERE

SERVICE BRAKE, M118A1 (BEFORE SN197)

This task covers:

- | | |
|----------------------------|-------------------------|
| a. Disassembly (page 4-92) | c. Assembly (page 4-93) |
| b. Inspection (page 4-93) | |

INITIAL SETUP**Tools**

Handle, ratchet, 1/2-inch drive
 Pliers, brake-repair
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Screwdriver, flat-tip, 3/8-inch
 (two required)
 Socket, 1/2-inch drive, 1-inch

Materials/Parts

Cotter pins (as required)
 Slotted washers (as required)

Equipment Condition

Hub and brakedrum removed (page 4-144).

LOCATION	ITEM	ACTION	REMARKS
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DISASSEMBLY**WARNING**

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

- | | | |
|---|---|---|
| 1. Two pins (1) | Two slotted washers (2) | Using two 3/8-inch flat-tip screwdrivers, take off. |
| 2. | Spring (3) | Using brake-repair pliers, take off. |
| 3. | Two cotter pins (4) and two flat washers (5) | Using diagonal-cutting pliers, take out.
Discard cotter pins. |
| 4. Two shoulder pins (6) to backing plate (7) | Two nuts (8) and two lockwashers (9) | Using 1-inch socket and ratchet handle with 1/2-inch drive, unscrew and take off. |
| 5. Backing plate (7) | Two shoulder pins (6), four keys (10), anchor link (11), two bushing sleeves (12), and two slotted washers (13) | Take off. |

SERVICE BRAKE, M118A1 (BEFORE SN197) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
6.	Two brakeshoes (14)	Take off.
7. Two brakeshoes (14)	Two pins (1)	Take off.
8. Two pins (1)	Two cotter pins (15), two spring washers (16), and two flat washers (17)	Using diagonal-cutting pliers, take out cotter pins, and slide spring and flat washers off. Discard cotter pins.

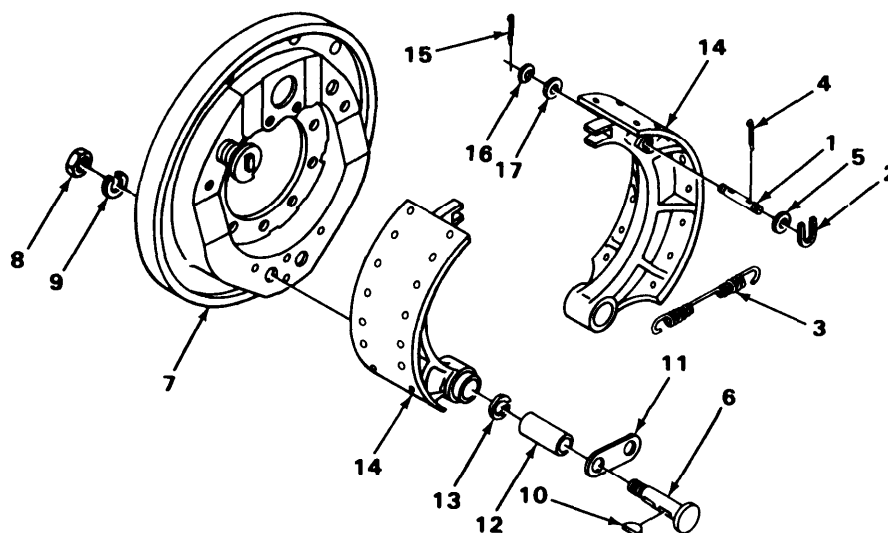
INSPECTION

NOTE

If brakeshoes are to be reused, inspect in accordance with instructions on page 5-10.

ASSEMBLY

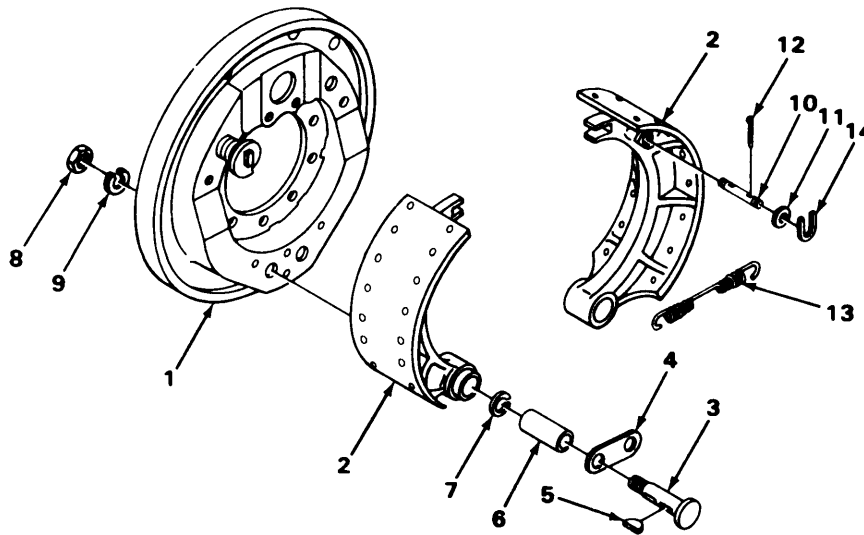
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|-------------------------|--|---|
| 9. Two pins (1) | Two new cotter pins (15), two spring washers (16), and two flat washers (17) | Place in position. |
| 10. | Two cotter pins (15) | Using 6-inch slip-joint pliers, put in. |
| 11. Two brakeshoes (14) | Two pins (1) | Place in position. |
| 12. Backing plate (7) | Two brakeshoes (14) | Place in position. |



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SERVICE BRAKE, M118A1 (BEFORE SN197) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY – CONTINUED		
13. Backing plate (1) to two brake- shoes (2)	Two shoulder pins (3), anchor link (4), four keys (5), two bushing sleeves (6), and two slotted washers (7)	Place in position.
14.	Two nuts (8) and two lockwashers (9)	Using 1-inch socket and ratchet handle with 1/2-inch drive, screw on and tighten.
15. Two pins (10) to two brakeshoes (2)	Two flat washers (11) and two new cotter pins (12)	Place in position.
16. Two pins (10)	Spring (13)	Using brake-repair pliers, put on.
17.	Two slotted washers (14)	Using 6-inch slip-joint pliers, squeeze.

**NOTE**

FOLLOW-ON MAINTENANCE: Install hub and brakedrum (page 4-144).

TASK ENDS HERE

SERVICE BRAKE, M118A1 (AFTER SN196) AND M119A1 (OPTIONAL)

This task covers:

- a. Disassembly (page 4-95)
- b. Inspection (page 4-96)
- c. Assembly (page 4-96)

INITIAL SETUP

Tools		Materials/Parts
Handle, ratchet, 1/2-inch drive		Cotter pins (as required)
Pliers, brake-repair		
Pliers, diagonal-cutting		Equipment Condition
Pliers, slip-joint, 6-inch		
Screwdriver, flat-tip, 3/8-inch		Hub and brakedrum removed (page 4-144).
(two required)		
Socket, 1/2-inch drive, 1-inch		

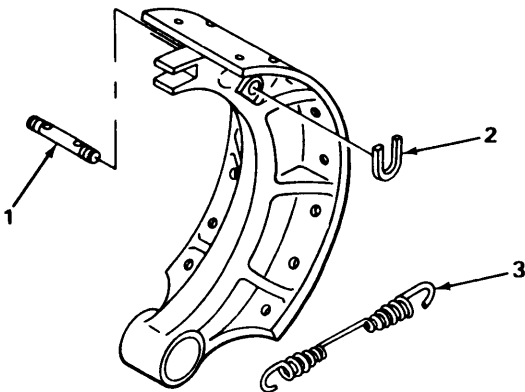
LOCATION		ITEM	ACTION	REMARKS
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DISASSEMBLY

WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

1. Two pins (1)
- Two clips (2)
- Using 3/8-inch flat-tip screwdriver, take off.
2.
- Spring (3)
- Using brake-repair pliers, take off.



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SERVICE BRAKE, M118A1 (AFTER SN196) AND M119A1 (OPTIONAL) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
3. Two pins (1)	Two cotter pins (2) and two flat washers (3)	Using diagonal-cutting pliers, take out. Discard cotter pins.
4. Two anchor pins (4)	Two clips (5)	Using two 3/8-inch flat-tip screwdrivers, open and take off.
5.	Anchor link (6)	Take off.
6. Backing plate (7)	Two brakeshoes (8)	Take off.
7. Brakeshoes (8)	Two pins (1), two cotter pins (9), two flat washers (10), and two spring washers (11)	Take off pin assemblies, slide flat and spring washers off pins.
8. Two pins (1)	Two cotter pins (9)	Using diagonal-cutting pliers, take out. Discard cotter pins.
9. Backing plate (7)	Two nuts (12) and two lockwashers (13)	Using 1-inch socket and ratchet handle with 1/2-inch drive, unscrew and take off.
10.	Two anchor pins (4)	Take off.

INSPECTION

NOTE

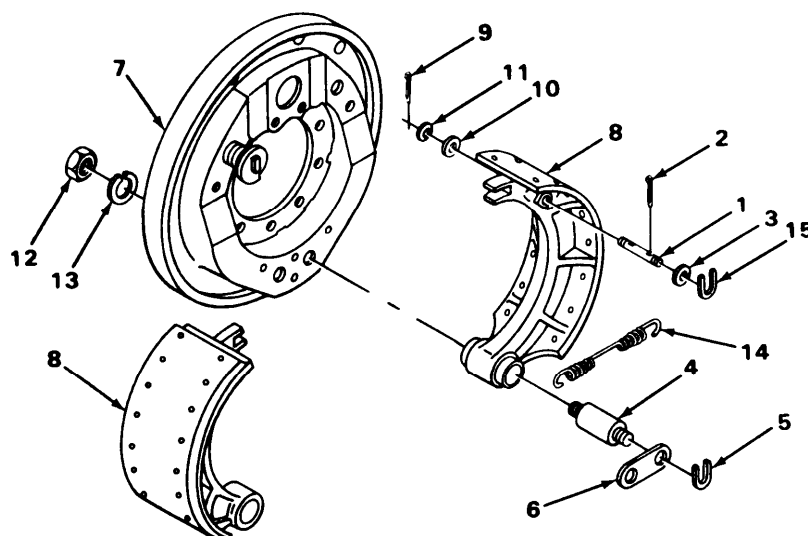
If brakeshoes are to be reused, inspect in accordance with instructions on page 5-10.

ASSEMBLY

11. Backing plate (7)	Two anchor pins (4)	Place in position.
12. Two anchor pins (4) to backing plate (7)	Two nuts (12) and two lockwashers (13)	Using 1-inch socket and ratchet handle with 1/2-inch drive, screw on and tighten.
13. Two pins (1)	Two spring washers (11), two flat washers (10), and two new cotter pins (9)	Place in position.
14.	Two cotter pins (9)	Using 6-inch slip-joint pliers, put in.

SERVICE BRAKE, M118A1 (AFER SN196) AND M119A1 (OPTIONAL) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
15. Brakeshoes (8)	Two pins (1)	Place in position.
16. Brakeshoes (8)	Two flat washers (3) and two new cotter pins (2)	Place in position.
17.	Two cotter pins (2)	Using 6-inch slip-joint pliers, put in.
18. Backing plate (7)	Two brakeshoes (8)	Place in position.
19. Anchor pins (4)	Anchor link (6) and two clips (5)	Place in position.
20.	Two clips (5)	Using 6-inch slip-joint pliers, squeeze. Install new cotter pins (2) as required.
21. Two pins (1)	Spring (14)	Using brake-repair pliers, put on.
22.	Two clips (15)	Using 6-inch slip-joint pliers, squeeze.



NOTE

FOLLOW-ON MAINTENANCE: Install hub and brakedrum (page 4-144).

TASK ENDS HERE

HYDRAULIC WHEEL CYLINDER, M118A1 AND M119A1

This task covers:

- a. Removal (page 4-98)
- b. Installation (page 4-98)

INITIAL SETUP

Tools	Materials/Parts
Wrench, open-end, 7/16-inch	Washers (two required)
Wrench, open-end, 1/2-inch	
Wrench, open-end, 1 1/16-inch	Equipment Condition
	Brakeshoes removed (page 4-85).

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

NOTE

This procedure is typical for all wheel cylinders.

REMOVAL

1. T-fitting (1) to wheel cylinder (2)	Fluid passage bolt (3) and two washers (4)	Using 1 1/16-inch open-end wrench, unscrew and take off. Discard washers.
2. Wheel cylinder (2)	Bleeder valve (5)	Using 7/16-inch open-end wrench, unscrew and take off.
3. Backing plate (6) to wheel cylinder (2)	Two capscrews (7) and two lock-washers (8)	Using 1/2-inch open-end wrench, unscrew and take out.
4. Backing plate (6)	Wheel cylinder (2) and heat shield (9)	Take off.

INSTALLATION

5. Backing plate (6)	Wheel cylinder (2) and heat shield (9)	Place in position.
6. Backing plate (6) to wheel cylinder (2)	Two capscrews (7) and two lock-washers (8)	Using 1/2-inch open-end wrench, screw in and tighten.
7. Wheel cylinder (2)	Bleeder valve (5)	Using 7/16-inch open-end wrench, screw in and tighten.

HYDRAULIC WHEEL CYLINDER, M118A1 AND M119A1 - CONTINUED

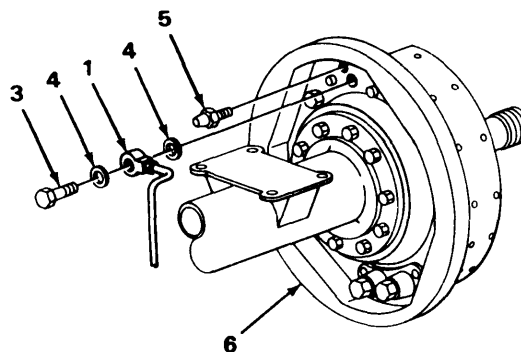
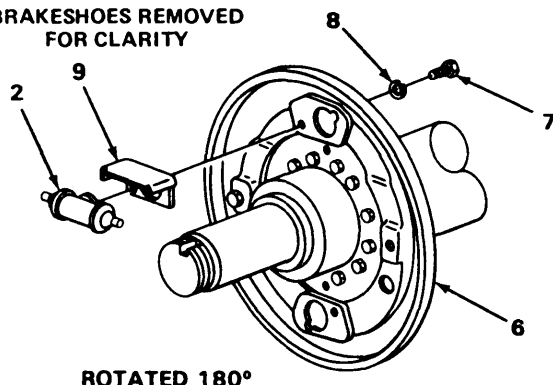
LOCATION	ITEM	ACTION	REMARKS
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8. T-fitting (1) to wheel cylinder (2)

Fluid passage bolt (3) and two new washers (4)

Using 1 1/16-inch open-end wrench, screw in and tighten.

BRAKESHOOES REMOVED FOR CLARITY

**NOTE**

FOLLOW-ON MAINTENANCE:

1. Install brakeshoes (page 4-65).
2. Bleed brakes (page 4-99).

TASK ENDS HERE

HYDRAULIC SYSTEM BLEEDING

This task covers:

Manual bleeding (page 4-100)

INITIAL SETUP**Tools**

Wrench, open-end, 7/16-inch

Materials/Parts

Brake fluid (item 1, appendix E)
Container (item 2, appendix E)
Plastic tubing (item 8, appendix E)

Personnel Required

Two

References

Brake Fluid, Silicone (BFS) Conversion Procedures for Tank-Automotive Equipment (TB 43-0002-87)

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HYDRAULIC SYSTEM BLEEDING - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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MANUAL BLEEDING

NOTE

Master cylinder or reservoir must be properly serviced prior to beginning this procedure. See Lubrication Chart (page 4-2).

Check fluid level in master cylinder or reservoir frequently during manual bleeding procedures and replenish as required. Failure to keep reservoir filled will allow air to enter hydraulic system.

Procedures given below pertain to all models.

Always bleed wheel cylinder furthest from master cylinder.

Always bleed lower cylinder first on a dual wheel cylinder brake.

Semitrailer must be connected to towing vehicle to manually bleed brakes.

The following procedures are typical for both left and right wheels.

- | | | |
|-----------------------|---------------|--|
| 1. Wheel cylinder (1) | Tube (2) | Push onto bleeder valve (3).
Tube should be long enough to reach ground when connected. |
| 2. | Container (4) | a. Fill halfway with brake fluid.
b. Place free end of tube into container.
Keep end of tube submerged in brake fluid throughout procedure. |

NOTE

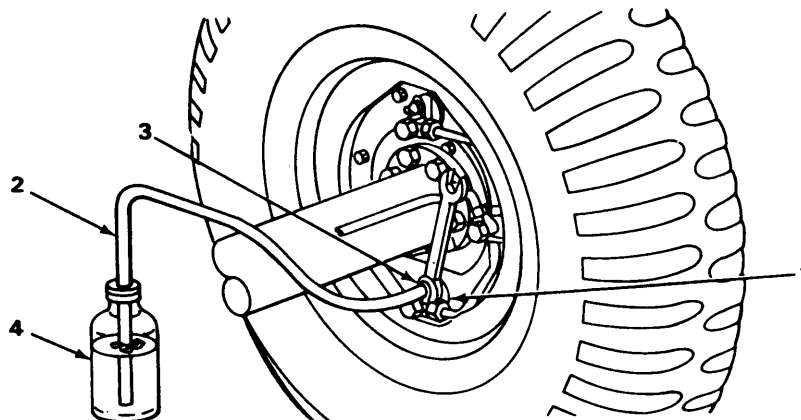
Assistant should pump brake pedal in towing vehicle slowly when bleeding brakes in step 3.

HYDRAULIC SYSTEM BLEEDING - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3. Wheel cylinder (1)	Bleeder valve (3)	a. Using 7/16-inch open-end wrench, open three-quarters of a turn. b. While assistant applies brake pedal, allow fluid to flow into container until fluid contains no air bubbles.
	Bleeder valve (3)	Using 7/16-inch open-end wrench, close.
	Tube (2)	Take off.

NOTE

Repeat steps 1 thru 5 for each wheel cylinder.

**NOTE**

FOLLOW-ON MAINTENANCE: Service master cylinder or reservoir. See Lubrication Chart (page 4-2).

TASK ENDS HERE

MASTER CYLINDER, HYDRAULIC, M118A1 AND M119A1

This task covers:

- a. Removal (page 4-102)
- b. Installation (page 4-102)

INITIAL SETUP**Tools**

Extension, 3/8-inch drive, 6-inch
Handle, ratchet, 3/8-inch drive
Socket, 3/8-inch drive, 9/16-inch
Wrench, open-end, 7/16-inch
Wrench, open-end, 5/8-inch

Materials/Parts

Brake fluid (item 1, appendix E)

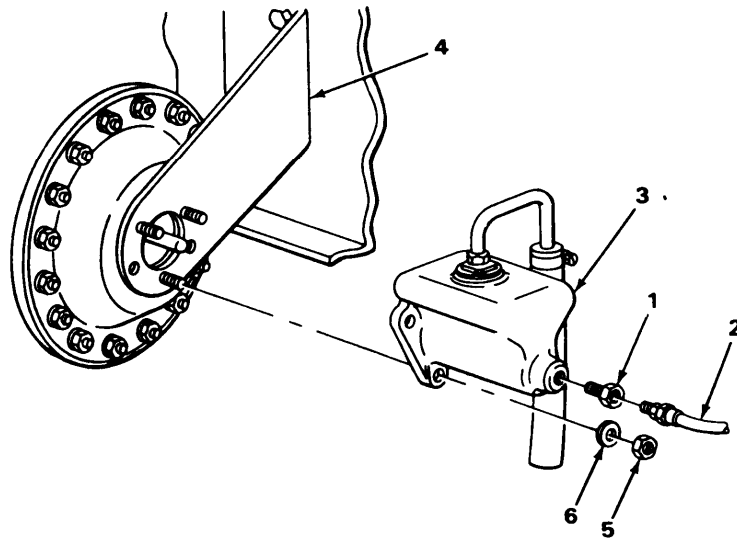
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

- | | | |
|--|--|---|
| 1. Fitting (1) | Brake hose (2) | Using 5/8-inch open-end wrench, hold fitting and, using 7/16-inch open-end wrench, unscrew and take off brake hose. |
| 2. Master cylinder (3) | Fitting (1) | Using 5/8-inch open-end wrench, unscrew and take off. |
| 3. Master cylinder (3)
to bracket (4) | Three nuts (5)
and three lock-
washers (6) | Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 6-inch extension, unscrew and take off. |
| 4. Bracket (4) | Master cylinder (3) | Take off. |

INSTALLATION

- | | | |
|--|--|---|
| 5. Bracket (4) | Master cylinder (3) | Place in position. |
| 6. Master cylinder (3)
to bracket (4) | Three nuts (5)
and three lock-
washers (6) | Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 6-inch extension, screw on and tighten. |
| 7. Master cylinder (3) | Fitting (1) | Using 5/8-inch open-end wrench, screw on and tighten. |
| 8. Fitting (1) | Brake hose (2) | Using 5/8-inch open-end wrench, hold fitting and, using 7/16-inch open-end wrench, screw on and tighten brake hose. |

MASTER CYLINDER, HYDRAULIC, M118A1 AND M119A1 - CONTINUED**NOTE**

FOLLOW-ON MAINTENANCE: Bleed brakes (page 4-99).

TASK ENDS HERE

HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1

This task covers:

- | | |
|--|---|
| a. Brake line removal, master cylinder-to-flex hose (page 4-104) | e. Backing plate brake line installation (page 4-106) |
| b. Flex hose removal (page 4-104) | f. Axle brake line installation (page 4-106) |
| c. Axle brake line removal (page 4-104) | g. Flex hose installation (page 4-108) |
| d. Backing plate brake line removal (page 4-106) | h. Brake line installation, master cylinder-to-flex hose (page 4-108) |

INITIAL SETUP**Tools**

Pliers, slip-joint, 6-inch
 Wrench, box-end, 3/4-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 1 1/16-inch
 Wrench, open-end, 15/16-inch

Materials/Parts

Washer

Equipment Condition

Hub and brakedrum removed (page 4-144).

HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
BRAKE LINE REMOVAL, MASTER CYLINDER-TO-FLEX HOSE		
1. Brake line (1) to master cylinder (2)	Fitting (3)	Using 7/16- and 5/8-inch open-end wrenches, unscrew and take out.
2. Brake line (1) to flex hose (4)	Fitting (5)	Using 7/16- and 15/16-inch open-end wrenches, unscrew and take out.
3. Master cylinder (2) to flex hose (4)	Brake line (1)	Take off.
4. Master cylinder (2)	Fitting (6) and washer (7)	Using 5/8-inch open-end wrench, unscrew and take off. Discard washer.
FLEX HOSE REMOVAL		
5. Flex hose (4) to bracket (8)	Nut (9)	Using 5/8- and 15/16-inch open-end wrenches, unscrew and take off.
6. Bracket (8)	Flex hose (4)	Take off.
7. Flex hose (4)	Clip (10)	Using 6-inch slip-joint pliers, take off.
8. Flex hose (4) to T-fitting (11)	Fitting (12)	Using 5/8-inch open-end wrench, unscrew and take off.
9. T-fitting (11)	Flex hose (4)	Take off.
AXLE BRAKE LINE REMOVAL		
10. Brake line (13) to T-fitting (11)	Fitting (14)	Using 7/16-inch open-end wrench, unscrew.
11. Brake line (13) to connector (15)	Fitting (16) and washer (17)	Using 7/16-inch open-end wrench, unscrew.
12. T-fitting (11)	Brake line (13)	Take off.
NOTE		
Repeat steps 10 thru 12 for opposite axle brake line.		
13. T-fitting (11) to axle (17)	Nut (18)	Using 5/8-inch open-end wrench, unscrew and take off.

HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
14. Axle (17)	T-fitting (11)	Take off.

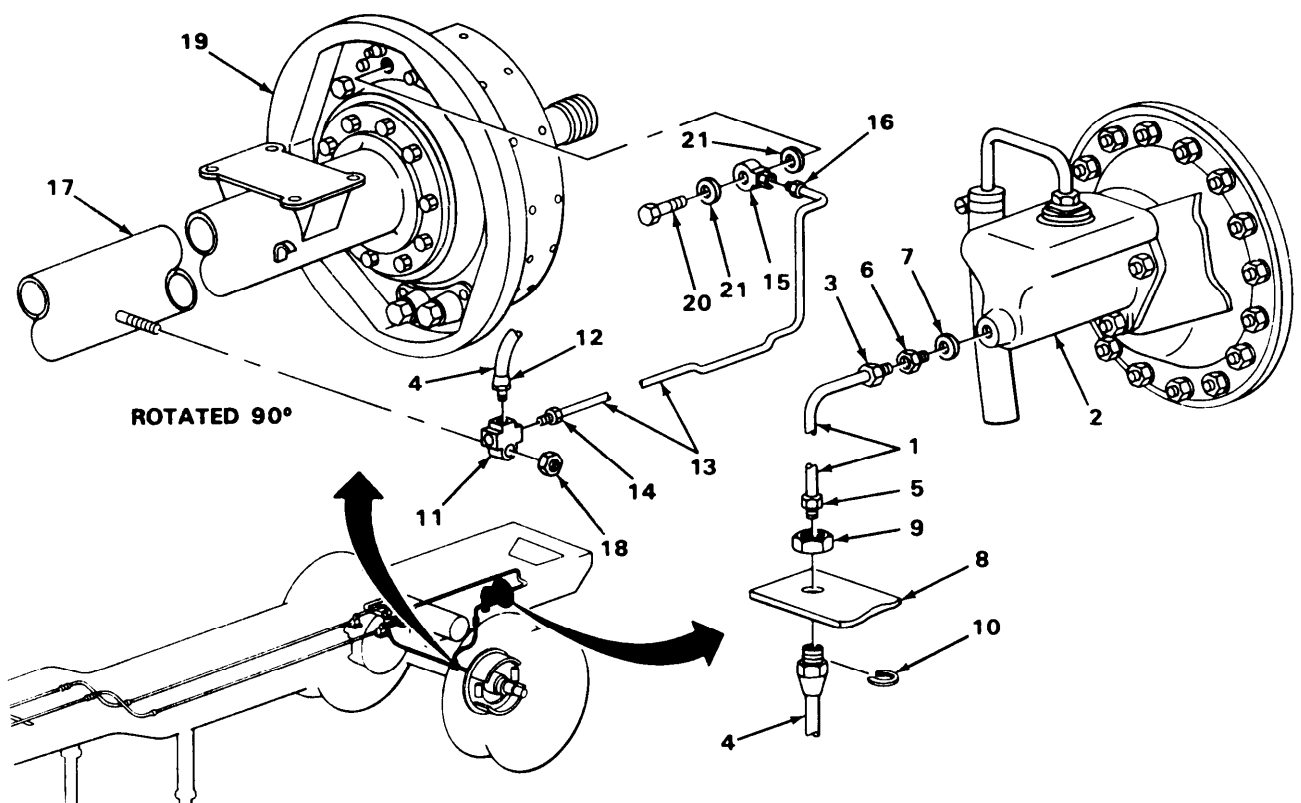
NOTE

Step 15 is for the M118A1 and M119A1 semitrailer with one wheel cylinder on each backing plate.

15. Connector (15) to backing plate (19)	Bolt (20), two washers (21), and connector (15)	Using 1 1/16-inch open-end wrench, unscrew and take off. Discard washers.
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NOTE

Repeat step 15 for opposite connector.



HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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BACKING PLATE BRAKE LINE REMOVAL

NOTE

Steps 16 thru 25 are for the M118A1 and M119A1 semitrailer with two wheel cylinders on each backing plate.

16. Fitting (1)	Bolt (2), two washers (3), and connector (4)	Using 3/4-inch box-end wrench, unscrew and take out. Discard washers.
17. Two brake lines (5)	Four nuts (6)	Using 7/16-inch open-end wrench, unscrew and take off.
18. Backing plate (7)	Two brake lines (5)	Take off.
19. Fitting (1) to backing plate (7)	Bolt (8)	Using 7/16-inch open-end wrench, unscrew and take out.
20. Backing plate (7)	Two bolts (9), four washers (10), and two connectors (11)	Using 3/4-inch box-end wrench, unscrew and take off. Discard washers.

BACKING PLATE BRAKE LINE INSTALLATION

21. Backing plate (7)	Two bolts (9), four new washers (10), and two connectors (11)	Using 3/4-inch box-end wrench, screw in and tighten.
22. Fitting (1) to backing plate (7)	Bolt (8)	Using 7/16-inch open-end wrench, screw in and tighten.
23. Backing plate (7)	Two brake lines (5)	Place in position.
24. Two brake lines (5)	Four nuts (6)	Using 7/16-inch open-end wrench, screw in and tighten.
25. Fitting (1)	Bolt (2), two new washers (3), and connector (4)	Using 3/4-inch box-end wrench, screw in and tighten.

AXLE BRAKE LINE INSTALLATION

NOTE

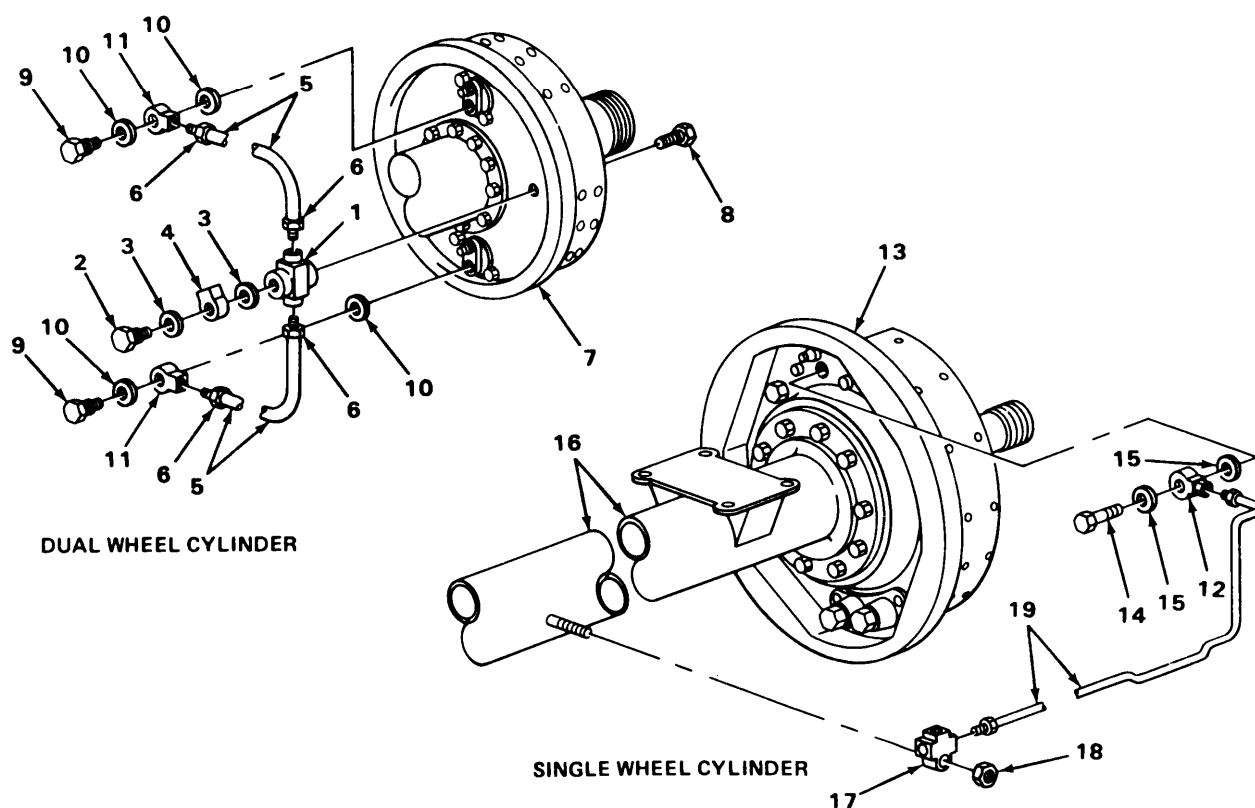
Step 26 is for the M118A1 and M119A1 semitrailer with one wheel cylinder on each backing plate.

HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
26. Connector (12) to backing plate (13)	Bolt (14), two new washers (15), and connector (12)	Using 1 1/16-inch open-end wrench, screw on and tighten.
NOTE		
Repeat step 26 for opposite connector.		
27. Axle (16)	T-fitting (17)	Place in position.
28. T-fitting (17) to axle (16)	Nut (18)	Using 5/8-inch open-end wrench, screw on and tighten.
29. Axle (16)	Brake line (19)	Place in position.

NOTE

Repeat step 29 for opposite axle brake line.



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HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1 - CONTINUED

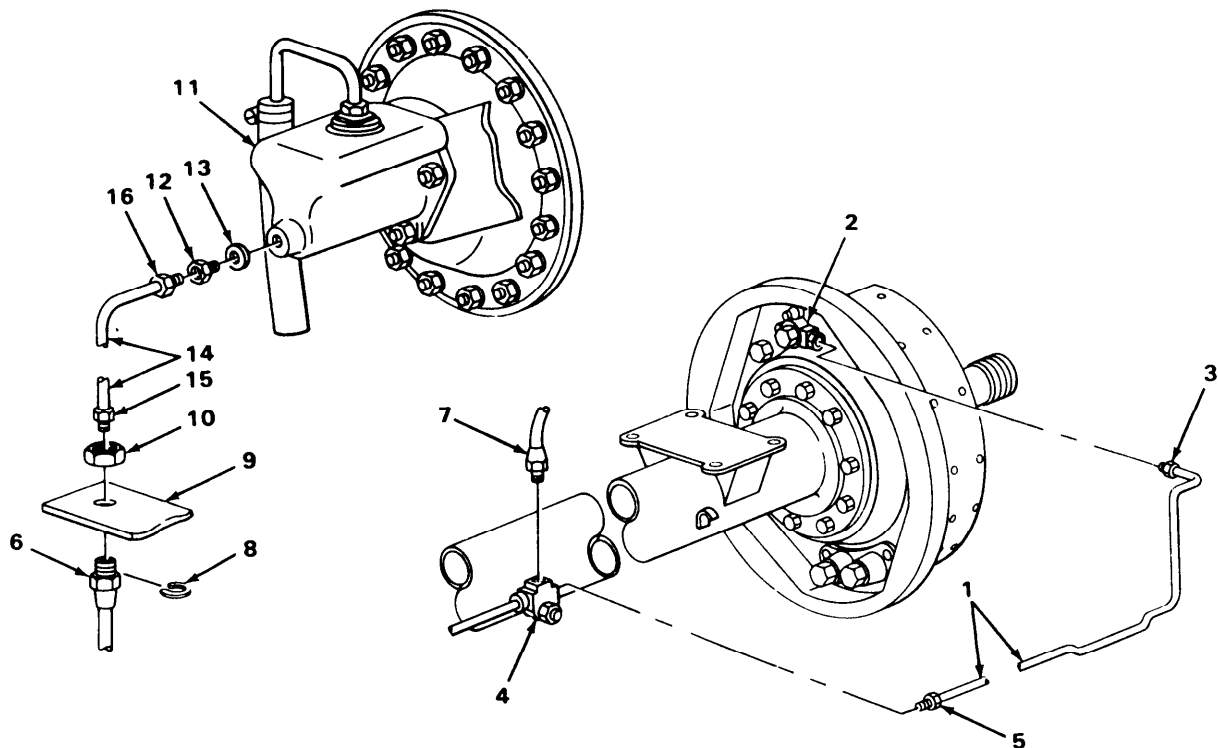
LOCATION	ITEM	ACTION REMARKS
AXLE BRAKE LINE INSTALLATION – CONTINUED		
30. Brake line (1) to connector (2)	Fitting (3)	Using 7/16-inch open-end wrench, screw in and tighten.
31. Brake line (1) to T-fitting (4)	Fitting (5)	Using 7/16-inch open-end wrench, screw in and tighten.
FLEX HOSE INSTALLATION		
32. T-fitting (4)	Flex hose (6)	Place in position.
33. Flex hose (6) to T-fitting (4)	Fitting (7)	Using 5/8-inch open-end wrench, screw in and tighten.
34. Flex hose (6)	Clip (8)	Place in position.
35. Bracket (9)	Flex hose (6)	Place in position.
38. Flex hose (6) to bracket (9)	Nut (10)	Using 5/8- and 15/16-inch open-end wrenches, screw on and tighten.
BRAKE LINE INSTALLATION, MASTER CYLINDER-TO-FLEX HOSE		
37. Master cylinder (11)	Fitting (12) and new washer (13)	Using 5/8-inch open-end wrench, screw in and tighten.
38. Master cylinder (11) to flex hose (6)	Brake line (14)	Place in position.

CAUTION

When performing steps 39 and 40, care must be taken not to twist, bend, or kink brake line.

HYDRAULIC LINES, HOSES, AND FITTINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
39. Brake line (14) to flex hose (6)	Fitting (15)	Using 7/16- and 15/16-inch open-end wrenches, screw in and tighten.
40. Brake line (14) to master cylinder (11)	Fitting (16)	Using 7/16- and 5/8-inch open-end wrenches, screw in and tighten.

**NOTE**

FOLLOW-ON MAINTENANCE:

1. Install hub and brakedrum (page 4-144).
2. Bleed brakes (page 4-99).

TASK ENDS HERE

SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119

This task covers:

- a. Removal (page 4-110)
- b. Installation (page 4-114)

INITIAL SETUP

Tools	Materials/Parts
Hammer, ball-peen, 12-ounce	Bearings (two required)
Handle, ratchet, 1/2-inch drive	Cotter pin
Pliers, brake-repair	Seals (two required)
Pliers, diagonal-cutting	
Pliers, external snapping	Equipment Condition
Pliers, slip-joint, 6-inch	
Punch, drift, brass	Air chamber removed (page 4-1 19).
Socket, 1/2-inch drive, 5/8-inch	Hub and brakedrum removed (page 4-144).
Wrench, open-end, 7/16-inch	
Wrench, open-end, 5/8-inch	

NOTE

For Minor Adjustment, see page 4-84.

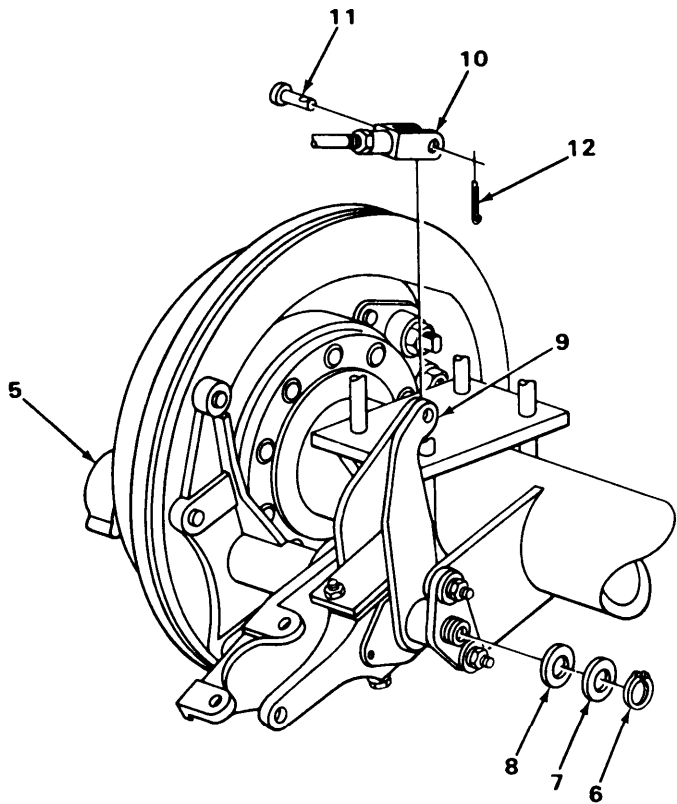
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

- | | | |
|--------------------------------------|----------------|--------------------------------------|
| 1. Brakeshoe (1) to
brakeshoe (2) | Spring (3) | Using brake-repair pliers, take off. |
| 2. Backing plate (4) | Brakeshoes (1) | Swing around to clear actuating |

SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3. Actuating camshaft (5)	Snapping (6)	Using external snapping pliers, take off.	
4.	Flat washer (7) and flat washer (8)	Take off.	
5. Lever (9) to clevis (10)	Pin (11) and cotter pin (12)	Using diagonal-cutting pliers, take out. Discard cotter pin.	



SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119- CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
<p style="text-align: center;">NOTE</p> <p>Remove actuating camshaft slowly to allow parts to fall free separately.</p> <p>Note amount of flat washers removed when performing steps 6 and 7.</p>		
6. Actuating camshaft (1)	Flat washers (2), spacer (3), slack adjuster (4), lever (5), and actuating camshaft bracket (6)	Pull out and remove all parts.
7.	Flat washer (7)	Take off.
8. Actuating camshaft bracket (6)	Actuating camshaft (1)	Slide out.
9. Adjusting bracket (8) to anchor bracket (9)	Two nuts (10), two lockwashers (11), and two flat washers (12)	Using 5/8-inch socket, ratchet handle with 1/2-inch drive, and 5/8-inch open-end wrench, unscrew and take out.
10. Anchor bracket (9)	Adjusting bracket (8)	Take off.

WARNING

Wear safety goggles when performing next step.

11.	Two ribbed shoulder bolts (13)	Using 12-ounce ball-peen hammer and brass drift, tap out.
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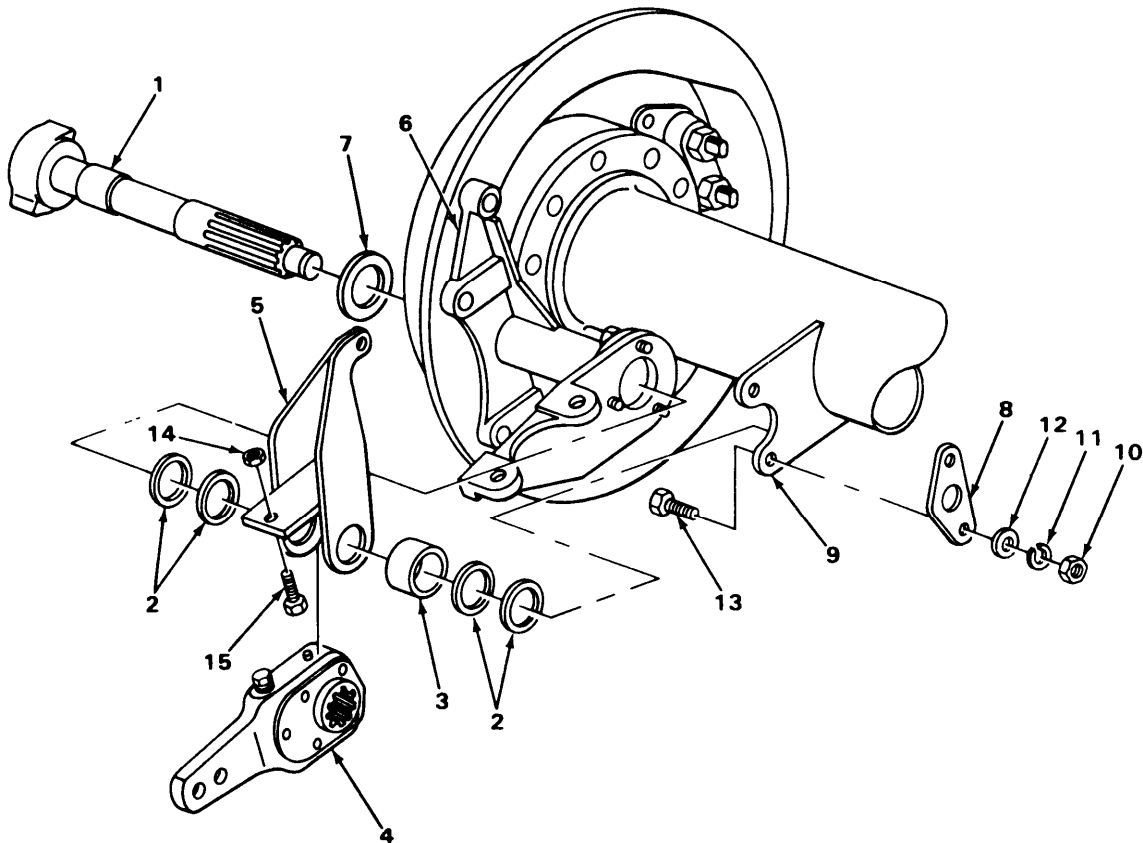
SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119- CONTINUED

LOCATION	ITEM	ACTION REMARKS
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12. Lever (5)

Nut (14) and
screw (15)

Using 5/8-inch socket, ratchet handle with
1/2-inch drive, and 5/8-inch open-end
wrench, unscrew and take out.



SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
13. Air chamber bracket (1) to actuating camshaft bracket (2)	Three screws (3) and three lock-washers (4)	Using 5/8-inch socket and ratchet handle with 1/2-inch drive, unscrew and take off.
14. Actuating camshaft bracket (2)	Air chamber bracket (1)	Take off.

NOTE

Omit steps 15 and 16 unless replacement of parts is necessary.

15.	Two seals (5)	Using 12-ounce ball-peen hammer and brass drift punch, tap out. Discard seals.
16.	Two bearings (6)	Using 12-ounce ball-peen hammer and brass drift punch, tap out. Discard bearings.
17.	Fitting (7)	Using 7/16-inch open-end wrench, take out.

INSTALLATION

18. Actuating camshaft bracket (2)	Fitting (7)	Using 7/16-inch open-end wrench, screw in and tighten.
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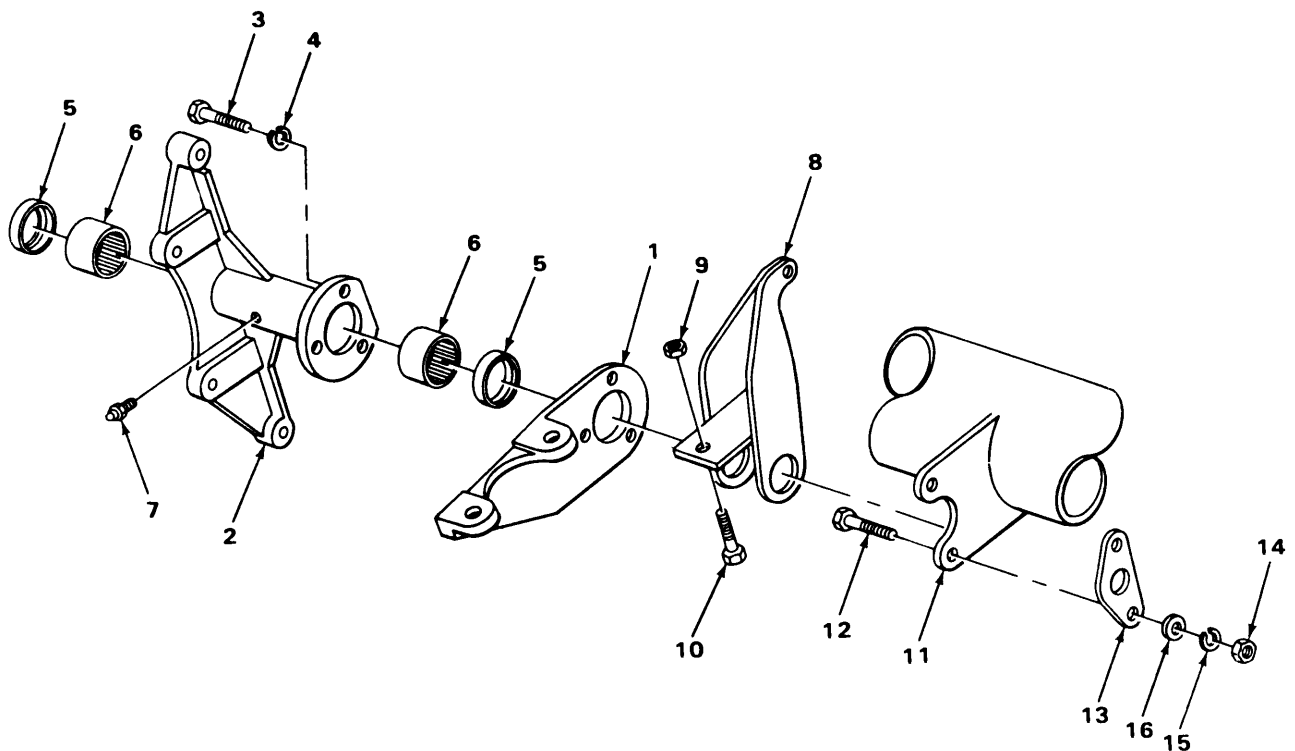
NOTE

If steps 15 and 16 were omitted, then steps 19 and 20 must be omitted.

19.	Two new bearings (6)	Using 12-ounce ball-peen hammer and brass drift punch, tap into position.
20.	Two new seals (3)	Using 12-ounce ball-peen hammer and brass drift punch, tap into position.
21.	Air chamber bracket (1)	Place in position.

SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119- CONTINUED

LOCATION	ITEM	ACTION REMARKS
22. Air chamber bracket (1) to actuating camshaft bracket (2)	Three screws (3) and three lockwashers (4)	Using 5/8-inch socket and ratchet handle with 1/2-inch drive, screw in and tighten.
23. Lever (8)	Nut (9) and screw (10)	Using 5/8-inch socket, ratchet handle with 1/2-inch drive, and 5/8-inch open-end wrench, screw on and tighten.
24. Anchor bracket (11)	Two ribbed shoulder bolts (12)	Using 12-ounce ball-peen hammer and brass drift punch, tap into position.
25.	Adjusting bracket (13)	Place in position.
26. Adjusting bracket (13) to anchor bracket (11)	Two nuts (14), two lockwashers (15), and two flat washers (16)	Using 5/8-inch socket and ratchet handle with 1/2-inch drive, screw on and tighten.



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SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119 - CONTINUED

LOCATION		ITEM	ACTION REMARKS
INSTALLATION – CONTINUED			
27.	Actuating camshaft (1)	Flat washer (2)	Install.
NOTE			
Actuating camshaft is progressively installed as steps 28 thru 33 are done to hold parts in position.			
28.	Actuating camshaft bracket (3)	Actuating camshaft (1)	Slide in far enough to put on parts.
NOTE			
Flat washers (4) are used for the purpose of adjustment. The amount of flat washers used will vary.			
29.	Actuating camshaft (1)	Flat washers (4)	Put on.
30.	Lever (5) to clevis (6)	Pin (7) and new cotter pin (8)	Using 6-inch slip-joint pliers, put in.
31.	Actuating camshaft (1)	Lever (5) and slack adjuster (9)	Assemble and place in position.
32.		Spacer (10)	Place in position.
NOTE			
Flat washers (11) are used for the purpose of adjustment. The amount of flat washers used will vary.			
33.		Flat washers(11)	Put on.
34.	Adjusting bracket (12)	Actuating camshaft (1)	Slide actuating camshaft in all the way.
35.	Actuating camshaft (1)	Flat washers (13 and 14)	Put on.
36.		Snapping (15)	Using external snapping pliers, put on.
37.	Backing plate (16)	Brakeshoes (17 and 18)	Swing into position on camshaft.

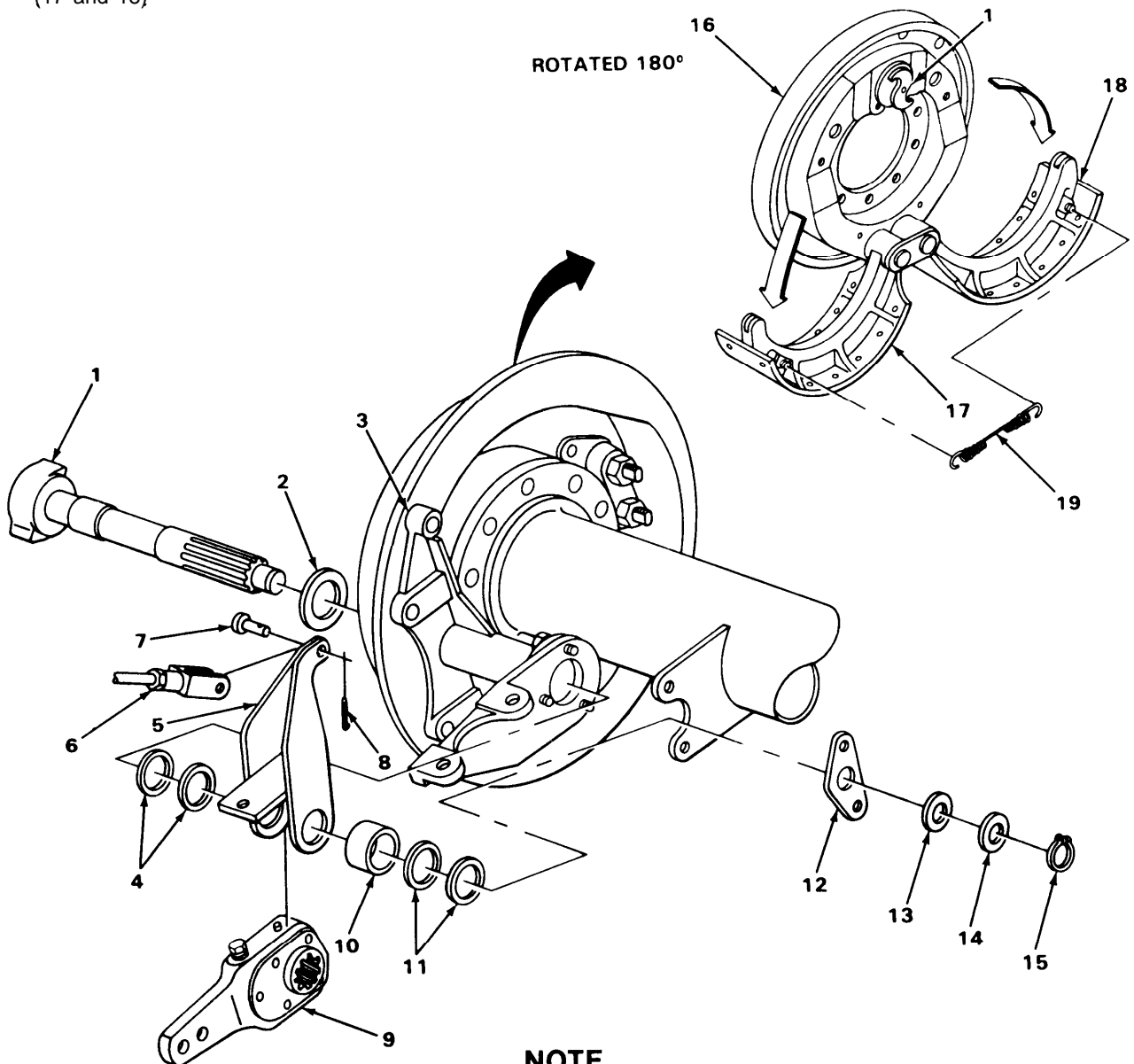
SLACK ADJUSTER AND ACTUATING CAMSHAFT, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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38. Brakeshoes
(17 and 18)

Spring (19)

Using brake-repair pliers, put on.

**NOTE**

FOLLOW-ON MAINTENANCE:

1. Install brake air chamber (page 4-119).
2. Install hub and brakedrum (page 4-144).

TASK ENDS HERE

TA234022

AIR CHAMBER, M118A1 AND M119A1

This task covers:

- a. Removal (page 4-118)
- b. Installation (page 4-118)

INITIAL SETUP**Tools**

Extension, 3/8-inch drive, 6-inch
Handle, ratchet, 3/8-inch drive

Tools – Continued

Socket, 3/8-inch drive, 9/16-inch
Wrench, open-end, 7/8-inch

LOCATION	ITEM	ACTION REMARKS
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REMOVAL**WARNING**

Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

- | | | |
|---|---|---|
| 1. Reservoir (1) | Draincock (2) | Open and release all air pressure. |
| 2. Air chamber (3) | Line (4) | Using 7/8-inch open-end wrench, unscrew and take off. |
| 3. Air chamber (3) to master cylinder (5) at mounting bracket (6) | Three nuts (7) and three lock-washers (8) | Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 6-inch extension, unscrew and take off. |

CAUTION

When air chamber is removed, master cylinder must be supported. Damage to hydraulic line could result.

- | | | |
|-------------------------|-----------------|-----------|
| 4. Mounting bracket (6) | Air chamber (3) | Take off. |
|-------------------------|-----------------|-----------|

INSTALLATION

- | | | |
|---|---|---|
| 5. Mounting bracket (6) | Air chamber (3) | Place in position. |
| 6. Air chamber (3) to master cylinder (5) at mounting bracket (6) | Three nuts (7) and three lock-washers (8) | Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 6-inch extension, screw on and tighten. |
| 7. Air chamber (3) | Line (4) | Using 7/8-inch open-end wrench, screw on and tighten. |

AIR CHAMBER, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
8. Reservoir (1)	Draincock (2)	Close.	

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TASK ENDS HERE

AIR CHAMBER, M119

This task covers:

- a. Removal (page 4-120)
- b. Installation (page 4-120)

INITIAL SETUP

Tools

Extension, 1/2-inch drive, 3-inch long
 Handle, ratchet, 1/2-inch drive
 Pliers, diagonal-cutting, 6-inch
 Pliers, slip-joint, 8-inch
 Socket, 1/2-inch drive, 15/16-inch
 Wrench, open-end, 1 1/16-inch
 (two required)

Materials/Parts

Cotter pins (two required)

Equipment Condition

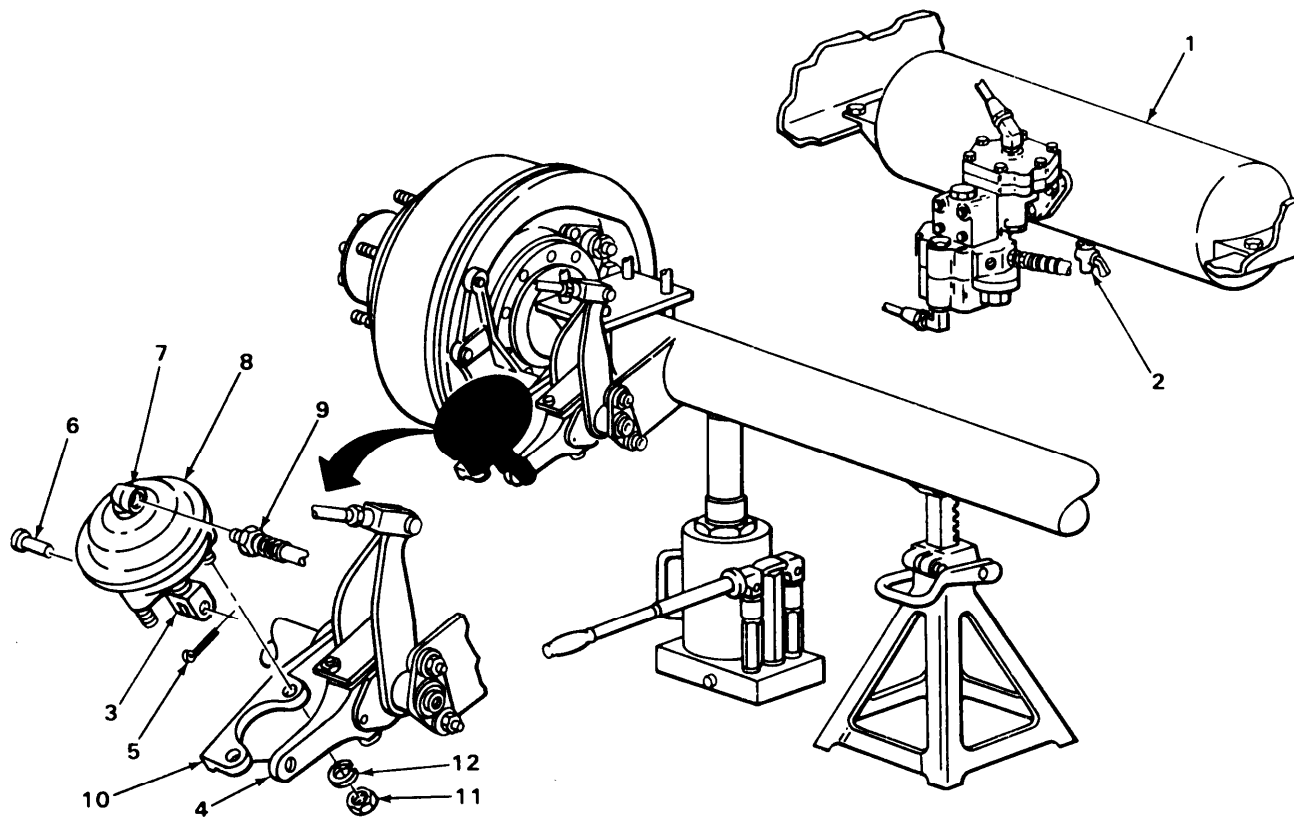
Wheel and tire removed (page 3-6).

AIR CHAMBER, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
WARNING		
Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.		
1. Reservoir (1)	Draincock (2)	Open to release air pressure.
2. Chamber yoke (3) to brake slack adjuster (4)	Cotter pin (5)	Using 6-inch diagonal-cutting pliers, take out. Discard cotter pin.
3.	Straight-headed pin (6)	Using 8-inch slip-joint pliers, remove.
4. Elbow (7) to air chamber (8)	Hose assembly (9)	Using two 1 1/16-inch open-end wrenches, unscrew and take off.
5. Air chamber (8) to camshaft diaphragm bracket (10)	Two nuts (11) and two lockwashers (12)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 3-inch extension, unscrew and take off.
INSTALLATION		
6. Camshaft diaphragm bracket (10)	Air chamber (8)	Put in place.
7. Air chamber (8)	Two nuts (11) and two lockwashers (12)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 3-inch extension, screw on and tighten.
8. Elbow (7) to air chamber (8)	Hose assembly (9)	Using two 1 1/16-inch open-end wrenches, screw on and tighten.
9. Chamber yoke (3) to brake slack adjuster (4)	Straight-headed pin (6)	Align chamber yoke with brake slack adjuster and push in.
10. Straight-headed pin (6)	New cotter pin (5)	Using 8-inch slip-joint pliers, put in.

AIR CHAMBER, M119 - CONTINUED**NOTE**

Repeat steps 2 thru 10 for opposite side.



TASK ENDS HERE

RELAY VALVE, M119

This task covers:

- a. Removal (page 4-122)
- b. Installation (page 4-122)

INITIAL SETUP**Tools**

Wrench, open-end, 9/16-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 7/8-inch
 Wrench, pipe, 6-inch

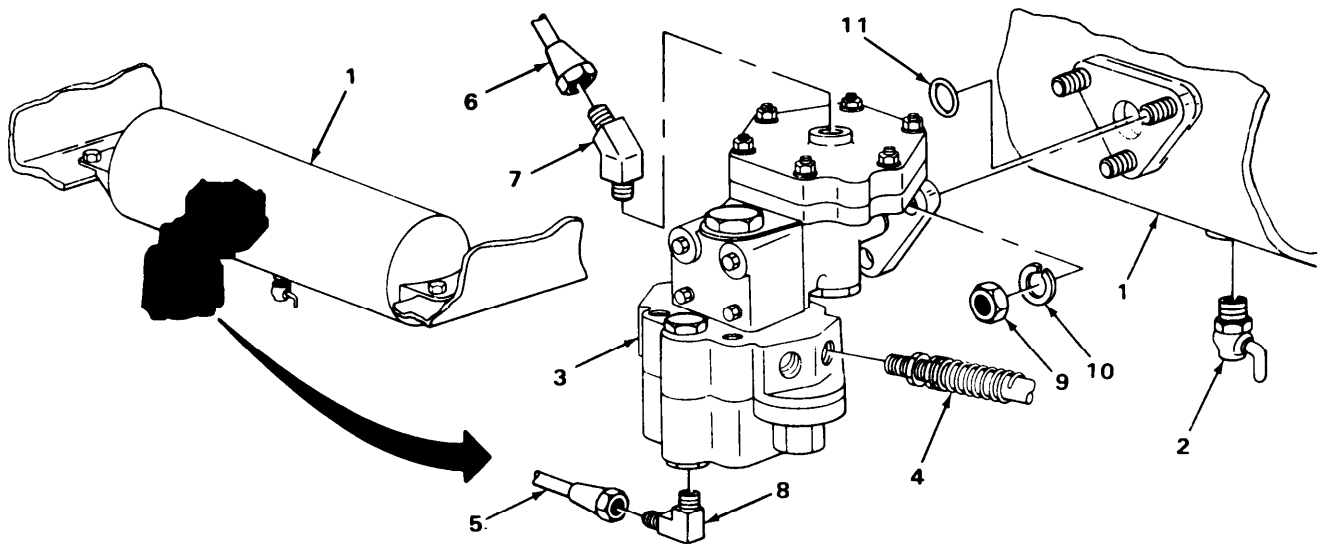
Materials/Parts

Grommet

RELAY VALVE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
WARNING		
Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.		
1. Air reservoir (1)	Draincock (2)	Open, relieve all pressure, then close.
2. Relay valve (3)	Two flexible air lines (4)	Using 5/8- and 7/8-inch open-end wrenches, unscrew and take off.
3.	Emergency air line (5) and service air line (6)	Using 5/8-inch open-end wrench, unscrew and take off.
4.	Two elbows (7 and 8)	Using 6-inch pipe wrench, unscrew and take off.
5. Relay valve (3) to air reservoir (1)	Three nuts (9) and three lock-washers (10)	Using 9/16-inch open-end wrench, unscrew and take off.
6. Air reservoir (1)	Relay valve (3) and grommet (11)	Take off. Discard grommet.
INSTALLATION		
7. Air reservoir (1)	Relay valve (3) and new grommet (11)	Place in position.
8. Relay valve (3) to air reservoir (1)	Three nuts (9) and three lock-washers (10)	Using 9/16-inch open-end wrench, screw on and tighten.
9. Relay valve (3)	Two elbows (7 and 8)	Using 6-inch pipe wrench, screw in and tighten. Install 45° elbow (7) at top of valve and 90° elbow (8) at bottom.
10. Relay valve (3)	Emergency air line (5) and service air line (6)	Using 5/8-inch wrench, install,
11.	Two flexible air lines (4)	Using 5/8- and 7/8-inch open-end wrenches, screw in and tighten.

RELAY VALVE, M119 - CONTINUED



TASK ENDS HERE

RELAY VALVE, M118A1 AND M119A1

This task covers:

- a. Removal (page 4-123)
- b. installation (page 4-124)

INITIAL SETUP

Tools

- Handle, ratchet, 3/8-inch drive
- Socket, 3/8-inch drive, 9/16-inch
- Wrench, open-end, 9/16-inch

Tools – Continued

- Wrench, open-end, 3/4-inch
- Wrench, open-end, 7/8-inch
- Wrench, pipe, 6-inch

		ACTION	REMARKS
LOCATION	ITEM		
REMOVAL			

WARNING

Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

RELAY VALVE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
1. Air reservoir (1)	Draincock (2)	Open, relieve all pressure, then close.
2. Valve (3)	Line (4)	Using 7/8-inch open-end wrench, unscrew and take off.
3.	Elbow (5)	Using 6-inch pipe wrench, unscrew and take off.
4.	Three lines (6) and three fittings (7)	Using 3/4-inch open-end wrench, unscrew and take off.
5. Valve (3) to crossmember (8)	Two screws (9), two lockwashers (10), and two nuts (11)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, unscrew and take off.
6. Crossmember (8)	Valve (3)	Take off.
INSTALLATION		
7. Crossmember (8)	Valve (3)	Place in position.
8. Valve (3) to crossmember (8)	Two screws (9), two lockwashers (10), and two nuts (11)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, screw on and tighten.
9. Valve (3)	Three fittings (7) and three lines (6)	Using 3/4-inch open-end wrench, screw in and tighten.
10.	Elbow (5)	Using 6-inch pipe wrench, screw in and tighten.
11.	Line (4)	Using 7/8-inch open-end wrench, screw on and tighten.

AIR RESERVOIR, M118A1 AND M119A1

This task covers:

- a. Removal (page 4-125)
- b. Installation (page 4-126)

INITIAL SETUP**Tools**

Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 9/16-inch
 Wrench, adjustable, 8-inch

Tools – Continued

Wrench, open-end, 9/16-inch
 Wrench, open-end, 3/4-inch

LOCATION	ITEM	ACTION REMARKS
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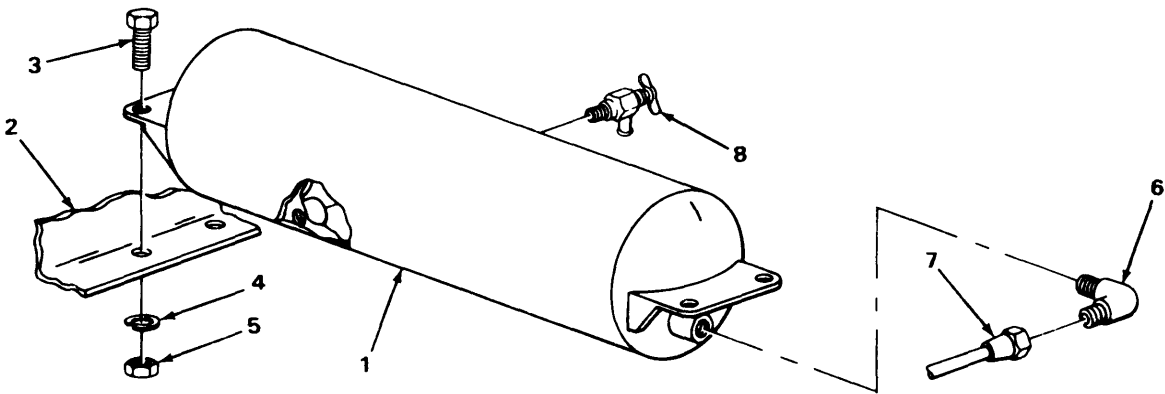
REMOVAL**WARNING**

Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

- | | | |
|----------------------|---------------|---|
| 1. Air reservoir (1) | Draincock (2) | a. Open and release air pressure.
b. Using 8-inch adjustable wrench, take off. |
| 2. | Air line (3) | Using 3/4-inch open-end wrench, unscrew and take off. |
| 3. | Elbow (4) | Using 8-inch adjustable wrench, unscrew and take off. |

AIR RESERVOIR, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL – CONTINUED			
4. Air reservoir (1) to two frame rails (2)	Four screws (3), four lockwashers (4), and four nuts (5)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, unscrew and take off.	
5. Two frame rails (2)	Air reservoir (1)	Take off.	
INSTALLATION			
6. Two frame rails (2)	Air reservoir (1)	Place in position.	
7. Air reservoir (1) to two frame rails (2)	Four screws (3), four lockwashers (4), and four nuts (5)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, screw on and tighten.	
8. Air reservoir (1)	Elbow (6)	Using 8-inch adjustable wrench, screw on and tighten.	
9.	Air line (7)	Using 3/4-inch open-end wrench, screw on and tighten.	
10.	Draincock (8)	a. Using 8-inch adjustable wrench, screw in. b. Close.	



TASK ENDS HERE

AIR RESERVOIR, MI 19

This task covers:

- a. Removal (page 4-127)
- b. Installation (page 4-128)

INITIALSETUP

Tools

Handle, ratchet, 3/8-inch drive
Socket, 3/8-inch drive, 9/16-inch
Wrench, adjustable, 8-inch
Wrench, open-end, 9/16-inch

Materials/Parts

Grommet

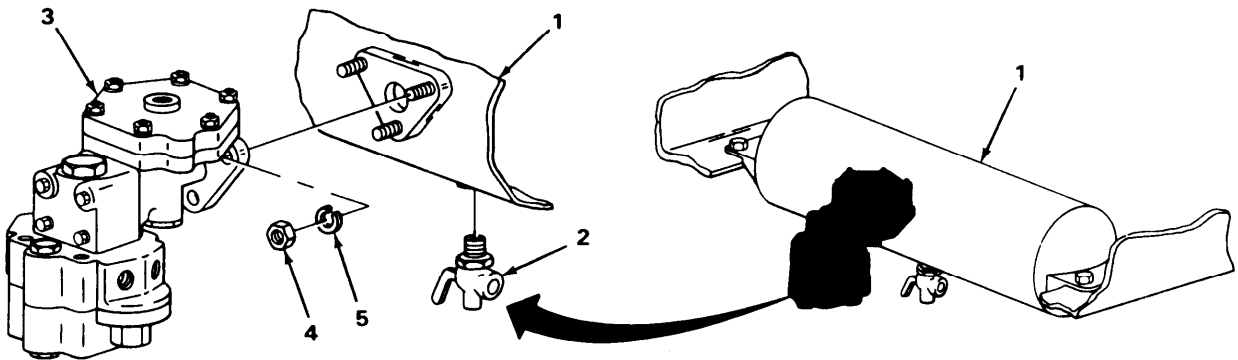
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

WARNING

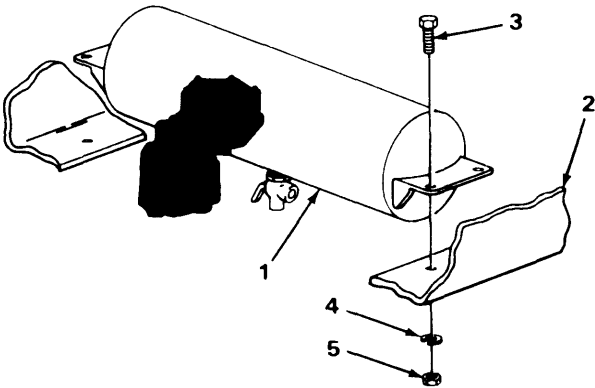
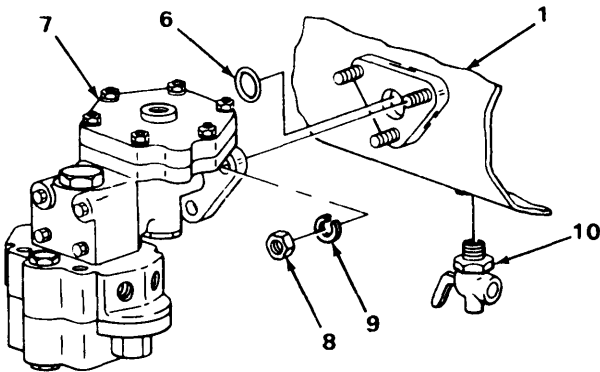
Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

- | | | |
|---|---|---|
| 1. Air reservoir (1) | Draincock (2) | <ol style="list-style-type: none"> a. Open and release all pressure. b. Using 8-inch adjustable wrench, unscrew and take off. |
| 2. Relay valve (3) to air reservoir (1) | Three nuts (4) and three lock-washers (5) | Using 9/16-inch open-end wrench, unscrew and take off. |



AIR RESERVOIR, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL – CONTINUED			
3. Air reservoir (1) to two frame rails (2)	Four screws (3), four lockwashers (4), and four nuts (5)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, unscrew and take out.	
4. Two frame rails (2)	Air reservoir (1)	Take off.	
5. Air reservoir (1)	Grommet (6)	Take out. Discard.	
INSTALLATION			
6. Air reservoir (1)	New grommet (6)	Place in position.	
7. Two frame rails (2)	Air reservoir (1)	Place in position.	
8. Air reservoir (1) to two frame rails (2)	Four screws (3), four lockwashers (4), and four nuts (5)	Using 9/16-inch socket, ratchet handle with 3/8-inch drive, and 9/16-inch open-end wrench, screw on and tighten.	
9. Relay valve (7) to air reservoir (1)	Three nuts (8) and three lock- washers (9)	Using 9/16-inch open-end wrench, screw on and tighten.	
10. Air reservoir (1)	Draincock (10)	a. Using 8-inch adjustable wrench, screw in and tighten. b. Close.	



TASK ENDS HERE

AIR FILTER, M118A1 AND M119A1

This task covers:

- | | |
|--|------------------------------|
| a. Removal (page 4-129) | c. Installation (page 4-131) |
| b. Filter element replacement (page 4-130) | |

INITIAL SETUP**Tools**

Wrench, open-end, 7/16-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 1 1/2-inch
 Wrench, pipe, & inch

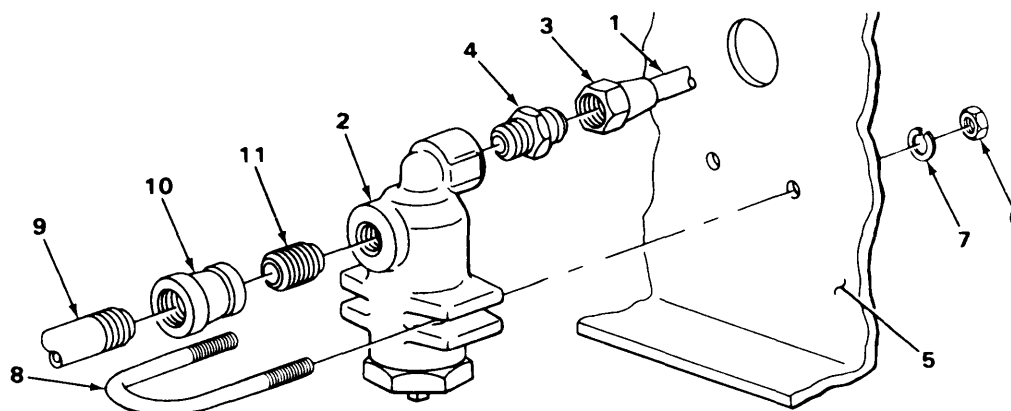
Materials/Parts

Filter element and gasket
 Solvent, drycleaning, P-D-680 (item 10, appendix E)
 Tape, antiseizing (item 12, appendix E)

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

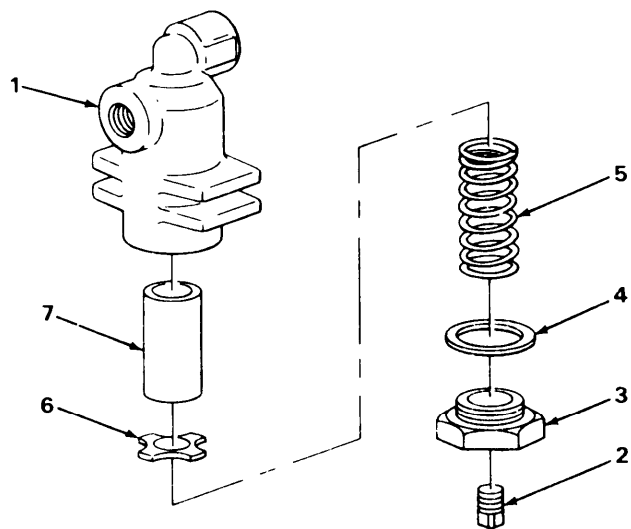
- | | | |
|--------------------------------------|--------------------------------------|---|
| 1. Air line (1) to air filter (2) | Nut (3) | Using 3/4-inch open-end wrench, unscrew and take off. |
| 2. Air filter (2) | Adapter (4) | Using 8-inch pipe wrench, unscrew and take off. |
| 3. Air filter (2) to crossmember (5) | Two nuts (6) and two lockwashers (7) | Using 7/16-inch open-end wrench, unscrew and take off. |
| 4. Air filter (2) | U-bolt (8) | Remove. |
| 5. Pipe nipple (9) | Air filter (2) | Using 8-inch pipe wrench, turn counter-clockwise to remove. |
| 6. Air filter (2) | Reducer (10) and nipple(11) | Using 8-inch pipe wrench, unscrew and take out. |



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AIR FILTER, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
FILTER ELEMENT REPLACEMENT			
7. Filter body (1)	Plug (2)	Using 7/16-inch open-end wrench, unscrew and take out.	
<div>WARNING</div> <p>Drycleaning solvent P-D-680 is toxic and flammable. 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 flashpoint for type #1 drycleaning solvent is 100°F (38°C) and for type #2 is 138°F (59°C). If you become dizzy while using cleaning solvent, get fresh air immediately, and get medical aid. If contact with eyes is made, wash your eyes with water, and get medical aid immediately. Failure to observe these precautions could cause serious injury or death to personnel.</p>			
8.	Adapter bushing (3), gasket (4), spring (5), spring retainer (6), and filter element (7)	a. Using 1 1/2-inch open-end wrench, unscrew and take off. b. Using drycleaning solvent, clean all parts. c. Using 1 1/2-inch open-end wrench, screw on and tighten. Install new filter element and gasket.	
9.	Plug (2)	Using 7/16-inch open-end wrench, screw in and tighten.	



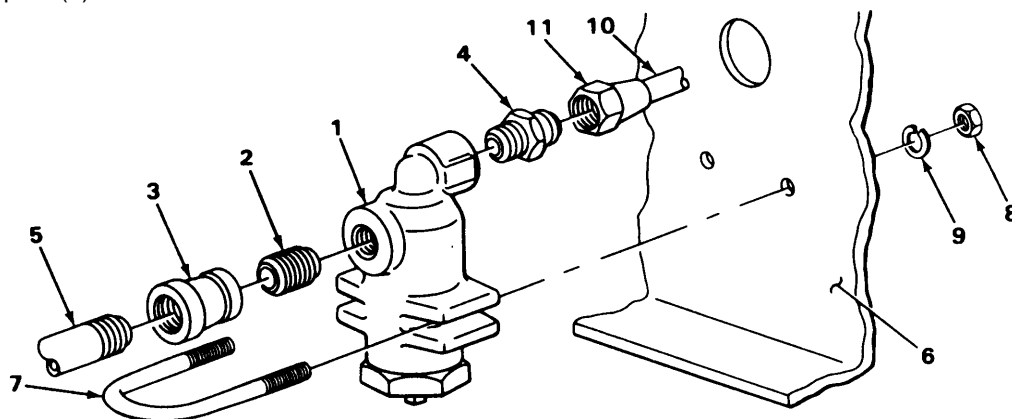
AIR FILTER, M118A1 AND M119A1 - CONTINUED

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

INSTALLATION**NOTE**

Use antiseizing tape when assembling all pipe joints.

- | | | |
|---------------------------------------|--------------------------------------|---|
| 10. Air filter (1) | Nipple (2) and reducer (3) | Using 8-inch pipe wrench, screw in and tighten. |
| 11. | Adapter (4) | Using 8-inch pipe wrench, screw in and tighten. |
| 12. Pipe nipple (5) | Air filter (1) | Using 8-inch pipe wrench, turn clockwise, screw in and tighten. |
| 13. Air filter (1) to crossmember (6) | U-bolt (7) | Place in position. |
| 14. U-bolt (7) | Two nuts (8) and two lockwashers (9) | Using 7/16-inch open-end wrench, screw on and tighten. |
| 15. Air line (10) to adapter (4) | Nut (11) | Using 3/4-inch open-end wrench, screw on and tighten. |

**TASK ENDS HERE****AIR FILTER, M119**

This task covers:

- a. Removal (page 4-132)
- b. Installation (page 4-132)

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AIR FILTER, M119 - CONTINUED

INITIAL SETUP

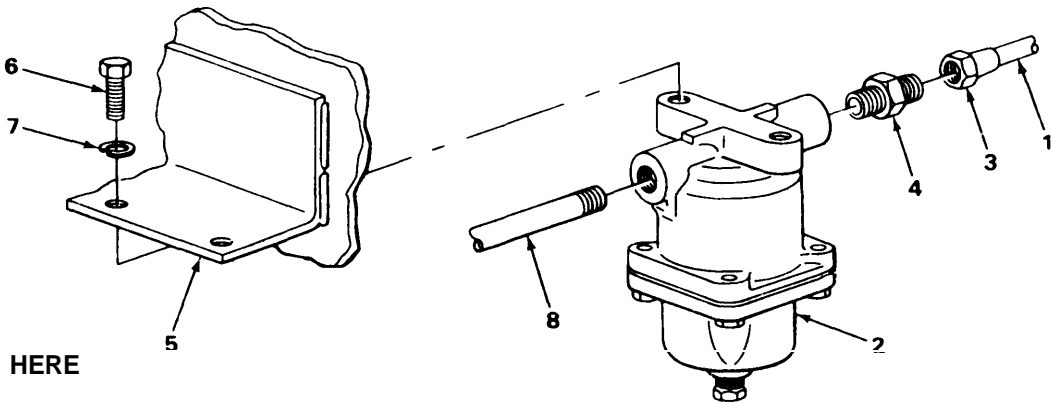
Tools

- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, pipe, 8-inch

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Air line (1) to air filter (2)	Nut (3)	Using 5/8-inch open-end wrench, unscrew and take off.
2. Air line (1)	Adapter (4)	Using 5/8-inch open-end wrench, unscrew and take off.
3. Air filter (2) to angle (5)	Two screws (6) and two lockwashers (7)	Using 9/16-inch open-end wrench, unscrew and take off.
4. Air line (8)	Air filter (2)	Using 8-inch pipe wrench, turn counter-clockwise to remove.

INSTALLATION

- | | | |
|-----------------------------------|--|--|
| 5. Air line (8) | Air filter (2) | Using 8-inch pipe wrench, turn clockwise to install. |
| 6. Air filter (2) to angle (5) | Two screws (6) and two lockwashers (7) | Using 9/16-inch open-end wrench, screw in and tighten. |
| 7. Air line (1) | Adapter (4) | Using 5/8-inch open-end wrench, screw in and tighten. |
| 8. Air line (1) to air filter (2) | Nut (3) | Using 5/8-inch open-end wrench, screw on and tighten. |



TASK ENDS HERE

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M118A1 AND M119A1

This task covers:

- | | |
|--|---|
| <ul style="list-style-type: none"> a. Gladhand packing replacement (page 4-133) b. Gladhand replacement (page 4-134) c. Air line replacement, gladhand-to-adapter (page 4-134) d. Air line replacement, adapter-to-adapter (page 4-134) e. Air line replacement, adapter-to-air filter (page 4-134) | <ul style="list-style-type: none"> f. Air line replacement, air filter-to-relay valve (page 4-135) g. Air line replacement, relay valve-to-air reservoir (page 4-136) h. Air line replacement, relay valve-to-air chamber (page 4-136) |
|--|---|

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/8-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1 1/8-inch (two required)
 Wrench, pipe, 12-inch (two required)

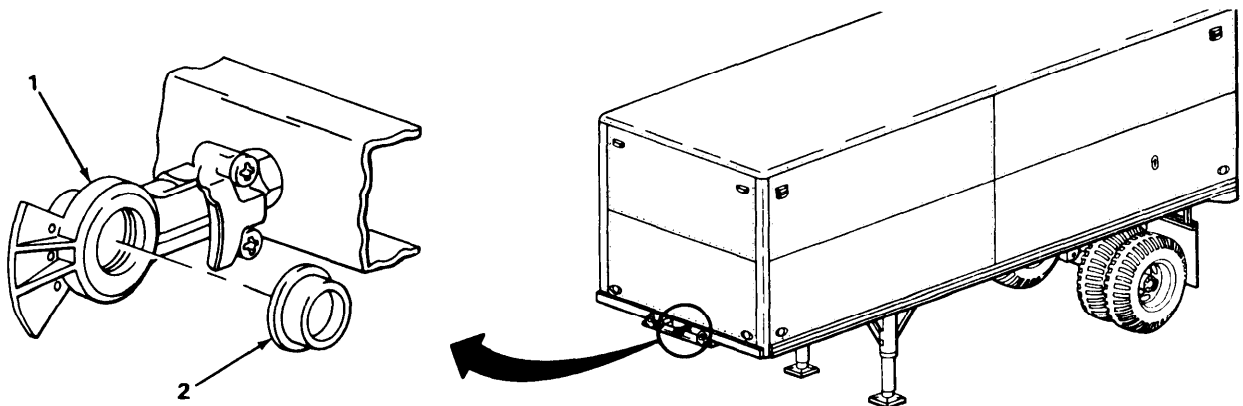
Materials/Parts

Adapter (as required)
 Air lines (as required)
 Gladhand (as required)
 Packing (as required)
 Tape, antiseizing (item 12, appendix E)

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

GLADHAND PACKING REPLACEMENT

- | | | |
|-----------------|-----------------|---|
| 1. Gladhand (1) | Packing (2) | Using 3/8-inch flat-tip screwdriver, take out by prying.
Discard packing. |
| 2. Gladhand (1) | New packing (2) | Squeeze and put one side in, then the other. |



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AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M118A1 AND M119A1 - CONTINUED

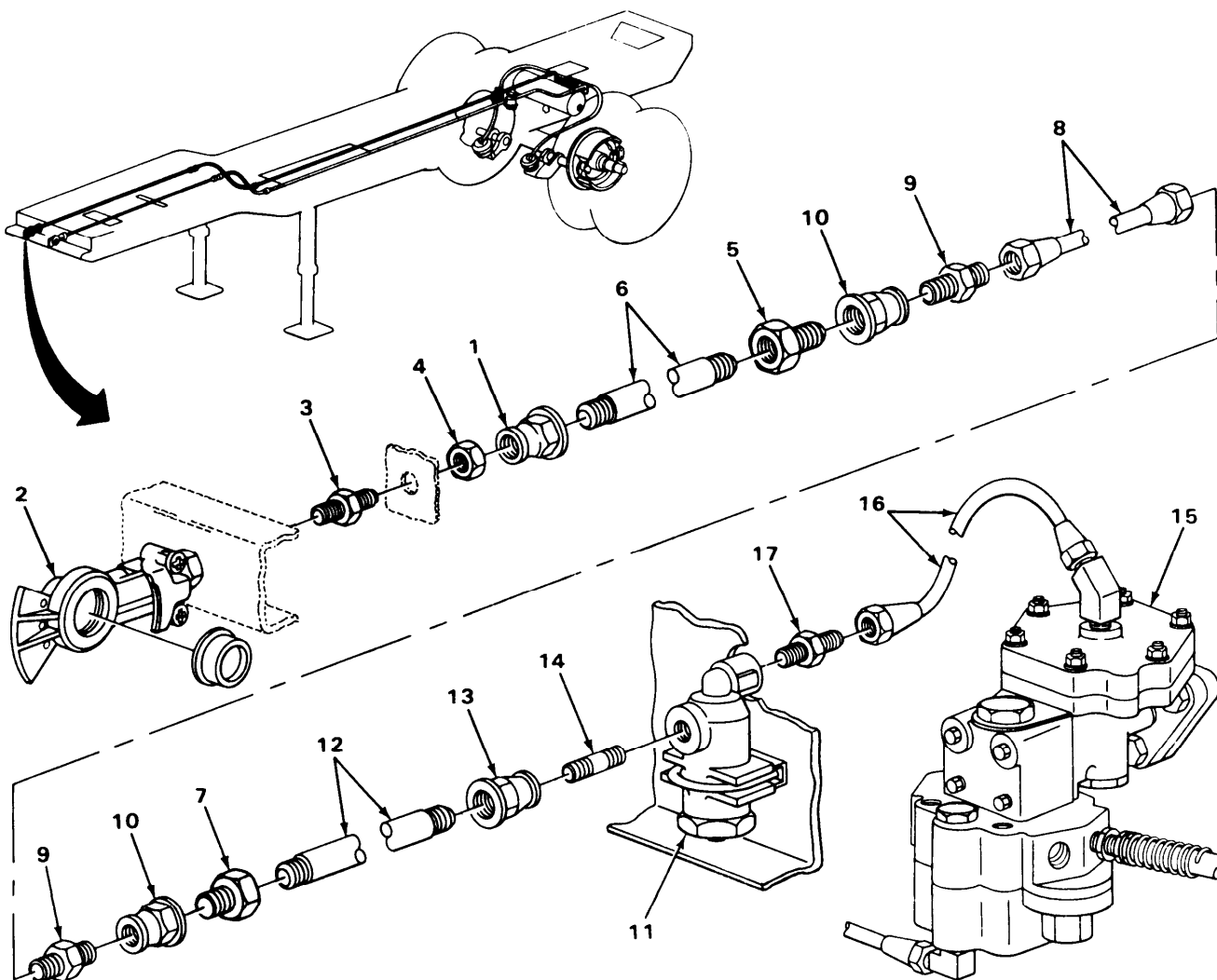
LOCATION	ITEM	ACTION REMARKS
GLADHAND REPLACEMENT		
3. Reducer (1)	Gladhand (2) with adapter (3) and nut (4)	Using two 1 1/8-inch open-end wrenches, unscrew and take out. Discard gladhand.
4.	New gladhand (2) with adapter (3) and nut (4)	a. Using antiseizing tape, cover threads. b. Using two 1 1/8-inch open-end wrenches, screw in and tighten.
AIR LINE REPLACEMENT, GLADHAND-TO-ADAPTER		
5. Gladhand (2) to adapter (5)	Air line (6), reducer (1), and adapter (5)	Using 7/8- and 1 1/8-inch open-end wrenches, unscrew and take out. Discard air line.
6.	New air line (6), reducer (1), and adapter (5)	a. Using antiseizing tape, cover threads. b. Using 7/8- and 1 1/8-inch open-end wrenches, screw in and tighten.
AIR LINE REPLACEMENT, ADAPTER-TO-ADAPTER		
7. Adapter (5) to adapter (7)	Air line (8), two fittings (9), and two reducers (10)]	Using 9/16-, 7/8-, and 1 1/8-inch open-end wrenches, unscrew and take out. Discard air line.
8.	New air line (8), two fittings (9), and two reducers (10)	Using 9/16-, 7/8-, and 1 1/8-inch open-end wrenches, screw in and tighten.
AIR LINE REPLACEMENT, ADAPTER-TO-AIR FILTER		
9. Adapter (7) to air filter (11)	Air line (12), adapter (7), reducer (13), and nipple (14)	Using 7/8- and 1 1/8-inch open-end wrenches and 12-inch pipe wrench, unscrew and take out. Discard air line.
10.	New air line (12), adapter (7), reducer (13), and nipple (14)	a. Using antiseizing tape, cover threads. b. Using 7/8- and 1 1/8-inch open-end wrenches and 12-inch pipe wrench, screw in and tighten.

NOTE

Repeat steps 3 thru 10 if opposite side is to be replaced.

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M118A1 AND M119A1 - CONTINUED

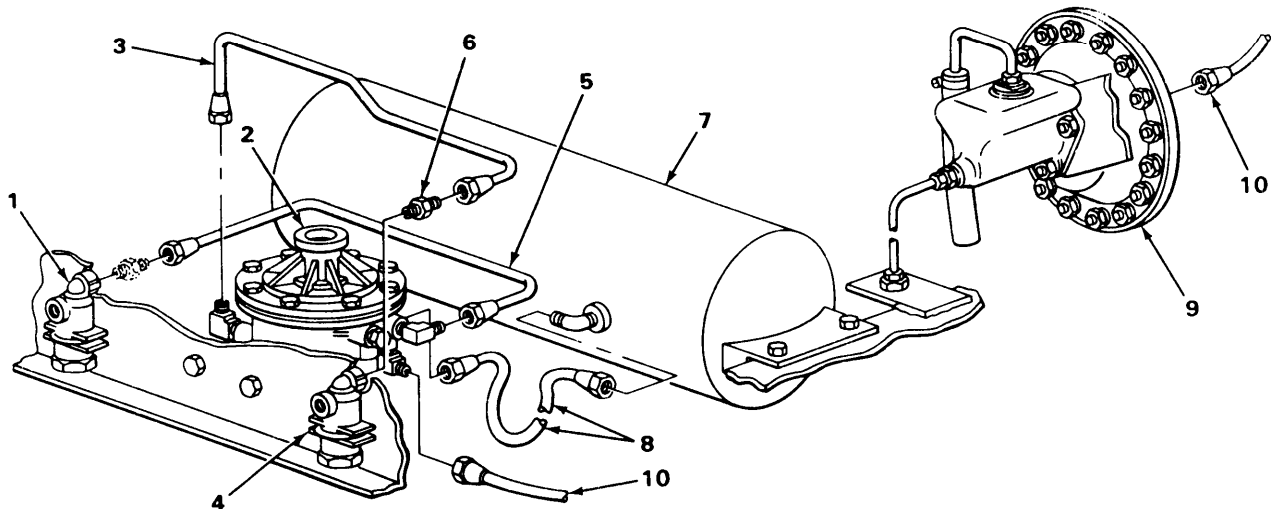
LOCATION	ITEM	ACTION	REMARKS
AIR LINE REPLACEMENT, AIR FILTER-TO-RELAY VALVE			
11. Air filter (11) to relay valve (15)	Service air line (16)	Using 3/4-inch open-end wrench, unscrew and take out. Discard air line.	
12. Air filter (11)	Adapter (17)	Using 9/16-inch open-end wrench, unscrew and take out. Discard adapter.	
13.	New adapter (17)	a. Using antiseizing tape, cover threads. b. Using 9/16-inch open-end wrench, screw in and tighten.	



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AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
AIR LINE REPLACEMENT, AIR FILTER-TO-RELAY VALVE – CONTINUED		
14. Air filter (1) to relay valve (2)	New service air line (3)	a. Using antiseizing tape, cover threads. b. Using 3/4-inch open-end wrench, screw in and tighten.
15. Air filter (4) to relay valve (2)	Emergency air line (5)	Using 3/4-inch open-end wrench, unscrew and take out. Discard air line.
16. Air filter (4)	Adapter (6)	Using 9/16-inch open-end wrench, unscrew and take out. Discard adapter.
17.	New adapter (6)	a. Using antiseizing tape, cover threads. b. Using 9/16-inch open-end wrench, screw in and tighten.
18. Air filter (4) to relay valve (2)	New emergency airline (5)	a. Using antiseizing tape, cover threads. b. Using 3/4-inch open-end wrench, screw in and tighten.
AIR LINE REPLACEMENT, RELAY VALVE-TO-AIR RESERVOIR		
19. Relay valve (2) to air reservoir (7)	Airline (8)	Using 3/4-inch open-end wrench, unscrew and take out. Discard air line.
20.	New air line (8)	a. Using antiseizing tape, cover threads. b. Using 3/4-inch open-end wrench, screw in and tighten.
AIR LINE REPLACEMENT, RELAY VALVE-TO-AIR CHAMBER		
21. Relay valve (2) to air chamber (9)	Air line (10)	Using 7/8-inch open-end wrench, unscrew and take out. Discard air line.
22.	New air line (10)	a. Using antiseizing tape, cover threads. b. Using 7/8-inch open-end wrench, screw in and tighten.

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M118A1 AND M119A1 - CONTINUED

TASK ENDS HERE

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M119

This task covers:

- | | |
|---|--|
| <ul style="list-style-type: none"> a. Gladhand packing replacement (page 4-138) b. Gladhand replacement (page 4-138) c. Air line replacement, gladhand-to-adapter (page 4-138) d. Air line replacement, adapter-to-adapter (page 4-138) | <ul style="list-style-type: none"> e. Air line replacement, adapter-to-air filter (page 4-139) f. Air line replacement, air filter-to-relay valve (page 4-140) g. Air line replacement, relay valve-to-brake air chamber (page 4-140) |
|---|--|

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M119 - CONTINUED

INITIAL SETUP

Tools

Screwdriver, flat-tip, 3/8-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 5/8-inch
 Wrench, open-end, 3/4-inch
 Wrench, open-end, 7/8-inch
 Wrench, open-end, 1 1/8-inch (two required)
 Wrench, pipe, 12-inch (two required)

Materials/Parts

Air lines (as required)
 Gladhand (as required)
 Packing (as required)
 Tape, antiseizing (item 12, appendix E)

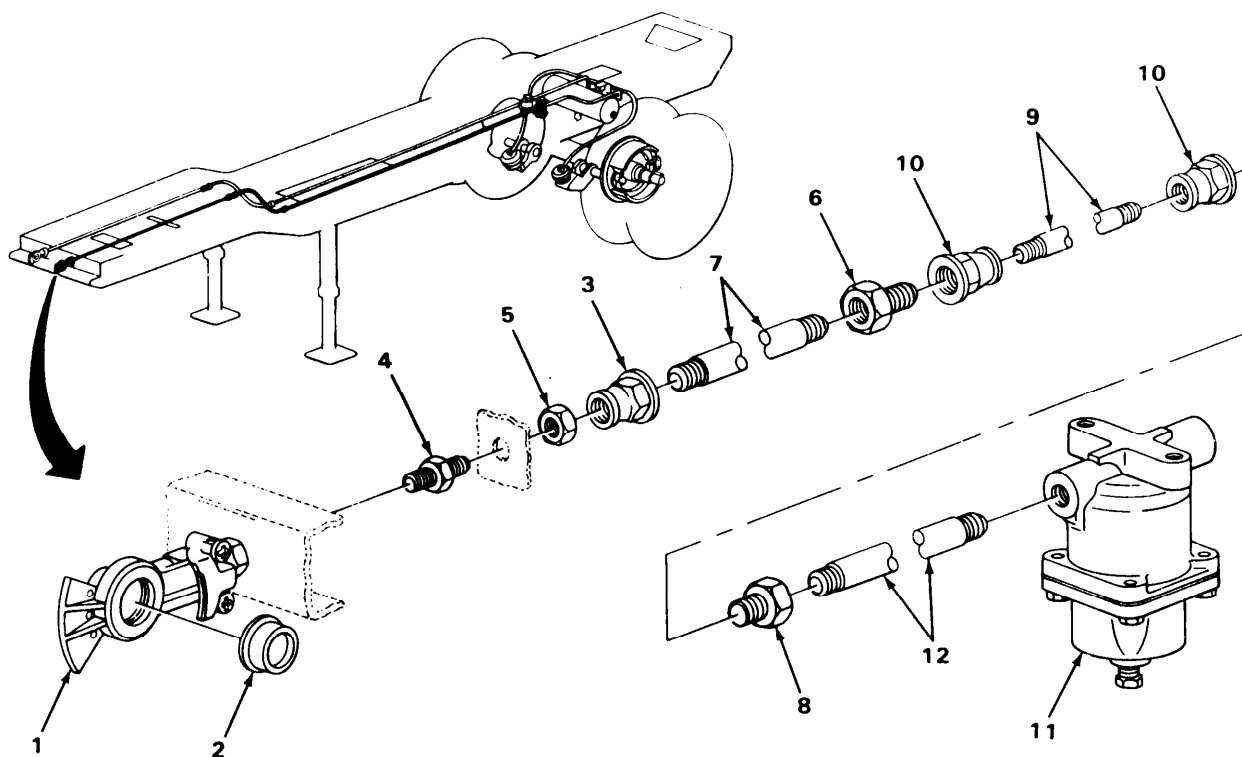
LOCATION	ITEM	ACTION REMARKS
GLADHAND PACKING REPLACEMENT		
1. Gladhand (1)	Packing (2)	Using 3/8-inch flat-tip screwdriver, take out by prying. Discard packing.
2.	New packing (2)	Squeeze and put one side in, then the other.
GLADHAND REPLACEMENT		
3. Reducer (3)	Gladhand (1) with adapter (4) and nut (5)	Using two 1 1/8-inch open-end wrenches, unscrew and take out. Discard gladhand.
4.	New gladhand (1) with adapter (4) and nut (5)	a. Using antiseizing tape, cover threads. b. Using two 1 1/8-inch open-end wrenches, screw in and tighten.
AIR LINE REPLACEMENT, GLADHAND-TO-ADAPTER		
5. Gladhand (1) to adapter (6)	Airline (7), reducer (3), and adapter (6)	Using 7/8- and 1 1/8-inch open-end wrenches, unscrew and take out. Discard air line.
6.	New air line (7), reducer (3), and adapter (6)	a. Using antiseizing tape, cover threads. b. Using 7/8- and 1 1/8-inch open-end wrenches, screw in and tighten.
AIR LINE REPLACEMENT, ADAPTER-TO-ADAPTER		
7. Adapter (6) to adapter (8)	Airline (9) and two reducers (10)	Using 7/8- and 1 1/8-inch open-end wrenches, unscrew and take out. Discard air line.

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M119- CONTINUED

LOCATION	ITEM	ACTION REMARKS
8.	New air line (9) and two reducers (10)	Using 7/8- and 1 1/8-inch open-end wrenches, screw in and tighten.
AIR LINE REPLACEMENT, ADAPTER-TO-AIR FILTER		
9. Air filter (11)	Air line (12) and adapter (8)	Using 1 1/8-inch open-end wrench and 12-inch pipe wrench, unscrew and take out. Discard air line.
10.	New air line (12) and adapter (8)	a. Using antiseizing tape, cover threads. b. Using 1 1/8-inch open-end wrench and 12-inch pipe wrench, screw in and tighten.

NOTE

Repeat steps 3 thru 10 if opposite side is to be replaced.



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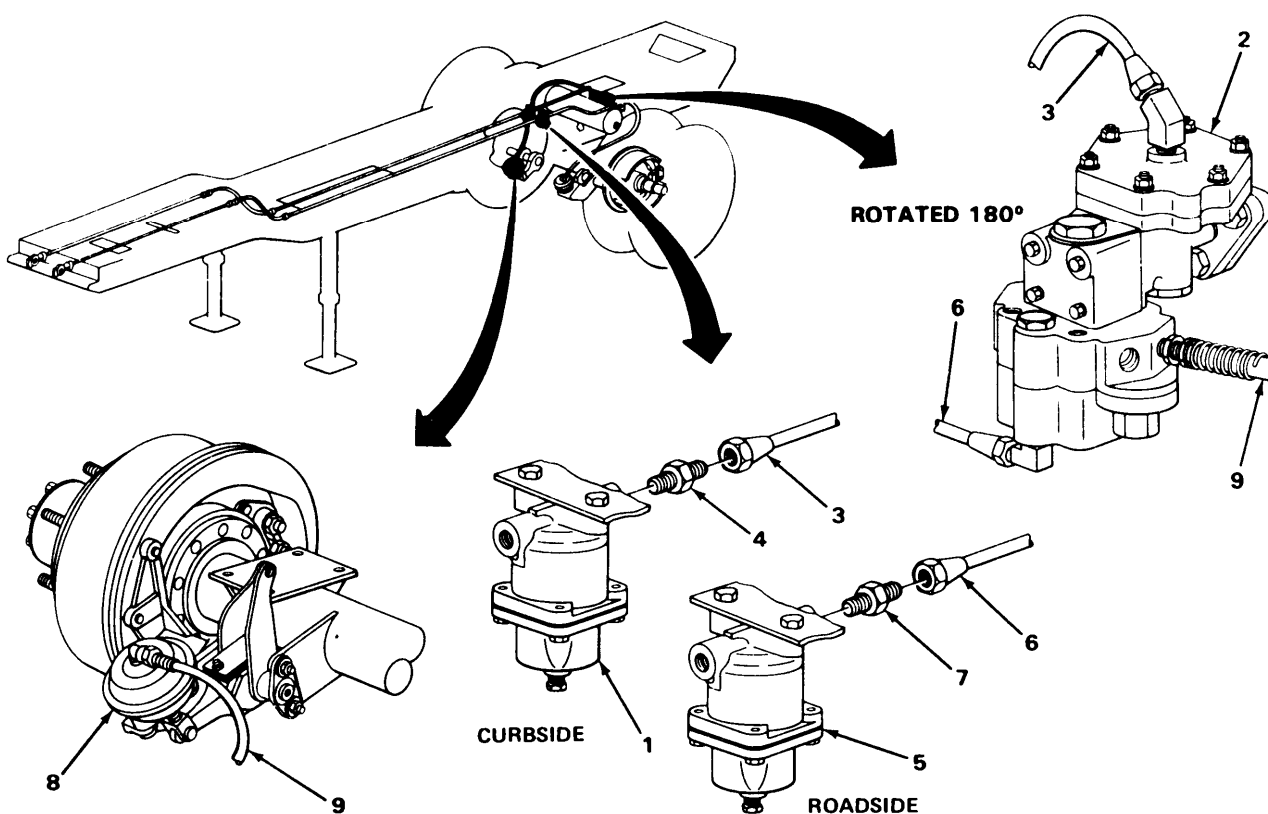
AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
AIR LINE REPLACEMENT, AIR FILTER-TO-RELAY VALVE		
11. Air filter (1) to relay valve (2)	Service air line (3)	Using 3/4-inch open-end wrench, unscrew and take out. Discard air line.
12. Air filter (1)	Adapter (4)	Using 9/16-inch open-end wrench, unscrew and take out. Discard adapter.
13.	New adapter (4)	a. Using antiseizing tape, cover threads. b. Using 9/16-inch open-end wrench, screw in and tighten.
14. Air filter (1) to relay valve (2)	New service air line (3)	a. Using antiseizing tape, cover threads. b. Using 3/4-inch open-end wrench, screw in and tighten.
15. Air filter (5) to relay valve (2)	Emergency air line (6)	Using 3/4-inch open-end wrench, unscrew and take out. Discard air line.
16. Air filter (5)	Adapter (7)	Using 9/16-inch open-end wrench, unscrew and take out. Discard adapter.
17.	New adapter (7)	a. Using antiseizing tape, cover threads. b. Using 9/16-inch open-end wrench, screw in and tighten.
18. Air filter (5) to relay valve (2)	New emergency air line (6)	a. Using antiseizing tape, cover threads. b. Using 3/4-inch open-end wrench, screw in and tighten.
AIR LINE REPLACEMENT, RELAY VALVE-TO-BRAKE AIR CHAMBER		
19. Relay valve (2) to brake air chamber (8)	Flexible air line (9)	Using 5/8- and 7/8-inch open-end wrenches, unscrew and take out. Discard flexible air line.
20.	New flexible air line (9)	a. Using antiseizing tape, cover threads. b. Using 5/8- and 7/8-inch open-end wrenches, screw in and tighten.

NOTE

Repeat steps 19 and 20 for opposite flexible air line.

AIR LINES, HOSES, AND FITTINGS REPLACEMENT, M119- CONTINUED



TASK ENDS HERE

AIR RESERVOIR DRAINCOCK

This task covers:

- a. Removal (page 4-142)
- b. Installation (page 4-142)

INITIAL SETUP

Tools

Wrench, adjustable, 8-inch

Materials/Parts

Tape, antiseizing (item 12, appendix E)

AIR RESERVOIR DRAINCOCK - CONTINUED

LOCATION	ITEM	ACTION	REMARKS

REMOVAL

WARNING

Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

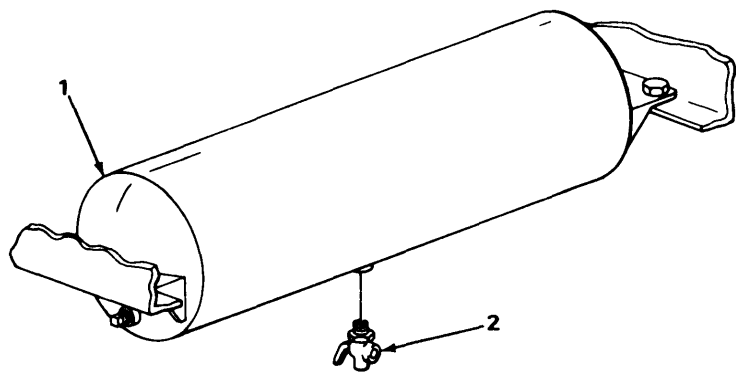
NOTE

Procedure given below for one air reservoir draincock is typical for all.

1. Air reservoir (1)	Draincock (2)	a. Open and release all air pressure. b. Using 8-inch adjustable wrench, unscrew and take out.
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INSTALLATION

2. Air reservoir (1)	Draincock (2)	a. Using antiseizing tape, coat first two or three threads. b. Using 8-inch adjustable wrench, screw in and tighten.
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NOTE

FOLLOW-ON MAINTENANCE: Test for leaks (page 4-143).

TASK ENDS HERE

AIRBRAKE SYSTEM

This task covers:

Leak testing

INITIAL SETUP

Materials/Parts		Personnel Required	
Soap solution		Two	
Brush			

LOCATION	ITEM	ACTION	REMARKS
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NOTE

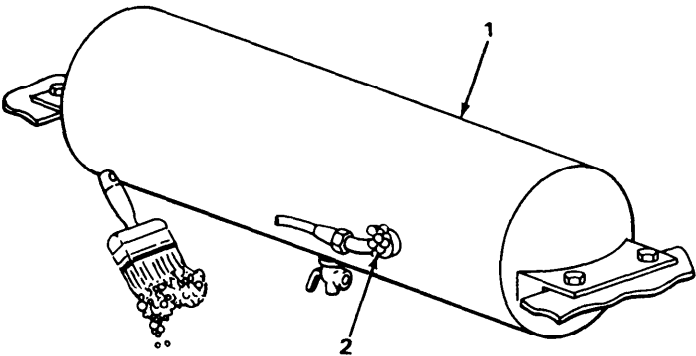
Trailer must be coupled to a towing vehicle with its brake system pressurized.

Have assistant hold brakes applied while testing to be sure that area being tested will be pressurized.

Air reservoir is shown but procedure is typical for any component of airbrake system.

Air reservoir (1)	Fitting (2)	Using brush, apply soap solution and water. Leaks will be detected by bubbling of solution.
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NOTE:
THIS IS A TYPICAL
COMPONENT ONLY.



TASK ENDS HERE

Section IX. HUB AND BRAKEDRUM

	Page		Page
Hub and Brakedrum	4-144	Hub and Brakedrum Replacement,	
Hub and Brakedrum Replacement,		M119	4-150
M118A1 and M119A1	4-148		

HUB AND BRAKEDRUM

This task covers:

- a. Removal (page 4-144)
- b. Installation (page 4-146)
- c. Wheel bearing adjustment (page 4-147)

INITIAL SETUP

Tools

Extension, 3/8-inch drive, 3-inch
Hammer, ball-peen, 1-pound
Handle, ratchet, 3/8-inch drive
Handle, ratchet, 1/2-inch drive
Jack, hand, hydraulic, 5-ton
Jack stand, 2-ton
Punch, pin, 3/8-inch
Screwdriver, flat-tip, 3/8-inch
Socket, 3/8-inch drive, 1/2-inch
Socket, 3/8-inch drive, 3/4-inch
Socket, 1/2-inch drive, 3/4-inch

Tools – Continued

Socket, wheel bearing, 1/2-inch drive,
6-point, 3-inch

Materials/Parts

Gasket
Oil seal

Equipment Condition

Wheel and tire removed (page 3-6).

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

REMOVAL

WARNING

Stay away from airstream and wear protective goggles to prevent injuries when opening air reservoir draincock.

1. Air reservoir (1)
- Draincock (2)
- Open and release all pressure, then close.

NOTE

Step 2 applies to MI 19 models only.

2. Curbside rail (3)
- Parking brake (4)
- Release.

HUB AND BRAKEDRUM -CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
7. Axle (1)	Outer and inner adjusting nut (2 and 3) and key washer (4)	Using 3-inch wheel bearing socket and ratchet handle with 1/2-inch drive, unscrew and take out.
8.	Flat washer (5)	Take out.
9. Hub (6)	Outer wheel bearing cone (7)	a. Pull hub out on axle slightly to loosen outer wheel bearing cone. b. Take out.

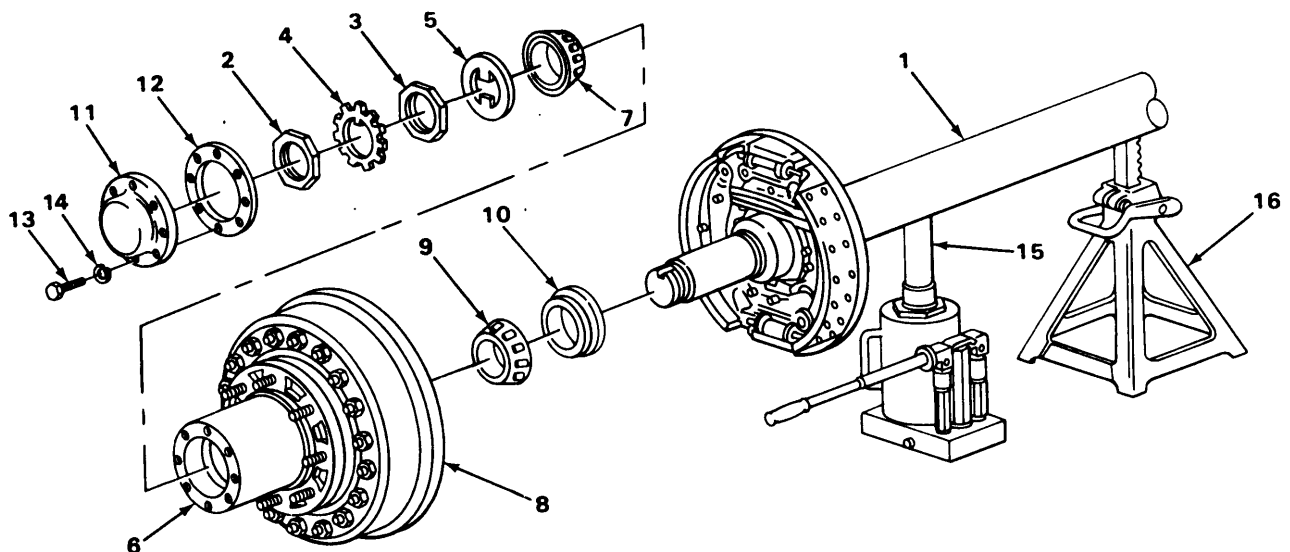
WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

10. Axle (1)	Hub (6) and brake-drum (8)	Take off.
11. Hub (6)	Inner wheel bearing cone (9) and oil seal (10)	Using 1-pound ball-peen hammer and 3/8-inch pin punch, tap out. Discard oil seal.
INSTALLATION		
12. Hub (6)	Inner wheel bearing cone (9)	Clean, inspect, repack, and place in position.
13.	New oil seal (10)	Using 1-pound ball-peen hammer, tap in.
14. Axle (1)	Hub (6) and brake-drum (8)	Put on.
15.	Outer wheel bearing cone (7)	Clean, inspect, repack, and place in position.
16.	Flat washer (5)	Place in position.
17.	Inner adjusting nut (3)	Using 3-inch wheel bearing socket and ratchet handle with 1/2-inch drive, screw on. Do not tighten at this time.

HUB AND BRAKEDRUM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
WHEEL BEARING ADJUSTMENT		
18. Hub (6) to axle (1)	Inner adjusting nut (3)	a. Using 3-inch wheel bearing socket and ratchet handle with 1/2-inch drive, tighten slowly while turning hub until a slight drag is felt. b. Loosen approximately one-eighth turn until drag disappears. c. Ensure that there is no looseness in bearings by trying to rock the hub back and forth.
19.	Key washer (4)	a. Bend tab of key washer over flat. of inner adjusting nut. b. Bend tab of key washer over flat of outer adjusting nut.
20. Hub (6)	Hubcap (11) and new gasket (12)	Place in position.
21.	Eight bolts (13) and eight lock-washers (14)	Using 3/4-inch socket and ratchet handle with 1/2-inch drive, screw in and tighten.
22. Axle (1)	5-ton hydraulic hand jack (15) and 2-ton jack stand (16)	a. Place 5-ton hydraulic hand jack in position under axle. b. Raise axle and take out 2-ton jack stand.



HUB AND BRAKEDRUM - CONTINUED**NOTE****FOLLOW-ON MAINTENANCE:**

1. Install wheel and tire (page 3-6).
2. Adjust service brake (page 4-77).

TASK ENDS HERE**HUB AND BRAKEDRUM REPLACEMENT, M118A1 AND M119A1**

This task covers:

- a. Disassembly (page 4-148)
- b. Assembly (page 4-149)

INITIAL SETUP**Tools**

Driftpin, brass
 Hammer, ball-peen, 1-pound
 Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 1/2-inch
 Socket, 3/8-inch drive, 5/8-inch

Tools – Continued

Wrench, box-end, 1/2-inch
 Wrench, open-end, 1 1/4-inch

Equipment Condition

Wheel and tire removed (page 3-6).
 Hub and brakedrum removed (page 4-144).

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

DISASSEMBLY

- | | | |
|--|--|---|
| 1. Adapter plate (1)
to hub (2) | 10 bolts (3) and
10 lockwashers (4) | Using 5/8-inch socket and ratchet handle
with 3/8-inch drive, unscrew and take out. |
| 2. Hub (2) | Adapter plate (1)
and brakedrum (5) | Take off. |
| 3. Adapter plate (1) to
brakedrum (5) | 12 bolts (6), 12
lockwashers (7),
12 nuts (8), and
inspection cover (9) | Using 1/2-inch socket, ratchet handle with
3/8-inch drive, and 1/2-inch box-end
wrench, unscrew and take out. |
| 4. | Adapter plate (1)
and brakedrum (5) | Take off. |

HUB AND BRAKEDRUM REPLACEMENT, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5. Hub (2)	Six nut caps (10)	Using 1 1/4-inch open-end wrench, unscrew and take out.

NOTE

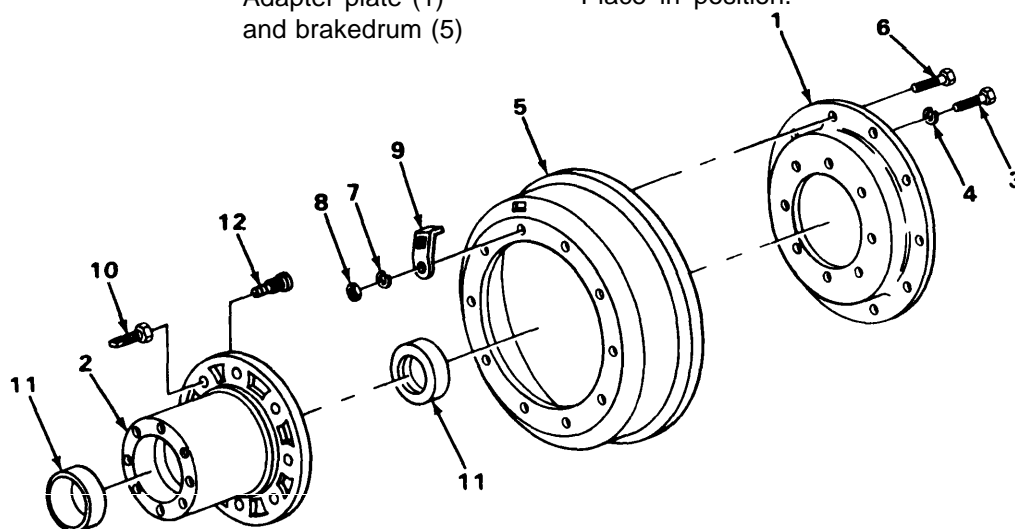
Bearing cups should be removed only if replacement is necessary.

Bearing cups should always be replaced when bearing cones are being replaced.

6. Hub (2)	Two bearing cups (11) and six wheel bolts (12)	Using 1-pound ball-peen hammer and brass driftpin, tap out.
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ASSEMBLY

7. Hub (2)	Two bearing cups (11) and six wheel bolts (12)	Using 1-pound ball-peen hammer and brass driftpin, tap in.
8.	Six nut caps (10)	Using 1 1/4-inch open-end wrench, screw in and tighten.
9. Brakedrum (5)	Adapter plate (1) and inspection cover (9)	Place in position.
10. Adapter plate (1) to brakedrum (5)	12 bolts (6), 12 lockwashers (7), 12 nuts (8), and inspection cover (9)	Using 1/2-inch socket, ratchet handle with 3/8-inch drive, and 1/2-inch box-end wrench, screw in and tighten.
11. Hub (2)	Adapter plate (1) and brakedrum (5)	Place in position.



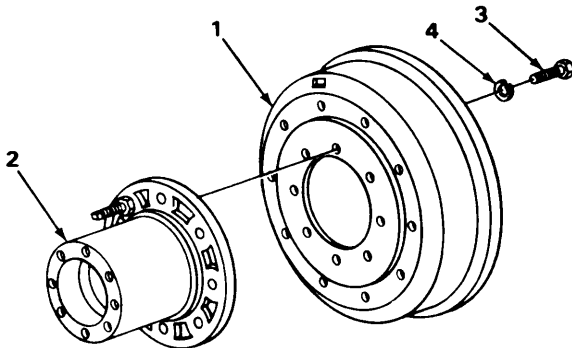
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HUB AND BRAKEDRUM REPLACEMENT, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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ASSEMBLY – CONTINUED

12. Adapter plate (1)
to hub (2)
- 10 bolts (3) and
10 lockwashers (4)
- Using 5/8-inch socket and ratchet handle
with 3/8-inch drive, screw in and tighten.



NOTE

FOLLOW-ON MAINTENANCE:

1. Install hub and brakedrum (page 4-144).
2. Install wheel and tire (page 3-6).
3. Adjust service brakes (page 4-77).

TASK ENDS HERE

HUB AND BRAKEDRUM REPLACEMENT, M119A

This task covers:

- a. Disassembly (page 4-151)
- b. Assembly (page 4-152)

INITIAL SETUP

Tools

- Driftpin, brass
- Hammer, ball-peen, 1-pound
- Handle, ratchet, 1/2-inch drive
- Socket, 1/2-inch drive, 5/8-inch
- Wrench, box-end, 5/8-inch
- Wrench, open-end, 1 1/8-inch

Equipment Condition

- Wheel and tire removed (page 3-6).
- Hub and brakedrum removed (page 4-144).

HUB AND BRAKEDRUM REPLACEMENT, M119A - CONTINUED

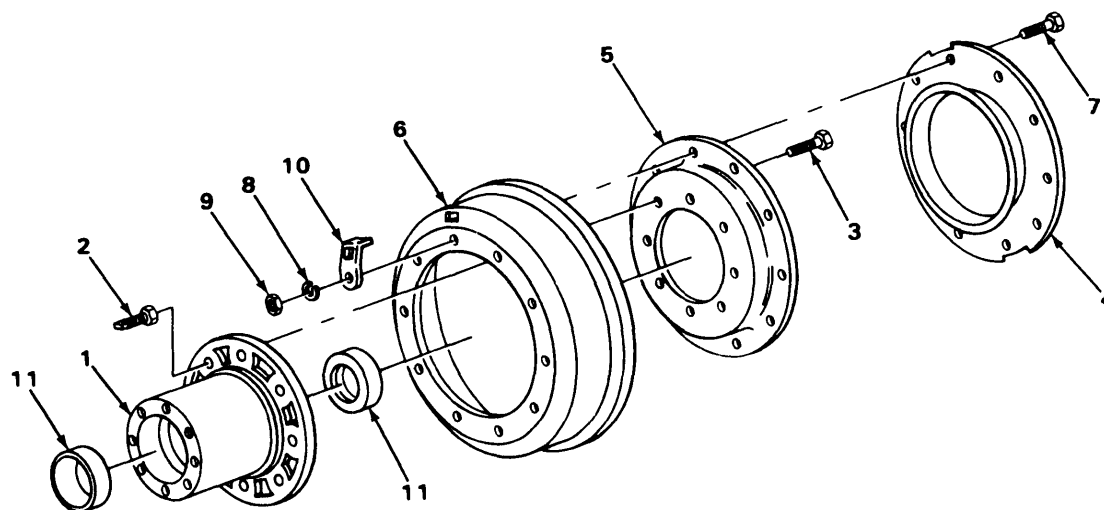
LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
1. Hub(1)	Six nut caps (2)	Using 1 1/8-inch open-end wrench, unscrew and take out.
2.	Six wheel bolts (3)	Using 1-pound ball-peen hammer and brass driftpin, tap out.
3.	Oil slinger (4), adapter plate (5), and brakedrum (6)	Take out.
4. Oil slinger(4) to brakedrum (6)	10 bolts (7), 10 lockwashers (8), 10 nuts (9), and inspection cover (10)	Using 5/8-inch socket, ratchet handle with 1/2-inch drive, and 5/8-inch box-end wrench, unscrew and take out.
5. Brakedrum (6)	Oil slinger (4) and adapter plate (5)	Take out.

NOTE

Bearing cups should be removed only if replacement is necessary.

Bearing cups should always be replaced if bearing cones are being replaced.

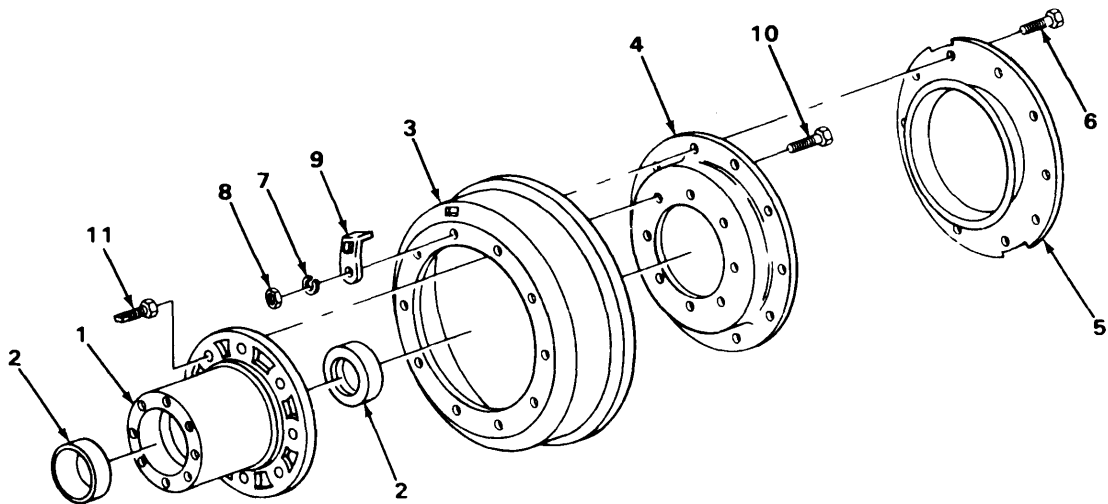
6. Hub (1)	Two bearing Cups(n)	Using 1-pound ball-peen hammer and brass driftpin, tap out.
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HUB AND BRAKEDRUM REPLACEMENT, M119A - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
7. Hub (1)	Two bearing cups (2)	Using 1-pound ball-peen hammer and brass driftpin, tap in.	
8. Brakedrum (3)	Adapter plate (4) and oil slinger (5)	Place in position.	
9. Adapter plate (4) to brakedrum (3)	10 bolts (6), 10 lockwashers (7), 10 nuts (8), and inspection cover (9)	Using 5/8-inch socket, ratchet handle with 1/2-inch drive, and 5/8-inch box-end wrench, screw in and tighten.	
10. Hub (1) to brakedrum (3)	Brakedrum (3), adapter plate (4), and oil slinger (5)	Place in position.	
11. Hub (1)	Six wheel bolts (10)	Using 1-pound ball-peen hammer and brass driftpin, tap in.	
12.	Six nut caps (11)	Using 1 1/8-inch open-end wrench, screw in and tighten.	



NOTE

FOLLOW-ON MAINTENANCE:

- 1. Install hub and brakedrum (page 4-144).
- 2. Install wheel and tire (page 3-6).
- 3. Adjust service brakes (page 4-77).

TASK ENDS HERE

Section X. FRAME AND TOWING ATTACHMENTS

Page

Spare Wheel Carrier 4-153

SPARE WHEEL CARRIER

This task covers:

- a. Disassembly (page 4-153)
- b. Assembly (page 4-154)

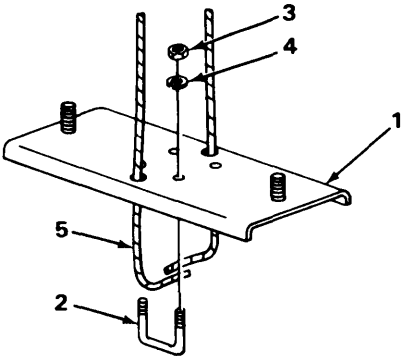
INITIAL SETUP

Tools	Equipment	Condition
Pliers, diagonal-cutting Pliers, slip-joint, 6-inch Wrench, box-end, 7/16-inch Wrench, box-end, 3/4-inch		Spare wheel removed (page 3-4).
Materials/Parts		
Cotter pin		

LOCATION	ITEM	ACTION	REMARKS
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DISASSEMBLY

1. Plate (1)	Two U-bolts (2), four nuts (3), and lockwashers (4)	Using 7/16-inch box-end wrench, unscrew and take out.
2.	Wire rope (5) and plate (1)	Take out.

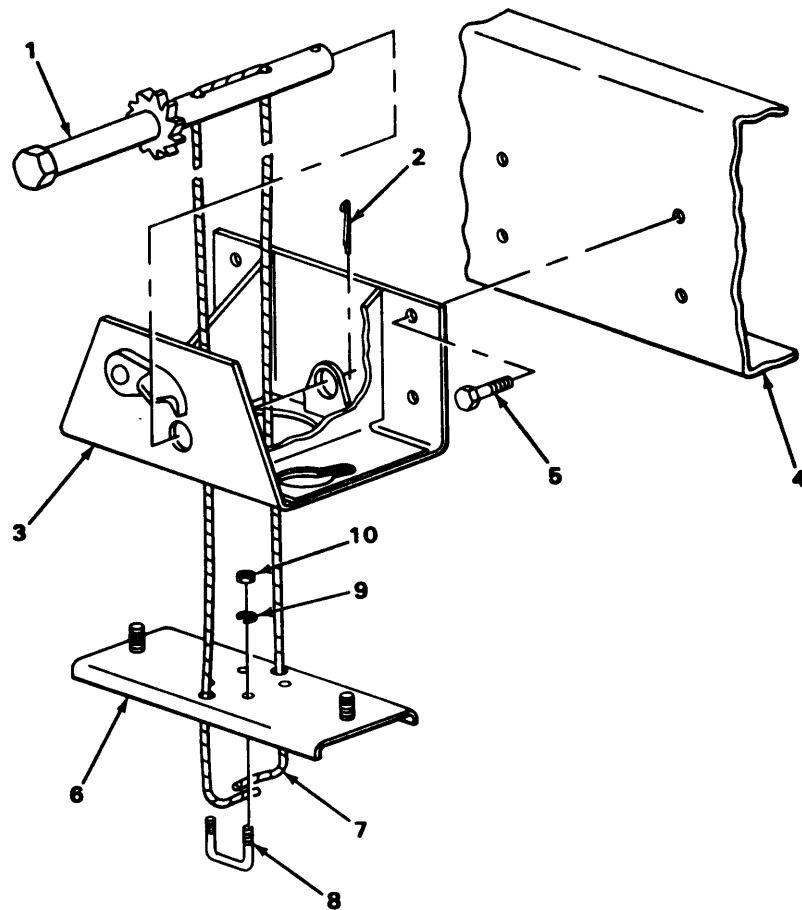


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SPARE WHEEL CARRIER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY – CONTINUED		
3. Ratchet wheel (1)	Cotter pin (2)	Using diagonal-cutting pliers, take out. Discard.
4. Body (3)	Ratchet wheel (1)	Remove.
5. Curbside rail (4)	Four bolts (5)	Using 3/4-inch box-end wrench, unscrew and take out.
6.	Body (3)	Take out.
ASSEMBLY		
7. Curbside rail (4)	Body (3)	Place in position.
8.	Four bolts (5)	Using 3/4-inch box-end wrench, screw in and tighten.
9. Body (3)	Ratchet wheel (1)	Slide ratchet wheel into position.
10. Ratchet wheel (1)	New cotter pin (2)	Using 6-inch slip-joint pliers, put in.
NOTE		
Leave U-bolts loose to allow ends of wire rope to be installed between plate and U-bolts while performing step 15.		
11. Body (3) and plate (6)	Wire rope (7) and two U-bolts (8)	Place in position.
12.	Two U-bolts (8), four lockwashers (9), and nuts (10)	Using 7/16-inch box-end wrench, screw in and tighten.

SPARE WHEEL CARRIER - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install spare wheel (page 3-4).

TASK ENDS HERE

Section XI. TIRES AND TUBES

NOTE

Refer to TM 9-2610-200-14, Operator's, Unit, Direct Support, and General Support Maintenance Manual for Care, Maintenance, Repair, and inspection of Pneumatic Tires and Inner Tubes, for tire and tube repair.

Section XII. BODY

	Page		Page
Doorframe, M119 and M119A1	4-157	Rear Door, Left, M119 and M119A1	4-174
Floor	4-159	Rear Door, Right, M119and M119A1	4-167
Interior Panels, M119 and M119A1	4-156	Rear Step, M118A1	4-164
Mud Guard.....	4-165	Rear Step, M119 and M119A1	4-162

INTERIOR PANELS, M119 AND M119A1

This task covers:

- a. Removal (page 4-156)
- b. Installation (page 4-156)

INITIAL SETUP

Tools	Personnel Required
Screwdriver, cross-tip, number two	Two

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

REMOVAL

NOTE

The 12 side wall and 2 front wall interior panels are attached with the same amount of hardware. Procedure given for one panel is typical for all.

1. Panel A (1) to body (2)	62 screws (3)	Using number two cross-tip screwdriver, unscrew and take out.
2. Body (2)	Panel A (1)	With assistance, take off.

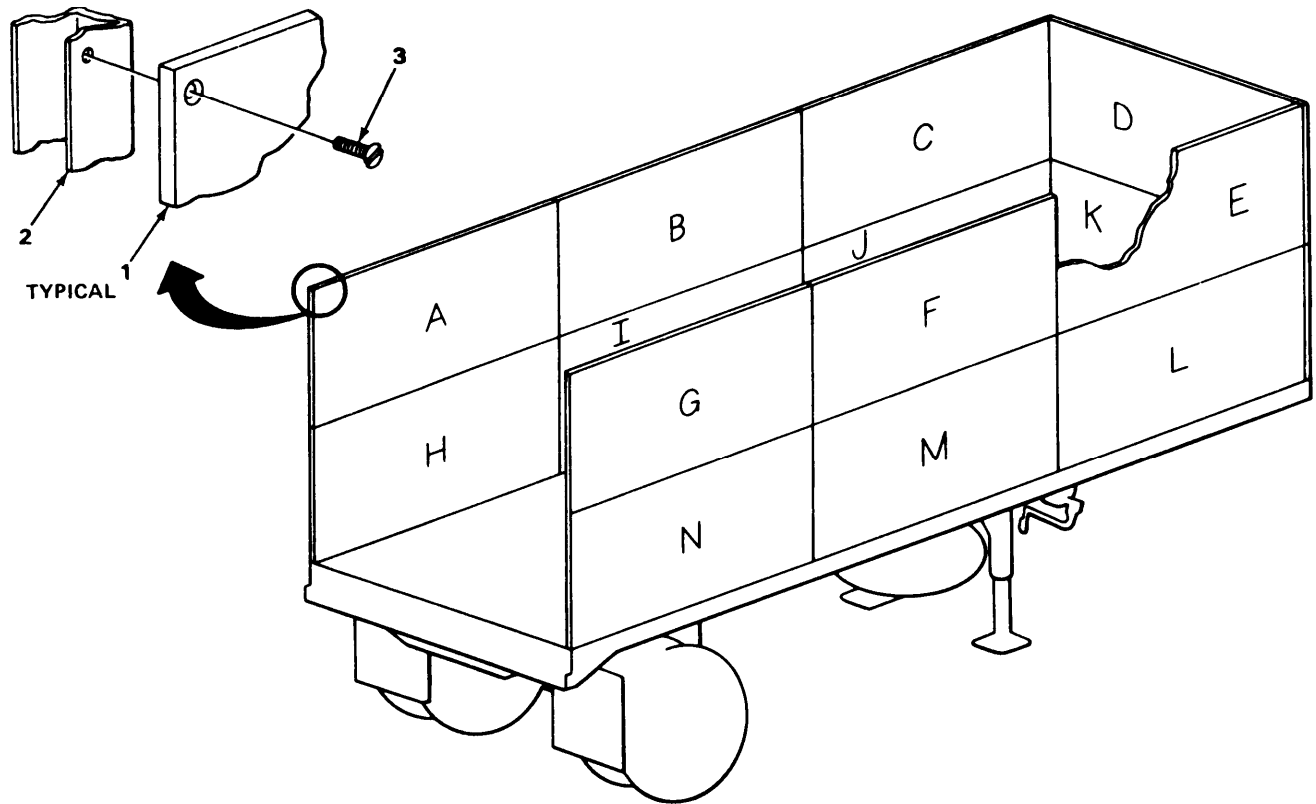
INSTALLATION

3. Body (2)	Panel A (1)	With assistance, place in position.
4. Panel A (1) to body (2)	62 screws (3)	Using number two cross-tip screwdriver, screw in and tighten.

NOTE

Alphabetical callouts A thru N are used to identify each interior panel.

INTERIOR PANELS, M119 AND M119A1 - CONTINUED



TASK ENDS HERE

DOORFRAME, M119 AND M119A1

This task covers:

- a. Removal (page 4-158)
- b. Installation (page 4-156)

INITIAL SETUP

Tools

Screwdriver, cross-tip, number two

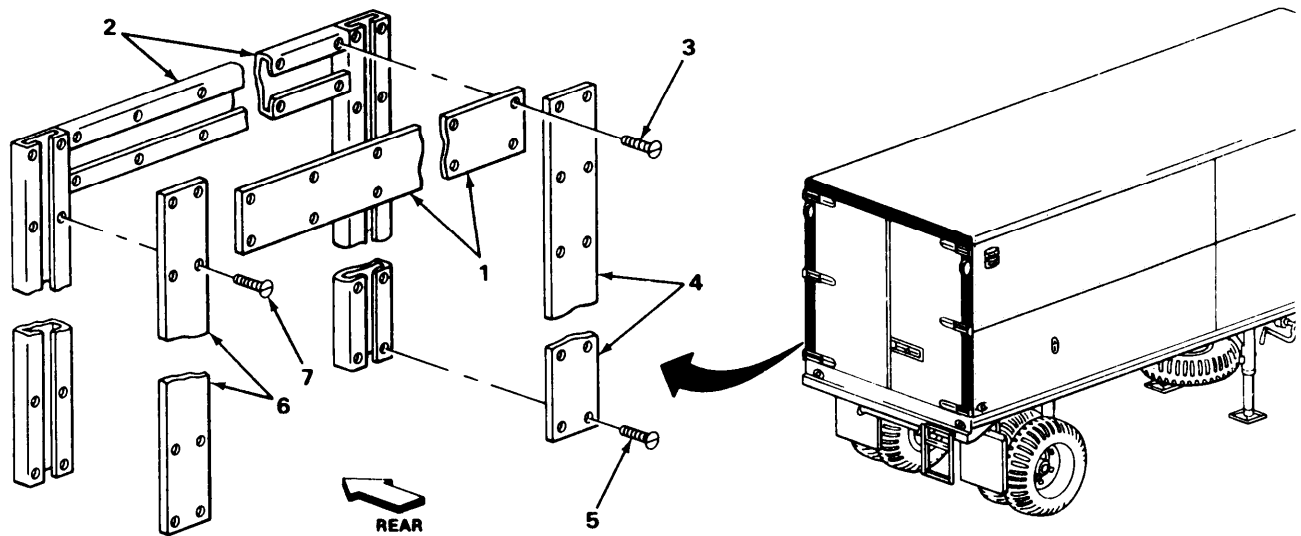
Equipment Condition

Dome light switch removed (page 4-16 or 4-17).

DOORFRAME, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Top strip (1) to body (2)	32 screws (3)	Using number two cross-tip screwdriver, unscrew and take out.
2. Body (2)	Top strip (1)	Take off.
3. Roadside strip (4) to body (2)	30 screws (5)	Using number two cross-tip screwdriver, unscrew and take out.
4. Body (2)	Roadside strip (4)	Take off.
5. Curbside strip (6) to body (2)	30 screws (7)	Using number two cross-tip screwdriver, unscrew and take out.
6. Body (2)	Curbside strip (6)	Take off.
INSTALLATION		
7. Body (2)	Curbside strip (6)	Place in position.
8. Curbside strip (6) to body (2)	30 screws (7)	Using number two cross-tip screwdriver, screw in and tighten.
9. Body (2)	Roadside strip (4)	Place in position.
10. Roadside strip (4) to body (2)	30 screws (5)	Using number two cross-tip screwdriver, screw in and tighten.
11. Body (2)	Top strip (1)	Place in position.
12. Top strip (1) to body (2)	32 screws (3)	Using number two cross-tip screwdriver, screw in and tighten.

DOORFRAME, M119 AND M119A1 CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install dome light switch (page 4-16 or 4-17).

TASK ENDS HERE

FLOOR

This task covers:

- a. Removal (page 4-160)
- b. Installation (page 4-160)

INITIAL SETUP

Tools

Extension, 3/8-inch drive, 6-inch
Handle, ratchet, 3/8-inch drive
Socket, deep, 3/8-inch drive, 1/2-inch

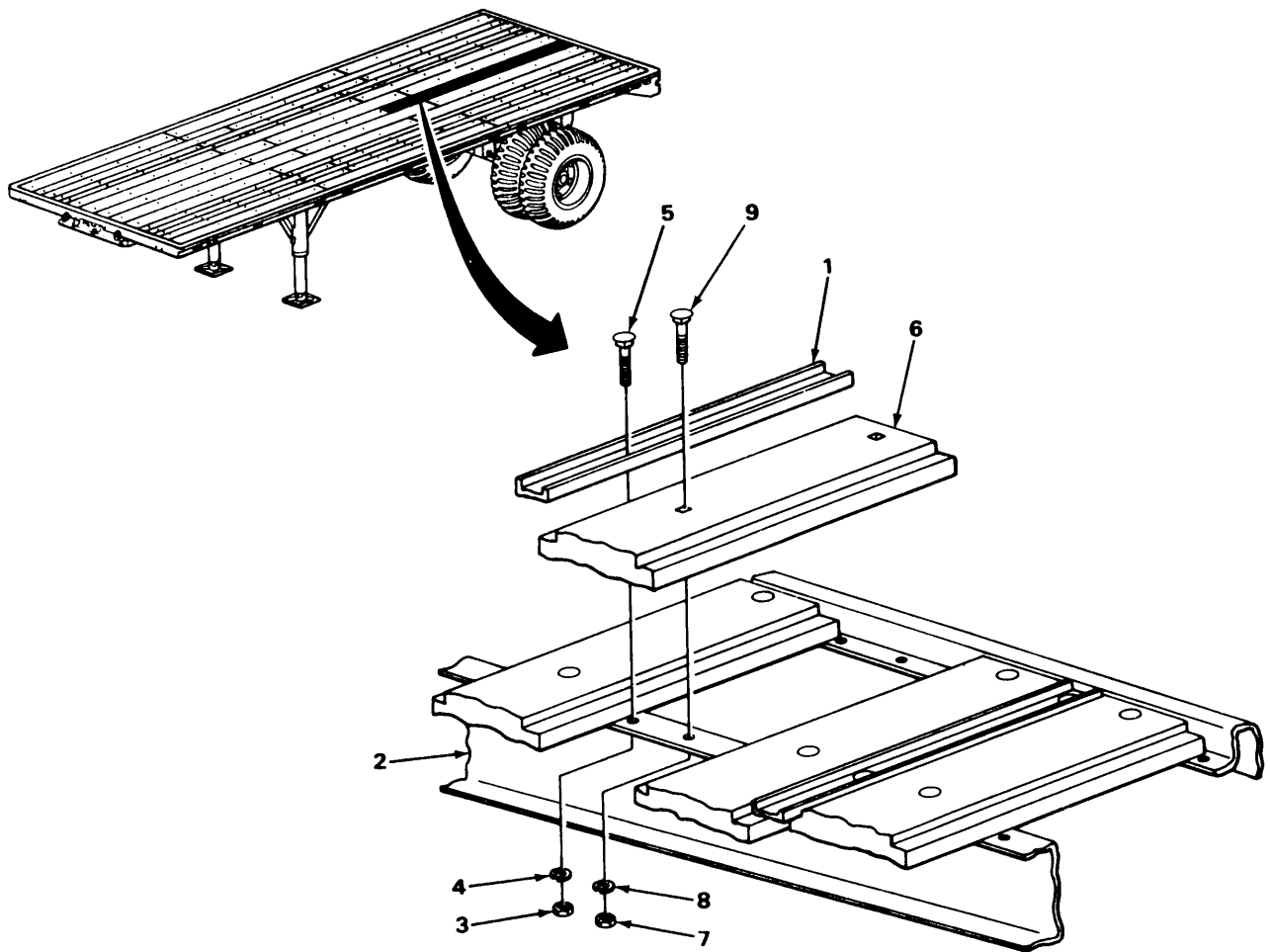
Personnel Required

Two

FLOOR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. 14 skid strips (1) to chassis (2)	190 nuts (3) and 190 lockwashers (4)	Using 6-inch extension, 1/2-inch deep socket, and ratchet handle with 3/8-inch drive, unscrew and take out.
2.	190 square neck bolts (5)	With assistance, take out.
3. Chassis (2)	14 skid strips (1)	Take off.
4. 15 floor boards (6) to chassis (2)	168 nuts (7) and 168 lockwashers (8)	Using 6-inch extension, 1/2-inch deep socket, and ratchet handle with 3/8-inch drive, unscrew and take out.
5.	168 floor boards (6)	With assistance, take out.
6. Chassis (2)	15 floor boards (6)	Take out.
INSTALLATION		
7. Chassis (2)	15 floor boards (6)	Place in position.
8. 15 floor boards (6) to chassis (2)	168 screws (9)	Place in position.
9.	168 nuts (7) and 168 lockwashers (8)	Using 6-inch extension, 1/2-inch deep socket, and ratchet handle with 3/8-inch drive, screw in and tighten.
10. Chassis (2)	14 skid strips (1)	Place in position.
11. 14 skid strips (1) to chassis (2)	190 square neck bolts (5)	Place in position.
12.	190 nuts (3) and 190 lockwashers (4)	Using 6-inch extension, 1/2-inch deep socket, and ratchet handle with 3/8-inch drive, screw in and tighten.

FLOOR - CONTINUED



TASK ENDS HERE

REAR STEP, M119 AND M119A1

This task covers:

- a. Removal (page 4-162)
 - b. Installation (page 4-163)
-

INITIAL SETUP

Tools	Materials/Parts
Pliers, diagonal-cutting Pliers, slip-joint, 6-inch	Cotter pins (three required)

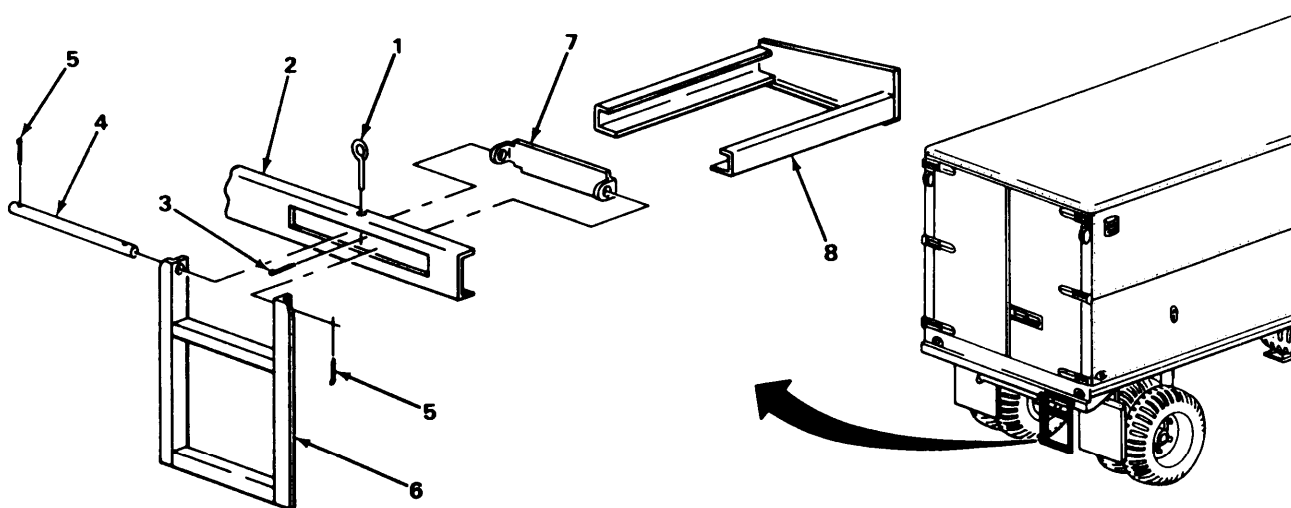
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

1. Pin (1) to rear crossmember (2)	Cotter pin (3)	Using diagonal-cutting pliers, take out. Discard cotter pin.
2. Rear cross-member (2)	Pin (1)	Take out.
3. Pin (4)	Two cotter pins (5)	Using diagonal-cutting pliers, take out. Discard cotter pins.
4. Step (6) to support (7)	Pin (4)	Take out.
5. support (7)	Step (6)	Take off.
6. Rear cross-member (2) and track (8)	Support (7)	Take out.

REAR STEP, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
7. Rear cross-member (2) and track (8)	support (7)	Put in.
8. Support (7)	Step (6)	Place in position.
9. Step (6) and support (7)	Pin (4)	Put in.
10. Pin (4)	Two new cotter pins (5)	Using 6-inch slip-joint pliers, put in.
11. Rear cross-member (2)	Pin (1)	Put in.
12. Pin (1)	New cotter pin (3)	Using 6-inch slip-joint pliers, put in.



TASK ENDS HERE

REAR STEP, M118A1

This task covers:

- a. Removal (page 4-164)
- b. Installation (page 4-164)

INITIAL SETUP

Tools

- Handle, ratchet, 3/8-inch drive
- Socket, 3/8-inch drive, 7/16-inch
- Wrench, box-end, 7/16-inch

LOCATION		ITEM	ACTION	REMARKS
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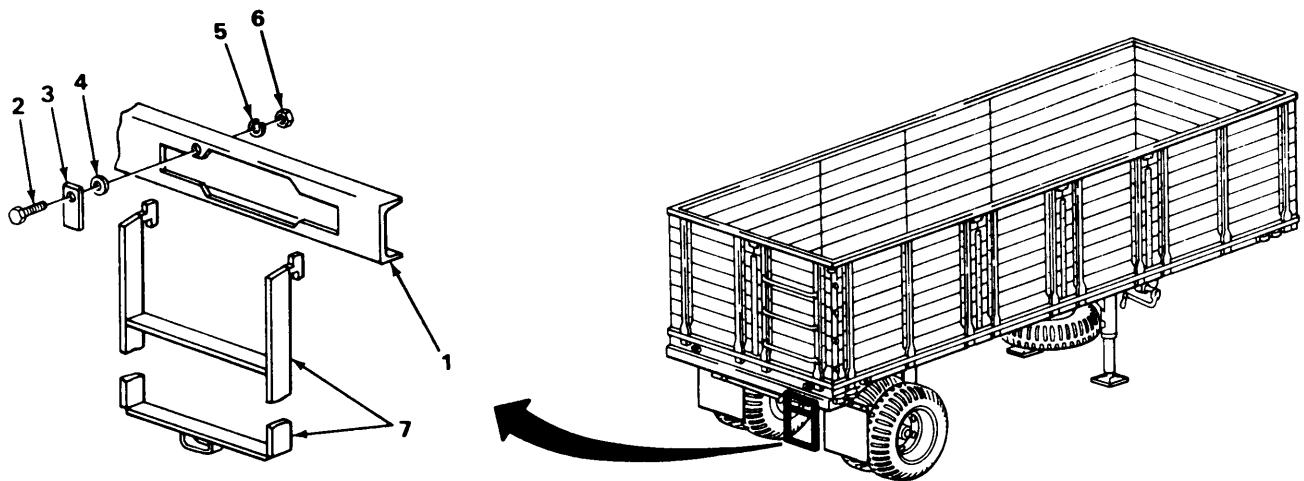
REMOVAL

- | | | |
|-----------------------|--|---|
| 1. Rear step slot (1) | Screw (2), latch (3), flat washer (4), lockwasher (5), and nut (6) | Using 7/16-inch socket, ratchet handle with 3/8-inch drive, and 7/16-inch box-end wrench, unscrew and take out. |
| 2. | Step (7) | Take off. |

INSTALLATION

- | | | |
|-----------------------|--|---|
| 3. Rear step slot (1) | Step (7) | Place in position. |
| 4. | Screw (2), latch (3), fiat washer (4), lockwasher (5), and nut (6) | Using 7/16-inch socket, ratchet handle with 3/8-inch drive, and 7/16-inch box-end wrench, screw in and tighten. |

REAR STEP, M118A1 - CONTINUED



TASK ENDS HERE

MUD GUARD

This task covers:

- a. Removal (page 4-166)
 - b. Installation (page 4-166)
-

INITIAL SETUP

Tools

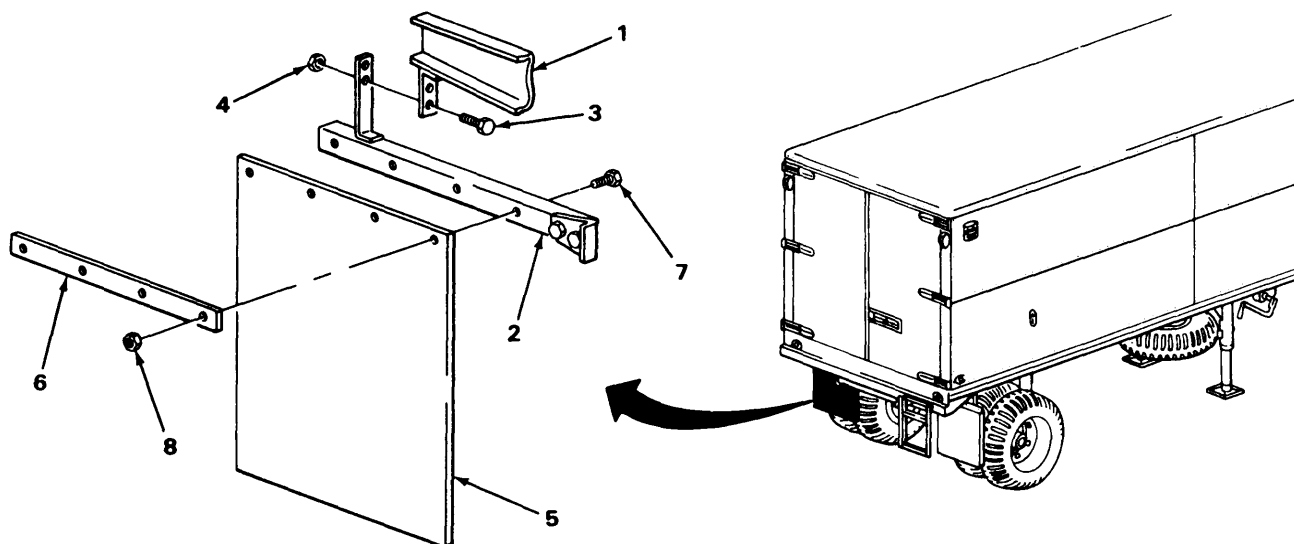
Handle, ratchet, 3/8-inch drive
 Socket, 3/8-inch drive, 7/16-inch
 Socket, 3/8-inch drive, 1/2-inch
 Wrench, box-end, 7/16-inch
 Wrench, box-end, 1/2-inch

MUD GUARD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Bracket (1) to retainer bracket (2)	Two screws (3) and two nuts (4)	Using 7/16-inch socket, ratchet handle with 3/8-inch drive, and 7/16-inch box-end wrench, unscrew and take out.
2. Bracket (1)	Retainer bracket (2)	Remove.
3. Mud guard (5) and retainer (6)	Four bolts (7) and four nuts (8)	Using 1/2-inch socket, ratchet handle with 3/8-inch drive, and 1/2-inch box-end wrench, unscrew and take out.
4. Retainer bracket (2)	Mud guard (5) and retainer (6)	Take off.
INSTALLATION		
5. Retainer bracket (2)	Mud guard (5) and retainer (6)	Place in position.
6. Retainer (6) and mud guard (5) to retainer bracket (2)	Four bolts (7) and four nuts (8)	Using 1/2-inch socket, ratchet handle with 3/8-inch drive, and 1/2-inch box-end wrench, screw in and tighten.
7. Bracket (1)	Retainer (6), mud guard (5), and retainer bracket (2)	Place in position.

MUD GUARD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
8. Retainer bracket (2) to bracket (1)	Two screws (3) and two nuts (4)	Using 7/16-inch socket, ratchet handle with 3/8-inch drive, and 7/16-inch box-end wrench, screw in and tighten.



TASK ENDS HERE

REAR DOOR, RIGHT, M119 AND M119A1

This task covers:

- a. Removal (page 4-168)
- b. Disassembly (page 4-168)
- c. Assembly (page 4-170)
- d. Installation (page 4-172)

REAR DOOR, RIGHT, M119 AND M119A1 - CONTINUED**INITIAL SETUP****Tools**

Hammer, ball-peen, 1-pound
 Handle, ratchet, 1/2-inch drive
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Punch, small
 Screwdriver, cross-tip, number two
 Socket, 1/2-inch drive, 3/8-inch
 Socket, 1/2-inch drive, 9/16-inch
 Wrench, box-end, 3/8-inch
 Wrench, box-end, 9/16-inch

Materials/Parts

Cotter pins (three required)

Personnel Required

Two

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

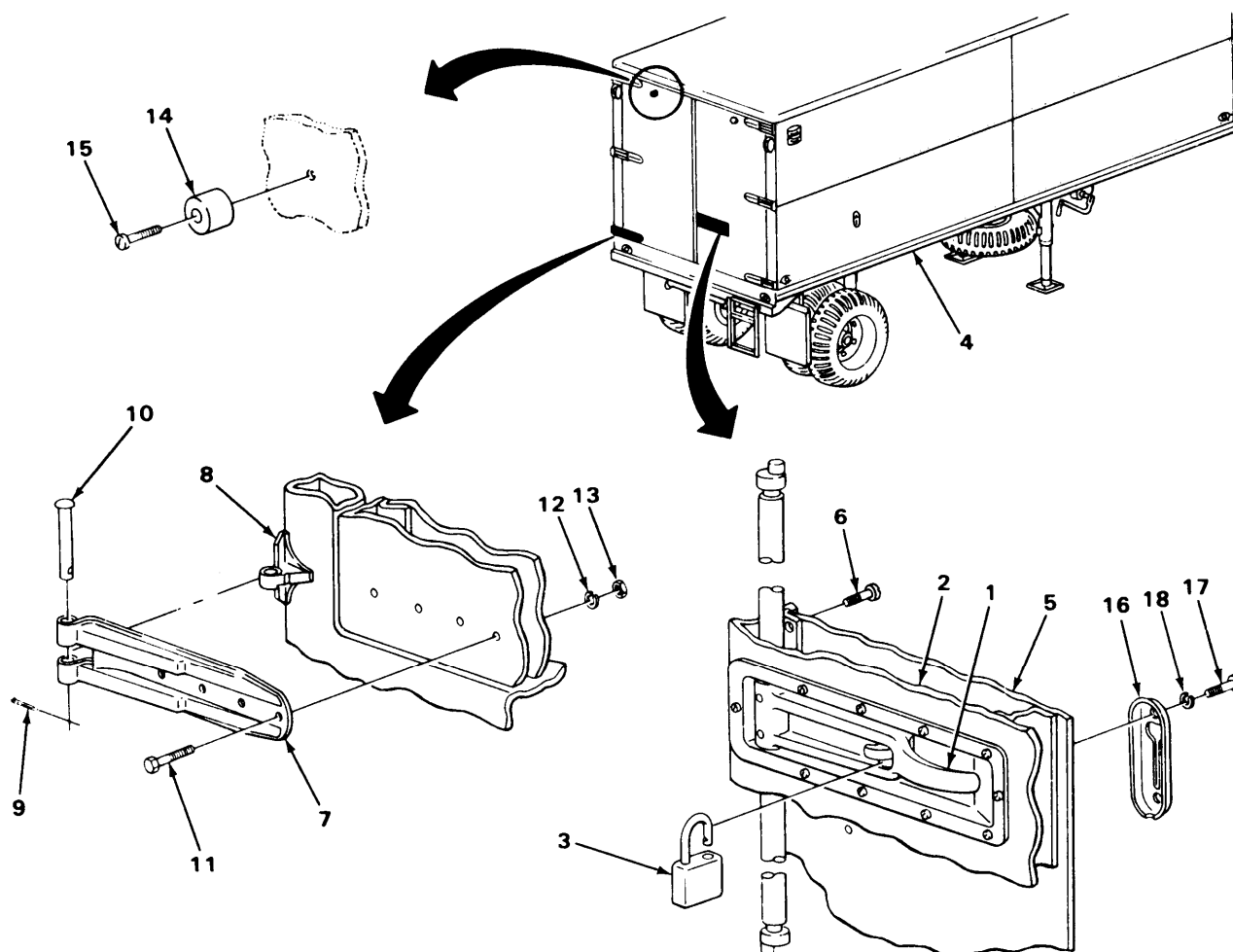
- | | | |
|---|---|--|
| 1. Lock handle (1)
to door (2) | Lock (3) | Open and take off. |
| 2. Door (2) | Lock handle (1) | Place in released position. |
| 3. Body (4) | Door (2) | Open. |
| 4. Panel (5) | 30 screws (6) | Using number two cross-tip screwdriver,
unscrew and take out. |
| 5. Door (2) | Panel (5) | Take off. |
| 6. Three female hinges
(7) to three male
hinges (8) | Three cotter pins
(9) and three hinge
pins (10) | Using diagonal-cutting pliers, take out.
Discard cotter pins. |
| 7. Body (4) | Door (2) | With assistance, take off. |

DISASSEMBLY

- | | | |
|---|---|---|
| 8. Three female hinges
(7) to door (2) | 12 screws (11), 12
lockwashers (12),
and 12 nuts (13) | Using 9/16-inch socket, ratchet handle
with 1/2-inch drive, and 9/16-inch
box-end wrench, remove. |
|---|---|---|

REAR DOOR, RIGHT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
9. Door (2)	Three female hinges (7)	Take off.	
10. stop (14) to door (2)	Screw (15)	Using number two cross-tip screwdriver, take out.	
11. Door (2)	stop (14)	Take off.	
12. Holdback (16) to door (2)	Two screws (17) and two lockwashers (18)	Using number two cross-tip screwdriver, unscrew and take out.	



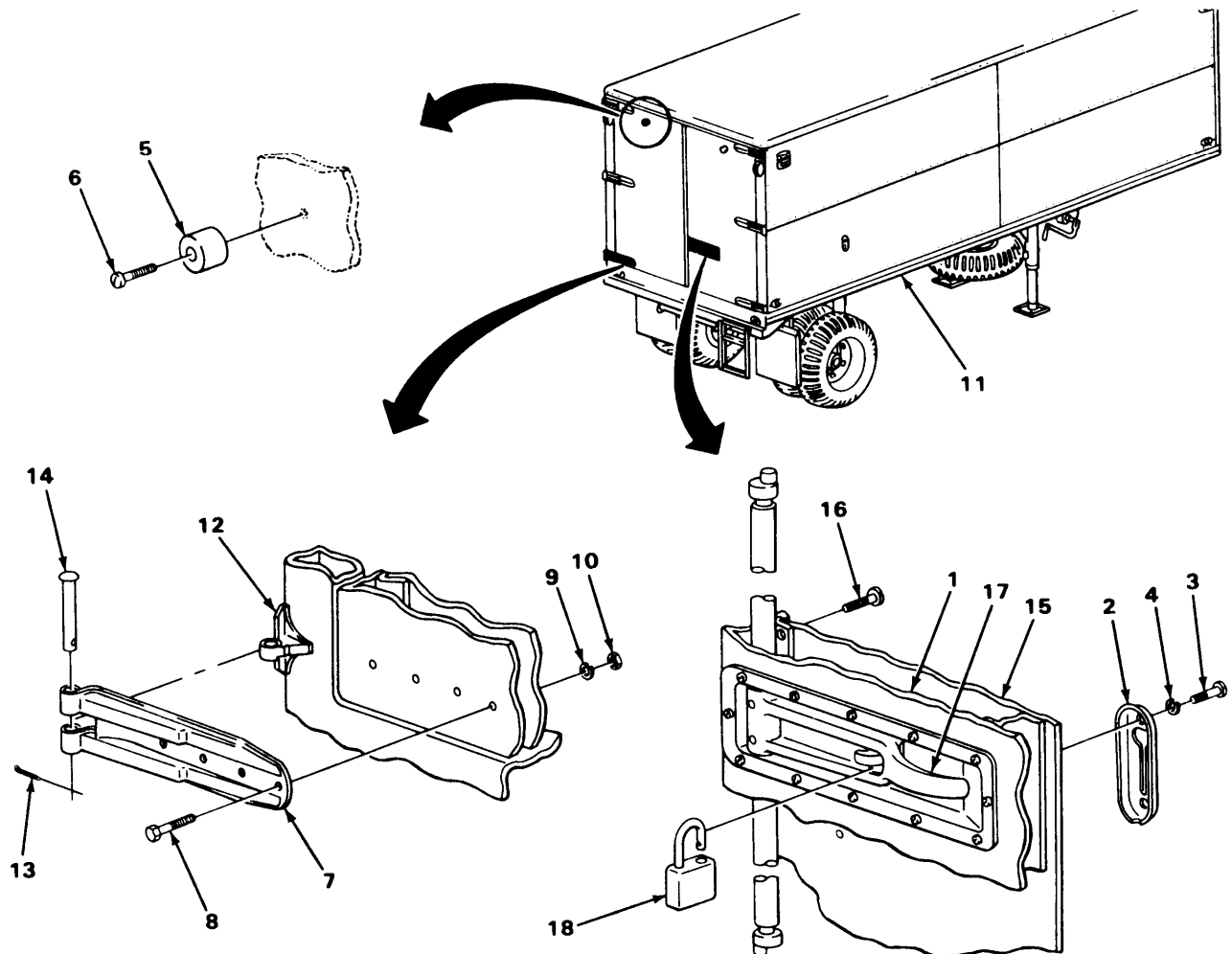
REAR DOOR, RIGHT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY – CONTINUED		
13. Door (1)	Holdback (2)	Take off.
14. Lower locking rod (3) to handle (4)	Pin (5)	Using I-pound ball-peen hammer and small punch, tap out.
15. Handle (4)	Lower locking rod (3), flat washer (6), and rubber washer (7)	Take out.
16. Upper locking rod (8) to handle (4)	Pin (9)	Using I-pound ball-peen hammer and small punch, tap out.
17. Handle (4)	Upper locking rod (8)	Take out.
18. Latch (10)	Handle (4)	Take out.
19. Latch (10) to well (11)	Three screws (12), three lockwashers (13), and three nuts (14)	Using 3/8-inch socket, ratchet handle with 1/2-inch drive, and 3/8-inch box-end wrench, unscrew and take out.
20. Well (11)	Latch (10)	Take out.
21. Well (11) to door (1)	12 screws (15)	Using number two cross-tip screwdriver, unscrew and take out.
22. Door (1)	Well (11)	Take out.
ASSEMBLY		
23. Door (1)	Well (n)	Place in position.
24. Well (11) to door (1)	12 screws (15)	Using number two cross-tip screwdriver, screw in and tighten.
25. Well (11)	Latch (10)	Place in position.
26. Latch (10) to well (11)	Three screws (12), three lockwashers (13), and three nuts (14)	Using 3/8-inch socket, ratchet handle with 1/2-inch drive, and 3/8-inch box-end wrench, screw in and tighten.
27. Latch (10)	Handle (4)	Place in position.

REAR DOOR, RIGHT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY – CONTINUED		
32. Door (1)	Holdback (2)	Place in position.
33. Holdback (2) to door (1)	Two screws (3) and two lockwashers (4)	Using number two cross-tip screwdriver, screw in and tighten.
34. Door (1)	stop (5)	Place in position.
35. stop (5) to door (1)	Screw (6)	Using number two cross-tip screwdriver, screw in and tighten.
36. Door (1)	Three female hinges (7)	Place in position.
37. Three female hinges (7) to door (1)	12 screws (8), 12 lockwashers (9), and 12 nuts (10)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box-end wrench, screw in and tighten.
INSTALLATION		
36. Body (11)	Door (1)	With assistance, place in position.
39. Three female hinges (7) to three male hinges (12)	Three new cotter pins (13) and three hinge pins (14)	Using 6-inch slip-joint pliers, put in.
40. Door (1)	Panel (15)	Place in position.
41. Panel (15) to door (1)	30 screws (16)	Using number two cross-tip screwdriver, screw in and tighten.
42. Body (11)	Door (1)	Close.
43. Door (1)	Lock handle (17)	Place in closed position.
44. Lock handle (17) to door (1)	Lock (18)	Place in position and close.

REAR DOOR, RIGHT, M119 AND M119A1 - CONTINUED



TASK ENDS HERE

REAR DOOR, LEFT, M119 AND M119A1

This task covers:

- | | |
|-----------------------------|------------------------------|
| a. Removal (page 4-174) | c. Assembly (page 4-176) |
| b. Disassembly (page 4-174) | d. Installation (page 4-176) |

INITIAL SETUP**Tools**

Extension, 1/2-inch drive, 6-inch
 Handle, ratchet, 1/2-inch drive
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Screwdriver, cross-tip, number two
 Screwdriver, flat-tip, 3/8-inch
 Socket, 1/2-inch drive, 7/16-inch
 Socket, 1/2-inch drive, 9/16-inch
 Wrench, box-end, 9/16-inch

Materials/Parts

Cotter pins (three required)

Personnel Required

Two

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

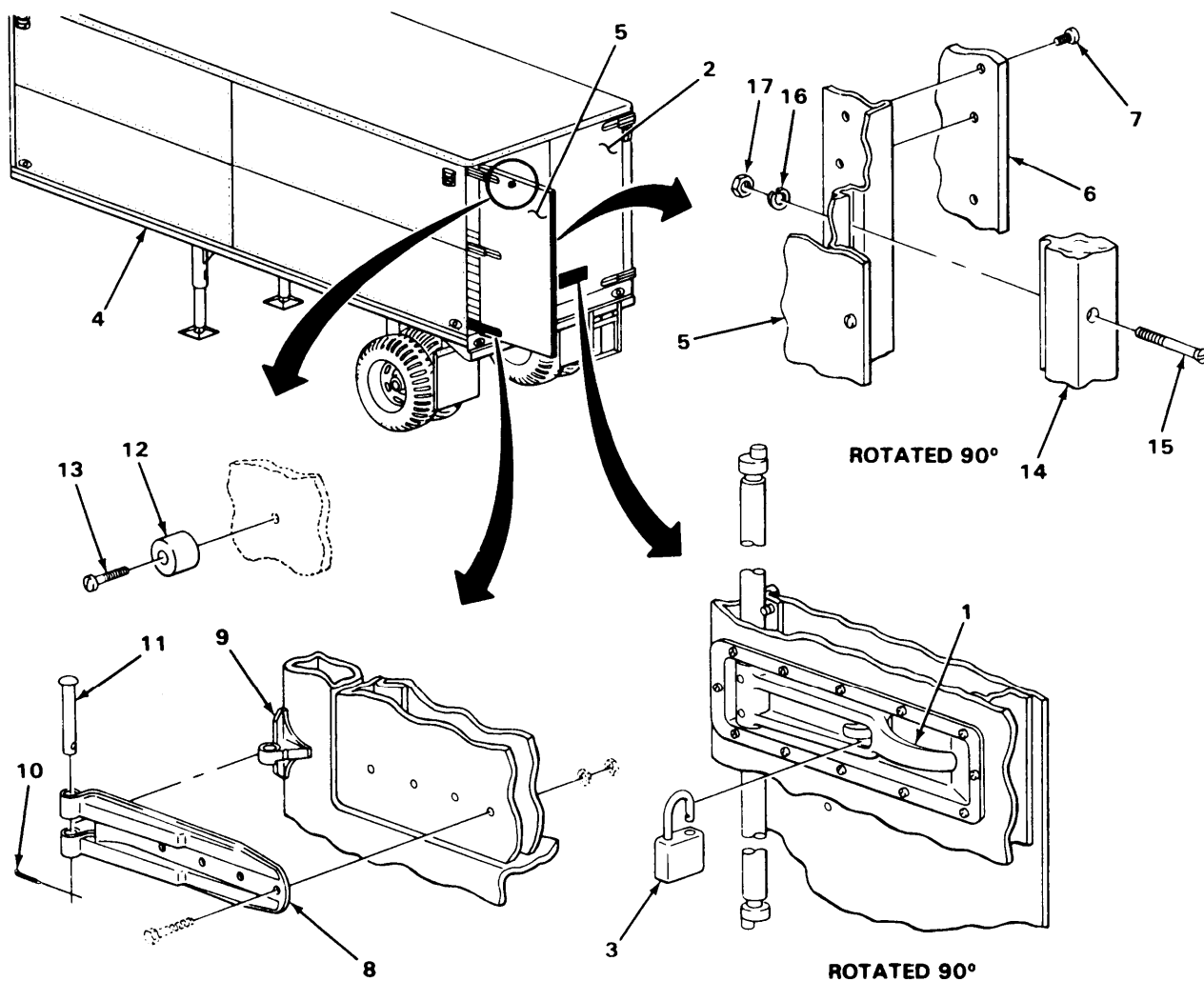
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|---|--|---|
| 1. Lock handle (1) to door (2) | Lock (3) | Open and take off. |
| 2. Door (2) | Lock handle (1) | Place in released position. |
| 3. Body (4) | Doors (2 and 5) | Open.
Door (2) must be opened first. |
| 4. Panel (6) to door (5) | 30 screws (7) | Using number two cross-tip screwdriver, unscrew and take out. |
| 5. Door (5) | Panel (6) | Take off. |
| 6. Three hinges (8) to three hinges (9) | Three cotter pins (10) and three hinge pins(n) | Using diagonal-cutting pliers, take out.
Discard cotter pins. |
| 7. Body (4) | Door (5) | With assistance, take off. |

DISASSEMBLY

- | | | |
|--------------------------|------------|---|
| 8. Stop (12) to door (5) | Screw (13) | Using number two cross-tip screwdriver, unscrew and take out. |
|--------------------------|------------|---|

REAR DOOR, LEFT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
9. Door (5)	stop (12)	Take off.	
10. Slam (14) to door (5)	Six screws (15), six lockwashers (16), and six nuts (17)	Using 3/8-inch flat-tip screwdriver, 7/16-inch socket, ratchet handle with 1/2-inch drive, and 6-inch extension, unscrew and take out.	
11. Door (5)	Slam (14)	Take off.	

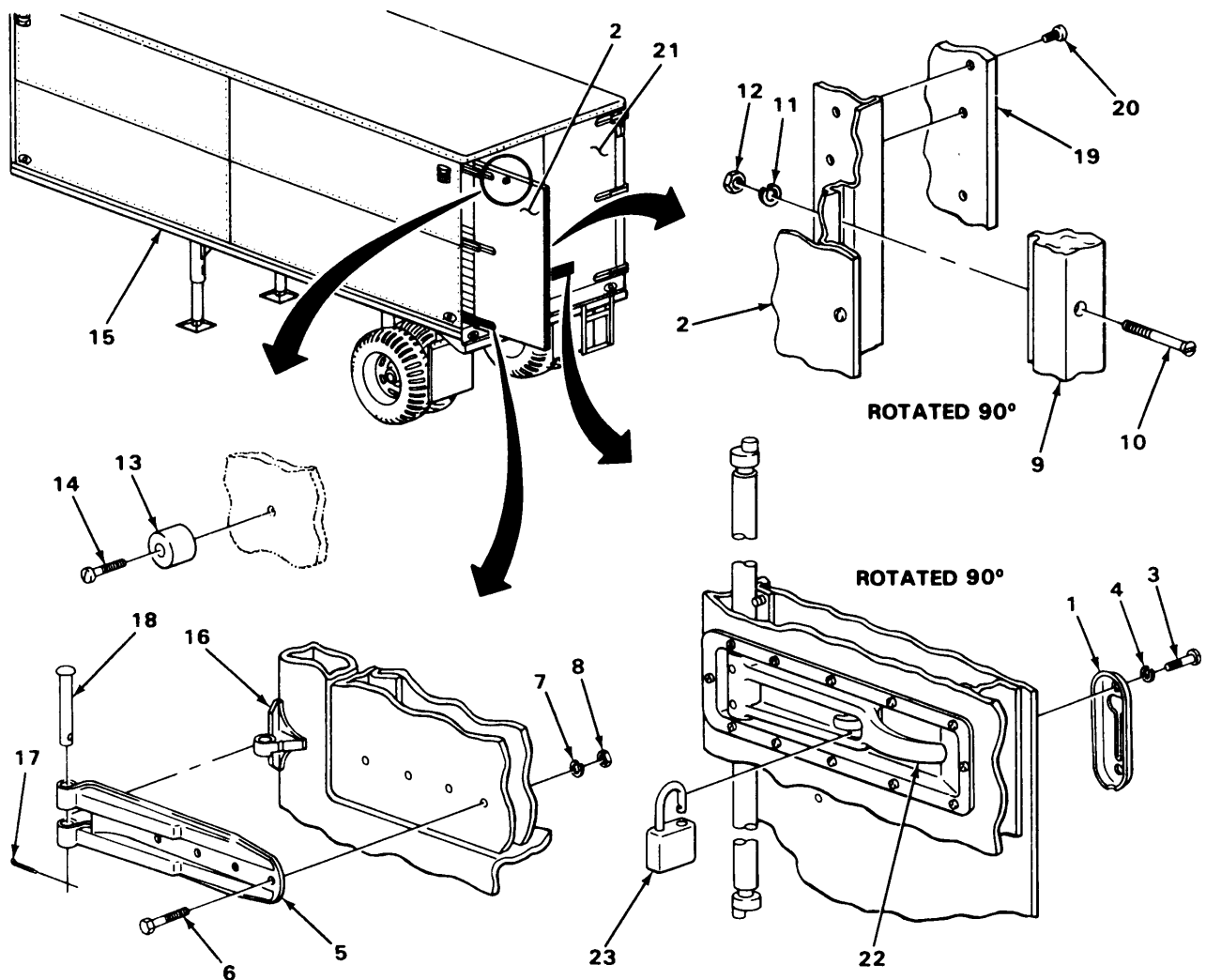


REAR DOOR, LEFT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY - CONTINUED		
12. Holdback (1) to door (2)	Two screws (3) and two lockwashers (4)	Using number two cross-tip screwdriver, unscrew and take out.
13. Door (2)	Holdback (1)	Take off.
14. Three hinges (5) to door (2)	12 screws (6), 12 lockwashers (7), and 12 nuts (8)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box-end wrench, unscrew and take out.
15. Door (2)	Three hinges (5)	Take off.
ASSEMBLY		
16. Door (2)	Three hinges (5)	Place in position.
17. Three hinges (5) to door (2)	12 screws (6), 12 lockwashers (7), and 12 nuts (8)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box-end wrench, screw in and tighten.
18. Door (2)	Holdback (1)	Place in position.
19. Holdback (1) to door (2)	Two screws (3) and two lockwashers (4)	Using number two cross-tip screwdriver, screw in and tighten.
20. Door (2)	Slam (9)	Place in position.
21. Slam (9) to door (2)	Six screws (10), six lockwashers (11), and six nuts (12)	Using 3/8-inch flat-tip screwdriver, 7/16-inch socket, ratchet handle with 1/2-inch drive, and 6-inch extension, screw in and tighten.
22. Door (2)	stop (13)	Place in position.
23. Stop (13) to door (2)	Screw (14)	Using number two cross-tip screwdriver, screw in and tighten.
INSTALLATION		
24. Body (15)	Door (2)	With assistance, place in position.
25. Three hinges (5) to three hinges (16)	Three new cotter pins (17) and three hinge pins (18)	Using 6-inch slip-joint pliers, put in.
26. Door (2)	Panel (19)	Place in position.

REAR DOOR, LEFT, M119 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
27. Panel (19) to door (2)	30 screws (20)	Using number two cross-tip screwdriver, screw in and tighten.	
28. Body (15)	Doors (2 and 21)	Close.	
29. Door (2)	Lock handle (22)	Place in closed position.	
30. Lock handle (22)	Lock (23)	Place in position and close.	



TASK ENDS HERE

Section XIII. MISCELLANEOUS ACCESSORIES

	Page		Page
Data Plates	4-179	Reflector Replacement	4-178

REFLECTOR REPLACEMENT

This task covers:

- a. Reflector replacement, MI 19 and MI 19A1 (page 4-178)
- b. Reflector replacement, M 118A1 (page 4-179)

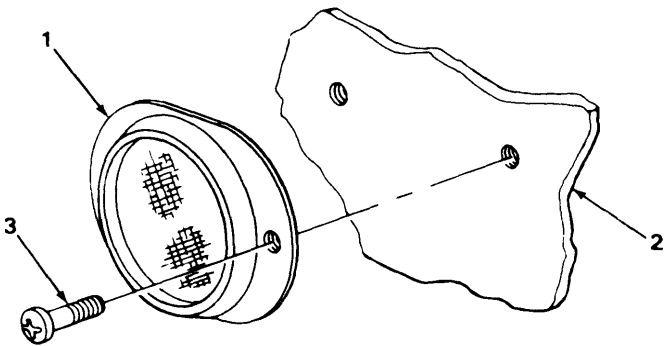
INITIAL SETUP

Tools	Materials/Parts
Screwdriver, cross-tip, number two	Reflectors (as required)
Screwdriver, flat-tip, 3/8-inch	
Wrench, open-end, 7/16-inch	

LOCATION	ITEM	ACTION	REMARKS
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REFLECTOR REPLACEMENT, MI 19 AND M119A1

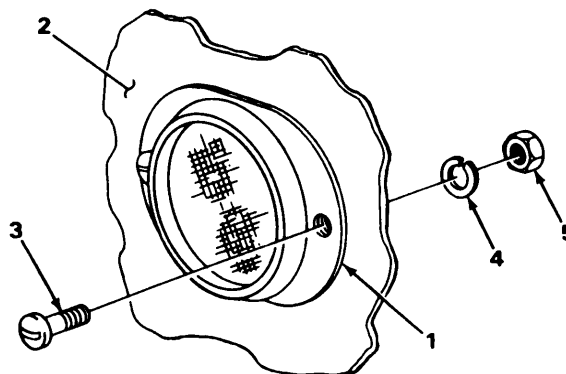
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|---------------------------------|-------------------|--|
| 1. Reflector (1)
to body (2) | Two screws (3) | Using number two cross-tip screwdriver,
unscrew and take out. |
| 2. Body (2) | Reflector (1) | Take off.
Discard reflector, if unserviceable. |
| 3. | New reflector (1) | Place in position. |
| 4. Reflector (1)
to body (2) | Two screws (3) | Using number two cross-tip screwdriver,
screw in and tighten. |



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REFLECTOR REPLACEMENT- CONTINUED

LOCATION	ITEM	ACTION REMARKS
REFLECTOR REPLACEMENT, M118A1		
5. Reflector (1) to body (2)	Two screws (3), two lockwashers (4), and two nuts (5)	Using 3/8-inch flat-tip screwdriver and 7/16-inch open-end wrench, unscrew and take off.
6. Body (2)	Reflector (1)	Take off. Discard reflector, if unserviceable.
7.	New reflector (1)	Place in position.
8. Reflector (1) to body (2)	Two screws (3), two lockwashers (4), and two nuts (5)	Using 3/8-inch flat-tip screwdriver and 7/16-inch open-end wrench, screw in and tighten.

**TASK ENDS HERE****DATA PLATES**

This task covers:

- a. Removal (page 4-180)
- b. Installation (page 4-180)

DATA PLATES- CONTINUED

INITIAL SETUP

Tools	Materials/Parts
Drill bit, 3/8-inch Drill, electric, 3/8-inch Hammer, ball-peen, 2-pound Punch, center, solid, 3/8-inch	Drivescrews (as required)

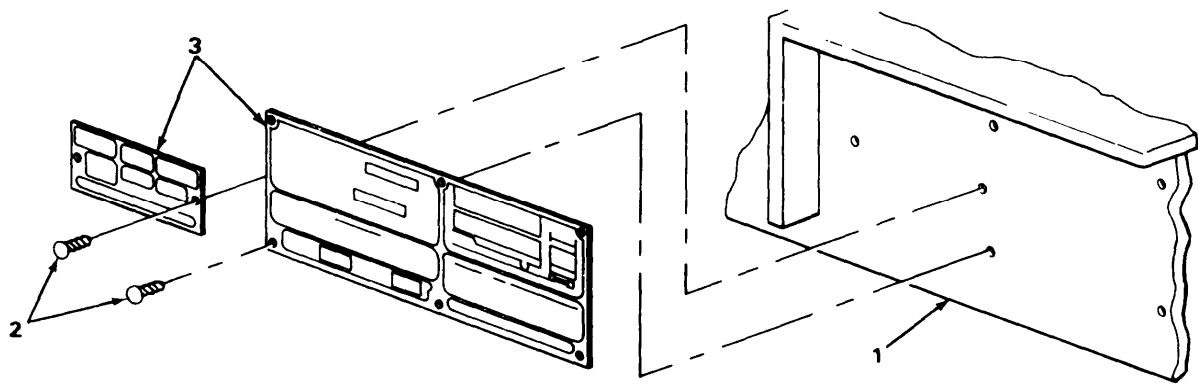
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1. Chassis frame (1)	Drivescrews (2)	a. Using 2-pound ball-peen hammer and 3/8-inch solid center punch, mark center of each drivescrew. b. Using 3/8-inch electric drill and 3/8-inch drill bit, drill off heads.
2.	Data plates (3)	Take off.

INSTALLATION

3. Chassis frame (1)	Data plates (3)	Place in position.
4.	Drivescrews (2)	Using 2-pound ball-peen hammer, tap in.



TASK ENDS HERE

Section XIV. PREPARATION FOR STORAGE AND SHIPMENT

	Page		Page
Inspection During Storage	4-181	Preservation	4-181
Packing, Shipment, and Storage	4-182		

PRESERVATION

When a trailer is received and has already been processed for domestic shipment, as indicated on DD Form 1397, the trailer does not have to be reprocessed for storage unless corrosion and deterioration are found during the inspection upon receipt. List all discrepancies found because of poor preservation, packaging, packing, marking, handling, loading, storage, or excessive preservation on SF 364. Repairs that cannot be handled by the receiving unit must have tags attached listing the needed repairs. A report of these conditions will be submitted by the unit commander for action by an ordnance maintenance unit.

Trailers to be prepared for administrative storage must be given a technical inspection and processed as described in TM 740-90-1 (Administrative Storage of Equipment).

The preferred type of storage for trailers is in a warehouse, or under cover in open sheds, whenever possible.

NOTE

Use TM 55-200, TM 55-601, and TM 743-200-1 as references for processing, storage, and shipment of material with the instructions contained in this section.

INSPECTION DURING STORAGE

Periodically perform a visual inspection on all trailers placed in storage. Remove any corrosion and clean, paint, and treat the area with the prescribed preservative.

NOTE

Touchup painting will be in accordance with TM 43-0139, Painting Instructions for Field Use.

Trailers must be reprocessed in accordance with TM 740-90-1 whenever the administrative storage period expires if they have not been issued for service or shipped to another unit.

Trailers 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 the trailer in accordance with TM 740-90-1 if inspection reveals any corrosion, or if anticipated in-transit weather conditions make it necessary.

Deprocess trailers to be placed in service in accordance with TM 740-90-1. Inspect and service the trailer in accordance with section III, Service Upon Receipt (page 4-4).

PACKING, SHIPMENT, AND STORAGE

PREPARATION FOR SHIPMENT

CAUTION

The height and width of the trailer packaging must not exceed the limits of the loading table in TM 55-200 when preparing the trailer for shipment by railroad. Consult the local transportation officer, whenever possible, for limitations of the railroad lines to be used, so that delays, dangerous conditions, and damage to equipment are avoided.

Prepare the trailer for shipment by processing it in accordance with TM 740-90-1.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

OVERVIEW

This chapter contains information covering repair parts; special tools; test, measurement, and diagnostic equipment (TMDE); support equipment; and direct support and general support maintenance instructions for the M1 18A1 and M1 19 series semitrailer.

		Page
Section 1.	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	5-1
Section II.	Maintenance Procedures	5-1

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

	Page		Page
Common Tools and Equipment	5-1	Special Tools, TMDE, and Support Equipment	5-1
Repair Parts	5-1		

COMMON TOOLS AND EQUIPMENT

Refer to the Modified Table of Organization and Equipment (MTOE) for authorized common tools and equipment applicable to your unit.

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

No special tools, TMDE, or support equipment are required to maintain the semitrailer.

REPAIR PARTS

Repair parts are listed and illustrated in appendix F of this manual.

Section II. MAINTENANCE PROCEDURES

	Page		Page
Air Chamber, M118A1 and M119A	5-11	General	5-2
Axle, M119	5-2	Landing Legs, M118A1 and M119A1	5-17
Axle, M118A1 and M119A1	5-5	Landing Legs, M1 19	5-29
Body	5-54	Radius Rod Adjustment, M118A1 and M119A1	5-52
Body Repair, M119 and M119A1	5-57	Springs, M119	5-48
Brake Chamber, Late M1 19	5-13	Springs, M118A1 and M119A1	5-40
Brakedrum Repair	5-15	Tire and Tube Repair	5-17
Brakeshoe	5-10		
Frame Repair	5-17		

GENERAL

This section provides instructions for direct support and general support maintenance of the M118A1 and M1 19 series semitrailer. The following initial setup information applies to all procedures.

Resources required are not listed unless they apply to the procedure.

Personnel are listed only if the task requires more than one technician. If Personnel Required is not listed, one technician can do the task.

AXLE, M119

This task covers:

- a. Removal (page 5-2)
- b. Installation (page 5-4)

INITIAL SETUP

Tools	Personnel Required
Handle, ratchet, 1/2-inch drive	Three
Jack, hand, hydraulic, 5-ton	
Jack stand, 2-ton (two required)	Equipment Condition
Socket, deep, 1/2-inch drive, 3/4-inch	Wheel and tire removed (page 3-6).
Socket, deep, 1/2-inch drive, 7/8-inch	Slack adjuster and actuating camshafts removed (page 4-1 10).
Wrench, box-end, 3/4-inch	
Materials/Parts	
Rivets, 9/16- by 1 5/8-inch (nine required)	

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

REMOVAL

1. Axle (1)	5-ton hydraulic hand jack (2) and two 2-ton jack stands (3)	a. Using 5-ton hydraulic hand jack, raise axle. b. Position 2-ton jack stands under frame rails at each corner of rear crossmember.
2. Backing plate (4) to axle (1)	Screw (5), lock-washer (6), and nut (7)	Using 3/4-inch deep socket, ratchet handle with 1/2-inch drive, and 3/4-inch box-end wrench, unscrew and take out.

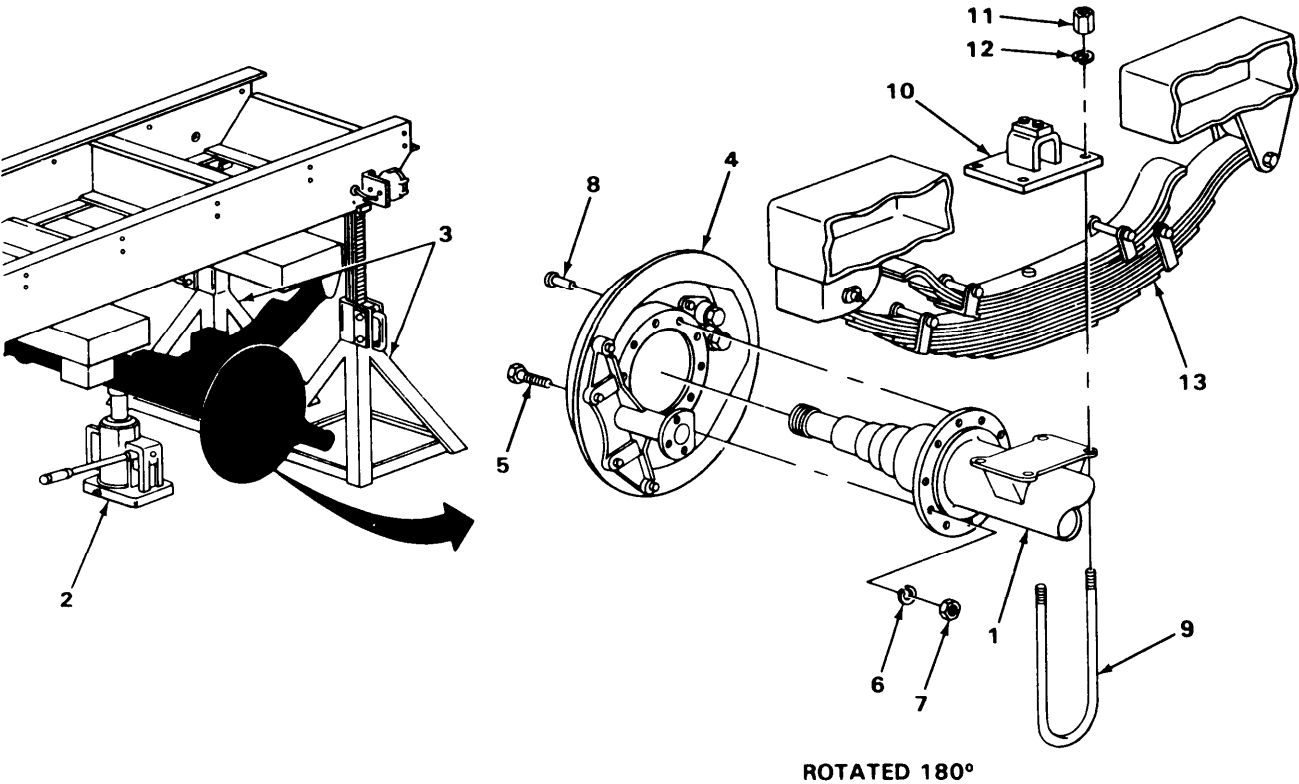
AXLE, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
3.	Nine rivets (8)	Take out.	Discard rivets.
4. Axle (1)	Backing plate (4)	Take off.	
5. Two U-bolts (9) to plate (10)	Four nuts (11) and four lock-washers (12)	Using 7/8-inch deep socket and ratchet handle with 1/2-inch drive, unscrew and take out.	
6. Axle (1)	Two U-bolts (9) and plate (10)	Take off.	

NOTE

Repeat steps 2 thru 6 for opposite side.

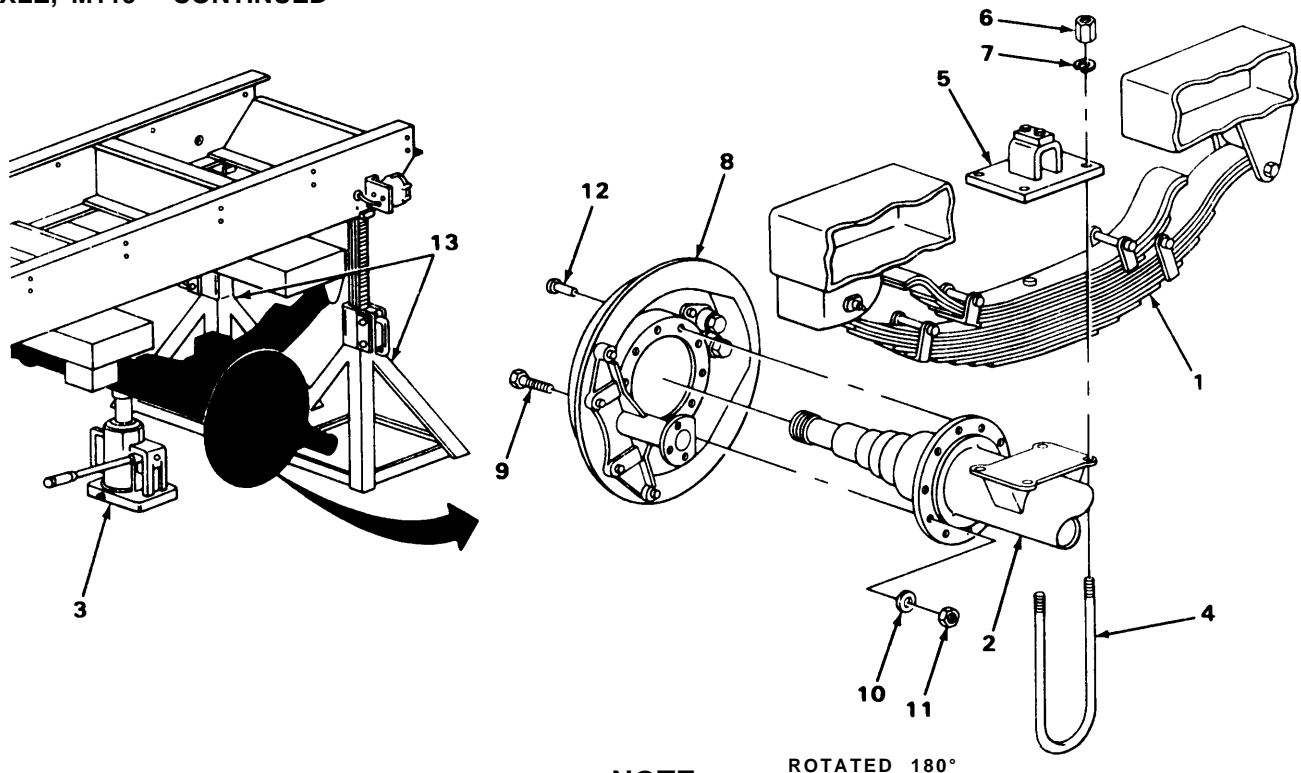
7. Springs (13)	Axle (1)	Using 5-ton hydraulic hand jack with assistance, take out.
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AXLE, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
8. Springs (1)	Axle (2)	Using 5-ton hydraulic hand jack (3) with assistance, place in position.
9. Axle (2)	Two U-bolts (4) and plate (5)	Place in position.
10. Two U-bolts (4) to plate (5)	Four nuts (6) and four lockwashers (7)	Using 7/8-inch deep socket and ratchet handle with 1/2-inch drive, screw on and tighten.
11. Axle (2)	Backing plate (8)	Place in position.
12. Backing plate (8) to axle (2)	Screw (9), lock-washer (10), and nut (11)	Using 3/4-inch deep socket, ratchet handle with 1/2-inch drive, and 3/4-inch box-end wrench, screw on and tighten.
13.	Nine new rivets (12)	Put in.
NOTE		
Repeat steps 10 thru 13 for opposite side.		
14. Axle (2)	5-ton hydraulic hand jack (3) and two 2-ton jack stands (13)	a. Using 5-ton hydraulic hand jack, raise axle. b. Reposition 2-ton jack stands under axle.

AXLE, M119 - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install slack adjuster and actuating camshafts (page 4-110).
2. Install wheel and tire (page 3-6).

TASK ENDS HERE

AXLE, M118A1 AND M119A1

This task covers:

- a. Removal (page 5-6)
- b. Installation (page 543)

INITIAL SETUP

Tools

Bar, breaker, 3/4-inch drive
 Jack, hand, hydraulic, 5-ton
 Jack stand, 2-ton (two required)
 Socket, 3/4-inch drive, 1 1/4-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 3/4-inch
 (two required)

Personnel Required

Three

Equipment Condition

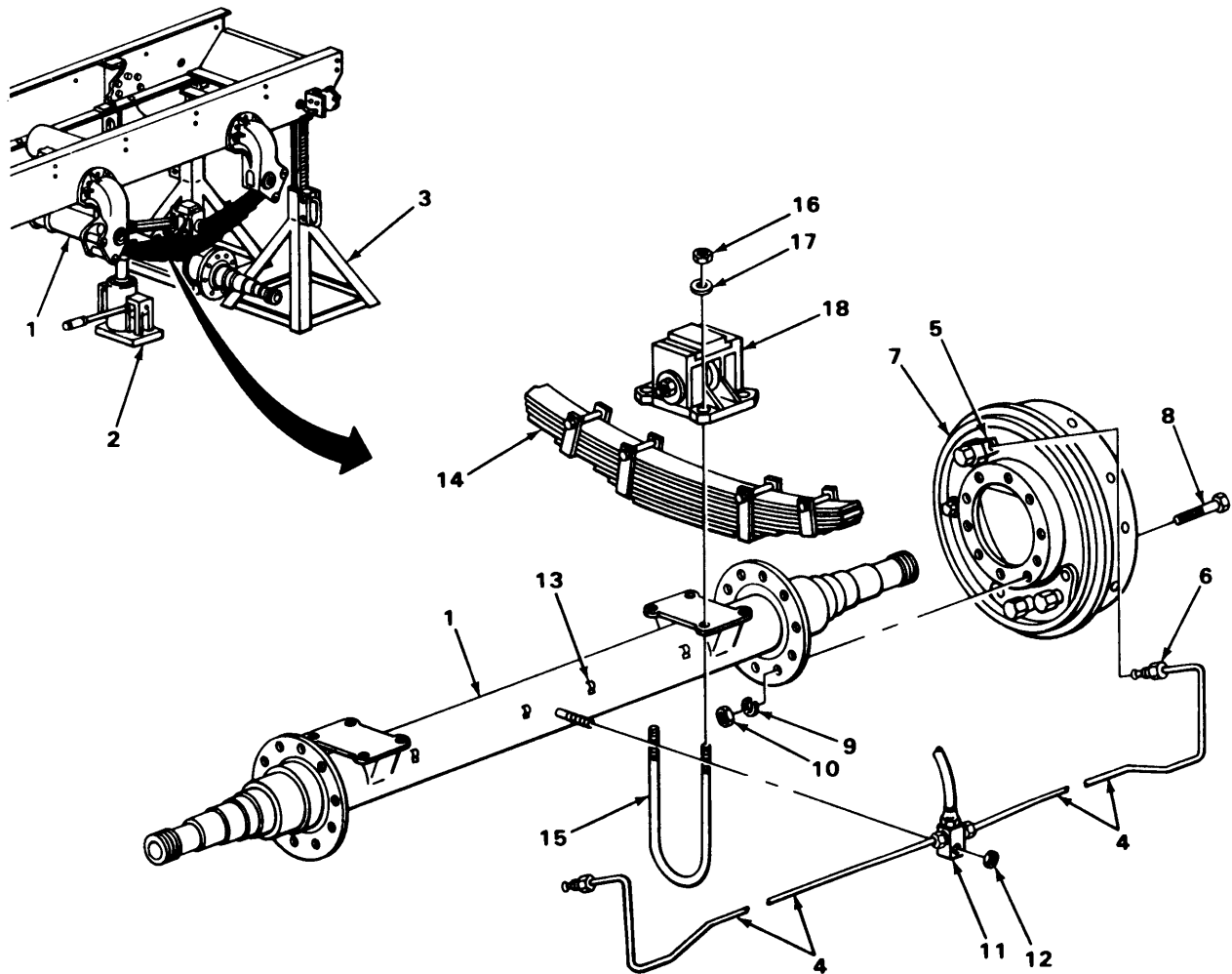
Hub and brakedrum removed (page 4-144).

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AXLE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Axle (1)	5-ton hydraulic hand jack (2) and two 2-ton jack stands (3)	a. Using 5-ton hydraulic hand jack, raise axle. b. Reposition 2-ton jack stands under frame rails at each corner of rear crossmember.
2. Brake line (4) to connector (5)	Fitting (6)	Using 7/16-inch open-end wrench, unscrew and take out.
3. Backing plate (7) to axle (1)	10 screws (8), 10 lockwashers (9), and 10 nuts (10)	Using two 3/4-inch open-end wrenches, unscrew and take out.
4. Axle (1)	Backing plate (7)	Take off.
NOTE		
Repeat steps 2 thru 4 for opposite side.		
5. Multiple connector (11) to axle (1)	Nut (12)	Using 9/16-inch open-end wrench, unscrew and take off.
6. Axle (1)	Multiple connector (11) with two brake lines (4)	a. Take out brake lines from clips (13). b. Take off multiple connector with brake lines.
7. Axle (1) to springs (14)	Four U-bolts (15), eight nuts (16), eight flat washers (17), and two brackets (18)	Using 1 1/4-inch socket and breaker bar with 3/4-inch drive, unscrew and take off.
8. Springs (14)	Axle (1)	Using 5-ton hydraulic hand jack with assistance, take out.

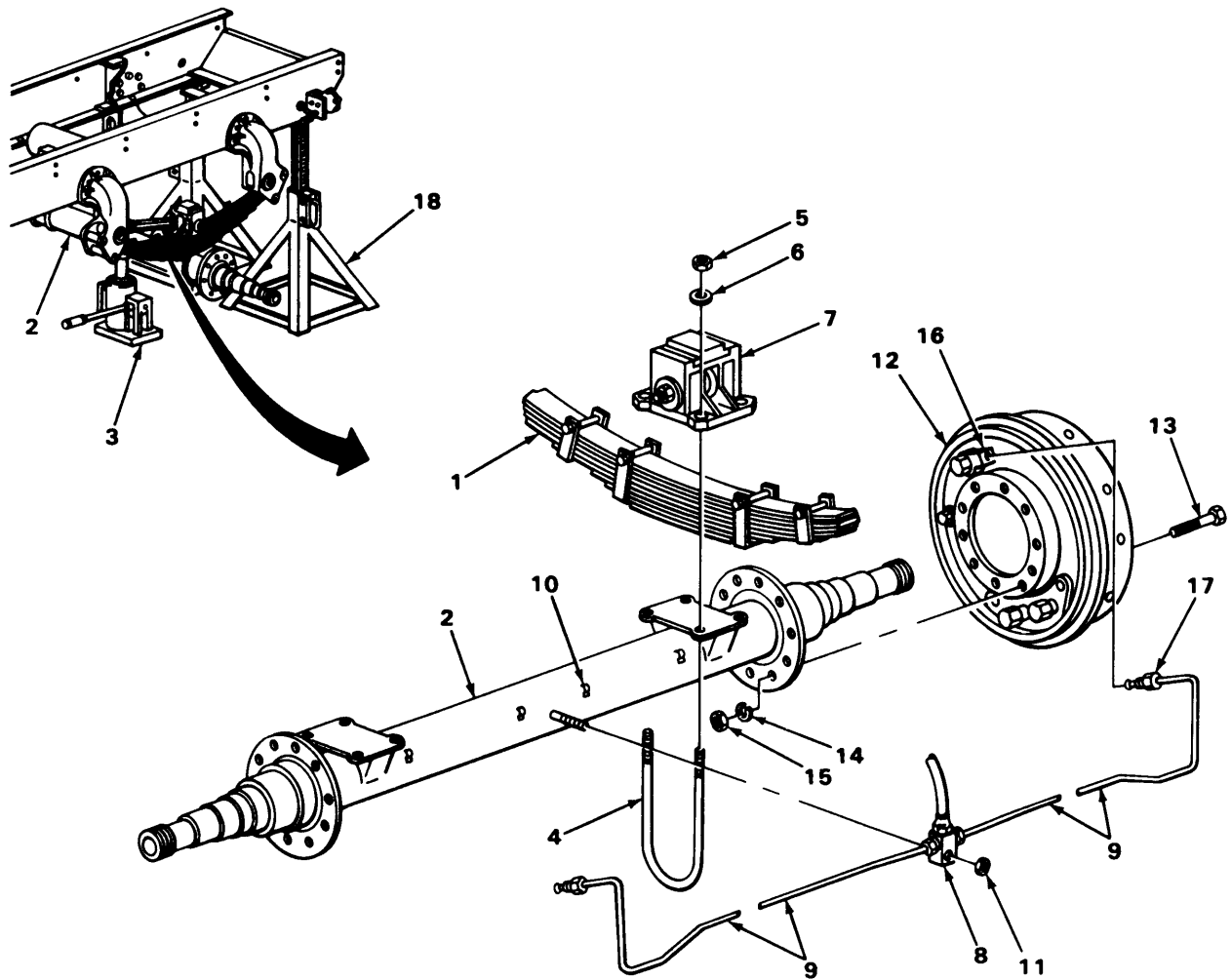
AXLE, M118A1 AND M119A1 - CONTINUED



AXLE, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
9. Springs (1)	Axle (2)	Using 5-ton hydraulic hand jack (3) with assistance, place in position.
10. Axle (2) to springs (1)	Four U-bolts (4), eight nuts (5), eight flat washers (6), and two brackets (7)	Using 1 1/4-inch socket and breaker bar with 3/4-inch drive, screw on and tighten.
11. Axle (2)	Multiple connector (8) with two brake lines (9)	a. Place multiple connector (8) in position. b. Install brake lines in clips (10).
12. Multiple connector (8) to axle (2)	Nut (11)	Using 9/16-inch open-end wrench, screw on and tighten.
13. Axle (2)	Backing plate (12)	Place in position.
14. Backing plate (12) to axle (2)	10 screws (13), 10 lockwashers (14), and 10 nuts (15)	Using two 3/4-inch open-end wrenches, screw on and tighten.
15. Brake line (9) to connector (16)	Fitting (17)	Using 7/16-inch open-end wrench, screw on and tighten.
NOTE		
Repeat steps 13 thru 15 for opposite side.		
16. Axle (2)	5-ton hydraulic hand jack (3) and two 2-ton jack stands (18)	a. Using 5-ton hydraulic hand jack, raise axle. b. Reposition 2-ton jack stands under axle.

AXLE, M118A1 AND M119A1 - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install hub and brakedrum (page 4-144).

TASK ENDS HERE

BRAKESHOE

This Task Covers:

- | | |
|------------------------------------|-----------------------------|
| a. Inspection criteria (page 5-10) | d. Inspection (page 5-10.1) |
| b. Disassembly (page 5-10) | e. Assembly (page 5-10.1) |
| c. Cleaning (page 5-10) | |

INITIAL SETUP

Tools

Reliner, brake and clutch
 Ruler, 6-inch

Equipment Condition

Brakeshoes removed (page 4-77 or 4-85).

Materials/Parts

Linings (as required)
 Rivets (as required)

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

INSPECTION CRITERIA

- | | | |
|-------------------------|-------------------------------------|--|
| 0.1. Two brakeshoes (3) | Brake linings (1)
and rivets (2) | a. Inspect brakeshoes for cracks.
b. Inspect lining for cracks or looseness to brakeshoes.
c. Using 6-inch ruler, check that linings have a minimum thickness of 1/8 inch (3.2 mm).
d. Using 6-inch ruler, check that rivets have a minimum depth of 1/16 inch (1.8 mm) below surface of linings. |
|-------------------------|-------------------------------------|--|

DISASSEMBLY

WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

- | | | |
|----------------------|------------|--|
| 1. Brake linings (1) | Rivets (2) | Using brake and clutch reliner, remove rivets and brake linings. |
|----------------------|------------|--|

CLEANING

- | | | |
|----------------------|----------------|--|
| 2. Brake linings (1) | Brakeshoes (3) | See cleaning instructions (page 4-13). |
|----------------------|----------------|--|

BRAKESHOE - CONTINUED

LOCATION		ITEM	ACTION	REMARKS
INSPECTION				
3.		Brakeshoes (3)	Visually check for cracks and distortion.	
4.		Pivot holes (4) and cam-roller holes (5)	Visually check for excessive wear. Discard defective brakeshoes.	
ASSEMBLY				
5.	Brakeshoes (3)	Brake linings (1)	Using brake and clutch reliner, install brake linings with rivets.	

NOTE

FOLLOW-ON MAINTENANCE: install brakeshoes (page 4-77 or 4-85).

TASK ENDS HERE

BRAKESHOES - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Install brakeshoes (page 4-77 or 4-85).

TASK ENDS HERE

AIR CHAMBER, M118A1 AND M119A1

This task covers:

- a. Disassembly (page 5-12)
 - b. Assembly (page 5-12)
-

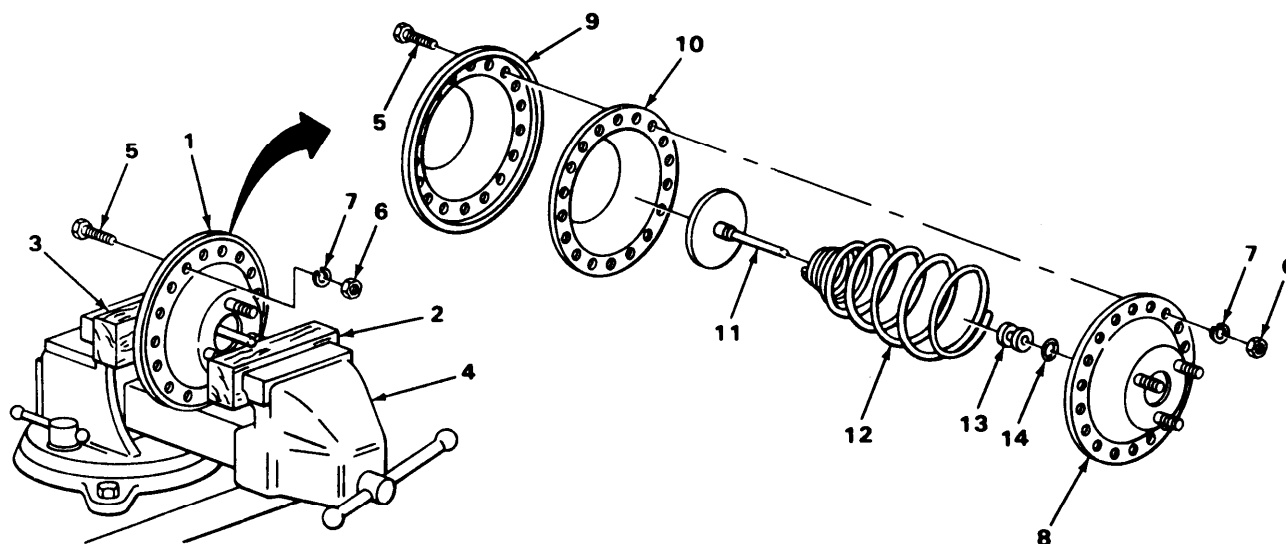
INITIAL SETUP

Tools	Equipment	Condition
Vise, machinist's		Air chamber removed (page 4-1 18).
Woodblocks, 2- by 4- by 6-inch (two required)		
Wrench, box-end, 9/18-inch (two required)		
Materials/Parts		
Diaphragm		

AIR CHAMBER, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
WARNING		
The return spring inside air chamber is under tension. Two halves of chamber must be clamped together in a vise before removing all screws and nuts that hold it together. Failure to do so could cause serious injury to personnel.		
1. Air chamber (1)	Two woodblocks (2 and 3) and vise (4)	Position air chamber in vise between woodblocks.
2.	18 screws (5), 18 nuts (6), and 18 lockwashers (7)	Using two 9/16-inch box-end wrenches, unscrew and take out.
3. Vise (4)	Cover (8) and body (9)	Slowly open vise and separate cover and body.
4. Cover (8) and body (9)	Diaphragm (10), push rod (11), spring (12), collar (13), and packing (14)	Take out. Discard diaphragm.
ASSEMBLY		
5. Cover (8) and body (9)	New diaphragm (10), push rod (11), spring (12), collar (13), and packing (14)	Put parts together.
6. Air chamber (1)	Vise (4) and two woodblocks (2 and 3)	Use vise to compress spring, bringing cover and body together. Be sure bolts in diaphragm are aligned with holes in cover and body.
7.	18 screws (5), 18 nuts (6), and 18 lockwashers (7)	Using two 9/16-inch box-end wrenches, screw in and tighten.

AIR CHAMBER, M118A1 AND M119A1 - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install air chamber (page 4-1 18).

TASK ENDS HERE

BRAKE CHAMBER, LATE M119

This task covers:

- a. Disassembly (page 5-14)
- b. Assembly (page 5-14)

INITIAL SETUP

Tools

Punch, tapered, 12-inch
 Vise, machinist's
 Woodblocks, 2- by 4- by 6-inch
 (two required)
 Wrench, open-end, 1/2-inch (two
 required)
 Wrench, open-end, 3/4-inch

Materials/Parts

Diaphragm

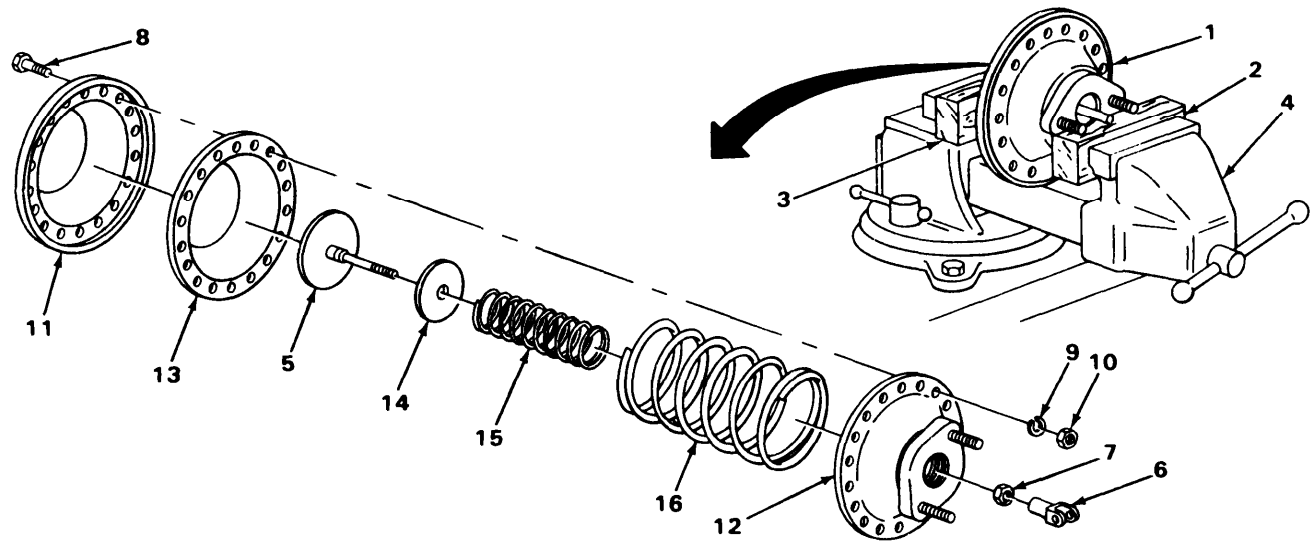
Equipment Condition

Brake air chamber removed (page 4-119).

BRAKE CHAMBER, LATE M119- CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
<u>WARNING</u>		
The return spring inside air chamber is under tension. Two halves of chamber must be clamped together in a vise before removing all screws and nuts that hold it together. Failure to do so could cause serious injury to personnel.		
1. Brake chamber (1)	Two woodblocks (2 and 3) and vise (4)	Position brake chamber in vise between woodblocks.
2. Push rod (5) to brake chamber (1)	Clevis (6) and nut (7)	Using 12-inch tapered punch and 3/4-inch open-end wrench, unscrew and take off.
3. Brake chamber (1)	18 bolts (8), 18 lockwashers (9), and 18 nuts (10)	Using two 1/2-inch open-end wrenches, unscrew and take out.
4. Vise (4)	Cover (11) and body (12)	Slowly open vise and separate cover and body.
5. Cover (11) and body (12)	Diaphragm (13), push rod (5), seal (14), and two springs (15 and 16)	Take out. Discard diaphragm.
ASSEMBLY		
6. Cover (11) and body (12)	New diaphragm (13), push rod (5), seal (14), and two springs (15 and 16)	Put parts together.
7. Vise (4)	Cover (11) and body (12)	Slowly close vise, bringing cover and body together.
8. Brake chamber (1)	18 bolts (8), 18 lockwashers (9), and 18 nuts (10)	Using two 1/2-inch open-end wrenches, screw in and tighten.
9. Push rod (5) to brake chamber (1)	Clevis (6) and nut (7)	Using 12-inch tapered punch and 3/4-inch open-end wrench, screw on and tighten.
10. Vise (4)	Brake chamber (1)	Take out.

BRAKE CHAMBER, LATE M119 - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install brake air chamber (page 4-119).

TASK ENDS HERE

BRAKEDRUM REPAIR

This task covers:

- a. Inspection (page 5-16)
- b. Repair (page 5-16)

INITIAL SETUP

Tools	Equipment	Condition
Lathe, brake Micrometer, inside, with extension	Hub and brakedrum removed (page 4-144).	

LOCATION	ITEM	ACTION	REMARKS
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WARNING

Parts of the service brake assembly will be coated with asbestos dust. Breathing this dust may be hazardous to your health. Use a filter mask approved for use against asbestos dust. Never use compressed air or dry brush to clean these assemblies. Dust shall be removed using an industrial-type vacuum cleaner with a high-efficiency filter system. Clean dirt or mud from brake assemblies with a bristle brush or cloth and water.

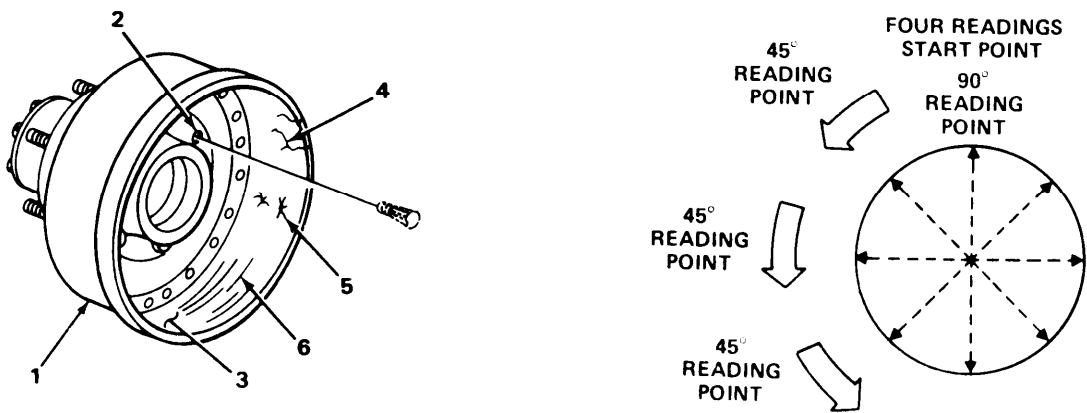
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BRAKEDRUM REPAIR - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION			
1. Brakedrum (1)	Stud holes (2)	Visually check for cracks. Discard drums with cracked stud holes.	
2.	Braking surface (3)	a. Visually check for cracks (4), heat checking (5), and scoring (6). b. Using inside micrometer with extension, check that runout (out of round) does not exceed 0.006 inch (0.1 524 mm) as illustrated. If runout exceeds 0.006 inch (0.1524 mm), reface using brake lathe. Discard drum if inside diameter exceeds 16.73 inches (42.5 cm) after refacing.	
REPAIR			
3.	Brakedrum (1)	Using brake lathe, reface braking surface to remove all cracks, heat checking, and scoring.	

NOTE

The illustration below shows examples of damage to brakedrum and area where runout is checked with inside micrometer.



NOTE

FOLLOW-ON MAINTENANCE: Install hub and brakedrum (page 4-144).

TASK ENDS HERE

TIRE AND TUBE REPAIR

Repair of tires and tubes will be accomplished in accordance with TM 9-2610-200-14, Operator's, Unit, Direct Support, and General Support Maintenance Manual for Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes.

FRAME REPAIR

Repair of the frame will be accomplished in accordance with TB 9-2300-247-40, Tactical Wheeled Vehicles: Repair of Frames.

LANDING LEGS, M118A1 AND M119A1

This task covers:

- | | |
|----------------------------|-----------------------------|
| a. Removal (page 5-18) | c. Assembly (page 5-22) |
| b. Disassembly (page 5-20) | d. Installation (page 5-26) |
-

INITIAL SETUP

Tools

Drift, brass, 1/2-inch
 Hammer, ball-peen, 3-pound
 Handle, ratchet, 1/2-inch drive
 Jack stand, 5-ton (two required)
 Punch, drive-pin, 3/16-inch
 Screwdriver, cross-tip, number two
 Socket, 1/2-inch drive, 9/16-inch
 Socket, 1/2-inch drive, 3/4-inch
 Socket, 1/2-inch drive, 7/6-inch
 Socket, 1/2-inch drive, 15/16-inch
 Socket, 1/2-inch drive, 17/16-inch
 Wrench, box-end, 7/8-inch
 Wrench, box-end, 15/16-inch
 Wrench, open-end, 7/16-inch
 Wrench, open-end, 9/16-inch
 Wrench, open-end, 3/4-inch

Materials/Parts

Bearing
 Bearing cup
 Gasket
 Grease (item 3, appendix E)
 Grease (item 4, appendix E)
 Thrust bearing

Personnel Required

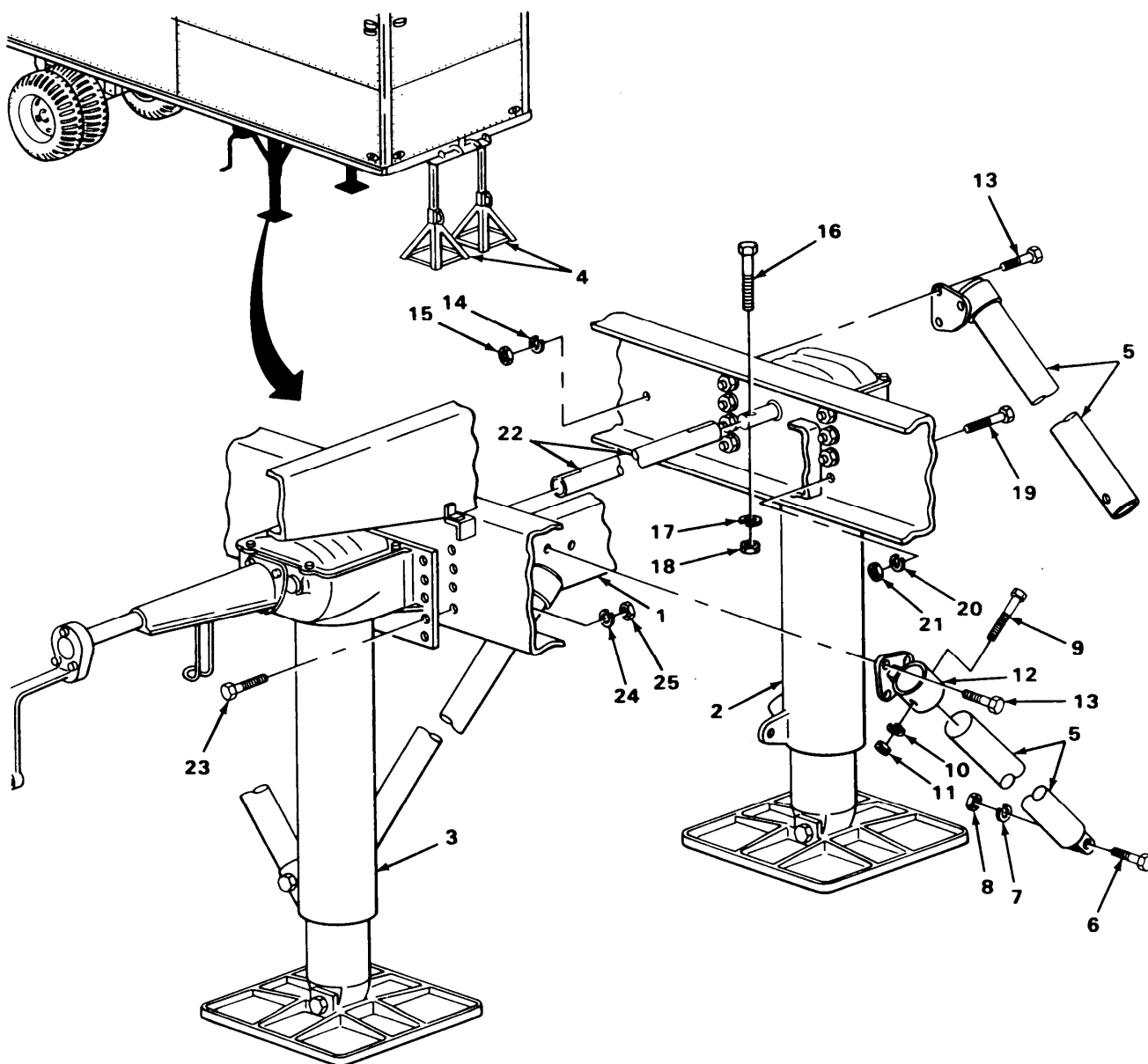
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LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Chassis frame (1)	Two landing legs (2 and 3)	Using crank, extend.
2.	Two 5-ton jack stands (4)	Position at front corners.
3.	Two landing legs (2 and 3)	Using crank on landing leg, raise. Trailer is now supported by 5-ton jack stands.
4. Four struts (5) to two landing legs (2 and 3)	Four screws (6), four lockwashers (7), and four nuts (8)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take out.
5. Four struts (5) to chassis frame (1)	Four screws (9), four lockwashers (10), and four nuts(n)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take out.
6. Two landing legs (2 and 3) and chassis frame (1)	Four struts (5)	Take off.
7. Four brackets (12) to chassis frame (1)	12 screws (13), 12 lockwashers (14), and 12 nuts (15)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, unscrew and take out.
8. Chassis frame (1)	Four brackets (12)	Take off.
9. Landing leg (2) to landing leg (3)	Two screws (16), two lockwashers (17), and two nuts (18)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch open-end wrench, unscrew and take out.
10. Landing leg (2) to chassis frame (1)	Eight screws (19), eight lockwashers (20), and eight nuts (21)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, unscrew and take out.
11. Chassis frame (1)	Landing leg (2) and shaft (22)	With assistance, take off.

LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
12. Landing leg (3) to chassis frame (1)	Eight screws (23), eight lockwashers (24), and eight nuts (25)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, unscrew and take out.	
13. Chassis frame (1)	Landing leg (3)	With assistance, take off.	



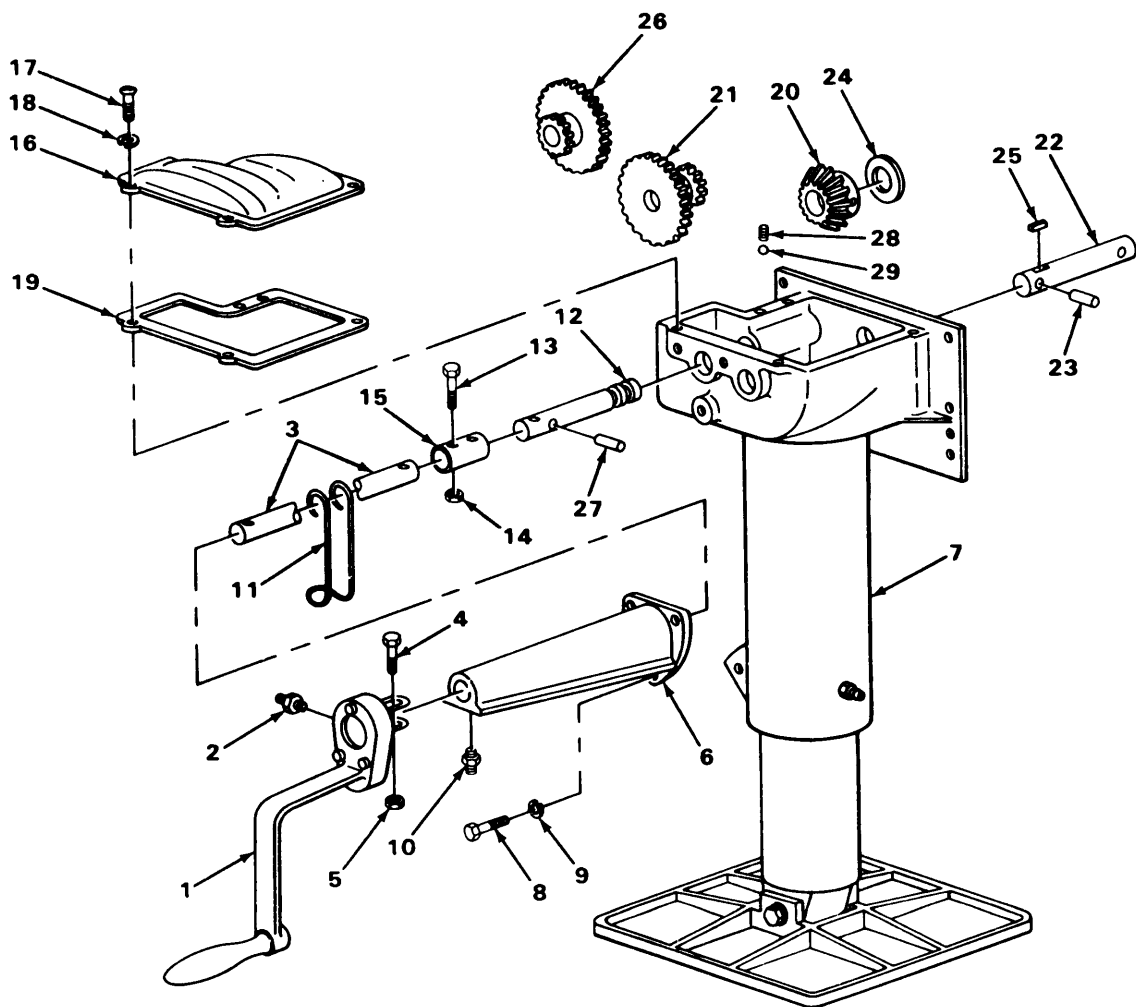
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LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
NOTE		
Steps 14 thru 21 apply to right side landing leg only.		
14. Crank (1)	Lubrication fitting (2)	Using 7/16-inch open-end wrench, unscrew and take out.
15. Ratchet (1) to extension (3)	Screw (4) and nut (5)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch open-end wrench, unscrew and take out.
16. Extension (3)	Crank (1)	Take off.
17. Bracket (6) to upper leg (7)	Three screws (8) and three lock- washers (9)	Using 3/4-inch socket and ratchet handle with 1/2-inch drive, unscrew and take out.
18. Bracket (6)	Lubrication fitting (10)	Using 7/16-inch open-end wrench, unscrew and take out.
19. Upper leg (7)	Bracket (6) and eye hook (11)	Take off.
20. Shaft (12) to extension (3)	Two screws (13) and two nuts (14)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch open-end wrench, unscrew and take out.
21. Shaft (12)	Extension (3) and coupling (15)	Take off.
22. Cover (16) to upper leg (7)	Five screws (17) and five lock- washers (18)	Using number two cross-tip screwdriver, unscrew and take out.
23. Upper leg (7)	Cover (16) and gasket (19)	Take off. Discard gasket.
24. Bevel gear (20) and spur gear (21) to shaft (22)	Two pins (23)	Using 3-pound ball-peen hammer and 3/16-inch drive-pin punch, tap out.
25. Upper leg (7)	Shaft (22)	Using 3-pound ball-peen hammer and 3/16-inch drive-pin punch, tap out.

LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
26.	Bevel gear (20), spur gear (21), flat washer (24), and key (25)	Take out.	
27. Spur gear (26) to shaft (12)	Pin (27)	Using 3-pound ball-peen hammer and 3/18-inch drive-pin punch, tap out.	
28. Upper leg (7)	Shaft (12)	Slide out.	
29.	Spur gear (28), spring (28), and ball bearing (29)	Take out.	



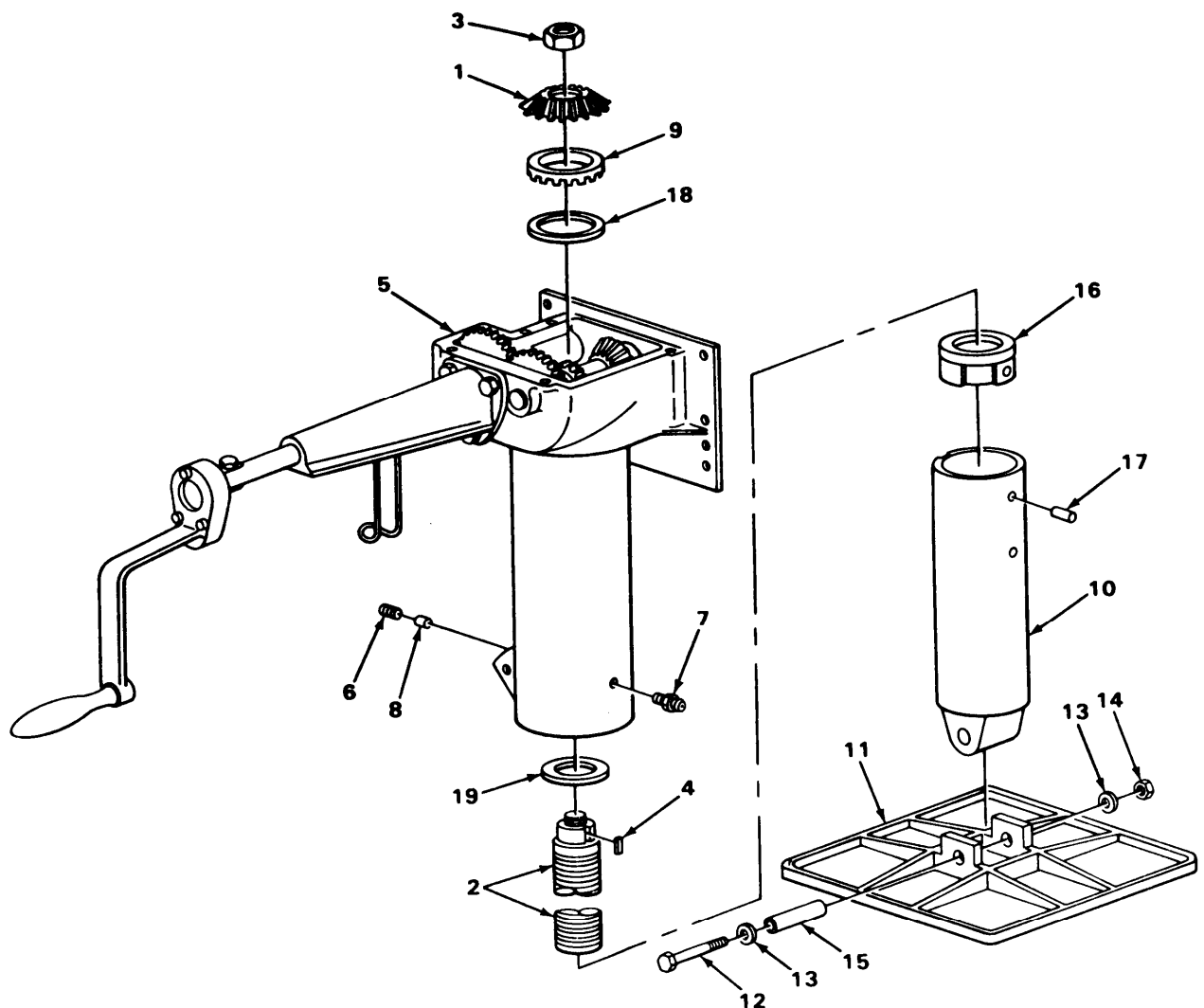
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LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY – CONTINUED		
30. Bevel gear (1) to screw (2)	Self-locking nut (3)	Using 1 7/16-inch socket and ratchet handle with 1/2-inch drive, unscrew and take off.
31. Screw (2)	Bevel gear (1) and key (4)	Take out.
32. Upper leg (5)	Plug (6) and lubrication fitting (7)	Using 7/16-inch open-end wrench, unscrew and take out.
33.	Gib (8) and bearing (9)	Take out. Discard bearing.
34	Leg (10)	Take off.
35. Shoe (11) to leg (10)	Screw (12), two flat washers (13), and nut (14)	Using 3/4-inch socket, ratchet handle with 1/2-inch drive, and 3/4-inch open-end wrench, unscrew and take out.
38. Leg (10)	Shoe (11) and pin (15)	Take off.
37. Nut (16) to leg (10)	Pin (17)	Take off.
38. Leg (10)	Nut (16) with screw (2)	Pull out.
39. Screw (2)	Nut (16)	Slide off.
40. Upper leg (5)	Bearing cup (18)	Using 3-pound ball-peen hammer and 1/2-inch brass drift, tap out. Discard bearing cup.
41•	Thrust bearing (19)	Using 3-pound ball-peen hammer and 1/2-inch brass drift, tap out. Discard thrust bearing.
ASSEMBLY		
42. Upper leg (5)	New thrust bearing (19)	Using 3-pound ball-peen hammer and 1/2-inch brass drift, tap into position.

LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
43. Upper leg (5)	New bearing cup (18)	Using 3-pound ball-peen hammer and 1/2-inch brass drift, tap into position.
44. Screw (2)	Nut (16)	Place in position.
45. Leg (10)	Nut (16) with screw (2)	Place in position.
46. Nut (16) to leg (10)	Pin (17)	Place in position.



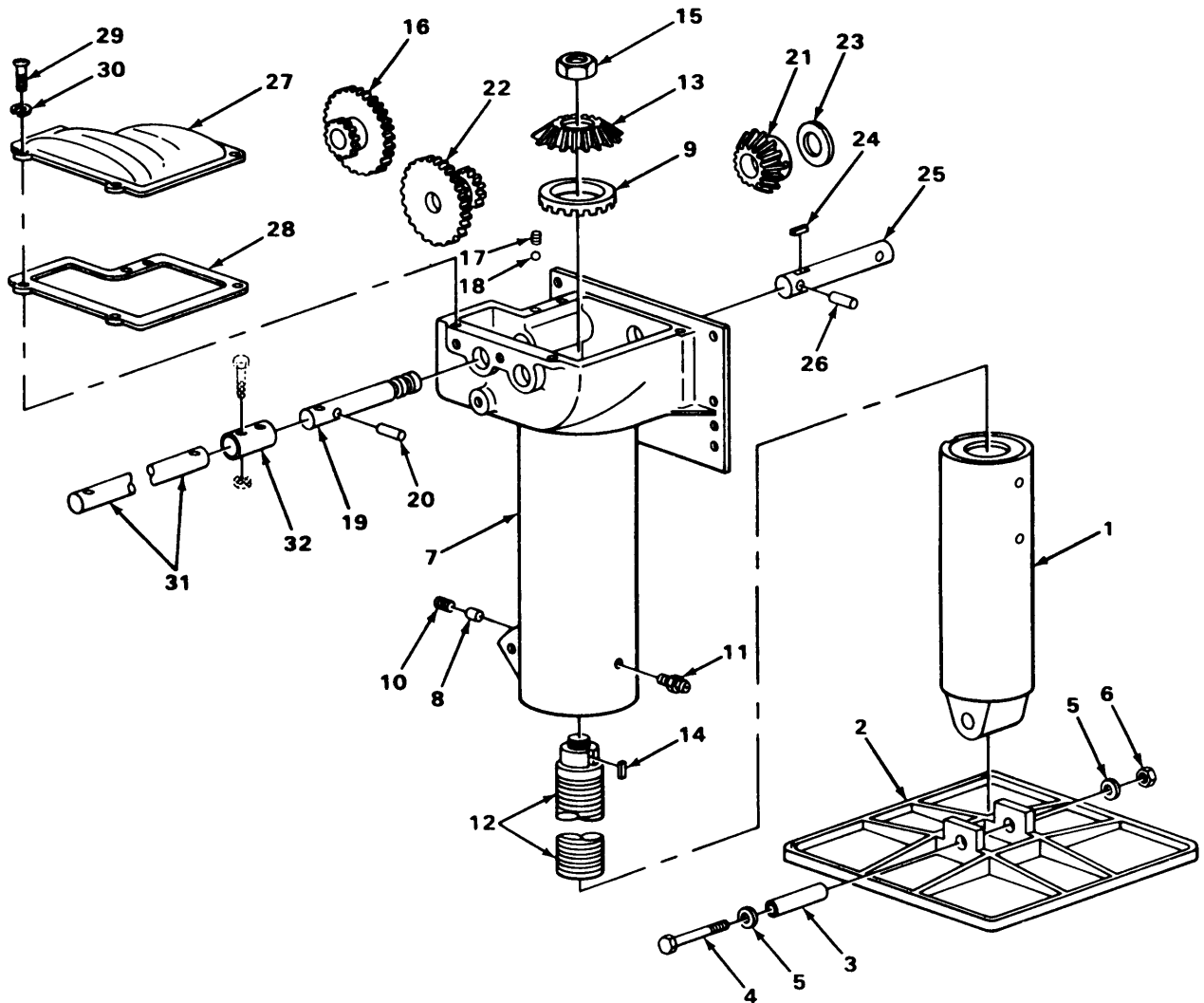
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LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY - CONTINUED		
47. Leg (1)	Shoe (2) and pin (3)	Place in position.
48. Shoe (2) to leg (1)	Screw (4), two flat washers (5), and nut (6)	Using 3/4-inch socket, ratchet handle with 1/2-inch drive, and 3/4-inch open-end wrench, screw on and tighten.
40. Upper leg (7)	Leg (1)	Place in position.
59.	Gib (8) and new bearing (9)	Place in position.
51.	Plug (10) and lubrication fitting (11)	Using 7/16-inch open-end wrench, screw in and tighten.
52. Screw (12)	Bevel gear (13) and key (14)	Place in position.
53. Bevel gear (13) to screw (12)	Self-locking nut (15)	Using 1 7/16-inch socket and ratchet handle with 1/2-inch drive, screw on and tighten.
54. Upper leg (7)	Spur gear (16), spring (17), and ball bearing (18)	Place in position.
55.	Shaft (19)	Slide into position.
58. Spur gear (16) to shaft (19)	Pin (20)	Using 3-pound ball-peen hammer and 3/16-inch drive-pin punch, tap into position.
57. Upper leg (7)	Bevel gear (21), spur gear (22), flat washer (23), and key (24)	Place in position.
58.	Shaft (25)	Using 3-pound ball-peen hammer and 3/16-inch drive-pin punch, tap into position.
59. Bevel gear (21) and spur gear (22) to shaft (25)	Two pins (26)	Using 3-pound ball-peen hammer and 3/16-inch drive-pin punch, tap into position.

LANDING LEGS, M118A1 AND M119A1 - CONTINUED

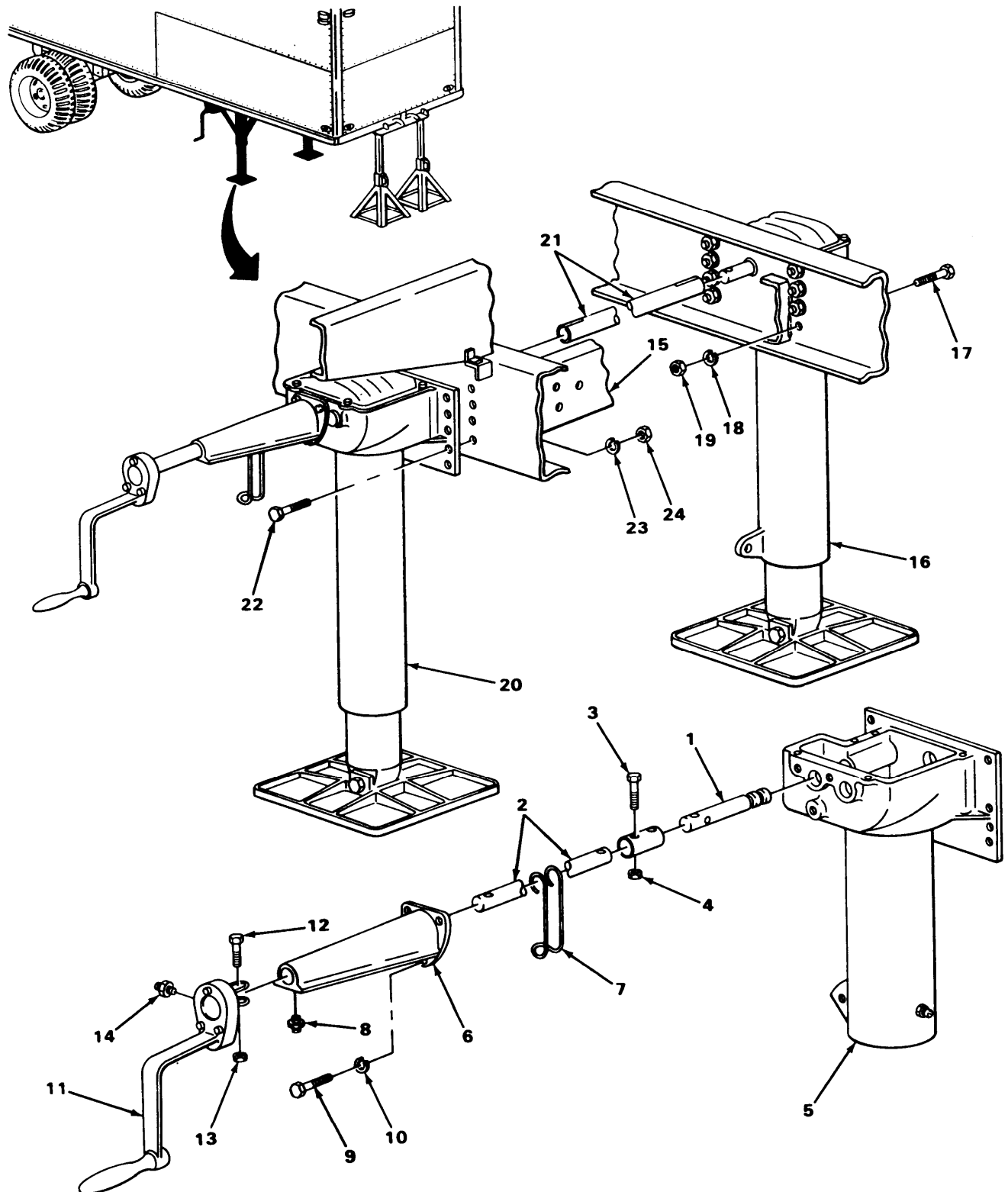
LOCATION	ITEM	ACTION REMARKS
60. Upper leg (7)	Cover (27) and new gasket (28)	Place in position.
61. Cover (27) to upper leg (7)	Five screws (29) and five lock-washers (30)	Using number two cross-tip screwdriver, screw on and tighten.
62 Shaft (19)	Extension (31) and coupling (32)	Place in position.



LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ASSEMBLY – CONTINUED		
63. Shaft (1) to extension (2)	Two screws (3) and two nuts (4)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch open-end wrench, screw in and tighten.
64. Upper leg (5)	Bracket (6) and eye hook (7)	Place in position.
65. Bracket (6)	Lubrication fitting (8)	Using 7/16-inch open-end wrench, screw in and tighten.
66. Bracket (6) to upper leg (5)	Three screws (9) and three lockwashers (10)	Using 3/4-inch socket and ratchet handle with 1/2-inch drive, screw in and tighten.
67. Extension (2)	Crank (11)	Place in position.
68. Crank (11) to extension (2)	Screw (12) and nut (13)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch open-end wrench, screw on and tighten.
69. Crank (11)	Lubrication fitting (14)	Using 7/16-inch open-end wrench, screw in and tighten.
INSTALLATION		
70. Chassis frame (15)	Landing leg (16)	With assistance, place in position.
71. Landing leg (16) to chassis frame (15)	Eight screws (17), eight lockwashers (18), and eight nuts (19)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, screw together and tighten.
72. Chassis frame (15)	Landing leg (20) and shaft (21)	With assistance, place in position.
73. Landing leg (20) to chassis frame (15)	Eight screws (22), eight lockwashers (23), and eight nuts (24)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, screw together and tighten.

LANDING LEGS, M118A1 AND M119A1 - CONTINUED

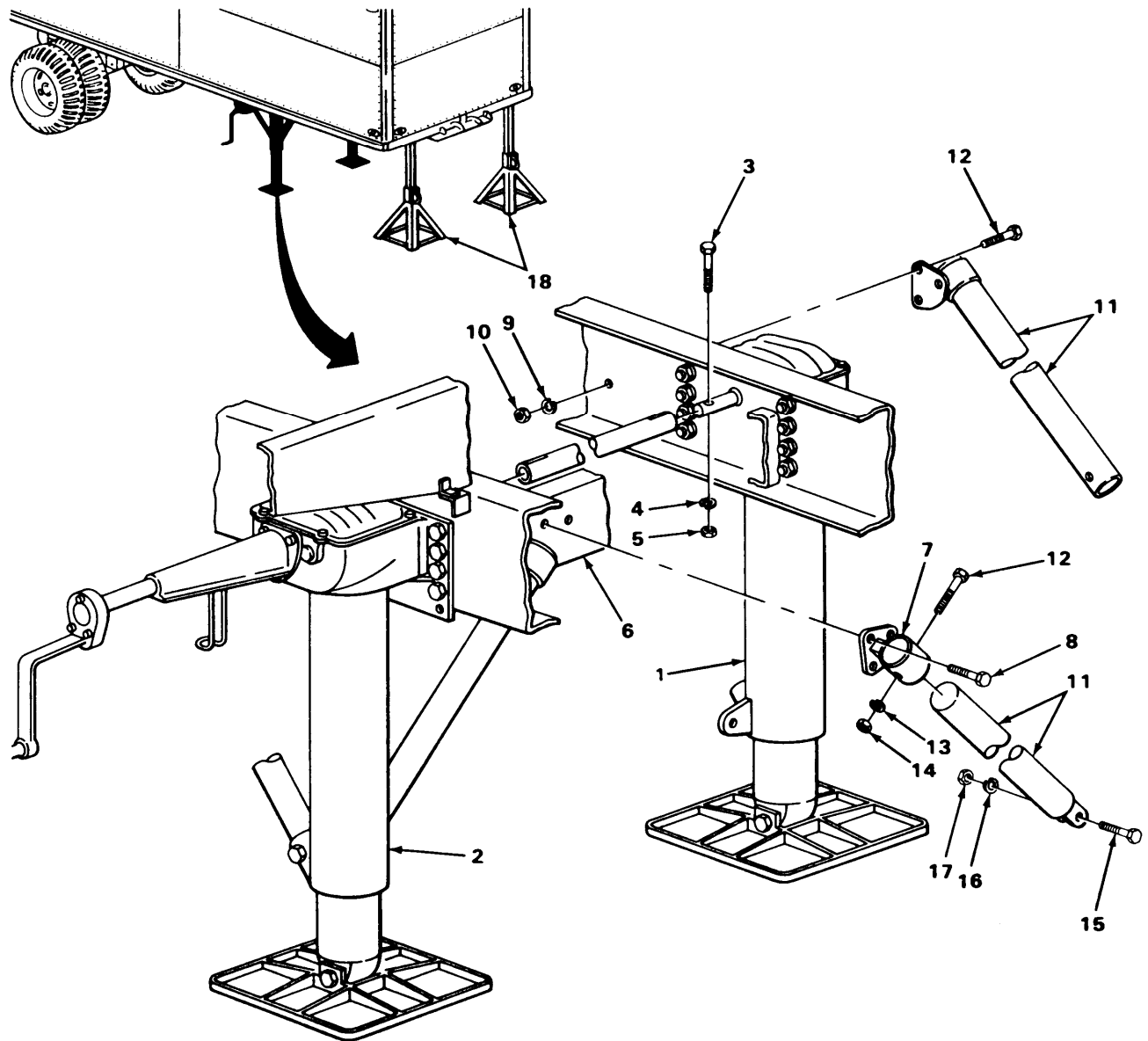


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LANDING LEGS, M118A1 AND M119A1 - CONTINUED

LOCATION		ITEM	ACTION REMARKS
INSTALLATION – CONTINUED			
74.	Landing leg (1) to landing leg (2)	Two screws (3), two lockwashers (4), and two nuts (5)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch open-end wrench, screw on and tighten.
75.	Chassis frame (6)	Four brackets (7)	Place in position.
76.	Four brackets (7) to chassis frame (6)	12 screws (8), 12 lockwashers (9), and 12 nuts (10)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, screw on and tighten.
77.	Two landing legs (1 and 2) and chassis frame (6)	Four struts (11)	Place in position.
78.	Four struts (11) to chassis frame (6)	Four screws (12), four lockwashers (13), and four nuts (14)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, screw on and tighten.
79.	Four struts (11) to two landing legs (1 and 2)	Four screws (15), four lockwashers (16), and four nuts (17)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, screw in and tighten.
80.	Chassis frame (6)	Two landing legs (1 and 2)	Using crank on landing leg, lower.
81.		Two 5-ton jack stands (18)	Remove from front corners.
82.		Two landing legs (1 and 2)	Using crank on landing leg, lower.

LANDING LEGS, M118A1 AND M119A1 - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Grease landing legs (page 4-2).

TASK ENDS HERE

LANDING LEGS, M119

This task covers:

- | | |
|----------------------------|-----------------------------|
| a. Removal (page 5-30) | c. Assembly (page 5-35) |
| b. Disassembly (page 5-32) | d. Installation (page 5-37) |

TA234077

LANDING LEGS, M119 - CONTINUED

INITIAL SETUP

Tools

Extension, 1/2-inch drive, 6-inch
 Hammer, ball-peen, 3-pound
 Handle, ratchet, 1/2-inch drive
 Jack stand, 5-ton (two required)
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Pliers, snapping
 Punch, drive-pin, 1/8-inch
 Screwdriver, cross-tip, number two
 Socket, 1/2-inch drive, 9/16-inch
 Socket, 1/2-inch drive, 3/4-inch
 Socket, 1/2-inch drive, 7/8-inch
 Socket, 1/2-inch drive, 15/16-inch
 Socket, 1/2-inch drive, 1 7/16-inch
 Wrench, box-end, 3/16-inch
 Wrench, box-end, 7/16-inch
 Wrench, box-end, 9/16-inch

Tools – Continued

Wrench, box-end, 7/8-inch
 Wrench, box-end, 15/16-inch

Materials/Parts

Bushings (if required)
 Cotter pin
 Gasket
 Gear oil (item 6, appendix E)
 Grease (item 3, appendix E)
 Grease (item 4, appendix E)
 Wire, 22-W-1633-160 (as required)

Personnel Required

Two

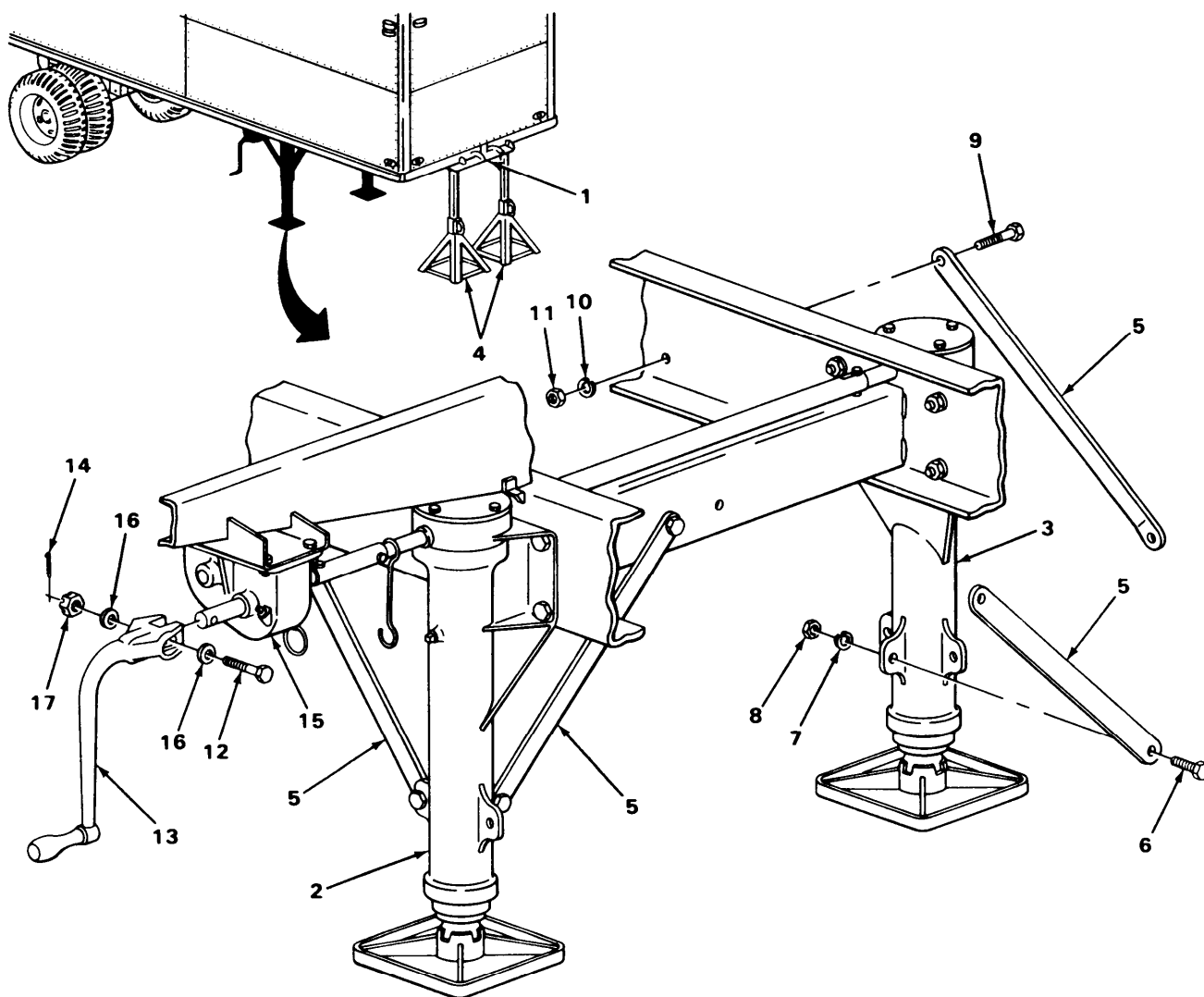
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

- | | | |
|--|--|---|
| 1. Chassis frame (1) | Landing legs (2 and 3) | Using crank (13) on landing leg, extend. |
| 2. | Two 5-ton jack stands (4) | Position at front corners. |
| 3. | Landing legs (2 and 3) | Using crank (13) on landing leg, raise.
Trailer is now supported by 5-ton jack stands. |
| 4. Four braces (5) to landing legs (2 and 3) | Four screws (6), four lockwashers (7), and four nuts (8) | Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take off. |
| 5. Four braces (5) to chassis frame (1) | Four screws (9), four lockwashers (10), and four nuts (11) | Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take off. |

LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
6. Two landing legs (2 and 3) and chassis frame (1)	Four braces (5)	Take off.
7. Screw (12) to crank (13)	Cotter pin (14)	Using diagonal-cutting pliers, take out. Discard cotter pin.
8. Crank (13) to gearbox (15)	Screw (12), two flat washers (16), and nut (17)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box-end wrench, unscrew and take off.



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LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
9. Gearbox (1)	Crank (2)	Take off.
10. Gearbox (1) to landing leg (3)	Two screws (4), four flat washers (5), two lockwashers (6), and two nuts (7)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, unscrew and take off.
11.	Coupling (8) and eye hook (9)	Take off.
12. Gearbox (1) to bracket (10)	Four screws (11), four lockwashers (12), and four nuts (13)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, unscrew and take off.
13. Bracket (10)	Gearbox (1) and gasket (14)	Take off. Discard gasket.
14. Landing leg (3) to landing leg (15)	Two screws (16), four flat washers (17), two lock- washers (18), and two nuts (19)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, unscrew and take off.
15.	Shaft (20)	Remove.
16. Two landing legs (3 and 15) to chassis frame (21)	Eight screws (22), eight lockwashers (23), and eight nuts (24)	Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box- end wrench, unscrew and take off.
17. Chassis frame (21)	Two landing legs (3 and 15)	With assistance, take off.

DISASSEMBLY

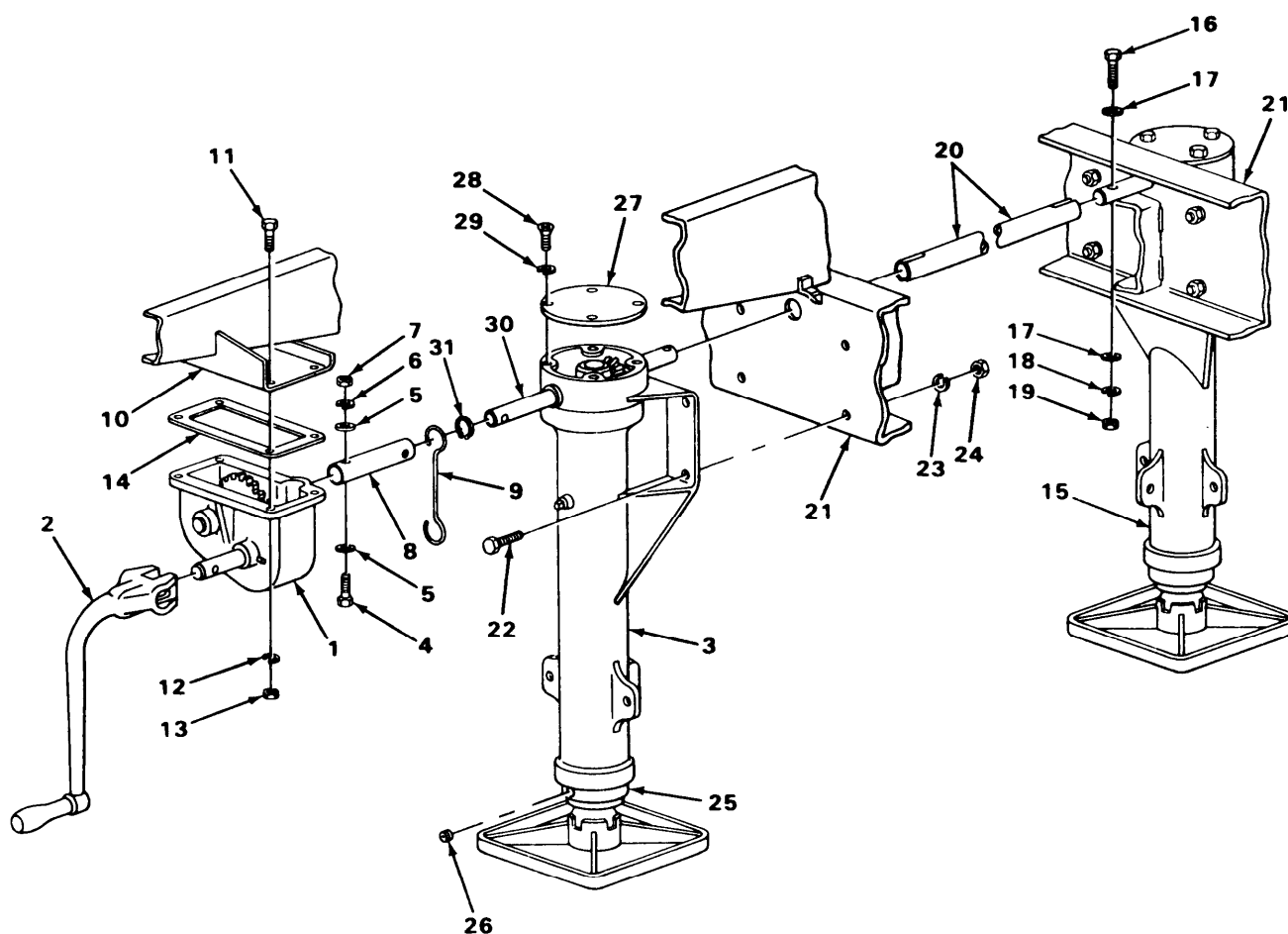
NOTE

Disassembly and assembly procedures given for one landing leg are the same for both.

18. Inner leg (25)	Plug (26)	Using 3/16-inch box-end wrench, unscrew and take off. Gear oil will drain out.
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LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
19. Cover (27) to landing leg (3)	Four screws (28) and four lock-washers (29)	Using number two cross-tip screwdriver, unscrew and take off.
20. Landing leg (3)	Cover (27)	Take off.
21. Shaft (30) to landing leg (3)	Retaining ring (31)	Using snapping pliers, take off.

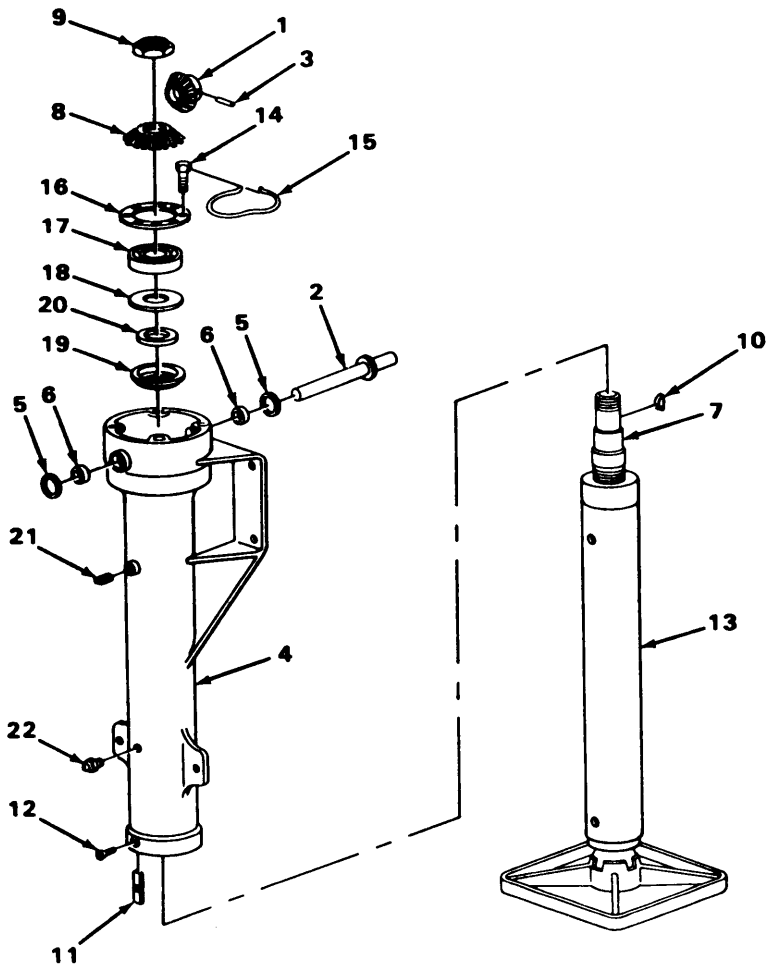


LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY – CONTINUED		
22. Bevel gear (1) to shaft (2)	Pin (3)	Using 3-pound ball-peen hammer and 1/8-inch drive-pin punch, tap out.
23. Outer leg (4)	Shaft (2)	Slide out.
24.	Bevel gear (1) and two flat washers (5)	Take out.
25.	Two bushings (6)	Using 3-pound ball-peen hammer and 1/8-inch drive-pin punch, tap out. Discard bushings if worn or damaged.
26. Screw (7) to bevel gear (8)	Self-locking nut (9)	Using 1 7/16-inch socket, ratchet handle, and 6-inch extension with 1/2-inch drive, unscrew and take off.
27. Screw (7)	Bevel gear (8) and key (10)	Take out.
28. Key (11) to outer leg (4)	Screw (12)	Using number two cross-tip screwdriver, unscrew and take off.
29. Outer leg (4)	Key(n)	Take out.
30.	Inner leg (13)	Take off.
31. Eight screws (14) to outer leg (4)	Wire (15)	Using diagonal-cutting pliers, take off. Discard wire.
32. Plate (16) to outer leg (4)	Eight screws (14)	Using 3/4-inch socket, ratchet handle, and 6-inch extension with 1/2-inch drive, unscrew and take off.
33. Outer leg (4)	Plate (16)	Take out.
34.	Ball bearing (17), felt washer (18), felt cup (19), and felt (20)	Take out.
35.	Plug (21) and lubri- cation fitting (22)	Using 7/16-inch box-end wrench, unscrew and take off.

LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
ASSEMBLY			
36. Outer leg (4)	Lubrication fitting (22)	Using 7/16-inch box-end wrench, screw in and tighten.	
37. Outer leg (4)	Ball bearing (17), felt washer (18), felt cup (19), and felt (20)	Place in position.	
38.	Plate (16)	Place in position.	
39. Plate (16) to outer leg (4)	Eight screws (14)	Using 3/4-inch socket, ratchet handle, and 6-inch extension with 1/2-inch drive, screw in and tighten.	



LANDING LEGS, M119 - CONTINUED

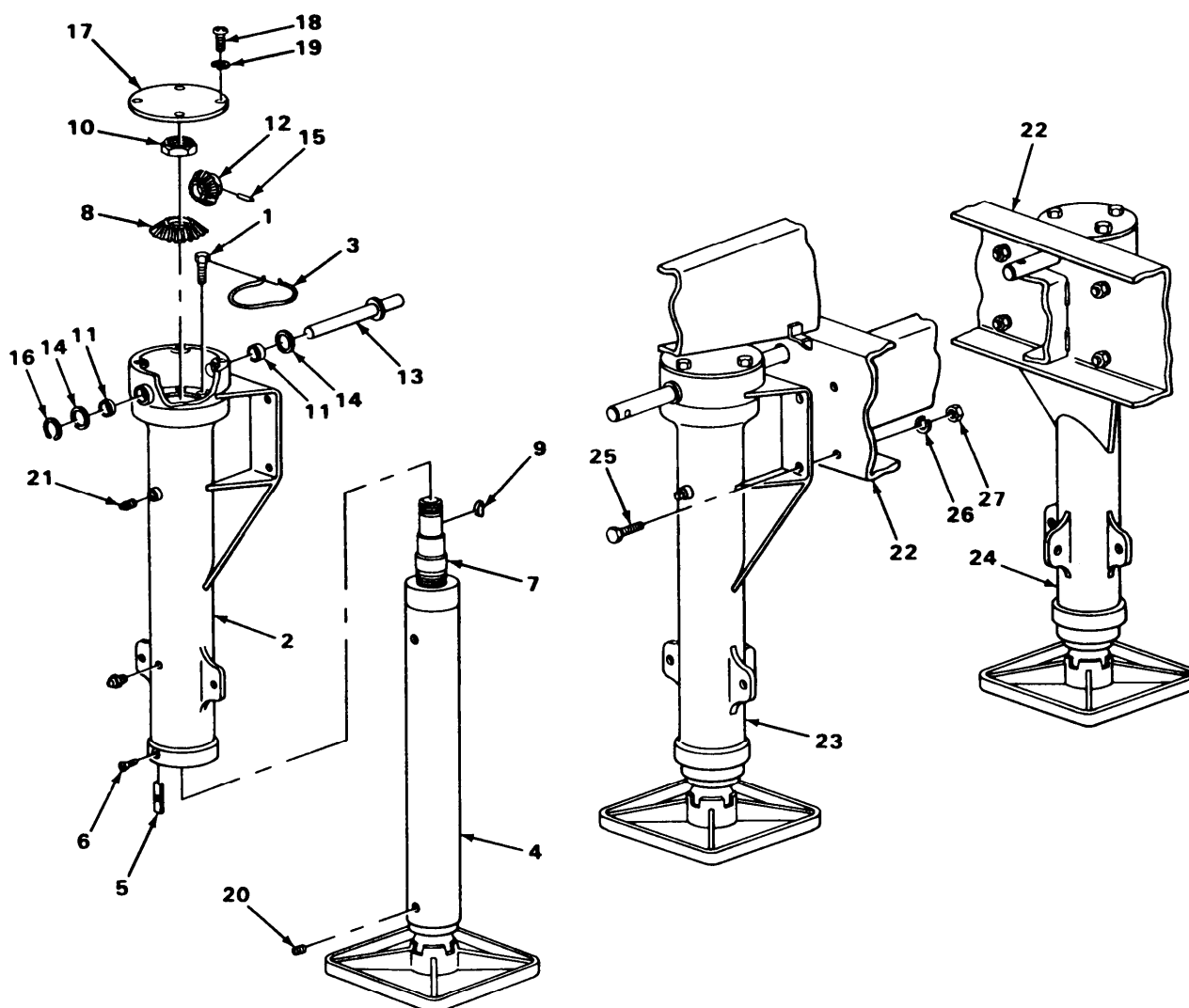
LOCATION	ITEM	ACTION REMARKS
ASSEMBLY – CONTINUED		
40. Eight screws (1) to outer leg (2)	New wire (3)	Place in position and, using diagonal-cutting pliers, cut to proper length.
41. Outer leg (2)	Inner leg (4)	Place in position.
42.	Key (5)	Place in position.
43. Key (5) to outer leg (2)	Screw (6)	Using number two cross-tip screwdriver, screw in and tighten.
44. Screw (7')	Bevel gear (8) and key (9)	Place in position.
45. Screw (7) to bevel gear (8)	Self-locking nut (10)	Using 1 7/16-inch socket, ratchet handle, and 6-inch extension with 1/2-inch drive, screw in and tighten.
46. Outer leg (2)	Two bushings (11)	Using 3-pound ball-peen hammer, tap into position.
47.	Bevel gear (12)	Place in position and hold.
48.	Shaft (13)	Slide into position.
49. Shaft (13)	Two flat washers (14)	Place in position.
50. Bevel gear (12) to shaft (13)	Pin (15)	Using 3-pound ball-peen hammer and 1/8-inch drive-pin, tap into place.
51. Shaft (13) to outer leg (2)	Retaining ring (16)	Using snapping pliers, put into place.
52. Outer leg (2)	Cover (17)	Place in position.
53. Cover (17) to outer leg (2)	Four screws (18) and four lock-washers (19)	Using number two cross-tip screwdriver, screw in and tighten.
54. Inner leg (4)	Plug (20)	Using 3/16-inch box-end wrench, screw in and tighten.
55. Outer leg (2)	Inner leg (4)	Fill with 1 1/2 quarts gear oil, grade 90,

LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
58.	Plug (21)	Using 7/16-inch box-end wrench, screw in and tighten.

INSTALLATION

- | | | |
|--|--|---|
| 57. Chassis frame (22) | Two landing legs (23 and 24) | With assistance, place in position. |
| 58. Two landing legs (23 and 24) to chassis frame (22) | Eight screws (25), eight lockwashers (28), and eight nuts (27) | Using 7/8-inch socket, ratchet handle with 1/2-inch drive, and 7/8-inch box-end wrench, screw in and tighten. |



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LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
59. Landing leg (1) to landing leg (2)	Shaft (3)	Place in position.
60.	Two screws (4), four flat washers (5), two lockwashers (6), and two nuts (7)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, screw in and tighten.
61. Bracket (8)	Gearbox (9) and new gasket (10)	Place in position.
62. Gearbox (9) to bracket (8)	Four screws (11), four lockwashers (12), and four nuts (13)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, screw in and tighten.
63.	Coupling (14) and eye hook (15)	Place in position.
64. Gearbox (9) to landing leg (1)	Two screws (16), two flat washers (17), two lockwashers (18), and two nuts (19)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, screw in and tighten.
65. Gearbox (9)	Crank (20)	Place in position.
66. Crank (20) to gearbox (9)	Screw (21), two flat washers (22), and nut (23)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box- end wrench, screw in and tighten.
67. Screw (21) to crank (20)	New cotter pin (24)	Using 6-inch slip-joint pliers, put in.
68. Two landing legs (1 and 2) and chassis frame (25)	Four braces (26)	Place in position.
69. Four braces (26) to chassis frame (25) and two landing legs (1 and 2)	Eight screws (27), eight lockwashers (28), and eight nuts (29)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box- end wrench, screw in and tighten.
70. Chassis frame (25)	Two landing legs (1 and 2)	Using crank (20) on landing leg, lower.

LANDING LEGS, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
71. Chassis frame (25)	Two 5-ton jack stands (30)	Take away.	

NOTE

FOLLOW-ON MAINTENANCE: Grease landing legs (page 4-2).

TASK ENDS HERE

SPRINGS, M118A1 AND M119A1

This task covers:

- | | |
|---------------------------------------|--|
| a. Radius rod removal (page 5-40) | e. Hanger bracket installation (page 5-44) |
| b. Spring removal (page 5-42) | f. Bushing installation (page 5-44) |
| c. Bushing removal (page 5-42) | g. Spring installation (page 5-44) |
| d. Hanger bracket removal (page 5-44) | h. Radius rod installation (page 5-46) |
-

INITIAL SETUP

Tools

Driftpin, brass, 3/8-inch
 Extension, 1/2-inch drive, 6-inch
 Handle, ratchet, 1/2-inch drive
 Handle, ratchet, 3/4-inch drive
 Jack, hand, hydraulic, 5-ton
 Jack stand, 5-ton
 Mallet, plastic
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Socket, 1/2-inch drive, 5/8-inch
 Socket, 1/2-inch drive, 15/16-inch
 Socket, 3/4-inch drive, 1 1/4-inch
 Wrench, box-end, 15/16-inch
 Wrench, open-end, 1/2-inch

Materials/Parts

Cotter pins (as required)
 Rubber bushings (four required)

Personnel Required

Two

Equipment Condition

Wheels and tires removed (page 3-6).

LOCATION	ITEM	ACTION	REMARKS
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RADIUS ROD REMOVAL

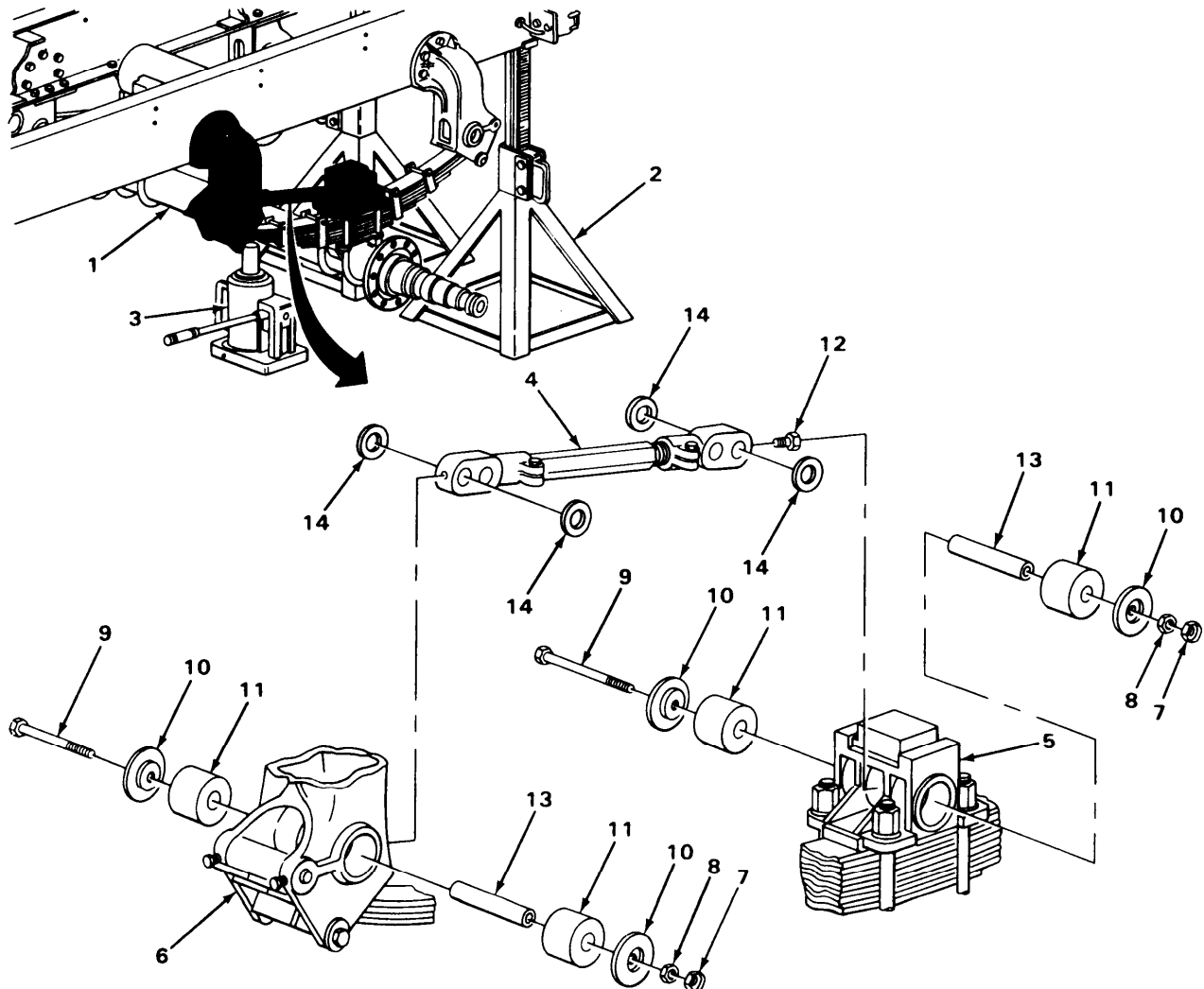
- | | | |
|--|---|---|
| 1. Axle (1) | 5-ton jack stand (2) and 5-ton hydraulic hand jack (3) | a. Using 5-ton hydraulic hand jack, raise and place 5-ton jack stand under axle.
b. Lower 5-ton hydraulic hand jack. |
| 2. Radius rod (4) to mounting bracket (5) and hanger bracket (6) | Two stamped nuts (7), two nuts (8), two screws (9), and four retainers (10) | Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take off. |
| 3. Radius rod (4) | Four rubber bushings(n) | Take out.
Discard. |
| 4. | Two setscrews (12) | Using 5/8-inch socket, ratchet handle, and 6-inch extension with 1/2-inch drive, unscrew and take off. |

SPRINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5.	Two bushings (13)	Using plastic mallet and 3/8-inch brass driftpin, tap out.
6. Mounting bracket (5) and hanger bracket (6)	Four flat washers (14)	Take out.
7.	Radius rod (4)	Take off.

NOTE

Repeat steps 1 thru 7 for opposite radius rod.



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SPRINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
SPRING REMOVAL		
8. Axle (1)	5-ton hydraulic hand jack (2) and 5-ton jack stand (3)	a. Using 5-ton hydraulic hand jack, raise axle. b. Reposition 5-ton jack stand under frame rail at corner or rear crossmember.
9.	Axle (1)	Lower axle so tires are on ground. 5-ton jack stand will hold weight off spring.
10. Two U-bolts (4) to mounting bracket (5)	Four nuts (6) and four flat washers (7)	Using 1 1/4-inch socket and ratchet handle with 3/4-inch drive, unscrew and take off.
11. Axle (1)	Two U-bolts (4)	Take off.
12. Spring (8) to rear hanger bracket (9)	Cotter pin (10)	Using diagonal-cutting pliers, take out. Discard cotter pin.
13.	Screw (11) and nut (12)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take off. .
14. Spring (8) to front hanger bracket (13)	Cotter pin (14)	Using diagonal-cutting pliers, take out. Discard cotter pin.
15.	Screw (15) and nut (16)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take off.
16. Rear hanger bracket (9) to front hanger bracket (13)	Spring (8)	With assistance, take off.

NOTE

Repeat steps 8 thru 16 for opposite spring.

BUSHING REMOVAL

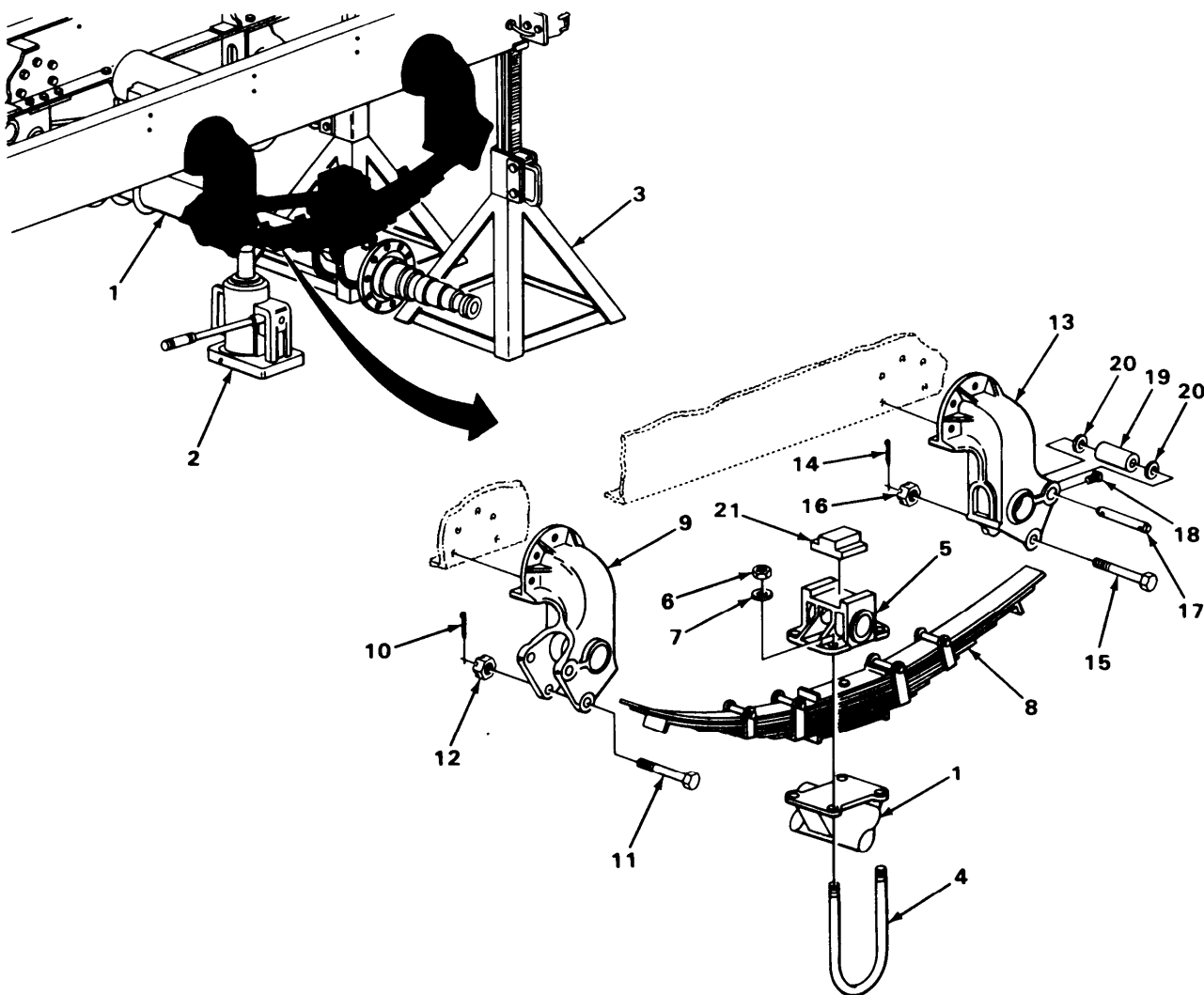
NOTE

There is a bushing at either end of spring. Repeat steps 17 thru 20 for other bushing.

17. Pin (17) to front hanger bracket (13)	Two setscrews (18)	Using 1/2-inch open-end wrench, unscrew and take off.
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SPRINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
18. Front hanger bracket (13)	Pin (17)	Using plastic mallet and 3/8-inch brass driftpin, tap out.
19.	Bushing (19) and two flat washers (20)	Take out.
20. Mounting bracket (5)	Rubber bumper (21)	Slide out.



SPRINGS, M118A1 AND M119A1 - CONTINUED

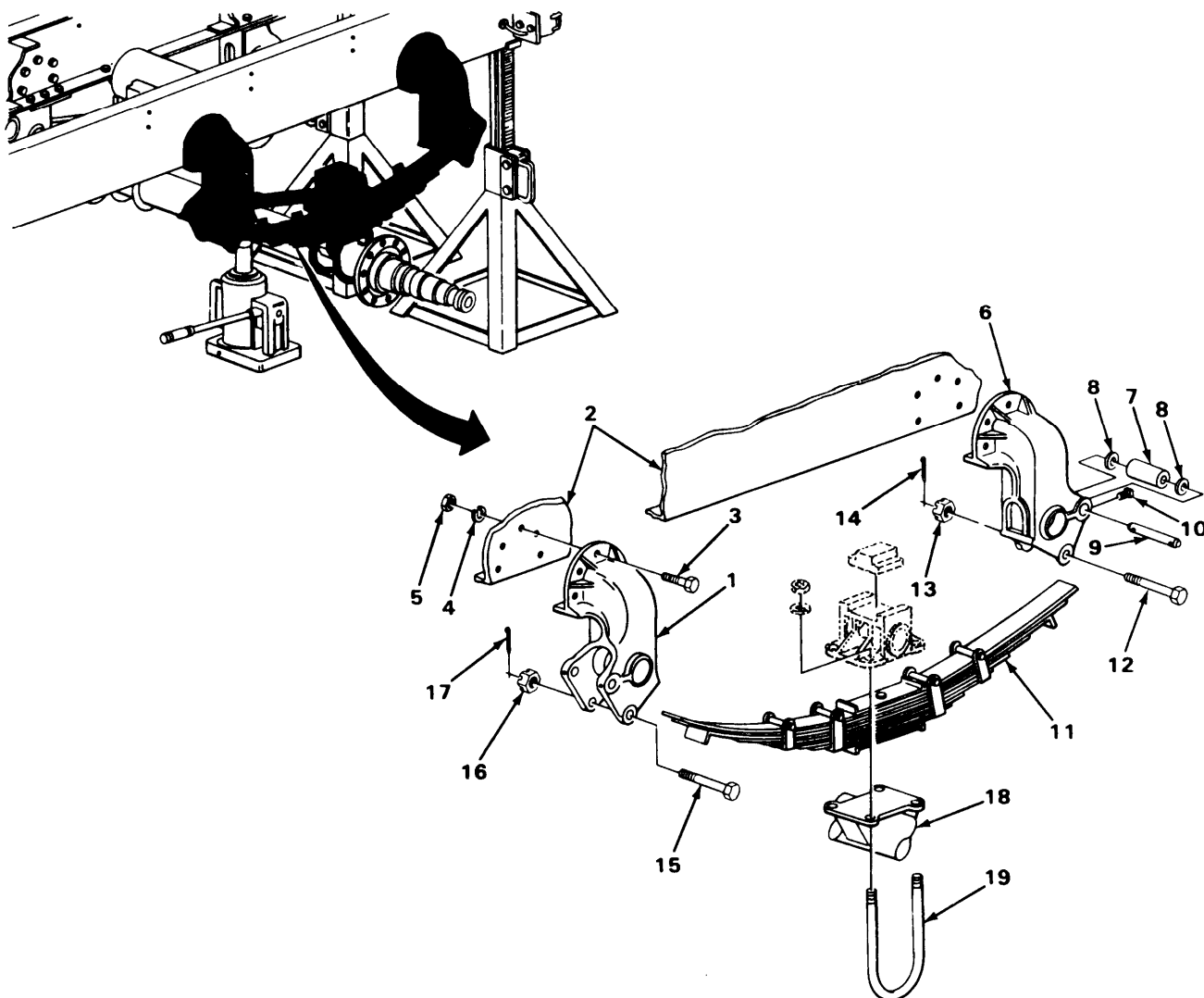
LOCATION	ITEM	ACTION REMARKS
HANGER BRACKET REMOVAL		
NOTE		
Procedure given is for one hanger bracket and is the same for both.		
21. Hanger bracket (1) to frame rail (2)	Eight screws (3), eight lockwashers (4), and eight nuts (5)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, unscrew and take off.
22. Frame rail (2)	Hanger bracket (1)	Take off.
HANGER BRACKET INSTALLATION		
23. Frame rail (2)	Hanger bracket (1)	Place in position.
24. Hanger bracket (1) to frame rail (2)	Eight screws (3), eight lockwashers (4), and eight nuts (5)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box- end wrench, screw in and tighten.
BUSHING INSTALLATION		
25. Front hanger bracket (6)	Bushing (7) and two flat washers (8)	Place in position.
26.	Pin (9)	Place in position. Aline screw holes.
27. Pin (9) to front hanger bracket (6)	Two setscrews (10)	Using 1/2-inch open-end wrench, screw in and tighten.
NOTE		
Repeat steps 25 thru 27 for other bushing.		
SPRING INSTALLATION		
28. Rear hanger bracket (1) to front hanger bracket (6)	Spring(n)	With assistance, place in position.
29. Spring (11) to front hanger bracket (6)	Screw (12) and nut (13)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, screw in and tighten.
30.	New cotter pin (14)	Using 6-inch slip-joint pliers, put in.

SPRINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
31. Spring (11) to rear hanger bracket (1)	Screw (15) and nut (16)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, screw in and tighten.
32.	New cotter pin (17)	Using 6-inch slip-joint pliers, put in.
33. Axle (18)	Two U-bolts (19)	Place in position.

NOTE

Repeat steps 28 thru 33 for opposite spring.

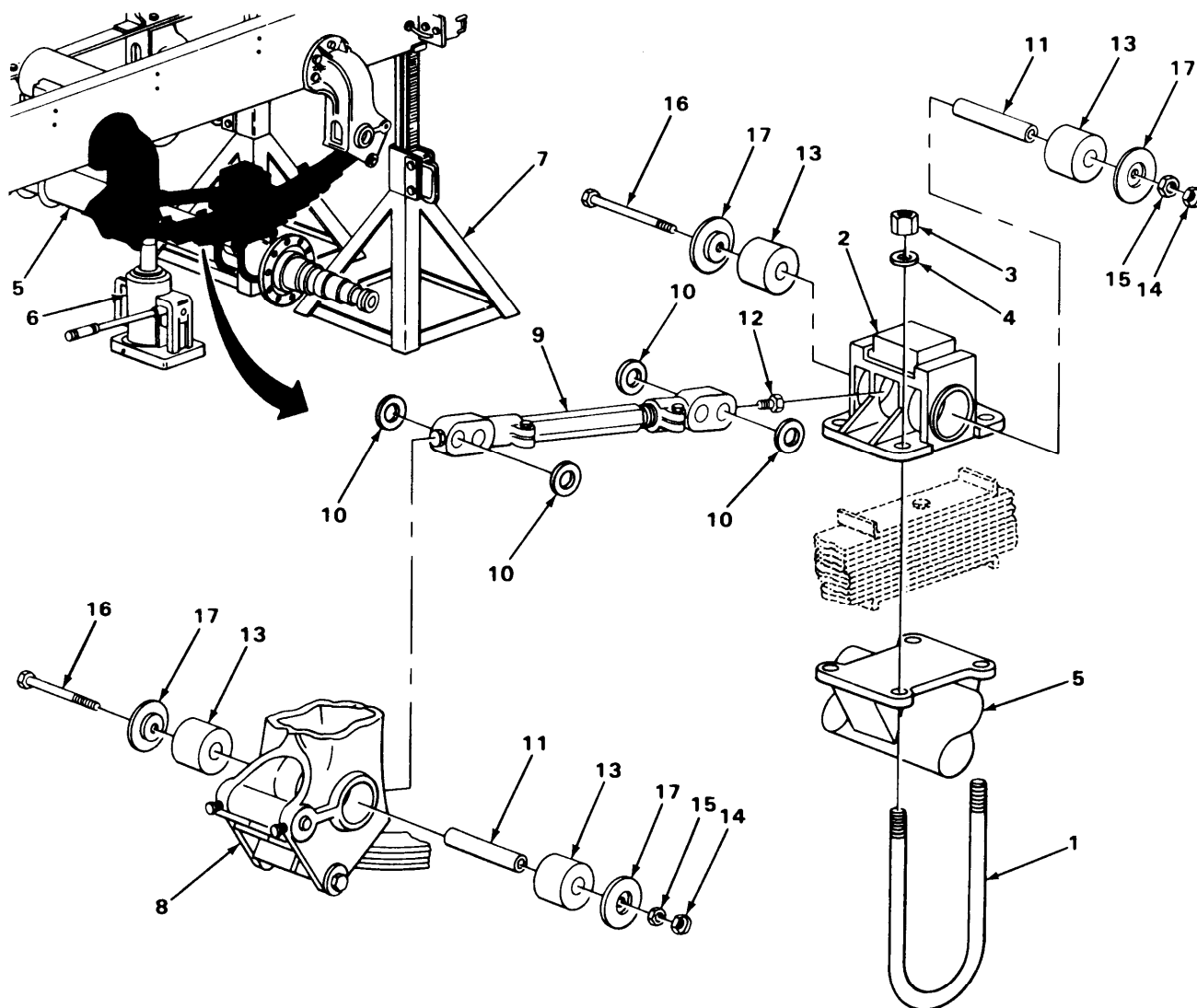


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SPRINGS, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
SPRING INSTALLATION - CONTINUED		
34. Two U-bolts (1) to mounting bracket (2)	Four nuts (3) and four flat washers (4)	Using 1 1/4-inch socket and ratchet handle with 3/4-inch drive, screw on and tighten.
NOTE		
Repeat step 34 for opposite side.		
35. Axle (5)	5-ton hydraulic hand jack (6) and 5-ton jack stand (7)	a. Using 5-ton hydraulic hand jack, raise axle. b. Reposition 5-ton jack stand under axle.
RADIUS ROD INSTALLATION		
36. Mounting bracket (2) to hanger bracket (8)	Radius rod (9)	Place in position.
37.	Four thrust washers (10)	Place in position.
38. Radius rod (9)	Two bushings (11)	Using plastic mallet, tap into place.
39.	Two screws (12)	Using 5/8-inch socket, ratchet handle with 1/2-inch drive, and 6-inch extension with 1/2-inch drive, screw in and tighten.
40.	Four new rubber bushings (13)	Place in position.
41. Radius rod (9) to mounting bracket (2) and hanger bracket (8)	Two stamped nuts (14), two nuts (15), two screws (16), and four retainers (17)	Using 15/16-inch socket, ratchet handle with 1/2-inch drive, and 15/16-inch box-end wrench, screw in and tighten.
NOTE		
Repeat steps 36 thru 41 for opposite radius rod.		
42. Axle (5)	5-ton hydraulic hand jack (6) and 5-ton jack stand (7)	Using 5-ton hydraulic hand jack, raise axle and remove 5-ton jack stand.

SPRINGS, M118A1 AND M119A1 - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Adjust radius rods (page 5-52).
2. Install wheel and tire (page 3-6).

TASK ENDS HERE

SPRINGS, M119

This task covers:

- a. Removal (page 5-48)
- b. Installation (page 5-50)

INITIAL SETUP**Tools**

Handle, ratchet, 3/4-inch drive
 Jack, hand, hydraulic, 5-ton
 Jack stand, 5-ton
 Pliers, diagonal-cutting
 Pliers, slip-joint, 6-inch
 Screwdriver, cross-tip, number two
 Socket, 3/4-inch drive, 15/16-inch
 Socket, 3/4-inch drive, 1 1/4-inch
 Socket, 3/4-inch drive, 1 1/2-inch
 Wrench, box-end, 15/16-inch
 Wrench, box-end, 1 1/2-inch
 Wrench, open-end, 7/16-inch

Materials/Parts

Cotter pins (two required)
 Rubber bumper

Personnel Required

Two

LOCATION	ITEM	ACTION REMARKS
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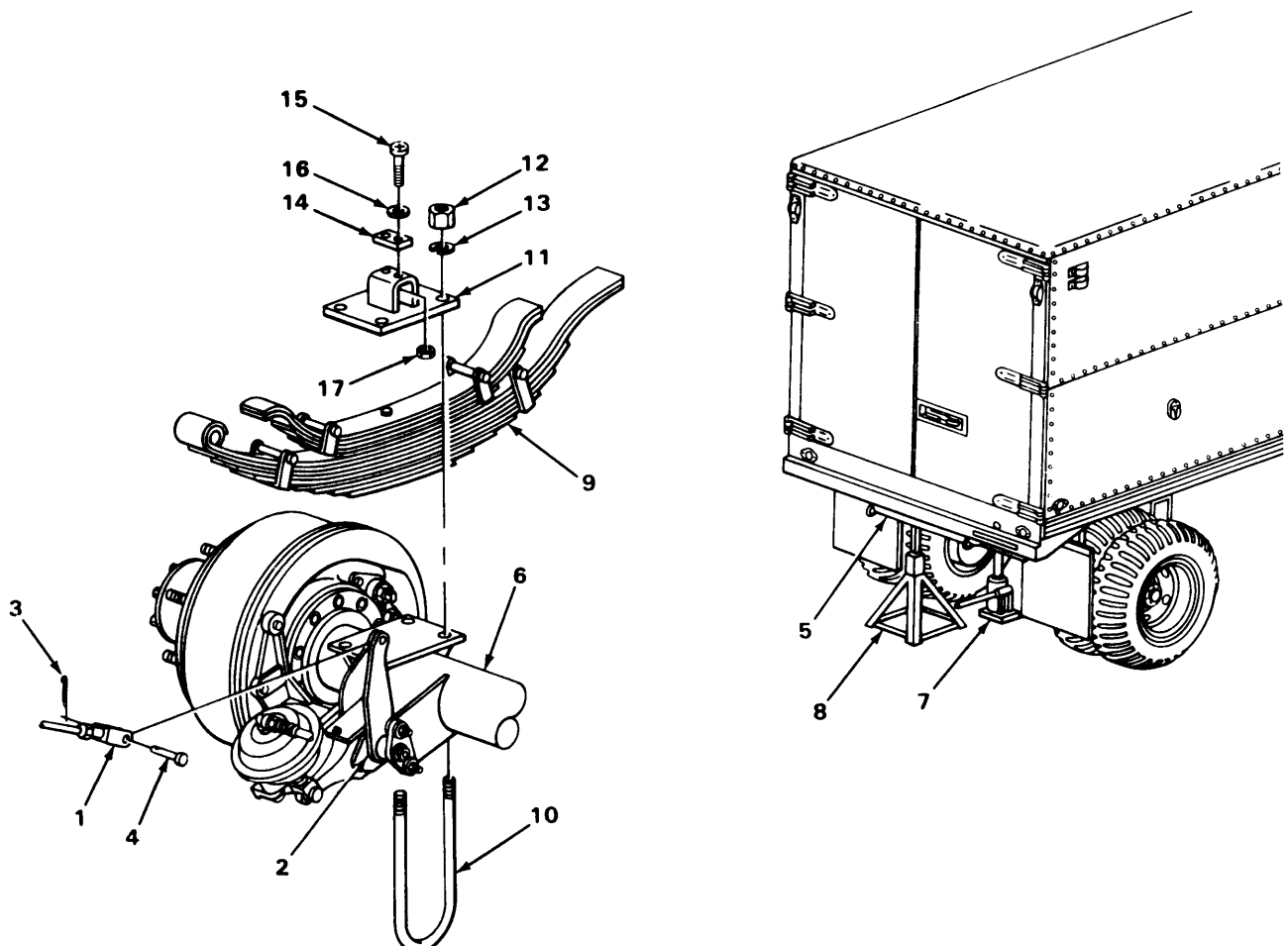
REMOVAL**NOTE**

Procedure given for one spring is the same for both sides.

- | | | |
|--|--|--|
| 1. Yoke (1) to parking brake actuating lever (2) | Cotter pin (3) and clevis pin (4) | Using diagonal-cutting pliers, take out.
Discard cotter pin. |
| 2. Parking brake actuating lever (2) | Yoke (1) | Take off. |
| 3. Rear crossmember (5) and axle (6) | 5-ton hydraulic hand jack (7) and 5-ton jack stand (8) | a. Position 5-ton jack stand under rear crossmember.
b. Lower 5-ton hydraulic hand jack to remove weight from spring (9). |
| 4. Two U-bolts (10) to mounting plate (11) | Four nuts (12) and four lockwashers (13) | Using 1 1/4-inch socket and ratchet handle with 3/4-inch drive, unscrew and take off. |

SPRINGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
5. Axle (6) and spring (9)	Two U-bolts (10) and mounting plate (11)	Take off.
6. Rubber bumper (14) to mounting plate (11)	Two screws (15), two flat washers (16), and two nuts (17)	Using number two cross-tip screwdriver and 7/16-inch open-end wrench, unscrew and take off.
7. Mounting plate (11)	Rubber bumper (14)	Take off. Discard rubber bumper.

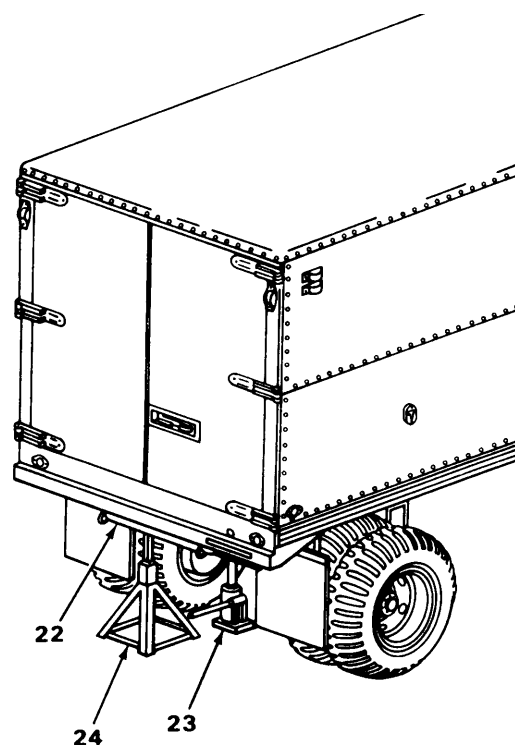
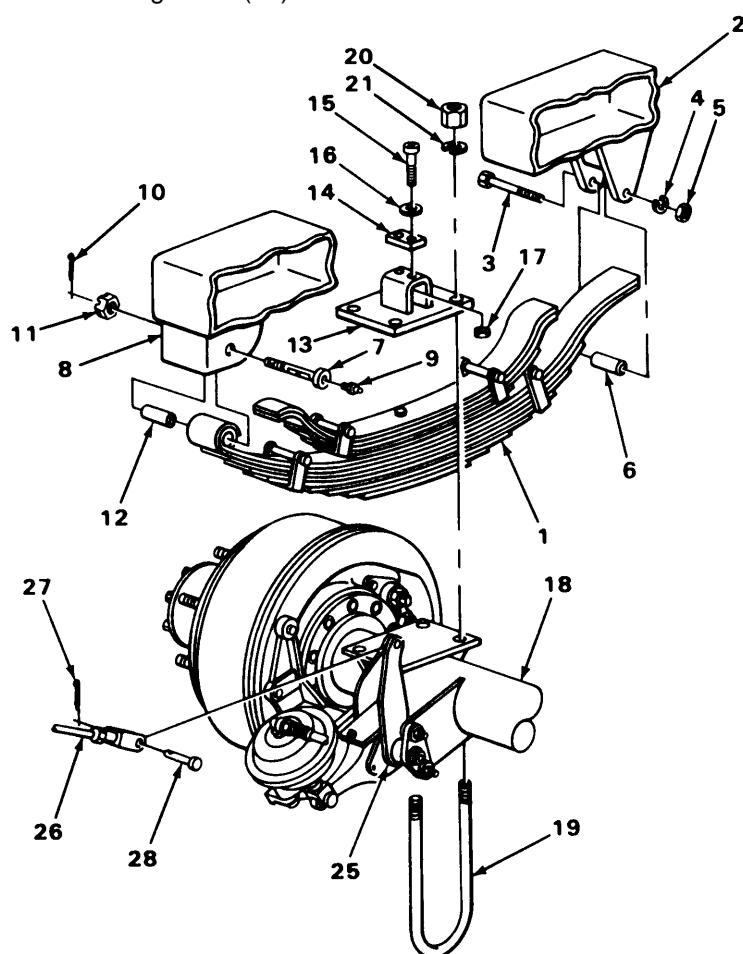


SPRINGS, M119 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
8. Spring (1) to rear hanger bracket (2)	Screw (3), lock-washer (4), nut (5), and bushing (6)	Using 15/16-inch socket, ratchet handle with 3/4-inch drive, and 15/16-inch box-end wrench, unscrew and take off.
9. Screw (7) to front hanger bracket (8)	Lubrication fitting (9)	Using 7/16-inch open-end wrench, unscrew and take off.
10.	Cotter pin (10)	Using diagonal-cutting pliers, take out. Discard cotter pin.
11. Spring (1) to front hanger bracket (8)	Screw (7), nut (11), and bushing (12)	Using 1 1/2-inch socket, ratchet handle with 3/4-inch drive, and 1 1/2-inch box-end wrench, unscrew and take off.
12. Front hanger bracket (8)	Spring (1)	With assistance, take off.
INSTALLATION		
13. Front hanger bracket (8)	Spring (1)	With assistance, place in position.
14. Spring (1) to front hanger bracket (8)	Screw (7), nut (11), and bushing (12)	Using 1 1/2-inch socket, ratchet handle with 3/4-inch drive, and 1 1/2-inch box-end wrench, screw in and tighten.
15. Screw (7) to front hanger bracket (8)	New cotter pin (10)	Using 6-inch slip-joint pliers, put in.
16.	Lubrication fitting (9)	Using 7/16-inch open-end wrench, screw in and tighten.
17. Spring (1) to rear hanger bracket (2)	Screw (3), lock-washer (4), nut (5), and bushing (6)	Using 15/16-inch socket, ratchet handle with 3/4-inch drive, and 15/16-inch box-end wrench, screw in and tighten.
18. Mounting plate (13)	New rubber bumper (14)	Place in position.
19. Rubber bumper (14) to mounting plate (13)	Two screws (15), two flat washers (16), and two nuts (17)	Using number two cross-tip screwdriver and 7/16-inch open-end wrench, screw in and tighten.
20. Axle (18) and spring (1)	Two U-bolts (19) and mounting plate (13)	Place in position.

SPRINGS, M119 - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
21. Two U-bolts (19) to mounting plate (13)	Four nuts (20) and four lockwashers (21)	Using 1 1/4-inch socket and ratchet handle with 3/4-inch drive, screw in and tighten.	
22. Rear crossmember (22) and axle (18)	5-ton hydraulic jack (23) and 5-ton jack stand (24)	Using 5-ton hydraulic jack, raise axle and remove 5-ton jack stand.	
23. Parking brake actuating lever (25)	Rear rod (26)	Place in position.	
24. Rear rod (26) to parking brake actuating lever (25)	New cotter pin (27) and clevis pin (28)	Using 6-inch slip-joint pliers, put in.	



TASK ENDS HERE

TA234088

RADIUS ROD ADJUSTMENT, M118A1 AND M119A1

This task covers:

Adjustment

INITIAL SETUP**Tools**

Tape measure, 50-foot-long
 Wrench, open-end, 3/4-inch (two required)
 Wrench, open-end, 1 1/2-inch

Personnel Required

Two

LOCATION	ITEM	ACTION	REMARKS
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ADJUSTMENT**NOTE**

Adjustment procedure must be done on level ground so that trailer remains level.

Only roadside radius rod is adjustable.

- | | | |
|------------------------|---|--|
| 1. Trailer chassis (1) | Kingpin (2) to curbside backing plate (3) | Using 50-foot-long tape measure, measure distance from kingpin to nearest point on curbside backing plate.
Record measurement and label as A. |
| 2. | Kingpin (2) to roadside backing plate (4) | Using 50-foot-long tape measure, measure distance from kingpin to nearest point on roadside backing plate.
Record measurement and label as B. |

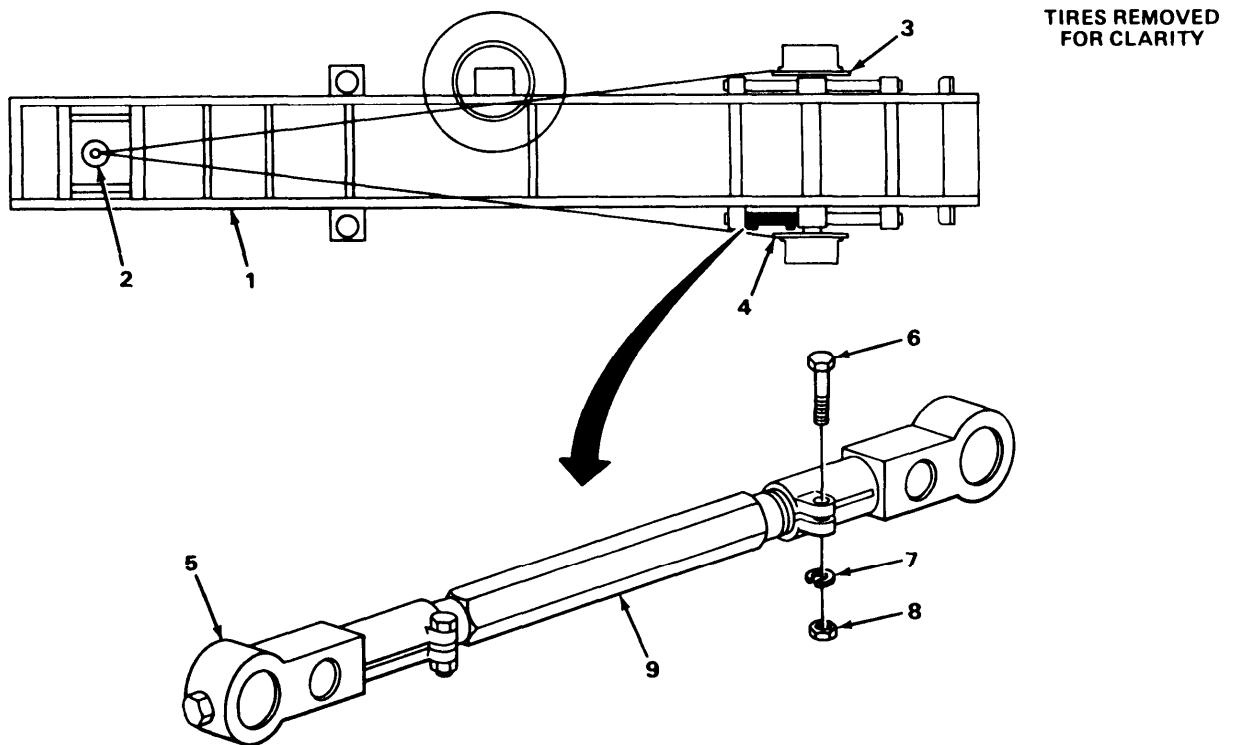
NOTE

Measurement of A and B should be $\pm 1/16$ inch (0.159 cm) of each other. If measurement of distance in steps 1 and 2 vary more than $1/16$ inch (0.159 cm) of each other, proceed with steps 3 thru 5.

- | | | |
|----------------------------|---|---|
| 3. Roadside radius rod (5) | Two screws (6), two lockwashers (7), and two nuts (8) | Using two 3/4-inch open-end wrenches, loosen. |
|----------------------------|---|---|

RADIUS ROD ADJUSTMENT, M118A1 AND M119A1 - CONTINUED

LOCATION	ITEM	ACTION REMARKS
4.	Spacer (9)	Using 1 1/2-inch open-end wrench, turn until measurement of A and B are within limits. Turn clockwise to lengthen or counterclockwise to shorten.
5. Roadside radius rod (5)	Two screws (6), two lockwashers (7), and two nuts (8)	Using two 3/4-inch open-end wrenches, tighten.



TASK ENDS HERE

BODY

This task covers:

- a. Removal (page 5-54)
- b. Installation (page 5-56)

INITIAL SETUP

Tools	Materials/Parts
Handle, ratchet, 1/2-inch drive	Gasket
Hoist and sling, overhead, 10-ton	
Socket, 1/2-inch drive, 9/16-inch	Personnel Required
Socket, 1/2-inch drive, 3/4-inch	
Wrench, box-end, 9/16-inch	Four
Wrench, box-end, 3/4-inch	

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

REMOVAL

NOTE

The following steps, except where noted, are typical for removing the body on the M118A1, M119, and M119A1 semitrailers.

- | | | |
|--|----------------|---------|
| 1. Body wire harness (1) to chassis wire harness (2) | Receptacle (3) | Unplug. |
|--|----------------|---------|

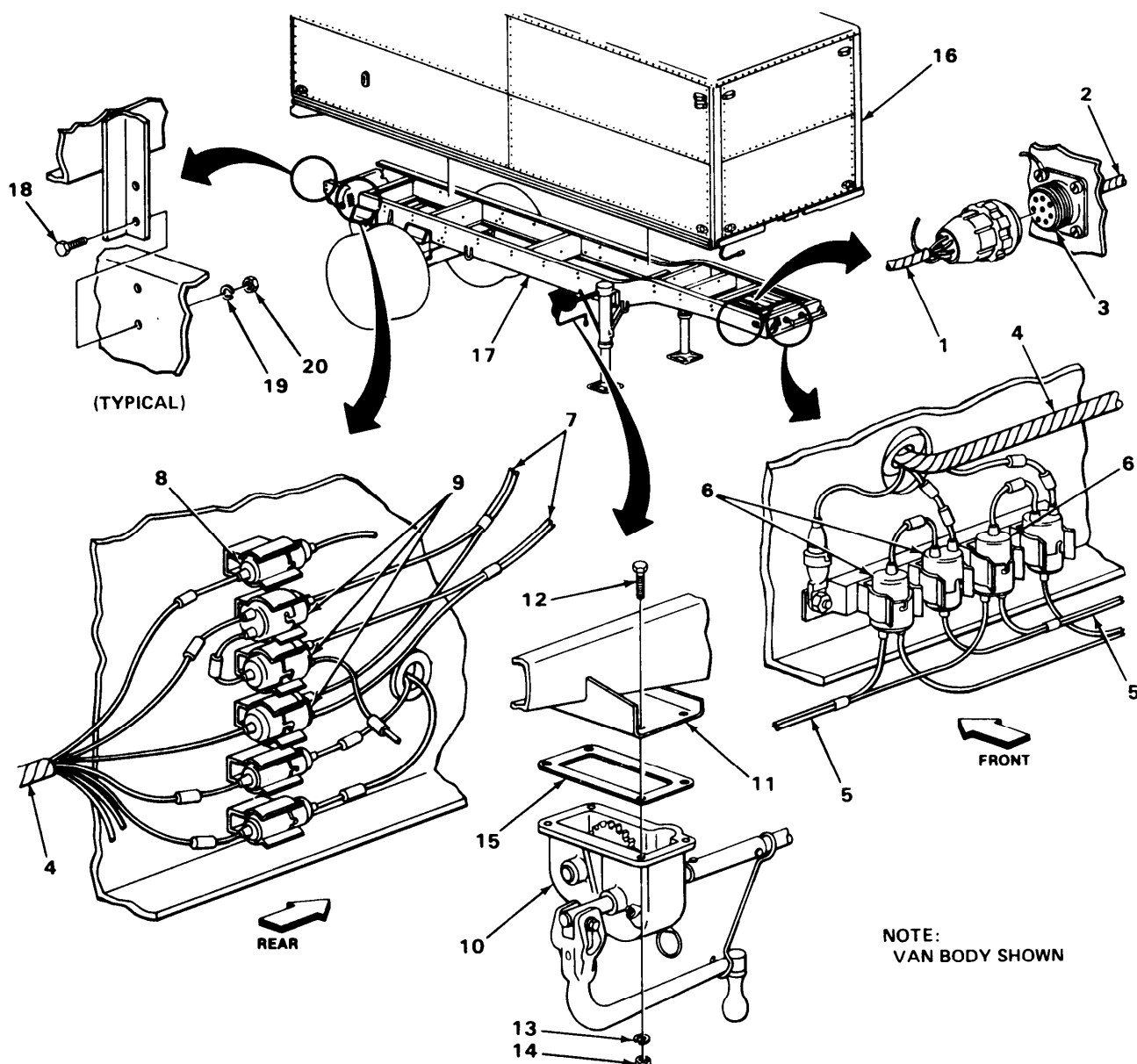
NOTE

Steps 2 and 3 are for the M119 semitrailer only. Steps 4 thru 11 are typical for all semitrailers.

- | | | |
|--|--|---|
| 2. Main harness (4) to front clearance light harness (5) | Three plug connectors (6) | Take apart. |
| 3. Main harness (4) to rear clearance light harness (7) | Dome light connector (8) and three rear clearance light connectors (9) | Take apart. |
| 4. Gearbox (10) to bracket (11) | Four screws (12), four lockwashers (13), and four nuts (14) | Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box-end wrench, unscrew and take off. |
| 5. | Gasket (15) | Take off.
Discard gasket. |

BODY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
6. Body (16) to chassis (17)	58 screws (18), 58 lockwashers (19), and 58 nuts (20)	Using 3/4-inch socket, ratchet handle with 1/2-inch drive, and 3/4-inch box-end wrench, unscrew and take off.	
7. Chassis (17)	Body (16)	Using 10-ton overhead hoist and sling with assistance, take off.	



BODY - CONTINUED

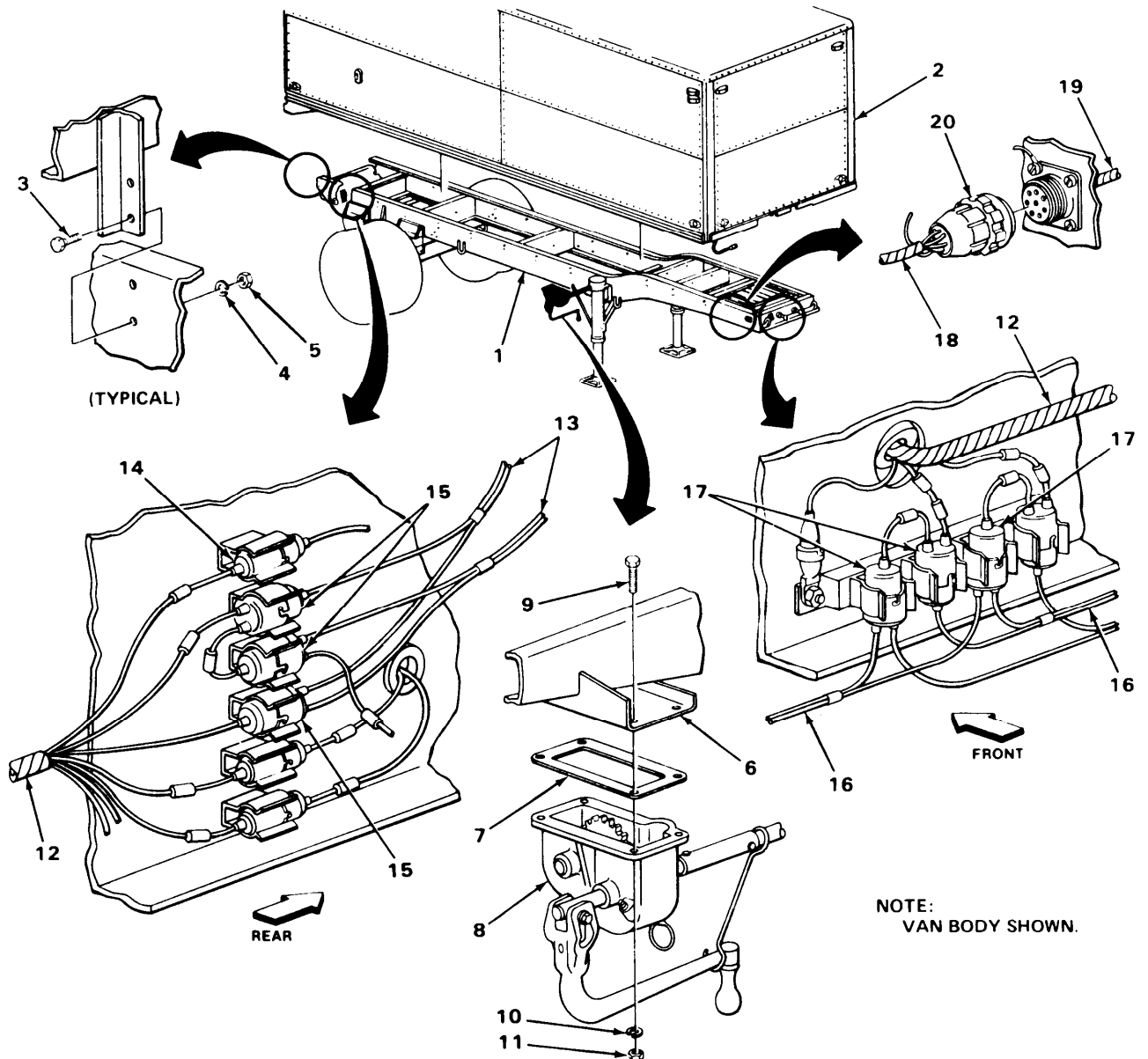
LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
8. Chassis (1)	Body (2)	Using 10-ton overhead hoist and sling with assistance, place in position.
9. Body (2) to chassis (1)	58 screws (3), 58 lockwashers (4), and 58 nuts (5)	Using 3/4-inch socket, ratchet handle with 1/2-inch drive, and 3/4-inch box-end wrench, screw in and tighten.
10. Bracket (6)	New gasket (7)	Place in position.
11. Gearbox (8) to bracket (6)	Four screws (9), four lockwashers (10), and four nuts(n)	Using 9/16-inch socket, ratchet handle with 1/2-inch drive, and 9/16-inch box-end wrench, screw in and tighten.

NOTE

Steps 12 and 13 are for the M119 semitrailer only.

12. Main harness (12) to rear clearance light harness (13)	Dome light connector (14) and three rear clearance light connectors (15)	Put together.
13. Main harness (12) to front clearance light harness (16)	Three plug connectors (17)	Put together.
14. Body wire harness (18) to chassis wire harness (19)	Receptacle (20)	Plug in.

BODY - CONTINUED



TASK ENDS HERE

BODY REPAIR, M119 AND M119A1

Repair body in accordance with FM 43-2, Metal Body Repair and Related Operations.

APPENDIX A

REFERENCES

A-1. SCOPE.

This appendix lists all publication indexes, forms, field manuals, technical manuals, technical bulletins, and miscellaneous publications referenced in this manual.

A-2. PUBLICATION INDEXES.

The following indexes should be consulted frequently for the latest changes or revisions and for new publications relating to material covered in this manual.

Consolidated index of Army Publications and Blank Forms	DA PAM 25-30
The Army Maintenance Management System (TAMMS)	DA PAM 738-750

A-3. FORMS.

Requirements for Army Automotive Publications, Dollies, Trailers and Semi-Trailers	DA Form 12-39
Recommended Changes to Publications and Blank Forms	DA Form 2028
Recommended Changes to Equipment Technical Publications	DA Form 2028-2
Equipment Inspection and Maintenance Worksheet	DA Form 2404
Maintenance Request	DA Form 2407
Preventive Maintenance Schedule and Record	DD Form 314
Processing and Reprocessing Record for Shipment, Storage, and Issue of Vehicles and Spare Engines	DD Form 1397
Report of Discrepancy (ROD)	SF Form 364
Quality Deficiency Report	SF Form 388

A-4. FIELD MANUALS.

Operation and Maintenance of Ordnance Materiel in Cold Weather (0° to - 65°F)	FM 9-207
Manual for Wheeled Vehicle Driver	FM 21-305
Metal Body Repair and Related Operations	FM 43-2
Railway Operating and Safety Rules	FM 55-21

A-5. TECHNICAL MANUALS.

Inspection, Care, and Maintenance of Antifriction Bearings	TM 9-214
Welding Theory and Application, Operator's Manual	TM 9-237
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals	TM 9-247
Operator's, Unit, Direct Support, and General Support Maintenance Manual for Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes	TM 9-2610-200-14
Painting instructions for Army Materiel	TM 43-0139
Railcar Loading Procedures	TM 55-601
Administrative Storage of Equipment	TM 740-90-1
Storage and Materials Handling	TM 743-200-1
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use	TM 750-244-6

A-6. TECHNICAL BULLETINS.

Equipment Improvement Report and Maintenance Digest	TB 43-0001 -39
	Series
Tank-Automotive Equipment	TB 43-0002-87

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL.

- a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.
- 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 function on the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.
- c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from section II.
- d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS.

Maintenance functions will be limited to and defined as follows:

- a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (eg, by sight, sound, or touch).
- b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- c. Service. Operations required periodically to keep an item in proper operating condition, ie, to clean (including decontaminate, when required), preserve, drain, paint, or replenish fuel, lubricants, chemical fluids, or gases.
- d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.
- e. 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 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.

B-2. MAINTENANCE FUNCTIONS - CONTINUED.

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 into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. Replace is authorized by the MAC and is shown as the third position of the SMR code.

i. Repair. The application of maintenance service¹, including fault location/troubleshooting², removal/installation, disassembly/assembly³ procedures, and maintenance actions⁴ to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publication (ie, DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc) considered in classifying Army equipment/components.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00".

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the function to be performed on the item listed in column 2. (For detailed explanation of these functions, see paragraph B-2.)

¹Service – inspect, test, service, adjust, align, calibrate, and/or replace.

²Fault location/troubleshooting – process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

³Disassembly/assembly – encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least component identified as maintenance significant (ie, assigned an SMR code) for the category of maintenance under consideration.

⁴Action – welding, grinding, riveting, straightening, facing, remachining, and/or resurfacing.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II - CONTINUED.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a worktime figure in the appropriate subcolumns, the category of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate worktime figures will be shown for each category. The worktime figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the Maintenance Allocation Chart. The symbol designations for the various maintenance categories are as follows:

- C – Operator or Crew
- O – Organizational
- F – Direct Support
- H – General Support
- D – Depot

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetical order, which shall be keyed to the remarks contained in section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

a. Column 1, Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, section 11, column 5.

b. Column 2, Maintenance Category. The lowest category 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.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

a. Column 1, Reference Code. The code recorded in column 6, section II.

b. Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, section II.

Section II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
06	ELECTRICAL SYSTEM								
0608	Miscellaneous Items								
0609	Switch, Dome Light	Replace		0.5				1	
	Lights								
	Lamps	Replace		0.3				1	
	Light Assemblies	Replace Repair		0.5 0.5				1,3,4	A
	Dome Light, Emergency	Replace Repair		0.4 0.5				1,3,4	
0613	Chassis Wiring Harness	Test Replace Repair		0.2 0.5 0.3				1,3,4	
	Body Wiring	Replace Repair		0.5 0.3				1,3,4	
	Intervehicle Cable Receptacle	Test Replace		0.2 0.3					
11	REAR AXLE								
1100	Rear Axle Assembly	Replace Repair			6.0 4.0			2,5,6,7	
1101	Housing, Beam	Replace			4.0			2,5	
12	BRAKES								
1201	Handbrakes								
	Handbrake Lever and Linkage (M119 only)	Adjust Replace Repair	0.2	1.0 1.0				1,3,4	

MAINTENANCE ALLOCATION CHART - CONTINUED

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
1202	Service Brakes								
	Brakeshoes	Replace Repair		1.3	0.5			2,5,6,7	B
1204	Hydraulic Brake System								
	Wheel Cylinder (M118A1 and M119A1)	Service Replace	0.5	2.0				1,3,4	
	Bleeder Valve (M118A1 and M119A1)	Replace		0.5					
	Hoses, Lines, and Fittings	Replace Repair		1.0 1.5				1,3,4	
	Master Cylinder (M118A1 and M119A1)	Service Replace	0.5	2.0				1,3,4	
1206	Mechanical Brake System								
	Slack Adjuster	Adjust Replace		0.2 0.4				1,3,4	
1208	Airbrake System								
	Gladhand	Replace		0.3				1,3,4	
	Lines, Hoses and Fittings	Replace		1.5				1,3,4	
	Brake Chamber	Replace Repair		1.0	1.0			2,5,6,7	
	Relay Valve, Emergency	Replace		1.0				1,3,4	
	Check Valve, Exhaust	Replace		0.5				1,3,4	

MAINTENANCE ALLOCATION CHART - CONTINUED

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
12	BRAKES – CONTINUED								
1208	Airbrake System – Continued								
	Air Filter Element	Replace		0.3				1,3	
	Air Filter	Replace		0.3				1	
	Air Reservoir	Replace		0.5				1	
13	WHEELS								
1311	Wheel Assembly								
	Hub Bearing	Service Replace		D.5 1.5				1,3,4	
	Braked rum	Replace Repair		1.5	1.0			2,5,6,7	c
	Wheel Hub	Replace Repair		1.5 1.5				1,3,4	
	Oil Seal	Replace		1.0				1,3,4	
	Wheel	Replace	0.5					1,3,4	D
1313	Tires, Tubes								
	Tire	Service Replace Repair	1.0		2.0 2.0			2,5,6,7	E
	Tube	Replace Repair			2.0 1.0			2,5,6,7	E
15	FRAME, TOWING ATTACHMENTS								
1501	Frame Assembly	Repair			3.0			2,5,6,7	F
	Rear Step	Replace		0.5					
	Mud Guards	Replace		1.5					

MAINTENANCE ALLOCATION CHART - CONTINUED

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
1504	Spare Wheel Carrier, Tire Lock, and Wire Rope	Replace		1.5				1,3,4	
1507	Landing Gear, Leveling Jacks, and Gearbox	Service Replace Repair		0.5	2.0 2.0			2,5,6,7	
16	SPRINGS AND SHOCK ABSORBERS								
1601	Springs								
	Main Spring	Replace			2.5			2,3,4	
	Bushings and Pins	Replace			1.0			2,3,4	
1605	Torque, Radius and Stabilizer Rods								
	Radius Rods	Adjust Replace			1.0 1.0			2,3,4	
18	BODY, CAB, AND HOOD								
1810	Cargo Body Racks (M118A1) Body Assembly (M118A1)	Remove/Install Replace	0.1	2.0	1.0				
1812	Special Purpose Bodies								
	Body Assembly (M119 and M119A1)	Replace Repair			3.0 3.0			2,5,6,7	F
	Rear Door Assembly (M119 and M119A1)	Replace Repair		2.0 1.0				1,3,4	F
	Floor	Replace		2.0				1	

MAINTENANCE ALLOCATION CHART - CONTINUED

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT	(6) REMARKS
			C	O	F	H	D		
22	BODY AND CHASSIS ACCESSORY ITEMS								
2201	Canvas, Rubber, or Plastic Items	Replace		0.6				1	
2202	Accessory Items								
	Reflector	Replace		0.3				1	
2210	Data Plates and Instruction Holders	Replace		1.0				1	

Section III. TOOLS AND TEST EQUIPMENT REQUIREMENTS

(1) REFERENCE CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
1	O,F,H	Tool Kit, General Mechanics	5180-00-177-7033	W33004
2	F,H	Tool Kit, Master Mechanics	5180-00-699-5273	W45060
3	O	Shop Equipment, Auto- motive Maintenance and Repair: Organizational Maintenance, Common No. 1, Less Power	4910-00-754-0654	W32593
4	O	Shop Equipment, Auto- motive Maintenance and Repair: Organizational Maintenance, Common No. 2	4910-00-754-0650	

TOOLS AND TEST EQUIPEMENT - CONTINUED

(1) REFERENCE CODE	(2) MAINTENANCE CATEGORY	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
5	F	Shop Equipment, Auto- motive Maintenance and Repair: Field Main- tenance, Common No. 1	4910-00-754-0681	
6	F	Tool Kit, Welder's	5180-00-754-0661	
7	F	Shop Equipment, Welding, Field Maintenance	4940-00-357-7268	

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	Light assembly repair limited to door, packing, gasket, and lamp replacement.
B	Brakeshoe repair limited to friction lining and tubular rivet replacement.
C	Brakedrum repair limited to refacing braking surface using a brakedrum lathe.
D	Includes removing and replacing spare wheel and tire from spare wheel carrier.
E	Refer to TM 9-2610-200-14 for tire and tube repair.
F	Frame, doors, and body repair consist of welding, straightening, and reconditioning damaged part or parts.

APPENDIX C

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS

Section I. INTRODUCTION

C-1. SCOPE.

This appendix lists components of end item and basic issue items for the ammunition trailer to help you inventory items required for safe and efficient operation.

C-2. GENERAL.

The Components of End Item and Basic Issue Items 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 ammunition trailer in operation, operate it, and perform emergency repairs. Although shipped separately packaged, BII must be with the ammunition trailer 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 the end item.

C-3. EXPLANATION OF COLUMNS.

The following provides an explanation of columns found in the tabular listings:

a. Column 1, Illustration Number (Illus No.). This column indicates the number of the illustration in which the item is shown.

b. Column 2, National Stock Number. Indicates the national stock number assigned to the item and will be used for requisitioning purposes.

c. Column 3, Description. Indicates the Federal item name and, if required, a minimal description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number. If item needed differs for different models of this equipment, the model is shown under the Usable On Code heading in this column.

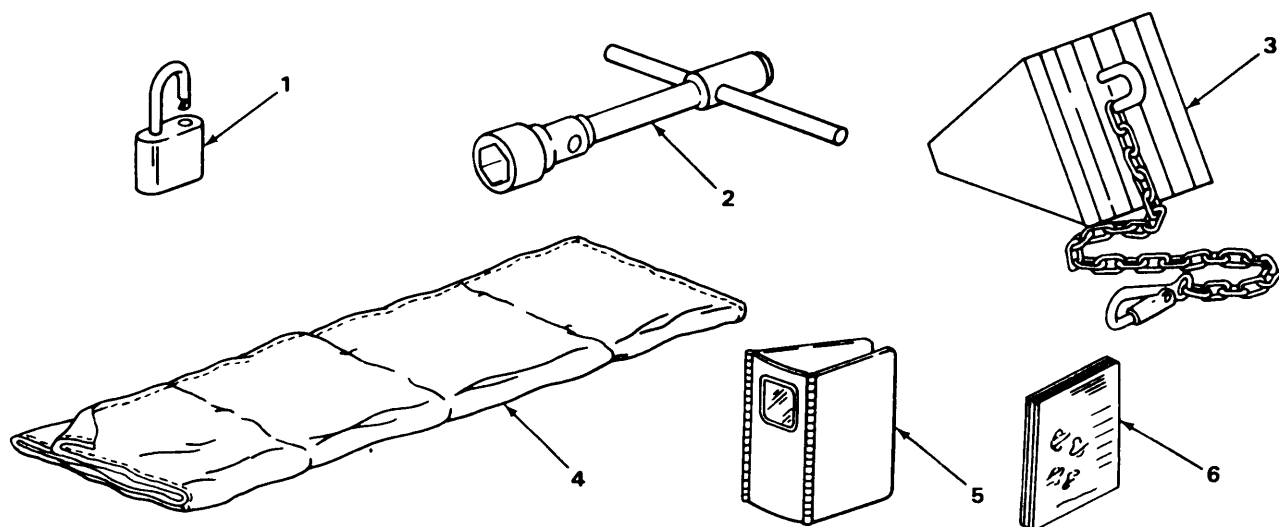
d. Column 4, Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (eg, ea, in., pr).

e. Column 5, Quantity Required (Qty Req'd). Indicates the quantity of the item authorized to be used with/on the equipment.

Section II. COMPONENTS OF END ITEM

NONE AUTHORIZED

Section III. BASIC ISSUE ITEMS



(1) ILLUS NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM AND PART NUMBER	USABLE ON CODE	(4) U/M	(5) QTY REQ'D
1	5340-00-582-2741	Padlock (96906) MS35647-4 Padlock (19207) 8376425	136 686	ea ea	1 1
2	5120-00-293-2452	Wrench, Lug with Handle (19207) 7083293		ea	1
3	2540-00-670-2003	Chock, Wheel (19207) 8343584		ea	2
4	2540-00-693-0732	Paulin: Cargo Body (19207) 8374884	694	ea	1
5	7510-00-281-4309	Binder, King Book (70063) DF1704		ea	1
6		Publication, Vehicle TM 9-2330-210-14&P		ea	1

APPENDIX E

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1. SCOPE.

This appendix lists expendable supplies and materials you will need to operate and maintain the M118A1 and M119 series semitrailer. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

E-2. EXPLANATION OF COLUMNS.

a. Column 1, Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (eg, Use sealing compound, item 8, appendix E).

b. Column 2, Level. This column identifies the lowest level of maintenance that requires the listed item.

- C - Operator/Crew
- O - Organizational
- F - Direct Support
- H - General Support

c. Column 3, National Stock Number. This is the national stock number assigned to the item; use it to request or requisition the item.

d. Column 4, Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

e. Column 5, Unit of Measure (U/M). indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (eg, ea, in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION (FSCM)	(5) U/M
1	0	9150-01-102-9455	Brake Fluid, Silicone (BFS) (81349) MIL-B-46176 1-Gallon Can	OZ
2	0		Container, Empty I-Quart	ea
3	0	9150-00-190-0904	Grease, Automotive and Artillery (81349) MIL-G-10924 1-Pound Can	lb
4	0	9150-00-180-6382	Grease, Industrial, General Purpose, (81349), VV-G-632 6.5-Pound Can	lb
5	0	9150-01-035-5390 9150-01-035-5391	Oil, Lubricating, Gear, Grade 75W, (81349) MIL-L-2105 1-Quart Can 5-Gallon Can	OZ OZ
6	0	9150-01-035-5392 9150-01-035-5393	Oil, Lubricating, Gear, Grade 80W/90, (81349) MIL-L-2105 1-Quart Can 5-Gallon Can	OZ OZ
7	0	9150-00-035-7293 9150-00-231-6689	Oil, Lubricating, Preservative, Medium, (81349) MIL-L-3150 Special, (81348) VV-L-800	OZ qt
8	0		Plastic Tubing	ft
9	0	7920-00-205-1711	Rags, Wiping (58536) A-A-531 50-Pound Bale	lb
10	0	6850-00-664-5685 6850-00-281-1985 6850-00-285-8011	Solvent, Drycleaning (81349) P-D-680 Type II 1-Quart Can 1-Gallon Can 55-Gallon Drum	qt gl gl
11	0	9905-00-537-8954	Tags, Marker	ea
12		8030-00-067-7368 8030-00-889-3535	Tape, Antiseizing, Pipe Joint Sealer (71643) 1/4 Inch Wide, 54 Feet Long (76381) 1/2 Inch Wide, 260 Inches Long	ft ea

APPENDIX F

REPAIR PARTS AND SPECIAL TOOLS LISTS

Section I. INTRODUCTION

F-1. SCOPE.

This 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 operator's, organizational, direct support, and general support maintenance of the 8-Ton, 2-Wheel, M118A1 Semitrailer, Stake. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

F-2. GENERAL.

In addition to Section I, *Introduction*, this Repair Parts and Special Tools List 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 in item name sequence. Repair parts kits are listed separately in their own functional group within Section II. Repair parts for reparable special tools are also listed in this section. Items listed are shown on the associated illustration(s)/figure(s).

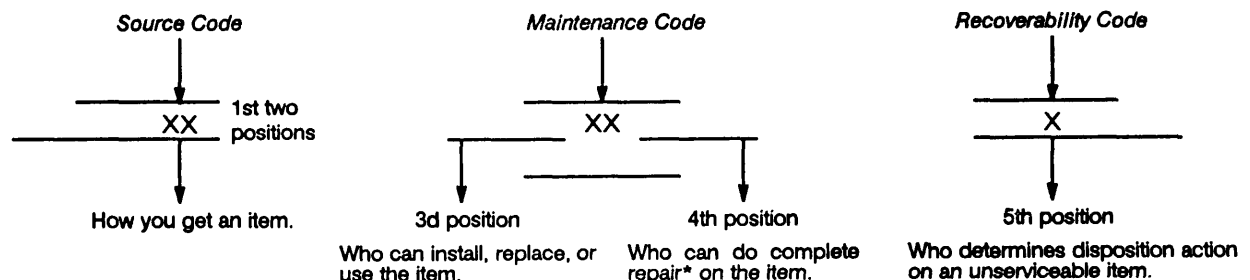
b. **Section III. Special Tools List.** A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL [as indicated by Basis of Issue (BOI) information in the *DESCRIPTION AND USABLE ON CODE* column] for the performance of maintenance.

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 and part numbers are cross-referenced to each illustration/figure and item number appearance. The figure and item number index lists figure and item numbers in alphanumeric sequence and cross-references NSN, CAGE, and part numbers.

F-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 Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



* **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.

F-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) - Continued.

(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>
<div> <div>PA</div> <div>PB</div> <div>PC**</div> <div>PD</div> <div>PE</div> <div>PF</div> <div>PG</div> </div>	<p>Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code.</p> <p>** Items coded PC are subject to deterioration.</p> <p>.....</p>
<div> <div>KD</div> <div>KF</div> <div>KB</div> </div>	<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 3d position of the SMR code. The complete kit must be requisitioned and applied.</p> <p>.....</p>
<div> <div>MO - Made at UM/AVUM Level</div> <div>MF - Made at DS/AVUM Level</div> <div>MH - Made at GS Level</div> <div>MD - Made at Depot</div> </div>	<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 <i>DESCRIPTION AND USABLE ON CODE (UOC)</i> 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 3d position code 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>
<div> <div>AO - Assembled by UM/AVUM Level</div> <div>AF - Assembled by DSI/AVUM Level</div> <div>AH - Assembled by GS Level</div> <div>AD - Assembled at Depot</div> </div>	<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 3d position code of the SMR code authorizes you to replace the item, but the source code indicates that the item is assembled at a higher level, order the item from the higher level of maintenance.</p>

NOTE

Cannibalization or controlled exchange, when authorized, maybe used as a source of supply for items with the following source codes, except for those source coded "XA"

XA - DO NOT requisition an "XA"-coded item. Order its next higher assembly.

XB - if an "X8" item is not available from salvage, order it using the CAGE and part number given.

F-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) - Continued.

XC - Installation drawing, diagram, instruction sheet, 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 CAGE 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	- Crew or operator 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 or aviation intermediate level can remove, replace, and use the item.
H	- General support level can remove, replace, and use the item.
L	- Specialized repair activity can remove, replace, and use the item.
D	- Depot level 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). This position will contain one of the following maintenance codes:

<u>Code</u>	<u>Application/Explanation</u>
O	- Unit maintenance or aviation unit is the lowest level that can do complete repair of the item.
F	- Direct support or aviation intermediate is the lowest level that can do complete repair of the item.
H	- General support is the lowest level that can do complete repair of the item.
L	- Specialized repair activity is the lowest level that can do complete repair of the item.
D	- Depot 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.

F-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) - Continued.

(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 3d position of the SMR code.
O	Reparable item. When uneconomically Repairable, condemn and dispose of the item at unit maintenance or aviation unit level.
F	Reparable item. When uneconomically Repairable, condemn and dispose of the item at the direct support or aviation intermediate level.
H	Reparable item. When uneconomically Repairable, condemn and dispose of the item at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
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. **CAGEC [Column (3)].** The Commercial and Government Entity (CAGE) Code (C) is a 5-digit alphanumeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

NOTE

When you use an NSN to requisition an Item, the Item you receive may have a different part number from the part ordered.

d. **PART NUMBER [Column (4)].** 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.

e. **DESCRIPTION AND USABLE ON CODE (UOC) [Column (5)].** 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 on Figure KIT.
- (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).
- (7) The usable on code, when applicable (see paragraph F-5, Special information).

F-3. EXPLANATION OF COLUMNS (SECTIONS II AND III) - Continued.

(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 equipments 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 5 for a given figure in both Section II and Section III.

f. QTY [Column (6)]. 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, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is invariable and the quantity may vary from application to application.

F-4. EXPLANATION OF COLUMNS (SECTION IV).

a. National Stock 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
NIIN

). When using this column to locate an item, ignore the first 4 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 O through 9 and each following letter or digit in like order).

(1) *CAGEC* column. The Commercial and Government Entity (CAGE) Code(C) is a 5-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 *CAGE* 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 is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

c. Figure and Item Number Index.

(1) *FIG. column* This column lists the number of the figure where the item is identified/located in Sections II and III.

(2) *ITEM* column The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) *STOCK NUMBER* column This column lists the NSN for the item.

F-4. EXPLANATION OF COLUMNS (SECTION IV) - Continued.

(4) **CAGE column.** The Commercial and Government Entity (CAGE) is a 5-digit alphanumeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(5) **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.

F-5. SPECIAL INFORMATION.

a. Usable On Code. The usable on code appears in the lower left corner of the Description column heading. Usable on codes are shown as "UOC:" in the Description column (justified left) on the first line applicable item description/nomenclature. Uncoded items are applicable to all models. Identification of the usable on codes used in this RPSTL are:

<u>Code</u>	<u>Used On</u>
136	M119A1
686	M119
694	M118A1

b. Fabrication Instructions. 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* of this manual.

c. Assembly Instructions. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in *Chapters 4* and *5*. Items that makeup 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 parts 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/Part Number Index and the bulk material list in Section II.

F-6. HOW TO LOCATE REPAIR PARTS.**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.

(3) **Third.** identify the item on the figure and use the Figure and item Number Index to find the NSN.

b. When National Stock Number or Part Number is Known:

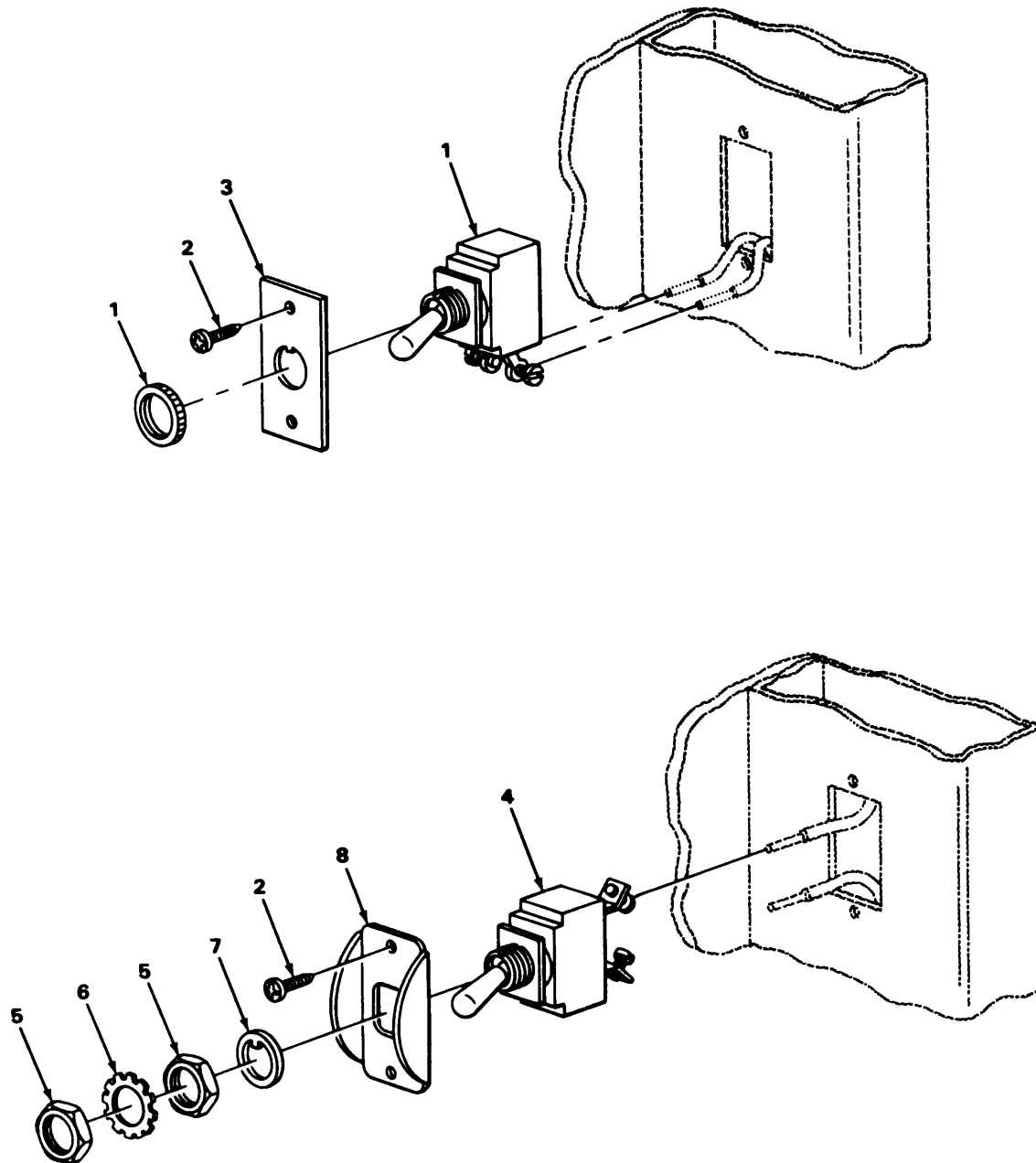
(1) **First.** Using the National Stock Number or Part Number Index, find the pertinent National Stock Number or Part Number. The NSN index is in National Item Identification Number (NIIN) sequence [see paragraph F-4a(1)]. The part numbers in the Part Number Index are listed in ascending alphanumeric sequence (see paragraph F-4.b). 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.

F-7. **ABBREVIATIONS.**

For standard abbreviations see MIL-STD-12D, *Military Standard Abbreviations for Use on Drawings, Specifications, Standards, and in Technical Documents*.

<u>Abbreviations</u>	<u>Explanation</u>
NIIN	National Item Identification Number (consists of the last 9 digits of the NSN)
RPSTL	Repair Parts and Special Tools Lists



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FIGURE F1. DOMELIGHT SWITCH (M119A1 AND M119).
AND FIGURE F1-1

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY

GROUP 06 ELECTRICAL SYSTEM

GROUP 0608 MISCELLANEOUS ITEMS

FIG. 1 DOMELIGHT SWITCH
(M119A1 AND M119)

1	PAOZZ	04009	80991	SWITCH,TOGGLE.....	1
				UOC:686	
2	PAOZZ	96906	MS51861-24	SCREW,TAPPING,THREA.....	2
				UOC:136,686	
3	PAOZZ	90299	AS113709	GUARD,SWITCH.....	1
				UOC:686	
4	PAOZZ	96906	MS35058-22	SWITCH,TOGGLE.....	1
				UOC:136,686	
5	PAOZZ	96906	MS25082-21	NUT,PLAIN,HEXAGON.....	2
				UOC:136	
6	PAOZZ	96906	MS35333-121	WASHER,LOCK.....	1
				UOC:136	
7	PAOZZ	96906	MS25081-4	WASHER,KEY.....	1
				UOC:136	
8	PAOZZ	90299	AS113709	GUARD,SWITCH.....	1
				UOC:136	

END OF FIGURE

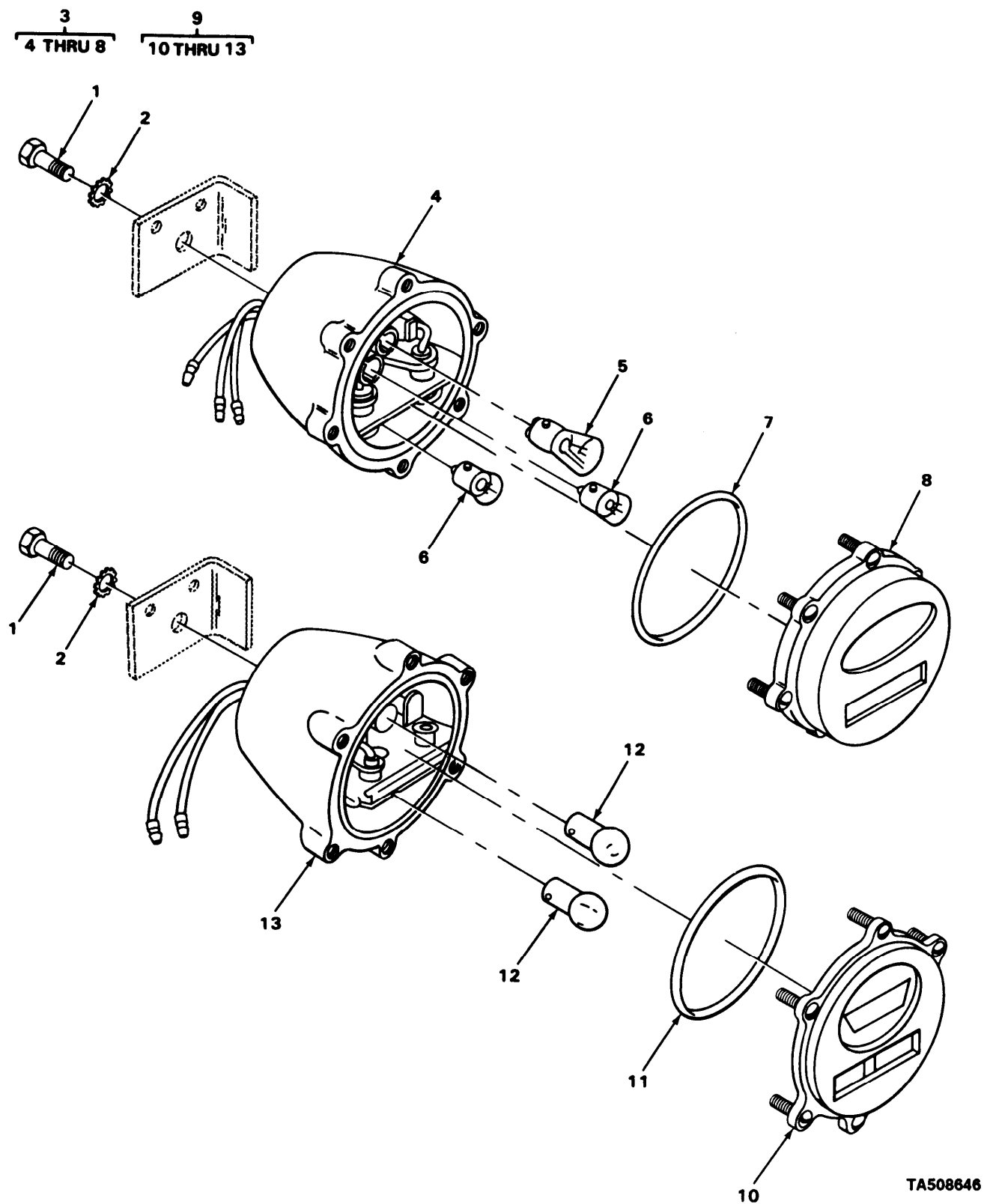


FIGURE 2. SERVICE AND BLACKOUT TAILLIGHT AND STOPLIGHT

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY

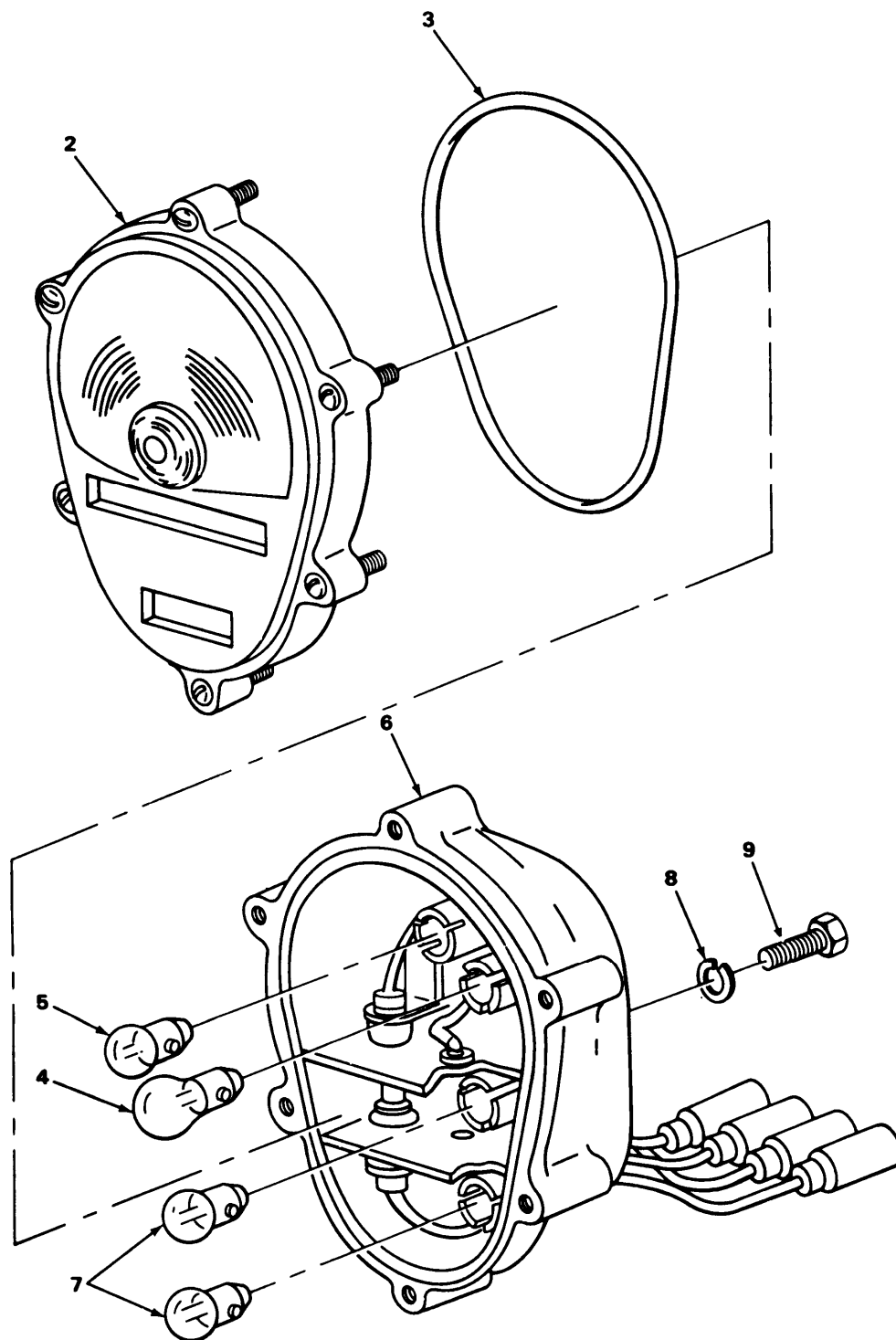
GROUP 0609 LIGHTS

**FIG. 2 SERVICE AND BLACKOUT
TAILLIGHT AND STOPLIGHT**

1	PAOZZ	96906	MS18154-58	SCREW,CAP,HEXAGON H.....	4
2	PAOZZ	96906	MS35338-8	WASHER,LOCK.....	4
3	XDU00	19207	7760507	STOP LIGHT-TAILLIGH.....	2
				UOC:136,694	
4	PAOZZ	96906	MS53047-1	.LIGHT,PARKING.....	1
				UOC:136,694	
5	PAOZZ	96906	MS35478-1683	.LAMP,INCANDESCENT.....	1
				UOC:136,694	
6	PAOZZ	96906	MS15570-1251	.LAMP,INCANDESCENT.....	2
				UOC:136,694	
7	PAOZZ	19207	7320658	.PACKING,PREFORMED.....	1
				UOC:136,694	
8	PAOZZ	19207	7526020	.RETAINER,LENS.....	1
				UOC:136,694	
9	PAOZZ	96906	MS51329-1	STOP LIGHT-TAILLIGH.....	2
				UOC:686	
10	PAOZZ	19207	7526018	.RETAINER,LENS.....	1
				UOC:686	
11	PAOZZ	19207	7320658	.PACKING,PREFORMED.....	1
				UOC:686	
12	PAOZZ	96906	MS15570-1251	.LAMP,INCANDESCENT.....	2
				UOC:686	
13	PAOZZ	96906	MS53047-1	.LIGHT,PARKING.....	1
				UOC:686	

END OF FIGURE

1
2 THRU 7



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FIGURE 3. COMPOSITE MARKER LIGHT (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY

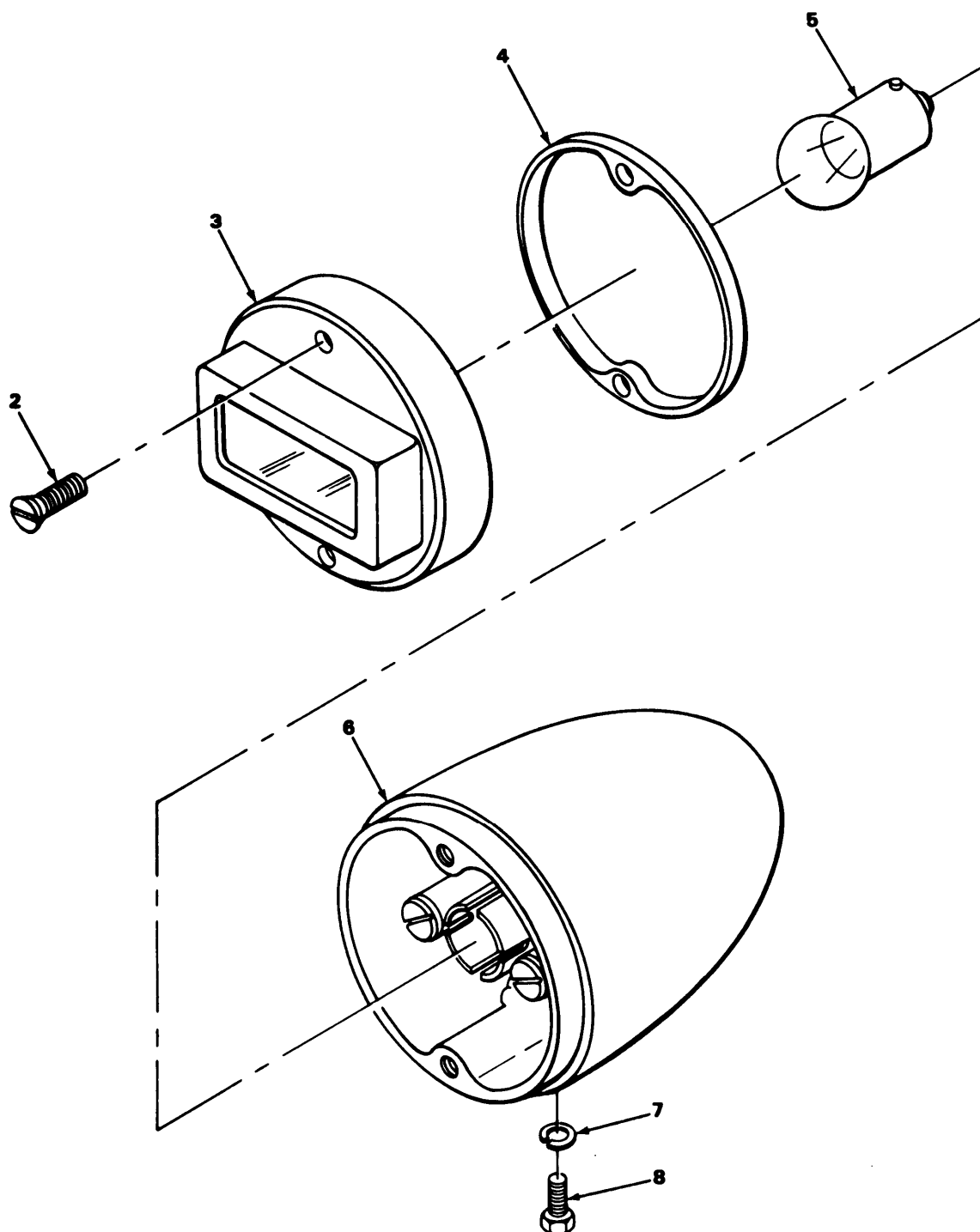
GROUP 0609 LIGHTS

**FIG. 3 COMPOSITE MARKER LIGHT
(M119A1 AND M118A1)**

1	PA000	96906	MS52125-2	STOP LIGHT-TAILLIGHT.....	2
				UOC:136,694	
2	PA0ZZ	19207	11639535	.LENS,LIGHT.....	1
				UOC:136,694	
3	PA0ZZ	19207	1163519-2	.PACKING,PREFORMED.....	1
				UOC:136,694	
4	PA0ZZ	96906	MS35478-1683	.LAMP,INCANDESCENT.....	1
				UOC:136,694	
5	PFOZZ	96906	MS15570-623	.LAMP,INCANDESCENT.....	1
				UOC:136,694	
6	PA0ZZ	19207	11639520	.BODY ASSEMBLY.....	1
				UOC:136,694	
7	PA0ZZ	96906	MS15570-1251	.LAMP,INCANDESCENT.....	2
				UOC:136,694	
8	PA0ZZ	96906	MS35338-46	WASHER,LOCK.....	4
				UOC:136,694	
9	PA0ZZ	96906	MS18154-58	SCREW,CAP,HEXAGON H.....	4
				UOC:136,694	

END OF FIGURE

1
2 THRU 6



TA508648

FIGURE 4. BLACKOUT STOPLIGHT (M119A1 AND M118A1).

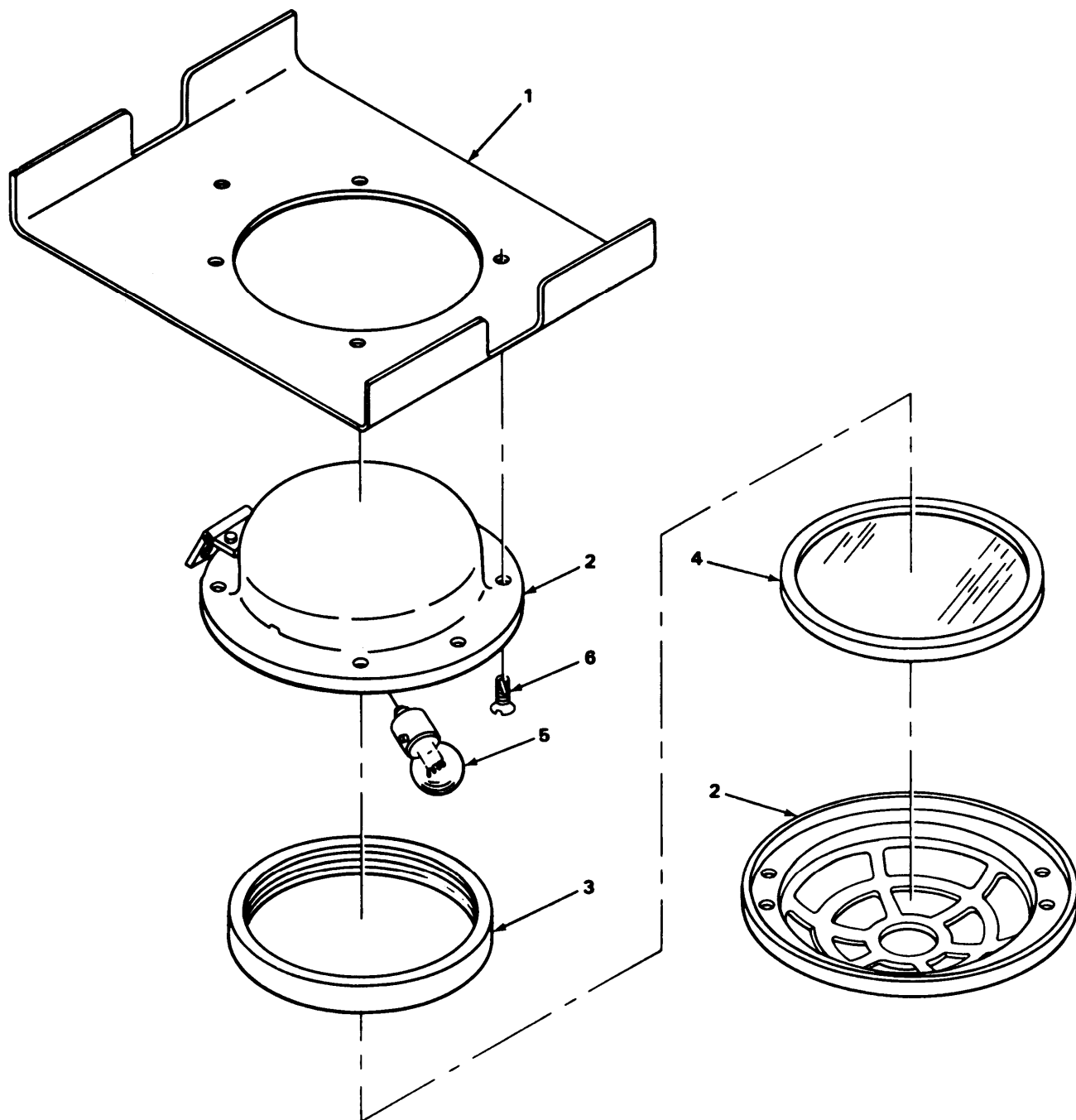
SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
No	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY

GROUP 0609 LIGHTS

FIG. 4 BLACKOUT STOPLIGHT
(M119A1 AND M118A1)

1	PA000	96906	MS51302-1	STOP LIGHT,VEHICULA BLACKOUT.....	1
				UOC:136,694	
2	PFOZZ	96906	MS51959-46	.SCREW,MACHINE.....	2
				UOC:136,694	
3	PAOZZ	19207	8741646	.RETAINER,LENS.....	1
				UOC:136,694	
4	PAOZZ	73331	5942528	.GASKET.....	1
				UOC:136,694	
5	PAOZZ	96906	MS15570-1251	.LAMP,INCANDESCENT.....	1
				UOC:136,694	
6	PAOZZ	19207	8741650	.HOUSING,LIGHT.....	1
				UOC:136,694	
7	PAOZZ	96906	MS35338-43	WASHER,LOCK.....	1
				UOC:136,694	
8	PAOZZ	96906	MS90726-28	BOLT,MACHINE.....	1
				UOC:136,694	

END OF FIGURE



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FIGURE 5. DOMELIGHT (M119 AND M119A1).

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY

GROUP 0609 LIGHTS

FIG. 5 DOMELIGHT (M119 AND M119A11

1	XBOZZ	19207	8343733	BRACKET.....	4
				UOC:136,686	
2	PAOZZ	01857	DE-89909	LIGHT,DOME.....	4
				UOC:136,686	
3	XDOZZ	19207	7978723	.GASKET.....	1
				UOC:136,686	
4	XDOZZ	19207	7978722	.LENS.....	1
				UOC:136,686	
5	PAOZZ	96906	MS35478-1683	LAMP,INCANDESCENT.....	4
				UOC:136,686	
6	XDOZZ	19207	171225	SCREW.....	16
				UOC:136,686	

END OF FIGURE

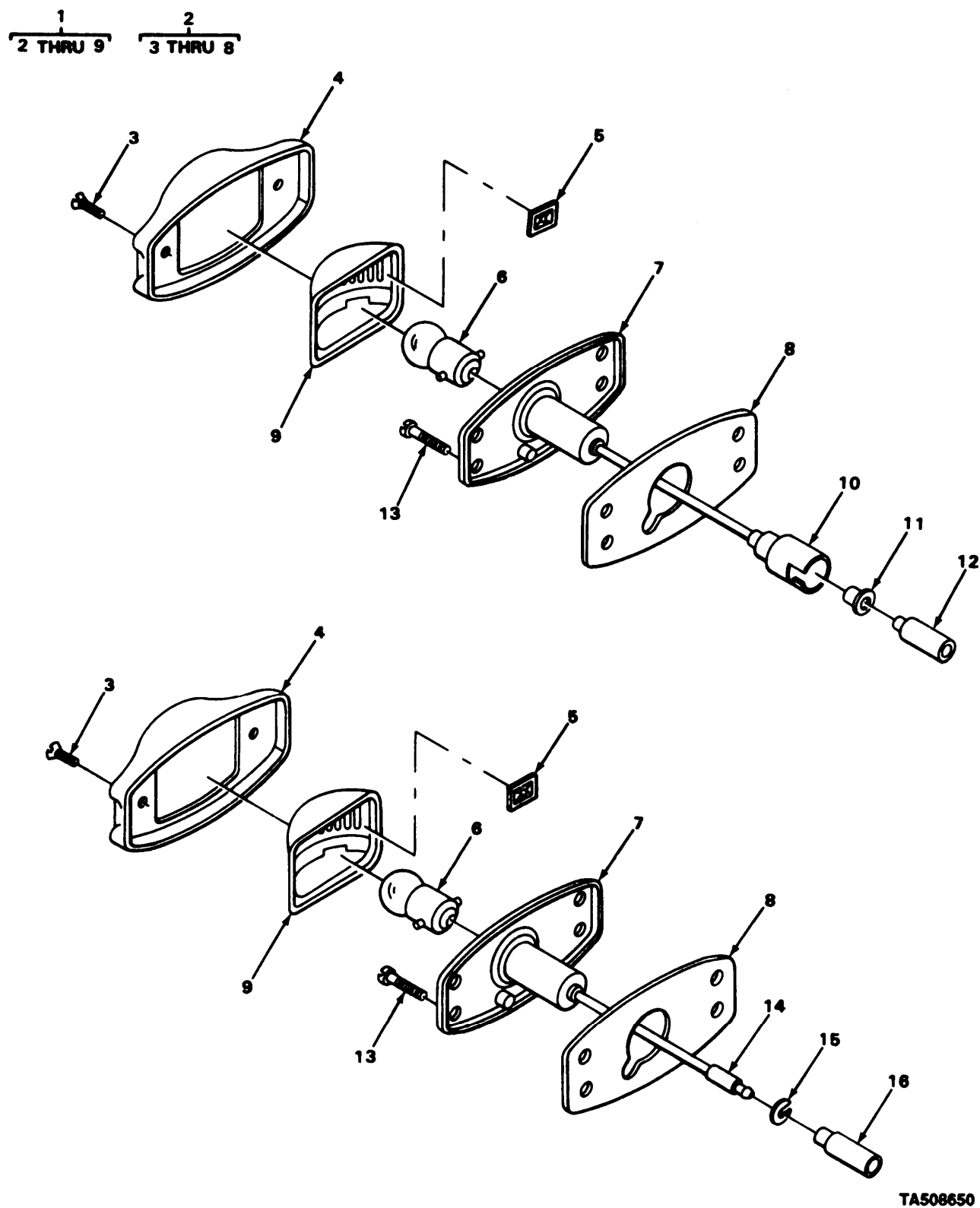


FIGURE 6. CLEARANCE LIGHT.

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE (ON CODES(UOC)	QTY

GROUP 0609 LIGHTS

FIG. 6 CLEARANCE LIGHT

1	PA000	96906	MS35423-1	LIGHT, MARKER, CLEARA SERVICE, AMBER. COMPONENTS SAME AS P/N MS35424-2 EXCEPT WHERE ANNOTATED, MODEL M119 USES 4. M119A1 AND M118A1 USE 2.....	4
1	PA000	96906	MS35424-1	LIGHT, MARKER, CLEARA BLACKOUT AMBER. COMPONENTS SAME AS P/N MS35424-2 EXCEPT WHERE ANNOTATED.....	2
1	PA000	96906	MS35423-2	LIGHT, MARKER, CLEARA SERVICE, RED COMPONENTS SAME AS P/N MS35424-2 EXCEPT WHERE ANNOTATED.....	4
1	PA000	96906	MS35424-2	LIGHT, MARKER, CLEARA BLACKOUT RED...	4
2	PA000	96906	MS35422-1	.LIGHT, MARKER, CLEARA.....	1
3	PAOZZ	96906	MS51959-61	..SCREW, MACHINE.....	2
4	PAOZZ	73331	5939830	..RETAINER, LENS.....	1
5	PAOZZ	78553	C1059-014-1	..PUSH ON NUT.....	2
6	PAOZZ	96906	MS15570-1251	..LAMP, INCANDESCENT.....	1
7	PAOZZ	73331	5939831	..PLATE, MOUNTING, LAMP.....	1
8	PAOZZ	73331	5939841	..FELT, MECHANICAL, PRE.....	1
9	PAOZZ	96906	MS35420-1	.LENS, LIGHT USE WITH P/N MS35424-1.	1
9	PAOZZ	96906	MS35420-2	.LENS, LIGHT USE WITH P/N MS35424-2.	1
9	PAOZZ	96906	MS35421-1	.LENS, LIGHT USE WITH P/N MS35423-1.	1
9	PAOZZ	96906	MS35421-2	.LENS, LIGHT USE WITH P/N MS35423-2.	1
10	PAOZZ	21450	573007	SHIELD, ELECTRICAL C.....	1
				UOC:686	
11	PAOZZ	19200	573005	INSULATOR, BUSHING.....	14
				UOC:686	
12	PAOZZ	19207	572999	BUSHING, ELECTRICAL.....	14
				UOC:686	
13	XDOZZ	19207	171732	SCREW.....	48
				UOC:136,694	
13	XDOZZ	19207	171732	SCREW.....	56
				UOC:686	
14	PAOZZ	96906	MS27148-2	CONTACT, ELECTRICAL.....	12
				UOC:136,694	

END OF FIGURE

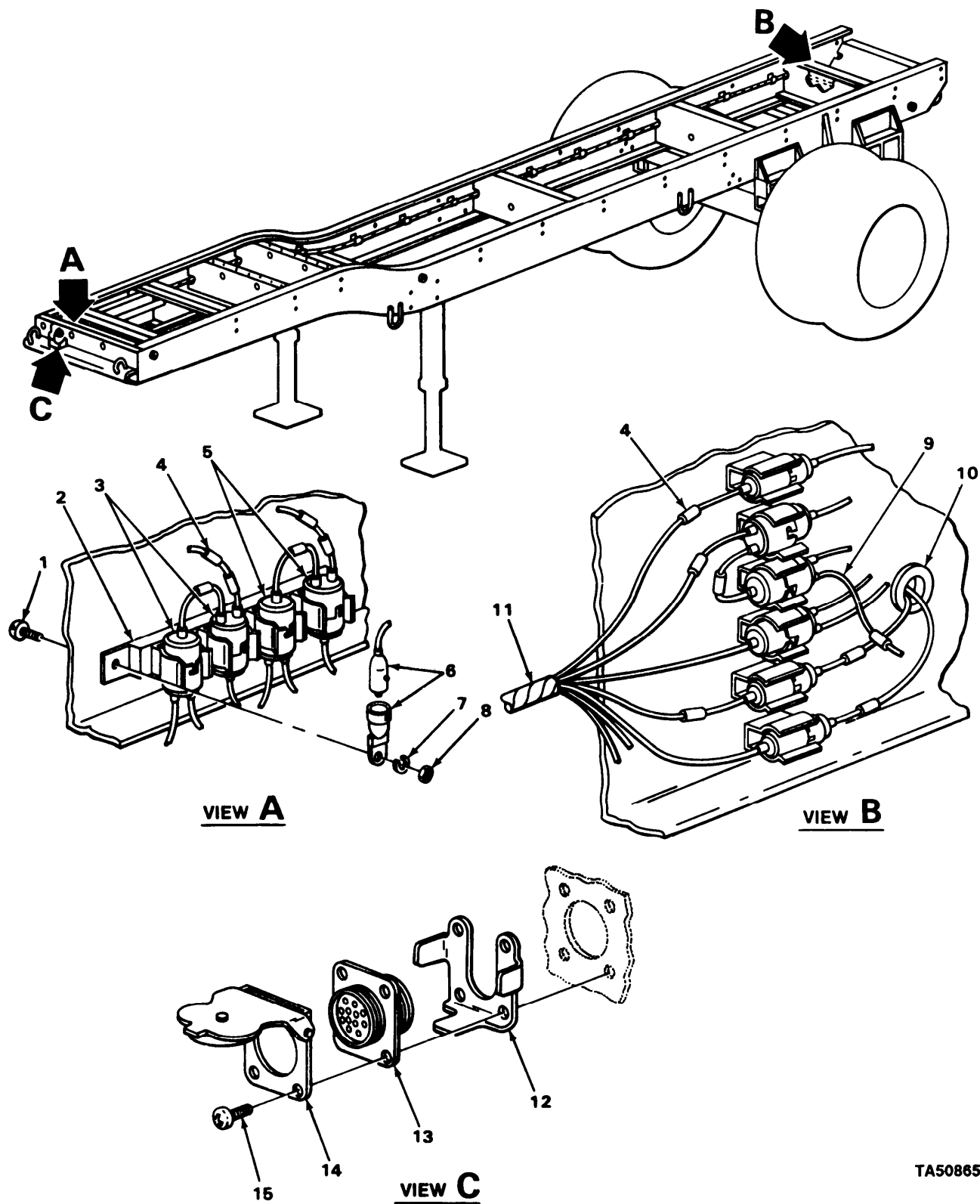


FIGURE 7. CHASSIS WIRING HARNESS (M119).

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SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)	(6)	
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY
GROUP 0613 HULL OR CHASSIS WIRING HARNESS						
FIG. 7 CHASSIS WIRING HARNESS (M119)						
1	PAOZZ	96906	MS35207-281	SCREW,MACHINE.....		2
				UOC:686		
2	XBOZZ	19207	8343579	BLOCK ASSEMBLY.....		1
				UOC:686		
3	XDOZZ	19207	8343509	HARNESS ASSEMBLY.....		1
				UOC:686		
4	PAOZZ	81349	M43436/1-1	BAND,MARKER.....		23
				UOC:686		
5	XDOZZ	19207	8343511	HARNESS ASSEMBLY.....		1
				UOC:686		
6	PAOZZ	19204	7731424	CONNECTOR,RECEPTAC.....		1
				UOC:686		
7	PFOZZ	96906	MS35338-44	WASHER,LOCK.....		2
				UOC:686		
8	XDOZZ	24617	218563	NUT,PLAIN,HEXAGON.....		2
				UOC:686		
9	XDOZZ	19207	8343510	HARNESS ASSEMBLY.....		1
				UOC:686		
10	XDOZZ	19207	7954201	GROMMET.....		1
				UOC:686		
11	XDOZZ	19207	8343578	MAIN HARNESS ASSEMB.....		1
				UOC:686		
12	PAOZZ	19207	7355938	BRACKET,POLARIZING,.....		1
				UOC:686		
13	PAOZZ	96906	MS75021-2	CONNECTOR,RECEPTAC.....		1
				UOC:686		
14	PAOZZ	19207	7731428	COVER,ELECTRICAL CO.....		1
				UOC:686		
15	PAOZZ	88044	AN504-428R8	SCREW,TAPPING,THREA.....		4
				UOC:686		

END OF FIGURE

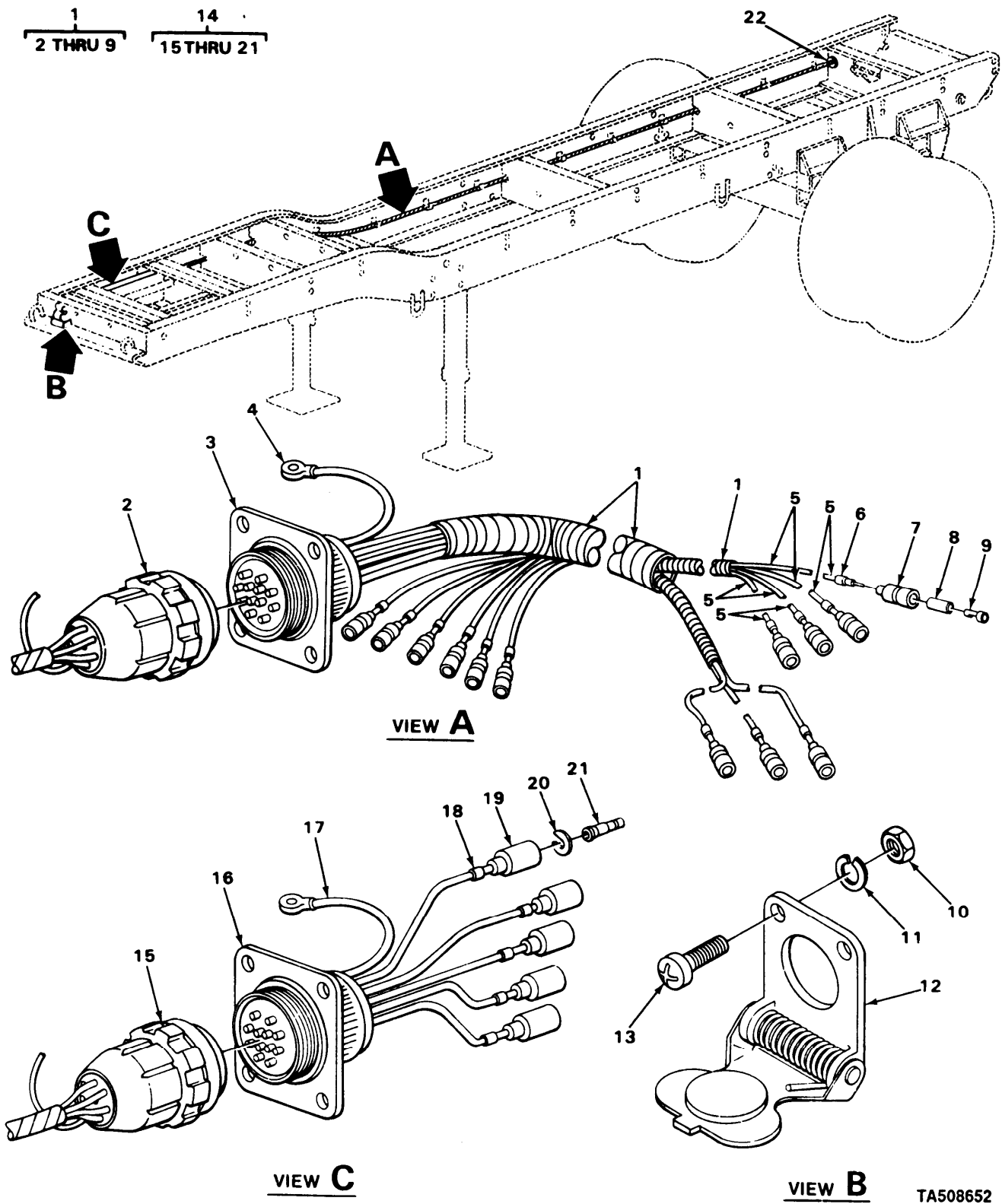
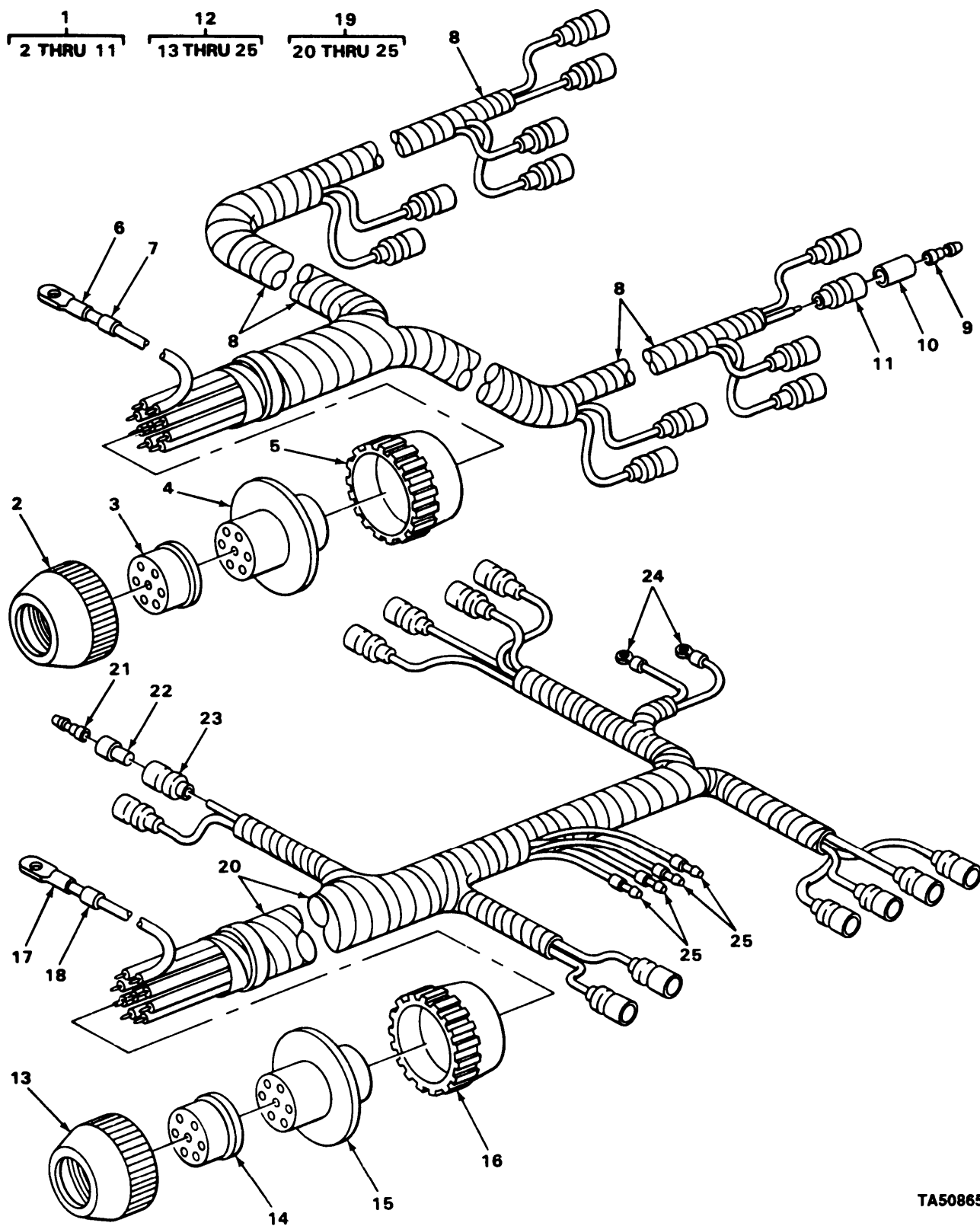


FIGURE 8. CHASSIS WIRING HARNESS (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01			(5)	(6)
(1)	(2)	(3)	(4)				
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	
GROUP 0613 HULL OR CHASSIS WIRING HARNESS							
FIG. 8 CHASSIS WIRING HARNESS (M119A1 AND M118A1)							
1	PFO00	19207	10924618	WIRING HARNESS, BRAN.....	UOC:136,694	1	
2	PAOZZ	72869	7723309	.NUT, PLAIN, KNURLED.....	UOC:136,694	1	
3	PAOZZ	96906	MS75021-2	.CONNECTOR, RECEPTACL.....	UOC:136,694	1	
4	PAOZZ	21450	506209	.TERMINAL, LUG.....	UOC:136,694	1	
5	MOOZZ	19207	1526499-1	.WIRE, ELEC MAKE FROM WIRE P/N M13486-1-5 (81349).....	UOC:136,694	1	
6	PFOZZ	96906	MS39020-1	.BAND, MARKER.....	UOC:136,694	13	
7	PAOZZ	19207	8338561	.SHELL, ELECTRICAL CO.....	UOC:136,694	13	
8	PAOZZ	19207	8338562	.INSULATOR, BUSHING.....	UOC:136,694	13	
9	PAOZZ	19207	8338564	.TERMINAL ASSEMBLY.....	UOC:136,694	13	
10	PAOZZ	96906	MS35649-103	NUT, PLAIN, HEXAGON.....	UOC:136,694	4	
11	PAOZZ	96906	MS35338-43	WASHER, LOCK.....	UOC:136,694	4	
12	PAOZZ	19207	7731428	COVER, ELECTRICAL CO.....	UOC:136,694	1	
13	PAOZZ	96906	MS35206-264	SCREW, MACHINE.....	UOC:136,694	4	
14	PAO00	19207	8683490	RECEPTACLE ASSEMBLY.....	UOC:136,694	1	
15	PAOZZ	19207	7723308	.NUT, BUSHING RETAINE.....	UOC:136,694	1	
16	PAOZZ	19207	7722354	.CONNECTOR, RECEPTACL RECEPTACLE....	UOC:136,694	1	
17	PAOZZ	21450	506209	.TERMINAL, LUG.....	UOC:136,694	1	
18	PFOZZ	96906	MS39020-1	.BAND, MARKER.....	UOC:136,694	5	
19	PAOZZ	19207	8338566	.SHELL, ELECTRICAL CO.....	UOC:136,694	5	
20	PAOZZ	19207	8338567	.WASHER, SLOTTED.....	UOC:136,694	5	
21	PAOZZ	96906	MS27148-2	.CONTACT, ELECTRICAL.....	UOC:136,694	5	
22	XDOZZ	19207	7954201	GRCMMET.....	UOC:136,694	2	

END OF FIGURE



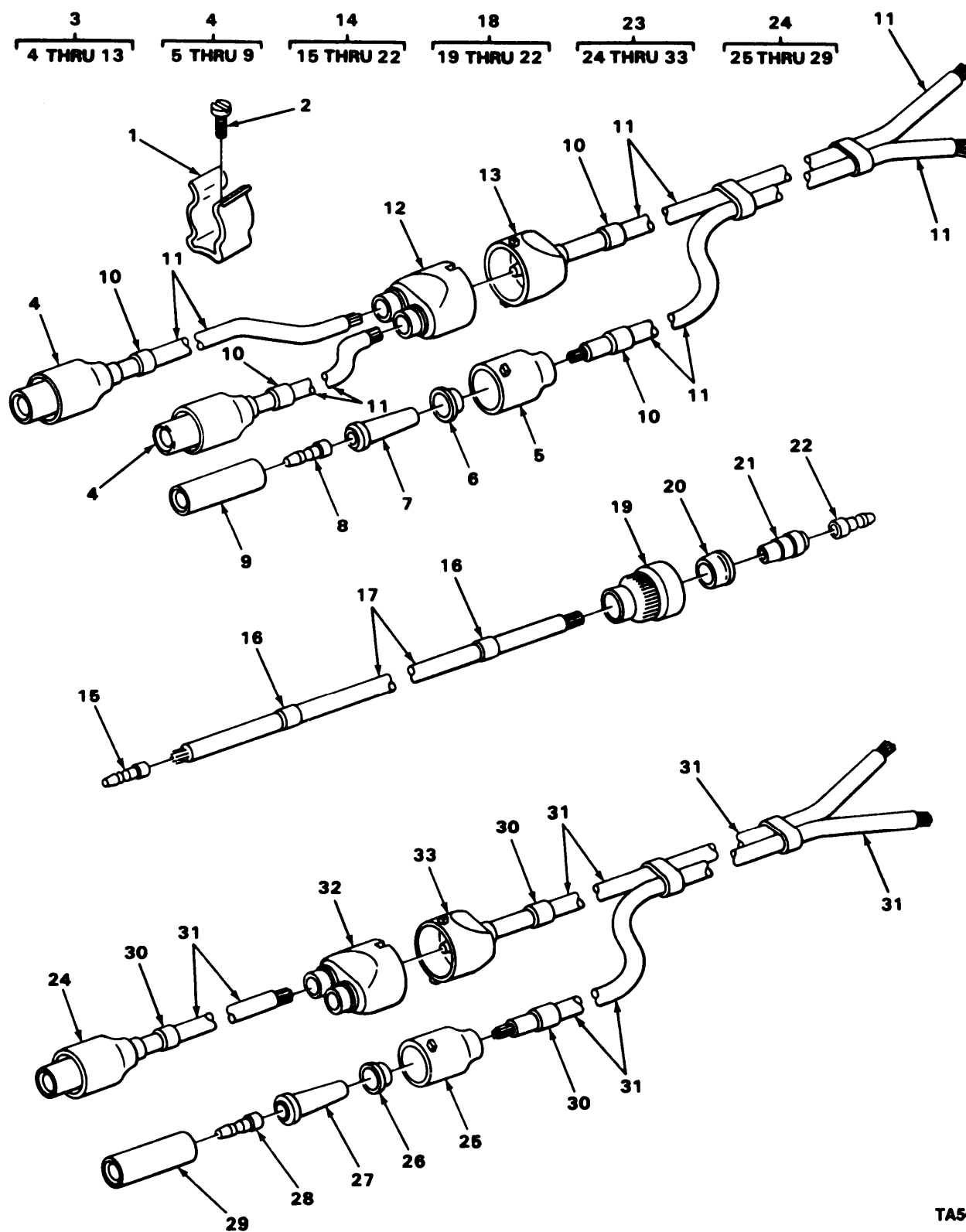
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FIGURE 9. BODY WIRING HARNESS (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01		(5)	(6)
(1)	(2)	(3)	(4)			
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY	
GROUP 0613 HULL OR CHASSIS WIRING HARNESS						
FIG. 9 BODY WIRING HARNESS (M119A1 AND M118A1)						
1	A0000	19207	10924617	WIRING HARNESS BODY.....	1	
				UOC:694		
2	PAOZZ	19207	7723308	.NUT,BUSHING RETAINE.....	1	
				UOC:694		
3	PAOZZ	19207	7722322	.BUSHING,RUBBER.....	1	
				UOC:694		
4	PAOZZ	77820	10-42622-23P	.C CNNECTOR,PLUG,ELEC.....	1	
				UOC:694		
5	PAOZZ	19207	8701325	.NUT,SLEEVE.....	1	
				UOC:694		
6	PAOZZ	21450	506209	.TERMINAL,LUG.....	1	
				UOC:694		
7	XDOZZ	96906	MS39020-2	.BAND,MARKER.....	1	
				UOC:694		
8	MOOZZ	19207	1526499-1	.WIRE,ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....	1	
				UOC:694		
9	PAOZZ	19207	8338564	.TERMINAL ASSEMBLY.....	12	
				UOC:694		
10	PAOZZ	19207	8338562	.INSULATOR,BUSHING.....	12	
				UOC:694		
11	PAOZZ	19207	8338561	.SHELL,ELECTRICAL CO.....	12	
				UOC:694		
12	PA000	19207	10935061	WIRING HARNESS,BRAN.....	1	
				UOC:136		
13	PAOZZ	19207	7723308	.NUT,BUSHING RETAINE.....	1	
				UOC:136		
14	PAOZZ	19207	7722322	.BUSHING,RUBBER.....	1	
				UOC:136		
15	PAOZZ	77820	10-42622-23P	.CONNECTOR,PLUG,ELEC.....	1	
				UOC:136		
16	PAOZZ	19207	8701325	.NUT,SLEEVE.....	1	
				UOC:136		
17	PAOZZ	21450	506209	.TERMINAL,LUG.....	1	
				UOC:136		
18	XDOZZ	96906	MS39020-2	.BAND,MARKER.....	1	
				UOC:136		
19	XD000	19207	10924619	.WIRING HARNESS.....	1	
				UOC:136		
20	MOOZZ	19207	1526499-1	..WIRE,ELECTRICAL MAKE FRM WIRE P/ N M13486-1-5 (81349).....	1	
				UOC:136		
21	PAOZZ	19207	8338564	..TERMINAL ASSEMBLY.....	12	
				UOC:136		
22	PAOZZ	19207	8338562	..INSULATOR,BUSHING.....	12	
				UOC:136		

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
23	PAOZZ	19207	8338561	..SHELL,ELECTRICAL CO.....	12
				UOC:136	
24	PAOZZ	96906	MS20659-126	..TERMINAL,LUG.....	2
				UOC:136	
25	PAOZZ	96906	MS27148-2	..CONTACT,ELECTRICAL.....	4
				UOC:136	

END OF FIGURE



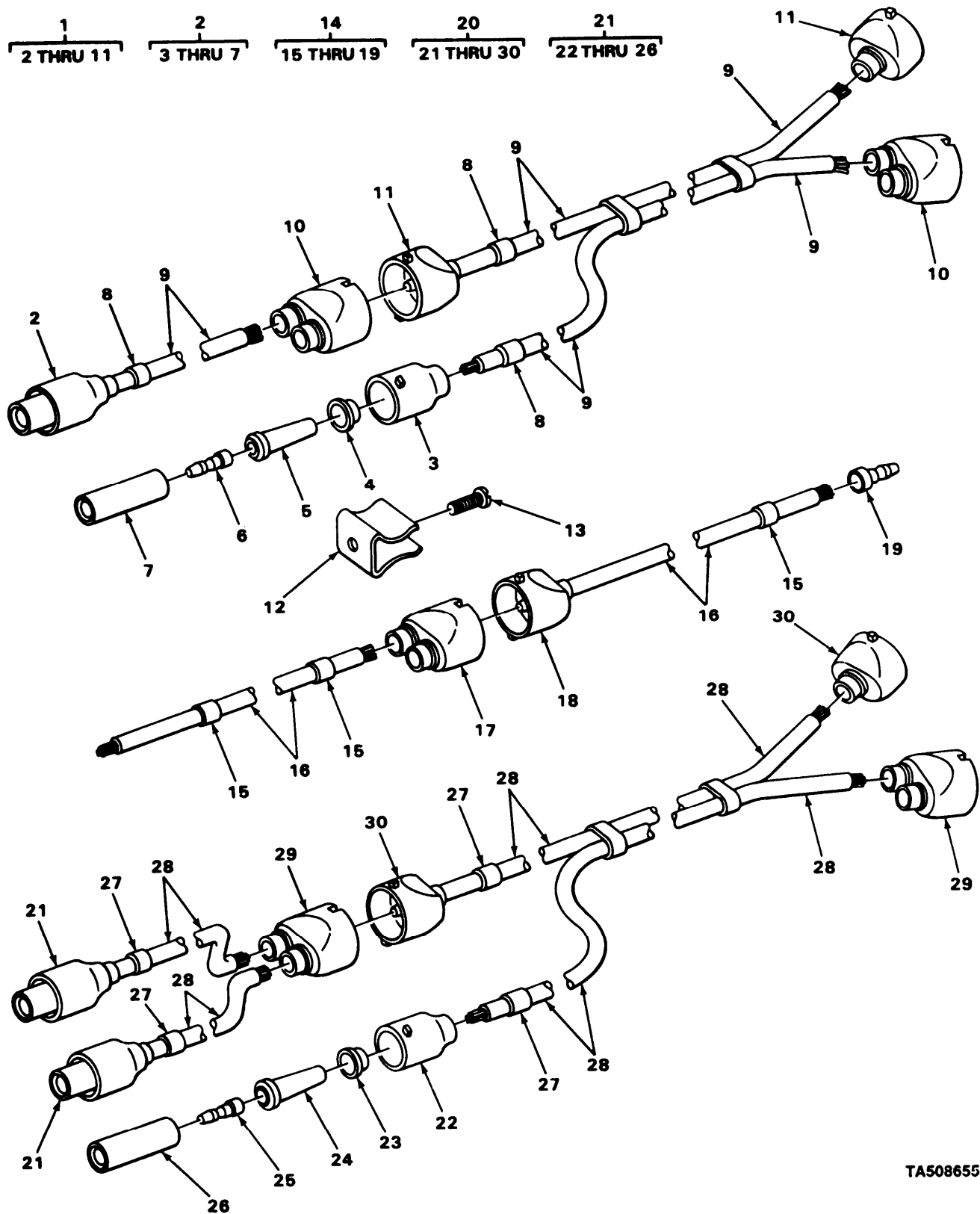
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FIGURE 10. BODY WIRING HARNESS (M119).

SECTION II			TM9-2330-210-14CPC01				
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND	USABLE ON	CODES(UOC)	QTY
GROUP 0613 HULL OR CHASSIS WIRING HARNESS							
FIG. 10 BODY WIRING HARNESS (M119)							
1	PFOZZ	78553	C3278	CLIP, SPRING TENSION.....			2
				UOC:686			
2	XDOZZ	19207	171656	SCREW.....			2
				UOC:686			
3	A0000	19207	8343727	HARNESS ASSEMBLY.....			1
				UOC:686			
4	PA000	19207	7760599	.CONNECTOR, PLUG, ELEC.....			3
				UOC:686			
5	PAOZZ	19207	573010	..SHELL, ELECTRICAL CO.....			1
				UOC:686			
6	PAOZZ	19207	7765237	..BUSHING, ELECTRICAL.....			1
				UOC:686			
7	PAOZZ	19207	7762603	..BUSHING, RUBBER.....			1
				UOC:686			
8	PAOZZ	96906	MS27148-2	..CONTACT, ELECTRICAL.....			1
				UOC:686			
9	PAOZZ	81263	7762624	..CONNECTOR, PLUG, ELEC.....			1
				UOC:686			
10	PAOZZ	81349	M43436/1-1	.BAND, MARKER.....			6
				UOC:686			
11	M0OZZ	19207	1526499-1	.WIRE, ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....			4
				UOC:686			
12	PAOZZ	19207	7762605	.CONNECTOR, PLUG, ELEC.....			1
				UOC:686			
13	PAOZZ	19204	7762642	.CONNECTOR, PLUG, ELEC.....			1
				UOC:686			
14	XD000	19207	8343731	HARNESS ASSEMBLY.....			1
				UOC:686			
15	PAOZZ	96906	MS27148-2	.CONTACT, ELECTRICAL.....			1
				UOC:686			
16	PAOZZ	81349	M43436/1-1	.BAND, MARKER.....			2
				UOC:686			
17	M0OZZ	19207	1526499-1	.WIRE, ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....			1
				UOC:686			
18	PA000	19207	7760598	.CONNECTOR, PLUG, ELEC.....			1
				UOC:686			
19	PAOZZ	19207	7762628	..SHIELD, ELECTRICAL C.....			1
				UOC:686			
20	PAOZZ	19207	7765237	..BUSHING, ELECTRICAL.....			1
				UOC:686			
21	PAOZZ	19207	7762603	..BUSHING, RUBBER.....			1
				UOC:686			
22	PAOZZ	96906	MS27148-2	..CONTACT, ELECTRICAL.....			1
				UOC:686			
23	A0000	19207	8343729	HARNESS ASSEMBLY.....			1

SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5}	(6)	
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION	NO	USABLE ON CODES (UOC) QTY
24	PAOZZ	19207	7760599	UQC:686 .CONNECTOR, PLUG, ELEC.....	2	
25	PAOZZ	19207	573010	UQC:686 ..SHELL, ELECTRICAL CO.....	1	
26	PAOZZ	19207	7765237	UQC:686 ..BUSHING, ELECTRICAL.....	1	
27	PAOZZ	19207	7762603	UQC:686 ..BUSHING, RUBBER.....	1	
28	PAOZZ	96906	MS27148-2	UQC:686 ..CONTACT, ELECTRICAL.....	1	
29	PAOZZ	81263	7762624	UQC:686 ..CONNECTOR, PLUG, ELEC.....	1	
30	PAOZZ	81349	M43436/1-1	UQC:686 ..BAND, MARKER.....	5	
31	MOOZZ	19207	1526499-1	UQC:686 ..WIRE, ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....	3	
32	PAOZZ	19207	7762605	UQC:686 ..CONNECTOR, PLUG, ELEC.....	1	
33	PAOZZ	19204	7762642	UQC:686 ..CONNECTOR, PLUG, ELEC.....	1	

END OF FIGURE



TA508655

FIGURE 11. BODY WIRING HARNESS (M119).

SECTION II			TFT9-2330-210-14&PC01			(5)		(6)
(1)	(2)	(3)	(4)					
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)			QTY	
GROUP 0613 HULL OR CHASSIS WIRING HARNESS								
FIG. 11 BODY WIRING HARNESS (M119)								
1	A0000	19207	8343730	HARNESS ASSEMBLY.....			1	
				UOC:686				
2	PA000	19207	7760599	.CONNECTOR, PLUG, ELEC.....			2	
				UOC:686				
3	PA0ZZ	19207	573010	..SHELL, ELECTRICAL CO.....			1	
				UOC:686				
4	PA0ZZ	19207	7765237	..BUSHING, ELECTRICAL.....			1	
				UOC:686				
5	PA0ZZ	19207	7762603	..BUSHING, RUBBER.....			1	
				UOC:686				
6	PA0ZZ	96906	MS27148-2	..CONTACT, ELECTRICAL.....			1	
				UOC:686				
7	PA0ZZ	81263	7762624	..CONNECTOR, PLUG, ELEC.....			1	
				UOC:686				
8	PA0ZZ	81349	M43436/1-1	.BAND, MARKER.....			5	
				UOC:686				
9	MO0ZZ	19207	1526499-1	.WIRE, ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....			3	
				UOC:686				
10	PA0ZZ	19207	7762605	.CONNECTOR, PLUG, ELEC.....			2	
				UOC:686				
11	PA0ZZ	19204	7762642	.CONNECTOR, PLUG, ELEC.....			2	
				UOC:686				
12	PA0ZZ	24617	1580891	CLIP, SPRING TENSION.....			4	
				UOC:686				
13	XDOZZ	19207	171732	SCREW.....			4	
				UOC:686				
14	A0000	19207	8343734	HARNESS ASSEMBLY.....			1	
				UOC:686				
15	PA0ZZ	81349	M43436/1-1	.BAND, MARKER.....			3	
				UOC:686				
16	MO0ZZ	19207	1526499-1	.WIRE, ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....			1	
				UOC:686				
17	PA0ZZ	19207	7762605	.CONNECTOR, PLUG, ELEC.....			1	
				UOC:686				
18	PA0ZZ	19204	7762642	.CONNECTOR, PLUG, ELEC.....			1	
				UOC:686				
19	PA0ZZ	96906	MS27148-2	.CONTACT, ELECTRICAL.....			1	
				UOC:686				
20	A0000	19207	8343728	HARNESS ASSEMBLY.....			1	
				UOC:686				
21	PA000	19207	7760599	.CONNECTOR, PLUG, ELEC.....			3	
				UOC:686				
22	PA0ZZ	19207	573010	..SHELL, ELECTRICAL CO.....			1	
				UOC:686				
23	PA0ZZ	19207	7765237	..BUSHING, ELECTRICAL.....			1	

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
24	PAOZZ	19207	7762603	UOC:686 ..BUSHING,RUBBER.....	1
25	PAOZZ	96906	MS27148-2	UOC:686 ..CONTACT,ELECTRICAL.....	1
26	PAOZZ	81263	7762624	UOC:686 ..CONNECTOR,PLUG,ELEC.....	1
27	PAOZZ	81349	M43436/1-1	UOC:686 ..BAND,MARKER.....	6
28	MOOZZ	19207	1526499-1	UOC:686 ..WIRE,ELECTRICAL MAKE FROM WIRE P/ N M13486-1-5 (81349).....	4
29	PAOZZ	19207	7762605	UOC:686 ..CONNECTOR,PLUG,ELEC.....	2
30	XDOZZ	19204	7762642	UOC:686 ..CONNECTOR,PLUG,ELEC.....	2

END OF FIGURE

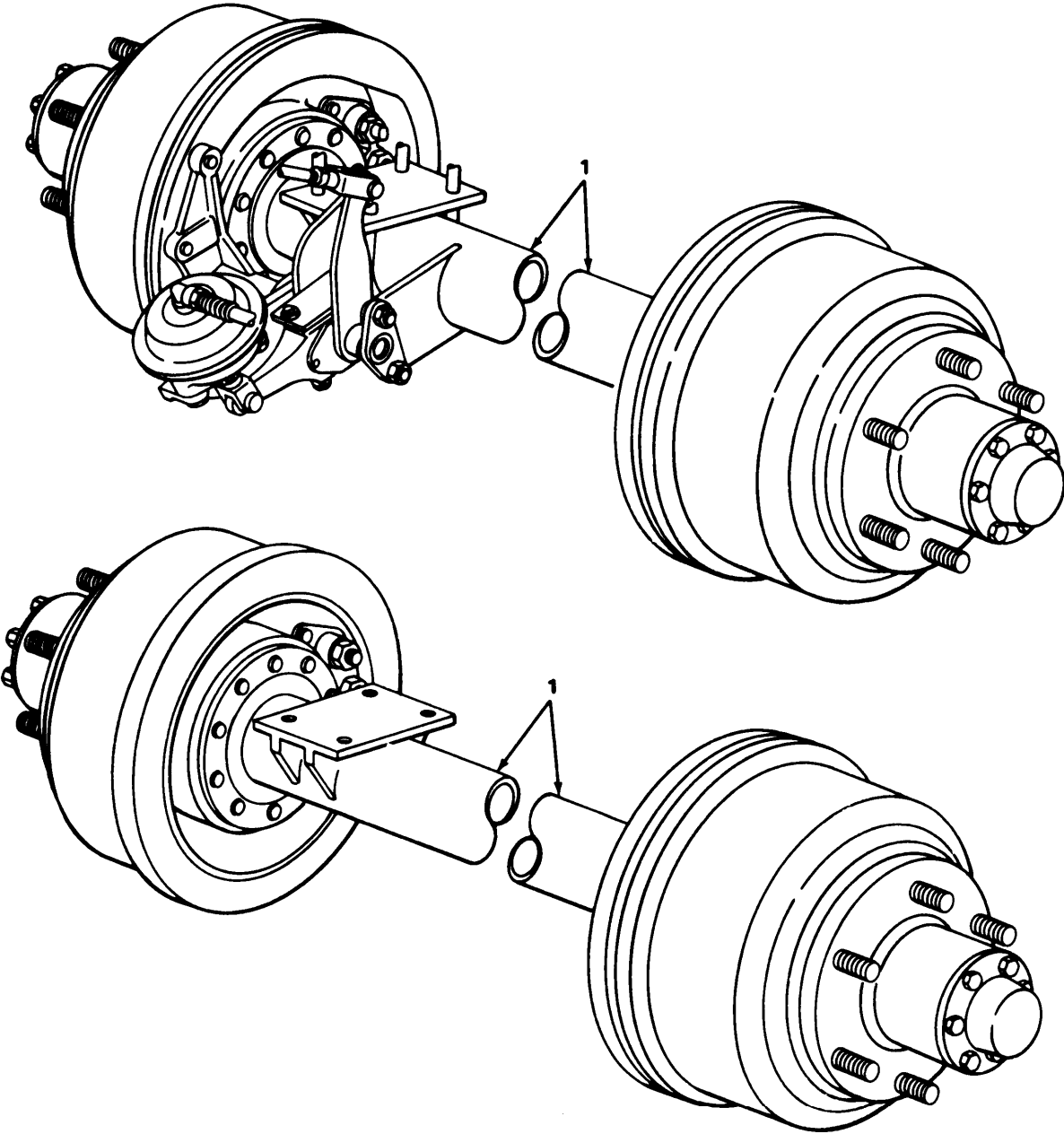
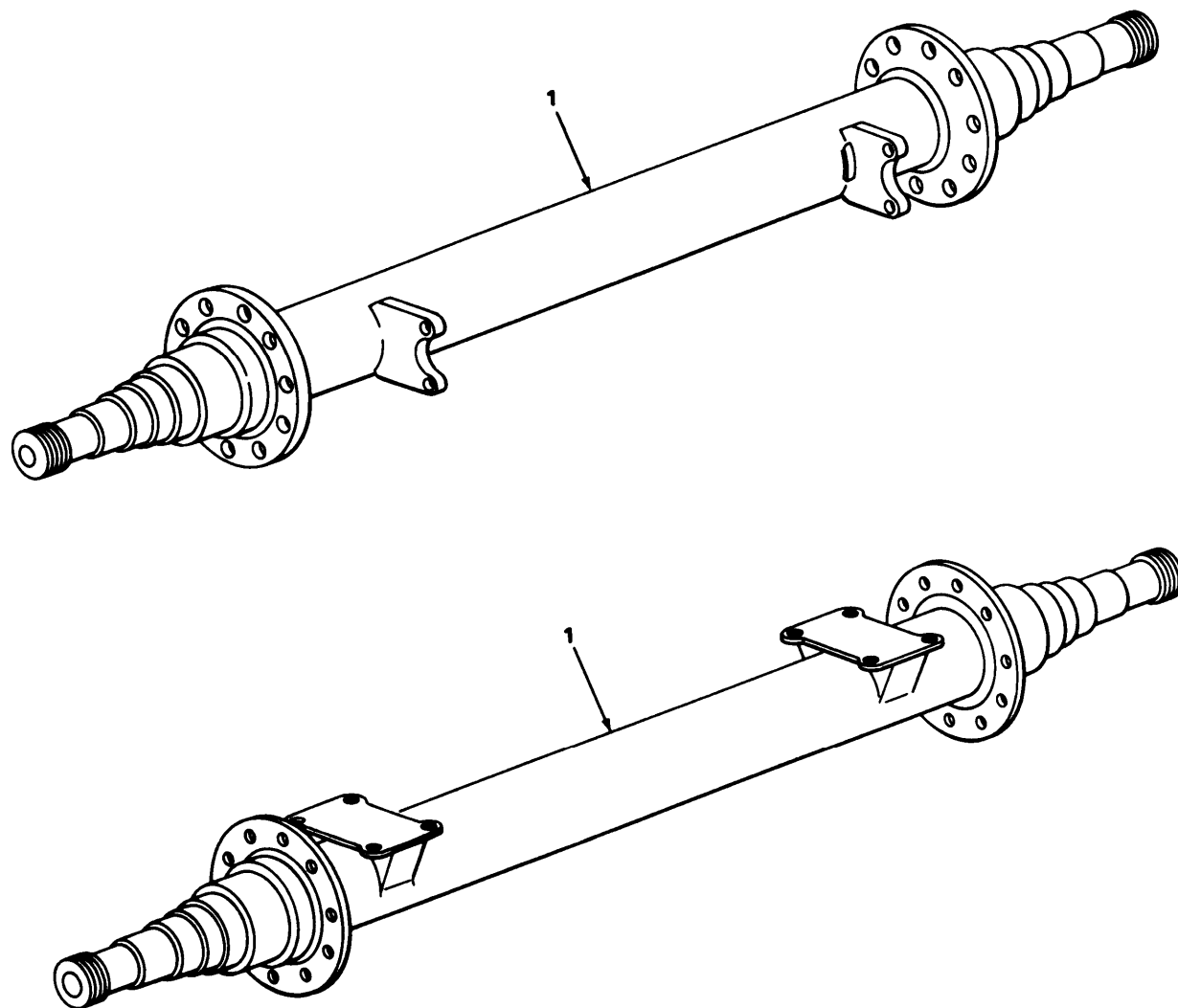


FIGURE 12. AXLE.

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 11 REAR AXLE	
				GROUP 1100 REAR AXLE ASSEMBLY	
				FIG. 12 AXLE	
1	XDFZZ	19207	8343608	AXLE ASSEMBLY.....	2
				UOC:686	
1	XDFZZ	19207	8710735	AXLE ASSEMBLY.....	2
				UOC:136,694	

END OF FIGRE



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FIGURE 13. AXLE BEAM.

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY

GROUP 1101 HOUSING, BEAM, HOUSING
COVERS, PLUGS, SEALS, ETC.

FIG. 13 AXLE BEAM

1	PFFZZ	19207	8710746	AXLE,VEHICULAR,NOND.....	1
				UOC:136,694	
1	XDFZZ	19207	8327368	BEAM ASSEMBLY.....	1
				UOC:686	

END OF FIGURE

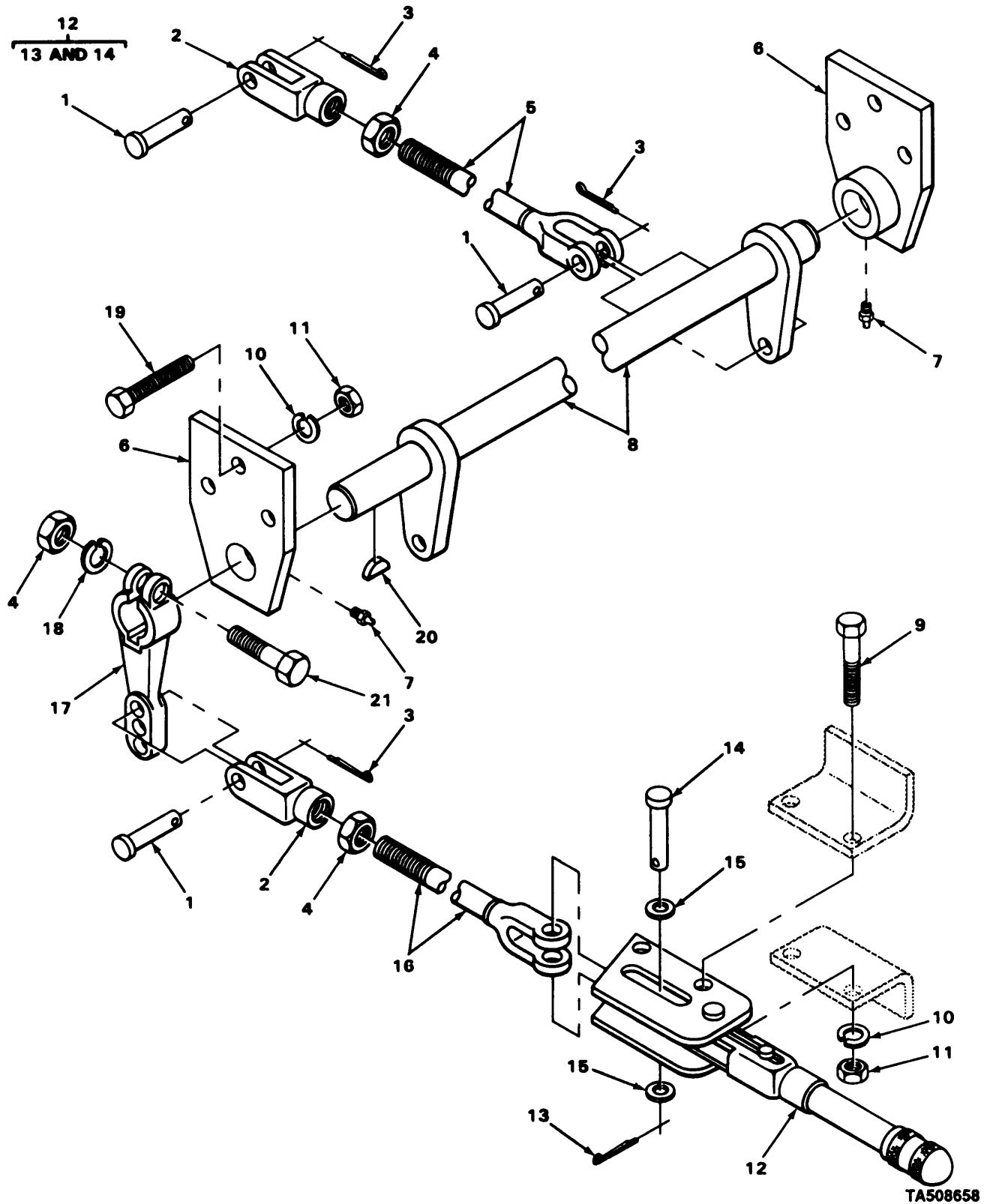
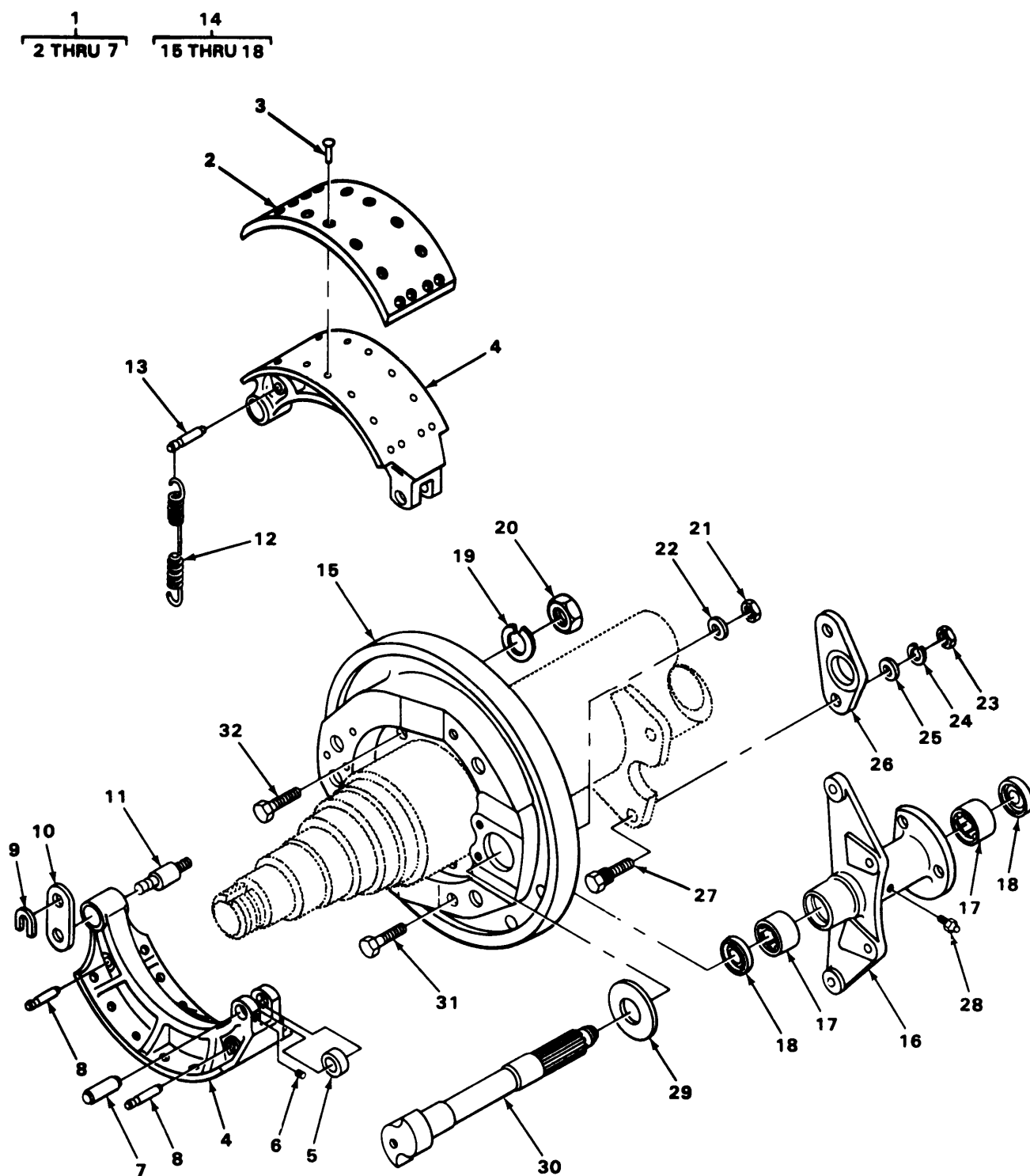


FIGURE 14. HANDBRAKE (M119).

SECTION II			TM9-2330-210-14&PC01					
(1)	(2)	(3)	(4)	(5)	(6)			
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	CODES(UOC)	QTY
GROUP 12 BRAKES								
GROUP 1201 HANDBRAKES								
FIG. 14 HANDBRAKES (M119)								
906	MS35810-6			PIN, STRAIGHT, HEADED.....				5
				UOC:686				
450	104039			CLEVIS, ROD END.....				3
				UOC:686				
906	MS24665-353			PIN, COTTER.....				5
				UOC:686				
450	218571			NUT, HEXAGON.....				4
				UOC:686				
207	8343563			ROD ASSEMBLY REAR BRAKE.....				2
				UOC:686				
207	8343556			BRACKET ASSEMBLY.....				2
				UOC:686				
906	MS15003-1			FITTING, LUBRICATION.....				2
				UOC:686, 694				
207	8343559			SHAFT ASSEMBLY.....				1
				UOC:686				
450	100030			SCREW, CAP, HEXAGON H.....				2
				UOC:686				
167	103321			WASHER, LOCK.....				8
				UOC:686				
450	218565			NUT, HEXAGON.....				8
				UOC:686				
867	01166202			LEVER, MANUAL CONTRO.....				1
				UOC:686				
906	MS24665-283			.PIN, COTTER.....				1
				UOC:686				
207	7415746			.PIN, STRAIGHT, HEADED.....				1
				UOC:686				
906	MS27183-11			WASHER, FLAT.....				2
				UOC:686				
207	8343565			ROD ASSEMBLY FRONT BRAKE.....				1
				UOC:686				
207	8343562			LEVER, BRAKE.....				1
				UOC:686				
204	103323			WASHER, LOCK.....				1
				UOC:686				
450	100027			SCREW, CAP, HEXAGON H.....				6
				UOC:686				
450	117982			KEY, WOODRUFF.....				1
				UOC:686				
450	100056			SCREW, CAP, HEXAGON H.....				1
				UOC:686				

END OF FIGURE



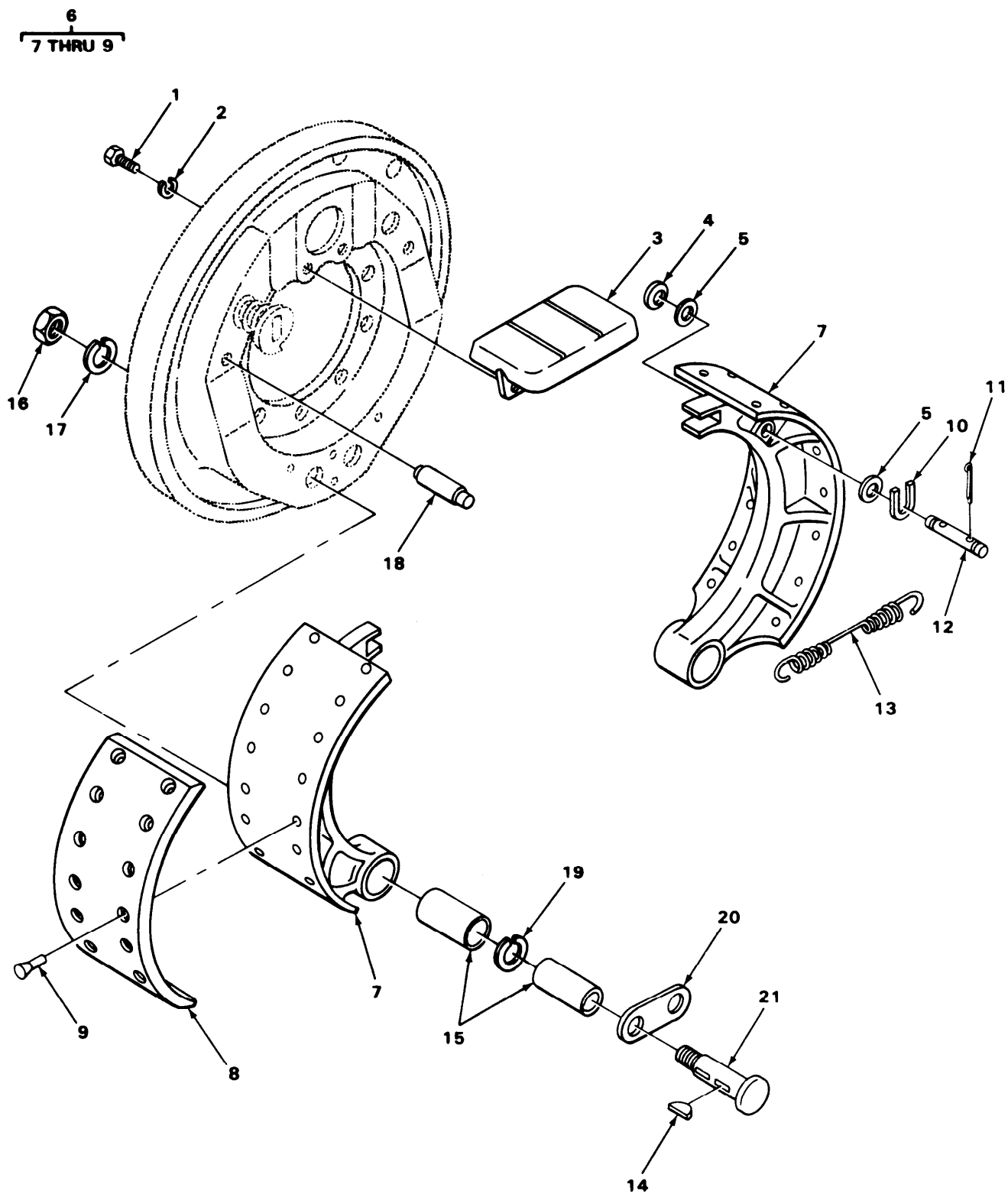
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FIGURE 15. SERVICE BRAKES (M119).

SECTION II		TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)	(6)
E M	S M R		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UuOC)	QTY
GROUP 1202 SERVICE BRAKES					
FIG. 15 SERVICE BRAKES (M119)					
1	PAOFF	78500	A1-3722B28	BRAKE SHOE INTERNALLY ACTUATED WITH LINING.....	4
				UQC:686	
2	PAFZZ	19207	7979277	.LINING,FRICTION.....	1
				UQC:686	
3	PAFZZ	96906	MS16536-172	.RIVET BRAKE LINING.....	16
				UQC:686	
4	XDFZZ	19207	7979279	.SHOE,BRAKE.....	2
				UQC:686	
5	PAOZZ	78500	1199A625	.BEARING,SLEEVE.....	2
				UQC:686	
6	PAFZZ	11083	102570	.SETSCREW.....	2
				UQC:686	
7	PAOZZ	56697	UB5009	.SHAFT,STRAIGHT.....	2
				UQC:686	
8	XDOZZ	81336	8630-20-5	PIN.....	8
				UQC:686	
9	PAOZZ	19207	7979332	WASHER,SLOTTED PART OF KIT P/N 7417135.....	4
				UQC:686	
10	PAOZZ	78500	1745E5Z	LINK,ANCHOR,BRAKE S.....	2
				UQC:686	
11	PAOZZ	78500	1759E5	PIN,SHOULDER,HEADLE PART OF KIT P/N 7417135.....	4
				UQC:686	
12	PAOZZ	19207	7979339	SPRING,HELICAL,EXTE.....	2
				UQC:686	
13	PAOZZ	19207	7979330	PIN,GROOVED,HEADLES.....	2
				UQC:686	
14	PBFZZ	78500	A3736P16	PLATE ASSEMBLY,BACK.....	2
				UQC:686	
15	XAFZZ	19207	7979336	.PLATE,BACKING,BRAKE.....	1
				UQC:686	
16	XDFZZ	19207	7979335	.BRACKET.....	1
				UQC:686	
17	XDFZZ	21450	709438	.BEARING.....	2
				UQC:686	
18	PAFZZ	19207	7979333	.SEAL,PLAIN ENCASED.....	2
				UQC:686	
19	PFOZZ	96906	MS35338-51	WASHER,LOCK.....	4
				UQC:686	
20	PAOZZ	19207	7207919	NUT,PLAIN,HEXAGON.....	4
				UQC:686	
21	PFOZZ	96906	MS35690-924	NUT,PLAIN,HEXAGON.....	2
				UQC:686	
22	XDOZZ	19207	103324	WASHER,LOCK.....	2
				UQC:686	
23	XDFZZ	19207	117050	NUT,PLAIN,HEXAGON.....	4

SECTION II			TM9-2330-210-14&PCOI				
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM	SNR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	
24	PAFZZ	96906	MS35338-47	UOC:686 WASHER, LOCK.....		4	
25	XDFZZ	19207	7979362	UOC:686 WASHER.....		4	
26	XDFZZ	19207	7979350	UOC:686 BRACKET ASSEMBLY.....		2	
27	PAFZZ	19207	7979179	UOC:686 BOLT, RIBBED SHOULDE.....		4	
28	PAOZZ	96906	MS15003-1	UOC:686 FITTING, LUBRICATION.....		1	
29	PAOZZ	19207	7979353	UOC:686 WASHER, FLAT.....		4	
30	PAOZZ	78500	2710E5	UOC:686 CAMSHAFT, ACTUATING, RIGHT.....		1	
30	PFOZZ	78500	2710F6	UOC:686 CAMSHAFT, ACTUATING, LEFT.....		1	
31	XDOZZ	19207	181455	UOC:686 SCREW.....		2	
32	PAOZZ	19207	7979351	UOC:686 RIVET, SOLID.....		18	

END OF FIGURE



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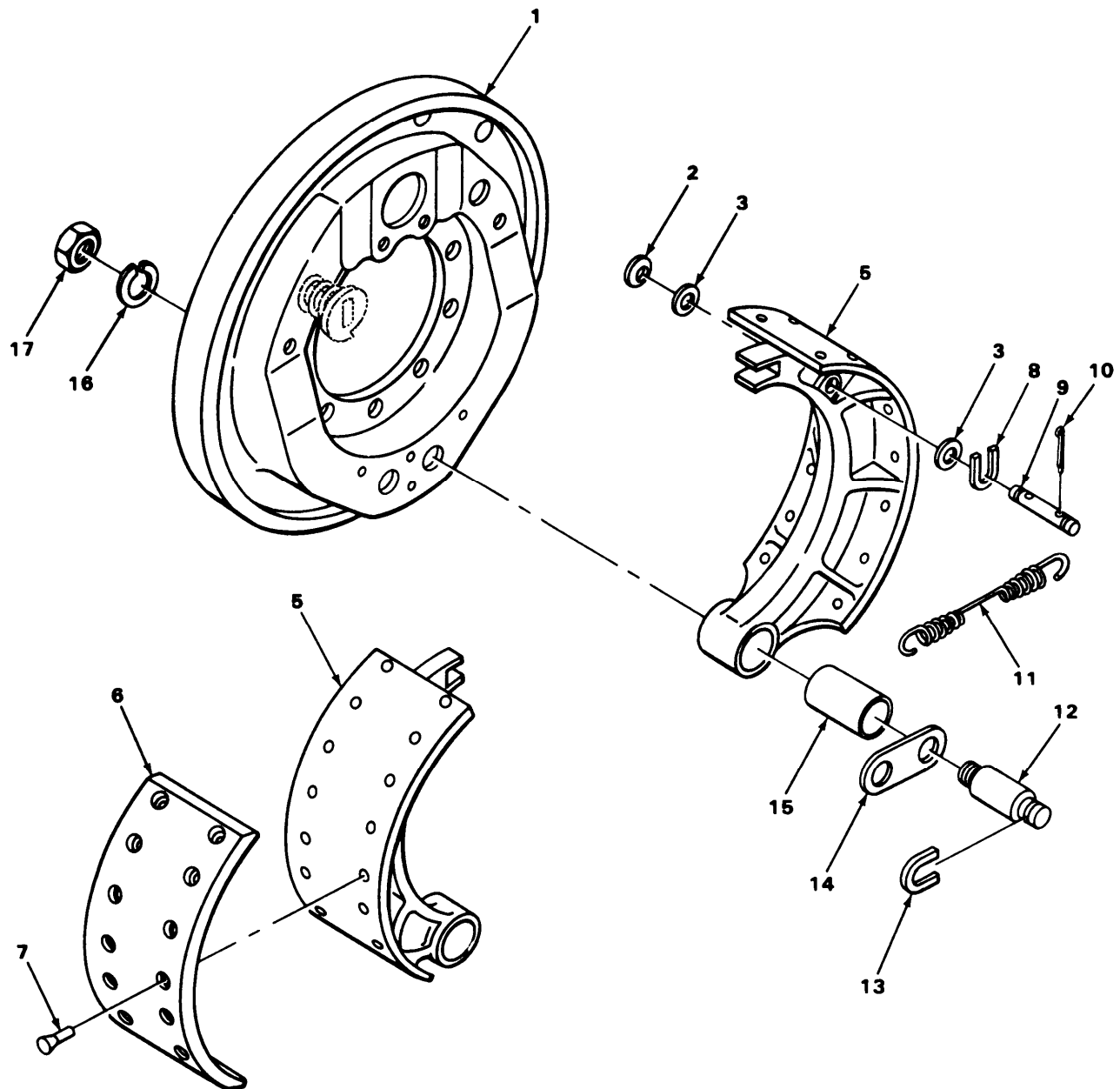
FIGURE 16. SERVICE BRAKES (M118A1 BEFORE SERIAL NUMBER 197).

SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)	(6)	
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY
GROUP 1202 SERVICE BRAKES						
FIG. 16 SERVICE BRAKES (M118A1 BEFORE SERIAL NUMBER 197)						
1	PAOZZ	96906	MS51096-359	SCREW,CAP,HEXAGON H USED UP TO SERIAL NUMBER 197.....	UOC:694	4
2	PAOZZ	94231	3-07620-311	WASHER,LOCK USED UP TO SERIAL NUMBER 197.....	UOC:694	4
3	PAOZZ	78500	2797E5	COVER,ACCESS USED UP TO SERIAL NUMBER 197.....	UOC:694	2
4	PAOZZ	19207	7409385	WASHER,SPRING TENS1 USED UP TO SEIAL NUMBER 197.....	UOC:694	4
5	XDOZZ	21450	594261	WASHER,FLAT USED UP TO SERIAL NUMBER 197.....	UOC:694	8
6	PAOFF	19207	7409380	SHOE USED UP TC SERIAL NUMBER 197..	UOC:694	4
7	XDFZZ	19207	8758318	.BRAKE SHOE USED UP TO SERIAL NUMBER 197.....	UOC:694	1
8	XDFZZ	78500	2740Z26	.LINING,FRICTION USED UP TO SERIAL NUMBER 197 PART OF KIT P/N 5704496..	UOC:694	1
9	PAFZZ	96906	MS16536-172	.RIVET,TUBULAR USED UP TO SERIAL NUMBER 197 PART OF KIT P/N 5704496..	UOC:694	14
10	PAOZZ	63477	F665	PISTON,HYDRAULIC BR USED UP TO SERIAL NUMBER 197.....	UOC:694	4
11	PAOZZ	96906	MS24665-283	PIN,COTTER USED UP TO SERIAL NUMBER 197.....	UOC:694	8
12	PAOZZ	19207	7409379	PIN,GROOVED,HEADLES USED UP TO SERIAL NUMBER 197.....	UOC:694	4
13	PAOZZ	19207	7979339	SPRING,HELICAL,EXTE USED UP TO SERIAL NUMBER 197.....	UOC:694	2
14	PAOZZ	96906	MS35756-16	KEY,WOODRUFF USED UP TO SERIAL NUMBER 197.....	UOC:694	4
15	PAOZZ	19207	7979280	BUSHING,SLEEVE USED UP TO SERIAL NUMBER 197.....	UOC:694	4
16	PAOZZ	19207	7207919	NUT,PLAIN,HEXAGON USED UP TO SERIAL NUMBER 197.....	UOC:694	4

SECTION II			TM9-2330-210-14&PC01	
(1)	(2)	(3)	(4)	(5)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC) QTY
17	PAQZZ	96906	MS35338-51	WASHER, LOCK USED UP TO SERIAL NUMBER 197..... UOC:694 4
18	PAQZZ	19207	7409378	PIN, SHOULDER, HEADLE USED UP TO SERIAL NUMBER 197..... UOC:694 4
19	PAQZZ	19207	7979332	WASHER, SLOTTED USED UP TO SERIAL NUMBER 197 PART OF KIT P/N 7417135.. UOC:694 2
20	PAQZZ	78500	1745E5Z	LINK, ANCHOR, BRAKE S USED UP TO SERIAL NUMBER 197..... UOC:694 2
21	PAQZZ	78500	1759E5	PIN, SHOULDER, HEADLE USED UP TO SERIAL NUMBER 197 PART OF KIT P/N 7417135..... UOC:694 2

END OF FIGURE

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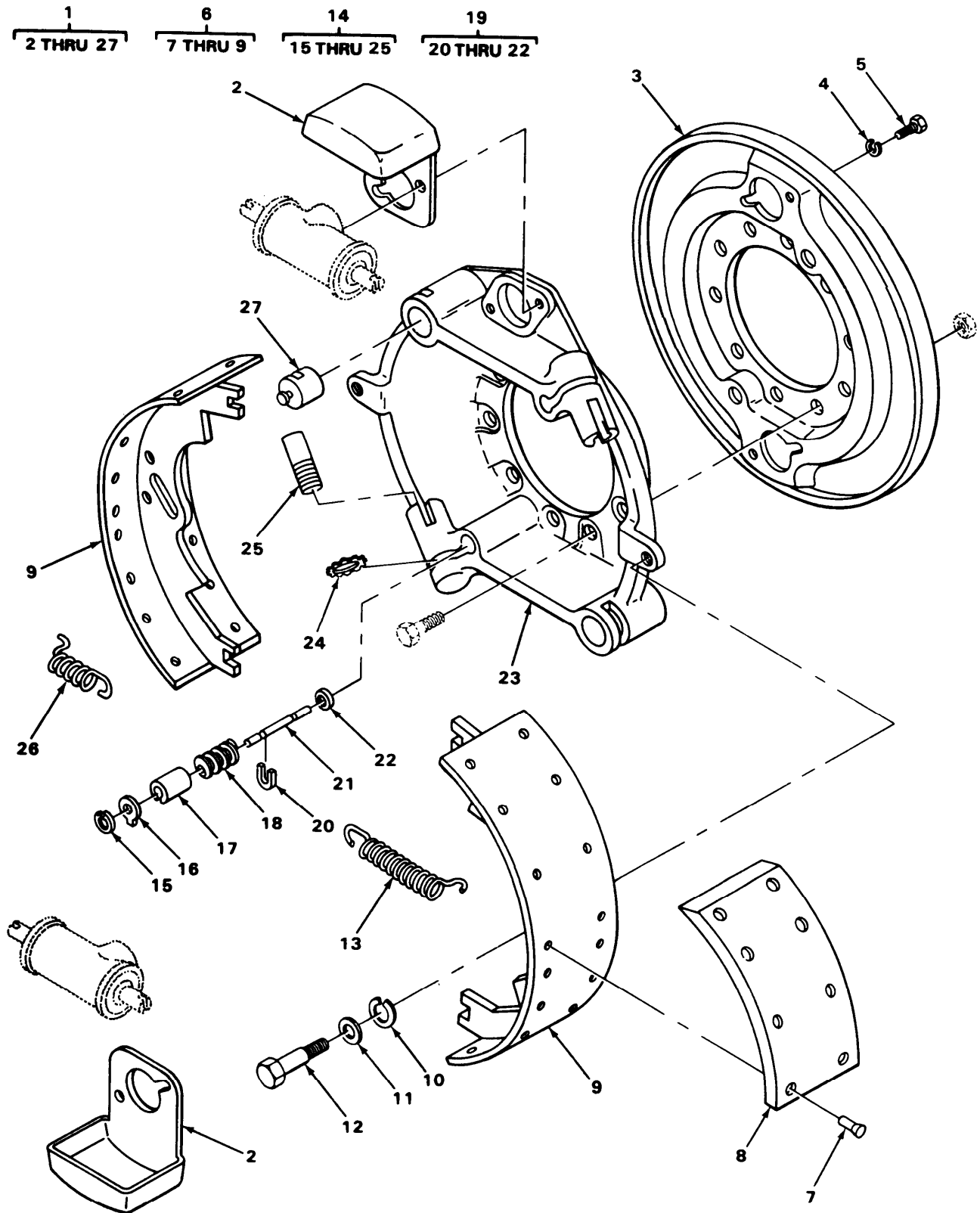
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FIGURE 17. SERVICE BRAKES (OPTIONAL FOR M118A1 AFTER SERIAL NUMBER 196 AND M119A1).

SECTION II			TM9-2330-210-14&PC01					
(1)	(2)	(3)	(4)	(5)	(6)			
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND	USABLE ON	CODES(UOC)	QTY	
GROUP 1202 SERVICE BRAKES								
FIG. 17 SERVICE BRAKES (OPTIONAL FOR M118A1 AFTER SERIAL NUMBER 196 AND M119A1)								
1	PAOZZ	78500	A173736H8	PLATE,BACKING,BRAKE	OPTIONAL FOR		2	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
2	PAOZZ	19207	7409385	WASHER,SPRING TENS	OPTIONAL FOR		4	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
3	XDOZZ	21450	594261	WASHER,FLAT	OPTIONAL FOR M118A1		8	
				AFTER SERIAL NUMBER 196, AND M119A1.				
				UOC:136,694				
4	PAOFF	19207	5705700	BRAKE SHOE SET,INTE	OPTIONAL FOR		4	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
5	XDFZZ	19207	8758318	.BRAKE SHOE	OPTIONAL FOR M118A1		1	
				AFTER SERIAL NUMBER 196, AND M119A1.				
				UOC:136,694				
6	XDFZZ	19207	8758256	.LINING FRICTICN BRA	OPTIONAL FOR		1	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
7	PAFZZ	96906	MS16536-172	.RIVET,TUBULAR	OPTIONAL FOR M118A1		10	
				AFTER SERIAL NUMBER 196, AND M119A1.				
				UOC:136,694				
8	PAOZZ	63477	F665	PISTON,HYDRAULIC BR	OPTIONAL FOR		4	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
9	PAOZZ	19207	7409379	PIN,GROOVED,HEADLES	OPTIONAL FOR		4	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
10	PAOZZ	96906	MS24665-283	PIN,COTTER	OPTIONAL FOR M118A1		8	
				AFTER SERIAL NUMBER 196, AND M119A1.				
				UOC:136,694				
11	PAOZZ	19207	7979339	SPRING,HELICAL,EXTE	OPTIONAL FOR		2	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1.....				
				UOC:136,694				
12	PAOZZ	78500	1759E5	PIN,SHOULDER,HEADLE	OPTIONAL FOR		4	
				M118A1 AFTER SERIAL NUMBER 196, AND				
				M119A1 PART CF KIT P/N 7417135.....				
				UOC:136,694				
13	PAOZZ	19207	7979332	WASHER,SLOTTED	OPTIONAL FOR M118A1		2	
				AFTER SERIAL NUMBER 196, AND M119A1				

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
No	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				PART OF KIT P/N 7417135.....	
				UOC:136,694	
14	PAOZZ	78500	1745-E-5	LINK,ANCHOR,BRAKE S OPTIONAL FOR	2
				M118A1 AFTER SERIAL NUMBER 196, AND	
				M119A1.....	
				UOC:136,694	
15	PAOZZ	19207	7979280	BUSHING,SLEEVE OPTIONAL FOR M118A1	4
				AFTER SERIAL NUMBER 196, AND M119A1.	
				UOC:136,694	
16	PAOZZ	96906	MS35338-51	WASHER,LOCK OPTIONAL FOR M118A1	4
				AFTER SERIAL NUMBER 196, AND M119A1.	
				UOC:136,694	
17	PAOZZ	19207	7207919	NUT,PLAIN,HEXAGON OPTIONAL FOR	4
				M118A1 AFTER SERIAL NUMBER 196, AND	
				M119A1.....	
				UOC:136,694	

END OF FIGURE



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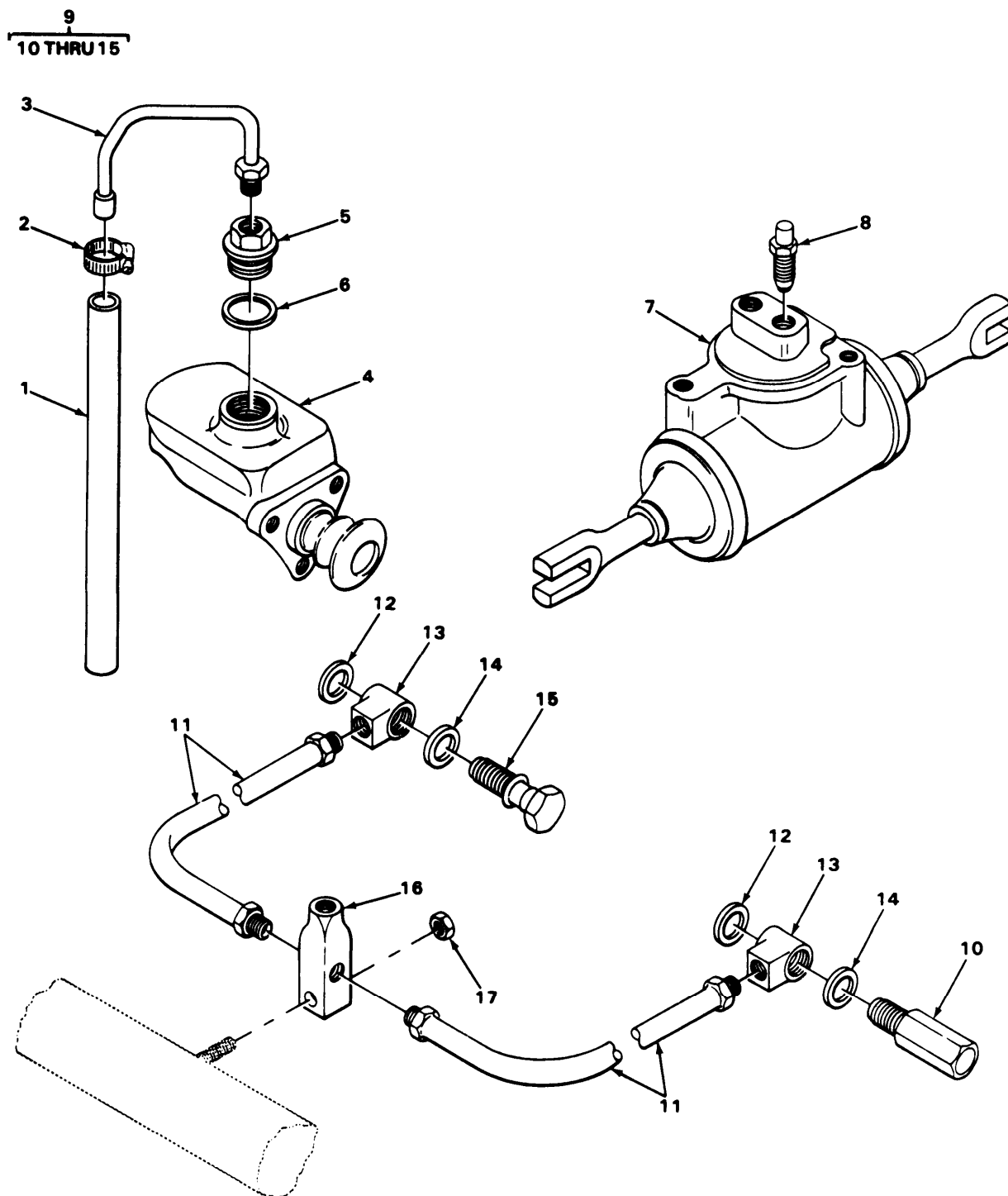
FIGURE 18. SERVICE BRAKES (M118A1 AFTER SERIAL NUMBER 196 AND M119A1).

SECTION II			TM9-2330-210-14&PC01						(5)	(6)
(1)	(2)	(3)	(4)							(6)
ITEM	SMR		PART							
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	OR	CODES(UOC)	QTY	
GROUP 1202 SERVICE BRAKES										
FIG. 18 SERVICE BRAKES (M118A1 AFTER SERIAL NUMBER 196 AND M119A11										
1	A0000	19207	8710719	BRAKE BAND AND LINI LEFT HAND,USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						1
				UOC:136,694						
1	A0000	19207	8710720	BRAKE BAND AND LINI RIGHT HAND,USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						1
				UOC:136,694						
2	PAOZZ	19207	8710693	.COVER,ACCESS LEFT HAND,USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						2
				UOC:136,694						
2	PAOZZ	19207	8710694	.SHIELD,SPARK,BRAKE RIGHT HAND,USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						2
				UOC:136,694						
3	PAOZZ	63477	FF20339	.PLATE,BACKING,BRAKE LEFT HAND,USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						1
				UOC:136,694						
3	PFOZZ	19207	8710718	.PLATE,BACKING,BRAKE RIGHT HAND, USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						1
				UOC:136,694						
4	PAOZZ	96906	MS35338-45	.WASHER,LOCK USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						4
				UOC:136,694						
5	PAOZZ	96906	MS90725-34	.BCLT,MACHINE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						4
				UOC:136,694						
6	PAOFF	19207	8710715	.BRAKE SHOE ASSEMBLY LEFT & RT, USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						2
				UOC:136,694						
7	PAFZZ	96906	MS16536-175	..RIVET,TUBULAR USE CN M118A1 AFTER SERIAL NUMBER 196, AND M119A1.						16
				UOC:136,694						
8	PAFZZ	19207	8710716	..LINING,FRICTION USE ON MODEL M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						1
				UOC:136,694						
9	XAOZZ	19207	8710714	..WEB AND TABLE ASSY USE CN M118A1 AFTER SERIAL NUMBER 196, ND M119A1..						1
				UOC:136,694						
10	PAOZZ	96906	MS35333-40	.WASHER,LOCK USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....						2
				UOC:136,694						

SECTION II		TM9-2330-210-14&PC01					
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM NO	SHR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	
11	PFOZZ	19207	8710685	.WASHER,FLAT USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	2	
12	PAOZZ	19207	8710683	.BCLT,SHOULDER USE ON M118A1 AFTER SERIAL UNBER 196, AND M119A1.....	UOC:136,694	2	
13	PAOZZ	19207	8710697	.SPRING,HELICAL,EXTE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	2	
14	XB000	19207	8710680	.SPIDER ASSEMBLY USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	1	
14	XB000	19207	8710681	.SPIDER ASSEMBLY USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	1	
15	PAOZZ	19207	8710672	..RING,RETAINING USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	2	
16	PAOZZ	19207	8710673	..WASHER,KEY USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	2	
17	PAOZZ	63477	FC10937	..BUSHING,SLEEVE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	2	
18	PAOZZ	19207	8710695	..GEAR,WORM USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	2	
19	PAOZZ	19207	8710692	..STUD ASSEMBLY USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	2	
20	PAOZZ	19207	8710711	...WASHER,SPLIT USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	1	
21	XDOZZ	19207	8710707	...STUD USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	1	
22	PFOZZ	96906	MS28775-011	...PACKING,PREFORMED USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.	UOC:136,694	1	
23	XBOZZ	63477	FF20318A	..SPIDER,BRAKE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	1	
23	XBOZZ	19207	8710713	..PLATE,BACKING,BRAKE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	1	
24	PAOZZ	63477	F20321	..GEAR,HELICAL USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....	UOC:136,694	2	
25	PAOZZ	19207	8710708	..SCREW ADJUSTING BRA USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....		2	

SECTION II			TM9-2330-210-14&PC01				
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	
26	PAQZZ	19207	8710696	UOC:136,694 -SPRING,HELICAL,EXTE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.		2	
27	PAQZZ	30076	200157	UOC:136,694 -PIN,ANCHOR USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....		2	

END OF FIGURE



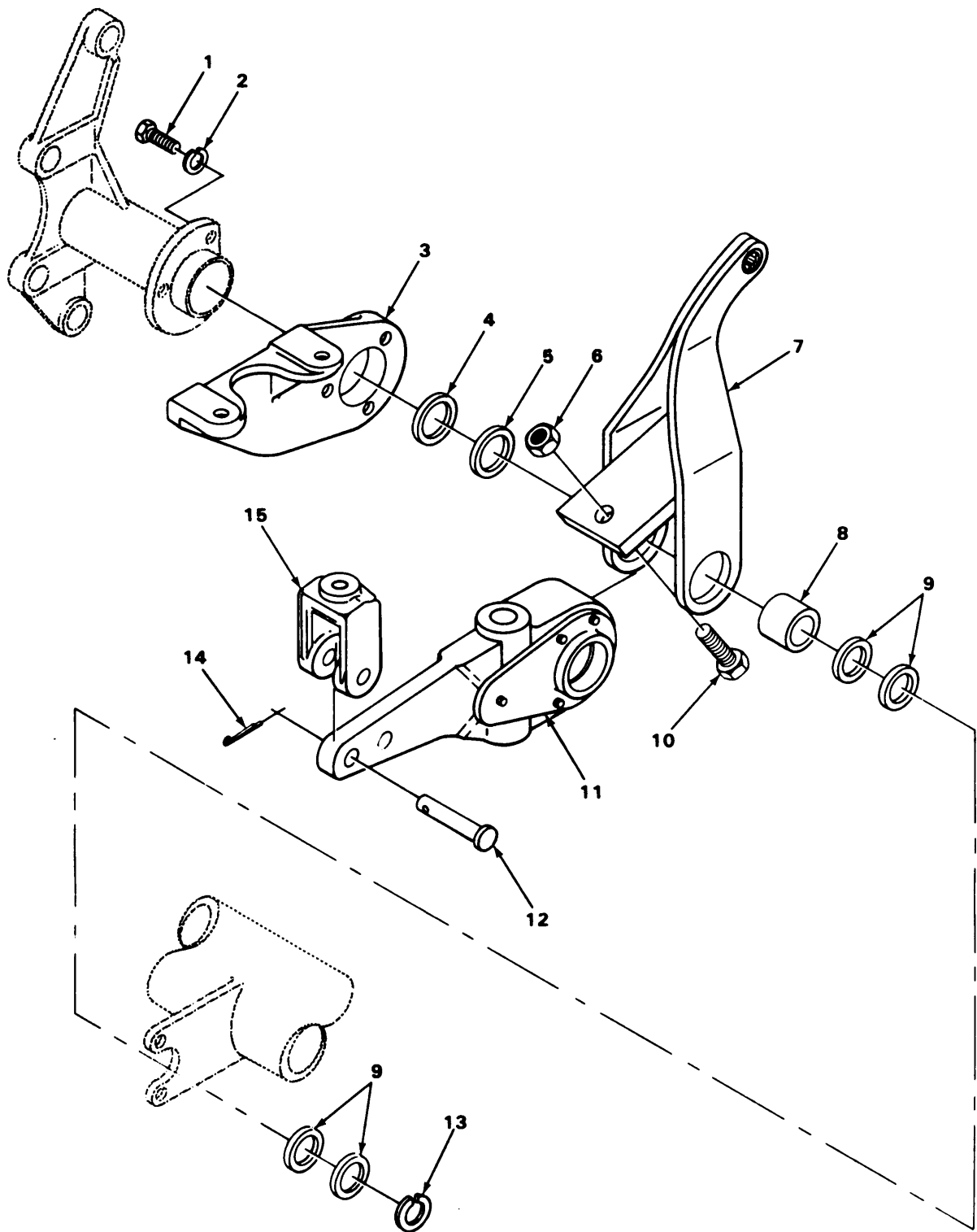
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FIGURE 19. WHEEL CYLINDER (M118A1 AFTER SERIAL NUMBER 196 AND M119A1) AND MASTER CYLINDER (M118A1 AND M119A1).

SECTION II		TM9-2330-210-14&PC01							
(1)	(2)	(3)	(4)	(5)	(6)				
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY
				GROUP 1204	HYDRAULIC	BRAKE	SYSTEM		
				FIG. 19 WHEEL CYLINDER (M118A1 AFTER SERIAL NUMBER 196 AND M119A1) AND MASTER CYLINDER (M118A1 AND M119A1)					
1	PAOZZ	96906	MS521301A204120	HOSE, NONMETALLIC.....					1
				UOC:136,694					
2	PAOZZ	96906	MS35842-11	CLAMP, HOSE.....					1
				UOC:136,694					
3	PAOZZ	23705	A298322	TUBE ASSEMBLY, METAL.....					1
				UOC:136,694					
4	PAOZZ	19207	8332086	CYLINDER ASSEMBLY, M.....					1
				UOC:136,694					
5	PAOZZ	63477	7979691	CAP, FILLER OPENING.....					1
				UOC:136,694					
6	PAOZZ	19207	7373354	SPACER, RING.....					1
				UOC:136,694					
7	PAOZZ	19207	8758259	CYLINDER ASSEMBLY, L USE ON MODEL M118A1 BEFORE SERIAL # 197.....					2
				UOC:694					
7	PAOZZ	63477	F56115	CYLINDER ASSEMBLY, H USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					2
				UOC:136,694					
8	PAOZZ	19207	7373260	VALVE, BLEEDER, HYDRA USE ON M118A1 AFTER SERIAL NUMBER 196 AND M119A1..					1
				UOC:136,694					
9	PAOZZ	63477	FD20333	TUBE ASSEMBLY, METAL USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					2
				UOC:136,694					
10	PAOZZ	92679	117171R1	.BOLT, FLUID PASSAGE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					1
				UOC:136,694					
11	PAOZZ	19207	8710676	.TUBE ASSEMBLY, METAL USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					1
				UOC:136,694					
12	PAOZZ	19207	7412088	.WASHER, SHOULDERED A USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					2
				UOC:136,694					
13	PAOZZ	19207	7745464	.TEE, TUBE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....					2
				UOC:136,694					
14	PAOZZ	19207	5298653	.SPACER, RING USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1.....					2
				UOC:136,694					
15	PAOZZ	82646	7412079	.BOLT, FLUID PASSAGE USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					1
				UOC:136,694					
16	PAOZZ	79470	5167679	CONNECTOR, MULTIPLE, USE ON M118A1 AFTER SERIAL NUMBER 196, AND M119A1..					1
				UOC:136,694					
17	PAOZZ	96906	MS51968-11	NUT, PLAIN, HEXAGON USE ON M118A1					1

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES (UOC) QTY
				AFTER SERIAL NUMBER 196, ARD M119A1.	
				UOC:136,694	

END OF FIGURE

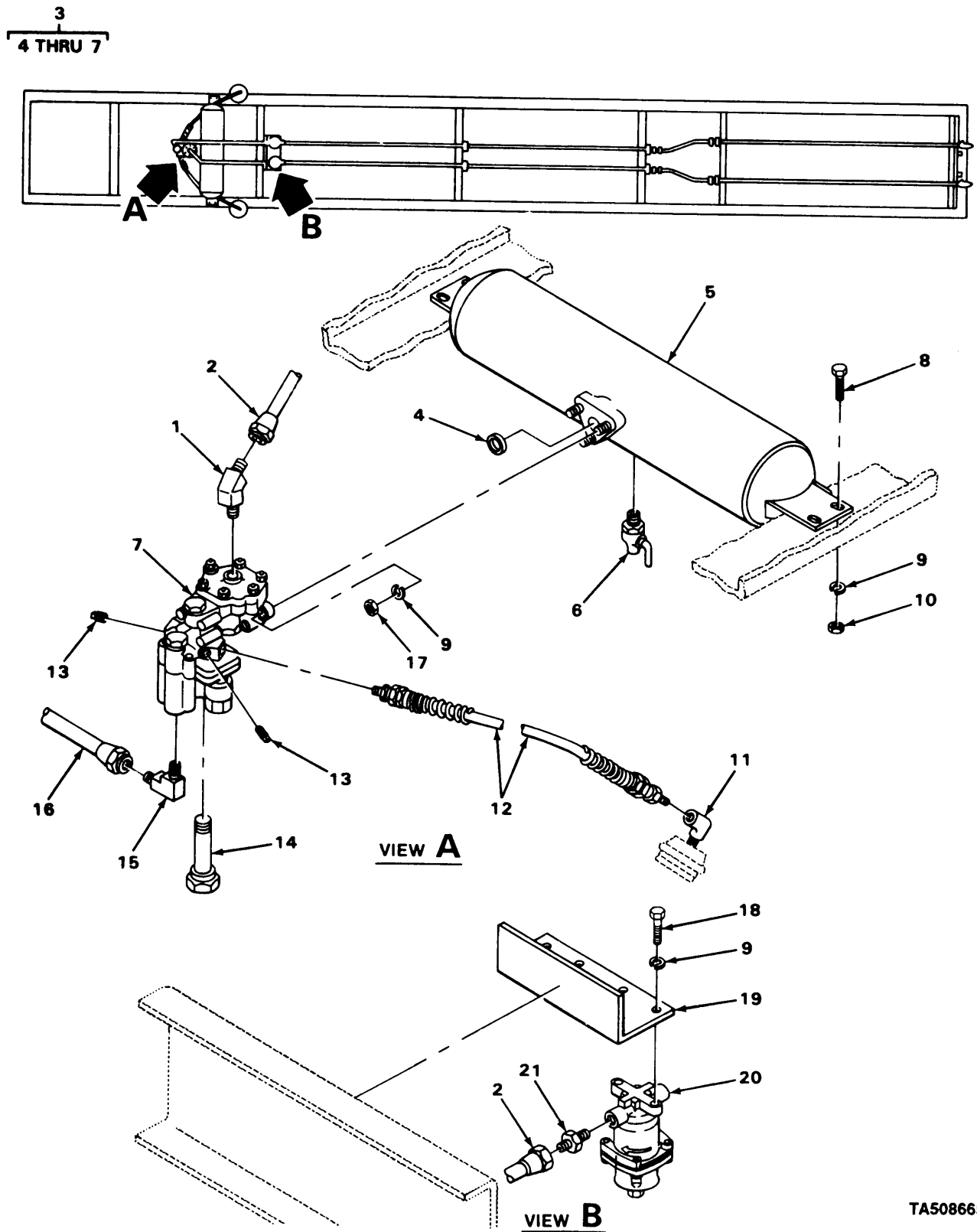


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FIGURE 20. SLACK ADJUSTER AND BRACKETS (M119).

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
				GROUP 1206 MECHANICAL BRAKE SYSTEM	
				FIG. 20 SLACK ADJUSTER AND BRACKETS (M119)	
1	PAOZZ	96906	MS90728-11	SCREW,CAP,HEXAGON H.....	6
				UQC:686	
2	PAOZZ	80045	23MS35338-10	WASHER, LOCK.....	6
				UQC:686	
3	PAOZZ	78500	3799Q407	BRACKET,EYE, NONROTA.....	1
				UQC:686	
3	PAOZZ	78500	3799P406	BRACKET,EYE, NONROTA LEFT.....	1
				UQC:686	
4	PAOZZ	19207	5168890	WASHER, FLAT.....	4
				UQC:686	
5	XDOZZ	19207	7534867	WASHER, FLAT.....	4
				UQC:686	
6	PAOZZ	96906	MS51968-11	NUT, PLAIN, HEXAGON.....	2
				UQC:686	
7	XDOZZ	19207	7979242	LEVER ASSEMBLY.....	2
				UQC:686	
8	PAOZZ	78500	174482	SPACER, SLEEVE.....	2
				UQC:686	
9	XDOZZ	19207	7979362	WASHER, FLAT.....	4
				UQC:686	
10	PAOZZ	96906	MS90727-85	SCREW,CAP,HEXAGON H.....	2
				UQC:686	
11	PAOZZ	19207	8327369	ADJUSTER, SLACK, BRAK.....	2
				UQC:686	
12	XDOZZ	19207	7954293	PIN, STRAIGHT, HEADED.....	2
				UQC:686	
13	XDOZZ	96906	MS51624-2112	RING, RETAINING.....	1
				UQC:686	
14	PAOZZ	96906	MS24665-353	PIN, COTTER.....	2
				UQC:686	
15	XDOZZ	19207	7954292	YOKE, CHAMBER.....	2
				UQC:686	

END OF FIGURE



TA508665

FIGURE 21. AIRBRAKE SYSTEM (M119).

SECTION II		TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY

GROUP 1208 AIRBRAKE SYSTEM

FIG. 21 AIRBRAKE SYSTEM (M119)

1	PAOZZ	81343	6-4 120202BA(LON	ELBOW,PIPE TO TUBE.....	1
			G NUT)	UOC:686	
2	XDOZZ	19207	8343573	TUBING.....	1
				UOC:686	
3	XDOZZ	19207	7954287	RESERVOIR AND VALVE.....	1
				UOC:686	
4	XDOZZ	2145C	546934	.GROMMET.....	1
				UOC:686	
5	PFOZZ	19207	8327379	.TANK,PRESSURE.....	1
				UOC:686	
6	PAOZZ	19204	5159378	.COCK,DRAIN.....	1
				UOC:686	
7	PAOZZ	96906	MS53004-2	.VALVE,RELAY-EMERGEN.....	1
				UOC:686	
8	XDOZZ	2145C	100026	SCREW,CAP,HEXAGON H.....	4
				UOC:686	
9	PAOZZ	96906	MS35338-8	WASHER,LOCK.....	11
				UOC:686	
10	XDOZZ	21450	218565	NUT,HEXAGON.....	4
				UOC:686	
11	PAOZZ	24617	144112	ELBOW,PIPE.....	2
				UOC:686	
12	XDOZZ	06853	224942	HOSE ASSEMBLY.....	2
				UOC:686	
13	XDOZZ	21450	444577	PLUG,PIPE.....	2
				UOC:686	
14	XDOZZ	19207	7954289	CHECK VALVE.....	1
				UOC:686	
15	PAOZZ	30327	69F3-8X3-8	ELBOW,PIPE TO TUBE.....	1
				UOC:686	
16	XDOZZ	19207	8343574	TUBING.....	4
				UOC:686	
17	XDOZZ	19207	225831	NUT.....	3
				UOC:686	
18	XDOZZ	21450	100134	SCREW,CAP,HEXAGON H.....	4
				UOC:686	
19	XDOZZ	19207	8343572	ANGLE,FILTER MOUNTI.....	1
				UOC:686	
20	PAOZZ	19207	8327375	FILTER,FLUID.....	2
				UOC:686	
21	PAOZZ	81343	6-4 120102BA	ADAPTER,STRAIGHT,PI.....	1
				UOC:686	

END OF FIGURE

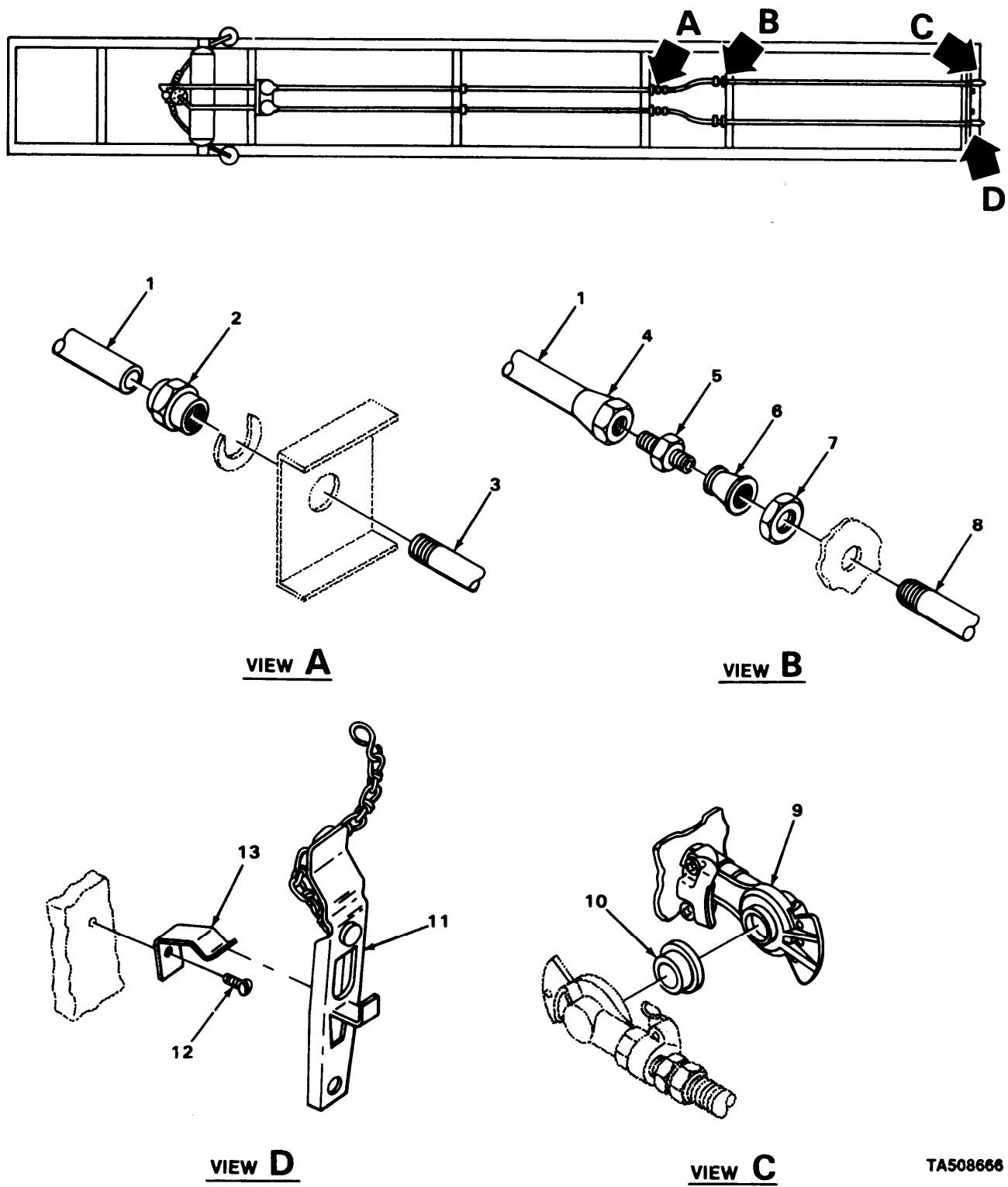
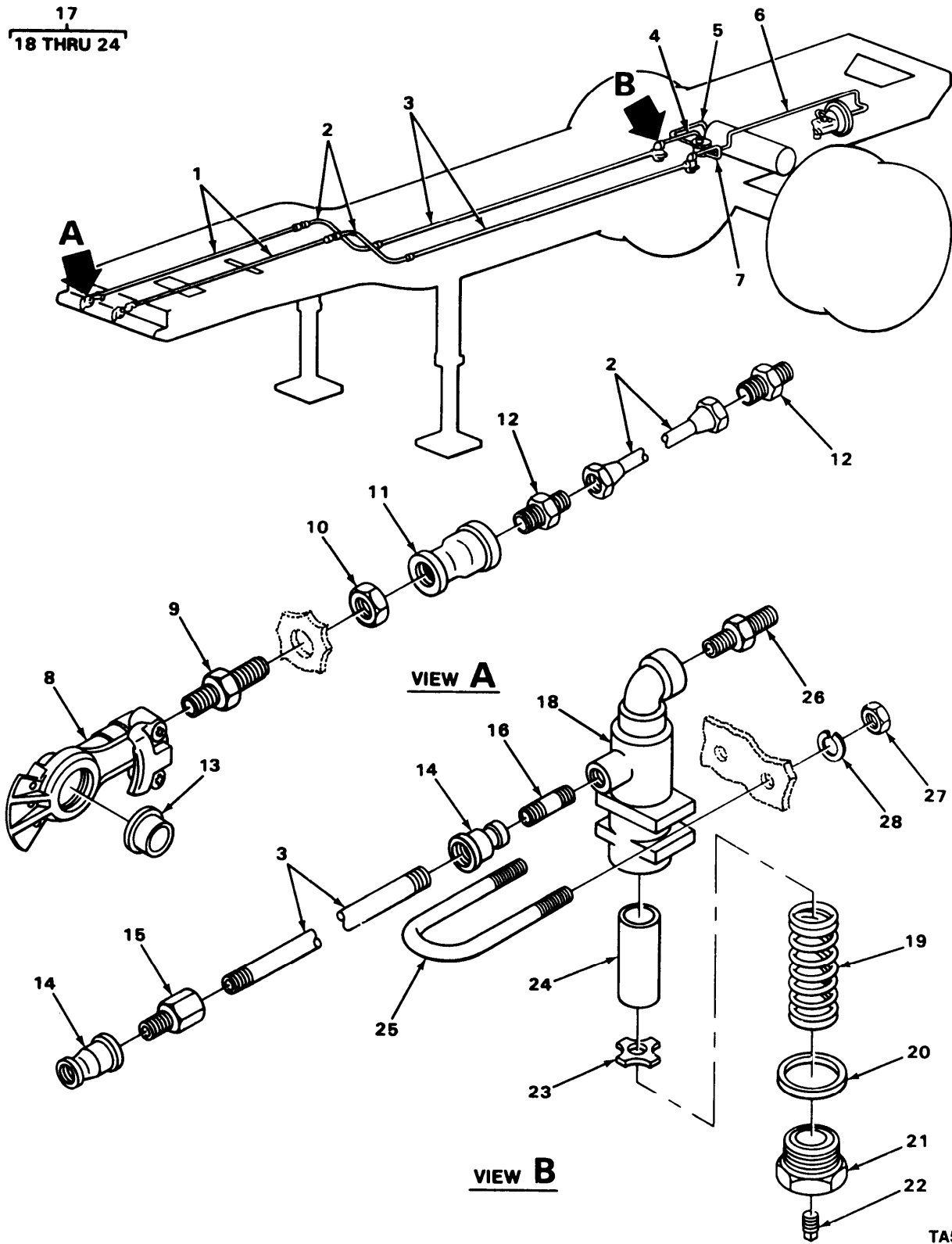


FIGURE 22. AIRBRAKE LINES AND FTITINGS (M119).

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SECTION II			TM9-2330-210-14&PC01		(5)	(6)
(1)	(2)	(3)	(4)			
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY	
GROUP 1208 AIRBRAKE SYSTEM						
FIG. 22 AIRBRAKE LINES AND FITTINGS (M119)						
1	XDOZZ	19207	8343570	TUBING.....	2	
				UOC:686		
2	PAOZZ	81343	6-6 120103BA	ADAPTER,STRAIGHT,PI FRONT PIPE TO	2	
				REAR PIPE.....		
				UOC:686		
3	XDOZZ	19207	8343571	PIPE.....	2	
				UOC:686		
4	PAOZZ	81343	6-4 1201028A	ADAPTER,STRAIGHT,PI.....	2	
				UOC:686		
5	PAOZZ	81343	6-6060102B	ADAPTER,STRAIGHT,PI.....	2	
				UOC:686		
6	PFOZZ	96906	MS39232-4	REDUCER,PIPE.....	2	
				UOC:686		
7	XDOZZ	21450	219754	NUT,HEXAGON,JAM.....	2	
				UOC:686		
8	PFOZZ	19207	8343698	PIPE,METALLIC.....	2	
				UOC:686		
9	XDOZZ	21450	501658	COUPLING,AIR BRAKE.....	2	
				UOC:686		
10	PAOZZ	06853	213630	PACKING,PREFORMED.....	2	
				UOC:686		
11	PAOZZ	19207	7338409	DUMMY COUPLING,AUTO.....	2	
				UOC:686		
12	XDOZZ	19207	171732	SCREW TAPPING,SLOTT.....	2	
				UOC:686		
13	XDOZZ	19207	8343575	BRACKET.....	2	
				UOC:686		

END OF FIGURE



TA508667

FIGURE 23. AIRBRAKE SYSTEM (M119A1 AND M118A1).

SECTION II		TM9-2330-210-14&PC01				(5)		(6)
(1)	(2)	(3)	(4)					
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC) QTY
GROUP 1208 AIRBRAKE SYSTEM								
FIG. 23 AIRBRAKE SYSTEM (M119A1 AND M118A1)								
1	XDOZZ	19207	8365189	PIPE,METALLIC.....				2
				UQC:136,694				
2	XDOZZ	19207	8742715	TUBE,COPPER.....				2
				UQC:136,694				
3	XDOZZ	19207	8343571	PIPE,STEEL.....				2
				UQC:136,694				
4	XDOZZ	19207	8365186	TUBE,COPPER.....				1
				UQC:136,694				
5	XDOZZ	19207	8365185	TUBE,COPPER.....				1
				UQC:136,694				
6	XDOZZ	19207	8365187	TUBE,COPPER.....				1
				UQC:136,694				
7	XDOZZ	19207	8365184	TUBE,COPPER.....				1
				UQC:136,694				
8	PAOZZ	96906	MS35746-1	COUPLING HALF,QUICK.....				2
				UQC:136,694				
9	PAOZZ	93061	68C-6-6	ADAPTER,STRAIGHT,PI.....				2
				UQC:136,694				
10	PAOZZ	96906	MS35691-69	NUT,PLAIN,HEXAGON.....				2
				UQC:136,694				
11	PAOZZ	96906	MS39232-4	REDUCER,PIPE.....				2
				UQC:136,694				
12	PFOZZ	81343	6-4 1201028A	ADAPTER,STRAIGHT,PI.....				4
				UQC:136,694				
13	PAOZZ	06853	213630	PACKING,PREFORMED.....				2
				UQC:136,694				
14	PAOZZ	96906	MS39232-2	REDUCER,PIPE.....				4
				UQC:136,694				
15	PAOZZ	81343	6-61201038A	ADAPTER,STRAIGHT,PI.....				2
				UQC:136,694				
16	XDOZZ	21450	219621	NIPPLE,PIPE.....				2
				UQC:136,694				
17	PAOOO	23705	A298749	AIR FILTER,BRAKE LI.....				2
				UQC:136,694				
18	PAOZZ	40342	N-12970-A	.ELBOW BODY,AIR LINE.....				1
				UQC:136,694				
19	PAOZZ	06853	235093	.SPRING,HELICAL,COMP PART OF KIT P/N RN13A.....				1
				UQC:136,694				
20	PAOZZ	91340	M4X509	.GASKET PART OF KIT P/N RN13A.....				1
				UQC:136,694				
21	PAOZZ	06853	235091	.ADAPTER BUSHING.....				1
				UQC:136,694				
22	PAOZZ	96906	MS20913-1S	.PLUG,PIPE.....				1
				UQC:136,694				
23	PAOZZ	40342	N12972	.WASHER,SPRING TENS.....				1
				UQC:136,694				

SECTION II			TM9-2330-210-14&PC01				
(1)	(2)	(3)	(4)		(5)		(6)
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND	USABLE ON	CODES(UOC)	QTY
24	PAQZZ	23705	N12971	.FILTER ELEMENT,FLUI	PART OF KIT P/N		1
				RN13A.....			
				UOC:136,694			
25	PAQZZ	19207	7979296	BOLT,U.....			2
				UOC:136,694			
26	PAQZZ	81343	6-4 1201028A	ADAPTER,STRAIGHT,PI.....			2
				UOC:136,694			
27	PAQZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON.....			4
				UOC:136,694			
28	PAQZZ	96906	MS35338-44	WASHER,LOCK.....			4
				UOC:136,694			

END OF FIGURE

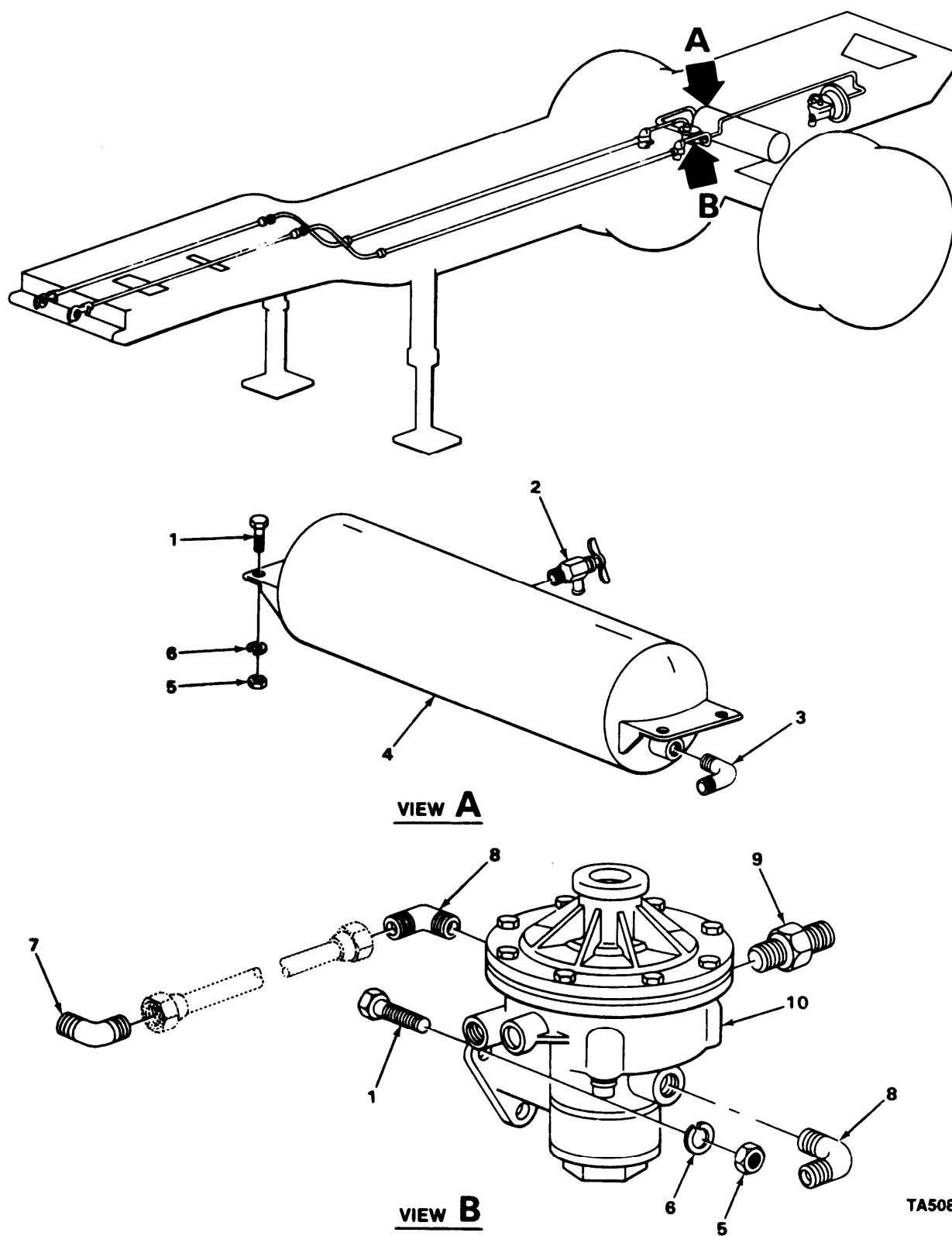
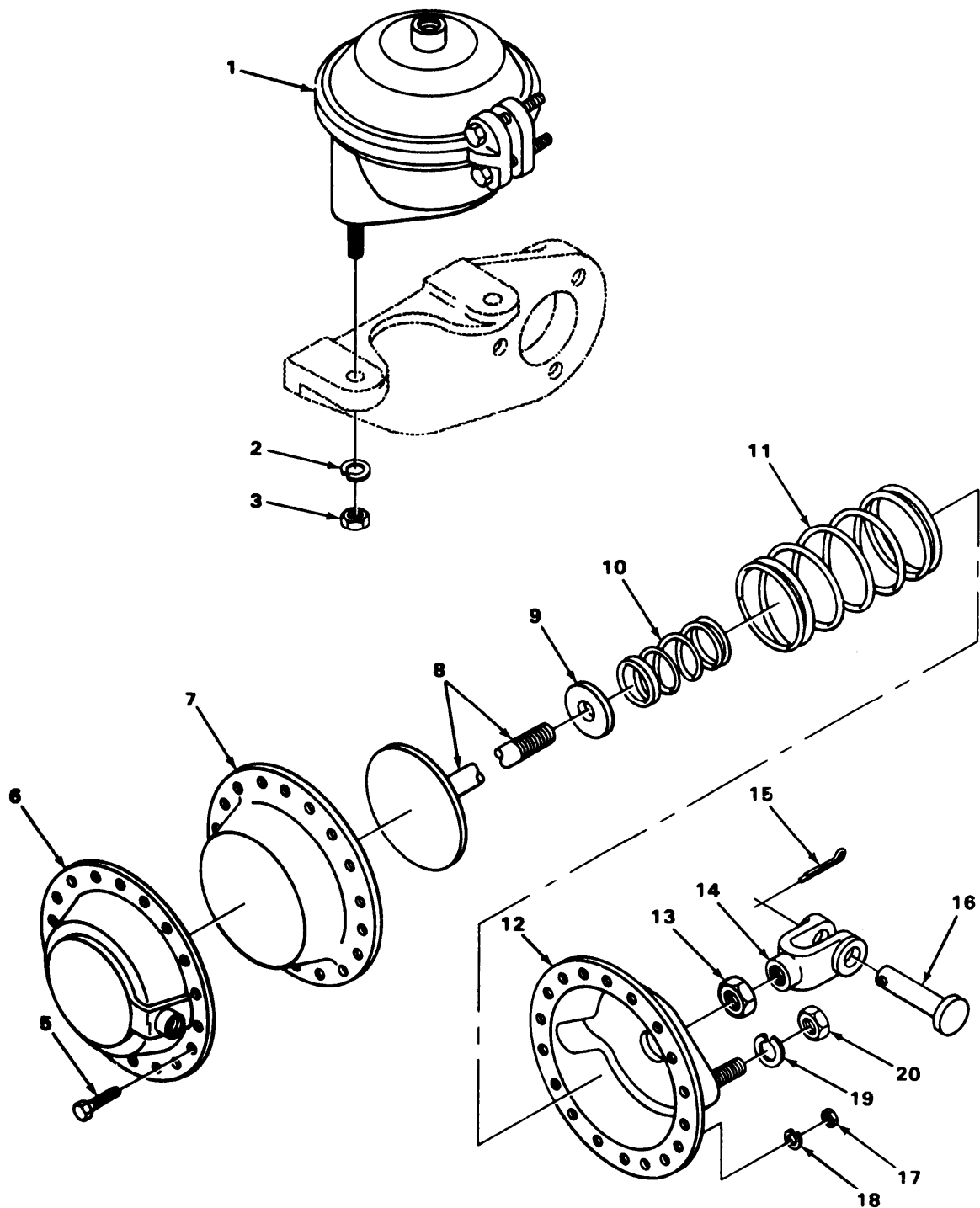


FIGURE 24. AIRBRAKE LINES AND FITTINGS (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)	(6)	
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY
GROUP 1208 AIRBRAKE SYSTEM						
FIG. 24 AIRBRAKE LINES AND FITTINGS (M119A1 AND M118A1)						
1	PAOZZ	96906	MS90726-60	SCREW,CAP,HEXAGON H.....		6
				UOC:136,694		
2	PAOZZ	19207	7524043	COCK,DRAIN.....		1
				UOC:136,694		
3	PAOZZ	81343	8-4120202BA	ELBOW,PIPE TO TUBE.....		1
				UOC:136,694		
4	PFOZZ	19207	8327379	TANK,PRESSURE.....		1
				UOC:136,694		
5	PAOZZ	96906	MS51968-8	NUT,PLAIN,HEXAGON.....		6
				UOC:136,694		
6	PAOZZ	96906	MS35338-46	WASHER,LOCK.....		6
				UOC:136,694		
7	PAOZZ	81343	6-4 120202BA(LONG NUT)	ELBOW,PIPE TO TUBE.....		1
				UOC:136,694		
8	PAOZZ	81343	6-6 120202BA	ELBOW,PIPE TO TUBE.....		1
				UOC:136,694		
9	PAOZZ	81343	4-2120102BA	ADAPTER,STRAIGHT,PI.....		1
				UOC:136,694		
10	PAOZZ	96906	MS53004-2	PARTS KIT,RELAY VAL.....		1
				UOC:136,694		

END OF FIGURE

4
5 THRU 20



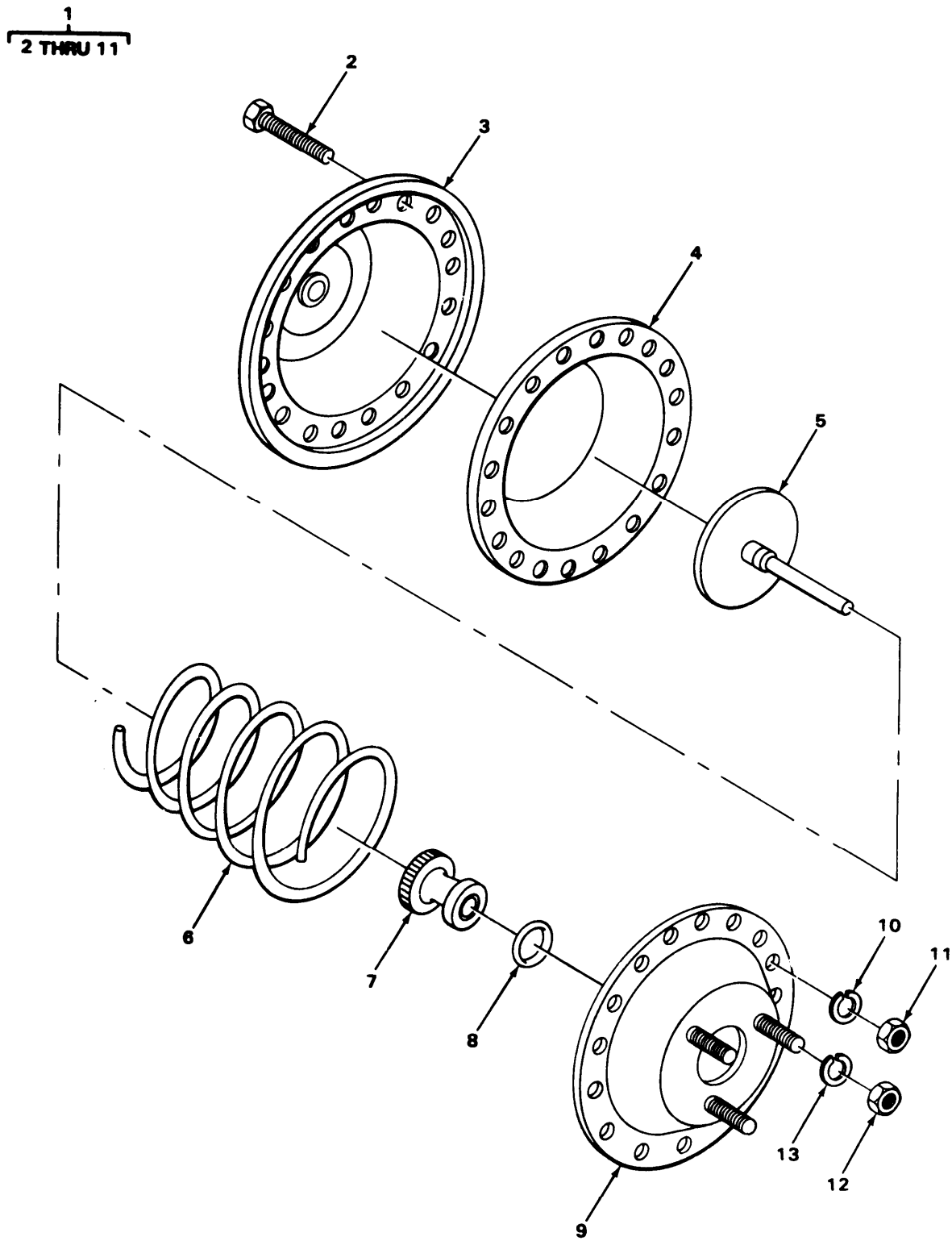
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FIGURE 25. AIRBRAKE CHAMBER (M119).

SECTION II		TM9-2330-210-14&PC01						(6)
(1)	(2)	(3)	(4)	(5)				
ITEM	SMR		PART					
No	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC) QTY
GROUP 1208 AIRBRAKE SYSTEM								
FIG. 25 AIRBRAKE CHAMBER (M119}								
1	XBOZZ	19207	8327374	CHAMBER ASSEMBLY BR	USE ON M119			2
				THROUGH SERIAL NUMBER 22V200.....				
				UOC:686				
2	PAOZZ	12603	23E10	WASHER, LOCK	USE ON M119 THROUGH			4
				SERIAL NUMBER 22V200.....				
				UOC:686				
3	PAOZZ	96906	MS51968-20	NUT, PLAIN, HEXAGON	USE ON M119			4
				THROUGH SERIAL NUMBER 22V200.....				
				UOC:686				
4	PAOFF	19207	7979039	CHAMBER AIRBRAKE	USE ON M119 AFTER			2
				SERIAL NUMBER 22V200.....				
				UOC:686				
5	PAFZZ	96906	MS90726-33	.BCLT, MACHINE	USE ON M119 AFTER			18
				SERIAL NUMBER 22V200 PART OF KIT P/N				
				RN21B.....				
				UOC:686				
6	XAFZZ	40342	N10497	.COVER	USE ON M119 AFTER SERIAL			1
				NUMBER 22V200.....				
				UOC:686				
7	KFFZZ	40342	N-2318	.DIAPHRAGM	USE ON M119 AFTER			1
				SERIAL NUMBER 22V200 PART OF KIT P/N				
				RN21B.....				
				UOC:686				
8	XAFZZ	40342	N10521	.PUSH ROD	USE ON M119 AFTER SERIAL			1
				NUMBER 22V200.....				
				UOC:686				
9	XAFZZ	40342	11194	.SEAL	USE ON M119 AFTER SERIAL			1
				NUMBER 22V200.....				
				UOC:686				
10	KFFZZ	40342	N11335A	.SPRING, HELICAL, COMP	USE ON M119			1
				AFTER SERIAL NUMBER 22V200 PART OF				
				KIT P/N RN21B.....				
				UOC:686				
11	KFFZZ	40342	N12471	.SPRING, HELICAL, COMP	USE ON M119			1
				AFTER SERIAL NUMBER 22V200 PART OF				
				KIT P/N RN21B.....				
				UOC:686				
12	XAFZZ	40342	10493D	.BODY ASSEMBLY	USE ON M119 AFTER			1
				SERIAL NUMBER 22V200.....				
				UOC:686				
13	PAFZZ	96906	MS51968-14	.NUT, PLAIN, HEXAGON	USE ON M119			1
				AFTER SERIAL NUMBER 22V200.....				
				UOC:686				
14	XBFZZ	40342	N10447	.CLEVIS, ROD END	USE ON M119 AFTER			1
				SERIAL NUMBER 22V200.....				
				UOC:686				
15	PFOZZ	96906	MS24665-353	.PIN, COTTER	USE ON M119 AFTER			1
				SERIAL NUMBER 22V200.....				

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
16	PAQZZ	96906	MS35810-6	UOC:686 .PIN,STRAIGHT,HEADED USE ON M119 AFTER SERIAL NUMBER 22V200.....	1
17	PAFZZ	96906	MS51968-5	UOC:686 .NUT,PLAIN,HEXAGON USE ON M119 AFTER SERIAL NUMBER 22V200 PART OF KIT P/N RN218.....	18
18	PAFZZ	96906	MS35338-45	UOC:686 .WASHER,LOCK USE ON M119 AFTER SERIL NUMBER 22V200 PART OF KIT P/N RN218.....	18
19	PAQZZ	12603	23E10	UOC:686 .WASHER,LOCK USE ON M119 AFTER SERIAL NUMBER 22V200.....	2
20	PAQZZ	96906	MS51968-20	UOC:686 .NUT,PLAIN,HEXAGON USE ON M119 AFTER SERIAL NUMBER 22V200.....	2

END OF FIGURE

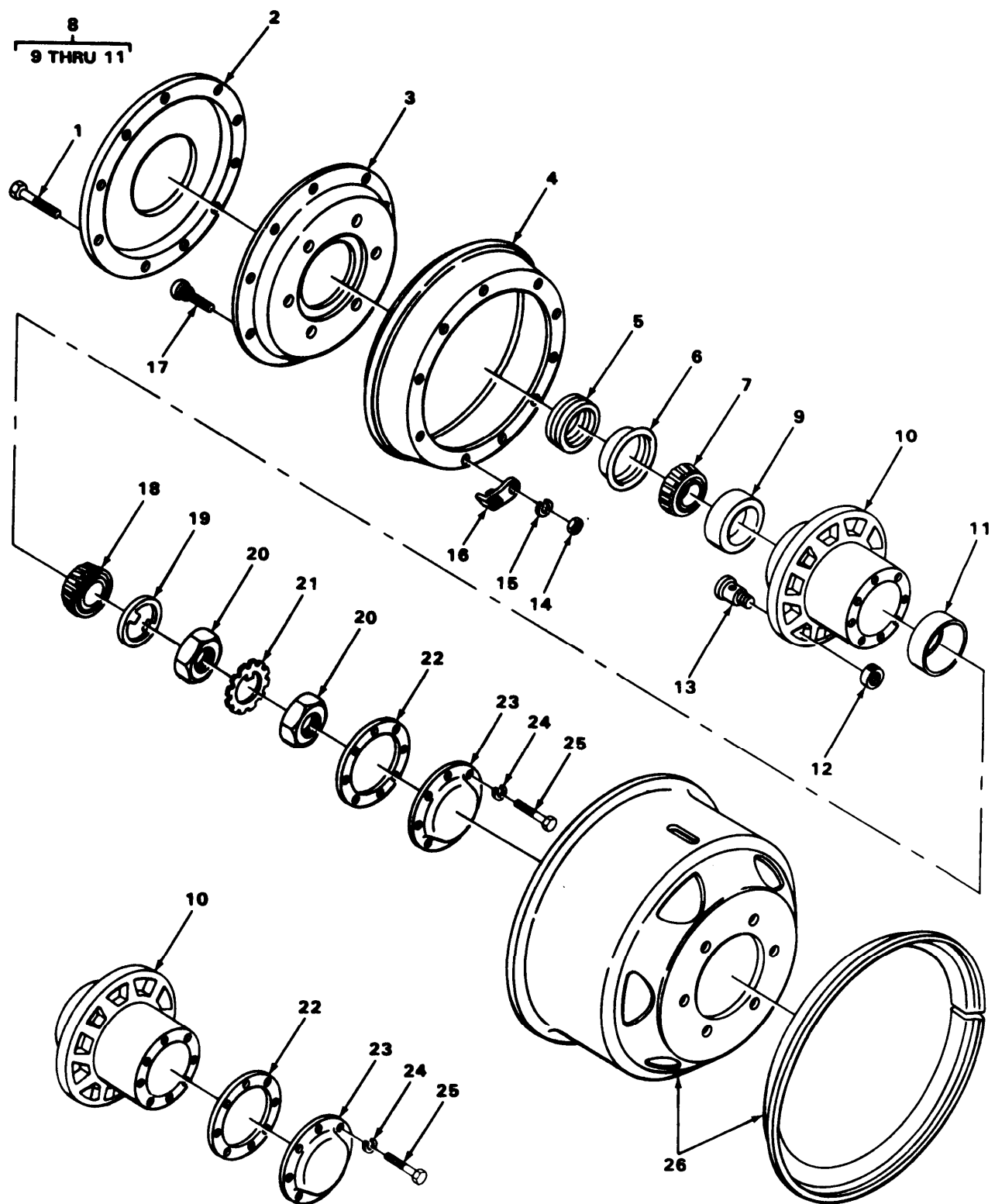


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FIGURE 26. AIRBRAKE CHAMBER (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01					
(1)	(2)	(3)	(4)	(5)	(6)			
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	UN	CODES(UOC) QTY
GROUP 1208 AIRBRAKE SYSTEM								
FIG. 26 AIRBRAKE CHAMBER (M119A1 AND M118A1)								
1	XBOFF	75237	N3782	CHAMBER,AIRBRAKE.....				
				UOC:134,694				
1	PAOZZ	19207	11668361	CHAMBER,AIR BRAKE.....				
				UOC:136,694				
2	PAFZZ	96906	MS90726-60	.SCREW,CAP,HEXAGON H PART CF KIT P/N				1
				8332543.....				
				UOC:136,694				
3	XAFZZ	19207	8380817	.COVER USE WITH P/N N3782.....				
				UOC:136,694				
4	PAFZZ	19207	8380805	.DIAPHRAGM,CHAMBER,B PART OF KIT				
				#8332543 PART OF KIT P/N 8332543....				
				UOC:136,694				
5	XAFZZ	19207	8380816	.PUSH ROD USE WITH P/N N3782.....				
				UOC:136,694				
6	KFFZZ	40342	N10673A	.SPRING,HELICAL,COMP PART OF KIT P/N				
				8332543.....				
				UOC:136,694				
7	XAFZZ	19207	8380814	.CELLAR,PUSH ROD.....				
				UOC:136,694				
8	KFFZZ	96906	MS28775-114	.PACKING,PREFORMED PART OF KIT P/N				
				8332543.....				
				UOC:136,694				
9	XAFZZ	19207	8380801	.BCDY ASSEMBLY.....				
				UOC:136,694				
10	PAFZZ	96906	MS35338-46	.WASHER,LOCK.....				1
				UOC:136,694				
11	PAFZZ	96906	MS51968-8	.NUT,PLAIN,HEXAGON PART OF KIT P/N				1
				8332543.....				
				UOC:136,694				
12	PAOZZ	96906	MS51968-8	NUT,PLAIN,HEXAGON PART OF KIT P/N				
				8332543.....				
				UOC:136,694				
13	PAOZZ	96906	MS35338-46	WASHER,LOCK.....				
				UOC:136,694				

END OF FIGURE



TA508671

FIGURE 27. HUB AND DRUM ASSEMBLY

SECTION II		TM9-2330-210-14&PC01						(6)
(1)	(2)	(3)	(4)	(5)				
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY		
GROUP 13 WHEELS AND TRACKS								
GROUP 1311 WHEEL ASSEMBLY								
FIG. 27 HUB AND DRUM ASSEMBLY								
1	PAOZZ	19207	7979179	BOLT,RIBBED SHOULDE.....		20		
2	XDOZZ	19207	8343588	SLINGER,CIL.....		2		
				UOC:686				
3	PFOZZ	78500	3268X180	ADAPTER.....		2		
				UOC:686				
3	PAOZZ	19207	8710742	ADAPTER,BRAKE DRUM.....		2		
				UOC:136,694				
4	PAOFF	78500	3219X2052	BRAKE DRUM.....		2		
5	PAOZZ	19207	7979349	SEAL,PLAIN ENCASED.....		2		
6	PAOZZ	78500	1199F1436	RING,WIPER.....		2		
7	PAOZZ	21450	712286	CONE ROLLER,INNER.....		2		
8	XDOOO	19207	8747994	HUB,WHEEL.....		2		
				UOC:136,694				
8	PAOOO	78500	A333V854	HUB,BODY WITH BEARING CUP,ASSEMBLY.		2		
				UOC:686				
9	PAOZZ	21450	706691	.CUP,TAPERED ROLLER INNER.....		1		
10	XDOZZ	19207	8343586	.HUB.....		1		
				UOC:686				
10	PAOZZ	19207	8710736	.HUB,BODY.....		1		
				UOC:136,694				
11	PAOZZ	19207	706771	.CUP,TAPERED ROLLER.....		1		
12	XDOZZ	21450	537807	NUT,CAP RIGHT OUTER WHEEL.....		6		
12	XDOZZ	21450	537808	NUT,CAP LEFT OUTER WHEEL.....		6		
13	XDOZZ	21450	537811	NUT,CAP RIGHT INNER WHEEL.....		6		
13	XDOZZ	21450	537812	NUT,CAP LEFT INNER WHEEL.....		6		
14	PAOZZ	96906	MS51968-11	NUT,PLAIN,HEXAGON BRAKE DRUM.....		20		
15	PAOZZ	96906	MS35338-47	WASHER,LOCK.....		20		
16	PAOZZ	78500	1107F84	COVER,ACCESS.....		2		
17	PAOZZ	96906	MS51946-5	BOLT,RIBBED SHOULDE LEFT WHEEL.....		6		
				UOC:686				
17	PAOZZ	96906	MS51946-6	BOLT,RIBBED SHOULDE RIGHT WHEEL....		6		
18	PAOZZ	08162	BT3994	CONE AND ROLLERS,TA.....		2		
19	PAOZZ	78500	1229D862	WASHER,KEY.....		2		
20	PAOZZ	19207	7521633	NUT,PLAIN,OCTAGON.....		4		
21	PAOZZ	19207	7521650	WASHER,KEY.....		2		
22	PAOZZ	19207	7521787	GASKET.....		2		
				UOC:686				
22	PAOZZ	19207	8710743	GASKET.....		2		
				UOC:136,694				
23	PAOZZ	19207	8710744	COVER,ACCESS.....		2		
				UOC:136,694				
23	PAOZZ	78500	3262H86	CAP,GREASE.....		2		
				UOC:686				
24	PAOZZ	24617	187130	WASHER,LOCK.....		16		
				UOC:686				
24	PAOZZ	80045	23MS35338-45	WASHER,LOCK.....		12		

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
25	PAQZZ	96906	MS18154-113	UOC:136,694 SCREW,CAP,HEXAGON H.....	16
25	PAQZZ	96906	MS90728-29	UOC:686 BOLT,MACHINE.....	12
26	PAQZZ	96906	MS53045-3	UOC:136,694 RING,SIDE,AUTOMOTIV.....	4

END OF FIGURE

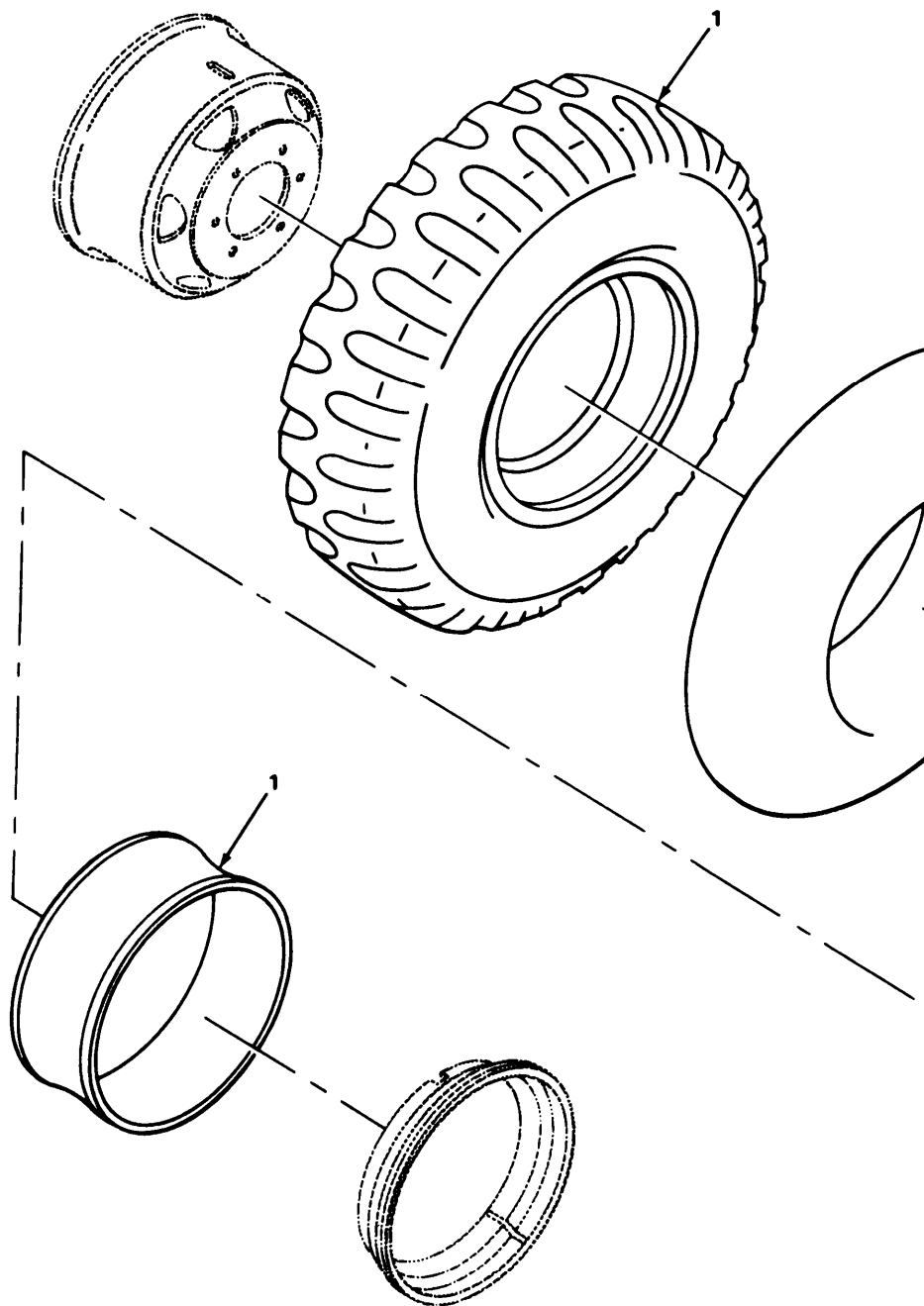


FIGURE 28. TIRE AND TUBE.

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER		

DESCRIPTION AND USABLE ON CODES(UOC) QTY

GROUP 1313 TIRES, TUBES, TIRE CHAINS

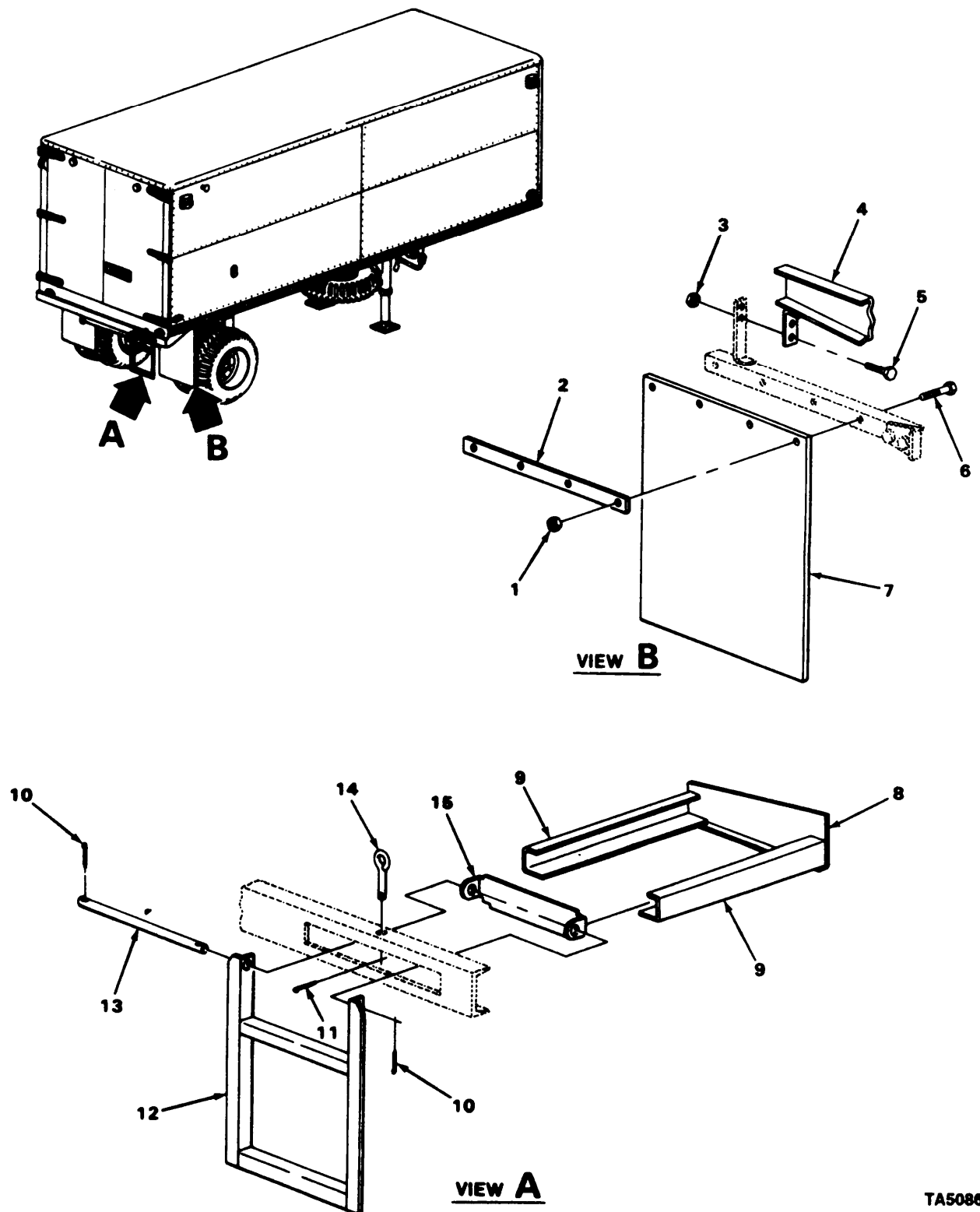
FIG. 28 TIRE AND TUBE

1	PAFFF	81348	ZZ-T-381M/GROUP3	TIRE,PNEUMATIC.....	5
			/9.00-20/D/TBCC		
2	PAOZZ	24617	2289994	INNER TUBE,PNEUMATI.....	4
3	PAOZZ	96906	MS51358-4	VALVE,PNEUMATIC TIR.....	4
4	PAOZZ	51665	US48	CAP,PNEUMATIC VALVE.....	4

END OF FIGURE

SECTION II			TM	9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)	
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY
GROUP 15 FRAME TOWING ATTCHMENTS, DRAWBARS, AND ARTICULATION SYSTEMS						
GROUP 1501 FRAME ASSEMBLY						
FIG. 29 SPLASHGUARDS AND REAR LADDER (M118A1)						
1	PAOZZ	96906	MS51922-1	NUT, SELF-LOCKING, HE.....		8
				UOC:694		
2	XBOZZ	19207	11597663	BRACKET.....		2
				UOC:694		
3	PAOZZ	96906	MS90725-34	BCLT, MACHINE.....		8
				UOC:694		
4	PAOZZ	96906	MS90728-8	SCREW,CAP,HEXAGON H.....		8
				UOC:694		
5	PAOZZ	96906	MS51331-6	GUARD,SPLASH,VEHICU.....		2
				UOC:694		
6	XBOZZ	19207	8722139-1	RETAINER.....		2
				UOC:694		
7	PAOZZ	96906	MS51922-9	NUT, SELF-LOCKING, HE.....		8
				UOC:694		
8	PAOZZ	96906	MS90728-7	SCREW,CAP,HEXAGON H.....		1
				UOC:694		
9	XDOZZ	19207	8365208	LATCH.....		1
				UOC:694		
10	PAOZZ	96906	MS27183-10	WASHER,FLAT.....		1
				UOC:694		
11	PAOZZ	96906	MS35338-44	WASHER,LOCK.....		1
				UOC:694		
12	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON.....		1
				UOC:694		
13	XDOZZ	19207	11625195-1	TRACK,LADDER.....		1
				UOC:694		
14	XDOZZ	19207	8365207	SUPPORT,TRACK.....		1
				UOC:694		
15	XDOZZ	19207	11625195-2	TRACK,LADDER.....		1
				UOC:694		
16	XBOZZ	19207	11625190	LADDER ASSEMBLY.....		1
				UOC:694		

END OF FIGURE

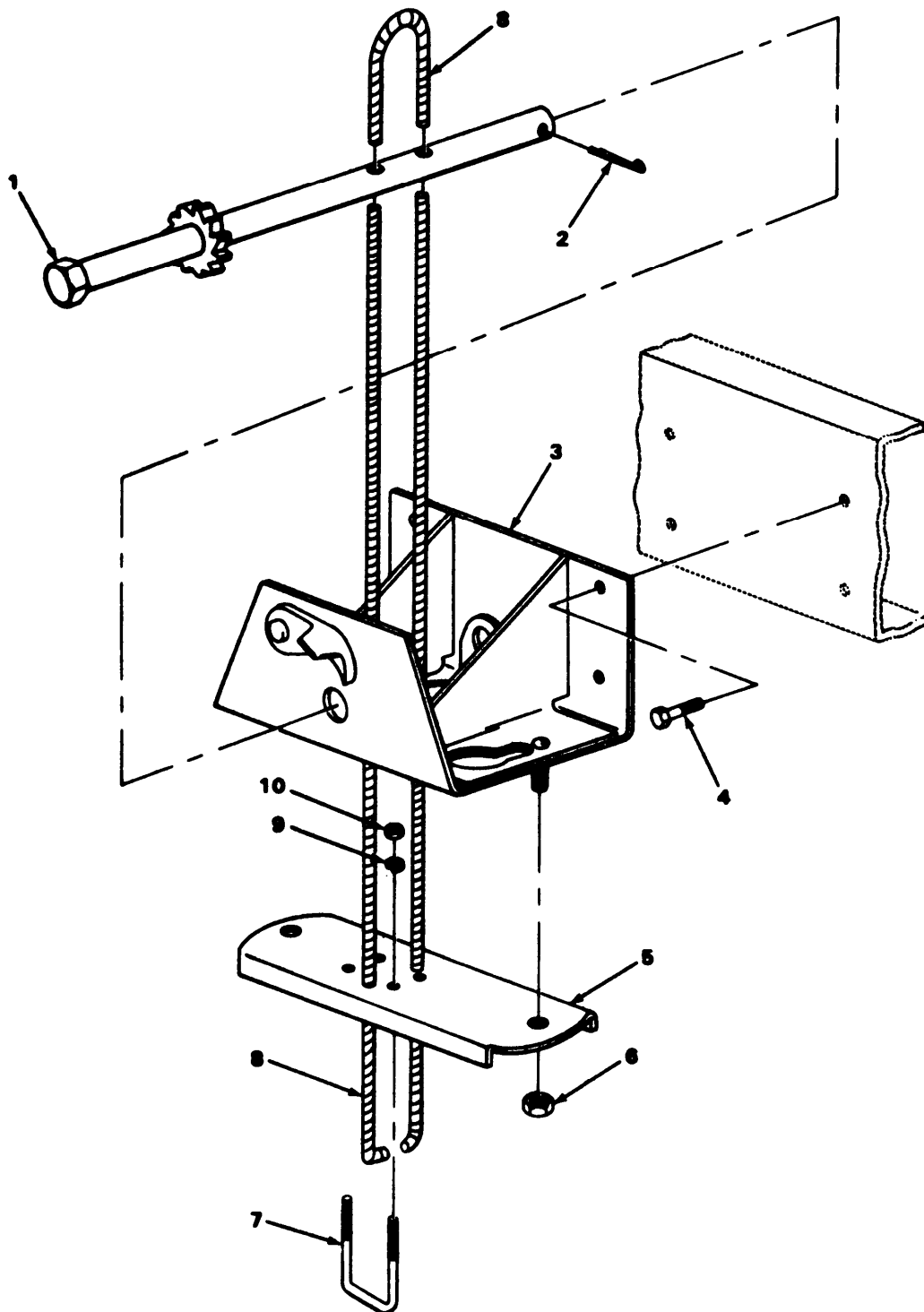


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FIGURE 30. SPLASHGUARDS AND REAR LADDER (M119A1 AND M119).

SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)		(5)	(6)
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND	USABLE ON	CODES(UOC) QTY
GROUP 1501 FRAME ASSEMBLY						
FIG. 30 SPLASHGUARDS AND REAR LADDER (M119A1 AND M119)						
1	PAOZZ	96906	MS51922-9	NUT,SELF-LOCKING,HE.....		8
				UOC:136,686		
2	XDOZZ	19207	8722139-1	RETAINER.....		2
				UOC:136,686		
3	PAOZZ	96906	MS51922-1	NUT,SELF-LOCKING,HE.....		8
				UOC:136,686		
4	XBOZZ	19207	11597663	BRACKET.....		2
				UOC:136,686		
5	PAOZZ	96906	MS90728-8	SCREW,CAP,HEXAGON H.....		8
				UOC:136,686		
6	PAOZZ	96906	MS90725-34	BOLT,MACHINE.....		8
				UOC:136,686		
7	PAOZZ	96906	MS51331-6	GUARD,SPLASH,VEHICU.....		2
				UOC:136,686		
8	XDOZZ	19207	8343745	SUPPORT.....		1
				UOC:136,686		
9	XDOZZ	19207	8343744	TRACK.....		2
				UOC:136,686		
10	PAOZZ	96906	MS24665-287	PIN,COTTER.....		2
				UOC:136,686		
11	PAOZZ	96906	MS24665-353	PIN,COTTER.....		1
				UOC:136,686		
12	XDOZZ	19207	8343738	LADDER,VEHICLE BOAR.....		1
				UOC:136,686		
13	XBOZZ	19207	8343743	PIN.....		1
				UOC:136,686		
14	XDOZZ	19207	8343747	PIN.....		1
				UOC:136,686		
15	PAOZZ	19207	8343742	BRACKET,VEHICULAR C.....		1
				UOC:136,686		

END OF FIGURE

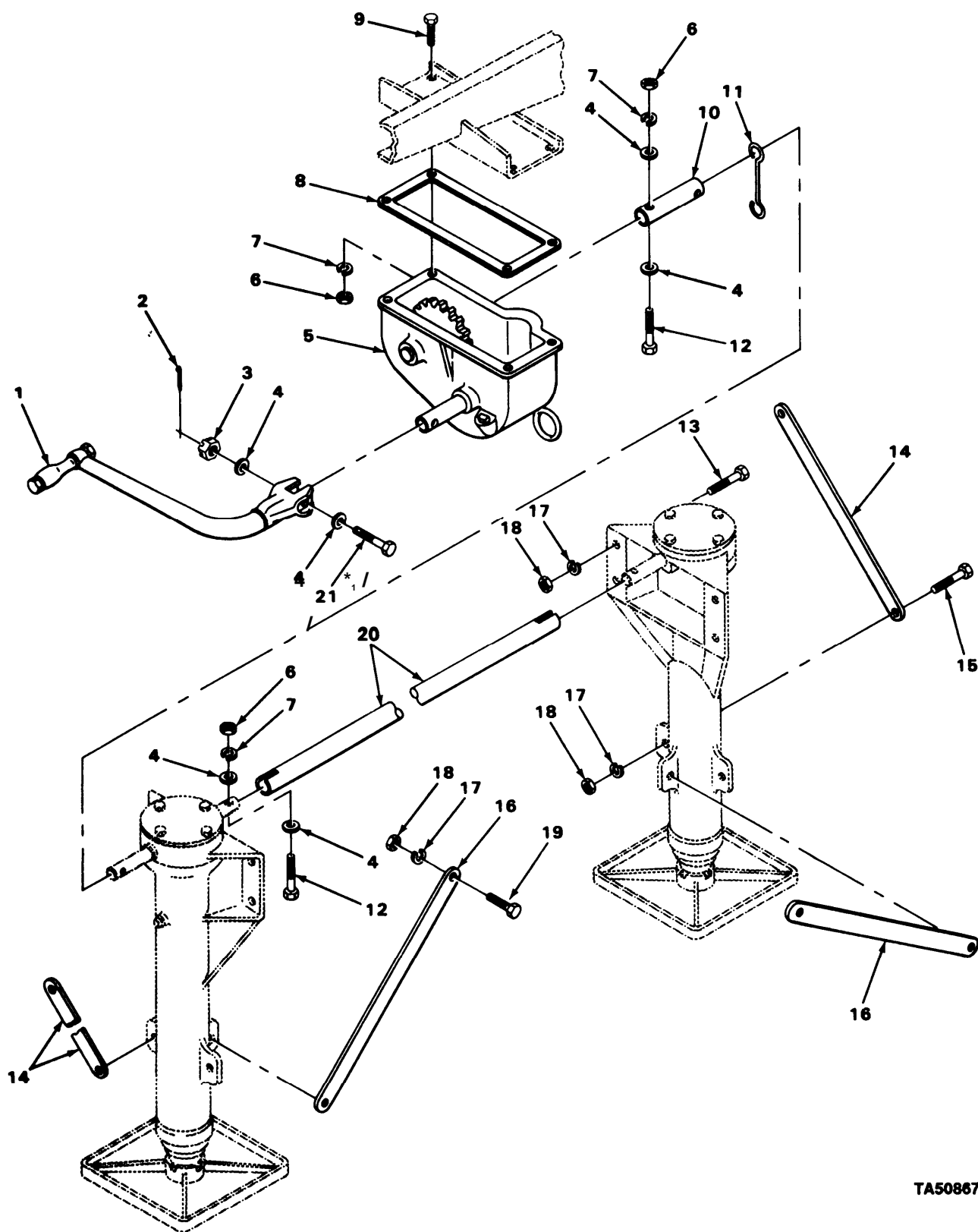


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FIGURE 31. SPARE WHEEL AND TIRE CARRIER.

SECTION II			TM9-2330-210-14&PC01					
(1)	(2)	(3)	(4)	(5)			(6)	
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION	AND	USABLE ON	CODES(UOC)	QTY
				GROUP 1504	SPARE WHEEL	CARRIER AND		
				TIRE LOCK				
				FIG. 31 SPARE WHEEL AND TIRE CARRIER				
1	PAOZZ	81216	54-43	SHAFT AND RATCHET A.....				1
2	PAOZZ	96906	MS24665-498	PIN,CCTTER.....				1
3	XDOZZ	19207	7369068	BODY.....				1
4	PAOZZ	96906	MS18154-113	SCREW,CAP,HEXAGON H.....				4
5	XDOZZ	80205	NAS54055-2	PLATE.....				1
6	PAOZZ	19207	7418892	NUT,PLAIN,HEXAGON.....				2
7	PAOZZ	19207	7739666	BOLT,U.....				2
8	MOOZZ	19207	22-C-2020-1	WIRE ROPE MAKE FROM WIRE P/N 22-C-2020 (80205).....				1
9	PAOZZ	96906	MS35338-46	WASHER,LOCK.....				4
10	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON.....				4

END OF FIGURE

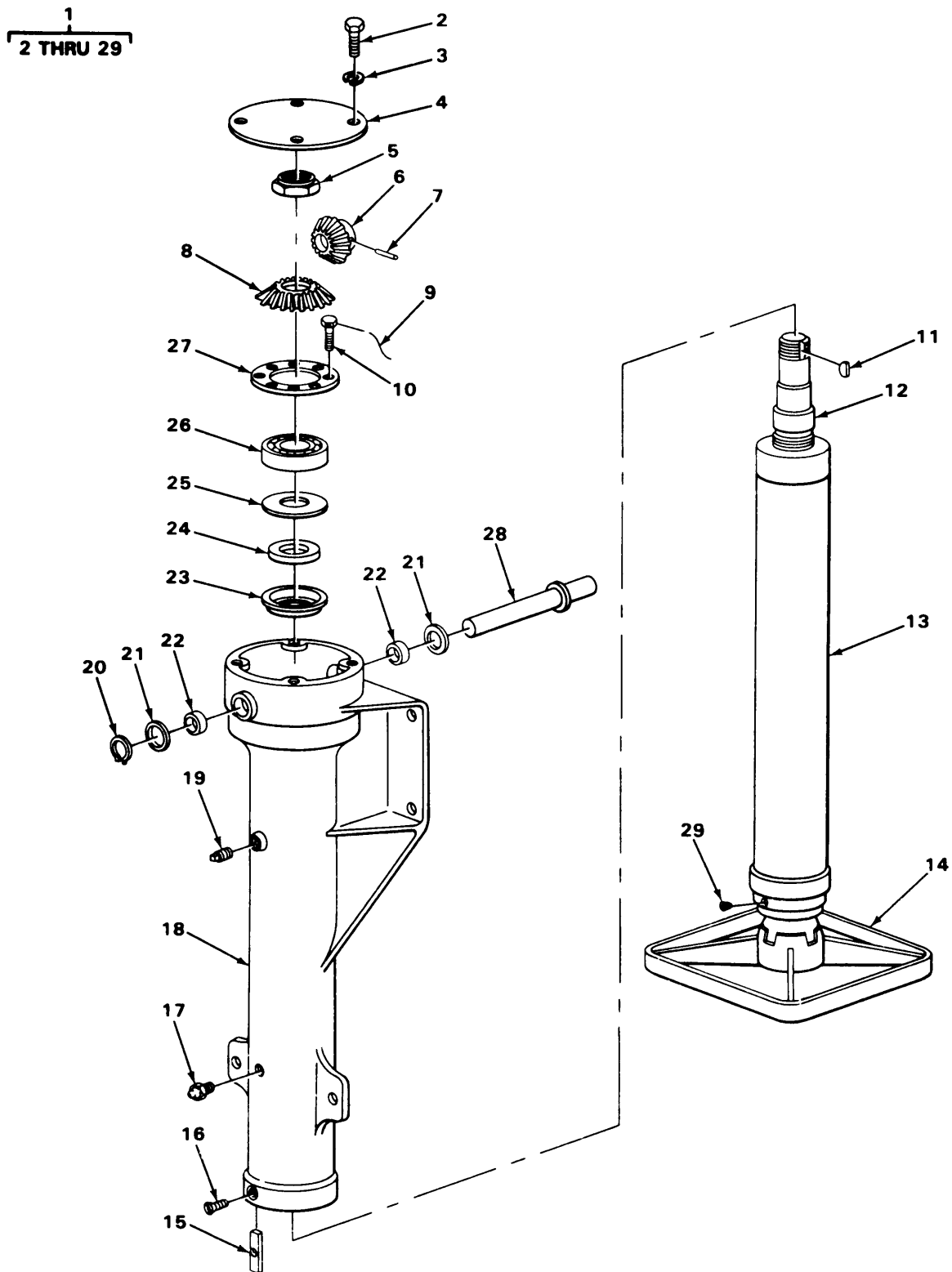


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FIGURE 32. LANDING GEAR AND CONTROLS (M119).

SECTION II			TM9-2330-210-146PC01						(6)
(1)	(2)	(3)	(4)	(5)					
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY
				GROUP 1507	LANDING	GEAR,	LEVELING		
				JACKS					
				FIG. 32	LANDING	GEAR	AND	CONTROLS	
				(M119)					
1	PAFZZ	60528	5A18-9	CRANK,HAND.....					1
				UOC:686					
2	PAFZZ	96906	MS24665-2 85	PIN,COTTER.....					1
				UOC:686					
3	PAFZZ	96906	MS35692-37	NUT,PLAIN,SLOTTED,H.....					1
				UOC:686					
4	PAFZZ	96906	MS27183-14	WASHER,FLAT.....					10
				UOC:686					
5	XDFZZ	19207	8343551	GEAR BOX ASSEMBLY.....					1
				UOC:686					
6	PAFZZ	96906	MS51968-8	NUT,PLAIN,HEXAGON.....					8
				UOC:686					
7	PAFZZ	96906	MS35338-8	WASHER,LOCK.....					8
				UOC:686					
8	PAFZZ	19207	8331183	GASKET.....					1
				UOC:686					
9	PAFZZ	96906	MS90726-60	SCREW,CAP,HEXAGON H.....					4
				UOC:686					
10	XDFZZ	19207	8327332	COUPLING,GEAR SHAFT.....					1
				UOC:686					
11	PAFZZ	19207	8327337	EYE HOOK.....					1
				UOC:686					
12	PAFZZ	96906	MS90728-66	SCREW,CAP,HEXAGON H.....					4
				UOC:686					
13	PAFZZ	96906	MS90727-162	SCREW,CAP,HEXAGON H.....					8
				UOC:686					
14	XDFZZ	19207	8327329	BRACE,FRAME BRACKET.....					2
				UOC:686					
15	PAFZZ	96906	MS90727-164	SCREW,CAP,HEXAGON H.....					4
				UOC:686					
16	XDFZZ	19207	8327358	BRACE,PROP.....					2
				UOC:686					
17	PAFZZ	12603	23E10	WASHER,LOCK.....					16
				UOC:686					
18	PAFZZ	96906	MS51968-20	NUT,PLAIN,HEXAGON.....					16
				UOC:686					
19	PAFZZ	96906	MS90727-163	SCREW,CAP,HEXAGON H.....					4
				UOC:686					
20	XDFZZ	19207	8343550	SHAFT,GEAR CONNECT I.....					1
				UOC:686					
21	PAFZZ	19207	8343452	SCREW,CAP,HEXAGON H.....					1
				UOC:686					

END OF FIGURE



TA508677

FIGURE 33. LANDING GEAR ASSEMBLY (M119)

SECTION II			TM9-2330-210-14&PC01						(6)
(1)	(2)	{3)	(4)	(5)				(6)	
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC) QTY	
				GROUP 1507	LANDING	GEARS	LEVELING		
				JACKS					
				FIG. 33	LANDING	GEAR	ASSEMBLY	(M119)	
1	PFFFF	19207	8343590	GEAR, LANDING ASSY 6 LEFT.....				1	
				UOC:686					
1	PFFFF	60528	4A5-33	LEG, SEMITRAILER RET RIGHT.....				1	
				UOC:686					
2	PAFZZ	96906	MS35207-261	.SCREW, MACHINE.....				4	
				UOC:686					
3	PAFZZ	96906	MS35338-43	.WASHER, LOCK.....				4	
				UOC:686					
4	PAFZZ	19207	8327333	.COVER, ACCESS.....				1	
				UOC:686					
5	PAFZZ	80205	NAS1022N17	.NUT, SELF-LOCKING, HE.....				1	
				UOC:686					
6	PAFZZ	19207	8343597	.GEAR, BEVEL.....				1	
				UOC:686					
7	PAFZZ	21450	142534	.PIN, GROOVED, HEADLES.....				1	
				UOC:686					
8	PAFZZ	19207	8327336	.GEAR, BEVEL.....				1	
				UOC:686					
9	MFFZZ	19207	22-W-1633-160-1	.WIRE, LOCKING MAKE FROM WIRE P/N				1	
				22-W-1633-160 (19207).....					
				UOC:686					
10	PFFZZ	96906	MS18153-113	.SCREW, CAP, HEXAGON H.....				8	
				UOC:686					
11	PAFZZ	96906	MS35756-15	.KEY, WOODRUFF.....				1	
				UOC:686					
12	XAFZZ	19207	8343599	.JACK SCREW.....				1	
				UOC:686					
13	XAFZZ	19207	8327338	.INNER LEG.....				1	
				UOC:686					
14	XAFZZ	29198	D1845	.SHOE, JACK SUPPORT.....				1	
				UOC:686					
15	PFFZZ	23705	333561	.BEARING, SLEEVE.....				1	
				UOC:686					
16	PAFZZ	96906	MS35190-288	.SCREW, MACHINE.....				1	
				UOC:686					
17	PAOZZ	96906	MS15003-1	.FITTING, LUBRICATION.....				1	
				UOC:686					
18	XDFZZ	19207	8343591	.OUTER LEG.....				1	
				UOC:686					
19	PAFZZ	73992	42	.COUPLING HALF, QUICK.....				1	
				UOC:686					
20	XDFZZ	19207	7954295	.RING, RETAINING.....				1	
				UOC:686					
21	XDFZZ	19207	8343595	.WASHER, FLAT.....				2	
				UOC:686					
22	PAFZZ	21450	542041	.BUSHING, SLEEVE.....				2	
				UOC:686					

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC} QTY
23	PAFZZ	19207	8343601	.WASHER, RECESSED..... UOC:686	1
24	XDFZZ	19207	8343598	.FELT, MECHANICAL, PRE..... UOC:686	1
25	XDFZZ	19207	8343600	.WASHER, FELT RETAINI..... UOC:686	1
26	XDFZZ	21450	700368	.BEARING, BALL, ANMULA..... UOC:686	1
27	XDFZZ	19207	8343602	.PLATE, RETAINER, BEAR..... UOC:686	1
28	XDFZZ	19207	8327357	.SHAFT ASSEMBLY, GEAR..... UOC:686	1
29	PAFZZ	66640	9112001	.PLUG, PIPE..... UOC:686	1

END OF FIGURE

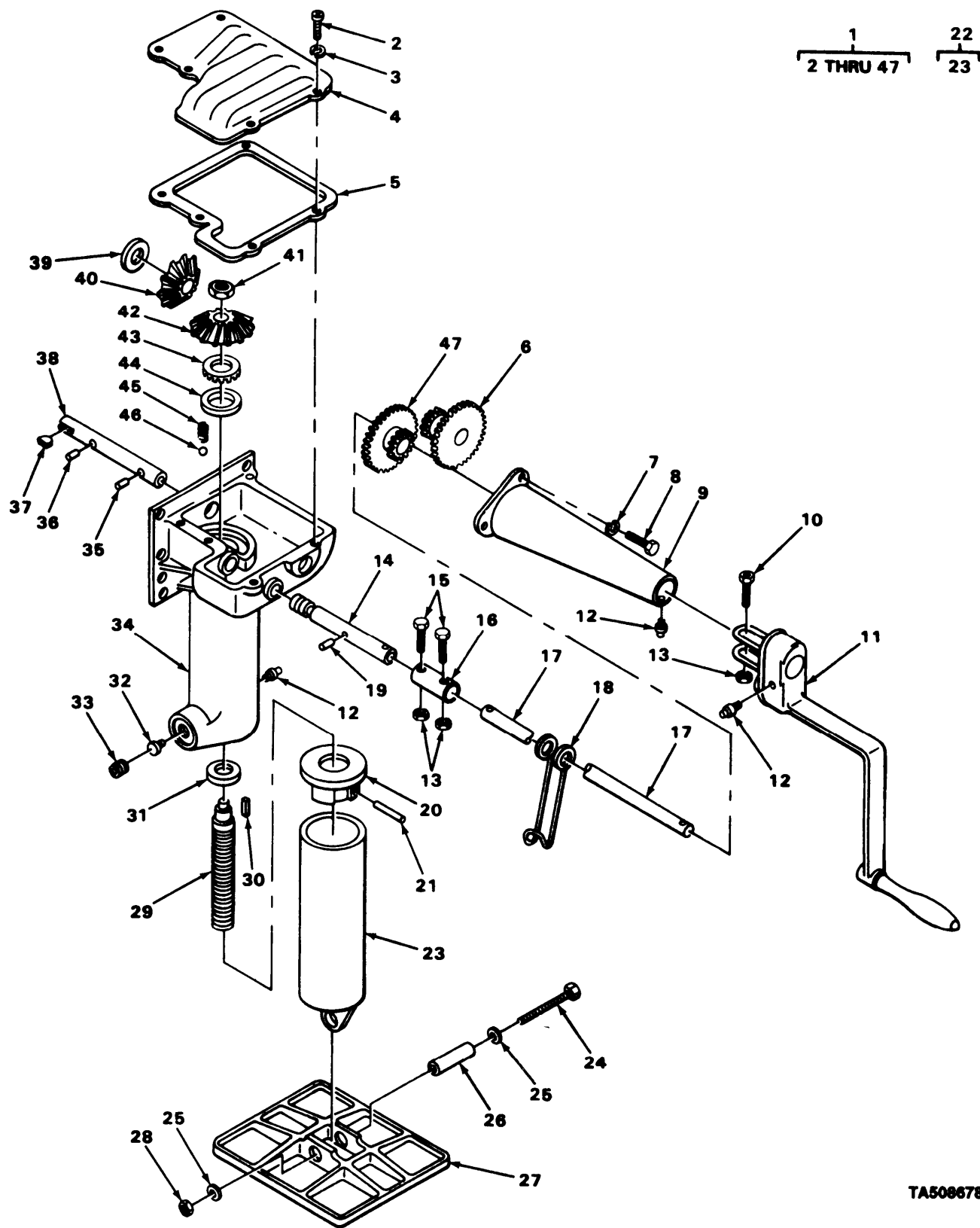


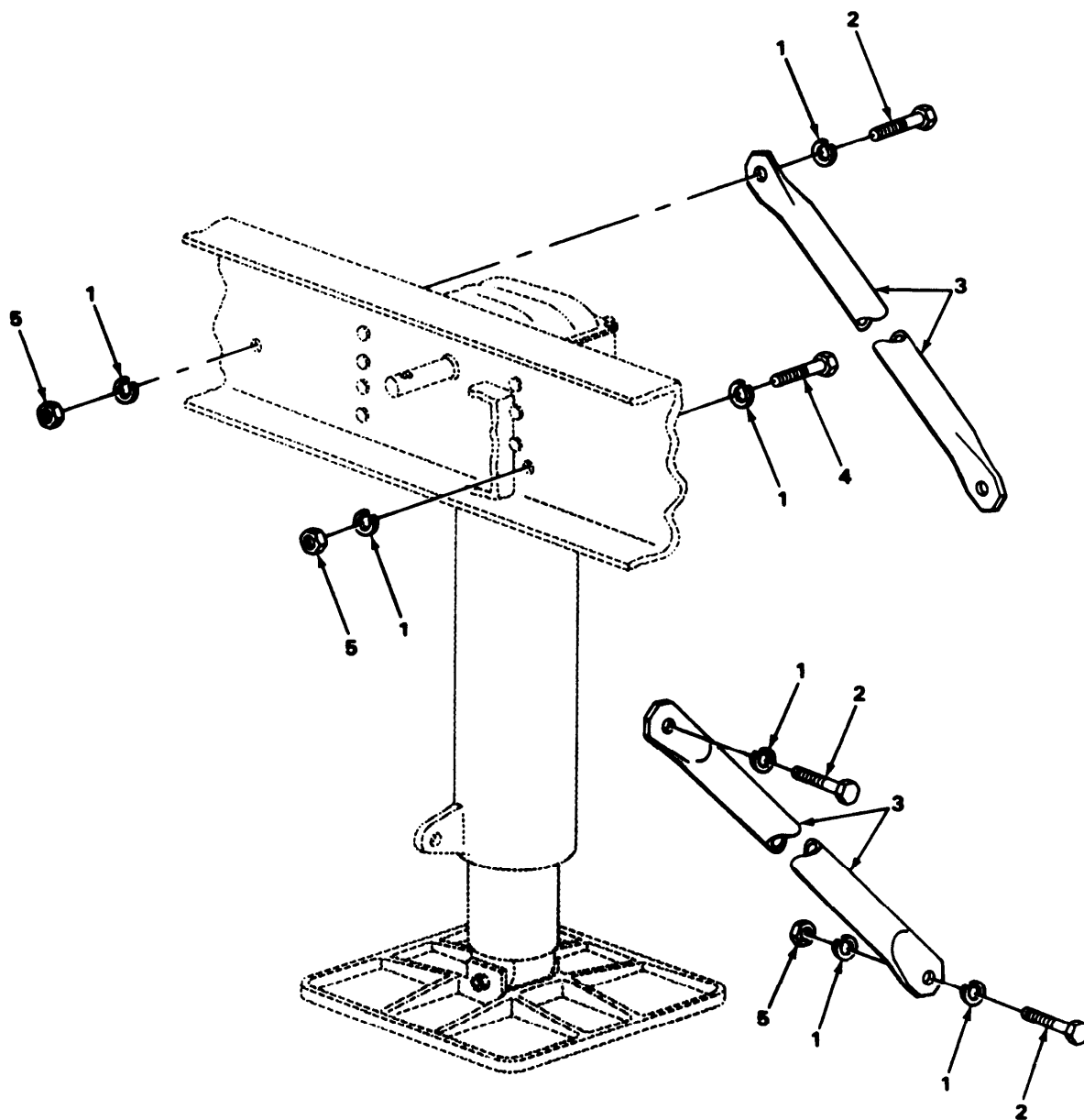
FIGURE 34. LANDING LEG (M119A1 AND M118A1).

SECTION II		TM9-2330-210-14&PC01									
(1)	(2)	(3)	(4)	(5)	(6)						
ITEM	SMR		PART								
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY		
				GROUP 1507	LANDING	GE4RS	LEVELING				
				JACKS							
				FIG. 34	LANDING	LEG					
				(M119A1)	AND	M118A1)					
1	PAFFF	19207	7341498	LEG,SEMITRAILER RET LEFT, PARTS					1		
				SAME AS LEG P/N 7341497 EXCEPT							
				WHERE NOTED.....							
				UOC:136,694							
1	PAFFF	19207	7341497	LEG,SEMITRAILER RET RIGHT.....					1		
				UOC:136,694							
2	PAFZZ	96906	MS35206-281	.SCREW,MACHINE.....					5		
				UOC:136,694							
3	PAFZZ	96906	MS35338-43	.WASHER,LOCK.....					5		
				UOC:136,694							
4	PAFZZ	19207	7974887	.COVER,ACCESS UE WITH P/N 7341497..					1		
				UOC:136,694							
4	PAFZZ	19207	7974886	.CCVER,ACCESS USE WITH P/N 7341498.					1		
				UOC:136,694							
5	PAFZZ	19207	7974884	.GASKET USE WITH P/N 7341498.....					1		
				UOC:136,694							
5	PAFZZ	80837	J3203G	.GASKET USE WITH P/N 7341497.....					1		
				UOC:136,694							
6	PAFZZ	19207	8376610	.GEAR CLUSTER.....					1		
				UOC:136,694							
7	PAFZZ	80045	23MS35338-10	.WASHER,LOCK.....					3		
				UOC:136,694							
8	PAFZZ	96906	MS90725-109	.SCREW,CAP,HEXAGON H.....					3		
				UOC:136,694							
9	XDFZZ	04632	J-1282	.BRACKET.....					1		
				UOC:136,694							
10	PAFZZ	96906	MS90728-66	.SCREW,CAP,HEXAGON H.....					1		
				UOC:136,694							
11	PAFZZ	80837	J3279	.CRANK ASSEMBLY,PARK.....					1		
				UOC:136,694							
12	PAOZZ	96906	MS15001-1	.FITTING,LUBRICATION.....					3		
				UOC:136,694							
13	XDFZZ	21450	451009	.NUT.....					3		
				UOC:136,694							
14	PFFZZ	80837	J3206	.SHAFT,STRAIGHT.....					1		
				UOC:136,694							
15	PAFZZ	96906	MS90728-65	.SCREW,CAP,HEXAGON H.....					2		
				UOC:136,694							
16	PFFZZ	80837	J318	.COUPLING,SHAFT,RIGI.....					1		
				UOC:136,694							
17	PAFZZ	80434	J-3293-1	.EXTENSION SHAFT.....					1		
				UOC:136,694							
18	PAFZZ	19207	8327337	.EYE HOOK.....					1		
				UOC:136,694							
19	XDFZZ	19207	8376671	.PIN.....					1		
				UOC:136,694							

SECTION II		TM9-2330-210-14&PC01							
(1)	(2)	(3)	(4)	(5)		(6)			
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY
20	XAFZZ	80837	J3265	.NUT,SLEEVE.....					1
				UOC:136,694					
21	PAFZZ	19207	8376596	.PIN,SHOULDER,HEADLE.....					1
				UOC:136,694					
22	PAFFF	19207	7341501	.LEG,SEMITRAILER RET.....					1
				UOC:136,694					
23	XAFZZ	04632	3269-13	..LEG.....					1
				UOC:136,694					
24	PAFZZ	96906	MS90728-125	.SCREW,CAP,HEXAGON H.....					1
				UOC:136,694					
25	PAFZZ	96906	MS27183-17	.WASHER,FLAT.....					2
				UOC:136,694					
26	PAFZZ	19207	7365938	.PIN,LANDING GEAR WH.....					1
				UOC:136,694					
27	PAFZZ	80837	J1386	.SHOE,JACK SUPPORT.....					1
				UOC:136,694					
28	PAFZZ	96906	MS35692-33	.NUT,PLAIN,SLOTTED,h.....					1
				UOC:136,694					
29	PFFZZ	19207	7045777	.SCREW.....					1
				UOC:136,694					
30	PAFZZ	80837	J3237	.KEY,MACHINE.....					1
				UOC:136,694					
31	PAFZZ	96906	MS17169-12	.BEARING,ROLLER,THRU.....					1
				UOC:136,694					
32	PAFZZ	80837	J-1276	.GIB,LEVELING.....					1
				UOC:136,694					
33	PAFZZ	80837	J1206A	.PLUG,MACHINE THREAD.....					1
				UOC:136,694					
34	XDFZZ	04632	J-3228-7-DR	.UPPER,LEG USE WITH P/N 7341497....					1
				UOC:136,694					
34	XDFZZ	19207	7341499	.UPPER LEG USE WITH P/N 7341498....					1
				UOC:136,694					
35	PAFZZ	96906	MS35671-64	.PIN,GROOVED,HEADLES.....					1
				UOC:136,694					
36	PAFZZ	96906	MS35671-55	.PIN,GROOVED,HEADLES.....					1
				UOC:136,694					
37	PFFZZ	96906	MS16998-31	.SCREW,CAP,SOCKET HE.....					1
				UOC:136,694					
38	PFFZZ	80837	J-3207-1	.SHAFT.....					1
				UOC:136,694					
39	PAFZZ	66640	27D252	.WASHER,FLAT.....					1
				UOC:136,694					
40	PAFZZ	80837	J344-1F	.GEAR,BEVEL.....					1
				UOC:136,694					
41	PAFZZ	19207	451091	.NUT,SELF-LOCKING,HE.....					1
				UOC:136,694					
42	PAFZZ	19207	8379855	.GEAR,BEVEL.....					1
				UOC:136,694					
43	XDFZZ	21450	705369	.CONE AND ROLLERS,TA.....					1
				UOC:136,694					
44	PAFZZ	65282	A10560X	.CUP,TAPERED ROLLER.....					1
				UOC:136,694					

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
45	PAFZZ	80837	J3205	.SPRING, HELICAL, COMP.....	1
				UOC:136,694	
46	PFFZZ	96906	MS19059-2419	.BALL, BEARING.....	1
				UOC:136,694	
47	PAFZZ	19207	8376611	.GEAR CLUSTER.....	1
				UOC:136,694	

END OF FIGURE



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FIGURE 35. LANDING GEAR STRUTS AND SUPPORTS (M119A1 AND M118A1).

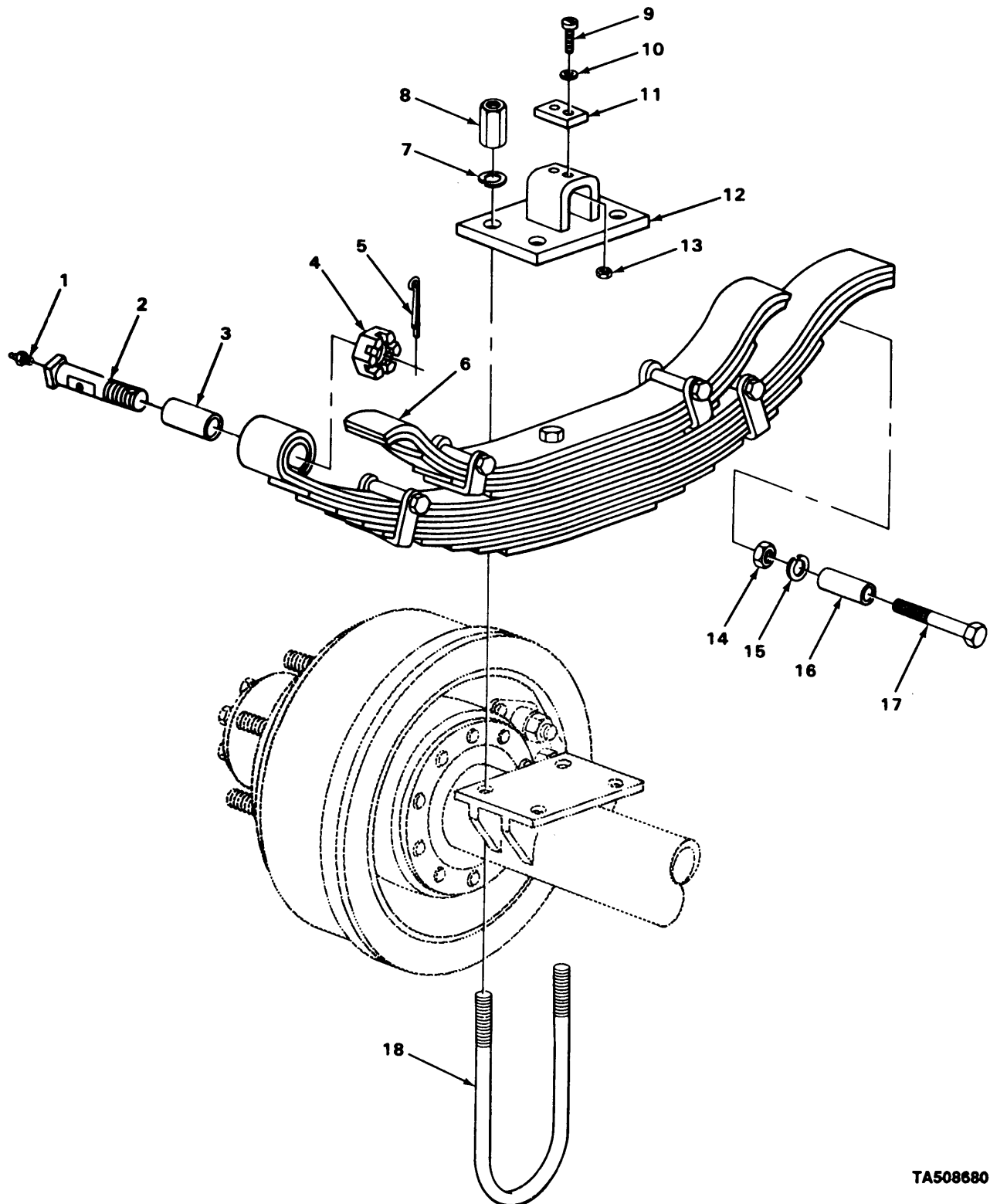
SECTION II			TM9-2330-210-14&PC01				
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	

GROUP 1507 LANCING GEAR, LEVELING JACKS

FIG. 35 LANDING GEAR STRUTS AND SUPPORTS (M119A1 AND M118A1)

1	PAFZZ	96906	MS27183-2	WASHER,FLAT.....		40
				UOC:136,694		
2	PAFZZ	96906	MS90728-164	SCREW,CAP,HEXAGON H.....		8
				UOC:136,694		
3	XDFZZ	19207	11625074	STRUT.....		4
				UOC:136,694		
4	PAFZZ	96906	MS90728-163	SCREW,CAP,HEXAGON H.....		12
				UOC:136,694		
5	PAFZZ	96906	MS51922-49	NUT,SELF-LOCKING,HE.....		20
				UOC:136,694		

END OF FIGURE

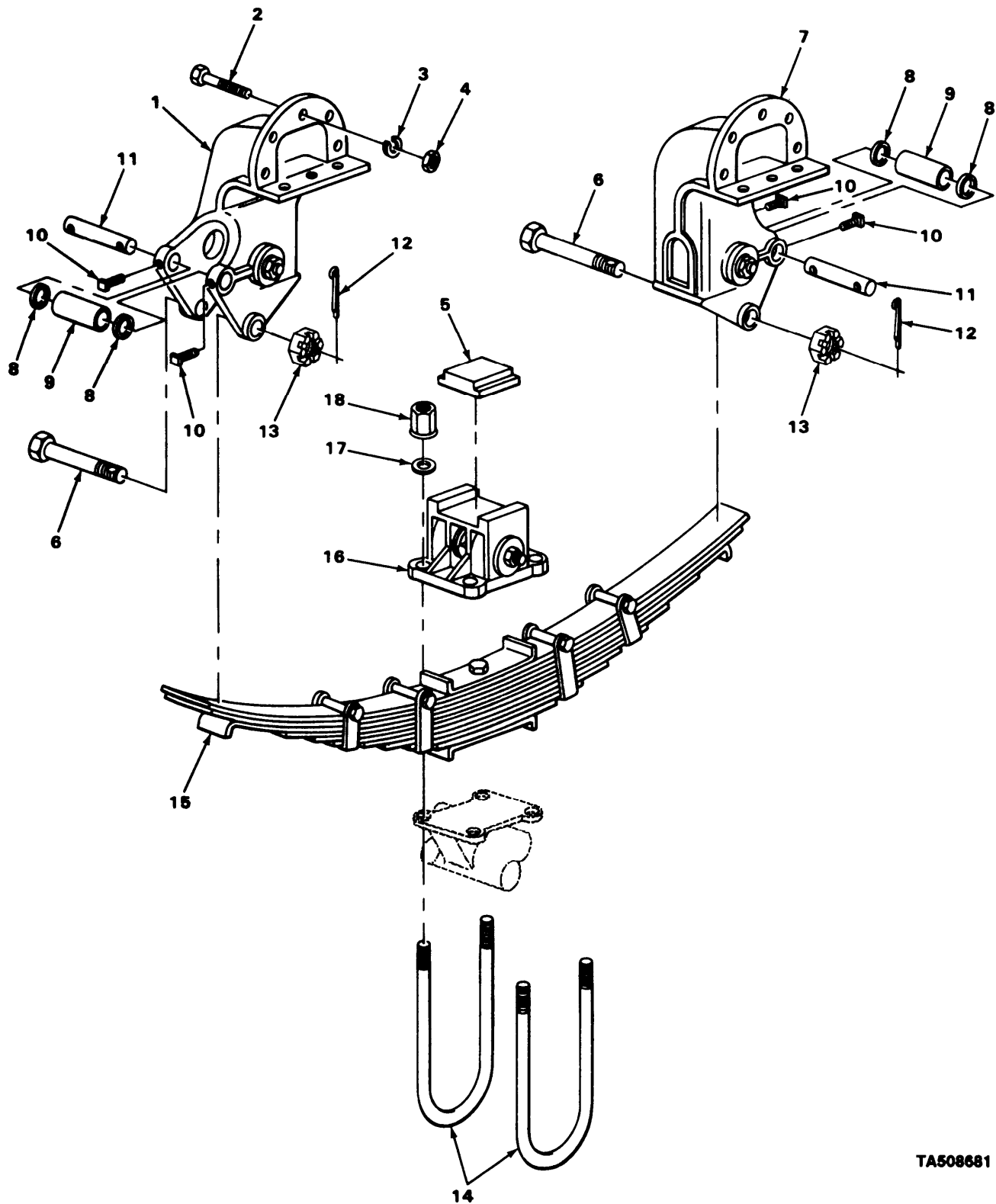


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FIGURE 36. SPRING ASSEMBLY (M119).

SECTION II			TM9-2330-210-14&PC01						(6)
(1)	(2)	(3)	(4)	(5)					(6)
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY			
GROUP 16 SPRINGS AND SHOCK ABSORBERS									
GROUP 1601 SPRINGS									
FIG. 36 SPRING ASSEMBLY (M1191									
1	PAOZZ	96906	MS15003-1	FITTING, LUBRICATION.....	UOC:686				
2	PFFZZ	19207	8327359	BOLT, FLUID PASSAGE.....	UOC:686				
3	XDFZZ	19207	8343478	BEARING, SLEEVE.....	UOC:686				
4	PAFZZ	96906	MS35692-77	NUT, PLAIN, SLOTTED, H.....	UOC:686				
5	PAFZZ	96906	MS24665-360	PIN, CUTTER.....	UOC:686				
6	PFFZZ	19207	8327365	SPRING ASSEMBLY, LEA.....	UOC:686				
7	PAFZZ	96906	MS35338-52	WASHER, LOCK.....	UOC:686				
8	PAFZZ	19207	8327364	NUT, PLAIN, HEXAGON.....	UOC:686				
9	PAFZZ	96906	MS35207-283	SCREW, MACHINE.....	UOC:686				
10	PAFZZ	96906	MS27183-11	WASHER, FLAT.....	UOC:686				
11	PAFZZ	19207	8343444	PAD, CUSHIONING.....	UOC:686				
12	PAFZZ	19207	8327361	PLATE, MOUNTING.....	UOC:686				
13	PAFZZ	96906	MS51922-5	NUT, SELF-LOCKING, HE.....	UOC:686				
14	PAFZZ	96906	MS51968-20	NUT, PLAIN, HEXAGON.....	UOC:686				
15	PAFZZ	12603	23E10	WASHER, LOCK.....	UOC:686				
16	PAFZZ	19207	8327360	SPACER, SLEEVE.....	UOC:686				
17	PAFZZ	96906	MS90727-175	SCREW, CAP, HEXAGON H.....	UOC:686				
18	PAFZZ	19207	8327362	BOLT, U.....	UOC:686				

END OF FIGURE

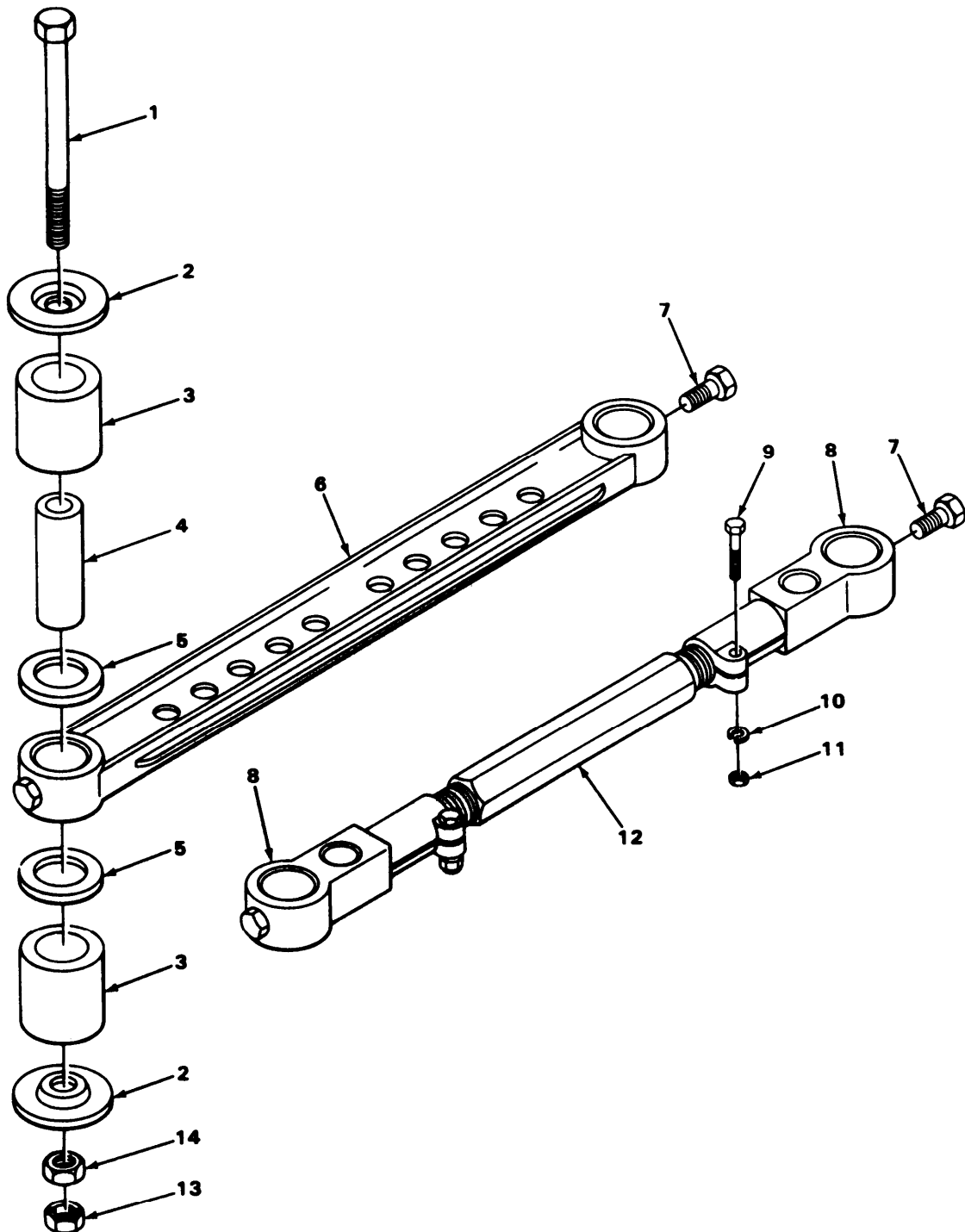


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FIGURE 37. SPRING ASSEMBLY (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)		
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE ON CODES{UOCB
				GROUP 1601	SPRINGS	
				FIG. 37 SPRING ASSEMBLY (M119A1 AND M118A1)		
1	XDFZZ	19207	8758001	BRACKET.....		2
				UOC:136,694		
2	PAFZZ	96906	MS90726-113	SCREW,CAP,HEXAGON H.....		32
				UOC:136,694		
3	PAFZZ	96906	MS35338-67	WASHER,LOCK.....		32
				UOC:136		
4	PFFZZ	96906	MS51943-40	NUT,SELF-LOCKING,HE.....		32
				UOC:136,694		
5	PAFZZ	19207	7974918	BUMPER,NONMETALLIC.....		2
				UOC:136,694		
6	PAFZZ	19207	8742683	BOLT,MACHINE.....		4
				UOC:136,694		
7	PFFZZ	19207	8737000	HOLDER,SPRING.....		2
				UOC:136,694		
8	PFFZZ	19207	7974921	WASHER,FLAT.....		8
				UOC:136,694		
9	PAFZZ	23705	333561	BEARING,SLEEVE.....		4
				UOC:136,694		
10	XDFZZ	21450	102950	SETSCREW.....		8
				UOC:136,694		
11	PAFZZ	19207	7974919	PIN,STRAIGHT,HEADLE.....		4
				UOC:136,694		
12	PAFZZ	96906	MS24665-357	PIN,COTTER.....		4
				UOC:136,694		
13	PAFZZ	96906	MS51922-49	NUT,SELF-LOCKING,HE.....		4
				UOC:136,694		
14	PFFZZ	19207	8742862	BOLT,U.....		4
				UOC:136,694		
15	PAFFF	23705	336837	SPRING ASSEMBLY,LEA.....		2
				UOC:136,694		
16	XDFZZ	19207	8742682	BRACKET,MOUNTING.....		2
				UOC:136,694		
17	PAFZZ	96906	MS27183-23	WASHER,FLAT.....		8
				UOC:136,694		
18	PAFZZ	19207	7979366	NUT,PLAIN,HEXAGON.....		8
				UOC:136,694		

END OF FIGURE

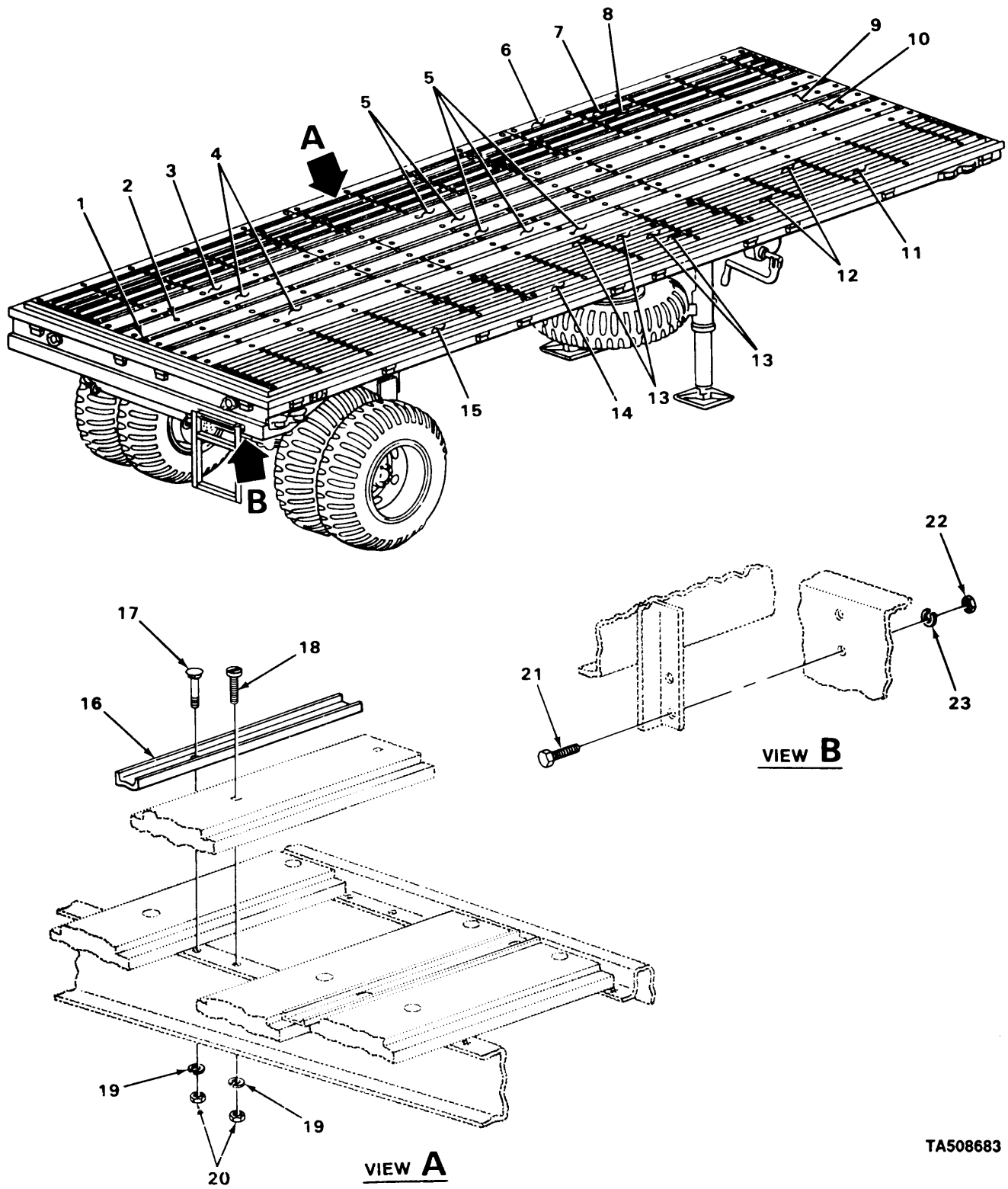


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FIGURE 38. SUSPENSION ASSEMBLY (M119A1 AND M118A1).

SECTION II			TM9-2330-210-14&PC01		(5)		(6)
(1)	(2)	(3)	(4)				
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON CODES(UOC) QTY
				GROUP 1605	TORQUE,	RADIUS,	AND
				STABILIZER	RODS		
				FIG. 38 SUSPENSION ASSEMBLY			
				(M119A1 AND M118A1)			
1	PAFZZ	96906	MS90727-178	SCREW,CAP,HEXAGON H.....			4
				UOC:136,694			
2	PAFZZ	19207	7349028	WASHER,SHOULDERED.....			8
				UOC:136,694			
3	PAFZZ	23705	563400	BUSHING,RUBBER.....			8
				UOC:136,694			
4	PAFZZ	19207	7974917	SPACER,SLEEVE.....			4
				UOC:136,694			
5	PAFZZ	19207	7349029	WASHER,FLAT.....			8
				UOC:136,694			
6	PAFZZ	19207	7520513	ROD RADIUS ASY.....			1
				UOC:136,694			
7	PAFZZ	12204	929721	SETSCREW.....			4
				UOC:136,694			
8	PAFZZ	19207	7707070	ROD,ALIGNING,VEHICU.....			1
				UOC:136,694			
9	PAFZZ	96906	MS90727-116	SCREW,CAP,HEXAGON H.....			2
				UOC:136,694			
10	PAFZZ	80045	23MS35338-10	WASHER,LOCK.....			2
				UOC:136,694			
11	PAFZZ	96906	MS51968-14	.NUT,PLAIN,HEXAGON.....			2
				UOC:136,694			
12	XDFZZ	19207	1713772	SPACER RADIUS ROD.....			1
				UOC:136,694			
13	PAFZZ	96906	MS27151-28	NUT,STAMPED.....			4
				UOC:136,694			
14	PAFZZ	96906	MS51968-20	NUT,PLAIN,HEXAGON.....			4
				UOC:136,694			

END OF FIGURE



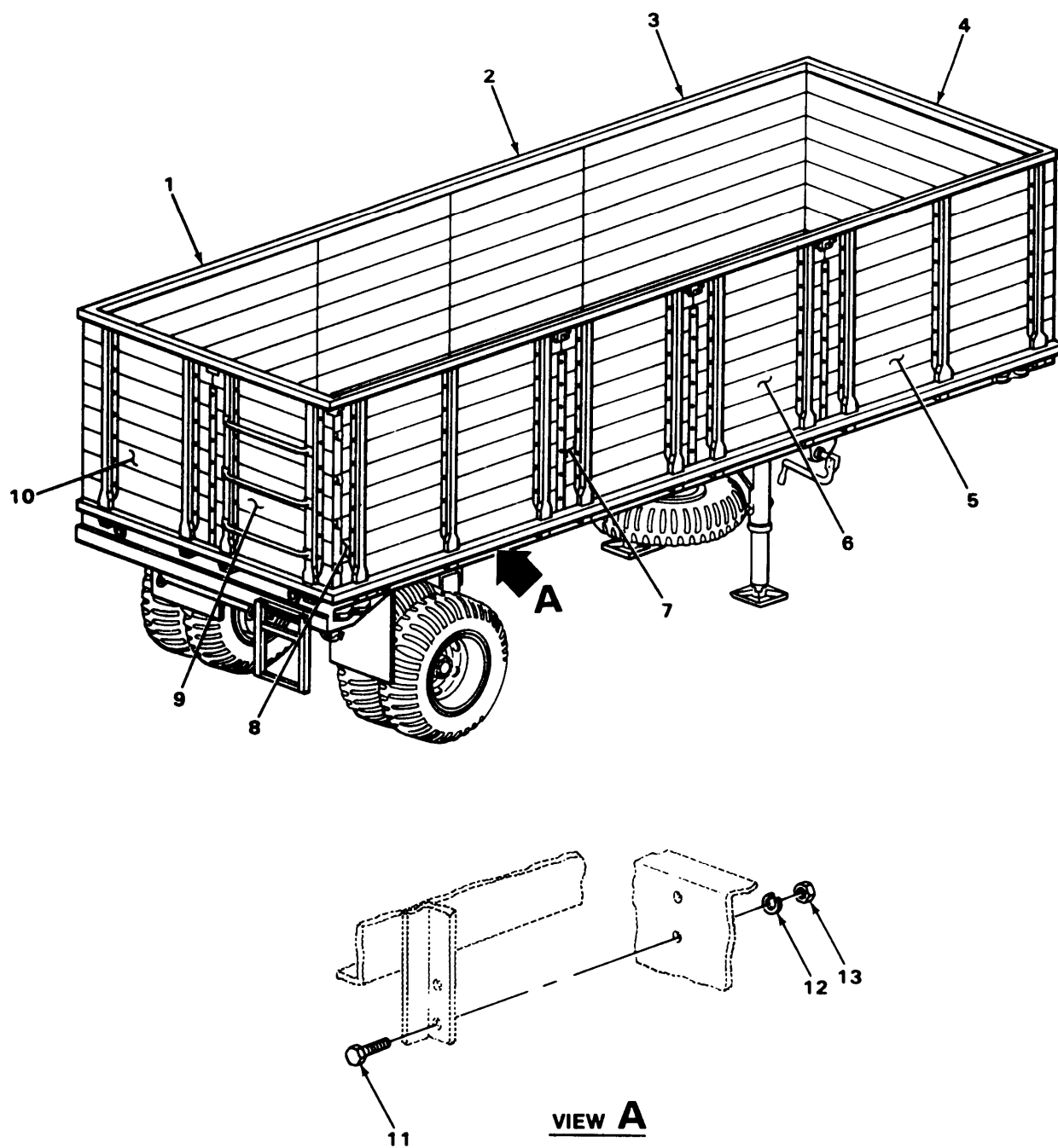
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FIGURE 39. FLOORBOARDS (M119A1 AND M119).

SECTION II			TM9-2330-210-14&PC01				
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	
GROUP 18 BODY, CAB, HOOD, AND HULL							
GROUP 1805 FLOORS, SUBFLOOR, AND RELATED COMPONENTS							
FIG. 39 FLOORBOARDS (M119A1 AND M119)							
1	XDOZZ	2145C	175631	SCREW,TAPPING,SLOTT.....		20	
				UOC:136,686			
2	XDOZZ	21450	455226	SCREW,TAPPING,SLOTT.....		15	
				UOC:136,686			
3	MOOZZ	19207	8343759-77	BOARD,FLOOR MAKE FROM BOARD P/N 8343759 (19207).....		3	
				UOC:136,686			
4	MOOZZ	19207	8343761-97	BOARD,FLOOR MAKE FROM BOARD P/N 8343761 (19207).....		2	
				UOC:136,686			
5	MOOZZ	19207	8343758-80	BOARD,FLOOR MAKE FROM BOARD P/N 8343758 (19207).....		5	
				UOC:136,686			
6	MOOZZ	19207	8343751-97	BOARD,FLOOR MAKE FROM BOARD P/N 8343751 (19207).....		2	
				UOC:136,686			
7	MOOZZ	19207	8343754-77	BOARD,FLOOR MAKE FROM BOARD P/N 8343754 (19207).....		4	
				UOC:136,686			
8	MOOZZ	19207	8343756-97	BOARD,FLOOR MAKE FROM BOARD P/N 8343756 (19207).....		4	
				UOC:136,686			
9	MOOZZ	19207	8343760-86	BOARD,FLOOR MAKE FROM BOARD P/N 8343760 (19207).....		2	
				UOC:136,686			
10	MOOZZ	19207	8343757-106	BOARD,FLOOR MAKE FROM BOARD P/N 8343757 (19207).....		3	
				UOC:136,686			
11	MOOZZ	19207	8343752-106	BOARD,FLOOR MAKE FROM BOARD P/N 8343752 (19207).....		4	
				UOC:136,686			
12	MOOZZ	19207	8343755-86	BOARD,FLOOR MAKE FROM BOARD P/N 8343755 (19207).....		4	
				UOC:136,686			
13	MOOZZ	19207	8343753-80	BOARD,FLOOR MAKE FROM BOARD P/N 8343753 (19207).....		8	
				UOC:136,686			
14	MOOZZ	19207	8343750-80	BOARD,FLOOR MAKE FROM BOARD P/N 8343750 (19207).....		2	
				UOC:136,686			
15	MOOZZ	19207	8343749-86	BOARD,FLOOR MAKE FROM BOARD P/N 8343749 (19207).....		2	
				UOC:136,686			
16	XDOZZ	19207	8343762	STRIP,SKID.....		14	

SECTION II			TM9-2330-210-14&PC01			(5)	(6)
(1)	(2)	(3)	(4)				
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON
							CODES(UOC)
							QTY
17	PAOZZ	96906	MS35751-46	UOC:136,686			
				BOLT,SQUARE NECK.....			190
18	PFOZZ	96906	MS35190-310	UOC:136,686			
				SCREW,MACHINE.....			168
19	PAOZZ	96906	MS35338-45	UOC:136,686			
				WASHER,LOCK.....			358
20	PAOZZ	96906	MS51967-5	UOC:136,686			
				NUT,PLAIN,HEXAGON.....			3
21	XDOZZ	19207	100051	UOC:136,686			
				SCREW,CAP,HEXAGON H.....			58
22	XDOZZ	21450	218571	UOC:136,686			
				NUT.....			58
23	XDOZZ	23705	103323	UOC:136,686			
				WASHER,LOCK.....			58
				UOC:136,686			

END OF FIGURE



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FIGURE 40. RACKS (M118A1).

SECTION II			TM9-2330-210-14&PC01				
(1)	(2)	(3)	(4)	(5)	(6)		
ITEM	SMR		PART				
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY	
				GROUP 1810 CARGO BODY			
				FIG. 40 RACKS (M118A1)			
1	PBOZZ	19207	8352618	SIDE RACK,TRAILER LEFT SIDE.....		1	
				UOC:694			
2	PBOZZ	19207	8739367	SIDE RACK,VEHICLE B.....		2	
				UOC:694			
3	PBOZZ	19207	8352620	SIDE RACK,TRAILER LEFT,REAR.....		1	
				UOC:694			
4	PBOZZ	19207	8739370	SIDE RACK,VEHICLE B.....		1	
				UOC:694			
5	PBOZZ	19207	8352619	SIDE RACK,TRAILER RIGHT,FRONT.....		1	
				UOC:694			
6	PBOZZ	19207	8739336	SIDE RACK,VEHICLE B.....		1	
				UOC:694			
7	PBOZZ	19207	8739373	SIDE RACK,VEHICLE B.....		1	
				UOC:694			
8	PBOZZ	19207	8352621	SIDE RACK,TRAILER RIGHT,REAR.....		1	
				UOC:694			
9	PBOZZ	19207	8739374	SIDE RACK,VEHICLE B REAR RIGHT.....		1	
				UOC:694			
10	PBOZZ	19207	8739372	SIDE RACK,VEHICLE B REAR LEFT.....		1	
				UOC:694			
11	PAOZZ	96906	MS90727-111	SCREW,CAP,HEXAGON H.....		58	
				UOC:694			
12	PAOZZ	96906	23MS35338-48	WASHER,LOCK.....		58	
				UOC:694			
13	PAOZZ	96906	MS51968-15	NUT,PLAIN,HEXAGON.....		58	
				UOC:694			

END OF FIGURE

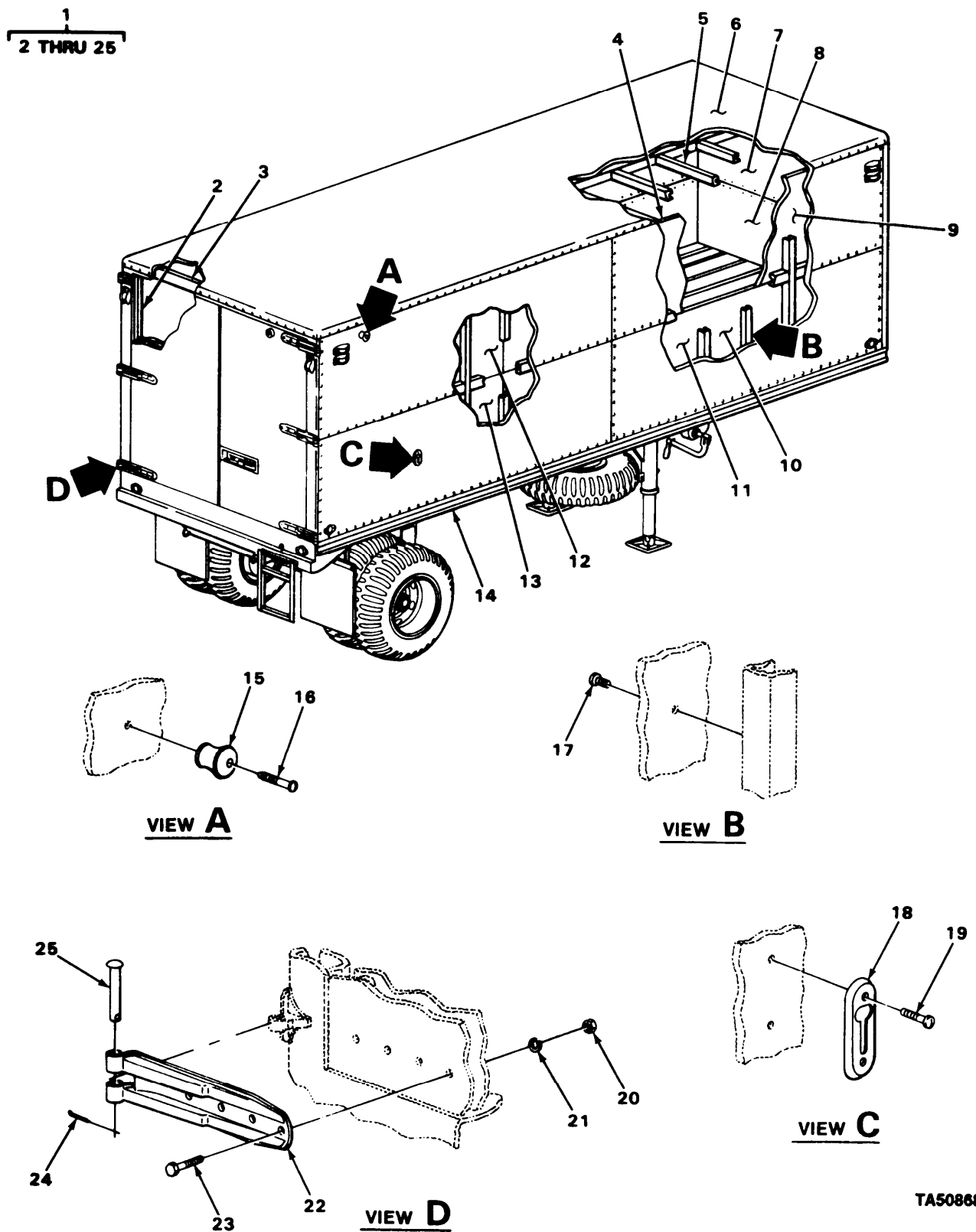
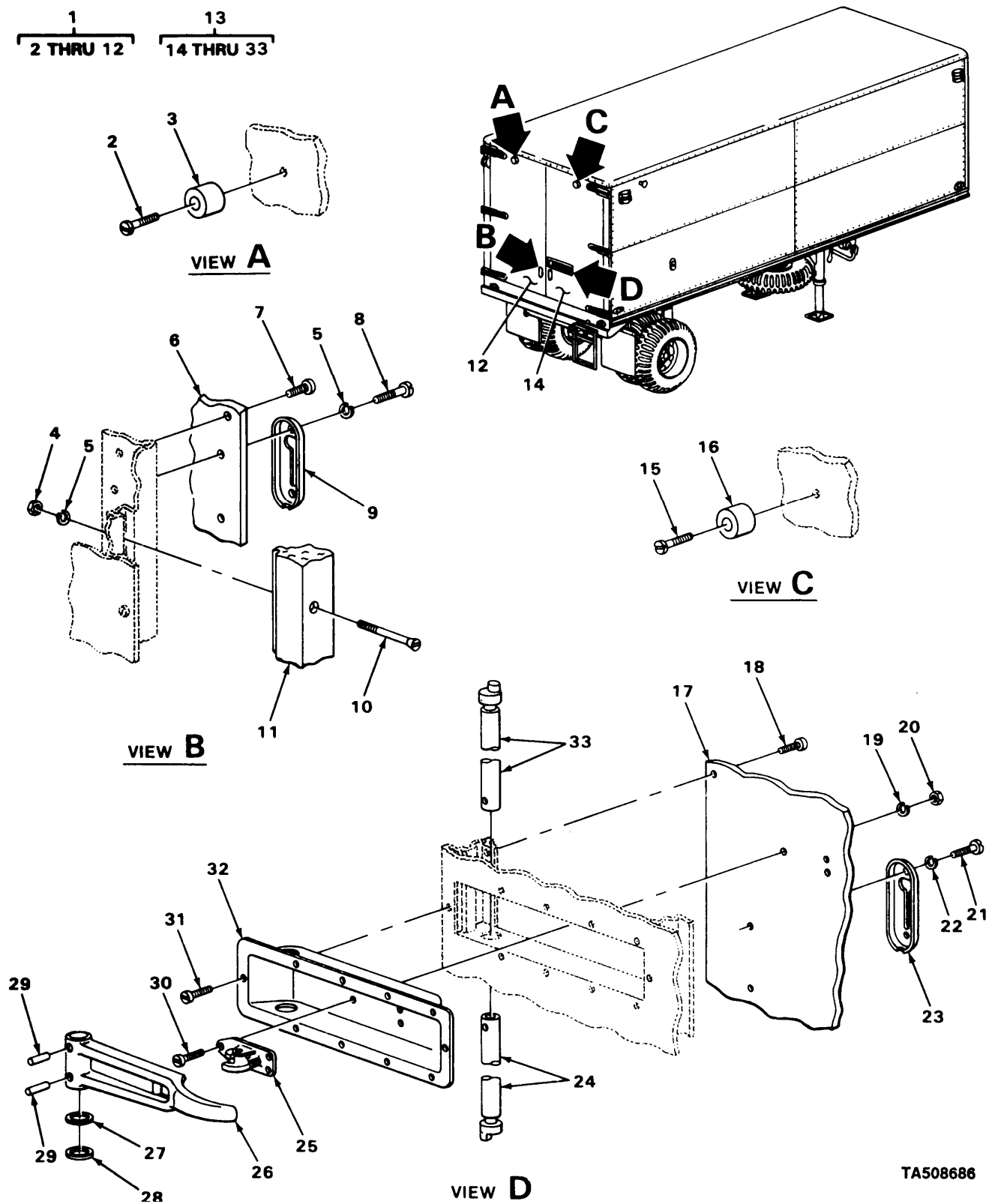


FIGURE 41. BODY ASSEMBLY (M119A1 AND M119).

SECTION II		TM9-2330-210-14&PC01				{5}		{6}	
(1)	(2)	(3)	(4)						(6)
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY
				GROUP 1812	SPECIAL	PURPOSE	BODIES		
				FIG. 41 BODY ASSEMBLY (M119A1 AND M119)					
1	XDFOF	19207	8374939	BODY ASSEMBLY CCMPL.....					1
				UOC:136,686					
2	MFOZZ	19207	8374808-75-2	.LINING MAKE FROM LINING P/N 8374808 (19207).....					2
				UOC:136,686					
3	MFOZZ	19207	8374807-84-3	.LINING MAKE FROM LINING P/N 8374807 (19207).....					1
				UOC:136,686					
4	MFOZZ	19207	8374810-100-39	.LINING MAKE FROM LINING P/N 8374810 (19207).....					2
				UOC:136,686					
5	XDOZZ	19207	8343717	.ROOF ASSEMBLY.....					1
				UOC:136,686					
6	XDOZZ	19207	8343716	.RCOF ASSEMBLY.....					1
				UOC:136,686					
7	MFOZZ	19207	8374812-90-39	.LINING MAKE FROM LINING P/N 8374812 (19207).....					1
				UOC:136,686					
8	MFOZZ	19207	8374806-90-36	.LINING MAKE FROM LINING P/N 8374806 (19207).....					1
				UOC:136,686					
9	MFOZZ	19207	8374811-86-39	.LINING MAKE FROM LINING P/N 8374811 (19207).....					2
				UOC:136,686					
10	MFOZZ	19207	8374805-86-36	.LINING MAKE FROM LINING P/N 8374805 (19207).....					2
				UOC:136,686					
11	MFOZZ	19207	8374804-100-36	.LINING MAKE FROM LINING P/N 8374804 (19207).....					2
				UOC:136,686					
12	MFOZZ	19207	8374809-77-39	.LINING MAKE FROM LINING P/N 8374809 (19207).....					2
				UOC:136,686					
13	MFOZZ	19207	8374803-77-36	.LINING MAKE FROM LINING P/N 8374803 (19207).....					2
				UOC:136,686					
14	XDFZZ	19207	8343786	.BCDY ASSEMBLY.....					1
				UOC:136,686					
15	XDOZZ	19207	8376423	.KNOB,ROPE.....					2
				UOC:136,686					
16	XDOZZ	19207	455227	.SCREW.....					2
				UOC:136,686					
17	PFOZZ	19207	171272	.SCREW,TAPPING,THREA.....					96
				UOC:136,686					
18	XDOZZ	19207	8343792	.HCLD BACK.....					2
				UOC:136,686					
19	XDOZZ	21450	171607	.SCREW,TAPPING,SLOTT.....					4

SECTION II			TM9-2330-210-14&PC01						
(1)	(2)	(3)	(4)		(5)			(6)	
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC) QTY	
20	XDOZZ	21450	218565	UOC:136,686					
				.NUT,HEXAGON.....				24	
21	PAOZZ	96906	MS35338-8	UOC:136,686					
				.WASHER,LOCK.....				24	
22	XDOZZ	19207	8374842	UOC:136,686					
				.HINGE.....				6	
23	XDOZZ	21450	106285	UOC:136,686					
				.SCREW,CAP,HEXAGON H.....				24	
24	XDOZZ	19207	121224	UOC:136,686					
				.PIN,COTTER.....				6	
25	XDOZZ	19207	8374844	UOC:136,686					
				.PIN,HINGE.....				6	
				UOC:136,686					

END OF FIGURE



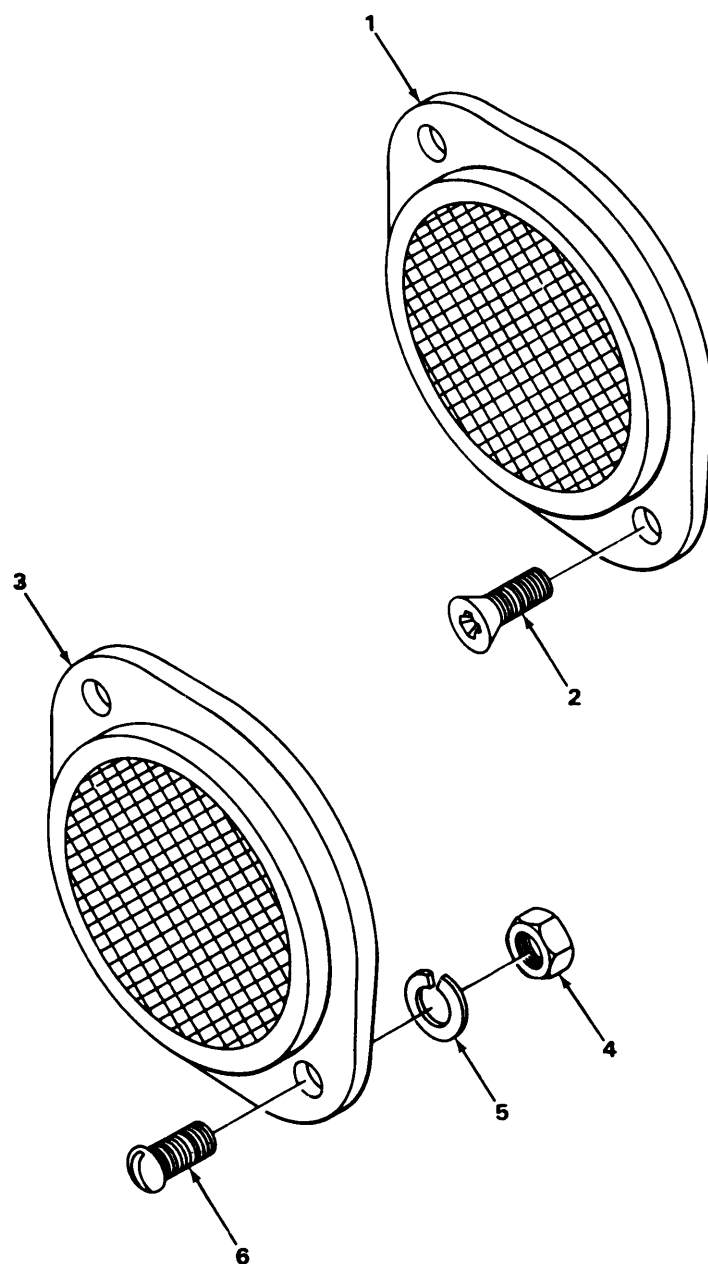
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FIGURE 42. REAR DOOR ASSEMBLY (M119A1 AND M119).

SECTION II			TM9-2330-210-14&PC01			(5)			(6)
(1)	{2}	(3)	(4)						
ITEM	SMR		PART						
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY
				GROUP 1812	SPECIAL	PURPOSE	BODIES		
				FIG. 42 REAR DOOR ASSEMBLY (M119A1 AND M119)					
1	XDO00	19207	8374837	.REAR DOOR ASSEMBLY.....					1
				UOC:136,686					
2	XDOZZ	21450	171593	.. SCREW,TAPPING,SLOTT.....					1
				UOC:136,686					
3	XDOZZ	19207	8374847	.. STOP ASSEMBLY.....					1
				UOC:136,686					
4	PAOZZ	33743	D42038	.. NUT,PLAIN,SQUARE.....					6
				UOC:136,686					
5	PFOZZ	96906	MS35338-44	.. WASHER,LOCK.....					8
				UOC:136,686					
6	XAOZZ	19207	8343831-70-40	.. LINING.....					1
				UOC:136,686					
7	XDOZZ	21450	171736	.. SCREW,TAPPING,SLOTT.....					30
				UOC:136,686					
8	XDOZZ	21450	175607	.. SCREW,TAPPING,SLOTT.....					2
				UOC:136,686					
9	XBOZZ	19207	8343836	.. HOLD BACK ASSEMBLY.....					1
				UOC:136,686					
10	XDOZZ	21450	133802	.. SCREW,MACHINE.....					6
				UOC:136,686					
11	XBOZZ	19207	8374840	.. SLAM,DOOR.....					1
				UOC:136,686					
12	XAOZZ	19207	8343712	.. REAR DOOR.....					1
				UOC:136,686					
13	XDO00	19207	8343821	.REAR DOOR ASSEMBLY.....					1
				UOC:136,686					
14	XAOZZ	19207	8343710	.. REAR DOOR.....					1
				UOC:136,686					
15	XDOZZ	21450	171593	.. SCREW,TAPPING,SLOTT.....					1
				UOC:136,686					
16	XDOZZ	19207	8374847	.. STOP ASSEMBLY.....					1
				UOC:136,686					
17	XAOZZ	19207	8343831-70-40	.. LINING.....					1
				UOC:136,686					
18	XDOZZ	21450	171736	.. SCREW,TAPPING,SLOTT.....					30
				UOC:136,686					
19	PAOZZ	96906	MS35338-43	.. WASHER,LOCK.....					3
				UOC:136,686					
20	PFOZZ	96906	MS35650-302	.. NUT,PLAIN,HEXAGON.....					3
				UOC:136,686					
21	XDOZZ	21450	175607	.. SCREW,TAPPING,SLCTT.....					2
				UOC:136,686					
22	PFOZZ	96906	MS35338-44	.. WASHER,LOCK.....					2
				UOC:136,686					
23	XDOZZ	19207	8343836	.. HOLD BACK ASSEMBLY.....					1
				UOC:136,686					
24	XDOZZ	19207	8374833	.. ROD ASSEMBLY.....					1

SECTION II			TM9-2330-210-14&PC01					
(1)	(2)	(3)	(4)	(5)		(6)		
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE ON	CODES(UOC)	QTY
25	XDOZZ	19207	8343838	UOC:136,686				
				..CATCH ASSEMBLY.....				1
26	XDOZZ	19207	8343837	UOC:136,686				
				..HANDLE DOOR LOCK.....				1
27	XDOZZ	19207	8374835	UOC:136,686				
				..WASHER,RUBBER.....				1
28	XDOZZ	19207	8374836	UOC:136,686				
				..WASHER,FLAT.....				1
29	XDOZZ	21450	142544	UOC:136,686				
				..PIN,STRAIGHT.....				2
30	XDOZZ	21450	132908	UOC:136,686				
				..SCREW,MACHINE.....				3
31	XDOZZ	21450	171268	UOC:136,686				
				..SCREW,TAPPING,SLOTT.....				12
32	XDOZZ	19207	8343830	UOC:136,686				
				..WELL,LOCK HANDLE.....				1
33	XDOZZ	19207	8374830	UOC:136,686				
				..ROD ASSEMBLY.....				1
				UOC:136,686				

END OF FIGURE

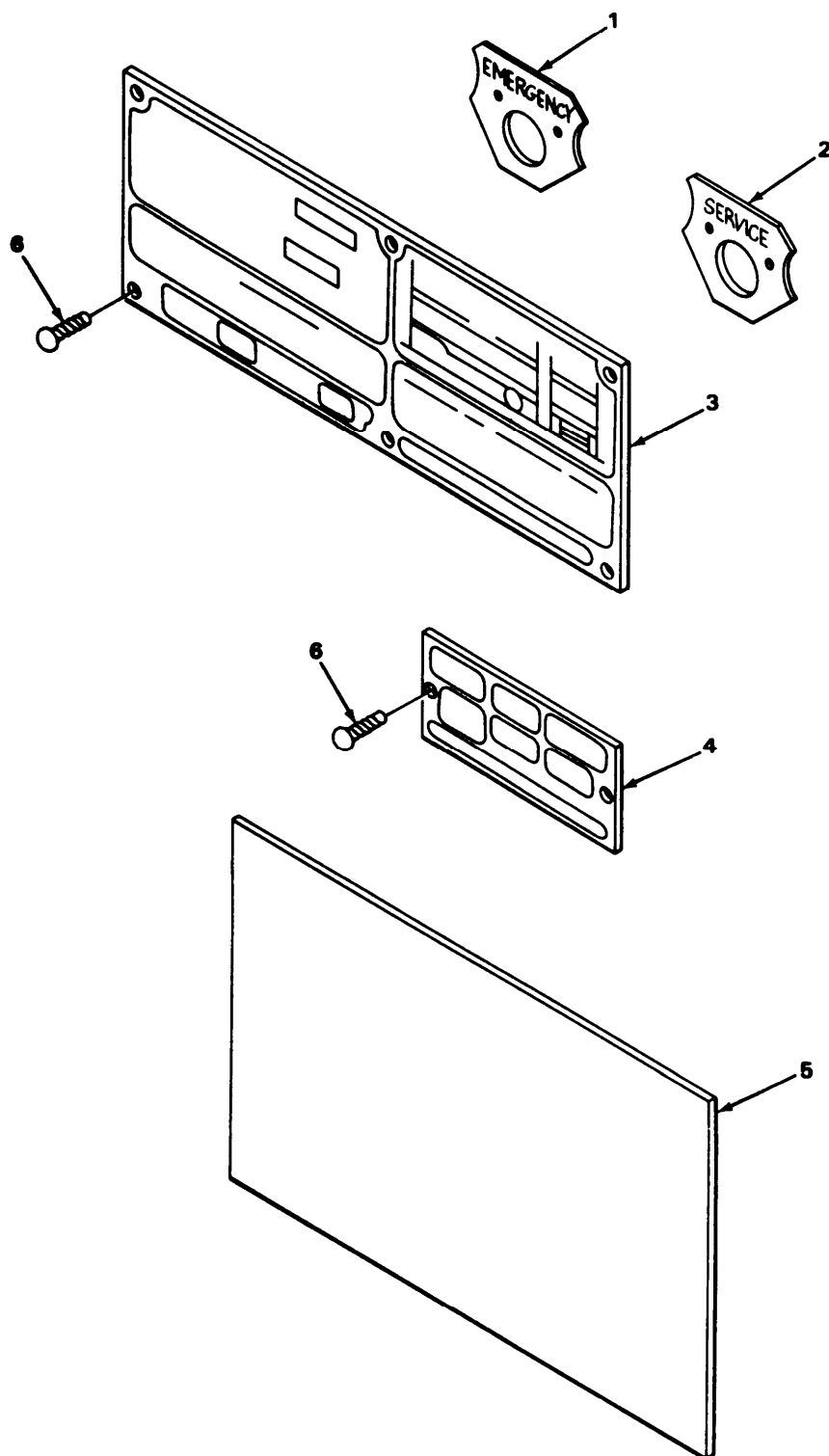


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FIGURE 43. REFLECTORS.

SECTION II			TM9-2330-210-14&PC01		
(1)	(2)	(3)	(4)		(6)
ITEM	SMR		PART		
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY
GROUP 22 BODY, CHASSIS, AND HULL					
ACCESSORY ITEMS					
GROUP 2202 ACCESSORY ITEMS					
FIG. 43 REFLECTORS					
1	PAOZZ	96906	MS35387-1	REFLECTOR RED.....	4
				UQC:686	
1	PAOZZ	96906	MS35387-2	REFLECTOR,INDICATIN AMBER.....	4
				UQC:136,686	
1	PAOZZ	96906	MS35387-1	REFLECTOR,INDICATIN RED.....	4
				UQC:136,694	
2	PAOZZ	88044	AN504-428R8	SCREW,TAPPING,THREA.....	16
				UQC:686	
2	PAOZZ	96906	MS24629-56	SCREW,TAPPING,THREA.....	16
				UQC:136	
3	PAOZZ	96906	MS35387-2	REFLECTOR,INDICATIN AMBER.....	2
				UQC:694	
4	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON.....	12
				UQC:694	
5	PAOZZ	96906	MS35338-44	WASHER,LOCK.....	12
				UQC:694	
6	PAOZZ	96906	MS35206-283	SCREW,MACHINE.....	12
				UQC:694	

END OF FIGURE



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FIGURE 44. DATA PLATES.

SECTION II			TM9-2330-210-14&PC01			
(1)	(2)	(3)	(4)	(5)	(6)	
ITEM	SMR		PART			
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC)	QTY
GROUP 2210 DATA PLATES AND INSTRUCTION HOLDERS						
FIG. 44 DATA PLATES						
1	PAOZZ	97384	60244-90104	PLATE, INSTRUCTION.....		1
				UOC:686		
1	PAOZZ	96906	MS53007-2	PLATE, IDENTIFICATIO.....		1
				UOC:694		
2	PAOZZ	96906	MS53007-1	PLATE, IDENTIFICATIO.....		1
				UOC:694		
2	PAOZZ	06853	201499	PLATE, INSTRUCTIGN.....		1
				UOC:686		
3	XDOZZ	19207	8343702	PLATE, IDENTIFICATIO.....		1
				UOC:686		
4	PAOZZ	19207	7979373	PLATE, IDENTIFICATIO IDENTIFICATION, SERVICE.....		1
				UOC:686		
4	PAOZZ	19207	7996977	PLATE, INSTRUCTION VEHICLE OVERHAUL.		1
5	PAOZZ	19207	6210252	PLATE, INSTRUCTION SHIPPING DATA....		1
5	PAOZZ	19207	8742576	PLATE, IDENTIFICATIO IDENTIFICATION, SERVICE.....		1
				UOC:694		
5	PFOZZ	19207	11625138	DECAL.....		1
				UOC:694		
5	PAOZZ	19207	10922103	PLATE, IDENTIFICATIO.....		1
				UOC:136		
6	XDOZZ	19207	171768	SCREW.....		8
				UOC:686		

END OF FIGURE

SECTION II			TM9-2330-210-14&PC01					
(1)	{2}	(3)	(4)	(5)	(6)			
ITEM	SMR		PART					
NO	CODE	CAGEC	NUMBER	DESCRIPTION AND USABLE ON	CODES(UOC) QTY			
GROUP 94 REPAIR KITS								
GROUP 9401 REPAIR KITS								
FIG. KITS								
PAOZZ	40342	RN13A		PARTS KIT,FLUID PRE.....	1			
				UCC:136,694				
				FILTER ELEMENT,FLUID (1) 23-24				
				GASKET (1) 23-20				
				SPRING,HELICAL,COMP (1) 23-19				
PAFZZ	40342	RN21B		PARTS KIT,BRAKE CHA USE CN M119	1			
				AFTER SERIAL NUMBER 22V200.....				
				UCC:686				
				BELT,MACHINE (18) 25-5				
				DIAPHRAGM (1) 25-7				
				NUT,PLAIN,HEXAGON (18) 25-17				
				SPRING,HELICAL,COMP (1) 25-10				
				SPRING,HELICAL,COMP (1) 25-11				
				WASHER,LOCK (18) 25-18				
PAOZZ	19207	5704496		BRAKE LINING KIT USED UP TO SERIAL	1			
				NUMBER 197.....				
				UCC:694				
				LINING,FRICTION (1) 16-8				
				RIVET,TUBULAR (14) 16-9				
PAOZZ	19207	7417135		PARTS KIT,BRAKE SHC.....	1			
				UCC:686				
				PIN,SHOULDER,HEADLE (4) 15-11				
				WASHER,SLOTTED (4) 15-9				
PAOZZ	19207	7417135		PARTS KIT,BRAKE SHC SERVICE BRAKE	1			
				USED UP TO SERIAL # 157.....				
				UCC:136,694				
				PIN,SHOULDER,HEADLE (2) 16-21				
				WASHER,SLOTTED (2) 16-19				
PAOZZ	19207	7417135		PARTS KIT,BRAKE SHC OPTICAL FOR	1			
				M118A1 AFTER SERIAL NUMBER 156, AND				
				M119A1.....				
				UCC:136,694				
				PIN,SHOULDER,HEADLE (4) 17-12				
				WASHER,SLOTTED (2) 17-13				
PAFZZ	19207	8332543		PARTS KIT,BRAKE CHA.....	1			
				UCC:136,694				
				DIAPHRAGM,CHAMBER (1) 26-4				
				DIAPHRAGM,CHAMBER (1) 26-4				
				NUT,PLAIN,HEXAGON (8) 22-6				
				NUT,PLAIN,HEXAGON (18) 26-11				
				NUT,PLAIN,HEXAGON (6) 24-5				
				NUT,PLAIN,HEXAGON (3) 26-12				
				PACKING,PREFORMED (1) 26-8				
				SCREW,CAP,HEXAGON (4) 22-9				
				SCREW,CAP,HEXAGON (18) 26-2				
				SCREW,CAP,HEXAGON (6) 24-1				
				SPRING,HELICAL,COMP (1) 26-6				

END OF FIGURE

SECTION II			TM9-2330-210-14&PC01						
(1)	(3)	(4)	(5)	(6)					
ITEM	SMR	PART							
NO	CODE	CAGEC	NUMBER	DESCRIPTION	AND	USABLE	ON	CODES(UOC)	QTY
				GROUP 95	GENERAL	USE	STANDARDIZED		
				PARTS					
				GROUP 9501	BULK	MATERIEL			
				FIG.	BULK				
1	XDOZZ	19207	8343749	BOARD,FLCOR.....				V	
				UOC:136,686					
2	XDOZZ	19207	8343831	LINING.....				V	
				UOC:136,686					
3	XDOZZ	19207	8374803	LINING.....				V	
				UOC:136,686					
4	XDOZZ	19207	8374804	LINING.....				V	
				UOC:136,686					
5	XDOZZ	19207	8374805	LINING.....				V	
				UOC:136,686					
6	XDOZZ	19207	8374806	LINING.....				V	
				UOC:136,686					
7	XDOZZ	19207	8374807	LINING.....				V	
				UOC:136,686					
8	XDOZZ	19207	8374808	LINING.....				V	
				UOC:136,686					
9	XDOZZ	19207	8374809	LINING.....				V	
				UOC:136,686					
10	XDOZZ	19207	8374810	LINING.....				V	
				UOC:136,686					
11	XDOZZ	19207	8374811	LINING.....				V	
				UOC:136,686					
12	XDOZZ	19207	8374812	LINING.....				V	
				UOC:136,686					
13	PAOZZ	81349	M13486-1-5	WIRE,ELECTRICAL.....				V	
14	XDOZZ	19207	22-W-1633-160	WIRE,LOCKING.....				V	
				UOC:686					
15	XDOZZ	80205	22-C-2020	WIRE,ROPE.....				V	

END OF FIGURE

CROSS-REFERENCE INDEXES

STOCK NUMBER	NATIONAL FIG.	STOCK ITEM	NUMBER INDEX STOCK NUMBER	FIG.	ITEM
5310-00-004-5033	16	2	5999-00-057-2929	8	21
5310-00-010-5604	42	4		9	25
5310-00-011-6121	37	3		10	8
5315-00-011-9120	30	10		10	15
5320-00-011-9951	18	7		10	22
5315-00-014-2543	34	35		10	28
5310-00-017-9721	31	6		11	6
5306-00-017-9722	31	7		11	19
4730-00-018-9566	33	29		11	25
6240-00-019-0877	2	6	5320-00-058-9883	15	3
	2	12		16	9
	3	7		17	7
	4	5	2640-00-060-3550	28	4
	6	6	5315-00-060-5074	34	36
6240-00-019-3093	3	5	5935-00-062-7450	9	4
2530-00-021-2366	21	7		9	15
	24	10	4730-00-069-1186	21	21
2530-00-026-0255	27	23		22	4
6220-00-026-4797	5	2		23	12
2590-00-030-6943	34	27		23	26
5340-00-040-2381	33	4	5310-00-070-1902	36	4
3040-00-040-2383	27	8	5305-00-071-2081	34	24
5365-00-040-2386	36	16	5305-00-071-2505	29	8
2530-00-040-2393	21	20	2510-00-074-2747	40	2
2530-00-040-2401	14	12	2510-00-074-2754	40	4
2530-00-040-2856	34	11	2510-00-074-2756	40	10
2530-00-040-2874	KIT		2510-00-074-2762	40	9
2590-00-040-2878	36	11	2510-00-078-9779	40	7
5305-00-044-4153	34	8	5310-00-080-6004	32	4
6240-00-044-6914	2	5	5310-00-087-0057	35	1
	3	4	5310-00-088-1251	29	1
	5	5		30	3
5310-00-045-1091	34	41	5330-00-090-2128	22	10
5310-00-045-3296	4	7		23	13
	8	11	3120-00-091-9774	18	17
	33	3	5310-00-091-9775	18	16
	34	3	2530-00-091-9776	18	19
	42	19	2530-00-091-9777	18	25
4730-00-050-4203	34	12	2530-00-093-5597	27	4
4730-00-050-4208	14	7	3110-00-100-0380	27	11
	15	28	3110-00-100-0515	34	44
	33	17	3110-00-100-3096	27	18
	36	1	3110-00-100-6164	34	46
5940-00-050-6209	8	4	5940-00-113-3144	9	24
	8	17	5305-00-115-9526	2	1
	9	6		3	9
	9	17	3110-00-117-0759	34	31
2640-00-052-0860	28	3	5970-00-138-5784	6	11
5305-00-052-6920	43	2	5315-00-140-1938	14	1
5999-00-057-2929	6	14		25	16

CROSS-REFERENCE INDEXES

STOCK NUMBER	NATIONAL FIG.	STOCK ITEM	NUMBER STOCK	INDEX NUMBER	FIG.	ITEM
4820-00-142-3036	21	6	5305-00-269-2803	26	2	
3110-00-142-4390	27	9		32	9	
2530-00-142-6045	26	1	5310-00-269-4040	35	5	
5310-00-151-8992	27	21		37	13	
2530-00-152-2465	KIT		2610-00-269-7383	28	2	
6145-00-152-6499	BULK	13	2530-00-270-3878	22	11	
2530-00-162-1986	17	4	4730-00-270-4616	22	5	
2530-00-164-0986	16	10		23	9	
	17	8	5365-00-274-4544	19	14	
2530-00-179-3635	18	2	5310-00-275-9460	15	20	
6220-00-179-4324	3	2		16	16	
4730-00-200-0442	19	10		17	17	
9905-00-202-3639	43	1	4730-00-277-8750	24	9	
	43	3	4730-00-277-8770	22	2	
2530-00-204-3622	15	10		23	15	
	16	20	2530-00-278-2243	19	4	
	17	14	2530-00-278-6556	20	11	
9905-00-205-2795	43	1	2510-00-278-6660	36	6	
	43	1	5975-00-280-3357	6	12	
5360-00-205-4654	18	26		10	6	
5360-00-205-4657	18	13		10	20	
5365-00-205-5105	18	15		10	26	
5310-00-205-8358	15	29		11	4	
5310-00-209-0965	15	24		11	23	
	27	15	9905-00-282-7489	44	4	
5340-00-211-6129	27	16	9905-00-282-8276	44	5	
5310-00-220-6587	18	11	5330-00-285-5123	23	20	
5310-00-220-6848	34	39	3020-00-287-8211	18	24	
4730-00-221-2136	23	22	3020-00-287-8215	18	18	
4730-00-221-2138	33	19	4730-00-289-0155	24	8	
5305-00-225-3841	20	1	5310-00-292-7851	27	19	
5305-00-225-3843	29	4	5330-00-297-7106	2	7	
	30	5		2	11	
5306-00-225-8499	18	5	5306-00-297-8274	18	12	
	29	3	5330-00-297-9829	15	18	
	30	6	5315-00-298-1481	27	12	
5306-00-225-9083	4	8	5315-00-298-1499	36	5	
5306-00-225-9088	25	5	6220-00-299-7425	6	9	
5306-00-226-4822	27	25	6220-00-299-7426	6	9	
4730-00-231-5644	23	14	5935-00-300-9909	10	5	
4730-00-231-5647	22	6		10	25	
	23	11		11	3	
5310-00-245-3594	15	21		11	22	
4730-00-246-9200	21	11	5315-00-316-1063	34	21	
5310-00-261-7340	2	2	5340-00-318-1006	32	1	
	21	9	5340-00-318-1008	22	11	
	32	7		34	18	
	41	21	2530-00-318-1225	18	6	
2610-00-262-8677	28	1	2530-00-318-1227	26	4	
5305-00-269-2803	24	1	5330-00-318-4317	32	8	

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX					
STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
3020-00-319-6011	34	42	5330-00-562-1947	27	22
5935-00-333-9414	8	15	5340-00-562-1948	27	23
	9	2	5310-00-562-1955	37	8
	9	13	5315-00-562-1956	37	11
5365-00-350-0155	38	3	5935-00-572-9180	6	16
5305-00-350-0158	38	7		8	19
3120-00-350-5466	15	5	6220-00-577-3434	6	1
5330-00-353-0959	6	8	6220-00-577-3435	6	1
6250-00-371-4018	6	7	4730-00-580-8457	23	21
3040-00-374-2127	15	7	5330-00-582-2133	18	22
3020-00-389-8199	33	6	5310-00-582-5965	7	7
5310-00-393-6685	8	2		23	28
3010-00-397-6160	34	16		29	11
5940-00-399-6676	8	9		42	5
	9	9		42	22
	9	21		43	5
5310-00-407-9566	18	4	5310-00-584-5272	20	2
	25	18		27	24
	39	19		34	7
4730-00-409-7854	24	3		38	10
4730-00-419-9425	19	13	5310-00-584-7888	15	19
5310-00-424-1452	38	2		16	17
5310-00-424-1456	38	5		17	16
2530-00-426-8370	21	5	4730-00-595-0083	23	8
	24	4	5310-00-596-8169	6	5
5305-00-432-4163	1	2	5330-00-599-4230	27	22
6220-00-433-5966	4	6	5930-00-615-9215	1	3
4710-00-443-0556	22	8		1	8
5315-00-461-3835	15	11	5310-00-616-2973	1	5
	16	21	5315-00-616-5529	16	14
	17	12	5315-00-616-5530	33	11
4730-00-463-1588	19	16	2510-00-624-0254	37	15
5310-00-488-3888	37	4	5365-00-624-0255	38	4
6220-00-500-0437	2	4	2530-00-624-0256	13	1
	2	13	5306-00-624-0257	37	6
5935-00-504-3176	10	12	9905-00-624-6148	44	5
	10	32	5365-00-629-7273	10	7
	11	10		10	21
	11	17		10	27
	11	29		11	5
2590-00-510-8829	34	32		11	24
4710-00-511-1692	19	3	5935-00-629-9241	10	18
5330-00-513-9932	34	5	5310-00-637-9541	3	8
5330-00-513-9933	34	5		24	6
5315-00-515-0495	34	30		26	10
4710-00-534-2347	19	11		26	13
5310-00-550-1130	18	10		31	9
3020-00-562-0487	34	6	5930-00-655-1514	1	4
3020-00-562-0488	34	47	5310-00-655-9860	9	5
5340-00-562-1943	37	5		9	16

CROSS-REFERENCE INDEXES

STOCK NUMBER	FIG.	NATIONAL STOCK ITEM	NUMBER INDEX STOCK NUMBER	FIG.	ITEM
5340-00-656-4895	16	3	2530-00-737-3260	19	8
3120-00-661-9523	33	22	5330-00-737-3354	19	6
6220-00-669-5623	2	9	2530-00-738-9061	27	26
3040-00-670-5333	34	14	5315-00-740-9378	16	18
2530-00-670-5334	34	29	5315-00-740-9379	15	13
2590-00-670-5335	34	1		16	12
2590-00-670-5336	34	1		17	9
2590-00-670-5337	34	22	5310-00-740-9385	16	4
3040-00-678-4081	34	38		17	2
5306-00-678-4769	37	14	5330-00-740-9550	27	5
5365-00-678-6872	34	33	2590-00-740-9553	27	6
5330-00-678-9047	4	4	5306-00-740-9555	27	17
5310-00-679-3606	23	23	3120-00-740-9567	16	15
5360-00-679-5658	34	45		17	15
5310-00-680-9290	33	5	9905-00-740-9721	44	1
5306-00-685-7790	39	17	2940-00-741-1081	23	24
5340-00-689-6180	34	4	5310-00-741-2088	19	12
2530-00-692-6133	17	1	5315-00-741-5746	14	14
2590-00-693-0728	33	1	2530-00-741-5748	23	18
2530-00-693-0729	33	1	2530-00-741-7135	KIT	
2530-00-696-0351	KIT			KIT	
5310-00-701-4891	20	4		KITS	
3020-00-701-4980	34	40	2530-00-752-0513	38	6
5305-00-701-5071	6	3	3020-00-752-1157	31	1
5315-00-705-4686	18	27	5310-00-752-1633	27	20
5360-00-706-9054	23	19	9905-00-752-4649	7	4
4730-00-708-1996	21	15		8	6
5305-00-709-8517	20	10		8	18
5305-00-719-5219	40	11		10	10
5305-00-719-5239	38	9		10	16
5305-00-724-7221	35	4		10	30
5305-00-724-7222	35	2		11	8
5305-00-725-4183	37	2		11	15
6220-00-726-1916	6	1		11	27
5305-00-726-2550	32	19	6220-00-752-5992	6	9
5305-00-726-2551	32	15	6220-00-752-5993	6	9
5305-00-726-2562	36	17	6220-00-752-6018	2	10
5305-00-726-2572	38	1	6220-00-752-6020	2	8
5305-00-727-2283	32	13	6220-00-752-6516	6	4
6220-00-727-3288	6	1	5340-00-752-6595	11	12
4730-00-729-6437	19	15	5310-00-753-4231	18	20
6220-00-729-9295	6	2	5310-00-754-2005	36	7
5310-00-732-0559	24	5	3040-00-757-1718	27	10
	26	11	5995-00-757-2755	8	1
	26	12	5310-00-761-6882	23	27
	32	6		29	12
5310-00-732-0560	25	13		31	10
	38	11		43	4
2590-00-735-5938	7	12	5310-00-763-8905	25	3
2530-00-736-2426	KIT			25	20

CROSS-REFERENCE INDEXES

STOCK NUMBER	NATIONAL FIG.	STOCK ITEM	NUMBER STOCK NUMBER	INDEX FIG.	ITEM
5310-00-763-8905	32	18	5310-00-809-5997	34	25
	36	14	5310-00-809-8533	37	17
	38	14	5305-00-819-5132	7	15
5305-00-764-0070	4	2		43	2
5935-00-768-7042	6	10	5310-00-820-6653	25	2
	10	19		25	19
2530-00-770-7070	38	8		32	17
5365-00-772-2322	9	3		36	15
	9	14	5305-00-821-3869	34	15
5935-00-772-2354	8	16	9905-00-831-6271	44	4
5935-00-773-1424	7	6	5305-00-832-6344	32	21
5935-00-773-1428	7	14	5935-00-833-8561	8	7
	8	12		9	11
4730-00-773-2163	19	5		9	23
5935-00-773-6198	10	9	5970-00-833-8562	8	8
	10	29		9	10
	11	7		9	22
	11	26	5310-00-833-8567	6	15
2530-00-773-9381	18	8		8	20
9905-00-774-4284	44	2	5315-00-839-5822	14	3
6220-00-775-2384	4	3		20	14
5935-00-776-0599	10	4		25	15
	10	24		30	11
	11	2	5310-00-841-2041	34	28
	11	21	5310-00-842-1490	32	3
2530-00-776-0966	19	7	5315-00-842-3044	14	13
5305-00-782-9489	32	12		16	11
	34	10		17	10
4710-00-795-0544	19	9	5935-00-846-3884	7	13
2530-00-797-9039	25	4		8	3
2530-00-797-9277	15	2	6220-00-846-9745	4	1
2530-00-797-9278	15	1	5315-00-849-9854	31	2
3040-00-797-9284	20	3	5310-00-852-8593	8	10
3040-00-797-9285	20	3	5935-00-854-4447	8	14
2530-00-797-9295	23	17	2530-00-864-2990	16	6
5306-00-797-9296	23	25	5310-00-880-7744	39	20
2530-00-797-9317	15	30	5310-00-880-7745	19	17
5306-00-797-9320	27	17		20	6
5310-00-797-9332	15	9		27	14
	16	19	5310-00-880-7746	25	17
	17	13	5340-00-893-4100	34	4
5360-00-797-9339	15	12	3120-00-893-4972	33	15
	16	13		37	9
	17	11	5320-00-894-0081	15	32
5365-00-797-9358	20	8	5310-00-905-5454	1	6
5310-00-798-1265	37	18	4730-00-908-3194	19	2
4720-00-809-2750	19	1	5305-00-912-5113	16	1
5310-00-809-3078	14	15	5305-00-914-6134	33	10
	36	10	5305-00-915-8087	27	25
5310-00-809-4058	29	10		31	4

CROSS-REFERENCE

INDEXES

STOCK NUMBER	NATIONAL STOCK NUMBER INDEX		FIG.	ITEM
	FIG.	ITEM		
2530-00-920-7568	19	7		
2540-00-921-5069	29	5		
	30	7		
5310-00-924-5968	1	7		
2510-00-926-3849	40	6		
5310-00-934-9751	42	20		
5310-00-943-2141	40	13		
5305-00-958-5245	33	16		
5305-00-958-5256	39	18		
5310-00-959-7600	36	13		
5340-00-970-3258	37	7		
5310-00-971-7990	23	10		
5305-00-983-6654	34	37		
5310-00-984-3806	29	7		
	30	1		
5305-00-984-6211	8	13		
5310-00-985-0782	38	13		
5305-00-988-1725	34	2		
5305-00-988-1727	43	6		
5305-00-990-6444	33	2		
5305-00-993-2459	36	9		
5305-00-993-2461	7	1		
9905-00-999-7369	44	1		
9905-00-999-7370	44	2		
9905-00-999-9672	44	5		
2510-01-035-3967	40	1		
2510-01-035-3968	40	5		
2510-01-035-3969	40	3		
2510-01-035-3970	40	8		
5340-01-053-5090	18	2		
5306-01-062-2334	15	27		
	27	1		
2510-01-067-4717	3	6		
2920-01-074-8354	9	12		
7690-01-075-3332	44	5		
2590-01-091-7620	34	26		
6220-01-093-4439	3	1		
2530-01-094-7940	18	3		
2530-01-110-4321	27	3		
5305-01-122-5468	15	6		
1440-01-146-4636	27	7		
3040-01-173-2246	34	17		
5310-01-280-9382	33	23		
3020-01-288-1966	33	8		
2590-01-322-2621	30	15		

CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
88044	AN504-428R8	5305-00-819-5132	7	15
			43	2
90299	AS113709	5930-00-615-9215	1	3
			1	8
78500	A1-3722B28	2530-00-797-9278	15	1
65282	A10560X	3110-00-100-0515	34	44
78500	A173736H8	2530-00-692-6133	17	1
23705	A298322	4710-00-511-1692	19	3
23705	A298749	2530-00-797-9295	23	17
78500	A333V854	3040-00-040-2383	27	8
78500	A3736P16		15	14
08162	BT3994	3110-00-100-3096	27	18
78553	C1059-014-1	5310-00-596-8169	6	5
78553	C3278		10	1
01857	DE-89909	6220-00-026-4797	5	2
29198	D1845		33	14
33743	D4203B	5310-00-010-5604	42	4
63477	FC10937	3120-00-091-9774	18	17
63477	FD20333	4710-00-795-0544	19	9
63477	FF20318A		18	23
63477	FF20339		18	3
63477	F20321	3020-00-287-8211	18	24
63477	F56115	2530-00-776-0966	19	7
63477	F665	2530-00-164-0986	16	10
			17	8
80837	J-1276	2590-00-510-8829	34	32
04632	J-1282		34	9
80837	J-3207-1	3040-00-678-4081	34	38
04632	J-3228-7-DR		34	34
80434	J-3293-1	3040-01-173-2246	34	17
80837	J1206A	5365-00-678-6872	34	33
80837	J1386	2590-00-030-6943	34	27
80837	J318	3010-00-397-6160	34	16
80837	J3203G	5330-00-513-9933	34	5
80837	J3205	5360-00-679-5658	34	45
80837	J3206	3040-00-670-5333	34	14
80837	J3237	5315-00-515-0495	34	30
80837	J3265		34	20
80837	J3279	2530-00-040-2856	34	11
80837	J344-1F	3020-00-701-4980	34	40
96906	MS15001-1	4730-00-050-4203	34	12
96906	MS15003-1	4730-00-050-4208	14	7
			15	28
			33	17
			36	1
96906	MS15570-1251	6240-00-019-0877	2	6
			2	12
			3	7
			4	5
			6	6
96906	MS15570-623	6240-00-019-3093	3	5

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
96906	MS16536-172	5320-00-058-9883	15	3
			16	9
			17	7
96906	MS16536-175	5320-00-011-9951	18	7
96906	MS16998-31	5305-00-983-6654	34	37
96906	MS17169-12	3110-00-117-0759	34	31
96906	MS18153-113	5305-00-914-6134	33	10
96906	MS18154-113	5305-00-915-8087	27	25
			31	4
96906	MS18154-58	5305-00-115-9526	2	1
			3	9
96906	MS19059-2419	3110-00-100-6164	34	46
96906	MS20659-126	5940-00-113-3144	9	24
96906	MS20913-15	4730-00-221-2136	23	22
96906	MS24629-56	5305-00-052-6920	43	2
96906	MS24665-283	5315-00-842-3044	14	13
			16	11
			17	10
96906	MS24665-285		32	2
96906	MS24665-287	5315-00-011-9120	30	10
96906	MS24665-353	5315-00-839-5822	14	3
			20	14
			25	15
			30	11
96906	MS24665-357	5315-00-298-1481	37	12
96906	MS24665-360	5315-00-298-1499	36	5
96906	MS24665-498	5315-00-849-9854	31	2
96906	MS25081-4	5310-00-924-5968	1	7
96906	MS25082-21	5310-00-616-2973	1	5
96906	MS27148-2	5999-00-057-2929	6	14
			8	21
			9	25
			10	8
			10	15
			10	22
			10	28
			11	6
			11	19
			11	25
96906	MS27151-28	5310-00-985-0782	38	13
96906	MS27183-10	5310-00-809-4058	29	10
96906	MS27183-11	5310-00-809-3078	14	15
			36	10
96906	MS27183-14	5310-00-080-6004	32	4
96906	MS27183-17	5310-00-809-5997	34	25
96906	MS27183-2	5310-00-087-0057	35	1
96906	MS27183-23	5310-00-809-8533	37	17
96906	MS28775-011	5330-00-582-2133	18	22
96906	MS28775-114		26	8
96906	MS35058-22	5930-00-655-1514	1	4
96906	MS35190-288	5305-00-958-5245	33	16

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
96906	MS35190-310	5305-00-958-5256	39	18
96906	MS35206-264	5305-00-984-6211	8	13
96906	MS35206-281	5305-00-988-1725	34	2
96906	MS35206-283	5305-00-988-1727	43	6
96906	MS35207-261	5305-00-990-6444	33	2
96906	MS35207-281	5305-00-993-2461	7	1
96906	MS35207-283	5305-00-993-2459	36	9
96906	MS35333-121	5310-00-905-5454	1	6
96906	MS35333-40	5310-00-550-1130	18	10
96906	MS35338-43	5310-00-045-3296	4	7
			8	11
			33	3
			34	3
			42	19
96906	MS35338-44	5310-00-582-5965	7	7
			23	28
			29	11
			42	5
			42	22
			43	5
96906	MS35338-45	5310-00-407-9566	18	4
			25	18
			39	19
96906	MS35338-46	5310-00-637-9541	3	8
			24	6
			26	10
			26	13
			31	9
96906	MS35338-47	5310-00-209-0965	15	24
			27	15
96906	MS35338-51	5310-00-584-7888	15	19
			16	17
			17	16
96906	MS35338-52	5310-00-754-2005	36	7
96906	MS35338-67	5310-00-011-6121	37	3
96906	MS35338-8	5310-00-261-7340	2	2
			21	9
			32	7
			41	21
96906	MS35387-1	9905-00-205-2795	43	1
			43	1
96906	MS35387-2	9905-00-202-3639	43	1
			43	3
96906	MS35420-1	6220-00-752-5992	6	9
96906	MS35420-2	6220-00-752-5993	6	9
96906	MS35421-1	6220-00-299-7425	6	9
96906	MS35421-2	6220-00-299-7426	6	9
96906	MS35422-1	6220-00-729-9295	6	2
96906	MS35423-1	6220-00-577-3434	6	1
96906	MS35423-2	6220-00-726-1916	6	1
96906	MS35424-1	6220-00-577-3435	6	1

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
96906	MS35424-2	6220-00-727-3288	6	1
96906	MS35478-1683	6240-00-044-6914	2	5
			3	4
			5	5
96906	MS35649-103	5310-00-852-8593	8	10
96906	MS35650-302	5310-00-934-9751	42	20
96906	MS35671-55	5315-00-060-5074	34	36
96906	MS35671-64	5315-00-014-2543	34	35
96906	MS35690-924	5310-00-245-3594	15	21
96906	MS35691-69	5310-00-971-7990	23	10
96906	MS35692-33	5310-00-841-2041	34	28
96906	MS35692-37	5310-00-842-1490	32	3
96906	MS35692-77	5310-00-070-1902	36	4
96906	MS35746-1	4730-00-595-0083	23	8
96906	MS35751-46	5306-00-685-7790	39	17
96906	MS35756-15	5315-00-616-5530	33	11
96906	MS35756-16	5315-00-616-5529	16	14
96906	MS35810-6	5315-00-140-1938	14	1
			25	16
96906	MS35842-11	4730-00-908-3194	19	2
96906	MS39020-1	9905-00-752-4649	8	6
			8	18
96906	MS39020-2		9	7
			9	18
96906	MS39232-2	4730-00-231-5644	23	14
96906	MS39232-4	4730-00-231-5647	22	6
			23	11
96906	MS51096-359	5305-00-912-5113	16	1
96906	MS51302-1	6220-00-846-9745	4	1
96906	MS51329-1	6220-00-669-5623	2	9
96906	MS51331-6	2540-00-921-5069	29	5
			30	7
96906	MS51358-4	2640-00-052-0860	28	3
96906	MS51624-2112		20	13
96906	MS51861-24	5305-00-432-4163	1	2
96906	MS51922-1	5310-00-088-1251	29	1
			30	3
96906	MS51922-49	5310-00-269-4040	35	5
			37	13
96906	MS51922-5	5310-00-959-7600	36	13
96906	MS51922-9	5310-00-984-3806	29	7
			30	1
96906	MS51943-40	5310-00-488-3888	37	4
96906	MS51946-5	5306-00-797-9320	27	17
96906	MS51946-6	5306-00-740-9555	27	17
96906	MS51959-46	5305-00-764-0070	4	2
96906	MS51959-61	5305-00-701-5071	6	3
96906	MS51967-2	5310-00-761-6882	23	27
			29	12
			31	10
			43	4

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CAGEC	PART NUMBER	PART NUMBER INDEX		FIG.	ITEM
			STOCK NUMBER		
96906	MS51967-5		5310-00-880-7744	39	20
96906	MS51968-11		5310-00-880-7745	19	17
				20	6
				27	14
96906	MS51968-14		5310-00-732-0560	25	13
				38	11
96906	MS51968-15		5310-00-943-2141	40	13
96906	MS51968-20		5310-00-763-8905	25	3
				25	20
				32	18
				36	14
				38	14
96906	MS51968-5		5310-00-880-7746	25	17
96906	MS51968-8		5310-00-732-0559	24	5
				26	11
				26	12
				32	6
96906	MS52125-2		6220-01-093-4439	3	1
96906	MS521301A204120		4720-00-809-2750	19	1
96906	MS53004-2		2530-00-021-2366	21	7
				24	10
96906	MS53007-1		9905-00-999-7370	44	2
96906	MS53007-2		9905-00-999-7369	44	1
96906	MS53045-3		2530-00-738-9061	27	26
96906	MS53047-1		6220-00-500-0437	2	4
				2	13
96906	MS75021-2		5935-00-846-3884	7	13
				8	3
96906	MS90725-109		5305-00-044-4153	34	8
96906	MS90725-34		5306-00-225-8499	18	5
				29	3
				30	6
96906	MS90726-113		5305-00-725-4183	37	2
96906	MS90726-28		5306-00-225-9083	4	8
96906	MS90726-33		5306-00-225-9088	25	5
96906	MS90726-60		5305-00-269-2803	24	1
				26	2
				32	9
96906	MS90727-111		5305-00-719-5219	40	11
96906	MS90727-116		5305-00-719-5239	38	9
96906	MS90727-162		5305-00-727-2283	32	13
96906	MS90727-163		5305-00-726-2550	32	19
96906	MS90727-164		5305-00-726-2551	32	15
96906	MS90727-175		5305-00-726-2562	36	17
96906	MS90727-178		5305-00-726-2572	38	1
96906	MS90727-85		5305-00-709-8517	20	10
96906	MS90728-11		5305-00-225-3841	20	1
96906	MS90728-125		5305-00-071-2081	34	24
96906	MS90728-163		5305-00-724-7221	35	4
96906	MS90728-164		5305-00-724-7222	35	2
96906	MS90728-29		5306-00-226-4822	27	25

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PART NUMBER INDEX				
CAGEC	PART NUMBER	STCK NUMBER	FIG.	ITEM
96906	MS90728-65	5305-00-821-3869	34	15
96906	MS90728-66	5305-00-782-9489	32	12
			34	10
96906	MS90728-7	5305-00-071-2505	29	8
96906	MS90728-8	5305-00-225-3843	29	4
			30	5
81349	M13486-1-5	6145-00-152-6499	BULK	13
91340	M4X50S	5330-00-285-5123	23	20
81349	M43436/1-1	9905-00-752-4649	7	4
			10	10
			10	16
			10	30
			11	8
			11	15
			11	27
40342	N-12970-A	2530-00-741-5748	23	18
40342	N-2318		25	7
80205	NAS1022N17	5310-00-680-9290	33	5
80205	NAS54055-2		31	5
40342	N10447		25	14
40342	N10497		25	6
40342	N10521		25	8
40342	N10673A		26	6
40342	N11335A		25	10
40342	N12471		25	11
23705	N12971	2940-00-741-1081	23	24
40342	N12972	5310-00-679-3606	23	23
75237	N3782		26	1
40342	RN13A	2530-00-696-0351	KIT	
40342	RN218	2530-00-736-2426	KIT	
56697	UB5009	3040-00-374-2127	15	7
51665	US48	2640-00-060-3550	28	4
81348	ZZ-T-381M/GROUP3	2610-00-262-8677	28	1
	/9.00-20/D/TBCC			
92867	01166202	2530-00-040-2401	14	12
77820	10-42622-23P	5935-00-062-7450	9	4
			9	15
21450	100026		21	8
21450	100027		14	19
21450	100030		14	9
19207	100051		39	21
21450	100056		14	21
21450	100134		21	18
11083	102570	5305-01-122-5468	15	6
21450	102950		37	10
24167	103321		14	10
12204	103323		14	18
			39	23
19207	103324		15	22
21450	104039		14	2
40342	104930		25	12

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
21450	106285		41	23
19207	10922103	9905-00-999-9672	44	5
19207	10924617		9	1
19207	10924618	5995-00-757-2755	8	1
19207	10924619		9	19
19207	10935061	2920-01-074-8354	9	12
78500	1107F84	5340-00-211-6129	27	16
40342	11194		25	9
19207	11597663		29	2
			30	4
19207	11625074		35	3
19207	11625138	7690-01-075-3332	44	5
19207	11625190		29	16
19207	11625195-1		29	13
19207	11625195-2		29	15
19207	1163519-2		3	3
19207	11639520	2510-01-067-4717	3	6
19207	11639535	6220-00-179-4324	3	2
19207	11668361	2530-00-142-6045	26	1
19207	117050		15	23
92679	117171R1	4730-00-200-0442	19	10
21450	117982		14	20
78500	1199A625	3120-00-350-5466	15	5
78500	1199F1436	2590-00-740-9553	27	6
19207	121224		41	24
78500	12290862	5310-00-292-7851	27	19
21450	132908		42	30
21450	133802		42	10
21450	142534		33	7
21450	142544		42	29
24617	144112	4730-00-246-9200	21	11
19207	1526459-1		8	5
			9	8
			9	20
			10	11
			10	17
			10	31
			11	9
			11	16
			11	28
24617	1580851	5340-00-752-6595	11	12
19207	171225		5	6
21450	171268		42	31
19207	171272		41	17
19207	1713772		38	12
21450	171593		42	2
			42	15
21450	171607		41	19
19207	171656		10	2
19207	171732		6	13
			6	13

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	171732		11	13
			22	12
21450	171736		42	7
			42	18
19207	171768		44	6
78500	174482	5365-00-797-9358	20	8
78500	1745-E-5	2530-00-204-3622	17	14
78500	1745E5Z	2530-00-204-3622	15	10
			16	20
21450	175607		42	8
			42	21
21450	175631		39	1
78500	1759E5	5315-00-461-3835	15	11
			16	21
			17	12
19207	181455		15	31
24617	187130	5310-00-584-5272	27	24
30076	200157	5315-00-705-4686	18	27
06853	201499	9905-00-774-4284	44	2
06853	213630	5330-00-090-2128	22	10
			23	13
24617	218563		7	8
21450	218565		14	11
			21	10
			41	20
21450	218571		14	4
			39	22
21450	219621		23	16
21450	219754		22	7
80205	22-C-2020		BULK	15
19207	22-C-2020-1		31	8
19207	22-W-1633-160		BULK	14
19207	22-W-1633-160-1		33	9
06853	224942		21	12
19207	225831		21	17
24617	2289994	2610-00-269-7383	28	2
12603	23E10	5310-00-820-6653	25	2
			25	19
			32	17
			36	15
80045	23MS35338-10	5310-00-584-5272	20	2
			34	7
			38	10
80045	23MS35338-45		27	24
96906	23MS35338-48		40	12
06853	235091	4730-00-580-8457	23	21
06853	235093	5360-00-706-9054	23	19
66640	270252	5310-00-220-6848	34	39
78500	2710E5	2530-00-797-9317	15	30
78500	2710F6		15	30
78500	2740Z26		16	8

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		PART NUMBER INDEX			
CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM	
78500	2797E5	5340-00-656-4895	16	3	
94231	3-07620-311	5310-00-004-5033	16	2	
78500	3219X2052	2530-00-093-5597	27	4	
78500	3262H86	2530-00-026-0255	27	23	
78500	3268X180		27	3	
04632	3269-13		34	23	
23705	333561	3120-00-893-4972	33	15	
			37	9	
23705	336837	2510-00-624-0254	37	15	
78500	3799P406	3040-00-797-9285	20	3	
78500	3799Q407	3040-00-797-9284	20	3	
81343	4-2120102BA	4730-00-277-8750	24	9	
60528	4A5-33	2590-00-693-0728	33	1	
73992	42	4730-00-221-2138	33	19	
21450	444577		21	13	
21450	451009		34	13	
19207	451091	5310-00-045-1091	34	41	
21450	455226		39	2	
19207	455227		41	16	
60528	5A18-9	5340-00-318-1006	32	1	
21450	501658		22	9	
21450	506209	5940-00-050-6209	8	4	
			8	17	
			9	6	
			9	17	
19204	5159378	4820-00-142-3036	21	6	
79470	5167679	4730-00-463-1588	19	16	
19207	5168890	5310-00-701-4891	20	4	
19207	5298653	5365-00-274-4544	19	14	
21450	537807		27	12	
21450	537808		27	12	
21450	537811		27	13	
21450	537812		27	13	
81216	54-43	3020-00-752-1157	31	1	
21450	542041	3120-00-661-9523	33	22	
21450	546934		21	4	
23705	563400	5365-00-350-0155	38	3	
19207	5704496	2530-00-152-2465	KIT		
19207	5705700	2530-00-162-1986	17	4	
19207	572999	5975-00-280-3357	6	12	
19200	573005	5970-00-138-5784	6	11	
21450	573007	5935-00-768-7042	6	10	
19207	573010	5935-00-300-9909	10	5	
			10	25	
			11	3	
			11	22	
73331	5939830	6220-00-752-6516	6	4	
73331	5939831	6250-00-371-4018	6	7	
73331	5939841	5330-00-353-0959	6	8	
73331	5942528	5330-00-678-9047	4	4	
21450	594261		16	5	

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
21450	594261		17	3
81343	6-4 120102BA	4730-00-069-1186	21	21
			22	4
			23	12
			23	26
81343	6-4 120202BA(LONG NUT)		21	1
			24	7
81343	6-6 120103BA	4730-00-277-8770	22	2
81343	6-6 120202BA	4730-00-289-0155	24	8
81343	6-6060102B	4730-00-270-4616	22	5
81343	6-6120103BA	4730-00-277-8770	23	15
97384	60244-90104	9905-00-740-9721	44	1
19207	6210252	9905-00-282-8276	44	5
93061	68C-6-6	4730-00-270-4616	23	9
30327	69F 3-8X3-8	4730-00-708-1996	21	15
21450	700368		33	26
19207	7045777	2530-00-670-5334	34	29
21450	705369		34	43
21450	706691	3110-00-142-4390	27	9
19207	706771	3110-00-100-0380	27	11
21450	709438		15	17
21450	712286	1440-01-146-4636	27	7
19207	7207919	5310-00-275-9460	15	20
			16	16
			17	17
19207	7320658	5330-00-297-7106	2	7
			2	11
19207	7338409	2530-00-270-3878	22	11
19207	7341497	2590-00-670-5335	34	1
19207	7341498	2590-00-670-5336	34	1
19207	7341499		34	34
19207	7341501	2590-00-670-5337	34	22
19207	7349028	5310-00-424-1452	38	2
19207	7349029	5310-00-424-1456	38	5
19207	7355938	2590-00-735-5938	7	12
19207	7365938	2590-01-091-7620	34	26
19207	7369068		31	3
19207	7373260	2530-00-737-3260	19	8
19207	7373354	5330-00-737-3354	19	6
19207	7409378	5315-00-740-9378	16	18
19207	7409379	5315-00-740-9379	16	12
			17	9
19207	7409380	2530-00-864-2990	16	6
19207	7409385	5310-00-740-9385	16	4
			17	2
82646	7412079	4730-00-729-6437	19	15
19207	7412088	5310-00-741-2088	19	12
19207	7415746	5315-00-741-5746	14	14
19207	7417135	2530-00-741-7135	KIT	
			KIT	

CROSS-REFERENCE INDEXES

		PART NUMBER INDEX		FIG.	ITEM
CAGEC	PART NUMBER		STOCK NUMBER		
19207	7417135		2530-00-741-7135	KITS	
19207	7418892		5310-00-017-9721	31	6
19207	7520513		2530-00-752-0513	38	6
19207	7521633		5310-00-752-1633	27	20
19207	7521650		5310-00-151-8992	27	21
19207	7521787		5330-00-599-4230	27	22
19207	7524043			24	2
19207	7526018		6220-00-752-6018	2	10
19207	7526020		6220-00-752-6020	2	8
19207	7534867			20	5
19207	7707070		2530-00-770-7070	38	8
19207	7722322		5365-00-772-2322	9	3
				9	14
19207	7722354		5935-00-772-2354	8	16
19207	7723308		5935-00-333-9414	8	15
				9	2
				9	13
72869	7723309		5310-00-393-6685	8	2
19204	7731424		5935-00-773-1424	7	6
19207	7731428		5935-00-773-1428	7	14
				8	12
19207	7739666		5306-00-017-9722	31	7
19207	7745464		4730-00-419-9425	19	13
19207	7760507			2	3
19207	7760598		5935-00-629-9241	10	18
19207	7760599		5935-00-776-0599	10	4
				10	24
				11	2
				11	21
19207	7762603		5365-00-629-7273	10	7
				10	21
				10	27
				11	5
				11	24
19207	7762605		5935-00-504-3176	10	12
				10	32
				11	10
				11	17
				11	29
81263	7762624		5935-00-773-6198	10	9
				10	29
				11	7
				11	26
19207	7762628		5935-00-768-7042	10	19
19204	7762642			10	13
				10	33
				11	11
				11	18
				11	30
19207	7765237		5975-00-280-3357	10	6
				10	20

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	7765237	5975-00-280-3357	10	26
			11	4
			11	23
19207	7954201		7	10
			8	22
19207	7954287		21	3
19207	7954289		21	14
19207	7954292		20	15
19207	7954293		20	12
19207	7954295		33	20
19207	7974884	5330-00-513-9932	34	5
19207	7974886	5340-00-689-6180	34	4
19207	7974887	5340-00-893-4100	34	4
19207	7974917	5365-00-624-0255	38	4
19207	7974918	5340-00-562-1943	37	5
19207	7974919	5315-00-562-1956	37	11
19207	7974921	5310-00-562-1955	37	8
19207	7978722		5	4
19207	7978723		5	3
19207	7979039	2530-00-797-9039	25	4
19207	7979179	5306-01-062-2334	15	27
			27	1
19207	7979242		20	7
19207	7979277	2530-00-797-9277	15	2
19207	7979279		15	4
19207	7979280	3120-00-740-9567	16	15
			17	15
19207	7979296	5306-00-797-9296	23	25
19207	7979330	5315-00-740-9379	15	13
19207	7979332	5310-00-797-9332	15	9
			16	19
			17	13
19207	7979333	5330-00-297-9829	15	18
19207	7979335		15	16
19207	7979336		15	15
19207	7979339	5360-00-797-9339	15	12
			16	13
			17	11
19207	7979349	5330-00-740-9550	27	5
19207	7979350		15	26
19207	7979351	5320-00-894-0081	15	32
19207	7979353	5310-00-205-8358	15	29
19207	7979362		15	25
			20	9
19207	7979366	5310-00-798-1265	37	18
19207	7979373	9905-00-282-7489	44	4
63477	7979691	4730-00-773-2163	19	5
19207	7996977	9905-00-831-6271	44	4
81343	8-41202028A	4730-00-409-7854	24	3
04009	80991		1	1
19207	8327329		32	14

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CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	8327332		32	10
19207	8327333	5340-00-040-2381	33	4
19207	8327336	3020-01-288-1966	23	8
19207	8327337	5340-00-318-1008	32	11
			34	18
19207	8327338		33	13
19207	8327357		33	28
19207	8327358		32	16
19207	8327359		36	2
19207	8327360	5365-00-040-2386	36	16
19207	8327361		36	12
19207	8327362		36	18
19207	8327364		36	8
19207	8327365	2510-00-278-6660	36	6
19207	8327368		13	1
19207	8327369	2530-00-278-6556	20	11
19207	8327374		25	1
19207	8327375	2530-00-040-2393	21	20
19207	8327379	2530-00-426-8370	21	5
			24	4
19207	8331183	5330-00-318-4317	32	8
19207	8332086	2530-00-278-2243	19	4
19207	8332543	2530-00-040-2874	KIT	
19207	8338561	5935-00-833-8561	8	7
			9	11
			9	23
19207	8338562	5970-00-833-8562	8	8
			9	10
			9	22
19207	8338564	5940-00-399-6676	8	9
			9	9
			9	21
19207	8338566	5935-00-572-9180	6	16
			8	19
19207	8338567	5310-00-833-8567	6	15
			8	20
19207	8343444	2590-00-040-2878	36	11
19207	8343452	5305-00-832-6344	32	21
19207	8343478		36	3
19207	8343509		7	3
19207	8343510		7	9
19207	8343511		7	5
19207	8343550		32	20
19207	8343551		32	5
19207	8343556		14	6
19207	8343559		14	8
19207	8343562		14	17
19207	8343563		14	5
19207	8343565		14	16
19207	8343570		22	1
19207	8343571		22	3

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	8343571		23	3
19207	8343572		21	19
19207	8343573		21	2
19207	8343574		21	16
19207	8343575		22	13
19207	8343578		7	11
19207	8343579		7	2
19207	8343586		27	10
19207	8343588		27	2
19207	8343590	2530-00-693-0729	23	1
19207	8343591		33	18
19207	8343595		33	21
19207	8343597	3020-00-389-8199	33	6
19207	8343598		33	24
19207	8343599		33	12
19207	8343600		33	25
19207	8343601	5310-01-280-9382	33	23
19207	8343602		33	27
19207	8343608		12	1
19207	8343698	4710-00-443-0556	22	8
19207	8343702		44	3
19207	8343710		42	14
19207	8343712		42	12
19207	8343716		41	6
19207	8343717		41	5
19207	8343727		10	3
19207	8343728		11	20
19207	8343729		10	23
19207	8343730		11	1
19207	8343731		10	14
19207	8343733		5	1
19207	8343734		11	14
19207	8343738		30	12
19207	8343742	2590-01-322-2621	30	15
19207	8343743		30	13
19207	8343744		30	9
19207	8343745		30	8
19207	8343747		30	14
19207	8343749		BULK	1
19207	8343749-86		39	15
19207	8343750-80		39	14
19207	8343751-97		39	6
19207	8343752-106		39	11
19207	8343753-80		39	13
19207	8343754-77		39	7
19207	8343755-86		39	12
19207	8343756-97		39	8
19207	8343757-106		39	10
19207	8343758-80		39	5
19207	8343759-77		39	3
19207	8343760-86		39	9

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CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	8343761-97		39	4
19207	8343762		39	16
19207	8343786		41	14
19207	8343792		41	18
19207	8343821		42	13
19207	8343830		42	32
19207	8343831		BULK	2
19207	8343831-70-40		42	6
			42	17
19207	8343836		42	9
			42	23
19207	8343837		42	26
19207	8343838		42	25
19207	8352618	2510-01-035-3967	40	1
19207	8352619	2510-01-035-3968	40	5
19207	8352620	2510-01-035-3969	40	3
19207	8352621	2510-01-035-3970	40	8
19207	8365184		23	7
19207	8365185		23	5
19207	8365186		23	4
19207	8365187		23	6
19207	8365189		23	1
19207	8365207		29	14
19207	8365208		29	9
19207	8374803		BULK	3
19207	8374803-77-36		41	13
19207	8374804		BULK	4
19207	8374804-100-36		41	11
19207	8374805		BULK	5
19207	8374805-86-36		41	10
19207	8374806		BULK	6
19207	8374806-90-36		41	8
19207	8374807		BULK	7
19207	8374807-84-3		41	3
19207	8374808		BULK	8
19207	8374808-75-2		41	2
19207	8374809		BULK	9
19207	8374809-77-39		41	12
19207	8374810		BULK	10
19207	8374810-100-39		41	4
19207	8374811		BULK	11
19207	8374811-86-39		41	9
19207	8374812		BULK	12
19207	8374812-90-39		41	7
19207	8374830		42	33
19207	8374833		42	24
19207	8374835		42	27
19207	8374836		42	28
19207	8374837		42	1
19207	8374840		42	11
19207	8374842		41	22

CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	8374844		41	25
19207	8374847		42	3
			42	16
19207	8374939		41	1
19207	8376423		41	15
19207	8376596	5315-00-316-1063	34	21
19207	8376610	3020-00-562-0487	34	6
19207	8376611	3020-00-562-0488	34	47
19207	8376671		34	19
19207	8379855	3020-00-319-6011	34	42
19207	8380801		26	9
19207	8380805	2530-00-318-1227	26	4
19207	8380814		26	7
19207	8380816		26	5
19207	8380817		26	3
81336	8630-20-5		15	8
19207	8683490	5935-00-854-4447	8	14
19207	8701325	5310-00-655-9860	9	5
			9	16
19207	8710672	5365-00-205-5105	18	15
19207	8710673	5310-00-091-9775	18	16
19207	8710676	4710-00-534-2347	19	11
19207	8710680		18	14
19207	8710681		18	14
19207	8710683	5306-00-297-8274	18	12
19207	8710685	5310-00-220-6587	18	11
19207	8710692	2530-00-091-9776	18	19
19207	8710693	5340-01-053-5090	18	2
19207	8710694	2530-00-179-3635	18	2
19207	8710695	3020-00-287-8215	18	18
19207	8710696	5360-00-205-4654	18	26
19207	8710697	5360-00-205-4657	18	13
19207	8710707		18	21
19207	8710708	2530-00-091-9777	18	25
19207	8710711	5310-00-753-4231	18	20
19207	8710713		18	23
19207	8710714		18	9
19207	8710715	2530-00-318-1225	18	6
19207	8710716	2530-00-773-9381	18	8
19207	8710718	2530-01-094-7940	18	3
19207	8710719		18	1
19207	8710720		18	1
19207	8710735		12	1
19207	8710736	3040-00-757-1718	27	10
19207	8710742	2530-01-110-4321	27	3
19207	8710743	5330-00-562-1947	27	22
19207	8710744	5340-00-562-1948	27	23
19207	8710746	2530-00-624-0256	13	1
19207	8722139-1		29	6
			30	2
19207	8737000	5340-00-970-3258	37	7

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CAGEC	PART NUMBER	PART NUMBER INDEX STOCK NUMBER	FIG.	ITEM
19207	8739336	2510-00-926-3849	40	6
19207	8739367	2510-00-074-2747	40	2
19207	8739370	2510-00-074-2754	40	4
19207	8739372	2510-00-074-2756	40	10
19207	8739373	2510-00-078-9779	40	7
19207	8739374	2510-00-074-2762	40	9
19207	8741646	6220-00-775-2384	4	3
19207	8741650	6220-00-433-5966	4	6
19207	8742576	9905-00-624-6148	44	5
19207	8742682		37	16
19207	8742683	5306-00-624-0257	37	6
19207	8742715		23	2
19207	8742862	5306-00-678-4769	37	14
19207	8747994		27	8
19207	8758001		37	1
19207	8758256		17	6
19207	8758259	2530-00-920-7568	19	7
19207	8758318		16	7
			17	5
66640	9112001	4730-00-018-9566	33	29
12204	929721	5305-00-350-0158	38	7

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FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
BULK	1		19207	8343749
BULK	2		19207	8343831
BULK	3		19207	8374803
BULK	4		19207	8374804
BULK	5		19207	8374805
BULK	6		19207	8374806
BULK	7		19207	8374807
BULK	8		19207	8374808
BULK	9		19207	8374809
BULK	10		19207	8374810
BULK	11		19207	8374811
BULK	12		19207	8374812
BULK	13	6145-00-152-6499	81349	M13486-1-5
BULK	14		19207	22-W-1623-160
BULK	15		80205	22-C-2020
KIT		2530-00-040-2874	19207	8332543
KIT		2530-00-152-2465	19207	5704496
KIT		2530-00-696-0351	40342	RN13A
KIT		2530-00-736-2426	40342	RN218
KIT		2530-00-741-7135	19207	7417135
KIT		2530-00-741-7135	19207	7417135
KITS		2530-00-741-7135	19207	7417135
1	1		04009	80991
1	2	5305-00-432-4163	96906	MS51861-24
1	3	5930-00-615-9215	90299	AS113709
1	4	5930-00-655-1514	96906	MS35058-22
1	5	5310-00-616-2973	96906	MS25082-21
1	6	5310-00-905-5454	96906	MS35333-121
1	7	5310-00-924-5968	96906	MS25081-4
1	8	5930-00-615-9215	90299	AS113709
2	1	5305-00-115-9526	96906	MS18154-58
2	2	5310-00-261-7340	96906	MS35338-8
2	3		19207	7760507
2	4	6220-00-500-0437	96906	MS53047-1
2	5	6240-00-044-6914	96906	MS35478-1683
2	6	6240-00-019-0877	96906	MS15570-1251
2	7	5330-00-297-7106	19207	7320658
2	8	6220-00-752-6020	19207	7526020
2	9	6220-00-669-5623	96906	MS51329-1
2	10	6220-00-752-6018	19207	7526018
2	11	5330-00-297-7106	19207	7320658
2	12	6240-00-019-0877	96906	MS15570-1251
2	13	6220-00-500-0437	96906	MS53047-1
3	1	6220-01-093-4439	96906	MS52125-2
3	2	6220-00-179-4324	19207	11639535
3	3		19207	1163519-2
3	4	6240-00-044-6914	96906	MS35478-1683
3	5	6240-00-019-3093	96906	MS15570-623
3	6	2510-01-067-4717	19207	11639520
3	7	6240-00-019-0877	96906	MS15570-1251
3	8	5310-00-637-9541	96906	MS35338-46

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FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
3	9	5305-00-115-9526	96906	MS18154-58
4	1	6220-00-846-9745	96906	MS51302-1
4	2	5305-00-764-0070	96906	MS51959-46
4	3	6220-00-775-2384	19207	8741646
4	4	5330-00-678-9047	73331	5942528
4	5	6240-00-019-0877	96906	MS15570-1251
4	6	6220-00-433-5966	19207	8741650
4	7	5310-00-045-3296	96906	MS35338-43
4	8	5306-00-225-9083	96906	MS90726-26
5	1		19207	8343733
5	2	6220-00-026-4797	01857	CE-89909
5	3		19207	7978723
5	4		19207	7978722
5	5	6240-00-044-6914	96906	MS35478-1683
5	6		19207	171225
6	1	6220-00-577-3434	96906	MS35423-1
6	1	6220-00-577-3435	96906	MS35424-1
6	1	6220-00-726-1916	96906	MS35423-2
6	1	6220-00-727-3288	96906	MS35424-2
6	2	6220-00-729-9295	96906	MS35422-1
6	3	5305-00-701-5071	96906	MS51959-61
6	4	6220-00-752-6516	73331	5939830
6	5	5310-00-596-8169	78553	C1059-014-1
6	6	6240-00-019-0877	96906	MS15570-1251
6	7	6250-00-371-4018	73331	5939831
6	8	5330-00-353-0959	73331	5939841
6	9	6220-00-299-7425	96906	MS35421-1
6	9	6220-00-299-7426	96906	MS35421-2
6	9	6220-00-752-5992	96906	MS35420-1
6	9	6220-00-752-5993	96906	MS35420-2
6	10	5935-00-768-7042	21450	573007
6	11	5970-00-138-5784	19200	573005
6	12	5975-00-280-3357	19207	572999
6	13		19207	171732
6	13		19207	171732
6	14	5999-00-057-2929	96906	MS27148-2
6	15	5310-00-833-8567	19207	8338567
6	16	5935-00-572-9180	19207	8338566
7	1	5305-00-993-2461	96906	MS35207-281
7	2		19207	8343579
7	3		19207	8343509
7	4	9905-00-752-4649	81349	M43436/1-1
7	5		19207	8343511
7	6	5935-00-773-1424	19204	7731424
7	7	5310-00-582-5965	96906	MS35338-44
7	8		24617	218563
7	9		19207	8343510
7	10		19207	7954201
7	11		19207	8343578
7	12	2590-00-735-5938	19207	7355938
7	13	5935-00-846-3884	96906	MS75021-2

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FIG.	ITEM	FIRGURE AND ITEM NUMBER STOCK NUMBER	INDEX CAGEC	PART NUMBER
7	14	5935-00-773-1428	19207	7731428
7	15	5305-00-819-5132	88044	AN504-428R8
8	1	5995-00-757-2755	19207	10924618
8	2	5310-00-393-6685	72869	7723309
8	3	5935-00-846-3884	96906	MS75021-2
8	4	5940-00-050-6209	21450	506209
8	5		19207	1526499-1
8	6	9905-00-752-4649	96906	MS39020-1
8	7	5935-00-833-8561	19207	8338561
8	8	5970-00-833-8562	19207	8338562
8	9	5940-00-399-6676	19207	8338564
8	10	5310-00-852-8593	96906	MS35649-103
8	11	5310-00-045-3296	96906	MS35338-43
8	12	5935-00-773-1428	19207	7731428
8	13	5305-00-984-6211	96906	MS35206-264
8	14	5935-00-854-4447	19207	8683490
8	15	5935-00-333-9414	19207	7723308
8	16	5935-00-772-2354	19207	7722354
8	17	5940-00-050-6209	21450	506209
8	18	9905-00-752-4649	96906	MS39020-1
8	19	5935-00-572-9180	19207	8338566
8	20	5310-00-833-8567	19207	8338567
8	21	5999-00-057-2929	96906	MS27148-2
8	22		19207	7954201
9	1		19207	10924617
9	2	5935-00-333-9414	19207	7723308
9	3	5365-00-772-2322	19207	7722322
9	4	5935-00-062-7450	77820	10-42622-23P
9	5	5310-00-655-9860	19207	8701325
9	6	5940-00-050-6209	21450	506209
9	7		96906	MS39020-2
9	8		19207	1526499-1
9	9	5940-00-399-6676	19207	8338564
9	10	5970-00-833-8562	19207	8338562
9	11	5935-00-833-8561	19207	8338561
9	12	2920-01-074-8354	19207	10935061
9	13	5935-00-333-9414	19207	7723308
9	14	5365-00-772-2322	19207	7722322
9	15	5935-00-062-7450	77820	10-42622-23P
9	16	5310-00-655-9860	19207	8701325
9	17	5940-00-050-6209	21450	506209
9	18		96906	MS39020-2
9	19		19207	10924619
9	20		19207	1526499-1
9	21	5940-00-399-6676	19207	8338564
9	22	5970-00-833-8562	19207	8338562
9	23	5935-00-833-8561	19207	8338561
9	24	5940-00-113-3144	96906	MS20659-126
9	25	5999-00-057-2929	96906	MS27148-2
10	1		78553	C3278
10	2		19207	171656

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FIG.	ITEM	FIGURE AND ITEM NUMBER STOCK NUMBER	INDEX CAGEC	PART NUMBER
10	3		19207	8343727
10	4	5935-00-776-0599	19207	7760599
10	5	5935-00-300-9909	19207	573010
10	6	5975-00-280-3357	19207	7765237
10	7	5365-00-629-7273	19207	7762603
10	8	5999-00-057-2929	96906	MS27148-2
10	9	5935-00-773-6198	81263	7762624
10	10	9905-00-752-4649	81349	M43436/1-1
10	11		19207	1526499-1
10	12	5935-00-504-3176	19207	7762605
10	13		19204	7762642
10	14		19207	8343731
10	15	5999-00-057-2929	96906	MS27148-2
10	16	9905-00-752-4649	81349	M43436/1-1
10	17		19207	1526499-1
10	18	5935-00-629-9241	19207	7760598
10	19	5935-00-768-7042	19207	7762628
10	20	5975-00-280-3357	19207	7765237
10	21	5365-00-629-7273	19207	7762603
10	22	5999-00-057-2929	96906	MS27148-2
10	23		19207	8343729
10	24	5935-00-776-0599	19207	7760599
10	25	5935-00-300-9909	19207	573010
10	26	5975-00-280-3357	19207	7765237
10	27	5365-00-629-7273	19207	7762603
10	28	5999-00-057-2929	96906	MS27148-2
10	29	5935-00-773-6198	81263	7762624
10	30	9905-00-752-4649	81349	M43436/1-1
10	31		19207	1526499-1
10	32	5935-00-504-3176	19207	7762605
10	33		19204	7762642
11	1		19207	8343730
11	2	5935-00-776-0599	19207	7760599
11	3	5935-00-300-9909	19207	573010
11	4	5975-00-280-3357	19207	7765237
11	5	5365-00-629-7273	19207	7762603
11	6	5999-00-057-2929	96906	MS27148-2
11	7	5935-00-773-6198	81263	7762624
11	8	9905-00-752-4649	81349	M43436/1-1
11	9		19207	1526499-1
11	10	5935-00-504-3176	19207	7762605
11	11		19204	7762642
11	12	5340-00-752-6595	24617	1580891
11	13		19207	171732
11	14		19207	8343734
11	15	9905-00-752-4649	81349	M43436/1-1
11	16		19207	1526499-1
11	17	5935-00-504-3176	19207	7762605
11	18		19204	7762642
11	19	5999-00-057-2929	96906	MS27148-2
11	20		19207	8343728

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM STOCK NUMBER	NUMBER INDEX CAGEC	PART NUMBER
11	21	5935-00-776-0599	19207	7760559
11	22	5935-00-300-9909	19207	573010
11	23	5975-00-280-3357	19207	7765237
11	24	5365-00-629-7273	19207	7762603
11	25	5999-00-057-2929	96906	MS27148-2
11	26	5935-00-773-6198	81263	7762624
11	27	9905-00-752-4649	81349	M43436/1-1
11	28		19207	1526499-1
11	29	5935-00-504-3176	19207	7762605
11	30		19204	7762642
12	1		19207	8343608
12	1		19207	8710735
13	1		19207	8327368
13	1	2530-00-624-0256	19207	8710746
14	1	5315-00-140-1938	96906	MS35810-6
14	2		21450	104039
14	3	5315-00-839-5822	96906	MS24665-353
14	4		21450	218571
14	5		19207	8343563
14	6		19207	8343556
14	7	4730-00-050-4208	96906	MS15003-1
14	8		19207	8343559
14	9		21450	100030
14	10		24167	103321
14	11		21450	218565
14	12	2530-00-040-2401	92867	01166202
14	13	5315-00-842-3044	96906	MS24665-283
14	14	5315-00-741-5746	19207	7415746
14	15	5310-00-809-3078	96906	MS27183-11
14	16		19207	8343565
14	17		19207	8343562
14	18		12204	103323
14	19		21450	100027
14	20		21450	117982
14	21		21450	100056
15	1	2530-00-797-9278	78500	A1-372282E
15	2	2530-00-797-9277	19207	7979277
15	3	5320-00-058-9883	96906	MS16536-172
15	4		19207	7979279
15	5	3120-00-350-5466	78500	1199A625
15	6	5305-01-122-5468	11083	102570
15	7	3040-00-374-2127	56697	UB5009
15	8		81336	8630-20-5
15	9	5310-00-797-9332	19207	7979332
15	10	2530-00-204-3622	78500	1745E5Z
15	11	5315-00-461-3835	78500	1759E5
15	12	5360-00-797-9339	19207	7979339
15	13	5315-00-740-9379	19207	7979330
15	14		78500	A3736P16
15	15		19207	7979336
15	16		19207	7979335

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FIG.	ITEM	FIGURE AND ITEM STOCK NUMBER	NUMBER INDEX GAGEC	PART NUMBER
15	17		21450	709438
15	18	5330-00-297-9829	19207	7979333
15	19	5310-00-584-7888	96906	MS35338-51
15	20	5310-00-275-9460	19207	7207919
15	21	5310-00-245-3594	96906	MS35690-524
15	22		19207	103324
15	23		19207	117050
15	24	5310-00-209-0965	96906	MS35338-47
15	25		19207	7979362
15	26		19207	7979350
15	27	5306-01-062-2334	19207	7979179
15	28	4730-00-050-4208	96906	MS15003-1
15	29	5310-00-205-8358	19207	7979353
15	30		78500	2710F6
15	30	2530-00-797-9317	78500	2710E5
15	31		19207	181455
15	32	5320-00-894-0081	19207	7979351
16	1	5305-00-912-5113	96906	MS51096-359
16	2	5310-00-004-5033	94231	3-07620-311
16	3	5340-00-656-4895	78500	2797E5
16	4	5310-00-740-9385	19207	7409385
16	5		21450	594261
16	6	2530-00-864-2990	19207	7409380
16	7		19207	8758318
16	8		78500	2740Z26
16	9	5320-00-058-9883	96906	MS16536-172
16	10	2530-00-164-0986	63477	F665
16	11	5315-00-842-3044	96906	MS24665-283
16	12	5315-00-740-9379	19207	7409379
16	13	5360-00-797-9339	19207	7979339
16	14	5315-00-616-5529	96906	MS35756-16
16	15	3120-00-740-9567	19207	7979280
16	16	5310-00-275-9460	19207	7207919
16	17	5310-00-584-7888	96906	MS35338-51
16	18	5315-00-740-9378	19207	7409378
16	19	5310-00-797-9332	19207	7979332
16	20	2530-00-204-3622	78500	1745E5Z
16	21	5315-00-461-3835	78500	1759E5
17	1	2530-00-692-6133	78500	A17373618
17	2	5310-00-740-9385	19207	7409385
17	3		21450	594261
17	4	2530-00-162-1986	19207	5705700
17	5		19207	8758318
17	6		19207	8758256
17	7	5320-00-058-9883	96906	MS16536-172
17	8	2530-00-164-0986	63477	F665
17	9	5315-00-740-9379	19207	7409379
17	10	5315-00-842-3044	96906	MS24665-283
17	11	5360-00-797-9339	19207	7979339
17	12	5315-00-461-3835	78500	1759E5
17	13	5310-00-797-9332	19207	7979332

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FIG.	ITEM	FIGURE AND ITEM STOCK NUMBER	NUMBER INDEX CAGEC	PART NUMBER
17	14	2530-00-204-3622	78500	1745-E-5
17	15	3120-00-740-9567	19207	7979280
17	16	5310-00-584-7888	96906	MS35338-51
17	17	5310-00-275-9460	19207	7207919
18	1		19207	8710719
18	1		19207	8710720
18	2	2530-00-179-3635	19207	8710694
18	2	5340-01-053-5090	19207	8710693
18	3		63477	FF20339
18	3	2530-01-094-7940	19207	8710718
18	4	5310-00-407-9566	96906	MS35338-45
18	5	5306-00-225-8499	96906	MS90725-34
18	6	2530-00-318-1225	19207	8710715
18	7	5320-00-011-9951	96906	MS16536-175
18	8	2530-00-773-9381	19207	8710716
18	9		19207	8710714
18	10	5310-00-550-1130	96906	MS35333-40
18	11	5310-00-220-6587	19207	8710685
18	12	5306-00-297-8274	19207	8710683
18	13	5360-00-205-4657	19207	8710697
18	14		19207	8710680
18	14		19207	8710681
18	15	5365-00-205-5105	19207	8710672
18	16	5310-00-091-9775	19207	8710673
18	17	3120-00-091-9774	63477	FC10937
18	18	3020-00-287-8215	19207	8710695
18	19	2530-00-091-9776	19207	8710692
18	20	5310-00-753-4231	19207	8710711
18	21		19207	8710707
18	22	5330-00-582-2133	96906	MS28775-011
18	23		19207	8710713
18	23		63477	FF20318A
18	24	3020-00-287-8211	63477	F20321
18	25	2530-00-091-9777	19207	8710708
18	26	5360-00-205-4654	19207	8710696
18	27	5315-00-705-4686	30076	200157
19	1	4720-00-809-2750	96906	MS521301A204120
19	2	4730-00-908-3194	96906	MS35842-11
19	3	4710-00-511-1692	23705	A298322
19	4	2530-00-278-2243	19207	8332086
19	5	4730-00-773-2163	63477	7979691
19	6	5330-00-737-3354	19207	7373354
19	7	2530-00-776-0966	63477	F56115
19	7	2530-00-920-7568	19207	8758259
19	8	2530-00-737-3260	19207	7373260
19	9	4710-00-795-0544	63477	FD20333
19	10	4730-00-200-0442	92679	117171R1
19	11	4710-00-534-2347	19207	8710676
19	12	5310-00-741-2088	19207	7412088
19	13	4730-00-419-9425	19207	7745464
19	14	5365-00-274-4544	19207	5298653

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FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STICK NUMBER	CAGEC	PART NUMBER
19	15	4730-00-729-6437	82646	7412079
19	16	4730-00-463-1588	79470	5167679
19	17	5310-00-880-7745	96906	MS51968-11
20	1	5305-00-225-3841	96906	MS90728-11
20	2	5310-00-584-5272	80045	23MS35338-10
20	3	3040-00-797-9284	78500	3799Q407
20	3	3040-00-797-9285	78500	3799P406
20	4	5310-00-701-4891	19207	5168890
20	5		19207	7534867
20	6	5310-00-880-7745	96906	MS51968-11
20	7		19207	7979242
20	8	5365-00-797-9358	78500	174482
20	9		19207	7979362
20	10	5305-00-709-8517	96906	MS90727-85
20	11	2530-00-278-6556	19207	8327369
20	12		19207	7954293
20	13		96906	MS51624-2112
20	14	5315-00-839-5822	96906	MS24665-353
20	15		19207	7954292
21	1		81343	6-4 120202BA (L G NUT)
21	2		19207	8343573
21	3		19207	7954287
21	4		21450	546934
21	5	2530-00-426-8370	19207	8327379
21	6	4820-00-142-3036	19204	5159378
21	7	2530-00-021-2366	96906	MS53004-2
21	8		21450	100026
21	9	5310-00-261-7340	96906	MS35338-8
21	10		21450	218565
21	11	4730-00-246-9200	24617	144112
21	12		06853	224942
21	13		21450	444577
21	14		19207	7954289
21	15	4730-00-708-1996	30327	69F3-8X3-8
21	16		19207	8343574
21	17		19207	225831
21	18		21450	100134
21	19		19207	8343572
21	20	2530-00-040-2393	19207	8327375
21	21	4730-00-069-1186	81343	6-4 120102BA
22	1		19207	8343570
22	2	4730-00-277-8770	81343	6-6 120103BA
22	3		19207	8343571
22	4	4730-00-069-1186	81343	6-4 120102BA
22	5	4730-00-270-4616	81343	6-60601028
22	6	4730-00-231-5647	96906	MS39232-4
22	7		21450	219754
22	8	4710-00-443-0556	19207	8343698
22	9		21450	501658
22	10	5330-00-090-2128	06853	213630

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FIG.	ITEM	FIGURE AND ITEM STOCK NUMBER	NUMBER INDEX CAGEC	PART NUMBER
22	11	2530-00-270-3878	19207	7338409
22	12		19207	171732
22	13		19207	8343575
23	1		19207	8365189
23	2		19207	8742715
23	3		19207	8343571
23	4		19207	8365186
23	5		19207	8365185
23	6		19207	8365187
23	7		19207	8365184
23	8	4730-00-595-0083	96906	MS35746-1
23	9	4730-00-270-4616	93061	68C-6-6
23	10	5310-00-971-7990	96906	MS35691-69
23	11	4730-00-231-5647	96906	MS39232-4
23	12	4730-00-069-1186	81343	6-4 120102BA
23	13	5330-00-090-2128	06853	213630
23	14	4730-00-231-5644	96906	MS39232-2
23	15	4730-00-277-8770	81343	6-6120103BA
23	16		21450	219621
23	17	2530-00-797-9295	23705	A298749
23	18	2530-00-741-5748	40342	N-12970-A
23	19	5360-00-706-9054	06853	235093
23	20	5330-00-285-5123	91340	M4X509
23	21	4730-00-580-8457	06853	235091
23	22	4730-00-221-2136	96906	MS20913-15
23	23	5310-00-679-3606	40342	N12972
23	24	2940-00-741-1081	23705	N12971
23	25	5306-00-797-9296	19207	7979296
23	26	4730-00-069-1186	81343	6-4 120102BA
23	27	5310-00-761-6882	96906	MS51967-2
23	28	5310-00-582-5965	96906	MS35338-44
24	1	5305-00-269-2803	96906	MS90726-60
24	2		19207	7524043
24	3	4730-00-409-7854	81343	8-4120202BA
24	4	2530-00-426-8370	19207	8327379
24	5	5310-00-732-0559	96906	MS51968-8
24	6	5310-00-637-9541	96906	MS35338-46
24	7		81343	6-4 120202BA (LO G NUT)
24	8	4730-00-289-0155	81343	6-6 120202BA
24	9	4730-00-277-8750	81343	4-2120102BA
24	10	2530-00-021-2366	96906	MS53004-2
25	1		19207	8327374
25	2	5310-00-820-6653	12603	23E10
25	3	5310-00-763-8905	96906	MS51968-20
25	4	2530-00-797-9039	19207	7979039
25	5	5306-00-225-9088	96906	MS90726-33
25	6		40342	N10497
25	7		40342	N-2318
25	8		40342	N10521
25	9		40342	11194

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FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
25	10		40342	N11335A
25	11		40342	N12471
25	12		40342	104930
25	13	5310-00-732-0560	96906	MS51968-14
25	14		40342	N10447
25	15	5315-00-839-5822	96906	MS24665-353
25	16	5315-00-140-1938	96906	MS35810-6
25	17	5310-00-880-7746	96906	MS51968-5
25	18	5310-00-407-9566	96906	MS35338-45
25	19	5310-00-820-6653	12603	23E10
25	20	5310-00-763-8905	96906	MS51968-20
26	1		75237	N3782
26	1	2530-00-142-6045	19207	11668361
26	2	5305-00-269-2803	96906	MS90726-60
26	3		19207	8380817
26	4	2530-00-318-1227	19207	8380805
26	5		19207	8380816
26	6		40342	N10673A
26	7		19207	8380814
26	8		96906	MS28775-114
26	9		19207	8380801
26	10	5310-00-637-9541	96906	MS35328-46
26	11	5310-00-732-0559	96906	MS51968-8
26	12	5310-00-732-0559	96906	MS51968-8
26	13	5310-00-637-9541	96906	MS35338-46
27	1	5306-01-062-2334	19207	7979179
27	2		19207	8343588
27	3		78500	3268X180
27	3	2530-01-110-4321	19207	8710742
27	4	2530-00-093-5597	78500	3219X2052
27	5	5330-00-740-9550	19207	7979349
27	6	2590-00-740-9553	78500	1199F1436
27	7	1440-01-146-4636	21450	712286
27	8		19207	8747994
27	8	3040-00-040-2383	78500	A333V854
27	9	3110-00-142-4390	21450	706691
27	10		19207	8343586
27	10	3040-00-757-1718	19207	8710736
27	11	3110-00-100-0380	19207	706771
27	12		21450	537807
27	12		21450	537808
27	13		21450	537811
27	13		21450	537812
27	14	5310-00-880-7745	96906	MS51968-11
27	15	5310-00-209-0965	96906	MS35338-47
27	16	5340-00-211-6129	78500	1107F84
27	17	5306-00-740-9555	96906	MS51946-6
27	17	5306-00-797-9320	96906	MS51946-5
27	18	3110-00-100-3096	08162	BT3994
27	19	5310-00-292-7851	78500	1229C862
27	20	5310-00-752-1633	19207	7521633

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM STOCK NUMBER	NUMBER INDEX CAGEC	PART NUMBER
27	21	5310-00-151-8992	19207	7521650
27	22	5330-00-562-1947	19207	8710743
27	22	5330-00-599-4230	19207	7521787
27	23	2530-00-026-0255	78500	3262H86
27	23	5340-00-562-1948	19207	8710744
27	24		80045	23MS35338-45
27	24	5310-00-584-5272	24617	187130
27	25	5305-00-915-8087	96906	MS18154-113
27	25	5306-00-226-4822	96906	MS90728-29
27	26	2530-00-738-9061	96906	MS53045-3
28	1	2610-00-262-8677	81348	ZZ-T-381M/GROUP: /9.00-20/C/TBCC
28	2	2610-00-269-7383	24617	2289994
28	3	2640-00-052-0860	96906	MS51358-4
28	4	2640-00-060-3550	51665	US48
29	1	5310-00-088-1251	96906	MS51922-1
29	2		19207	11597663
29	3	5306-00-225-8499	96906	MS90725-34
29	4	5305-00-225-3843	96906	MS90728-8
29	5	2540-00-921-5069	96906	MS51331-6
29	6		19207	8722139-1
29	7	5310-00-984-3806	96906	MS51922-9
29	8	5305-00-071-2505	96906	MS90728-7
29	9		19207	8365208
29	10	5310-00-809-4058	96906	MS27183-10
29	11	5310-00-582-5965	96906	MS35338-44
29	12	5310-00-761-6882	96906	MS51967-2
29	13		19207	11625195-1
29	14		19207	8365207
29	15		19207	11625195-2
29	16		19207	11625190
30	1	5310-00-984-3806	96906	MS51922-9
30	2		19207	8722139-1
30	3	5310-00-088-1251	96906	MS51922-1
30	4		19207	11597663
30	5	5305-00-225-3843	96906	MS90728-8
30	6	5306-00-225-8499	96906	MS90725-34
30	7	2540-00-921-5069	96906	MS51331-6
30	8		19207	8343745
30	9		19207	8343744
30	10	5315-00-011-9120	96906	MS24665-287
30	11	5315-00-839-5822	96906	MS24665-353
30	12		19207	8343738
30	13		19207	8343743
30	14		19207	8343747
30	15	2590-01-322-2621	19207	8343742
31	1	3020-00-752-1157	81216	54-43
31	2	5315-00-849-9854	96906	MS24665-498
31	3		19207	7369068
31	4	5305-00-915-8087	96906	MS18154-113
31	5		80205	NAS54055-2

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER STOCK NUMBER	INDEX CAGEC	PART NUMBER
31	6	5310-00-017-9721	19207	7418892
31	7	5306-00-017-9722	19207	7739666
31	8		19207	22-C-2020-1
31	9	5310-00-637-9541	96906	MS35338-46
31	10	5310-00-761-6882	96906	MS51967-2
32	1	5340-00-318-1006	60528	5A18-9
32	2		96906	MS24665-285
32	3	5310-00-842-1490	96906	MS35692-37
32	4	5310-00-080-6004	96906	MS27183-14
32	5		19207	8343551
32	6	5310-00-732-0559	96906	MS51968-8
32	7	5310-00-261-7340	96906	MS35338-8
32	8	5330-00-318-4317	19207	8331183
32	9	5305-00-269-2803	96906	MS90726-60
32	10		19207	8327322
32	11	5340-00-318-1008	19207	8327337
32	12	5305-00-782-9489	96906	MS90728-66
32	13	5305-00-727-2283	96906	MS90727-162
32	14		19207	8327329
32	15	5305-00-726-2551	96906	MS90727-164
32	16		19207	8327358
32	17	5310-00-820-6653	12603	23E10
32	18	5310-00-763-8905	96906	MS51968-20
32	19	5305-00-726-2550	96906	MS90727-163
32	20		19207	8343550
32	21	5305-00-832-6344	19207	8343452
33	1	2530-00-693-0729	19207	8343590
33	1	2590-00-693-0728	60528	4A5-33
33	2	5305-00-990-6444	96906	MS35207-261
33	3	5310-00-045-3296	96906	MS35338-43
33	4	5340-00-040-2381	19207	8327333
33	5	5310-00-680-9290	80205	NAS1022N17
33	6	3020-00-389-8199	19207	8343597
33	7		21450	142534
33	8	3020-01-288-1966	19207	8327336
33	9		19207	22-W-1633-160-1
33	10	5305-00-914-6134	96906	MS18153-113
33	11	5315-00-616-5530	96906	MS35756-15
33	12		19207	8343599
33	13		19207	8327338
33	14		29198	C1845
33	15	3120-00-893-4972	23705	333561
33	16	5305-00-958-5245	96906	MS35190-288
33	17	4730-00-050-4208	96906	MS15033-1
33	18		19207	8343591
33	19	4730-00-221-2138	73992	42
33	20		19207	7954295
33	21		19207	8343595
33	22	3120-00-661-9523	21450	542041
33	23	5310-01-280-9382	19207	8343601
33	24		19207	8343598

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
33	25		19207	8343600
33	26		21450	700368
33	27		19207	8343602
33	28		19207	8327357
33	29	4730-00-018-9566	66640	9112001
34	1	2590-00-670-5335	19207	7341497
34	1	2590-00-670-5336	19207	7341498
34	2	5305-00-988-1725	96906	MS35206-281
34	3	5310-00-045-3296	96906	MS35338-43
34	4	5340-00-689-6180	19207	7974866
34	4	5340-00-893-4100	19207	7974887
34	5	5330-00-513-9932	19207	7974884
34	5	5330-00-513-9933	80837	J32036
34	6	3020-00-562-0487	19207	8376610
34	7	5310-00-584-5272	80045	23MS35338-10
34	8	5305-00-044-4153	96906	MS90725-109
34	9		04632	J-1282
34	10	5305-00-782-9489	96906	MS90728-66
34	11	2530-00-040-2856	80837	J3279
34	12	4730-00-050-4203	96906	MS15001-1
34	13		21450	451009
34	14	3040-00-670-5333	80837	J3206
34	15	5305-00-821-3869	96906	MS90728-65
34	16	3010-00-397-6160	80837	J318
34	17	3040-01-173-2246	80434	J-3293-1
34	18	5340-00-318-1008	19207	8327337
34	19		19207	8376671
34	20		80837	J3265
34	21	5315-00-316-1063	19207	8376596
34	22	2590-00-670-5337	19207	7341501
34	23		04632	3269-13
34	24	5305-00-071-2081	96906	MS90728-125
34	25	5310-00-809-5997	96906	MS27183-17
34	26	2590-01-091-7620	19207	7365938
34	27	2590-00-030-6943	80837	J1386
34	28	5310-00-841-2041	96906	MS35692-33
34	29	2530-00-670-5334	19207	7045777
34	30	5315-00-515-0495	80837	J3237
34	31	3110-00-117-0759	96906	MS17169-12
34	32	2590-00-510-8829	80837	J-1276
34	33	5365-00-678-6872	80837	J1206A
34	34		04632	J-3228-7-CR
34	34		19207	7341499
34	35	5315-00-014-2543	96906	MS35671-64
34	36	5315-00-060-5074	96906	MS35671-55
34	37	5305-00-983-6654	96906	MS16998-31
34	38	3040-00-678-4081	80837	J-3207-1
34	39	5310-00-220-6848	66640	270252
34	40	3020-00-701-4980	80837	J344-1F
34	41	5310-00-045-1091	19207	451091
34	42	3020-00-319-6011	19207	8379855

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM STOCK NUMBER	NUMBER INDEX CAGEC	PART NUMBER
34	43		21450	705369
34	44	3110-00-100-0515	65282	A10560X
34	45	5360-00-679-5658	80837	J3205
34	46	3110-00-100-6164	96906	MS19059-2419
34	47	3020-00-562-0488	19207	8376611
35	1	5310-00-087-0057	96906	MS27183-2
35	2	5305-00-724-7222	96906	MS90728-164
35	3		19207	11625074
35	4	5305-00-724-7221	96906	MS90728-163
35	5	5310-00-269-4040	96906	MS51922-49
36	1	4730-00-050-4208	96906	MS15003-1
36	2		19207	8327359
36	3		19207	8343478
36	4	5310-00-070-1902	96906	MS35692-77
36	5	5315-00-298-1499	96906	MS24665-360
36	6	2510-00-278-6660	19207	8327365
36	7	5310-00-754-2005	96906	MS35338-52
36	8		19207	8327364
36	9	5305-00-993-2459	96906	MS35207-283
36	10	5310-00-809-3078	96906	MS27183-11
36	11	2590-00-040-2878	19207	8343444
36	12		19207	8327361
36	13	5310-00-959-7600	96906	MS51922-5
36	14	5310-00-763-8905	96906	MS51968-20
36	15	5310-00-820-6653	12603	23E10
36	16	5365-00-040-2386	19207	8327360
36	17	5305-00-726-2562	96906	MS90727-175
36	18		19207	8327362
37	1		19207	8758001
37	2	5305-00-725-4183	96906	MS90726-113
37	3	5310-00-011-6121	96906	MS35338-67
37	4	5310-00-488-3888	96906	MS51943-40
37	5	5340-00-562-1943	19207	7974918
37	6	5306-00-624-0257	19207	8742683
37	7	5340-00-970-3258	19207	8737000
37	8	5310-00-562-1955	19207	7974921
37	9	3120-00-893-4972	23705	333561
37	10		21450	102950
37	11	5315-00-562-1956	19207	7974919
37	12	5315-00-298-1481	96906	MS24665-357
37	13	5310-00-269-4040	96906	MS51922-49
37	14	5306-00-678-4769	19207	8742862
37	15	2510-00-624-0254	23705	336837
37	16		19207	8742682
37	17	5310-00-809-8533	96906	MS27183-23
37	18	5310-00-798-1265	19207	7979366
38	1	5305-00-726-2572	96906	MS90727-178
38	2	5310-00-424-1452	19207	7349028
38	3	5365-00-350-0155	23705	563400
38	4	5365-00-624-0255	19207	7974917
38	5	5310-00-424-1456	19207	7349029

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX STOCK NUMBER	CAGEC	PART NUMBER
38	6	2530-00-752-0513	19207	7520513
38	7	5305-00-350-0158	12204	929721
38	8	2530-00-770-7070	19207	7707070
38	9	5305-00-719-5239	96906	MS90727-116
38	10	5310-00-584-5272	80045	23MS35338-10
38	11	5310-00-732-0560	96906	MS51968-14
38	12		19207	1713772
38	13	5310-00-985-0782	96906	MS27151-28
38	14	5310-00-763-8905	96906	MS51968-20
39	1		21450	175631
39	2		21450	455226
39	3		19207	8343759-77
39	4		19207	8343761-97
39	5		19207	8343758-80
39	6		19207	8343751-97
39	7		19207	8343754-77
39	8		19207	8343756-57
39	9		19207	8343760-86
39	10		19207	8343757-106
39	11		19207	8343752-106
39	12		19207	8343755-86
39	13		19207	8343753-80
39	14		19207	8343750-80
39	15		19207	8343749-86
39	16		19207	8343762
39	17	5306-00-685-7790	96906	MS35751-46
39	18	5305-00-958-5256	96906	MS35190-310
39	19	5310-00-407-9566	96906	MS35338-45
39	20	5310-00-880-7744	96906	MS51967-5
39	21		19207	100051
39	22		21450	218571
39	23		23705	103323
40	1	2510-01-035-3967	19207	8352618
40	2	2510-00-074-2747	19207	8739367
40	3	2510-01-035-3969	19207	8352620
40	4	2510-00-074-2754	19207	8739370
40	5	2510-01-035-3968	19207	8352619
40	6	2510-00-926-3849	19207	8739336
40	7	2510-00-078-9779	19207	8739373
40	8	2510-01-035-3970	19207	8352621
40	9	2510-00-074-2762	19207	8739374
40	10	2510-00-074-2756	19207	8739372
40	11	5305-00-719-5219	96906	MS90727-111
40	12		96906	23MS35338-48
40	13	5310-00-943-2141	96906	MS51968-15
41	1		19207	8374939
41	2		19207	8374808-75-2
41	3		19207	8374807-84-3
41	4		19207	8374810-100-39
41	5		19207	8343717
41	6		19207	8343716

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX		
		STOCK NUMBER	CAGEC	PART NUMBER
41	7		19207	8374812-90-39
41	8		19207	8374806-90-36
41	9		19207	8374811-86-39
41	10		19207	8374805-86-36
41	11		19207	8374804-100-36
41	12		19207	8374809-77-39
41	13		19207	8374803-77-36
41	14		19207	8343786
41	15		19207	8376423
41	16		19207	455227
41	17		19207	171272
41	18		19207	8343792
41	19		21450	171607
41	20		21450	218565
41	21	5310-00-261-7340	96906	MS35338-8
41	22		19207	8374842
41	23		21450	106285
41	24		19207	121224
41	25		19207	8374844
42	1		19207	8374837
42	2		21450	171593
42	3		19207	8374847
42	4	5310-00-010-5604	33743	042038
42	5	5310-00-582-5965	96906	MS35338-44
42	6		19207	8343831-70-40
42	7		21450	171736
42	8		21450	175607
42	9		19207	8343836
42	10		21450	133802
42	11		19207	8374840
42	12		19207	8343712
42	13		19207	8343821
42	14		19207	8343710
42	15		21450	171593
42	16		19207	8374847
42	17		19207	8343831-70-40
42	18		21450	171736
42	19	5310-00-045-3296	96906	MS35338-43
42	20	5310-00-934-9751	96906	MS35650-302
42	21		21450	175607
42	22	5310-00-582-5965	96906	MS35338-44
42	23		19207	8343836
42	24		19207	8374833
42	25		19207	8343838
42	26		19207	8343837
42	27		19207	8374835
42	28		19207	8374836
42	29		21450	142544
42	30		21450	132908
42	31		21450	171268
42	32		19207	8343830

CROSS-REFERENCE INDEXES

FIG.	ITEM	FIGURE AND ITEM NUMBER INDEX		PART NUMBER
		STOCK NUMBER	CAGEC	
42	33		19207	8374830
43	1	9905-00-202-3639	96906	MS35387-2
43	1	9905-00-205-2795	96906	MS35387-1
43	1	9905-00-205-2795	96906	MS35387-1
43	2	5305-00-052-6920	96906	MS24629-56
43	2	5305-00-819-5132	88044	AN504-428R8
43	3	9905-00-202-3639	96906	MS35387-2
43	4	5310-00-761-6882	96906	MS51967-2
43	5	5310-00-582-5965	96906	MS35338-44
43	6	5305-00-988-1727	96906	MS35206-283
44	1	9905-00-740-9721	97384	60244-90104
44	1	9905-00-999-7369	96906	MS53007-2
44	2	9905-00-774-4284	06853	201499
44	2	9905-00-999-7370	96906	MS53007-1
44	3		19207	8343702
44	4	9905-00-282-7489	19207	7979373
44	4	9905-00-831-6271	19207	7996977
44	5	7690-01-075-3332	19207	11625138
44	5	9905-00-282-8276	19207	6210252
44	5	9905-00-624-6148	19207	8742576
44	5	9905-00-999-9672	19207	10922103
44	6		19207	171768

APPENDIX G

ILLUSTRATED LIST OF MANUFACTURED ITEMS

Section 1. INTRODUCTION

This appendix includes complete instructions for making items authorized to be manufactured or fabricated **at organizational maintenance**.

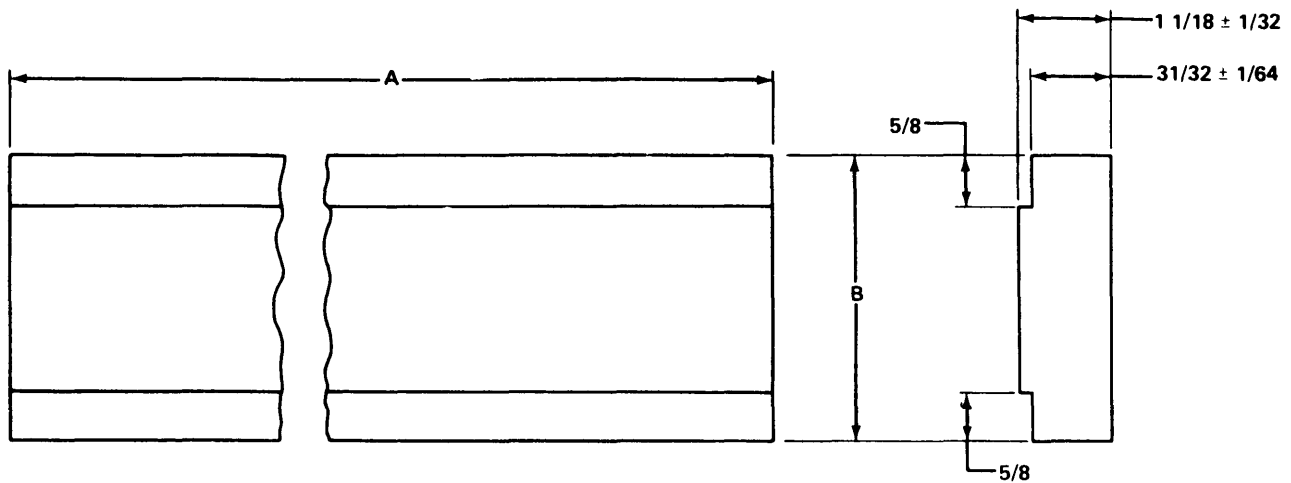
A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure that covers fabrication criteria.

All bulk materials needed for manufacturing an item are listed by part number or specification number in a tabular list on the illustration.

Section II. MANUFACTURED ITEMS PART NUMBER INDEX

Part Number	Item	Page Number	Figure Number
8343749	Board, Flooring	G-2	1
8343750	Board, Flooring	G-2	1
8343751	Board, Flooring	G-2	1
8343752	Board, Flooring	G-2	1
8343753	Board, Flooring	G-2	1
8343754	Board, Flooring	G-2	1
8343755	Board, Flooring	G-2	1
8343756	Board, Flooring	G-2	1
8343757	Board, Flooring	G-2	1
8343758	Board, Flooring	G-2	1
8343759	Board, Flooring	G-2	1
8343760	Board, Flooring	G-2	1
8343761	Board, Flooring	G-2	1
8343831	Panel, Liner	G-3	2
8374803	Panel, Liner	G-3	2
8374804	Panel, Liner	G-3	2
8374805	Panel, Liner	G-3	2
8374806	Panel, Liner	G-3	2
8374807	Panel, Liner	G-3	2
8374808	Panel, Liner	G-3	2
8374809	Panel, Liner	G-3	2
8374810	Panel, Liner	G-3	2
8374811	Panel, Liner	G-3	2
8374812	Panel, Liner	G-3	2
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Section III. MANUFACTURED ITEMS ILLUSTRATIONS



PART NO.	A	B	PART NO.	A	B
8343749	$86 \frac{1}{16}$	$3 \frac{3}{4}$	8343759	$77 \frac{13}{16}$	8
8343750	80	$3 \frac{3}{4}$	8343760	$86 \frac{1}{16}$	8
8343751	$97 \frac{13}{16}$	$3 \frac{3}{4}$	8343761	$97 \frac{13}{16}$	8
8343752	$106 \frac{1}{16}$	$3 \frac{3}{4}$			
8343753	80	$3 \frac{3}{4}$			
8343754	$77 \frac{13}{16}$	$3 \frac{3}{4}$			
8343755	$86 \frac{1}{16}$	$3 \frac{3}{4}$			
8343756	$97 \frac{13}{16}$	$3 \frac{3}{4}$			
8343757	$106 \frac{1}{16}$	8			
8343758	80	8			

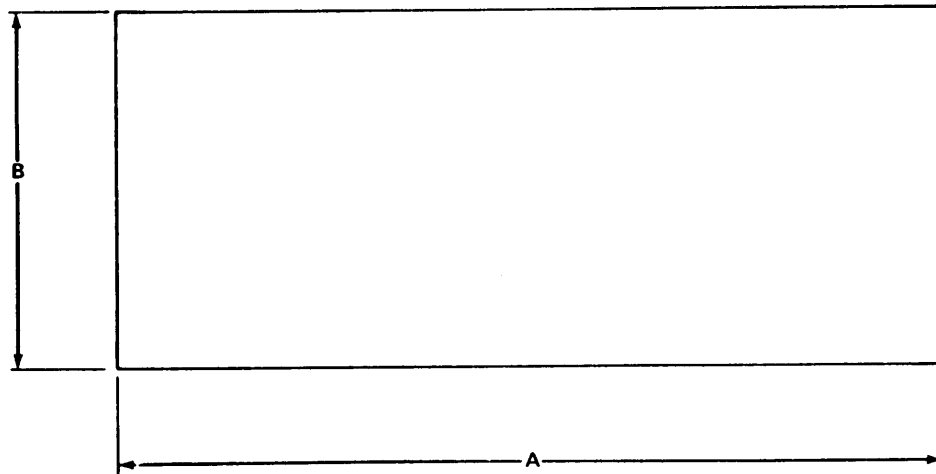
MATERIAL NOTE:
WOOD, OAK, CLASS A
SPEC MIL-W-3912

NOTE:
DIMENSIONING IN
ACCORDANCE WITH MIL-STD-8

Figure 1. Boards, Flooring

TA234093

MANUFACTURED ITEMS ILLUSTRATIONS - CONTINUED



PART NO.	A	B
8343831	70 3/4	40 1/2
8374803	77 1/4	36
8374804	100	36
8374805	86 3/8	36
8374806	90 1/8	36
8374807	84 1/2	3 1/4
8374808	75	2 11/16
8374809	77 1/4	39 1/4
8374810	100	39 1/4
8374811	86 3/4	39 1/4
8374812	90 1/8	39 1/4

MATERIAL NOTE:
DOUGLAS FIR PLYWOOD
3 PLY - 1/4 THICK
EXTERIOR TYPE, GRADE B-C
SPEC NN-P-530

FINISH NOTE:
TREAT PER MIL-S-13518
PRIME PER SPEC TT-P-636
ALL SURFACES

NOTE:
DIMENSIONING IN ACCORDANCE
WITH MIL-STD-8

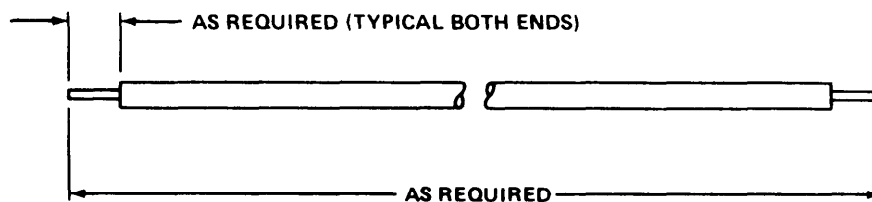
Figure 2. Panels, Liners

MANUFACTURED ITEMS ILLUSTRATIONS - CONTINUED



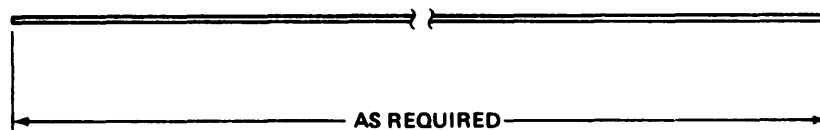
NOTE:
FABRICATE FROM PART NUMBER (P/N) 22-C-2020 STOCK.
CUT ENDS OF WIRE ROPE SQUARE.

Figure 3. Wire Rope



NOTE:
FABRICATE FROM NATIONAL STOCK NUMBER (NSN)
6145-00-152-6499 STOCK, PART NUMBER (P/N) M13486-1-5.

Figure 4. Electrical Wire












NOTE:
FABRICATE FROM PART NUMBER (P/N) 22-W-1633-160 STOCK.

Figure 5. Locking Wire

TA234095

APPENDIX H

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)	  			

CAUTION

If replacement capscrews are of a higher grade than originally supplied, use torque specifications for that placement. This will prevent equipment damage due to over torquing.

Capscrew Body Size (Inches) – (Thread)		Torque Ft Lb (N·m)	Torque Ft Lb (N·m)	Torque Ft Lb (N·m)	Torque Ft Lb (N·m)
1/4	20	5 (7)	8 (11)	10 (14)	12 (16)
	28	6 (8)	10 (14)		14 (19)
5/16	18	11 (15)	17 (23)	19 (26)	24 (33)
	24	13 (18)	19 (26)		27 (37)
3/8	16	18 (24)	31 (42)	34 (46)	44 (60)
	24	20 (27)	35 (47)		49 (66)
7/16	14	28 (38)	49 (66)	55 (75)	70 (95)
	20	30 (41)	55 (75)		78 (106)
1/2	13	39 (53)	75 (102)	85 (115)	105 (142)
	20	41 (56)	85 (115)		120 (163)
9/16	12	51 (69)	110 (149)	120 (163)	155 (210)
	18	55 (75)	120 (163)		170 (231)
5/8	11	83 (113)	150 (203)	167 (226)	210 (285)
	18	95 (129)	170 (231)		240 (325)
3/4	10	105 (142)	270 (366)	280 (380)	375 (508)
	16	115 (156)	295 (400)		420 (569)
7/8	9	160 (217)	395 (536)	440 (597)	605 (820)
	14	175 (237)	435 (590)		675 (915)
1	8	235 (319)	590 (800)	660 (895)	910 (1234)
	14	250 (339)	660 (895)		990 (1342)

TORQUE LIMITS - CONTINUED

NOTE

Always use the torque values listed on page H-1 when specific torque values are not available.

Do not use these values in place of those specified in other sections of this manual; special attention should be observed when using SAE Grade 6, 7, and 8 capscrews.

The values are based on use of clean, dry threads.

Reduce torque by 10 percent when engine oil is used as a lubricant.

Reduce torque by 20 percent if new plated capscrews are used.

CapsCrews threaded into aluminum may require reductions in torque of 30 percent or more of Grade 5 capscrews torque and must attain two capscrew diameters of thread engagement.

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By Order of the Secretary of the Army

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

Official:

MILDRED E. HEDBERG
Brigadier General United States Army
The Adjutant General

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To be distributed in accordance with DA Form 12-39, Operator's; Organizational and Direct Support and General Support Maintenance requirements for Semitrailer, Stake, 6-Ton, 2-Wheel M118, Semitrailer, Van Shop, 6-Ton, 2-Wheel, M119, M119A1, M508.

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In action column, change statement to read as follows:

Using diagonal-cutting pliers, take out cotter pins and slide spring and flat washers off.

Reason: Clarify action to be performed.

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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=0.0386 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

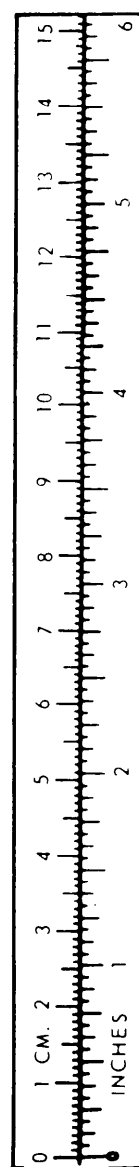
TEMPERATURE

$5/9 (^\circ\text{F} - 32) = ^\circ\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5 \text{ } ^\circ\text{C} + 32 = ^\circ\text{F}$

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	5.895
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	0.385
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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