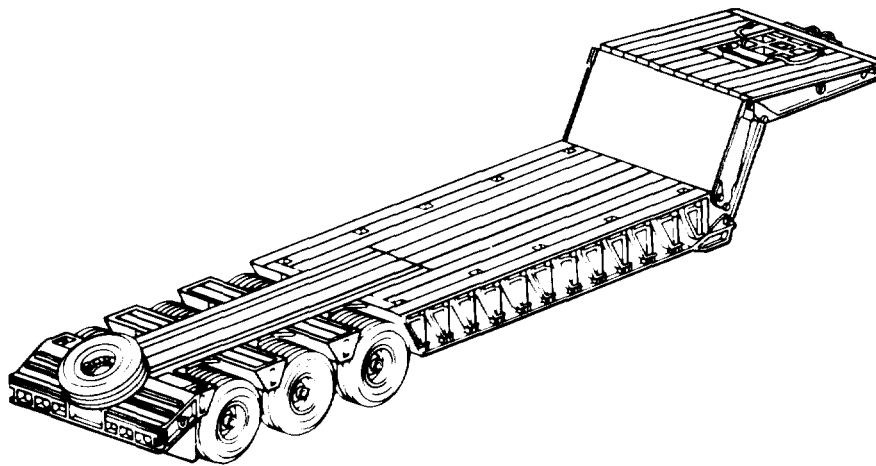


TM 5-2330-360-14&P

TECHNICAL MANUAL

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



INTRODUCTION PAGE 1-1
OPERATING INSTRUCTIONS PAGE 2-1
OPERATOR MAINTENANCE PAGE 3-1
ORGANIZATIONAL MAINTENANCE PAGE 4-1
DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE PAGE 5-1
MAINTENANCE ALLOCATION CHART PAGE B-1
REPAIR PARTS AND SPECIAL TOOLS LISTS PAGE F-1

SEMITRAILER, LOWBED: 40-TON CONSTRUCTION EQUIPMENT TRANSPORTER M870 (CCE) (CMI/LOAD KING MODEL 403LF) (NSN 2330-00-133-1731)

HEADQUARTERS, DEPARTMENT OF THE ARMY

DECEMBER 1984

WARNING**USING DRYCLEANING SOLVENT**

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

WARNING**COUPLING**

All persons not involved in coupling operation must stand clear of tractor and semitrailer to prevent serious injury.

WARNING**NONOPERATIONAL LIGHTS**

Do not operate semitrailer with burned out or missing running, stop, or turn lights. Failure to be seen could result in injury to personnel.

WARNING**DRAINING HIGH PRESSURE AIR**

Wear goggles for draining high air pressure. Failure to wear protective goggles when opening air reservoir draincock could cause serious eye injury.

WARNING**COMPRESSED AIR**

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield when using compressed air.

WARNING**GOOSENECK**

Do not work under gooseneck without lockpins securely in place. Injury to personnel may result,

WARNING**HINGE PIN**

Before removing hinge pin, the part being freed must be supported. If hinge pin is being removed from lower link arm, support end of lower link arm with dolly jack. If hinge pin is being removed from deck assembly arm, deck assembly must be supported by overhead hoist. Failure to do so may result in injury or death.

WARNING

Placement of jacks is extremely important in this procedure. Failure to place jacks properly could result in injury or death.

Do not work under gooseneck without locking pins in place. Doing so could result in injury or death.

WARNING

Brake linings contain asbestos fibers. Protective mask must be worn while performing this task. Failure to do so could result in serious illness.

WARNING

Keep fingers from between equalizer beam ends and spring ends, while balancing axle as it is moved and lifted into place. Failure to do so could result in serious personnel injury.

WARNING

Be sure wheels are chocked before starting procedure. Failure to do so could result in injury to personnel.

WARNING

Wear eye protection when working with air under pressure. Failure to do so could result in eye injury.

WARNING

Before putting hand to hub and drum, hold hand close to drum and hub to check for excessive heat radiation. This will prevent skin burns caused by hot metal.

WARNING

When opening draincock, turn face away from exhaust air blast to prevent eye injury.

WARNING

Particles blown by compressed air are hazardous. Failure to wear protective goggles when drying metal parts could cause serious eye injury.

WARNING

Keep fingers from between equalizer beam end and spring end, while balancing axle as it is lowered. Failure to do so could result in serious injury to personnel.

For first aid information, refer to FM21-11.

CHANGE
No. 1

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

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

**SEMITRAILER, LOWBED: 40-TON
CONSTRUCTION EQUIPMENT
TRANSPORTATION M870 (CCE)
(CMI/LOAD KING MODEL 403LF)
(NSN 2330-00-133-1731)**

TM 5-2330-360-14&P, dated 6 December 1984, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. New or changed information is indicated by a vertical bar in the margin of the page.

Remove Pages	Insert Pages
iii and iv	iii and iv
1-5 through 1-10	1-5 through 1-10
2-1 and 2-2	2-1 and 2-2
2-9 through 2-12	2-9 through 2-12
3-9 and 3-10	3-9 and 3-10
4-65 through 4-68	4-65 through 4-68
4-71 through 4-100	4-71 through 4-100
4-98 and 4-99	4-98 and 4-99
B-1 through B-6	B-1 through B-6
C-1 and C-2	C-1 and C-2
F-13 through F-16	F-13 through F-16
F-25 through F-32	F-25 through F-32
F-65/(F-66 blank)	F-65 through F-68

3. File this change sheet in front of the publication for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

PATRICIA P. HICKERSON
Colonel, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-39-E, block 0784, Operator and Unit, Direct and General Support maintenance requirements for TM 5-2330-360-14&P.

TECHNICAL MANUAL }
 NO. 5-2330-360-1 4&P }

HEADQUARTERS
 DEPARTMENT OF THE ARMY
 WASHINGTON, D.C. 6 December 1984

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

**SEMITRAILER, LOWBED: 40-TON
 CONSTRUCTION EQUIPMENT TRANSPORTER
 M870 (CCE) (CMI/LOAD KING MODEL 403LF)
 (NSN 2330-00-133-1731)**

CURRENT as of 21 MARCH 1984

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find 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, U.S. Army Tank-Automotive Command, ATTN:AMSTA-MB, Warren, MI 48090. A reply will be sent to you.

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*This manual supersedes TM 5-2330-360-14, 31 March 1976, including all changes.

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CHAPTER 1

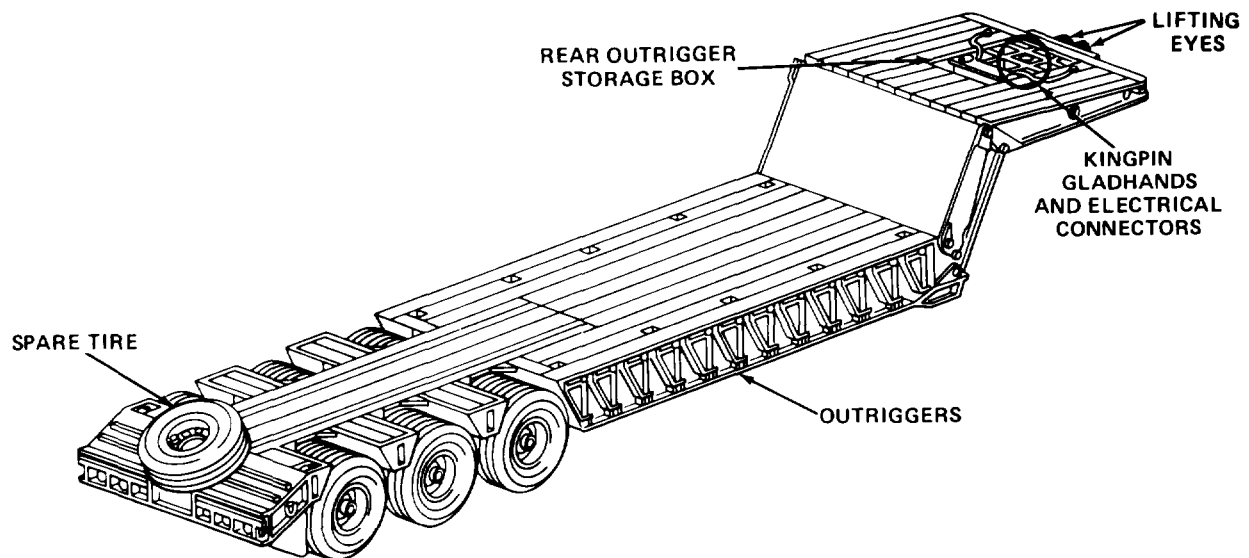
INTRODUCTION

OVERVIEW

The purpose of this chapter is to acquaint you with the M870, 40-ton, lowbed semitrailer, equipment, size, and shape, and how the semitrailer systems work.

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Section I. GENERAL INFORMATION



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SCOPE

Type of Manual: Operator's, Organizational, Direct Support, and General Support Maintenance (including Repair Parts and Special Tools Lists).

Model Number and Equipment Name: M870, 40-ton lowbed semitrailer.

Purpose of Equipment: Carry construction equipment on highways or off roads.

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 OR SHIPMENT

Requirements for packaging and administrative storage are contained in Chapter 4.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR'S)

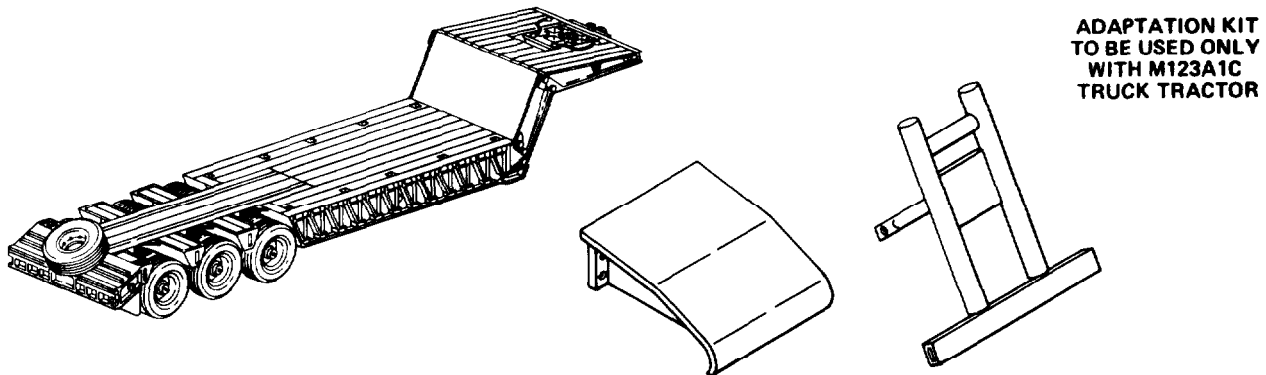
If your semitrailer needs improvement, let us know. Send us an EIR. You the user are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to: Commander, US Army Tank-Automotive Command, ATTN: DRSTA-MP, Warren, MI 48090. We'll send you a reply.

Section II. EQUIPMENT DESCRIPTION AND DATA

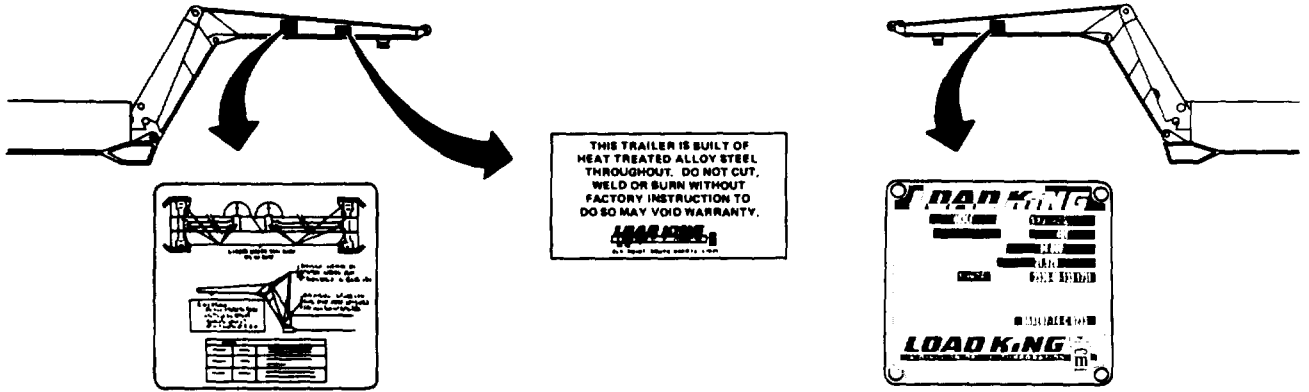
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Differences between Models	1-4	Equipment Data	1-5
Equipment Characteristics, Capabilities, and Features	1-2	Location and Description of Major Components	1-3

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

The M870 semitrailer is used to transport construction equipment and materiel and will be towed by the M920 truck tractor. The semitrailer can also be towed by the M123A1C truck tractor using an adaptation kit.

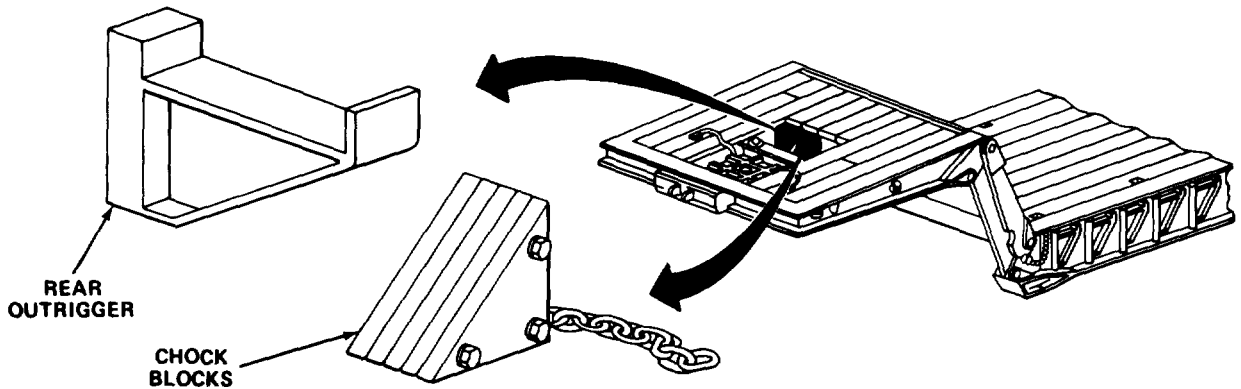


LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



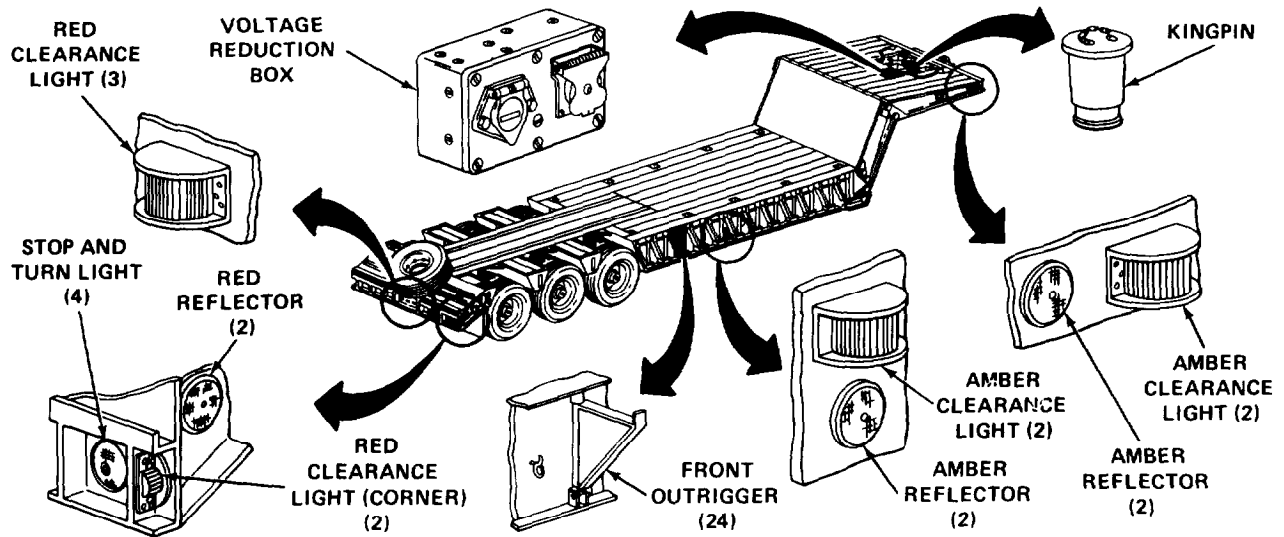
Three vehicle data plates are located on both sides of the gooseneck.

The gooseneck of the semitrailer drops down to form a ramp for the loading and unloading of equipment.



Rear outriggers (six) and chock blocks (two) are stored in the open stowage compartment on the gooseneck behind the air and electrical connectors.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-CONTINUED



A removable kingpin extends below the fifth wheel plate and attaches to the fifth wheel on the truck tractor for towing. Twenty-four outriggers swing out from the side of the semitrailer.

A voltage reduction box is located in the storage compartment on the gooseneck and provides 12- or 24-volt service to the semitrailer.

An amber clearance light and amber reflector are located on both sides of the semitrailer gooseneck.

An amber clearance light and an amber reflector are located on both sides near the middle of the semitrailer.

A red reflector is located on both sides at the rear of the semitrailer.

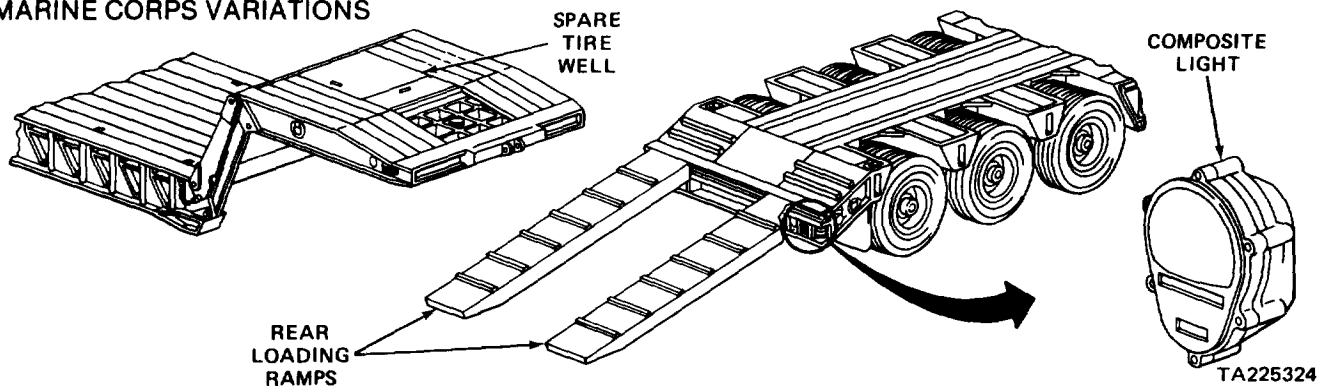
A red clearance light is located on each rear corner of the semitrailer. Three red clearance lights are located in the rear center of the semitrailer.

There are two pairs of combination stop and turn lights on the rear of the semitrailer.

DIFFERENCES BETWEEN MODELS

There are two slightly different versions of the semitrailer. The M870 is the model used by the Army. The 403LF is the model used by the Marine Corps. Following are the items peculiar to the Marine Corps version.

MARINE CORPS VARIATIONS



LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED**MARINE CORPS VARIATIONS – CONTINUED**

Two loading ramps allow the semitrailer to be loaded from the rear.

There are two composite stop/turn/taillights on the rear of the semitrailer.

Spare tire and wheel assembly storage is provided by a closed compartment in the gooseneck.

EQUIPMENT DATA**Overall Dimensions**

Length	41 ft 11 in. (12.8 m)
Marine variation	40 ft 7 in. (12.4 m)
Width	8 ft (2.4 m)
Height	5 ft 4in. (1.6 m)
Ground clearance (40-ton load)	1 ft 1.5 in. (0.335 m)

Deck Dimensions

Length	18 ft (5.5 m)
Marine variation	17 ft (5.2 m)
Width	8 ft (2.4 m)
Height (no load)	3 ft 4 in. (1 m)
Marine variation	4 ft (1.22 m)

Weights

Curb (no load)	16,500 lbs (approx) (7,491 kg (approx))
Maximum cargo	80,000 lbs (approx) (36,320 kg (approx))
Gross (loaded)	96,500 lbs (approx) (43,811 kg (approx))

Bridge Classification

Unloaded	24 tons (21.75 t (approx))
With 40-ton payload	60 tons (54.5 t (approx))

Weight Distribution

Rear axle (empty)	11,000 lbs (approx) (4,994 kg (approx))
Rear axle (loaded)	56,500 lbs (approx) (25,651 kg (approx))
Fifth wheel of truck tractor (loaded)	40,000 lbs (approx) (18,160 kg (approx))

Axles

Quantity	3
Type	Tubular

Wheel Bearings

Manufacturer	Timken bearing company
Type	Taper

Suspension

3-axle walking beam spring combination

Wheels

Type	Disc – 8 stud
Manufacturer	Budd wheel
Rim size	7.50x 15 in.
Rim type	Advance military

Tires

Quantity	12 plus 1 spare
Size	10 x 15
Ply	14
Type	Commercial
Tread design	Highway tread

EQUIPMENT DATA - CONTINUED

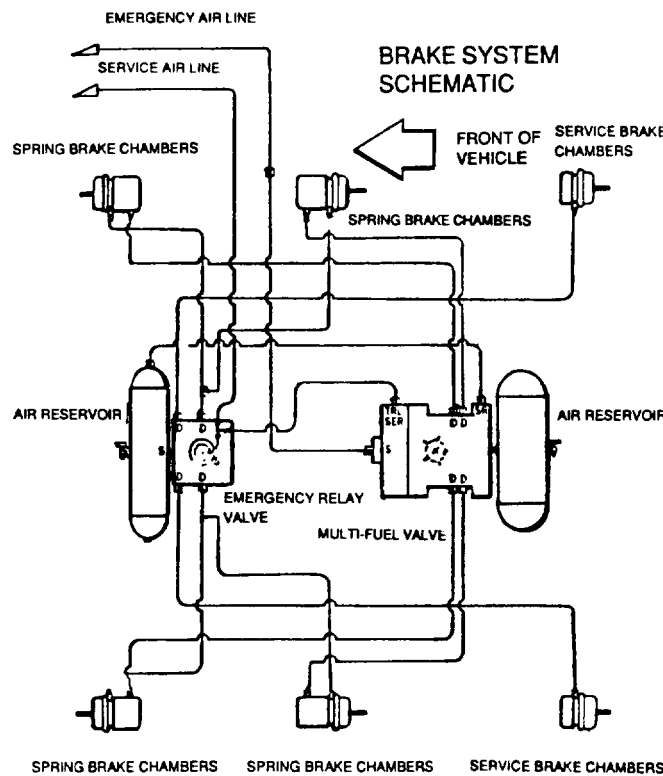
Tire Air Pressure	
Highway	85 psi (586 kPa)
Rough terrain	45 psi (310.3 kPa)
Sand or soft ground	35 psi (241.3 kPa)
Service Brakes	
Manufacturer	Standard Forge and Axle Company
Type	S-cam, two-shoe, double anchor, interval expanding
Actuation	Air
Airbrake System	
Manufacturer	Bendix Westinghouse
Type	Air chamber actuated
Electrical System	
Type	12-volt, 24-volt dual

Section III. PRINCIPLES OF OPERATION

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Airbrake System	1-6	Lighting System	1-7

AIRBRAKE SYSTEM

TYPE OF BRAKES - The brakes are the air actuated type. Air pressure is used to operate the mechanical internal brakes at the semitrailer wheels. The brakes are applied in proportion to the foot pressure applied to the brake pedal of the towing vehicle.

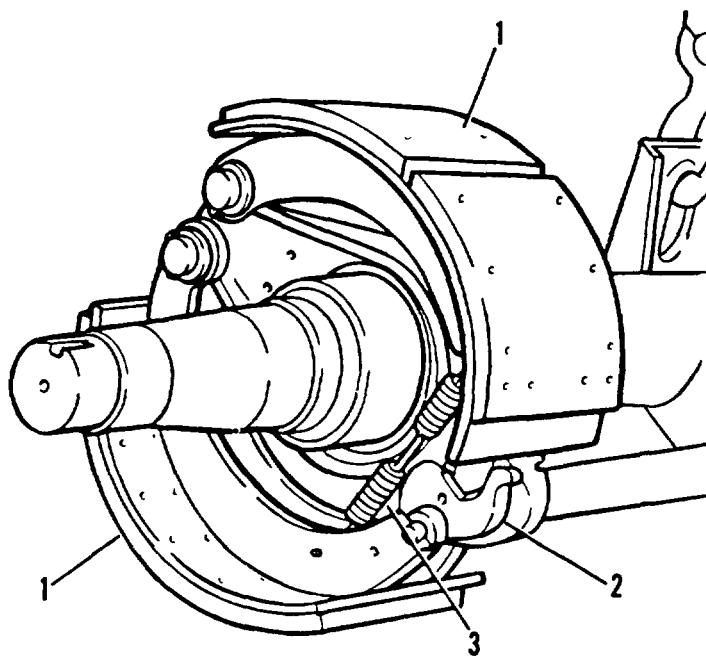


AIRBRAKE SYSTEM - CONTINUED

BRAKE SYSTEM UNITS - The brake system consists of internal brakes, slack adjusters, service air line, emergency relay valve, multi-function valve, air reservoirs, air brake chambers, spring brake chambers and connections.

INTERNAL BRAKES

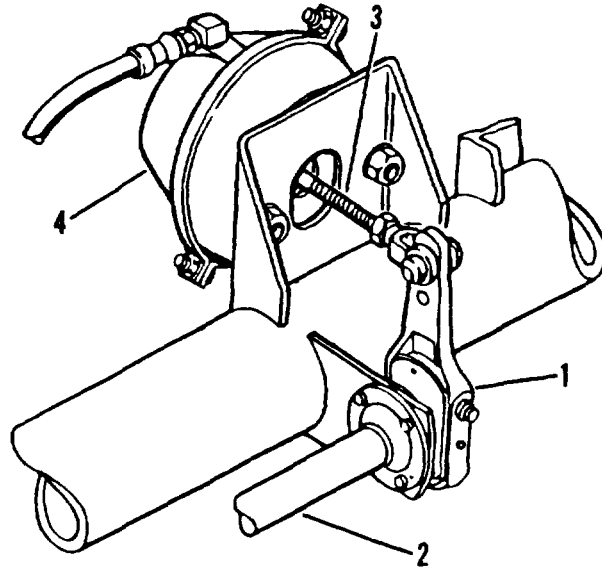
- a. The internal brakes are located within the brake drums. Each internal brake has two brake shoes (1). The outer surfaces of the brake shoes are fitted with brake linings. Each shoe is anchored at one end on an anchor pin on which it pivots. The other end of each shoe is free to be pushed out or pulled.
- b. An S-shaped cam (2) on the end of the camshaft is mounted between the free ends of the two brake shoes (1). Rotation of the cam (2) forces the shoes (1) out causing the brake linings to contact the drum.
- c. A brake shoe tension spring (3), near the free ends of the brake shoes (1), retracts the brake shoes (1) from the drum and holds them in a retracted position until the brakes are applied.



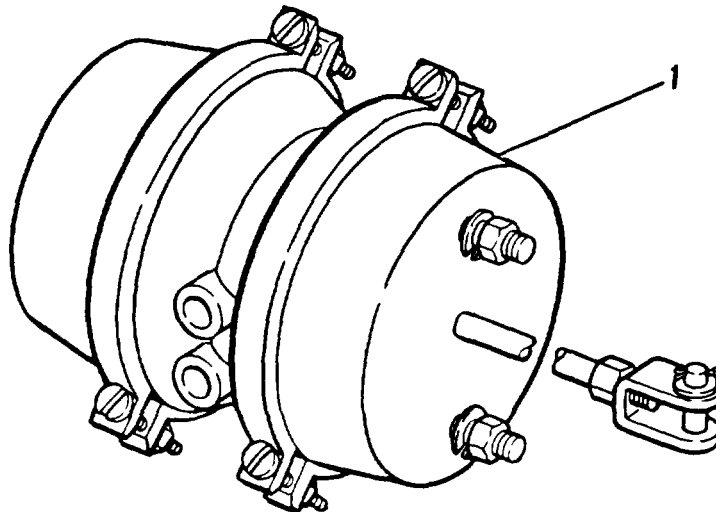
AIRBRAKE SYSTEM - CONTINUED

SLACK ADJUSTERS - The slack adjusters (1) are levers mounted on the brake camshafts (2). Push rods (3) of the air brake chambers and the spring brake chambers operate the slack adjusters(1) which in turn rotate the camshafts (2) causing the cams to press the brake shoes against the brake drums.

AIR BRAKE CHAMBERS - The air brake chambers (4) are mounted adjacent to the rear axle internal wheel brakes. The air brake chambers convert air pressure into mechanical motion to operate the slack adjusters when applying brakes.



SPRING BRAKE CHAMBERS - The spring brake chambers (1) are mounted adjacent to the front and middle axle internal wheel brakes. The spring brake chambers convert air pressure into mechanical motion to operate the slack adjusters when applying brakes. The spring brakes will automatically lock in the event of air pressure loss.

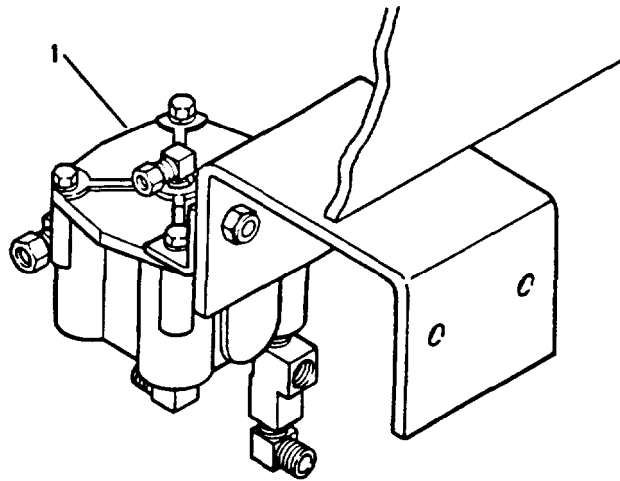


AIRBRAKE SYSTEM - CONTINUED

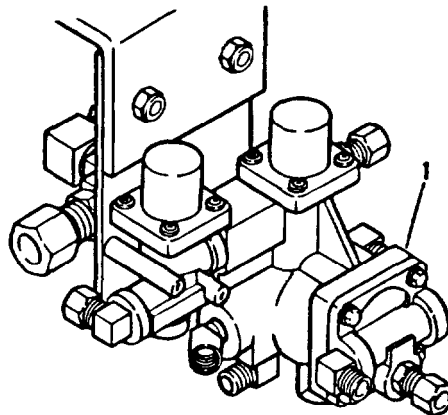
SERVICE AIR LINE - The service air line on the semitrailer extends from the air hose coupling (tagged SERVICE) on the right side of the semitrailer to the multi-function valve to the emergency relay valve. Its purpose is to transmit changes in air pressure originated in the towing vehicle, which causes the emergency relay valve to function.

EMERGENCY AIR LINE - The emergency air line on the semitrailer extends from the air hose coupling (tagged EMERGENCY), on the left side of the semitrailer to the multi-function valve to the emergency relay valve. This air line transmits compressed air to fill the semitrailer air reservoirs and maintain proper air pressure, under control of the multi-function valve and the emergency relay valve, to apply the brakes on the semitrailer.

EMERGENCY RELAY VALVE - The emergency relay valve (1) is mounted on the semitrailer frame. The emergency relay valve directly controls the service brakes on the semitrailer. It speeds brake action by releasing air from the air reservoirs, on the semitrailer, directly to the service brake chambers. This valve controls the flow of air to and from the semitrailer air reservoirs and automatically applies the brakes if the semitrailer breaks away from the towing vehicle or if there is a serious leak in the emergency air line.

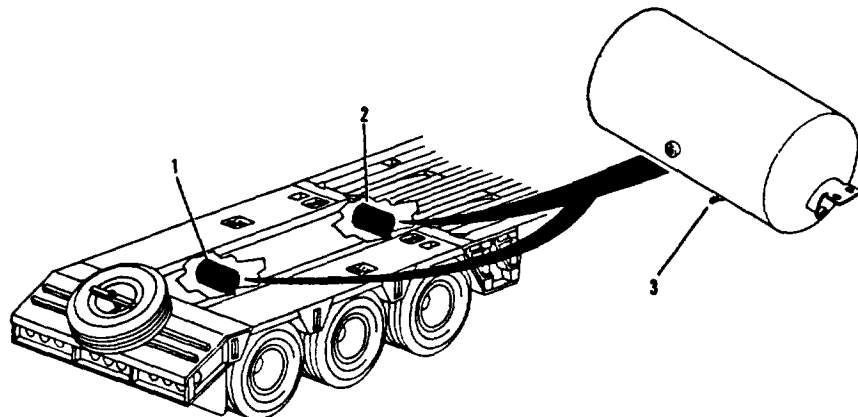


MULTI-FUNCTION VALVE - The multi-function valve (1) controls the spring brake chambers by utilizing both air reservoirs for normal service braking, but reserving sufficient air pressure to provide the required spring brake release in the event of a service system failure.



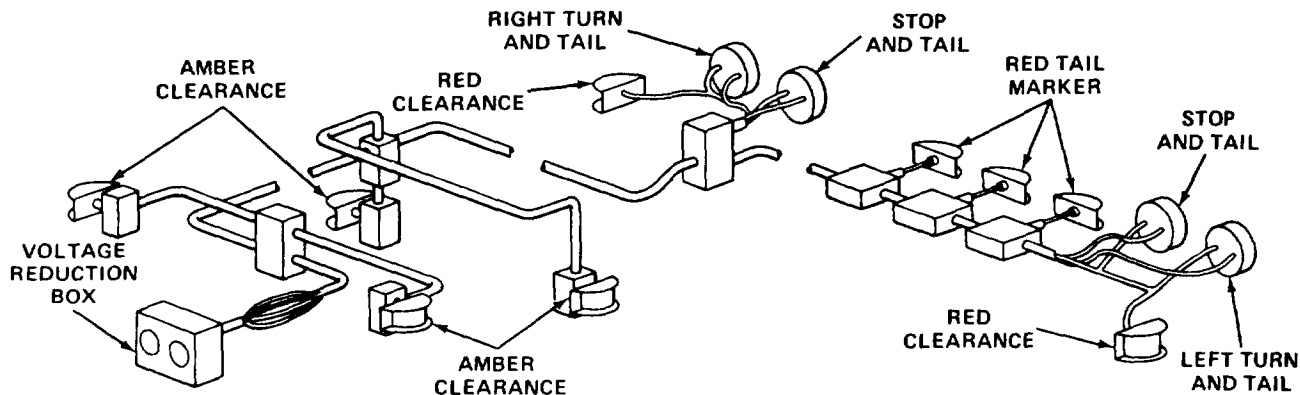
AIRBRAKE SYSTEM-CONTINUED

AIR RESERVOIRS - The air reservoirs (1 and 2) are attached to the frame. The reservoirs provide a supply of air through the emergency relay valve and the multi-function valve for applying the brakes. The air reservoirs are equipped with drain cocks (3) for draining accumulations of moisture and for releasing air pressure in the semitrailer brake system.



LIGHTING SYSTEM

The semitrailer receives electric power from the truck tractor through a voltage reduction box located in the tool bin on the gooseneck. The semitrailer operates on a 12-volt or a 24-volt power supply. If a 24-volt supply is used, voltage is reduced to 12 volts by the voltage reduction box. All semitrailer circuits are contained in metal conduit and junction boxes.



CLEARANCE LIGHTS – are located on the rear and on both sides of the semitrailer. They turn on and off with the service lights of the truck tractor.

STOP, TURN, AND TAILLIGHTS - are located on the rear of the semitrailer and work with the truck tractor service lights to indicate stops and turns and locate the rear of the semitrailer in low light conditions.

CHAPTER 2

OPERATING INSTRUCTIONS

OVERVIEW

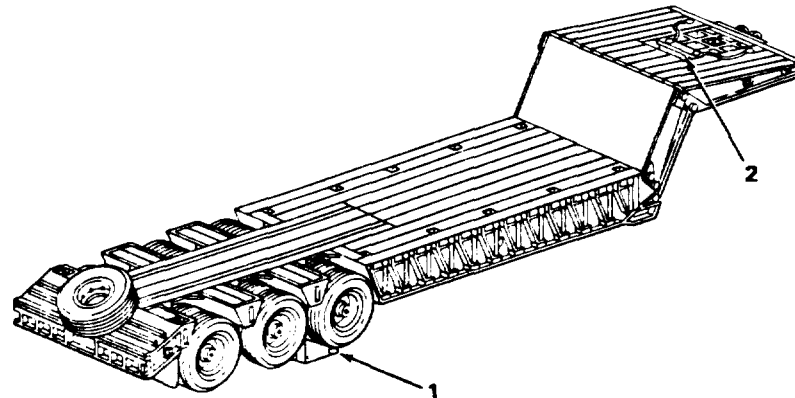
This chapter shows and describes the semitrailer controls and contains operator/crew level preventive maintenance procedures. There are instructions for coupling, driving, stopping, and backing in both usual and unusual conditions. Also, there is additional information to help you understand and better operate the semitrailer.

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

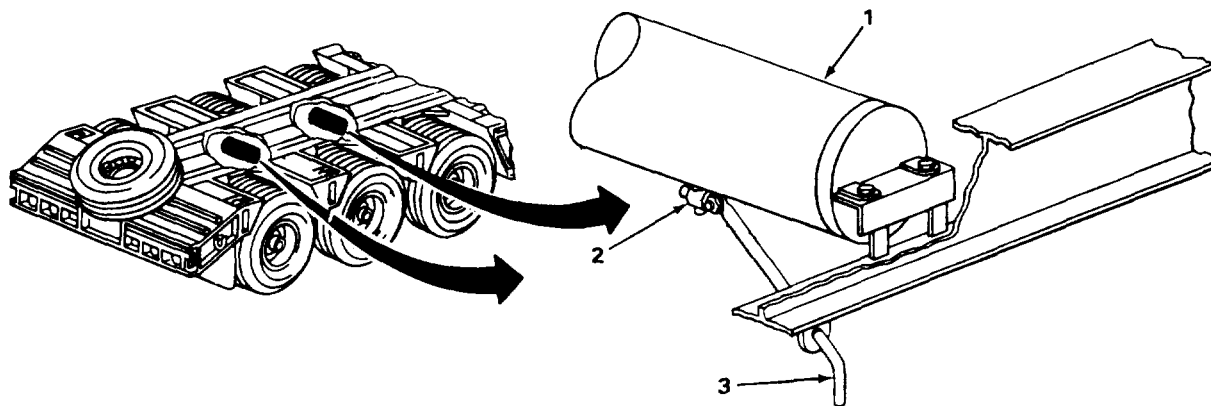
	Page		Page
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Chock Blocks	2-1	Outriggers, Spare Tire and Wheel Assembly	2-2
Crow Bar, Chain Assemblies, and Load Binders	2-4		

CHOCK BLOCKS



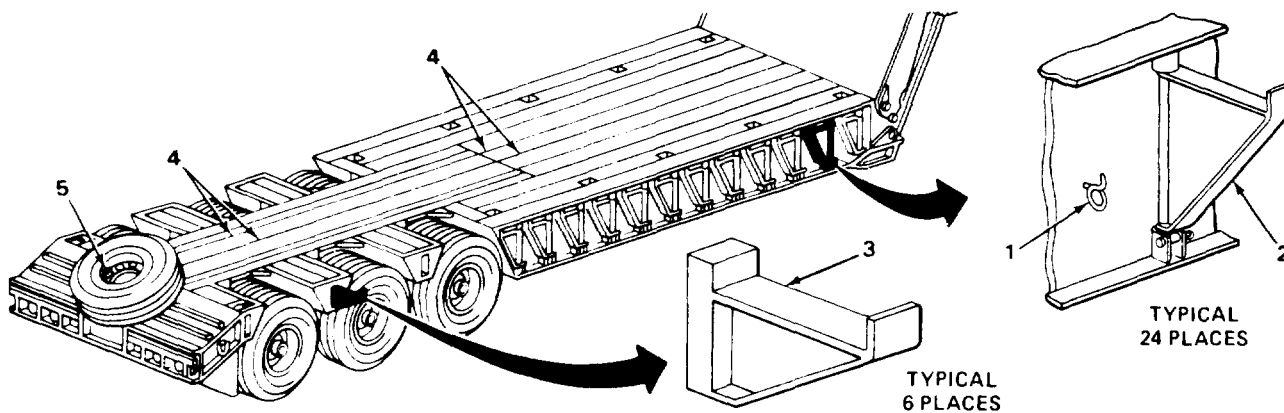
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Chock blocks	One placed in front of or behind the center tire on each side of semitrailer to keep it from moving.
2	Stowage bin	Used to stow chock blocks when not in use.

AIR RESERVOIR AND DRAINCOCK



KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Reservoir	Holds semitrailer's air supply.
2	Reservoir draincock	Used to drain moisture from reservoir.
3	Reservoir draincock control rod	Rotated to open or close draincock.

OUTRIGGERS, SPARE TIRE AND WHEEL ASSEMBLY

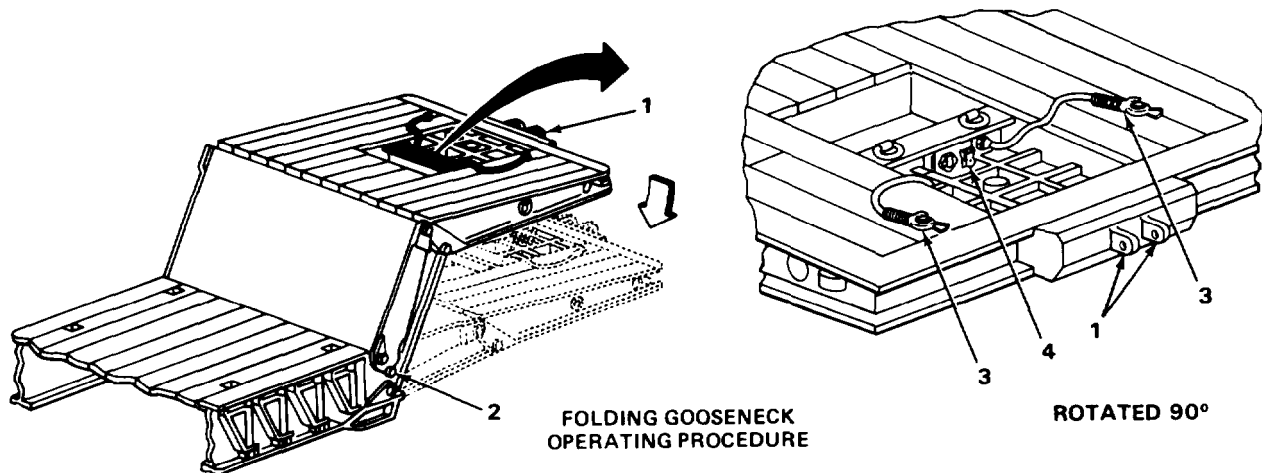


KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Hook fastener	Holds front outriggers to semitrailer's side when not in use.
2	Front outriggers	Hold side extension planks when loading or unloading wide loads.

OUTRIGGERS, SPARE TIRE AND WHEEL ASSEMBLY- CONTINUED

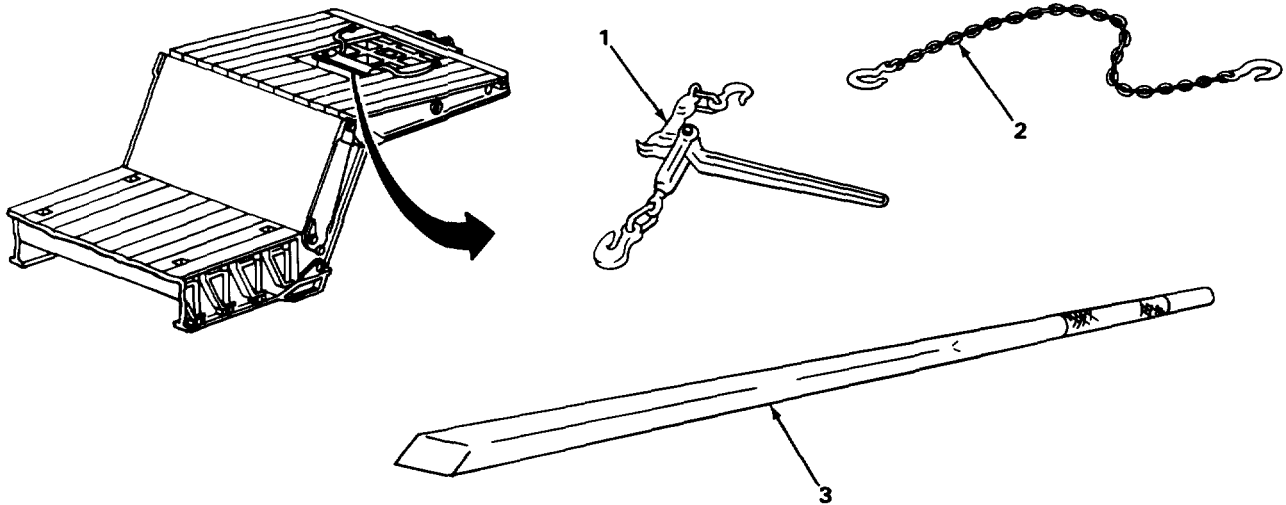
KEY	CONTROL OR INDICATOR	FUNCTION OR USE
3	Rear outriggers	Hold side extension planks when loading or unloading wide loads.
4	Extension planks (4)	Put on top of outriggers when loading or unloading wide loads.
5	Lug nuts (2)	Hold spare tire to mounting lugs.

GOOSENECK AND TRACTOR-TO-SEMITRAILER COUPLINGS AND CONNECTORS



KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Lifting eye	Cable hookup point for towing vehicle when raising or lowering gooseneck.
<u>WARNING</u>		
Do not work under gooseneck without lockpins securely in place. Injury to personnel may result.		
2	Lockpin	Locks gooseneck into up position for towing.
3	Gladhands	Provide emergency and service air supply to semi-trailer from truck tractor for operation of semi-trailer brakes.
4	Voltage reduction box	Provides hookup for 12-volt or 24-volt electric supply to operate lights on semitrailer.

CROWBAR, CHAIN ASSEMBLIES, AND LOAD BINDERS



KEY	CONTROL OR INDICATOR	FUNCTION OR USE
1	Load binders	Secure loads to semitrailer.
2	Chain assemblies	Secure loads to semitrailer.
3	Crow bar	Used to move objects, pry items.

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

	Page		Page
General	2-5	PMCS Column Description	2-7
Leakage Definitions for Operator/ Crew PMCS	2-6	Special Instructions	2-5
Operator/Crew Preventive Maintenance Checks and Services (PMCS)	2-7		

GENERAL

Every mission begins and ends with the paperwork. There isn't much of it, but you have to keep it up. The forms and records you fill out have several uses. They are a permanent record of the services, repairs, and modifications made on your vehicle. They are reports to Organizational Maintenance and to your commander. And they are a checklist for you when you want to know what is wrong with the vehicle after its last use, and whether those faults have been fixed. For the information you need on forms and records, see DA PAM 738-750.

SPECIAL INSTRUCTIONS

Do your Before (B) PMCS just before you operate the vehicle. Pay attention to the WARNINGS and CAUTIONS.

Do your During (D) checks and services of PMCS while the equipment and/or its component systems are in operation. Pay attention to the WARNINGS and CAUTIONS.

Do your After (A) PMCS right after operating the vehicle. Pay attention to the WARNINGS and CAUTIONS.

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

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

When you do your PMCS, take along a rag or two.

While performing PMCS observe WARNING and CAUTION paragraphs preceding those operations which could endanger your safety or result in damage to the equipment.

If anything looks wrong and you can't fix it, write it on your DA Form 2404. The number column is the source for the numbers used on the TM Number Column on DA Form 2404. If you find something seriously wrong, report it to Organizational Maintenance RIGHT AWAY.

SPECIAL INSTRUCTIONS – CONTINUED

WARNING

Drycleaning solvent PD-680 is toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

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 (PD-680) to clean metal surfaces. Use soap and water when you clean 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, of course, 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 Organizational Maintenance.

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

LEAKAGE DEFINITIONS FOR OPERATOR/CREW PMCS

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

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

CAUTION

Equipment operation is allowable with minor leaks (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. When operating with Class I or II leaks, continue to check fluid levels as required on your PMCS. Class III leaks should be reported to Organizational Maintenance.

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 check is to be performed.

Item to be inspected – Lists the checks 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 (PMCS)

B – BEFORE

D – DURING

A – AFTER

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		
				<p style="text-align: center;">NOTE</p> <p>Perform Before (B) PMCS if:</p> <ul style="list-style-type: none"> a. You are the assigned operator, but have not used the semitrailer since the last inspection. b. You are using the semitrailer for the first time. <p style="text-align: center;">NOTE</p> <p>Perform the following inspections/ checks, prior to connecting the semitrailer to the prime mover.</p>	

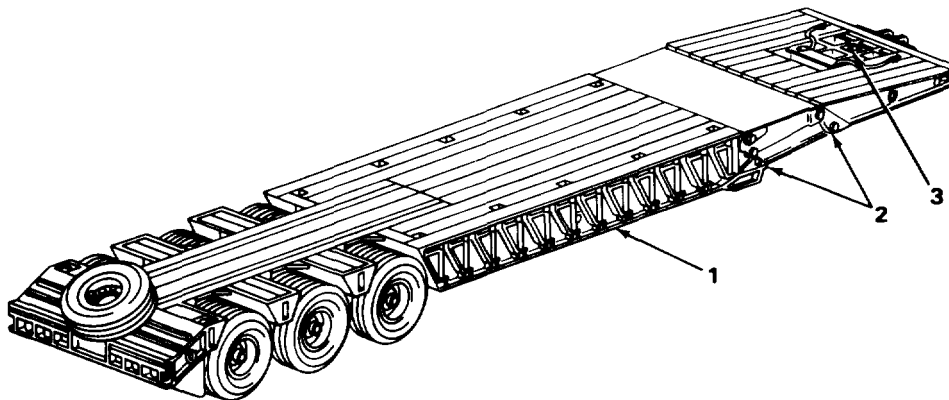
OPERATOR/CREW Preventive Maintenance CHECKS AND SERVICES (PMCS) - CONTINUED

B - BEFORE

D - DURING

A - AFTER

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>CHASSIS</p> <p>Visually inspect chassis (1) for missing or damaged components.</p>	
2	●			<p>GOOSENECK</p> <p>Inspect gooseneck ramp hinge points (2) for cracks, damage, or excessive wear.</p>	Excessive wear, cracks, or damage.
3	●			<p>KINGPIN</p> <p>Visually inspect kingpin (3) for cracks or a bent condition.</p>	Bent or cracked.



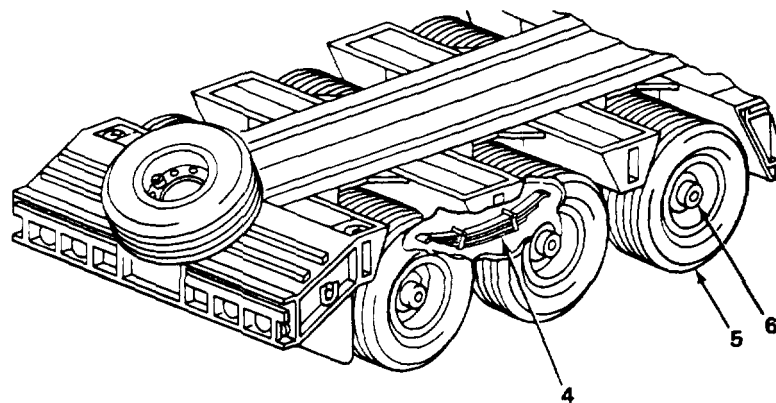
OPERATOR/CREW Preventive Maintenance CHECKS AND SERVICES (PMCS) - CONTINUED

B - BEFORE

D - DURING

A - AFTER

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		
4	●			<p>T I R E S</p> <p>a. Visually inspect all tires (5) for gouges, cracks, tread separation, and foreign objects lodged in tread or between wheels.</p> <p>b. Check all tire (5) pressures. Recommended pressure is 85 psi (586 kPa).</p>	Two tires are flat, missing, or unserviceable.
5	●			<p>WHEEL BEARING</p> <p>Check wheel bearing oil level through sight glass (6). If oil level is between inner and outer circle of of sight glass, the oil level is considered adequate. If the oil level is below the outer ring, check for leaks and notify Organizational Maintenance.</p>	Class III leakage.
6	●			<p>SPRINGS</p> <p>Inspect springs (4) and related hardware for serviceability.</p>	Spring leaf broken; hardware is broken or missing.



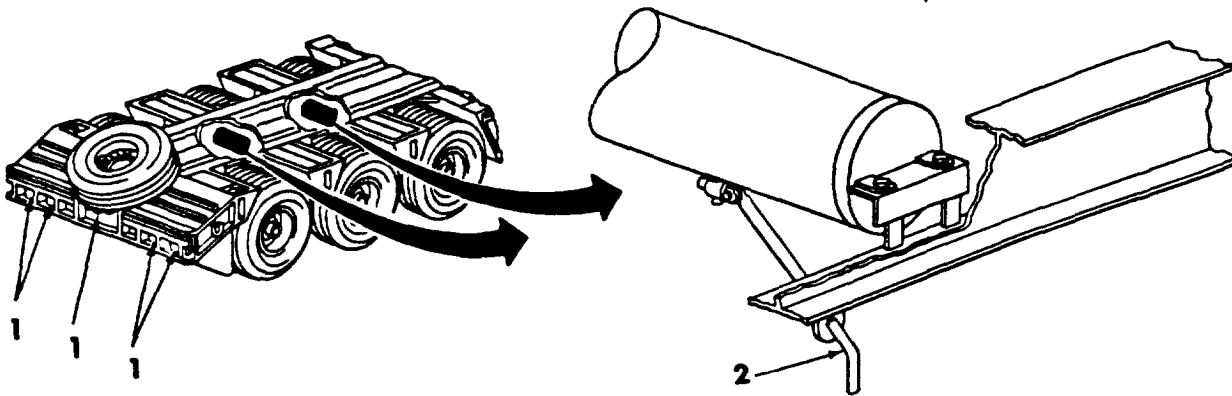
OPERATOR/CREW Preventive Maintenance CHECKS AND SERVICES (PMCS) - CONTINUED

B - BEFORE

D- DURING

A - AFTER

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		
7				<p>NOTE</p> <p>Perform the following inspections/ checks with the prime mover connected to the semitrailer.</p> <p>LIGHTS</p> <ol style="list-style-type: none"> Visually inspect for damaged parts or components. Check all lights (1) for proper operation and cleanliness. 	
8				<p>AIR RESERVOIRS</p> <ol style="list-style-type: none"> Close draincocks reservoir control lever (2). <p><u>WARNING</u></p> <p>When opening draincock, turn face away from exhaust air blast to prevent eye injury.</p> <ol style="list-style-type: none"> Open draincock reservoir control levers (2), and drain all moisture from reservoirs. 	



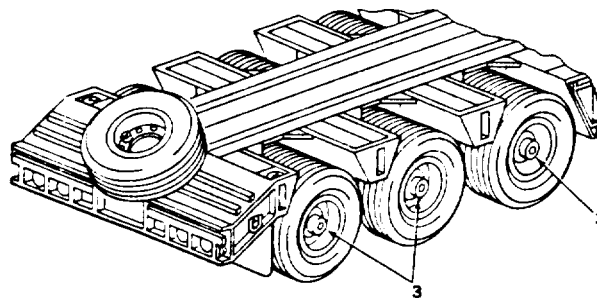
OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - CONTINUED

B- BEFORE

D- DURING

A -AFTER

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		
9	●			<p>BRAKES</p> <p>a. Check for leaks in the airbrake system by shutting off the engine of the prime mover when the air pressure is at maximum. Observe the air pressure gage for 1 minute. Note any drop in air pressure.</p> <p>b. Apply semitrailer brakes and see if they operate property. Have an assistant activate the service brakes. Listen for leaks at the intetvehicular connecting hoses, at relay valve and air reservoirs.</p> <p style="text-align: center;"><u>WARNING</u></p> <p>Before putting hand to hub, hold hand close to hub to check for excessive heat radiation. This will prevent skin burns caused by hot metal.</p> <p>c. Check wheel hubs (3) immediately after road use; feel hubs for significant temperature variation.</p> <p style="text-align: center;">NOTE</p> <p>An overheated hub indicates an improperly adjusted or defective service brake or dry wheel bearings. An abnormally cool condition indicates an inoperative service brake.</p>	<p>Any leaks are evident.</p> <p>Semitrailer brakes fail to hold or air leaks are found.</p>



Section III. OPERATION UNDER USUAL CONDITIONS

	Page		Page
After Use	2-18	Preparation for Use	2-12
Operation	2-17		

PREPARATION FOR USE

Perform the Operator/Crew Preventive Maintenance Checks and Services in the "Before" column before doing the procedures below.

CAUTION

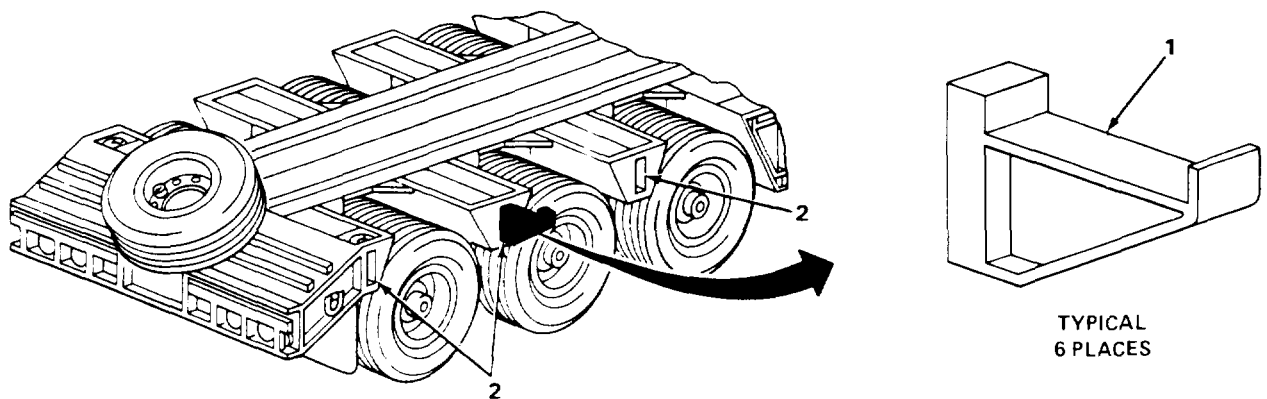
To prevent damage to the equipment, coupling should be done by two persons, one in the truck tractor cab and the other to operate the winch.

Adaptation kit must be installed on the M123A1C truck tractor before it can be used with the semitrailer. Failure to do so will result in damage to the equipment.

Cargo or equipment is to be loaded over the gooseneck ramp only. Failure to do so could result in damage to the frame of the semitrailer.

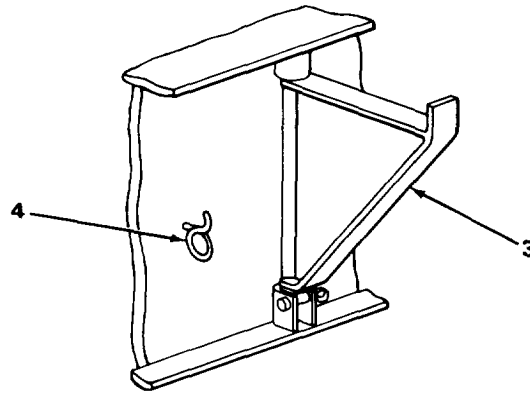
POSITIONING OUTRIGGERS AND PLANKS FOR LOADING

1. Remove rear outriggers (1) from stowage bin in gooseneck.
2. Place rear outriggers (1) in mounting slots (2) on each side of semitrailer.

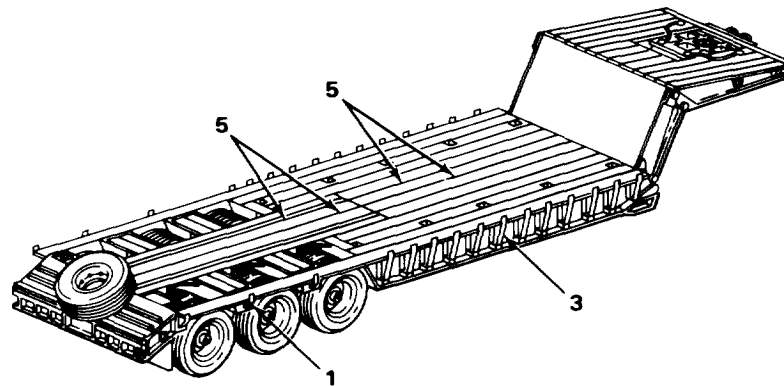


PREPARATION FOR USE - CONTINUED**POSITIONING OUTRIGGERS AND PLANKS FOR LOADING – CONTINUED**

3. Unhook front outriggers (3) by pulling out hook fasteners (4).
4. Swing front outriggers (3) out 90 degrees from semitrailer.



5. Remove four planks (5) from center of semitrailer. Put long planks on rear outriggers (1) and short planks on front outriggers (3).

**CAUTION**

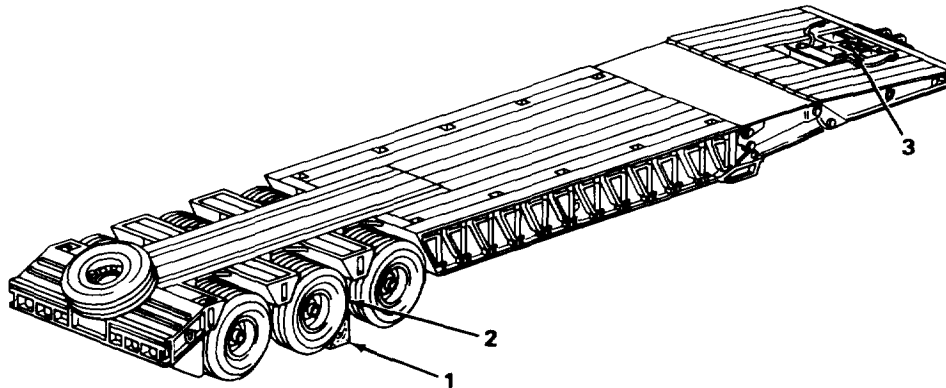
Payload must be positioned over rear axles before doing coupling procedure. Failure to do so could cause damage to the semitrailer.

6. Load payload.

PREPARATION FOR USE - CONTINUED

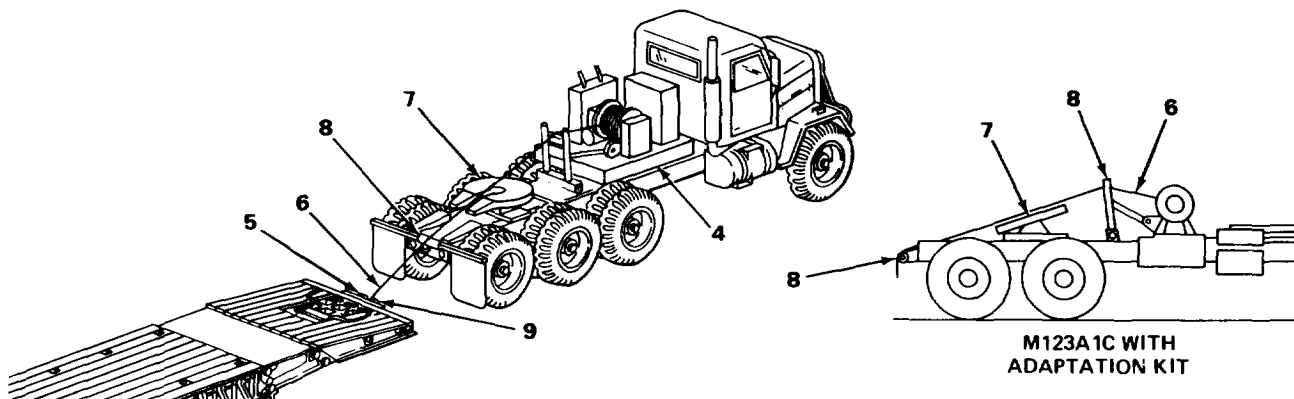
REMOVING CHOCK BLOCKS

1. Take chock block (1) from wheel assembly (2).
2. Put chock block (1) in stowage bin (3).
3. Repeat steps 1 and 2 for other side of semitrailer.



COUPLING SEMITRAILER TO TRUCK TRACTOR

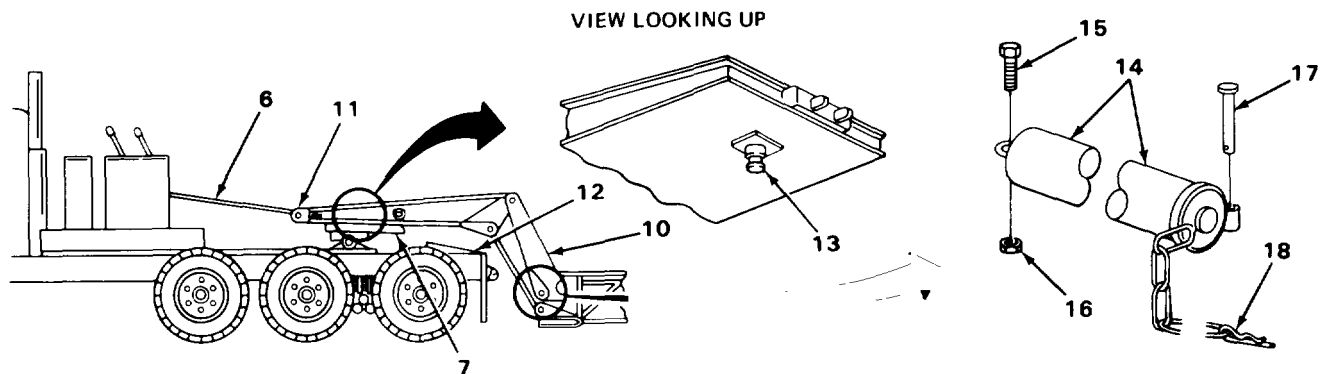
1. Line up truck tractor (4) with semitrailer (5).
2. Slowly back truck tractor (4) to within 3 feet of front of semitrailer (5).
3. With truck tractor (4) in neutral and power takeoff engaged, release winch cable (6).
4. Pass winch cable (6) over fifth wheel (7) and guide roller (8). Attach winch cable (6) to lifting eye (9) on semitrailer (5) nose.



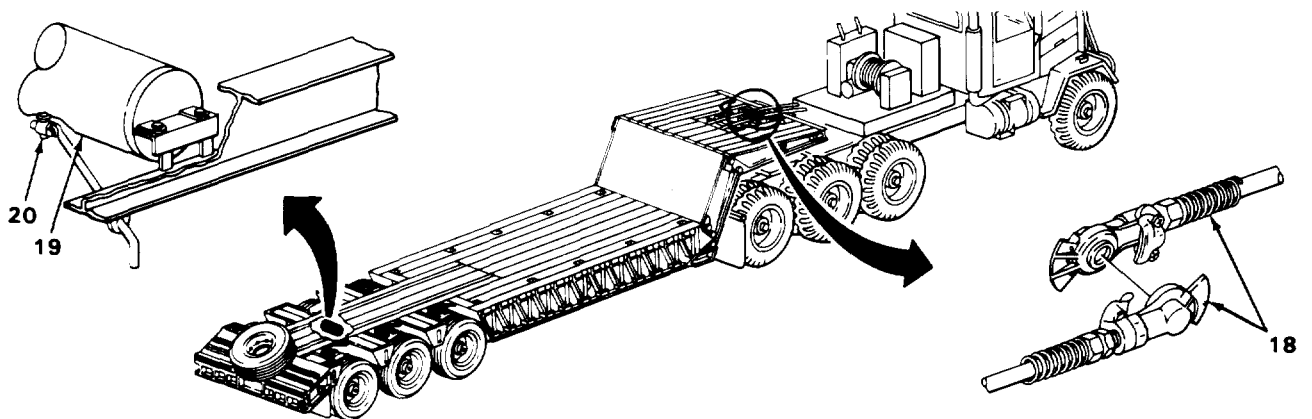
PREPARATION FOR USE - CONTINUED

COUPLING SEMITRAILER TO TRUCK TRACTOR – CONTINUED

5. Take up winch cable (6) until gooseneck (10) is in maximum upright position. Allow semitrailer and truck tractor to roll together.
6. Pull semitrailer nose (11) up the approach ramp (12) and into fifth wheel (7) until kingpin (13) engages and locks into place.
7. Put in locking pins (14) on each side of gooseneck (10), and install safety bolts (15), nuts (16), safety locking pins (17), and safety clips (18).



8. Connect gladhands (18) to semitrailer, and fill air reservoir. Make sure reservoir draincock (20) is closed. Check operation of brakes.



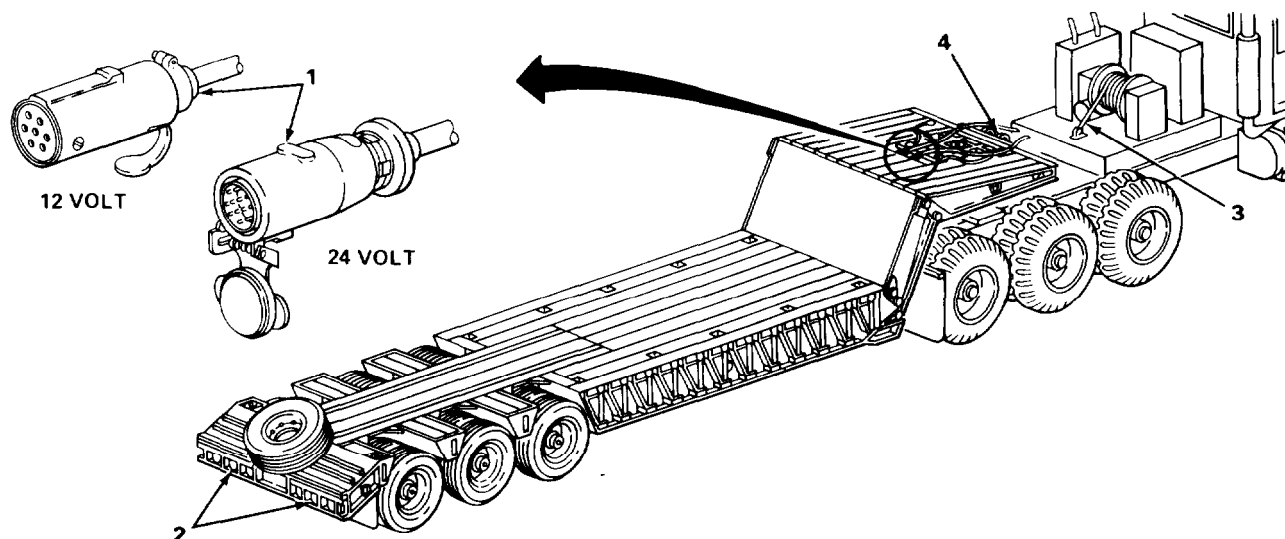
PREPARATION FOR USE - CONTINUED

COUPLING SEMITRAILER TO TRUCK TRACTOR - CONTINUED

CAUTION

The semitrailer is equipped with both 12-volt and 24-volt electrical receptacles. Be sure proper receptacle is used to avoid equipment damage.

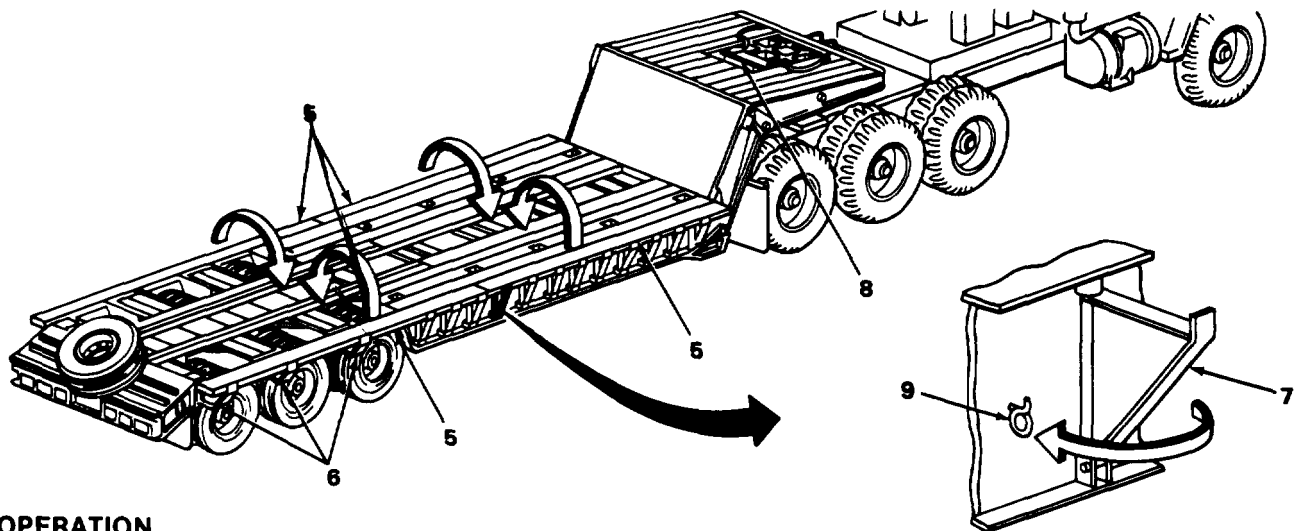
9. Connect intervehicular cable connector (1).
10. Turn on truck tractor lights. Check that all semitrailer clearance lights work.
11. Check that left and right turn indicators work.
12. Have assistant apply brakes. Check that semitrailer brake lights (2) work.
13. Release winch cable (3) from lifting eye (4) and secure cable.



14. Move load to forward position on semitrailer.
15. Remove planks (5) from rear outriggers (6) and front outriggers (7), and stow in center of semitrailer.
16. Take off rear outriggers (6), and stow in storage bin (8).
17. Fold front outriggers (7) against semitrailer, and secure with hook fasteners (9).
18. Tie down load with chains and load binders.
19. Semitrailer is ready for travel.

PREPARATION FOR USE – CONTINUED

COUPLING SEMITRAILER TO TRUCK TRACTOR – CONTINUED



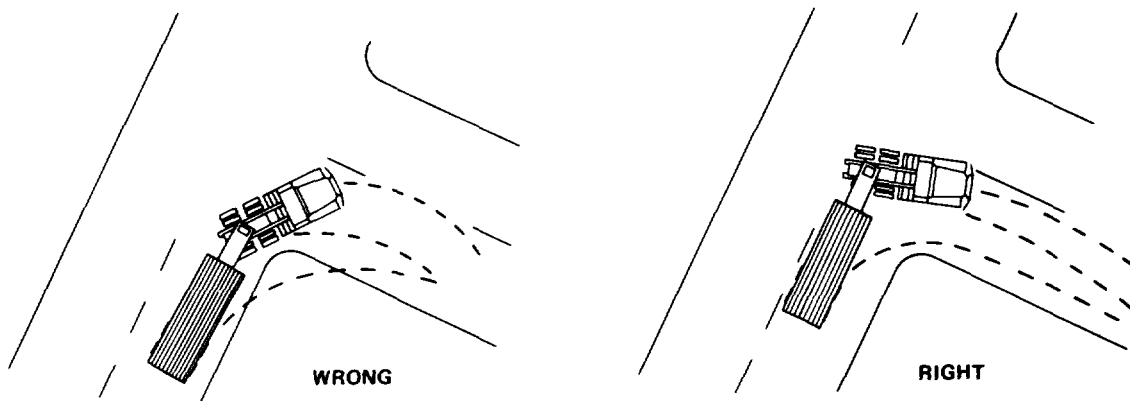
OPERATION

DRIVING

When driving the truck tractor and semitrailer, the overall length of the unit must be kept in mind when passing other vehicles and when turning. Because the unit is hinged in the middle, backing is also affected.

TURNING

When turning corners, allow for the semitrailer wheels turning inside the radius of the truck tractor. Make a right-hand turn by driving the truck tractor about halfway into the intersection and then cutting sharply to the right. This will keep the semitrailer off the curb.



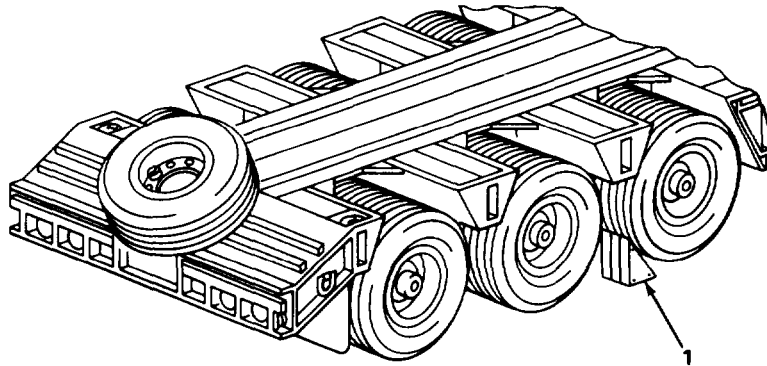
STOPPING

The brakes of the truck tractor and the semitrailer are applied at the same time in normal operation when the driver steps on the brake pedal. Brake pressure must be applied gradually and smoothly. The semitrailer brakes may be applied separately by using the semitrailer handbrake control lever on the steering column. On steep downgrades or slippery surfaces, the semitrailer brakes must be applied before the truck tractor brakes. This will reduce the possibility of jackknifing the semitrailer.

OPERATION - CONTINUED

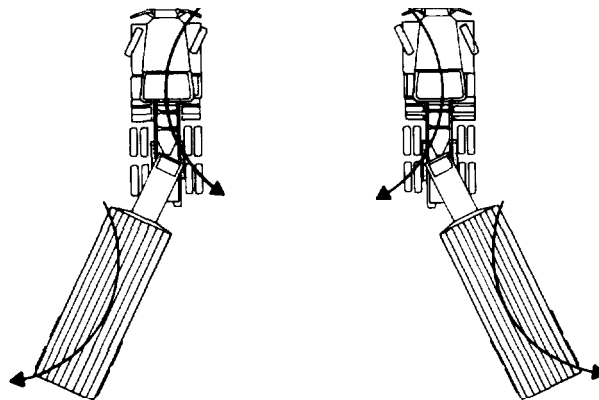
PARKING

When parking the truck tractor and semitrailer and leaving unattended, set the parking brake on the truck tractor. Apply the semitrailer handbrake control, and turn off the engine before leaving the cab. Block the semitrailer wheels with chock blocks (1). Block behind front wheels on uphill grades and in front of back wheels on downhill grades.



BACKING

When backing, use an assistant as a ground guide to direct you. Adjust rearview mirrors before backing. When backing, the rear of the semitrailer will move in the opposite direction from the front truck tractor wheels. If the wheels are turned to the right, the semitrailer will go left. If the wheels are turned to the left, the semitrailer will go to the right.



AFTER USE

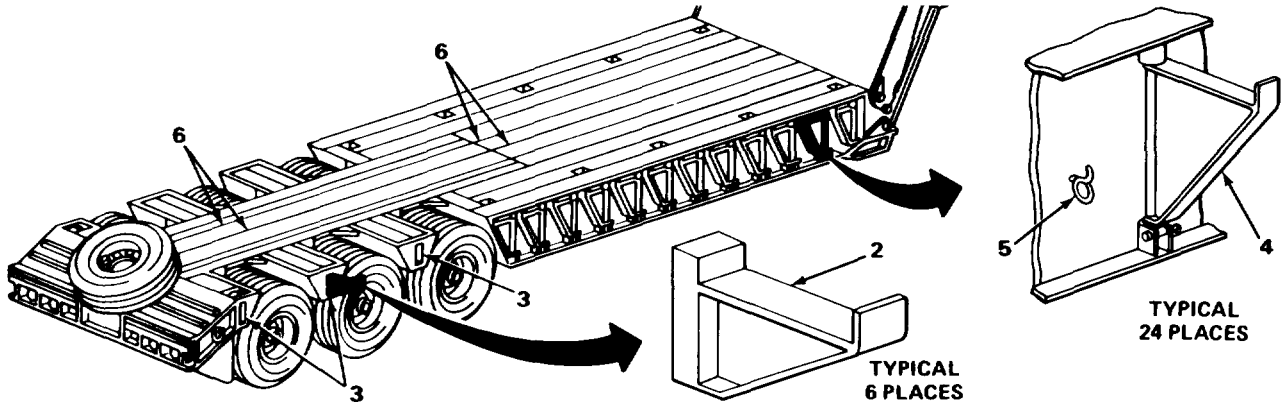
POSITIONING OUTRIGGERS AND PLANKS FOR UNLOADING

1. Remove rear outriggers (2) from stowage bin in gooseneck.
2. Place rear outriggers (2) in mounting slots (3) on each side of semitrailer.
3. Unhook front outriggers (4) by pulling out hook fastener (5).
4. Swing front outriggers (4) out 90 degrees from semitrailer.

AFTER USE - CONTINUED

POSITIONING OUTRIGGERS AND PLANKS FOR UNLOADING – CONTINUED

5. Remove four planks (6) from center of semitrailer. Put long planks on rear outriggers (2) and short planks on front outriggers (4).

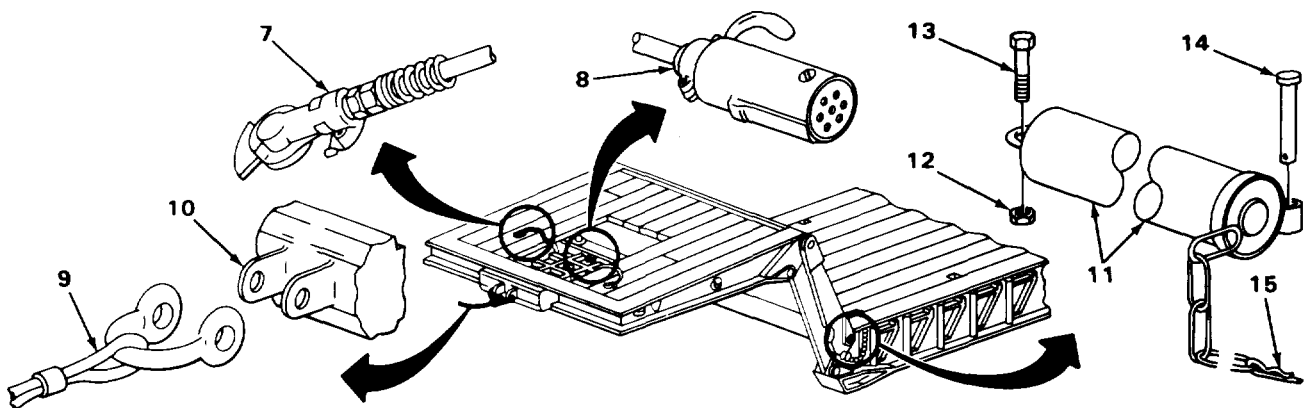


UNCOUPLING SEMITRAILER FROM TRUCK TRACTOR

CAUTION

Payload must be positioned over rear axles before doing uncoupling procedure. Failure to do so will cause damage to semitrailer.

1. Untie payload, and move to rear of semitrailer.
2. Unhook gladhands (7) and intervehicular cable connector (8).
3. Attach winch cable (9) to lifting eye (10) on nose of semitrailer.
4. Remove two locking pins (11) from each side of semitrailer, and reinstall safety nuts (12), bolts (13), and safety locking pins (14) and safety clips (15) to prevent loss.



AFTER USE - CONTINUED

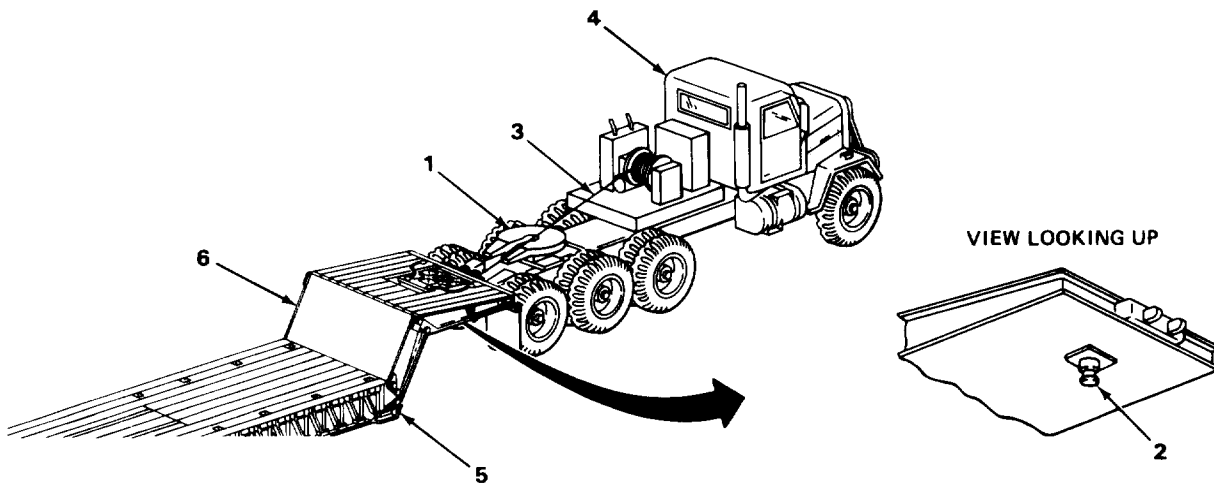
UNCOUPLING SEMITRAILER FROM TRUCK TRACTOR - CONTINUED

CAUTION

To prevent damage to the equipment, uncoupling should be done by two persons, one in the truck tractor cab and the other to operate the winch.

When uncoupling on soft ground or rough terrain, the truck tractor may not roll forward as the line is payed out. It will be necessary to move the truck tractor forward each time the winch cable is payed out. Do not release too much line before pulling the truck tractor forward because the gooseneck may damage the truck tractor taillights or towing pintle.

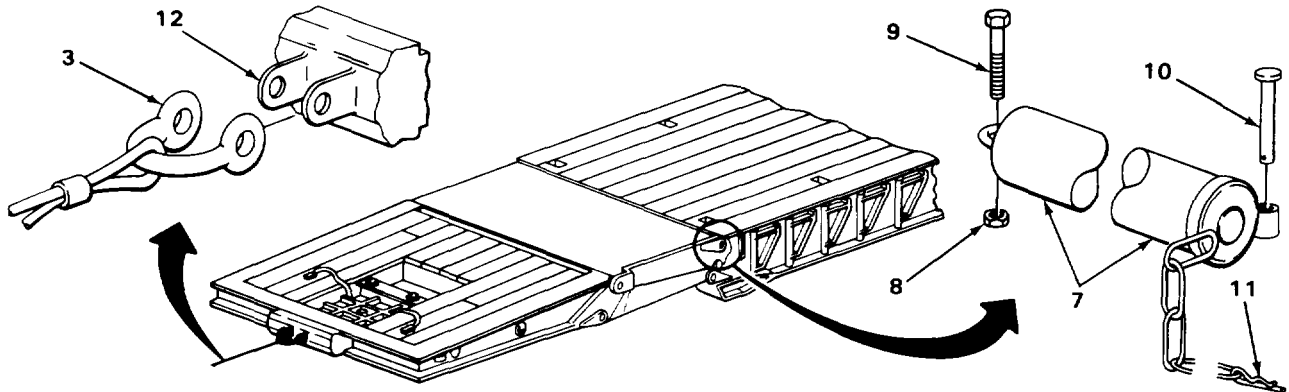
5. Unlock fifth wheel (1) from semitrailer kingpin (2).
6. Pay out slack in winch cable (3), and allow truck tractor (4) to roll forward until semitrailer landing pads (5) touch ground.
7. Continue to pay out winch cable (3), and allow truck tractor (4) to roll forward as gooseneck (6) extends fully and reaches ground position.



AFTER USE - CONTINUED

UNCOUPLING SEMITRAILER FROM TRUCK TRACTOR – CONTINUED

8. Install two safety locking pins (7), nuts (8), safety bolts (9), safety pins (10), and safety clips (11).
9. Unhook winch cable (3) from lifting eye (12), and move truck tractor away from semitrailer.

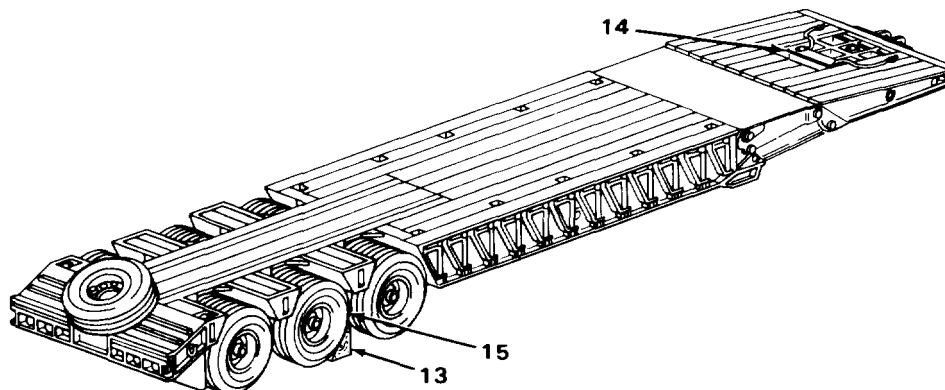


CAUTION

Unload cargo or equipment over the gooseneck ramp only. Failure to do so could result in damage to the frame of the semitrailer.

PLACING CHOCK BLOCKS

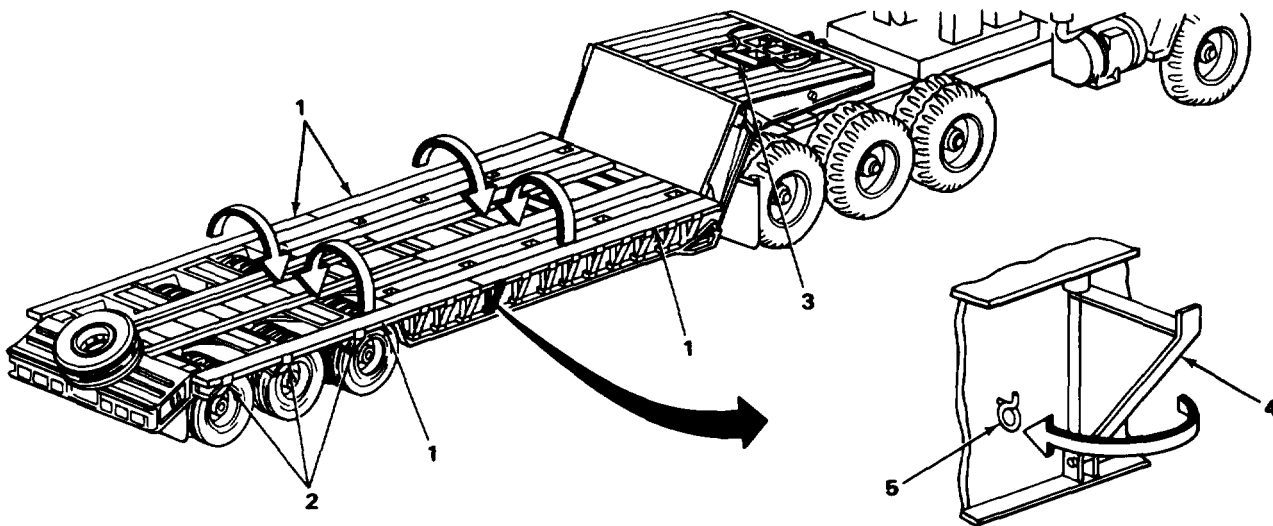
1. Take out chock blocks (13) from stowage bin (14).
2. Put chock blocks (13) in front of wheel assembly (15).
3. Repeat steps 1 and 2 for other side of semitrailer.



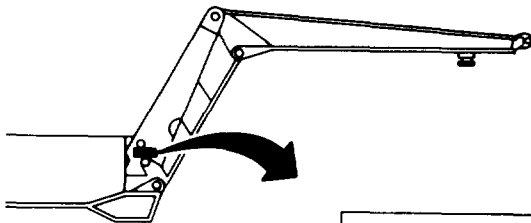
AFTER USE - CONTINUED

STOWING PLANKS AND OUTRIGGERS AFTER UNLOADING

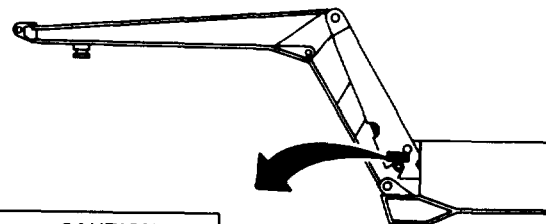
1. Unload cargo or equipment.
2. Remove planks (1) from rear outriggers (2).
3. Take off rear outriggers (2), and stow in stowage bin (3).
4. Remove planks (1) from front outriggers (4).
5. Fold front outriggers (4) against semitrailer, and secure with hook fasteners (5).
6. Stow planks (1) in center of semitrailer.



OPERATING INSTRUCTION PLATES



CAUTION
DO NOT WORK UNDER
GOOSENECK UNLESS
LOCK PINS ARE
SECURELY IN PLACE



CAUTION
DO NOT WORK UNDER
GOOSENECK UNLESS
LOCK PINS ARE
SECURELY IN PLACE

A caution plate is located on each side of gooseneck.

Section IV. OPERATION UNDER UNUSUAL CONDITIONS

Page	Page		
Fording	2-24	Operation in Saltwater Areas	2-24
Operation in Extreme Cold	2-23	Operation in Sandy or Dusty	
Operation in Extreme Heat	2-23	Areas	2-23
Operation in Mud	2-24	Operation in Snow	2-24
Operation in Rainy or Humid		Operation on Rocky Terrain	2-24
Conditions	2-23		

OPERATION IN EXTREME HEAT

CAUTION

Do not park the semitrailer in sunlight for long periods of time because effects of heat and sunlight shorten the life of tires. If possible, shelter or cover the semitrailer.

OPERATION IN EXTREME COLD

1. Extreme cold can cause lubricants to thicken. Insulation can crack and cause electrical short circuits. Construction materials can become hard, brittle, and easily damaged or broken.
2. Tires may freeze to the ground or have a flat spot if underinflated.
3. Brakeshoes may freeze to brakedrums and need to be heated to prevent damage to mating surf aces.
4. Refer to FM 9-207 and FM 21-305 for special instructions on driving hazards in extreme cold.
5. When parking short term, park in a sheltered area out of the wind.
6. For parking long term, if high dry ground is not available, place a footing of planks or brush under semitrailer wheels and landing pads.
7. Remove all built-up ice, snow, and mud as soon as possible after shutdown.
8. Cover and shield the semitrailer with canvas covers if available. Keep ends of covers off ground to keep them from freezing to the ground.

OPERATION IN RAINY OR HUMID CONDITIONS

Inspect, clean, and lubricate inactive equipment often to prevent rust and fungus from developing.

OPERATION IN SANDY OR DUSTY AREAS

CAUTION

Do not tow, pull, or push semitrailer by rear bumper. This may cause damage to equipment.

1. Clean, inspect, and lubricate more often in dusty or sandy areas.
2. Reduce tire pressure to 35 psi (241.3 kPa) for operation in beach or desert sand.

OPERATION IN SANDY OR DUSTY AREAS-CONTINUED

3. Be sure to return tire pressure to normal 85 psi (586 kPa) after sand operation.

OPERATION IN SNOW

Refer to FM 21-305 for special instructions for operation in snow.

OPERATION IN MUD

CAUTION

Do not tow, push, or pull semitrailer by rear bumper. This may cause damage to equipment.

1. Reduce tire inflation to 35 psi (241.3 kPa) while operating in soft mud, if practical.
2. If one or more wheels sink into mud, you may need to jack up mired wheel and put planking or matting under it.
3. Clean off all mud after operation.

OPERATION IN SALTWATER AREAS

Saltwater will cause early rust and corrosion. Clean, inspect, and lubricate often.

OPERATION ON ROCKY TERRAIN

1. Tires must be fully inflated to 85 psi (586 kPa) when moving on rough or rocky terrain. Underinflated tires will cause internal ruptures of tires and damage tubes.
2. Before driving over stumps or rocks, make sure the semitrailer can clear them. Such objects can damage components on the underside of the semitrailer. Beware of low hanging limbs that can damage cargo.
3. Be sure you have a serviceable spare tire and wheel assembly because there is a greater chance of tire puncture.

FORDING

BEFORE FORDING

1. Before entering water, check bottom surface conditions. If bottom is too soft, do not ford.

AFTER FORDING

2. After coming out of water, apply brakes a few times to help dry out brake linings. Make sure semitrailer brakes are working before driving at normal speeds.
3. Drain or dry all areas where water has collected.
4. Lubricate all unpainted surfaces. See Lubrication Chart, page 4-5.
5. Dry all lubrication points, and lubricate. See Lubrication Chart, page 4-5.

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	3-5

Section I. LUBRICATION INSTRUCTIONS

Lubrication instructions under usual and unusual conditions and the semitrailer lubrication chart are provided in Organizational Maintenance, Chapter 4.

Section II. OPERATOR TROUBLESHOOTING PROCEDURES

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

GENERAL

The table lists common malfunctions which you may find during operation or maintenance of the semitrailer or its components. You should perform tests/inspections and corrective maintenance in the order listed.

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

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 problem.

SYMPTOM INDEX

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

	Page
BRAKES	
Brakes do not apply	3-3
Brakes grab	3-4
ELECTRICAL SYSTEM	
All lamps do not work	3-2
One or more (but not all) lamps do not work	3-3
GOOSENECK	
Will not raise or lower	3-5
TIRES	
Excessively worn, scuffed, or cupped tires	3-4

OPERATOR TROUBLESHOOTING

NOTE

The following provides procedures the operator can use to find and fix trailer malfunctions.

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ALL LAMPS DO NOT WORK

Step 1. Check lights on truck tractor to make sure they operate. See Truck Tractor Operator's Manual.

If truck tractor lights do not work, troubleshoot truck tractor using truck tractor operator's manual.

Step 2. Check intervehicular electric cable for proper connection.

If cable is not connected properly, reconnect (page 2-16).

OPERATOR TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

ELECTRICAL SYSTEM – CONTINUED
1. ALL LAMPS DO NOT WORK – CONTINUED

Step 3. Check both ends of electric cable connectors and receptacles for bent, broken, dirty, or corroded pins and dirty, corroded, or plugged sockets.

a. If pins or sockets are dirty, plugged, or corroded, clean them.

b. If pins are bent or broken, notify Organizational Maintenance.

c. If all lamps still do not work, notify Organizational Maintenance.

2. ONE OR MORE (BUT NOT ALL) LAMPS DO NOT WORK

Check for lamps that do not light.

If one or more lamps do not light, notify Organizational Maintenance.

BRAKES**3. BRAKES DO NOT APPLY**

Step 1. Check that air supply from truck tractor is turned on.

If air is turned off, turn on air (page 2-15).

Step 2. Check air pressure in truck tractor.

If pressure is low, build up pressure (page 2-15).

Step 3. Check connection of gladhands to air lines.

If air lines are not properly connected (service-to-service and emergency-to-emergency), connect properly (page 2-16).

Step 4. Check for dirty or leaking gladhands.

a. If gladhands are dirty, clean.

b. If gladhands are leaking, notify Organizational Maintenance.

OPERATOR TROUBLESHOOTING - CONTINUED

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BRAKES – CONTINUED

3. BRAKES DO NOT APPLY – CONTINUED

Step 5. Check brake hoses and connectors for damage or leaks by listening for hissing sound while system is under pressure.

If hoses or connectors are damaged or leaking, notify Organizational Maintenance.

WARNING

Wear eye protection when working with air under pressure. Failure to do so could result in eye injury.

Step 6. Check semitrailer air reservoir for open draincock (page 2-15).

- a. If draincock is open, close it (page 2-15).
- b. If draincock is closed and brakes still do not apply, notify Organizational Maintenance.

4. BRAKES GRAB

WARNING

Wear eye protection when working with air under pressure. Failure to do so could result in eye injury.

Check for moisture in air reservoir by opening draincock (page 2-10).

- a. If reservoir has moisture present, drain moisture, and close draincock (page 2-10).
- b. If reservoir does not have moisture and brakes still grab, notify Organizational Maintenance.

TIRES

5. EXCESSIVELY WORN, SCUFFED, OR CUPPED TIRES

Step 1. Check tire pressure.

If pressure is not 85 psi (586 kPa), inflate tires.

OPERATOR TROUBLESHOOTING - CONTINUED

MALFUNCTION
 TEST OR INSPECTION
 CORRECTIVE ACTION

TIRES – CONTINUED

5. EXCESSIVELY WORN, SCUFFED, OR CUPPED TIRES – CONTINUED

- Step 2. Check wheels for cracks, breaks, or looseness.
 - a. If wheels are loose, tighten wheels.
 - b. If wheels are cracked or broken, notify Organizational Maintenance.

- Step 3. Check suspension system for damaged springs and loose or missing nuts and bolts.

If suspension system is damaged or missing nuts and bolts, notify Organizational Maintenance.

- Step 4. Check axles for damage and misalignment.
 - a. If axles appear to be damaged or misaligned, notify Organizational Maintenance.
 - b. If tires still scuff, cup, or wear unevenly, notify Organizational Maintenance.

GOOSENECK

6. GOOSENECK WILL NOT RAISE OR LOWER

- Step 1. Check hinge seams for dirt or rocks,

If dirty or jammed by rocks, clean.

- Step 2. Check side links and link pins for damage.

If side links or link pins are damaged, notify Organizational Maintenance.

Section III. OPERATOR MAINTENANCE PROCEDURES

	Page		Page
Air Reservoir	3-8	Tire and Wheel Assembly	3-9
Electrical Connectors	3-6	Spare Tire and Wheel Assembly	3-13
Gladhands	3-7		

ELECTRICAL CONNECTORS

This task cover:

Cleaning

INITIAL SETUP

Materials/Parts

- Brush acid swabbing (item 2, appendix E)
- Detergent, liquid (item 4, appendix E)
- Rags, wiping (item 12, appendix E)

Personnel Required

One

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

CLEANING

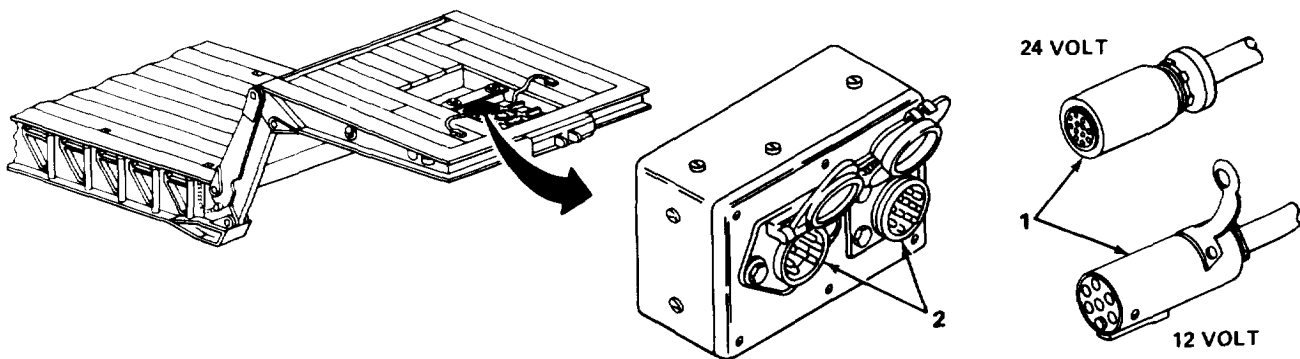
Stowage bin

Intervehicular electrical cable connector (1) and connector receptacle (2)

a. Using rags, wipe off any buildup of grease and dirt.

b. Using brush and detergent, clean metal surfaces.

c. Allow to dry.



TASK ENDS HERE

GLADHANDS

This task covers:

Cleaning

INITIAL SETUP

Materials/Parts

Detergent, liquid (item 4, appendix E)
Rags, wiping (item 12, appendix E)

Personnel Required

One

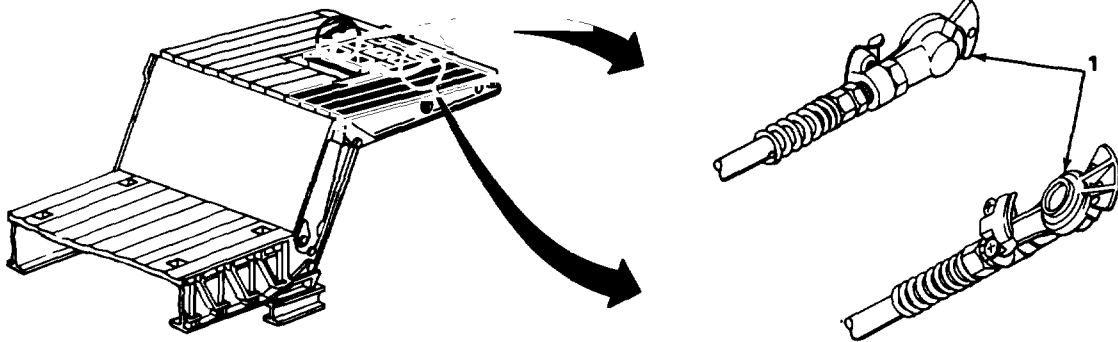
LOCATION	ITEM	ACTION REMARKS
----------	------	-------------------

CLEANING

Stowage bin

Two gladhands (1)

- a. Using rags, wipe off any buildup of grease and dirt.
- b. Using a rag moistened with detergent, clean gladhands.
- c. Allow to dry.



TASK ENDS HERE

AIR RESERVOIR

This task covers:

Servicing

INITIAL SETUP

Tools

Protective goggles

Personnel Required

One

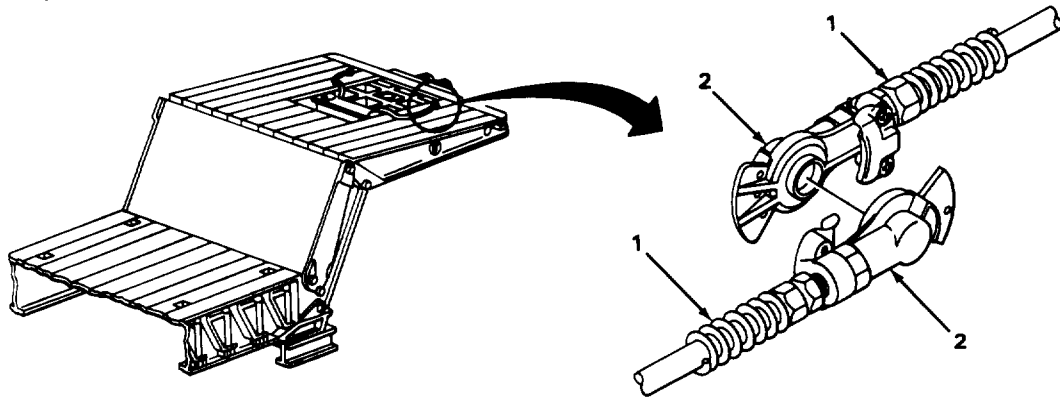
LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

SERVICING

- | | | | |
|----|----------------------|------------------------|-------------------------------------|
| 1. | Truck tractor | Semitrailer air supply | Turn off air supply to semitrailer. |
| 2. | Front of semitrailer | Two airlines (1) | Unhook gladhands (2). |

WARNING

Wear goggles for draining high air pressure. Failure to wear protective goggles when opening air reservoir draincock could cause serious eye injury.



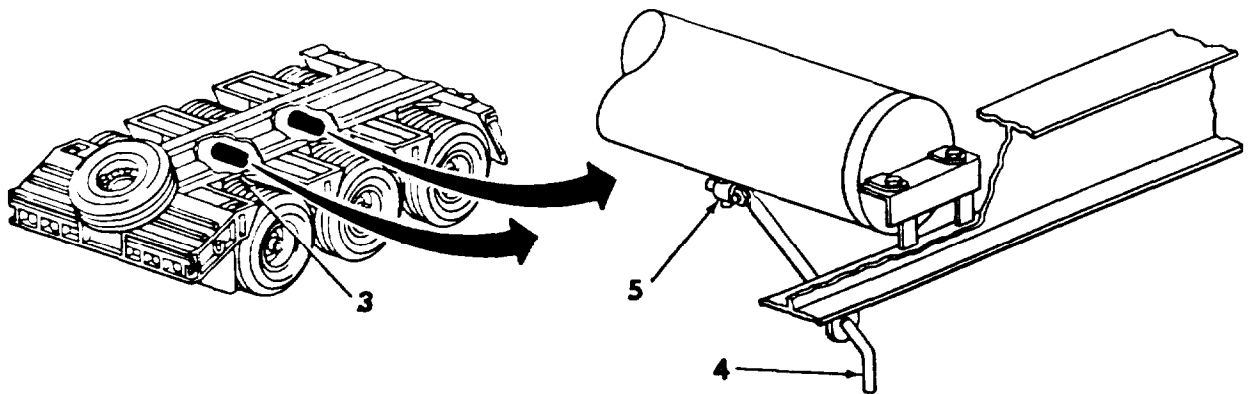
- | | | | |
|----|---|---|---|
| 3. | Rear of semi-trailer in front of middle left wheel on bottom of frame (3) | Air reservoir draincock control lever (4) | a. Turn to open draincock (5), and allow to drain fully.
b. Close. |
| 4. | Front of semitrailer | Two air lines | Hook up gladhands. |

AIR RESERVOIR - CONTINUED

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

SERVICING – CONTINUED

- | | | | |
|----|---------------------|------------------------------|---|
| 5. | Truck tractor | Semitrailer air supply | Turn on air supply to semitrailer. |
| 6. | Rear of semitrailer | Air reservoirs draincock (5) | Check for leaks by listening for hissing
If draincock is leaking, notify Organizational Maintenance. |



TASK ENDS HERE

TIRE AND WHEEL ASSEMBLY

This task covers:

- a. Removal (page 3-10)
- b. Installation (page 3-11)

INITIAL SETUP

Tools

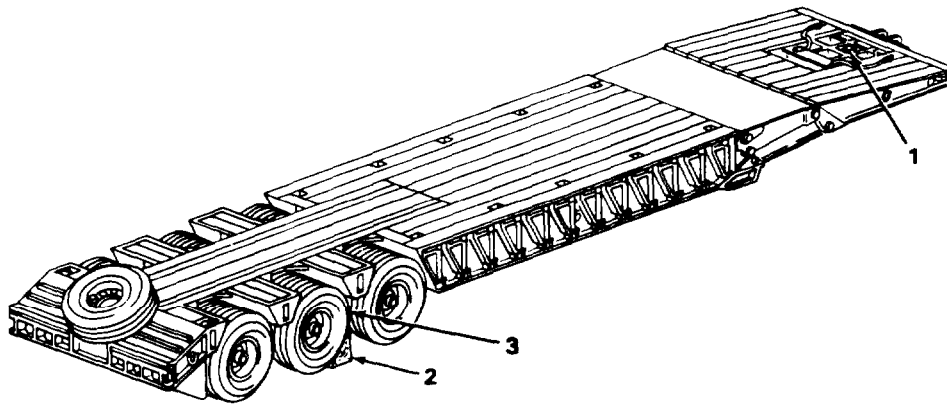
Jack, hydraulic, hand, 10-ton
Trestle, motor vehicle, 10-ton
Wrench, lug/stud nut

Personnel Required

Two

TIRE AND WHEEL ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Stowage bin (1)	Chock blocks (2)	Take out of bin, and block tires (3) not being removed.	



NOTE

Check lug nut stamping to determine direction of rotation for removal before starting to loosen nuts.

2. Outer tire and wheel assembly (4)	Ten lug nuts (5)	Using lug wrench, loosen 10 lug nuts but do not remove.
3. End of axle (6) for tire being removed	Hydraulic jack (7)	<ul style="list-style-type: none"> a. Place jack under axle (6) close to tire and wheel assembly being removed. b. Raise tire and wheel assembly (4) until off ground. c. Place trestle under rear corner of semitrailer where wheel is being removed.
4.	Ten lug nuts (5)	Unscrew 10 lug nuts, and take off.

TIRE AND WHEEL ASSEMBLY - CONTINUED

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

REMOVAL – CONTINUED

- | | | |
|----|-----------------------------------|----------------------------------|
| 5. | Outer tire and wheel assembly (4) | With aid of assistant, take off. |
|----|-----------------------------------|----------------------------------|

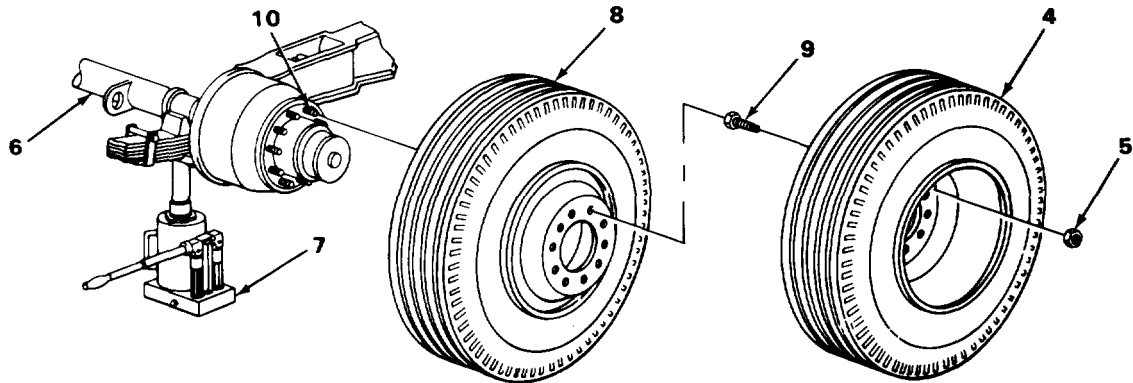
NOTE

If inner tire and wheel assembly does not need to be removed, skip steps 6 thru 12.

- | | | |
|----|-----------------------------------|---|
| 6. | Inner tire and wheel assembly (8) | Using lug wrench, unscrew 10 stud nuts and take off. |
| 7. | Lug studs (10) | Inner tire and wheel assembly (8)
With aid of assistant, take off. |

INSTALLATION

- | | | |
|----|-----------------------------------|--|
| 8. | Inner tire and wheel assembly (8) | With aid of assistant, put assembly on lug bolts (10). |
|----|-----------------------------------|--|



TIRE AND WHEEL ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION – CONTINUED

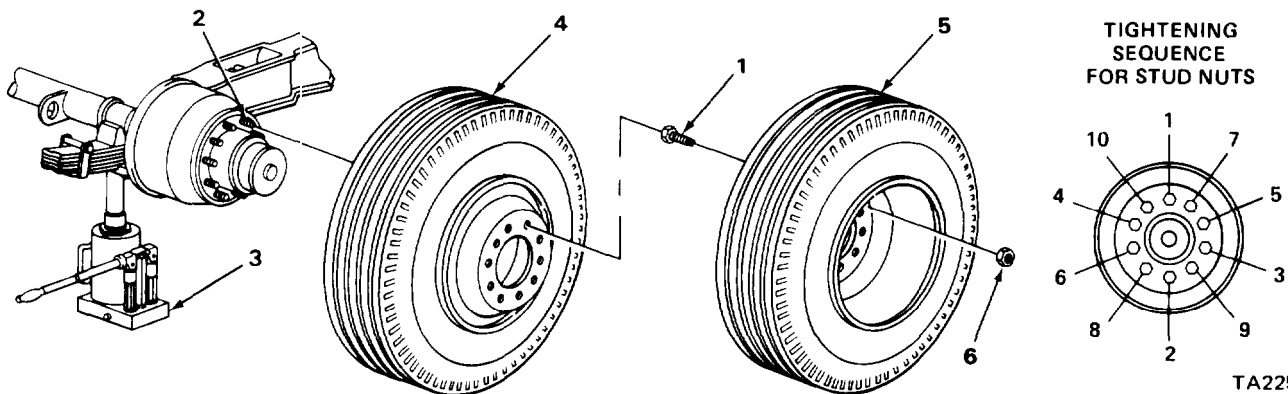
NOTE

Lug bolts are threaded right hand or left hand in direction of forward wheel rotation. To tighten stud nuts on right side, turn clockwise. To tighten stud nuts on left side, turn counterclockwise.

- | | | |
|-----|-----------------------------------|---|
| 9. | Ten stud nuts (1) | Screw onto lug bolts (2), and tighten in sequence shown below using lug wrench. |
| 10. | Hydraulic jack (3) | a. Remove trestle.
b. Lower inner tire and wheel assembly (4) to ground. |
| 11. | Ten stud nuts (1) | Screw on, and tighten using lug wrench. |
| 12. | Hydraulic jack (3) | Raise inner tire and wheel assembly (4) off ground. |
| 13. | Outer tire and wheel assembly (5) | With the aid of an assistant, put assembly on stud nuts (1). |
| 14. | Ten lug nuts (6) | Screw onto stud nuts (1), and tighten sequence shown below using lug wrench. |
| 15. | Hydraulic jack (3) | Lower, remove, and stow. |

NOTE

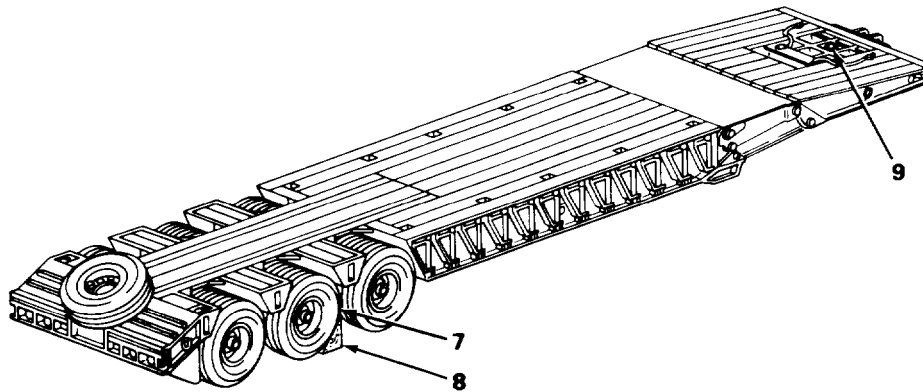
As soon as possible, notify Organizational Maintenance of tire change. Have Organizational Maintenance tighten stud nuts and lug nuts to 450 to 500 ft-lb of torque (610 to 678 N•m).



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TIRE AND WHEEL ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED		
16.	Bad tire	Stow on spare tire lugs, at rear of semitrailer.
17.	Tires and wheel assembly (7) Chock blocks (8)	Take away from tire and wheel assembly (7) and stowage bin (9).



TASK ENDS HERE

SPARE TIRE AND WHEEL ASSEMBLY

This task covers:

- a. Removal (page 3-14)
- b. Installation (page 3-14)

INITIAL SETUP

Tools

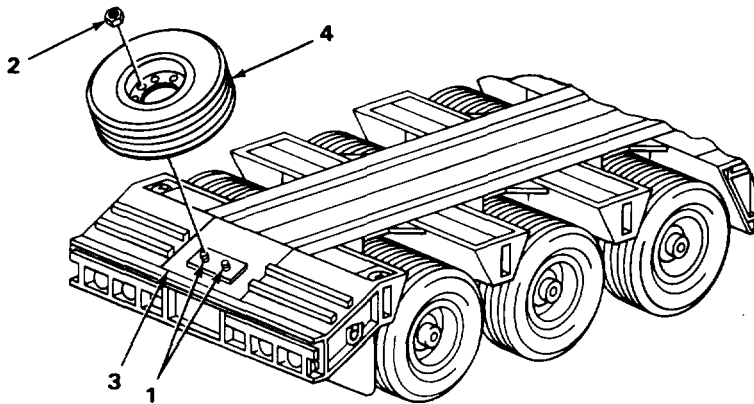
Wrench, lug/stud nut

Personnel Required

Two

SPARE TIRE AND WHEEL ASSEMBLY - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL			
1.	Lugs (1)	Two lug nuts (2)	Using lug wrench, unscrew two lug nuts (2) and take off.
2.	Rear of semitrailer (3)	Spare tire and wheel assembly (4)	a. With assistant, lift off lugs (1) and remove. b. Install spare tire and wheel assembly.
INSTALLATION			
3.	Rear of semitrailer (3)	Spare tire and wheel assembly (4)	With assistant, put tire and wheel assembly (4) on lugs (1).
4.	Lugs (1)	Lug nuts (2)	Screw on two lug nuts, and tighten using lug wrench.



NOTE

As soon as possible, notify Organizational Maintenance of tire change. Have Organizational Maintenance repair bad tire.

TASK ENDS HERE

CHAPTER 4

ORGANIZATIONAL MAINTENANCE

OVERVIEW

This chapter contains all of the maintenance authorized to be performed by organizational maintenance. Included are lubrication instructions, service upon receipt, preventive maintenance checks and services, troubleshooting, and maintenance procedures.

		Page
Section I.	General Maintenance instructions	4-1
Section II.	Lubrication instructions	4-5
Section III.	Repair Parts, Special Tools; Test, Measurement and Diagnostic Equipment (TMDE); and Support Equipment	4-8
Section IV.	Service Upon Receipt	4-8
Section V.	Organizational Preventive Maintenance Checks and Services (PMCS)	4-9
Section VI.	Organizational Troubleshooting Procedures	4-15
Section VII.	Electrical System Maintenance	4-24
Section VIII.	Brake System Maintenance	4-65
Section IX.	Wheels, Hubs, and Drums Maintenance	4-99
Section X.	Frame and Towing Attachments Maintenance	4-106
Section XI.	Accessory Items Maintenance	4-115
Section XII.	Preparation for Storage and Shipment	4-119

Section I. GENERAL MAINTENANCE INSTRUCTIONS

	Page		Page
Cleaning Instructions	4-2	Repair Instructions	4-4
General Information	4-2	Scope	4-1
Inspection Instructions	4-3	Work Safety	4-1

SCOPE

These general maintenance instructions contain general shop practices and specific methods you must be familiar with to properly maintain the semitrailer. You should read and understand these practices and methods before starting organizational tasks on the semitrailer.

WORK SAFETY

Before starting a task, think about the risks and hazards to your safety as well as others. Wear protective gear such as safety goggles or lenses, safety shoes, rubber apron, or gloves. Protect yourself against injury.

When lifting heavy parts, have someone help you. Make sure that lifting/jacking equipment is working properly, that it is suitable for the task assigned, and is secured against slipping.

Always use power tools carefully.

Observe all WARNINGS and CAUTIONS.

GENERAL INFORMATION

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

All tags and forms attached to the equipment must be checked to learn the reason for removal from service. Also, check all Modification Work Orders (MWO) and Technical Bulletins (TB) for equipment changes and updates.

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

1. Don't take out dowel pins or studs unless loose, bent, broken, or otherwise damaged.
2. Don't pull bearings or bushings unless damaged. If you must get at parts behind them, pull out bearings or bushings carefully.
3. Replace all gaskets, seals, and packings.

CLEANING INSTRUCTIONS

GENERAL

- a. The cleaning instructions will be the same for the majority of parts and components which make up the semitrailer.
- b. The importance of cleaning must be thoroughly understood by maintenance personnel. Great care and effort are required in cleaning. Dirt and foreign material are a constant threat to satisfactory maintenance. The following should apply to all cleaning, inspection, repair, and assembly operations.
 1. Clean all parts before inspection, after repair, and before assembly.
 2. Hands should be kept free of any accumulation of grease, which can collect dust, dirt, or grit.
 3. After cleaning, all parts should be covered or wrapped to protect them from dust and dirt. Parts which are subject to rust should be lightly oiled.

STEAM CLEANING

- a. Protect all electrical equipment which could be damaged by the steam or moisture before steam cleaning the exterior of the M870 semitrailer.
- b. Place disassembled parts in a suitable container to steam clean.
- c. After cleaning, dry and apply light coat of oil to all parts subject to rust.

CLEANING INSTRUCTIONS - CONTINUED**WARNING**

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield when using compressed air.

- d. Blow out all tapped (threaded) holes with compressed air to remove dirt and cleaning fluids.

ELECTRICAL CABLES, FLEXIBLE HOSE, AND OIL SEALS**WARNING**

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors, and avoid skin contact. Use only in well-ventilated area, and keep away from open flame or excessive heat. Injury to personnel could occur.

CAUTION

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

NOTE

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

BEARINGS

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

INSPECTION INSTRUCTIONS

All components and parts must be carefully checked to determine:

- a. If they are serviceable for reuse,
- b. If they can be repaired,
- c. If they must be scrapped.

DRILLED AND TAPPED (THREADED) HOLES

- a. Inspect for wear, distortion (stretching), cracks, or any other damage in or around holes.
- b. Inspect threaded areas for wear, distortion, or evidence of cross-threading.
- c. Mark all damaged areas for repair or replacement.

INSPECTION INSTRUCTIONS - CONTINUED

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

- a. Inspect metal lines for sharp kinks, cracks, bad bends, or if badly dented.
- b. Inspect flexible lines for fraying, evidence of leakage, or loose metal fittings or connectors.
- c. Check all metal fittings and connectors for thread damage, and check for hex heads that are worn or rounded by poorly fitting wrenches.
- d. Mark all damaged material for repair or replacement.

CASTINGS, FORGINGS, AND MACHINED METAL PARTS

- a. Inspect machined surfaces for nicks, burrs, raised metal, wear, or any other damage.
- b. Check all inner and outer surfaces for breaks or cracks.
- c. Mark all damaged material for repair or replacement.

BEARINGS

Refer to TM 9-214 for inspection instructions and defect analysis.

AIR LINES, FITTINGS, AND CONNECTIONS

Check for leaking fittings and connections by coating fittings and connections with soap solution. No leakage is permissible.

REPAIR INSTRUCTIONS

NOTE

For accuracy, refer to the Source, Maintenance, and Recoverability codes (SMR) assigned to support items listed in the maintenance Repair Parts and Special Tools Lists (RPSTL) Appendix F contained in this manual.

Any repair procedure peculiar to a specific part or component is covered in the section or paragraph relating to that item. After repair, clean all parts thoroughly to prevent dirt, metal chips, or other foreign material from entering any working parts.

CASTINGS, FORGINGS, AND MACHINED METAL PARTS

- a. Minor cracked castings or forgings may possibly be repaired. See your supervisor, and refer to TM 9-237.
- b. Repair minor damage to machined surfaces with a fine mill file or crocus cloth dipped in dry-cleaning solvent.
- c. Machined surface deeply nicked which could affect the assembly operation should be replaced. See your supervisor.

REPAIR INSTRUCTIONS - CONTINUED

CASTINGS, FORGINGS, AND MACHINED METAL PARTS – CONTINUED

- d. Minor damage to threaded capscrew holes should be repaired with thread tap of same size, to prevent cutting oversize. See your supervisor.

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

Refer to brake system maintenance procedures (page 4-65).

Section II. LUBRICATION INSTRUCTIONS

	Page		Page
Lubrication Chart	4-5	Lubrication Instructions	4-5

LUBRICATION INSTRUCTIONS

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

CLEANING. Keep all external parts not requiring lubrication free of lubricants. Before lubricating the equipment, wipe all lubrication points free of dirt and grease. Clean all lubrication points after servicing to prevent accumulation of foreign matter.

LUBRICATION INTERVAL. Service the lubrication points at proper intervals as specified in the lubrication chart. The intervals specified are based on operation under normal conditions. Modification of the recommended intervals may be required under unusual operating conditions.

LUBRICATION CHART

- a. For lubrication under normal conditions, see Lubrication Chart on page 4-6.
- b. For instructions on lubrication in weather below 0°F (-18°C), refer to FM 9-207.
- c. For lubrication before and after fording, refer to TM 9-238.
- d. After operation in mud, dust, sand, or other unusual conditions, clean and inspect all lubrication points. Lubricate semitrailer in accordance with the Lubrication Chart.

LUBRICATION CHART

SEMITRAILER, LOWBED, 40-TON CONSTRUCTION EQUIPMENT TRANSPORTER M870 (CCE) (CMI/LOAD KING MODEL 403LF) (2330-00-133-1731)

Hard-time intervals and the related man-hours are based on normal operation. The man-hour time specified is the time you need to do all the services prescribed for a particular interval. Change the interval if your lubricants are contaminated or if you are operating the 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.

Clean fittings before lubricating. Lubrication points are indicated by dotted arrow shafts on both sides of equipment. Clean parts with drycleaning solvent PD-680, Type II, SDII. Dry before lubricating. The lowest level of maintenance authorized to lubricate a point is indicated by one of the following: (C) Operator/crew or (O) Organizational Maintenance.

WARNING

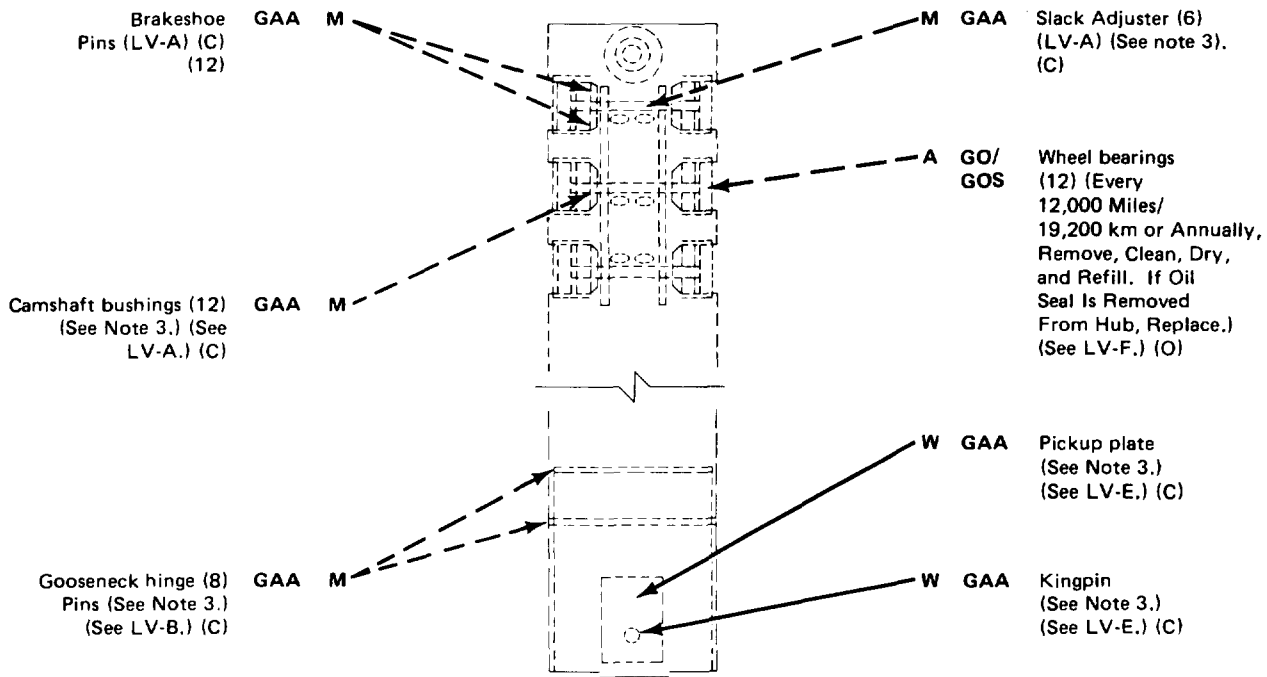
Drycleaning solvent is extremely flammable. Do not use near open flame. Use only in well-ventilated area and do not breathe vapors.

NOTE

LV is Localized View.

LUBRICANT • INTERVAL

INTERVAL • LUBRICANT



TOTAL MAN-HR		TOTAL MAN-HR	
INTERVAL	MAN-HR	INTERVAL	MAN-HR
W	0.5	S	0.2
M	0.6	A	7.3
Q	0.5		

-KEY-

LUBRICANTS	EXPECTED TEMPERATURES			For arctic operations, refer to FM 9-207	INTERVALS
	ABOVE +32 F (ABOVE 0)	+40 TO -10 F (-5 C TO -23 C)	0 F TO -65 F (-18 C TO -54 C)		
GAA Grease Lubr. automotive and artillery	GAA	GAA	GAA		Intervals given in weekly, monthly, quarterly, semi-annually, and annually.
GO/GOS Lubricating Oil, multipurpose or subzero	GO	GO	GOS		
PL-M/PL-S Lubricating oil preservative	PL-M	PL-S	PL-S		
OE/HDO Lubricating oil	OE/HDO 30	OE/HDO 10	OEA/AP6-PD-1		

Notes:

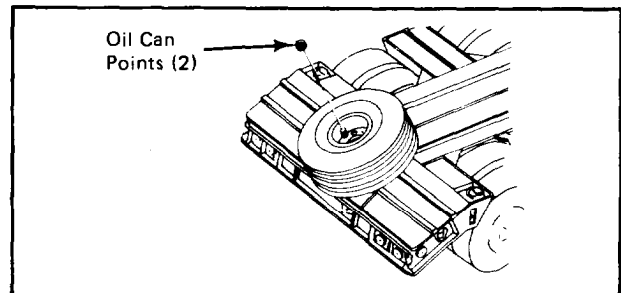
WARNING

Drycleaning solvent is extremely flammable. Do not use near open flame. Use only in well-ventilated area and do not breathe vapors.

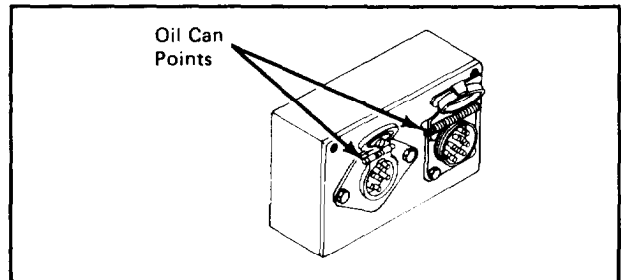
1. For operation of semitrailer in protracted cold temperatures below -10°F (-23°C), remove lubricants prescribed in the key for temperatures above -10°F (-23°C). Clean parts with drycleaning solvent. Relubricate with lubricants specified in the key for temperatures 0°F to -65°F (-18°C to -54°C).

2. OIL CAN POINTS. Every 1000 miles (1600 km) or monthly, lubricate hinges, springs, and spare wheel lugs.

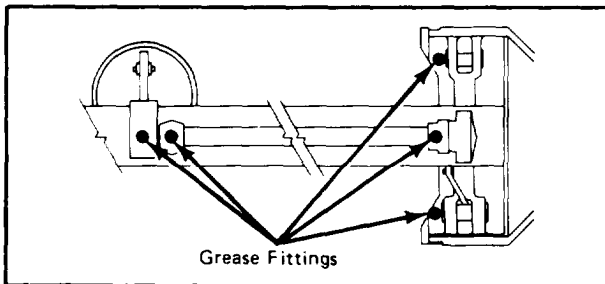
3. In sandy areas, halve lubrication intervals.



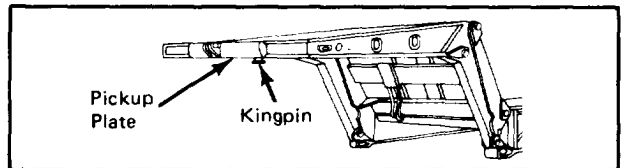
LV-C



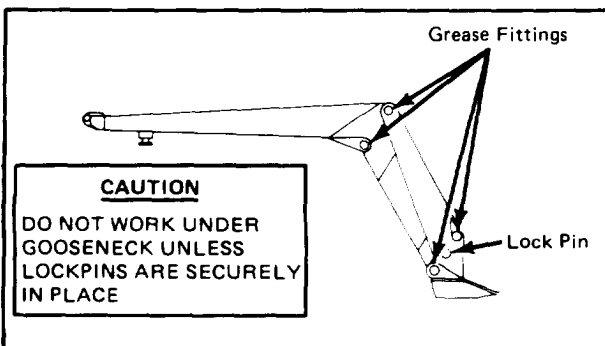
LV-D



LV-A

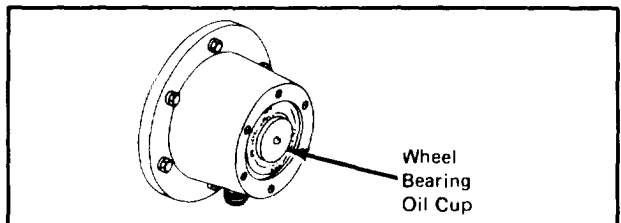


LV-E



CAUTION
DO NOT WORK UNDER GOOSENECK UNLESS LOCKPINS ARE SECURELY IN PLACE

LV-B



LV-F

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

	Page		Page
Common Tools and Equipment	4-8	Special Tools, TM DE, and Support	
Repair Parts	4-8	Equipment	4-8

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) 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 IV. SERVICE UPON RECEIPT

	Page		Page
Preliminary Servicing and		Service Upon Receipt	
Adjustment of Equipment	4-9	of Material	4-8

SERVICE UPON RECEIPT OF MATERIAL

	LOCATION	ITEM	ACTION REMARKS
1.	Attached to conspicuous part of semitrailer	DD Form 1397	Read, and follow all instructions.
2.		Metal strapping, plywood, tapes, seals, and wrappings	Remove.

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

SERVICE UPON RECEIPT OF MATERIAL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
3.	Coated exterior of parts	Remove rust preventive compound with dry-cleaning solvent.
4.	Semitrailer	a. Inspect for damage received during shipping. b. If damage is found, submit DD Form 6, Package Improvement Report.
5.	Equipment packing slip	a. Check against equipment to see if shipment is complete. b. Report all discrepancies in accordance with instructions in DA PAM 738-750.

PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT

Perform the operator and organizational preventive maintenance checks and services contained in chapters 2 and 4.

Lubricate all points as shown in the Lubrication Chart (page 4-5) regardless of interval.

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

Report all deficiencies on DA Form 2407 if the deficiencies appear to involve unsatisfactory design.

Perform a break-in road test of 25 miles (40 km) at a maximum speed of 55 miles per hour (88 km/h).

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

	Page		Page
General	4-10	PMCS Column Instructions	4-11
Leakage Definitions for Organizational PMCS	4-11	Special Instructions	4-10
Organizational Preventive Main- tenance Checks and Services (PMCS)	4-12		

GENERAL

To make sure that your vehicle is ready for operation at all times, inspect it systematically so you can discover any defects and have them corrected before they result in serious damage or failure. The information on the next few pages is your Organizational PMCS. The item numbers indicate the sequence of minimum inspection requirements. If you're operating the vehicle and notice something wrong which could damage the equipment if you continue operation, stop operation immediately.

Record all deficiencies and shortcomings along with the corrective action taken on DA Form 2404. The Item Number column is the source for numbers used on TM Number column on DA Form 2404.

SPECIAL INSTRUCTIONS

The item numbers indicate the sequence of PMCS. Perform at intervals shown below:

Do your (Q) PMCS quarterly (every 3 months).

Do your (S) PMCS semiannually (every 6 months).

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

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

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

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield when using compressed air.

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 to clean metal surfaces. Use soap and water when you clean 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, of course, 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.

SPECIAL INSTRUCTIONS - CONTINUED

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

Hoses and Fluid Lines: Look for wear, damage, and leaks. Make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, either correct it or report it to Direct Support Maintenance (see Maintenance Allocation Chart, appendix B).

It is necessary for you to know how fluid leaks affect the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them.

LEAKAGE DEFINITIONS FOR ORGANIZATIONAL PMCS

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

CAUTION

Equipment operation is allowable with minor leakages (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. Class III leaks should be reported to your supervisor.

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 or DA Form 2404. Equipment Inspection and Maintenance Worksheet when recording results of PMCS.

Interval – Tells when each check should be performed.

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

NOTE

Perform Operator/Crew PMCS prior to or in conjunction with Organizational PMCS if:

- a. There is a delay between the daily operation and the Organizational PMCS.
- b. Regular operator is not assisting/participating.

ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

Q- QUARTERLY

S - SEMIANNUALLY

ITEM NO.	INTERVAL		ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, REPLACED, OR ADJUSTED AS NEEDED
	Q	S	

NOTE

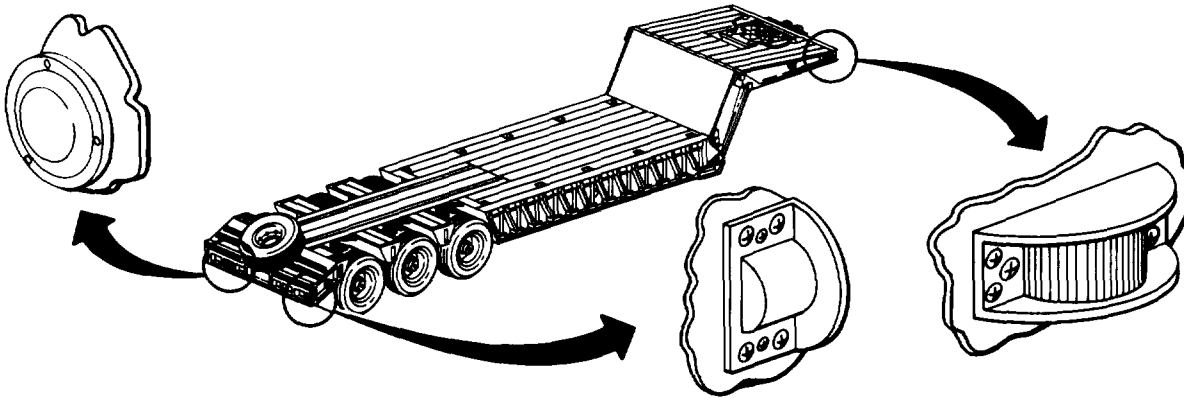
Perform Operator/Crew PMCS prior to or in conjunction with Organizational PMCS.

1

LIGHTS AND REFLECTORS

-
-

- a. Check for loose mounting and electrical connections.
- b. Check for bare wires and frayed insulation.

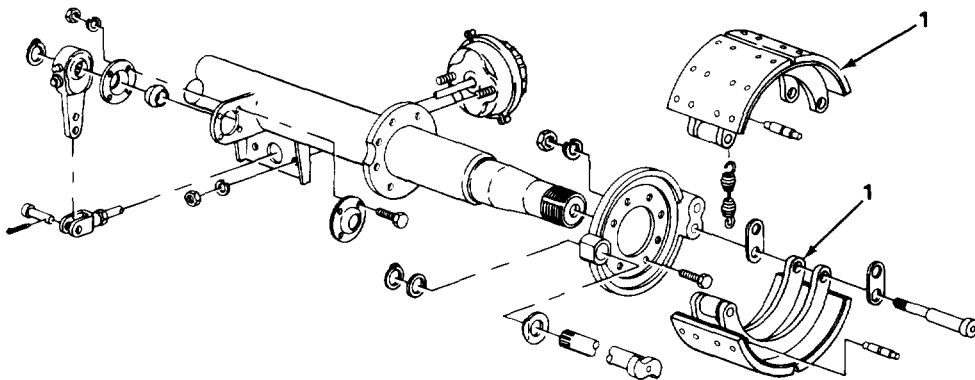


2

SERVICE BRAKES

-
-

- a. Check brakeshoes (1) for wear and proper adjustment (page 4-65).
- b. Check brake components for proper operation (page 2-17).



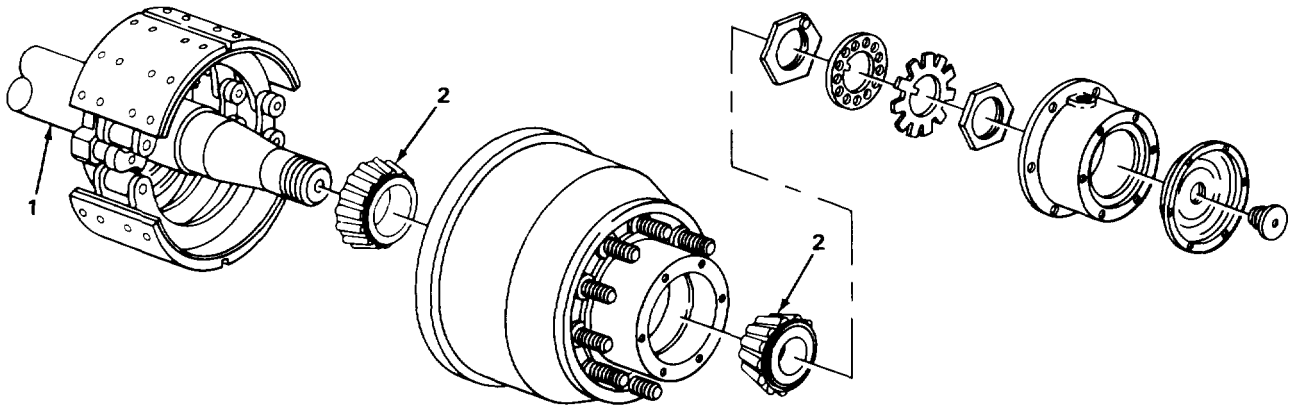
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ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - CONTINUED

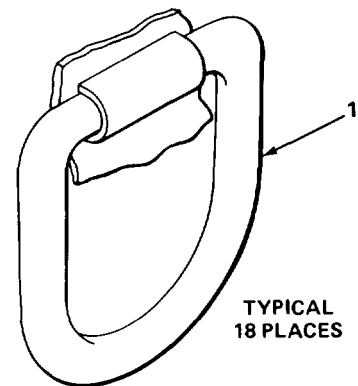
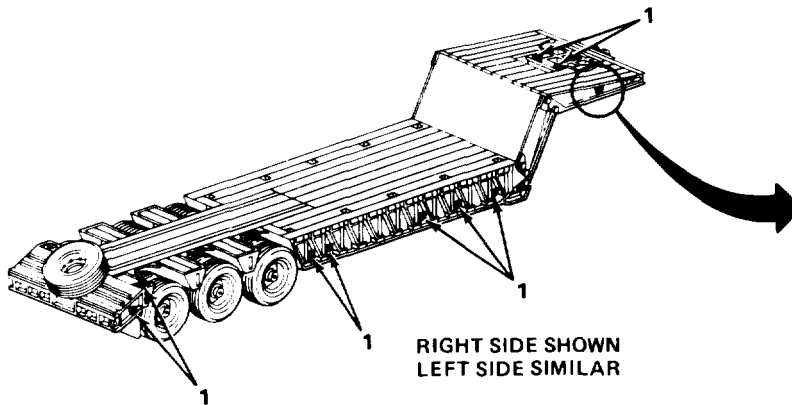
Q - QUARTERLY

S - SEMIANNUALLY

ITEM NO.	INTERVAL		ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, REPLACED, OR ADJUSTED AS NEEDED
	Q	S	
3	●	●	<p>AXLE</p> <p>a. Check for bent axle (1). b. Check wheel bearings (2) (page 4-103) and all component parts.</p>



4	●		<p>LOADING AND LASHING EQUIPMENT</p> <p>Inspect lashing rings (1) for serviceability.</p>
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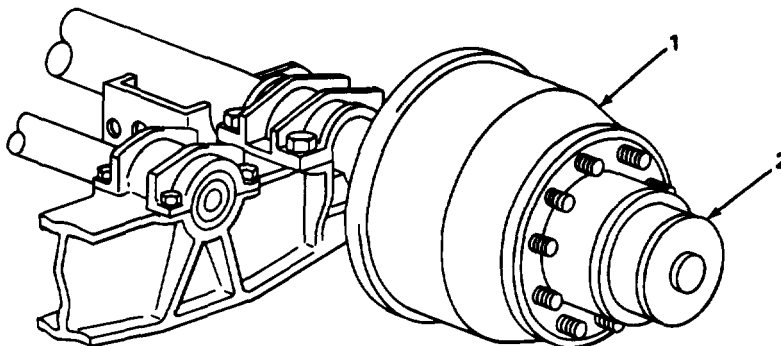
5		●	<p>ROAD TEST</p> <p>a. Perform road test. Give special attention to items that were repaired or adjusted.</p>
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ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS) - CONTINUED

Q – QUARTERLY

S – SEMIANNUALLY

ITEM NO.	INTERVAL		ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, REPLACED, OR ADJUSTED AS NEEDED
	Q	s	
5			<p>ROAD TEST – CONTINUED</p> <p style="text-align: center;"><u>WARNING</u></p> <p>Before putting hand on hub and drum, hold hand close to drum and hub to check for excessive heat radiation. This will prevent skin burns caused by hot metal.</p> <ul style="list-style-type: none"> ● b. Check brakedrums (1) and hubs (2) immediately after road test; feel brakedrums and hubs. <p style="text-align: center;">NOTE</p> <p>An overheated hub and brakedrum indicate an improperly adjusted or defective service brake or dry wheel bearings. An abnormally cool condition indicates an inoperative service brake.</p>



Section VI. ORGANIZATIONAL TROUBLESHOOTING PROCEDURES

	Page		Page
Explanation of Columns	4-15	Organizational Troubleshooting	4-16
General	4-15	Symptom Index	4-15

GENERAL

The table in this section lists the common malfunctions which may be found during the operation or maintenance of the semitrailer or components. You should perform the test/inspections and corrective actions in the order listed.

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

EXPLANATION OF COLUMNS

MALFUNCTION	Visual or operational indication that something is wrong with the semitrailer.
TEST/INSPECTION	Procedure to isolate the problem to a component or system.
CORRECTIVE ACTION	Procedure to correct problem.

SYMPTOM INDEX

This symptom index is provided as a quick way to get you to the troubleshooting procedure that will help you solve the problem you are having. The semitrailer must be hooked up to the truck tractor when performing electrical or airbrake tests.

	Page
BRAKES	
Brakes do not apply	4-20
Brakes grab	4-22
ELECTRICAL SYSTEM	
All lamps do not work	4-16
One or more clearance and taillamps do not work	4-16
Stoplights do not work	4-17
Turn signals do not work	4-18
GOOSENECK	
Will not raise or lower	4-23
TIRES	
Excessively worn, cupped, or scuffed tires	4-23

ORGANIZATIONAL TROUBLESHOOTING

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ALL LAMPS DO NOT WORK

Step 1. Go to truck tractor, and turn on service lights. Go to intervehicular connector socket, and using multi meter set at 30 vdc, put red probe on socket pins and black probe to good ground.

If meter shows low or no voltage, troubleshoot truck tractor. (Refer to Truck Tractor Operator's Manual).

Step 2. Hook up intervehicular connector cable. Go to semitrailer end of cable. Using multi meter set at 30 vdc, put red probe to connector socket and black probe to good ground.

If meter shows no voltage, replace intervehicular cable. (Refer to Truck Tractor Operator's Manual).

Step 3. Go to voltage reduction box on front of semitrailer. Open front cover of box (page 4-57). Locate junction block on left side of box. With power connected to semitrailer, and using multimeter set at 30 vdc, put red probe on junction block terminals and black probe to good ground.

a. If meter shows no voltage, replace voltage reduction box (page 4-57).

b. If meter shows voltage and all lights still do not work, check for wiring harness breaks. Repair or replace wiring harness (page 4-35).

2. ONE OR MORE CLEARANCE AND TAILLAMPS DO NOT WORK

Step 1. Check which lamps do not work and compare to electrical wiring diagram (page 4-63 or 4-64).

If all other lamps are on, individual circuits are not working, go to step 4.

Step 2. Take lens off lamp that does not work. Remove bulb from socket. Using multi-meter set for continuity testing, put red probe to base terminal and black probe to side of lamp.

If meter reads no continuity, replace bulb (page 4-25 or 4-28).

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

ELECTRICAL SYSTEM – CONTINUED
2. ONE OR MORE CLEARANCE AND TAILLAMPS DO NOT WORK – CONTINUED

- Step 3. Open junction box for lamp. Cut wire at connector. Using multimeter set at 30 vdc, put red probe into feeder wire and black probe to good ground.
- a. If meter reads voltage, replace lamp socket (page 4-25 or 4-28).
 - b. If meter reads no voltage, replace feeder wire between lamp and main wiring harness (page 4-35).
- Step 4. Take cover off voltage reduction box, and go to harness junction block. Using multi meter set at 30 vdc, put red probe on terminal for circuit to be checked and black probe to good ground.
- If meter reads voltage, replace bad circuit (page 4-35).
- Step 5. Unhook intervehicular cable. Using multimeter set at 30 vdc, put red probe on pin for bad circuit and black probe to good ground on truck tractor.
- If meter reads voltage, replace voltage reduction box (page 4-57).
- Step 6. Go to intervehicular cable socket on truck tractor. Using multimeter set at 30 vdc, put red probe on pin for bad circuit and black probe to good ground.
- a. If meter reads voltage, replace intervehicular cable. (Refer to Truck Tractor Operator's Manual).
 - b. If meter reads no voltage, troubleshoot truck tractor.

3. STOPLIGHTS DO NOT WORK

- Step 1. Check if one or both stoplights do not work.
- If both stoplights do not work, go to step 4.
- Step 2. Take lens off lamp that does not work (page 4-25). Using multimeter set for continuity testing, put red probe to base terminal and black probe to side of lamp.
- If meter shows no continuity, replace bulb (page 4-25).

ORGANIZATIONAL TROUBLESHOOTING – CONTINUED

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
-------------	--------------------	-------------------

ELECTRICAL SYSTEM – CONTINUED

3. STOPLIGHTS DO NOT WORK – CONTINUED

- Step 3. Remove lamp body from semitrailer (page 4-25). Cut red wires at connector. Using multimeter set at 30 vdc, put red probe to red circuit wire and black probe to good ground while assistant applies brakes.
 - a. If meter reads voltage, replace lamp assembly (page 4-25).
 - b. If meter reads no voltage, replace red wire between stop lamp and junction box under rear ramp of semitrailer (page 4-25).

- Step 4. Go to voltage reduction box and remove cover. Have intervehicular connector hooked to terminal. With multimeter set at 30 vdc, put red probe to terminal for red harness wire on junction block and black probe to good ground while assistant applies brakes.
 - If meter reads voltage, replace red wire from voltage reduction box to junction box under rear semitrailer ramp (page 4-35).

- Step 5. Unhook intervehicular connector. Using multi meter set at 30 vdc, put red probe on pin for bad circuit and black probe to good ground on truck tractor.
 - If meter reads voltage, replace voltage reduction box (page 4-57).

- Step 6. Go to intervehicular cable socket on truck tractor. Using multimeter set at 30 vdc, put red probe on pin for bad circuit and black probe to good ground.
 - a. If meter reads voltage, replace intervehicular connector. (Refer to Truck Tractor Operator’s Manual).
 - b. If meter reads no voltage, troubleshoot truck tractor.

4. TURN SIGNALS DO NOT WORK

NOTE

The wires feeding turn signal lamps are color coded, and both feed wires are connected to red lead wire on turn signal lamp housing. The left turn signal circuit is coded white and the right turn signal is coded brown. This procedure applies to either.

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION
 TEST OR INSPECTION
 CORRECTIVE ACTION

ELECTRICAL SYSTEM – CONTINUED

4. TURN SIGNALS DO NOT WORK – CONTINUED

- Step 1. Check which signal light does not work.
- If both signal lights do not work, go to step 5.
- Step 2. Take lens off light that does not work (page 4-25). Using multimeter set for continuity testing, put red probe to base terminal and black probe to side of lamp.
- If meter shows no continuity, replace bulb (page 4-25).
- Step 3. Remove lamp body from semitrailer (page 4-25). Cut brown or white wire from red lead wire. Using multi meter set at 30 vdc, put red probe to brown or white wire and black probe to good ground while assistant applies brakes.
- If meter reads voltage, replace lamp assembly (page 4-25).
- Step 4. Go to voltage reduction box, and remove cover (page 4-57). Have intervehicular connector hooked to terminal. With multi meter set at 30 vdc, put red probe to terminal for white or brown harness wire on junction block and black probe to good ground while assistant applies brakes.
- If meter reads voltage, replace brown or white wire from voltage reduction box to left or right turn signal (page 4-35).
- Step 5. Unhook intervehicular connector. Using multimeter set at 30 vdc, put red probe on two pins for turn signals and black probe to good ground on truck tractor while assistant applies brakes.
- If meter reads voltage on both pins, replace voltage reduction box (page 4-57).
- Step 6. Go to intervehicular cable socket on truck tractor. Using multimeter set at 30 vdc, put red probe on two pins for turn signals and black probe to good ground on truck tractor while assistant applies brakes.
- a. If meter reads voltage, replace intervehicular cable. (Refer to Truck Tractor Operator's Manual).
 - b. If meter reads no voltage, troubleshoot truck tractor.

ORGANIZATIONAL TROUBLESHOOTING – CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

BRAKES

5. BRAKES DO NOT APPLY

Step 1. Check towing vehicle or line valves.

If valve is closed, open valve.

Step 2. Check which brakes do not apply.

If one or more brakes, but not all, do not apply, go to step 6.

Step 3. Go to front of semitrailer, and check service and emergency gladhand connectors for damage or leaks by listening for hissing sound or using a mild soap solution and watching for bubbles.

If gladhands are leaking, clean, replace packing, or replace gladhand (page 4-77).

WARNING

Particles blown by compressed air are hazardous. Make certain the airstream is directed away from user and other personnel in the area. To prevent injury, user must wear protective goggles or face shield when using compressed air.

Step 4. Check reservoir air valve to see if it is open.

If valve is open, close valve.

Step 5. Check air relay valve on reservoir for damage or leaks by listening for hissing sound or using a mild soap solution and watching for bubbles.

If air relay valve is damaged or leaking, replace valve (page 4-94).

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION
 TEST OR INSPECTION
 CORRECTIVE ACTION

BRAKES – CONTINUED

5. BRAKES DO NOT APPLY – CONTINUED

- Step 6. Check emergency and service hoses and fittings from gladhands to air reservoir for damage or leaks by listening for hissing sound or using mild soap solution and watching for bubbles.
- a. If hoses are damaged or leaking, repair or replace hoses (page 4-90).
 - b. If brakes still do not apply, notify Direct Support Maintenance.
- Step 7. Have assistant apply brakes in truck tractor. Check slack adjuster and S-camshaft on bad brake for damage and movement.
- a. If slack adjuster and S-cam do not move when brake is applied, go to step 9.
 - b. If slack adjuster and S-camshaft are damaged, repair or replace (page 4-72).
- Step 8. Take tire and wheel assembly (page 3-9) and hub and drum (page 4-100) off axle. Check brakeshoes for damage, grease, or oil on surface of pad.
- a. If brakeshoe is damaged, repair or replace (page 4-65).
 - b. If brakeshoe is greasy or oily, clean (page 4-65).
- Step 9. Check brakedrum for damage, grease, or oil on surface.
- a. If brakedrum is damaged, replace (page 4-100).
 - b. If brakedrum is oily or greasy, clean (page 4-100).
- Step 10. Go to air chamber. Check chamber for damage or leaks by listening for hissing sound or using mild soap solution and watching for bubbles.
- If chamber is damaged or leaking, replace (page 4-92).

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

BRAKES - CONTINUED

5. BRAKES DO NOT APPLY - CONTINUED

- Step 11. Check hose and fittings from brake chamber to relay valve for damage or leaks by listening for hissing sound or using a mild soap solution and watching for bubbles.
- a. If hose or fittings are damaged or leaking, replace (page 4-84).
 - b. If brakes still will not apply, notify Direct Support Maintenance.

6. BRAKES GRAB

- Step 1. Check brakes for adjustment.
- If brakes need adjustment, adjust (page 4-65).
- Step 2. Take off wheel assembly (page 3-9) and hub and drum (page 4-1 00). Check brakeshoe for damage, grease, or oil.
- a. If brakeshoe is damaged, replace (page 4-65).
 - b. If brakeshoe is oily or greasy, clean (page 4-65).
- Step 3. Check brakedrum for damage.
- If brakedrum is damaged, replace (page 4-100).
- Step 4. Check S-cam for damage.
- If S-cam is damaged, replace (page 4-72).
- Step 5. Check spider for damage or looseness.
- a. If spider is damaged or loose, replace or tighten (page 4-72).
 - b. If brakes still grab, notify Direct Support Maintenance.

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

TIRES
7. EXCESSIVELY WORN, CUPPED, OR SCUFFED TIRES

- Step 1. Check for bent wheel or damaged lugs.
- a. If wheel is bent, replace (page 3-9).
 - b. If lugs are damaged, notify Direct Support Maintenance.
- Step 2. Check which axle has bad tire or tires.
- If bad tire or tires are not on middle axle, go to step 4.
- Step 3. Using tape, measure two radius rods.
- If radius rods are not the same length, notify Direct Support Maintenance.
- Step 4. Check axle of bad tire for damaged, missing, or loose bolts or screws in mounting hardware.
- If bolts or screws are loose or missing, notify Direct Support Maintenance.
- Step 5. Check axle for damage or bending.
- If axle is damaged or bent, notify Direct Support Maintenance.
- Step 6. Check for grabbing brake.
- a. If brake is grabbing, troubleshoot brake.
 - b. If tire still wears, cups, or scuffs, notify Direct Support Maintenance.

GOOSENECK**8. GOOSENECK WILL NOT RAISE OR LOWER**

- Step 1. Check if locking pins are removed.
- If locking pins are still in place, remove (page 2-19).

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION

TEST OR INSPECTION

CORRECTIVE ACTION

GOOSENECK – CONTINUED

8. GOOSENECK WILL NOT RAISE OR LOWER - CONTINUED

- Step 2. Check hinge joints for dirt or stones which could cause jamming,
 If joint is jammed, clean joint (page 4-1).
- Step 3. Check eight link pins for damage or binding.
 If link pins are binding, lubricate (page 4-5).
 If link pins are damaged, notify Direct Support Maintenance.
- Step 4. Check link arms for damage.
 - a. If link arms are damaged, notify Direct Support Maintenance.
 - b. If gooseneck still will not raise or lower, notify Direct Support Maintenance.

Section VII. ELECTRICAL SYSTEM MAINTENANCE

	Page		Page
Composite Light Assemblies (Marine Corps Variation)	4-60	Stop and Tail or Stop and Turn Light Assembly	4-25
Electrical Wiring Diagram	4-63	Voltage Reduction Box	4-57
Rear Corner Marker Lights.	4-32	Wiring Harness	4-35
Side Clearance Lights	4-28		

STOP AND TAIL OR STOP AND TURN LIGHT ASSEMBLY

This task covers:

- a. Removal (page 4-25)
- b. Installation (page 4-26)

INITIAL SETUP

<p>Tools</p> <p>Handle, brace, speeder, 3/8-inch drive Pliers, diagonal-cutting Screwdriver, cross-tip, number two Socket, 3/8-inch drive, 5/16-inch Tool kit, electrical connector repair</p>	<p>Personnel Required</p> <p>One</p>
--	--------------------------------------

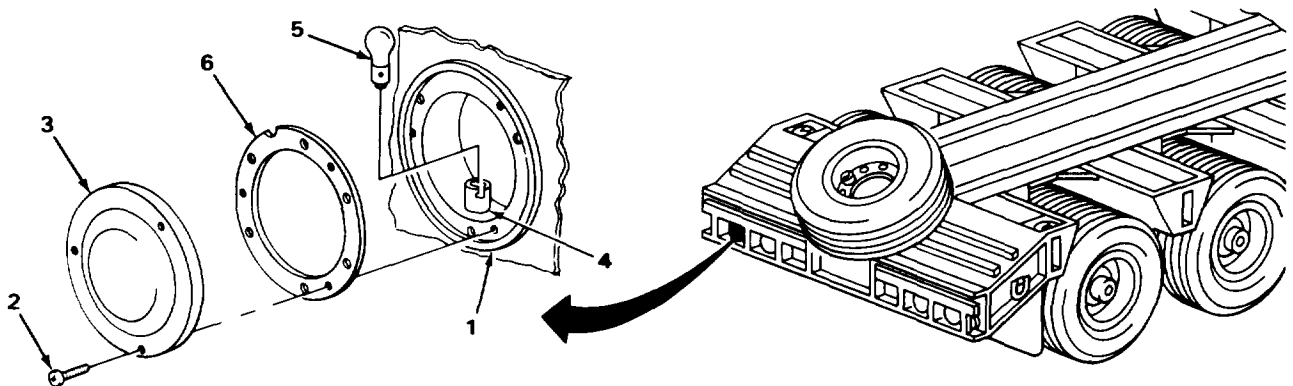
LOCATION	ITEM	ACTION REMARKS
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NOTE

If only replacing lamp, skip steps 4 thru 15.

REMOVAL

- | | | |
|---|--|--|
| <ol style="list-style-type: none"> 1. Light body (1) 2. 3. Socket (4) 4. Light body (1) | <ol style="list-style-type: none"> Three screws (2)
in lens (3) Lens (3) Lamp (5) Gasket (6) | <ol style="list-style-type: none"> Using number two cross-tip screwdriver,
unscrew and take out. Take off. Push down, turn counterclockwise,
and take out. Take out. |
|---|--|--|



STOP AND TAIL OR STOP AND TURN LIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL – CONTINUED

5.	Studs (1)	Three nuts (2)	Using 5/16-inch socket and speeder handle with 3/8-inch drive, unscrew and take off.
6.	Mounting hole (3)	Light body (4)	Pull out.

NOTE

Before cutting wires, tag to aid in installation. Refer to electrical wiring diagram (page 4-63) for proper installation, if tags are lost.

7.	Four wires (5), (6), (7), and (8)	Two wire connectors (9) and (10)	Using diagonal cutting pliers, cut wires off connectors.
8.	Mounting hole (3)	Gasket (11)	Take off.

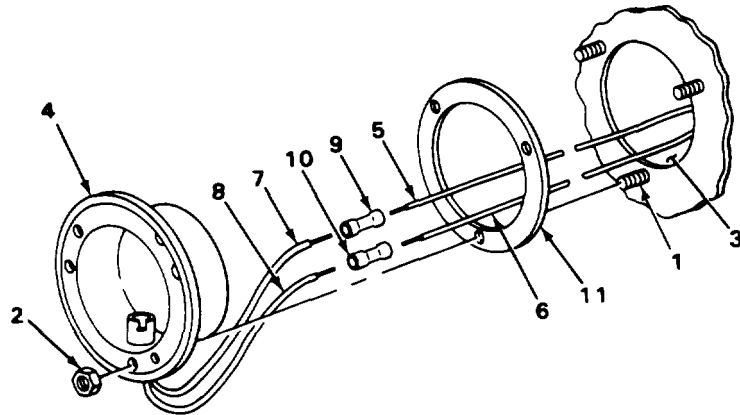
INSTALLATION

9.		Gasket (11)	Put in place.
10.		Four wires (5), (6), (7) and (8)	Strip insulation off ends to depth of connector using stripping pliers from Electrical Tool Kit.
11.	Connector (10)	Black wire (8) and wire (6)	Put into connector, and crimp using crimping tool from Electrical Tool Kit.
12.	Connector (9)	Wire (5) and wire (7)	Put into connector, and crimp using crimping tool from Electrical Tool Kit.
13.	Mounting hole (3)	Light body (4)	Put in.
14.	Studs (1)	Three nuts (2)	Put on, and tighten using 5/16-inch socket and speeder handle with 3/8-inch drive.

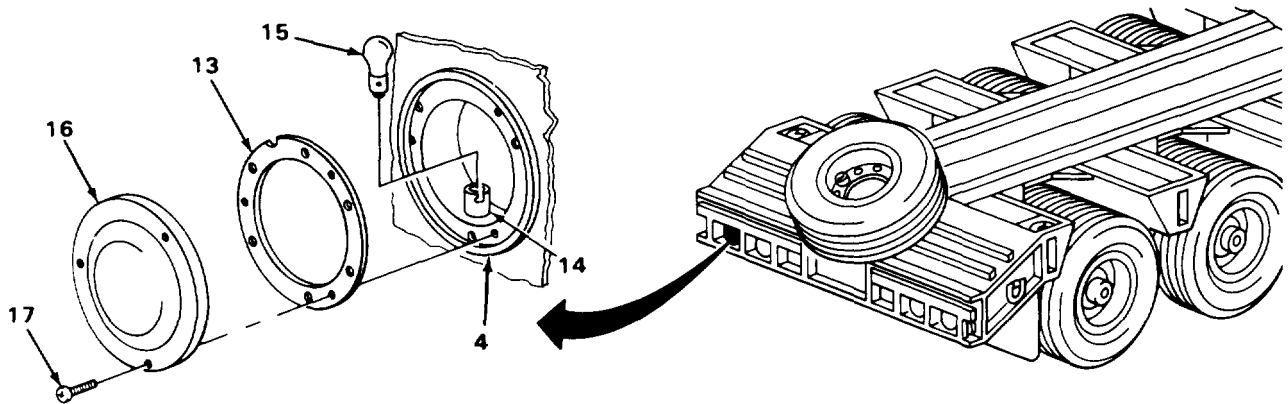
STOP AND TAIL OR STOP AND TURN LIGHT ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION – CONTINUED



- | | | | |
|-----|-----------------|-------------------|---|
| 15. | Light body (4) | Gasket (13) | Put on. |
| 16. | Socket (14) | Lamp (15) | Push in, and turn clockwise. |
| 17. | Light body (12) | Lens (16) | Put on, and line up with screw holes. |
| 18. | Lens (16) | Three screws (17) | Screw in, and tighten using number two cross-tip screwdriver. |



TASK ENDS HERE

SIDE CLEARANCE LIGHTS

This task covers:

- a. Removal (page 4-28)
 - b. Installation (page 4-30)
-

INITIAL SETUP

Tools	Personnel Required
Extension, 1/4-inch drive, 5-inch Handle, ratchet, 1/4-inch drive Pliers, diagonal-cutting Screwdriver, cross-tip, number two Screwdriver, flat-tip, 1/4-inch Socket, deepwell, 1/4-inch drive, 3/8-inch Tool kit, electrical connector repair	Two

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

If replacing lamp only, skip steps 4 thru 16.

- | | | | |
|----|--|--|---|
| 1. | Clearance light cover (1) and lens (2) | Two screws (3) | Using number two cross-tip screwdriver, unscrew and take out. |
| 2. | Base plate (4) | Clearance light cover (1) and lens (2) | Take off, and separate.
Standard side clearance light will have small clips (5) to hold lens (2) in place. |
| 3. | Socket (6) | Lamp (7) | Take out. |

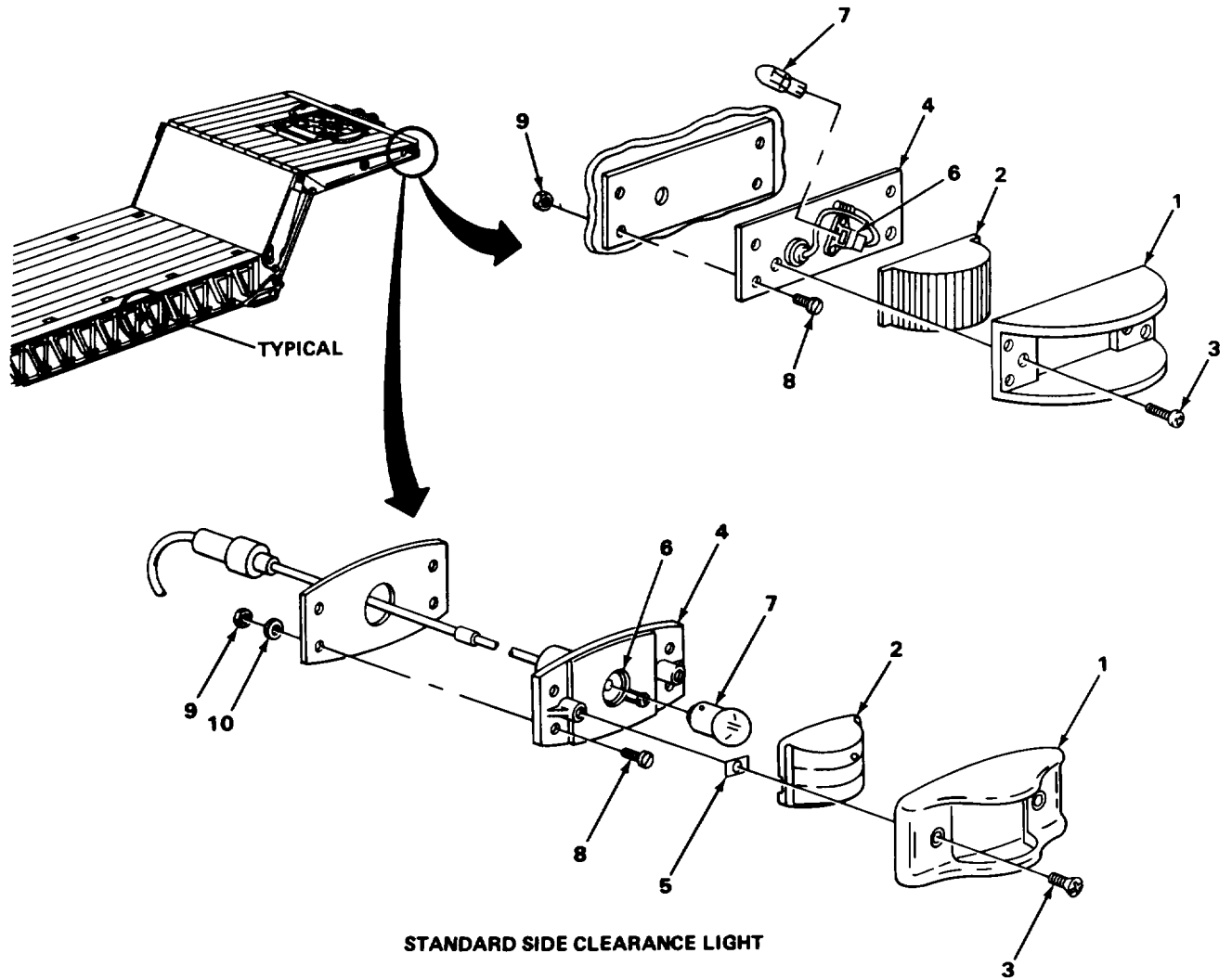
NOTE

Depending on light being replaced, it may be necessary to have assistant behind frame to keep nuts from turning.

- | | | | |
|----|----------------|---|--|
| 4. | Base plate (4) | Four screws (8), nuts (9), and four lockwashers (10) (standard side clearance light only) | Using 1/4-inch flat-tip screwdriver, 3/8-inch deepwell socket, 5-inch extension, and handle with 1/4-inch drive, unscrew and take out. |
|----|----------------|---|--|

SIDE CLEARANCE LIGHTS - CONTINUED

REMOVAL - CONTINUED



SIDE CLEARANCE LIGHTS - CONTINUED

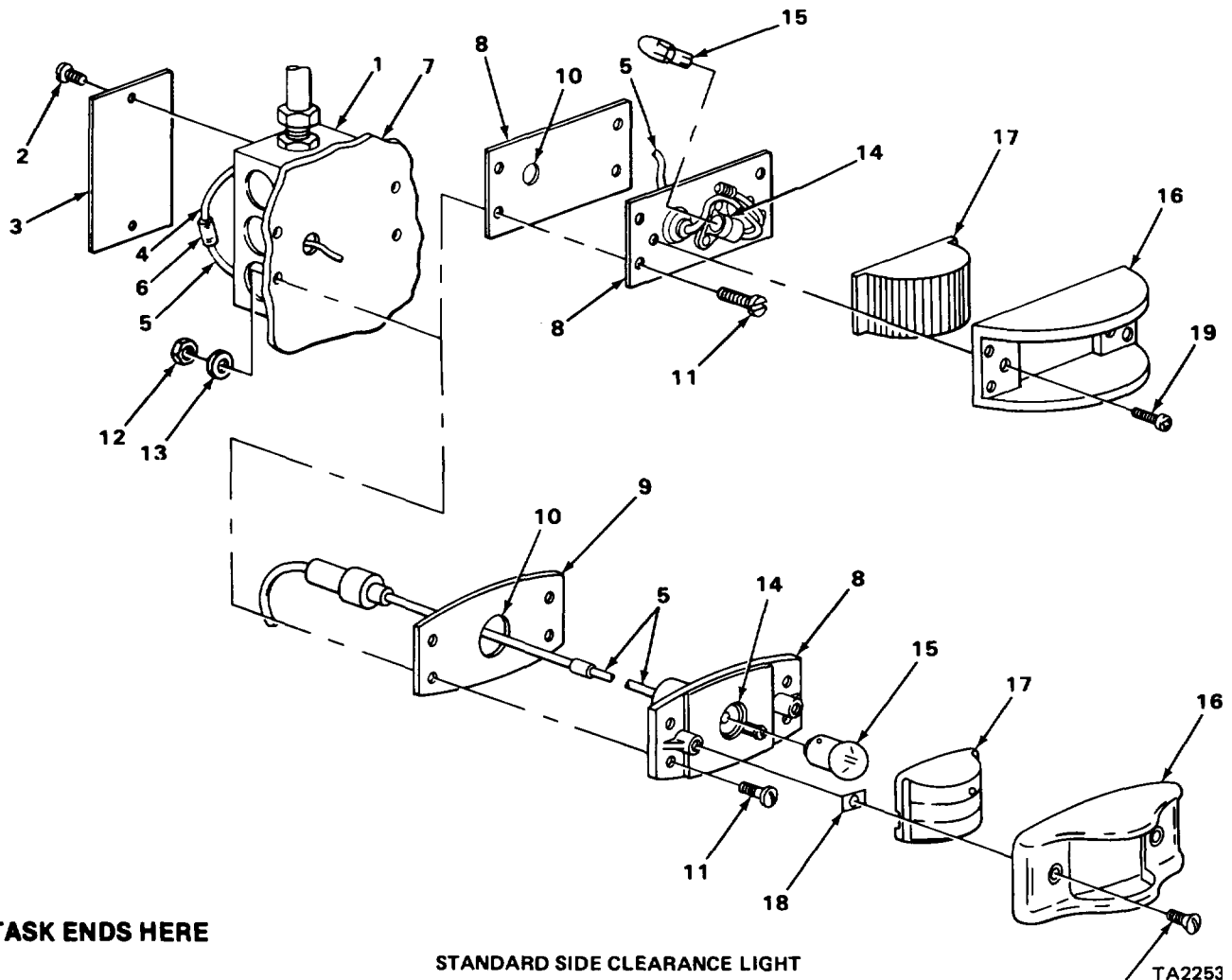
	LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED			
5.	Junction box (1)	Two screws (2)	Unscrew, and take out.
6.		Cover plate (3)	Take off.
7.	Two wires (4) and (5)	Connector (6)	Using diagonal cutting pliers, cut wires and take out.
8.	Frame (7)	Base plate (8) and gasket (9)	Take off.
INSTALLATION			
9.	Frame (7)	Gasket (9)	Put on.
10.	Lead hole (10)	Wire (5)	Thread through.
11.	Gasket (9)	Base plate (8)	Put in place.
12.	Base plate (8)	Four screws (11), nuts (12), and four lockwashers (13) (standard side clear- ance light only)	Screw in, and tighten using 1/4-inch flat-tip screwdriver, 3/8-inch socket, 5-inch extension, and handle with 1/4-inch drive.
13.	Junction box (1)	Wire (5) and wire (4)	Strip insulation to depth of connector using stripping pliers from Electrical Tool Kit.
14.	Wire (5)	Connector (6)	Put on, and crimp using crimping tool from Electrical Tool Kit.
15.	Connector (6)	Wire (4)	Put on, and crimp using crimping tool from Electrical Tool Kit.
16.	Junction box (1)	Cover plate (3)	Put on.
17.		Two screws (2)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.
18.	Socket (14)	Lamp (15)	Push in.

SIDE CLEARANCE LIGHTS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION – CONTINUED

- | | | | |
|-----|----------------------------|--|---|
| 19. | Clearance light cover (16) | Lens (17) | Put together.
On standard side clearance light only, place clips (18) in position and start screws (19) into cover (16) and clips (18) to hold lens (17) in place. |
| 20. | Base plate (8) | Clearance light cover (16) and lens (17) | Put on. |
| 21. | | Two screws (19) | Screw in, and tighten using number two cross-tip screwdriver. |



TASK ENDS HERE

STANDARD SIDE CLEARANCE LIGHT

TA2253

REAR CORNER MARKER LIGHTS

This task covers:

- a. Removal (page 4-32)
 - b. Installation (page 4-34)
-

INITIAL SETUP

Tools	Personnel Required
Handle, ratchet, 1/4-inch drive Pliers, diagonal-cutting Screwdriver, cross-tip, number two Screwdriver, flat-tip, 1/4-inch Socket, deepwell, 1/4-inch drive, 3/8-inch Tool kit, electrical connector repair	One

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

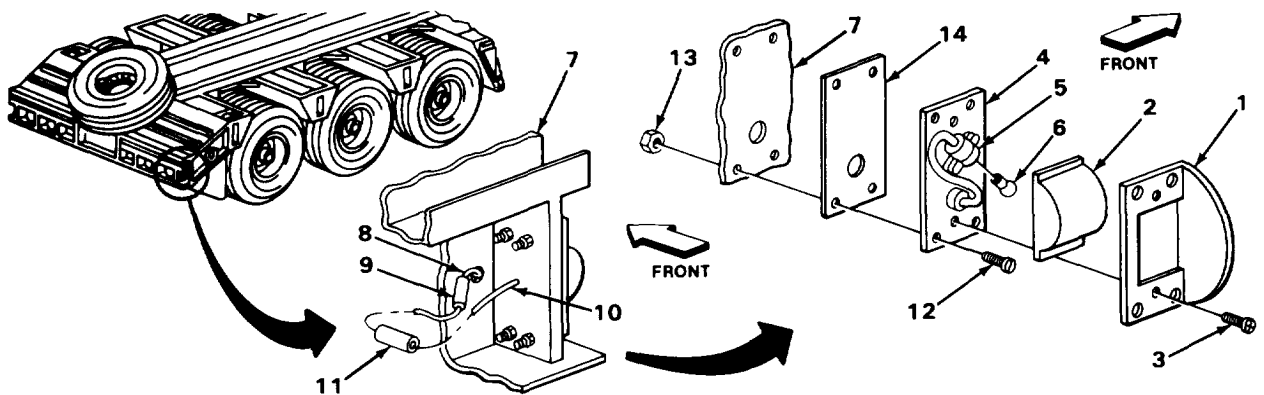
NOTE

If only replacing lamp, skip steps 3 thru 17.

- | | | | |
|----|--|--|---|
| 1. | Clearance light cover (1) and lens (2) | Two screws (3) | Using number two cross-tip screwdriver, unscrew and take out. |
| 2. | Base plate (4) | Clearance light cover (1) and lens (2) | Take off, and separate. |

REAR CORNER MARKER LIGHTS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL- CONTINUED			
3.	Socket (5)	Lamp (6)	Take out.
4.	Frame (7)	Wire (8), connector (9), and wire (10)	Pull out.
5.	Wires (8) and (10)	Connector (9)	Using diagonal cutting pliers, cut out. Secure wire (7) to keep it from slipping through hole in frame.
6.	Wire (8)	Rubber sleeve (11)	Take off.
7.	Base plate (4)	Four screws (12) and four nuts (13)	Using 1/4-inch flat-tip screwdriver, 3/8-inch deepwell socket, and handle with 1/4-inch drive, unscrew and take out.
8.	Gasket (14)	Base plate (4)	Take off.
9.	Frame (7)	Gasket (14)	Take off.

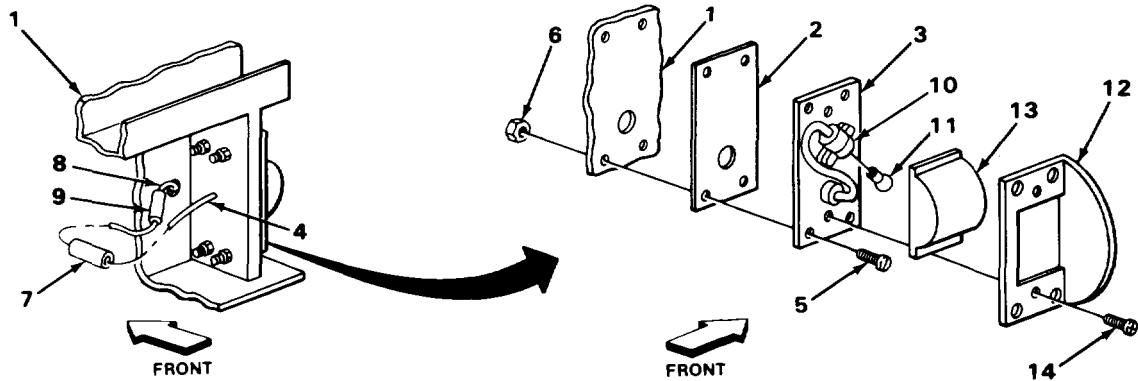


REAR CORNER MARKER LIGHTS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
10.	Frame (1)	Gasket (2) and base plate (3)	Put in place.
11.	Base plate (3)	Wire (4)	Thread through hole.
12.		Four screws (5) and nuts (6)	Screw in, and tighten using 1/4-inch flat-tip screwdriver, 3/8-inch deepwell socket, and handle with 1/4-inch drive.
13.	Wire (4)	Rubber sleeve (7)	Put on.
14.	Frame (1)	Wire (8) and wire (4)	Strip wire end to depth of connector (9), using stripping pliers from Electrical Tool Kit.
15.	Wire (8)	Connector (9)	Put on, and crimp with crimping tool from Electrical Tool Kit.
16.	Connector (9)	Wire (4)	Put on, and crimp with crimping tool from Electrical Tool Kit.
17.	Frame (1)	Wire (8), connector (9), wire (4), and rubber sleeve (7)	Push into hole.
18.	Socket (10)	Lamp(11)	Put in.
19.	Base plate (3)	Clearance light cover (12) and lens (13)	Put together, and put on.
20.	Clearance light cover (12)	Two screws (14)	Screw in, and tighten using number two cross-tip screwdriver.

REAR CORNER MARKER LIGHTS - CONTINUED

INSTALLATION – CONTINUED



TASK ENDS HERE

WIRING HARNESS

This task covers:

- a. Removal (page 4-36)
- b. Installation (page 4-49)

INITIAL SETUP

Tools

- Handle, brace, speeder, 1/4-inch drive
- Pliers, diagonal cutting
- Pliers, straight-nose
- Socket, 5/16-inch, 1/4-inch drive
- Screwdriver, cross-tip, number two
- Screwdriver, flat-tip, 1/4-inch
- Soldering tool, gun type, 115 vac
- Tool kit, electrical connector repair

Materials/Parts

- Alcohol, denatured (item 1, appendix E)
- Brush, acid swabbing (item 2, appendix E)

Materials/Parts – Continued

- Flux, rosin core (item 5, appendix E)
- Grease, automotive (item 6, appendix E)
- Solder, electrical (item 13, appendix E)
- Tape, electrical (item 17, appendix E)

Personnel Required

Two

Equipment Condition

Semitrailer unloaded.

WIRING HARNESS - CONTINUED

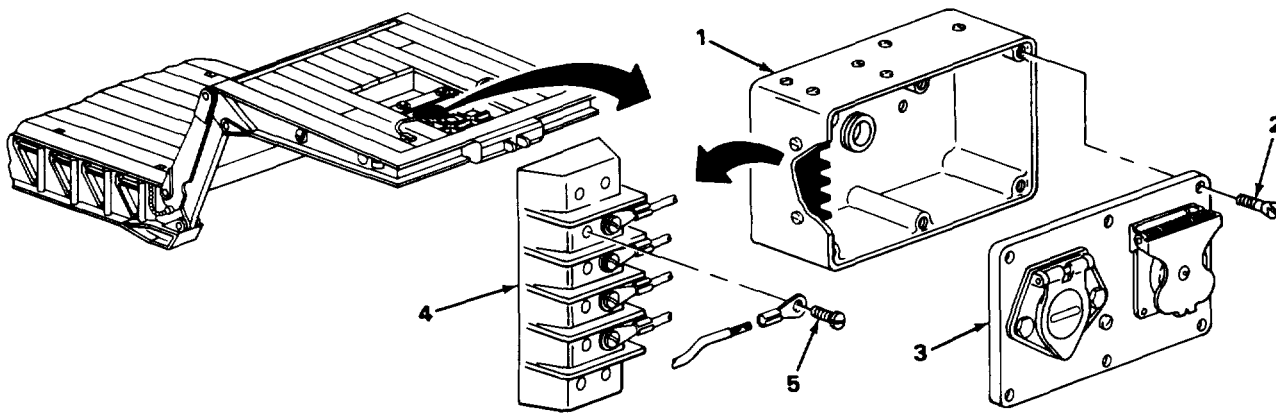
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

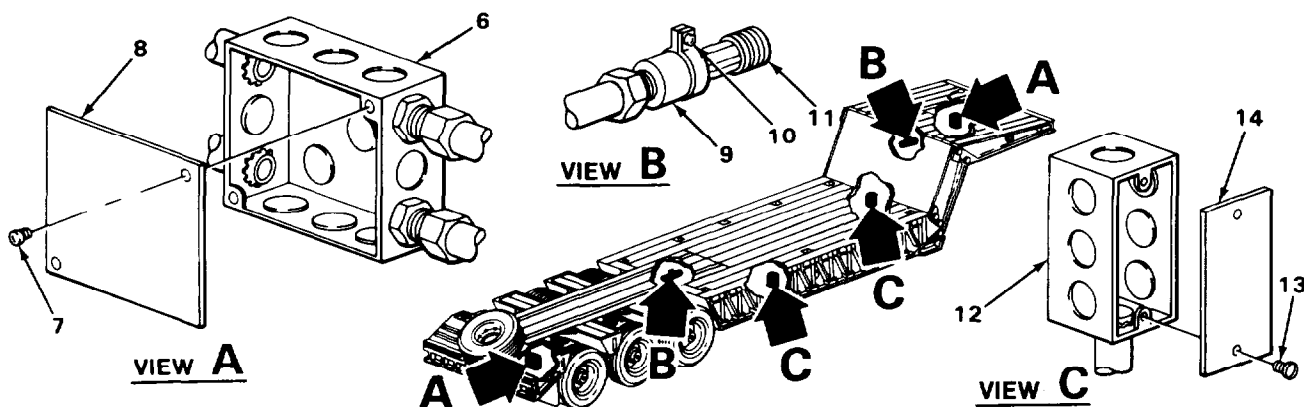
All circuit wires are replaced the same way. This procedure is for one circuit. Refer to electrical wiring diagram (page 4-63 or 4-64) for correct color code and routing for circuit being replaced. See wire list in appendix G for wire lengths of circuit being replaced.

- | | | |
|------------------------------|-------------------------------|--|
| 1. Voltage reduction box (1) | Six screws (2) | Using 1/4-inch flat-tip screwdriver, unscrew and take out. |
| 2. | Box cover (3) | Pull out of way. |
| 3. Junction block (4) | Black wire terminal screw (5) | Using 1/4-inch flat-tip screwdriver, unscrew and take out. |



WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED				
4.	Two junction boxes (6)	Four screws (7)	Using 1/4-inch flat-tip screwdriver, unscrew and take out.	
5.		Two covers (8)	Take off.	
6.	Two flexible tube connectors (9)	Screw (10)	Using 1/4-inch flat-tip screwdriver, loosen.	
7.		Flexible tube (11)	Pull out of connector.	
8.	Two junction boxes (12)	Four screws (13)	Using 1/4-inch flat-tip screwdriver, unscrew and take out.	
9.		Two covers (14)	Take off.	
10.	Two flexible tube connectors (9)	Flexible tube (11)	Pull out of connector.	

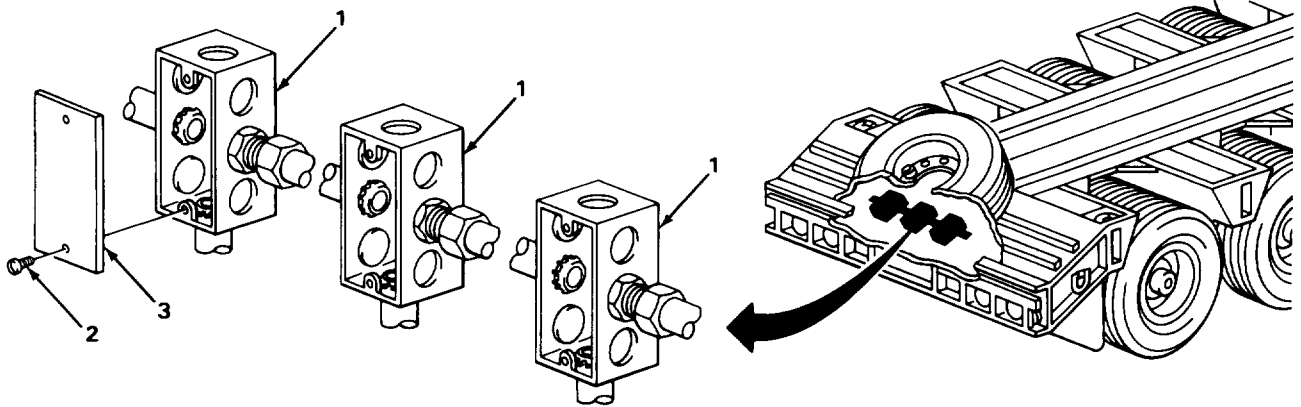


WIRING HARNESS - CONTINUED

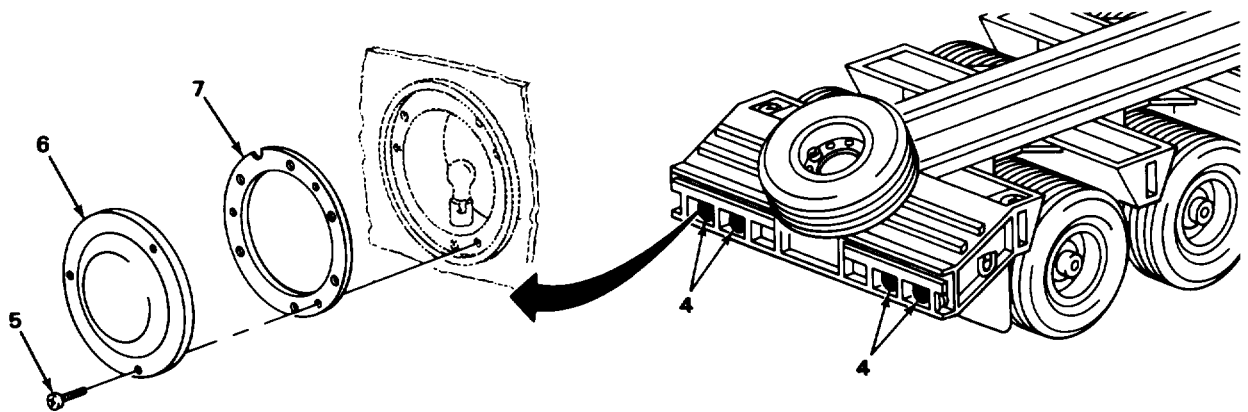
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|-----|--------------------------|------------------------|--|
| 11. | Three junction boxes (1) | Six screws (2) | Using 1/4-inch flat-tip screwdriver, unscrew and take out. |
| 12. | Three cover plates (3) | Three cover plates (3) | Take off. |



- | | | | |
|-----|--|-------------------|---|
| 13. | Four stop, tail, and turn light assemblies (4) | Twelve screws (5) | Using number two cross-tip screwdriver, unscrew and take out. |
| 14. | Four lenses (6) | Four lenses (6) | Take out. |
| 15. | Four gaskets (7) | Four gaskets (7) | Take out. |

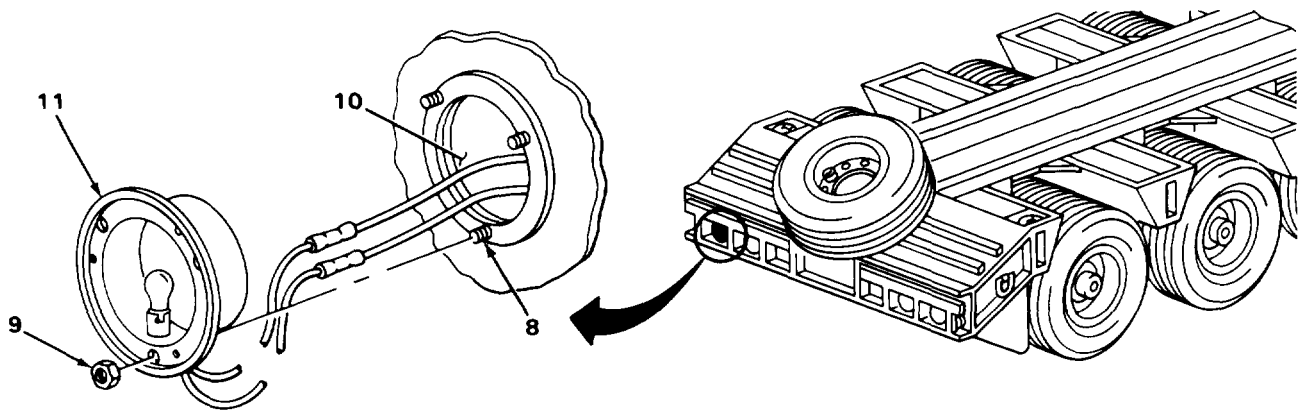


WIRING HARNESS – CONTINUED

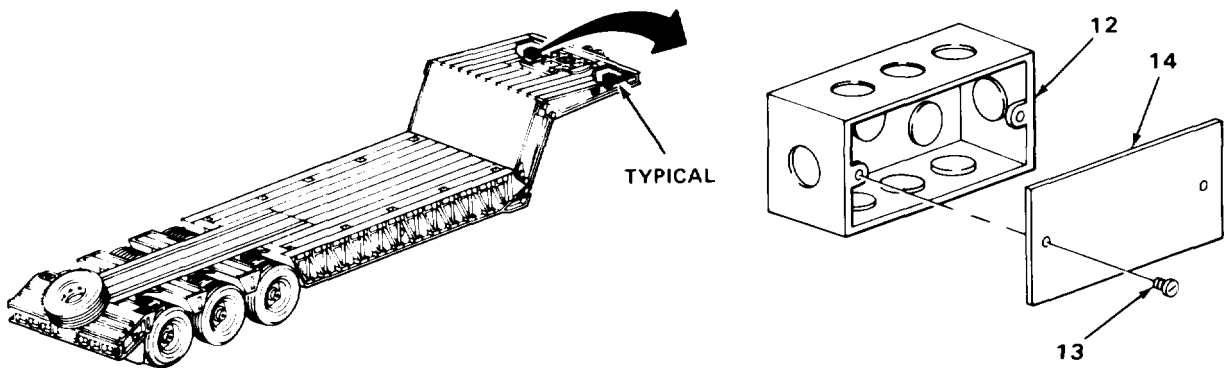
LOCATION	ITEM	ACTION REMARKS
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REMOVAL – CONTINUED

- | | | | |
|-----|--------------------------|----------------------|--|
| 16. | Twelve studs (8) | Twelve nuts (9) | Using 5/16-inch socket and speeder handle with 1/4-inch drive, unscrew and take off. |
| 17. | Four mounting holes (10) | Four light bodies(n) | Take out, and let hang. |



- | | | | |
|-----|-------------------------|-----------------------|--|
| 18. | Two junction boxes (12) | Four screws (13) | Using 1/4-inch flat-tip screwdriver, unscrew and take out. |
| 19. | | Two cover plates (14) | Take off. |



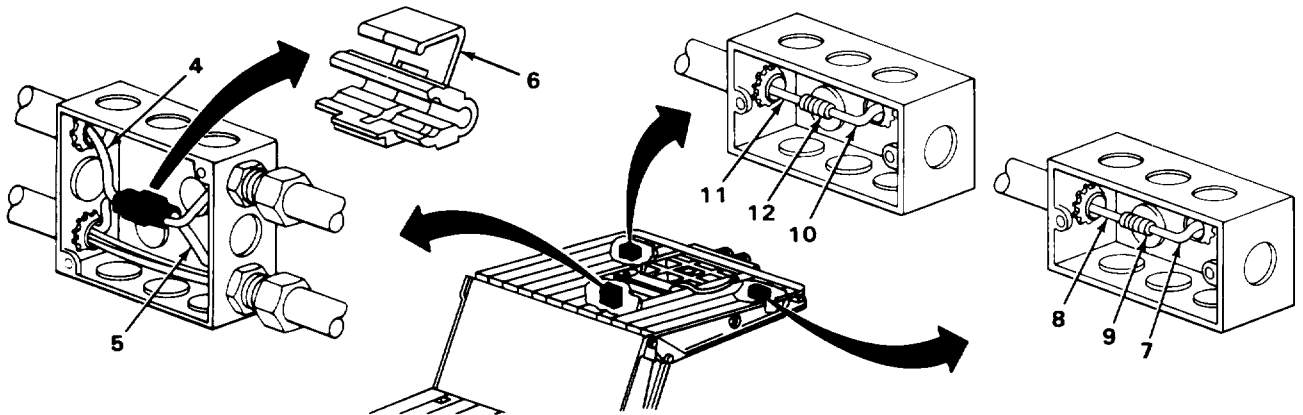
WIRING HARNESS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
20. Two junction boxes (1)	Four screws (2)	Using 1/4-inch flat-tip screwdriver, unscrew and take out.
21.	Two cover plates (3)	Take off.
22. Two wires (4) and (5)	Wire connector (6)	Using 1/4-inch flat-tip screwdriver, pry open and take off.
23. Circuit wire (7) and lead wire (8)	Wire connector (9)	Using diagonal cutting pliers, cut out.
24. Circuit wire (10) and lead wire(n)	Wire connector (12)	Using diagonal cutting pliers, cut out.

WIRING HARNESS – CONTINUED

LOCATION	ITEM	ACTION REMARKS
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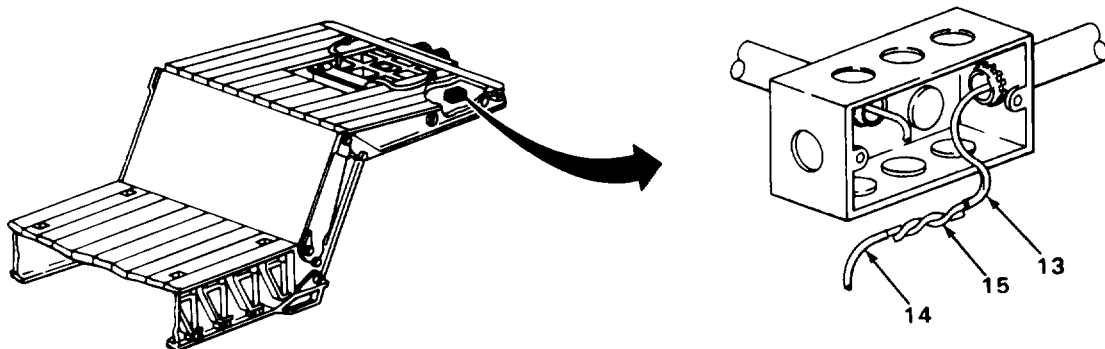
REMOVAL – CONTINUED



NOTE

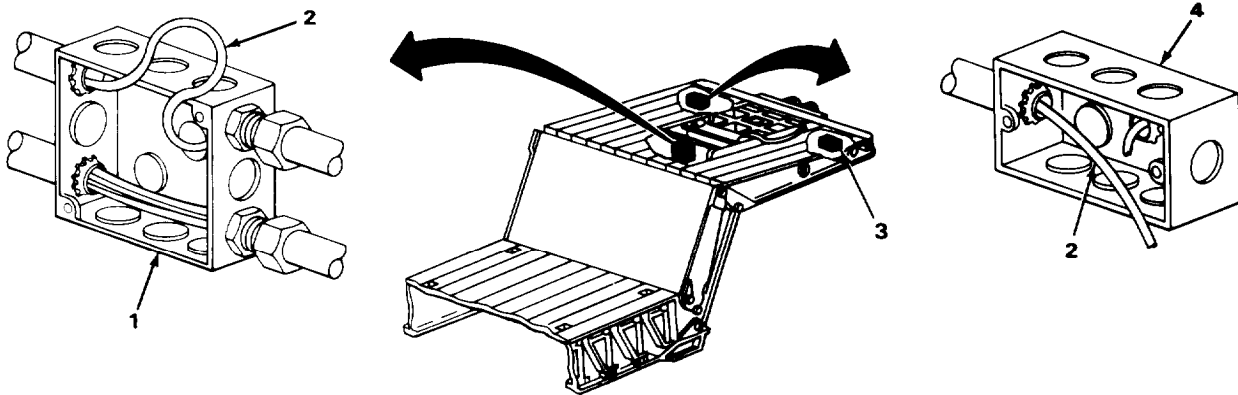
Use acid swabbing brush and denatured alcohol as necessary to clean soldered connections during wiring harness splicing procedures.

- | | | | |
|-----|-------------------|-----------------------|---|
| 25. | Circuit wire (13) | New 14-foot wire (14) | <ul style="list-style-type: none"> a. Using stripping pliers from Electrical Tool Kit, remove 1-inch of insulation from each wire. b. Twist wire ends (15) together, and using soldering tool, solder, and flux, connect wires. c. Using electrical tape, tape connection. |
|-----|-------------------|-----------------------|---|



WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED			
26.	Junction box (1)	Circuit wire (2)	Pull circuit wire (2) from box while assistant applies grease, until 12-inches of new wire are left exposed at junction box (3).
27.	Junction box (4)	Circuit wire (2)	Pull circuit wire while assistant applies lubricant at box (4), until slack is gone.



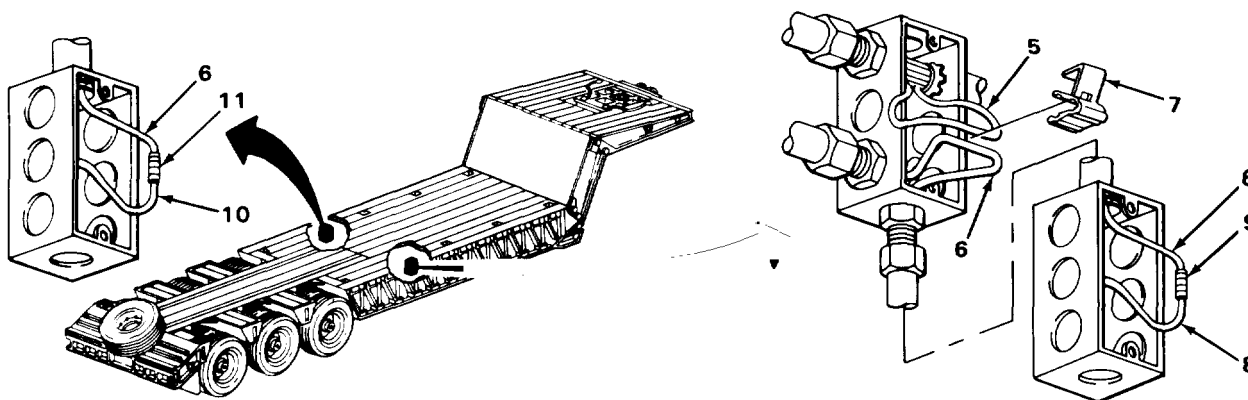
28.	Two wires (5) and (6)	Wire connector (7)	Using 1/4-inch flat-tip screwdriver, pry open and take off.
29.	Circuit wire (6) and lead wire (8)	Connector (9)	Using diagonal cutting pliers, cut out.

WIRING HARNESS- CONTINUED

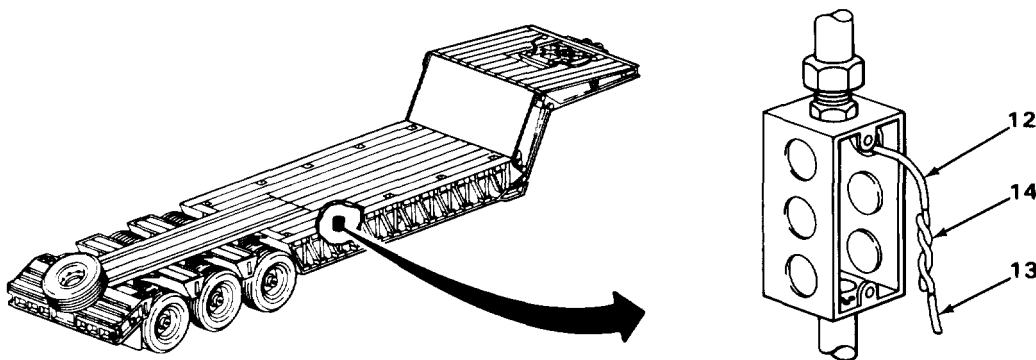
LOCATION	ITEM	ACTION REMARKS
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REMOVAL- CONTINUED

- | | | | |
|-----|--|----------------|---|
| 30. | Circuit wire (6)
and lead wire (10) | Connector (11) | Using diagonal cutting pliers, cut out. |
|-----|--|----------------|---|



- | | | | |
|-----|----------------------|----------------------------------|--|
| 31. | Circuit
wire (12) | New 12-foot circuit
wire (13) | <p>a. Using stripping pliers from Electrical Tool Kit, remove 1-inch of insulation from each wire.</p> <p>b. Twist wire ends (14) together and using solder tool, solder, and flux, connect wires.</p> <p>c. Using electrical tape, tape connection.</p> |
|-----|----------------------|----------------------------------|--|



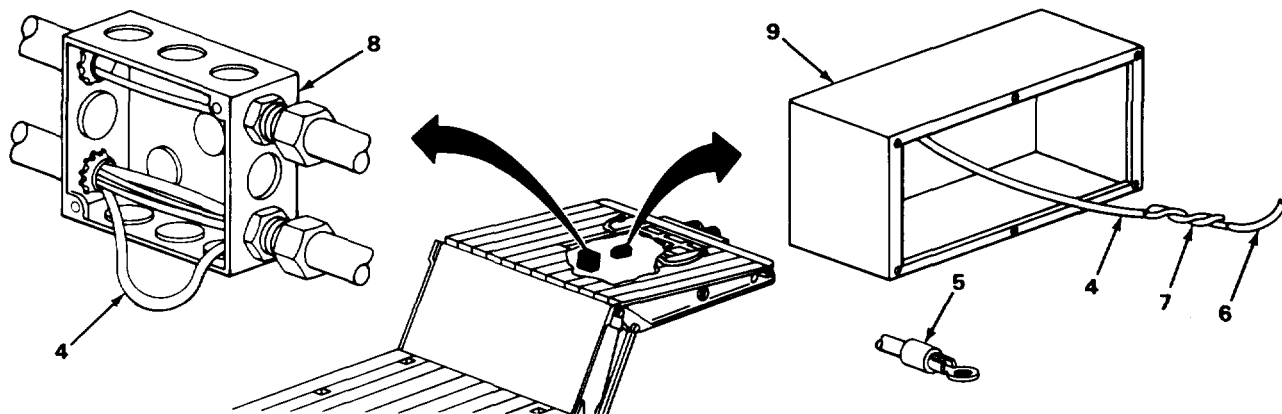
WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED			
32.	Junction box (1)	Circuit wire (2)	Pull circuit wire (2) from box while assistant applies grease. until 12-inches of new wire are left exposed at junction box (3).
33.	Junction box (3)	Circuit wire (2)	Pull circuit wire while assistant applies lubricant at box (1), until slack is gone.
34.	Black circuit wire (4)	Connector (5)	Using diagonal cutting pliers, cut off.
35.		New 54-foot circuit wire (6)	<ul style="list-style-type: none"> a. Using stripping pliers from Electrical Tool Kit, remove 1-inch of insulation from each wire. b. Twist wire ends (7) together and using soldering tool, solder, and flux, connect wires. c. Using electrical tape, tape connection.
36.	Junction box (8)	Black circuit wire (4)	Pull circuit wire (4) from box (8) while assistant applies grease, until 12-inches of new wire are left exposed at voltage reduction box (9).

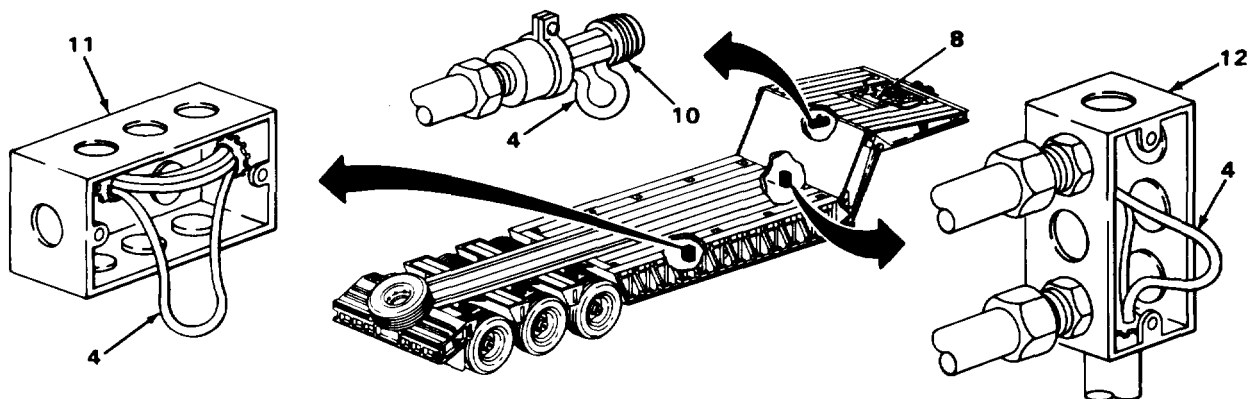
WIRING HARNESS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

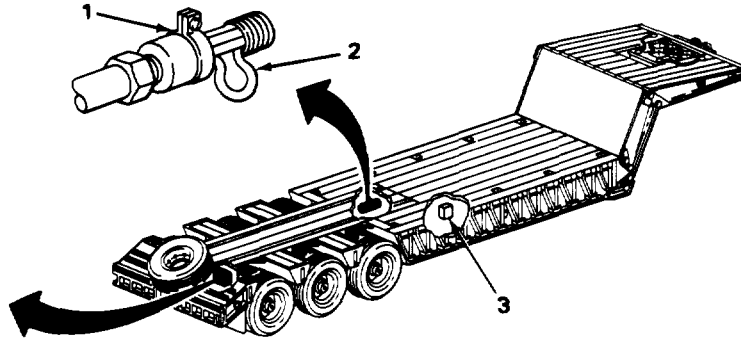
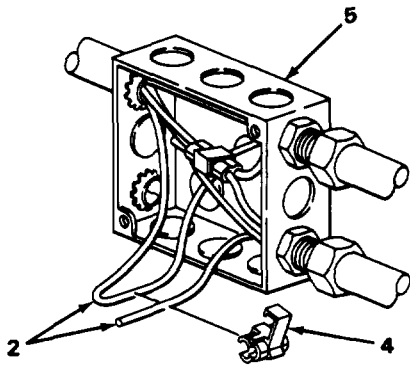


- | | | | |
|-----|-------------------------|------------------------|---|
| 37. | Flexible connector (10) | Black circuit wire (4) | Pull circuit wire while assistant applies grease at function box (8), until slack is gone. |
| 38. | Junction box (11) | Black circuit wire (4) | Pull circuit wire while assistant applies grease at flexible connector (10), until slack is gone. |
| 39. | Junction box (12) | Black circuit wire (4) | Pull circuit wire while assistant applies grease at box (11), until slack is gone. |



WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED				
40.	Flexible connector (1)	Black circuit wire (2)	Pull circuit wire while assistant applies grease at box (3), until slack is gone.	
41.	Black circuit wire (2)	Connector (4)	Using 1/4-inch flat-tip screwdriver, pry apart and take off.	
42.	Junction box (5)	Black circuit wire (2)	Pull circuit wire while assistant applies grease at flexible connector (1), until slack is gone.	



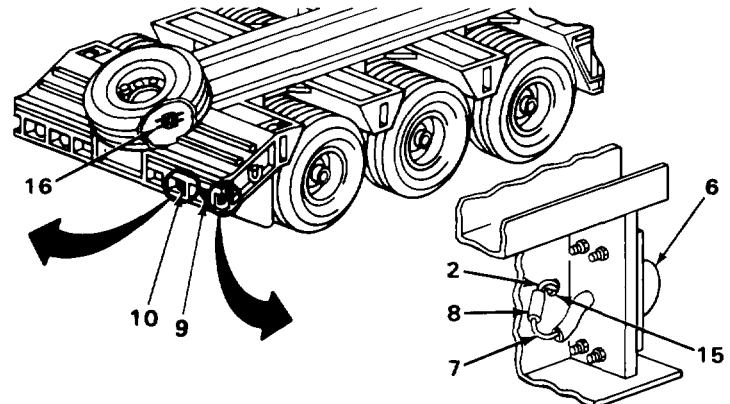
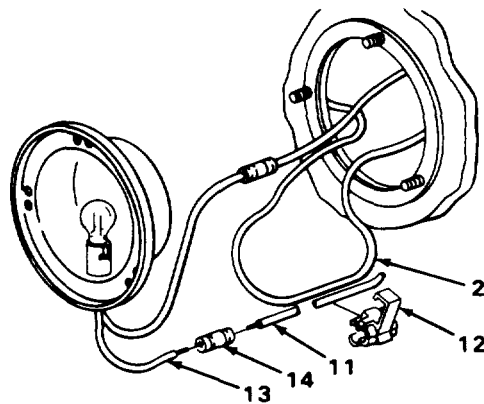
43.	Right rear corner marker light (6)	Lead wire (7)	Pull from hole in frame until connector(8) is exposed.	
44.	Black circuit wire (2) and lead wire (7)	Connector (8)	Using diagonal cutting pliers, cut out.	
45.	Two stop/turn lights (9) and (10)	Black lead wire (11)	Pull out until connector (12) and black circuit wire (2) are exposed.	
46.	Black lead wire (11) and black circuit wire (2)	Connector	Using 1/4-inch flat-tip screwdriver, pry open and take off.	

WIRING HARNESS - CONTINUED

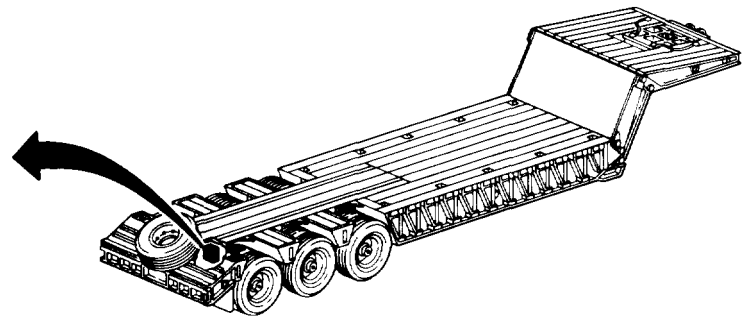
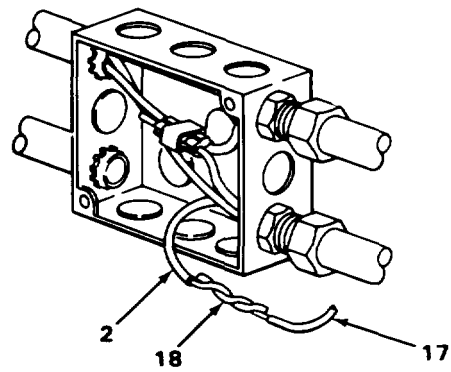
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|-----|---|------------------------|--|
| 47. | Black lead wire (11) and black lead wire (13) | Connector (14) | Using diagonal cutting pliers, cut out. |
| 48. | Hole in frame (15) | Black circuit wire (2) | <p>a. Pull circuit wire while assistant helps at box (16), until slack is gone.</p> <p>b. Using diagonal cutting pliers, cut old circuit wire from new circuit wire at connection.</p> |



- | | | | |
|-----|------------------------|----------------------|--|
| 49. | Black circuit wire (2) | New 7-foot wire (17) | <p>a. Using stripping pliers from Electrical Tool Kit, remove 1-inch of insulation from each wire.</p> <p>b. Twist wire ends (18) together.</p> <p>c. Using soldering tool, solder, and flux, connect wires and wrap with electrical tape.</p> |
|-----|------------------------|----------------------|--|

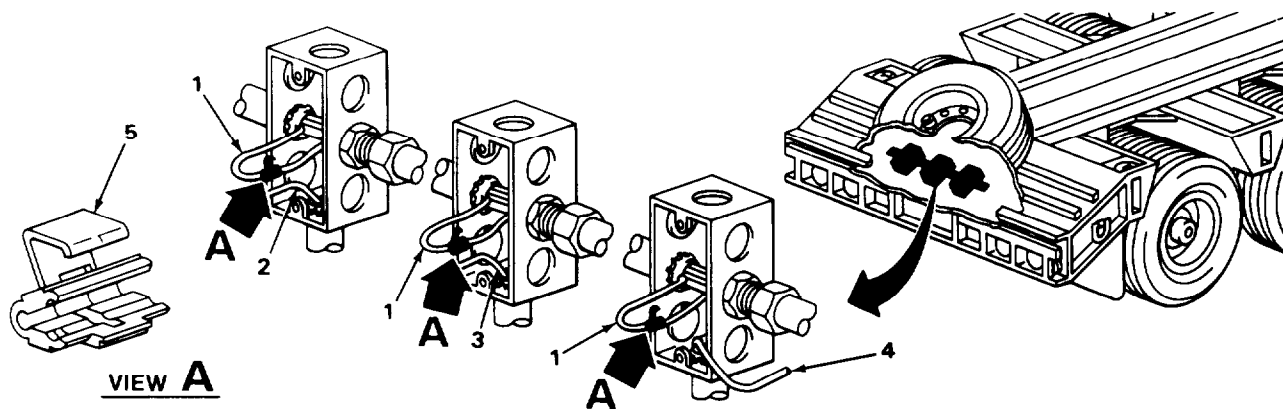


WIRING HARNESS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL – CONTINUED

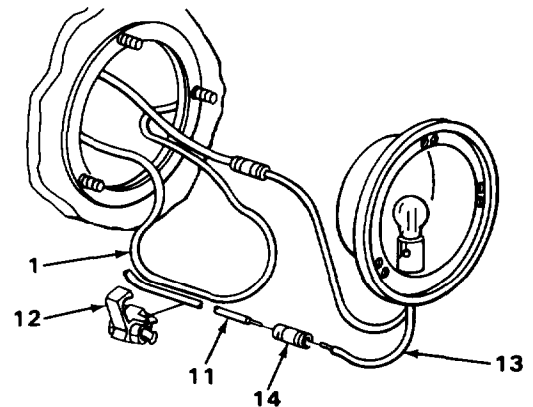
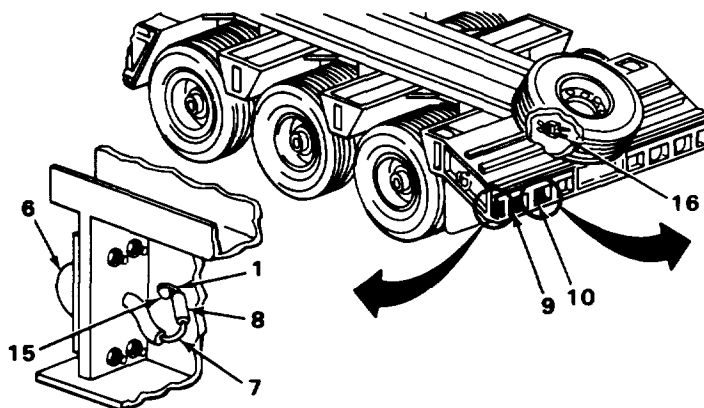
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|-----|--|----------------------|--|
| 50. | Black circuit wire (1) and three white rear marker light leads (2), (3), and (4) | Three connectors (5) | Using 1/4-inch flat-tip screwdriver, pry apart and take off. |
|-----|--|----------------------|--|



- | | | | |
|-----|---|----------------------|---|
| 51. | Left rear corner marker light (6) | Lead wire (7) | Pull from hole in frame until connector (8) is exposed. |
| 52. | Black circuit wire (1) and lead wire (7) | Connector (8) | Using diagonal cutting pliers, cut out. |
| 53. | Two stop/turn lights (9) and (10) | Black lead wire (11) | Pull out until connector (12) and black circuit wire (1) are exposed. |
| 54. | Black lead wire (11) and black circuit wire (1) | Connector (12) | Using 1/4-inch flat-tip screwdriver, pry open and take off. |
| 55. | Black lead wire (11) and black lead wire (13) | Connector | Using diagonal cutting pliers, cut out. |

WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED			
56.	Hole in frame (15)	Black circuit wire (1)	a. Pull circuit wire while assistant applies grease at box (16), until 12-inches of new wire are left exposed. b. Using diagonal cutting pliers, cut old circuit wire from new circuit wire at connection.
INSTALLATION			
57.	Left corner marker (6)	Black lead wire (7)	Strip insulation from end to depth of connector using stripping pliers from Electrical Tool Kit.
58.	Hole in frame (15)	Black circuit wire (1)	Strip insulation from end to depth of connector using stripping pliers from Electrical Tool Kit.
59.	Black lead wire (7) and black circuit wire (1)	Connector (8)	a. Put on, and crimp using crimping tool from Electrical Tool Kit. b. Push excess wire into hole in frame.



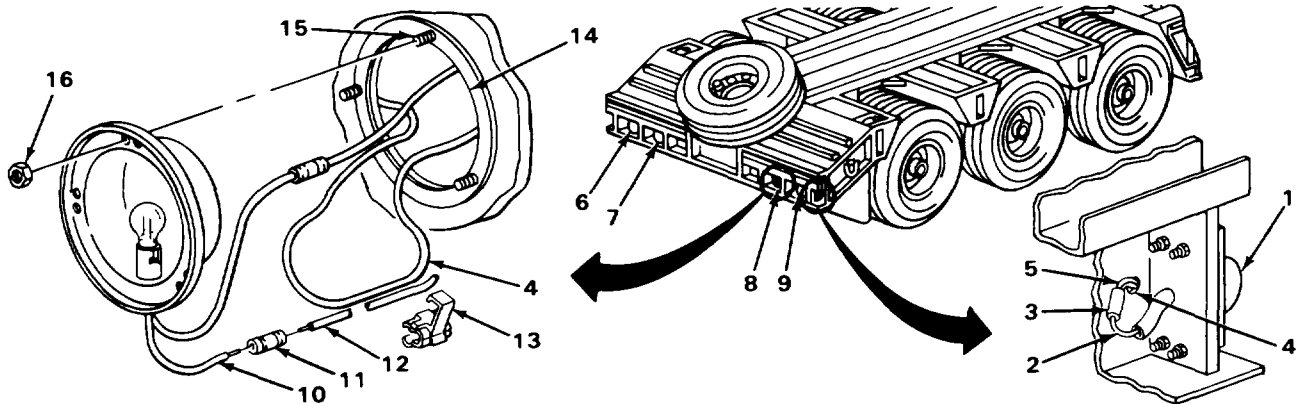
WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED			
60.	Right corner marker light (1)	Black lead wire (2)	Strip insulation from end to depth of connector (3) using stripping pliers from Electrical Tool Kit.
61.	Hole in frame (4)	Black circuit wire (5)	Strip insulation from end to depth of connector (3) using stripping pliers from Electrical Tool Kit.
62.	Black lead wire (2) and black circuit wire (5)	Connector (3)	a. Put on, and crimp using crimping tool from Electrical Tool Kit. b. Push excess wire into hole in frame (3).
63.	Four stop/turn lights (6), (7), (8), and (9)	Four black lead wires (10)	Strip insulation from ends to depth of connector (11) using stripping pliers from Electrical Tool Kit. Only one light shown.
64.		Four new 18-inch black lead wires (11)	Strip insulation from one end of each wire to depth of connector (11) using stripping pliers from Electrical Tool Kit.
65.	Four black lead wires (10) and four new 18-inch black lead wires (12)	Four connectors (11)	Put on, and crimp using crimping tool from Electrical Tool Kit.
66.	Black circuit wire (4) and four new 18-inch black lead wires (12)	Four connectors (13)	Put on wires, and close using straight-nose pliers.
67.	Four mounting holes (14)	Four stop/turn lights (6), (7), (8), and (9)	Put in.
68.	Twelve studs (15)	Twelve nuts (16)	Put on, and tighten using 5/16-inch socket and speeder handle with 1/4-inch drive.

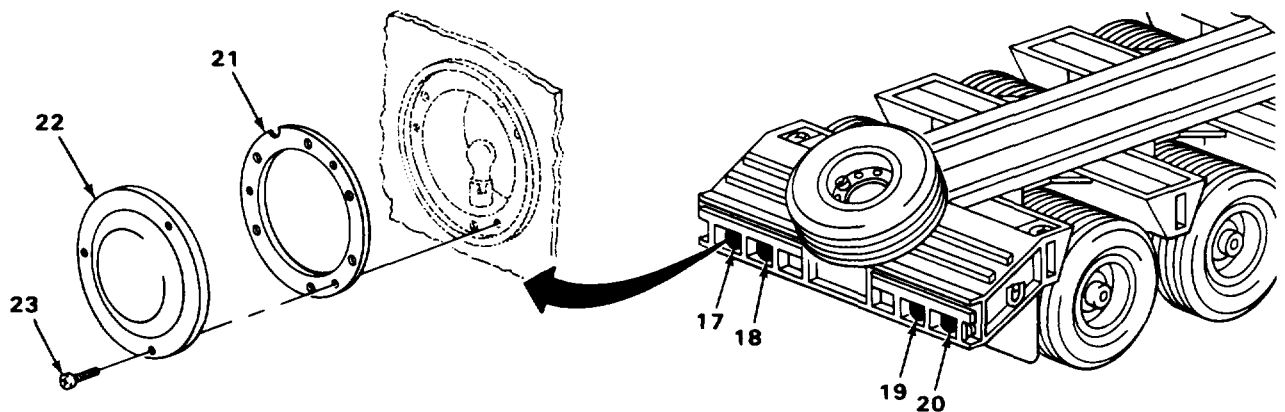
WIRING HARNESS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

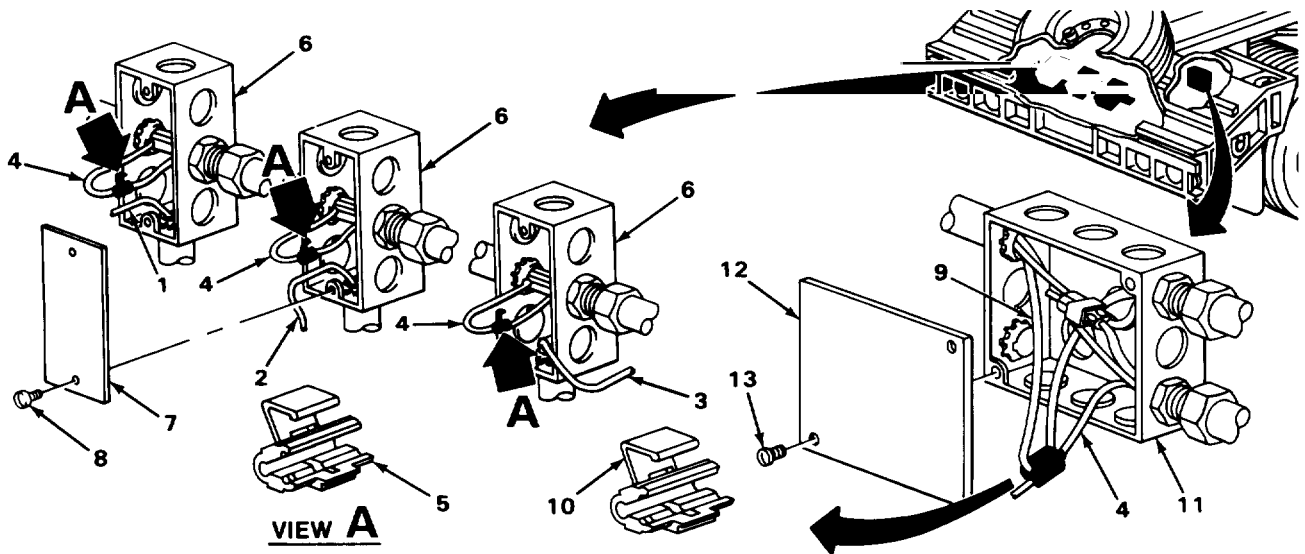


- | | | | |
|-----|--|--------------------|---|
| 69. | Four stop/turn light assemblies (17), (18), (19), and (20) | Four gaskets (21) | Put in. |
| 70. | | Four lenses (22) | Put in. |
| 71. | | Twelve screws (23) | Screw in, and tighten using number two cross-tip screwdriver. |



WIRING HARNESS - CONTINUED

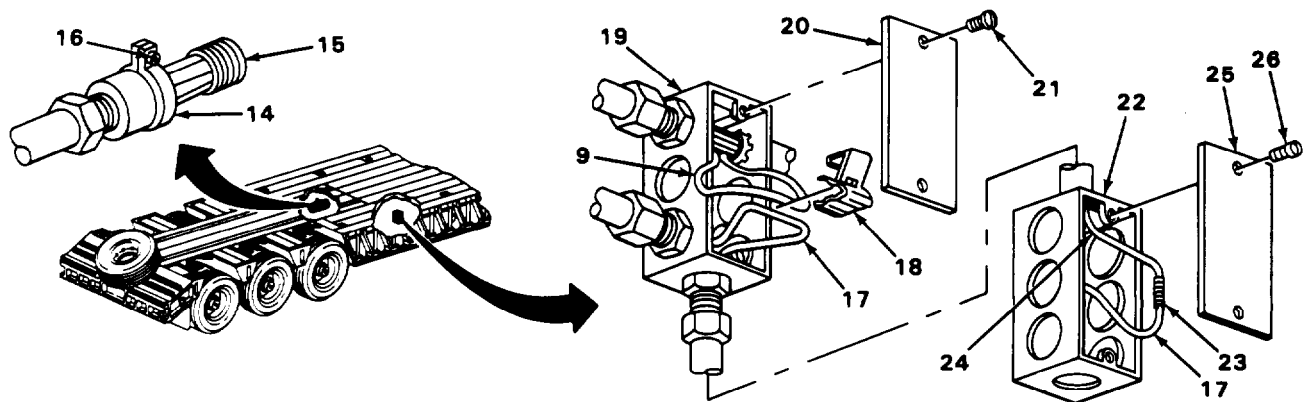
	LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED				
72.	Three white rear marker light leads (1), (2), and (3), and black circuit wire (4)	Three connectors (5)	Put on wires, and close using straight-nose pliers.	
73.	Three junction boxes (6)	Three cover plates (7)	Put on.	
74.		Six screws (8)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.	
75.	Black circuit wire (4) and black circuit wire (9)	Connector (10)	Put on wires, and close using straight-nose pliers.	
76.	Junction box (11)	Cover plate (12)	Put on.	
77.		Two screws (13)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.	



78.	Flexible tube connector (14)	Flexible tube (15)	Put together.	
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WIRING HARNESS - CONTINUED

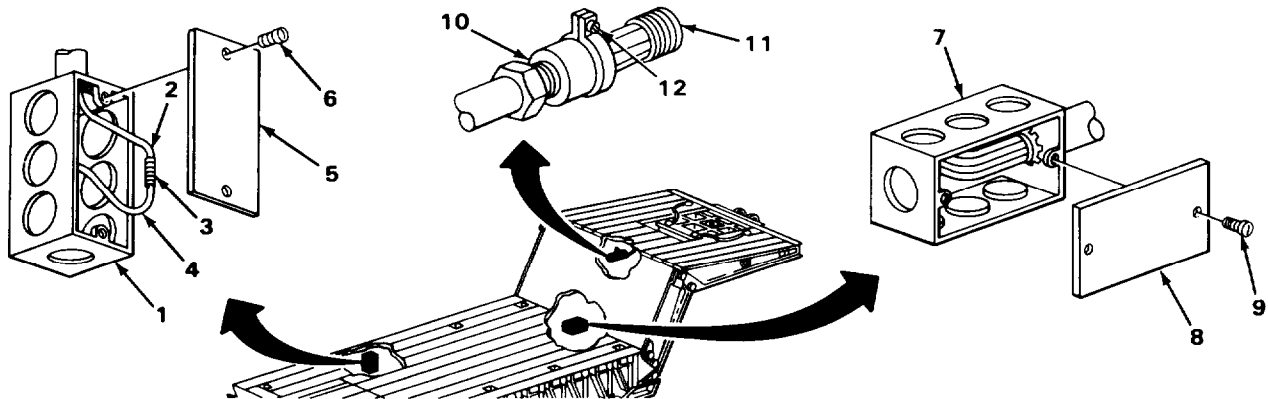
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION – CONTINUED			
79.	Screw (16)	Screw in, and 1/4-inch flat-tip screwdriver.	
80.	Black circuit wire (9) and black circuit wire (17)	Connector	Put on wires, and close using straight-nose pliers.
81.	Junction box (19)	Cover plate (20)	Put on.
82.		Two screws (21)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.
83.	Junction box (22)	Black circuit wire (17)	Strip insulation from end to depth of connector (23) using stripping pliers from Electrical Tool Kit.
84.		Black lead wire (24)	Strip insulation from end to depth of connector (23) using stripping pliers from Electrical Tool Kit.
85.	Black circuit wire (17) and black lead wire (24)	Connector (23)	Put on, and crimp using crimping tool from Electrical Tool Kit.
86.	Junction box (22)	Cover plate (25)	Put on.
87.		Two screws (26)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.



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WIRING HARNESS - CONTINUED

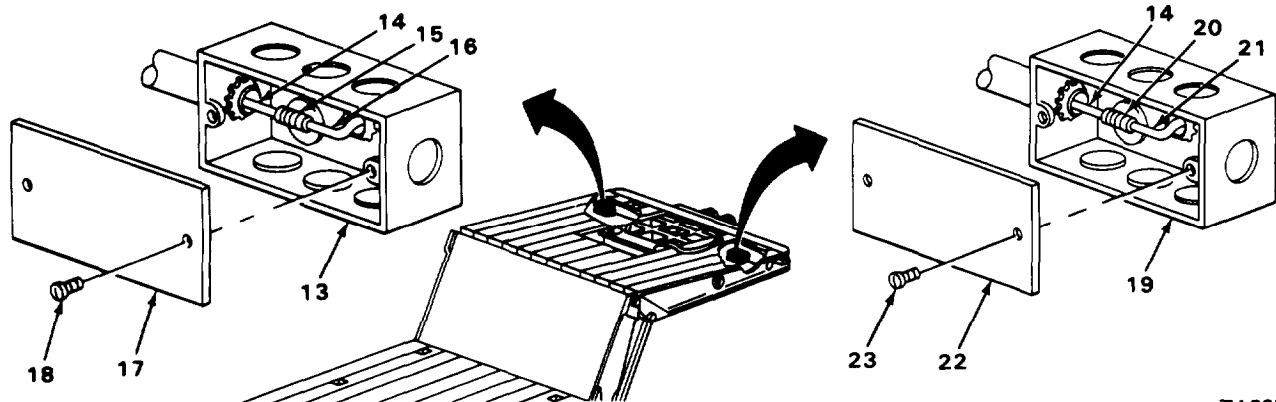
	LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED			
88.	Junction box (1)	Black circuit wire (2)	Strip insulation from end to depth of connector (3) using stripping pliers from Electrical Tool Kit.
		Black lead wire (4)	Strip insulation from end to depth of connector (3) using stripping pliers from Electrical Tool Kit.
89.	Black circuit wire (2) and black lead wire (4)	Connector (4)	Put on, and crimp using crimping tool from Electrical Tool Kit.
90.	Junction box (1)	Cover plate (5)	Put on.
91.		Two screws (6)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.
92.	Junction box (7)	Cover plate (8)	Put on.
93.		Two screws (9)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.
94.	Flexible tube connector (10)	Flexible tube (11)	Put together.
95.		Screw (12)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.



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WIRING HARNESS - CONTINUED

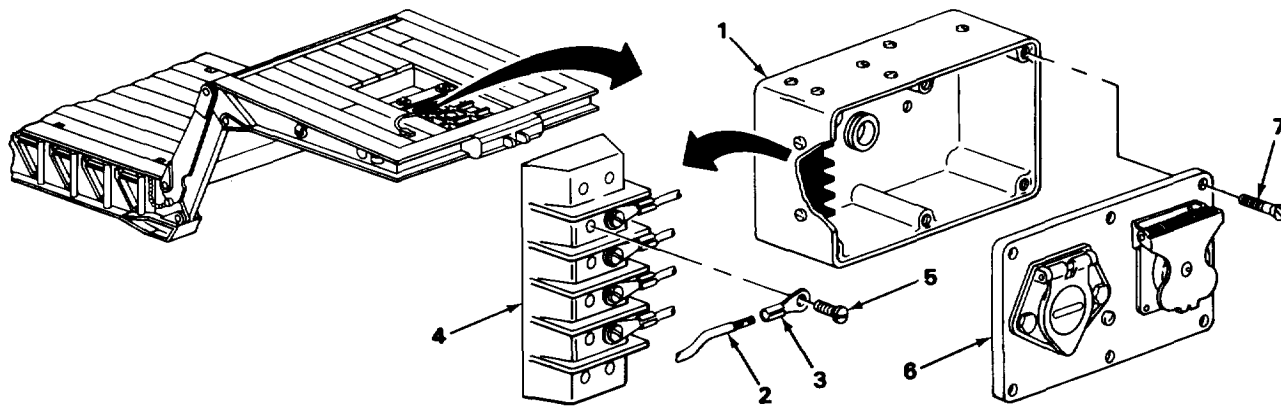
	LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED			
96.	Junction box (13)	Black circuit wire (14)	Strip insulation from end to depth of connector (15) using stripping pliers from Electrical Tool Kit.
97.		Black lead wire (16)	Strip insulation from end to depth of connector (15) using stripping pliers from Electrical Tool Kit.
98.	Black circuit wire (14) and black lead wire (16)	Connector (15)	Put on, and crimp using crimping tool from Electrical Tool Kit.
99.	Junction box (13)	Cover plate (17) and two screws (18)	a. Put on. b. Screw in, and tighten using 1/4-inch flat-tip screwdriver.
100.	Junction box (19)	Black circuit wire (14)	Strip insulation from end to depth of connector (20) using stripping pliers from Electrical Tool Kit.
101.		Black lead wire (21)	Strip insulation from end to depth of connector (20) using stripping pliers from Electrical Tool Kit.
102.	Black circuit wire (14) and black lead wire (21)	Connector (20)	Put on, and crimp using crimping tool from Electrical Tool Kit.
103.	Junction box (19)	Cover plate (22) two screws (23)	a. Put on. b. Screw in, and tighten using 1/4-inch flat-tip screwdriver.



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WIRING HARNESS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED			
104.	Voltage reduction box (1)	Black circuit wire (2)	Strip insulation from end to depth of connector using stripping pliers from Electrical Tool Kit.
105.	Black circuit wire (2)	Connector (3)	Put on, and crimp using crimping tool from Electrical Tool Kit.
106.	Junction block (4)	Black wire terminal screw (5)	Unscrew, and take out using 1/4-inch flat-tip screwdriver.
107.		Connector (3)	Put in place.
108.		Black wire terminal screw (5)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.
109.	Voltage reduction box (1)	Box cover (6)	Put in place.
110.		Six screws (7)	Screw in, and tighten using 1/4-inch flat-tip screwdriver.



TASK ENDS HERE

VOLTAGE REDUCTION BOX

This task covers:

- a. Removal (page 4-57)
- b. Installation (page 4-58)

INITIAL SETUP

Tools

Extension, 1/4-inch drive, 5-inch
 Hammer, hand, ball-peen, 3-lb
 Handle, ratchet, 1/4-inch drive
 Punch, center, solid, 1/8-inch
 Screwdriver, flat-tip, 3/8-inch

Tools – Continued

Socket, 1/4-inch drive, 7/16-inch
 Wrench, open-end, 7/16-inch

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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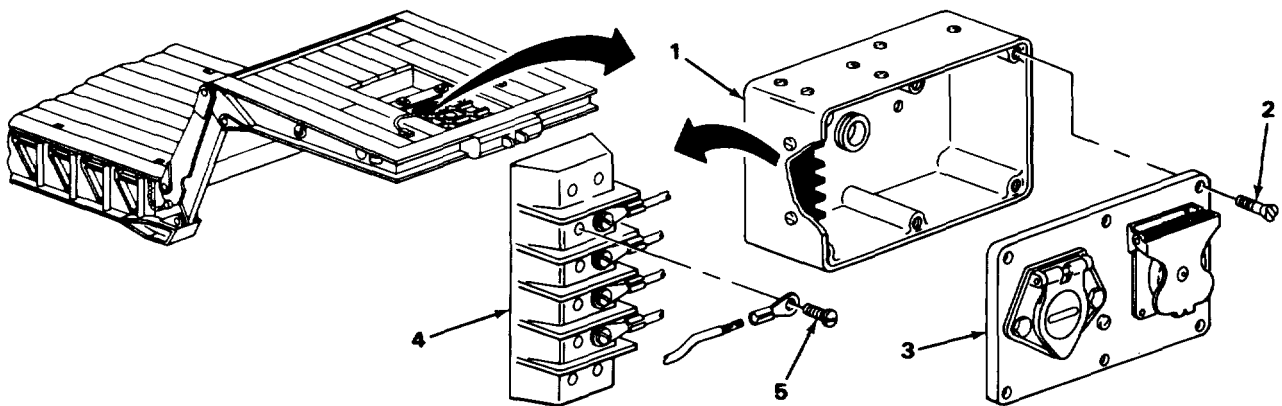
REMOVAL

- | | | | |
|----|---------------------------|----------------|--|
| 1. | Voltage reduction box (1) | Six screws (2) | Using 3/8-inch flat-tip screwdriver, unscrew and take out. |
| 2. | | Box cover (3) | Pull out of way. |

NOTE

Before removing harness wires from junction block, tag or mark wires for proper installation.

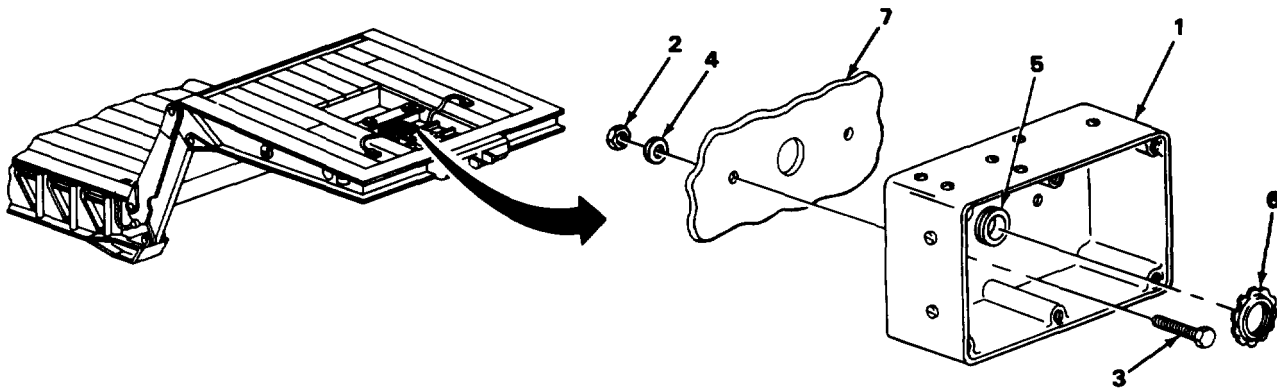
- | | | | |
|----|--------------------|-----------------|---|
| 3. | Junction block (4) | Four screws (5) | Using 3/8-inch flat-tip screwdriver, unscrew and take out.
Replace screws after removing wires. |
|----|--------------------|-----------------|---|



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VOLTAGE REDUCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
4.	Voltage reduction box (1)	Two nuts (2), two screws (3), and two washers (4)	Using 7/16-inch open-end wrench, 7/16-inch socket, 5-inch extension, and handle with 1/4-inch drive, unscrew and take out.
5.	Conduit fitting (5)	Conduit fitting locknut (6)	Using hammer and center punch, turn counterclockwise and take off.
6.	Frame member (7)	Voltage reduction box (1)	Take off.



INSTALLATION

7.	New voltage reduction box (8)	Six screws (9)	Using 1/4-inch flat-tip screwdriver, unscrew and take out.
8.	Box cover (10)		Pull out of way.

NOTE

When putting new voltage reduction box in place, make sure wire harness ends do not get stuck between box and frame member.

9.	Frame member (7)	New voltage reduction box (8)	Put in place,
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VOLTAGE REDUCTION BOX - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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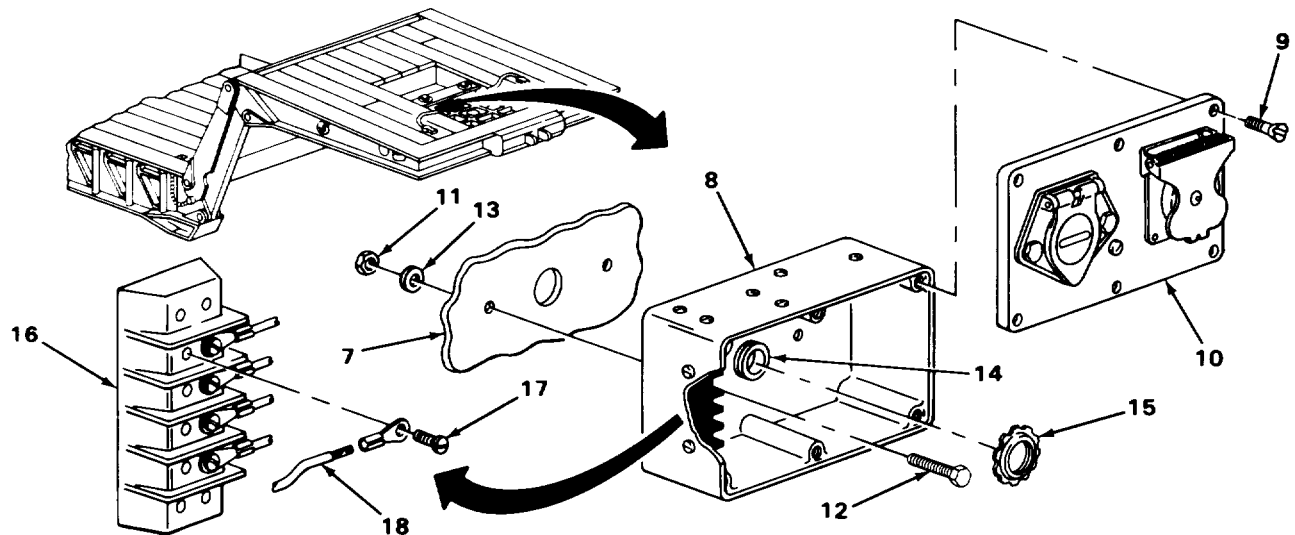
INSTALLATION – CONTINUED

- | | | | |
|-----|-------------------------------|--|--|
| 10. | New voltage reduction box (8) | Two nuts (11), two screws (12), and two washers (13) | Screw in, and tighten using 7/16-inch open-end wrench, 7/16-inch socket, 5-inch extension, and handle with 1/4-inch drive. |
| 11. | Conduit fitting (14) | Conduit fitting locknut (15) | Screw on, and tighten using hammer and center punch. |

NOTE

If wire tags have fallen off harness wires, go to electrical wiring diagram (page 4-63) for proper wire placement.

- | | | | |
|-----|-------------------------------|---|--|
| 12. | Junction block (16) | Four terminal screws (17) | Using 1/4-inch flat-tip screwdriver, take out. |
| 13. | | Four circuit wires (18) and four terminal screws (17) | a. Put wires in place.
b. Put in screws, and tighten using 3/8-inch flat-tip screwdriver. |
| 14. | New voltage reduction box (8) | Box cover (10) | Put in place. |
| 15. | | Six screws (9) | Screw in, and tighten using 3/8-inch flat-tip screwdriver. |



TASK ENDS HERE

COMPOSITE LIGHT ASSEMBLIES (MARINE CORPS VARIATION)

This task covers:

- a. Removal (page 4-60)
 - b. Lamp, Lens, and Door Assembly Replacement (page 4-60)
 - c. Installation (page 4-62)
-

INITIAL SETUP

Tools	Personnel Required
Handle, ratchet, 1/2-inch drive Screwdriver, flat-tip, 1/4-inch Socket, 1/2-inch drive 9/16-inch	One

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

REMOVAL

NOTE

Removal is not necessary for lamp, lens, or door assembly replacement. If wire identification tags are missing or not readable, wires should be retagged to aid in assembly.

- | | | | |
|----|--|-----------------------------------|--|
| 1. | Composite light assembly (1) to wiring harness (2) | Four electrical connectors (3) | Separate. |
| 2. | Composite light assembly (1) | Two bolts (4) and lockwashers (5) | Using 9/16-inch socket and handle with 1/2-inch drive, unscrew and take out. |
| 3. | | Composite light assembly (1) | Feed connectors (3) through hole (6), and take off. |

LAMP, LENS AND DOOR ASSEMBLY REPLACEMENT

- | | | | |
|----|------------------------------|----------------------------|---|
| 4. | Door and lens assembly (7) | Six captive screws (8) | Using 1/4-inch flat-tip screwdriver, unscrew.
Screws will stay in assembly. |
| 5. | Composite light assembly (1) | Door and lens assembly (7) | Take off. |
| 6. | Door and lens assembly (7) | Preformed packing (9) | Take out only if damaged.
If damaged, throw away. |

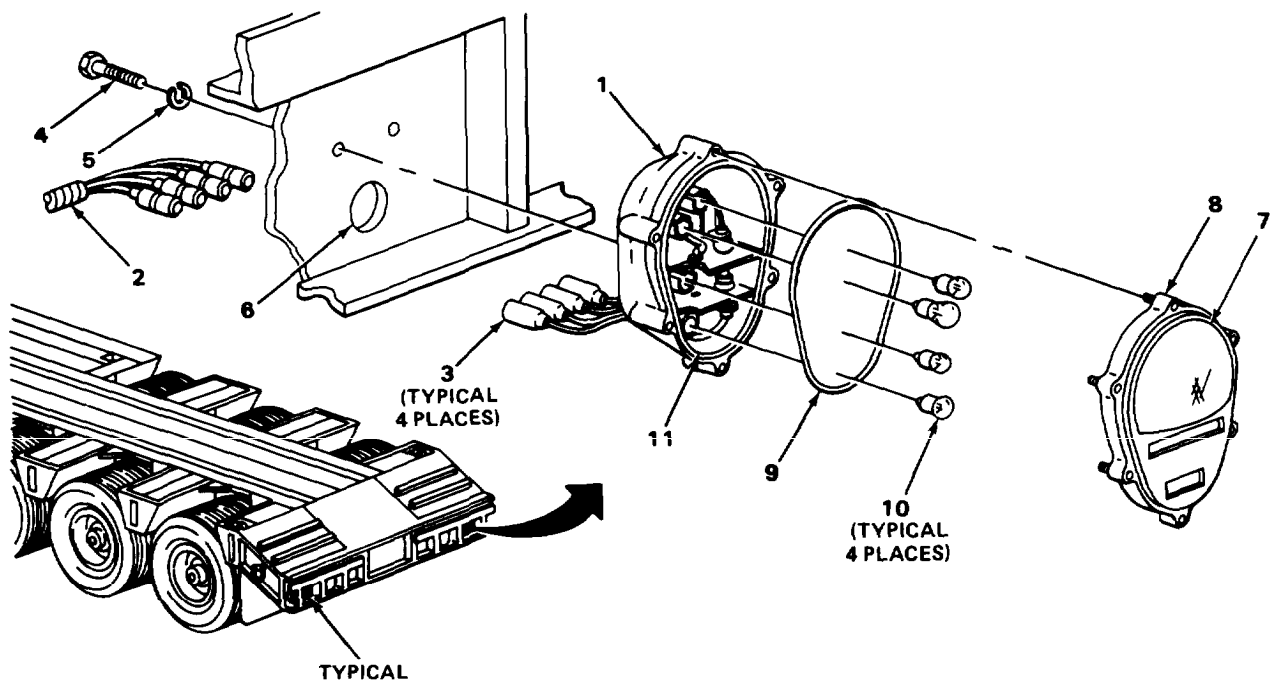
COMPOSITE LIGHT ASSEMBLIES (MARINE CORPS VARIATION) - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
LAMP, LENS, AND DOOR ASSEMBLY REPLACEMENT - CONTINUED			
7.	Composite light assembly (1)	Four lamps (10)	a. Push in, turn one-quarter turn counter-clockwise, and take out. b. Inspect for broken filament. If filament is broken, get rid of lamp. c. Inspect sockets for corrosion. If corroded, clean.

NOTE

Top lamp in light assembly is taillight; second lamp is stop turn lamp; third down is blackout taillight, and bottom lamp is blackout stoplight.

8.	Composite light assembly (1)	Four lamps (10)	Place in proper socket, push in, and turn clockwise.
9.		Preformed packing (9)	Place in groove (11) if removed.
10.		Door and lens assembly (7)	Put in position.
11.		Six captive screws (8)	Screw in using 1/4-inch flat-tip screwdriver.



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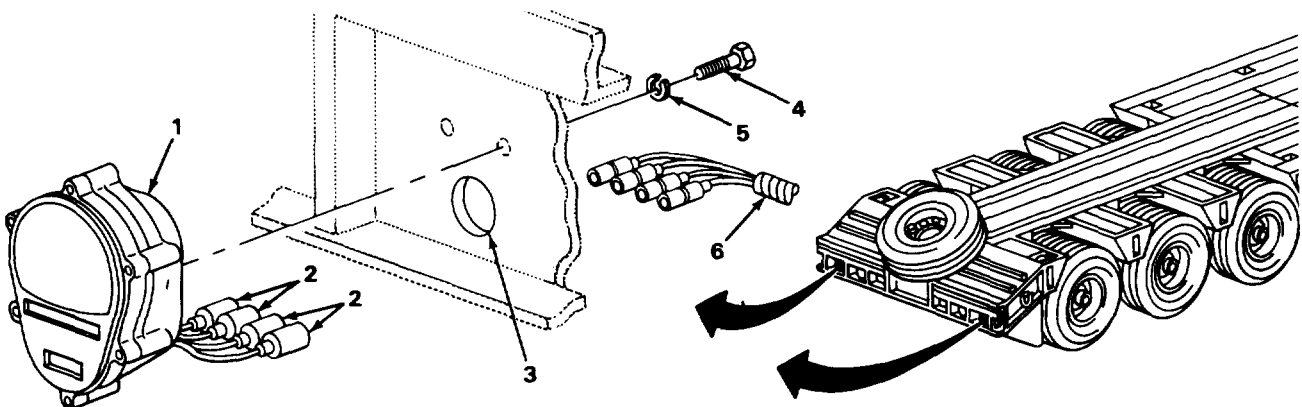
COMPOSITE LIGHT ASSEMBLIES (MARINE CORPS VARIATION) - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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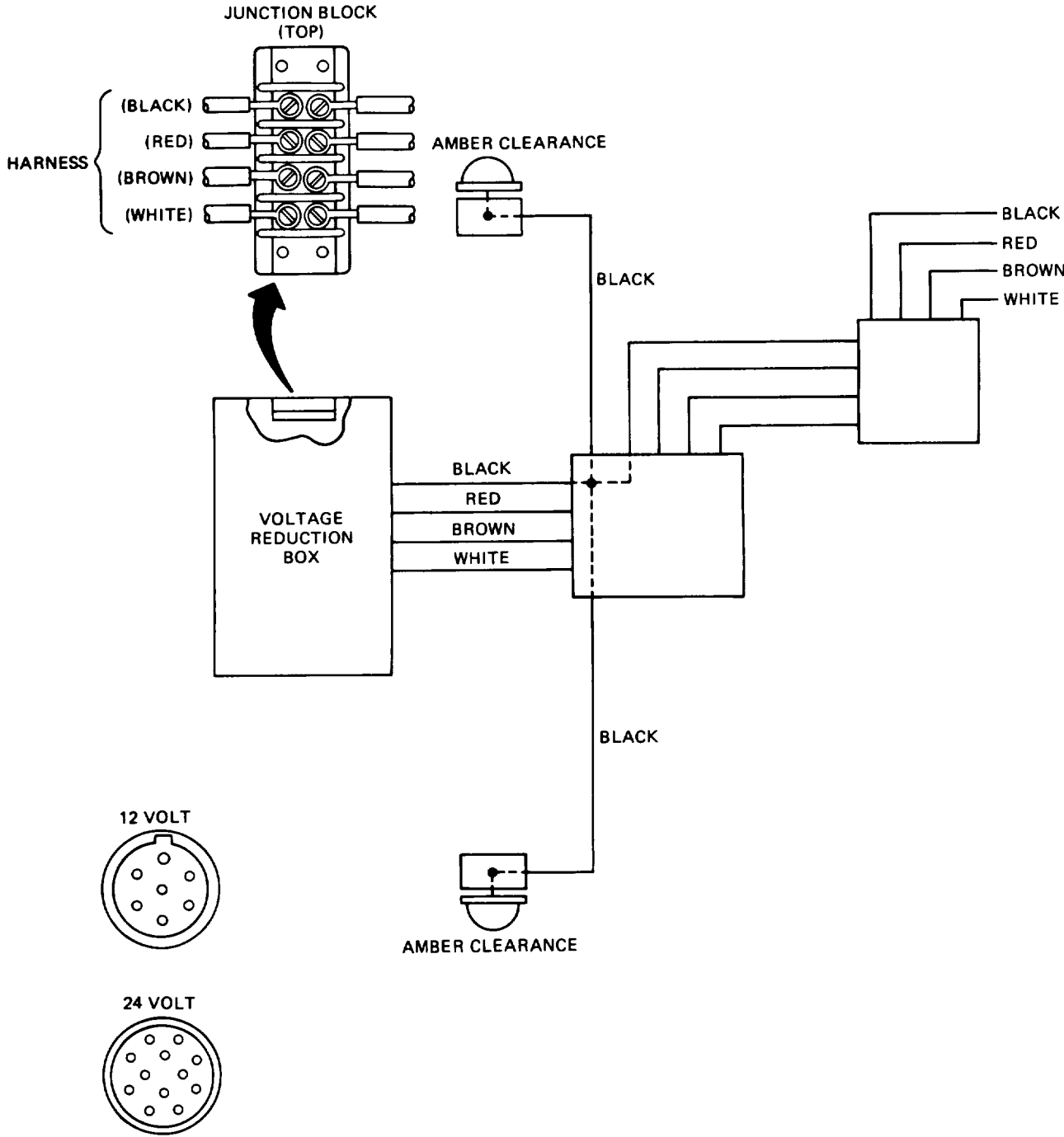
LAMP, LENS, AND DOOR ASSEMBLY REPLACEMENT—CONTINUED

INSTALLATION

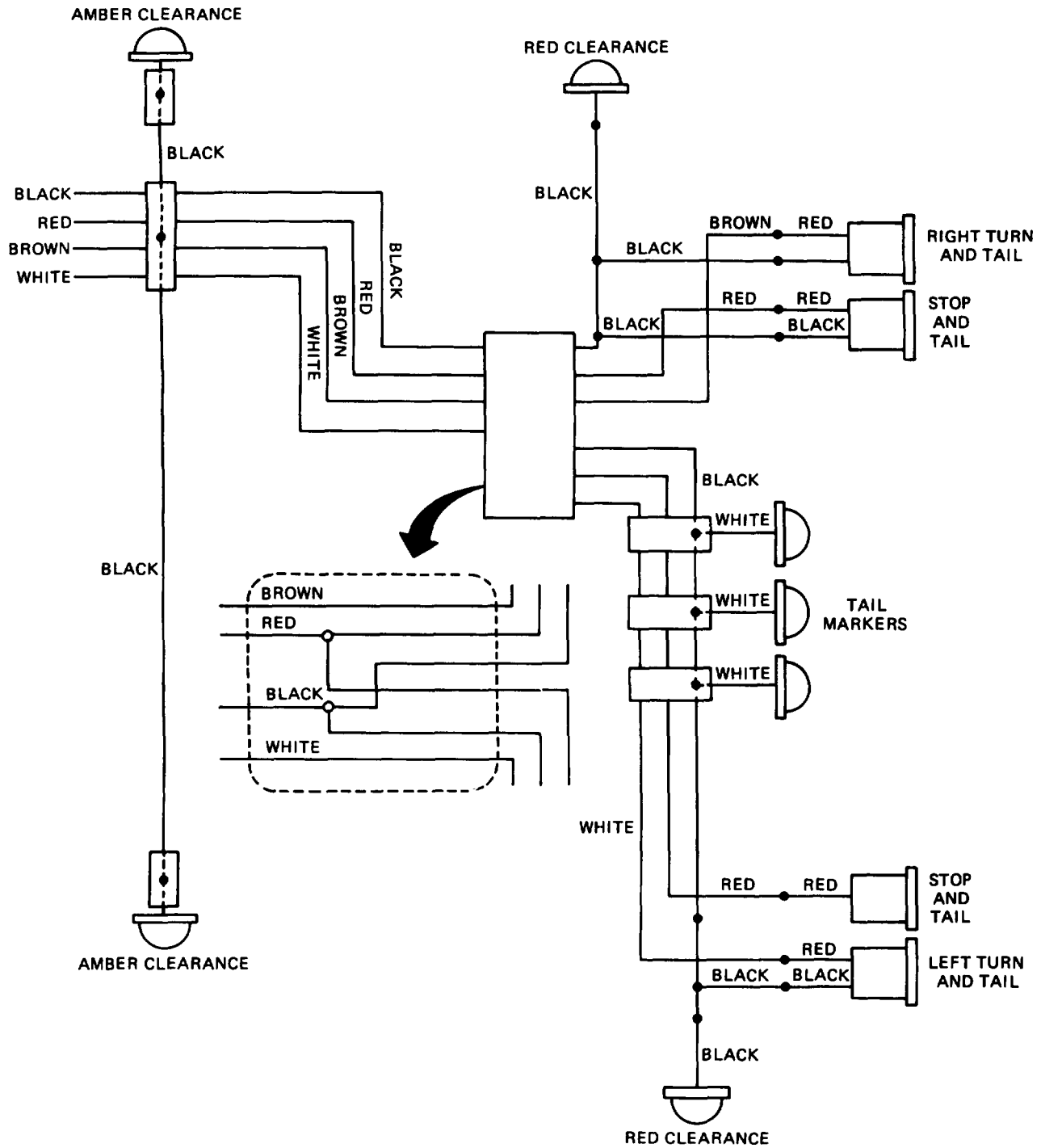
- | | | | |
|-----|---------------------|---|---|
| 12. | Back of semitrailer | Composite light assembly (1) | Put electrical connectors (2) through hole (3). |
| 13. | | Two bolts (4) and lockwashers (5) | Screw into back of light assembly (1), and tighten using 9/16-inch socket and handle with 1/2-inch drive. |
| 14. | | Four electrical connectors (2) and wire harness (6) | Match tags, and connect. |



TASK ENDS HERE



Electrical Wiring Diagram



Electrical Wiring Diagram

Section VIII. BRAKE SYSTEM MAINTENANCE

	Page		Page
Air Chamber	4-92	Air Line Repair	4-90
Air Couplings, Lines, and Fittings (Gladhands-to-Relay Valve)	4-77	Air Reservoir and Draincock	4-98
Air Couplings, Lines, and Fittings (Relay Valve-to-Air Chambers)	4-84	Brakeshoe	4-65
		Relay Valve	4-94
		Spider, S-Cam, and Slack Adjuster	4-72

BRAKESHOE

This task covers:

- | | |
|---|---|
| <ul style="list-style-type: none"> a. Adjustment (page 4-66) b. Removal (page 4-67) | <ul style="list-style-type: none"> c. Cleaning/Repair (page 4-68) d. Installation (page 4-70) |
|---|---|

INITIAL SETUP

Tools

- Brush, paint, 1 7/16-inch
- Drift, brass, 3/4-inch
- Hammer, hand, ball-peen, 3-lb
- Jack, hydraulic, 10-ton
- Key, hex, 1/2-inch
- Pliers, snapping
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 1 1/8-inch

Personnel Required

Two

Equipment Condition

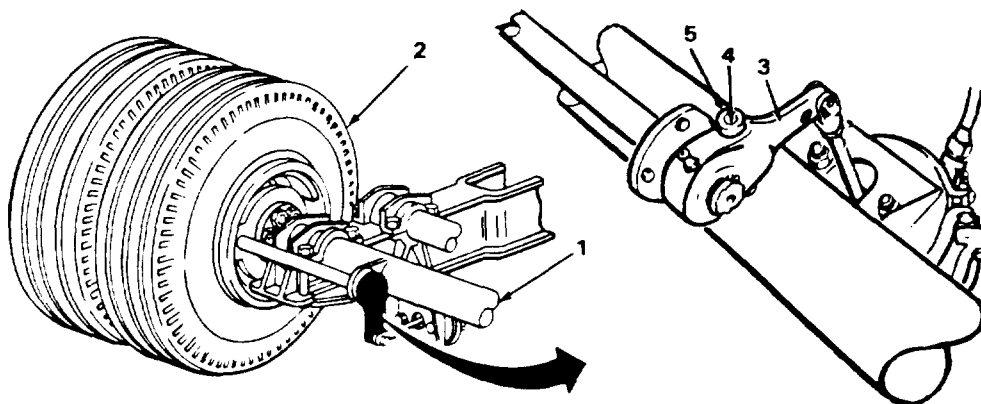
- Hub and drum removed
(page 4-100).
- Air reservoir drained (page 2-10).

Materials/Parts

- Solvent, drycleaning, PD-680
(item 13 appendix E)

BRAKESHOE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
NOTE			
Spring brakes must be released to allow adjustment. Apply air to brake chambers to release spring brakes. Do not apply brakes.			
ADJUSTMENT			
1.	Axle (1)	Hydraulic jack	Place under end of axle (1), and raise tires (2) off ground so tires rotate freely.
2.	Slack adjuster (4)	Wormshaft adjustment nut (4)	Using 9/16-inch open-end wrench, press in and turn nut (5) clockwise until wheels cannot be turned. Wrench will disengage lock (5) when applied.
3.		Wormshaft adjustment nut (4)	Using 9/16-inch open end wrench, press in and back off until wheels turn freely. Be sure lock(6) engages wormshaft adjustment nut (5) when wrench is removed.
4.	Axle (1)	Hydraulic jack	Lower, and remove. Repeat steps 1 thru 5 to complete adjustment of remaining brakes. Adjust all brakes to the same degree of tightness.



BRAKESHOE – CONTINUED

LOCATION	ITEM	ACTION REMARKS
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ADJUSTMENT – CONTINUED

NOTE

If only adjusting brakes, go to end of task and perform FOLLOW-ON MAINTENANCE procedure, step 3.

All six sets of brakeshoes are removed identically. Only one is described here. Repeat steps for remaining sets of brakeshoes.

REMOVAL

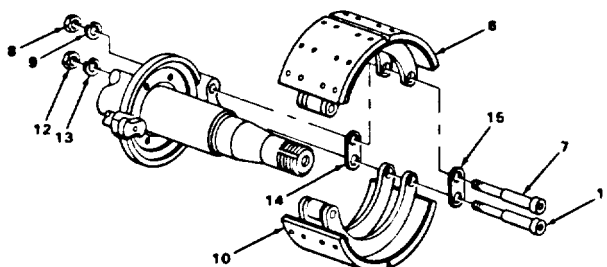
5.	Brakeshoe (6)	Anchor bolt (7), nut (8), and lockwasher (9)	Using 1 1/8-inch open-end wrench and 1/2-inch hex key, unscrew and take out.
6.	Brakeshoe (10)	Anchor bolt (11), nut (12), and lockwasher (13)	Using 1 1/8-inch open-end wrench and 1/2-inch hex key, unscrew and take out. Two spacers (14) and (15) will fall out when second anchor bolt is removed.

OPERATING TEST

- a. With gladhands connected to towing vehicle, apply brakes. Check that brakes of all semitrailer wheels apply properly.
- b. Release brakes. Check that each brake releases promptly.
- c. With brake system fully charged, close shutoff cock in emergency line on towing vehicle. Disconnect gladhands tagged EMERGENCY. Make sure semitrailer brakes apply automatically.
- d. Connect gladhands tagged EMERGENCY. Open shutoff cock on towing vehicle. Check that brakes release automatically.

LEAKAGE TEST

- a. With air brake system connected, apply soapy water to flanges that hold diaphragm and to service gladhands. No leakage is permitted. Tighten nuts on flanges and tighten coupling as required.
- b. With emergency relay valve in emergency position ((c) above), coat exhaust port with soapsuds.
- c. Leakage tests must not exceed a one inch bubble in three seconds. If excess leakage is found, replace emergency relay valve.



BRAKESHOE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED			
7.	S-cam (1) and axle (2)	Two brakeshoes (3) and (4)	Slide off.
8.	Brake spring retainer pins (5) and (6)	Spring (7)	Take off.
9.	Two brakeshoes (3) and (4)	Brake spring retainer pins (5) and (6)	Take out.
10.	Roller shaft (8)	Snapping (9)	Using snapping pliers, take off.
11.	Brakeshoe (3)	Roller shaft (8) and roller (10)	Using hammer and 3/4-inch brass drift, unseat and take out. Repeat steps 11 and 12 for other brakeshoe.

CLEANING/REPAIR

WARNING

Drycleaning solvent PD-680 is extremely flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or extreme heat. Flash point is 138°F (59°C). Injury to personnel could occur.

Brake linings contain asbestos fibers. Protective mask must be worn while performing this task. Failure to do so could result in serious illness.

CAUTION

Do not get grease, oil, solvent, or fingerprints on lining surfaces. This will cause glazed linings and uneven braking.

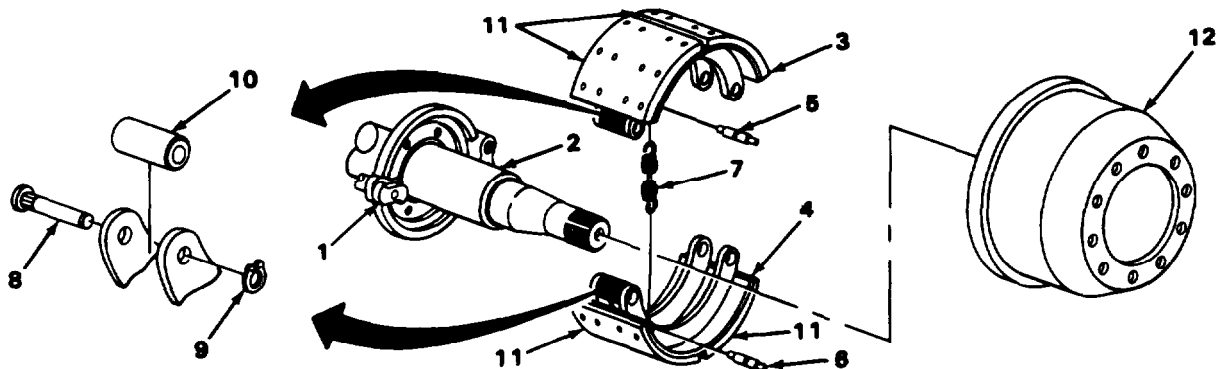
12.		Brake spring (7), retainer pins (5) and (6), rollers (10), and roller shafts (8)	Clean using drycleaning solvent and brush.
-----	--	--	--

BRAKESHOE - CONTINUED

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

CLEANING/REPAIR - CONTINUED

- | | | | |
|-----|------------------------|--------------------|---|
| 13. | Brakeshoes (3) and (4) | Brake linings (11) | <ul style="list-style-type: none"> a. Inspect for damage and wear. b. If damaged or worn to within 1/16-inch of rivet heads, replace brakeshoes. |
| 14. | | Brakedrum (12) | <ul style="list-style-type: none"> a. Inspect for cracks, warping, scoring, or other damage and wear. b. If drum is damaged or worn, notify Direct Support Maintenance for repair or resurfacing. |
| 15. | | S-cam (1) | <ul style="list-style-type: none"> a. Check for wear or damage. b. If worn or damaged, replace (page 4-72). |



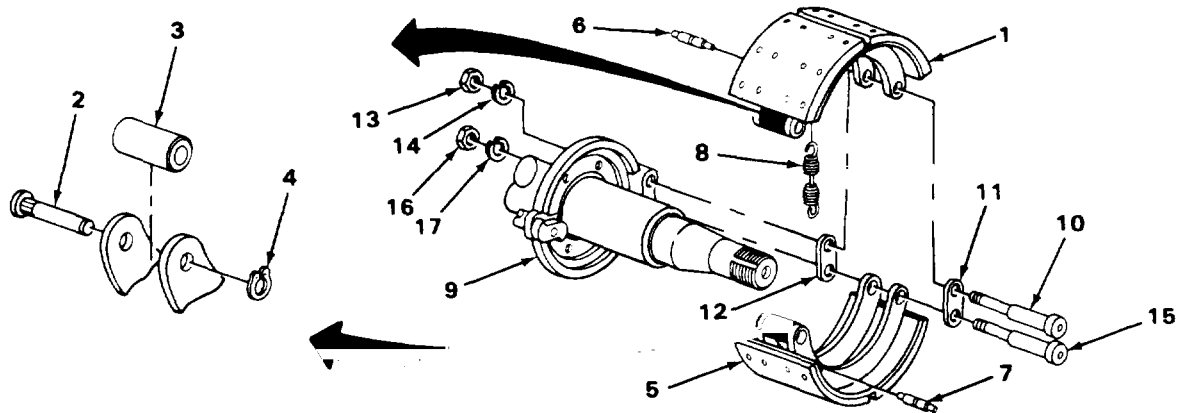
BRAKESHOE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
16.	Brakeshoe (1)	Roller shaft (2) and roller (3)	Put in, and tap with hammer until seated.
17.	Roller shaft (2)	Snapping (4)	Put on using snapping pliers. Repeat steps 16 and 17 for other brakeshoe.
18.	Two brakeshoes (1) and (5)	Two brake spring retainer pins (6) and (7)	Put in.
19.	Brake spring retainer pins (6) and (7)	Spring (8)	Put on.
20.	Spider (9)	Two brake shoes (1) and (5)	Have assistant hold assembly over axle and S-cam, and line up brakeshoe anchor boltholes with holes in spider (9).
21.		Anchor bolt (10), two spacers (11) and (12), nut (13), and lockwasher (14)	Put in, and tighten using 1 1/8-inch open end wrench and 1/2-inch hex key.
22.		Anchor bolt (15), nut (16), and lockwasher (17)	Put in, and tighten using 1 1/8-inch open end wrench and 1/2-inch hex key. Be sure anchor bolt (15) goes through holes in spacers (11) and (12).

BRAKESHOE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install hub, drum, and wheel (page 4-100).
2. Adjust brakes (page 4-66).
3. Check operation of brakes (page 2-17).

TASK ENDS HERE

SPIDER, S-CAM, AND SLACK ADJUSTER

This task covers:

- a. Removal (page 4-72)
 - b. Inspection/Repair (page 4-74)
 - c. Installation (page 4-74)
-

INITIAL SETUP

Tools

Shop Equipment, Common Set No. 1
 NSN 4910-00-754-0654
 Drift, brass, 2-inch
 Hammer, hand, ball-peen, 3-lb
 (para. 3-9)
 Pliers, straight-nose

Personnel Required

One

Equipment Condition

Drain cocks open
 Brakeshoes removed (page 4-67)

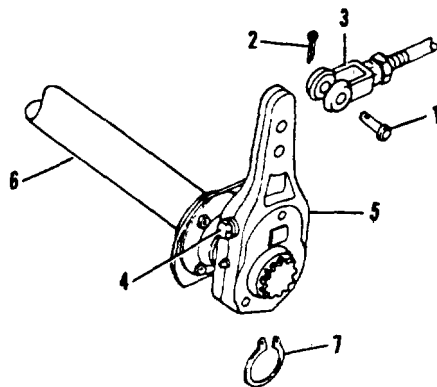
Materials/Parts

Rags (item 12, Appendix E)

LOCATION	ITEM	ACTION	REMARKS
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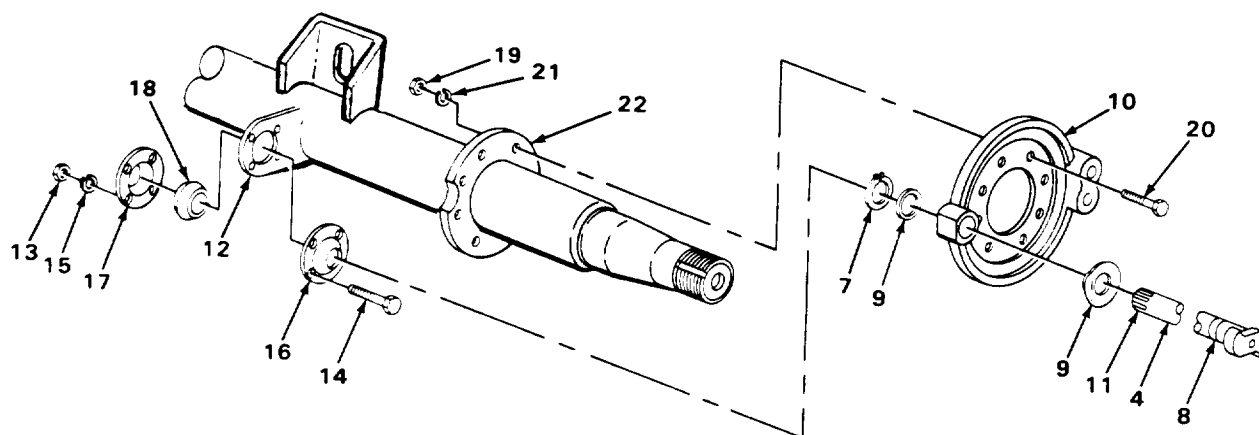
REMOVAL

- | | | |
|-------------------|--------------------|---------------------------------------|
| 1. Clevis pin (1) | Cotter pin (2) | Using straight-nose pliers, take out. |
| 2. Clevis (3) | Clevis pin(1) | Take out. |
| 3. S-camshaft (4) | Snapping (5) | Using snapping pliers, take off. |
| 4. | Slack adjuster (6) | Slide off. |



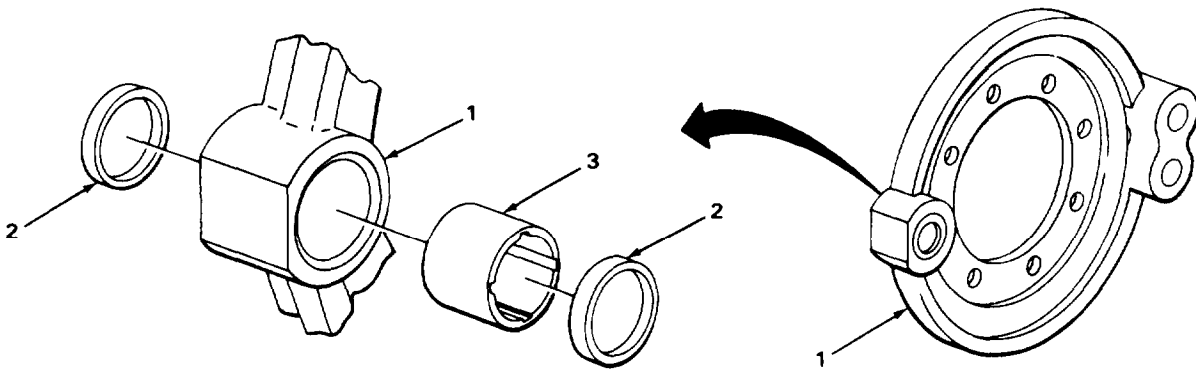
SPIDER, S-CAM, AND SLACK ADJUSTER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
5.	Snapping (7)	a. Using snapping pliers, take snapping out of seat (8). b. Slide S-camshaft (4) and camwashers (9) out of spider (10). Snapping (7) and washers (9) will slide on S-camshaft (4). Snapping (7) will drop into seat (11) and have to be taken off with snapping pliers.
6.	S-camshaft bushing bracket (12)	Using two 7/16-inch open-end wrenches, unscrew and take out.
7.	Two bushing cups (16) and (17)	Take off.
8.	Nylon bushing (18)	Take out.
9.	Spider (10)	Using 3/4-inch open-end wrench and 3/4-inch socket and handle with 1/2-inch drive, unscrew and take out.
10.	Axle (22)	Spider (10) Slide off.



SPIDER, S-CAM, AND SLACK ADJUSTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSPECTION/REPAIR			
11.	Spider (1) Bushing seals (2) and nylon bushing (3)	Check for damage or wear.	
NOTE			
If bushing seal and nylon bushing are all right, skip steps 12 thru 16			
12.	Bushing seal (2)	Using 3/8-inch flat-tip screwdriver, pry out.	Repeat for bushing seal (2) on other side of spider.
13.	Nylon bushing (3)	Push out.	
14.	New bushing seal (2)	Put in, and seat using hammer and brass drift.	
15.	New nylon bushing (3)	Put in.	
16.	New bushing seal (2)	Put in, and seat using hammer and brass drift.	

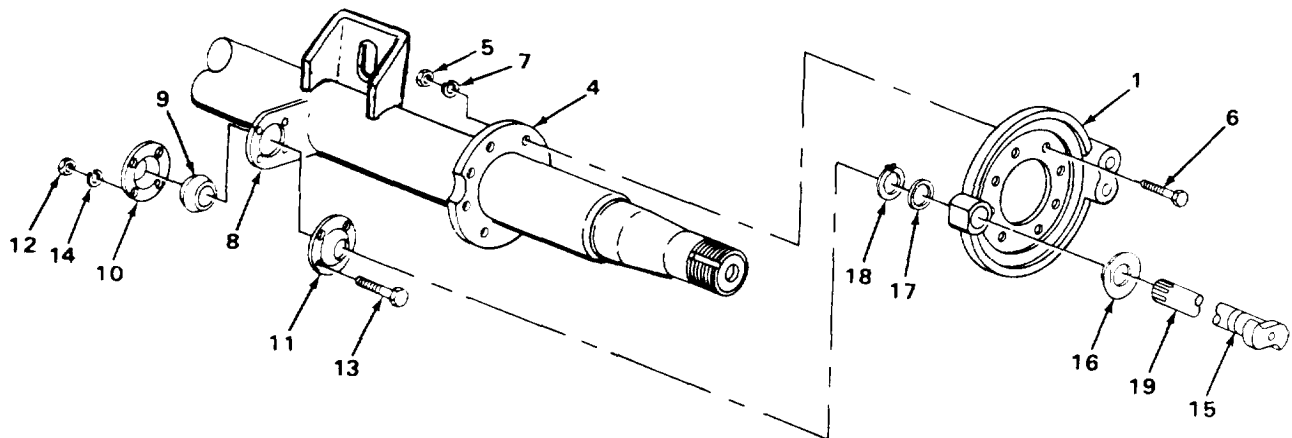


INSTALLATION

17.	Axle (4)	Spider (1)	Slide on, and line up holes.
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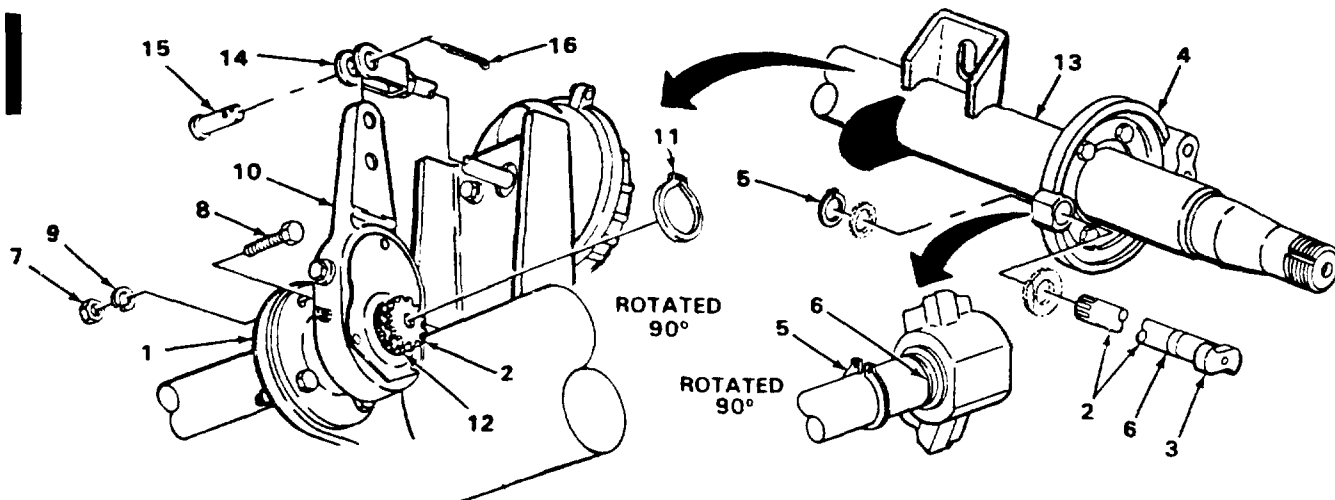
SPIDER, S-CAM, AND SLACK ADJUSTER - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED			
18.	Spider (1)	Eight nuts (5), bolts (6), and lockwashers (7)	Put in, and tighten using 3/4-inch open-end wrench and 3/4-inch socket and handle with 1/2-inch drive.
19.	S-camshaft bracket (8)	Nylon bushing (9) and two bushing cups (10) and (11)	Put on.
20.		Four nuts (12), bolts (13), and lockwashers (14)	Put in and start, but do not tighten. Bushing must be able to turn for alinement when S-camshaft is put in.
21.	S-camshaft (15)	Cam washer (17)	Put on with bent edge toward spline of S-camshaft.
22.	Spider (1)	S-camshaft (18)	Slide S-camshaft through spider (1) but not through S-camshaft bushing (9).
23.	S-camshaft (15)	Cam washer (17)	Put on.
24.		Snapring (18)	Put on, and move past groove (19) until snapring touches spider (1) using snapring pliers.



SPIDER, S-CAM, AND SLACK ADJUSTER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
25.	S-camshaft bushing bracket (1)	Push through until S-cam (3) touches spider (4).	
26.	S-camshaft (2)	Snapping (5)	Put in groove (6) using snapping pliers.
27.	S-camshaft bracket (1)	Four nuts (7), bolts (8), and lockwashers (9)	Tighten using two 7/16-inch open-end wrenches.
28.	S-camshaft (2)	S-cam (3)	Position horizontally.
29.		Slack adjuster (10)	Put on vertically.
30.		Snapping (11)	Put in groove (12) using snapping pliers.
31.		Slack adjusters (10)	Push toward axle (13), and line up bottom hole with clevis (14).
32.	Clevis (14)	Clevis pin (15)	Put in.
33.	Clevis pin (15)	Cotter pin (16)	Put in, and bend using straight-nose pliers.



NOTE

FOLLOW-ON MAINTENANCE: Install brakeshoes (page 4-70).

TASK ENDS HERE

AIR BRAKE CHAMBERS

This task covers:

- a. Removal (page 4-77)
- b. Installation (page 4-79)

INITIAL SETUP

Tools

Tool Kit, Mechanics General
NSN 5180-00-177-7033

Personnel Required

One

Materials/Parts

Tape, antiseizing (teflon)
(Item 16, Appendix E)

Equipment Condition

Air reservoir drained
Extension planks removed from
stowed position.

LOCATION	ITEM	ACTION	REMARKS
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NOTE

The air brake chambers are located on the rear axle.

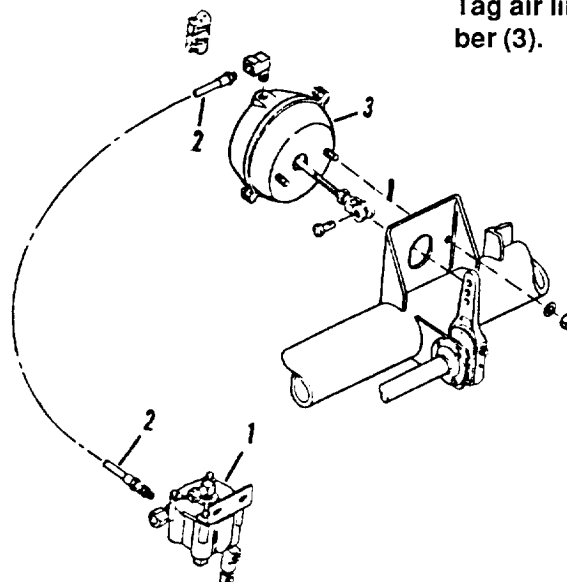
REMOVAL

1. Emergency relay valve (1)

Air line (2)

Disconnect

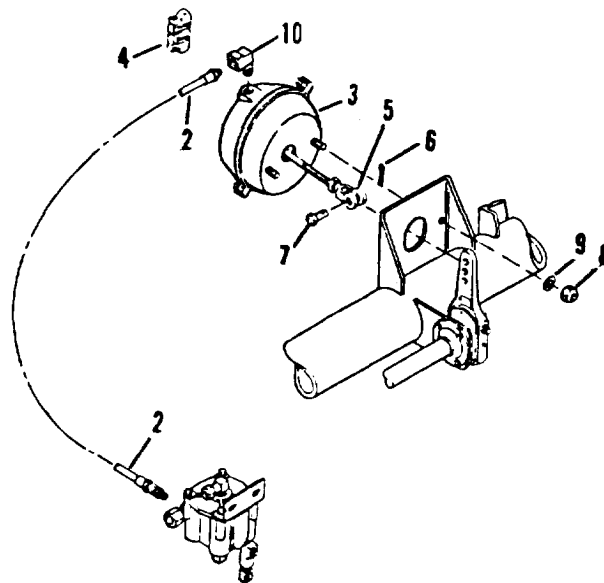
Tag air line (2) to air brake chamber (3).



AIR BRAKE CHAMBERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2. Air line(2)	Hose separators (4)	Remove	Bend up bracket on suspension using screwdriver.
3. Clevis (5)	Cotter pin (6) and clevis pin (7)	Remove	
4. Air brake chamber (3)	Two nuts (8) and two washers (9)	Remove	
5. Semitrailer	Air brake chamber (3)	Remove	
6. Air brake chamber (3)	Air line (2)	Remove	
7. Air brake chamber (3)	Elbow (10)	Remove	

REPAIR. Repair is limited to replacement of hardware.



AIR BRAKE CHAMBERS - CONTINUED

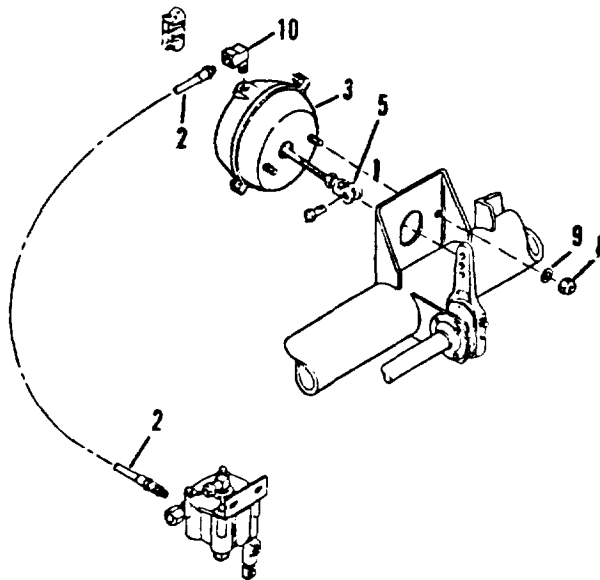
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Wrap threaded ends of all brass fittings with two turns of teflon tape.

- | | | | |
|--------------------------|-----------------------------------|---------|---|
| 1. Air brake chamber (3) | Elbow (10) | Install | |
| 2. Air brake chamber (3) | Air line (2) | | Check that distance from non-pressure housing to center of clevis pin hole is 4.0 inches (10.2 cm). |
| 3. Air brake chamber (3) | | Install | Be sure clevis (5) is in center hole of mounting bracket. |
| 4. Air brake chamber (3) | Two washers (9) and two nuts (8). | Install | |



AIR BRAKE CHAMBERS - CONTINUED

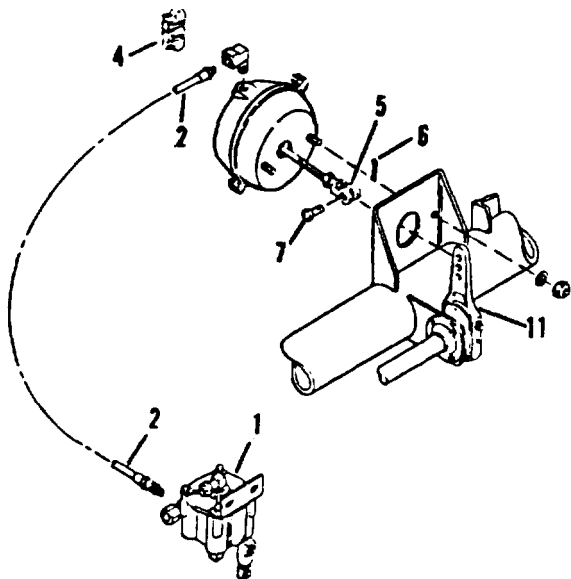
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

5. Slack adjuster(11) Clevis (5) Position

6. Clevis (5) Clevis pin (7) and cotter pin (6) Install

Check brake adjustment.



7. Emergency relay valve (1) Air line (2) Connect

8. Air line (2) Hose separators (4) Install

Bend bracket on suspension down, using screwdriver.

9. Air reservoirs Drain cocks Close

NOTE

FOLLOW-ON MAINTENANCE

1. Pressurize air brake system.
2. Test air system for leaks.

TASK ENDS HERE

SPRING BRAKE CHAMBERS

This task covers:

- a. Removal (page 4-81)
 - b. Installation (page 4-82)
-

INITIAL SETUP

Tools

Tool Kit, Mechanics General
NSN 5180-00-177-7033

Personnel Required

One

Materials/Parts

Tape, antiseizing (teflon)
(Item 16, Appendix E)

Equipment Condition

Drain cocks open

LOCATION	ITEM	ACTION	REMARKS
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NOTE

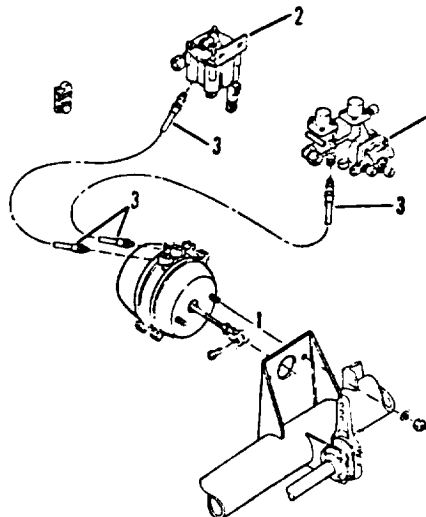
The spring brake chambers are located on the front and middle axles.

REMOVAL

1. Multifunction valve (1)
and emergency
relay valve (2)

Air hoses (3)

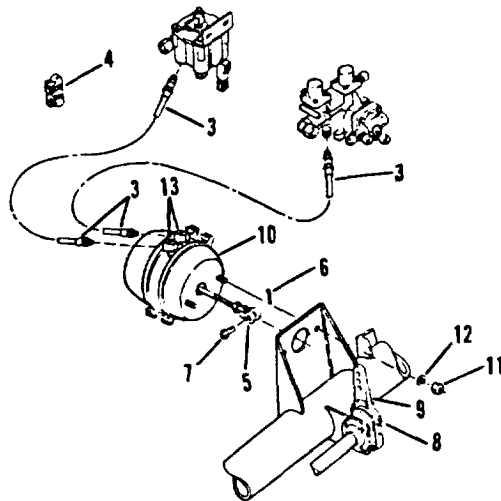
Tag and disconnect



SPRING BRAKE CHAMBERS - CONTINUED

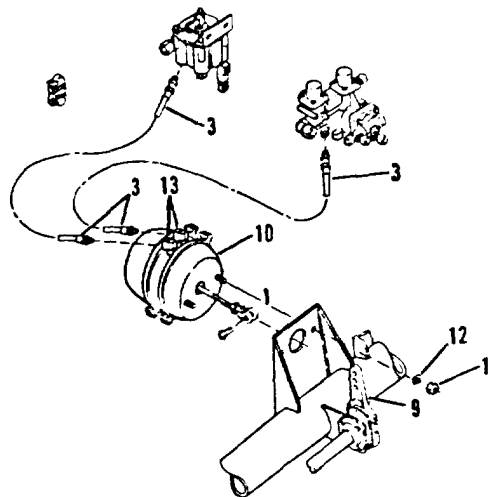
LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
2. Air hoses (3)	Hose separators (4)	Remove	Bend up bracket on suspension using screwdriver.
3. Clevis (5)	Cotter pin (6) and clevis pin (7)	Remove	Using slack adjuster nut (8), back slack adjuster (9) off clevis (5).
4. Spring brake chamber (10)	Two nuts (11) and two washers (12)	Remove	
5. Semitrailer	Spring brake chamber (10)	Remove	
6. Springbrake chamber (10)	Air hoses (3)	Disconnect	
7. Spring brake chamber (10)	Two elbows (13)	Remove	

REPAIR. Repair is limited to replacement of hardware.



SPRING BRAKE CHAMBERS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
NOTE			
Wrap threaded ends of all brass fittings with two turns of teflon tape.			
1. Spring brake chamber (10)	Two elbows (13)	Install	
2. Spring brake chamber (10)	Air hoses (3)	Install	Check that distance from non-pressure housing to center of clevis pin hole is 6.75 Inches (17.1 cm).
3. Spring brake chamber (10)		Install	Be sure clevis (9) is in center hole of mounting bracket.
4. Spring brake chamber (10)	Two washers (12) and two nuts (11)	Install	



SPRING BRAKE CHAMBERS - CONTINUED

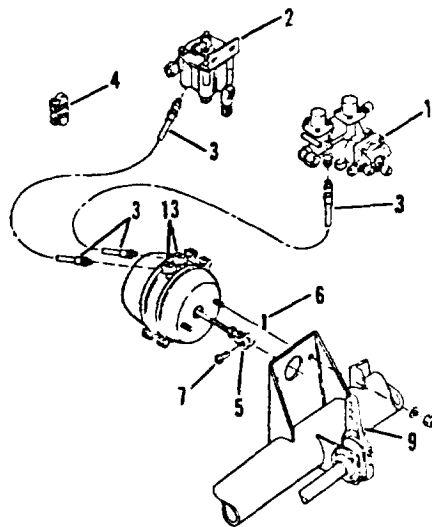
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

5. Slack adjuster (9) Clevis (5) Position

6. Clevis (5) Clevis pin (7) and cotter pin (6) Install

Check brake adjustment.



7. Multifunction valve (1) and emergency relay valve (2) Air line (3) Connect

8. Air hoses (3) Hose separators (4) Install

Bend bracket on suspension down, using screwdriver.

NOTE

FOLLOW-ON MAINTENANCE

1. Close drain cock on each air reservoir.
2. Pressurize air brake system.
3. Test air system for leaks.

TASK ENDS HERE

MULTI-FUNCTION VALVE

This task covers:

- a. Removal (page 4-85)
- b. Installation (page 4-86)

INITIAL SETUP

Tools

Tool Kit, Mechanics General
NSN 5180-00-177-7033

Personnel Required

One

Materials/Parts

Tape, antiseizing (teflon)
(Item 16, Appendix E)

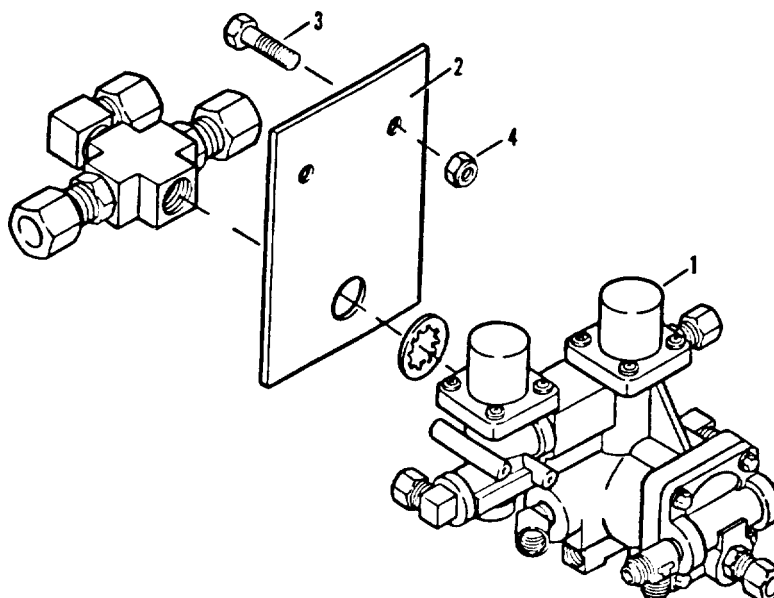
Equipment Condition

Drain cocks open

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

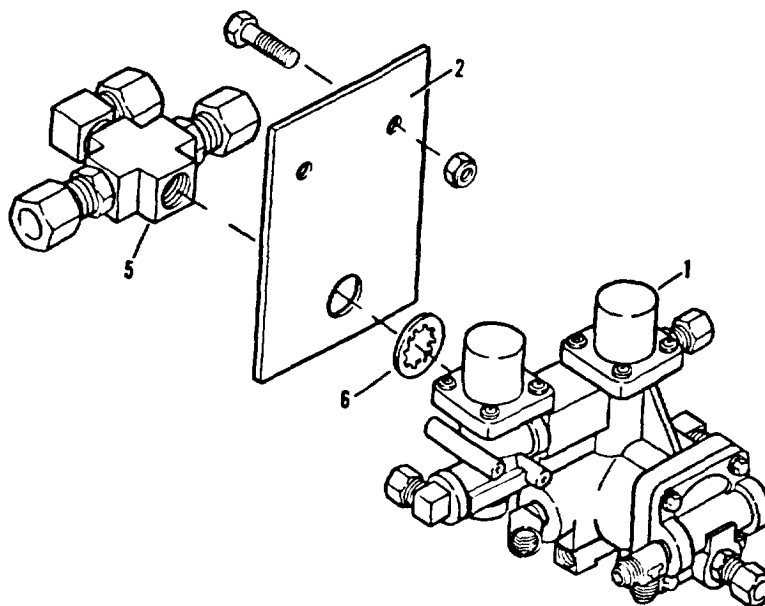
- 1. Multifunction valve (1) Air lines Tag and disconnect
- 2. Mounting plate (2) Two screws (3) and locknuts (4) Remove



MULTI-FUNCTION VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
3. Female pipe cross (5) and mounting plate (2)	Multi-function valve (1)	Remove	
4. Multi-function valve (1)	Washer (6)	Remove	

REPAIR. Repair is limited to replacement of hardware.



INSTALLATION

NOTE

Wrap threaded ends of all brass fittings with two turns of teflon tape.

1. Multi-function valve (1)	Washer (6) and mounting plate (2)	Install
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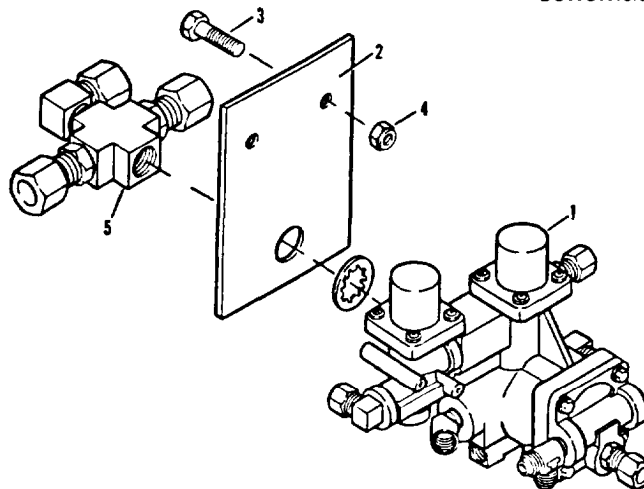
MULTI-FUNCTION VALVE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

2. Female pipe cross (5)	Multi-function valve (1) and mounting plate (2)	Install	
3. Frame	Multi-function valve (1) and mounting plate (2)	Secure with two screws (3) and locknuts (4)	
4. Multi-function valve (1)	Air lines	Connect	

Check tagged air lines with schematic.



NOTE

FOLLOW-ON MAINTENANCE

1. Close drain cocks
2. Charge air system.
3. Check for leaks.
4. Check operation of brakes.

TASK ENDS HERE

EMERGENCY RELAY VALVE

This task covers:

- a. Removal (page 4-88)
- b. Installation (page 4-89)

INITIAL SETUP

Tools

Tool Kit, Mechanics General
NSN 5180-00-177-7033

Personnel Required

One

Materials/Parts

Tape, antiseizing (teflon)
(Item 16, Appendix E)

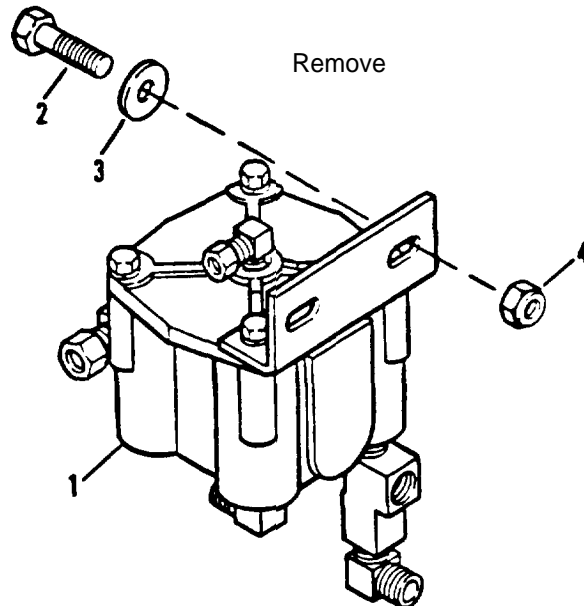
Equipment Condition

Drain cocks open

LOCATION	ITEM	ACTION	REMARKS
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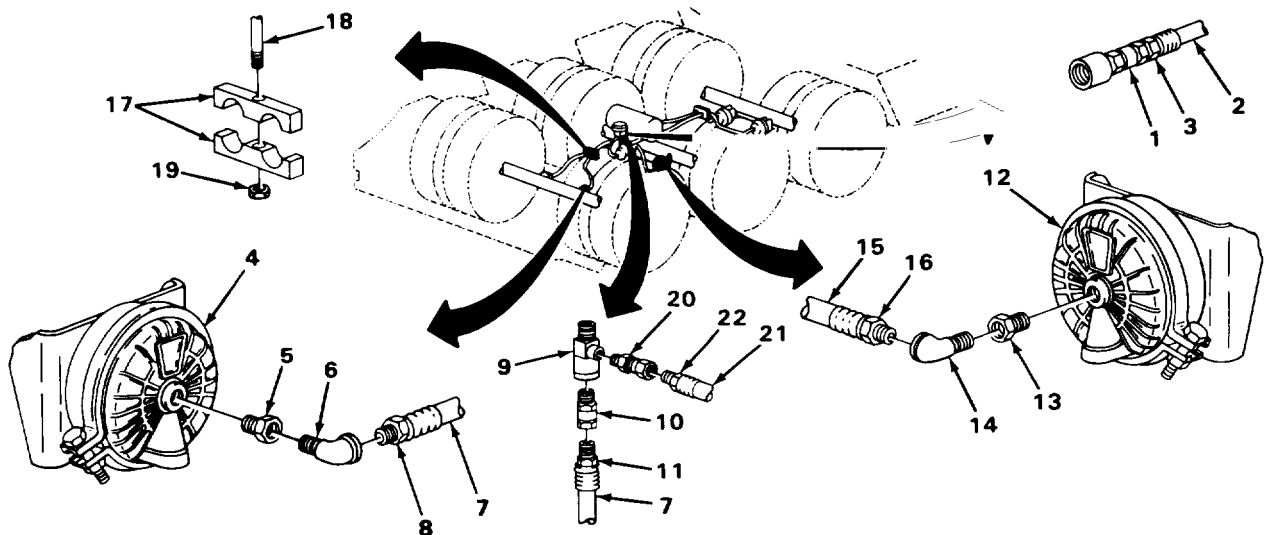
REMOVAL

- | | | |
|------------------------------|--|--------------------|
| 1. Emergency relay valve (1) | Air lines | Tag and disconnect |
| 2. Emergency relay valve (1) | Two screws (2), washers (3) and locknuts (4) | Remove |
| 3. Emergency relay valve (1) | | Remove |



AIR COUPLINGS, LINES, AND FITTINGS (RELAY VALVE-TO-AIR CHAMBERS) - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
39.	Elbow (14)	New hose (15) and hose fitting (16)	Screw in, and tighten using 9/16-inch open-end wrench. Put hose in bracket (17).
40.	Stud (18)	Nut (19)	Screw on, and tighten using 7/16-inch open-end wrench.
41.	T-fitting (9)	Union (20)	Screw in, and tighten using 11/16-inch open-end wrench.
42.	Union (20)	New hose (21) and hose fitting (22)	Screw on, and tighten using 9/16-inch and 11/16-inch open-end wrenches.



NOTE

FOLLOW-ON MAINTENANCE:

1. Fill air reservoir (page 2-15).
2. Check system for leaks (page 4-22).
3. Check operation of brakes (page 2-17).

TASK ENDS HERE

AIR LINE REPAIR

This task covers:

Repair (page 4-90)

INITIAL SETUP

Tools

- Cutter, tube
- Pliers, diagonal cutting
- Tape, measuring
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch

Personnel Required

One

Equipment Condition

Air reservoir drained (page 2-10).

LOCATION	ITEM	ACTION REMARKS
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REPAIR

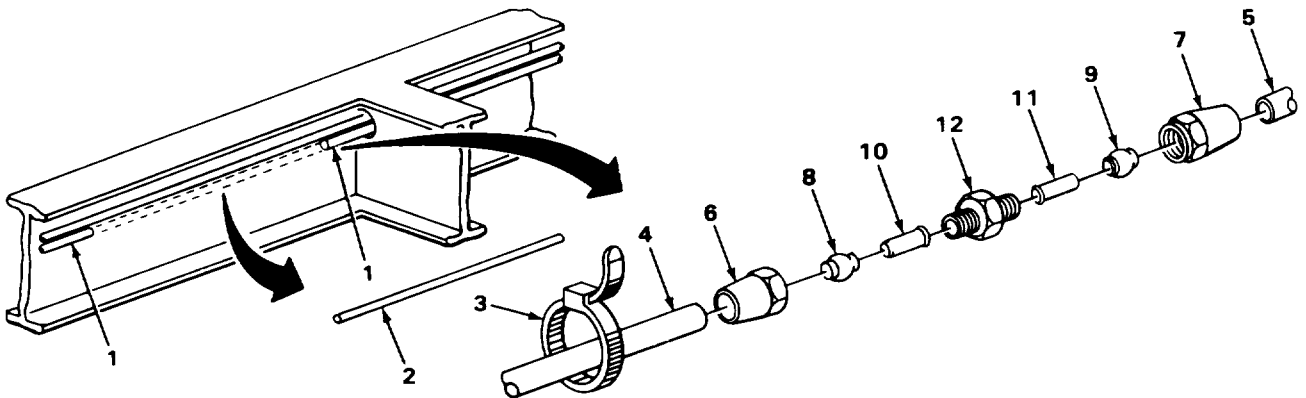
NOTE

Air line tubing can either be replaced or repaired depending on the length of the damaged section. If the damaged airhose is short, replace it. If the damaged airhose is long, repair it. Typical repair procedures are shown in this procedure.

- | | | | |
|----|---------------------------|--|---|
| 1. | Tubing (1) | Damaged section (2) | <ul style="list-style-type: none"> a. Using tube cutter, cut out. b. Using measuring tape, measure cut out piece of tubing. c. Using tubing cutter, cut new piece 1/2-inch shorter.
If section of tubing being cut out is held by plastic ties (3), cut off plastic ties with diagonal cutting pliers. |
| 2. | Two hose ends (4) and (5) | Two slip nuts (6) and (7) and ferrules (8) and (9) | Put on, and position ferrules (8) and (9) 3/16-inch from hose ends. |
| 3. | | Two tubing inserts (10) and (11) | Put in hose ends until flush.
Repeat steps 2 and 3 for other two ends. |

AIR LINE REPAIR - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
4.	Slip nut (6)	Air line connector (12)	Screw in, and tighten using 5/8-inch and 9/16-inch open-end wrenches.
5.	Slip nut (7)	Air line connector (12)	Screw in, and tighten using 5/8-inch and 9/16-inch open-end wrenches. Repeat steps 4 and 5 for other two hose ends.
6.		Plastic ties (3)	Put on, and tighten.



NOTE

FOLLOW-ON MAINTENANCE: Check for leaks (page 4-22).

TASK ENDS HERE

AIR CHAMBER

This task covers:

- a. Removal (page 4-92)
 - b. Installation (page 4-93)
-

INITIAL SETUP

Tools

- Pliers, straight-nose
- Wrench, open-end, 15/16-inch
- Wrench, open-end, 11/16-inch
- Wrench, pipe, 12-inch

Personnel Required

One

Equipment Condition

Air reservoir drained (page 2-10).

Materials/Parts

Tape, teflon (item 16, appendix E)

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

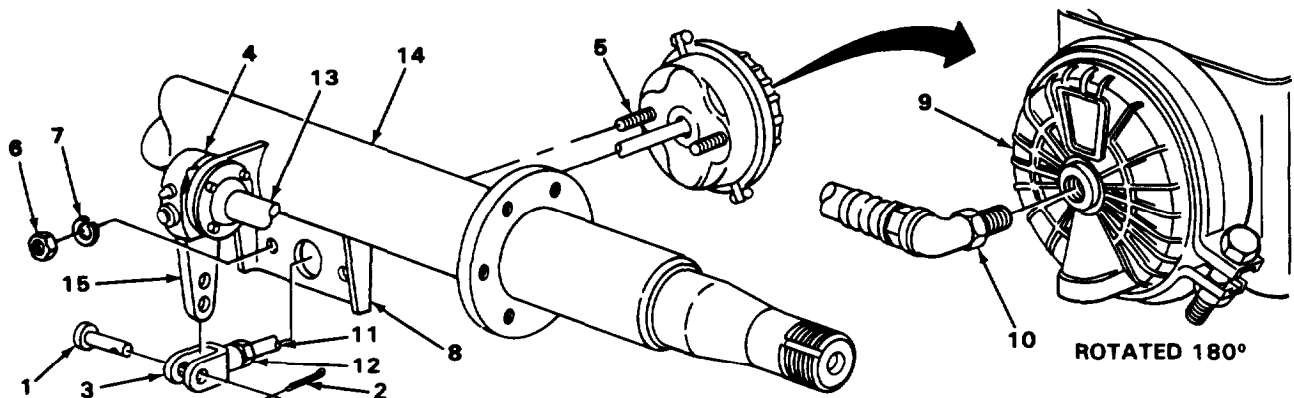
NOTE

There are six air chambers. This procedure is for one. Repeat this procedure for all of them.

1.	Clevis pin (1)	Cotter pin (2)	Using straight-nose pliers, take out.
2.	Clevis (3) and slack adjuster (4)	Clevis pin (1)	Take out.
3.	Two studs (5)	Two nuts (6) and two lockwashers (7)	Using 15/16-inch open-end wrench, unscrew and take off.
4.	Air chamber bracket (8)	Air chamber (9)	Pull out,
5.	Air chamber(9)	Fitting (10)	Using 1 1/16-inch open-end wrench, unscrew and take out.
6.	Push rod (11)	Clevis locknut (12)	Using 15/16-inch open-end wrench and pipe wrench, loosen one turn.
7.		Clevis (3) and clevis locknut (12)	Using pipe wrench, unscrew and take off. Note the number of turns for installation.

AIR CHAMBER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
8. Air chamber (9)	Fitting (10)	a. Wrap threads two turns clockwise teflon tape. b. Screw in, and tighten using 11/16-inch open-end wrench.	
9. Air chamber bracket (8)	Air chamber (9)	Put in place.	
10. Two studs (5)	Two nuts (6) and two lockwashers (7)	Screw on, and tighten using 15/16-inch open-end wrench.	
11. Push rod (11)	Clevis locknut (12)	Screw in, the number of turns noted in removal.	
12.	Clevis (3)	Screw on until seated to locknut.	
13. S-camshaft (13)	Slack adjuster (4)	Push toward axle (14), and line up bottom hole with clevis (15).	
14. Clevis (3)	Clevis pin (1)	Put in.	
15. Clevis pin (1)	Cotter pin (2)	Put in, and bend legs using straight-nose pliers.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Adjust brakes (page 4-66).
2. Check operation of brakes (page 2-17).

TASK ENDS HERE

RELAY VALVE

This task covers:

- a. Removal (page 4-94)
 - b. Installation (page 4-96)
-

INITIAL SETUP

Tools

- Caps, vise jaws
- Vise, machinist's
- Wrench, open-end, 9/16-inch
- Wrench, open-end, 5/8-inch
- Wrench, open-end, 11/16-inch
- Wrench, pipe, 12-inch (two required)

Personnel Required

One

Equipment Condition

Air reservoir drained (page 2-10).
Rear extension planks removed from stowage position (page 2-16).

Materials/Parts

- Tags, marker (item 15, appendix E)
 - Tape, teflon (item 16, appendix E)
-

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

REMOVAL

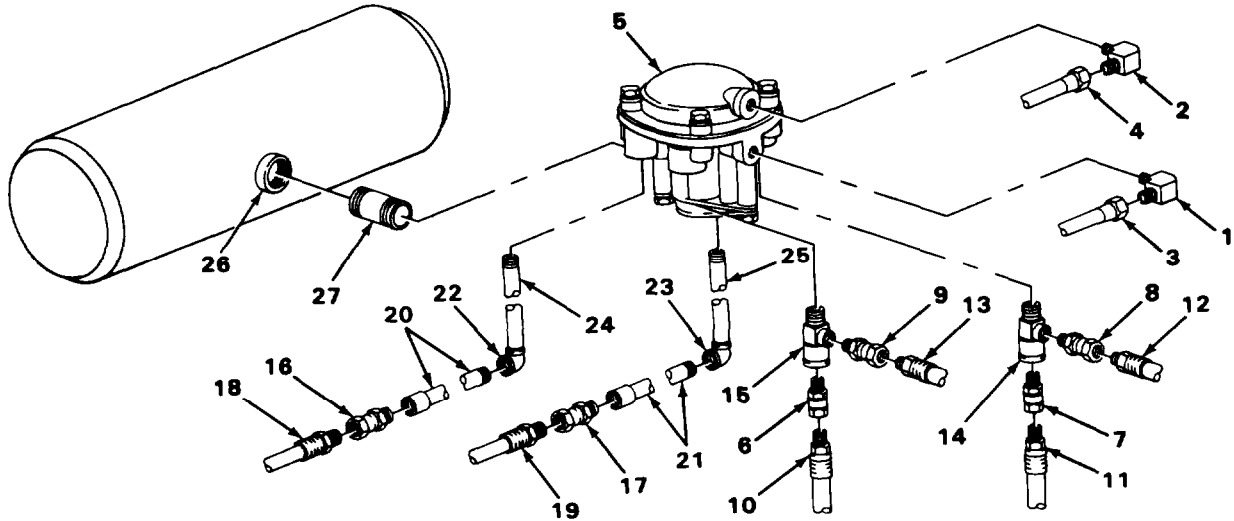
NOTE

Tag all hoses to aid in installation.

- | | | | |
|----|------------------------------------|---|---|
| 1. | Two elbows (1) and (2) | Two hose fittings (3) and (4) | Using 5/8-inch open-end wrench, unscrew and take off. |
| 2. | Relay valve (5) | Two elbows (1) and (2) | Using 5/8-inch open-end wrench, unscrew and take out. |
| 3. | Four unions (6), (7), (8), and (9) | Four hose fittings (10), (11), (12), and (13) | Using 9/16-inch and 11/16-inch open-end wrenches, unscrew and take off. |
| 4. | Two T-fittings (14) and (15) | Four unions (6), (7), (8), and (9) | Using 11/16-inch open-end wrench, unscrew and take out. |
| 5. | Relay valve (5) | Two T-fittings (14) and (15) | Using pipe wrench, unscrew and take out, |
| 6. | Two unions (16) and (17) | Two hose fittings (18) and (19) | Using 9/16-inch and 11/16-inch open-end wrenches, unscrew and take out. |

RELAY VALVE - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED				
7.	Two pipes (20) and (21)	Two unions (16) and (17)	Using 11/16 open-end wrench and pipe wrench, unscrew and take out.	
8.	Two elbows (22) and (23)	Two pipes (20) and (21)	Using two 12-inch pipe wrenches, unscrew and take out.	
9.	Relay valve (5)	Two pipes (24) and (25)	Using two 12-inch pipe wrenches, unscrew unscrew and take out.	
10.	Reservoir (26)	Nipple (27)	Using 12-inch pipe wrench, unscrew and take off.	
11.	Relay valve (5)	Nipple (27)	a. Place relay valve (5) in vise equipped with jaws caps. b. Using 12-inch pipe wrench, unscrew and take out nipple (27). c. Remove valve (5) from vise.	



RELAY VALVE-CONTINUED

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

NOTE

Wrap threads of all male fittings clockwise with two turns teflon tape before installation.

INSTALLATION

12.	New relay valve (1)	Nipple (2)	<ul style="list-style-type: none"> a. Place relay valve (1) in vise equipped with jaws caps. b. Screw in, and tighten nipple (2) using 12-inch pipe wrench. c. Remove relay valve (1) from vise.
13.	Reservoir (3)	Nipple (2)	Screw in, and tighten using 12-inch pipe wrench. Put relay valve (1) in vertical position.
14.	Relay valve (1)	Two pipes (4) and (5)	Screw in, and tighten using 12-inch pipe wrench.
15.	Two elbows (6) and (7)	Two pipes (8) and (9)	Screw in, and tighten using 12-inch pipe wrench.
16.	Two pipes (8) and (9)	Two unions (10) and (11)	Screw in, and tighten using 11/16-inch open-end wrench.
17.	Two unions (10) and (11)	Two hose fittings (12) and (13)	Screw in, and tighten using 9/16-inch and 11/16-inch open-end wrenches.
18.	Relay valve (1)	Two T-fittings (14) and (15)	Screw in, and tighten using 12-inch pipe wrench. Point horizontal openings toward front of semitrailer.
19.	Two T-fittings (14) and (15)	Four unions (16), (17), (18), and (19)	Screw in, and tighten using 9/16-inch and 11/16-inch open-end wrenches.
20.	Four unions (16), (17), (18), and (19)	Four hose fittings (20), (21), (22), and (23)	Screw in, and tighten using 9/16-inch and 11/16-inch open-end wrenches.

EMERGENCY RELAY VALVE - CONTINUED

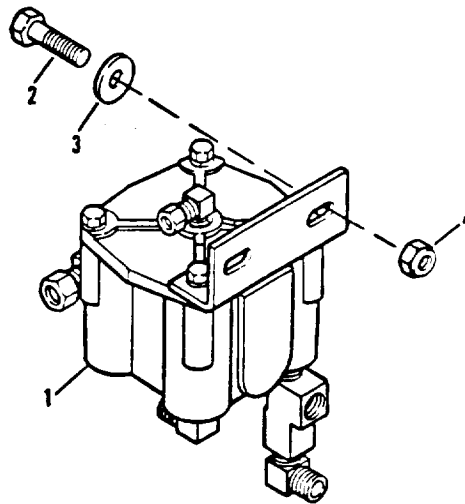
LOCATION	ITEM	ACTION	REMARKS
----------	------	--------	---------

INSTALLATION

NOTE

Wrap threaded ends of all brass fittings with two turns of teflon tape.

1. Frame bracket	Emergency relay valve (1)	Install	
2. Frame bracket	Emergency relay valve (1)	Secure with two screws (2), washers (3) and locknuts (4).	
3. Emergency relay valve (1)	Air lines	Connect	



NOTE

FOLLOW-ON MAINTENANCE

1. Close drain cocks.
2. Charge air system.
3. Check for leaks.
4. Check operation of brakes.

TASK ENDS HERE

NOTE - ALL DATA ON PAGES 4-90 THRU 4-97, INCLUDING FIGURES, DELETED.

AIR RESERVOIRS AND DRAIN COCKS

This task covers:

- a. Removal (page 4-98)
- b. Installation (page 4-99)

INITIAL SETUP

Tools

Tool Kit, Mechanics General
NSN 5180-00-177-7033

Personnel Required

One

Materials/Parts

Tape, antiseizing (teflon)

Equipment Condition

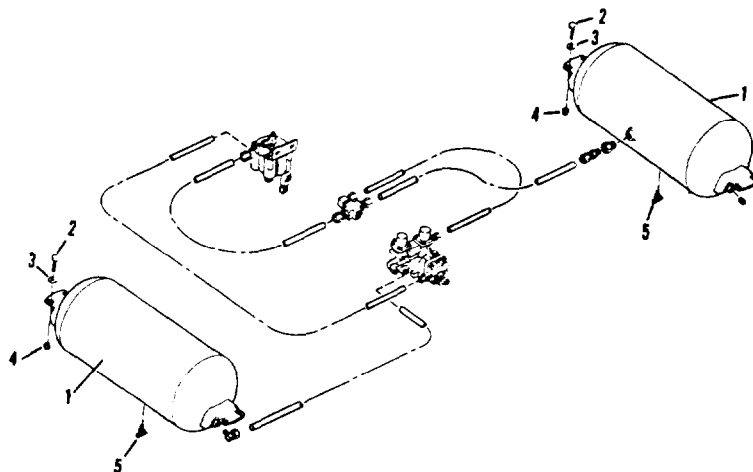
Air reservoir drained.
Extension planks removed from
stowed position.

(Item 16, Appendix E)

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

REMOVAL

- | | | |
|-----------------------------------|---|--------------------|
| 1. Air reservoir (1) | Air lines | Tag and disconnect |
| 2. Air reservoir mounting bracket | Four screws (2), washers (3) and locknuts (4) | Remove |
| 3. Air reservoir (1) | | Remove |
| 4. Air reservoir (1) | Drain cock (5) | Unscrew and remove |



AIR RESERVOIRS AND DRAIN COCKS - CONTINUED

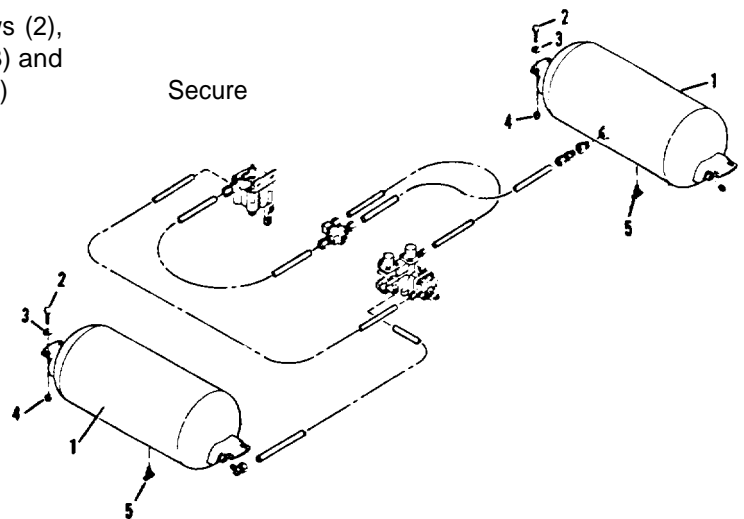
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Wrap threaded ends of all brass fittings with two turns of teflon tape.

1. Air reservoir	Drain	Install	Wrap threads of drain cock (5) with two turns of teflon tape.
2. Frame	Air reservoir (1)	Install	
3. Air reservoir (1)	Four screws (2), washers (3) and locknuts (4)	Secure	



NOTE

FOLLOW-ON MAINTENANCE

1. Connect air lines.
2. Close drain cocks.
3. Charge air system.
4. Check for leaks.
5. Check operation of brakes.
6. Stow extension planks.

TASK ENDS HERE

HUB AND DRUM

This task covers:

- a. Removal (page 4-100)
 - b. Cleaning/Inspection (page 4-103)
 - c. Installation (page 4-104)
-

INITIAL SETUP

Tools

- Block, wood
- Chisel, cold, hand
- Extension, 1/2-inch drive
- Extension, 3/4-inch drive
- Goggles, protective
- Hammer, hand, ball-peen, 3-lb
- Handle, ratchet, 1/2-inch drive
- Handle, ratchet, 3/4-inch drive
- Key, hex, 3/4-inch drive, 5/16-inch
- Pail, 1-gallon capacity
- Puller, bearing/seal
- Remover/replacer, bearing
- Screwdriver, cross-tip, number two
- Screwdriver, flat-tip, 3/8-inch
- Socket, 1/2-inch drive, 1/2-inch
- Socket, 3/4-inch drive, 1 1/8-inch
- Socket, spindle nut, 3/4-inch drive, 3/4-inch

Tools – Continued

- Socket, spindle nut, 3/4-inch drive 3 7/8-inch
- Wrench, torque, 3/4-inch

Materials/Parts

- Rags, wiping (item 12, appendix E)
- Solvent, drycleaning, PD-680 (item 14,) appendix E)

Personnel Required

One

Equipment Condition

Tire and wheel assembly removed (page 3-9).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

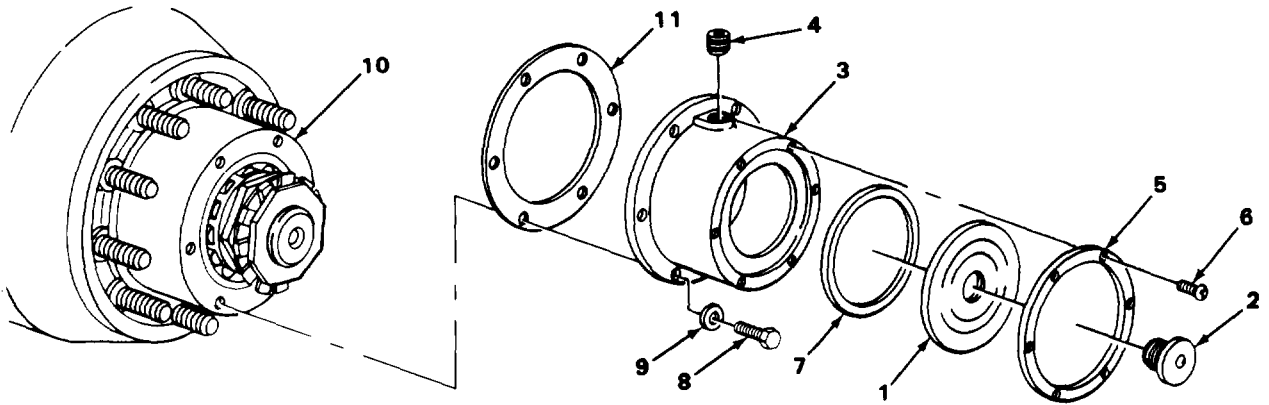
1.	Access cover (1)	Vent plug (2)	Using 3/8-inch flat-tip screwdriver, pry out.
2.	Oil seal assembly (3)	Drainplug (4)	a. Using 5/16-inch hex key, take out. b. Turn drum and hub, and allow oil to drain into pail. c. Get rid of drained oil.
3.	Retainer ring (5)	Six screws (6)	Using number two cross-tip screwdriver, unscrew and take out.
4.	Oil seal assembly (3)	Retainer ring (5), access cover (1) and gasket (7)	Take out.

HUB AND DRUM - CONTINUED

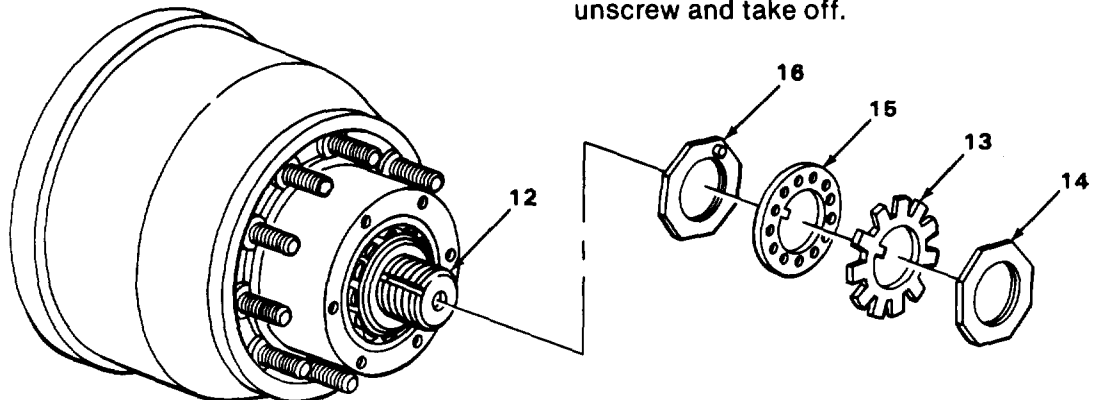
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|----|--|--|------------------------------|
| 5. | Six screws (8) and six lockwashers (9) | Using 1/2-inch socket, extension and ratchet handle with 1/2-inch drive, unscrew and take out. | |
| 6. | Hub (10) | Oil seal assembly (3) and gasket (11) | Take off.
Discard gasket. |



- | | | | |
|-----|---------|------------------------|---|
| 7. | Spindle | Lockwasher (13) | Using hammer and chisel, bend back ears. |
| 8. | | Outer spindle nut (14) | Using 3/4-inch spindle nut socket and ratchet handle with 3/4-inch drive, unscrew and take off. |
| 9. | | Lockwasher (13) | Slide off. |
| 10. | | Lockring (15) | Slide off. |
| 11. | | Inner spindle nut (16) | Using 3 7/8-inch spindle nut socket and ratchet handle with 3/4-inch drive, unscrew and take off. |

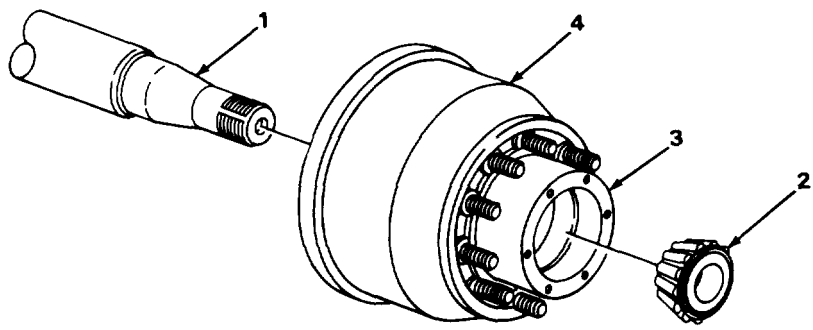


HUB AND DRUM - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|-----|-------------|------------------------|--|
| 12. | Spindle (1) | Outer bearing cone (2) | a. Pull hub (3) and drum (4) assembly forward slightly, and push back to expose bearing cone (2).
b. Take off bearing cone (2). |
| 13. | | Hub (3) and drum (4) | Take off. |



- | | | | |
|-----|---------------|-------------------------------|---|
| 14. | Ten studs (5) | Ten nuts (6) | Using 1 1/8-inch socket, extension, and ratchet handle with 3/4-inch drive, unscrew and take off. |
| 15. | Drum (4) | Hub(3) | Take apart. |
| 16. | Hub (3) | inner seal (7) | Using bearing/seal puller, take out. |
| 17. | | inner bearing cone (8) | Take out. |
| 18. | | Two bearing cups (9) and (10) | Using bearing/seal puller and ball-peen hammer, take out. |

CLEANING/INSPECTION

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). injury to personnel could occur.

- | | | | |
|-----|-----------------|--|--|
| 19. | All metal parts | | Clean thoroughly using drycleaning solvent and rags. |
|-----|-----------------|--|--|

HUB AND DRUM - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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CLEANING/inspection – CONTINUED

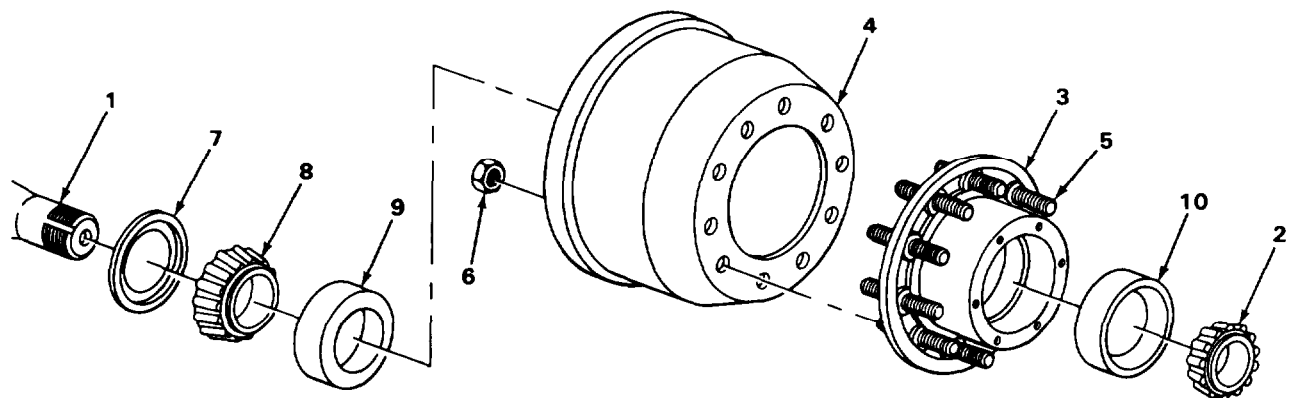
WARNING

Particles blown by compressed air are hazardous. Failure to wear protective goggles when drying metal parts could cause seroius eye injury.

CAUTION

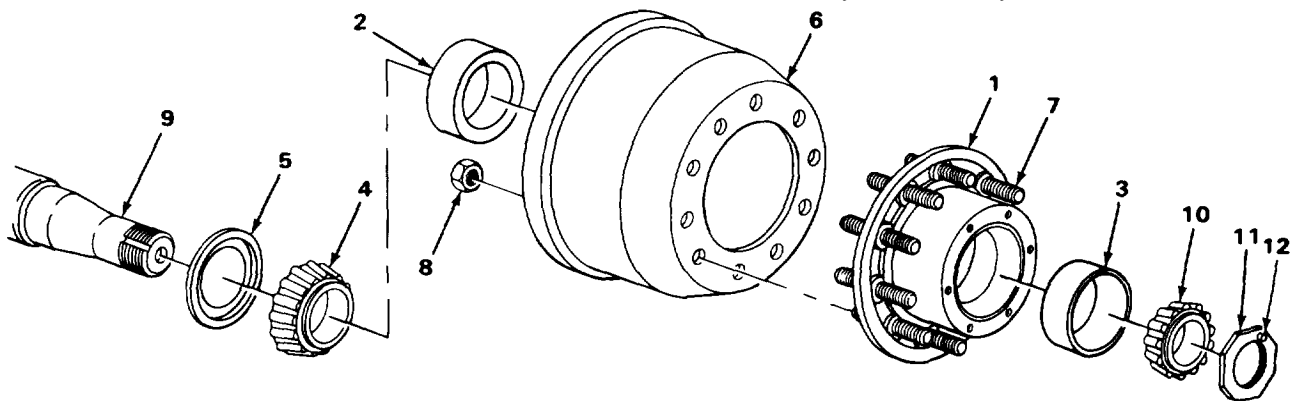
Do not dry bearings with high-pressure compressed air. Spinning dry will cause damage to bearings.

- | | | |
|-----|--------------------------------|--|
| 20. | All metal parts | Dry with low pressure compressed air. |
| 21. | Two bearing cones (2) and (8) | a. Check for cracks and breaks in bearing cage, etching, and pitting on rollers and evidence of wear.
b. If damaged or worn, replace cones. |
| 22. | Two bearing cups (9) and (10) | Inspect for pits, grooves, and flaking. If pitted, grooved, or flaked, notify Direct Support Maintenance. |
| 23. | Ten studs (5) and ten nuts (6) | Inspect for damaged threads or breaks. If damaged or broken, replace (page 5-30). |
| 24. | Drum (4) | Inspect for pitting or scoring. If pitted or scored, notify Direct Support Maintenance. |
| 25. | Spindle (1) | Inspect surfaces for pitting and grooves. If pitted or grooved, notify Direct support Maintenance. |



HUB AND DRUM - CONTINUED

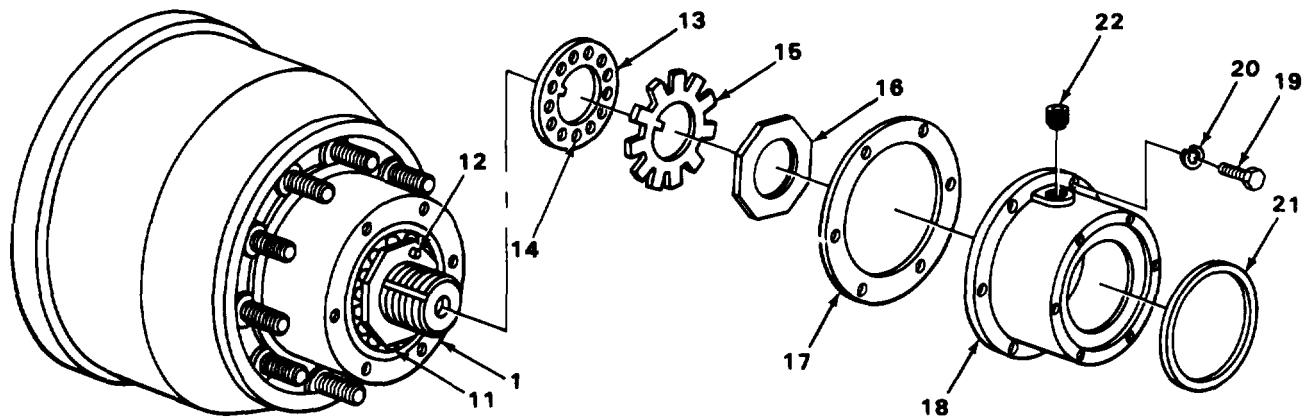
	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
26.	Hub (1)	Two bearing cups (2) and (3)	Put in, and seat using bearing replacer and hammer.
27.		Inner bearing cone (4)	Put in cup (2).
28.		Inner seal (5)	a. Put in place, and hand press. b. Place wood block over seal (5), and tap evenly with hammer until seated.
29.	Drum (6)	Hub (1)	Put in place. Do not damage threads when going through holes.
30.	Ten studs (7)	Ten nuts (8)	Screw on, and tighten using 1 1/8-inch socket, extension with 3/4-inch drive, and ratchet handle with 3/8-inch drive.
31.	Spindle (9)	Drum (6) and hub (1) assembly	Put on.
32.		Outer bearing cone (10)	Put on, and slide into cup (3).
33.		Inner spindle nut (11)	a. Screw on, and tighten to 50 ft-lb (67.8 N•m) of torque using 3/4-inch drive torque wrench and 3 7/8-inch spindle nut socket. Be sure pin (12) on spindle nut (11) faces outward. b. Back off until hub (1) and drum (6) assembly turns freely.



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HUB AND DRUM -CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED		
34.	Lockring (13)	Put on and turn inner spindle nut (11) until pin (12) goes into nearest hole (14).
35.	Lockwasher(15)	Put on.
36.	Outer spindle nut (16)	Screw on, and tighten using 3 1/4-inch spindle nut socket and ratchet handle with 3/4-inch drive.
37.	Lockwasher(15)	Bend two ears over on flat surface of outer spindle nut (16) using ball-peen hammer and chisel.
38.	Hub (1)	Put on, and line up holes.
39.	New gasket (17)	Put on, and line up holes.
40.	Hub (1) and oil seal assembly (18)	Screw in, and tighten using 1/2-inch socket, extension with 1/2-inch drive, and ratchet handle with 1/2-inch drive.
41.	Gasket (21)	Put in place. Spread light film of oil on gasket to give good seal.
42.	Drainplug (22)	Screw in, and tighten using 5/16-inch hex key.

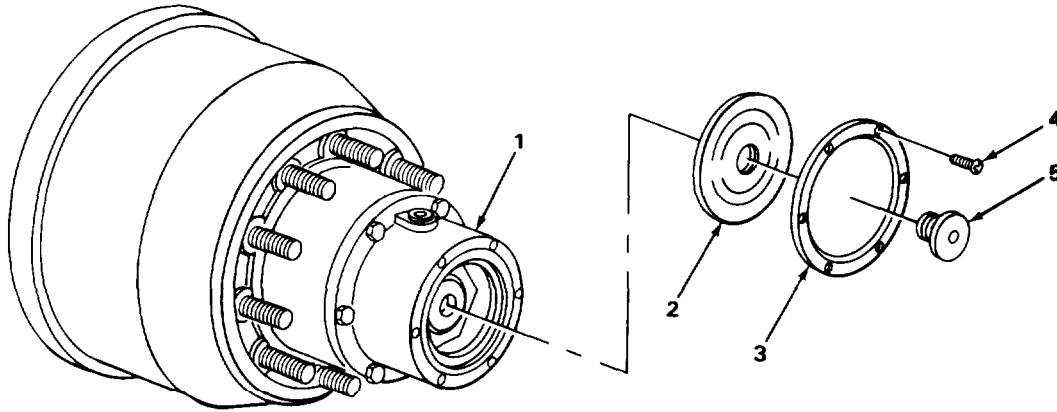


HUB AND DRUM - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

43.	Oil seal assembly (1)	Access cover (2)	Press in place.
44.	Access cover (2)	Retainer ring (3)	Put in place, and line up holes.
45.	Retainer ring (3)	Six screws (4)	Screw in, and tighten using number two cross-tip screwdriver.
46.	Access cover (2)	Vent plug (5)	Press into place.



NOTE

FOLLOW-ON MAINTENANCE:

1. Lubricate (page 4-5).
2. Replace tire and wheel assembly (page 3-9).
3. Adjust brakes (page 4-65).

TASK ENDS HERE

WHEEL, TIRE, AND TUBE REPAIR

NOTE

For wheel, tire, and tube repair procedures, see TM 9-2610-200-24.

TASK ENDS HERE

Section X. FRAME AND TOWING ATTACHMENTS MAINTENANCE

	Page		Page
Hook Fastener	4-108	Outriggers	4-107
Kingpin	4-111	Planks	4-112
Locking Pins (Gooseneck)	4-110		

TA225421

OUTRIGGERS

This task covers:

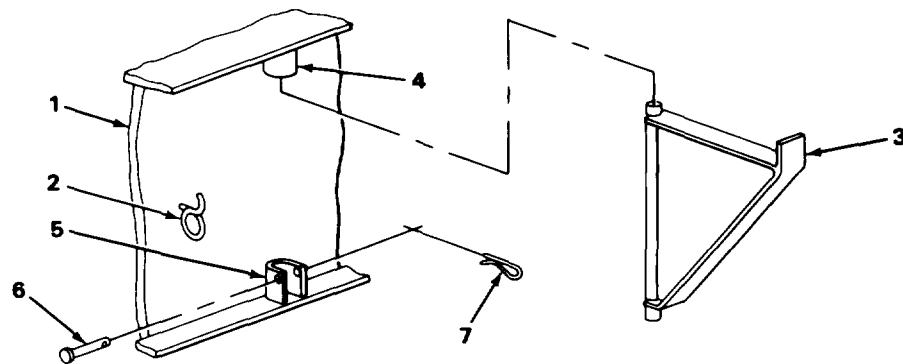
- a. Removal (page 4-107)
- b. Installation (page 4-107)

INITIAL SETUP

Personnel Required

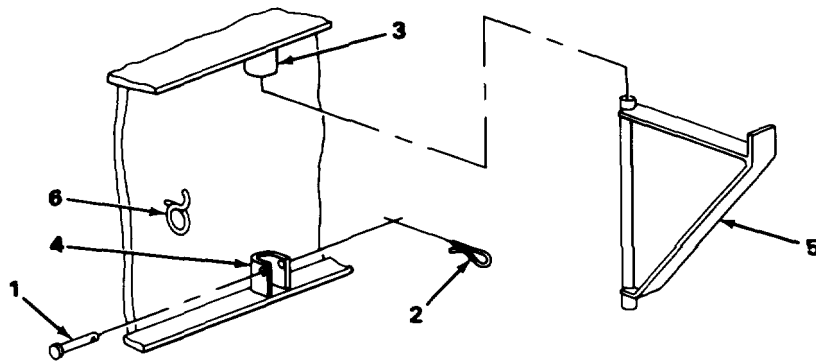
One

	LOCATION	ITEM	ACTION REMARKS
REMOVAL			
1.	Frame (1)	Hook fastener (2)	Pull out, and rotate to release out-rigger (3).
2.	Upper yoke (4) and lower yoke (5)	Outrigger (3)	Swing out.
3.	Retaining pin (6)	Hairpin (7)	Pull out.
4.	Lower yoke (5)	Retaining pin (6) and outrigger (3)	a. Pull out pin (6). b. Pull outrigger (3) bottom out, and lower to clear upper yoke (4).
INSTALLATION			
5.	Upper yoke (4)	Outrigger (3)	Put in, and lift as far as possible.
6.	Lower yoke (5)	Outrigger (3) and retaining pin (6)	a. Put outrigger (3) in, and push to rear of lower yoke (5). b. Put retaining pin (6) in.



OUTRIGGERS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
7.	Retaining pin (1)	Hairpin (2)	Put in.
8.	Upper yoke (3) and lower yoke (4)	Outrigger (5)	Swing in as far as possible.
9.		Hook fastener (6)	Pull out, rotate over edge of outrigger (5), and release.



TASK ENDS HERE

HOOK FASTENER

This task covers:

- a. Removal (page 4-109)
- b. Installation (page 4-109)

INITIAL SETUP

Tools

- Blocks, chock
- Cutter, bolt
- Torch, acetylene
- Wrench, pliers, straight-jaw
(two required)

Personnel Required

Two

HOOK FASTENER - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

WARNING

Be sure wheels are chocked before starting procedure. Failure to do so could result in injury to personnel.

NOTE

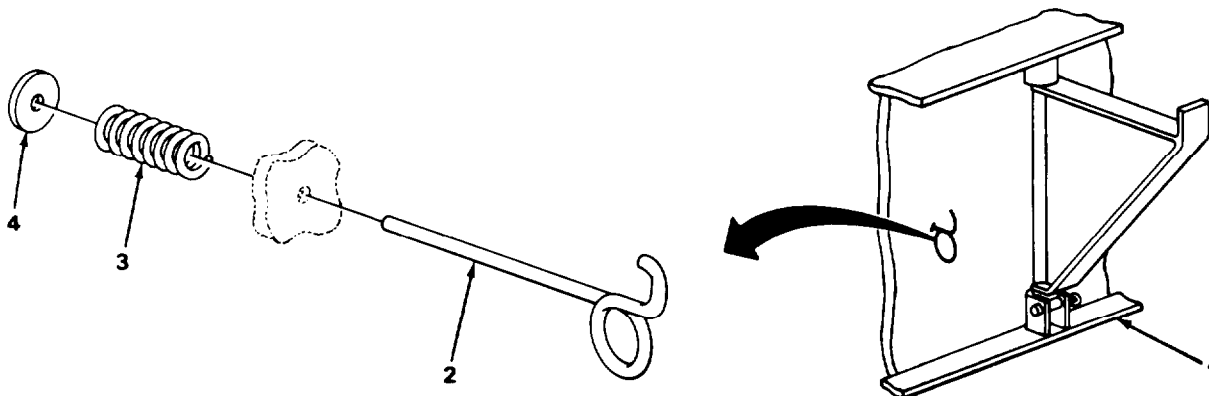
There are 25 hook fasteners on the semitrailer. This procedure is for one. Repeat this procedure for all of them.

For welding procedure, refer to TM 9-237.

- | | | | |
|----|-----------|-------------------|------------------------------|
| 1. | Frame (1) | Hook fastener (2) | Using bolt cutters, cut off. |
|----|-----------|-------------------|------------------------------|

INSTALLATION

- | | | | |
|----|-------------------|---|--|
| 2. | Frame (1) | Hook fastener (2) | Have assistant push through outside of frame (1) as far as possible, and hold in position using wrench pliers. |
| 3. | Hook fastener (2) | Fastener spring (3) and fastener washer (4) | Put on, and push against inside of frame (1) as far as possible without squeezing fastener spring (3). |
| 4. | | Fastener washer (4) | a. Hold using wrench pliers.
b. Weld washer(4) to hook fastener (2) using acetylene equipment. |



TASK ENDS HERE

LOCKING PINS (GOOSENECK)

This task covers:

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

INITIAL SETUP

Tools

Cutter, bolt
 Torch, acetylene
 Wrench, pliers, straight-jaw

Equipment Condition

Semitrailer coupled to unloaded truck tractor (page 2-14).

Personnel Required

Two

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

NOTE

There are two locking pins. This procedure is for one. Use the same procedure for the other locking pin.

REMOVAL

1.	Locking pin (1)	Chain (2)	Using bolt cutter, cut at link closest to locking pin (1).
2.		Safety bolt (3) and nut (4)	Unscrew, and take out.
3.	Safety pin (5)	Safety clip (6)	Take out.
4.	Locking pin (1)	Safety pin (5)	Take out.
5.	Gooseneck (7)	Locking pin (1)	Take out.

INSTALLATION

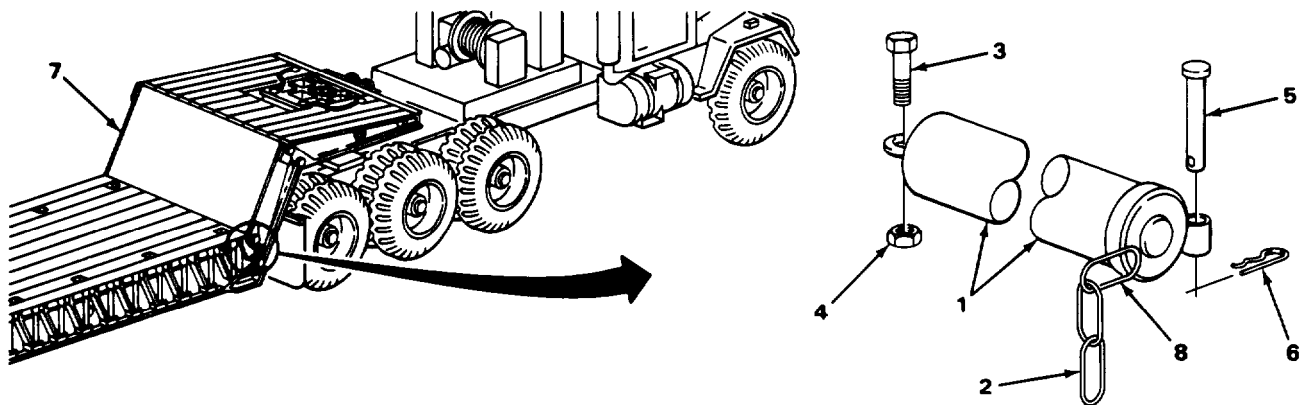
6.		Locking pin (1)	Put in.
7.	Locking pin (1)	Safety pin (5)	Put in.
8.	Safety pin (5)	Safety pin (6)	Put in.

LOCKING PINS (GOOSENECK) - CONTINUED

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

INSTALLATION - CONTINUED

- | | | | |
|-----|-----------------|-----------------------------|--|
| 9. | Locking pin (1) | Safety bolt (3) and nut (4) | Screw in, and hand tighten. |
| 10. | Chain (2) | | While assistant holds in place using wrench pliers, weld last link (8) to locking pin (1) using acetylene torch. |



TASK ENDS HERE

KINGPIN

This task covers:

- a. Removal (page 4-112)
- b. Installation (page 4-112)

INITIAL SETUP

Tools

Hammer, hand, plastic face

Personnel Required

One

Equipment Condition

Gooseneck up (page 2-15).

KINGPIN - CONTINUED

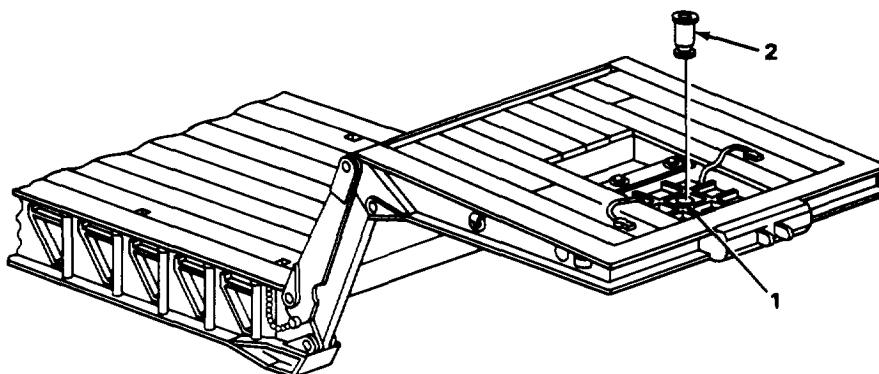
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

- | | | | |
|----|---------------|-------------|--|
| 1. | Gooseneck (1) | Kingpin (2) | Using hammer, drive kingpin (2) up until loose and lift out. |
|----|---------------|-------------|--|

INSTALLATION

- | | | | |
|----|---------------|-------------|--|
| 2. | Gooseneck (1) | Kingpin (2) | Put in place, making sure kingpin (2) is full seated.
It may be necessary to seat kingpin using hammer. |
|----|---------------|-------------|--|



TASK ENDS HERE

PLANKS

This task covers:

- a. Removal (page 4-113)
- b. Installation (page 4-114)

INITIAL SETUP

Tools

- Blocks, chock
- Drift pin
- Drill, electric, 3/8-inch
- Drill bit, 3/8-inch
- Drill bit, 7/8-inch
- Hammer, hand, ball-peen, 3-lb
- Handle, ratchet, 1/2-inch drive
- Socket, 1/2-inch drive, 9/16-inch

Personnel Required

Two

Equipment Condition

- Wheels chocked (page 2-21).
- Gooseneck up (page 2-15).

PLANKS - CONTINUED

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

REMOVAL

NOTE

There are many planks in the deck. This procedure is for one of them. Repeat this procedure for all of them.

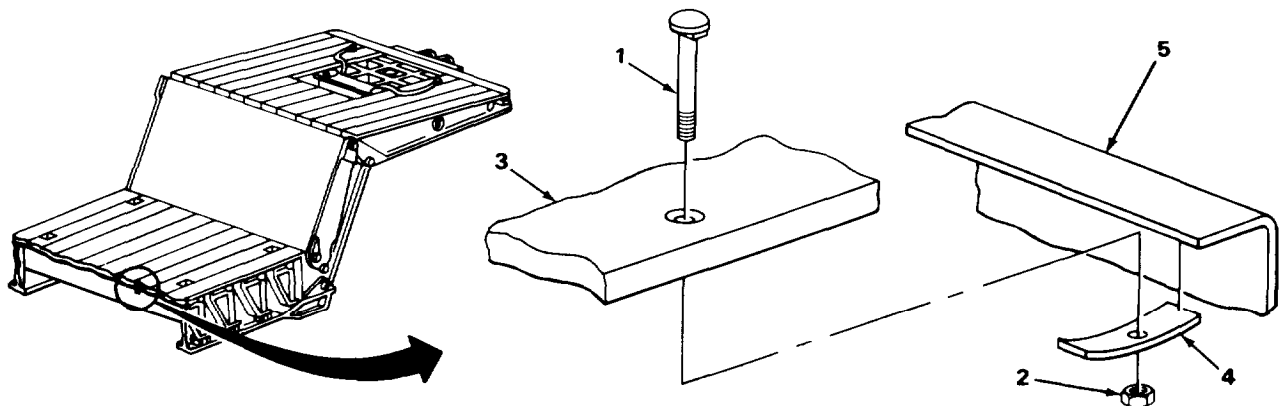
Before starting procedure, measure planks to be replaced and cut new planks to required dimensions.

- | | | | |
|----|-------------------------------|----------|--|
| 1. | Bolt (1) | Nut (2) | Using 9/16-inch socket and ratchet handle with 1/2-inch drive, unscrew and take off. |
| 2. | Old plank (3)
and clip (4) | Bolt (1) | a. Using ball-peen hammer and drift pin, drive out.
b. Check bolt (1) and nut (2) for damage or rust.
c. If damaged or rusty, replace as required.
Repeat steps one and two for other nuts and bolts in planks. |

NOTE

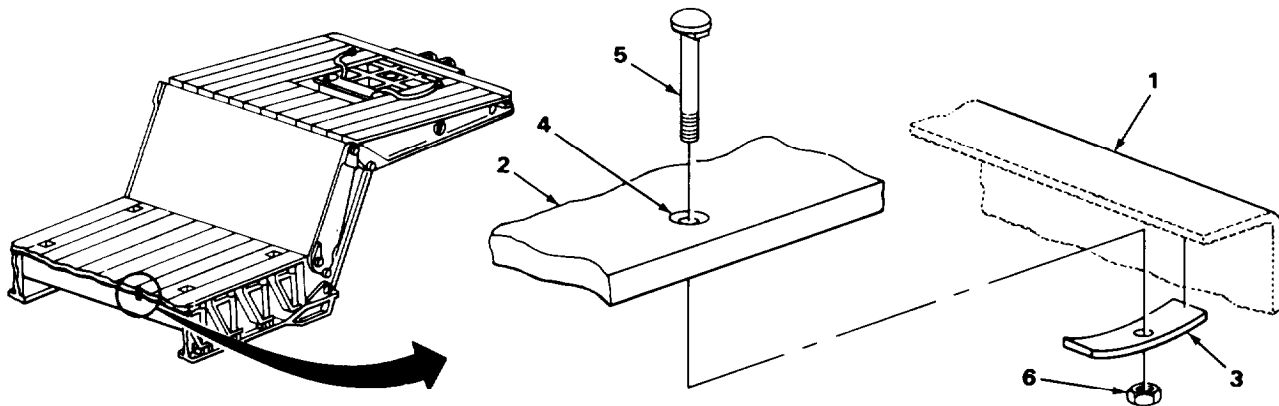
Clips (4) are tack-welded to the semitrailer frame. If one is damaged or loose, notify Direct Support Maintenance.

- | | | | |
|----|----------|---------------|-----------|
| 3. | Deck (5) | Old plank (3) | Take out. |
|----|----------|---------------|-----------|



PLANKS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
4.	Deck (1)	New plank (2)	Put in, and check for proper fit.
5.		New plank (2)	a. Have assistant hold in place from topside. b. Using electric drill and 3/8-inch drill bit, drill new holes from underside using clips (3) as guide for proper alignment. Be sure holes are drilled vertically.
6.		New plank (2)	Using electric drill and 7/8-inch drill bit, countersink holes (4) 1/2-inch deep over new boltholes on top side of plank.
7.	New plank (2) and clip (3)	Bolt (5)	Using hammer, drive in as far as possible from topside. Repeat for rest of holes.
8.	Bolt (5)	Nut (6)	Screw on, and tighten until bolt is fully seated, using 9/16-inch socket and ratchet handle. Repeat for rest of nuts.



TASK ENDS HERE

Section XI. ACCESSORY ITEMS MAINTENANCE

	Page		Page
Mud Flaps	4-118	Vehicle Data Plates	4-116
Reflectors	4-115		

REFLECTORS

This task covers:

- a. Removal (page 4-115)
- b. Installation (page 4-116)

INITIAL SETUP

Tools

Screwdriver, flat-tip, 1/4-inch
Wrench, open-end, 3/8-inch

Personnel Required

Two

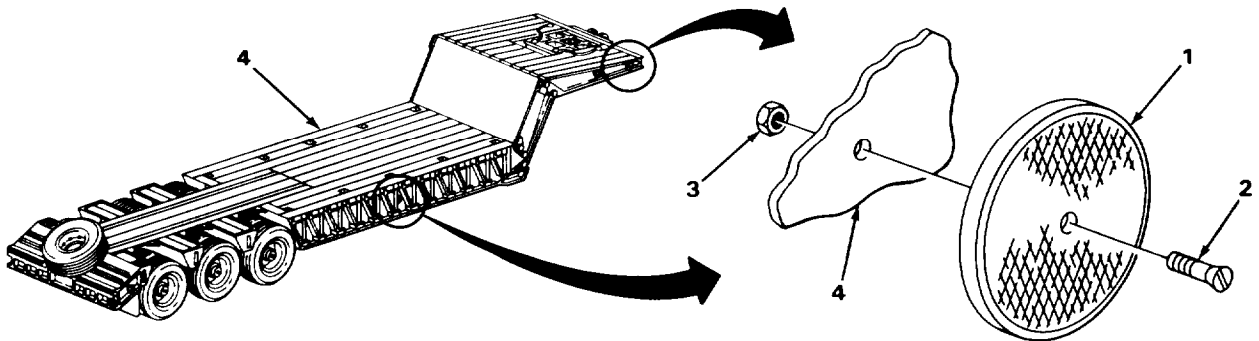
Equipment Condition

Turn signal removed (page 4-25) (rear corner reflectors only).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

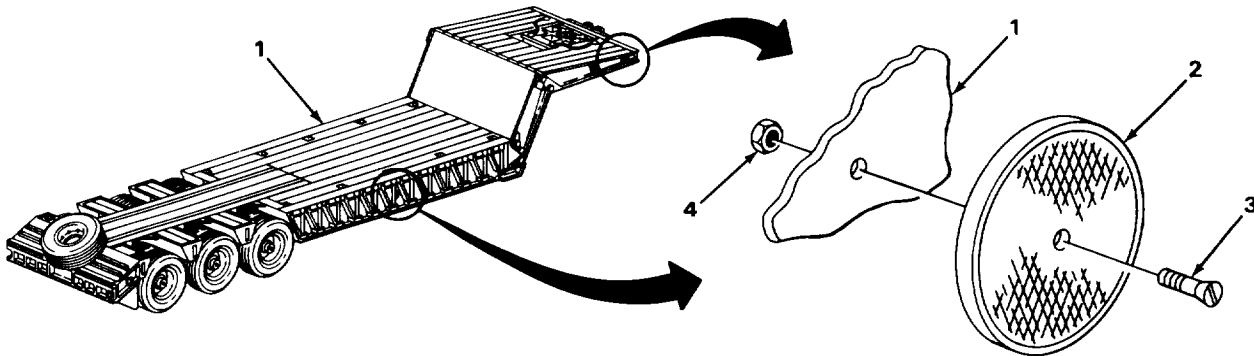
- | | | | |
|----|-----------------|-----------------------|--|
| 1. | Reflector (1) | Screw (2) and nut (3) | Using 1/4-inch flat-tip screwdriver and 3/8-inch open-end wrench, unscrew and take out.
It may be necessary for assistant to hold wrench. |
| 2. | Semitrailer (4) | Reflector(1) | Take off (corner reflectors only). |



TA225429

REFLECTORS-CONTINUED

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
3.	Semitrailer (1)	Reflector (2)	Put in place, and line up holes.
4.	Reflector (2)	Screw (3) and nut (4)	Screw in, and tighten using 1/4-inch flat-tip screwdriver and 3/8-inch open-end wrench.



NOTE

FOLLOW-ON MAINTENANCE: Replace turn signal (page 4-26) (rear corner reflectors only).

TASK ENDS HERE

VEHICLE DATA PLATES

This task covers:

- a. Removal (page 4-117)
- b. Installation (page 4-118)

INITIAL SETUP

Tools

- Chisel, cold, hand
- Hammer, hand, ball-peen, 3-lb
- Knife, putty
- Drill, electric, hand, 3/8-inch
- Drill bit, 1/8-inch

Materials/Parts

- Rags, wiping (item 12, appendix E)
- Solvent, drycleaning, PD-680 (item 14, appendix E)

Personnel Required

One

VEHICLE DATE PLATES – CONTINUED

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

REMOVAL

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

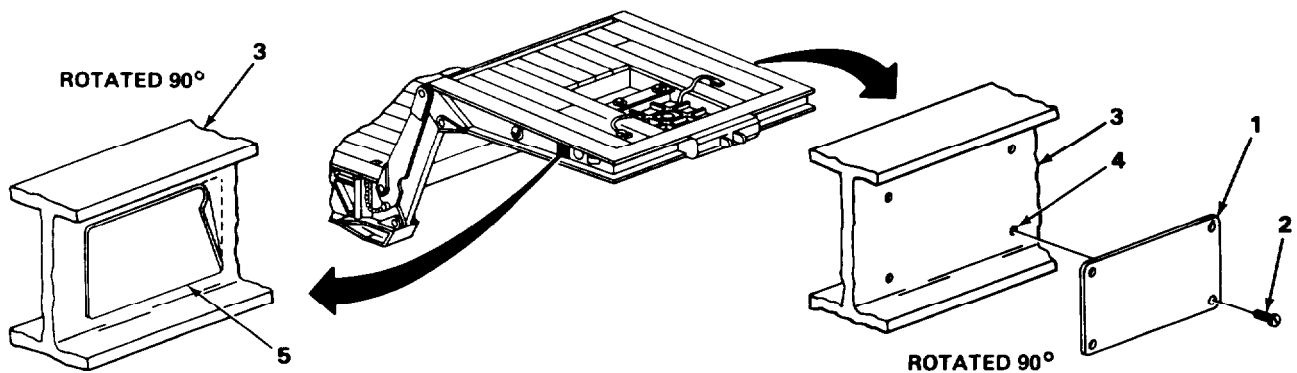
NOTE

There are two methods of vehicle data plate attachment. If removing an adhesive attached plate, go to step 4.

- | | | | |
|----|------------------------|----------------------------|--|
| 1. | Vehicle data plate (1) | Four drive screws (2) | Using ball-peen hammer and chisel, take off heads. |
| 2. | Frame (3) | Data plate (1) | Take off. |
| 3. | | Four drive screw holes (4) | Using 3/8-inch electric drill and 1/8-inch drill bit, drill out. |
| 4. | Frame (3) | Data plate (5) | a. Using putty knife, scrape off.
b. Using drycleaning solvent and clean rags, clean and dry area thoroughly. |

INSTALLATION

- | | | | |
|----|------------------------|--------------------|--|
| 5. | Vehicle data plate (5) | Protective backing | Peel off, and apply to frame (3) at location of old vehicle data plate (5).
If replacing adhesive attached plate, task ends here. |
| 6. | Frame (3) | Data plate (1) | Place in position, and using ball-peen hammer, secure with four drive screws (2). |



TASK ENDS HERE

MUD FLAPS

This task covers:

- a. Removal (page 4.118)
- b. Installation (page 4-118)

INITIAL SETUP

Tools

Wrench, open-end, 9/16-inch
(two required)

Personnel Required

One

LOCATION	ITEM	ACTION	REMARKS
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NOTE

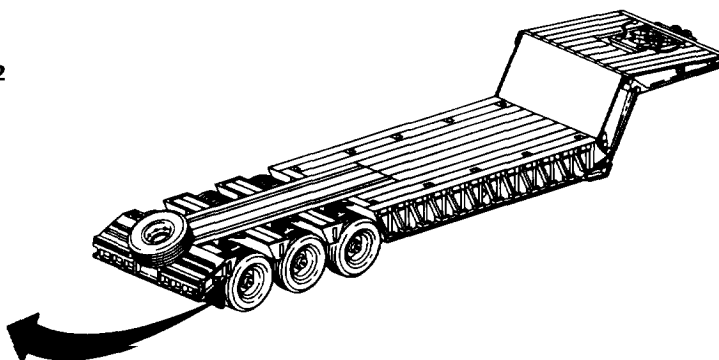
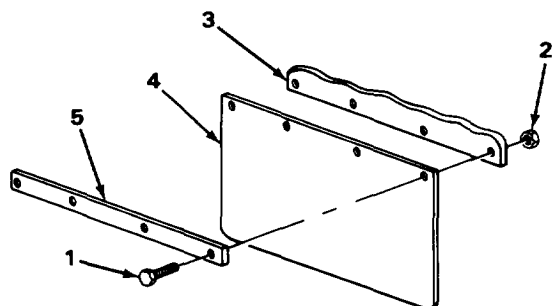
For information on new mud flaps, go to appendix G.

REMOVAL

- | | | | |
|----|----------------------|----------------------------------|--|
| 1. | Four screws (1) | Four nuts (2) | Using two 9/16-inch open-end wrenches, unscrew and take out. |
| 2. | Mounting bracket (3) | Mud flap (4) and support bar (5) | Take off. |

INSTALLATION

- | | | | |
|----|-----------------------------------|----------------------------------|---|
| 3. | Mounting bracket (3) | Mud flap (4) and support bar (5) | Put in place, and line up four holes. |
| 4. | Four screws (1) and four nuts (2) | | Put in, and tighten using two 9/16-inch wrenches.
Repeat steps 1 thru 4 for other side of semitrailer. |



TASK ENDS HERE

Section XII. PREPARATION FOR STORAGE OR SHIPMENT

	Page		Page
Army Shipping Documents	4-119	Removal of Preservatives	
Limited Storage Instructions	4-119	Before Shipment	4-119

PREPARATION FOR SHIPMENT

When shipping the 40-ton, 2-wheel Chassis Trailer M870, the officer in charge of preparing the shipment will be responsible for furnishing the trailer, including on-vehicle materiel (OVM), to the carrier in a serviceable condition, properly cleaned, preserved, painted, and lubricated as prescribed in SB 9-4.

REMOVAL OF PRESERVATIVES BEFORE SHIPMENT

The removal of preservatives is the responsibility of organizations receiving shipments. Personnel withdrawing trailers from storage for domestic shipment must not remove preservatives other than to insure that material is complete and serviceable. If it has been determined that preservatives have been removed, they must be restored to the prescribed level prior to shipment.

ARMY SHIPPING DOCUMENTS

Prepare all Army shipping documents accompanying the trailer in accordance with DA PAM 738-750.

LIMITED STORAGE INSTRUCTIONS

GENERAL

Trailers received for storage and already processed for domestic shipment must not be reprocessed unless inspection performed on receipt of trailers reveals corrosion, deterioration, etc. Completely process trailers upon receipt directly from manufacturing facilities or if the processing data recorded on the tag indicates that preservatives have been rendered ineffective by operation or freight shipment damage. Trailers to be prepared for limited storage must be given a limited technical inspection and processed as prescribed in SB 9-4.

LIMITED STORAGE INSTRUCTIONS – CONTINUED

RECEIVING INSTRUCTIONS

Report of trailers received for storage in a damaged condition or improperly prepared for shipment will be made on DD Form 6. (Report of Damaged or Improper Shipment), in accordance with DA PAM 310-1. When trailers are inactivated, they will be processed in accordance with SB 9-4.

Immediately upon receipt of trailers for storage, they must be inspected and serviced. Perform a systematic inspection and replace or repair all missing or broken parts. If repairs are beyond the scope of the unit and the trailers will be inactivated for an appreciable length of time, place them in limited storage and attach tags specifying the repairs needed. The reports of these conditions will be submitted by the unit commander for action by any ordnance maintenance unit.

INSPECTION DURING STORAGE

Perform a visual inspection periodically to determine general condition. If corrosion is found on any part, remove it, and clean, paint, or treat part with prescribed preservatives.

REMOVAL FROM STORAGE

If the trailers are not shipped or issued upon expiration of the limited storage period, proceed as applicable in accordance with SB 9-4. If the trailers are not shipped or issued upon expiration of the limited storage period, they need not be reprocessed upon removal from storage unless inspection reveals it to be necessary according to anticipated in-transit weather conditions. Deprocess the trailers in accordance with SB 9-4 when it has been ascertained that they are to be placed in immediate service. Repair or replace all items tagged for such service.

STORAGE SITE

Whenever possible, the preferred type of storage is under cover in open sheds or warehouses. When it is necessary to store the trailers outdoors, select the storage site and protect the trailers against the elements as prescribed in DA PAM 310-1.

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

OVERVIEW

This chapter contains all of the maintenance authorized to be performed by direct support and general support maintenance. Included is information covering repair parts, special tools, test, measurement and diagnostic equipment (TMDE), and support equipment, cleaning instructions, inspection instructions, and repair instructions.

		Page
Section I.	Repair Parts, Special Tools; Test, Measurement and Diagnostic Equipment (TMDE); and Support Equipment	5-1
Section II	Axle Maintenance	5-2
Section III.	Brake Maintenance	5-22
Section IV.	Wheels, Hubs, and Drums Maintenance	5-26
Section V.	Frame and Towing Attachments Maintenance	5-31
Section VI.	Springs and Shocks Maintenance	5-41

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		
Repair Parts	5-1	Support Equipment		5-1

COMMON TOOLS AND EQUIPMENT

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) 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 for the semitrailer are listed in appendix F of this manual. Refer to appendix G, Illustrated List of Manufactured Items, for a description of fabricated parts.



Section II. AXLE MAINTENANCE

	Page		Page
Axle (Front and Rear)	5-9	Equalizing Beam	5-13
Axle (Middle)	5-2	Trunnion Tube and Clamp	5-18

AXLE (MIDDLE)

This task covers:

- a. Removal (page 5-2)
 - b. Installation (page 5-6)
-

INITIAL SETUP

Tools	Personnel Required
Jack, dolly, 10-ton	Three
Jack, hydraulic, hand, 10-ton	
Trestle, motor vehicle, 10-ton (six required)	Equipment Condition
Screwdriver, cross-tip, number 2	Both radius rods removed (page 5-44).
Wrench, lug	
Wrench, open-end, 1 1/2-inch	
Wrench, open-end, 1 1/8-inch (two required)	

LOCATION	ITEM	ACTION REMARKS
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REMOVAL

NOTE

This procedure is for removing and installing the middle axle only. To remove and install front or rear axles, go to page 5-9.

- | | | | |
|----|-----------------------------|----------------------------------|---|
| 1. | Tire and wheel assembly (1) | Lug nuts (2) | Using lug wrench, loosen but do not remove.
Repeat for other tire and wheel assembly. |
| 2. | | Two semitrailer rear corners (3) | a. Using hydraulic jack, raise 32-inches.
b. Place trestles underneath. |
| 3. | Equalizing beam (4) | Trestles | a. Using hydraulic jack, lift spring end of equalizing beam (4) about 3-inches.
b. Put trestles under equalizing beam (4) just behind spring slot (5). |

AXLE (MIDDLE) - CONTINUED

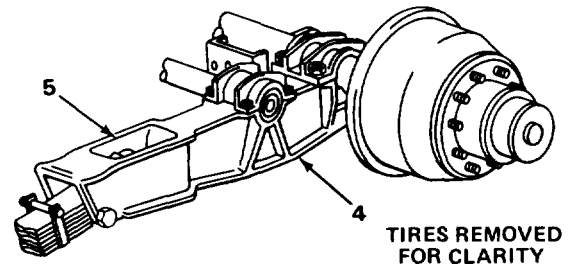
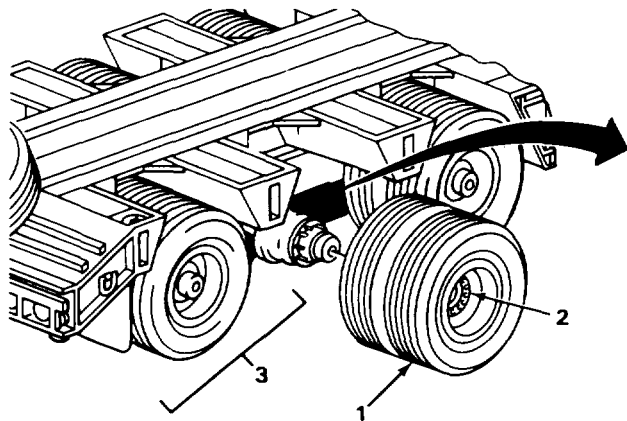
LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

WARNING

Be certain equalizing beam is securely supported by trestles. Failure to do so could result in serious injury to personnel.

- c. Take out hydraulic jack.
Repeat for other three equalizing beams.



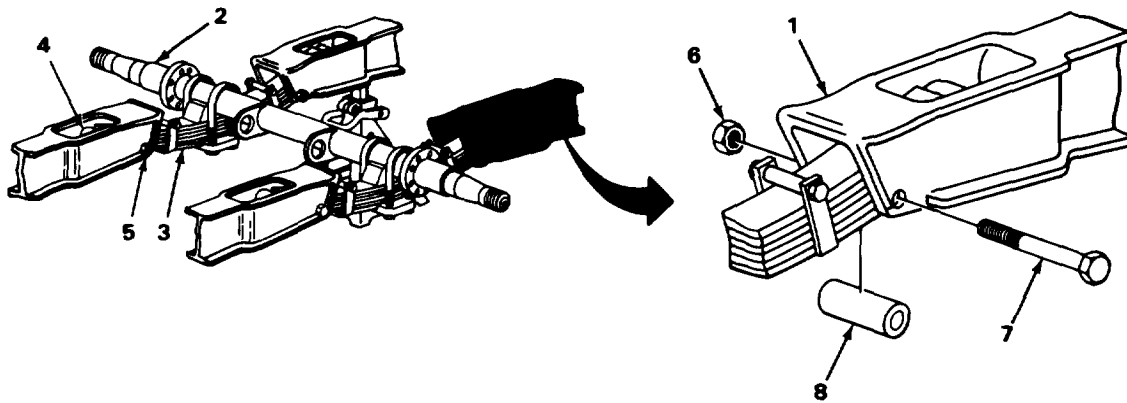
- 4. Remove two tire and wheel assemblies (page 3-9).
- 5. Remove two hubs and drums (page 4-100).
- 6. Remove two sets brakeshoes (page 4-65).
- 7. Remove two air chambers (page 4-92).
- 8. Remove two sets spider, S-cam, and slack adjuster (page 4-72).

AXLE (MIDDLE) - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL - CONTINUED

- | | | | |
|-----|---------------------|------------------------------------|---|
| 9. | Equalizing beam (1) | Axle (2) and springs (3) | Using dolly jack, lift in middle until spring ends (4) are clear of support assemblies (5).
Be certain dolly jack is positioned under axle at balance point. |
| 10. | | Nut (6), screw (7), and spacer (8) | Using two 1 1/8-inch open-end wrenches, unscrew and take out.
Repeat for other three equalizing beams. |



WARNING

Keep fingers from between equalizer beam end and spring end, while balancing axle as it is lowered. Failure to do so could result in serious injury to personnel.

- | | | |
|-----|--------------------------|---|
| 11. | Axle (2) and springs (9) | <ol style="list-style-type: none"> a. Lower axle (2) and springs (9) while two assistants balance assembly. b. Pull out from under semitrailer. c. Put on blocking which allows access to bottom of axle (2), and take out dolly jack. |
|-----|--------------------------|---|

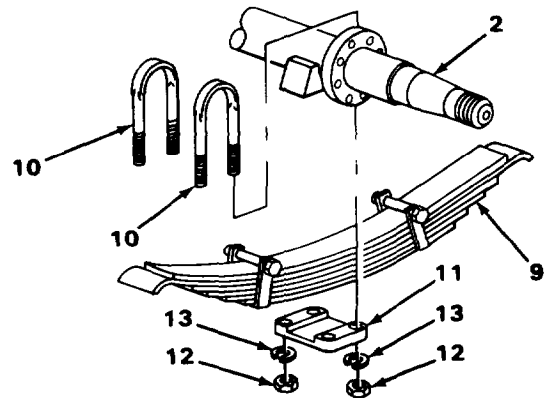
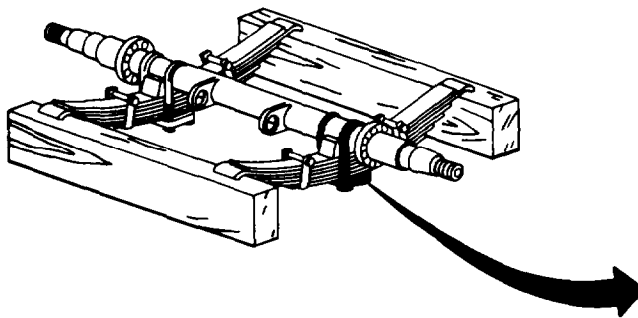
AXLE (MIDDLE) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL – CONTINUED

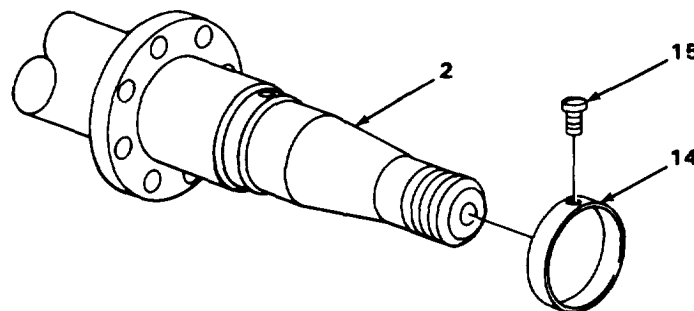
12. Two U-bolts (10) and spring clamp plate (11) Four nuts (12) and four washers (13) Using 1 1/2-inch open-end wrench, unscrew and take off.

13. Axle (2) Two U-bolts (10) spring clamp plate (11) a. Take off. Repeat steps 6 and 7 for other end of axle.
b. Using hydraulic jack, lift axle off springs.



14. Axle ring (14) Screw (15) Using number two cross-tip screwdriver, unscrew and take out.

15. Axle (2) Axle ring (14) Slide off. Repeat for other end of axle.



AXLE (MIDDLE) - CONTINUED

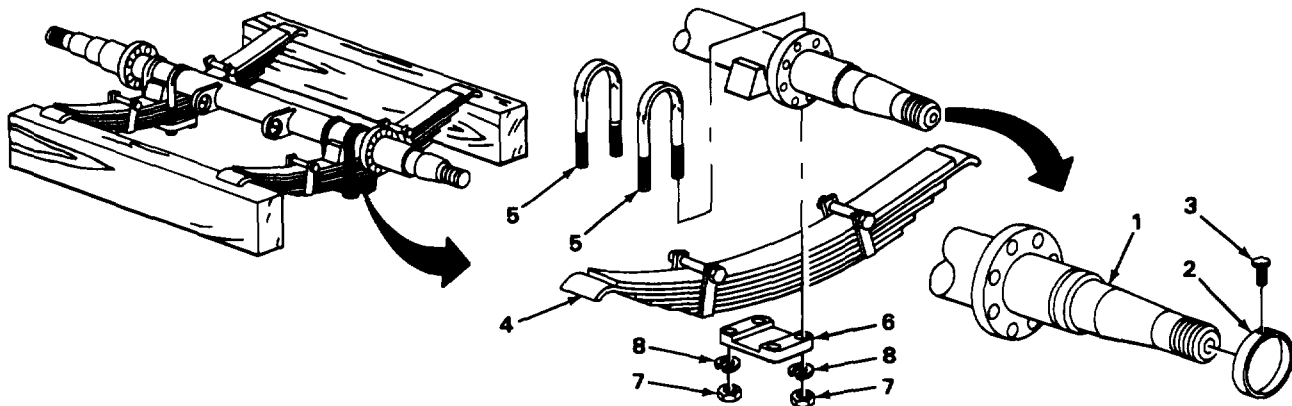
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION

NOTE

Before starting installation procedure, put spring ends on blocking high enough to allow dolly jack to roll under springs and axle assembly.

- | | | | |
|-----|--|--|--|
| 16. | Axle (1) | Axle ring (2) | Put on, and line up screw hole. |
| 17. | Axle ring (2)
and axle (1) | Screw (3) | Screw in, and tighten using number two cross-tip screwdriver.
Repeat steps 16 and 17 for other end of axle. |
| 18. | Two
springs (4) | Axle (1) | Put axle on springs using hydraulic jack.
Be sure alinement pins go into alinement holes in springs. |
| 19. | Axle (1) | Two U-bolts (5)
and spring
clamp plate (6) | Put on, and have assistant hold in place. |
| 20. | Two U-bolts (5)
and spring clamp
plate (6) | Four nuts (7) and
four washers (8) | Put on, and tighten using 1 1/2-inch open-end wrench.
Repeat steps 19 and 20 for other end of axle. |



AXLE (MIDDLE) - CONTINUED

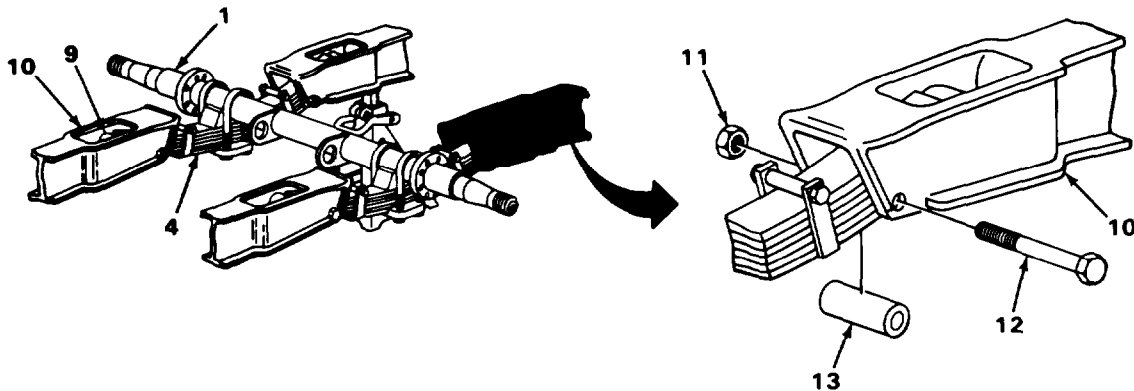
LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

WARNING

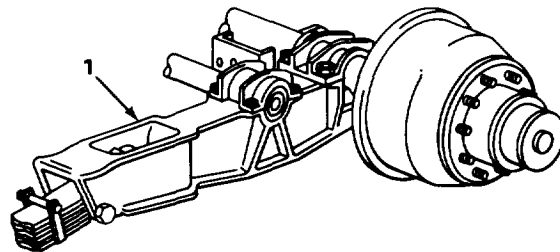
Keep fingers from between equalizer beam ends and spring ends while balancing axle as it is moved and lifted into place. Failure to do so could result in serious personal injury.

- | | | |
|-----|---|--|
| 21. | Axle (1) and springs (4) | <ul style="list-style-type: none"> a. While two assistants balance assembly, lift from blocking using dolly jack. Position dolly jack lifting pad at balance point. Be sure dolly jack is parallel to axle. b. Put in position, and lift until spring (4) ends are at top of equalizing beam spring pockets (9). |
| 22. | Equalizing beam (10)
Nut (11), screw (12), and spacer (13) | <ul style="list-style-type: none"> a. Screw in, and tighten using two 1 1/8-inch wrenches. Repeat for other three equalizing beams. b. Lower dolly jack, and take out. |



AXLE (MIDDLE) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED		
23.	Equalizing beam (1)	Install two air chambers (page 4-92).
24.		Install two sets spider, S-cam, and slack adjuster (page 4-72).
25.		Install two sets brakeshoes (page 4-65).
26.		Install two hubs and drums (page 4-100).
27.		Install two tire and wheel assemblies (page 3-9).
28.	Trestle	Take out using hydraulic jack. Repeat for other three equalizing beams.



NOTE

FOLLOW-ON MAINTENANCE: Install two radius rods (page 5-47).

TASK ENDS HERE

AXLE (FRONT AND REAR)

This task covers:

- a. Removal (page 5-9)
- b. Installation (page 5-11)

INITIAL SETUP

Tools

- Jack, dolly, 10-ton
- Jack, hydraulic, hand, 10-ton
- Socket, 1/2-inch drive, 1 1/2-inch
- Trestle, motor vehicle, 10-ton
(two required)
- Wrench, open-end, 1 5/16-inch
(two required)
- Wrench, open-end, 1 1/2-inch
(two required)
- Wrench, torque, 1/2-inch drive,
0 to 550 ft-lb capacity

Personnel Required

Two

Equipment Condition

Tire and wheel assemblies removed
(page 3-9)

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

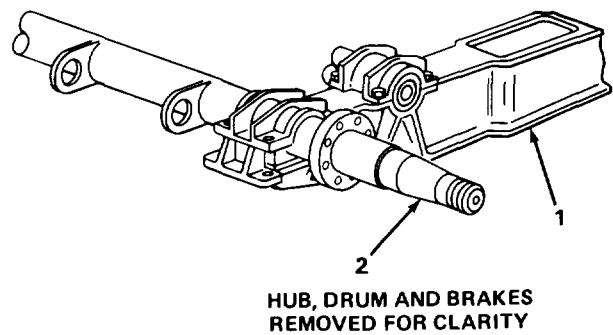
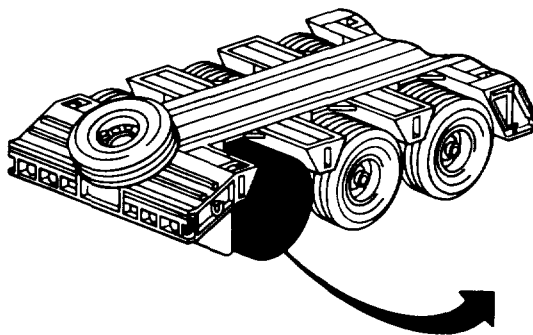
REMOVAL

NOTE

Both front and rear axles are removed the same way. This procedure covers one axle. Repeat the procedure for the other.

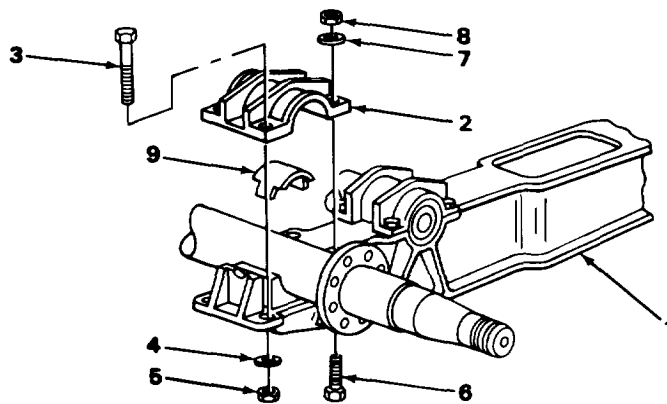
- 1. Equalizing beam (1) Axle (2)

- a. Using hydraulic jack, lift axle (2).
- b. Put trestle under axle (2) and equalizing beam (1), and remove hydraulic jack.
Repeat for other end of axle.



AXLE (FRONT AND REAR) - CONTINUED

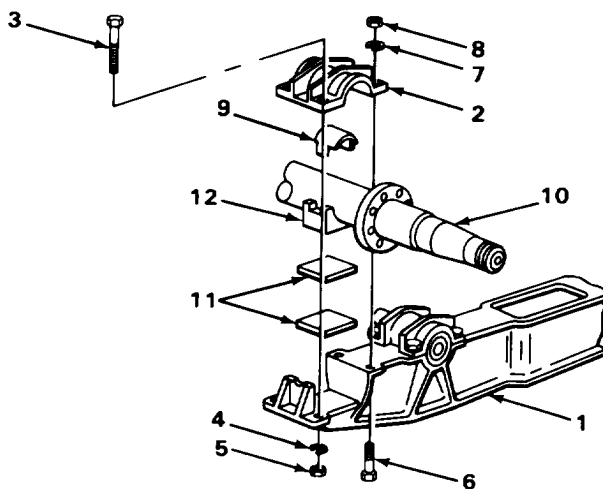
LOCATION	ITEM	ACTION REMARKS	
REMOVAL - CONTINUED			
2.	Equalizing beam (1)	Remove two hubs and drums (page 4-100).	
3.		Remove two sets brakeshoes (page 4-65).	
4.		Remove two air chambers (page 4-92).	
5.		Remove two sets spider, S-cam, and slack adjuster (page 4-72).	
6.	Axle cap (2) and equalizing beam (1)	Two capscrews (3), two flat washers (4), and two locknuts (5)	Using two 1 5/16-inch open-end wrenches, unscrew and take out.
7.		Two capscrews (6), two flat washers (7), and two locknuts (8)	Using two 1 1/2-inch open-end wrenches, unscrew and take out.
8.	Equalizing beam (1)	Axle cap (2) and rubber wrapper (9)	Take off. Repeat steps 2 thru 8 for other end of axle.



- | | | |
|-----|----------------------|---|
| 9. | Axle (10) | a. Using dolly jack, lift until axle (10) clears ends of equalizing beam (1).
b. Have assistant balance axle (10).
c. Remove trestles from rear corners of semitrailer.
d. Take out. |
| 10. | Two rubber pads (11) | Take out. |

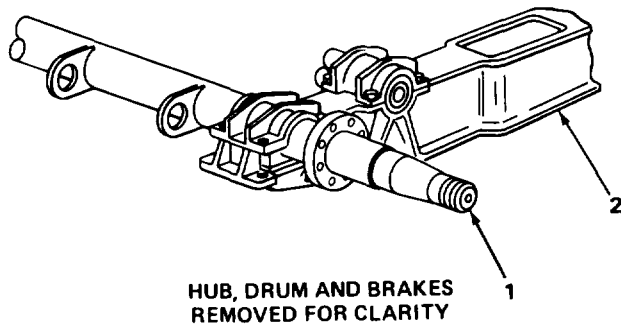
AXLE (FRONT AND REAR) - CONTINUED

LOCATION	ITEM	ACTION REMARKS	
INSTALLATION			
11.	Two rubber pads (11)	Put in place.	
12.	Axle (10) with axle adapter (12)	a. Lift axle (10) into position over equalizing beam (1) using dolly jack. b. Put trestles back under rear corners of semitrailer. c. Lower into place. Be sure axle adapter (12) is properly positioned in equalizing beam (1).	
13.	Axle cap (2) and rubber wrapper (9)	Put on.	
14.	Axle cap (2) and equalizing beam (1)	Two capscrews (6), two flat washers (7), and two locknuts (8)	a. Screw in, and tighten using two 1 1/2-inch open-end wrenches. b. Tighten nuts (8) to approximately 550 ft-lb (746 N•m) of torque (lubricated) using 1 1/2-inch open-end wrench 1 1/2-inch socket and torque wrench.
15.	Two capscrews (3), two flat washers (4), and two locknuts (5)	Two capscrews (3), two flat washers (4), and two locknuts (5)	Screw in, and tighten using two 1 5/16-inch wrenches. Repeat steps 13 thru 15 for other end of axle.



AXLE (FRONT AND REAR) - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED		
16.	Axle (1)	Install two air chambers (page 4-92).
17.		Install two sets spider, S-cam, and slack adjuster (page 4-72).
18.		Install two sets brakeshoes (page 4-65).
19.		Install two hubs and drums (page 4-100).
20.	Equalizing beam (2)	Axle (1)
		a. Lift axle (1) using hydraulic jack. b. Take out trestle. c. Lower axle, and take out hydraulic jack. Repeat for other end of axle.



NOTE

FOLLOW-ON MAINTENANCE: Install tire and wheel assemblies (page 3-9).

TASK ENDS HERE

EQUALIZING BEAM

This task covers:

- a. Removal (page 5-13)
- b. Installation (page 5-16)

INITIAL SETUP

Tools

Handle, ratchet, 1/2-inch drive
 Jack, dolly, 10-ton (two required)
 Jack, hydraulic, hand, 10-ton
 Socket, 1/2-inch drive, 1 1/8-inch
 Socket, 1/2-inch drive, 1 1/2-inch
 Trestle, motor vehicle, 10-ton
 (three required)
 Wrench, open-end, 1 1/8-inch
 (two required)
 Wrench, open-end, 1 1/2-inch
 (two required)
 Wrench, open-end, 1 5/16-inch
 (two required)
 Wrench, torque, 1/2-inch drive,
 0 to 550 ft-lb capacity

Personnel Required

Two

Equipment Condition

Semitrailer unloaded.
 Wheels chocked.

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

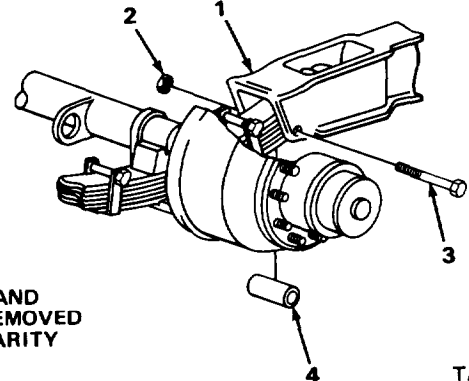
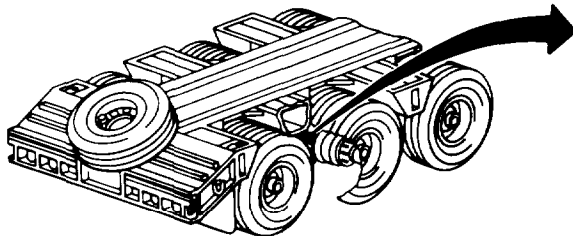
REMOVAL

NOTE

There are four equalizing beams on the semitrailer. This procedure is for one of them. Repeat this procedure for all four.

- | | | |
|----|---------------------|------------------------------------|
| 1. | Equalizing beam (1) | Nut (2), screw (3), and spacer (4) |
|----|---------------------|------------------------------------|

Using two 1 1/8-inch open-end wrenches, unscrew and take out.



TIRES AND WHEELS REMOVED FOR CLARITY

TA225443

EQUALIZING BEAM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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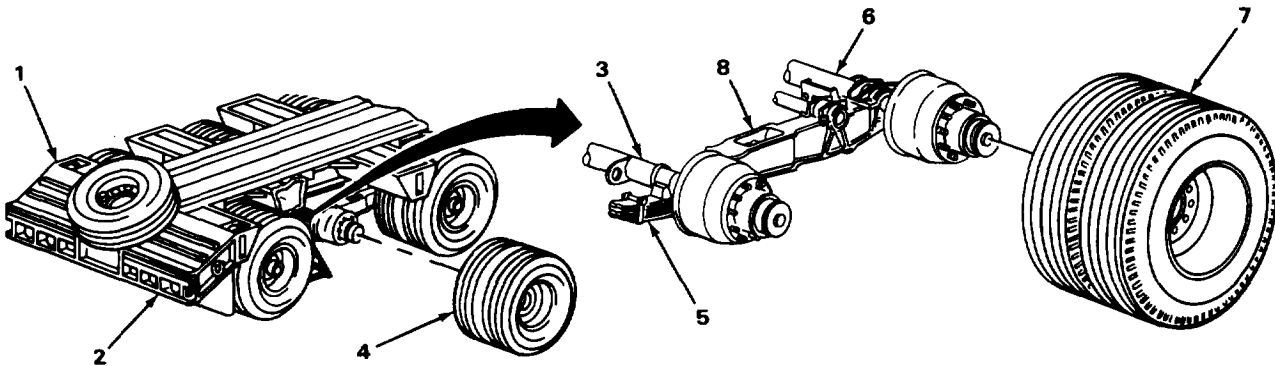
REMOVAL - CONTINUED

- | | | |
|----|--|---|
| 2. | Semitrailer (1)

Rear corner (2)
same side as
equalizing beam
being removed | a. Using hydraulic jack, lift until weight is off suspension system but tire and wheel assemblies still touch ground.
b. Put trestle under corner (2). |
| 3. | Middle axle (3)

Tire and wheel
assembly (4) | a. Remove (page 3-9).
b. Support middle axle (4) on trestle under spring clamp plate (5). |
| 4. | Axle (6)

Tire and wheel
assembly (7) | a. Remove (page 3-9).
b. Support axle (6) with trestle behind equalizing beam (8). |



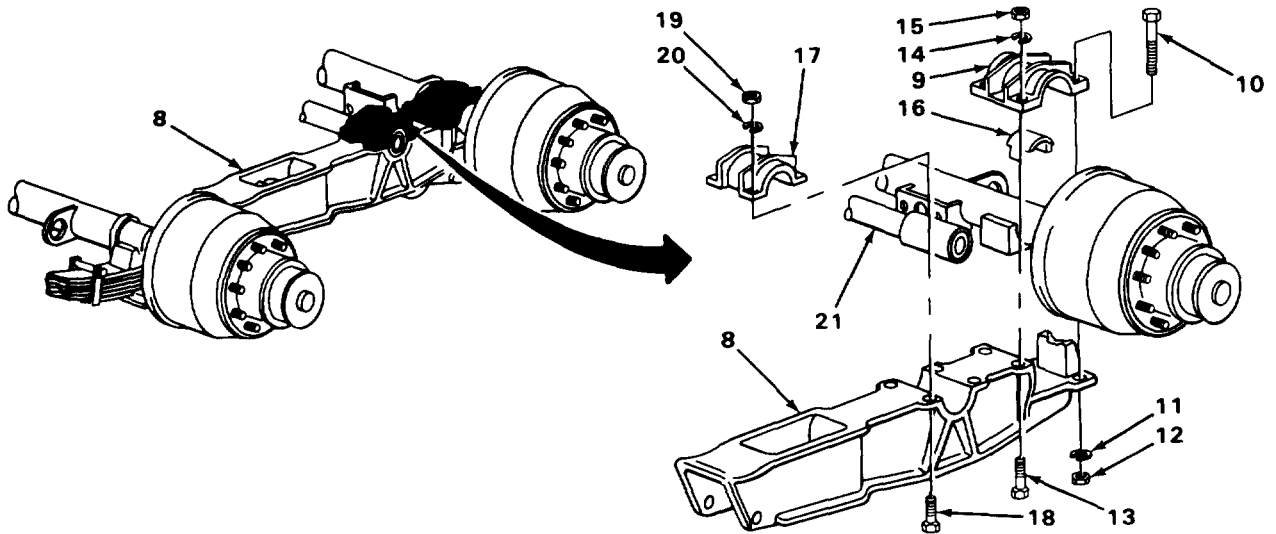
- | | | |
|----|--|--|
| 5. | Equalizing
beam (8) | Using two dolly jacks, support under each end.

Place dolly jacks so they do not interfere with removal of axle cap capscrews and nuts. |
| 6. | Axle cap (9)
and equalizing
beam (8) | Two capscrews (10),
two flat washers
(11), and two
locknuts (12)

Using two 1 5/16-inch open-end
wrenches, unscrew and take out. |

EQUALIZING BEAM - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED			
7.		Two capscrews (13), two flat washers (14), and two locknuts (15)	Using two 1 1/2-inch open-end wrenches, unscrew and take out.
8.	Equalizing beam (8)	Axle cap (9) and rubber wrapper (16)	Take off.
9.	Trunnion cap (17)	Four capscrews (18), four locknuts (19), and four washers (20)	Using 1 1/8-inch open-end wrench, 1 1/8-inch socket and ratchet handle with 1/2-inch drive, unscrew and take out.
10.	Trunnion tube (21)	Trunnion cap (20)	Take off.
11.		Equalizing beam (8)	Using two dolly jacks, take out. Lower axle end of equalizing beam first, then slip other end off spring and roll out.



EQUALIZING BEAM -CONTINUED

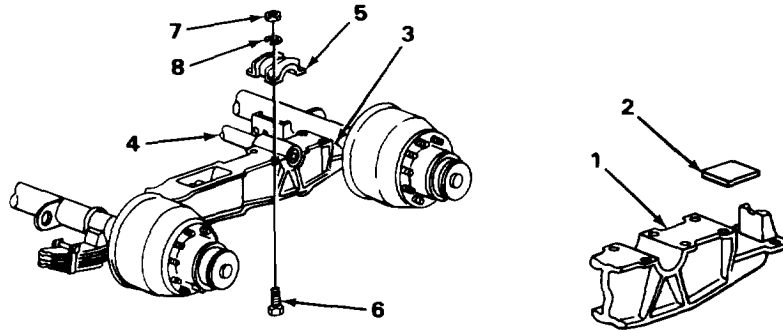
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL – CONTINUED

12.	Equalizing beam (1)	Rubber pad (2)	Take out.
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INSTALLATION

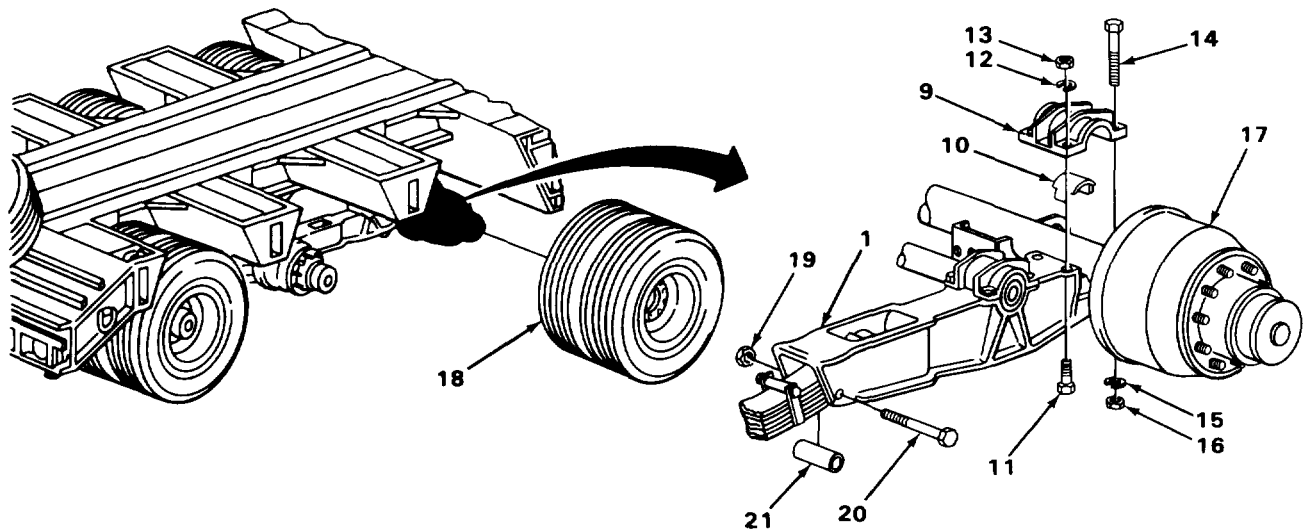
13.		Rubber pad (2)	Put in place.
14.		Equalizing beam (1)	Put in using two dolly jacks. Be sure axle adapter(3) and rubber pad (2) do not shift out of place.
15.	Trunnion tube (4)	Trunnion cap (5)	Put in place.
16.	Trunnion cap (5)	Four capscrews (6), four locknuts (7), and four washers (8)	<ul style="list-style-type: none"> a. Screw in, and tighten using 1 1/8-inch socket and ratchet handle with 1/2-inch drive. b. Tighten locknuts (7) to approximately 250 ft-lb (339N•m) of torque (lubricated), using 1 1/8-inch socket and torque wrench.



17.	Equalizing beam (1)	Axle cap (9) and rubber wrapper (10)	Put in place.
18.		Two capscrews (11), two flat washers (12), and two locknuts (13)	<ul style="list-style-type: none"> a. Screw in, and tighten using two 1 1/2-inch open-end wrenches. b. Tighten locknuts (13) to approximately 550 ft-lb (746 N•m) of torque (lubricated), using 1 1/2-inch open-end wrench, 1 1/2-inch socket, and torque wrench.

EQUALIZING BEAM - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION – CONTINUED		
19.	Two capscrews (14), two washers (15), and two locknuts (16)	Screw in, and tighten using two 1 5/16-inch open-end wrenches. Take out dolly jacks.
20.	Hub and drum (17)	Install (page 3-9). Repeat for other axle.
21.	Three trestles	Take out using hydraulic jack.
22.	Equalizing beam (1)	a. Screw in, and tighten using two 1 1/8-inch open-end wrenches. b. Tighten nut (19) to approximately 75 ft-lb (102 N•m) of torque (lubricated), using 1 1/8-inch open-end wrench, 1 1/8-inch socket and torque wrench.



TASK ENDS HERE

TRUNNION TUBE AND CLAMP

This task covers:

- a. Removal (page 5-18)
- b. Installation (page 5-20)

INITIAL SETUP

Tools

- Drift, brass, 3-inch
- Hammer, sledge, 10-lb
- Handle, ratchet, 1/2-inch drive
- Jack, dolly, 10-ton
- Jack, hydraulic, hand, 10-ton
- Socket, 1/2-inch drive, 1 1/8-inch
- Trestle, motor vehicle, 10-ton
(two required)
- Wrench, open-end, 1 1/8-inch
- Wrench, torque, 1/2-inch drive,
0 to 250 ft-lb capacity

Personnel Required

Two

Equipment Condition

Tire and wheel assembly removed (page 3-9).

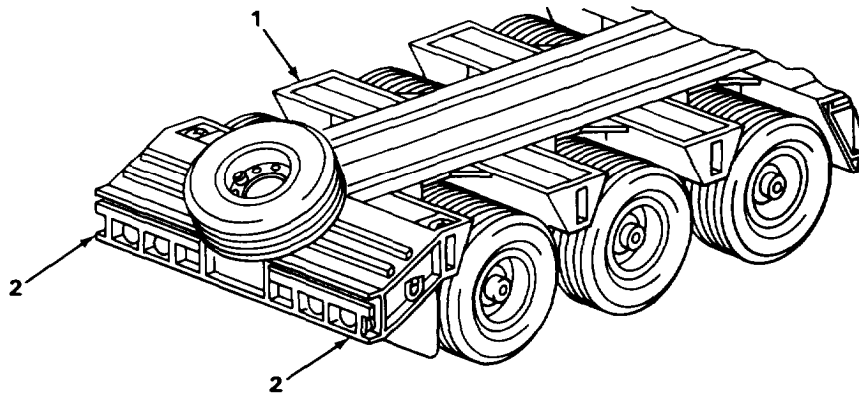
LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

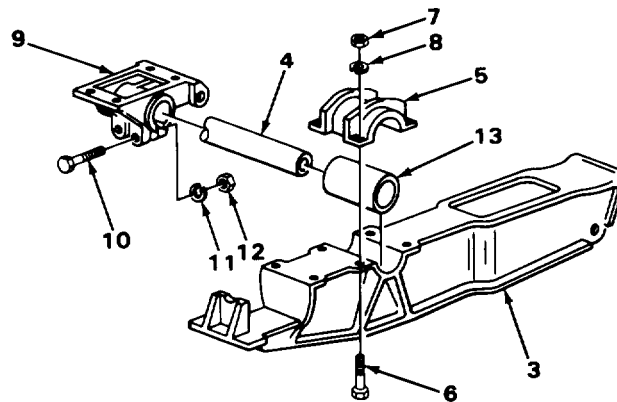
There are two trunnion tubes on the semitrailer. This procedure is for one of them. Repeat the procedure for both of them.

- 1. Semitrailer (1)
 - Two rear corners (2)
 - a. Using hydraulic jack, lift until weight is off suspension system but tire and wheel assemblies still touch ground.
 - b. Put trestles under corners (2).



TRUNNION TUBE AND CLAMP - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
2.	Equalizing beam (3)	Using dolly jack, support under trunnion tube (4) but do not lift. Repeat for other side.
3.	Trunnion cap (5)	Four capscrews (6), four lock-nuts (7), and four washers (8) a. Using 1 1/8-inch open-end wrench, 1 1/8-inch socket, ratchet handle, with 1/2-inch drive, unscrew and take out. b. Take off trunnion cap (5). Repeat for other side.
4.	Trunnion tube (4)	Equalizing beam (3) Using dolly jack, lower until clear of trunnion tube (4). Repeat for other side.
5.	Trunnion clamp (9)	Two capscrews (10), two washers (11), and two locknuts (12) Using two 1 1/8-inch open-end wrenches, unscrew and take out. Repeat for other side.
6.	Trunnion tube (4)	Rubber bushing (13) Take off. Repeat for other side.
7.	Two trunnion clamps (9)	Trunnion tube (4) With the aid of assistant, and using hammer and brass drift, drive out.

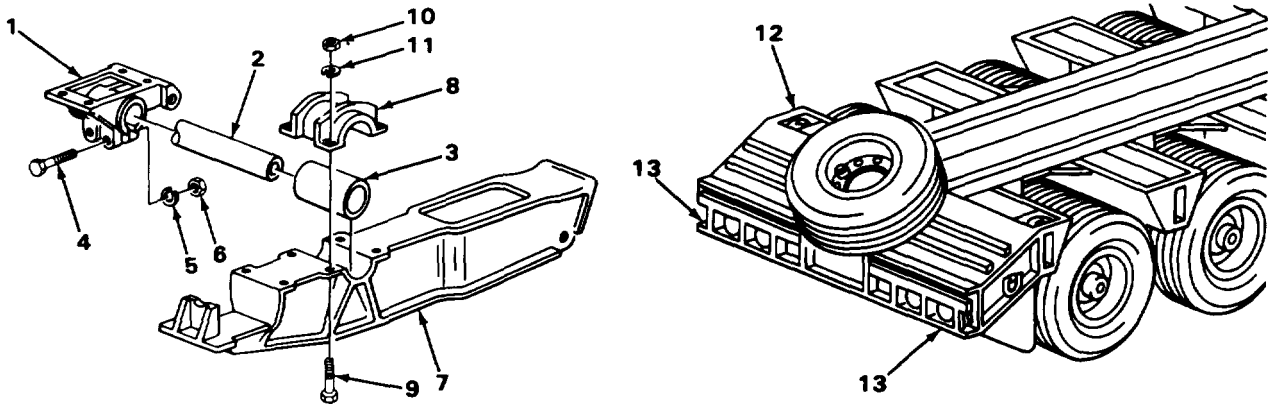


TRUNNION TUBE AND CLAMP - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
8.	Two trunnion clamps (1)	Trunnion tube (2)	With aid of assistant, drive in using hammer and brass drift. Be sure trunnion tube (2) sticks out of clamps the same on both sides.
9.	Trunnion tube (2)	Rubber bushing (3)	Put on. Repeat for other side.
10.	Trunnion clamp (1)	Two capscrews (4), two washers (5), and two locknuts (6)	a. Screw in, and tighten using two 1 1/8-inch open-end wrenches. b. Tighten to approximately 250 ft-lb (339 N•m) of torque (lubricated), using 1 1/8-inch socket and torque wrenches. Repeat for other side.
<u>CAUTION</u>			
Be sure trunnion clamp securely holds trunnion tube. Failure to do so could result in damage to equipment.			
11.		Equalizing beam (7)	Lift into place using dolly jack, until rubber bushing (3) and trunnion tube (2) are seated.
12.	Trunnion cap (8)	Four capscrews (9), four locknuts (10), and four washers (11)	a. Screw in, and tighten using 1 1/8-inch open-end wrench, 1 1/8-inch socket, and ratchet handle with 1/2-inch drive. b. Tighten to approximately 250 ft-lb (339 N•m) of torque (lubricated), using 1 1/8-inch open-end wrench, 1 1/8-inch socket and torque wrench. c. Take out dolly jacks. Repeat for other side.
13.	Semitrailer (12)	Two rear corners (13)	Take off trestles using hydraulic jack.

TRUNNION TUBE AND CLAMP - CONTINUED

INSTALLATION – CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install tire and wheel assembly (page 3-9).

TASK ENDS HERE

Section III. BRAKE MAINTENANCE

	Page		Page
Air Chamber	5-24	Brakeshoe	5-22

BRAKESHOE

This task covers:

Repair (page 5-22)

INITIAL SETUP

Tools

- Brush, wire
- Drill, electric, 3/8-inch
- Drill bit, 13/64-inch
- Gage, feeler, 0.0002-inch (0.0508 mm)
- Mask, protective
- Reliner, brake

Materials/Parts

- Shim stock, as required
- Solvent, drycleaning, PD-680
(item 14, appendix E)

Equipment Condition

Brakeshoes removed (page 4-65).

LOCATION	ITEM	ACTION	REMARKS
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REPAIR

WARNING

Brake linings contain asbestos fibers. Protective mask must be worn while performing this task. Failure to do so could result in serious illness.

NOTE

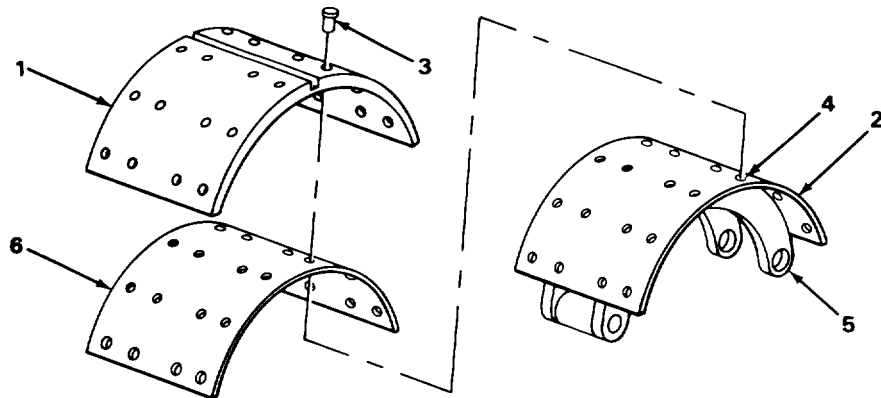
There are six sets of brakeshoes on the semitrailer. This procedure is for one set. Repeat this procedure as needed.

Do not grind off rivet heads.

- | | | | |
|----|---|---------------------------|---|
| 1. | Brake lining
(1) to brake-
shoe (2) | Twenty four
rivets (3) | Using 3/8-inch drill and 13/64-inch
drill bit, take out. |
|----|---|---------------------------|---|

BRAKESHOE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REPAIR- CONTINUED			
<u>WARNING</u>			
<p>Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.</p>			
2.	Brakeshoe (2)	Brake lining (1)	<p>a. Take off. b. Using wire brush and drycleaning solvent PD-680, clean brakeshoe (2).</p>
3.	Brakeshoe (2)		<p>a. Check for cracks, breaks in welds, distortion, warping, and rivet holes (4) or anchor pin holes (5) that are oversized from wear. b. If defective, brakeshoe must be replaced.</p>
4.	Brakeshoe (2)	Shim (6)	If drums have been turned, use shim (6).
5.	New brake lining (1) and shim (6)		<p>a. Using brake reliner, put in rivets starting in center and working outward. b. Check fit using 0.0002-inch (0.0508 mm) feeler gage. Gage should not penetrate past rivets.</p>



NOTE

FOLLOW-ON MAINTENANCE: Install brakeshoes (page 4-65).

TASK ENDS HERE

AIR CHAMBER

This task covers:

Repair (page 5-24)

INITIAL SETUP

Tools

- Brush, wire
- C-clamp, 8-inch
- Handle, ratchet, 3/8-inch drive
- Socket, deep, 3/8-inch drive, 9/16-inch

Personnel Required

Two

Equipment Condition

Air chamber removed (page 4-92).

Materials/Parts

- Brush, acid swabbing
(item 2, appendix E)
 - Solvent, drycleaning, PD-680
(item 14, appendix E)
-

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

REPAIR

NOTE

There are six air chambers on the semitrailer. This procedure is for one. Repeat this procedure for all six.

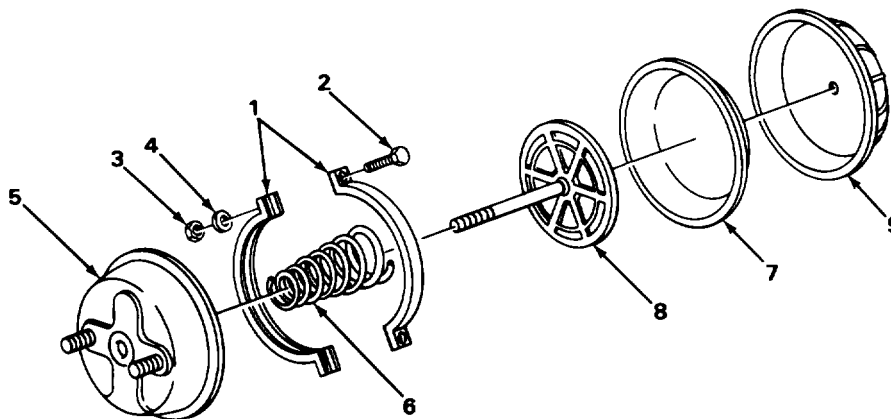
- | | | | |
|----|------------------------------|--|---|
| 1. | Clamp ring (1) | Two screws (2), two nuts (3) and two washers (4) | <ul style="list-style-type: none"> a. While assistant holds chamber shells together, using 9/16-inch deep socket and ratchet handle with 3/8-inch drive, unscrew and take out. b. Take off clamp ring.
Chamber shells will separate easily due to spring. |
| 2. | Air chamber bottom shell (5) | Spring (6), diaphragm (7), and pressure plate push rod (8) | <ul style="list-style-type: none"> a. Take out. b. Check for broken or bent parts and ruptured or torn diaphragm (7). c. Replace defective parts. |

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

AIR CHAMBER - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REPAIR - CONTINUED			
2.	Cont.		d. Using drycleaning solvent PD-680 and brush, remove grease and dirt from metal parts.
3.	Pressure plate and push rod (8)	Spring (6)	Put on.
4.	Air chamber bottom shell (5)	Pressure plate and push rod (8) and spring (6)	Put in place.
5.	Pressure plate and push rod (8)	Diaphragm (7)	Put in place. Be sure edges seat on bottom shell.
6.		Top shell (9)	Put in place, and compress assembly with C-clamp until top and bottom shells touch.
7.		Clamp ring (1)	Position around assembly.
8.	Two screws (2), two nuts (3) and two washers (4)		a. Screw in, and tighten using 9/16-inch socket and ratchet handle with 3/8-inch drive. Be sure clamp ring (1) seats properly. b. Remove C-clamp.



NOTE

FOLLOW-ON MAINTENANCE: Install air chamber (page 4-92).

TASK ENDS HERE

Section IV. WHEELS, HUBS, AND DRUMS MAINTENANCE

	Page		Page
Brakedrum	5-26	Tire Repair	5-30
Hub	5-29		

BRAKEDRUM

This task covers:

Repair (page 5-26)

INITIAL SETUP

Tools

Extension, 1/2-inch drive, 5-inch
 Handle, ratchet, 1/2-inch drive
 Lathe, brakedrum
 Micrometer, inside, brakedrum I.D.
 Socket, 1/2-inch drive, 1 1/8-inch

Materials/Parts

Crocus cloth (item 3, appendix E)
 Rags, wiping (item 12, appendix E)
 Solvent, drycleaning, PD-680, (item 14,
 appendix E)

Equipment Condition

Hub and drum removed (page 4-100).

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

REPAIR

- | | | | |
|----|------------------------------|--------------|--|
| 1. | Hub (1) and
brakedrum (2) | Ten nuts (3) | a. Using 1 1/8-inch socket, 5-inch extension with 1/2-inch drive, and ratchet handle with 1/2-inch drive, unscrew and take off.
b. Separate hub (1) and drum (2). |
|----|------------------------------|--------------|--|

WARNING

Drycleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Injury to personnel could occur.

- | | | |
|----|---------------|--|
| 2. | Brakedrum (2) | Wash thoroughly with drycleaning solvent PD-680. |
| 3. | Brakedrum (2) | Check for wear, cracks, and damage. If worn, cracked, or damaged, replace. |

BRAKEDRUM-CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REPAIR - CONTINUED			
4.	Inner braking surface (4)	Check for heat checking, scoring or warpage.	

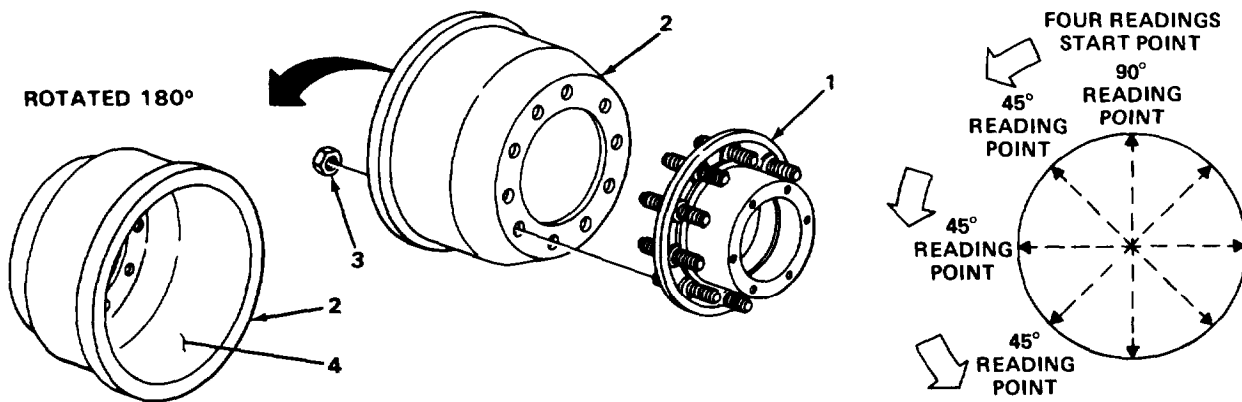
NOTE

Slight scoring conditions can be corrected by polishing with crocus cloth. Heavy scoring and out-of-round conditions require turning the brakedrum on a refinishing lathe.

Whenever the drum on one side of the axle is refinished, the other drum on that axle should be turned to the same specifications.

- | | | | |
|----|---------------|--|--|
| 5. | Brakedrum (2) | <ul style="list-style-type: none"> a. Using micrometer, check inside for out-of-round or tapered wear. b. Record each reading. The maximum difference between the four readings cannot exceed 0.0006 inch (1.5888 mm). | |
|----|---------------|--|--|

Drums with out-of-round exceeding limits must be turned.



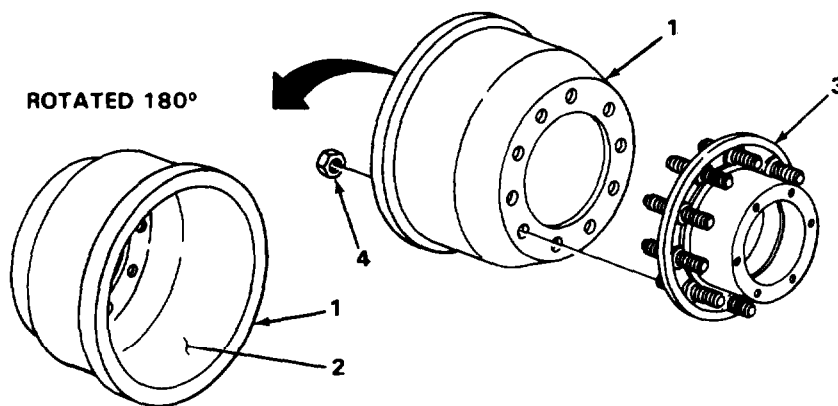
BRAKEDRUM-CONTINUED

LOCATION	ITEM	ACTION REMARKS
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NOTE

If turning causes drum to exceed original diameter by more than 0.060 inch (23.019 mm), replace drum. The other drum on that axle should be replaced also.

- | | | | |
|----|---------------|---------------------------|---|
| 6. | Brakedrum (1) | Inner braking surface (2) | <ul style="list-style-type: none"> a. Refinish by turning using refinishing lathe. b. Make several thin cuts until scoring or grooving defects have been removed.
Check drum diameter after each cut to make sure you have not cut too much metal out. c. Refinish other drum on that axle to same specifications as the one above. |
| 7. | Brakedrum (1) | Hub (3) | <ul style="list-style-type: none"> a. Put hub (3) and drum (1) together. b. Screw on, and tighten nuts (4) using 1 1/8-inch socket, 5-inch extension with 1/2-inch drive, and ratchet handle with 1/2-inch drive. |



NOTE

FOLLOW-ON MAINTENANCE: Install hub and drum (page 4-100).

TASK ENDS HERE

HUB

This task covers:

Repair (page 5-29)

INITIAL SETUP

Tools

Brush, wire
 Drift, brass, 3-inch
 Driver, bearing cup
 Hammer, hand, ball-peen, 3-lb
 Puller, universal

Materials/Parts

Solvent, drycleaning, PD-680 (item 14, appendix E)

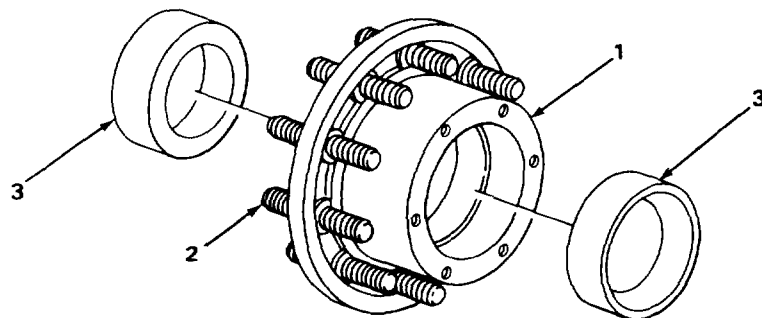
Personnel Required

One

Equipment Condition

Hub and drum separated (page 5-26).

LOCATION	ITEM	ACTION REMARKS
REPAIR		
1.	Hub(1)	a. Inspect flange areas and hub for cracks. Replace if damaged. b. Check studs (2) for thread damage. Mark or tag studs needing replacement.
2.	Bearing cups (3)	a. Using universal puller, take out. b. Check for pitting, chipping, or other damage. If damaged, replace. c. Put in bearing cups using bearing cup driver. d. Check that cups fit tightly.



HUB - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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REPAIR – CONTINUED

NOTE

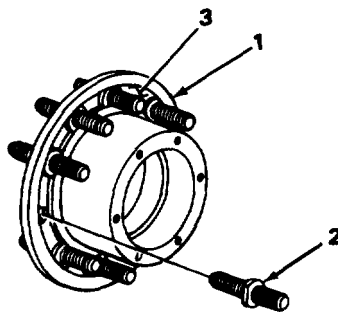
Replace damaged or broken studs in groups of three; the damaged or broken stud plus the studs on either side.

- | | | | |
|----|--------|-------------------|--|
| 5. | Hub(1) | Damaged studs (2) | a. Using 3-inch brass drift and ball-peen hammer, drive out. |
|----|--------|-------------------|--|

NOTE

When putting in replacement studs (2), be sure stud collars are seated in recessed slot (3).

- | |
|--|
| b. Put new studs in place. |
| If necessary, tap with ball-peen hammer and 3-inch brass drift to seat. |



NOTE

FOLLOW-ON MAINTENANCE: Assemble hub and drum (page 5-26).

TASK ENDS HERE

TIRE REPAIR

NOTE

For tire repair procedures, see TM 9-2610-200-24.

TASK ENDS HERE

Section V. FRAME AND TOWING ATTACHMENTS MAINTENANCE

	Page		Page
Gooseneck Hinge Pin	5-37	Spare Tire Carrier	5-40
Lower Link Assembly	5-33	Tiedown Rings	5-31

TIEDOWN RINGS

This task covers:

- Removal (page 5-31)
 - Installation (page 5-32)
-

INITIAL SETUP

Tools	Personnel Required
Dowel, wood	Two
Grinder, portable	
Torch, acetylene	
Welder, arc	

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

There are 18 tiedown rings on the semitrailer. This procedure is for one. Repeat this procedure as necessary.

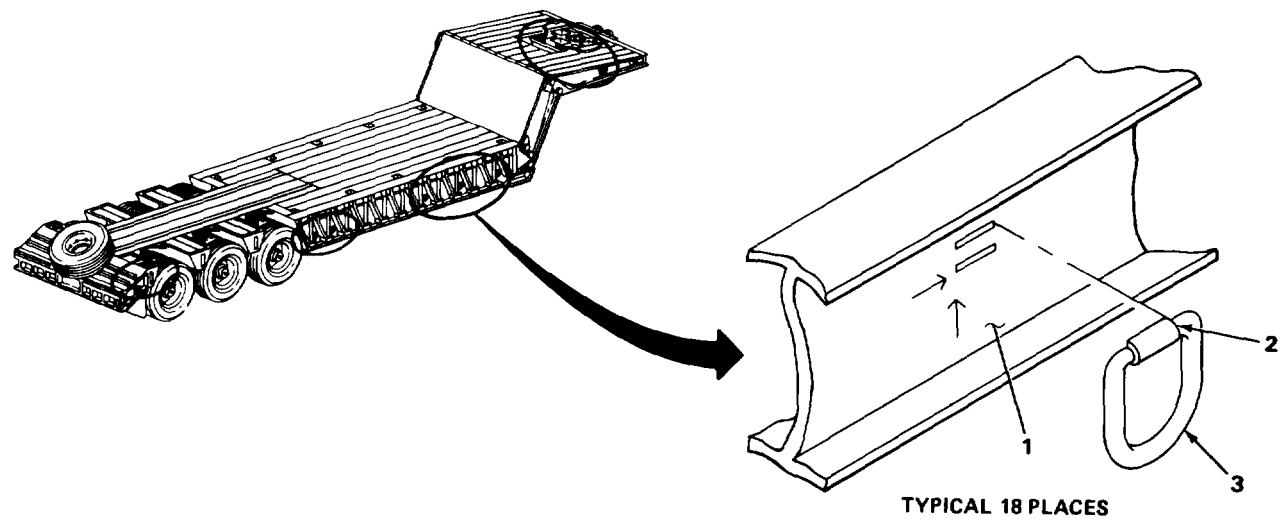
For welding procedures, refer to TM 9-237.

TIEDOWN RINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
REMOVAL - CONTINUED			
1. Frame (1)	Bracket (2)	a. Mark location above and beside to aid in placement of new bracket (2). b. Using torch, cut off bracket (2).	
2. Bracket (2)	Ring (3)	Take off.	
3. Frame (1)	Frame (1)	Using portable grinder, grind smooth.	

INSTALLATION

4. Ring (3) Place in bracket (1).
5. Frame (1) Bracket (2)
 - a. Put in position according to marks, and have assistant hold in place with wood dowel.
 - b. Weld using arc welder.
See TM 9-237- High yield strength, low alloy structural steels (T-1).



TASK ENDS HERE

LOWER LINK ASSEMBLY

This task covers:

- a. Removal (page 5-33)
- b. Installation (page 5-36)

INITIAL SETUP

Tools

- Adapter, thread
- Blocks, wood
- Dowel, wood
- Grinder, hand
- Hammer, sledge, 12-lb
- Hammer, slide
- Handle, ratchet, 3/8-inch
- Hoist, overhead
- Jack, dolly, 10-ton, (two required)
- Jack, hydraulic, hand, 10-ton (two required)
- Socket, 3/8-inch drive, 7/16-inch

Tools – Continued

- Torch, acetylene
- Welder, arc
- Wrench, pipe

Personnel Required

Two

Equipment Condition

- Wheels chocked (page 2-21).
- Gooseneck up (page 2-15).

LOCATION	ITEM	ACTION	REMARKS
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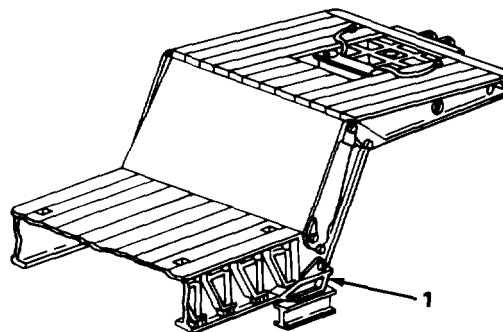
REMOVAL

WARNING

Placement of jacks is extremely important in this procedure. Failure to place jacks properly could result in injury or death.

Do not work under gooseneck without locking pins in place. Doing so could result in injury or death.

- 1. Semitrailer Two landing pads (1) a. Using overhead hoist, lift front of semitrailer.

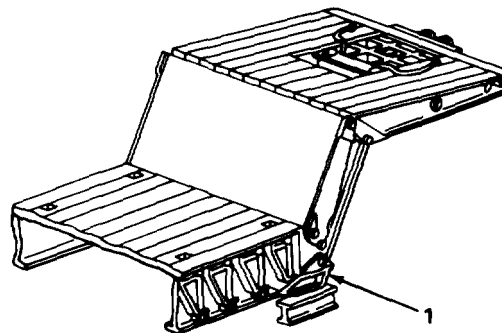


LOWER LINK ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
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REMOVAL - CONTINUED

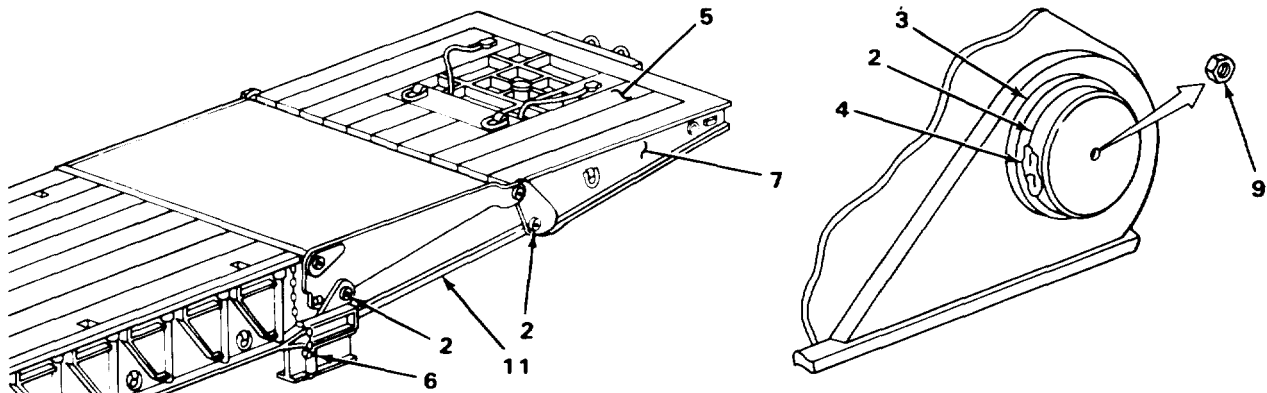
- | | | | |
|----|-------|----------------------|--|
| 1. | Cont. | Two landing pads (1) | b. Place wood blocks one-foot high under pads, and lower front of semitrailer onto blocks. |
|----|-------|----------------------|--|



- | | | | |
|----|-------------------------------|--------------------------|---|
| 2. | Two lower link hinge pins (2) | Two retaining rings (3) | a. Using torch, cut tack welds.
b. Take off.
c. Using portable grinder, grind weld (4) off to surface of pin (2) |
| 3. | Semitrailer | Gooseneck (5) | a. Using overhead hoist, lift until two locking pins(6) are loose.
b. Take out locking pins (7) (page 4-110).
c. Lower until gooseneck (5) is fully extended. |
| 4. | Gooseneck(5) | Upper deck side rail (7) | a. Using two hydraulic jacks, place one under each end of rail.
b. Raise front hydraulic jack until gooseneck (5) starts to lift.
c. Raise rear hydraulic jack until hinge pins (2) can be turned with pipe wrench. |

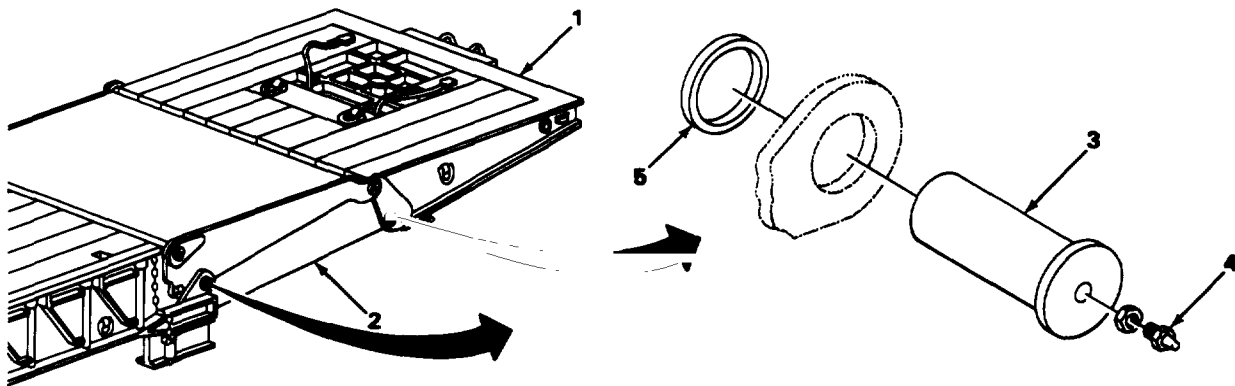
LOWER LINK ASSEMBLY - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED			
5.	Hinge pin (2)	Grease fitting (8)	Using 7/16-inch socket and ratchet handle with 3/8-inch drive, unscrew and take out.
6.		Nut (9)	<p>a. Use nut (9) that will fit threads on end of slide hammer rod.</p> <p>b. Put nut (9) over grease fitting hole (10) and have assistant hold in place with wood dowel.</p> <p>c. Using arc welder, weld nut (9) to hinge pin (2).</p> <p>Repeat steps 5 and 6 for other hinge pin. See TM 9-237.</p>
7.	Gooseneck (5)	Lower link arm (11)	Using dolly jacks, support lower link arm (11) at each end.
8.	Hinge pin (2)	Nut (9)	<p>a. Screw in slide hammer rod.</p> <p>b. Using slide hammer, take out hinge pin (2).</p> <p>Repeat for other hinge pin.</p>
9.	Gooseneck (5)	Lower link arm (11)	Using dolly jacks, lower and pull out.



LOWER LINK ASSEMBLY - CONTINUED

	LOCATION	ITEM	ACTION	REMARKS
INSTALLATION				
10.	Gooseneck (1)	Lower link arm (2)	a. Slide in, and raise into position using two trestles. b. Line up holes.	
11.	Lower link arm (2)	Two hinge pins (3)	Put in using 12-lb sledge hammer.	If using old hinge pins, cut nuts off with acetylene torch and remove weld with portable grinder before installing.
12.	Two hinge pins (3)	Two grease fittings (4)	a. Screw in, and tighten using 7/16-inch socket and ratchet handle with 3/8-inch drive. b. Take out dolly jacks.	
13.	Semitrailer	Gooseneck (1)	a. Raise to up position using overhead hoist. b. Put in locking pins.	
14.	Two hinge pins (3)	Two retaining rings (5)	a. Put on. b. Weld using arc welder.	See TM9-237.



NOTE

FOLLOW-ON MAINTENANCE: Lubricate pins (page 4-6).

TASK ENDS HERE

GOOSENECK HINGE PIN

This task covers:

- a. Removal (page 5-37)
- b. Installation (page 5-39)

INITIAL SETUP

Tools

- Adapter thread
- Blocks, wood
- Dowel, wooden
- Grinder, hand
- Hammer, sledge, 10-lb
- Hammer, slide
- Handle, ratchet, 3/8-inch drive
- Hoist, overhead
- Jack, dolly, 10-ton (two required)
- Jack, hydraulic, hand, 10-ton (two required)
- Socket, 7/16-inch, 3/8-inch drive

Tools - Continued

- Welder, acetylene
- Welder, arc
- Wrench, pipe

Personnel Required

Two

Equipment Condition

Gooseneck up (page 2-15).

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

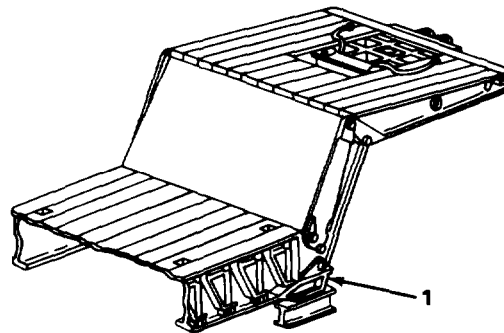
REMOVAL

WARNING

Placement of jacks is extremely important in this procedure. Failure to place jacks properly could result in personnel injury or death.

Do not work under gooseneck without locking pins in place. Doing so could result in injury or death.

- | | | | |
|----|-------------|----------------------|---|
| 1. | Semitrailer | Two landing pads (1) | a. Using overhead hoist, lift front of semitrailer. |
|----|-------------|----------------------|---|

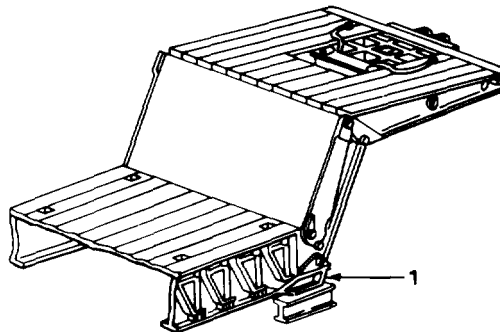


GOOSENECK HINGE PIN - CONTINUED

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

REMOVAL - CONTINUED

- | | | | |
|----|-------|----------------------|--|
| 1. | Cont. | Two landing pads (1) | b. Place blocking one foot high under pads and lower front of semitrailer onto blocks. |
|----|-------|----------------------|--|



- | | | | |
|----|---------------|--------------------------|---|
| 2. | Hinge pin(2) | Retaining ring (3) | a. Using acetylene torch, cut tack welds (4).
b. Take off.
c. Using portable grinder, grind off weld (4) to surface of pin (2). |
| 3. | Semitrailer | Gooseneck (5) | a. Using overhead hoist, lift until two locking pins (6) are loose.
b. Take out locking pins (6) (page 4-104).
c. Lower until gooseneck (5) is fully extended. |
| 4. | Gooseneck (5) | Upper deck side rail (7) | a. Place two 10-ton hydraulic jacks, one under each end of rail (7).
b. Raise front hydraulic jack until gooseneck (5) starts to lift.
c. Raise rear hydraulic jack until hinge pin (2) can be turned with pipe wrench. |

GOOSENECK HINGE PIN - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
5. Hinge pin (2)	Grease fitting (8)	Using 7/16-inch socket and ratchet handle with 3/8-inch drive, unscrew and take out.

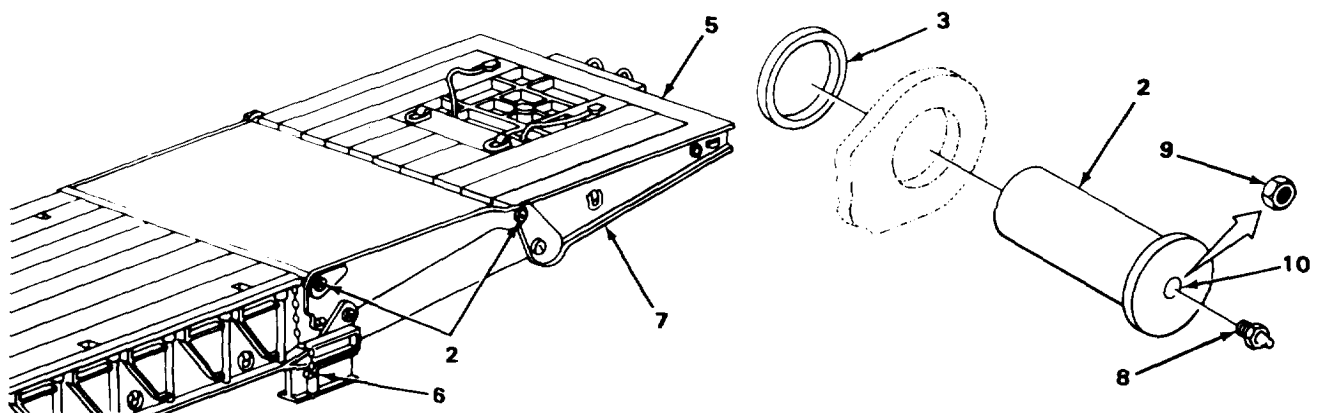
WARNING

Before removing hinge pin, the part being freed must be supported. If hinge pin is being removed from lower link arm, support end of lower link arm with dolly jack. If hinge pin is being removed from deck assembly arm, deck assembly must be supported by overhead hoist. Failure to do so may result in injury or death.

- | | | |
|----|---------|--|
| 6. | Nut (9) | <ol style="list-style-type: none"> Use nut (9) that will fit threads on end of slide hammer rod with adapter thread. Put nut (9) over grease fitting hole (10) and have assistant hold in place with wooden dowel. Using arc welder, weld nut (9) to hinge pin (2). <p>See TM 9-237.</p> <ol style="list-style-type: none"> Screw in slide hammer rod with adapter thread. Using slide hammer, take out. |
|----|---------|--|

INSTALLATION

- | | | | |
|----|---------------|--------------------|--|
| 7. | Gooseneck (5) | New hinge pin (2) | Put in using 10-lb sledge hammer. |
| 8. | Hinge pin (2) | Grease fitting (8) | Screw in, and tighten using 7/16-inch socket and ratchet handle with 3/8-inch drive. |

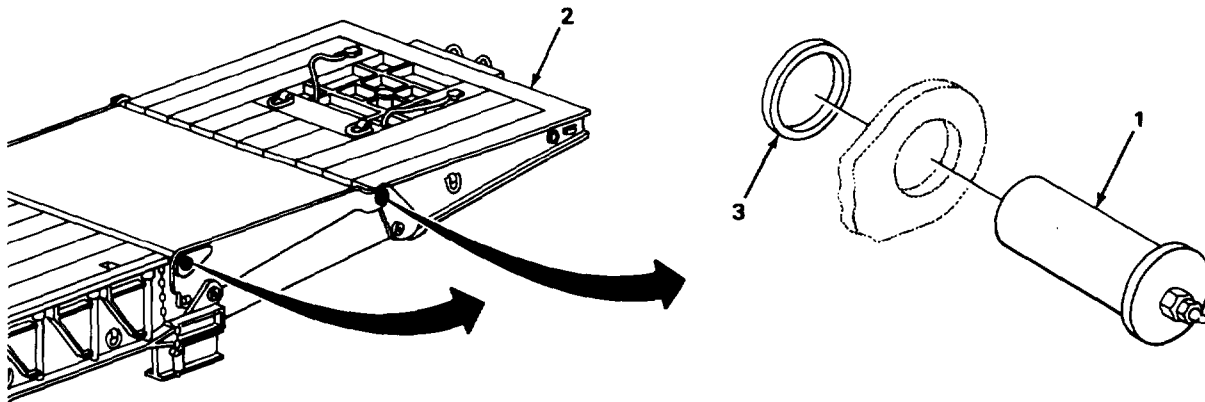


GOOSENECK HINGE PIN – CONTINUED

LOCATION	ITEM	ACTION	REMARKS
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INSTALLATION - CONTINUED

- | | | | |
|-----|---------------|------------------------------------|--|
| 9. | Hinge pin (1) | Gooseneck (2) and two locking pins | <ul style="list-style-type: none"> a. Raise to up position using overhead hoist. b. Install locking pins (page 4-110). |
| 10. | Hinge pin (1) | Retaining ring (3) | <ul style="list-style-type: none"> a. Put on. b. Weld using arc welder.
See TM 9-237. |



NOTE

FOLLOW-ON MAINTENANCE: Lubricate pins (page 4-6).

TASK ENDS HERE

SPARE TIRE CARRIER

This task covers:

Repair (page 5-42)

INITIAL SETUP

Tools

Dowel, wood
Grinder, portable
Torch, acetylene
Welder, arc

Personnel Required

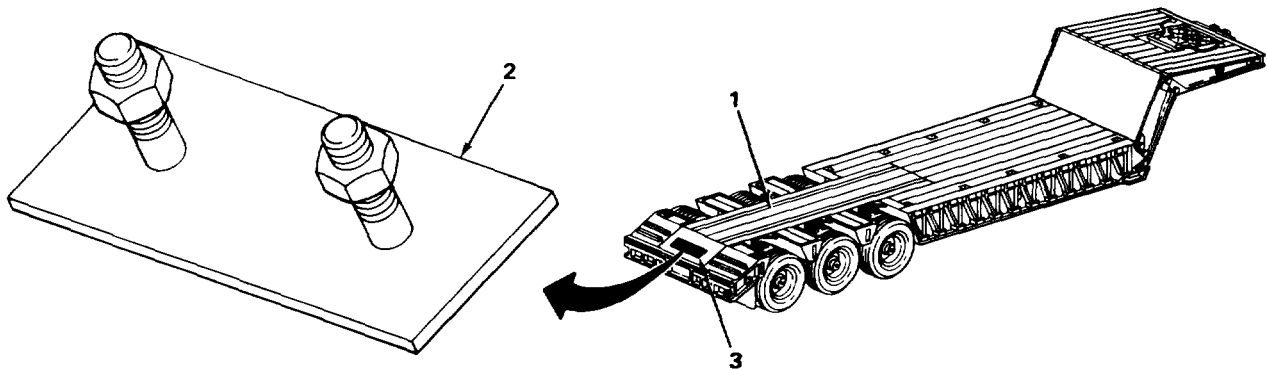
Two

Equipment Condition

Spare tire removed (page 3-13).

SPARE TIRE CARRIER - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REPAIR			
1.	Semitrailer (1)	Spare tire carrier (2)	a. Mark location above and beside to aid placement of new spare tire carrier (2). b. Using torch, cut off spare tire carrier (2).
2.		Deck (3)	Using portable grinder, grind weldment smooth.
3.		New spare tire carrier (2)	a. Put in position according to marks, and have assistant hold in place with wood dowel. b. Weld using arc welder. See TM 9-237- High yield strength, low alloy structural steels (T-1).



NOTE

FOLLOW-ON MAINTENANCE: Install spare tire (page 3-13).

TASK ENDS HERE

Section VI. SPRINGS AND SHOCKS MAINTENANCE

	Page	Page	
Clips	5-48	Springs and Clamp Plate	5-42
Radius Rods and Brackets	5-44		

SPRINGS AND CLAMP PLATE

This task covers:

- a. Removal (page 5-42)
 - b. Installation (page 5-43)
-

INITIAL SETUP

Tools

- Grinder, portable
- Jack, dolly, 10-ton
- Jack, hydraulic, hand, 10-ton
- Socket, 1 1/8-inch
- Torch, acetylene
- Trestles, motor vehicle, 10-ton
(three required)
- Welder, arc
- Wrench, open-end, 1 1/8-inch
(two required)

Tools - Continued

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

Personnel Required

One

Equipment Condition

Wheel and tire assembly removed
(page 3-9).

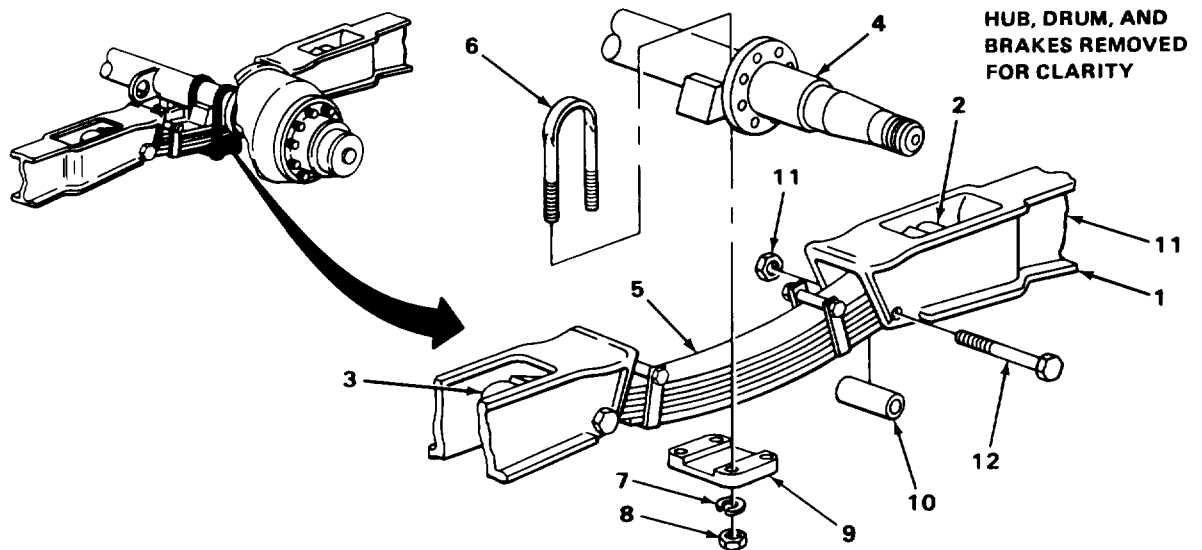
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

1.	Equalizing beam (1)	<ul style="list-style-type: none"> a. Using hydraulic jack, lift spring end of equalizing beam approximately 3 inches. b. Place trestle under equalizing beam (1) just behind spring slot (2). c. Remove hydraulic jack, and repeat for other spring end (3).
2.	Axle (4)	<ul style="list-style-type: none"> a. Using hydraulic jack, lift and put on trestle. b. Take out hydraulic jack.
3.	Spring (2) and axle (1)	Using 1 1/2-inch open-end wrench, unscrew and take off.
4.	Clamp plate (9)	Take off.
5.	Axle (1)	Using dolly jack, raise spring until weight is taken off spacers (10).
6.	Equalizing beam (1)	Using two 1 1/8-inch open-end wrenches, unscrew and take out. Repeat for other equalizing beam.

SPRINGS AND CLAMP PLATE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED		
7.	Spring (5)	Using dolly jack, lower and take out.
INSTALLATION		
8.	Equalizing beam (1)	Lift into position using dolly jack.
9.	Nut (11), screw (12), and spacer (10)	a. Put in, and tighten using two 1 1/8-inch open-end wrenches. b. Tighten to approximately 75 ft-lb (102 N • m) of torque (lubricated) using 1 1/8-inch open-end wrench, 1 1/8-inch socket, and torque wrench. Repeat for other equalizing beam.
10.	Axle (4)	a. Take out trestle using hydraulic jack. b. Lower axle (4) onto spring.
11.	Axle (4) and spring (5)	Two U-bolts (6), four washers (7), four nuts (8), and clamp plate (9)



SPRINGS AND CLAMP PLATE - CONTINUED

INSTALLATION – CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Install wheel and tire assembly (page 3-9).
TASK ENDS HERE

RADIUS RODS AND BRACKETS

This task covers:

- a. Removal (page 5-44)
 - b. Installation (page 5-46)
 - c. Adjustment (page 5-47)
-

INITIAL SETUP

Tools

- Grinder, portable
- Socket, 1 5/8-inch
- Socket, 1 1/2-inch
- Tape measure
- Torch, acetylene
- Welder, arc
- Wrench, impact
- Wrench, open-end, 15/16-inch
(two required)
- Wrench, open-end, 1 11/16-inch
- Wrench, pipe (two required)

Personnel Required

Two

Equipment Condition

Air reservoir removed (page 4-98).
 Air chambers removed (middle axle)
 (page 4-92).

LOCATION	ITEM	ACTION	REMARKS
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REMOVAL

NOTE

There are two radius rods on the semitrailer. This procedure is for one. Repeat the procedure for the other.

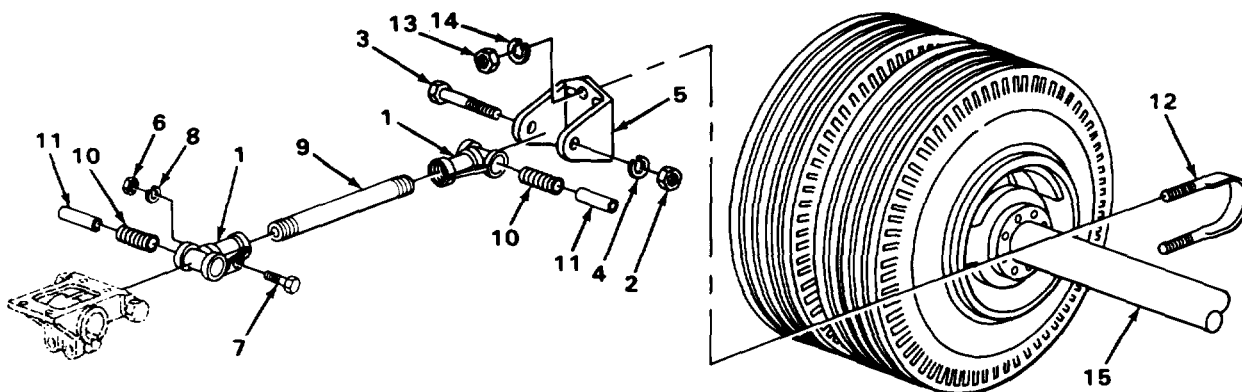
Before starting procedure measure and record the following measurements:

Distance between radius rod ends (1) flanges on both radius rods.

Distance between front and middle axles at both axle ends.

RADIUS RODS AND BRACKETS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL – CONTINUED			
1.	Radius rod end (1)	Nut (2), rod bolt (3), and washer (4)	Using 1 11/16-inch open-end wrench, 1 5/8-inch socket, and impact wrench, unscrew and take out. Repeat for other radius rod end.
2.	Radius rod brackets (5)	Radius rod assembly	Take out.
3.	Radius rod end (1)	Two nuts (6), two bolts (7), and two washers (8)	Using two 15/16-inch open-end wrenches, loosen.
4.	Radius rod screw (9)	Radius rod end (1)	Using two pipe wrenches, unscrew and take off.
5.	Radius rod end (1)	Rubber bushing (10) and liner (11)	Take out.
6.	U-bolt (12)	Two nuts (13) and two washers (14)	a. Using 1 1/2-inch socket and impact wrench, unscrew and take off. b. Take off U-bolt.
7.	Middle axle (15)	Bracket (5)	a. Mark location on axle (15). b. Using cutting torch, cut weldment. c. Using portable grinder, grind weld off axle surface. Be careful not to remove location marks.



RADIUS RODS AND BRACKETS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
8. Middle axle (1)	Bracket (2), U-bolt (3), two nuts (4), and two washers (5)	a. Put bracket (2) in position according to marks. b. Put U-bolt (3) in place. c. Screw on two washers (5) and two nuts (4), and tighten using 1 1/2-inch socket and impact wrench. d. Weld bracket (2) to axle (1) using arc welder. See TM 9-237.
9.	Radius rod screw (6) and two radius rod ends (7) and (8)	a. Start two radius rod ends (7) and (8) three turns each on radius rod screw (6). b. Using pipe wrench while assistant holds radius rod ends (7) and (8), turn radius rod screw (6) until distance between flanges (9) is the same as measurement taken at start of procedure.
10. Radius rod end (7)	Rubber bushing (10) and liner (11)	Put in.
11. Front bracket (12)	Radius rod end (8)	Put in place, and line up holes.
12. Radius rod end (8) and front bracket (12)	Rod bolt (13), nut (14), and washer (15)	Put in, and tighten using 1 11/16-inch open-end wrench, 1 5/8-inch socket, and impact wrench.
13. Bracket (2)	Radius rod end (7)	Lift into position, and line up holes. It may be necessary to adjust radius rod screw with pipe wrench.

RADIUS RODS AND BRACKETS - CONTINUED

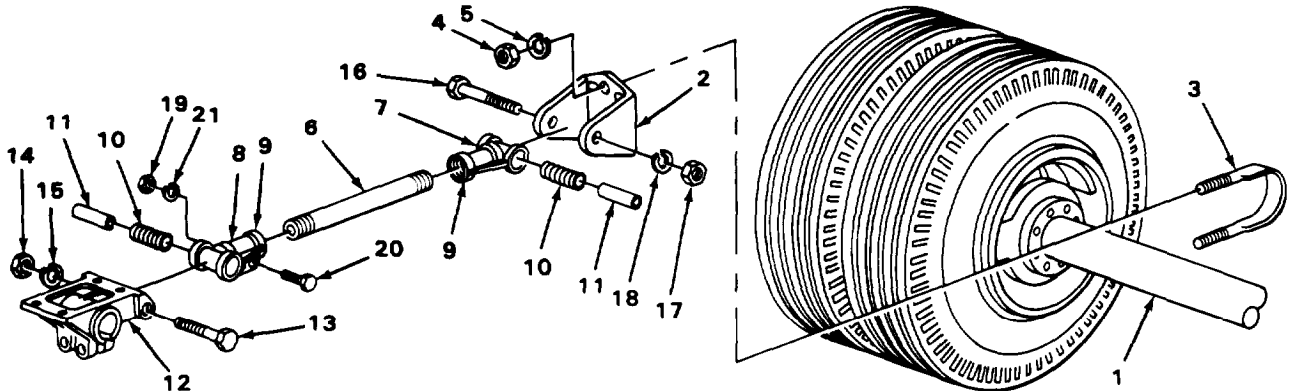
LOCATION	ITEM	ACTION	REMARKS
INSTALLATION - CONTINUED			
14. Radius rod end (7) and bracket (2)	Rod bolt (16), nut (17), and washer (18)	a. Screw in and tighten using 1 11/16-inch open-end wrench, 1 5/8-inch socket, and impact wrench. b. Tighten to approximately 600 ft-lb (184 N·m) of torque (lubricated) using 1 11/16-inch open-end wrench, 1 5/8-inch socket and torque wrench.	

ADJUSTMENT

NOTE

Be certain nuts and bolts on radius rod ends are loose. Radius rod screw must turn for adjustment.

15. Radius rod assembly	Radius rod end flanges (9)	a. Measure distance between. b. Make same measurement on other radius rod. c. Using pipe wrench, turn radius rod screw until both measurements are the same.	
16. Radius rod end (7) and (8)	Two nuts (19), two bolts (20), and two washers (21)	Tighten using two 15/16-inch wrenches.	



NOTE

FOLLOW-ON MAINTENANCE:

1. Install middle axle air chambers (page 4-92).
2. Install air reservoir (page 4-98).

TASK ENDS HERE

CLIPS

This task covers:

- a. Removal (page 5-48)
- b. Installation (page 5-48)

INITIAL SETUP

Tools	Personnel Required
Grinder, portable Handle, ratchet, 3/8-inch drive Socket, 9/16-inch Torch, acetylene Welder, arc	One

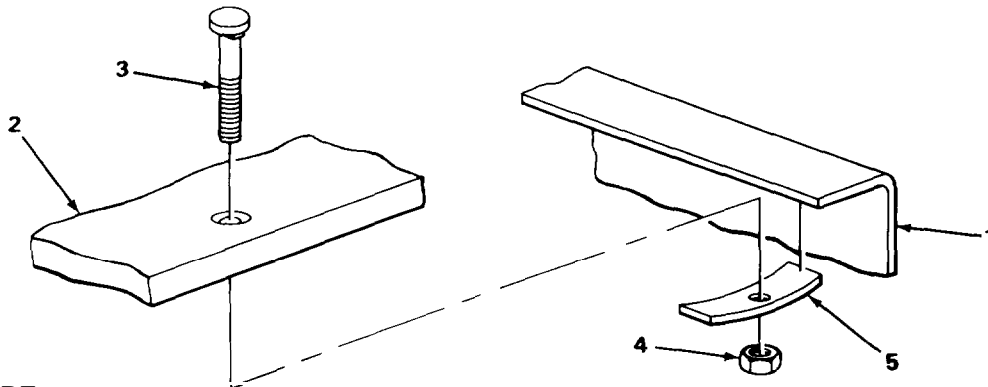
LOCATION	ITEM	ACTION REMARKS
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REMOVAL

- | | | | |
|----|-------------------------|-----------------------|--|
| 1. | Frame (1) and plank (2) | Screw (3) and nut (4) | Using 9/16-inch socket and ratchet handle with 3/8-inch drive, and take off. |
| 2. | Frame (1) | Clip (5) | a. Cut off using torch.
b. Grind off weldment using grinder. |

INSTALLATION

- | | | | |
|----|-------------------------|------------------------------|--|
| 3. | Frame (1) and plank (2) | Screw (3), clip (5), nut (4) | Put on, and tighten using 9/16-inch socket and ratchet handle with 3/8-inch drive.
Be sure clip (5) has one end on frame(1). |
| 4. | Frame (1) | Clip (5) | Weld using arc welder.
See TM 9-237- High yield strength. low alloy structural steels (T-1). |



TASK ENDS HERE

APPENDIX A
REFERENCES

A-1. PUBLICATION INDEXES AND GENERAL REFERENCES.

Indexes should be consulted frequently for latest changes, revisions, or references given in this appendix and for new publications relating to material covered in this publication.

a. Military Publication Indexes.

Consolidated Index of Publications and Blank Forms DA PAM 310-1

b. General References.

Techniques of Military instruction FM 21-6
 Military Symbols FM 21-30

A-2. FORMS.

Refer to DA PAM 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to the material.

A-3. OTHER PUBLICATIONS.

The following publications contain information pertinent to the major item material and associated equipment.

a. Camouflage.

Camouflage FM 5-20
 Color, Marking, and Camouflage Painting of Military
 Vehicles, Construction Equipment and Materials Handling
 Equipment TB 43-0209

b. Decontamination.

Chemical, Biological, and Radiological (CBR)
 Decontamination TM 3-220
 Chemical, Biological, Radiological, and Nuclear Defense FM 21-40

c. General.

Basic Cold Weather Manual FM 31-70
 Deep Water Fording of Ordnance Materiel TM 9-238
 Driver Selection and Training (Wheeled Vehicles) FM 55-30
 Manual for Wheeled Vehicle Driver FM 21-305
 Northern Operations FM 31-71
 Operation and Maintenance of Ordnance Material in Cold
 Weather (0° to -65°F) FM 9-207
 Procedures for Destruction of Tank Automotive Equipment
 to Prevent Enemy Use (U.S. Army Tank-Automotive Command) TM 750-244-6

A-3. OTHER PUBLICATIONS - CONTINUED.

d. Maintenance and Repair.

Description, Use, Bonding Techniques, and Properties of
Adhesives TB ORD 1032

Inspection, Care, and Maintenance of Antifriction Bearings TM 9-214

Materials Used for Cleaning, Preserving, Abrading, and
Cementing Ordnance Material and Related Materials
Including Chemicals TM 9-247

Operator's Manual for Welding Theory and Application TM 9-237

Organizational Care, Maintenance, and Repair of Pneumatic
Tires and Inner Tubes TM 9-2610-200-24

e. Administrative Storage.

Administrative Storage of Equipment TM 740-90-1

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL.

- a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance 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 functions to 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 (e.g., by sight, sound, or feel).
- b. **Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.
- c. **Service.** Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), preserve, drain, paint, or replenish fuel, lubricants, 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 to be adjusted on instruments or test, measuring and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
- g. **Remove/install.** To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of a piece of equipment or system.

B-2. MAINTENANCE FUNCTIONS - CONTINUED.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. Replace is authorized by the MAC and shown as the third position code of the SMR code.

i. Repair. The application of maintenance services¹, including fault location/troubleshooting², removal/installation, and disassembly/assembly 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 or action) prescribed to restore an item to completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material 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, Components/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 functions to be performed on the item listed in column 2. (For detailed explanation of these functions, see paragraph B-2.)

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), 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

- 1 Services – inspect, test, service, adjust, align, calibrate, and/or replace.
- 2 Fault locate/troubleshoot – the process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).
- 3 Disassemble/assemble – 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 (i.e., assigned an SMR code) for the category of maintenance under consideration,
- 4 Actions – welding, grinding, riveting, straightening, facing, remachining, and/or resurfacing.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II - CONTINUED.

control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance 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, TM DE, and support equipment required to perform the designated function,

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, that 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 II, 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								
0609	Lamps	Replace		0.3					
	Light Assemblies	Replace Repair		0.5 0.3					
0613	Harness, Wire Chassis	Repair Replace		1.0 2.0					
	Shur-Volt Box, Electric	Replace		1.0					
11	AXLE								
1100	Axle	Replace			6.0				
	Axle Cap	Replace			1.0				
	Equalizing Beam	Replace			3.5				
	Trunnion Tube and Clamp	Replace			3.0				
12	BRAKES								
1202	Brake, Service	Inspect Service Adjust Repair Replace	0.2	1.0 1.0 4.0 4.0					
	Brakeshoe	Repair Replace		4.0	1.0				
1208	Brake, Camshaft	Repair		3.0					
	Coupling, Air	Repair Replace		0.1 0.5					
	Lines and Fittings	Repair Replace		1.0 2.0					

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		
1208	Chamber, Airbrake	Adjust		0.3					
		Repair			2.0				
		Replace		1.0					
	Chamber, Spring	Replace		1.0					
		Adjust		0.3					
	Valve, Emergency Relay	Replace		2.0					
	Valve, Multifunction	Test		0.5					
Replace			2.0						
Reservoir, Air	Replace		2.5						
Draincock	Replace		0.3						
13	WHEELS, HUBS, AND DRUMS								
1311	Hub, Drum, Bearing, and Seal	Service		1.5					
		Adjust		0.3					
		Repair			1.5				
		Replace		1.5					
Wheel	Replace	1.0							
1313	Tire Assembly	Repair		1.0	*				
		Replace		0.5					
		Inspect		0.3					
	Tubes	Repair		0.5					
		Replace		0.7					
15	FRAME AND TOWING ATTACHMENTS								
1501	Outriggers Brackets)	Replace		0.7					
		Replace			1.3				
	Lower Link Assembly	Replace			3.0				

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		
1501	FRAME AND TOWING ATTACHMENTS (CONTINUED)								
	Locking Pins (Gooseneck)	Replace		0.3					
	Hinge Pins (Gooseneck)	Replace			2.0				
1504	Spare Tire Carrier	Replace			1.0				
	Kingpin	Inspect Replace	0.1	0.3					
16	SPRINGS AND SHOCKS								
1601	Spring and Clamp Plate	Replace			6.0				
1605	Radius Rods and Brackets	Replace			2.0				
18	BODY								
1810	Deck	Repair		8.0					
22	ACCESSORIES								
2202	Reflectors	Replace		0.1					
2210	Plates, Vehicle Data	Replace		0.3					
	Mud Flaps	Replace		1.0					

SECTION III. TOOLS AND TEST EQUIPMENT REQUIREMENTS

TOOLS OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O,F,H	COMMON TOOLS: TOOL KIT, MECHANICS GEN	5180-00-177-7033	
2	O,F,H	SHOP EQUIPMENT, COMMON SET NO. 1	4910-00-754-0654	
3	O,F,H	SHOP EQUIPMENT, SUPPLE- MENTAL SET NO. 1	4910-00-754-0653	
4	F,H	SHOP EQUIPMENT, FIELD MAINT, BASIC SET	4910-00-754-0705	
5	H	SHOP EQUIPMENT, WHEELED FIELD MAINTENANCE, POST CAMP AND STATION	4910-00-348-7696	

SPECIAL TOOLS: NONE

SECTION IV. REMARKS

REFERENCE CODE	REMARKS
	NONE

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 semitrailer 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. The 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 semitrailer in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the semitrailer 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 Number). This column indicates the number of the illustration in which the item is shown.

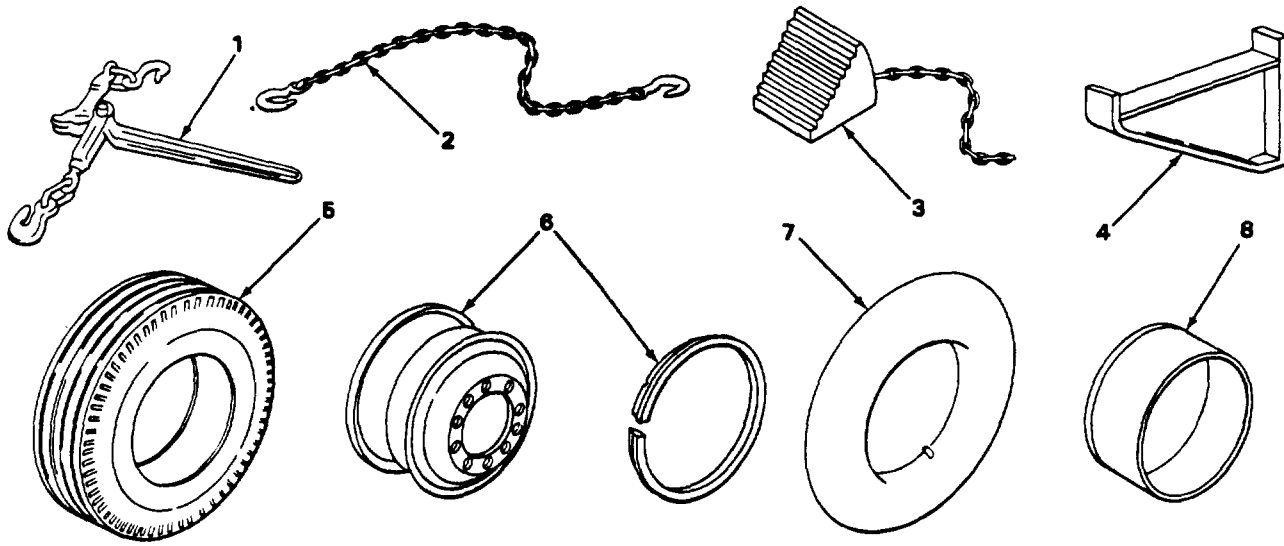
b. Column (2) – National Stock Number. Indicates the National stock number assigned to the item and will be used for requisitioning purposes.

c. Column (3) – Description. Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number.

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 (e.g., ea, in., pr).

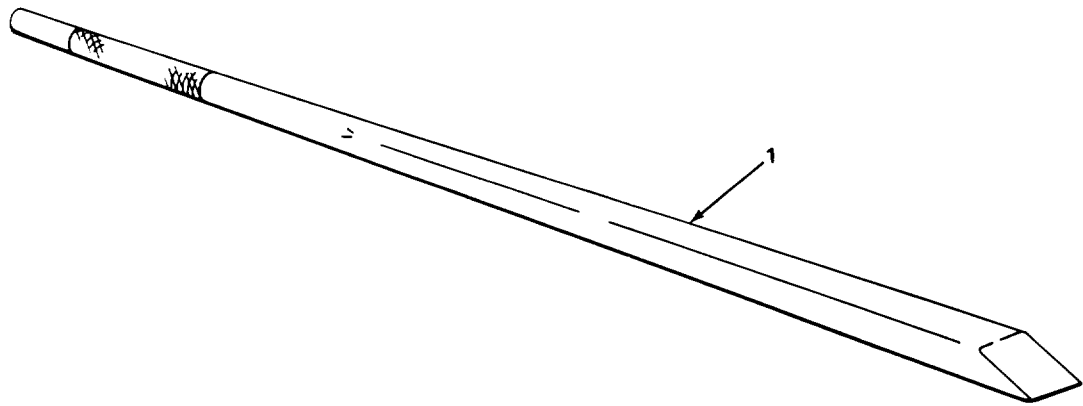
e. Column (5) – Quantity required (Qty rqr). Indicates the quantity of the item authorized to be used with/on the equipment.

Section II. COMPONENTS OF END ITEM LIST



(1) ILLUS NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQ'D
1	3990-00-171-9774	Load binder		EA	10
2	4010-00-443-4845	Chain assembly		EA	10
3	2540-00-670-2003	Chock block		EA	2
4	BCI-0004	Outrigger, rear		EA	6
5	2610-00-194-6212	Tire, pneumatic radial 12-ply regular 10:00 x 15		EA	1
6	2530-01-048-7842	Wheel, pneumatic tire		EA	1
7	2610-00-052-7969	Tube, inner, pneumatic		EA	1
8	2610-00-260-7354	Flap, pneumatic tire		EA	1

Section III. BASIC ISSUE ITEMS LIST



(1) ILLUS NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM AND PART NUMBER	(4) USABLE ON CODE	(5) U/M	(6) QTY REQ'D
1	5120-00-224-1390	Crowbar		EA	1

APPENDIX D
ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists additional items you are authorized for the support of the semitrailer.

D-2. GENERAL

This list identifies items that do not have to accompany the semitrailer and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, or JTA.

D-3. EXPLANATION OF LISTING

National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. The items are listed in alphabetical sequence by item name under the type document (i.e., CTA, MTOE, TDA, or JTA) which authorizes the item(s) to you.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) NATIONAL STOCK NUMBER	(2) DESCRIPTION FSCM & PART NUMBER USABLE ON CODE	(3) U/M	(4) QTY AUTH
	MTOE AUTHORIZED ITEMS NONE		
	CTA AUTHORIZED ITEMS NONE		

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 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 initial setup narrative instructions to identify the material.

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 (e.g., ea, in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION (FSCM)	(5) U/M
1.			Alcohol, Denatured	
2.	C	7920-00-514-2417	Brush, Acid Swabbing HB-643 (81348) Box of 144	ea
3.	O	5350-00-221-0872	Cloth, Abrasive (Crocus) P-C-458 (81348) 50-sheet package	sh
4.	O	7930-00-282-9699	Detergent, GP Liq, WS, A	gal

SECTION II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION (FSCM)	(5) U/M
5.			FLUX	PT
6.	C	9150-00-190-0904	GREASE, AUTOMOTIVE AND ARTILLERY, GAA, MIL-G-10924 (81349), 1-POUND (0.454-KG) CAN	LB
7.	C	9150-00-189-6727	OIL, LUBRICATING, OE/HDO 10 MIL-L-2104C (81349) 1-QUART (0.946-LITER) CAN	QT
8.	C	9150-00-186-6681	OIL, LUBRICATING, OE/HDO 30 MIL-L-2104C (81349) 1-QUART (0.956-LITER) CAN	QT
9.	C	9150-00-402-4478	OIL, LUBRICATING, OEA, MIL-L-46167 (81349) 1-QUART (0.496-LITER) CAN	QT
10.	C	9150-00-231-2361	OIL, LUBRICATING, PRESERVATIVE PL-M, MIL-L-3150 (81349) 1-QUART (0.946-LITER) CAN	QT
11.	C	9150-00-231-6689	OIL, LUBRICATING, PRESERVATIVE PL-S, VV-L-800 (81348) 1-QUART (0.946-LITER) CAN	QT
12.	C	7920-00-205-1711	RAGS, WIPING, A-A-531 (58536) 50 POUND (22.7-KG) BALE	LB
13.			SOLDER, ROSIN CORE	
14.	C		SOLVENT, DRYCLEANING, TYPE II PD-680 (81348) 1-QUART (0.946-LITER) CAN 1-GALLON (3.785-LITER) CAN 55-GALLON (208-LITER) DRUM	QT GAL GAL
15.	O	9905-00-537-8954	TAG, MARKER, MIL-T-12755 (81349) BOX OF 50	
16.	O	8030-00-889-3534	TAPE, ANTISEIZING (TEFLON) MIL-T-27730 (81349) 1/4 INCH WIDE X 260 INCHES LONG	FT
17.			TAPE, ELECTRICAL, PLASTIC	

APPENDIX F

REPAIR PARTS AND SPECIAL TOOLS LISTS

SECTION I. INTRODUCTION

1. Scope.

This manual 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 organizational, direct support, and general support maintenance of the Trailer. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the Source, Maintenance and Recoverability (SMR) codes.

2. General.

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 NSN sequence.

b. Section III. Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National Item Identification Number (NIIN) sequence, of all National stock numbers (NSN) appearing in the listings, 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.

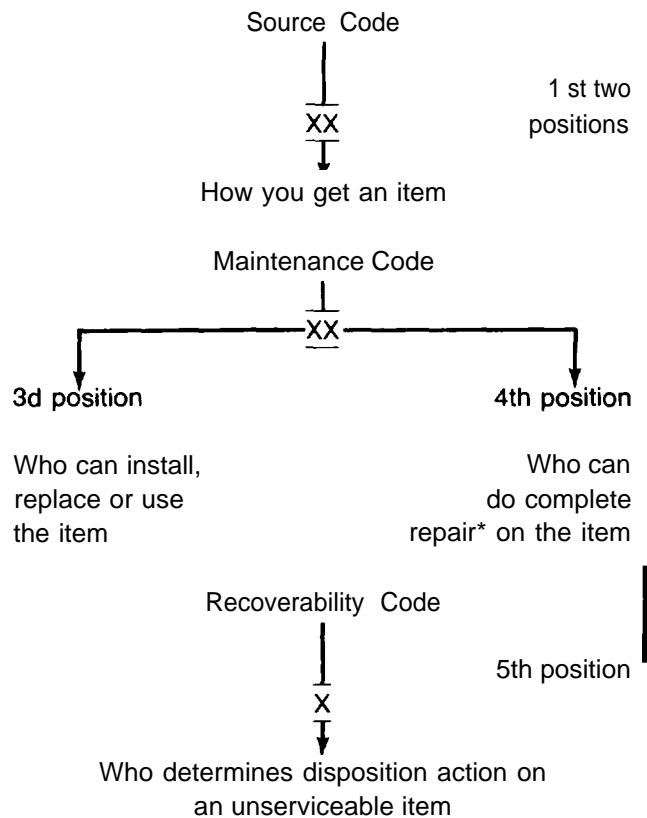
3. Explanation of Columns.

a. Illustration (Column (1)). This column is divided as follows:

(1) ((a) FIG NO.) Figure Number. Indicates the figure number illustrating an exploded view of a functional group.

(2) ((b) ITEM NO.) Item Number. 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 instructions, as shown in the following breakout:



* Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first two positions of the SMR code. Explanations of source codes follow:

Code	Explanation
PA PB PC PD PE PF PG	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.
KD KF KB	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.
MO-(Made at Org Category) MF-(Made at DS Category) MH-(Made at GS Category) MD-(Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by NSN in the Description column and listed in the Bulk Material group in the repair parts list in this manual. 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 category, order the item from the higher category of maintenance.
AO-(Assembled by Org Category) AF-(Assembled by DS Category)	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

AH-(Assembled by GS Category)
AD-(Assembled by Depot)

} category 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 the item is assembled at a higher category, order the item from the higher category of maintenance.

XA } Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)

XB } If an "XB" item is not available from salvage, order it using the FSCM and part number given.

XC } Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number. Not applicable.

XD } Item is not stocked. Order an "XD"-coded item through normal supply channels using the FSCM and part number given, if no NSN is available.

NOTE: Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA".

(2) Maintenance Code. Maintenance codes tell you the category(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 category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

Code	Application/Explanation
C	-Crew or operator maintenance done within organization maintenance.
O	-Organizational category can remove, replace, and use the item.
F	-Direct support category can remove, replace, and use the item.
H	-General support category can remove, replace, and use the item.
L	-Specialized repair activity can remove, replace, and use the item.
D	-Depot category can remove, replace, and use the item,

(b) The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.) This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	-Organizational is the lowest category that can do complete repair of the item.
F	-Direct support is the lowest category that can do complete repair of the item.
H	-General support is the lowest category that can do complete repair of the item.
L	-Specialized repair activity is the lowest category that can do complete repair of the item.
D	-Depot is the lowest category that can do complete repair of the item.
Z	-Nonreparable. No repair is authorized.

Code	Application/Explanation
B	-No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR code as follows:

Recoverability Codes	Definition
Z	-Nonreparable item. When unserviceable, condemn and dispose of the item at the category of maintenance shown in 3d position of SMR code.
O	-Reparable item. When uneconomically repairable, condemn and dispose of the item at organizational category.
F	-Reparable item. When uneconomically repairable, condemn and dispose of the item at the direct support category.
H	-Reparable item. When uneconomically repairable, condemn and dispose of the item at the general support category.
D	-Reparable item. When beyond lower category repair capability, return to depot. Condemnation and disposal of item not authorized below depot category.
L	-Reparable item. Condemnation and disposal not authorized below specialized repair activity.
A	-Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. NATIONAL STOCK NUMBER (Column (3)). Lists the National Stock Number (NSN) assigned to the item. Use the NSN for requests/requisitions.

d. FSCM (Column (4)). The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

e. PART NUMBER (Column (5)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristic of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE: When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered, but go ahead and use or furnish it as the replacement part.

f. DESCRIPTION (Column (6)). This column includes the following information:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The physical security classification. Not applicable.

(3) Items that are included in kits and sets are listed below the name of the kit or set.

(4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry. If the first item of a figure is indented, the assembly appears as the last item in the previous figure.

(5) NSN's for bulk materials are referenced in the description column in the line item entry for the item to be manufactured/fabricated.

(6) When the part to be used differs between serial numbers of the same model, the effective serial numbers are shown as the last line of the description.

(7) The USABLE ON CODE. When applicable (see paragraph 4, Special Information).

(8) In the Special Tools List section, the Basis Of Issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.

g. U/M (Column (7)). The unit of Measure (U/M) indicates the measure (e.g., foot, gallon, pound) or count (e.g., each, dozen, gross) of a listed item. A two-character alpha code (e.g., FT, GL, LB, EA, DZ, GR) appears in this column to indicate the measure or count. If the U/M code appearing in this column differs from the Unit of Issue (U/I) code listed in the Army Master Data File (AMDF), request the lowest U/I that will satisfy your needs.

h. QTY INC IN UNIT (Column (8)). The Quantity Incorporated in Unit (QTY INC IN UNIT) 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 no specific quantity is applicable (e.g., shims, spacers).

4. SPECIAL INFORMATION.

a. The "USABLE ON CODE" title appears in the lower right corner of column (6), Description. Usable on codes are shown in the right-hand margin of the description column. Uncoded items are applicable to all models. Identification of the usable on codes used in this publication are:

Code	<u>Used On</u>
T01	M870
U17	403LF (MARINE CORPS)

b. Bulk materials required to manufacture items are listed in the Bulk Material Group of this manual. NSN's for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated. Detailed manufacturing instructions for items source coded to be

manufactured or fabricated are found in the appropriate appendices of this manual.

c. Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in the appropriate appendices of this manual. Items that makeup the assembly are listed immediately following the assembled item entry.

d. Line item entries for repair kits and sets appear as the last entries in the repair parts listing for the figure in which their parts are listed as repair parts.

e. Items which have the word BULK in the figure number column will have an index number shown in the item number column. This index number is furnished for use as a cross-reference between the National Stock Number/Part Number Index and the Bulk Material List in Section II.

5. 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 functional group to which the item belongs. This is necessary since figures are prepared for functional groups, and listings are divided into the same groups.

(2) Second. Find the figure covering the functional group to which the item belongs.

(3) Third. Identify the item on the figure and note the item number of the item.

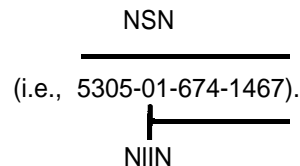
(4) Fourth. Refer to the Repair Parts List for the figure to find the line item entry for the item number noted on the figure.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent

national stock number or part number. The NSN index is in National Item Identification Number (NIIN)* sequence. The part numbers in the Part Number Index are listed in ascending alphanumeric sequence. Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

* The NIIN consists of the last 9 digits of the NSN



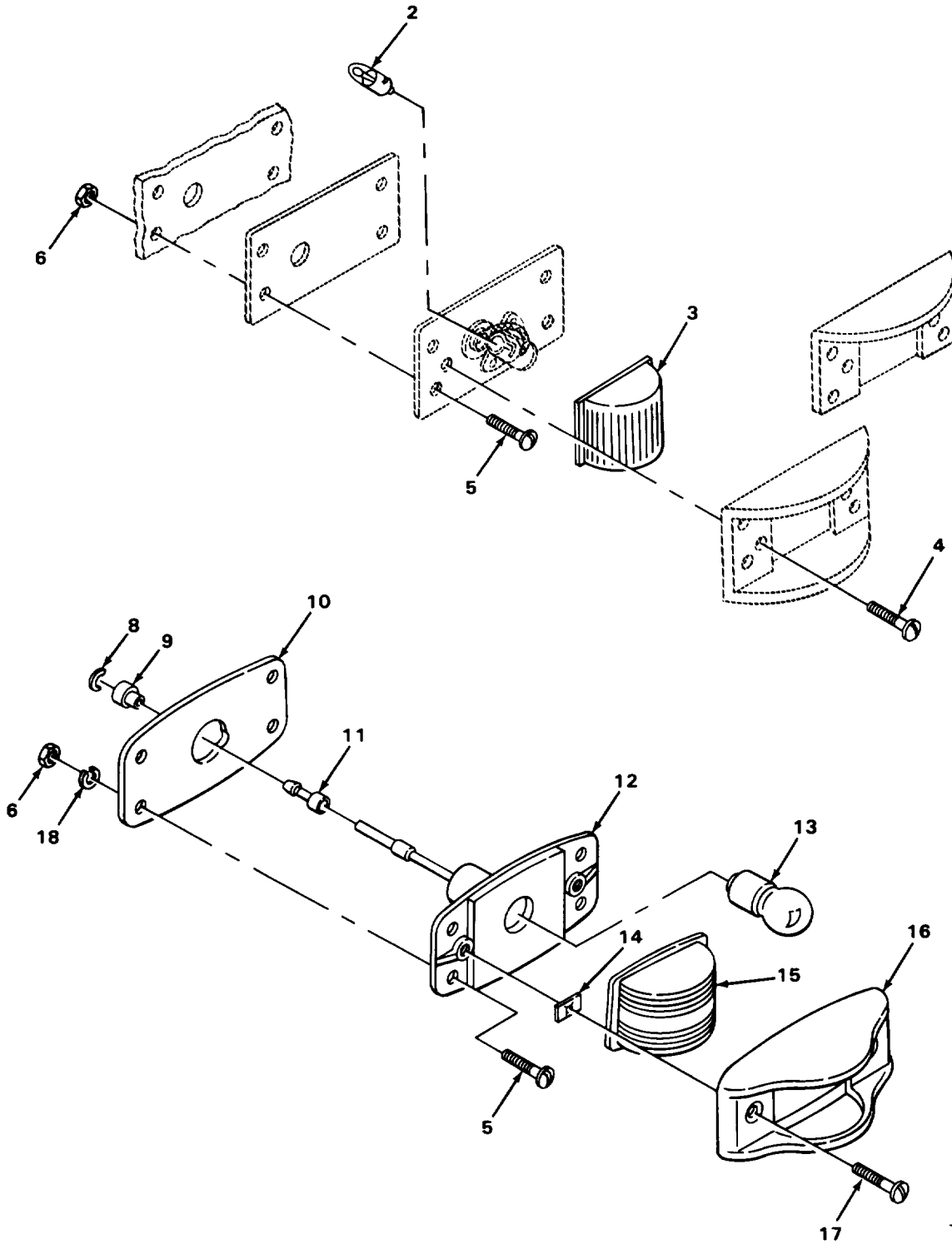
(2) Second. After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

6. Abbreviations.

For standard abbreviations see MIL-STD-12D, Military Standard Abbreviations For Use On Drawing, Specifications, Standards And in Technical Documents.

1
2 THRU 4

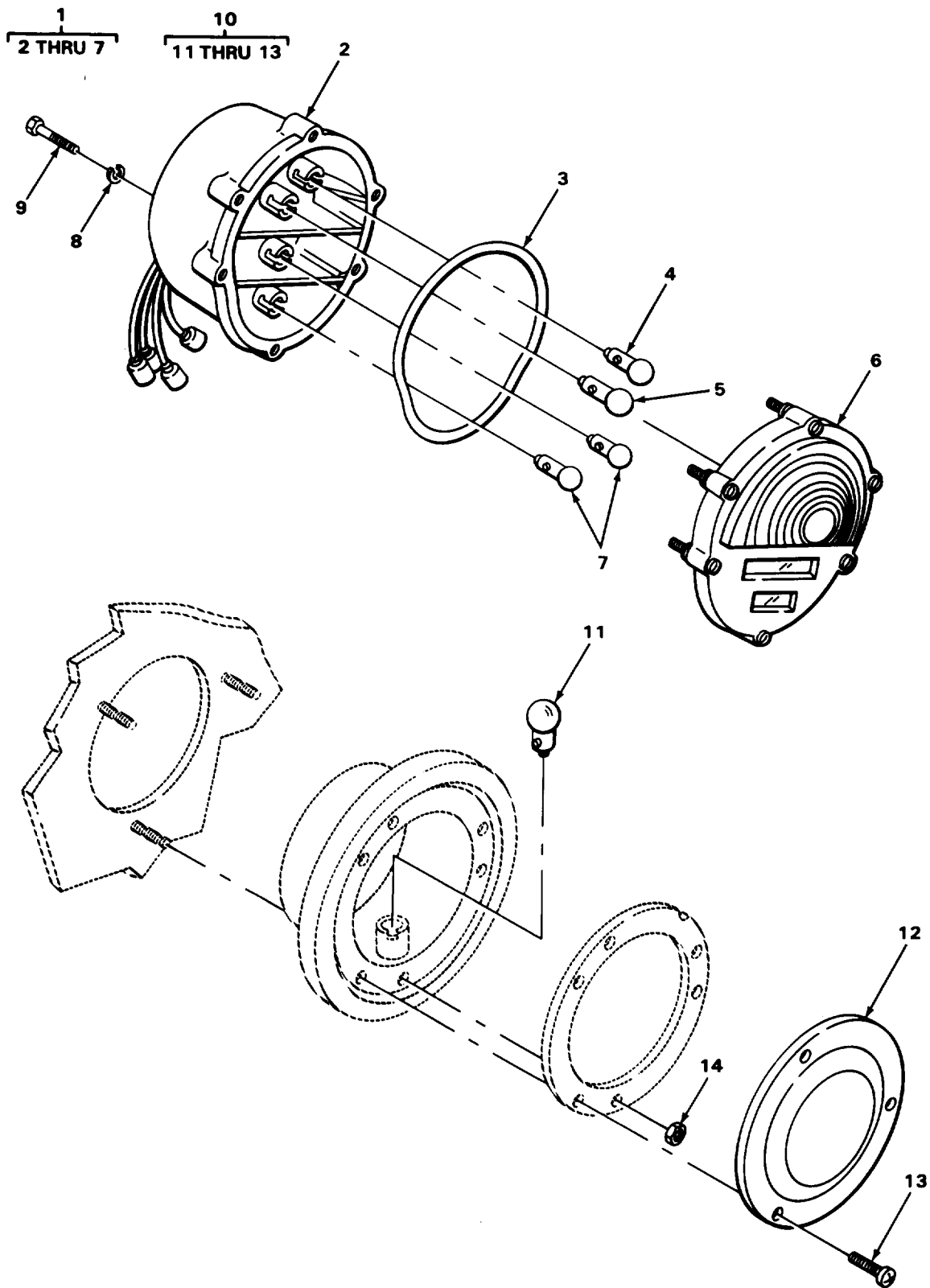
7
8 THRU 17



TA224194

FIGURE 1. CLEARANCE LIGHTS

SECTION II REPAIR PARTS LIST		TM5-2330-360-14&P						(7)	(8)
(1) ILLUS- TRATION (A) FIG NO	(B) ITEM NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	USABLE ON CODE	U\M	QTY INC IN UNIT
GROUP 06-ELECTRICAL SYSTEM 0609-LIGHTS									
1	1	XDOOO		26697	06000000124A	LIGHT,CLEARANCE AMBER	T01	EA	4
1	1	XDOOO		26697	06000000124R	LIGHT,CLEARANCE RED	TP1	EA	5
1	2	PAOZZ	6240-00-944-1264	26697	06000000-194	.LAMP, INCANDESCENT	T01	EA	1
1	3	PAOZZ	6220-00-128-6823	26697	06000124-15R	.LENS,LIGHT RED	T01	EA	1
1	3	PAOZZ	6220-00-128-6827	26697	06000124-15A	.LENS,LIGHT AMBER	T01	EA	1
1	4	PAOZZ	5305-00-701-5071	96906	MS51959-61	.SCREW,MACHINE	T01	EA	2
1	5	PAOZZ	5305-00-984-6211	96906	MS35206-264	SCREW,MACHINE		EA	4
1	6	PAOZZ	5310-00-934-9751	96906	MS35649-202	NUT,PLAIN,HEXAGON		EA	4
1	7	PAOOO	6220-00-577-3434	96906	MS35423-1	LIGHT,MARKER,CLEARA AMBER	U17	EA	4
1	7	PAOOO	6220-00-726-1916	96906	MS35423-2	LIGHT,MARKER,CLEARA RED	U17	EA	5
1	8	PAOZZ	5310-00-833-8567	19207	8338567	.WASHER,SLOTTED	U17	EA	1
1	9	PAOZZ	5935-00-572-9180	19207	8338566	.CONNECTOR	U17	EA	1
1	10	PAOZZ		19207	7526509	.FELT,MECHANICAL	U17	EA	1
1	11	PAOZZ	5999-00-057-2929	96906	MS27148-2	.CONTACT,ELECTRICAL	U17	EA	1
1	12	PAOZZ	6250-00-371-4018	19207	7526515	.PLATE,MOUNTING,LAMP	U17	EA	1
1	13	PAOZZ	6240-00-019-0877	96906	MS15570-1251	.LAMP, INCANDESCENT	U17	EA	1
1	14	PAOZZ	5310-00-596-8169	19207	7526796	.PUSH ON NUT	U17	EA	2
1	15	PAOZZ	6220-00-299-7426	74925	MS35421-2	.LENS,CLEARANCE MARK RED	U17	EA	1
1	15	PAOZZ	6220-00-299-7425	96906	MS35421-1	.LENS,CLEARANCE MARK AMBER	U17	EA	1
1	16	PAOZZ	6220-00-752-6516	19207	7526516	.DOOR	U17	EA	1
1	17	PAOZZ	5305-00-701-5071	96906	MS51959-61	.SCREW,MACHINE	U17	EA	2
1	18	PAOZZ	5310-00-045-3296	96906	MS35338-43	WASHER,LOCK	U17	EA	4



TA217510

FIGURE 2. COMPOSITE AND TURN-STOP LIGHTS.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
0609 (CONT)									
2	1	PAOZZ	6220-01-093-4439	96906	MS52125-2	LIGHT, COMPOSITE	TO1	EA	4
2	2	XAOZZ		19207	11639520	.BODY ASSEMBLY COMPOSITE LIGHT	TO1	EA	1
2	3	PAOZZ	5330-00-462-0907	19207	11639519-2	.PACKING, PREFORMED COMPOSITE LIGHT	TO1	EA	1
2	4	PAOZZ	6240-00-019-3093	96906	MS15570-623	.LAMP, INCANDESCENT	TO1	EA	1
2	5	PAOZZ	6240-00-044-6914	96906	MS35478-1683	.LAMP, INCANDESCENT	TO1	EA	1
2	6	PAOZZ	6220-00-179-4324	19207	11639535	.DOOR ASSY COMPOSITE LIGHT	TO1	EA	1
2	7	PAOZZ	6240-00-019-0877	96906	MS15570-0877	.LAMP, INCANDESCENT	TO1	EA	2
2	8	PAOZZ	5310-00-637-9541	96906	MS35338-46	WASHER, LOCK COMPOSITE MOUNTING	TO1	EA	2
2	9	PAOZZ		96906	MS90725-57	SCREW, CAP, HEXAGON H COMPOSITE MOUNTING	TO1	EA	2
2	10	PAOOO	5220-01-093-4439	96906	MS52125-2	STOPLIGHT-TAILLIGH	U17	EA	4
2	11	PAOZZ	6240-00-295-1184	65083	1034	.LAMP, INCANDESCENT	U17	EA	1
2	12	PAOZZ	6220-00-128-8151	26697	06000042415R	.LENS, LIGHT RED	U17	EA	1
2	13	PAOZZ	5305-00-476-7387	96906	MS51861-53	.SCREW, TAPPING, THREA LENS MOUNTING	U17	EA	3
2	14	PAOZZ		96906	MS35649-23	NUT LIGHT MOUNTING	U17	EA	3

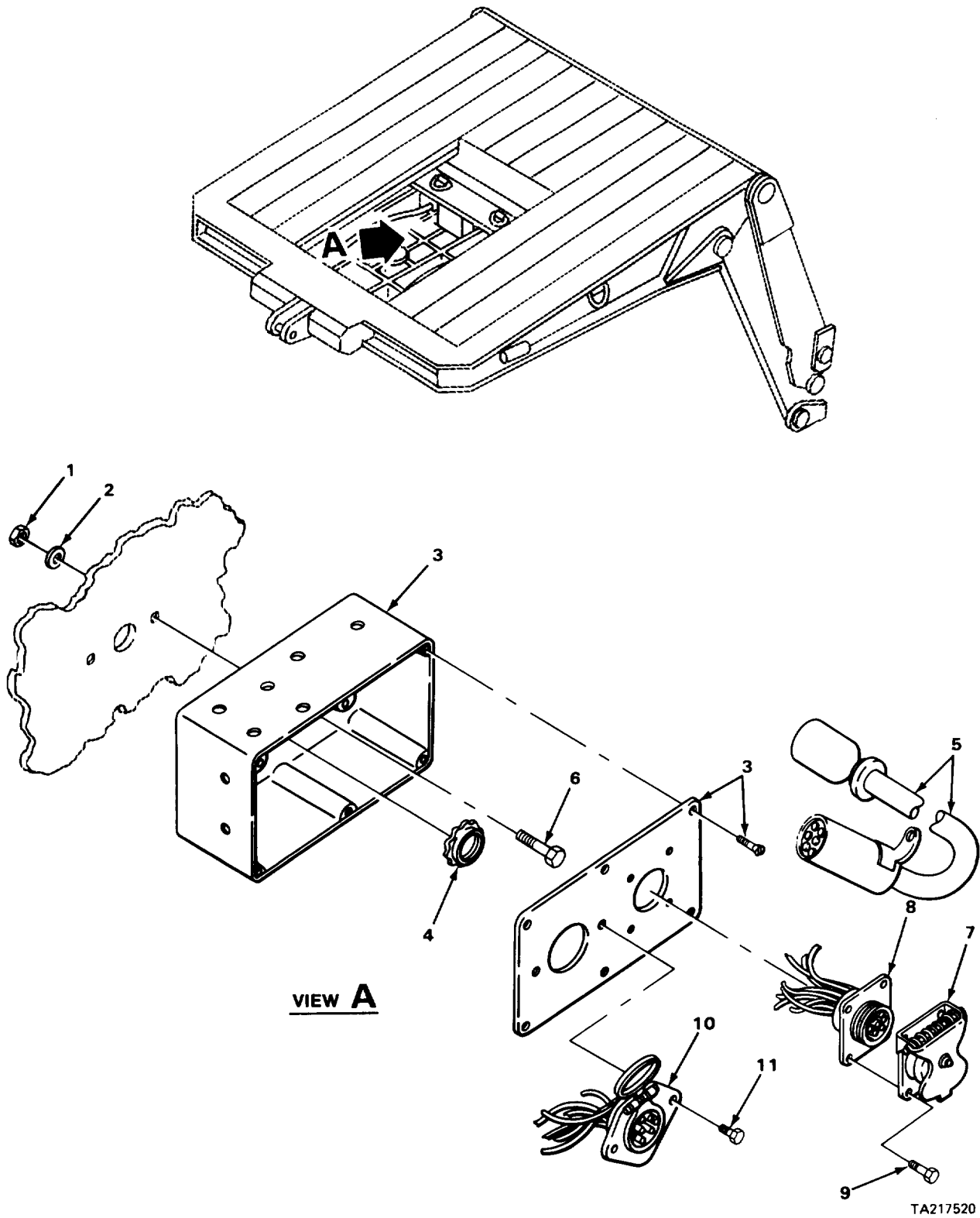
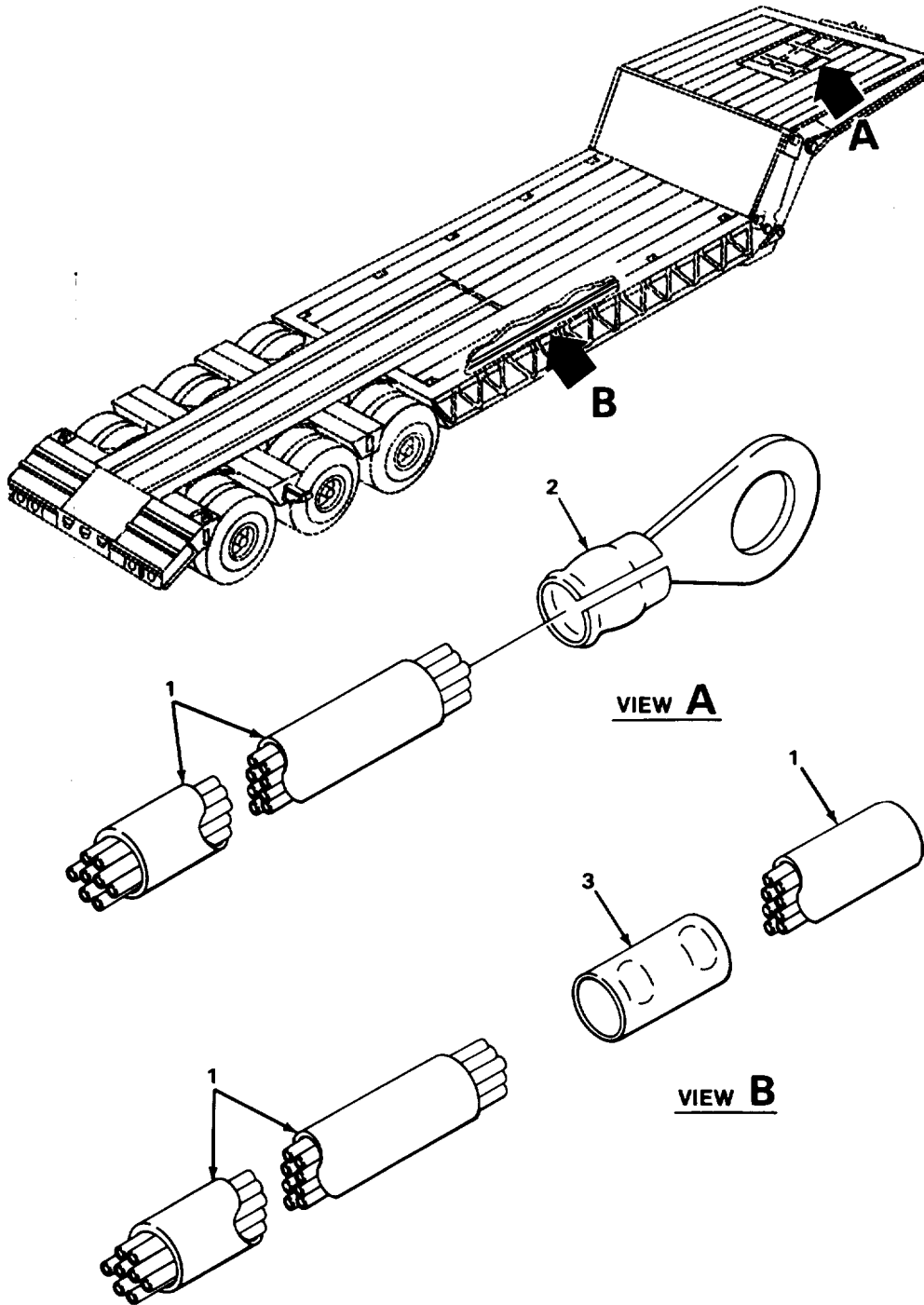


FIGURE 3. ELECTRIC REDUCTION BOX AND CONNECTOR.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
0613-CHASSIS WIRING HARNESS									
3	1	PAOZZ		26697	MP5-0091-407	NUT BOX MOUNTING		EA	2
3	2	PAOZZ		26697	MP5-0105-6	WASHER, BOX MOUNTING		EA	2
3	3	PAOZZ	2590-01-003-9416	26697	S196M3	BOX, REDUCER	T01	EA	1
3	3	XDOZZ		26697	50379	REDUCTION BOX	U17	EA	1
3	4	PAOZZ		26697	PDO-0285	NUT		EA	1
3	5	PAOZZ		26697	JPO-0031	CONNECTOR, 7-WAY LIGHT, COUPLING		EA	1
3	6	PAOZZ		26697	MP5-0094-6	SCREW BOX MOUNTING		EA	2
3	7	PAOZZ	5935-00-773-1428	19207	7731428	COVER, ELECTRICAL CO		EA	1
3	8	PAOZZ	5935-00-846-3883	96906	MS75021-1	CONNECTOR, RECEPTACL		EA	1
3	9	PAOZZ	5305-00-988-1724	96906	MS35206-280	SCREW, MACHINE		EA	4
3	10	PAOZZ	5935-01-061-9734	98343	752ATA	CONNECTOR, RECEPTACL		EA	1
3	11	PAOZZ	5305-00-984-5675	96906	MS35206-295	SCREW, MACHINE		EA	4



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FIGURE 4. WIRING HARNESS.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
0613 (CONT)									
4	1	MOOZZ		19207	6152019-1	WIRE, BLACK MANUFACTURE FROM NSN 6145-00-615-2019		EA	8
4	2	PAOZZ		26697	PD0-0286	CONNECTOR TERMINAL LUG		EA	V
4	3	PAOZZ		26697	PD0-0287	CONNECTOR		EA	V

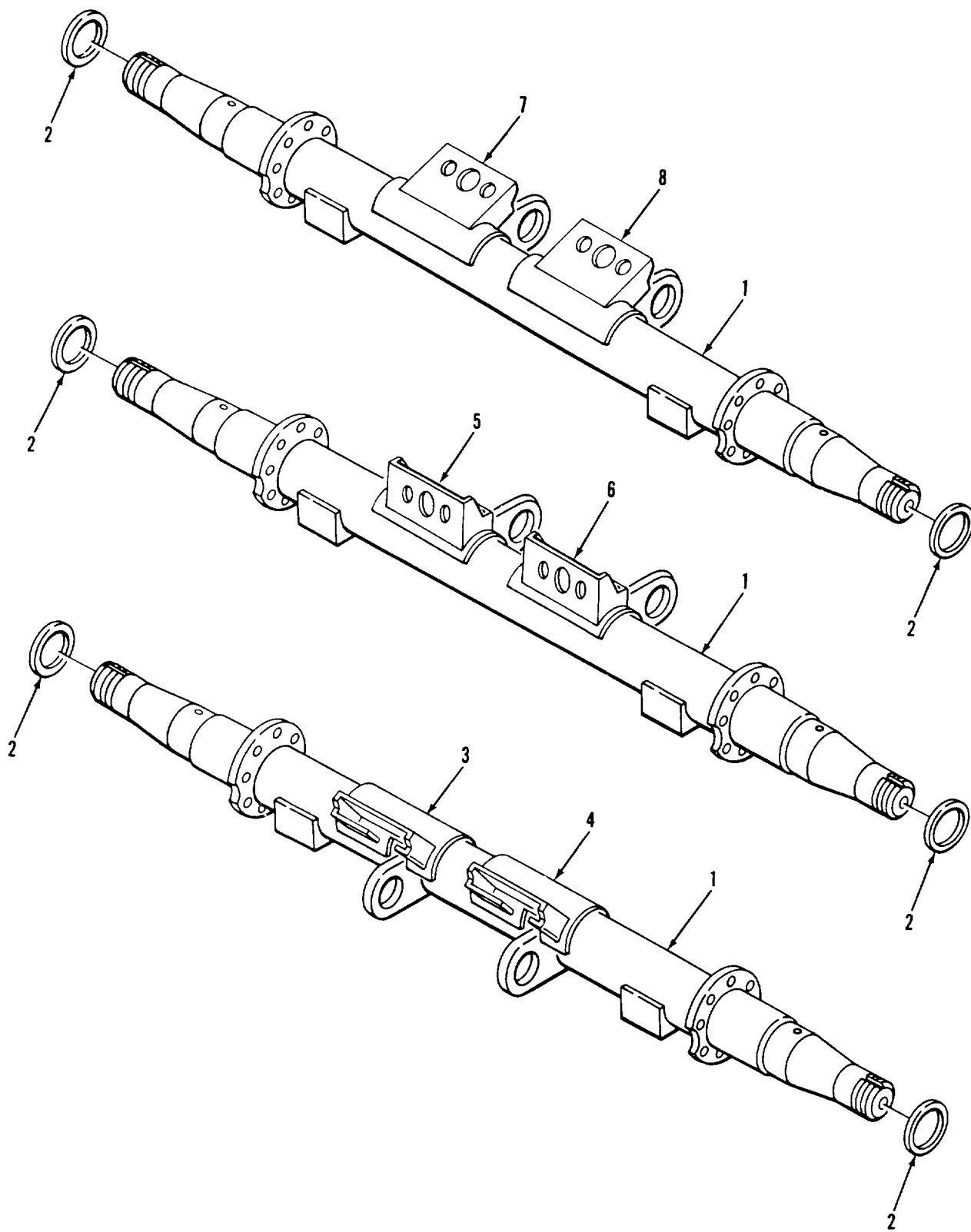


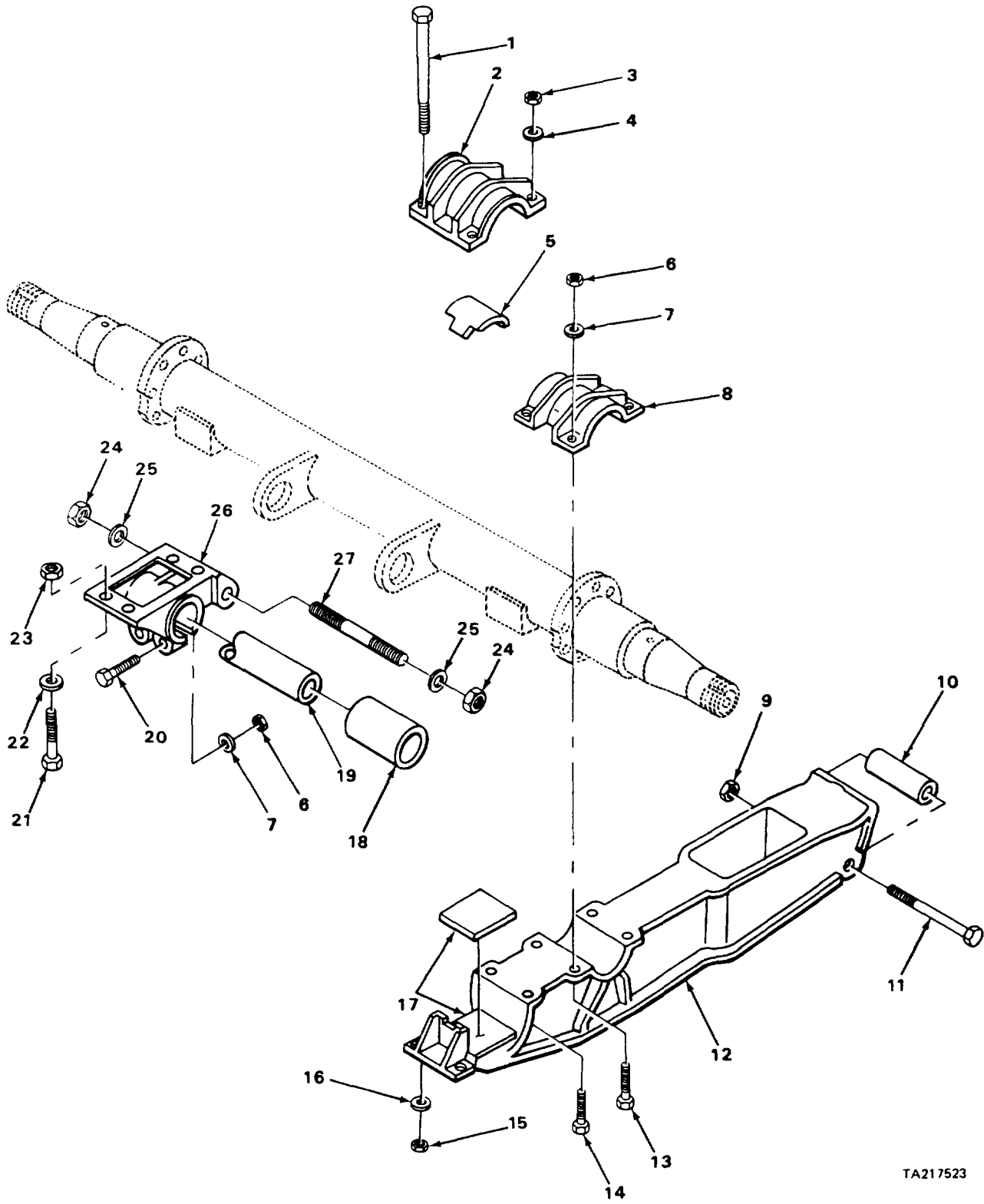
FIGURE 5. AXLES

SECTION II

CHANGE 1

TM5-2330-360-14&P

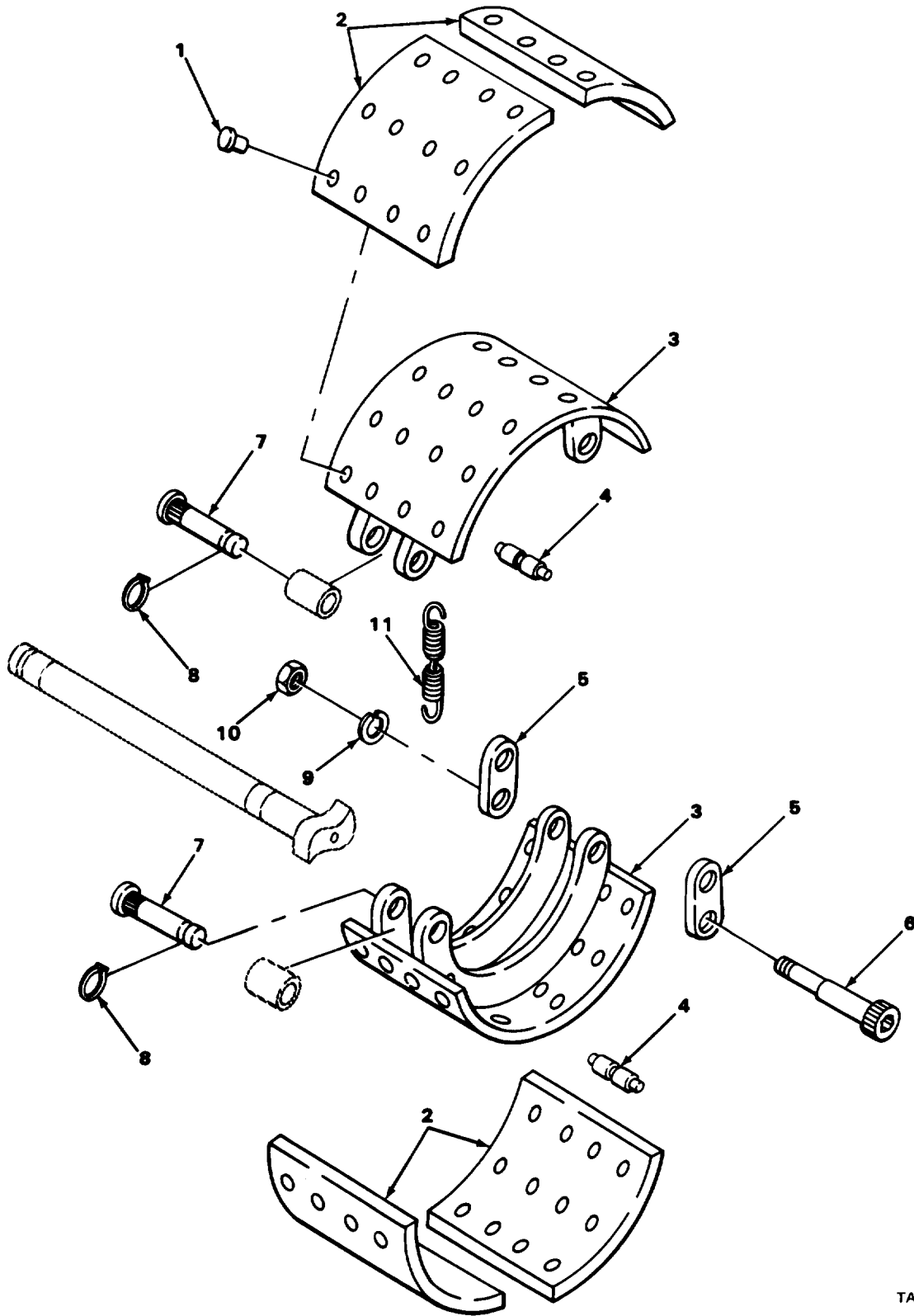
(1) ILLUS- TRATION (A) (B) FIG ITEM NO NO	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION	(7) USABLE ON CODE	(8) QTY INC IN UNIT
					GROUP 11 REAR AXLE 1100 REAR AXLE ASSEMBLY FIG. 5. AXLE		
5	1	XDFZZ		26697	A19T75LHDA-71		EA 3
5	2	PAFZZ	2530-00-151-6681	26151	1083		EA 6
5	3	XDFZZ		19207	12357778-1	T01	EA 1
5	4	XDFZZ		19207	12357778-2	T01	EA 1
5	5	XDFZZ		19207	12357779-1	T01	EA 1
5	6	XDFZZ		19207	12357779-2	T01	EA 1
5	7	XDFZZ		19207	12357780-1	T01	EA 1
5	8	XDFZZ		19207	12357780-2	T01	EA 1



TA217523

FIGURE 6. AXLE SUSPENSION.

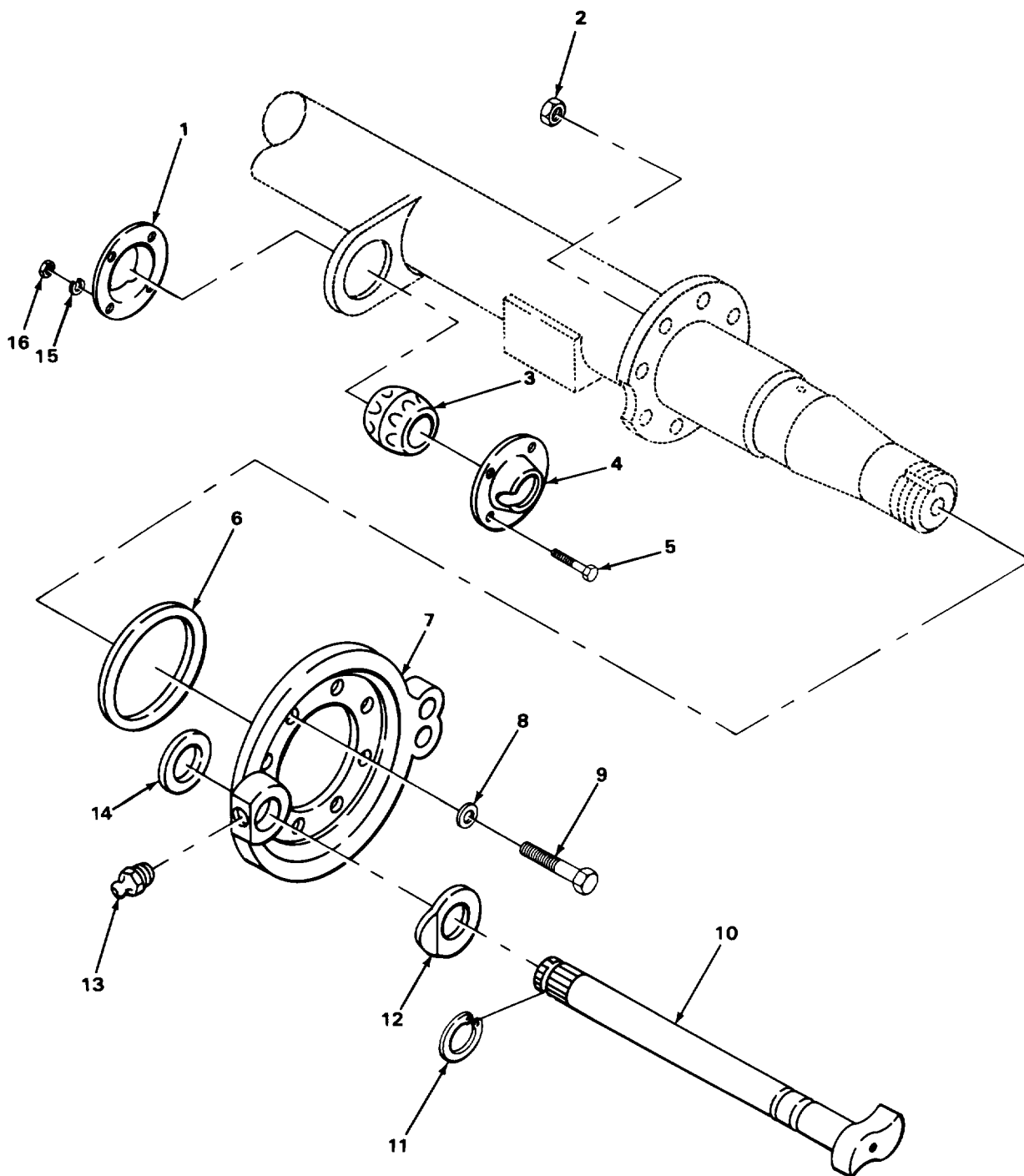
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1100 (CONT)									
6	1	XDFZZ		98171	91010060	CAPSCREW		EA	8
6	2	PFFZZ		98171	91001089	CAP, AXLE		EA	4
6	3	PAFZZ		98171	93900027	NUT, LOCK		EA	20
6	4	PAFZZ		98171	90041823	WASHER, FLAT		EA	20
6	5	PAFZZ	2530-01-052-4018	98171	91028051	RUBBER WRAPPER		EA	2
6	6	PAFZZ		98171	93600005	NUT, LOCK		EA	24
6	7	PAFZZ		98171	93003579	WASHER, FLAT		EA	24
6	8	PAFZZ	5365-00-486-2885	98171	900-08-011	BUSHING, RUBBER TRUNNION CAP		EA	4
6	9	PAFZZ		98171	93003657	NUT, HEX		EA	4
6	10	PFFZZ		98171	93400149	SPACER, PIPE		EA	4
6	11	PAFZZ		98171	93400494	CAPSCREW		EA	4
6	12	PAFZZ		98171	91515011	BEAM, EQUALIZING		EA	4
6	13	PAFZZ		98171	93400502	CAPSCREW		EA	16
6	14	PAFZZ		98171	91001075	CAPSCREW		EA	8
6	15	PAFZZ		98171	93003935	LOCKNUT		EA	8
6	16	PFFZZ	5310-01-061-1312	98171	934 00 498	WASHER, FLAT		EA	8
6	17	XDFZZ		98171	91028089	RUBBER STRIP PAD		EA	4
6	18	XDFZZ		98171	93003633	BUSHING, TRUNNION RUBBER		EA	4
6	19	XDFZZ		98171	91038290	TRUNNION TUBE		EA	2
6	20	PAFZZ		98171	91518041R	CAPSCREW		EA	8
6	21	PAFZZ		98171	90041807	CAPSCREW		EA	16
6	22	PAFZZ		98171	93003359	WASHER, FLAT		EA	24
6	23	PAFZZ		98171	93003375	NUT, LOCK, CROWN		EA	24
6	24	PAFZZ		98171	93600030	NUT, LOCK		EA	8
6	25	PAFZZ		98171	90006199	WASHER, FLAT		EA	8
6	26	PFFZZ		98171	91501011	CLAMP, TRUNNION, REAR		EA	2
6	26	PFFZZ		98171	91518040L	CLAMP, TRUNNION FRONT		EA	2
6	27	PFFZZ	5340-01-096-7556	98171	90008002	BOLT, ROD		EA	4



TA217524

FIGURE 7. SERVICE BRAKES.

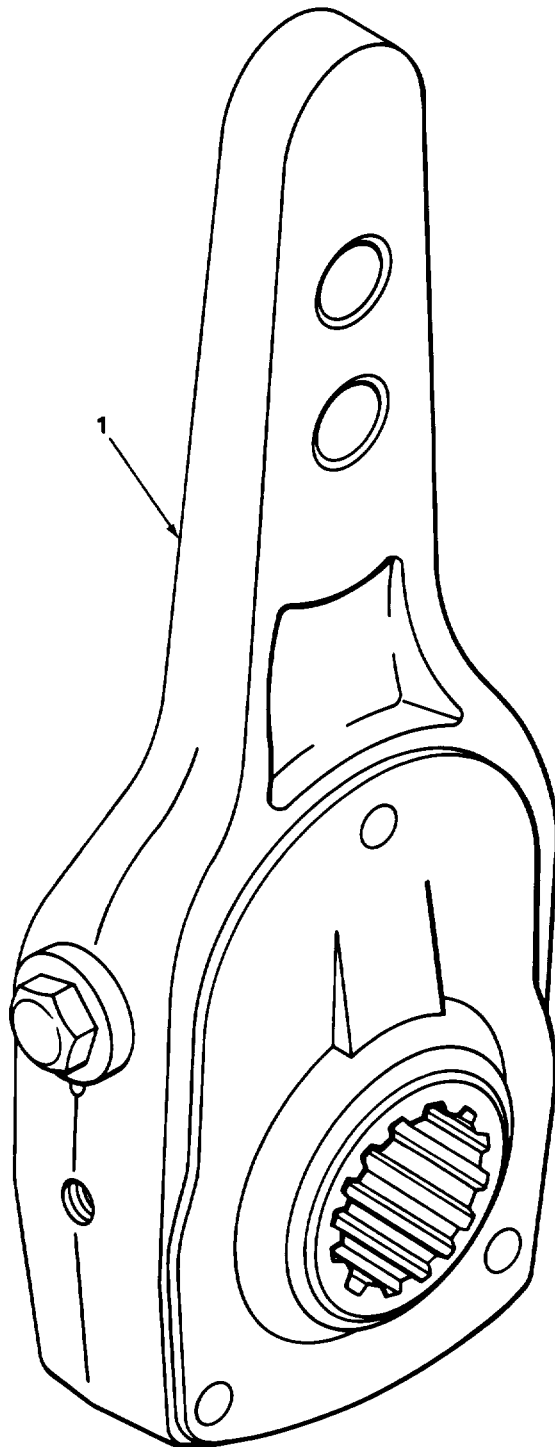
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
						GROUP 12-BRAKES 1202-SERVICE BRAKES			
7	1	PAFZZ	5320-01-020-0703	56697	404101-001	RIVET BRAKE SHOE		EA	288
7	2	PAFZZ	2530-01-044-8847	56697	FMS4591	LINING, FRICTION (SET OF 4 EACH)		EA	V
7	3	PAFZZ	2530-01-071-9893	56697	201140	BRAKE SHOE FABRICATED		EA	12
7	4	PAFZZ	2530-01-016-2029	56697	207100	PIN, BRAKE SPRING RETAINER		EA	12
7	5	PAFZZ		56697	999197	LINK, ANCHOR PIN		EA	12
7	6	PAFZZ	2530-01-046-0176	56697	203110	PIN, ANCHOR		EA	12
7	7	PAFZZ	5315-01-047-6042	56697	205107-001	PIN, ROLLER BRAKE		EA	12
7	7	PAFZZ	2530-01-041-4671	56697	204108-001	ROLLER, BRAKE CAM PIN		EA	12
7	8	PAFZZ	5365-01-041-6034	56697	214102	RETAINER, SPECIAL BRAKE ROLLER		EA	12
7	9	PAFZZ	5310-01-049-3984	56697	403103	ANCHOR PIN WASHER LOCK		EA	12
7	10	PAFZZ	5310-01-042-1006	56697	402101	ANCHOR PIN NUT		EA	12
7	11	PAFZZ	5360-01-019-3541	56697	208106	SPRING		EA	6



TA217525

FIGURE 8. CAMSHAFT.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5)		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1202 (CONT)									
8	1	PPFZZ		56697	403105	RETAINER, CAMSHAFT		EA	6
8	2	PAFZZ		56697	402106	NUT, BRAKE SPIDER		EA	48
8	3	XDFZZ		56697	405129	BUSHING, SPIDER		EA	6
8	4	PPFZZ		56697	403112	SPACER, CAMSHAFT		EA	6
8	5	PAFZZ		26697	MPO-0033	SCREW SPACER ATTACHING		EA	24
8	6	PAFZZ	5330-01-067-3440	56697	408101-001	SEAL, PLAIN ENCASED SPIDER		EA	6
8	7	PPFZZ		56697	200101-001	SPIDER, BRAKE		EA	6
8	8	PPFZZ	5310-00-488-3911	56697	403117	WASHER, BRAKE SPIDER		EA	48
8	9	PAFZZ		56697	401113	BOLT, BRAKE SPIDER		EA	48
8	10	PPFZZ		56697	202103-213R	CAM SHAFT, RIGHT		EA	3
8	10	PPFZZ		56697	202103-213L	CAM SHAFT, LEFT		EA	3
8	11	PAFZZ	5365-01-061-0710	56697	214104	LOCK RING, CAMSHAFT		EA	12
8	12	PAFZZ		26697	MPO-0330	WASHER, FLANGED		EA	6
8	13	PAOZZ	4730-01-048-0819	56697	407100	FITTING, LUBRICATION ZERK, BRAKE SPIDER		EA	6
8	14	PAFZZ		26697	MPO-0088	WASHER, CAM		EA	6
8	15	PAFZZ		26697	MPO-0035	WASHER, LOCK SPACER ATTACHING		EA	24
8	16	PAFZZ		26697	MPO-0034	NUT, SPACER ATTACHING		EA	24

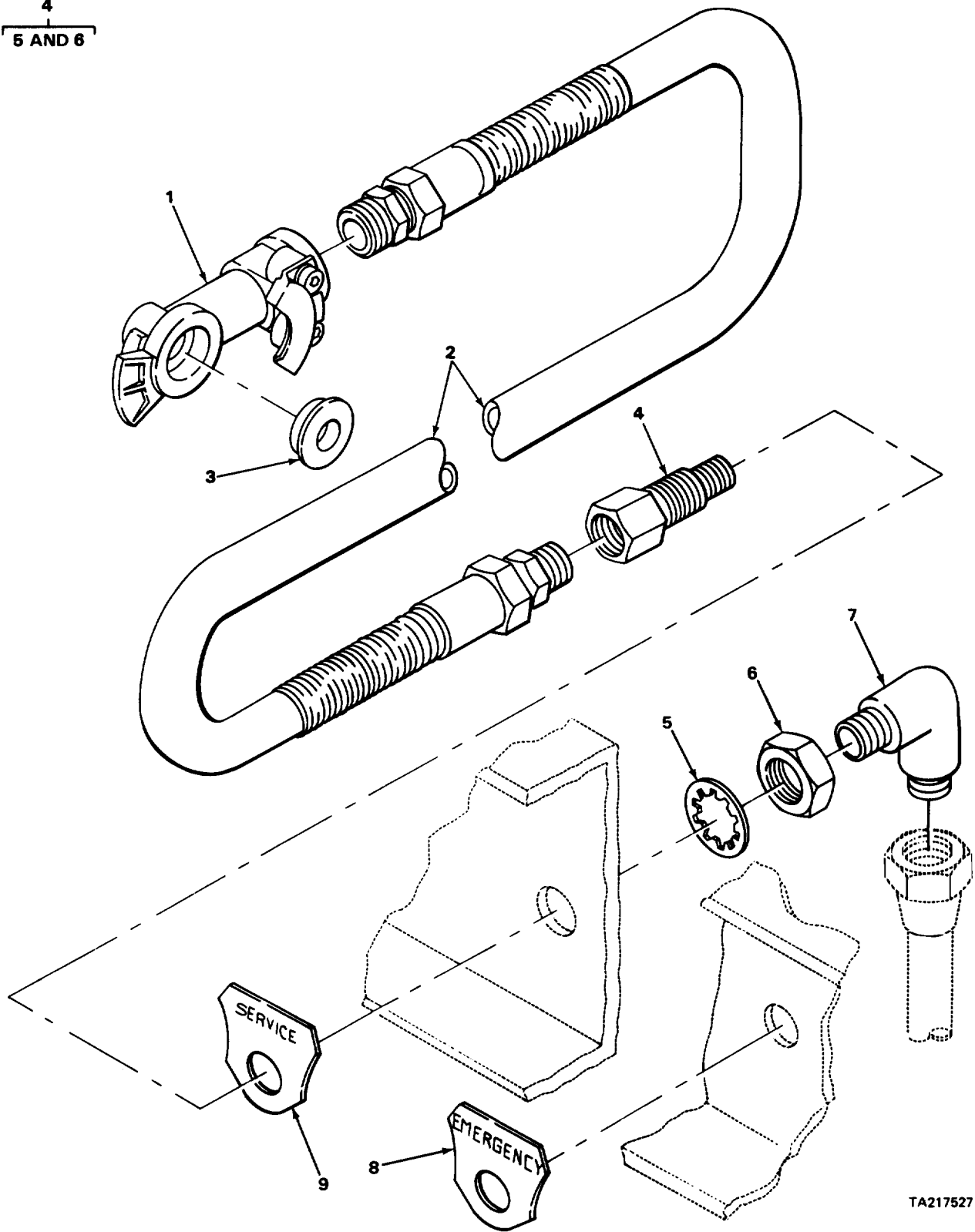


TA217526

FIGURE 9. SLACK ADJUSTER.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
9	1	PAOZZ	2530-01-041-5159	56697	212102	1206-MECHANICAL BRAKE SYSTEM SLACK ADJUSTER, BRAK		EA	6

4
5 AND 6



TA217527

FIGURE 10. AIR BRAKE COUPLING.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1208-AIR BRAKE SYSTEM									
10	1	PAOZZ	4730-00-595-0083	96906	MS35746-1	CONNECTOR, AIRBRAKE		EA	1
10	2	XDOZZ		26697	MPO-0635	HOSE ASSY		EA	1
10	3	PAOZZ	5330-00-090-2128	96906	MS35748-1	PACKING, PREFORMED		EA	1
10	4	PFOZZ		26697	KPO-0164	CLAMPING STUD ASSY		EA	1
10	5	PFOZZ		26697	KPO-0162	.WASHER, CLAMPING STUD		EA	1
10	6	PFOZZ		26697	KPO-0163	.NUT, CLAMPING STUD		EA	1
10	7	PAOZZ		26697	MP5-0169-8	ELBOW		EA	2
10	8	XDOZZ		26697	KPO-0165	TAG, EMERGENCY		EA	1
10	9	XDOZZ		26697	KPO-0166	TAG, SERVICE		EA	1

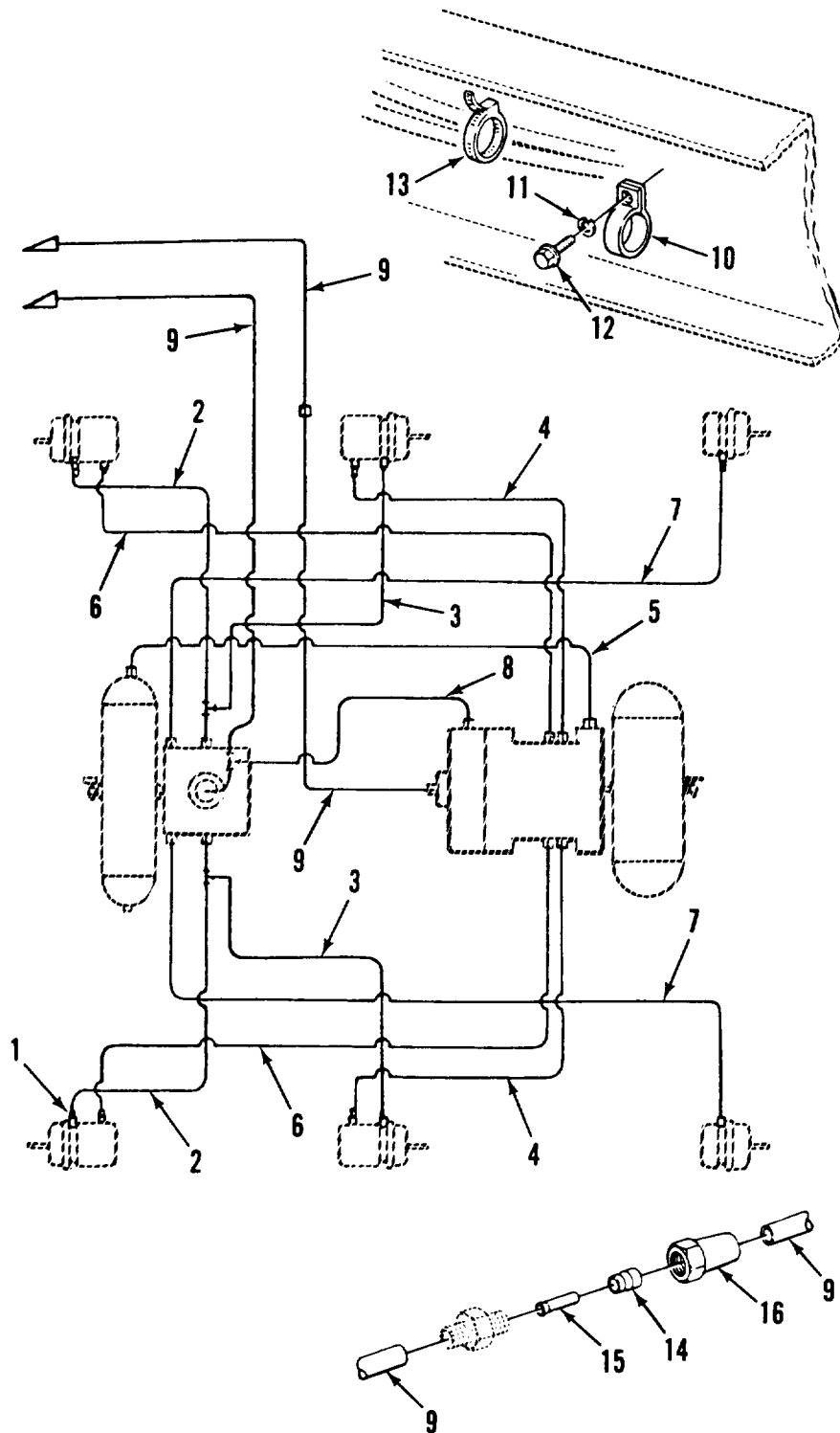


FIGURE 11. AIR BRAKE LINES AND FITTINGS

SECTION II (1) ILLUS- TRATION (A) FIG NO		CHANGE 1 (2) SMR CODE		TM5-2330-360-14&P (3) NATIONAL STOCK NUMBER		(4) FSCM PART NUMBER		(5) DESCRIPTION	(6) USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1208 AIR BRAKE SYSTEM FIG.11. AIR BRAKE LINES AND FITTINGS											
11	1	PAOZZ		96906	MS51504-B6-6		ELBOW	T01	EA	10	
11	2	PAFZZ	4720-01-302-2533	96906	MS500077A60500		HOSE, ASSEMBLY NONE	T01	EA	2	
11	3	PAFZZ	4720-01-300-5878	96906	MS500077A60300		HOSE, ASSEMBLY NOME	T01	EA	2	
11	4	PAFZZ	4720-00-307-4745	96906	MS500077A60370		HOSE, ASSEMBLY NOME	T01	EA	2	
11	5	PAFZZ	4720-01-300-0774	96906	MS500077A60544		HOSE, ASSEMBLY NOME	T01	EA	2	
11	6	PAFZZ	4720-01-301-7997	96906	MS500077A60760		HOSE, ASSEMBLY NOME	T01	EA	2	
11	7	PAFZZ	4720-01-307-4746	96906	MS500077A60800		HOSE, ASSEMBLY NOME	T01	EA	2	
11	8	PAFZZ	4720-01-302-2935	19207	12357855		HOSE, ASSEMBLY, NOME AIR BRAKE	T01	EA	1	
11	9	MOOZZ		19207	3250-06104		TUBING				
11	10	PAFZZ	5340-00-905-2691	96906	MS21333-12		MAKE FROM TUBING, P/N CPR104420-1			V	
11	11	PAOZZ	5310-00-582-5965	88044	AN935-416		CLAMP, LOOP	T01	EA	10	
11	12	PFOZZ	5305-00-993-2461	96906	MS35207-281		WASHER, LOCK	T01	EA	10	
11	13	PAOZZ	5975-00-985-6630	96906	MS3367-3-0		SCREW, MACHINE	T01	EA	10	
11	14	XDOZZ		26697	MP5-0162-2		STRAP, TIEDOWN, ELECT	T01	EA	3	
11	15	XDOZZ		26697	MP5-0164-2		FERRULE		EA	1	
11	16	PAOZZ	4730-00-604-6496	79146	H0168-6X4		INSERT		EA	1	
							ADAPTER, STRAIGHT, PI		EA	2	

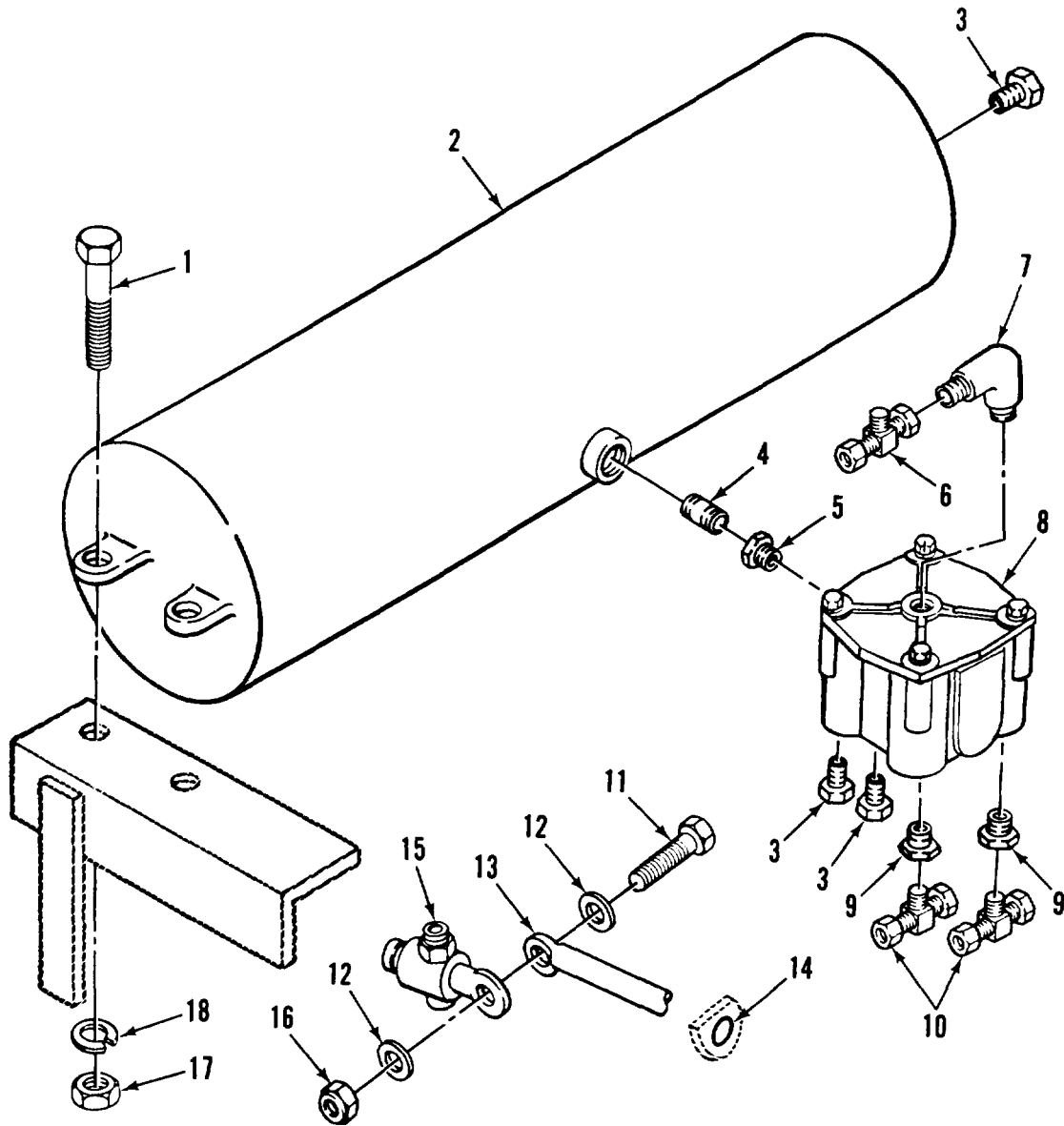


FIGURE 12. EMERGENCY RELAY VALVE AND RESERVOIR

SECTION II		CHANGE 1		TM5-2330-360-14&P					(7)	(8)
(1)	(2)	(3)	(4)	(5)	(6)					
ILLUS- TRATION (A) FIG NO	(B) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION	USABLE ON CODE	U\M	QTY IN UNIT	
1208 AIR BRAKE SYSTEM FIG. 12. EMERGENCY RELAY VALVE AND RESERVOIR										
12	1	PAOZZ	5305-00-269-3211	96906	MS90725-60	SCREW,CAP,HEXAGON	T01	EA	4	
12	2	XDOZZ		06853	280023	TANK		EA	1	
12	3	PAOZZ	4730-00-322-8457	96906	MS51500-B6-6	ADAPTER, STRAIGHT,PI	T01	EA	3	
12	4	PAOZZ	4730-00-196-1504	81346	A733	NIPPLE,PIPE		EA	1	
12	5	PAOZZ	4730-00-277-9114	96906	MS51887-13Z	BUSHING,PIPE	T01	EA	1	
12	6	PFFZZ	4730-00-813-7811	81348	6-4-6 120424B	TEE,PIPE TO TUBE	T01	EA	1	
12	7	PAOZZ	4730-00-069-1187	96906	MS39182-3	ELBOW		EA	1	
12	8	PAOZZ	2350-01-155-5731	19207	12357833	VALVE,RELAY,AIR PRE	T01	EA	1	
12	9	PAOZZ	4730-00-903-7204	81348	22-F-471BD1	BUSHING,PIPE	T01	EA	2	
					QBDCB					
12	10	PAOZZ	4730-00-995-1579	96906	MS51511-A6	TEE,PIPE TO TUBE		EA	2	
12	11	PFOZZ	5305-00-068-0509	96906	MS90725-10	SCREW,CAP,HEXAGON	T01	EA	1	
12	12	PFOZZ	5310-00-833-3340	24446	N402P13C6	WASHER,FLAT	T01	EA	4	
12	13	PFOZZ	5340-01-303-1656	19207	12357829-2	LEVER,MANUAL CONTROL	T01	EA	1	
12	14	PAOZZ	5325-00-795-0719	96906	MS35489-43	GROMMET,NONMETALLIC	T01	EA	1	
12	15	PAOZZ	4820-00-057-0694	19207	12357831	COCK,DRAIN	T01	EA	1	
12	16	PFOZZ	5310-00-208-1919	88044	AN365-420A	NUT,SELF-LOCKING	T01	EA	1	
12	17	PAOZZ	5310-00-732-0558	96906	MS51967-8	NUT,PLAIN,HEXAGON	T01	EA	1	
12	18	PAOZZ	5310-00-637-9541	96906	MS35338-46	WASHER,LOCK		EA	1	

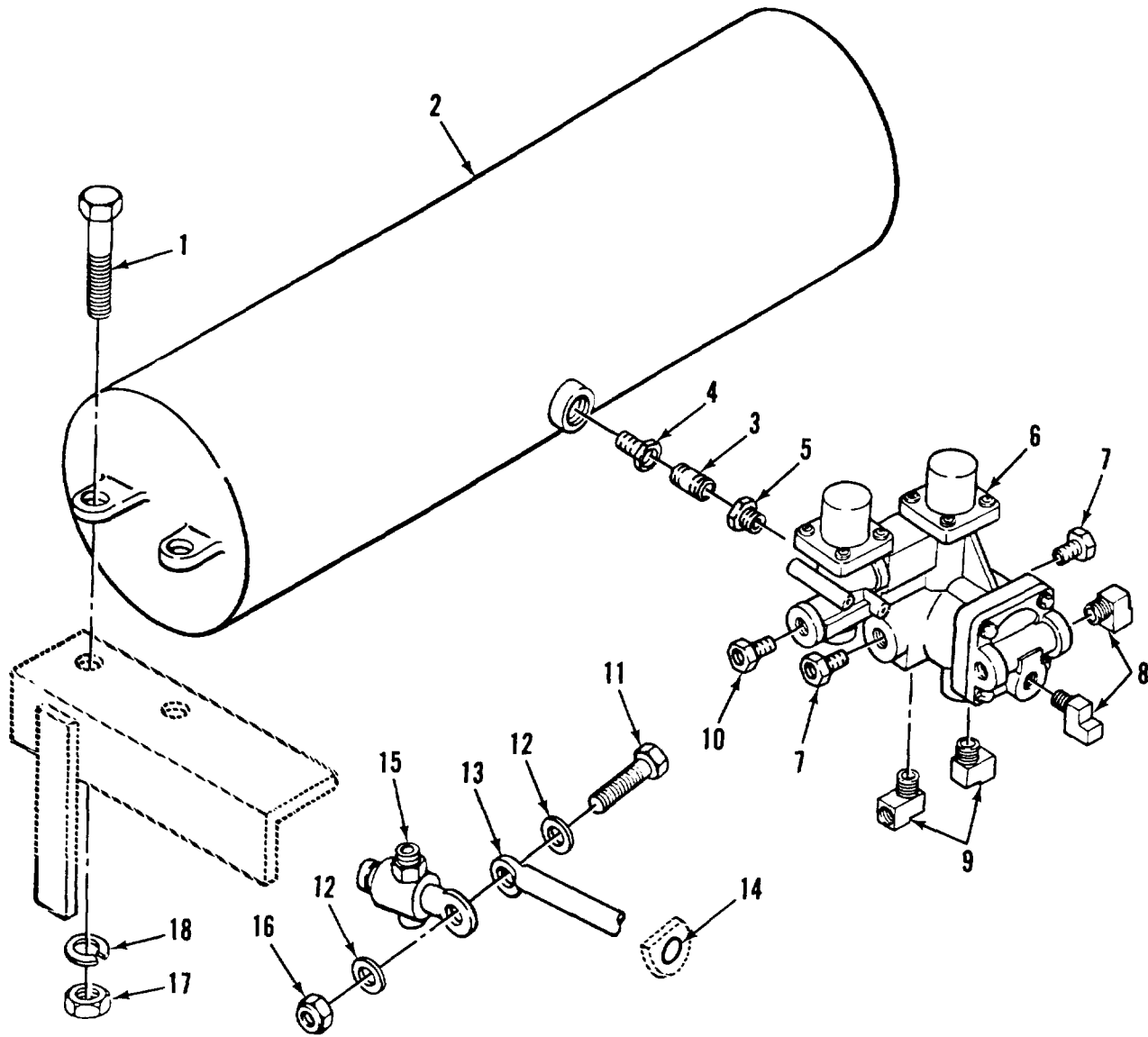


FIGURE 12A. SPRING BRAKE VALVE AND RESERVOIR

SECTION II		CHANGE 1		TM5-2330-360-14&P								
(1)	(2)	(3)	(4)	(5)	(6)				(7)	(8)		
ILLUS- TRATION (A)	(B)	SMR	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION	USABLE ON CODE	U\M	QTY IN UNIT			
FIG NO	ITEM NO	CODE										
1208 AIR BRAKE SYSTEM FIG. 12A. BRAKE VALVE AND RESERVOIR												
12A	1	PAOZZ	5305-00-269-3211	96906	MS90725-60	SCREW, CAP, HEXAGON	TO1	EA	4			
12A	2	PAOZZ	2530-01-301-8094	19207	12357803	TANK PRESSURE	TO1	EA	1			
12A	3	PAOZZ	4730-00-196-1504	81346	A733	NIPPLE, PIPE		EA	1			
12A	4	PFOZZ	4730-00-227-6929	84849	WWP521	REDUCER, PIPE	TO1	EA	1			
12A	5	PAOZZ	4730-00-277-9114	96906	MS51877-13Z	BUSHING, PIPE	TO1	EA	1			
12A	6	PAOZZ	2530-01-303-0049	19207	12357787	VALVE, RELAY, AIR PRE	TO1	EA	1			
12A	7	PAOZZ	4730-00-322-8457	96906	MS51500-B6-6	ADAPTER, STRAIGHT PI	TO1	EA	2			
12A	8	PAOZZ	4730-00-812-7999	96906	MS51504-A6	ELBOW, PIPE TO TUBE	TO1	EA	2			
12A	9	PAOZZ		96906	MS51504-B6-6	ELBOW	TO1	EA	2			
12A	10	PAOZZ		96906	MS51500-B6	ADAPTER	TO1	EA	1			
12A	11	PFOZZ	5305-00-068-0509	96906	MS90725-10	SCREW, CAP, HEXAGON	TO1	EA	1			
12A	12	PFOZZ	5310-00-833-3340	24446	N402P13C6	WASHER, FLAT		EA	2			
12A	13	PFOZZ	5340-01-303-1656	19207	12357829-2	LEVER, MANUAL CONTROL	TO1	EA	1			
12A	14	PAOZZ	5325-00-795-0719	96906	MS35489-43	GROMMET, NONMETALLIC	TO1	EA	1			
12A	15	PAOZZ	4820-00-057-0694	19207	12357831	COCK, DRAIN	TO1	EA	1			
12A	16	[FPZZ	5310-00-208-1919	88044	AN365-420A	NUT, SELF-LOCKING	TO1	EA	1			
12A	17	PAOZZ	5310-00-732-0558	96906	MS51967-8	NUT, PLAIN, HEXAGON	TO1	EA	4			
12A	18	PAOZZ	5310-00-637-9541	96906	MS35338-46	WASHER, LOCK	TO1, U17	EA	4			

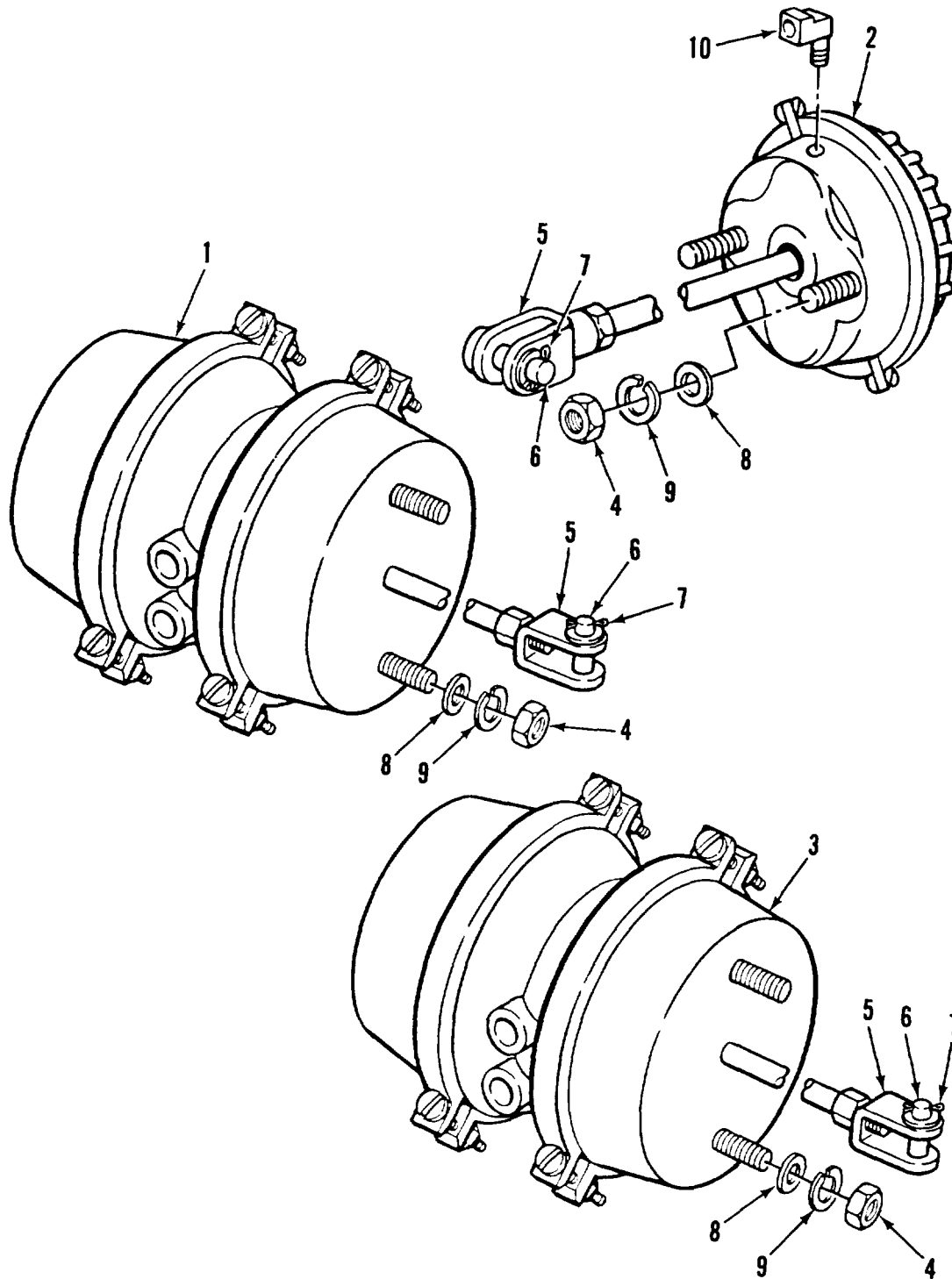
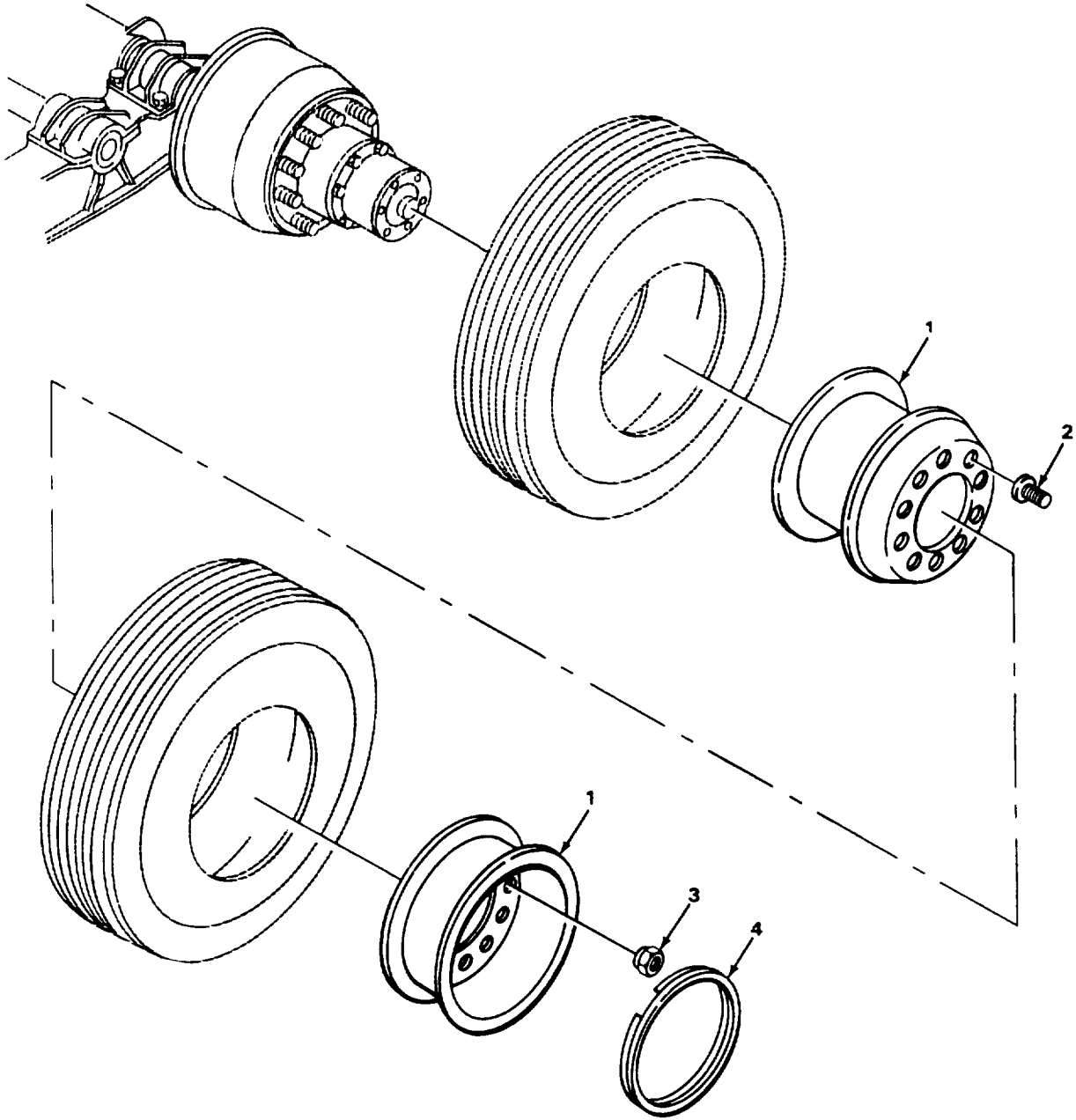


FIGURE 13. AIR BRAKE CHAMBER ASSEMBLY

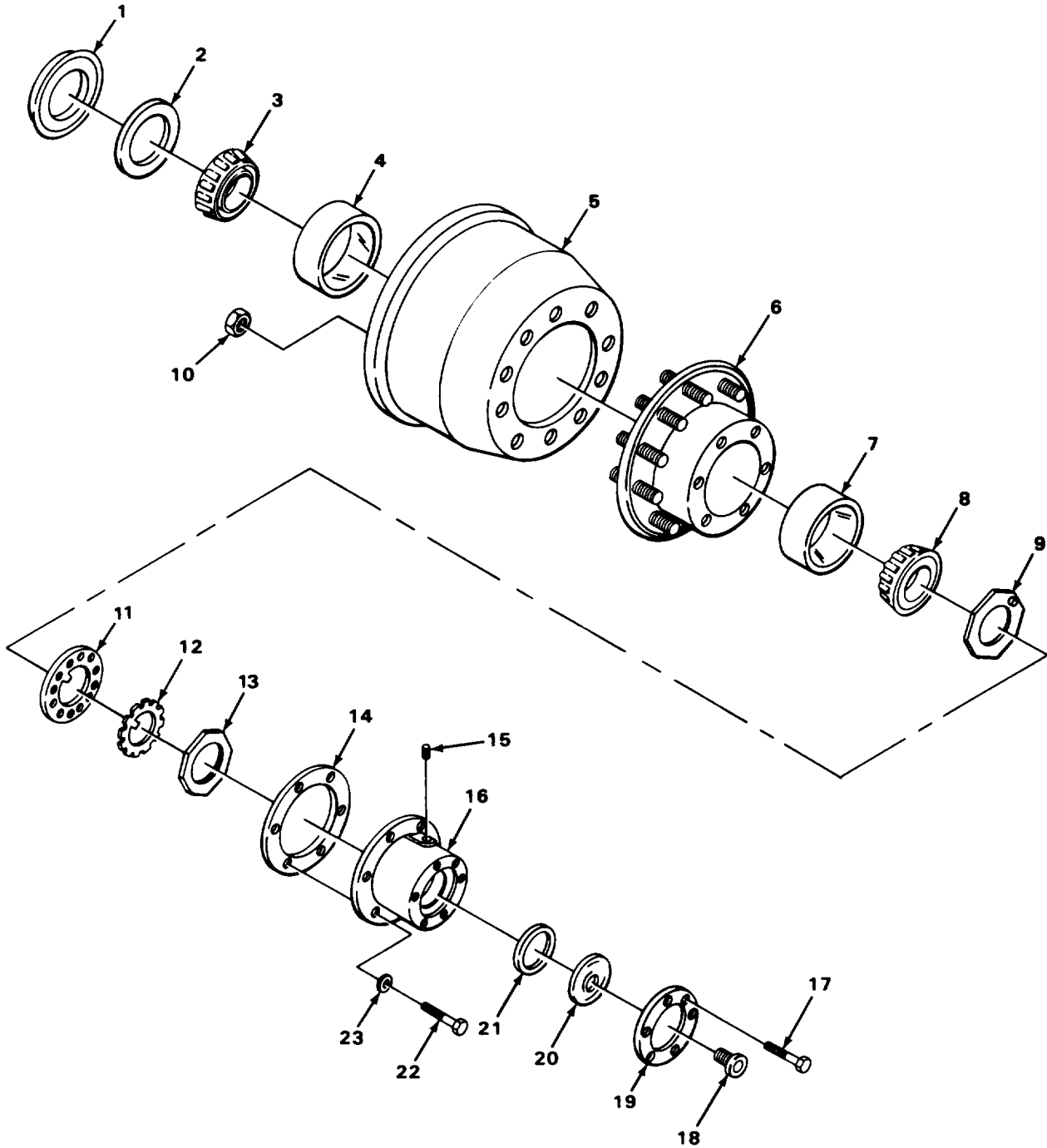
SECTION II (1) ILLUS- TRATION (A) FIG NO		CHANGE 1 (2) (3)		TM5-2330-360-14&P (4) (5)		(6)		(7)	(8)
(B) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION	USABLE ON CODE	U\M	QTY INC IN UNIT	
1208 AIR BRAKE SYSTEM FIG.13. AIR BRAKE CHAMBER ASSEMBLY									
13	1	PAOZZ	2530-01-303-0085	19207	12357788-2	CHAMBER,AIR BRAKE FRONT AXLE	TO1	EA	2
13	2	PAOZZ	2530-01-312-0340	19207	12357812	CHAMBER,AIR BRAKE REAR AXLE	TO1	EA	2
13	3	PAOZZ	2530-01-302-2583	19207	12357788-1	CHAMBER,AIR BRAKE CENTER AXLE	TO1	EA	2
13	4	PAFZZ	5310-00-835-2037	06853	MS35691-53	NUT,PLAIN,HEXAGON 2 FRONT AXLE, 2 CENTER AXLE, 2 REAR AXLE		EA	6
13	5	PAFZZ	5340-00-426-8299	06853	216841	CLEVIS,ROD END 2 FRONT AXLE, 2 CENTER AXLE,2 REAR AXLE		EA	6
13	6	PAOZZ	5315-01-201-1998	26697	MPO-0521	PIN,STRAIGHT HEADED 2 FRONT AXLE, 2 CENTER AXLE,2 REAR AXLE		EA	6
13		XDOZZ		26697	MPS-0102-351	PIN,COTTER 2 FRONTAXLE, 2 CENTER AXLE,2 REAR AXLE		EA	6
13	8	PAOZZ	5310-00-835-2037	96906	MS35691-53	NUT,PLAIN,HEXAGON 4 FRONT AXLE, 4 CENTER AXLE,4 REAR AXLE		EA	12
13	9	PAOZZ	5310-01-205-2838	26697	MPO-0455	WASHER,LOCK 4 FRONT AXLE, 4 CENTER AXLE,4REAR AXLE		EA	12
13	10	PAOZZ		96906	MS51504-B6-6	ELBOW	TO1	EA	3



TA217531

FIGURE 14. WHEELS.

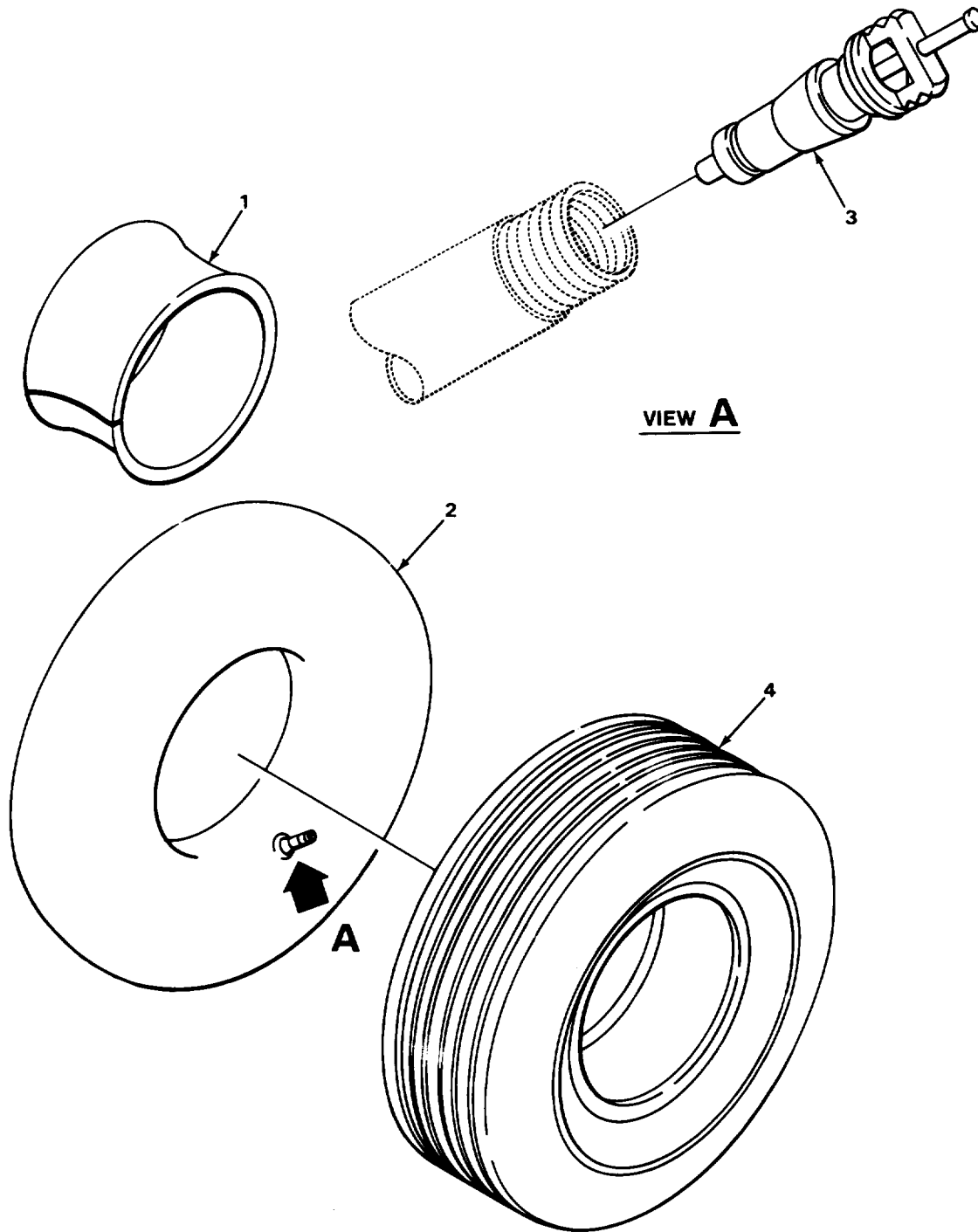
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
						GROUP 13-WHEELS 1311-WHEEL ASSEMBLY			
14	1	PAOZZ	2530-01-048-7842	09386	R85770-3	WHEEL,PNEUMATIC TIR		EA	12
14	2	PAOZZ	5307-00-637-0856	09386	13988	STUD,SHOULDERED RIGHT		EA	30
14	2	PAOZZ	5307-00-637-1084	09386	13989	STUD,SHOULDERED LEFT		EA	30
14	3	PAOZZ	5310-00-880-2005	96906	MS51983-4	NUT,PLAIN,SINGLE OUTER LEFT		EA	30
14	3	PAOZZ	5310-00-880-2004	96906	MS51983-3	NUT,PLAIN SINGLE OUTER RIGHT		EA	30
14	4	PAOZZ		26697	PDO-0107	LOCK-RING		EA	6



TA217532

FIGURE 15. HUB AND DRUM.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1311 (CONT)									
15	1	PAOZZ	5330-00-615-1855	56697	408101	SEAL,PLAIN ENCASED		EA	6
15	2	PAOZZ	5330-00-202-4421	79150	2109	GASKET	TO1	EA	6
15	3	PAOZZ	3110-00-100-0670	56697	104107	CONE AND ROLLERS,TA		EA	6
15	4	PAOZZ	3110-00-829-0575	96906	MS19081-113	BEARING,ROLLER,TAPE INNER		EA	6
15	5	PAOZZ	2530-00-606-2101	09386	1244	BRAKE DRUM		EA	6
15	6	XDOZZ		56697	300129-002	HUB ASSY		EA	6
15	7	PAOZZ	3110-00-100-0335	60038	653	CUP,TAPERED,ROLLER OUTER		EA	6
15	8	PAOZZ	3110-00-293-8998	56697	104108	CONE AND ROLLERS,TA		EA	6
15	9	PAOZZ	5310-01-043-0596	56697	103103-002	NUT,PLAIN,OCTAGON		EA	6
15	10	PAOZZ		26697	MPO-0123	NUT DRUM TO HUB ATTACHING		EA	10
15	11	PFOZZ		09386	8015	LOCK RING		EA	6
15	12	PAOZZ	5310-01-049-9051	56697	105106	WASHER,LOCK		EA	6
15	13	PAOZZ	5310-01-043-5781	56697	103102-001	NUT,PLAIN,OCTAGON OUTER		EA	6
15	14	PAOZZ	5330-00-615-1843	26151	3009	GASKET HUB CAP		EA	6
15	15	XAOZZ		26697	MPO-0540	PLUG		EA	6
15	16	PAOZZ		26697	MPO-0539	OIL SEAL ASSEMBLY		EA	6
15	17	PAOZZ		26697	MPO-0545	SCREW RETAINER RING ATTACHING		EA	6
15	18	PAOZZ	5340-00-615-1856	26151	5990	PLUG,VENT HUB CAP		EA	6
15	19	PAOZZ		26697	MPO-0543	RING RETAINER		EA	6
15	20	PAOZZ	2530-01-042-0573	26151	343-4009	COVER,ACCESS		EA	6
15	21	PAOZZ		26697	MPO-0541	GASKET		EA	6
15	22	PAOZZ		26697	MP5-0094-32	SCREW OIL SEAL ASSEMBLY		EA	6
15	23	PAOZZ		26697	MP5-0094-32	WASHER OIL SEAL ASSEMBLY		EA	6



TA217533

FIGURE 16. TIRES AND TUBES.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1313-TIRES AND TUBES									
16	1	PAOZZ		26697	PDO-0288	FLAP,PNEUMATIC TIRE		EA	12
16	2	PAOZZ	2610-00-051-9218	96906	MS35392-25	INNER TUBE,PNEUMATI		EA	12
16	3	PAOZZ	2640-00-050-1229	17875	100AA	VALVE,CORE		EA	12
16	4	PAOFH	2610-00-163-0417	81349	ZZ-T-381/10.00R TIRE ,PNEUMATIC 5/GP3/G/TBHR			EA	12

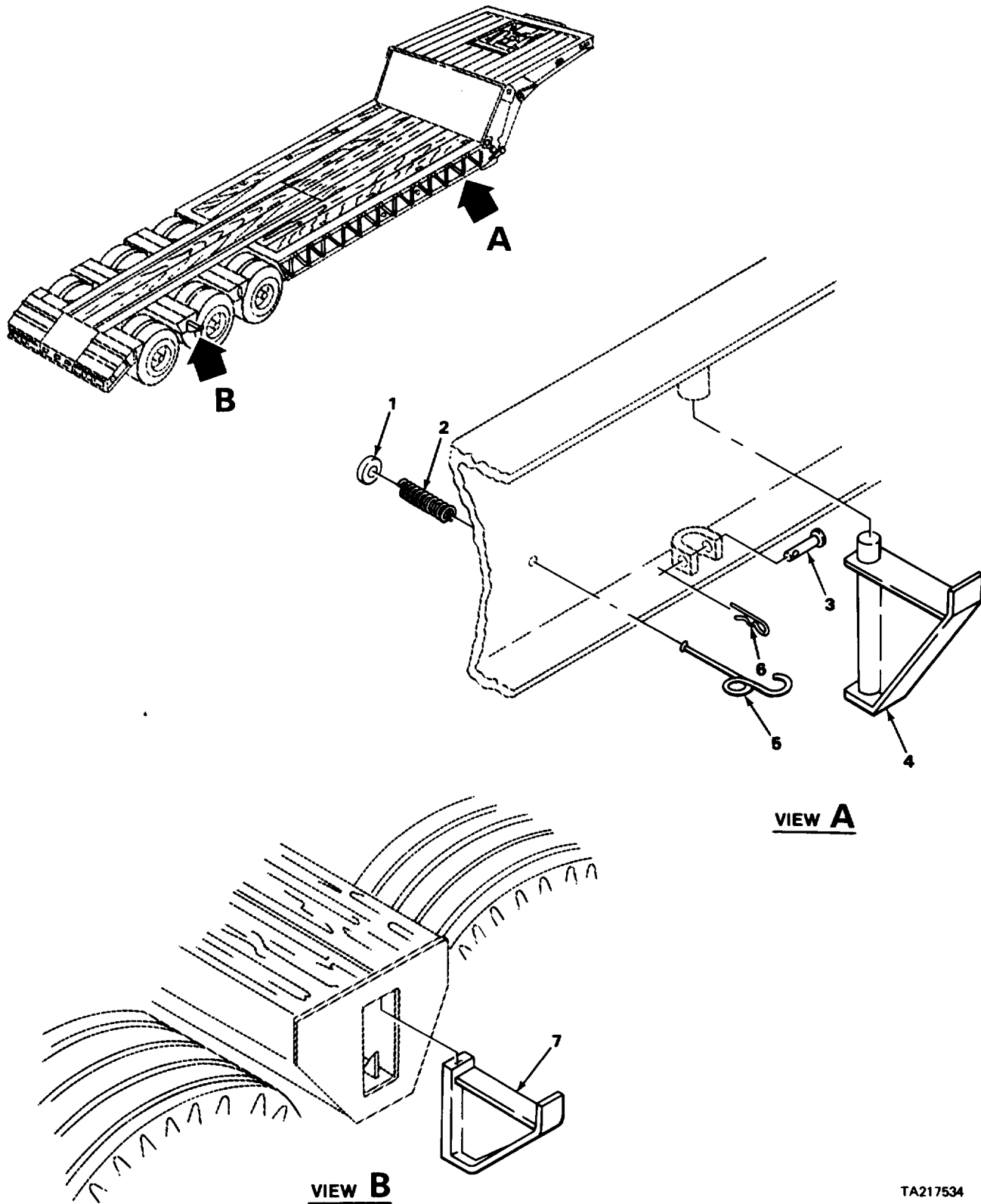
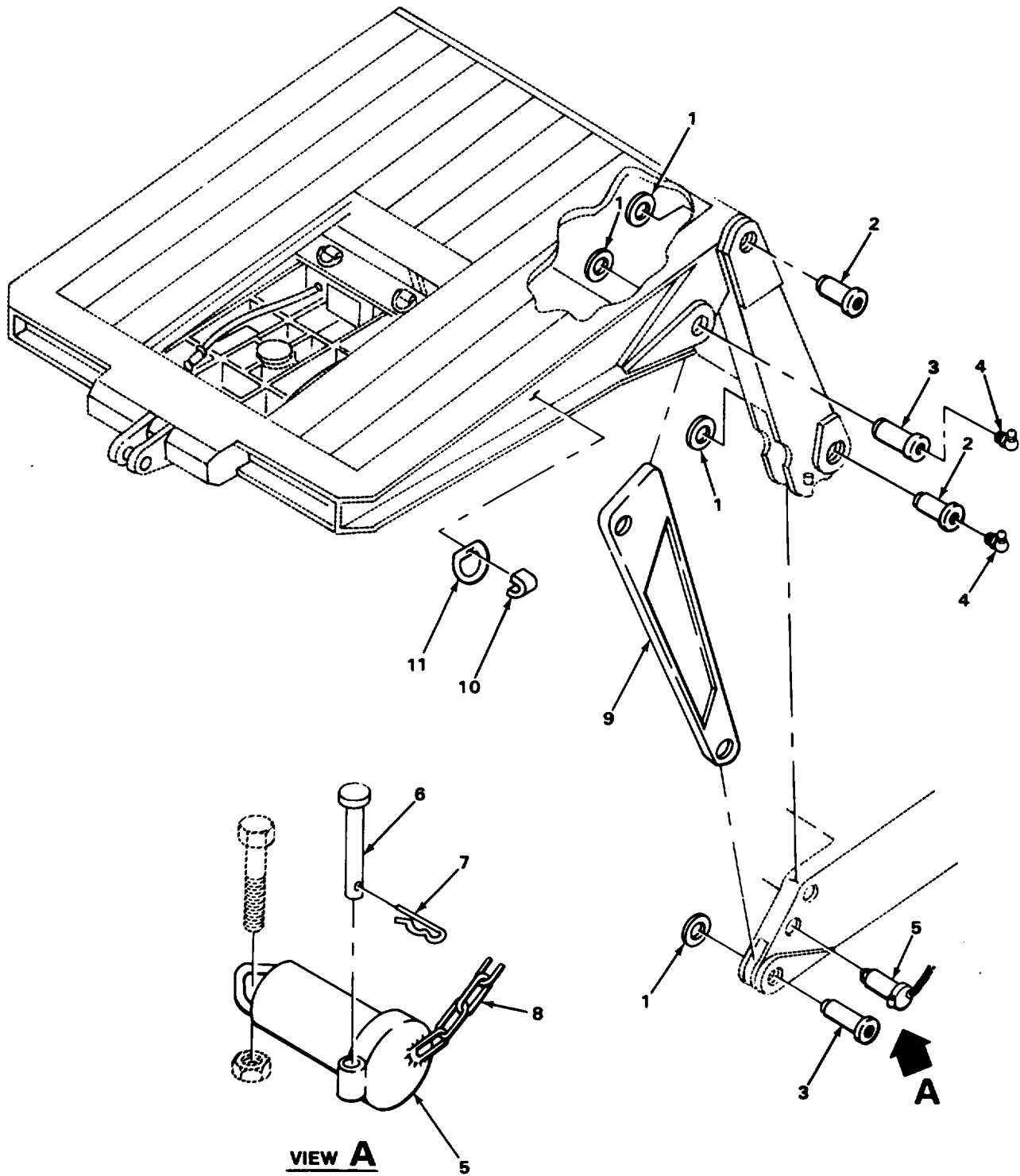


FIGURE 17. OUTRIGGERS.

TA217534

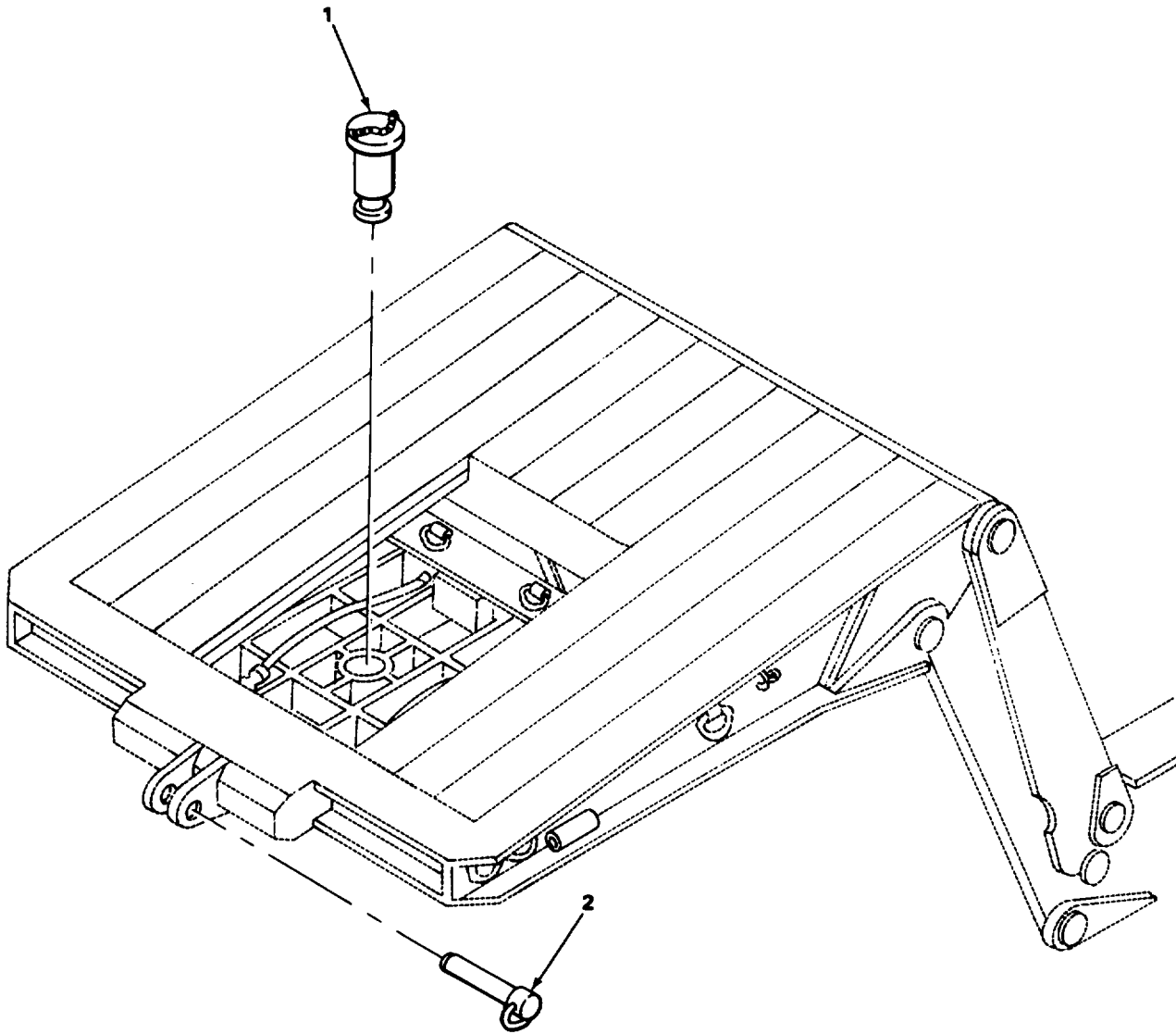
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
						GROUP 15-FRAME, TOWING ATTACHMENTS AND DRAWBARS 1501-FRAME ASSEMBLY			
17	1	PAOZZ	5310-01-041-5168	26697	0610000000B9	WASHER, FLAT FASTENER		EA	24
17	2	PAOZZ	5360-01-042-2666	26697	0610000000B8	SPRING, HELICAL, COMP FASTENER		EA	24
17	3	PAOZZ	5315-01-043-5478	26697	0610000000B11	PIN, STRAIGHT, HEADED RETAINING		EA	24
17	4	PAOZZ	2590-01-164-8174	26697	0610000000B4	OUTRIGGER, FRONT		EA	24
17	5	PAOZZ	5325-01-041-7321	26697	0610000000B7	FASTENER, HOOK		EA	24
17	6	PAOZZ	5315-01-043-5477	26697	0610000000B10	PIN, LOCK HAIR		EA	24
17	7	PAOZZ		26697	0610000000BR12	BRACLET, OUTRIGGER REAR		EA	6



TA217535

FIGURE 18. GOOSENECK AND LASHING RINGS.

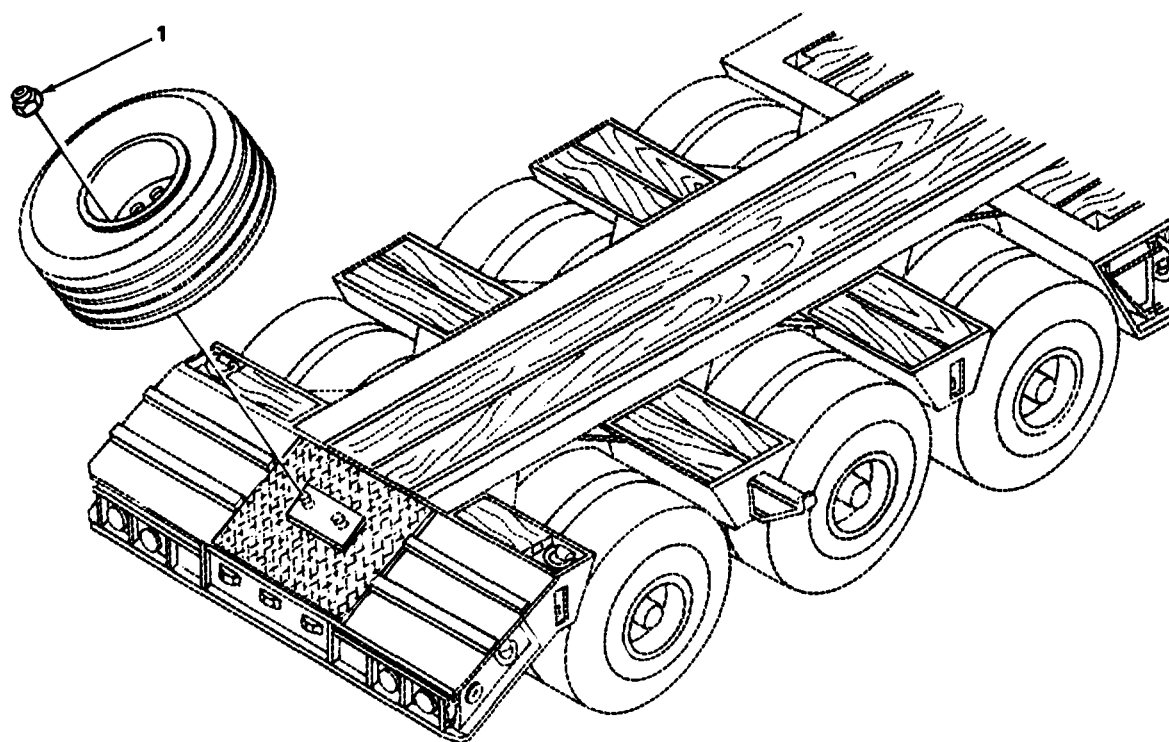
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
18	1	PAFZZ		26697	MPO-0996	RING,RETAINER		EA	10
18	2	PAFZZ	5315-01-043-4187	26667	061FOLD00PF4	PIN,STRAIGHT,HEADED UPPER		EA	4
18	3	PAFZZ	5315-01-043-4188	26697	061FOLD00PF3	PIN,STRAIGHT,HEADED LOWER		EA	4
18	4	PAOZZ		26697	MP5-0303	FITTING,LUBE		EA	8
18	5	PAOZZ	5315-01-155-0009	26697	061FOLD00PF2	PIN,LOCK		EA	2
18	6	PAOZZ		26697	MPO-0492	PIN		EA	1
18	7	PAOZZ		26697	MPO-0296	PIN,COTTER		EA	1
18	8	PAOZZ		81348	RRC-271	CHAIN		EA	1
18	9	XDFZZ		26697	061FOLD00PF10	LINK,ASSEMBLY,LOWER		EA	2
18	10	PAFZZ		26697	MP1-0014	BRACKET LASHING RINGS		EA	16
18	11	XDFZZ		26697	MP1-0015	TESTING RING LASHING		EA	16



TA217536

FIGURE 19. KINGPIN AND LIFTING PIN.

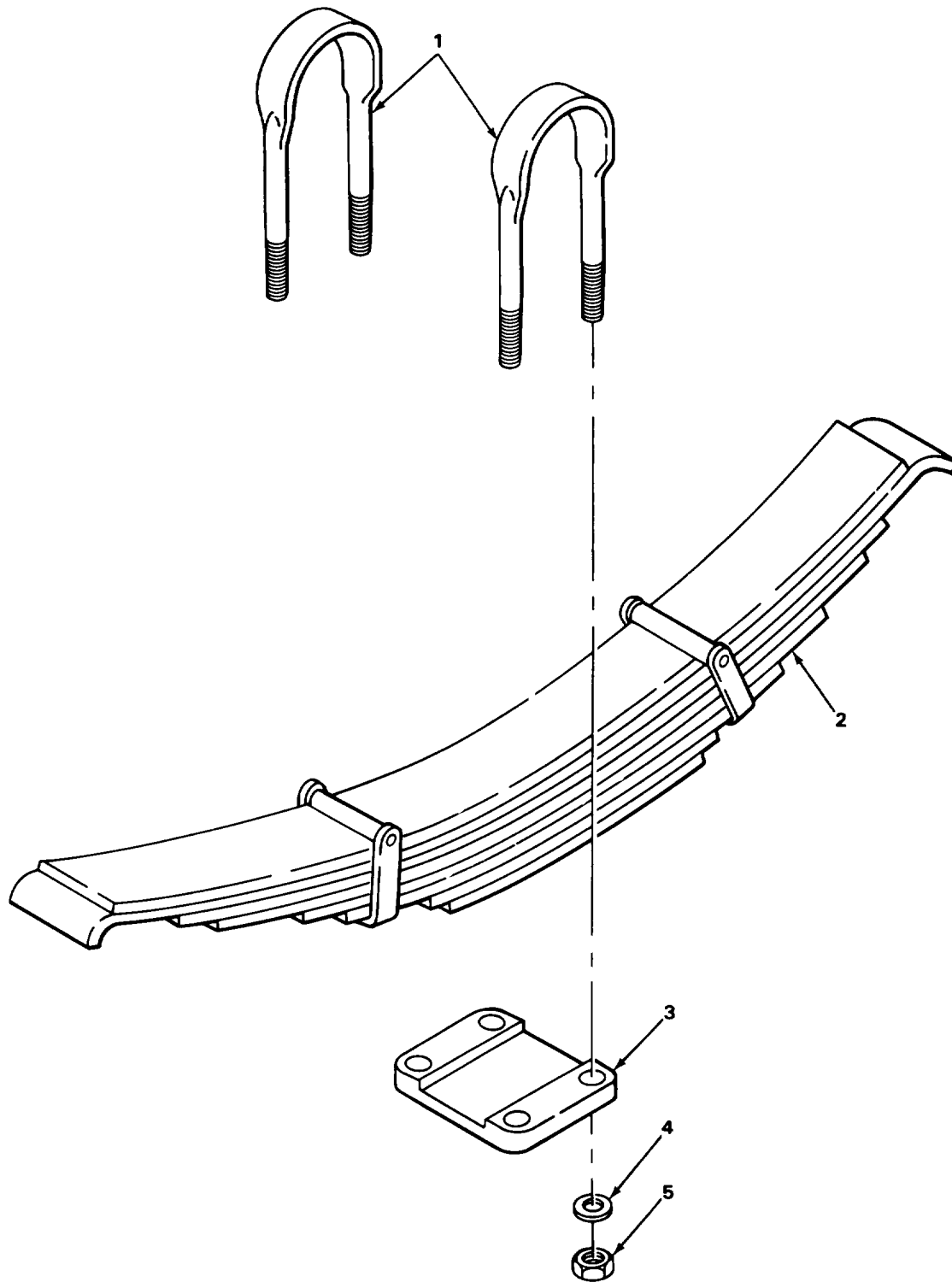
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
1503-PINTLES AND TOWING ATTACHMENTS									
19	1	PAOZZ	5315-00-630-4819	26697	061FOLD00PF1	PIN,SPECIAL FIFTH WHEEL	T01	EA	1
19	1	PAOZZ	5315-01-048-3180	26697	18241	PIN K ING	U17	EA	1
19	2	PAOZZ		26697	MPO-0902	EYE,LIFTING POIN		EA	1



TA217537

FIGURE 20. SPARE WHEEL CARRIER ATTACHING HARDWARE.

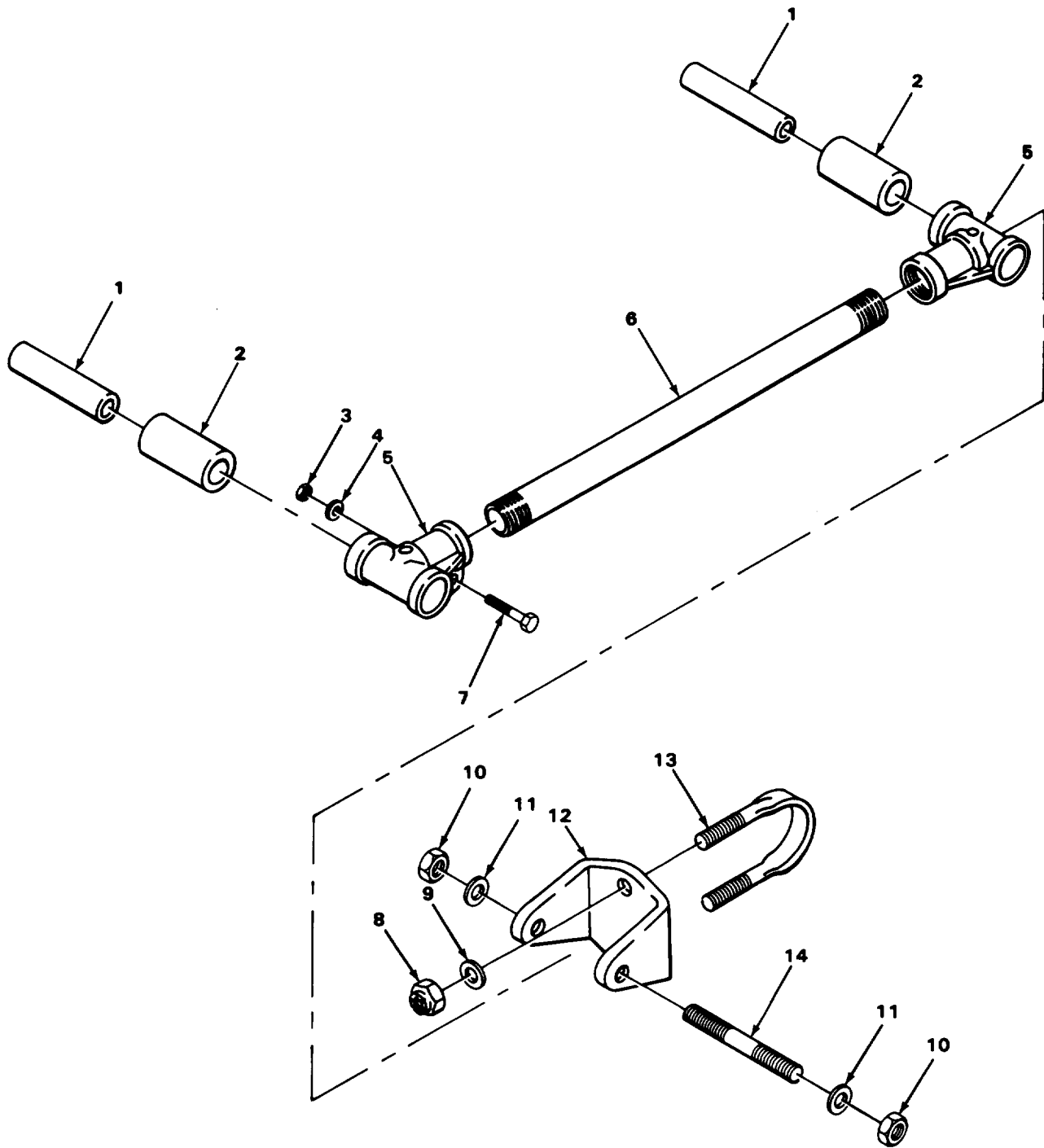
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
20	1	PAOZZ	5310-00-880-2004	96906	MS51983-3	1504-SPARE WHEEL CARRIER AND TIRE LOCK NUT, LOCKING		EA	2



TA217538

FIGURE 21. SPRING AND CLAMP PLATE.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
GROUP 16-SPRINGS AND SHOCK ABSORBERS 1601-SPRINGS									
21	1	PAFZZ	5305-01-061-0734	98171	930-04-239	U BOLT		EA	2
21	2	PAFZZ	2510-01-062-1920	98171	915-57-172	SPRING ASSEMBLY, LEA		EA	2
21	3	PAFZZ	2510-01-061-0429	98171	910-10-108	CLAMP PLATE, SPRING		EA	2
21	4	PAFZZ		98171	900-41-823	WASHER, FLAT		EA	4
21	5	PAFZZ		98171	939-00-027	NUT, LOCK		EA	4

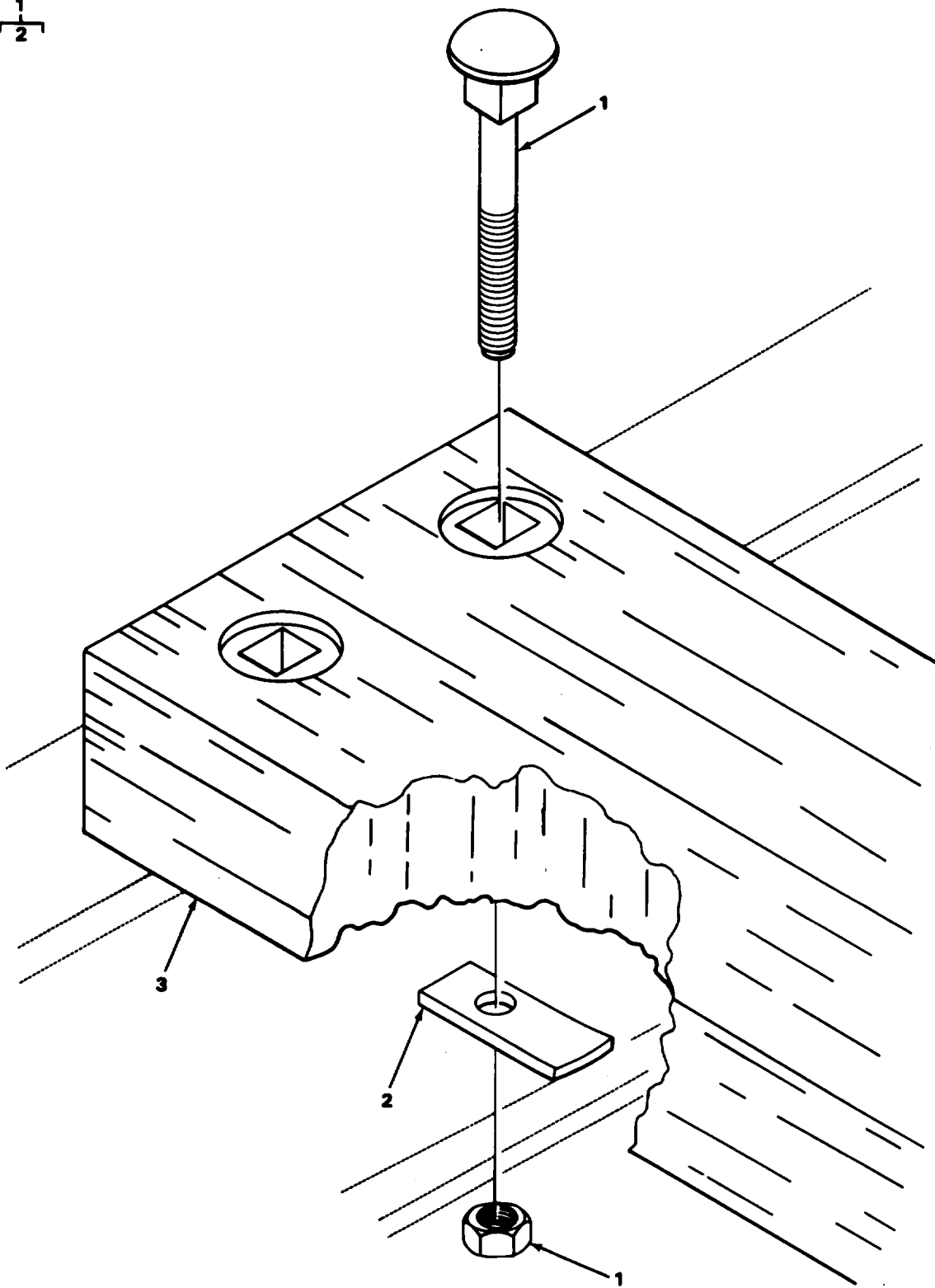


TA217539

FIGURE 22. RADIUS RODS.

SECTION II		TM5-2330-360-14&P						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
ILLUS- TRATION (A) FIG NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION	USABLE ON CODE	U\M INC IN UNIT	
					1605-TORQUE, RADIUS, AND STABILIZIER RODS			
22	1	PPFZZ	98171	93400504	LINER, PLASTIC	EA	4	
22	2	PPFZZ	98171	91038475	BUSHING, RUBBER	EA	4	
22	3	PAFZZ	98171	93003375	LOCKNUT, CROWN	EA	8	
22	4	PAFZZ	98171	93003359	WASHER, FLAT	EA	8	
22	5	PAFZZ	2530-01-045-5913	98171	91544137	ROD END, RADIUS, LEFT	EA	2
22	5	PAFZZ	2530-01-045-7196	98171	91044027R	ROD END, RADIUS, RIGH	EA	2
22	6	PPFZZ	98171	91036078	ROD SCREW, RADIUS	EA	2	
22	7	PAFZZ	98171	93900025	CAPSCREW	EA	8	
22	8	PAFZZ	98171	93900027	NUT, LOCK	EA	4	
22	9	PAFZZ	98171	90041823	WASHER, FLAT	EA	4	
22	10	PAFZZ	98171	93600030	NUT, LOCK	EA	4	
22	11	PAFZZ	98171	90006199	WASHER, FLAT	EA	4	
22	12	PAFZZ	2530-01-046-4695	98171	90038083	BRACKET, RADIUS ROD AXLE	EA	2
22	13	PAFZZ	98171	91018039	BOLT-U	EA	2	
22	14	PPFZZ	5340-01-096-7556	98171	90008002	BOLT, ROD	EA	2

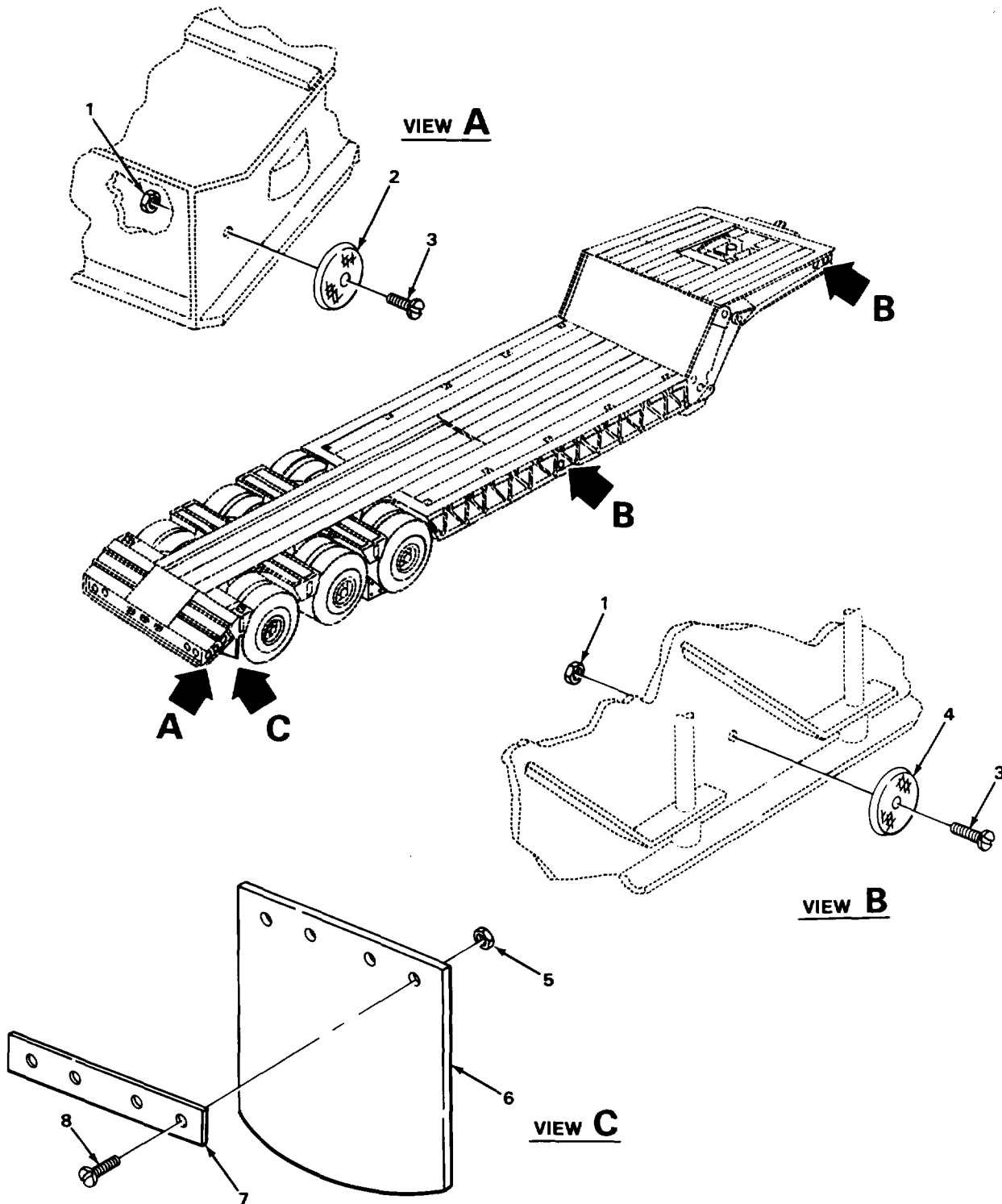
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TA217540

FIGURE 23. DECKING HARDWARE.

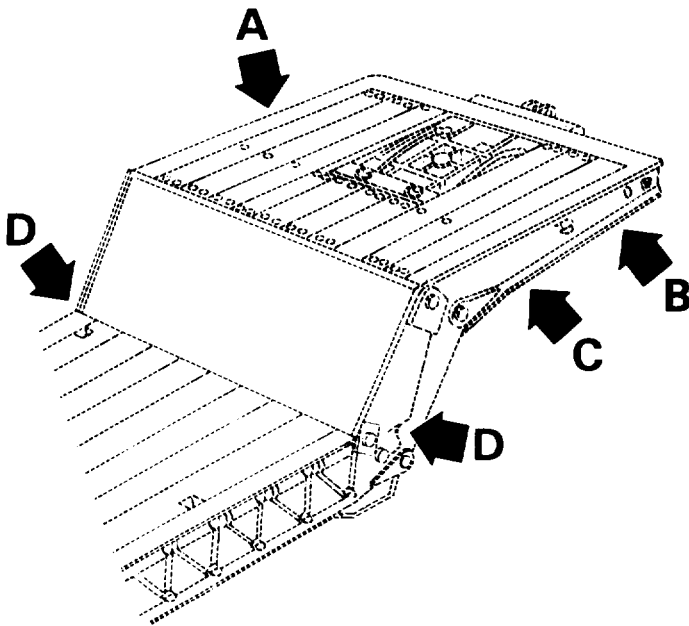
SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
GROUP 18-BODY ASSEMBLY 1810-CARGO BODY (PLATFORM)									
23	1	PAFZZ		26697	MPO-0919	NUT,BOLT,CLIP ASSEMBLY		EA	V
23	2	PAFZZ		26697	MP1-0014	.CLIP		EA	1
23	3	PAFZZ	5510-00-274-4994	26697	MIL-W-003912D	LUMBER HARDWOOD		EA	V



TA217541

FIGURE 24. REFLECTORS AND MUD FLAPS.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
GROUP 22-BODY CHASSIS AND ACCESSORY ITEMS 2202-ACCESSORY ITEMS									
24	1	PAOZZ	5310-00-934-9751	96906	MS35650-302	NUT,PLAIN,HEXAGON REFLECTOR MOUNTING		EA	6
24	2	PAOZZ	9905-00-205-2795	96906	MS35387-1	REFLECTOR,INDICATIN RED		EA	2
24	3	PAOZZ	5305-00-984-6216	96906	MS35206-267	SCREW,MACHINE REFLECTOR MOUNTING		EA	6
24	4	PAOZZ	9905-00-202-3639	96906	MS35387-2	REFLECTOR,INDICATIN AMBER		EA	4
24	5	PAOZZ		26697	MPO-0482	NUT MUD FLAP MOUNTING		EA	8
24	6	XODZZ		26697	7060000012X24	MUD,FLAP	T01	EA	2
24	6	MOOZZ		19207	0410708-1	GUARD,SPLASH MANUFACTURE FROM NSN 2540-01-0708	U17	EA	2
24	7	PAOZZ		26697	BCO-0002	BAR		EA	2
24	8	PAOZZ		26697	MPO-0489	SCREW AND FLAP MOUNTING		EA	8



CAUTION
DO NOT WORK UNDER
GOOSENECK UNLESS
LOCK PINS ARE
SECURELY IN PLACE

VIEW D

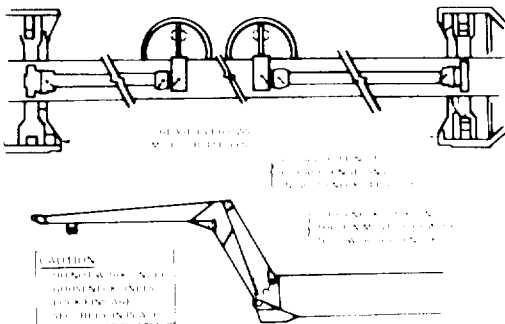
LOAD KING

MODEL **403LF** SERIAL [REDACTED]
 WEIGHT [REDACTED] CAP **40T**
 GROSS VEHICLE WT. RATING **94,000**
 GROSS AXLE WT. RATING **21,920**
 DATE OF MFG. [REDACTED] SER. NO. **2330-00-133-1731**

THE MANUFACTURER CERTIFIES THAT THIS MOTOR
 VEHICLE OR MOTOR VEHICLE EQUIPMENT MEETS ALL
 APPLICABLE FEDERAL SAFETY STANDARDS AS OF
 THE DATE OF MANUFACTURE **DAAE07-74-C-0233**
 MADE BY

LOAD KING

VIEW A



ITEM NO.	DESCRIPTION	QUANTITY	REMARKS
1	AXLE ASSEMBLY	2	
2	WHEEL END	2	
3	DRIVE END	2	
4	GOOSENECK	1	
5	LOCK PIN	2	

VIEW C

**THIS TRAILER IS BUILT OF
HEAT TREATED ALLOY STEEL
THROUGHOUT DO NOT CUT,
WELD OR BURN WITHOUT
FACTORY INSTRUCTION TO
DO SO MAY VOID WARRANTY**

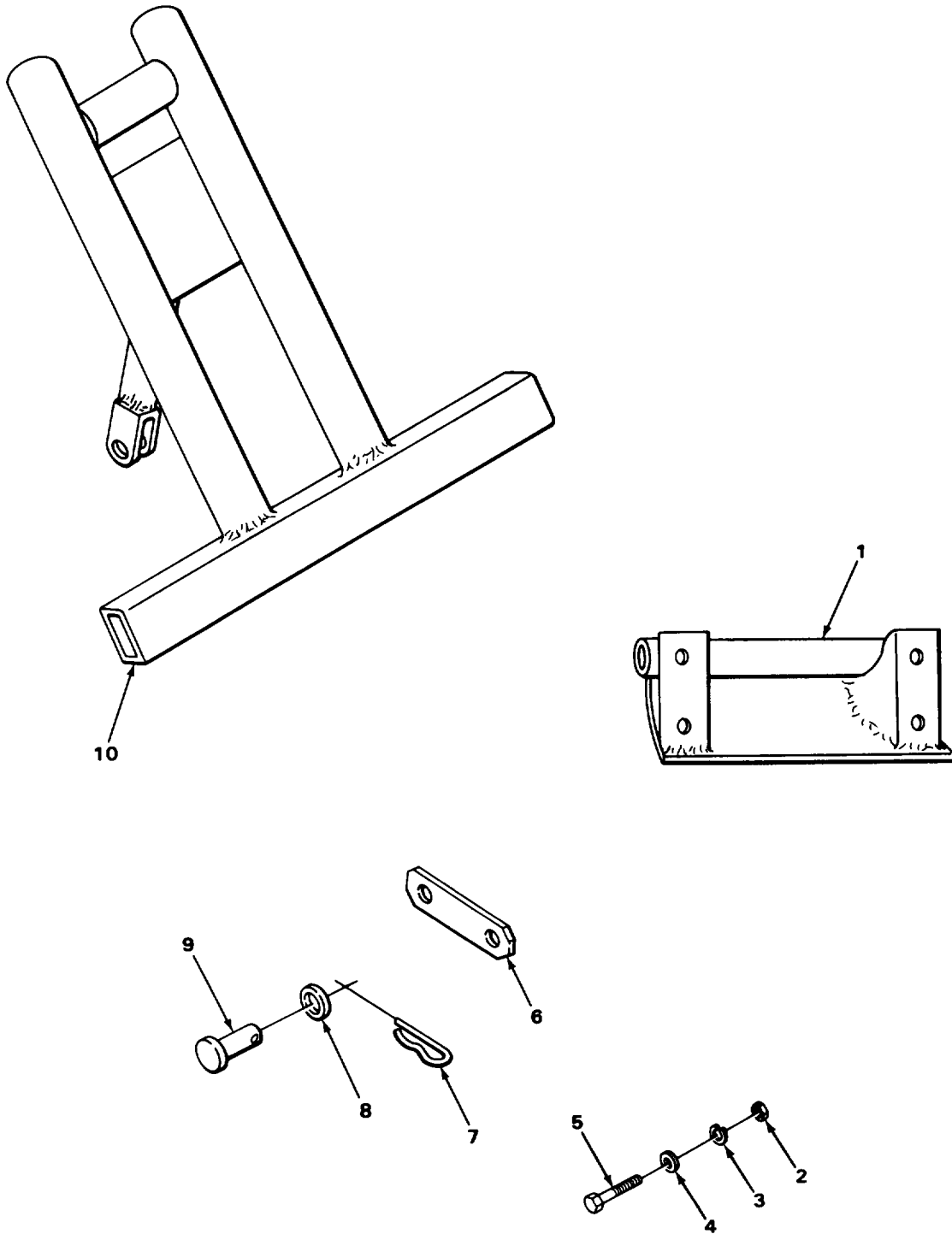
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VIEW B

TA217542

FIGURE 25. DATA PLATES.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
2210-DATA PLATES									
25	1	XDOZZ		26697	061NAMEPLATE	DATA PLATE IDENTIFICATION		EA	1
25	2	XDOZZ		26697	061000T1WELD	DATA PLATE WELDING INST		EA	1
25	3	XDOZZ		26697	PDO-0289	DATA PLATE LUBRICATION INST		EA	1
25	4	XDOZZ		26697	061CAUTIONOF	DATA PLATE GOOSENECK CAUTION		EA	2



TA217543

FIGURE 26. ADAPTATION KIT.

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
GROUP 33-SPECIAL PURPOSE KITS 3307-SPECIAL PURPOSE KITS									
26	1	KFOZZ		26697	21280	APPROACH PLATE CENTER EXTENSION PART OF KIT P/N 21707	U17	EA	1
26	1	KFOZZ		26697	9004	APPROACH PLATE CENTER EXTENSION PART OF KIT P/N 8000	T01	EA	1
26	2	PAOZZ	5310-00-763-8905	96906	MS51968-20	NUT,PLAIN,HEXAGON		EA	4
26	3	PAOZZ	5310-00-820-6653	96906	MS35338-50	WASHER,LOCK		EA	4
26	4	PAOZZ	5310-00-823-8803	96906	MS27183-21	WASHER,FLAT		EA	4
26		KFOZZ		96906	90726-164	SCREW,CAP,HEXAGON PART OF KIT P/N 8000		EA	4
26	6	KFOZZ		26697	9003	HANG UP PALTE PART OF KIT P/N 8000		EA	1
26	7	PAOZZ	5315-00-018-7988	96906	MS24665-493	PIN,COTTER		EA	1
26	8	PAOZZ	5310-00-902-6659	96906	MS15795-825	WASHER,FLAT		EA	1
26	9	KFOZZ		26697	9002	PIN PART OF KIT P/N 8000		EA	1
26	10	KFOZZ		26697	9001	SUPPORT FRAME,CABLE PART OF KIT P/N 8000	T01	EA	1
26	10	KFOZZ		26697	30112	SUPPORT FRAME,CABLE PART OF KIT P/N 21707	U17	EA	1
26		PAOZZ	2540-01-003-4413	26697	8000	ADAPTER KIT	T01	EA	1
26	1					APPROACH PLATE		EA	1
26	5					SCREW,CAP,HEXAGON		EA	4
26	6					HANG UP PLATE		EA	1
26	9					PIN		EA	1
26	10					SUPPORT FRAME		EA	1
26		PAOZZ		26697	21707	KIT,ADAPTER	U17	EA	1
26	1					APPROACH PLATE		EA	1
26	10					SUPPORT FRAME,CABLE		EA	1

SECTION II (1) ILLUS- TRATION (A) FIG NO		(2) SMR CODE	(3) NATIONAL STOCK NUMBER	TM5-2330-360-14&P (4) (5) FSCM PART NUMBER		(6) DESCRIPTION	USABLE ON CODE	(7) U\M	(8) QTY INC IN UNIT
GROUP 95-GENERAL USE STANDARIZED PARTS 9501-BULK MATERIAL									
BULK	1	PAOZZ	2540-01-041-0708	19207	10959859	GUARD,SPLASH		EA	1
BULK	2	PAOZZ	4720-01-058-7213	19207	CPR104420-1	TUBING,NONMETALLIC		EA	V
BULK	3	PAOZZ	6145-00-615-2019	79146	59A4X14X500	WIRE,ELECTRICAL		FT	V

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO	NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO
5315-00-018-7988	26	7	5310-00-833-8567	1	8
6240-00-019-0877	1	13	5310-00-835-2037	13	9
6240-00-019-0877	2	7	5935-00-846-3883	3	8
6240-00-019-3093	2	4	4820-00-849-1220	12	8
2530-00-021-2366	12	4	5310-00-880-2004	14	3
6240-00-044-6914	2	5	5310-00-880-2004	20	1
5310-00-045-3296	1	18	5310-00-880-2005	14	3
2640-00-050-1229	16	3	5310-00-902-6659	26	8
2610-00-051-9218	16	2	5310-00-934-9751	1	6
5999-00-057-2929	1	11	5310-00-934-9751	24	1
5330-00-090-2128	10	3	6240-00-944-1264	1	2
3110-00-100-0335	15	7	5305-00-984-5675	3	11
3110-00-100-0670	15	3	5305-00-984-6211	1	5
6220-00-128-6823	1	3	5305-00-984-6216	24	3
6220-00-128-6827	1	3	5305-00-988-1724	3	9
6220-00-128-8151	2	12	2540-01-003-4413	26	KIT
2530-00-151-6681	5	2	2590-01-003-9416	3	3
2610-00-163-0417	16	4	2530-01-016-2029	7	4
6220-00-179-4324	2	6	5360-01-019-3541	7	11
9905-00-202-3639	24	4	5320-01-020-0703	7	1
5330-00-202-4421	15	2	2540-01-041-0708	BULK	1
9905-00-205-2795	24	2	2530-01-041-4671	7	7
5510-00-274-4994	23	3	2530-01-041-5019	13	1
3110-00-293-8998	15	8	2530-01-041-5159	9	1
2530-00-294-7633	13	3	5310-01-041-5168	17	1
6240-00-295-1184	2	11	5365-01-041-6034	7	8
6220-00-299-7425	1	15	5325-01-041-7321	17	5
6220-00-299-7426	1	15	2530-01-042-0573	15	20
6250-00-371-4018	1	12	5310-01-042-1006	7	10
5340-00-426-8299	13	10	5360-01-042-2666	17	2
5330-00-462-0907	2	3	5310-01-043-0596	15	9
5305-00-476-7387	2	13	5315-01-043-4187	18	2
5365-00-486-2885	6	8	5315-01-043-4188	18	3
5310-00-488-3911	8	8	5315-01-043-5477	17	6
5935-00-572-9180	1	9	5315-01-043-5478	17	3
6220-00-577-3434	1	7	5310-01-043-5781	15	13
4730-00-595-0083	10	1	2530-01-044-8847	7	2
5310-00-596-8169	1	14	2530-01-045-5913	22	55
4730-00-604-6496	11	17	2530-01-045-7196	22	5
2530-00-606-2101	15	5	2530-01-046-0176	7	6
4730-00-609-9937	11	14	2530-01-046-4695	22	12
5330-00-615-1843	15	14	5315-01-047-6042	7	7
5330-00-615-1855	15	1	4730-01-048-0819	8	13
5340-00-615-1856	15	18	5315-01-048-3180	19	1
6145-00-615-2019	BULK	3	2530-01-048-7842	14	1
5315-00-630-4819	19	1	5310-01-049-3984	7	9
5307-00-637-0856	14	2	5310-01-049-9051	15	12
5307-00-637-1084	14	2	2530-01-052-4018	6	5
5310-00-637-9541	2	8	4720-01-058-7213	BULK	2
5360-00-698-7589	13	8	2510-01-061-0429	21	3
5305-00-701-5071	1	4	5365-01-061-0710	8	11
5305-00-701-5071	1	17	5305-01-061-0734	21	1
6220-00-726-1916	1	7	5310-01-061-1312	6	16
6220-00-752-6516	1	16	5935-01-061-9734	3	10
5310-00-763-8905	26	2	2510-01-062-1920	21	2
5935-00-773-1428	3	7	5330-01-067-3440	8	6
5306-00-811-5685	13	6	2530-01-071-9893	7	3
5310-00-820-6653	26	3	5220-01-093-4439	2	10
5310-00-823-8803	26	4	6220-01-093-4439	2	1
3110-00-829-0575	15	4	5340-01-096-7556	6	27

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO
5340-01-096-7556	22	14
4720-01-108-1089	11	1
4720-01-108-1090	11	9
4720-01-108-1091	11	5
5315-01-155-0009	18	5
2590-01-164-8174	17	4

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

FSCM	PART NUMBER	NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO	FSCM	PART NUMBER	NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO
26697	A19T75LHDA-71		5	1	26697	MP5-0197-2		11	4
26697	BCO-0002		24	7	26697	MP5-0197-2		11	7
19207	CPR104420-1	4720-01-058-7213	BULK	2	26697	MP5-0200-2		11	10
56697	FMS4591	2530-01-044-8847	7	2	26697	MP5-0303		18	4
79146	H0168-6X4	4730-00-604-6496	11	17	96906	MS15570-0877	6240-00-019-0877	2	7
79146	H0169-6X4	4730-00-609-9937	11	14	96906	MS15570-1251	6240-00-019-0877	1	13
26697	JPO-0031		3	5	96906	MS15570-623	6240-00-019-3093	2	4
26697	KPO-0162		10	5	96906	MS15795-825	5310-00-902-6659	26	8
26697	KPO-0163		10	6	96906	MS19081-113	3110-00-829-0575	15	4
26697	KPO-0164		10	4	96906	MS24665-493	5315-00-018-7988	26	7
26697	KPO-0165		10	8	96906	MS27148-2	5999-00-057-2929	1	11
26697	KPO-0166		10	9	96906	MS27183-21	5310-00-823-8803	26	4
26697	MIL-W-003912D	5510-00-274-4994	23	3	96906	MS35206-264	5305-00-984-6211	1	5
26697	MPO-0033		8	5	96906	MS35206-267	5305-00-984-6216	24	3
26697	MPO-0034		8	16	96906	MS35206-280	5305-00-988-1724	3	9
26697	MPO-0035		8	15	96906	MS35206-295	5305-00-984-5675	3	11
26697	MPO-0088		8	14	96906	MS35338-43	5310-00-045-3296	1	18
26697	MPO-0123		15	10	96906	MS35338-46	5310-00-637-9541	2	8
26697	MPO-0296		18	7	596906	MS35338-50	5310-00-820-6653	26	3
26697	MPO-0330		8	12	96906	MS35387-1	9905-00-205-2795	24	2
26697	MPO-0454		13	13	96906	MS35387-2	9905-00-202-3639	24	4
26697	MPO-0455		13	14	96906	MS35392-25	2610-00-051-9218	16	2
26697	MPO-0477		12	7	96906	MS35421-1	6220-00-299-7425	1	15
26697	MPO-0482		24	5	74925	MS35421-2	6220-00-299-7426	1	15
26697	MPO-0489		24	8	96906	MS35423-1	6220-00-577-3434	1	7
26697	MPO-0492		18	6	96906	MS35423-2	6220-00-726-1916	1	7
26697	MPO-0521		13	11	96906	MS35475-1683	6240-00-044-6914	2	5
26697	MPO-0539		15	16	96906	MS35649-202	5310-00-934-9751	1	6
26697	MPO-0540		15	15	96906	MS35649-23		2	14
26697	MPO-0541		15	21	96906	MS35650-302	5310-00-934-9751	24	1
26697	MPO-0543		15	19	96906	MS35691-53	5310-00-835-2037	13	9
26697	MPO-0545		15	17	96906	MS35746-1	4730-00-595-0083	10	1
26697	MPO-0635		10	2	96906	MS35748-1	5330-00-090-2128	10	3
26697	MPO-0902		19	2	96906	MS35782-5	4820-00-849-1220	12	8
26697	MPO-0919		23	1	96906	MS51861-53	5305-00-476-7387	2	13
26697	MPO-0996		18	1	96906	MS51959-61	5305-00-701-5071	1	4
26697	MP1-0014		18	10	96906	MS51959-61	5305-00-701-5071	1	17
26697	MP1-0014		23	2	96906	MS51968-20	5310-00-763-8905	26	2
26697	MP1-0015		18	11	96906	MS51983-3	5310-00-880-2004	14	3
26697	MP5-0091-407		3	1	96906	MS51983-3	5310-00-880-2004	20	1
26697	MP5-0091-407		12	9	96906	MS51983-4	5310-00-880-2005	14	3
26697	MP5-0091-607		12	10	96906	MS52125-2	6220-01-093-4439	2	1
26697	MP5-0094-32		15	22	96906	MS52125-2	5220-01-093-4439	2	10
26697	MP5-0094-32		15	23	96906	MS53004-2	2530-00-021-2366	12	4
26697	MP5-0094-6		3	6	96906	MS75021-1	5935-00-846-3883	3	8
26697	MP5-0094-60		12	1	96906	MS90725-57		2	9
26697	MP5-0094-8		12	6	40342	N-20097	2530-00-294-7633	13	3
26697	MP5-0102-351		13	12	26697	PDO-0107		14	4
26697	MP5-0105-6		3	2	26697	PDO-0285		3	4
26697	MP5-0105-8		13	15	26697	PDO-0286		4	2
26697	MP5-0107-2		11	6	26697	PDO-0287		4	3
26697	MP5-0108-2		11	3	26697	PDO-0288		16	1
26697	MP5-0111-10		12	3	26697	PDO-0289		25	3
26697	MP5-0112-2		11	8	26697	PDO-0291		11	13
26697	MP5-0113-3		11	11	81348	RRC-271		18	8
26697	MP5-0162-2		11	15	09386	R85770-3	2530-01-048-7842	14	1
26697	MP5-0164-2		11	16	26697	S196M3	2590-01-003-9416	3	3
26697	MP5-0169-3		12	5	81348	ZZ-T-381/10.00R1	2610-00-163-0417	16	4
26697	MP5-0169-8		10	7		5/GP3/G/TBHR			
26697	MP5-0197-2		11	2	19207	0410708-1		24	6

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

FSCM	PART NUMBER	NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO	FSCM	PART NUMBER	NATIONAL STOCK NUMBER	FIGURE NO	ITEM NO
26697	06000000-194		1	2	06853	280023		12	12
26697	06000000124A	6240-00-944-1264	1	1	56697	300129-002		15	6
26697	06000000124R		1	1	26151	3009	5330-00-615-1843	15	14
26697	06000042415R	6220-00-128-8151	2	12	26697	30112		26	10
26697	06000124-15A	6220-00-128-6827	1	3	26697	32011950	4720-01-108-1091	11	5
26697	06000124-15R	6220-00-128-6823	1	3	26697	32011953	4720-01-108-1089	11	1
26697	061CAUTIONOF		25	4	26697	32011954	4720-01-108-1090	11	9
26697	061FOLDOPFF10		18	9	19207	3250-06104		11	12
26697	061FOLDOPFF2	5315-01-155-0009	18	5	26151	343-4009	2530-01-042-0573	15	20
26697	061FOLDOPFF3	5315-01-043-4188	18	3	56697	401113		8	9
26697	061FOLDOPFF4	5315-01-043-4187	18	2	56697	402101	5310-01-042-1006	7	10
26697	061FOLDOPFF1	5315-00-630-4819	19	1	56697	402106		8	2
26697	061NAMEPLATE		25	1	56697	403103	5310-01-049-3984	7	9
26697	06100071WELD		25	2	56697	403105		8	1
26697	06100000RR12		17	7	5697	403112		8	4
26697	061000000B10	5315-01-043-5477	17	6	56697	403117	5310-00-488-3911	8	8
26697	061000000B11	5315-01-043-5478	17	3	56697	404101-001	5320-01-020-0703	7	1
26697	0610000000B4	2590-01-164-8174	17	4	56697	405129		8	3
26697	0610000000B7	5325-01-041-7321	17	5	56697	407100	4730-01-048-0819	8	13
26697	0610000000B8	5360-01-042-2666	17	2	56697	408101	5330-00-615-1855	15	1
26697	0610000000B9	5310-01-041-5168	17	1	56697	408101-001	5330-01-067-3440	8	6
17875	100AA	2640-00-050-1229	16	3	26697	50379		3	3
26151	1013	2530-00-151-6681	5	2	79146	59A4X14X500	6145-00-615-2019	BULK	3
56697	103102-001	5310-01-043-5781	15	13	26151	5990	5340-00-615-1856	15	18
56697	103103-002	5310-01-043-0596	15	9	19207	6152019-1		4	1
65083	1034	6240-00-295-1184	2	11	60038	653	3110-00-100-0335	15	7
56697	104107	3110-00-100-0670	15	3	26697	706000012X24		24	6
56697	104108	3110-00-293-8998	15	8	98343	752ATA	5935-01-061-9734	3	10
56697	105106	5310-01-049-9051	15	12	19207	7526509		1	10
19207	10959859	2540-01-041-0708	BULK	1	19207	7526515	6250-00-371-4018	1	12
19207	11639519-2	5330-00-462-0907	2	3	19207	7526516	6220-00-752-6516	1	16
19207	11639520		2	2	19207	7526796	5310-00-596-8169	1	14
19207	11639535		2	6	19207	7731428	5935-00-773-1428	3	7
09386	1244	6220-00-179-4324	15	5	26697	8000	2540-01-003-4413	26	KIT
09386	13988	5307-00-637-0856	14	2	09386	8015		15	11
09386	13989	5307-00-637-1084	14	2	19207	8338566	5935-00-572-9180	1	9
26697	18241	5315-01-048-3180	19	1	19207	8338567	5310-00-833-8567	1	8
56697	200101-001		8	7	9817	900-08-011	5365-00-486-2885	6	8
56697	201140	2530-01-071-9893	7	3	98171	900-41-823		21	4
56697	202103-213L		8	10	98171	90006199		6	25
56697	202103-213R		8	10	98171	90006199		22	11
56697	203110	2530-01-046-0176	7	6	98171	90008002	5340-01-096-7556	6	27
56697	204108-001	2530-01-041-4671	7	7	98171	90008002	5340-01-096-7556	22	14
56697	205107-001	5315-01-047-6042	7	7	26697	9001		26	10
56697	207100	2530-01-016-2029	7	4	26697	9002		26	9
56697	208106	5360-01-019-3541	7	11	26697	9003		26	6
79150	2109	5330-00-202-4421	15	2	98171	90038083	2530-01-046-4695	22	12
56697	212102	2530-01-041-5159	9	1	26697	9004		26	1
26697	21280		26	1	98171	90041807		6	21
56697	214102	5365-01-041-6034	7	8	98171	90041823		6	4
56697	214104	5365-01-061-0710	8	11	98171	90041823		22	9
06853	216841	5340-00-426-8299	13	10	96906	90726-164		26	5
26697	21707		26	KIT	98171	910-10-108	2510-01-061-0429	21	3
06853	225643		13	2	98171	91001075		6	14
06853	226056	2530-01-041-5019	13	1	98171	91001089		6	2
06853	227745		13	4	98171	91010060		6	1
06853	234130	5360-00-698-7589	13	8	98171	91018039		22	13
06853	237886	5306-00-811-5685	13	6	98171	91028051		6	5
06853	237887		13	7	98171	91028089		6	17
06853	237891		13	5	98171	91036078		22	6

NATIONAL STOCK NUMBER AND PART NUMBER INDEX

FSCM	PART NUMBER	NATIONAL STOCK NUMBER	FIGURE NO.	ITEM NO.
98171	91038290		6	19
98171	91038475		22	2
98171	91044027R	2530-01-045-7196	22	5
98171	915-57-172	2510-01-062-1920	21	2
98171	91501011		6	226
98171	91515011		6	12
98171	91518040L		6	26
98171	91518041R		6	20
98171	91544137	2530-01-045-5913	22	5
98171	930-04-239	5305-01-061-0734	21	1
98171	93003359		6	22
98171	93003359		22	4
98171	93003375		6	23
98171	93003375		22	3
98171	93003579		6	7
98171	93003633		6	18
98171	93003657		6	9
98171	93003935		6	15
98171	934 00 498	5310-01-061-1312	6	16
98171	93400149		6	10
98171	93400494		6	11
98171	93400502		6	13
98171	93400504		22	1
98171	93600005		6	6
98171	93600030		6	24
98171	93600030		22	10
98171	939-00-027		21	5
98171	93900025		22	7
98171	93900027		6	3
98171	93900027		22	8
56697	999197		7	5

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National Stock Number	Figure No	Item No	National Stock Number	Figure No	Item No
4820-00-057-0694	12	15	4720-01-302-2533	11	2
	12A	15	4720-01-302-2935	11	8
5305-00-068-0509	12	11	2530-01-302-2583	13	3
	12A	11	2530-01-303-0049	12A	6
			2530-01-303-0085	13	1
4730-00-188-3513	12	7	5340-01-303-1656	12	13
	12A	7			
4730-00-196-1504	12A	3			
5310-00-208-1919	12	16			
	12A	16			
4730-00-227-6929	12A	4			
4730-00-227-9114	12A	5			
5305-00-269-3211	12	1			
	12A	1			
4730-00-277-9114	12	5			
4730-00-322-8457	12	3			
	12A	7			
5340-00-426-8299	13	5			
5310-00-582-5965	11	11			
4730-00-604-6496	11	16			
5310-00-637-9541	12	18			
	12A	18			
5310-00-732-0558	12	17			
	12A	17			
5325-00-795-0719	12	14			
	12A	14			
4730-00-812-7999	12A	8			
4730-00-813-7811	12	6			
5310-00-833-3340	12	12			
	12A	12			
5310-00-835-2037	13	4			
	13	8			
4730-00-903-7204	12	9			
5340-00-905-2691	11	10			
5975-00-985-6630	11	13			
5305-00-993-2461	11	12			
4730-00-995-1579	12	10			
4730-01-056-4990	12	8			
2530-01-155-5731	12	8			
5315-01-201-1998	13	6			
5310-01-205-2838	13	9			
4720-01-300-0774	11	5			
4720-01-300-5878	11	3			
4720-01-301-7997	11	6			
	12A	13			
2530-01-301-8094	12A	2			

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FSCM		PART NUMBER STOCK NUMBER	FIGURE NO.	ITEM NO.
88044	AN365-420A	5310-00-208-1919	12	16
			12A	16
88044	AN935-416	5310-00-582-5965	13	11
26697	A19T75LHDA-71		5	1
81346	A773	4730-00-227-6929	12	4
			12A	3
79146	H0168-6X4	4730-00-604-6496	11	16
26697	MPS-0102-351		13	7
26697	MPO-0455	5310-01-205-2838	13	9
26697	MPO-0521	5315-01-201-1998	13	6
26697	MP5-0162-2		11	14
26697	MP5-0164-2		11	15
96906	MS21332-12	5340-00-905-2691	11	10
96906	MS3367-3-0	5975-00-985-6630	11	13
96906	MS35207-281	5305-00-993-2461	11	12
96906	MS35338-46	5310-00-637-9541	12	18
			12A	18
96906	MS35489-43	5325-00-795-0719	12	14
			12A	14
06853	MS35691-53	5310-00-835-2037	13	4
96906	MS35691-53	5310-00-835-2037	13	8
96906	MS39182-3	4730-00-069-1187	12	7
96906	MS500077A60300	4720-01-300-5878	11	3
96906	MS500077A60370	4720-01-307-4745	11	4
96906	MS500077A60500	4720-01-302-2533	11	2
96906	MS500077A60544	4720-01-300-0774	11	5
96906	MS500077A60760	4720-01-301-7997	11	6
96906	MS500077A60800	4720-01-307-4746	11	7
96906	MS51500-B-6		12A	10
96906	MS51500-B6-6	4730-00-322-8457	12	3
			12A	7
96906	MS51504-A6	4730-00-812-7999	12A	8
96906	MS51504-B6-6		11	1
			12A	9
			13	10
96906	MS51511-A6	4730-00-95-1579	12	10
96906	MS51877-13Z	4730-00-277-9114	12A	5
			12	5
96906	MS51967-8	5310-00-732-0558	12	17
			12A	17
96906	MS90725-10	5305-00-068-0509	12	11
			12A	11

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FSCM		PART NUMBER STOCK NUMBER	FIGURE NO.	ITEM NO.
96906	MS90725-60	5305-00-269-3211	12	1
			12A	1
24446	N402P13C6	5310-00-833-3340	12	12
			12A	12
84849	WWP521	4730-00-227-6929	12A	4
26151	1013	2530-00-151-6681	5	2
19207	12357778-1		5	3
19207	12357778-2		5	4
19207	12357779-1		5	5
19207	12357779-2		5	6
19207	12357780-1		5	7
19207	12357780-2		5	8
19207	12357787	2530-01-303-0049	12A	6
19207	12357788-1	2530-01-302-2583	13	3
19207	12357788-2	2530-01-303-0085	13	1
19207	12357803	2530-01-301-8094	12A	2
19207	12357812	2530-01-312-0340	13	2
19207	12357829-2	5340-01-303-1656	12	13
			12A	13
19207	12357831	4820-00-057-0694	12	15
			12A	15
19207	1235783	2530-01-155-5731	12	8
19207	12357855	4720-01-302-2935	11	8
06853	216841	5340-00-426-8299	13	5
81348	22-P-471BD1QBDCB	4730-00-903-7204	12	9
06853	280023		12	2
19207	3250-06104		11	9
81343	6-4-6 12424B	4730-00-813-7811	12	6

APPENDIX G

ILLUSTRATED LIST OF MANUFACTURED ITEMS

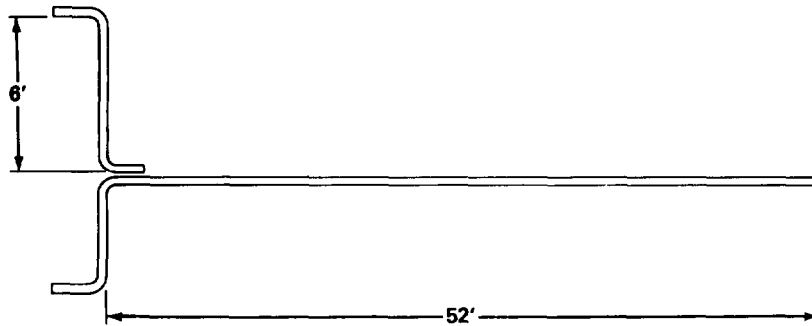
Section I. INTRODUCTION

This appendix includes complete instructions for making items authorized to be manufactured or fabricated at direct support/general support maintenance.

ITEM NUMBER	DESCRIPTION	PAGE
1	Electric circuit – brake lights	G-1
2	Electric circuit – service lights	G-2
3	Electric circuit - right turn signal	G-3
4	Electric circuit - left turn signal	G-2
5	Brake air lines	G-3

Section II. MANUFACTURED ITEMS ILLUSTRATIONS

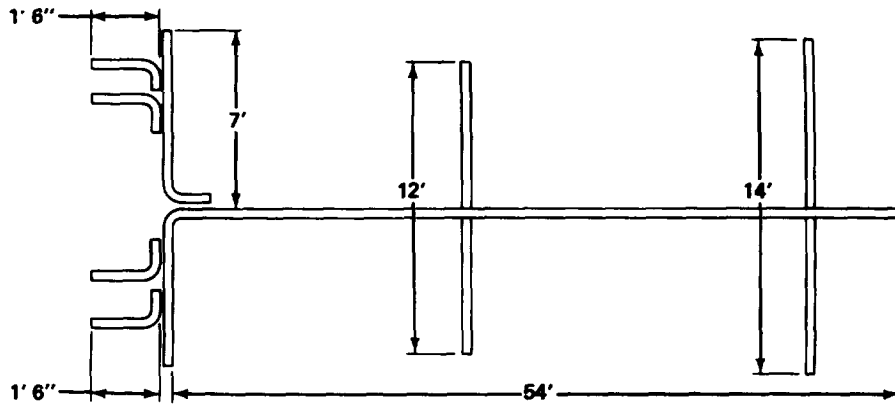
ELECTRIC CIRCUIT - BRAKE LIGHTS



NOTE

Fabricate from: NSN 6145-00-615-2019 – Wire.

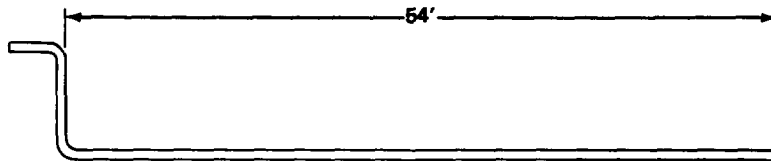
ELECTRIC CIRCUIT - SERVICE LIGHTS



NOTE

Fabricate from: NSN 6145-00-615-2019 - Wire.

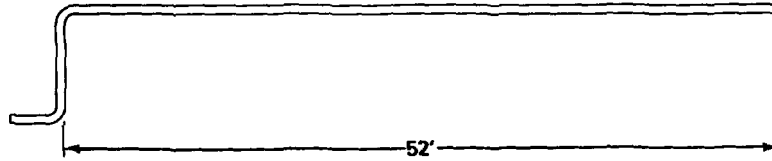
ELECTRIC CIRCUIT - LEFT-TURN SIGNAL



NOTE

Fabricate from: NSN 6145-00-615-2019 - Wire.

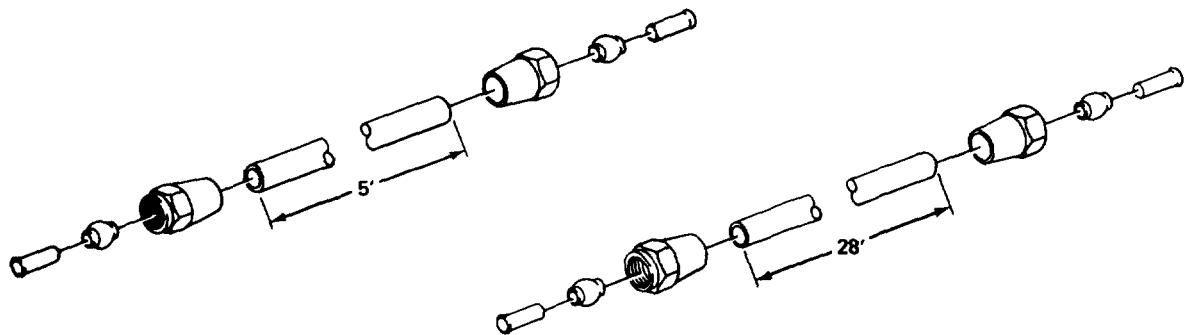
ELECTRIC CIRCUIT – RIGHT-TURN SIGNAL



NOTE

Fabricate from: NSN 6145-00-615-2019 - Wire.

BRAKE AIR LINES



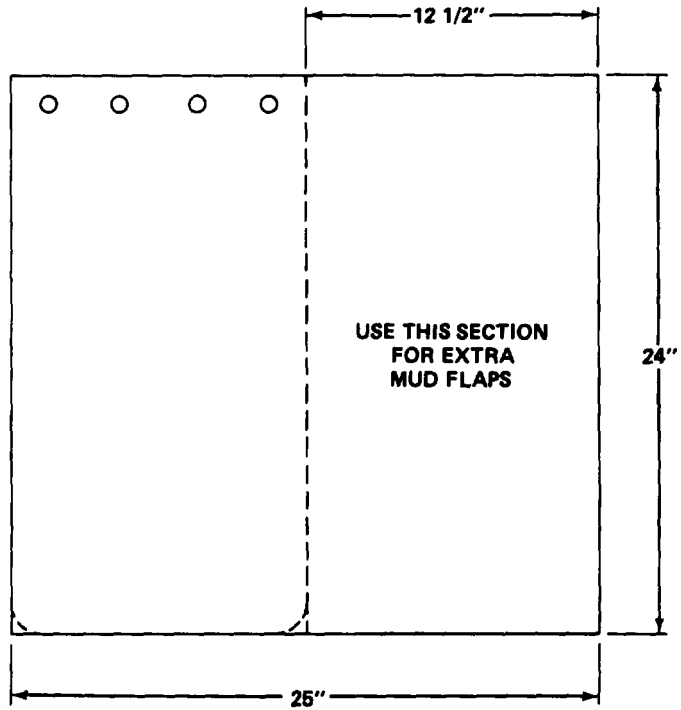
NOTE

Fabricate from:
NSN 4720-01-058-7213- Nylon hose.
NSN 4730-00-609-9937 - Adapter (as required).
NSN P/N MP5-0162-2 - Tubing ferrule (as required).
NSN P/N MP5-0164-2 - Tubing insert (as required).

MUD FLAPS

CUT PIECE IN HALF
WITH UTILITY KNIFE
AND ROUND OFF THE
BOTTOM EDGES

USE SUPPORT BAR AS
TEMPLATE AND DRILL
FOUR HOLES USING
9/16" DRILL BIT








NOTE

Fabricate from: NSN 2540-01-041-0708- Mud flap (1)

APPENDIX H

TORQUE LIMITS

CAPSCREW MARKING

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)				

TORQUE VALUES

CAUTION

If replacement capscrews are of a higher grade than originality supplied, use torque specifications for that placement. This will prevent equipment damage due to over torquing.

Capscrew Body Size (inches) - (Thread)		Torque Ft Lb (NŻm)	Torque Ft Lb (N•m)	Torque Ft Lb (NŻm)	Torque Ft Lb (NŻm)
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	63 (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 VALUES - CONTINUED

NOTE

Always use the torque values listed above when specific torque values are not available.

Do not use above 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 above is 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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IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
5-27		2	

Wrench size given is 1 1/4-inch.
Should be 1 1/8-inch wrench.

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THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT. FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER
TM 5-2330-360-14&P

PUBLICATION DATE
December 84

PUBLICATION TITLE Semitrailer, Lowbed:
40-Ton, M870 (NSN 2330-00-133-1731)

BE EXACT... PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter=10 Millimeters=0.01 Meters=0.3937 Inches
 1 Meter=100 Centimeters=1000 Millimeters=39.37 Inches
 1 Kilometer=1000 Meters=0.621 Miles

WEIGHTS

1 Gram=0.001 Kilograms=1000 Milligrams=0.035 Ounces
 1 Kilogram=1000 Grams=2.2 Lb
 1 Metric Ton=1000 Kilograms=1 Megagram=1.1 Short Tons

LIQUID MEASURE

1 Milliliter=0.001 Liters=0.0338 Fluid Ounces
 1 Liter=1000 Milliliters=33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Centimeter=100 Sq Millimeters=0.155 Sq Inches
 1 Sq Meter=10,000 Sq Centimeters=10.76 Sq Feet
 1 Sq Kilometer=1,000,000 Sq Meters=0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter=1000 Cu Millimeters=0.06 Cu Inches
 1 Cu Meter=1,000,000 Cu Centimeters=35.31 Cu Feet

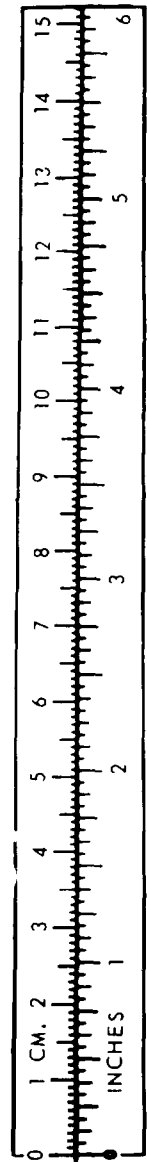
TEMPERATURE

$5/9 (^{\circ}\text{F} - 32) = ^{\circ}\text{C}$
 212° Fahrenheit is equivalent to 100° Celsius
 90° Fahrenheit is equivalent to 32.2° Celsius
 32° Fahrenheit is equivalent to 0° Celsius
 $9/5 \text{ C}^{\circ} + 32 = \text{F}^{\circ}$

APPROXIMATE CONVERSION FACTORS

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

<u>TO CHANGE</u>	<u>TO</u>	<u>MULTIPLY BY</u>
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621



TAO89991

(FOR REFERENCE ONLY)

