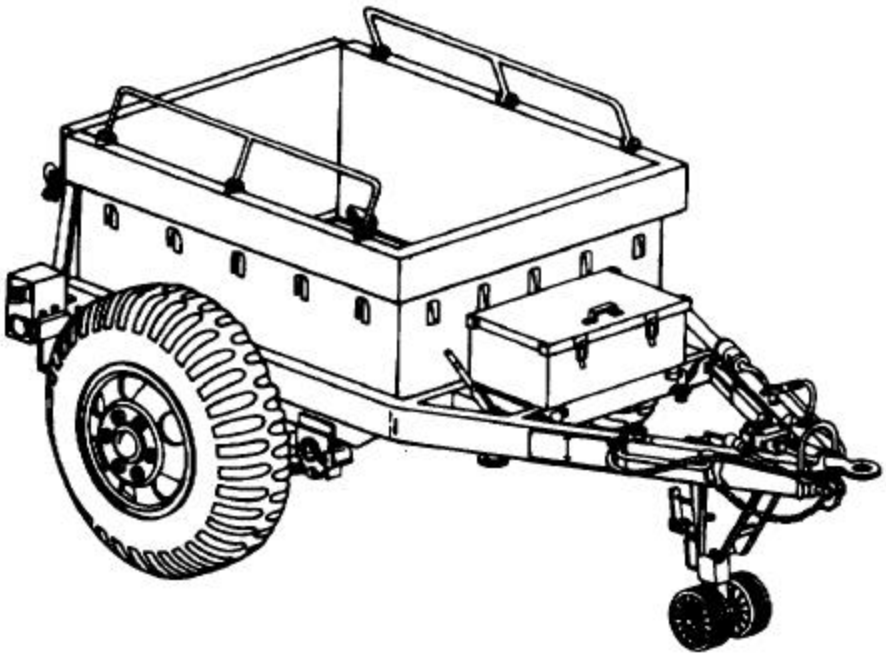
TECHNICAL MANUAL
OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)



TRAILER, AMMUNITION:
1 1/2-TON, 2-WHEEL, M332
(NSN 2330-00-200-1785)

HEADQUARTERS, DEPARTMENT OF THE ARMY
SEPTEMBER 1984

WARNING

USING DRY-CLEANING SOLVENT

Dry-cleaning 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). Serious injury, illness, or loss of life could result.

WARNING

DRAINING HIGH PRESSURE AIR

Wear protective goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream to prevent injuries.

WARNING

COUPLING

All persons not involved in coupling operation must stand clear of towing vehicle and trailer to prevent serious injury.

WARNING
NONOPERATIONAL LIGHTS

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

WARNING

ASBESTOS DUST

The hub and brakedrum assembly will be full of asbestos dust from the brake linings.
Breathing asbestos dust is extremely hazardous. A filter mask should be worn whenever working on the hub and brakedrum assembly. Failure to do so could result in injury to personnel.

WARNING

BRAKE AIR CHAMBER SPRING

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

WARNING

USE OF COMPRESSED AIR

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

C1

CHANGE **HEADQUARTERS**
DEPARTMENT OF THE ARMY
No. 1 **Washington, D. C., 9 *March 1990***

OPERATOR's, ORGANIZATIONAL, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LISTS
For
TRAILER, AMMUNITION:
1 1/2-TON, 2-WHEEL, M332
(NSN2330-00-200-1 785)

TM 9-2330-231-14&P, 20 September 1984 is changed as follows:
1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added illustrations are indicated by a vertical bar adjacent to the illustration identification number.

Remove Pages	Insert Pages
i thru 14	*i thru 1-4*
1-7 and 1-8	*1-7 and 1-8*
2-15/(2-16 blank)	*2-15/(2-16 blank)*
4-3 and 4-4	*4-3 and 4-4*
4-33 thru 4-38	*4-33 and 4-38*
5-3 thru 5-6	*5-3 and 5-6*
B-3 thru B-6	*B-3 thru B-6*
C- 1 and C-2	*C-1 and C-2*
F-1 thru F-82	*F-1 thru 1-17*

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

By Order of the Secretary of the Army:

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

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-39 (Block Nos. 536, 537, 538), Operator, Unit, Direct Support and General Support maintenance requirements for Trailer, Ammunition, 1 1/2-ton, 2-Wheel, M332.

TECHNICAL MANUAL

NO. 9-2330-231-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC 20 September 1984

Operator's, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) TRAILER, AMMUNITION: 1 1/2-TON, 2-WHEEL, M332 (NSN 2330-00-200-1785)

Current as of 27 October, 1989

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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

TABLE OF CONTENTS

*This manual supersedes TM 9-2330-231-14, 23 March 1972; including all changes.

TABLE OF CONTENTS - CONTINUED

TABLE OF CONTENTS - CONTINUED

TABLE OF CONTENTS - CONTINUED

HOW TO USE THIS MANUAL

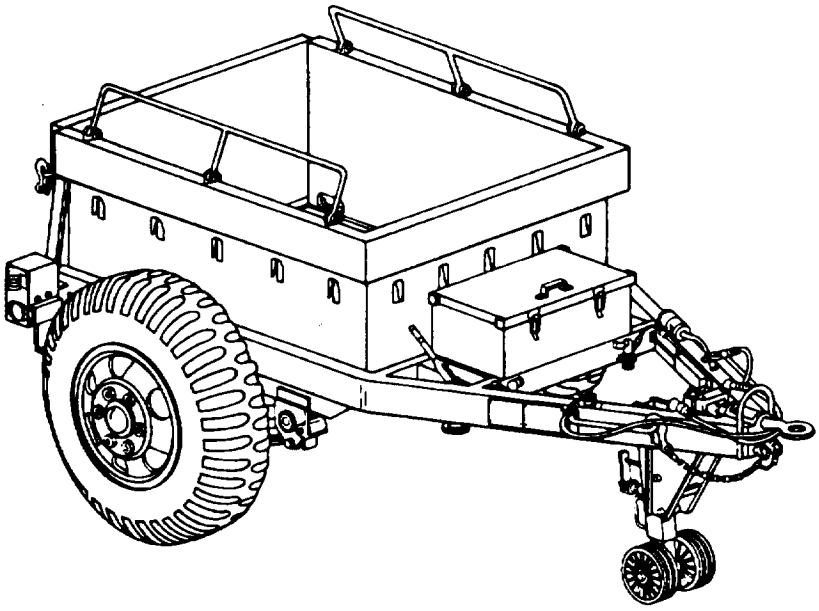
This manual is designed to help you operate and maintain the M332 ammunition trailer. The front cover table of contents is provided for quick reference to important information. There is also an index located in the final pages for use in boating specific items of information. Three separate indexes are also available for use in the back of Appendix F (The Repair Parts and Special Tools List).

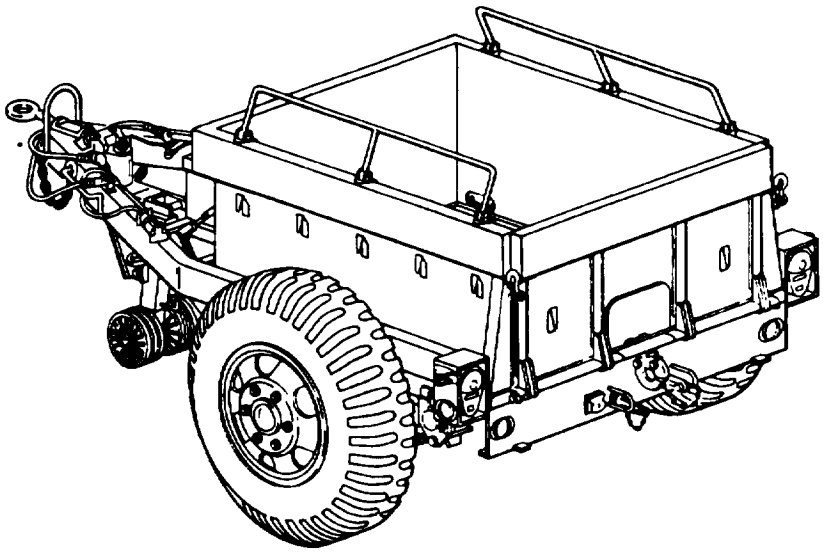
Measurements in this manual are given in both U S Standard and metric units. A metric to U S Standard conversion chart can be found on the inside back cover.

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

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

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





CHAPTER 1

INTRODUCTION

OVERVIEW

The purpose of this chapter Is to give you information on the ammunition trailer size, shape, major equipment, and how it works.

Section I. GENERAL INFORMATION

SCOPE

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

Model Number and Equipment Name: Trailer Ammunition, 1 1/2-Ton, 2-Wheel, M332.

Purpose of Equipment: The trailer is used to transport ammunition in tactical situations.

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.

PREPARATION FOR STORAGE AND SHIPMENT

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

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs)

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

REFERENCE INFORMATION

This list includes the nomenclature used in this manual.

Common Name	Nomenclature
glad-hand	coupling half, quick, airbrake
landing leg	retractable support assembly
tow hook	pintle
tow ring	lunette
trailer	trailer, ammunition,1 1/2-ton, M332

Section II. EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

CHARACTERISTICS

Open-frame trailer chassis with ammunition cargo compartment and fuse cap container mounted on frame

Has two-wheel single axle with leaf spring suspension

Has retractable landing leg to support front of trailer when uncoupled from towing vehicle

Has air-operated hydraulic brake system controlled from towing vehicle

Has manually operated parking brakes

Operates on 24-volt electrical system

Has automatic emergency braking in event of trailer breakaway or emergency air line break

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES- CONTINUED

CHARACTERISTICS - CONTINUED

May be towed by 2 1/2-ton, 6 by 6 cargo truck M35 or similar vehicle

CAUTION

To prevent damage to equipment, tandem towing of trailers is limited to two trailers cross country at speeds not to exceed 10 miles per hour. Tandem towing of trailers is prohibited on highways.

Trailers may be connected to each other in tandem and towed by a 5-ton truck.

Used to transport ammunition in tactical situations

CAPABILITIES AND FEATURES

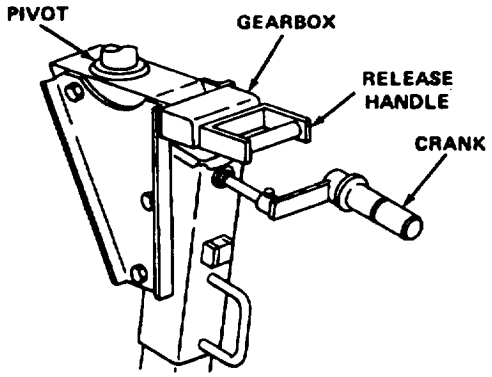
Payload	3000 lb (1362 kg)
Adjustable tow ring height	31 1/4 or 35 1/4 in. (79.4 or 89.5 cm)
Angle of departure	30 degrees

Speed is restricted to 50 mph (80 km/h) on improved roads and 25 mph (40 km/h) on cross-country or unimproved roads.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

LANDING LEG

The landing leg supports the front of the trailer when uncoupled, raises and lowers the trailer for coupling, and has wheels to allow the trailer to be moved while uncoupled.



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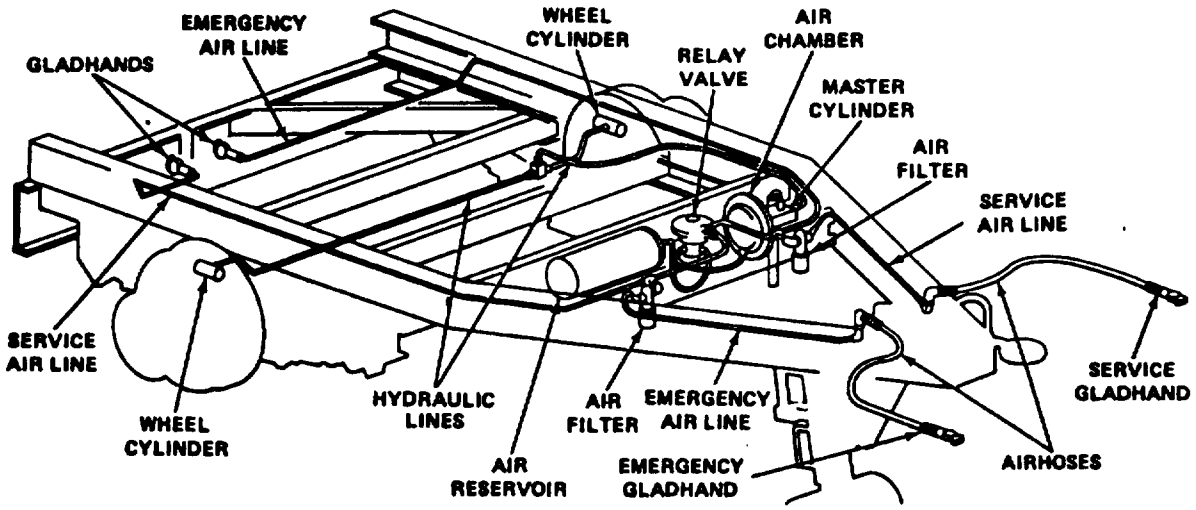
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - CONTINUED

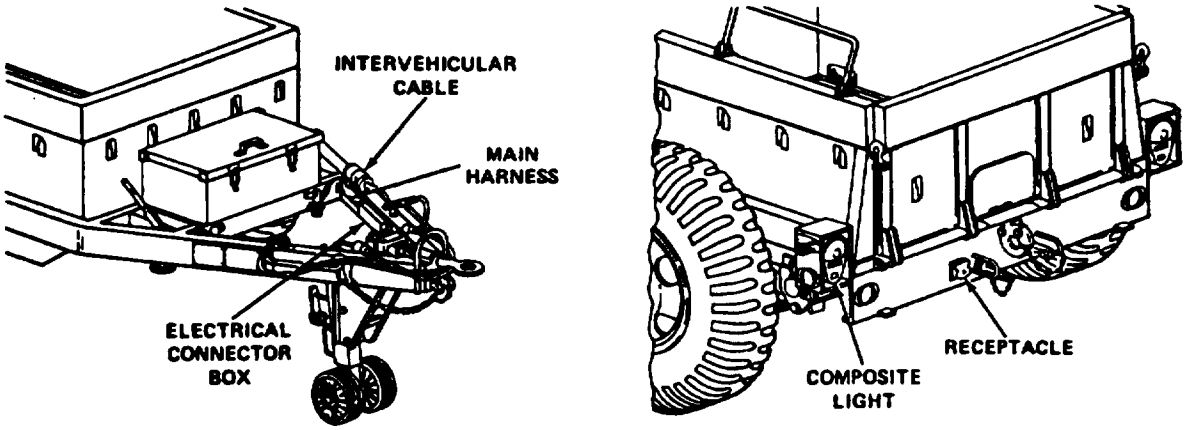
BRAKE SYSTEM

The brake system is an air-actuated, hydraulically-operated system that is operated by the towing vehicle's brake system.



ELECTRICAL SYSTEM

The electrical system provides power for the tail, stop, turn signal, and blackout lights. It is a 24-volt military system that is operated and powered by the towing vehicle.



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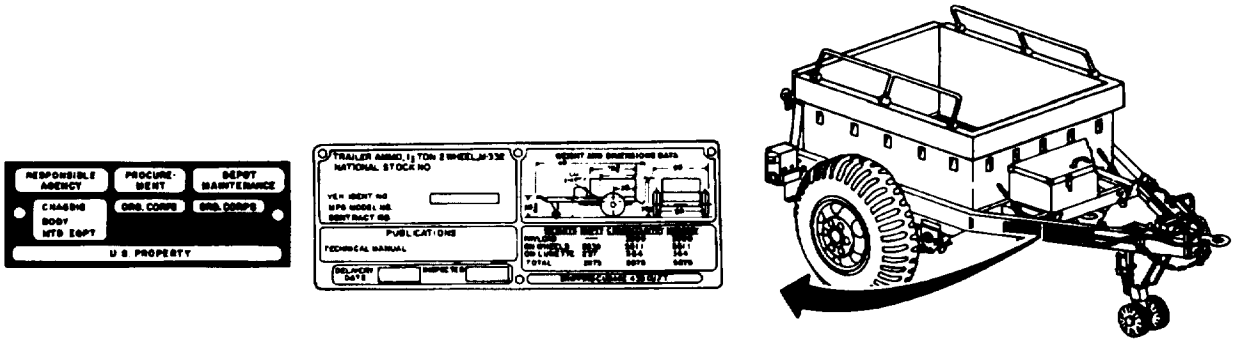
LOCATION AND DESCRIPTION OF DATA PLATES

The two data plates on the right drawbar provide identification, information, registration, weights, and .dimensions.



EQUIPMENT DATA

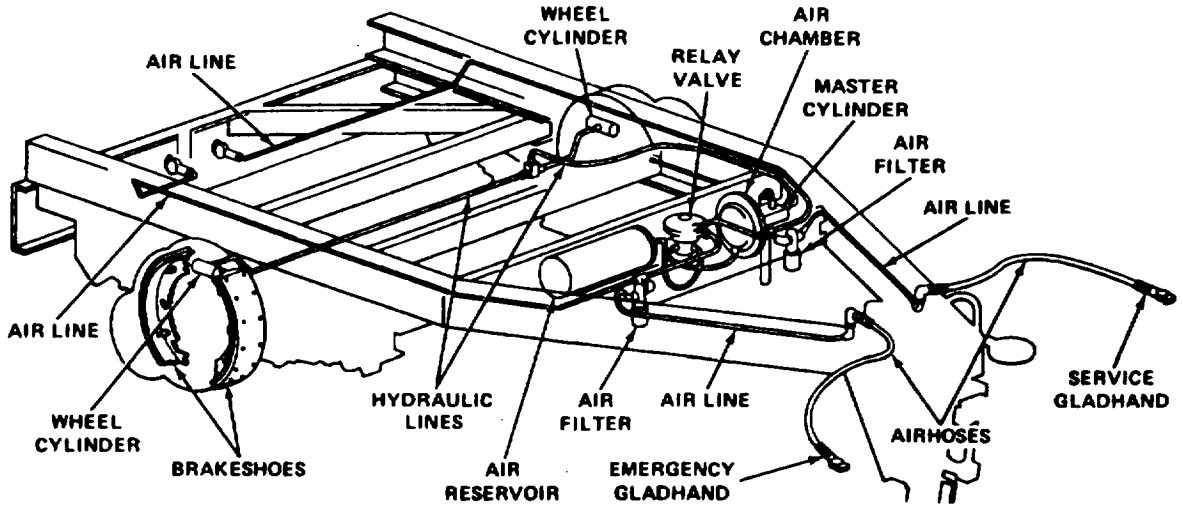
Weights and dimensions	
Length overall	148 in. (375.9 cm)
Width overall	95 in. (241.3 cm)
Height overall	53 1/4 in. (135.3 cm)
Tow ring (adjustable)	31 1/4 or 35 1/4 in. (79.4 or 89.5 cm)
Weight (empty)	2800 lb (1270 kg)
Payload	3000 lb (1361 kg)
Angle of departure	30 degrees
Tires	
Number	Two
Number of plies	Eight
Size	9.00 x 20
Inflation	
(cross-country)	25 psi (172.4 kPa)
(highway)	35 psi (241.3 kPa)
(mud, snow, and sand)	25 psi (1 72.4 kPa)
Type	Military pneumatic
Wheels	
Number	Two
Diameter of stud circle	8.743 in. (22.2 cm)
Number of studs	Six each
Rim size	20 x 7.5
Tire retention and removal	Split ring
Type	Offset disk
Bearing type	Tapered roller
Axle	
Type	Round tubular steel

EQUIPMENT DATA - CONTINUED

Suspension system	
Type	Leaf spring
Number of leaves	8
Shock absorbers	Oil filled, telescopic
Brakes	
Type	Air over hydraulic
Operating air pressure	60 psi (413.7 kPa) minimum
Shoe size	
diameter	15 in.
width	3 in.
Handbrakes	
Number	2
Location	Forward crossmember, left and right side of fuse cap container
Landing leg	
Length	
extended	28 in. (71.1 cm)
ret ratted	19.62 in. (49.8 cm)
Type	Hinged, screw-controlled, telescopic
Electrical System	
Service blackout	
and marker lights	3 CP
Stop and signal lights	32 CP
Frame	
Material Welded pressed steel	

Section III. TECHNICAL PRINCIPLES OF OPERATION

BRAKE SYSTEM



Glad-hands - The glad-hands are the coupling point for the trailer brake system to towing vehicle. They are marked, one for emergency and the other for service, to ensure correct hookup.

Airhoses - The airhoses connect the trailer brake system to the towing vehicle's.

Air Lines - The air lines connect trailer's airbrake system components together.

Air Filters - The air filter cleans towing vehicle air of moisture and foreign matter.

Relay Valve - The relay valve initiates a service or emergency stop based on signals received from the towing vehicle by sending air reservoir pressure to the brake chamber.

Air Chamber - The air chamber uses air pressure to operate the master cylinder.

Air Reservoir - The air reservoir stores air from the towing vehicle to operate the trailer braking system.

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

Hydraulic Brake Lines - The hydraulic brake lines transfer hydraulic pressure from the hydraulic master cylinder to the wheel cylinders.

Wheel Cylinders - The wheel cylinders convert system hydraulic pressure to mechanical motion and force the brake lining against the brakedrum.

Brakeshoes - The brakeshoes create friction against the brakedrum, slowing and stopping trailer.

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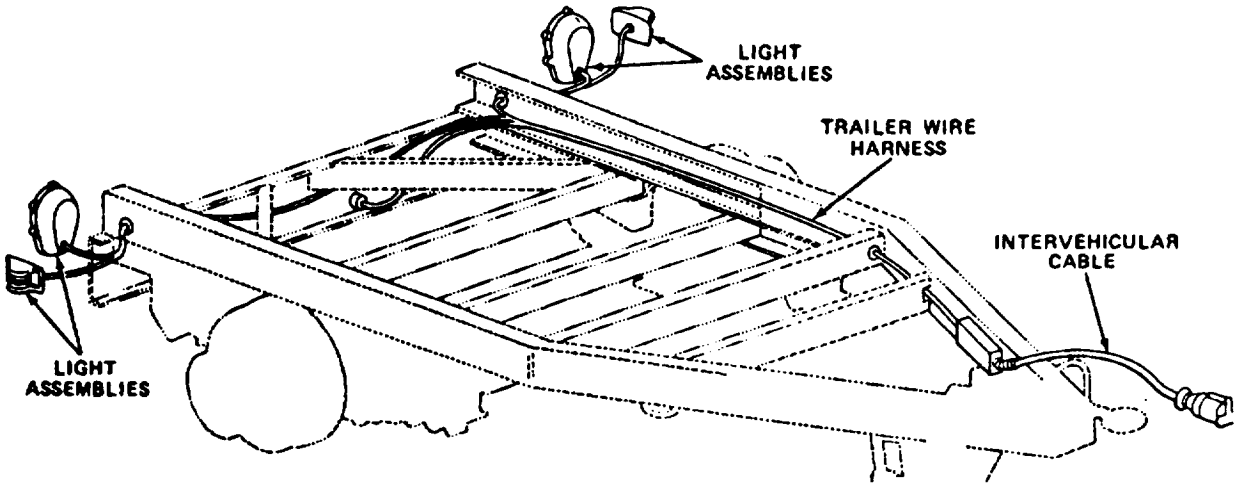
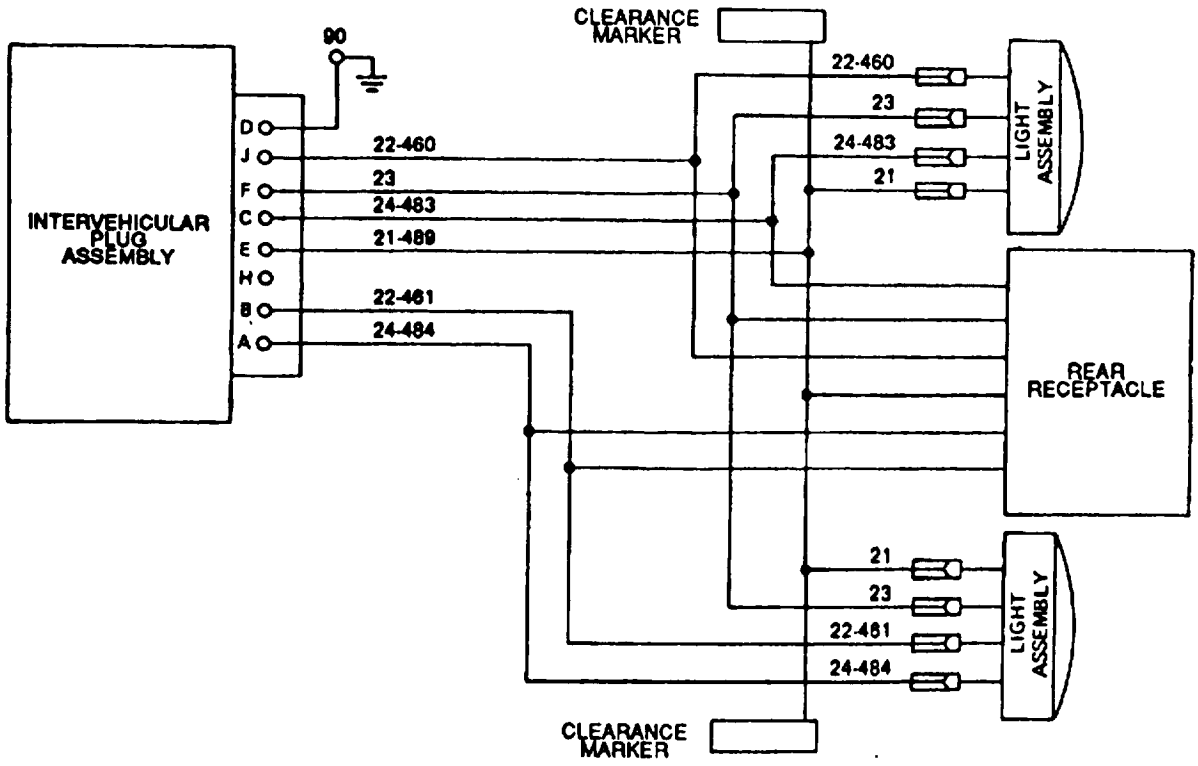
ELECTRICAL SYSTEM



Intervehicular Cable-When connected, the intervehicular cable carries electrical current from the towing vehicle to trailer wire harness.

Trailer Wire. Harness- The trailer wire harness carries electrical current to trailer light assemblies and rear electrical receptacle.

Light Assemblies- The light assemblies provide stoplight, taillight, turn signal, light, marker light, and clearance lights.



CHAPTER 2

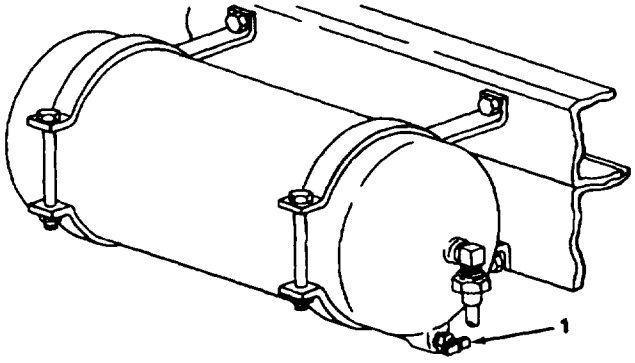
OPERATING INSTRUCTIONS

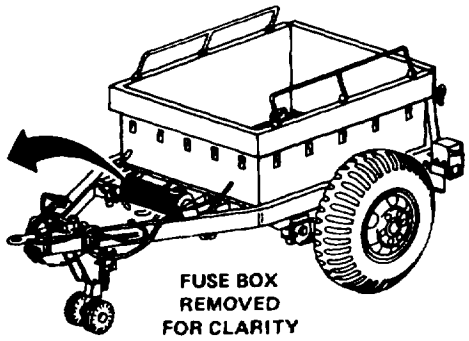
OVERVIEW

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

Section L. DESCRIPTION AND USE OF OPERATOR'S CONTROLS

AIR RESERVOIR





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

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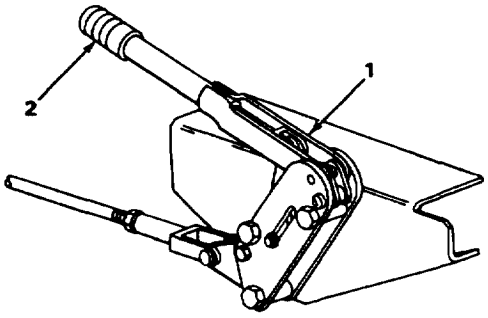
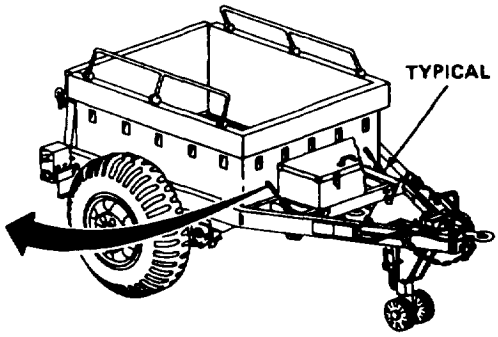
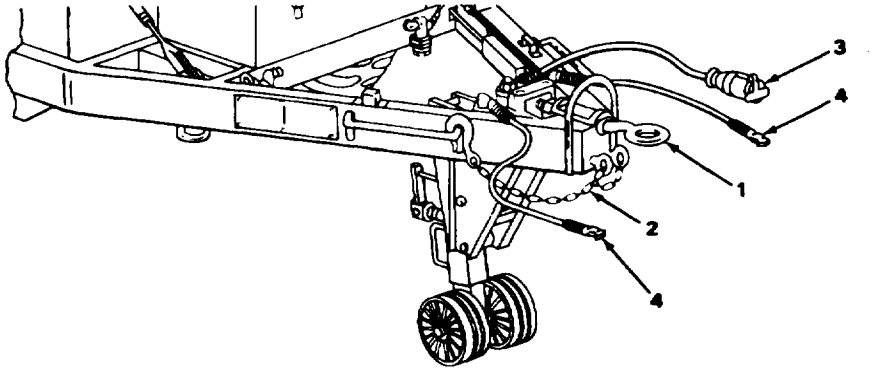
HANDBRAKES





KEY	CONTROL OR INDICATOR	FUNCTION
1	Handbrake lever assemblies	Applies and releases the handbrakes. There is one handbrake lever for each wheel.
2	Adjustment knob	Used to adjust handbrake cable tension.

TRAILER-TO-TOWING VEHICLE CONNECTIONS

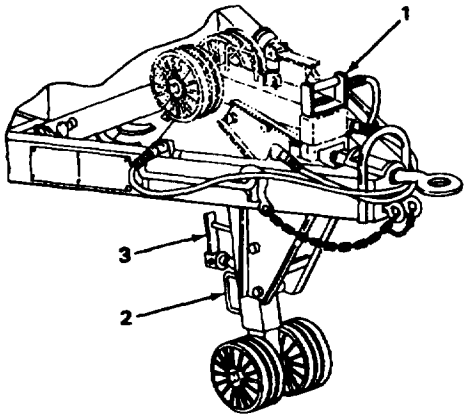


KEY	CONTROL OR INDICATOR	FUNCTION
1	L u n e t t e	Used to couple trailer to towing vehicle or another trailer.
2	Safety chain	Hooks to eyebolts on towing vehicle to prevent trailer from fully breaking away.

TRAILER-TO-TOWING VEHICLE CONNECTIONS - CONTINUED

Key	Control/Indicator	Function
3	Intervehicular cable connector	Provides connection between towing vehicle and trailers electrical system.
4	Gladhands	Provides connection between towing vehicle and trailers air supply and between trailers when coupled in tandem.

LANDING LEG



Key	Control/Indicator	Function
1	Release handle	Secures landing leg in up or down position.
2	Ground pad handle	Provides handle to lift landing leg to folded up position.
3	Crank handle	Operates gearbox to raise or lower the leg.

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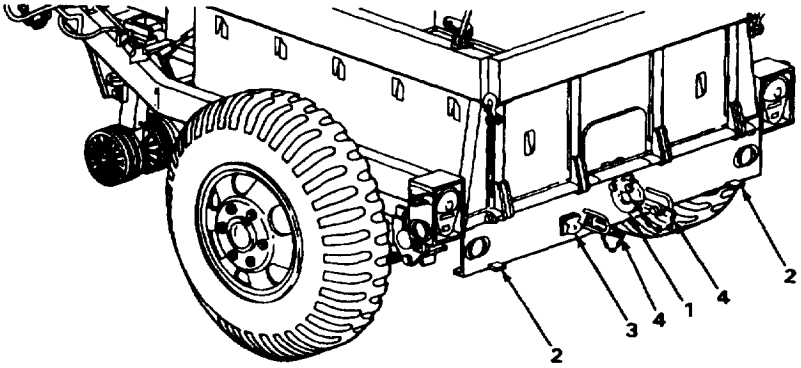
TRAILER-TO-TRAILER CONNECTIONS



Key	Control/Indicator	Function
1	Pintle	Used to couple trailer to tandem trailer.
2	Eyebolts	Safety chains from tandem trailer hooked to eyebolts to prevent tandem trailer from fully breaking away.
3	Receptacle	Connects the towing vehicle's electrical system to tandem trailers.
4	Gladhands	Connects the towing vehicle's brake system to tandem trailers.

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

GENERAL

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

Do your before (B) PMCS just before operating the vehicle. Pay attention to the CAUTIONS AND WARNINGS.

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GENERAL - CONTINUED

Do your during (D) PMCS while operating the vehicle. (During means to monitor the vehicle and its related parts while being operated.) Do your after (A) PMCS right after operating the vehicle. Pay attention to the CAUTIONS and WARNINGS.

SPECIAL INSTRUCTIONS

If something doesn't work, troubleshoot it with the instructions in this manual and 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 on a DA Form 2404. If you find something seriously wrong, report it to organizational maintenance immediately.

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

WARNING

Drycleaning solvent 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). Serious injury, illness, or loss of life could result.

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 on all metal surfaces. Use soap and water to clean rubber or plastic material.

Bolts, Nuts, and Screws. Check that they are not missing. Check for obvious looseness by looking for chipped paint, bare metal, or rust around boltheads. Report loose or missing nuts, bolts, and screws to organizational maintenance.

Welds. Look for loose or chipped paint, rust, or gaps where parts are welded together. Report bad welds to organizational maintenance.

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

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

LEAKAGE DEFINITIONS

It is necessary for you to know how fluid leaks affect the status of the trailer. The following are definitions of the types/classes of leakage needed to determine the status of the trailer. Become familiar with them. When in doubt, notify your supervisor.

LEAKAGE DEFINITIONS - CONTINUED

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

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

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

CAUTION

Equipment operation is allowable with minor leaks (class I and II). Consideration must be given to the fluid capacity of the trailer hydraulic system. When in doubt, notify your supervisor.

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

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

PMCS COLUMN DESCRIPTION

Item No. - The order that PMCS should be performed. 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 check to be performed.

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

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES

B-BEFORE D-DURING A-AFTER

ITEM NO.	INTERVAL B	INTERVAL D	INTERVAL A	ITEM TO BE INSPECTED PROCEDURE:	EQUIPMENT IS NOT READY/AVAILABLE IF:
1.				TIRES	
	•			a. Check tires for excessive wear and obvious damage such as cuts, bruises, and bulges.	Tires are damaged and unserviceable.
	•			b. Check for apparent air leakage.	
	•			c. Remove any glass, nails, or stones.	
	•			d. Check tire pressure.	

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES - CONTINUED

B-BEFORE D-DURING A-AFTER

ITEM NO.	INTERVAL B	INTERVAL D	INTERVAL A	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED OR ADJUSTED AS NEEDED.	EQUIPMENT IS NOT READY/AVAILABLE IF:
2.	•			WHEELS Check wheel nuts for obvious looseness or if missing.	 Wheel nuts are loose or missing.
3.	•			BRAKE BACKING PLATES, MASTER CYLINDER, HYDRAULIC LINES, AND TUBING Check for any evidence of brake fluid leaks at master cylinder, hydraulic lines, and backing plate. Leaks at backing plates indicate leaking wheel cylinders.	 Class III type leakage is evident.
4.	•			LUNETTE, AIRHOSES, INTERVEHICULAR CABLE, AND SAFETY CHAINS Check for obvious looseness and for condition of lunette, airhoses, intervehicular cable, and safety chains.	 Parts unserviceable.
5	•			LANDING LEG Check for obvious looseness of mounting bolts and condition of landing leg.	 Evidence or indication landing leg might collapse.
6.	•			HANDBRAKES a. Check for proper operation of hand-brakes. b. Adjust handbrakes if no resistance is needed to move lever past halfway point of travel. See page 3-4.	
7.	•			FRAME AND SUSPENSION Check frame and suspension for damage.	 Spring is broken, shock absorber leaking, or frame is cracked.

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES - CONTINUED

B-BEFORE D-DURING A-AFTER

ITEM NO.	INTERVAL B	D	A	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED OR ADJUSTED AS NEEDED.	EQUIPMENT IS NOT READY/AVAILABLE IF:
8.				LIGHTS AND REFLECTORS	
	•			a. Check lights (1)and reflectors(2) for obvious damage and broken lens.	Taillight lens broken or lights inoperable.
		•		b. Check lights for proper operation.	
9.		•		BRAKES	
				a. Check brakes for proper operation.	Brakes will not hold or release.
				b. Pay attention for pulling or grabbing.	
10.			•	AIR RESERVOIR	
				a. Apply handbrakes (3).	
				b. Open draincock and drain reservoir (4) of moisture.	
				c. Close draincock after draining.	

Section III. OPERATION UNDER USUAL CONDITIONS

PREPARATION FOR USE

Perform the before (B) operator/crew preventive maintenance checks and services before continuing with the following procedures.

WARNING

All persons not involved in coupling operation must stand clear of towing vehicle and trailer to prevent possible injury.

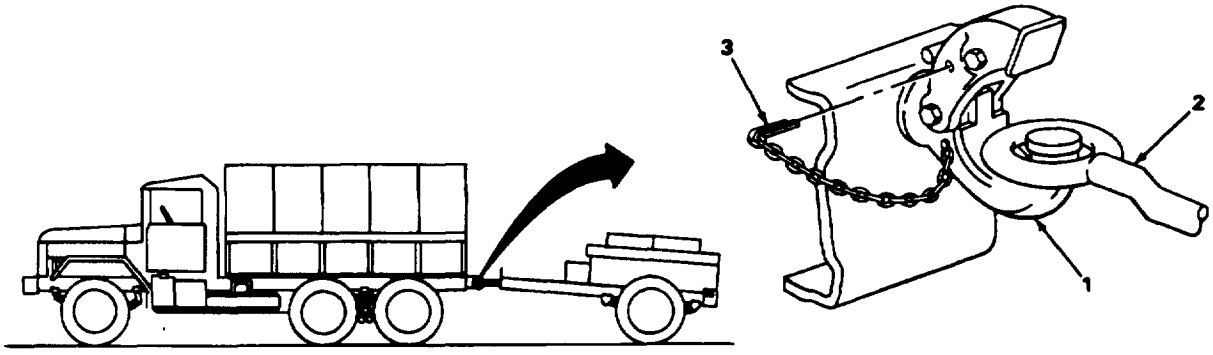
1. Review and perform towing vehicle operating procedures in accordance with towing vehicle operator TM to prepare towing vehicle for coupling.

NOTE

If lunette height needs to be adjusted, see page 4-110.

Use an assistant to direct you while backing up.

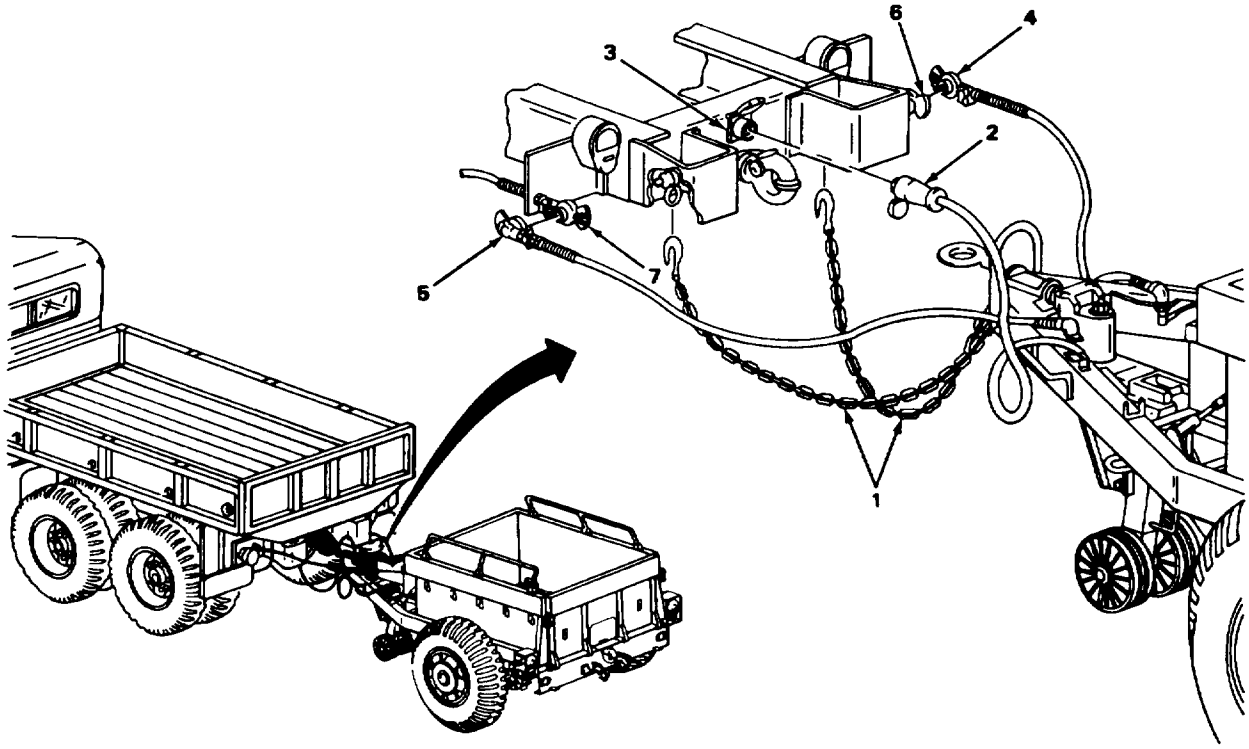
2. Aline towing vehicle with trailer.
3. Slowly back towing vehicle until pintle (1) is adjacent to lunette (2).
4. Remove pintle lockpin (3) and open pintle (1).
5. Release handbrake and move trailer as required to engage lunette (2) in pintle (1).
6. Close pintle (1) and install pintle lockpin (3).



TA223850

PREPARATION FOR USE - CONTINUED

7. Attach safety chains (1) from trailer to towing vehicle by crossing them under lunette to opposite side eyebolts.
8. Connect trailer intervehicular cable (2) to receptacle (3) on towing vehicle.
9. Connect trailer service and emergency airhose gladhands (4 and 5) to towing vehicle gladhands (6 and 7).
10. Turn on towing vehicle air supply to pressurize the trailer brake system.



WARNING

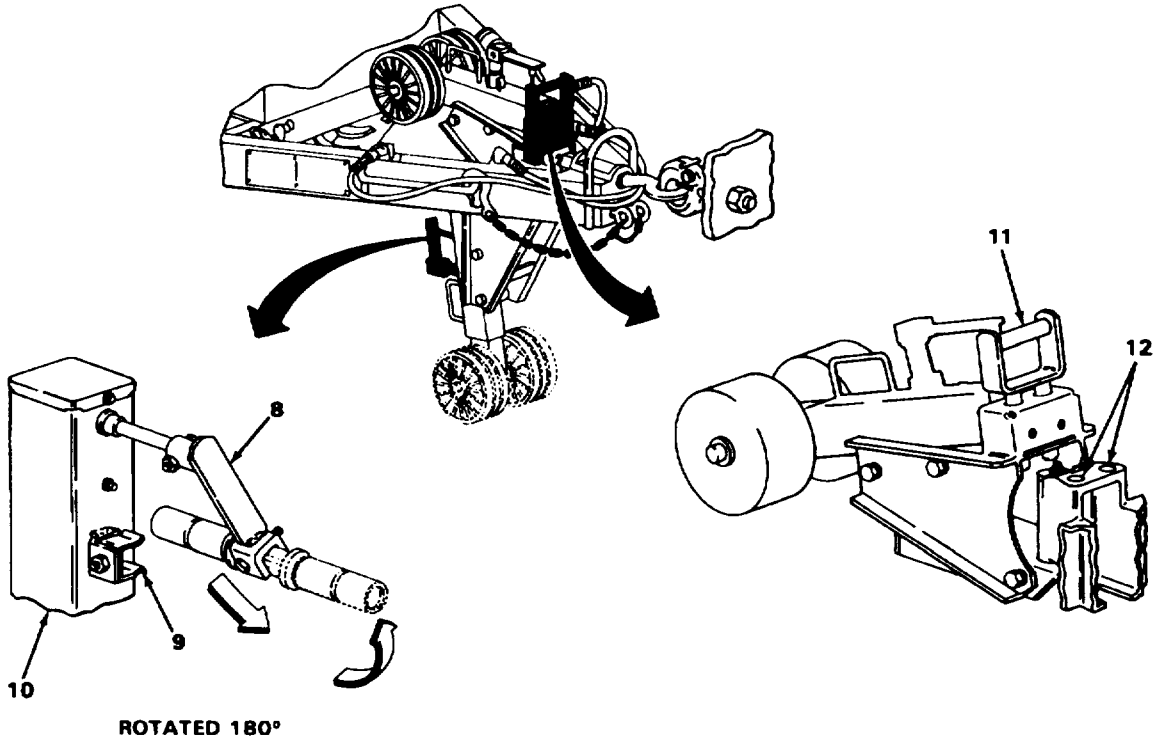
Do not attempt to raise landing leg assembly unless trailer is coupled to a towing vehicle or is securely supported on jack stands. The trailer may fall, causing injury to personnel.

11. Pull handle (8) from spring clip (9) and flip into operating position.
12. Rotate handle (8) counterclockwise until landing leg (10) is fully retracted.

TA223851

PREPARATION FOR USE - CONTINUED

13. Stow handle (8) in spring clip (9).
14. Pull spring-loaded release handle (11) out.
15. Swing landing leg (10) back and up to its stowed position.
16. Check that spring-loaded release handle (11) engages holes (12).



ROTATED 180°

17. Perform PMCS during operation.

OPERATION

DRIVING

When driving the towing vehicle and trailer, the overall length of the unit must be kept in mind when passing other vehicles and when turning. Backing is also affected because the unit is hinged in the middle. Backing should not be attempted when more than one trailer is towed in tandem.

TURNING

When turning corners, allow for the fact that the trailer wheels turn inside the turning radius of the towing vehicle. Make right turns by driving towing vehicle approximately halfway into the intersection and then cut sharply to the right. This will keep trailer wheels off the curb. Keep the vehicle close enough to the edge of the road to prevent any following vehicles from attempting to pass on the right.

TA223852

OPERATION - CONTINUED

STOPPING

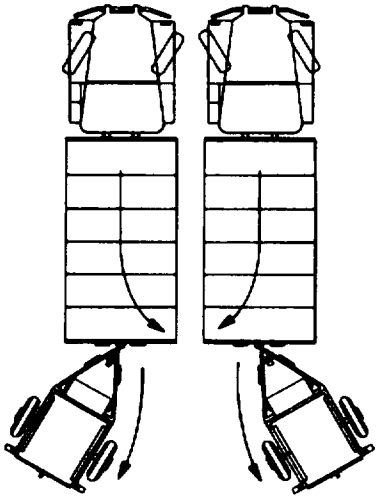
During normal operation, stepping on the brake pedal will apply both towing vehicle and trailer brakes at the same time. Apply brakes gradually and smoothly. Release brakes if locking takes place.

PARKING

When parking for extended periods, both the towing vehicle and trailer parking brakes should be set. Do not use the trailer service brakes for long-term parking. Part of the reservoir pressure is automatically released if they are left applied. Slow leaks could cause the service brakes to release when air pressure drops too low.

BACKING

Use an assistant to guide you while backing. Adjust rearview mirrors before backing. When the towing vehicle and trailer are in a straight line, the rear of the trailer will move opposite to the direction the front towing vehicle wheels are turned. When the towing vehicle wheels are turned to the right, the rear of the trailer will move to the left as you back up. The sharper the towing vehicle wheels are turned to the right, the tighter the trailer will turn to the left. When the towing vehicle wheels are turned to the left, the rear of the trailer will move to the right. To decrease the angle of turn, gradually turn towing vehicle wheels in the direction the trailer is turning. This will gradually decrease the angle until the towing vehicle and trailer are in a straight line.

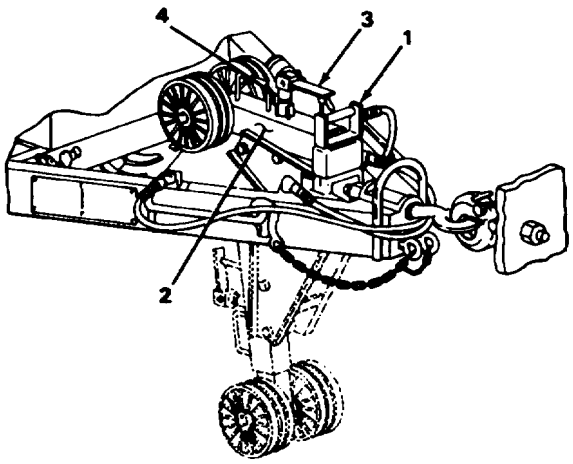


AFTER USE

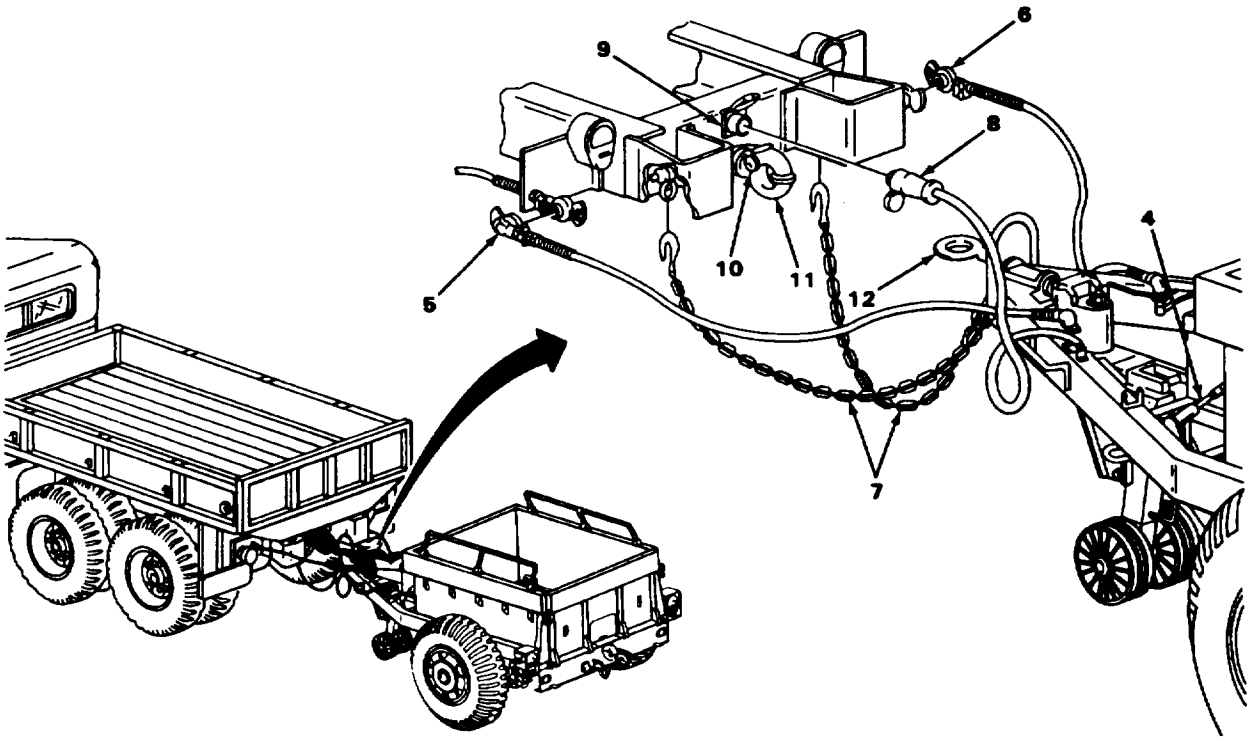
1. While holding landing leg up by handle, pull spring-loaded support handle (1) out,
2. Swing landing leg (2) down. Check that spring-loaded support handle (1) engages holes in support.
3. Pull crank handle (3) from spring clip (4) and rotate to extend landing leg and remove trailer weight from towing hook.

TA223853

AFTER USE - CONTINUED



4. Apply handbrake levers (4).
5. Close air supply valves on towing vehicle and uncouple service and emergency gladhands (5 and 6).
6. Unhook safety chains (7) from towing vehicle.
7. Remove intervehicular cable (8) from receptacle (9).
8. Remove pintle safety pin (10) and open pintle (11).
9. Have an assistant drive towing vehicle to uncouple lunette (12) from pintle (11).



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Section IV. OPERATION UNDER UNUSUAL CONDITIONS

OPERATION IN EXTREME COLD

1. Refer to the lubrication chart for the proper lubricants to use in extreme cold.
2. Extreme cold can cause insulation material on electrical wire to crack and cause short circuits and other construction materials to become hard, brittle, and easily damaged or broken.
3. Tires may freeze to the ground or have flat spots if underinflated.
4. Brakeshoes may freeze to brakedrum and will need to be heated to prevent damage.
5. Refer to FM 9-207 and FM 21-305 for special instructions on driving hazards in extreme cold.
6. When parking short term, park in a sheltered area out of the wind.
7. When parking long term, place a footing of planks or brush under the wheels and landing gear.
8. Remove all built-up ice and mud as soon as possible after use.
9. Use canvas covers to shield the trailer, if available. Keep cover ends off the ground to keep them from freezing to the ground.

OPERATION IN EXTREME HEAT

1. Refer to the lubrication chart for proper lubricants to use in extreme heat.
2. Do not park the trailer in sunlight for long periods of time. Heat and sunlight shorten tire life. Shelter or cover the trailer with canvas if available.

OPERATION IN SANDY OR DUSTY AREAS

1. Clean, inspect, and lubricate more often in dusty or sandy areas.
2. Reduce tire pressure for emergency use on beach or desert sand.
3. Return tire pressure to normal (35 psi/241 kPa) after emergency operation in sand.

OPERATION IN SALTWATER AREAS

Saltwater will cause rapid rust and corrosion to develop. Clean, inspect, and lubricate more often than scheduled.

OPERATION IN SNOW

See FM 21-305 for special instructions on operating in snow.

OPERATION IN MUD

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

FORDING

1. Check bottom surface of stream or river. If bottom surface is too soft, do not ford.
2. After fording, apply the brakes a few times to help dry out the brake linings. Be sure brakes are operating properly before driving at normal speeds.
3. Lubricate all unpainted surfaces with lubricating oil.
4. Lubricate trailer in accordance with lubrication chart. See page 4-2.
5. Refer to TM 9-236 for deepwater fording information.

CHAPTER 3

OPERATOR MAINTENANCE

OVERVIEW

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

Section I. LUBRICATION INSTRUCTIONS

Lubrication under usual and unusual conditions and the trailer lubrication chart are contained in organizational maintenance, chapter 4.

Section II. OPERATOR TROUBLESHOOTING PROCEDURES

GENERAL

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

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

EXPLANATION OF COLUMNS

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

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

Corrective Action. Procedure to correct problem.

SYMPTOM INDEX

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

SYMPTOM INDEX- CONTINUED

OPERATOR TROUBLESHOOTING

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ALL LAMPS FAIL TO LIGHT.

   Step 1. Ensure that lights are turned on.

   Turn on lights. Refer to towing vehicle TM.

   Step 2. Check intervehicular cable connector for proper connection.

   Disconnect and reconnect intervehicular cable.

   Step 3. Check towing vehicle circuit breaker/fuse.

   Refer to towing vehicle technical manual for maintenance instructions.

   If lamps still fail to light, notify organizational maintenance.

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

   Check for loose connector at affected light.

   Reconnect loose connector.

   If lamp(s) still fail to light, notify organizational maintenance.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BRAKES

3. NO BRAKES.

Step 1. Check for open draincock on air reservoir.

Close draincock.

Step 2. Check for closed air valves on towing vehicle.

Open air valves.

Step 3. Check air line gladhands for proper connection. (emergency-to-emergency and service-to-service)

Properly reconnect.

If brakes still do not operate, notify organizational maintenance.

4. BRAKES WILL NOT RELEASE.

Check for proper intervehicular hose connections.

Reconnect intervehicular hoses.

If brakes still will not release, notify organizational maintenance.

Section III. OPERATOR MAINTENANCE PROCEDURES

NOTE

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

HANDBRAKE

This Task Covers:

Adjustment

LOCATION	ITEM	ACTION	REMARKS

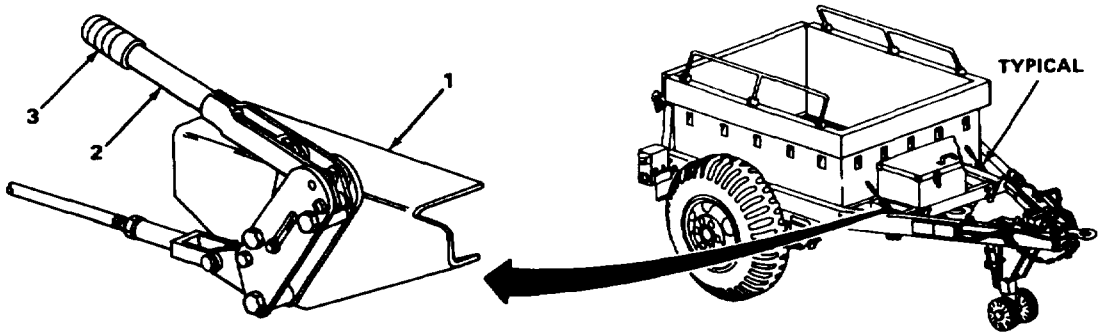
WARNING

If trailer is not coupled to a towing vehicle, be sure that the wheels are securely chocked. Failure to do so may cause trailer to roll, resulting in injury or damage to equipment.

NOTE

Procedure is for one handbrake. Repeat procedure for opposite side.

1.	Draw bar legs	(1) Handbrake lever (2)	Move to release position.
2.	Hand brake lever (2)	Adjustment knob (3)	Adjust handbrake by turning clockwise to tighten or counterclockwise to loosen. Additional force will be required to move handbrake lever(2) beyond two-thirds distance of travel towards applied position when proper adjustment is obtained.



TASK ENDS HERE

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WHEEL AND TIRE

This Task Covers:

a. Removal (page 3-5)
b. Installation (page 3-6)

Initial Setup

Tools

Handle, 3/4-inch square drive
Hydraulic jack
Socket, 1 1/2-by 3/4-inch square drive

Equipment Condition

Handbrake applied.

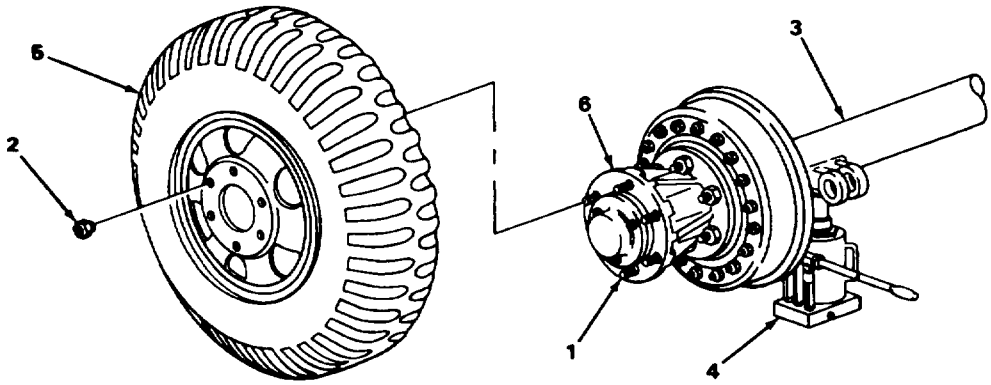
LOCATION	ITEM	ACTION	REMARKS

REMOVAL

NOTE

Hub studs and wheel nuts are marked Ron right wheel and L on left wheel. Nuts must be turned in opposite direction to normal forward rotation of wheel to be loosened or removed.

1	Hub studs (1)	Six nuts (2)	Using 1 1/2-inch socket, loosen. Do not remove at this time.
2	Axle (3)	Jack (4)	Raise wheel and tire (5) until it clears ground.
3.	Hub studs (1)	Six nuts (2)	Using 1 1/2-inch socket, remove.
4.	Hub (6)	Wheel and tire (5)	Remove.



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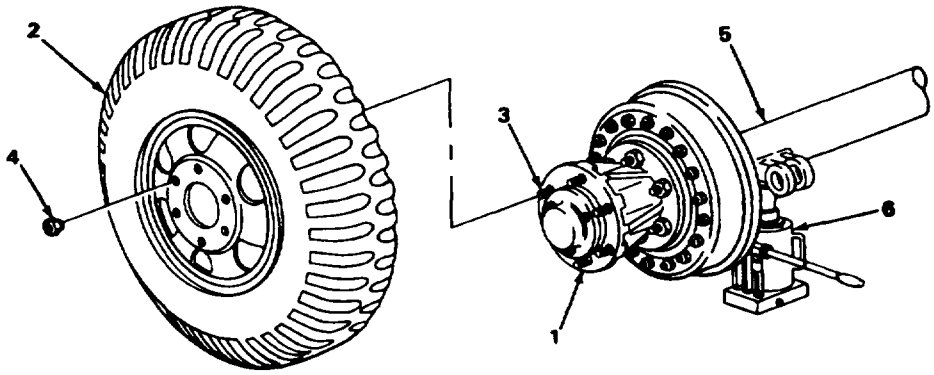
WHEEL AND TIRE-CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
5. Hub (1)	Wheel and tire (2)	Position.
6 . Hub studs (3)	Six nuts (4)	Install and tighten snug.
7. Axle (5)	Jack (6)	Lower and remove,
8 . Hub studs (3)	Six nuts (4)	Using 1 1/2-inch socket, alternately tighten. Have organizational maintenance tighten to 450-600 ft lb (610 - 678 N•m) as soon as possible.



TASK ENDS HERE

TA223857

CHAPTER 4

ORGANIZATIONAL MAINTENANCE

OVERVIEW

This chapter contains all 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.

Section I. LUBRICATION INSTRUCTIONS

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 the 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

Refer to the lubrication chart on the following page for lubrication under normal conditions.

Refer to FM-207 for instructions on lubrication in weather below 0°F (-18°C).

Refer to TM 9-238 for instructions on lubrication before and after fording.

Clean and inspect all lubrication points after operating in mud, dust, sand, or other unusual conditions. Lubricate the trailer in accordance with the lubrication chart.

LUBRICATION CHART

TRAILER, AMMUNITION: 1 1/2-TON, 2-WHEEL, M332 (NSN2330-00-200-1785)

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

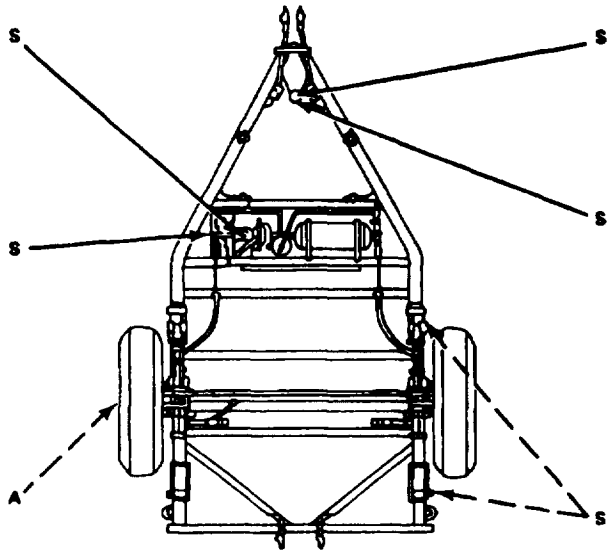
Dotted leader lines indicate lubrication is required on both sides of the equipment.

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 139° F (58° C). Serious illness, injury, or loss of life could result.

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

LUBRICANT • INTERVAL			INTERVAL • LUBRICANT		
Master Cylinder	BFS	S	S	GAA	Landing Gear Gearbox (See Note 4.)
Handbrake (See Note 2.)	OE/ HDO	S	S	GAA	Landing Gear Housing
Wheel Bearings (See Note 3.)	GAA	A	S	GAA	Spring Shackles



TOTAL MAN-HOURS*

INTERVAL	MAN-HOURS
A	1.5
S	0.7

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

TA223858

-KEY-

LUBRICANTS		EXPECTED TEMPERATURES: ABOVE +15°F (ABOVE -9°C)	EXPECTED TEMPERATURES: +40°F TO -15°F (+4°C TO -26°C)	EXPECTED TEMPERATURES: +40°F TO -65°F (+4°C TO -54°C)	For arctic operations, refer to FM 9-207	INTERVALS
OE/HDO	Lubricating oil, internal combustion engine, tactical service	OE/HDO 30	OE/HDO 10			A – Annually S – Semiannually
OEA	Lubricating oil, internal combustion, arctic					
	Oilcan points (See Note 2.)					
BFS	Brake fluid silicone, automotive	ALL TEMPERATURES				
	Master cylinder					
GAA	Grease, automotive and artillery	ALL TEMPERATURES				

NOTES:

1. FOR OPERATION OF EQUIPMENT IN PROTRACTED COLD TEMPERATURES BELOW -15°F (-26°C). Remove lubricants prescribed in the key for temperatures above -15°F (-26°C). Relubricate with lubricants specified in the key for temperatures below -15°F (-26°C). If OEA lubricant is required to meet the temperature changes prescribed in the key, OEA lubricant is to be used in place of OE/HDO 10 lubricant for all temperature ranges where OE/HDO 10 lubricant is specified in the key.

2. OILCAN POINTS. Every 6 months, lubricate linkage pins, clevises, and all exposed adjusting threads with OE/HDO.

3. WHEEL BEARINGS. Every 12 months, remove, clean, and repack with GAA. Refer to TM 9-214, Inspection, Care, and Maintenance of Antifriction Bearings.

4. LANDING LEG GEARBOX. Lubricate at time of disassembly.

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

OE/HDO	MIL-L-2104C
GAA	MIL-G-10924C
OEA	MIL-L-46167
BFS	MIL-B-46176

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

COMMON TOOLS AND EQUIPMENT

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

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT Special tools are listed and illustrated in appendix F of this manual. No TMDE or support equipment are required to maintain the trailer.

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

Section III. SERVICE UPON RECEIPT

SERVICE UPON RECEIPT OF MATERIEL

This Task Covers:

a. Unpacking (page 4-6)
b. Checking unpacked equipment (page 4-6)

INITIAL SETUP

Tools
- Cutters, strap
- Puller, nail

Materials/Parts
- Drycleaning solvent PD-680 (item 10, appendix E)
- Rags (item 7, appendix E)

SERVICE UPON RECEIPT OF MATERIEL - CONTINUED

LOCATION	ITEM	ACTION REMARKS
UNPACKING		
1. Trailer	DD Form 1397	Read and follow all instructions.
2. Metal strapping,	Using strap cutters and nail pullers, plywood, tape, seals, and wrapping	remove all strapping, plywood, tape, seals, and wrapping.
CHECKING UNPACKED EQUIPMENT		
	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). Serious illness, injury, or loss of life could result.**	
3.	Coated exterior parts	Remove rust preventive compound using drycleaning solvent and rags.
4.	Trailer	a. Inspect the equipment for damage incurred during shipment. b. If the equipment has been damaged, report the damage on DD Form 6, Packing Improvement Report. c. Check to see if equipment has been modified.
5.	Equipment packing	a. Check the equipment against the packing list to see if the shipment is complete. b. Report all discrepancies in accordance with the instructions in TM 38-750.

TASK ENDS HERE

PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT

Perform the operator and organizational preventive maintenance checks and services (PMCS) as described on pages 2-4 and 4-7.

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

PRELIMINARY SERVICING AND ADJUSTMENT OF EQUIPMENT - CONTINUED

Schedule the next PMCS on DD Form 314, Preventive Maintenance Schedule and Record.

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

Perform a break-in road test of 25 mi (40.2 km) at a maximum speed of 55 mph (88.5 km/h).

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

GENERAL

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

Do your (S) PMCS once each 6 months.

Do your (A) PMCS once each year.

SPECIAL INSTRUCTIONS

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

Always do your PMCS in the same order so it gets to be a habit. Once you've had practice, you will spot something 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.

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

WARNING

Drycleaning solvent 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). Serious illness, injury, or loss of life could result.

NOTE

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

SPECIAL INSTRUCTIONS - CONTINUED

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

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 cleaning rubber or plastic material.

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

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

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

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

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 should be performed.

Item to be Inspected Lists the check to be performed.

ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

S-SEMIANNUALLY A-ANNUALLY

ITEM NO.	INTERVAL S	INTERVAL A	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED REPLACED OR ADJUSTED AS NEEDED.
			NOTE **Perform operator/crew PMCS prior to or in conjunction with organizational PMCS.**
1.	•		FRAME Look for cracks, bent members, or broken welds.

ORGANIZTIONAL PREVENTIVE MAINTENENACE CHECKS AND SERVICES - CONTINUED
S-SEMIANNUALLY A-ANNUALLY

ITEM NO.	INTERVAL S	INTERVAL A	ITEM TO BE INSPECTED PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED REPLACED OR ADJUSTED AS NEEDED.
2	·		BODY AND FUSE BOX Look for cracks, dents, and good security.
3.			BRAKE MASTER CYLINDER Check fluid level in master cylinder. Fill to 1/2inch from top.
4.			WHEEL BEARINGS a. Take off the wheel hubs and bearings (page 4-103). b. Clean, inspect, and repack wheel bearings.
5.			BRAKE ASSEMBLIES a. Clean, inspect, and repair or replace internal brake parts as required (page 4-52). b. Adjust brakeshoes (page 4-51).
6.			WHEELS AND TIRES a. Tighten wheel nuts to 450 - 500 ft lb (610.2 - 678 N•m) using a torque wrench. b. Check tread depth.
7.			SUSPENSION a. Check suspension for bent or cracked parts, loose mounting, and worn bushings. b. Check shock absorbers for damage or leaks.

Section V. ORGANIZATIONAL TROUBLESHOOTING PROCEDURES

GENERAL

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

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

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

EXPLANATION OF COLUMNS

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

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

Corrective Action. Procedure used to correct the 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.

NOTE

Refer to the electrical schematic on page 1-8 when performing any electrical troubleshooting.

ORGANIZATIONAL TROUBLESHOOTING

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ONE OR MORE LAMPS FAIL TO LIGHT.

Step 1. Check lamps.
Remove and replace as required:
Service taillight (page 4-21).
Composite light (page 4-18).
Blackout light (page 4-16).
Marker light (page 4-24).

Step 2. Check for continuity between edge of lamp socket and light assembly housing, and center post of lamp socket and related light assembly plug connector.
If no continuity exists, replace light assembly:
Service taillight (page 4-22).
Composite light (page 4-20).
Blackout light (page 4-17).
Marker light (page 4-24).

Step 3. Check continuity between edge of lamp socket and trailer frame.
If no continuity exists, remove and clean mating surfaces.

Step 4. Disconnect main harness from intervehicular cable. Have assistant operate lights while checking voltage in affected lines of intervehicular cable.
If 24 volts are present in all affected lines, replace main harness (page 4-28).

Step 5. Disconnect intervehicular cable from towing vehicle receptacle. Have assistant operate light while checking voltage at towing vehicle receptacle.
If voltage is present at all sockets of towing vehicle receptacle, replace intervehicular cable.
If voltage is not present at all sockets of towing vehicle receptacle, reference applicable maintenance TM for the vehicle.

2. LAMPS DIM OR FLICKERING.

Step 1. Check continuity between intervehicular cable pin D and ground wire eyelet end.
If no continuity exists, replace intervehicular cable.

Step 2. Check continuity between ground wire eyelet end and trailer frame.
If no continuity exists, remove eyelet and clean mating surfaces.

ORGANIZATIONAL TROUBLESHOOTING - CONTINUED

MALFUNCTION TEST OR INSPECTION	CORRECTIVE ACTION

2. LAMPS DIM OR FLICKERING - CONTINUED.

Step 3. Check continuity between edge of lamp socket and light assembly housing.
If no continuity exists, replace light assembly:
Service taillight (page 4-22).
Composite light (page 4-20).
Blackout light (page 4-17).
Marker light (page 4-24).

Step 4. Check continuity between edge of lamp socket and trailer frame.
If no continuity exists, remove and clean mating surfaces.

BRAKES

3. BRAKES WILL NOT RELEASE.

NOTE
If only one wheel brake will not release, proceed with step 4.

Step 1. Check emergency relay valve for proper operation.

WARNING
Before performing any maintenance on brake system, disconnect air supply to trailer and drain trailer air reservoir. Failure to do so may result in serious injury.

Replace relay valve as required (page 4-72).

Step 2. Check airbrake chamber for insufficient push rod travel.
Adjust wheel brakes as required (page 4-51).

Step 3. Check service airhose and lines for obstructions.
Remove hose and lines, clear obstructions or replace hose and lines as required (page 4-100).

Step 4. Check for binding handbrake cable.
Replace as required (page 4-47).

Step 5. Check for separation of brakeshoe and lining.
Replace as required (page 4-52).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

4. NO BRAKES OR WEAK BRAKES.

Step 1. Check fluid level in master cylinder.
Adjust fluid level (page 4-9).

Bleed brake (page 4-57).

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

WARNING

Before performing any maintenance on brake system, disconnect air supply from trailer and drain trailer air reservoir. Failure to do so may result in serious injury.

Replace relay valve as required (page 4-72).

Step 3. Check airbrake chamber for excessive travel.
Adjust wheel brakes as required (page 4-51).

Step 4. Check for worn brake lining.
Replace as required (page 4-52).

Step 5. Inspect wheel cylinders for possible binding and leaking.
Replace as required (page 4-56).

5. GRABBING OR DRAGGING BRAKES.

Step 1. Check parking brake adjustment.
Adjust parking brake (page 3-4).

Step 2. Check wheel bearing adjustment.
Adjust wheel bearings (page 4-103).

Step 3. Check service brake assembly.
Disassemble and repair service brake (page 4-52).

Section VI. GENERAL MAINTENANCE INSTRUCTIONS

GENERAL

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

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

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

CLEANING INSTRUCTIONS

WARNING

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

Cleaning instructions will be the same for the majority of parts and components that make up the trailer.

The importance of cleaning must be thoroughly understood by maintenance personnel. Care and effort are required in cleaning. Dirt and foreign material are a constant threat to satisfactory maintenance. The following should apply to all cleaning, inspection, repair, and assembly operation.

1. Clean all parts before inspection, after repair, and before assembly.

2. Keep hands free of grease, which can collect dust, dirt, or grit.

3. After cleaning, cover or wrap all parts to protect them from dust and dirt. Lightly oil parts that are subject to rust.

STEAM CLEANING

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

Place disassembled parts in a suitable container to steam clean.

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

CLEANING INSTRUCTIONS - CONTINUED

CASTINGS, FORGINGS, AND MACHINED METAL 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). Serious illness, injury, or loss of life may result.

Clean inner and outer surfaces with drycleaning solvent.

Remove grease and accumulated deposits with a stiff bristle brush.

Check machined surfaces for scoring or obvious damage.

WARNING

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

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

ELECTRICAL CABLES, FLEXIBLE HOSES, AND OIL SEALS

CAUTION

Washing electrical cables and flexible hoses with drycleaning solvents or mineral sprits will cause serious damage or destroy the material.

Wash electrical and flexible hoses with soap and water solution and wipe dry.

Oil seals are generally damaged during removal and new ones are installed, therefore cleaning will not be necessary.

BEARINGS

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

INSPECTION INSTRUCTIONS

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

INSPECTION INSTRUCTIONS - CONTINUED

DRILLED AND THREADED HOLES AND SURFACES

Inspect for wear, distortion, cracks, or any other damage in or around holes and threaded surfaces.

Inspect threaded areas for wear, distortion, or evidence of cross threading.

Mark all damaged areas for repair or replacement.

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

Inspect metal lines for sharp kinks, cracks, bad bends, or if badly dented.

Inspect flexible lines for fraying, evidence of leakage, or loose metal fittings or connectors.

BUSHINGS

Inspect bushings for excessive wear, elongation, or grooving.

Section VII. ELECTRICAL SYSTEM

BLACKOUT STOPLIGHT LAMP AND LENS

This task covers:

INITIAL SETUP

Tools

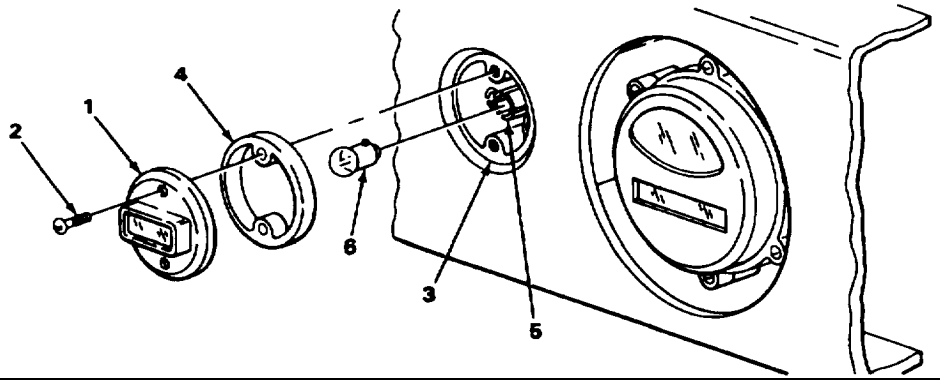
Screwdriver, flat-tip

Materials/Parts

Lamp
Packing (if required)

BLACKOUT STOPLIGHT LAMP AND LENS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Door assembly (1)	Two screws (2)	Using screwdriver, remove.
2. Blackout stoplight (3)	Door assembly (1) and packing (4)	Remove. Discard packing (4) if damaged.
3. Socket (5)	Lamp (6)	Remove by pushing in and turning counterclockwise.
INSTALLATION		
4. Socket (5)	Lamp (6)	Install by pushing in and turning clockwise.
5. Blackout stoplight (3)	Packing (4) and door assembly (1)	Place in position. Install new packing if necessary.
6. Door assembly.(1)	Two screws.(2)	Using screwdriver, install.



TASK ENDS HERE

BLACKOUT STOPLIGHT

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

TA223860

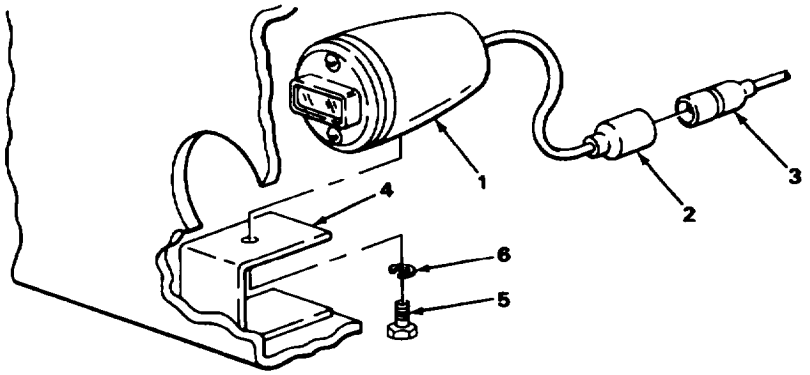
BLACKOUT STOPLIGHT - CONTINUED

INITIAL SETUP

Tools
Handle, reversible, 3/8-inch square drive

Tools - Continued
Socket, 1/2- by 3/8-inch square drive

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Blackout stoplight (1)	Electrical connectors (2 and 3)	Separate.
2. Bracket (4)	Capscrew (5) and lockwasher (6)	Using 1/2-inch socket, unscrew. Remove blackout stoplight (I).
INSTALLATION		
3. Bracket (4)	Capscrew (5) and lockwasher (6)	Using 1/2-inch socket, attach blackout stoplight (1).
4. BIackout stoplight (1)	Electrical connectors (2 and 3)	Reconnect.



TASK ENDS HERE

COMPOSITE LIGHT LAMP AND LENS

This task covers:
a. Removal (page 4-19)
b. Installation (page 4-19)

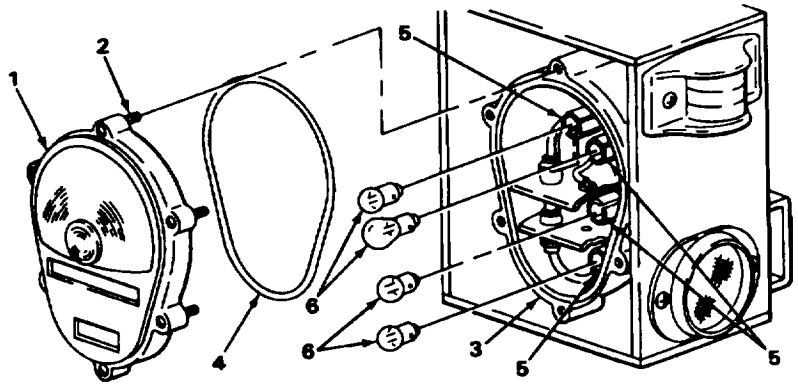
TA223861

COMPOSITE LIGHT LAMP AND LENS - CONTINUED

INITIAL SETUP

Tools	Materials/Parts
Screwdriver, flat-tip	Lamp(s) (as required) Packing (if required)

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Door (1)	Six captive screws (2)	Using screwdriver, unscrew from housing (3). Screw will remain with door (I).
2. Housing (3)	Door assembly (1) and packing (4)	Remove. Discard packing (4) if damaged.
3. Four sockets (5)	Four lamps (6)	Remove by pushing in and turning counterclockwise.
INSTALLATION		
4. Four sockets (5)	Four lamps (6)	Install by pushing in and turning clockwise.
5. Housing (3)	Packing (4) and door assembly (1)	Place in position. install new packing if necessary.
6. Door assembly (1)	Six captive screws (2)	Using screwdriver, tighten into housing (3).



TASK ENDS HERE

TA223862

COMPOSITE LIGHT

This task covers:

a. Removal (page 4-20)
b. Installation (page 4-20)

INITIAL SETUP

Tools
Handle, reversible, 3/8-inch square drive

Tools - Continued
Socket, 9/16- by 3/8-inch square drive

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Composite light (1)	Four electrical connectors (2 and 3)	Separate.
2. Composite light box (4)	Two capscrews (5), two lockwashers (6), and composite light (1)	a. Using 9/16-inch socket wrench, remove. b. Remove composite light (1).
INSTALLATION		
3. Composite light box (4)	Two capscrews (5), two lockwashers (6), and composite light (1)	Using 9/16-inch socket wrench, install.
4. Composite light (1)	Four electrical connectors (2 and 3)	Reconnect.

TASK ENDS HERE

TA223863

SERVICE TAILLIGHT LAMP AND LENS

This task covers:

a. Removal (page 4-21)
b. Installation (page 4-22)

INITIAL SETUP

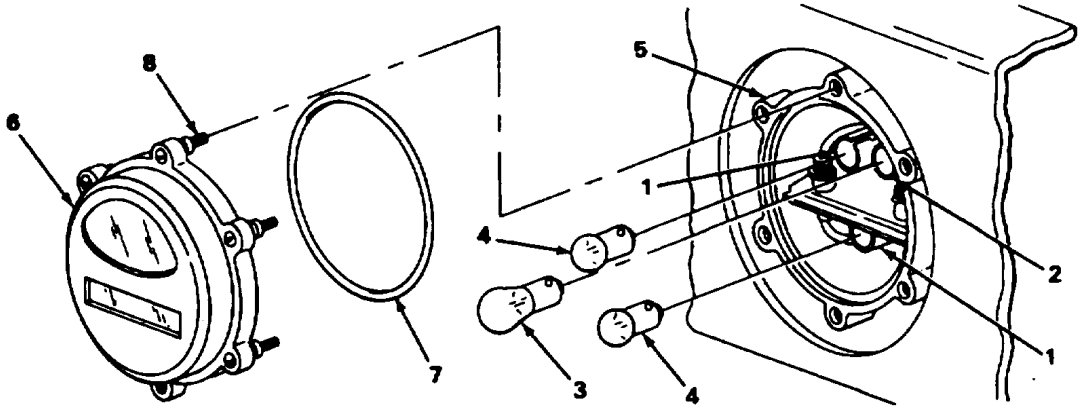
Tools	Materials/Parts
Screwdriver, flat-tip	Lamp(s) (as required) Packing (if required)

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1.. Door assembly (1)	Six captive screws (2)	Using screwdriver, loosen.
2. Housing (3)	Door assembly (1) and packing (4)	Remove. Discard packing (4) if damaged.
3. Sockets (5 and 6)	Lamps (7 and 8)	Remove by pushing in and turning counterclockwise.

TA223864

SERVICE TAILLIGHT LAMP AND LENS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
4. Sockets (1 and 2)	Lamps (3 and 4)	Install by pushing in and turning clockwise.
5. Housing (5)	Door assembly (6) Place in position. and packing (7)	Install new packing if necessary.
6. Door assembly (6)	Six captive screws (8)	Using screwdriver, install.



TASK ENDS HERE

SERVICE TAILLIGHT

This Task Covers:

a. Removal (page 4-23)
b. installation (page 4-23)

Initial Setup

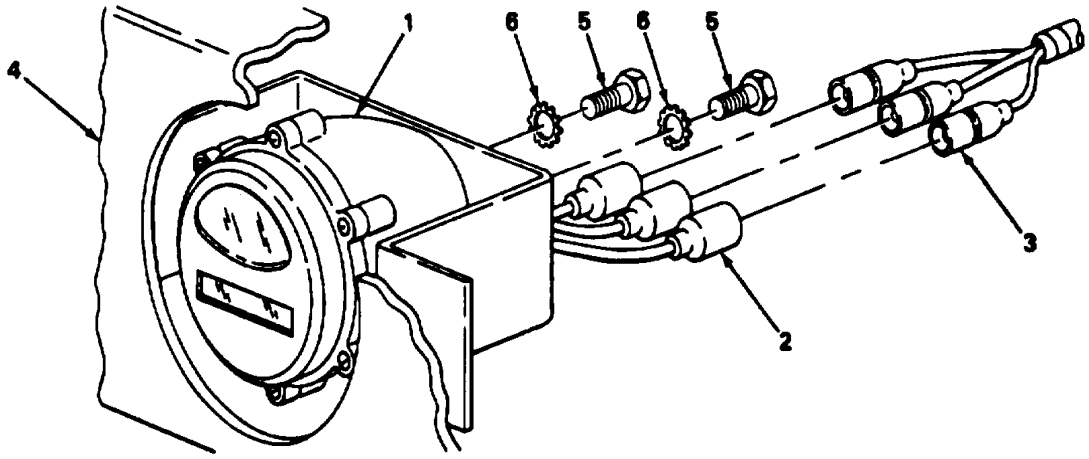
Tools

Handle, reversible, 3/8-inch square drive
Socket, 9/16- by 3/8-inch square drive

TA223865

SERVICE TAILLIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Service taillight (1)	Three electrical connectors (2 and 3)	Separate.
2. Rear trailer chassis (4)	Two capscrews (5) and two lockwashers (6)	Using 9/16-inch socket, remove.
3.	Service taillight (1)	Remove.
INSTALLATION		
4. Rear trailer chassis (4)	Service taillight (1)	Place in position.
5.	Two lockwashers (6) and two capscrews (5)	Using 9/16-inch socket, install.
6. Service taillight (1)	Three electrical connectors (2 and 3)	Reconnect.



TASK ENDS HERE

TA223866

MARKER LIGHT

This Task Covers:

a. Lamp and lens removal (page 4-24)
b. Marker light removal (page 4-24)
c. Marker light installation (page 4-25)
d. Lamp and lens installation (page 4-25)

Initial Setup

Tools

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

Equipment Condition

Composite light removed (page 4-20).

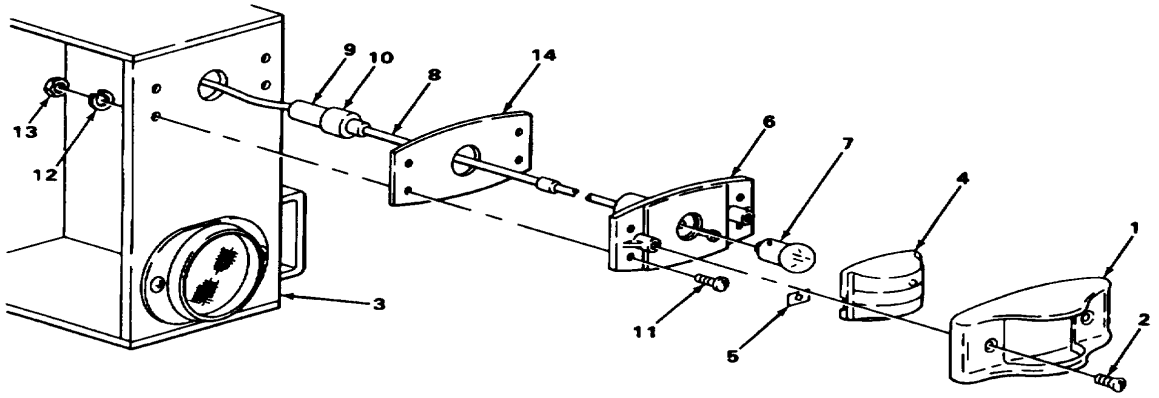
Materials/Parts

Lamp (if required)
Lens (if required)

LOCATION	ITEM	ACTION REMARKS
LAMP AND LENS REMOVAL		
1. Door assembly (1)	Two screws (2)	Using flat-tip screwdriver, remove.
2. Light box (3)	Door assembly (1)	Remove.
3. Lens (4)	Two nuts (5)	Using flat-tip screwdriver, pry off.
4. Door assembly (1)	Lens (4)	Remove.
5. Plate (6)	Lamp (7)	Push in, turn counterclockwise, and remove.
MARKER LIGHT REMOVAL		
6. Lamp lead (8)	Connectors (9 and 10)	Separate.
7. Plate (6)	Four screws (11), four lockwashers (12), and four nuts (13)	Using flat-tip screwdriver and wrench, remove.
8. Light box (3)	Plate (6) and gasket (14)	Remove.

MARKER LIGHT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
MARKER LIGHT INSTALLATION		
9. Light box (3)	Plate (6)	Place in position.
10. Plate (6)	Four screws (11), four lockwashers (12), and four nuts (13)	Using flat-tip screwdriver and wrench. install.
11. Lamp lead (8)	Connectors (9 and 10)	Reconnect.
LAMP AND LENS INSTALLATION		
12. Plate (6)	Lamp (7)	Push in and turn clockwise.
13. Door assembly (1)	Lens (4)	Place in position.
14. Lens (4)	Four nuts (5)	Push on,
15. Light box (3)	Door assembly (1)	Place in position.
16. Door assembly (1)	Two screws (2)	Using flat-tip screwdriver, install.



NOTE

FOLLOW-ON MAINTENANCE: Install composite light (page 4-20).

TASK ENDS HERE

TA223867

INTERVEHICULAR CABLE

This Task Covers:

a. Removal (page 4-26)
b. Installation (page 4-27)

Initial Setup

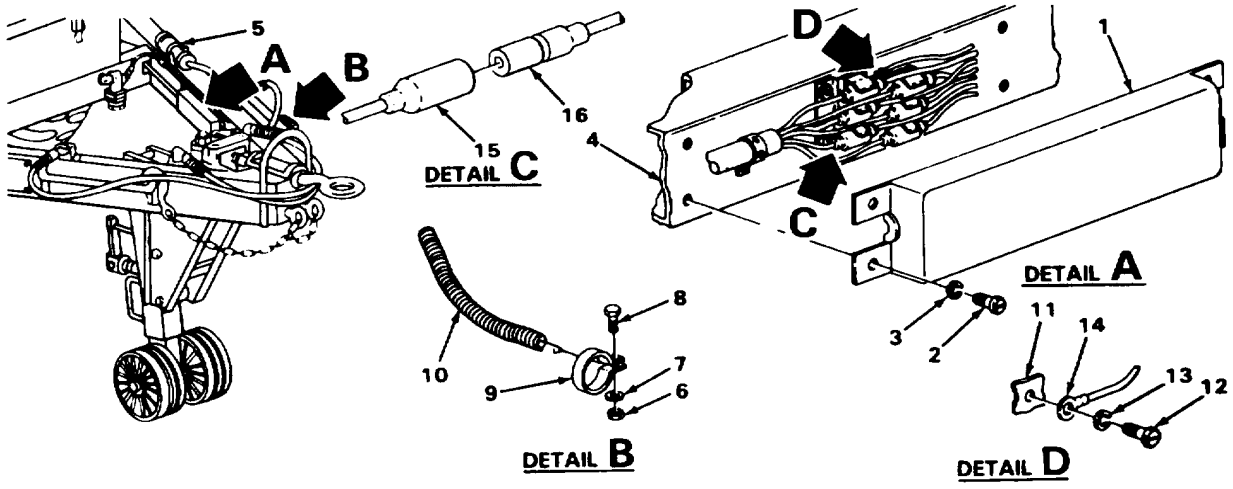
Tools

Screwdriver, flat-tip
Screwdriver, cross-tip
Wrench, open-end, 1 1/32-inch

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Connector cover (1)	Four screws (2) and four lockwashers (3)	Using flat-tip screwdriver, remove.
2. Left, front drawbar (4)	Connector cover (1)	Remove.
	NOTE	
	Identify matching connectors using tags or tape if identification bands are missing.	
3. Intervehicular cable (5)	Nut (6), lockwasher (7), screw (8), clamp (9), and extension spring (10)	Using wrench and cross-tip screwdriver, remove.
4. Clip assemblies (11)	Screw (12), washer (13), and ground lead (14)	Using flat-tip screwdriver, remove.
5.	Mating connectors (15 and 16)	Remove and separate.
6. Left, front drawbar (4)	Ihtervehicular cable (5)	Remove.

INTERVEHICULAR CABLE- CONTINUED

LOCATION	ITEM	ACTION / REMARKS
INSTALLATION		
7. Left, front drawbar (4)	Intervehicular cable (5)	Position.
8. Clip assemblies (11)	Mating connectors (15 and 16)	a. Match connector's (15) identification to connectors (16) and push connectors firmly together. b. Push mating connectors into clips.
9.	Ground lead (14), washer (13), and screw (12)	Using flat-tip screwdriver, install.
10. Intervehicular cable (4)	Clamp (9), screw (8), lockwasher (7), nut (6), and extension spring (10)	Using cross-tip screwdriver and wrench, install.
11. Left, front drawbar (4)	Connector cover (1)	Place in position.
12.	Four lockwashers (3) and four screws (2)	Using flat-tip screwdriver, install.



TASK ENDS HERE

TA223868

MAIN HARNESS

This Task Covers:

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

Initial Setup

Tools

Extension, 6-by 1/4-inch square drive
Handle, reversible, 1/4-inch square drive
Pliers, diagonal-cutting
Screwdriver, cross-tip-
Screwdriver, flat-tip
Socket, universal, 7/16- by 1/4-inch square drive

Materials/Parts

Grommet (if required)
Wire ties (as required)

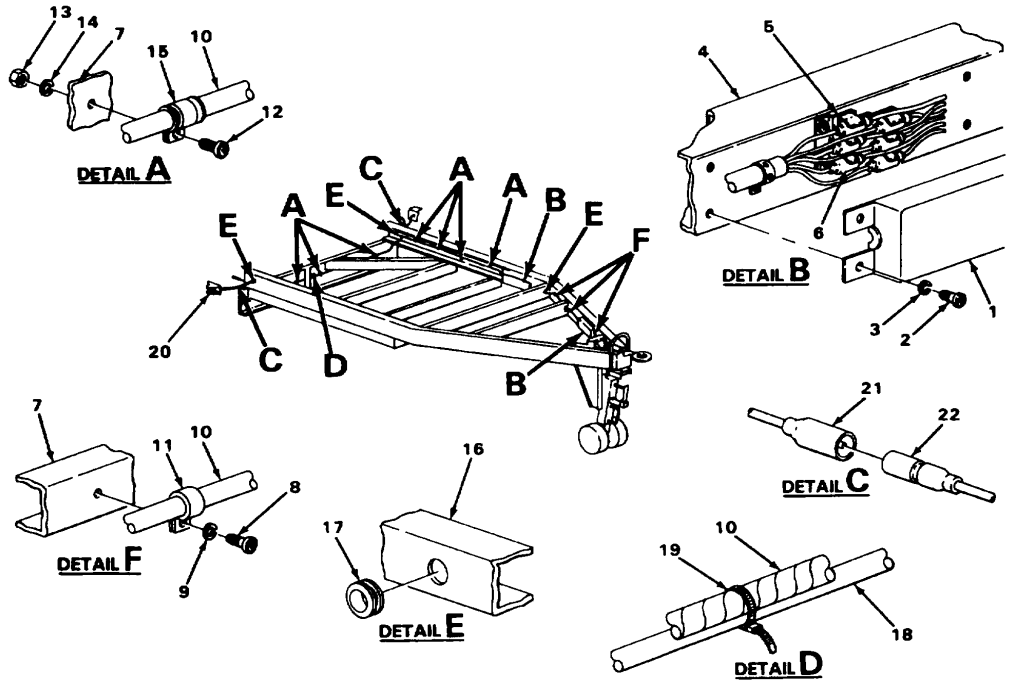
Equipment Condition

Composite lights removed (page 4-20).

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Connector cover (1)	Four screws (2) and four lockwashers (3)	Using cross-tip screwdriver, remove.
2. Left, front drawbar (4)	Connector cover (1)	Remove.
NOTE		
Identify matching connectors using tags or tape if identification bands are not installed.		
3. Clip assemblies (5)	Mated connectors (6)	Remove from clip assemblies (5) and separate.
4. Left drawbar (7)	Four screws (8) and four lockwashers (9)	Using cross-tip screwdriver, remove.
5. Main harness (10)	Four clamps (11)	Remove.
6. Left drawbar (7)	Seven screws (12), seven nuts (13), and seven lock-washers (14)	Using 7/16-inch socket, 6-inch extension, and cross-tip screwdriver, remove.

MAIN HARNESS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
7.	Main harness (10)	Seven clamps (15)	Remove.
8.	Frame rail (16)	Grommet (17)	Using flat-tip screwdriver, remove.
9.		Main harness (10)	Pull through hole.
10.	Harness (10) to air lines (18)	Two wire ties (19)	Using pliers, remove. Discard wire ties (19).
11.	Marker lights (20)	Connectors (21 and 22)	Separate.



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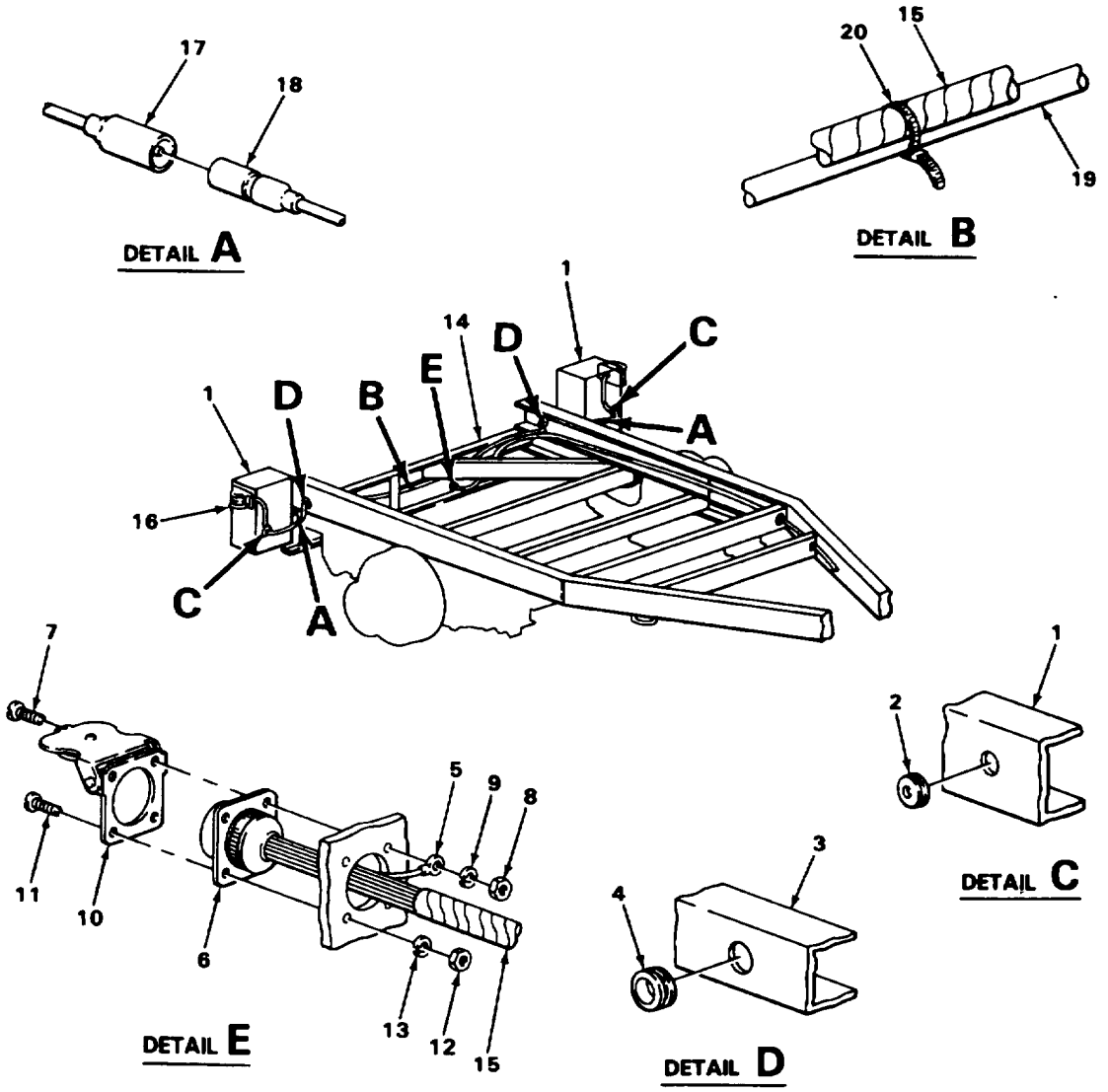
MAIN HARNESS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
12. Light box (1)	Two grommets (2)	Remove.
13. Frame rail (3)	Two grommets (4)	Remove.
14. Ground lead (5) to receptacle (6)	Screw (7), nut (8), and lockwasher (9)	Using 7/16-inch socket and cross-tip screwdriver, remove.
15. Receptacle cover (10)	Three screws (11), three nuts (12), and three lock-washers (13)	Using 7/16-inch socket and cross-tip screwdriver, remove.
16. Receptacle (6)	Receptacle cover (10)	Remove.
17. Rear cross-	Main harness (15) member (14)	Remove through receptacle hole.
INSTALLATION		
18. Rear cross-member (14)	Main harness (15)	Guide through receptacle hole.
19.	Receptacle (6) and cover (10)	Aline mounting holes.
20. Receptacle cover (10)	Three screws (11), three nuts (12), and three lockwashers(13)	Using 7/16-inch socket and cross-tip screwdriver, install.
21. Ground lead (5) to receptacle (6)	Screw (7), nut (8), and lockwasher (9)	Using 7/16-inch socket and cross-tip screwdriver, install.

MAIN HARNESS- CONTINUED

LOCATION	ITEM	ACTION	REMARKS
22. Marker lights (16)	Connectors (17 and 18)	Connect.	
23. Harness (15) to air lines (19)	Two wire ties (20)	Install.	



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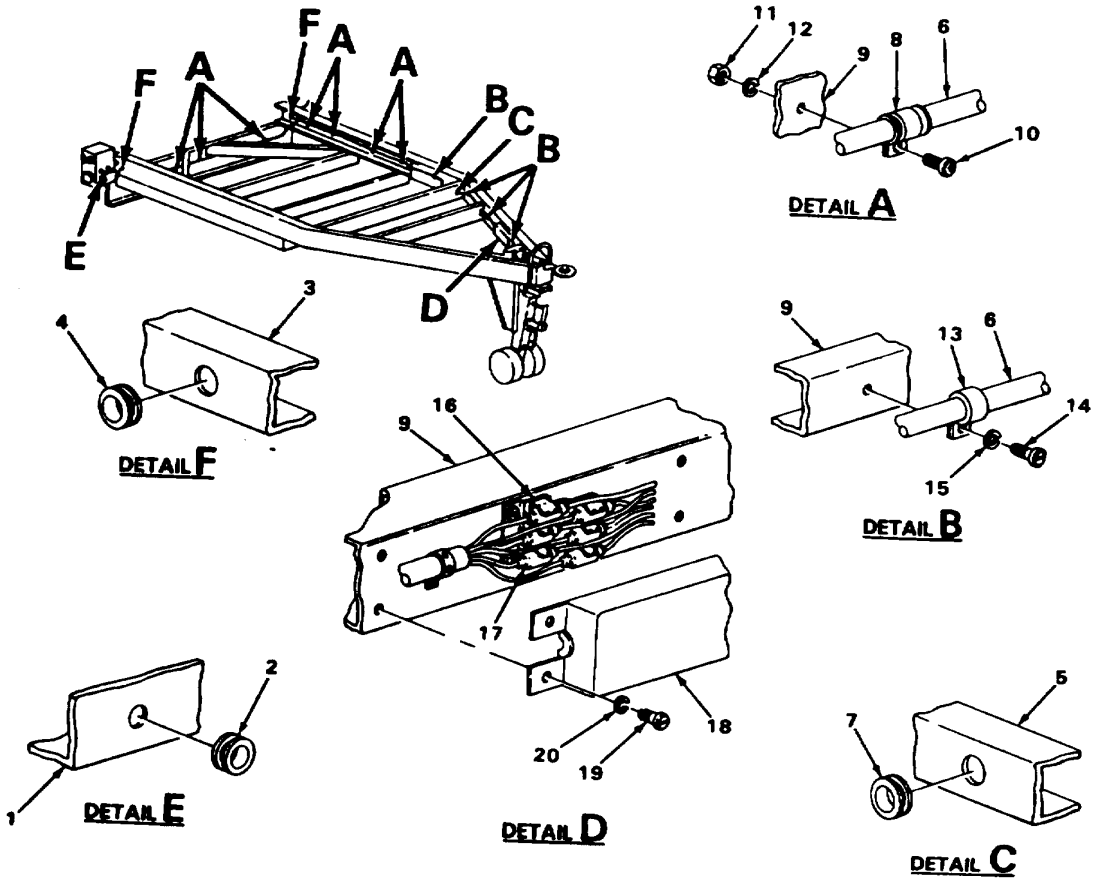
MAIN HARNESS - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
24. Light box (1)	Two grommets (2)	Install.
25. Frame rail (3)	Two grommets (4)	Install.
26. Forward crossmember (5)	Main harness (6)	Pull through hole.
27.	Grommet (7)	Install.
28. Main harness (6)	Seven clamps (8)	Install.
29. Left drawbar (9)	Seven screws (10), seven nuts (11), and seven lock-washers (12)	Using 7/16-inch socket, 6-inch extension, and cross-tip screwdriver, install.
30. Main harness (6)	Four clamps (13)	Install.
31. Left drawbar (9)	Four screws (14) and four lock-washers (15)	Using flat-tip screwdriver, install.
32. Clip assemblies (16)	Twelve connectors (17)	Reconnect and install into clip assemblies (16).
33. Left drawbar (9)	Connector cover (18)	Place in position.
34. Connector cover (18)	Four screws (19) and four lock-washers (20)	Using flat-tip screwdriver, install.

MAIN HARNESS - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Install composite lights (page 4-20).

TASK ENDS HERE

All data on pages 4-34 thru 4-37 are deleted.

TA223871

Section VIII. AXLE

AXLE MAINTENANCE

This Task Covers:

a. Removal (page 4-38)
b. Installation (page 4-42)

INITIAL SETUP

Tools

Handle, reversible, 3/8-inch square drive
Handle, reversible, I/2-inch square drive
Jack, hydraulic floor
Mallet, plastic
Socket, 9/16- by 3/8-inch square drive
Socket, 518- by 318-inch square drive
Socket, 15/16- by 1/2-inch square drive
Wrench, open-end, 7/16-inch

Tools - Continued

Wrench, open-end, 9/16-inch
Wrench, box-end, 15/16-inch
Wrench, box-end, 1 1/8-inch

Personnel Required

Two

Equipment Condition

Hubs and drums removed (page 4-103).

LOCATION	ITEM	ACTION	REMARKS

REMOVAL

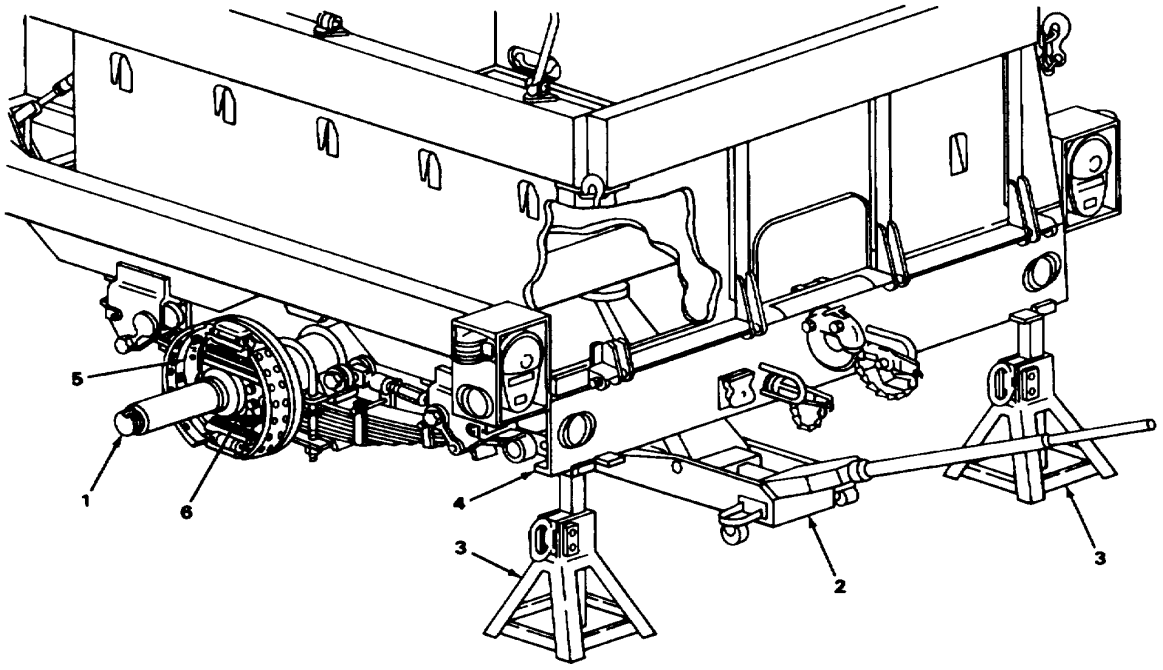
NOTE

Because this procedure begins with both hubs and drums removed, the axle is already supported on jack stands.

1. Axle (1) Jack (2)
   a. Place under and lift axle (1) on left side so that it clears left side jack stand (3).
   b. Position left side jack stand (3) under left side of rear frame member(4).
   c. Lower and remove jack (2).

AXLE MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION	REMARKS
		NOTE	
		Repeat step 1 for right side.	
2. Hand brake lever (5)	Handbrake cable (6)	Remove.	



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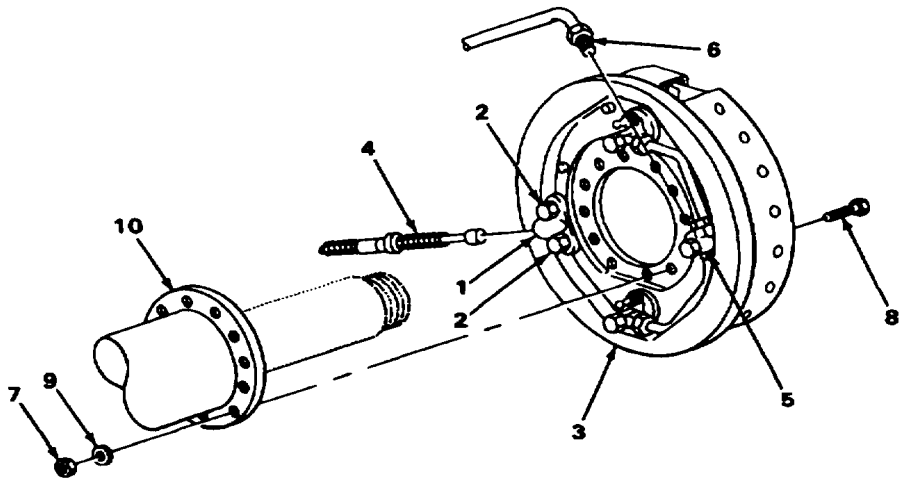
AXLE MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL- CONTINUED		
3. Cable bracket guide (1)	Two nuts (2)	Using 7/16-inch wrench, loosen.
4. Backing plate (3)	Handbrake cable (4)	Pull through backing plate.
5. Connector (5)	Brake line nut (6)	Using 7/16-inch wrench, remove.
6. Backing plate (3)	Twelve nuts (7), twelve bolts (8), and twelve lockwashers (9)	Using 9/16-inch socket and 9/16-inch wrench, remove.
7. Axle (10)	Backing plate (3)	Remove.

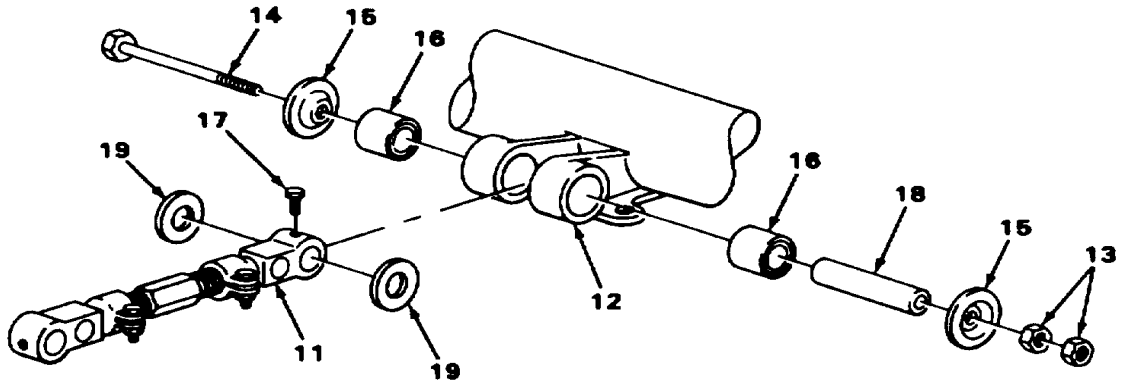


8. Radius rod (11) to axle bracket (12)	Two nuts (13), bolt (14), and two retainers (15)	Using 15/16-inch socket and 15/16-inch wrench, remove.
9. Axle bracket (12)	Two bushings (16)	Remove.
10. Radius rod (11)	Screw (17)	Using 5/8-inch socket, remove.

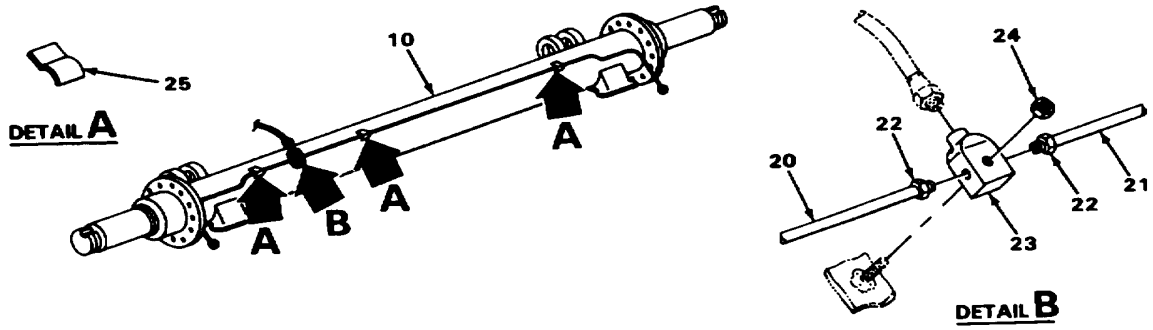
TA223876

AXLE MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
11.	Spacer(18)	Using a mallet, lightly tap to loosen, then remove.
12. Axle bracket (12)	Two washers (19)	Remove.
13.	Radius rod (11)	Lift from axle bracket (12).



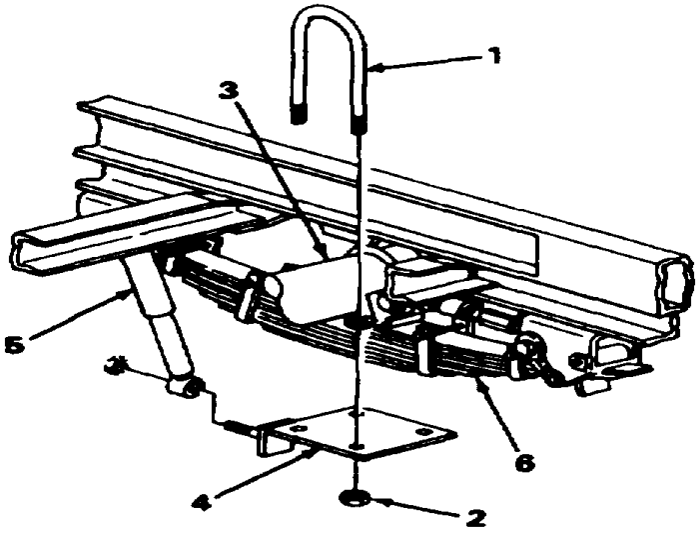
14.	Brake lines (20 and 21)	Two nuts (22)	Using 7/16-inch wrench, remove.
15.	T-fitting (23)	Nut (24)	Using 9/16-inch wrench, remove.
16.	Axle (10)	T-fitting (23)	Remove. T-fitting will hang from flex line.
17.	Axie (10)	Brake lines (20 and 21)	Remove from three clips (25).



TA223877

AXLE MAINTENANCE - CONTINUED

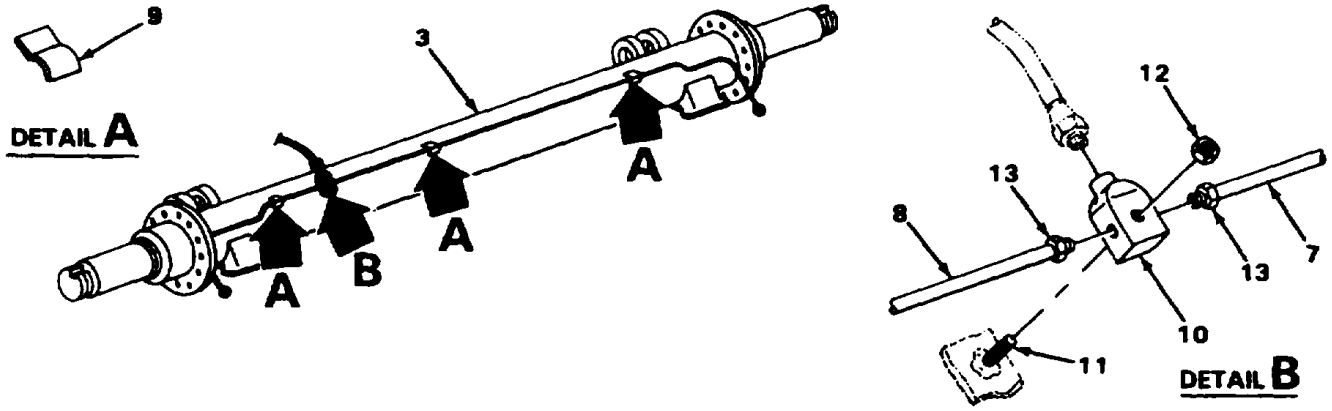
LOCATION	ITEM	ACTION REMARKS
REMOVAL - CONTINUED		
18. Two U-bolts (1)	Four nuts (2)	Using 1 1/8-inch wrench, remove.
19. Axle (3)	Two U-bolts (1)	Remove. Allow plate (4) to hang from shock absorber (5).
NOTE		
Repeat steps 2 thru 13 and steps 18 and 19 for opposite side.		
20. Two springs (6)	Axle (3)	Remove with assistance.
INSTALLATION		
21. Two springs (6)	Axle (3)	Position on top of springs with assistance.
22. Axle (3) to plate (4)	Two U-bolts (1)	install.
23. U-bolts (1)	Four nuts (2)	Using 1 1/8-inch wrench, install.



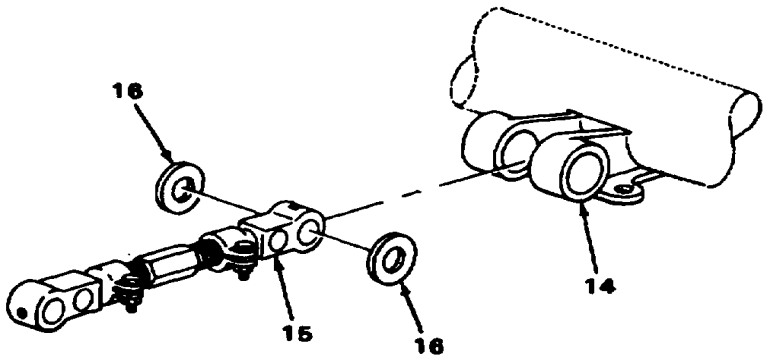
TA223878

AXLE MAINTENANCE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
24.	Axle (3)	Brake lines (7 and 8)	Position under three clips (9).
25.		T-fitting (10)	Place onto axle stud (11).
26.	Stud (11)	Nut (12)	Using 9/16-inch wrench, install.
27.	T-fitting (10)	Two nuts (13)	Using 7/16-inch wrench, install.



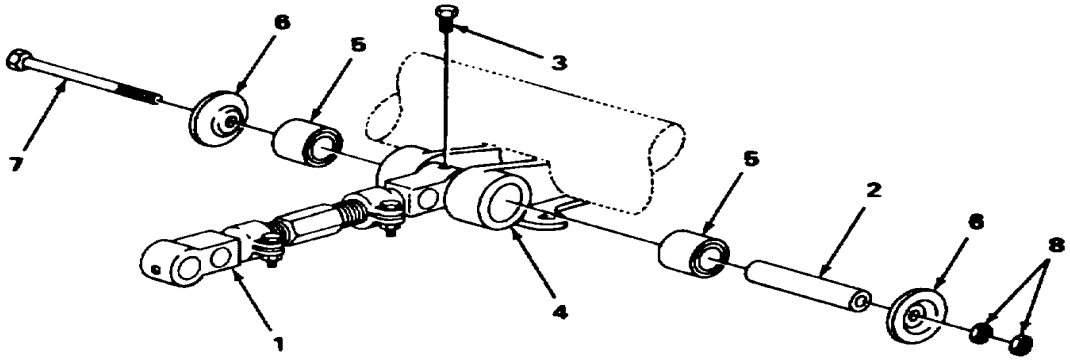
28.	Axle bracket (14)	Radius rod (15)	Lower into position.
29.		Two washers (16)	Place in position.



TA223879

AXLE MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION - CONTINUED		
30. Radius rod (1)	Spacer (2)	Install.
31.	Screw (3)	Using 5/8-inch socket, install.
32. Axle bracket (4)	Two bushings (5)	Install.
33. Radius rod (1) to axle bracket (4)	Two retainers (6), bolt (7), and two nuts (8)	Using 15/16-inch socket and 15/16-inch wrench, assemble and install.



NOTE

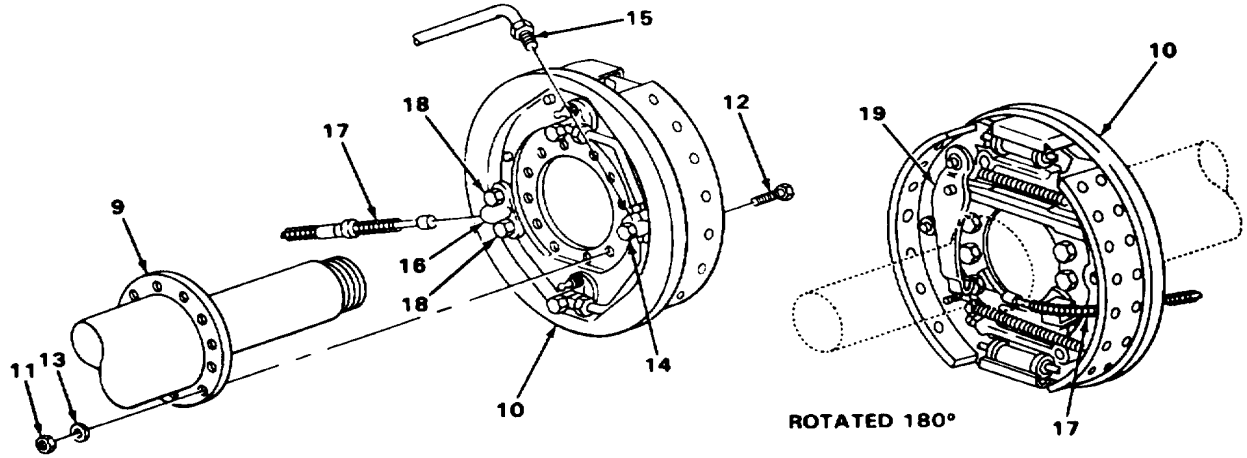
Backing plate must be positioned so that connector fitting is facing rear of trailer and handbrake lever pivots at the top.

34. Axle (9)	Backing plate (10)	Place in position.
35. Backing plate (10)	Twelve nuts (11), twelve bolts (12), and twelve washers (13)	Using 9/16-inch socket and 9/16-inch wrench, install.
36. Connector (14)	Brake line nut (15)	Using 7/16-inch wrench, install.
37. Cable bracket guide (16)	Handbrake cable (17)	Slide into place.
38.	Two nuts (18)	Using 7/16-inch wrench, tighten.
39. Handbrake lever (19)	Hand brake cable(17)	Install.

TA223880

AXLE MAINTENANCE - CONTINUED

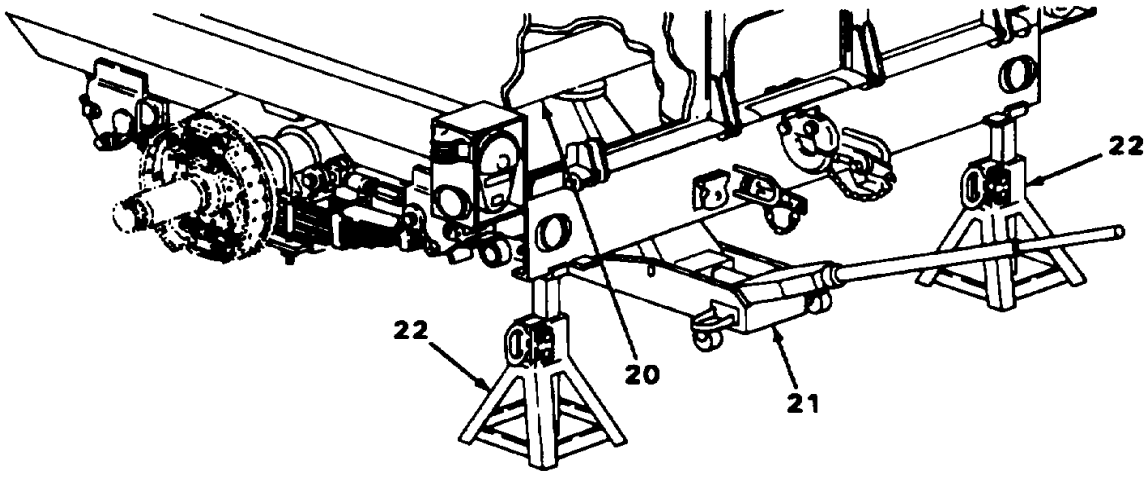
LOCATION	ITEM	ACTION	REMARKS



NOTE

Repeat steps 22, 23, and steps 28 thru 39 for opposite side.

40.	Axle (20)	Jack (21)	Position under axle and raise.
41.		Two jack stands (22)	Remove from rear trailer frame and position under axle.



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AXLE - CONTINUED

NOTE
FOLLOW-ON MAINTENANCE:

1. Install hub and drum (page 4-103).
2. Aline axle (page 4-123).
3. Bleed brakes (page 4-57).

TASK ENDS HERE

Section IX. BRAKE SYSTEM

HANDBRAKE LEVER ASSEMBLY

This task covers:

a. Removal (page 4-47)
b. Installation (page 4-47)

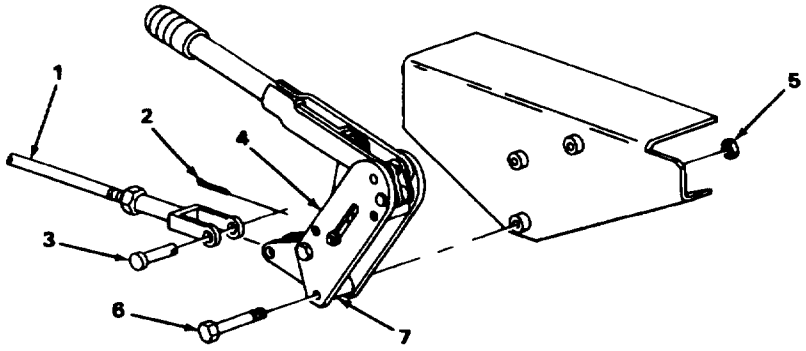
INITIAL SETUP

Tools
- Handle, reversible, 3/8-inch square drive
- Pliers, diagonal-cutting
- Socket, 9/16- by 3/8-inch square drive
- Wrench, box-end, 9/16-inch

Materials/Parts
- Cotter pin

HANDBRAKE LEVER ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Handbrake cable (1)	Cotter pin (2) and clevis pin (3)	Using pliers, remove. Discard cotter pin (2).
2. Handbrake lever (4)	Three nuts (5), three bolts (6), three spacers (7), and handbrake lever (4)	Using socket and wrench, remove.
INSTALLATION		
3.	Handbrake lever (4), three bolts (6), three spacers (7), and three nuts (5)	Using socket and wrench, install.
4. Handbrake cable (1)	Cotter pin (2) and clevis pin (3)	Using pliers install.



NOTE
FOLLOW-ON MAINTENANCE: Adjust handbrake (page 3-4).

TASK ENDS HERE

HANDBRAKE CABLE ASSEMBLY

This task covers:

a. Removal (page 4-48)
b. installation (page 4-48)

TA223882

HANDBRAKE CABLE ASSEMBLY - CONTINUED

INITIAL SETUP

Tools

Handle, reversible, 3/8-inch square drive
Pliers
Socket, 1/2- by 3/8-inch square drive
Wrench, open-end, 7/16-inch
Wrench, open-end, 1/2-inch

Materials/Parts

Cotter pin

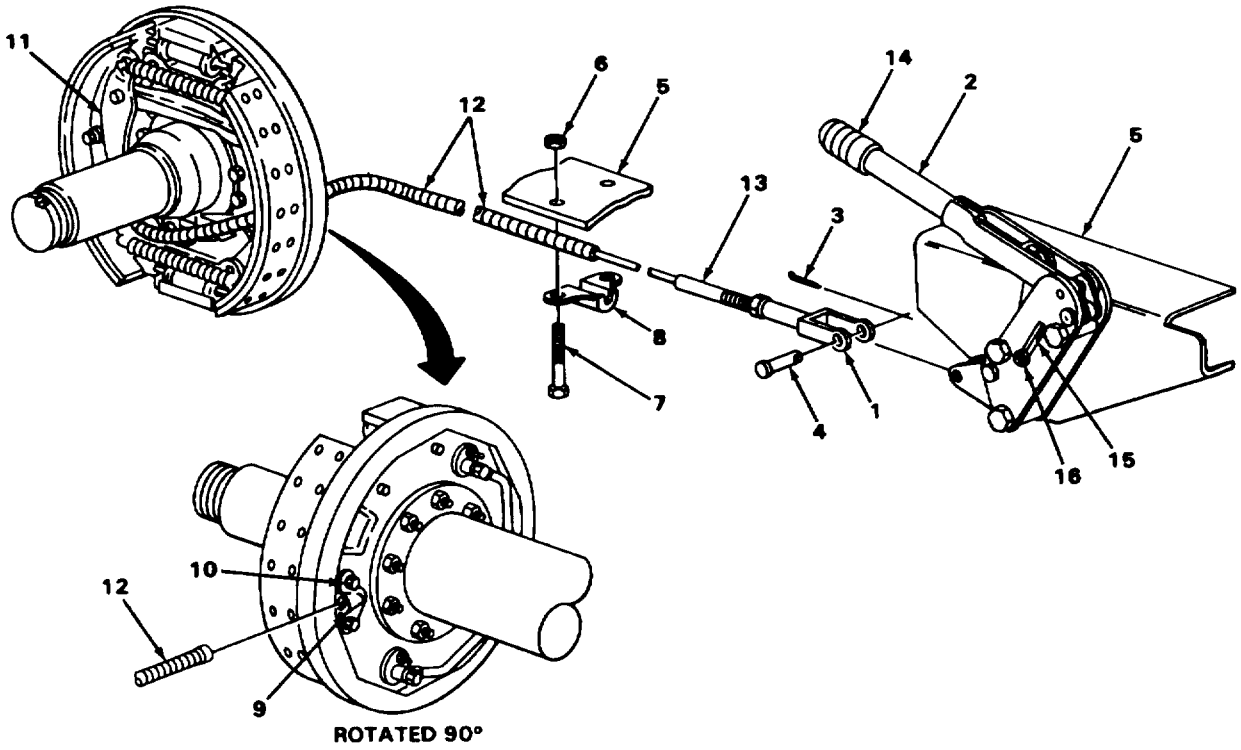
Equipment Condition

Hub and brakedrum removed (page 4-103).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Clevis (1) to hand brake lever (2)	Cotter pin (3) and clevis pin (4)	Using pliers, remove. Throw away cotter pin (3).
2. Frame (5	Two nuts (6), two capscrews (7), and strap (8)	Using socket and 1/2-inch wrench, r e m o v e.
3. Cable bracket guide (9)	Two nuts (10)	Using 7/16-inch wrench, loosen.
4. Brake lever (11)	Handbrake cable (12)	Unhook.
5. Cable bracket guide (9)	Handbrake cable (12)	Slide out.
6. Handbrake cable (12)	Nut (13) and clevis (1)	Using 1/2-inch wrench, remove.
INSTALLATION		
7. Handbrake cable (12)	Nut (13) and clevis (1)	a. Screw on nut (13). b. Screw on clevis (I). Do not tighten.
8. Cable bracket guide (9)	Handbrake cable (12)	Slide in.
9. Brake lever (11)	Handbrake cable (12)	Hook Into place.

HANDBRAKE CABLE ASSEMBLY - CONTINUED

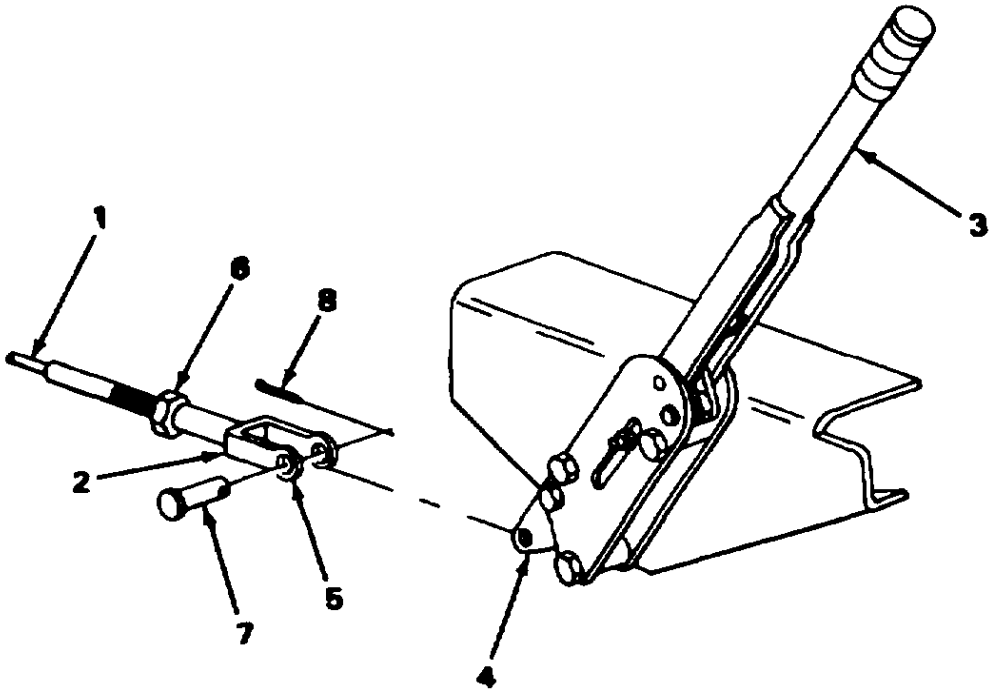
	LOCATION	ITEM	ACTION REMARKS
10.	Cable bracket guide (9)	Two nuts (10) Using	7/16-inch wrench, tighten.
11.	Frame (5)	Two nuts (6), two capscrews (7), and strap (8)	Using socket wrench and 1/2-inch wrench, install.
12.		Handbrake lever (2)	Move to the release position.
13.	Hand brake lever (2)	Adjusting knob (14)	Turn counterclockwise, loosening until pin (15) just reaches the top of slot (16).
14.	Frame (5)	Handbrake lever (2)	Move to the apply position.



TA223883

HANDBRAKE CABLE ASSEMBLY- CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION -CONTINUED		
15. Handbrake cable (1)	Clevis (2)	a. Pull on clevis (2) toward handbrake lever (3) to remove slack in handbrake cable (1). b. Turn clevis (2) clockwise or counterclockwise until holes (4 and 5) just line up.
16.	Nut (6)	Using 1/2-inch wrench, tighten against clevis (2).
17. Clevis (2) to handbrake lever (1)	Clevis pin (7) new cotter pin (8)	and Using pliers, install.



NOTE

FOLLOW-ON MAINTENANCE: install hub and brakedrum (page 4-103).

TASK ENDS HERE

TA223884

SERVICE BRAKE ADJUSTMENT

This task covers:

Adjustment

INITIAL SETUP

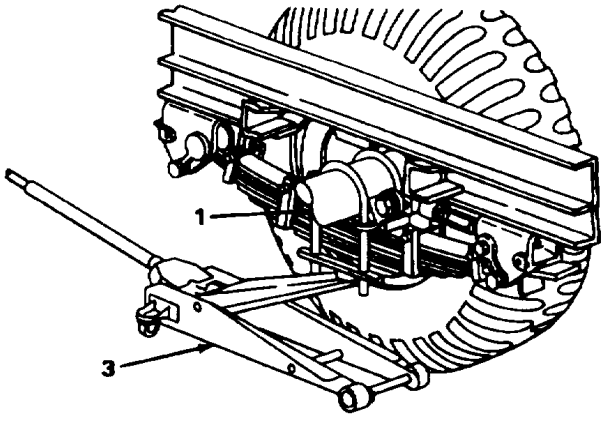
Tools

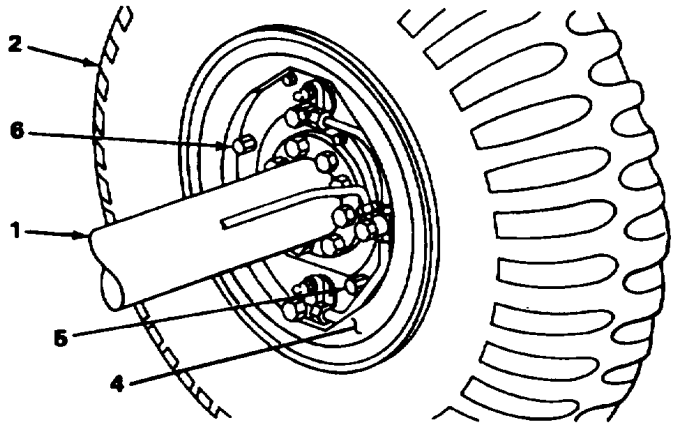
Handle, reversible, 3/8-inch square drive

Tools - Continued

Jack, hydraulic
Socket, 5/8- by 3/8-inch square drive

LOCATION	ITEM	ACTION REMARKS
	NOTE	
	Procedure given is for one wheel.	
1. Axle (1)	Tire and wheel (2)	Using jack (3), raise.
2. Backing plate (4)	Lower adjusting stud (5)	a. Using socket, turn adjusting stud (5) counterclockwise until wheel just locks. b. Back off enough so wheel just turns freely.
3.	Upper adjusting stud (6)	Repeat step 2.
4. Axle (1)	Wheel (2)	Using jack (3), lower.





NOTE

FOLLOW-ON MAINTENANCE: Adjust handbrake (page 3-4).

TASK ENDS HERE

TA223885

SERVICE BRAKE

This task covers:

a. Disassembly (page 4-52)
b. Inspection criteria (page 4-54)
c. Assembly (page 4-54)

INITIAL SETUP

Tools

Extension, 6-by 3/8-inch square drive
Handle, reversible, 3/8-inch square drive
Pliers, brake-repair
Pliers, needle-nose
Socket, 7/16- by 3/8-inch square drive

Tools -Continued

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

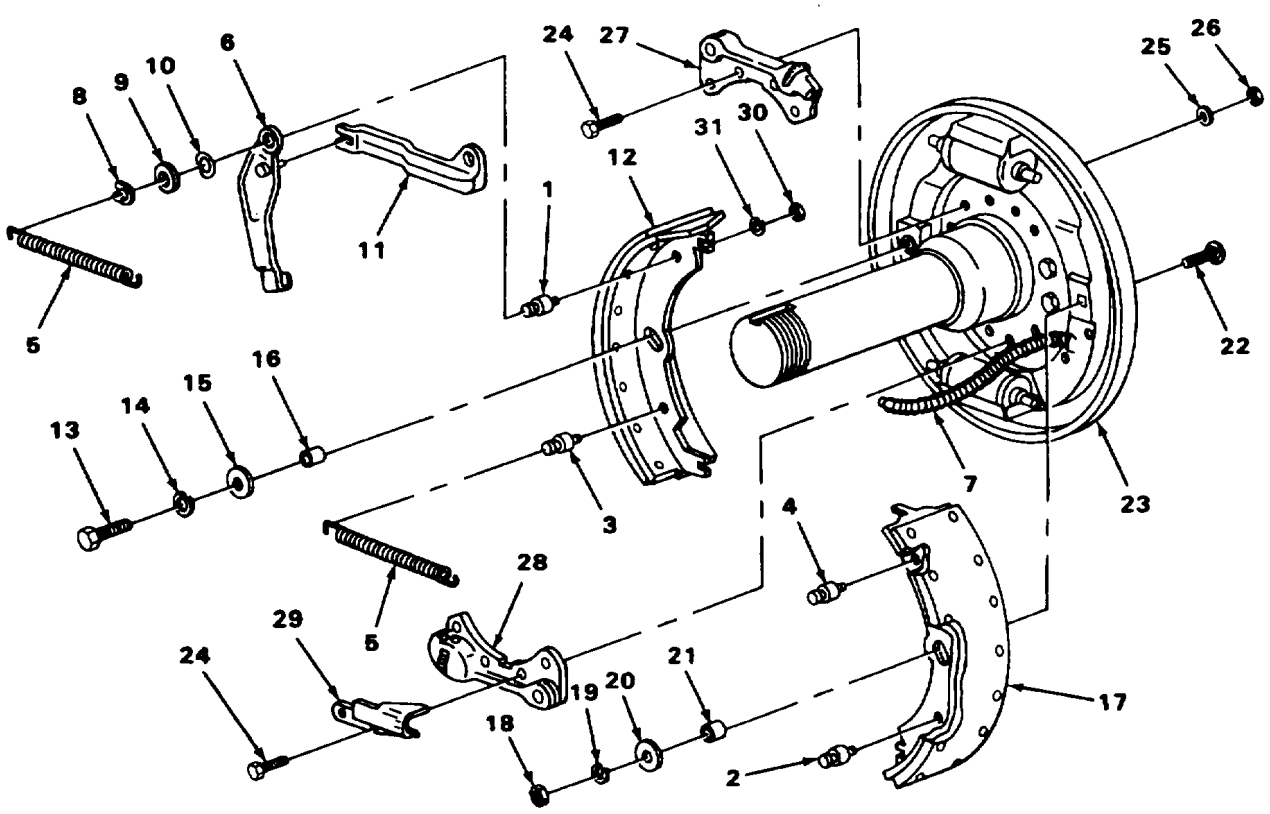
Equipment Condition

Wheel hub and drum removed (page 4-103).

LOCATION	ITEM	ACTION	REMARKS
DISASSEMBLY			
1. Pins (1, 2, 3, and 4)	Two springs (5)		Using brake-repair pliers, remove.
2. Brake lever (6)	Handbrake cable (7)		Unhook.
3. Pin (1 and 4)	Two clips (8), two flat washers (9), and two wave washers (10)		Using needle-nose pliers, remove.
4. Pin	(1) Brake lever (6)		Slide off.
5. Pin	(4) Strut (11)		Slide off.
6. Brakeshoe (12)	Capscrew (1 3), lock-washer (14), flat washer (15), and sleeve (16)		Using 7/16-inch socket, remove.
7. Brakeshoe (17)	Nut (18), lockwasher (19), flat washer (20), sleeve (21), and bolt (22)		Using 7/16-inch socket, remove.

SERVICE BRAKE - CONTINUED

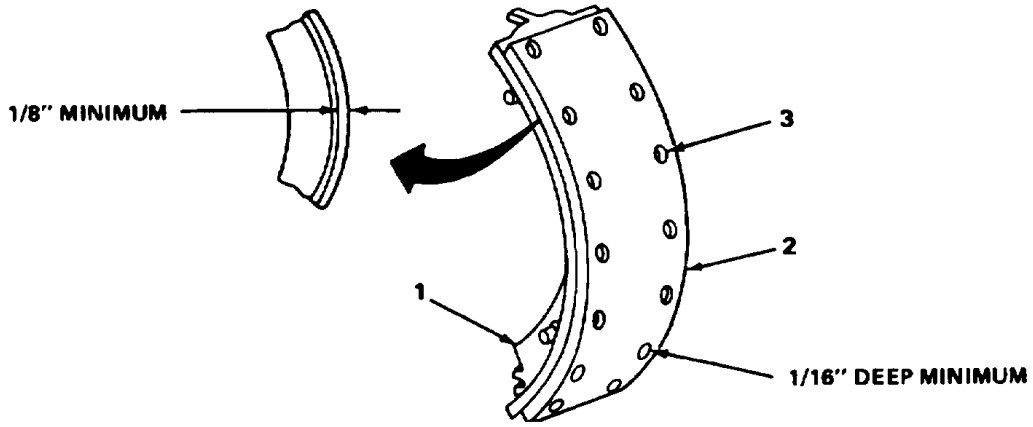
	LOCATION	ITEM	ACTION REMARKS
8.	Backing plate (23)	Brakeshoes (12 and 17)	Remove.
9.		Four capscrews (24), four lockwashers (25), four nuts (26), and adjuster (27)	Using 9/16-inch socket and 9/16-inch wrench, remove.
10.		Four capscrews (24), four lockwashers (25), four nuts (26), adjuster (28), and cable guide (29)	Using 9/16-inch socket and 9/16-inch wrench, remove.
11.	Brakeshoes (12 and 17)	Pins (1, 2, 3 and 4), four nuts (30), and four lockwashers (31)	Using 9/16-inch wrench, remove.



TA223886

SERVICE BRAKE - CONTINUED

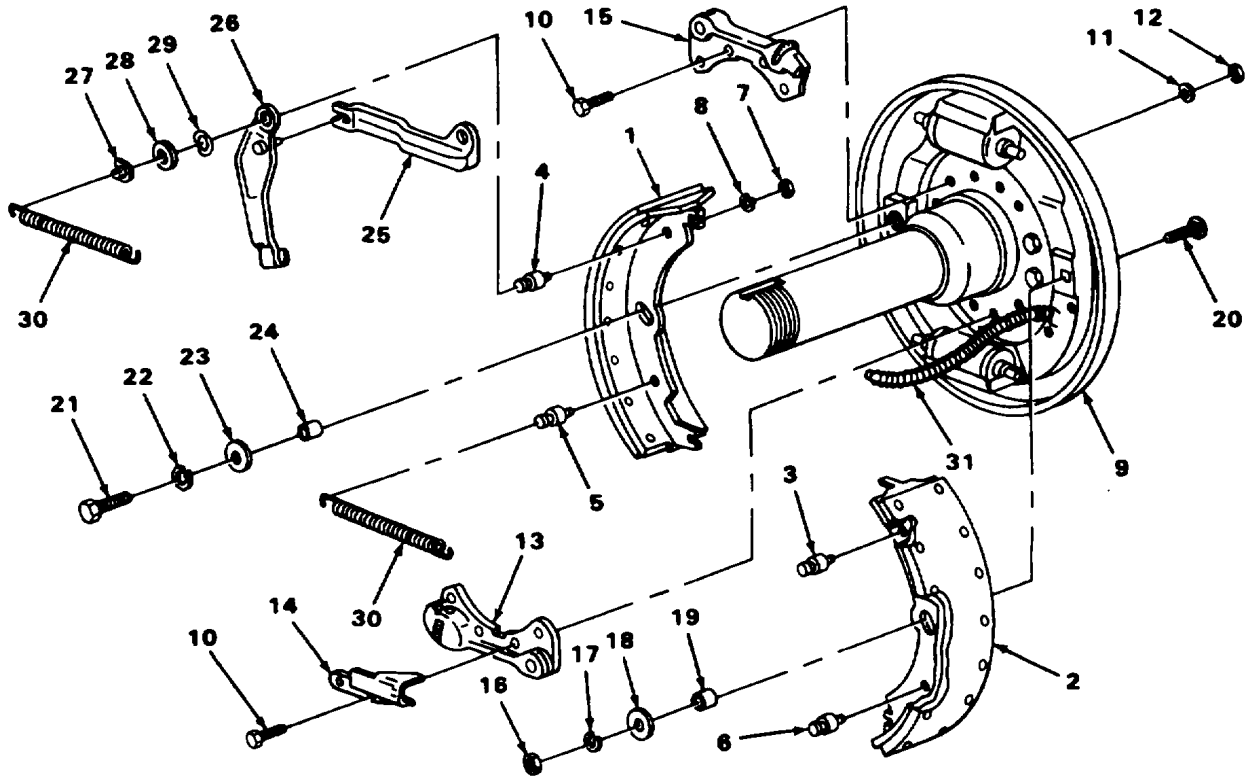
LOCATION	ITEM	ACTION	REMARKS
INSPECTION CRITERIA			
12. Brakeshoe (1)	Lining (2) and rivets (3)	a. Inspect shoes (1) for cracks. b. Inspect linings (2) for cracks, looseness to shoes (I), or a thickness of at least 1/8 inch (3.2 mm). c Inspect rivets (3) for looseness. Rivets (3) should beat least 1/16 inch (1.6 mm) below surface of lining (2).	
ASSEMBLY			
13. Brakeshoes (1 and 2)	Pins (3, 4,5, and 6), four nuts (7), and four lockwashers (8)		Using 9/16-inch wrench, install.
14. Backing plate (9)	Four capscrews (10), four lockwashers (1 1), four nuts (12), adjuster (13), and cable guide (14)		Using 9/16-inch wrench and 9/16-inch socket, install.
15.	Four capscrews (10), four lockwashers (11), four nuts (12), and adjuster (15).		Using 9/16-inch wrench and 9/16-inch socket, install.
16.	Brakeshoe (2)		Place in position.
17. Brakeshoe (2) to backing plate (9)	Nut (16), lockwasher (17), flat washer (18), sleeve (19), and bolt (20)		Using 7/16-inch socket, install.



TA223887

SERVICE BRAKE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
18.	Backing plate (9)	Brakeshoe (1)	Place in position.
19.	Brakeshoe (1) to backing plate (9)	Capscrew (21), lock-washer (22), flat washer (23), and sleeve (24)	Using 7/16-inch socket, install.
20.	Pin	(3) Strut (25)	Slide on.
21.	Pin	(4) Brake lever (26)	Slide on. Pin on brake lever (26) should fit into slot on strut (25).
22.	Pins (4 and 5)	Two clips (27'), two flat washers (28) and two wave washers (29)	Using pliers, install.
23.	Pins (3, 4,5, and 6)	Two springs (30)	Using brake-repair pliers, install.
24.	Brake lever (26)	Handbrake cable (31)	Hook into place.



TA223888

SERVICE BRAKE-CONTINUED

NOTE

FOLLOW-ON MAINTENANCE: Install hud drum (page 4-103).

TASK ENDS HERE

HYDRAULIC WHEEL CYLINDER

This task covers:

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

INITIAL SETUP

Tools
Wrench, open-end, 1/2-inch
Wrench, open-end, 11/16-inch

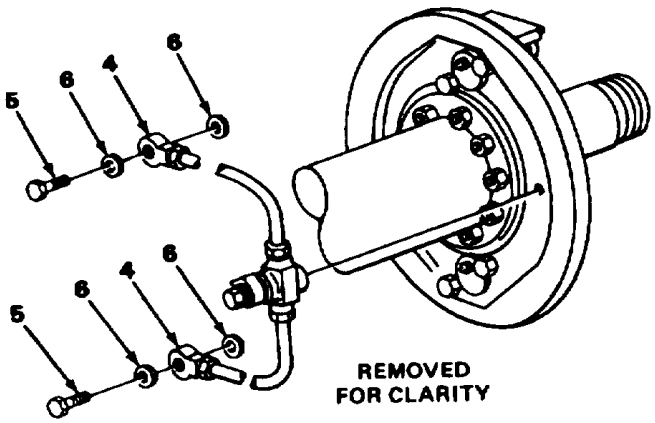
Materials/Parts
Washers, copper

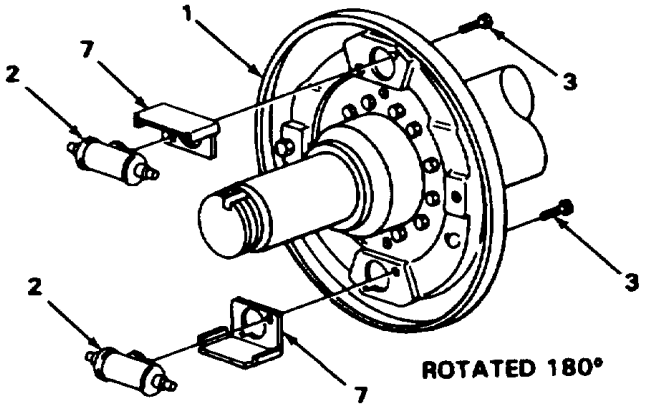
Equipment Condition
Service brake disassembled (page 4-52).

LOCATION	ITEM	ACTION	REMARKS
REMOVAL			
1. Backing plate (1) to wheel cylinder (2)	Two capscrews (3)	Using 1/2-inch wrench, remove.	
2. Connector (4) to wheel cylinder (2)	Bolt (5) and two sealing washers (6)	Using 11/16-inch wrench, remove.	Throw away washers (6).
3. Backing plate (1)	Wheel cylinder (2) and spark shield (7)	Remove.	
INSTALLATION			
4. Backing plate (1)	Wheel cylinder (2) and spark shield (7)	Place in position.	
5. Connector (4) to wheel cylinder (2)	Bolt (5) and two new sealing washers (6)	Using 1 1/16-inch wrench, install.	

HYDRAULIC WHEEL CYLINDER - CONTINUED

LOCATION	ITEM	ACTION / REMARKS
6. Backing plate (1) to wheel cylinder (2)	Two capscrews (3)	Using 1/2-inch wrench, install.





NOTE

FOLLOW-ON MAINTENANCE:

1. Install brakeshoes (page 4-52).
2. Bleed brakes (page 4-57).

TASK ENDS HERE

HYDRAULIC SYSTEM BLEEDING

This task covers:

a. Manual bleeding (page 4-58)
b. Pressure bleeding (page 4-59)

INITIAL SETUP

Tools
Pressure bleeder
Wrench, open-end, 7/16-inch

Materials/Parts
Brake fluid (item 2, appendix E)
Container
Plastic tubing

Personnel Required
Manual bleeding - two

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

TA223889

HYDRAULIC SYSTEM BLEEDING - CONTINUED

LOCATION	ITEM	ACTION REMARKS

NOTE

Use the manual bleeding procedure only if a pressure bleeder is not available.

The trailer must be connected to the towing vehicle to manually bleed brakes.

The following procedure is typical for both left and right wheels.

Always bleed the wheel cylinder farthest from the master cylinder first.

Always bleed the lower cylinder first on a dual wheel cylinder brake,

Check fluid level of master cylinder frequently during manual bleeding procedure and replenish as required. Failure to keep filled will allow air to enter the hydraulic system. Refer to the manufacturer's instructions for proper operation and servicing of the pressure bleeder.

MANUAL BLEEDING

1.	Right wheel at lower cylinder bleed fitting (1)	Tubing (2)	Push tubing onto bleed fitting. Tubing should be long enough to reach ground when connected.
2.		Container (3)	Fill container half full with brake fluid and position by wheel being bled.
3.		Tubing (2)	Submerge free end in brake fluid,

NOTE

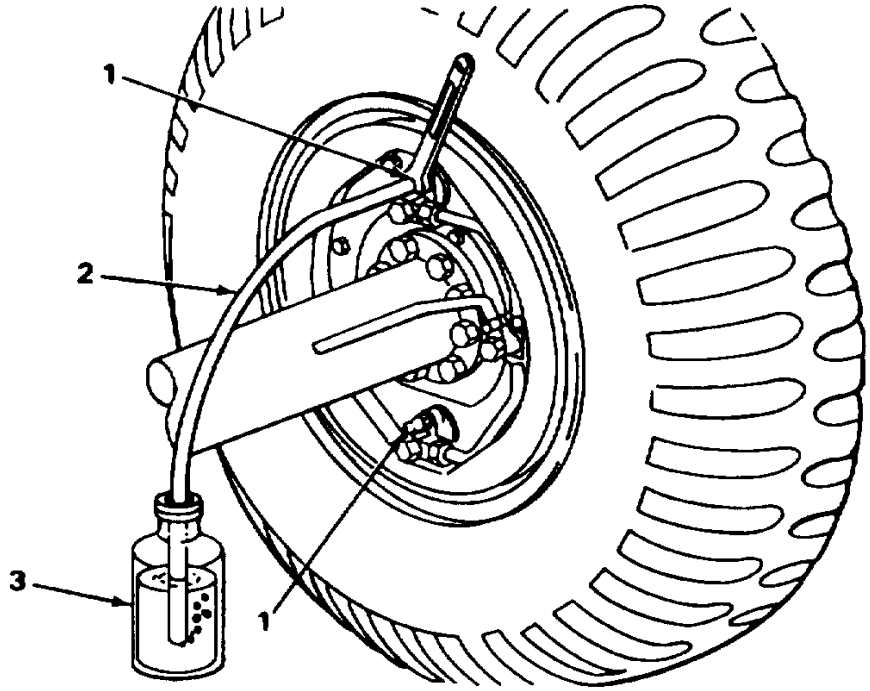
Assistant should pump brake pedal slowly while brakes are bled. Make sure free end of tubing stays submerged in fluid.

4.		Bleed fitting (1)	Using 7/16-inch wrench, open fitting three-quarter turn. Fluid and air will be forced through tube. Continue until no more air bubbles appear in fluid.
5.		Bleed fitting (1)	Close fitting and remove tubing.

HYDRAULIC SYSTEM BLEEDING - CONTINUED

NOTE

Steps 1 thru 5 should be repeated for upper wheel cylinder and both cylinders on right wheel.



PRESSURE BLEEDING

NOTE

The pressure bleeder should be connected to the master cylinder according to manufacturer's instructions for proper operation.

Perform the manual bleeding procedure after the pressure bleeder is connected.

TASK ENDS HERE

TA223890

HYDRAULIC BRAKE LINES AND FITTINGS

This task covers:

a. Flex hose removal (page 4-60)
b. Axle brake tube removal (page 4-61)
c. Chassis brake tube removal (page 4-62)
d. Cylinder-to-cylinder brake tube removal (page 4-62)
e. Cylinder-to-cylinder brake tube installation (page 4-64)
f. Chassis brake tube installation (page 4-64)
g. Axle brake tube installation (page 4-66)
n. Flex hose installation (page 4-66)

INITIAL SETUP

Tools Materials/Parts

Handle, reversible, 3/8-inch square drive
Screwdriver, cross-tip
Socket, 7/16- by 3/8-inch square drive
Wrench, open-end, 7/16-inch (two each)
Wrench, open-end, 5/8-inch
Wrench, box-end, 3/4-inch
Wrench, open-end, 15/16-inch
Gaskets, copper, 1 1/16-inch OD
Gaskets, copper, 13/16-inch OD
Gasket, inlet, copper

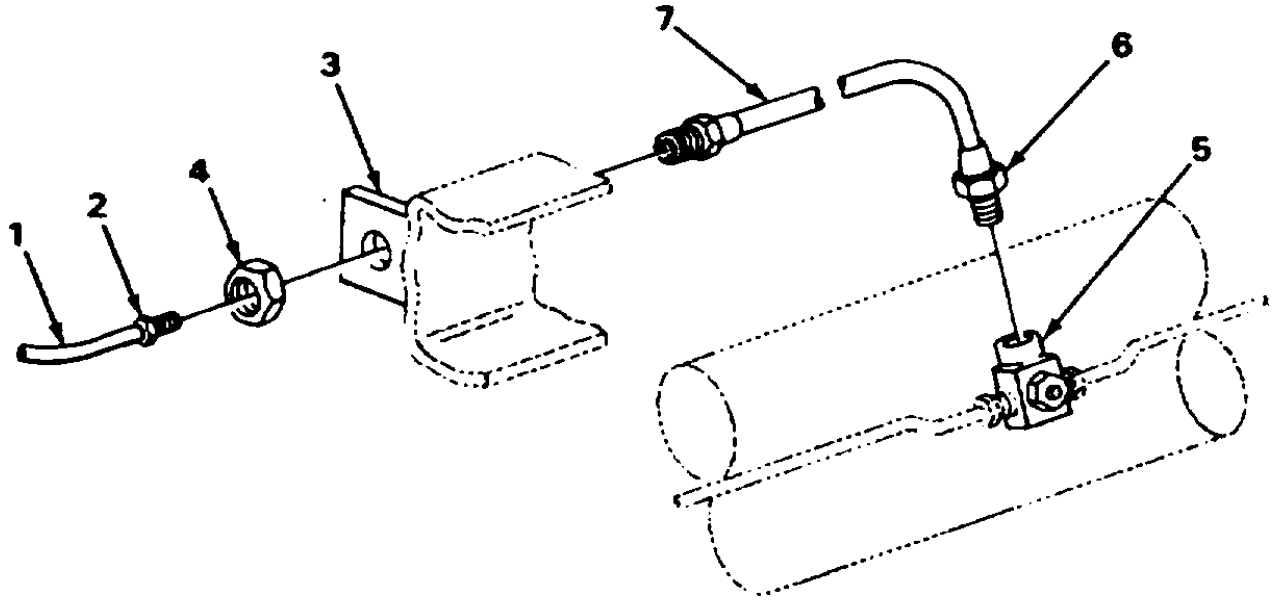
Equipment Condition

Hub and drum removed (page 4-103).

LOCATION	ITEM	ACTION	REMARKS
FLEX HOSE REMOVAL			
1. Brake line (1)	Nut (2)		Using 7/16-inch wrench, remove.
2. Bracket (3)	Nut (4)		Using 15/16- and 5/8-inch wrenches, remove.
3. T-fitting (5)	Nut (6)		Using 5/8-inch wrench, remove.
4. Bracket to T-fitting	Flex hose (7)		Remove.

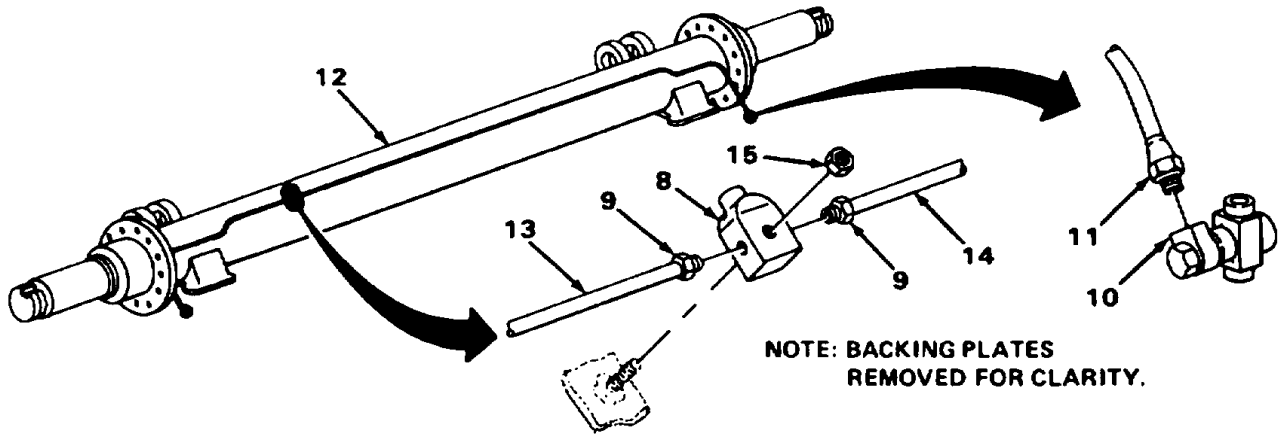
HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED

LOCATION	ITEM	ACTION	REMARKS



AXLE BRAKE TUBE REMOVAL

5.	T-fitting (8)	Two nuts (9)	Using 7/16-inch wrench, remove.
6.	Two connectors (10)	Two nuts (11)	Using 7/16-inch wrench, remove.
7.	Axle (12)	Brake lines Remove. (13 and 14)	
8.	T-fitting (8)	Nut (15)	Using 5/8-inch wrench, remove.
9.	Axle (12)	T-fitting (8)	Remove.

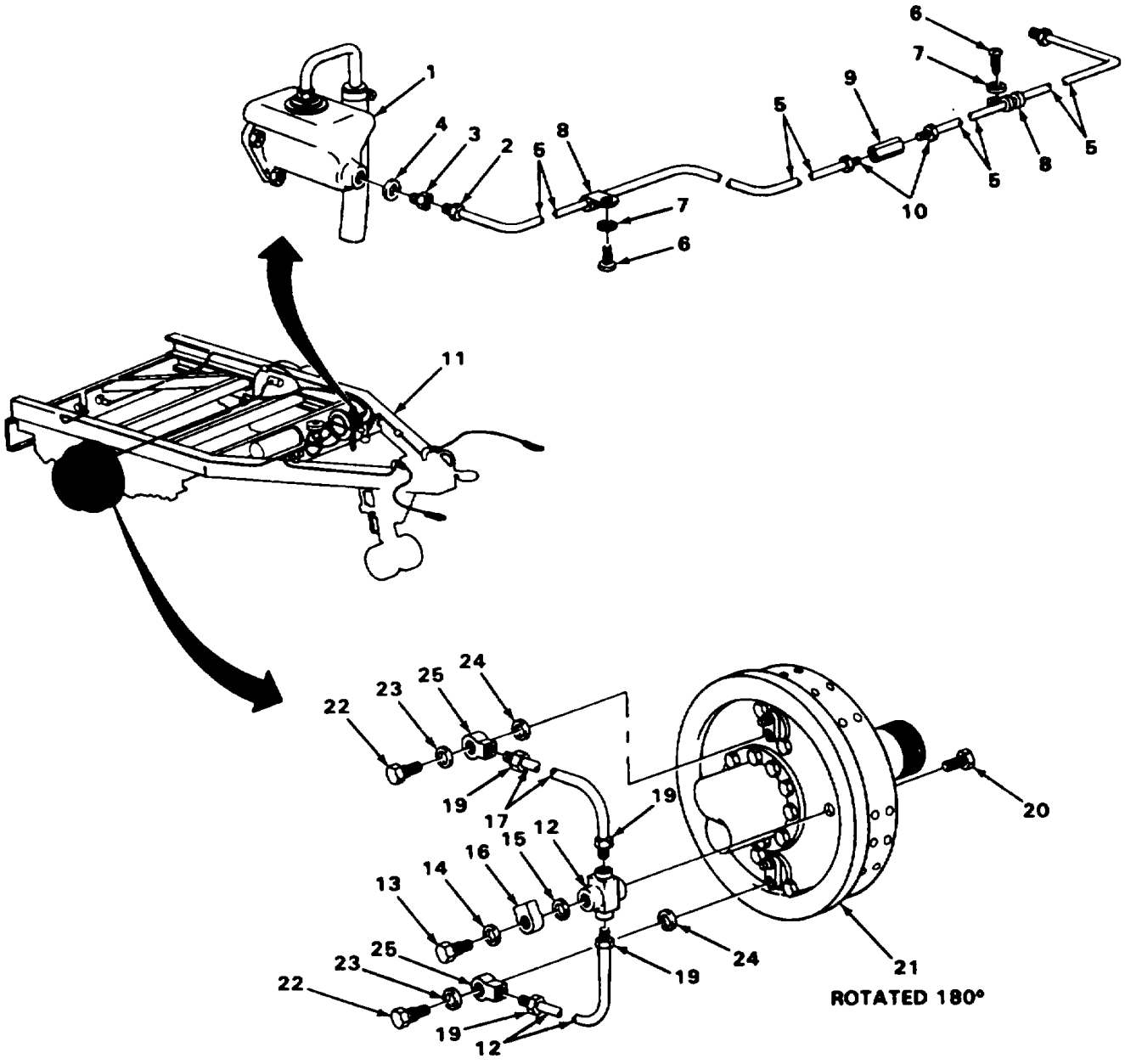


TA223891

HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
	CHASSIS BRAKE TUBE REMOVAL		
10.	Master cylinder (1)	Nut (2)	Using 5/8- and 7/16-inch wrenches, remove.
11.		Fitting (3) and gasket (4)	Using 5/8-inch wrench, remove. Discard gasket (4).
12.	Brake line (5)	Three screws (6), three washers (7), and three clamps (8)	Using cross-tip screwdriver, remove.
13.	Union (9)	Two nuts (10)	Using two 7/16-inch wrenches, remove.
		NOTE	
		After union is removed, brake line will be in two pieces.	
14.	Left frame rail (11)	Brake line (5)	Remove.
	CYLINDER-TO-CYLINDER BRAKE TUBE REMOVAL		
15.	Fitting (12)	Bolt (13), washers (14 and 15), and connector (16)	Using 3/4-inch wrench, remove. Discard washers (14 and 15).
16.	Brake lines (17 and 18)	Nuts (19)	Using 7/16-inch wrench, remove.
17.	Fitting (12)	Bolt (20)	Using 7/16-inch wrench, remove,
18.	Backing plate (21)	Two bolts (22), tWO washers (23 and 24), and two connectors (25)	Using 3/4-inch wrench, remove. Discard washers (23 and 24).
		NOTE	
		Repeat steps 15 thru 18 for opposite wheel.	

HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED

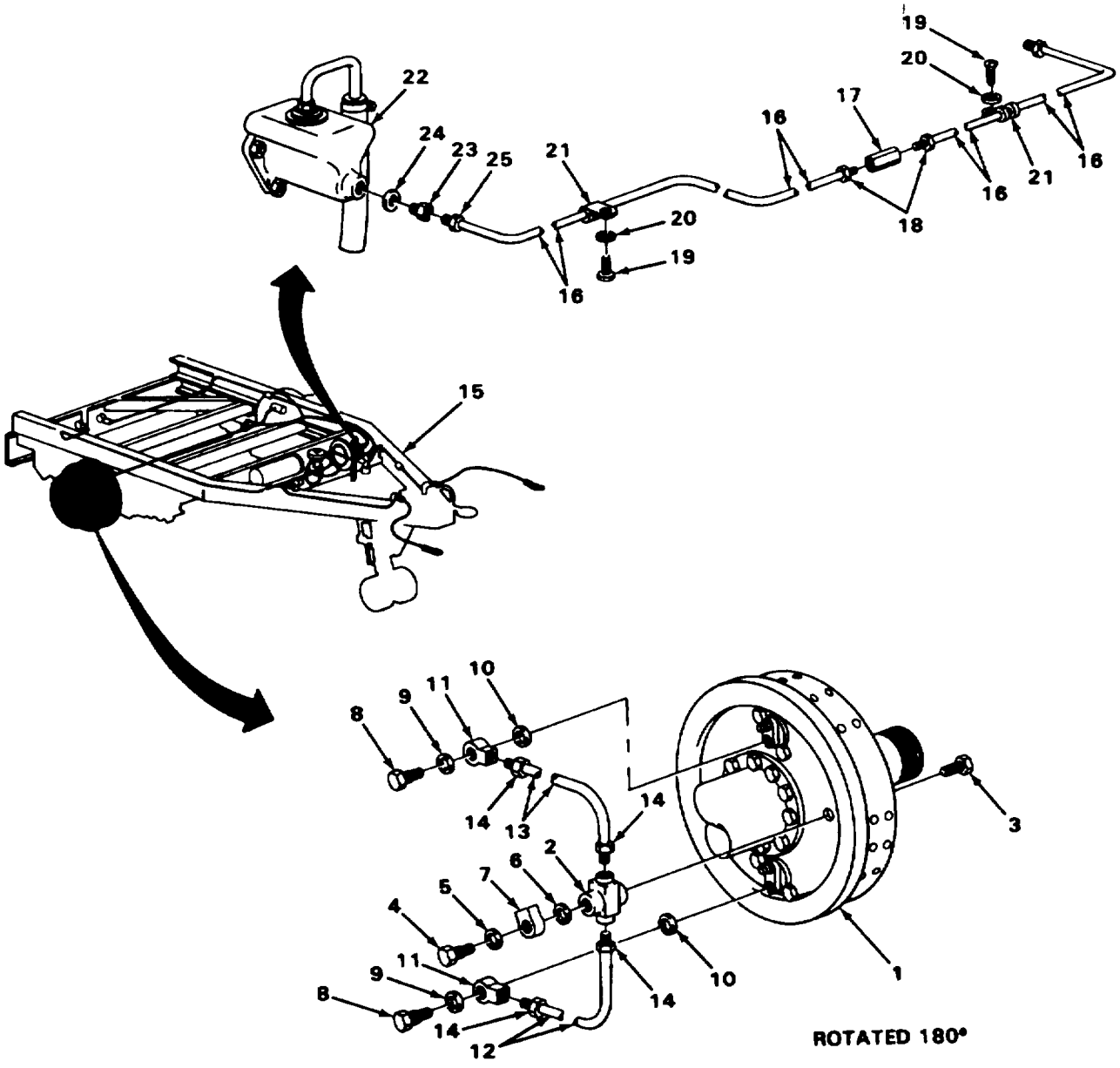


TA222892

HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
	CYLINDER-TO-CYLINDER BRAKE TUBE INSTALLATION		
19.	Backing plate (1)	Fitting (2)	Place in position.
20.	Fitting (2)	Bolt (3)	Using 7/16-inch socket, install.
21.		Bolt (4), new washers (5 and 6), and connector (7)	Using 3/4-inch wrench, assemble and install.
22.	Backing plate (1)	Two bolts (8), two new washers (9 and 10), and two connectors (11)	Using 3/4-inch wrench, assemble and install.
23.	Fitting (2) to connectors(n)	Brake lines (12 and 13)	Place in position.
24.	Brake lines (12 and 13)	Two nuts (14)	Using 7/16-inch wrench, install.
		Repeat steps 19 thru 24 for opposite wheel.	
	CHASSIS BRAKE TUBE INSTALLATION		
		Brake line will be in two pieces until union is installed.	
25.	Left frame rail (15)	Brake line (16)	Place both halves in position.
26.	Union (17)	Two nuts (18)	Using two 7/16-inch wrenches, install.
27.	Brake line (16)	Three screws (19), three washers (20), and three clamps (21)	Using cross-tip screwdriver, assemble and install.
28.	Master cylinder (22)	Fitting (23) and new gasket (24)	Using 5/8-inch wrench, install.
29.		Nut (25)	Using 5/8- and 7/16-inch wrenches, install into fitting (23).

HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED



TA223893

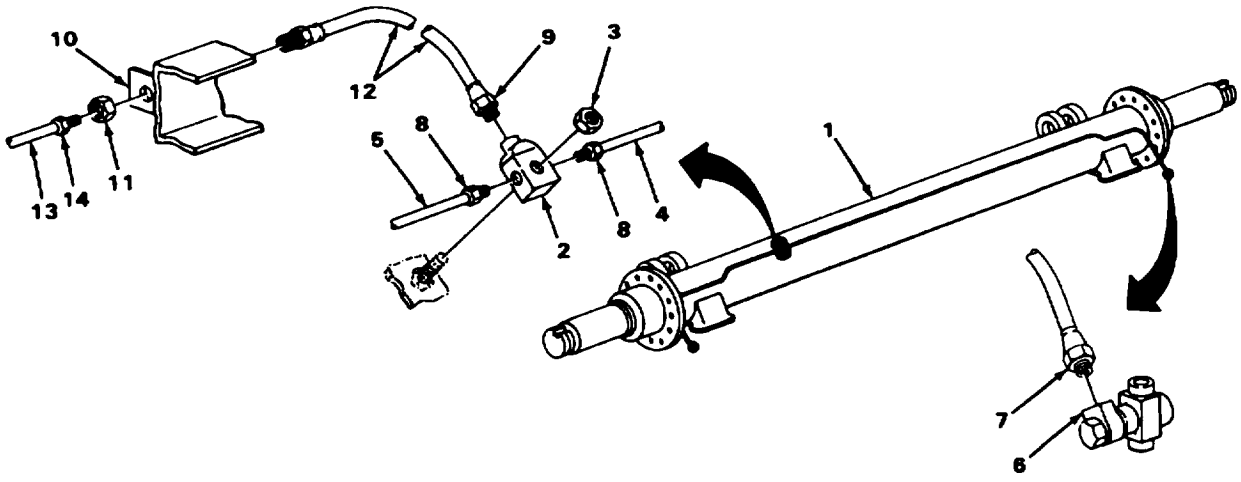
HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
AXLE BRAKE TUBE INSTALLATION			
30.	Axle (1)	T-fitting (2)	Place in position.
31.	T-fitting (2)	Nut (3)	Using 5/8-inch wrench, install.
32.	Axle (1)	Brake lines (4 and 5)	Place in position.
33.	Connectors (6)	Two nuts (7)	Using 7/16-inch wrench, install.
34.	T-fitting (2)	Two nuts (8)	Using 7/16-inch wrench, install.
FLEX HOSE INSTALLATION			
35.	T-fitting (2)	Nut (9)	Using 5/8-inch wrench, install.

NOTE

Use a 5/8-inch wrench to hold flex hose while installing brake line nut.

36.	Bracket (10)	Nut (11) `	Position flex hose (12) into bracket (10) and, using 5/18- and 15/16-inch wrenches, install nut (11).
37.	Brake line (13)	Nut (14)	Using 7/16- and 5/8-inch wrenches, install.



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HYDRAULIC BRAKE LINES AND FITTINGS - CONTINUED

NOTE

FOLLOW-ON MAINTENANCE:

1. **Install hub and drum (page 4-103).**
2. **Bleed brakes (page 4-57).**

TASK ENDS HERE

HYDRAULIC MASTER CYLINDER

This task covers:

a. Removal (page 4-68
b. Installation (page 4-68)

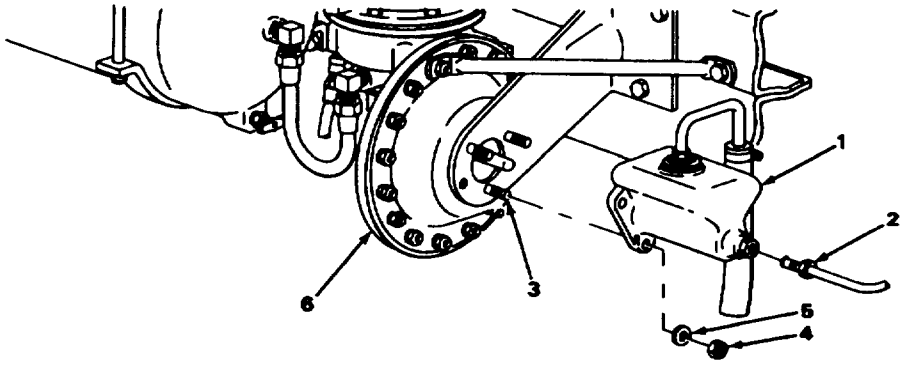
INITIAL SETUP

Tools

Handle, reversible, 3/8-inch square drive
Socket, 9/16- by 3/8-inch square drive
Wrench, open-end, 7/16-inch
Wrench, open-end, 11/16-inch

HYDRAULIC MASTER CYLINDER - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL			
1.	Master cylinder (1)	Nut (2)	Using 7/16- and 11/16- inch wrenches, remove.
2.	Studs (3)	Three nuts (4) and three lockwashers (5)	Using 9/16-inch socket, remove.
3.	Air chamber (6)	Master cylinder (1)	Remove.
INSTALLATION			
4.		Master cylinder (1)	Place on studs (3).
5.	Studs (3)	Three lockwashers (5) and three nuts (4)	Using 9/16-inch socket, install.
6.	Master cylinder .(1)	Nut (2)	Using 7/16- and 1 1/16-inch wrenches, install.



NOTE

FOLLOW-ON MAINTENANCE: Bleed brakes (page 4-57).

TASK ENDS HERE

TA223895

AIR RESERVOIR DRAINCOCK

This task covers:

a. Removal (page 4-69)
b. Installation (page 4-69)

INITIAL SETUP

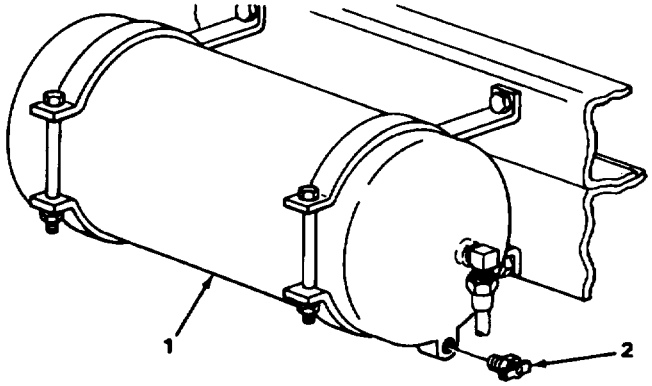
Tools

Wrench, open-end, 9/16-inch

Materials/Parts

Sealing compound (item 8, appendix E)

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
	WARNING	
	Wear protective goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream.	
1. Air reservoir (1)	Draincock (2)	Using 9/16-inch wrench, open, release all air pressure, and remove.
INSTALLATION		
2.	Draincock (2)	Using sealing compound, coat first two or three threads and, using 9/16-inch wrench, install.



NOTE

FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

TA223896

AIR RESERVOIR

This task covers:

a. Removal (page 4-70)
b. Installation (page 4-71)

INITIAL SETUP

Tools

Handle, reversible, 3/8-inch square drive
Socket, 9/16- by 3/8-inch square drive
Wrench, adjustable
Wrench, open-end, 9/16-inch
Wrench, open-end, 13/16-inch

Materials/Parts

Sealing compound (item 8, appendix E)

Equipment Condition

Fuse box removed (page 4-130).

LOCATION	ITEM	ACTION / REMARKS

REMOVAL

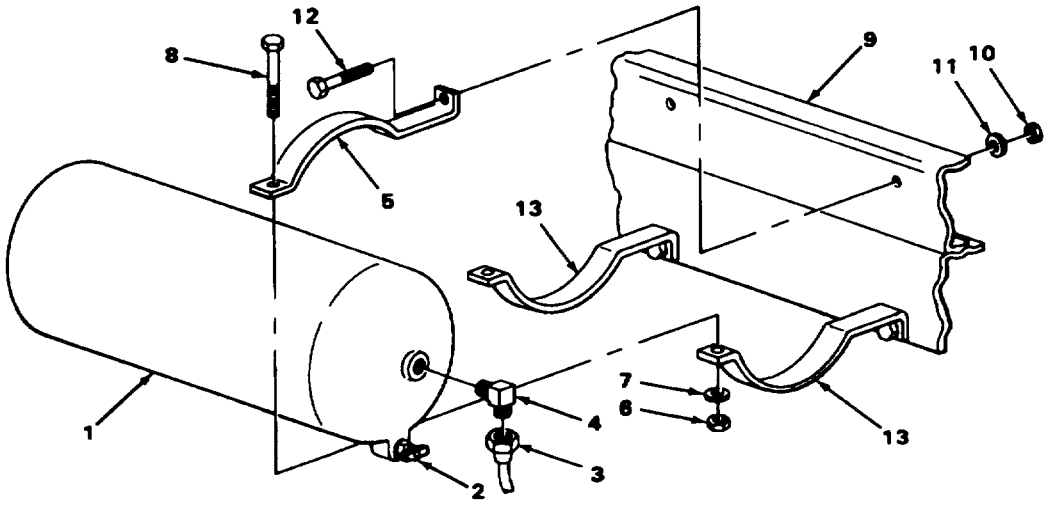
WARNING

Wear protective goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream.

1.	Reservoir (1)	Draincock (2)	Open, release all air pressure, and remove using 9/16-inch wrench.
2.		Air line (3)	Using 13/16-inch wrench, remove.
3.		Elbow (4)	Using adjustable wrench, remove.
4.	Two upper clamps (5)	Two nuts (6), two lockwashers (7), and two screws (8)	Using 9/16-inch socket and 9/16- inch wrench, remove.
5.	Crossmember (9)	Nuts (10), washers (11), and screws (12)	Using 9/16-inch socket and 9/16-inch wrench, remove.
6.	Reservoir (1)	Two upper support clamps (5)	Remove.
7.	Two lower clamps (13)	Reservoir (1)	Remove.

AIR RESERVOIR - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
8.	Two lower clamps (13)	Reservoir (1)	Place in position.
9.	Reservoir (1)	Two upper support clamps (5)	Position on reservoir (1).
10.	Crossmember (9)	Two screws (12), two lockwashers (11), and two nuts (10)	Using 9/16-inch socket and 9/16-inch wrench, install.
11.	Two upper clamps (5)	Two screws (8), two lockwashers (7), and two nuts (6)	Using 9/16-inch socket and 9/16-inch wrench, install.
12.	Reservoir (1)	Elbow (4)	Using sealing compound, coat first two or three threads and, using adjustable wrench, install.
13.		Air line (3)	Using 13/16-inch wrench, install.
14.		Draincock (2)	Using sealing compound, coat first two or three threads and, using 9/16-inch wrench, install.



TA223897

AIR RESERVOIR - CONTINUED

NOTE
FOLLOW-ON MAINTENANCE:

1. **Install fuse box (page 4-130).**
2. **Test for leaks (page 4-97).**

TASK ENDS HERE

EMERGENCY RELAY VALVE

This task covers:

a. Removal (page 4-72)
b. Installation (page 4-72)

INITIAL SETUP

Tools

Wrench, box-end, 9/16-inch (two each)
Wrench, open-end, 5/8-inch
Wrench, open-end, 7/8-inch

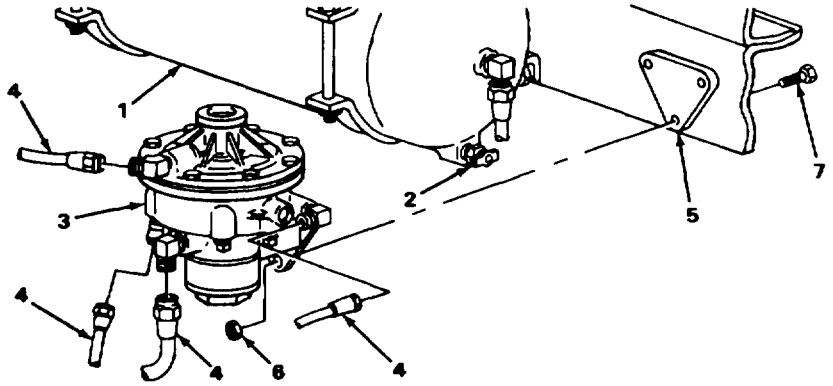
Materials/Parts

Sealing compound (item 8, appendix E)

	LOCATION	ITEM	ACTION / REMARKS
	REMOVAL		
	WARNING		
	Wear protective goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream.		
1.	Air reservoir (1)	Draincock (2)	Open, relieve all pressure, then close.
2.	Relay valve (3)	Lines (4)	Using 5/8- and 7/8-inch wrenches, remove.
3.	Mount (5)	Three nuts (6), three capscrews (7), and relay valve (3)	Using two 9/16-inch wrenches, remove.
	INSTALLATION		
4.	Mount (5)	Relay valve (3)	Position on mount (5).
5.		Three capscrews (7) and three nuts (6)	Using two 9/16-inch wrenches, install.

EMERGENCY RELAY VALVE - CONTINUED

	LOCATION	ITEM	ACTION / REMARKS
6.	Relay valve (3)	Lines (4)	Coat threads with sealing compound and, using 5/8- and 7/8-inch wrenches, install.



NOTE
FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

REAR MANUAL SHUTOFF AIR VALVE

This task covers:

a. Removal (page 4-74)
b. Installation (page 4-74)

INITIAL SETUP

Tools

Wrench, open-end, 9/16-inch
Wrench, open-end, 5/8-inch
Wrench, open-end, 7/8-inch
Wrench, open-end, 15/16-inch

Materials/Parts

Sealing compound (item 8, appendix E)

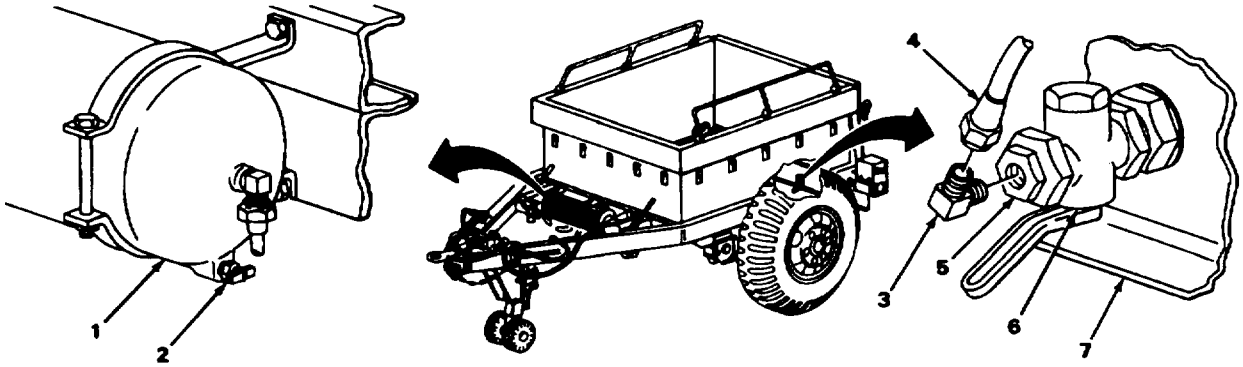
Equipment Condition

Quick disconnect air coupling (gladhand) removed (page 4-98).

TA223898

REAR MANUAL SHUTOFF AIR VALVE - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
REMOVAL			
1.	Air reservoir (1)	Draincock (2)	Open, relieve all pressure, then close.
2.	Elbow (3)	Line	(4) Using 5/8-inch wrench, remove.
3.	Nut (5)	Elbow	(3) Using 9/16-inch wrench, remove.
4.	Air valve (6)	Nut (5)	Using 7/8-inch wrench, remove.
5.	Rear cross-member (7)	Air valve (6)	Using 1 5/16-inch wrench, remove.
INSTALLATION			
6.	Rear cross-member (7)	Air valve (6)	Coat threads with sealing compound, and, using 1 5/16-inch wrench, install.
7.	Air valve (6)	Nut (5)	Coat threads with sealing compound, and, using 7/8-inch wrench, install.
8.	Nut (5)	Elbow (3)	Coat threads with sealing compound, and, using 9/16-inch wrench, install.
9.	Elbow (3)	Line (4)	Coat threads with sealing compound, and, using 5/8-inch wrench, install.



NOTE

FOLLOW-ON MAINTENANCE:

1. **Install quick disconnect coupling (glad hand) (page 4-98).**
2. **Test for leaks (page 4-97).**

TASK ENDS HERE

TA223899

AIR FILTER

This task covers:

a. Removal (page 4-75)
b. Installation (page 4-75)

INITIAL SETUP

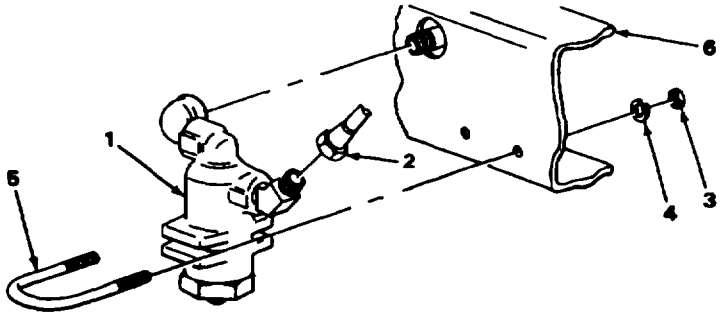
Tools

Handle, reversible, 3/8-inch square drive

Tools - Continued

Socket, deep, 7/16- by 3/8-inch square drive
Wrench, open-end, 5/8-inch

	LOCATION	ITEM	ACTION REMARKS
REMOVAL			
1.	Air filter (1)	Nut (2)	Using 5/8-inch wrench, remove.
2.		Two nuts (3), two lockwashers (4), and U-bolt (5)	Using 7/16-inch socket, remove.
3.	Front cross-member (6)	Air filter (1)	Remove by turning counterclockwise.
INSTALLATION			
4.	Front cross-member (6)	Air filter(l)	Install by turning clockwise.
5.	Air filter (1)	Two nuts (3), two lockwashers (4), and U-bolt (5)	Using 7/16-inch socket, install.
6.		Nut (2)	Using 5/8-inch wrench, install.



TA223900

AIR FILTER - CONTINUED

NOTE
FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

AIR CHAMBER

This task covers:

a. Removal (page 4-76)
b. Installation (page 4-77)

INITIAL SETUP

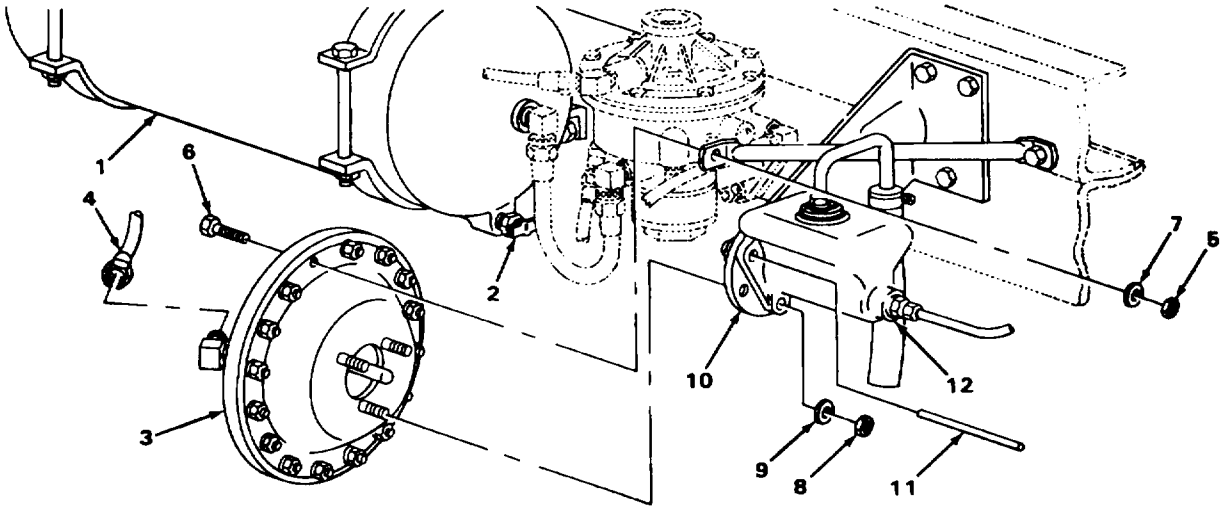
Tools

Rod, 1/4- by 6-inch
Wrench, open-end, 1/2-inch (two each)
Wrench, open-end, 9/16-inch
Wrench, open-end, 5/8-inch

	LOCATION	ITEM	ACTION / REMARKS
	REMOVAL		
	WARNING **Wear protective goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream.**		
1.	Reservoir (1)	Draincock (2)	Open and release all air pressure.
2.	Air chamber (3)	Line (4)	Using 5/8-inch wrench, disconnect.
3.		Nut (5), bolt (6), and washer (7)	Using two 1/2-inch wrenches, remove.
4.		Three nuts (8) and three lockwashers (9)	Using 9/16-inch wrench, remove.
5.	Mount bracket (10)	Air chamber (3)	Remove.
6.		Rod (11)	Insert through mount bracket (10) and master cylinder (12). Rod (11) will support weight of master cylinder (12).

AIR CHAMBER - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
INSTALLATION			
7.	Mount bracket (10)	Rod (11)	Remove.
8.		Air chamber (3)	Position on mount bracket (10).
9.	Air chamber (3)	Master cylinder (12)	Position on mount studs.
10.		Three lockwashers (9) and three nuts (8)	Using 9/16-inch wrench, install.
11.		Line (4)	Using 5/8-inch wrench, install.
12.		Nut (5), bolt (6), and washer (7)	Using two 1/2-inch wrenches, install.
13.	Reservoir (1)	Draincock (2)	Close.



NOTE

FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

TA223901

PLASTIC AIRBRAKE LINE REPLACEMENT

This task covers:

a. Service elbow to air filter (page 4-78)
b. Service tee to relay valve (page 4-79)
c. Emergency elbow to air filter (page 4-60)
d. Emergency tee to relay valve (page 4-80)
e. Relay valve to air reservoir (page 4-81)
f. Relay valve to air chamber (page 4-82)
g. Service tee to rear shutoff (page 4-82)
h. Emergency tee to rear shutoff (page 4-64)

INITIAL SETUP

Tools

Wrench, open-end, 5/8-inch
Wrench, open-end, 1 1/16-inch
Screwdriver, cross-tip

Materials/Parts

New wire ties (as required)

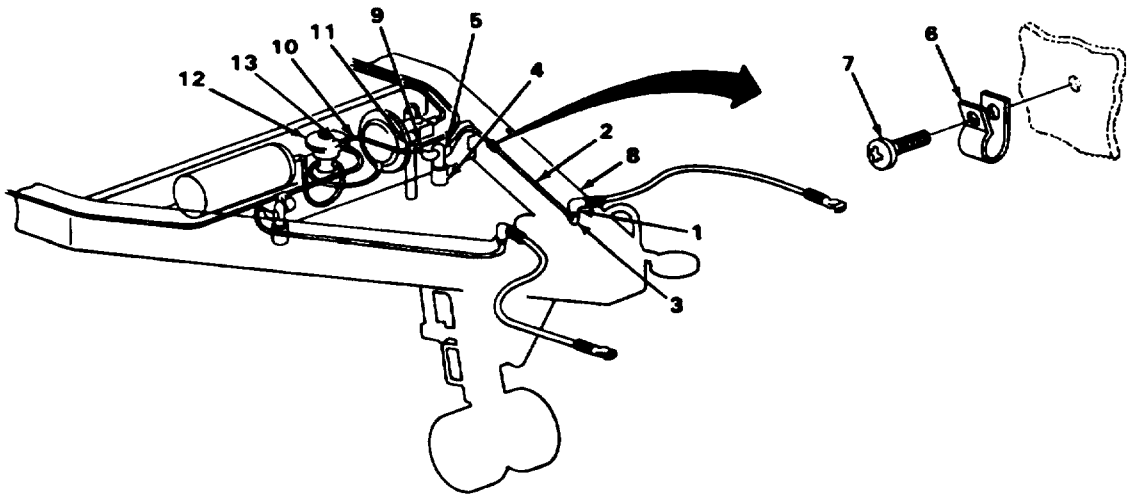
Applicable Configurations

Models with plastic air lines

	LOCATION	ITEM	ACTION REMARKS
	SERVICE ELBOW TO AIR FILTER		
1.	Service elbow (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, disconnect.
2.	Air filter (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, disconnect.
3.	Two clamps (6)	Two screws (7)	Using cross-tip screwdriver, remove.
4.	Left drawbar leg (8)	Air line(2)	Remove.
5.	Air line (2)	Two clamps (6)	Remove.
		NOTE	
		To make a new air line, see page 4-85.	
6.	Air line (2)	Two clamps (6)	Install.
7.	Left drawbar leg (8)	Air line(2)	Place in position.
8.	Two clamps (6)	Two screws (7)	Using cross-tip screwdriver, install.

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
9.	Air filter (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, install.
10.	Service elbow (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, install.
	SERVICE TEE TO RELAY VALVE		
11.	Tee (9) to line (10)	Nut (11)	Using 5/8-inch wrench, remove.
12.	Relay valve (12)	Nut (13) and line (10)	Using 5/8-inch wrench, remove.
		To make a new air line, see page 4-85.	
13.	Relay valve (12)	Nut (13) and line (10)	Using 5/8-inch wrench, install.
14.	Tee (9) to line (10)	Nut (11)	Using 5/8-inch wrench, install.



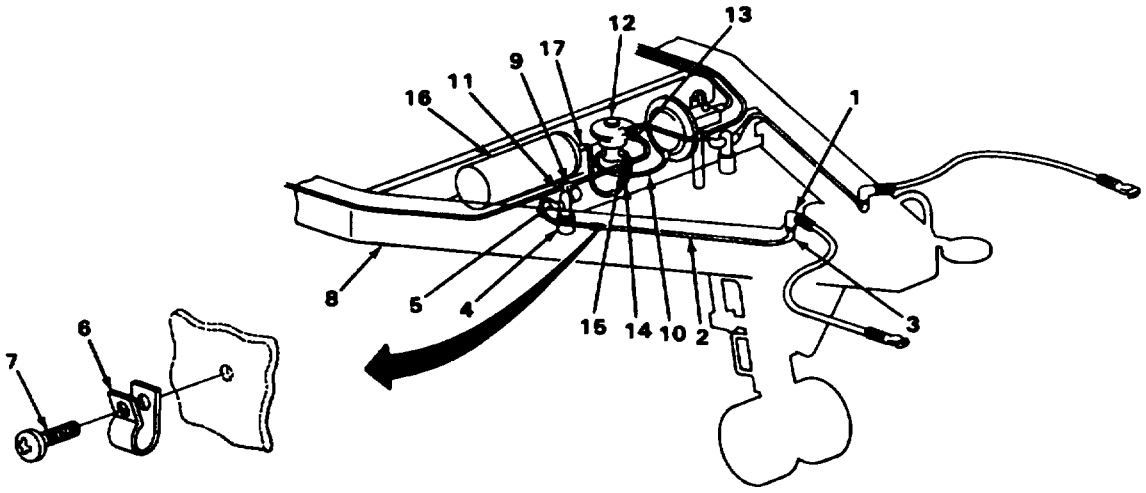
TA223902

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
EMERGENCY ELBOW TO AIR FILTER			
15.	Emergency elbow (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, remove.
16.	Air filter (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, remove.
17.	Two clamps (6)	Two screws (7)	Using cross-tip screwdriver, remove.
18.	Right drawbar leg (8)	Air line (2)	Remove.
19.	Air line (2)	Two clamps (6)	Remove.
		NOTE **To make a new air line, see page 4-85.**	
20.	Air line (2)	Two clamps (6)	install.
21.	Right drawbar leg (8)	Air line(2)	Place in position.
22.	Two clamps (6)	Two screws (7)	Using cross-tip screwdriver, install.
23.	Air filter (4) to air line (2)	N u t	(5) Using 5/8-inch wrench, install.
EMERGENCY TEE TO RELAY VALVE			
24.	Tee (9) to air line (10)	Nut (11)	Using 5/8-inch wrench, remove.
25.	Relay valve (12)	Nut (13) and air line (10)	Using 5/8-inch wrench, remove.
		NOTE **To make a new air line, see page 4-85.**	
26.	Relay valve (12)	Nut (13) and air line (10)	Using 5/8-inch wrench, install.

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
27.	Tee (9) to air line (10)	Nut (11)	Using 5/8-inch wrench, install.
	RELAY VALVE TO AIR RESERVOIR		
28.	Air line (14) to relay valve (12)	Nut (15)	Using 1 1/16-inch wrench, remove.
29.	Air reservoir (16)	Air line (14) and nut (17'	Using 11/16-inch wrench, remove.
		NOTE **To make a new air line, see page 4-85.**	
30.	Air reservoir (16)	Air line (14) and nut (17)	Using 11/16-inch wrench, install.
31.	Air line (14) to relay valve (12)	Nut (15)	Using 11/16-inch wrench, install.



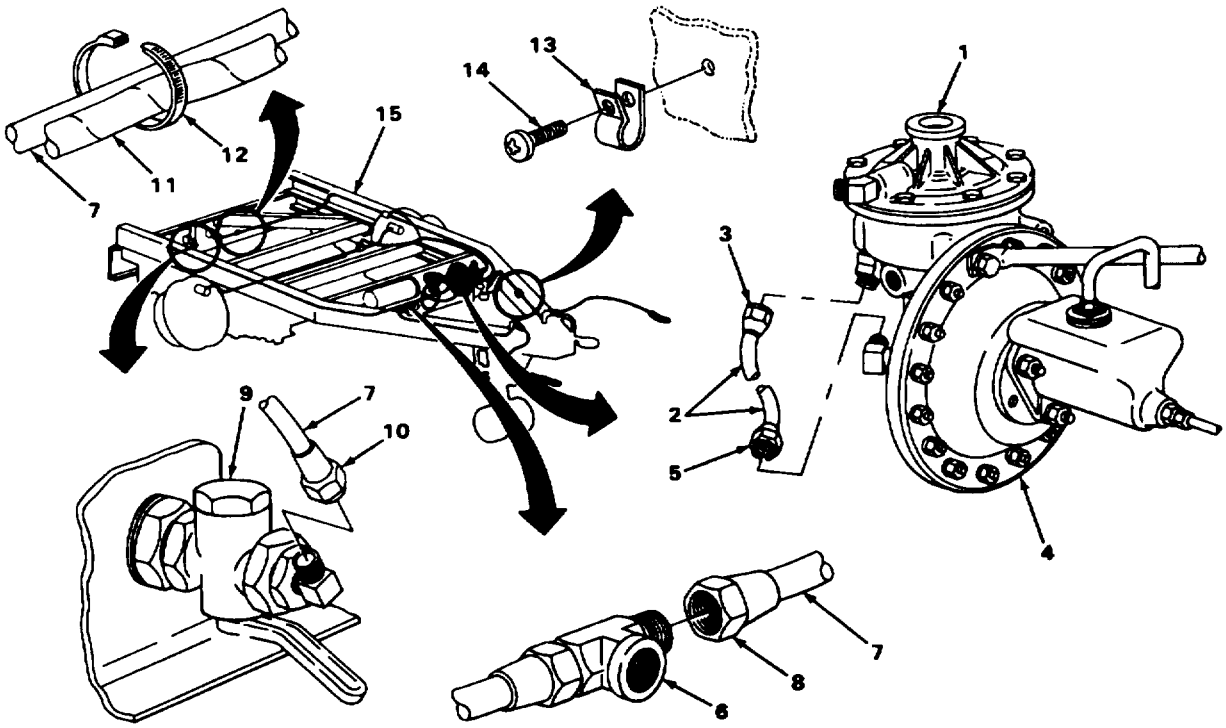
TA223903

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
RELAY VALVE TO AIR CHAMBER			
32.	Relay valve (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, remove.
33.	Air chamber (4)	Air line (2) and nut (5)	Using 5/8-inch wrench, remove.
		NOTE	
		To make a new air line, see page 4-85.	
34.	Air chamber (4)	Air line (2) and nut (5)	Using 5/8-inch wrench, install.
35.	Relay valve (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, install.
SERVICE TEE TO REAR SHUT OFF			
36.	Tee (6) to air line (7)	Nut (8)	Using 5/8-inch wrench, remove.
37.	Rear shutoff (9) to air line (7)	Nut (10)	Using 5/8-inch wrench, remove.
36.	Air line (7) to main harness (11)	Wire tie (12)	Using pliers, cut off. Discard wire tie (12).
39.	Five clamps (13)	Five screws (14)	Using a cross-tip screwdriver, remove.
40.	Left frame rail (15)	Air line (7)	Remove.
41.	Air line (7)	Five clamps (13)	Remove.
		NOTE	
		To make a new line, see page 4-85.	
42.	Air line (7)	Five clamps (13)	install.
43.	Left frame rail (15)	Air line (7)	Place in position.

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
44.	Five clamps (13)	Five screws (14)	Using cross-tip screwdriver, install.
45.	Air line (7) to main harness (11)	New wire tie (12)	Install.
46.	Rear shutoff (9) to air line (7)	Nut (10)	Using 5/8-inch wrench, install.
47.	Tee (6) to air line (7)	Nut (8)	Using 5/8-inch wrench, install.

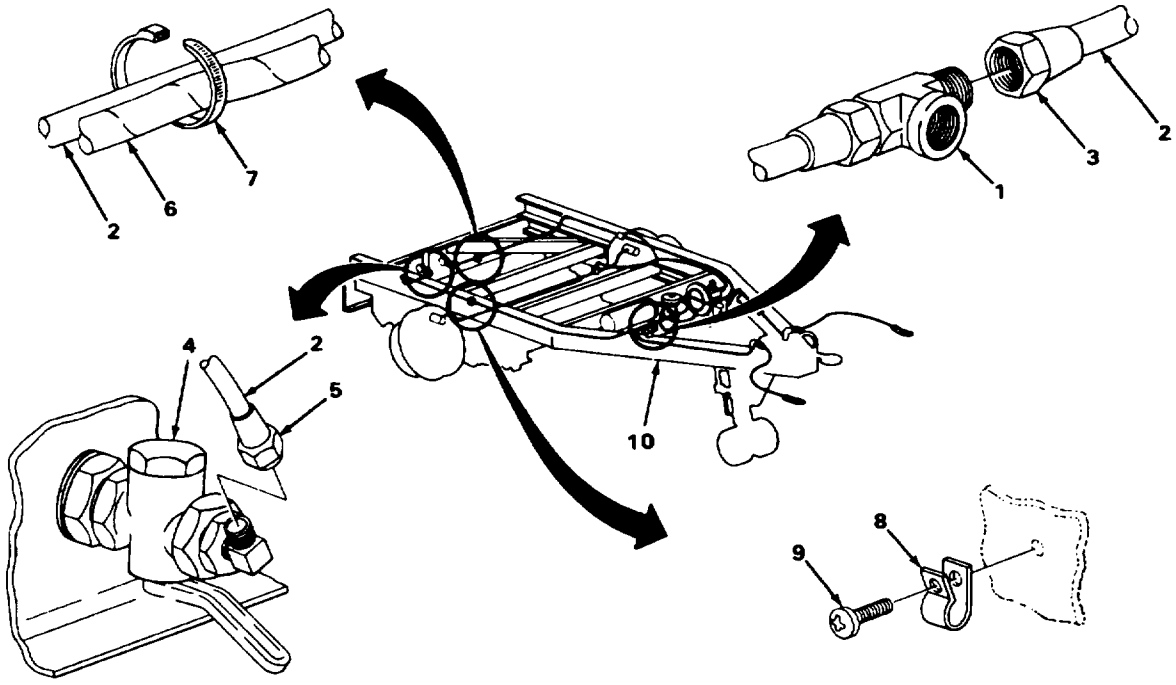


TA223904

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
EMERGENCY TEE TO REAR SHUT OFF			
48.	Tee (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, remove.
49.	Rear shutoff (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, remove.
50.	Air line (2) to main harness (6)	Wire tie (7)	Using pliers, remove. Discard wire tie (7).
51.	Five clamps (8)	Five screws (9)	Using cross-tip screwdriver, remove.
52.	Right frame rail (10)	Air line (2)	Remove.
53.	Air line (2)	Five clamps (8)	Remove.
		NOTE **To make a new line, see page 4-85.**	
54.	Air line (2)	Five clamps (8)	Install.
55.	Right frame rail (10)	Air line (2)	Place in position.
56.	Five clamps (8)	Five screws (9)	Using cross-tip screwdriver, install.
57.	Air line (2) to main harness (6)	New wire tie (7)	Install.
58.	Rear shutoff (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, install.
59.	Tee (1) to air line (2)	Nut (3)	Using 5/8-inch wrench, install.

PLASTIC AIRBRAKE LINE REPLACEMENT - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

PLASTIC AIRBRAKE LINES

This task covers:

Fabrication

INITIAL SETUP

Tools
Razor blade

Materials/Parts
Compression fittings (as required)
Inserts, brass (as required)

Materials/Parts - Continued

Nuts (as required)
Plastic air line (as required)

TA223905

PLASTIC AIRBRAKE LINES - CONTINUED

LOCATION	ITEM	ACTION	REMARKS

FABRICATION

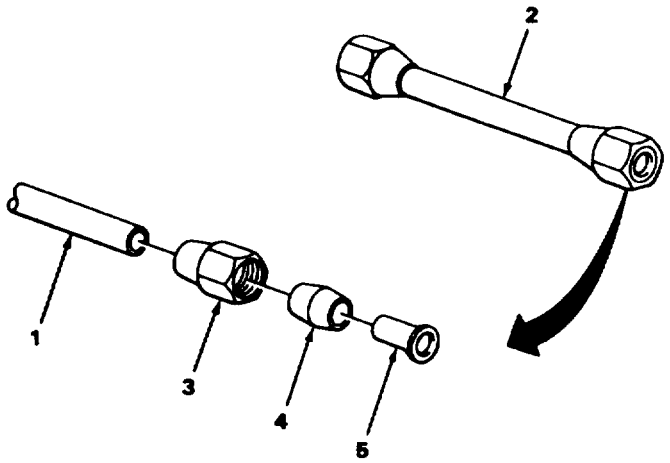
NOTE

This is a typical procedure for all air lines if the trailer is equipped with plastic lines.

1.		New air line (1)	Using razor blade, cut to same length as old air line (2).
2.	New air line (1)	Nut (3)	Place on new air line (1) approximately
3.		Compression fitting (4)	
4.		Insert (5)	
5.		Compression fitting (4)	

NOTE

Repeat steps 3 thru 6 for opposite end.



TASK ENDS HERE

TA223906

METAL AIRBRAKE LINE REPLACEMENT

This task covers:

a. Union to shutoff cock (page 4-87)
b. Air filter tee to union (page 4-88)
c. Air hose elbow to air filter (page 4-90)
d. Air filter tee to relay valve, right (page 4-92)
e. Relay valve to reservoir (page 4-93)
f. Relay valve to brake chamber (page 4-94)
g. Air filter tee to relay valve, left (page 4-94)

INITIAL SETUP

Tools

Screwdriver, cross-tip
Wrench, open-end, 9/16-inch
Wrench, open-end, 5/8-inch
Wrench, open-end, 3/4-inch
Wrench, open-end, 13/16-inch

Materials/Parts

Tube coupling nuts - as required
Tube coupling sleeves - as required
New air line -as required

Applicable Configurations

Models equipped with metal air lines

LOCATION	ITEM	ACTION	REMARKS

UNION TO SHUTOFF COCK

NOTE
This task is for one side only. The steps for the opposite side are the same.

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

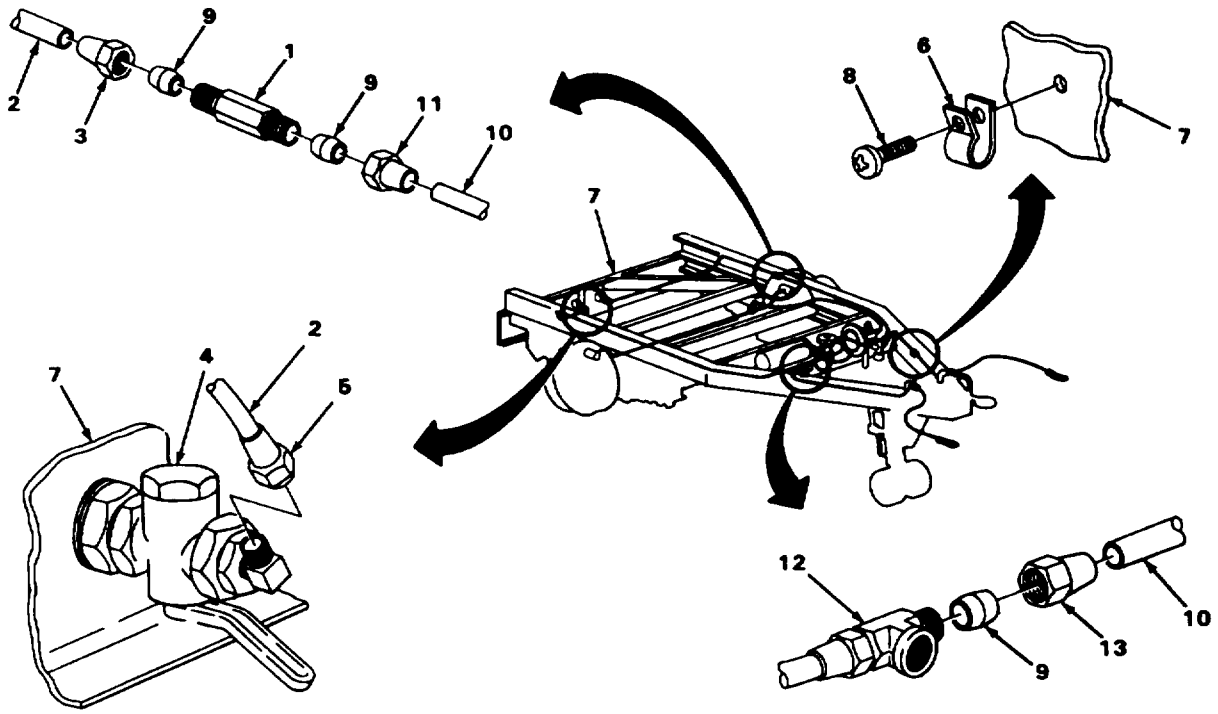
	LOCATION	ITEM	ACTION REMARKS
UNION TO SHUTOFF COCK - CONTINUED			
1.	Union (1) to air line (2)	Nut (3)	Using 9/16- and 5/8-inch wrenches, remove.
2.	Shutoff cock (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, remove.
3.	Two clamps (6) to frame rail (7)	Two screws (8)	Using screwdriver, remove.
4.	Frame rail (7)	Air line (2)	Remove.
5.	Air line (2)	Two clamps (6)	Remove. Discard air line (2), two sleeves (9), and nuts (3 and 5).
6.	Air line (2)	Two sleeves (9) and nuts (3 and 5)	a. Slide nut (5) onto one end of air line (2). b. Slide nut (3) onto other end of air line (2). c. Slide one sleeve (9) onto each end of air line (2).
7.		Two clamps (6)	Install.
8.	Frame rail (7)	Air line (2)	Place in position.
9.	Two clamps (6) to frame rail (7)	Two screws (8)	Using screwdriver, install.
10.	Shutoff cock (4) to air line (2)	Nut (5)	Using 5/8-inch wrench, install.
11.	Union (1) to air line (2)	Nut (3)	Using 9/16- and 5/8-inch wrenches, install.
AIR FILTER TEE TO UNION			

NOTE

This task is for one side only. The steps for the opposite side are the same.

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
12.	Union (1) to air line (10)	Nut (11)	Using 9/16- and 5/8-inch wrenches, remove.
13.	Tee (12) to air line (10)	Nut (13)	Using 3/4-inch wrench, remove.
14.	Clamp (6) to frame rail (7)	Screw (8)	Using screwdriver, remove.
15.	Frame rail (7)	Air line (10)	Remove.
16.	Air line (10)	Clamp (6)	Remove. Discard air line (10), two sleeves (9), and nuts (11 and 13).



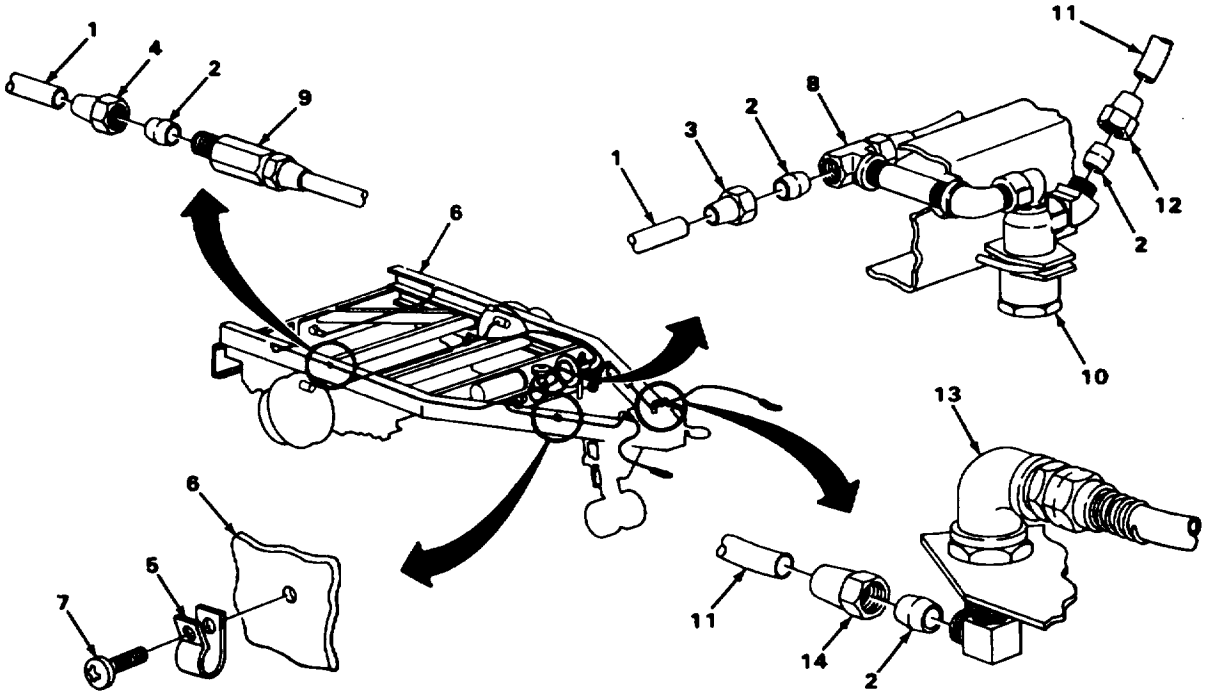
TA222907

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
AIR FILTER TEE TO UNION - CONTINUED		
	NOTE **Nuts must be installed on the proper ends of air line. Use the old line as a guide to avoid making a mistake.**	
17. Air line (1)	Two sleeves (2) and nuts (3 and 4)	a. Slide nut (3) onto one end of air line (1). b. Slide nut (4) onto other end of air line (1). c. Slide one sleeve (2) onto each end of air line (1).
18.	Clamp (5)	Install.
19. Frame rail (6)	Air line (1)	Place in position.
20. Clamp (5) to frame rail (6)	Screw (7)	Using screwdriver, install.
21. Tee (8) to air line (1)	Nut (3)	Using 3/4-inch wrench, install.
22. Union (9) to air line (1)	Nut (4)	Using 9/16- and 5/8-inch wrenches, install.
AIR HOSE ELBOW TO AIR FILTER		
	NOTE **This task is for one side only. The steps for the opposite side are the same.**	
23. Air filter (10) to air line (11)	Nut (12)	Using 5/8-inch wrench, remove.
24. Elbow (13) to air line(11)	Nut (14)	Using 5/8-inch wrench, remove.
25. Two clamps (5) to frame rail (6)	Two screws (7)	Using screwdriver, remove.

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
26.	Frame rail (6)	Air line (11)	Remove.
27.	Air line (11)	Two clamps (5)	Remove. Discard air line (11), two sleeves (2), and nuts (12 and 14).
28.	Air line (11)	Two sleeves (2) and nuts (12 and 14)	a. Slide nut (14) onto one end of air line(11). b. Slide nut (12) onto other end of air line(11). c. Slide one sleeve (2) onto each end of air line (11).
29.		Two clamps (5)	Install.



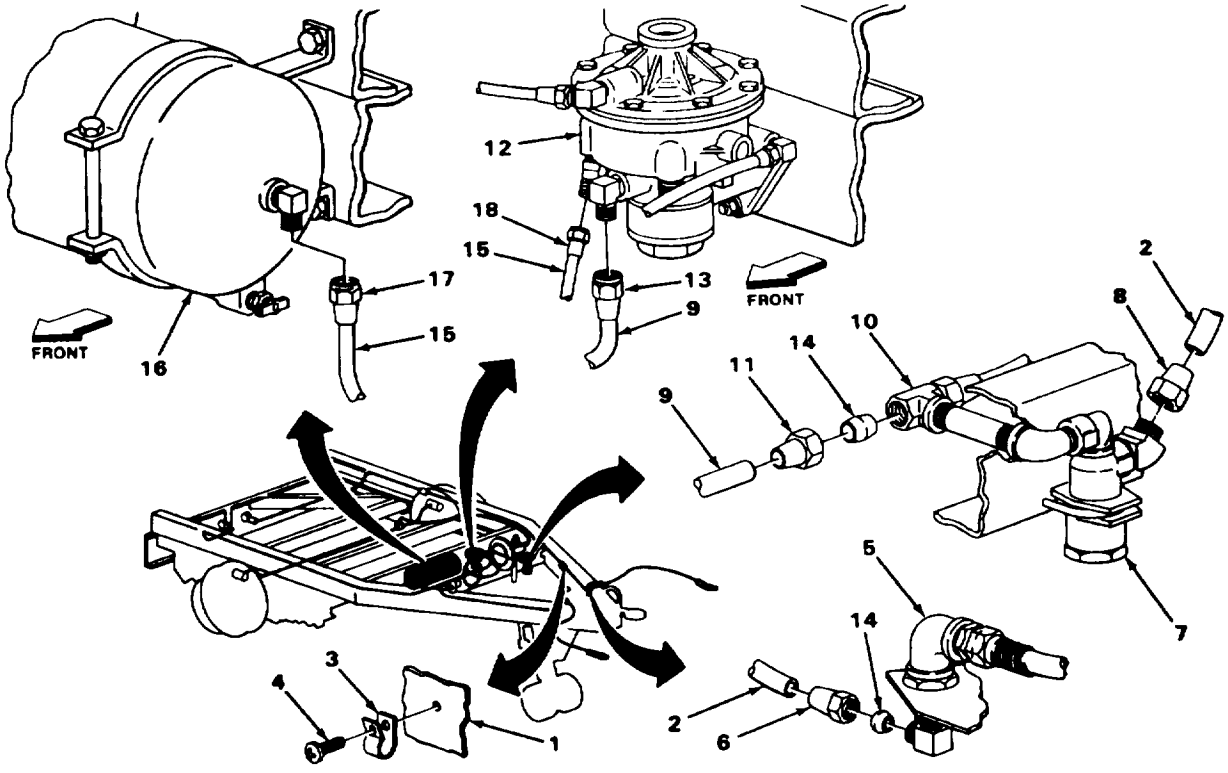
TA223908

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
AIR HOSE ELBOW TO AIR FILTER - CONTINUED			
30.	Frame rail (1)	Air line (2)	Place in position.
31.	Two clamps (3) to frame rail (1)	Two screws (4)	Using screwdriver, install.
32.	Elbow (5) to air line (2)	Nut (6)	Using 5/8-inch wrench, install.
33.	Air filter (7) to air line(2)	Nut (8)	Using 5/8-inch wrench, install.
AIR FILTER TEE TO RELAY VALVE, RIGHT			
34.	Air line (9) to tee (10)	Nut (11)	Using 3/4-inch wrench, remove.
35.	Air line (9) to relay valve (12)	Nut (13)	Using 5/8-inch wrench, remove.
36.	Frame rail (1)	Air line (9)	Remove. Discard air line (9), two sleeves (14), and nuts (11 and 13).
		NOTE **Nuts must be installed on proper ends of air line. Use the old line as a guide to avoid making a mistake.**	
37.	Air line (9)	Two sleeves (14) and nuts (11 and 13)	a. Slide nut (11) onto one end of air line (9). b. Slide nut (13) onto other end of air line (9). c. Slide one sleeve (14) onto each end of air line (9).
38.	Frame rail (1)	Air line (9)	Place in position.
39.	Air line (9) to relay valve (12)	Nut (13)	Using 5/8-inch wrench, install.
40.	Air line (9) to tee (10)	Nut (11)	Using 3/4-inch wrench, install.

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
RELAY VALVE TO RESERVOIR		
41. Air line (15) to reservoir (16)	Nut (17)	Using 13/16-inch wrench, remove.
42. Air line (15) to relay valve (12)	Nut (18)	Using 13/16-inch wrench, remove.
43. Frame rail (1)	Airline	Remove. Discard air line (15), two sleeves (14), and nuts (17 and 18).
44. Air line (15)	Two sleeves (14) and nuts (17 and 18)	a. Slide nut (17) onto one end of air line (15). b. Slide nut (18) onto other end of air line (15). c. Slide one sleeve (14) onto each end of air line (15).



TA223909

METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

	LOCATION	ITEM	ACTION REMARKS
	RELAY VALVE TO RESERVOIR - CONTINUED		
45.	Air line (1) to relay valve (2)	Nut (3)	Using 13/16-inch wrench, install.
46.	Air line (1) to reservoir (4)	Nut (5)	Using 13/16-inch wrench, install.
	RELAY VALVE TO BRAKE CHAMBER		
47.	Air line (6) to brake chamber (7)	Nut (8)	Using 5/8-inch wrench, remove.
48.	Air line (6) to relay valve (2)	Nut (9)	Using 5/8-inch wrench, remove.
49.	Frame rail (10)	Air line (6)	Remove. Discard air line (6), two sleeves (12), and nuts (8 and 9).
50.	Air line (6)	Two sleeves (11) and nuts (8 and 9)	a. Slide nut (8) onto one end of air line (6). b. Slide nut (9) onto other end of air line (6). c. Slide one sleeve (11) onto each" end of air line (6).
51.	Frame rail (10)	Air line (6)	Place in position.
52.	Air line (6) to relay valve (2)	Nut (9)	Using 5/8-inch wrench, install.
53.	Air line(6) to brake chamber (7)	Nut (8)	Using 5/8-inch wrench, install.
	AIR FILTER TEE TO RELAY VALVE, LEFT		
54.	Relay valve (2) to air line (12)	Nut (13)	Using 5/8-inch wrench, remove.
55.	Tee (14) to air line (12)	Nut (15)	Using 3/4-inch wrench, remove.

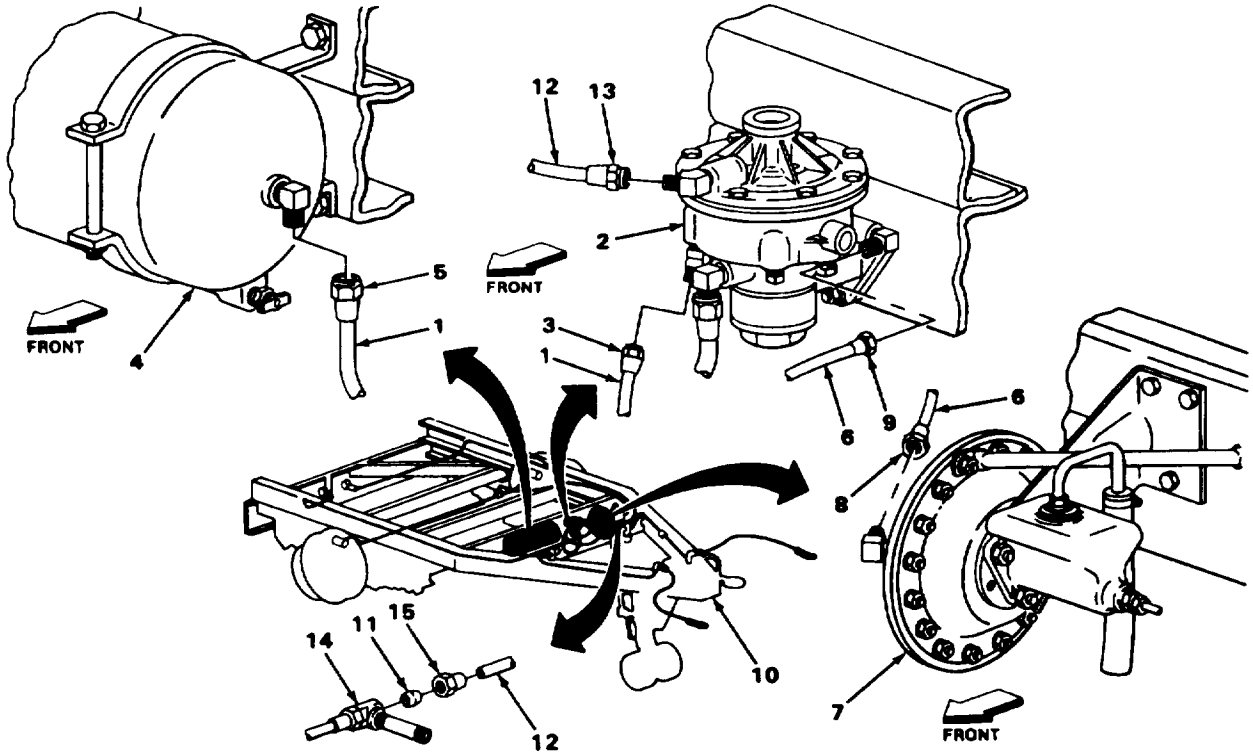
METAL AIRBRAKE LINE REPLACEMENT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
56. Frame rail (10)	Air line (12)	Remove. Discard air line (12), two sleeves (11), and nuts (13 and 15).

NOTE

Nuts must be installed at the proper ends of air line. Use the old line as a guide to avoid making a mistake.

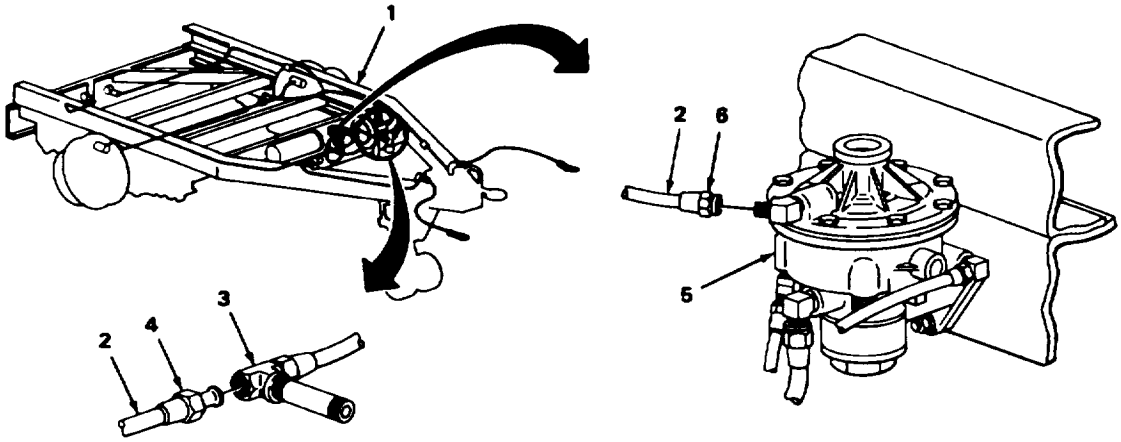
57. Air line (12)	Two sleeves (11) and nuts (13 and 15)	a. Slide nut (13) onto one end of air line (12). b. Slide nut (15) onto other end of air line (12). c. Slide one sleeve(11) onto each end of air line (12).



TA223910

METAL AIR BRAKE LINE REPLACEMENT- CONTINUED

LOCATION	ITEM	ACTION REMARKS
AIR FILTER TEE TO RELAY VALVE, LEFT - CONTINUED		
58. Frame rail (1)	Air line (2)	Place in position.
59. Tee (3) to air line (2)	Nut (4)	Using 3/4-inch wrench, install.
60. Relay valve (5) to air line (2)	Nut (6)	Using 5/8-inch wrench, install.



NOTE

FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

TA223911

AIRBRAKE SYSTEM LEAKS

This task covers:

Testing

INITIAL SETUP

Tools
Brush, straight handle bristle

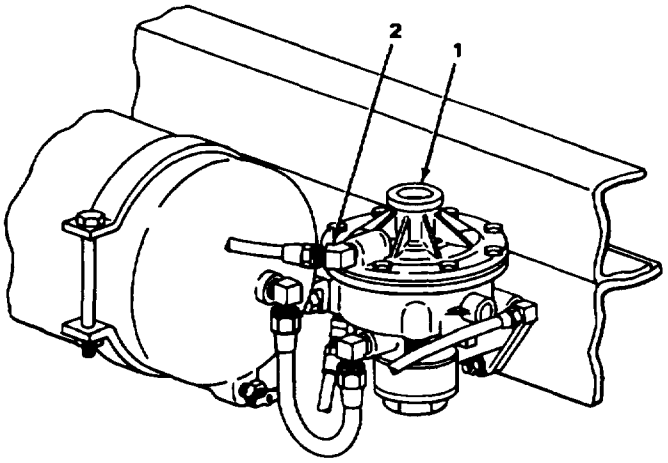
Materials/Parts
Soap solution (item 9, appendix E)

LOCATION	ITEM	ACTION REMARKS

NOTE
This is a typical test that maybe applied to any part of the air system.

The ammo trailer must be coupled to a tow vehicle to pressurize its braking system.

Component (1)	Fitting (2)	Using brush, apply a soap solution and water. Leakage of air will be indicated by bubbles.



TASK ENDS HERE

TA223912

WICK DISCONNECT AIR COUPLING (GLADHAND - REAR)

This task covers:

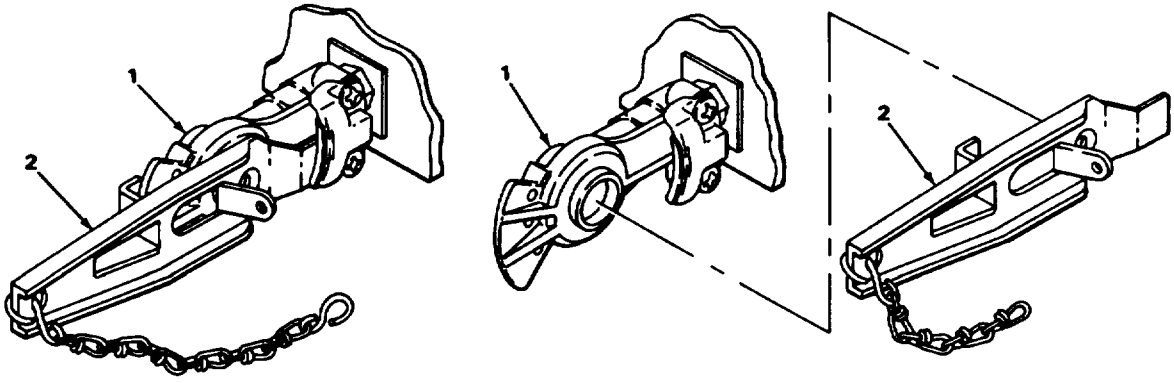
a. Removal (page 4-98)
b. Installation (page 4-98)

INITIAL SETUP

Tools
Wrench, adjustable, 12-inch

Materials/Parts
Sealing compound (item 8, appendix E)

	LOCATION	ITEM	ACTION REMARKS
	REMOVAL		
1.	Gladhand (1)	Dust cover (2)	Remove. Dust cover (2) is attached to chain.
2.	Rear crossmember	Gladhand (1)	Using 12-inch wrench, remove.
	INSTALLATION		
3.		Gladhand (1)	Using sealing compound, coat first two or three threads and, using 12-inch wrench, install.
4.	Gladhand (1)	Dust cover (2)	Replace.



NOTE
FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

TA223913

AIR FILTER SERVICING

This task covers:

Servicing

INITIAL SETUP

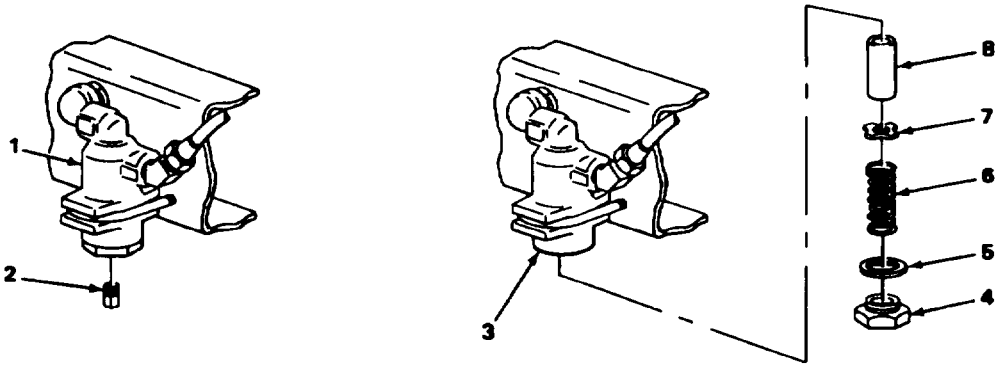
Tools

Handle, reversible, 1/2-inch square drive
Socket, 1 1/4- by 1/2-inch square drive
Wrench, adjustable, 8-inch

Materials/Parts

Element (as required)

LOCATION	ITEM	ACTION REMARKS
	NOTE	
	Do steps 1 and 2 to drain filter assembly. Do steps 3 thru 6 to clean or replace element.	
1. Air filter (1)	Plug (2)	Remove using adjustable wrench. Water will drain out.
2.	Plug (2)	Using adjustable wrench, install.
3. Filter body (3)	Cover nut (4)	Using 1 1/4-inch socket, remove.
4.	Gasket (5), spring (6), washer (7'), and element (8)	Remove and clean or replace all parts and insert in filter body (3).
5.	Cover nut (4)	Using 1 1/4-inch socket, install.



TASK ENDS HERE

TA223914

INTERVEHICULAR HOSES

This task covers:

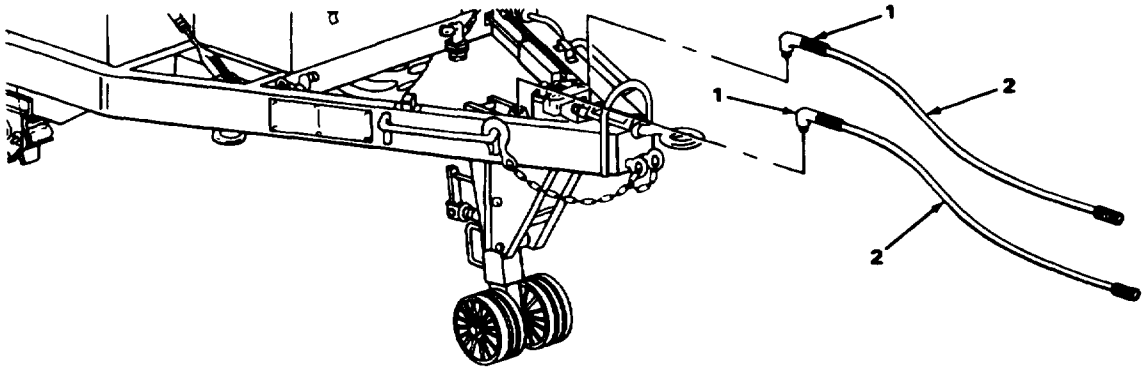
a. Removal (page 4-100)
b. Installation (page 4-100)

INITIAL SETUP

Tools
Wrench, open-end, 13/16-inch

Equipment Condition
Quick disconnect air coupling removed (page 4-101).

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Elbow (1)	Hose (2)	Using 13/16-inch wrench, remove. Remove hose.
INSTALLATION		
2. Elbow (1)	Hose (2)	Using 13/16-inch wrench, install.



NOTE
FOLLOW-ON MAINTENANCE:
1. Install quick disconnect ah' coupling (page 4-101).
2. Test for leaks (page 4-97).

TASK ENDS HERE

TA223915

QUICK DISCONNECT AIR COUPLING (GLADHAND - FRONT)

This task covers:
a. Removal (page 4-101)
b. Installation (page 4-102)

INITIAL SETUP
Tools
Wrench, open-end, 15/16-inch
Wrench, open-end, 1 1/16-inch
Wrench, open-end, 1 1/8-inch

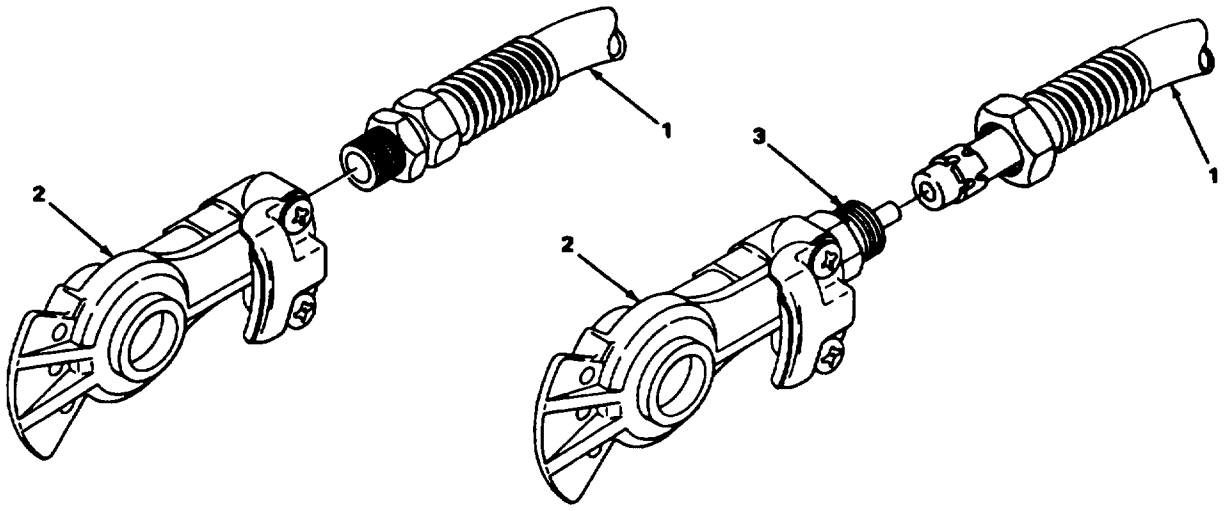
LOCATION	ITEM	ACTION REMARKS

REMOVAL

NOTE

Do steps 1 and 4 when removing an unserviceable gladhand. Do steps 2 and 3 when removing gladhands from an unserviceable hose.

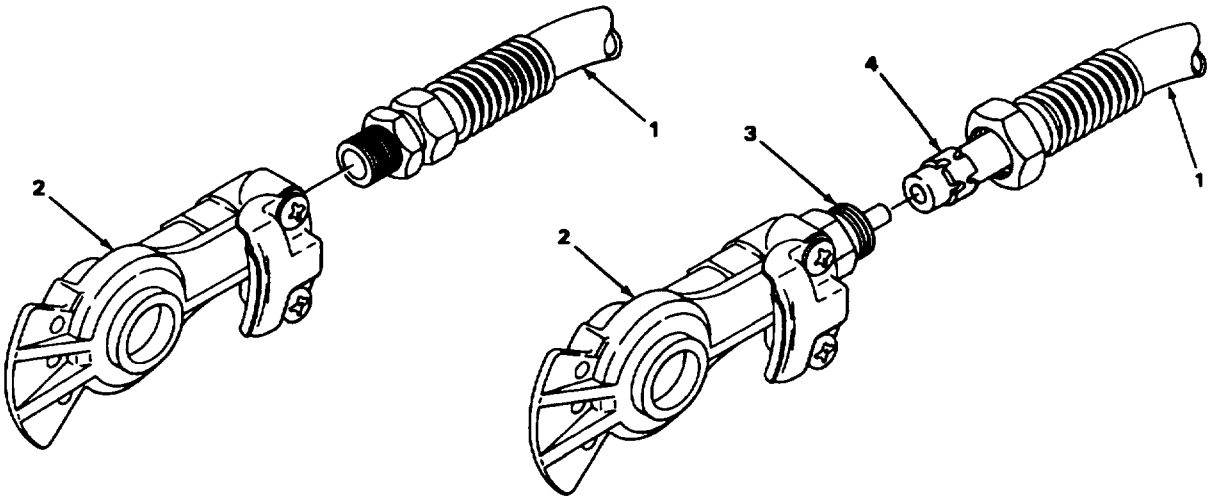
	LOCATION	ITEM	ACTION REMARKS
1.	Service or emergency airhose (1)	Gladhand (2) wrenches.	Remove using 15/16- and 1 1/8-inch
2.		Gladhand (2) and body (3)	Using 15/16- and 1 1/16-inch wrenches, remove from hose (1).



TA223916

QUICK DISCONNECT AIR COUPLING (GLADHAND - FRONT) - CONTINUED

LOCATION	ITEM	ACTION / REMARKS
INSTALLATION		
3. Service or emergency hose (1)	Gladhand (2), body (3), and sleeve (4)	Using 15/16- and 1 1/16-inch wrenches, install on hose (3).
4.	Gladhand (2)	Using 15/16- and 1 1/8-inch wrenches, install.



NOTE
FOLLOW-ON MAINTENANCE: Test for leaks (page 4-97).

TASK ENDS HERE

TA223917

Section X. HUB AND BRAKEDRUM

HUB AND BRAKEDRUM MAINTENANCE

This task covers:

a. Hub and brakedrum removal (page 4-104)
b. Hub and brakedrum disassembly (page 4-104)
c. Wheel bearing removal (page 4-105)
d. Wheel bearing installation (page 4-107) (page 4-106)
e. Hub and brakedrum assembly (page 4-107)
f. Hub and brakedrum installation (page 4-107)
g. Wheel bearing adjustment

INITIAL SETUP

Tools

Drift, brass
Hammer, ball-peen
Handle, reversible, 3/4-inch square drive
Jack, hydraulic
Jack stands
Puller, universal
Screwdriver, cross-tip
Screwdriver, offset
Wrench, open-end, 7/8-inch
Wrench, 7950946

Materials/Parts

New inner wheel bearing - if required

Materials/Parts - Continued

New outer wheel bearing - if required
New hub cover gasket
New oil seal

Equipment Condition

Wheel and tire removed (page 3-5).

References

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

HUB AND BRAKEDRUM MAINTENANCE - CONTINUED

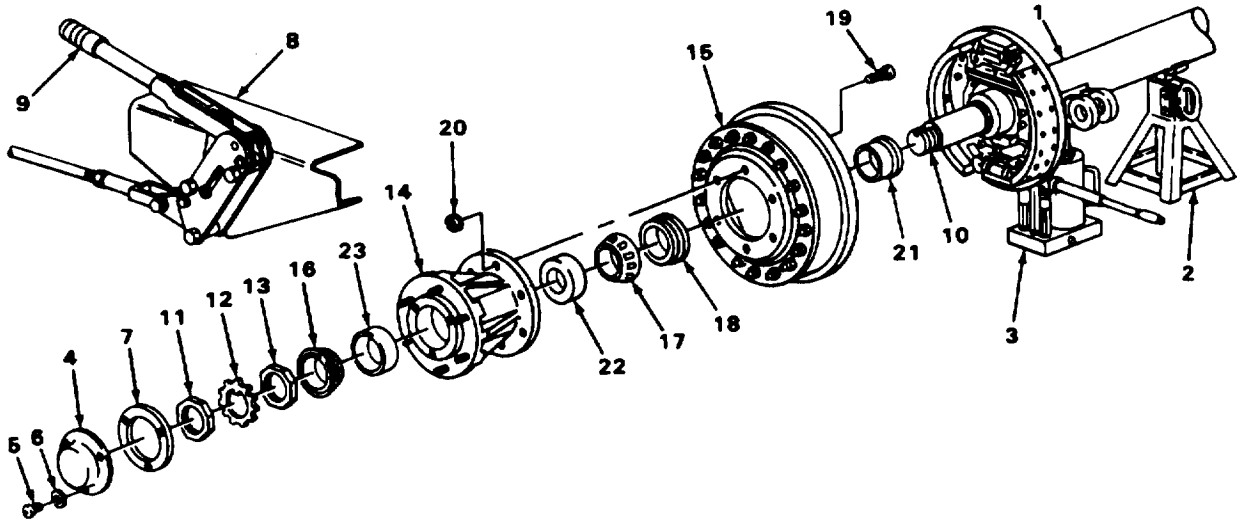
LOCATION	ITEM	ACTION REMARKS
HUB AND BRAKEDRUM REMOVAL		
1. Axle (1)	Jack stand (2)	Position under axle (1).
2.	Jack (3)	Remove.
3. Hubcap (4)	Three screws (5) and three lockwashers (6)	Using cross-tip screwdriver, remove. Hubcap (4) and gasket (7) should fall.
4. Frame rail (8)	Handbrake lever (9)	Release.
5. Spindle (10)	Locking nut (11) and lockwasher (12)	Using wrench 7950946, remove.
6.	Adjusting nut (13)	Using wrench 7950946, remove.
7.	Hub (14) and drum (15)	Rock back and forth to loosen outer bearing cone (16).
8.	Outer bearing cone (16)	Remove.
9.	Hub (14) and drum (15)	Remove. Take care Inner bearing cone (17) and oil seal (18) do not fall out if they are removed with hub (14).
HUB AND BRAKEDRUM DISASSEMBLY		
10. Hub (14) and drum (15)	Six studs (19) and six nuts (20)	a. Using 7/8-inch wrench, remove six nuts (20). b. Using hammer, remove six studs (19).
11. Drum (15)	Hub (14)	Remove.

NOTE

Whenever the hub and drum is removed, clean, inspect, and repack or replace wheel

HUB AND BRAKEDRUM MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
WHEEL BEARING REMOVAL		
12. Hub (14)	Oil seal (18) and inner bearing cone (17)	Using hammer and drift, remove. Discard oil seal (18).
	NOTE **Wiper should be removed only if replacement is necessary because of damage or wear.**	
13.	Wiper (21)	Using offset screwdriver, pry off.
	NOTE **Bearing cups should be removed only if replacement is necessary because of damage or wear.** **Bearing cups should always be replaced if bearing cones are being replaced.**	
14. Hub (14)	Inner and outer bearing cups (22 and 23)	Using puller, remove.
15.	Bearing cones (16 and 17) and cups (22 and 23)	Clean, inspect, and repack in accordance with TM 9-214 - Inspection, Care, and Maintenance of Antifriction Bearings.



TA223918

HUB AND BRAKEDRUM MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION REMARKS

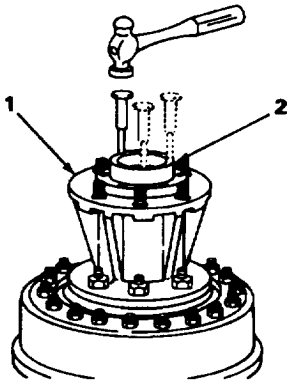
WHEEL BEARING INSTALLATION

NOTE

When tapping bearing cup into hub make sure you work your way around circumference of bearing cup. Keep bearing cup level during installation.

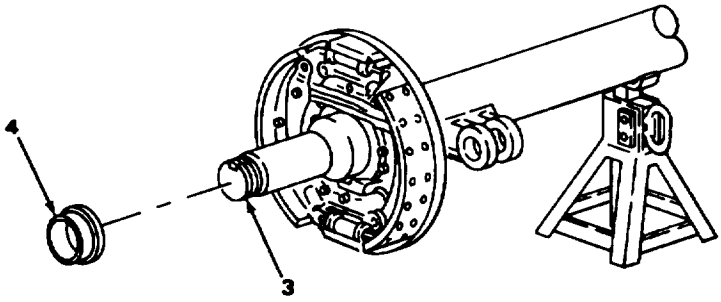
16. Hub (1) — Bearing cup (2)

a. Position cup in hub lying on flat, hard surface.
Large diameter of cup taper should be face out.
Using hammer and drift, tap cup (2) in until it is fully seated.



17. Spindle (3) — Wiper (4)

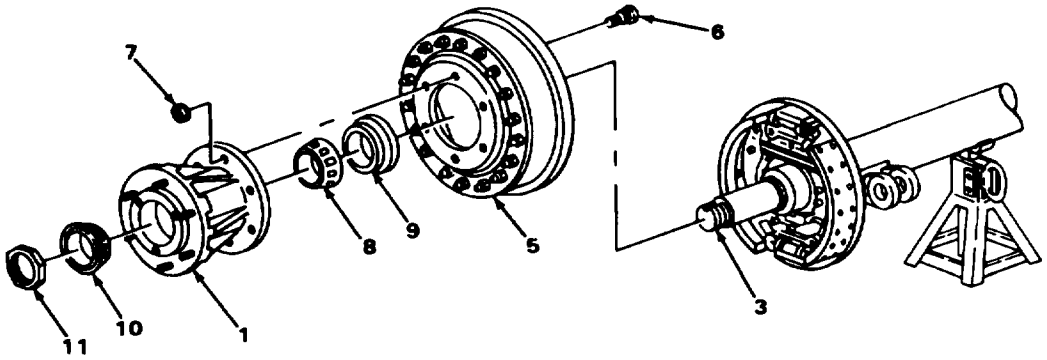
Position on spindle and gently tap until fully seated.



TA223919

HUB AND BRAKEDRUM MAINTENANCE - CONTINUED

LOCATION	ITEM	ACTION REMARKS
HUB AND BRAKEDRUM ASSEMBLY		
18. Hub (1)	Drum (5), six studs (6), and six nuts (7)	a. Position drum on hub and install studs(6). b. Install nuts (7) using 7/8-inch wrench.
HUB AND BRAKEDRUM INSTALLATION		
19.	Inner bearing cone (8) and oil seal (9)	Install in hub (1) and gently tap seal into place if necessary.
20. Spindle (3)	Hub (1) and drum (5)	Slide onto spindle and carefully seat oil seal (9).
21.	Outer bearing cone(1 0)	Slide on spindle and seat in hub.
22.	Adjusting nut(n)	Install using wrench 7950946. Do not tighten.



WHEEL BEARING ADJUSTMENT

NOTE

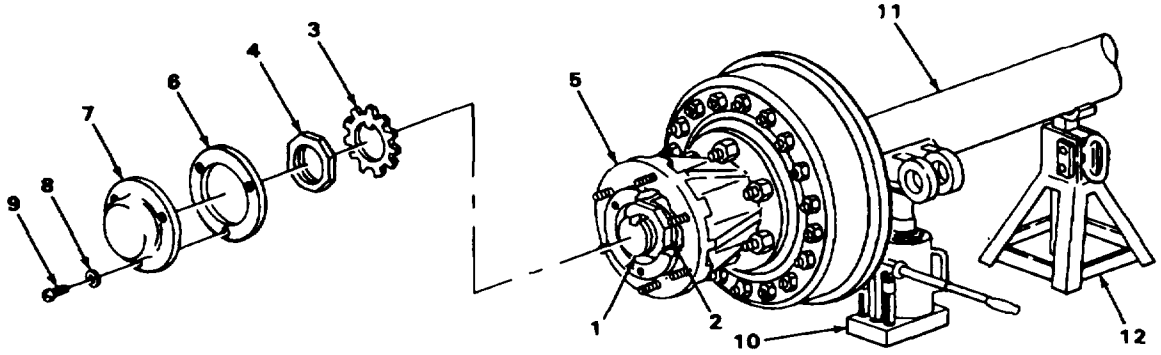
If bearings are properly adjusted, there will be almost no movement noticeable between the brakedrum and the top edge of the brake backing plate when hub rocks on the spindle and turns freely.

When turning the hub, a slight drag caused by lubricant and oil seal will be felt in welladjusted bearings.

TA223920

HUB AND BRAKEDRUM MAINTENANCE- CONTINUED

LOCATION	ITEM	ACTION REMARKS
WHEEL BEARING ADJUSTMENT- CONTINUED		
23. Spindle (1)	Adjusting nut (2)	a. Using wrench 7950946, tighten until hub just binds. b. Back off approximately one-eighth turn. Hub should not rock and should turn freely.
24.	Lockwasher (3) and locking nut (4)	Using wrench 7950946, install and tighten nut.
25. Hub (5)	Gasket (6), hubcap (7), three lock-washers (8), and three screws (9)	Using cross-tip screwdriver, install,
26. Axle	Jack (10)	Reposition and raise under axle (11).
27.	Jack stand (12)	Remove.



NOTE

FOLLOW-ON MAINTENANCE:

1. Install wheel and tire (page 3-5).
2. Adjust service brakes (page 4-51).

TASK ENDS HERE

TA223921

Section XI. FRAME AND TOWING ATTACHMENT

SAFETY CHAINS

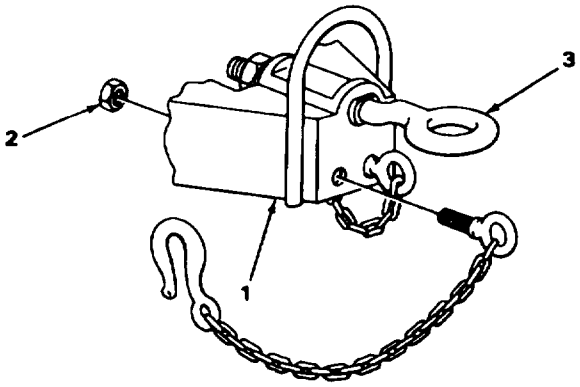
This Task Covers:

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

INITIAL SETUP

Tools
Handle, reversible, 1/2-inch square drive
Socket, 1-by 1/2-inch square drive

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Frame (1)	Nut (2) and eyebolt (3)	Remove using socket.
INSTALLATION		
2. Frame (1)	Eyebolt (3) and nut (2)	Install using socket.



TASK ENDS HERE

TA223922

LUNETTE

This Task Covers:

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

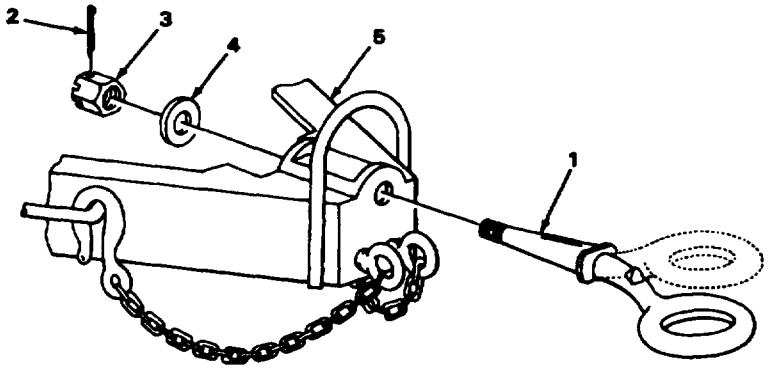
INITIAL SETUP

Tools
Pliers, diagonal cutting
Wrench, open-end, 1 12-inch

Materials/Parts
Cotter pin

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Lunette (1)	Cotter pin (2)	Using pliers, remove. Discard cotter pin (2).
2.	Nut (3) and flat washer (4)	Using 1 1/2-inch wrench, remove.
3. Drawbar (5)	Lunette (1)	Remove.
INSTALLATION		
	NOTE **Lunette maybe positioned in either of two positions by rotating it 180 degrees in the drawbar. Determine height need before installing.**	
4. Drawbar (5)	Lunette (1)	Place in position.
5. Lunette (1)	Nut (3) and fiat washer (4)	Using 1 1/2-inch wrench, install.
6.	New cotter pin (2)	Using pliers, install.

LUNETTE - CONTINUED



TASK ENDS HERE

LANDING GEAR

This Task Covers:

a. Removal (page 4-112)
b. Installation (page 4-112)
c. Disassembly (page 4-112)
d. Assembly (page 4-113)

INITIAL SETUP

Tools
- Hammer, ball-peen
- Handle, reversible, 1/2-inch square drive
- Punch Jack stands (two required)
- Socket, 7/16- by 1/2-inch square drive
- Socket, 3/4- by 1/2-inch square drive

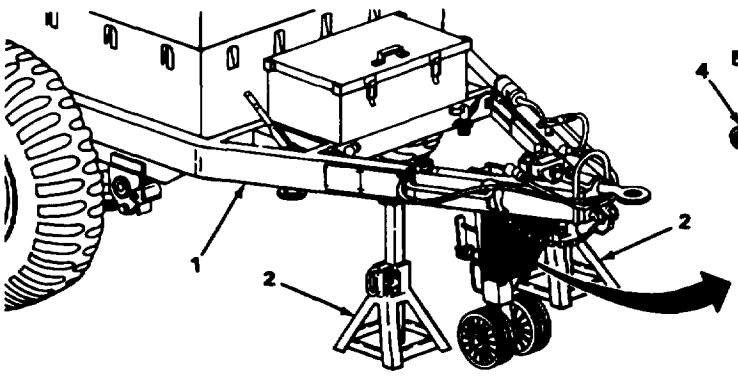
Tools - Continued
- Socket, 7/6- by 1/2-inch square drive
- Wrench, box-end, 7/16-inch
- Wrench, box-end, 1-inch

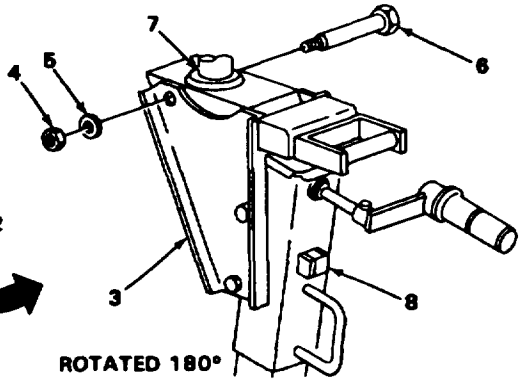
Materials/Parts
- Roll pins (two required)

TA223923

LANDING GEAR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Chassis (1)	Jack stands (2)	Support chassis.
2. Frame support (3)	Nut (4), lockwasher (5), and bolt (6)	Using 7/8-inch socket and I-inch wrench, remove.
3. Frame (7)	Landing gear (8)	Remove.
INSTALLATION		
4. Frame support (3)	Landing gear (8)	Place in position.
5. Frame support (3)	Nut (4), lockwasher (5), and bolt (6)	Using 7/8-inch socket and I-inch wrench, install.
6. Chassis (1)	Jack stands (2)	Remove.





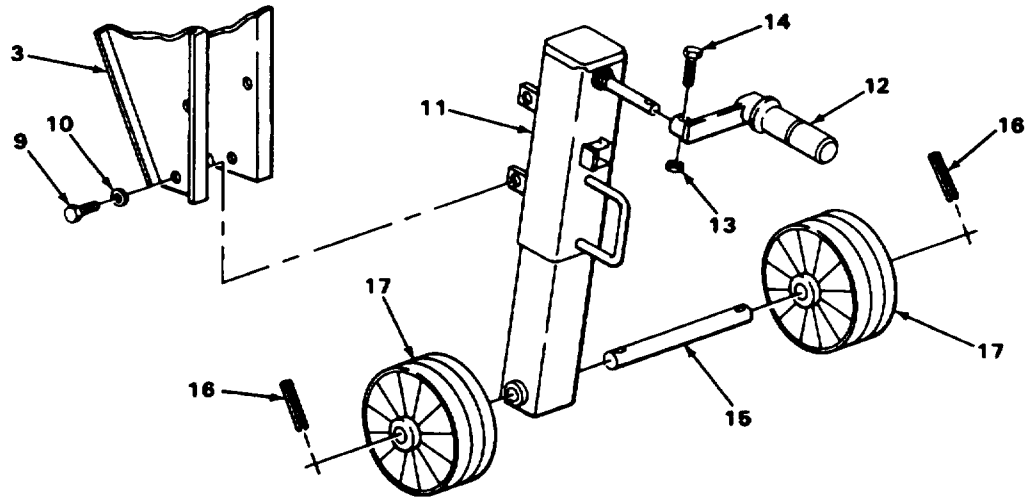
DISASSEMBLY

7. Frame support (3)	Four bolts (9) and four lockwashers (10)	Using 3/4-inch socket, remove.
8.	Landing leg (11)	Remove.
9. Handcrank (12)	Nut (13) and bolt (14)	Using 7/16-inch socket and 7/16-inch wrench, remove.
10. Landing leg (11)	Handcrank (12)	Remove.
11. Axle (15)	Two roll pins (16)	Using hammer and punch, remove. Discard roll pins (16).

TA223924

LANDING GEAR - CONTINUED

LOCATION	ITEM	ACTION REMARKS
12. Landing leg (11)	Axle (15) and two wheels (17)	Remove.
ASSEMBLY		
13. Landing leg (11)	Axle (15) and wheels (17)	Place in position.
14. Axle (15)	Two roll pins (16)	Place in position and, using hammer punch, install.
15. Landing leg (11)	Handcrank(12)	Place in position and aline holes.
16. Handcrank (12)	Bolt (14) and nut (13)	Using 7/16-inch socket and wrench, install.
17. Frame support (3)	Landing leg (11)	Place in position.
18.	Four bolts (9) and four lockwashers (10)	Using 3/4-inch socket, install.



TASK ENDS HERE

TA223925

PINTLE ASSEMBLY

This Task Covers:

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

INITIAL SETUP

Tools
Pliers, diagonal-cutting
Wrench, open-end, 1 7/8-inch

Materials/Parts
Cotter pin

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Pintle (1)	Cotter pin (2)	Using pliers, remove. Discard cotter pin.
2. Nut (3)		Using wrench, remove.
3. Rear cross-member (4)	Pintle (1)	Remove.
INSTALLATION		
4. Rear cross-member (4)	Pintle (1)	Place in position.
5. Pintle (1)	Nut (3)	Using wrench, install.
6. Cotter pin (2)	Using pliers,	install.

TASK ENDS HERE

TA223926

Section XII. SPRINGS AND SHOCK ABSORBER

SPRING ASSEMBLY

This Task Covers:

a. Spring removal (page 4-115)
b. Roller removal (page 4-117)
c. Roller installation (page 4-117)
d. Spring installation (page 4-118)

INITIAL SETUP

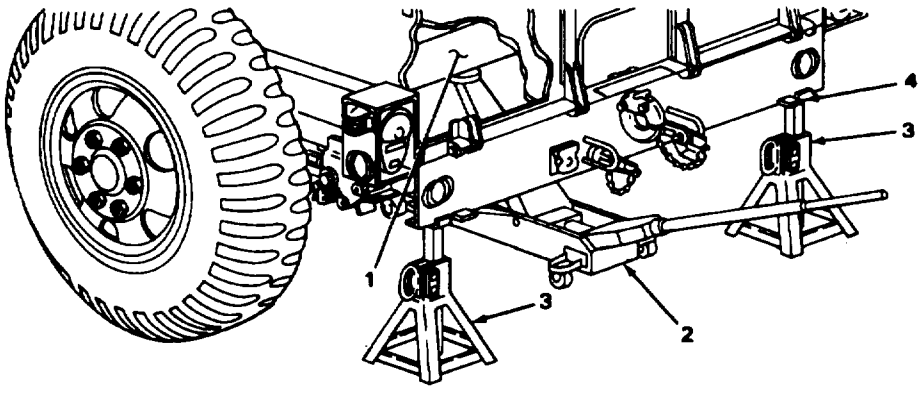
Tools
- Handle, reversible, 1/2-inch square drive
- Jack, hydraulic
- Jack stands (two each)
- Mallet, plastic
- Socket, 15/16- by 1/2-inch square drive

Tools - Continued
- Socket, 1 1/8- by 1/2-inch square drive
- Wrench, Allen, 3/16-inch
- Wrench, open-end, 15/16-inch

Personnel Required

Two

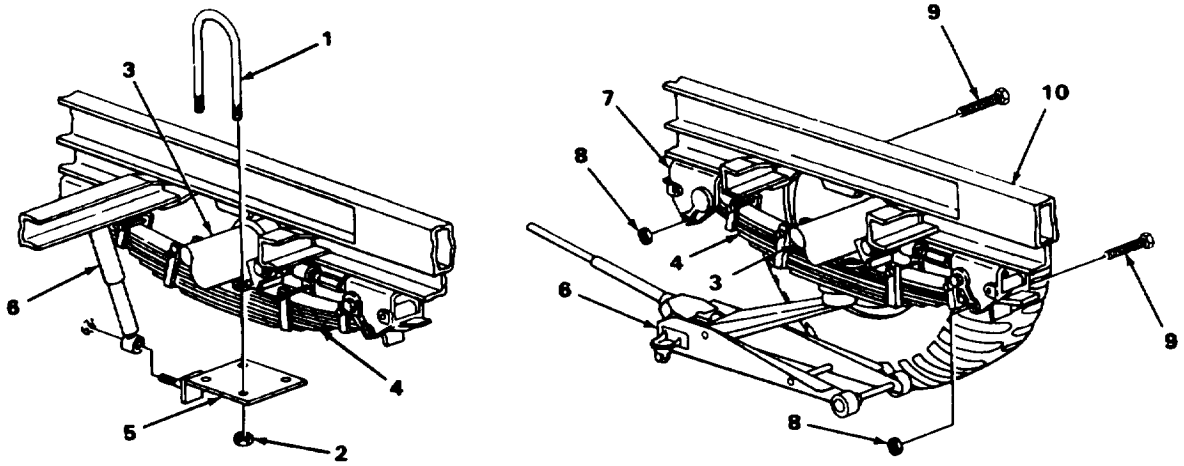
LOCATION	ITEM	ACTION	REMARKS
SPRING REMOVAL			
1. Axle (1)	Jack (2)		Raise axle (1) and position jack stands (3) at rear to support chassis (4).
2.	Axle (1)		Lower axle (1) so tires are on ground. Jack stands (3) will hold weight off springs.



TA223927

SPRING ASSEMBLY- CONTINUED

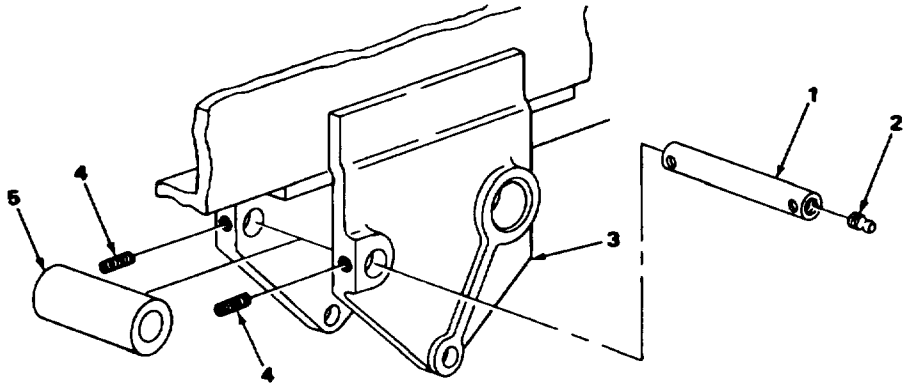
LOCATION	ITEM	ACTION REMARKS
SPRING REMOVAL- CONTINUED		
3. Two U-bolts (1)	Four nuts (2)	Using 1 1/8-inch socket, remove.
4. Axle (3)	Two U-bolts (1)	Remove.
5. Spring (4)	Plate (5)	Pull down and swing away. Plate (5) is attached to shock absorber.
6. Axle (3)	Jack (6)	Position under center of spring (4). Jack (6) will hold weight of spring (4).
7. Two hangers (7)	Two nuts (8)	Using 15/16-inch socket and 15/16-inch wrench, remove.
8.	Two screws (9)	Drive from hangers (7) using plastic mallet.
9. Chassis	Spring (4)	Using jack (6), lower and remove.



TA223928

SPRING ASSEMBLY - CONTINUED

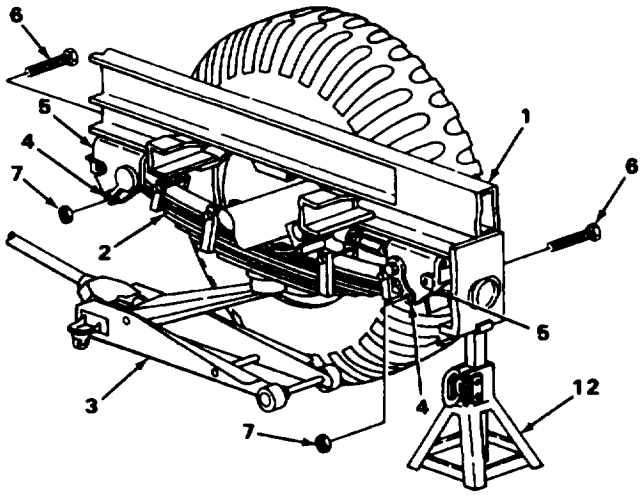
LOCATION	ITEM	ACTION REMARKS
ROLLER REMOVAL		
	NOTE **There is a roller at either end of the spring. Repeat steps 10 thru 17 for other roller.**	
10. Pin (1)	Grease fitting (2)	Remove.
11. Hanger (3)	Two setscrews (4)	Using Allen wrench, remove.
12. Roller (5)	Pin (1)	Using mallet, remove.
13. Hanger (3)	Roller (5)	Remove.
ROLLER INSTALLATION		
14. Hanger (3)	Roller (5)	Place in position.
15. Roller (5)	Pin (1)	Using mallet, install.
16. Hanger (3)	Two setscrews (4)	Using Allen wrench, install.
17. Pin (1)	Grease fitting (2)	Install.

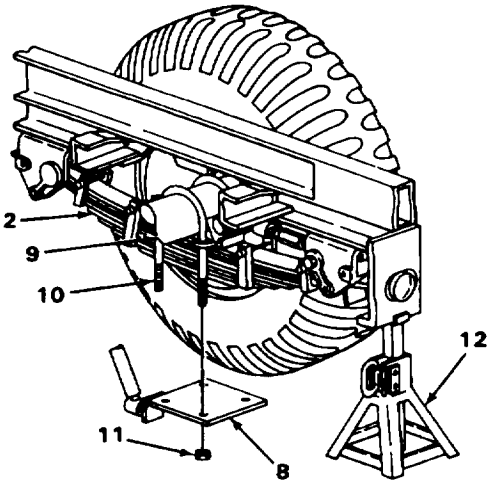


TA223929

SPRING ASSEMBLY - CONTINUED

LOCATION	ITEM	ACTION REMARKS
SPRING INSTALLATION		
18. Chassis (1)	Spring (2)	With assistance, place on jack (3) and raise until spring (2) clears hanger holes (4).
19. Hangers (5)	Two screws (6) and two nuts (7)	Using 15/16-inch socket and 15/16-inch wrench, install.
20. Spring (2)	Jack	(3) Lower and remove.
21.	Plate	(8) Position under spring (2).
22. Axle (9)	Two U-bolts (10)	Place over axle (9) and through plate (8).
23. U-bolts (10)	Four nuts (11)	Using 1 1/8-inch socket, install.
24. Axle (9)	Jack (3)	Position under axle (9) and raise.
25. Chassis (1)	Jack stand (12)	Remove.
26. Axle (9)	Jack (3)	Lower and remove.





TASK ENDS HERE

TA223930

SHOCK ABSORBER

This Task Covers:

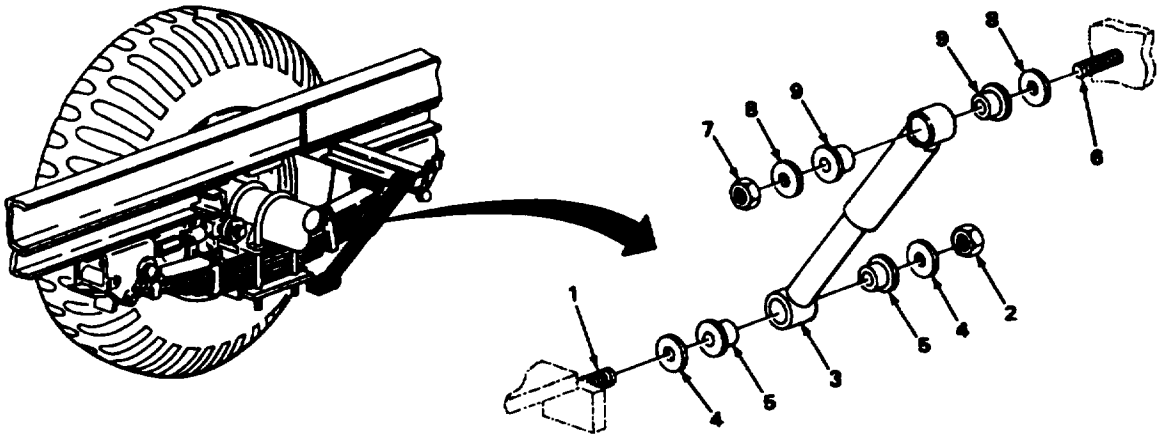
a. Removal (page 4-119)
b. Installation (page 4-120)

INITIAL SETUP

Tools

Handle, reversible, 1/2-inch square drive
Socket, 15/16- by 1/2-inch square drive

LOCATION	ITEM	ACTION REMARKS
REMOVAL		
1. Lower mounting stud (1)	Nut (2)	Using 15/16-inch socket, remove.
2. Shock absorber (3)	Two washers (4) and two bushings (5)	Remove.
3. Upper mounting stud (6)	Nut (7)	Using 15/16-inch socket, remove.
4. Shock absorber (3)	Two washers (8) and two bushings (9)	Remove.
5. Studs (1 and 6)	Shock absorber (3)	Remove.



TA22393

SHOCK ABSORBER -CONTINUED

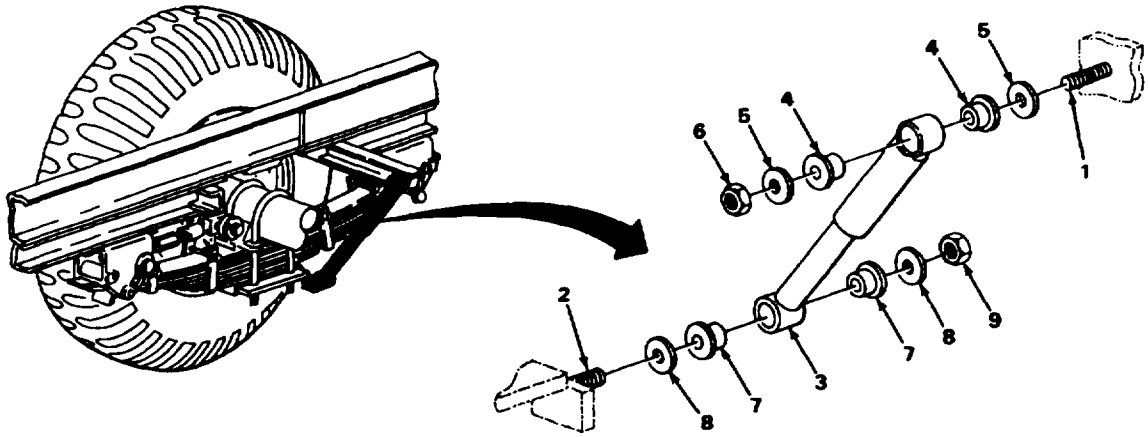
LOCATION	ITEM	ACTION / REMARKS

INSTALLATION

CAUTION

Installing shock absorber upside down could result in damage to equipment.

6.	Studs (1 and 2)	Shock absorber (3)	Place in position.
7.	Shock absorber (3)	Two bushings (4) and two washers (5)	Place in position.
8.	Upper mounting stud (1)	Nut (6)	Using 15/16-inch socket, install.
9.	Shock absorber (3)	Two bushings (7) and two washers (8)	Place in position.
10.	Lower mounting stud (2)	Nut (9)	Using 15/16-inch socket, install.



TASK ENDS HERE

TA223932

RADIUS ROD

This Task Covers:

a. Removal (page 4-121)
b. Installation (page 4-122)

INITIAL SETUP

Tools

Drift, 6-by 3/8-inch
Extension, 6-by 3/8-inch square drive
Handle, reversible, 3/8-inch square drive
Handle, reversible, 1/2-inch square drive
Jack
Jack stand
Mallet, plastic
Socket, 5/8- by 3/8-inch square drive
Socket, 15/16- by 1/2-inch square drive

Tools - Continued

Universal joint, adapter, 3/8-inch square drive
Wrench, box-end, 15/16-inch

Materials/Parts

Four bushings (if required)

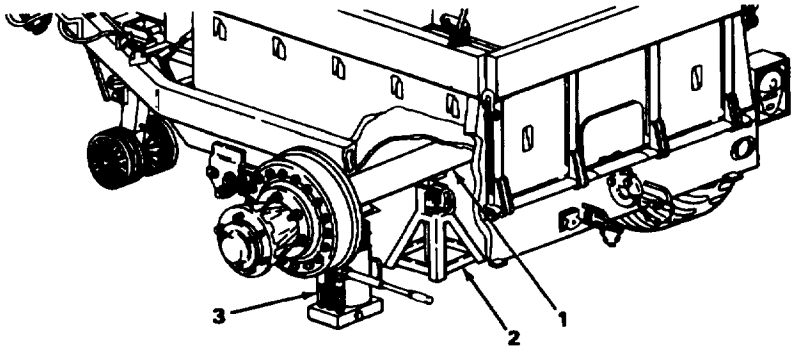
Equipment Condition

Wheel and tire removed (page 3-5).

LOCATION	ITEM	ACTION	REMARKS

REMOVAL

1. Axle (1)
   - Jack stand (2) and jack (3)
     - a. Place jack stand (2) under axle (1).
     - b. Lower jack (3).

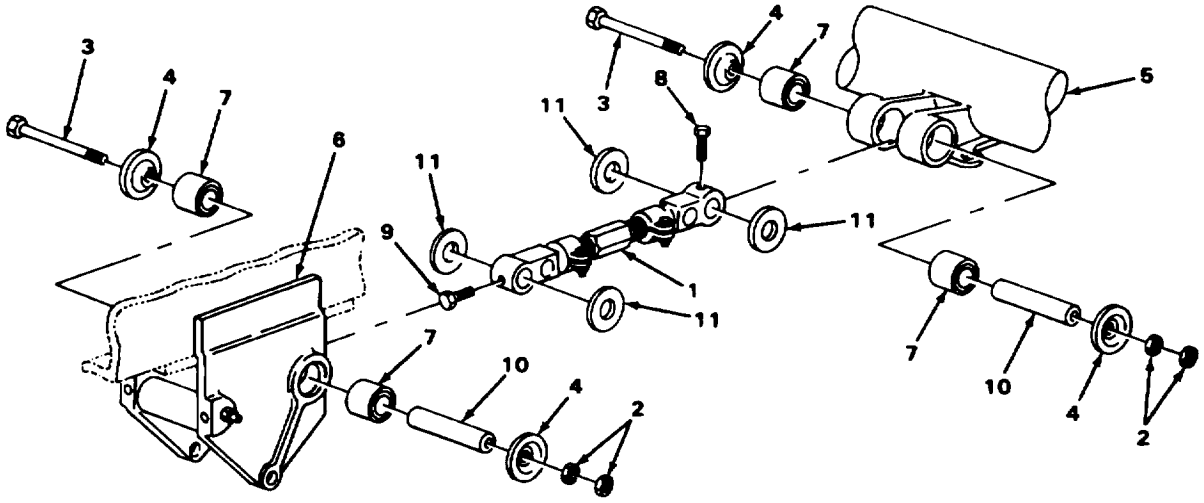


TA223933

RADIUS ROD - CONTINUED

LOCATION	ITEM	ACTION REMARKS
REMOVAL- CONTINUED		
2. Radius rod (1)	Four nuts (2), two bolts (3), and four retainers (4)	Using 15/16-inch socket and wrench, remove.
3. Axle (5) and hanger (6)	Four bushings (7)	Remove. Discard If cracked or rotted.
4. Radius rod (1)	Screw (8)	Using 5/8-inch socket, remove.
5.	Screw (9)	Using 5/8-inch socket, universal, and extension, remove.
6.	Two spacers (10)	Using mallet and drift, lightly tap to loosen and remove.
7. Axle (5) and hanger (6)	Four washers (11)	Remove.
8. Axle (5) to hanger (6)	Radius rod (1)	Remove.
INSTALLATION		
9. Axle (5) to hanger (6)	Radius rod (1)	Place in position.
10. Axle (5) and hanger (6)	Washers (11)	Place in position.
11. Radius rod (1)	Spacers (10)	Tap into position using mallet.
12.	Screw (9)	Using 5/8-inch socket, universal, and extension, install.
13.	Screw (8)	Using 5/8-inch socket, install.
14. Axle (5) and hanger (6)	Bushings (7)	Install.
15 . Radius rod (1)	Retainers (4), bolts (3), and nuts (2)	Using 15/16-inch socket and wrench, install.

RADIUS ROD - CONTINUED



NOTE

FOLLOW-ON MAINTENANCE:

1. Install wheel and tire (page 3-5).
2. Aline axle (page 4-123).

TASK ENDS HERE

RADIUS ROD ADJUSTMENT

This Task Covers:

Adjustment

INITIAL SETUP

Tools

Jack stands (two required)
Wrench, open-end, 3/4-inch (two each)
Wrench, open-end, 1 1/2-inch

Equipment Condition

Wheels and tires removed (page 3-5).

TA223934

RADIUS ROD ADJUSTMENT - CONTINUED

LOCATION	ITEM	ACTION REMARKS
ADJUSTMENT		
	NOTE **Adjustment procedure must be done on level ground so that trailer remains level.**	
1. Trailer chassis (1)	Two jack stands (2)	Position under axle.
2. Curbside radius rod (3)	Two nuts (4), screws (5), and two washers (6)	Using two 3/4-inch wrenches, loosen.
3.	Spacer (7)	Using 1 1/2-inch wrench, turn to obtain nominal dimension of 14.75 inch. Turn clockwise to lengthen or counterclockwise to shorten.
4.	Nuts (4), screws (5), and washers (6)	Using two 3/4-inch wrenches, tighten.
5. Curbside hub (8)	Plumb line (9)	Hang from a wheel mounting stud so that it passes along the rearward surface of one stud and the forward surface of the opposite stud. Plumb line should be positioned so that it just touches the hubcap but still hangs free.
6. Forward cross-member	Parking brake (10) lever(11)	Apply.
	NOTE **Repeat steps 2 thru 6 for roadside hub.**	
7. Drawbar ring(12)	Plumb line (13)	Hang loosely from neck of drawbar ring.
8. Roadside hub (14) to drawbar ring (12)	Plumb lines (13 and 15)	Measure distance. Record measurement.
9. Curbside hub (8) to drawbar ring (12)	Plumb lines (9 and 13)	Measure distance. Record measurement.

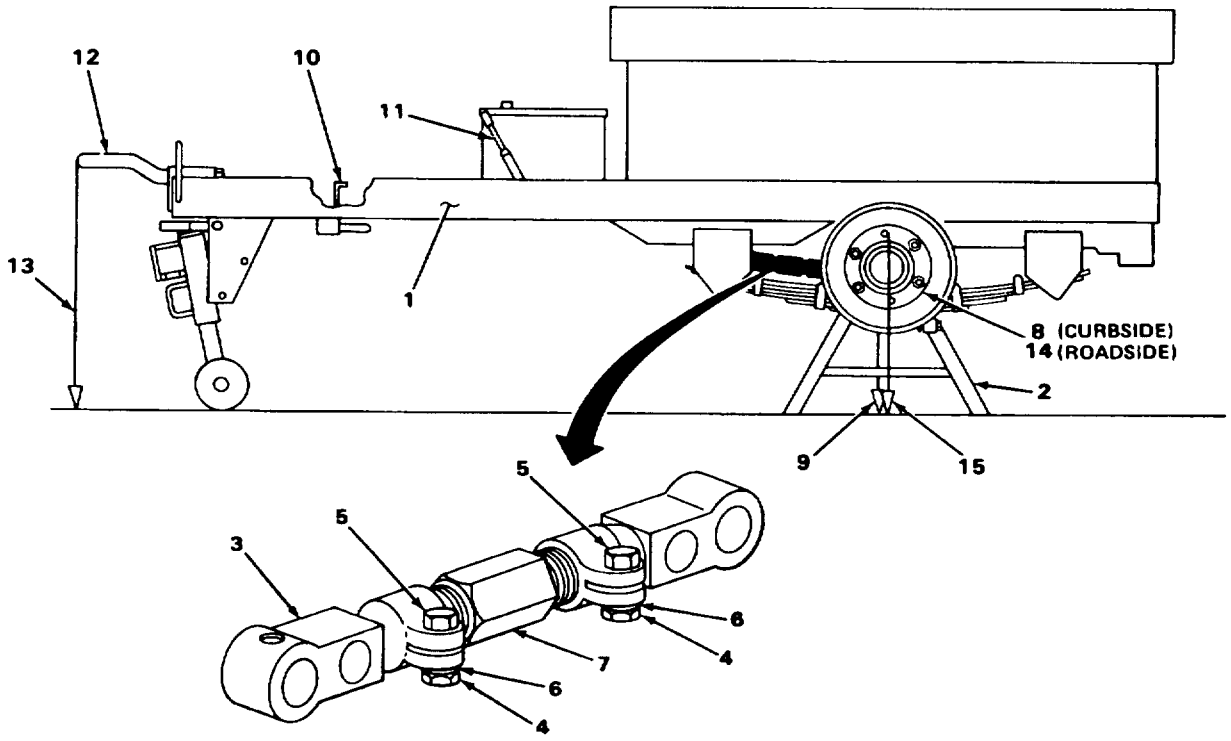
RADIUS ROD ADJUSTMENT-CONTINUED

ACTION LOCATION	ITEM	REMARKS

NOTE

Measurement of both plumb lines should be ± 1/16 inch of each other. If the measurement of the plumb lines in steps 8 and 9 vary more than 1/16 inch of each other, adjust either radius rod to obtain equal length.

Plumb lines (???9,13 Remove.
and 15)



NOTE

FOLLOW-ON MAINTENANCE: Install wheels and tires (page 3-5).

TASK ENDS HERE

TA223935

Section XIII. BODY

TAILGATE

This task covers:

a. Removal (page 4-126)
b. Installation (page 4-127)

INITIAL SETUP

Tools

Drift
Hammer, ball-peen
Pliers, diagonal-cutting

Materials/Parts

Cotter pins

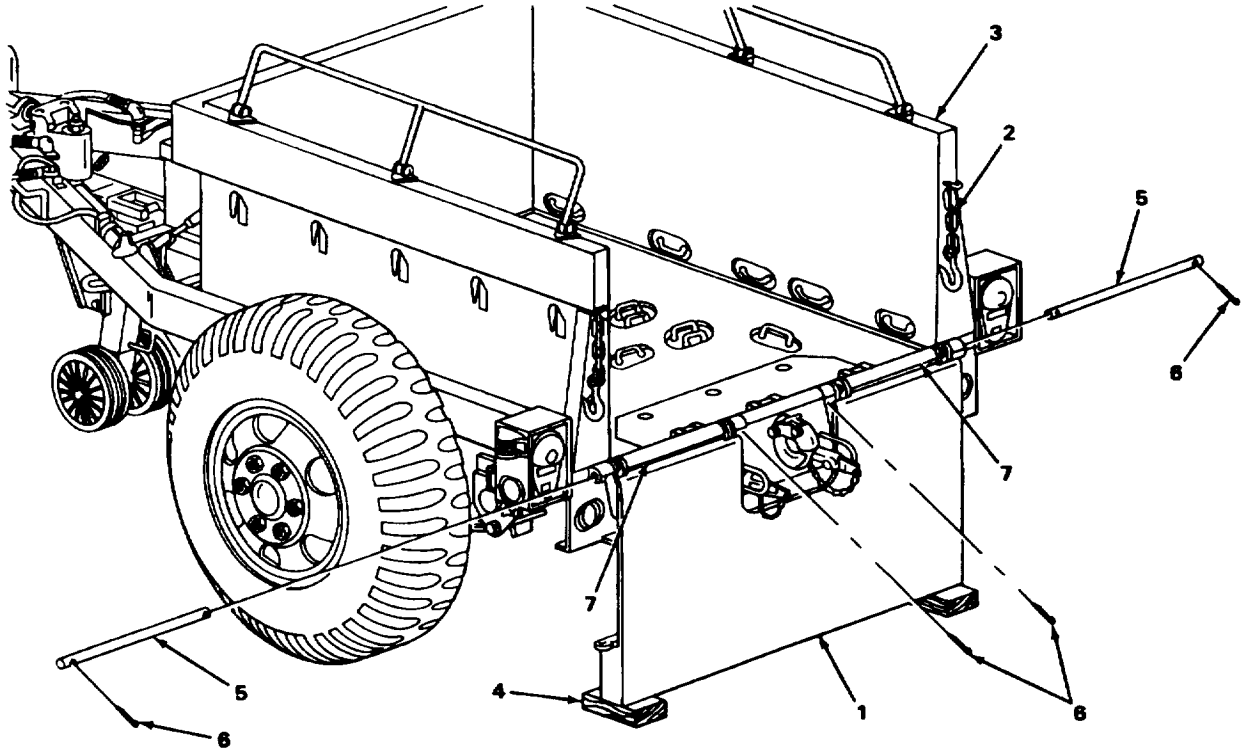
Personnel Required

Two

ACTION LOCATION	ITEM	REMARKS
REMOVAL		
1. Tailgate (1)	Two safety chains (2)	Unhook.
2. Rear body (3)	Tailgate (1)	Lower and block up with wood (4).
3. Two hinge rods (5)	Four cotter pins (6)	Remove using pliers. Discard cotter pins (6).
WARNING		
Have assistant hold tailgate during removal of hinge rods. Failure to do so may result in injury.		
4. Two hinges (7)	Two hinge rods (5)	Using hammer and drift, remove.
5. Rear body (3)	Tailgate (1)	Remove with assistance.
6.	Tailgate (1)	Place on wood (4) and aline hinges.

TAILGATE-CONTINUED

LOCATION	ITEM	ACTION REMARKS
INSTALLATION		
7. Hinges (7)	Two hinge rods (5)	Using hammer, install.
8. Two hinge rods (5)	Four cotter pins (6)	Using pliers, install.
9. Rear body (3)	Tailgate (1)	Remove woodblock (4) and raise.
10. Tailgate (1)	Two safety chains (2)	Hook.



TASK ENDS HERE

BODY

This task covers:

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

TA223936

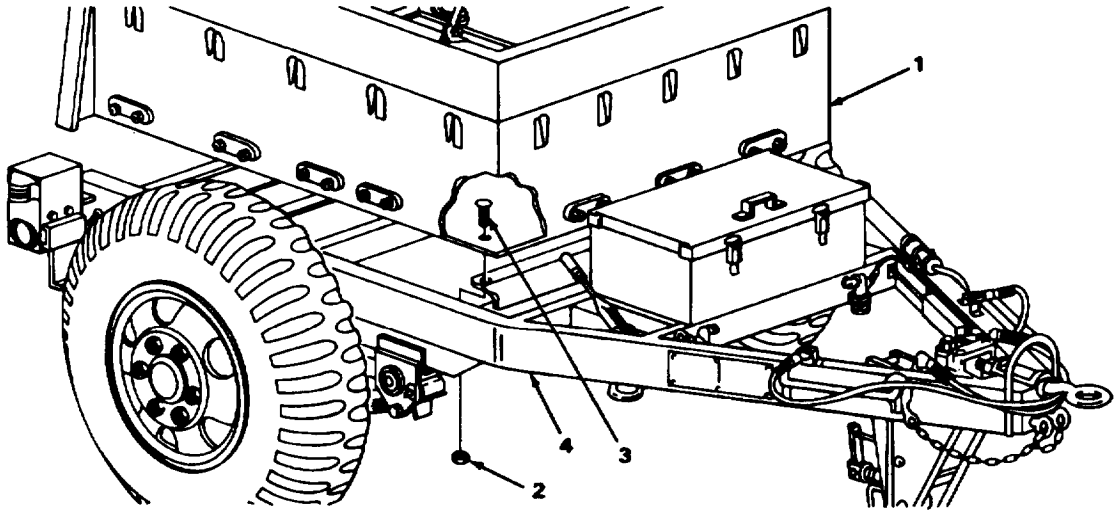
BODY-CONTINUED

INITIAL SETUP

Tools

Wrench, open-end, 9/16-inch

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Body (1)	18 nuts (2) and bolts (3)	Using wrench, remove.
2. Chassis (4)	Body (1)	Using a suitable hoist, remove.
INSTALLATION		
3. Chassis (4)	Body (1)	Position on chassis.
4.	18 nuts (2) and bolts, (3)	Using wrench, install.



TASK ENDS HERE

FOLDING RAILS

This task covers:

a. Removal (page 4-129)
b. Installation (page 4-129)

TA223937

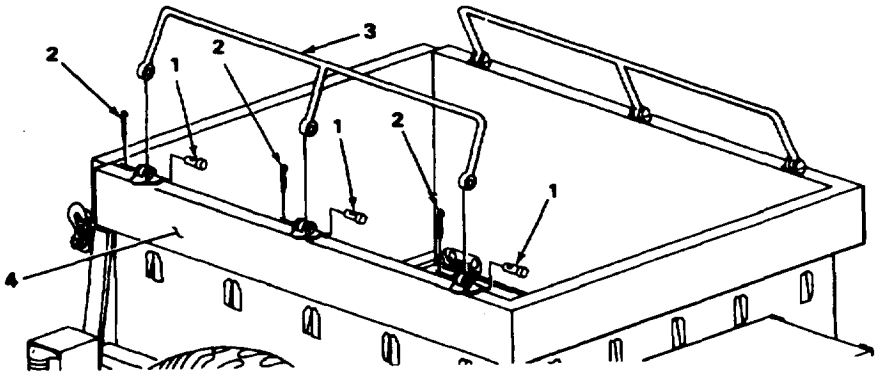
FOLDING RAILS-CONTINUED

INITIAL SETUP

Tools	Personnel Required
Pliers, diagonal-cutting	Two
Materials/Parts	
Cotter pins	

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Three clevis pins (1)	Three cotter pins (2)	Using pliers, remove. Discard cotter pins (2).
2. Folding rails (3)	Three clevis pins (1)	Remove.
3. Body (4)	Folding rail (3)	Remove.
INSTALLATION		
4. Body (4)	Folding rail (3)	Aline brackets with assistance.
5. Folding rail (3)	Three clevis pins (1)	Insert.
6. Three clevis pins (1)	Three cotter pins (2)	Using pliers, install.

TASK ENDS HERE



TA223938

FUSE BOX

This task covers:

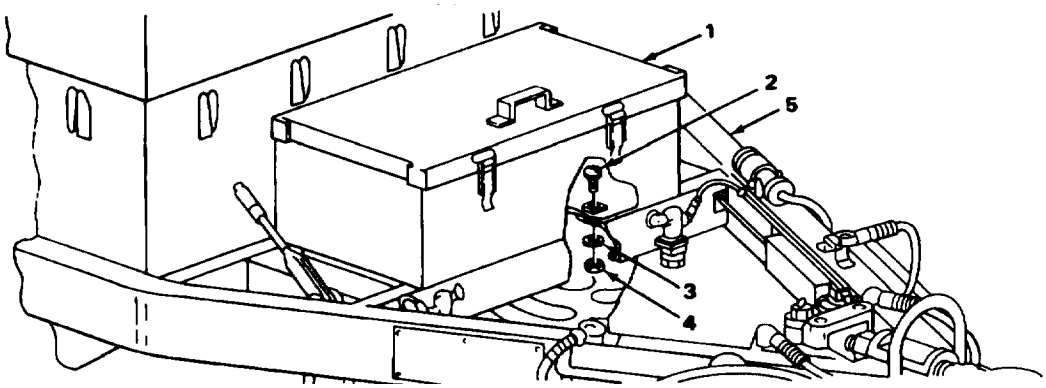
a. Removal (page 4-130)
b. Installation (page 4-130)

INITIAL SETUP

Tools

Extension, 6-inch square drive
Handle, reversible, 3/8-inch square drive
Socket, universal, 9/16-by 3/8-inch square drive

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Fuse box (1)	Four bolts (2), four lockwashers (3), and four nuts (4)	Using extension and 9/16-inch socket, remove.
2. Trailer chassis (5)	Fuse box (1)	Remove.
INSTALLATION		
3.	Fuse box (1)	Place in position.
4. Fuse box (1)	Four bolts (2), four lockwashers (3), and four nuts (4)	Using extension and 9/16-inch socket, install.



TASK ENDS HERE

TA223939

Section XIV. BODY ACCESSORY

REFLECTORS

This task covers:

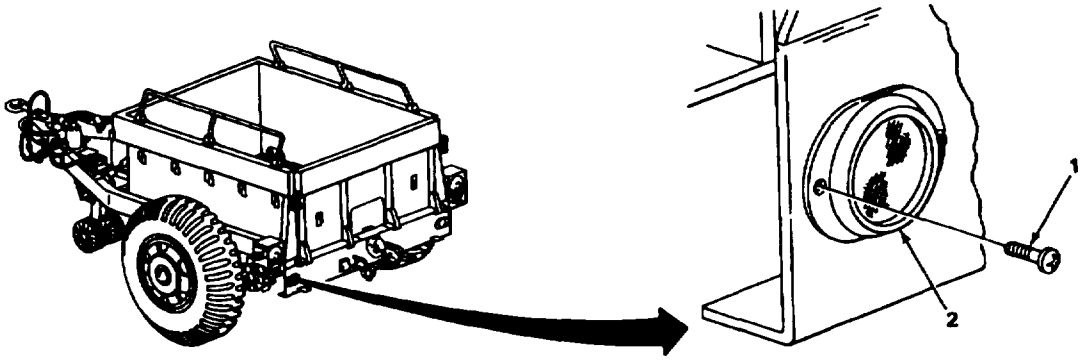
a. Removal (page 4-131)
b. Installation (page 4-131)

INITIAL SETUP

Tools

Screwdriver, cross-tip

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Frame	Two screws (1)	Using cross-tip screwdriver, remove.
2.	Reflector (2)	Remove.
INSTALLATION		
3. Frame	Reflector (2)	Position in place.
4.	Two screws (1)	Using cross-tip screwdriver, install.



TASK ENDS HERE

TA223940

DATA PLATES

This task covers:

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

INITIAL SETUP

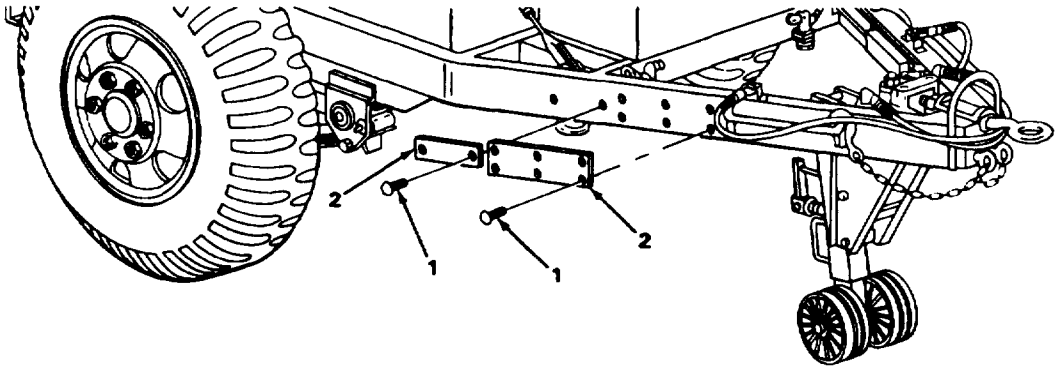
Tools

Drill bit, 3/8-inch
Drill, electric, 3/8-inch
Hammer, ball-peen
Punch, center

Materials/Parts

Drivescrews (as required)

LOCATION	ITEM	ACTION / REMARKS
REMOVAL		
1. Left drawbar	Drivescrews (1)	a. Using hammer and punch, mark center of each drivescrew. b. Using drill and bit, drill off heads.
2.	Data plates (2)	Remove.
INSTALLATION		
3.	Data plates (2)	Position on drawbar.
4.	Drivescrews (1)	Using hammer, install.



TASK ENDS HERE

TA223941

Section XV. PREPARATION FOR STORAGE AND SHIPMENT

PRESERVATION

Unit commanders are responsible for the proper care of the trailers.

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

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

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

NOTE

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

INSPECTION DURING STORAGE

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

NOTE

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

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

Trailers that have been removed from storage for shipment do not have to be reprocessed if they will reach their destination within the administrative storage period. Reprocess the trailer in accordance with TM 740-90-1 if inspection reveals any corrosion, or if anticipated in-transit weather conditions make it necessary.

Deprocess trailers to be placed in service in accordance with TM 740-90-1. Inspect and service the trailer in accordance with Section III, Service Upon Receipt (page 4-5).

Repair or replace all items tagged on inspection prior to preservation.

PACKING, SHIPMENT, AND STORAGE

PREPARATION FOR SHIPMENT

CAUTION

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

Increase tire pressure to 45 psi (310 kPa) for rail shipment, unless the weather is expected to be hotter than 90°F (32.2°C) during shipment.

Protect the trailer against corrosion by coating all unpainted surfaces with grease or oil. Lubricants listed in the Lubrication Chart (page 4-3) maybe used for this purpose. Check the trailer for corrosion frequently during shipment and recoat with oil or grease if necessary.

Prepare the trailer for shipment by processing it in accordance with TM 740-90-1. Check the trailer for corrosion frequently during shipment and recoat with oil or grease if necessary.

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

CHAPTER 5

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE

OVERVIEW

This chapter contains information covering repair parts, special tools; test, measurement, and diagnostic equipment (TMDE); support equipment; and direct support and general support maintenance instructions for the M332 ammunition trailer.

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

COMMON TOOLS AND EQUIPMENT

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

SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

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

REPAIR PARTS

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

Section II. MAINTENANCE PROCEDURES

GENERAL

This section provides instructions for direct support and general support maintenance of the ammunition trailer. The following initial setup information applies to all procedures:

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

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

The normal standard equipment condition to start a maintenance task is power off. Equipment condition is not listed unless some other condition is required.

BRAKESHOE

This task covers:

a. Disassembly (page 5-2)
b. Cleaning (page 5-2)
c. Inspection (page 5-2)
d. Assembly (page 5-3)

INITIAL SETUP

Tools

Reliner, brake and clutch

Equipment Condition

Brakeshoes removed (page 4-52).

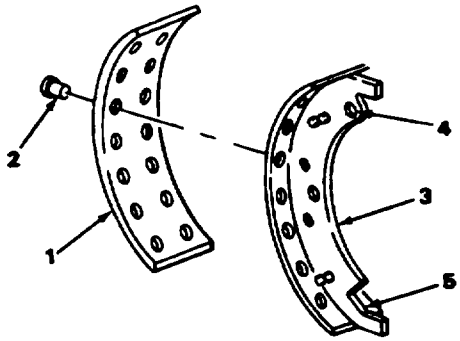
Materials/Parts

Linings, 4 each
Rivets, 64 each

LOCATION	ITEM	ACTION REMARKS
DISASSEMBLY		
1. Brake linings (1)	Rivets (2)	Using brake reliner, remove rivets (2) and linings (1).
CLEANING		
2. Brake linings (1)	Brakeshoes (3)	See cleaning instructions.
INSPECTION		
3.	Brakeshoes (3)	Check for cracks and distortion.
4.	Pivot holes (4) and cam-roller holes (5)	Check for excessive wear. Discard bad brakeshoes (3).

BRAKESHOE-CONTINUED

LOCATION	ITEM	ACTION / REMARKS
ASSEMBLY		
5. Brakeshoes (3)	Brake linings (1)	Using brake reliner, install linings (1) with rivets.



NOTE

FOLLOW-ON MAINTENANCE: Install brakeshoes (page 4-52).

TASK ENDS HERE

All data on pages 5-4 and 5-5 are deleted.

TA223942

BRAKEDRUM

This task covers:

a. Inspection (page 5-6)
b. Repair (page 5-6)

INITIAL SETUP

Tools	Equipment Condition
Inside micrometer with extension	Hub and drum removed (page 4-103).

LOCATION	ITEM	ACTION / REMARKS

WARNING

The hub and brakedrum assembly will be full of asbestos dust from the brake linings. Breathing asbestos dust is extremely hazardous. A filter mask should be worn whenever working on the hub and brakedrum assembly. Failure to do so could result in injury to personnel.

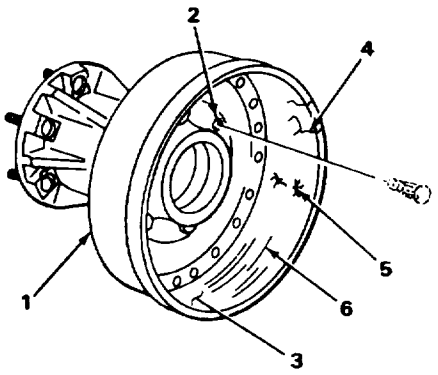
INSPECTION

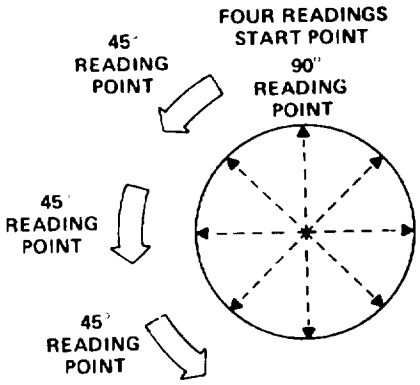
1.	Brakedrum (1)	Stud holes (2)	Check for cracks. Discard drums with cracked stud holes (2).
2.		Braking surface (3)	a. Check for cracks (4), heat checking (5), and scoring (6). b. Check for out-of-round or tapered condition. Maximum out-of-round is 0.010 inch (0.254 mm). Maximum taper is 0.0004 inch (0.0102 mm).

REPAIR

3.		Brakedrum (1)	Reface braking surface to remove ail cracks, heat checking, and scoring using brake lathe. Remove a maximum of 0.010 inch (0.254 mm) per cut. Discard drums with edge cracks or if inside diameter exceeds 13.20 inches (33.53 cm).

BRAKEDRUM-CONTINUED





NOTE

FOLLOW-ON MAINTENANCE: Install brakedrums (page 4-103).

TASK ENDS HERE

FRAME

Repair frame in accordance with TB 9-2300-247-40, Tactical Wheeled Vehicles: Repair of Frames.

TIRE

Repair tires in accordance with TM 9-2610-200-24, Organizational Care, Maintenance, and Repair of Pneumatic Tires, Inner Tubes, and Radial Tires.

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APPENDIX A

REFERENCES

A-1. SCOPE.

This appendix lists all publication indexes, forms, field manuals, technical manuals, technical bulletins, and miscellaneous publications referenced in this manual.

A-2. PUBLICATION INDEXES.

The following indexes should be consulted frequently for the latest changes or revisions and for new publications relating to material covered in this manual.

Index of Army Motion Pictures and Related Audio Visual Aids ..... DA Pam 108-1
Consolidated Index of Army Publications and Blank Forms ..... DA Pam 310-1

A-3. FORMS.

Recommended Change to DA Publications ..... DA Form 2028-2
Equipment Inspection and Maintenance Worksheet ..... DA Form 2404
Maintenance Request ..... DA Form 2407
Equipment Daily or Monthly Log ..... DA Form 2408-1
Equipment Transfer Report ..... DA Form 2408-7
Equipment Acceptance and Registration Record ..... DA Form 2408-8
Uncorrected Fault Record ..... DA Form 2408-14
Equipment Maintenance Log (Consolidated) ..... DA Form 2409
Packing Improvement Record ..... DD Form 6
Preventive Maintenance Schedule and Record ..... DD Form 314
Accident identification Card ..... DD Form 518
Processing and Reprocessing Report for Shipment, Storage, and
Issue of Vehicles and Spare Engines ..... DD Form 1397
Vehicle Accident Report ..... SF 91
Report of Discrepancy ..... SF 364
Quality Deficiency Report ..... SF 368

A-4. FIELD MANUALS.

Explosives and Demolitions ..... FM 525
Camouflage, Basic Principles, and Field Camouflage ..... FM 5-20
Operation and Maintenance of Ordnance Material in
Cold Weather (0° to-65°F) ..... FM 9-207
Manual for Wheeled Vehicle Driver ..... FM 21-305
Cold Weather Operations ..... FM 31-70

A-5. TECHNICAL MANUALS.

Inspection, Care, and Maintenance of Antifriction Bearings ..... TM 9-214
Welding Theory and Application, Operator's Manual ..... TM 9-237
Deepwater Fording of Ordnance Material ..... TM 9-238
Materials Used for Cleaning, Preserving, Abrading, and Cementing
Ordnance Materiel and Related Materials Including Chemicals ..... TM 9-247

A-5. TECHNICAL MANUALS-CONTINUED.

Organizational Care, Maintenance, and Repair of Pneumatic Tires, Inner Tubes, and Radial Tires ..... TM 9-2610-200-24
The Army Maintenance Management System (TAMMS) ..... TM 38-750
Painting Instruction for Field Use ..... TM 43-0139
Railway Operating and Safety Rules ..... TM 55-200
Railcar Loading Procedures ..... TM 55-601
Administrative Storage of Equipment ..... TM 740-90-1
Railway Operating Rules ..... TM 743-200-1
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use ..... TM 750-244-6

A-6. TECHNICAL BULLETINS.

Tactical Wheeled Vehicles: Repair of Frames ..... TB 9-2300-247-40
Standards For Oversea Shipment or Domestic Issue of Combat, Tactical, and Special Purpose Vehicles ..... TB 9-2300-281-35
Brake Fluid, Silicone (BFS) Conversion Procedures for Tank-Automotive Equipment ..... TB 430002-87
Color Marking and Camouflage Painting of Military Vehicles, Construction Equipment, and Materials Handling Equipment ..... TB 43-0209

A-7. MISCELLANEOUS PUBLICATIONS.

Requisitioning, Receipt, and Issue System ..... AR 725-50

APPENDIX B

MAINTENANCE ALLOCATION CHART (MAC)

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 touch.)

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), preserve, drain, paint, or replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

B-2. MAINTENANCE FUNCTIONS-CONTINUED.

f. Calibrate. To determine and cause corrections to be made or adjusted on instruments or test, measuring, and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. Replace is authorized by the MAC and is shown as the third position code of the SMR code.

i. Repair. The application of maintenance services[1], including fault location/troubleshooting[2], removal/installation, and disassembly/assembly procedures[3] and maintenance actions[4] to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like-new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II.

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00".

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, 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. See paragraph B-2 for a detailed explanation of these functions.

[1]Services-inspect, test, service, adjust, aline, calibrate, and/or replace.

[2]Fault locating/troubleshooting-process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or unit under test (UUT).

[3]Disassembly/assembly-encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least componency identified as maintenance significant (i.e., assigned an SMR code) for the category of maintenance under consideration.

[4]Actions-welding, grinding, riveting, straightening, facing, remachinery, and/or resurfacing.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II-Continued.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a worktime figure in the appropriate 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 indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate worktime figures will be shown for each category. The worktime figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembiy time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the Maintenance Allocation Chart. The symbol designations for the various maintenance categories are as follows:

c - Operator or Crew
o - Organizational
F - Direct Support
H - General Support
D - Depot

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EOUIPMENT 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 il.

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 C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
06	ELECTRICAL SYSTEM								
0609	Lamp, Incandescent	Replace		0.2				1	
	Light Assemblies	Replace		0.2				1,3	
0613	Wiring Harness Intervehicular Cable	Repair		0.5				1,3	
		Replace		0.5				1,3	
		Replace		0.2				1,3	
11	AXLES								
1100	Axle Assembly	Replace		6.0				1,3	
12	BRAKES								
1201	Handbrake Lever	Replace		1.0				1	
		Adjust	0.2						
	Handbrake Cables	Replace		1.0				1	
		Adjust		1.0				1	
1202	Service Brake Brakeshoe	Replace		1.5					
		Repair			0.5			3, 4	
1204	Master Cylinder	Replace		1.5				1, 2	
	Wheel Cylinder	Replace		1.5				1, 2	
	Lines and Fittings	Replace		1.5				1, 2	
1208	Air Chamber	Replace		1.0				1,2	
	Relay Valve	Replace		1.0				1,2	
	Air Reservoir	Replace		2.0				1, 2	
	Shutoff Valves	Replace		0.8				1, 2	
	Couplings	Repair		0.2				1	
		Replace		0.4				1	
	Filter	Repair		0.4				1	
		Replace		0.5				1	
	Lines and Fittings	Replace		1.5				1, 2	
13	WHEELS								
1311	Brakedrum	Replace		1.0				1	
		Repair		1.0				4	
	Hub and Drum	Remove/ Install		1.5				1, 2	
	Hub	Replace		1.0				1,2	
	Wheel and Tire Assembly	Replace	0.5						
	Wheel	Replace		2.0				1,2	

MAINTENANCE ALLOCATION CHART- CONTINUED

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
1311	Wheel	Service		1.5					
(cont)	Bearings	Adjust		0.5				1,2	
		Replace		1.5				1,2	
1313	Tires	Repair			2.0			3	
		Replace		2.0					
	Tubes	Repair		0.8					
		Replace		2.0				3	
15	FRAMES AND TOWING ATTACHMENTS								
1503	Tow Ring	Replace		1.0				1	
	Tow Hook	Replace		0.4				1	
1507	Landing Gear	Replace		1.5				1,2	
		Repair		1.5				1,2	
16	SPRINGS								
1601	Springs	Replace		2.5				1,2	
1604	Shock Absorbers	Replace		0.8				1	
1605	Radius Rods	Adjust		2.0				1	
		Replace		2.5				1	
18	BODY								
1808	Fuse Box	Replace		2.0				1, 2	
1810	Body	Replace		8.0				1, 2	
	Tailgate	Replace		2.0				1	
	Folding Rails	Replace		1.0				1	
22	ACCESSORY ITEMS								
2202	Reflectors	Replace		0.3				1	
2210	Data Plates	Replace		0.3				1	

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) REFERENCE CODE	(2) LEVEL MAINTENANCE	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
1	O,F,H	TOOL KIT,MECHANICS: AUTOMOTIVE	5180-00-177-7033	
2	O	SHOP EQUIPMENT,AUTO-MOTIVE MAINTENANCE AND REPAIR:ORGANIZATIONAL MAINTENANCE, COMMON NO.1,LESS POWER	4910-00-754-0654	
3	O	SHOP EQUIPMENT,AUTO-MOTIVE MAINTENANCE AND REPAIR:ORGANIZATIONAL MAINTENANCE, COMMON NO.2,LESS POWER	4910-00-754-0650	
4	F	SHOP EQUIPMENT,AUTO-MOTIVE MAINTENANCE AND REPAIR:FIELD MAIN-TENANCE,COMMON NO.1	4910-00-754-0661	
5	F	TOOL KIT,WELDER'S	5180-00-754-0661	
6	F	SHOP EQUIPMENT,WELDING, FIELD MAINTENANCE	3470-00-357-7268	
		SPECIAL TOOLS: SOCKET,SOCKET WRENCH WHEEL BEARING ADJUSTING NUT	5120-00-795-0946	

SECTION IV. 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 ammunition trailer to help you inventory items required for safe and efficient operation.

C-2. GENERAL.

The Components of End Item and Basic Issue Items Lists are divided Into the following sections:

a. Section II. Components of End Item. This listing is for informational purposes only, and is not authority to requisition replacements. These items are part of the end item, but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Illustrations are furnished to assist you in identifying the items.

b. Section III. Basic Issue Items. These are the minimum essential items required to place the ammunition trailer in operation, operate It, and perform emergency repairs. Although shipped separately packaged, BII must be with the ammunition trailer during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items, This manual is your authority to request/requisition replacement Bll, based on TOE/MTOE authorization of the end item.

C.3. EXPLANATION OF COLUMNS.

The following provides an explanation of columns found in the tabular listings:

a. Column 1, Illustration Number (Illus No.). This column indicates the number of the illustration in which the item is shown.

b. Column 2, National Stock Number. Indicates the national stock number assigned to the item and will be used for requisitioning purposes.

c. Column 3, Description. Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number. If item needed differs for different models of this equipment, the model is shown under the Usable On Code heading in this column.

d. Column 4, Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr).

e, Column 5, Quantity Required (Qty Req'd) Indicates the quantity of the item authorized to be used with/on the equipment.

Section II. COMPONENTS OF END ITEM

NONE AUTHORIZED

Section III. BASIC ISSUE ITEMS

NONE AUTHORIZED

APPENDIX D

ADDITIONAL AUTHORIZATION LIST

There are no additional items authorized with the M332 Ammunition trailer.

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 M332 ammunition trailer. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

E-2. EXPLANATION OF COLUMNS.

a. Column 1, Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., Use sealing compound, item 8, appendix D).

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	(5) U/M
1	0		CONTAINER,EMPTY 1-QUART	EA
2	0		BRAKE FLUID,SILICONE (BFS) (81349)MIL-B-46176	
		9150-01-102-9455	1-GALLON CAN	OZ
3	0		GREASE,AUTOMOTIVE AND ARTILLERY(81349)MIL-G-10924	
		9150-00-190-0904	1-POUND CAN	OZ
4	0		OIL,LUBRICATING,OE/HDO-30 (81349)MIL-L-2104C	
		9150-00-186-6181	1-QUART CAN TYPE 1	OZ
		9150-00-188-9858	5-GALON CAN	OZ
		9150-00-188-9859	55-GALLON DRUM(16-GAGE)	OZ
		9150-00-189-6729	55-GALLON DRUM(18-GAGE)	OZ
5	0		OIL,LUBRICATING OEA (81349)MIL-L-46167	
		9150-00-402-4478	1-QUART CAN	OZ
		9150-00-402-2372	5-GALLON CAN	OZ
		9150-00-495-7197	55-GALLON DRUM(18-GAGE)	OZ
6	0		PLASTIC TUBING	FT
7	0		RAGS,WIPING (58536)A-A-531	
		7920-00-205-1711	50-POUND BALE	EA
8	0		SEALING COMPOUND	OZ
9	0		SOAP SOLUTION	OZ
10	0		SOLVENT,DRYCLEANING (81349)PD-680 TYPE II	
		6850-00-664-5685	1-QUART CAN	OZ
		6850-00-281-1985	1-GALLON CAN	OZ
		6850-00-285-8011	55-GALLON DRUM	OZ

1
2 THRU 3

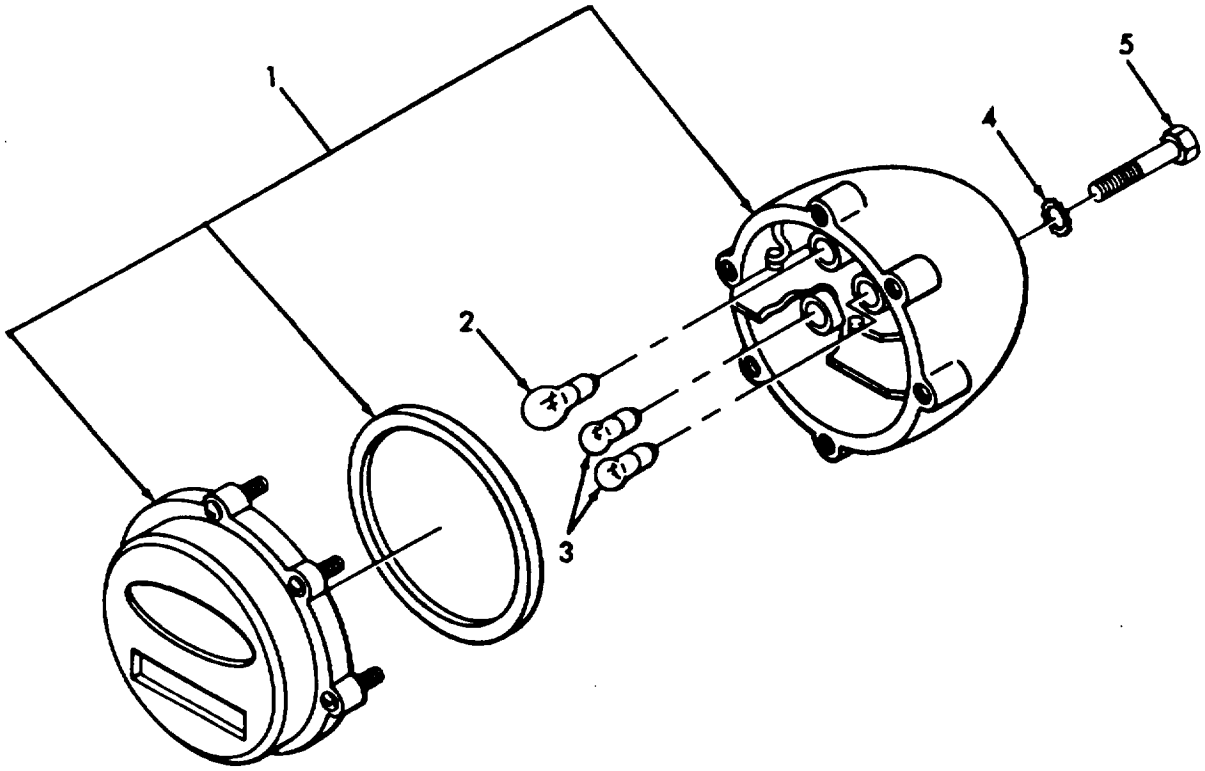

FIGURE 1. STOPLIGHT TAILLIGHT ASSEMBLY (EARLY MODELS).

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 06 ELECTRICAL SYSTEM 0609 LIGHTS FIG. 1 STOPLIGHT-TAILLIGHT ASSEMBLY (EARLY MODELS)	
1	PAOOO	19207	8378785	STOP LIGHT-TAILLIGH	2
2	PAOZZ	19207	446914	LAMP, INCANDESCENT	2
3	PAOZZ	19207	190877	LAMP, INCANDESCENT	1
4	PAOZZ	96906	MS35335-35	WASHER,LOCK	4
5	PAOZZ	96906	MS90728-57	SCREW,CAP,HEXAGON H STOP AND TAILLIGHT MOUNTING	4
				END OF FIGURE	

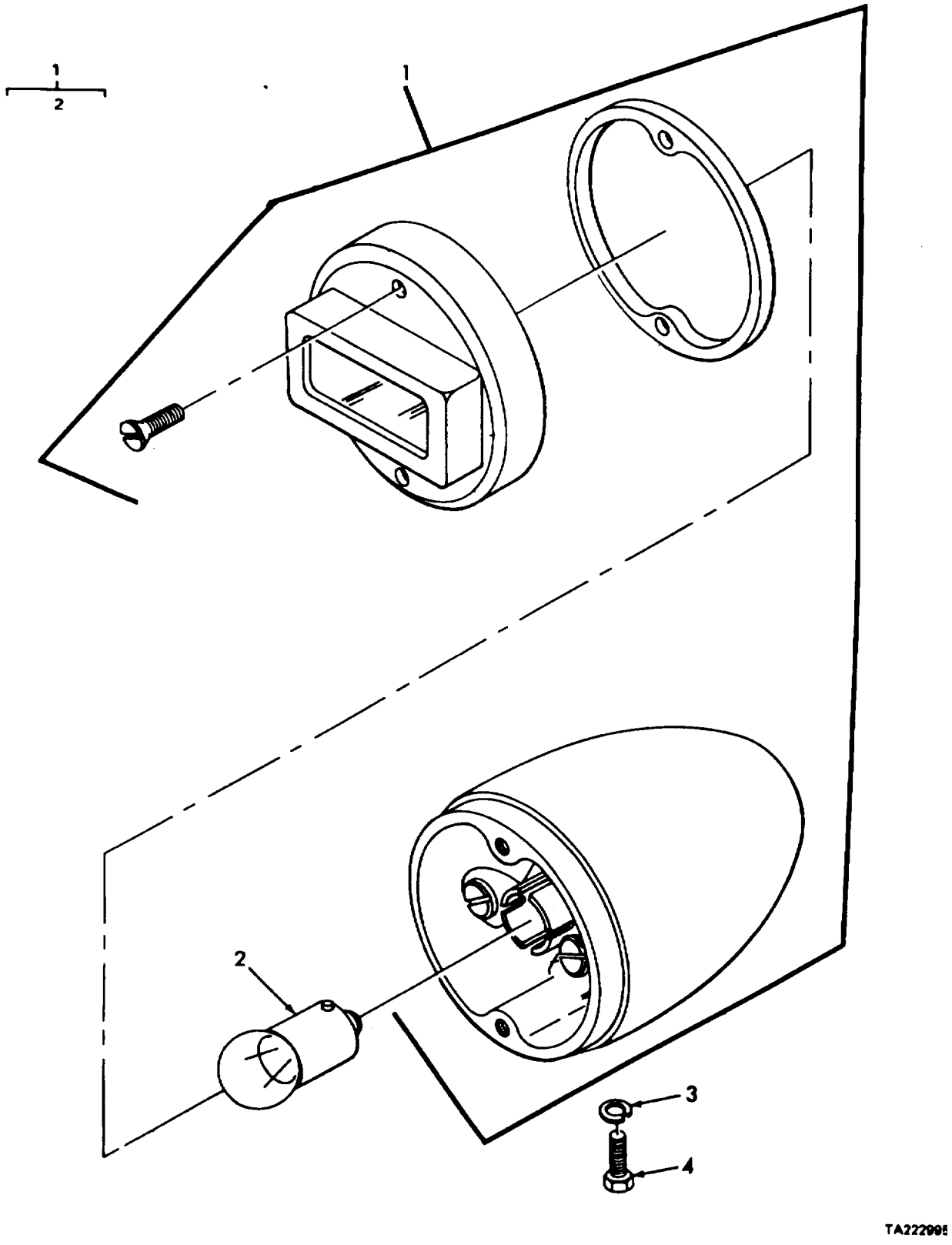

FIGURE 2. BLACKOUT STOPLIGHT ASSEMBLY (EARLY MODELS).

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				0609 LIGHTS FIG. 2 BLACKOUT STOPLIGHT ASSEMBLY (EARLY MODELS)	
1	PAOZZ	19207	8741645	STOP LIGHT,VEHICULA	1
2	PAOZZ	19207	190877	LAMP, INCANDESCENT	4
3	PAOZZ	96906	MS35338-45	WASHER,LOCK	1
4	PAOZZ	96906	MS90726-34	BOLT,MACHINE	1
				END OF FIGURE	

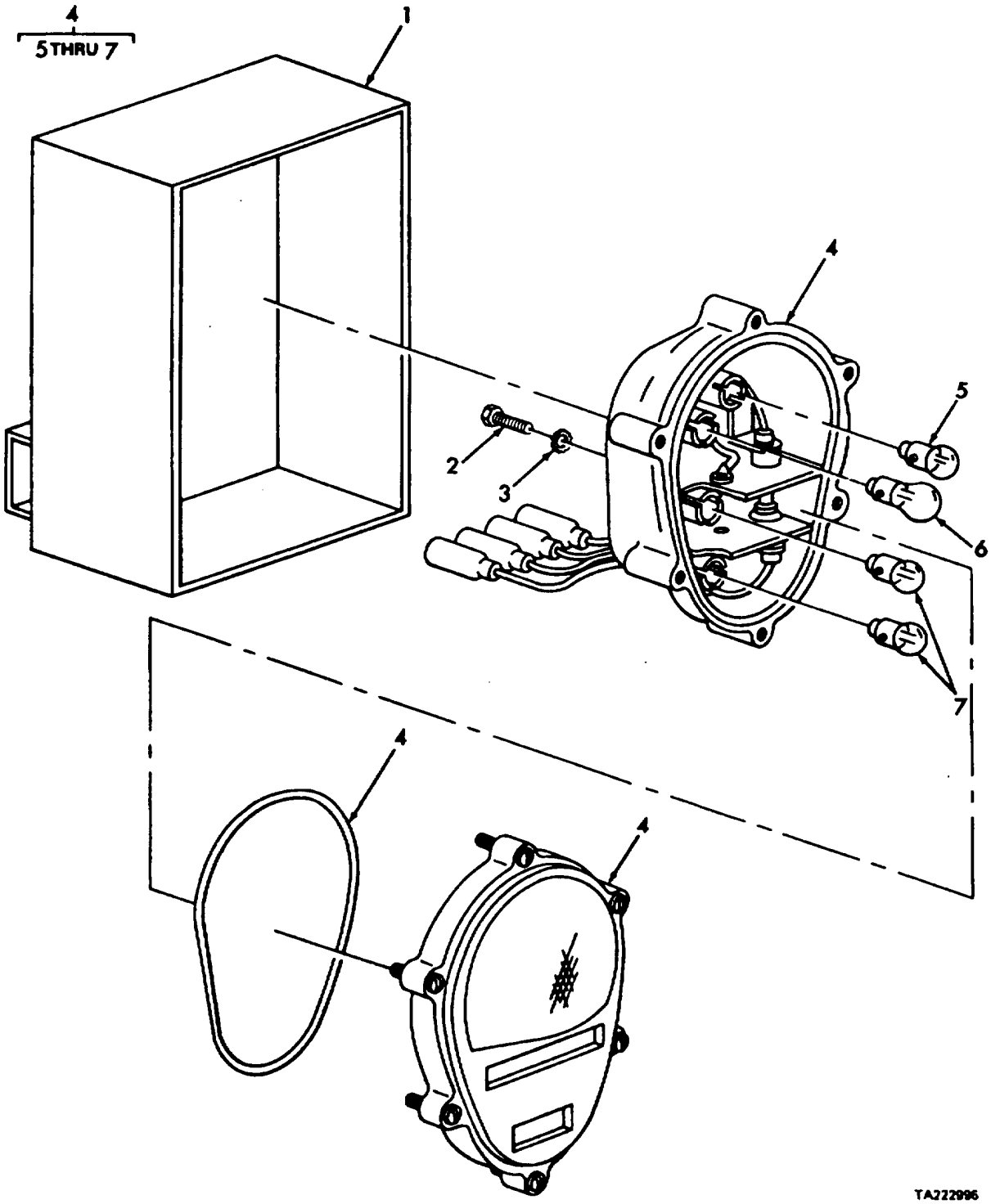

FIGURE 3. REAR COMPOSITE MARKER LIGHT ASSEMBLY (LATE MODELS).

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				0609 LIGHTS FIG. 3 REAR COMPOSITE MARKER LIGHT ASSEMBLY (LATE MODELS)	
1	XDOZZ	19207	11677539-1	BOX LEFT HAND	1
1	XDOZZ	19207	11677539-2	BOX RIGHT HAND	1
2	PAOZZ	96906	MS90728-61	SCREW,CAP,HEXAGON H	4
3	PAOZZ	96906	MS35338-46	WASHER,LOCK	4
4	PAOOO	96906	MS52125-2	STOP LIGHT-TAILLIGH LATE MODELS	2
5	PAOZZ	96906	MS15570-623	LAMP, INCANDESCENT	1
6	PAOZZ	96906	MS35478-1683	LAMP, INCANDESCENT	1
7	PAOZZ	96906	MS15570-1251	LAMP, INCANDESCENT	2
				END OF FIGURE	

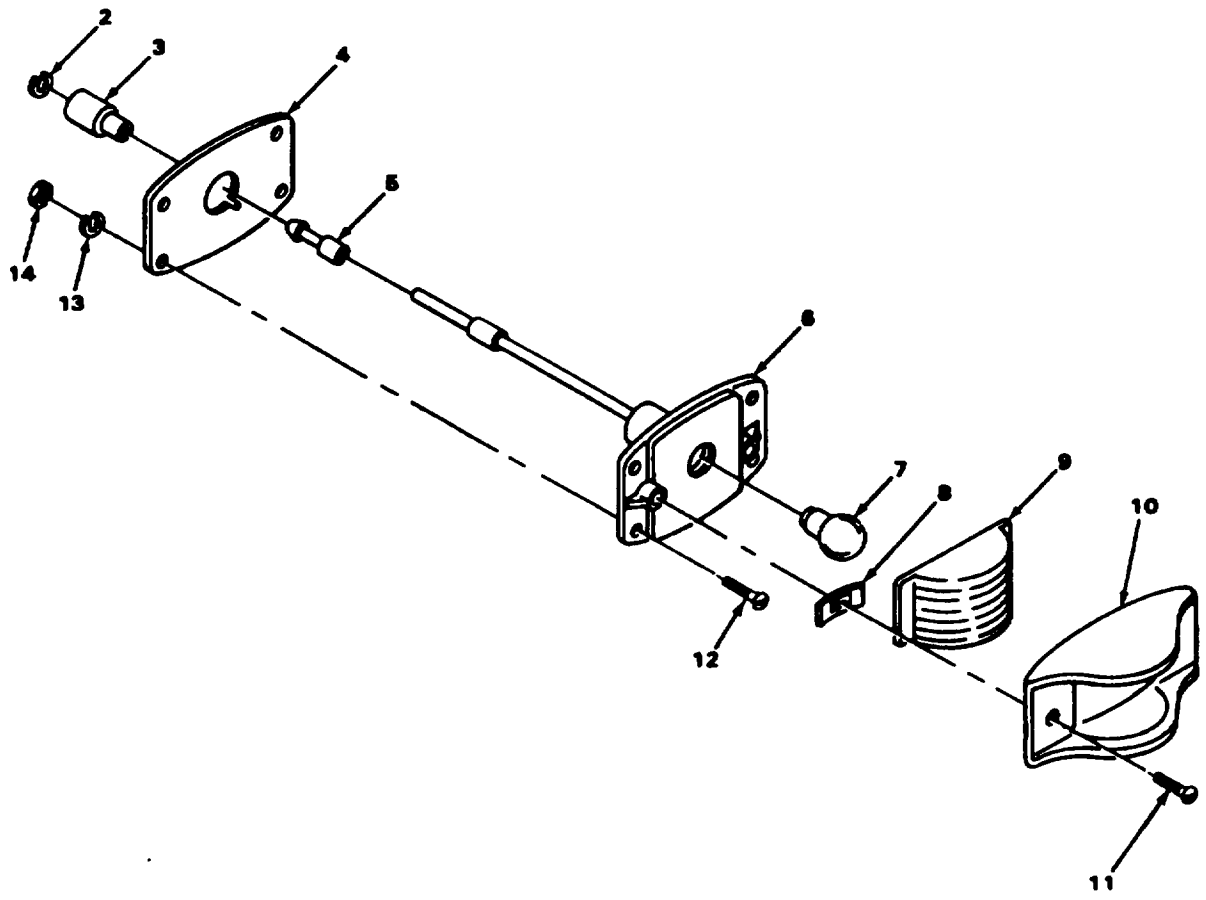

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FIGURE 4. MARKER LIGHT ASSEMBLY..

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				0609 LIGHTS FIG. 4 MARKER LIGHTS ASSEMBLY	
1	PAOOO	96906	MS35423-2	LIGHT,MARKER,CLEARA	2
2	PAOZZ	19207	8338567	WASHER, SLOTTED	1
3	PAOZZ	19207	8338566	SHELL, ELECTRICAL CO	1
4	PAOZZ	73331	5939841	FELT, MECHANICAL, PRE	1
5	PAOZZ	96906	MS27148-2	CONTACT, ELECTRICAL	1
6	PAOZZ	73331	5939831	PLATE, MOUNTING, LAMP	1
7	PAOZZ	96906	MS15570-1251	LAMP, INCANDESCENT	1
8	PAOZZ	78553	C1059-014-1	PUSH ON NUT	2
9	PAOZZ	96906	MS35421-2	LENS, LIGHT RED	1
10	PAOZZ	73331	5939830	RETAINER, LENS	1
11	PAOZZ	96906	MS51959-61	SCREW, MACHINE	2
12	PAOZZ	96906	MS35207-265	SCREW,MACHINE	4
13	PAOZZ	96906	MS35338-43	WASHER,LOCK	4
14	PAOZZ	96906	MS35650-302	NUT,PLAIN,HEXAGON	4
				END OF FIGURE	

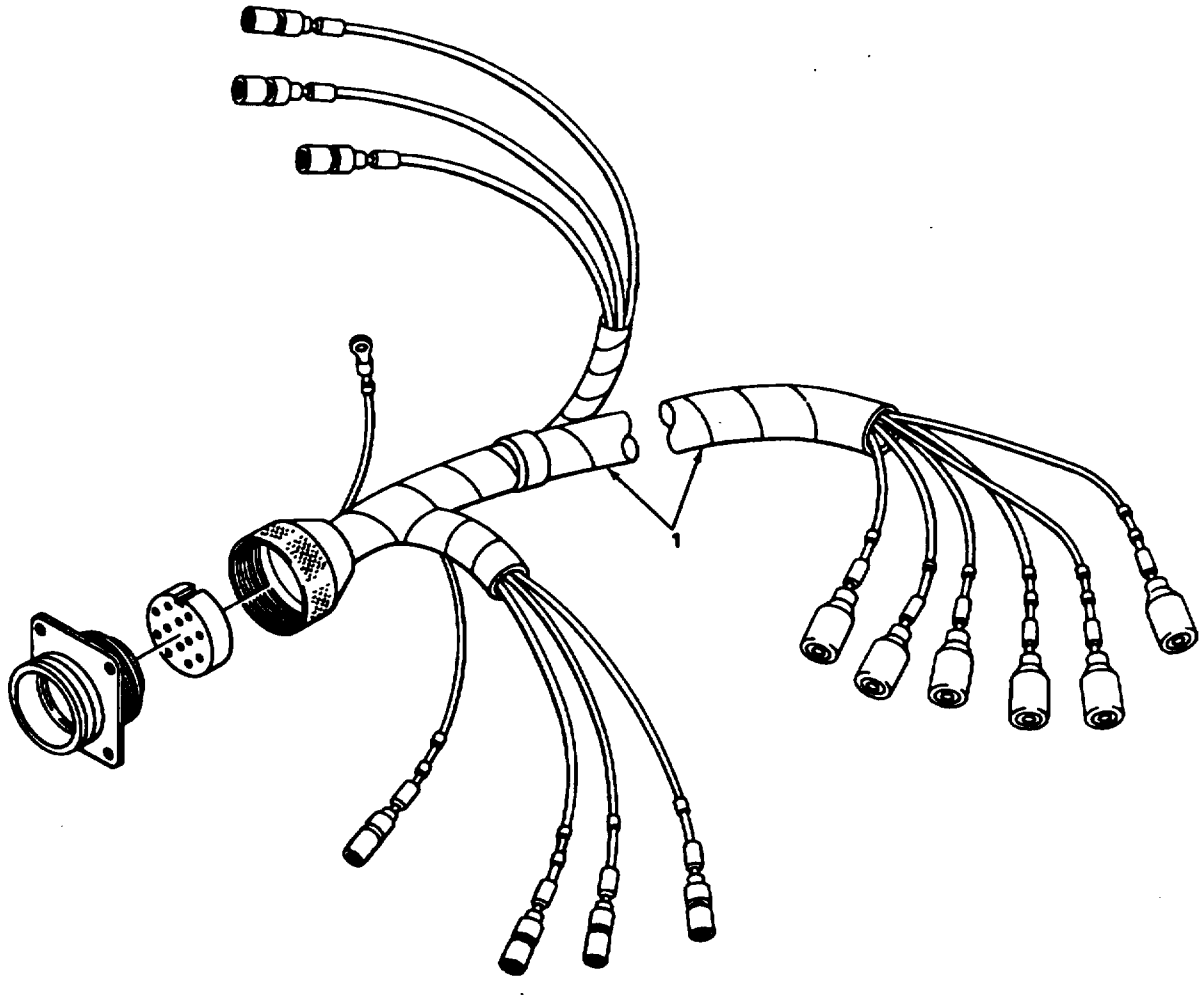

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FIGURE 5. WIRING HARNESS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				0613 CHASSIS WIRING HARNESS FIG. 5 WIRING HARNESS	
1	PAOZZ	19207	10919562	WIRING HARNESS, BRAN	1
				END OF FIGURE	

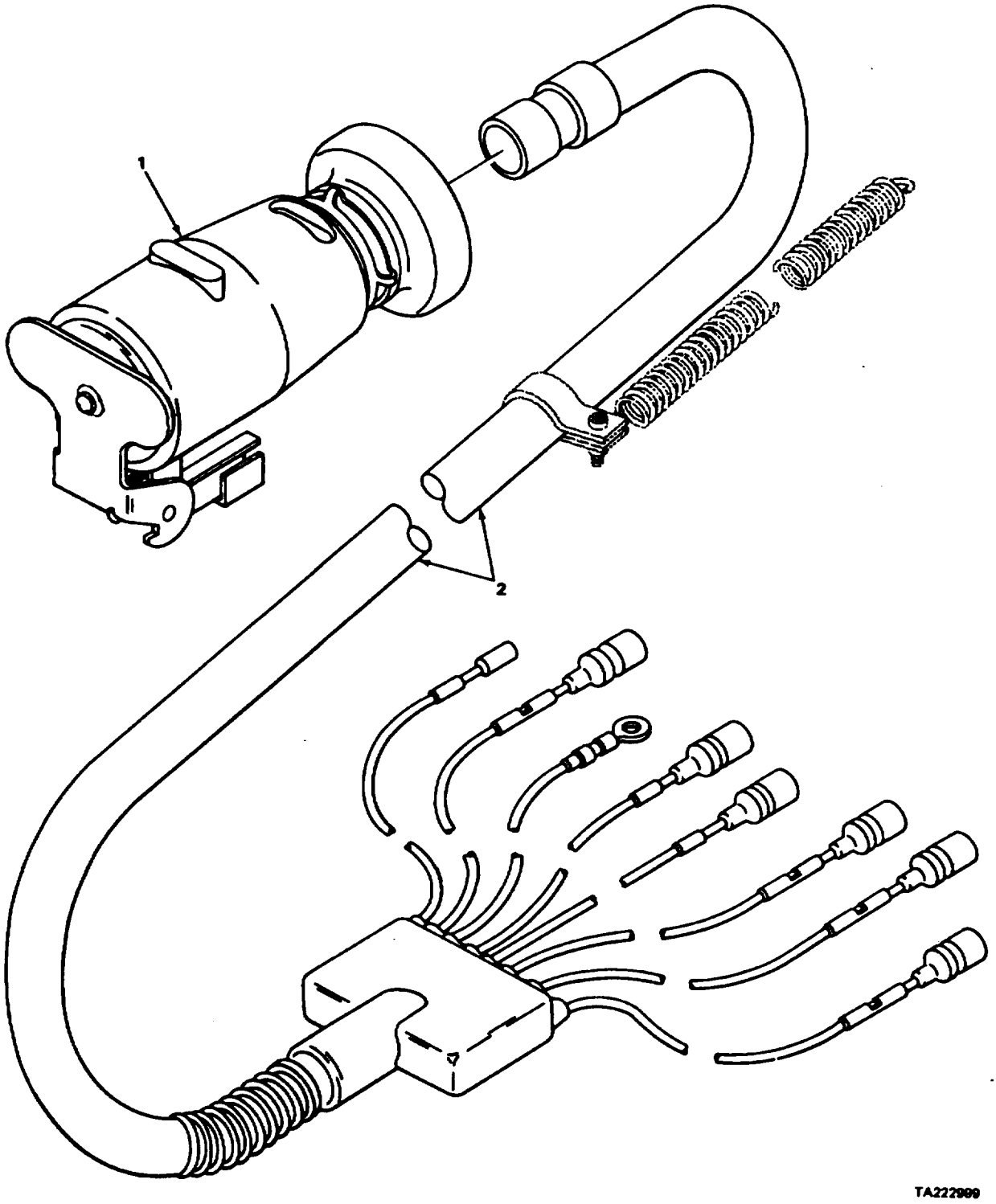

FIGURE 6. INTERVEHICULAR CABLE ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				0613 CHASSIS WIRING HARNESS FIG. 6 INTERVEHICULAR CABLE ASSEMBLY	
1	PAOZZ	19207	8724316	SHELL,ELECTRICAL CO POWER CABLE	1
2	PAOZZ	19207	7055100	WIRING HARNESS INTERVEHICULAR	1
				END OF FIGURE	

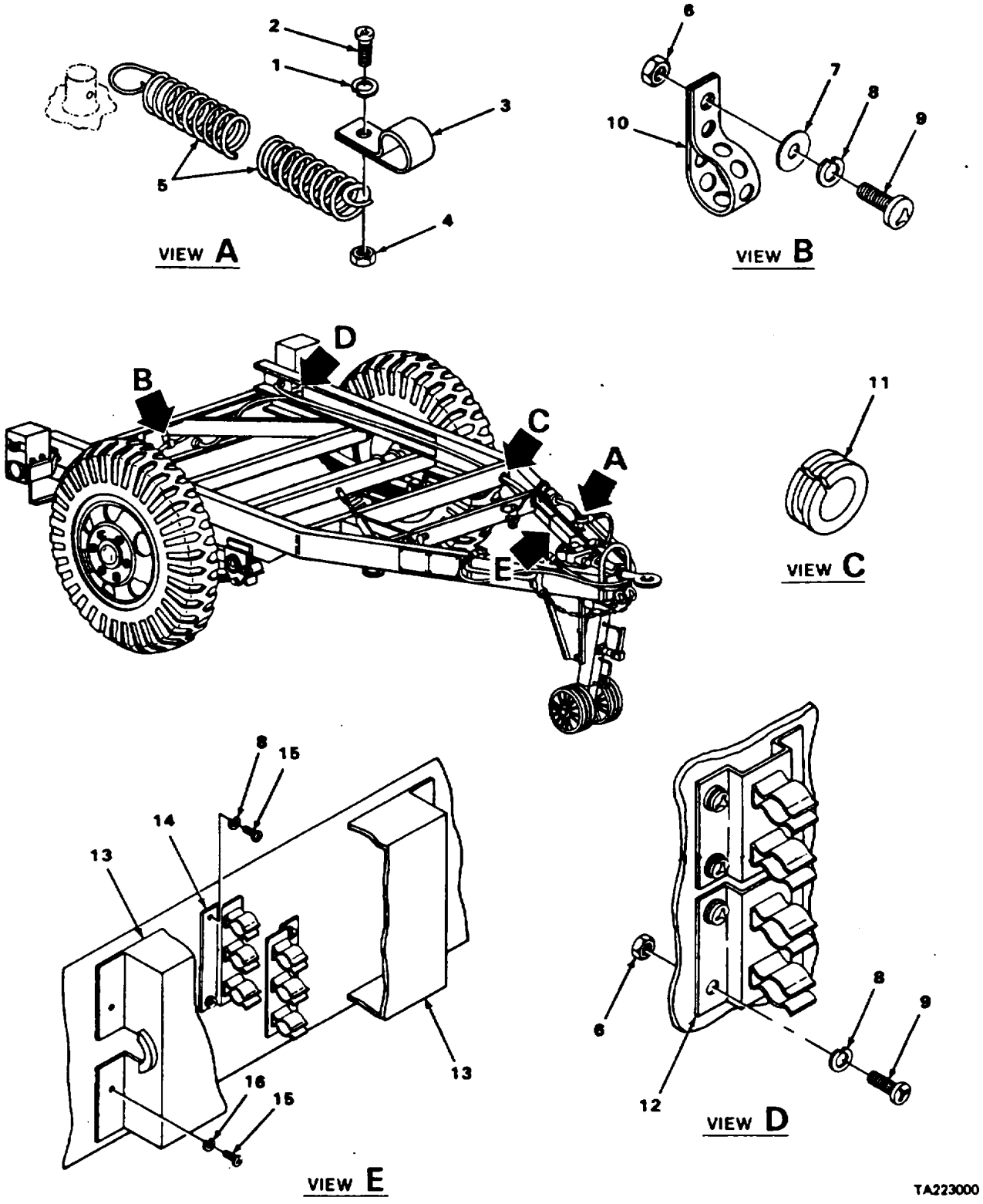

FIGURE 7. WIRING HARNESS ATTACHING PARTS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				0613 CHASSIS WIRING HARNESS FIG. 7 WIRING HARNESS ATTACHING PARTS	
1	PAOZZ	96906	MS35338-42	WASHER,LOCK CLAMP	1
2	PAOZZ	96906	MS35206-245	SCREW, MACHINE CLAMP	1
3	PAOZZ	19207	545033	CLAMP,LOOP INTERVEHICULAR CABLE TO SPRING	1
4	XDOZZ	96906	MS35649-282	NUT,PLAIN,HEXAGON CLAMP	1
5	PAOZZ	40342	N12929	SPRING,HELICAL,EXTE	1
6	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON STRAP MOUNTING	13
7	PAOZZ	96906	MS27183-10	WASHER,FLAT STRAP MOUNTING	11
8	PAOZZ	96906	MS35338-44	WASHER,FLAT STRAP AND CLIP MOUNTING	15
9	PAOZZ	96906	MS35206-281	SCREW,MACHINE STRAP,WIRING HARNESS	13
10	PAOZZ	19207	10905840	STRAP,TIEDOWN,ELECT WIRING HARNESS	11
11	PAOZZ	96906	MS35489-80	GROMMET,NONMETALLIC	1
12	PAOZZ	19207	8747908-1	CLIP ASSEMBLY	2
13	PAOZZ	19207	8342195	COVER,ACCESS	1
14	PAOZZ	19207	8747908	CLIP ASSY,SPRING,TE	2
15	PAOZZ	96906	MS24629-58	SCREW,TAPPING,THREA	6
16	PAOZZ	96906	MS35333-40	WASHER,LOCK ACCESS COVER MOUNTING	4
				END OF FIGURE	

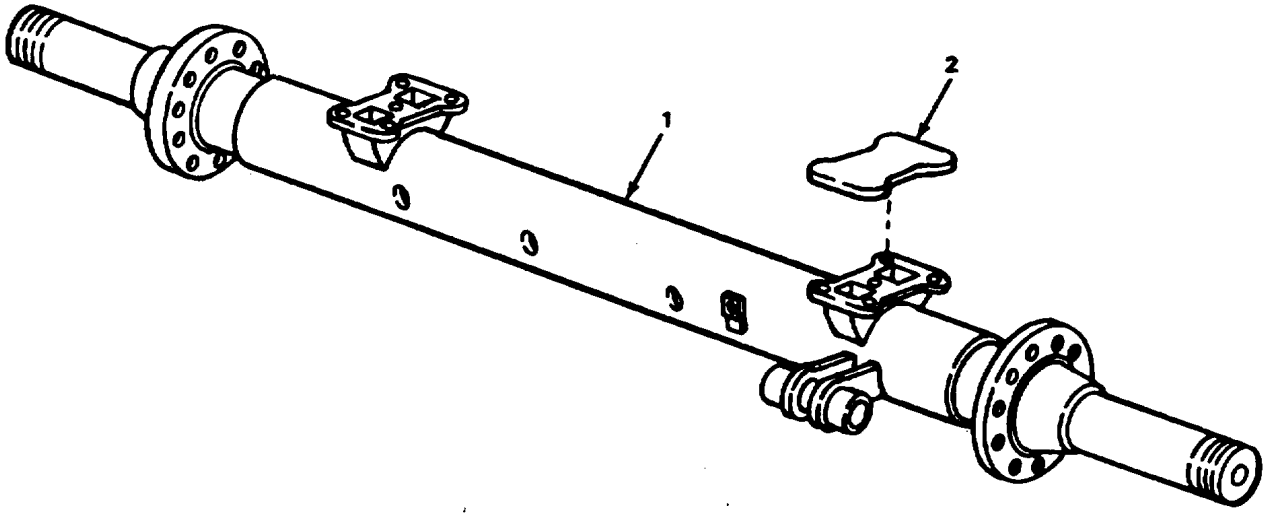

FIGURE 8. AXLE ASSEM8LY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 11 REAR AXLE 1100 REAR AXLE ASSEMBLY FIG. 8 AXLE ASSEMBLY	
1	PFOZZ	19207	10910871	AXLE,VEHICULAR,NOND AXLE ASSEMBLY	1
2	PAOZZ	19207	10910879	BUMPER,NONMETALLIC	1
				END OF FIGURE	

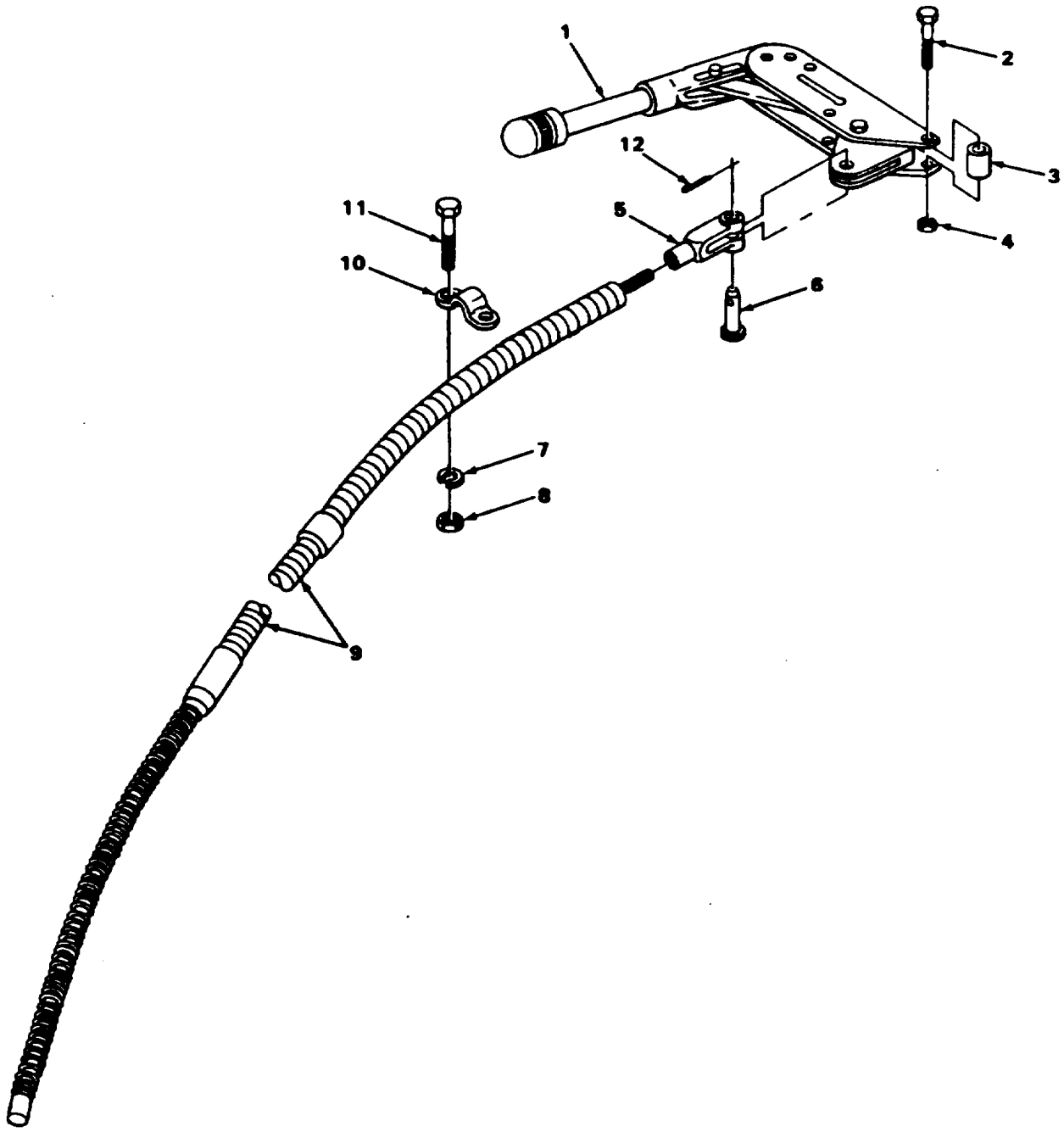

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FIGURE 9. HAND BRAKE ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 12 BRAKES 1201 HAND BRAKES FIG. 9 HAND BRAKE ASSEMBLY	
1	PAOZZ	92867	01001307	LEVER,MANUAL CONTRO HANDBRAKE	2
2	PAOZZ	96906	MS90725-67	SCREW,CAP,HEXAGON H HANDBRAKE LEVER MOUNTING	6
3	PAOZZ	19207	8699500	SPACER,SLEEVE HANDBRAKE LEVER MOUNTING	6
4	PAOZZ	96906	MS51922-17	NUT,SELF-LOCKING,HE HANDBRAKE LEVER MOUNTING	6
5	PAOZZ	96906	MS35812-4	CLEVIS,ROD END HANDBRAKE CABLE	2
6	PAOZZ	96906	MS35810-4	PIN,STRAIGHT,HEADED LEVER TO CLEVIS	2
7	PAOZZ	96906	MS35338-45	WASHER,LOCK	4
8	PAOZZ	96906	MS51967-5	NUT,PLAIN,HEXAGON	2
9	PAOZZ	96906	MS53060-5	CONTROL ASSEMBLY,PU	2
10	PAOZZ	19207	5303461	BRACKET,BRAKE CABLE	2
11	PAOZZ	96906	MS35206-295	SCREW,MACHINE	4
12	PAOZZ	96906	MS24665-283	PIN,COTTER	2
				END OF FIGURE	

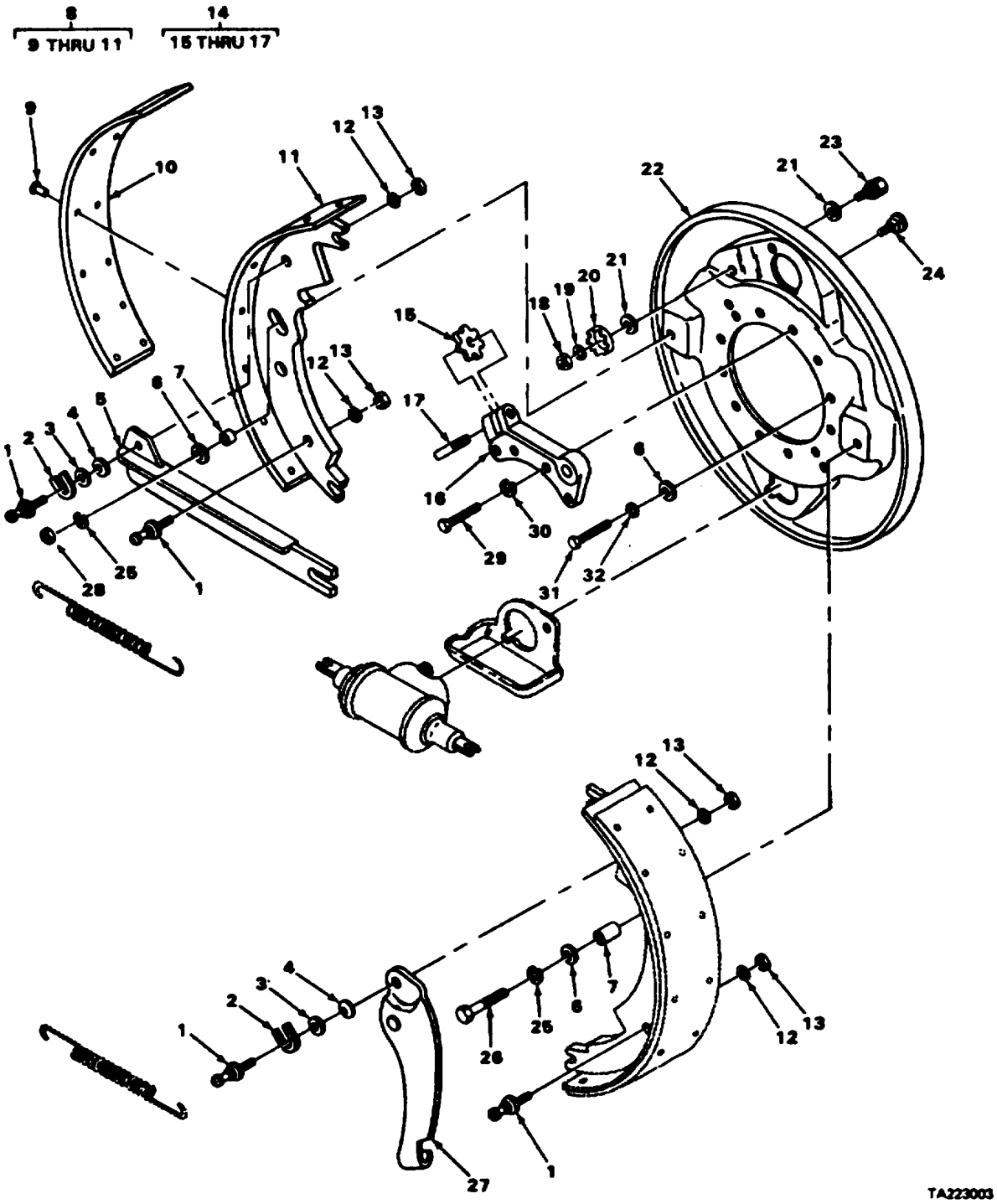

FIGURE 10. SERVICE BRAKES.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1202 SERVICE BRAKES FIG. 10 SERVICE BRAKES	
1	PAOZZ	63477	F17758	PIN,SERVICE BRAKE	8
2	PAOZZ	19207	8733937	WASHER,SLOTTED	4
3	PAOZZ	19207	8733936	WASHER,FLAT	4
4	PAOZZ	19207	8733935	WASHER,SPRING TENSI	4
5	PAOZZ	63477	FD17762	LINK EMERGENCY BRAK RIGHT HAND	1
5	PAOZZ	19207	8733926	CONNECTING LINK,RIG BRAKE LEFT HAND	1
6	PAOZZ	19207	5323088	WASHER,FLAT	10
7	PAOZZ	19207	7412103	SPACER,SLEEVE	1
8	PAOFF	63477	F19223	BRAKE SHOE	4
9	PAFZZ	96906	MS16536-175	RIVET,TUBULAR BRAKE LINING	16
10	PAFZZ	19207	8720517	LINING,FRICTION BRAKE	1
11	XAOZZ	19207	7064979	WEB AND TABLE BRAKE SHOE	1
12	PAOZZ	96906	MS35335-36	WASHER,LOCK	8
13	PAOZZ	96906	MS51970-4	NUT,PLAIN,HEXAGON	8
14	PAOOO	63477	F17764	SUPPORT AND ADJUSTE BRAKE SHOE, LEFT HAND	2
14	PAOOO	18876	8733897	SUPPORT AND ADJUSTE BRAKE SHOE, RIGHT HAND	2
15	XAOZZ	19207	7412123	WHEEL ADJUSTING BRA	2
16	PAOZZ	19207	8733908	SUPPORT ASSY BRAKE SHOE,LEFT HAND	2
16	PAOZZ	19207	8733909	SUPPORT ASSEMBLY BRAKE SHOE,RIGHT HAND	2
17	PAOZZ	63477	F12084	SCREW,MACHINE BRAKE SHOE,LEFT	2
17	PAOZZ	63477	F12085	SCREW,MACHINE BRAKE SHOE,RIGHT	2
18	PAOZZ	96906	MS35691-13	NUT,PLAIN,HEXAGON ADJUSTING BOLT	4
19	PAOZZ	96906	MS35333-41	WASHER,LOCK ADJUSTING BOLT	4
20	PAOZZ	63477	FC14257	PINION,BRAKE SHOE A ADJUSTING BOLT	4
21	PAOZZ	19207	7412120	WASHER,FLAT ADJUSTING BOLT	8
22	PFOZZ	19207	8733933	PLATE,BACKING,BRAKE	2
23	PAOZZ	19207	8720331	SPRING AND BOLT ASS ADJUSTING	4
24	PAOZZ	19207	7411760	BOLT,SQUARE NECK	1
25	PAOZZ	96906	MS35338-44	WASHER,LOCK	2
26	PAOZZ	96906	MS90727-8	SCREW,CAP,HEXAGON H	1
27	PAOZZ	02686	123917	LEVER,LEFT HAND BRA	1
27	PAOZZ	63477	F17751	LEVER,RIGHT HAND BR	1
28	PAOZZ	96906	MS51970-1	NUT,PLAIN,HEXAGON	1
29	PAOZZ	96906	MS18154-58	SCREW,CAP,HEXAGON H SUPPORT RETAINING	16
30	PAOZZ	96906	MS35335-35	WASHER,LOCK SUPPORT RETAINING	16
31	PAOZZ	96906	MS90727-64	SCREW,CAP,HEXAGON H	8
32	PAOZZ	96906	MS35335-35	WASHER,LOCK	8
				END OF FIGURE	

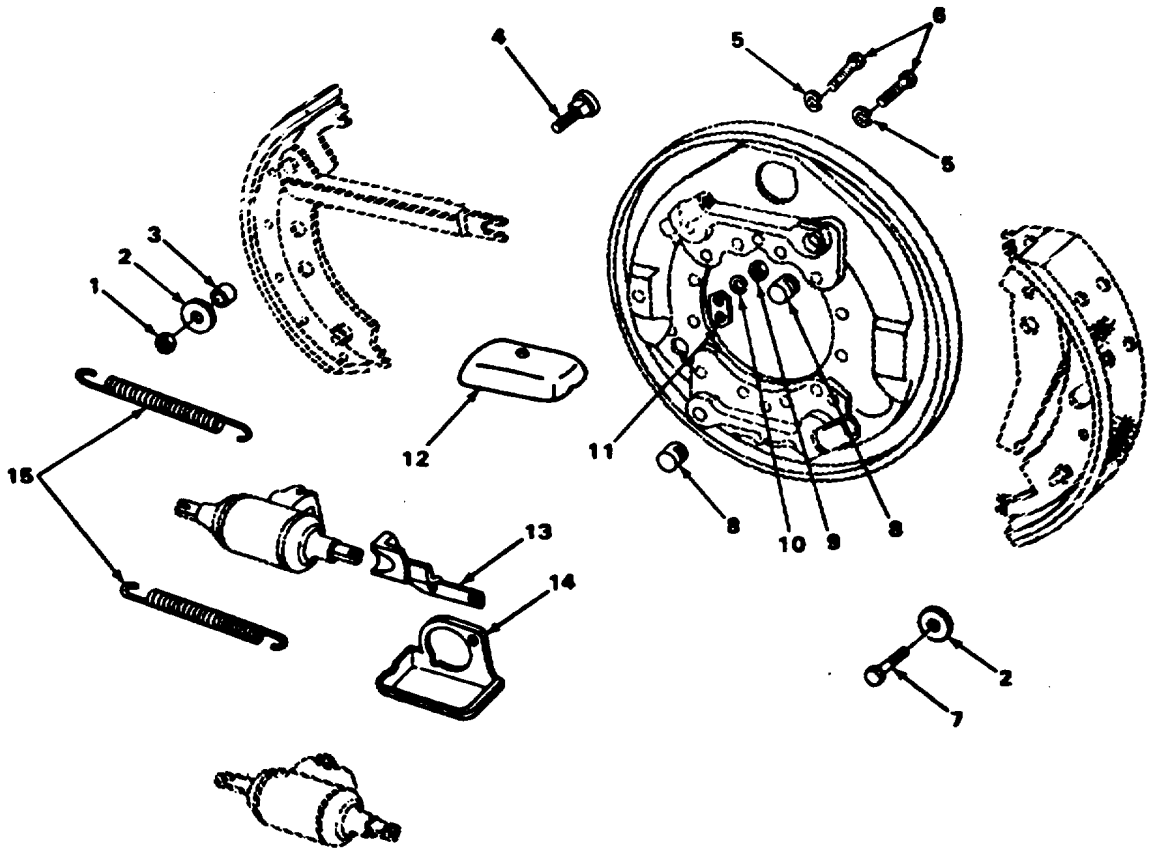

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FIGURE 11. BRAKE RELATED ITEMS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1202 SERVICE BRAKES FIG. 11 BRAKE RELATED ITEMS	
1	PAOZZ	96906	MS51970-1	NUT,PLAIN,HEXAGON BRAKE SHOE RETAINING	1
2	PAOZZ	63477	F6783	WASHER,FLAT BRAKE SHOE RETAINING	2
3	PAOZZ	19207	7412103	SPACER,SLEEVE BRAKE SHOE RETAINING	2
4	PAOZZ	19207	7411760	BOLT,SQUARE NECK BRAKE SHOE RETAINING	1
5	PAOZZ	96906	MS35338-45	WASHER,LOCK	2
6	PAOZZ	96906	MS90725-31	BOLT,MACHINE WHEEL CYLINDER RETAINING	2
7	PAOZZ	96906	MS90727-8	SCREW,CAP,HEXAGON H BRAKE SHOE RETAINING	1
8	PAOZZ	63477	F12088	PIN,STRAIGHT,HEADLE BRAKE SHOE SUPPORT	2
9	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON	4
10	PAOZZ	96906	MS35338-44	WASHER,LOCK BRACKET,CABLE GUIDE, MOUNTING	4
11	PAOZZ	63477	F19635	BRACKET,LEFT HAND BRAKE,	1
11	PAOZZ	63477	F19636	BRACKET,RIGHT HAND BRAKE,	1
12	PAOZZ	63477	F9556	SHIELD, BRAKE DISK SPARK	
13	PAOZZ	63477	F19581	RAMP,CABLE BRAKE SHOE,LEFT HAND	1
13	PAOZZ	63477	F19582	RAMP,BRAKE CABLE BRAKE SHOE,RIGHT HAND	1
14	PAOZZ	19207	7412068	SHIELD,BRAKE DISK SPARK	1
15	PAOZZ	19207	8333770	SPRING,HELICAL,EXTE	2
				END OF FIGURE	

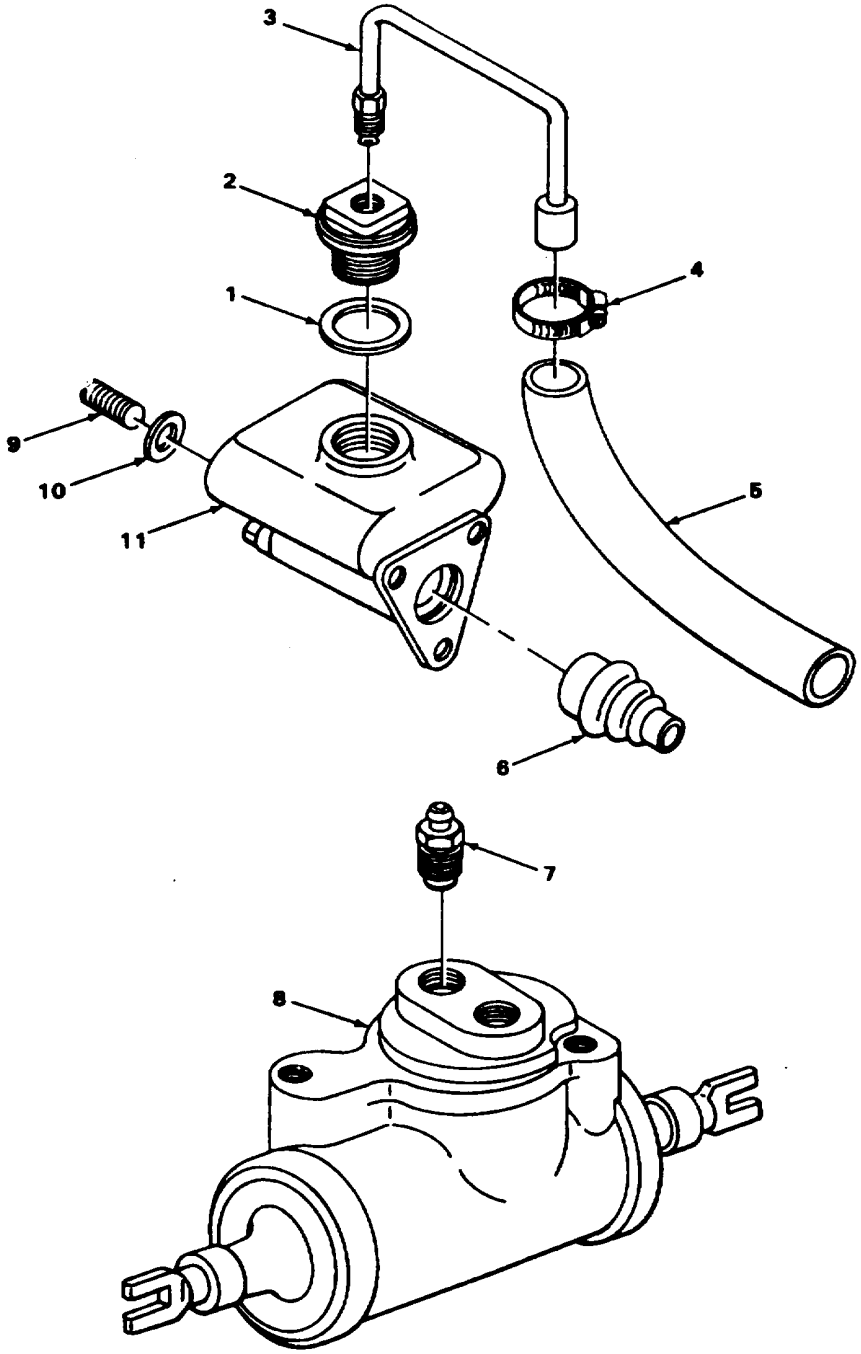

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FIGURE 12. HYDRAULIC MASTER CYLINDER AND WHEEL CYLINDER.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1204 HYDRAULIC BRAKE SYSTEM FIG. 12 HYDRAULIC MASTER CYLINDER AND WHEEL CYLINDER	
1	PAOZZ	19207	7373354	SPACER,RING	1
2	PAOZZ	63477	7979691	CAP,FILLER OPENING	1
3	PAOZZ	19207	8365426	TUBE ASSEMBLY,METAL	1
4	XDOZZ	96906	MS35842-2	CLAMP,HOSE	1
5	PAOZZ	96906	MS521301A204120	HOSE,NONMETALLIC	1
6	PAOZZ	19207	7979699	BOOT,DUST AND MOIST	1
7	PAOZZ	19207	7373260	BLEEDER VALVE,HYDRA	1
8	PAOZZ	63477	F56114	CYLINDER ASSEMBLY,H WHEEL BRAKE	4
9	PAOZZ	63477	5156653	ADAPTER,STRAIGHT,TU MASTER CYLINDER	1
10	PAOZZ	56442	N7557	WASHER,FLAT	1
11	PAOZZ	63477	FE14240	CYLINDER ASSEMBLY,H BRAKE MASTER	1
				END OF FIGURE	

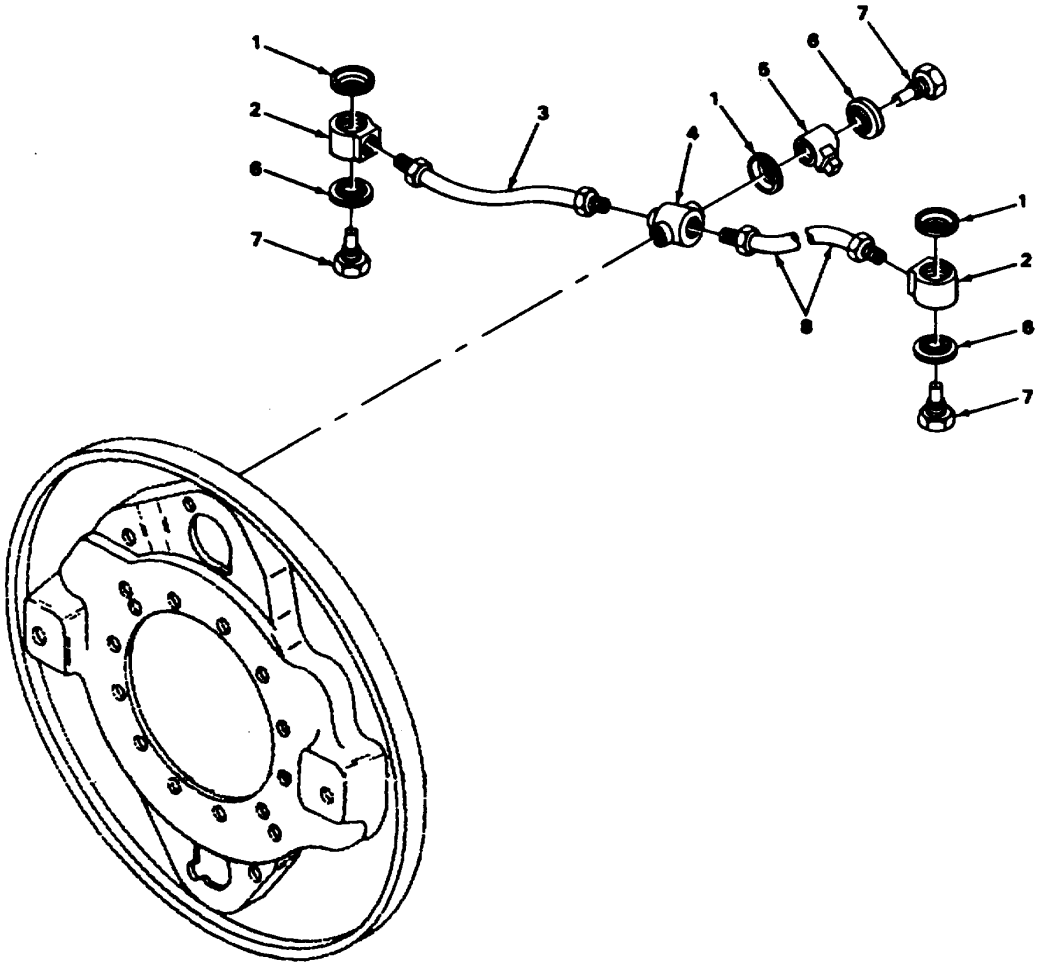

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FIGURE 13. HYDRAULIC BRAKE LINES AND FITTINGS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1204 HYDRAULIC BRAKE SYSTEM FIG. 13 HYDRAULIC BRAKE LINES AND FITTINGS	
1	PAOZZ	19207	7412088	WASHER,SHOULDERED A BRAKE LINE	6
2	PAOZZ	12204	1502415	CONNECTOR,MULTIPLE, BRAKE LINE	4
3	PAOZZ	19207	8733922	TUBE ASSEMBLY,METAL BRAKE LINE	2
4	PAOZZ	19207	7411903	CONNECTOR,MULTIPLE	2
5	PAOZZ	19207	7745464	TEE,TUBE AXLE BRAKE LINE TO BACK PLATE	2
6	PAOZZ	89346	48122H	SPACER,RING BRAKE LINE	6
7	PAOZZ	63477	7412079	BOLT,FLUID PASSAGE BRAKE LINE CONNECTOR	6
8	PAOZZ	19207	8733920	TUBE ASSEMBLY,METAL BRAKE LINE	2
				END OF FIGURE	

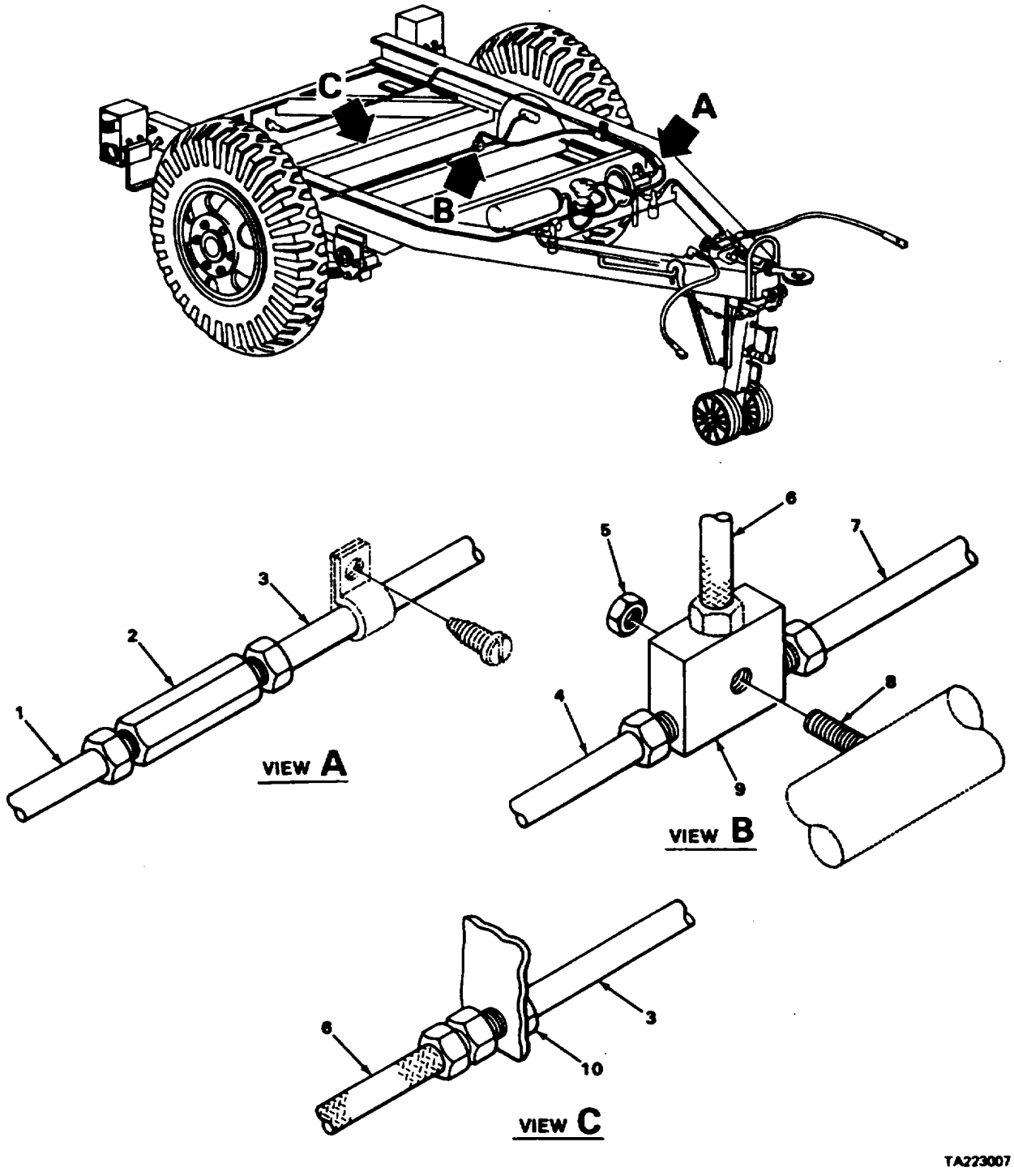

FIGURE 14. HYDRAULIC BRAKE LINES.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1204 HYDRAULIC BRAKE SYSTEM FIG. 14 HYDRAULIC BRAKE LINES	
1	PFOZZ	19207	10919495-1	TUBE ASSEMBLY,METAL MASTER CYLINDER	1
2	XBOZZ	21450	190152	UNION MASTER CYLINDER TUBE	1
3	PFOZZ	19207	10919496-1	TUBE ASSEMBLY,METAL MASTER CYLINDER TUBE TO HOSE ASSEMBLY	1
4	PAOZZ	19207	10919491-1	TUBE ASSEMBLY,METAL AXLE BRAKE LINE,LEFT	1
5	PAOZZ	96906	MS51922-29	NUT,SELF-LOCKING,HE CONNECTOR TO AXLE SCREW	1
6	PAOZZ	63477	FC3700	HOSE ASSEMBLY,NONME AXLE TO FRAME	1
7	PAOZZ	19207	10919492-1	TUBE ASSEMBLY,METAL AXLE BRAKE LINE,RIGHT	1
8	PAOZZ	96906	MS90727-87	SCREW,CAP,HEXAGON H CONNECTOR TO AXLE	1
9	PAOZZ	79470	5167679	CONNECTOR,MULTIPLE, BRAKE LINE	1
10	PAOZZ	23705	137397	INVERTED NUT,TUBE C	8
				END OF FIGURE	

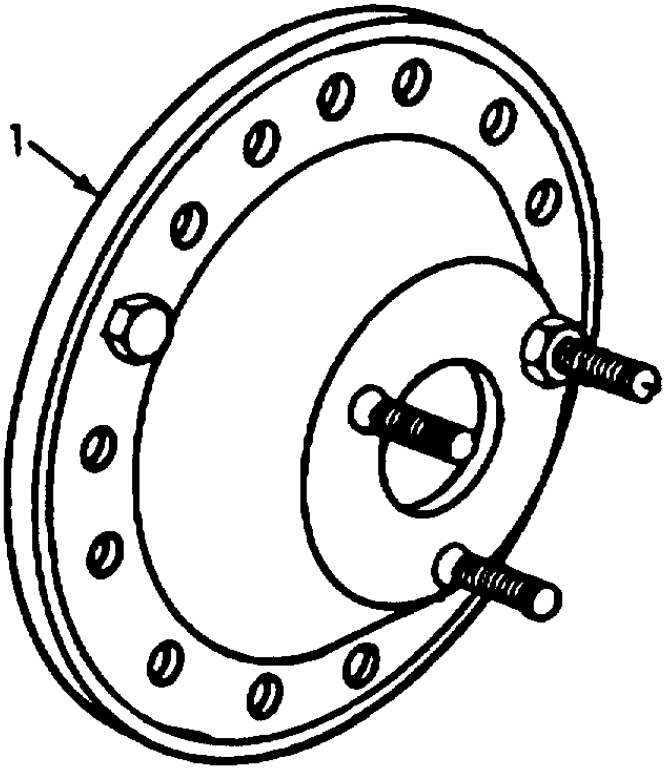

FIGURE 15. AIR HYDRAULIC CHAMBER ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1208 AIR BRAKE SYSTEM FIG. 15 AIR CHAMBER ASSEMBLY	
1	PAOZZ	23075	A298320	CHAMBER,AIR BRAKE	1
				END OF FIGURE	

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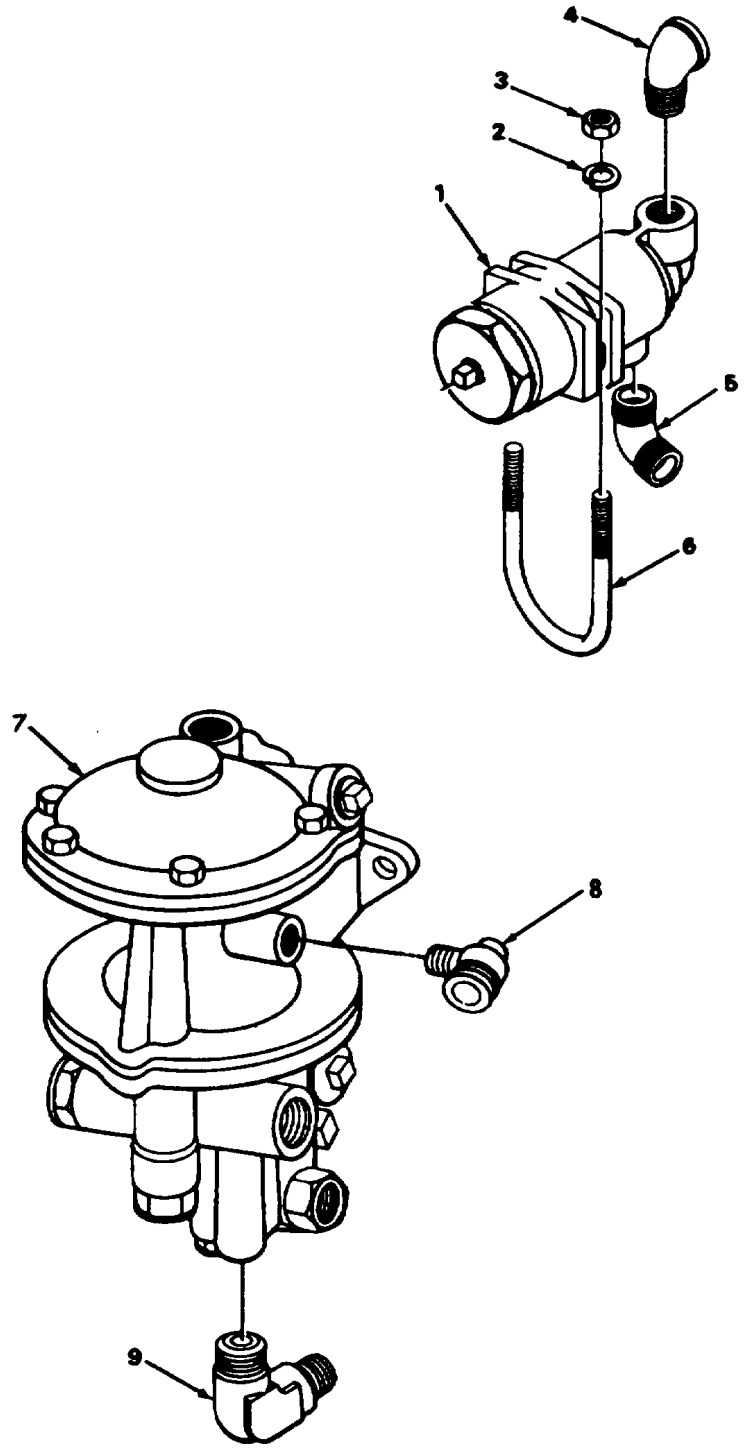

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FIGURE 16. AIR FILTER ASSEMBLY AND EMERGENCY RELAY VALVE.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1208 AIR BRAKE SYSTEM FIG. 16 AIR FILTER ASSEMBLY AND EMERGENCY RELAY VALVE	
1	PAOZZ	23705	A298749	AIR FILTER,BRAKE LI	2
2	PAOZZ	96906	MS35338-44	WASHER,LOCK	4
3	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON	4
4	PAOZZ	96906	MS39230-2	ELBOW,PIPE AIR FILTER OUTLET	2
5	PAOZZ	96906	MS39185-1	ELBOW,PIPE TO TUBE AIR FILTER INLET	2
6	PAOZZ	19207	7979296	BOLT,U AIR FILTER TO FRAME	2
7	XDOZZ	96906	MS53004-2	PARTS KIT,RELAY VAL	1
8	PAOZZ	19207	7979297	.VALVE,CHECK	1
9	PAOZZ	96906	MS39182-5	.ELBOW,PIPE TO TUBE	1
				END OF FIGURE	

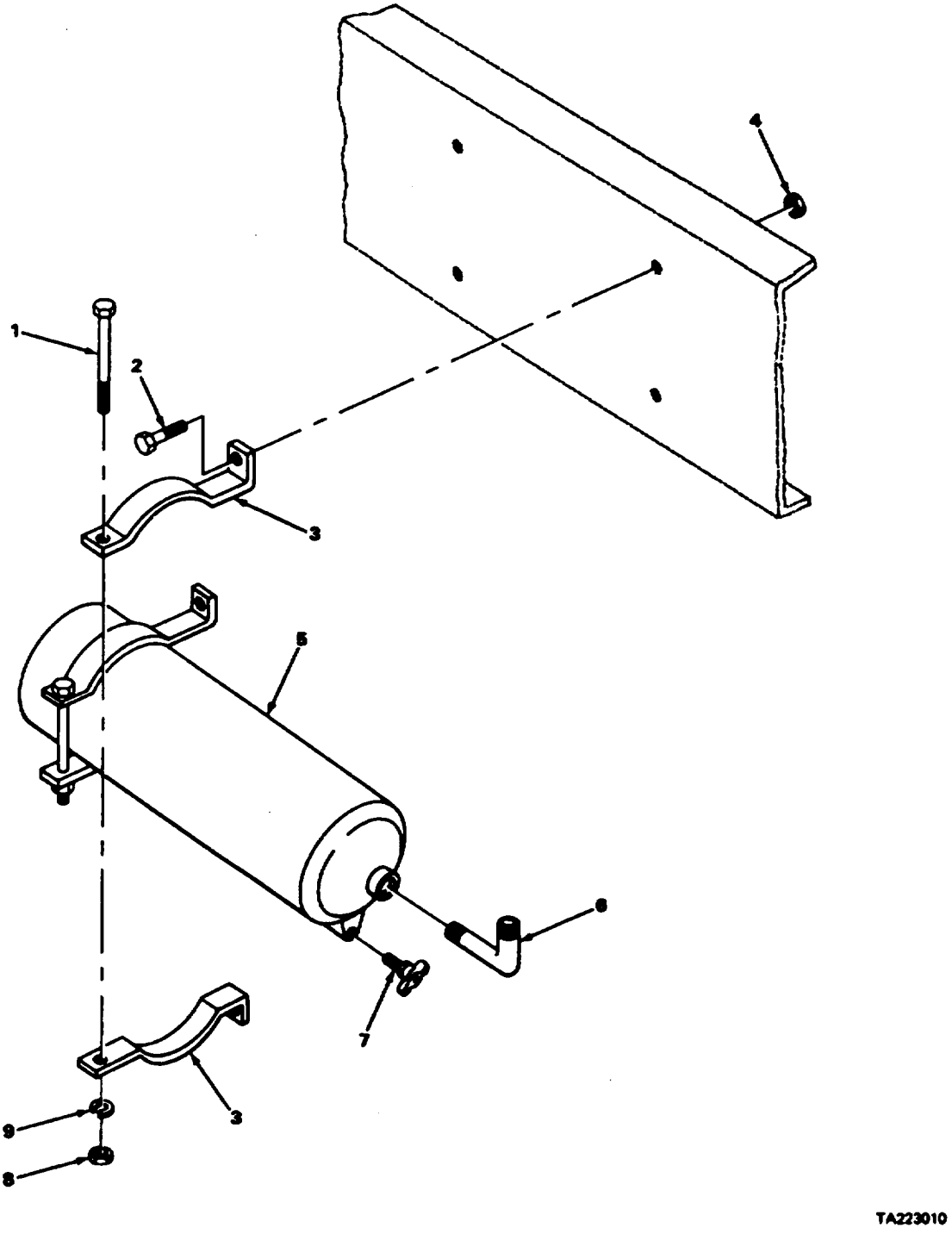

FIGURE 17. AIR BRAKE RESERVOIR.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1208 AIR BRAKE SYSTEM FIG. 17 AIR BRAKE RESERVOIR	
1	PAOZZ	96906	MS90727-74	SCREW,CAP,HEXAGON H	2
2	PAOZZ	96906	MS90727-60	SCREW,CAP,HEXAGON H	4
3	PAOZZ	40342	N13008	STRAP,RETAINING	4
4	PAOZZ	96906	MS21044N6	NUT,SELF-LOCKING,HE	4
5	PAOZZ	23705	A298748	TANK,PRESSURE	1
6	PFOZZ	96906	MS39182-6	ELBOW,PIPE TO TUBE	1
7	PAOZZ	96906	MS35782-5	COCK,DRAIN	2
8	PAOZZ	96906	MS51968-8	NUT,PLAIN,HEXAGON	2
9	PAOZZ	96906	MS35338-46	WASHER,LOCK	2
				END OF FIGURE	

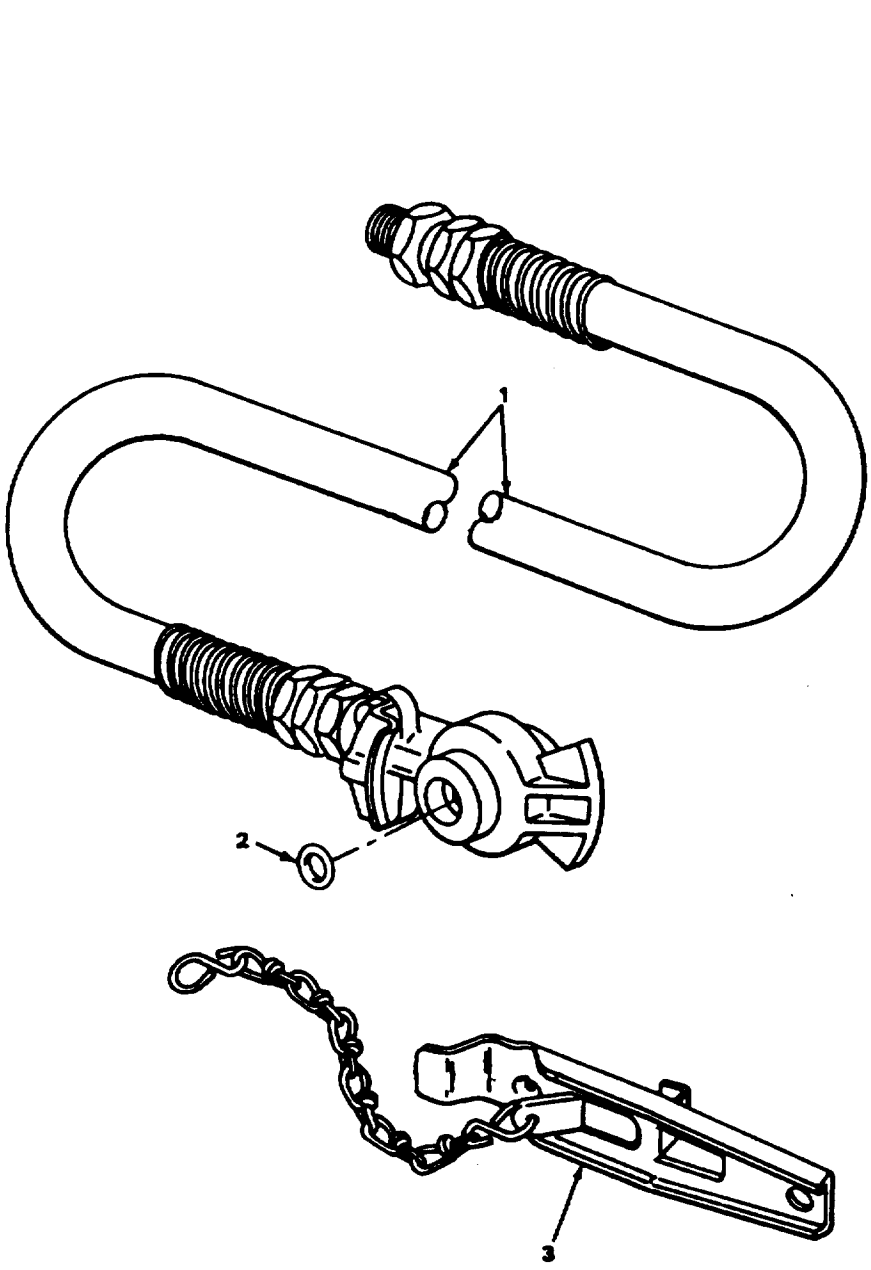

FIGURE 18. AIR HOSE ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1208 AIR BRAKE SYSTEM FIG. 18 AIR HOSE ASSEMBLY	
1	PAOZZ	06721	N13448	HOSE ASSEMBLY,NONME	1
2	PAOZZ	96906	MS35748-1	PACKING	2
3	PAOZZ	19207	7411021	DUMMY COUPLING,AUTO	2
				END OF FIGURE	

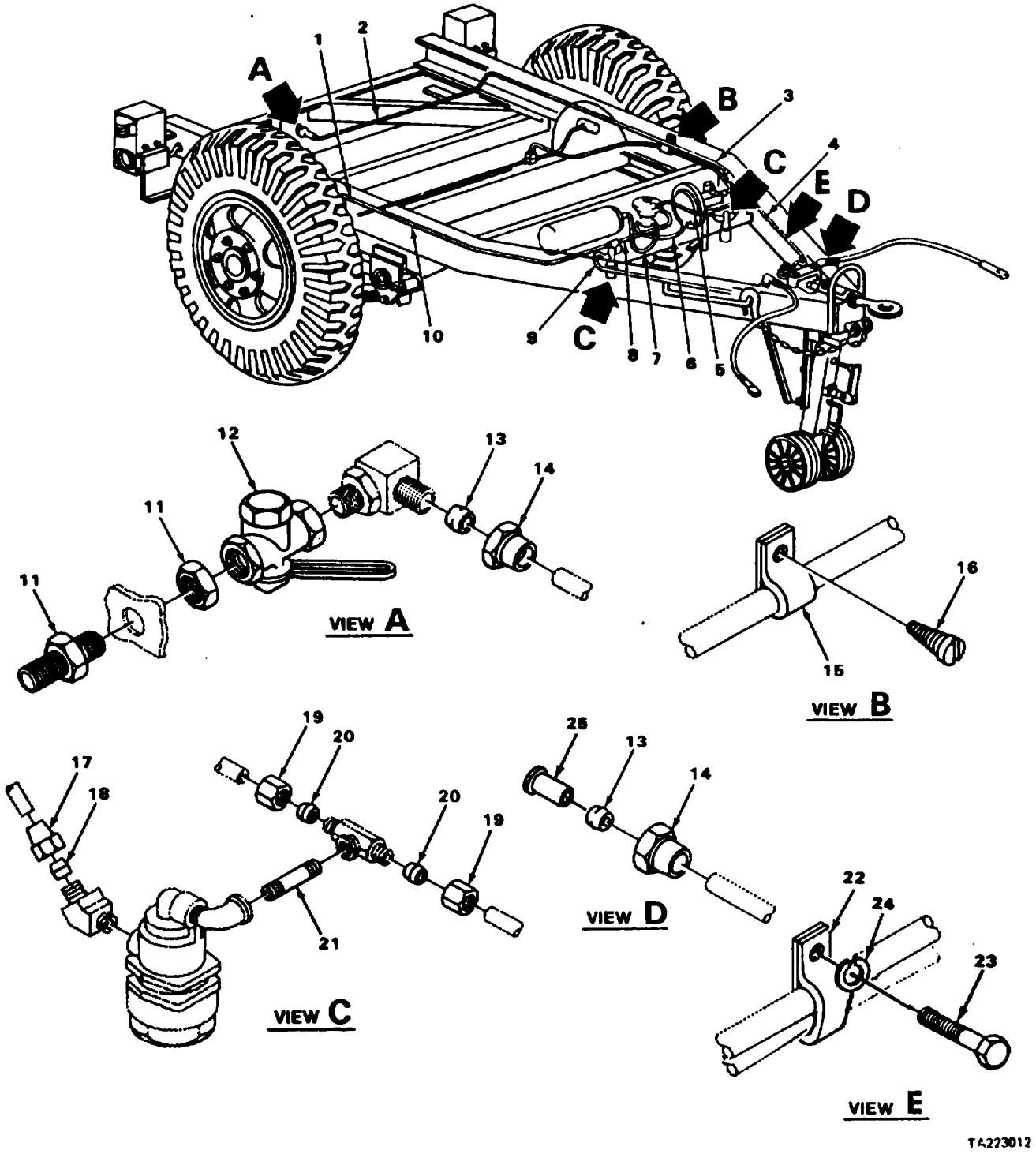

FIGURE 19. AIR LINES.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1208 AIR BRAKE SYSTEM FIG. 19 AIR LINES	
1	MOOZZ	19207	10919493-1	TUBE RIGHT REAR MAKE FROM TUBING P/N CPR10442D-2 (50.5 IN LG.)	1
2	MOOZZ	19207	10919493-2	TUBE LEFT REAR MAKE FROM TUBING P/N CPR10442D-2 (51.5 IN LG.)	1
3	MOOZZ	19207	10919494-2	TUBE LEFT FRONT MAKE FROM TUBING P/N CPR104420-2 (62.5 IN LG.)	1
4	MOOZZ	19207	10919497-2	TUBE LEFT MAKE FROM TUBING P/N CPR104420-2 (35.5 IN LG.)	1
5	MOOZZ	19207	10919502	TUBE LEFT MAKE FROM TUBING P/N CPR104420-2 (19.5 IN LG.)	1
6	MOOZZ	19207	10919501	TUBE, BENT, METALLIC MAKE FROM TUBING P/N CPR104420-2 (6.5 IN LG.)	1
7	MOOZZ	19207	10919500	TUBE MAKE FROM TUBING P/N CPR104420-2 (21 IN LG.)	1
8	MOOZZ	19207	10919499	TUBE RIGHT MAKE FROM TUBING P/N CPR104420-2 (34.5 IN LG)	1
9	MOOZZ	19207	10919497-1	TUBE, AIR HOSE ELBOW RIGHT MAKE FROM TUBING P/N CPR104420-2 (62.5) IN LG.)	1
10	MOOZZ	19207	10919494-1	TUBE RIGHT MAKE FROM TUBING P/N CPR104420-2 (81.5 IN LG.)	1
11	PAOZZ	40342	8330281	NIPPLE, PIPE REAR	2
12	PFOZZ	06853	285172	VALVE, BALL	2
13	PAOZZ	96906	MS39197-3	SLEEVE, COMPRESSION, AIR LINE UNION AND ELBOWS	6
14	PAOZZ	96906	MS39196-3	NUT, TUBE COUPLING AIR LINE UNION AND ELBOWS	6
15	PAOZZ	81348	CMDX2-3PT573036	CLAMP, LOOP TUBE MOUNTING	14
16	PAOZZ	96906	MS24629-58	SCREW, TAPPING, THREA TUBE MOUNTING	14
17	PAOZZ	96906	MS39196-4	NUT, TUBE COUPLING AIR LINE ELBOW	2
18	PAOZZ	96906	MS39197-4	SLEEVE, COMPRESSION, AIR LINE ELBOW	2
19	PAOZZ	96906	MS51823-5	NUT, TUBE COUPLING AIR LINE TEE	4
20	PAOZZ	96906	MS39212-5	SLEEVE, CLINCH, TUBE AIR LINE TEE	4
21	PAOZZ	14397	MS39187-2	NIPPLE, TUBE AIR FILTER TEE TO BALL VALVE LINE	1
22	PAOZZ	19207	7979851	BRACKET, PIPE	1
23	PAOZZ	96906	MS90726-31	BOLT, MACHINE	2
24	PAOZZ	96906	MS35338-45	WASHER, LOCK	2
25	PAOZZ	19207	CPR102321-1	INSERT, TUB FITTING	6
				END OF FIGURE	

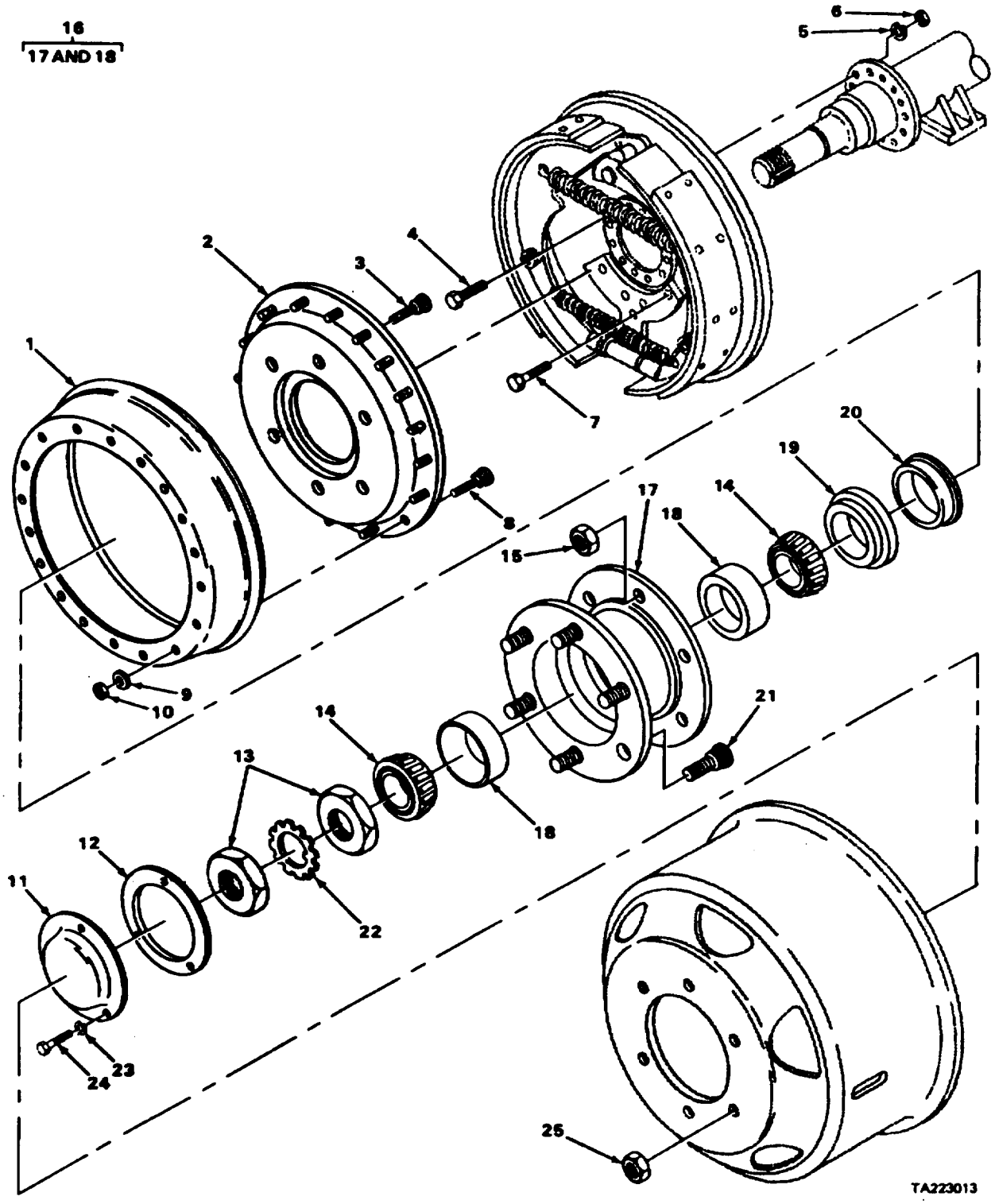

FIGURE 20. HUB AND DRUM ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 13 WHEELS 1311 WHEELS, HUBS AND DRUMS FIG. 20 HUB AND DRUM ASSEMBLY	
1	PAOFF	24617	2284031	BRAKE DRUM SERVICE AND PARKING	2
2	PAOZZ	19207	7413231	PLATE,BACKING,BRAKE	2
3	PAOZZ	96906	MS51946-11	BOLT,RIBBED SHOULDE BACK TO HUB	12
4	PAOZZ	96906	MS90727-64	SCREW,CAP,HEXAGON H BACK PLATE TO AXLE	24
5	PAOZZ	96906	MS35335-35	WASHER,LOCK BACK PLATE TO AXLE	24
6	PAOZZ	96906	MS51968-8	NUT,PLAIN,HEXAGON BACK PLATE TO AXLE	24
7	PAOZZ	96906	MS35206-279	SCREW,MACHINE BRAKE PLATE AXLE	8
8	PAOZZ	09386	70627E	BOLT,RIBBED NECK BACK TO DRUM	36
9	PAOZZ	96906	MS27183-14	WASHER,FLAT BACK TO DRUM	72
10	PAOZZ	96906	MS21045-6	NUT,SELF-LOCKING,HE BACK TO DRUM	72
11	PAOZZ	19200	6144454	HUB CAP,WHEEL	2
12	PAOZZ	56442	25030W	GASKET	2
13	PAOZZ	19207	7411379	NUT,PLAIN,OCTAGON WHEEL BEARING ADJUSTING AND LOCKING	4
14	PAOZZ	19207	7411376	CONE AND ROLLERS,TA	4
15	PAOZZ	24617	451031	NUT,SELF-LOCKING,HE HUB TO DRUM BACK	12
16	PAOOO	09386	71423E	HUB AND CUP ASSEMBL	2
17	PAOZZ	19207	8719915	HUB	1
18	PAOZZ	19207	7411377	CUP,TAPERED ROLLER	2
19	PAOZZ	19207	7411429	SEAL,PLAIN ENCASED	2
20	PAOZZ	23862	2275698	SPACER,SLEEVE HUB OIL SEAL	2
21	PAOZZ	96906	MS51946-1	BOLT,RIBBED HOULDE WHEEL HUB, RIGHT HAND	6
21	PAOZZ	96906	MS51946-2	BOLT,RIBBED SHOULDE WHEEL HUB,LEFT HAND	6
22	PAOZZ	19207	7411378	WASHER,KEY	2
23	PAOZZ	96906	MS35338-160	WASHER,LOCK	6
24	PAOZZ	96906	MS35206-260	SCREW,MACHINE	6
25	PAOZZ	96906	MS51983-1	NUT,PLAIN,SINGLE BA WHEEL TO HUB, LEFT HAND	6
25	PAOZZ	96906	MS51983-2	NUT,PLAIN,SINGLE BA WHEEL TO HUB, RIGHT HAND	6
				END OF FIGURE	

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2 AND 31

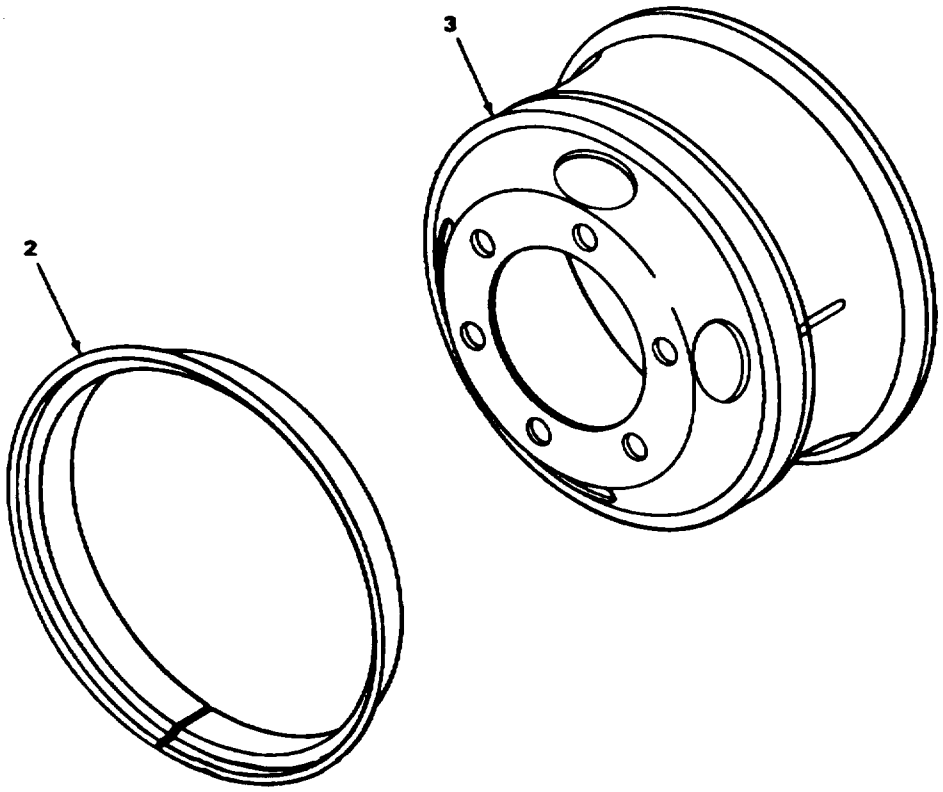

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FIGURE 21. WHEELS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1311 WHEEL ASSEMBLY FIG. 21 WHEELS	
1	PAOOO	96906	MS53044-5	WHEEL,PNEUMATIC TIR WITH RING	2
2	PAOZZ	96906	MS53045-3	.RING,SIDE,AUTOMOTIVWHEEL	1
3	PAOZZ	09386	65890	.WHEEL,PNEUMATIC TIRWITHOUT RING	1
				END OF FIGURE	

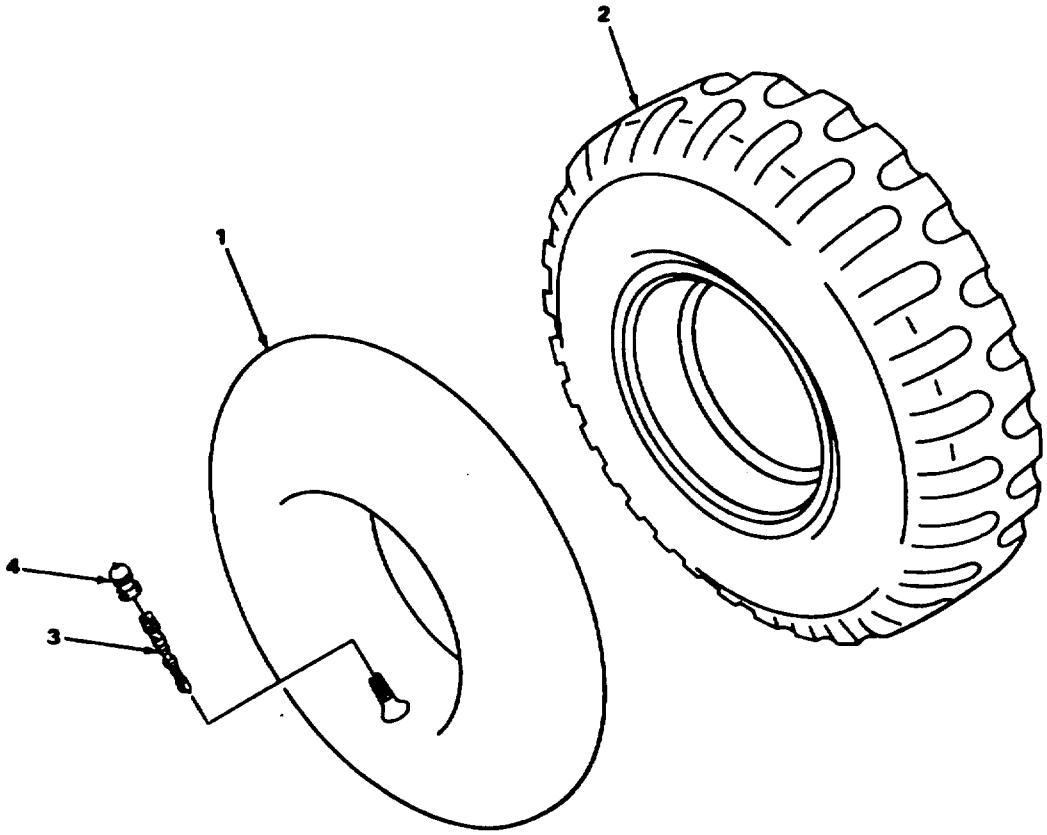

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FIGURE 22. TIRES, TUBES AND VALVES.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1313 TIRES AND TUBES FIG. 22 TIRES, TUBES AND VALVES	
1	PAOOO	81348	GROUP 2/9.00-20/ TR175A/ON CENTER	INNER TUBE,PNEUMATI	2
2	PAOFF	81348	ZZ-T-381M/GROUP3 /9.00-20/D/TBCC	TIRE,PNEUMATIC	2
3	PAOZZ	17875	100AA	VALVE CORE	2
4	PAOZZ	34623	648487	CAP,PNEUMATIC VALVE	2
				END OF FIGURE	

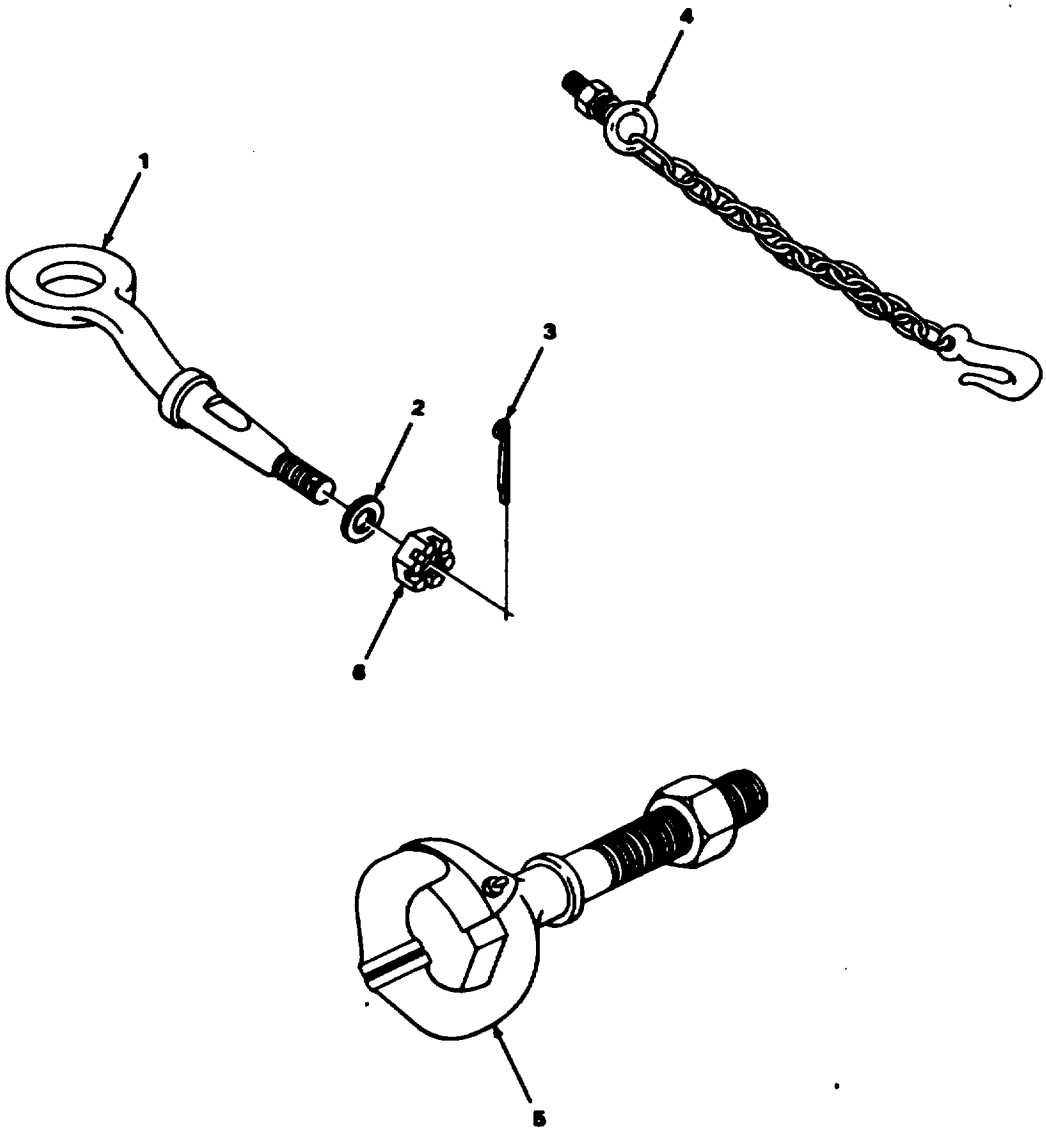

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FIGURE 23. TOWING ATTACHMENTS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 15 FRAME AND TOWING ATTACHMENTS 1503 TOWING ATTACHMENTS FIG. 23 TOWING ATTACHMENTS	
1	PAOZZ	96906	MS51339-3	COUPLER,DRAWBAR,RIN	1
2	PAOZZ	24617	446284	WASHER,FLAT	1
3	PAOZZ	96906	MS24665-498	PIN,COTTER	1
4	PAOZZ	19207	7411027	CHAIN ASSEMBLY,SING SAFETY	2
5	PAOZZ	96906	MS51335-1	PINTLE ASSEMBLY,TOW	1
6	PAOZZ	19207	7411028	NUT,PLAIN,SLOTTED,H SLOTTED	1
				END OF FIGURE	

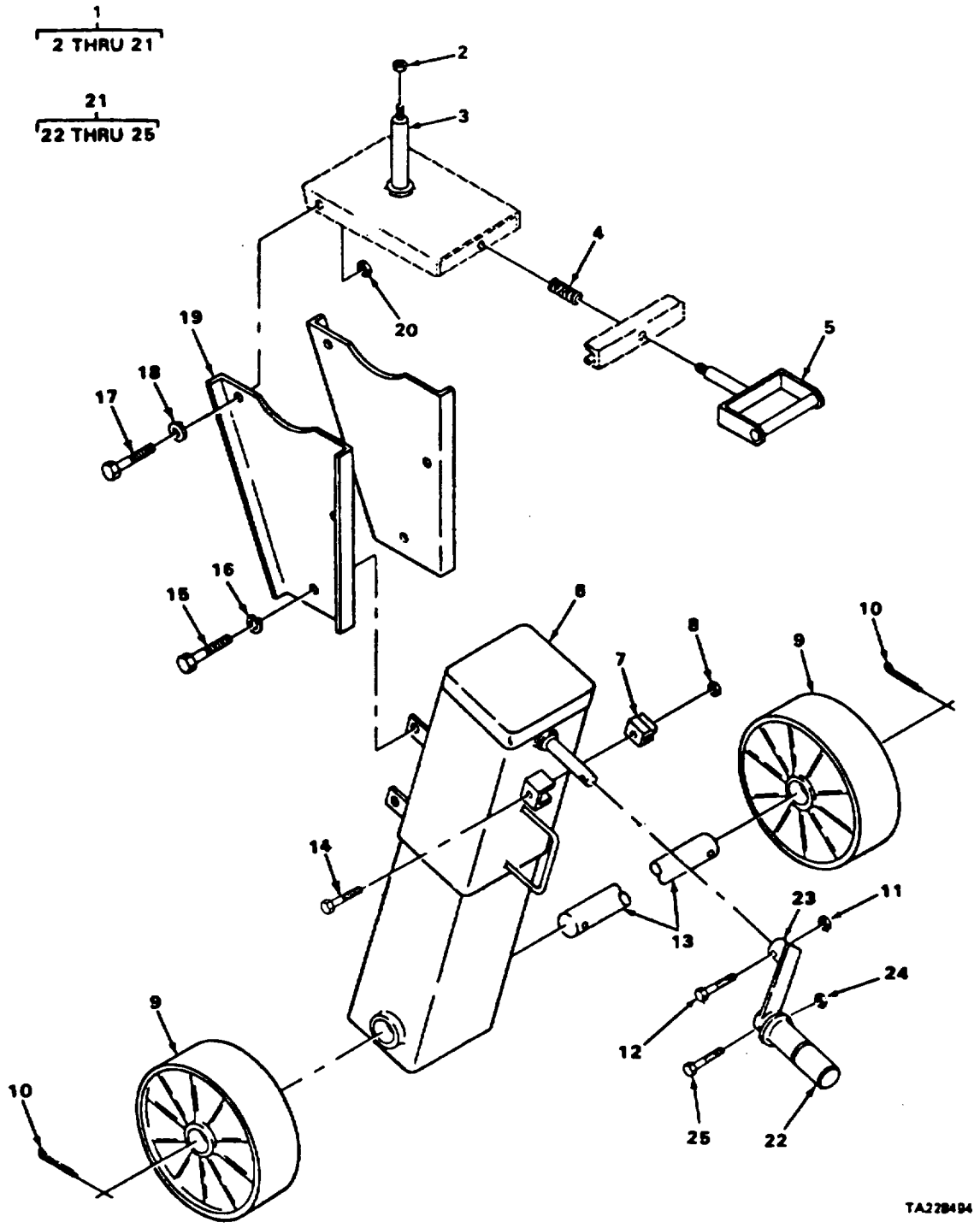

FIGURE 24. ADJUSTABLE CASTER ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1507 LANDING GEAR FIG. 24 ADJUSTABLE CASTER ASSEMBLY	
1	PAOOO	19207	12259830	SUPPORT,RETRACTABLE	1
2	PAOZZ	96906	MS21044-N12	.NUT,SELF-LOCKING,HE	1
3	PAOZZ	19207	8331539	.SPINDLE,WHEEL,DRIVI	1
4	PAOZZ	19207	8331541	.SPRING,HELICAL,COMP	2
5	PAOZZ	19207	12259844	.HANDLE,DRAW BAR	1
6	XAOZZ	19207	12259830-1	.LEG ASSY	1
7	PAOZZ	19207	12312996	.CLIP,RETAINING	1
8	PAOZZ	96906	MS51922-1	.NUT,SELF-LOCKING,HE	1
9	PAOZZ	19207	12259845	.WHEEL,METAL TIRE	2
10	PAOZZ	96906	MS16562-65	.PIN,SPRING	2
11	PAOZZ	96906	MS17829-4C	.NUT,SELF-LOCKING,HE	1
12	PAOZZ	96906	ZS90725-10	.SCREW,CAP,HEXAGON H	1
13	PAOZZ	19207	12259831	.SHAFT,STRAIGHT	1
14	PAOZZ	96906	MS90725-5	.SCREW,CAP,HEXAGON H	1
15	PAOZZ	96906	MS90728-109	.SCREW,CAP,HEXAGON H	4
16	PAOZZ	96906	MS35338-48	.WASHER,LOCK	4
17	PAOZZ	19207	7979972	.BOLT,SHOULDER	1
18	PAOZZ	96906	MS27183-20	.WASHER,FLAT	1
19	PAOZZ	19207	12259839	.LEG,SEMITRAILER RET	1
20	PAOZZ	96906	MS21044-N9	.NUT,SELF-LOCKING,HE	1
21	PAOZZ	19207	12259835	.CRANK,HAND	1
22	PAOZZ	19207	12259837	..HANDLE,MANUAL CONTR	1
23	PAOZZ	19207	12259840	..ARM,HAND CRANK	1
24	PAOZZ	96906	MS21083-N5	..NUT,SELF-LOCKING,HE	1
25	PAOZZ	96906	MS90726-38	..BOLT,MACHINE	1
				END OF FIGURE	

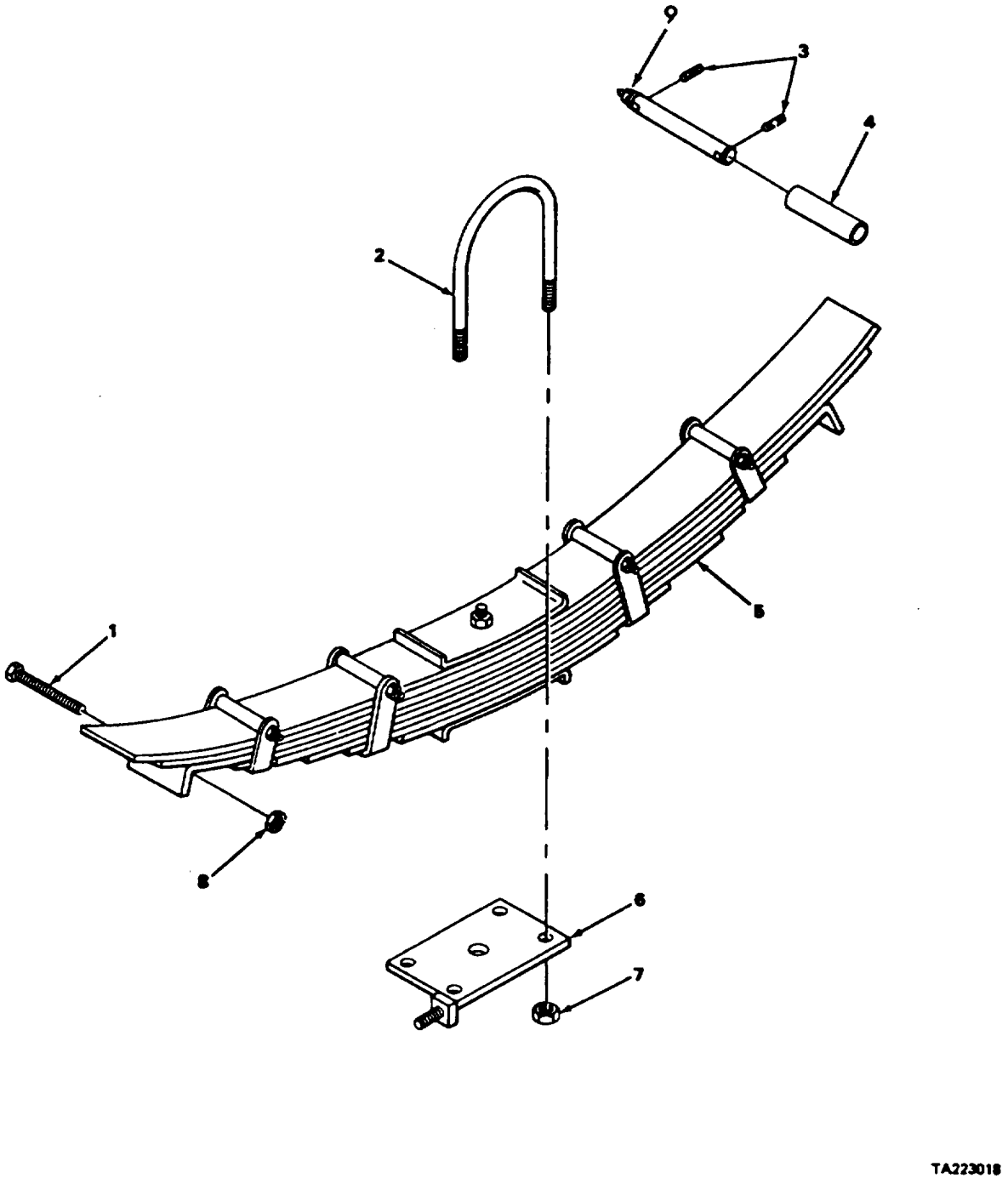

FIGURE 25. SPRINGS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 16 SPRINGS AND SHOCK ABSORBERS 1601 SPRINGS FIG. 25 SPRINGS	
1	XDOZZ	19207	595479	SCREW,CAP,HEXAGON SPRING RETAINING	4
2	PAOZZ	19207	10919535	BOLT,U SPRING	4
3	PAOZZ	19207	8363968	SCREW,MACHINE	2
4	PAOZZ	19207	10919536	BEARING,SLEEVE	1
5	PAOZZ	19207	8363955	SPRING ASSEMBLY,LEA	2
6	PAOZZ	19207	10910878	PLATE,WEAR,LEAF SPR LEFT HAND	1
6	PAOZZ	19207	10910873-2	PLATE,NEAR,LEAF SPR RIGHT HAND	1
7	PAOZZ	96906	MS51968-15	NUT,PLAIN,HEXAGON U-BOLT	8
8	PAOZZ	96906	MS21044N10	NUT,SELF-LOCKING,HE SPRING RETAINING	4
9	PAOZZ	19207	10916434	PIN,VEHICULAR LEAF	4
				END OF FIGURE	

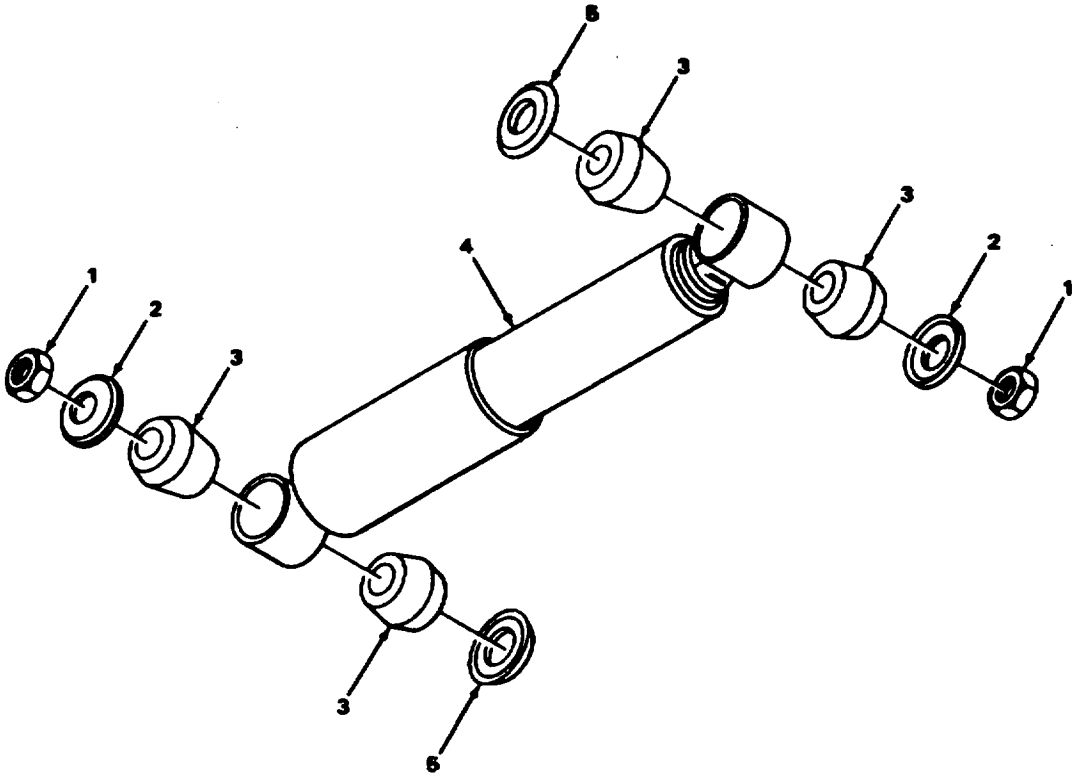

FIGURE 26. SHOCK ABSORBERS.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1604 SHOCK ABSORBERS FIG. 26 SHOCK ABSORBERS	
1	PAOZZ	96906	MS51968-20	NUT,PLAIN,HEXAGON	4
2	PAOZZ	19207	7339465	WASHER,RECESSED	4
3	PAOZZ	19207	7339466	BUSHING,RUBBER	8
4	PAOZZ	19207	7339464	SHOCK ABSORBER,DIRE	2
5	XDOZZ	19207	10919503	WASHER	4
				END OF FIGURE	

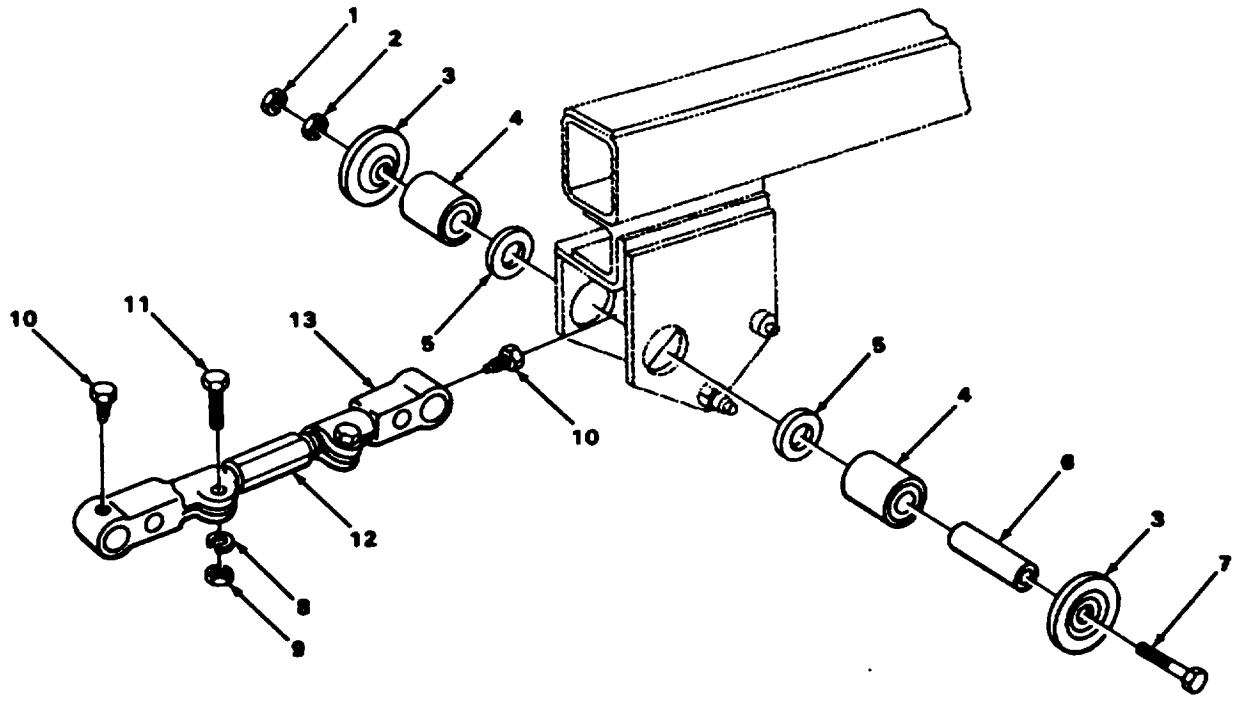

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FIGURE 27. RADIUS ROD ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1605 RADIUS RODS FIG. 27 RADIUS ROD ASSEMBLY	
1	PAOZZ	96906	MS35691-53	NUT,PLAIN,HEXAGON	4
2	PAOZZ	96906	MS51968-20	NUT,PLAIN,HEXAGON	4
3	PAOZZ	19207	7349028	WASHER,SHOULDERED	8
4	PAOZZ	23705	563400	BUSHING,RUBBER	8
5	PAOZZ	19207	7349029	WASHER,FLAT	8
6	PAOZZ	19207	10919534	SPACER,SLEEVE	4
7	XDOZZ	96906	MS90726-178	SCREW,CAP,HEXAGON H	4
8	PAOZZ	96906	MS35338-48	WASHER,LOCK	4
9	PAOZZ	96906	MS51968-14	NUT,PLAIN,HEXAGON	4
10	PAOZZ	19207	10919533	SETSCREW	4
11	PAOZZ	96906	MS90726-116	SCREW,CAP,HEXAGON H	4
12	PAOZZ	19207	7366480-1	ROD,ALIGNING,VEHICU	2
13	PAOZZ	19207	10916439	ROD,ALIGNING VEHICU	2
				END OF FIGURE	

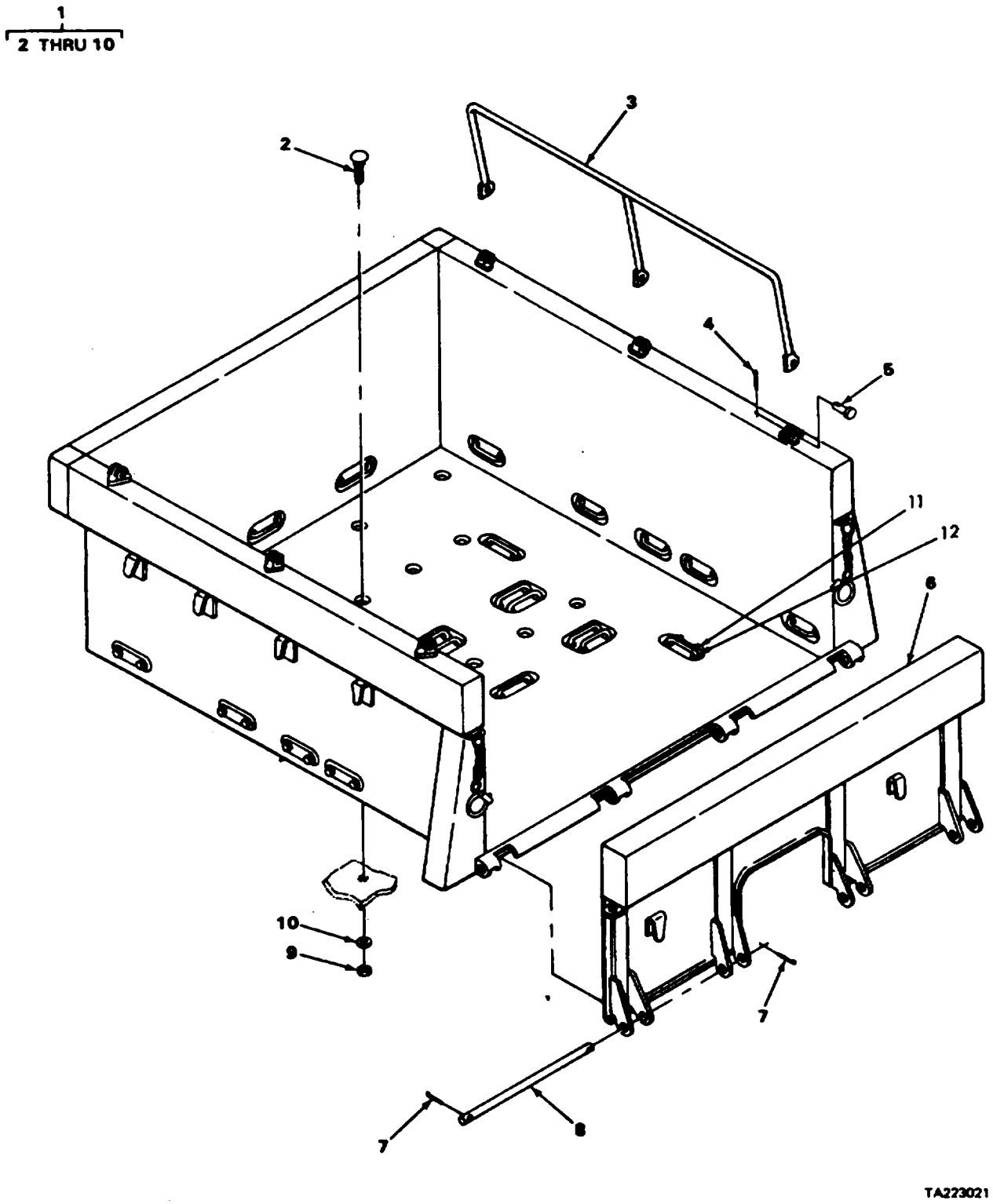

FIGURE 28. BODY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 18 BODY 1801 BODY ASSEMBLY FIG. 28 BODY	
1	XDOZZ	19207	10910850	BODY ASSEMBLY COMPL	1
2	PFOZZ	96906	MS90726-116	.SCREW,CAP,HEXAGON H MOUNTING	14
3	PAOZZ	19207	10919525	.FRAME ASSEMBLY	2
4	PAOZZ	96906	MS24665-351	.PIN,COTTER FRAME ASSEMBLY	6
5	PAOZZ	96906	MS35810-6	.PIN,STRAIGHT,HEADED FRAME ASSEMBLY	6
6	PAOZZ	19207	10910858	.TAILGATE,ASSEMBLY	1
7	PAOZZ	96906	MS24665-491	.PIN,COTTER TAILGATE	4
8	PAOZZ	19207	10910883	.ROD,STRAIGHT,HEADLETAILGATE	2
9	PAOZZ	96906	MS16228-6C	.NUT,SELF-LOCKING,HEBODY MOUNTING	14
10	PAOZZ	96906	MS16212-3	.WASHER,FLAT BODY MOUNTING	14
11	PAOZZ	19207	10910867	STRAP,RETAINING	1
12	PAOZZ	96906	MS35744-36	RIVET,SOLID	2
				END OF FIGURE	

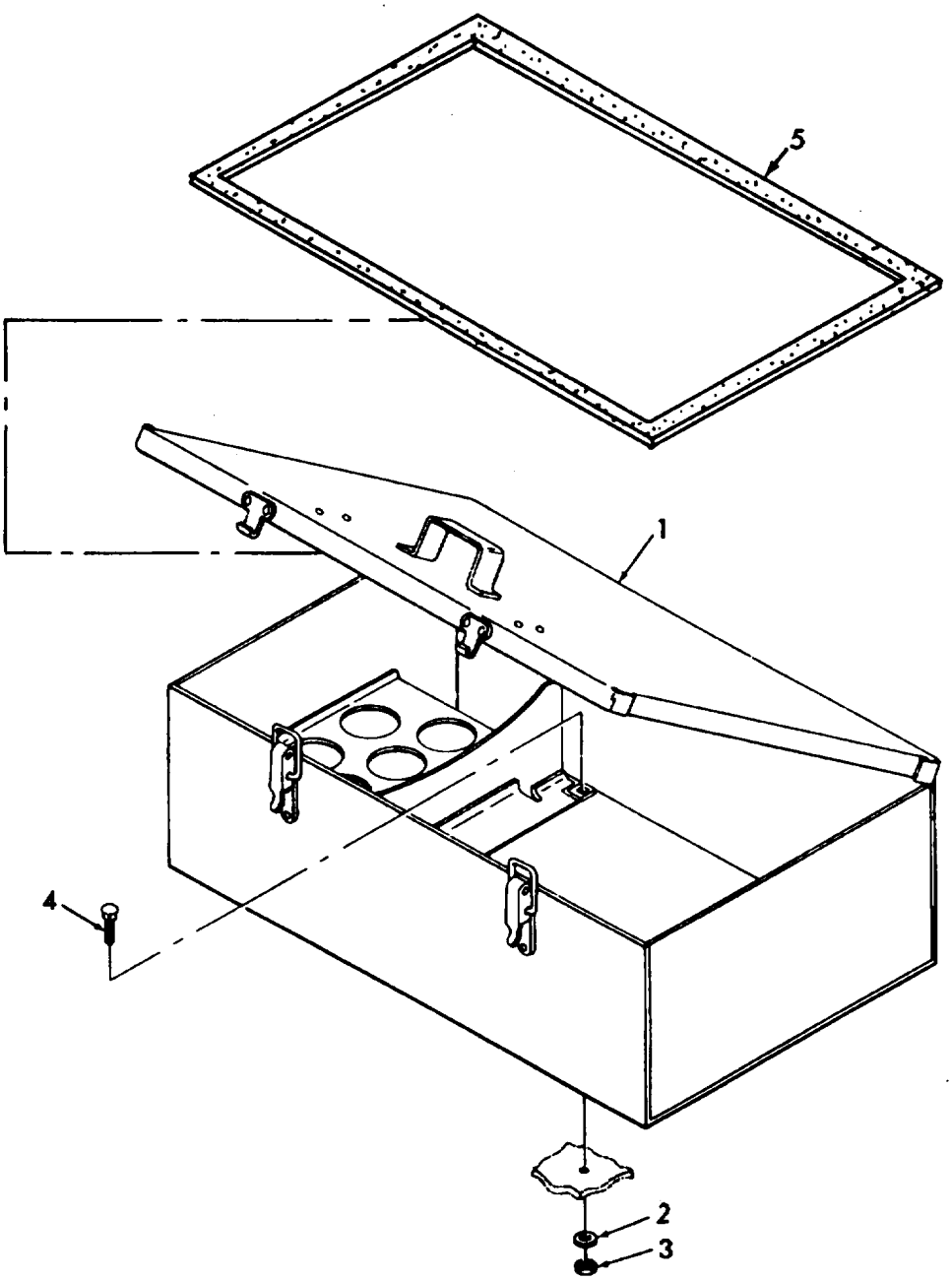

FIGURE 29. FUSE BOX ASSEMBLY.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				1808 STOWAGE BOXES FIG. 29 FUSE BOX ASSEMBLY	
1	PBOZZ	19207	10919515	FUSE BOX	1
2	PAOZZ	96906	MS16212-3	WASHER,FLAT	4
3	PAOZZ	96906	MS16228-6C	NUT,SELF-LOCKING,HE	4
4	PFOZZ	96906	MS90726-116	SCREW,CAP,HEXAGON H	4
5	MOOZZ	81343	AMS3195X8FT	STRIP,RUBBER MAKE FROM P/N AMS 3195)	1
				END OF FIGURE	

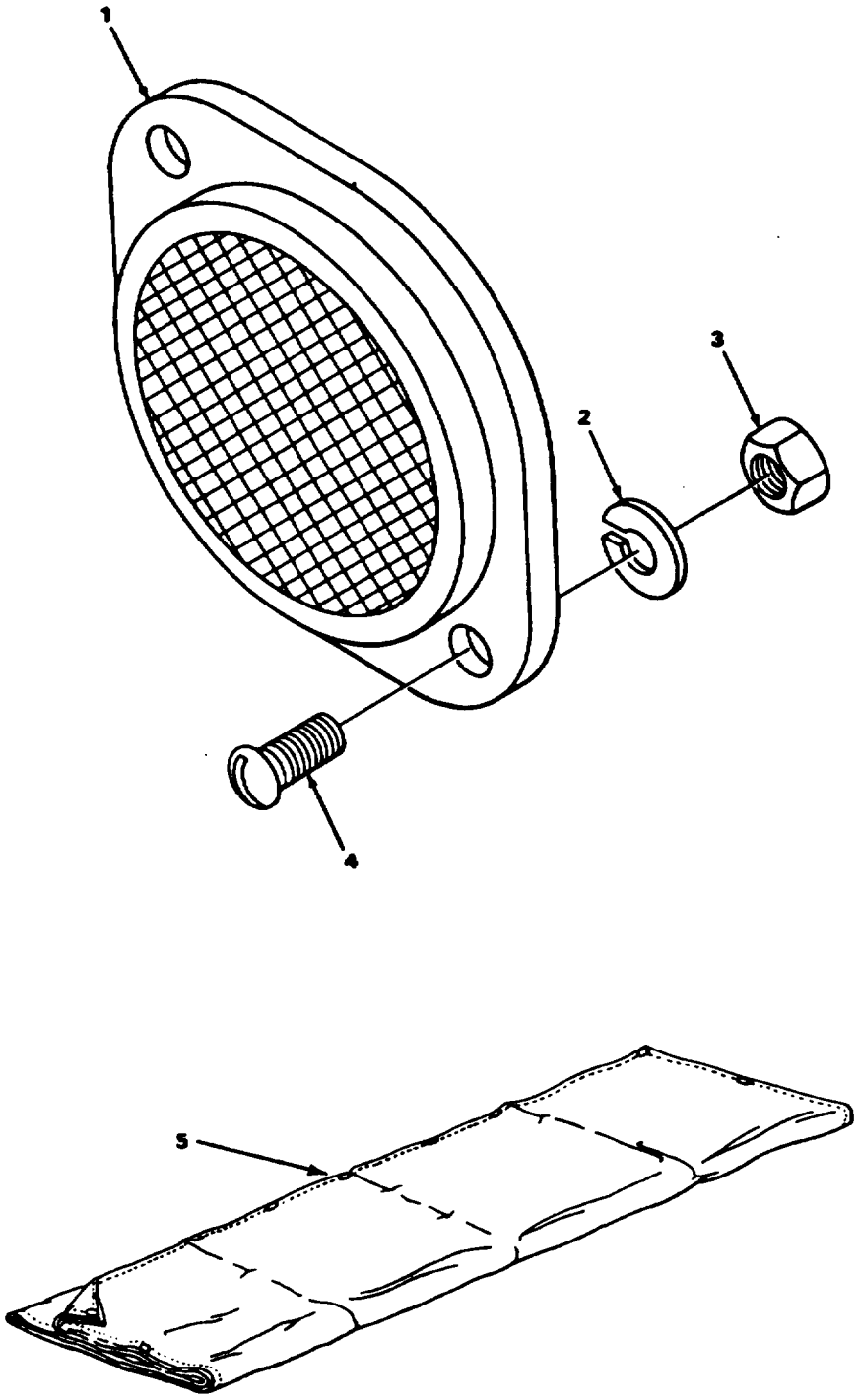

FIGURE 30. REFLECTORS AND TRAILER BODY COVER

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 22 BODY AND CHASSIS ACCESSORY ITEMS 2202 ACCESSORY ITEMS FIG. 30 REFLECTORS AND TRAILER BODY COVER	
1	PAOZZ	96906	MS35387-2	REFLECTOR,INDICATIN AMBER	2
1	PAOZZ	96906	MS35387-1	REFLECTOR,INDICATIN RED	4
2	PAOZZ	96906	MS35338-44	WASHER,LOCK	8
3	PAOZZ	96906	MS51967-2	NUT,PLAIN,HEXAGON	8
4	PAOZZ	96906	MS35206-281	SCREW,MACHINE	8
4	PAOZZ	21450	172439	SCREW,TAPPING,THREAD	4
5	PACOO	19207	10910838	TARPAULIN	1
				END OF FIGURE	

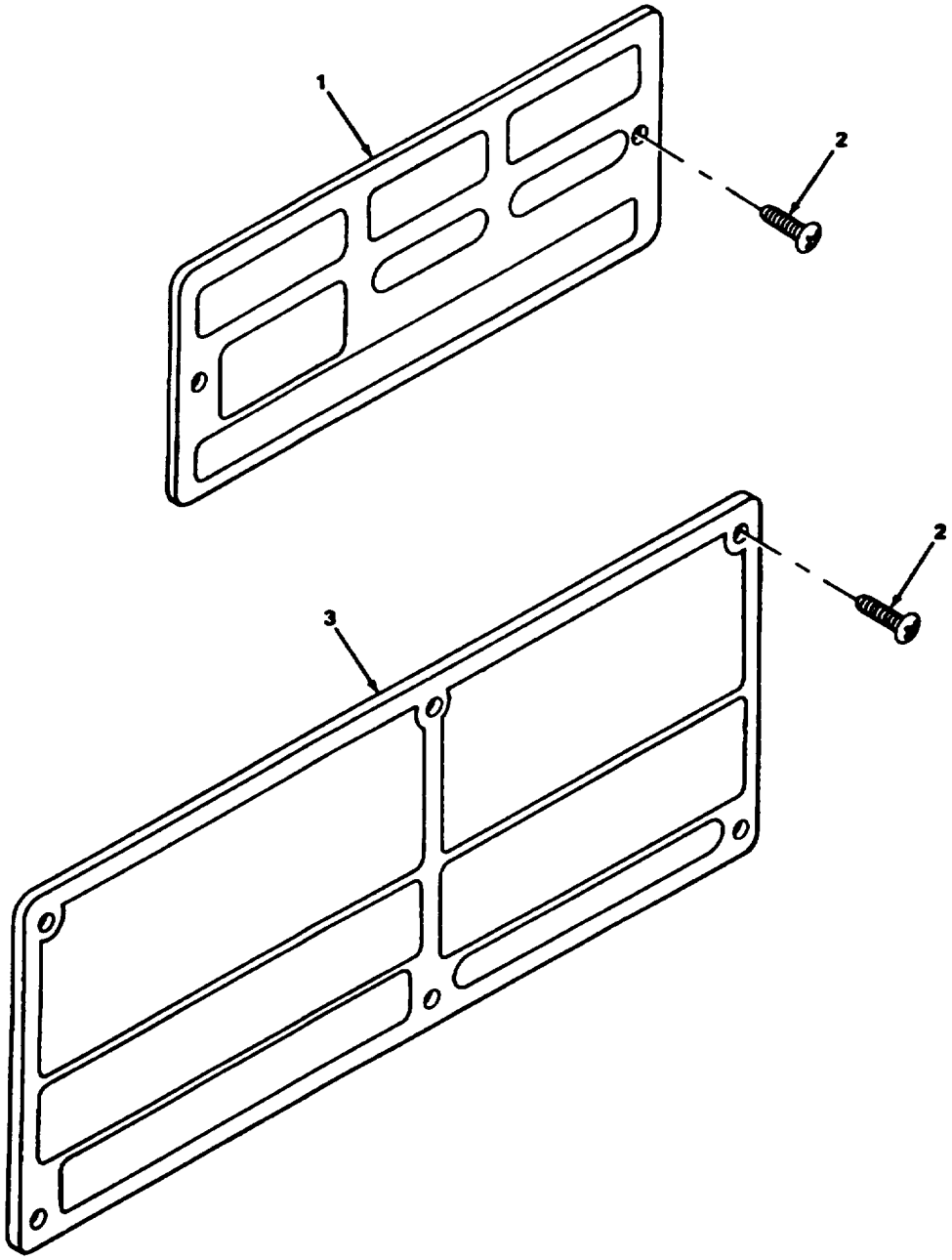

FIGURE 31. DATA PLATES.

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				2210 DATA PLATES FIG. 31 DATA PLATES	
1	PAOZZ	19207	7979373	PLATE,IDENTIFICATIO	1
2	PAOZZ	96906	MS21318-58	SCREW,DRIVE	8
3	PAOZZ	19207	10919561	PLATE,IDENTIFICATIO VEHICLE DATA	1
`				END OF FIGURE	

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC) AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 95 GENERAL USE STANDARDIZED PARTS 9501 BULK MATERIAL	
1	PAOZZ	81343	AMS 3195	STRIP,RUBBER	V
2	PAOZZ	19207	CPR104420-2	HOSE,NONMETALLIC	V
				END OF FIGURE	

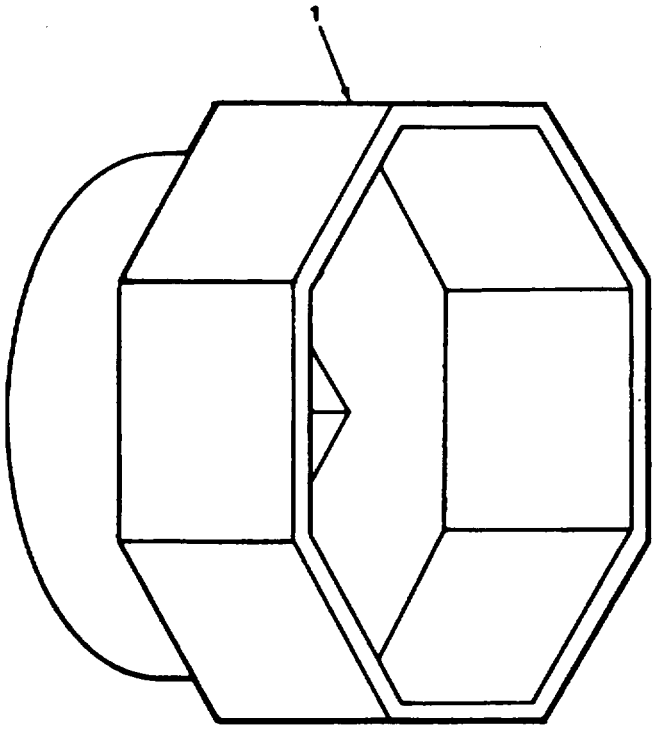

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FIGURE 32. SPECIAL TOOL

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODE (UOC)	(6) QTY
				GROUP 26 TOOLS AND TEST EQUIPMENT 2604 SPECIAL TOOLS FIG. 32 SPECIAL TOOL	
1	PEOZZ	19207	7950946	SOCKET,SOCKET WRENC WHEEL BEARING ADJUSTING NUT 1 PER SET	
				END OF FIGURE	

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX.

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5320-00-010-4168	28	12	5310-00-167-0721	10	19
5320-00-011-9951	10	9	5306-00-174-4246	24	17
4730-00-013-7397	14	10	9905-00-202-3639	30	1
6240-00-019-0877	1	3	2530-00-204-4800	12	11
	2	2	9905-00-205-2795	30	1
	3	7	5306-00-206-1560	20	3
	4	7	5306-00-225-8496	11	6
6240-00-019-3093	3	5	5306-00-225-9086	19	23
4730-00-025-7508	19	19	5306-00-225-9089	2	4
2530-00-026-0265	21	1	5306-00-225-9093	24	25
4730-00-036-4421	13	2	5310-00-241-6640	28	9
5310-00-044-6284	23	2		29	3
6240-00-044-6914	1	2	4730-00-253-4412	16	4
	3	6	5305-00-253-5632	31	2
5310-00-045-1031	20	15	2610-00-262-8677	22	2
5310-00-045-3296	4	13	5305-00-269-3217	9	2
5310-00-045-3299	7	1	5305-00-269-3236	17	2
2640-00-050-1229	22	3	5305-00-269-3240	10	31
2640-00-050-1235	22	4		20	4
5305-00-052-6922	7	15	5305-00-269-3250	17	1
	19	16	2610-00-269-7383	22	1
4730-00-054-2571	19	18	5365-00-274-4544	13	6
4730-00-054-2572	19	17	5365-00-275-4519	26	3
5999-00-057-2929	4	5	5340-00-275-6042	7	3
5310-00-057-7080	14	5	5310-00-275-6635	12	10
5315-00-059-0206	28	7	4730-00-278-8825	19	14
9320-00-067-4120	BULK	1	9905-00-282-7489	31	1
5305-00-068-0501	24	14	4730-00-289-0051	17	6
5305-00-068-0515	10	26	4730-00-289-0155	16	9
	11	7	2530-00-293-5139	15	1
5310-00-068-5285	24	18	4730-00-293-7108	19	13
5305-00-071-2066	24	15	6220-00-299-7426	4	9
3040-00-074-2357	10	5	5310-00-314-0764	10	4
5340-00-076-5990	7	13	5310-00-314-0765	10	3
2540-00-078-6633	23	5	4720-00-318-1016	18	1
5306-00-080-5431	25	2	5310-00-322-7260	10	2
5310-00-080-6004	20	9	5315-00-322-7261	10	1
5310-00-087-4652	9	4	3040-00-330-3262	9	1
5310-00-088-1251	24	8	4730-00-335-4728	19	11
5330-00-090-2128	18	2	5306-00-335-4768	20	8
5305-00-115-9430	30	4	5975-00-345-8055	7	10
5305-00-115-9526	10	29	5365-00-350-0155	27	4
2530-00-137-9235	18	3	4820-00-350-6749	16	8
5315-00-140-1938	28	5	5330-00-353-0959	4	4
5305-00-140-4759	27	10	6250-00-371-4018	4	6
3110-00-143-7538	20	14	5306-00-383-4957	20	21
3110-00-143-7586	20	18	5310-00-407-9566	2	3
3040-00-150-7127	10	5		9	7
2530-00-159-8755	10	16		11	5
2530-00-159-8756	10	16		19	24

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX.

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
2530-00-408-9177	9	10	5305-00-655-9404	25	3
4730-00-419-9425	13	5	5310-00-660-3381	24	24
4820-00-420-5499	19	12	6220-00-669-5623	1	1
2510-00-420-8959	25	6	2530-00-677-0202	20	17
5310-00-424-1452	27	3	2510-00-679-3681	25	5
5310-00-424-1456	27	5	1440-00-689-6160	12	6
2510-00-439-6331	25	9	2530-00-693-0736	24	3
5340-00-439-6332	8	2	2530-00-693-1007	10	8
5365-00-446-3110	27	6	2530-00-693-1010	20	16
2590-00-446-3115	5	1	5360-00-699-8489	24	4
5935-00-446-3159	6	1	5360-00-699-9018	11	15
2540-00-446-3163	30	5	5305-00-701-5071	4	11
4730-00-463-1588	14	9	4730-00-701-7677	16	5
5310-00-483-8792	24	11	5305-00-709-8523	14	8
4710-00-511-1692	12	3	5305-00-716-8183	27	11
5310-00-518-5566	20	25		28	2
4720-00-518-6757	14	6		29	4
2530-00-522-1157	11	13	5305-00-721-5492	1	5
2530-00-522-4183	10	10	6220-00-726-1916	4	1
5340-00-529-6199	7	12	4730-00-729-6437	13	7
5360-00-535-1924	7	5	5310-00-732-0559	17	8
5305-00-543-2419	3	2		20	6
5310-00-550-1130	7	16	5310-00-732-0560	27	9
5310-00-550-3503	10	12	5306-00-733-9239	20	21
2530-00-566-1674	9	9	2540-00-733-9464	26	4
4710-00-566-7133	13	8	5310-00-733-9465	26	2
4710-00-566-7134	13	3	2530-00-737-3260	12	7
5935-00-572-9180	4	3	5330-00-737-3354	12	1
5325-00-579-6134	7	11	2530-00-738-9061	21	2
5310-00-582-5965	7	8	2530-00-738-9620	21	3
	10	25	4010-00-741-1027	23	4
	11	10	5310-00-741-1028	23	6
	16	2	2530-00-741-1078	17	5
	30	2	5310-00-741-1378	20	22
5310-00-584-5272	24	16	5310-00-741-1379	20	13
	27	8	2530-00-741-1425	20	1
5310-00-584-7981	28	10	5330-00-741-1429	20	19
	29	2	5365-00-741-1433	20	20
5310-00-594-8038	20	25	5306-00-741-1760	10	24
5310-00-596-8169	4	8		11	4
5340-00-611-7883	7	14	4730-00-741-1903	13	4
5330-00-614-4356	20	12	2530-00-741-2050	11	12
2530-00-614-4454	20	11	2530-00-741-2065	12	8
5310-00-627-6128	1	4	2530-00-741-2068	11	14
	10	30	5310-00-741-2088	13	1
	10	32	5365-00-741-2103	10	7
	20	5		11	3
5310-00-637-9541	3	3	2530-00-741-2104	10	20
	17	9	5315-00-741-2106	11	8
5310-00-641-9939	10	6	5305-00-741-2108	10	17

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX.

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5305-00-741-2109	10	17	5305-00-984-6207	20	24
5310-00-741-2120	10	21	5340-00-985-0823	9	5
2530-00-741-3231	20	2	2530-00-987-2565	11	11
6220-00-752-6516	4	10	5305-00-988-1723	20	7
5310-00-761-6882	7	6	5305-00-988-1725	7	9
	11	9		30	4
	16	3	4730-00-989-1096	19	20
	30	3	2530-00-991-4342	11	11
5310-00-763-8905	26	1	5305-00-993-1848	4	12
	27	2	1440-00-994-8975	10	23
4730-00-773-2163	12	2	2540-00-999-5584	23	1
6150-00-777-3068	6	2	4720-01-014-4915	BULK	2
2530-00-794-9763	11	13	2530-01-039-8722	8	1
5120-00-795-0946	32	1	2530-01-047-5409	27	13
2530-00-797-9295	16	1	4730-01-079-8821	19	25
5306-00-797-9296	16	6	2530-01-083-5641	10	22
2530-00-798-4812	10	14	4710-01-090-4560	14	4
2530-00-798-4824	10	14	6220-01-093-4439	3	4
9905-00-809-1440	31	3	2530-01-093-8271	27	12
3120-00-809-1487	25	4	4710-01-159-1846	14	3
5340-00-809-1492	19	15	4710-01-159-1847	14	1
4720-00-809-2750	12	5	4710-01-160-0741	14	7
5310-00-809-4058	7	7	2590-01-183-6816	24	1
5315-00-815-8840	9	6	2510-01-186-5900	25	6
5310-00-833-8567	4	2	5340-01-189-6405	19	22
5310-00-835-2037	27	1	5340-01-209-0475	24	21
5315-00-839-5821	28	4	3040-01-209-0497	24	13
5315-00-842-3044	9	12	5340-01-209-0500	24	22
5315-00-844-5836	24	10	5340-01-209-0503	24	23
6220-00-846-9745	2	1	2590-01-210-8843	24	19
4820-00-849-1220	17	7	2540-01-215-1617	24	5
5315-00-849-9854	23	3	2530-01-215-3389	24	9
5310-00-853-9335	10	18	5340-01-222-5247	24	7
4730-00-854-6931	12	9	5340-01-238-0963	28	8
5310-00-880-7744	9	8	2510-01-240-7280	28	6
5365-00-899-6723	9	3	2510-01-255-0868	28	3
5310-00-903-3993	10	13	2540-01-268-3551	29	1
5310-00-924-4218	10	28	5340-01-276-8740	28	11
	11	1			
5310-00-926-5877	20	23			
5310-00-934-9751	4	14			
5310-00-943-2141	25	7			
5310-00-950-0039	17	4			
2530-00-973-2355	10	27			
2530-00-973-2356	10	27			
5340-00-977-0815	17	3			
5310-00-982-4908	20	10			
5310-00-982-6809	25	8			
5305-00-984-5675	9	11			
5305-00-984-6193	7	2			

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

STOCK NO.	FIG	ITEM	STOCK NO.	FIG
81343	AMS 3195	9320-00-067-4120	BULK	1
81343	AMS3195X8FT		29	5
23075	A298320	2530-00-293-5139	15	1
23705	A298748	2530-00-741-1078	17	5
23705	A298749	2530-00-797-9295	16	1
81348	CMDX2-3PT573036	5340-00-809-1492	19	15
19207	CPR102321-1	4730-01-079-8821	19	25
19207	CPR104420-2	4720-01-014-4915	BULK	2
78553	C1059-014-1	5310-00-596-8169	4	8
63477	FC14257	2530-00-741-2104	10	20
63477	FC3700	4720-00-518-6757	14	6
63477	FD17762	3040-00-074-2357	10	5
63477	FE14240	2530-00-204-4800	12	11
63477	F12084	5305-00-741-2108	10	17
63477	F12085	5305-00-741-2109	10	17
63477	F12088	5315-00-741-2106	11	8
63477	F17751	2530-00-973-2356	10	27
63477	F17758	5315-00-322-7261	10	1
63477	F17764	2530-00-798-4824	10	14
63477	F19223	2530-00-693-1007	10	8
63477	F19581	2530-00-522-1157	11	13
63477	F19582	2530-00-794-9763	11	13
63477	F19635	2530-00-991-4342	11	11
63477	F19636	2530-00-987-2565	11	11
63477	F56114	2530-00-741-2065	12	8
63477	F6783		11	2
63477	F9556	2530-00-741-2050	11	12
81348	GROUP 2/9.00-20/ TR175A/ON CENTER	2610-00-269-7383	22	1
96906	MS15570-1251	6240-00-019-0877	3	7
			4	7
96906	MS15570-623	6240-00-019-3093	3	5
96906	MS16212-3	5310-00-584-7981	28	10
			29	2
96906	MS16228-6C	5310-00-241-6640	28	9
			29	3
96906	MS16536-175	5320-00-011-9951	10	9
96906	MS16562-65	5315-00-844-5836	24	10
96906	MS17829-4C	5310-00-483-8792	24	11
96906	MS18154-58	5305-00-115-9526	10	29
96906	MS21044-N12		24	2
96906	MS21044-N9		24	20
96906	MS21044N10	5310-00-982-6809	25	8
96906	MS21044N6	5310-00-950-0039	17	4
96906	MS21045-6	5310-00-982-4908	20	10
96906	MS21083-N5	5310-00-660-3381	24	24
96906	MS21318-58	5305-00-253-5632	31	2
96906	MS24629-58	5305-00-052-6922	7	15
			19	16
96906	MS24665-283	5315-00-842-3044	9	12
96906	MS24665-351	5315-00-839-5821	28	4

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS24665-491	5315-00-059-0206	28	7
96906	MS24665-498	5315-00-849-9854	23	3
96906	MS27148-2	5999-00-057-2929	4	5
96906	MS27183-10	5310-00-809-4058	7	7
96906	MS27183-14	5310-00-080-6004	20	9
96906	MS27183-20	5310-00-068-5285	24	18
96906	MS35206-245	5305-00-984-6193	7	2
96906	MS35206-260	5305-00-984-6207	20	24
96906	MS35206-279	5305-00-988-1723	20	7
96906	MS35206-281	5305-00-988-1725	7	9
			30	4
96906	MS35206-295	5305-00-984-5675	9	11
96906	MS35207-265	5305-00-993-1848	4	12
96906	MS35333-40	5310-00-550-1130	7	16
96906	MS35333-41	5310-00-167-0721	10	19
96906	MS35335-35	5310-00-627-6128	1	4
			10	30
			10	32
			20	5
96906	MS35335-36	5310-00-550-3503	10	12
96906	MS35338-160	5310-00-926-5877	20	23
96906	MS35338-42	5310-00-045-3299	7	1
96906	MS35338-43	5310-00-045-3296	4	13
96906	MS35338-44	5310-00-582-5965	7	8
			10	25
			11	10
			16	2
			30	2
96906	MS35338-45	5310-00-407-9566 2	3	
			9	7
			11	5
			19	24
96906	MS35338-46	5310-00-637-9541 3	3	
			17	9
96906	MS35338-48	5310-00-584-5272 24	16	
			27	8
96906	MS35387-1	9905-00-205-2795	30	1
96906	MS35387-2	9905-00-202-3639	30	1
96906	MS35421-2	6220-00-299-7426	4	9
96906	MS35423-2	6220-00-726-1916	4	1
96906	MS35478-1683	6240-00-044-6914	3	6
96906	MS35489-80	5325-00-579-6134	7	11
96906	MS35649-282		7	4
96906	MS35650-302	5310-00-934-9751	4	14
96906	MS35691-13	5310-00-853-9335	10	18
96906	MS35691-53	5310-00-835-2037	27	1
96906	MS35744-36	5320-00-010-4168	28	12
96906	MS35748-1	5330-00-090-2128	18	2
96906	MS35782-5	4820-00-849-1220	17	7
96906	MS35810-4	5315-00-815-8840	9	6
96906	MS35810-6	5315-00-140-1938	28	5

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FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS35812-4	5340-00-985-0823	9	5
96906	MS35842-2		12	4
96906	MS39182-5	4730-00-289-0155	16	9
96906	MS39182-6	4730-00-289-0051	17	6
96906	MS39185-1	4730-00-701-7677	16	5
14397	MS39187-2		19	21
96906	MS39196-3	4730-00-278-8825	19	14
96906	MS39196-4	4730-00-054-2572	19	17
96906	MS39197-3	4730-00-293-7108	19	13
96906	MS39197-4	4730-00-054-2571	19	18
96906	MS39212-5	4730-00-989-1096	19	20
96906	MS39230-2	4730-00-253-4412	16	4
96906	MS51335-1	2540-00-078-6633	23	5
96906	MS51339-3	2540-00-999-5584	23	1
96906	MS51823-5	4730-00-025-7508	19	19
96906	MS51922-1	5310-00-088-1251	24	8
96906	MS51922-17	5310-00-087-4652	9	4
96906	MS51922-29	5310-00-057-7080	14	5
96906	MS51946-1	5306-00-733-9239	20	21
96906	MS51946-11	5306-00-206-1560	20	3
96906	MS51946-2	5306-00-383-4957	20	21
96906	MS51959-61	5305-00-701-5071	4	11
96906	MS51967-2	5310-00-761-6882	7	6
			11	9
			16	3
			30	3
96906	MS51967-5	5310-00-880-7744	9	8
96906	MS51968-14	5310-00-732-0560	27	9
96906	MS51968-15	5310-00-943-2141	25	7
96906	MS51968-20	5310-00-763-8905	26	1
			27	2
96906	MS51968-8	5310-00-732-0559	17	8
			20	6
96906	MS51970-1	5310-00-924-4218	10	28
			11	1
96906	MS51970-4	5310-00-903-3993	10	13
96906	MS51983-1	5310-00-518-5566	20	25
96906	MS51983-2	5310-00-594-8038	20	25
96906	MS52125-2	6220-01-093-4439	3	4
96906	MS521301A204120	4720-00-809-2750	12	5
96906	MS53004-2		16	7
96906	MS53044-5	2530-00-026-0265	21	1
96906	MS53045-3	2530-00-738-9061	21	2
96906	MS53060-5	2530-00-566-1674	9	9
96906	MS90725-31	5306-00-225-8496	11	6
96906	MS90725-5	5305-00-068-0501	24	14
96906	MS90725-67	5305-00-269-3217	9	2
96906	MS90726-116	5305-00-716-8183	27	11
			28	2
			29	4
96906	MS90726-178		27	7

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FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS90726-31	5306-00-225-9086	19	23
96906	MS90726-34	5306-00-225-9089	2	4
96906	MS90726-38	5306-00-225-9093	24	25
96906	MS90727-60	5305-00-269-3236	17	2
96906	MS90727-64	5305-00-269-3240	10	31
			20	4
96906	MS90727-74	5305-00-269-3250	17	1
96906	MS90727-8	5305-00-068-0515	10	26
			11	7
96906	MS90727-87	5305-00-709-8523	14	8
96906	MS90728-109	5305-00-071-2066	24	15
96906	MS90728-57	5305-00-721-5492	1	5
96906	MS90728-61	5305-00-543-2419	3	2
40342	N12929	5360-00-535-1924	7	5
40342	N13008	5340-00-977-0815	17	3
06721	N13448	4720-00-318-1016	18	1
56442	N7557	5310-00-275-6635	12	10
96906	ZS90725-10		24	12
81348	ZZ-T-381M/GROUP3 /9.00-20/D/TBCC	2610-00-262-8677	22	2
92867	01001307	3040-00-330-3262	9	1
17875	100AA	2640-00-050-1229	22	3
19207	10905840	5975-00-345-8055	7	10
19207	10910838	2540-00-446-31633	30	5
19207	10910850		28	1
19207	10910858	2510-01-240-7280	28	6
19207	10910867	5340-01-276-8740	28	11
19207	10910871	2530-01-039-8722	8	1
19207	10910873-2	2510-01-186-5900	25	6
19207	10910878	2510-00-420-8959	25	6
19207	10910879	5340-00-439-6332	8	2
19207	10910883	5340-01-238-0963	28	8
19207	10916434	2510-00-439-6331	25	9
19207	10916439	2530-01-047-5409	27	13
19207	10919491-1	4710-01-090-4560	14	4
19207	10919492-1	4710-01-160-0741	14	7
19207	10919493-1		19	1
19207	10919493-2		19	2
19207	10919494-1		19	10
19207	10919494-2		19	3
19207	10919495-1	4710-01-159-1847	14	1
19207	10919496-1	4710-01-159-1846	14	3
19207	10919497-1		19	9
19207	10919497-2		19	4
19207	10919499		19	8
19207	10919500		19	7
19207	10919501		19	6
19207	10919502		19	5
19207	10919503		26	5
19207	10919515	2540-01-268-3551	29	1
19207	10919525	2510-01-255-0868	28	3

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FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19207	10919533	5305-00-140-4759	27	10
19207	10919534	5365-00-446-3110	27	6
19207	10919535	5306-00-080-5431	25	2
19207	10919536	3120-00-809-1487	25	4
19207	10919561	9905-00-809-1440	31	3
19207	10919562	2590-00-446-3115	5	1
19207	11677539-1		3	1
19207	11677539-2		3	1
19207	12259830	2590-01-183-6816	24	1
19207	12259830-1		24	6
19207	12259831	3040-01-209-0497	24	13
19207	12259835	5340-01-209-0475	24	21
19207	12259837	5340-01-209-0500	24	22
19207	12259839	2590-01-210-8843	24	19
19207	12259840	5340-01-209-0503	24	23
19207	12259844	2540-01-215-1617	24	5
19207	12259845	2530-01-215-3389	24	9
19207	12312996	5340-01-222-5247	24	7
02686	123917	2530-00-973-2355	10	27
23705	137397	4730-00-013-7397	14	10
12204	1502415	4730-00-036-4421	13	2
21450	172439	5305-00-115-9430	30	4
21450	190152		14	2
19207	190877	6240-00-019-0877	1	3
			2	2
23862	2275698	5365-00-741-1433	20	20
24617	2284031	2530-00-741-1425	20	1
56442	25030W	5330-00-614-4356	20	12
06853	285172	4820-00-420-5499	19	12
24617	446284	5310-00-044-6284	23	2
19207	446914	6240-00-044-6914	1	2
24617	451031	5310-00-045-1031	20	15
89346	48122H	5365-00-274-4544	13	6
63477	5156653	4730-00-854-6931	12	9
79470	5167679	4730-00-463-1588	14	9
19207	5303461	2530-00-408-9177	9	10
19207	5323088	5310-00-641-9939	10	6
19207	545033	5340-00-275-6042	7	3
23705	563400	5365-00-350-0155	27	4
73331	5939830	6220-00-752-6516	4	10
73331	5939831	6250-00-371-4018	4	6
73331	5939841	5330-00-353-0959	4	4
19207	595479		25	1
19200	6144454	2530-00-614-4454	20	11
34623	648487	2640-00-050-1235	22	4
09386	65890	2530-00-738-9620	21	3
19207	7055100	6150-00-777-3068	6	2
09386	70627E	5306-00-335-4768	20	8
19207	7064979		10	11
09386	71423E	2530-00-693-1010	20	16
19207	7339464	2540-00-733-9464	26	4

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FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19207	7339465	5310-00-733-9465	26	2
19207	7339466	5365-00-275-4519	26	3
19207	7349028	5310-00-424-1452	27	3
19207	7349029	5310-00-424-1456	27	5
19207	7366480-1	2530-01-093-8271	27	12
19207	7373260	2530-00-737-3260	12	7
19207	7373354	5330-00-737-3354	12	1
19207	7411021	2530-00-137-9235	18	3
19207	7411027	4010-00-741-1027	23	4
19207	7411028	5310-00-741-1028	23	6
19207	7411376	3110-00-143-7538	20	14
19207	7411377	3110-00-143-7586	20	18
19207	7411378	5310-00-741-1378	20	22
19207	7411379	5310-00-741-1379	20	13
19207	7411429	5330-00-741-1429	20	19
19207	7411760	5306-00-741-1760	10	24
			11	4
19207	7411903	4730-00-741-1903	13	4
19207	7412068	2530-00-741-2068	11	14
63477	7412079	4730-00-729-6437	13	7
19207	7412088	5310-00-741-2088	13	1
19207	7412103	5365-00-741-2103	10	7
			11	3
19207	7412120	5310-00-741-2120	10	21
19207	7412123		10	15
19207	7413231	2530-00-741-3231	20	2
19207	7745464	4730-00-419-9425	13	5
19207	7950946	5120-00-795-0946	32	1
19207	7979296	5306-00-797-9296	16	6
19207	7979297	4820-00-350-6749	16	8
19207	7979373	9905-00-282-7489	31	1
63477	7979691	4730-00-773-2163	12	2
19207	7979699	1440-00-689-6160	12	6
19207	7979851	5340-01-189-6405	19	22
19207	7979972	5306-00-174-4246	24	17
40342	8330281	4730-00-335-4728	19	11
19207	8331539	2530-00-693-0736	24	3
19207	8331541	5360-00-699-8489	24	4
19207	8333770	5360-00-699-9018	11	15
19207	8338566	5935-00-572-9180	4	3
19207	8338567	5310-00-833-8567	4	2
19207	8342195	5340-00-076-5990	7	13
19207	8363955	2510-00-679-3681	25	5
19207	8363968	5305-00-655-9404	25	3
19207	8365426	4710-00-511-1692	12	3
19207	8378785	6220-00-669-5623	1	1
19207	8699500	5365-00-899-6723	9	3
19207	8719915	2530-00-677-0202	20	17
19207	8720331	1440-00-994-8975	10	23
19207	8720517	2530-00-522-4183	10	10
19207	8724316	5935-00-446-3159	6	1

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FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
18876	8733897	2530-00-798-4812	10	14
19207	8733908	2530-00-159-8755	10	16
19207	8733909	2530-00-159-8756	10	16
19207	8733920	4710-00-566-7133	13	8
19207	8733922	4710-00-566-7134	13	3
19207	8733926	3040-00-150-7127	10	5
19207	8733933	2530-01-083-5641	10	22
19207	8733935	5310-00-314-0764	10	4
19207	8733936	5310-00-314-0765	10	3
19207	8733937	5310-00-322-7260	10	2
19207	8741645	6220-00-846-9745	2	1
19207	8747908	5340-00-611-7883	7	14
19207	8747908-1	5340-00-529-6199	7	12

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FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
BULK	1	9320-00-067-4120	81343	AMS 3195
BULK	2	4720-01-014-4915	19207	CPR104420-2
1	1	6220-00-669-5623	19207	8378785
1	2	6240-00-044-6914	19207	446914
1	3	6240-00-019-0877	19207	190877
1	4	5310-00-627-6128	96906	MS35335-35
1	5	5305-00-721-5492	96906	MS90728-57
2	1	6220-00-846-9745	19207	8741645
2	2	6240-00-019-0877	19207	190877
2	3	5310-00-407-9566	96906	MS35338-45
2	4	5306-00-225-9089	96906	MS90726-34
3	1		19207	11677539-1
3	1		19207	11677539-2
3	2	5305-00-543-2419	96906	MS90728-61
3	3	5310-00-637-9541	96906	MS35338-46
3	4	6220-01-093-4439	96906	MS52125-2
3	5	6240-00-019-3093	96906	MS15570-623
3	6	6240-00-044-6914	96906	MS35478-1683
3	7	6240-00-019-0877	96906	MS15570-1251
4	1	6220-00-726-1916	96906	MS35423-2
4	2	5310-00-833-8567	19207	8338567
4	3	5935-00-572-9180	19207	8338566
4	4	5330-00-353-0959	73331	5939841
4	5	5999-00-057-2929	96906	MS27148-2
4	6	6250-00-371-4018	73331	5939831
4	7	6240-00-019-0877	96906	MS15570-1251
4	8	5310-00-596-8169	78553	C1059-014-1
4	9	6220-00-299-7426	96906	MS35421-2
4	10	6220-00-752-6516	73331	5939830
4	11	5305-00-701-5071	96906	MS51959-61
4	12	5305-00-993-1848	96906	MS35207-265
4	13	5310-00-045-3296	96906	MS35338-43
4	14	5310-00-934-9751	96906	MS35650-302
5	1	2590-00-446-3115	19207	10919562
6	1	5935-00-446-3159	19207	8724316
6	2	6150-00-777-3068	19207	7055100
7	1	5310-00-045-3299	96906	MS35338-42
7	2	5305-00-984-6193	96906	MS35206-245
7	3	5340-00-275-6042	19207	545033
7	4		96906	MS35649-282
7	5	5360-00-535-1924	40342	N12929
7	6	5310-00-761-6882	96906	MS51967-2
7	7	5310-00-809-4058	96906	MS27183-10
7	8	5310-00-582-5965	96906	MS35338-44
7	9	5305-00-988-1725	96906	MS35206-281
7	10	5975-00-345-8055	19207	10905840
7	11	5325-00-579-6134	96906	MS35489-80
7	12	5340-00-529-6199	19207	8747908-1
7	13	5340-00-076-5990	19207	8342195
7	14	5340-00-611-7883	19207	8747908
7	15	5305-00-052-6922	96906	MS24629-58

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FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
7	16	5310-00-550-1130	96906	MS35333-40
8	1	2530-01-039-8722	19207	10910871
8	2	5340-00-439-6332	19207	10910879
9	1	3040-00-330-3262	92867	01001307
9	2	5305-00-269-3217	96906	MS90725-67
9	3	5365-00-899-6723	19207	8699500
9	4	5310-00-087-4652	96906	MS51922-17
9	5	5340-00-985-0823	96906	MS35812-4
9	6	5315-00-815-8840	96906	MS35810-4
9	7	5310-00-407-9566	96906	MS35338-45
9	8	5310-00-880-7744	96906	MS51967-5
9	9	2530-00-566-1674	96906	MS53060-5
9	10	2530-00-408-9177	19207	5303461
9	11	5305-00-984-5675	96906	MS35206-295
9	12	5315-00-842-3044	96906	MS24665-283
10	1	5315-00-322-7261	63477	F17758
10	2	5310-00-322-7260	19207	8733937
10	3	5310-00-314-0765	19207	8733936
10	4	5310-00-314-0764	19207	8733935
10	5	3040-00-074-2357	63477	FD17762
10	5	3040-00-150-7127	19207	8733926
10	6	5310-00-641-9939	19207	5323088
10	7	5365-00-741-2103	19207	7412103
10	8	2530-00-693-1007	63477	F19223
10	9	5320-00-011-9951	96906	MS16536-175
10	10	2530-00-522-4183	19207	8720517
10	11		19207	7064979
10	12	5310-00-550-3503	96906	MS35335-36
10	13	5310-00-903-3993	96906	MS51970-4
10	14	2530-00-798-4812	18876	8733897
10	14	2530-00-798-4824	63477	F17764
10	15		19207	7412123
10	16	2530-00-159-8755	19207	8733908
10	16	2530-00-159-8756	19207	8733909
10	17	5305-00-741-2108	63477	F12084
10	17	5305-00-741-2109	63477	F12085
10	18	5310-00-853-9335	96906	MS35691-13
10	19	5310-00-167-0721	96906	MS35333-41
10	20	2530-00-741-2104	63477	FC14257
10	21	5310-00-741-2120	19207	7412120
10	22	2530-01-083-5641	19207	8733933
10	23	1440-00-994-8975	19207	8720331
10	24	5306-00-741-1760	19207	7411760
10	25	5310-00-582-5965	96906	MS35338-44
10	26	5305-00-068-0515	96906	MS90727-8
10	27	2530-00-973-2355	02686	123917
10	27	2530-00-973-2356	63477	F17751
10	28	5310-00-924-4218	96906	MS51970-1
10	29	5305-00-115-9526	96906	MS18154-58
10	30	5310-00-627-6128	96906	MS35335-35
10	31	5305-00-269-3240	96906	MS90727-64

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FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
10	32	5310-00-627-6128	96906	MS35335-35
11	1	5310-00-924-4218	96906	MS51970-1
11	2		63477	F6783
11	3	5365-00-741-2103	19207	7412103
11	4	5306-00-741-1760	19207	7411760
11	5	5310-00-407-9566	96906	MS35338-45
11	6	5306-00-225-8496	96906	MS90725-31
11	7	5305-00-068-0515	96906	MS90727-8
11	8	5315-00-741-2106	63477	F12088
11	9	5310-00-761-6882	96906	MS51967-2
11	10	5310-00-582-5965	96906	MS35338-44
11	11	2530-00-987-2565	63477	F19636
11	11	2530-00-991-4342	63477	F19635
11	12	2530-00-741-2050	63477	F9556
11	13	2530-00-522-1157	63477	F19581
11	13	2530-00-794-9763	63477	F19582
11	14	2530-00-741-2068	19207	7412068
11	15	5360-00-699-9018	19207	8333770
12	1	5330-00-737-3354	19207	7373354
12	2	4730-00-773-2163	63477	7979691
12	3	4710-00-511-1692	19207	8365426
12	4		96906	MS35842-2
12	5	4720-00-809-2750	96906	MS521301A204120
12	6	1440-00-689-6160	19207	7979699
12	7	2530-00-737-3260	19207	7373260
12	8	2530-00-741-2065	63477	F56114
12	9	4730-00-854-6931	63477	5156653
12	10	5310-00-275-6635	56442	N7557
12	11	2530-00-204-4800	63477	FE14240
13	1	5310-00-741-2088	19207	7412088
13	2	4730-00-036-4421	12204	1502415
13	3	4710-00-566-7134	19207	8733922
13	4	4730-00-741-1903	19207	7411903
13	5	4730-00-419-9425	19207	7745464
13	6	5365-00-274-4544	89346	48122H
13	7	4730-00-729-6437	63477	7412079
13	8	4710-00-566-7133	19207	8733920
14	1	4710-01-159-1847	19207	10919495-1
14	2		21450	190152
14	3	4710-01-159-1846	19207	10919496-1
14	4	4710-01-090-4560	19207	10919491-1
14	5	5310-00-057-7080	96906	MS51922-29
14	6	4720-00-518-6757	63477	FC3700
14	7	4710-01-160-0741	19207	10919492-1
14	8	5305-00-709-8523	96906	MS90727-87
14	9	4730-00-463-1588	79470	5167679
14	10	4730-00-013-7397	23705	137397
15	1	2530-00-293-5139	23075	A298320
16	1	2530-00-797-9295	23705	A298749
16	2	5310-00-582-5965	96906	MS35338-44
16	3	5310-00-761-6882	96906	MS51967-2

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
16	4	4730-00-253-4412	96906	MS39230-2
16	5	4730-00-701-7677	96906	MS39185-1
16	6	5306-00-797-9296	19207	7979296
16	7		96906	MS53004-2
16	8	4820-00-350-6749	19207	7979297
16	9	4730-00-289-0155	96906	MS39182-5
17	1	5305-00-269-3250	96906	MS90727-74
17	2	5305-00-269-3236	96906	MS90727-60
17	3	5340-00-977-0815	40342	N13008
17	4	5310-00-950-0039	96906	MS21044N6
17	5	2530-00-741-1078	23705	A298748
17	6	4730-00-289-0051	96906	MS39182-6
17	7	4820-00-849-1220	96906	MS35782-5
17	8	5310-00-732-0559	96906	MS51968-8
17	9	5310-00-637-9541	96906	MS35338-46
18	1	4720-00-318-1016	06721	N13448
18	2	5330-00-090-2128	96906	MS35748-1
18	3	2530-00-137-9235	19207	7411021
19	1		19207	10919493-1
19	2		19207	10919493-2
19	3		19207	10919494-2
19	4		19207	10919497-2
19	5		19207	10919502
19	6		19207	10919501
19	7		19207	10919500
19	8		19207	10919499
19	9		19207	10919497-1
19	10		19207	10919494-1
19	11	4730-00-335-4728	40342	8330281
19	12	4820-00-420-5499	06853	285172
19	13	4730-00-293-7108	96906	MS39197-3
19	14	4730-00-278-8825	96906	MS39196-3
19	15	5340-00-809-1492	81348	CMDX2-3PT573036
19	16	5305-00-052-6922	96906	MS24629-58
19	17	4730-00-054-2572	96906	MS39196-4
19	18	4730-00-054-2571	96906	MS39197-4
19	19	4730-00-025-7508	96906	MS51823-5
19	20	4730-00-989-1096	96906	MS39212-5
19	21		14397	MS39187-2
19	22	5340-01-189-6405	19207	7979851
19	23	5306-00-225-9086	96906	MS90726-31
19	24	5310-00-407-9566	96906	MS35338-45
19	25	4730-01-079-8821	19207	CPR102321-1
20	1	2530-00-741-1425	24617	2284031
20	2	2530-00-741-3231	19207	7413231
20	3	5306-00-206-1560	96906	MS51946-11
20	4	5305-00-269-3240	96906	MS90727-64
20	5	5310-00-627-6128	96906	MS35335-35
20	6	5310-00-732-0559	96906	MS51968-8
20	7	5305-00-988-1723	96906	MS35206-279
20	8	5306-00-335-4768	09386	70627E

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FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
20	9	5310-00-080-6004	96906	MS27183-14
20	10	5310-00-982-4908	96906	MS21045-6
20	11	2530-00-614-4454	19200	6144454
20	12	5330-00-614-4356	56442	25030W
20	13	5310-00-741-1379	19207	7411379
20	14	3110-00-143-7538	19207	7411376
20	15	5310-00-045-1031	24617	451031
20	16	2530-00-693-1010	09386	71423E
20	17	2530-00-677-0202	19207	8719915
20	18	3110-00-143-7586	19207	7411377
20	19	5330-00-741-1429	19207	7411429
20	20	5365-00-741-1433	23862	2275698
20	21	5306-00-383-4957	96906	MS51946-2
20	21	5306-00-733-9239	96906	MS51946-1
20	22	5310-00-741-1378	19207	7411378
20	23	5310-00-926-5877	96906	MS35338-160
20	24	5305-00-984-6207	96906	MS35206-260
20	25	5310-00-518-5566	96906	MS51983-1
20	25	5310-00-594-8038	96906	MS51983-2
21	1	2530-00-026-0265	96906	MS53044-5
21	2	2530-00-738-9061	96906	MS53045-3
21	3	2530-00-738-9620	09386	65890
22	1	2610-00-269-7383	81348	GROUP 2/9.00-20/ TR175A/ON CENTER
22	2	2610-00-262-8677	81348	ZZ-T-381M/GROUP3 /9.00-20/D/TBCC
22	3	2640-00-050-1229	17875	100AA
22	4	2640-00-050-1235	34623	648487
23	1	2540-00-999-5584	96906	MS51339-3
23	2	5310-00-044-6284	24617	446284
23	3	5315-00-849-9854	96906	MS24665-498
23	4	4010-00-741-1027	19207	7411027
23	5	2540-00-078-6633	96906	MS51335-1
23	6	5310-00-741-1028	19207	7411028
24	1	2590-01-183-6816	19207	12259830
24	2		96906	MS21044-N12
24	3	2530-00-693-0736	19207	8331539
24	4	5360-00-699-8489	19207	8331541
24	5	2540-01-215-1617	19207	12259844
24	6		19207	12259830-1
24	7	5340-01-222-5247	19207	12312996
24	8	5310-00-088-1251	96906	MS51922-1
24	9	2530-01-215-3389	19207	12259845
24	10	5315-00-844-5836	96906	MS16562-65
24	11	5310-00-483-8792	96906	MS17829-4C
24	12		96906	ZS90725-10
24	13	3040-01-209-0497	19207	12259831
24	14	5305-00-068-0501	96906	MS90725-5
24	15	5305-00-071-2066	96906	MS90728-109
24	16	5310-00-584-5272	96906	MS35338-48
24	17	5306-00-174-4246	19207	7979972

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FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
24	18	5310-00-068-5285	96906	MS27183-20
24	19	2590-01-210-8843	19207	12259839
24	20		96906	MS21044-N9
24	21	5340-01-209-0475	19207	12259835
24	22	5340-01-209-0500	19207	12259837
24	23	5340-01-209-0503	19207	12259840
24	24	5310-00-660-3381	96906	MS21083-N5
24	25	5306-00-225-9093	96906	MS90726-38
25	1		19207	595479
25	2	5306-00-080-5431	19207	10919535
25	3	5305-00-655-9404	19207	8363968
25	4	3120-00-809-1487	19207	10919536
25	5	2510-00-679-3681	19207	8363955
25	6	2510-00-420-8959	19207	10910878
25	6	2510-01-186-5900	19207	10910873-2
25	7	5310-00-943-2141	96906	MS51968-15
25	8	5310-00-982-6809	96906	MS21044N10
25	9	2510-00-439-6331	19207	10916434
26	1	5310-00-763-8905	96906	MS51968-20
26	2	5310-00-733-9465	19207	7339465
26	3	5365-00-275-4519	19207	7339466
26	4	2540-00-733-9464	19207	7339464
26	5		19207	10919503
27	1	5310-00-835-2037	96906	MS35691-53
27	2	5310-00-763-8905	96906	MS51968-20
27	3	5310-00-424-1452	19207	7349028
27	4	5365-00-350-0155	23705	563400
27	5	5310-00-424-1456	19207	7349029
27	6	5365-00-446-3110	19207	10919534
27	7		96906	MS90726-178
27	8	5310-00-584-5272	96906	MS35338-48
27	9	5310-00-732-0560	96906	MS51968-14
27	10	5305-00-140-4759	19207	10919533
27	11	5305-00-716-8183	96906	MS90726-116
27	12	2530-01-093-8271	19207	7366480-1
27	13	2530-01-047-5409	19207	10916439
28	1		19207	10910850
28	2	5305-00-716-8183	96906	MS90726-116
28	3	2510-01-255-0868	19207	10919525
28	4	5315-00-839-5821	96906	MS24665-351
28	5	5315-00-140-1938	96906	MS35810-6
28	6	2510-01-240-7280	19207	10910858
28	7	5315-00-059-0206	96906	MS24665-491
28	8	5340-01-238-0963	19207	10910883
28	9	5310-00-241-6640	96906	MS16228-6C
28	10	5310-00-584-7981	96906	MS16212-3
28	11	5340-01-276-8740	19207	10910867
28	12	5320-00-010-4168	96906	MS35744-36
29	1	2540-01-268-3551	19207	10919515
29	2	5310-00-584-7981	96906	MS16212-3
29	3	5310-00-241-6640	96906	MS16228-6C

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FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	FSCM	PART NUMBER
29	4	5305-00-716-8183	96906	MS90726-116
29	5		81343	AMS3195X8FT
30	1	9905-00-202-3639	96906	MS35387-2
30	1	9905-00-205-2795	96906	MS35387-1
30	2	5310-00-582-5965	96906	MS35338-44
30	3	5310-00-761-6882	96906	MS51967-2
30	4	5305-00-115-9430	21450	172439
30	4	5305-00-988-1725	96906	MS35206-281
30	5	2540-00-446-3163	19207	10910838
31	1	9905-00-282-7489	19207	7979373
31	2	5305-00-253-5632	96906	MS21318-58
31	3	9905-00-809-1440	19207	10919561
32	1	5120-00-795-0946	19207	7950946

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 organizational maintenance.

A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the figure that covers fabrication criteria.

All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

Section II. MANUFACTURED ITEMS PART NUMBER INDEX

Part Number	Item	Page Number	Figure Number
10919493-1	Tube, union to shutoff cock; left rear	G-2	1
10919493-2	Tube, union to shutoff cock; right rear	G-2	2
10919494-1	Tube, air filter tee to union; left front	G-3	3
10919494-2	Tube, air filter tee to union; right front	G-3	4
10919497-1	Tube, airhose elbow to air filter; left	G-4	5
10919497-2	Tube, airhose elbow to air filter; right	G-4	6
10919499	Tube, air filter tee to relay valve; right	G-5	7
10919500	Tube, relay valve to reservoir	G-5	8
10919501	Tube, relay valve to brake chamber	G-6	9
10919502	Tube, air filter tee to relay valve; left	G-6	10

Section III. MANUFACTURED ITEMS ILLUSTRATIONS

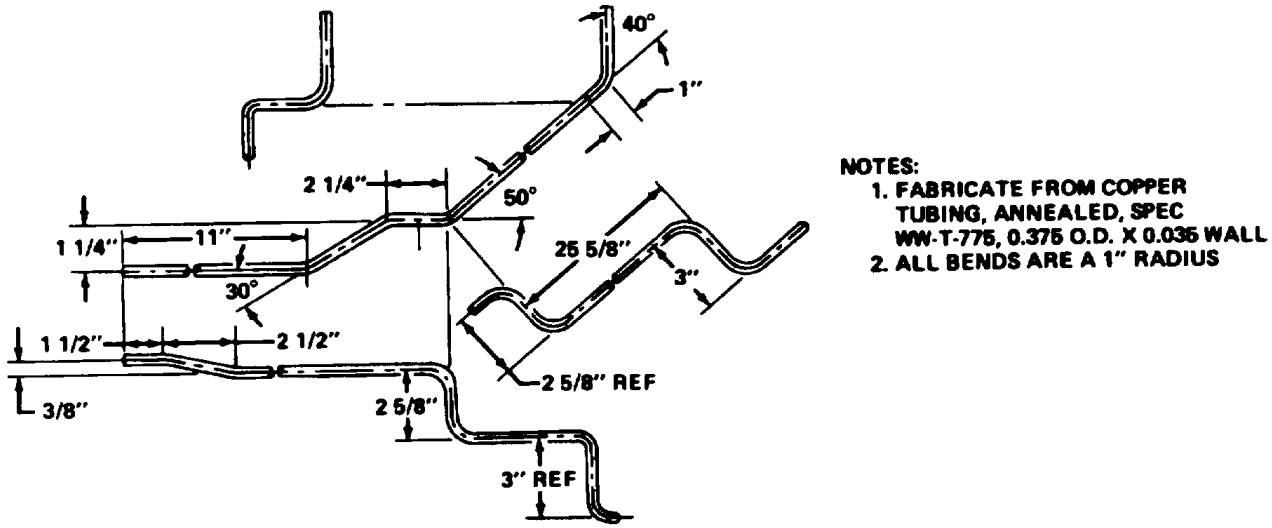

Figure 1. Tube, Union to Shutoff Cock Left Rear.

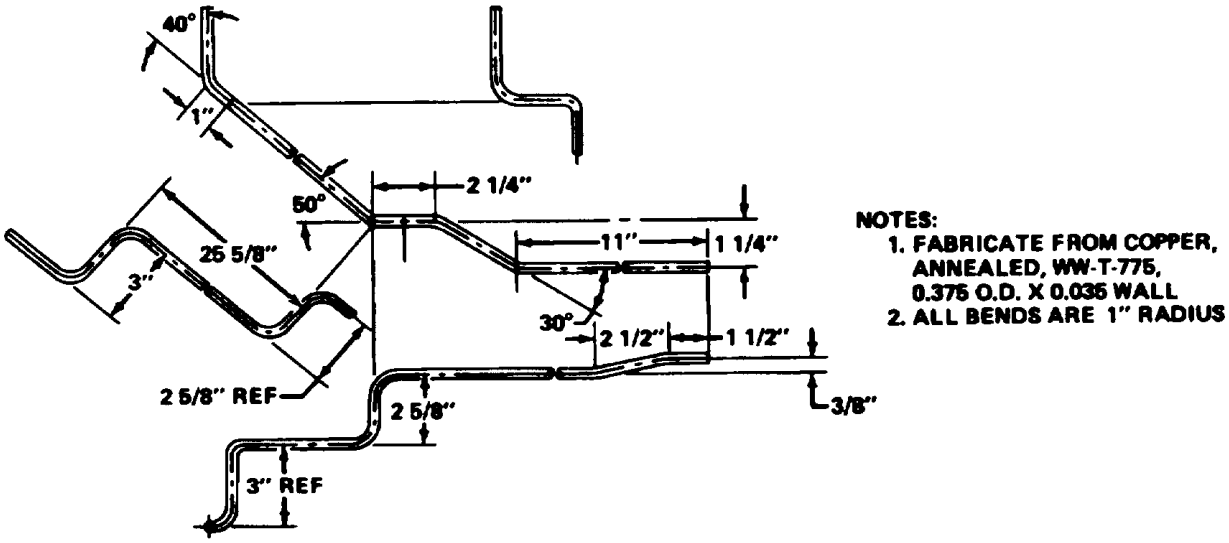

Figure 2. Tube, Union to Shutoff Cock Right Rear.

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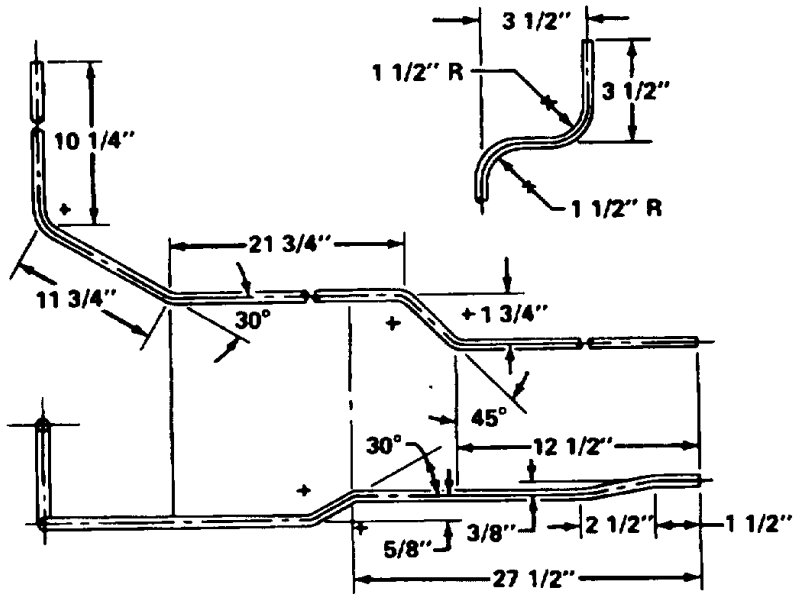
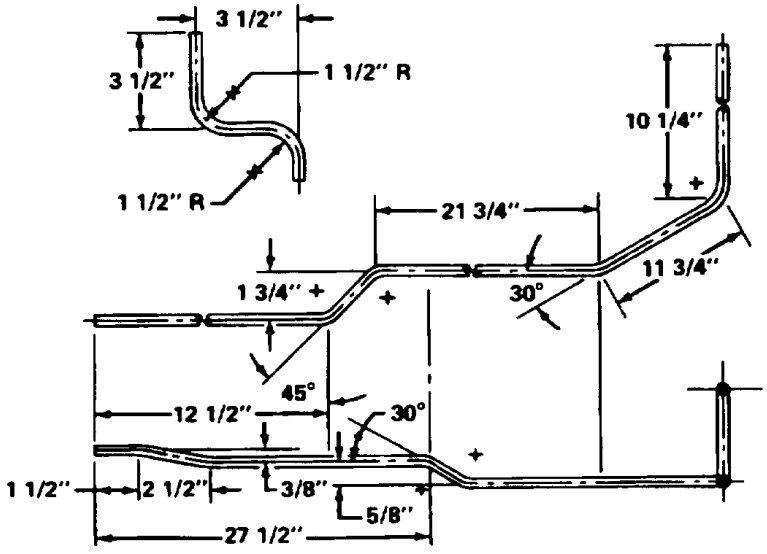
MANUFACTURED ITEMS ILLUSTRATIONS - CONTINUED



NOTE:
FABRICATE FROM COPPER TUBING, ANNEALED, SPEC WW-T-775, 0.375 O.D. X 0.035 WALL

Figure 3. Tube, Air Filter Tee to Union; Left Front.

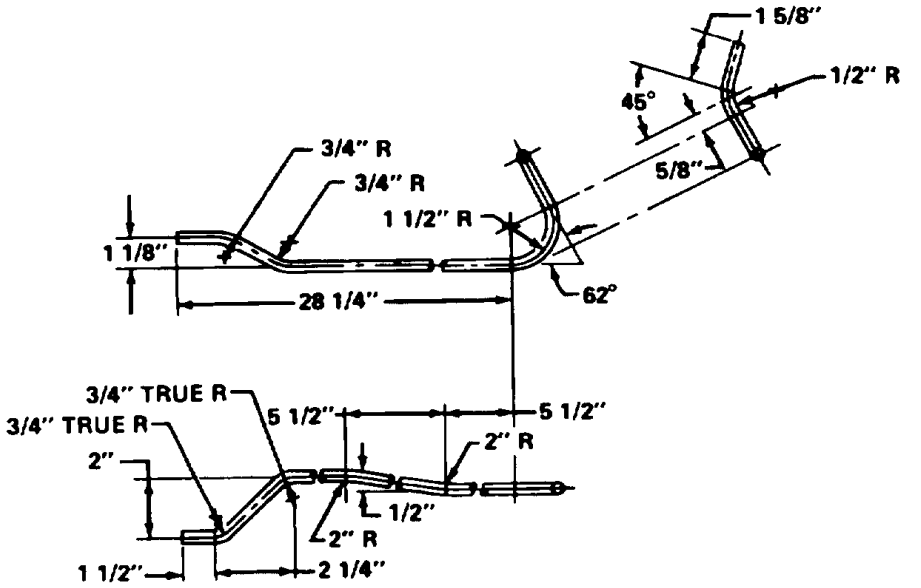


NOTE:
FABRICATE FROM COPPER TUBING, ANNEALED, SPEC WW-T-775, 0.375 O.D. X 0.035 WALL

Figure 4. Tube, Air Filter Tee to Union; Right Front.

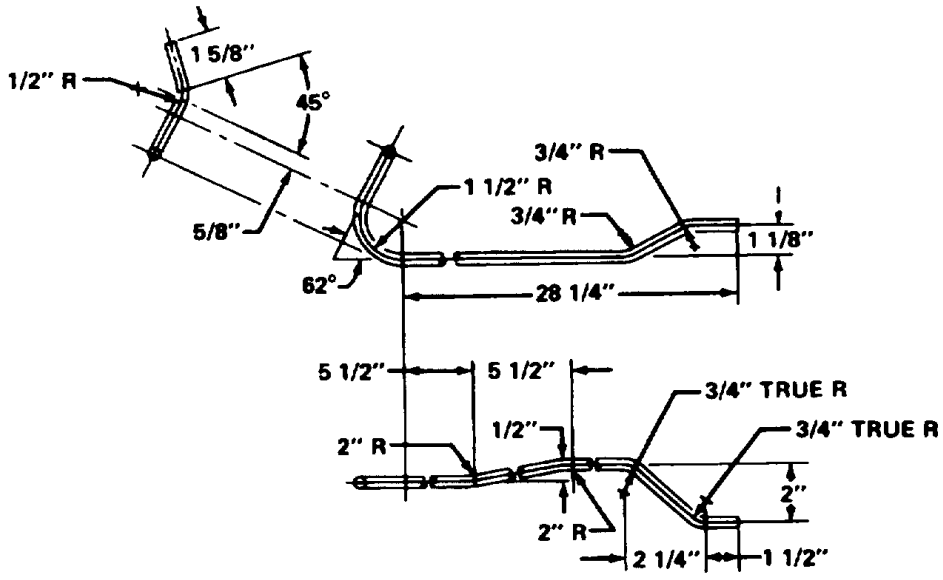
TA223947

MANUFACTURED ITEMS ILLUSTRATIONS - CONTINUED



NOTE:
FABRICATE FROM COPPER TUBING, ANNEALED, SPEC WW-T-775, 0.375 O.D. X 0.032 WALL

Figure 5. Tube, Airhose Elbow to Air Filter, Left.

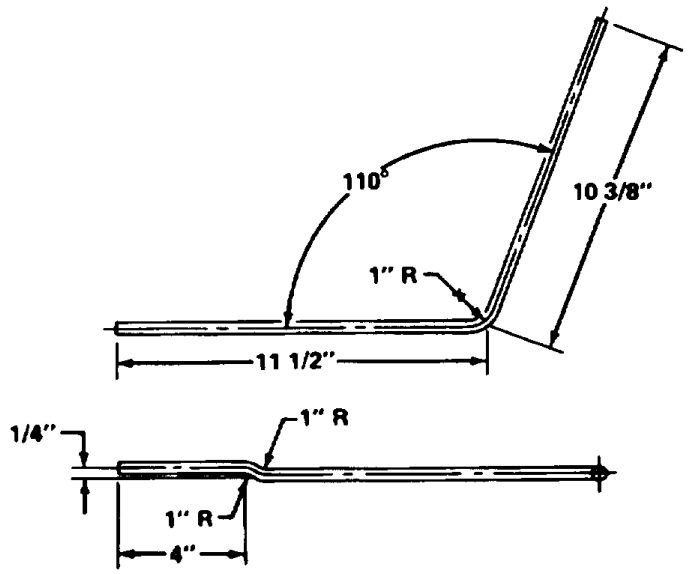


NOTE:
FABRICATE FROM COPPER TUBING, ANNEALED, SPEC WW-T-775, 0.375 O.D. X 0.32 WALL

Figure 6. Tube, Airhose Elbow to Air Filter, Right.

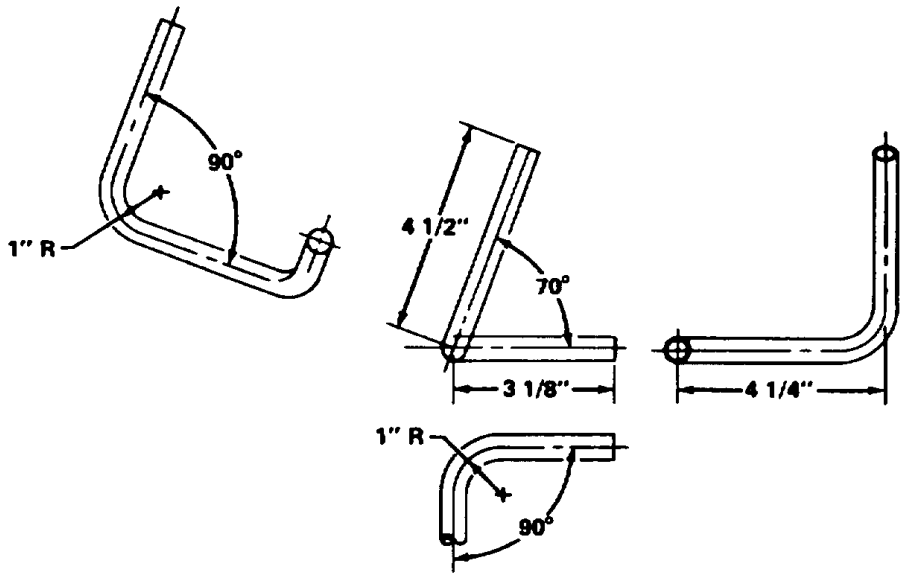
TA223848

MANUFACTURED ITEMS ILLUSTRATIONS - CONTINUED



NOTE:
FABRICATE FROM COPPER TUBING, ANNEALED, SPEC WW-T-775, 0.375 O.D. X 0.032 WALL

Figure 7. Tube, Air Filter Tee to Relay; Valve; Right.



NOTE:
FABRICATE FROM COPPER TUBING, ANNEALED, SPEC WW-T-775, 0.375 O.D. X 0.032 WALL

Figure 8. Tube, Relay Valve to Reservoir.

TA223949

MANUFACTURED ITEMS ILLUSTRATIONS - CONTINUED

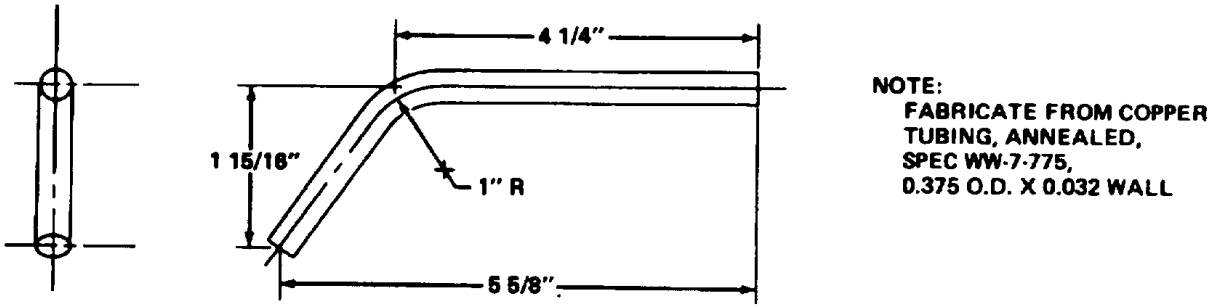


Figure 9. Tube, Relay Valve to Brake Chamber.

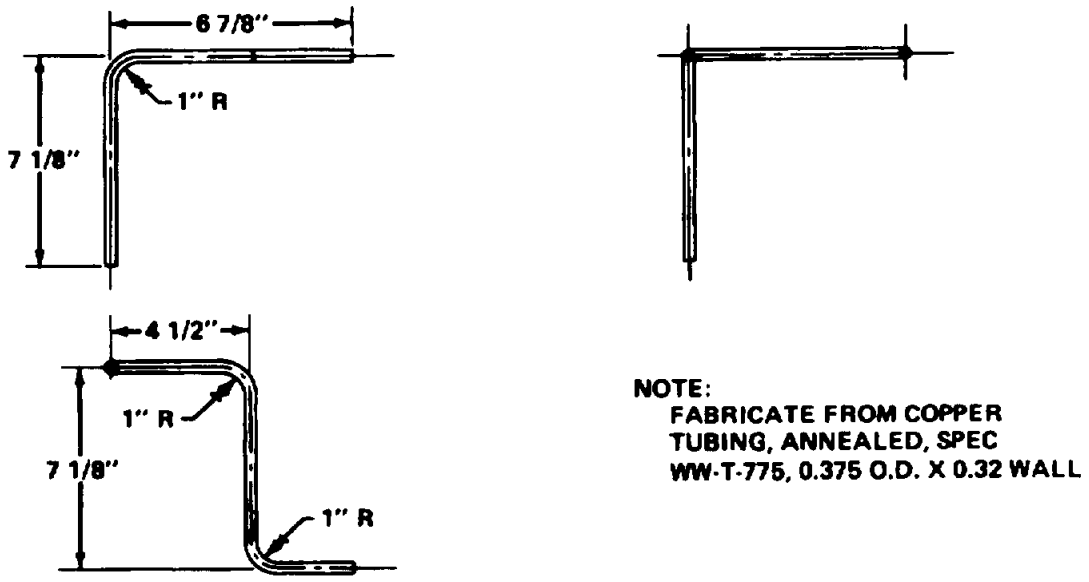


Figure 10. Tube, Air Filter Tee to Relay Valve; Left.

TA223950

APPENDIX H

TORQUE LIMITS

Current Usage	Much Used	Much Used	Used at Times	Used at Times
Quality of Material	**Indeterminate**	**Minimum Commercial**	**Medium Commercial**	**Best Commercial**
SAE Grade Number	1 or 2	5	6 or 7	8
Capscrew Head Markings				
Manufacturers marks may vary				
These are all SAE Grade 5 (3 line)				

CAUTION

If replacement capscrews are of a higher grade than originally supplied, use torque specifications for that placement. This will prevent equipment damage due to over torquing.

Capscrew Body Size (Inches) - (Thread)		Torque Ft Lb (N•m)		Torque Ft Lb (N•m)		Torque Ft Lb (N•m)		Torque Ft Lb (N•m)	
1/4	20	5	(7)	8	(11)	10	(14)	12	(16)
28	6	(8)	10	(14)	14	(19)			
5116	18	11	(15)	17	(23)	19	(26)	24	(33)
24	13	(18)	19	(26)	27	(37)			
318	16	18	(24)	31	(42)	34	(46)	44	(60)
24	20	(27)	35	(47)	49	(66)			
7116	14	28	(38)	49	(66)	55	(75)	70	(95)
20	30	(41)	55	(75)	78	(106)			
112	13	39	(53)	75	(102)	85	(115)	105	(142)
20	41	(56)	85	(115)	120	(163)			
9116	12	51	(69)	110	(149)	120	(163)	155	(210)
18	55	(75)	120	(163)	170	(231)			
518	11	83	(113)	150	(203)	167	(226)	210	(285)
18	95	(129)	170	(231)	240	(325)			
314	10	105	(142)	270	(366)	280	(380)	375	(508)
16	115	(156)	295	(400)	420	(569)			
718	9	160	(217)	395	(538)	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)			

TA223951

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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