

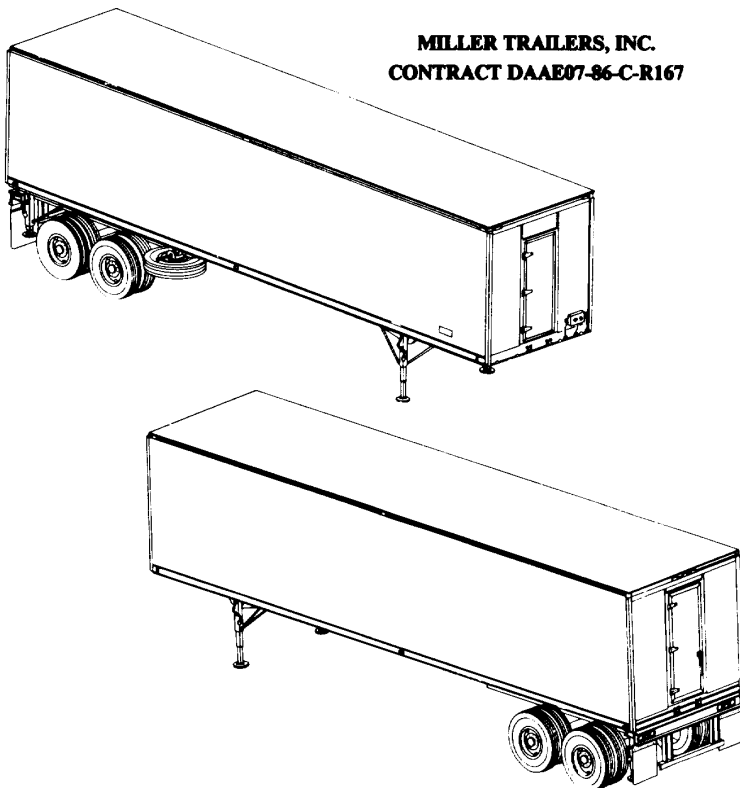
DEPARTMENT OF THE ARMY TECHNICAL MANUAL

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

SEMITRAILER, VAN: ELECTRONIC TACTICAL

12-TON, 4 WHEEL, XM1063

(2330-01-224-944M)



OPERATOR PMCS
PAGE 2-2

LUBRICATION
INSTRUCTIONS
PAGE 3-1

OPERATOR
TROUBLESHOOTING
PAGE 3-7

UNIT PMCS
PAGE 4-3

UNIT MAINTENANCE
PAGE 4-26

INTERMEDIATE
DS/GS MAINTENANCE
PAGE 5-1

Approved for public release; distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY
DECEMBER 1988

WARNING

HIGH VOLTAGE

is used in the operation of this equipment.

DEATH ON CONTACT

may result if personnel fail to observe safety precautions. Learn the area containing high-voltage in each piece of equipment. Be careful not to contact high-voltage connections when installing or operating this equipment.

Before working inside the equipment, turn power off and ground points of high potential before touching them.

WARNING

AIR UNDER PRESSURE

100 PSI AIR PRESSURE

is used in the operation of this equipment.

DEATH

or severe injury may result if personnel fail to observe safety precautions.

WARNING

Compressed air used for cleaning purposes will not exceed 30 psi. Use only with effective chip guarding and personnel protective equipment (goggles/shield, gloves, etc.).

WARNING

Dry cleaning solvent PD-680 is toxic and flammable. Wear protective goggles and gloves and use only in a well ventilated area. Avoid contact with skin, eyes, and clothes and don't breathe vapors. Do not use near open flame or excessive heat. The flash point is 100 F - 138 °F (38 °C - 50 °C). If you become dizzy while using cleaning solvent, get fresh air immediately and get medical aid. If contact with eyes is made, wash your eyes with water and get medical aid immediately. Reasons: to prevent personal injury.

b

TECHNICAL MANUAL

TM 9-2330-380-14& P

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington D.C., 15 December 1988

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

SEMITRAILER, VAN: ELECTRONIC TACTICAL

**10-TON, 4-WHEEL, XM10063
(2330-01-163-5025)**

Current as of 30 October 1988

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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

TABLE OF CONTENTS

CHAPTER			Page
	1	INTRODUCTION	
Section	I	General Information	1-1
Section	II	Equipment Description and Data	1-4
Section	III	Principles of Operation	1-21

		Page
CHAPTER	2	OPERATING INSTRUCTIONS
Section	I	Description and Use of Operator's Controls and Indicators..... 2-1
Section	II	Preventive Maintenance Checks and Services (PMCS) 2-2
Section	III	Operation Under Usual Conditions..... 2-10
Section	IV	Operation Under Unusual Conditions..... 2-21
CHAPTER	3	OPERATOR MAINTENANCE INSTRUCTIONS
Section	I	Lubrication Instructions 3-1
Section	II	Troubleshooting Procedures 3-7
Section	III	Maintenance..... 3-16
CHAPTER	4	UNIT MAINTENANCE INSTRUCTIONS
Section	I	Repair Parts, Special Tools; Test, Measurement and Diagnostic Equipment (TMDE) and Support Equipment 4-2
Section	II	Service Upon Receipt..... 4-2
Section	III	Preventive Maintenance Checks and Services (PMCS) 4-3
Section	IV	Troubleshooting Procedures 4-9
Section	V	Electrical System Maintenance Procedures..... 4-26
Section	VI	Air Brake System Maintenance Procedures 4-41
Section	VII	Axle/Brake Assembly Maintenance Procedures 4-59
Section	VIII	Spare Wheel Carrier, Landing Gear and Leveling Jack Maintenance Procedures..... 4-69
Section	IX	Doors, Body and Parts Maintenance Procedures 4-75
Section	X	Preparation for Storage or Shipment 4-88
CHAPTER	5	INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL SUPPORT MAINTENANCE PROCEDURES
Section	I	Repair Parts, Special Tools, TMDE, and Support Equipment 5-1
Section	II	Axle Assembly Maintenance Procedures..... 5-2
Section	III	Suspension System Maintenance Procedures 5-7

			Page
APPENDIX	A	REFERENCES.....	A-1
APPENDIX	B	MAINTENANCE ALLOCATION CHART	
Section	I	Introduction.....	B-1
Section	II	Maintenance Allocation Chart	B-4
Section	III	Tool and Test Equipment Requirements	B-9
Section	IV	Remarks	B-9
APPENDIX	C	COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST	
Section	I	Introduction.....	C-1
Section	II	Components of End Item	C-2
Section	III	Basic Issue Items	C-4
APPENDIX	D	ADDITIONAL AUTHORIZATION LIST	
Section	I	Introduction.....	D-1
Section	II	Additional Authorization List.....	D-2
APPENDIX	E	EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST	
Section	I	Introduction.....	E-1
Section	II	Expendable/Durable Supplies and Materials List	E-2
APPENDIX	F	REPAIR PARTS AND SPECIAL TOOLS LIST	
Section	I	Introduction.....	1
Section	II	Repair Parts List.....	1-1

			Page	Illus/ Figure
Group	06	ELECTRICAL SYSTEM		
	0608	Resistor Box and Cover Assembly.....	1-1	1
	0608	Components of Resistor Box Cover Assembly	2-1	2
	0609	Light, Marker, Clearance	3-1	3
	0609	Light, Blackout Stop and Tail.....	4-1	4
	0609	Light, Turn and Stop.....	5-1	5
	0613	Wiring Harness Attaching Parts, Dolly	6-1	6
	0613	Wiring Harness, Attaching Parts, Van Body.....	7-1	7
	0613	Wiring Harness, Dolly.....	8-1	8
	0613	Wire Assembly, Dolly	9-1	9
	0613	Wiring Harness, Van Body.....	10-1	10
	0613	Wiring Harness, Van Body	11-1	11
	0613	Wiring Harness, Van Body	12-1	12
Group	11	REAR AXLE		
	1100	Rear Axle Assembly.....	13-1	13
Group	12	BRAKES		
	1202	Brake Assembly	14-1	14
	1202	Slack Adjuster	15-1	15
	1208	Piping, Air Brake, Van Body.....	16-1	16
	1208	Piping, Air Brake, Dolly.....	17-1	17
	1208	Ratio Relay Valve.....	18-1	18
	1208	Relay Valve	19-1	19
	1208	Brake Air Chamber.....	20-1	20
	1208	Air Reservoir.....	21-1	21
Group	13	WHEELS AND TRACKS		
	1311	Wheel, Hub and Drum Assembly	22-1	22
	1313	Tire and Tube.....	23-1	23
Group	15	FRAME AND TOWING ATTACHMENTS		
	1504	Spare Wheel Carrier	24-1	24
	1507	Landing Gear.....	25-1	25
	1507	Leveling Jack.....	26-1	26

		Page	Illus/ Figure
Group	16 SPRINGS AND SHOCK ABSORBERS		
	1601 Suspension Assembly.....	27-1	27
Group	18 BODY		
	1801 Front Door.....	28-1	28
	1801 Rear Door.....	29-1	29
	1801 Rear Door Lock Components.....	30-1	30
	1801 Ladder Bracket, Splash Guard, Dolly Attaching Hardware.....	31-1	31
	1801 Ladder Stowage, Lifting Brace Stowage, Lifting Jack Installation.....	32-1	32
	1801 Landing Gear Stowage, Lifting Arm Assembly.....	33-1	33
Group	22 ACCESSORY ITEMS		
	2202 Reflector.....	34-1	34
	2210 Data Plate.....	35-1	35
Group	9501 Bulk Items.....		
Section	III Special Tools List.....		
	This Section Not Applicable		
Section	IV National Stock Number and Part Number Index		
APPENDIX	G ILLUSTRATED LIST OF MANUFACTURED ITEMS	G-1	
APPENDIX	H TORQUE LIMITS	H-1	
ALPHABETICAL INDEX	Index 1	

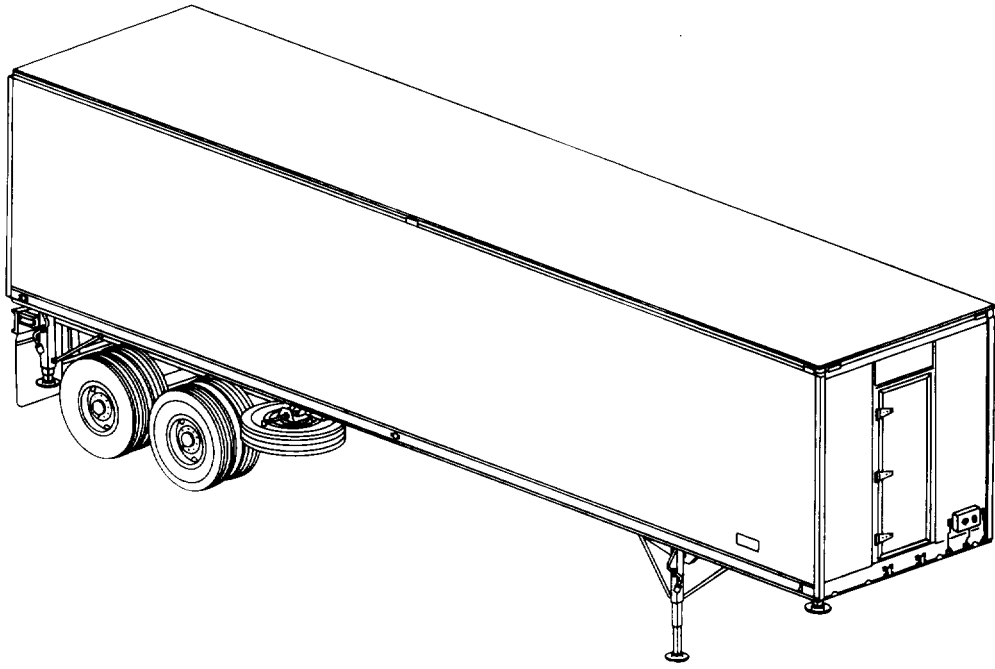
v/(vi blank)

CHAPTER 1

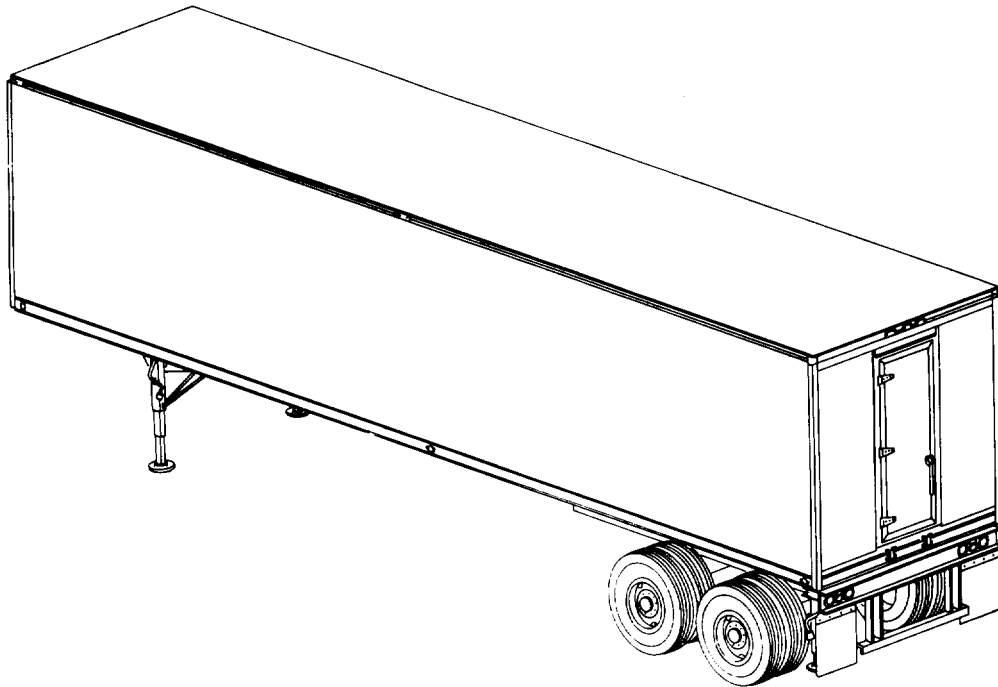
INTRODUCTION

Section I. GENERAL INFORMATION

CHAPTER INDEX	Page
Scope.....	1-3
Maintenance forms, records and reports.....	1-3
Destruction of Army materiel to prevent enemy use.....	1-3
Preparation for storage.....	1-3
Reporting equipment improvement recommendations.....	1-3
Equipment characteristics, capabilities and features.....	1-4
Location and description of major components.....	1-4
Landing gear.....	1-5
Front door.....	1-6
Rear door.....	1-6
Boarding ladder.....	1-6
Amber reflector.....	1-7
Amber clearance light.....	1-7
Red reflector.....	1-7
Red clearance light.....	1-7
Dolly assembly.....	1-8
Wheel and tire.....	1-9
Axle assembly.....	1-9
Hub.....	1-9
Brake drum.....	1-9
Spare wheel carrier.....	1-10
Brake system.....	1-10
Service brakes.....	1-10
Relay valve.....	1-11
Ratio relay valve.....	1-11
Air chamber.....	1-12
Slack adjuster.....	1-12
Air reservoir.....	1-13
Gladhand (air half-coupling).....	1-13
Gladhand cover.....	1-13
Compressed air supply.....	1-14
Service air line.....	1-14
Emergency air line.....	1-14
Internal brake system.....	1-14
Leveling jack.....	1-15
Suspension system.....	1-15
Dolly electrical system.....	1-15
Rear lights.....	1-16
Electrical input receptacles.....	1-17
Splash guard.....	1-16
Identification plate.....	1-17
Identification markings.....	1-18
Equipment data.....	1-18
Principles of operation.....	1-21
Air Brake system.....	1-21



Semitrailer XM1063, Right Front View



Semitrailer XM1063, Left Rear View

1-1. SCOPE

Type of Manual:

Operator's, Unit, Intermediate Direct Support and Intermediate General Support Maintenance (including Repair Parts and Special Tools List).

Model Number and Equipment Name:

Semitrailer, Van: Electronic Tactical, 12-ton, 40 feet long, 102 inches wide, XM1063.

Purpose of Equipment:

Houses and transports sensitive electronic equipment.

1-2. MAINTENANCE FORMS, RECORDS AND REPORTS

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

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

For destruction of Army materiel to prevent enemy use, refer to TM 750-244-6.

1-4. PREPARATION FOR STORAGE

For information on administrative storage, refer to page 4-88.

1-5. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

EIR can and must be submitted by anyone who is aware of an unsatisfactory condition with the equipment design or use. It is not necessary to show a new design or list a better way to perform a procedure; just simply tell why the design is unfavorable or why a procedure is difficult. EIR may be submitted on SF368 (Quality Deficiency Report). Mail directly to: Commander, U.S. Army Tank Automotive Command, ATTN: AMSTA-MP, Warren MI 48397-5000. We will send you a reply.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-6. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

a. Characteristics.

- (1) Serves as housing for electronic equipment.
- (2) Serves to transport the electronic equipment in operating condition.
- (3) Provides quick set-up in operating mode

b. Capabilities and Features.

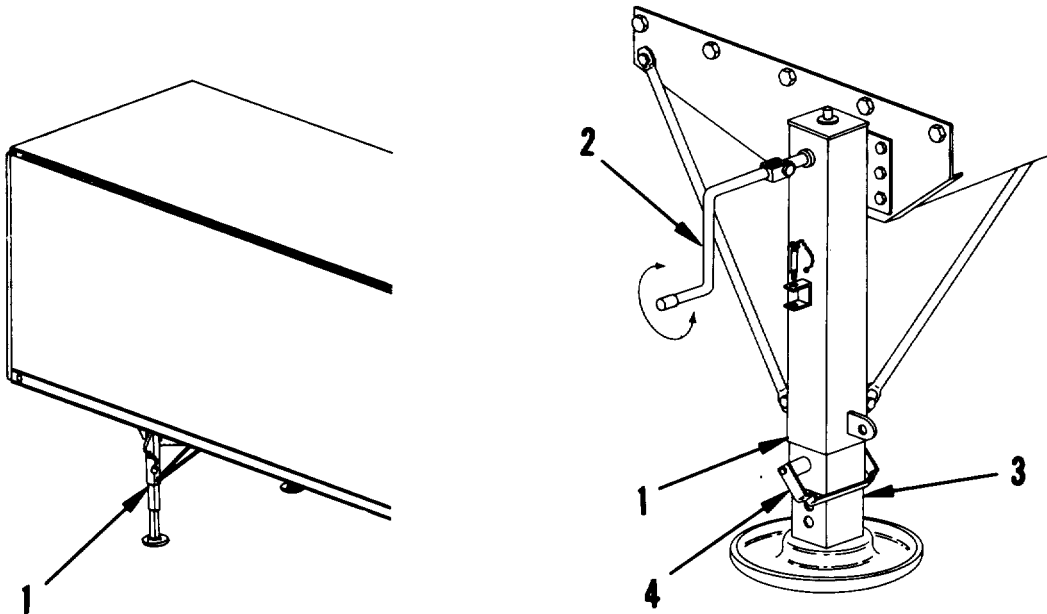
- (1) Transports delicate electronic equipment with a minimum of vibration.
- (2) Provides level attitude needed for operation of delicate electronic equipment through use of landing gears and leveling jacks.
- (3) Can be towed at speeds up to 55 mph (88.5 kph) on highway, 30 mph (48.3 kph) on improved gravel, and 30 mph (48.3 kph) cross country when fully loaded.
- (4) An air brake system provides positive stopping action of semitrailer.
- (5) It is Radio Frequency Interference (RFI) shielded.
- (6) It is weather insulated and water tight.
- (7) Has a removable dolly assembly.
- (8) The towing vehicle used is the H52, H52A1, M52A2, M818, M931 or M932 tractor.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

The front, rear, right, and left designations used in the manual designate the general areas or sides of the semitrailer as viewed from the rear of the semitrailer, facing toward the front.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

a. LANDING GEAR



Two separately operated single-speed landing gears (1).

Located near front of semitrailer.

Cranks (2) are used to operate landing gear legs to raise or lower front end of semitrailer to couple and uncouple from towing vehicle. Cranks are stowed on landing gear legs when not in use.

Landing gear is used to support semitrailer when not coupled to towing vehicle and to level front of semitrailer.

Landing gears are stowed on dolly frame for aircraft loading.

Drop leg assemblies (3) are controlled by release handle (4). The drop leg assemblies contact the ground and can be used in sandy, soft areas, as well as on flat, hard surfaces.

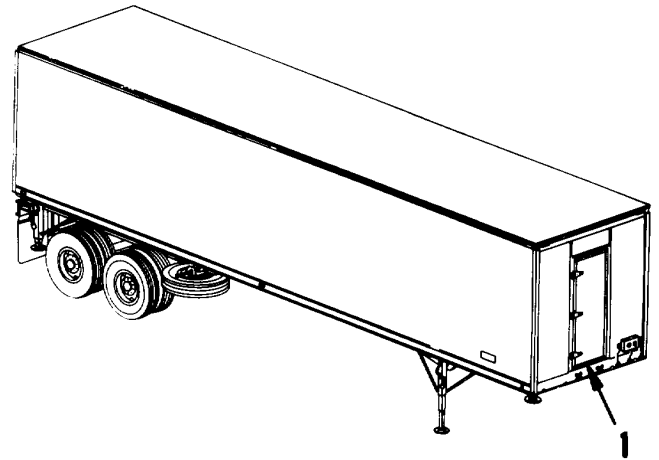
1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

b. FRONT DOOR (1)

Located in center of front of van body.

Is an escape door. Does not have an outside handle. Can only be opened from interior of semitrailer.

Front door is Radio Frequency Interference (RFI) shielded.

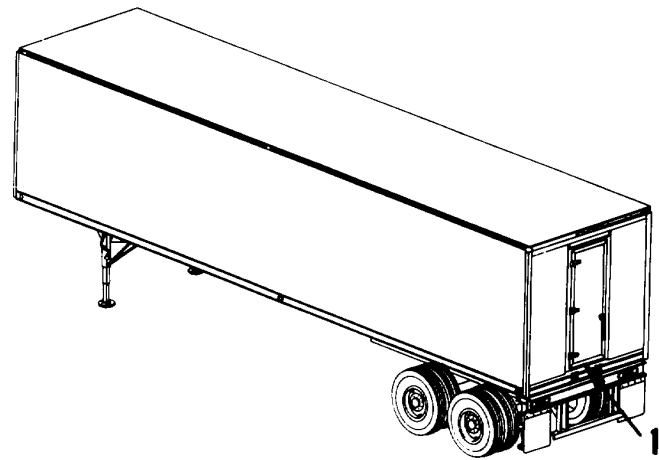


c. REAR DOOR (1)

Rear door is located in center of rear of van body.

It is used to gain access to the interior of the semitrailer.

Rear door is Radio Frequency Interference (RFI) shielded.

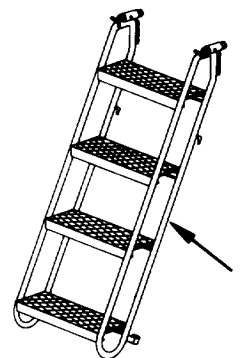


d. BOARDING LADDER (1)

A four-step ladder is used at door to step up to semitrailer floor level.

Refer to page 2-17 for ladder installation procedure.

Ladder is stowed in brackets on underside of van body when not in use.

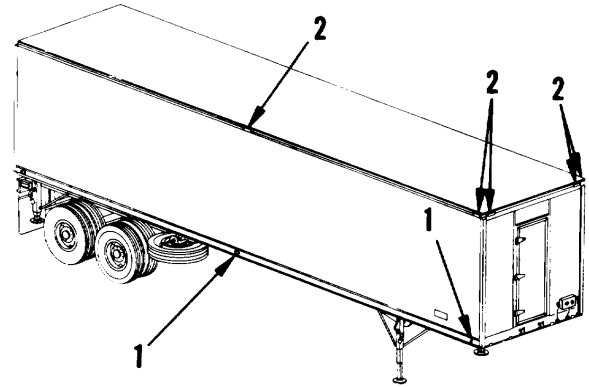


1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

e. ANBER REFLECTOR (1)

Four amber reflectors.

Two on each side, one near front and one at center.



f. ANBER CLEARANCE LIGHT (2)

Six amber clearance lights.

One at top center of each side. One at top front corner of each side.

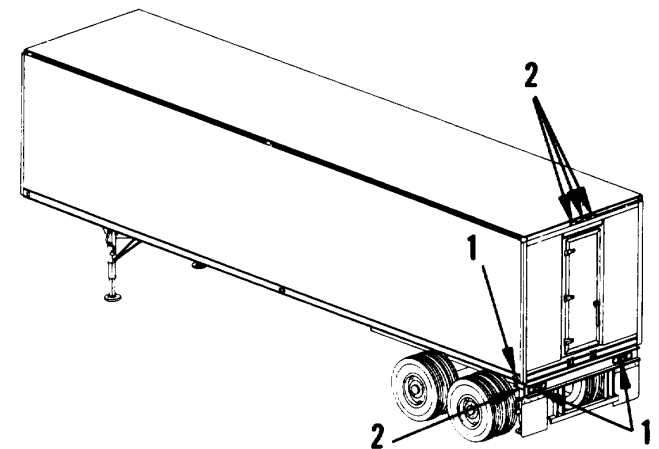
One at top corner of each side of front.

g. RED REFLECTOR (1)

Four red reflectors.

One at lower rear corner of each side.

One at each end of dolly frame, between the two stop and turn lights at each end.



h. RED CLEARANCE LIGHT (2)

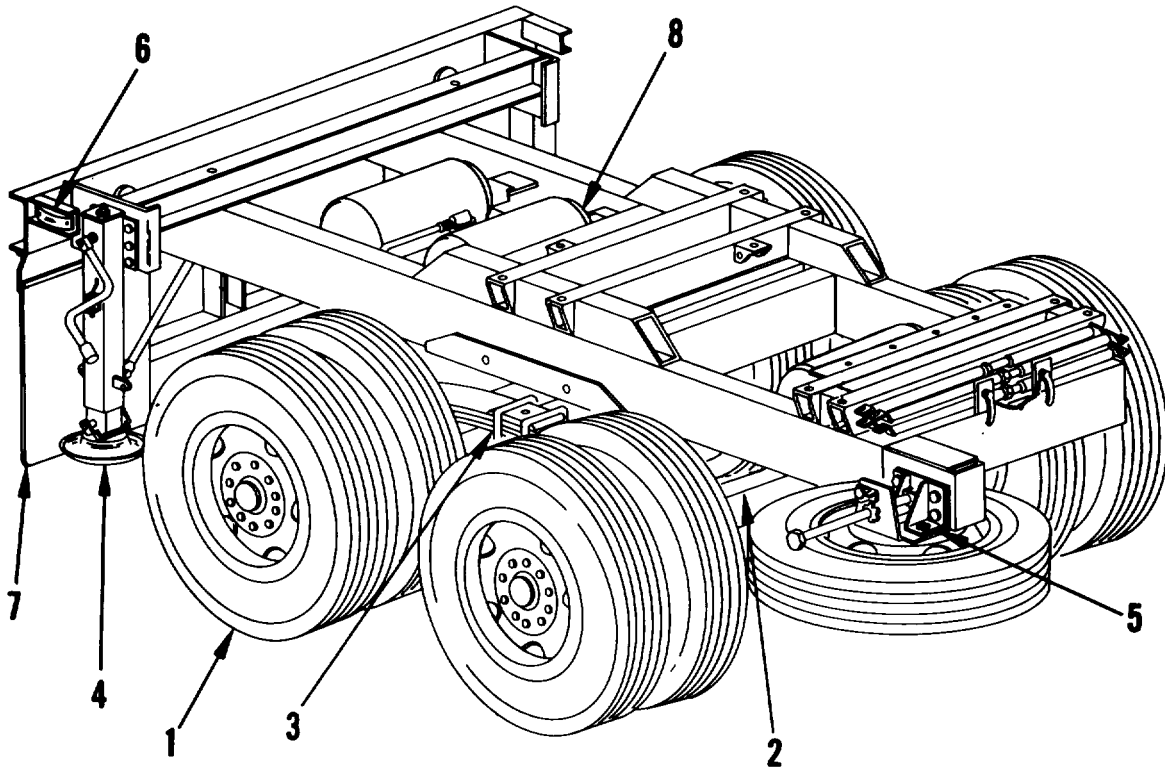
Five red clearance lights.

One at lower rear corner of each side, on dolly frame.

Three at center of top of rear.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

i. DOLLY ASSEMBLY



The dolly assembly, which can be removed, consists of:

1. Dual wheels and tires
2. Axle assembly
3. Suspension system
4. Leveling jacks
5. Spare wheel carrier
6. Electrical system
7. Splash guards
8. Air brake system

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

(1) WHEEL AND TIRE

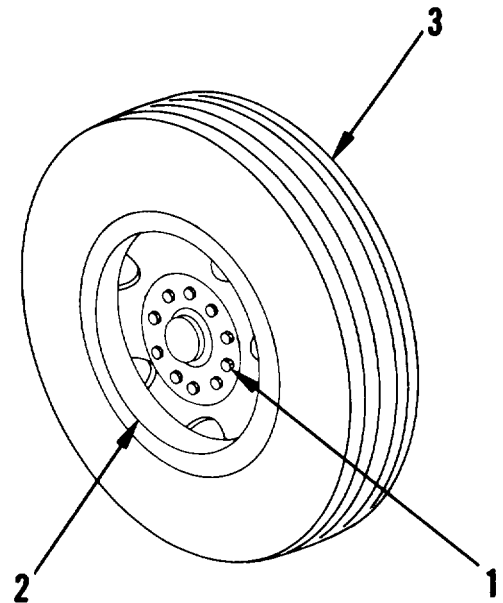
The nine wheels (2) are offset disk-type rims with split-type retaining rings. The ninth wheel is mounted on the spare wheel carrier.

Nuts (1) for right wheels (marked R) have right hand threads.

Nuts (1) for left wheels (marked L) have left hand threads. The studs are similarly marked.

Nuts (1) must be turned in opposite direction of forward rotation of wheel to be loosened or removed.

Tires (3) are tube type, highway tread, size 10.00 by 20, 12-ply rating.



(2) AXLE ASSEMBLY

Two axle assemblies, one located at center and one at rear of dolly assembly.

Each axle assembly has brake drums, hubs, brake assemblies, and associated parts.

(3) HUB (1)

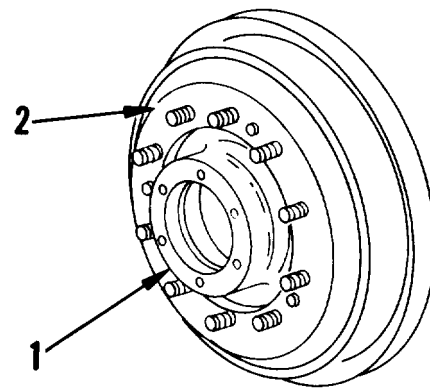
Each hub is mounted on axle spindle on two tapered roller bearings.

Brake drums are mounted on hubs.

(4) BRAKE DRUM (2)

Each brake drum is secured to hub with three screws and 10 serrated bolts.

A hub cap and gasket, secured to hub, keeps out moisture and dirt.

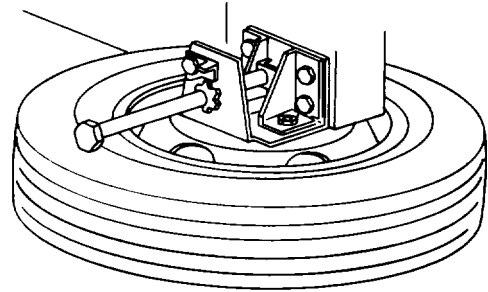


1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

(5) SPARE WHEEL CARRIER

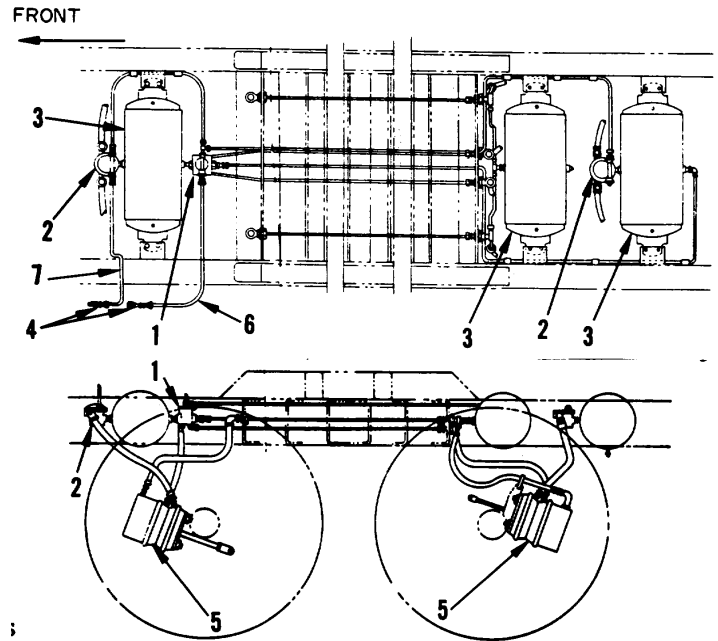
Is mounted at right side, to front of dolly assembly.

Has a wire rope and ratchet to help raise and lower spare wheel and tire.



j. BRAKE SYSTEM

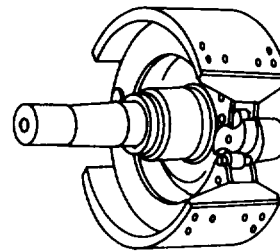
1. Ratio relay valve
2. Relay valve
3. Air reservoir
4. Air coupling
5. Air chamber
6. Emergency air line
7. Service air line



(1) SERVICE BRAKE!

Are straight air type.

Air pressure operates braking system.

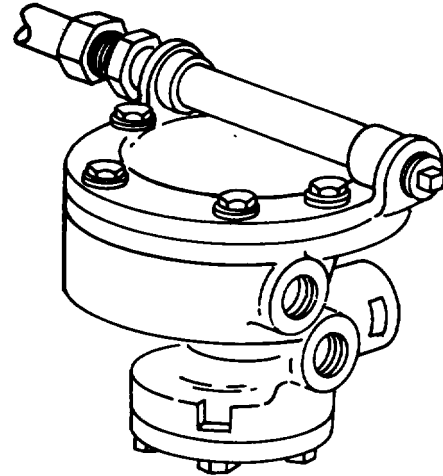


1-7 LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)**(2) RELAY VALVE**

Two relay valves. One is located at the forward side of aft air reservoir. The other relay valve is located at forward side of forward air reservoir.

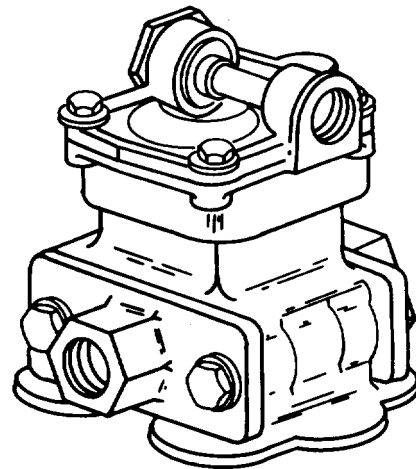
Directly control service brakes by controlling flow of air to and from air reservoir.

Are connected to emergency and service air lines, air reservoirs and brake air chambers. Automatically apply brakes if semitrailer breaks away from towing vehicle. Brakes also apply automatically if there is a serious leak in the emergency air line.

**(3) RATIO RELAY VALVE**

Air from the emergency air hose flows into the ratio relay valve. From there it flows to the relay valves and the air reservoirs.

By directing the flow of emergency air, the ratio relay valve directly controls parking brakes.

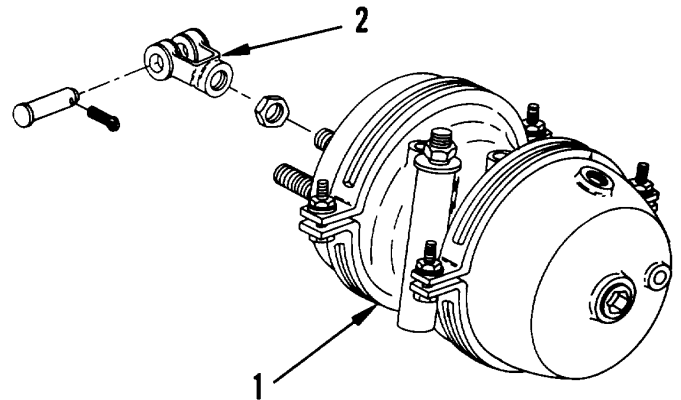


1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

(4) AIR CHAMBERS

Four air chambers (1) are located on the axle at each of the four wheel assemblies.

Yoke assembly (2) on each air chamber acts with attached slack adjuster to apply brakes

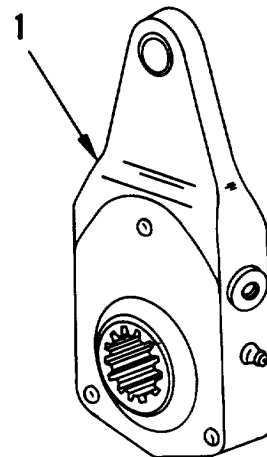


(5) SLACK ADJUSTERS

Four slack adjusters (1). Each slack adjuster is splined to the cam shaft at each of the four brake assemblies.

The other end of the slack adjuster is connected to the air chamber yoke.

The movement of the slack adjuster causes the cam shaft to turn and thus apply the brakes.



1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

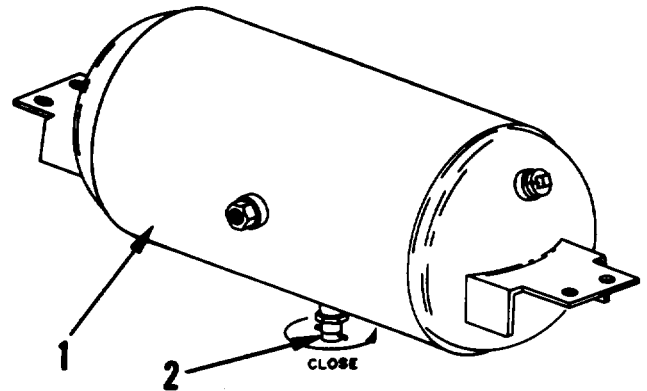
(6) AIR RESERVOIRS

Three metal tanks located on the dolly (refer to page 1-10 for locations of air reservoirs).

The fore and aft reservoirs store compressed air for use in the semitrailer braking system.

The center air reservoir stores exhaust air from the braking system. This will prevent water from entering the system during fording operations.

Each reservoir (1) is equipped with a drain cock (2) for draining moisture and releasing air pressure.



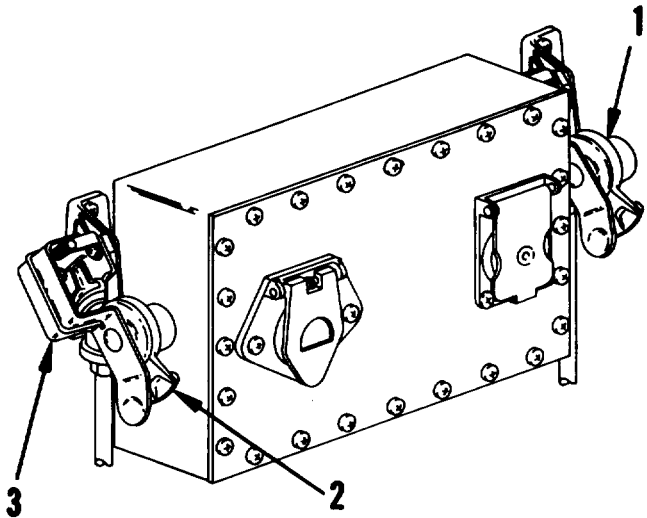
(7) GLADRAND (AIR HALF-COUPLING)

Two gladhands are located at bottom left side of front of semitrailer, on either side of the resistor box.

The SERVICE gladhand (1) is positioned to the left of the resistor box.

the EMERGENCY gladhand (2) is located to the right of the resistor box.

Gladhands provide the connections to the brake air system.



(8) GLADBAND COVERS

Gladhand covers (3) are located on front of gladhands.

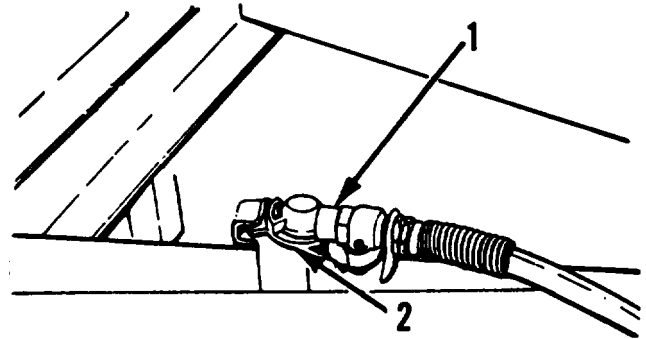
Are spring loaded to keep dirt from entering when system is not connected.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

(9) COMPRESSED AIR SUPPLY

Towing vehicle is equipped with an air compressor, air reservoir, governor for controlling air pressure, air gage, and safety valve.

Air lines, intervehicular air hoses (1), air couplings, and shutoff valves transmit compressed air to semitrailer brake system through gladhands (2).



(10) SERVICE AIR LINE

Service air line extends from gladhand (air half-coupling) marked SERVICE to top of the two relay valves and the ratio relay valve (page 1-10).

It transmits changes in air pressure which cause relay valves to function. These changes result from brake being applied in towing vehicle.

(11) EMERGENCY AIR LINE

Emergency air line extends from gladhand marked EMERGENCY to top of ratio relay valve (page 1-10).

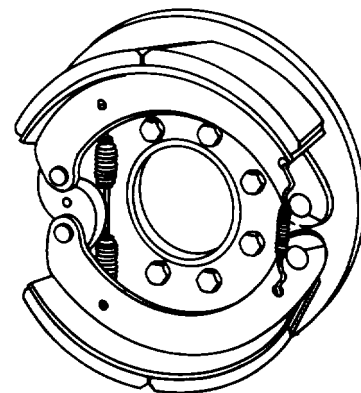
It transmits compressed air to fill air reservoirs and to maintain proper air pressure under control of the relay valves.

(12) INTERNAL BRAKE MECHANISM

Each brake mechanism is located within the brake drum.

Each one has two brake shoes fitted with brake linings.

Scam is used to expand brake shoes. Springs aid in retracting brake shoes.



1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

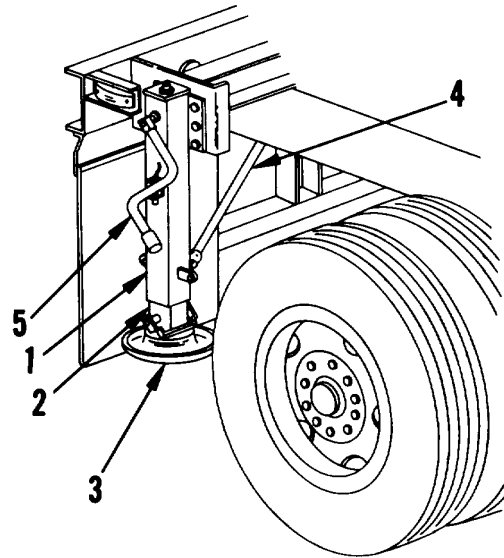
k. LEVELING JACK

Is provided at each rear corner of dolly.

Consists of housing assembly (1), screw (2), drop leg assembly (3), braces (4), and crank (5).

Is used to level and help stabilize semitrailer.

Is used as aircraft loading jack in aircraft loading procedure.

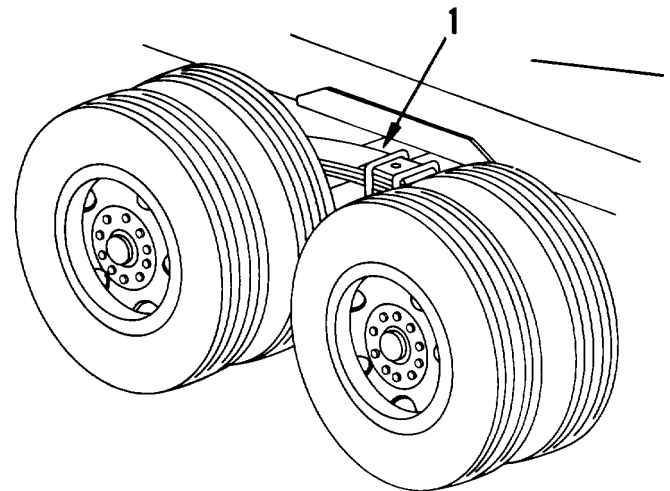


l. SUSPENSION SYSTEM

Consists of a single point, two- spring tandem axle suspension (1).

Each spring contains three leaves.

Each end of spring rests on rubber pads in spring box.



m. DOLLY ELECTRICAL SYSTEM

Wiring harnesses and wire assemblies are located along the rail of the dolly frame. They extend from the electrical inlet receptacles on front of resistor box to running lights.

1-7. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS (cont)

m. DOLLY ELECTRICAL SYSTEM (cont)

(1) LIGHT, TURN AND MARKER (1)

Two lights, one installed at each end of rear dolly frame.

(2) REFLECTOR, RED (2)

Two red reflectors, located just in-board of the two turn and marker lights.

(3) LIGHT, STOP AND TURN (3)

Two lights located just inboard of each of the two reflectors.

(4) LIGHT, BLACKOUT STOP AND RIGHT HAND TURN AND TAIL (4)

One light installed on right of rear dolly frame between the two right lights and above the reflector.

(5) LIGHT, BLACKOUT STOP AND LEFT HAND TURN AND TAIL (5)

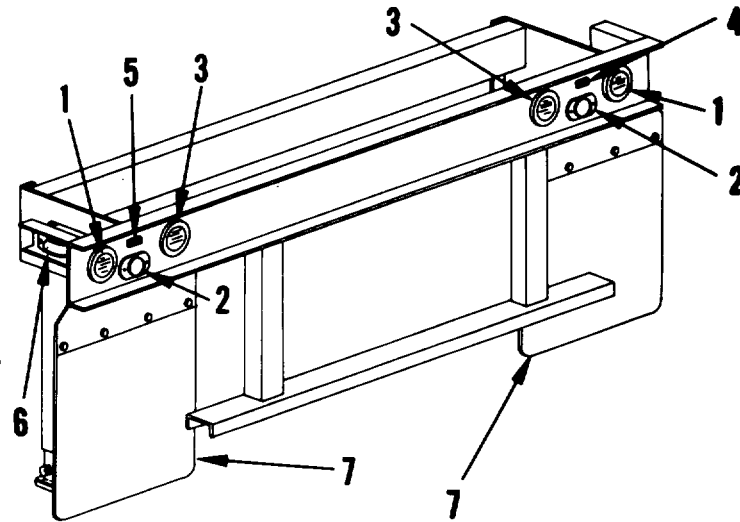
One light installed on left of rear dolly frame between the two left lights and above the reflector.

(6) LIGHT, CLEARANCE, RED (6)

Two lights, one at each bottom rear side of dolly frame.

n. SPLASH GUARD (7)

Is installed at rear of each rear wheel.



- 1. Light, turn and marker
- 2. Reflector, red
- 3. Light, stop and turn
- 4. Light, B/O stop and right hand stop and turn
- 5. Light, B/O stop and left hand stop and turn
- 6. Light, clearance, red
- 7. Splash guard

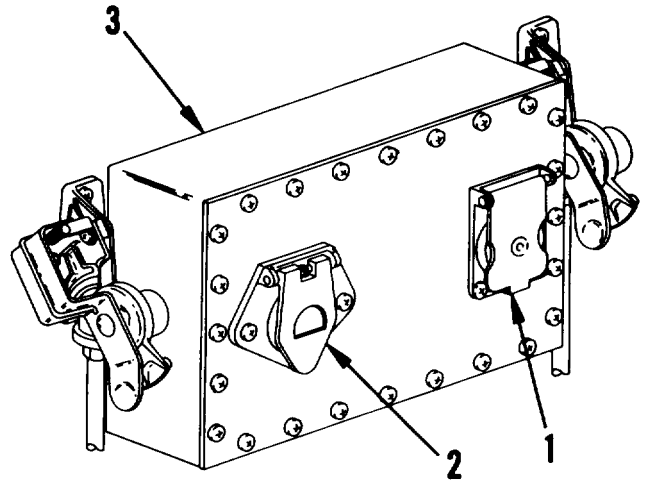
1-7. LOCATION AND DESCRIPTION OF NAJOR COMPONENTS (cont)

o. ELECTRICAL INPUT RECEPTACLES

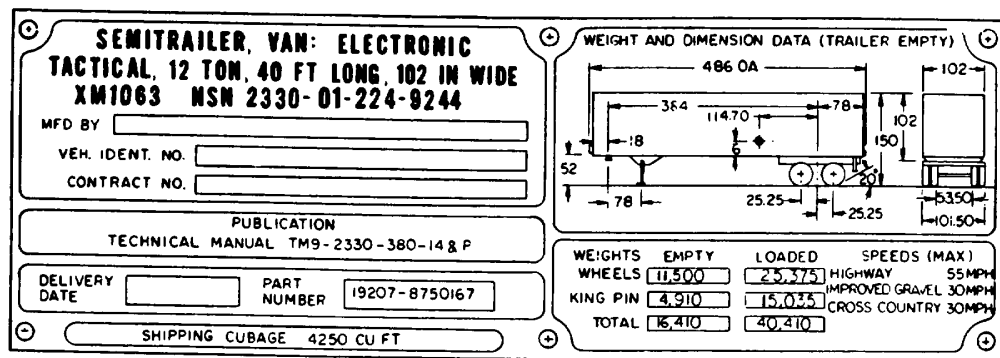
Two electrical input receptacles are located on the resistor box (3) at the lower left front wall of the van.

A system of resistors in the resistor box makes it possible to use a towing vehicle with either a 12-volt or a 24-volt electrical system.

The 24-volt, 12-pin receptacle (1) is located to the left of the 12-volt, 7-pin receptacle (2).



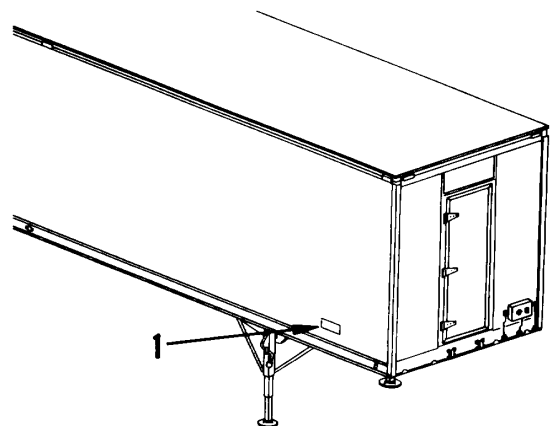
1-8. IDENTIFICATION PLATE



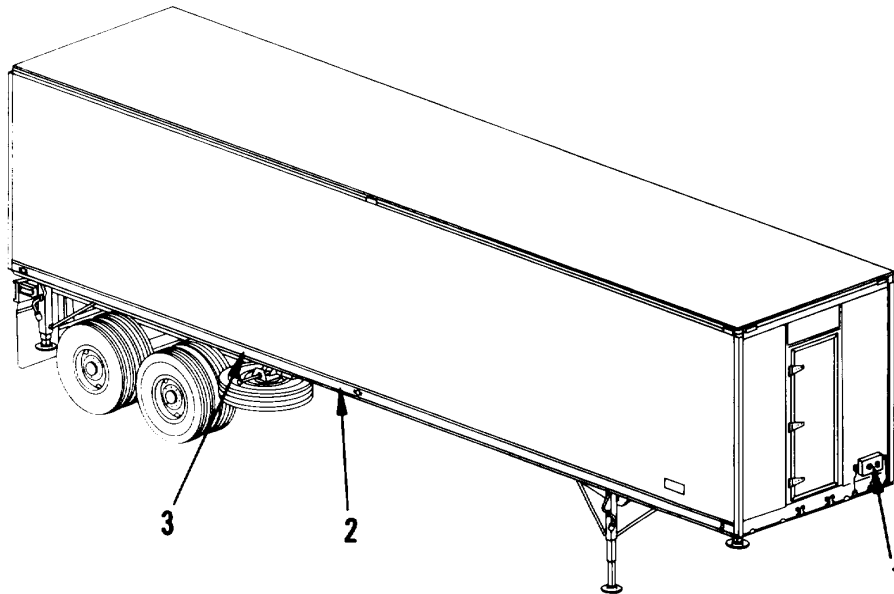
The name and data identification plate (1) is located on front right side of semitrailer.

It lists name of vehicle, national stock number, manufacturer's serial number, contract number, publications concerning the vehicle, delivery and inspection dates, weight and dimension data, and shipping cubage.

The Army registration number for the vehicle is located on the inside of the rear door.



1-9. IDENTIFICATION MARKINGS



The following list shows the location and wording of the stencil markings used on the semitrailer (refer to page 3-6 for instructions):

- 1. HOT SURFACE. DO NOT TOUCH
- 2. USE FOR LIFT ONLY
- 3. 70 PSI COLD

1-10. EQUIPMENT DATA

Towing facilitykingpin

Dimensions:

Overall length	486 in	(1 234.4 cm)
Overall width.....	102 in	(259.1 cm)
Kingpin to front	18 in	(45.7 cm)
Kingpin to center of axle	384 in	(975.4 cm)
Overall height (operational)	150 in	(381.0 cm)
Overall height (reduced)	102 in	(259.1 cm)

1-10. EQUIPMENT DATA (cont)

Weight:

Weight (empty),	16,410 lbs	(7 450.1 kg)
Weight on kingpin (empty)	4,910 lbs	(2 229.1 kg)
Weight on wheels (empty)	11,500 lbs	(5 221.0 kg)
Weight (loaded)	40,410 lbs	(18 346.1 kg)
Weight on kingpin (loaded)	15,035 lbs	(6 825.9 kg)
Weight on wheels (loaded)	25,375 lbs	(11 520.3 kg)
Weight of dolly	5,570 lbs	(2 528.8 kg)
Cubage (shipping).....	4,250 cu. ft.	(1 190 m ³)

Axle:

Tubular.....	20,000 lbs.	(9 080 kg)
--------------	-------------	------------

Brake system:

Actuation	Air
Brake assemblies	4 sets

Electrical System:

Voltage-Military Application.....	24-volt dc
Voltage-Commercial Application.....	12-volt dc
Power source	towing vehicle

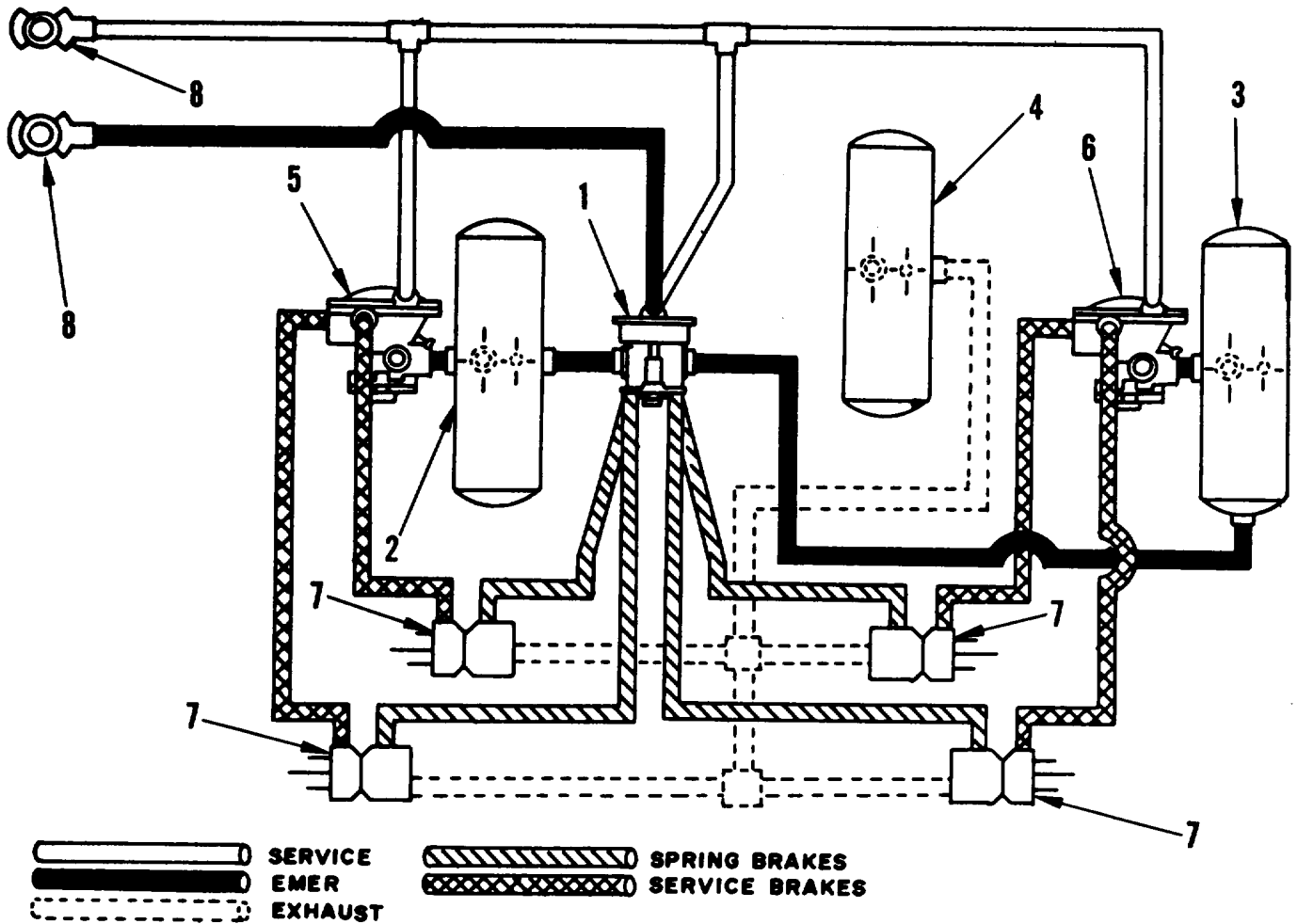
1-10. EQUIPMENT DATA (cont)

Tires:

Number	8 and a spare
Type.....	Commercial tube type
Design	Highway tread
Number of plies	12-ply rating ("F" Load Range)
Tire inflation:	
Highway.....	70 psi (482.65 k pa)
Cross country	45 psi (310.28 k pa)
Sand, mud, snow.....	45 psi (310.28 k pa)
Suspension.....	Single point, three leaf spring tandem suspension system
Landing gear.....	Separately operated
Fording Depth.....	60 in (152.4 cm)

Section III. PRINCIPLES OF OPERATION

1-11. AIR BRAKE SYSTEM



- 1. Ratio relay Valve
- 2. Front reservoir
- 3. Rear reservoir
- 4. Reserve reservoir

- 5. Front relay valve
- 6. Rear relay valve
- 7. Air chamber
- 8. Gladhand

When the gladhands (air couplings) (8) are connected between the towing vehicle and the semitrailer, air shutoff valves on the towing vehicle are opened.

Air flows through the emergency air lines into the ratio relay valve (1). The air from the emergency air lines flows from the ratio relay valve (1) into the front and rear air reservoirs (2 and 3). From each of these reservoirs the emergency air flows into each relay valve (5 and 6).

The emergency air pressure is built up in the semitrailer air system to equal the air pressure on the towing vehicle, 90-100 psi (620.5-758.5 k pa).

When pressure is applied to the brake pedal on the towing vehicle, air pressure is directed through the service air line to the ratio relay valve (1) and to the two relay valves (5 and 6).

The two relay valves release compressed emergency air to the service brake sections of the four air chambers

The brake air chamber push rod extends to contact the air chamber yoke. This contact turns the slack adjuster which is connected to the yoke and is splined into the splines of the cam shaft.

The cam shaft turns as the slack adjuster turns, thus forcing the lining of the brake shoe against the brake drum.

When the brake pedal is released, a drop in pressure causes the relay valves (5 and 6) to release the compressed air from the semitrailer braking system. With the air released, the brake return springs pull the brake shoes away from the drums.

When the air pressure in the semitrailer braking system falls below 60 psi (413.7 k pa), the ratio relay valve (1) automatically releases emergency air from the spring brake sections of the air chambers (7).

The spring brake section of the air chamber contains an emergency brake application spring. As the emergency air exhausts this section of the air chamber the spring is released.

The spring in turn applies pressure to the push rod.

This spring pressure causes the air chamber push rod to extend and contact the air chamber yoke. This contact turns the slack adjuster which is splined into the splines of the cam shaft.

The cam shaft turns as the adjuster turns, forcing the lining of the brake shoe against the brake drum.

The middle air reservoir (4) acts as a surge tank to accept exhaust air from the non-pressure side of the service chamber in order to prevent water from entering the system during fording operations.

In the event of an emergency stop resulting from a loss of air or a complete failure of the braking system, a brake caging procedure may be used to move the semitrailer off the traveled portion of the highway. The caging of the brakes is to be used for this purpose only. Refer to page 2-25 for the procedure to accomplish this movement.

CHAPTER 2

OPERATING INSTRUCTIONS

CHAPTER INDEX

Page

Preventive maintenance checks and services	2-2
Operation under usual conditions	2-10
Coupling semitrailer to towing vehicle.....	2-10
Towing the semitrailer.....	2-13
Uncoupling semitrailer from towing vehicle	2-15
Preparing semitrailer for operation	2-16
Landing gear and leveling jack	2-16
Installing boarding ladder.....	2-17
Air reservoir drain cock	2-18
Gladhand (air half-coupling).....	2-19
Emergency escape mechanism.....	2-19
Removal and installation of spare wheel and tire	2-20
Operation under unusual conditions	2-21
Operation with brake failure.....	2-24

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

For location and description of the following items, refer to the paragraphs listed after each item name:

- 2-1. **LANDING GEAR CRANK.** Refer to page 1-5.
- 2-2. **GLADHAND (AIR HALF-COUPLING).** Refer to page 1-13.
- 2-3. **AIR RESERVOIR DRAIN COCK.** Refer to page 1-13.
- 2-4. **SPARE WHEEL CARRIER.** Refer to page 1-10.
- 2-5. **LEVELING JACK.** Refer to page 1-15.
- 2-6. **LADDER.** Refer to page 1-6.

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

2-7. MAINTENANCE FORMS AND RECORDS

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

2-8. PREVENTIVE MAINTENANCE CHECKS AND SERVICES.

a. Do your before (B) PREVENTIVE MAINTENANCE just before you operate the vehicle. Pay attention to the CAUTIONS and WARNINGS.

b. During checks and services (D) of PREVENTIVE MAINTENANCE will be performed while the equipment and/or its component systems are in operation.

c. Do your after (A) PREVENTIVE MAINTENANCE right after operating the vehicle. Pay attention to the CAUTIONS and WARNINGS.

d. Do your weekly (W) PREVENTIVE MAINTENANCE weekly.

e. Do your monthly (M) PREVENTIVE MAINTENANCE once a month.

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

g. 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.

h. If anything looks wrong and you can't fix it, write it on your DA Form 2404. If you find something seriously wrong, report it to unit maintenance RIGHT NOW.

i. 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

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

2-8. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

(1) Keep it clean: Dirt, grease, oil and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use cleaning solvent (item 3, appendix E) on all metal surfaces. Use soap and water when you clean rubber or plastic material.

(2) Bolts, nuts and screws: Check them all for obvious looseness, missing, bent or broken condition. You can't try them all with a tool, but look for chipped paint, bare metal, or rust around bolt heads. If you find one you think is loose, tighten it, or report it to unit maintenance if you can't tighten it.

(3) Welds: Look for loose or chipped paint, rust, or gap where parts are welded together. If you find a bad weld, report it to unit maintenance.

(4) Electric wires and connectors: Look for cracked, frayed or broken insulation, bare wires, and loose connectors. Tighten all loose wires and connectors as required.

(5) Hoses and fluid lines: Look for wear, damage and leaks. Make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, report it to unit maintenance.

i. It is necessary for you to know how fluid leakage affects the status of your vehicle. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your vehicle. Learn, then be familiar with them and REMEMBER - WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR.

Leakage Definition for Crew/Operator PMCS

CLASS I: Seepage of fluid (as indicated by wetness or discoloration) not great enough to form drops.

CLASS II: Leakage of fluid 'great enough to form drops but not enough to cause drops to drip from item being checked/inspected.

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

CAUTION

Equipment operation is allowable with minor leakages (Class I or II). Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. When in doubt, notify your supervisor. Operation with major leakages may cause equipment damage.

When operating with Class I or Class II leaks, continue to check fluid levels as required in your PMCS. Class III leaks should be reported to your supervisor or unit maintenance.

Operator/Crew Preventive Maintenance Checks and Services

NOTE

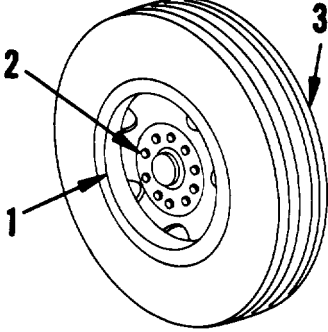
Within designated interval, these checks are to be performed in the order listed.

ITEM NO	INTERVAL					ITEM TO BE INSPECTED PROCEDURE: Check For and Have, Repaired Filled, or Adjusted as Needed	Equipment is Not Ready/Available If:
	B	D	A	W	M		
1						<p>NOTE</p> <p>Perform weekly as well as before PMCS if:</p> <ul style="list-style-type: none"> a. You are the assigned operator but have not operated the vehicle since the last weekly. b. You are operating the vehicle for the first time. <p>TIRES</p> <ul style="list-style-type: none"> a. Check tires (3) for previously low pressure, deep nuts, foreign objects or unusual tread wear (TM 9-2610-200-24) b. Check tires, including spare for first pressure: <p>Highway - 70 psi (482.65k pa) Off road - 45 psi (310.28 k pa) Sand or mud - 45 psi (310.28 k pa)</p>	Two tires on one axle side flat, missing or unservicable.
2						<p>WHEELS</p> <p>NOTE</p> <p>Left wheel nuts are turned counterclockwise to tighten and clockwise to loosen. Right wheel nuts are turned clockwise to tighten and counterclockwise to loosen.</p>	

Operator/Crew Preventive Maintenance Checks and Services (cont)

NOTE

Within designated interval, these checks are to be performed in the order listed.

ITEM NO	INTERVAL					ITEM TO BE INSPECTED PROCEDURE: Check For and Have, Repaired Filled, or Adjusted as Needed	Equipment is Not Ready/Available If:
	B - Before	D - During	A - After	W - Weekly	M - Monthly		
3						<p>WHEELS (cont)</p>  <p>• Check wheels (1) for damage and for loose or missing wheel nuts (2).</p>	Four or more wheel nuts, on one wheel, missing or wheel damaged.
						<p>BRAKES (AIR)</p> <p>a. Inspect brake hose couplings (gladhands) for security/damage.</p>	Gladhand missing, broken or damaged.
						<p>b. Couple towing vehicle air hoses to semitrailer and check for air leaks.</p> <p>c. Check for proper operation of brakes by applying vehicle brakes and attempting to pull vehicle forward.</p>	Air leaks are present. Brakes fail to operate.

Operator/Crew Preventive Maintenance Checks and Services (cont)

NOTE

Within designated interval, these checks are to be performed in the order listed.

ITEM NO	INTERVAL					ITEM TO BE INSPECTED PROCEDURE: Check For and Have, Repaired Filled, or Adjusted as Needed	Equipment is Not Ready/Available If:
	B - Before	D - During	A - After	W - Weekly	M - Monthly		
						<p>BRAKES (AIR) (cont)</p> <ul style="list-style-type: none"> d. During operation, apply semitrailer brakes several times and check for grabbing, pulling or slow brakes. e. Pull semitrailer straight ahead and check for side pull, wander, shimmy, or slack between kingpin and fifth wheel lock. <p style="text-align: center;">WARNING</p> <p>A hot brake can cause serious burns. Exercise extreme caution before attempting to touch drum after use. Slowly move hand toward drum. If drum is overheated, radiated heat will be felt before drum is touched.</p> <ul style="list-style-type: none"> f. Cautiously feel brake drum for abnormal heat or cold. An abnormally hot drum indicates a possible dragging or grabbing brake. An abnormally cool drum indicates improper adjustment or defective brake. 	<p>Grabbing, pulling or slow brakes.</p> <p>Vehicle pulls to side or wanders.</p>

Operator/Crew Preventive Maintenance Checks and Services (cont)

NOTE

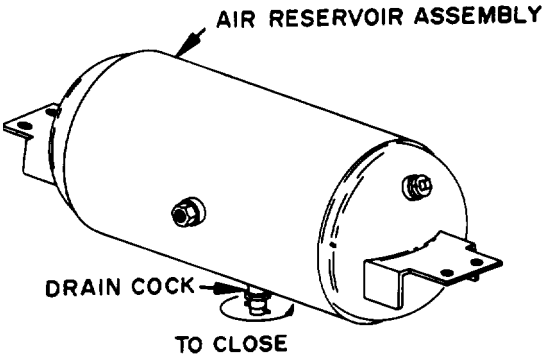
Within designated interval, these checks are to be performed in the order listed.

ITEM NO	INTERVAL					ITEM TO BE INSPECTED PROCEDURE: Check For and Have, Repaired Filled, or Adjusted as Needed	Equipment is Not Ready/Available If:
	B - Before	D - During	A - After	W - Weekly	M - Monthly		
4						<p>LIGHTS</p> <p>NOTE</p> <p>An assistant is required when checking semitrailer lights.</p> <ul style="list-style-type: none"> a. Visually inspect receptacles for secure mounting or damage. b. Inspect receptacle pins for foreign matter build up, bent, burnt or broken pins. c. If tactical situation permits, connect towing vehicle electrical cable to semitrailer. Check all lights for proper operation. 	

Operator/Crew Preventive Maintenance Checks and Services (cont)

NOTE

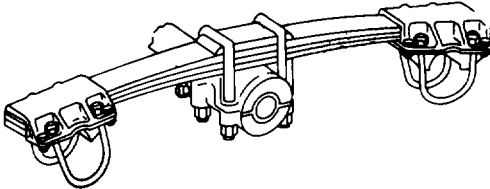
Within designated interval, these checks are to be performed in the order listed.

ITEM NO	INTERVAL					ITEM TO BE INSPECTED PROCEDURE: Check For and Have, Repaired Filled, or Adjusted as Needed	Equipment is Not Ready/Available If:
	B	D	A	W	M		
5						<p>AIR RESERVOIR</p>  <p>a. Check that air reservoir drain cock is closed.</p> <p>b. Inspect air reservoir for damage and evidence of leaking.</p> <p>WARNING</p> <p>Wear goggles when opening drain cock. Failure to do so could cause serious eye injury from high pressure air.</p> <p>c. Open drain cock and drain moisture from reservoir.</p>	

Operator/Crew Preventive Maintenance Checks and Services (cont)

NOTE

Within designated interval, these checks are to be performed in the order listed.

ITEM NO	INTERVAL					ITEM TO BE INSPECTED PROCEDURE: Check For and Have, Repaired Filled, or Adjusted as Needed	Equipment is Not Ready/Available If:
	B - Before	D - During	A - After	W - Weekly	M - Monthly		
6						<p>KINGPIN</p> <p>Inspect kingpin and upper plate for cracks and damage.</p>	Kingpin missing, cracked or broken.
7						<p>LANDING GEAR</p> <p>a. Inspect crank, landing legs and drop legs for damage and secure mounting</p> <p>b. When cranking landing gear, check that shaft turns smoothly and that leg moves without binding or grinding.</p>	
8						<p>SUSPENSION</p>  <p>Inspect springs and suspension for looseness, damaged, broken or missing components. evident.</p>	

Section III. OPERATION UNDER USUAL CONDITIONS

2-9. COUPLING SEMITRAILER TO TOWING VEHICLE

WARNING

Be sure all personnel stand clear of towing vehicle and semitrailer during coupling operations, or serious injury may result.

- a. Slowly back towing vehicle into position. Be sure kingpin (1) is in line with fifth wheel coupler jaws (3).
- b. Before kingpin plate (2) starts to ride the approach ramps (4), check that kingpin plate (2) is above approach ramps (4).

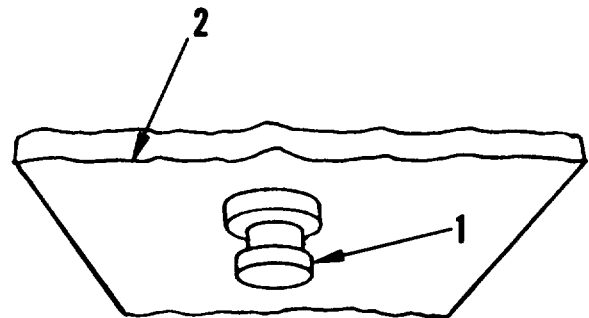
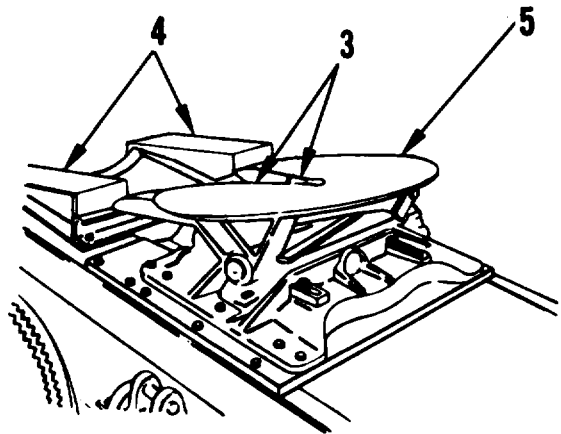
NOTE

Ground guide will assist in raising and lowering landing gear legs as required.

- c. Adjust height as needed by using landing gear. Make sure coupler jaws (3) are open.
- d. Slowly back towing vehicle until coupler jaws (3) engage kingpin.

CAUTION

Visually check coupling. You should not be able to see daylight between fifth wheel and kingpin plate. If light shows, lower kingpin plate, using landing gear. If coupling is not done properly, equipment damage may occur.



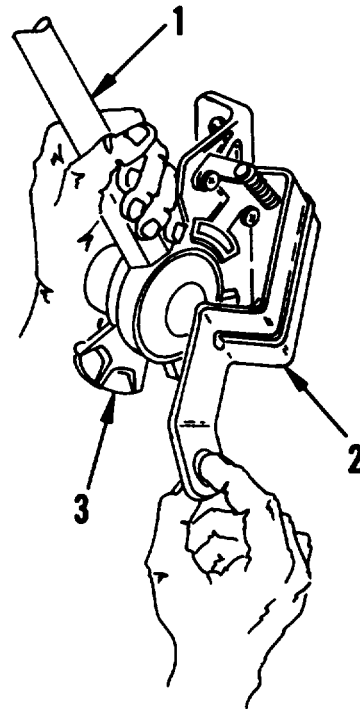
- 1. Kingpin
- 2. Kingpin plate
- 3. Coupler jaws
- 4. Ramps
- 5. Fifth wheel

2-9. COUPLING SEMITRAILER TO TOWING VEHICLE (cont)

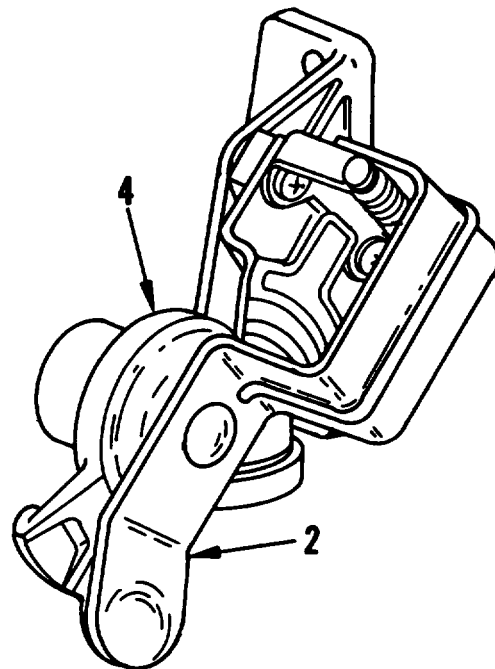
- e. Make sure coupling is secure by inching forward. If coupling is not locked, rock back and forth slowly until kingpin (1) is locked in fifth wheel (5).

- f. Raise spring loaded covers (2) on gladhands on front of semitrailer.

- g. Connect coupling marked SERVICE on towing vehicle air hose (1) to gladhand marked SERVICE (3) on semitrailer.

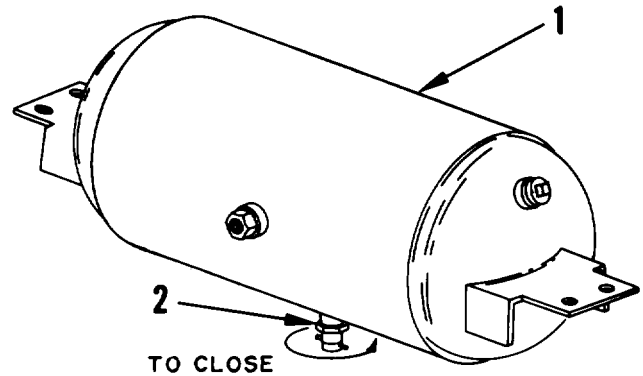


- h. Connect coupling marked EMERGENCY on towing vehicle air hose to gladhand marked EMERGENCY (4) on semitrailer.



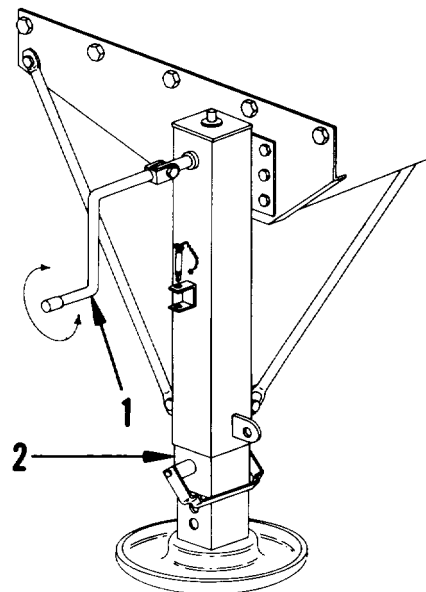
2-9. COUPLING SEMITRAILER TO TOWING VEHICLE (cont)

- i. Check all three air reservoirs (1) and make certain all three drain cocks (2) are closed.
- j. Open two air shutoff valves on towing vehicle to pressurize semitrailer air system.



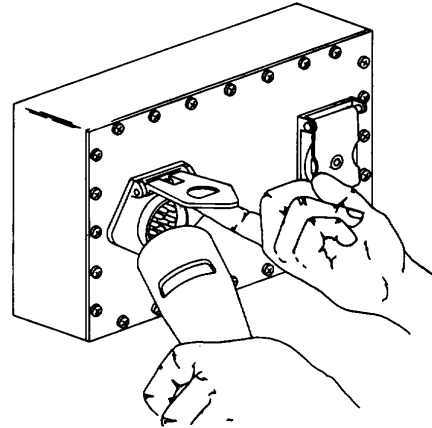
- k. Unlatch and remove boarding ladder from holes beneath door. Stow ladder in brackets underneath van body.

- l. Turn landing gear crank (1) counterclockwise to raise landing gear leg (2).
- m. Turn leveling jack crank (1) counterclockwise to raise leveling jack leg (2).



2-9. COUPLING SEMITRAILER TO TOWING VEHICLE (cont)

- n. Plug towing vehicle intervehicular cable into receptacle on front of semitrailer.
- o. Make sure to use the proper receptacle, either 24-volt or 12-volt, depending on the electrical system of towing vehicle.
- p. Check to see that all lights are in working order.

**2-10. TOWING THE SEMITRAILER****DRIVING**

- a. When driving towing vehicle and semitrailer, the overall length of the unit must be kept in mind when passing other vehicles and when turning.
- b. Because the unit is hinged in the middle, turning and backing are also affected.
- c. The semitrailer's payload will affect stopping and off road maneuverability.

TURNING

- a. When turning corners, allow for the fact that the semitrailer wheels turn inside the turning radius of the towing vehicle.
- b. To make a right turn at a road intersection, drive towing vehicle about half way into the intersection and then cut sharply to the right.
- c. This will allow for the shorter turning radius of the semitrailer and will keep it off the curb.

2-10. TOWING THE SEMITRAILER (cont)**STOPPING**

- a. In normal operation, the brakes of towing vehicle and semitrailer are applied at the same time when the driver steps on brake pedal.
- b. Brake pressure must be applied gradually and smoothly.
- c. Semitrailer brakes may be applied separately by using brake control lever on towing vehicle steering column.
- d. On steep down grades or slippery surfaces, semitrailer brakes must be applied before towing vehicle brakes. This will reduce the possibility of jack-knifing the semitrailer.

PARKING

- a. When towing vehicle and semitrailer are to be parked and left unattended, set parking brake on towing vehicle.
- b. Turn off towing vehicle engine before leaving cab.

BACKING

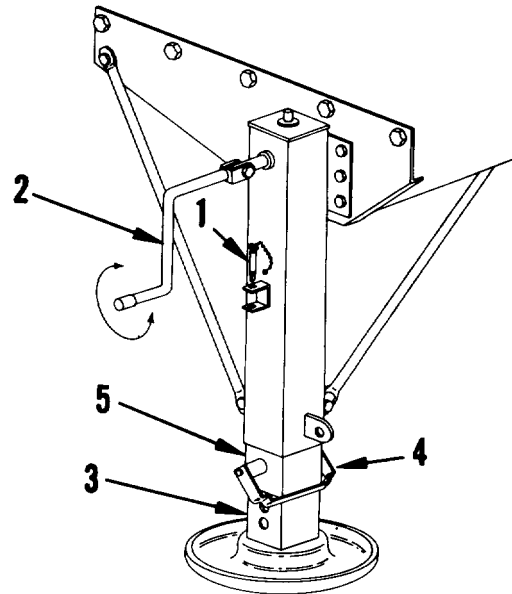
- a. The assistant driver or another person will act as ground guide to assist and direct driver.
- b. Adjust all rear view mirrors before backing.
- c. When backing, rear of semitrailer will always move to opposite direction of that in which front wheels are turned.
- d. When wheels of towing vehicle are turned to the right, rear of semitrailer will go to the left.
- e. When semitrailer has turned and backing in a straight line is required, turn towing vehicle wheels in the direction semitrailer is moving. This will slowly bring towing vehicle and semitrailer into a straight line.

2-11. UNCOUPLING SEMITRAILER FROM TOWING VEHICLE

NOTE

Make sure there is firm footing under landing gear and leveling jack drop leg assemblies before lowering landing gear or leveling jack legs.

- a. Lift drop leg release handle (4) and lower drop leg (3) to lowest position before contacting ground.
- b. Remove pin (1) from crank holder bracket and move crank (2) to cranking position.
- c. Turn both cranks (2) clockwise to lower landing gear legs (5) until drop leg assemblies (3) support front of semitrailer.



- d. Close shutoff valves on towing vehicle air lines.

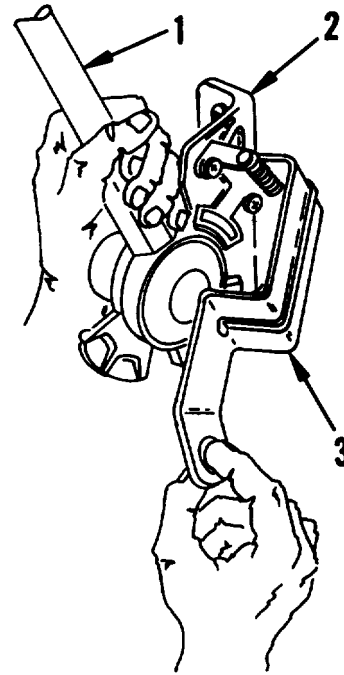
WARNING

Wear goggles when opening air reservoir drain cock. Failure to do so could cause serious eye injury from high pressure air.

- e. Open all three air reservoir drain cocks (see page 2-18).

2-11. UNCOUPLING SEMITRAILER FROM TOWING VEHICLE (cont)

- f. Raise gladhand spring loaded covers (3).
- g. Disconnect intervehicular air hoses (1) from semitrailer gladhands (2).



- h. Disconnect intervehicular electrical cable.
- i. Release kingpin lock on the fifth wheel and drive towing vehicle away from semitrailer.

2-12. PREPARING SEMITRAILER FOR OPERATION**PRELIMINARY STEPS**

- a. Disconnect from towing vehicle (pages 2-15, 2-16).
- b. Lower landing gear and leveling jack legs (page 2-17).
- c. Install ladder (page 2-17).

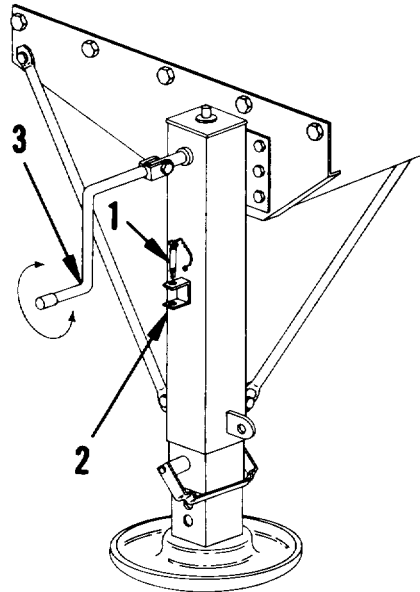
2-13. LANDING GEAR AND LEVELING JACK**NOTE**

Both the landing gear and the leveling jack operate in the same manner.

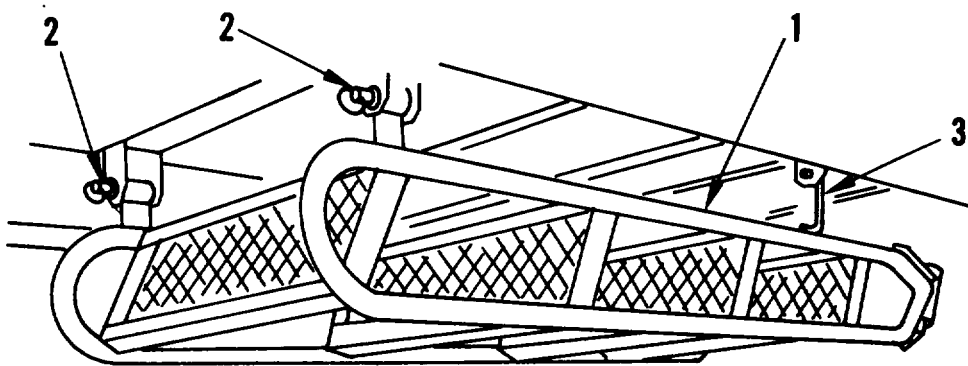
2-13. LANDING GEAR AND LEVELING JACK (cont)

OPERATION

- a. With landing gear in normal operating position with leg contacting ground, remove pin (1) from crank storage bracket (2) and move crank (3) to cranking position.
- b. Position slot in crank (3) to engage landing gear shaft.
- c. Use crank (3) to raise or lower semitrailer. Clockwise rotation raises semitrailer. Counterclockwise rotation lowers semitrailer.

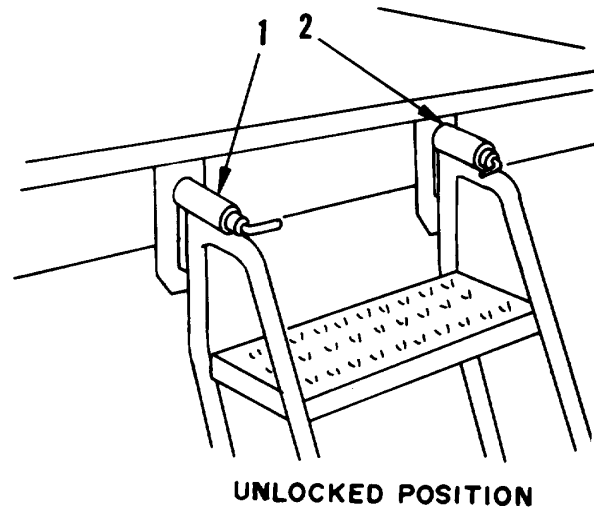
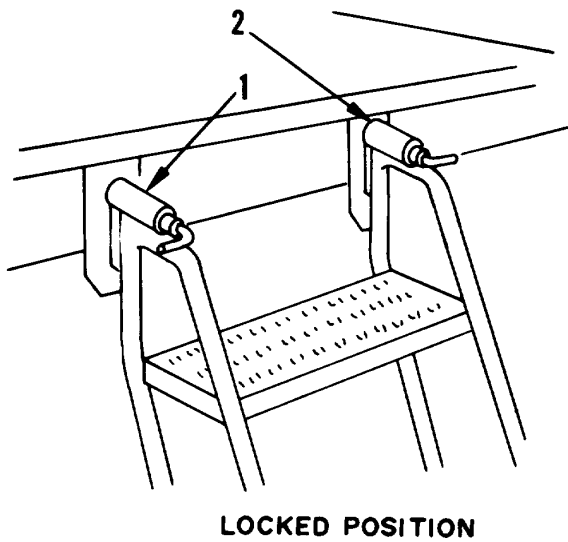


2-14. INSTALLING BOARDING LADDER



- a. Boarding ladder (1) is stowed in bracket (3) underneath van body.
- b. Remove two pins (2) securing ladder and remove ladder.

2-14. INSTALLING BOARDING LADDER (cont)



- c. To install, first turn left latch handle (1) to right and right latch handle (2) to left.
- d. Insert ladder ends into holes provided in brackets below each door.
- e. To lock ladder in position, turn left latch handle (1) to left and right latch handle (2) to right.

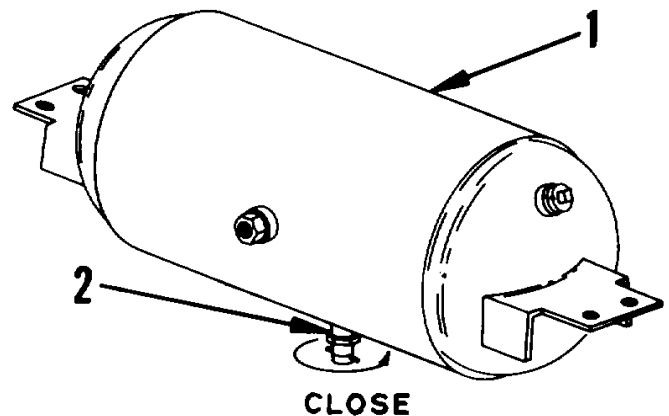
2-15. AIR RESERVOIR DRAIN COCK

- a. The hand operated drain cock (2) is located at center and bottom of air reservoir (1).

WARNING

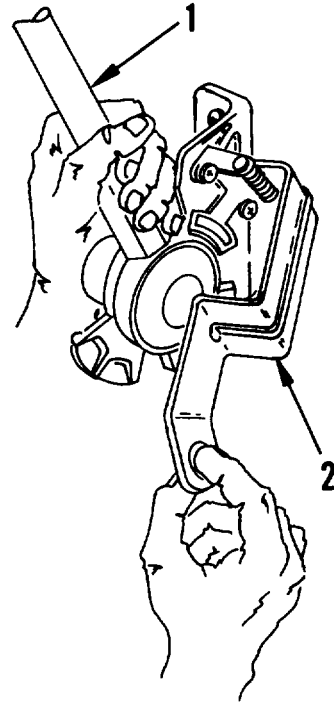
Wear goggles when opening drain cock. Failure to do so could cause serious eye injury. Make sure to open all three drain cocks.

- b. Turn counterclockwise to open to drain moisture and to release air pressure if brakes lock. Turn clockwise to close.
- c. Open drain cocks if semitrailer is to remain inactive for a length of time.



2-16. GLADHAND (AIR HALF-COUPLING)

- a. Lift gladhand cover (2).
- b. Raise towing vehicle intervehicular air hose (1) coupling to a vertical position and align outlet holes.
- c. Rotate coupling to the horizontal locked position.

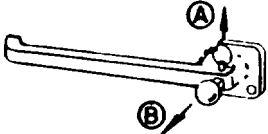


2-17. EMERGENCY ESCAPE MECHANISM

- a. The rear door has an emergency escape mechanism to allow personnel to open the door from the inside, even if outside handle is locked.
- b. To disengage outside handle, pull out safety release pin (A) and pull lock pin (B) out completely.
- c. Turn interior door handle clockwise and open door.

IN EMERGENCY

**TO OPEN DOOR WHEN
EXTERIOR HANDLE IS
LOCKED**



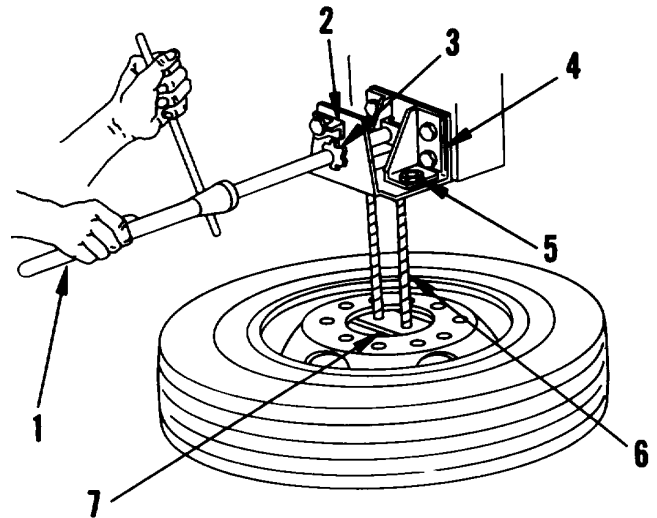
1) (A) REMOVE SAFETY RELEASE

2) (B) EXTERIOR HANDLE IS NOW

3) OPERATE DOOR HANDLE
IN NORMAL MANNER

2-18. REMOVAL AND INSTALLATION OF SPARE WHEEL AND TIRE**REMOVAL**

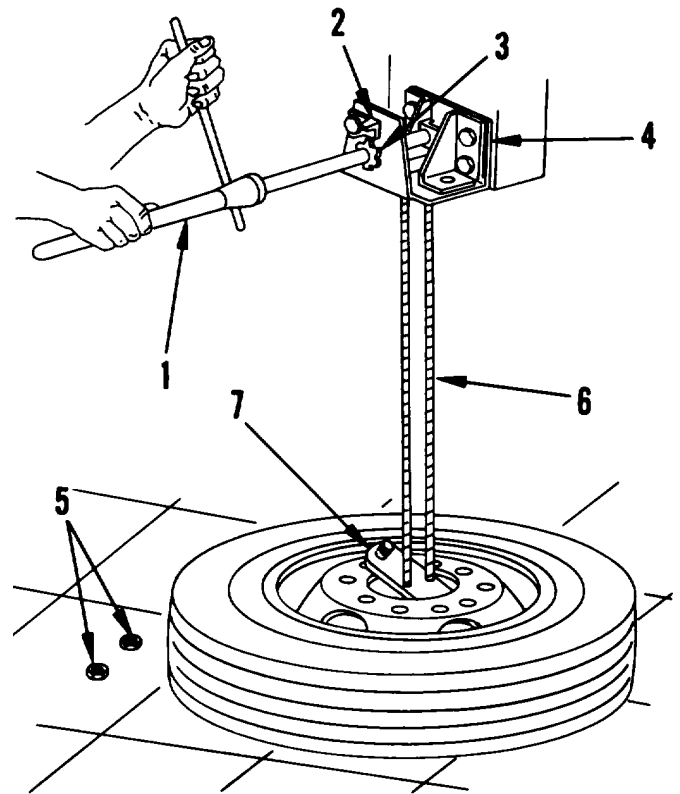
- a. Use wheel nut wrench (1) and remove two special wheel nuts (5) which secure wheel to upper member (4).
- b. Position wheel nut wrench (1) on the nut at outer end of ratchet wheel (3) on which wire rope (6) is wound.
- c. Release pawl (2) from ratchet and turn wrench counterclockwise, thus lowering wheel.
- d. Continue turning counterclockwise until wheel rests on ground.
- e. Let pick-up member (7) drop away from wheel.
- f. Remove pick-up member through center hole in wheel.

**INSTALLATION**

- a. Lower pick-up member (7) to ground (steps (1) through (5) of removal procedure).
- b. Rotate pick-up member (7) until it aligns with wire rope (6); then slide wire rope and pick-up member through center hole in wheel.
- c. Rotate pick-up member (7) so that it is at right angles to wire rope (6).
- d. Align the securing bolts on pick-up member (7) with any two holes in wheel.

2-18. REMOVAL AND INSTALLATION OF SPARE WHEEL AND TIRE (cont)**INSTALLATION (cont)**

- e. Position wheel nut wrench (1) on nut at outer end of ratchet wheel (3).
- f. Set pawl (2) in contact with ratchet and turn wrench (1) clockwise to raise wheel and tire.
- g. As wheel moves up to upper member (4), align studs on pick-up member (7) with the holes in upper member (4).
- h. After wheel is tight against upper member (4), install and tighten nuts (5) with wrench (1).

**Section IV. OPERATION UNDER UNUSUAL CONDITIONS****2-19. GENERAL INFORMATION**

- a. In addition to the normal preventive maintenance service, special care in cleaning and lubrication must be observed where extremes of temperature, humidity, and terrain conditions are present or anticipated. Proper cleaning, lubrication, and storage and handling of fuels and lubricants not only insure proper operation and functioning, but also guard against excessive wear of the working parts and deterioration of the materials.

OPERATION UNDER UNUSUAL CONDITIONS (cont)**2-19. GENERAL INFORMATION (cont)**

b. FM 55-30 contains instructions on driver selection, training, and supervision, and FM 21-305 prescribes special driving instructions for operating wheeled vehicles under unusual conditions. A detailed study of FM 55-30 and FM 21-305 is essential for use of this material under unusual conditions.

c. Refer to pages 2-22 through 2-24 for operating procedures under unusual conditions. For lubrication procedures under operation in dusty and sandy conditions and after fording operations, refer to page 2-23 and 2-24.

d. When chronic failure of materiel results from subjection to extreme conditions, report the condition on SF Form 368.

2-20. OPERATION IN EXTREME COLD**a. General.**

(1) Extensive preparation of materiel scheduled for operation in extreme cold weather is necessary. Generally, extreme cold causes lubricants to thicken or congeal, cracks insulation, causes electrical short circuits and various construction materials to become hard, brittle, and easily damaged or broken.

(2) You, the operator, must always be on the alert for indications of the effect of cold weather on the semitrailer.

(3) You, the operator, must be very cautious when placing the vehicle in motion after a shutdown. Congealed lubricants may cause failure of parts. Tires frozen to the ground or frozen to the shape of the flat spot while underinflated must be considered. One or more brake shoes may be frozen fast and require preheating to avoid damage to the towing vehicle clutch surfaces.

(4) Refer to FM 9-207 for description of operation in extreme cold.

b. At Halt or Parking.

(1) When halted for short shutdown periods, park semitrailer in a sheltered spot out of the wind. If no shelter is available, park so that its

2-20. OPERATION IN EXTREME COLD (cont)

rear faces into the wind. For long shutdown periods, if high and dry ground is not available, prepare a footing of planks or brush.

(2) Clean all parts of the semitrailer of snow, ice and mud as soon as possible after operation. See PMCS, chapter 2, for after-operation procedures.

(3) Gage tires for correct pressure, 70 psi (482.65 k pa) highway, 45 psi (310.28 k pa) cross-country, 45 psi (310.28 k pa) soft sand, mud or snow.

2-21. OPERATION IN EXTREME HEAT

a. If possible, park semitrailer under cover to protect it from sun, sand and dust.

b. Cover inactive semitrailer with tarpaulins, if they are available and if there is no other available shelter. Shake out and air canvas covers or other items subject to deterioration from mildew or attacks by insects or vermin for several hours weekly.

c. Semitrailers, inactive for long periods in hot, humid weather are subject to rapid rusting and accumulation of fungi growth. Frequently inspect, clean and lubricate to prevent excessive deterioration.

2-22. OPERATION IN DUSTY OR SANDY AREAS

a. For emergency operations in beach and desert sands, correct tire inflation is 45 psi (310.28 k pa). For continued operation in sand, oversize balloon sand tires may be necessary. The tread should be of plain rib and the tire of round cross section.

2-23. OPERATION IN MUD AND SNOW

a. Reduce tire inflation to 45 psi (310.28 k pa).

b. After each operation, remove ice, snow and mud from underneath semitrailer and from hoses, lines, tubes, and electrical connections.

2-24. OPERATION UNDER RAINY OR HUMID CONDITIONS

- a. Protect semitrailer from direct rainfall whenever possible.
- b. Dampness increases corrosive action. Inspect painted surfaces and electrical connections more frequently for damage.

2-25. OPERATION IN SALT WATER AREAS

Wash salt deposits from all equipment with fresh water. Observe the precautions in operation under rainy or humid conditions.

2-26. FORDING OPERATIONS

- a. Instructions for fording operations for the towing vehicle apply also to the semitrailer.
- b. Reduce tire pressure to 45 psi (310.28 k pa) to aid in amphibious landings.
- c. After fording operations, lubricate semitrailer in accordance with lubrication instructions.
- d. Notify unit maintenance to clean wheel bearings and hand pack with lubricant specified in lubrication instructions after each submersion.

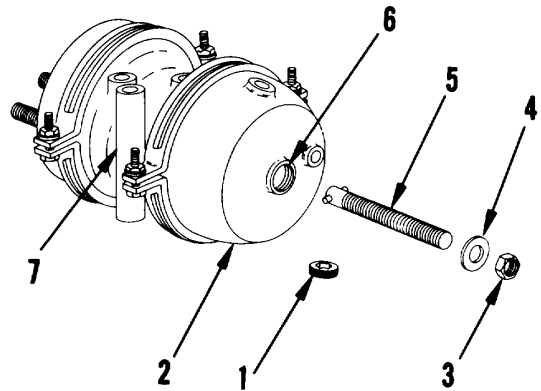
2-27. OPERATION WITH AIR BRAKE FAILURE (CAGING BRAKES)

In the event of a complete failure of the braking system, the following procedure makes it possible to move the semitrailer off the traveled portion of the highway. Heed the WARNING and proceed as follows:

2-27. OPERATION WITH AIR BRAKE FAILURE (CAGING BRAKES) (cont)**WARNING**

The following is an emergency procedure that is to be used only to move the semitrailer off the traveled portion of the highway when there is a complete failure of the brake system. Normal operation with brakes caged could result in personal injury.

- a. Remove internal hex pipe plug (1) from air chamber (2).
- b. Remove nut (3) and washer (4) and remove release tool (5) from the tool holder (7) on the air chamber.
- c. Insert release tool (5) into the hole (6) and turn one-quarter turn to seat release tool.
- d. Install washer (4) and nut (3) on release tool (5) and tighten until 2 1/2 to 2 3/4 inches of release tool is exposed.
- e. Repeat steps a through d for the remaining air chambers.



- f. With release tools in position, the semitrailer brake system is not operative. Use extreme caution and move semitrailer to side of road.
- g. After reaching side of road, remove nut (3) and washer (4) from each release tool (5).
- h. Remove release tools (5) from holes (6) in air chambers (2).
- i. Insert each pipe plug in holes (6) of air chambers and tighten.
- j. Insert each release tool (5) in its tool holder (7) and secure with washers (4) and nuts (3).

2-25/(2-26 blank)

CHAPTER 3

OPERATOR MAINTENANCE INSTRUCTIONS

CHAPTER INDEX

	Page
Detailed lubrication information	3-2
Cleaning	3-2
Service intervals	3-2
Lubrication chart	3-3
Painting and identification marking.....	3-6
Troubleshooting.....	3-7
Removal of wheel and tire assembly from hub	3-16
Installation of wheel and tire assembly on hub.....	3-16

Section I. LUBRICATION INSTRUCTIONS

3-1. GENERAL

This section contains the lubrication instructions, showing location, intervals and proper materials for lubricating the semitrailer. These instructions are mandatory.

3-2. DETAILED LUBRICATION INFORMATION

- a. Clean lubrication points, grease fittings and surrounding areas before applying lubricant.
- b. Clean all lubrication points after lubricating to prevent accumulation of foreign matter.
- c. Clean and lubricate bearings as specified in TM 9-214.
- d. Maintain a record of vehicle lubrication and report any discrepancies noted during lubrication. Refer to DA PAM 738-750 for maintenance forms and procedures to record and report any findings.

3-3. CLEANING

- a. Keep all external parts not requiring lubrication clean of lubricants.
- b. Use a cleaning solvent (item 3, appendix E) to clean or wash grease or oil from metal parts.
- c. After parts are cleaned, rinse and dry them thoroughly. Apply a light grade of oil to all polished metal surfaces to prevent rusting.
- d. When authorized to install new parts, remove any preservative materials, such as rust preventive compound or protective grease, prior to installation. Apply lubricant prescribed in lubrication instructions if required.

3-4. SERVICE INTERVALS

- a. The service intervals specified are for conditions where normal operation, temperature and humidity prevail.
- b. Refer to FM 9-207 for instructions on necessary preliminary lubrication of the vehicle in cold weather areas.
- c. After operation under dusty or sandy conditions, clean and inspect all points of lubrication for fouled lubricants. Lubricate as necessary in accordance with lubrication instructions.
- d. After fording operation, lubricate vehicle in accordance with lubrication instructions.

LUBRICATION INSTRUCTIONS

**SEMITRAILER, VAN: ELECTRONIC,
TACTICAL, XM1063**

- KEY -

Lubricants	Expected Temperatures			Intervals
	(Above +15°F (Above -9°C))	+40° to -15°F (+4° to -26°C)	+40° to -65°F (+4° to -54°C)	
OE/IIDO - Lubricating Oil. Internal Combustion, Tactical Service MIL-L-2104	OE/HDO 15/40 OR OE/HDO-30 (0-238)	OE/HDO 15/40 OR OE/HDO-10 (0-237)		Q-Quarterly (3 Months)
OEA - Lubricating Oil, Internal Combustion, Arctic MIL-L-46167			OEA	A- Annually every second Semi-annual "S" PM Service
GAA - Grease, Automotive and Artillery MIL-G-10924	ALL TEMPERATURES			S- Semi-annually, every second Q-Quarterly Service
BFS, Brake Fluid Silicone, All Temperature, Operational and Preservative MIL-B-46176				

For Arctic Operation Refer to FM 9-207

- NOTES -

1. OIL CAN POINTS 3.

Quarterly lubricate hinges and spare wheel carrier pawl and ratchet with OE/HDO.

If OEA lubricant is required to meet the 4. temperature ranges prescribed in the Key. OEA is to be used in all place, where OE/HDO-10 is specified.

Grade 15W-40 (OE/HDO is the preferred lubricant when temperatures are above +5°F (-15°C).

2. DO NOT LUBRICATE -Springs.

3. LUBRICATION INTERVAL

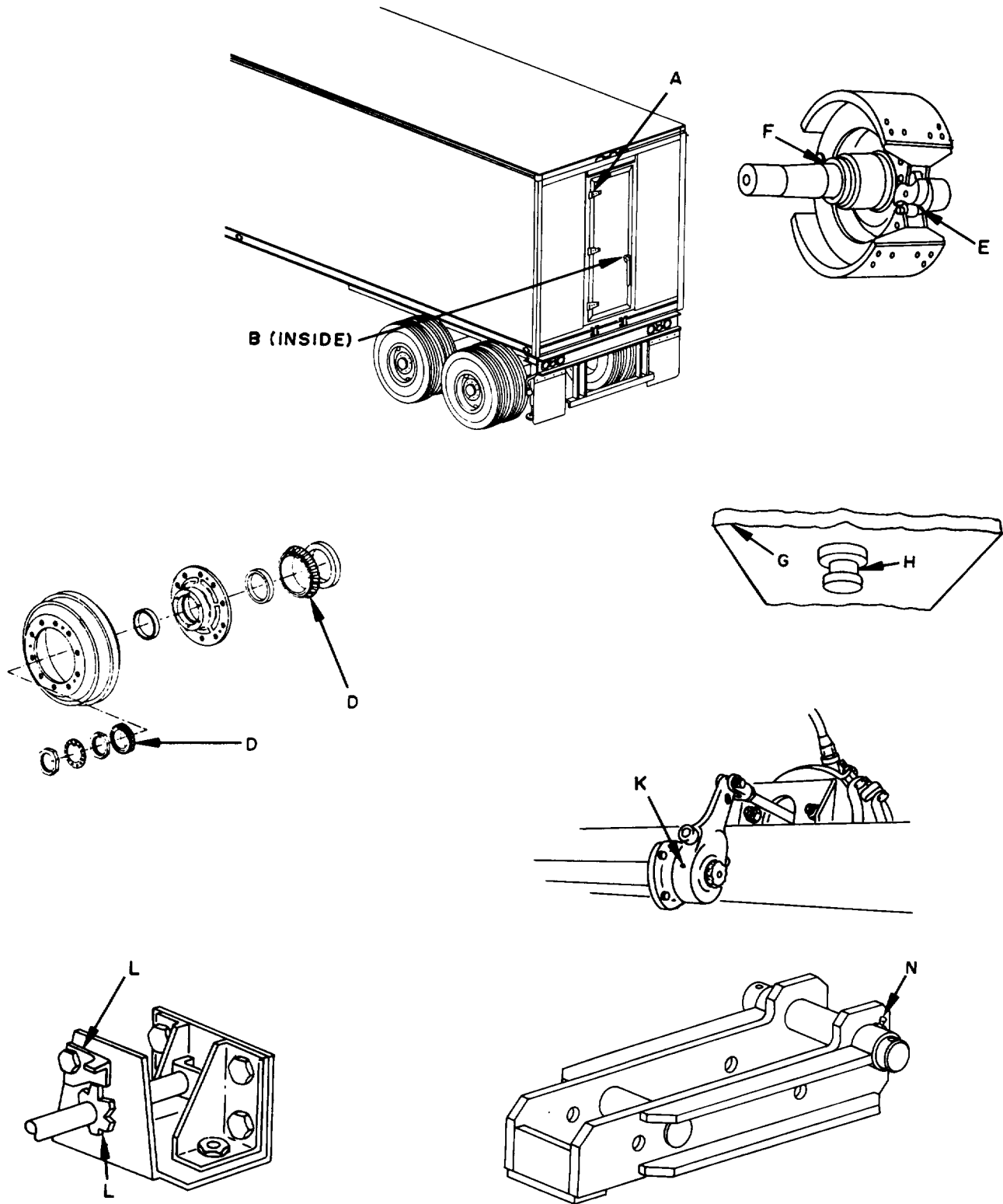
Intervals marked "Q" may be lubricated by the operator if supervised by a mechanic.

4. LANDING GEAR AND LEVELING JACK LEGS

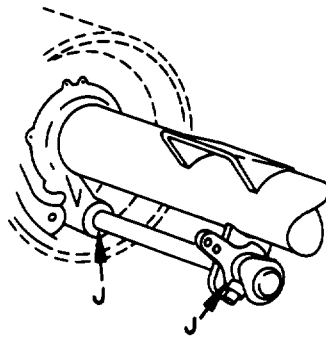
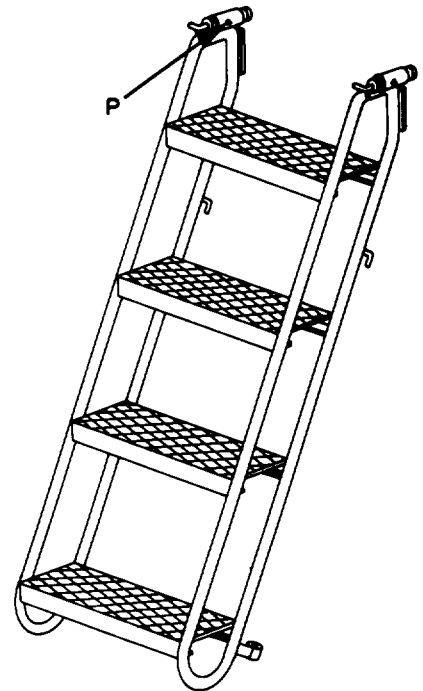
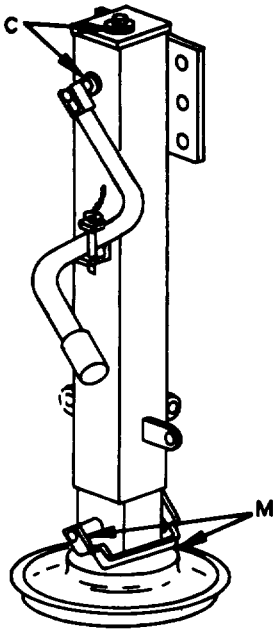
Quarterly fully extend legs, wipe clean and apply GAA to unpainted surfaces.

5. INTERVALS

Lubrication intervals will be scheduled and performed during regular scheduled PM Services whenever possible.



Localized Lubrication Points



Localized Lubrication Points

3-5. PAINTING AND IDENTIFICATION MARKING

a. Painting. Instructions for preparation of the material for painting, methods of painting, and materials to be used are contained in TM 43-0139.

b. Identification Marking. Re-stencil the semitrailer chassis or body if the markings are not legible. Instructions for marking are contained in TB 43-0209. The numerals and letters are of simple block type (1-1/2 inches high), with curved lines where applicable, and painted with black enamel to specification MIL-E-52798. Proceed as follows:

3-5. PAINTING AND IDENTIFICATION MARKING (cont)**WARNING**

To prevent injury to personnel, avoid excessive inhalation of vapors. All cleaning and stenciling procedures must be performed in a well-ventilated room, or outdoors. A fire extinguisher must be positioned adjacent to the work area.

- (1) Remove oil and grease from equipment.
- (2) Apply paint to stencil with dabbing motion.
- (3) Remove stencil and fill in spaces to provide for continuous lines in the letters and numerals.
- (4) Allow paint to dry for 24 hours.

Section II. TROUBLESHOOTING PROCEDURES**3-6. INTRODUCTION**

Table 3-1 lists the common malfunctions which you find during the operation or maintenance of the semitrailer, van, or its components. You should perform the tests/inspections and corrective actions in the order listed.

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

TROUBLESHOOTING PROCEDURES

3-6. INTRODUCTION (cont)

SYMPTOM INDEX

	Troubleshooting Chart Item No.	Page
BRAKE SYSTEM		
Brakes will not release	5	3-12
Grabbing brakes	7	3-13
No brakes or weak brakes	6	3-13
ELECTRICAL SYSTEM		
All chassis lights are on and van clearance lights are off	3	3-11
All lamps fail to light	1	3-9
Directional signals inoperative	4	3-11
One or more lamps will not light.....	2	3-10
LEVELING JACK AND LANDING GEAR		
Erratic operation or binding.....	13	3-15
SUSPENSION SYSTEM		
Semitrailer sags to one side.....	8	3-14
WHEELS, HUBS, BEARINGS, AND TIRES		
Air leakage from tires	12	3-15
Excessively worn, scuffed, or cupped tire(s) .	11	3-15
Noisy wheels.....	9	3-14
Wobbly wheels.....	10	3-14

Table 3-1. Troubleshooting

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

ELECTRICAL SYSTEM

WARNING

Make sure all electrical power is disconnected before performing any maintenance on the electrical system. Serious injury or death may occur if safety precautions are not observed.

1. ALL LAMPS FAIL TO LIGHT.

Step 1. Check light switch on towing vehicle.

Place light switch on towing vehicle in proper mode of operation. If towing vehicle lamps light, but semitrailer lights do not, proceed to Step 2.

Step 2. Check to see that intervehicular cable (1) is properly plugged into receptacle.

If cable is not properly connected. reconnect cable.

If cable is properly connected, proceed to step 3

Step 3. Inspect for dirty or corroded sockets (2) on intervehicular cable (1). Check for damaged pins.

If pins or sockets are dirty or corroded, clean pins, sockets, receptacle and plug.

If pins are damaged, notify unit maintenance.

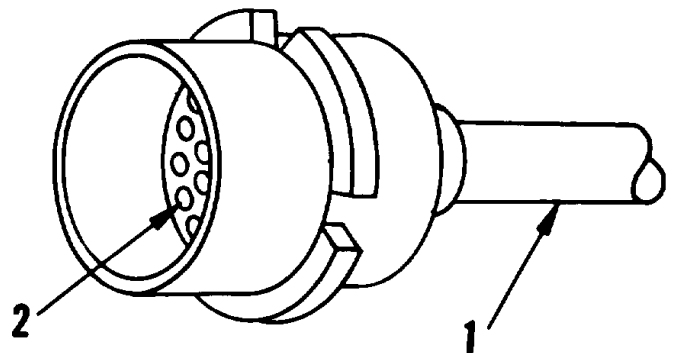


Table 3-1. Troubleshooting

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

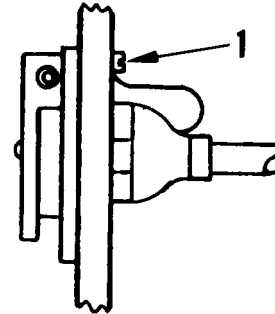
ELECTRICAL SYSTEM (cont)

Step 4. Check for good ground connection at intervehicular cable receptacle.

Have ground connection (1) tightened.

Step 5. Check lights again.

If they still don't light, notify unit maintenance.



2. ONE OR MORE LAMPS WILL NOT LIGHT.

Step 1. Check for burned out or defective lamps.

If lamps are burned out or defective, notify unit maintenance.

If lamps are not burned out or defective, proceed to step 2.

Step 2. Check for broken lead wires or loose connections.

If connections are loose, tighten connections.

If lead wires are broken, notify unit maintenance.

If connections are not loose or broken, proceed to step 3.

Step 3. Check lens and light assembly for damage.

If damaged, notify unit maintenance.

If lens and light assembly are not damaged, proceed to step 4.

Step 4. Check for dirty or corroded connections.

Clean connections if dirty or corroded.

If the above steps do not correct the malfunction, notify unit maintenance.

Table 3-1. Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
ELECTRICAL SYSTEM (cont)		
3. ALL CHASSIS LIGHTS ARE ON AND CLEARANCE LIGHTS ARE OFF.		
Step 1. Check for loose connections at resistor box.		
If connections are loose, tighten connections.		
If connections are tight, proceed to step 2.		
Step 2. Check for dirty or corroded connectors.		
Clean dirty or corroded connectors.		
If the connectors are not dirty, corroded or loose and malfunction is not corrected, notify unit maintenance.		
4. DIRECTIONAL SIGNALS INOPERATIVE.		
Step 1. Check operation of turn signal light assembly		
If lamp is defective, notify unit maintenance.		
If lamp or light is not defective, proceed to step 2.		
Step 2. Check for loose connections.		
If connections are loose, tighten connections.		
If connections are not loose, proceed to step 3.		
Step 3. Check for dirty or corroded connectors.		
If connectors are dirty or corroded, clean them.		
If the above steps do not correct the malfunction, notify unit maintenance.		

Table 3-1. Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
BRAKE SYSTEM		
5. BRAKES WILL NOT RELEASE.		
Step 1. Check that tractor to semitrailer air supply is turned on.	If air is shut off, turn on air supply.	If air supply is on, proceed to step 2.
Step 2. Check air pressure of tractor.	If pressure is low, build up pressure to 90-100 psi (620.5-758.5 k pa).	If pressure is normal, proceed to step 3.
Step 3. Check connections of air lines to gladhands.	If air lines are not properly connected (EMERGENCY TO EMERGENCY and SERVICE TO SERVICE), connect air lines properly.	If air lines are connected properly, proceed to step 4.
Step 4. Check for dirty or leaking gladhand connections.	If gladhand is dirty, clean gladhand.	If gladhand is leaking, notify unit maintenance.
	If gladhand is clean and not leaking, proceed to step 5.	
Step 5. Inspect air hoses and connectors for leaks.	If hoses or connectors are leaking, notify unit maintenance.	If hoses and connectors are not leaking, proceed to step 6.
Step 6. Check air reservoirs for open drain cocks.	If a drain cock is open, close it.	If all drain cocks are closed, notify unit maintenance.

Table 3-1. Troubleshooting

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

BRAKE SYSTEM (cont)

6. NO BRAKES OR WEAK BRAKES.

Step 1. Check to see if intervehicular air hoses are properly connected.

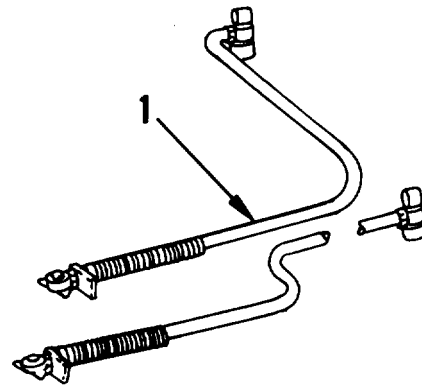
If not properly connected, connect air hoses properly.

If properly connected, proceed to step 2.

Step 2. Check for low air pressure.

If pressure is low, build up pressure.

If pressure is normal, notify unit maintenance.



7. GRABBING BRAKES.

WARNING

Wear goggles when opening air reservoir drain cocks. Failure to do so could cause serious eye injury from high pressure air.

Check air system for moisture.

Open all three air reservoir (2) drain cocks (1) and allow any moisture to drain.

If reservoirs are dry and malfunction is not corrected, close drain cocks and notify unit maintenance.

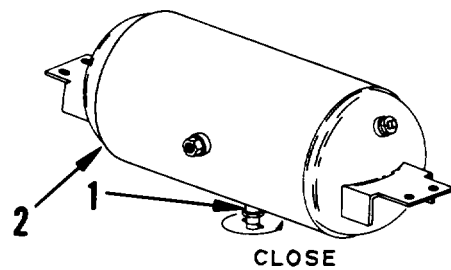


Table 3-1. Troubleshooting

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

SUSPENSION SYSTEM

8. SEMITRAILER SAGS TO ONE SIDE.

Step 1. Check tires to see if air pressure is low or uneven.

Inflate tires to correct pressure: highway, 70 psi (482.65 k pa), cross-country, 45 psi (310.28 k pa), soft sand, mud or snow, 45 psi (310.28 k pa).

Step 2. Check to see if load in semitrailer is evenly distributed.

Distribute load evenly.

Step 3. Visually check for broken spring leaves.

If broken, notify intermediate direct support maintenance.

WHEELS, HUBS, BEARINGS, AND TIRES

9. NOISY WHEELS.

Inspect wheels (1) for looseness.

Tighten wheel stud nuts (2) (page 3-17).

If wheels are still noisy, notify unit maintenance.

10. WOBBLY WHEELS.

Inspect wheels (1) for looseness.

Tighten wheel stud nuts (2) (page 3-17).

If wheels are still wobbly, notify unit maintenance.

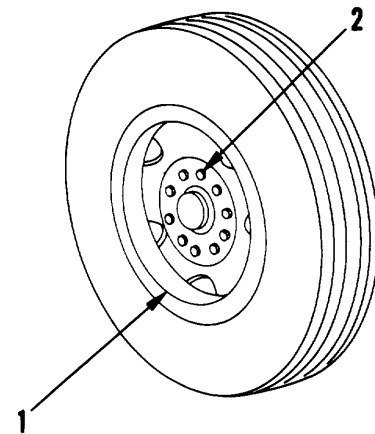


Table 3-1. Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
WHEELS, HUBS, BEARINGS, AND TIRES (cont)		
11. EXCESSIVELY WORN, SCUFFED, OR CUPPED TIRE(S).		
Step 1. Check for improper tire pressure.	Inflate tires to correct pressure: highway, 70 psi (482.65 k pa), cross-country, 45 psi (310.28 k pa), soft sand, mud or snow, 45 psi (310.28 k pa).	
Step 2. Check wheels for looseness.	If wheel is loose, tighten wheel study nuts (page 3-17).	If wheel is still loose, notify unit maintenance.
12. AIR LEAKAGE FROM TIRES.		
Step 1. Check valve core for damage or looseness.	Notify unit maintenance to tighten or replace valve core.	If tire is punctured, replace wheel and punctured tire with the spare (pages 2-20 and 3-16).
LANDING GEAR AND LEVELING JACK		
13. ERRATIC OPERATION OR BINDING.		
Step 1. Check for adequate lubrication.	Lubricate in accordance with lubrication instructions.	
Step 2. Visually check for apparent damage.	If damaged, notify unit maintenance.	

Section III. MAINTENANCE

3-7. WHEEL AND TIRE

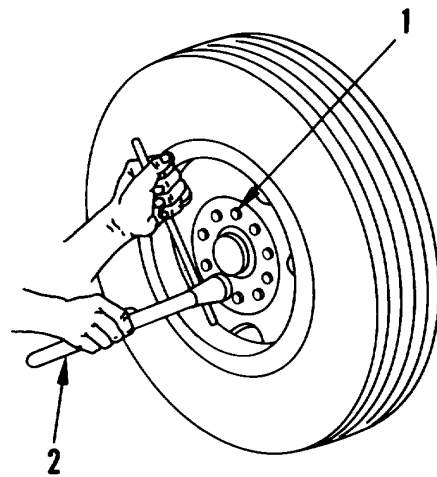
REMOVAL OF WHEEL AND TIRE ASSEMBLY FRONT HUB

- a. Apply brakes to semitrailer. If semitrailer is attached to towing vehicle, wheels may be locked by disconnecting the emergency air connections.

NOTE

Outer cap nuts on right side (marked R) have right hand threads and those on left side (marked L) have left hand threads. Nuts must be turned in opposite direction to normal forward rotation of wheel to be loosened or removed.

- b. Loosen ten outer wheel nuts (1), using wheel nut wrench (2).
- c. Jack up semitrailer axle until wheel clears the ground.
- d. Remove wheel nuts and remove wheel.
- e. If inner wheel is to be removed, remove inner ten cap nuts and inner wheel in same manner.



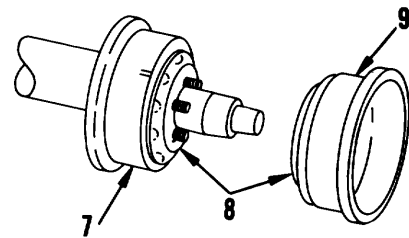
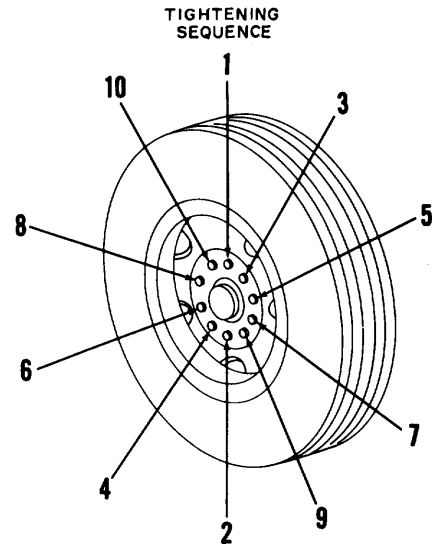
INSTALLATION OF WHEEL AND TIRE ASSEMBLY ON HUB

- a. Make certain mounting faces of hub, ball seats and flat mounting surfaces of wheel are clean and free of foreign matter or excess paint.
- b. Check to see that threads of studs are clean and not damaged.

3-7. WHEEL AND TIRE (cont)

INSTALLATION OF WHEEL AND TIRE ASSEMBLY ON HUB (cont)

- c. If removed, mount inner wheel (7) on hub with convex side (8) of wheel facing out. Install inner wheel cap nuts.
- d. Tighten nuts securely in the tightening sequence shown.
- e. Mount outer wheel (9) on hub, with convex side (8) of wheel facing in and against inner wheel.
- f. Make certain valve stem for outer wheel is not aligned with valve stem of inner wheel.
- g. Install outer wheel nuts, following same procedure and tightening sequence used with inner wheel nuts.
- h. As soon as possible, have unit maintenance torque wheel stud nuts to 450-500 lb-ft (610.2678.0 Nm).
- i. Inflate tires to 70 psi (482.65 k pa) for highway driving, 45 psi (310.28 k pa) for cross-country driving, and 45 psi (310.28k pa) for driving in soft sand, mud or snow.
- j. Lower semitrailer and remove jacking equipment.



3-17/(3-18 blank)

CHAPTER 4

UNIT MAINTENANCE INSTRUCTIONS

CHAPTER INDEX	Page
Common tools and equipment	4-2
Special tools, TMDE, and support equipment	4-2
Repair parts	4-2
Inspecting and servicing equipment.....	4-2
Unit preventive maintenance checks and services (PMCS).....	4-3
Troubleshooting	4-9
Resistor assembly.....	4-27
Resistor box	4-28
24-Volt intervehicular cable receptacle	4-29
12-Volt intervehicular cable receptacle.....	4-31
Wiring harness	4-32
Marker clearance light.....	4-33
Blackout stop and tail light	4-34
Stop and turn light.....	4-36
Front relay valve.....	4-41
Rear relay valve	4-44
Ratio relay valve.....	4-46
Brake air chamber	4-47
Air reservoir.....	4-50
Gladhand (air half-coupling).....	4-54
Hose, tubing and fitting	4-56
Axle/brake assembly.....	4-59
Slack adjuster	4-59
Hub and drum assembly	4-61
Brake shoes	4-64
Brake camshaft	4-66
Spare wheel carrier.....	4-69
Landing gear and leveling jack	4-72
Doors	4-75
Splash guard.....	4-85
Ladder bracket	4-85
Reflector.....	4-86
Identification plate	4-86
Dolly assembly	4-86
Maintenance under unusual conditions	4-87
Preparation for storage	4-88
Preparation for air shipment of semitrailer.....	4-91

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

4-1. COMMON TOOLS AND EQUIPMENT

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

4-2. SPECIAL TOOLS, TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

Special tools are not required for this equipment.

4-3. REPAIR PARTS

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

Section II. SERVICE UPON RECEIPT

4-4. GENERAL

When new, used or reconditioned materiel is first received, it is the responsibility of the officer in charge to determine whether the materiel has been properly prepared for service by the supplying organization and to be sure it is in condition to perform its function. Inspect all assemblies, subassemblies, and accessories to be sure they are properly assembled, secure, clean, and correctly adjusted and/or lubricated. Check all tools and equipment to be sure every item is present, in good condition, clean, and properly mounted or stowed.

4-5. INSPECTING AND SERVICING EQUIPMENT

a. Preliminary Services.

(1) General procedures.

If exterior surface is coated with rust preventive compound, remove it with cleaning solvent (item 3, appendix E).

4-5. INSPECTING AND SERVICING EQUIPMENT (cont)

(2) Special procedures.

(a) Perform the preventive maintenance checks and services (table 4-1).

(b) Lubricate all lubrication points illustrated in the lubrication instructions, regardless of interval.

(c) Schedule "S" semiannual preventive maintenance service on DD Form 314 (Preventive Maintenance Schedule and Record).

(d) Deficiencies, which appear to involve unsatisfactory design, will be reported in accordance with DA PAM 738-750.

(e) Perform a "break in" of 25 miles (40.23 km) at a maximum speed of 30 mph (48.27 kph).

b. Before-Operation Service. This is a brief service to ascertain that the semitrailer is ready for operation; it is mainly a check to see if conditions affecting the vehicle's readiness have changed since the last after-operating service. Refer to Operator/Crew Preventive Maintenance Checks and Services in chapter 2.

Section III. PREVENTIVE MAINTENANCE CHECKS

AND SERVICES (PNCS)

4-6. GENERAL

To insure that the semitrailer is ready for operation at all times, it must be inspected within designated intervals so that defects may be discovered and corrected before they result in serious damage or failure. Table 4-1 contains a tabulated listing of preventive maintenance checks and services to be performed by unit maintenance personnel. All deficiencies and shortcomings will be recorded as well as the corrective action taken on DA Form 2404 at the earliest possible opportunity.

4-7. UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES

a. The item numbers of table 4-1 indicate the sequence of the PMCS. Perform at the intervals shown below:

(1) Do your Quarterly (Q) PREVENTIVE MAINTENANCE once each three months.

(2) Do your Semiannual (S) PREVENTIVE MAINTENANCE once each six months.

4-7. UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

- (3) Do your Annual (A) PREVENTIVE MAINTENANCE once each year.
- (4) Do your Miles (MI) PREVENTIVE MAINTENANCE when the mileage of the semitrailer reaches the amount listed.
 - b. If something doesn't work, troubleshoot it with the instructions in this manual, or notify your supervisor.
 - c. Always do your preventive maintenance in the same order, so it gets to be a habit. Once you've had some practice, you'll spot anything wrong in a hurry.
 - d. If anything looks wrong and you can't fix it, write it down on your DA Form 2404. If you find something seriously wrong, report it to intermediate direct support as soon as possible.

WARNING

Cleaning solvent is both toxic and flammable. To prevent personal injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- (1) Keep it clean: Dirt, grease, oil and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Use cleaning solvent (item 3, appendix E) to clean metal surfaces. Use soap and water when you clean rubber or plastic material.
- (2) Bolts, nuts and screws: Check that they are not loose, missing, bent, or broken. You can't try them all with a tool, of course, but look for chipped paint, bare metal or rust around bolt heads. Tighten any that you find loose.
- (3) Welds: Look for loose or chipped paint, rust or gaps where parts are welded together. If you find a bad weld, report it to intermediate direct support.
- (4) Electric wires and connectors: Look for cracked, frayed or broken insulation, bare wires, and loose or broken connections and connectors. Tighten all loose wires and connectors. Replace or repair as required.
- (5) Hoses and fluid lines: Look for wear, damage and leaks. Make sure clamps and fittings are tight. Wet spots show leaks, of course, but a stain around a fitting or connector can mean a leak. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, either correct it or report it to intermediate direct support (refer to MAC Chart).

4-7. UNIT PREVENTIVE MAINTENANCE CHECKS AND SERVICES (cont)

e. It is necessary for you to know how fluid leaks affect the status of your equipment. The following are definitions of the types/classes of leakage you need to know to be able to determine the status of your equipment. Learn and be familiar with them and REMEMBER WHEN IN DOUBT, NOTIFY YOUR SUPERVISOR.

Leakage definition for Organizational PMCS

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

CLASS II Leakage of fluid great enough to form drops but not enough to cause drops to drip from the item being checked/inspected.

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

CAUTION

Equipment operation is allowable with minor leakages (Class I or II). Operation with major leakages (Class III) may cause equipment damage. Of course, consideration must be given to the fluid capacity in the item/system being checked/inspected. When in doubt, notify your supervisor.

When operating with Class I or Class II leaks, continue to check fluid levels as required in your PMCS. Class III leaks should be reported to your supervisor or intermediate direct support.

4-8. SPECIFIC PROCEDURES

Specific procedures for performance of preventive maintenance checks and services are given in table 4-1.

Table 4-1. Unit Preventive Maintenance Checks and Services (cont)

Q - Quarterly

S - Semiannually

A - Annually

MI - Miles

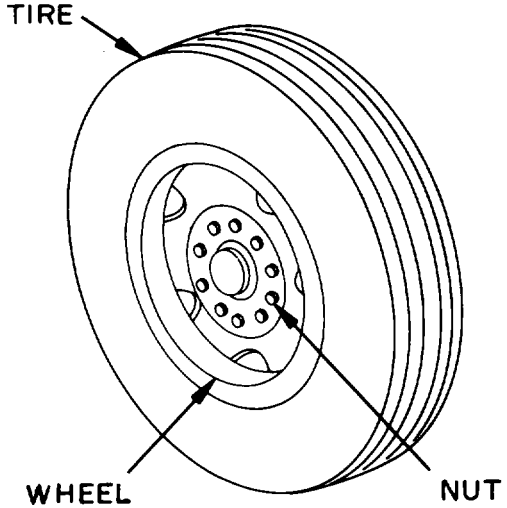
Item No.	Interval				ITEM TO BE INSPECTED Procedures: Check for and have repaired, filled, or adjusted as needed.
	Q	S	A	MI	
1					<p style="text-align: center;">NOTE</p> <p>Perform operator/crew PHCS prior to or in conjunction with unit PMCS if:</p> <ol style="list-style-type: none"> a. There is a delay between the daily operation of the equipment and the unit PHCS. b. Regular operator is not assisting/participating. <p>WHEELS AND TIRES</p> <div style="text-align: center;">  <p>The diagram shows a perspective view of a truck wheel and tire. Three arrows point to specific parts: 'TIRE' points to the outer tread, 'WHEEL' points to the metal rim, and 'NUT' points to one of the mounting bolts on the hub.</p> </div> <ol style="list-style-type: none"> a. Rotate and match tires semiannually in accordance with TM9-2610-200-24. b. Check wheel nuts for tightness. Torque nuts to 450-500 lb-ft (610.2-678.0 Nm).

Table 4-1. Unit Preventive Maintenance Checks and Services (cont)

Q - Quarterly

S - Semiannually

A - Annually

MI - Miles

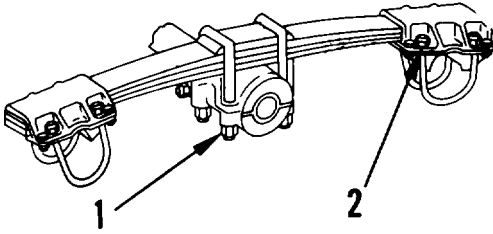
Item No.	Interval				ITEM TO BE INSPECTED Procedures: Check for and have repaired, filled, or adjusted as needed.
	Q	S	A	MI	
2					<p>KINGPIN</p> <ul style="list-style-type: none"> • Check wear of kingpin. Refer to page 5-16.
3					<p>BRAKE AIR SYSTEM</p> <ul style="list-style-type: none"> • Check all air hoses for leaks, kinks, bends, cracks, and presence of mounting clamps. Replace as required.
4					<p>SPRINGS</p>  <p>• Check U-bolt nuts for following torques:</p> <p>Trunnion U-bolt nuts (1) - 870-880 lb-ft dry (1179.7-1193.3 Nm), 650-660 lb-ft lube (881.4-895 Nm).</p> <p>Axle U-bolt Nuts (2) - 290-300 lb-ft dry (383.2-406.8 Nm), 210-220 lb-ft lube (284.8-298.3 Nm).</p>
5					<p>WHEEL BEARINGS</p> <ul style="list-style-type: none"> • Clean wheel bearings and repack in accordance with lubrication instructions and page 4-63.

Table 4-1. Unit Preventive Maintenance Checks and Services (cont)

Q - Quarterly

S - Semiannually

A - Annually

MI - Miles

Item No.	Interval				ITEM TO BE INSPECTED Procedures: Check for and have repaired, filled, or adjusted as needed.
	Q	S	A	MI	
6		• •			<p>BRAKES</p> <p>a. Adjust brakes (page 4-60).</p> <p>b. If possible, perform a road test of semitrailer. At all times during the test be alert for unusual or excessive noises that may indicate damage, looseness, defects and deficient lubrication. Make several stops, noting side pull, noise, chatter or any other unusual condition.</p> <p>c. Inspect and repair brakes as required.</p>
7	•		•		<p>RADIO FREQUENCY INTERFERENCE (RFI) SHIELDING</p> <p>Radio Frequency Interference (RFI) shielding seals and contact areas must be kept clean at all times to provide good conductivity.</p>

Section IV. TROUBLESHOOTING PROCEDURES

4-9. INTRODUCTORY INFORMATION

a. Table 4-2 lists the common malfunctions which you may find during the operation or maintenance of the semitrailer, van, or its components. You should perform the tests/inspections and corrective actions in the order listed.

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

SYMPTOM INDEX

	Troubleshooting Chart Item No.	Page
BRAKE SYSTEM		
Brake drum running hot	9	4-20
Brakes will not release	5	4-15
Grabbing brakes	8	4-20
No brakes or weak brakes	6	4-17
Noisy brakes	11	4-21
Slow brake application or slow release.....	7	4-19
Uneven braking.....	10	4-21
DOORS		
Difficulty in locking or unlocking door.....	18	4-25
Door hinges do not operate properly	19	4-25
RFI shielding does not provide good conductivity	20	4-25
ELECTRICAL SYSTEM		
All lights fail to operate.....	1	4-11
Dim or flickering lights.....	3	4-14
Directional signals inoperative	4	4-15
One or more lamps will not light.....	2	4-13

SYMPTOM INDEX - Continued

	Troubleshooting Chart Item No.	Page
LANDING GEAR AND LEVELING JACK		
Difficulty in lowering or raising.....	17	4-24
RADIO FREQUENCY INTERFERENCE (RFI) SHIELDING		
RFI shielding does not provide good conductivity	20	4-25
SUSPENSION SYSTEM		
Improper spring action	16	4-24
Pulling to left or right	15	4-23
WHEELS AND HUBS		
Excessively worn, scuffed or cupped tires.....	14	4-23
Wheel noise	12	4-22
Wheel wobble	13	4-22

Table 4-2. Troubleshooting

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

ELECTRICAL SYSTEM

WARNING

Make sure all electrical power is disconnected before performing any maintenance on the electrical system. Serious injury or death may result if proper precautions are not taken.

NOTE

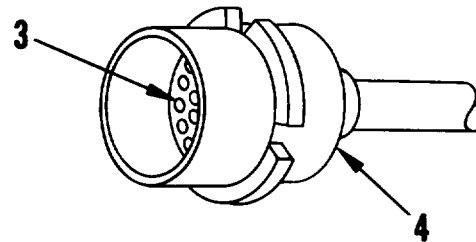
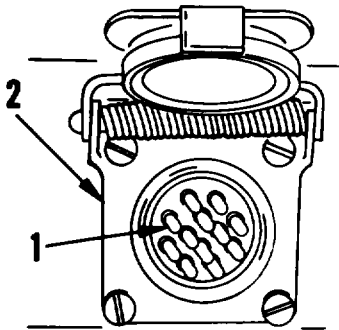
The following procedures are applicable to the 12-volt and 24-volt electrical systems.

1. ALL LIGHTS FAIL TO OPERATE

Step 1. Check to see that light switch on towing vehicle is in desired position.

If switch is not in desired position, place in proper mode of operation.

If switch is in desired position, proceed to step 2.



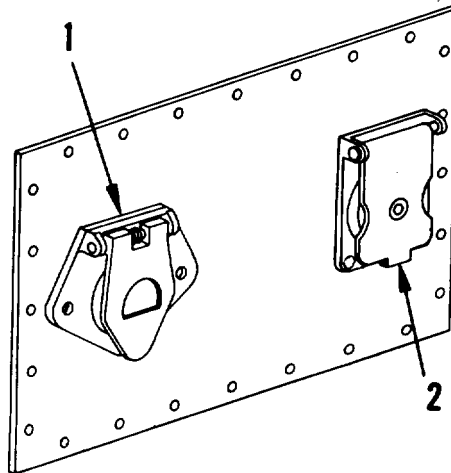
Step 2. Check for dirty or corroded terminals (1) in intervehicular cable receptacle (2) and sockets (3) in plug (4).

If terminals or sockets are dirty or corroded, clean them.

If terminals and sockets are clean, proceed to step 3.

Table 4-2. Troubleshooting (cont)

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

ELECTRICAL SYSTEM (cont)

Step 3. Inspect intervehicular cable for proper connection to either 24-volt receptacle (2) or 12-volt receptacle (1). In all steps, check for good ground connection.

If cable is not properly connected, connect it properly.

If ground connection is loose, tighten ground connection.

If cable is connected properly and ground connection is tight, proceed to step 4.

Step 4. Check to see that current is flowing from towing vehicle, using a multimeter.

If proper voltage is obtained, proceed to step 5.

WARNING

Make sure power is disconnected to prevent injury to personnel

Step 5. Check wiring harness for short circuit.

Check cable for bare spots. Repair as necessary. Make a continuity test of all circuits with a multimeter (refer to wiring diagrams, page 4-38, 4-39, 4-40).

Table 4-2. Troubleshooting (cont)

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

ELECTRICAL SYSTEM (cont)

Step 6. Check light switch on towing vehicle.

If switch is defective, replace switch.

If switch is good, proceed to step 7.

Step 7. Remove resistor box cover and check resistor contact points (1).

Clean contact points.

Step 8. Use multimeter and check resistors for rated ohms marked on resistors (refer to resistor box wiring diagram, page 4-38).

Replace cracked, chipped or defective resistor (page 4-28).

**2. ONE OR MORE LAMPS WILL NOT LIGHT.**

Step 1. Only clearance light lamp can be replaced.

Replace defective lamp.

If lamp is not defective, proceed to step 2.

Step 2. Check for broken cable or loose connections.

If cable is broken, repair or replace cable.

If cable has loose connections, tighten connections.

If cable is not broken and connections are tight, proceed to step 3.

Step 3. Check intervehicular cable for dirty or corroded terminals.

If terminals are dirty or corroded, clean the terminals.

If terminals are clean, proceed to step 4.

Table 4-2. Troubleshooting (cont)

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

ELECTRICAL SYSTEM (cont)

Step 4. Check for damaged or defective light.

Replace damaged or defective light.

3. DIN OR FLICKERING LIGHTS.

Step 1. Check for defective cable.

If wiring is defective, repair or replace wiring.

If wiring is not defective, proceed to step 2.

Step 2. Check for loose or defective wiring and components in resistor box.

If wiring is defective, or loose in box, repair wiring.

If components are loose or damaged, repair or replace components.

If malfunction is not corrected, proceed to step 3.

Step 3. Check resistor contact points (page 4-27).

Clean resistor contact points.

Use multimeter and check resistors for rated ohms marked on resistors (refer to wiring diagram, page 4-38).

Replace cracked, chipped or defective resistor (page 4-28).

If resistors are in good condition, proceed to step 4.

Table 4-2. Troubleshooting (cont)

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

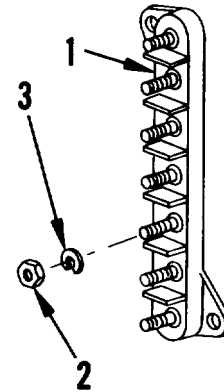
ELECTRICAL SYSTEM (cont)

Step 4. Remove resistor box cover and check connections on circuit boards (1). Make sure nut (2) and washer (3) are tight at each connection.

If connections are tight, proceed to step 5.

Step 5. Check for defective light assembly.

Replace defective light assembly.



4. DIRECTIONAL SIGNALS INOPERATIVE.

Step 1. Check for defective switch or flasher in towing vehicle.

Replace defective switch or flasher.

If switch and flasher are not defective, proceed to step 2.

Step 2. Check for defective light assembly.

Replace defective light assembly.

BRAKE SYSTEM

5. BRAKES WILL NOT RELEASE.

Step 1. Check for restrictions in air lines and hoses.

If air lines or hoses are restricted, replace as required.

If air lines and hoses are not restricted, proceed to step 2.

Table 4-2. Troubleshooting (cont)

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

BRAKE SYSTEM (cont)

Step 2. Check to see if shutoff valves in towing vehicle are open.

If valves are closed, open shutoff valves.

If shutoff valves are open, proceed to step 3.

Step 3. Check to see if any drain cock is open.

If any drain cock is open, close drain cock.

If all drain cocks are closed, proceed to step 4.



Step 4. Check intervehicular air hoses (1) for proper connection and damaged or missing preformed packing (2).

If hoses are improperly connected, connect them properly.

If preformed packing is damaged or missing, replace packing.

If hoses are properly connected and packing is in good order, proceed to step 5.

Table 4-2. Troubleshooting (cont)

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

BRAKE SYSTEM (cont)

Step 5. Check relay valve and air chamber.

Apply towing vehicle brakes and release. Relay valve should vent air chamber air through exhaust port when brakes are released.

If air is not vented from air chamber, replace relay valve.

If relay valve is not defective, but air chamber is defective, replace air chamber.

If relay valve and air chamber are not defective, proceed to step 6.

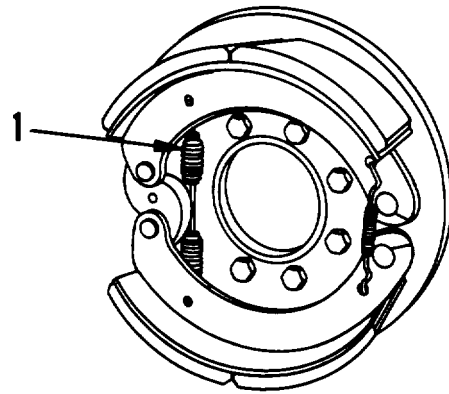
Step 6. Check for weak or broken brake shoe return spring (1).

If return spring is defective, replace spring.

if return spring is not defective, proceed to step 7.

Step 7. Check for out of adjustment brakes.

Adjust brakes if out of adjustment (page 4-60).



6. NO BRAKES OR WEAK BRAKES.

Step 1. Check to see if shut off valves on towing vehicle are open.

If shutoff valves are closed, open shutoff valves.

If shutoff valves are open, proceed to step 2.

Table 4-2. Troubleshooting (cont)

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

BRAKE SYSTEM (cont)

Step 2. Check intervehicular hoses for proper connection.

If hoses are not properly connected, connect hoses properly.

If hoses are properly connected, proceed to step 3.

Step 3. Check to see if any semitrailer drain cock is open.

If drain cock is open, close drain cock.

If all drain cocks are closed, proceed to step 4.

Step 4. Check for low air pressure.

Check air pressure gage on towing vehicle.

If air lines are restricted, remove restrictions.

Make leakage test and repair or replace as needed.

If air pressure is normal and air lines are not restricted or leaking, proceed to step 5.

Step 5. Check relay valve for defect.

If valve is defective, replace relay valve.

If relay valve is not defective, proceed to step 6.

Step 6. Check for defective air chamber.

If air chamber is defective, replace air chamber.

If air chamber is not defective, proceed to step 7.

Step 7. Check for grease on brake lining.

Replace defective oil seal (page 4-63) and brake shoes (page 4-65).

If grease is not present on brake lining, proceed to step 8.

Table 4-2. Troubleshooting (cont)

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

BRAKE SYSTEM (cont)

Step 8. Check for worn brake lining.

If brake lining is worn, replace brake shoes (page 4-65).

If brake lining is not worn, proceed to step 9.

Step 9. Check brake adjustment.

Adjust brakes if out of adjustment (page 4-60).

7. SLOW BRAKE APPLICATION OR SLOW RELEASE.

Step 1. Check for restrictions in air lines and hoses.

If restrictions exist, replace air lines or hoses as needed.

Step 2. Check relay valve operation.

If relay valve is defective, replace relay valve.

If relay valve is not defective, proceed to step 3.

Step 3. Check for weak or broken brake shoe return spring.

If return spring is defective, replace spring (page 4-65).

If return spring is not defective, proceed to step 4.

Step 4. Check for defective air chamber.

If air chamber is defective, replace air chamber (page 4-49).

If air chamber is not defective, proceed to step 5.

Step 5. Check for low pressure.

Perform leakage test. If air lines, air hoses or connections are leaking, repair or replace as needed.

Table 4-2. Troubleshooting (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
BRAKE SYSTEM (cont)		
8. GRABBING BRAKES.		
	Step 1. Check brake adjustment.	<p>If brakes are out of adjustment, adjust brakes (page 4-60).</p> <p>If brakes are not out of adjustment, proceed to step 2.</p>
	Step 2. Check for grease on brake lining.	<p>If grease is present, replace brake shoes (page 4-65) and replace oil seals (page 4-63).</p> <p>If grease is not present on brake lining, proceed to step 3.</p>
	Step 3. Check for loose or worn wheel bearings.	<p>If wheel bearings are loose, adjust bearings (page 4-63).</p> <p>If wheel bearings cannot be adjusted, replace bearings (page 4-63).</p> <p>If wheel bearings are not loose or worn, proceed to step 4.</p>
	Step 4. Check for cracked, scored, or deformed brake drum.	<p>If brake drum is cracked, scored or deformed, replace brake drum.</p> <p>If brake drum does not need replacement, proceed to step 5.</p>
	Step 5. Check for loose or worn brake lining.	Replace brake shoes (page 4-65).
9. BRAKE DRUM RUNNING HOT.		
	Step 1. Check brake adjustment.	<p>If brakes are out of adjustment, adjust brakes (page 4-60).</p> <p>If brakes are not out of adjustment, proceed to step 2.</p>

Table 4-2. Troubleshooting (cont)

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

BRAKE SYSTEM (cont)

Step 2. Check for weak or broken brake shoe return spring.

If return spring is defective, replace spring (page 4-65).

If return spring is not damaged, proceed to step 3.

Step 3. Check for out-of-round brake drum.

If drum is out-of-round, replace brake drum (page 4-63).

10. UNEVEN BRAKING.

Step 1. Check brake adjustment.

If brakes are out of adjustment, adjust brakes (page 4-60).

If brakes are not out of adjustment, proceed to step 2.

Step 2. Check for grease on brake lining.

If grease is present on brake lining, replace brake lining and oil seal.

11. NOISY BRAKES.

Step 1. Check for loose rivets or loose lining.

If rivets or lining are loose, notify intermediate maintenance.

If rivets or lining are not loose, proceed to step 2.

Step 2. Check for grit, rust or metal particles in brake drum.

If grit, rust or metal particles are present, clean brake drum and brake components.

If grit, rust or metal particles are not present, proceed to step 3.

Step 3. Check for scored or deformed brake drum.

Replace scored or deformed brake drum (page 4-63).

Table 4-2. Troubleshooting (cont)

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
WHEELS AND RUBS		
12. WHEEL NOISE.		
	Step 1. Check adjustment of wheel bearings.	
	If bearings are out of adjustment, adjust bearings (page 4-63).	
	If bearings are not out of adjustment, proceed to step 2.	
	Step 2. Check for worn wheel bearings.	
	If bearings are worn, replace bearings (page 4-63).	
	If bearings are not worn, proceed to step 3.	
	Step 3. Check for brake adjustment and worn brake lining.	
	If brakes are out of adjustment, adjust brakes (page 4-63).	
	If brake lining is worn, replace brake shoes (page 4-65).	
13. WHEEL WOBBLE.		
	Step 1. Check wheel bearings.	
	If wheel bearings are worn or damaged, replace bearings (page 4-63).	
	If wheel bearings are not worn or damaged, proceed to step 2.	
	Step 2. Check to see if wheel bearings are too loose.	
	If wheel bearings are too loose, adjust or replace bearings (page 4-63).	
	If wheel bearings are not too loose, proceed to step 3.	
	Step 3. Check for bent or damaged wheel.	
	If wheel is bent or damaged, replace wheel (page 3-16).	

Table 4-2. Troubleshooting (cont)

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

WHEELS AND HUBS (cont)**14. EXCESSIVELY VORN, SCUFFED OR CUPPED TIRES.**

Step 1. Check for improper tire pressure.

If tire pressure is not 70 psi, inflate tire to 70 psi (482.65 k pa).

If tire pressure is 70 psi, proceed to step 2.

Step 2. Check for loose wheel.

If wheel is loose, tighten wheel nuts. Torque to 450-500 lb-ft.

If wheel is not loose, proceed to step 3.

Step 3. Check for loose wheel bearings.

If wheel bearings are loose, adjust bearings (page 4-63).

If wheel bearings are not loose, proceed to step 4.

Step 4. Check for deformed wheel or rim.

If wheel is defective, replace wheel (page 3-16).

If wheel is not defective, proceed to step 5.

Step 5. Check for deformed brake drum.

Replace deformed brake drum (page 4-63).

SUSPENSION SYSTEM**15. PULLING TO LEFT OR RIGHT.**

Step 1. Check for dragging brakes.

If brakes are dragging, adjust brakes (page 4-60).

If brakes are not dragging, proceed to step 2.

Table 4-2. Troubleshooting (cont)

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

SUSPENSION SYSTEM (cont)

Step 2 Check wheel bearing adjustment.

If wheel bearings are out of adjustment, adjust bearings (page 4-63).

16. IMPROPER SPRING ACTION.

Step 1. Check for loose U-bolts.

If U-bolts are loose, notify intermediate maintenance.

If U-bolts are not loose, proceed to step 2.

Step 2. Check for broken or weak spring leaf.

If spring leaf is broken or weak, notify intermediate direct support maintenance.

LANDING GEAR AND LEVELING JACK

17. DIFFICULTY IN LOVERING OR RAISING.

Step 1. Check for grit and dirt on working parts.

If dirt and grit are present, clean all working parts and lubricate.

If dirt and grit are not present, proceed to step 2.

Step 2. Check for misalignment or damage.

Replace landing gear or leveling jack if it is damaged or misaligned.

Table 4-2. Troubleshooting (cont)

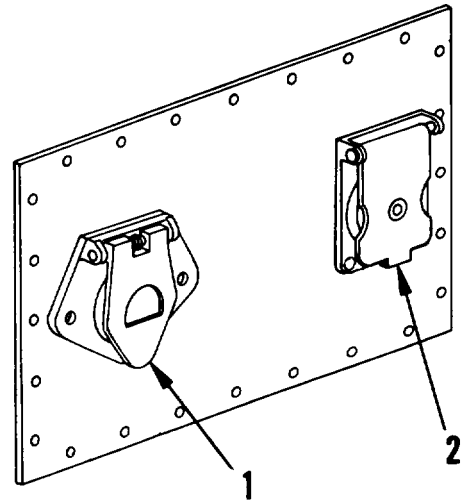
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
DOORS		
18. DIFFICULTY IN LOCKING OR UNLOCKING DOORS.		
	Step 1. Check handle door lock, slide bolt assemblies and striker plates for rust and corrosion.	Clean and lubricate.
	Step 2. Check if door is hard to lock.	Add shim stock as required under handle door lock and (or) slide bolt assembly guides.
	Step 3. Check for a good weather tight seal when door is in closed and locked position.	Add shim stock as required under striker plate of slide bolt assemblies.
		Replace defective lock assembly (page 4-81).
19. DOOR HINGES DO NOT OPERATE PROPERLY.		
	Step 1. Check for rust on hinge pin.	Remove rust and lubricate.
	Step 2. Check for cracked or broken hinge.	Replace defective hinge (page 4-78).
20. R.F.I. SHIELDING DOES NOT PROVIDE GOOD CONDUCTIVITY.		
	Check for dust, grime and dirt on RFI seals and contact areas.	
	Seals and contact areas must be kept clean at all time to provide good conductivity.	

Section V. ELECTRICAL SYSTEM MAINTENANCE PROCEDURES**WARNING**

Make sure all electrical power is disconnected before performing any maintenance on the electrical system. Serious injury or death may result if proper precautions are not taken.

4-10. GENERAL

- a. The XM1063 semitrailer is equipped with two intervehicular cable receptacles, located in the resistor box at lower left corner of front of semitrailer.
- b. The 12-pin, 24-volt receptacle (2) is located to the left of the 7-pin, 12-volt receptacle (1).
- c. A system of resistors makes it possible to use a towing vehicle with either a 12-volt or a 24-volt electrical system.
- d. Refer to semitrailer wiring diagrams (pages 4-38, 4-39 and 4-40) before connecting any disconnected wires.



4-11. RESISTOR ASSEMBLY

THIS TASK COVERS

- a. Removal of resistor
- b. Inspection of resistor
- c. Installation of resistor

Test Equipment:

REMOVAL OF RESISTOR

- a. Disconnect power source.
- b. Remove 24 screws (1) and washers (2) and remove cover assembly (3).
- c. Remove two nuts (4) and screws (5) securing resistors (6) and (7).
- d. The two 6-ohm resistors (6) may be removed individually. Tag and disconnect wires. Remove resistors.
- e. The three 4.5-ohm resistors (7) are interconnected by jumper wires (9). Tag and disconnect wires and remove resistors as a unit.

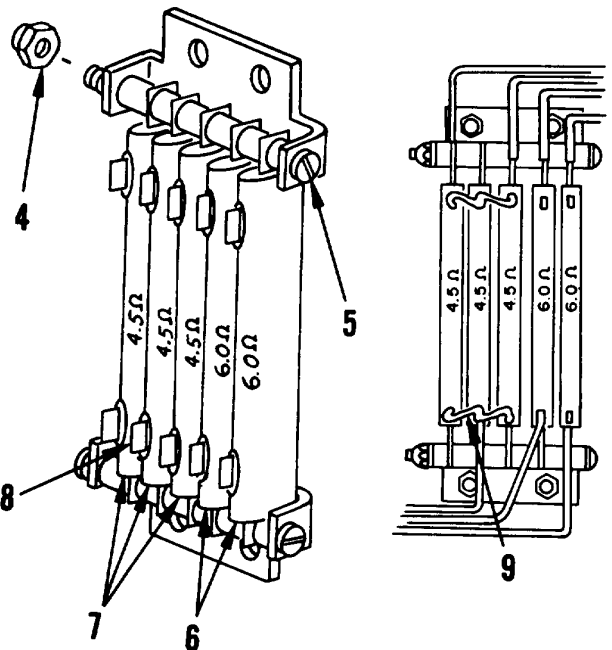
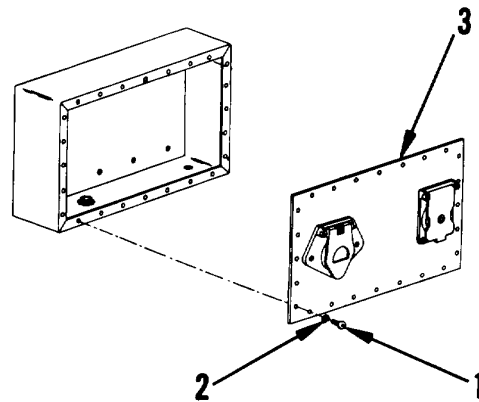
INSPECTION

- a. Check resistor contact points (8) for cleanliness. Clean as required
- b. Using a multimeter, check resistors for rated ohms marked on front of resistor (refer to wiring diagram, page 4-38).

Troubleshooting Reference Item No.

1. All lights fail to operate
3. Dim or flickering lights

Multimeter Personnel Required: 1



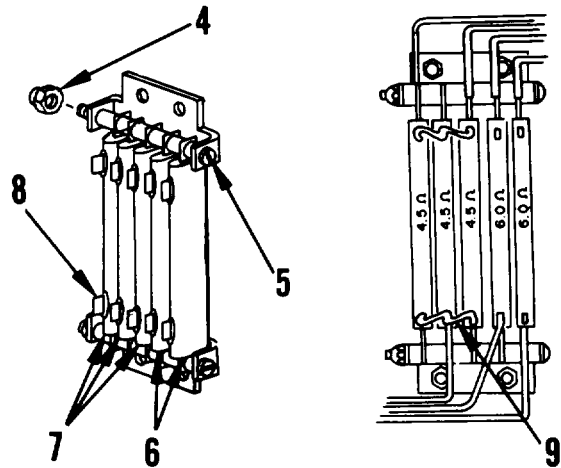
4-11. RESISTOR ASSEMBLY (cont)

INSPECTION (cont)

- c. Replace cracked, chipped or defective resistor.

INSTALLATION OF RESISTOR

- a. Replace 6-ohm resistor (6) by connecting disconnected wires and securing with screws (5) and nuts (4).
- b. Position 4.5-ohm resistors (7) and solder all jumper wire (9) connections.
- c. Connect all disconnected wires and secure with screws (5) and nuts (4).
- d. Using multimeter, check resistors for rated ohms marked on front of resistors (refer to wiring diagram, page 4-38).
- e. Position cover assembly (3) on resistor box (10) and secure with 24 screws (1) and washers (2).



4-12. RESISTOR BOX

THIS TASK COVERS

- a. Removal
- b. Installation

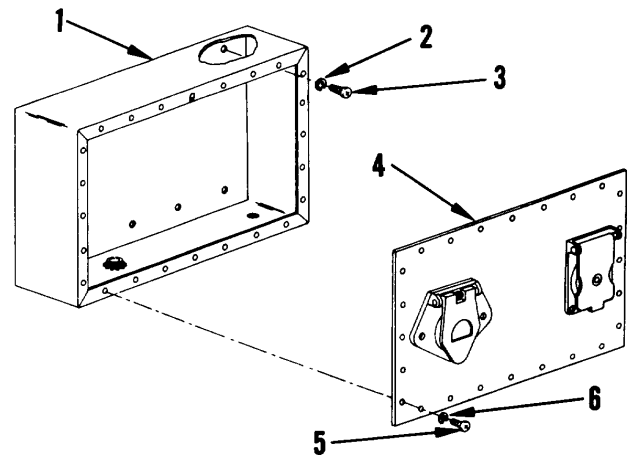
Personnel Required: 1

REMOVAL

- a. Remove 24 screws (5) and washers (6) and remove cover assembly (4).
- b. Remove 10 screws (3) and washers (2) and remove resistor box (1).

INSTALLATION

- a. Position resistor box (1) and secure with 10 screws (3) and washers (2).
- b. Position cover assembly (4) and secure in position with 24 screws (5) and washers (6).



4-13. INTERVEHICULAR CABLE RECEPTACLE, 24-VOLT

THIS TASK COVERS

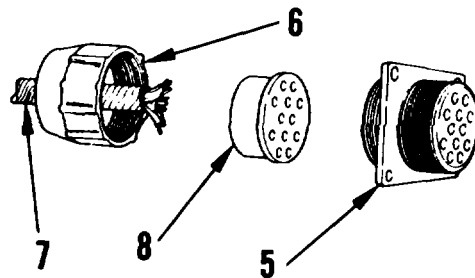
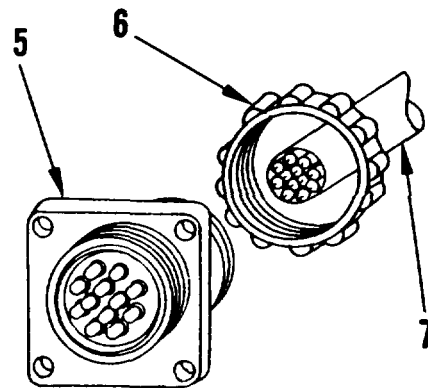
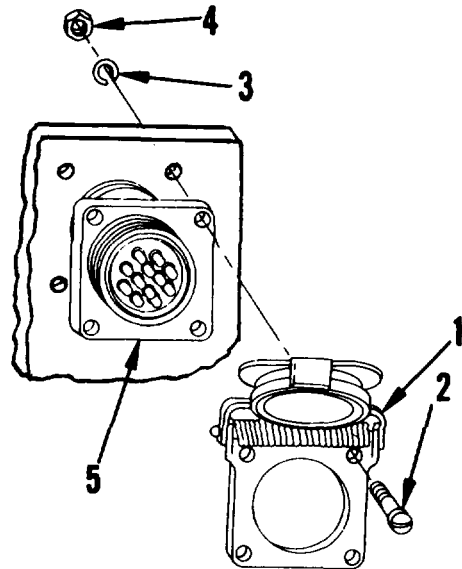
- a. Removal
- b. Cleaning and inspection
- c. Installation

Test equipment Required: Multimeter

Personnel Required: 1

REMOVAL

- a. Disconnect power source.
- b. Remove four nuts (4), washers (3) and screws (2) securing receptacle (5) and cover (1) to resistor box cover assembly.
- c. Remove cover and receptacle.
- d. Remove nut (7) from rear of receptacle (5) and slide nut back over the wires (7).
- e. Mark and unsolder wires at rear of receptacle (5).
- f. Remove rubber bushing (8) from receptacle (5) and slide bushing back over wires (7).



4-13. INTERVEBICULAR CABLE RECEPTACLE, 24-VOLT (cont)

CLEANING AND INSPECTION

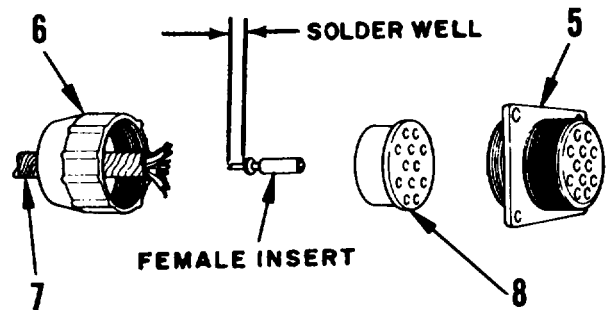
WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

- a. Clean all parts with cleaning solvent (item 3, appendix E).
- b. Inspect for cracks, breaks or other damage.
- c. Replace defective parts.

INSTALLATION

- a. Insert bushing (8) over wires (7).
- b. Solder wires (7) to terminals at rear of receptacle (refer to wiring diagram, page 4-28).
- c. Slide nut (6) over wires (7) and bushing (8) to rear of receptacle (5). Tighten nut.



- d. Make certain power source is disconnected and make a continuity check of all circuits throughout semitrailer, using a multimeter.
- e. Wrap exposed wires and nut with tape, leaving ground wire (with lug) exposed for later installation (step h below).
- f. Insert ground wire and receptacle into hole in front of resistor box cover assembly. Place receptacle cover assembly over receptacle flange, with hinge at top of receptacle.

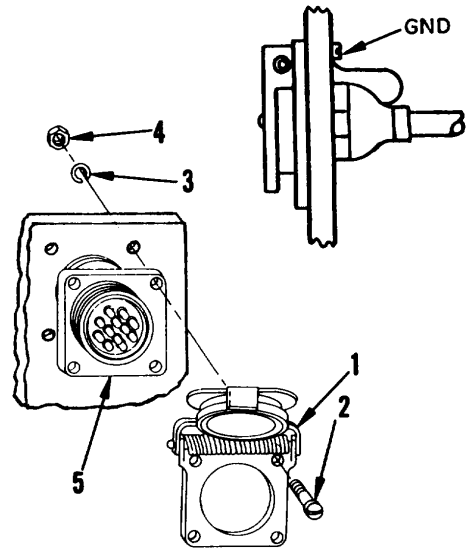
4-13. INTERVEHICULAR CABLE RECEPTACLE, 24-VOLT (cont)

INSTALLATION (cont)

NOTE

Receptacle key must be next to cover hinge.

- g. Aline holes in receptacle cover (1) and receptacle (5) with holes in resistor box cover assembly.
- h. Secure with four screws (2), washers (3) and nuts (4), with ground lug secured by one of washers and nuts.
- i. Connect power source.



4-14. INTRRVEHICULAR CABLE RECEPTACLE, 12-VOLT

THIS TASK COVERS

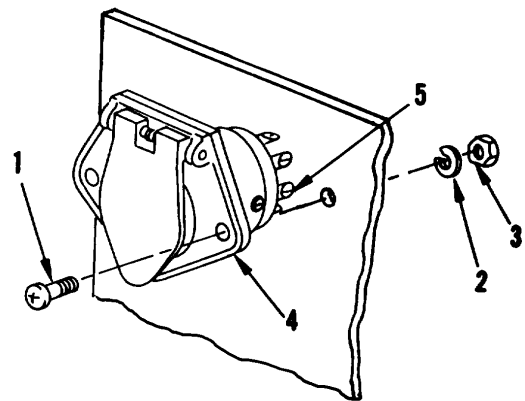
- a. Removal
- b. Installation

Test equipment Required: Multimeter

Personnel Required: 1

REMOVAL

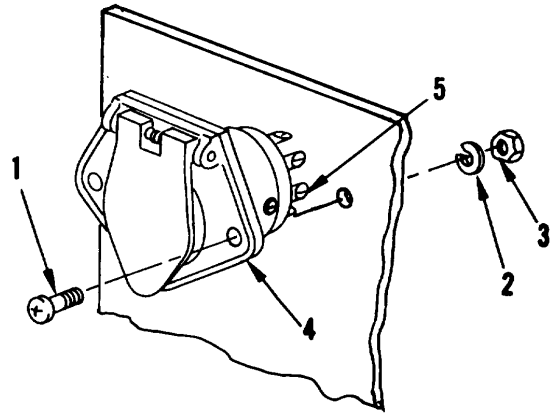
- a. Disconnect power source.
- b. Remove two screws (1), washers (2) and nuts (3) securing receptacle (4). Remove receptacle.
- c. Loosen screws (5) securing each wire. Tag and remove wires from rear of receptacle.



4-14. INTERVEICULAR CABLE RECEPTACLE, 12-VOLT (cont)

INSTALLATION

- a. Clean and inspect receptacle in accordance with the procedure for the 24-volt receptacle (page 4-30).
- b. Insert each wire into its proper position at rear of receptacle (refer to wiring diagram, page 4-39) and secure with screws (5).
- c. Position receptacle (4) and secure with two screws (1), washers (2), and nuts (3).
- d. Make a continuity check of all circuits, using a multimeter.
- e. Connect power source.



4-15. WIRING BARNES

THIS TASK COVERS

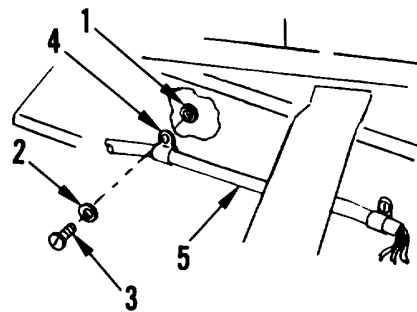
- a. Removal
- b. Installation

Test equipment Required: Multimeter

Personnel Required: 1

REMOVAL

- a. Disconnect harness from all connectors.
- b. Remove nuts (1), washers (2) screws (3) and clamps (4) securing harness (5) to undercarriage.
- c. Remove harness.



INSTALLATION

- a. Position harness, threading through cutouts where required and secure with screws (3), washers (2), nuts (1) and clamps (4).
- b. Connect harness to all connectors.
- c. Make a continuity check of all circuits, using a multimeter.

4-16. MARKER CLEARANCE LIGHT

THIS TASK COVERS

- a. Lamp replacement
- b. Removal
- c. Cleaning and inspection
- d. Installation

Troubleshooting Reference

Item No.

3. Dim or flickering lights

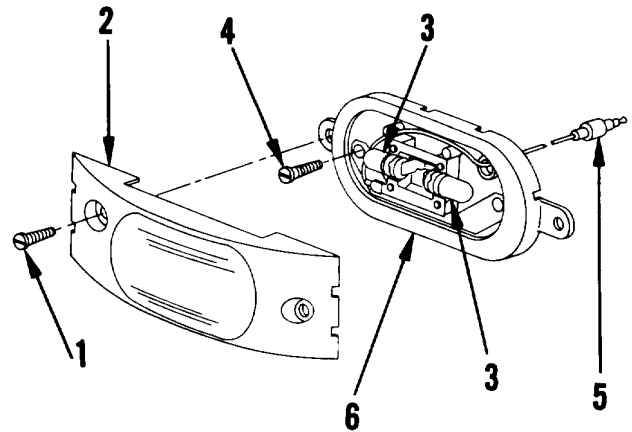
Personnel Required: 1

LAMP REPLACEMENT

NOTE

All semitrailer running lights are controlled by the electrical system of the towing vehicle. A master switch on the towing vehicle controls the service and blackout modes of operation of the lights. Place this switch in the proper position prior to testing the lamps after installation. Lamps will not light if towing vehicle switch is in the OFF position.

- a. Remove two screws (1) securing lens (2). Remove lens.
- b. Push in on lamp (3), turning counterclockwise to remove from socket.
- c. Insert new lamp (3) into socket. Press in and turn clockwise.
- d. Test lamp by turning on switch in towing vehicle.
- e. Position lens (2) on light and secure with two screws (1).



REMOVAL

- a. Remove two screws (1) and remove lens (2).
- b. Disconnect wire assembly (5) at rear of light.
- c. Remove two screws (4) and remove light body (6).

4-16. MARKER CLEARANCE LIGHT (cont)**CLEANING AND INSPECTION****CAUTION**

Do not use cleaning solvent. It will damage the body of the light. Remove lamps before cleaning.

- a. Clean light, using clean water and soap solution. Dry thoroughly.
- b. Check wiring for damaged or worn insulation.
- c. Inspect body for cracks, dents, warpage and cracked or broken lens.
- d. Make sure all parts are in good condition and will make good electrical contact and watertight connections.
- e. Replace light if defective.

INSTALLATION

- a. Position light body (6) and secure with screws (4).
- b. Connect wire assembly (5).
- c. Position lens (2) and secure with two screws (1).
- d. Test light by turning on switch in towing vehicle.

4-17. BLACKOUT STOP AND TAIL LIGHT**THIS TASK COVERS**

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

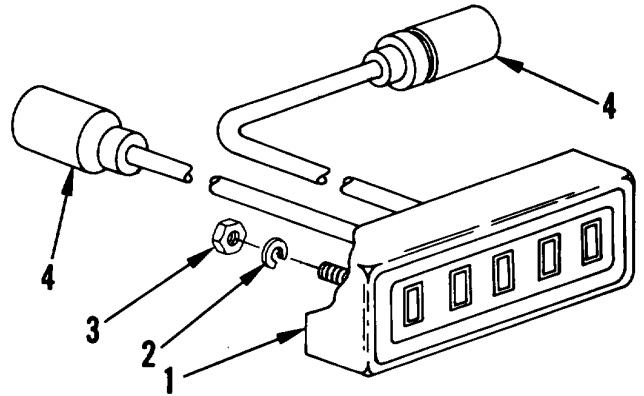
Troubleshooting Reference**Item No.**

1. All lights fail to operate
2. One or more lamps will not light
3. Directional signals inoperative

Personnel Required: 1

4-17. BLACKOUT STOP AND TAIL LIGHT (cont)**REMOVAL**

- a. Disconnect electrical connectors (4).
- b. Remove nuts (3) and washers (2) and remove light (1).

**CLEANING****CAUTION**

Do not use cleaning solvent. It will damage the body of the light.

- a. Clean light, using clean water and soap solution. Dry thoroughly.
- b. Check wiring for damaged or worn insulation.
- c. Inspect body for cracks, dents, warpage and cracked or broken lens.
- d. Make sure all parts are in good condition and will make good electrical contact and watertight connections.
- e. Replace light if defective.

INSTALLATION

- a. Connect electrical connections (4).
- b. Position light (1) and secure with nuts (3) and washers (2).
- c. Test light by placing towing vehicle light switch in the BLACKOUT position and then operating the proper switch, brake pedal or turn signal level.

4-18. STOP AND TURN LIGHT**THIS TASK COVERS**

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

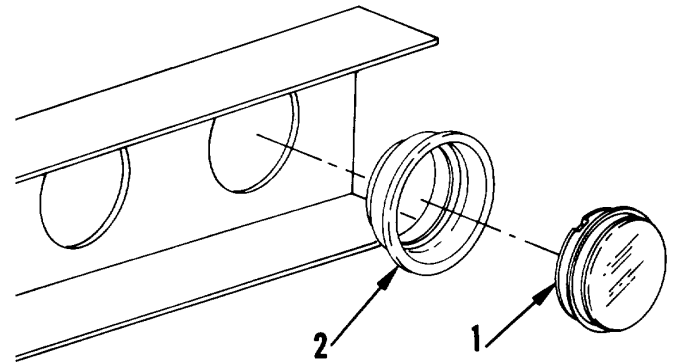
Troubleshooting Reference**Item No.**

1. All lights fail to operate
2. One or more lamps will not light
3. Dim or flickering lights
4. Directional signals inoperative

Personnel Required: 1**REMOVAL****NOTE**

Light (1) fits into rubber grommet (2). No hardware is used.

- a. Using a screw driver, carefully pry light from grommet.
- b. Disconnect electrical harness from rear of light (1).
- c. Use same procedure to remove grommet (2) from opening in dolly frame.

**CLEANING AND INSPECTION****CAUTION**

Do not use cleaning solvent. It will damage the body of the light.

- a. Clean light, using clean water and soap solution. Dry thoroughly.
- b. Check wiring for damaged or worn insulation.

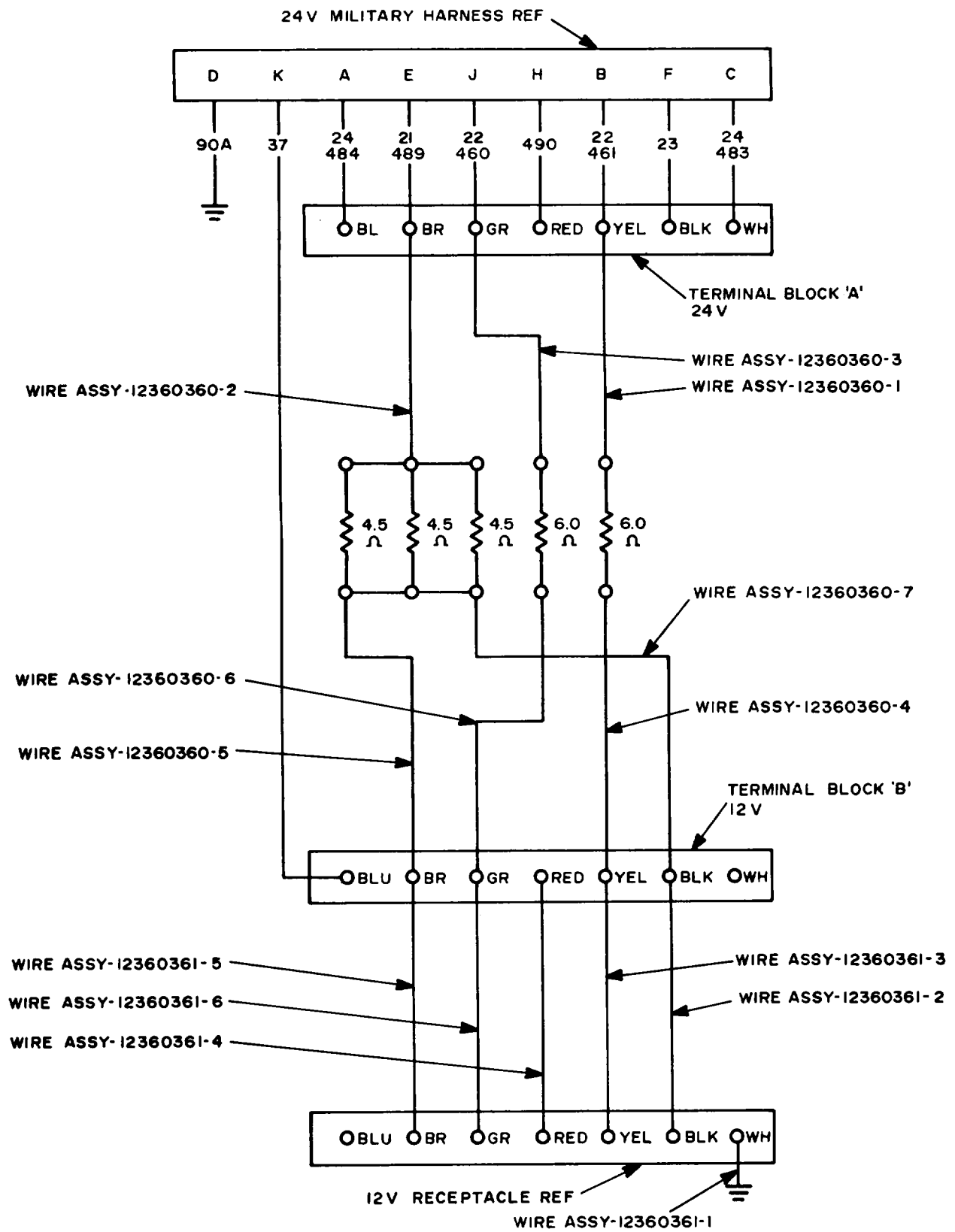
4-18. STOP AND TURN LIGHT (cont)

CLEANING AND INSPECTION (cont)

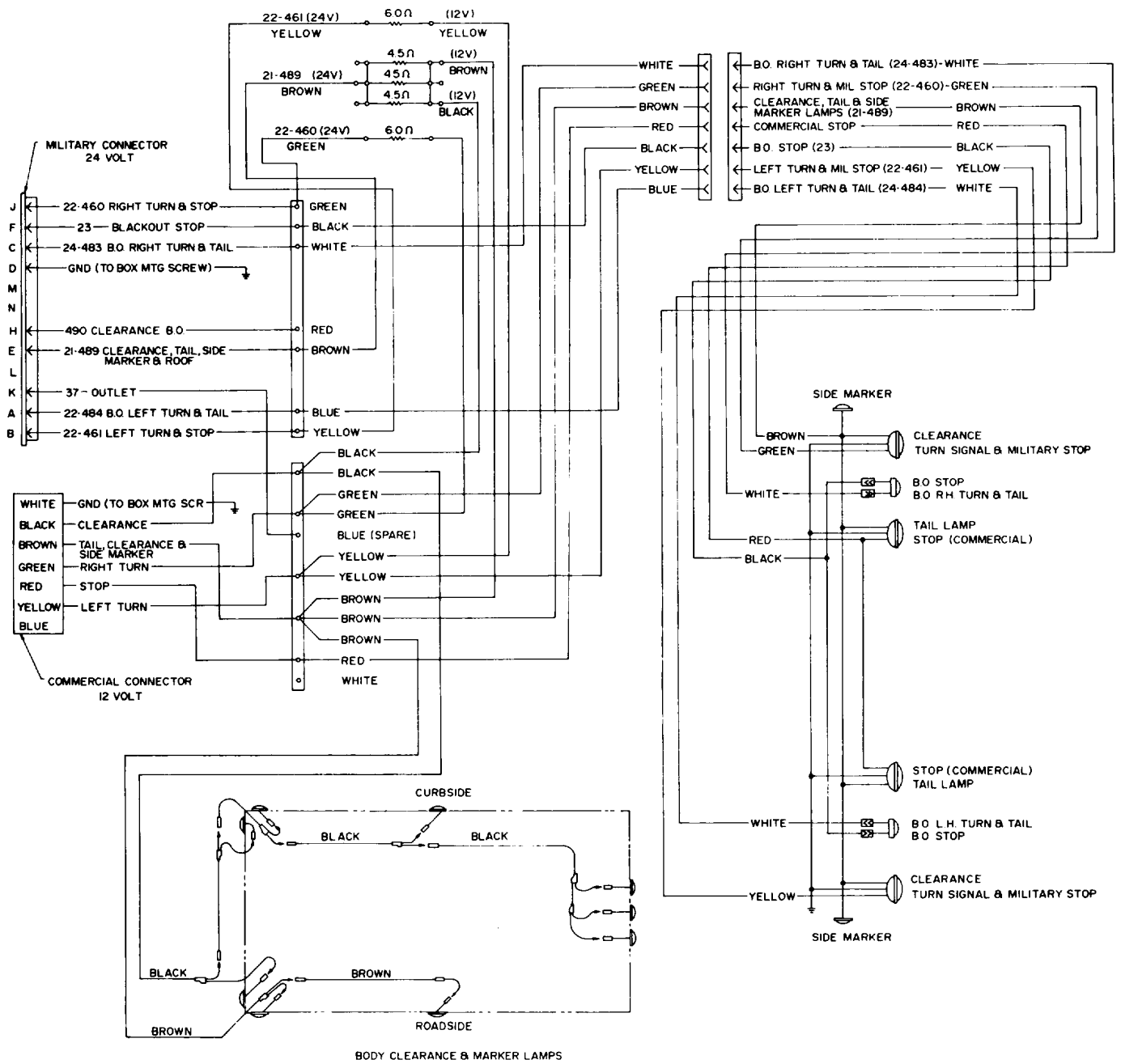
- c. Inspect body for cracks, dents, warpage and cracked or broken lens.
- d. Replace light if defective.
- e. Inspect rubber grommet for excessive wear, deterioration and secure fit in dolly frame. Replace if defective.

INSTALLATION

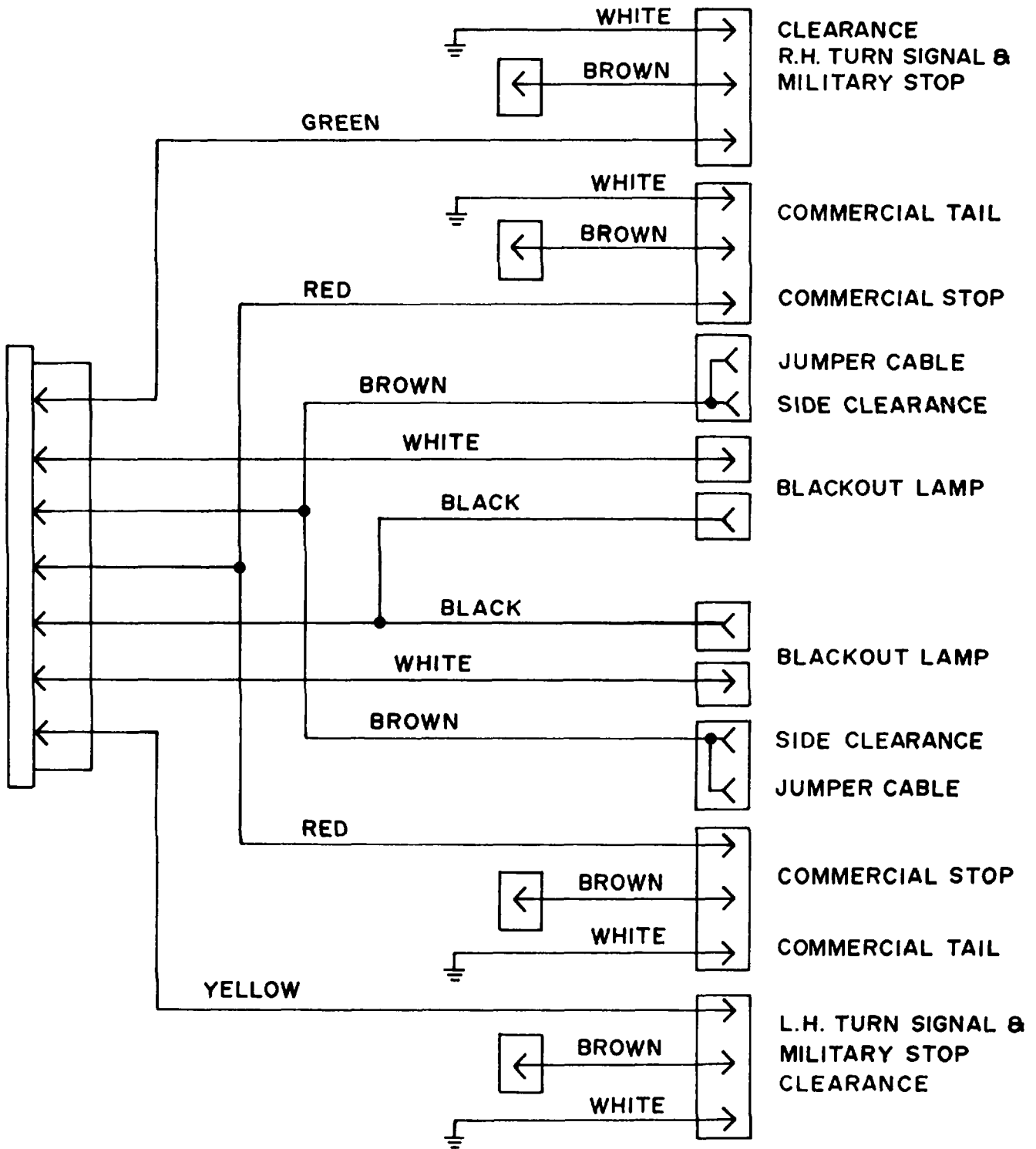
- a. Insert grommet (2) into opening in dolly frame. Make certain it fits properly and securely.
- b. Connect harness at rear of light (1) and insert light into grommet (2).
- c. Test light by turning on towing vehicle light switch and operating brake pedal and turn signal lever.



Wiring Diagram, Resistor Box



Wiring Diagram, Body Lighting



Wiring Diagram, Dolly Lighting

Section VI. BRAKE SYSTEM MAINTENANCE PROCEDURES

4-19. GENERAL

WARNING

Air under 100 psi pressure is used in the operation of the brake air system. Serious injury or death can result unless proper precautions are taken.

The following paragraphs cover procedures for testing, removal, disassembly, assembly and installation of brake shoe assembly, brake air chamber assembly, relay valve, ratio relay valve, air reservoir and air lines. These paragraphs also cover cleaning, inspection and repair of air lines. The service brakes are straight air type with automatic break-away protection.

When the semitrailer brake system is properly connected to the service brake system of the towing vehicle, the towing vehicle brake pedal operates the brakes on both vehicles.

4-20. FRONT RELAY VALVE

THIS TASK COVERS

- a. Operating test
- b. Leakage test
- c. Removal
- d. Cleaning
- e. Inspection
- f. Installation

**Troubleshooting Reference
Item No.**

- 5. Brakes will not release
- 6. No brakes or weak brakes
- 7. Slow brake application or slow release

Personnel Required: 1

Equipment Condition

Towing vehicle attached
and air brake system charged

Materials:

Cleaning solvent (item 3, appendix E).
Teflon tape (item 12, appendix E).

OPERATING TEST

- a. With brake air system of semitrailer connected and charged, check if brakes apply properly.
- b. Release brakes and check whether air pressure is being exhausted promptly.
- c. With semitrailer brake system fully charged, close shutoff valve in emergency line tube on towing vehicle and disconnect brake air hose

4-20. FRONT RELAY VALVE (cont)

OPERATING TEST (cont)

coupling tagged EMERGENCY. Check whether semitrailer brakes apply automatically.

- d. Connect brake air hose to coupling tagged EMERGENCY. Open shutoff valve on towing vehicle and check for automatic semitrailer release of brakes.

LEAKAGE TEST

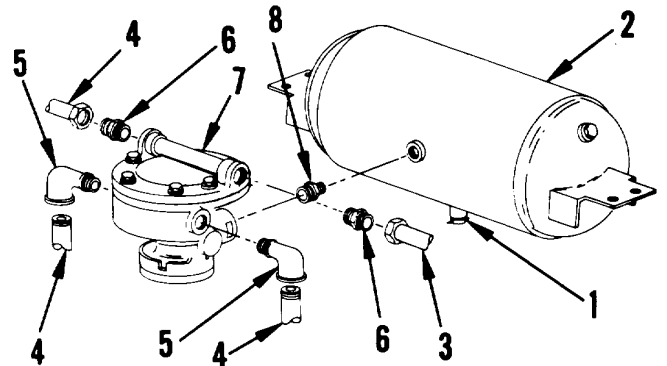
- a. With brake air system of semitrailer connected and charged, apply soap and water solution to cover flanges which hold diaphragms and to brake air hose coupling tagged SERVICE. No leakage should be present. If leaks are detected, tighten attaching hardware and tighten coupling as required.
- b. Apply brakes and apply soap and water solution to all air fittings and check for leaks.
- c. Disconnect EMERGENCY coupling (step c, operating test), coat exhaust port with soap and water solution and check for leaks.
- d. Leakage in steps b and c above must not exceed one inch bubble in two seconds. If excess leakage is found, replace relay valve.

REMOVAL

WARNING

Wear goggles when opening air reservoir drain cock. Failure to do so could cause serious eye injury from high pressure air.

- a. Open drain cocks (1) on all air reservoirs (2) and allow air pressure to bleed off.
- b. Disconnect one input line (3) and three output lines (4) from two elbows (5) and two male connectors (6).



4-20. FRONT RELAY VALVE (cont)**REMOVAL (cont)**

- c. Remove two elbows (5) and two male connectors (6).
- d. Remove relay valve assembly (7) by turning entire valve assembly counterclockwise.
- e. Remove nipple (8).

CLEANING

- a. Clean mud and dirt from exposed surfaces with water and a stiff brush.

WARNING

Cleaning solvent, used to clean parts, is potentially dangerous to personnel and property. To avoid personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- b. Remove grease and oil with cleaning solvent (item 3, appendix E).
- c. Dry thoroughly.

INSPECTION

- a. Inspect for loose, missing, or damaged parts.
- b. Inspect valve, elbows, and connectors for cracks, dents, holes and warps.
- c. Inspect for rust, corrosion and marred paint. Clean, treat, prime and paint as required.
- d. Replace defective parts.

INSTALLATION**NOTE**

Apply teflon tape (item 12, appendix E) to threads of air line connections before installation.

- a. Install nipple (8) at rear of relay valve (7).

4-20. FRONT RELAY VALVE (cont)

INSTALLATION (cont)

- b. Install relay valve to reservoir by turning entire assembly clockwise.
- c. Install two elbows (5) and two male connectors (6).
- d. Connect input line (3) and output lines (4) to elbows (5) and connectors (6).
- e. Close all drain cocks (1) and pressurize air brake system.
- f. Check for leaks (page 4-42).

4-21. REAR RELAY VALVE

THIS TASK COVERS

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

**Troubleshooting Reference
Item No.**

- 5. Brakes will not release
- 6. No brakes or weak brakes
- 7. Slow brake application or slow release

Personnel Required: 1

Equipment Condition:

Operating test performed (page 4-41).

Materials:

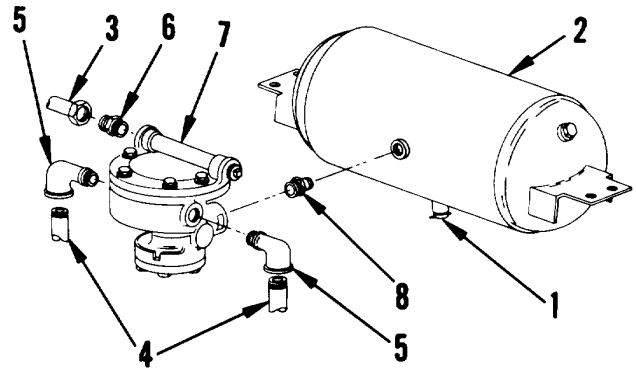
Cleaning solvent (item 3, appendix E).
Teflon tape (item 12, appendix E).

Leakage test performed (page 4-42).

All reservoir drain cocks open (page 4-42).

4--21. REAR RELAY VALVE (cont)**REMOVAL**

- a. Disconnect input line (3) from male connector (6) and two output lines (4) from elbows (5).
- b. Remove two elbows (5) and male connector (6).
- c. Remove relay valve (7) by turning entire valve assembly counterclockwise.
- d. Remove nipple (8).

**CLEANING AND INSPECTION**

Refer to page 4-43 for these procedures.

INSTALLATION**NOTE**

Apply teflon tape (item 12, appendix E) to threads of air line connections before installation.

- a. Install nipple (8) at rear of relay valve.
- b. Install relay valve (7) to reservoir (2) by turning entire assembly clockwise.
- c. Install two elbows (5) and male connector (6).
- d. Connect input line (3) to connector (6) and output lines (4) to two elbows (5).
- e. Follow on maintenance: close all air reservoir drain cocks and pressurize air brake system. Check for leaks (page 4-42).

4-22. RATIO RELAY VALVE

THIS TASK COVERS

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

**Troubleshooting Reference
Item No.**

- 5. Brakes will not release
- 6. No brakes or weak brakes
- 7. Slow brake application or slow release

Personnel Required: 1

Equipment Condition:

Operating test performed (page 4-41).

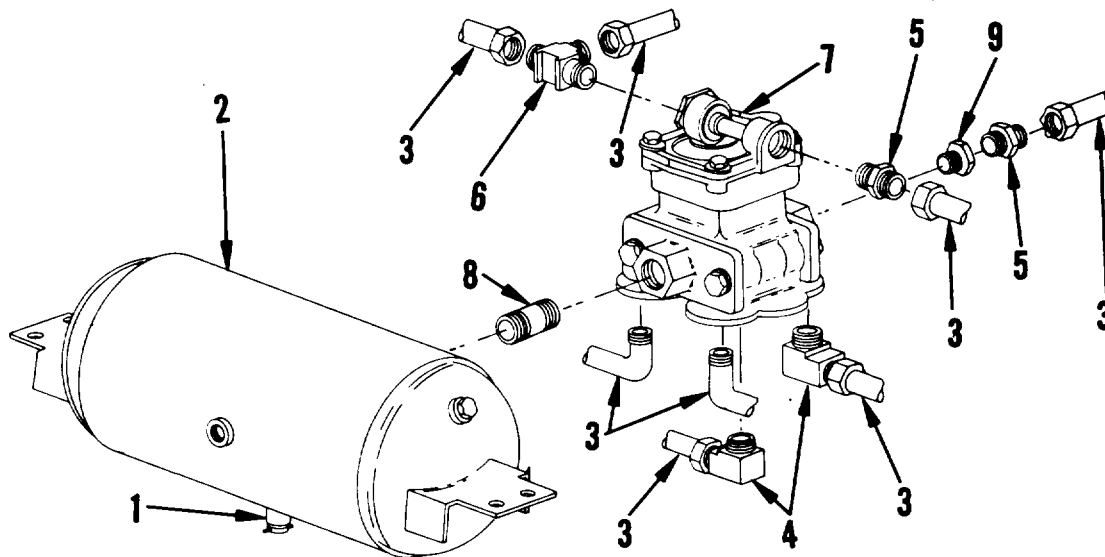
Leakage test performed (page 4-42).

Materials:

Cleaning solvent (item 3, appendix E).
Teflon tape (item 12, appendix E).

All reservoir drain cocks open (page 4-42).

REMOVAL



- a. Disconnect eight air lines (3). Tag lines with port identification.
- b. Remove two elbows (4), two male connectors (5) and tee (6).
- c. Remove ratio relay valve (7) by turning entire valve assembly counterclockwise.
- d. Remove nipple (8) from rear of ratio relay valve (7).

CLEANING AND INSPECTION

Refer to page 4-43 for these procedures.

4-22. RATIO RELAY VALVE (cont)

INSTALLATION

NOTE

Apply teflon tape (item 12, appendix E) to threads of air line connections before installation.

- a. Install nipple (8) at rear of ratio relay valve (7). Install tee (6) to top of ratio relay valve (7).
- b. Install ratio relay valve (7) by turning entire valve assembly clockwise.
- c. Install two elbows (4) and two male connectors (5).
- d. Connect eight air lines in accordance with the tagged identification.
- e. Follow on maintenance: close all drain cocks (page 4-44) and pressurize air brake system. Check for leaks (page 4-42).

2-23. BRAKE AIR CHAMBER

THIS TASK COVERS

- a. Leakage test
- b. Operating test
- c. Removal
- d. Cleaning and inspection
- e. Installation

**Troubleshooting Reference
Item No.**

- 5. Brakes will not release
- 6. No brakes or weak brakes
- 7. Slow brake application or slow release

Personnel Required: 1

Materials:

Cleaning solvent (item 3, appendix E).
Teflon tape (item 12, appendix E).

Equipment Condition:

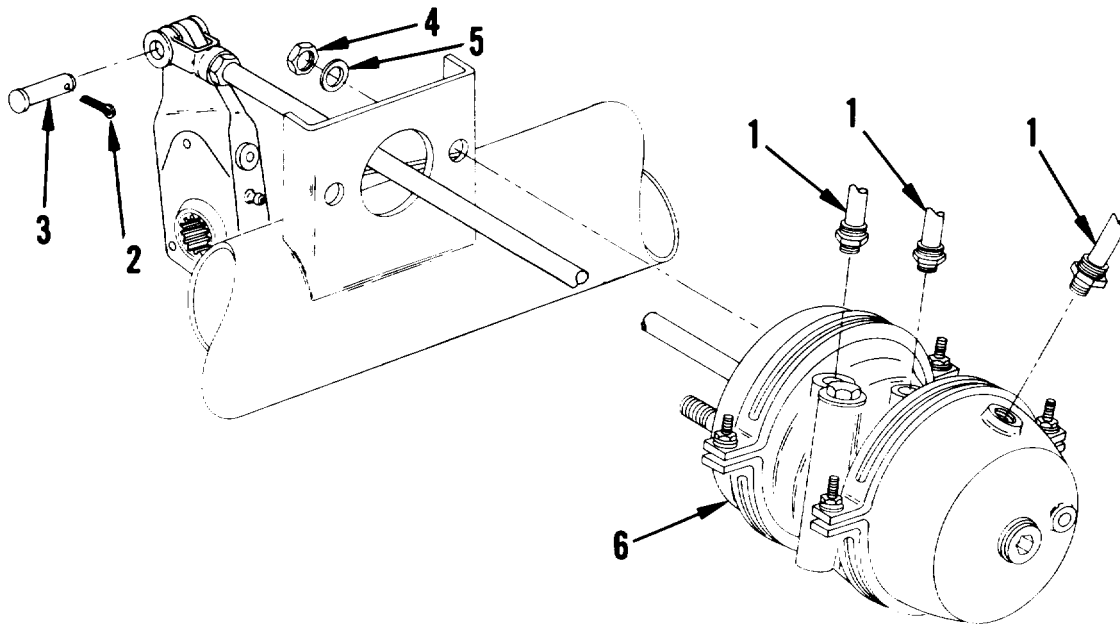
Brakes applied

LEAKAGE TEST

- a. Coat air chamber flange with soap and water solution and inspect for leaks.
- b. If leakage is detected, tighten securing hardware sufficiently to stop any leaks. No leakage is permissible.
- c. Check non-pressure side of air chamber for leaks by applying soap and water solution to holes in chamber body. If leakage exists, replace air chamber.

4-23. BRAKE AIR CBAMBER (cont)**OPERATING TEST**

- Refer to page 4-61 and check yoke pin adjustment.
- Dimension from outside of non-pressure side of air chamber to center of yoke pin must be 7.5 inches, plus or minus 1/8 inch.
- If the 7.5 inch dimension cannot be obtained, replace yoke pin, or replace air chamber (page 4-49) or replace slack adjuster (page 4-60).

REMOVAL**WARNING**

Wear goggles when opening air reservoir drain cock. Failure to do so could cause serious eye injury from high pressure air.

- Open all drain cocks on air reservoirs and allow air pressure to bleed off.
- Tag and disconnect three air lines (1).
- Remove cotter pin (2) and yoke pin (3).
- Remove two nuts (4) and washers (5).
- Remove air chamber (6).

4-23. BRAKE AIR CHAMBER (cont)**CLEANING**

- a. Clean mud and dirt from all exposed surfaces with water and a stiff brush.

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

- b. Remove grease and oil with cleaning solvent (item 3, appendix E), using a clean soft cloth or a medium bristle brush.

INSPECTION

- a. Inspect for loose, missing, or damaged hardware.
- b. Inspect air chamber for cracks, dents, holes and warps.
- c. Inspect for rust and corrosion. Clean, treat, prime and paint as required.
- d. Replace defective air chamber.

INSTALLATION**NOTE**

Apply teflon tape (item 1?, appendix E) to threads of air line connections before installation.

- a. Position air chamber (6) and secure with two nuts (4) and washers (5).
- b. Position yoke pin (3) and secure with cotter pin (2).
- c. Connect three air lines (1).
- d. Close air reservoir drain cocks and pressurize air brake system.
- e. Check for leaks (page 4-47).
- f. Check yoke pin adjustment (refer to page 4-60).

4-24. AIR RESERVOIR

THIS TASK COVERS

- a. Leakage test
- b. Removal
- c. Cleaning and inspection
- d. Installation
- e. Drain cock leakage test
- f. Removal of drain cock
- g. Cleaning and inspection of drain cock
- h. Installation of drain cock

Personnel Required: 1

Equipment Condition

Materials:

Towing vehicle attached
and air brake system charged

Cleaning solvent (item 3, appendix E).
Teflon tape (item 12, appendix E).
Rag/brush (items 14 and 15, appendix E)

LEAKAGE TEST

- a. With brake system charged, coat drain cock, air connections and outside of air reservoir with soap and water solution and check for air leaks. No leakage is permissible.
- b. Tighten any leaking connections.
- c. Replace reservoir if it leaks or if any damage or corrosion is found that would weaken reservoir.

REMOVAL

WARNING

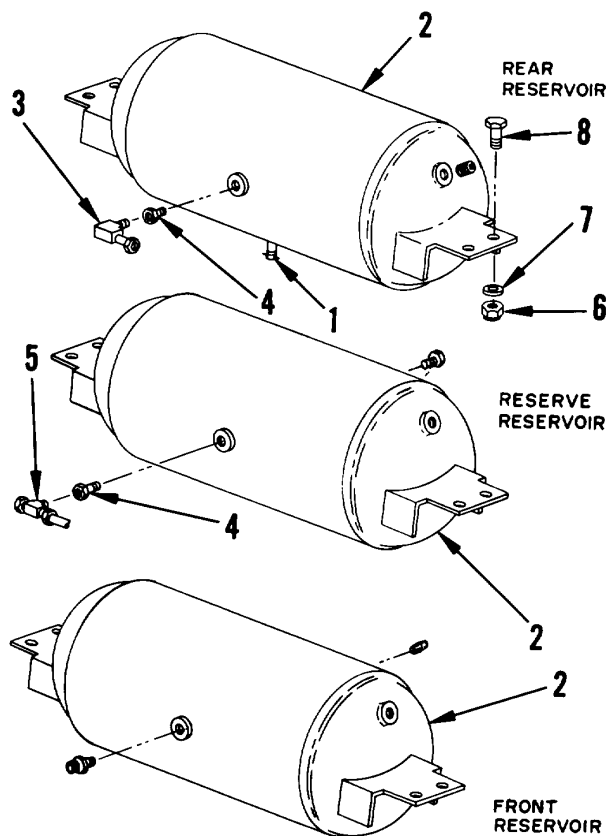
Wear goggles when opening air reservoir drain cock. Failure to do so could cause serious eye injury from high pressure air.

- a. Open drain cocks on air reservoirs and allow air pressure to bleed off.

4-24. AIR RESERVOIR (cont)

REMOVAL (cont)

- b. If front reservoir is being removed, remove relay valve in accordance with instructions on page 4-42. Remove ratio relay valve in accordance with instructions on page 4-46.
- c. If rear reservoir is being removed, remove relay valve in accordance with instructions on page 4-45. Remove male elbow (3) and bushing (4) d. If reserve reservoir is being removed, remove male branch tee (5) and bushing (4).
- e. Remove four nuts (6), washers (7) and screws (8) securing air reservoir (2).
- f. Remove air reservoir (2).



CLEANING

CAUTION

Take care to keep water from entering reservoirs to prevent contamination of air system components

- a. Clean mud and dirt from all exposed surfaces with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- 2. Remove grease and oil with cleaning solvent (item 3, appendix E) and a clean soft rag or medium bristle brush (items 14 and 15, appendix E).

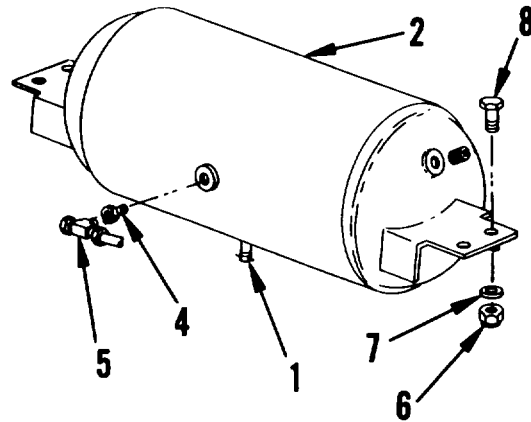
4-24. AIR RESERVOIR (cont)**INSPECTION**

- a. Inspect for loose, missing, or damaged hardware.
- b. Inspect air reservoir for cracks, dents, holes and bulges.
- c. Inspect mounting brackets for cracks, warps and broken welds.
- d. Inspect for rust and corrosion. Clean, treat, prime and paint as required.
- e. Replace defective air reservoir.

INSTALLATION**NOTE**

Apply teflon tape (item 12, appendix E) to threads of air lines before installation.

- a. Position air reservoir (2) and secure with four screws (0), washers (7) and nuts (6).
- b. If rear reservoir was removed, install rear relay valve in accordance with instructions on page 4-45.



- c. If front air reservoir was removed, install front relay valve on front of front air reservoir in accordance with instructions on page 4-44. Install ratio relay valve on rear of front air reservoir in accordance with instructions on page 4-47.
- d. If reserve reservoir was removed, install bushing (4) and male branch tee (5).
- e. Close all drain cocks (1) and pressurize air brake system.
- f. Check for leaks (page 4-50).

4-26. IR RESERVOIR (cont)**DRAIN COCK LAKAGE TEST**

- a. With brake system charged, coat drain cock with soap and water solution.
- b. Leaks in excess of a three-inch bubble in three seconds are not permissible.
- c. Leakage due to dirt accumulation can be corrected by cleaning and applying teflon tape (item 12, appendix E) on the drain cock threads before assembly.
- d. Leakage due to a damaged part requires replacement of the drain cock.

REMOVAL OF DRAIN COCK**WARNING**

Wear goggles when opening air reservoir drain cock. Failure to do so could cause serious eye injury from high pressure air.

- a. Open drain cock to release air from reservoirs.
- b. Remove drain cock by turning it counterclockwise.

CLEANING AND INSPECTION OF DRAIN COCK**WARNING**

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- a. Clean with cleaning solvent (item 3, appendix E).
- b. Inspect for damage or excessive wear.
- c. Replace defective drain cock.

4-24. AIR RESERVOIR (cont)

INSTALLATION OF DRAIN COCK

- a. Apply teflon tape (item 12, appendix E) to drain cock threads.
- b. Take care not to damage drain cock during installation. Insert in position and secure by turning in a clockwise direction.

4-25. GLADHAND (AIR HALF-COUPLING)

THIS TASK COVERS

- a. Removal
- b. Cleaning
- c. Inspection and replacement
- d. Installation of packing ring
- e. Installation

Troubleshooting Reference

- Item No.
- 5. Brakes will not release
 - 6. No brakes or weak brakes

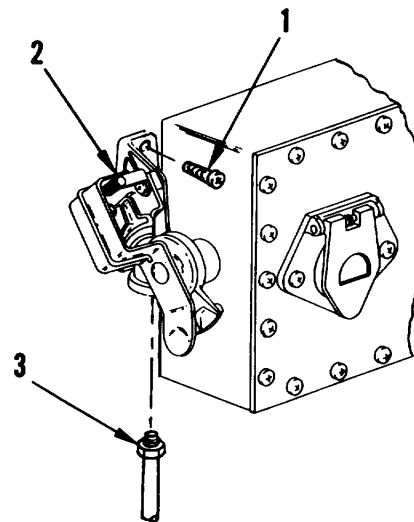
Personnel Required: 1

Materials:

- Cleaning solvent (item 3, appendix E)
- Packing ring
- Rag/brush (items 14 and 15, appendix E)

REMOVAL

- a. Unscrew air line nut (3).
- b. Remove two screws (1) securing gladhand to body and remove gladhand (2).



CLEANING

- a. Clean mud and dirt from all exposed surfaces with water and a soft bristle brush (item 15, appendix E).

4-25. GLADRAND (cont)**CLEANING (cont)****WARNING**

Cleaning solvent is both toxic and flammable. To prevent injury to personnel, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

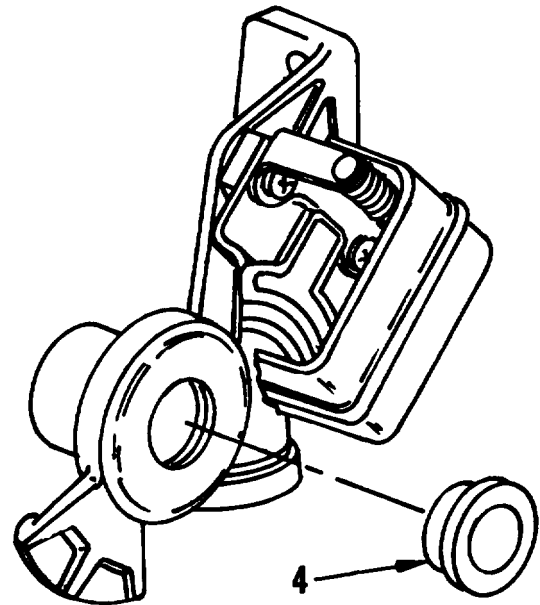
- b. Remove grease with cleaning solvent (item 3, appendix E) and a clean soft rag or medium bristle brush (items 14 and 15, appendix E).

INSPECTION AND REPLACEMENT

- a. Inspect gladhand body for damaged threads, cracks, dents, holes and warps. Replace gladhand if it is damaged.
- b. Pry out packing ring (4) and check for wear and deterioration.
- c. Replace defective packing ring.

INSTALLATION OF PACKING RING

- a. Clean groove in gladhand from which packing ring (4) was removed.
- b. Partially collapse ring with fingers and insert one side of ring flange in groove.
- c. Push ring into place. Face of ring must lie flat, with no twist or bulge.

**INSTALLATION OF GLADIAND**

- a. Position gladhand and secure to body with two screws (1).
- b. Secure air line to gladhand (2) with air line nut (3).

4-26. ROSE, TUBING AND FITTINGS

THIS TASK COVERS

- a. Serviceability test
- b. Removal of tubing
- c. Removal of tube fitting
- d. Installation of tube fitting
- e. Installation of tubing
- f. Splicing nonmetallic tubing

Troubleshooting Reference

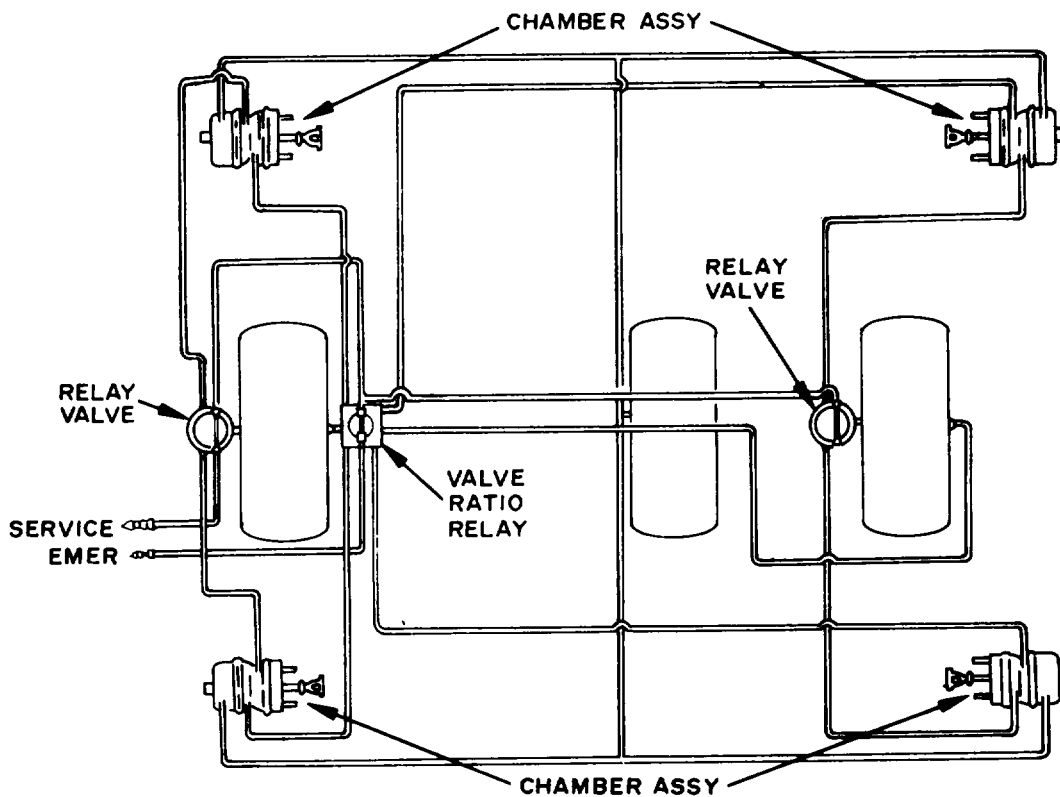
Item No

- 5. Brakes will not release
- 6. No brakes or weak brakes
- 7. Slow brakes or slow release

Personnel Required: 1

SERVICEABILITY TEST

- a. Connect intervehicular air hose and apply brakes.
- b. Coat air tubing couplings, connectors and fittings with soap and water solution. No leakage is permissible.
- c. Tighten fittings as required. No leakage is permissible.



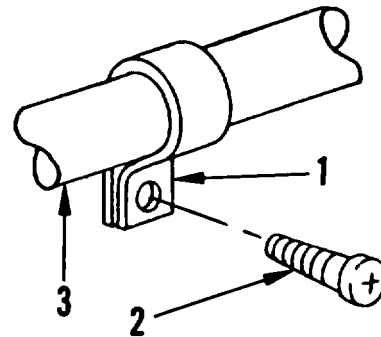
4-26. BOSE, TUBING AND FITTINGS (cont)

REMOVAL

WARNING

Wear goggles when opening air reservoir drain cock. Failure to do so could cause serious eye injury from high pressure air.

- a. Open all air reservoir drain cocks.
- b. Disconnect air tubing (3) at both ends. Remove any attaching clamps (1) by removing screw (2).
- c. Remove tubing (3).

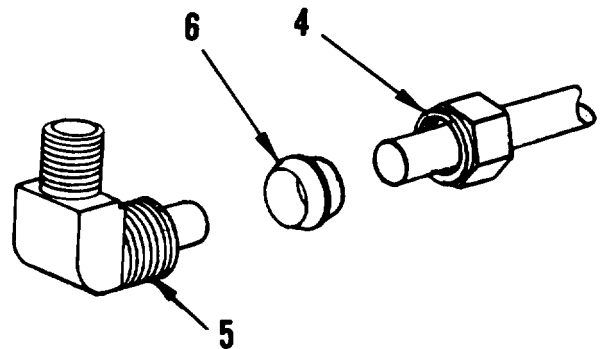


REMOVAL OF TUBE FITTING

- a. Unscrew tube nut (4) from tube fitting (5).
- b. Serviceable tube fittings and tube nuts may be reused, but compression sleeves (6) must be replaced.

INSTALLATION OF TUBE FITTING

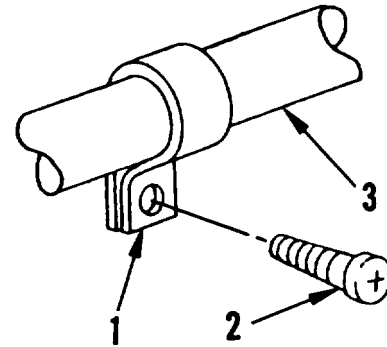
- a. Cut tubing. Make sure end is smooth and cut squarely with tubing wall. Do not crimp or partially close ends.
- b. Place nut (4) and new sleeve (6) on tube and insert end of tube into recess in fitting body (5).
- c. Hold tube at bottom of recess and tighten tube nut (4) until sufficient pressure is placed on sleeve (6) to prevent leakage. Do not cross thread.



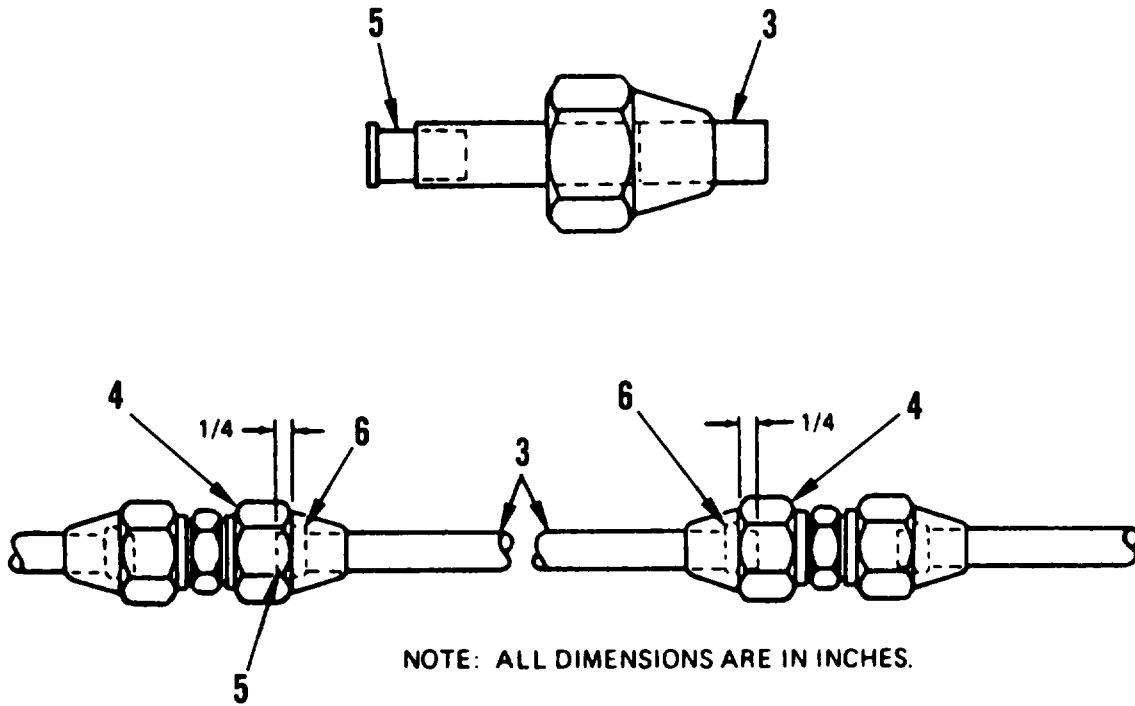
4-26. HOSE, TUBING AND FITTINGS (cont)

INSTALLATION OF TUBING

- a. Position tubing (3) and secure long lengths with screws (2) and clamps (1).
- b. Connect tubing.
- c. Close drain cock and check for leaks.



SPLICING NONMETALLIC TUBING



- a. Cut required length of tubing to replace damaged portion.
- b. Install nut (4), sleeve (6) and insert (5) on both ends of tubing and splice as shown above.

Section VII. AXLE/BRAKE ASSEMBLY MAINTENANCE PROCEDURES

4-27. AXLE/BRAKE ASSEMBLY (cont)

THIS SECTION COVERS

- a. Removal and installation of slack adjuster
- b. Removal and installation of hub and drum assembly
- c. Removal and installation of brake shoes
- d. Removal and installation of brake camshaft
- e. Cleaning and inspection
- f. Adjustment of wheel bearings
- g. Adjustment of slack adjuster (Brake adjustment)

4-28. SLACK ADJUSTER

THIS TASK COVERS

- a. Removal
- b. Cleaning
- c. Inspection
- d. Installation
- e. Adjustment

**Troubleshooting Reference
Item No.**

- 5. Brakes will not release
- 8. Grabbing brakes
- 9. Brake drum running hot
- 10. Uneven braking
- 12. Wheel noise

Materials:

Cleaning solvent (item 3, appendix E)
Brush (item 15, appendix E)

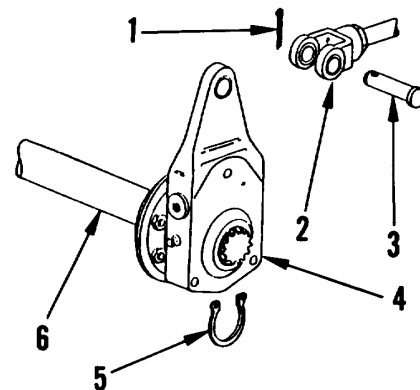
Equipment Condition:

Brakes caged (page 2-25)

Personnel Required: 1

REMOVAL

- a. Remove cotter pin (1) securing yoke (2) and yoke pin (3). Remove yoke (2).
- b. Remove retaining ring (5) from end of camshaft (6).
- c. Using a brass hammer, lightly tap slack adjuster (4) until it comes off the camshaft.



4-28. SLACK ADJUSTER (cont)**CLEANING**

- a. Remove surface dirt with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

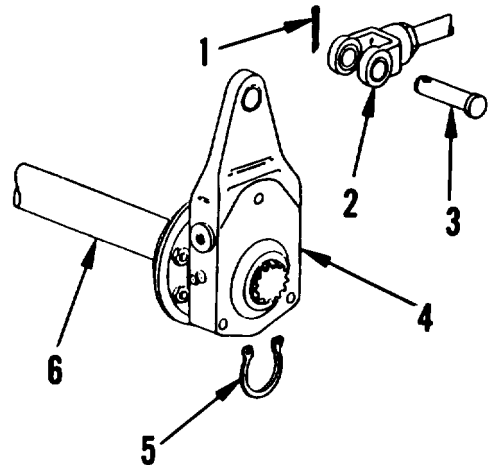
- b. Remove grease and oil with cleaning solvent (item 3, appendix E). Dry thoroughly.

INSPECTION

- a. Inspect for damage and condition of splines.
- b. Inspect for rust, corrosion or marred finish. Repaint as required.

INSTALLATION

- a. Clean splines of camshaft (6).
- b. Place slack adjuster (4) in position and tap into place, using a brass hammer.
- c. Install retaining ring (5).
- d. Install yoke (2), yoke pin (3) and cotter pin (1).

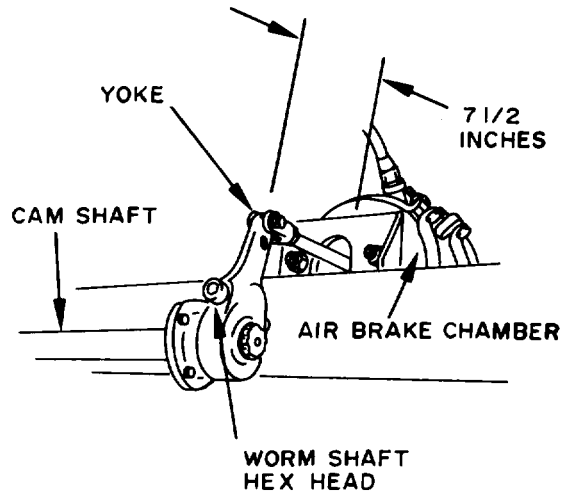
**ADJUSTMENT**

- a. Make certain brakes are still caged.
- b. Jack up axle to be adjusted and check that wheels rotate freely.

4-28. SLACK ADJUSTER (cont)

ADJUSTMENT (cont)

- c. Check yoke adjustment. Dimension from outside of non pressure housing to center of yoke pin must be 7-1/2 inches, plus or minus 1/8 inch.
- d. Apply a 9/16 wrench to worm shaft hex head and push in against slack adjuster to unlock the worm shaft.
- e. Turn the hex head of the worm shaft clockwise on slack adjuster until the wheel cannot be turned.
- f. Back off the worm shaft until wheel turns freely.
- g. Remove jack.
- h. Repeat steps 1 through 6 for other slack adjusters as required.
- i. Follow on maintenance: remove caging equipment (page 2-25).



4-29. HUB AND DRUM ASSEMBLY

THIS TASK COVERS

- a. Removal
- b. Cleaning
- c. Inspection
- d. Installation and adjustment of wheel bearings

Troubleshooting Reference

- | Item No. |
|---|
| 8. Grabbing brakes |
| 9. Brake drum running hot |
| 11. Noisy brakes |
| 14. Excessively worn, scuffed or cupped tires |

Materials:

- Cleaning solvent (item 3, appendix E)
- Gasket
- Grease (item 5, appendix E)
- Brush (item 15, appendix E)

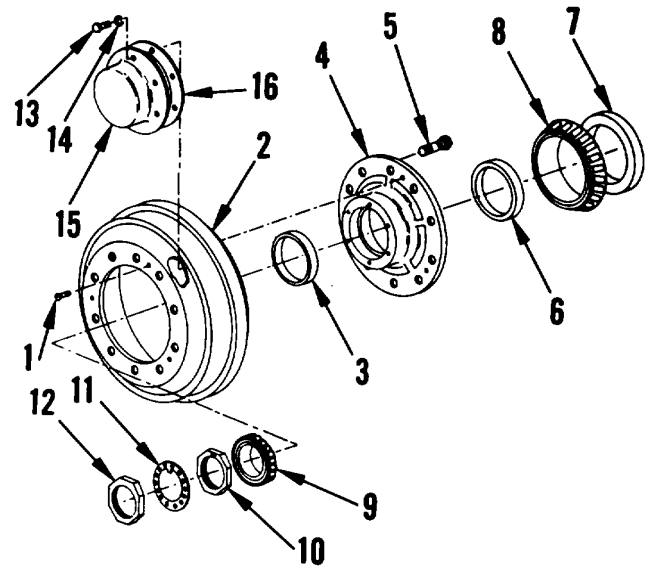
Equipment Condition:

- Wheels removed (page 3-16)
- Brakes caged (page 2-25)
- Jack or jack stand in place under axle

Personnel Required: 1

4-29. HUB AND DRUM ASSEMBLY (cont)**REMOVAL**

- a. Remove three screws (1) and remove brake drum (2).
- b. Remove six screws (13) and washers (14) and remove hub cap (15) and gasket (16).
- c. Remove the 3-1/4 inch outer bearing nut (12), keyed washer (11) and the 3-7/8 inch inner nut (10).
- d. Remove outer bearing cone (9) and remove hub (4).
- e. Remove oil seal (7), inner bearing cone (8), inner bearing cup (6) and outer bearing cup (3).
- f. Remove serrated bolts (5) if defective.

**CLEANING**

- a. Remove surface dirt with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- b. Remove grease and oil with cleaning solvent (item 3, appendix E). Dry thoroughly.

4-29. BUB AND DRUM ASSEMBLY (cont)**INSPECTION**

- a. Inspect for damage.
- b. Inspect for rust, corrosion or marred finish.
- c. Inspect brake drum for out-of-roundness and scoring.
- d. Inspect bearings in accordance with TM 9-214.
- e. Inspect oil seals to make sure contact material is intact and pliable.

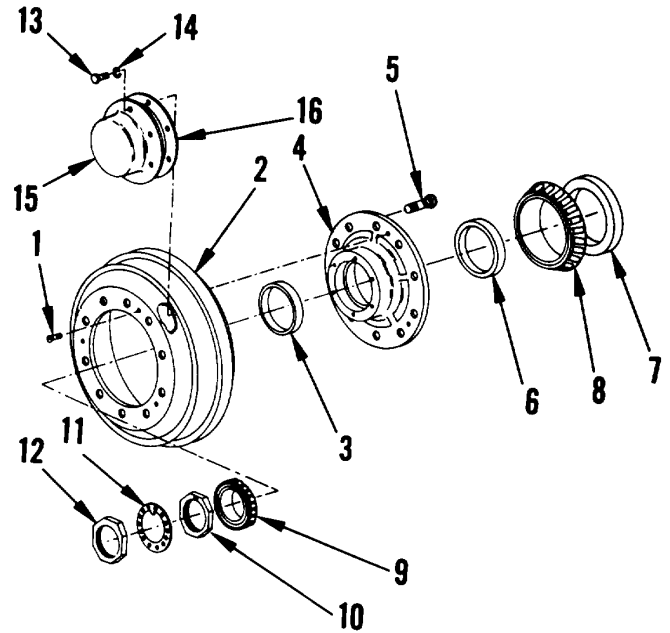
INSTALLATION

- a. Install inner bearing cup (6) and outer bearing cup (3) into hub (4) if removed.
- b. Install serrated bolts (5) if removed.
- c. Pack inner bearing (8) with grease (item 5, appendix E) and install in hub (4) with large outside diameter of bearing toward oil seal.
- d. Install new oil seal (7) in hub (4), with lip of seal next to bearing.
- e. Slide hub (4) on axle spindle, being careful not to damage oil seal (7).
- f. Pack outer bearing (9) with grease (item 5, appendix E) and insert into hub (4) with large diameter of bearing (9) facing out.
- g. Install inner nut (10), using the 3-7/8 inch wheel bearing locknut wrench.
- h. While turning hub slowly, tighten inner nut, using wheel bearing locknut wrench, to a torque of approximately 100 lb-ft (135.6 Nm). Back off one-eighth turn.
- i. Check adjustment by trying to rock hub on spindle. If bearings are properly adjusted, lateral movement of brake drum will not be visible and brake drum will turn freely. If movement is excessive, repeat procedure.
- j. Install keyed washer (11). Back off inner nut (10), if necessary, so that alignment pin on inner nut mates into closest hole in keyed washer (11).

4-29. HUB AND DRUM ASSEMBLY (cont)

INSTALLATION (cont)

- k. Install outer nut (12), using the 3-1/4 wheel bearing locknut wrench, drawing it up tightly against keyed washer (11).
- l. Install new hub cap gasket (16).
- m. Position hub cap (15) and secure with six screws (13) and washers (14).
- n. Position brake drum (2) and align holes with holes in hub. Secure hub (4) to brake drum (2) with three screws (1).
- o. Follow on maintenance: Install wheels (page 3-16) and remove caging equipment (page 2-25).



4-30. BRAKE SHOES

THIS TASK,COVERS

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

**Troubleshooting Reference
Item No.**

- 5. Brakes will not release
- 6. No brakes or weak brakes
- 7. Slow brake application or slow release
- 8. Grabbing brakes
- 9. Brake drum running hot
- 10. Uneven braking
- 11. Noisy brakes
- 12. Wheel noise

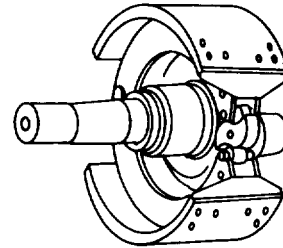
Personnel Required: 1

Equipment Condition:

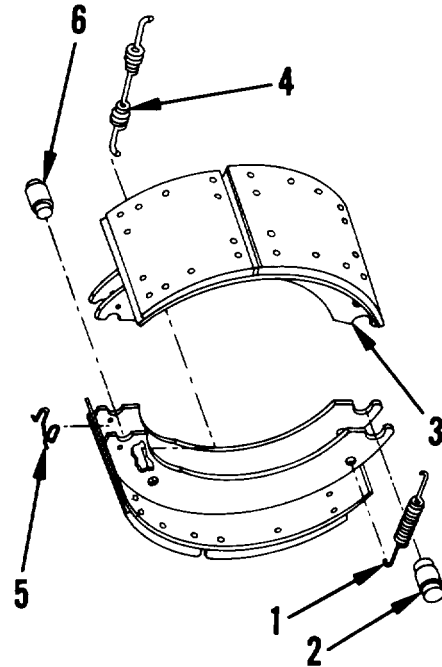
Wheels removed (page 3-16)
 Hub and drum assembly removed
 (page 4-62)
 Brakes caged (page 2-25)

4-30. BRAKE SHOES (cont)**REMOVAL**

- a. Hold each shoe (3) away from anchor pins (2) and take out anchor pins (2)]
- b. Remove retaining springs (1).
- c. Swing back brake shoes (3) and remove shoes, along with return springs (4).
- d. Remove return springs (4) from shoes and remove cam roller spring (5) and cam roller (6).

**INSPECTION**

- a. inspect springs for rust, obvious defect and excess wear. Replace defective spring.
- b. Inspect brake shoe lining for wear. If braking surface is within 3/16 inch of rivet head or grease is present, replace brake shoe.

**INSTALLATION**

- a. Install return spring (4), cam roller spring (5) and cam roller (6).
- b. Position brake shoes (3) on axle spider and install retaining spring (1).
- c. Hold each shoe (3) away from cam and insert anchor pins (2).
- d. Follow on maintenance: Install hub and drum assembly (page 4-63).

Install wheels (page 3-16).

Remove caging equipment (page 2-25).

Adjust slack adjuster (page 4-60).

4-31. BRAKE CAMSHAFT

THIS TASKS COVERS

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

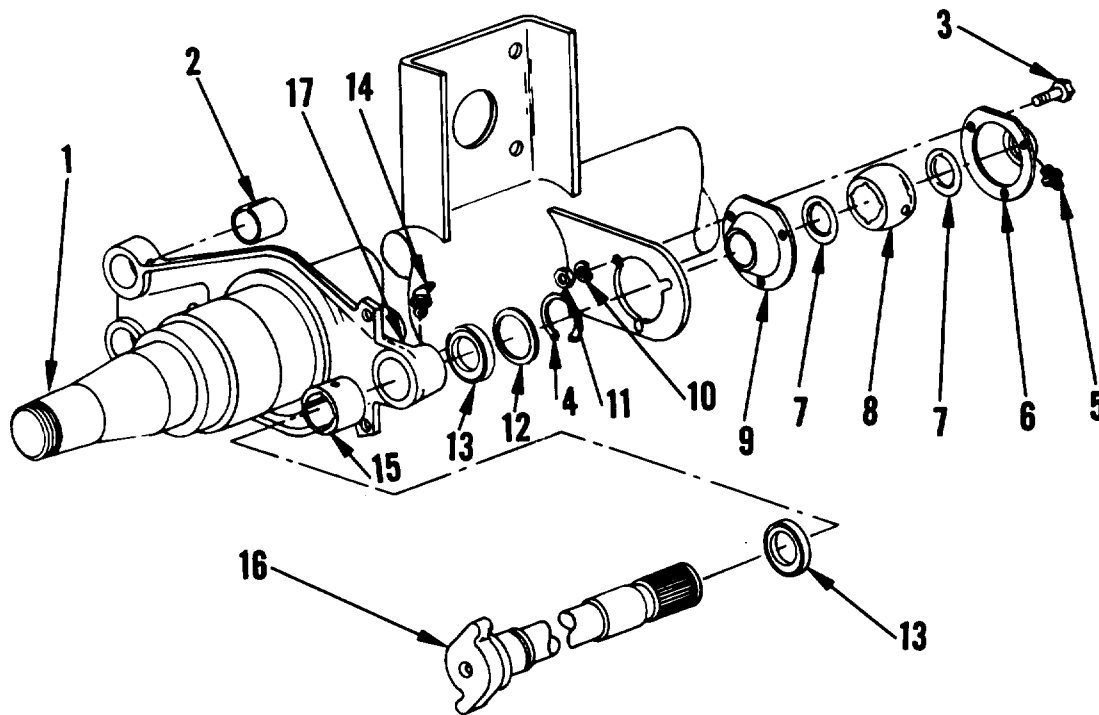
Materials:

Cleaning solvent (item 3, appendix E)
 Brush (item 15, appendix E)
 Slack adjuster removed (page 4-59)
 Personnel Required: 1

Equipment Condition:

Wheels removed (page 3-16)
 Hub and drum assembly removed (page 4-62)
 Brake shoes removed (page 4-64)

REMOVAL



WARNING

Place jack stand or blocking under axle. To prevent injury to personnel.

CAUTION

Make sure, when removing retaining ring not to damage machined surface of camshaft. Equipment failure may result.

4-31. BRAKE CAMSHAFT (cont)**REMOVAL**

- a. Expand retaining ring (4) and slide camshaft (16) and spacer (12) out of spider (17), which is part of axle assembly (1).
- b. Remove two seals (13). Remove bushing (15) and bushing (2) if required.
- c. Remove three nuts (11), washers (10) and screws (3).
- d. Remove housing (6 and 9), preformed packing (7) and bushing (8).

CLEANING

- a. Remove dirt and mud with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- b. Remove grease and oil with cleaning solvent (item 3, appendix E). Dry thoroughly.

INSPECTION

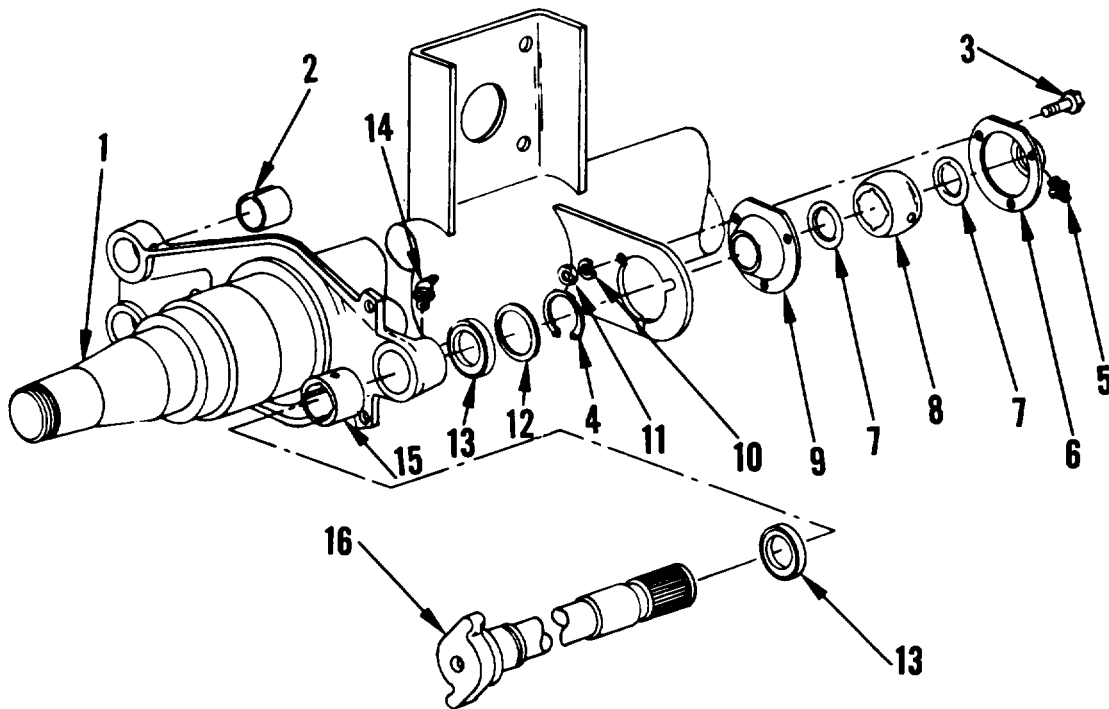
- a. Inspect all parts for damage.
- b. Inspect all parts for rust, corrosion or marred finish.
- c. Inspect camshaft (16) for twists and bends.
- d. Inspect lubrication fitting (5) and replace if defective.

INSTALLATION

- a. Position two preformed packings (7), bushing (8) and housing (6 and 9).
- b. Secure housing with three screws (3), washers (10) and nuts (11).

4-31. BRAKE CAMSRAFT (cont)

INSTALLATION (cont)



- c. Install bushing (15) and bushing (2) if removed. Install two seals (13).

CAUTION

Make sure, when installing retaining ring not to damage machined surface of camshaft. Equipment failure may result.

- d. Install camshaft (16) in spider (17) portion of axle assembly (1) part way. Install spacer (12) and retaining ring (4) on camshaft.
- e. Slide camshaft (16) all the way in and install spacer (12) and retaining ring (4) in position on camshaft.
- f. Follow on maintenance: Install brake shoes (page 4-65).

Install hub and drum assembly (page 4-63).
 Install wheels (page 3-16). Install slack adjuster (page 4-60).
 Adjust slack adjuster to adjust brakes (page 4-60)

Section VIII. SPARE WHEEL CARRIER, LANDING GEAR AND LEVELING JACK

4-32. SPARE WHEEL CARRIER

THIS TASK COVERS

- a. Removal
- b. Cleaning
- c. Inspection and repair
- d. Replacement of wire rope
- e. Inspection and replacement of pawl
- f. Installation

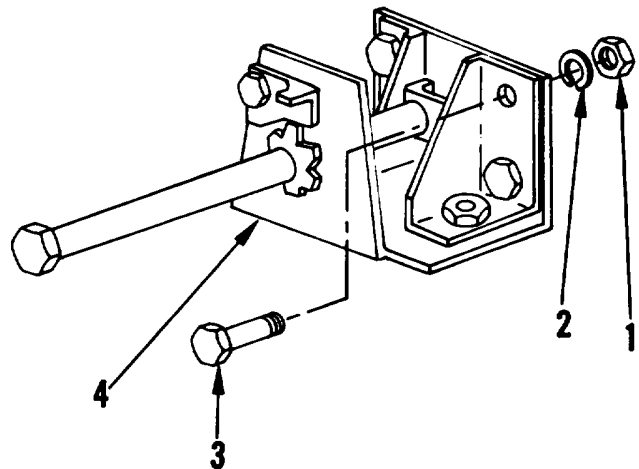
Materials:

Cleaning solvent (item 3, appendix E)
Grease (item 5, appendix E)
Brush (item 15, appendix E)

Personnel Required: 2

REMOVAL

- a. Remove spare wheel and tire (page 2-20).
- b. Remove four nuts (1), washers (2) and screws (3) securing spare wheel carrier upper member (4) to dolly.
- c. Remove spare wheel carrier.



CLEANING

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

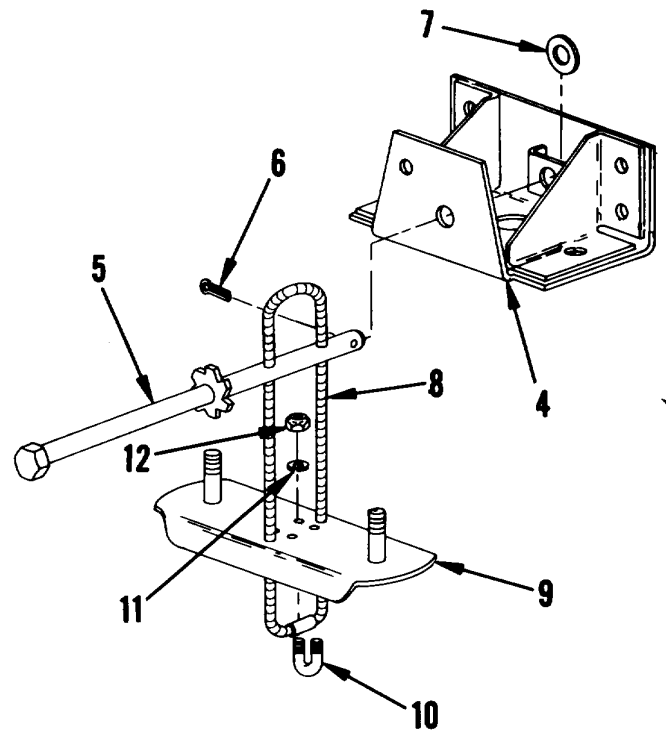
4-32. SPARE WHEEL CARRIER (cont)

CLEANING (cont)

- a. Remove accumulated grease with cleaning solvent (item 3, appendix E).
- b. Remove surface dirt with water and brush (item 15, appendix E).

INSPECTION AND REPAIR

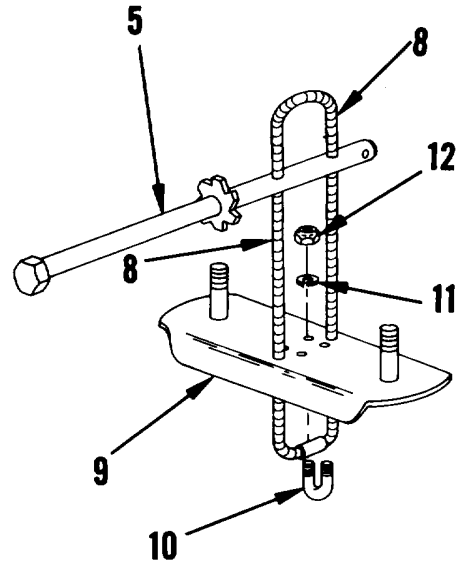
- a. Check upper member (4) for cracks or breaks in welds. Straighten member and weld cracks (TM 9-237).
- b. Check ratchet wheel (5) for wear and alignment. Check weld of ratchet and nut on shaft for cracks or undue teeth wear. Reweld if necessary.
- c. Replace ratchet wheel (5) by removing cotter pin (6), washer (7) and wire rope (8). Slide worn ratchet wheel out and new one in; then secure with washer (7), cotter pin (6) and attach wire rope (8).
- d. Check lower member (9) for dents or twisted parts.
- e. Check U-bolts (10) for tightness. Check nuts (12) for stripped threads and looseness and washers (11) for damage. Replace if necessary.
- f. Check wire rope (8) for frayed wire or undue wear. Replace if necessary.
- g. Repair and repaint damaged surfaces where paint has been removed, in accordance with instructions in TM 43-0139.



4-32. SPARE WHEEL CARRIER (cont)

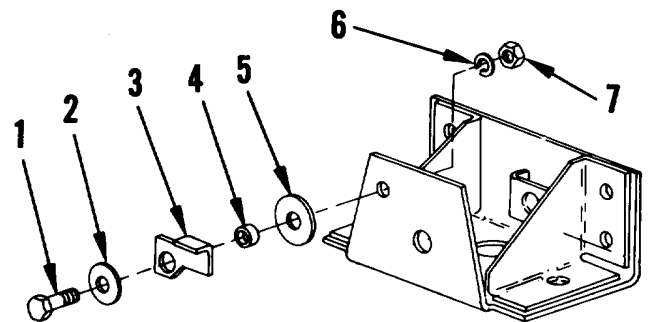
REPLACEMENT OF WIRE ROPE

- a. Release wire rope (8) from lower member (9) by removing four nuts (12) and lock washers (11) from U-bolts (10).
- b. Draw wire rope (8) from holes in ratchet wheel (5).
- c. Insert new wire rope (8) through holes in ratchet wheel (5). Secure wire rope to lower member (9) with U-bolts (10), washers (11) and nuts (12).



INSPECTION AND REPLACEMENT OF PAWL

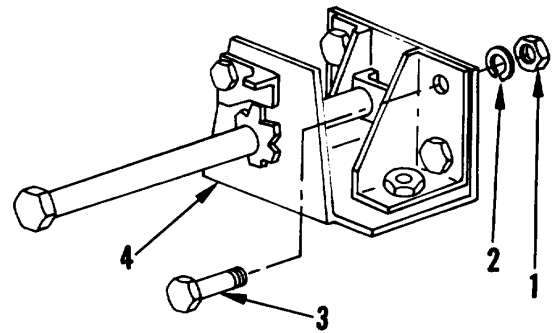
- a. Check pawl (3) for wear.
- b. Check nut (7) and screw (1) for wear and stripped threads.
- c. Check washers (2, 5 and 6) for looseness.
- d. Check spacer (4) for wear and looseness.
- e. To replace pawl, remove nut (7), lock washer (6) and screw (1).
- f. Flat washers (2 and 5), pawl (3) and spacer (4) will be removed with the removal of screw (1).
- g. Replace all defective parts and reinstall by assembling flat washer (2), pawl (3), spacer (4) and flat washer (5) on screw (1).
- h. Insert assembled parts in upper member (8) and secure with lock washer (6) and nut (7).
- i. Apply grease (item 5, appendix E) in accordance with lubrication instructions.



4-32. SPARE WHEEL CARRIER (cont)

INSTALLATION

- a. Aline four holes in spare wheel carrier upper member (4) with holes in chassis.
- b. Secure carrier with four screws (3), lock washers (2) and nuts (1).
- c. Install spare wheel and tire and raise spare wheel carrier (page 2-21).



4-32. LANDING GEAR AND LEVELING JACK MAINTENANCE PROCEDURES

THIS TASK COVERS

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

**Troubleshooting Reference
Item No.**

17. Difficulty in lowering and raising

Materials:

- Cleaning solvent (item 3, appendix E)
- Grease (item 5, appendix E)
- Brush (item 15, appendix E)

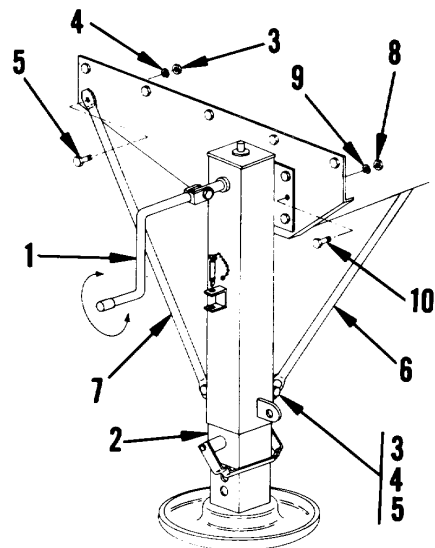
Personnel Required: 2

REMOVAL

NOTE

With one person holding selflocking nuts stationary, other person removes screws.

- a. Couple semitrailer to towing vehicle, or block semitrailer for support.
- b. Using crank (1), extend landing gear or leveling jack leg (2) to contact ground.
- c. Remove two nuts (3), washers (4) and screws (5) securing both ends of each brace (6 and 7).
- d. Remove six nuts (8), washers (9) and screws (10). Remove landing gear or leveling jack.



4-33. LANDING GEAR AND LEVELING JACK MAINTENANCE PROCEDURES (cont)**CLEANING**

- a. Remove dirt with water and brush (item 15, appendix E).

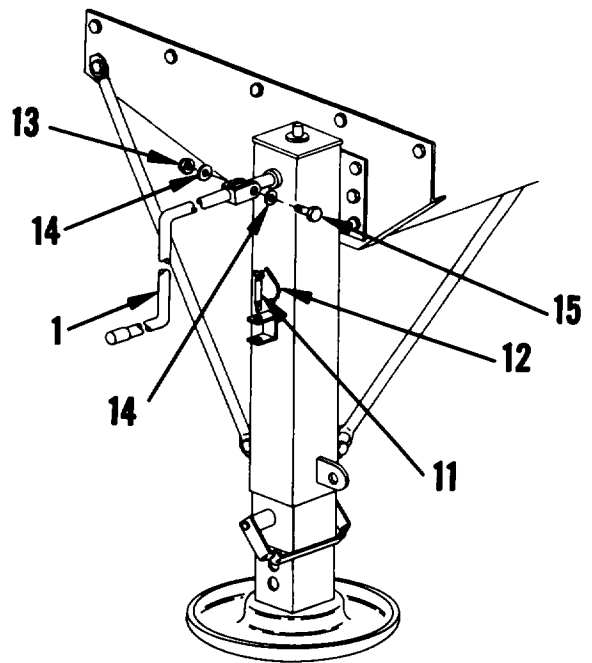
WARNING

Cleaning solvent is both toxic and flammable. To avoid personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

- b. Remove grease with cleaning solvent (item 3, appendix E).

INSPECTION AND REPLACEMENT

- a. Inspect housing for damage.
- b. Check operation. Lubricate in accordance with lubrication instructions.
- c. Replace landing gear or leveling jack if it is defective.
- d. Check lock pin (11) and chain (12) for wear and damage. Replace defective part.
- e. Check crank (1) for damage. If defective, replace by removing nut (13), two washers (14) and screw (15) and installing new crank.
- f. Secure new crank with screw (15), two washers (14) and nut (13).



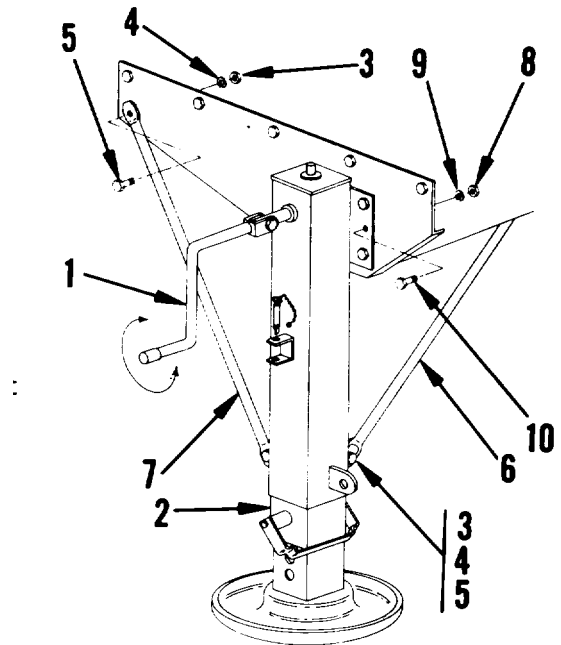
4-33. LANDING GEAR AND LEVELING JACK MAINTENANCE PROCEDURES (cont)

INSTALLATION

NOTE

With one person holding selflocking nuts stationary, other person tightens screws.

- a. Position landing gear or leveling jack. Secure to mounting bracket with six screws (10), washers (9) and nuts (8).
- b. Position braces (6 and 7) and secure each brace with two screws (5), washers (4) and nuts (3).
- c. Using crank (1), extend landing gear or leveling jack leg to contact ground and support semitrailer.
- d. Remove towing vehicle or blocking equipment.



Section IX. DOORS, BODY AND PARTS KAINTENANCE PROCEDURES

4-34. DOORS

This section covers

- a. Removal and installation of door stop and chain, front door
- b. Removal and installation of door holder, rear door
- c. Removal and installation of door
- d. Cleaning, inspection and repair
- e. Removal and installation of hinge
- f. Removal and installation of exterior handle, rear door
- g. Removal and installation of interior handle
- h. Removal and installation of lower door lock assembly
- i. Removal and installation of upper door lock assembly
- j. Removal and installation of slide bolt assemblies and locking rods
- k. Removal and installation of door seals

4-35. DOOR STOP AND CHAIN, FRONT DOOR

THIS TASK COVERS

- a. Removal
- b. Installation

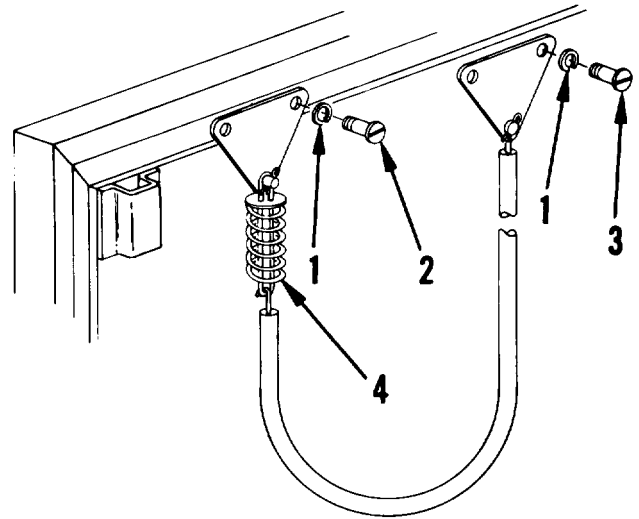
Personnel Required: 1

REMOVAL

- a. Remove two screws (2) and two lock washers (1) securing door stop (4) to door.
- b. Remove two screws (3) and two lock washers (1) securing other end of door stop (4) to door frame.
- c. Remove door stop (4).

INSTALLATION

- a. Position end of door stop (4) on door frame. Secure with two screws (3) and two lock washers (1).
- b. Position other end of door stop (4) on door. Secure with two screws (2) and two lock washers (1).

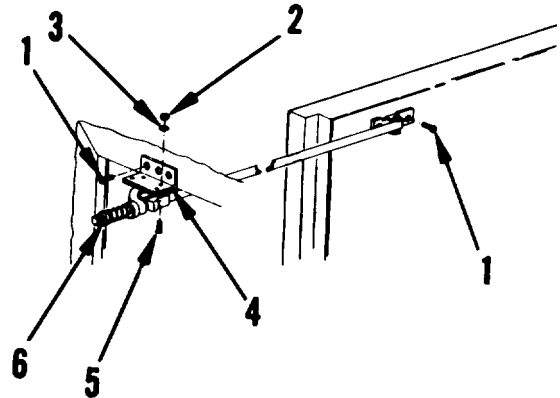


4-36. DOOR HOLDER, REAR DOOR**THIS TASK COVERS**

- a. Removal
- b. Installation

Personnel Required: 1**REMOVAL**

- a. Remove six screws (1) securing door holder (6) to door and to door frame.
- b. Remove door holder (6).
- c. If bracket (4) is defective, remove four nuts (2), lock washers (3) and screws (5). Remove bracket.

**INSTALLATION**

- a. If bracket (4) has been removed, position bracket on door holder (6) and secure with four screws (5), lock washers (3) and nuts (2).
- b. Position door holder (6) on door and on door frame and secure with six screws (1).

4-37. DOORS**THIS TASK COVERS**

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

Personnel Required: 2**Materials:**

Cleaning Solvent (item 3, appendix E)

REMOVAL

- a. Remove setscrews (2) securing three hinge pins (1).
- b. Drive out hinge pins (1) and remove two flat washers (3) from between each hinge butt (5) and hinge strap (4). Remove door.

4-37. DOORS (cont)

CLEANING

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

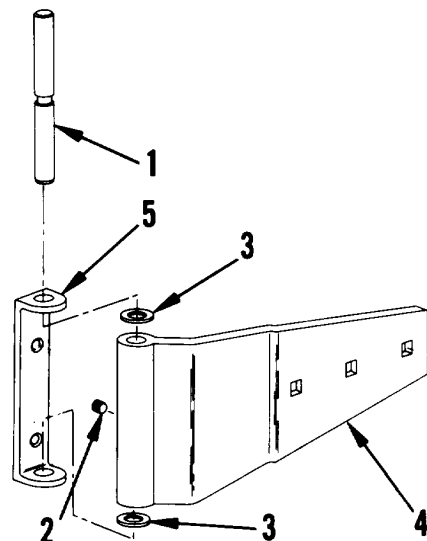
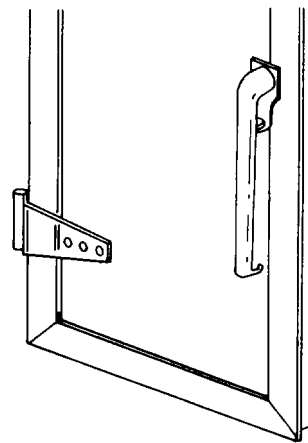
- a. Use cleaning solvent (item 3, appendix E) to remove oil and grease.
- b. Use steam or water and a stiff brush to remove dirt.

INSPECTION AND REPLACEMENT

- a. Inspect door for dents and cracks.
- b. Visually inspect all hardware for defects.
- c. Weld cracked or fractured item (TM 9-237).
- d. Replace parts damaged beyond repair.

INSTALLATION

- a. Position door in door frame.
- b. Position two flat washers (3) between each hinge strap (4) and hinge butt (5) and insert each hinge pin (1).
- c. Secure each hinge pin (1) with setscrew (2).



4-38. DOOR HINGE

THIS TASK COVERS

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

Troubleshooting Reference

Item No.

- 19. Door hinges do not operate properly

Personnel Required: 2

Equipment Condition:

Door removed (page 4-76)

REMOVAL

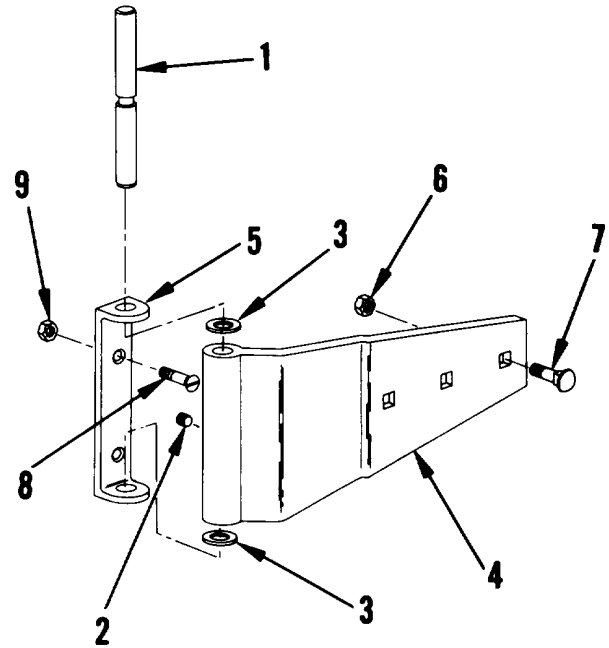
- a. To remove hinge strap (4) from door, remove interior door handle and lower lock assembly (page 4-80).
- b. Remove rivets and/or screws securing inner door panel(s).
- c. Remove three nuts (6) and screws (7) securing hinge strap (4). Remove hinge strap.
- d. Remove two nuts (9) and screws (8) securing hinge butt (5). Remove hinge butt.

INSPECTION AND REPAIR

- a. Inspect hinge for cracks and evidence of deterioration.
- b. Straighten bent parts, if feasible.
- c. Replace parts damaged beyond repair.

INSTALLATION

- a. Position hinge butt (5) on door frame. Secure with two screws (8) and nuts (9).
- b. Position hinge strap (4) on door and secure with three screws (7) and nuts (6).
- c. Position inner panels and secure with rivets and/or screws.
- d. Install lower lock assembly (page 4-81) and interior handle (page 4-80). Follow on maintenance: install door (page 4-77).



4-39. EXTERIOR HANDLE, REAR DOOR**THIS TASK COVERS**

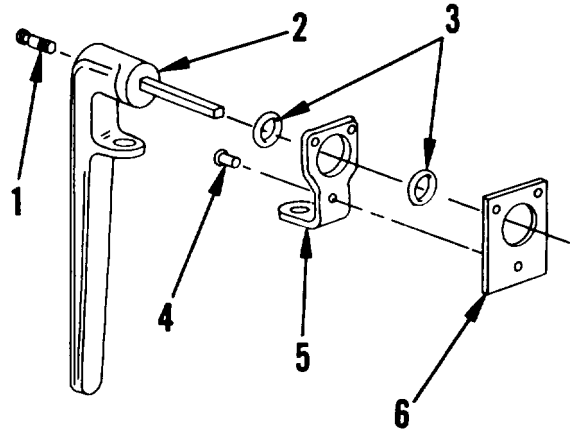
- a. Removal
- b. Installation

Personnel Required: 1**Materials:**

Loctite (item 7, appendix E)

REMOVAL

- a. Remove screw (1) securing exterior handle (2) on shaft.
- b. Remove handle (2) and outer preformed packing (3).
- c. To remove inner preformed packing (3) and escutcheon plate (5), remove three rivets (4) and remove inner preformed packing (3), escutcheon plate (5) and spacer (6).

**INSTALLATION**

- a. Position spacer (6), inner preformed packing (3) and escutcheon plate (5) if they had been removed. Secure with three rivets (4).
- b. Position exterior handle (2) and outer preformed packing (3).

NOTE

Screw (1) must be coated with loctite prior to installation. Over-torque of this screw will cause fracture of interior shear pin.

- c. Apply loctite (item 7, appendix E) to threads of screw (1). Secure handle (2) with screw (1) to a torque of 3-4 lb-ft (4.07-5.42 Nm).

4-40. INTERIOR HANDLE**THIS TASK COVERS**

- a. Removal
- b. Installation

Personnel Required: 1

REMOVAL

Remove two shoulder screws (1) and spacers (2) securing interior handle (3) and lower end of center locking rod (4) and upper end of lower locking rod (5) on lower lock assembly (6).

NOTE

Center locking rod (4) will remain attached to upper lock assembly. Lower locking rod (5) will remain attached to lower slide bolt assembly.

INSTALLATION

- a. Position lower end of center locking rod (4) and upper end of lower locking rod (5) with interior handle (3) on lower lock assembly (6).
- b. Secure handle and rods with two shoulder screws (1) and spacers (2).

4-41. LOWER LOCK ASSEMBLY**THIS TASK COVERS**

- a. Removal
- b. Inspection and repair
- d. Installation

Materials:

Grease (item 5, appendix E)

Personnel Required: 1

Troubleshooting Reference**Item No.**

- 18. Difficulty in locking and unlocking door

Equipment Condition:

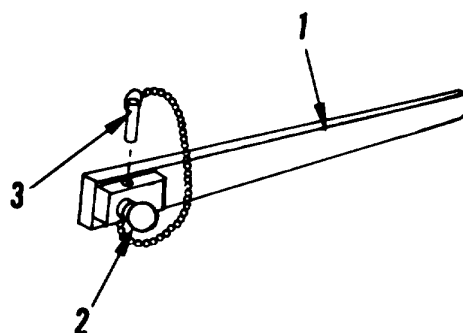
Interior handle removed (page 4-80)

4-41. LOVER LOCK ASSEMBLY (cont)**REMOVAL**

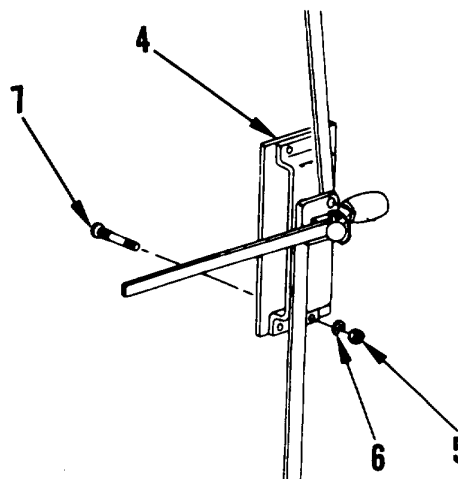
- a. Remove four bolts (1), washers (2) and nuts (3) securing lower lock assembly (4).
- b. Remove lower lock assembly.

INSPECTION AND REPAIR

- a. Inspect parts for cracks, bends, excessive wear and deterioration. Replace defective parts.
- b. Straighten locking rods to assure proper alignment in upper and lower bolt slide fasteners.
- c. Straighten bends or dents in slide bolt assembly covers that may cause binding.
- d. Check lock for ease of operation. Lubricate as required in accordance with lubrication instructions, using grease fitting on handle lock assembly.
- e. With door locked from outside, remove safety release pin (3). Remove lock pin (2), turn handle (1) and note if door opens easily.
- f. Clean and paint if necessary. Replace defective or damaged parts.

**INSTALLATION OF LOVER LOCK ASSEMBLY**

- a. Position lower lock assembly (4).
- b. Secure lower lock assembly with four bolts (7), washers (6) and nuts (5).
- c. Follow on maintenance: Install interior handle (page 4-80).

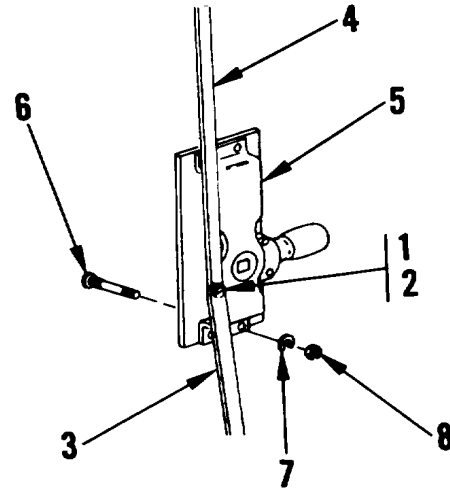


4-42. UPPER LOCK ASSEMBLY**THIS TASK COVERS**

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

Personnel Required: 1**REMOVAL**

- a. Remove shoulder screw (1) and spacer (2) securing ends of center locking rod (3) and upper locking rod (4) to upper lock assembly (5).
- b. Remove center locking rod (3). Upper locking rod (4) will remain attached to upper slide bolt assembly.
- c. Remove four bolts (6), washers (7) and nuts (8) securing upper lock assembly (5).
- d. Remove lock assembly.

**INSPECTION AND REPAIR**

Refer to page 4-81 for these procedures.

INSTALLATION

- a. Position upper lock assembly (5) and secure with four bolts (6), washers (7) and nuts (8).
- b. On upper lock assembly (5), position lower end of upper locking rod (4) with upper end of center locking rod (3). Secure with shoulder screw (1) and spacer (2).

4-43. SLIDE BOLT ASSEMBLIES**THIS TASK COVERS**

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

Personnel Required: 1**REMOVAL**

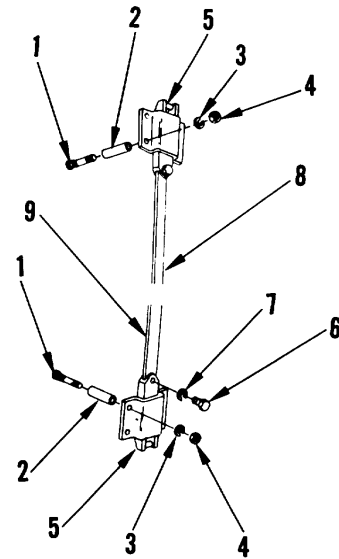
- a. Remove screws (6) and washers (7) securing upper and lower locking rods (8 and 9) to slide bolt assemblies (5). Remove locking rods.
- b. Remove four bolts (1), spacers (2), washers (3) and nuts (4) securing each slide bolt assembly (5).
- c. Remove slide bolt assembly.

INSPECTION AND REPAIR

Refer to page 4-81 for these procedures.

INSTALLATION

- a. Position slide bolt assembly (5) and secure each one with four bolts (1), spacers (2), washers (3) and nuts (4).
- b. Position upper locking rod (8) on upper slide bolt assembly (5). Position lower locking rod (9) on lower slide bolt assembly (5).
- c. Secure locking rods to slide bolt assembly (5) with screw (6) and washer (7).



4-44. DOOR SEALS

THIS TASK COVERS

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

Troubleshooting Reference

Item No.

- 20. RFI shielding does not provide good conductivity

Materials:

Cleaning solvent (item 3, appendix E)

Personnel Required: 1

REMOVAL

- a. Doors are provided with both rubber seals and Radio Frequency Interference (RFI) shielding seals.
- b. To remove both types of seals, open door and pry seals from groove.

CLEANING

- a. Make certain jams and thresholds are free of dust, dirt and grime.

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

- b. Use fine steel wool to remove any grease or grime; then wash with cleaning solvent (item 3, appendix E). Wipe clean.

INSTALLATION

Insert seals in groove.

4-45. SPLASH GUARD

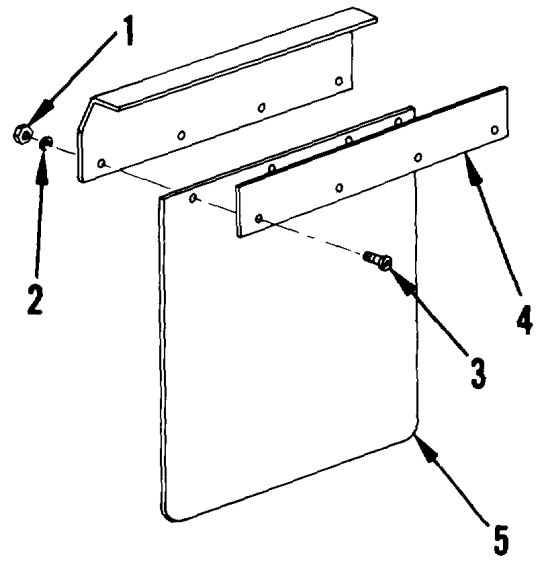
THIS TASK COVERS

- a. Removal
- b. Installation

Personnel Required: 1

REMOVAL

- a. Remove four nuts (1), washers (2) and screws (3) securing spacer (4) and splash guard (5) to bracket.
- b. Remove splash guard and spacer.



INSTALLATION

- a. Position splash guard (5) and spacer (4) on bracket.
- b. Secure splash guard (5) and spacer (4) to bracket with four screws (3), washers (2) and nuts (1).

4-46. LADDER BRACKET

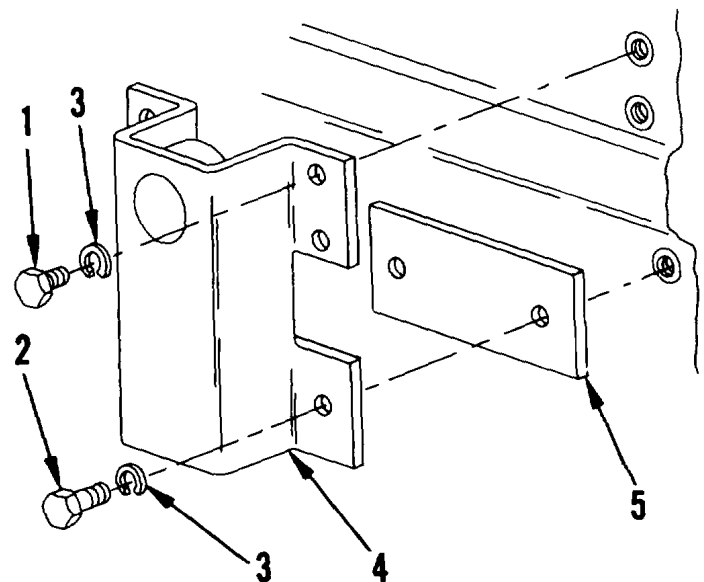
THIS TASK COVERS

- a. Removal
- b. Installation

Personnel Required: 1

REMOVAL

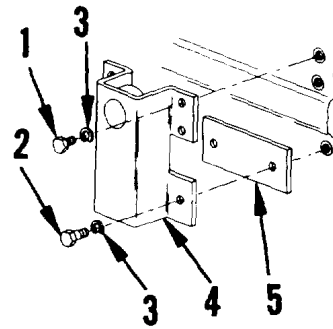
- a. Remove four screws (1) and washers (3) securing upper end of ladder bracket (4).
- b. Remove two screws (2) and washers (3) securing lower end of ladder bracket (4) and spacer (5).
- c. Remove bracket.



4-46. LADDER BRACKET (cont)

INSTALLATION

- a. Position ladder bracket (4) and spacer (5). Secure with two screws (2) and washers (3).
- b. Secure upper end of bracket (4) with four screws (1) and washers (3).



4-47. REFLECTOR

THIS TASK COVERS

- a. Removal
- b. Installation

Personnel Required: 1

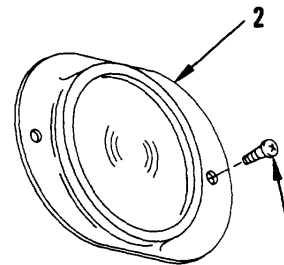
Materials:
Sealant (item 13, appendix E)

REMOVAL

- a. Remove two screws (1) securing reflector (2) to van body.
- b. Remove reflector.

INSTALLATION

- a. Apply sealant (item 13, appendix E) in and around mounting holes.
- b. Position reflector (2) on body and secure with two screws (1).



4-48. IDENTIFICATION PLATE

THIS TASK COVERS

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

Personnel Required: 1

Materials:
Lacquer (item 16, appendix E)

REMOVAL

Remove six rivets securing identification plate and remove plate.

INSPECTION

- a. Inspect for damage and rust. Replace as required.
- b. Remove rust, clean thoroughly and apply a heavy coat of lacquer.

4-48. IDENTIFICATION PLATE (cont)**INSTALLATION**

Position identification plate and secure with six rivets.

4-49. DOLLY ASSEMBLY**REMOVAL**

Remove dolly assembly in accordance with instructions on page 4-94.

INSTALLATION

Install dolly in accordance with instructions on page 4-99.

4-50. MAINTENANCE UNDER UNUSUAL CONDITIONS**EXTREME COLD WEATHER MAINTENANCE**

For maintenance procedures and practices during extreme cold weather, refer to FM 9-207.

EXTREME HOT WEATHER MAINTENANCE

- a. In hot, dry climates, corrosive action will occur on all parts of the materiel and will be accelerated during rainy seasons.
- b. Evidence of corrosion will appear in the form of rust, paint blisters, mildew, mold, and fungus growth.
- c. Remove corrosion from exterior metal surfaces with abrasive paper or cloth. Apply a protective coating of paint, or touch up the existing paint.
- d. Keep a film of engine lubricating oil (OE-30) on unfinished exposed metal surfaces.

MAINTENANCE AFTER FORDING

Refer to TM 9-238 for maintenance procedures after fording.

MAINTENANCE AFTER OPERATION ON UNUSUAL TERRAIN

- a. Thorough cleaning and lubrication of all parts affected must be accomplished as soon as possible after operation in mud.
- b. Clean all suspension components. Repack wheel bearings if necessary.
- c. After operation in sand or dust, touch up all painted surfaces damaged by sandblasting.
- d. Lubricate completely to force out lubricants contaminated by sand or dust.

Section X. PREPARATION FOR STORAGE OR SHIPMENT**4-51. PREPARATION FOR STORAGE****THIS TASK COVERS**

- a. Administrative storage
- b. Storage site
- c. Storage plan
- d. Maintenance services, inspection and lubrication
- e. Auxiliary equipment and basic issue items
- f. Corrections of shortcomings and deficiencies
- g. Cleaning, painting and preservation
- h. Care of equipment in administrative storage
- i. Removal of equipment from administrative storage

4-52. DEFINITION OF ADMINISTRATIVE STORAGE

The placement of equipment in administrative storage can be for short periods of time when a shortage of maintenance effort exists. Items should be ready for use within the time factors as determined by the directing authority. During the storage period appropriate maintenance records will be kept.

4-53. STORAGE SITE

Select the best available site for administrative storage. Separate stored equipment from equipment in use. Conspicuously mark the area "Administrative Storage".

Covered space is preferred. When sufficient covered space for all items to be stored is not available, priority should be given to items which are most susceptible to deterioration from the elements. SB 740-98-1 should be used as a guide for establishing the items most susceptible to deterioration.

Open sites should be improved hardstand, if available. Unimproved sites should be firm, well-drained, and kept free of excessive vegetation.

4-54. STORAGE PLAN

Store equipment so as to provide maximum protection from the elements and to provide access for inspection, maintenance, and exercising. Anticipate removal or deployment problems and take suitable precautions. For example, strategically locate recovery vehicles, snowplows, slave units, and similar items, likely to be needed on short notice.

4-54. STORAGE PLAN (cont)

Take into account environmental conditions, such as extreme heat or cold; high humidity; blowing sand, or loose debris; soft ground; mud; heavy snows; or combinations thereof, and take adequate precautions.

Establish a fire plan and provide for adequate firefighting equipment and personnel.

4-55. MAINTENANCE SERVICES, INSPECTION, AND LUBRICATION

Prior to storage, perform the next scheduled major preventive maintenance service (monthly, quarterly or semiannually).

Inspect and approve equipment prior to storage. When applicable, perform PMCS. Do not place equipment in storage in NOT READY condition.

Lubricate equipment in accordance with the applicable lubrication instructions or this manual.

4-56. CORRECTIONS OF SHORTCOMINGS AND DEFICIENCIES

Correct all shortcomings and deficiencies prior to storage, or obtain a deferment from the approving authority.

4-57. CLEANING, PAINTING AND PRESERVATION

Clean the equipment of dirt, grease and other contaminants in accordance with applicable provisions of this manual. Do not use vapor degreasing. Remove foreign objects that are wedged in and between dual wheels.

CAUTION

Do not direct water or steam under pressure against air outlets, unsealed electrical systems, fire control instruments, upholstery, or any exterior opening which will damage a component.

Remove rust and damaged paint by scraping, wire brushing, sanding or buffing. Sand to a smooth finish and spot paint as necessary. See TM 43-0139.

After cleaning and drying, immediately coat unpainted metal surfaces with oil or grease (item 5 or 8, appendix E).

4-57. CLEANING, PAINTING AND PRESERVATION (cont)

Sunlight, heat, moisture (humidity), and dirt tend to hasten deterioration. Install all covers (including vehicle protective closures) authorized for the equipment. Close and secure all openings except those required for venting and draining. Seal openings to prevent the entry of rain, snow, or dust. Insert dessicant (item 4, appendix E) when complete seal is required. Place equipment and provide blocking or framing to allow for ventilation and water drainage. Support cover away from item surfaces which may rust, rot or mildew.

NOTE

Air circulation under draped covers reduces deterioration from moisture and heat.

CAUTION

Place a piece of barrier material (item 1, appendix E) between dessicant bags and metal surfaces.

4-58. CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE**MAINTENANCE SERVICES**

After equipment has been placed in administrative storage, suspend all regularly scheduled preventive maintenance services and inspect and exercise as specified herein. Do not reduce Prescribed load List (PLL). See DA PAM 710-2-1.

INSPECTION

Inspection will usually be visual and must consist of at least a walk-around examination of all equipment to note any deficiencies that may have occurred. Inspect equipment in open storage weekly and that in covered storage monthly. Immediately after any severe storm or environmental change, inspect all equipment. The following are examples of things to look for during visual inspection:

- a. Low or flat tires.
- b. Leaks.
- c. Condition of preservatives, seals and wraps.
- d. Torn, frayed or split canvas covers and tops.
- e. Corrosion or other deterioration.
- f. Missing or damaged parts.
- g. Water in compartments.
- h. Any other readily recognizable shortcomings or deficiencies.

4-58. CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE (cont)**REPAIR DURING ADMINISTRATIVE STORAGE**

Keep equipment in optimum state of readiness. Accomplish required services and repairs as expeditiously as possible. Whenever possible, perform all maintenance "on-site".

EXERCISING

Perform the before, during and after operational checks in accordance with this manual. Conduct applicable ESC inspections. Immediately take action to correct shortcomings and deficiencies noted. Note inspection and exercise results on DA Form 2404. Record and report maintenance actions on DA Form 2407. After exercising, restore the preservation to the original condition. Replenish fuel and oil used during exercising and note the amount on DA Form 2408-1.

ROTATION

To assure utilization of all assigned materiel, rotate items in accordance with any rotational plan that will keep equipment in operational condition and reduce maintenance effort.

4-59. REMOVAL OF EQUIPMENT FROM ADMINISTRATIVE STORAGE**ACTIVATION AND SERVICING**

Restore equipment to normal operating condition in accordance with pertinent technical manuals.

Resume the maintenance service schedule in effect at the commencement of storage or service the equipment before the scheduled dates in order to produce a staggered maintenance workload.

4-60. PREPARATION FOR AIR SHIPMENT OF SEMITRAILER**THIS TASK COVERS**

- a. General
- b. Tools required
- c. Components of aircraft loading equipment
- d. Loading procedure
- e. Unloading procedure

Personnel Required: 2

4-60. PREPARATION FOR AIR SHIPMENT OF SEMITRAILER (cont)

GENERAL

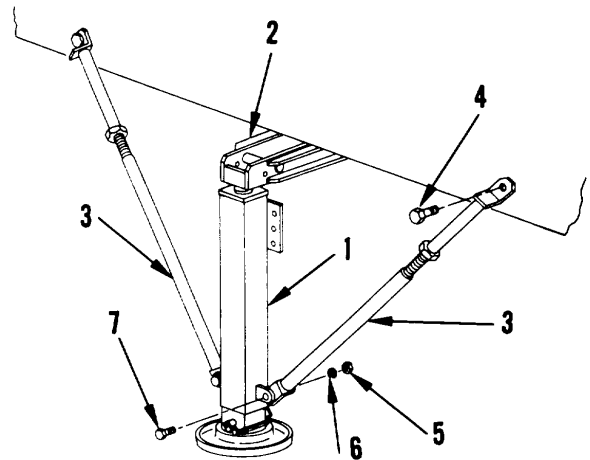
- a. The aircraft loading equipment for the XM1063 semitrailer has been designed for the 40K-Loader to load semitrailer in C130 or C141 aircraft.
- b. The XM1063 semitrailer may be loaded into the C5 aircraft without the use of the K-Loader. The semitrailer is driven into the C5 aircraft for shipment.

TOOLS REQUIRED

- One 9/16 inch allen wrench
- One 3/4 inch deep well socket, 1/2 inch drive
- One 1-1/8 inch deep well socket, 1/2 inch drive
- One 1-1/8 inch combination wrench
- One 15/16 inch deep well socket, 1/2 inch drive
- One 15/16 inch combination wrench
- One 1-11/16 inch socket, 3/4 inch drive
- One 8 inch to 10 inch socket extension, 1/2 inch drive
- One ratchet, 1/2 inch drive
- One ratchet, 3/4 inch drive
- One 3/4 inch combination wrench
- One 18 inch drift pin.

4-61. COMPONENTS OF AIRCRAFT LOADING EQUIPMENT

1. Lifting/loading jack
2. Lifting arm
3. Lifting jack brace
4. Screw
5. Nut
6. Washer
7. Screw

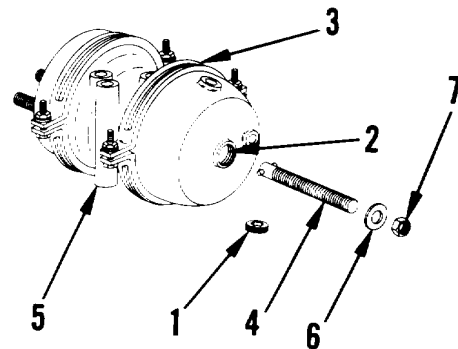


4-61. COMPONENTS OF AIRCRAFT LOADING EQUIPMENT (cont)

- a. Two leveling jacks which are removed from rear dolly assembly to act as lifting/loading jacks (1).
- b. Four lifting jack braces (3), stowed in front of dolly, and attaching hardware (4 thru 7).
- c. Two lifting arms (2), located underneath van body.

4-62. LOADING PROCEDURE

- a. Place towing vehicle and semitrailer on level ground, as close to aircraft as possible.
- b. Remove plastic plugs from tie down ring holes in van body and set aside in interior of semitrailer for reinstallation after unloading semitrailer from aircraft. Remove tie down rings from stowage in van body and install all 30 in van body tie down holes.
- c. Cage brakes as follows to allow for free movement of dolly when dolly attaching hardware is removed:
 - (1) Remove pipe plug (1) from release tool hole (2) in air chamber (3).
 - (2) Remove release tool (4) from stowage bracket (5) on air chamber.
 - (3) Insert release tool (4) in release tool hole (2).
 - (4) Turn release tool (4) 1/4 turn to lock in position.
 - (5) Install washer (6) and nut (7) on release tool (4) and tighten against body of air chamber (3).
 - (6) Repeat procedure on remaining three air chambers.

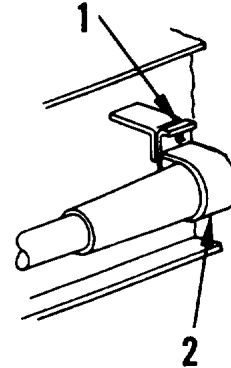


4-62. LOADING PROCEDURE (cont)

NOTE

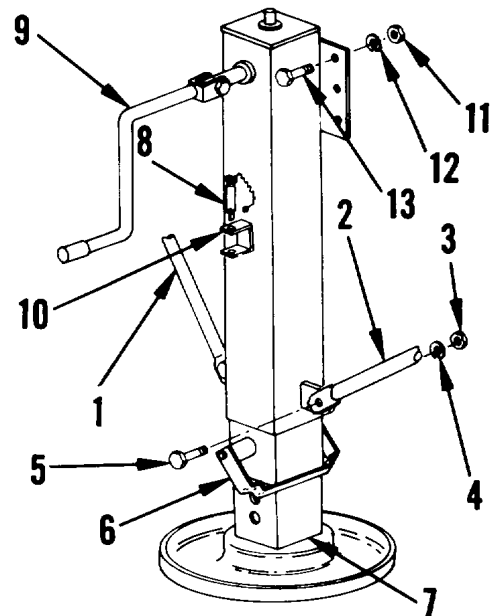
When the instructions that follow state that two persons are to work as a team, the intent is for one person to hold the nut stationary while other person turns the screw or bolt whenever self-locking nuts are removed or installed.

- d. Working as a team, loosen, but do not remove, five screws on each side of dolly that attach dolly to van body.
- e. Disconnect electrical connector on left side of dolly by pulling up snap lock tab (1) to release locking clamp (2). Pull connector from plug.



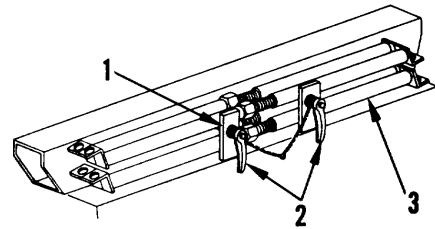
- f. Stow removed connector in locking clamp on dolly left side rail. Close snap lock.
- g. Disconnect front and rear brake lines by pulling back quick disconnect coupling collar. Pull apart the connecting brake lines. Stow dolly portion of line inside dolly rail.

- h. Working as a team, remove leveling jack braces (1 and 2) by removing nuts (3), washers (4) and screws (5) securing braces to mounting bracket at top and to lower jack leg at the bottom. Install hardware removed from top of braces in holes in mounting bracket. Install hardware removed from bottom of braces in holes at bottom of leg.
- i. Lift release handle (6) on leveling jack to release drop leg (7). Lower drop leg to lowest position before contacting ground. Return handle to locked position.



4-62. LOADING PROCEDURE (cont)

- j. Release pin (8) securing each crank (9) in stowage bracket (10) on leg. Place crank in operating position. Turn each crank clockwise until bottom of drop leg (7) contacts ground to support leg only, not van body. Return crank to stowed position and secure with pin (8).
- k. Working as a team, remove six nuts (11), washers (12) and screws (13) attaching each jack to mounting bracket. Stow hardware in holes in brackets from which hardware was removed.
- l. The rear lifting arms are located underneath van body at each side of semitrailer, between the rear wheels. Remove locking pin from each arm and swing arm out approximately 180 degrees. Lock in position with locking pin.
- m. The four lifting/loading jack braces (3) are stowed on front of dolly. Turn the two handles (2) counterclockwise and remove two brackets (1) securing braces. Remove the four braces (3).



NOTE

From this point the leveling jacks will be used as and called lifting/loading jacks.

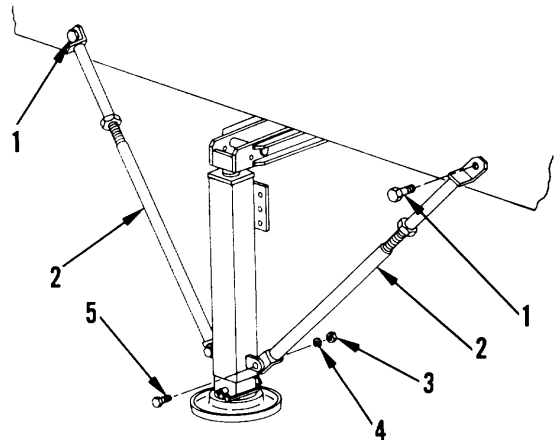
WARNING

Lifting/loading jacks must be kept perpendicular at all times to prevent injury to personnel.

- n. Set lifting/loading jacks in position under lifting arms. Align jacks and insert jack leg guide into hole in lifting arm. Position jack to keep it perpendicular to the ground.
- o. Remove the tie down rings located at each side of lifting/loading jack locations. Remove OVE cap screws (item 7, appendix C) from interior of semitrailer.

4-62. LOADING PROCEDURE (cont)

- p. Secure upper end of each lifting brace (2) to van body at tie down ring holes with OVE bolts (1).
- q. Match hole at lower end of each lifting brace (2) with hole at bottom of each jack. Adjust length of lifting brace as required by turning it counterclockwise to extend it or clockwise to shorten it.
- r. Secure bottom of each brace (2) to each jack with existing hardware (3, 4, 5).



- s. Working as a team, remove the five nuts, washers and screws previously loosened from each side of dolly. Set hardware aside.

WARNING

Personnel at this point should stay clear of the underside of the van body until it is securely resting on the K-Loader.

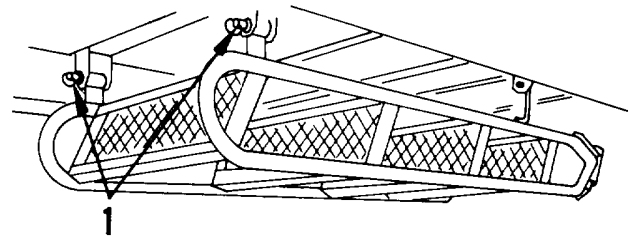
- t. Working as a team, turn each crank of lifting/loading jack clockwise to lift van body rear end (both sides at the same time) 1/4-inch to 1/2inch from dolly. Make certain jacks do not deviate from the perpendicular. Should this occur, stop the lifting operation, reposition jacks and repeat lifting operation.
- u. Roll dolly assembly toward the rear to clear van body. Replace removed screws, washers and nuts in dolly frame for future use.
- v. Position front of K-Loader to rear of van body, making sure that van body skid rails are aligned with the rollers of the K-Loader.
- w. Move K-Loader forward about three feet, stopping at rear lifting jack braces. Working as a team, turn cranks of each jack counterclockwise at the same time until van body comes to rest on K-Loader.

4-62. LOADING PROCEDURE (cont)

- x. Remove hardware attaching lifting braces and remove braces. Place OVE hardware removed from tops of braces in bag. Place bag inside van body. Set aside hardware removed from bottoms of lifting braces for installation of leveling jack braces (step aa).
- y. Turn lifting/loading jack cranks counterclockwise to lower jacks until guide pins on jacks clear holes in the lifting arms.
- z. Pull locking pin from each lifting arm. Swing arm back to stowed position (about 180 degrees). Reinsert locking pin to secure lifting arm in stowed position underneath van body.
- aa. Reinstall jacks in position on dolly rear frame. Using the original hardware, secure jacks to mounting bracket. Secure braces to jacks and to mounting bracket with the set aside hardware.

ab. Move K-Loader forward, stopping about two feet from rear end of personnel ladder, stowed underneath van body.

ac. Pull out two tension lock pins (1). Hold rear end of ladder, lower it and slide it forward. Set ladder aside for later stowage in interior of van body.

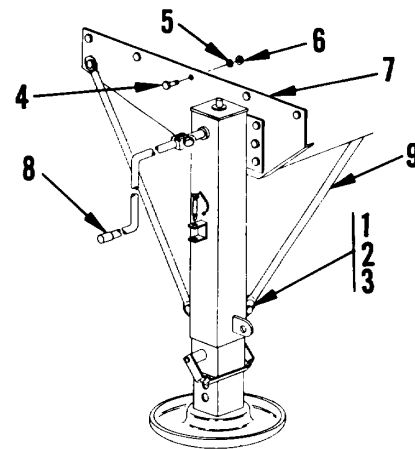


ad. Move K-Loader forward, stopping about two feet from rear landing gear braces.

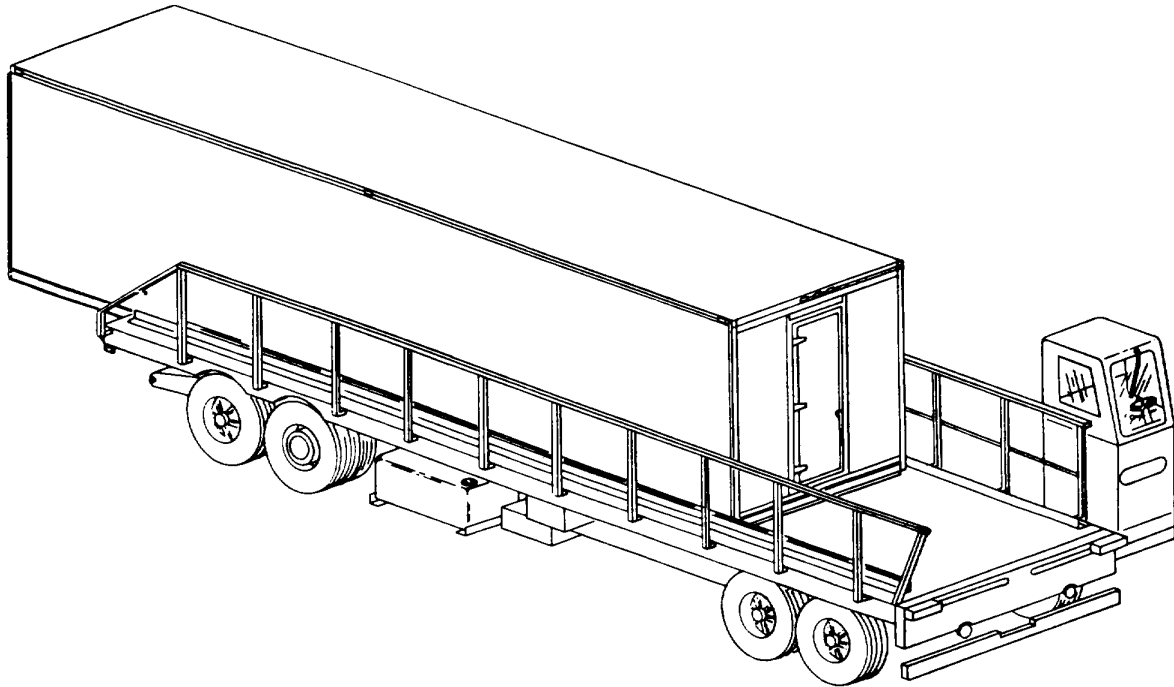
ae. Working as a team, turn both landing gear cranks counterclockwise at the same time to lower van body to rest on K-Loader.

af. Working as a team, remove nuts (1), washers (2) and screws (3) from center brace (9) of each landing gear leg. Set braces aside. Reinstall hardware in holes from which hardware was removed.

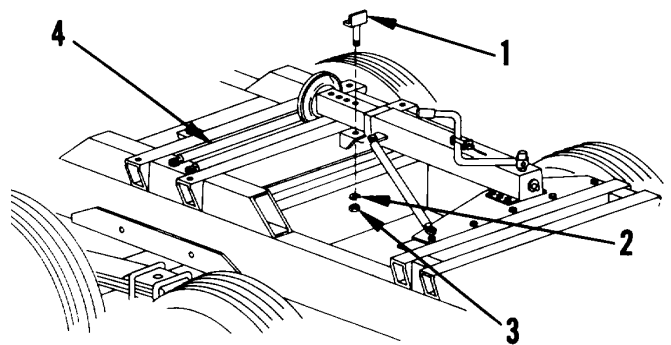
ag. Working as a team, remove nuts (6), washers (5) and screws (4) attaching mounting brackets (7) to van body. Separate both landing gears, together with the attached brackets, from van body. Turn cranks (B) counterclockwise to raise leg, if necessary, to clear van body.



4-62. LOADING PROCEDURE (cont)



- ah. Move K-Loader forward until entire van body rests on K-Loader.
- ai. Disconnect intervehicular electrical cable from receptacle in front cover of resistor box.
- aj. Raise gladhand covers and disconnect intervehicular air hoses from gladhands located at each side of resistor box on front of van body.
- ak. Remove towing vehicle.
- al. Stow landing gear center braces (4) in center dolly frame, using the original hardware.
- am. Remove landing gear stowage retainers (1) from stowage brackets on dolly. Position left landing gear to front of dolly, right landing gear to rear of dolly. Aline holes in landing gear mounting brackets with holes in dolly frame and secure with original hardware. Install stowage retainers (1) and secure with washer (2) and nut (3).



4-62. LOADING PROCEDURE (cont)

- an. Set lifting/loading braces in position for stowing on front of dolly. Secure with stowage brackets (refer to page 4-95).
- ao. Stow personnel ladder in interior of van body.

4-63. UNLOADING PROCEDURE

- a. Unload van body from aircraft to the K-loader, making certain that area from which landing gears were removed is accessible for reinstallation.

WARNING

Van body must be secured prior to any movement of K-Loader to prevent unsafe movement and possible injury to personnel.

- b. Attach towing vehicle to van body.
- c. Remove landing gear legs and center braces from stowed positions on dolly frame. Working as a team, attach mounting brackets with attached legs and secure with existing hardware.
- d. Position center braces and secure with existing hardware.
- e. Turn both cranks clockwise at the same time and lower legs to ground.
- f. Move K-Loader to rear until it clears area of personnel ladder stowage. Remove personnel ladder from interior of van body and stow in brackets underneath van body.
- g. Move K-Loader to rear until it clears area to rear of rear braces of lifting/loading jacks.
- h. Pull lock pin from each rear lifting arm and swing each arm out about 180 degrees. Reinsert pin to lock each arm in position.
- i. Remove leveling jacks from rear of dolly (steps j thru m of loading procedure). Set jacks in position as lifting/loading jacks under each lifting arm.
- j. Align jacks and insert jack guides into holes in lifting arms. Make sure jacks are perpendicular to ground (page 4-95).

4-63. UNLOADING PROCEDURE (cont)

- k. Remove four lifting braces from stowage on front of dolly, install in position and secure (steps p through r of loading procedure).

WARNING

Make certain lifting jacks are perfectly straight. If shifting occurs, stop operation at once and reposition lifting jacks.

- l. Working as a team, turn jack cranks clockwise to raise van body rear end (both sides at the same time) to a height permitting installation of dolly from the rear.
- m. Remove K-Loader.
- n. Remove dolly attaching hardware from attaching holes in dolly frame.
- o. Insert dolly in position from the rear. Lower rear end of van body toward dolly. Make certain holes in dolly match holes in van body. Working as a team, secure dolly with the existing hardware.
- p. Remove lifting jack braces and stow braces on front of dolly. Set aside hardware removed from bottoms of braces for reinstallation of leveling jack braces. Place OVE bolts in interior of van body.
- q. Turn cranks of lifting/loading jacks counterclockwise to lower legs and clear guides from holes in lifting arms. Remove jacks. Install as leveling jacks at rear of dolly and reinstall braces.
- r. Pull lock pins from lifting arms, swing arms inward 180 degrees and lock in position with the lock pins.
- s. Remove release tool and stow in air chamber (refer to step c of loading procedure and page 2-25).
- t. Detach towing vehicle.
- u. Remove the tie down rings previously installed. Place them in bags and store inside van body. Install plastic plugs in tie down ring holes.
- v. Reconnect electrical connector on left side of dolly (refer to step e of loading procedure).
- w. Reconnect front and rear brake lines (step 7 of loading procedure).

CHAPTER 5
INTERMEDIATE DIRECT SUPPORT AND INTERMEDIATE GENERAL
SUPPORT MAINTENANCE INSTRUCTIONS

CHAPTER INDEX

	Page
Common tools and equipment	5-1
Special tools, test, measurement and diagnostic equipment (TMDE) and support equipment.....	5-1
Repair parts	5-1
Axle assembly	5-2
Suspension system	5-7
Brake drum.....	5-13
Repair standards	5-14
Relining brake shoes.....	5-15
Kingpin.....	5-16

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

5-1. COMMON TOOLS AND EQUIPMENT

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

5-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools are not required for this equipment.

5-3. REPAIR PARTS

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

Section II. AXLE ASSEMBLY MAINTENANCE PROCEDURES

5-4. AXLE ASSEMBLY

THIS TASK COVERS

- a. General
- b. Removal
- c. Cleaning
- d. Inspection and repair
- e. Repair standards
- f. Assembly of new axle
- g. Alignment procedure
- h. Installation

Equipment Condition:

Materials:

Cleaning solvent
Brush (item 15, appendix E)

Air reservoir drain cocks open
(page 2-18)

Wheels removed (page 3-16)

Hubs and brake drums removed
(page 4-62)

Personnel Required: 2

Slack adjuster removed, together
with yoke pin (page 4-59)

Brake air chambers removed
(page 4-48)

5-5. GENERAL

Generally, axle assemblies will not be removed unless inspection shows a need for repair or replacement.

For inspection purposes, remove wheels (page 3-16) and hubs and brake drums (page 4-62).

5-6. REMOVAL

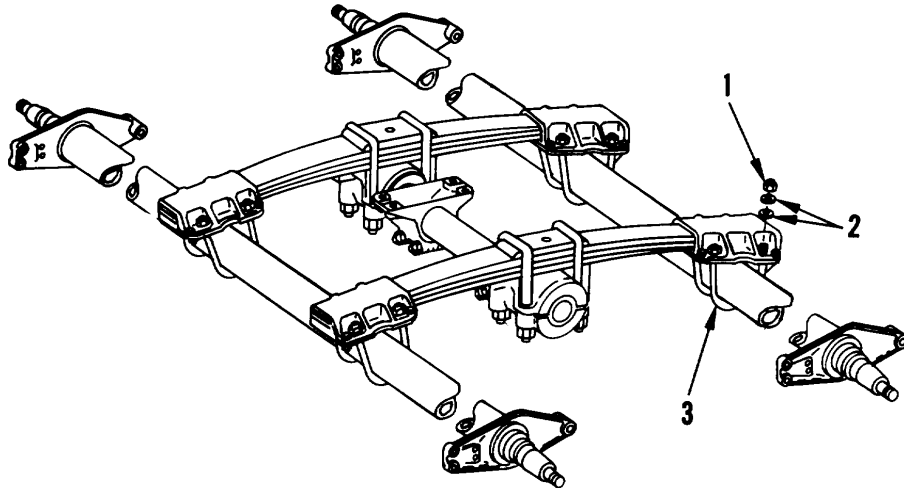
WARNING

Weight of semitrailer must be supported by leveling jacks or by blocking or support stands placed under rear corners of frame throughout operation.

- a. Position semitrailer on level surface with front end resting on landing gear legs.

5-6. REMOVAL (cont)

- b. Extend leveling jack legs enough to contact ground and provide support during removal and installation operations.
- c. Support axles with jacks.



- d. Remove two nuts (1) and four washers (2) from each axle U-bolt (3) and remove U-bolts.
- e. Lower axle assembly and remove from under semitrailer.

5-7. CLEANING

- a. Remove dirt with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

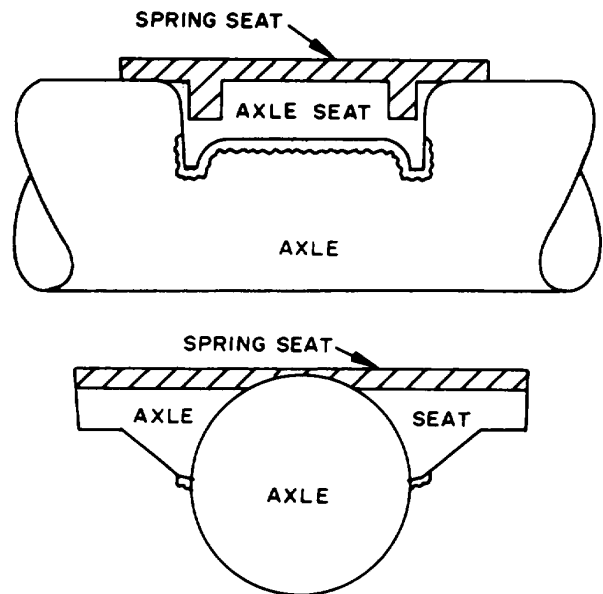
- b. Remove grease from spindle of axle and wheel retaining parts with cleaning solvent (item 3, appendix E).

5-8. INSPECTION AND REPAIR

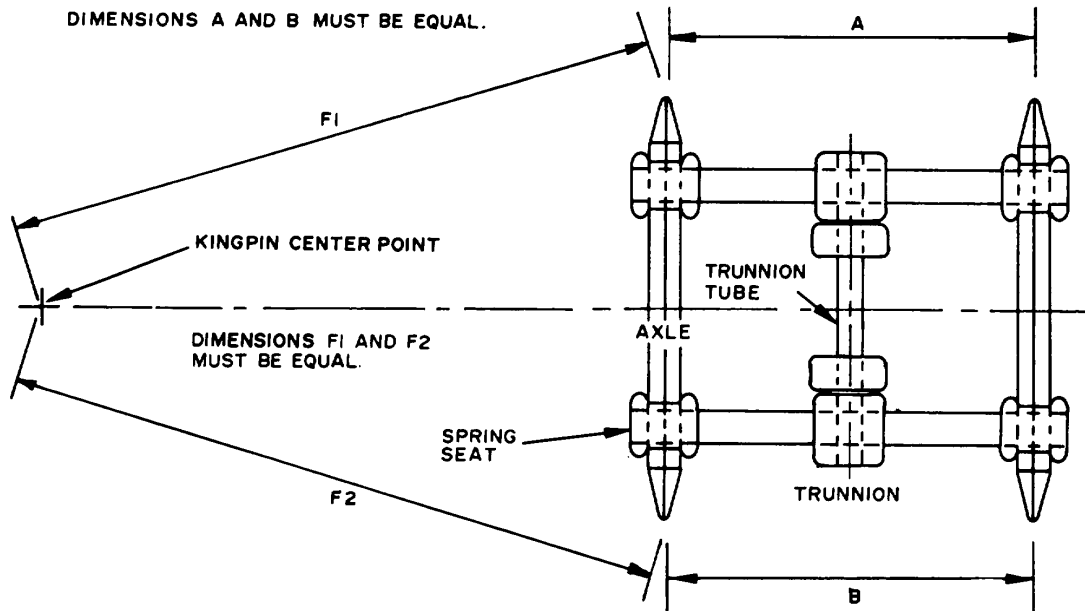
- a. Check threads of axle spindle for wear, crossed threads, or other damage.
- b. Using fine file, remove burrs, or hand chase threads if necessary.
- c. Check axle spindle for bend. Indications of a bent axle spindle are binding bearings which cannot be adjusted properly, and extremely uneven wear of brake linings. Replace axle, if spindle is defective.
- d. Check for damaged paint and repaint where necessary.

5-9. ASSEMBLY OF NEW AXLE

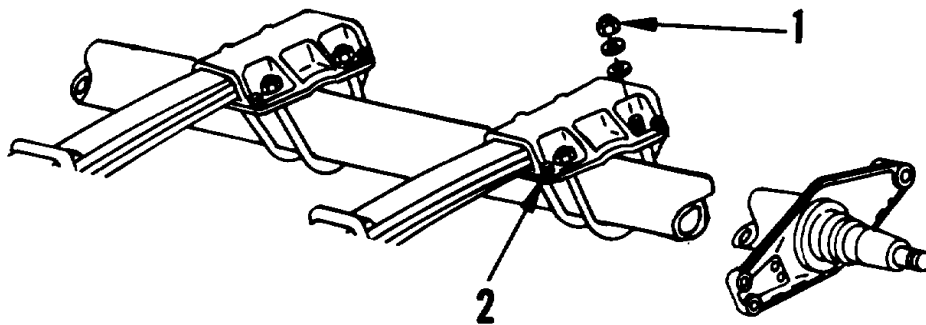
- a. Refer to appendix G for locational dimensions of the new spring seats.
- b. Be certain spring seats fit axle properly. If necessary, grind seats to insure that both seats fit properly and are horizontal and parallel.
- c. Make sure that spring seats are level, parallel, an equal distance from center of axle and the same distance from the brake flanges.
- d. Tack weld seats in place and recheck.



5-9. AXLE ASSEMBLY (cont)



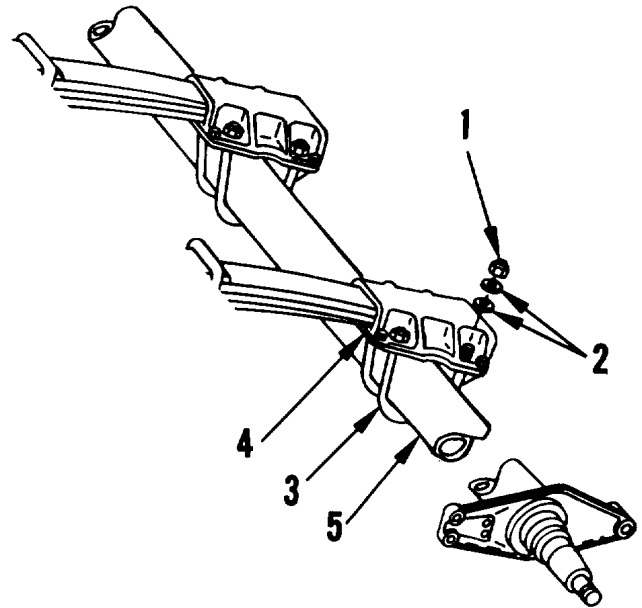
- e. Axle should be alined in relation to semitrailer kingpin.
- f. Measure distance from kingpin to centerline of the spindles on front axle, as shown above.
- g. After alining front axle, tighten U-bolt nuts (1) and end cap nuts (2) on that axle only.



- h. Aline rear axle with front axle by measuring between spindles.
- i. Tighten rear axle U-bolt nuts and end cap nuts.
- j. Recheck alinement of front axle with kingpin. Recheck alinement of rear axle with front axle.
- k. Tighten U-bolt nuts to a torque of 300 lb-ft (406.8 Nm) dry or 220 lb-ft (298.3 Nm) lube.

5-10. INSTALLATION

- a. Position axle on dolly.
- b. Place support under axle.
- c. Insert four U-bolts (3) through two spring seats (4) on axle (5). Secure each U-bolt (3) with two nuts (1) and four washers (2).
- d. Tighten U-bolt nuts to a torque of 300 lb-ft (406.8 Nm) dry or 220 lb-ft (298.3 Nm) lube.
- e. Follow on maintenance:
 - (1) Install brake air chambers (page 4-49).
 - (2) Install slack adjusters (page 4-60).
 - (3) Install hubs and brake drums (page 4-63).
 - (4) Install wheels (page 3-16).
 - (5) Close air reservoir drain cocks (page 2-18).
- f. Remove blocking and support equipment.



Section III. SUSPENSION SYSTEM MAINTENANCE PROCEDURES

THIS TASK COVERS

- a. Removal of spring
- b. Inspection of spring
- c. Installation of spring
- d. Removal of rubber bushing
- e. Installation of rubber bushing
- f. Removal of rubber pad
- g. Installation of rubber pad

**Troubleshooting Reference
Item No.**

- 2. Semitrailer leans to one side
- 3. Excessively worn, scuffed or cupped tires
- 4. Wheel hop or diminished handling stability

Materials:

Cleaning solvent (item 3, appendix E)
Brush (item 15, appendix E)

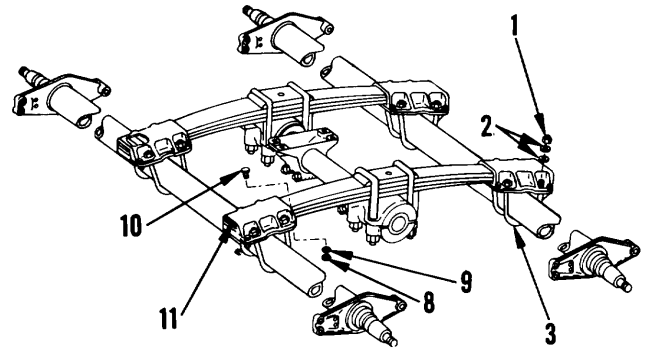
Equipment Condition:

Wheels removed (page 3-16)

Personnel Required: 2

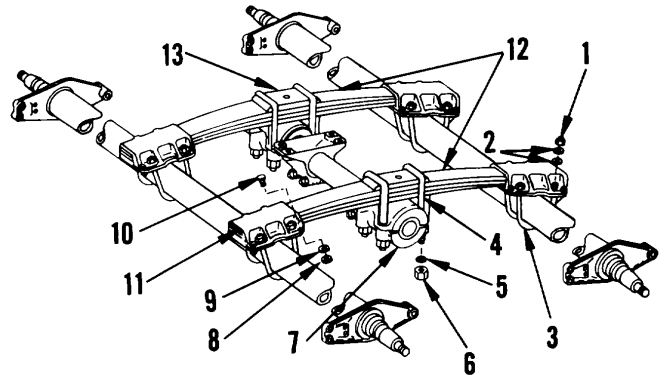
5-12. REMOVAL OF SPRING

- a. Position semitrailer on level surface with front end resting on landing gear legs.
- b. Extend leveling jack legs enough to provide support during removal and installation procedures.
- c. Place jack under each axle just enough to support the weight of the axle.
- d. Support semitrailer with support stands or blocking equipment.
- e. Remove two nuts (1) and four washers (2) from each axle U-bolt (3). Remove axle U-bolts.
- f. Remove eight nuts (8), washers (9) and screws (1Q) and remove two end caps (11).



5-12. REMOVAL OF SPRING (cont)

- g. Remove two nuts (6) and washers (5) from each trunnion U-bolt (4). Remove lower hub (7). Lift up U-bolts (4) and remove wear plate (13).
- h. Lift up spring ends and slide out spring (12).
- i. To remove trunnion U-bolts (4), rotate trunnion hub to side and remove U-bolts.

**5-13. CLEANING AND INSPECTION**

- a. Remove dirt with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

- b. Remove grease with cleaning solvent (item 3, appendix E).
- c. Inspect for loose, missing or damaged hardware.
- d. Inspect spring for cracks, breaks and excessive wear.
- e. Inspect for rust or corrosion.
- f. Replace spring if defective or excessive wear is apparent.

5-14. INSTALLATION OF SPRING

- g. Position spring on axle.
- h. Position end caps (11) and secure with eight screws (10), washers (9) and nuts (8). Tighten nuts to a torque of 180 lb-ft (244 Nm) dry or 130 lb-ft (176.3 Nm) lube.
- i. Install axle U-bolts (1) and secure each U-bolt with two nuts (2) and four washers (3). Tighten nuts to a torque of 300 lb-ft (406.8 Nm) dry or 220 lb-ft (298.3 Nm) lube.
- j. Install trunnion U-bolts (4), insert lower hub (7) in position and secure with nuts (6) and washers (5). Tighten nuts to a torque of 880 lb-ft (1193.3 Nm) dry or 660 lb-ft (895 Nm) lube.
- k. After installation of new spring, axle should be alined in relation to semitrailer kingpin (page 5-5).
- l. Follow on maintenance: Install wheels (page 3-16) and remove blocking and support equipment.

5-15. RUBBER BUSHING**THIS TASK COVERS**

- a. Removal
- b. Installation

Materials:

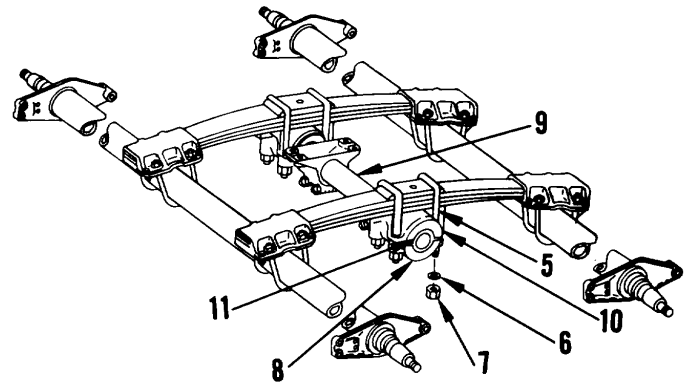
Silicone lubricant (item 11, appendix E).

Personnel Required: 1**REMOVAL**

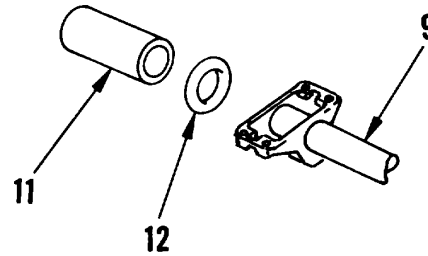
- a. Position semitrailer on level surface with front end resting on landing gear legs.
- b. Extend leveling jacks enough to relieve each tire of ground contact and provide support during removal and installation procedures.
- c. Place jacks under both axles and raise van body just enough to take weight off spring.
- d. Block or support semitrailer. Remove wheels (page 3-16).

5-15. RUBBER BUSHING (cont)**REMOVAL (cont)**

- e. Remove four nuts (7) and washers (6) securing trunnion U-bolts (5). Lift up U-bolts and remove lower hub (8).
- f. Lower van body, with axles on jacks, to clear springs and upper hub (10). Remove rubber bushing (11).
- g. Check bushing (11) for wear and deterioration. Replace defective bushing.

**INSTALLATION**

- a. Lubricate inner surface of rubber bushing (11) with silicone lubricant (item 11, appendix E) to ease installation of bushing.
- b. Slide washer (12) and rubber bushing (11) on trunnion tube (9).
- c. Raise van body, with axles on jacks and push down trunnion U-bolts (5) to allow for installation of lower hub (8).
- d. Position lower hub (8) on trunnion U-bolts (5) and secure with four nuts (7) and washers (6).
- e. Tighten nuts to a torque of 880 lb-ft (1193.3 Nm) dry or 660 lb-ft (895 Nm) lube.
- f. Install wheels (page 3-16).
- g. Remove support and blocking equipment.



5-16. TRUNNION TUBE

THIS TASK COVERS

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

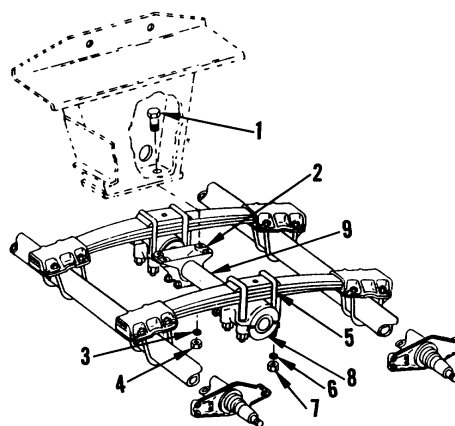
Materials:

Cleaning solvent (item 3, appendix E).
Brush (item 15, appendix E)

Personnel Required: 2

REMOVAL

- a. Perform steps a through d of rubber bushing removal procedure (page 5-9).
- b. Remove eight nuts (4), washers (3) and screws (1) securing trunnion hangers (2) to mounting bracket.
- c. Support trunnion tube (9). Remove eight nuts (7) and washers (6) securing trunnion U-bolts (5).
- d. Lift up U-bolts (5) and remove lower hub (8). Remove trunnion tube.



CLEANING AND INSPECTION

- a. Remove dirt with water and brush (item 15, appendix E).

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in a well-ventilated area. Keep away from open flame.

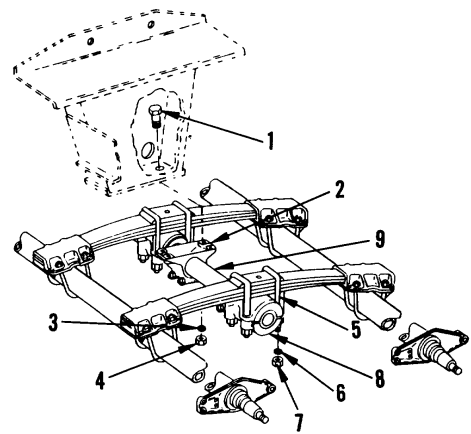
- b. Remove grease with cleaning solvent (item 3, appendix E).

5-16. TRUNNION TUBE (cont)**CLEANING AND INSPECTION (cont)**

- c. Inspect trunnion tube for cracks, breaks, bends and excessive wear.
- d. Inspect for rust, corrosion and marred paint. Clean, treat, prime and paint as required.
- e. Replace defective trunnion tube.

INSTALLATION

- a. Position trunnion tube (9) on suspension.
- b. Raise van body, with axles on jacks and push down trunnion U-bolts (5) to allow for installation of lower hub (8).
- c. Position lower hub (8) on trunnion U-bolts (5) and secure with eight nuts (7) and washers (6).
- d. Tighten nuts (7) to a torque of 880 lb-ft (1193.3 Nm) dry or 660 lb-ft (895 Nm) lube.
- e. Secure trunnion hangers (2) to mounting bracket with nuts (4), washers (3) and screws (1).
- f. Install wheels (page 3-16).
- g. Remove blocking and support equipment.



5-17. RUBBER PAD

THIS TASK COVERS

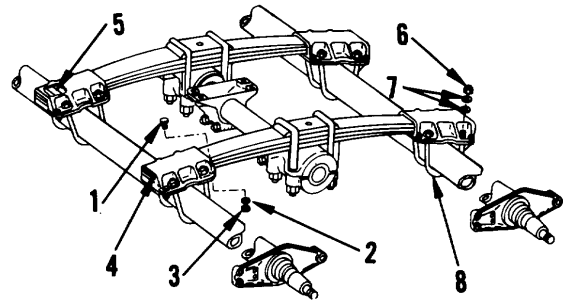
- a. Removal
- b. Inspection
- c. Installation

Personnel Required: 1

Equipment Condition:
Axles supported

REMOVAL

- a. Remove four nuts (6) and eight washers (7) securing two axle U-bolts (8).
- b. Remove four nuts (3), washers (2) and screws (1) securing end cap (4).
- c. Remove end cap and remove rubber pads (5).



INSPECTION

- a. Inspect rubber pads for excessive wear and deterioration.
- b. Replace defective pads.

INSTALLATION

- a. Position end cap (4).
- b. Secure end cap with four screws (1), washers (2) and nuts (3). Tighten nuts to a torque of 180 lb-ft (244.0 Nm) dry or 130 lb-ft (176.3 Nm) lube.
- c. Install axle U-bolts (8) and secure with four nuts (6) and eight washers (7). Tighten nuts to a torque of 300 lb-ft (406.8 Nm) dry or 220 lb-ft (298.3 Nm) lube.
- d. Follow on maintenance: remove support equipment.

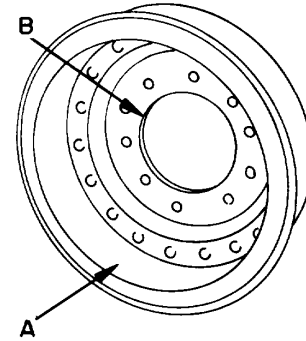
5-18. BRAKE DRUM

REPAIR

- a. If inspection (page 4-63) shows brake drum to be out of round or excessively scored, rebores, removing as little metal as necessary to true friction surface.
- b. After boring, check that brake drum meets the requirements of repair standards listed on page 5-14.

5-18. BRAKE DRUM

REPAIR (cont)



- c. If refinishing requires the removal of more than 1/16 inch of material (1/8 inch in diameter), replace brake drum.

Repair Standards

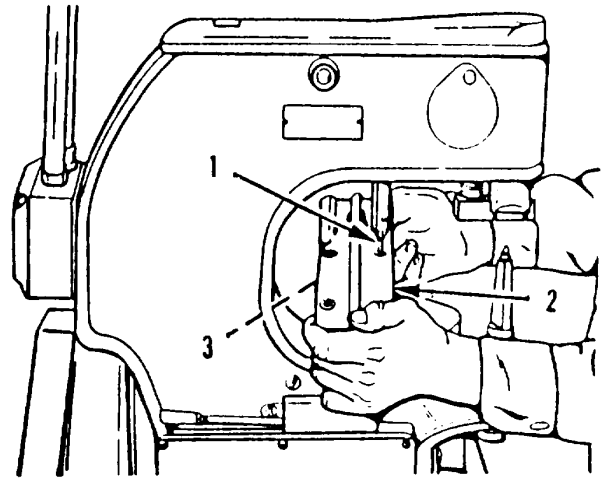
Item and point of measurement	Illustration letter ref.	Size and fit of new parts		Wear limits
		Min.	Max.	
Brake drum				
Inside diameter	A	16.495	16.505	16.625
Concentricity of inside diameter with outside diameter	B	Total reading	Indicator 0.004	*

* Indicates that part should be replaced when worn beyond the limits given in "size and fit of new parts" column.

- d. The repair and rebuild standards included herein give the minimum, maximum, and key clearance of new or rebuilt parts. They also give wear limits which indicate that point to which a part or parts may be worn before replacement, in order to give maximum service with minimum replacement.
- e. Normally, all parts which have not been worn beyond the dimensions shown under wear limits in the above table, or damaged from corrosion, will be approved for service. Points of measurement for repair standards are shown in the above illustration.

5-19. RELINING BRAKE SHOES

- a. Remove 24 rivets (1) from brake shoe (2), and remove and discard old brake lining (3).



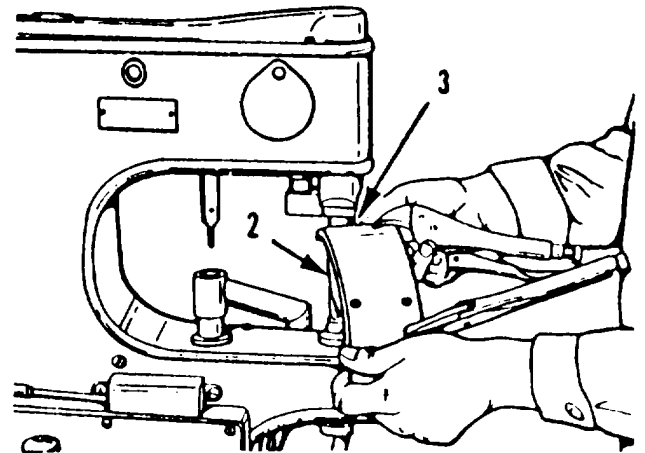
- b. Clean brake shoe thoroughly. Use a stiff bristle brush and water to remove mud.

WARNING

Cleaning solvent is both toxic and flammable. To prevent personnel injury, avoid prolonged breathing of vapors. Avoid skin contact. Use only in well-ventilated areas. Keep away from open flame.

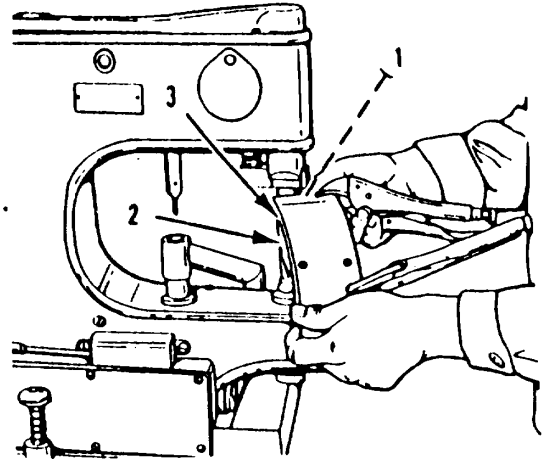
- c. Use cleaning solvent (item 3, appendix E) to remove grease and oil. Dry brake shoe thoroughly.
- d. Repaint brake shoe with forest green enamel and allow it to dry.

- e. Position new brake lining (3) on brake shoe (2).



5-19. RELINING BRAKE SHOES (cont)

- f. Install rivets (1) in the two center holes of brake shoe (2) and brake lining (3) to secure brake lining.
- g. Install remaining rivets (1) in brake lining (3) to secure it to brake shoe (2).
- h. Check contact of brake lining with brake shoe. A 0.010-inch (0.25 cm) feeler gage should not enter between brake shoe and brake lining at any point.
- i. Repeat steps a through g on the remaining brake shoes.

**5-20. KINGPIN**

If any repair or replacement of the king pin or supporting structure is required, contact the manufacturer.

APPENDIX A

REFERENCES

A-1. SCOPE

This appendix lists forms, field manuals, technical manuals, and other publications referenced in this manual and which apply to operation, unit maintenance and intermediate direct support and general support maintenance of the van, semitrailer XM1063.

A-2. DEPARTMENT OF THE ARMY PAMPHLETS.

Consolidated Index of Army Publications and Blank Forms..... DA Pam 25-30

Using Unit Supply System (Manual Procedures) DA Pam 710-2-1

The Army Maintenance Management System (TAMMS)..... DA Pam 738-750

A-3. FORMS.

Recommended Changes to Publications and Blank Forms..... DA Form 2028

Recommended Changes to Equipment Technical Publications DA Form 2028-2

Organizational Control Record for Equipment..... DA Form 2401

Equipment Inspection and Maintenance Worksheet..... DA Form 2404

Maintenance Request..... DA form 2407

Preventive Maintenance Schedule and Record DD Form 314

Product Quality Deficiency Report (NSN 7540-00-105-0078) SF 369

A-4. FIELD MANUALS.

NEC Contamination Avoidance FM 3-3

NEC Protection..... FM 3-4

NEC Decontamination FM 3-5

Camouflage FM 5-20

Operation and Maintenance of Ordnance Materiel in Cold Weather
(O Deg to Minus 65 Deg F)..... FM 9-207

First Aid for Soldiers FM 21-11

Manual for the Wheeled Vehicle Driver..... FM 21-305

Basic Cold Weather Manual FM 31-70

Northern Operations FM 31-71

Army Motor Transport Units and Operators FM 55-30

Desert Operations FM 90-3

Mountain Operations (How to Fight) FM 90-6

A-5. TECHNICAL BULLETINS.

Tactical Wheeled Vehicles: Repair of Frames TB 9-2300-247-30

Equipment Improvement Report and Maintenance
Digest (US Army Tank-Automotive Command)
Tank-Automotive Equipment TB 43-0001-39 series

Color, Marking, and Camouflage Painting of
Military Vehicles, Construction Equipment, and
Materiels Handling Equipment..... TB 43-0209

Maintenance in the Desert..... TB 43-0239

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

A-6. TECHNICAL MANUALS.

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

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

Deepwater Fording of Ordnance Materiel TM 9-238

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

Organization, Direct Support, and General Support
Care, Maintenance, and Repair of Pneumatic Tires and
Inner Tubes TM 9-2610-200-24

Painting Instructions for Field Use..... TM 43-0139

Procedures for Destruction of Tank-Automotive Equipment
to Prevent Enemy Use..... TM 750-244-6

A-6. SPECIFICATIONS AND STANDARDS.

Dry Cleaning Solvent..... Fed Spec F-D-680

Methyl Ethyl Ketone, Technical TT-M-261

Inspection, Liquid Penetrant Methods MIL-I-6866

Inspection Process, Magnetic Particles..... HIL-I-6868

Human Engineering Design Criteria for Military Systems,
Equipment and Facilities MIL-STD-1472

A-8. OTHER PUBLICATIONS.

Army Medical Department Expendable/Durable Items CTA 8-100

Expendable/Durable Items (Except Medical,
Class V, Repair Parts, and Heraldic
Items)..... CTA 50-970

A-3/(A-4 blank)

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTENANCE FUNCTIONS.

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound or feel).

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

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

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

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

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

g. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of 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 3d position code of the SMR code.

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

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

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurement (hours/miles, etc.) considered in classifying Army equipments/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 items listed in column 2. (For detailed explanation of these functions, see paragraph B-2).

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance levels are as follows:

- C.....Operator or crew
- O.....Organizational maintenance

Unit Maintenance Level

- C.....Operator or crew
- O.....Organizational maintenance

Intermediate Direct Support Level

- F.....Intermediate direct support maintenance

Intermediate General Support Level

- H.....Intermediate general support maintenance

Depot Maintenance Level

- D.....Depot maintenance

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

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

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III.

- a. Column 1, Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.
- b. Column 2, Maintenance Category. The lowest level of maintenance authorized to use the tools or test equipment.
- c. Column 3, Nomenclature. Name or identification of tool or test equipment.
- d. Column 4, National Stock Number. The national stock number of the tool or test equipment.
- e. Column 5, Tool Number. The manufacturer's part number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV.

- a. Column 1, Reference Code. The code recorded in Column 6, Section II.
- b. Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

SECTION III. MAINTENANCE ALLOCATION CHART									
(1) GROUP	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			UNIT		INT	MED			
NUMBER			C	O	F	H	D		
06	ELECTRICAL SYSTEM							01	
0608	COVER ASSEMBLY	Inspect		0.1					
		Replace		0.2					
	RESISTOR ASSEMBLY	Inspect		0.1					
		Replace		0.5					
	RECEPTACLE, ELECTRICAL	Inspect		0.1					
		Replace		0.5					
	CIRCUIT BOARD	Inspect		0.2					
		Replace		0.3					
0609	LIGHTS	Inspect		0.1					
		Replace		0.2					
	LAMP	Inspect	0.1						
		Replace		0.2					
0613	WIRING HARNESS, BODY	Inspect		0.2					
		Test		0.3					
		Replace		0.5					
	WIRING HARNESS, DOLLY	Inspect		0.2					
		Replace		0.3					
11	AXLE							01,02,03	
1100	AXLE ASSEMBLY	Inspect		0.5					
		Replace			8.0				
		Repair			9.0				
12	BRAKES							02,03	
1202	SHOE ASSEMBLY	Inspect		0.5					
		Adjust		0.5					
		Replace		1.0					
	LINING, SHOE	Inspect		0.5					
		Replace			3.0				
	SLACK ADJUSTER	Inspect		0.2					
		Replace		0.5					

* MAINTENANCE LEVELS:

C - OPERATOR/CREW = UNIT
O - ORGANIZATIONAL

F - INTERMEDIATE DIRECT SUPPORT
H - INTERMEDIATE GENERAL SUPPORT

D - DEPOT

SECTION II. MAINTENANCE ALLOCATION CHART

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			UNIT		INTMED				
			C	O	F	H	D		
1208	CHAMBER, AIR	Inspect Replace		0.1 1.0				01	
	VALVE, RELAY	Inspect Replace		0.1 1.0					
	VALVE, RATIO RELAY	Inspect Replace		0.1 0.5					
	RESERVOIR, AIR	Inspect Test Replace	0.1	0.2 0.5					
	HOSE, AIR (SHORT)	Inspect Test Replace		0.1 0.2 0.5					
	HOSE, AIR (LONG)	Inspect Test Replace		0.2 0.3 2.0					
	COCK, DRAIN	Inspect Test Replace	0.1	0.1 0.1					
	COUPLING, AIR (GLADHAND)	Inspect Replace		0.1 0.1					
	HOSE ASSEMBLY, RUBBER	Inspect Replace		0.1 0.2					
	13	WHEEL ASSEMBLY 01, 02, 03							
1311	BEARING, HUB	Inspect Adjust Replace		0.3 0.2 0.5					
	SEAL, OIL	Replace		0.5					
	BRAKE DRUM	Inspect Replace Repair		0.5 0.5	1.0				
MAINTENANCE LEVELS: C - OPERATOR = CREW O - ORGANIZATIONAL F - INTERMEDIATE DIRECT SUPPORT H - INTERMEDIATE GENERAL SUPPORT D - DEPOT									

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			UNIT		INTMED				
			C	O	F	H	D		
1311	HUB, WHEEL	Inspect Replace		0.3 0.5					
	WHEEL	Replace		0.5					
1313	TIRE	Inspect Replace Repair		0.2 0.5	1.0				
	INNER TUBE	Inspect Replace Repair		0.5 1.0	1.5				
15	FRAME						01		
1504	CARRIER, SPARE WHEEL	Inspect Replace Repair		0.1 0.3 0.5					
1507	LANDING GEAR	Inspect Replace		0.2 0.3					
	LEVELING JACK	Inspect Replace		0.2 0.3					
16	SPRINGS						01,02		
1601	SPRING ASSEMBLY	Inspect Replace			0.2 3.0				
	SEAT, SPRING	Inspect Replace			0.2 2.0				
	HUB, TRUNNION	Inspect Replace			0.2 1.0				
	BUSHING, RUBBER	Inspect Replace			0.2 2.0				
	PAD, RUBBER	Inspect Replace			0.2 0.5				
<p>* MAINTENANCE LEVELS: C - OPERATOR/CREW = UNIT F - INTERMEDIATE DIRECT SUPPORT D - DEPOT O - ORGANIZATIONAL H - INTERMEDIATE GENERAL SUPPORT</p>									

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			UNIT		INTMED				
			C	O	F	H	D		
18	BODY							01	
1801	HINGE, DOOR	Inspect Replace		0.1 0.5					
	LOCK ASSEMBLY	Inspect Replace		0.2 0.2					
	HOLDER, DOOR	Inspect Replace		0.1 0.2					
	SEAL, DOOR	Inspect Replace		0.1 0.3					
22	BODY, CHASSIS ACCESSORY ITEMS								
2202	REFLECTORS	Replace		0.2					
2210	DATA PLATES	Replace		0.2					
<p>* MAINTENANCE LEVELS: C - OPERATOR/CREW = UNIT F - INTERMEDIATE DIRECT SUPPORT D - DEPOT O - ORGANIZATIONAL H - INTERMEDIATE GENERAL SUPPORT</p>									

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS

SEMITRAILER, VAN: ELECTRONIC TACTICAL, XM1063

Tool or Test Equipment Reference Code	Maintenance Category	Nomenclature	National/NATO Stock Number	Tool No.
01	0, F	Tool Kit General Mechanics: Automotive	5180-00-117-7033	SC5180-90-CL-N26
02	0, F	Shop Equipment, Automotive Maintenance and Repair	4910-00-754-0705	SC4910-95-CL-A31
02	0, F	Wheel Bearing Wrench Set	5120-00-169-4586	

Section IV. REMARKS

SEMITRAILER, VAN: ELECTRONIC TACTICAL, XH1063

Reference Code	Remarks/Notes
	None

APPENDIX C**COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST**

Section I. INTRODUCTION**C-1. SCOPE**

This appendix lists components of end item and basic issue items for Semitrailer, Van: Electronic Tactical, XM1063.

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 semitrailer in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the semitrailer during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII, based on TOE/MTOE authorization of the end item.

C-3. EXPLANATION OF COLUMNS

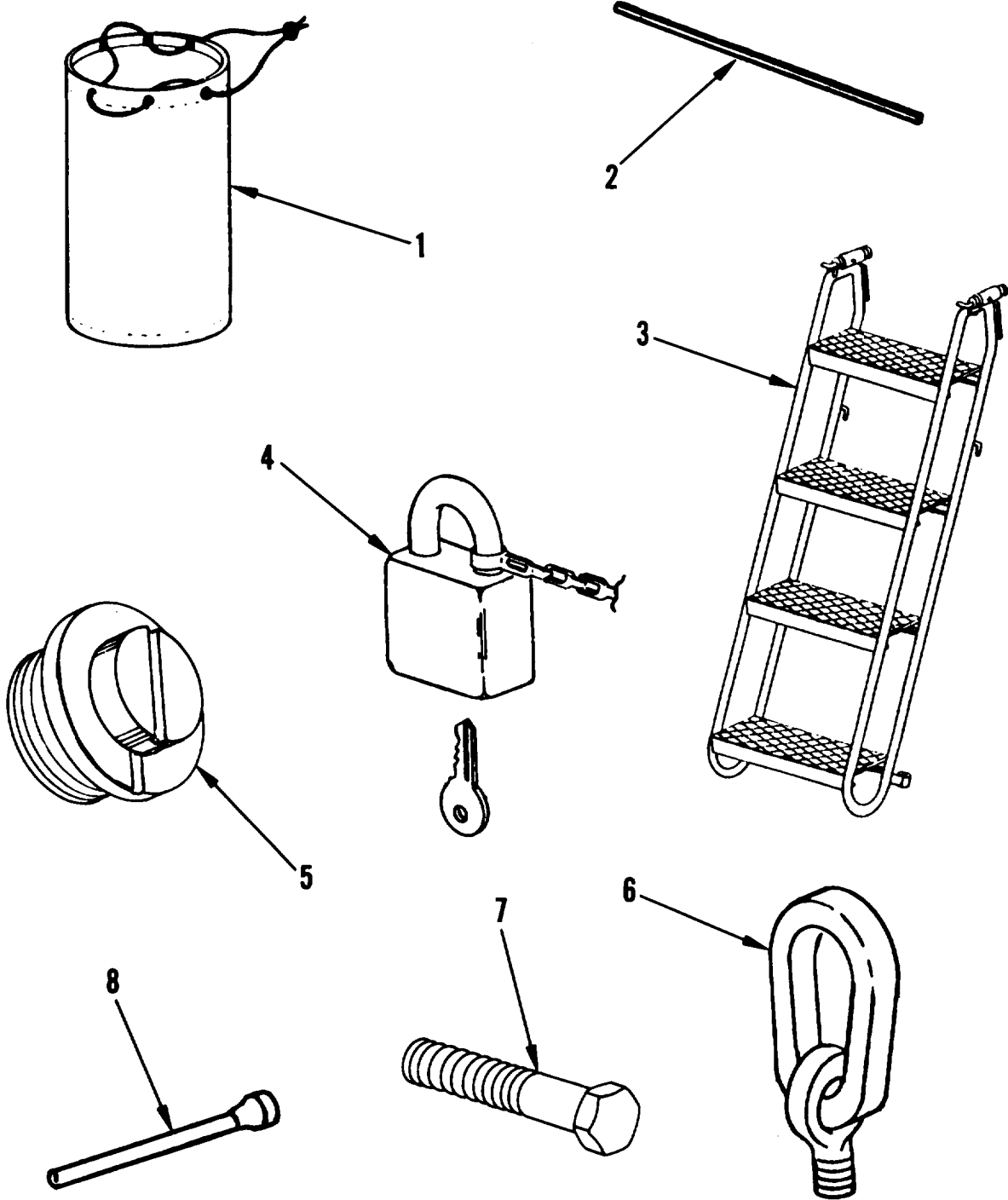
The following provides an explanation of columns found in the tabular listings:

- a. Column (1) - Illustration Number (Illus Number). This column indicates the number of the illustration in which the item is shown.
- b. Column (2) - National Stock Number. Indicates the National stock number assigned to the item and will be used for requisitioning purposes.
- c. Column (3) - Description. Indicates the Federal item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number. If item needed differs for different models of this equipment, the model is shown under the "Usable On" heading in this column. "Usable on Codes" are not included, since only the XM1063 Semitrailer is covered in this manual.
- d. Column (4) - Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea., in., pr.).
- e. Column (5) - Quantity required (Qty rqr). Indicates the quantity of the item authorized to be used with/on the equipment.

Section II. COMPONENTS OF END ITEM

This section is not applicable

Section III. BASIC ISSUE ITEMS



Basic Issue Items

BASIC ISSUE ITEMS

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC and Part Number	(4) Usable On Code U/M	(5) QTY Reqd
1	8105-01-171-4739	BAG: tiedown ring stowage (in interior of van body) (19207)12307763	EA	2
2		HANDLE: wrench (in interior of van body) (21450)41-H-1541	EA	1
3		LADDER: vehicle boarding (in brackets underneath van body) (19207)12360404	EA	1
4		PADLOCK SET: (on door) (19207)12353784-5	EA	1
5		PLUG, CAP: tie down ring holes (81349)MIL-C-5501/10, Type 2, Style A, Form B, Class 2, Size 32, Black	EA	30
6	1670-01-092-9236	RING, TIEDOWN: (in stowage bags in interior of van body) (96906)MS21237-1B	EA	30
7		SCREW, CAP, HEXAGON: lift- ing jack brace (in interior of van body) (96906)MS90727-250	EA	4
8	5120-00-293-1289	WRENCH, LUG: wheel nut (in interior of van body) (21450)41V3838-30	EA	1

APPENDIX D

ADDITIONAL AUTHORIZATION LIST

Section I. INTRODUCTION

D-1. SCOPE

This appendix lists additional items you are authorized for the support of the semitrailer.

D-2. GENERAL

This list identifies items that do not have to accompany the semitrailer and that do not have to be turned in with it. These items are all authorized to you by CTA, MTOE, TDA, OR JTA.

D-3. EXPLANATION OF LISTING

National stock numbers, descriptions, and quantities are provided to help you identify and request the additional items you require to support this equipment. The items are listed in alphabetical sequence by item name under the type document (i.e., CTA, MTOE, TDA, or JTA) which authorizes the item(s) to you.

Section II. ADDITIONAL AUTHORIZATION LIST

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC and Part Number	(4) Usable On Code U/M	(5) QTY Reqd
		None authorized		

APPENDIX E

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1. SCOPE

This listing is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

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 cleaning solvent, item 3, appendix E").
- b. Column 2 - Level. This column identifies the lowest level of maintenance that requires the listed item.
 - C - Operator/Crew
 - 0 - Unit level
 - F - Intermediate direct support level
 - H - Intermediate general support level
- 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 requirement.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
1	0	8135-753-4662	Barrier material, greaseproofed, water-proofed, flexible smooth, grade A, heat sealable, MIL-B-121 100-yd roll	EA
2	0	8040-00-290-4301 8040-00-062-6953	Cement, bonding, MMM-A-1617, type 2 1 Qt can 5 Oz tube	EA EA
3	C, 0	685000-281-1985	Cleaning solvent, PD680 (SDII) 1 Gal can	EA
4	C, 0	6850-264-6572	Dessicant, activated, bagged, packaging use and static dehumidifation (about 9 units per pound) dessicant units per bag (about 2 lb), MIL-D-3464 150 bags, 16	EA
5	C, 0 C, 0 C, 0	9150-00-190-0904 9150-00-190-0905 9150-00-190-0907	Grease, Automotive and Artillery (GAA), MIL-G-10924 1 Lb can 5 Lb can 35 Lb can	EA EA EA
6			Enamel, Black - MIL-E-52798A	EA
7			Loctite	EA
8			Lubricating Oil, MIL-L-2104, OE/HDO-30 1 Qt can 5 Gal can 55 Gal drum (16 Ga) 55 Gal drum (18Ga)	EA EA EA EA

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
9 0 0		9150-00-189-6727 9150-00-191-2772	Lubricating Oil, Sub-zero, MIL-L-2104, (temp. above -20°F), OE/HDO-10 1 Qt can, type 1 55 Gal drum	EA EA
10 0			Lubricating Oil, MIL-L-2104, 15W-40. OE/HDO (temp. above 5° F9-15°C) 1 Qt can	EA
11	F	8650-00-177-5094	Silicone Lubricating, MIL-S-8660 2 oz tube	EA
12	C, 0	8030-00-889-3534	Tape, Teflon, MIL-T-27730	EA
13	C, 0	8030-00-515-2488	Waterproof Sealant, MIL-C-21067 1 Cartridge	EA
14	C, 0	7920-00-205-1711	Rag, Wiping, white bleached, MIL-STD-AA-521 50 lb bale	EA
15	0	7920-01-088-5188	Brush, soft bristle, (53800) 30G14493	EA
16	0		Lacquer, Brushing, clear TT-L-26 1 QT an 1 Gal can	EA EA

APPENDIX F

**UNIT, INTERMEDIATE DIRECT SUPPORT, AND
INTERMEDIATE GENERAL SUPPORT MAINTENANCE
REPAIR PARTS AND SPECIAL TOOLS LIST**

Section I. INTRODUCTION**1. SCOPE**

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for the performance of unit, intermediate direct support, and intermediate general support maintenance of the Van Semitrailer. It authorizes the requisitioning, issue and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

2. GENERAL

In addition to Section I, Introduction, this Repair Parts and Special Tools List (RPSTL) is divided into the following sections:

a. Section II - Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. This list also includes parts which must be removed for replacement of the authorized parts. Parts are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed by item name sequence. Repair parts kits or sets are listed separately in their own group within Section II. Repair parts for repairable special tools are also listed in this section.

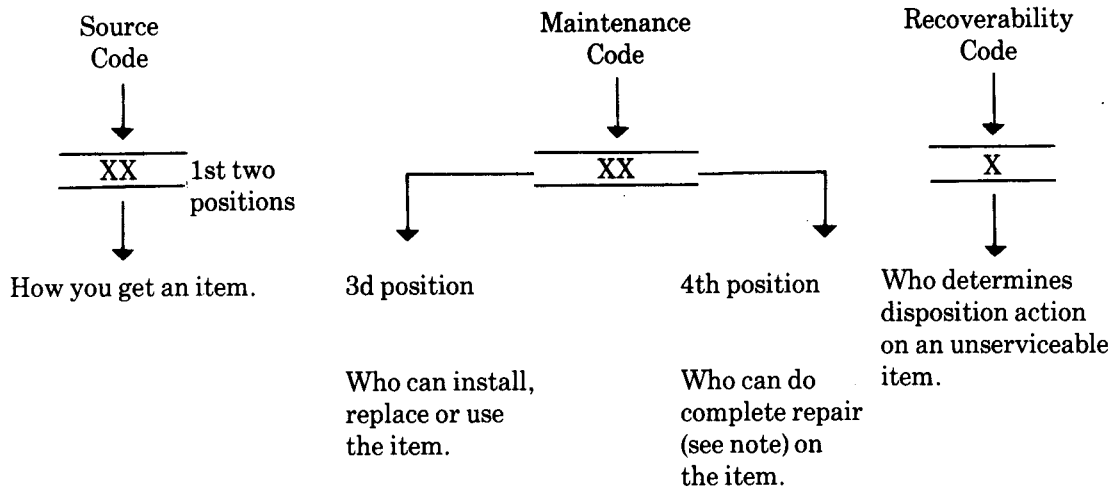
b. Section III - Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized by this RPSTL [as indicated by Basis of Issue (BOI) information in DESCRIPTION AND USABLE ON CODE (UOC) column] for the performance of maintenance.

c. Section IV - Cross-reference Index. A list, in National item identification number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listing. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure and item number index lists figure and item numbers in alphanumeric sequence and cross-references NSN, FSCM, and part numbers.

3. EXPLANATION OF COLUMNS (Sections II and III).

a. ITEM NO. [Column (1)]. Indicates the number used to identify items called out in the illustration.

b. SMR CODE [Column (2)]. The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instructions, as shown in the following breakout:



* Complete Repair: Maintenance capacity, capability, and authority to perform all corrective tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) Source Code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes are as follows:

Code	Explanation
PA PB PC** PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the level indicated by the code entered in the 3d position of the SMR code. **NOTE: Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance level indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.
MO—Made at org/ AVUM category MF—Made at DS/ AVUM category MH—Made at GS category ML—Made at Specialized Repair Activity (SRA) MD—Made at Depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in this RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

Code

Explanation

AO —Assembled by org/AVUM category
 AF —Assembled by DS/AVUM category
 AH —Assembled by GS category
 AL —Assembled by SRA
 AD —Assembled by Depot

Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.

- XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
- XB - If an "XB" item is not available from salvage, order it using the CAGEC and part number given.
- XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
- XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

(2) Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance:

CODE	APPLICATION/EXPLANATION
C	- Crew or operator maintenance done within unit or aviation unit maintenance.
O	- Unit or aviation unit level can remove, replace, and use the item.
F	- Direct support or aviation intermediate level can remove, replace, and use the item.
H	- General support level can remove, replace, and use the item.
L	- Specialized repair activity can remove, replace, and use the item.
D	- Depot level can remove, replace, and use the item.

- L - Specialized repair activity can remove, replace, and use the item.
- D - Depot level can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes). This position will contain one of the following maintenance codes:

CODE	APPLICATION/EXPLANATION
O	- Organizational or aviation unit is the lowest level that can do complete repair of the item.
F	- Direct support or aviation intermediate is the lowest level that can do complete repair of the item..
H	- General support is the lowest level that can do complete repair of the item.
L	- Specialized repair activity is the lowest level that can do complete repair of the item.
D	- Depot is the lowest level that can do complete repair of the item.
Z	- Nonreparable. No repair is authorized.
B	- No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item.) However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) Recoverability Code. Recoverability code are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability CODE	APPLICATION/EXPLANATION
Z	- Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the 3d position of SMR Code.

Recoverability Code	Application/Explanation
0	-Reparable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit level.
F	-Reparable item. When uneconomically reparable condemn and dispose of the item at the direct support or aviation level.
H	-Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item is not authorized below depot level.
L	-Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/ directives for specific instructions.

c. **PSCH [Column (3)].** The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. **PART NUMBER [Column (4)].** Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

NOTE: When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. **DESCRIPTION AND USABLE ON CODE (UOC) [Column (5)].** This column includes the following information:

(1) The Federal item name, and when required, a minimum description to identify the item.

(2) The physical security classification of the item is indicated by the parenthetical entry (insert applicable physical security classification abbreviation, e.g., Phy Sec CL (C) - Confidential, Phy Sec CL (S) - Secret, Phy Sec CL (T) - Top Secret).

(3) Items that are included in kits and sets are listed below the name of the kit or set.

(4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.

(5) Part numbers for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.

(6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before the UOC).

(7) The usable on code, when applicable (see paragraph 5, Special Information)

(8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipments supported exceeds density spread indicated in the BOI, the total authorization is increased proportionately.

(9) The statement "END OF FIGURE" appears just below the last item description in Column 5 for a given figure in both Section II and Section III.

f. QTY [Column (6)] The QTY (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

4. Explanation of Columns (Section IV).

a. NATIONAL STOCK NUMBER (NSN) INDEX.

(1) STOCK NUMBER Column. This column lists the NSN by National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine NSN digits of the NSN (i.e., 5305-01-674-1467). When using this column to locate NIIN an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II and Section III.

(3) ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

b. PART NUMBER INDEX. Part numbers in this index are listed by part number in ascending alphanumeric sequence (i.e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

(1) FSCM-Column. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) PART NUMBER Column. Indicates the primary number used by the manufacturer (individual company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

(3) STOCK NUMBER Column. This column lists the NSN for the associated part number and manufacturer identified in the PART NUMBER and FSCM columns to the left.

(4) FIG. Column. This column lists the number of the figure where the item is identified/located in Section II and III.

(5) ITEM Column. This item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

c. FIGURE AND ITEM NUMBER INDEX.

(1) FIG. column. This column lists the number of the figure where the item is identified/located in Section 11 and Section III.

(2) ITEM column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) STOCK NUMBER column. This column lists the NSN for the item.

(4) FSCM column. The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(5) PART NUMBER column. Indicates the primary number used by the manufacturer (individual company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements to identify an item or range of items.

5. Special Information.

a. **USABLE ON CODE.** The usable on code appears in the lower left corner of the Description column heading. Usable on codes are shown as "UOC....." in the Description Column (left justified) on the first line applicable item description/nomenclature. Uncoded items are applicable to all models. Identification of the usable on codes used in the RPSTL are:

Model	Usable on Code
N/A	N/A

b. **FABRICATION INSTRUCTIONS.** Bulk materials required to manufacture items are listed in the Bulk Material Functional Group of this RPSTL. Part numbers for bulk materials are also referenced in the Description column of the line item entry for the item to be manufactured/fabricated. Detailed fabrication instructions for items source coded to be manufactured/fabricated are found in appendix G of this manual.

c. **ASSEMBLY INSTRUCTION.** Detailed assembly instructions for items source coded to be assembled from component spare/repair parts are found in Chapters 4 and 5 of this manual.

d. **KITS.** Line item entries for repair parts kits appear in a group in Section II (see table of contents)

e. **INDEX NUMBERS.** Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

6. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Not Known.

(1) **First.** Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same groups.

(2) **Second.** Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) **Third.** Identify the item on the figure and use the Figure and Item Number Index to find the NSN.

b. When National Stock Number/Part Number is Known.

(1) First. Using the Index of National Stock Number or Part Number) Index, find the pertinent National Stock Number or Part Number. The NSN Index is in National Item Identification Number (NIIN) sequence [see 4.1(1)]. The part numbers in the Part Number index are listed in ascending alphanumeric sequence (see 4.b). Both indexes cross-reference you to the illustration/figure and item number of the item you are looking for.

(2) Second. Turn to the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

7. Abbreviations.

Abbreviation	Explanation
N/A	N/A

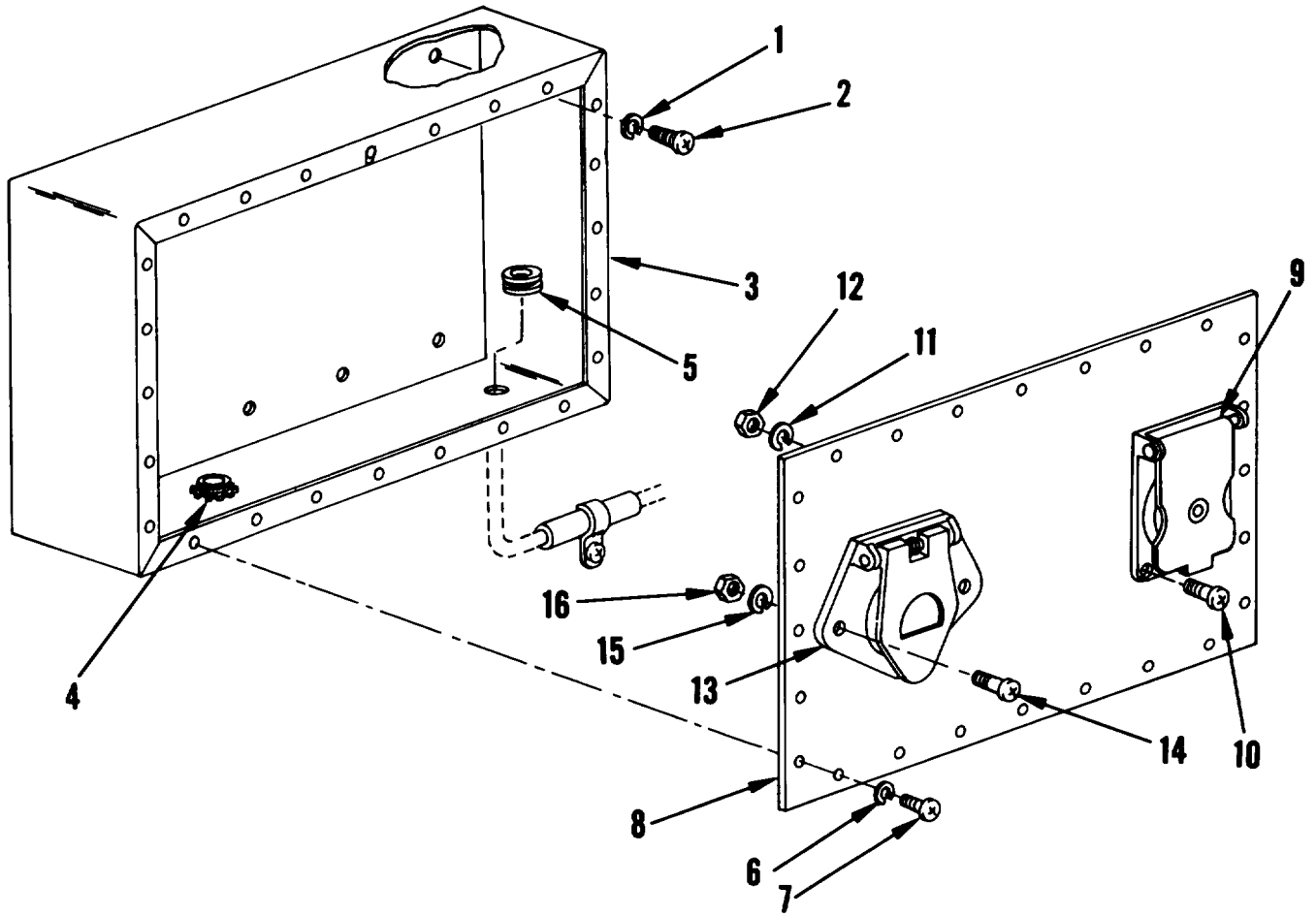


Figure 1. Resistor Box and Cover Assembly

SECTION II.

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 06 ELECTRICAL SYSTEM					
GROUP 0608 MISCELLANEOUS ELECTRICAL ITEMS					
FIG. 1 RESISTOR BOX AND COVER ASSEMBLY					
1	PAOZZ	96906	MS35338-44	WASHER, LOCK	10
2	PAOZZ	96906	MS24629-57	SCREWTRAPPING, THREA	10
3	PAOZZ	19207	1254026	TERMINAL BOX	1
4	XDOZZ	19207	12360387	COUPLING BOSS	1
5	PAOZZ	70485	A12113	GROMMET, NONNETALLIC	1
6	PAOZZ	96906	MS35338-43	WASHERLOCK	24
7	PAOZZ	96906	MS24629-45	SCREW, TAPPING, THREA	24
8	PAOZZ	19207	12354025	COVER, ACCESS	1
9	PAOZZ	19207	7731428	.COVER, ELECTRICAL CO.....	1
10	PAOZZ	96906	M5S35206-281	.SCREW, MACHINE	4
11	PAOZZ	96906	MS35338-44	.WASHER, LOCK	4
12	PAOZZ	363178	MS35649-2252'	.NUT, PLAINHEXAGON	4
13	PAOZZ	19207	12315557	.CONNECTOR/RECEPTACLE	1
14	PAOZZ	96906	MS35206-296	.SCREW, MACHINE	2
15	PAOZZ	96906	MS35338-45	.WASHER, LOCK	2
16	PAOZZ	96906	MS35649-2312	.NUT, PLAIN, HEXAGON	2

END OF FIGURE

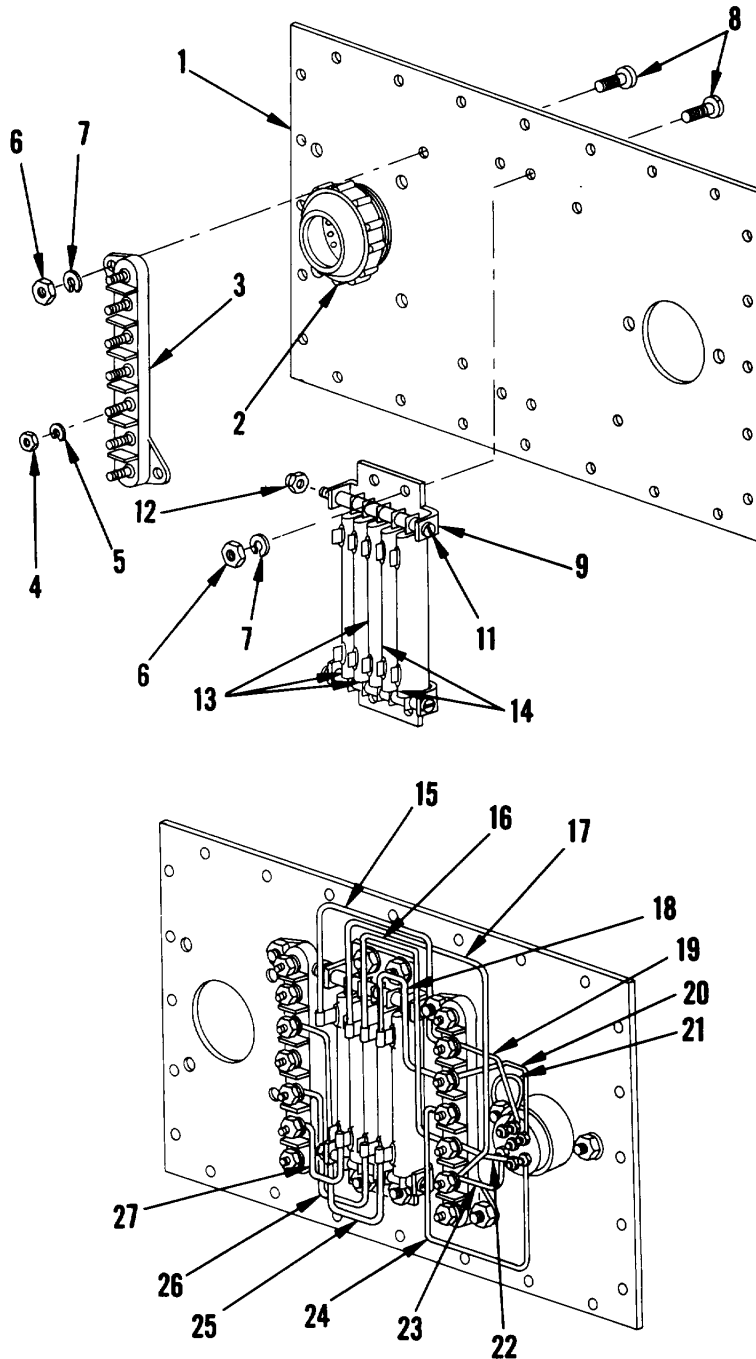


Figure 2. Components of Resistor Box Cover Assembly

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 0608 MISCELLANEOUS ELECTRICAL ITEMS					
FIG. 2 COMPONENTS OF RESISTOR BOX COVER ASSEMBLY (REFER TO FIG. 1 FOR NEXT HIGHER ASSEMBLY)					
1	PBOZZ	19207	12354025	.COVER, ACCESS	1
2	PAOZZ	96906	MS75021-1	.CONNECTOR, RECEPTACL	1
3	PADZZ	19207	12360363	.TERMINAL BOARD	2
4	PAOZZ	96906	MS35650-302	.NUT, PLAIN, HEXAGON	14
5	PAOZZ	96906	MS35333-39	.WASHER, LOCK	14
6	PAOZZ	96906	MS35649-202	.NUT, PLAIN, HEXAGON	8
7	PAOZZ	96906	MS35338-43	.WASHER, LOCK	8
8	PADZZ	96906	MS35206-265	..SCREW, MACHINE	8
9	PAOZZ	19207	12315505	..BRACKET, DOUBLE ANGL	2
10	PFOZZ	19207	12360366	..RESISTOR ASSEMBLY	1
11	PAOZZ	96906	MS35207-274	..SCREW, MACHINE	2
12	PAOZZ	96906	MS21044N3	..NUT, SELF-LOCKING, HE	2
13	PAOZZ	81349	RW22-V4R5	..RESISTOR, FIXED, WIRE (4.5 OHMS)	3
14	PAOZZ	81348	RW22V6RO	..RESISTOR, FIXED, WIRE (6 OHMS)	2
15	MOOZZ	19207	12360360-5	.WIRE ASSEMBLY MAKE FROM P/N	1
				(6448881146S	
16	MOOZZ	19207	12360360-4	.WIRE ASSEMBLY MAKE FROM P/N	1
				(64488) 81142S	
17	MOOZZ	19207	12360360-7	.WIRE ASSEMBLY MAKE FROM P/N	1
				(6448881143S	
18	MOOZZ	19207	12360360-6	.WIRE ASSEMBLY MAKE FROM P/N	1
				(64488 81L44S	
19	MOOZZ	19207	12360361-5	.WIRE ASSEMBLY MAKE FROM P/N	1
				(6418881146S	
20	MOOZZ	19207	12360361-6	.WIRE ASSEMBLY MAKE FROM P/N	1
				(64488)81144S	
21	MOOZZ	19207	12360361-1	.WIRE ASSEMBLY MAKE FROM P/N	1
				(64488)81147S	
22	MOOZZ	19207	12360361-3	.WIRE ASSEMBLY MAKE FROM P/N	1
				(64488J81142S.....	
2.3	MOOZZ	19207	12360361-2	.WIRE ASSEMBLY MAKE FROM P/N	1
				(64488 81143S	
24	PAOZZ	19207	12360361-4	.LEAD, ELECTRICAL RED.....	1
25	MOOZZ	19207	12360360-3	.WIRE ASSEMBLY MAKE FROM P/N	1
				(6448 818[[44S	
26	MOOZZ	19207	12360360-1	.WIRE ASSEMBLY MAKE FROM P/N 1	
				(644888[42S	
27	MOOZZ	19207	L2360360-2	.WIRE ASSEMBLY MAKE FROM P/N	1
				(644881 8146S	

END OF FIGURE

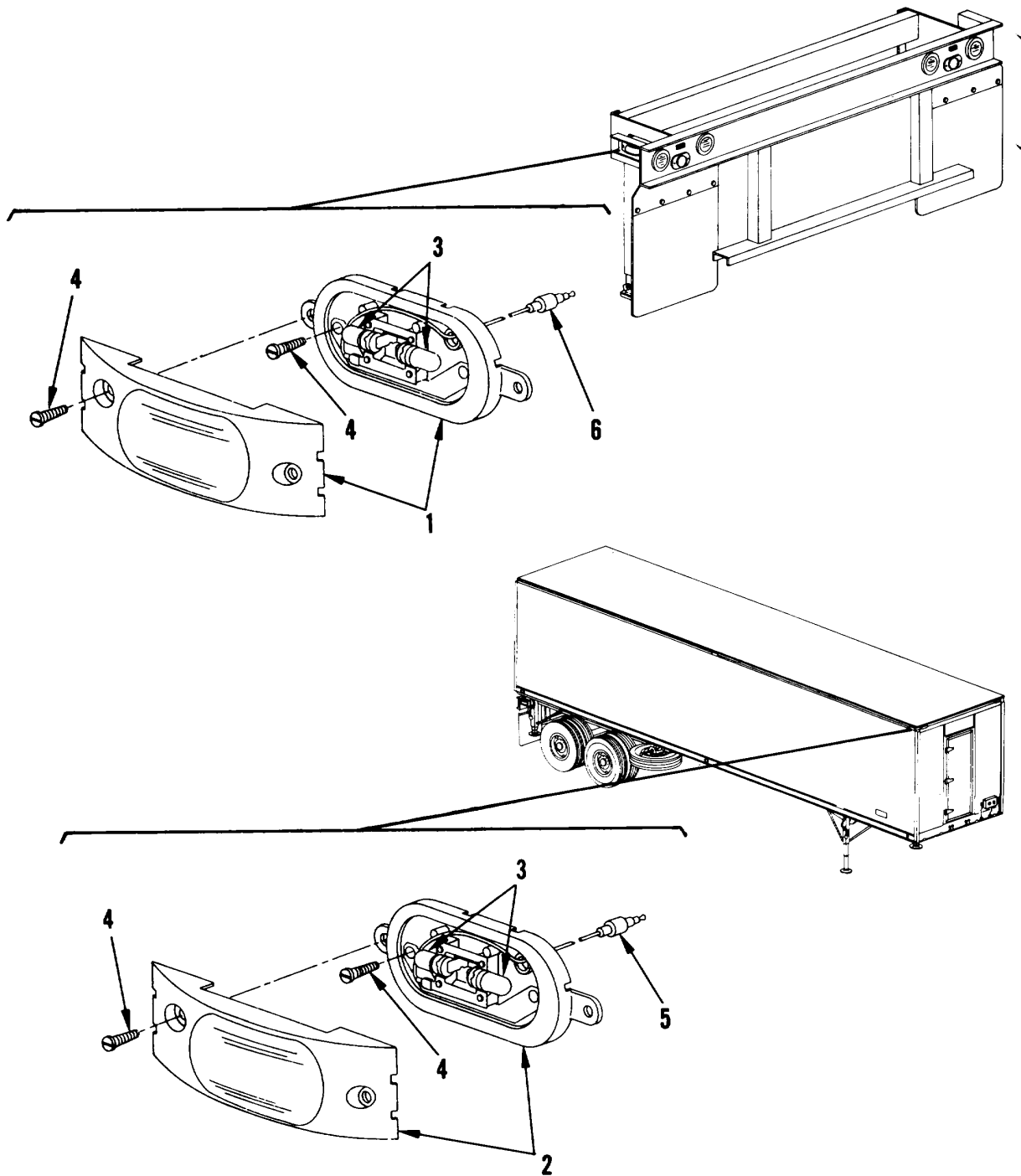


Figure 3. Light, Marker, Clearance

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
-------------------	--------------------	-------------	-----------------------	--	------------

GROUP 0609 LIGHTS

FIG. 3 CLEARANCE MARKER LIGHTS

1	PAOZZ	19207	12353969-1	LIGHT, MARKER, CLEARA RED	5
1	PAOZZ	19207	12353969-2	LIGHT, MARKER, CLEARA AMBER.....	6
2	PAOZZ	96906	MS15571-8	.LAMP, INCANDESCENT.....	22
3	PAOZZ	96906	MS24629-48	SCREWTAPPI NGTHREA	44
4	PAOZZ	19207	12354015	LEAD1ELECTRICAL	9
5	PAOZZ	19207	12353970	CABLE ASSEMBLY, SPEC.....	2

END OF FIGURE

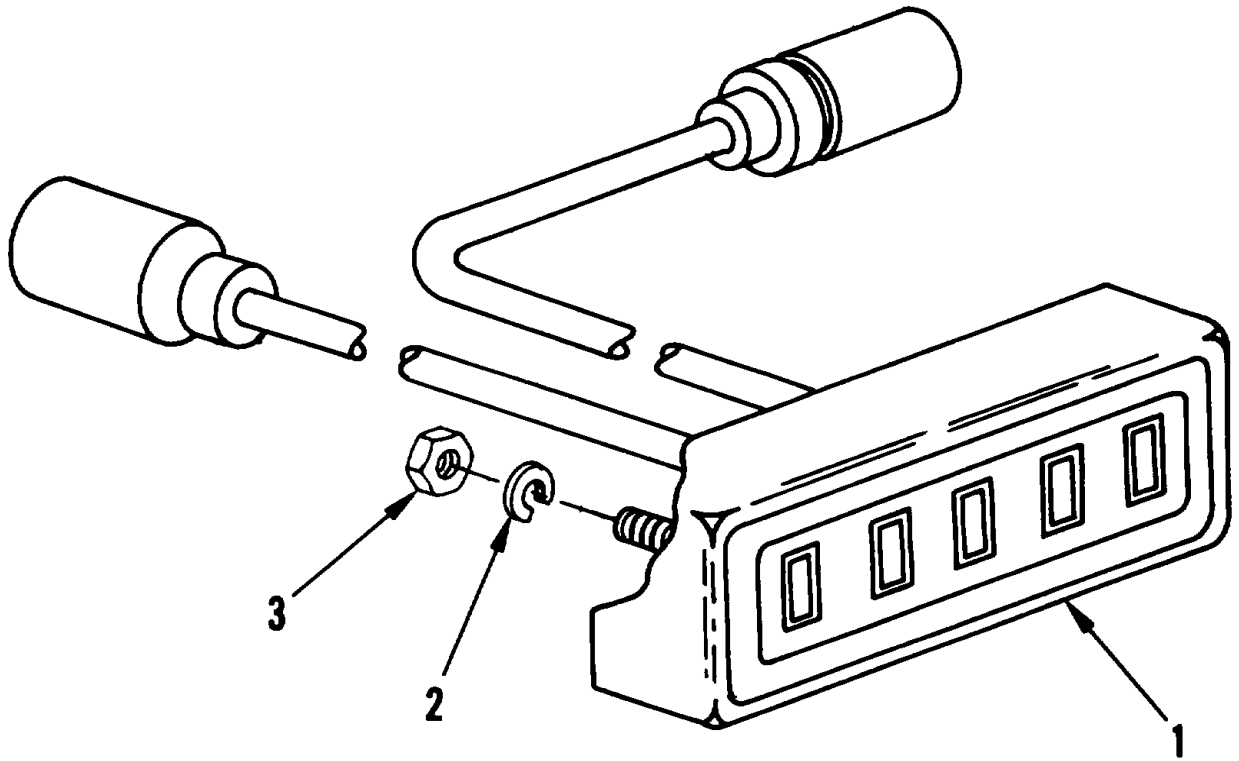


Figure 4. Light, Blackout, Stop and Tail

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
				GROUP 0609 LIGHTS	
				FIG. 4 BLACKOUT, STOP AND TAILLIGHT	
1	PAODO	19207	12258212-2	TAILLIGHT ASSY, BLAC.....	2
2	PAOZZ	96906	MS35338-42	WASHER,LOCK	4
3	PAOZZ	96906	MS35649-282	NUT, PLAIN,HEXAGON	4
				END OF FIGURE	

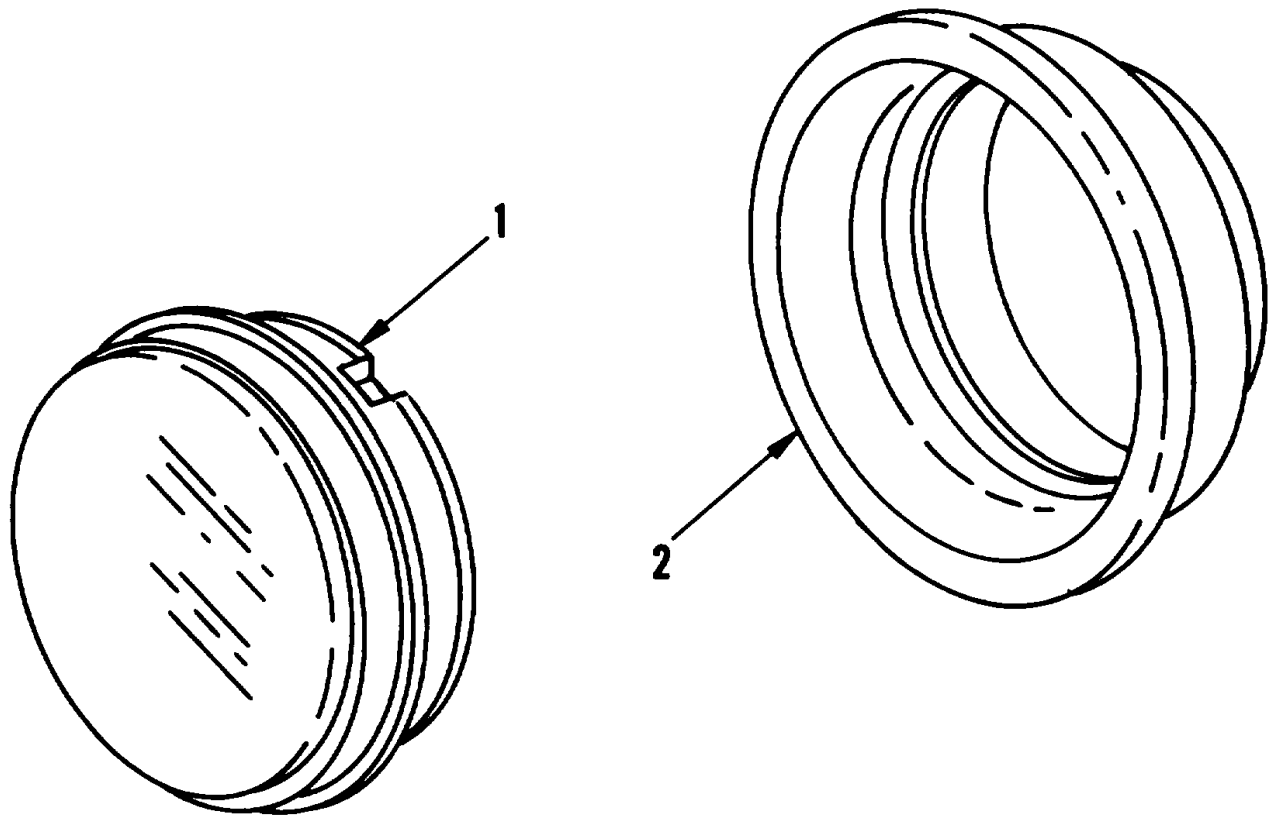


Figure 5. Light, Turn and Stop

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
				GROUP 0609 LIGHTS	
				FIG. 5 TURN AND STOP LIGHTS	
1	PAOZZ	19207	12353972	LAMP UNIT,VEHICULAR	4
2	PAOZZ	19207	12353971	CAP, PROTECTIVE, DUST.....	4
				END OF FIGURE	

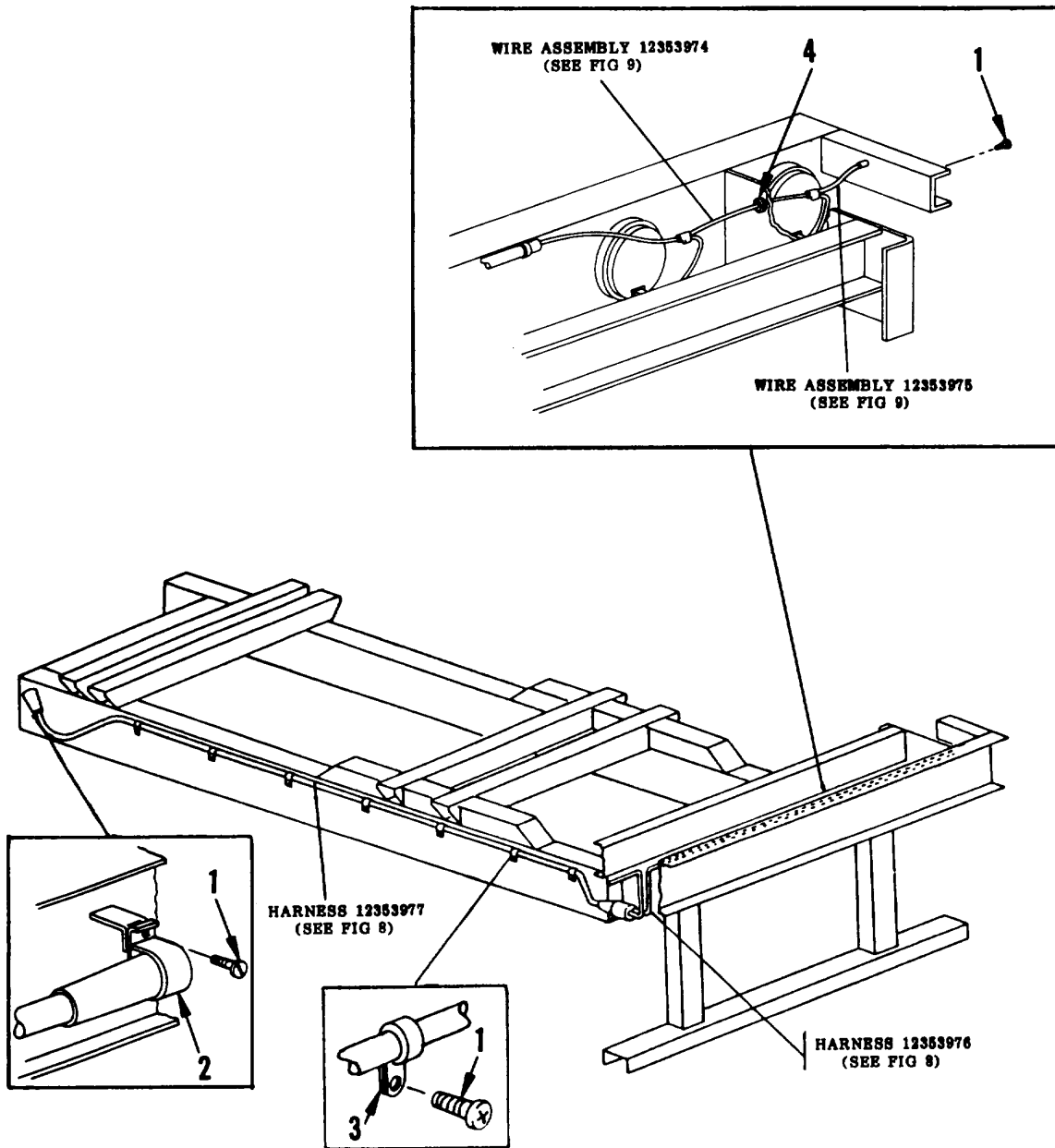


Figure 6. Wiring Harness Attaching Parts, Dolly

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
-------------------	--------------------	-------------	-----------------------	--	------------

GROUP 0613 WIRING HARNESS

FIG. 6 DOLLY WIRING HARNESS
ATTACHING PARTS

1	PAOZZ	96906	NS24629-48	SCREWTAPPING, THREA	18
2	PAOZZ	19201	12354144	SHELL, ELECTRICAL CO	2
3	PAOZZ	96906	MS21333-73	CLAMP, LOOP	14
4	PAOZZ	96906	MS35489-78	GROMMETNONMETALLIC	2

END OF FIGURE

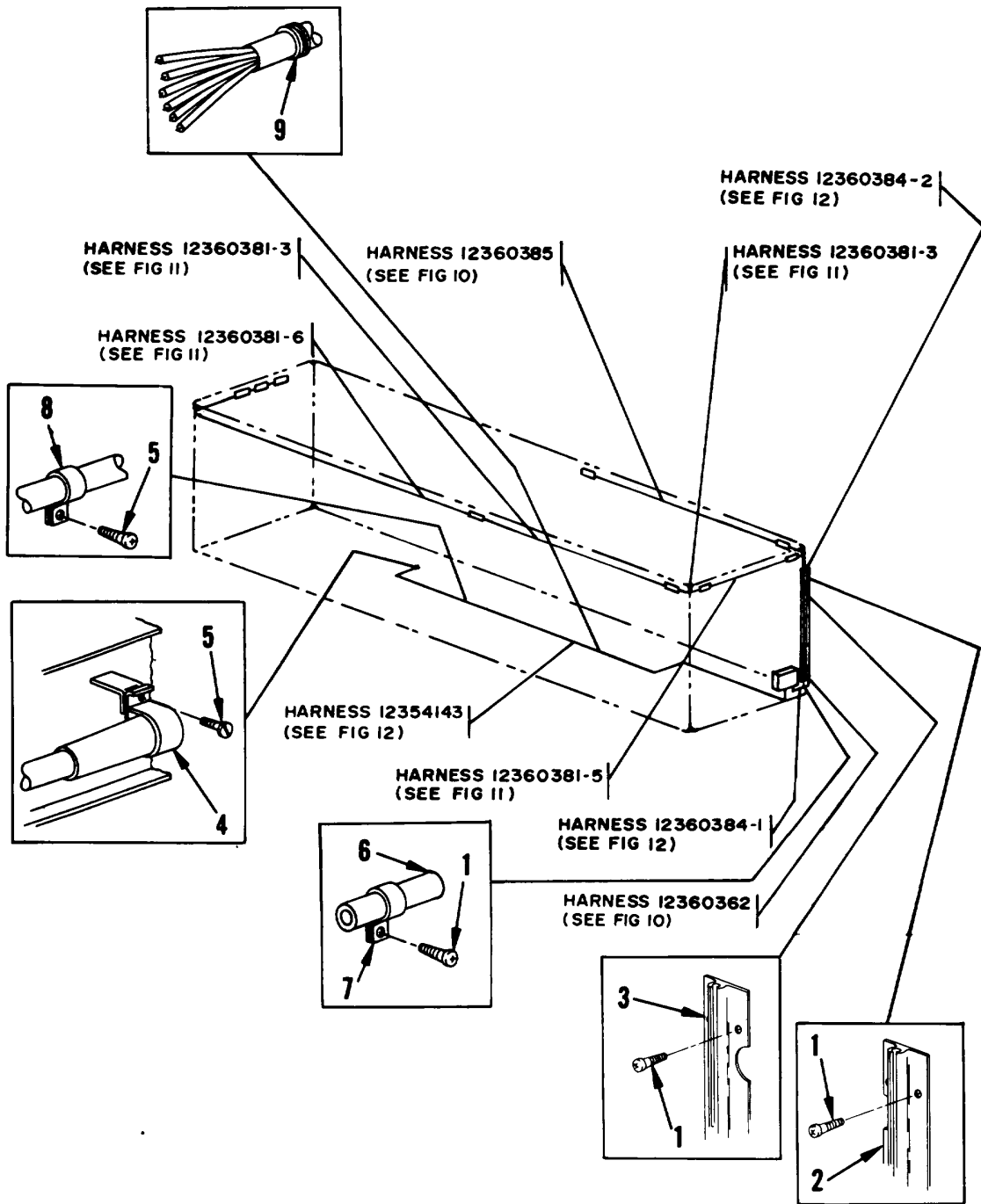


Figure 7. Wiring Harness Attaching Parts, Van Body

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 0613 WIRING HARNESS					
FIG. 7 VAN BODY WIRING HARNESS					
ATTACHING PARTS					
1	PAOZZ	96906	MS24629-45	SCREW,TAPPING, THREA	41
2	PBOZZ	19207	12354149-1	RETAINER, ELECTRIC C	1
3	XDOZZ	19207	12354149-2	CLAMP, LOOP	1
4	PAOZZ	19207	12354144	SHELL, ELECTRICAL CO	1
5	PAOZZ	96906	MS24629-48	SCREW, TAPPING,THREA	17
6	PAOZZ	19207	CPR104420-2	HOSE, NONMETALLIC MAKE FROM P/N	1
				(06853) 246115	
7	PAOZZ	96906	MS35150-5	STRAP,RETAINING	1
8	PAOZZ	96906	MS21333-73	CLAMP, LCOP	16
9	PAOZZ	96906	MS35489-46	GROMMET, NONMETALLIC	3

END OF FIGURE

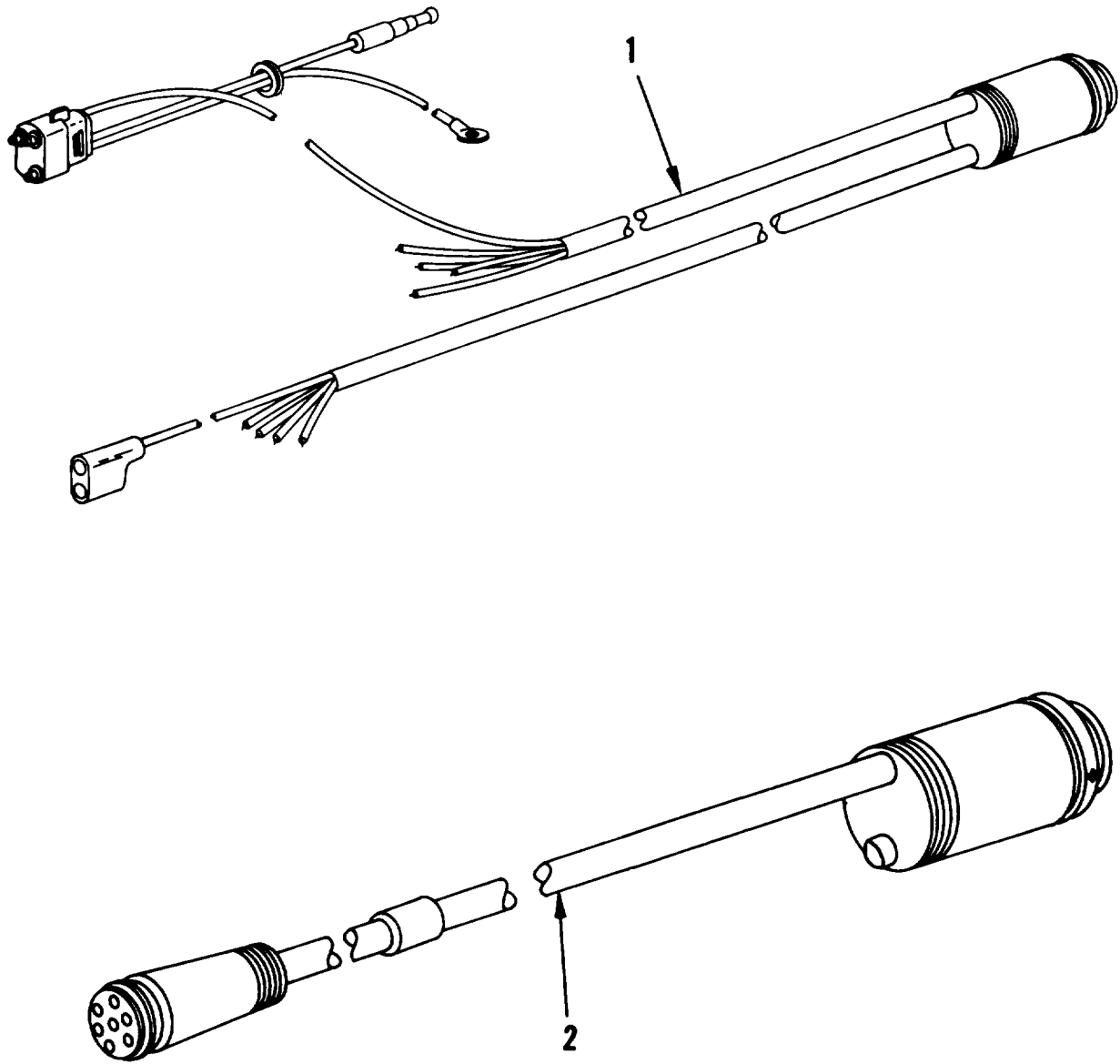


Figure 8. Wiring Harness, Dolly

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
				GROUP 0613 WIRING HARNESS	
				FIG. 8 DOLLY WIRING HARNESS	
1	PAOZZ	19207	12353976	WIRING HARNESS	1
2	PAOZZ	19207	12353977	CABLE ASSEMBLY, SPEC.....	1
				END OF FIGURE	

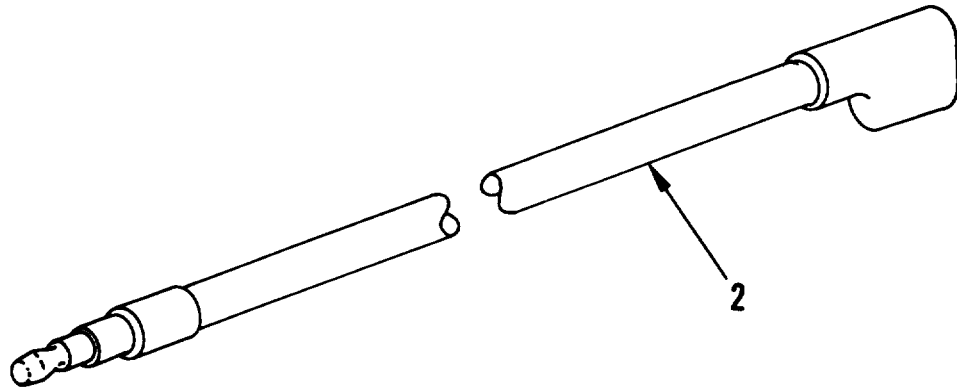
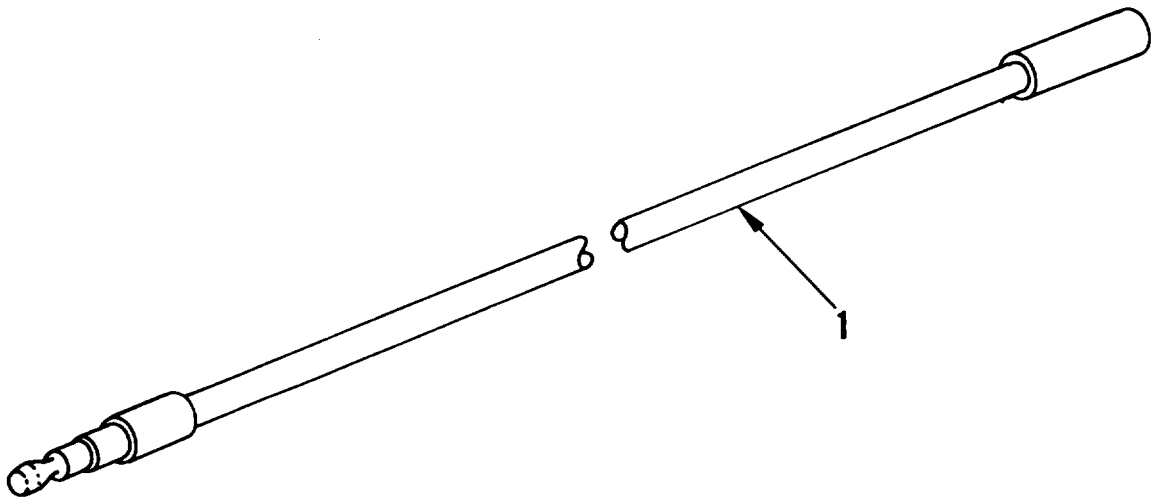


Figure 9. Wire Assembly, Dolly

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		

GROUP 0613 WIRING HARNESS

FIG. 9 DOLLY WIRE ASSEMBLY

1	PAOZZ	19207	12353975	LEAD ELECTRICAL	1
2	PAOZZ	19207	12353974	LEAD.ELECTRICAL	1

END OF FIGURE

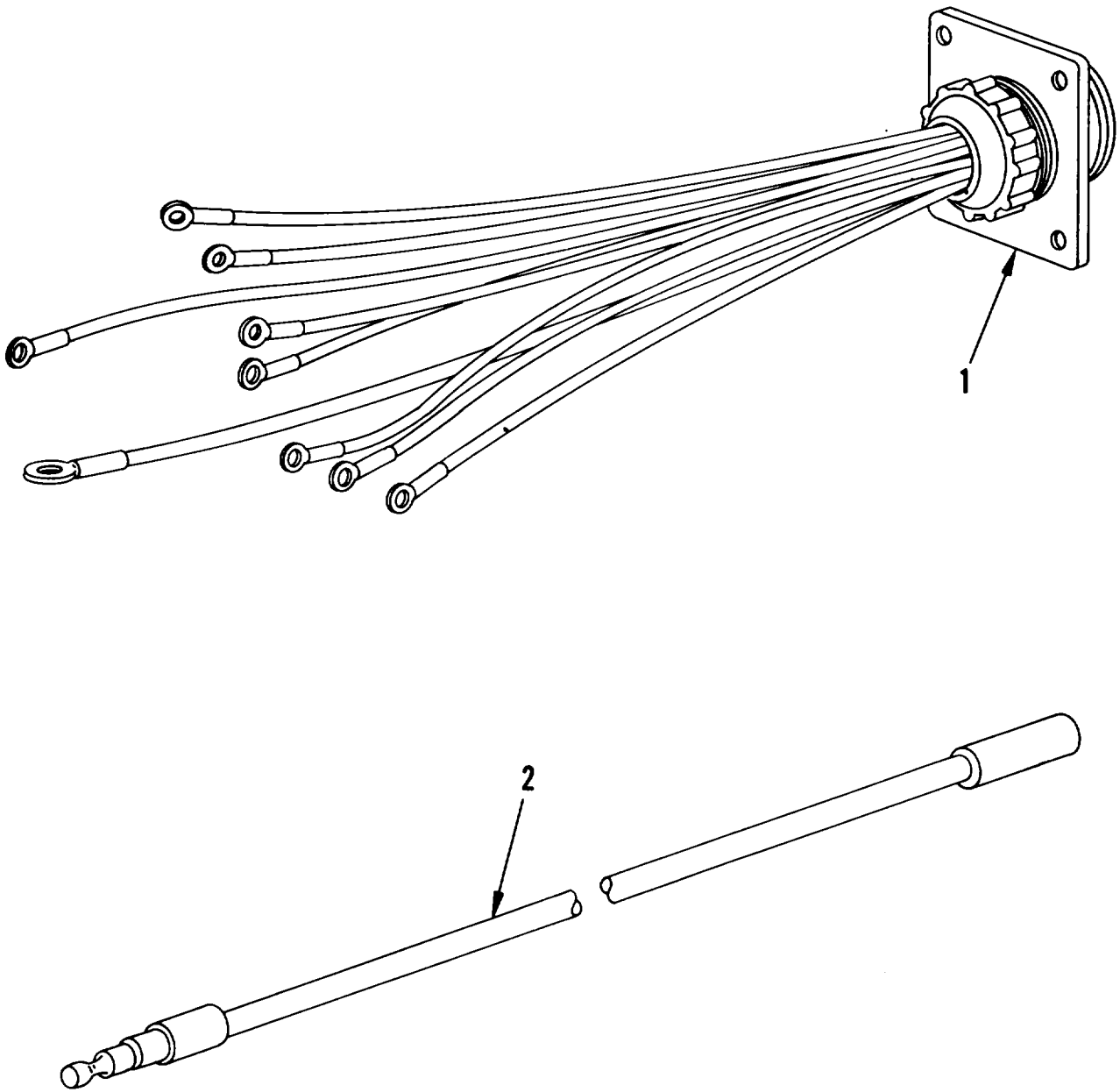


Figure 10. Wiring Harness, Van Body

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART		
NO	CODE	FSCM	NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
				GROUP 0613 WIRING HARNESS	
				FIG. 10 VAN BODY WIRING HARNESS	
1	XDOZZ	19207	12360362	CABLE ASSEMBLY, POWE	1
2	PAOZZ	19207	12360385-	LEAD,ELECTRICAL	1
				END OF FIGURE	

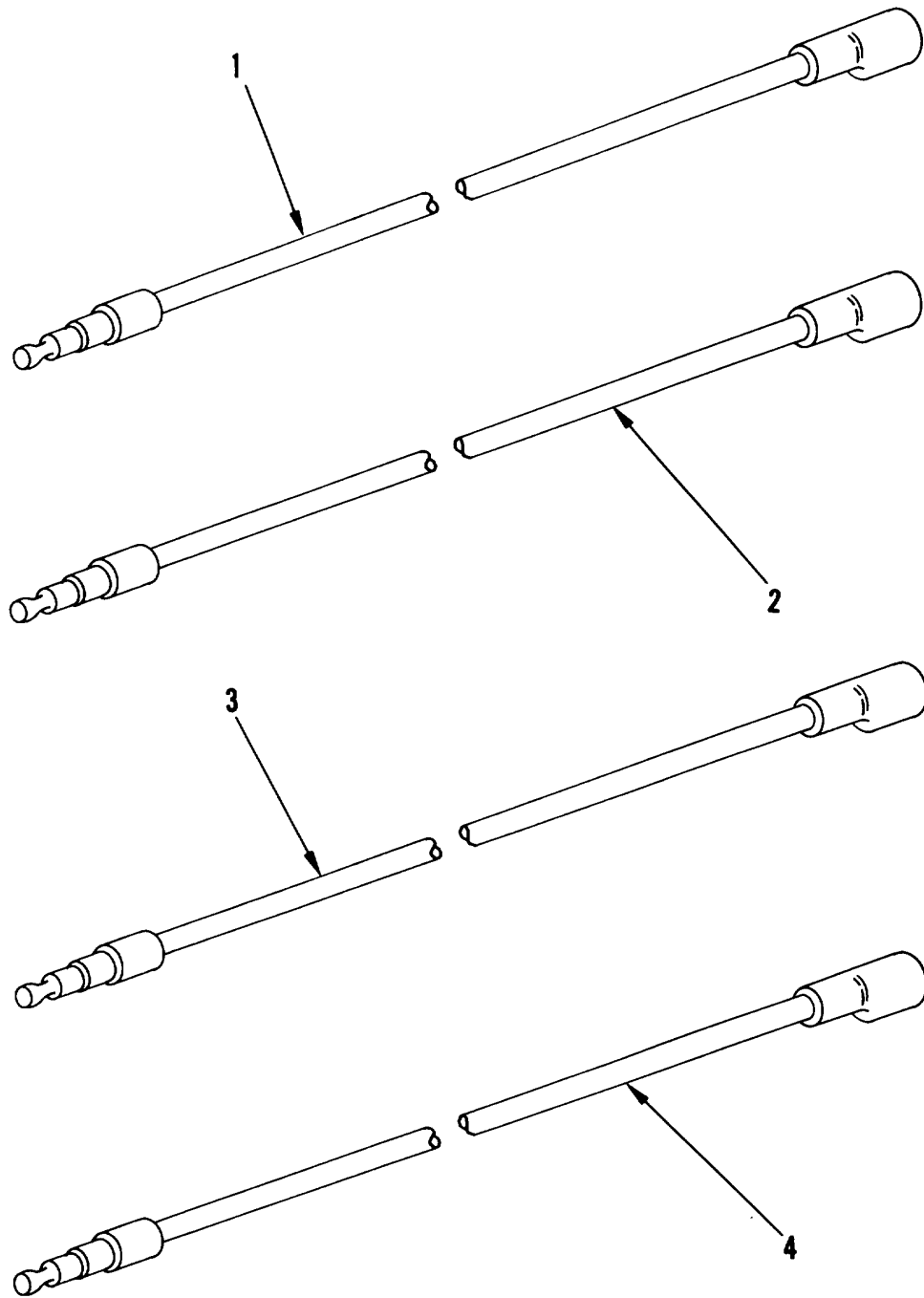


Figure 11. Wiring Harness, Van Body

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
				GROUP 0613 WIRING HARNESS	
				FIG. 11 VAN BODY WIRING HARNESS	
1	PAOZZ	19207	12360381-3	CABLE ASSEMBLY, SPEC.....	3
2	PAOZZ	19207	12360381-5	CABLE ASSEMBLY, SPEC.....	1
3	PAOZZ	19207	12360381-4	CABLE ASSEMBLY, SPEC.....	1
4	PAOZZ	19207	12360381-6	CABLE ASSEMBLY, SPEC.....	1

END OF FIGURE

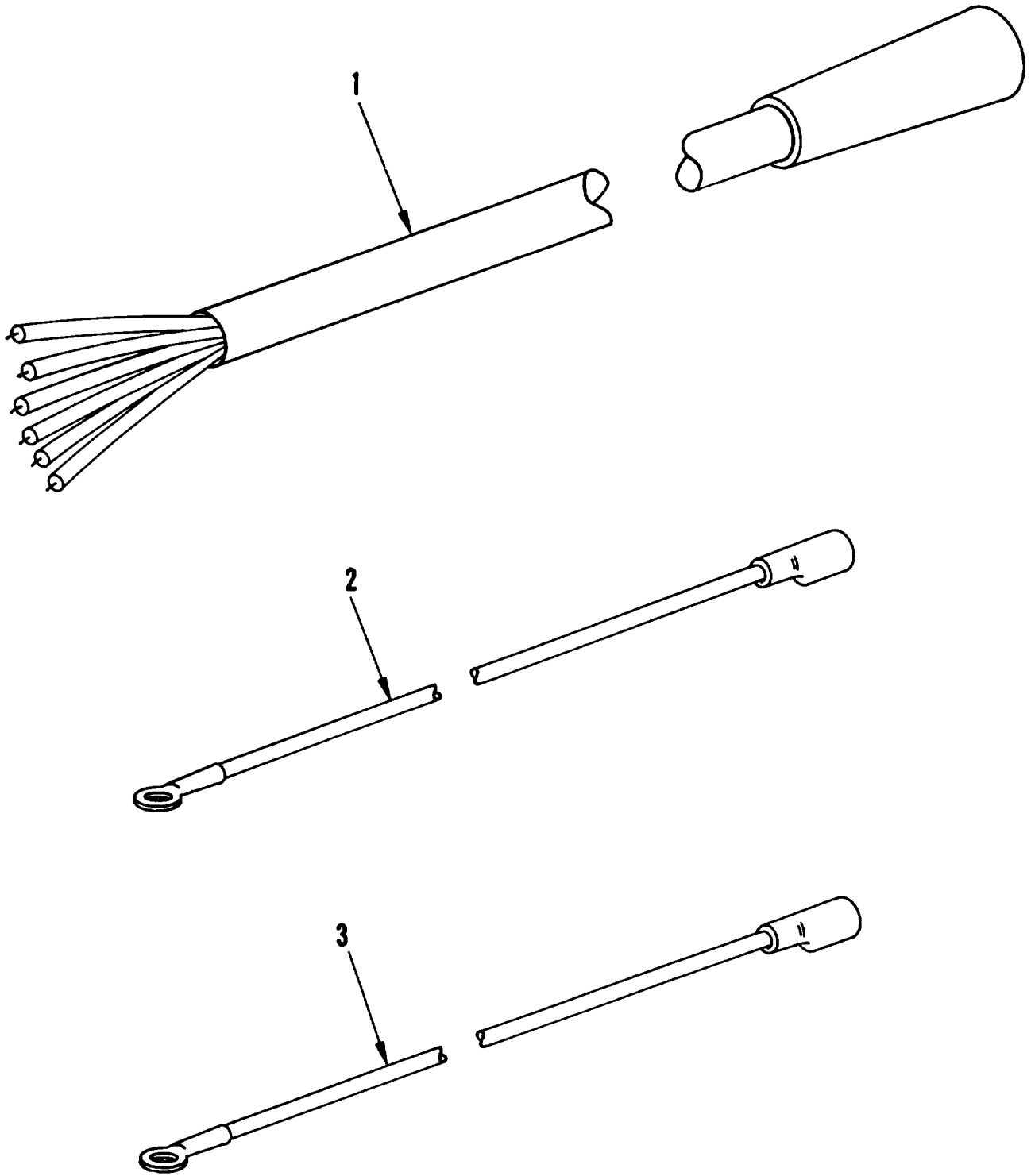


Figure 12. Wiring Harness, Van Body

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
				GROUP 0613 WIRING HARNESS	
				FIG. 12 VAN BODY WIRING HARNESS	
1	PAOZZ	19207	12354143	CABLE ASSEMBLY, SPEC	1
2	PAOZZ	19207	12360384-1	LEAD,ELECTRICAL	1
3	PAOZZ	19207	12360384-2	LEAD, ELECTRICAL	1
				END OF FIGURE	

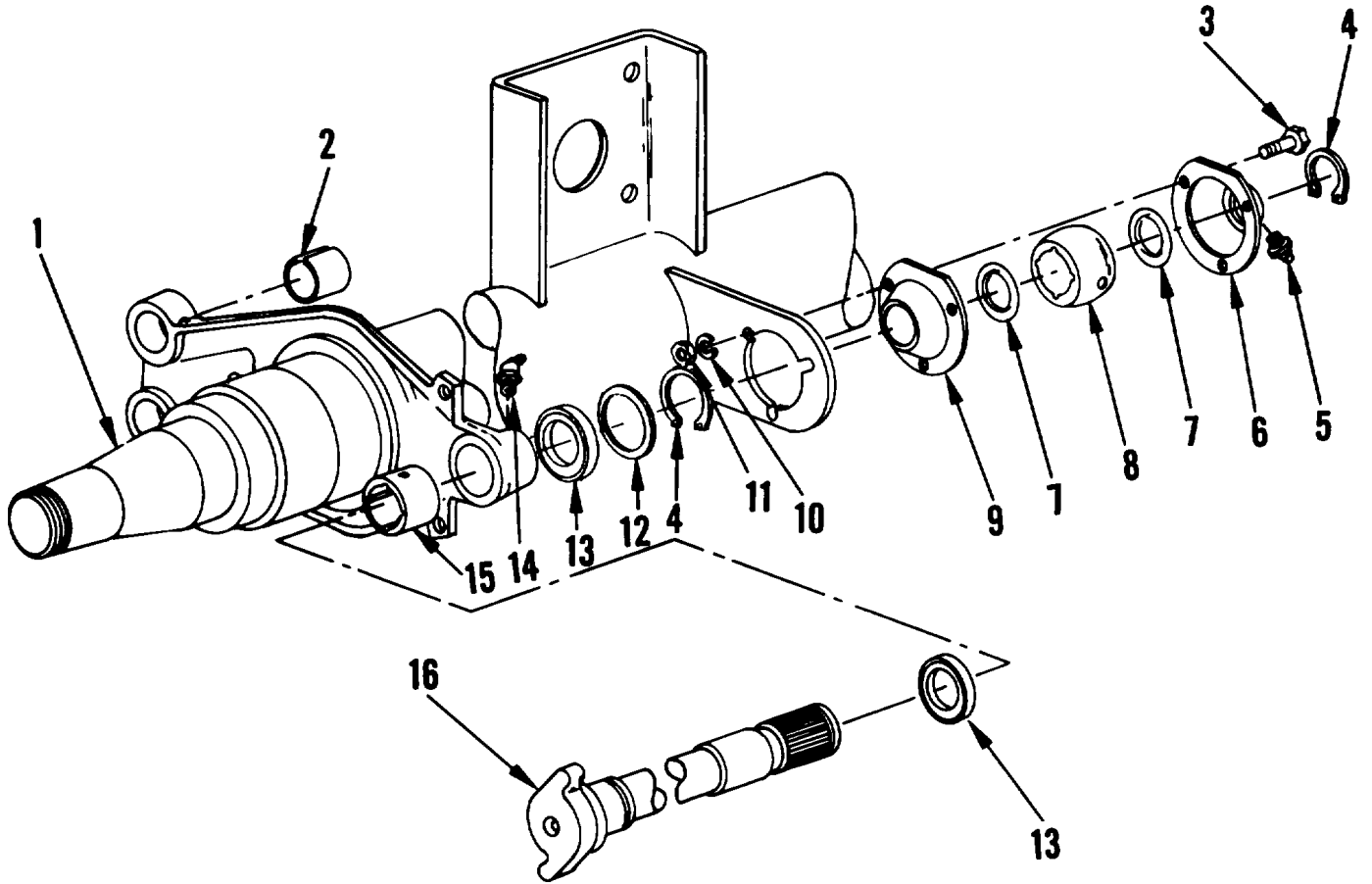


Figure 13. Rear Axle Assembly

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 11 REAR AXLE ASSEMBLY					
GROUP 1100 REAR AXLE					
FIG. 13 REAR AXLE ASSEMBLY					
1	PBFZZ	19207	12354156-2	AXLE, VEHICULAR, NOND.....	2
2	PAOZZ	19207	12354160	BUSHING, SLEEVE.....	8
3	PAOZZ	96906	MS90725-33	BOLT, MACHINE	12
4	PAOZZ	79136	5100-150HD	RING, RETAINING	8
5	PAOZZ	96906	MSI5001-1	FITTING, LUBRICATION.	4
6	PAOZZ	19207	12354105-2	HOUSING, MECHANICAL.....	4
7	PAOZZ	81349	M83461/1-325	PACKING, PREFORMED.....	8
8	PAOZZ	19207	12354109	BEARING, PLAIN, SPHER.....	4
9	PAOZZ	19207	12354105-1	HOUSING, MECHANICAL.....	4
10	PAOZZ	96906	MS35338-45	WASHER, LOCK	12
11	PAOZZ	96906	MS51922-9	NUT, SELF-LOCKING, HE	12
12	PAOZZ	19207	7534868	WASHER, FLAT	4
13	PAOZZ	62707	M16HH100	SEAL, BUSHING	8
14	PAOZZ	96906	MS15003-4	FITTING, LUBRICATION.....	4
15	PAOZZ	62707	M16HD100	BUSHING, SLEEVE.....	4
16	PAOZZ	19207	12354103	CAMSHAFT, ACTUATING,	2
16	PAOZZ	19207	12354104	CAMSHAFT, ACTUATING, RH	2

END OF FIGURE

SECTION II
1
2 THRU 8
8
9 THRU 11

TM 9-2330-380-14&P

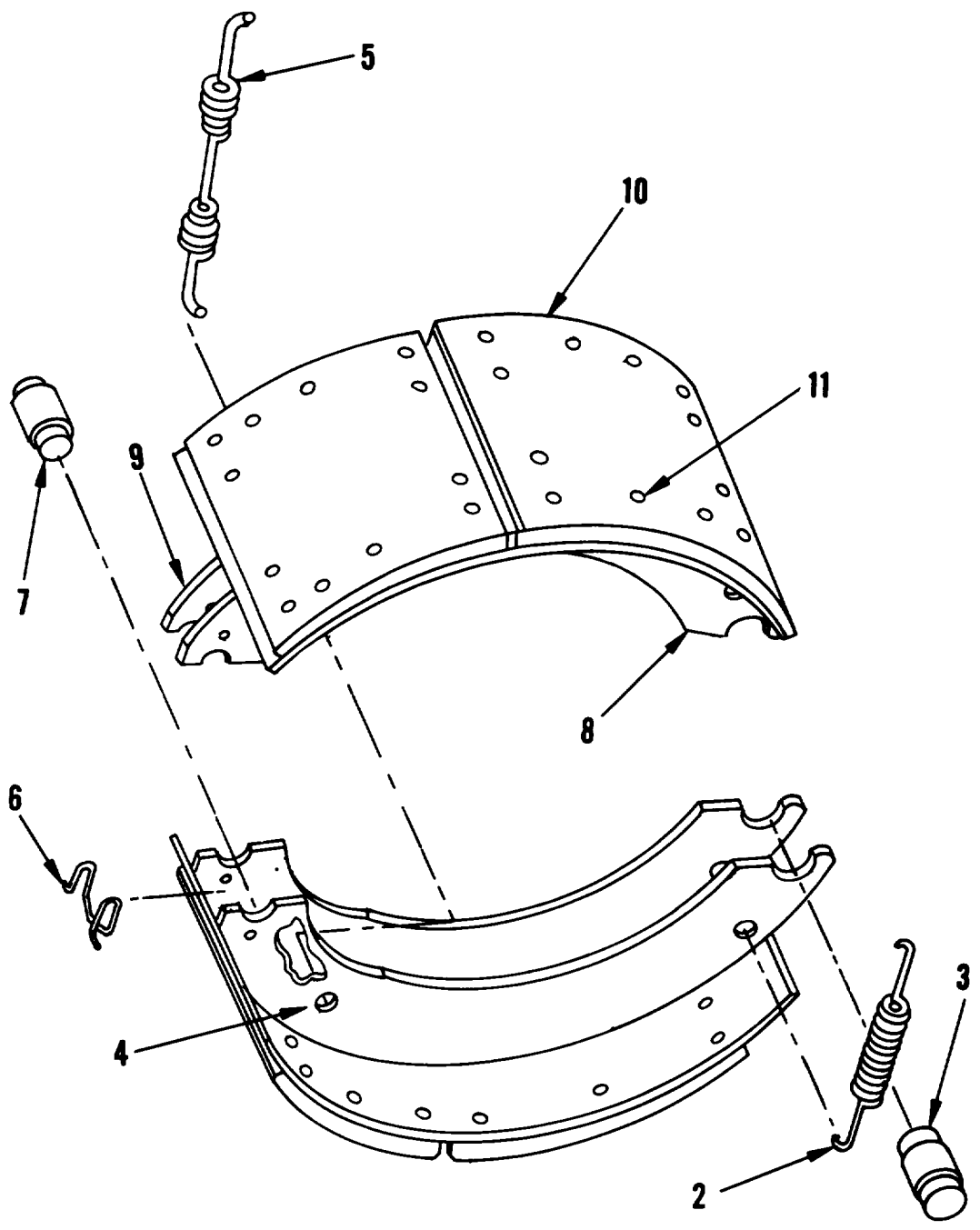


Figure 14. Brake Assembly

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 12 BRAKES	
				GROUP 1202 SERVICE BRAKES	
				FIG. 14 BRAKE ASSEMBLY	
1	PFOZZ	19207	12354163	BRAKE,SHOE TYPE	4
2	PAOZO	19207	12354152	.SPRING, HELICAL, EXTE.....	4
3	PAOZZ	19207	12354165	.PIN, SHOULDER, HEADLE.....	8
4	PAOZZ	62707	16WJ102	.CLIP, RETAINING	8
5	PAOZZ	62707	M16WJ100	.SPRING,HELICAL, EXTE.....	4
6	PAOZZ	62707	M16WJ103	.SPRING, HELICAL, TORS.....	8
7	PAOZZ	62707	M16WJ104	.PIN, SHOULDER, HEADLE.....	8
8	PAOFF	19207	12354166	.SHOE ASSEM BRAKE	2
9	XAOFF	19207	12354167	..BRAKE SHOE.....	2
10	PAOZF	62707	M6WL100	..LINING, FRICTION	2
11	PAFZZ	62707	M10HM100	..RIVET, TUBULAR.....	48

END OF FIGURE

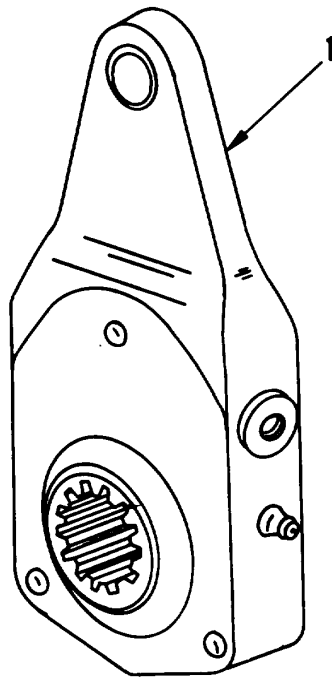


Figure 15. Slack Adjuster

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE	FSCM	NUMBER		
				GROUP 1202 SERVICE BRAKES	
				FIG. 15 SLACK ADJUSTER	
1	PAOZZ	19207	12354150	ADJUSTER, SLACK, BRAKE	4
				END OF FIGURE	

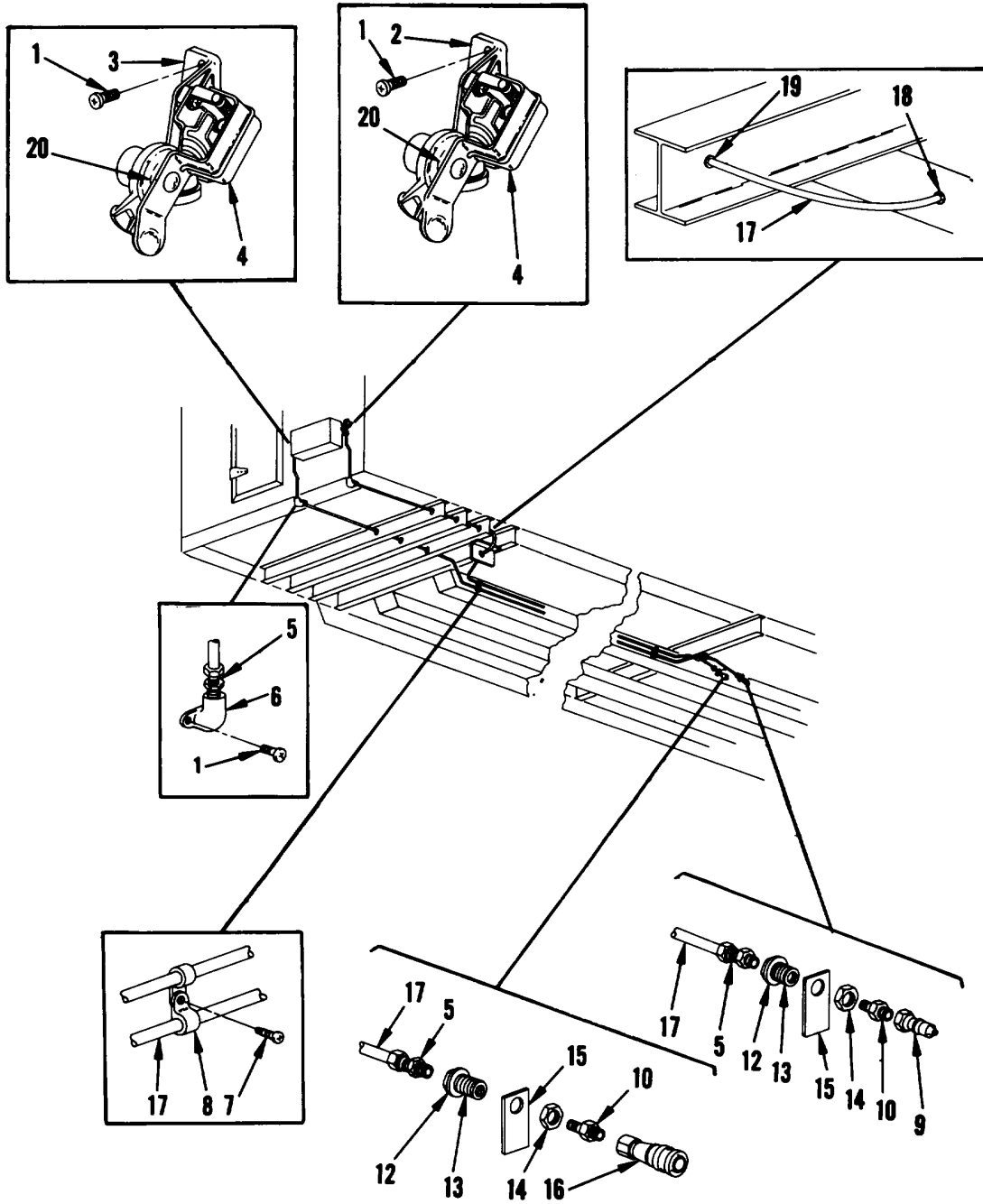


Figure 16. Piping, Air Brake, Van Body

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1208 AIR BRAKE SYSTEM					
FIG. 16 VAN BODY, BRAKE AIR LINES					
1	PAOZZ	96906	MS24629-61	SCREW, TAPPING, THREA	8
2	PAOZZ	19207	12315278	GLADHAND, EMERGENCY	1
3	PAOZZ	19207	12315280	GLADHAND, SERVICE	1
4	PAOZZ	19207	12315536	COVER, GLADHAND	2
5	PAOZZ	19207	12354108-2	CONNECTOR, MALE	6
6	PAOZZ	19207	12353895	ELBOW, FLANGE TO PIP	2
7	PAOZZ	96906	MS24629-45	SCREW, TAPPING, THREA	10
8	PAOZZ	96906	MS21333-69	CLAMP, LOOP	20
9	PAOZZ	73992	2K16	COUPLING HALF, QUICK.	1
10	PAOZZ	21450	443990	REDUCER, PIPE	2
11	PBOZZ	19207	12354138	ADAPTER BUSHING	2
12	PAOZZ	19207	12354138-2	.ADAPTER BUSHING	2
13	PADZZ	96906	MS35333-49	.WASHER, LOCK	2
14	PAOZZ	19207	12354138-1	.NUT, PLAIN, HEXAGON	2
15	PBOZZ	19207	12360359	SPACER, PLATE	2
16	PAOZZ	73992	2-H16	COUPLING HALF, QUICK	1
17	MOOZZ	19207	CPR104420-2	HOSE, NONIPE TALLILC MAKE FROM P/N	1
				(06853)246115	
18	PAOZZ	96906	MS35489-98	GROMMET, NONMETALLIC	1
19	PAOZZ	96906	MS35489-40	GROMMET, NONMETALLIC	6
20	PAOZZ	96906	MS35748-1	PACKING, PREFORMED	1

END OF FIGURE

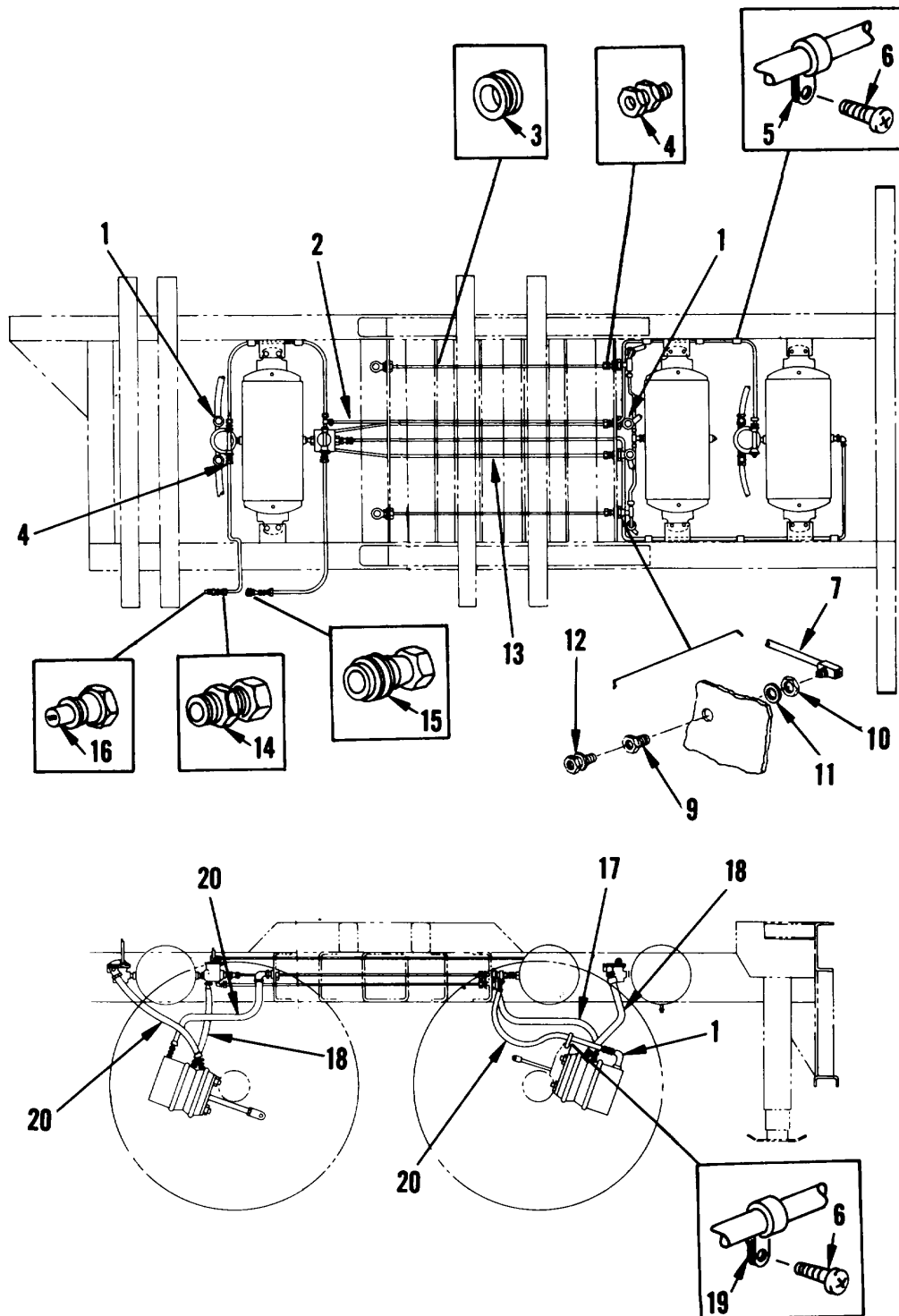


Figure 17. Piping, Air Brake, Dolly

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1208 AIR BRAKE SYSTEM					
FIG. 17 DOLLY, BRAKE AIR LINES					
1	PAOZZ	96906	MS39230-3	ELBOW,PIPE	12
2	MOOZZ	19207	CPR104420-2	HOSE, NONMETALLIC MAKE FROM P/N V (06853) 246115	
3	PAOZZ	96906	MS35489-78	GROMMET, NONMETALLIC-	32
4	PAOZZ	19207	12354108-2	CONNECTOR, MALE	2
5	PAOZZ	96906	MS21333-69	CLAMP, LOOP	9
6	PADZZ	96906	MS24629-45	SCREW STAPPING, THREA	11
7	PAOZZ	81343	6-661404250	TEE, TUBE	1
8	PBOZZ	19207	12354138	ADAPTER BUSHING.....	8
9	PADZZ	19207	12354138-2	.ADAPTER BUSHING.....	8
10	XDOZZ	19207	12354138-1	NUT, PLAIN, HEXAGON	8
11	PADZZ	96906	MS35333-49	.WASHER, LOCK	8
12	XDOZZ	93061	68NTA-8-6	ADAPTER, STRAIGHT, PI	3
13	MOOZZ	19207	CPR104420-3	HOSE, NON METALLIC MAKE FROM P/N V (19207)CPR104420-3	
14	PAOZZ	73992	2-H16	COUPLING HALF, QUICK.....	1
15	PAOZZ	81343	6-41001028A	CONNECTOR, TUBING, ST	2
16	PAOZZ	73992	2K16	COUPLING HALF, QUICK.	1
17	PAOZZ	19207	12354046-2	HOSE ASSEMBLY, NONME	2
18	PAOZZ	19207	12354046-3	HOSE ASSEMBLY, NONME	4
19	PAOZZ	96906	MS21333-73	CLAMP, LOOP.....	2
20	PAOZZ	19207	12354046-1	HOSE ASSEMBLY,NONME	6

END OF FIGURE

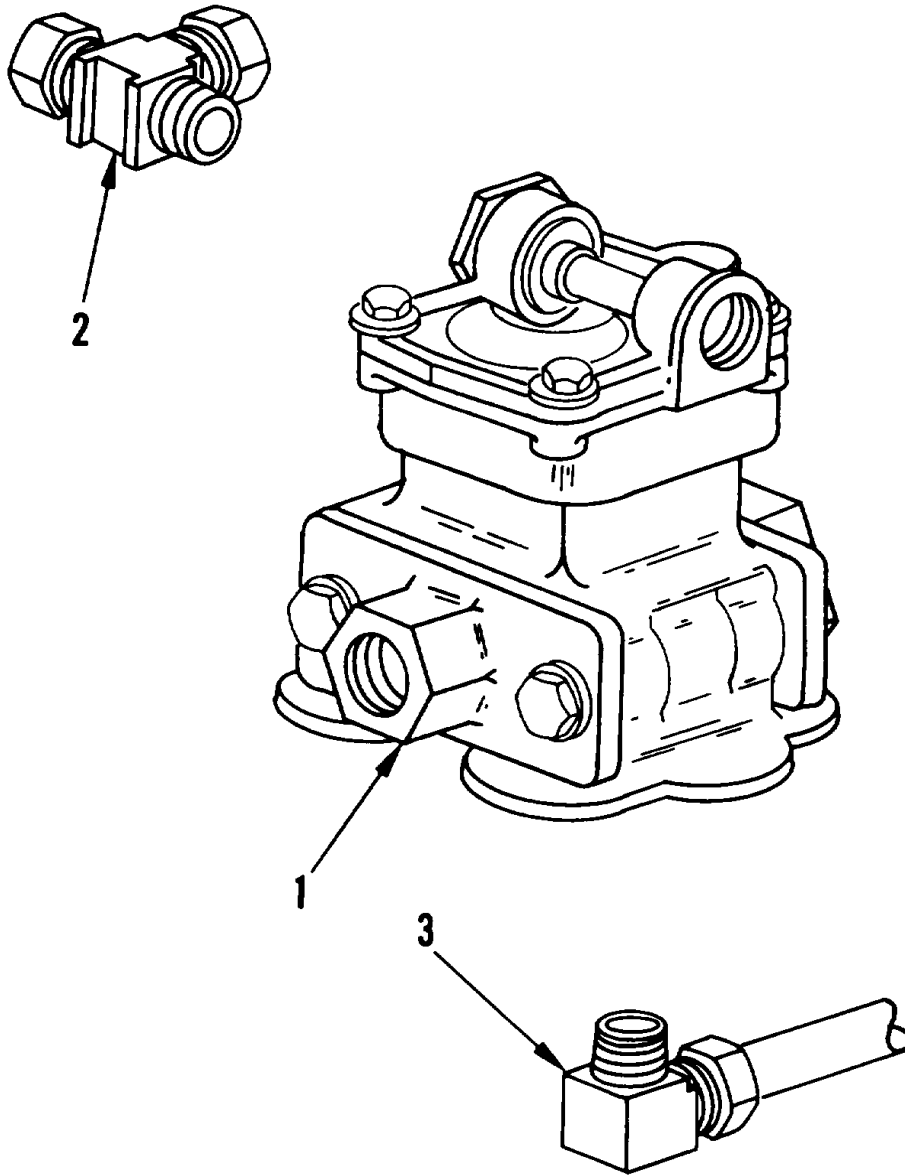


Figure 18. Ratio Relay Valve

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1208 AIR BRAKE SYSTEM					
FIG. 18 RATIO RELAY VALVE					
1	PAOZZ	10125	110180	VALVE, RELAY,AIR PRE	1
2	PAOZZ	19207	12354111	TEE, PIPE TO TUBE	1
3	XDOZZ	81343	8-8100202BA	ELBOW, PIPE TO TUBE	2

END OF FIGURE

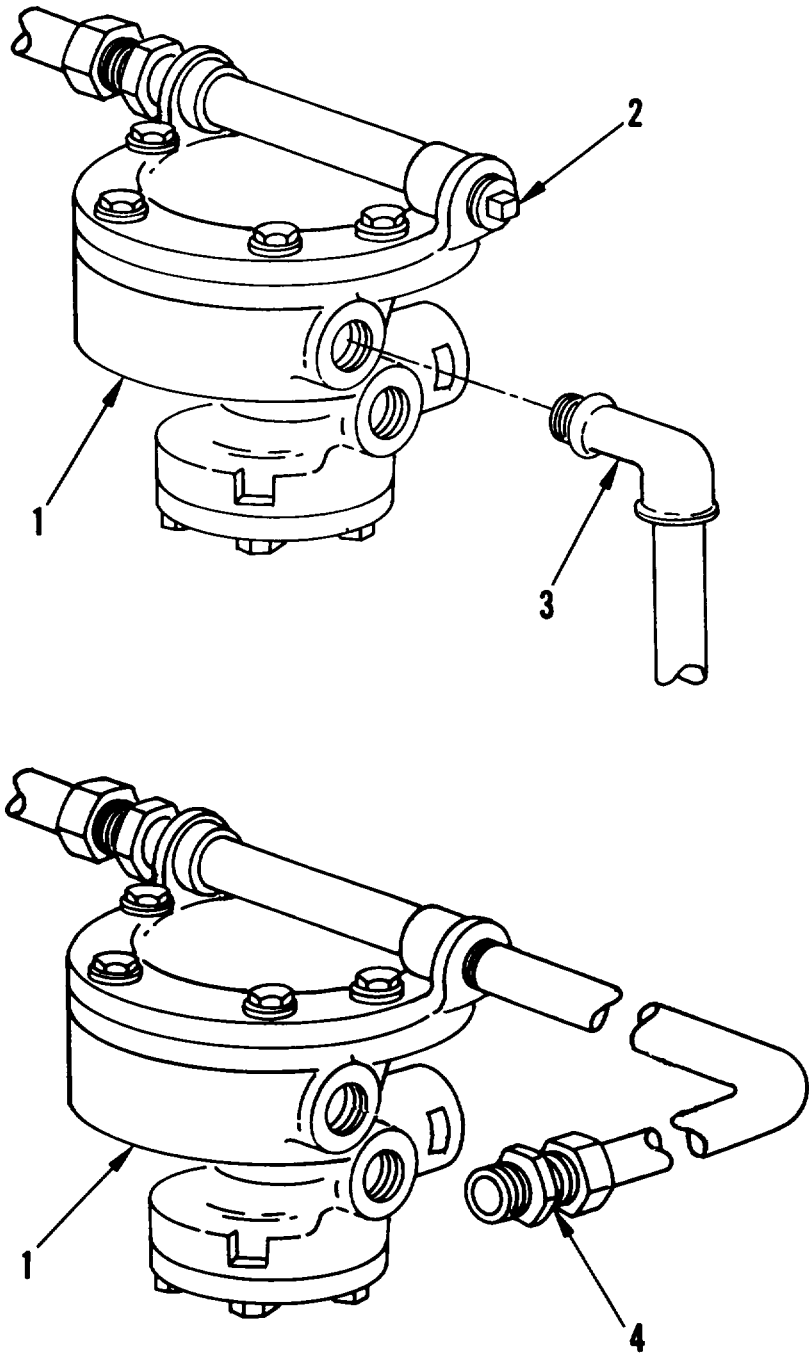


Figure 19. Relay valve

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
GROUP 1208 AIR BRAKE SYFEM					
FIG. 19 RELAY VALVE					
1	PAOZZ	19207	12354140	VALVE,RELAY, AIR PRE	2
2	PAOZZ	24617	444583	PLUG, PIPE	2
3	PAOZZ	96906	MS39230-2	ELBOW, PIPE	4
4	PAOZZ	19207	12354108-2	CONNECTOR, MALE	4

END OF FIGURE

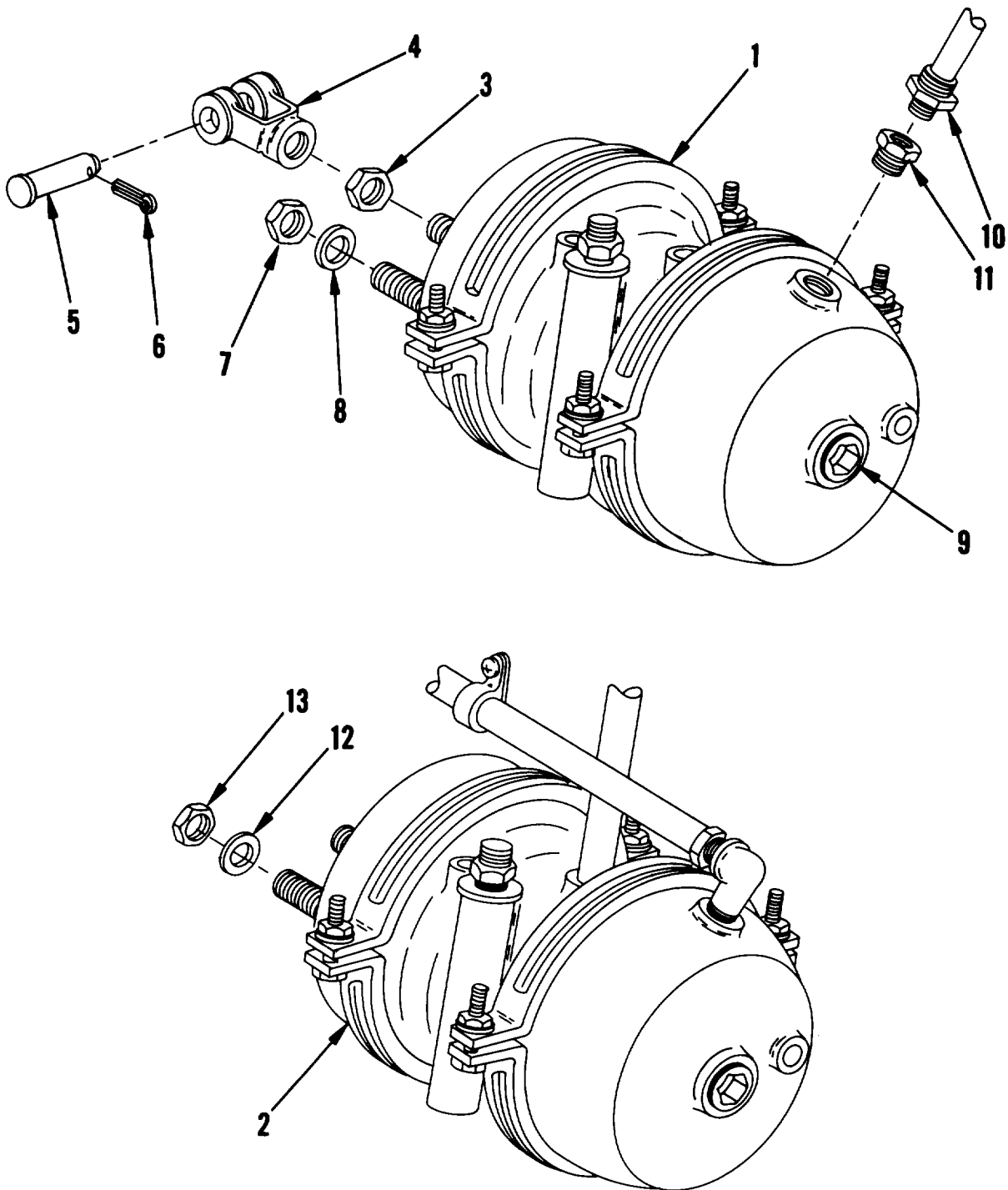


Figure 20. Brake Air Chamber

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1208 AIR BRAKE SYSTEM					
FIG. 20 BRAKE AIR CHAMBER					
1	PAOZZ	19207	12353997	CHAMBER, AIR BRAKE U/O FRONT LEFT	2
				AND REAR RIGHT	
2	PAOZZ	19207	12354007	CHAMBER, AIR BRAKE U/O REAR LEFT.....	2
				AND FRONT RIGHT	
3	PAOZZ	96906	MS51968-20	.NUT, PLAIN, HEXAGON	4
4	PAOZZ	19207	12360344	.CLEVIS, ROD END.....	4
5	PAOZZ	19207	12360345	.PIN, STRAIGHT, HEADED.....	4
6	PAOZZ	96906	MS24665-370	.PIN, COTTER	4
7	PAOZZ	96906	MS51922-49	.NUT, SELF-LOCKING, HE	8
8	PAOZZ	96906	MS27183-21	.WASHER, FLAT	8
9	PAOZZ	21450	444710	.PLUG	4
10	PAOZZ	19207	12360347	ADAPTER, STRAIGHT, TU.....	12
11	XDOZZ	81343	6-4140140C	ADAPTER BUSHING.....	12
12	PAOZZ	96906	MS35338-50	WASHER, LOCK	8
13	PAOZZ	96906	MS17828-10C	NUT, SELF-LOCKING, HE	8

END OF FIGURE

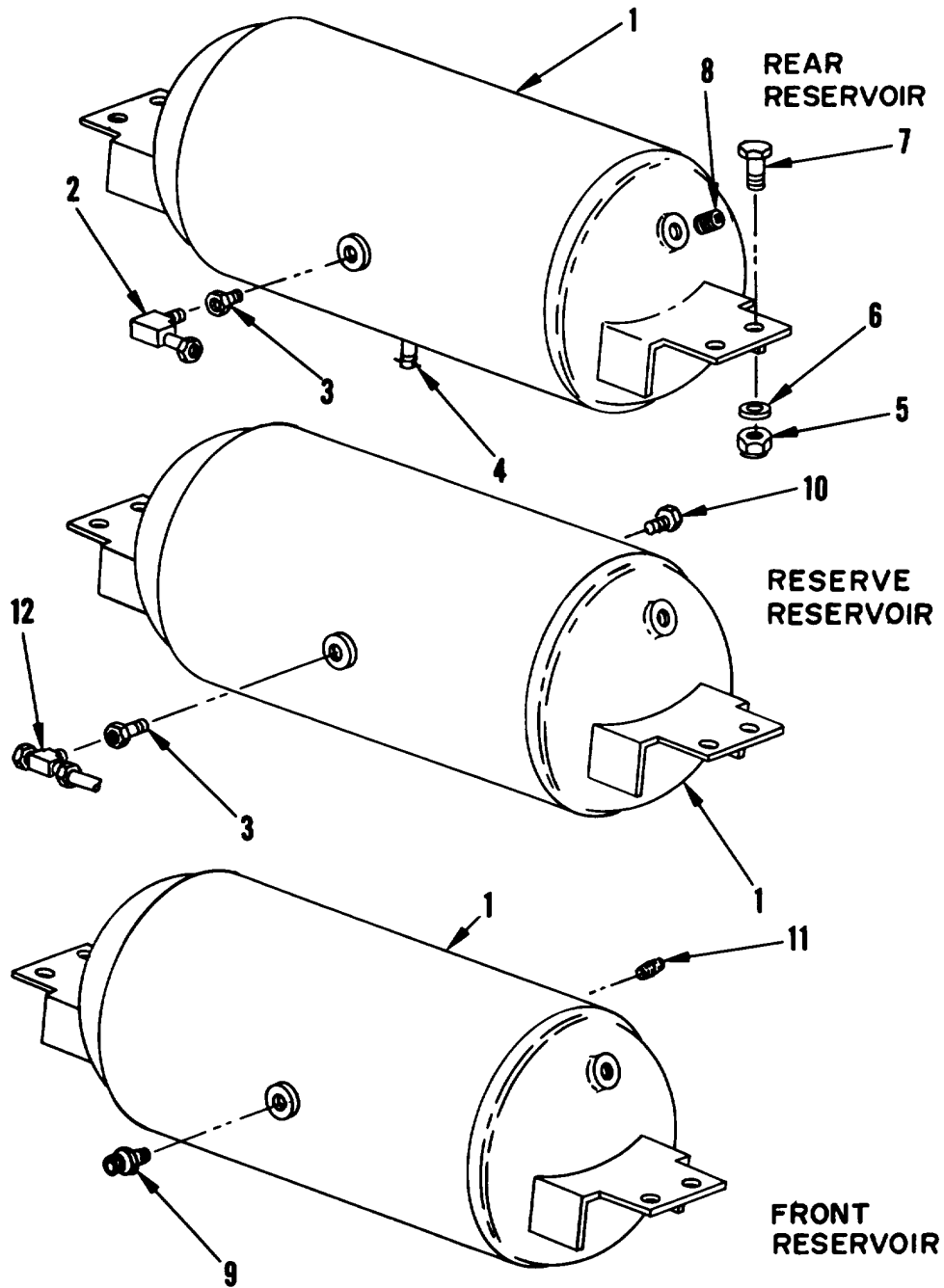


Figure 21. Air Reservoir

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
GROUP 1208 AIR BRAKE SYSTEM					
FIG. 21 AIR RESERVOIR					
1	PBOZZ	19207	12354102	TANK, PRESSURE.....	3
2	XDOZZ	81343	6-6100202BA	ELBOW, TUBE	1
3	PAOZZ	96906	MS14315-4	BUSHING, PIPE U/O FRONT AND REAR.....	2
				RESERVOIRS	
4	PAOZZ	96906	MS35782-5	COCK, DRAIN	3
5	PAOZZ	96906	NS51922-17	NUT, SELF-LOCKING, HE	12
6	PAOZZ	96906	NS27183-14	WASHER,FLAT	12
7	PAOZZ	96906	MS90725-60	SCREW, CAP, HEXAGON	12
8	PAOZZ	89346	444624	PLUG, PIPE	6
9	XDOZZ	19207	12354132-2	REDUCER, PIPE U/O FRONT AND REAR.....	2
				RESERVOIRS	
10	XDOZZ	79470	C3159X12	PLUG, PIPE U/O RESERVE RESERVOIR	1
11	PAOZZ	50663	NP5053238	NIPPLETPIPE U/O FRONT RESERVOIR.....	1
12	PAOZZ	19207	12354107	TEE, PIPE TO TUBE U/O RESERVE.....	1
				RESERVOIR.....	

END OF FIGURE

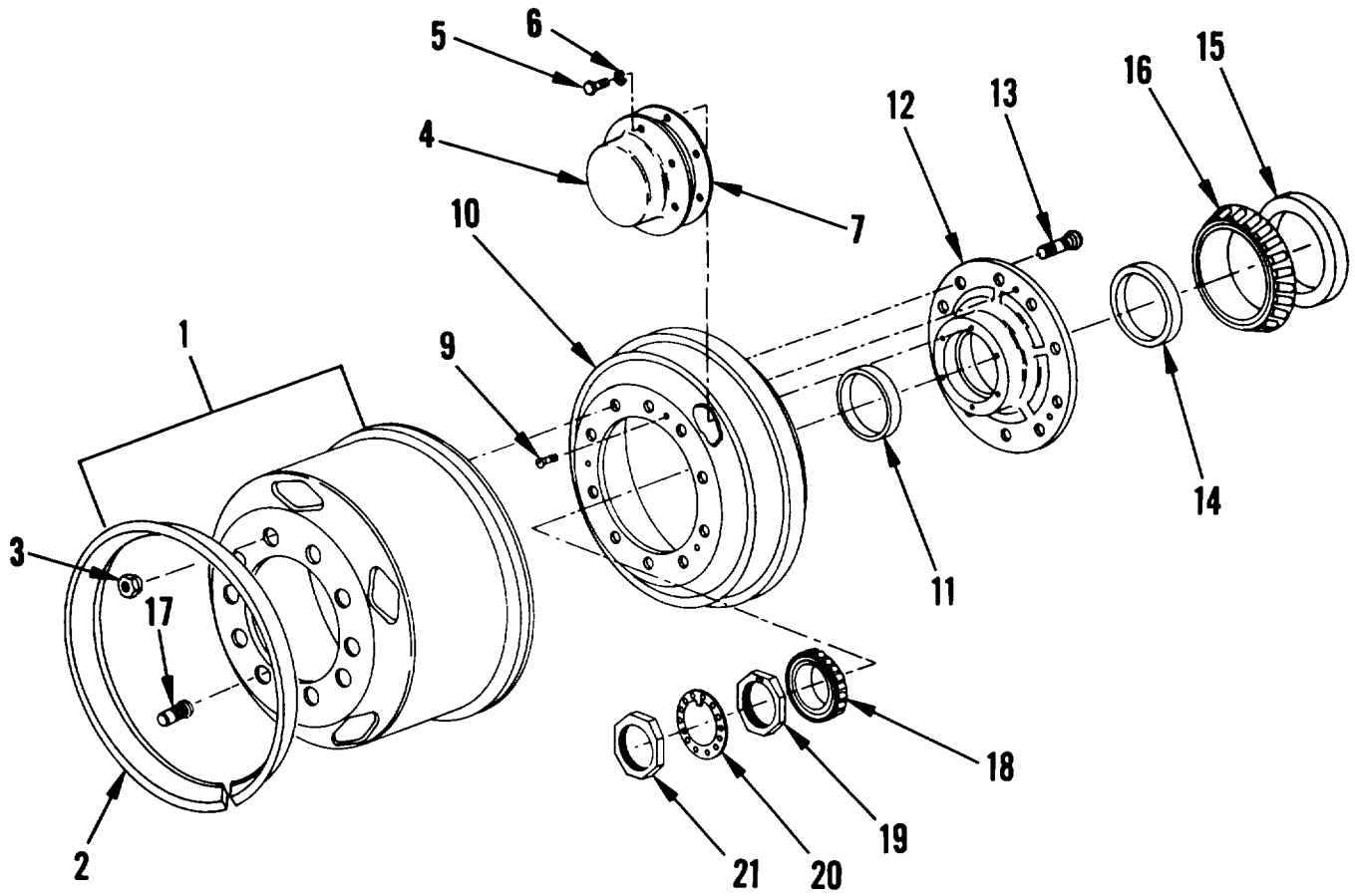


Figure 22. Wheel, Hub and Drum Assembly

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 13 WHEELS					
GROUP 1311 WHEEL ASSEMBLY					
FIG. 22 WHEEL, HUB AND DRUM ASSEMBLY					
1	PAOZZ	19207	12354148	WHEEL, PNEUMATIC TIR	8
2	XAOZZ	19207	12360341	RING, LOCK, WHEEL	8
3	PAOZZ	96906	MS51983-3	NUT, PLAIN, SINGLE BA LH, U/O OUTER	20
3	PAOZZ	96906	MS51983-4	WHEEL	
				NUT, PLAIN, SINGLE BA RH, U/O OUTER 20	
				WHEEL	
4	PAOFZ	19207	12354157	CAP, GREASE	4
5	PAOZZ	96906	MS90728-32	BOLT, MACHINE	24
6	PAOZZ	96906	MS35338-45	WASHER, LOCK	24
7	PAOZZ	19207	12354158	GASKET	4
8	PAOZZ	19207	12354155-1	HUB & DRUM ASSEMBLY RH	2
8	PAOZZ	19207	12354155-2	HUB & DRUM ASSEMBLY LH	2
9	PAOZZ	96906	MS35190-305	.SCREW, MACHINE	12
10	PAOFZ	19207	12360342	.BRAKE DRUM	4
11	PAOZZ	60038	HM212011	.CUP, TAPERED ROLLER	4
12	PAOZZ	19207	12360339	.HUB, WHEEL, VEHICULAR	4
13	PAOZZ	19207	12354151-1	.BOLT, RIBBED SHOULDE RH	40
13	PAOZZ	19207	12354151-2	.BOLT, RIBBED SHOULDE LH	40
14	PAOZZ	60038	HM21B210	.CUP, TAPERED ROLLER	4
15	PAOZZ	19207	12314159	SEAL, NONMETALLIC CH	4
16	PAOZZ	60038	HM218248	CONE AND ROLLERS, TA	4
17	PAOZZ	96906	MS553068-1	NUT, CAP, DUAL WHEEL LH, U/O INNER	20
				WHEEL	
17	PAOZZ	96906	MS53068-2	NUT, CAP, DUAL WHEEL RH, U/O INNER 20	
				WHEEL	
18	PAOZZ	60038	HM212049	CONE AND ROLLERS, TA	4
19	PAOZZ	62707	M10HN101	NUT, PLAIN, OCTAGON	4
20	PAOZZ	19207	12354113	WASHER, KEY	4
21	PAOZZ	62707	M10HN102	NUT, PLAIN, SLOTTED, O	4

END OF FIGURE

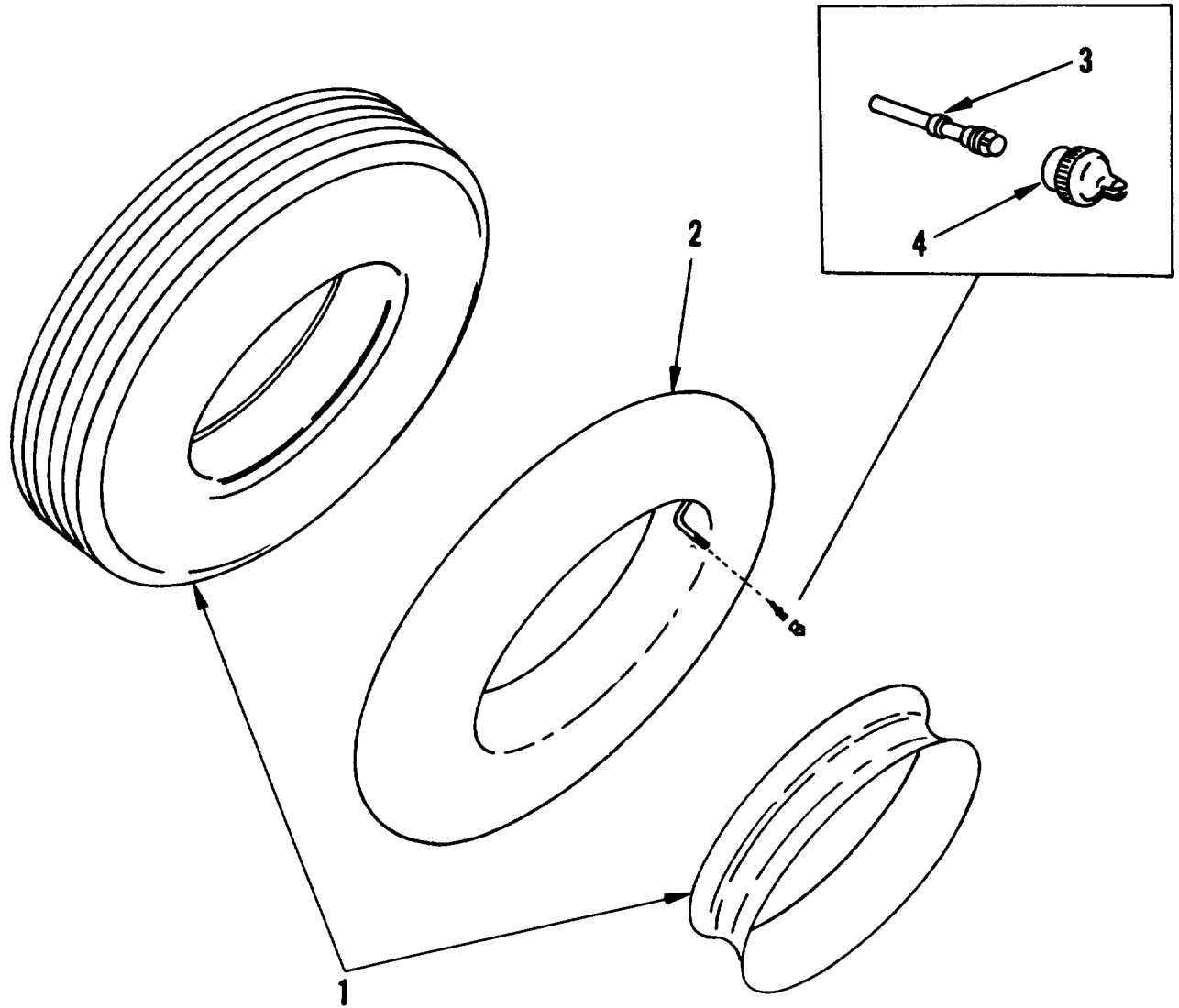


Figure 23. Tire and Tube

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR		PART	DESCRIPTION AND USABLE ON CODES (UOC)	
NO	CODE	FSCM	NUMBER		QTY
				GROUP 1313 TIRE AND RUBER	
				FIG. 23 TIRE AND TUBE	
1	PAOFH	81348	GP3/10.00-20/F/T BHR	TIRE, PNEUMATIC.....	8
2	PAOOZ	81348	GROUP 2/10.00-20 /TR78A/ON CENTER	INNER TUBE, PNEUMATI .	8
3	PAOZZ	96906	MS51359-4	VALVE ,PNEUMAT[C TIR	8
4	PAOZZ	81348	ZZ-V-25/TYPE IV/ CLASS1/TR-VC-2	CAP,PNEUMATIC VALVE.....	8

END OF FIGURE

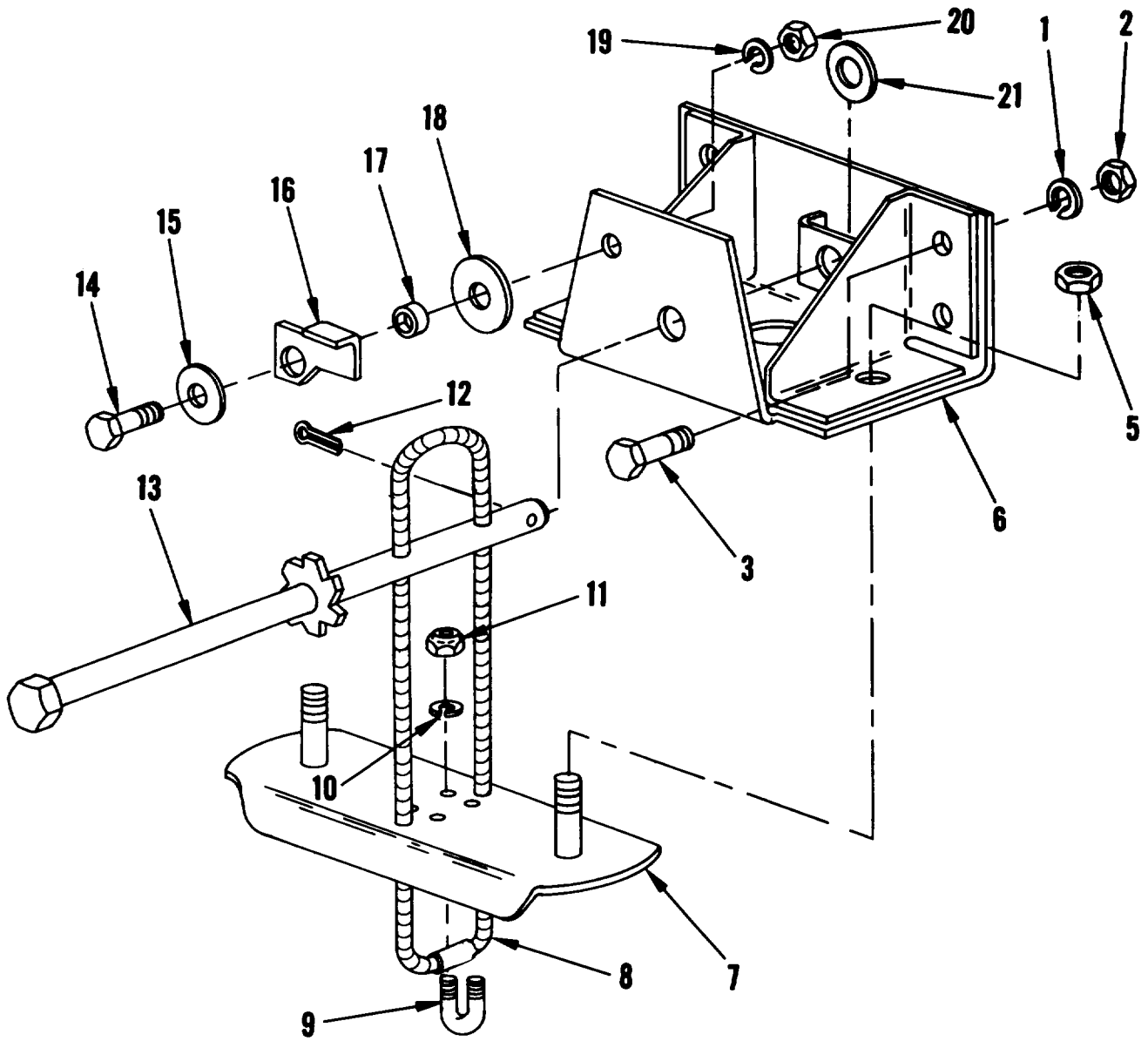


Figure 24. Spare Wheel Carrier

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 15 FRAME, TOWING ATTACHMENTS AND DRAWBAR	
				GROUP 1504 SPARE WHEEL CARRIER	
				FIG. 24 SPARE WHEEL CARRIER	
1	PAOZZ	80045	23MS35338-10	WASHER, LOCK	4
2	PAOZZ	96906	MS51968-14	NUT, PLAIN, HEXAGON	4
3	PAOZZ	96906	MS90727-128	SCREW, CAP, HEXAGON H	8
4	PBOZZ	19207	12354173	BRACKET, VEHICULAR C.....	1
5	PAOZZ	96906	MS51983-2	.NUT, PLAIN, SINGLE BA.....	2
6	PBOZZ	19207	12354182	.FRAME SECTION, STRUC.....	1
7	PAOZZ	19207	12354183	.BRACKET, MOUNTING	1
8	PAOZZ	19207	7521159	.ROPE, WIRE	1
9	PAOZZ	19207	8713419	.BOLT, U	2
10	PAOZZ	96906	MS35338-44	.WASHER, LOCK	4
11	PAOZZ	96906	MS51967-2	.NUT, PLAIN, HEXAGON	4
12	PAOZZ	96906	MS24665-495	.PIN, COTTER	1
13	XDOZZ	19207	12354160	.RATCHET WHEEL	1
14	PAOZZ	96906	MS90728-62	.SCREW, CAP, HEXAGON H	1
15	PAOZZ	19207	12354010-2	.WASHER, FLAT	1
16	PAOZZ	19207	12360337	.PAWL.....	1
17	PAOZZ	19207	12360336	.SPACER, SLEEVE	1
18	PAOZZ	19207	12354010-1	.WASHER, FLAT	1
19	PAOZZ	94231	3-07620-311	.WASHER, LOCK	1
20	PAOZZ	96906	MS51967-8	.NUT, PLAIN, HEXAGON	1
21	PAOZZ	96906	MS27183-27	.WASHER, FLAT	1

END OF FIGURE

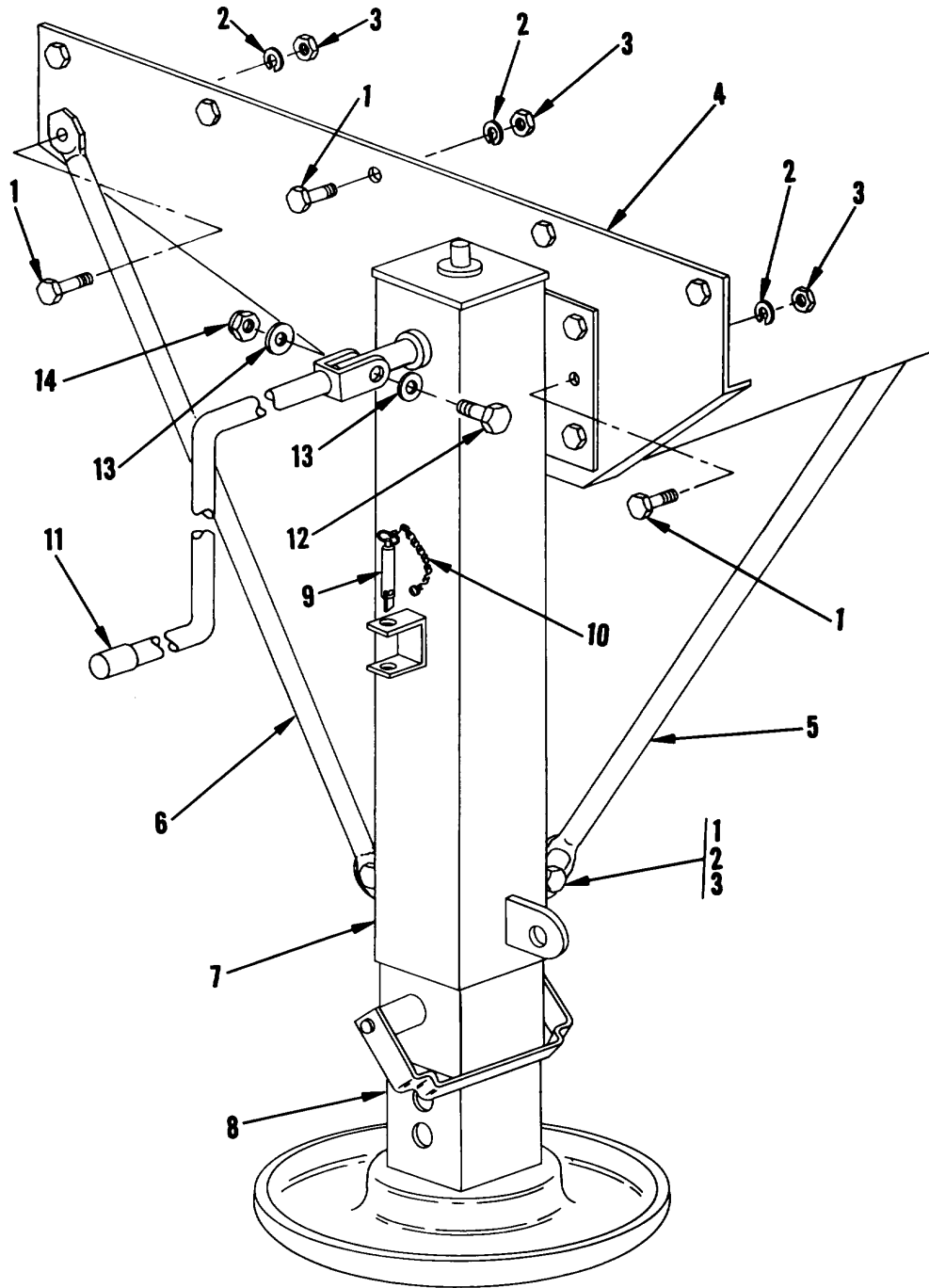


Figure 25. Landing Gear

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1507 LANDING GEAR AND LEVELING JACKS					
FIG. 25 LANDING GEAR ASSEMBLY					
1	PAOZZ	96906	MS90725-162	SCREW, CAP, HEXAGON H	30
2	PAOZZ	96906	MS35338-50	WASHER, LOCK	30
3	PAOZZ	96906	MS51967-20	NUT, PLAIN, EXAGON	30
4	PBOZZ	19207	12360392-1	BRACKET, MOUNTING LH	1
4	P80ZZ	19207	12360392-2	BRACKET, MOUNTING RH	1
5	PAOZZ	19207	12353958-3	BRACING SUPPORT, TUB	2
6	PAOZZ	19207	12353958-2	BRACKET, VEHICULAR C	2
7	PAOZZ	19207	12353957	LEG, SEMITRAILER RET	2
8	PAOZZ	19207	12354101	.LEG, SEMITRAILER RET	2
9	PAOZZ	19207	12315611-2	PIN, TOGGLE, HEADED	2
10	MOOZZ	19207	12353862-1	CHAIN MAKE FROM (19207)12353862	2
11	PAOZZ	19207	12315506	CRANK, HAND	2
2	PAOZZ	96906	MS90727-68	SCREW, CAP, HEXAGON H	2
13	PAOZZ	96906	MS27183-13	WASHER, FLAT.	4
14	PAOZZ	96906	MS51922-21	NUT, SELF-LOCKING, HE	2

END OF FIGURE

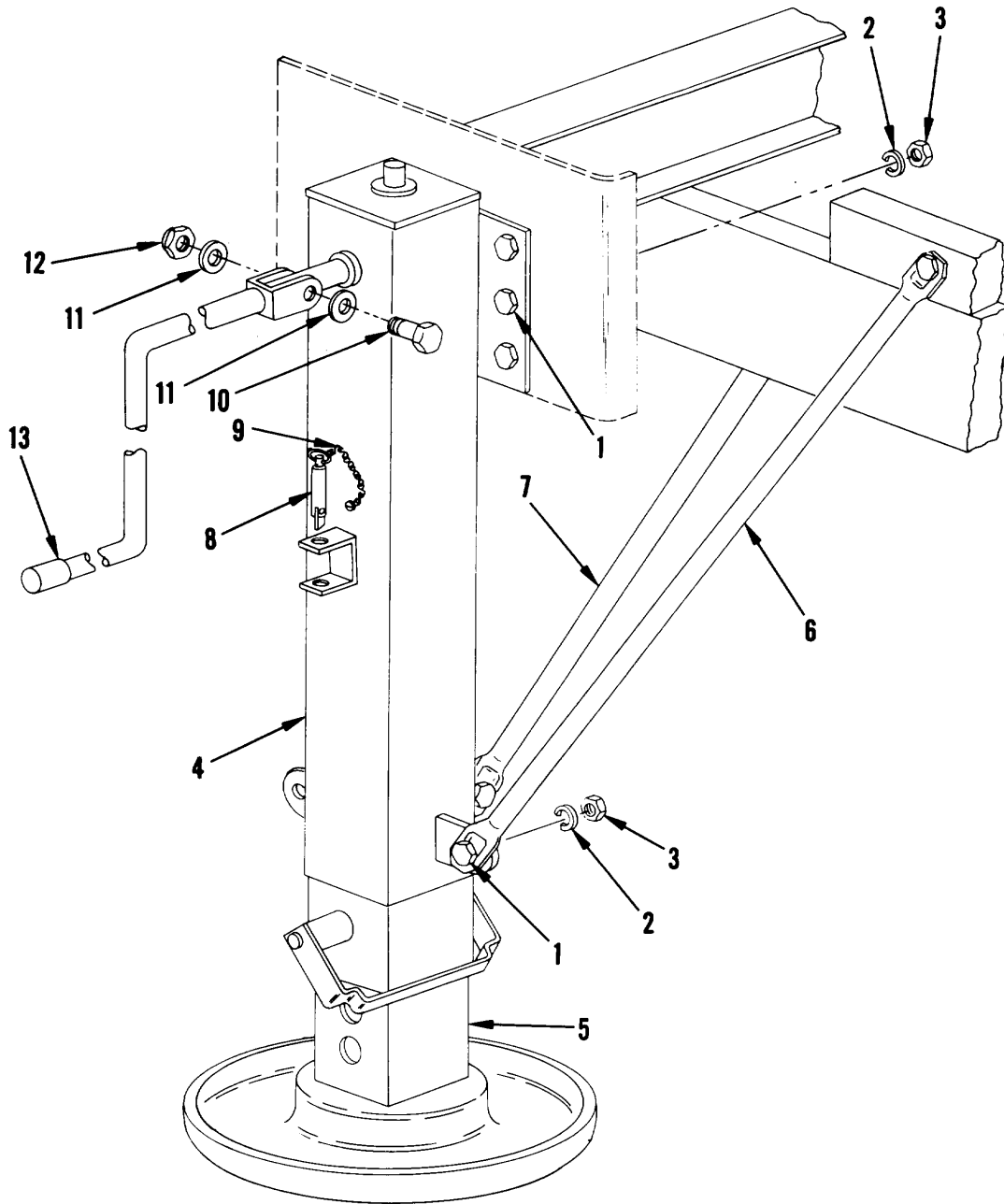


Figure 26. Leveling Jack

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1507 LANDING GEAR AND LEVELING JACKS					
FIG, 26 LEVELING JACK ASSEMBLY					
1	PAOZZ	96906	MS90725-162	SCREW,CAP, HEXAGON H	20
2	PAOZZ	96906	MS35338-50	WASHER, LOCK	20
3	PAOZZ	96906	MS51967-20	NUT,PLAIN,HEXAGCN	20
4	PAOZZ	19207	12353957	LEG, SEMITRAILER RET	2
5	PAOZZ	19207	12354101	LEG,SEMITRAILER RE.....	2
6	PAOZZ	19207	12353958-1	BRACKET, VEHICULAR C.....	2
7	PAOZZ	19207	12353958-4	BRACKET, VEHICULAR C.....	2
8	PAOZZ	19207	12315611-2	PIN, TOGGLE,HEADED	2
9	PAOZZ	96906	MS51967-20	NUT,PLAIN, HEXAGON	4
9	MOOZZ	19207	12353862-1	CHAIN MAKE FROM (19207)12353862.....	1
10	PAOZZ	96906	MS90727-68	SCREW, CAP, HEXAGCN H.....	2
11	PAOZZ	96906	MS27183-13	WASHER,FLAT	4
12	PAOZZ	96906	MS51922-21	NUT, SELF-LOCKING,HE	2
13	PAOZZ	19207	12315506	CRANK, HAND	2

END OF FIGURE

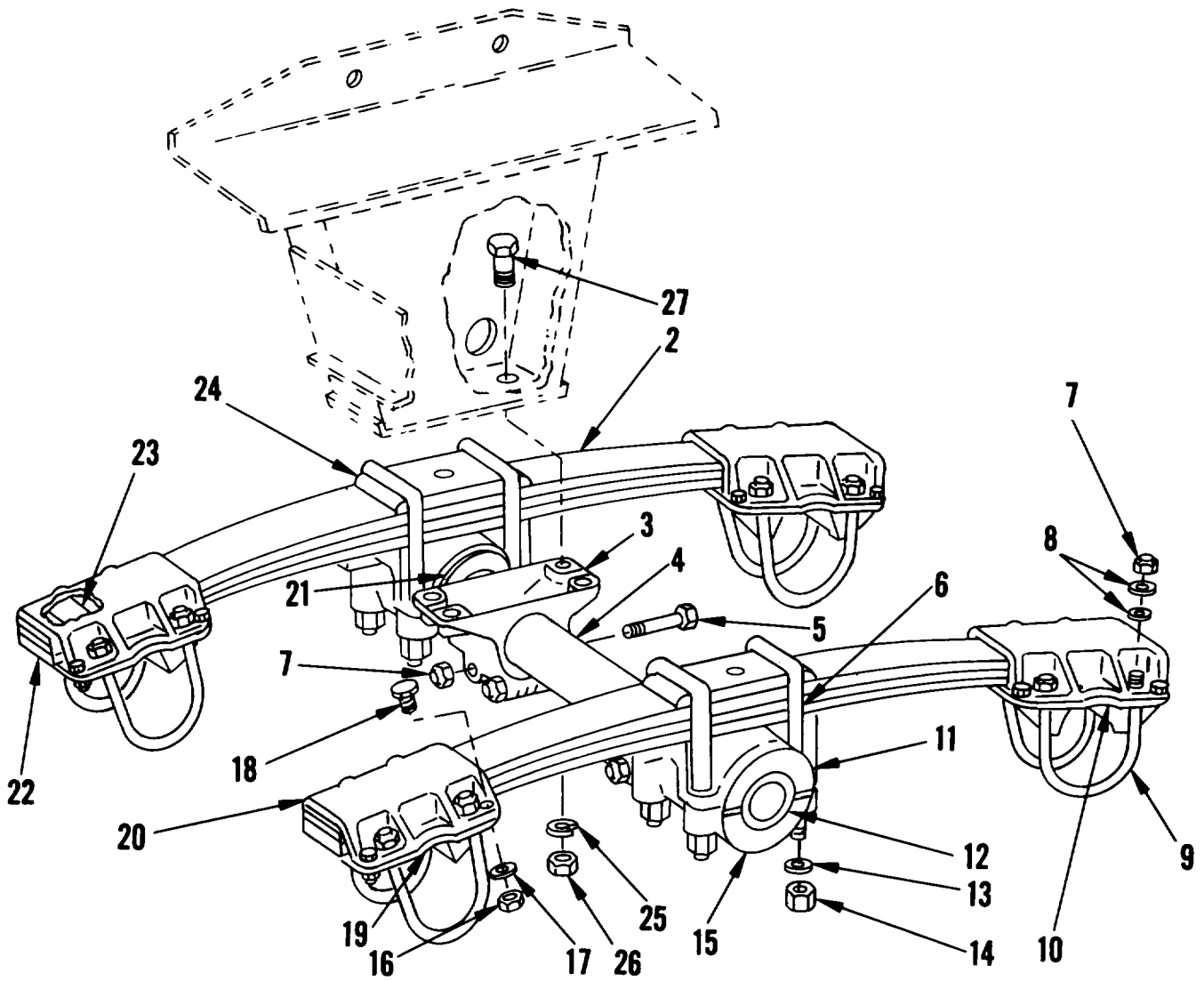


Figure 27. Suspension Assembly

SECTION II

TM9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 16 SPRINGS AND SHOCK ABSORBERS					
GROUP 1601 SPRINGS					
FIG. 27 SPRING ASSEMBLY					
1	PFFZZ	19207	12354153-2	SPRING ASSEMBLY, LEA	1
2	PBFZZ	19207	12354125	.SPRING ASSEMBLY, LEA.....	2
3	PFFZZ	19207	12315353	.HANGER, TRUNION	2
4	PBFZZ	19207	12315342-2	.TUBE, METALLIC.....	2
5	PAFZZ	96906	MS0727-197	.SCREW, CAP, HEXAGON H	4
6	PAFZZ	19207	12315340-2	.BOLT, U.....	4
7	PAOZZ	96906	MS51922-61	.NUT, SELF-LOCKING, HE	20
8	PAOZZ	96906	MS27183-23	.WASHER, FLAT	32
9	PAFZZ	92967	10060-01	.BOLT, U.....	8
10	PFFZZ	19207	12315564	.SEAT, LEAF SPRING.....	2
11	PFFZZ	19207	12315352	.HUB TRUNNION, UPPER UPPER.....	2
12	PAFZZ	19207	12354092	.BUSHING, SLEEVE	2
13	PAFZZ	92967	837-00	.WASHER, FLAT	8
14	PAFZZ	19207	12315614	.NUT, PLAIN, HEXAGON	8
15	PBFZZ	19207	12315351	.TRUNNION, HUB, LOWER LOWER	2
16	PAFZZ	96906	MS51922-53	.NUT, SELF-LOCKING, HE	16
17	PAFZZ	10001	1561635	.WASHER, FLAT	16
18	PAFZZ	96906	MS90728-164	.SCREW, CAP, HEXAGON H	16
19	PFFZZ	19207	12315349	.SEAT, LEAF SPRING.....	2
20	PFFZZ	19207	12315350	.CAP, END SPRING	4
21	PAFZZ	92967	895-00	.WASHER, FLAT	2
22	PBFZZ	19207	12315441	.PLATE, ALIGNMENT, LEA.....	2
23	PAFZZ	19207	12315354	.PAD, CUSHIONING.....	8
24	PFFZZ	92967	9640-00	.PLATE, WEAR, LEAF SPR	2
25	PAFZZ	96906	MS35338-50	WASHER, LOCK	8
26	PAFZZ	96906	MS51968-21	NUT, PLAIN, HEXAGON	8
27	PAFZZ	96906	MS90727-168	SCREW, CAP, HEXAGON H	8

END OF FIGURE

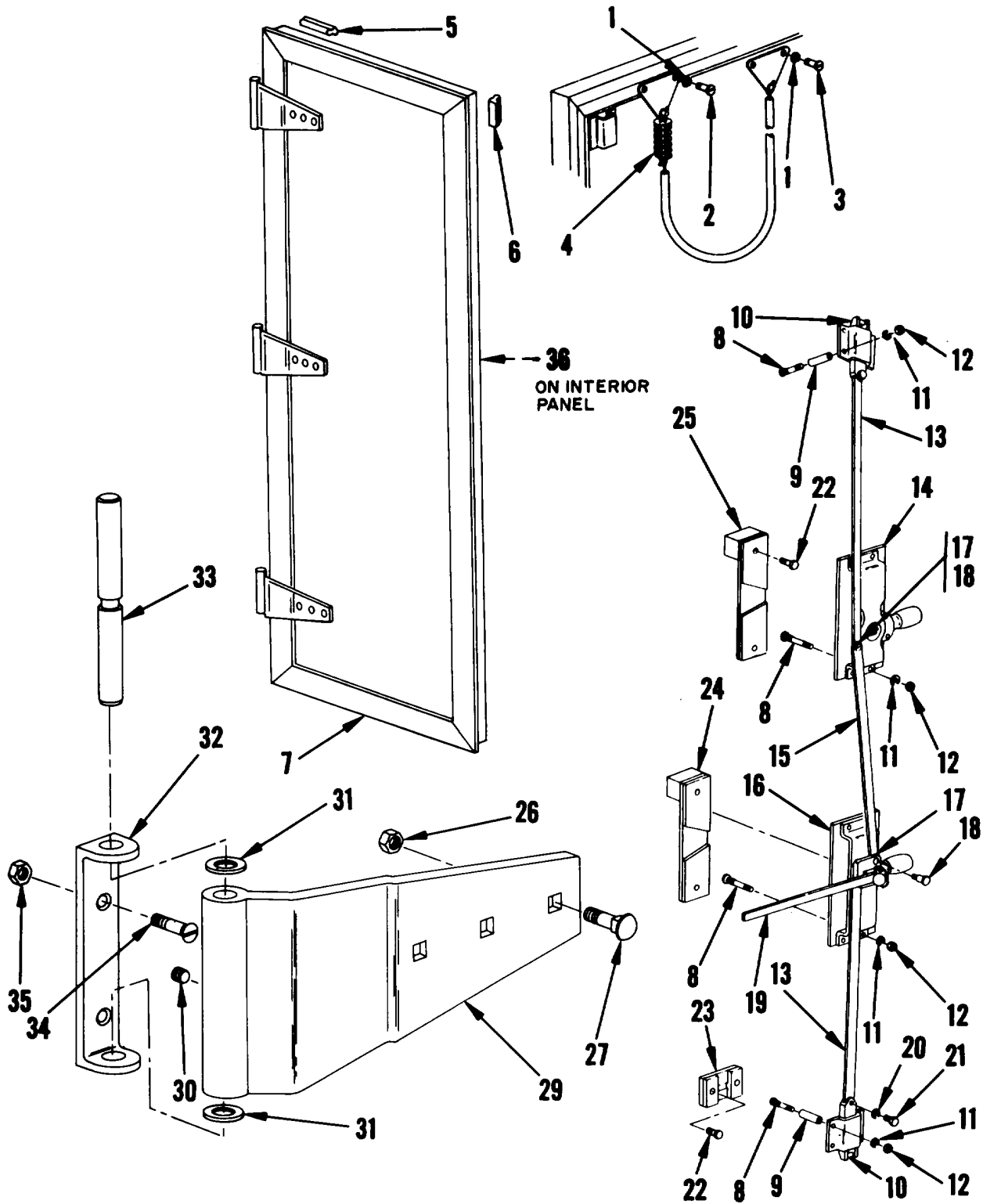


Figure 28. Front Door

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 18 BODY, CAB, HOOD AND HULL					
GROUP 1801 BODY, CAB, HOOD AND HULL ASSEMBLIES					
FIG. 28 FRONT DOORS					
1	PAOZZ	96906	MS35338-43	WASHER, LOCK	4
2	PAOZZ	96906	NS24629-45	SCREW, TAPPING, THREA	2
3	PAOZZ	96906	MS24629-50	SCREW, TAPPING, THREA	2
4	PAOZZ	19207	11681178	CHAIN DOOR STOP	1
5	PAOZZ	19207	12315658	NONMETALLIC CHANNEL	19
6	PAOZZ	19207	12315659	SEAL, RUBBER CHANNEL.....	19
7	PBOZZ	19207	12360379	DOOR, ASSEMBLY	1
8	PAOZZ	19207	12331242	BOLT, RIBBED NECK	16
9	PAOZZ	19207	12331243-2	SPACER, SLEEVE	8
10	PAOZZ	19207	12315618	SLIDE FASTENER, BOLT	2
11	PAOZZ	96906	MS35338-45	WASHER, LOCK	8
12	PAOZZ	96906	MS51922-9	NUT, SELF-LOCKING, HE	16
13	PAOZZ	19207	12315484-8	ROD, LOCKING.....	2
14	PAOZZ	19207	12315489-1	LATCH, DOOR, VEHICULA	1
15	PAOZZ	19207	12360368	CONNECTING LINK, RIG	1
16	PAOZZ	19207	12315617-1	LOCK SET, RIM.....	1
17	PAOZZ	19207	12330845	SPACER, SLEEVE	3
18	PAOZZ	96906	MS51975-18	SCREW, SHOULDER	3
19	PAOZZ	19207	12315674	HANDLE, BOW	1
20	PAOZZ	94231	3-07620-311	WASHER LOCK	2
21	PAOZZ	96906	MS90727-58	SCREW, CAP, HEXAGON H	2
22	PAOZZ	96906	MS90725-6	SCREW CAP , HEXAGON H	1
23	PBOZZ	19207	12315649	STRIKE, CATCH.....	2
24	PBOZZ	19207	12315633-1	PLATE, KEEPER.....	1
25	PBOZZ	19207	12315633-2	PLATE, MENDING.....	1
26	PAOZZ	96906	MS17830-6C	NUT, SELF-LOCKING, HE	9
27	PAOZZ	96906	NS35751-71	BOLT, SQUARE NECK	9
28	XDOZZ	19207	12360372	HINGE, BUTT	3
29	XDOZZ	19207	12360399	.STRAP, RETAINING	3
30	PAOZZ	96906	NMS51963-64	.SETSCREW	3
31	PAOZZ	96906	MS27183-18	.WASHER, FLAT	3
32	PAOZZ	19207	12360397	.PIN, GROOVED, HEADLES.....	3
33	PAOZZ	19207	12360398	.BRACKET, DOUBLE ANGL	3
34	PAOZZ	96906	MS35191-323	SCREW, MACHINE	3
35	PAOZZ	96906	MS51922-21	NUT, SELF-LOCKING, HE	6
36	PAOZZ	19207	12315542-8	RIVET.	91

END OF FIGURE

12
13 THRU 17

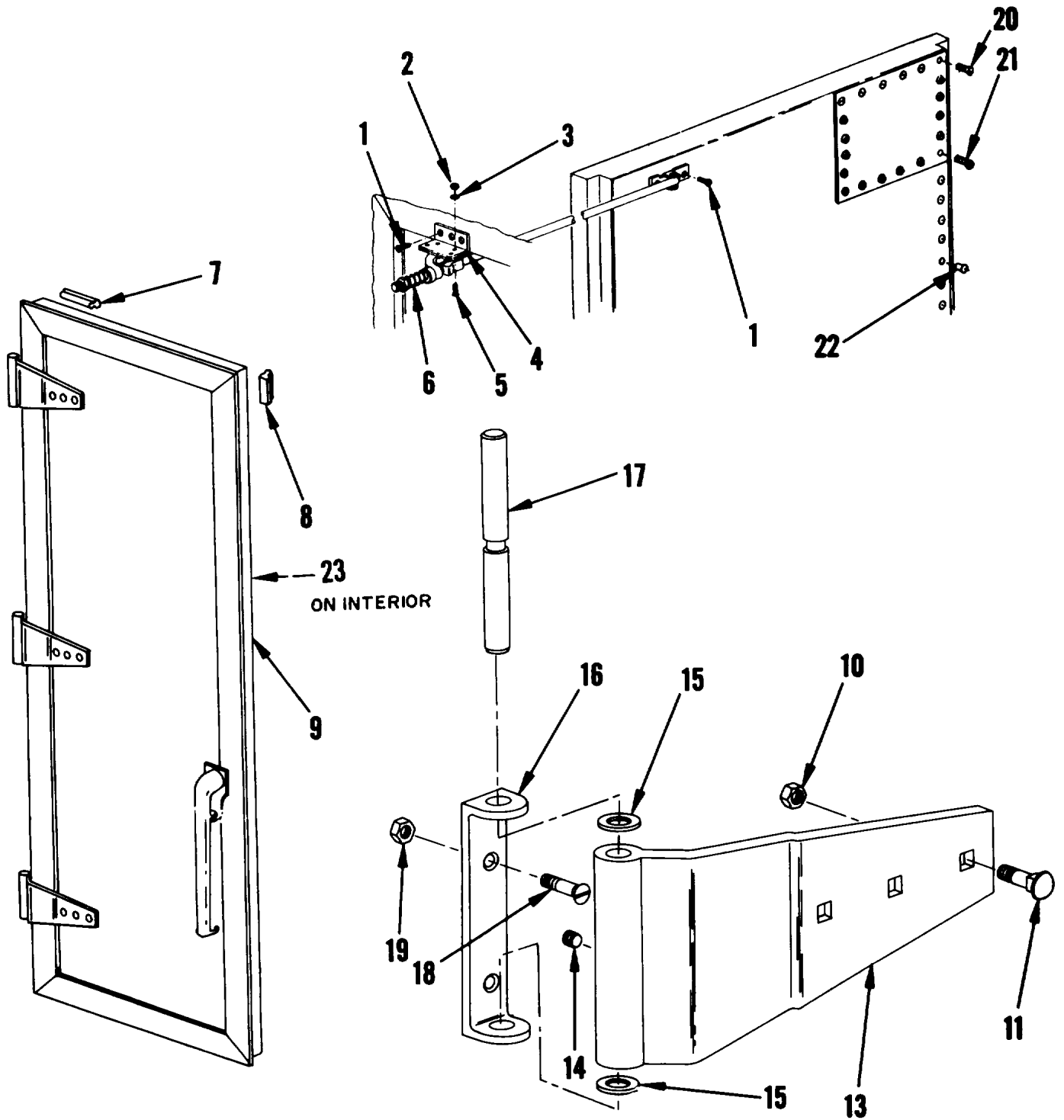


Figure 29. Rear Door

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 1801 BODY, CAB, HOOD AND HULL ASSEMBLIES					
FIG. 29 REAR DOORS					
1	PAOZZ	96906	MS24627-64	SCREW, TAPPING, THREA	6
2	PAOZZ	96906	MS51967-2	NUT, PLAIN, HEXAGON	4
3	PAOZZ	96906	M535338-44	WASHER, LOCK	4
4	PAOZZ	19207	12330931	BRACKET, ANGLE	1
5	PAOZZ	96906	MS35190-291	SCREW, MACHINE	4
6	PAOZZ	19207	12330932	HOLDER, DOOR	1
7	PAOZZ	19207	12315658	NONMETALLIC CHANNEL	20
8	PAOZZ	19207	12315659	SEAL, RUBBER CHANNEL.....	20
9	XDOZZ	19207	12360364	DOOR, METAL, SWINGING	1
10	PAOZZ	96906	MS7830-6C	NUT, SELF-LOCKING, HE	9
11	PAOZZ	96906	NS35751-71	BOLT, SQUARE NECK	9
12	PAOZZ	19207	12360372	HINGE, BUTT	3
13	PAOZZ	19207	12360399	.STRAP, RETAINING	3
14	PAOZZ	96906	MS51963-64	.SETSCREW	3
15	PAOZZ	96906	MS27183-18	.WASHER, FLAT	6
16	PAOZZ	19207	12360398	.BRACKET, DOUBLE ANGL	3
17	PAOZZ	19207	1236C397	.PIN, GROOVED, HEADLES.....	3
18	PAOZZ	96906	MS35191-323	SCREW, MACHINE	6
19	PAOZZ	96906	MS551922-21	NUT, SELF-LOCKING, HE	6
20	PAOZZ	96906	MS35207-267	SCREW	41
21	PAOZZ	96906	MS35191-276	SCREW	12
22	PAOZZ	19207	12315542-8	RIVET	101
23	PAOZZ	19207	L2331218	DECAL	1

END OF FIGURE

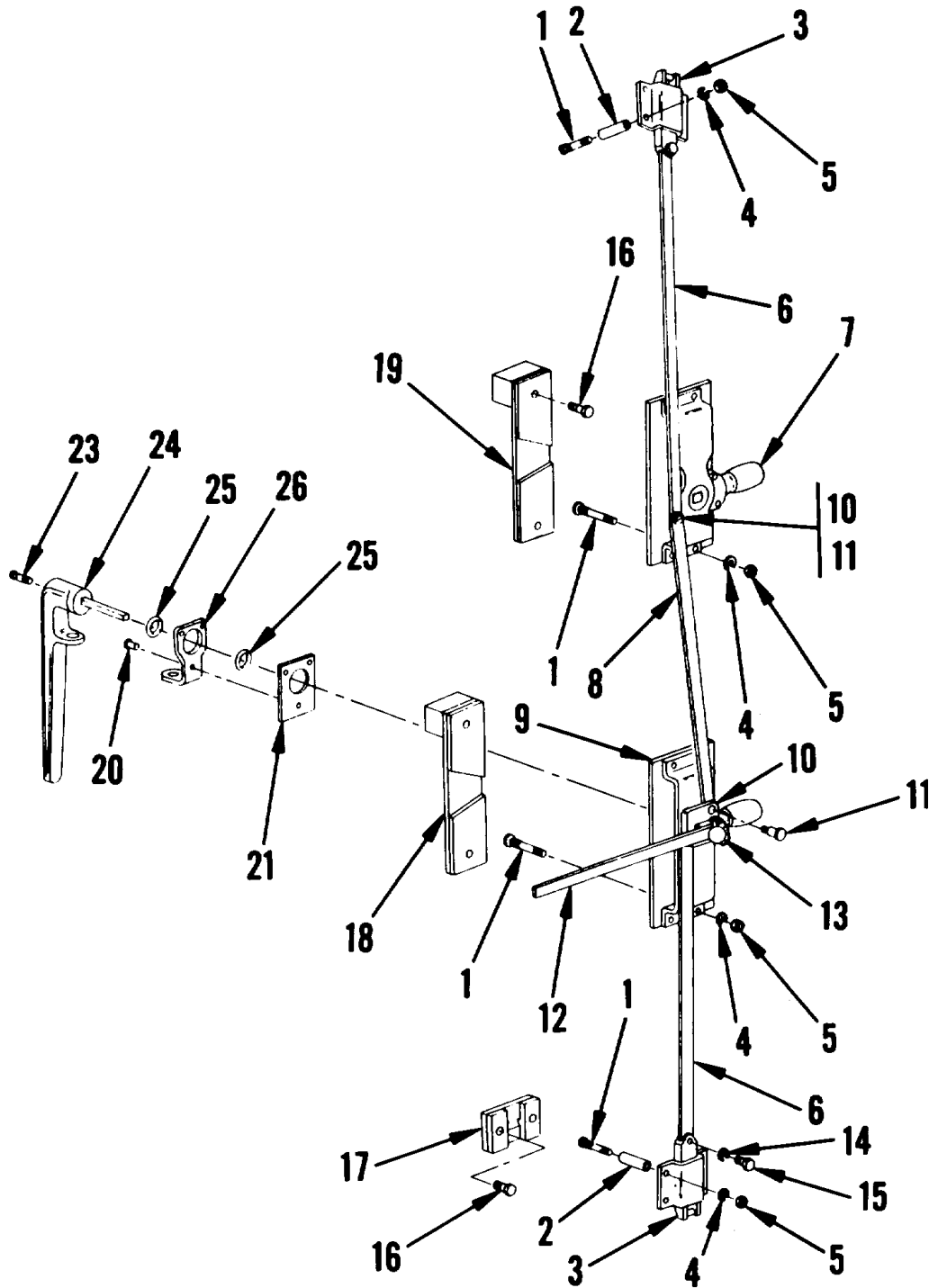


Figure 30. Rear Door Lock Components

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 1801 BODY, CAB, HOOD AND HULL ASSEMBLIES	
				FIG. 30 REAR DOOR LOCK COMPONENTS	
1	PAOZZ	19207	12331242	BOLT, RIBBED NECK	16
2	PAOZZ	19201	12331243-2	SPACER, SLEEVE.	8
3	PAOZZ	19207	12315618	SLIDE FASTENER, BOLT	2
4	PAOZZ	96906	MS35338-45	WASHER, LOCK	16
5	PAOZZ	96906	MS51922-9	NUT, SELF-LOCKING, HE	16
6	PAOZZ	19207	12315484-3	CONNECTING LINK1RIG	2
7	PAOZZ	19207	12315489-1	LATCH, DOOR, VEHICULA	1
8	PAOZZ	19207	12360368	CONNECTING LINK, RIG	1
9	PAOZZ	19207	12315617-1	LOCK SET, RIM.	1
10	PAOZZ	19207	12330845	SPACER, SLEEVE	3
11	PAOZZ	96906	NMS51975-18	SCREW, SHOULDER	3
12	PAOZZ	19207	12315674	HANDLE, BOW	1
13	PAOZZ	19207	12331240	PIN, QUICK RELEASE	1
14	PAOZZ	94231	3-07620-311	WASHER, LOCK	2
15	PAOZZ	96906	MS90727-58	SCREW, CAP, HEXAGON H	2
16	PAOZZ	96906	MS90725-6	SCREW, CAP, HEXAGON H	8
17	P8OZZ	19207	12315649	STRIKE, CATCH.....	2
18	PBOZZ	19207	123L5633-1	PLATE KEEPER	1
19	PBOZZ	19207	12315633-2	PLATE MENDING.....	1
20	PAOZZ	19207	12315644-3	RIVET, BLIND.....	3
21	PAOZZ	19207	12330884	SPACER, PLATE	1
22	PBOZZ	19207	12315569-1	LEVER, MANUAL CONTROL.....	1
23	PAOZZ	96906	M5S16997-61	.SCREW, CAP, SOCKET HE	1
24	PAOZZ	19207	12307731	.HANDLE, DOOR.....	1
25	PAOZZ	96906	MS28775-216	.PACKING, PREFORMED.....	2
26	PBOZZ	19207	12315571	.ESCUTCHEON PLATE	1

END OF FIGURE

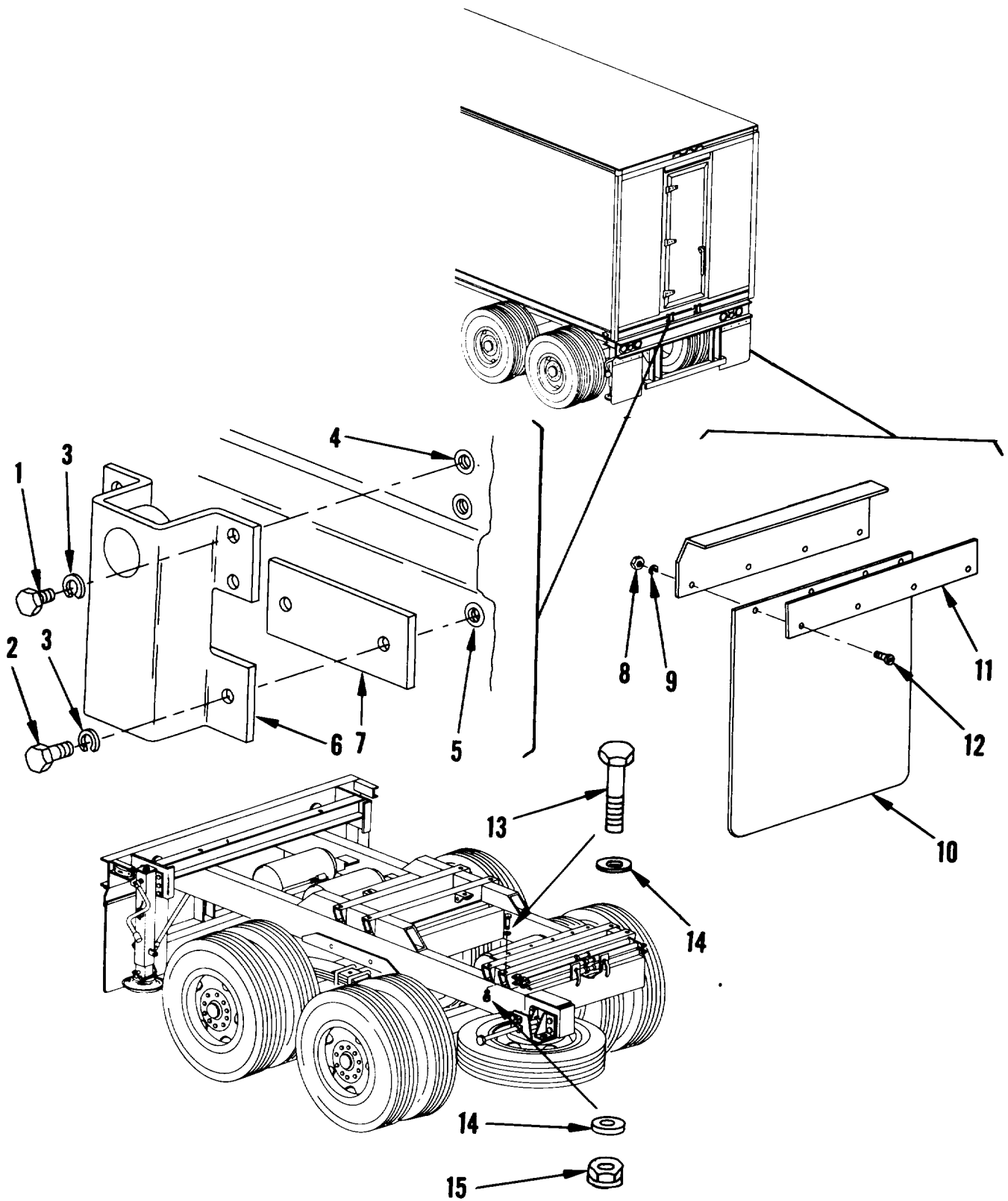


Figure 31. Ladder Bracket, Splash Guard, Dolly Attaching Hardware

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 1801 BODY, CAB, HOOD AND HULL ASSEMBLIES	
				FIG. 31 LADDER BRACKET, SPLASH GUARD AND DOLLY ATTACHING HARDWARE	
1	PAOZZ	96906	MS9072534	BOLT, MACHINE	16
2	PAOZZ	96906	MS90725-36	BOLT, MACHINE	8
3	PAOZZ	96906	M53533-45	WASHER, LOCK	24
4	PAOZZ	19207	12353917-1	NUT, PLAIN, BLIND RIV.....	16
5	PAOZZ	19207	12353917-2	NUT, PLAIN, BLIND RIV.....	8
6	PAOZZ	19207	12360531	BRACKET, DOUBLE ANGL	4
7	PBOZZ	19207	12330833-38	SPACER, PLATE	4
8	PAOZZ	96906	MS51967-8	NUT, PLAIN, HEXAGON	8
9	PAOZZ	94231	3-07620-311	WASHER, LOCK	8
10	PAOZZ	19207	108822GO	GUARD, SPLASH, VEHICU	2
11	PBOZZ	19207	10544341	SPACER, PLATE.....	2
12	PAOZZ	96906	HS90726-189	SCREW, CAP, HEXAGON H	8
13	PAOZZ	96906	MS90727-189	SCREW, CAP HEXAGON	10
14	PAOZZ	96906	MS2718323	WASHER, FLAT	20
15	PAOZZ	96906	MS21044N12	NUT, SELF-LOCKING, HE	10

END OF FIGURE

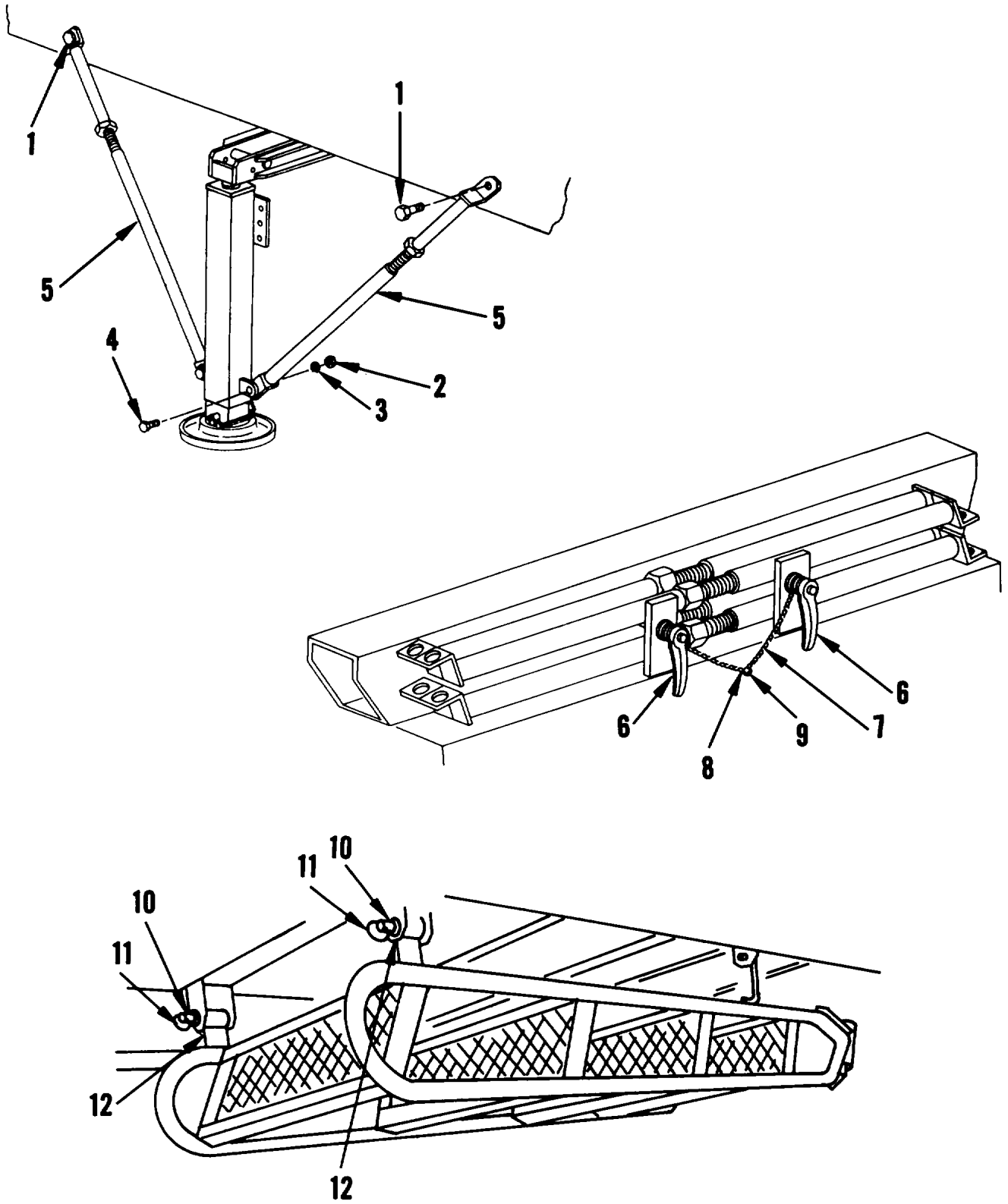


Figure 32. Ladder Stowage, Lifting Brace Stowage, Lifting Jack Installation

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 1801 BODY, CAB, HOOD AND HULL ASSEMBLIES	
				FIG. 32 LADDER STOWAGE, LIFTING BRACE STORAGE AND LIFTING JACK INSTALLATION	
1	PAOZZ	96906	MSS0727-250	SCREW, CAP, HEXAGON	4
2	PAOZZ	96906	MHS51967-20	NUT, PLAIN, HEXAGON	4
3	PAOZZ	96906	MS3533E-50	WASHER, LOCK	4
4	PAOZZ	96906	MS90725-162	SCREW, CAP, HEXAGON H	4
5	PAOZZ	19207	12360400	BRACE ARM ASSEMBLY	4
6	PAOZZ	19207	12353955	HANDLE, DOOR.....	2
7	MOOZZ	19207	12353862-6	CHAIN MAKE FROM P/N(19207)12353862.....	1
8	PAOZZ	19207	8747064	.HOOK, CHAIN, S.....	2
9	PAOZZ	96906	MS24627-49	SCREW, TAPPING, THREA	1
10	PAOZZ	19207	12315611-5	PIN, TOGGLE, EYE COLL	2
11	MOOZZ	19207	12353862-5	CHAIN MAKE FROM P/N (192071)2353862.....	2
12	PAOZZ	96906	MS24629-57	SCREW, TAPPING, THREA.	2

END OF FIGURE

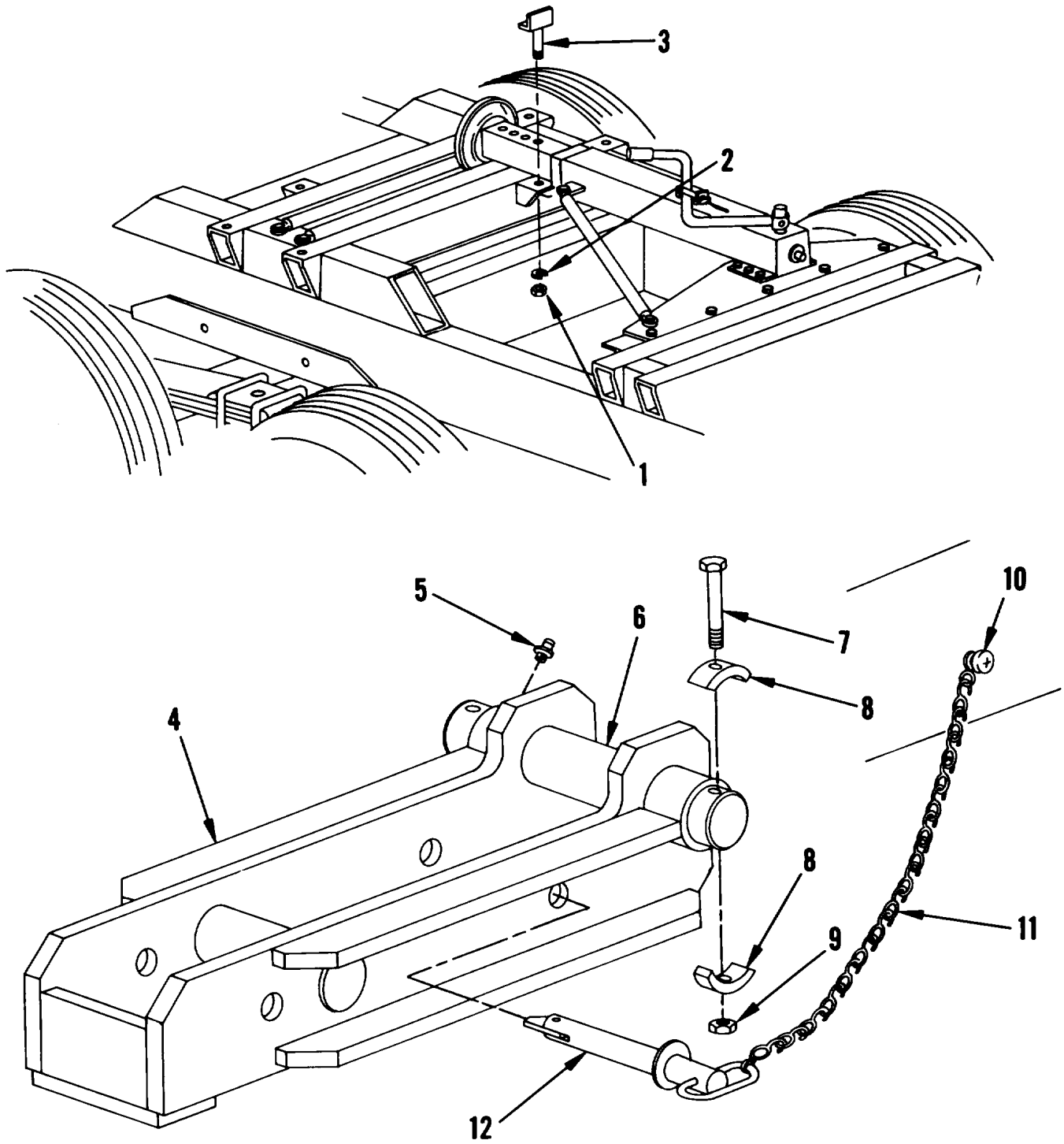


Figure 33. Landing Gear Stowage, Lifting Arm Assembly

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 1801 BODY, CABs HOOD AND HULL ASSEMBLIES	
				FIG. 33 LANDING GEAR STOWAGE AND LIFTING ARM ASSEMBLY	
1	PAOZZ	96906	NS51967-14	NUT, PLAIN, HEXAGON	2
2	PAOZZ	80045	23MS35338-10	WASHER, LOCK	2
3	PAOZZ	19207	12360410	RETAINER, ASSEMBLED	2
4	PAOZZ	19207	12353888	BRACKET, MOUNTING	6
5	PAOZZ	96906	MS15001-1	FITTING, LUBRICATION	12
6	PBOZZ	19207	12360414	SHAFT, STRAIGHT	6
7	PAOZZ	96906	NS51106-340	BOLT, MACHINE	12
8	PBOZZ	19207	12360426	CLAMP, RIM CLENCHING	24
9	PAOZZ	96906	NS21044N5	NUTSELF-LOCKING1HE	12
10	PAOZZ	96906	MS24629-57	SCREW, TAPPING, THREA	6
11	MOOZZ	19207	12353862-7	CHAIN MAKE FROM P/N (19207)12353862.....	1
72	PAOZZ	19207	12360415	PIN, TOGGLE, HEADED	6

END OF FIGURE

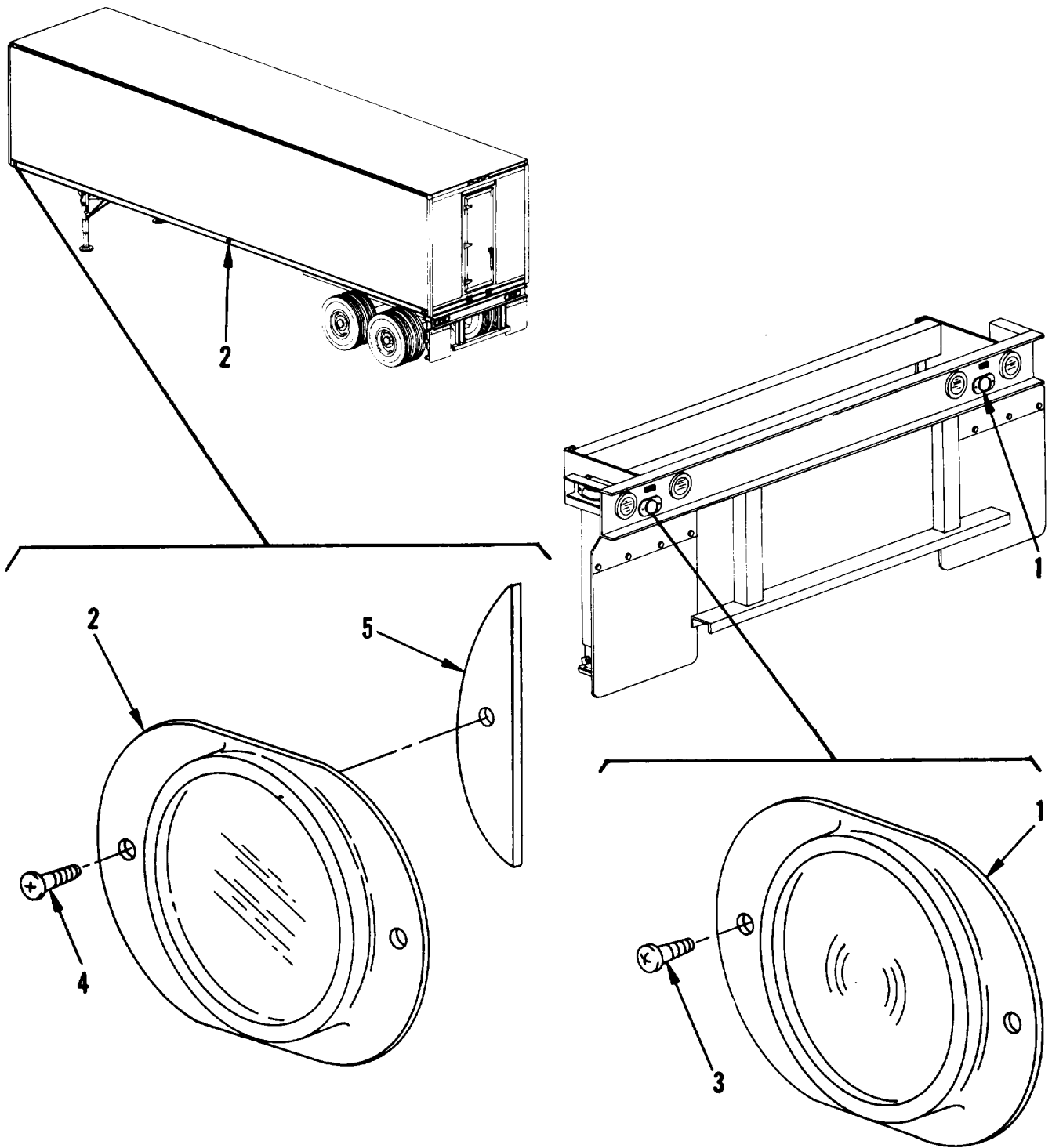


Figure 34. Reflector

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
GROUP 22 BODY CHASSIS OR HULL, AND ACCESSORY ITEMS					
GROUP 2202 ACCESSORY ITEMS					
FIG. 34 REFLECTORS					
1	PAOZZ	96906	NS35387-1	REFLECTOR INDICATING RED	4
2	PAOZZ	96906	MS35387-2	REFLECTOR, INDICATING AMBER	4
3	PAOZZ	96906	MS24629-59	SCREW, TAPPING, THREE U/O DOLLY	4
4	PAOZZ	96906	MS51861-66	SCREW, TAPPING, THREE U/O VAN BODY	12
5	PAOZZ	19207	12360388	FRAME SECTION, STRUCTURE U/O EACH SIDE	2
AT BOTTOM FRONT					
END OF FIGURE					

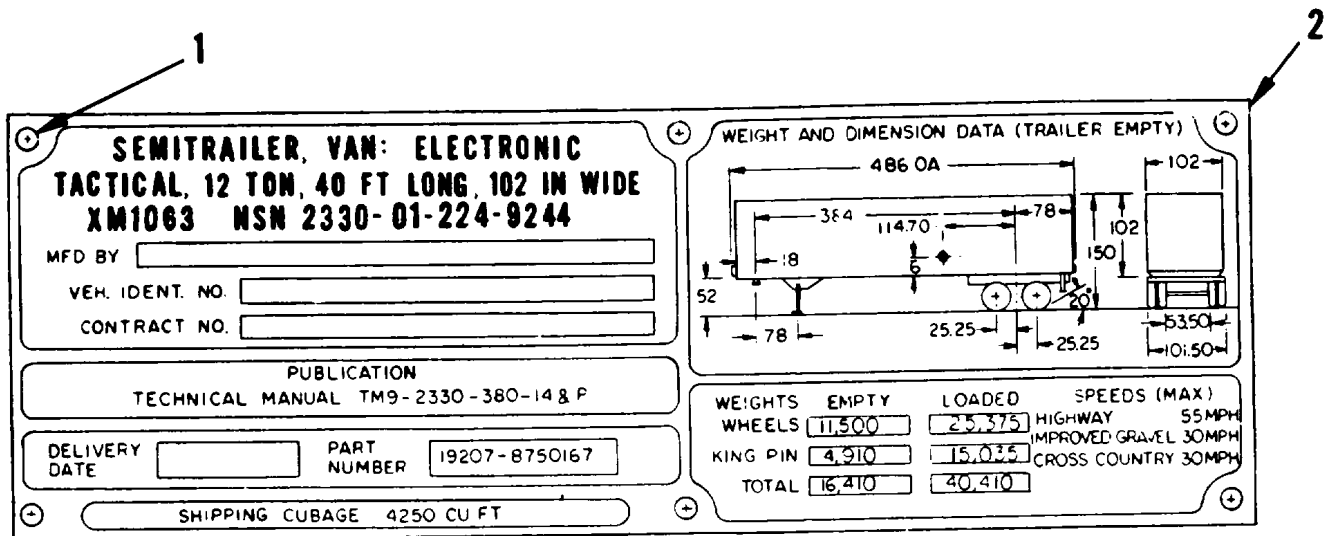


Figure 35. Data Plate

SECTION II					
(1)	(2)	(3)	(4)	(5)	(6)
ITEM	SMR	FSCM	PART	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
NO	CODE		NUMBER		
				GROUP 2210 DATA PLATES AND INSTRUCTION HOLDERS	
				FIG. 35 DATA PLATES	
1	PAOZZ	19207	12331207-3	RIVET, BLIND.....	6
2	PAOZZ	19207	12353919	PLATE, IDENTIFICATIO	1
				END OF FIGURE	

SECTION II

TM 9-2330-380-14&P

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
-------------------	--------------------	-------------	-----------------------	--	------------

GROUP 95 GENERAL USE STANDARDIZED PARTS

GROUP 9501 HARDWARE SUPPLIES AND BULK MATERIAL

1	PAOZZ	19207	CPR104420-3	HOSE, NONMETALLIC	
2	PAOZZ	06853	246115	HOSE, NONMETALLIC	
3	PAOZZ	64488	81146S	WIRE, ELECTRICAL	
4	PAOZZ	64488	81142S	WIRE, ELECTRICAL	
5	PAOZZ	64488	81143S	WIRE, ELECTRICAL	
6	PAOZZ	81343	SAEJ1128TYGPT-14 AG-GREEN	WIRE, ELECTRICAL	
7	PAOZZ	64488	81147S	WIRE, ELECTRICAL	
8	PAOZZ	64488	81141S	WIRE, ELECTRICAL	

END OF FIGURE

BULK-1

**CROSS- REFERENCE-INDEXES
NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5305-00-003-6769	29	1	5315-00-236-8359	20	6
5310-00-004-5033	24	19	5310-00-252-5868	31	5
	28	20	4730-00-253-4412	19	3
	30	14	4730-00-253-4413	17	1
	31	9	2610-00-260-7345	23	2
5306-00-017-9722	24	9	5305-00-269-3234	28	21
4730-00-044-4583	19	2		30	15
5310-00-045-3296	1	6	5305-00-269-3244	25	12
	2	7		26	10
	28	1	5310-00-269-4040	20	7
5310-0-00-45-3299	4	2	5325-00-276-6040	16	18
4730-00-050-4203	13	5	5325-00-276-6098	6	4
	33	5		17	3
5310-00-050-6646	28	26	5325-00-276-6228	1	5
	29	10	3110-00-293-8997	22	11
2640-00-052-0875	23	3	3110-00-293-8998	22	18
4730-00-052-3666	21	8	3120-00-304-9074	13	15
5305-00-052-6872	32	9	6145-00-310-2590	BULK	8
5305-00-052-6917	28	3	6145-00-310-2598	BULK	5
5305-00-052-6921	1	2	5310-00-350-5550	13	12
	32	12	2530-00-359-1162	22	17
	33	10	5310-00-407-9566	1	15
5305-00-052-6923	34	3		13	10
5305-00-052-7492	16	1		22	6
5340-00-057-2906	6	3		28	11
	7	8		30	4
	117	19		31	3
2640-00-060-3550	23	4	5305-00-432-4252	34	4
5305-00-068-0502	28	22	5310-00-576-5752	2	5
	30	16	5310-00-582-5965	1	1
5305-00-068-0511	24	14		1	11
5310-00-080-6004	21	6		24	10
5310-00-087-4652	21	5		29	3
5310-00-087-7493	25	13	5310-00-582-6714	16	13
	26	11		17	11
5310-00-008-0553	33	9	5310-00-584-5272	24	1
5330-00-090-2128	16	20		33	2
6240-00-155-7859	3	2	5310-00-594-8038	24	5
4730-00-172-0028	13	14	3110-00-618-0248	22	16
5325-00-185-0001	7	9	3110-00-618-0249	22	14
5325-00-185-0004	16	19	5330-00-641-0231	30	25
4730-00-196-1504	21	11	2530-00-693-1029	22	17
9905-00-202-3635	34	2	5365-00-717-5617	31	11
5260-00-204-4026	23	1	5305-00-719-5275	24	3
9905-00-205-2795	34	1	5305-00-723-9386	28	30
5310-00-225-640e	27	16		29	14
5306-00-225-8498	13	3	5305-00-724-5910	25	1
5306-00-225-8495	31	1		26	1
5306-00-226-4825	22	5		32	4
5315-00-234-1664	24	12	5305-00-724-7222	27	18

**CROSS- REFERENCE-INDEXES
NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5305-00-726-2555	27	27	5310-00-817-5797	2	12
4730-00-729-1087	16	9	4730-00-878-4199	16	10
	17	16	5310-00-880-2004	22	3
5310-00-132-0558	24	20	5310-00-880-2005	22	3
	31	8	2540-00-897-5917	31	10
5310-00-732-0560	24	2	5310-00-934-9751	2	4
5310-00-761-6882	24	11	5310-00-934-9757	4	3
	29	2	5310-00-934-9758	2	6
5305-00-762-6041	31	13	5310-00-937-5950	31	4
5310-00-763-8904	27	26	5305-00-939-0658	28	18
5310-00-763-8905	20	3		30	11
5310-00-763-8920	25	3	5305-00-940-8069	27	5
	26	3	5305-00-958-0671	2	11
	26	9	5305-00-958-5247	29	5
	32	2	5305-00-958-5469	22	9
5340-00-764-7051	16	8	5310-00-959-1488	25	14
	17	5		26	12
5935-00-773-1428	1	9		28	35
5305-00-781-7245	28	34		29	19
	29	18	5305-00-978-9380	30	23
5310-00-784-8142	27	17	5310-00-982-6810	31	15
5365-00-803-7299	13	4	5310-00-984-3806	13	11
5310-00-809-5998	28	31		28	12
	29	15		30	5
5310-00-809-8533	27	8	5305-00-984-5676	1	14
	31	14	5305-00-984-6212	2	8
5310-00-809-8541	24	21	5305-00-984-7343	29	21
5306-00-816-2441	28	27	5305-00-988-1725	1	10
	29	11	5305-00-993-1851	29	20
4730-00-817-6578	21	3	5310-00-997-1888	1	12
5310-00-820-6653	20	12	4720-01-003-6706	BULK	1
	25	2	5310-01-004-6946	20	13
	26	2	4720-01-014-4915	7	6
	27	25		BULK	2
	32	3	5340-01-034-3072	28	4
5310-00-823-8803	20	8	5310-01-043-0596	22	19
5340-00-827-2453	7	7	5310-01-070-2105	33	1
5310-00-829-9981	1	16	4010-01-074-5029	24	8
5310-00-832-9711	27	7	5306-01-075-8519	31	2
5905-00-845-9470	2	13	5306-01-098-7197	27	9
5935-00-846-3883	2	2	5310-01-098-7236	27	14
4820-00-849-1220	21	4	5310-01-098-7246	27	13
5305-00-855-0958	1	7	5310-01-098-7247	27	21
	7	1	2590-01-100-9001	27	23
	16	7	2510-01-100-9270	27	10
	17	6	2510-01-100-9271	27	19
	28	2	2520-01-101-0935	27	11
5305-00-855-096	43	3	2520-01-101-2551	27	15
	6	1	2510-01-101-2559	27	24
	7	5	2510-01-101-2890	27	22

CROSS- REFERENCE-INDEXES
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
5315-01-L37-3819	25	9	6145-01-230-2516	BULK	7
	26	8	5365-01-230-3488	28	17
4730-01-138-0907	16	2		30	10
5340-01-138-7153	30	26	5320-01-239-0880	14	11
5340-01-138-7195	25	11	5340-01-239-0883	14	4
	26	13	5330-01-239-0885	13	13
2510-01-138-9158	21	20	5310-01-239-0893	22	21
5340-01-139-9679	28	16	5360-01-241-6961	14	5
	30	9	2530-01-253-1978	18	1
5330-01-140-2424	28	6	5340-01-264-0205	29	6
	29	8	5340-01-273-8823	33	4
2590-01-140-8208	16	4	4730-01-274-1830	17	15
5935-01-41-08777	1	13	6220-01-280-3337	3	1
2510-01-L141-529	27	3	6150-01-280-4644	11	1
4730-01-141-9268	16	3	6150-01-280-4645	11	3
5320-01-150-9681	30	20	6150-01-280-4646	11	2
2540-01-152-105f	30	24	6150-01-280-4647	11	4
5325-01-152-2378	28	10	6150-01-280-9459	12	2
	30	3	6150-01-280-9460	12	3
5340-01-152-8882	28	19	6150-01-280-9461	3	4
	30	12	5905-01-280-9947	2	10
9390-01-156-8094	28	5	6150-01-281-2131	10	2
	29	7	3040-01-281-5264	30	22
5330-01-160-4343	13	7	5306-01-281-7159	22	13
2530-01-173-8546	14	10	5340-01-281-7207	28	33
2530-01-179-9307	22	4		29	16
4730-01-184-1683	16	16	3120-01-281-7211	27	12
	11	14	3120-01-281-7212	13	2
3040-01-186-7888	30	6	5340-01-281-7251	25	5
2540-01-189-0455	28	14	5315-01-281-7905	28	32
	30	7		29	17
5340-01-203-0321	28	25	5315-01-281-7906	32	10
	30	19	4730-01-281-8042	16	11
5340-01-204-5674	28	23		17	8
	30	17	6150-01-281-8824	12	1
5340-01-206-7589	28	24	5306-01-281-9191	27	6
	30	18	4730-01-281-9372	16	6
9905-01-207-3508	29	23	3040-01-281-9706	33	6
5365-01-208-6216	30	21	3040-01-281-9722	28	15
5340-01-208-6814	29	4		30	8
5365-01-215-3863	28	9	5306-01-282-0418	33	7
	30	2	5306-01-282-0427	22	13
2510-01-215-9950	28	13	5310-01-282-0429	24	15
5340-01-217-5316	30	13	5340-01-282-0961	1	8
5315-01-220-6245	14	7		2	1
5360-01-220-9373	14	6	4030-01-282-0988	32	8
5306-01-224-6887	28	8	5365-01-282-1561	16	15
	30	1	5320-0-282-1573	35	1
6145-01-228-6269	BULK	4	3120-01-282-1582	13	8
6145-01-230-1863	BULK	3	4730-01-282-1706	20	10

CROSS- REFERENCE-INDEXES
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
4720-01-282-1714	17	20	6150-01-283-7869	3	5
4720-01-282-1715	17	17	5365-01-283-9258	24	17
2530-01-282-2525	22	12	5340-01-283-9296	33	8
2540-01-282-2537	32	6	2590-01-284-0978	25	6
2530-01-282-255S	21	1	2590-01-284-0979	26	6
2510-01-282-2572	27	2	6220-01-284-1880	5	1
2530-01-282-2575	13	1	2590-01-284-2163	24	4
2530-01-282-2576	22	8	6150-01-284-2735	9	2
5340-01-282-3436	2	9	6150-01-284-3917	9	1
5340-01-282-3576	25	4	5365-01-285-2064	22	20
5340-01-282-3577	25	4	5905-01-286-0649	2	14
5340-01-282-3930	20	4	6150-01-286-7510	8	1
2510-01-282-4194	32	5			
9905-01-282-4656	35	2			
4710-01-282-5025	27	4			
2530-01-282-5188	14	7			
2530-01-282-5190	22	10			
2530-01-282-5191	13	16			
2530-01-282-5192	15	1			
2530-01-282-5193	20	1			
2530-01-282-5194	20	2			
2530-01-282-5208	22	8			
2590-01-282-6994	25	8			
	26	5			
3040-01-282-7002	13	9			
3040-01-282-7003	13	6			
5340-01-282-7663	5	2			
5315-01-282-8268	14	3			
4730-01-282-8505	6	2			
	7	4			
2590-01-282-8544	25	7			
	26	4			
2510-01-282-8565	34	5			
2510-01-282-8570	24	6			
2530-01-282-8620	13	16			
3040-01-282-8631	24	16			
5365-01-282-9286	31	7			
5315-01-282-9307	33	12			
5940-01-283-0374	2	3			
2530-01-283-0812	19	1			
5330-01-283-1186	22	7			
4730-01-283-1876	18	2			
4730-01-283-1877	21	12			
4720-01-283-1888	17	18			
2590-01-283-3791	26	7			
4730-01-283-3934	16	12			
	17	9			
5360-01-283-4341	14	2			
2530-01-283-5114	22	1			
6150-01-283-6934	8	2			

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
70485	A12113	5325-00-276-6228	1	5
19207	CPR104420-2	4720-01-014-4915	7	6
			16	17
			17	2
19207	CPR104420-3		17	13
		4720-01-003-6706	BULK	1
79470	C3159X12		21	10
81348	GP3/LO.00-20/F/T	2610-00-204-4026	23	1
	BHR			
81348	GROUP2/10.00-20	2610-00-260-7345	23	2
	/TR78A/ONCENIER			
60038	HN212011	3110-00-293-8997	22	11
60038	HM212049	3110-00-293-8998	22	18
60038	HM218210	3110-00-618-0249	22	14
60038	HM218248	3110-00-618-0248	22	16
96906	NS14315-4	4730-00-817-6578	21	3
96906	MS15001-1	4730-00-050-4203	13	5
			33	5
96906	NS15003-4	4730-00-172-0028	13	14
96906	MS1551-8	6240-00-155-7859	3	2
96906	MS169S7-61	5305-00-978-9380	30	23
96906	MS17828-10C	5310-01-004-6946	20	13
96906	MS17830-6C	5310-00-050-6646	28	26
			29	10
96906	NS21044N12	5310-00-982-6810	31	15
96906	MS21044N3	5310-00-877-5797	2	12
96906	NS21044N5	5310-00-088-0553	33	9
96906	MS21333-69	5340-00-764-705[16	8
			17	5
96906	MS21333-73	5340-00-057-2906	6	3
			7	8
			17	19
96906	MS24627-49	5305-00-052-6872	32	9
96906	MS24627-64	5305-00-003-6769	29	1
96906	MS24629-45	5305-00-855-0958	1	7
			7	1
			16	7
			17	6
			28	2
96906	MS24629-48	5305-00-855-0964	3	3
			6	1
			7	5
96906	NS24629-50	5305-00-052-6917	28	3
96906	MS24629-57	5305-00-052-6921	1	2
			32	12
			33	10
96906	MS24629-59	5305-00-052-6923	34	3
96906	MS24629-61	5305-00-052-7492	16	1
96906	MS24665-370	5315-00-236-8359	20	6
96906	MS24665-495	5315-00-234-1664	24	12
96906	MS27183-13	5310-00-087-7493	25	13

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS271183-13	5310-00-087-7493	26	11
96906	MS27183-14	5310-00-080-6004	21	6
96906	MS27183-18	5310-00-809-5998	28	31
			29	15
96906	MS27183-21	5310-00-823-8803	20	8
96906	MS27183-23	5310-00-809-8533	27	8
			31	14
96906	MS27183-27	5310-00-809-8541	24	21
96906	MS28775-216	5330-00-641-0231	30	25
96906	MS35150-5	5340-00-827-2453	7	7
96906	MS35190-291	5305-00-958-5247	29	5
96906	MS35190-305	5305-00-958-5469	22	9
96906	MS35191-276	5305-00-984-7343	29	21
96906	MS35191-323	5305-00-781-7245	28	34
			29	18
96906	MS35206-265	5305-00-984-6212	2	8
96906	MS35206-281	5305-00-988-1725	1	10
96906	MS35206-296	5305-00-984-5676	1	14
96906	MS35207-267	5305-00-993-1851	29	20
96906	MS35207-274	5305-00-958-0671	2	11
96906	MS35333-39	5310-00-576-5752	2	5
96906	MS35333-49	5310-00-582-6714	16	13
			17	11
96906	MS35338-42	5310-00-045-3299	4	2
96906	MS35338-43	5310-00-045-3296	1	6
			2	7
			28	1
96906	MS35338-44	5310-00-582-5965	1	1
			1	11
			24	10
			29	3
96906	MS35338-45	5310-00-407-9566	11	5
			13	10
			22	6
			28	11
			30	4
			31	3
96906	MS35338-50	5310-00-820-6653	20	12
			25	2
			26	2
			27	25
			32	3
96906	MS35387-1	9905-00-205-2795	34	1
96906	MS35387-2	9905-00-202-3639	34	2
96906	MS35489-40	5325-00-185-0004	16	19
96906	MS35489-46	5325-00-185-0001	7	9
96906	MS35489-78	5325-00-276-6098	6	4
			17	3
96906	MS35489-S8	5325-00-276-6040	16	18
96906	MS35649-202	5310-00-934-9758	2	6
36378	MS35649-2252	5310-00-997-1888	1	12

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS35649-2312	5310-00-829-9981	1	16
96906	MS35649-282	5310-00-934-9757	4	3
96906	MS35650-3C2	5310-00-934-9751	2	4
96906	MS35748-1	5330-00-090-2128	16	20
96906	MS35751-71	5306-00-816-2441	28	27
			29	11
96906	MS35782-5	4820-00-849-1220	21	4
96906	MS39230-2	4730-00-253-4412	19	3
96906	MS39230-3	4730-00-253-4413	17	1
96906	MS51106-340	5306-01-282-0418	33	7
96906	MS51359-4	2640-00-052-0875	23	3
96906	MS51861-66	5305-00-432-4252	34	4
96906	MS51922-17	5310-00-087-4652	21	5
96906	MS51922-21	5310-00-959-1488	25	14
			26	12
			28	35
			29	19
96906	MS51922-49	5310-00-269-4040	20	7
96906	MS5922-53	5310-00-225-6408	27	16
96906	MS51922-61	5310-00-832-9719	27	7
96906	MS51922-9	5310-00-984-3806	13	11
			28	12
			30	5
96906	MS51963-64	5305-00-723-9386	28	30
			29	14
96906	MS51967-14	5310-01-070-2105	33	1
96906	MS51967-2	5310-00-761-6882	24	11
			29	2
96906	MS51967-20	5310-00-763-8920	25	3
			26	3
			26	9
			32	2
96906	MS51967-8	5310-00-732-0558	24	20
			31	8
96906	MS51968-14	5310-00-732-0560	24	2
96906	MS51968-20	5310-00-763-8905	20	3
96906	MS51968-21	5310-00-763-8904	27	26
96906	MS51975-18	5305-00-939-0658	28	18
			30	11
96906	MS51983-2	5310-00-594-8038	24	5
96906	MS51983-3	5310-00-880-2004	22	3
96906	MS51983-4	5310-00-880-2005	22	3
96906	MS53068-1	2530-00-693-1029	22	17
96906	MS53068-2	2530-00-359-1162	22	117
96906	MS75021-1	5935-00-846-3883	2	2
96906	MS90725-162	5305-00-724-5910	25	1
			26	1
			32	4
96906	MS90725-33	5306-00-225-8498	13	3
96906	MS90725-34	5306-00-225-8499	31	1
96906	MS90725-36	5306-01-075-8519	31	2

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
96906	MS90725-6	5305-00-068-0502	28	22
			30	16
96906	MS90725-60		21	7
96906	MS90726-189		31	12
96906	MS90727-128	5305-00-719-5275	24	3
96906	MS90727-168	5305-00-726-2555	27	27
96906	NS90727-189	5305-00-762-6041	31	13
96906	NS90727-1S7	5305-00-940-8069	27	5
96906	NS90727-250		32	1
96906	MS90727-58	5305-00-269-3234	28	21
			30	15
96906	MS90721-68	5305-00-269-3244	25	12
			26	10
96906	NS90728-164	5305-00-724-7222	27	18
96906	MS90728-32	5306-00-226-4825	22	5
96906	MS90728-62	5305-00-068-0511	24	14
62707	M1OHM100	5320-01-239-0880	14	11
62707	M1OHN101	5310-01-043-0596	22	19
62707	M1OHN102	5310-01-239-0893	22	21
62707	MH6HD100	3120-00-304-9074	13	15
62707	M16HH100	5330-01-239-0885	13	13
62707	M16WJ100	5360-01-241-6961	14	5
62707	M16WJJ102	5340-01-239-0883	14	41
62707	M16WJ103	5360-01-220-9373	14	6
62707	M16WJ104	5315-01-220-6245	14	7
62707	M16WL100	2530-01-173-8546	14	10
81349	M83461/1-325	5330-01-160-4343	13	7
50663	NP5053238	4730-00-196-1504	21	11
81349	RW22-V4R5	5905-00-845-9470	2	13
81348	RW22V6R0	5905-01-286-0649	2	14
81343	SAEJ128TYGPT-14		BULK	6
	AWG-GREEN			
81348	ZZ-V-25/TVPE IV/ CLASS1/TR-VC-2	2640-00-060-3550	23	4
92967	10060-01	5306-01-098-7197	27	9
19207	10882200	2540-00-897-5917	31	10
19207	10944341	5365-00-717-5617	31	11
10125	110180	2530-01-253-1978	18	1
19207	1168178	5340-01-034-3072	28	4
19207	12258212-2		4	1
19207	12307731	2540-01-152-1056	30	24
19207	12314155		22	15
19207	12315278	4730-01-138-0907	16	2
19207	12315280	4730-01-141-9268	16	3
19207	12315340-2	5306-01-281-9191	27	6
19207	12315342-2	4710-01-282-5025	27	4
19207	12315345	2510-01-100-9271	27	19
19207	12315350	2510-01-138-9158	27	20
19207	12315351	2520-01-101-2551	27	15
19207	12315352	2520-01-101-0935	27	11
19207	12315353	2510-01-141-5297	27	3

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19207	12315354	2590-01-100-9001	27	23
19207	12315441	2510-01-101-2890	27	22
19207	12315484-3	3040-01-186-7888	30	6
19207	12315484-8	2510-01-215-9950	28	13
19207	12315489-1	2540-01-189-0455	28	14
			30	7
19207	12315505	5340-01-282-3436	2	9
19207	12315506	5340-01-138-7195	25	11
			26	13
19207	12315536	2590-01-140-8208	16	4
19207	12315542-8		28	36
			29	22
19207	12315557	5935-01-141-0877	1	13
19207	12315564	2510-01-100-9270	27	10
19207	12315569-1	3040-01-281-5264	30	22
19207	12315571	5340-01-138-7153	30	26
19207	12315611-2	5315-01-137-3819	25	9
			26	8
19207	12315611-5	5315-01-281-7906	32	10
19207	12315614	5310-01-098-7236	27	14
19207	12315617-1	5340-01-139-9679	28	16
			30	9
19207	12315618	5325-01-152-2378	28	10
			30	3
19207	12315633-1	5340-01-206-7589	28	24
			30	18
19207	12315633-2	5340-01-203-03212	8	25
			30	19
19207	12315644-3	5320-01-150-9681	30	20
19207	12315649	5340-01-204-5674	28	23
			30	17
19207	12315658	9390-01-156-8094	28	5
			29	7
19207	12315659	5330-01-140-2424	28	6
			29	8
19207	12315674	5340-01-152-8882	28	19
			30	12
19207	12330833-38	5365-01-282-9286	31	7
19207	12330845	5365-01-230-3488	28	17
			30	10
19207	12330884	5365-01-208-6216	30	21
19207	12330931	5340-01-208-6814	29	4
19207	12330932	5340-01-264-0205	29	6
19207	12331207-3	5320-01-282-1573	35	1
19207	12331218	9905-01-207-3508	29	23
19207	12331240	5340-01-217-5316	30	13
19207	12331242	5306-01-224-6887	28	8
			30	1
19207	12331243-2	5365-01-215-3863	28	9
			30	2
19207	12353862-1		25	10

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19207	12353862-1		26	9
19207	12353862-5		32	11
19207	12353862-6		32	7
19207	12353862-7		33	11
19207	12353888	5340-01-273-8823	33	4
19207	12353895	4730-01-281-9372	16	6
19207	12353517-1	5310-00-937-5950	31	4
19207	12353517-2	5310-00-252-5868	31	5
19207	12353919	9905-01-282-4656	35	2
19207	12353955	2540-01-282-2537	32	6
19207	12353957	2590-01-282-8544	25	7
			26	4
19207	12353958-1	2590-01-284-0979	26	6
19207	12353958-2	2590-01-284-0978	25	6
19207	1235355-3	5340-01-281-7251	25	5
19207	12353958-4	2590-01-283-3791	26	7
19207	12353969-1	6220-01-280-3337	3	1
19207	123539869-2		3	1
19207	12353970	6150-01-283-7869	3	5
19207	12353971	5340-01-282-7663	5	2
19207	12353972	6220-01-284-1880	5	1
19207	12353974	6150-01-284-2735	9	2
19207	12353975	6150-01-286-3917	9	1-
19207	12353976	6150-01-286-7510	8	1
19207	12353977	6150-01-283-6934	8	2
19207	12353597	2530-01-282-5193	20	1
19207	12354007	2530-01-282-5194	20	2
19207	12354010-1		24	18
19207	12354010-2	5310-01-282-0429	24	15
19207	12354015	6150-01-280-9461	3	4
19207	12354025	5340-01-282-0911	1	8
			2	1
19207	12354046-1	4720-01-282-1714	17	20
19207	12354046-2	4720-01-282-1715	17	11
19207	12354046-3	4720-01-283-1888	17	18
19207	12354092	3120-01-281-7211	27	12
19207	12354101	2590-01-282-6994	25	8
			26	5
19207	12354102	2530-01-282-2559	21	1
19207	12354103	2530-01-282-8620	13	16
19207	12354104	2530-01-282-5191	13	16
19207	12354105-1	3040-01-282-7002	13	9
19207	12354105-2	3040-01-282-7003	13	6
19207	12354107	4730-01-283-1877	21	12
19207	12354108-2		16	5
			17	4
			19	4
19207	12354109	3120-01-282-1582	13	8
19207	12354111	4730-01-283-1876	18	2
19207	12354113	5365-01-285-2064	22	20
19207	12354125	2510-01-282-2572	27	2

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19207	12354132-2		21	9
19207	12354138	4730-01-281-8042	16	11
			17	8
19207	12354138-1		16	14
			17	10
19207	12354138-2	4730-01-283-3934	16	12
			17	9
19207	12354140	2530-01-283-0812	19	1
19207	12354143	6150-01-281-8824	12	1
19207	12354144	4730-01-282-8505	6	2
			7	4
19207	12354148	2530-01-283-5114	22	1
19207	12354149-1		7	2
19207	12354149-2		7	3
19207	12354150	2530-01-282-5192	15	1
19207	12354151-1	5306-01-282-0427	22	13
19207	12354151-2	5306-01-281-7159	22	13
19207	12354152	5360-01-283-4341	14	2
19207	12354153-2		27	1
19207	12354155-1	2530-01-282-2576	22	8
19207	12354155-2	2530-01-282-5208	22	8
19207	12354156-2	2530-01-282-2575	13	1
19207	12354157	2530-01-179-9307	22	4
19207	12354158	5330-01-283-1186	22	7
19207	12354160	3120-01-281-7212	13	2
19207	12354163	2530-01-282-5188	14	1
19207	12354165	5315-01-282-8268	14	3
19207	12354166		14	8
19207	12354167		14	9
19207	12354171	2590-01-284-2163	24	4
19207	12354180		24	13
19207	12354182	2510-01-282-8570	24	6
19207	12354183		24	7
19207	12360336	5365-01-283-9258	24	17
19207	12360337	3040-01-282-8631	24	16
19207	12360389	2530-01-282-2525	22	12
19207	12360341		22	2
19207	12360342	2530-01-282-5190	22	10
19207	12360344	5340-01-282-3930	20	4
19207	12360345		20	5
19207	12360347	4730-01-282-1706	20	10
19207	12360359	5365-01-282-1561	16	15
19207	12360360-1		2	26
19207	12360360-2		2	27
19207	12360360-3		2	25
19207	12360360-4		2	16
19207	12360360-5		2	15
19207	12360360-6		2	18
19207	12360360-7		2	117
19207	12360361-1		2	21
19207	12360361-2		2	23

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
19207	12360361-3		2	22
19207	12360361-4		2	24
19207	12360361-5		2	19
19207	12360361-6		2	20
19207	12360362		10	1
19207	12360363	5940-01-283-0374	2	3
19207	12360364		29	9
19207	12360366	5905-01-280-9947	2	10
19207	12360368	3040-01-281-9722	28	15
			30	8
19207	12360372		28	28
			29	12
19207	12360375		28	7
19207	12360381-3	6150-01-280-4644	11	1
19207	12360381-4	6150-01-280-4645	11	3
19207	12360381-5	6150-01-280-4646	11	2
19207	12360381-6	6150-01-280-4647	11	4
19207	12360384-1	6150-01-280-9459	12	2
19207	12360384-2	6150-01-280-9460	12	3
19207	12360385-1	6150-01-281-2131	10	2
19207	12360387		1	4
19207	12360388	2510-01-282-8569	34	5
19207	12360392-1	5340-01-282-3576	25	4
19207	12360392-2	5340-01-282-3577	25	4
19207	12360397	5315-01-281-7905	28	32
			29	17
19207	12360398	5340-01-281-7207	28	33
			29	16
19207	12360399		28	29
			29	13
19201	12360400	2510-01-282-4194	32	5
19207	12360410		33	3
19207	12360414	3040-01-281-9706	33	6
19207	12360415	5315-01-282-9307	33	12
19207	12360426	5340-01-283-9296	33	8
19207	12360531		31	6
19207	1254026		1	3
10001	1561635	5310-00-784-8142	27	17
73992	2-H16	4730-01-184-1683	16	16
			17	14
739922	K16	4730-00-729-7087	16	9
			17	16
80045	23MS35338-10	5310-00-584-5272	24	1
			33	2
06853	246115	4720-01-014-4915	BULK	2
94231	3-07620-311	5310-00-004-5033	24	19
			28	20
			30	14
			31	9
21450	443990	4730-00-878-4199	16	to
24617	444583	4730-00-044-4583	19	2

**CROSS-REFERENCE INDEXES
PART NUMBER INDEX**

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
89346	444624	4730-00-052-3666	21	8
21450	444710		20	9
79136	5100-150MD	5365-00-803-7299	13	4
81343	6-4100102BA	4730-01-274-1830	17	15
81343	6-41401400		20	11
81343	6-6-61404250		17	7
81343	6-6100202BA		21	2
93061	68NTA-8-6		17	12
19207	7521159	4010-01-074-5029	24	8
19207	7534868	5310-00-350-5550	13	12
19207	7731428	5935-00-773-1428	1	9
81343	8-8100202BA		18	3
64488	81141S	6145-00-310-2590	BULK	8
64488	81142S	6145-01-228-6269	BULK	4
64488	81143S	6145-00-310-2598	BULK	5
64488	81146S	6145-01-230-1863	BULK	3
64488	81147S	6145-01-230-2516	BULK	7
92967	837-00	5310-01-098-7246	27	13
19207	8713419	5306-00-017-9722	24	9
19207	8747064	4030-01-282-0988	32	8
9296	895-00	5310-01-098-7247	27	21
92967	9640-00	2510-01-101-2559	27	24

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
BULK	1	4720-01-003-6706	19207	CPR104420-3
BULK	2	4720-01-014-4915	06853	246115
BULK	3	6145-01-230-1863	64488	811465
BULK	4	6145-01-228-6269	64488	81142S
BULK	5	6145-00-310-2598	64488	8143S
BULK	6		81343	SAEJ1128TYGPT-14 AWG-GREEN
BULK	7	6145-01-230-2516	64488	81147S
BULK	8	6145-00-310-2590	64488	81141S
1	1	5310-00-582-5965	96906	MS35338-44
1	2	5305-00-052-6921	96906	MS24629-57
1	3		19207	1254026
1	4		19207	12360387
1	5	5325-00-276-6228	70485	A12113
1	6	5310-00-045-3296	96906	MS35338-43
1	7	5305-00-855-0958	96906	MS24629-45
1	8	5340-01-282-0961	19207	12354025
1	9	5935-00-773-1428	19207	7731428
1	10	5305-00-988-1725	96906	MS35206-281
1	11	5310-00-582-5965	96906	MS35338-44
1	12	5310-00-997-1888	36378	MS35649-2252
1	13	5935-01-141-0877	19207	12315557
1	14	5305-00-984-5676	96906	MS35206-296
1	15	5310-00-407-9566	96906	MS35338-45
1	16	5310-00-829-9981	96906	MS35649-2312
2	1	5340-01-282-0961	19207	12354025
2	2	5935-00-846-3883	96906	MS75021-1
2	3	5940-01-283-0374	19207	12360363
2	4	5310-00-934-9751	96906	MS35650-302
2	5	5310-00-576-5752	96906	MS35333-39
2	6	5310-00-934-9758	96906	MS35649-202
2	7	5310-00-045-3296	96906	MS35338-43
2	8	5305-00-984-6212	96906	MS35206-265
2	9	5340-01-282-3436	19207	12315505
2	10	5905-01-280-9947	19207	12360366
2	11	5305-00-958-0671	96906	MS35207-274
2	12	5310-00-877-5797	96906	MS21044N3
2	13	5905-00-845-9470	81349	RW22-V4R5
2	14	5905-01-286-0649	81348	RW22V6RO
2	15		19207	12360360-5
2	16		19207	12360360-4
2	17		19207	12360360-7
2	18		19207	12360360-6
2	19		19207	12360361-5
2	20		19207	12360361-6
2	21		19207	12360361-1
2	22		19207	12360361-3
2	23		19207	12360361-2
2	24		19207	12360361-4
2	25		19207	12360360-3
2	26		19207	12360360-1

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
2	27		19207	12360360-2
3	1		19207	12353969-2
3	1	6220-01-280-3337	19207	12353969-1
3	2	6240-00-155-7859	96906	MS15571-8
3	3	5305-00-855-0964	96906	MS24629-48
3	4	6150-01-280-9461	19207	123540 15
3	5	6150-01-283-7869	19207	12353970
4	1		19207	12258212-2
4	2	5310-00-045-3299	96906	MS35338-42
4	3	5310-00-934-9757	96906	M535649-282
5	1	6220-01-284-1880	19207	12353972
5	2	5340-01-282-7663	19207	12353971
6	1	5305-00-855-0964	96906	MS24629-48
6	2	4730-01-282-8505	19207	12354144
6	3	5340-00-057-2906	96906	MS21333-73
6	4	5325-00-276-6098	96906	MS35489-78
7	1	5305-00-855-0958	96906	PS24629-45
7	2		19207	12354149-1
7	3		19207	12354149-2
7	4	4730-01-282-8505	19207	12354144
7	5	5305-00-855-0964	96906	MS24629-48
7	6	4720-01-014-4915	19207	CPR104420-2
7	7	5340-00-827-2453	96906	MS35150-5
7	8	5340-00-057-2906	96906	MS21333-73
7	9	5325-00-185-0001	96906	MS35489-46
8	1	6150-01-286-7510	19207	12353976
8	2	6150-01-283-6934	19207	12353977
9	1	6150-01-284-3917	19207	12353975
9	2	6150-01-284-2735	19207	12353974
10	1		19207	12360362
10	2	6150-01-281-2131	19207	12360385-1
11	1	6150-01-280-4644	19207	12360381-3
11	2	6150-01-280-4646	19207	12360381-5
11	3	6150-01-280-4645	19207	12360381-4
11	4	6150-01-280-4647	19207	12360381-6
12	1	6150-01-281-8824	19207	12354143
12	2	6150-01-280-9459	19207	12360384-1
12	3	6150-01-280-9460	19207	12360384-2
13	1	2530-01-282-2575	19207	12354156-2
13	2	3120-01-281-7212	19207	12354160
13	3	5306-00-225-8498	96906	MS90725-33
13	4	5365-00-803-7299	79136	5100-150MD
13	5	4730-00-050-4203	96906	MS15001-1
13	6	3040-01-282-7003	19207	12354105-2
13	7	5330-01-160-4343	81349	M83461/1-325
13	8	3120-01-282-1582	19207	12354109
13	9	3040-01-282-7002	19207	12354105-1
13	10	5310-00-407-9566	96906	MS35338-45
13	11	5310-00-984-3806	96906	MS5[922-9
13	12	5310-00-350-5550	19207	7534868
13	13	5330-01-239-0885	62707	M16HH100

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
13	14	4730-00-172-0028	96906	MSL5003-4
13	15	3120-00-304-9074	62707	M16HD100
13	16	2530-01-282-5191	19207	12354104
13	16	2530-01-282-8620	19207	12354L03
14	1	2530-01-282-5188	19207	12354163
14	2	5360-01-283-4341	19207	12354152
14	3	5315-01-282-8268	19207	12354165
14	4	5340-01-239-0883	62707	M16WJ102
14	5	5360-01-241-6961	62707	M16WJ100
14	6	5360-01-220-9373	62707	M16WJ103
14	7	5315-01-220-6245	62707	M16WJ104
14	8		19207	12354166
14	9		19207	12354167
14	10	2530-01-173-8546	62707	M16WL100
14	11	5320-01-239-0880	62707	M10HM100
15	1	2530-01-282-5192	19207	12354150
16	1	5305-00-052-7492	96906	MS24629-61
16	2	4730-01-138-0907	19207	12315278
16	3	4730-01-141-9268	19207	12315280
16	4	2590-01-140-8208	19207	12315536
16	5		19207	12354108-2
16	6	4730-01-281-9372	19207	12353895
16	7	5305-00-855-0958	96906	MS24629-45
16	8	5340-00-764-7051	96906	MS21333-69
16	9	4730-00-729-7087	73992	2K16
16	10	4730-00-878-4199	21450	443990
16	11	4730-01-281-8042	19201	12354138
16	12	4730-01-283-3934	19207	12354138-2
16	13	5310-00-582-6714	96906	MS35333-49
16	14		19207	12354138-1
16	15	5365-01-282-1561	19207	12360359
16	16	4730-01-184-1683	73992	2-H16
16	17		19207	CPRI04420-2
16	18	5325-00-276-6040	96906	MS35489-98
16	19	5325-00-185-0004	96906	MS35489-40
16	20	5330-00-090-2128	96906	MS35748-1
17	1	4730-00-253-4413	96906	MS39230-3
17	2		19207	CPR104420-2
17	3	5325-00-276-6098	96906	MS35489-78
17	4		19207	12354108-2
L7	5	5340-00-764-7051	96906	MS21333-69
17	6	5305-00-855-0958	96906	MS24629-45
17	7		81343	6-6-61404250
17	8	4730-01-281-8042	19207	12354138
17	9	4730-01-283-3934	19207	12354138-2
17	10		19207	12354138-1
17	11	5331-00-582-6714	96906	MS35333-49
17	12		93061	68NTA-8-6
17	13		19207	CPR104420-3
17	14	4730-01-184-1683	73992	2-H16
17	15	4730-01-274-1830	81343	6-4100102BA

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
17	16	4730-00-729-7087	73992	2K16
17	17	4720-01-282-1715	19207	12354046-2
17	18	4720-01-283-1888	19207	12354046-3
17	19	5340-00-057-2906	96906	MS21333-73
17	20	4720-01-282-1714	19207	12354046-1
18	1	2530-01-253-1978	10125	110180
18	2	4730-01-283-1876	19207	12354111
18	3		81343	8-8100202BA
19	1	2530-01-283-0812	19207	12354140
19	2	4730-00-044-4583	24617	444583
19	3	4730-00-253-4412	96906	MS39230-2
19	4		19207	12354108-2
20	1	2530-01-282-5193	19207	12353997
20	2	2530-01-282-5194	19207	12354007
20	3	5310-00-763-8905	96906	MS51968-20
20	4	5340-01-282-3930	19207	12360344
20	5		19207	12360345
20	6	5315-00-236-8359	96906	MS24665-370
20	7	5310-00-269-4040	96906	MS51922-49
20	8	5310-00-823-8803	96906	MS27183-21
20	9		21450	444710
20	10	4730-01-282-1706	19207	12360347
20	11		81343	6-4140140C
20	12	5310-00-820-6653	96906	MS35338-50
20	13	5310-01-004-6946	96906	MS17828-10C
21	1	2530-01-282-2559	19207	12354102
21	2		81343	6-6100202BA
2	3	4730-00-817-6578	96906	MS14315-4
21	4	4820-00-849-1220	96906	MS35782-5
21	5	5310-00-087-4652	96906	MS51922-17
21	6	5310-00-080-6004	96906	M527183-14
21	7		96906	MS90725-60
21	8	4730-00-052-3666	89346	444624
21	9		19207	12354132-2
21	10		79470	C3159X12
21	11	4730-00-196-1504	50663	NP5053238
21	12	4730-01-283-1877	19207	12354107
22	1	2530-01-283-5114	19207	12354148
22	2		19207	12360341
22	3	5310-00-880-2004	96906	MS51983-3
22	3	5310-00-880-2005	96906	MS51983-4
22	4	2530-01-179-9307	19207	12354157
22	5	5306-00-226-4825	96906	MS90728-32
22	6	5310-00-407-9566	96906	MS35338-45
22	7	5330-01-283-1186	19207	12354158
22	8	2530-01-282-2576	19207	12354155-1
22	8	2530-01-282-5208	19207	12354155-2
22	9	5305-00-958-5469	96906	MS35190-305
22	10	2530-01-282-5190	19207	12360342
22	11	3110-00-293-8997	60038	HM212011
22	12	2530-01-282-2525	19207	12360339

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
22	13	5306-01-281-7159	19207	12354151-2
22	13	5306-01-282-0427	19207	12354151-1
22	14	3110-00-618-0249	60038	HM218210
22	15		19207	12314159
22	16	3110-00-618-0248	60038	HM218248
22	17	2530-00-359-1162	96906	MS53068-2
22	17	2530-00-693-1029	96906	MS53068-1
22	18	3110-00-293-8998	60038	HM212049
22	19	5310-01-043-0596	62707	M10HN101
22	20	5365-01-285-2064	19207	12354113
22	21	5310-01-239-0893	62707	M10HN102
23	1	2610-00-204-4026	81348	GP3/10.00-20/F/T BHR
23	2	2610-00-260-7345	81348	GROUP 2/10.00-20 /TR78A/ON CENTER
23	3	2640-00-052-0875	96906	MS51359-4
23	4	2640-00-060-3550	81348	ZZ-V-25/TYPE IV/ CLASS /TR-VC-2
24	1	5310-00-584-5272	80045	23MS35338-10
24	2	5310-00-732-0560	96906	MS51968-14
24	3	5305-00-719-5275	96906	MS90727-128
24	4	2590-01-284-2163	19207	12354173
24	5	5310-00-594-8038	96906	MS51983-2
24	6	2510-01-282-8570	19207	12354182
24	7		19207	12354183
24	8	4010-01-074-5029	19207	7521159
24	9	5306-00-017-9722	19207	8713419
24	10	5310-00-582-5965	96906	MS35338-44
24	11	5310-00-761-6882	96906	MS51967-2
24	12	5315-00-234-1664	96906	MS24665-495
24	13		19207	12354180
24	14	5305-00-068-0511	96906	MS90728-62
24	15	5310-01-282-0429	19207	12354010-2
24	16	3040-01-282-8631	19207	12360337
24	17	5365-01-283-9258	19207	12360336
24	18		19207	12354010-1
24	19	5310-00-004-5033	94231	3-07620-311
24	20	5310-00-732-0558	96906	MS51967-8
24	21	5310-00-809-8541	96906	MS27183-27
25	1	5305-00-724-5910	96906	MS90725-162
25	2	5310-00-820-6653	96906	MS35338-50
25	3	5310-00-763-8920	96906	MS51967-20
25	4	5340-01-282-3576	19207	12360392-1
25	4	5340-01-282-3577	19207	12360392-2
25	5	5340-01-281-7251	19207	12353958-3
25	6	2590-01-284-0978	19207	12353958-2
25	7	2590-01-282-8544	19207	12353957
25	8	2590-01-282-6994	19207	12354101
25	9	5315-01-137-3819	19207	1231561-2
25	10		19207	12353862-1
25	11	5340-01-138-7195	19207	12315506

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
25	12	5305-00-269-3244	96906	MS90727-68
25	13	5310-00-087-7493	96906	MS27183-13
25	14	5310-00-959-1488	96906	MS51922-21
26	1	5305-00-724-5910	96906	MS90725-162
26	2	5310-00-820-6653	96906	MS35338-50
26	3	5310-00-763-8920	96906	MS51967-20
26	4	2590-01-282-8544	19207	12353957
26	5	2590-01-282-6994	19207	12354101
26	6	2590-01-284-0979	19207	12353958-1
26	7	2590-01-283-3791	19207	12353958-4
26	8	5315-01-137-3819	19207	12315611-2
26	9		19207	12353862-1
26	9	5310-00-763-8920	96906	MS51967-20
26	10	5305-00-269-3244	96906	MS90727-68
26	11	5310-00-087-7493	96906	MS27183-13
26	12	5310-00-959-1488	96906	MS51922-21
26	13	5340-01-138-7195	19207	12315506
27	1		19207	12354153-2
27	2	2510-01-282-2572	19207	12354125
27	3	2510-01-141-5297	19207	12315353
27	4	4710-01-282-5025	19207	12315342-2
27	5	5305-00-940-8069	96906	MS90727-97
27	6	5306-01-281-9191	19207	12315340-2
27	7	5310-00-832-9719	96906	MS51922-61
27	8	5310-00-809-8533	96906	MS27183-23
27	9	5306-01-098-7197	92967	10060-0 1
27	10	2510-01-100-9270	19207	12315564
27	11	2520-01-101-0935	19207	12315352
27	12	3120-01-281-7211	19207	12354092
27	13	5310-01-098-7246	92967	837-00
27	14	5310-01-098-7236	19207	12315614
27	15	2520-01-101-2551	19207	12315351
27	16	5310-00-225-6408	96906	MS51922-53
27	17	5310-00-784-8142	10001	1561635
27	18	5305-00-724-7222	96906	MS90728-164
27	19	2510-01-100-9271	19207	12315349
27	20	2510-01-138-9158	19207	12315350
27	21	5310-01-098-7247	92967	895-00
27	22	2510-01-101-2890	19207	12315441
27	23	2590-01-100-9001	19207	12315354
27	24	2510-01-101-2559	92967	9640-00
27	25	5310-00-820-6653	96906	MS35338-50
27	26	5310-00-763-8904	96906	MS51968-21
27	27	5305-00-726-2555	96906	MS90727-168
28	1	5310-00-045-3296	96906	MS35338-43
28	2	5305-00-855-0958	96906	MS24629-45
28	3	5305-00-052-6917	96906	MS24629-50
28	4	5340-01-034-3072	19207	11681178
28	5	9390-01-156-8094	19207	12315658
28	6	5330-01-140-2424	19207	12315659
28	7		19207	12360379

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
28	8	5306-01-224-6887	19207	12331242
28	9	5365-01-215-3863	19207	12331243-2
28	10	5325-01-152-2378	19207	12315618
28	11	5310-00-407-9566	96906	MS35338-45
28	12	5310-00-984-3806	96906	MS51922-9
28	13	2510-01-215-9950	19207	12315484-8
28	14	2540-01-189-0455	19207	12315489-1
28	15	3040-01-281-9722	19207	12360368
28	16	5340-01-139-9679	19207	12315617-1
28	17	5365-01-230-3488	19207	12330845
28	18	5305-00-939-0658	96906	MS51975-18
28	19	5340-01-152-8882	19207	12315674
28	20	5310-00-004-5033	94231	3-07620-311
28	21	5305-00-269-3234	96906	MS90727-58
28	22	5305-00-068-0502	96906	MS90725-6
28	23	5340-01-204-5674	19207	12315649
28	24	5340-01-206-7589	19207	12315633-1
28	25	5340-01-203-0321	19207	12315633-2
28	26	5310-00-050-6646	96906	MS17830-6C
28	27	5306-00-816-2441	96906	MS35751-71
28	28		19207	12360372
28	29		19207	12360399
28	30	5305-00-723-9386	96906	MS51963-64
28	31	5310-00-809-5998	96906	MS27183-18
28	32	5315-01-281-7905	19207	12360397
28	33	5340-01-281-7207	19207	12360398
28	34	5305-00-781-7245	96906	MS35191-323
28	35	5310-00-959-1488	96906	MS51922-21
28	36		19207	12315542-8
29	1	5305-00-003-6769	96906	MS24627-64
29	2	5310-00-761-6882	96906	MS51967-2
29	3	5310-00-582-5965	96906	MS35338-44
29	4	5340-01-208-6814	19207	12330931
29	5	5305-00-958-5247	96906	MS35190-291
29	6	5340-01-264-0205	19207	12330932
29	7	9390-01-156-8094	19207	12315658
29	8	5330-01-140-2424	19207	12315659
29	9		19207	12360364
29	10	5310-00-050-6646	96906	MS17830-6C
29	11	5306-00-816-2441	96906	MS35751-71
29	12		19207	12360372
29	13		19207	12360399
29	14	5305-00-723-9386	96906	MS51963-64
29	15	5310-00-809-5998	96906	MS27183-18
29	16	5340-01-281-7207	19207	12360398
29	17	5315-01-281-7905	19207	12360397
29	18	5305-00-781-7245	96906	MS35191-323
29	19	5310-00-959-1488	96906	MS51922-21
29	20	5305-00-993-1851	96906	MS35207-267
29	21	5305-00-984-7343	96906	MS35191-276
29	22		19207	12315542-8

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

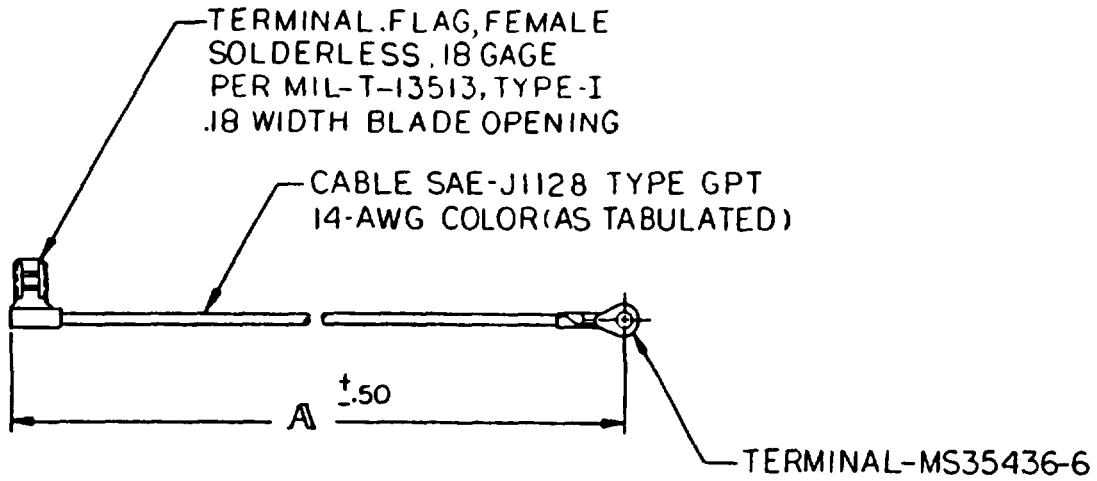
FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
29	23	9905-01-207-3508	19207	12331218
30	1	5306-01-224-6887	19207	12331242
30	2	5365-01-215-3863	19207	12331243-2
30	3	5325-01-152-2378	19207	12315618
30	4	5310-00-407-9566	96906	MS35338-45
30	5	5310-00-984-3806	96906	MS51922-9
30	6	3040-01-186-7888	19207	12315484-3
30	7	2540-01-189-0455	19207	12315489-1
30	8	3040-01-281-9722	19207	12360368
30	9	5340-01-139-9679	19207	12315617-1
30	10	5365-01-230-3488	19207	12330845
30	11	5305-00-939-0658	96906	MS51975-18
30	12	5340-01-152-8882	19207	12315674
30	13	5340-01-217-5316	19207	12331240
30	14	5310-00-004-5033	94231	3-07620-311
30	15	5305-00-269-3234	96906	MS90727-58
30	16	5305-00-068-0502	96906	MS90725-6
30	17	5340-01-204-5674	19207	12315649
30	18	5340-01-206-7589	19207	12315633-1
30	19	5340-01-203-0321	19207	12315633-2
30	20	5320-01-150-9681	19207	12315644-3
30	21	5365-01-208-6216	19207	12330884
30	22	3040-01-281-5264	19207	12315569-1
30	23	5305-00-978-9380	96906	MS16997-61
30	24	2540-01-152-1056	19207	12307731
30	25	5330-00-641-0231	96906	MS28775-216
30	26	5340-01-138-7153	19207	12315571
31	1	5306-00-225-8499	96906	MS90725-34
31	2	5306-01-075-8519	96906	MS90725-36
31	3	5310-00-407-9566	96906	MS35338-45
31	4	5310-00-937-5950	19207	12353917-1
31	5	5310-00-252-5868	19207	12353917-2
31	6		19207	12360531
31	7	5365-01-282-9286	19207	12330833-38
31	8	5310-00-732-0558	96906	MS51967-8
31	9	5310-00-004-5033	94231	3-07620-311
31	10	2540-00-897-5917	19207	10882200
31	11	5365-00-717-5617	19207	10944341
31	12		96906	MS90726-189
31	13	5305-00-762-6041	96906	MS90727-189
31	14	5310-00-809-8533	96906	MS27183-23
31	15	5310-00-982-6810	96906	MS21044N12
32	1		96906	MS90727-250
32	2	5310-00-763-8920	96906	MS51967-20
32	3	5310-00-820-6653	96906	MS35338-50
32	4	5305-00-724-5910	96906	MS90725-162
32	5	2510-01-282-4194	19207	12360400
32	6	2540-01-282-2537	19207	12353955
32	7		19207	12353862-6
32	8	4030-01-282-0988	19207	8747064
32	9	5305-00-052-6872	96906	MS24627-49

**CROSS-REFERENCE INDEXES
FIGURE AND ITEM NUMBER INDEX**

FIG.	ITEM	STOCK NUMBER	FSCM	PART NUMBER
32	10	5315-01-281-7906	19207	12315611-5
32	11		19207	12353862-5
32	12	5305-00-052-6921	96906	MS24629-57
33	1	5310-01-070-2105	96906	MS51967-14
33	2	5310-00-584-5272	80045	23MS35338-10
33	3		19207	12360410
33	4	5340-01-273-8823	19207	12353888
33	5	4730-00-050-4203	96906	MS15001-1
33	6	3040-01-281-9706	19207	12360414
33	7	5306-01-282-0418	96906	MS51106-340
33	8	5340-01-283-9296	19207	12360426
33	9	5310-00-088-0553	96906	MS21044N5
33	10	5305-00-052-6921	96906	MS24629-57
33	11		19207	12353862-7
33	12	5315-01-282-9307	19207	12360415
34	1	9905-00-205-2795	96906	MS35387-1
34	2	9905-00-202-3639	96906	MS35387-2
34	3	5305-00-052-6923	96906	MS24629-59
34	4	5305-00-432-4252	96906	MS51861-66
34	5	2510-01-282-8569	19207	12360388
35	1	5320-01-282-1573	19207	12331207-3
35	2	9905-01-282-4656	19207	12353919

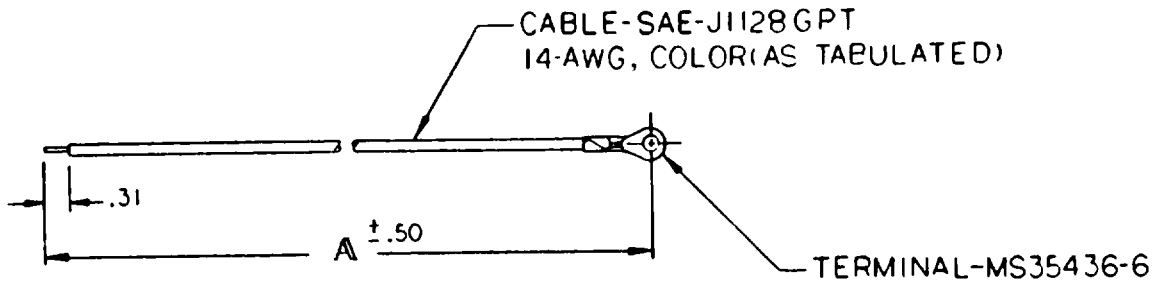
APPENDIX G

ILLUSTRATED LIST OF MANUFACTURED ITEMS



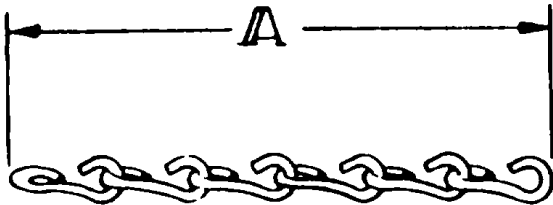
12360360-7	BLACK	8.00	64488	81143S
12360360-6	GREEN	12.00	64488	81144S
12360360-5	BROWN	12.00	64488	81146S
12360360-4	YELLOW	12.00	64488	81142S
12360360-3	GREEN	8.00	64488	81144S
12360360-2	BROWN	8.00	64488	81146S
12360360-1	YELLOW	8.00	64488	81142S
PART NO.	COLOR	A	MFR CODE	MFR
				PART NO.

Wire assembly 12360360



12360361-6	GREEN	8.00	64488	81144S
12360361-5	BROWN	8.00	64488	81146S
12360361-4	RED	8.00	64488	81141S
12360361-3	YELLOW	8.00	64488	81142S
12360361-2	BLACK	8.00	64488	81143S
12360361-1	WHITE	15.00	64488	81147S
PART NO.	COLOR	A	MFR CODE	MFR
				PART NO.

Wire assembly 12360361

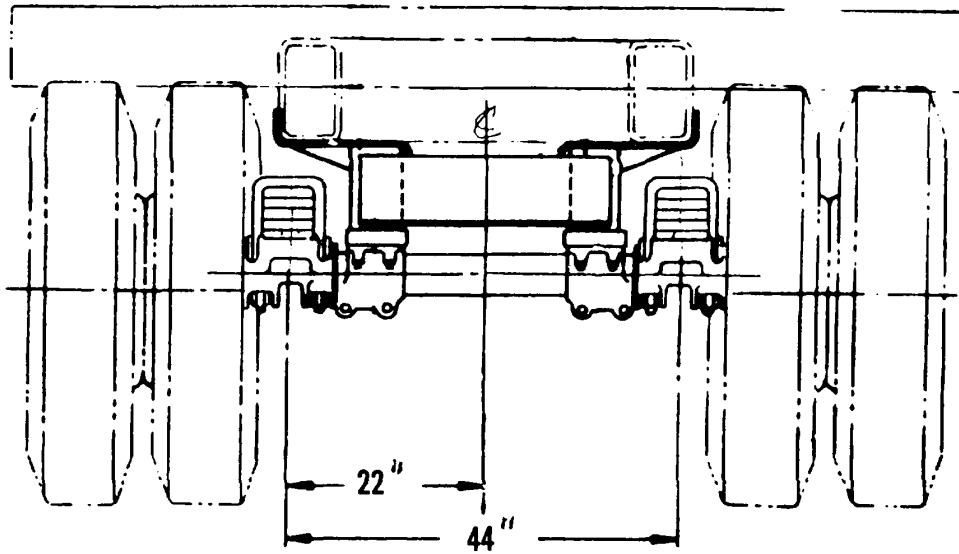


12353862-5	7.38
12353862-4	4.62
12353862-3	3.69
12353862-2	16.62
12353862-1	9.25
PART NO.	A

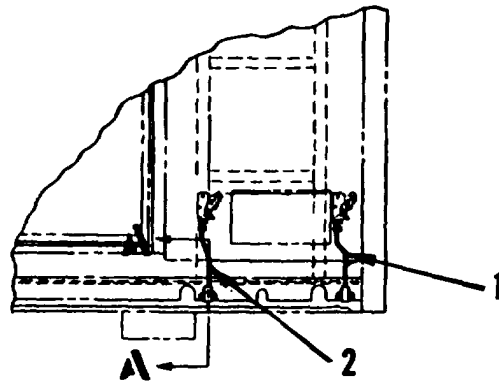
NOTES:

1. MATERIAL:
CHAIN, SINGLE-JACK, WELDLESS
PER RR-C-271. TYPE II. CLASS 7
STEEL. SIZE: .135 (NO 10)
2. FINISH
COMMERCIAL BRIGHT

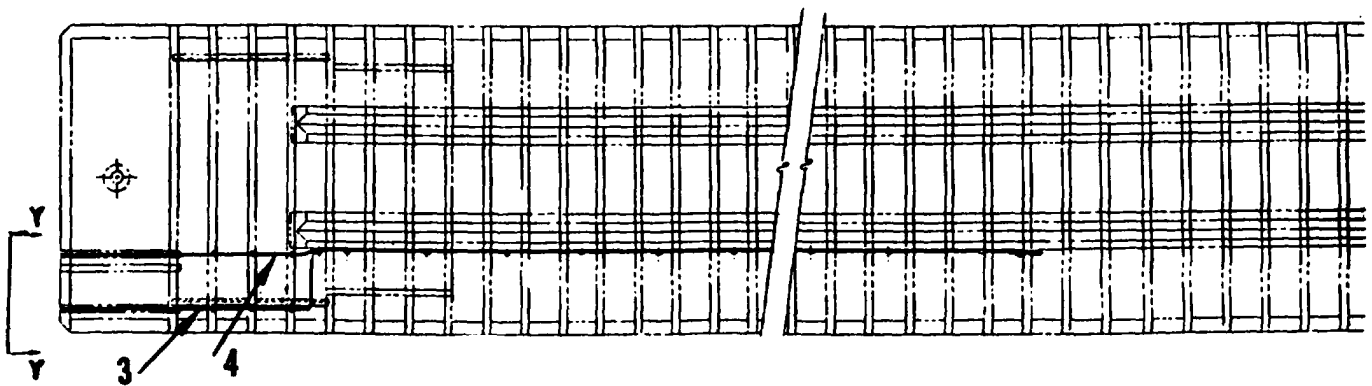
Chain 12353862



Locational Dimensions of New Spring Seat

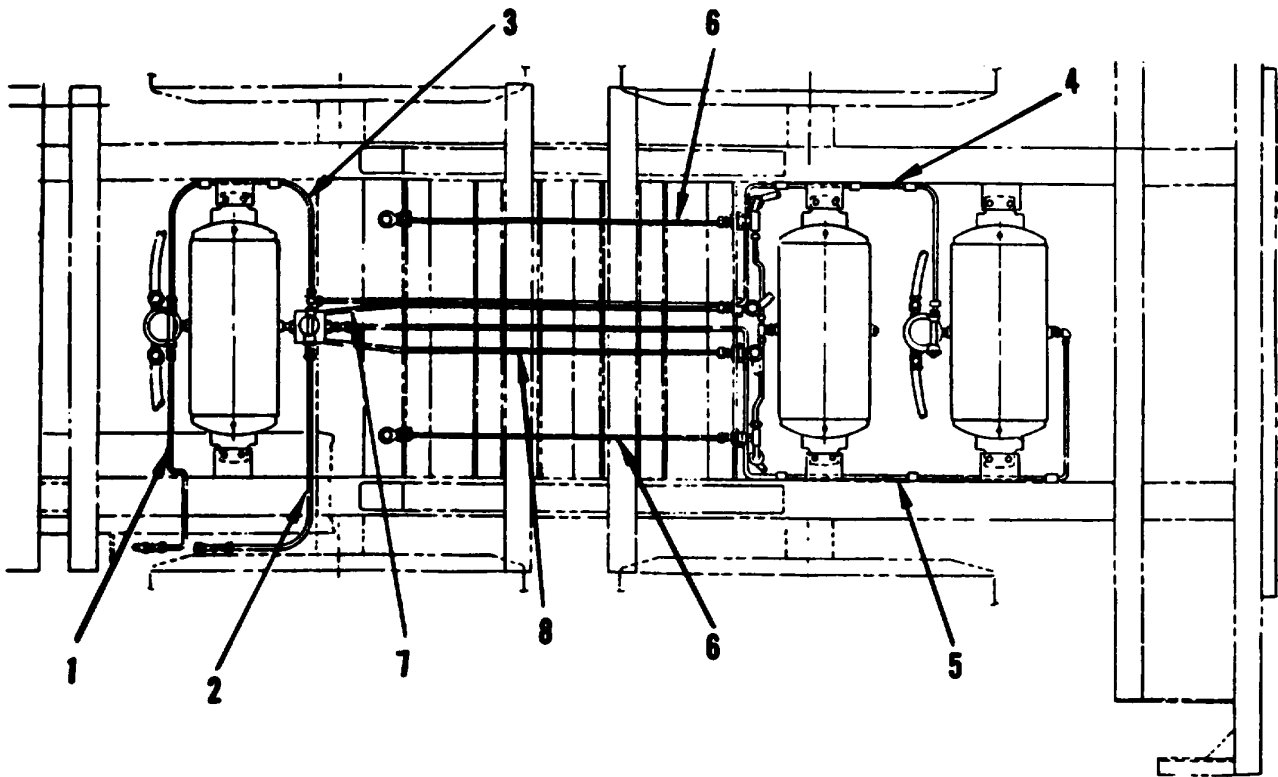


VIEW Y-Y



Item	Hose Part No.	Hose Length (inches)	Fitting End "A"	Fitting End "B"
1	CPR104420-2	11	12354108-2	12354108-2
2	CPR104420-2	11	12354108-2	12354108-2
3	CPR104420-2	384	12354108-2	12354108-2
4	CPR104420-2	360	12354108-2	12354108-2

Nonmetallic Hose CPR104420 - Lengths and Locations, Van Body



Item No.	Hose Part No.	Hose Length (inches)	Fitting End "A"	Fitting End "B"
1	CPR104420-2	23-1/2	12354108-1	12354108-2
2	CPR104420-2	28-1/2	12354108-2	12354108-1
3	CPR104420-2	40	12354108-2	12354111
4	CPR104420-2	92-1/2	12354111	12354108-2
5	CPR104420-2	110	12354108-2	12354112-1
6	CPR104420-2	34	12354138	12354108-2
7	CPR104420-3	54	12354108-3	12354108-3
8	CPR104420-3	54	12354108-3	12354108-3

Nonmetallic Hose CPR104420 - Lengths and Locations, Dolly

G-5/(G-6 blank)

APPENDIX H

TORQUE LIMITS

H-1. GENERAL

This appendix lists the torque limits used on Semitrailer, Van: Electronic Tactical, XH1063.

B-2. TORQUE LIMITS

The torque limits are listed in table H-1.

Table H-1. Torque limits

	Maximum Torque Dry	Maximum Torque Lube
Suspension System Trunnion U-bolt nuts	880 lb-ft (1193.3 Nm)	660 lb-ft (895 Nm)
Axle U-bolt nuts	300 lb-ft (406.8 Nm)	220 lb-ft (298.3 Nm)
End cap nuts	180 lb-ft (244 Nm)	130 lb-ft (176.3 Nm)
Landing Gear Leveling Jack		
Attaching nuts	120 lb-ft (162.7 Nm)	
Wheel nuts	450-500 lb-ft (610.2-678 Nm)	
Exterior Door Handle Retaining screw	3-4 lb-ft (4.1-5.4 Nm)	

H-1/(H-2 blank)

ALPHABETICAL INDEX

- A -

	Page
Additional authorization list..... Appendix D	D-1
Adjuster, slack	
Adjustment	4-60
Cleaning.....	4-60
Description	1-12
Inspection.....	4-60
Installation.....	4-60
Removal.....	4-59
Adjustment	
Brake/slack adjuster	4-60
Wheel bearing.....	4-63
Administrative Storage	4-88
Air chamber, brake	
Cleaning.....	4-49
Description	1-12
Inspection.....	4-49
Installation.....	4-49
Leakage test	4-47
Operating test	4-48
Removal.....	4-48
Air half coupling (Gladhand)	
Cleaning.....	4-54
Cover	1-13
Description	1-13
Inspection and replacement.....	4-55
Installation.....	4-55
Installation of packing ring	4-55
Operation	2-19
Removal.....	4-54

	Page
Air hose, tubing, and fittings	
Installation of tubing	4-58
Installation of tube fitting	4-57
Removal of tubing	4-57
Removal of tube fittings	4-57
Serviceability test	4-56
Splicing nonmetallic tubing	4-58
Air line, emergency, brake system	1-14
Air line, service, brake system	1-14
Air reservoir	
Cleaning	4-51
Cleaning and inspection of drain cock	4-53
Description	1-13
Drain cock leakage test	4-53
Inspection	4-52
Installation	4-52
Installation of drain cock	4-54
Leakage test	4-50
Removal	4-50
Removal of drain cock	4-53
Air shipment, preparation for	
Components of aircraft loading equipment	4-92
Loading procedure	4-93
Tools required	4-92
Unloading procedure	4-99
Axle assembly	
Alinement	5-5
Assembly of new axle	5-4
Cleaning	5-3
Description	1-9
Inspection and repair	5-4
Installation	5-6
Removal	5-2
Axle/brake assembly	
Adjustment of slack adjuster/brakes	4-60
Cleaning	4-60
Description	1-9
Inspection	4-63
Installation of brake camshaft	4-67
Installation of brake shoes	4-65
Installation of hub and drum assembly	4-63
Installation of slack adjuster	4-60

	Page
Axle/brake assembly (cont)	
Removal of brake camshaft	4-66
Removal of brake shoe	4-65
Removal of hub and drum assembly	4-62
Removal of slack adjuster.....	4-59

- B -

Basic issue items..... Appendix C	C-1
Bearing, wheel	
Adjustment	4-63
Inspection.....	4-63
Installation.....	4-63
Removal.....	4-62
Blackout stop and tail light	
Cleaning and inspection.....	4-35
Description	1-16
Installation.....	4-35
Removal.....	4-35
Boarding ladder	
Description	1-6
Installation.....	2-17
Box, Resistor	
Description	1-17
Installation.....	4-31
Removal.....	4-31
Brake adjustment	4-60
Brake air chamber	
Cleaning.....	4-49
Description	1-12
Inspection.....	4-49
Installation.....	4-49
Leakage test	4-47
Operating test	4-48
Removal.....	4-48
Brake drum	
Cleaning.....	4-62
Description	1-9
Inspection.....	4-63
Installation on axle	4-63

	Page
Brake drum (cont)	
Installation on hub.....	4-64
Removal from axle.....	4-62
Removal from hub.....	4-62
Repair.....	5-13
Repair standards.....	5-14
Brake shoe	
Inspection.....	4-65
Relining.....	5-15
Brake system hose, tubing, and fittings	
Removal and installation of tube fittings.....	4-57
Removal and installation of tubing.....	4-57
Serviceability test.....	4-56
Splicing nonmetallic tubing.....	4-58
Brakes, service	
Adjustment.....	4-60
Brake return spring.....	4-65
Brake shoe inspection.....	4-65
Brake shoe installation.....	4-65
Brake shoe removal.....	4-65
Description.....	1-10
Principles of operation.....	1-21
Bushing, rubber	
Installation.....	5-10
Removal.....	5-9
-C-	
Carrier, spare wheel	
Cleaning.....	4-69
Description.....	1-10
Inspection and repair.....	4-70
Installation.....	4-72
Removal.....	4-69
Replacement of Pawl.....	4-71
Replacement of wire rope.....	4-71
Chamber, air brake	
Cleaning.....	4-49
Description.....	1-12
Inspection.....	4-49
Installation.....	4-49
Leakage test.....	4-47

	Page
Chamber, air brake (cont)	
Operating test	4-48
Removal	4-48
Cleaning	3-2
Clearance light	
Cleaning and inspection	4-34
Description	1-7
Installation	4-34
Lamp replacement	4-33
Removal	4-33
Cock, drain, air reservoir	
Cleaning and inspection	4-53
Description	1-13
Installation	4-54
Leakage test	4-53
Operation	2-18
Removal	4-53
Components of end item	Appendix C C-1
Compressed air supply	1-14
Coupling, air half (gladhand)	
Cleaning	4-54
Description	1-13
Inspection and replacement	4-55
Installation	4-55
Installation of packing ring	4-55
Operation	2-19
Removal	4-54
Coupling semitrailer to towing vehicle	2-10
-D-	
Data, equipment	1-18
Destruction of army materiel to prevent enemy use	1-3
Dolly assembly	
Description	1-8
Electrical system	1-15
Installation	4-99
Removal	4-93

	Page
Door handle, exterior, rear door	
Installation	4-79
Removal	4-79
Door handle, interior	
Installation	4-80
Removal	4-80
Door hinge	
Inspection	4-78
Installation	4-78
Removal	4-78
Door holder, rear door	
Installation	4-76
Removal	4-76
Door lock assembly	
Inspection and repair	4-81
Installation of lower lock assembly	4-81
Installation of upper lock assembly	4-82
Removal of lower lock assembly	4-81
Removal of upper lock assembly	4-82
Door slide bolt assembly and locking rod	
Inspection and repair	4-83
Installation	4-83
Removal	4-83
Door stop, front door	
Installation	4-75
Removal	4-75
Doors	
Cleaning	4-77
Description	1-6
Emergency escape mechanism	2-19
Inspection and repair	4-77
Installation	4-77
Removal	4-76
Seal, rubber	4-84
Shielding, RFI	4-84
Drain cock, air reservoir	
Cleaning and inspection	4-53
Description	1-13
Installation	4-54
Leakage test	4-53
Operation	2-18
Removal	4-53

	Page
Drum, brake	
Cleaning.....	4-62
Description.....	1-9
Inspection.....	4-63
Installation on axle.....	4-63
Installation on hub.....	4-64
Removal from axle.....	4-62
Removal from hub.....	4-62
Repair.....	5-13
Repair standards.....	5-14

-E-

Electrical input receptacles.....	1-17
Emergency air line, brake system.....	1-14
Emergency escape mechanism, door.....	2-19
Equipment characteristics, capabilities and features.....	1-4
Equipment data.....	1-18
Expendable supplies and materials list.....Appendix E	E-2
Extreme cold weather maintenance.....	4-87
Extreme hot weather maintenance.....	4-87

-F-

Fording operation.....	2-24
Forms, records and reports.....	1-3
Front door.....	1-6
Front relay valve	
Cleaning.....	4-43
Description.....	1-11
Inspection.....	4-43
Installation.....	4-43
Leakage test.....	4-42
Operating test.....	4-41
Removal.....	4-42

-G-

Gear, landing	
Cleaning.....	4-73
Description.....	1-5
Inspection and replacement.....	4-73
Installation.....	4-74
Operation.....	2-17
Removal.....	4-72
Gladhand (air half coupling)	
Cleaning.....	4-54
Cover.....	1-13
Description.....	1-13
Inspection and replacement.....	4-55
Installation.....	4-55
Installation of packing ring.....	4-55
Operation.....	2-19
Removal.....	4-54
Guard, splash	
Description.....	1-16
Installation.....	4-85
Removal.....	4-85

-H-

Handle, door, exterior	
Installation.....	4-79
Removal.....	4-79
Handle, Door, interior	
Installation.....	4-80
Removal.....	4-80
Harness, wiring	
Installation.....	4-32
Removal.....	4-32
Hinge, door	
Inspection and repair.....	4-78
Installation.....	4-78
Removal.....	4-78

	Page
Holder, door	
Installation.....	4-76
Removal.....	4-76
Hose, tubing and fittings	
Installation of tubing.....	4-58
Installation of tube fitting.....	4-57
Removal of tubing.....	4-57
Removal of tube fittings.....	4-57
Serviceability test.....	4-56
Splicing nonmetallic tubing.....	4-58
Hub and brake drum	
Cleaning.....	4-62
Description.....	1-9
Inspection.....	4-63
Installation of brake drum on hub.....	4-64
Installation of hub and brake drum on axle.....	4-63
Removal of brake drum from hub.....	4-62
Removal of hub and brake drum from axle.....	4-62
Repair.....	5-13
Repair standards.....	5-14
Hub, Wheel	
Description.....	1-9
Inspection.....	4-63
Installation on brake drum.....	4-64
Removal from brake drum.....	4-62
-I-	
Identification Markings	
Description.....	1-18
Re-stenciling.....	3-6
Identification Plate	
Description.....	1-17
Inspection.....	4-86
Installation.....	4-87
Removal.....	4-86
Inspecting and servicing equipment.....	4-2

	Page
Intervehicular cable receptacle, 12-volt	
Cleaning and inspection.....	4-32
Installation.....	4-32
Removal.....	4-31
Intervehicular cable receptacle, 24-volt	
Cleaning and inspection.....	4-30
Installation.....	4-31
Removal.....	4-29

-J-

Jack, leveling	
Cleaning.....	4-73
Description.....	1-15
Inspection and replacement.....	4-73
Installation.....	4-74
Operation.....	2-17
Removal.....	4-72

-L-

Ladder, boarding	
Description.....	1-6
Installation.....	2-17
Landing gear	
Cleaning.....	4-73
Description.....	1-5
Inspection and replacement.....	4-73
Installation.....	4-74
Operation.....	2-17
Removal.....	4-72
Leakage test	
Air reservoir.....	4-50
Brake air chamber.....	4-47
Drain cock.....	4-53
Hose and tubing.....	4-56
Ratio Relay Valve.....	4-42
Relay valve.....	4-42

	Page
Leveling Jack	
Cleaning.....	4-73
Description.....	1-15
Inspection and replacement.....	4-73
Installation.....	4-74
Operation.....	2-17
Removal.....	4-72
Light, blackout, stop and tail	
Cleaning and inspection.....	4-35
Description.....	1-16
Installation.....	4-35
Removal.....	4-35
Light, marker clearance	
Cleaning and inspection.....	4-34
Description.....	1-7
Installation.....	4-34
Lamp replacement.....	4-33
Removal.....	4-33
Light, stop and turn	
Cleaning and inspection.....	4-36
Description.....	1-16
Installation.....	4-37
Removal.....	4-36
Lock assembly, door	
Inspection and repair.....	4-81
Installation of lower lock assembly.....	4-81
Installation of upper lock assembly.....	4-82
Removal of lower lock assembly.....	4-81
Removal of upper lock assembly.....	4-82
Lock, door, emergency escape.....	2-19
Lubrication.....	3-2
Lubrication instructions.....	3-3
- M -	
Maintenance allocation chart.....Appendix B	B-5
Maintenance forms and records.....	2-2

	Page
Maintenance, preventive, checks and services	
Operator.....	2-2
Unit.....	4-3
Maintenance under unusual conditions	
After fording	4-87
Extreme cold weather	4-87
Extreme hot weather.....	4-87
Operation on unusual terrain	4-87
Manufactured items, illustrated list	Appendix G G-1
Markings, stencil.....	1-18
-N-	
Number, vehicle registration.....	1-17
-O-	
Operating test	
Brake air chamber	4-48
Front relay valve.....	4-41
Ratio relay valve.....	4-41
Rear relay valve	4-41
Operation under unusual conditions	
Air brake failure.....	2-24
Dusty or sandy areas	2-23
Extreme cold	2-22
Extreme heat.....	2-23
Fording.....	2-24
Humid or rainy conditions	2-24
Mud and snow.....	2-23
Salt water areas	2-24

- P -

Pad, rubber, suspension	
Inspection.....	5-13
Installation.....	5-13
Removal.....	5-13
Painting and identification marking.....	3-6
Plate, identification	
Description.....	1-17
Inspection.....	4-86
Installation.....	4-87
Removal.....	4-86
Preparation for air shipment	
Components of aircraft loading equipment.....	4-92
Loading procedure.....	4-93
Tools required.....	4-92
Unloading procedure.....	4-99
Preparation for storage	
Care of equipment in administrative storage.....	4-90
Cleaning, painting and preservation.....	4-89
Corrections of shortcomings and deficiencies.....	4-89
Definition of administrative storage.....	4-88
Maintenance services, inspection and lubrication.....	4-89
Removal of equipment from administrative storage.....	4-91
Storage plan.....	4-88
Storage site.....	4-88
Preparing semitrailer for operation.....	2-16
Preventive maintenance checks and services	
Operator.....	2-2
Unit.....	4-3

-R-

Ratio relay valve	
Cleaning and inspection.....	4-46
Description.....	1-11
Installation.....	4-47
Leakage test.....	4-42
Operating test.....	4-41
Removal.....	4-46

	Page
Receptacle, intervehicular cable, 12-volt	
Cleaning and inspection.....	4-32
Installation.....	4-32
Removal.....	4-31
Receptacle, intervehicular cable, 24-volt	
Cleaning and inspection.....	4-30
Installation.....	4-31
Removal.....	4-29
Records	1-3
References	Appendix A A-1
Reflector	
Description	1-7
Installation.....	4-86
Removal.....	4-86
Registration number, vehicle.....	1-17
Relay valve, front	
Cleaning.....	4-43
Description.....	1-11
Inspection.....	4-43
Installation.....	4-43
Leakage test	4-42
Operating test	4-41
Removal.....	4-42
Relay valve, rear	
Cleaning.....	4-43
Description.....	1-11
Installation.....	4-45
Leakage test	4-42
Operating test	4-41
Removal.....	4-42
Removal and installation of spare wheel and tire.....	2-20
Repair parts and special tools lists.....	Appendix F F-1
Repair standards	Table 5-2 5-14
Reporting equipment improvement recommendations	1-3

	Page
Reservoir, air	
Cleaning.....	4-51
Cleaning and inspection of drain cock	4-53
Description.....	1-13
Drain cock leakage test	4-53
Inspection.....	4-52
Installation.....	4-52
Installation of drain cock	4-54
Leakage test	4-50
Removal.....	4-50
Removal of drain cock	4-53
Resistor assembly	
Description.....	1-17
Inspection.....	4-27
Installation.....	4-28
Removal.....	4-27
Resistor box	
Description.....	1-17
Installation.....	4-28
Removal.....	4-28
RFI Shielding	
Installation and removal.....	4-84
Rubber bushing, air suspension	
Installation.....	5-10
Removal.....	5-9
Rubber pad, suspension	
Inspection.....	5-13
Installation.....	5-13
Removal.....	5-13
- S -	
Seal, rubber, door	
Installation and removal.....	4-84
Service air line, brake system	1-14
Service, brakes	
Adjustment.....	4-60
Brake return spring	4-65

	Page
Service, brakes (cont)	
Brake shoe inspection.....	4-65
Brake shoe installation.....	4-65
Brake shoe removal.....	4-65
Description.....	1-10
Principles of operation.....	1-21
Serviceability test	
Air, tubing hose.....	4-56
Servicing equipment.....	4-2
Shielding, RFI.....	4-84
Slack adjuster	
Adjustment.....	4-60
Description.....	1-12
Inspection.....	4-60
Installation.....	4-60
Removal.....	4-59
Spare wheel and tire	
Removal and installation.....	2-20
Spare wheel carrier	
Cleaning.....	4-69
Description.....	1-10
Inspection and repair.....	4-70
Installation.....	4-72
Removal.....	4-69
Replacement of pawl.....	4-71
Replacement of wire rope.....	4-71
Splash guard	
Description.....	1-16
Installation.....	4-85
Removal.....	4-85
Spring, return	
Inspection.....	4-65
Installation.....	4-65
Removal.....	4-65
Spring, suspension	
Cleaning and inspection.....	5-8
Description.....	1-15
Installation.....	5-9
Removal.....	5-7

	Page
Stop, door	
Installation.....	4-75
Removal.....	4-75
Storage, preparation for	
Care of equipment in administrative storage	4-90
Cleaning, painting and preservation	4-89
Corrections of shortcomings and deficiencies	4-89
Definition of administrative storage.....	4-88
Maintenance services, inspection and lubrication.....	4-89
Removal of equipment from administrative storage	4-91
Storage plan	4-88
Storage site	4-88
Suspension system	
Cleaning.....	5-8
Description	1-15
Inspection of rubber pad	5-13
Inspection of spring.....	5-9
Installation of rubber bushing.....	5-10
Installation of rubber pad	5-13
Installation of spring	5-9
Removal of rubber bushing.....	5-9
Removal of rubber pad	5-13
Removal of spring.....	5-7
- T -	
Tire	1-9
Torque limits.....	Appendix H H-1
Towing the semitrailer	
Backing	2-14
Driving	2-13
Parking.....	2-14
Stopping.....	2-14
Turning.....	2-13
Troubleshooting	
Operator.....	3-7
Unit.....	4-9
Trunnion tube	
Installation.....	5-12
Removal.....	5-11
Tube fittings.....	4-57
Tubing.....	4-58

- U -

Uncoupling semitrailer from towing vehicle	2-15
--	------

-V-

Valve, ratio relay	
Cleaning and inspection.....	4-46
Description	1-11
Installation.....	4-47
Leakage test	4-42
Operating test	4-41
Removal.....	4-46

Valve, relay, front	
Cleaning.....	4-43
Description	1-11
Installation.....	4-43
Leakage test	4-42
Operating test	4-41
Removal.....	4-42

Valve, relay, rear	
Cleaning and inspection.....	4-43
Description	1-11
Installation.....	4-45
Leakage test	4-42
Operating test	4-41
Removal.....	4-42

-V-

Wheel and tire	
Description	1-9
Installation.....	3-16
Removal.....	3-16

Wheel bearing	
Adjustment	4-63
Inspection.....	4-63
Installation.....	4-63
Removal.....	4-62

Wiring Harness	
Installation.....	4-32
Removal.....	4-32

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, Operator, Unit, Intermediate Direct Support and Intermediate General Support Maintenance for Semitrailer, Van, 12-Ton, XM1063.

☆ U. S. GOVERNMENT PRINTING OFFICE: 1989 643-025/00004

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS



THEN... JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER

PUBLICATION DATE

PUBLICATION TITLE

BE EXACT... PIN-POINT WHERE IT IS

PAGE NO.

PARA-GRAPH

FIGURE NO.

TABLE NO.

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

TEAR ALONG PERFORATED LINE

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE:

DA FORM 2028-2 JUL 79

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.—IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

PIN: 065460-000