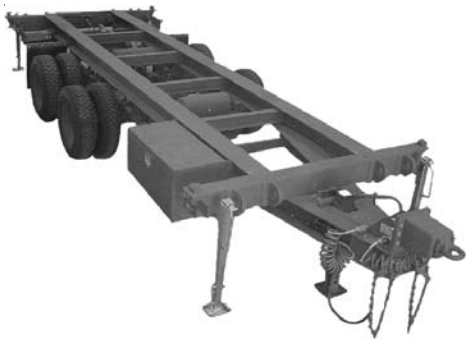
TM 9-2330-328-14&P

TECHNICAL MANUAL

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

CHASSIS, CONTAINERIZED KITCHEN TRAILER: 7 1/2-TON, 4-WHEEL XCK2000, NSN 2330-01-471-7006

TRAILER: 7 1/2-TON, 4-WHEEL XCK2000E1, NSN 2330 -01-506-5979



XCK2000E1

XCK2000

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HEADQUARTERS, DEPARTMENT OF THE ARMY

31 December 2001

SAFETY WARNINGS ICONS

FLYING PARTICLES - arrows bouncing off face shows that particles flying through the air will harm face.

HEAVY PARTS - heavy object on human figure shows that heavy parts present a danger to life or limb.

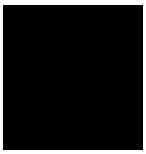
HEAVY PARTS - heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.

CHEMICAL - drops of liquid on hand shows that the material will cause burns or irritation to human skin or tissue.

EYE PROTECTION - person with goggles shows that the material will injure the eyes.

FIRE - flame shows that a material is highly flammable and may ignite and cause burns.

VAPOR - human figure in a cloud shows that material vapors present a danger to life or health.



DARKNESS - black box shows visibility for operations with burned out or missing lights that can cause physical injury.

WARNING SUMMARY

Dry-cleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent 138°F (59°C). Serious illness, injury, or loss of life could result from improper use.

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

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

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

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

Particles blown by compressed air are hazardous. Make certain that the airstream is directed away from user and other personnel in the area. User must wear safety eye goggles or face shield to prevent injury when using compressed air. Make certain that air stream is less than 30 psi.

Before performing any maintenance tasks on brake system, disconnect trailer air lines from towing vehicle and open draincock to release air pressure from system. Serious injury may result from failure to do so.

All parts of the brake assembly will be coated with dust from the brake linings. A nose mask should be worn whenever working on any brake assembly components.

The return spring inside the brake chamber is under heavy spring tension. The two halves must be clamped together in a vise before removing the fastening devices that hold it together. Failure to do so could result in serious injury.

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

TM 9-2330-328-14&P
C1

CHANGE NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., *24 FEBRUARY 2006*

TECHNICAL MANUAL

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

CHASSIS, CONTAINERIZED KITCHEN TRAILER: 7 ½-TON, 4 WHEEL XCK2000, NSN 2330-01-471-7006 TRAILER: 7 1/2-TON, 4-WHEEL XCK2000E1, NSN 2330-01-506-5979

TM 9-2330-328-14&P, 31 December 2001, is changed as follows:

1. Remove old pages and insert new pages as indicated below.
2. File this change sheet in front of the publication for reference purposes.

Remove Pages	Insert Pages
a and b	a and b
A/B Blank	A/B Blank
i through iv	i through iv
Chapter 1 title page	Chapter 1 title page
0001 00-1/2 Blank	0001 00-1/2 Blank
Chapter 2 title page	Chapter 2 title page
0004 00-1 and 0004 00-2	0004 00-1 and 0004 00-2
0005 00-1 through 0005 00-21/22 Blank	0005 00-1 through 0005 00-21/22 Blank
0006 00-1 through 0006 00-3/4 Blank	0006 00-1 through 0006 00-3/4 Blank
Chapter 3 title page	Chapter 3 title page
0007 00-1/2 Blank	0007 00-1/2 Blank
Chapter 4 title page	Chapter 4 title page
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0009 00-1/2 Blank	0009 00-1/2 Blank
Chapter 5 title page	Chapter 5 title page
0011 00-1 and 0011 00-2	0011 00-1 and 0011 00-2

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Remove Pages	Insert Pages
0015 00-5 and 0015 00-6	0015 00-5 and 0015 00-6
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Chapter 6 title page	Chapter 6 title page
0013 00-1/2 Blank	0013 00-1/2 Blank
0014 00-1 and 0014 00-2	0014 00-1 and 0014 00-2
0017 00-9 and 0017 00-10	0017 00-9 and 0017 00-10
Chapter 7 title page	Chapter 7 title page
0018 00-1 and 0018 00-2	0018 00-1 and 0018 00-2
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Chapter 8 title page	Chapter 8 title page
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0040 00-1 through 0040 00-18	0040 00-1 through 0040 00-18
0041 00-1 and 0042 00-2	0041 00-1 and 0042 00-2
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Original 31 Dec 01
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Page/WP No.	*Change No.	Page/WP No.	*Change No.
Title	1	Chapter 7 title page	1
Warnings	1	WP 0018 00 (2 pgs)	1
i-iv	1	WP 0019 00 (2 pgs)	0
Chapter 1 title page	1	WP 0020 00 (3 pgs)	0
WP 0001 00 (2 pgs)	1	WP 0021 00 (4 pgs)	1
WP 0002 00 (7 pgs)	0	Chapter 8 title page	1
WP 0003 00 (2 pgs)	0	WP 0022 00 (2 pgs)	0
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WP 0005 00 (21 pgs)	1	WP 0025 00 (1 pg)	0
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		WP 0043 00 (1 pg)	0
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TECHNICAL MANUAL

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

for

CHASSIS, CONTAINERIZED KITCHEN TRAILER: 7 1/2-TON, 4-WHEEL,
XCK2000,
NSN 2330-01-471-7006
and
XCK2000E1,
NSN 2330-01-506-5979

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this publication. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Submit your DA Form 2028 (Recommended Changes to Publications and Blank Forms), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is http://aeps.ria.army.mil. If you need a password, scroll down and click on "ACCESS REQUEST FORM". The DA Form 2028 is located in the ONLINE FORMS PROCESSING section of AEPS. Fill out the form and click on SUBMIT. Using this form on AEPS will enable us to respond quicker to your comments and better manage the DA Form 2028 program.You may also mail, fax or E-mail your letter, DA Form 2028 or DA Form 2028-2 direct to:Technical Publications Information Office, TACOM-R1, 1 Rock Island Arsenal, Rock Island, IL 61299-7630. The email address is TACOM-TECH-PUBS@ria.army.mil The Fax number is DSN 793-0726 or Commercial (309) 782-0726.

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31 December 2001 **Change 1**

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HOW TO USE THIS MANUAL

This manual is designed to help you operate and maintain the Chassis, Containerized Kitchen Trailer, 7 1/2-ton, 4-wheel, XCK2000 and XCK2000E1. The table of contents is provided for quick reference to important information located in Work Packages (WP). There is also an index located in the final pages for use in locating specific items of information.

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

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

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

NOTE

The electronic version of this manual has links to all of the Work Packages (WP) and pages in the table of contents and indexes at the beginning of each chapter and in the back of the TM. The WP's are also linked whenever referenced within the text. This allows you to advance directly to the required page and/or pages.

CHAPTER 1

INTRODUCTION
FOR
CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT)
7 1/2-TON, 4-WHEEL, XCK2000
and
7 1/2-TON, 4-WHEEL, XCK2000E1

TYPE OF MANUAL

TM 9-2330-328-14&P is an Operator's, Organizational, Direct Support and General Support Maintenance Manual (including Repair Parts and Special Tools List).

MODEL NUMBER AND EQUIPMENT NAME

This manual covers: Chassis, Containerized Kitchen Trailer: 7 1/2-ton, 4-wheel, XCK2000 and XCK2000E1.

PURPOSE OF EQUIPMENT

The purpose of this trailer is to transport containerized mobile kitchens. It can be used on improved and unimproved roads.

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 (TAMMS) DA PAM 738-751, and AR 700-138, Army Logistics Readiness and Sustainability.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRs)

If your trailer needs improvement, let us know. Send us an Equipment Improvement Recommendation (EIR). You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Product Deficiency Report). Mail it to the address specified in DA PAM 738-750, Functional Users Manual for The Army Maintenance Management System(TAMMS), or as specified by the contracting activity. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

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

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

If a corrosion problem is identified, it can be reported using SF 368, Product Quality Deficiency Report. Use of key words such as "corrosion", "rust", "deterioration", or "cracking" will ensure the information is identified as a CPC problem.

The form should be submitted to the address specified in a DA PAM 738-750, Functional Users Manual for The Army Maintenance Management System (TAMMS).

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Refer to TM 750-244-5, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive and Armaments Command).

NOMENCLATURE CROSS-REFERENCE LIST

Common Name	Official Nomenclature
Tow hook	Pintle
Tow ring	Coupler, drawbar, lunette, ring

LIST OF ABBREVIATIONS/ ACRONYMS

BII..... Basic Issue Items
cp.....Candle Power
CPC.....Corrosion Prevention and Control
cm..... centimeters
DS..... Direct Support
EA.....Each
EIR..... Equipment Improvement Report
FMTV..... Family of Medium Tactical Vehicles
GS..... General Support
in.....inches
ISO.....International Organization for Standardization
kg.....kilograms
km/h .....kilometers per hour
kPa.....kilopascals
lb.....pounds
lb-ft.....foot pounds
MAC..... Maintenance Allocation Chart
mm.....millimeters
MTOE..... Modified Table of Organization and Equipment
MWO..... Modification Work Order
NSN..... National Stock Number
N-m..... Newton-meters
P/N.....Part Number
PMCS .....Preventive Maintenance Checks and Services
psi.....pounds per square inch
REF..... Reference
rl.....Roll
RPSTL.....Repair Parts and Special Tools List
SC ..... Supply Catalog
TAMMS.....The Army Maintenance Management System
TMDE..... Test, Measurement, and Diagnostic Equipment
TOE..... Table of Organization and Equipment
U/M.....Unit of Measurement
V.....volts
WP..... Work Package

EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES

The trailer chassis has an open-frame, double-axle, dual mounted wheels, and leaf spring suspension. The trailer is designed to transport a standard ISO sized containerized kitchen.

Load Capacity:

1. Highway: 15,000 lb (6804 kg)
2. Cross country: 15,000 lb (6804 kg)

May be towed by a 5-ton, FMTV cargo truck or similar vehicle.

1. Highway: 55 mph. (88.5 kph)
2. Cross-Country: 15 mph (24.1 kph)
3. Gravel: 30 mph (48.3 kph)

It can ford hard-bottom water crossings to any depth which can be negotiated by the towing vehicle.

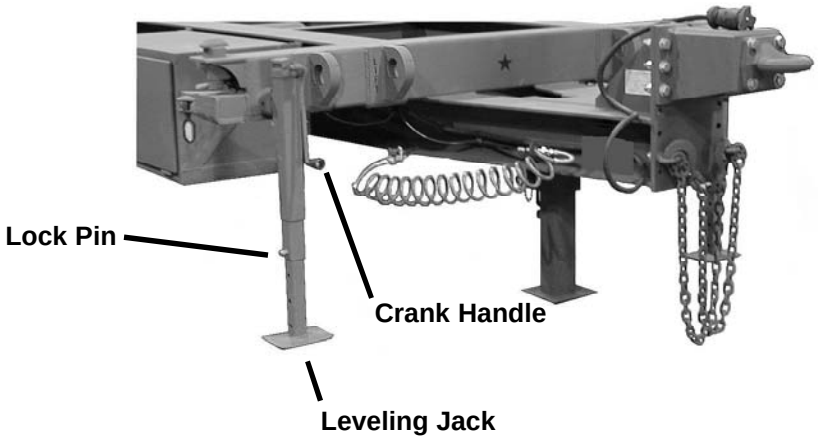
The trailer is equipped with:

1. A 24 V dc electrical system capable of operating under standard and blackout modes.
2. Dual axle, dual mounted wheels with multi-leaf spring suspension which absorbs road shock.
3. An air brake system.
4. An automatic emergency braking breakaway system in the event of trailer breakaway from the towing vehicle.
5. Four adjustable leveling jacks to support and level the trailer when uncoupled from the towing vehicle.
6. A spare tire stowed under the rear trailer frame.
7. A tool box for stowing Basic Issue Items (BII).

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

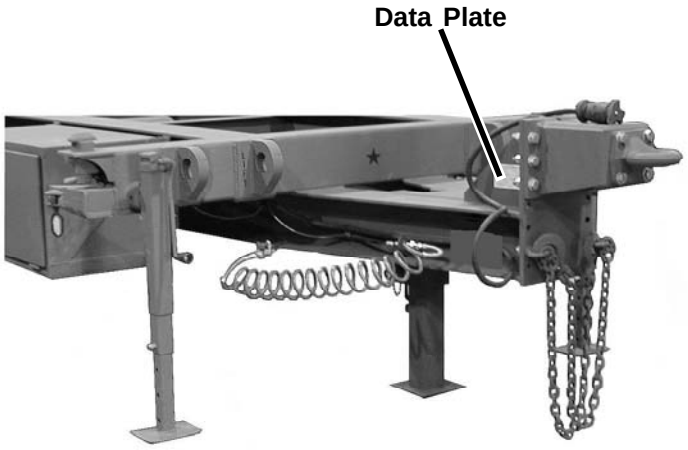
LEVELING JACKS

Four leveling jacks support the front and back of the trailer when uncoupled and can be used for leveling the trailer.
The crank handle extends or retracts each telescoping leveling jack independently.
The telescoping legs can be locked in several different positions by a lockpin on each leg.
The leveling jacks are locked in the down position, or fully collapsed and stored in the tool box.



DATA PLATE

A data plate is located on each side of the lunette support. They provide identification and transportation information.

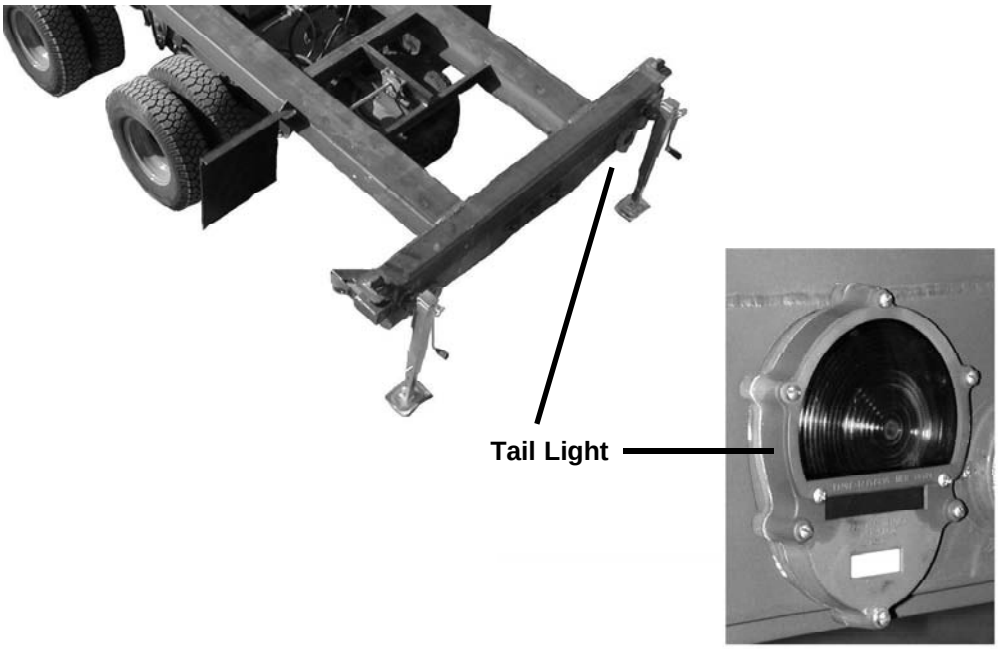


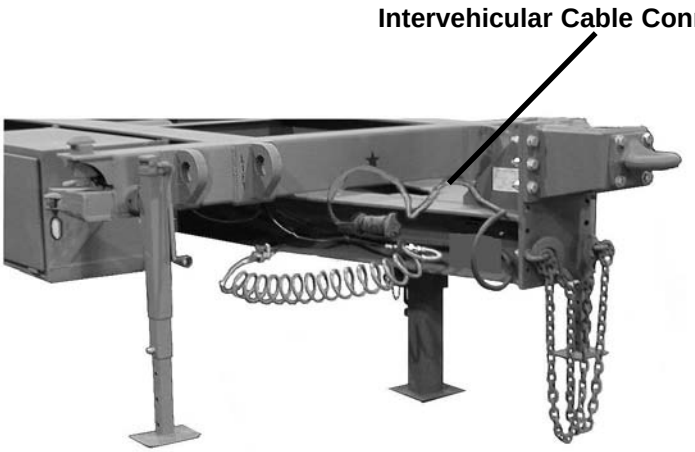
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS-Continued

ELECTRICAL SYSTEM

The electrical system is the 24-volt military vehicle system with a NATO standard twelve (12) pin intervehicular cable to connect the trailer to the towing vehicle.

The tail lights, composite lights and black out lights provide stopping, turning signals, and safe operations in hours of darkness.





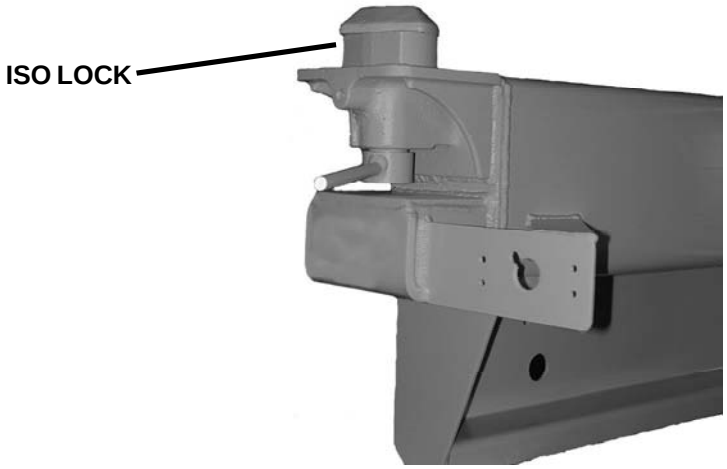
LOCATION AND DESCRIPTION OF MAJOR COMPONENTS -Continued

SPARE TIRE MOUNT

The spare tire mount is used to securely attach an additional tire to the trailer.

ISO LOCK

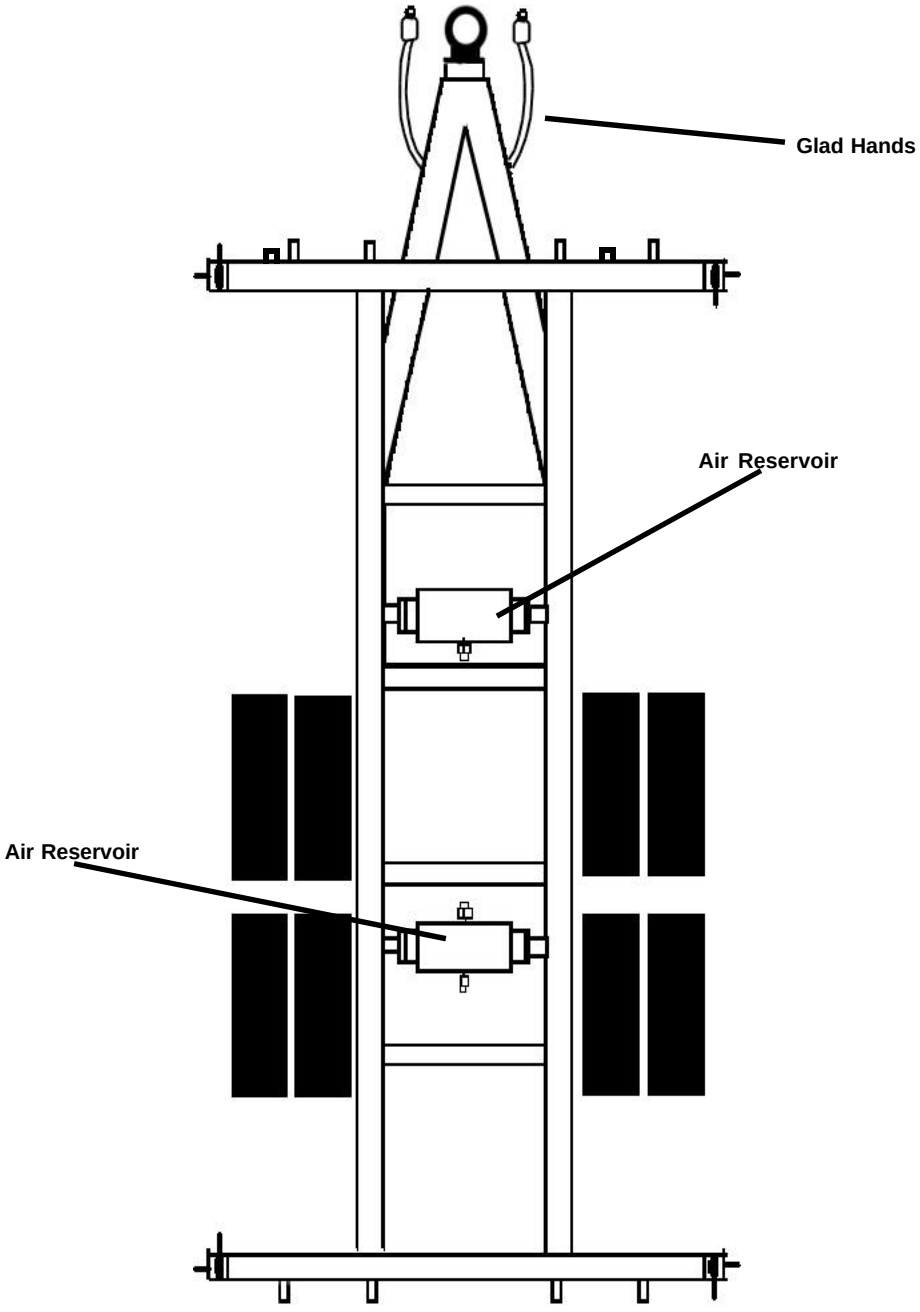
The ISO lock is used to secure the Containerized Kitchen to the trailer.



LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

BRAKE SYSTEM

The brake system is an air-actuated system.



EQUIPMENT DATA

Axles	
Type	Dexter D12000 - Tubular
Diameter O.D.	5 in. (127 mm)
Brakes	
Type	Air
Operating pressure	95 psi (655 kPa) minimum
Size, diameter	12 in. (305 mm)
Size, width	5 in. (127 mm)
Type mechanism	2-shoe, self-centering, expanding S-CAM actuation
Electrical system, 24-volt	
Lamps, blackout	3 candle power
Lamps, service	32 candle power
Frame	
Material	Welded Structural steel beam
Height	38 in. (965 mm)
Parking Brakes	24/30 Air actuated
Actuation	Internal Spring
Location	Forward glad hands
Leveling legs	
Length extended	46.9 in. (1191.26 mm)
Length retracted	21.4 in. (543.56 mm)
Springs	
Material	Steel alloy
Number of leaves	3
Type	Low arch
Tires	
Number	8
Number of plies	8
Size	LT 235/85/R16
Inflation (cross country)	75 psi (517 kPa)
(highway)	75 psi (517 kPa)
(mud, snow, and sand)	75 psi (517 kPa)
Type	On/Off road pneumatic radial

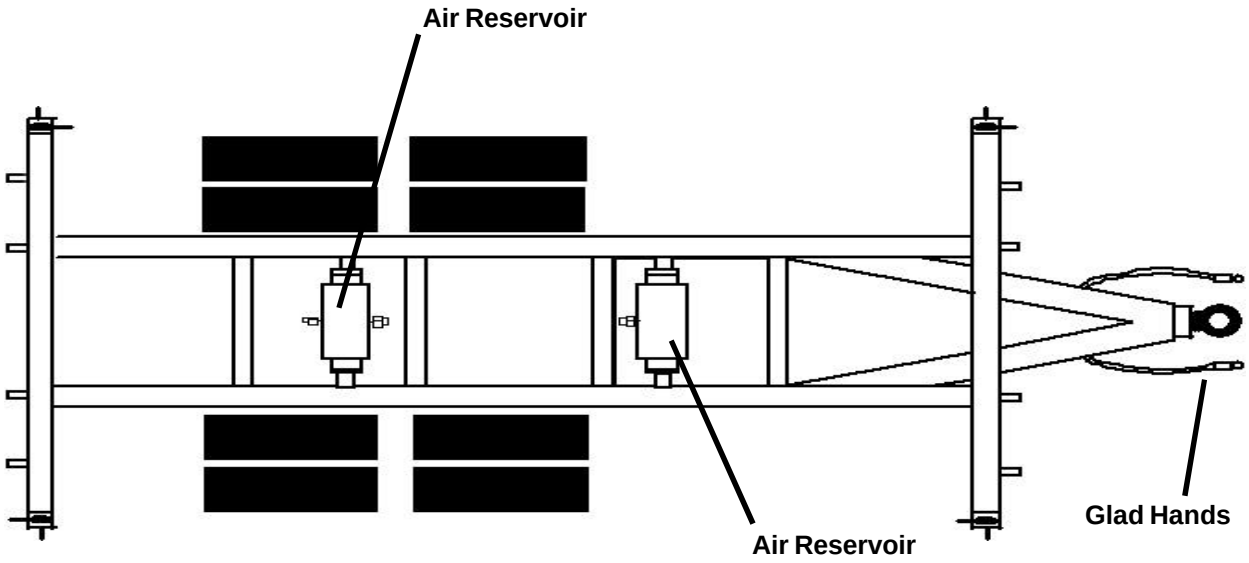
EQUIPMENT DATA - Continued

Weights and dimensions

Length (to center of lunette)	296 in. (752 cm)
Width (overall)	96 in. (244 cm)
Height (top of tires)	32 in. (81 cm)
Weight (empty)	Est. 6,000 lb (2722 kg)
Payload (cross country)	15,000 lb (6804 kg)
(highway)	15,000 lb (6804 kg)
Gross Combined Weight (GCW)	21,000 lb (9545 kg)
Weight on Pintle	2,100 lb (954 kg)
Angle of departure	20-degree slope

Wheels

Diameter of stud circle	6.5 in. Bolt Circle (165 mm)
Number of studs	8 each
Rim size	16in x 6in (406.4mm x 152.4mm)
Tire retention	Standard
Type	Offset disk
Bearing type	Tapered roller
Number	8



Gladhands – The gladhands are the coupling point for the air supply between the trailer and the towing vehicle. They are marked, one for emergency and the other for service, to ensure correct hookup.

Air Lines – The air lines extend from the gladhands to supply service and emergency air to the relay valve, air reservoir, and brake air chamber.

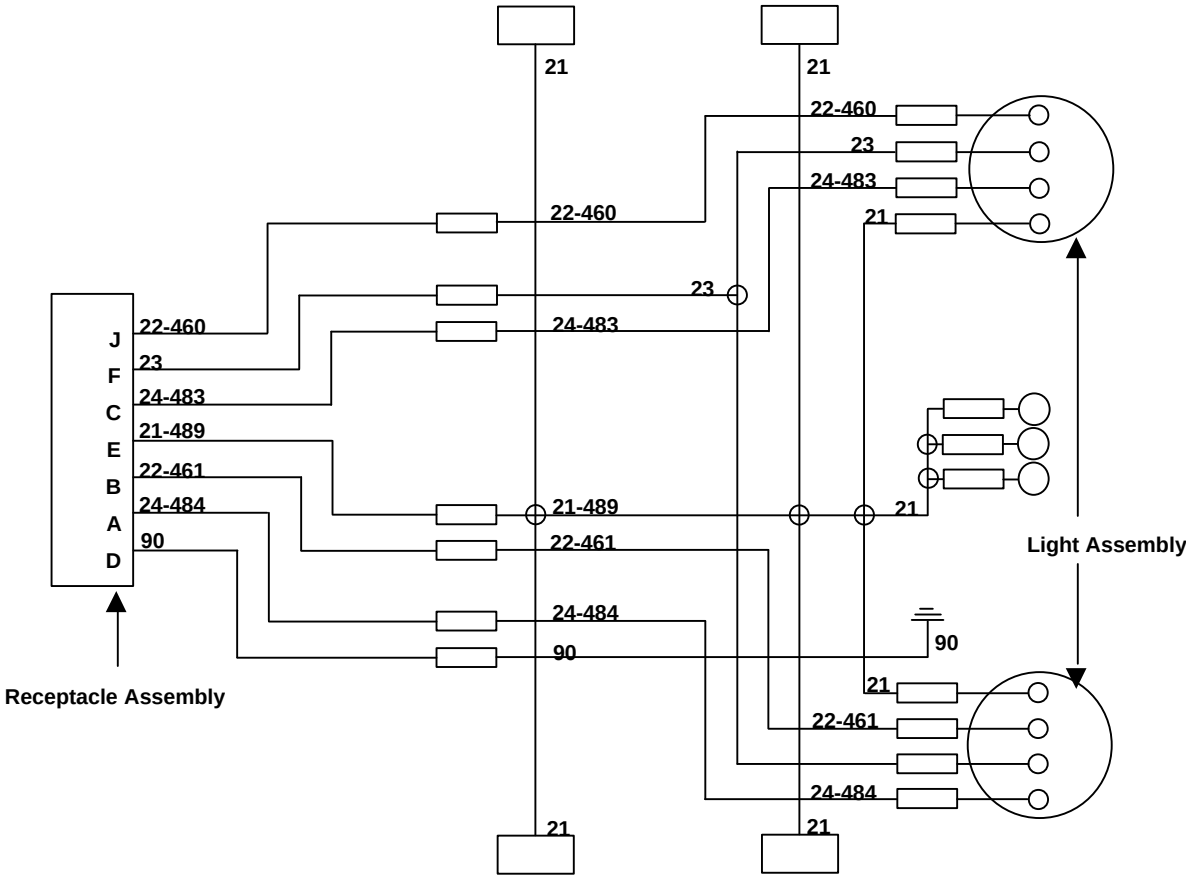
Relay Valve – Controls the braking system of the trailer. Based on the air pressure signals received from the towing vehicle, it will apply or release the service brakes or it will initiate an emergency brake application.

Air Reservoir – The air reservoir stores the system air pressure, 95 psi (655 kPa) minimum, that operates the brake system. Pressure to the reservoir is initially supplied, and then maintained through the emergency supply line from the towing vehicle through the relay valve.

Brake Chamber – The brake chamber controls the movement of the s-cam on the brake system causing the activation and release of the brakes as the air flow from the air reservior is passed into and out of the chamber.

Brake shoes – The two brake shoes on each wheel assembly are spread apart by the mechanical movement of the S-CAM. The brake shoes cause friction to slow or stop the trailer.

Trailer Chassis Electrical System Diagram



The light assemblies receive power to operate from the towing vehicle through the intervehicular cable and the main chassis harness.

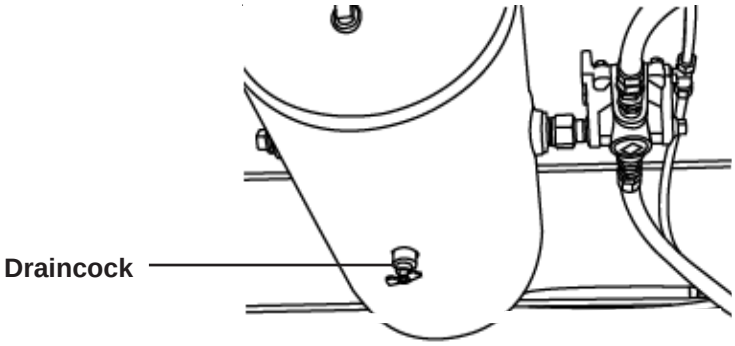
CHAPTER 2

OPERATOR INSTRUCTIONS FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2-TON, 4-WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

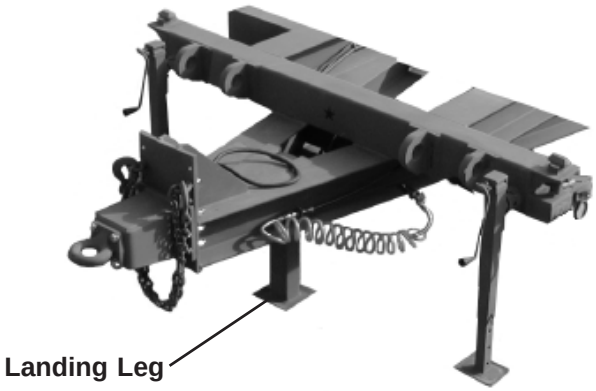
DESCRIPTION AND USE OF OPERATOR'S CONTROLS 0004 00

GENERAL

This section gives a short explanation of the components of the 7 1/2 ton, Containerized Kitchen Trailer, XCK2000 and XCK2000E1 and their function.



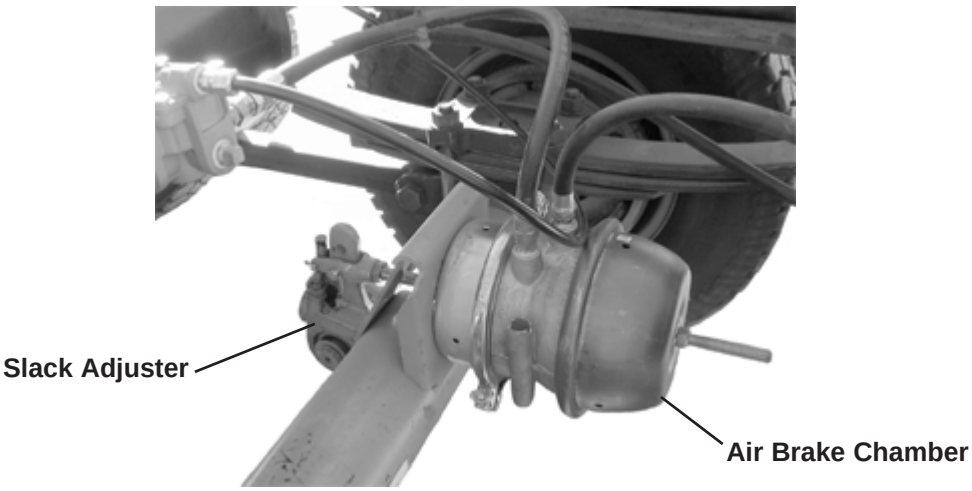
KEY	CONTROL OR INDICATION	FUNCTION
1	Draincocks	Used to drain accumulation of moisture, and to release air pressure from air reservior.



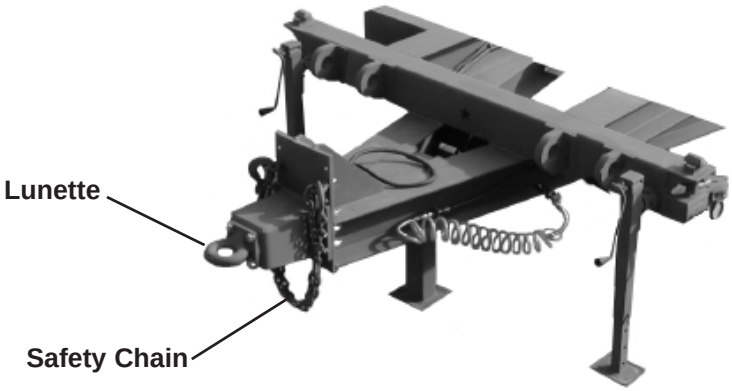
KEY	CONTROL OR INDICATION	FUNCTION
1	Landing Leg	Used to support the trailer after operation, and during airlift operations.

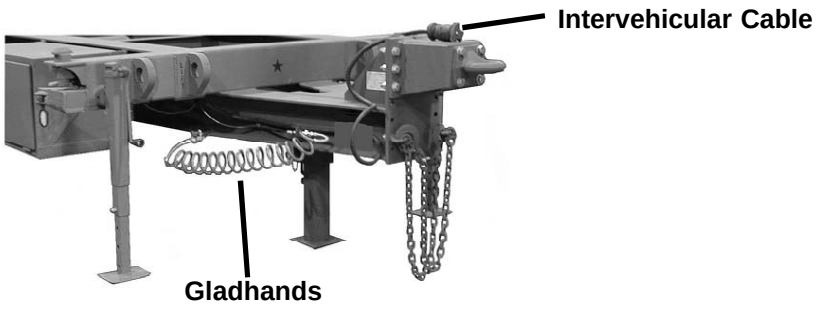
DESCRIPTION AND THE USE OF CONTROLS AND INDICATORS - Continued **0004 00**

KEY	CONTROL OR INDICATOR	FUNCTION
1	Air brake chamber assemblies	Air brake chambers are located on the axle at each of the four wheel assemblies.
2	Slack adjuster	One slack adjuster is splined to the camshaft at each of the four brake assemblies. The movement of the slack adjusters causes the camshaft to turn, thus applying brakes.

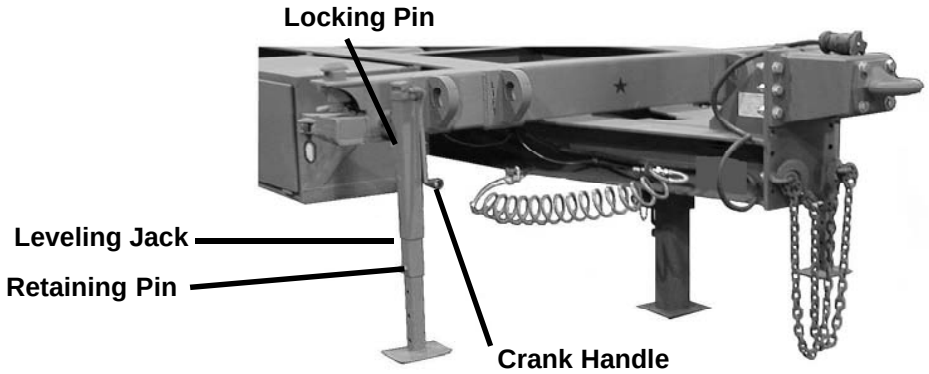


KEY	CONTROL OR INDICATOR	FUNCTION
1	Lunette	Used to couple the trailer to the towing vehicle.
2	Safety chain	Hooked to lifting shackles on towing vehicle to prevent trailer from fully breaking away.



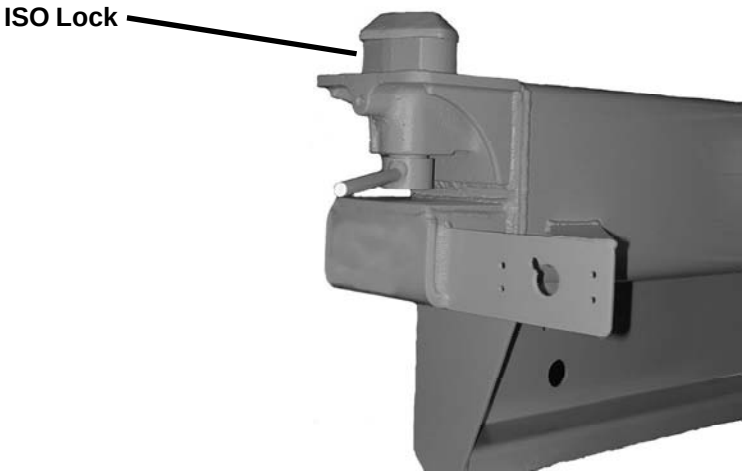


KEY	CONTROL OR INDICATOR	FUNCTION
1	Intervehicular cable connector	Provides the connection between the towing vehicle and the trailer electrical system.
2	Service and emergency gladhands	Provide the connections between the towing vehicle's air supply and the trailer.



KEY	CONTROL OR INDICATOR	FUNCTION
1	Leveling jack	Provide support for the chassis when it is not coupled to a towing vehicle.
2	Retaining pin	Locks lower telescoping tube in a variety of optional positions.
3	Locking pin	Secures the leveling jack to the trailer in the down position, or the folded up or stowed position.
4	Crank handle	Operates the gearbox. Turning crank clockwise retracts landing leg assembly, lowering trailer. Turning crank counter-clockwise extends landing leg assembly, raising trailer.

KEY	CONTROL OR INDICATOR	FUNCTION
1	Spare tire mount	Provides a secure location to store the spare tire.



KEY	CONTROL OR INDICATOR	FUNCTION
1	ISO lock	Secures the Containerized Kitchen to the trailer.

PREPARATION FOR USE

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

WARNING

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

1. Review and perform towing vehicle operating procedures to prepare towing vehicle for coupling.

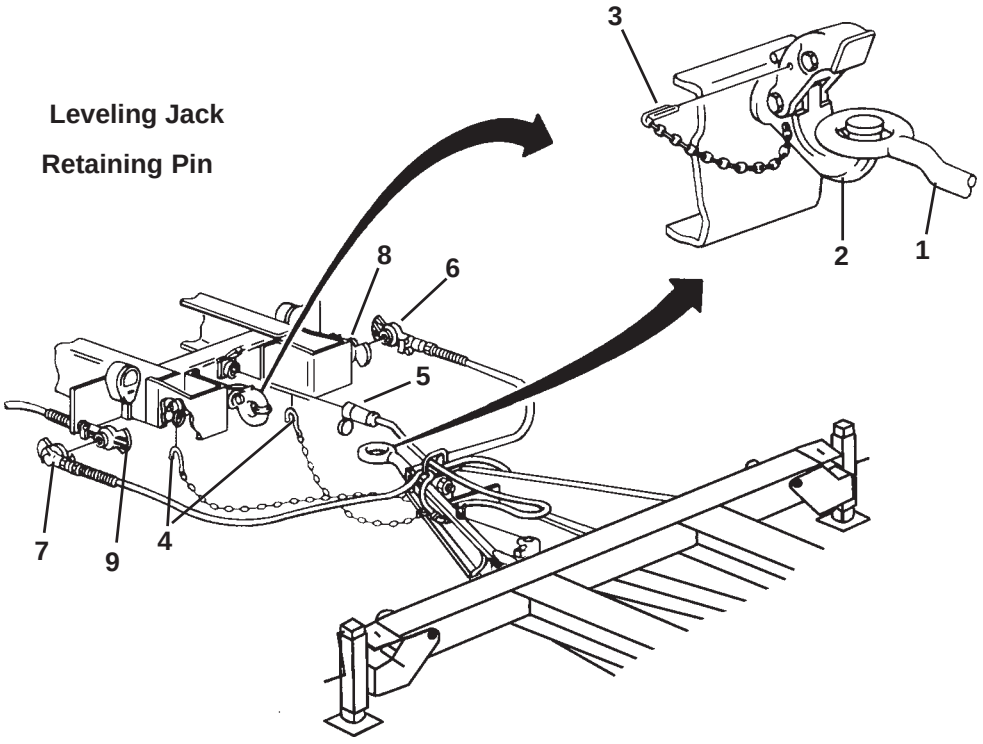
NOTE

Use an assistant to direct you while backing up.

2. Align towing vehicle with trailer.

3. Slowly back towing vehicle until lunette **(1)** and pintle **(2)** engage. Close pintle.

4. Install pintle lockpin **(3)**.



PREPARATION FOR USE - Continued

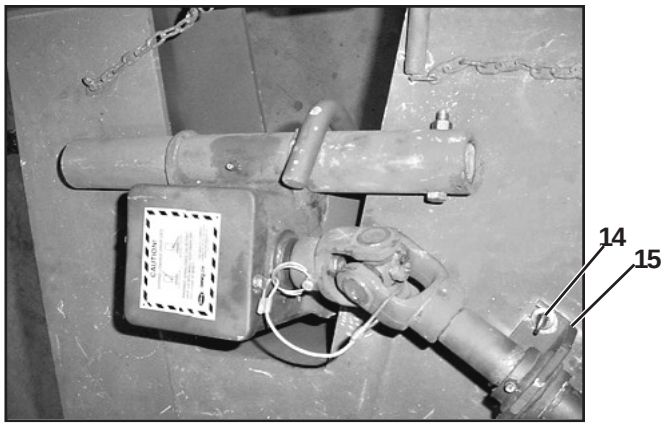
RAISING JACK

CAUTION

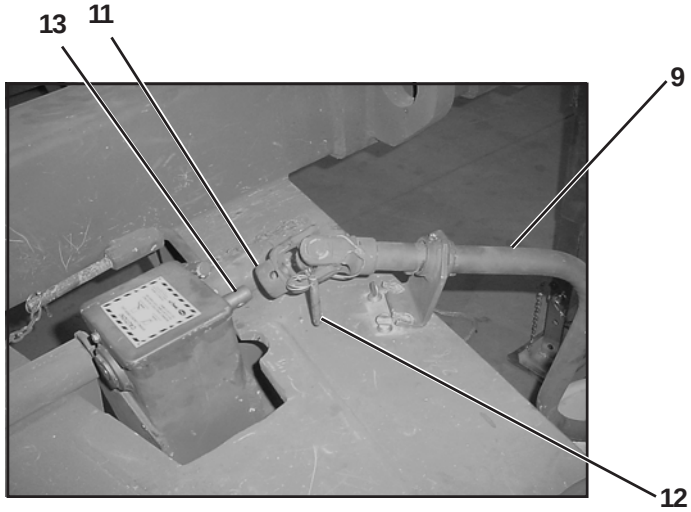
Insure towing vehicle is in place before beginning the jack raising procedure. Failure to do so may cause damage to personnel or equipment.

5. Rotate crank counterclockwise until trailer is resting on towing vehicle.

6. Loosen retention screws **(14)** on handle support bracket **(15)**.

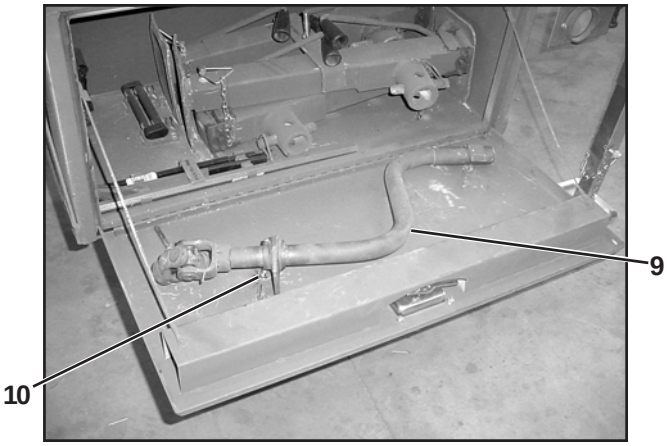


7. Remove pin **(12)** from handle U-joint **(11)** and crankshaft **(13)** and remove handle **(9)**.



PREPARATION FOR USE - Continued

8. Secure handle **(9)** in toolbox lid with wing nuts **(10)**.



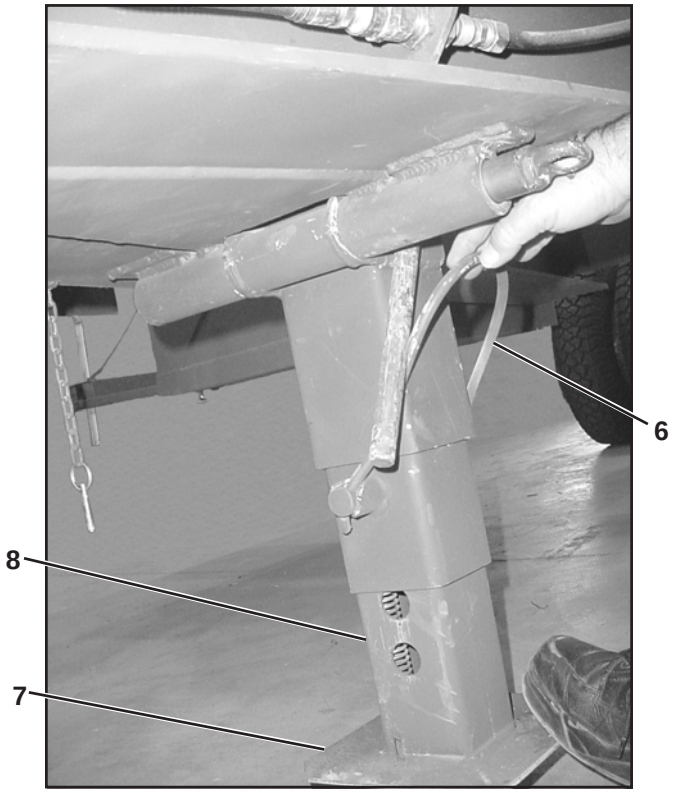
PREPARATION FOR USE - Continued

9. Place foot on the shoe **(7)** of the drop leg **(8)** and apply downard pressure.

10. Using hand, push adjustment handle **(6)** down to the released position.

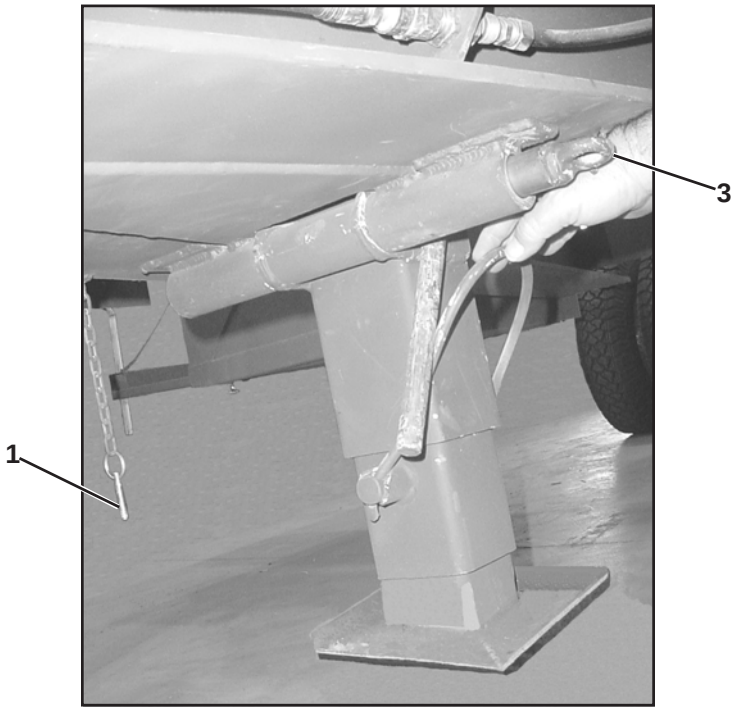
11. Slowly release pressure with foot allowing the drop leg **(8)** to rise until it stops.

12. Push adjustment handle **(6)** up to the locked position.

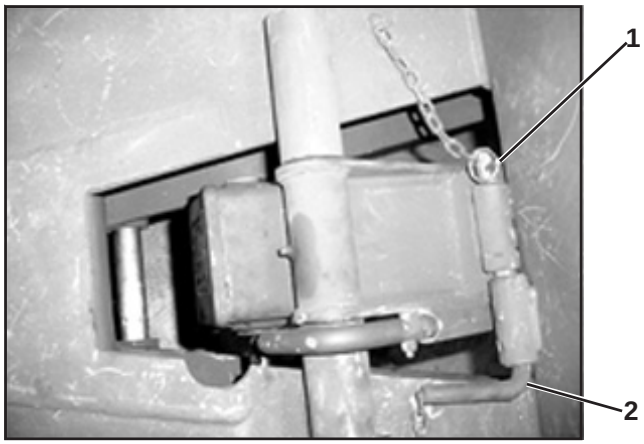


PREPARATION FOR USE - Continued

13. Remove lower safety pin **(1)** and lower jack retention pin **(3)**.

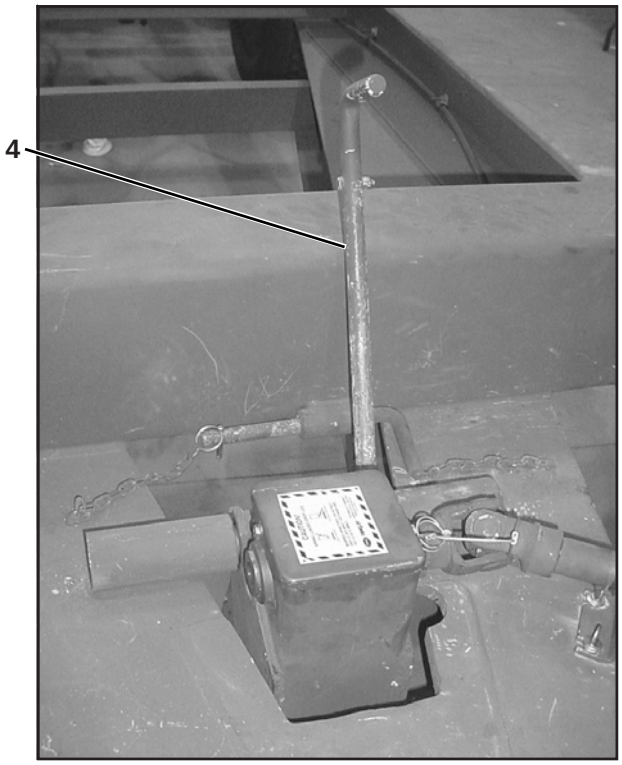


14. Remove safety pin **(1)** and upper Jack retention pin **(2)**.

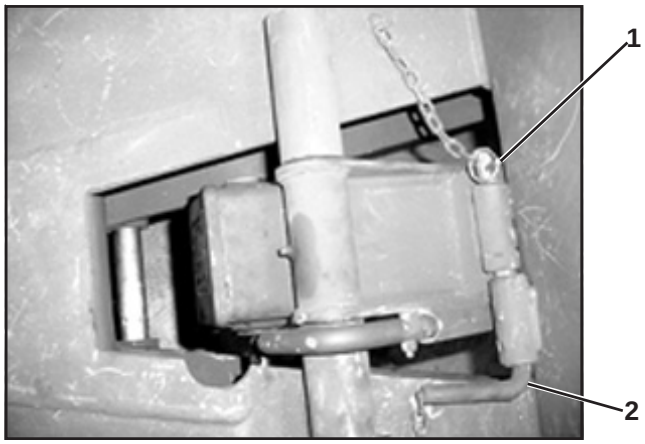


PREPARATION FOR USE - Continued

15. Using lifting handle **(4)** place jack in the raised position.



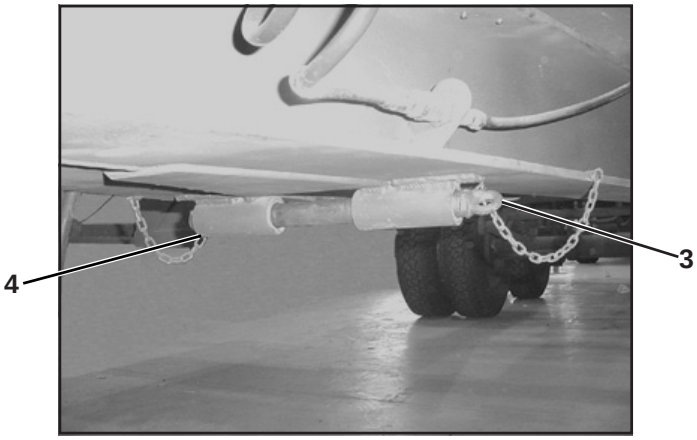
16. Insert upper jack retention pin **(2)** and attach safety pin **(1)** to secure jack in the raised position.



PREPARATION FOR USE - Continued

17. Slide lifting handle into stored position.

18. Insert lower jack retention pin **(3)** and attach safety pin **(4)**.



PREPARATION FOR USE - Continued

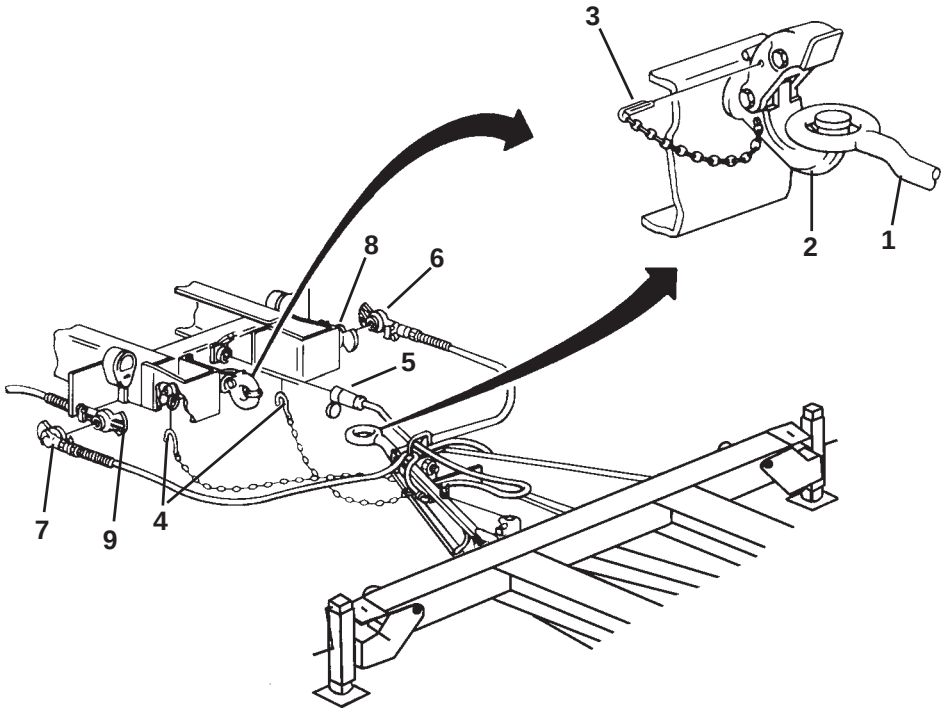
19. Attach safety chains **(4)** from trailer to towing vehicle by crossing chain under lunette to opposite side eyebolt.

20. Connect trailer intervehicular cable **(5)** to towing vehicle.

21. Connect trailer service and emergency airhose gladhands **(6 and 7)** to towing vehicle gladhands **(8 and 9)**.

22. Check airhose gladhands **(6 and 7)** and intervehicular cable **(5)** connector for security.

23. Turn on towing vehicle air supply to pressurize the brake system air reservoir.



PREPARATION FOR USE - Continued

24. Turn on service lights in towing vehicle and check that all taillights are working.

25. Have an assistant turn on turn signals and apply service brakes. Check that taillights/composite lights **(11)** flash and brake lights light.

26. Check blackout portions of taillights/composite lights **(11)** for proper operation.

PREPARATION FOR USE - Continued

CAUTION

Stop turning hand crank when it becomes hard to turn. Continuing to turn hand crank may cause damage to leveling jack.

27. Raise leveling jack to highest level by turning hand crank **(12)**.

28. Remove the retaining pin **(13)**.

29. Raise lower portion of leveling jack to highest level.

30. Replace retaining pin **(13)**.

31. Remove locking pin **(14)** and remove jack from trailer.

32. Secure jack in tool box.

33. Repeat steps **13-18** until all four jacks are secured.

PREPARATION FOR USE - Continued

WARNING

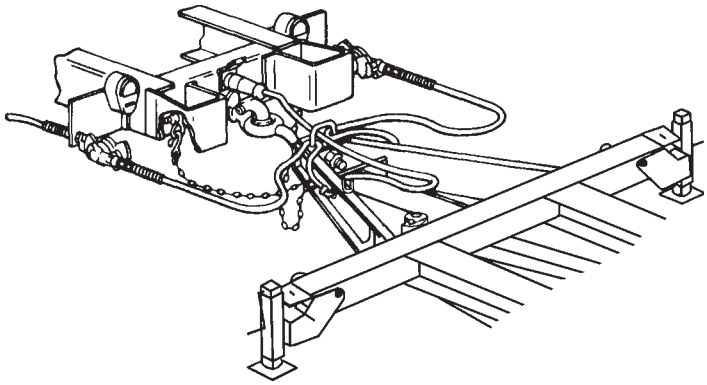
Do not raise leveling leg assemblies unless trailer is connected to a towing vehicle or is securely supported on jack stands. The trailer may fall, causing injury to personnel.

34. Have an assistant apply and release towing vehicle service brakes.

35. Check the trailer relay valve vents with each application and release of towing vehicle service brakes. Venting of air should be heard.

36. Check the air brake chambers to insure they are not caged. (Ref WP 0006 00-3)

PREPARATION FOR USE - Continued



OPERATION

DRIVING

When driving the towing vehicle and trailer, the overall length of the unit must be kept in mind when passing other vehicles and when turning. Backing is also affected because the unit is hinged in the middle.

TURNING

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

STOPPING

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

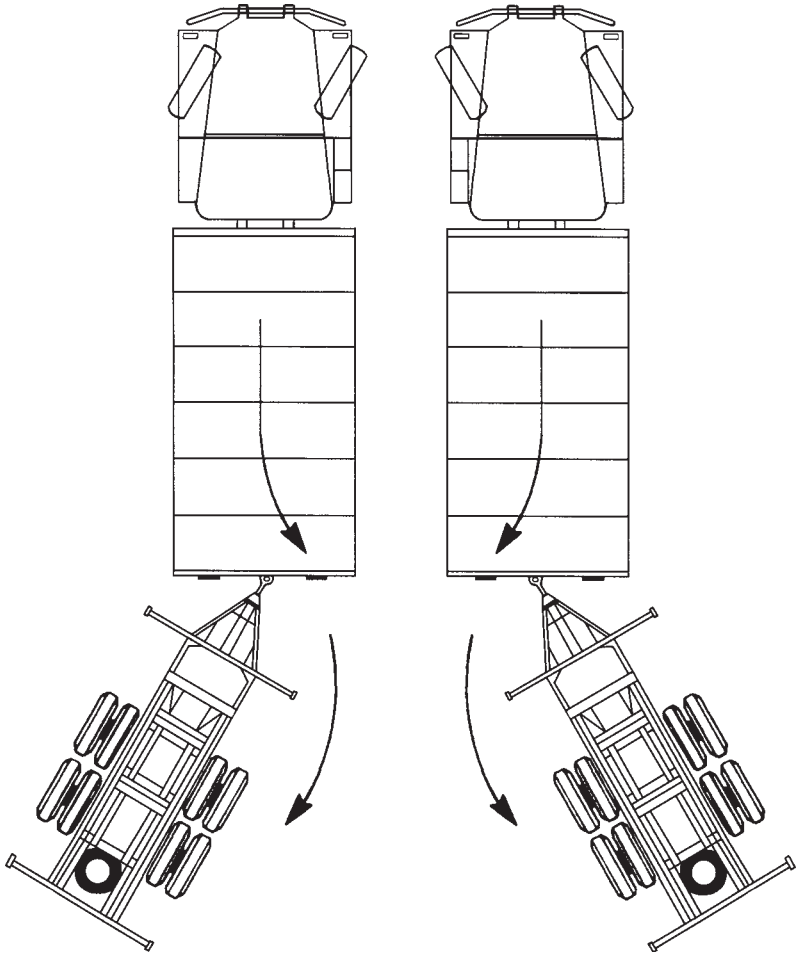
PARKING

When parking for extended periods, disconnect gladhands from towing vehicle. Both the towing vehicle and trailer parking brakes should be set. The spring brake section of the air chamber contains an emergency brake application spring. When the emergency air exhausts this section of the air chamber, the spring releases therefore applying the emergency brake.

OPERATION - Continued

BACKING

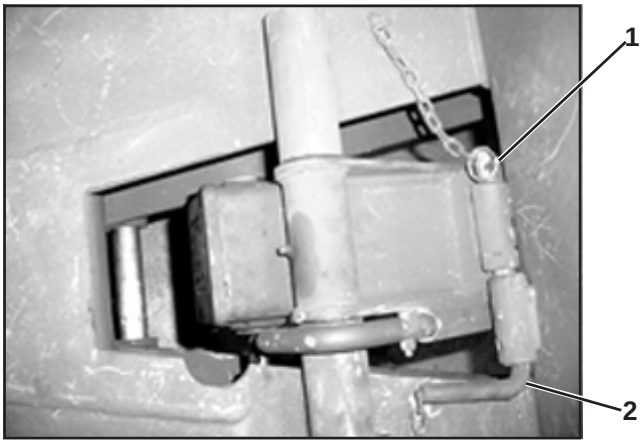
Use an assistant to guide you while backing. Adjust rearview mirrors before backing. When the towing vehicle and trailer are in a straight line, the rear of the trailer will move opposite to the direction the front towing vehicle wheels are turned. When the towing vehicle wheels are turned to the right, the rear of the trailer will move to the left as you back up. When the towing vehicle wheels are turned to the left, the rear of the trailer will move to the right.



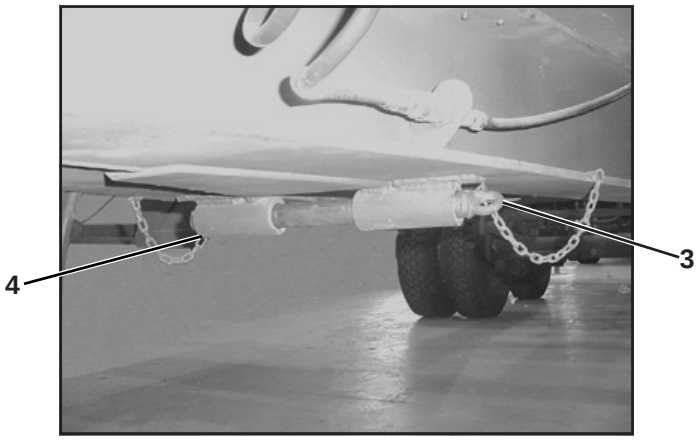
AFTER USE

LOWERING JACK

1. Remove safety pin **(1)** and upper Jack retention pin **(2)** and lower jack using lifting handle.

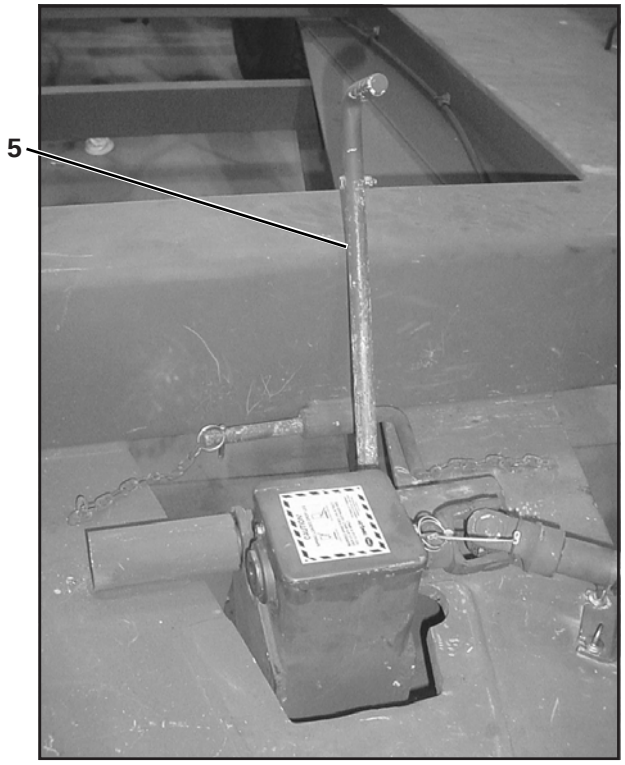


2. Remove safety pin **(4)** and lower jack retention pin **(3)**.



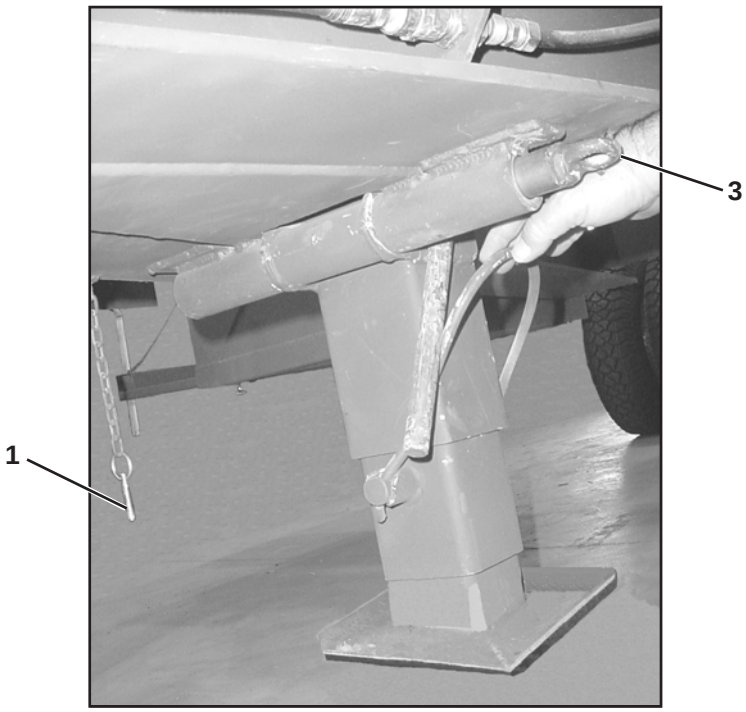
AFTER USE - Continued

(3) Using lifting handle **(5)** place jack in full down position.



AFTER USE - Continued

(4) Insert lower jack retention pin **(3)** and attach safety pin **(1)** to secure the jack in the down position.

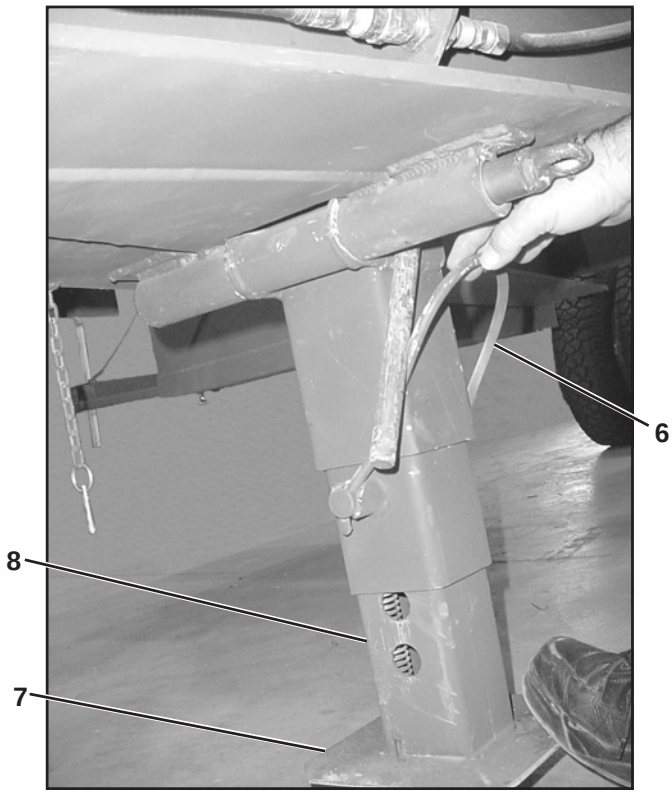


AFTER USE - Continued

(5) Push the adjustment handle **(6)** down to the released position.

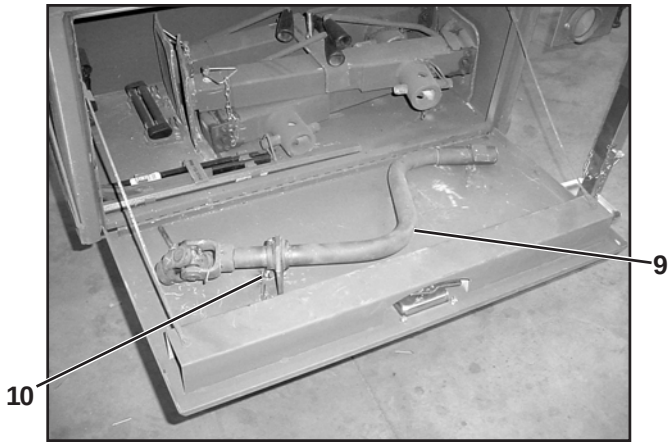
(6) Place foot on the shoe **(7)** of the drop leg **(8)** and push down to the desired height.

(7) Keeping foot on the shoe **(7)** of the drop leg **(8)**, raise the adjustment handle **(6)** to the locked position.



AFTER USE - Continued

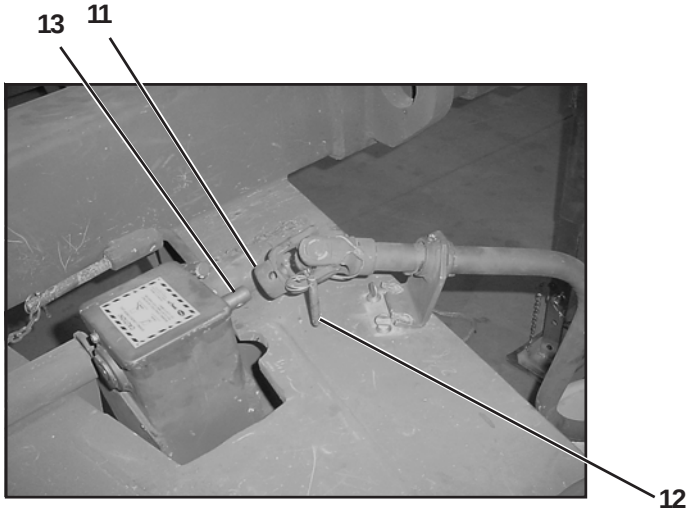
(8) Remove jack handle **(9)** from the toolbox lid be loosening the wing nuts **(10)** securing it in place.



Note
Insure the slots ing the handle support bracket slide under the retention screws on the frame of the trailer during step 9.

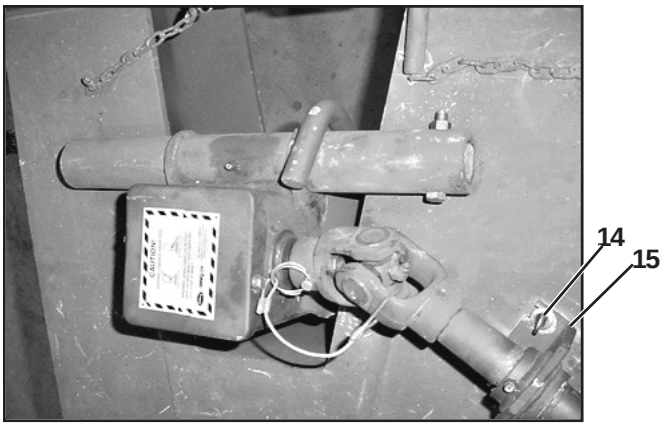
(9) Place the open end of handle U-joint **(11)** over the jack crankshaft **(13)**.

(10) Insert pin **(12)** through handle U-joint **(11)** and jack crankshaft **(13)** securing them together.



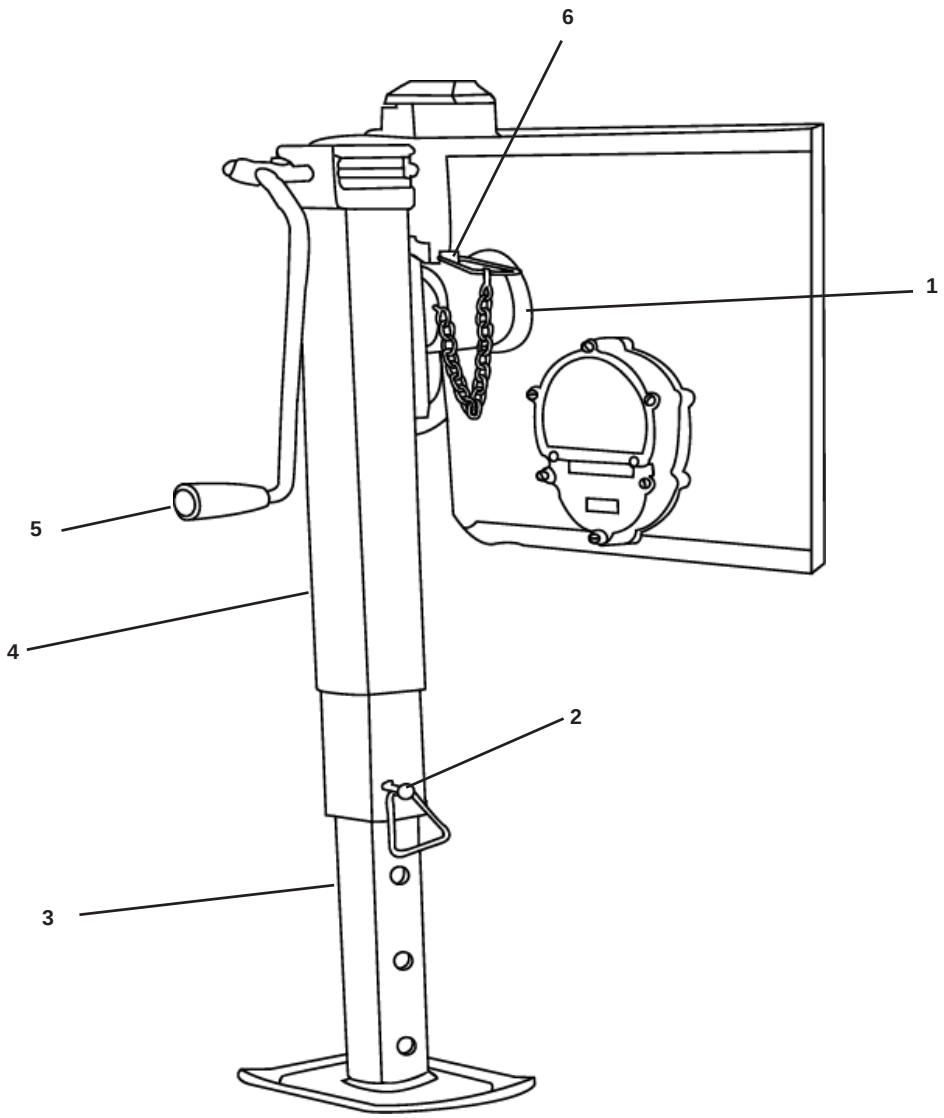
AFTER USE - Continued

11. Tighten retention screws **(14)** on handle support bracket **(15)** to secure handle to trailer frame.
12. Rotate crank clockwise to extend leg to desired height.
13. Place leveling jack on trailer swivel mounts **(1)** located on each corner of the trailer.
14. Secure leveling jack **(4)** with lockpin **(6)**.
15. Drop telescoping leg **(3)** of leveling jack to lowest possible position and secure with retaining pin **(2)**.
16. Repeat steps **1** through **4** until all four jacks are in place.



AFTER USE - Continued

17. Rotate crank handle **(5)** counterclockwise to extend leveling jack **(4)** and remove trailer weight from towing pintle.



AFTER USE - Continued

18. Unhook safety chains **(1)** from towing vehicle.

19. Close air supply valves on towing vehicle.

20. Uncouple service and emergency air gladhands **(3 and 4)** from towing vehicle.

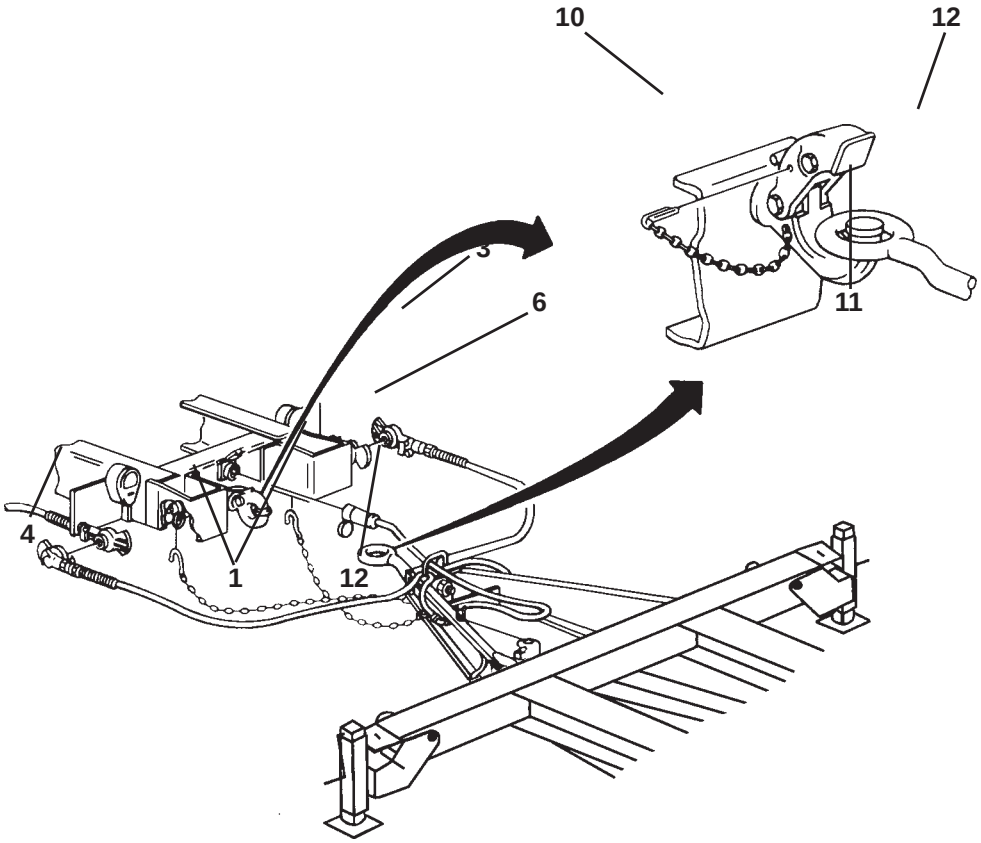
NOTE

Trailer parking brakes are set when gladhands are uncoupled from towing vehicle.

21. Unplug intervehicular cable connector **(6)**.

22. Remove safety pin **(10)** from pintle **(11)**.

23. Have an assistant drive towing vehicle to uncouple lunette **(12)** from pintle **(11)**.



OPERATION UNDER UNUSUAL CONDITIONS 0006 00

OPERATION IN EXTREME COLD

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

OPERATION IN EXTREME HEAT

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

OPERATION IN SANDY OR DUSTY AREAS

Clean, inspect, and lubricate more often in dusty or sandy areas.

AIRMOBILE OPERATIONS

For instructions to airlift the CKT, XCK2000 and XCK2000E1 refer to FM 90-4 (Airmobile Operations), and to FM 55-70 (Army Transportation Container Operations).

OPERATION IN SNOW

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

OPERATION IN SALTWATER AREAS

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

OPERATION IN MUD

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

FORDING

1. Check bottom surface of stream or river. If bottom surface is too soft, do not ford.
2. After fording, apply the brakes a few times to help dry out the brake lining. Be sure brakes are operating properly before driving at normal speeds.
3. Lubricate all unpainted surfaces with lubricating oil.
4. Lubricate the trailer in accordance with the lubrication instructions in WP 0027 00-1.
5. Refer to TM 9-238 for deepwater fording information.

OPERATION WITH AIR BRAKE FAILURE (CAGING BRAKES)

In the event of a complete failure of the brake system, the following procedure makes it possible to move the trailer off the travel portion of the highway.

WARNING

This is an emergency procedure that is to be used only to move the trailer off the travel portion of the highway when there is a complete failure of the brake system. Normal operation with brakes caged could result in serious injury to personnel.

a. Remove internal hex pipe plug **(1)** from air chamber **(2)**.

b. Remove nut **(3)** and washer **(4)**. Remove release tool from the 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.

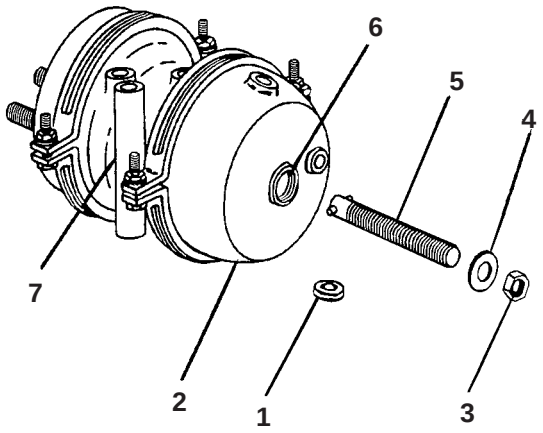
f. With release tools in position, the trailer brake system is not operative. Use extreme caution and move trailer to side of the road.

g. After reaching the side of the road, remove nut **(3)** and washer **(4)** from each release tool **(5)**.

h. Remove release tools **(5)** from holes **(6)** in air chambers and tighten.

i. Insert each pipe plug **(1)** in holes **(6)** of air chambers and tighten.

j. Insert each release tool **(5)** in its tool holder **(7)** and secure with washer **(4)** and nuts **(3)**.



CHAPTER 3

OPERATOR TROUBLESHOOTING PROCEDURES FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2 TON, 4 WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

GENERAL

This section lists the common malfunctions that you may find during operation of the 7 1/2 ton, Containerized Kitchen Trailer, XCK2000 and XCK2000E1 and its components. 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 the corrective actions listed, notify your supervisor.

EXPLANATION OF COLUMNS

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

2. Test/Inspection - Procedure to isolate problem to a component or system.

3. Corrective Action - Procedure to correct problem.

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

ELECTRICAL SYSTEM

All lamps fail to light 0008 00-1
One or more (but not all) lamps fail to light 0008 00-1

BRAKES

No brakes 0008 00-2
Brakes do not release 0008 00-2

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

ELECTRICAL SYSTEM

1. ALL LAMPS FAIL TO LIGHT.

Step 1. Check that intervehicular cable is properly connected.
Reconnect.

Step 2. Check towing vehicle circuit breaker/fuse.

NOTE
Refer to towing vehicle technical manual for maintenance instructions.
If lamps still do not light, notify Organizational Maintenance.

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

Check for loose connector at affected light.

Reconnect.

If lamp still fails to light, notify Organizational Maintenance.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BRAKES

1. NO BRAKES.

Step 1. Check for closed air valves on towing vehicle.

Refer to Step 2.

NOTE
Step 2 is for emergency brakes only.

Step 2. Check to insure brake chambers are not caged.

Uncage (Ref. WP 006 00-3)

If you still have no brakes, notify Organizational Maintenance.

2. BRAKES DO NOT RELEASE.

Step 1. Check air line gladhands for proper connection (insure there is no air leaking around connection).

Reconnect.

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

Close air valves.

Step 3. Check for open air valves on trailer.

Close air valves.

If the brakes still do not release, notify Organizational Maintenance.

CHAPTER 4

ORGANIZATIONAL TROUBLESHOOTING PROCEDURES FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2-TON, 4-WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

GENERAL

This WP provides information on the Repair Parts, Special Tools, Test Measurements and Diagnostic Equipment, and Support Equipment for Organizational troubleshooting of the 7 1/2 ton Containerized Kitchen Trailer, XCK2000 and XCK2000E1.

The malfunction/symptom index is a quick reference index for finding troubleshooting procedures. Associated with each symptom is a WP sequence number representing the starting point in a troubleshooting sequence.

SYMPTOM INDEX

	WP
BRAKES	
Brakes will not release	0010 03
No brakes or weak brakes	0010 03
Slow brake application or slow release	0010 04
Grabbing brakes	0010 05
Hard pulling (one or more brake drums running hot)	0010 05
ELECTRICAL SYSTEM	
All lamps do not light	0010 02
One or more (but not all) will not light	0010 02
Dim or flickering lights	0010 02
LEVELING JACK	
Difficulty in lowering or raising the leveling jacks	0010 06
SPRINGS AND SUSPENSION	
Improper spring action	0010 06
TIRES	
Excessively worn, scuffed tires, or flat spots on tires	0010 07

ORGANIZATIONAL TROUBLESHOOTING

This WP lists the common malfunctions which may be found during the operation or maintenance of the trailer or components. You should perform the test/inspections and corrective actions in the order listed.

The columns are defined as follows:

1. **MALFUNCTION -** A visual or operational indication that something is wrong with the trailer.

2. **TEST OR INSPECTION** - A procedure to isolate the problem in a component or system.

3. **CORRECTIVE ACTION** - A procedure to correct the problem.

If you are unsure of the location of an item mentioned in troubleshooting, refer to WP 0002 00 or to the maintenance task where the item is replaced.

Before performing troubleshooting, read and follow all safety instructions found in the Warning Summary at the front of this manual.

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

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

ELECTRICAL SYSTEM
(See Schematic Diagram, page no. 0015 00-7)

1. ALL LAMPS DO NOT LIGHT.

Step 1. Check intervehicular cable.

a. If cable is defective, replace cable.

b. If cable is not defective, proceed to step 2.

Step 2. Check for ground or open circuit in wiring.

If wiring has a ground or open circuit, repair or replace wiring.

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

Step 1. Check for defective light assemblies.

a. Replace defective light assemblies.

b. If light is not damaged, proceed to step 2.

Step 2. Check for ground or open circuit in wiring.

If wiring has a ground or open circuit, repair or replace wiring.

3. DIM OR FLICKERING LIGHTS.

Step 1. Check for defective light assemblies.

a. Replace or repair defective light assemblies.

b. If light assemblies are not defective, proceed to step 2.

Step 2. Check for intermittent ground or open circuit.

If wiring is defective, repair or replace wiring.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BRAKES

1. BRAKES WILL NOT RELEASE.

Step 1. Check operation of air brake chambers (WP 0016 00-12).

a. If one air brake chamber does not release, replace defective brake chamber.

b. If all air brake chambers do not release, proceed to step 2.

Step 2. Check trailer valve operation for application of emergency air to air brake chambers.

If emergency air is not being applied to air brake chambers, replace trailer valve.

Step 3. Check for low air pressure (leakage at connection, air lines or valves) (WP 0016 00-14).

a. If air lines/connections are leaking, repair or replace as needed.

b. If valve is leaking, replace defective valve.

2. NO BRAKES OR WEAK BRAKES.

Step 1. Inspect for grease on brake lining.

a. If grease is present on brake linings, replace defective oil seals and brake shoes.

b. If grease is not present on brake lining, proceed to step 2.

Step 2. Check for worn brake lining.

a. If brake lining is worn, replace brake shoe.

b. If brake lining is not worn, proceed to step 3.

Step 3. Check brake adjustment .

a. Adjust brake shoes if out of adjustment.

b. If brakes are adjusted, proceed to step 4.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BRAKES (Continued)

2. NO BRAKES OR WEAK BRAKES (Continued)

Step 4. Check for relay valve operation by observing action of air brake chambers.

a. If air brake chambers do not operate, replace relay valve (WP 0016 00-18).

b. If action of air brake chambers is not positive, replace relay valve (WP 0016 00-18).

c. If a single air brake chamber does not operate properly, replace brake chamber (WP 0016 00-12).

3. SLOW BRAKE APPLICATION OR SLOW RELEASE.

Step 1. Check for low air pressure (leakage at connections, air lines or valves) (WP 0016 00-14).

a. If air lines/connections are leaking, repair or replace as needed.

b. If valve is leaking, replace defective valve.

c. If air lines/connections and valves are not leaking, proceed to step 2.

Step 2. Remove and check for restrictions in air lines and hoses (WP 0016 00-14).

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

b. If air lines or hoses are not restricted, proceed to step 3.

Step 3. Check for damaged or broken brake shoe springs (WP 0016 00-5).

a. If a spring is defective, replace spring.

b. If any spring is not defective, proceed to step 4.

Step 4. Check for air brake chamber operation.

a. If one air brake chamber operates slowly, replace defective brake chamber (WP 0016 00-12).

b. If all air brake chambers operate slowly, replace relay valve (WP 0016 00-18).

c. If all air brake chambers still operate slowly, replace trailer valve (WP 0016 00-19).

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

BRAKES (Continued)

4. GRABBING BRAKES.

Step 1. Check brake adjustment (WP 0016 00-10).

a. If brakes are out of adjustment, adjust brakes.

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

Step 2. Check for grease on brake lining.

a. If grease is present, replace brake shoes and oil seals.

b. If grease is not present on brake lining, proceed to step 3.

Step 3. Check for cracked, scored, or deformed brake drum.

a. If brake drum is cracked, scored, or deformed, replace brake drum.

b. If brake drum is not cracked, scored, or deformed, proceed to step 4.

Step 4. Check for worn or loose brake linings.

If linings are worn or damaged, replace brake shoes.

5. HARD PULLING (ONE OR MORE BRAKE DRUMS RUNNING HOT).

Step 1. Check for cross connected air hoses.

a. If hoses are cross connected, correct hoses properly. (See air system diagram, WP 0016 00-16).

b. If hoses are not cross connected, proceed to step 2.

Step 2. Check brake adjustment (WP 0016 00-10).

a. If brakes are out of adjustment, adjust brakes.

b. If brakes are not out of adjustment, proceed to step 3.

Step 3. Check for weak or broken brake shoe springs (WP 0016 00-5).

If a spring is defective, replace spring.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

LEVELING JACKS

1. DIFFICULTY IN LOWERING OR RAISING LEVELING JACKS.

Step 1. Inspect for misaligned or damaged leveling jacks.

a. If leg is damaged or misaligned, replace leveling jack.

b. If leg is not damaged or misaligned, proceed to step 2.

Step 2. Inspect for damaged gearing.

If gearing is damaged, replace leveling jack.

SPRINGS AND SUSPENSION

1. IMPROPER SPRING ACTION.

Step 1. Check for loose or damaged U-bolts.

a. If U-bolts are loose, tighten U-bolts (WP 0018 00-1).

b. If U-bolts are damaged, replace U-bolts.

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

Step 2. Check for broken spring leafs.

a. If spring leafs are broken, notify Direct Support Maintenance.

b. If springs are not broken, proceed to step 3.

Step 3. Check torque rods for looseness or damage.

If torque rods are loose or damaged, notify Direct Support Maintenance.

MALFUNCTION
TEST OR INSPECTION
CORRECTIVE ACTION

TIRES

1. EXCESSIVELY WORN OR SCUFFED TIRES OR FLAT SPOTS ON TIRES.

Step 1. Check for loose wheels.

a. If wheels are loose, tighten wheel nuts.

b. If wheels are not loose, proceed to step 2.

Step 2. Check for loose wheel bearings (WP 0016 00-1).

a. If wheel bearings are loose, adjust wheel bearings.

b. If wheel bearings are not loose, proceed to step 3.

Step 3. Check suspension system for damaged rubber bushings, springs, and loose or missing bolts and nuts.

a. If suspension system is damaged or has loose or missing bolts and nuts, notify Direct Support Maintenance.

b. If suspension system is not damaged and all hardware is complete and secure, notify Direct Support Maintenance.

CHAPTER 5

OPERATOR MAINTENANCE PROCEDURES FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2-TON, 4-WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

GENERAL

This WP contains instructions for performing PMCS on the 7 1/2-ton, Containerized Kitchen Trailer, XCK2000 and XCK2000E1. The procedure lists checks, services, and criteria to ensure that the trailer is prepared for operation. Perform the checks and services at the specified intervals, keeping in mind the following guidelines:

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

SPECIAL INSTRUCTIONS

If something doesn't work due to a fault, troubleshoot the fault with the instructions in this manual.
If the fault cannot be fixed then notify your supervisor.
Always do preventive maintenance in the same order so it gets to be a habit. Once you've had some practice, it will be much easier to spot any faults in a hurry.
If there is anything wrong, and you can't fix it, write it on a DA Form 2404.
If there is something seriously wrong, report it to Organizational Maintenance immediately.
When you do your preventive maintenance, take along the tools you need to make all the checks. You always need a rag or two.
Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Clean as you work and as needed. Keep your equipment clean.
Use dry-cleaning solvent PD-680 on all metal surfaces.
Use soap and water to clean rubber or plastic material.

WARNING

Dry-cleaning solvent PD-680 is both toxic and flammable. Avoid prolonged breathing of vapors and avoid skin contact. Do not use near open flame or excessive heat. Flash point of solvent is 138°F (59°C). Serious illness, injury, or loss of life could result from improper use.

Bolts, Nuts, and Screws. Check that they are not loose, missing, bent, or broken. Look for chipped paint, bare metal, or rust around bolt heads. Report loose nuts and bolts to Organizational maintenance.
Welds. Look for loose or chipped paint, rust, or gaps where parts are welded together. Report bad welds to Organizational maintenance.
Electric Wires and Connectors. Look for cracked or broken insulation, bare wires, and loose or broken connectors. Report loose connections and faulty wiring to Organizational maintenance. Pay particular attention to wires for damage at points where they may rub against the frame or other components
Hoses and Air Lines. Look for wear, damage, or leaks. Make sure clamps and fittings are tight. If a leak comes from a loose fitting or connector, or if something is broken or worn out, notify Organizational maintenance.

LEAKAGE DEFINITIONS

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

Class I – Seepage of fluid (indicated by wetness or discoloration) not great enough to form drops.
Class II – Leakage of fluid great enough to form drops, but not enough to cause drops to fall.
Class Ill – Leakage of fluid great enough to form drops that fall.

CAUTION

When operating with class I or II leaks, check fluid levels more often than that required in the PMCS. Equipment operation is allowable with minor leaks (class I or II). Notify your supervisor when in doubt. Class Ill leaks must be reported to your supervisor or Organizational maintenance.

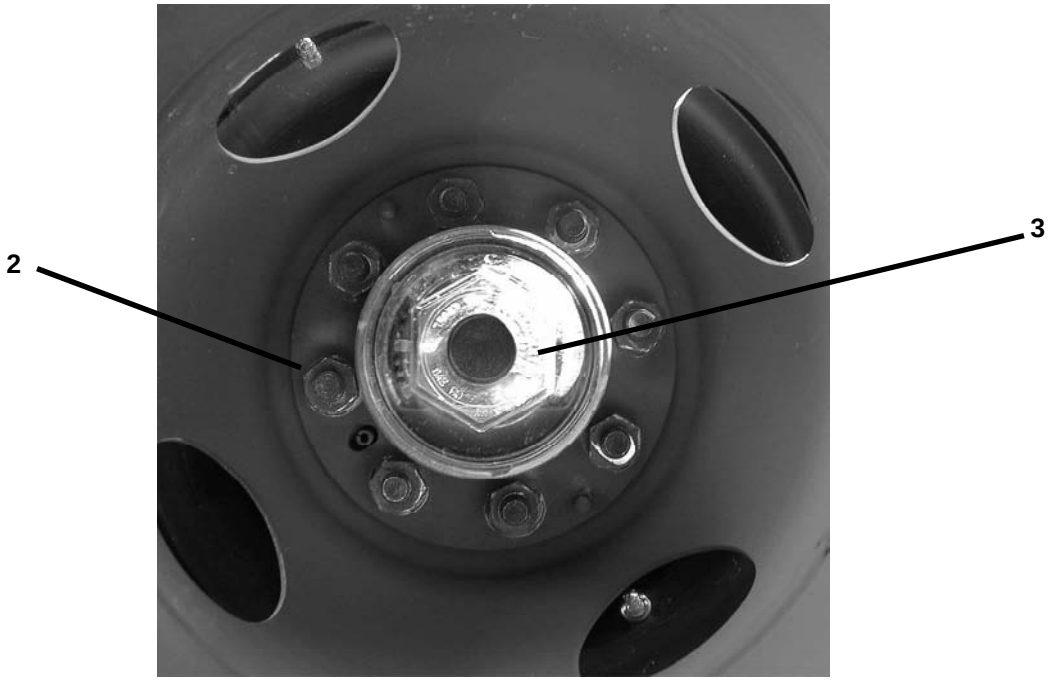
PMCS COLUMN DESCRIPTION

Item No. – The order that PMCS should be performed, and also used as a source of item numbers for the TM number column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, when recording results of PMCS.
Interval – Tells when each check is to be performed.
Item To Be Inspected – Lists the check to be performed.
Equipment Is Not Ready/Available If – Has an entry only when the trailer should not be operated or accepted with that problem.

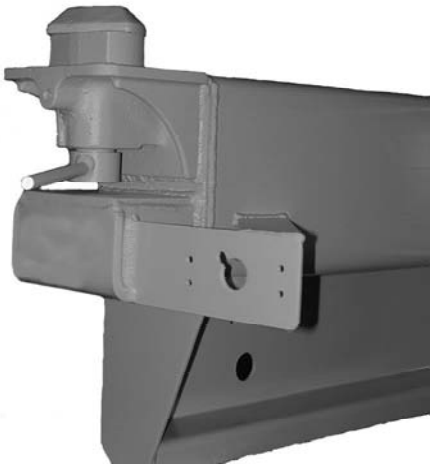
OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES

	BEFORE	DURING	AFTER
ITEM NO.	INTERVAL	ITEM TO BE INSPECTED	
		PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
1.		TIRES	
	BEFORE	a. Check for excessive wear and damage.	Tires are unserviceable.
	AFTER	b. Remove any glass, nails, or stones.	

	BEFORE	DURING	AFTER
ITEM NO.	INTERVAL	ITEM TO BE INSPECTED	
		PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
	BEFORE	c. Gage and inflate to 75 psi (517 kPa).	
2.	BEFORE & AFTER	WHEELS Check for missing or loose wheel capnuts **(2)**.	Capnuts loose or missing.
3.	BEFORE	WHEEL END Check oil level and oil cap for leaks.	Oil Level low or leaking oil cap **(3)**.
4.	BEFORE & AFTER	LIGHTS AND REFLECTORS Check for missing or damaged components.	Lights or reflectors damaged or missing.

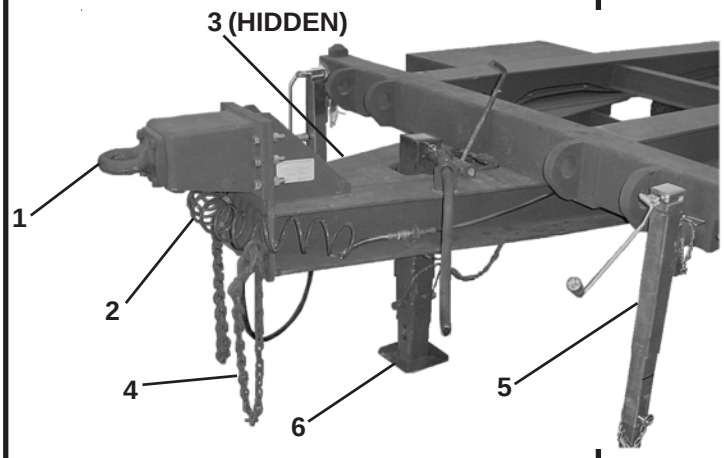


	BEFORE	DURING	AFTER
ITEM NO.	INTERVAL	ITEM TO BE INSPECTED	
		PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
5.	BEFORE	ISO LOCK Check condition of body, stem, and handle.	Parts are unserviceable.

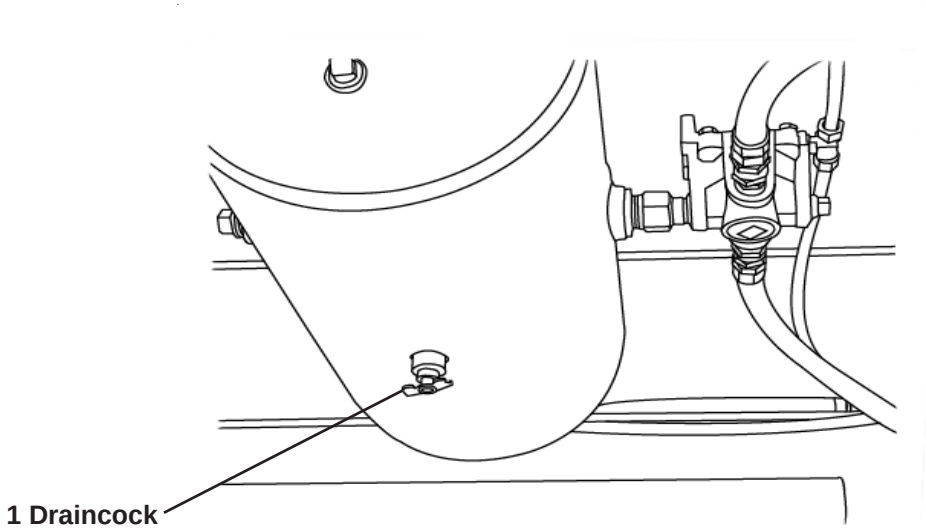


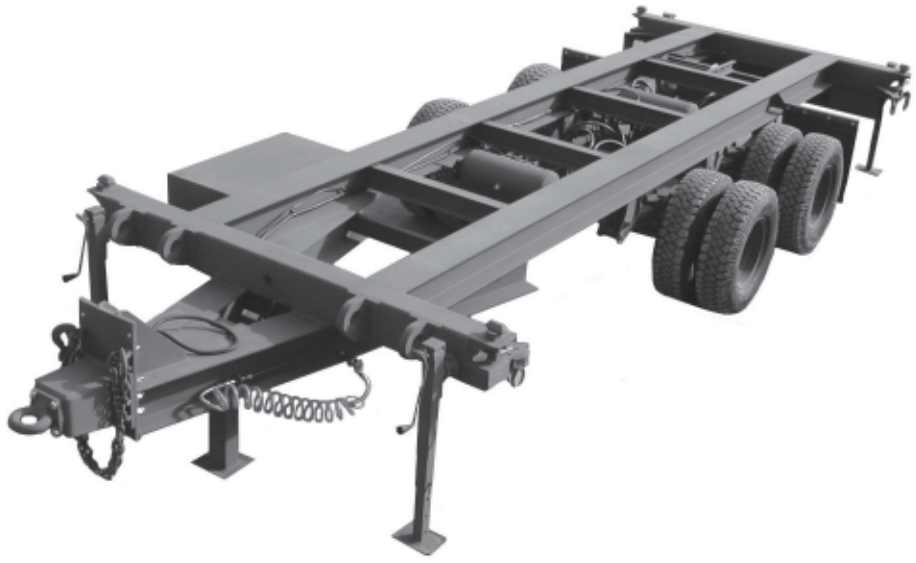
6.	DURING	SPARE TIRE MOUNT Check for proper operation.	Tire is not secure

OPERATOR/CREW PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued **0011 00**

ITEM NO.	BEFORE INTERVAL	DURING ITEM TO BE INSPECTED	AFTER
		PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
7.	BEFORE	LUNETTE, AIR HOSES, INTERVEHICULAR CABLE, AND SAFETY CHAINS Check condition of lunette **(1)**, air-hoses **(2)**, cable **(3)**, and chains **(4)**.	Parts are missing, damaged, or unserviceable.
8.	BEFORE	LEVELING JACK Check proper operation of leveling jack **(5)**	Lock pins missing or the crank lock does not hold.
9.	BEFORE	LANDING LEG Check proper operation of landing leg **(6)**	Landing leg will not lock in up or down position.
			
10.	DURING	BRAKES Check for proper operation.	Brakes will not hold.
11.	DURING	SUSPENSION AND LOAD a. Listen for unusual noise. b. Check for defective suspension or shifting load.	

	BEFORE	DURING	AFTER
ITEM NO.	INTERVAL	ITEM TO BE INSPECTED	
		PROCEDURE: CHECK FOR AND HAVE REPAIRED, FILLED, OR ADJUSTED AS NEEDED	EQUIPMENT IS NOT READY/AVAILABLE IF:
12.	BEFORE AFTER	AIR RESERVOIR Open draincock **(1)** to drain reservoir and close when finished.	Draincock leaks after closing.
13.	AFTER	FRAME AND SUSPENSION Examine for cracks or breaks.	Cracks or breaks are present. Report to supervisor.





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

WHEEL AND TIRE

This task covers:

a. Spare Tire Removal (0012 00-1)
b. Removal (0012 00-3)
c. Installation (0012 00-4)

INITIAL SETUP

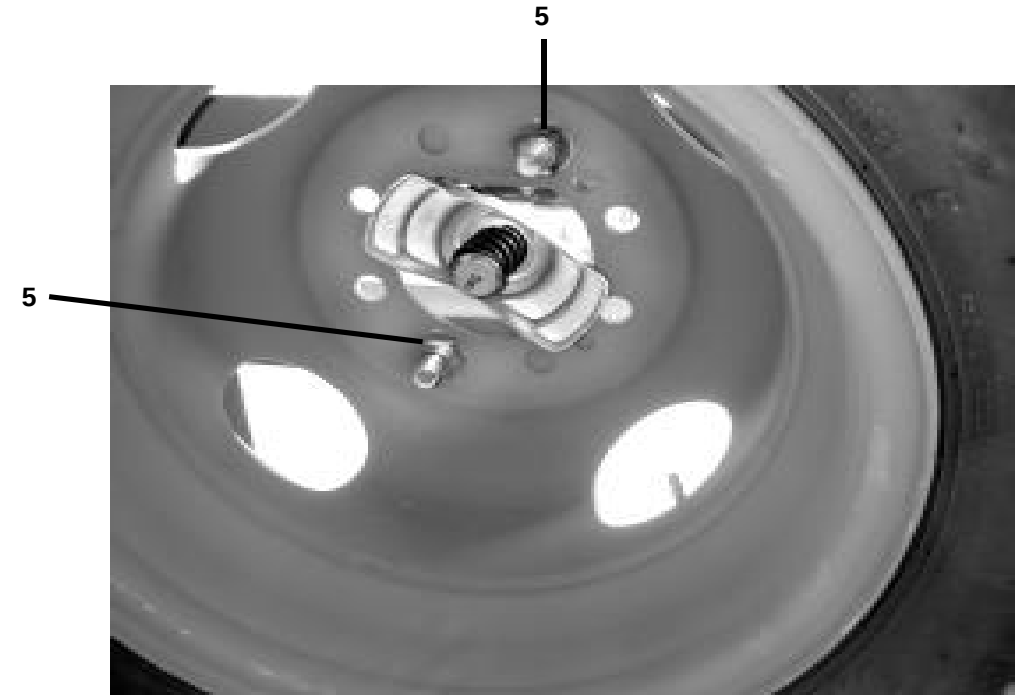
Tools

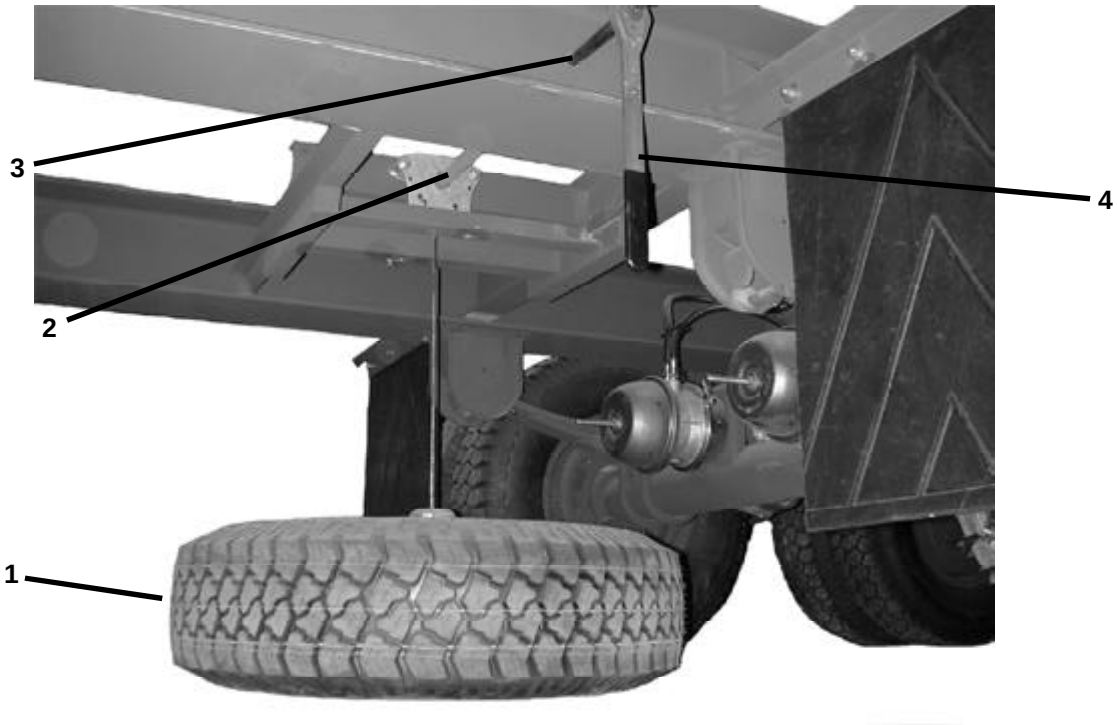
Handle, Spare Tire Loader	Shaft, Spare Tire Loader
Handle, 3/4-inch square drive	Socket, wheel, 1 1/2-by 5/8- by 3/4-inch square drive
Jack, hydraulic	

SPARE TIRE REMOVAL

LOCATION	ITEM	ACTION
1. Spare Tire **(1)**	Two capnuts **(5)**	Using wheel socket, remove nuts.
2. Spare Tire Loader Shaft **(3)**	Spare Tire Loader Handle **(4)**	Attach to Spare Tire Loader Shaft.
3. Spare Tire Gear Box **(2)**	Spare Tire Loader Shaft **(3)**	Insert into gear box slot
	Spare Tire Loader Handle (4)	Insure word DOWN is facing out, rotate counterclockwise.
	Spare Tire **(1)**	Lower and remove

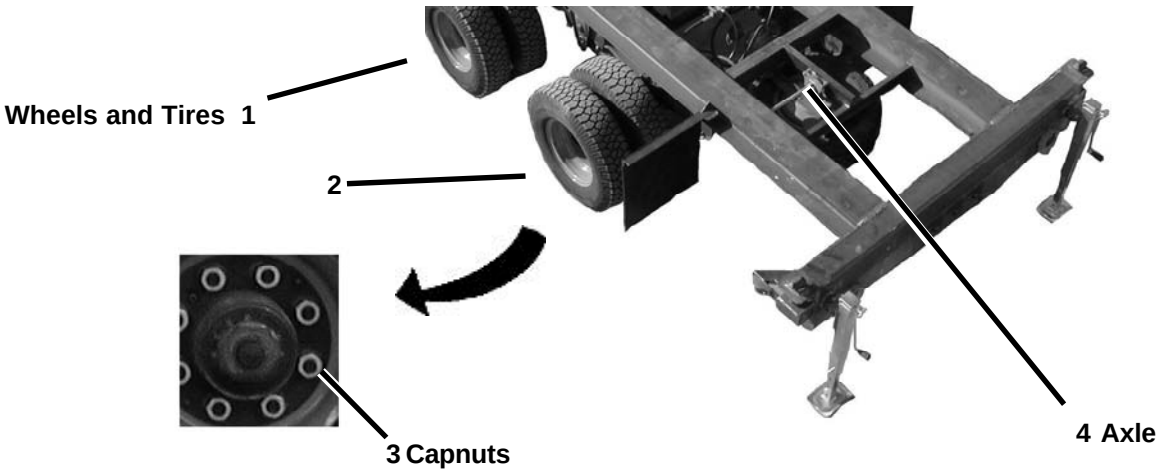
WHEEL AND TIRE-Continued





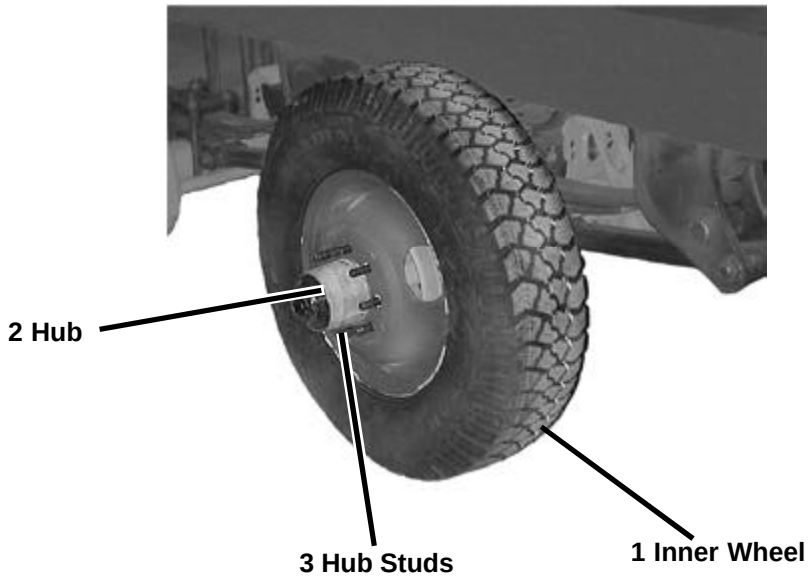
WHEEL AND TIRE – CONTINUED

LOCATION	ITEM	ACTION
DAMAGED TIRE REMOVAL		
1. Wheels and tires **(1 and 2)**	Eight capnuts **(3)**	Using wheel socket, loosen nuts. **Do not remove nuts.**
2. Axle **(4)**	Wheels and tires **(1 and 2)**	Using hydraulic jack**,** raise.
3. Wheels and tires **(1 and 2)**	Eight capnuts **(3)**	Remove.
4.	Outer wheel and tire **(1)**	Remove.



WHEEL AND TIRE – Continued

LOCATION	ITEM	ACTION
REMOVAL – CONTINUED		
5. Hub **(2)**	Inner wheel **(1)**	Remove.
INSTALLATION		
6. Hub (2)	Inner wheel **(1)**	Position wheel on hub studs **(3)**.

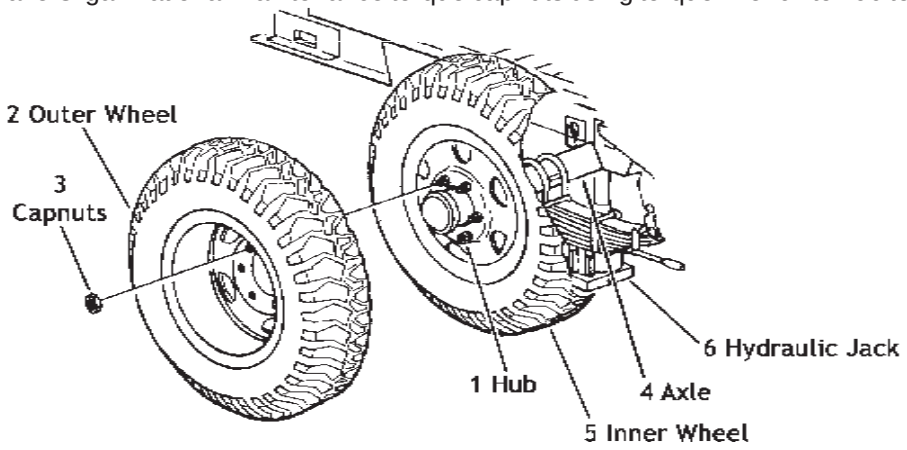


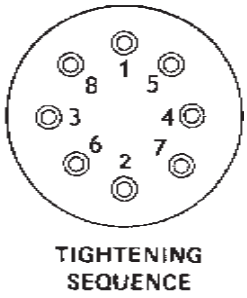
WHEEL AND TIRE - Continued

LOCATION	ITEM	ACTION
7. Hub **(1)**	Outer wheel **(2)**	Place in position. **Position inner and outer valve stems 180 degrees apart (7).**
8. Hub studs	Eight capnuts **(3)**	Using wheel socket, install. **Tighten using illustrated tightening sequence.**
9. Axle **(4)**	Wheels and tires **(2 and 5)**	Using hydraulic jack **(6)**, lower. **Remove jack.**
10. Outer wheel **(2)**	Eight capnuts **(3)**	Using wheel socket and illustrated tightening sequence, retighten.

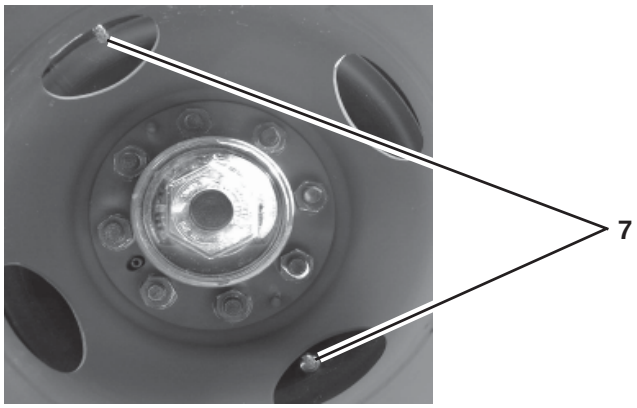
NOTE

Have Organizational Maintenance torque capnuts using torque wrench to 190 to 210 ft. lb (258 to 285 N•m).





TIGHTENING SEQUENCE



CHAPTER 6

ORGANIZATIONAL MAINTENANCE FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2-TON, 4-WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

SERVICE UPON RECEIPT OF MATERIAL 0013 00

GENERAL

This WP provides information on the Repair Parts, Special Tools, Test Measurements and Diagnostic Equipment, and Support Equipment for Organizational Maintenance of the 7 1/2 ton Containerized Kitchen Trailer, XCK2000 and XCK2000E1.

NOTE

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

UNPACKING AND CHECKING THE EQUIPMENT

a. Remove any metal strapping, plywood, tapes, seals, wrapping paper or any other shipping and protective items.

WARNING

Dry-cleaning solvent (P-D-680) used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of dry-cleaning solvent is 138°F (59°C).

b. If any exterior parts are coated with rust preventive compound, remove it with cleaning solvent (P-D-680).

c. Inspect the equipment for damage incurred during shipment.

d. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of DA Pam 738-750.

e. Uncage brake chambers in accordance with WP 00006 00-3.

SERVICING THE EQUIPMENT

a. Perform the preventive maintenance checks and services contained in WP.

b. Lubricate all points as shown in the Lubrication Instructions WP regardless of interval.

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

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

e. Perform a break-in road test of 25 miles at a maximum speed of 50 miles per hour.

GENERAL

To ensure that the 7 1/2 ton, Containerized Kitchen Trailer, XCK2000 and XCK2000E1 is ready for operation at all times, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. This WP contains a tabulated listing of Preventive Maintenance Checks and Services (PMCS) to be performed by Organizational 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.

ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES

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

(1) Do your semiannual PREVENTIVE MAINTENANCE once each 6 months.

(2) Do your annual PREVENTIVE MAINTENANCE once each year.

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 direct support as soon as possible.

WARNING

Dry-cleaning solvent P-D-680 used to clean parts is potentially dangerous to personnel and property. Do not use near an open flame or excessive heat. Flash point of dry-cleaning solvent is 138° F (59°C).

(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 dry-cleaning solvent (P-D-680) to clean metal surfaces. Use soap when you clean rubber or plastic material.

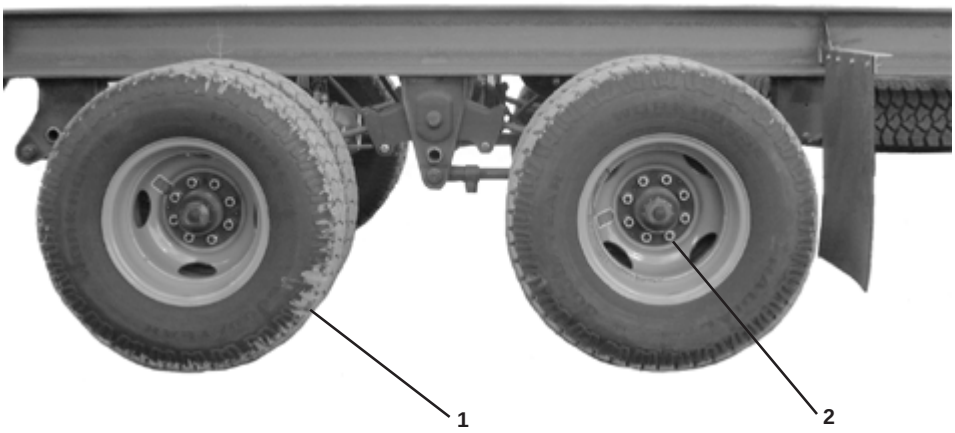
(2) Bolts, nuts, and screws: Check that they are not loose, missing, bent, or broken. You can't try them all with a tool, of course; but look for chipped paint, bare metal, or rust around bolt heads. Tighten any that you find loose.

(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 Direct Support.

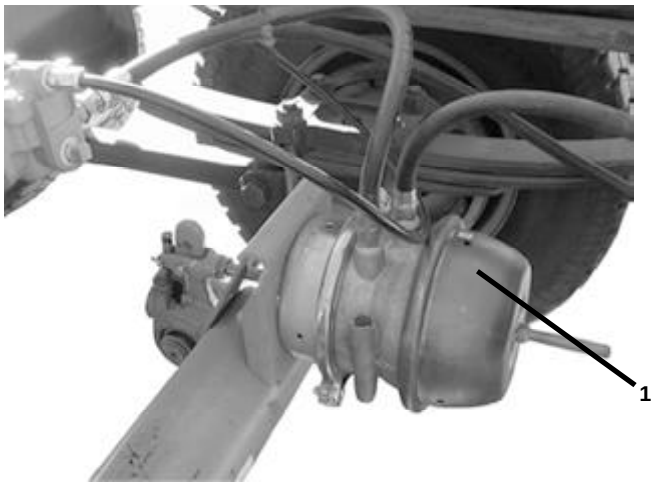
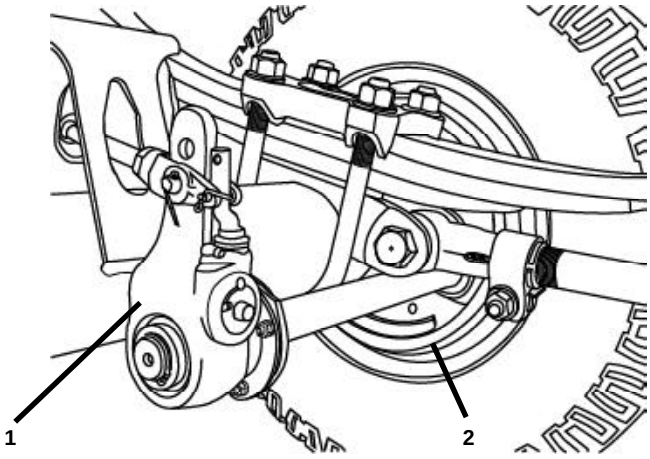
(4) Electric wires and connectors: Look for cracked or broken insulation, bare wires, and loose or broken connectors. Pay particular attention to areas where wires pass through conduit holes or may rub against other components. Tighten loose connections and make sure the wires are in good condition.

(5) Air hoses: Look for wear, damage and leaks. Make sure clamps and fittings are tight. If a leak comes from a loose fitting or connector, tighten it. If something is broken or worn out, either correct it or report it to Direct Support Maintenance. (WP 0016 00-14)

S – Semiannually A – Annually

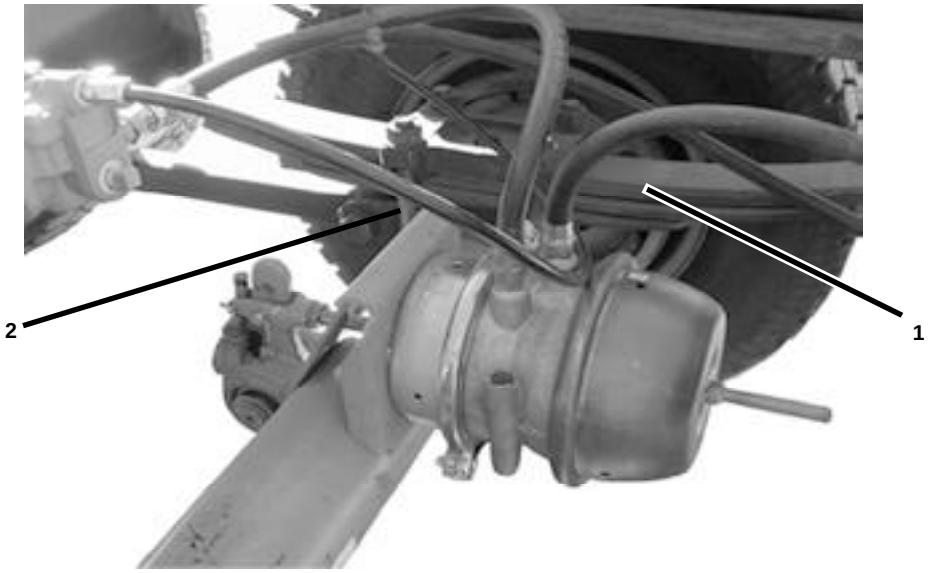
Item No	Interval	ITEM TO BE INSPECTED Procedure:
		NOTE Perform operator/crew PMCS prior to or in conjunction with Organizational PMCS if: a. There is a delay between the daily operation of the equipment and the Organizational PMCS. b. Regular operator is not assisting/participating.
1	Annual	**WHEELS AND TIRES** Rotate and match tires **(1)** according to tread design and degree of wear. See TM 9-2610-200-24 for acceptable limits in matching tires. Tighten wheel nuts **(2)** to 225-250 lb-ft. (305-339 Nm). 
2	Semiannual	**SERVICE BRAKES** a. Inspect hub and drum for visible wear and scoring (WP 0016 00-2). b. Inspect wheel bearings for visible wear and seal for deterioration and damage (WP 0016 00-2). c. Inspect brake shoes for wear (WP 0016 00-7). d. Inspect camshafts for visible wear and damage (WP 0016 00-7). e. Inspect camshaft bearings for visible wear (WP 0016 00-7).

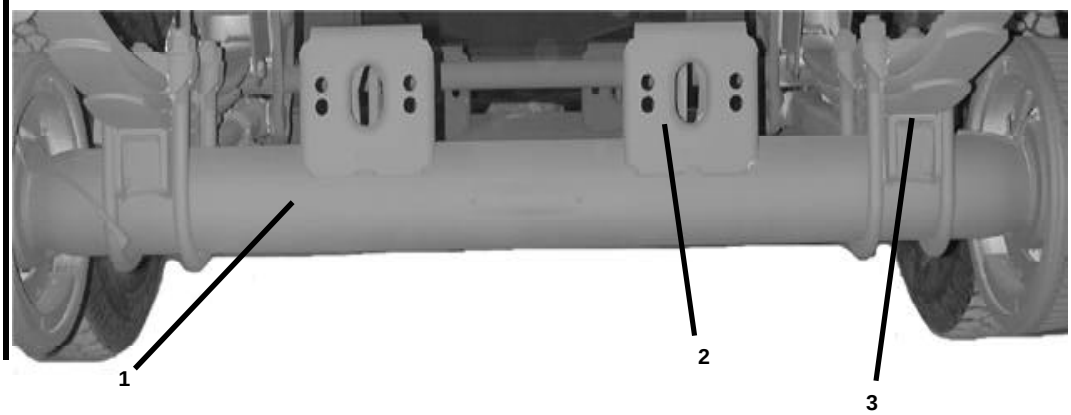
S – Semiannually A – Annually

Item No.	Interval	ITEM TO BE INSPECTED Procedure:
3	Semiannual	**BRAKE AIR CHAMBERS** **WARNING** **Do not attempt to disassemble brake air chambers (1). The springs inside the chambers are under heavy tension and may cause severe injury if released during disassembly.** Inspect brake air chambers **(1)** for visible damage, particularly push rod boots. Replace defective boots. 
4	Semiannual	**SLACK ADJUSTERS** a. Inspect slack adjusters **(1)** for damage. b. Check brake shoe **(2)** clearance (WP 016 00-10). 

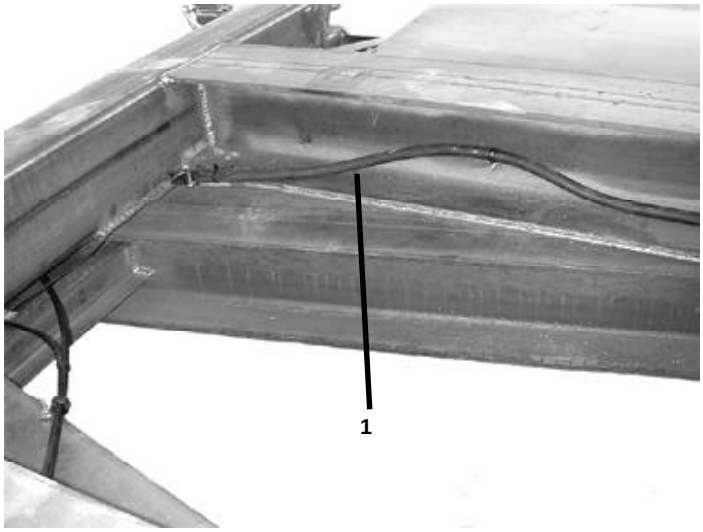
S – Semiannually A – Annually

Item No.	Interval	ITEM TO BE INSPECTED Procedure:
5	Semiannual	**SPRINGS AND U-BOLTS** a. Inspect springs **(1)** for broken leaves. Report defective springs to Direct Support Maintenance. b. Inspect U-bolts **(2)** for breakage and loose nuts. Tighten loose nuts to 285 lb.-ft. (386 N•m). Report broken U-bolts **(2)** to Direct Support Maintenance.
6	Semiannual	**AXLES** Inspect axles **(1)** for cracks, damaged brackets **(2)**, and pads **(3)** report deficiencies to Direct Support Maintenance.





S – Semiannually A – Annually

Item No.	Interval	ITEM TO BE INSPECTED Procedure:
7	Semiannual	**WIRING HARNESS** Inspect wiring harness **(1)** for loose mounting, broken wires, damaged insulation and connections. Repair or replace defective wiring harness (WP 0015 00-5). 
8	Semiannual	**HUB SIGHT GAUGE** Inspect the Hub Sight Gauge **(2)** for cracks, missing plug, leaks, and oil level.

COMPOSITE LIGHTS

Materials/Tools

General mechanics tool kit

a. Removal.

(1) Tag and disconnect connectors **(1)** from wiring harness.

(2) Remove two cap screws **(3)** and lock washers **(2)** to detach each composite light. Remove light.

b. Repair.

(1) Loosen captive screws **(7)** and remove lens **(8**).

NOTE
Do not remove o-ring **(9)** unless damaged.

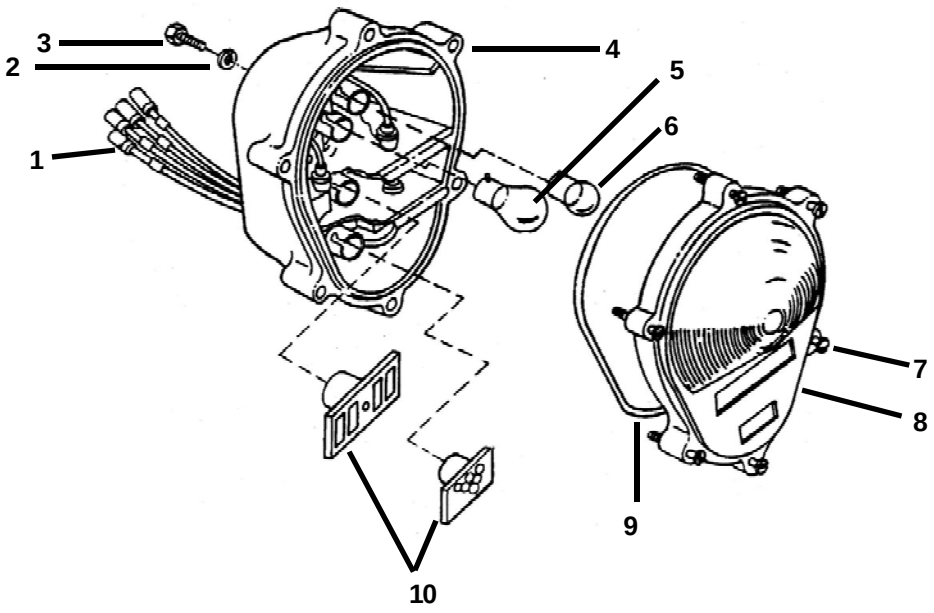
(2) Replace any defective lamps **(5, 6 and 10)**.

(3) Install new o-ring **(9)** if it was removed in lens **(8)** and fasten unit to body **(4)** with captive screws **(7)**.

c. Installation.

(1) Install composite light on trailer with two cap screws **(3)** and lock washers **(2)**.

(2) Connect connectors **(1)** to wiring harness. Make sure that tag or marker numbers on wires correspond.



CLEARANCE MARKER LIGHTS

Materials/Tools

General mechanics tool kit

All clearance marker lights **(1)** are identical except for the lenses.

a. Removal.

(1) Disconnect light connector from harness connector.

(2) Remove two screws **(2)** and lens **(3)**.

(3) Remove lamp **(4)**.

(4) Remove four screws **(5)** and light housing **(6)**.

(5) Push shell **(7)** back on wire and remove C-washer **(8)** and shell **(7)**. Remove terminal **(9)** if damaged.

b. Installation.

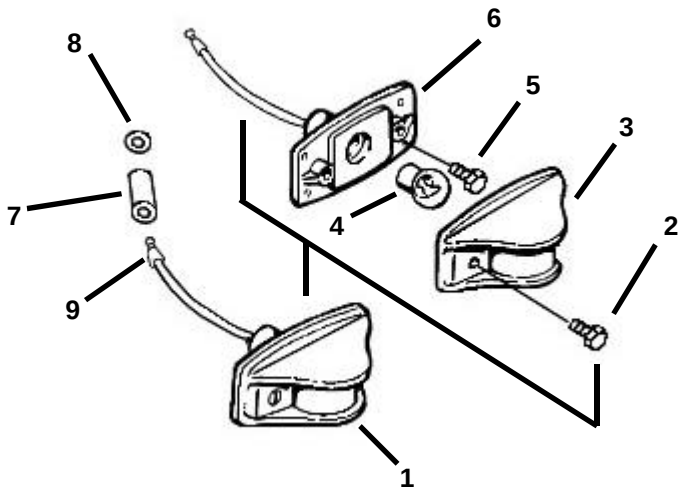
(1) Install terminal **(9)** if removed. Insert terminal **(9)** through shell **(7)**. Install C-washer **(8)** on terminal **(9)** and pull shell **(7)** over terminal.

(2) Mount light housing **(6)** to trailer with four screws **(5)**.

(3) Install lamp **(4)**.

(4) Install lens **(3)** with two screws **(2)**.

(5) Connect connector to wiring harness.



TESTING ELECTRICAL SYSTEM

Materials/Tools

Multimeter

a. Check for Grounds.

(1) Disconnect all wiring connectors at the lights. Be sure identification markers are present on individual wires before disconnecting. If not, tag wires.

NOTE

Check for continuity on grounds using the multimeter on a low ohms scale.

(2) Check for continuity between wiring harness connector pin D and the chassis. If the circuit is open, repair ground lead on wiring harness.

(3) Check for grounds between wiring harness connector pins A, B, C, E, F and J and pin D (ground). (Refer to schematic diagram, WP 0015 00-7.) There should be an open circuit between the connector pins. If there is continuity between any connector pin as specified, that circuit is grounded and the wiring harness must be repaired or replaced.

(4) Remove all lamps from lights (WP 0015 00-1).

(5) Check for grounds from each light lead wire and the chassis (ground). There should be an open circuit between each lead wire and the chassis. If there is continuity on any lead wire, the wire is grounded and must be repaired or the light replaced.

b. Check Wiring Harness Continuity.

(1) Install all lamps in lights (WP 0015 00-1).

(2) Check for continuity between each light lead wire and the chassis. If there is an open circuit, first check lamp. If lamp is defective replace it. If there is still an open circuit, repair lead wire or replace light.

(3) Connect all wire connectors at lights.

(4) Check for continuity between wiring harness connector pins A, B, C, E, F and J and pin D (ground). Each circuit should indicate continuity. If not, there is a broken wire and wiring must be repaired or replaced.

c. Check Intervehicular Cable Continuity.

Check for continuity between individual connector pins and socket on opposite ends of cable at terminals A, B, C, D, E, F and J. Each circuit should indicate continuity. If any circuit is open, replace cable.

WIRING HARNESS

Materials/Tools

General mechanics tool kit
Electrical tool kit
Soldering iron
Wiping rag (WP 0026 00)

NOTE
Remove complete harness only if required to effect repair or replacement.

a. Removal.

(1) Remove electrical connection cover plate at front of trailer.

(2) Tag and disconnect harness connectors **(1 and 2)** at all lights.

(3) Remove tie wraps around harness **(3)** at composite light mounting bracket.

(4) Remove two lock nuts and cap screws to free ground lead **(4)** from frame.

NOTE
To make installation easier, tape connector bundles to main harness if desired.

(5) Feed wire harness **(3)** through clamps **(5)** and along frame while pulling harness from the frame.

b. Cleaning and Inspection.

(1) Clean wiring harness with a clean rag.

(2) Inspect wiring for cuts, breaks and loose connections, and connectors and cover for damage.

c. Repair.

(1) If any connector terminal **(1)** is damaged, replace it. Push back shell **(2)** on wire to expose terminal **(1)**, remove defective terminal, and crimp a new terminal on end of wire. Pull shell over terminal.

WIRING HARNESS - Continued

(2) If individual harness wires extending from the harness loom are broken, cut off defective piece of wire and splice on new length of wire. Install new terminal **(1)** and shell **(2)** to new wire (step 1).

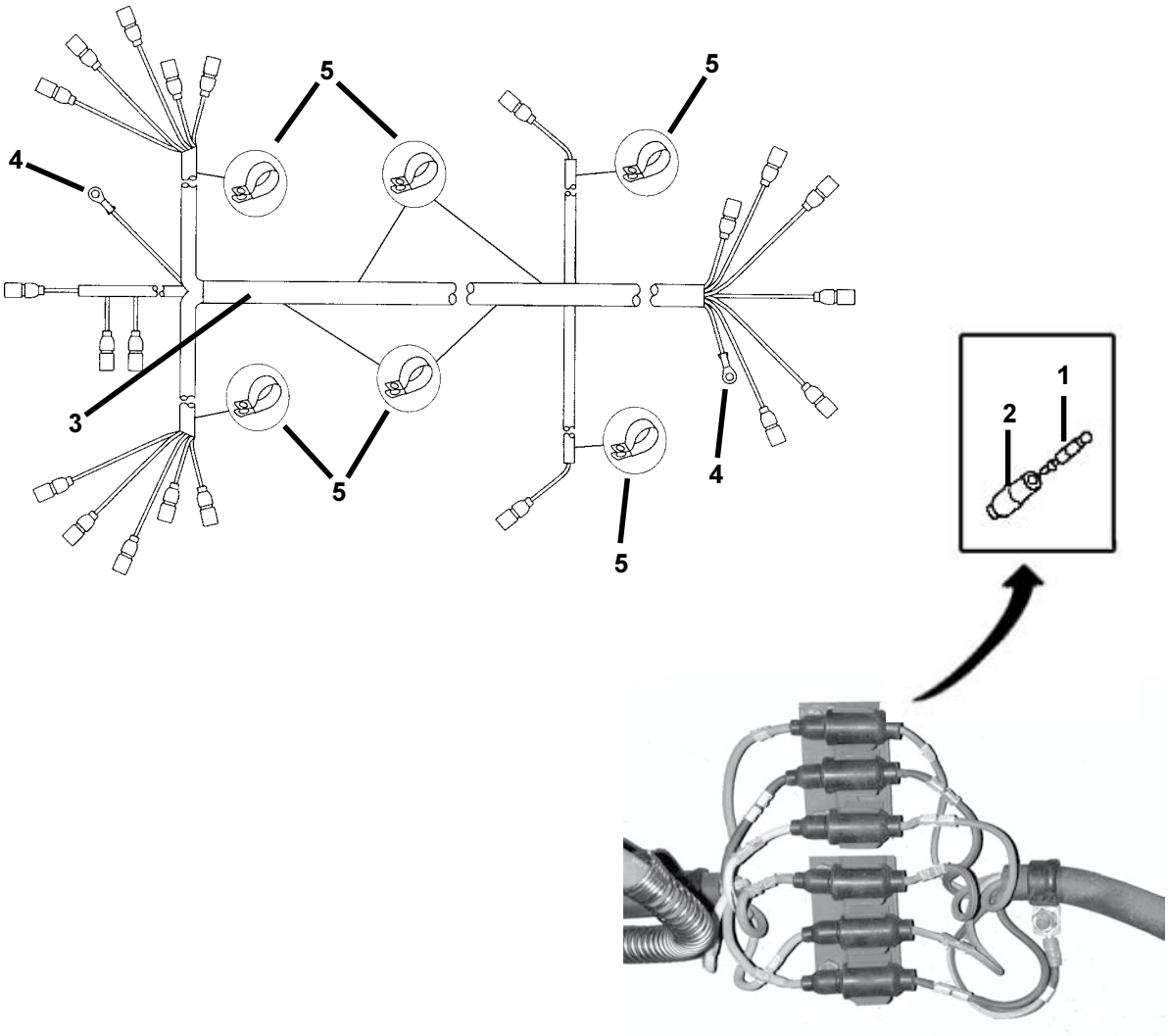
(3) If wire leads have damaged insulation, tape over damaged insulation where required. If wires within the harness loom are defective, replace wiring harness.

d. Installation.

CAUTION

Do not damage wiring or insulation during installation of wiring harness.

Feed wiring harness **(3)** through the clamps **(5)** on frame.



WIRING HARNESS - Continued

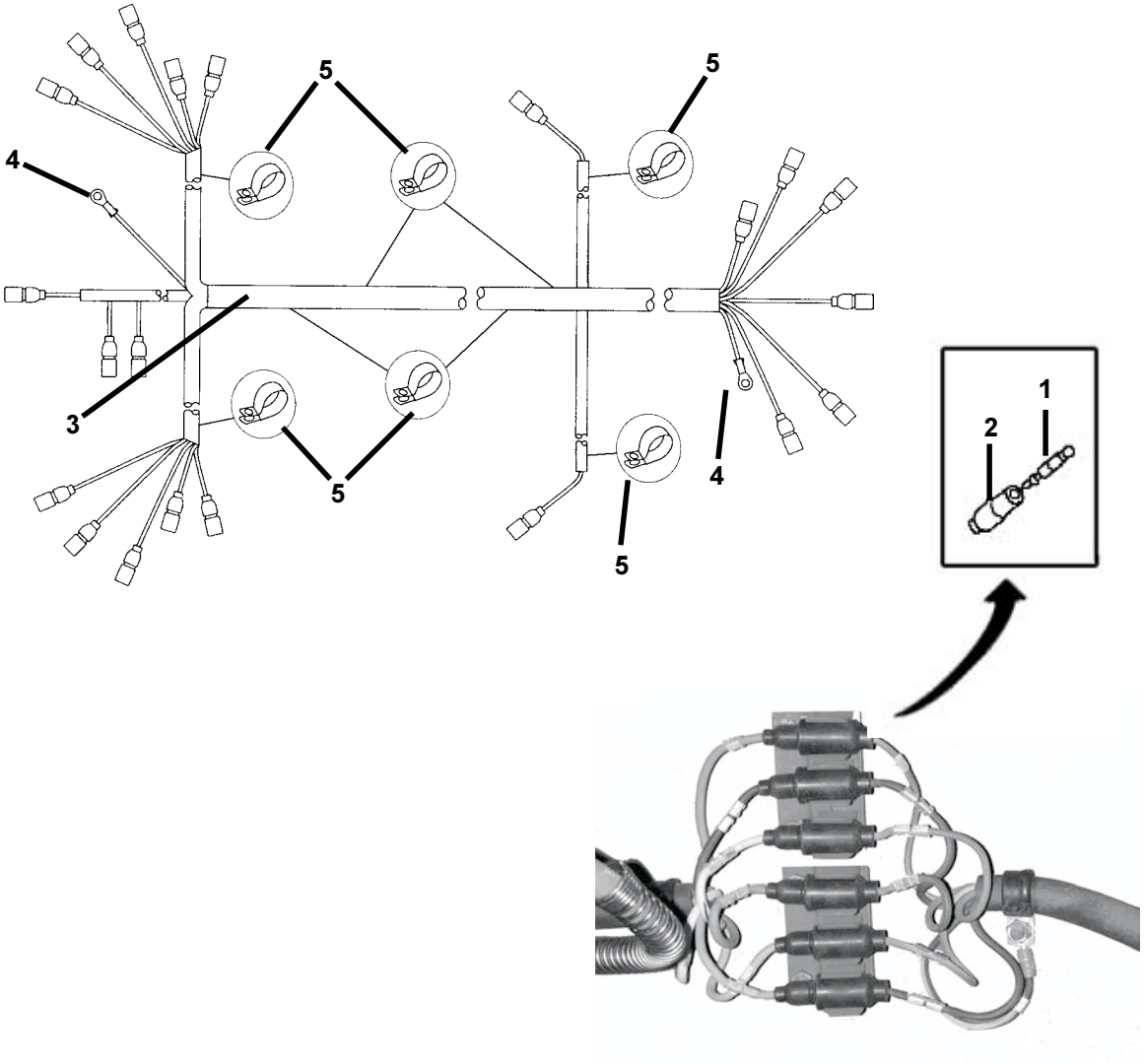
(1) Run wiring harness **(3)** along frame and through clamps **(5)** as shown. Run harness over cross beams and inside of main beam. Run rear of harness through clamp **(5)**.

(2) Position ground connection **(4)** on frame. Connector must have a contact. Install lock nuts. Be sure ground lead is under one of the lock nuts.

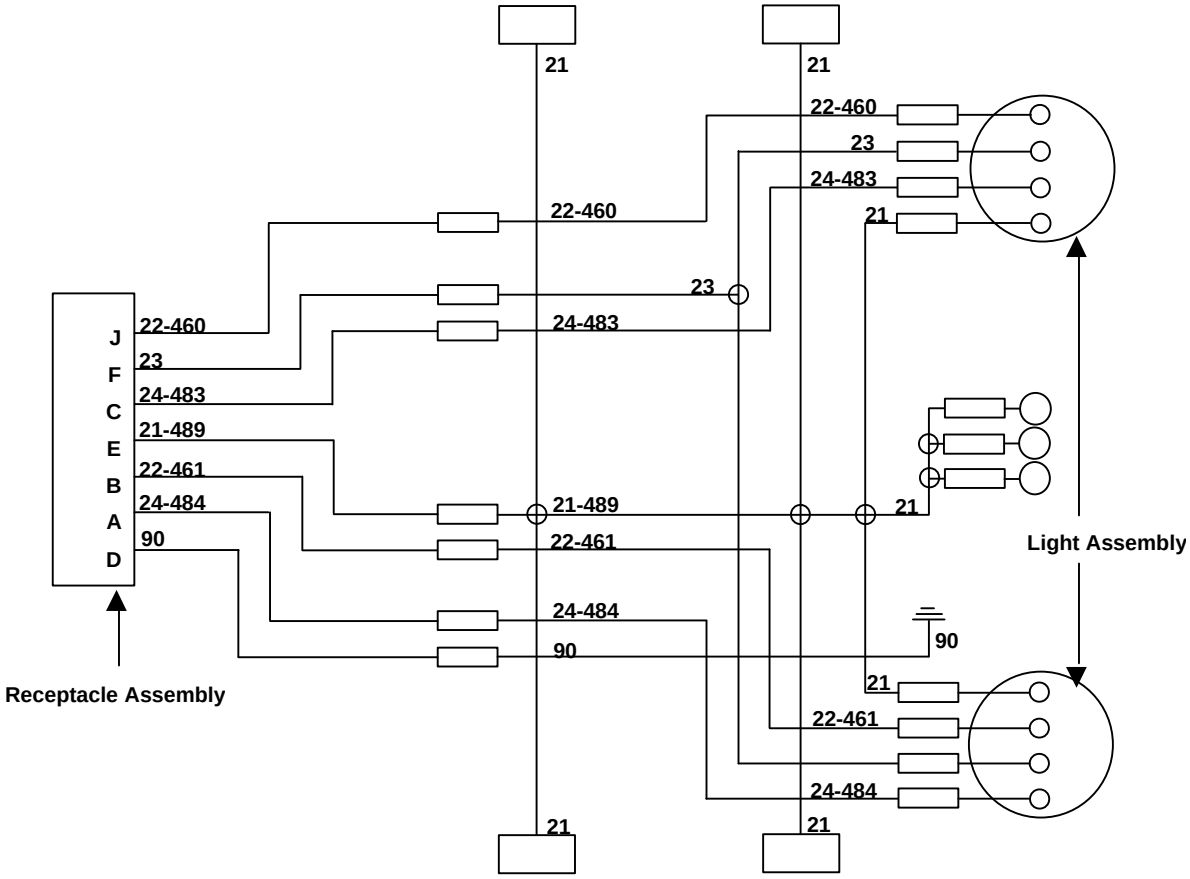
(3) Connect connectors **(1 and 2)** to all lights.

(4) Connect to towing vehicle and check operation of all lights.

(5) Replace electrical connection cover plate at front of trailer.



Wiring Diagram



HUBS AND DRUMS

Materials/Tools

Dry-cleaning solvent (WP 0026 00)
Wiping rag (WP 0026 00)
Oil - SAE 90 Hypoid Gear (WP 0026 00)
Hub cap gasket
Hub oil seal
General mechanics tool kit
Ratchet, 3/4 inch drive
Bearing nut wrench, 3/4 inch drive, 2-5/8 inch
Torque wrench, 3/4 inch drive, 0-600 lb-ft.
Two pry bars

a. Removal. (WP 0016 00-4)

(1) Chock wheels.

(2) Drain air tanks.

(3) Cage air brake chamber (WP 0006 00-3).

(4) Remove wheel and tire (WP 0012 00-3).

(5) Back off slack adjuster to release pressure on brakes (WP 0016 00-5).

NOTE

Be sure there a catch pan under the wheel end to catch the old oil.

(6) Remove hub cap **(2)** and gasket **(3)**.

(7) Remove outer spindle nut **(4)** using 2-5/8 inch bearing nut wrench and ratchet. Remove spindle lock **(5).**

(8) Loosen inner spindle nut **(6)** using 2-5/8 inch bearing nut wrench and ratchet until nut is flush with outside edge of hub **(7).**

(9) Using two pry bars, move hub-drum assembly **(7 through 16)** out against nut **(6)**.

(10) Remove nut **(6)** and outer bearing cone **(8)**.

(11) Remove hub-drum assembly **(9 through 16)** as a unit and place on clean work surface with hub **(7)** upward.

(12) Using brass drift, drive out bearing cone **(9)** and seal **(10).**

HUBS AND DRUMS - Continued

(13) Inspect the bearing cup inside the hub (WP0016 00-2).

NOTE

If bearing cup is damaged precede to step 14. If no damage present proceed to step 15.

(14) Turn unit so hub is down. Using brass drift, drive out bearing cup **(12)**.

(15) Only remove back nuts **(13)** and drum **(15)** from hub **(7)** if studs **(16)** are damaged.

(16) Remove studs **(16)** from hub **(7)** only if damaged.

CAUTION

Wear safety glasses when removing or installing force fitted parts. Failure to comply may result in serious eye injury.

b. Cleaning.

WARNING

Dry-cleaning solvent (P-D-680) used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of dry-cleaning solvent is 138°F (59°C).

(1) Clean all parts thoroughly using a brush and dry-cleaning solvent. Allow to air dry.

(2) Clean spindle **(17)** on axle **(18)** with wiping cloth.

c. Inspection.

(1) Inspect bearings visually for wear and scoring flat spots and overheating (discoloration).

(2) Inspect brake drum visually for deep scoring, excessive wear (ridge) and other irregularities. Replace as needed.

(3) Inspect hub cap, nuts, lock and hub for cracks and other damage.

(4) Inspect spindle for damaged threads, evidence of seizure and rough surfaces. Report condition to Direct Support Maintenance.

d. Repair. Replace all gaskets, seals and defective parts.

e. Installation.

(1) Install studs **(16)** in hub **(7)** if removed.

(2) If removed, install inner bearing cup **(11)** in hub **(7)**, with narrow edge outward. Seat with steel drift.

HUBS AND DRUMS - Continued

(3) Cover bearing with a light coat of SAE 90 Hypoid Gear oil. Install inner bearing cone **(9)** in hub.

(4) To assure proper fit, place seal **(10)** on spindle up to first rubber rib. The correct seal will not go on any further due to designed interference.

(5) Place seal **(10)** on rear of hub **(7)** with the words “OIL SIDE” facing inward. Make sure that seal is straight. Using a hammer and piece of flat hardwood, tap the seal into hub until seal bottoms out.

(6) Cover bearing with a light coat of SAE 90 Hypoid Gear oil. Install outer bearing cup **(12)** in hub **(7)**.

(7) Install drum **(15)** on hub **(7)** with back nuts **(13)** if removed. Tighten nuts **(13)** to 100-125 lb-ft.

CAUTION

Be sure the seal does not hit the spindle while putting the hub on the wheel end. The seal could become damaged if it strikes the spindle.

NOTE

Be sure there is no brake drag between brake shoes and drum.

(8) Put a light coat of SAE 90 Hypoid Gear oil on the seal ring.

(9) Install the hub and drum on the spindle **(17)**.

(10) Install inner spindle nut **(6)** on spindle **(17)** and tighten nut against bearing while turning brake drum **(15)** by hand.

(11) Tighten spindle nut **(6)** to a minimum torque of 100 ft-lbs while turning hub.

(12) Loosen nut **(6)** to remove preload torque and hand tighten the nut. **Do not rotate the hub.**

(13) Back it off 1/4 to 3/8 turn.

(14) Install spindle lock **(5)** and bend one tab down on the inner spindle nut **(6).**

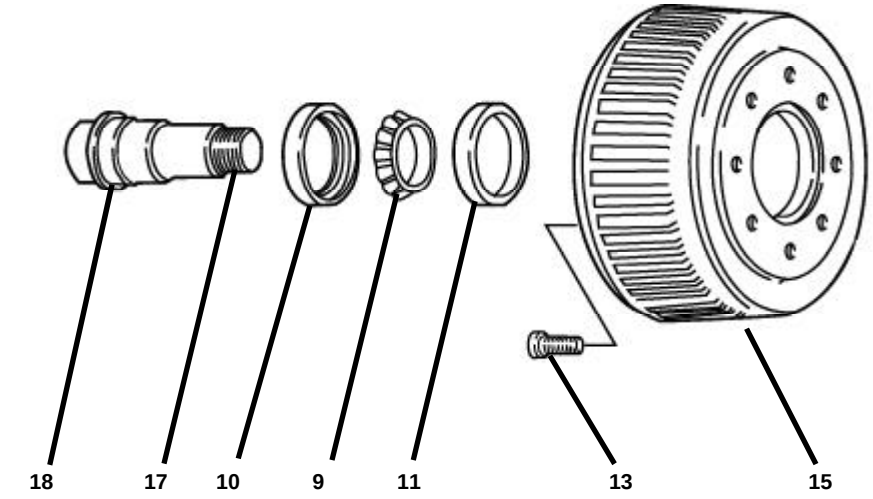
(15) Install outer spindle nut **(4)**. Tighten nut to 225-250 Ft.-Lbs.

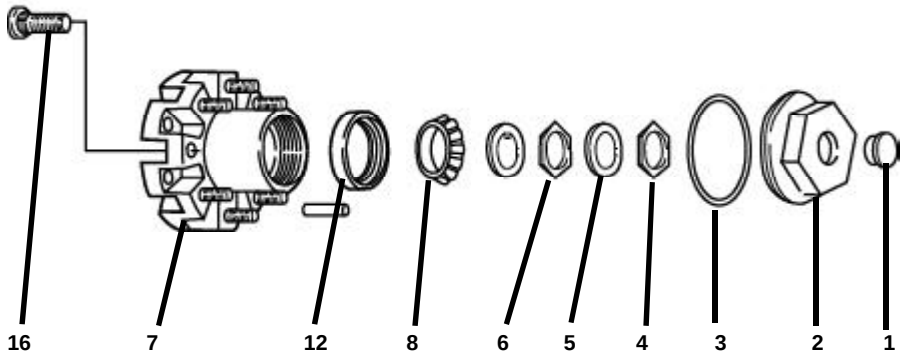
(16) Bend over two locking tangs on the spindle lock **(5).**

(17) Install hub cap **(2)** and new gasket **(3)**.

(18) Rotate brake drum **(15)** to assure free movement without binding.

HUBS AND DRUMS - Continued





HUBS AND DRUMS - Continued

(18) Fill hub through oil plug **(1)** with SAE 90 Hypoid Gear oil to full line on hub cap **(2)**.

(19) Uncage air brake chamber (WP 0006 00-3).

(20) Install wheels and tires (WP 0012 00-3).

(21) Remove chocks.

(22) Adjust brakes (WP 0016 00-10).

(23) Lower trailer.

SERVICE BRAKES

Materials/Tools

Dry-cleaning solvent (WP 0026 00)
Wiping rag (WP 0026 00)
General mechanics tool kit
lock ring pliers
pry bar

a. Brakes Shoes.

(1) Removal (Ref. 0016 00-6)

(a) Remove wheels and tires (WP 0012 00-3) hubs and drum (WP 0016 00-1).

(b) Back off slack adjuster nut **(1)** until it separates from slack adjuster **(3)**.

(c) Turn the hex head **(2)** of the worm shaft counterclockwise to back off slack adjuster to low part of cam **(4)**.

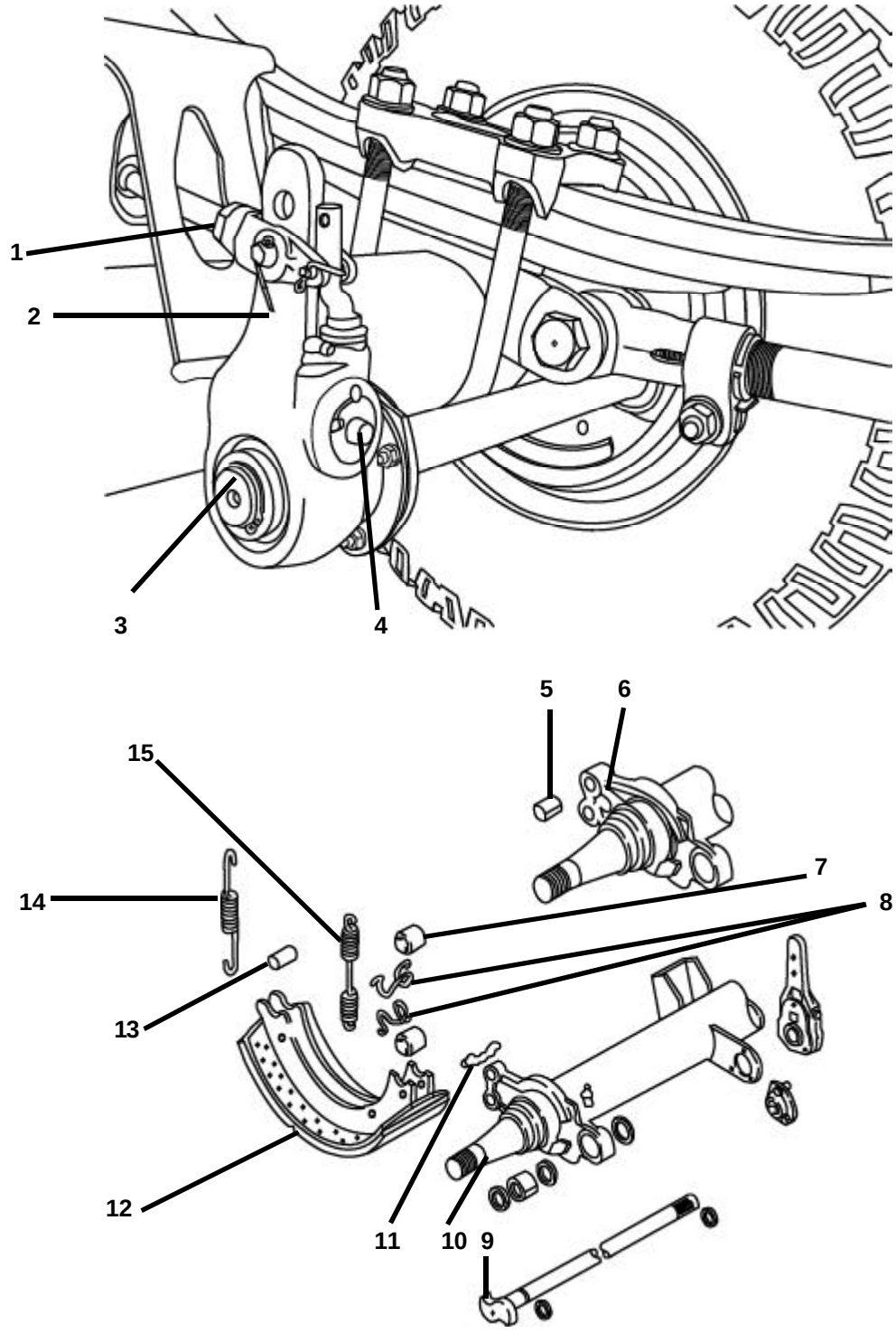
(d) Drive out brake anchor pins **(5)**.

(e) Remove retaining spring **(6)**.

(f) Remove brake shoe assemblies **(7)** with retract spring **(8)**, springs **(9)** and rollers **(10)**.

(g) Remove retract spring **(8)** from brake shoe assemblies **(7)**.

SERVICE BRAKES - Continued



SERVICE BRAKES - Continued

(h) Remove roller retaining springs **(8)** and rollers **(7)** from brake shoe assemblies **(12)**.

(i) Drive out spring pins **(11)** from brake shoe assemblies **(12)**.

(j) Remove bushings **(5) from** axle spider **(6)** if worn.

(2) Cleaning.

WARNING

Dry cleaning solvent (PD-680) used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of dry cleaning solvent is 138°F (59°C).

CAUTION

Do not allow lubricants or solvents to get on brake shoes. These materials will do damage to brake linings and result in poor braking action.

WARNING

DO NOT use a dry brush or compressed air to clean brakeshoes. There may be dust on brakeshoes which may be dangerous to your health if you breath it. Dampen surface of lining with water and use a soft bristle brush.

(a) Clean all parts except brake shoes with a brush and dry cleaning solvent. Air dry.

(b) Clean brake shoes with soft bristle brush.

(**3) Inspection.**

(a) Inspect brake shoes for wear and scoring. Replace brake shoes if linings are worn to less than 5/16-inch thick at any place on the linings.

(b) Inspect springs for kinks, corrosion and distortion.

(c) Inspect rollers, anchor pins, spring pins and bushings for wear, corrosion and other damage.

(4) Repair. Replace all defective parts.

(5) Installation.

(a) Install bushings **(5)** in axle spider **(6)** if removed.

SERVICE BRAKES - Continued

(b) Drive spring pins **(11)** into brake shoe assemblies **(12)**.

(c) Install rollers **(7)** on brake shoe assemblies **(12)** and secure with retaining springs **(14)**.

(d) Install retract spring **(15)** on spring pins on brake shoe assemblies **(12)**.

(e) Position brake shoe assemblies **(12)** with springs **(8 and 15)** and rollers so rollers engage cam **(9)** and shoes straddle spindle **(10)**.

(f) Install two retaining springs **(14)** on brake shoe assemblies **(12)**.

(g) Pry up upper brake shoe assembly **(12)** and insert anchor pin **(13)** in upper bushing **(5).**

(h) Pry down lower brake shoe assembly **(12)** and insert anchor pin **(13)** in lower bushing **(5)**.

(i) Install hubs and drums (WP 0016 00-1).

(j) Install wheels and tires (WP 0012 00-3)

(k) Adjust brakes (WP 0016 00-10).

b. Camshaft and Bearings.

(1) Removal.

(a) Chock wheels.

(b) Cage air brake chamber (WP 0006 00-3).

(c) Drain air tanks.

(d) Remove wheels and tires (WP 0012 00-3).

(e) Remove hubs and drum (WP 0016 00-1, steps 5 through 11).

(f) Remove brake shoes (WP 0016 00-5).

(g) Remove lock ring **(1)** using lock ring pliers and slack adjuster **(2)** (WP 0016 00-11).

(h) Remove lock ring **(4)** using lock ring pliers. Withdraw camshaft **(3)** part way and remove washer **(5)**.

(i) Remove three hex nuts **(6)**, washers **(7)** and screws **(8)** to remove bearing assembly **(9)**.

SERVICE BRAKES - Continued

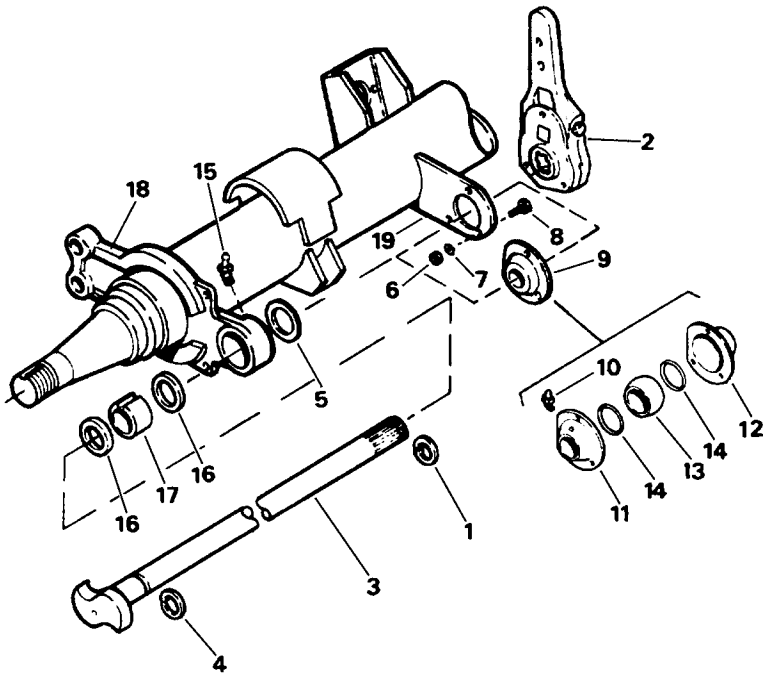
(j) Remove grease fitting **(10)**.

(k) Separate brackets **(11 and 12)** and remove bearing **(13)**.

(l) Remove seals **(14)** from brackets and discard seals.

(m) Remove grease fitting **(15)**.

(n) Remove seals **(16)** and bushing **(17)** from axle spider **(18)**. Discard seals.



(2) Installation.

(a) Install new seals, **(16)** bushing **(17)** in spider **(18)**. Make sure hole in bushing aligns with hole in spider for grease fitting **(15)**.

(b) Install grease fitting **(15)**.

(c) Install new seals **(14)** in brackets **(11 and 12)**.

(d) Place bearing **(13)** between brackets **(11 and 12)** so hole in bearing aligns with hole in bracket **(11)**. Insert grease fitting **(10)** through bracket hole and install in bearing.

SERVICE BRAKES - Continued

(e) Install bearing assembly **(9)** on axle bracket **(19)** with three screws **(8)**, lock washers **(7)** and hex nuts **(6)**.

(f) Coat length of camshaft **(3)** with grease, lithium base NGLI Grade 1, and insert through bushing **(17)**. Place washer **(5)** on camshaft and insert camshaft through bearing assembly **(9)**.

(g) Install lock ring **(4)** using lock ring pliers.

(h) Install slack adjuster and lock ring (WP 0016 00-11).

(i) Install brake shoes (WP 0016 00-7).

NOTE

It may be necessary to remove slack adjuster to align camshaft with shoe anchor pins.

(j) Install hubs and drums (WP 0016 00-1).

(k) Install wheels (WP 0012 00-3).

c. Brake Adjustment (Slack Adjustment).

NOTE

Brake adjustment must be done with brake air chambers uncaged and air in the system.

(1) Jack up wheel to be adjusted.

(2) Apply a 9/16 inch wrench to hex head **(1)** of worm shaft and push in against the slack adjuster **(2)** to unlock the worm shaft.

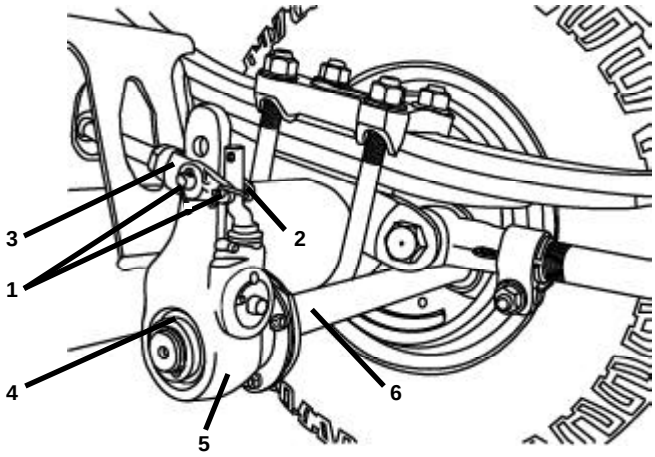
(3) Turn the hex head **(1)** of the worm shaft clockwise on slack adjuster until the wheel cannot be turned.

(4) Back off the worm shaft hex head **(1)** until the wheel turns freely. Check clearance between brake shoes and drum with feeler gage. Clearance should be 0.005 inch. Adjust worm shaft hex head **(1)** to meet specified clearance.

(5) Lower jack and remove from axle.

(6) Repeat steps **(1)** through **(5)** for other slack adjusters as required.

SERVICE BRAKES - Continued



d. Slack Adjusters.

(1) Removal.

(a) Chock wheels.

(b) Cage air brake chamber (WP 0006 00-3).

(c) Drain air tanks.

(d) Remove cotter pins **(1)** and headed pins **(2)** from rod end **(3)**.

(e) Remove lock ring **(4)** with lock ring pliers. Remove slack adjuster **(5)** from camshaft **(6)**. Pull slack adjuster arm away from push rod end to clear. Use soft faced hammer to tap slack adjuster off if necessary.

(2) Installation.

(a) Install slack adjuster **(5)** on camshaft **(6)**. Turn camshaft to align slack adjuster with push rod end. Use soft-faced hammer to tap in place if necessary.

NOTE

The bottom hole of the two holes on the slack adjuster must be aligned with push rod end. If it is not, reinstall slack adjuster.

(b) Install lock ring **(4)** on camshaft **(6)** using lock ring pliers.

(c) Install headed pins **(2)** through bottom hole of slack adjuster **(5)** and push rod end **(3)**.

(d) Install cotter pins **(1)** in headed pins **(2)**.

(e) Lubricate slack adjuster with grease-Lithium complex.

SERVICE BRAKES - Continued

(f) Cage air chambers (WP 0006 00-3).

(g) Close air tank drain cocks.

(h) Adjust brakes (WP 0016 00-10).

BRAKE AIR CHAMBER

Materials/Tools

General mechanics tool kit

WARNING

Do not attempt to disassemble the brake air chamber. The springs inside the chamber are under heavy tension and may cause severe injury if released during disassembly.

a. Removal.

(1) Cage air chambers (WP 0006 00-3).

(2) Drain air tanks.

(3) Tag and disconnect air hoses **(8 and 9)** from brake air chamber **(10)**.

(4) Remove cotter pins **(4)** and headed pins **(5)**.

(5) Remove two hex nuts **(2)** and lock washers **(3)**. Withdraw brake air chamber **(10)** from slack adjuster **(1)**.

BRAKE AIR CHAMBER - Continued

(6) Loosen nut **(7)** and remove push rod end **(6)** and nut from push rod.

(7) Uncage air chamber (WP 0006 00-3).

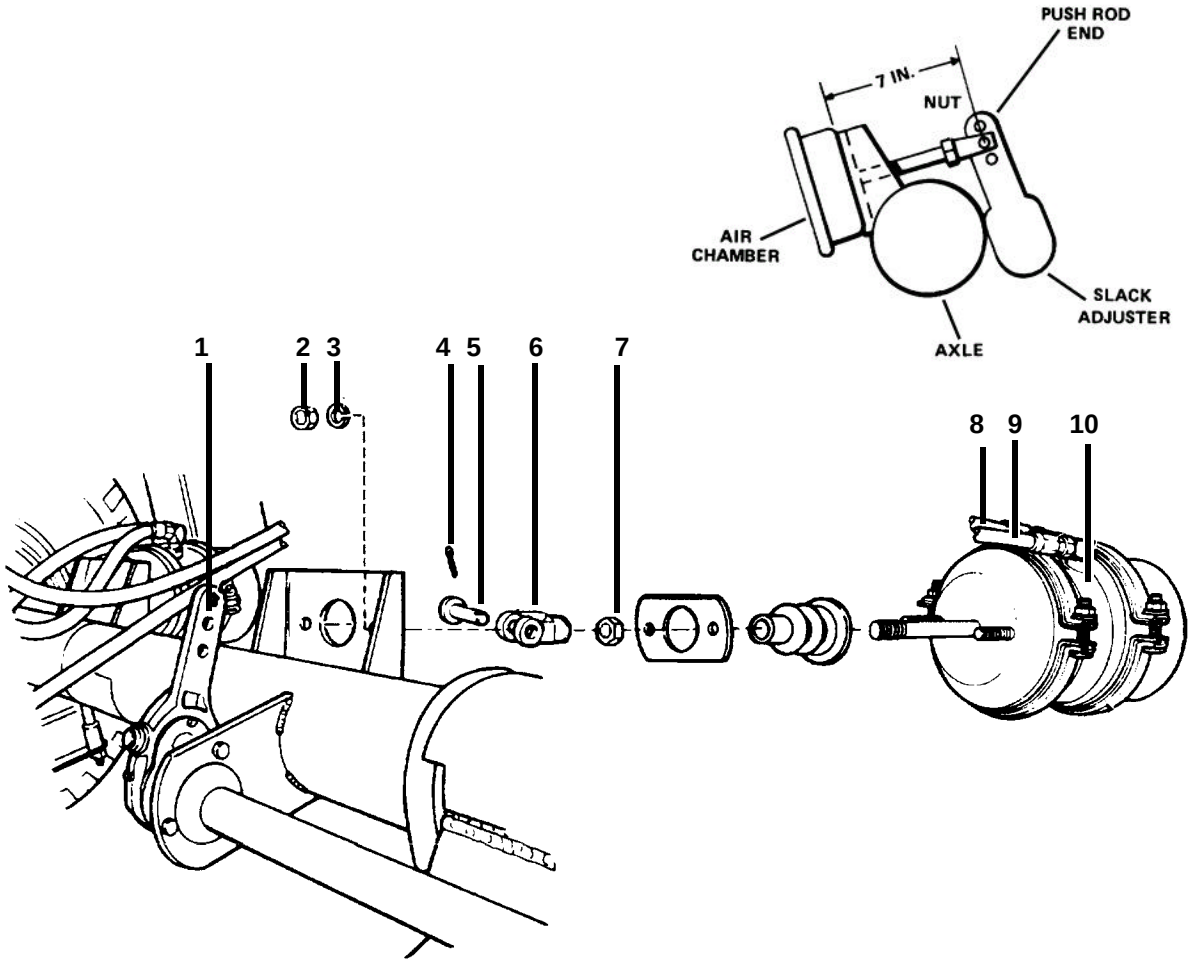
b. Installation.

(1) Install nut **(7**) and push rod end **(6)** on push rod.

(2) Cage new brake chamber (WP 0006 00-3).

(3) With brake air chamber spring caged, measure length of push rod. Length should be 7 inches.

(4) If push rod length is not 7 inches, loosen hex nut and turn push rod end on or off push rod to adjust length. Tighten hex nut against push rod end to 15-25 lb-ft.



BRAKE AIR CHAMBER - Continued

(5) Mount air chamber **(3)** with two hex nuts **(6)** and lock washers **(7)**.

NOTE

It may be necessary to turn slack adjuster adjustment screw to adjust chamber push rod.

(6) Align rod end **(10)** with bottom hole in slack adjuster **(13)**. Install headed pins **(5)** and cotter pins **(4)**.

(7) Uncage brake air chamber spring (WP 0006 00-3).

(8) Connect air hoses **(1 and 2)**.

(9) Adjust brakes (WP 0016 00-10).

AIR LINES

Materials/Tools

Anti-seize tape (WP 0026 00)
General mechanics tool kit

a. Removal of Air Hoses and Fittings.

NOTE

Tag all hoses before disconnecting from vehicle.

(1) Remove intervehicular air hoses and gladhands **(1)** from drawbar. Remove packing from gladhands.

(2) Remove hoses **(2)** from air chambers **(3)**, trailer valve **(4)** and relay valves **(5)**.

(3) Remove drain cocks from air tanks **(6)**.

b. Installation of Air Hoses and Fittings. (Ref. WP 0016 00-16)

(1) Install drain cocks in air tanks **(6)**.

(2) Connect hoses **(2)** to air chambers, trailer valve **(4)** and relay valves **(5)**.

AIR LINES - Continued

(3) Install packings in gladhands **(1)**.

(4) Connect gladhands **(1)** to intervehicular air hoses.

(5) Connect air hoses to drawbar couplings.

c. Removal of Tubing and Fittings.

NOTE
Tag all air lines before disconnecting.

(1) Remove air hose clamps and clips as required.

(2) Remove tube and nut assemblies from relay valves **(5)**, trailer valve **(4)**, and air tanks **(6)**.

(3) Remove connectors.

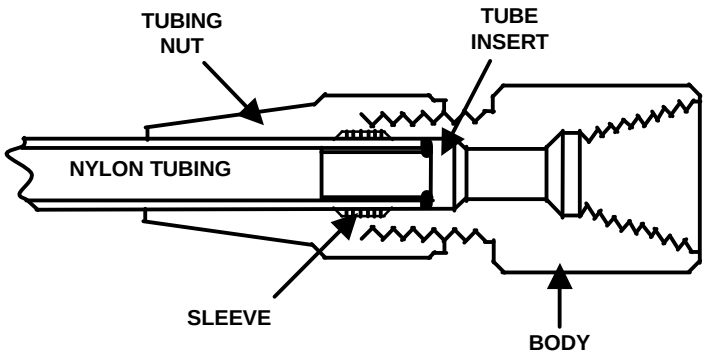
(4) Remove relay valve **(5)**.

d. Repair of Tube and Nut Assemblies.

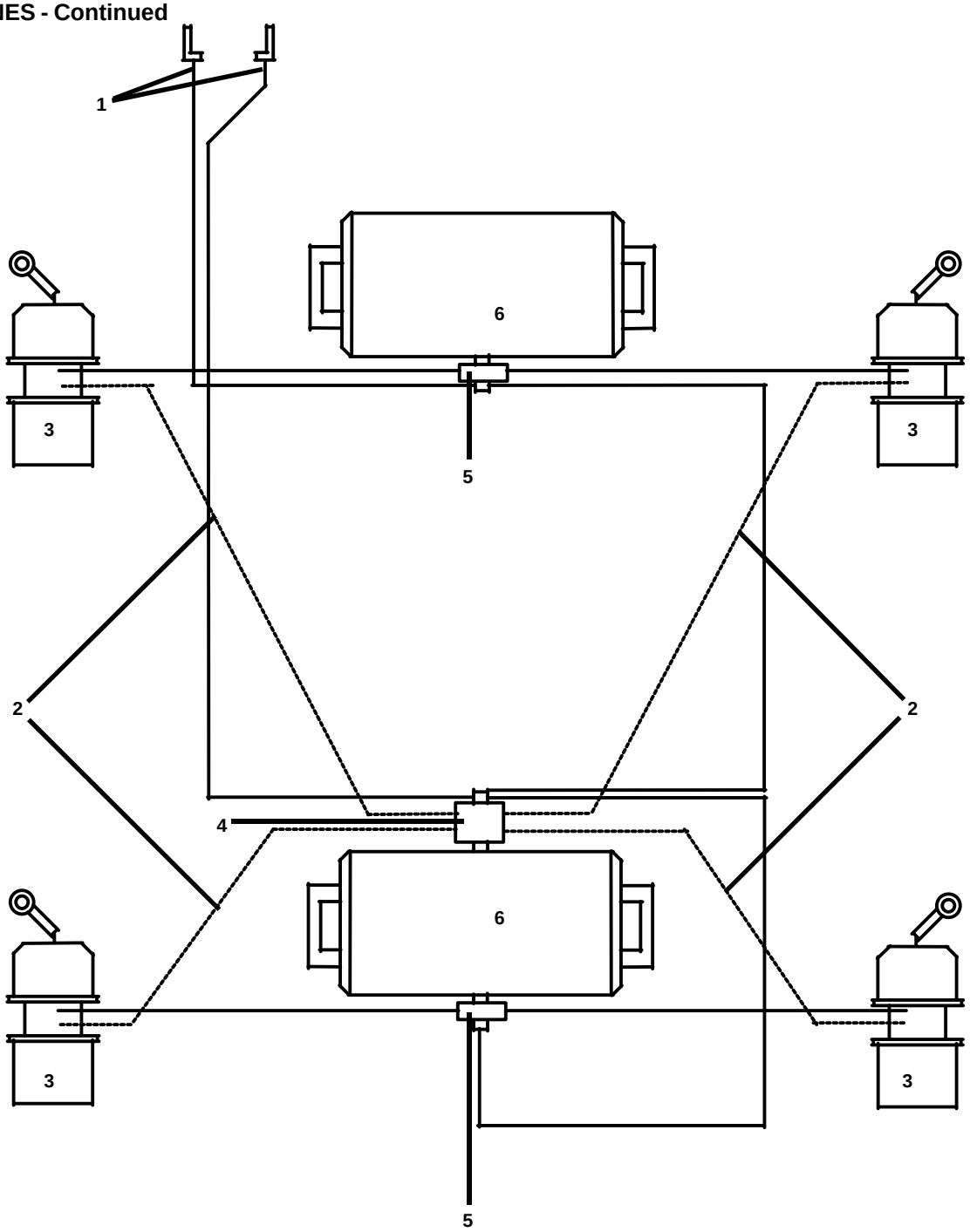
(1) Unscrew tubing nut from body and remove body.

(2) Remove tube insert from inside of nylon tubing.

(3) Remove tubing nut and sleeve from nylon tubing.



AIR LINES - Continued



AIR LINES - Continued

(4) Cut nylon tubing to length of replaced tubing.

(5) Place tubing nut on nylon tubing and install compression sleeve.

(6) Install tube insert in tubing so insert bottoms out in tubing.

(7) Place body over end of tubing and insert and tighten tubing nut.

e. Installation of Tubing and Fittings.

NOTE
Use anti-seize tape on all pipe threads.

(1) Install reducer and relay valves **(5)**.

(2) Install connectors.

(3) Connect tube and nut assemblies to relay valves **(5)**, trailer valve **(4)** and air tanks **(6)**.

(4) Install air hose clamps and clips.

AIR VALVE

Materials/Tools

Anti-seize tape (WP 0026 00)
General mechanics tool kit

a. Relay Valves.

(1) Removal.

(a) Drain air tanks.

(b) Tag and disconnect four hoses **(1 through 4)** from relay valve **(5)**.

(c) Disconnect tube and nut assembly **(6)**. Remove connector **(7)**.

(d) Turn relay valve **(5)** counterclockwise to remove from tank **(8)**.

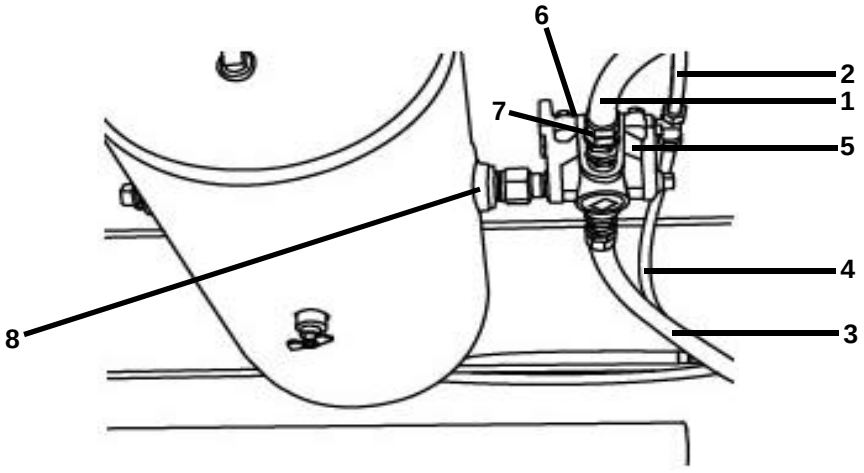
(2) Installation.

NOTE
Use anti-seize tape on all pipe fittings.

(a) Position relay valve **(5)** on nipple on tank **(8)**. Turn clockwise to install. The valve must be vertical and the joint tight.

(b) Install connector **(7)** on relay valve **(5)**. Connect tube and nut assembly **(6)** to connector making sure compression insert bottoms in connector.

(c) Install four hoses **(1 through 4)**.



AIR VALVES - Continued

b. Trailer Valve.

(1) Removal.

(a) Drain air tanks.

(b) Tag and disconnect hoses **(1 through 4)** from trailer valve **(5)**.

(c) Disconnect three tube and nut assemblies **(7, 8 and 9)**. Remove connectors **(10, 11 and 12)**.

(d) Turn trailer valve **(5)** counterclockwise to remove from tank **(13)**.

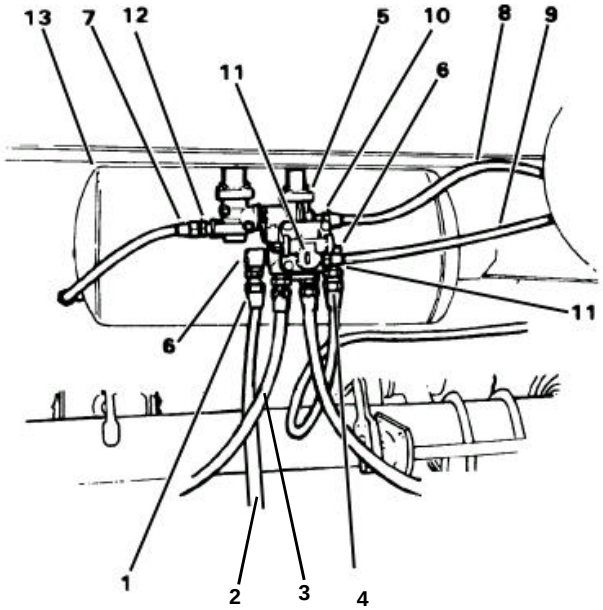
(2) Installation.

NOTE
Use anti-seize tape on all pipe fittings.

(a) Position trailer valve **(5)** on tank **(13)** and turn clockwise to install. The valve must be vertical and the joint tight.

(b) Install connectors **(10, 11 and 12)** on valve. Connect tube and nut assemblies **(7, 8 and 9)**.

(c) Install hoses **(1 through 4)**.



AIR TANKS

Materials/Tools

General mechanics tool kit

a. Removal.

(1) Disconnect all hoses and air lines (WP 0016 00-14) to air tanks **(1)**.

(2) Remove relay valves (WP 0016 00-18) and trailer valve (WP 0016 00-19).

(3) Remove drain cocks.

(4) Remove four lock nuts **(2)** and capscrews **(3)** from ends of air tanks (1). Remove air tanks.

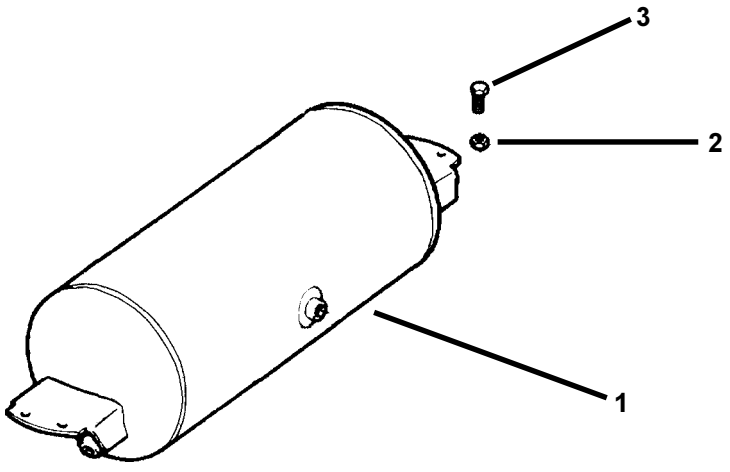
b. Installation.

(1) Position air tanks **(1)** on frame and install four cap screws **(3)** and lock nuts **(2)** to secure.

(2) Install relay valves (WP 0016 00-18) and trailer valve (WP 0016 00-19).

(3) Install drain cocks.

(4) Connect all hoses and air lines (WP 0016 00-14) to air tanks.



INTRODUCTION

LUNETTE

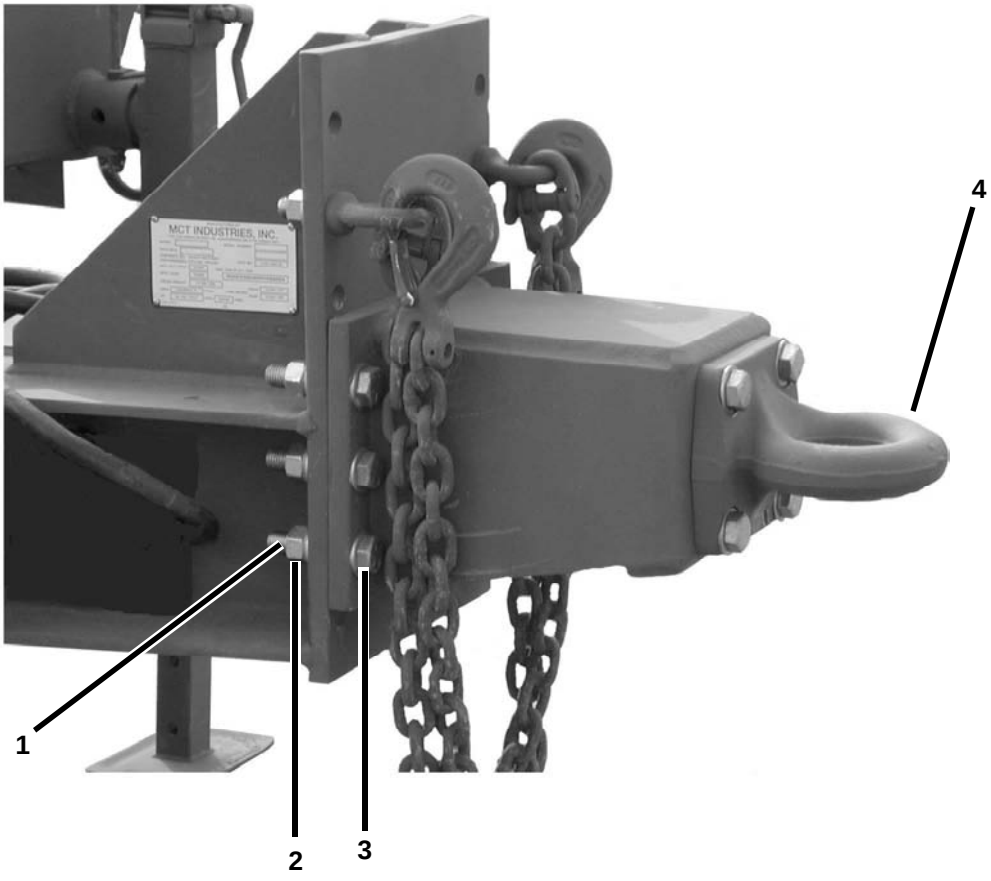
Materials/Tools
General mechanics tool kit
Four lock washers, 3/4 inch
Torque wrench, 3/4 inch drive, 0-600 lb-ft.
Socket, 1-1/8 inch, 3/4 inch drive

a. Removal.

Remove six hex nuts **(1)**, lock washers **(2)**, cap screws **(3)** and coupler **(4)**. Discard lock washers.

b. Installation.

Mount coupler **(4)** on frame with six cap screws **(3)**, new lock washers **(2)** and hex nuts **(1)**. Tighten hex nuts to 300 lb-ft.



SAFETY CHAINS

Materials/Tools

General mechanics tool kit
Torque wrench, 3/4 inch drive, 0-600 lb-ft.
Socket, 3/4inch, 3/4 inch drive

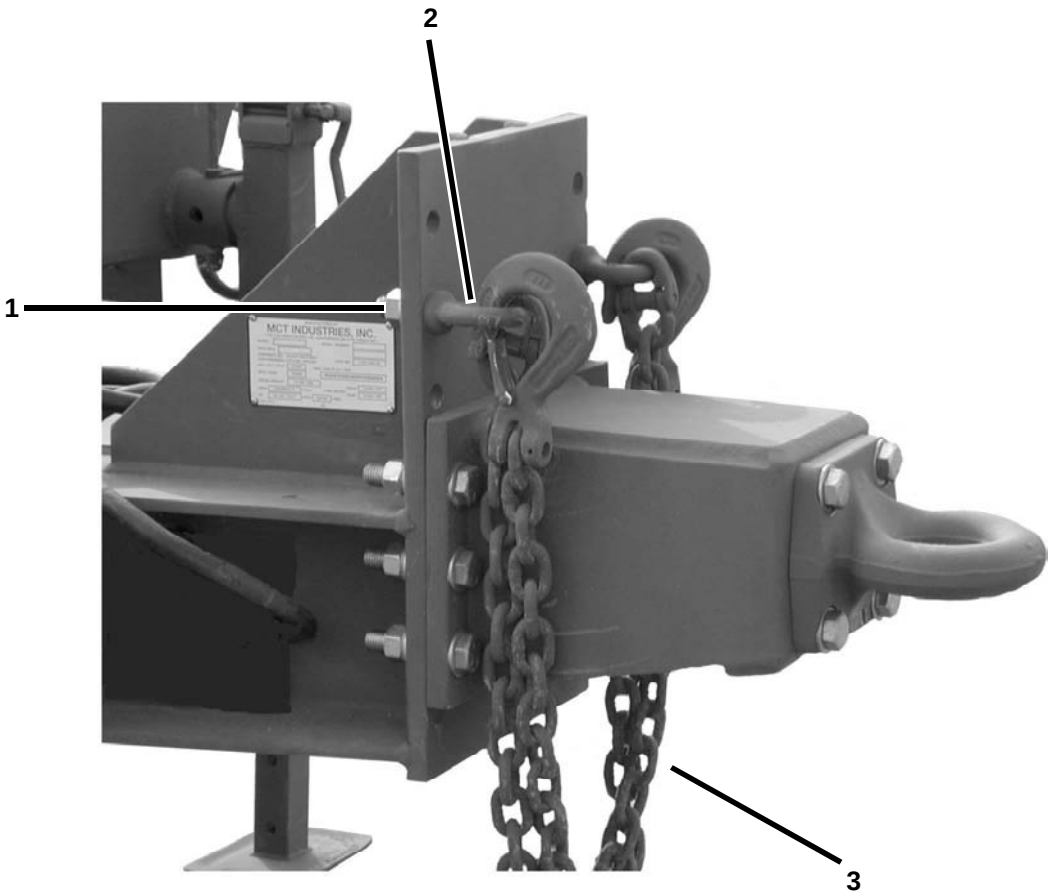
a. Removal.

Remove nut **(1)**, eye bolt **(2)** and safety chain **(3)**.

b. Installation.

Mount chain to frame with eye bolt **(2)** and nut **(1)**. Tighten nut until snug on frame.

NOTE
Minimum backoff torque for nut **(1)** is 30 lb-ft.



AIR COUPLING QUICK DISCONNECTS (GLADHANDS)

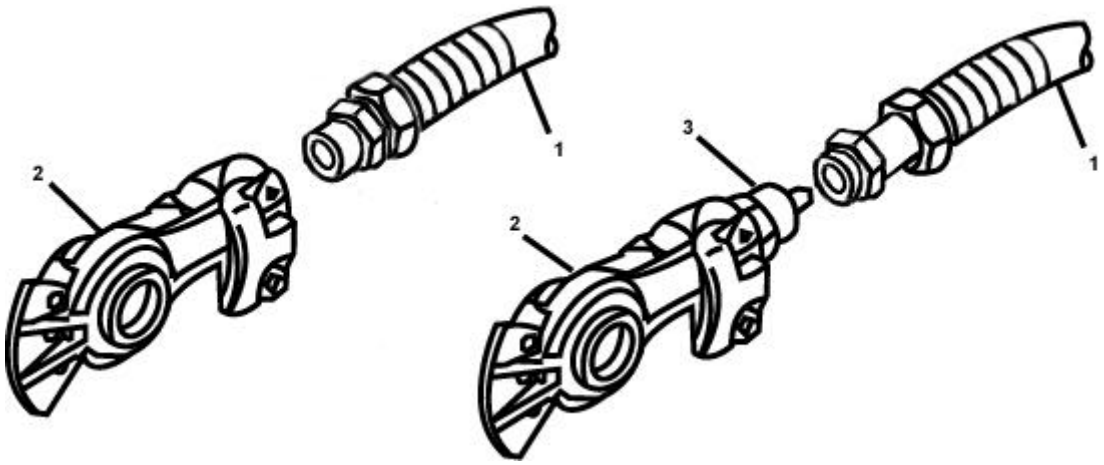
Materials/Tools
Wrench, open-end, 15/16-inch
Wrench, open-end, 1 1/16-inch
Wrench, open-end, 1 1/8-inch

a. Removal

NOTE
Do step 2 when removing an unserviceable gladhand.
Do steps 1 and 2 when removing gladhands from an unserviceable hose.

(1) Remove service or emergency airhose **(1)** from gladhand **(2)** using 15/16- and 1 1/8-inch wrenches.

(2.) Remove service or emergency gladhand **(2)** from the body **(3)** using 15/16- and 1 1/16-inch wrenches.



AIR COUPLING QUICK DISCONNECTS (GLADHANDS)

Materials/Tools

Wrench, open-end, 1 5/16-inch
Wrench, open-end, 1 1/16-inch
Wrench, open-end, 1 1/8-inch

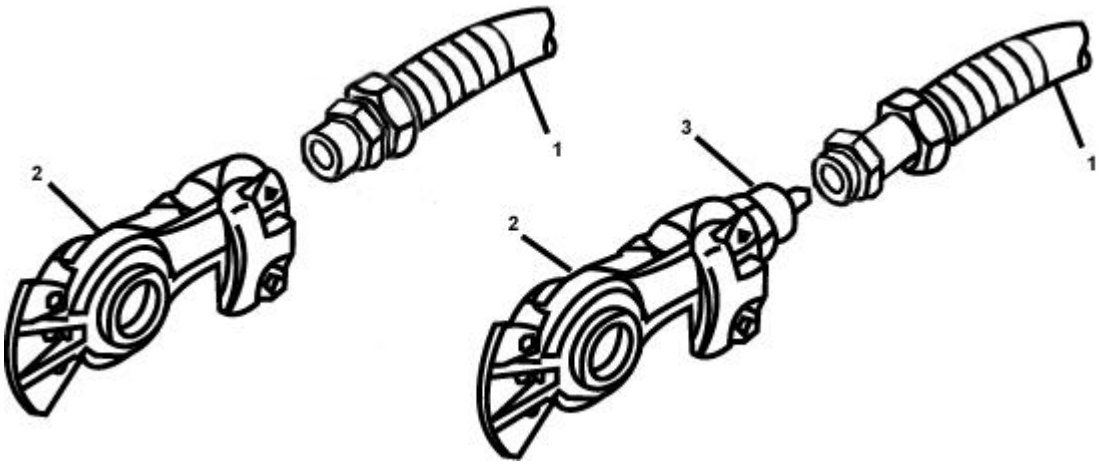
a. Installation.

NOTE

Do step 2 when installing a serviceable gladhand on a servicable hose.
Do steps 1 and 2 when installing gladhands to a replacement hose.

(1) Install service or emergency airhose **(1)** to gladhand **(2)** using 15/16- and 1 1/8-inch wrenches.

(2) Install service or emergency gladhand **(2)** to the body **(3)** using 15/16- and 1 1/16-inch wrenches.



SPARE TIRE CARRIER

Materials/Tools

Dry-cleaning solvent (WP 0026 00)
Wiping rag (WP 0026 00)
General mechanics tool kit
Torque wrench, 3/8 inch drive 0-150 lb-ft.
Socket, 9/16 inch, 3/8 inch drive

a. Removal.

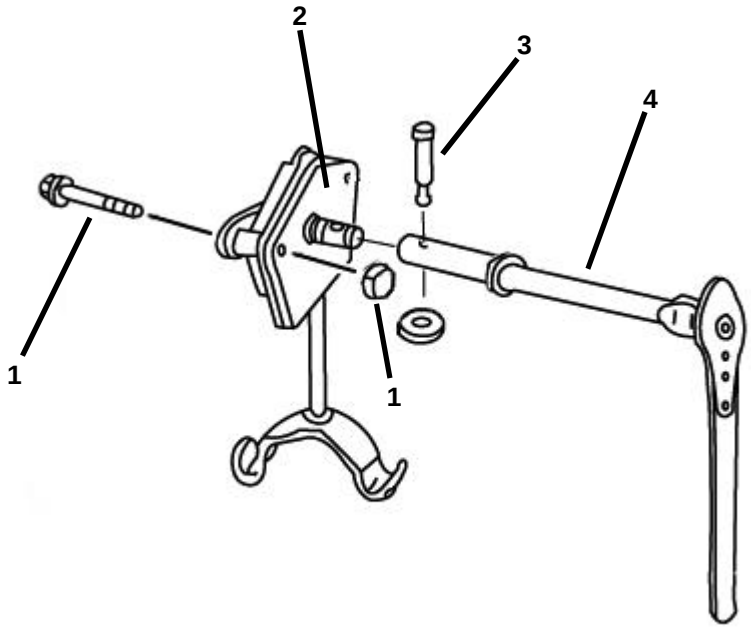
(1) Remove spare tire (WP 0012 00-1).

(2) Place wheel nuts on studs.

(3) Remove nuts, lock washers and bolts **(1)**. Remove pickup member **(2)**.

NOTE
Main member is welded to frame and cannot be removed.

(5) Remove pin **(3)** and take shaft **(4)** off of pickup member.



SPARE TIRE CARRIER - Continued

b. Installation.

(6) Slide shaft **(4)** through frame and onto pickup member **(2).** Install pin **(3)**.

(7) Install bolts, lock washers and nuts **(1)** on pickup member **(2)**.
Tighten nuts on bolts to 30 lb-ft.

(8) Install spare tire.

TOOL BOX

Materials/Tools

General mechanics tool kit
Torque wrench, 3/8 inch drive, 0-150 lb-ft.
Socket, 9/16 inch, 3/8 inch drive

a. Removal.

Remove four flanged nuts and carriage bolts from each side of the tool box frame and lift tool box from trailer frame.

b. Installation.

Position tool box frame on trailer frame and install four carriage bolts and flanged nuts on each side to secure.

REFLECTORS

Materials/Tools

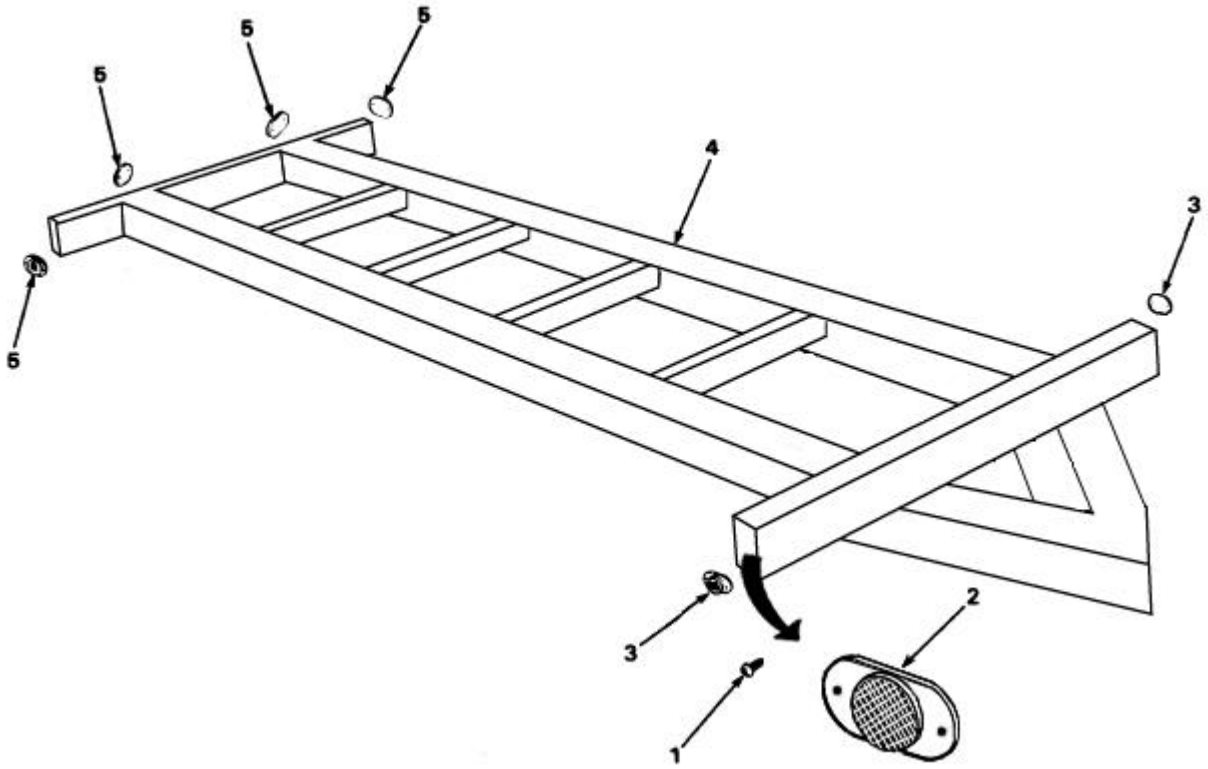
1/4 inch wrench

a. Removal.

Remove two self-tapping screws **(1)** to remove any defective reflector **(2)**.

b. Installation.

Install each red reflector **(5)** and amber reflector **(3)** with two self-tapping screws **(1)**.



SPLASH GUARDS

Materials/Tools

General mechanics tool kit
Torque wrench, 3/8 inch drive, 0-150 lb-ft.
Socket, 1/2 inch, 3/8 inch drive

a. Removal.

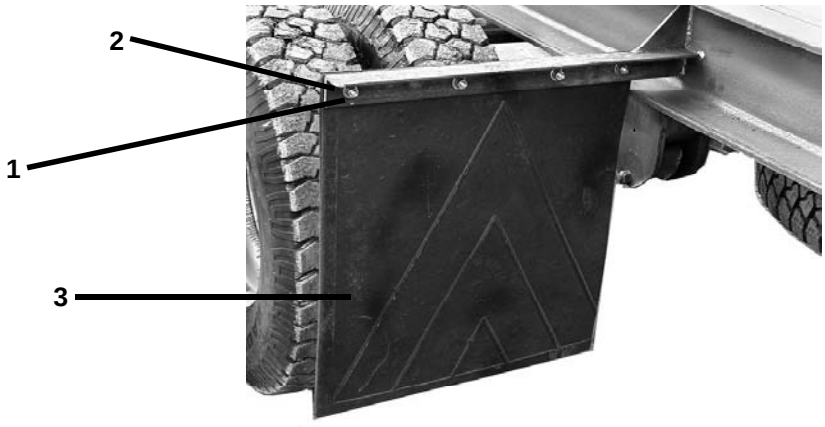
(1) Remove four hex nuts **(1)** and cap screws **(2).**

(2) Remove each mud flap **(3)**.

b. Installation.

(1) Install each mud flap **(3)** with four cap screws **(2)** and hex nuts **(1)**.

(2) Tighten hex nuts to 15 lb-ft.



DATA PLATES

Materials/Tools
General mechanics tool kit
Blind head riveter
Rivets

a. Removal.

Remove four Drive Screws to detach any defective identification or transportation plate.

b. Installation.

Install identification plate or transportation plate with four Drive Screws each.

LANDING LEG - Model XCK2000E1 only.

Materials/Tools
General Mechanics Tool Kit

Personnel: 2

WARNING

Properly secure trailer to prevent it from falling down on the front end. Failure to do so may result in serious injury or death.

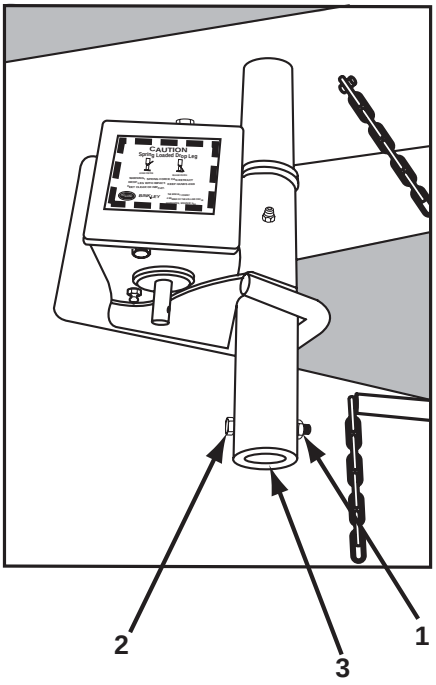
a. Removal

(1) Secure trailer.

(2) Secure jack to keep it from dropping to the ground.

(3) Remove nut **(1)** and bolt **(2)**.

(4) Remove securing pin **(3)**.



LANDING LEG - Model XCK2000E1 only - Continued

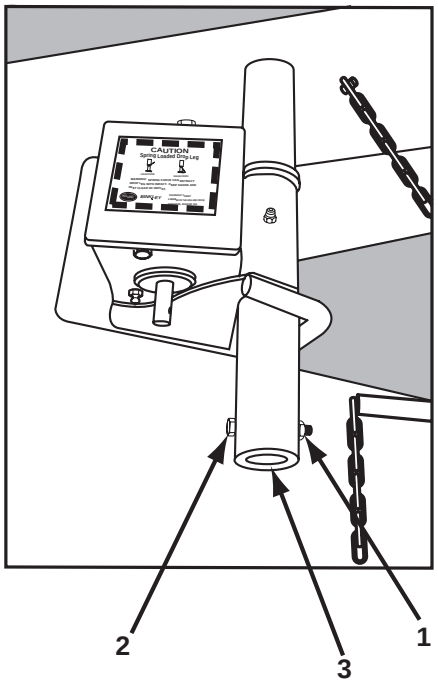
b. Installation

(1) Place jack in proper position.

(2) Insert securing pin (3).

(3) Insert bolt (2) and secure with nut (1).

(4) Check for proper operation per WP (0005).



CHAPTER 7

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2-TON, 4-WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

GENERAL

This WD covers the inspection, removal and installation of components at the Direct Support and General Support Maintenance level on the 7 1/2 ton, Containerized Kitchen Trailer, XCK2000 and XCK2000E1.

Materials/Tools
General mechanics tool kit
Open end wrench, 1-5/16 inch
Ratchet, 3/4 inch drive
Socket, 1-5/16 inch, 3/4 inch drive
Torque wrench, 3/4 inch drive, 0-600 lb-ft.

NOTE
Following procedures are for one complete axle suspension.
If only one wheel requires maintenance, perform steps for that wheel only.

a. Removal.

(1) Jack up trailer high enough to relieve tension on the springs.

(2) Block up corners of trailer (front or rear).

(3) Remove two hex nuts **(1)**, bolts **(2)** and torque arm **(3)**.

(4) Support axle to prevent it from dropping. Remove four hex nuts **(4)** and top plate **(5)**.

(5) Remove spring **(6)** and U-bolts **(7)**.

(6) Perform same procedure to remove other axle suspension components if necessary.

b. Installation.

(1) Place U-bolts **(7)** under axle.

NOTE
Hook end of all springs must be toward equalizer bolt.

(2) Place spring **(6)** on spring mount **(8)** welded to the axle.

(3) Install top plate **(5)** with four hex nuts **(4)** but do not tighten nuts.

(4) Adjust position of spring **(6)** if necessary so spring is centered. Tighten nuts **(4)** to 285 Ft-Lbs. (386 Nm).

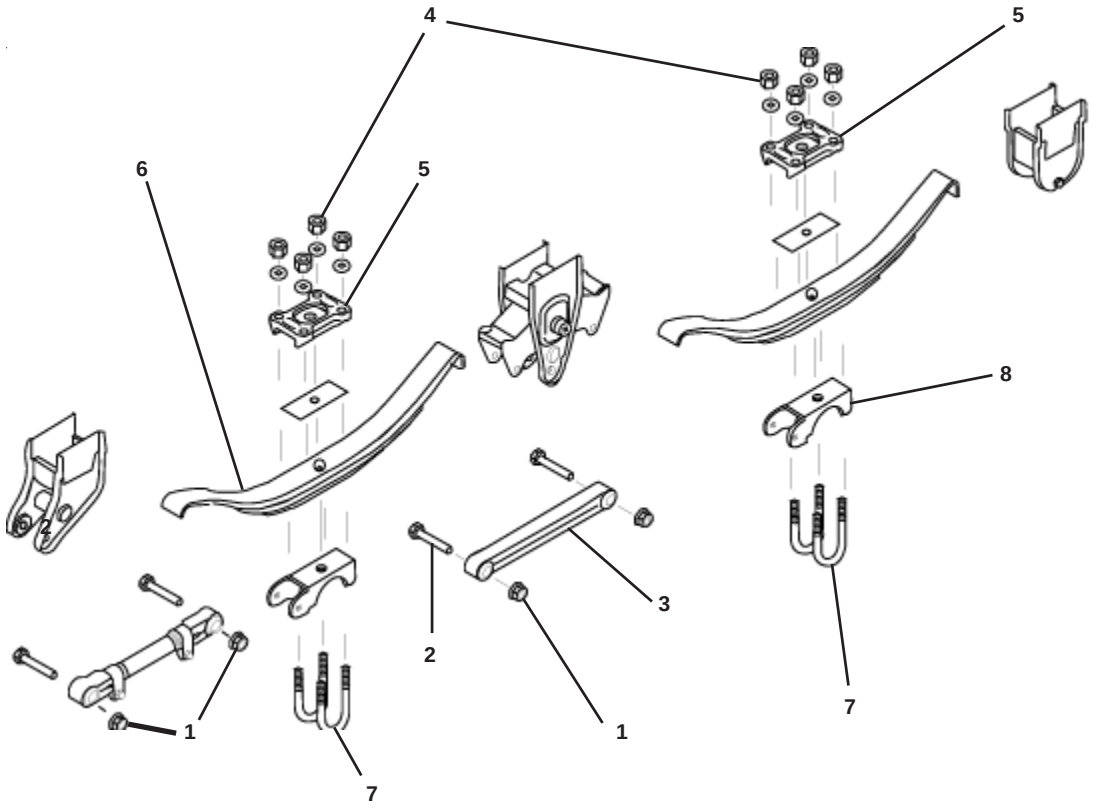
(5) Install spring **(6)**, torque arm **(3)**, bolts **(2)** and hex nuts **(1)**. Tighten nuts to 540 Ft-Lbs. (732 Nm).

(6) Perform same procedure for other axle suspension components if necessary.

(7) Remove blocking from under corners of trailer.

(8) Lower trailer and remove jacks.

(9) Adjust torque arms.



Materials/Tools

Cleaning compound (WP 0026 00)
Wiping rag (WP 0026 00)
Welding machine Welder tool kit **Personnel:** 2 required

NOTE
If an axle is to be removed for replacement or repair, remove axle and suspension together, and disassemble after removal.

a. Removal.

(1) Disconnect air lines from brake air chambers (WP 0016 00-14).

(2) Use a suitable lifting device to lift trailer and relax spring tension.

(3) Remove torque arms and spring rollers (WP 0018 00-1).

(4) Roll rear axle assembly with wheel and suspension from underneath trailer.

(5) Remove springs from axle (WP 0018 00-1).

b. Disassembly.

(1) Jack up axle assembly and place on jack stands.

(2) Remove tires and wheels (WP 0012 00-3).

(3) Remove hubs and drums (WP 0016 00-1).

(4) Remove brakes (WP 0016 00-5), slack adjuster (WP 0016 00-11), and camshafts and bearings (WP 0016 00-8).

(5) Remove air brake chambers (WP 0016 00-12).

c. Cleaning. Clean axle thoroughly, using a brush and water to remove mud, and cleaning compound to remove grease and oil. Wipe off.

d. Inspection. Inspect axle for cracks, breaks, broken or distorted brackets **(1)** and pads **(2)**, corrosion and other damage.

e. Repair.

(1) Straighten distorted air brake chamber brackets **(1)** and spring mounting pads **(2)** if possible. If brackets or pads cannot be straightened, the axle must be replaced.

(2) Repair broken welds.

(3) Repaint the axle.

f. Assembly.

(1) Install camshafts and bearings (WP 0016 00-9), slack adjusters (WP 0016 00-11) and brakes (WP 0016 00-7).

(2) Install hubs and drums (WP 0016 00-1).

(3) Install air brake chambers (WP 0016 00-13).

(4) Install wheels and tires (WP 0012 00-3).

g. Installation.

(1) Install springs on axle (WP 0018 00-1).

(2) Roll axle assembly with wheels and suspension underneath trailer. Position unit underneath suspension hangers.

(3) Install spring rollers and torque arms (WP 0018 00-1).

(4) Lower trailer.

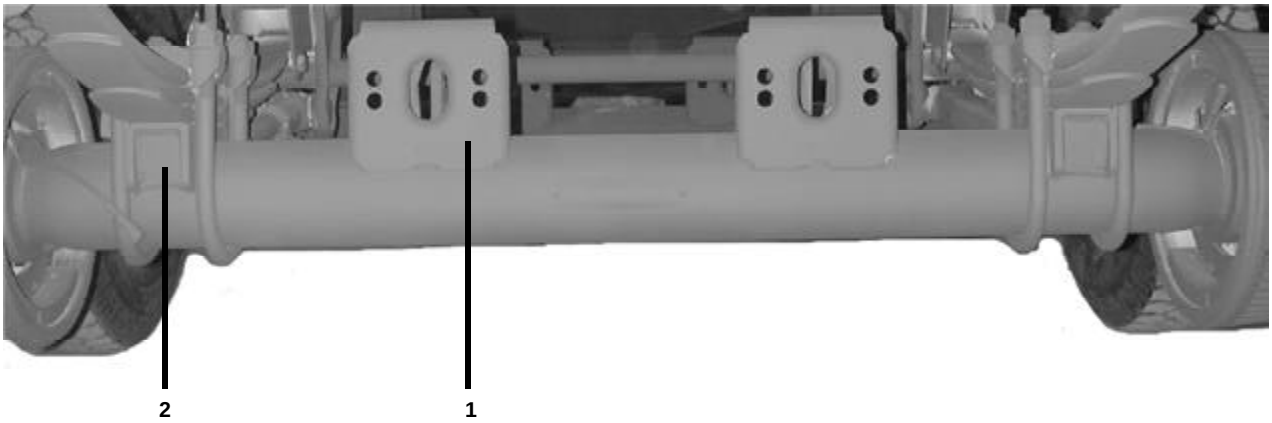
(5) Connect air hoses to air brake chambers.

(6) Close drain cocks on air tanks.

(7) Uncage brakes (WP 0006 00-3).

(8) Adjust air brake chamber (WP 0016 00-13).

(9) Adjust brakes (WP 0016 00-10).



Materials/Tools
Cleaning compound (WP 0026 00)
Shop equipment, welding
Tool kit, welder

a. Cleaning.

Clean frame thoroughly using a stiff bristle brush and water to remove mud, and cleaning compound to remove grease and oil.

b. Inspection.

Inspect frame for marred paint, corrosion, cracks, breaks, broken welds and other damage.

c. Repair.

(1) If damage to frame is not too extensive, straighten member where possible. Weld cracks or broken welds.

(2) Clean frame.

Materials/Tools
Cleaning compound (WP 0026 00)
Shop equipment, welding
Tool kit, welder

a. Cleaning.

Clean accessory, step **(1),** ISO lock **(2)**, landing leg **(3)** and frame around accessory thoroughly using a stiff bristle brush and water to remove mud, and cleaning compound to remove grease and oil.

b. Inspection.

Inspect area for marred paint, corrosion, cracks, breaks, broken welds and other damage.

c. Repair.

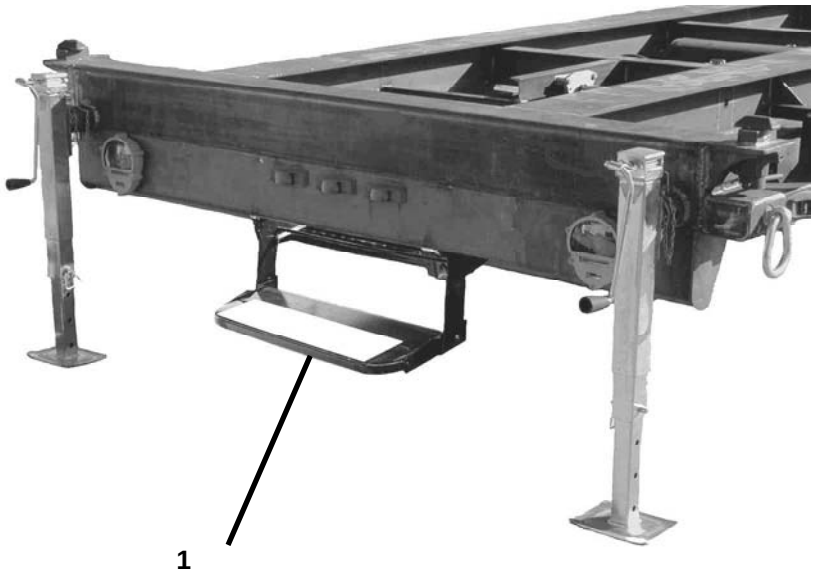
(1) If damage to accessory requires replacement, remove accessory. Prepare area for welding new piece in place. Weld accessory in place.

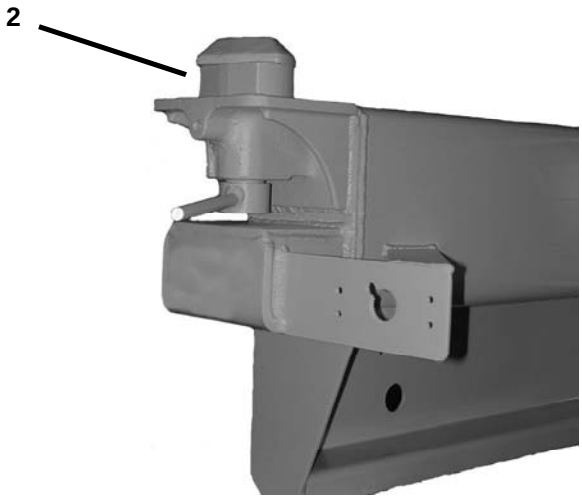
(2) Clean area.

(3) Repaint area.

NOTE

Removal of the Containerized Kitchen TM 10-7360-226-13&P is required to replace the ISO lock.

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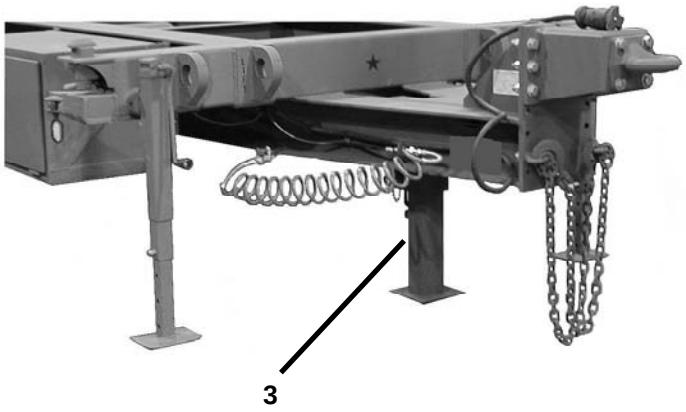

3

PREPARATION FOR STORAGE

a. Air Brake System.

(1) Open drain cocks on both air tanks on the trailer.

(2) Cage all four air brake chambers (WP 0006 00-3).

b. Frame.

(1) Jack up the trailer using the leveling jacks so that the weight will be off of the tires.

(2) Never jack up or place jack stands on the axle tube or on the equalizers.

c. Lubrication.

Lubricate moving parts such as suspension parts that may be exposed to weather.

PREPARATION FOR USE AFTER STORAGE

a. Air System.

(1) Close air tank drain cocks.

(2) Uncage air brake chambers (WP 0006 00-3).

b. Perform Operator/Crew and Organizational preventive maintenance services.

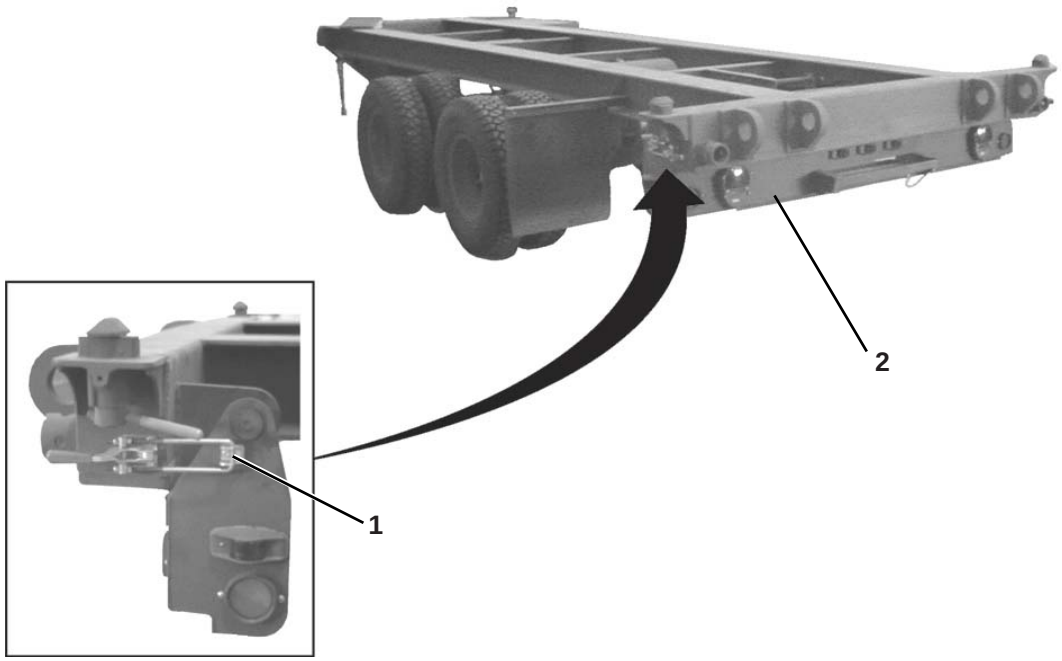
Use WP0011 00 through WP0014 00 as a guide for performing preventive maintenance services.

PREPARATION FOR SHIPMENT

a. Frame

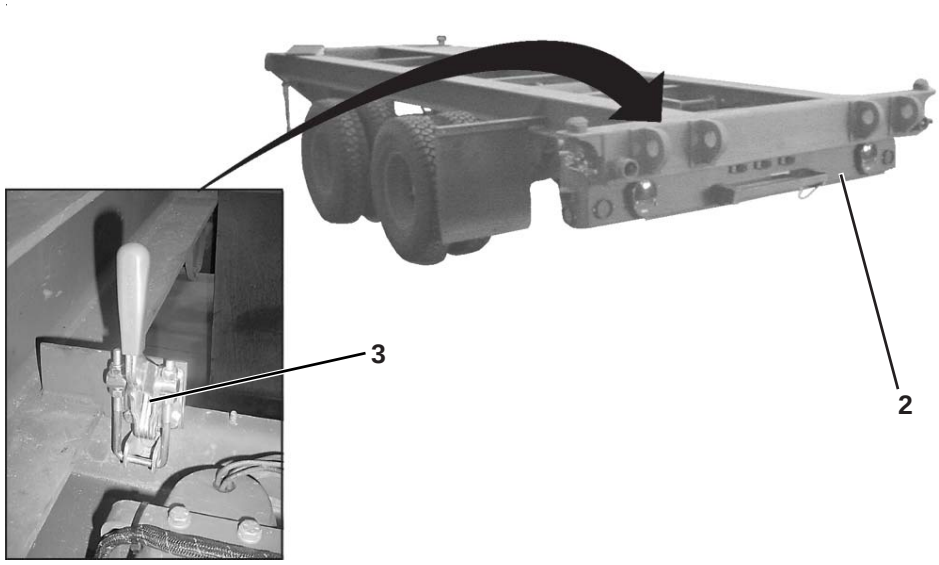
(1) Release outer bumper latches **(1)** on both ends of bumper **(2)**.

(2) Fold bumper **(2)** under rear of trailer.



PREPARATION FOR SHIPMENT - Continued

(3) Latch bumpers **(2)** in folded position with both inner bumper latches **(3)**.



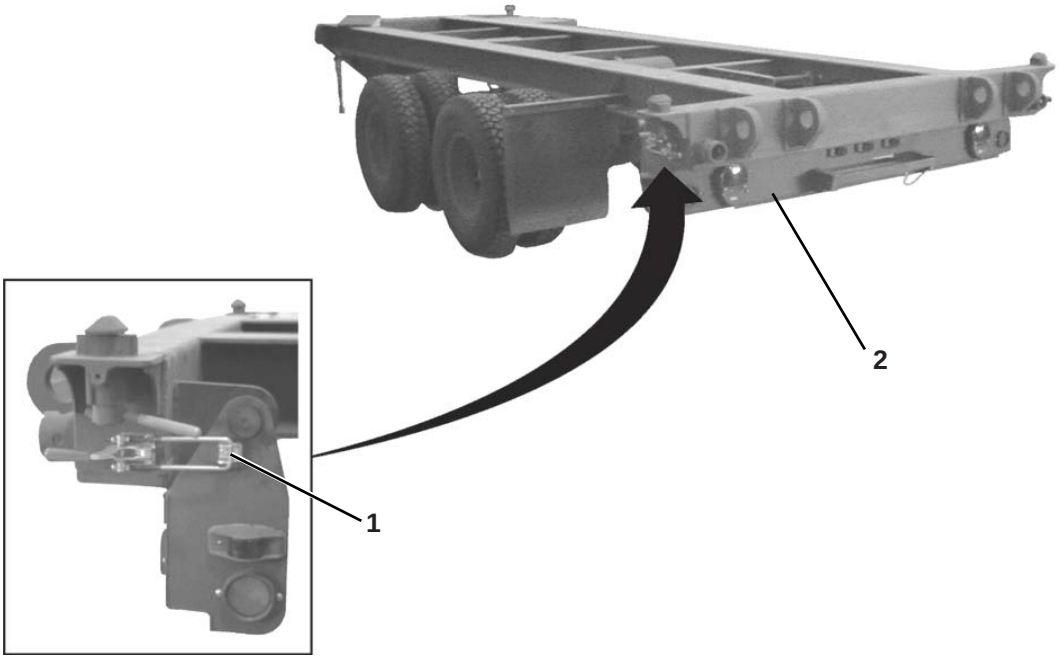
PREPARATION FOR USE FROM SHIPMENT

a. Frame

(1) Release inner bumper latches.

(2) Fold bumper **(2)** to down position.

(3) Latch bumper **(2)** in down position with outer bumper latches **(1)**.



b. Perform operator/crew and organizational preventive maintenance services.

Use WP 0011 00 through WP 0014 00 as a guide for performing preventive maintenace services.

CHAPTER 8

REPAIR PARTS LISTINGS, DIAGRAMS, AND REFERENCES FOR CHASSIS, CONTAINERIZED KITCHEN TRAILER (CKT) 7 1/2-TON, 4-WHEEL, XCK2000 and 7 1/2-TON, 4-WHEEL, XCK2000E1

REFERENCES **0022 00**

SCOPE.

This appendix lists all forms, field manuals, techniques manuals, and miscellaneous publications referenced in this manual.

PUBLICATION INDEXES.

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

Index of Army Motion Pictures and Related Audio Visual Aids ..... DA PAM 108-1

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

FORMS.

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

FIELD MANUALS.

Camouflage, Basic Principles, and Field Camouflage ..... FM 5-20
Explosives and Demolitions ..... FM 5-25
Operation and Maintenance of Ordnance Material in Cold Weather (0° to -65°F) ..... FM 9-207
Manual for the Wheeled Vehicle Driver ..... FM 21-305
Cold Weather Operations ..... FM 31-70

TECHNICAL MANUALS.

Inspection, Care, and Maintenance of Antifriction Bearings ..... TM 9-214
Welding Theory and Application, Operators Manual ..... TM 9-237
Deepwater Fording of Ordnance Material ..... TM 9-238
Materials Used for Cleaning, Preserving, Abrading, and Cementing
Ordnance Materiel and Related Materials Including Chemicals ..... TM 9-247
Organizational Care, Maintenance, and Repair of Pneumatic Tires,
Inner Tubes, and Radial Tires ..... TM 9-2610-200-24

TECHNICAL MANUALS - CONTINUED.

The Army Maintenance Management System (TAMMS) ..... TM 38-750
Painting Instructions for Field Use ..... TM 43-0139
Railway Operating and Safety Rules ..... TM 55-200
Railcar Loading Procedures ..... TM 55-601
Administrative Storage of Equipment ..... TM 740-90-1
Railway Operating Rules ..... TM 743-200-1
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive Command) ..... TM 750-244-6

TECHNICAL BULLETINS.

Tactical Wheeled Vehicles: Repair of Frames ..... TB 9-2300-247-40
Standards for Oversea Shipment or Domestic Issue of Combat, Tactical, and Special Purpose Vehicles ..... TB 9-2300-281-35
Color Marking and Camouflage Painting of Military Vehicles ..... TB 43-0209

MISCELLANEOUS PUBLICATIONS.

Requisitioning, Receipt, and Issue System ..... AR 725-50
Maintenance of Supplies and Equipment ..... DA PAM 738-750

MAINTENANCE ALLOCATION CHART (MAC) 0023

B-1. General

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

The MAC (immediately following the introduction) 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 shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field — includes two subcolumns, Unit (C (operator/crew) and O (unit) maintenance) and Direct Support (F) maintenance

Sustainment — includes two subcolumns, general support (H) and depot (D)

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced for the MAC).

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance Functions

Maintenance functions are limited to and defined as follows:

1. 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). This includes scheduled inspection and gagings and evaluation of cannon tubes.

2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.

3. Service. Operations required periodically to keep an item in proper operating condition, e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging or recoil mechanisms.

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

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

6. Calibrate. To determine and cause corrections to be made or be adjusted on instruments of 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.

7. 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.

8. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance, and Recoverability (SMR) code.

9. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, 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.

NOTE

The following definitions are applicable to the "repair" maintenance function services: Inspect, test, service, adjust, align, calibrate, and/or replace.

- Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system of Unit Under Test (UUT).

- Disassembly/assembly. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code of the level of maintenance under consideration (i.e., identified as maintenance significant).

- Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

10. 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. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to "like new" condition.

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

Explanation of Columns in the MAC

Column (1) Group Number. Column (1) lists FGC numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions, refer to “Maintenance Functions” outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as man-hours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. 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 time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance functions are as follows:

Field:
C Operator or crew maintenance
O Unit maintenance
F Direction support maintenance

Sustainment:
H General support maintenance
D Depot maintenance

NOTE

The “L” maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by a work time figure in the “H” column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE and special support equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks table entries.

Explanation of Columns in the Tools and Test Equipment Requirements

Column (1) Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) Nomenclature. Name or identification of the tool or test equipment.

Column (4) National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) Tool Number. The manufacturer's part number, model number, or type number.

Explanation of Columns in the Remarks

Column (1) Remarks Code. The code recorded in column (6) of the MAC.

Column (2) Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

Table 1. MAC for CHASSIS, TRAILER: GENERATOR, 2 1/2-TON, 2-WHEEL, M200A1

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQPT	(6) REMARKS
			FIELD		SUSTAINMENT				
			UNIT	DS	GS		DEPOT		
			C	O	F	H	D		

Table 2. Tools and Test Equipment for CHASSIS, TRAILER: GENERATOR, 2 1/2-TON, 2-WHEEL, M200A1

(1) TOOLS OR TEST EQUIPMENT	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(5) NATIONAL STOCK NUMBER	(6) TOOL NUMBER

Table 3. Remarks for CHASSIS, TRAILER: GENERATOR, 2 1/2-TON, 2-WHEEL, M200A1

REMARK CODES	REMARKS

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) FIELD UNIT C	(4) FIELD UNIT O	(4) FIELD DS F	(4) SUSTAINMENT GS H	(4) SUSTAINMENT DEPOT D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
0015	**ELECTRICAL SYSTEM**								
0015 00-1	Lamps	Replace		0.5				1	
0015 00-1	Lights	Replace		0.5				1	
0015 00-1		Repair		0.5				1 and 2	
0015 00-3	Harness, Wiring	Test		0.5				1 and 2	
0015 00-4	Chassis	Replace		1.0				1	
0015 00-4		Repair		2.0				1 and 2	
0015 00-4	Cover	Replace	0.1					1	
0019	**AXLE**								
0014 00-4	Axle	Inspect			0.2				
0019 00-1		Replace			8.0			1 and 2	
0016 00-5	**SERVICE BRAKES**								
0016 00-5	Shoe, Brake	Replace		3.0				4	
0016 00-12	Chamber, Air	Replace		0.8				1	
0011 00-5	Coupling, Air	Inspect	0.2						
0016 00-18		Replace		0.5				1	
0016 00-18		Repair		1.0				1	
0016 00-18	Valve, Check and Valve, Relay	Replace		0.5				1	
0016 00-14	Cock, Drain	Replace		0.5				1	
0011 00-6	Reservoir, Air	Service	0.5						
0016 00-20		Replace		0.5				1	
0011 00-5	Lines, Fittings,	Inspect	0.5						
0016 00-14	And Hoses (Air)	Replace		1.0				1	

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) FIELD UNIT C	(4) FIELD UNIT O	(4) FIELD DS F	(4) SUSTAINMENT GS H	(4) SUSTAINMENT DEPOT D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
0016 00-1	**HUBS AND DRUMS**								
0016 00-2	Drum, Brake	Inspect		3.5				1 and 2	
0016 00-1		Replace		1.0				1 and 2	
0016 00-1	Hub, Wheel	Replace		1.0				1	
0016 00-1	Bearing, Hub	Replace		1.5				1	
0016 00-2	Gasket, Hub	Replace		2.0				1	
0016 00-2	Seal, Oil	Replace		2.0				1	
0016 00-3	Bearing, Wheel	Adjust		1.0				1 and 2	
0016 00-3		Replace		1.0					
0016 00-3	Stud Wheel	Replace		1.5				1	
0016 00-3	Wheel, Assembly	Replace		0.5				1	
0011 00-2	Tires	Inspect	0.1						
0014 00-2		Replace	0.5					2	

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4)					(5) TOOLS AND EQUIPMENT	(6) REMARKS
			FIELD			SUSTAINMENT			
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
0020 00-1	**FRAME**	Repair			3.0			5	
0017	**FRAME ATTACHMENTS**								
0017 00-1	Lunette, Towing	Adjust		1.0				1	
0017 00-1		Replace		1.5				1	
0017 00-2	Safety Chains	Replace		0.5				1	
0017 00-8	Reflector	Replace		0.5				1	
0017 00-6	Tool Box	Replace		0.5				1	
0017 00-8	Data Plates	Replace	0.1	0.5				1	
0020 00-2	Step	Replace			0.5			1	
0020 00-2	ISO Lock	Replace			0.5			1	
0020 00-2	Landing Leg	Replace			0.5			1	
0018	**SPRINGS AND SUSPENSION**								
0018 00-1	Spring	Replace			4.0			1, 2, and 3	
0018 00-1	Shackle, Spring	Replace			0.5			1, 2, and 3	

SECTION III. TOOLS AND TEST EQUIPMENT REQUIREMENT

(1)	(2)	(3)	(4)	(5)	
REFERENCE CODE	**MAINTENACE CATEGORY**	**NOMENCLATURE**	**NATIONAL STOCK NUMBER**	**TOOL NUMBER**	
1	C	Tool Kit, General Mechanic's: Automotive	5180-00-177-7033	SC 5180-90-N26	
2	O	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Common No. 1, Less Power	4910-00-754-0654	SC 4910-95-A74	
3	O	Shop Equipment, Automotive Maintenance and Repair: Organizational Maintenance, Supplemental No. 1	4910-00-754-0653	SC 4910-95-A73	
4	F	Shop Equipment, Automotive Maintenance and Repair: Field Maintenance, Basic Set	4910-00-754-0705	SC 4910-95-A63	
5	H	Shop Equipment, Wheeled Field Maintenance, Post, Camp, and Station	4910-00-348-7696		

INTRODUCTION

SCOPE.

This WP lists Components of End Item and Basic Issue Items for the trailer 7 1/2 ton Containerized Kitchen Trailer, XCK2000 and XCK2000E1 to help you inventory items required for safe and efficient operation.

GENERAL.

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

a. Components of End Item (COEI). 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. Basic Issue Items (Bll). These are the minimum essential items required to place the trailer in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, Bll must be with the trailer during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement Bll, based upon TOE/MTOE authorizations of the end item.

EXPLANATION OF COLUMNS.

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

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 (NSN) assigned to the item and will be used for requisitioning purposes.

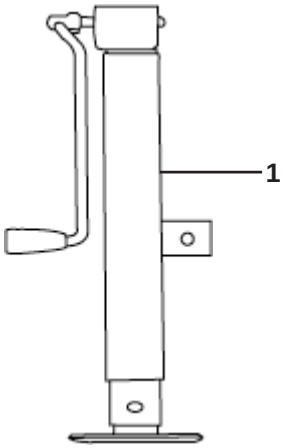
c. Column (3) - Description. Indicates the Federal Item Name and, if required, a description to identify and locate the item. The last line for each item indicates the Commercial and Government Entity (CAGE) Code in parentheses followed by the part number. If item needed differs for different models of this equipment, the model is shown under the “Usable On Code” heading in this column. These codes are identified as:

Code	*Used On*
CRV	*XCK2000*
RAY	*XCK2000E1*

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).

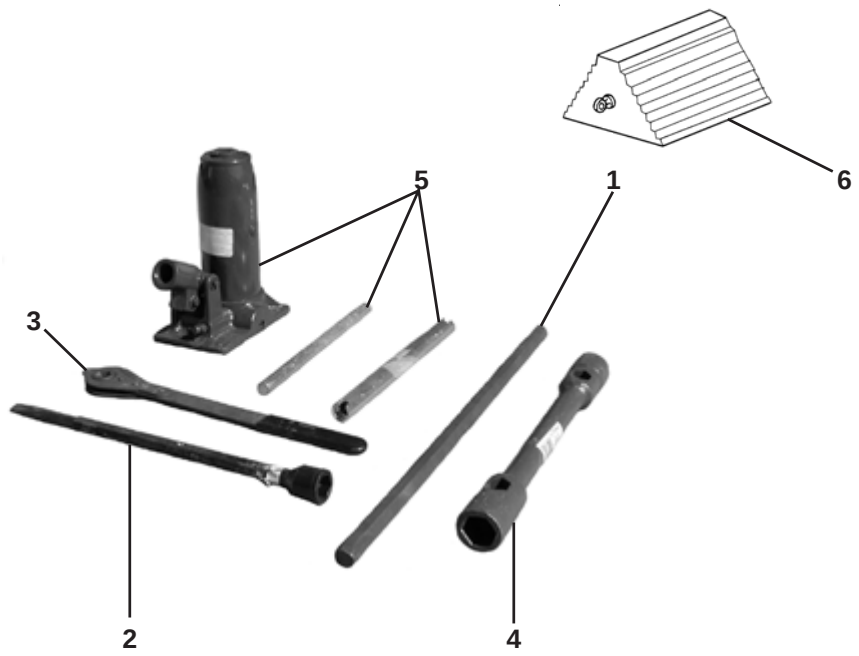
e. Column (5) - Quantity Required (Qty Rqr). Indicates the quantity of the item authorized to be used with/on the equipment.

COMPONENTS OF END ITEM



(1) Illus Number	(2) National Stock Number	(3) Description, CAGE and Part Number	Usable on Code	(4) U/M	(5) Qty Rqr'd
1	2590-01-487-4723	Support, Retractible, Trailer (89257) SWL 1900LTSK WP&C	CRV, RAY	ea	4

BASIC ISSUE ITEMS



(1) Illus Number	(2) National Stock Number	(3) Description, CAGE and Part Number	Usable on Code	(4) U/M	(5) Qty Rqr'd
1	5120-01-134-9422	Handle, Truck Wrench (2U930) TR5	CRV, RAY	ea	1
2		Socket, Socket Wrench (24617) 15721542	CRV, RAY	ea	1
3	5120-01-429-6964	Wrench, Ratchet (24617) 15659721	CRV, RAY	ea	1
4	5120-01-487-6301	Wrench, Socket (2U930) TR3A	CRV, RAY	ea	1
5	5120-01-487-6306	Jack, Hydraulic, Hand (2U930) W93227A	CRV, RAY	ea	1
6	4935-01-028-474	Block, Chock (18876) 10698121-2	CRV, RAY	ea	2

ADDITIONAL AUTHORIZATION LIST 0025 00

There are no additional items authorized for the support of the Chassis, Containerized Kitchen Trailer.

INTRODUCTION

GENERAL

This WP covers the expendable supplies and materials you will need to operate and maintain the 7 1/2 ton, Containerized Kitchen Trailer, XCK2000 and XCK2000E1. These items are authorized to you by CTA 50-970, Expendable Items.

EXPLANATION OF COLUMNS

a. Column 1, Item Number. This is the number assigned to the entry in the listing.

b. Column 2, Level. This column identifies the lowest level of maintenance that requires the listed items. The symbol designation for the various maintenance levels are as follows:
C – Operator or Crew
O – Organizational Maintenance
F – Direct Support
H – General Support Maintenance

c. Column 3, National Stock Number. This is the national stock number assigned to the item; use it to request or requisition the item.

d. Column 4, Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

e. Column 5, Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL NUMBER	(3) NSN	(4) DESCRIPTION (FSCM)	(5) U/M
1	O		CONTAINER, EMPTY, 1-QUART	EA
2	O	9150-01-313-2191	OIL, SAE 90 HYPOID GEAR 1-GALLON CAN	QT.
3	O	9150-01-197-7689	GREASE, GAA NGLI GRADE 1 6.5 LB CAN	LB.
4	O		PLASTIC TUBING	FT
5	C	7920-00-205-1711	RAGS, WIPING (58536) A-A-531 50-POUND BALE	EA
6	O		SEALING COMPOUND	OZ.
7	O		SOAP SOLUTION	OZ.
8	C	6850-00-664-5685 6850-00-281-1985 6850-00-285-8011	SOLVENT, DRY-CLEANING (81349) PD-680, TYPE II 1-QUART CAN 1-GALLON CAN 55-GALLON DRUM	OZ. OZ. OZ.
9	O	8010-01-309-0329	PRIMER, COATING	QT
10	O	8010-01-055-2319	COATING, CARC-OLIVE DRAB	QT
11	O	8030-00-281-2726	COATING, COMPOUND, METAL PRETREATMENT, RESIN-A	QT
12	O	9150-00-111-3199	OIL, SAE 10	QT

General

This appendix contains the lubrication instructions, showing locations intervals and proper materials for lubricating the trailer. These instructions are mandatory.

Detailed Lubrication Information

a. Clean lubrication points, grease fittings and surrounding areas before applying lubrication.

b. Clean all lubrication points after lubricating to prevent accumulation of foreign matter.

c. 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.

d. The dotted leader lines indicate lubrication is required on both sides of the equipment.

Cleaning

a. Keep all external parts not requiring lubrication clean of lubricants.

WARNING

Dry-cleaning solvent PD-680 used to clean parts is potentially dangerous to personnel and property. Do not use near open flame or excessive heat. Flash point of dry-cleaning solvent is 138° F (59°C).

b. Use dry-cleaning solvent (WP 0026 00-2) to clean and wash grease or oil from metal parts.

c. After parts are cleaned, rinse and dry them thoroughly. Supply a light grade of oil to all polished metal surfaces to prevent rusting.

d. When authorized to install new parts, remove any preservation materials, such as rust preventive compound or protective grease, prior to installation. Apply lubricant prescribed in lubrication instructions if required.

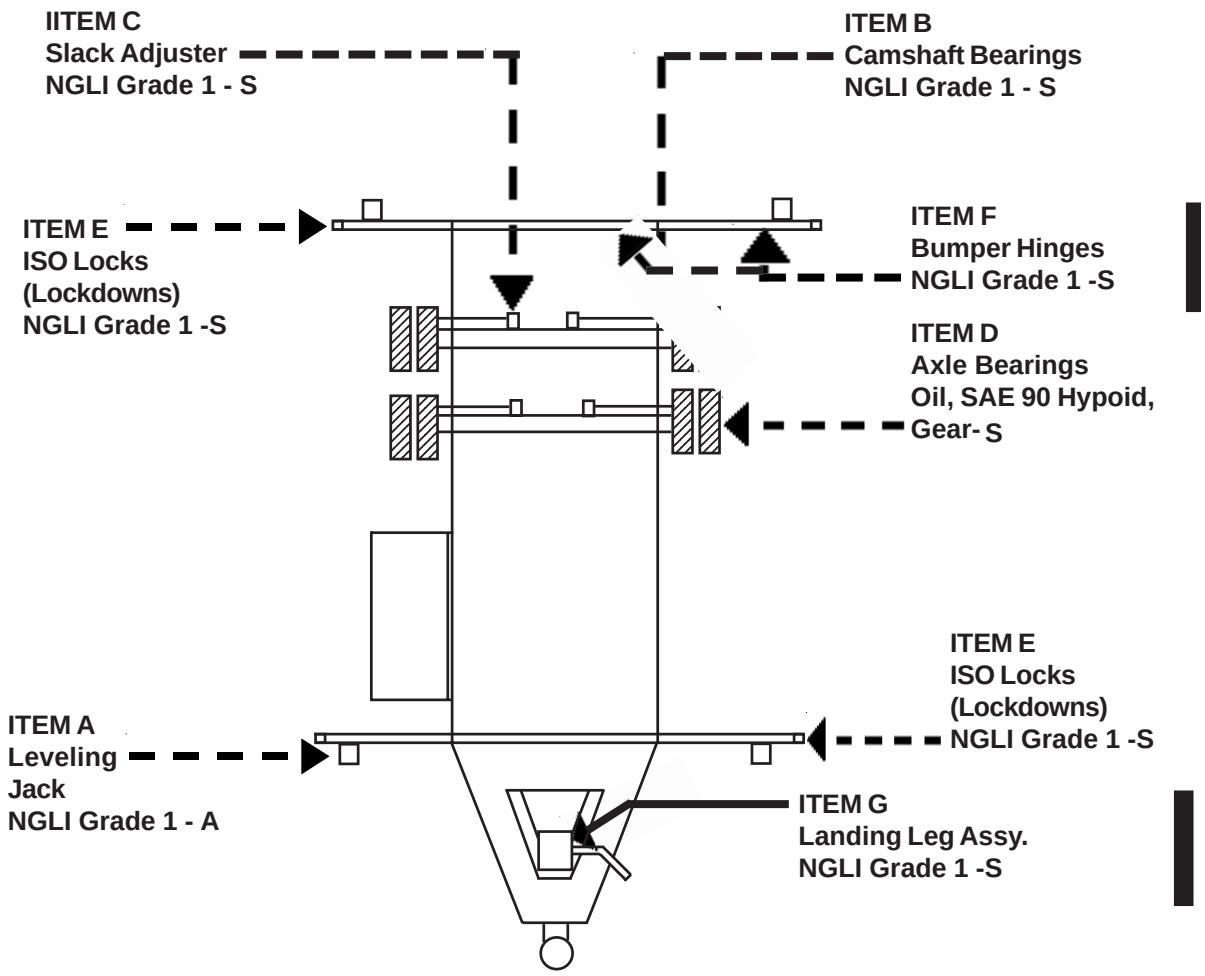
Service Intervals

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.



-TIME REQUIRED-

TOTAL MAN-HOURS		TOTAL MAN HOURS	
INTERVAL	MAN-HR.	INTERVAL	MAN-HR.
A	4.25	S	4.00

* The man-hour time specified is the time you need to do all services prescribed for a particular interval.

Lubricants	Intervals	Remarks
NGLI Grade 1 Oil, SAE 90 Hypoid, Gear	S - Semiannually A - Annually	For Artic Operations Refer to FM-9-207

NOTES

1. DO NOT LUBRICATE - Springs

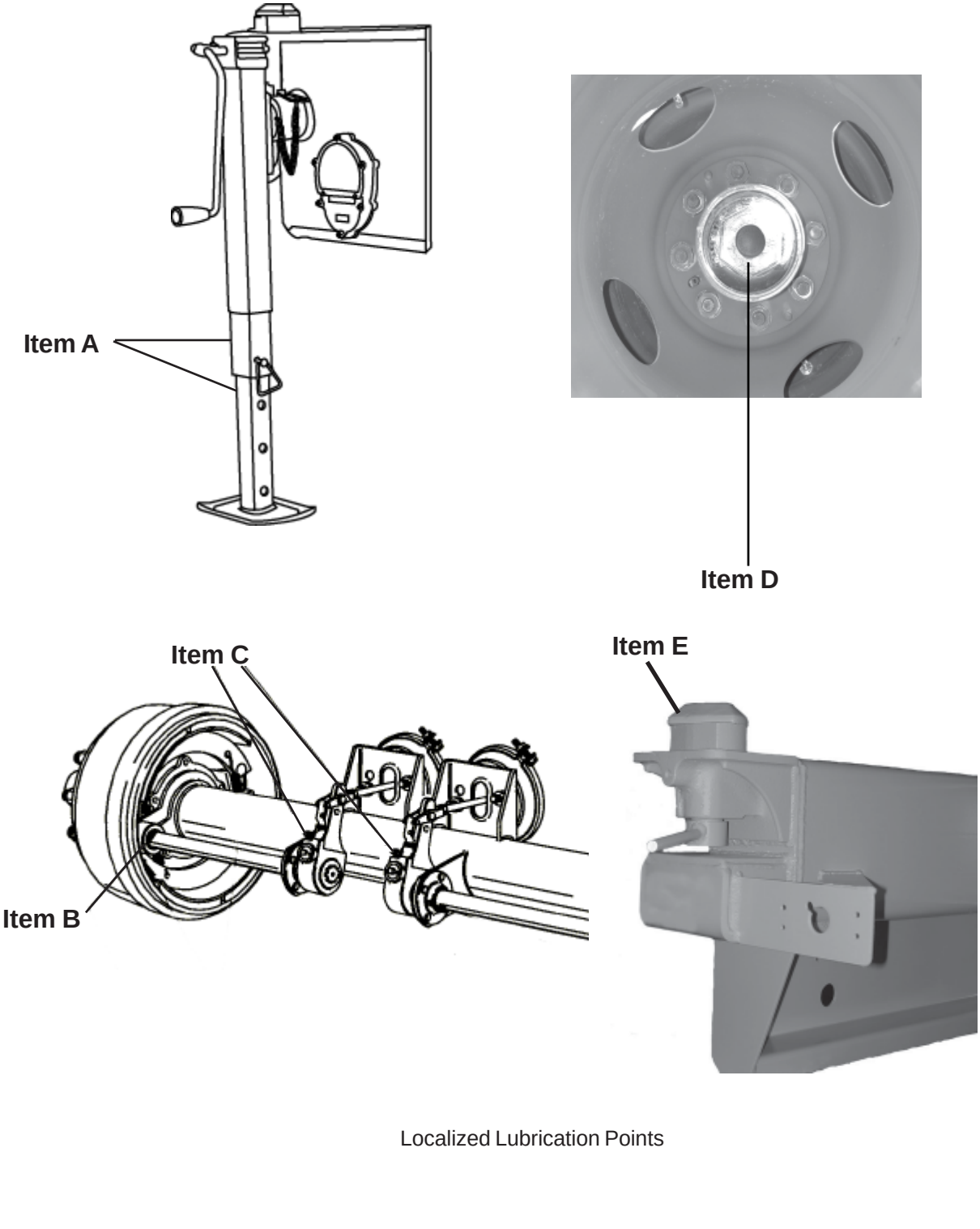
2. LEVELING JACK - Annually extend legs, wipe clean and apply NGLI Grade 1 to unpainted surfaces.

3. ISO LOCKS (Lockdowns) -Semiannually wipe clean and apply NGLI Grade 1 to the ISO Lock shaft.

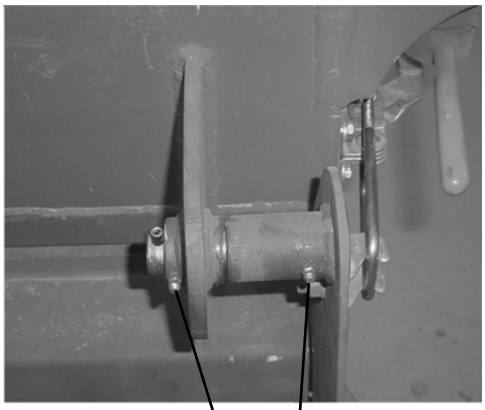
4. OIL CAN POINT - Semiannually lubricate the tool box hinges with Oil, SAE 10.

5. INTERVALS - Lubrication intervals will be regularly scheduled and performed during regular scheduled PMCS services whenever possible.

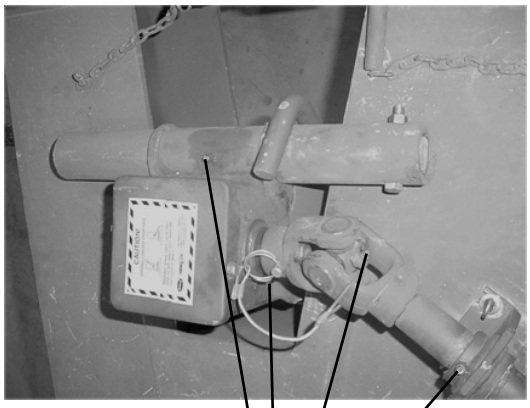
6. BUMPER HINGES - There is a total of eight (8) grease fittings.



Localized Lubrication Points



Item F



Item G

Localized Lubrication Points

INTRODUCTION

Scope.

This RPSTL authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of Organizational, Direct Support and General Support Maintenance of the Chassis, Containerized Kitchen Trailers. It authorizes the requisitioning, issue, and disposition of spares, repair parts, and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

General.

In addition to the Introduction, this Repair Parts and Special Tools List (RPSTL) is divided into the following sections:

a. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in 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 for reparable special tools are also listed in the section.

b. 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.

Explanation of Columns.

a. ITEM NO. [Column (l)]. 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:

Source Code	Maintenance Code		Recoverability Code
xx	xx		x
1st two positions	3d position	4th position	5th position
How you get an item	Who can install, replace, or use the item	Who can do complete repair* on the item	Who determines disposition on an - unserviceable item

*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 Level) MF-(Made at DS/AVUM Level) MH-(Made at GS Level) ML-(Made at Specialized Repair (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. If the item is authorized to you by the 3d Activity position code of the SMR code, but the source code indicates it is made at a Material group of this RPSTL.

AO-(Assembled by Org/AVUM Level) AF-(Assembled by DS/AVUM Level) AH-(Assembled by GS Level) 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 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 FSCM 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".

(2) Maintenance Code. Maintenance code tells 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 and 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 Organizational Maintenance.
O	Organizational level can remove, replace, and use the item.
F	Direct Support level can remove, replace, and use the item.

Code	Application/Explanation

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.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes). 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 - Non-reparable. No repair is authorized.

B - No repair is authorized. (No parts or special tools are authorized for the maintenance of a “B” coded item) . However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) Recoverability Code. Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR code as follows:

Code	Application/Explanation

Z - Non-repairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the 3d position of the SMR code.

Code Application/Explanation

O - Repairable item. When uneconomically repairable, condemn and dispose of the item at Organizational or Aviation unit level.

F - Repairable item. When uneconomically repairable, condemn and dispose of the item at the Direct Support or Aviation intermediate level.

H - Repairable item. When uneconomically repairable, condemn and dispose of the item at the General Support level.

D - Repairable item. When beyond lower level repair capability, return to Depot. Condemnation and disposal of the item is not authorized below Depot level.

L - Repairable 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. NSN [Column (3)]. The National Stock Number (NSN) is 13-digit numeric code which is used to identify the item in the National Parts and Supplies Database.

d. PLISN [Column (4)] The Provisioning List Item Sequence Number (PLISN) is a four digit code that represents the sequentially assigned value for all items contained in the system/equipment breakdown.

e. CAGEC [Column (5)]. The Commercial And Government Entity Code (CAGEC) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc. that supplies the item.

f. PART NUMBER [Column (6)]. 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.

g. DESCRIPTION AND USABLE ON CODE (UOC) [Column (7)]. 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 C1 (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 line item 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 WP0031 00-8, Special Information).

(8) In the Special Tools List section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipment supported exceeds density spread indicated on the BOI, the total authorization is increased proportionately.

(9) The statement “END OF FIGURE” appears just below the last item.

h. QTY [Column (8)]. 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.

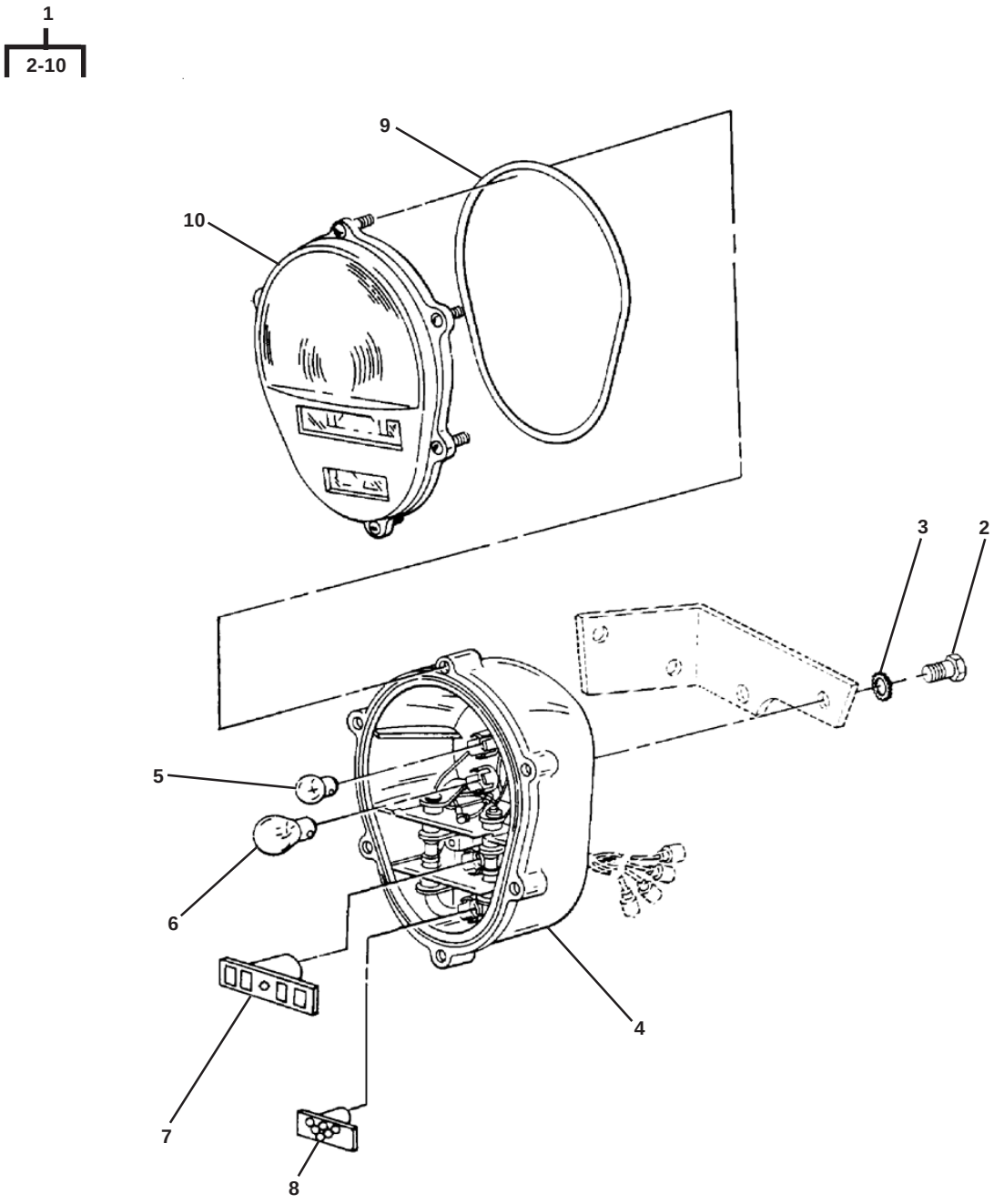


FIGURE 1. REAR COMPOSITE MARKER LIGHT ASSEMBLY.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
						GROUP: 0015 LIGHTS FIG.1 REAR COMPOSITE MARKER LIGHT ASSEMBLY	
1	PAOOO	6220-01-093-4439	ACKJ	96906	MS52125-2	STOPLIGHT,TAILLIGHT,VEHICULAR	2
2	PAOZZ	5305-00-269-3211	ACME	96906	MS90725-60	.SCREW,CAP,HEXAGON HEAD	2
3	PAOZZ	5310-00-637-9541	ACFQ	96906	MS35338-46	.WASHER, LOCK	2
4	PAOZZ	6220-01-067-4717	ACKP	19207	11639520	.HOUSING,LIGHT	1
5	PAOZZ	6240-00-019-3093	ACKU	96906	MS15570-623	.LAMP,INCANDESCENT	1
6	PAOZZ	6240-01-447-3779	ACKA	96906	MS35478-1683	.LAMP,INCANDESCENT	1
7	PAOZZ	6220-01-284-2709	ACLG	19207	12360850-1	.LAMP,MARKER,CLEARANCE	1
8	PAOZZ	6220-01-297-3217	ACLM	19207	12360870-2	.STOPLIGHT,VEHICULAR	1
9	PAOZZ	5331-00-462-0907	ACLS	19207	11639519-2	.O-RING	1
10	PAOZZ	6220-00-179-4324	ACLY	19207	11639535	.LENS, LIGHT	1

END OF FIGURE

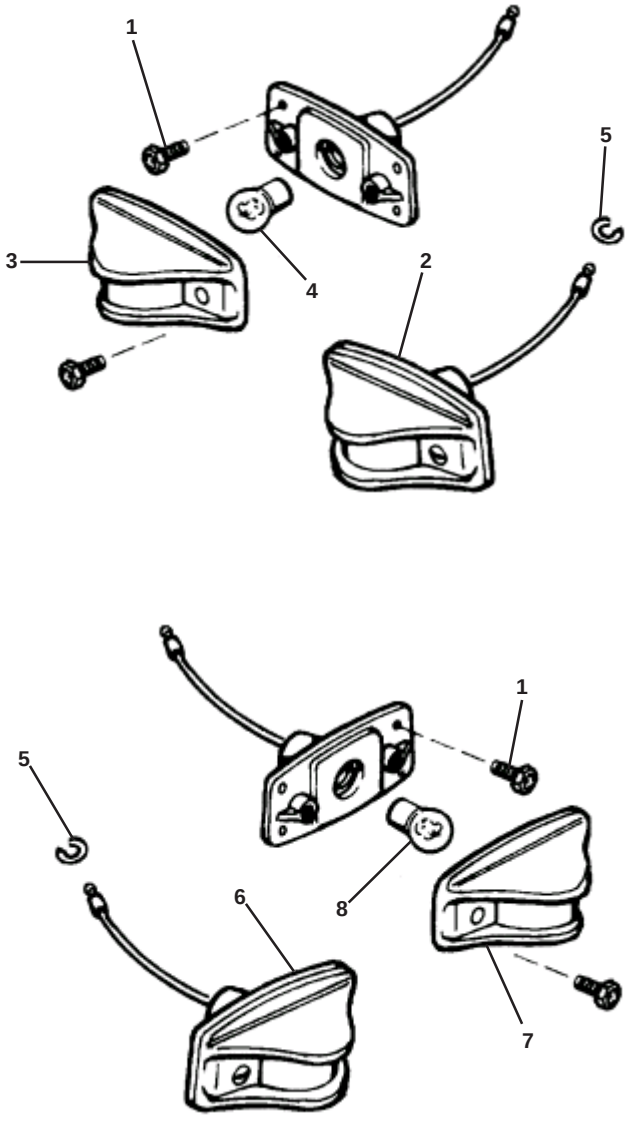


FIGURE 2. CLEARANCE LIGHT ASSEMBLY.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP: 0015 LIGHTS FIG. 2 CLEARANCE LIGHTS	
1	PAOZZ	5305-00-984-6214	ACPA	96906	MS35206-267	SCREW, MACHINE, 10-24 UNC X1.0	28
2	PAOOO	6220-00-577-3434	ACNJ	96906	MS35423-1	LIGHT,MARKER,CLEARANCE	2
3	PAOZZ	6220-00-299-7425	ACNP	96906	MS35421-1	.LENS,LIGHT	1
4	PAOZZ	6240-00-019-0877	ACNU	96906	MS15570-1251	.LAMP,INCANDESCENT	1
5	PAOZZ	5310-00-045-3296	ACPG	96906	MS35338-43	WASHER,LOCK	28
6	PAOOO	6220-00-726-1916	ACMQ	96906	MS35423-2	LIGHT,MARKER,CLEARANCE	5
7	PAOZZ	6220-00-299-7426	ACMW	96906	MS35421-2	.LIGHT,MARKER,CLEARANCE	1
8	PAOZZ	6240-00-019-0877	ACNC	96906	MS15570-1251	.LAMP	1

END OF FIGURE

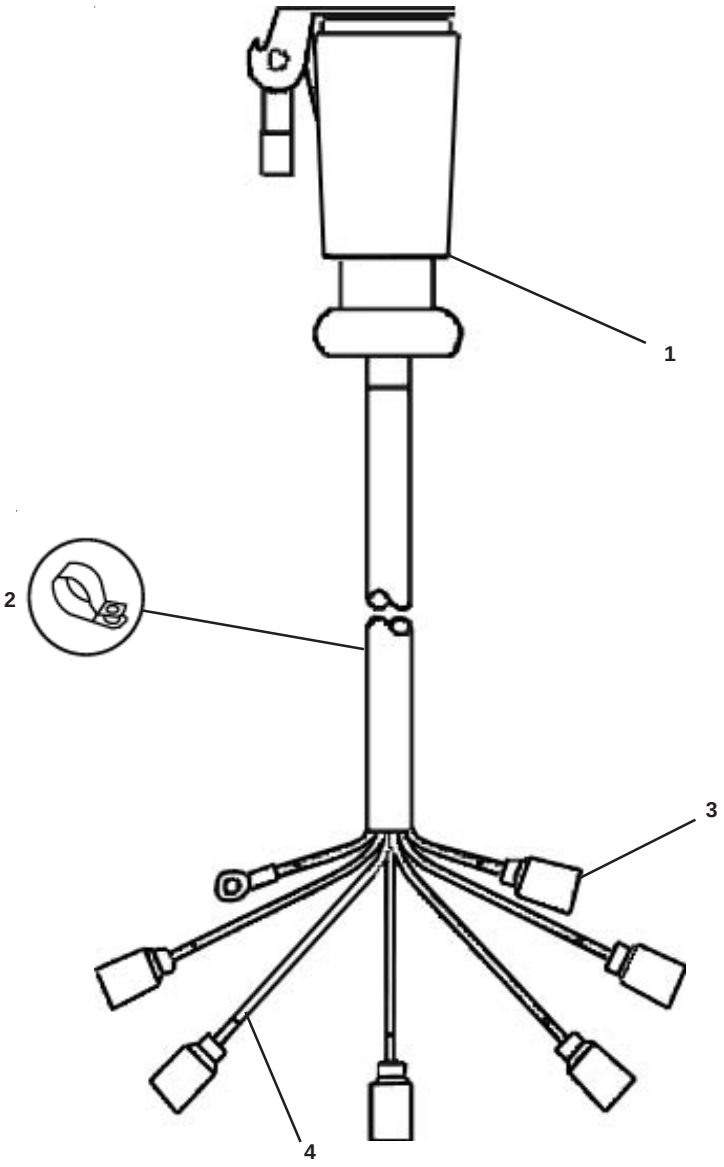


FIGURE 3. INTERVEHICULAR CABLE.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP: 0015 WIRING HARNESSES FIG. 3. INTERVEHICULAR CABLE	
1	PAOZZ	6150-01-487-4967	ACJE	2W888	1103-1440-01	INTERVEHICULAR CABLE	1
2	PAOZZ	5340-01-487-4657	ACGP	64466	1-3414	CLAMP, LOOP	1
3	PAOZZ	5935-00-059-2841	ACJW	96906	MS75020-1	CONNECTOR,PLUG,ELECTRICAL	1
4	PAOZZ		ACKC	39428	12405T51	BAND,MARKER	34

END OF FIGURE

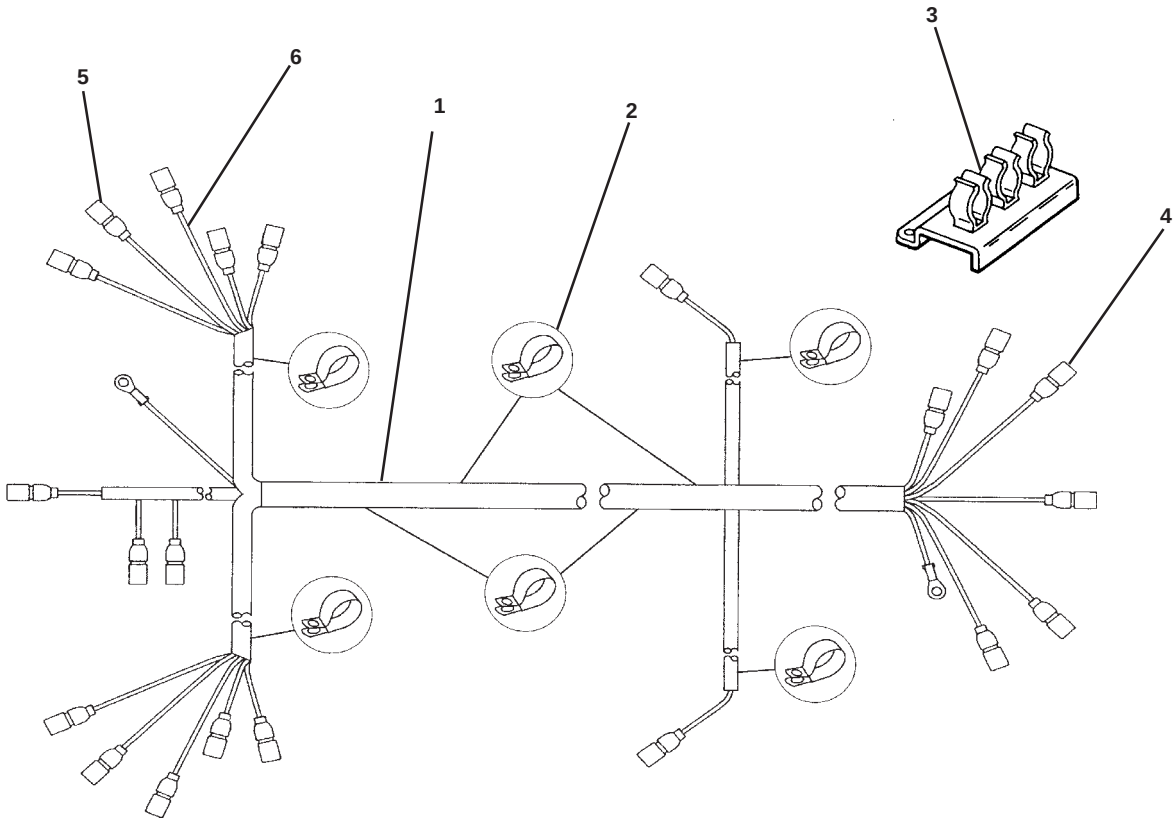


FIGURE 4. CHASSIS WIRING HARNESS.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP:0015 WIRING HARNESSES FIG. 4 CHASSIS WIRING HARNESS	
1	PAOZZ	6150-01-487-4966	ACHG	2W888	1103-1430-01	WIRING HARNESS	1
2	PAOZZ	5340-01-487-4657	ACPM	64466	1-3414	CLAMP, LOOP	9
3	PAOZZ	5340-00-611-7883	ACPS	19207	8747908	STRAP, RETAINING	1
4	PAOZZ	5935-00-167-7775	ACHS	96906	MS27144-1	CONNECTOR,PLUG,ELECTRICAL	1
5	PAOZZ	5935-00-462-6603	ACJQ	96906	MS27142-2	CONNECTOR,PLUG,ELECTRICAL	1
6	PAOZZ		ACHY	39428	12405T51	BAND,MARKER	78

END OF FIGURE

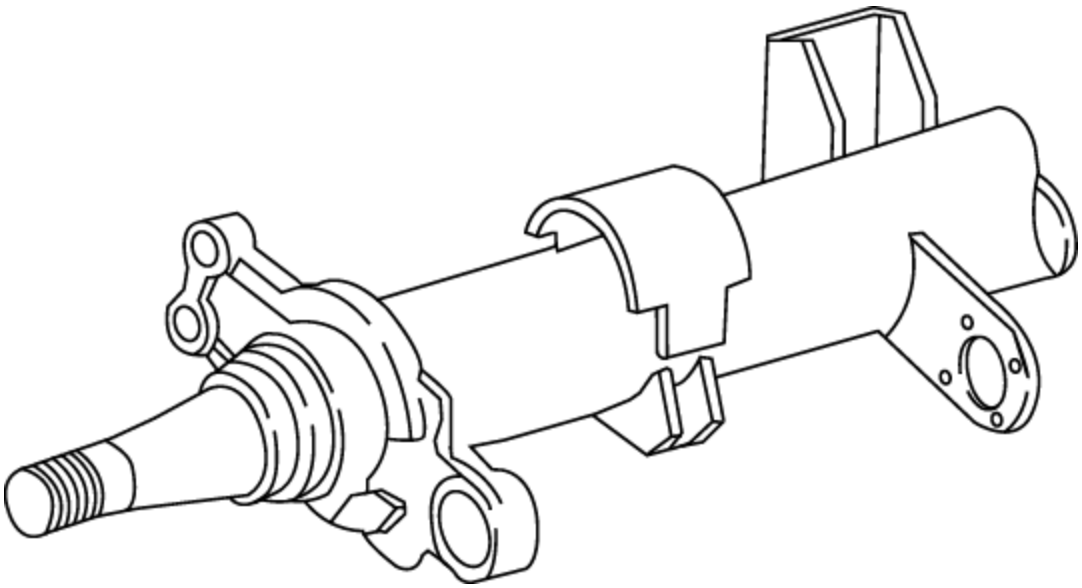


FIGURE 5. AXLE

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0019 AXLES FIG. 5. AXLE	
1	XAOOZ		AAYQ	15460	D12000	AXLE,VEHICULAR, NONDRIVING	2
					END OF FIGURE		

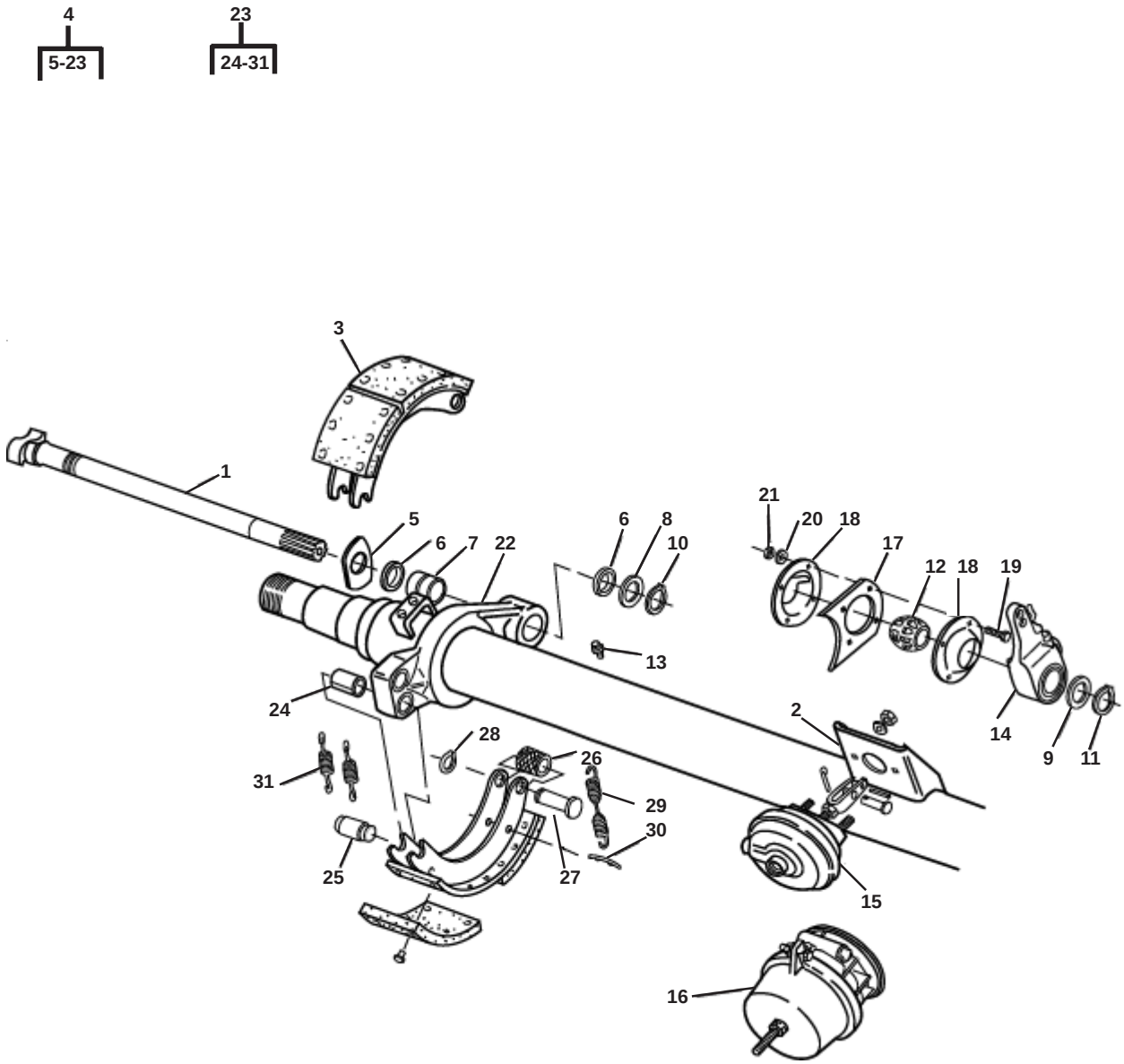


FIGURE 6. BRAKE ASSEMBLY

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0016 SERVICE BRAKES FIG.6. BRAKE ASSEMBLY	
1	XDOOZ		ABDG	15460	034-188-00	CAMSHAFT,ACTUATING,BRAKE SHOE	1
1	XDOOZ		ABDM	15460	034-189-00	CAMSHAFT,ACTUATING,BRAKE SHOE	1
2	XDOOZ		ABDS	15460	034-048-00	BRACKET,MOUNTING	2
3	PAOOO	2530-01-487-4619	ABDY	15460	040-322-01	BRAKE SHOE SET	2
3	PAOZZ	2530-01-487-4625	ABEE	15460	040-322-03	.BRAKE SHOE RH	1
3	PAOZZ	2530-01-487-4628	ABEK	15460	040-322-02	.BRAKE SHOE LH	1
4	KFFZZ		ABEQ	15460	K71-101-00	PARTS KIT,CAMSHAFT	2
5	PAFZZ	5310-01-487-4639	ABEW	15460	005-074-00	.WASHER, FLAT PART OF KIT K71-101-00	1
6	PAFZZ	5330-01-487-4641	ABFC	15460	010-052-00	.SEAL,PLAIN PART OF KIT K71-101-00	2
7	PCFZZ	3120-01-487-4955	ABFJ	15460	014-056-00	.BUSHING,SLEEVE PART OF KIT K71-101-00	1
8	PAFZZ	5310-01-487-4642	ABFP	15460	005-075-00	.WASHER, FLAT PART OF KIT K71-101-00	1
9	PAFZZ	5310-01-487-4644	ABFU	15460	005-134-00	.WASHER, FLAT PART OF KIT K71-101-00	1
10	PAFZZ	5325-01-487-4646	ABGA	15460	069-020-00	.RING,RETAINING PART OF KIT K71-101-00	1
11	PAFZZ		ABGF	15460	069-078-00	.RING,RETAINING PART OF KIT K71-101-00	1
12	PAFZZ	5365-01-487-5110	ABGL	15460	014-058-00	.BUSHING,NONMETALIC PART OF KIT K71-101-00	1
13	PAFZZ		ABGR	15460	061-006-00	.FITTING,LUBRICATION PART OF KIT K71-101-00	1
14	PFOZZ	2530-01-487-4633	ABGX	15460	055-040-07	ADJUSTER,SLACK,BRAKE	2
15	PFOZZ	2530-01-487-4637	ABHD	15460	034-059-00	CHAMBER,AIR BRAKE	2
16	XBOZZ		ABHK	15460	034-060-00	SPRING BRAKE	2
17	XAOZZ		ABHQ	15460	034-031-00	PLATE, CAMSHAFT SUPPORT BRACKET	2
18	XBOZZ		ABHW	15460	034-032-00	PLATE BUSHING RETAINER	4
19	PAFZZ	5306-01-487-5078	ABJC	15460	007-139-00	BOLT, MACHINE	8
20	PAFZZ	5310-01-487-4647	ABJJ	15460	005-079-00	WASHER,LOCK	8
21	PAFZZ	5310-01-487-4649	ABJP	15460	006-099-00	NUT,PLAIN,HEXAGON	8
22	XAOZZ		ABJU	15460	036-113-02	BRAKE SPIDER	2
23	KFFZZ		ABKX	15460	K71-460-00	PARTS KIT,BRAKE SHOE	1
24	PAFZZ	3120-01-487-4957	ABLD	15460	014-068-00	.BUSHING,SLEEVE PART OF KIT K71-460-00	2
25	PAFZZ	5315-01-487-4638	ABLK	15460	056-017-00	.PIN,SHOULDER,HEADLESS PART OF KIT K71-460-00	2
26	PAFZZ	5365-01-487-4959	ABLS	15460	014-057-00	.BUSHING,SLEEVE PART OF KIT K71-460-00	1
27	PAFZZ	5315-01-487-4640	ABLW	15460	056-010-00	.PIN,STRAIGHT,HEADED PART OF KIT K71-460-00	2
28	PAFZZ	5325-01-487-4643	ABMC	15460	069-018-00	.RING,RETAINING PART OF KIT K71-460-00	2
29	PAFZZ	5360-01-487-4645	ABMJ	15460	046-092-00	.SPRING,HELICAL,EXTENSION PART OF KIT K71-460-00	1
30	PAFZZ	5315-01-487-4648	ABMP	15460	056-018-00	.PIN,STRAIGHT,HEADLESS PART OF KIT K71-460-00	2
31	PAFZZ		ABMU	15460	046-097-00	.SPRING,HELICAL,EXTENSION PART OF KIT K71-460-00	2

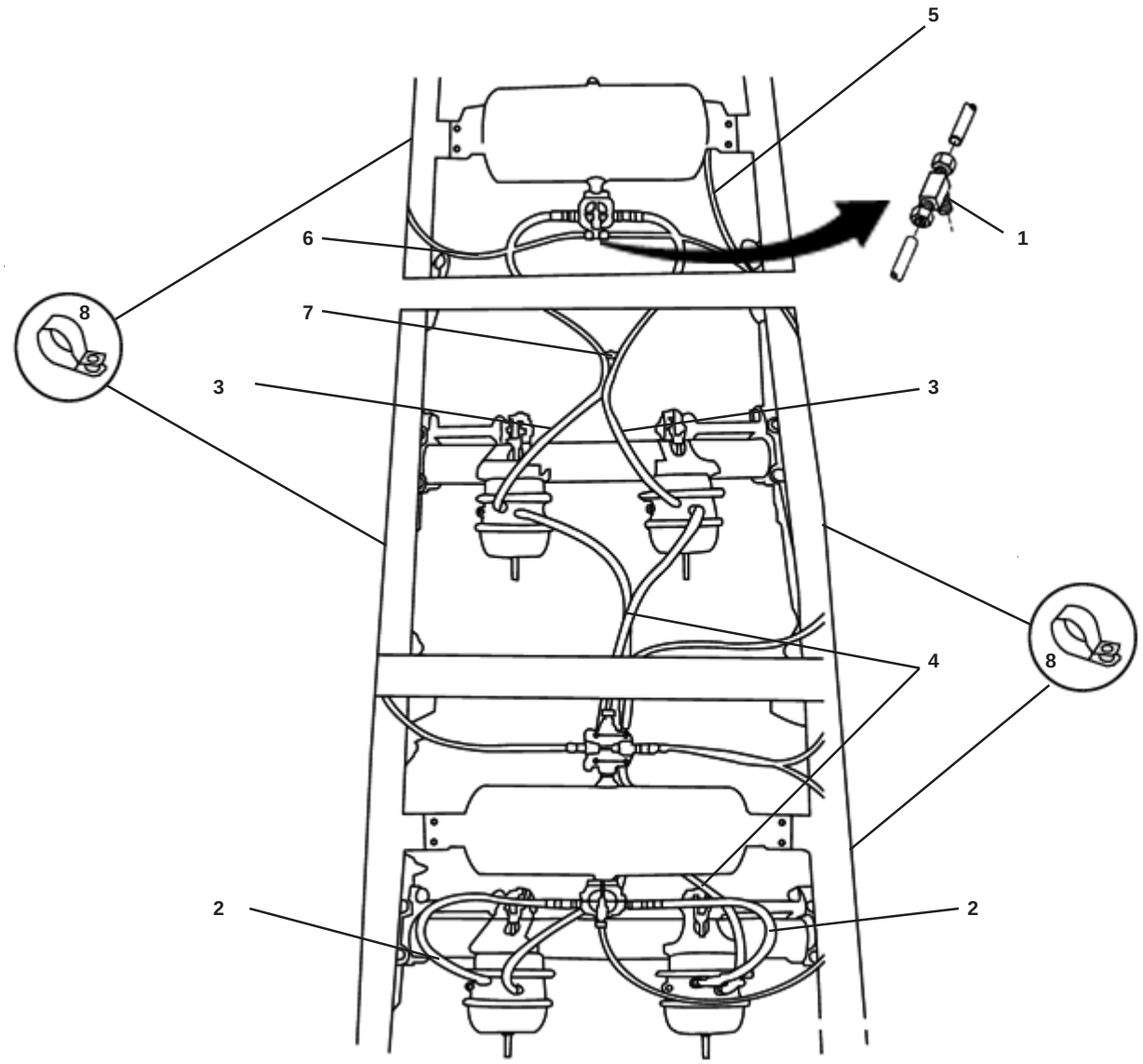


FIGURE 7. AIR BRAKE SYSTEM.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0016 AIR BRAKE SYSTEM FIG. 7. AIR BRAKE SYSTEM	
1	PAOZZ	4730-01-097-0386	ACCD	93061	272NTA-6-4	TEE,PIPE TO TUBE	1
2	PCOZZ	4720-01-225-0661	ACEG	06721	16628	HOSE, ASSEMBLY,NONMETALLIC	2
3	PCOZZ	4720-01-487-4704	ACEM	06721	16660	HOSE, ASSEMBLY,NONMETALLIC	2
4	PCOZZ	4720-01-487-4705	ACES	06721	16645	HOSE, ASSEMBLY,NONMETALLIC	4
5	PCOZZ	4720-01-182-9068	ACFW	93061	PFT-8B-BLK-100	TUBING,NONMETALLIC	1
6	PCOZZ	4720-01-182-9067	ACGC	93061	PFT-6B-BLK-100	TUBING,NONMETALLIC	1
7	PAOZZ	4730-01-323-1025	ACGU	06721	100469D	SEPARATOR, HOSE,	8
8	PAOZZ	5340-01-487-4655	ACGJ	64466	1-3814	CLAMP, LOOP	6

END OF FIGURE

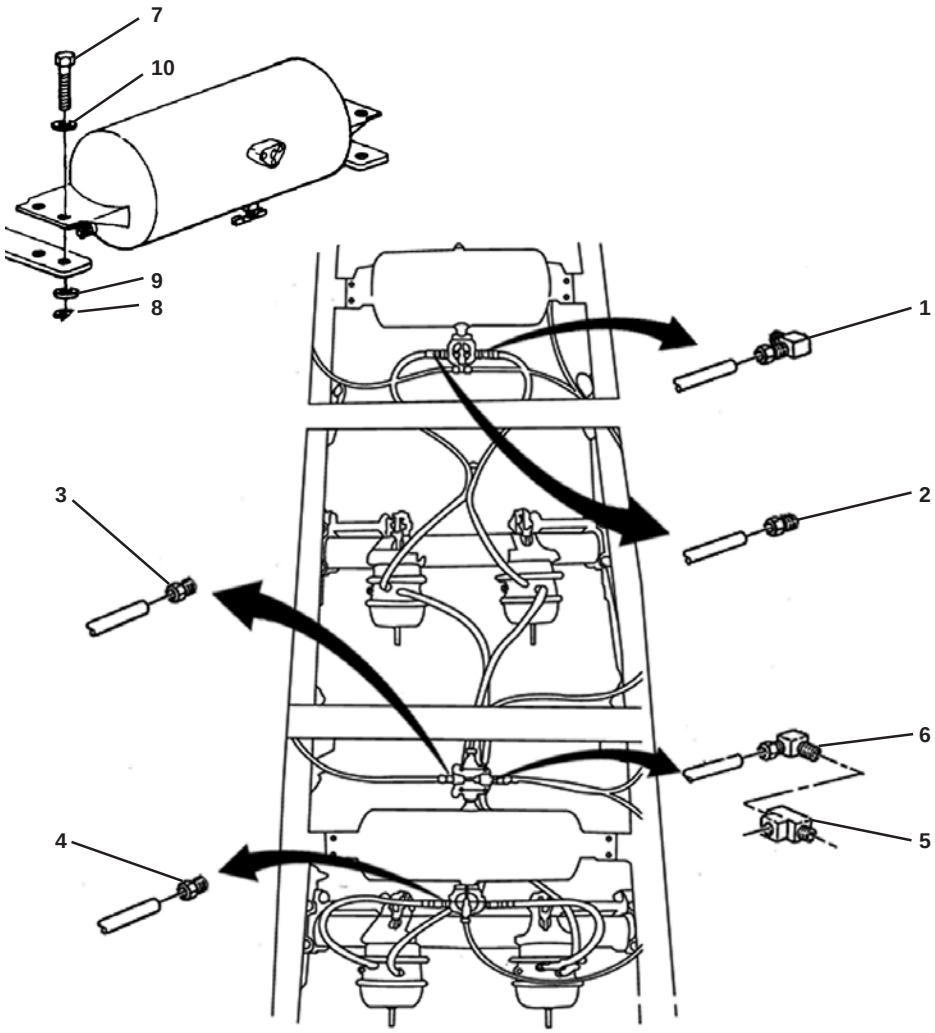


FIGURE 8. AIR BRAKE SYSTEM

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0016 AIR BRAKE SYSTEM FIG. 8. EMERGENCY RELAY VALVE	
1	PAOZZ	4730-00-289-0155	ACAQ	93061	269NTA-6-6	ELBOW,PIPE TO PIPE	2
2	PAOZZ	4730-01-134-7759	ACBG	93061	68NTA-8-8	ADAPTER,STRAIGHT	2
3	PAOZZ	4730-01-596-9128	ACBL	93061	68NTA-6-6	ADAPTER,STRAIGHT	2
4	PAOZZ	4730-01-091-8032	ACBR	93061	68NTA-8-6	ADAPTER,STRAIGHT	1
5	PAOZZ	4730-00-469-7797	ACBX	93061	2225P-6	TEE, PIPE	1
6	PAOZZ	4730-01-095-7717	ACCK	93061	269NTA-8-6	ELBOW, PIPE TO TUBE	1
7	PAOZZ	5305-01-325-8387	ACEX	96906	MS90725-64	SCREW,CAP,HEXAGON HEAD	8
8	PAOZZ	5310-00-087-4652	ACFD	96906	MS51922-17	NUT,SELF LOCKING	8
9	PAOZZ	5310-00-087-7493	ACFK	96906	MS27183-13	WASHER, FLAT	16
10	PAOZZ	5310-00-637-9541	ACMK	96906	MS35338-46	WASHER, LOCK	8

END OF FIGURE

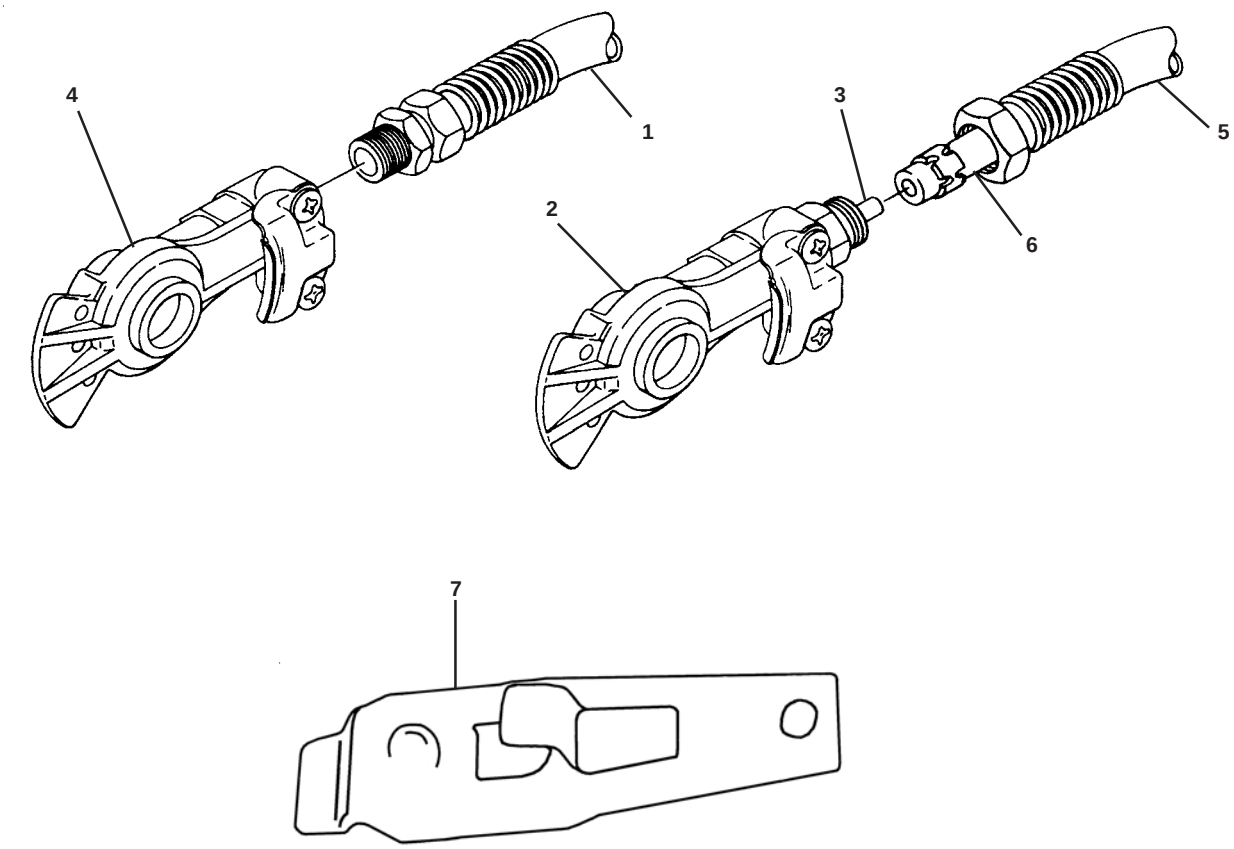


FIGURE 9. GLADHAND CONNECTIONS

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0017 AIR BRAKE SYSTEM FIG. 9.GLADHAND CONNECTIONS	
1	PCOZZ	4720-01-487-4702	ACEA	06721	11961	HOSE,ASSEMBLY,NONMETALLIC	1
2	PAOZZ	4730-01-096-3204	ACDJ	06721	N20415NA	COUPLING HALF,QUICK DISCONNECT EMERGENCY	1
3	PAOZZ	2590-01-180-6105	ACCW	06721	11300	NIPPLE,FRAME	2
4	PAOZZ	4730-00-595-0083	ACQP	06721	N20415PA	COUPLING HALF,QUICK DISCONNECT SERVICE	1
5	PCOZZ	4720-01-479-6013	ACDU	19207	12442819-002	HOSE,ASSEMBLY,NONMETALLIC	1
6	PAOZZ	4730-00-542-5598	ACDC	01276	2096-8S	COUPLING,PIPE	2
7	PAOZZ	2530-00-270-3878	ADAS	06721	N13048	DUMMY COUPLING,AUTOMOTIVE AIR BR	2

END OF FIGURE

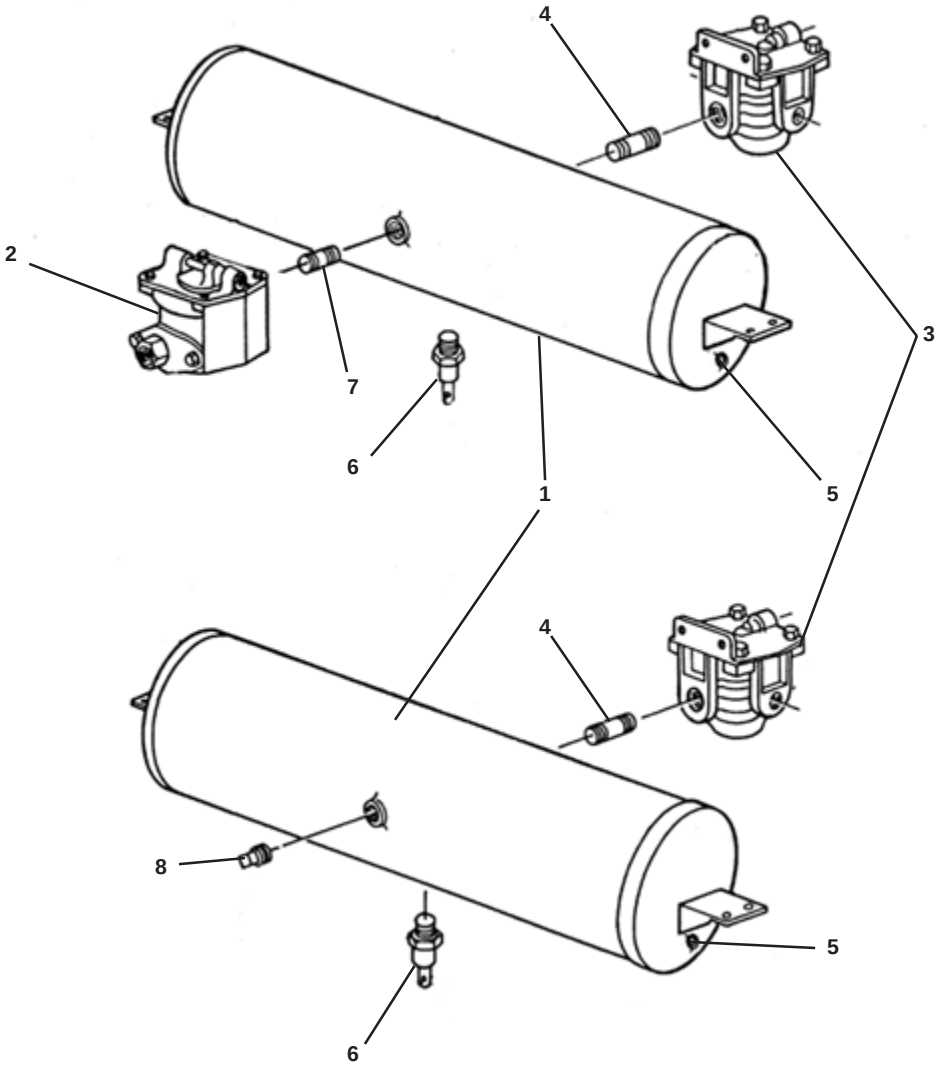


FIGURE 10. RELAY VALVE, TRAILER VALVE, AIR TANK

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0016 AIR BRAKE SYSTEM FIG. 10. EMERGENCY RELAY VALVE	
1	PAOZZ	2530-00-469-7847	ABZQ	06721	1984	TANK,PRESSURE	2
2	PAOZZ	2530-01-487-4652	ABZW	10125	110170	VALVE,BRAKE,PNEUMATIC	1
3	PAOZZ	2530-01-487-4663	ACAC	06721	N30108BH	VALVE,BRAKE,PNEUMATIC	2
4	PAOZZ	4730-01-487-4676	ACAJ	01276	2083-12-8	ADAPTER, PIPE	2
5	PAOZZ	4730-01-487-4686	ACAU	93061	211P-6	PLUG, PIPE	5
6	PAOZZ	4820-00-849-1220	ACBA	93061	DC604-4	COCK,DRAIN	2
7	PAOZZ	4730-01-487-4676	ACAJ	01276	2083-12-8	ADAPTER,AIR COMPRESSOR, VEHICULAR BRAKE	1
8	PAOZZ	4730-01-269-2415	ACCQ	93061	211P-12	PLUG, PIPE	1

END OF FIGURE

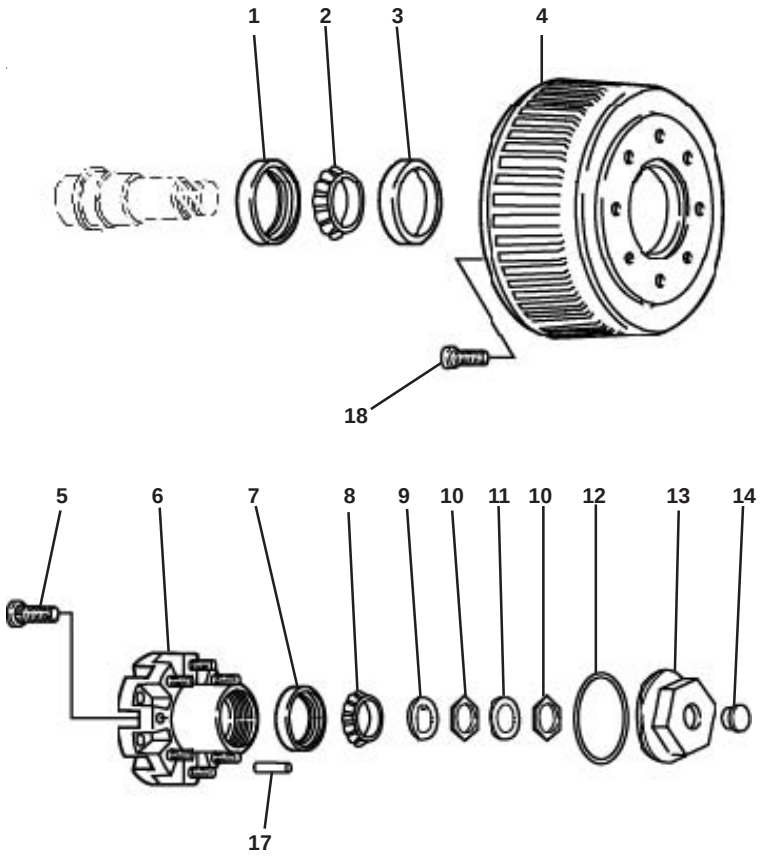


FIGURE 11. HUB AND DRUM ASSEMBLY

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0016 SERVICE BRAKES FIG.11. HUB AND DRUM ASSEMBLY	
1	PCOZZ	5330-01-417-7761	AAZC	15460	010-056-00	SEAL,PLAIN ENCASED	2
2	PAOZZ	3110-00-100-3095	AAZJ	15460	3984	BEARING,BALL,ANNULAR	2
3	PAOZZ	3110-00-100-0380	AAZP	15460	3920	BEARING,SLEEVE	2
4	PAFZZ		AAZU	15460	009-028-01	BRAKE DRUM	2
5	PAOZZ		AAZZ	15460	007-115-00	STUD,SELF LOCKING	16
6	PAOZZ		ABAF	15460	008-214-08	HUB BODY	2
7	PAOZZ		ABAL	15460	031-021-01	BEARING,SLEEVE	2
8	PAOZZ		ABAR	15460	031-021-02	BEARING,BALL,ANNULAR	2
9	PAOZZ		ABAX	15460	005-060-00	WASHER,KEY	2
10	PAOZZ		ABBD	15460	006-084-00	NUT,PLAIN,HEXAGON	4
11	PAOZZ		ABBK	15460	005-059-00	WASHER,KEY	2
12	PAOZZ	5331-01-487-4635	ABBQ	15460	010-050-00	O-RING	2
13	PAOZZ	5340-01-487-4610	ABBW	15460	021-036-00	CAP,PROTECTIVE,DUST& MOISTURE SEAL	2
14	PAOZZ	5340-01-487-4614	ABCC	15460	046-032-00	PLUG,PROTECTIVE,DUST& MOISTURE SEAL	2
15	PAOZZ	2530-01-487-4612	ABCJ	15460	033-052-01	RING,SIDE,AUTOMOTIVE WHEEL	2
16	PAOZZ	5310-01-336-6856	AAKP	15460	006-109-00	NUT,PLAIN,CONE SEAT,HEXAGON	16
17	PAOZZ	5315-01-487-4615	ABCU	15460	056-008-00	PIN,STRAIGHT,HEADLESS	2
18	PAOZZ	5307-01-487-4636	ABDA	15460	007-244-00	STUD,SELF LOCKING	16

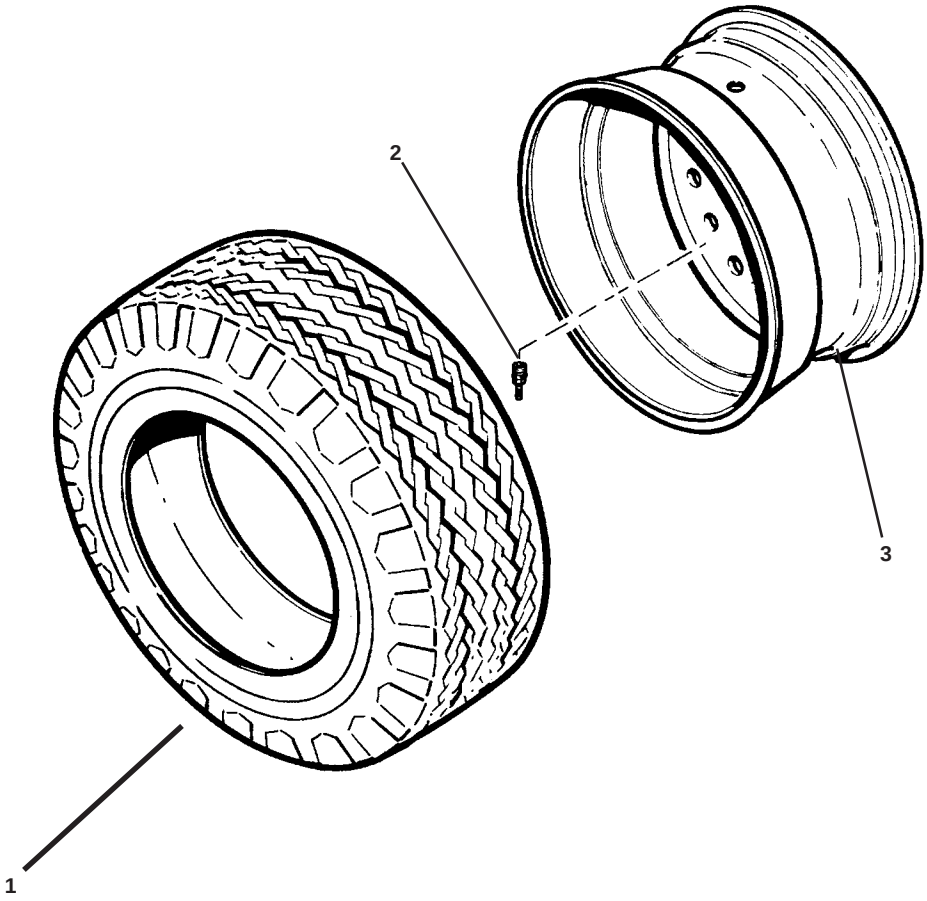


FIGURE 12. TIRE

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0012 TIRES FIG. 12. TIRE	
1	PCOZZ		ACSG	73842	LT235/85R16	TIRE,PNEUMATIC,VEHICLE	9
2	PAOZZ	2640-00-555-2842	ACVM	27783	3640SD	VALVE, ,PNEUMATIC TIRE	9
3	PAOZZ	2530-01-487-4711	ACVG	15460	017-279-25	WHEEL,PNEUMATIC TIRE	9

END OF FIGURE

6

7-11

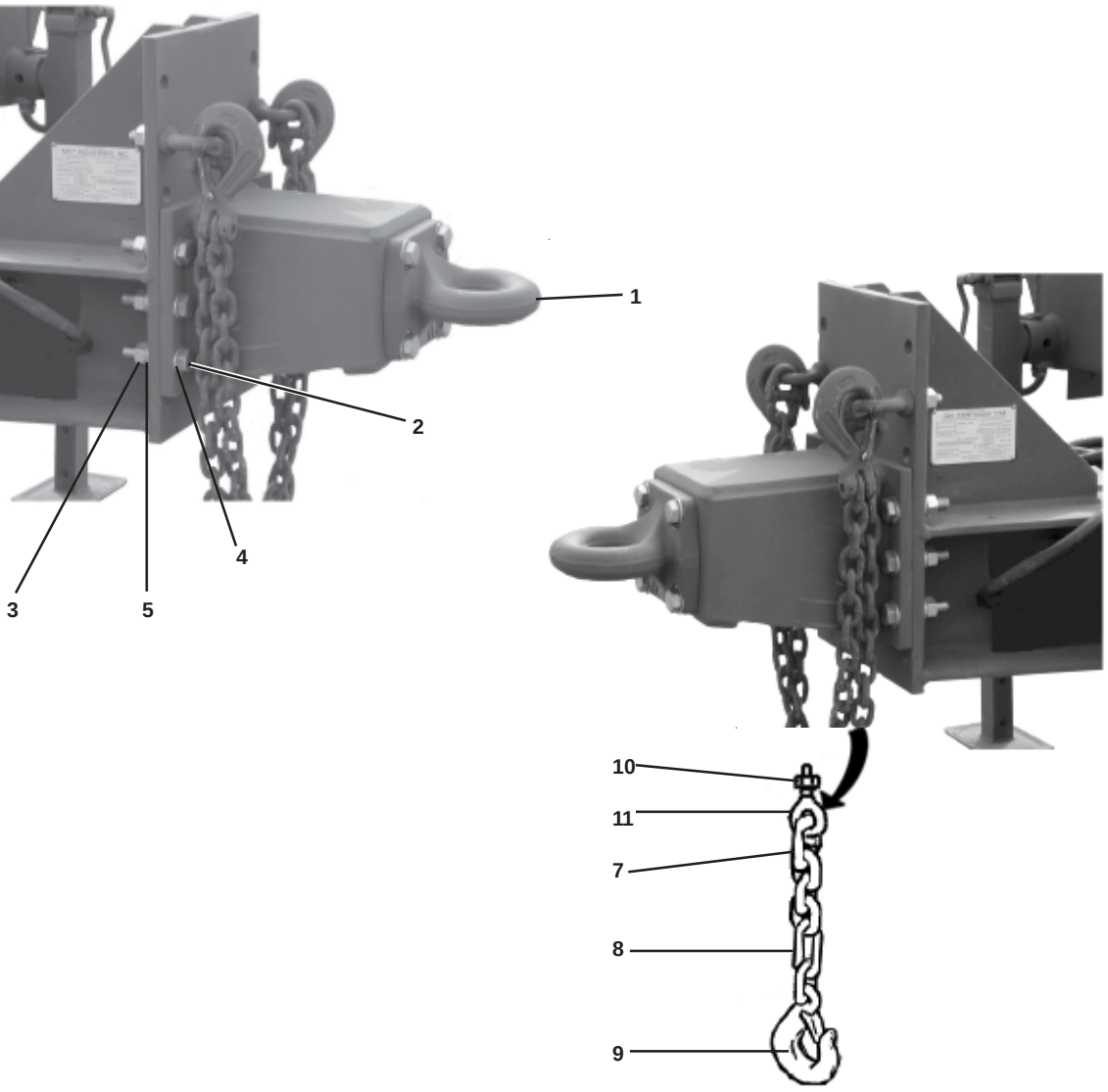


FIGURE 13. LUNETTE, SAFETY CHAINS

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0017. PINTLES AND TOWING ATTACHMENTS FIG. 13. LUNETTE, SAFETY CHAINS	
1	PAOZZ	2540-01-164-7252	ACQE	9X737	BDB1385	DRAWBAR	1
2	PAOZZ	5305-00-947-4356	ACSY	96906	MS90728-193	SCREW, HEXAGON HEAD	6
3	PAOZZ	5310-00-763-8922	ACTQ	96906	MS51967-24	NUT,PLAIN,HEXAGON	6
4	PAOZZ	5310-01-251-2925	ACUC	96906	MS51412-14A	WASHER, FLAT	12
5	PAOZZ	5310-01-339-6531	ACUP	96906	MS35338-51	WASHER, LOCK	6
6	PAOOO	4010-01-487-5087	ACQQ	2W888	1103-1740-01	CHAIN ASSEMBLY,SINGLE LEG	2
7	PAOZZ	4010-01-041-9751	ACRC	13743	664241	.LINK,CHAIN,END	2
8	PAOZZ	4010-01-487-5260	ACRJ	1H082	677013	.CHAIN,WELDLESS	2
9	PAOZZ	4030-01-487-4710	ACRP	1H082	658319	.HOOK,HOIST	2
10	PAOZZ	5310-00-067-6356	ACRU	96906	MS51922-57	.NUT,SELF- LOCKING,HEXAGON	2
11	PAOZZ	5306-01-487-4722	ACQW	76257	S279	.BOLT,EYE	2

END OF FIGURE

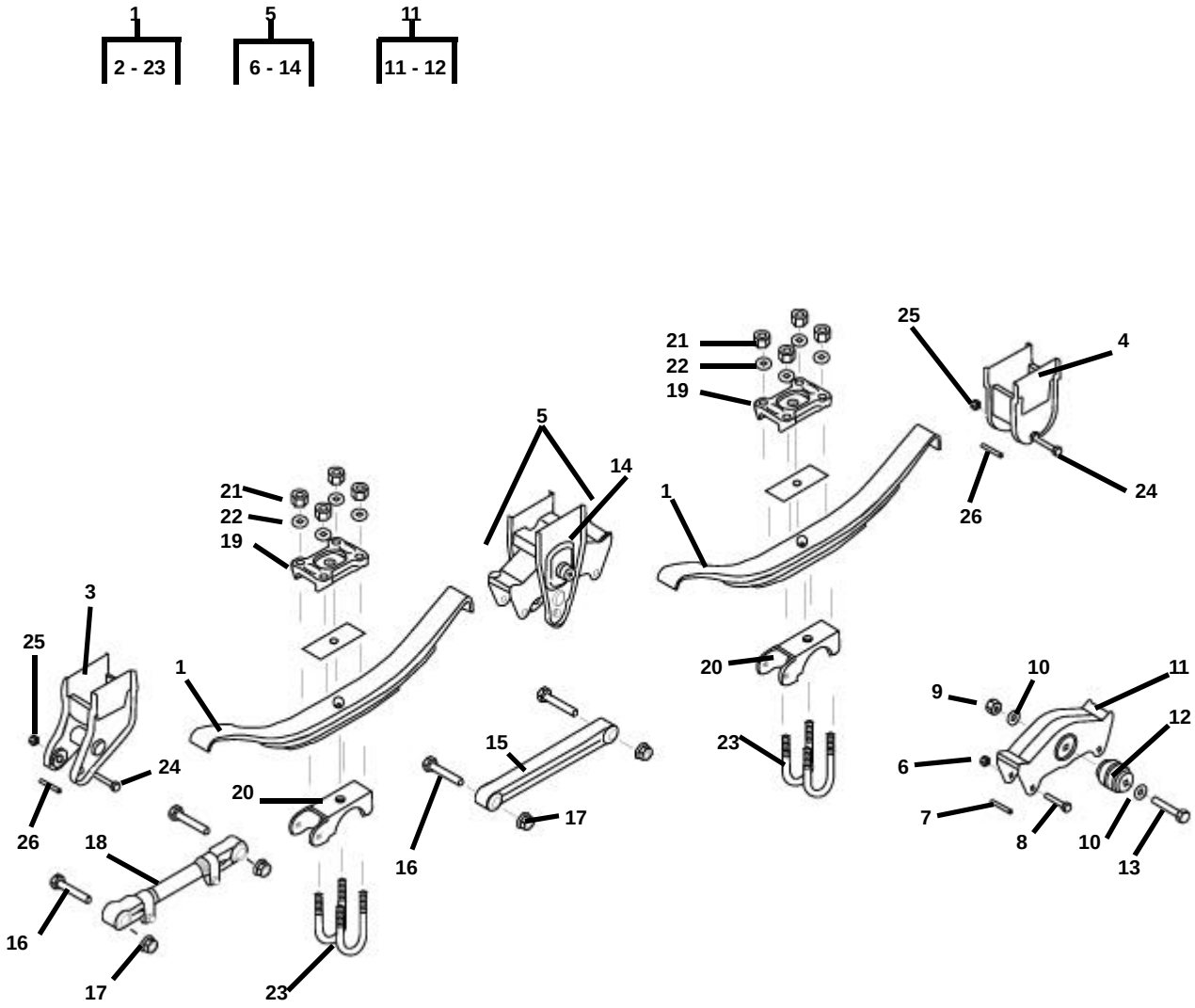


FIGURE 14. SPRING ASSEMBLY.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0018 SPRING ASSEMBLY FIG.14. SPRING ASSEMBLY	
1	XDFFF		ABNF	92967	H9700T-UN/MT-3/4	SUSPENSION KIT	1
2	XDFFF		ABMZ	92967	00356-00	.SPRING,SUSPENSION	4
3	XDFFF		ABNL	92967	7701-02	.SPRING HANGER,FRT	2
4	XDFFF		ABNR	92967	7703-02	.SPRING HANGER,REAR	2
5	XDFFF		ABNX	92967	16319-02	.HANGER ROCKER ASSY	2
6	PAFZZ	5310-01-099-6539	ABPD	92967	37-03	.NUT,SELF LOCKING,HEXAGON	4
7	PAFZZ	5365-01-420-5031	ABPJ	92967	756-00	.SPACER,SLEEVE	4
8	PAFZZ	5306-01-487-4650	ABPP	92967	759-00	.BOLT,MACHINE	4
9	PAFZZ	5310-01-487-4651	ABPV	92967	11154-00	.NUT,SELF LOCKING,HEXAGON	2
10	PAFZZ	5310-01-098-7246	ABQB	92967	837-00	.WASHER,FLAT	4
11	XDFFF		ABQH	92967	16158-01	.FABRICATED ROCKER ASSY	2
12	XDFZZ		ABQN	92967	18723-01	.BUSHING,ROCKER	1
13	XDFZZ		ABQZ	92967	16150-01	.SCREW,CAP,HEX	2
14	XDFZZ		ABQT	92967	16171-01	.HANGER,ROCKER	2
15	XDFFF	2530-01-153-1859	ABRW	92967	71500	.TORQUE ROD,TANDEM AXLE	2
16	PAFZZ	5306-01-248-8360	ABSC	92967	719-02	.BOLT,MACHINE	8
17	PAFZZ	5310-01-241-6911	ABSJ	92967	10562-00	.NUT,PLAIN,EXTENDED,WASHER	8
18	XDFFF		ABSP	92967	16398-04	.TORQUE ROD,TANDEM AXLE,ADJ	2
19	XDFZZ		ABSV	92967	09202-00	.TOP PLATE	4
20	XDFZZ		ABSB	92967	705-01	.SPRING SEAT	4
21	PAFZZ	5310-01-194-9211	ABSH	92967	34-04	.NUT,PLAIN,HEXAGON	16
22	PAFZZ	5310-00-809-8540	ABSN	92967	MS27183-25	.PLATE,WASHER	16
23	PAFZZ	5306-01-487-4653	ABST	92967	07816-07	.U-BOLT	8
24	PAFZZ	5306-01-487-4650	ABRQ	92967	759-00	.BOLT,MACHINE	4
25	PAFZZ	5310-01-099-6539	ABRF	92967	37-03	.NUT,SELF LOCKING,HEXAGON	4
26	PAFZZ	5365-01-420-5031	ABPJ	92967	756-00	.SPACER,SLEEVE	4

END OF FIGURE

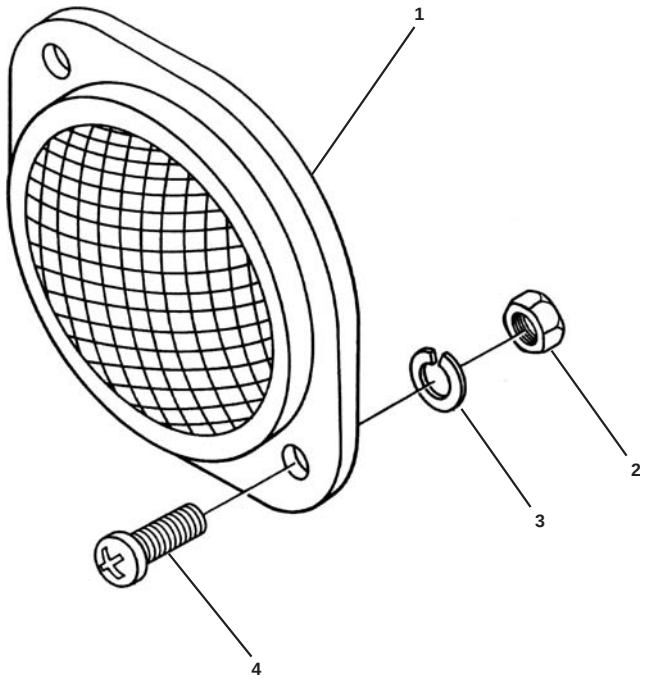


FIGURE 15. REFLECTORS.

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0017 ACCESSORY ITEMS FIG. 15. REFLECTORS	
1	PAOZZ	9905-00-205-2795	ACWQ	96906	MS35387-1	REFLECTOR,INDICATINING,CLEARANCE	4
1	PAOZZ	9905-00-202-3639	ACWK	96906	MS35387-2	REFLECTOR,INDICATINING,CLEARANCE	2
2	PAOZZ	5310-00-088-1251	ACXN	81349	M45913/1-4CG5C	NUT,SELF LOCKING,HEXAGON	12
3	PAOZZ	5310-00-809-4058	ACXJ	96906	MS27183-10	WASHER, FLAT	12
4	PAOZZ	5305-00-068-0502	ACWV	96906	MS90725-6	SCREW,CAP,HEXAGON HEAD	12

END OF FIGURE

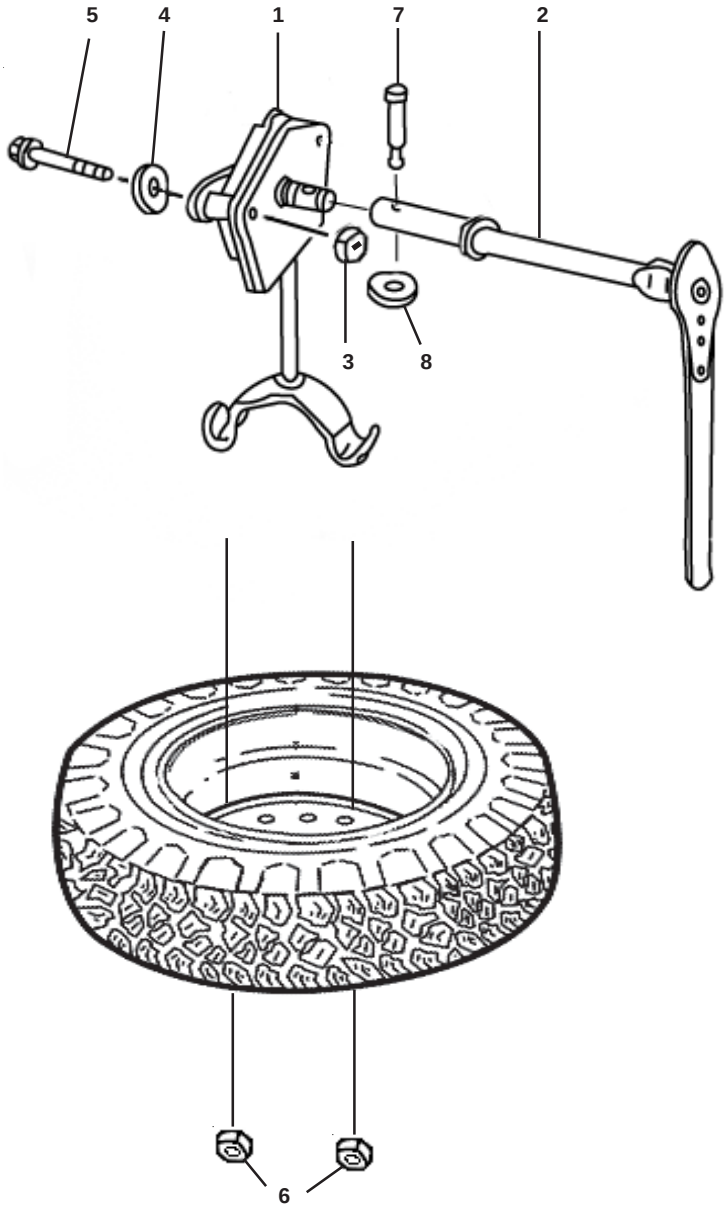


FIGURE 16. SPARE TIRE CARRIER

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0017 ACCESSORY ITEMS FIG. 16. HOIST ASSY,SPARE TIRE	
1	PAFZZ	2590-01-356-7706	ACSA	7X677	15733295	RETAINER,SPARE TIRE	1
2	PAOZZ		ABTA	24617	15548837	SOCKET,SOCKET WRENCH	1
3	PAOZZ	5310-00-087-4652	ACTW	96906	MS51922-17	NUT,SELF LOCKING,HEXAGON	2
4	PAOZZ	5310-00-087-7493	ACUH	96906	MS27183-13	WASHER, FLAT	2
5	PAOZZ	5305-00-269-3219	ACTE	96906	MS90725-69	SCREW,HEXAGON HEAD	2
6	PAOZZ	5310-01-336-6856	ABCP	15460	006-109-00	NUT,PLAIN,CONE SEAT,HEXAGON	2
7	PAOZZ	5315-01-487-4659	ACUU	24617	15567923	PIN,SHOULDER,HEADED	1
8	PAOZZ	5325-01-487-4662	ACZK	24617	15683957	CLIP,RETAINING	1

END OF FIGURE

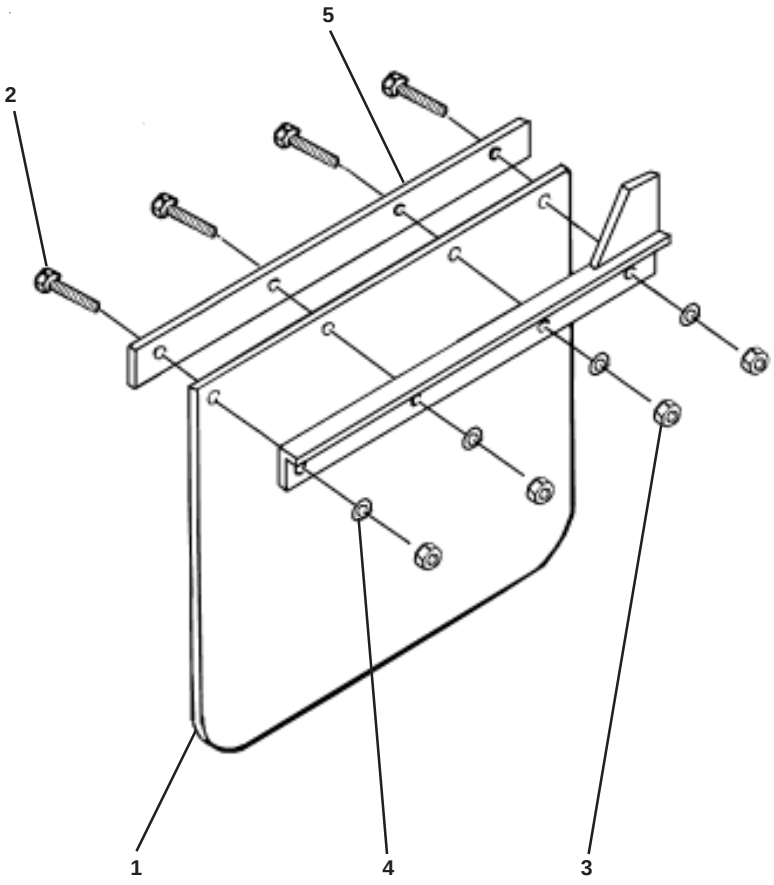


FIGURE 17. SPLASH GUARD

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0017 ACCESSORY ITEMS FIG. 17. GUARD,SPLASH ASSY	
1	PAOZZ	2540-01-487-4707	ACQK	O7DK2	2050445	GUARD,SPLASH,VEHICULAR	1
2	PAOZZ	5305-01-325-8387	ACTK	96906	MS90725-64	SCREW,HEXAGON HEAD	4
3	PAOZZ	5310-00-087-4652	ACTW	96906	MS51922-17	NUT,SELF LOCKING,HEXAGON	4
4	PAOZZ	5310-00-087-7493	ACUJ	96906	MS27183-13	WASHER,FLAT	4
5	PAOZZ	5340-01-487-5060	ACZE	2W888	1103-1810-01	BRACE,SPLASHGUARD,VEHICULAR	1

END OF FIGURE

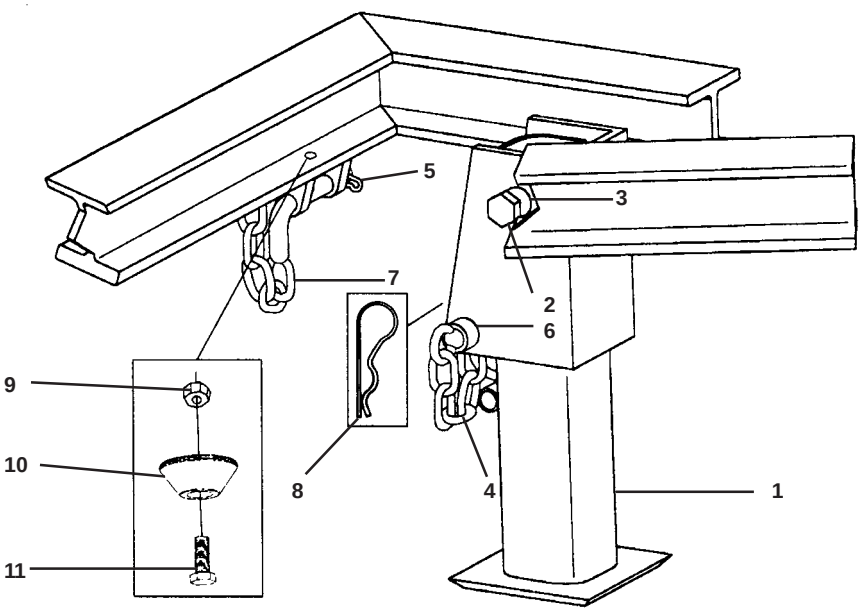
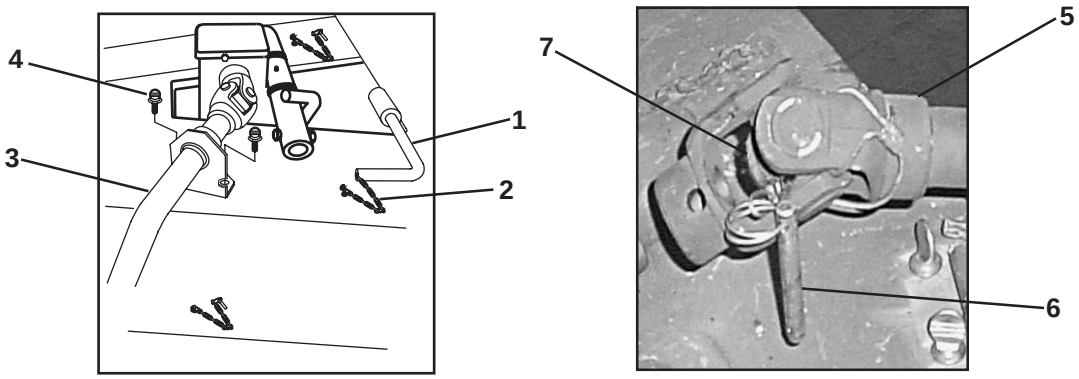


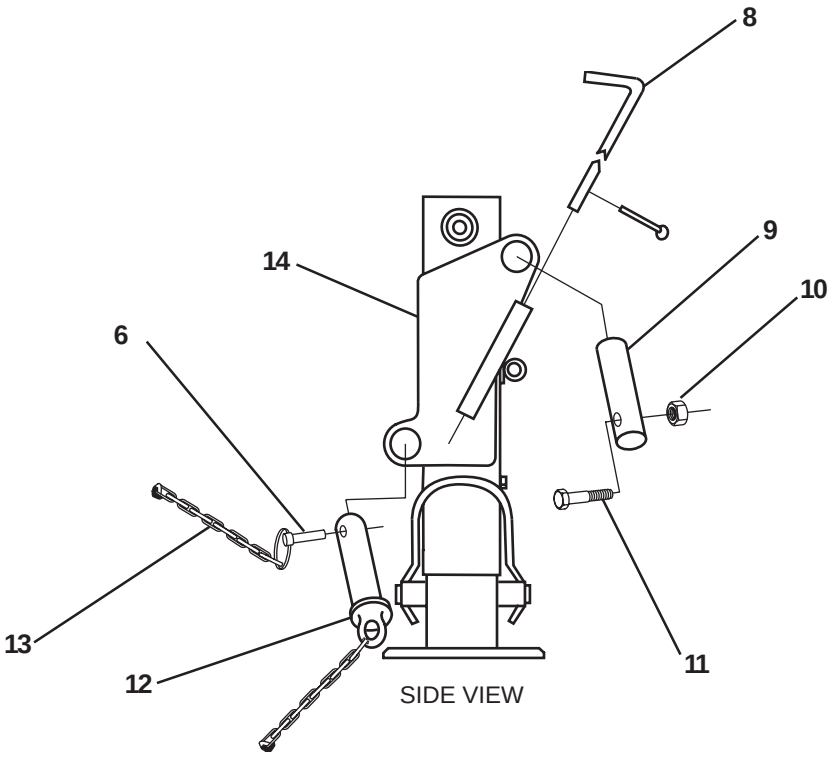
FIGURE 18. LANDING LEG XCK2000

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0020 ACCESSORY ITEMS FIG. 18. LEG, LANDING UOC:CRV	
1	PFFFF	2590-01-487-4588	AACR	2W888	1103-1660-01	LEG,TRAILER RETRACTABLE SUPPORT	1
2	PFFZZ	5310-00-832-9719	AAEQ	96906	MS51922-61	NUT,SELF LOCKING,HEXAGON	1
3	PFFZZ	5306-00-145-6997	AAEK	88044	AN12-62	BOLT, MACHINE	1
4	PAOZZ	4010-01-487-4736	AADZ	39426	3593T21-16	CHAIN, WELDLESS	1
5	PAOZZ	5315-01-270-8270	AAFK	84256	BLNS4-13	PIN, LOCK	1
6	PAOZZ	5315-01-487-5083	AAFC	2W888	1103-1710-01	PIN, STRAIGHT,HEADLESS	1
7	PAOZZ	4010-01-487-5262	AAFJ	39426	3593T21-8	CHAIN, WELDLESS	1
8	PAOZZ		AAEF	39426	98335A087	PIN, COTTER	1
9	PAOZZ	5310-00-689-3877	ADAH	96906	MS17829-3C	NUT,SELF LOCKING, HEXAGON	1
10	PAOZZ	5340-01-487-4727	ACZV	76385	ZB-1175	BUMPER, RUBBER	1
11	PAOZZ	5305-00-984-6214	ADAN	96906	MS35206-267	SCREW MACHINE	1

END OF FIGURE



TOP VIEW



SIDE VIEW

FIGURE 18A. LANDING LEG XCK2000E1

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0020 ACCESSORY ITEMS FIG. 18A. LEG,LANDING UOC:RAY	
1	PAOZZ	5315-01-487-5083	AAFD	2W888	1103-1710-01	PIN,STRAIGHT,HEADLESS	1
2	PAOZZ	4010-01-487-5262	AAFL	39426	3593T21-8	CHAIN,WELDLESS	1
3	PAOZZ		AADU	2W888	1103-1945-01	HANDLE, CRANK, ASSEM.	1
4	PAOZZ		AADQ	39428	91744A624	SCREW, THUMB	2
5	PAOZZ	5305-00-724-5884	AAXN	96906	M45913/1-4CG5C	SETSCREW, 38-16 UNCX50	1
6	PAOZZ	5315-01-270-8270	AAFM	84256	BLNS4-13	PIN,LOCK	1
7	PAOZZ	4730-00-050-4203	AADM	96906	MS15001-1	FITTING, LUBE, .25-28 UNF 1	3
8	PAOZZ		AADF	2W888	1103-1937-01	HANDLE, LIFTING	1
9	PAOZZ		AADA	2W888	1103-1934-01	PIN, HINGE	1
10	PAOZZ	5310-00-088-1251	AACV	96906	MS51922-1	NUT, LOCKING, .25-20 UNC	1
11	PAOZZ	5305-01-485-6049	AACU	96906	MS90725-10	BOLT, HEX HEAD, .25-20 UNCX1.25	1
12	PAOZZ		AAC7	2W888	1103-1670-01	PIN, LOCKING	1
13	PAOZZ	4010-01-487-4736	AAEA	39426	3593T21-16	CHAIN,WELDLESS	1
14	PAFZZ		AACT	2W888	1103-1926-01	LEG,TRAILER ADJUSTABLE	1

END OF FIGURE

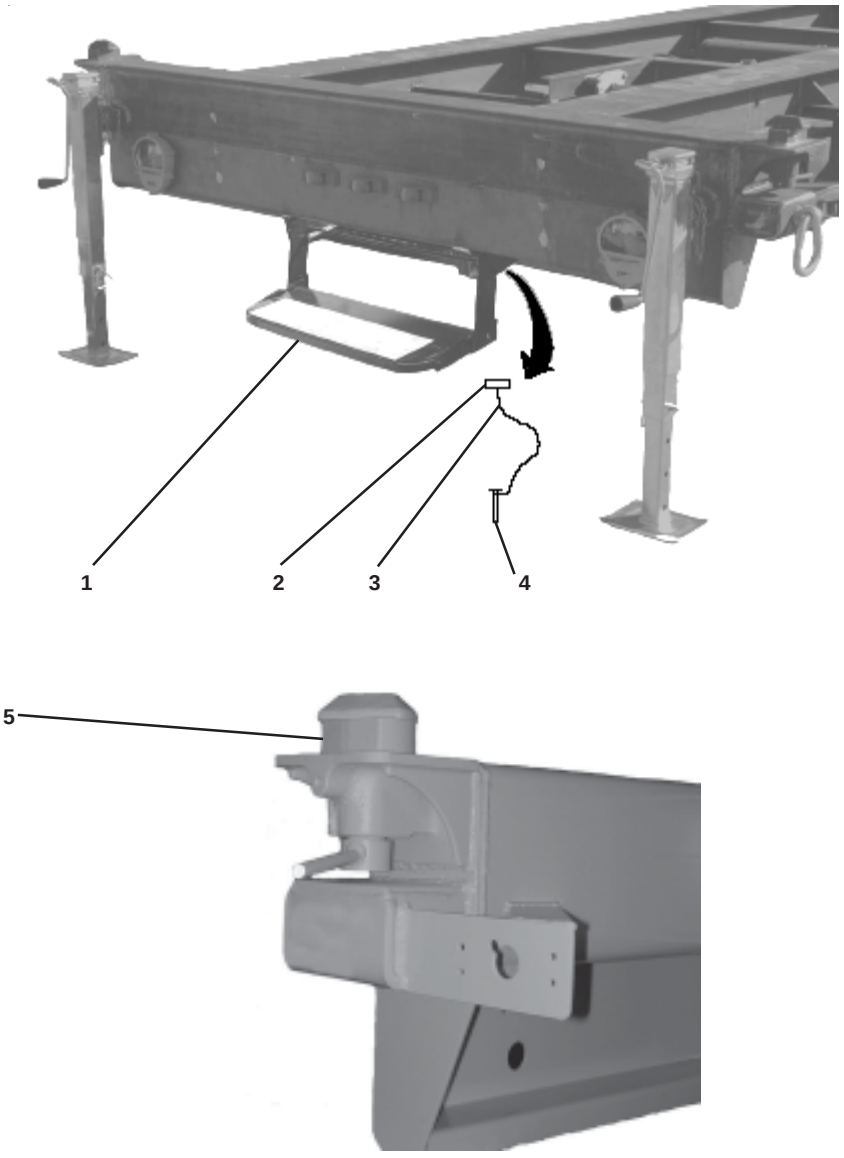
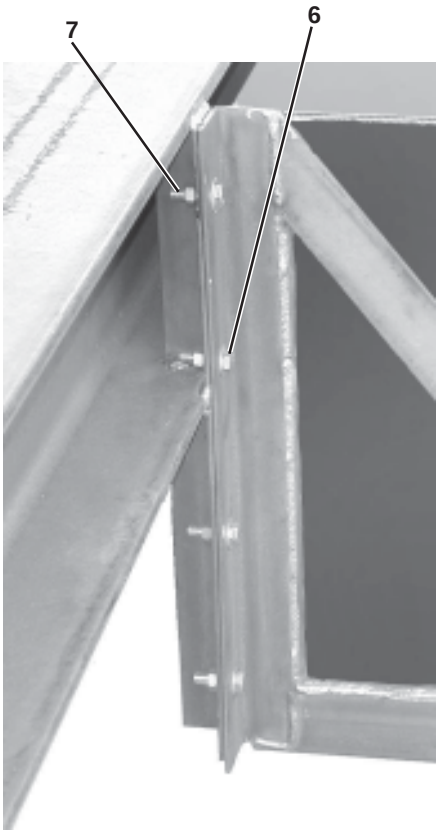


FIGURE 19. STEP, ISO LOCK, TIE DOWN

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 2202 ACCESSORY ITEMS FIG. 19. STEP, ISO LOCK, TIE DOWN	
1	PFFZZ	2510-01-487-4595	AAYE	2W888	99-2653	STEP, TAILGATE	1
2	PAOZZ	4030-00-431-5537	ACVY	76691	28-2G	STUD	1
3	PAOZZ	4010-01-487-5103	ACWE	2W888	1103-1560-01	ROPE,WIRE	1
4	PAOZZ	5315-01-270-8270	ACVS	84256	BLNS4-13	PIN,LOCK	1
5	PAFZZ	5325-01-487-5196	AAGZ	OL9E5	BLR-149/2NR	FASTENER ASSEMBLY,TURNLOCK	4

END OF FIGURE



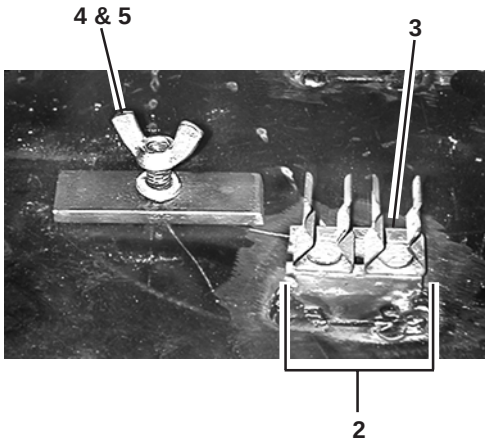


FIGURE 20. TOOL BOX

GROUP 0020 ACCESSORY ITEMS - Continued

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0020 ACCESSORY ITEMS FIG. 20. BOX,TOOL	
1	AFOZZ		ABUZ	2W888	1103-1295-01	ASSEMMBLY,BOX,TOOL UOC:CRV	1
1	AFOZZ		ABVC	2W888	1103-3295-01	ASSEMMBLY,BOX,TOOL UOC:RAY	1
2	PFFZZ	5340-00-611-7883	ABXP	19207	8747908	STRAP,RETAINING	2
3	PFFZZ		ABXU	99400	XB-LG00085	CLIP,SPRING TENSION	2
4	PAOZZ	5310-01-088-2490	ABZA	96906	MS35425-74	NUT,PLAIN,WING	2
5	PAOZZ	5310-01-124-5247	ABZE	96906	MS35425-78	NUT,PLAIN,WING	2
6	PAOZZ	5305-01-325-8387	ACTK	96906	MS90725-64	SREW,CAP,HEXAGON HEAD	8
7	PAOZZ	5310-00-087-4652	ACTW	96906	MS51922-17	NUT,PLAIN	8

END OF FIGURE

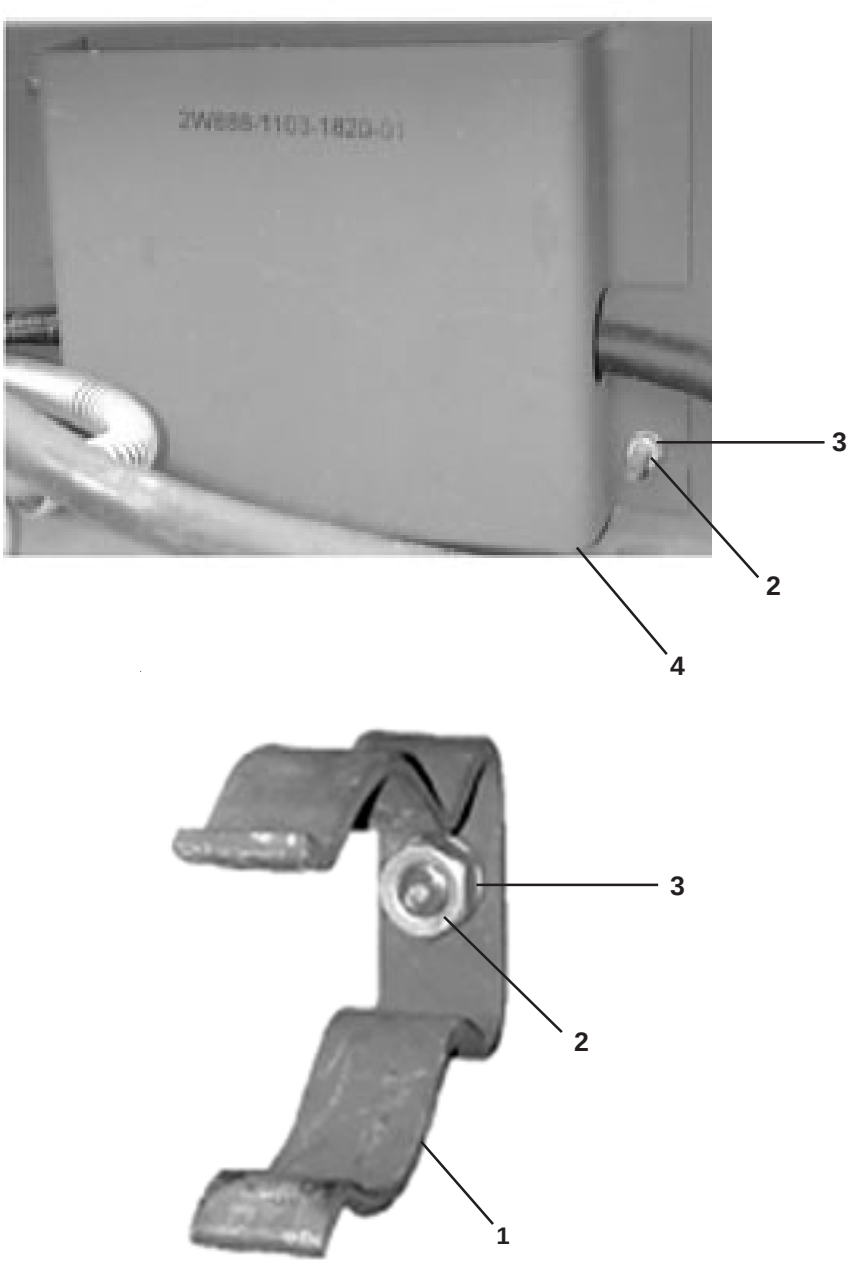


FIGURE 21. ELECTRICAL COVER, INTERVEHICULAR CABLE CLAMP

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0020 ACCESSORY ITEMS FIG. 21. COVER,ELECTRICAL; CLAMP,CABLE	
1	PAOZZ	5340-00-679-3185	ADAX	19207	8363978	CLIP,SPRING TENSION	1
2	PAOZZ	5310-00-761-6882	ADBG	96906	MS51967-2	NUT,PLAIN	3
3	PAOZZ	5310-00-582-5965	ADBM	96906	MS35338-44	WASHER,LOCK	3
4	PAOZZ		ADBS	2W888	1103-1820-01	COVER,ELECTRICAL	1

END OF FIGURE

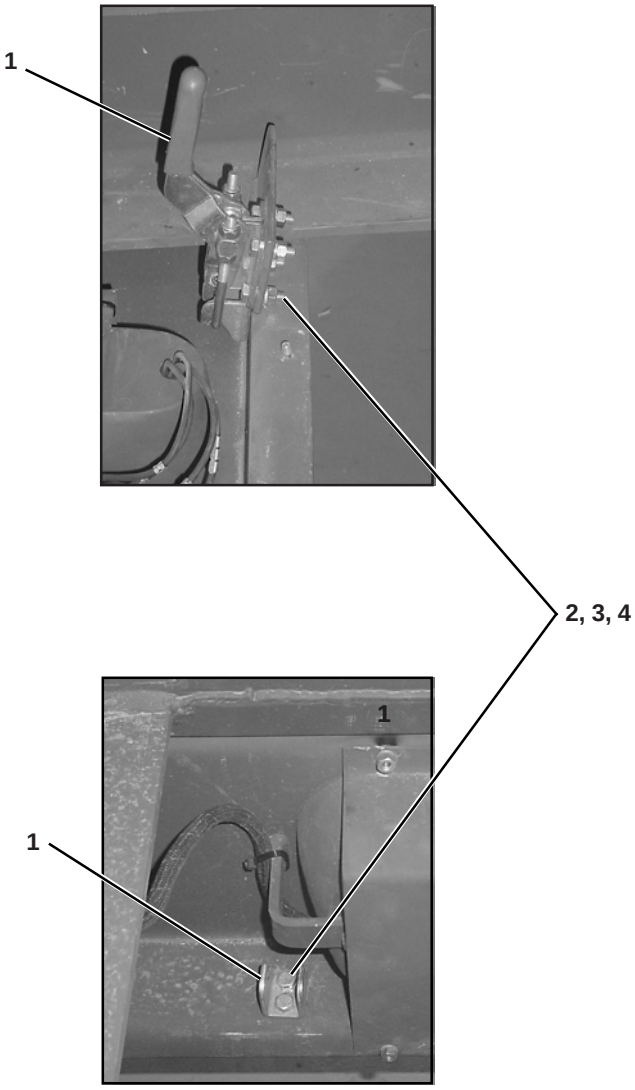


FIGURE 21A. REAR BUMPER CLAMP

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0020 ACCESSORY ITEMS FIG. 21A. REAR BUMPER CLAMP UOC:RAY	
1	PAOZZ		AEAA	99862	CL-300-PA	LATCH CLAMP	4
2	PAOZZ	5310-01-478-3126	AEAE	96906	MS51967-5	NUT,PLAIN	14
3	PAOZZ	5310-01-338-7338	AEAJ	96906	MS35338-45	WASHER,LOCK	24
4	PAOZZ	5306-00-225-8499	AEAM	96906	MS90725-34	BOLT, .312-18 UNCX1	24

END OF FIGURE

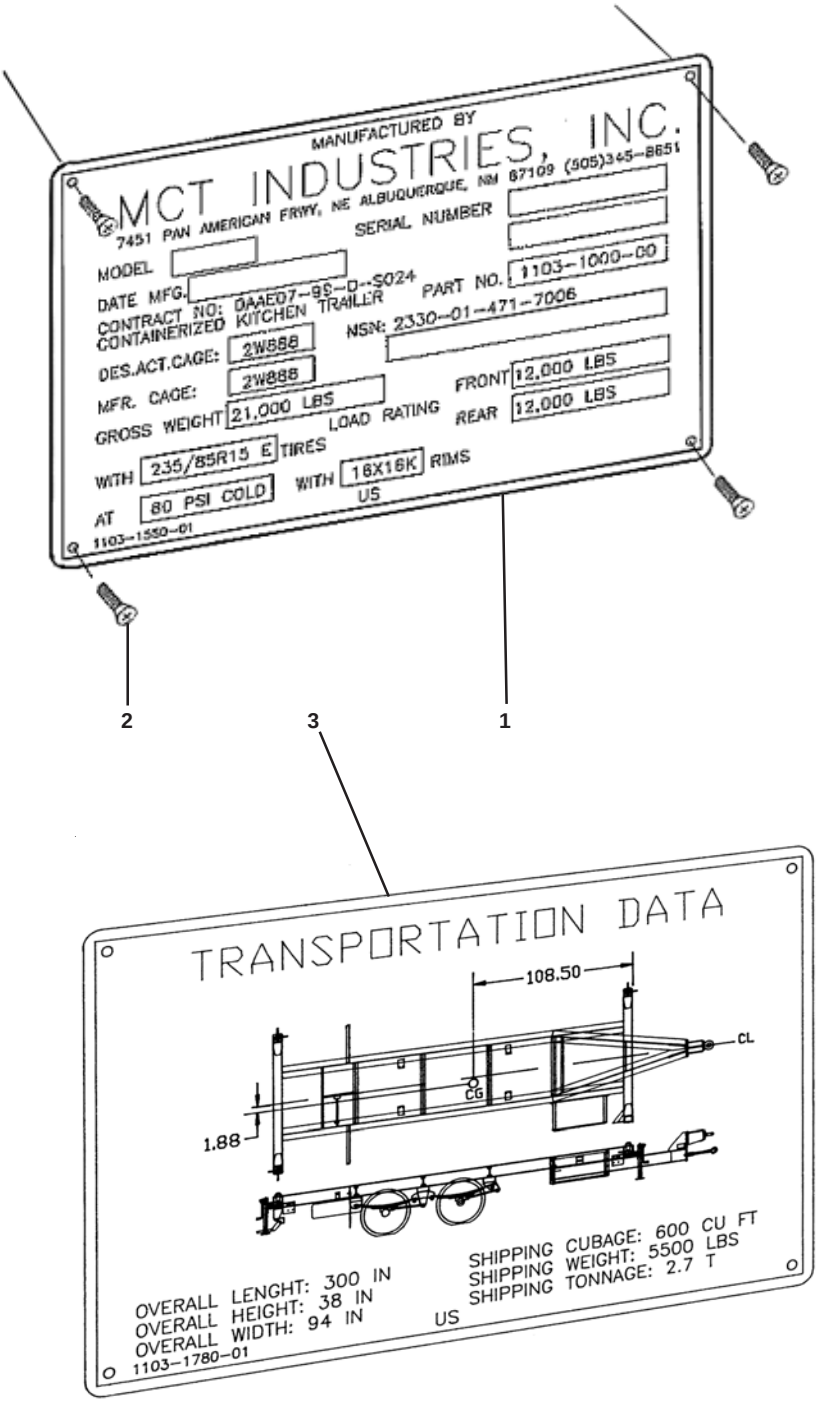


FIGURE 22. IDENTIFICATION/TRANSPORTATION PLATES.

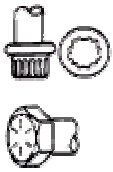
(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) PLISN	(5) CAGEC	(6) PART NUMBER	(7) DESCRIPTION AND USABLE ON CODE (UOC)	(8) QTY
						GROUP 0017 IDENTIFICATION PLATES FIG. 22. IDENTIFICATION/TRANSPORTATION PLATE	
1	PAOZZ	9905-01-487-7356	ACSL	2W888	1103-1550-01	PLATE,IDENTIFICATION UOC:CRV	1
1	PAOZZ		ACSP	2W888	1103-3550-01	PLATE,IDENTIFICATION UOC:RAY	1
2	PAOZZ	5305-00-253-5618	ACSS	96906	MS21318-27	SCREW, DRIVE	8
3	PAOZZ	9905-01-487-7355	ACZP	2W888	1103-1780-01	PLATE,TRANSPORTATION UOC:CRV	1
3	PAOZZ		ACZR	2W888	1103-3780-01	PLATE,TRANSPORTATION UOC:RAY	1

END OF FIGURE

SPECIAL TOOLS LIST 0042 00

At the present time there are no special tools for this trailer.

TORQUE LIMITS

SAE Grade Number	1 or 2	5	6 or 7	8
Quality of Material Capscrew Head Markings	Indeterminate	Minimum Commercial	Medium Commercial	Best Commercial 

NOTE

Head marking may vary with different manufactures.

Capscrew Body Size (Inches) - (Thread)		Torque Ft Lb (N.m)		Torque Ft Lb (N.m)		Torque Ft Lb (N.m)		Torque Ft Lb(N.m)	
1/4	20	5	(7)	8	(11)	10	(14)	12	(16)
	28	6	(8)	10	(14)			14	(19)
5/16	18	11	(15)	17	(23)	19	(26)	24	(33)
	24	13	(18)	19	(26)			27	(37)
3/8	16	18	(24)	31	(42)	34	(46)	44	(60)
	24	20	(27)	35	(47)			49	(66)
7/16	14	28	(38)	49	(66)	55	(75)	70	(95)
	20	30	(41)	55	(75)			78	(106)
1/2	13	39	(53)	75	(102)	85	(115)	105	(142)
	20	41	(56)	85	(115)			120	(163)
9/16	12	51	(69)	110	(149)	120	(163)	155	(210)
	18	55	(75)	120	(163)			170	(231)
5/8	11	83	(113)	150	(203)	167	(226)	210	(285)
	18	95	(129)	170	(231)			240	(325)
3/4	10	105	(142)	270	(366)	280	(380)	375	(508)
	16	115	(156)	295	(400)			420	(569)
7/8	9	160	(217)	395	(536)	440	(597)	605	(820)
	14	175	(237)	435	(590)			675	(915)
1	8	235	(319)	590	(800)	660	(895)	910	(1234)
	14	250	(339)	660	(895)			990	(1342)

CAUTION

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

NOTE

Always use the torque values listed above when specific torque values are not available.

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By Order of the Secretary of the Army:

ERIC K. SHINSEKI
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0127507

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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeters = 10 Millimeters = 0.01 Meters = 0.3937 Inches
1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches
1 Kilometer = 1000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces
1 Kilogram = 1000 Grams = 2.2 Lb
1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliter = 0.001 Liters = 0.0338 Fluid Ounces
1 Liter = 1000 Milliters = 33.82 Fluid Ounces

SQUARE MEASURE

1 Sq Cemtimeter = 100 Sq Millimeters = 0.155 Sq Inches
1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet
1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles

CUBIC MEASURE

1 Cu Centimeter = 1000 Cu Millimeters = 0.06 Cu Inches
1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet

TEMPERATURE

5/9 (^{o}F - 32 = ^{o}C)
212^{o}Fahrenheit is equivalent to 100^{o} Celsius
90^{o}Fahrenheit is equivalent to 32.2^{o} Celsius
32^{o} Fahrenheit is equivalent to 0^{o}Celsius
9/5 C^{o} + 32 = F^{o}

APPROXIMATE CONVERSION FACTORS

TO CHANGE	TO	MULTIPLY BY
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Square Inches	Square Centimeters	6.451
Square Feet	Square Meters	0.093
Square Yards	Square Meters	0.836
Square Miles	Square Kilometers	2.590
Acres	Square Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Millimeters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Square Inch	Kilopascals	6.095
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inces	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.385
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Square Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621

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