

TM 9-2330-331-14&P

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE MANUAL

WITH

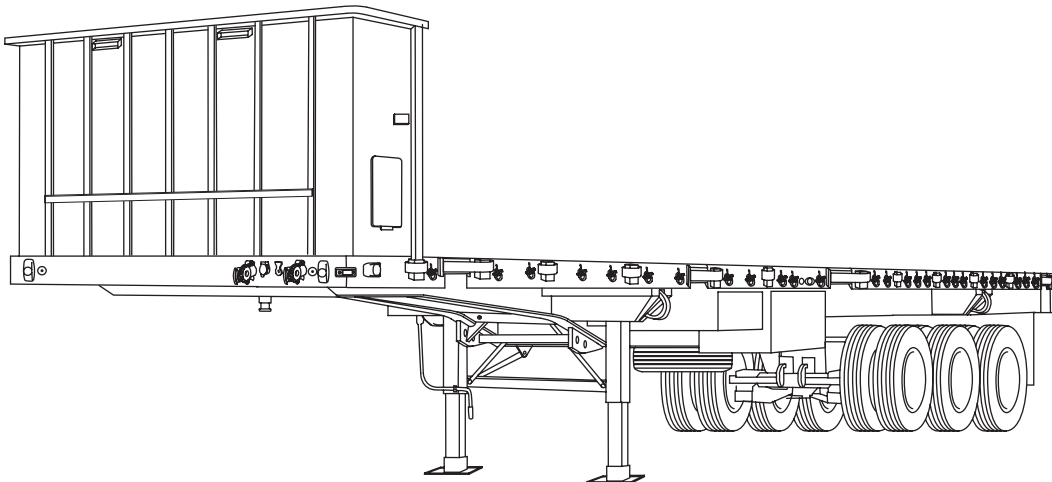
REPAIR PARTS AND SPECIAL TOOLS LISTS

FOR

SEMITRAILER, FLATBED: BREAKBULK/CONTAINER
TRANSPORTER, 34 TON, M872A4

(NSN 2330-01-497-0706)

(LIN S70159)



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HEADQUARTERS, DEPARTMENT OF THE ARMY

DECEMBER 2005

SAFETY WARNINGS ICONS

FOR INFORMATION ON FIRST AID, REFER TO FM 4-25.11.



EAR PROTECTION - headphones over ears shows that noise level will harm ears.



ELECTRICAL - electrical wire to arm with electricity symbol running through human body shows that shock hazard is present.



ELECTRICAL - electrical wire to hand with electricity symbol running through hand shows that shock hazard is present.



FALLING PARTS - arrow bouncing off human shoulder and head shows that falling parts present a danger to life or limb.



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



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



HEAVY OBJECT - human figure stooping over heavy object shows physical injury potential from improper lifting technique.

SAFETY WARNINGS ICONS - Continued



HEAVY PARTS - hand with heavy object on top shows that heavy parts can crush and harm.



HEAVY PARTS - foot with heavy object on top shows that heavy parts can crush and harm.



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



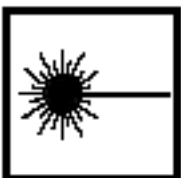
HEAVY PARTS - heavy object pinning human figure against wall shows that heavy, moving parts present a danger to life or limb.



HELMET PROTECTION - arrow bouncing off head with helmet shows that falling parts present a danger.



HOT AREA - hand over object radiating heat shows that part is hot and can burn.



LASER LIGHT - laser light hazard symbol indicates extreme danger for eyes from laser beams and reflections.

SAFETY WARNINGS ICONS - Continued



MOVING PARTS - human figure with an arm caught between gears shows that the moving parts of the equipment present a danger to life or limb.



MOVING PARTS - hand with fingers caught between gears shows that the moving parts of the equipment present a danger to life or limb.



MOVING PARTS - hand with fingers caught between rollers shows that the moving parts of the equipment present a danger to life or limb.



SHARP OBJECT - pointed object in hand shows that a sharp object presents a danger to limb.



SHARP OBJECT - pointed object in hand shows that a sharp object presents a danger to limb.



SHARP OBJECT - pointed object in foot shows that a sharp object presents a danger to limb.



SLICK FLOOR - wavy line on floor with legs prone shows that slick floor presents a danger for falling.

HAZARDOUS MATERIALS WARNINGS ICONS



BIOLOGICAL - abstract symbol bug shows that a material may contain bacteria or viruses that present a danger to life or health.



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



CRYOGENIC - hand in block of ice shows that the material is extremely cold and can injure human skin or tissue.



EXPLOSION - rapidly expanding symbol shows that the material may explode if subjected to high temperatures, sources of ignition or high pressure.



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



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

HAZARDOUS MATERIALS WARNINGS ICONS - Continued



POISON - skull and crossbones shows that a material is poisonous or is a danger to life.



RADIATION - three circular wedges shows that the material emits radioactive energy and can injure human tissue.



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

WARNING SUMMARY



Dry cleaning solvent is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.



Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment.



All personnel must stand clear of towing vehicle and semitrailer during uncoupling operation. Failure to follow this warning may result in serious injury or death to personnel.



Wear safety goggles to prevent eye injury when opening air reservoir draincock. Step away from air stream to prevent injury. Serious injury may result from failure to do so.



Compressed air used for cleaning or drying purposes, or for clearing restrictions, should never exceed 30 psi (207 kPa). Wear protective clothing (goggles/shield, gloves, etc.) and use caution to avoid injury to personnel.



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.



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 landing leg assembly unless the trailer is coupled to a towing vehicle. The trailer may fall, causing injury to personnel.



Notify Organizational Maintenance at first month of new semitrailer operation or first 1000 miles (1609 km) (from hubdometer) that suspension nuts must be torqued. Reference item No. 1 WP 0019 00-3 of Organizational PMCS. Failure to follow this warning may result in injury or death.



Sling provision weighs 97 lbs. (44 kgs). Use caution when lifting and moving to avoid serious injury.



Disconnect all electrical power before performing any maintenance on the electrical system. Failure to do so could result in injury to personnel.

WARNING SUMMARY - Continued



Before moving semitrailer, ensure that all loose equipment is properly stowed and that nothing will drag on ground. If semitrailer is loaded, ensure that load is properly secured. Failure to follow this warning may result in injury to personnel or damage to equipment.



Chock wheels to prevent semitrailer from moving when brakes are released (caged). Failure to follow this warning may result in serious injury or death.



Do not allow brake lining to wear to the point that the rivets touch the drum. Extremely worn brakes may cause brake failure and cause serious damage to equipment and personnel.



The triennial (3 years) 36,000 miles check/service is based on normal operation. Conditions identified such as leakage/seepage of spindle/hub grease, brake lock-up, wheel end noise/damage, and impact damage will require inspection and repair be performed when the incident occurs, not at service interval. Failure to perform required repairs may cause serious damage to equipment and personnel.



Wipe excess lubricant from area of brake shoe linings to prevent any contamination of linings. Replace all wheel end linings if one has been contaminated with lubricant. Failure to follow this warning may cause brakes to malfunction, resulting in serious injury or death.



Do not use any grease with Teflon, over 3% molysulfide content, or "white" grease in the automatic slack adjusters. These additives will adversely affect the friction clutch and cause it to not hold adjustment. Failure of the slack adjusters may cause serious injury or death.



A hot brake can cause serious burns. Exercise caution before attempting to touch wheel hub after use. Radiated heat will be felt before brake drum is touched.



When repairing an electrical malfunction, ALWAYS disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.



The axle weighs 774 lbs. (351 kgs). Use caution when lifting and moving to avoid serious injury.



All personnel must stand clear of semitrailer during slinging operation. Only trained sling operations personnel should conduct this operation. Failure to follow this warning may result in serious injury or death to personnel.



Equalizing beam weighs 134 lbs. (61 kgs) and suspension springs weigh 179 lbs (81 kgs). Use caution when lifting and moving to avoid serious injury.



The bumper weighs 112 lbs. (51 kgs). Use caution when lifting and moving to avoid serious injury.

WARNING SUMMARY - Continued



Clean and check service brakes and all brake components for wear and damage. Replace worn or damaged parts. At Triennial Service replace all springs, pins, rollers, clips, and bushings on each axle end.



The axle must be firmly supported to prevent shifting of the semitrailer. Shifting may cause serious injury to personnel and damage to equipment.



Clean and check all S-cam brake components for wear and damage. Replace worn or damaged parts. At Triennial Service replace all O-rings, bushings, retainers, snap rings, lockwashers, and brackets on each axle end.



Spare tire weighs 205 lbs. (93 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.



Spare tire weighs 205 lbs. (93 kg) and may cause cheater bar to spin when locking tab is released causing injury to personnel or damage to equipment.



Jack must be positioned directly under axle to prevent slippage. Direct all personnel to stay clear of vehicle when vehicle is supported in the air. Failure to do so could result in serious injury and damage to equipment.



To prevent shifting of trailer, floor jack should be used only on a hard level surface. Failure to follow this warning could result in serious injury and damage to equipment.



Make sure the wheels are chocked before servicing the semitrailer. Failure to do so may cause serious injury or death.



Wear protective goggles when underneath semitrailer and opening drain valve. Avoid the air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.



Bulkhead assembly weighs 250 lbs. (113.4 kg). Failure to secure bulkhead during replacement may cause serious injury or death.



Kingpin/upper coupler plate weighs 302 lbs. (137 kgs). Caution must be used during removal and installation to avoid serious injury or death.



Brake drum weighs 114 lbs. (52 kgs). Two people are required for removal and installation. Failure to do so could result in serious injury and damage to equipment.

WARNING SUMMARY - Continued



Side rack panels and stake installation and removal is difficult. Two personnel are required to safely perform this task. Damage to equipment or injury to personnel may occur if warning is not followed.



If flange nuts cannot be torqued, at first opportunity have Organizational Maintenance torque flange nuts to proper specifications (Step 3 and 4, WP 0016 00-4). Periodically stop and check flange nuts for tightness if not properly torqued initially. Failure to follow this warning could cause injury to personnel.



The small stowage boxes weigh 114 lbs (52 kgs) and the large stowage box weighs 184 lbs. (84 kgs). Proper support of stowage boxes during removal and replacement procedures will prevent damage to equipment and serious injury to personnel.



DO NOT tow semitrailer at speeds exceeding the following. Failure to follow this warning may result in injury to personnel or damage to equipment.

Primary Road	45-65 mph (72-104 km/h)
Improved Rated Payload Secondary	30-45 mph (48 -72 km/h)
Off-road	5-10 mph (8-16 km/h)



Stowage box door may swing closed during loading. Failure to follow this warning may cause injury to personnel.



There is a lot of tension on brake springs. Caution must be used while removing all components to avoid injury.



Adhesives and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesives or sealing compound contacts skin or clothing, wash immediately with soap and water.



Ensure all air lines and fittings are clear of debris, and that excess pipe sealing compound does not enter air lines or fittings. Failure to follow this warning could result in injury to personnel or damage to equipment.



WARNING SUMMARY - Continued



Remove CARC paint around all areas to be cut. Cutting CARC paint-coated metal creates toxic fumes. Failure to follow this warning may cause serious illness or death.



M915 and M915A1 tractors (without ABS) pulling an empty M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. Failure to follow this warning could result in injury to personnel or damage to equipment.



M915A2, M915A3 and M915A4 tractors (without functioning ABS) pulling an empty M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. When the mission is complete, report to Organizational Maintenance to fix the ABS fault and restore all ABS capabilities. Failure to follow this warning could result in injury to personnel or damage to equipment.



Tarpaulin weighs 93 lbs. (42 kgs). Three personnel are required to install, remove, and store the tarpaulin. Failure to follow this warning may result in serious injury.



Notify Organizational Maintenance at first month of new semitrailer operation or first 1000 miles (1609 km) (from hubdometer) that all airline clamp nuts must be tightened. Failure to follow this warning may result in injury or death.



Landing leg without the gear box weighs 110 lbs. (50 kgs) and landing leg with the gear box weighs 124 lbs. (56 kgs). Failure to follow the maintenance procedures could result in damage to equipment and/or injury to personnel.



The Family of Medium Tactical Vehicles (FMTV), 1088 Basic/A1, 5 ton tractors are not authorized to tow the M872A4 trailer. Use of the M818 and M931/M932 Basic/A1/A2, 5 ton tractors are limited to towing a non-payloaded M872A4 for yard use only and at a reduced speed of 5 mph. Failure to follow this warning could result in injury to personnel or damage to equipment.



With a maximum payload of 67,200 lbs placed in the center of the trailer, the operator must position tractor fifth wheel two notches behind the haul position to preclude possible front axle overload.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

Date of issue for the original manual is:

Original 31 December 2005

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 35 AND TOTAL NUMBER OF WORK PACKAGES IS 88, CONSISTING OF THE FOLLOWING:

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*Zero in this column indicates an original page.

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HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 31 December 2005

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL**

WITH

REPAIR PARTS AND SPECIAL TOOLS LIST

FOR

**SEMITRAILER, FLATBED: BREAKBULK/CONTAINER
TRANSPORTER, 34 TON, M872A4**

(NSN 2330-01-497-0706)

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 Equipment Technical Publications), through the Internet, on the Army Electronic Product Support (AEPS) website. The Internet address is <http://aeeps.ria.army.mil>. The DA Form 2028-2 is located under the Public Applications section in the AEPS Public Home Page. 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 or DA Form 2028 direct to: AMSTA-LC-LPIT/TECH PUBS, 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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HEADQUARTERS, DEPARTMENT OF THE ARMY

31 DECEMBER 2005

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HOW TO USE THIS MANUAL

INTRODUCTION

1. This manual is designed to help you operate the M872A4 and perform troubleshooting and maintenance on the equipment.
2. This manual is written in Work Package format:
 - a. Chapters divide the manual into major categories of information (e.g., *General Information, Equipment Description, and Theory of Operation, Operator Instructions, Operator Troubleshooting Procedures, Organizational Troubleshooting Procedures, Operator Maintenance Procedures, Organizational Maintenance Procedures, Direct Support Maintenance Instructions, and Supporting Information*).
 - b. Each Chapter is divided into Work Packages, which are identified by a 6-digit number (e.g., 0001 00, 0002 00, etc.) located on the upper right-hand corner of each page. The Work Package page number (e.g., 0001 00-1, 0001 00-2, etc.) is centered at the bottom of each page.
 - c. If a Change Package is issued to the manual, added Work Packages use the fifth and sixth digits of their number to indicate new material. For instance, Work Packages inserted between WP 0001 00 and WP 0002 00 are numbered WP 0001 01. WP 0001 02. etc.
3. Scan through this manual to become familiar with its organization and contents before attempting to operate or maintain the equipment.

CONTENTS OF THIS MANUAL

1. A *Warning Summary*, located at the beginning of this manual. Become familiar with these warnings before operating or performing any troubleshooting or maintenance on the vehicle.
2. A *Table of Contents*, located in the front of the manual, lists all Chapters and Work Packages in the publication.
 - a. The Table of Contents also provides *Reporting Errors and Recommending Improvements* information and DA Form 2028 addresses, for the submittal of corrections to this manual.
 - b. If you cannot find what you are looking for in the Table of Contents, refer to the alphabetical *Index* at the back of the manual.
3. Chapter 1, *General Information, Equipment Description, and Theory of Operation*, WP 0001 00 provides general information on the manual and the equipment.
4. Chapter 2, *Operator Instructions*, WP 0005 00 explains and illustrates all operator controls and indicators, and describes how to perform all operating procedures for the M872A4; *Operation Under Usual Conditions* and *Operation Under Unusual Conditions*.
5. Chapter 3, *Operator Troubleshooting Procedures*, WP 0009 00 is a *Troubleshooting Symptom Index*. If the vehicle malfunctions, this index should always be consulted to locate the appropriate troubleshooting procedure.

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6. Chapter 4, *Organizational Troubleshooting Procedures*, WP 0011 00 is a *Troubleshooting Symptom Index*. If the vehicle malfunctions, this index should always be consulted to locate the appropriate troubleshooting procedure.
7. Chapter 5, *Operator Maintenance Procedures*, WP 0013 00. Major areas covered are *Preventive Maintenance Checks and Services (PMCS)* and operator level maintenance tasks.
8. Chapter 6, *Organizational Maintenance Procedures*, WP 0017 00. Major areas covered are *Preventive Maintenance Checks and Services (PMCS)* and operator level maintenance tasks.
9. Chapter 7, *Direct Support Maintenance Procedures*, WP 0068 00. Major areas covered are *Direct Support* level maintenance tasks.
10. Chapter 8, *Supporting Information*, WP 0074 00. *References, Maintenance Allocation Chart (MAC), Repair Parts and Special Tool List (RPSTL), Components of End Item (COEI) and Basic Issue Items (BII) Lists, Additional Authorization List (AAL), and Expendable and Durable Items List.*

FEATURES OF THIS MANUAL

1. WARNINGS, CAUTIONS, NOTES, subject headings, and other important information are highlighted in **BOLD** print as a visual aid.

WARNING

A WARNING indicates a hazard which may result in death or serious injury.

CAUTION

A CAUTION is a reminder of safety practices or directs attention to usage practices that may result in damage to equipment.

NOTE

A NOTE is a statement containing information that will make the procedures easier to perform.

2. Statements and words of particular importance are printed in CAPITAL LETTERS to create emphasis.
3. Within a procedural step, reference may be made to another Work Package in this manual or to another manual. These references indicate where you should look for more complete information.
 - a. If you are told "*Perform After Operation PMCS (WP 0015 00-10)*", go to Work Package 0015 00 in this manual for *After Operation PMCS*.

FEATURES OF THIS MANUAL - Continued

- b. If you are told "Refer to FM 21-305 for General Guidelines on Vehicle Recovery", go to FM 21-305, which is listed in the *References Work Package*, for complete information on vehicle recovery.
4. Illustrations are placed after, and as close to, the procedural steps to which they apply.
5. Dashed leader lines used in illustrations indicate that called out items are not visible in the view depicted (i.e., they are located within the structure).
6. Technical instructions include metric units as well as standard units. For your reference, a *Metric Conversion Chart* is located on the inside back cover of the manual.

NOTE

If at any time you are unsure how to use this manual or you cannot locate the information you need, notify your supervisor.

TM 9-2330-331-14&P

CHAPTER 1

GENERAL INFORMATION, EQUIPMENT DESCRIPTION AND THEORY OF OPERATION

GENERAL INFORMATION, EQUIPMENT DESCRIPTION, AND THEORY OF OPERATION INDEX

WP Sequence No.

GENERAL INFORMATION 0002 00-1

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 Destruction of Army Materiel to Prevent Enemy Use 0002 00-1

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 Antilock Brake System (ABS) 0004 00-1

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END OF WORK PACKAGE

GENERAL INFORMATION

SCOPE

1. This manual describes the operator, organizational, direct, and support operations and maintenance, including repair parts and special tools lists for:
 - Semitrailer, Flatbed: Breakbulk/Container Transporter, 34 Ton, M872A4
2. Throughout the manual, the terms “curbside” and “roadside” are used to describe views of the semitrailer. As viewed from the rear, curbside is the right side and the roadside is the left side.

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-751, The Army Maintenance Management System (TAMMS).

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

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

WARRANTY STATEMENT

Limited Structural Warranty: Talbert Manufacturing, Inc. warrants each new trailer structure manufactured by us to be free from defects in material and workmanship under normal usage and service for a period of five (5) years after delivery of the trailer to the customer. Warranty coverage will be in accordance with the schedule below. Trailer structure shall be considered the framework of the trailer (gooseneck, main frame and/or rear frame) which is fabricated by Talbert Manufacturing, Inc. This warranty is not transferable.

Structural Warranty Coverage Schedule: Talbert Manufacturing, Inc. shall bear that portion of the cost of repairing or replacing any trailer structure found to be defective within the five year warranty period based on the following schedule:

Up to One year: 100%, One - Two Years: 80% Two - Three years: 60% Three - Four Years: 40%
Four - Five Years: 20%

Warranty of Other Talbert Manufacturing, Inc., Manufactured Components: Talbert Manufacturing, Inc. warrants other Talbert Manufacturing, Inc. manufactured components of its trailers (other than the trailer structure), for a period of one (1) year after delivery of the trailer to the customer. Talbert Manufacturing, Inc. makes no warranty of loading ramps, or of components supplied by other manufacturers and suppliers of components or accessories. Talbert Manufacturing, Inc. will assign to the customer any warranty rights it receives from the component manufacturer or supplier. Please contact your dealer in the event of a problem with the trailer or its components. In general, components will be subject to the manufacturers warranties.

Wear parts, including tires, light bulbs, brake lining and flooring: Are not warranty items.

WARRANTY STATEMENT - Continued

Regulatory Warranty: Our trailers are manufactured to conform to all applicable Federal Motor Vehicle Safety Standards in effect on the date of manufacture. We do not warrant trailers to be in compliance with any other federal, state or local laws, rules, regulations, or orders.

Specific Exclusions: Our limited warranty is subject to specific exclusions, and does not apply to any trailer which has been: 1) subjected to or operated with loads which, at any time, have exceeded the trailer's rated capacity or design limits, 2) repaired or altered outside our factory in any way so as, in our judgment, to affect its stability or reliability. Please contact the factory prior to undertaking any repair or alteration including welding, burning, or drilling holes on or in the frame of your Talbert Trailer, 3) subject to misuse, negligence, accident, or has been operated in a manner expressly prohibited in the instruction, or not operated in accordance with practices approved by Talbert Manufacturing, Inc.

Our Obligation: Under the specific warranties set forth above, our obligation is limited to making good at our factory any trailer structure or Talbert Manufacturing, Inc. manufactured component which shall be returned to us, transportation charges prepaid, up to five years after delivery of the trailer to the customer (one (1) year in the case of Talbert Manufacturing, Inc. manufactured components) and which our examination discloses to have been defective. Coverage of the trailer structure shall be in accordance with the schedule set forth above. All warranty claims must be made immediately upon discovery to the Talbert Service/Warranty Manager. Talbert shall not be obligated to pay for any repairs, alterations or parts which are made prior to authorization from us.

Exclusive Warranty: This warranty is the exclusive warranty given for trailers sold by Talbert Manufacturing, Inc. It is expressly in lieu of all other warranties, whether oral, written or implied, including the implied warranties of merchantability or fitness for a particular purpose, and of all other obligations or liabilities on the part of Talbert Manufacturing, Inc. We neither assume nor authorize any dealers or other persons to assume for us, any other liability in connection with the sale of our trailers.

Limitation of Liability: In no case will we be liable for any consequential or incidental damages incurred by you, including, but limited to, loss of sales, profit or goodwill; loss of use of the trailer or any associated equipment; cost of rentals, substitute equipment, facilities or services; downtime costs; attorneys' fees; or losses or claims of your customers or other third parties.

This warranty begins at the date stamped on the trailer data plate; if data plate is missing, the warranty start date will be determined by the U.S. Army Registration number of the trailer.

PREPARATION FOR STORAGE OR SHIPMENT

For information on preparing the semitrailer for storage or shipment, refer to Work Package (WP) 0066 00-1.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIRS)

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

END OF WORK PACKAGE

EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

1. The M872A4 Series Flatbed Semitrailer is a cargo hauling semitrailer designed to carry containerized or breakbulk cargo.
2. The semitrailer is designed to be towed by the M915 Series 6 x 4 Truck, Tractor.

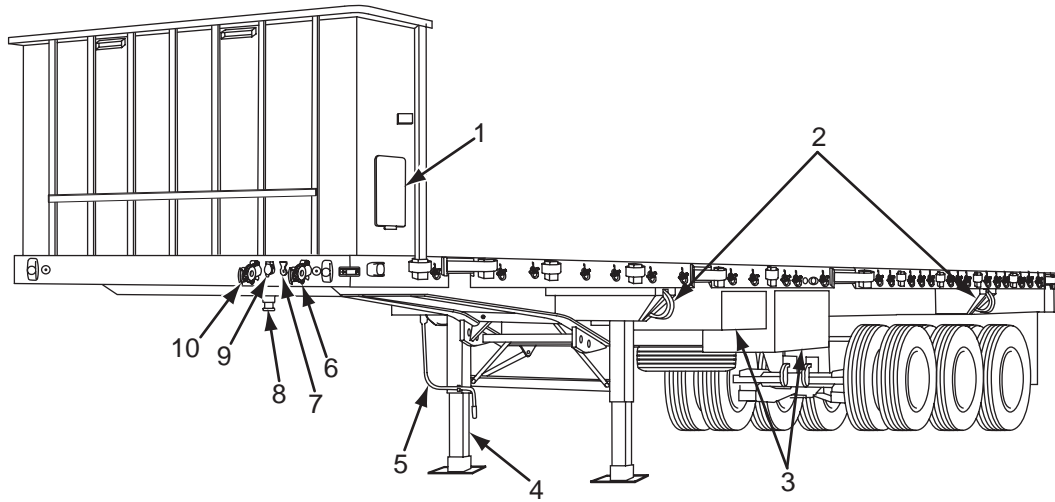
**WARNING**

- **M915 and M915A1 tractors (without ABS) pulling an empty M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. Failure to follow this warning could result in injury to personnel or damage to equipment.**
 - **M915A2, M915A3 and M915A4 tractors (without functioning ABS) pulling an empty M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. When the mission is complete, report to Organizational Maintenance to fix the ABS fault and restore all ABS capabilities. Failure to follow this warning could result in injury to personnel or damage to equipment.**
 - **The Family of Medium Tactical Vehicles (FMTV), 1088 Basic/A1, 5 ton tractors are not authorized to tow the M872A4 trailer. Use of the M818 and M931/M932 Basic/A1/A2, 5 ton tractors are limited to towing a non-payloaded M872A4 for yard use only and at a reduced speed of 5 mph. Failure to follow this warning could result in injury to personnel or damage to equipment.**
3. The semitrailer is equipped with:
 - a. A 12 and 24 volt electrical system capable of operating in standard or blackout modes.
 - b. Automatic emergency braking in the event the semitrailer breaks away from the towing vehicle.
 - c. Landing gear to provide support for the front of semitrailer when uncoupled from towing vehicle.
 - d. Three axles with dual-mounted wheels and leaf spring suspension, including walking beams and radius rods, to absorb road shock.

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES - Continued

- e. Internal expanding type brakes which are activated by air pressure received from the towing vehicle.
- f. Four retractable sling mechanisms to permit slinging when empty or when loaded with two 20 ft. (6.1 m) or one 40 ft. (12.2 m) container.
- g. Twist lock fasteners to secure containers to semitrailer loadbed.
- h. Removable side and rear racks for use when transporting bulk cargo. (AAL)
- i. Toolbox to provide storage for load binders, load-securing hardware, tools (BII), and tarpaulin.
- j. Removable bulkhead for a better shipping configuration.
- k. Adjustable bumper to allow the trailer to be loaded and unloaded easier during shipping.
- l. Cargo tie downs to secure ammunition and other cargo to the trailer bed.
- m. Rear step to assist the soldiers when getting on and off the trailer bed.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS



Key	Component	Description
1	Document Box	Provides stowage for semitrailer technical manual.
2	Sling Provisions	Used for sling handling of semitrailer when empty or when loaded with two 20ft. (6.1 m) or one 40 ft. (12.2 m) container.
3	Tool Boxes	Provides stowage for load binders, load-securing hardware, tools (BII), and tarpaulin.
4	Landing Legs	Support front of semitrailer when uncoupled from towing vehicle.
5	Handcrank	Operates landing gear legs.
6	Emergency Air Coupling (Red)	Connects to towing vehicle to provide emergency air supply.
7	24-volt Electrical Receptacle	Connects semitrailer 24-volt electrical system to towing vehicle.
8	King Pin	Used to couple semitrailer to towing vehicle fifth wheel.
9	12-volt Electrical Receptacle	Connects semitrailer 12-volt electrical system to towing vehicle.
10	Service Air Coupling (Blue)	Connects to towing vehicle to provide service air supply.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

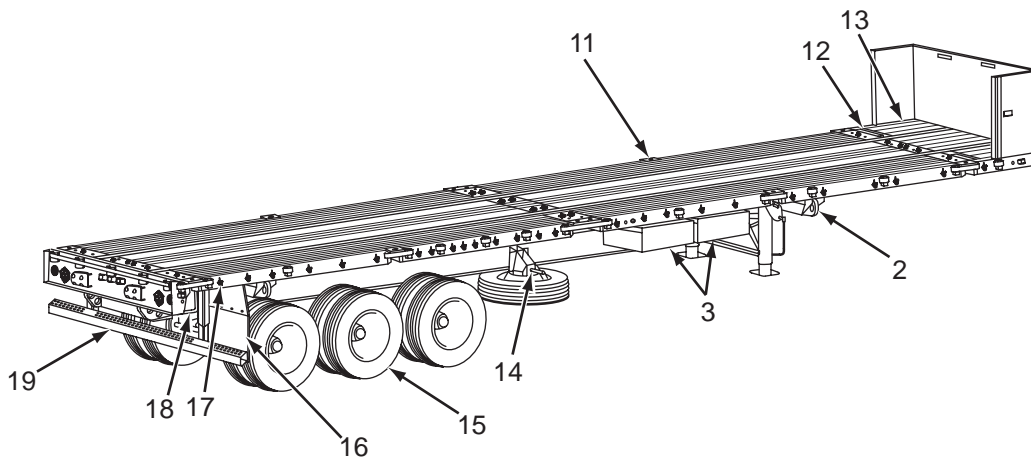


Figure 2. Semitrailer - Rear View

Key	Component	Description
11	Twist Lock Fasteners	Secure container to semitrailer loadbed.
12	Container Guides	Used to position container on loadbed in relation to securing points.
13	Bulkhead Storage Area	Provides stowage for bows, stakes, and side racks behind bulkhead.
14	Spare Tire Carrier	Provides stowage for spare tire.
15	Dual Wheels	Two wheels at end of each axle to support semitrailer load.
16	Mudflaps	Protect semitrailer, and vehicles traveling behind, from thrown-off dirt or stones.
17	Cargo Tie-downs	Secure cargo to the bed of the trailer.
18	Step	Safely assist the soldier getting onto the bed of the trailer.
19	Adjustable Bumper	Allows the trailer to be loaded and unloaded easier during shipping.

LOCATION AND CONTENTS OF DATA PLATE AND STENCILED LABELS

The following illustration shows the location and contents of the semitrailer data plate:

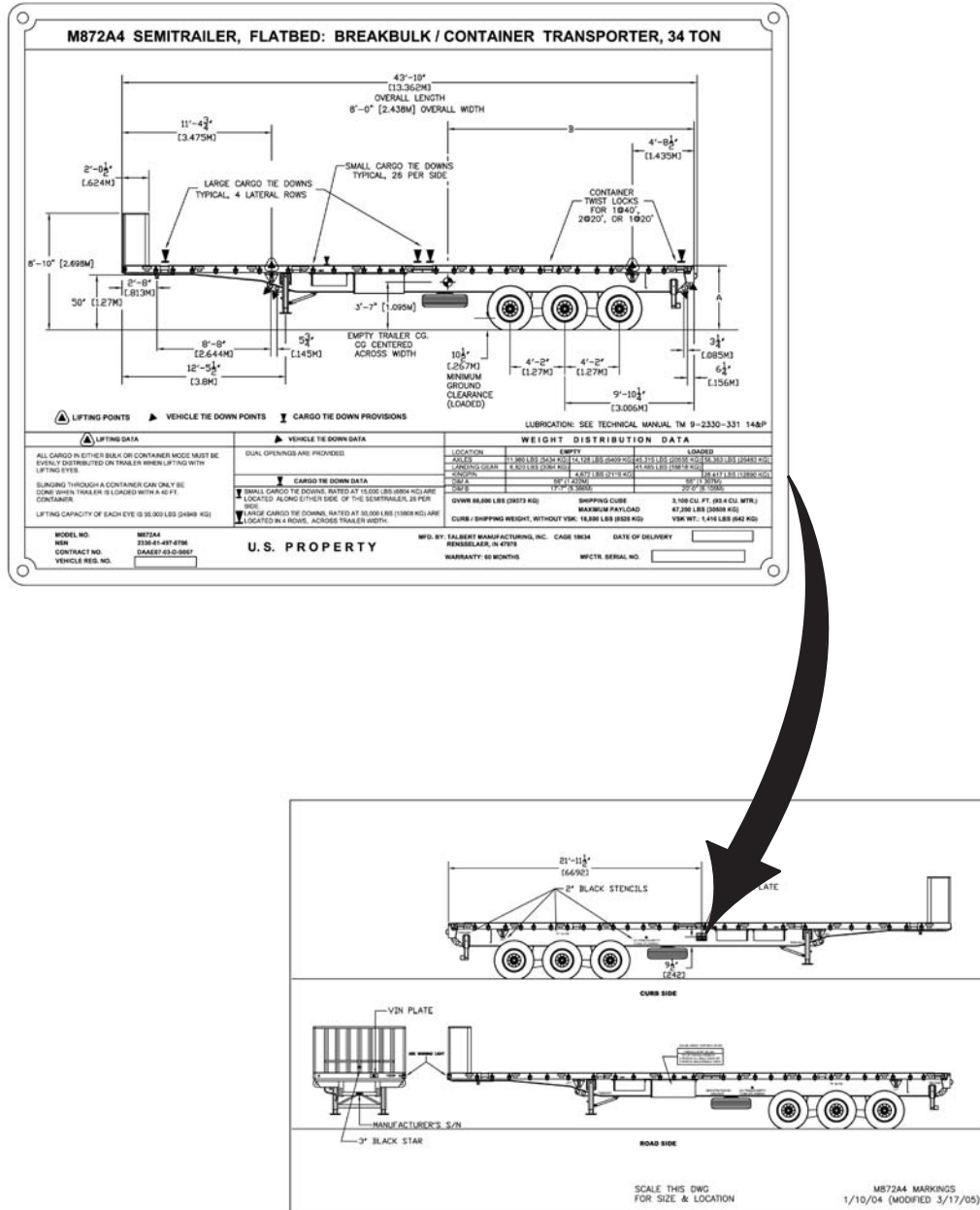


Figure 3. Data Plate Contents and Location

LOCATION AND CONTENTS OF DATA PLATE AND STENCILED LABELS - Continued

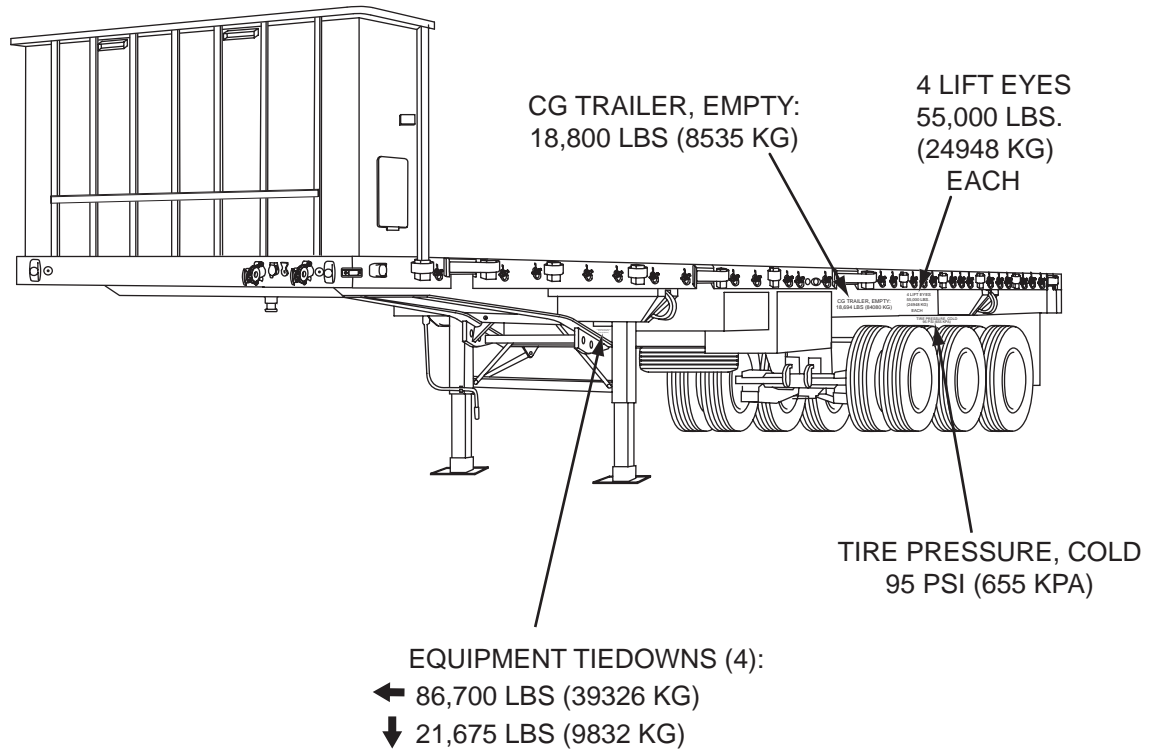


Figure 4. Trailer Stenciling Locations

EQUIPMENT DATA

Dimensions (Overall):	
Height:	
To Top of Front Panel (Empty)	106.25 in. (274 cm)
To Top of Semitrailer Bed (Empty)	56 in. (147 cm)
Length:	
Overall	43 ft. 10 in. (13.1 m)
Semitrailer Bed	40 ft. (12 m)
Width:	
Overall	96 in. (244 cm)
Semitrailer Bed	96 in. (244 cm)
Weights:	
Empty	18,800 lbs. (8,535 kg)
Payload Maximum:	
Primary Roads	67,200 lbs. (30,509 kg)
Improved Secondary Roads	67,200 lbs. (30,509 kg)
Gross Combined Vehicle Rating (GCVR) with M915A3 Tractor	105,000 lbs. (47,670 kg)
Ground Clearance:	
Frame	39 in. (99 cm)
Axle	12 in. (30 cm)
Electrical System:	
Lamps	8-32 volt
Clearance Lights	8-32 volt
Taillights (Military)	Sealed Unit
12-volt (Turn)	
24-volt (Stop, Turn, and Blackout)	
Taillights (Commercial)	Sealed Unit
12-volt (Stop)	
24-volt (Do Not Operate)	
ABS Light (12-volt only)	Sealed Unit
Tires:	
Size	11R22.5
Inflation (Cold):	
Highway	95 psi (655 kPa)
Cross-country	95 psi (655 kPa)
Sand and Mud	95 psi (655 kPa)
Wheels	22.5 in. (57.15 cm)
Rims	22 x 8.25
Suspension	
Manufacturer	Hutchens Industries, Inc., Springfield, Missouri
Type	3 Axles
Model Number	11455-00
Rating	75,000 lbs. (34,050 kg)

EQUIPMENT DATA - Continued

Axles:

Manufacturer Arvin Meritor
 Troy, Michigan
 Model Number TQ-4671-LH-5885
 Capacity 25,000 lbs. (11,350 kg)

Brakes:

Manufacturer Commercial Standard
 Type Drum, 20 x 16 1/2 x 7
 Actuator Cam, Air-actuated
 Operating Pressure 100 psi (690 kPa)

Landing Gear:

Type Telescopic, Manual,
 Handcrank Gearbox
 Capacity 60,000 lbs. (27,240 kg)

Kingpin Location:

From Front of Semitrailer 32 in. (81 cm)
 To Center of Landing Gear Pad 149.5 in. (453 cm)

Towing Information:

Towing Facility SAE Standard 2 in. Kingpin
 Towing Vehicle M915 Series Truck Tractor
 Towing Speed:
 Highway 45-65 mph (72-104 km/h)
 Dirt/Gravel Roads 30-45 mph (48-72 km/h)
 Off-road 5-10 mph (8-16 km/h)
 with Reduced Load

Authorized Tractors:



WARNING

*** With a maximum payload of 67,200 lbs placed in the center of the trailer, the operator must position tractor fifth wheel two notches behind the haul position to preclude possible front axle overload.**

MODEL	CURB WEIGHT	FIFTH WHEEL CAPACITY
M915	19,630 lb	30,000 lb
M915A1	19,720 lb	30,000 lb
M915A2*	18,680 lb	30,000 lb
M915A3*	19,080 lb	30,000 lb
M915A4*	18,680 lb	30,000 lb

END OF WORK PACKAGE

THEORY OF OPERATION

ANTILOCK BRAKE SYSTEM (ABS)

The semitrailer brakes are equipped with a sensor to modulate ABS, axle by axle, using an Electronic Control Unit (ECU) to prevent wheel lockup during braking on unstable surfaces. The ABS is automatic, applied through the air brake system, and needs no operator assistance.

ELECTRICAL SYSTEM

The M872A4 is equipped with two electrical systems, a 12-volt system and a 24-volt system. The systems receive their power from the prime mover through the intervehicular cable assemblies. The intervehicular cable assemblies are connected to the M872A4 main wiring harness that distributes the power. The 24-volt system operates the blackout lights. The 12-volt system operates all non-blackout lights and the ABS system.

NOTE

- During normal operation (non-blackout), only the 12-volt power cable is required.
- During blackout operation, both the 12-volt and 24-volt power cables are required.

END OF WORK PACKAGE

CHAPTER 2
OPERATOR INSTRUCTIONS

OPERATOR INSTRUCTIONS INDEX

WP Sequence No.

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 Controls and Indicators 0006 00-1

OPERATION UNDER USUAL CONDITIONS 0007 00-1

 General 0007 00-1

 Authorized Tractors 0007 00-1

 Coupling Semitrailer to Towing Vehicle 0007 00-2

 Loading Semitrailer 0007 00-4

 Unloading Semitrailer 0007 00-4

 Side Rack and Stake Installation and Removal 0007 00-5

 Removing Side Rack Panels and Stakes 0007 00-6

 Storing Side Rack Panels and Stakes 0007 00-7

 Trailer Bow and Tarpaulin Replacement 0007 00-8

 Bow Installation 0007 00-8

 Tarpaulin Installation 0007 00-9

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OPERATION UNDER UNUSUAL CONDITIONS 0008 00-1

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END OF WORK PACKAGE

DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

GENERAL

This work package shows the location and function of all semitrailer controls and indicators. Review this work package thoroughly before operating the semitrailer.

CONTROLS AND INDICATORS

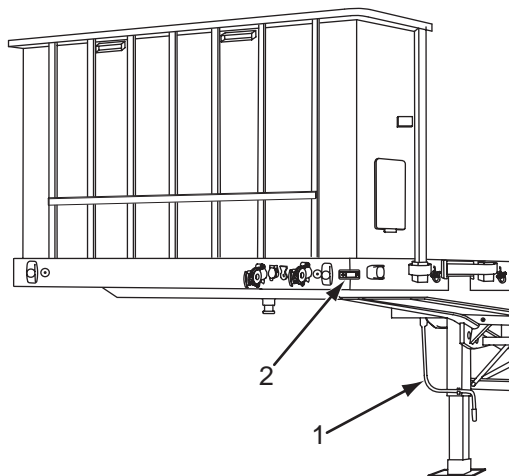


Figure 1. Hand Crank and ABS Light

1	Handcrank	<p>Operates landing gear legs at two speeds. Pushed in is high gear - pulled out is low gear.</p> <p style="text-align: center;">NOTE</p> <p>ABS light functions normally when towing vehicle and trailer are in blackout mode. Covering the lights with tape or mud is recommended during blackout operations.</p>
2	ABS Light	<p>Informs operator if ABS brake system is operating properly.</p>

END OF WORK PACKAGE

OPERATION UNDER USUAL CONDITIONS

GENERAL

1. This work package contains instructions for safely operating the M872A4 Series Flatbed Semitrailers under usual conditions. Unusual operating conditions are defined and described in WP 0008 00 of this chapter.
2. Perform all "Before" PMCS in WP 0015 00-1, Table 3 before operating the semitrailer.
3. Review all towing vehicle operating instructions to prepare for coupling and uncoupling operations.

AUTHORIZED TRACTORS



WARNING

* With a maximum payload of 67,200 lbs placed in the center of the trailer, the operator must position tractor fifth wheel two notches behind the haul position (1) to preclude possible front axle overload.

MODEL	CURB WEIGHT	FIFTH WHEEL CAPACITY
M915	19,630 lb	30,000 lb
M915A1	19,720 lb	30,000 lb
M915A2*	18,680 lb	30,000 lb
M915A3*	19,080 lb	30,000 lb
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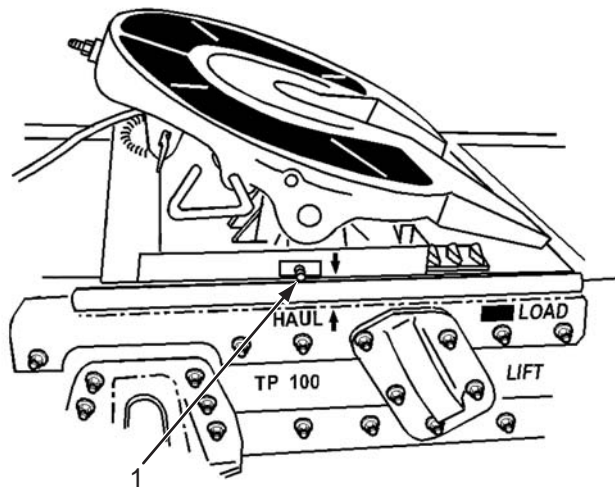


Figure 1. Coupler Haul Position

COUPLING SEMITRAILER TO TOWING VEHICLE**WARNING**

All personnel must stand clear of towing vehicle and semitrailer during coupling operation. Failure to follow this warning may result in serious injury or death to personnel.

1. Chock semitrailer wheels.

CAUTION

Have assistant direct you during backing operations. Damage to equipment may result if caution is not followed.

2. Align towing vehicle with semitrailer and slowly back towing vehicle so that kingpin (6) aligns with coupler jaws (9). Ensure that kingpin is at proper height to engage fifth wheel (8). Minimum kingpin height is above tractor approach ramps (10). Maximum kingpin height is 1 1/2 in. (3.8 cm) below fifth wheel (8). Adjust height of semitrailer with landing gear hand crank (5).

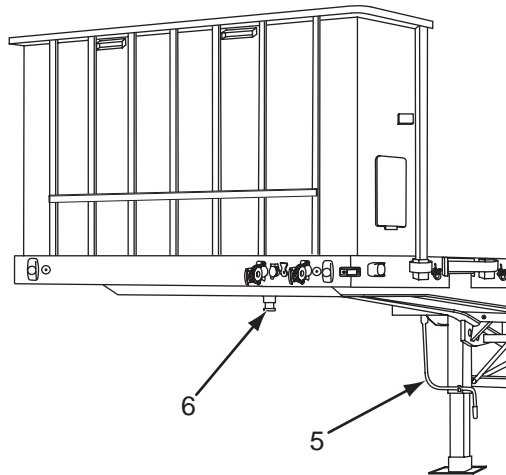


Figure 2. Kingpin and Hand Crank

COUPLING SEMITRAILER TO TOWING VEHICLE - Continued

3. Slowly back towing vehicle until coupler jaws (9) engage kingpin (6) and lock.

NOTE

- During normal operations (non-blackout) only the 12-volt power cable is required.
 - During blackout operations, both the 12-volt and 24-volt power cables are required.
4. Connect 24-volt electrical connector from towing vehicle to electrical receptacle (4), and 12-volt connector from towing vehicle to electrical receptacle (5).
 5. Connect service air line from towing vehicle to semitrailer air coupling (7). Connect emergency air line from towing vehicle to semitrailer air coupling (3).

NOTE

Locking plunger lever and safety latch may vary with different model towing vehicle.

6. Pressurize air system by applying towing vehicle brakes. Ensure that fifth wheel locking plunger lever (11) and safety latch (12) are in locked position.
7. Engage handcrank (2) and raise landing gear (1).
8. Fold and stow handcrank (2), and remove and stow chock blocks and ground boards.

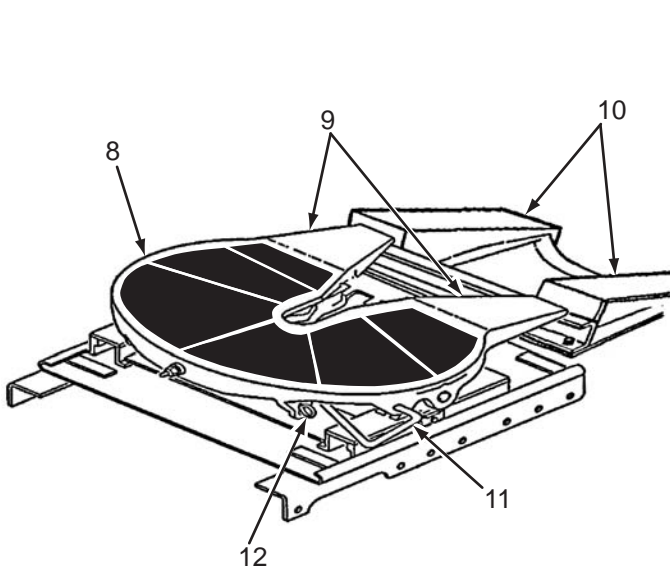


Figure 3. Coupler Plate

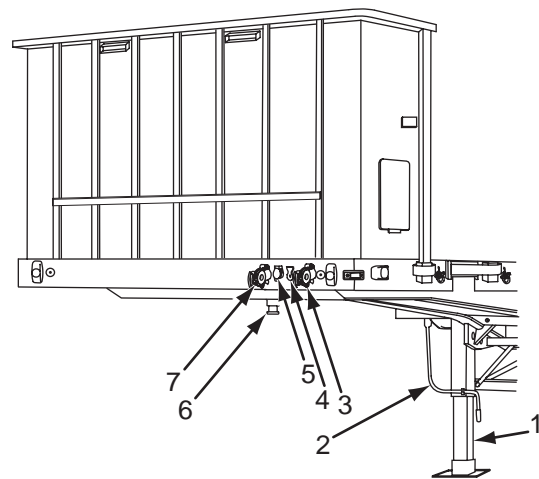


Figure 4. Air Line Connections

LOADING SEMITRAILER

1. Loading Semitrailer Using Retractable Twist Lock.

- a. To unlock, push twist lock (2) up and turn handle (1) 90° clockwise.
- b. Push twist lock up until bayonet collar (3) is clear of siderail (4) surface.
- c. While holding twist lock (2) up, turn bayonet collar (3) 90° clockwise. Release twist lock to seat bayonet collar on siderail (4).
- d. Load and secure container(s) on semitrailer.
- e. Turn handle (5) 90° counterclockwise into locked position.

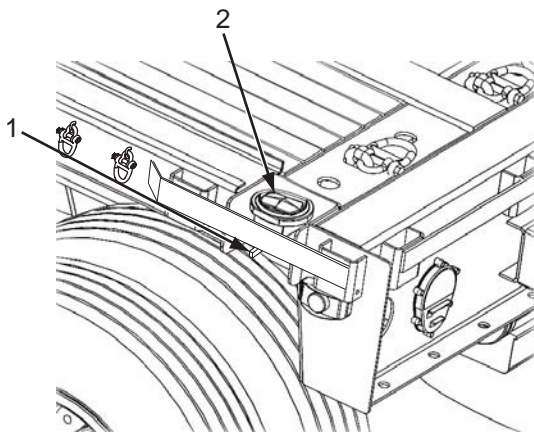


Figure 5. Twist Lock - Unlocked Position

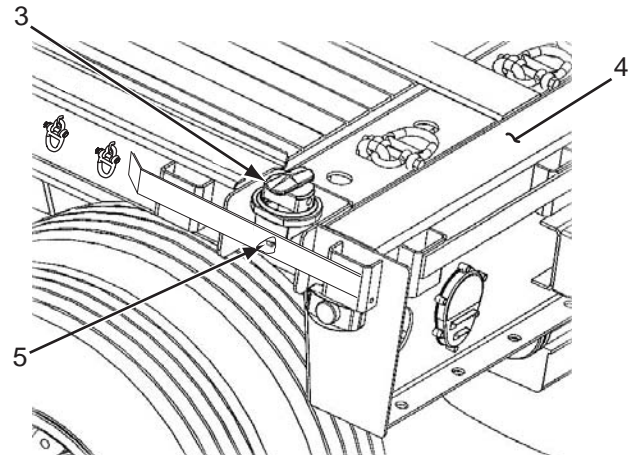


Figure 6. Twist Lock - Locked Position

UNLOADING SEMITRAILER

1. Unloading Semitrailer Using Retractable Twist Lock.

- a. Turn handle (5) 90° clockwise.
- b. Unfasten and remove container(s) from semitrailer.
- c. Push twist lock up until bayonet collar (3) is clear of siderail (4) surface.
- d. Turn bayonet collar (3) 90° counterclockwise and lower twist lock.
- e. Turn handle (5) 90° counterclockwise into locked position.

SIDE RACK PANEL AND STAKE INSTALLATION AND REMOVAL

**WARNING**

Side rack panels and stake installation and removal is difficult. Two personnel are required to safely perform this task. Damage to equipment or injury to personnel may occur if warning is not followed.

NOTE

- Not all trailers are equipped with side rack kits.
- Start side rack panel installation from front and work to rear.
- Side rack panels are different sizes. Ensure that they are installed in proper position.
- Side racks should be installed with the notched side down, as shown in Figures 7 and 8, when cargo tie downs are used. Side racks should be installed with the notched side up during all other operations.

1. Install first side rack panel (1) into slot in bulkhead (4).
2. Install slot of stake (2) on side rack panel (1) and slide stake into slot (3).
3. Install remaining side racks (5).

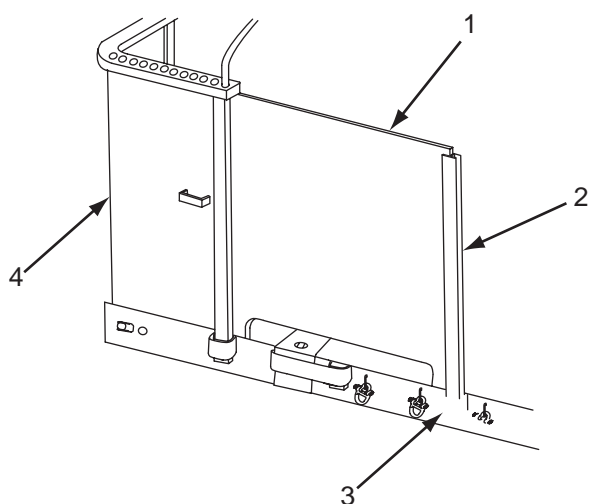


Figure 7. Side Rack Rail

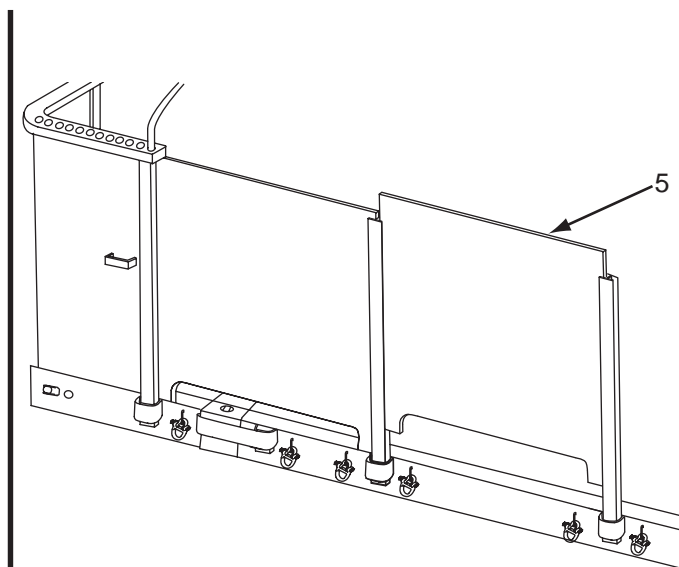


Figure 8. Side Panels

SIDE RACK PANEL AND STAKE INSTALLATION AND REMOVAL - Continued**NOTE**

Start side rack panel removal from rear and work to the front.

REMOVING SIDE RACK PANELS AND STAKES

1. Remove side panels (5) from side stakes (2).
2. Remove side stakes (2) from slot (3).

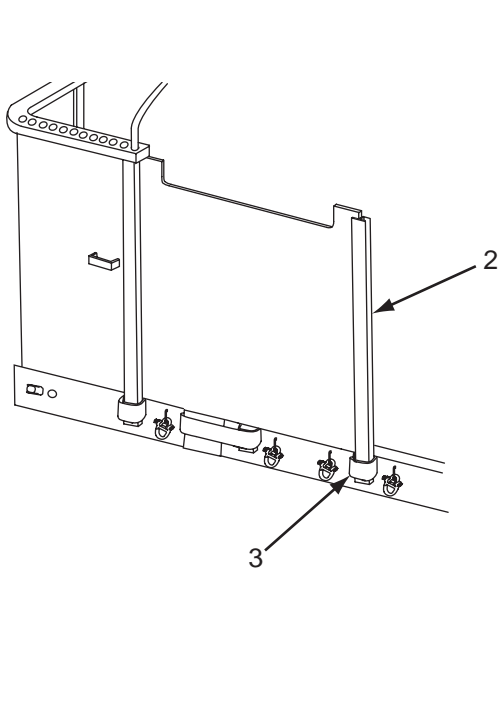


Figure 9. Side Rack Rail

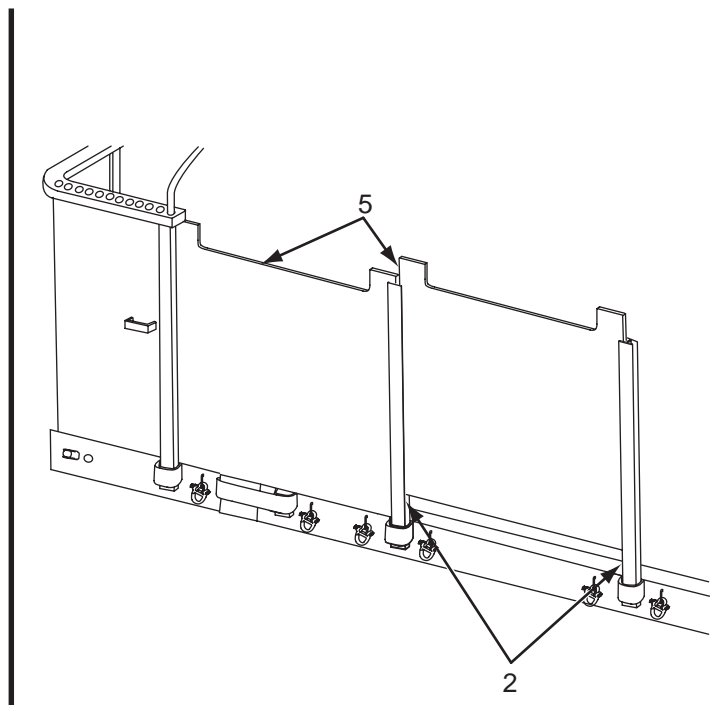


Figure 10. Side Panels

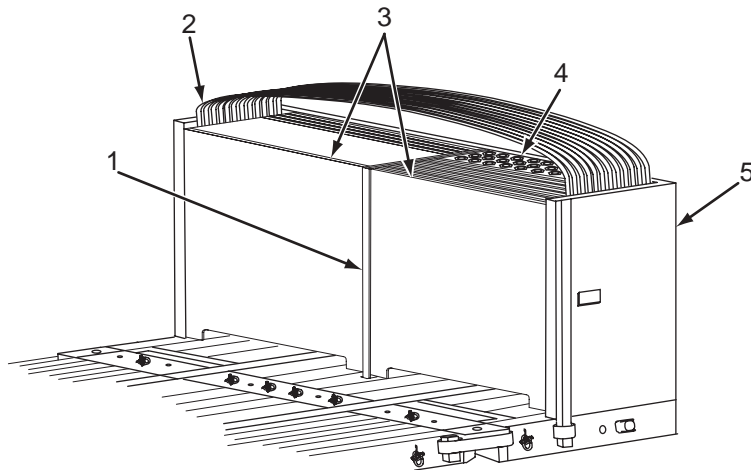
STORING SIDE RACK PANELS AND STAKES

Figure 11. Side Rack Stakes Storage

1. Place rear center stake (1) in front center deck behind bulkhead (5).
2. Install one rear panel (3) into grooves of center stake (1) and bulkhead (5).
3. Slide 10 long side panels between rear panel (3) and bulkhead (5), placing them all to the left or right side.
4. Install second rear panel (3) into grooves of center stake (1) and bulkhead (5) closing storage area.
5. Place remaining side panels behind the second rear panel, placing them on the opposite side.
6. Place all of the stakes (4) and two small panels in the area created behind the second set of panels.
7. Store bows (2) according to WP 0007 00-12.

TRAILER BOW AND TARPAULIN REPLACEMENT**BOW INSTALLATION**

Install ends of bows (1) in side stakes (2) on opposite sides of trailer. First bow (1) is installed in last hole of bulkhead (3).

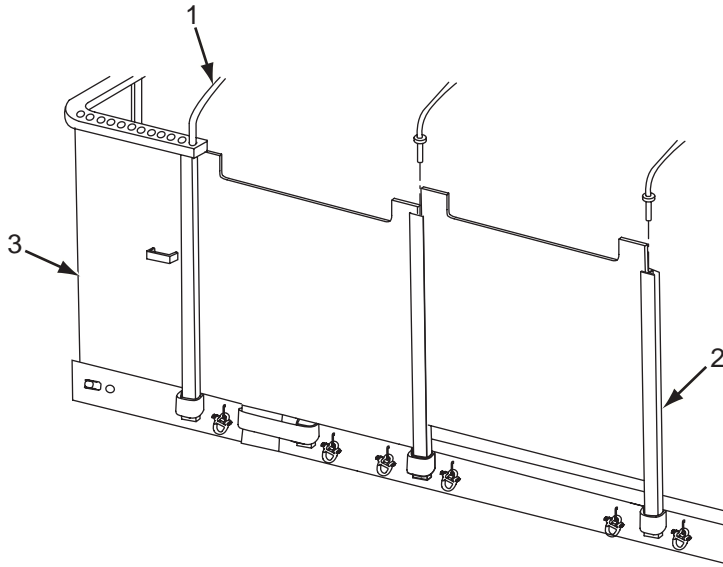


Figure 12. Bow Installation

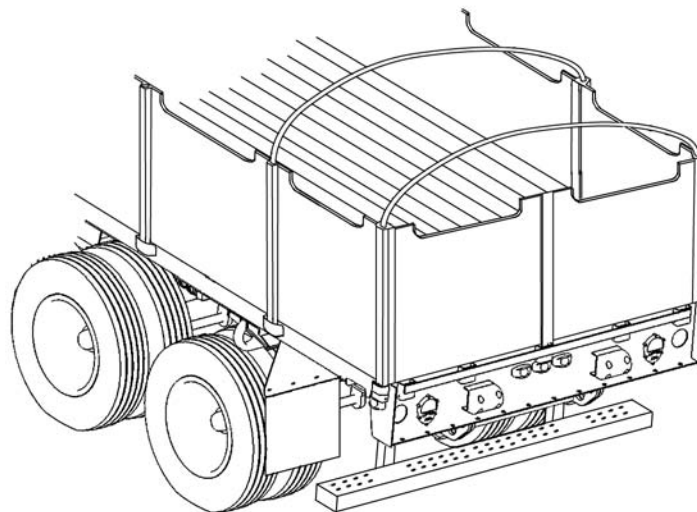


Figure 13. Bow Installation

TRAILER BOW AND TARPAULIN REPLACEMENT-Continued**WARNING**

Tarpaulin weighs 93 lbs. (42 kgs). Three personnel are required to install, remove, and store the tarpaulin. Failure to follow this warning may result in serious injury.

TARPAULIN INSTALLATION

1. Remove tarpaulin (1) from stowage box (3).
2. Lay tarpaulin on bulkhead according to Figure 14.
3. Unroll tarpaulin (1) over top of bows (2) toward rear of trailer.
4. Unfold tarpaulin (1) toward sides of trailer.
5. Secure center strap at front of trailer and tighten at rear of trailer.
6. Secure tarpaulin (1) from front to rear of trailer with attached ropes and rubber straps.

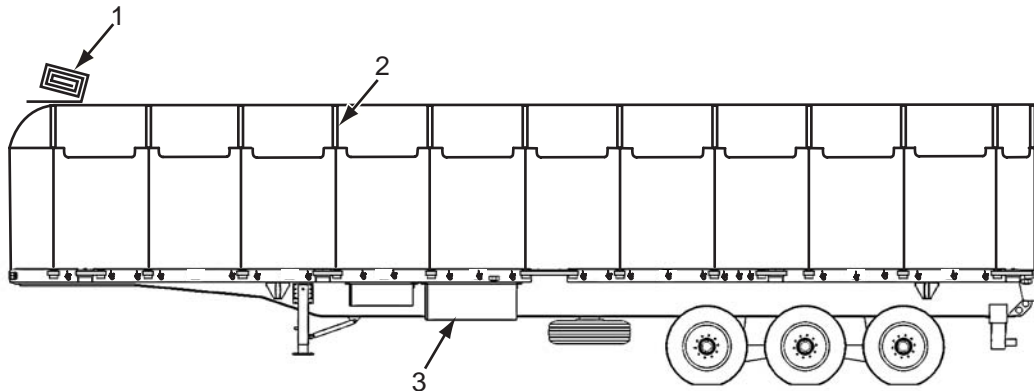


Figure 14. Tarpaulin Installation

TARPAULIN REMOVAL

1. Untie ropes, unhook rubber straps, and unhook center strap, securing tarpaulin.
2. Carefully remove tarpaulin over side of trailer.

TRAILER BOW AND TARPAULIN REPLACEMENT-Continued

FOLDING TARPAULIN

CAUTION

If tarpaulin must be folded or stowed when dirty or wet; clean, dry, refold, and stow tarpaulin as soon as mission permits. Failure to follow this caution may result in damage to tarpaulin.

1. Lay tarpaulin on a flat clean surface with inside of tarpaulin down.

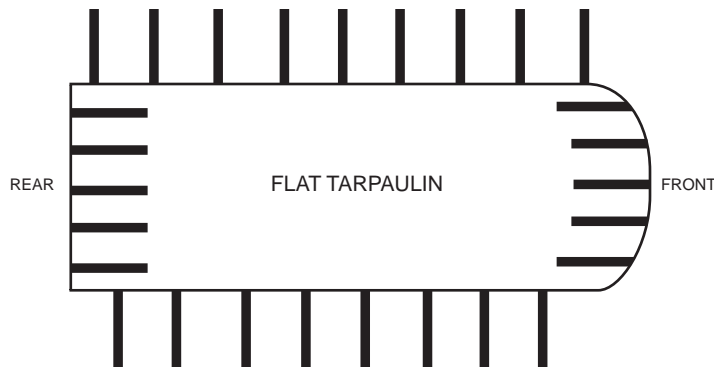


Figure 15. Tarpaulin - Step 1

2. Fold both long sides of tarpaulin to the middle. Lay straps and ropes flat. Make sure straps lay flat in the middle of tarpaulin.

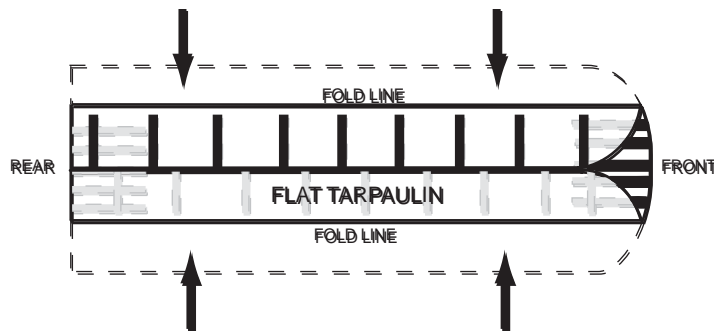


Figure 16. Tarpaulin - Step 2

TRAILER BOW AND TARPAULIN REPLACEMENT - Continued

FOLDING TARPAULIN - Continued

3. Fold one long side of tarpaulin to the opposite side.

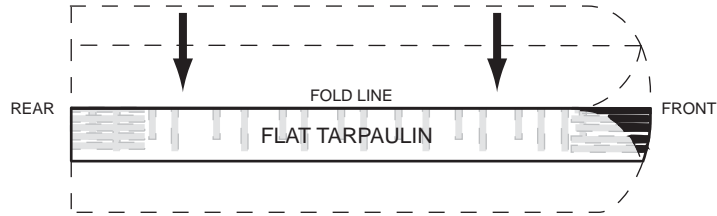


Figure 17. Tarpaulin - Step 3

4. Starting at rear of tarpaulin, in approximately 18 inch sections, completely fold to the front.

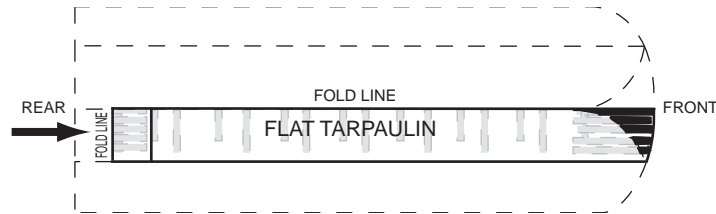


Figure 18. Tarpaulin - Step 4

NOTE

Ensure that all air has been released by pressing or kneeling on folded tarpaulin.

FOLDED TARPAULIN



Figure 19. Folded Tarpaulin



WARNING

Stowage box door may swing closed during loading. Failure to follow this warning may cause injury to personnel.

5. Stow tarpaulin in stowage box (WP 0003 00-3).

BOW REMOVAL

1. Remove bows by lifting from side stakes.
2. Stow bows on top of bulkhead in stowage holes.

TOWING INSTRUCTIONS**WARNING**

- Before moving semitrailer, ensure that all loose equipment is properly stowed and that nothing will drag on ground. If semitrailer is loaded, ensure that load is properly secured. Failure to follow this warning may result in injury to personnel or damage to equipment.

DO NOT tow semitrailer at speeds exceeding the following. Failure to follow this warning may result in injury to personnel or damage to equipment.

Primary Road	45-65 mph (72-104 km/h)
Improved, Rated Payload or Secondary Roads	30-45 mph (48 -72 km/h)
Off-road	5-10 mph (8-16 km/h)

- M915 and M915A1 tractors (without ABS) pulling an empty M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. Failure to follow this warning could result in injury to personnel or damage to equipment.
- M915A2, M915A3 and M915A4 tractors (without functioning ABS) pulling an empty M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. When the mission is complete, report to Organizational Maintenance to fix the ABS fault and restore all ABS capabilities. Failure to follow this warning could result in injury to personnel or damage to equipment.

TOWING INSTRUCTIONS - Continued

1. Perform all "During" PMCS in WP 0015 00-1, Table 3 while operating the semitrailer.
2. When towing the semitrailer, overall length of the unit must be kept in mind when passing other vehicles and when turning.
3. Turning and backing operations will be affected because the towing vehicle and semitrailer are a hinged unit. When backing, have assistant direct you. Adjust rearview mirrors before backing. When backing, rear of semitrailer will move in opposite direction from towing vehicle's front wheels. If wheels are turned to the right, semitrailer will go left. If wheels are turned left, semitrailer will go right.
4. Always tow the semitrailer at safe speeds and note any driving irregularities.

NOTE

Ensure that chock block chains are disconnected from semitrailer before chocking wheels.

5. When parking for extended periods, set parking brakes on both towing vehicle and semitrailer. Turn off towing vehicle engine before leaving cab. Chock semitrailer wheels.
6. If the towing vehicle and semitrailer are parked on a hill, chock wheels.
7. Refer to FM 21-305 for further information on proper driving practices.

CAGING AND UNCAGING SPRING BRAKES

1. Caging Spring Brakes.

**WARNING**

Chock wheels to prevent semitrailer from moving when brakes are released (caged). Failure to follow this warning may result in serious injury or death.

NOTE

In the event of air system pressure loss, failsafe units on every axle will automatically apply brakes. If semitrailer must be moved and there is not enough air system pressure to compress spring in spring brake chambers to release brakes, you will have to do this manually.

- a. Chock semitrailer wheels.
- b. Remove cap (5) from access hole (1).

NOTE

Brake chamber release studs may be stored in roadside toolbox.

- c. Remove nut (4), washer (3), and release stud (2) from air brake chamber (6).
- d. Insert tab end of release stud (2) in access hole (1) and turn release stud (2) 1/4 turn clockwise.
- e. Install washer (3) and nut (4) on release stud (2) using 3/4 in. wrench. Tighten nut until spring is fully caged.
- f. Repeat steps b through e for remaining spring brake chambers.
- g. Remove wheel chocks and stow.
- h. Move semitrailer off traveled portion of road.
- i. Chock semitrailer wheels.
- j. Notify organizational maintenance.

CAGING AND UNCAGING SPRING BRAKES - Continued

2. Uncaging Spring Brakes.

**WARNING**

Chock wheels to prevent semitrailer from moving when brakes are released (caged). Failure to follow this warning may result in serious injury or death.

- a. Remove nut (4) and washer (3) from release stud (2) using 3/4 in. wrench.
- b. Remove release stud (2) from access hole (1).

NOTE

Brake chamber release studs may be stored in roadside toolbox.

- c. Install release stud (2) on airbrake chamber (6) with washer (3) and nut (4) .
- d. Install cap (5) on access hole (1).
- e. Repeat steps a through d for remaining spring brake chambers.
- f. Remove and stow chocks.

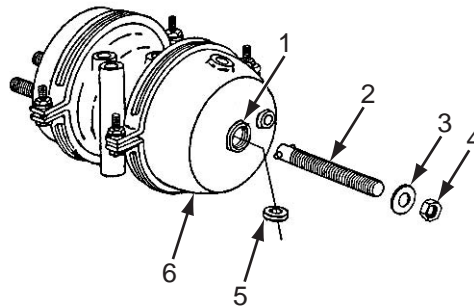


Figure 20. Spring Brakes

UNCOUPLING SEMITRAILER FROM TOWING VEHICLE

**WARNING**

All personnel must stand clear of towing vehicle and semitrailer during uncoupling operation. Failure to follow this warning may result in serious injury or death to personnel.

1. Chock semitrailer wheels.
2. Position ground boards under landing gear.
3. Lower landing gear (1), using landing gear hand crank (2). Secure hand crank after lowering landing gear (1).
4. Shut off air from towing vehicle to trailer. Disconnect service airlines from semitrailer air coupling (7). Disconnect emergency airline from semitrailer air coupling (3).
5. Disconnect 24-volt electrical connector from semitrailer electrical receptacle (4), or disconnect 12-volt electrical connector from semitrailer electrical receptacle (5).

NOTE

Locking plunger lever and safety latch may vary with different model prime movers.

6. Pull fifth wheel locking plunger (11) forward and slowly drive towing vehicle forward until kingpin plate (6) clears fifth wheel approach ramps (10).
7. Move towing vehicle a safe distance from semitrailer.
8. Perform all "After" PMCS (WP 0015 00-10) in Table 3.

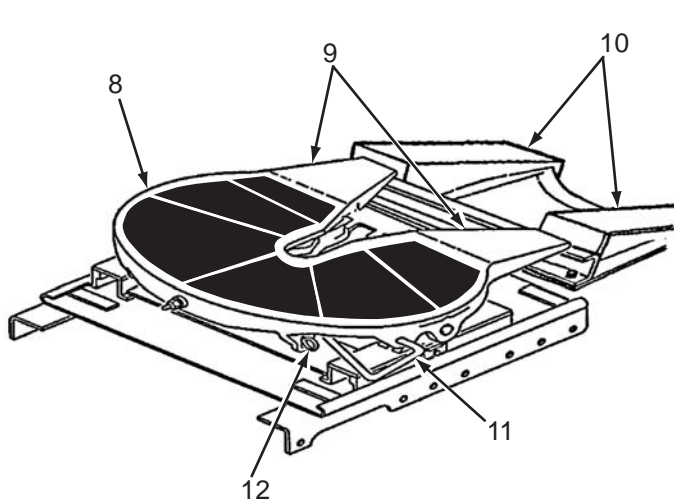


Figure 3. Coupler Plate

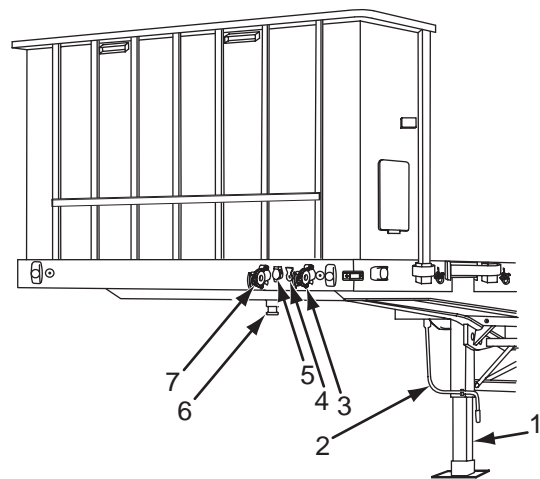


Figure 4. Air Line Connections

SLINGING OPERATIONS

**WARNING**

All personnel must stand clear of semitrailer during slinging operation. Only trained sling operations personnel should conduct this operation. Failure to follow this warning may result in serious injury or death to personnel.

CAUTION

Sling only an empty semitrailer or a semitrailer loaded with two 20 ft. (6.1 m) or one 40 ft. (12 m) container. Do not sling semitrailer in any other configuration. Failure to follow this caution may result in damage to equipment.

DO NOT sling semitrailer unless all four sling provisions are fully extended and locked. Failure to follow this caution may result in damage to equipment.

1. Remove sling provision locking pin (1).
2. Pull sling provision (2) to fully extended position. Put locking pin (1) back in to the lock pin hole. Repeat for other sling provisions.
3. Attach lifting cables to sling provisions (2) and complete slinging operation.
4. On completion of slinging operation, remove lifting cables from sling provisions (2).
5. Remove locking pin (1) from sling provisions (2). Push sling provision into fully retracted position.
6. Put sling provision locking pin (1) back into hole.
7. Repeat steps 5 and 6 to stow other sling provisions (2).

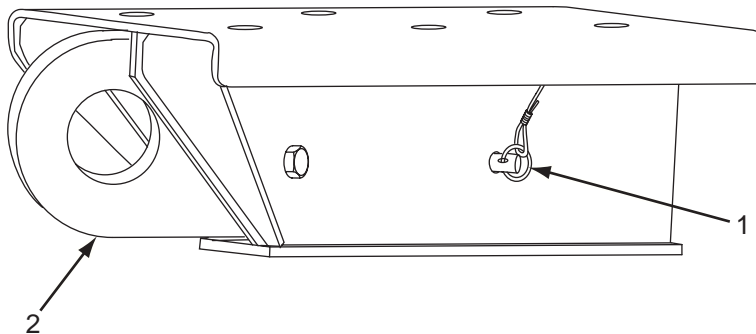


Figure 21. Sling Provision and Locking Pin

END OF WORK PACKAGE

OPERATION UNDER UNUSUAL CONDITIONS

GENERAL

1. This section contains instructions for safely operating the M872A4 Series Flatbed Semitrailers under unusual conditions. In addition to normal preventive maintenance and service, special care must be taken to keep the semitrailers operational in extreme temperatures and humidity.
2. Chronic failure of materiel resulting from exposure to extreme conditions must be reported in accordance with DA PAM 738-751.

OPERATION IN EXTREME COLD**CAUTION**

In arctic and extreme cold conditions, the fluid in the hydraulic jack needs to be changed to Arctic OEA (WP 0086 00-2, Item 8) before using it. Failure to follow this caution may result in damage to equipment.

1. Special care must be taken when operating the semitrailers in cold weather. Refer to FM 21-305 for special instructions for all semitrailers.
2. Refer to WP 0022 00 for proper lubrication during extreme cold weather.
3. When parking for any period of time in temperatures below 0°F (-18°C), park in a sheltered area out of the wind and clean off any build-up of ice or snow. Place a footing of planks or brush under tires and landing legs to prevent them from freezing to the ground. Ensure that the tires are properly inflated (WP 0003 00-7). Underinflated tires will freeze, resulting in flat spots.
4. Be cautious when placing semitrailer in motion after a shutdown. Thickened lubricants may cause failure of components. Free frozen brakeshoes, or tires frozen to ground, with care.

OPERATION IN EXTREME HEAT

1. Refer to WP 0022 00 for proper lubrication during extreme heat conditions.
2. Do not park the semitrailer in sunlight for long periods of time. Heat and sunlight shorten tire life.
3. Shelter or cover the semitrailer with tarpaulin, if available.

OPERATION IN SANDY OR DUSTY AREAS

1. Clean, inspect, and lubricate the semitrailer more often in sandy or dusty areas (WP 0022 00).
2. Maximum allowable speed when driving in sand is 10 mph (16 km/h).

OPERATION IN SALTWATER AREAS

Clean, inspect, and lubricate the semitrailer more often when operating in saltwater areas (WP 0022 00).

OPERATION IN MUD

1. Immediately after operation in mud, thoroughly clean, inspect, and lubricate if tactical situation permits (WP 0022 00).
2. Maximum allowable speed when driving in mud is 5 mph (8 km/h).
3. If one or more wheels sink into mud, it may be necessary to raise mired wheel and insert planking or matting beneath it.

OPERATION IN SNOW

Refer to FM 21-305 for special instructions on driving hazards in snow.

FORDING

Semitrailer will sustain water fording up to a depth of 20 in. (76 cm).

OPERATION IN MOUNTAIN REGION

Semitrailer brakes will be used more than normal operation. Brake shoes will need to be checked for damage due to overheating as soon as the mission allows.

END OF WORK PACKAGE

TM 9-2330-331-14&P

CHAPTER 3
OPERATOR TROUBLESHOOTING PROCEDURES

OPERATOR TROUBLESHOOTING INDEX

<u>Malfunction/Symptom</u>	<u>Troubleshooting Procedure</u>
OPERATOR TROUBLESHOOTING PROCEDURES	0010 00-1
1. General	0010 00-1
2. Explanation of Columns	0010 00-1
ELECTRICAL SYSTEM	
1. All lamps fail to light	0010 00-2
2. One or more lamps (but not all) fail to light	0010 00-2
3. Dim or flickering lights	0010 00-2
BRAKE SYSTEM	
1. Brakes will not release	0010 00-3
2. Brakes grab	0010 00-4
ABS	
ABS light blinks or stays on during operation	0010 00-5
TIRES	
Abnormal tire wear	0010 00-6
LANDING GEAR	
1. Landing gear difficult to lower	0010 00-6
2. Landing gear difficult to raise	0010 00-6
3. Only one landing leg raises or lowers	0010 00-6
END OF WORK PACKAGE	

OPERATOR TROUBLESHOOTING PROCEDURES

GENERAL

1. This section provides information for identifying and correcting malfunctions which may develop while operating your semitrailer.
2. The Troubleshooting Symptom Index (WP 0009 00-1) lists common malfunctions which may occur, and refers you to the proper Work Package in Table 1 for a troubleshooting procedure.
3. If you are unsure of the location of an item mentioned in troubleshooting, refer to WP 0003 00-1 or to the maintenance task where the item is replaced.
4. Before performing troubleshooting, read and follow all safety instructions found in the Warning Summary at the front of this manual.
5. This section 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.
6. When troubleshooting a malfunction:
 - a. Locate the symptom(s) in the Troubleshooting Symptom Index in WP 0009 00-1 that best describe the malfunction.
 - b. Turn to the page in Table 1 where the troubleshooting procedures for the malfunction question are described. Headings at top of each page show how each troubleshooting procedure is organized: MALFUNCTION, TEST OR INSPECTION (in step number order), and CORRECTIVE ACTION.
 - c. Perform each step in the order listed until the malfunction is corrected. DO NOT perform any maintenance task unless the troubleshooting procedure tells you to do so.

EXPLANATION OF COLUMNS

The columns in Table 1 are defined as follows:

- a. **MALFUNCTION.** A visual or operational indication that something is wrong with the semitrailer.
- b. **TEST OR INSPECTION.** A procedure to isolate the problem in a component or system.
- c. **CORRECTIVE ACTION.** A procedure to correct the problem.

Table 1. Operator Troubleshooting

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>ELECTRICAL SYSTEM</p> <p>1. ALL LAMPS FAIL TO LIGHT</p> <p>2. ONE OR MORE LAMPS (BUT NOT ALL) FAIL TO LIGHT</p> <p>3. DIM OR FLICKERING LIGHTS</p>	<p>1. Check towing vehicle for inoperative lights.</p> <p>2. If only towing vehicle lights operate, check towing vehicle electrical connector for loose or improper connection at semitrailer electrical receptacle.</p> <p>3. Check semitrailer electrical receptacles and towing vehicle electrical connector for dirty and corroded contacts.</p> <p>1. Check light assemblies for damage.</p> <p>2. Check for broken lead wires and dirty or loose connections.</p> <p>1. Check for damaged light assembly.</p> <p>2. Check for loose, dirty, or corroded terminals.</p> <p>3. Check semitrailer electrical receptacle and towing vehicle electrical connector for dirty and corroded contacts.</p>	<p>Report inoperative lights to Organizational Maintenance.</p> <p>Connect electrical connector (WP 0007 00-3).</p> <p>1. Clean contacts.</p> <p>2. If condition is not repaired, notify Organizational Maintenance.</p> <p>If light assembly is damaged, notify Organizational Maintenance. If light assembly is not damaged, go to step 2.</p> <p>Notify Organizational Maintenance if any lead wires or wiring harness require repair or replacement.</p> <p>If light assembly is damaged, notify Organizational Maintenance. If light assembly is not damaged, go to step 2.</p> <p>Notify Organizational Maintenance.</p> <p>1. Clean electrical receptacles and contacts.</p> <p>2. If condition is not repaired, contact Organizational Maintenance.</p>

Table 1. Operator Troubleshooting - Continued



MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>BRAKES SYSTEM</p> <p>1. BRAKES WILL NOT RELEASE</p>	<div style="display: flex; align-items: center;">   <div style="margin-left: 10px;"> <p>WARNING</p> <ul style="list-style-type: none"> • Chock wheels to prevent semitrailer from moving when brakes are released (caged). Failure to follow this warning may result in serious injury or death. • A hot brake can cause serious burns. Exercise caution before attempting to touch wheel hub after use. Radiated heat will be felt before brake drum is touched. <p style="text-align: center;">NOTE</p> <p>In the event of air system pressure loss, failsafe unit on axles will automatically apply brakes. If semitrailer must be moved and there is not enough air system pressure to compress spring in spring brake chambers to release brakes, you will have to do this manually (WP 0007 00-14).</p> <ol style="list-style-type: none"> 1. Check towing vehicle for proper air pressure. Refer to towing vehicle technical manual. 2. Check for proper air coupling connections at towing vehicle and semitrailer (WP 0007 00-02). 3. Check for air leaks in brake hoses and connectors. </div> </div>	<p>If air pressure is low, increase to normal level.</p> <p>Connect air couplings.</p> <p>Notify Organizational Maintenance if hoses or connectors require repair or replacement.</p>

Table 1. Operator Troubleshooting - Continued


MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>ABS</p> <p>ABS LIGHT</p>	<div style="text-align: center;">  <p>WARNING</p> </div> <ul style="list-style-type: none"> • M915 and M915A1 tractors (without ABS) pulling an <u>empty</u> M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. Failure to follow this warning could result in injury to personnel or damage to equipment. • M915A2, M915A3 and M915A4 tractors (without functioning ABS) pulling an <u>empty</u> M872A4 trailer have shown a tendency to veer out of the driving lane during hard braking under dry conditions. Speeds above 35 mph under hard braking will require the driver to quickly compensate steering for tractor/trailer instability. Reduce speed even further under wet and slippery conditions which can also cause tractor/trailer instability. When the mission is complete, report to Organizational Maintenance to fix the ABS fault and restore all ABS capabilities. Failure to follow this warning could result in injury to personnel or damage to equipment. <p>ABS light blinks more than one time or stays on during operation.</p>	<p>Check ABS sensor connections. If problem continues, notify Organizational Maintenance.</p>

Table 1. Operator Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>TIRES</p> <p>ABNORMAL TIRE WEAR</p>	<ol style="list-style-type: none"> 1. Check tires for proper inflation. 2. Check for loose wheel nuts. 	<p>Inflate tires to proper pressure (WP 0003 00-6).</p> <p>Tighten wheel nuts. Notify Organizational Maintenance to apply proper torque (WP 0016 00-4).</p>
<p>LANDING GEAR</p> <p>1. LANDING GEAR DIFFICULT TO LOWER</p> <p>2. LANDING GEAR DIFFICULT TO RAISE</p> <p>3. ONLY ONE LANDING LEG RAISES OR LOWERS</p>	<ol style="list-style-type: none"> 1. Check for misaligned or broken handcrank. 2. Check for misaligned, bent, and damaged landing legs. 1. Check for misaligned or broken handcrank. 2. Check for dirt on lower landing leg. 3. Check for misaligned, bent, and damaged landing legs. 4. Check for missing crossbar or components. Check for missing crossbar or crossbar hardware. 	<p>Notify Organizational Maintenance if repair or replacement is required.</p> <p>Notify Organizational Maintenance if repair or replacement is required.</p> <p>Notify Organizational Maintenance if repair or replacement is required.</p> <p>Clean landing leg as necessary.</p> <p>Notify Organizational Maintenance if repair or replacement is required.</p> <p>Notify Organizational Maintenance if repair or replacement is required.</p> <p>Notify Organizational Maintenance if repair or replacement is required.</p>

END OF WORK PACKAGE

TM 9-2330-331-14&P

CHAPTER 4

**ORGANIZATIONAL
TROUBLESHOOTING PROCEDURES**

ORGANIZATIONAL TROUBLESHOOTING INDEX

Malfunction Symptom Troubleshooting Procedure

ORGANIZATIONAL TROUBLESHOOTING PROCEDURES 0012 00-1

- 1. General 0012 00-1
- 2. Explanation of Columns 0012 00-1

ELECTRICAL SYSTEM

- 1. All lamps fail to light..... 0012 00-2
- 2. One or more lamps (but not all) fail to light 0012 00-2
- 3. Dim or flickering lights 0012 00-3

BRAKE SYSTEM

- 1. Brakes will not release 0012 00-3
- 2. Brakes do not engage or are weak 0012 00-4
- 3. Brakes engage or release slowly 0012 00-4
- 4. Brakes grab 0012 00-5
- 5. Brakes drag 0012 00-5

ABS WARNING LIGHT

- 1. ABS light come on and stays on at operating speeds 0012 00-6
- 2. ABS warning light does not come on 0012 00-8

TIRES

Abnormal tire wear 0012 00-8

LANDING GEAR

- 1. Landing gear difficult to raise or lower 0012 00-8
- 2. Only one landing leg raises or lowers 0012 00-8

SUSPENSION SYSTEM

- 1. Semitrailer pulls to one side. 0012 00-9
- 2. Semitrailer leans to one side 0012 00-9

END OF WORK PACKAGE

ORGANIZATIONAL TROUBLESHOOTING PROCEDURES

GENERAL

1. This section provides information for identifying and correcting malfunctions which may develop when operating or maintaining the semitrailer.
2. The Troubleshooting Symptom Index in WP 0011 00 lists common malfunctions which may occur and refers you to the proper page in Table 2 for a troubleshooting procedure.
3. This section 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.
4. When troubleshooting a malfunction:
 - a. Question the operator to obtain any information that might help determine the cause of the problem. Before continuing, ensure that all applicable operator/crew troubleshooting was performed.
 - b. Locate the symptom(s) in WP 0011 00-1 that best describes the malfunction. If the appropriate symptom is not listed, notify your supervisor.
 - c. Turn to the page in Table 2 where the troubleshooting procedures for the malfunction in question are described. Headings at the top of each page show how each troubleshooting procedure is organized: MALFUNCTION, TEST OR INSPECTION (in step number order), and CORRECTIVE ACTION.
 - d. Perform each step in the order listed until the malfunction is corrected. DO NOT perform any maintenance task unless the troubleshooting procedure tells you to do so.

EXPLANATION OF COLUMNS

The columns in Table 2 are defined as follows:

- a. **MALFUNCTION.** A visual or operational indication that something is wrong with the semitrailer.
- b. **TEST OR INSPECTION.** A procedure to isolate the problem in a component or system.
- c. **CORRECTIVE ACTION.** A procedure to correct the problem.

Table 2. Organizational Troubleshooting - Continued


MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>3. DIM OR FLICKERING LIGHTS</p>	<p style="text-align: center;">NOTE</p> <p>Refer to wiring diagrams in WP 0025 00-1 to determine routing of electrical wires and location of electrical components.</p> <ol style="list-style-type: none"> 1. Check for loose, dirty, and corroded terminals. 2. Check for poor or loose ground. 3. Check for defective contacts in electrical receptacle or on plug of electrical connector on towing vehicle. 	<p>Clean and tighten terminals.</p> <p>Clean and tighten terminals of ground wires.</p> <p>Replace contact or electrical receptacles as required (WP 0026 00-1).</p> <p>Refer to towing vehicle technical manual to replace or repair electrical connector.</p>
<p>BRAKES SYSTEM</p> <p>1. BRAKES WILL NOT RELEASE</p>	<div style="text-align: center;">  <p>WARNING</p> <p>Wear safety goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream to prevent injuries. Serious injury may result from failure to do so.</p> </div> <ol style="list-style-type: none"> 1. Check for restrictions and any bulges, cracks, nicks, or cuts in air lines and hoses. 2. Check for proper operation of standard air brake chambers. 	<p>Remove restriction or replace defective air lines and hoses (WP 0041 00-1).</p> <p>Replace defective air brake chamber (WP 0042 00-1).</p>

Table 2. Organizational Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. BRAKES WILL NOT RELEASE - Continued	3. Check for weak or broken brakeshoe return spring. 4. Check for proper service brake adjustment.	Replace return spring (WP 0034 00-1). Adjust service brakes (WP 0038 00-4).
2. BRAKES DO NOT ENGAGE OR ARE WEAK	1. Perform air leakage test (WP 0044 00-1). 2. Check for proper operation of spring and relay valves. 3. Check for presence of grease on brakeshoe linings. 4. Check for worn brakeshoe linings. 5. Check for proper service brake adjustment.	Tighten any loose fittings or repair or replace fittings per component (WP 0044 00-1). Replace defective spring and relay valves (WP 0043 00-1). 1. Replace brakeshoes (WP 0034 00-1) and defective oil seals (WP 0037 00-1). 2. Clean brakedrum. Replace brakeshoes if linings are worn within 1/18 in. (1.6 mm) of rivet heads (WP 0034 00-1). Adjust service brakes (WP 0038 00-4).
3. BRAKES ENGAGE OR RELEASE SLOWLY	1. Check for restrictions in air lines and hoses. 2. Check for proper operation of spring and relay valves. 3. Check for weak or broken brakeshoe return spring. 4. Check for proper operation of airbrake chamber.	Remove restriction or replace defective air lines and hoses (WP 0041 00-1). Replace defective spring and relay valves (WP 0043 00-1). Replace return spring (WP 0034 00-1). Replace defective airbrake chamber (WP 0042 00-1).

Table 2. Organizational Troubleshooting - Continued


MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>3. BRAKES ENGAGE OR RELEASE SLOWLY (Continued)</p>	<p>5. Perform air leakage test (WP 0044 00-1).</p>	<p>Tighten any loose fittings or repair or replace fittings per component WP.</p>
<p>4. BRAKES GRAB</p>	<div style="text-align: center;">  <p>WARNING</p> <p>Wear safety goggles to prevent eye injury when opening air reservoir draincock. Step away from airstream to prevent injuries. Serious injury may result from failure to do so.</p> </div>	
	<p>1. Check for moisture in air reservoir.</p>	<p>Drain air reservoir.</p>
	<p>2. Check for proper service brake adjustment.</p>	<p>Adjust service brakes (WP 0038 00-4).</p>
	<p>3. Check for presence of grease on brakeshoe linings and brakedrum.</p>	<p>1. Replace brakeshoes (WP 0034 00-1) and defective oil seals (WP 0037 00-1).</p> <p>2. Clean brakedrum.</p>
	<p>4. Check for loose or worn wheel bearings (rollers).</p>	<p>Adjust or replace wheel bearings (rollers) (WP 0037 00-1).</p>
	<p>5. Check for cracked, scored, or deformed brakedrum.</p>	<p>Replace brakedrum (WP 0036 00-1).</p>
	<p>6. Check for worn or loose brakeshoe linings.</p>	<p>Replace brakeshoes (WP 0034 00-1).</p>
<p>5. BRAKES DRAG (ONE OR MORE BRAKE DRUMS RUNNING HOT)</p>	<p>1. Check for proper service brake adjustment.</p>	<p>Adjust service brakes (WP 0038 00-4).</p>
	<p>2. Check for weak or broken brakeshoe return spring.</p>	<p>Replace return spring (WP 0034 00-1).</p>
	<p>3. Check for out-of-round brakedrum.</p>	<p>Replace brakedrum (WP 0036 00-1).</p>

Table 2. Organizational Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>ABS WARNING LIGHT</p> <p>1. ABS WARNING LIGHT COMES ON AND STAYS ON AT OPERATING SPEEDS (ABOVE 4 MPH [6 KM/H])</p>	<p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • The ABS light identifies the center and rear axles issues. • Frequent ABS issues may be the result of wheel bearings (rollers) out of adjustment. <ol style="list-style-type: none"> 1. Turn prime mover (refer to applicable prime mover TM) ignition switch ON. 2. Count to three and turn OFF ignition switch. Immediately turn switch ON again. 3. The ABS warning indicator light will come on and then off. 4. The ABS blink code will then be displayed three times. 	<p>Record ABS blink code and refer to ABS diagnostics per WP 0012 00-7.</p>

Table 2. Organizational Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
ABS WARNING LIGHT - Continued		
NOTE If blink codes 3, 4, 5, or 6 occur, wheel with fault must be rotated at a speed higher than 4 mph either by towing or spinning while connected to the towing vehicle. This will reset the ECU after corrective action is completed.		
ABS Diagnostic Blink Codes		
Blink Code	Problem Area	Action
3	Sensor BU1 Roadside center	Check sensor installation. Replace sensor and sensor cables if code continues after installation check (WP 0040 00-1).
4	Sensor YE1 Curbside center	Check sensor installation. Replace sensor and sensor cables if code continues after installation check (WP 0040 00-1).
5	Sensor BU2 Roadside rear	Check sensor installation. Replace sensor and sensor cables if code continues after installation check (WP 0040 00-1).
6	Sensor YE2 Curbside rear	Check sensor installation. Replace sensor and sensor cables if code continues after installation check (WP 0040 00-1).
7	External ABS modulator valve	Verify proper electrical installation. Check power supply. If code continues, replace ECU (WP 0039 00-1).
9	Internal modulator failure, inlet valve #2	Verify proper installation. If code continues, replace ECU (WP 0039 00-1).
10	Internal modulator failure, inlet valve #1	Verify proper installation. If code continues, replace ECU (WP 0039 00-1).
11	Internal modulator failure, outlet valve	Verify proper installation. If code continues, replace ECU (WP 0039 00-1).
14	Power supply	Verify proper electrical installation. Check power supply. Refer to towing vehicle TM if code continues.
15	ECU failure	Verify proper installation. If code continues, replace ECU (WP 0039 00-1).
16	SAE J1708 failure	Replace ECU (WP 0039 00-1).
17	SAE J2497 (PLC) failure	Replace ECU (WP 0039 00-1).
18	Generic I/O failure	Verify proper electrical installation. Check power supply. Refer to towing vehicle TM if code continues.

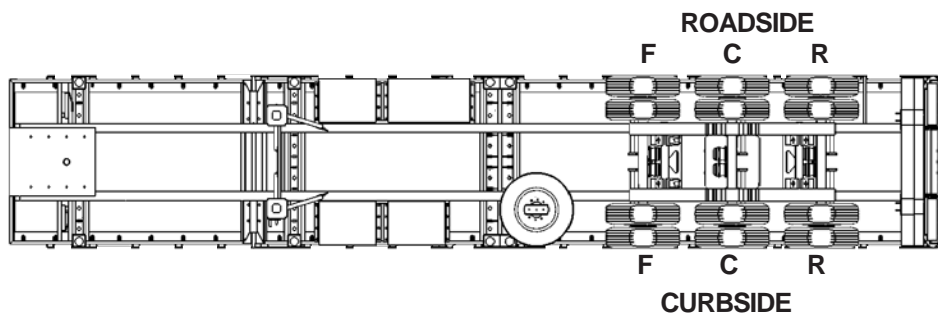


Figure 1. ABS Sensor Locations

Table 2. Organizational Troubleshooting - Continued

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
<p>ABS WARNING LIGHT - Continued</p> <p>2. ABS WARNING LIGHT DOES NOT COME ON</p>	<p>1. Turn prime mover (refer to applicable prime mover TM) ignition switch ON.</p> <p>2. Count to three and turn OFF ignition switch. Immediately turn switch ON again.</p> <p>3. ABS indicator light still does not come on.</p>	<p>1. Check intervehicular connections for corrosion or damage. Repair or replace as needed.</p> <p>2. Replace ABS light. Verify problem is solved.</p>
<p>TIRES</p> <p>ABNORMAL TIRE WEAR</p>	<p>1. Check for proper wheel bearing (rollers) adjustment.</p> <p>2. Check for worn trunnion bushing.</p> <p>3. Check for loose or defective radius rods.</p> <p>4. Check alignment.</p>	<p>Adjust wheel bearings (rollers) (WP 0037 00-1).</p> <p>Replace trunnion bushing (WP 0047 00-1).</p> <p>Tighten or replace radius rods (WP 0057 00-1).</p> <p>Contact Direct Support Maintenance.</p>
<p>LANDING GEAR</p> <p>1. LANDING GEAR DIFFICULT TO RAISE OR LOWER</p> <p>2. ONLY ONE LANDING LEG RAISES OR LOWERS</p>	<p>1. Check for misaligned or damaged landing leg.</p> <p>2. Check for damaged gearbox.</p> <p>3. Check for missing crossbar or crossbar hardware.</p> <p>Check for missing crossbar or crossbar hardware.</p>	<p>Replace landing leg as required (WP 0053 00-1).</p> <p>Replace landing leg as required (WP 0053 00-1).</p> <p>Repair landing leg hardware (WP 0053 00-1).</p> <p>Repair landing leg hardware (WP 0053 00-1).</p>

TM 9-2330-331-14&P

CHAPTER 5
OPERATOR MAINTENANCE PROCEDURES

OPERATOR MAINTENANCE PROCEDURES INDEX

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**OPERATOR/CREW PREVENTIVE MAINTENANCE
CHECKS AND SERVICES INSTRUCTIONS (PMCS)**

GENERAL

To ensure that the M872A4 Semitrailer is ready for operation at all times, it must be inspected on a regular basis so that defects may be found before they result in serious damage, equipment failure, or injury to personnel. This section contains systematic instructions on inspections, adjustments, and corrections to be performed by the operator/crew.

While performing PMCS, read and follow all safety instructions in the warning summary at the front of this manual. Keep in mind all warnings and cautions throughout PMCS.

SERVICE INTERVALS

Perform PMCS, found in Table 3, at the following intervals:

Perform "Before" PMCS before operating the semitrailer.

Perform "During" PMCS while operating the semitrailer.

Perform "After" PMCS immediately after operating the semitrailer.

Perform "Weekly" PMCS procedures, must be done once each week on semitrailer.

Perform "Monthly" PMCS procedures, must be done once each month on semitrailer.

REPORTING REPAIRS

All defects that the operator cannot fix must be reported on a DA Form 2404, Equipment Inspection and Maintenance Worksheet, or an electronic DA Form 5988E, if available, immediately after completing PMCS. If a serious problem is found, immediately report it to your supervisor. Remember, record any corrective action taken.

GENERAL PMCS PROCEDURES**WARNING**

Dry cleaning solvent is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.

1. Keep equipment clean. Dirt, oil, and debris may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (WP 0086 00-3) on all metal surfaces. Use soap and water on rubber, plastic, and painted surfaces.

GENERAL PMCS PROCEDURES - Continued

2. While performing PMCS, inspect the following components:
 - a. **Bolts, Nuts, and Screws.** Ensure that they are not loose, missing, damaged, or broken. Tighten any that are loose.
 - b. **Welds.** Inspect for gaps where parts are welded together. Report bad welds to your supervisor.
 - c. **Electric Wires or Connectors.** Inspect for cracked or broken insulation, bare wires, and loose or broken connectors. Inspect all wires and connections for corrosion. Make repairs or replace as required.
 - d. **Hoses, Lines, and Fittings.** Inspect for wear, damage, and leaks. Ensure that clamps and fittings are tight. If a leak originates from a loose fitting or connector, tighten it. If a component is broken or worn, correct problem if authorized by the Maintenance Allocation Chart (MAC). If not authorized, report it to your supervisor.
 - e. **Leakage.**

CAUTION

Equipment operation is allowable with minor leakages (Class I or II). Of course, consideration must be given to the fluid capacity of the item or system being checked. When in doubt, ask your supervisor.

When operating with Class I or II leaks, continue to check fluid levels as required in your PMCS. Class III leaks should be reported immediately to your supervisor. It is necessary to know how fluid leakage affects the status of the vehicle. The following are definitions of the classes of leakage an operator or crew member needs to know to be able to determine the condition of the leak. Learn and then be familiar with them, and REMEMBER - WHEN IN DOUBT, ASK YOUR SUPERVISOR.

Leakage Definitions for Crew/Operator PMCS.

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

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

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

3. Check that components are adequately lubricated in accordance with WP 0022 00.

SPECIFIC PMCS PROCEDURES

1. Operator/crew PMCS is provided in Table 3 (WP 0015 00-1). Always perform PMCS in the order listed. Once it becomes a habit, anything that is not right can be spotted quickly. PMCS is a good tool for learning about the semitrailer. Times to perform good PMCS will decrease as you become more familiar with its operation.
2. Before performing PMCS, read all the checks required for the applicable interval and prepare all the tools needed. Have several clean rags handy. Perform all inspections at the applicable interval.
3. If anything wrong is discovered through PMCS, perform the appropriate troubleshooting task in WP 010 00. If any component or system is not serviceable, or if a given service does not correct the problem, notify your supervisor.
4. The column headings in Table 3 are defined as follows:
 - a. **Item No.** Provides a logical sequence for PMCS to be performed and is used as a source of item numbers for the "TM ITEM NO" column on DA Form 2404 in recording PMCS results.
 - b. **Interval.** Specifies interval at which PMCS is to be performed.
 - c. **Man Hour.** Specifies the estimated time it takes a person to check or service.
 - d. **Item To Be Checked or Serviced.** Lists the system and common name of items that are to be inspected.
 - e. **Procedure.** Tells you how to do the required check or service.
 - f. **Equipment Not Ready/Available If:** Explains when the semitrailer is nonmission-capable (NMC). This column tells you when and why your equipment cannot be used.

NOTE

- Mission requirements, urgency, safety, and common sense should be considered in determining NMC status of the semitrailer.
- Before beginning PMCS procedures, make sure prime mover is uncoupled from trailer.

END OF WORK PACKAGE

Table 3. Operator/Crew PMCS

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before	.25	Complete Trailer	<p style="text-align: center;">NOTE</p> <p>Perform weekly as well as before PMCS if:</p> <ul style="list-style-type: none"> • You are the assigned operator but have not operated the semi-trailer since the last weekly PMCS. • You are operating the semitrailer for the first time. <p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> • Reference prime mover technical manual. Ensure all operations are adhered to, i.e., coupling, fifth wheel load and position, load capabilities, speeds, on/off road operation, and adverse weather/road operations. • Bumper must be lowered for ALL normal operation. • Bumper is only raised during shipping operations. <p style="text-align: center;">NOTE</p> <p>Perform the following inspections and checks before connecting the semitrailer to the towing vehicle.</p> <p>Perform visual walk-around inspection of complete trailer, checking for obvious damage, corrosion, missing components, and bumper position.</p>	

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before	.25 .25 .25 .15	Kingpin	a. Visually inspect kingpin for obvious damage and wear. Make sure kingpin and coupler plate are greased per WP 0022 00 if required for prime mover. b. Visually inspect coupler plate for obvious damage, bowing, and cracked welds. c. Check to make sure coupler plate drain holes are not plugged. d. Check for loose or missing nuts and bolts.	Kingpin is damaged or shows obvious wear. Coupler plate is bowed or welds are cracked. Coupler plate drain holes are plugged. Nuts and bolts are loose or missing.
3	Before	.10	Voltage Receptacles	Visually check for damage.	Receptacles are damaged.
4	Before	.10	Gladhands	Inspect gladhands for damage. Gladhands are missing, worn/cracked seals, and missing hardware. <p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • Check for corroded or loose plug-in connectors. Make sure there is no debris between plug and connector and then make sure that plug-in is seated. • Mission requirements, urgency, safety, and common sense should be considered in determining NMC status of the semitrailer. 	Gladhands are damaged, seals worn/cracked or missing, or missing hardware.

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before	.25	Lights	<p>a. Connect 12-volt intervehicular cable from tractor to semitrailer. Check lights for damage, proper operation, and missing hardware.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">Remove 12-volt cable before beginning step b.</p> <p>b. Connect 24-volt intervehicular cable from tractor to semitrailer. Check lights for damage, proper operation, and missing hardware.</p>	<p>Lights are damaged, do not operate, or missing hardware.</p> <p>Lights are damaged, do not operate, or missing hardware.</p>
6	Before	.10	Reflectors	<p>Look for damage and missing hardware.</p> <p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • Tractor must be coupled before checking ABS warning light. • ABS warning light should not stay on when semitrailer is moving above 4 mph (6.4 km/h). • If mission requirements do not allow for troubleshooting of ABS system, continue on with mission until system can be properly diagnosed by Organizational Maintenance. Only modulation will be affected, not stopping capacity of brake system. 	<p>Reflectors are missing and required for mission.</p>
7	Before	.10	ABS	<p>Visually check that the ABS warning light does not stay on.</p>	<p>ABS light does not come on or stays on.</p>

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Before	.25	Landing Leg Assembly	<p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> • Use high gear for rapid lowering/raising semitrailer without a load on deck. • Use low gear for lifting/raising semitrailer with a load on deck. • Leave landing gear in low gear, in the full up position, when traveling on the road. (Low gear will eliminate over-the-road vibration that may cause legs to wind-down (extend)). • Crank operation: Facing crank, clockwise - retracts (raises) legs and counterclockwise - extends (lowers) legs. • Push in - high gear, pull out - low gear. • Make sure landing legs are fully retracted before moving semitrailer. <p>Engage landing leg hand crank and raise and lower legs. Check high and low-speed operation. Check for binding, damage, unequal leg movement, and missing hardware. Lubricate per WP 0022 00-3.</p>	

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before	.25	Radial Tires	<p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> • Rust near wheel nuts can mean low torque. • Check wheels (inner/outer) and hubcaps for grease leakage. If grease leakage is found, notify Organizational Maintenance. <p style="text-align: center;">NOTE</p> <p>All wheel flange nuts have right hand treads.</p> <p style="text-align: center;">NOTE</p> <p>Cold radial tire pressure should be 95 psi (655 kPa) for all tires.</p> <p>a. Inspect tires, including spare, for proper inflation, unusual tread wear, sidewall damage, cuts, foreign objects, valve stem damage, and valve caps.</p> <p>b. Check wheels for damaged rims, rust, or leaking grease.</p> <p>c. Check for loose or missing wheel nuts.</p>	<p>Tires are not properly inflated, or show unusual wear.</p> <p>Wheel rims are damaged, rusty, or shows signs of leaking grease.</p> <p>All nuts must be present and torqued to specifications (WP 0016 00-4).</p>

Table 3. Operator/Crew PMCS - Continued



ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Before	.10	Spare Tire Carrier	 <p>WARNING</p> <p>Spare tire weighs 205 lbs. (93 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.</p> <p>Inspect spare tire carrier assembly for loose/missing hardware and cracked/broken welds.</p>	Loose/missing hardware and cracked/broken welds.
11	Before	.10	Hubcaps and Hubdometer	<p>CAUTION</p> <p>Do not stand on hubdometer.</p> <p>a. Inspect hubcaps for damage, loose or missing hardware, and leakage.</p> <p>b. Inspect hubdometer for missing hardware, damage, and loose mounting bracket or gage.</p>  <p>WARNING</p> <p>Notify Organizational Maintenance at first month of new semitrailer operation or first 1000 miles (1609 km) (from hubdometer) that suspension nuts must be torqued. Reference item No. 1 WP 0019 00-3 of Organizational PMCS. Failure to follow this warning may result in injury or death.</p>	<p>Hubcap is leaking grease or hardware is loose or missing.</p> <p>Hubcap is leaking grease or hardware is loose or missing.</p>

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
12	Before	.10	Suspension	a. Visually inspect for broken or shifted leaf springs, shifted trunnions, and loose or missing hardware. <p style="text-align: center;">NOTE</p> A small protrusion of the trunnion bushing around trunnion cap is normal. b. Visually inspect trunnion bushing to ensure it is not missing.	Springs and/or trunnions bushings have shifted or are broken and hardware is loose, or missing. Rubber bushing is missing.
13	Before	.10	Air Reservoir Tanks	a. Make sure drain valves do not leak air. b. Inspect air tanks for damage, loose fittings, missing hardware, and any evidence of air leakage. <div style="text-align: center;">  <p>WARNING</p> <p>Notify Organizational Maintenance at first month of new semitrailer operation or first 1000 miles (1609 km) (from hubodometer) that all airline clamp nuts must be tightened. Failure to follow this warning may result in injury or death.</p> </div> c. Inspect drain valve pull cables for a frayed or broken condition.	Drain valves leak air. Any air leaks are present or hardware is missing.
14	Before	.10	Stowage Box Door	Open and close door, make sure hinge does not bind, and all mounting/securing hardware is tight and present. Make sure drain holes are not blocked. Ensure jack is secure and door seal is in good condition. Keep box clean and serviceable. Lubricate per WP 0022 00-3.	Hardware is missing.

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
15	Before	.10	Twist Locks	<p style="text-align: center;">CAUTION</p> <p>Make sure there is no debris in ISO container lock slots that would prevent twistlock engagement and positive locking.</p> <p style="text-align: center;">NOTE</p> <p>If side racks are installed, Item No. 15 cannot be performed.</p> <p>Check to make sure there is no debris in the lock pocket that would interfere with lock operation. Make sure twist locks (all) operate freely and do not bind.</p>	Twist locks do not operate and are required for mission.
16	Before	.25	Tiedowns	<p style="text-align: center;">CAUTION</p> <p>Deformation of any part of D-ring is not allowed. Notify Organizational Maintenance.</p> <p>Check all tiedowns for missing hardware, damage, cracked welds, and deformation. Lubricate per WP 0022 00-3.</p>	Damaged, deformed, and cracked welds are evident.
17	Before	.10	Brakes	<p>With prime mover coupled, prior to start of mission, have a person observe if trailer brakes are working. With trailer brakes applied, slowly move tractor forward. Observe if trailer tires move. If tires move, brakes are not holding.</p>	Trailer tires move when brakes are applied.

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
<p>NOTE</p> <ul style="list-style-type: none"> • If ABS warning light stays on during mission, continue on with mission until system can be properly diagnosed by Organizational Maintenance. Braking capacity will be no modulation at wheel or wheels that have a fault. • Trailer is not NMC if during mission ABS is inoperable and there is no time to diagnose problem(s). • During blackout mode conditions, place mud or tape over ABS warning light. Do not remove or otherwise disable light. 					
18	During	.10	ABS Warning Light	Check ABS warning light for constant operation.	
19	During	N/A	Axles and Suspension	Listen for unusual noises, which are indications of possible problems. Be alert to conditions such as side pull, wandering, tracking of semitrailer, and load shift.	Unusual noises, semitrailer wanders, pulls to either side, or does not track.
20	During	N/A	General	Be alert to all conditions that may indicate unsafe operation or improperly secured cargo. Ensure all prime mover TM procedures are adhered to for safe operation i.e., coupling load limits, speeds, and fifth wheel settings for on/off operation.	Unsafe conditions are identified.

Table 3. Operator/Crew PMCS - Continued


ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
21	After	.10	Landing Leg Assembly	<p style="text-align: center;">CAUTION</p> <p>Do not use high-speed cranking mode for lifting and lowering of landing gear if there is a load on the semi-trailer.</p> <p>Inspect gearbox, braces, and leg assemblies for proper operation and tight mounting hardware. Ensure there is no binding in operation, equal leg movement and the hand crank is present and can be safely stowed.</p> <div style="text-align: center;">  <p>WARNING</p> <p>A hot brake can cause serious burns. Exercise caution before attempting to touch wheel hub after use. Radiated heat will be felt before wheel hub is touched.</p> </div>	Legs bind, are unequal in movement, missing hardware, or hand-crank cannot be safely stowed.
22	After	.10	Brake System	Use caution when feeling wheel hubs for abnormal heat or cold. Abnormally hot wheel hubs indicates a possible dragging or grabbing brake. Abnormally cool wheel hubs indicates improper adjustment or a wheel hubs defective brake.	Wheel hubs abnormally hot or cold.
23	After	.10	Air Reservoir Tanks	Pull reservoir drain cables to remove all condensation.	System is not drained of moisture.
24	After	.10	Coupler Plate Drain Hole	Check visible coupler plate drain holes to make sure holes are not plugged.	Coupler plate drain holes are plugged.

Table 3. Operator/Crew PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
25	After	N/A	Semitrailer Cleanliness	<p>After operation, especially in mud, salt environment, or fording conditions, flush exposed area of axles, axle ends, suspension, landing gear, underside/ topside of semitrailer and stowage box with clean, low-pressure water, if mission permits.</p> <p>a. Clean and lubricate all parts as specified in the WP 0022 00 to make sure water/debris is flushed out of system.</p> <p>b. Check all electrical connections for corrosion and security.</p> <p>c. Make sure all painted surfaces are touched up where necessary to prevent rust.</p> <p style="text-align: center;">NOTE</p> <p>Mission requirements, urgency, safety, and common sense should be considered in determining NMC status of semitrailer.</p>	
26	Weekly	.10	Wheels	<p>Check all wheels for cracks, between and around stud holes and hand holds. Check all wheels for rust streaks and grease stains.</p>	Cracks or leakage are evident. Notify Organizational Maintenance.
27	Monthly	.10	Frame and Decking	<p>Perform a visual inspection of semitrailer for evidence of corrosion and condition of deck wood. Visually check all welds for rust and cracks. Notify Organizational Maintenance if corrosion or deck damage is evident.</p>	

END OF WORK PACKAGE

WHEEL ASSEMBLY AND BUMPER MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Tools/Test Equipment

- Jack Stands
- Ground Boards
- Floor Jack

Personnel

- Two
-

SPARE TIRE REMOVAL

1. Using 15/16 in. wrench, remove nuts (1) holding spare tire in place.
2. Attach wheel socket to spare tire loader shaft (3).

**WARNING**

- Spare tire weighs 205 lbs. (93 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.
- Spare tire weighs 205 lbs. (93 kg) and may cause cheater bar to spin when locking tab is released causing injury to personnel or damage to equipment.

3. Using cheater bar, rotate spare tire loader shaft (3) clockwise until locking tab (2) can be released.
4. Slowly lower spare tire to the ground by turning spare tire loader shaft (3) counterclockwise.
5. Remove spare tire from spare tire holder.

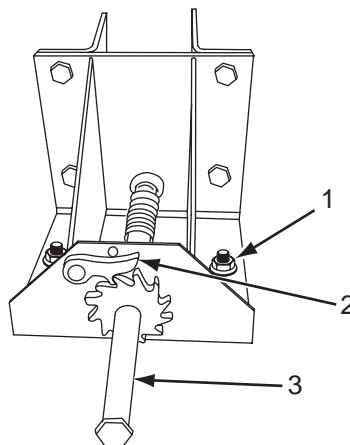


Figure 1. Spare Tire Holder

SPARE TIRE REMOVAL– Continued**WARNING**

- **Jack must be positioned directly under axle to prevent slippage. Direct all personnel to stay clear of vehicle when vehicle is supported in the air. Failure to do so could result in serious injury and damage to equipment.**
- **To prevent shifting of trailer, floor jack should be used only on a hard level surface. Failure to follow this warning could result in serious injury and damage to equipment.**
- **Spare tire weighs 205 lbs. (93 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.**

NOTE

- Wheel replacement in the form of tire-changing is also an Operator task. If floor jacks and jack stands are not available, use BII 20-ton jack.
- There are twelve tire and wheel assemblies and they are removed and installed the same way. This procedure covers one wheel assembly.
- Outer wheel assembly (5) must be removed to replace inner wheel assembly (4).

WHEEL ASSEMBLY REMOVAL

1. Chock tires on axles not being lifted.

CAUTION

In arctic and extreme cold conditions the fluid in the hydraulic jack needs to be changed to Arctic OEA (WP 0086 00-2, Item 8) before using it. Failure to follow this caution may result in damage to equipment.

2. Position jack under trunnion (3) of front or rear axle and spring seat (1) of center axle closest to where wheel(s) will be removed, as shown (Figure 2).
3. Loosen, but do not remove, ten nuts (6) while semitrailer tires are in contact with ground. If necessary, use a cheater pipe for additional leverage.
4. Jack up axle until wheel assemblies (4 and 5) clear the ground. Position jackstand under axle if available.
5. Remove ten nuts (6) and wheel assemblies (4 and 5).

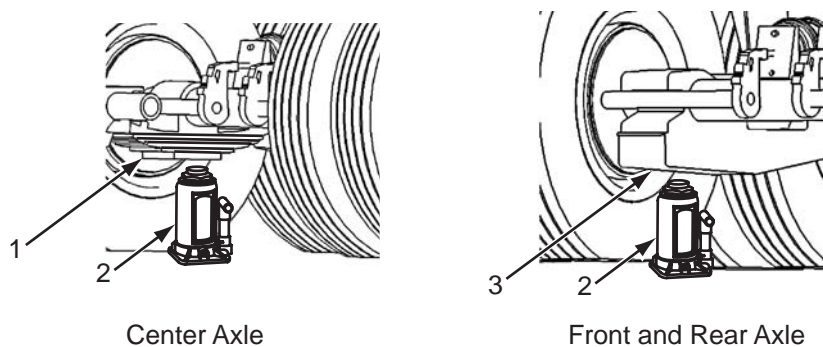
WHEEL ASSEMBLY AND BUMPER MAINTENANCE – Continued

Figure 2. Jack Positions

WHEEL ASSEMBLY INSTALLATION

1. Using a floor jack or 20-ton jack, raise axle high enough so that wheel assemblies (4 and 5) can be mounted on axle.

NOTE

Ensure inner and outer valve stems are 180° from each other and inner valve stem is accessible.

2. Install wheel assemblies (4 and 5) and ten nuts (6).

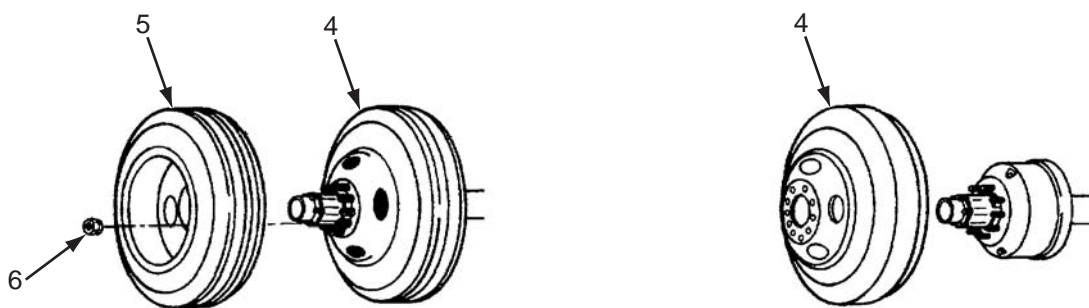


Figure 3. Wheel Assembly

WHEEL ASSEMBLY INSTALLATION - Continued**WARNING**

If flange nuts cannot be torqued, at first opportunity have Organizational Maintenance torque flange nuts to proper specifications (Step 3 and 4, WP 0016 00-4). Periodically stop and check flange nuts for tightness if not properly torqued initially. Failure to follow this warning could cause injury to personnel.

3. Lower wheel assemblies (4 and 5) to the ground and tighten wheel lug nuts according to torque sequence.
4. Notify Organizational Maintenance as soon as possible to apply 450–500 lb-ft (610– 678 N•m) of torque according to Tightening/Torque Sequence.

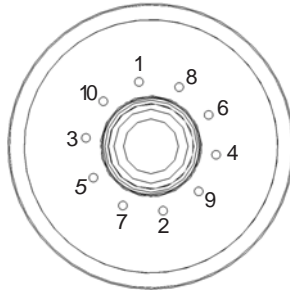


Figure 4. Tightening/Torque Sequence

SPARE TIRE INSTALLATION

1. Place spare tire on spare tire holder.
2. Attach wheel socket to spare tire loader shaft (3).

**WARNING**

- Spare tire weighs 205 lbs. (93 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.
 - Spare tire weighs 205 lbs. (93 kg) and may cause cheater bar to spin when locking tab is released causing injury to personnel or damage to equipment.
3. Using cheater bar, rotate spare tire loader shaft (3) clockwise insuring locking tab (2) is in place.
 4. When spare tire is in it's stored position, use 15/16 inch wrench to install retaining nuts (1).

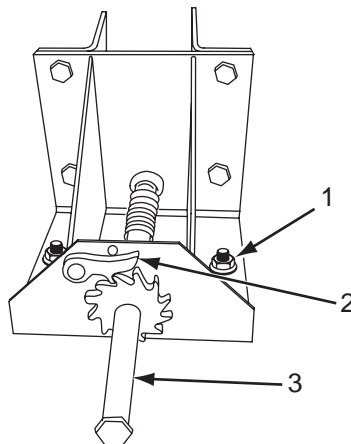


Figure 5. Spare Tire Holder

BUMPER OPERATION PROCEDURES**WARNING**

Bumper weighs 112 lbs. (51 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.

RAISING BUMPER**CAUTION**

Bumper is only raised during shipping operations.

NOTE

Center the BII jack or floor jack, if available, under the Bumper for easier raising and lowering operations. Blocking or cribbage is required when using the BII jack.

1. Remove two pins (1) from bumper supports (3).
2. Raise bumper (2) until holes are above bumper supports (3).
3. Insert two pins (1) through bumper (2).
4. Lower bumper (2) until pins (1) rest on bumper supports (3).

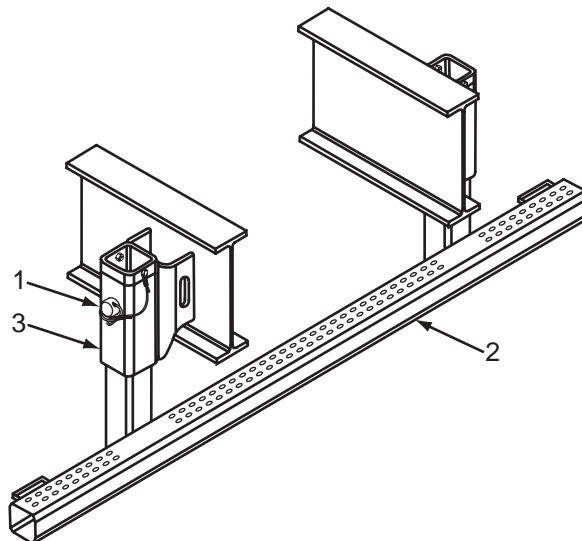


Figure 6. Bumper in the Lowered Position

LOWERING BUMPER**WARNING**

Bumper weighs 112 lbs. (51 kg) and may fall if procedures are not followed carefully. Injury to personnel or damage to equipment may occur.

CAUTION

- Bumper must be lowered for ALL normal operation.
- Bumper is only raised during shipping operations.

1. Remove two pins (1) from bumper (2).
2. Lower bumper (2) until holes in the bumper (2) line up with the holes in the bumper supports (3).
3. Insert two pins (1) through bumper supports (3).

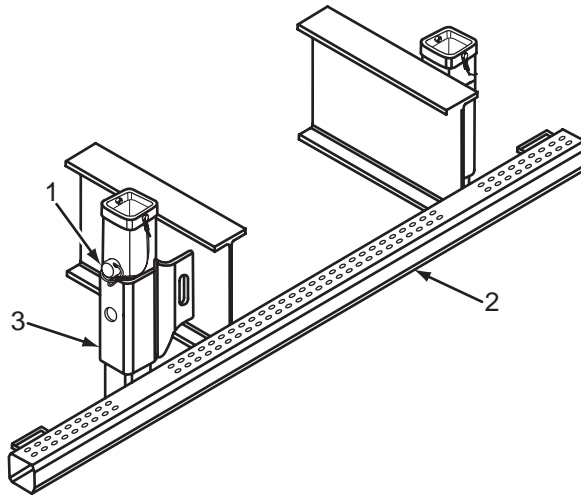


Figure 7. Bumper in the Raised Position

FOLLOW-ON TASKS

- Remove all jacks/stands.
- Connect semitrailer to prime mover (if required).
- Raise landing legs (if required).
- Remove/store tire chocks and ground boards.
- Check air pressure for 95 psi (655 kPa).
- Ensure proper torque has been applied to flange nuts.

END OF WORK PACKAGE

TM 9-2330-331-14&P

CHAPTER 6

ORGANIZATIONAL MAINTENANCE PROCEDURES

ORGANIZATIONAL MAINTENANCE PROCEDURES INDEX

WP Sequence No.**ORGANIZATIONAL MAINTENANCE PROCEDURES**

Service Upon Receipt	0018 00-1
Organizational Preventive Maintenance Checks and Services (PMCS)	0019 00-1
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Cleaning Instructions	0021 00-1
Lubrication Instructions	0022 00-1
Maintenance Inspection Instructions	0023 00-1
Wiring Harness Repair	0024 00-1
Maintenance of Electrical Systems	0025 00-1
12 Volt Electrical Receptacle Replacement	0026 00-1
24 Volt Electrical Receptacle Replacement	0027 00-1
Stop, Tail, and Directional Light Replacement	0028 00-1
Blackout Light Replacement	0029 00-1
Clearance Lights Replacement	0030 00-1
ABS Warning Light Replacement	0031 00-1
Reflector Replacement	0032 00-1
Trailer Wiring Harnesses Replacement	0033 00-1
Service Brakes - Shoes and Lining Maintenance	0034 00-1
Service Brakes - S-Camshaft Replacement	0035 00-1
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ECU Valve Replacement	0039 00-1
ABS Brake Power Connections Replacement	0040 00-1
Air Line Replacement	0041 00-1
Air Brake Chambers Replacement	0042 00-1
Spring and Relay Valves Replacement	0043 00-1
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Air Reservoirs Replacement	0045 00-1
Service and Emergency Swivel Couplings (Gladhands) Replacement	0046 00-1
Trunnion Bushing Replacement	0047 00-1
Dock Bumper Replacement	0048 00-1
Retractable Twist Locks Replacement	0049 00-1
Tiedown Rings Replacement	0050 00-1
Spare Tire Hoist Replacement	0051 00-1
Spare Tire Carrier Cable Replacement	0052 00-1
Landing Leg Maintenance	0053 00-1
Sling Provision Assembly Maintenance	0054 00-1
Bulkhead and Stowage Rack Assembly Replacement	0055 00-1
Bumper Assembly Replacement	0056 00-1
Radius Rods Replacement	0057 00-1
Stowage Box Maintenance	0058 00-1
Document Box Replacement	0059 00-1
Mudflap Replacement	0060 00-1
Floor Deck Boards Replacement	0061 00-1

ORGANIZATIONAL MAINTENANCE PROCEDURES INDEX-Continued

	<u>WP Sequence No.</u>
Data Plates Replacement	0062 00-1
Hubodometer Replacement	0063 00-1
Reflective Tape Replacement	0064 00-1
Container Guide Assembly Replacement	0065 00-1
Preparation of Equipment for Administrative Storage	0066 00-1
This WP is Intentionally Blank	0067 00-1

SERVICE UPON RECEIPT

GENERAL

When a new, used, or reconditioned semitrailer is first received, determine whether it has been properly prepared for service and is in condition to perform its mission. Follow the inspection and servicing instructions in this work package.

INSPECTION INSTRUCTIONS

1. Refer to DD Form 1397 for procedures on unpacking the semitrailer.
2. Remove all straps, plywood, tape, seals, and wrappings.

**WARNING**

Dry cleaning solvent is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.

NOTE

Dispose of all hazardous material in accordance with TB 43-0244

3. Remove rust preventive compound from coated exterior parts of the semitrailer using dry cleaning solvent (WP 0086 00-3, Item 12) and rags (WP 0086 00-2, Item 10).
4. Inspect the semitrailer for damage incurred during shipment. Check to see if the equipment has been modified.
5. Check the equipment against the packing list to ensure that the shipment is complete. Report any discrepancies in accordance with instructions in DA PAM 738-751.

SERVICING INSTRUCTIONS

1. Perform all Operator/Crew and Organizational PMCS. Schedule the next PMCS on DD Form 314.
2. Lubricate all lubrication points as described in WP 0022 00-5, regardless of interval.
3. Report any problems on DA Form 2404.
4. Perform a break-in road test of 25 mi (40 km) at a maximum speed of 50 mi/h (80 km/h).

END OF WORK PACKAGE

ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

GENERAL

To ensure that the M872A4 Series Flatbed Semitrailers are ready for operation at all times, they must be inspected on a regular basis so that defects may be found before they result in serious damage, equipment failure, or injury to personnel. This section contains systematic instructions on inspections, adjustments, and corrections to be performed by organizational maintenance.

SERVICE INTERVALS

Perform PMCS, found in Table 4, at the following intervals:

- a. Perform Monthly PMCS once each month.
- b. Perform Quarterly PMCS once every three months.
- c. Perform Semiannual PMCS once every six months.
- d. Perform Annual PMCS once each year.
- e. Perform Triennially PMCS once every three years.

REPORTING REPAIRS

Report all defects and corrective actions on DA Form 2404 or an electronic DA Form 5988E. If a serious problem is found, report it to your supervisor immediately.

GENERAL PMCS PROCEDURES**WARNING**

Dry cleaning solvent is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.

NOTE

Dispose of all hazardous material in accordance with TB 43-0244

1. Keep equipment clean. Dirt, oil, and debris may cover up a serious problem. Clean as you work and as needed. Use dry cleaning solvent (WP 0086 00-3, Item 12) on all metal surfaces. Use soap and water on rubber, plastic, and painted surfaces.

GENERAL PMCS PROCEDURES - Continued

2. While performing PMCS, inspect the following components:
 - a. **Bolts, Nuts, and Screws.** Ensure that they are not loose, missing, damaged, or broken. Tighten any that are loose.
 - b. **Welds.** Inspect for gaps where parts are welded together. Report bad welds to your supervisor.
 - c. **Electric Wires or Connectors.** Inspect for cracked or broken insulation, bare wires, and loose or broken connectors. Inspect all wires and connections for corrosion. Make repairs or replace as required.
 - d. **Hoses, Lines, and Fittings.** Inspect for wear, damage, and leaks. Ensure that clamps and fittings are tight. If a leak originates from a loose fitting or connector, tighten it. If a component is broken or worn, correct problem if authorized by the Maintenance Allocation Chart (MAC) (WP 0076 00). If not authorized, report it to your supervisor.

SPECIFIC PMCS PROCEDURES

1. Organizational PMCS are provided in Table 4. Always perform PMCS in the order listed. Once it becomes a habit, anything that is not right can be spotted quickly. If anything wrong is discovered through PMCS, perform the appropriate troubleshooting task in WP 0012 00. If any component or system is not serviceable, or if given service does not correct problem, notify your supervisor.
2. Before performing preventive maintenance, read all the checks required for the applicable interval and prepare tools needed to make all checks. Have several clean rags handy. Perform ALL inspections at the applicable interval.
3. If anything wrong is discovered through PMCS, perform the appropriate troubleshooting task in WP 0012 00. If any component or system is not serviceable, or if a given service does not correct the problem, notify your supervisor.
4. The columns in Table 4 are defined as follows:
 - a. **Item No.** Provides a logical sequence for PMCS to be performed and is used as a source of item numbers for the "TM ITEM NO" column on DA Form 2404 or DA Form 5988E in recording PMCS results.
 - b. **Interval.** Specifies interval at which PMCS is to be performed.
 - c. **Man-Hours.** Specifies the estimated time it takes a person to check or service.
 - d. **Item To Be Checked or Serviced.** Lists the system and common name of items that are to be inspected.
 - e. **Procedure.** Tells you how to do the required check or service.
 - f. **Equipment not Ready/Available if:** Explains when the semitrailer is nonmission-capable (**NMC**). This column tells you when and why your equipment cannot be used.

Table 4. Organizational PMCS

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly	.50	Suspension Initial Torque	<p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • Perform Operator/Crew PMCS prior to, or in conjunction with, Organizational PMCS if there is a delay between daily operation of the equipment and the Organizational PMCS or regular operator is not assisting/ participating. • Clean axle and suspension system with low-pressure water and fiber brush to allow for careful inspection. • For the first 1,000 miles: <p>Torque suspension nuts to the following in-service dry torque values:</p> <p>1-5/16"-12 UNF 660 lb-ft (895 N•m) 7/8"-14 UNF 460 lb-ft (624 N•m) 3/4"-16 UNF 300 lb-ft (407 N•m) 5/8"-18 UNF 180 lb-ft (244 N•m)</p> <p style="text-align: center;">NOTE</p> <p>New replacement installations/ hardware should have wet (oiled) fasteners. The following wet torque values apply:</p> <p>1-5/16"-12 UNF 600 lb-ft (814 N•m) 7/8"-14 UNF 350 lb-ft (474 N•m) 3/4"-16 UNF 220 lb-ft (298 N•m) 5/8"-18 UNF 130 lb-ft (176 N•m)</p>	Torque service requirements/ schedule are not met. NMC if nuts, bolts are damaged.

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Monthly	.50	Airline Clamp Tighten	Tighten all clamps securing airlines.	
3	Semi-Annually	.25	Stowage Box and Padlocks	Lubricate according to WP 0022 00-3.	
4	Semi-Annually	.25	Tiedown Rings	Lubricate according to WP 0022 00-3.	
5	Semi-Annually	.10	Landing Gear Shoes, Swing Pins, and Crank Handle	Lubricate according to WP 0022 00-3.	

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Semi-Annually	.50	Coupler Plate	<p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> • Any bumps, valleys, or warping of the coupler plate will cause uneven loading of the fifth wheel, which could result in damage to the top plate and poor lock life. • The coupler plate should not bow upward (concave) more than 1/16 in. (1.58 mm) within a 19-in. (48.26-cm) radius from kingpin. • The coupler plate should not bow downward (convex) more than 1/4 in. (6.35 mm) within a 19-in. (48.26-cm) radius from kingpin or more than 1/8 in. (3.18 mm) at a 10-in (254-mm) radius from kingpin. <p>This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p> <p style="text-align: center;">NOTE</p> <p>Lubrication is not required if towing with a M915A3/A4, with teflon coated coupler plate.</p> <p>a. Clean coupler plate and kingpin. Lubricate according to WP 0022 00-4 after checks are completed, if required for prime mover.</p> <p>b. Check flatness of coupler plate using a 48 in. (1.22 m) straight edge. Check flat edge in all directions.</p>	<p style="text-align: right;">Straight edge exceeds .25 (6.35 mm) gap.</p>

Table 4. Organizational PMCS - Continued

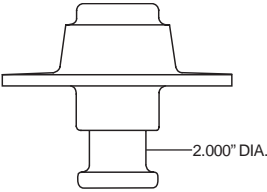
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Semi-Annually	.50	Kingpin	<p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • This should be checked every 6,000 miles or semiannually, whichever period is shorter. • Kingpin wear gauge available Ref WP 0085 00-2 <p>a. Visually inspect kingpin for excessive wear, cracks, or damage.</p> <p>b. Inspect for chips, nicks, or gouges.</p> <div style="text-align: center;">  <p style="text-align: right; margin-right: 50px;">2.000" DIA.</p> </div> <p>c. Clean and lube kingpin and plate according to WP 0022 00-4.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p>	<p>Wear, cracks or damage prevent proper coupling.</p> <p>Nicks, chips or gouges deeper than 1/8 in. (.32 cm) is found anywhere on wear surface.</p>
8	Semi-Annually	.10	Landing Legs	<p>Check alignment of landing legs according to WP 0053 00-3.</p>	<p>Landing legs will not align properly.</p>

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Semi-Annually	.25	Main Electrical Harness and All Electrical Connections	<p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p> <p>Check conditions of electrical harness for wear, frayed insulation, corrosion, and that connectors are secured. Use corrosion preventive compounds (dielectric) on all electrical contacts.</p>	<p>Harness is worn through, corroded, or unsecured. Electrical connections are loose or corroded.</p>
10	Semi-Annually	.25	Leaf Springs and Attaching Parts	<p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p> <p>a. Check for missing or damaged hangers, end caps, spring seats, adjustment plates, trunnion bushings, and hardware.</p> <p>b. Check for the following:</p> <ol style="list-style-type: none"> 1. Any leaf or portion of any leaf in any spring assembly is missing, separated, or broken. <p style="text-align: center;">NOTE</p> <p>A small protrusion of the trunnion bushing around trunnion cap is normal.</p> <ol style="list-style-type: none"> 2. Visually inspect rubber trunnion bushing to ensure it is not missing causing metal to metal contact. 	<p>Leaf spring attachments or hardware is missing or damaged.</p> <p>Leaf or leaves are missing, separated, or broken.</p> <p>Rubber trunnion bushing is missing.</p>

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
				<p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> • Do not use paints or solvents on hubodometer polycarbonate face. • Do not stand on hubodometer. <p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • If hubodometer has a bent or stripped stud, case damage, improper bracket, or hardware or case tampering, it will not perform properly. • This should be checked every 6,000 miles or semi-annually, whichever period is shorter. 	
11	Semi-Annually	.10	Hubodometer	<p>Check hubodometer bracket and gage for looseness and missing hardware. Torque gage nut to 15 lb-ft (20.3 N•m) max.</p> <p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • This should be checked every 6,000 miles or semi-annually, whichever period is shorter. • Inside of hub cap should have a light coat of grease. 	
12	Semi-Annually	.10	Hub Caps	<p>Check hub caps for leaks, damage, and missing hardware and torque nuts to 15 lb-ft (20.3 N•m) max.</p>	Hub cap leaks or is missing.

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
13	Semi-Annually	.25	Air Brake Chamber	<div data-bbox="797 474 906 569" data-label="Image"> </div> <p data-bbox="922 499 1078 533">WARNING</p> <p data-bbox="797 575 1159 856">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.</p> <p data-bbox="938 915 1029 949">NOTE</p> <p data-bbox="797 978 1138 1066">This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p> <p data-bbox="745 1125 1211 1243">Clean and visually inspect clamp bands, castings (case), and fasteners for looseness, damage, and missing hardware or leaking air.</p>	Hardware is loose or missing or castings are damaged or leaking air.

Table 4. Organizational PMCS - Continued

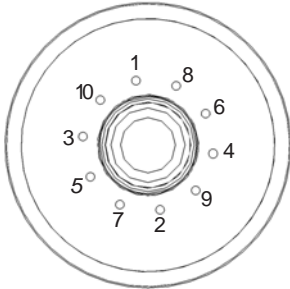
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
14	Semi-Annually	.25	Studs and Flange Nuts	<p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p> <p>a. Check studs and flange nuts for damage.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">All flange nuts and studs have right-hand threads.</p> <p>b. Flange nut torque:</p> <p style="text-align: center;">Torque flange nuts to 50 lb-ft (67.8 N•m) and then tighten to 450-500 lb-ft (610-678 N•m) using DRY torque.</p> <p>c. Torquing sequence is as follows:</p> <div style="text-align: center;">  </div>	Studs or flange nuts are damaged, loose, or missing.
15	Semi-Annually	.10	Spare Tire Hoist Cable	Inspect cable for damage, or frayed or broken wires.	

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
16	Semi-Annually	.25	Automatic Slack Adjusters (ASAs)	<p style="text-align: center;">CAUTION</p> <ul style="list-style-type: none"> • Do not use air or electric tools to adjust ASAs. • Initial adjusting procedures start with measurements not tear-down. <p style="text-align: center;">NOTE</p> <p>This should be checked every 6,000 miles or semiannually, whichever period is shorter.</p> <p>a. Check for any binding, broken, worn or loose parts, missing hardware, evidence of an out-of-adjustment condition, worn clutch, and release action.</p> <p>b. Lubricate according to WP 0022 00-3.</p> <p style="text-align: center;">NOTE</p> <p>This should be checked every 12,000 miles or annually, whichever period is shorter.</p>	Binding, wear, loose parts, missing hardware, out-of-adjustment conditions are evident.
17	Annually	.50	Axles	Check axles for proper alignment (WP 0071 00-3) . If suspension is damaged or axles are out of alignment, notify Direct Support maintenance.	Axles are not in alignment.
18	Annually	.10	Twist Locks	Lubricate according to WP 0022 00-3.	

Table 4. Organizational PMCS - Continued


ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
19	Annually	.25	Wood Decking	<p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • This should be checked every 12,000 miles or annually, whichever period is shorter. • Apply a coat of water sealant or linseed oil protector to deck surfaces. <p>Check for missing, damaged or broken boards.</p> <div style="display: flex; align-items: center; margin-top: 10px;">  <p>WARNING</p> </div> <p>Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment.</p> <p style="text-align: center; margin-top: 10px;">CAUTION</p> <p>To ensure a balanced braking system, both brake assemblies on an axle end should have like repairs accomplished at the same time.</p> <p style="text-align: center; margin-top: 10px;">NOTE</p> <p>Make sure seals show no signs of leakage on axle, spider, or wheels. Replace both seals and tapered cups (races) when replacing the seal.</p>	

Table 4. Organizational PMCS - Continued


ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
20	Annually	1.0	Brake Systems	<p style="text-align: center;">NOTE</p> <p>This should be checked every 12,000 miles or annually, whichever period is shorter.</p> <p>a. Check brake lining thickness, springs, anchor pins, bushings, and rollers for damage and wear.</p> <p>b. Lubricate according to WP 0022 00-4.</p> <div style="text-align: center;">  <p>WARNING</p> <p>Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment.</p> </div> <p style="text-align: center;">NOTE</p> <ul style="list-style-type: none"> • Make sure seals show no signs of leakage on axle, spider or wheels. Replace both seals and tapered cups (races) when replacing the seal. Use all components of replacement kits and balance repairs on both axle ends. • This should be checked every 36,000 miles or triennially, whichever period is shorter. 	<p>Linings are worn to pad limit. Springs, anchor pins, bushings, and rollers are damaged or worn.</p>



Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
21	Triennially	1.0	Wheel Bearings (Rollers)	<p>Clean, inspect, and repack inner and outer cones and rollers according to WP 0022 00-4. Replace if damaged or worn.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 36,000 miles or triennially, whichever period is shorter.</p>	
22	Triennially	1.0	Seals	<p>Check condition of seals for indicators of problems. When seal is removed, it should be replaced when possible. If available, use correct seal installation tool to drive/seat seal.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 36,000 miles or triennially, whichever period is shorter.</p>	Seal is damaged, worn, or leaking.
23	Triennially	.75	Spindle	<p>a. Check spindle for damaged threads and surface area for rust/pitting.</p> <p>b. Lubricate according to WP 0022 00-4.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 36,000 miles or triennially, whichever period is shorter.</p>	Spindle is damaged. Notify Direct Support maintenance.

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
24	Triennially	.75	Brake Drums	<p>Check drums for cracking, heat discoloration, grooving, elongated bolt holes, out-of-round or worn beyond re-bore limit on drum.</p> <p style="text-align: center;">CAUTION</p> <p style="text-align: center;">Tap sensor to tone ring using a wood rod only. A metal rod will damage components.</p> <p style="text-align: center;">NOTE</p> <p style="text-align: center;">This should be checked every 36,000 miles or triennially, whichever period is shorter.</p>	Drum is cracked, severely over-heated, has elongated holes, or is out-of-round.
25	Triennially	.75	ABS Sensors	Check that sensor pickups are lightly touching tone ring, or have a gap of no more than 0.040 in. (1.02 mm) between the tone ring and pickup end.	
26	Triennially	.75	"S" Cams	<p>a. Check for wear and damage to spline, bushings, cam lobes, and retaining brackets. Replace bushings.</p> <p>b. Lubricate according to WP 0022 00-4.</p>	Damage/wear affects operation.

Table 4. Organizational PMCS - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
27	Triennially	.75	Hubs	<div style="text-align: center;">   </div> <p>WARNING</p> <ul style="list-style-type: none"> • The triennial (3 years) 36,000 miles check/service is based on normal operation. Conditions identified such as leakage/seepage of spindle/hub grease, brake lock-up, wheel end noise/damage, and impact damage will require inspection and repair be performed when the incident occurs, not at service interval. Failure to perform required repairs may cause serious damage to equipment and personnel. • A hot brake can cause serious burns. Exercise caution before attempting to touch wheel hub after use. Radiated heat will be felt before brake drum is touched. <p>Clean and check hubs for wear and damage, including tone rings. Replace hub with tone ring if damaged or worn.</p>	Hub or tone ring is worn or damaged.

END OF WORK PACKAGE

GENERAL MAINTENANCE INSTRUCTIONS

GENERAL

1. These general maintenance instructions contain general shop practices and specific methods you must be familiar with to properly maintain your semitrailer. You should read and understand these practices and methods before performing any organizational maintenance tasks.
2. Before beginning a task, find out how much repair, modification, or replacement is needed to fix the equipment. Sometimes the reason for equipment failure can be seen right away, and complete teardown is not necessary. Disassemble equipment only as far as necessary to repair or replace damaged or broken parts.
3. In some cases, a part may be damaged by removal. If the part appears to be good, and other parts behind it are not defective, leave it on and continue with the procedure. Here are a few simple rules:
 - a. Do not remove dowel pins or studs unless loose, bent, broken, or otherwise damaged.
 - b. Do not remove bearings (rollers) or bushings unless damaged. If you need to remove them to access parts behind, pull bearings (rollers) and bushings out carefully.
 - c. Replace all gaskets, seals, and preformed packings.
4. The following "Initial Setup" information applies to all procedures:
 - a. Resources are not listed unless they apply to the procedure.
 - b. "Personnel Required" is listed only if more than one technician is required to complete the task.
5. All tags and forms attached to equipment must be checked to learn the reason for equipment's removal from service. Modification Work Orders (MWO) and Technical Bulletins (TB) must also be checked for equipment changes and updates.

END OF WORK PACKAGE

CLEANING INSTRUCTIONS

GENERAL**WARNING**

- Dry cleaning solvent is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and **DO NOT** breathe vapors. **DO NOT** use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.
- Improper cleaning methods and use of unauthorized cleaning liquids or solvents can injure personnel and damage equipment.

CAUTION

Do not wash oil seals, electrical cables, and flexible hoses with dry cleaning solvent or mineral spirits. Serious damage or destruction of material would result.

NOTE

Dispose of all hazardous material in accordance with TB 43-0244

Cleaning instructions will be the same for a majority of parts and components which make up the semitrailer. The following should apply to all cleaning operations:

1. Clean all parts before inspection, after repair, and before assembly.
2. Keep hands free of grease which can collect dust, dirt, and grit.
3. After cleaning, all parts should be covered or wrapped to protect them from dust and dirt. Parts that are subject to rust should be lightly oiled.

STEAM CLEANING

1. Before steam cleaning exterior of semitrailer, protect all electrical equipment which could be damaged by steam or moisture.
2. Place disassembled parts in a suitable container to steam clean. Parts that are subject to rust should be dried and lightly oiled after cleaning.

CLEANING INSTRUCTIONS - Continued**CASTINGS, FORGINGS, AND MACHINED METAL PARTS****WARNING**

Compressed air used for cleaning or drying purposes, or for clearing restrictions, should never exceed 30 psi (207 kPa). Wear protective clothing (goggles/shield, gloves, etc.) and use caution to avoid injury to personnel.

NOTE

- Dispose of all hazardous material in accordance with TB 43-0244
- Clear all threaded holes with compressed air to remove dirt and cleaning fluids.

BEARINGS (ROLLERS)

Clean bearings (rollers) in accordance with TM 9-214.

END OF WORK PACKAGE

LUBRICATION INSTRUCTIONS

GENERAL**NOTE**

These instructions are MANDATORY.

1. The trailer must receive lubrication with the approved lubricants at the recommended interval in order to be mission-ready at all times.
2. The LUBRICATION TABLE (WP 0022 00-8) lists the lubricants to be used in all temperature ranges and shows the interval.
3. The lubrication chart (WP 0022 00-3) shows the lubrication points, names the item to be lubricated, the required lubricants, and recommended interval for lubrication.
4. The recommended interval is based on normal conditions of operation, temperature, and humidity. When operating under extreme conditions, the lubricants should always be changed more frequently. When in doubt, notify your supervisor.

GENERAL LUBRICATION REQUIREMENTS

1. The lubrication requirements for the M872A4 Semitrailer consist of only two types of lubricant, GAA and OE/HDO, for oil can points. Only variants of the lubricating oil are authorized due to temperature variations.
2. All grease fittings and lubrication points should be wiped clean prior to being lubed.
3. Re-lubricate the semitrailer grease fittings if high-pressure washing is used and as soon as possible after fording operations, especially in a salt-water environment.
4. If a padlock is used, make sure it is lubed and operational.
5. Reference TB 43-0209 for stencil identification marking and semitrailer painting.

SPECIFIC LUBRICATION INSTRUCTIONS

1. Keep lubricants in closed containers and store in a clean, dry place away from extreme heat. Keep container cover clean and do not allow dust, dirt, or other foreign material to mix with lubricant. Keep lubrication equipment clean and ready for use.
2. Maintain a record of lubrication performed and report any problems noted during lubrication. Refer to DA PAM 738-751 for maintenance forms and procedures to record and report any findings.

**WARNING**

Wipe excess lubricant from area of brake shoe linings to prevent any contamination of linings. Replace all wheel end linings if one has been contaminated with lubricant. Failure to follow this warning may cause brakes to malfunction, resulting in serious injury or death.

CAUTION

Grease streaks on the outside or inside of the wheel may indicate overpacking of the grease, an improperly installed grease seal, damage to the axle end, loose hardware, or gasket damage.

NOTE

Dispose of all hazardous material in accordance with TB 43-0244

3. Keep all external parts of equipment not requiring lubrication free of lubricants. After lubrication, wipe off excess oil to prevent accumulation of foreign matter.
4. Refer to FM 9-207 for lubrication instructions in cold weather.
5. After fording, operation in mud, sandy, or dusty conditions, clean and inspect the points of lubrication for fouled lubricants. Change lubricants as required.

LUBRICATION INSTRUCTIONS-Continued

6. Clean fittings before lubrication using cleaning compound. Dry before lubricating.
7. The dotted leader lines in Figure 1, WP 0022 00-5, indicate lubrication is required on both sides of the equipment.
8. Re-lubricate after washing as necessary.

LUBRICATION POINTS	INTERVAL	LUBRICATION TYPE/SPECIAL INSTRUCTIONS/MAINTENANCE LEVEL ()
ABS Sensor Body	When replaced or removed from Spring Clip	GAA, When removed from spring clip, clean off old grease and apply a new light coat on sensor body. Wipe off excess. (O)
Automatic Slack Adjuster	Semiannually or every 6,000 miles (9,656 km)	GAA, grease fittings. (O)
Detail 1	Semiannually or every 6,000 miles (9,656 km)	OE/HDO-10, clevis pins, oil can points. (O)
Stowage Box and Padlocks - Detail 3	Semiannually or every 6,000 miles (9,656 km)	OE/HDO-10, hinge/latch, oil can points. (C)
Twist Locks (8) Detail 6	Annually	GAA, grease fittings. (O) OE/HDO-10, oil can points. (C)
Tiedown Rings Detail 7	Semiannually or every 6,000 miles (9,656 km)	OE/HDO-10, oil can points. (C)
Landing Gear Shoes, Swing Pins, and Crank Handle - Detail 4	Semiannually or every 6,000 miles (9,656 km)	OE/HDO-10, oil can points. (C)
All Receptacle Pins and Connectors	When disassembled/replaced	Dielectric Grease. Clean and Apply a thin coat. (O)

LUBRICATION INSTRUCTIONS-Continued

LUBRICATION POINTS	INTERVAL	LUBRICATION TYPE/SPECIAL INSTRUCTIONS/MAINTENANCE LEVEL ()
Kingpin and Coupler Plate Detail 5	Semiannually or every 6,000 miles (9,656 km) NOT REQUIRED IF TOWING WITH A M915A3/A4 WITH TEFLON COVERED COUPLER PLATE	GAA, Clean, then apply thin coat on kingpin and coupler plate. Make sure drain holes are not plugged. (C)
Wheel Bearings (Rollers) and Seals Detail 2	Triennial or every 36,000 miles (57,935 km)	GAA, Clean, inspect, and repack WITH CLEAN GAA. (O) Replace seals. (O)
Brake Bushings, Rollers, Anchor Pins, "S" Cam Lobes, Spider Face, Splines - Detail 8	Annually or every 12,000 miles (19,312 km)	GAA, light coat. Wipe off excess. (O)
"S" Camshaft Support Bracket Detail 1	Semiannually or every 6,000 miles (9,656 km)	GAA, grease fittings. (O)
Spindles, Cam Follower Shaft Detail 1	Triennial or every 36,000 miles (57,935 km)	GAA, light coat. Wipe off excess. (O)

LUBRICATION INSTRUCTIONS-Continued

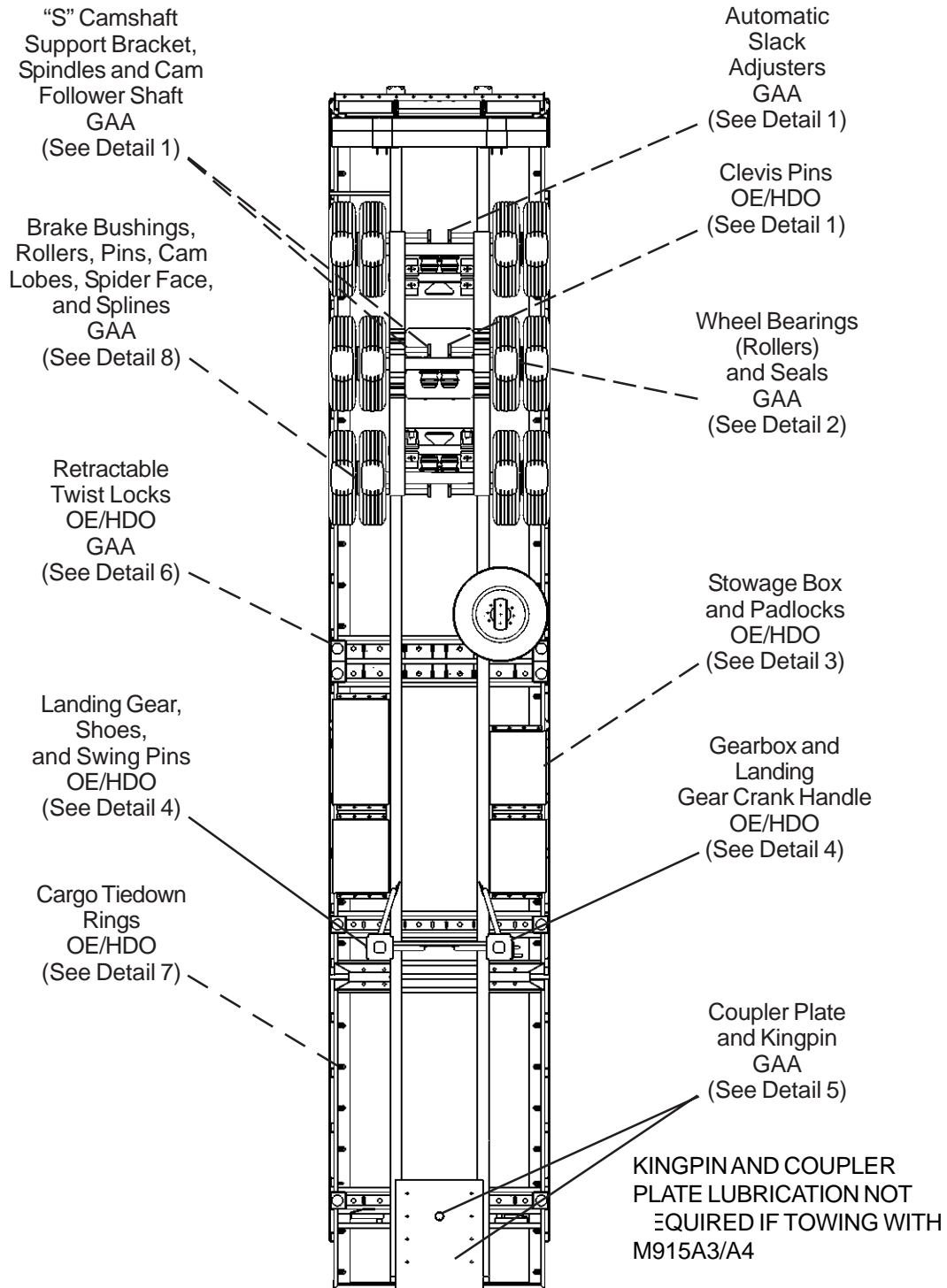
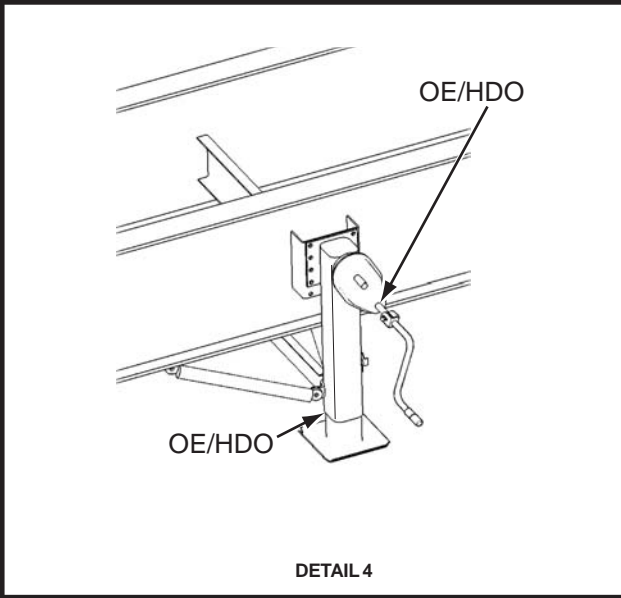
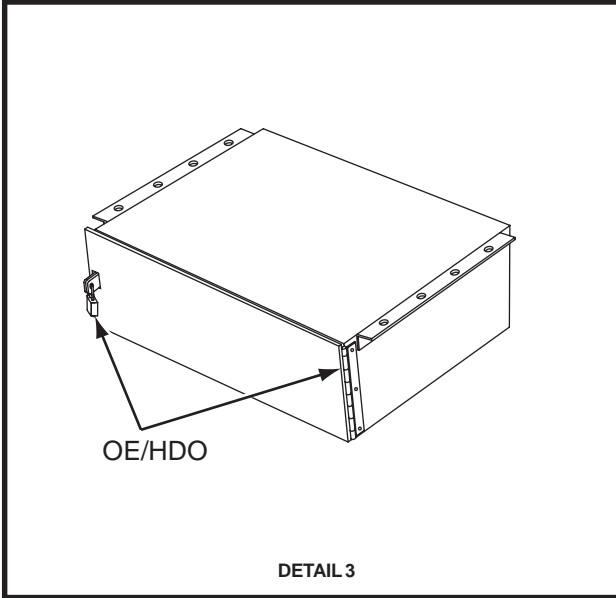
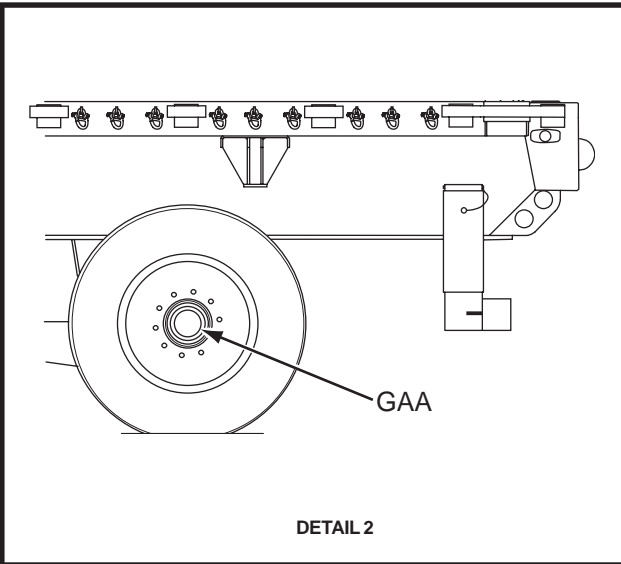
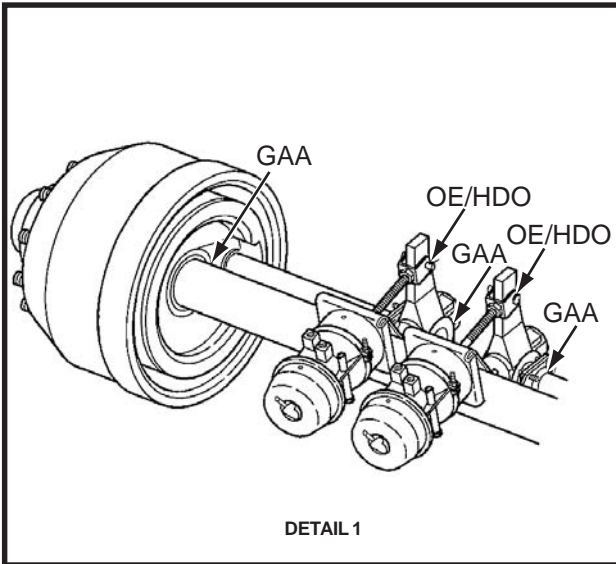
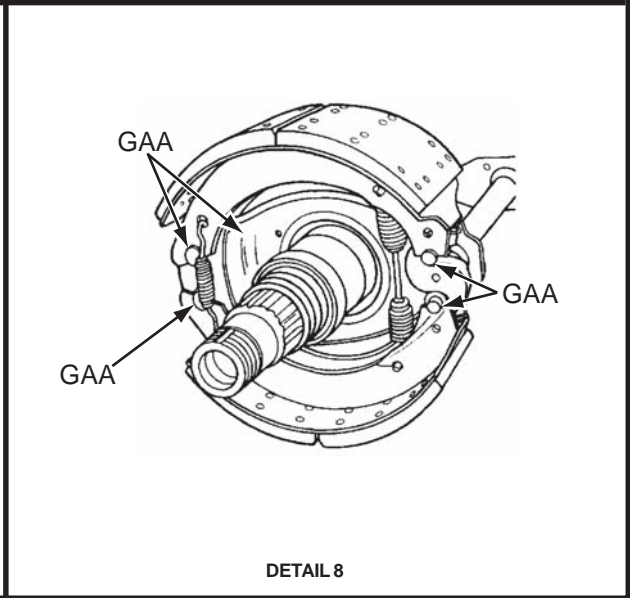
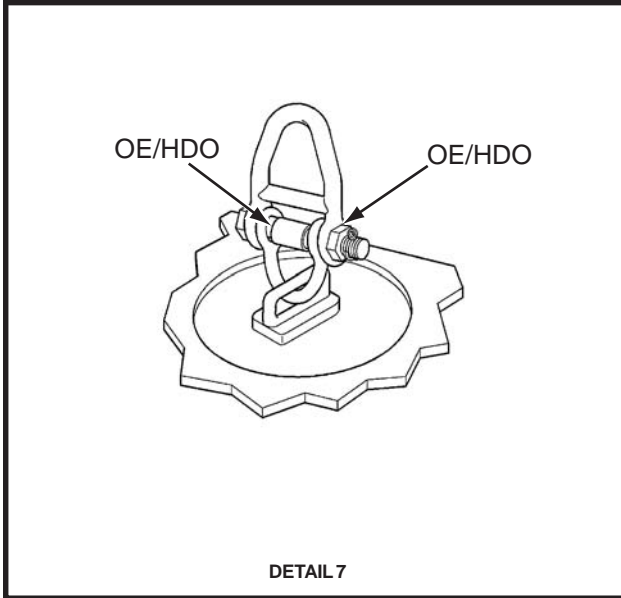
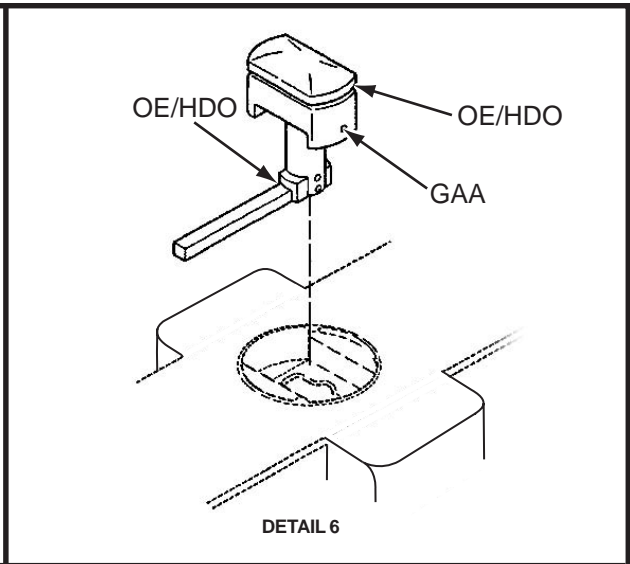
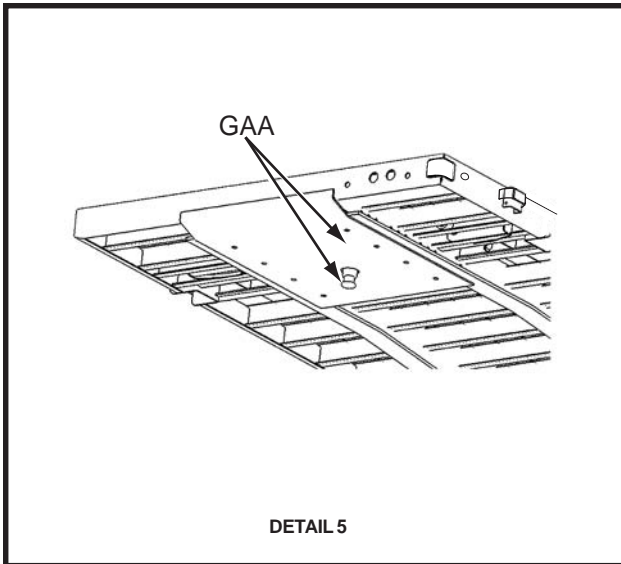


Figure 1. Lubrication Points

LUBRICATION INSTRUCTIONS-Continued



LUBRICATION INSTRUCTIONS-Continued



LUBRICATION INSTRUCTIONS-Continued

LUBRICANTS

The table below lists lubricants to be used in all temperature ranges and shows the intervals.

Lubricants

LUBRICANTS	EXPECTED TEMPERATURES*		
	ABOVE +15°F (ABOVE -9°C)	+40°F to -15°F (+4°F to -26°C)	+40°F to - 65°F (+4°F to -54°C)
OE/HDO (MIL-L-2104) Lubricating Oil, Internal Combustion Engine, Tactical Service	OE/HDO-30	OE/HDO-30	-
OEA (MIL-L-46167) Lubricating Oil, Internal Combustion Engine, Arctic	-	-	OEA
GAA (MIL-PRF-10924G) Grease, Automotive and Artillery	All Temperatures		

*For Arctic operation, refer to FM 9-207.

LUBRICATION INSTRUCTIONS-Continued**COLD OPERATION**

For operation of equipment in extended cold temperatures below -15°F (-26°C), remove lubricants prescribed in the key for temperatures above -15°F (-26°C). Re-lubricate with lubricants specified in the key for temperatures below -15°F (-26°C). If OEA lubricant is required to meet the temperature changes prescribed in the key, OEA lubricant is to be used in place of OE/HDO lubricant for all temperature ranges where OE/HDO lubricant is specified in the key.

S-CAMS (SPECIFIC)

1. When the wheels and hubs are removed, place a light film of lubricant on cam roller follower shafts, journals, and the top and bottom surface of the "S" cam. Wipe off any excess lubricant.
2. Automatic slack adjusters:

**WARNING**

Do not use any grease with Teflon, over 3% molysulfide content, or "white" grease in the automatic slack adjusters. These additives will adversely affect the friction clutch and cause it to not hold adjustment. Failure of the slack adjusters may cause serious injury or death.

CAUTION

It is important not to overfill wheel-end cavity with lubricant. Do not exceed grease level indicated below. Also, make sure excess grease is wiped away since it can contaminate brake linings and cause poor brake performance.

BEARINGS (ROLLERS)/HUBS

1. Pack bearing (rollers) cones with grease by forcing grease into the cavities between rollers and cage from the large end of the cone. The use of a pressure packer is recommended; otherwise pack the bearings (rollers) by hand.
2. Apply a light coat of grease to the spindle bearing (rollers) journals and wipe off excess.
3. Fill the hub cavity with grease to the outer cap's smallest diameter.
4. At the top of the spindle and as far back as possible, pump additional grease until it appears that the grease will run out. Install the outer bearing (rollers) cone quickly.
5. Hub cavity will be filled 1/3 full of grease (from the 4 to the 8 o'clock positions). This will involve installation of 1-1/2 lb (0.7 kg) of grease.
6. Install the wheel retention hardware. Place a dab of grease across the face of the locknut for identification that hub cavity has been greased if caps are not to be immediately installed.

LUBRICATION INSTRUCTIONS-Continued**CAUTION**

Brush a thin layer of GAA on the inside of the hub cap. Do not pack the hub cap with grease. Do not coat the cap mounting flange with grease.

7. When brake shoes are replaced, apply an even coat of lubricant between contact face of anchor pin bushing, brake shoe area, and spider faces. Coat anchor pin completely. Wipe off all excess grease.

SUSPENSION

Hutchens suspension does not require lubrication, but new replacement suspension hardware (nuts/threads) should be oiled before assembly and a wet torque applied. In-service torque values should have dry torque values applied.

FORDING OPERATIONS

1. Use common sense. If the mission/situation does not allow for after fording inspection, inspect the semitrailer when the mission allows.
2. Apply the brakes three or four times to dry them out after fording.
3. If hubs were **hot** prior to fording there is a good chance water may have been sucked in through the hub cap. If cold or warm to touch, they should be all right.
4. If hubs and seals showed any signs of leakage prior to fording they may be contaminated by water after fording semitrailer.
5. When mission allows, carefully remove hub caps to inspect for water contamination. Gasket must be replaced if damaged.

END OF WORK PACKAGE

MAINTENANCE INSPECTION INSTRUCTIONS

NOTE

All damaged areas should be marked for repair or replacement.

1. All components and parts must be carefully checked to determine if they are serviceable for use, can be repaired, or must be scrapped.
2. Inspect drilled and tapped (threaded) holes for the following:
 - a. Wear, distortion, cracks, and any other damage in or around holes.
 - b. Threaded areas for wear distortion (stretching) and evidence of cross-threading.
3. Inspect metal lines, flexible lines (hoses), and metal fittings for the following:
 - a. Metal lines for sharp kinks, cracks, bad bends, and dents.
 - b. Flexible lines for fraying, evidence of leakage, and loose metal fittings or connectors.
 - c. Metal fittings and connectors for thread damage and worn or rounded hex heads.
4. Inspect castings, forgings, and machined metal parts for the following:
 - a. Machined surfaces for nicks, burrs, raised metal wear, and other damage.
 - b. Inner and outer surfaces for breaks and cracks.
5. Inspect air lines, fittings, and connectors for leaks by performing air leakage test (WP 0044 00-1).
6. Inspect bearings (rollers) in accordance with TM 9-214.

END OF WORK PACKAGE

WIRING HARNESS REPAIR

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Connectors (as required)
- Terminals (as required)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
 - Common No. 2 Shop Set (WP 0077 00-9)
-

**WARNING**

When repairing an electrical malfunction, ALWAYS disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

TERMINAL REPLACEMENT

1. Cut terminal (3) off wire (1). Discard terminal.
2. Strip insulation off wire (1) equal to depth of new terminal (3).
3. Slide insulator (2) on wire (1).
4. Position new terminal (3) on wire (1). Crimp terminal.
5. Slide insulator (2) over crimped end of terminal (3).

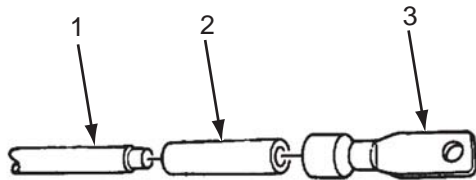


Figure 1. Terminal Assembly

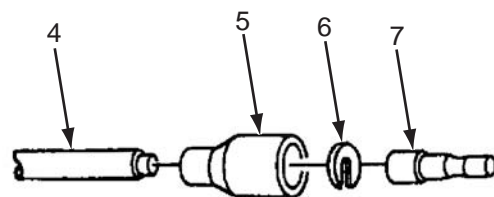


Figure 2. Male Connector

MALE CONNECTOR REPAIR

1. Slide shell (5) back and remove washer (6) from wire (4). Cut ferrule (7) from cable. Discard ferrule. Remove shell.
2. Strip insulation off wire (4) equal to depth of new ferrule (7).
3. Slide shell (5) on wire (4).
4. Position new ferrule (7) on wire (4) and crimp.
5. Position washer (6) on wire (4) near crimping. Slide shell (5) over washer and ferrule (7).

WIRING HARNESS REPAIR - Continued**FEMALE CONNECTOR REPAIR**

1. Slide shell (9) and sleeve (10) back and cut terminal (11) from wire (8). Discard terminal.
2. Remove sleeve (10) and shell (9) from wire (8).
3. Strip insulation off wire (8) equal to depth of new terminal (11).
4. Slide shell (9) and sleeve (10) on wire (8).
5. Position new terminal (11) on wire (8) and crimp.
6. Slide sleeve (10) and shell (9) over terminal (11).

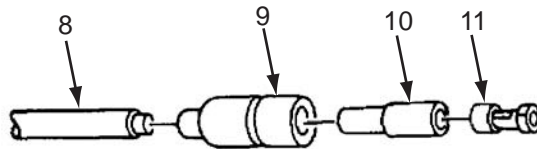


Figure 3. Female Connector

WIRE REPAIR

1. Locate damaged area in wire.
2. Cut wire in center of damaged area.
3. Strip insulation off wires approximately one inch from each cut end.
4. Twist ends of wire securely together, or crimp a splicing sleeve to both wire ends.
5. Cover repaired area with two layers of electrical tape.

FOLLOW-ON TASKS:

- Connect towing vehicle electrical connector to semitrailer (WP 0007 00-2).
- Check operation of lights.

END OF WORK PACKAGE

MAINTENANCE OF ELECTRICAL SYSTEMS

WIRING DIAGRAM

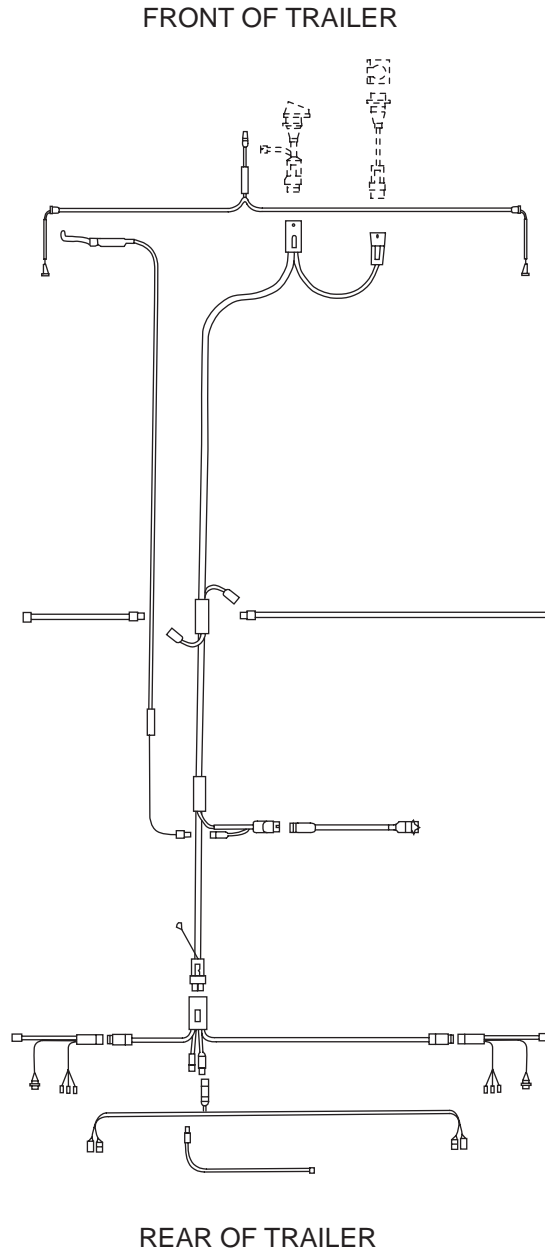


Figure 1. Wiring Diagram

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

WIRING DIAGRAM-Continued

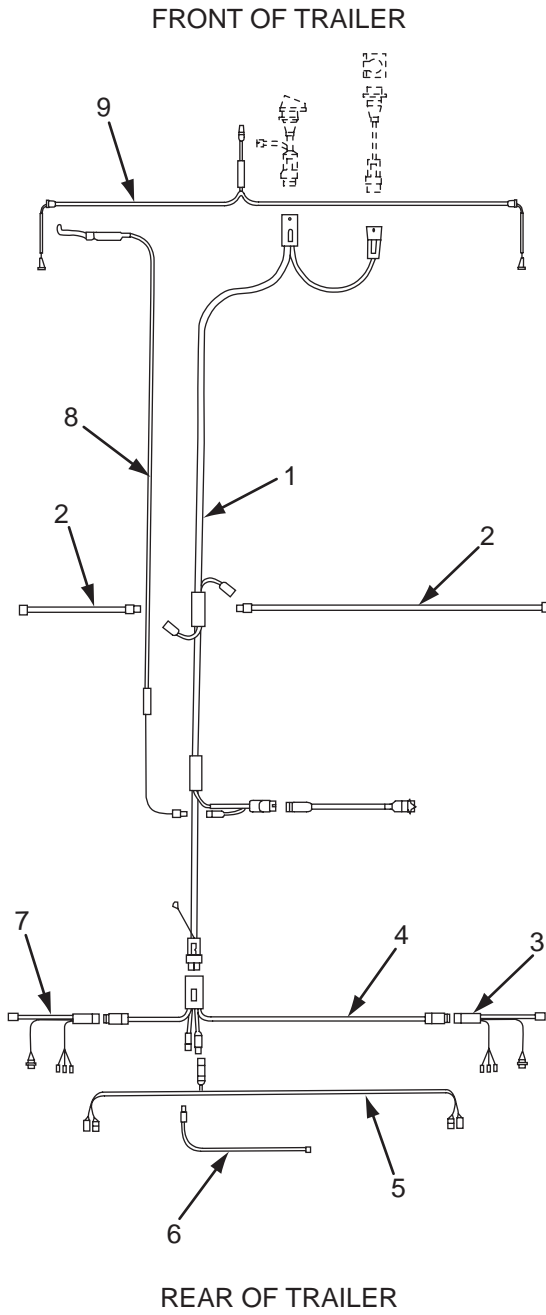


Figure 2. Wiring Diagram

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

WIRING DIAGRAM-Continued

NO.	DESCRIPTION	WIRE COLOR
1	Main Wiring Harness	Blue, Brown, Black, Green, Orange, Purple, Red, White, Gray, and Yellow
2	Side Clearance Marker Harnesses	Black and White
3	Left Clearance and Tail Light Harness	Black, White, Red, Brown, and Green
4	Rear Wiring Harness	Black, White, Brown, Green, and Red, and Yellow
5	Blackout Light Harness	Gray, Purple, and Orange
6	Rear Clearance Light Harness	Black and White
7	Right Clearance and Tail Light Harness	Black, White, Red, Brown, and Yellow
8	ABS Warning Light Harness	White and White/Green
9	Front Wiring Harness	Black and White

WIRE COLOR	FUNCTION
Black	Side Marker/Identification
Blue	ABS Primary Power
Brown	Tail Lights
Gray	Black-Out Tail Lights
Green	Right Turn
Orange	Black-Out Left Turn
Purple	Black-Out Right Turn
Red	Stop Light/ABS Secondary
White	Return Ground
White/Green	ABS Warning Light (Only one not in main harness)
Yellow	Left Turn

END OF WORK PACKAGE

12-VOLT ELECTRICAL RECEPTACLE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Prime Mover Electrical Connector Disconnected from Semitrailer

Materials/Parts

- Two Locknuts (WP 0080 00-5)
- Dielectric Grease (WP 0086 00-4)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

REMOVAL**WARNING**

When repairing an electrical malfunction, **ALWAYS** disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

1. Unplug main wiring harness from 12-volt electrical receptacle harness (3).
2. Remove two locknuts (1), washers (2), screws (4), and 12-volt electrical receptacle harness (3) from front of trailer (5). Discard locknuts.

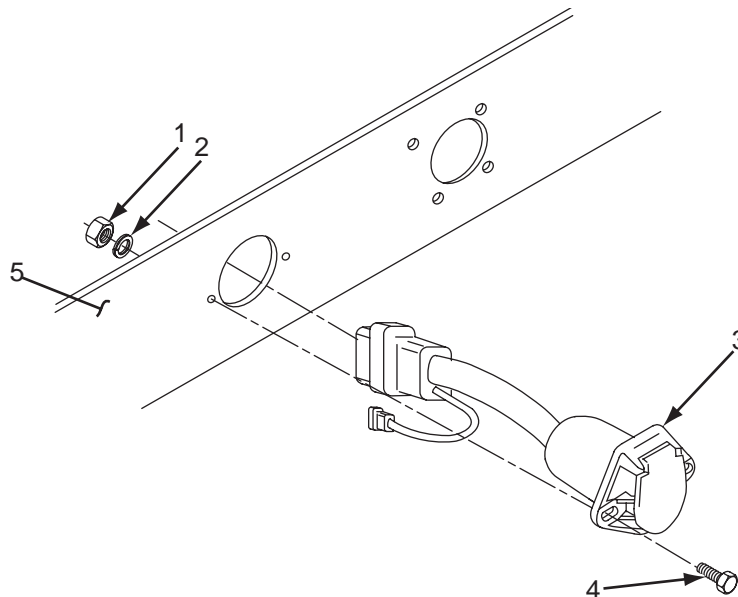


Figure 1. 12-Volt Electrical Receptacle

INSTALLATION

1. Fasten 12-volt electrical receptacle harness (3) to front of trailer (5) using two screws (4), washers (2), and new locknuts (1).
2. Apply dielectric grease on pins and then connect main wiring harness to 12-volt electrical receptacle harness (3).

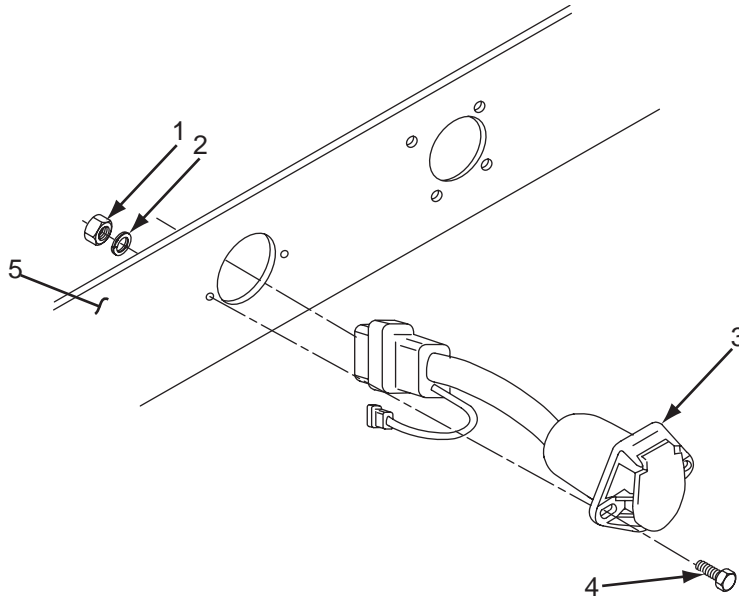


Figure 1. 12-Volt Electrical Receptacle

FOLLOW-ON TASKS

- Connect towing vehicle electrical connector to semitrailer.
- Check operation of lights.

END OF WORK PACKAGE

24-VOLT ELECTRICAL RECEPTACLE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Prime Mover Electrical Connector Disconnected from Semitrailer

Materials/Parts

- Four Locknuts (WP 0080 00-5)
- Dielectric Grease (WP 0086 00-4)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

REMOVAL**WARNING**

When repairing an electrical malfunction, ALWAYS disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

1. Unplug receptacle extension harness (4) from wiring harness.
2. Remove four locknuts (1), washers (2), screws (5), 24-volt receptacle harness (4), and receptacle cover (6) from front of trailer (3). Discard locknuts.

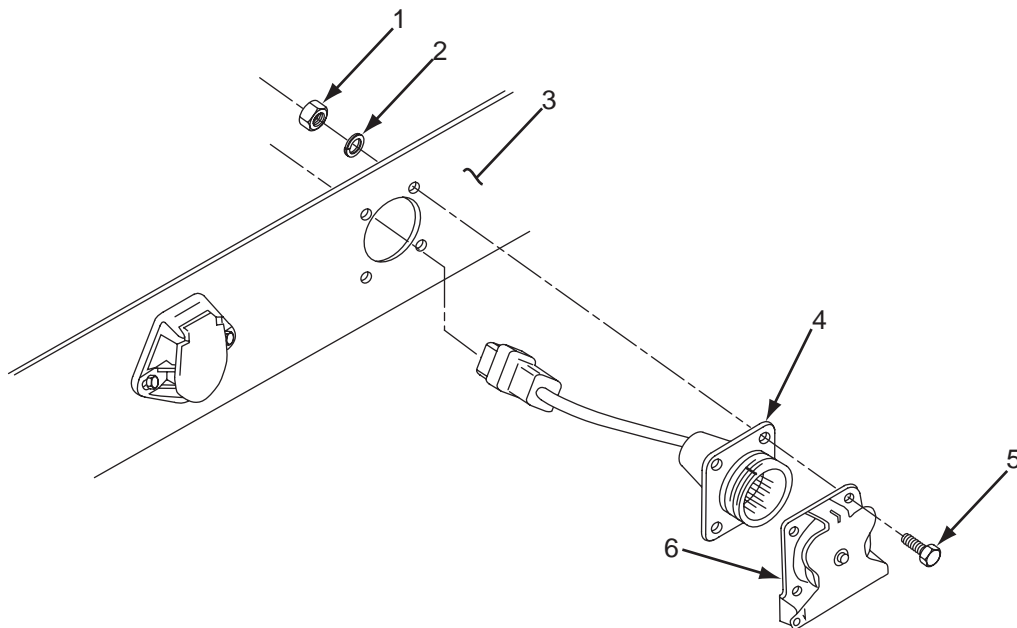


Figure 1. 24-Volt Electrical Receptacle

INSTALL

1. Fasten 24-volt electrical receptacle harness (4) and cover (6) to front of trailer (3) using four screws (5), washers (2), and new locknuts (1).
2. Apply dielectric grease on pins and then connect receptacle extension harness (4) into wiring harness.

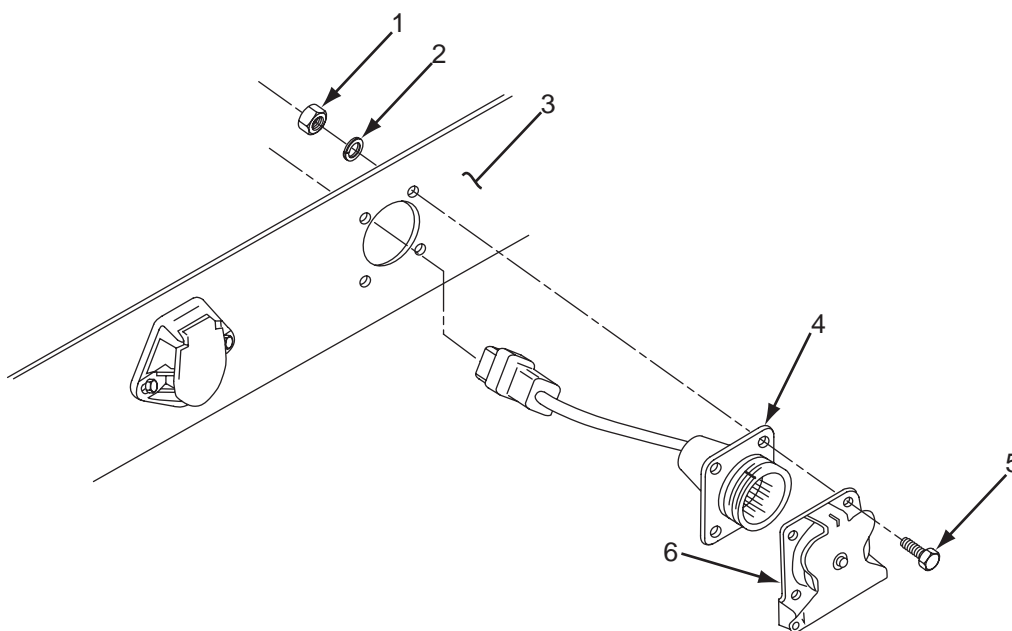


Figure 1. 24-Volt Electrical Receptacle

FOLLOW-ON TASKS:

- Connect towing vehicle electrical connector to semitrailer.
- Check operation of lights.

END OF WORK PACKAGE

STOP, TAIL, AND DIRECTIONAL LIGHT REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Prime Mover Electrical Connector Disconnected from Semitrailer

Materials/Parts

- Self-Tapping Screws (WP 0080 00-1)
- Dielectric Grease (WP 0086 00-4)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
 - Common No. 1 Tool Kit (WP 0077 00-9)
-

REMOVAL**WARNING**

When repairing an electrical malfunction, **ALWAYS** disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

NOTE

Right and left stop lights are removed and installed the same way. This procedure covers one stop light.

1. Remove three self-tapping screws (4) and light body (3) from frame (2). Discard screws.
2. Unplug connector from wiring harness (1).

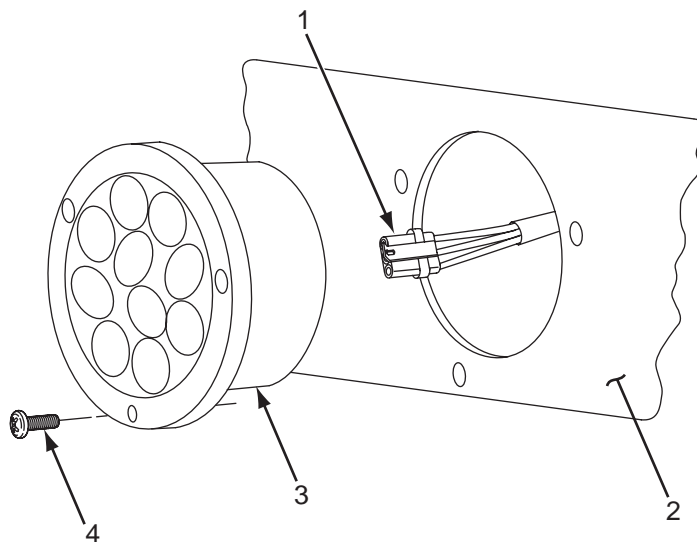


Figure 1. Stop, Tail, and Directional Light

STOP, TAIL, AND DIRECTIONAL LIGHT REPLACEMENT-Continued**INSTALLATION**

1. Apply dielectric grease to connector and plug into wiring harness (1).
2. Install body (3) on frame (2) with three new self-tapping screws (4).

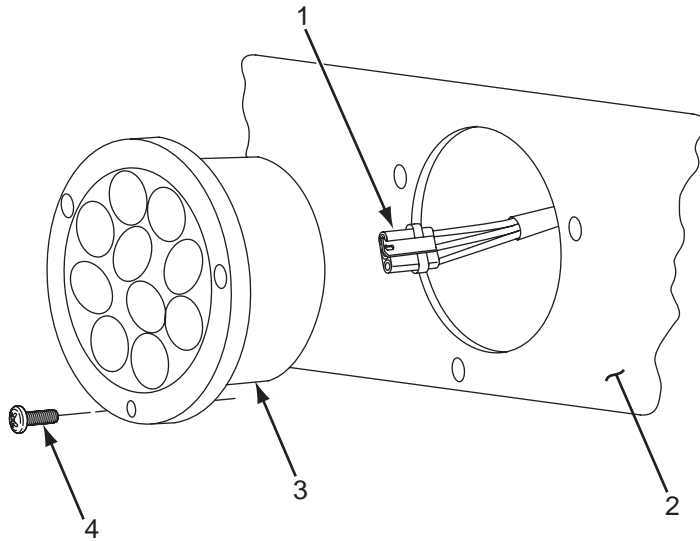


Figure 1. Stop, Tail, and Directional Light

FOLLOW-ON TASKS:

- Connect towing vehicle electrical connector to semitrailer.
- Check operation of light.

END OF WORK PACKAGE

BLACKOUT LIGHT REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Prime Mover Electrical Connector Disconnected from Semitrailer

Materials/Parts

- Self-Tapping Screws (WP 0080 00-1)
- Dielectric Grease (WP 0086 00-4)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

**WARNING**

When repairing an electrical malfunction, **ALWAYS** disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

NOTE

Right and left blackout lights are removed and installed the same way. This procedure covers one blackout light.

REMOVAL

1. Remove six self-tapping screws (1), and blackout light (2). Discard screws.
2. Disconnect light connectors (3) from wiring harness.

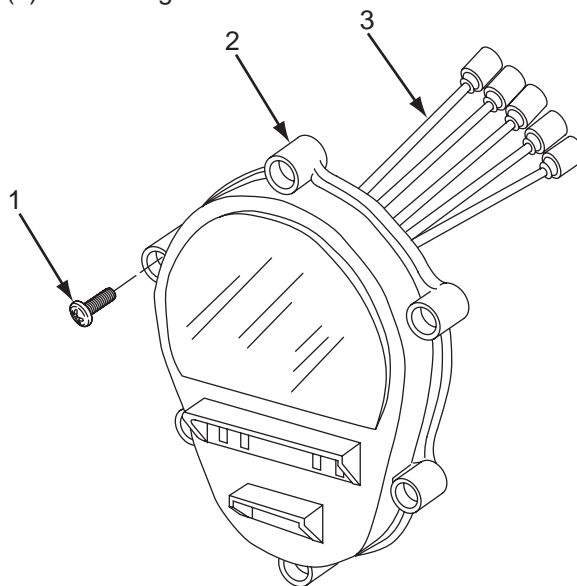


Figure 1. Blackout Light

BLACKOUT LIGHT REPLACEMENT-Continued**INSTALLATION**

1. Apply dielectric grease on connectors (3) and plug into wiring harness.
2. Install blackout light (2), and six new self-tapping screws (1).

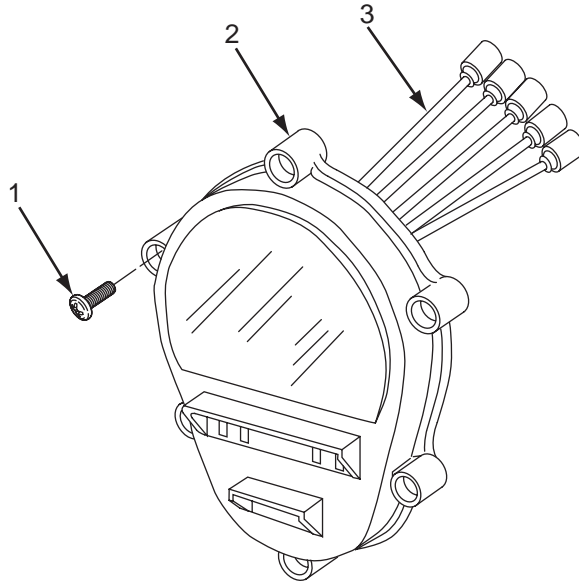


Figure 1. Blackout Light

FOLLOW-ON TASKS

- Connect towing vehicle electrical connector to semitrailer.
- Check operation of light.

END OF WORK PACKAGE

CLEARANCE LIGHTS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Prime Mover Electrical Connector Disconnected from Semitrailer

Materials/Parts

- Self-Tapping Screws (WP 0080 00-1)
- Dielectric Grease (WP 0086 00-4)
- Antiseize Compound (WP 0086 00-2)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

**WARNING**

When repairing an electrical malfunction, ALWAYS disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

NOTE

There are eleven clearance lights on the M872A4 semitrailer. This procedure removes and installs one clearance light; the remaining clearance lights are removed and installed the same way.

CLEARANCE LIGHTS REPLACEMENT-Continued**REMOVAL**

1. Remove two screws (1) and clearance light cover (2).
2. Twist clearance light bulb (3) one quarter turn counterclockwise and disconnect wiring harness from clearance light bulb (3).

NOTE

Step 3 is not required if the mount does not need to be replaced.

3. Remove four self-tapping screws (4) and clearance light mount (5) from trailer. Discard screws.

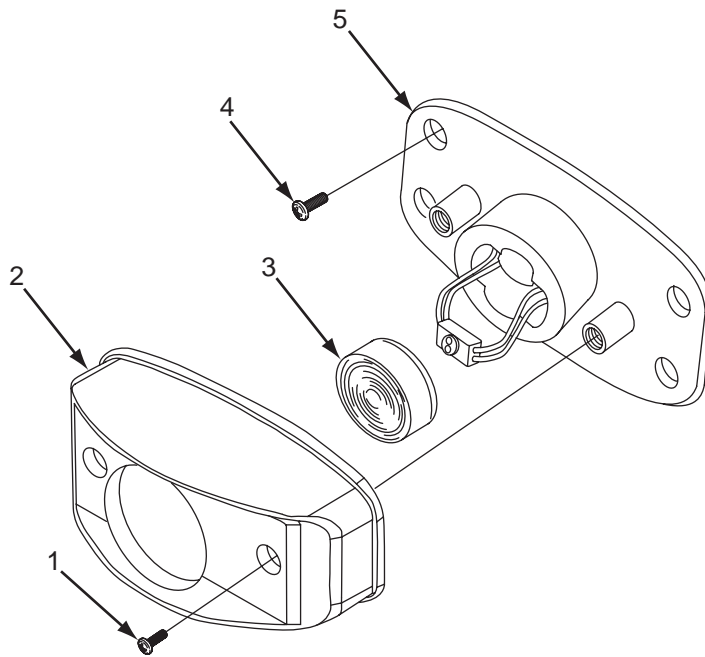


Figure 1. Clearance Light

CLEARANCE LIGHTS REPLACEMENT-Continued**INSTALLATION**

1. Apply antiseize compound to four new self-tapping screws (4). Install clearance light mount (5) and four new self-tapping screws (4).
2. Apply dielectric grease to wiring harness pins. Connect wiring harness connector to clearance light bulb (3).
3. Secure clearance light bulb (3) in mount (5) by turning one quarter turn clockwise.
4. Attach clearance light cover (2) using two screws (1).

FOLLOW-ON TASKS

- Connect towing vehicle electrical connector to semitrailer.
- Check operation of light.

END OF WORK PACKAGE

ABS WARNING LIGHT REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Towing Vehicle Electrical Connector Disconnected from Semitrailer

Materials/Parts

- Dielectric Grease (WP 0086 00-4)
- Antiseize Compound (WP 0086 00-2)
- Self-Tapping Screws (WP 0080 00-2)

Tools /Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

**WARNING**

When repairing an electrical malfunction, ALWAYS disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

ABS WARNING LIGHT REPLACEMENT-Continued**REMOVAL**

1. Unsnap ABS light (3) from ABS light mount (2).
2. Disconnect wiring harness (1) from ABS light (3).
3. Remove two self-tapping screws (4) and ABS light mount (2). Discard screws.

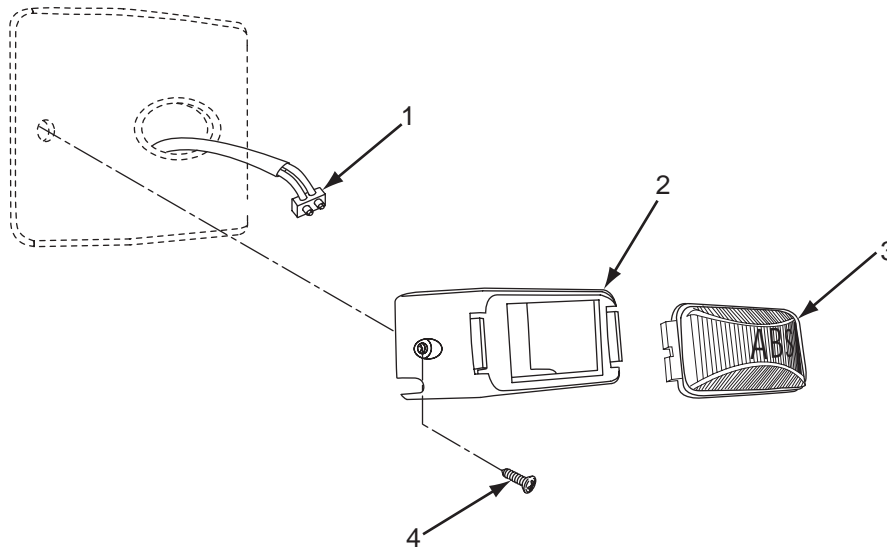


Figure 1. ABS Warning Light

INSTALLATION

1. Apply antiseize compound to new self-tapping screws. Install ABS light mount (2) and two new self-tapping screws (4).
2. Apply dielectric grease to wiring harness pins. Connect wiring harness connector (1) to ABS light mount (2).
3. Snap ABS light (3) into ABS light mount (2).

FOLLOW-ON TASKS

- Perform ABS Lights Troubleshooting Procedures per WP 0012 00-8

END OF WORK PACKAGE

REFLECTOR REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Self-Tapping Screw (WP 0080 00-34)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

REPLACEMENT**NOTE**

All reflectors are replaced in the same manner.

1. Remove self-tapping screw (2) and reflector (1) from frame. Discard screw.
2. Install reflector (1) on frame with new self-tapping screw (2).

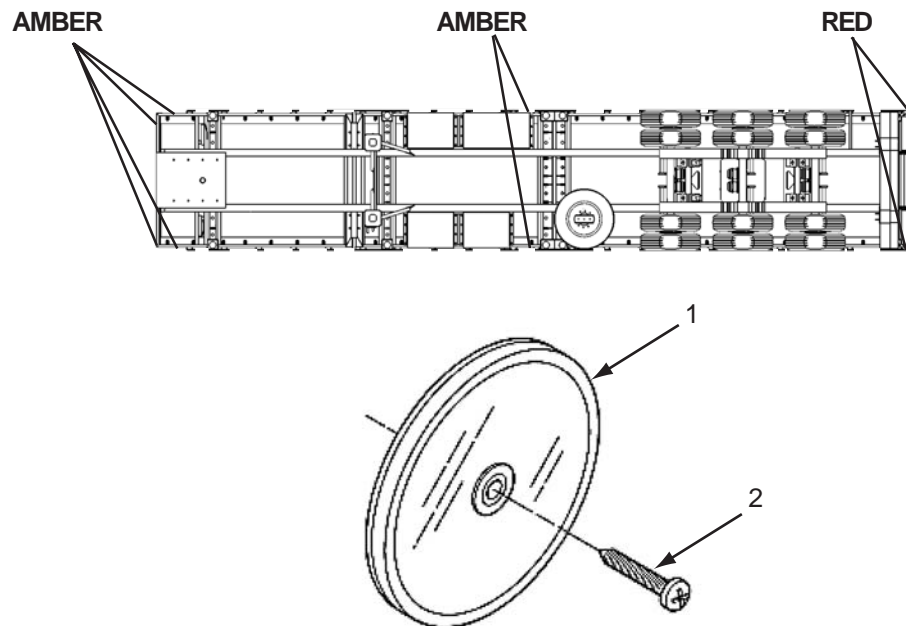


Figure 1. Reflector

END OF WORK PACKAGE

TRAILER WIRING HARNESSES REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Dielectric Grease (WP 0086 00-4)
- Tiedown Straps, Nylon (WP 0086 00-4)
- Grommets (WP 0080 00-6)

Tools/Test Equipment

- General Mechanic's Tool kit (WP 0077 00-9)

**WARNING**

When repairing an electrical malfunction, **ALWAYS** disconnect towing vehicle electrical connector from semitrailer. Failure to do so may result in serious injury or death due to electric shock.

CAUTION

Use dielectric grease on all electrical connection(s) and grounds to prevent corrosion.

NOTE

Remove clamps and ties necessary to remove the damaged wiring harness.

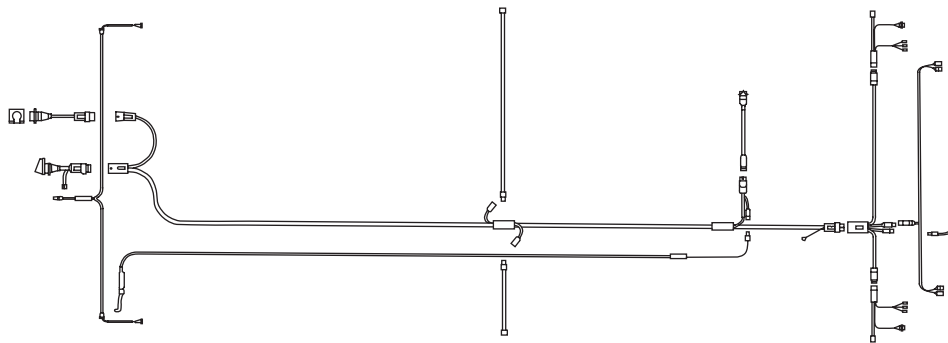


Figure 1. Wiring Harness

MAIN WIRING HARNESS REPLACEMENT

MAIN WIRING HARNESS REMOVAL

1. Disconnect main wiring harness (2) from 12 and 24-volt electrical receptacles (1).
2. Disconnect main wiring harness (2) from side clearance light harness (3) and rear wiring harness (5).
3. Disconnect main wiring harness (2) from ABS ECU power cable (4) and ABS warning light indicator cable (6).
4. Remove main wiring harness (2).
5. Remove and discard damaged grommets as necessary.

MAIN WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Install main wiring harness (2) to frame.

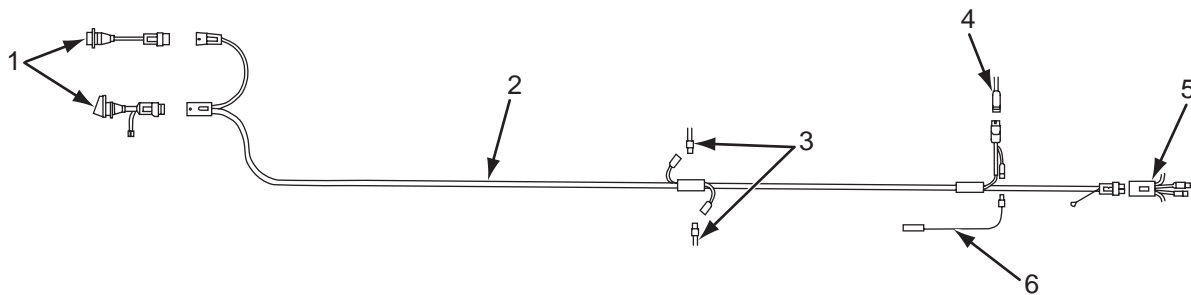


Figure 2. Main Wiring Harness

NOTE

- See charts in WP 0025 00-3 for details on wiring diagram.
- Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect main wiring harness (2) to ABS ECU power cable (4) and ABS warning light indicator cable (6).
4. Connect main wiring harness (2) to side clearance light harness (3) and rear wiring harness (5).
5. Connect main wiring harness (2) to 12 and 24-volt electrical receptacles (1).
6. Connect to prime mover and check all lights for correct operation.

REAR WIRING HARNESS REPLACEMENT

REAR WIRING HARNESS REMOVAL

1. Disconnect rear wiring harness (2) from main wiring harness (5) and tail lights harnesses (1).
2. Disconnect rear wiring harness (2) from blackout lights harness (3) and rear clearance lights harness (4).
3. Remove rear wiring harness (2) from frame.
4. Remove and discard damaged grommets as needed.

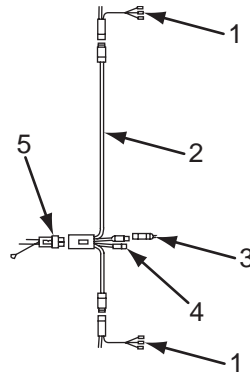


Figure 3. Rear Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

REAR WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Install rear wiring harness (2) on frame.

NOTE

Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect rear wiring harness (2) to blackout lights harness (3) and tail lights harnesses (1).
4. Connect rear wiring harness (2) to main wiring harness (5) and rear clearance lights harness (4).
5. Connect to prime mover and check all lights for correct operation.

FRONT CLEARANCE LIGHT WIRING HARNESS REPLACEMENT**FRONT CLEARANCE LIGHT WIRING HARNESS REMOVAL****NOTE**

Removal of clearance light mount is not required for this task.

1. Disconnect all front clearance lights from front clearance light wiring harness (1) per WP 0030 00-2.
2. Disconnect front clearance light wiring harness (1) from 12-volt receptacle plug (2).
3. Remove front clearance light wiring harness (1) from frame.
4. Remove and discard damaged grommets as needed.

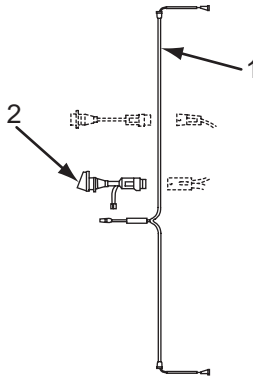


Figure 4. Front Clearance Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

FRONT CLEARANCE LIGHT WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Install front clearance light wiring harness (1) to frame.

NOTE

Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect front clearance light wiring harness (1) to 12-volt receptacle plug (2).
4. Connect and install front clearance lights per WP 0030 00-3.
5. Connect to prime mover and check all lights for proper operation.

TAIL LIGHT WIRING HARNESS REPLACEMENT**NOTE**

- There are two tail light harnesses. Both are removed the same way. Procedures are for the removal of one harness.
- Removal of clearance light mounts are not required for this task.

TAIL LIGHT WIRING HARNESS REMOVAL

1. Disconnect tail light harness (1) from rear wiring harness (2).
2. Remove side clearance lights per WP 0030 00-2.
3. Remove tail light per WP 0028 00-1.
4. Remove tail light wiring harness (1) from frame.
5. Remove and discard grommets as needed.

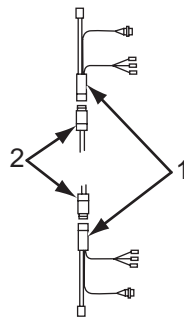


Figure 5. Tail Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

TAIL LIGHT WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Install tail light wiring harness (1) to frame.
3. Install tail light per WP 0028 00-2.

TAIL LIGHT WIRING HARNESS REPLACEMENT-Continued**TAIL LIGHT WIRING HARNESS INSTALLATION****NOTE**

Apply dielectric grease to each plug before connecting to other cables and harnesses.

4. Install side clearance light per WP 0030 00-3.
5. Connect tail light wiring harness (1) to rear main wiring harness (2).
6. Connect to prime mover and check lights for proper operation.

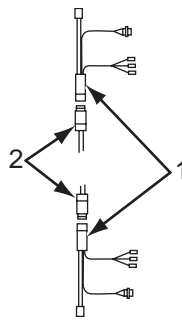


Figure 5. Tail Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

BLACKOUT LIGHT WIRING HARNESS REPLACEMENT**BLACKOUT LIGHT WIRING HARNESS REMOVAL**

1. Remove blackout lights per WP 0029 00-1.
2. Disconnect blackout light wiring harness (1) from rear main wiring harness (2).
3. Remove blackout light wiring harness (1) from frame.
4. Remove and discard damaged grommets as needed.

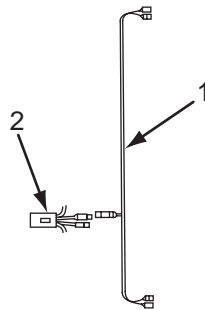


Figure 6. Blackout Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

BLACKOUT LIGHT WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Connect blackout light harness (1) to frame.

NOTE

Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect blackout light wiring harness (1) to rear main wiring harness (2).
4. Install blackout lights per WP 0029 00-2.
5. Connect to prime mover and check all lights for correct operation.

REAR CLEARANCE LIGHT WIRING HARNESS REPLACEMENT**REAR CLEARANCE LIGHT WIRING HARNESS REMOVAL**

1. Remove rear clearance lights per WP 0030 00-2.
2. Disconnect rear clearance light wiring harness (1) from rear main wiring harness (2).
3. Remove rear clearance light wiring harness (1) from frame.
4. Remove and discard damaged grommets as needed.

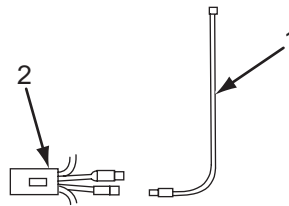


Figure 7. Rear Clearance Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

REAR CLEARANCE LIGHT WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Install rear clearance light wiring harness (1) to frame.

NOTE

Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect rear clearance light wiring harness (1) to rear main wiring harness (2).
4. Install rear clearance lights per WP 0030 00-3.
5. Connect to prime mover and check all lights for correct operation.

SIDE CLEARANCE LIGHT WIRING HARNESS REPLACEMENT**SIDE CLEARANCE LIGHT WIRING HARNESS REMOVAL****NOTE**

There are two side clearance light wiring harnesses. Both harnesses are removed using the same procedure. This task is written for one harness.

1. Remove side clearance light per WP 0030 00-2.
2. Disconnect side clearance light wiring harness (1) from main wiring harness (2).
3. Disconnect side clearance light wiring harness (1) from frame.
4. Remove and discard damaged grommets as needed.

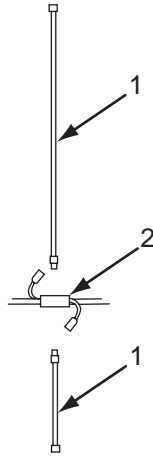


Figure 8. Side Clearance Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

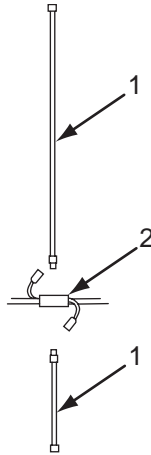
SIDE CLEARANCE LIGHT WIRING HARNESS REPLACEMENT-Continued**SIDE CLEARANCE LIGHT WIRING HARNESS INSTALLATION**

Figure 8. Side Clearance Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

1. Install new grommets as needed.
2. Install side clearance light wiring harness (1) to frame.

NOTE

Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect side clearance light wiring harness (1) to main wiring harness (2).
4. Install side clearance light per WP 0030 00-3.
5. Connect to prime mover and check all lights for correct operation.

ABS WARNING LIGHT WIRING HARNESS REPLACEMENT**ABS WARNING LIGHT WIRING HARNESS REMOVAL**

1. Remove ABS warning light per WP 0031 00-2.
2. Disconnect ABS warning light wiring harness (1) from main wiring harness (2).
3. Remove ABS warning light wiring harness (1) from frame.
4. Remove and discard damaged grommets as needed.

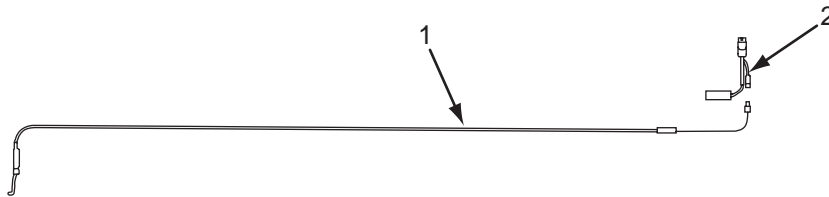


Figure 9. ABS Warning Light Wiring Harness

NOTE

See charts in WP 0025 00-3 for details on wiring diagram.

ABS WARNING LIGHT WIRING HARNESS INSTALLATION

1. Install new grommets as needed.
2. Install ABS warning light wiring harness (1) on frame.

NOTE

Apply dielectric grease to each plug before connecting to other cables and harnesses.

3. Connect ABS warning light wiring harness (1) to main wiring harness (2).
4. Install ABS warning light per WP 0031 00-2.
5. Connect to prime mover and check all lights for correct operation.

END OF WORK PACKAGE

SERVICE BRAKES - SHOES AND LINING MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Tires and Wheels Removed (WP 0016 00-2)
- Brake Drum Removed (WP 0036 00-2)

Materials/Parts

- Antiseize Compound (WP 0086 00-2)
- Grease, GAA (WP 0086 00-2)

Personnel Required:

- Two

Tools/Test Equipment

- General Mechanic's Tool kit (WP 0077 00-9)
 - Jack Stands
-

**WARNING**

- **Clean and check service brakes and all brake components for wear and damage. Replace worn or damaged parts. At Triennial Service replace all springs, pins, rollers, clips, and bushings on each axle end.**
- **Wipe excess lubricant from area of brake shoe linings to prevent any contamination of linings. Replace all wheel end linings if one has been contaminated with lubricant. Failure to follow this warning may cause brakes to malfunction, resulting in serious injury or death.**

NOTE

- There are six brake shoe assemblies and they are removed and installed the same way. This procedure covers one brake shoe assembly.
- Dispose of all hazardous material in accordance with TB 43-0244
- If slack adjusters cannot be adjusted properly or the hex nut is damaged, brakes must be caged according to WP 0007 00-14.

INSPECTION

1. Measure brake lining thickness. Thickness must be NO LESS than 1/4 in. (6.4mm). If brake lining is less than 1/4 in. (6.4mm), replace brakeshoes.
2. Measure clearance between top of brake lining and top of all rivet heads. Clearance must be a minimum of 1/32 in. (0.8mm). If clearance is less than 1/32 in. (0.8mm), replace brakeshoes.

SERVICE BRAKES - SHOES AND LINING MAINTENANCE - Continued

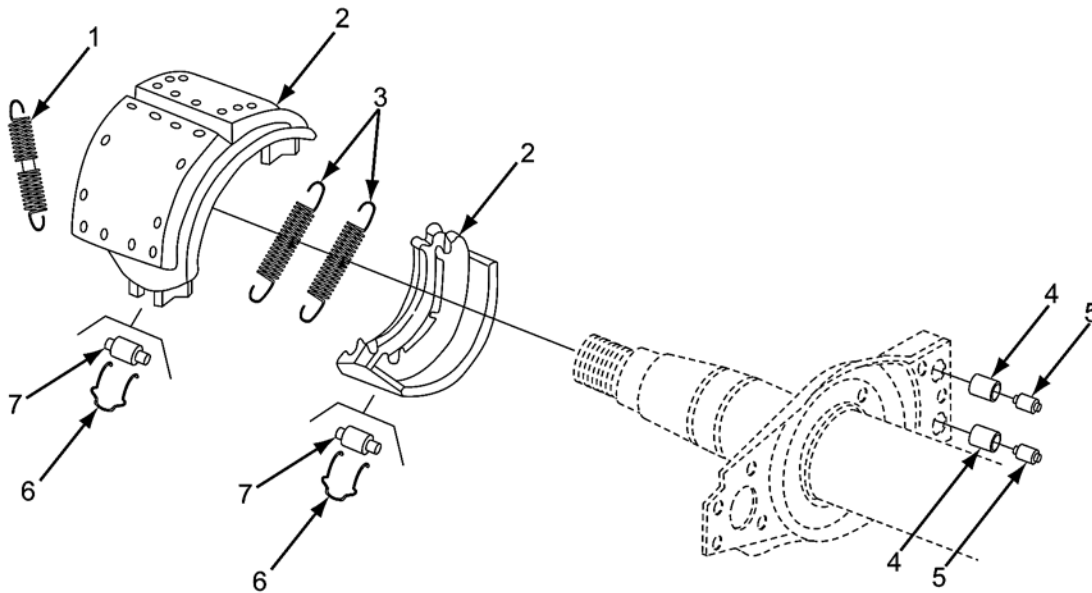


Figure 1. Service Brake

REMOVAL

**WARNING**

There is a lot of tension on brake springs. Caution must be used while removing all components to avoid injury.

1. Rotate slack adjuster manual adjustment hex counterclockwise until pin becomes loose in slack adjuster.
2. Remove rollers (7) and clips (6).
3. Remove spring (1) from S-cam side of brake shoe assembly (2).
4. Remove brake shoe assembly (2).
5. Remove springs (3) from opposite side of brake shoe assembly (2).
6. Remove shoulder pins (5), and bushings (4).
7. Clean and lube rollers (7), pins (5), and bushings (4) per WP 0022 00-4.

SERVICE BRAKES - SHOES AND LINING MAINTENANCE - Continued**INSTALLATION**

1. Install bushings (4), and pins (5).
2. Install springs (3) on shoulder pin side of brake shoe assembly (2).
3. Install brake shoe assembly (2).
4. Install spring (1) on opposite side of brake shoe assembly (2).
5. Install rollers (7), and clips (6).

NOTE

Step 6 is only required if brakes are caged.

6. Uncage brakes according to WP 0007 00-15.

FOLLOW-ON TASKS

- Install brake drum (WP 0036 00-2).
- Install tire and wheel (WP 0016 00-3).
- Adjust brakes (WP 0038 00-4).
- Remove jack stands.
- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove/store chocks and ground boards.
- Verify proper/safe operation.

END OF WORK PACKAGE

SERVICE BRAKES - S-CAMSHAFT REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Semitrailer Disconnected from Prime Mover
- Axles Supported by Jack Stands
- Tires Chocked
- Tires and Wheels Removed (WP 0016 00-2)
- Brake Drum Removed (WP 0036 00-2)
- Brake Shoes Removed (WP 0034 00-2)
- Slack Adjusters Removed (WP 0038 00-2)
- Hub Removed (WP 0037 00-2)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Jack Stands
- Floor Jack

Materials/Parts

- Grease, GAA (WP 0086 00-2)
 - Gasket (WP 0080 00-8)
 - O-Ring (WP 0080 00-8)
 - O-Ring (WP 0080 00-8)
-

**WARNING**

- **The axle must be firmly supported to prevent shifting of the semitrailer. Shifting may cause serious injury to personnel and damage to equipment.**
- **Clean and check all S-cam brake components for wear and damage. Replace worn or damaged parts. At Triennial Service replace all O-rings, bushings, retainers, snap rings, lockwashers, and brackets on each axle end.**

NOTE

- There are six brake S-camshafts (three left and three right) and they are removed and installed the same way. Right and left does not mean left and/or right side. Left or right S-camshaft is specific to S-camshaft rotation in operation. This procedure covers one brake S-camshaft.
- Dispose of all hazardous material in accordance with TB 43-0244
- If slack adjusters cannot be adjusted properly or the hex nut is damaged, brakes must be caged according to WP 0007 00-14.

SERVICE BRAKES - S-CAMSHAFT REPLACEMENT - Continued**REMOVAL**

1. Remove washer (10) from S-camshaft (1).
2. Remove S-camshaft (1), washer (2), and gasket (3). Discard gasket.
3. Remove four screws (9), S-camshaft housing, and bushing (7).
4. Remove O-rings (5 and 8) for S-camshaft housing. Discard O-rings.
5. Remove four screws (6) and cam bushing (4). Check for worn bushings.

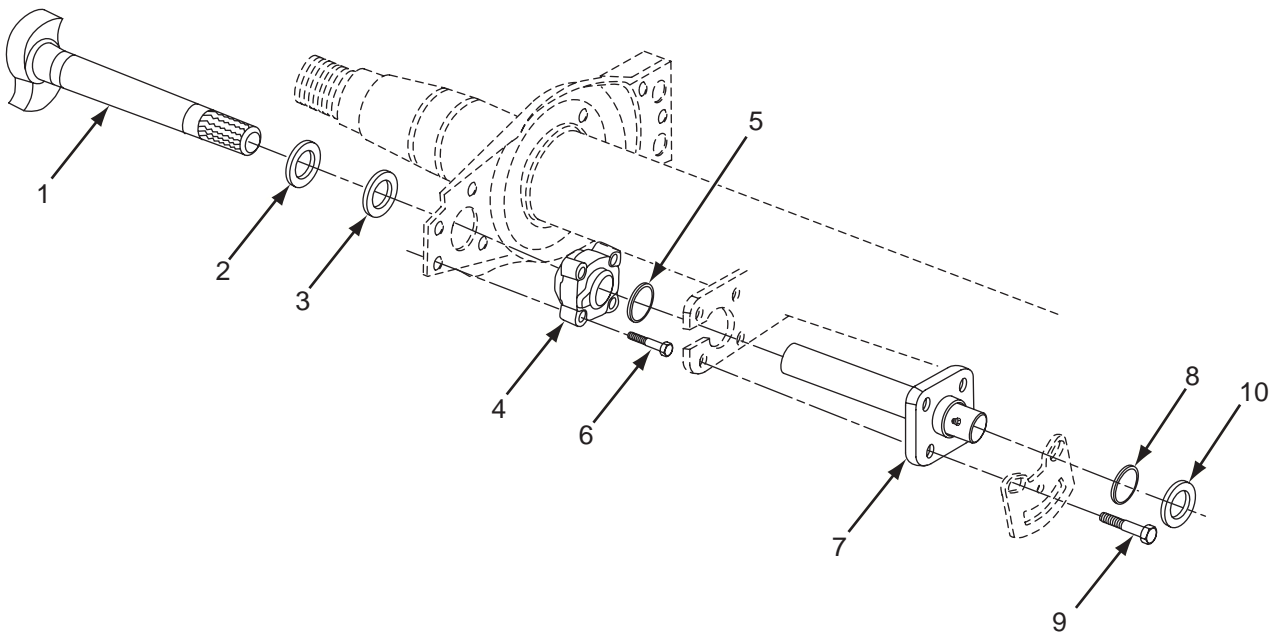


Figure 1. S-Camshaft Assembly

SERVICE BRAKES - S-CAMSHAFT REPLACEMENT - Continued**INSTALLATION**

1. Install cam bushing (4) with four screws (6).
2. Install new O-rings (5 and 8), S-camshaft housing, bushing (7), and four screws (9).
3. Lube grease fittings (WP 0022 00-4).
4. Lightly lube S-camshaft lobes with GAA grease. Wipe off excess grease (WP 0022 00-1).
5. Install S-camshaft (1) with new gasket (3), and washer (2).
6. Install washer (10) on S-camshaft.

NOTE

Step 7 is only required if brakes are caged.

7. Uncage brakes according to WP 0007 00-15.

FOLLOW-ON TASKS

- Install brake shoes (WP 0034 00-3).
- Install brake drum (WP 0036 00-2).
- Install slack adjuster (WP 0038 00-3).
- Install hub (WP 0037 00-2).
- Install tire and wheel (WP 0016 00-3).
- Remove jack stands from axles.
- Connect semitrailer to prime mover.
- Adjust brakes (WP 0038 00-4).
- Verify proper/safe operation.

END OF WORK PACKAGE

BRAKE DRUM REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Tires and Wheels Removed (WP 0016 00-2)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Floor Jacks
- Jack Stands

Personnel

- Two
-

**WARNING**

- Jack must be positioned directly under axle to prevent slippage. Direct all personnel to stay clear of vehicle when vehicle is supported in the air. Failure to do so could result in serious injury and damage to equipment.
- To prevent shifting of trailer, floor jack should be used only on a hard, level surface. Failure to follow this warning could result in serious injury and damage to equipment.
- Brake drum weighs 114 lbs. (52 kgs.). Two people are required for removal and installation. Failure to do so could result in serious injury and damage to equipment.

NOTE

- There are six brake drums on the M872A4 Semitrailer. This procedure removes and installs one brake drum.
- If slack adjusters cannot be adjusted properly or the hex nut is damaged, brakes must be caged according to WP 0007 00-14.

BRAKE DRUM REPLACEMENT - Continued**REMOVAL**

1. Rotate slack adjuster manual adjustment hex counterclockwise until pin becomes loose in slack adjuster.

NOTE

Wheel studs should only be removed if damaged.

2. Remove brake drum (1) and ten wheel studs (3) from hub (2).

INSTALLATION

1. Seat brake drum (1) onto hub (2) using ten wheel studs (3) as guides. Do not damage threads.

NOTE

Step 2 is only required if brakes are caged.

2. Uncage brakes according to WP 0007 00-15.

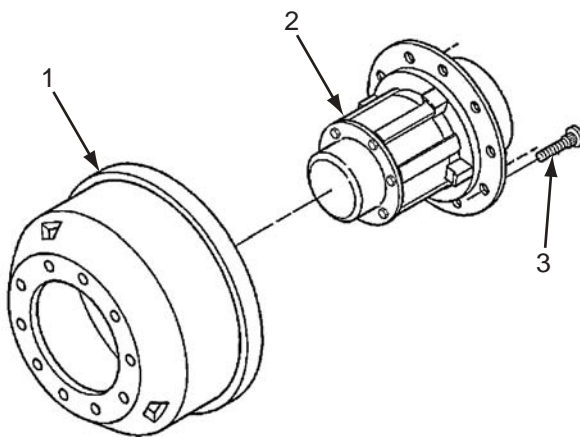


Figure 1. Brake Drum Removal

FOLLOW-ON TASKS

- Adjust brakes (WP 0038 00-4).
- Install tires and wheels (WP 0016 00-3)
- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove/store chocks and ground boards.
- Verify proper/safe operation.

END OF WORK PACKAGE

HUB MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Shop Equipment Auto Repair, FM Basic (WP 0077 00-9)
- Floor Jacks
- Jack Stands

Materials/Parts

- Six Lockwashers (WP 0080 00-17)
- Gasket (WP 0080 00-17)
- Self-Locking Nut (WP 0080 00-17)
- Keeper Arm (WP 0080 00-17)
- Seal (WP 0080 00-17)

Reference

- TM 9-214
 - WP 0022 00
-

**WARNING**

- **Jack must be positioned directly under axle to prevent slippage. Direct all personnel to stay clear of vehicle when vehicle is supported in the air. Failure to do so could result in serious injury and damage to equipment.**
- **To prevent shifting of trailer, floor jack should be used only on a hard, level surface. Failure to do so could result in serious injury and damage to equipment.**

NOTE

- ABS tone ring is part of hub assembly, not a separate item of supply.
- There are six sets of hubs on the M872A4 Semitrailer. This procedure services one hub.
- Dispose of all hazardous material in accordance with TB 43-0244
- Replace components of both wheel axle ends when required.
- If slack adjusters cannot be adjusted properly or the hex nut is damaged, brakes must be caged according to WP 0007 00-14.

HUB MAINTENANCE - Continued**REMOVAL**

1. Rotate slack adjuster manual adjustment hex counterclockwise until pin becomes loose in slack adjuster.
2. Remove six screws (12), lockwashers (11), hubcap (10), and gasket (9) from hub (3). Discard lockwashers and gasket.
3. Remove keeper arm (8) and self-locking nut (7) from spindle. Discard keeper arm and self-locking nut.
4. Remove outer cone and rollers (bearings) (1). Using dual wheel dolly, remove hub assembly (3), cone and rollers (bearings) (5) and seal (6). Discard seal.
5. Using appropriate tool, remove inner (4) and outer (2) tapered roller cups.

HUB COMPONENT SERVICE

Clean, inspect, and lubricate wheel end per WP 0022 00-4.

INSTALLATION**CAUTION**

Seal must not be cocked or distorted when pressed into hub. Use of a seal installation tool is the best method for installation of seal. Spindle must be clean. Improper installation of seals can cause serious damage to equipment.

1. Install new seal (6), cone and rollers (bearing) (5), tapered roller cup (4), hub (3), tapered roller cup (2), and cone and rollers (bearing) (1) onto spindle.

NOTE

When installing the self-locking nut, ensure that the notched portion of the self-locking nut is facing out.

2. Install new nut (7) on axle spindle.
3. Tighten nut (7) to 200 lb.-ft. (271 N•m).
4. Back off nut until loose.

HUB MAINTENANCE - Continued

5. Tighten nut (7) to 100 lb.-ft. (135 N•m).
6. Back off nut (7) 1/4 turn.
7. Install new keeper arm (8) in nut (7).

NOTE

Hubcap fasteners shall be tightened to 15 lb-ft (20.3 N•m) of torque.

8. Install new gasket (9) and hubcap (10) onto hub (3) using six new lockwashers (11) and screws (12). Gasket should be dry.

NOTE

Step 9 is only required if brakes are caged.

9. Uncage brakes according to WP 0007 00-15.

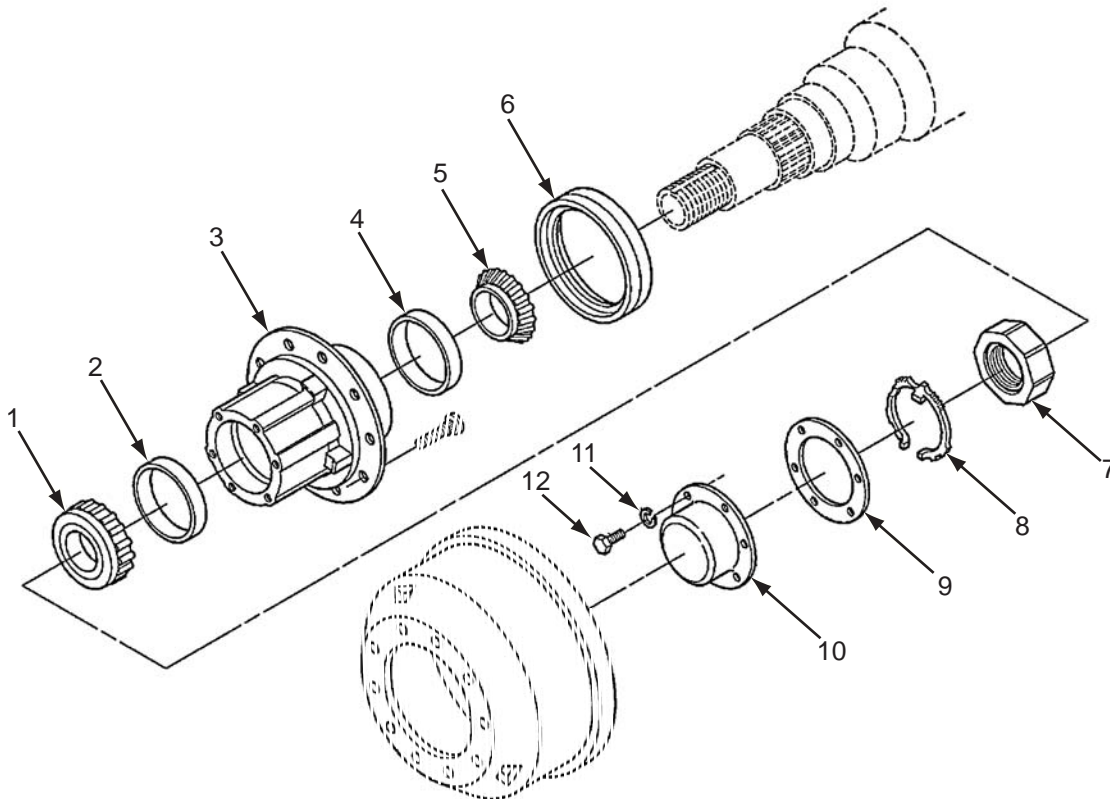


Figure 1. Hub and Drum Assembly

HUB MAINTENANCE - Continued**FOLLOW-ON TASKS**

- Adjust brakes (WP 0038 00-4).
- Raise landing legs.
- Remove/store chocks and ground boards.
- Verify proper/safe operation.

END OF WORK PACKAGE

AUTOMATIC SLACK ADJUSTERS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked

Materials/Parts

- Universal Joint Vehicular (WP 0080 00-11)
- O-Ring (WP 0080 00-8)
- Washer (WP 0080 00-8)

Tools /Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
 - Shop Equipment Common No. 1 (WP 0077 00-9)
-

**WARNING**

**Make sure the wheels are chocked before servicing the semitrailer.
Failure to do so may cause serious injury or death.**

CAUTION

- **Electrical or pneumatic tools shall not be used for slack adjustment.**
- **Initial adjustments procedures start with measurement, not tear-down.**

NOTE

- There are six slack adjusters and they are removed and installed the same way. This procedure and material covers one slack adjuster.
- Dispose of all hazardous material in accordance with TB 43-0244.
- If slack adjusters cannot be adjusted properly or the hex nut is damaged, brakes must be caged according to WP 0007 00-14.

AUTOMATIC SLACK ADJUSTERS REPLACEMENT - Continued**REMOVAL**

1. Rotate slack adjuster manual adjustment hex (10) counterclockwise until straight pin (3) becomes loose in slack adjuster yoke (universal joint vehicular) (2).

NOTE

More torque is required to rotate slack adjuster manual adjustment hex counterclockwise than is necessary to rotate it clockwise. Torque may be as high as 70 lb-ft (94.9 N•m).

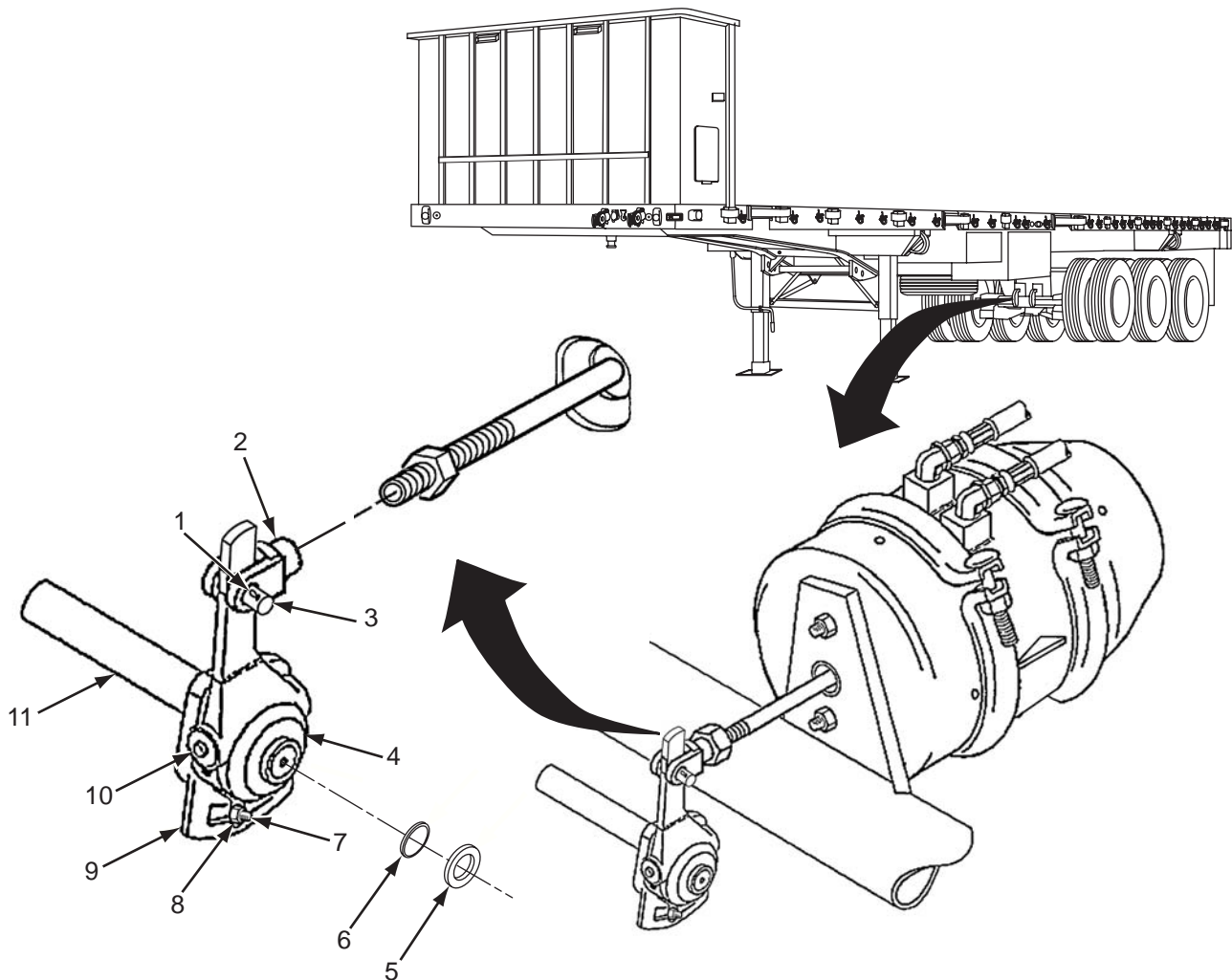


Figure 1. Slack Adjuster Assembly

2. Remove cotter pin (1) from straight pin (3) and remove straight pin (3) from slack adjuster (4). Discard cotter pin.
3. Remove nut (8) and bolt (7) from mounting bracket (9).

AUTOMATIC SLACK ADJUSTERS REPLACEMENT - Continued**REMOVAL - Continued**

4. Rotate slack adjuster manual adjustment hex (10) counterclockwise until slack adjuster (4) clears yoke (universal joint vehicular) (2).
5. Remove washer (5) and o-ring (6) from recess on end of camshaft (11). Discard washer and o-ring.
6. Using soft-faced hammer, tap on slack adjuster (4) lightly until it can be removed from camshaft (11).

CLEANING AND INSPECTION**NOTE**

Do not use solvents or soap and water for cleaning.

1. Clean slack adjuster, splines of camshaft, and other metal parts using stiff fiber brush, and wipe clean.
2. Inspect slack adjuster for bent, broken, loose, or misaligned brake actuator push rods and cracked or damaged brake actuator brackets. Replace slack adjuster if damaged.

INSTALLATION

1. Install slack adjuster (4), new o-ring (6), and new washer (5) on end of camshaft (11).
2. Turn manual adjustment hex (10) clockwise until hole in yoke (universal joint vehicular) (2) and hole in slack adjuster (4) are aligned.
3. Install straight pin (3) through yoke (universal joint vehicular) (2).
4. Install new cotter pin (1) through straight pin (3).
5. Install bolt (7) and nut (8) in mounting bracket (9). Do not tighten nut (8).
6. Lubricate slack adjusters (4) per WP 0022-00-3.

NOTE

Step 7 is only required if brakes are caged.

7. Uncage brakes according to WP 0007 00-15.

AUTOMATIC SLACK ADJUSTERS REPLACEMENT - Continued**ADJUSTMENT****NOTE**

Air brake system should be fully charged prior to adjustment.

1. Raise axle until wheels clear ground. Rotate manual adjustment hex (4) clockwise until brake linings are snug against brakedrum.

NOTE

More torque is required to rotate manual adjustment hex counterclockwise than is necessary to rotate it clockwise. Torque may be as high as 70 lb-ft (94.9 N•m).

2. Turn manual adjustment hex (4) counterclockwise 1/2 turn.
3. Apply 90 to 95 psi (621 to 655 kPa) air pressure from towing vehicle air gage. Make and hold a full brake application. Measure push-rod (1) stroke. Maximum stroke is 2 in. (5.1 cm). If stroke exceeds 2-in. (5.1-cm) limit, inspect all brake system components for serviceability.
4. Tighten nut (2) on mounting bracket (3).

AUTOMATIC SLACK ADJUSTERS REPLACEMENT - Continued

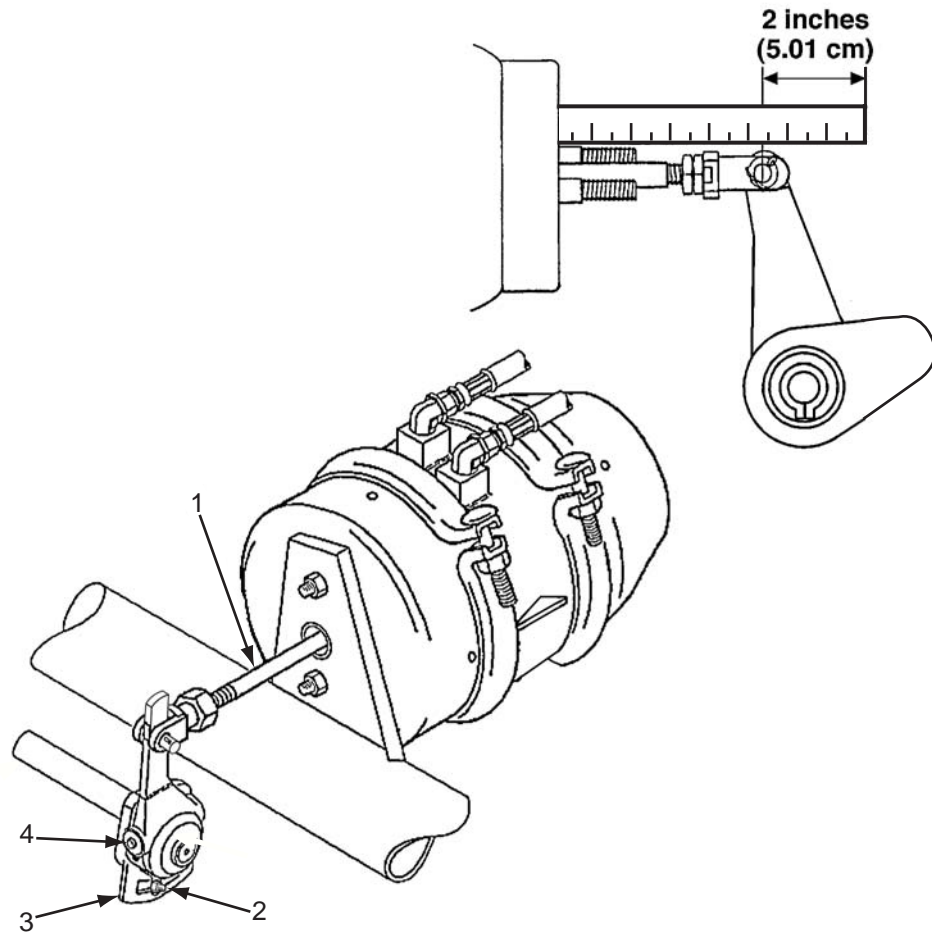


Figure 2. Slack Adjuster Adjustment

END OF WORK PACKAGE

ECU VALVE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Electrical Power Disconnected

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

Materials/Parts

- Sealant, Silicone (WP 0086 00-3)
 - Locknuts (WP 0080 00-12)
-

**WARNING**

Wear protective goggles when underneath semitrailer and opening drain valve. Avoid air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.

NOTE

Tag all hoses and sensor connections before removal.

ECU VALVE REPLACEMENT - Continued

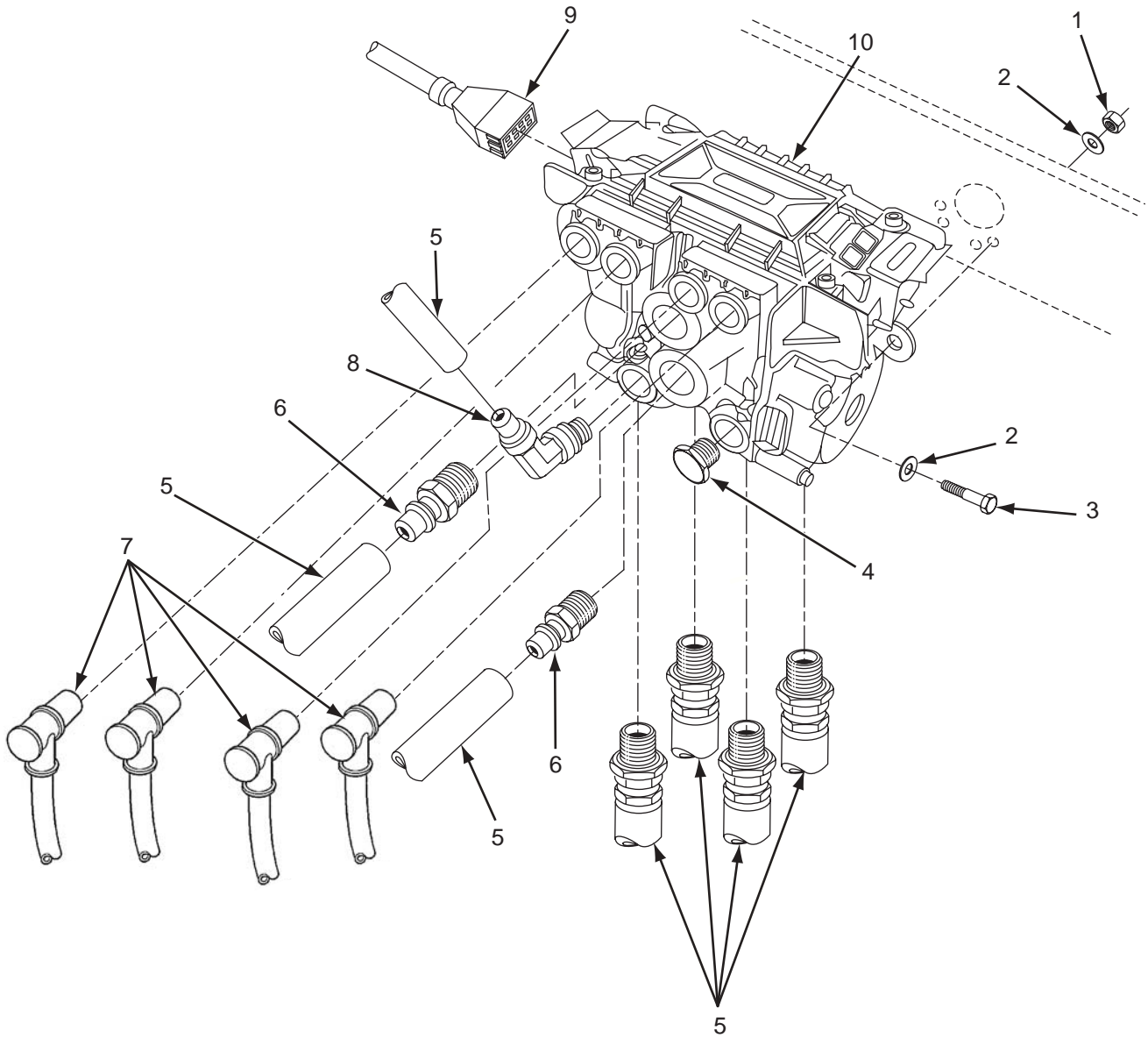


Figure 1. ECU Valve

ECU VALVE REPLACEMENT - Continued**ECU VALVE REMOVAL**

1. Open drain valves on reservoirs and allow air to escape.
2. Tag and disconnect sensor cables (7) from ECU valve (10).
3. Disconnect electrical cable (9) from ECU valve (10).
4. Remove hoses (5), plug (4), and fittings (6 and 8) from ECU valve (10).
5. Remove two locknuts (1), washers (2), and bolts (3) from ECU valve (10). Discard locknuts.

ECU VALVE INSTALLATION

1. Apply sealing compound (sealant, silicone) to threads of plug (4), and fittings (6 and 8). DO NOT use Teflon tape.
2. Install plug (4), and fittings (6 and 8) to ECU valve (10).
3. Install ECU valve (10) on frame with two bolts (3), washers (2), and new locknuts (1).
4. Install hoses (5) to ECU valve (10).
5. Connect electrical cable (9) to the ECU valve (10).
6. Connect all sensor cables (7) to the ECU valve (10).
7. Ensure drain valve on air reservoir is closed.

FOLLOW-ON TASKS

- Connect semitrailer to prime mover.
- Check for air leaks. (WP 0044 00)
- Raise landing legs.
- Remove/store chocks and ground boards.
- Verify proper/safe operation.

END OF WORK PACKAGE

ABS BRAKE SENSOR AND POWER CONNECTION REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Brake Drum Removed (WP 0036 00-1)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

Materials/Parts

- Tiedown Strap, Nylon (0086 00-4)
-

**WARNING**

Wear protective goggles when underneath semitrailer and opening drain valve. Avoid air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.

REMOVAL

1. Remove ABS sensor (3) from sensor housing.
2. Remove retainer clip (2) from sensor housing.
3. Disconnect sensor cable (3) from sensor cable extension (4) and remove sensor cable (3) from wheel.
4. Disconnect sensor cable extension (4) from ECU valve.

NOTE

Complete step 5 only if replacement of ECU power cable is required.

5. Disconnect power cable (1) from ECU valve and power supply.

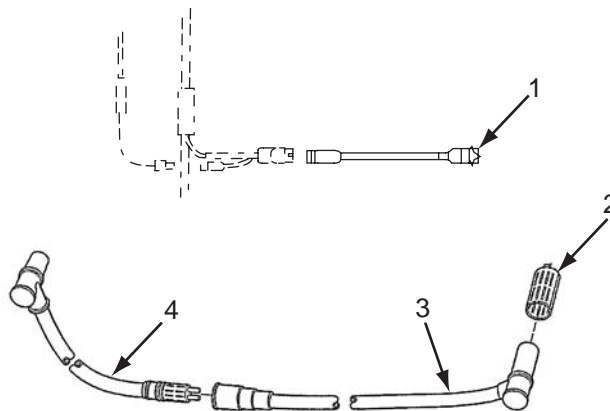


Figure 1. ABS Brake Power Connections

ABS BRAKE SENSOR AND POWER CONNECTION REPLACEMENT - Continued**INSTALLATION**

1. Connect sensor cable extension (4) to ECU valve.
2. Install sensor cable (3) on wheel and connect sensor cable (3) to sensor cable extension (4) from ECU.
3. Install retainer clip (2) in sensor housing.
4. Install sensor (3) in sensor housing.

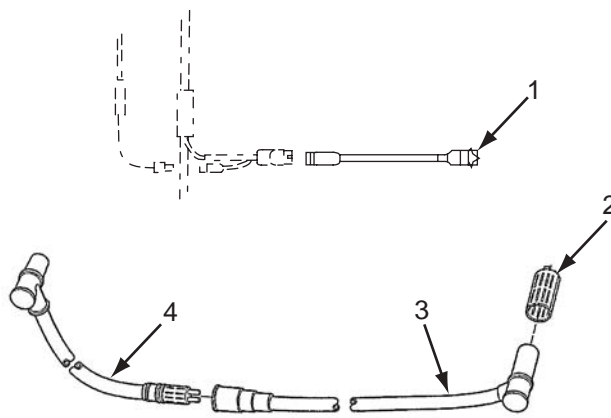


Figure 1. ABS Brake Power Connections

NOTE

Complete step 5 only if replacement of ECU power cable is required.

5. Connect power cable (1) to ECU valve and power supply.

CAUTION

Sensor cables must be nylon strapped at the 12 o'clock or 3 o'clock position on the axle (top or rearward side of axle) to protect them during off-road operation. Use as many nylon straps as required to ensure the cables are tightly secured to the axle ends.

NOTE

Attach nylon tiedown straps to axle allowing for easy replacement—locking tab shall be situated within 90° of axle top.

6. Secure sensor cables to axle with nylon tiedown straps.

ABS BRAKE SENSOR AND POWER CONNECTION REPLACEMENT - Continued**FOLLOW-ON TASKS**

- Install brake drum (WP 0036 00-2).
- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove/store chocks and ground boards.
- Verify proper/safe operation.

END OF WORK PACKAGE

AIR LINE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Air Brake Reservoirs Drained

Materials/Parts

- Sealant, Silicone (WP 0086 00-3)
- Tiedown Straps (WP 0086 00-4)

Tools/Test Equipment

- General Mechanic's Tool kit (WP 0077 00-9)
-

**WARNING**

Wear protective goggles when underneath semitrailer and opening drain valve. Avoid air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.

NOTE

There are many air lines on the brake system of this trailer. Remove only the air line that needs to be replaced.

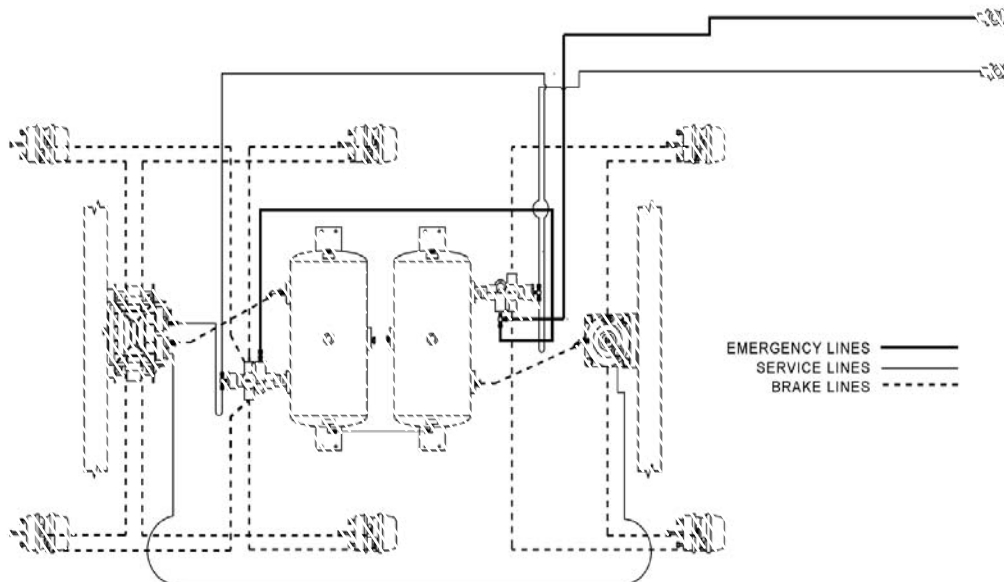


Figure 1. Air Line Locations

AIR LINE REPLACEMENT - Continued**REMOVAL**

Remove hose ties and hose clamps as necessary.

INSTALLATION

1. Treat all threads with sealing compound (sealant, silicone) before replacing.
2. Install hose clamps and hose ties as necessary.

FOLLOW-ON TASKS

- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove/store chocks and ground boards.
- Pressurize system and check for leaks (WP 0044 00-1).
- Verify proper/safe operation.

END OF WORK PACKAGE

AIR BRAKE CHAMBERS REPLACEMENT

INITIAL SETUP:**Equipment Conditions:**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Air Brake Reservoirs Drained

Materials/Parts

- Sealant, Silicone (WP 0086 00-3)
- Locknuts (WP 0080 00-11)
- Universal Joint, Vehicular (WP 0080 00-11)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

**WARNING**

- **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.**
- **Wear protective goggles when underneath semitrailer and opening drain valve. Avoid the air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.**

NOTE

- There are six air brake chambers and they are removed and installed the same way. This procedure covers one air brake chamber.
- If slack adjusters cannot be adjusted properly or the hex nut is damaged, brakes must be caged according to WP 0007 00-14.

AIR BRAKE CHAMBERS REPLACEMENT - Continued**REMOVAL**

1. Rotate slack adjuster manual adjustment hex counterclockwise until pin becomes loose in slack adjuster yoke.
2. Loosen jamnut (4). Remove and discard cotter pin (7) from straight pin (5).
3. Remove straight pin (5) from yoke (universal joint, vehicular) (6).

NOTE

Ensure air lines are marked prior to removal.

4. Remove air lines.
5. Remove two locknuts (8), washers (9), and air brake chamber (1). Discard locknuts.
6. Remove elbows (2) and adapters (3) from air brake chamber (1).
7. Measure distance from the face of the air brake chamber to the jamnut (4).
8. Remove yoke (universal joint, vehicular) (6) and jamnut (4) from air brake chamber (1).

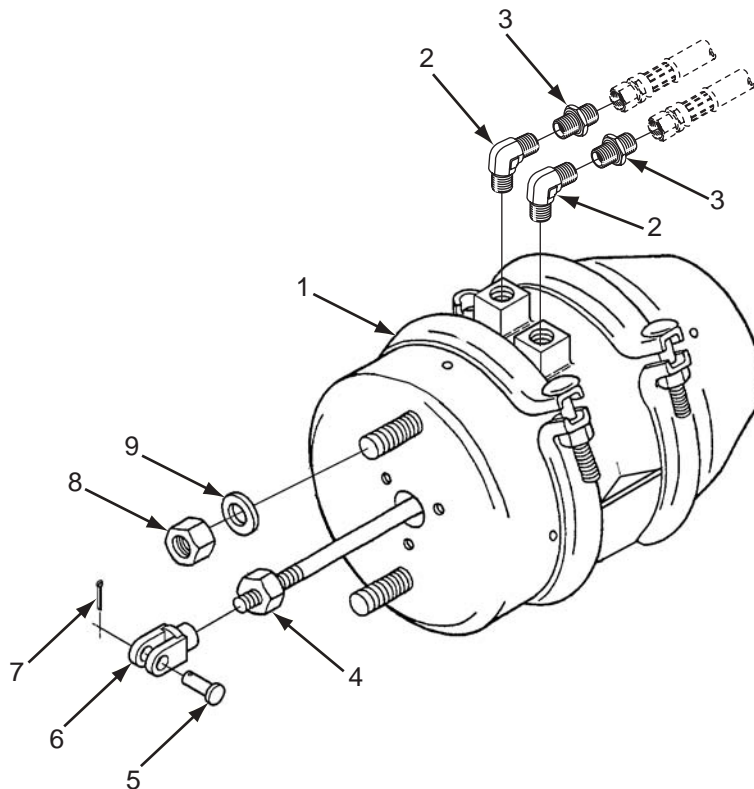


Figure 1. Air Brake Chamber

AIR BRAKE CHAMBERS REPLACEMENT - Continued**INSTALLATION**

1. Treat all threads with sealing compound (sealant, silicone).
2. Install adapters (3) and elbows (2) on brake chamber (1).
3. Install jamnut (4) and yoke (universal joint, vehicular) (6) on air brake chamber (1) the distance measured from the face of the old chamber to the jamnut per WP 0042 00-2, Step 7.
4. Install air brake chamber (1), two washers (9), and new locknuts (8).
5. Install air lines.
6. Line up yoke (universal joint, vehicular) (6) with slack adjuster and install straight pin (5).
7. Install new cotter pin (7) into straight pin (5).

NOTE

Step 8 is only required if brakes are caged.

8. Uncage brakes according to WP 0007 00-15.

FOLLOW-ON TASKS

- Adjust brakes according to WP 0038 00-4.
- Connect semitrailer to prime mover.
- Remove tire chocks.
- Raise landing legs.
- Remove/store ground boards.
- Pressurize system.
- Check system for air leaks.
- Verify proper/safe operation.

END OF WORK PACKAGE

SPRING AND RELAY VALVES REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Air Brake Reservoirs Drained

Materials/Parts

- Sealant, Silicone (WP 0086 00-3)
- Lock Washers (WP 0080 00-13)
- Lock Nuts (WP 0080 00-13)

Tools /Test Equipment

- Tool Kit, No. 1 Common (WP 0077 00-9)
-

**WARNING**

Wear protective goggles when underneath semitrailer and opening drain valve. Avoid the air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.

NOTE

- Retain plugs and save after removal.
- The air lines connected to the air brake chamber control and relay valves must be tagged and removed prior to these procedures.

SPRING AND RELAY VALVES REPLACEMENT - Continued**SPRING VALVE REMOVAL**

1. Remove air brake chamber control valve (2), with pipe fittings (1 and 6), tees (3 and 5), pipe plugs (4) attached, from front of each reservoir.
2. Remove fittings (1 and 6), tees (3 and 5) and pipe plugs (4) from air brake chamber control valve (2).

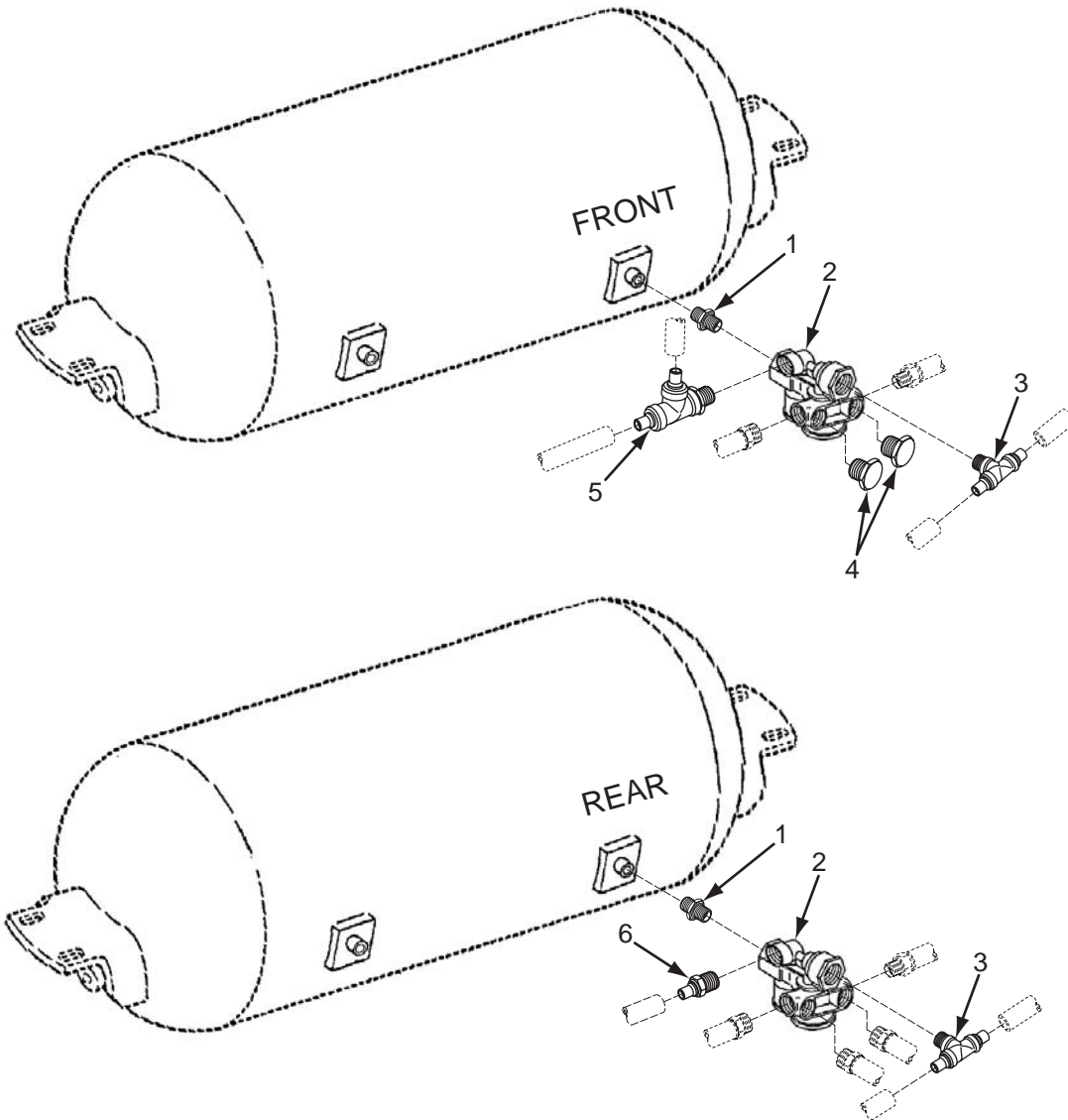


Figure 1. Spring Valve

SPRING AND RELAY VALVES REPLACEMENT - Continued**SPRING VALVE INSTALLATION**

1. Treat all threads with sealing compound (sealant, silicone).
2. Install pipe fittings (1 and 6) and tees (3 and 5) to air brake chamber control valve (2). Install pipe plugs (4).
3. Install air brake chamber control valve (2), with pipe fittings and tees attached, to front air reservoir.
4. Install air lines to air brake chamber control valve (2).

RELAY VALVE REMOVAL

1. Remove two nuts (13), lockwashers (14), and relay valve (8) from valve mounting bracket (10). Discard lockwashers
2. Remove fittings (7 and 9) from relay valve (8).

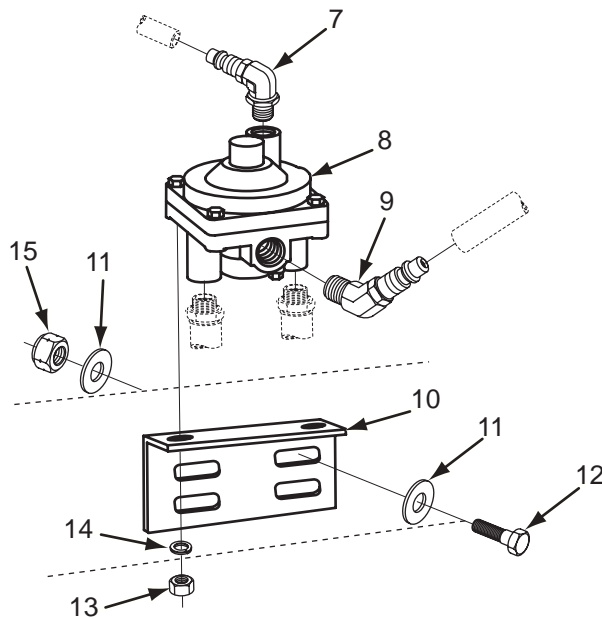


Figure 2. Relay Valve

NOTE

Step 3 is only required if valve mounting bracket is being replaced.

3. Remove two locknuts (15), washers (11), bolts (12), and valve mounting bracket (10) from trailer frame. Discard locknuts.

SPRING AND RELAY VALVES REPLACEMENT - Continued**RELAY VALVE INSTALLATION****NOTE**

Step 1 is only required if valve mounting bracket was removed.

1. Install valve mounting bracket (10), two bolts (12), washers (11), and new locknuts (15), to trailer frame.
2. Treat all fitting threads with sealing compound (sealant, silicone).
3. Install fittings (7 and 9) to relay valve (8).
4. Install relay valve (8), two new lockwashers (14), and nuts (13) to valve mounting bracket (10).
5. Connect all hoses to relay valve (8).

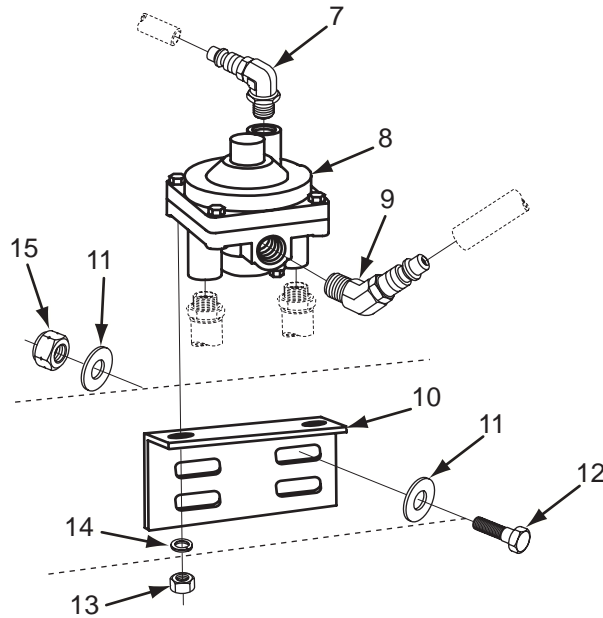


Figure 2. Relay Valve

FOLLOW-ON TASKS

- Couple semitrailer to prime mover.
- Remove tire chocks from both sides and store.
- Raise landing legs.
- Remove/store ground boards.
- Check for air leakage (WP 0044 00-1).
- Verify proper/safe operation.

END OF WORK PACKAGE

AIR LEAKAGE TEST

INITIAL SETUP:**Equipment Conditions**

- Semitrailer Coupled to Towing Vehicle with Air System Pressurized (WP 0007 00-2).

Materials/Parts

- Dishwashing Compound (WP 0086 00-2)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

Personnel Required

- Two
-

TEST

- (1) Coat air lines, fittings, and airbrake chamber connections with soap and water solution. Inspect for air bubbles. No air leakage is permissible.
- (2) Tighten any leaking connections or replace defective components as required.
- (3) Apply soap and water solution to exhaust check valve on underside of emergency relay valve. Place service relay valve in emergency position by disconnecting either towing vehicle air line from semitrailer air coupling.
- (4) Replace air service valve if air bubble larger than 1 in. (2.5 cm) develops within three seconds (WP 0042 00-1).

END OF WORK PACKAGE

AIR RESERVOIRS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Spring Valve Removed (WP 0043 00-2)

Materials/Parts

- Sealant, Silicone (WP 0086 00-3)
- Locknuts (WP 0080 00-14)

Tools /Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

**WARNING**

Wear protective goggles when underneath semitrailer and opening drain valve. Avoid the air stream. Ensure all pressurized air has been drained from system. Failure to do so could result in injury to personnel.

CAUTION

Air reservoirs weigh 30 lbs (14 kgs). Use caution during removal and replacement procedures.

NOTE

This procedure is for one air reservoir. All reservoirs are removed in the same way.

AIR RESERVOIRS REPLACEMENT - Continued**REMOVAL**

1. Remove all fittings (8, 9, and 10), plugs (4) and air release valve (7) from the air reservoir.
2. Remove four locknuts (6), eight washers (3), four hex screws (2), two rubber pads (5), and air reservoir (1) from mounts. Discard locknuts.

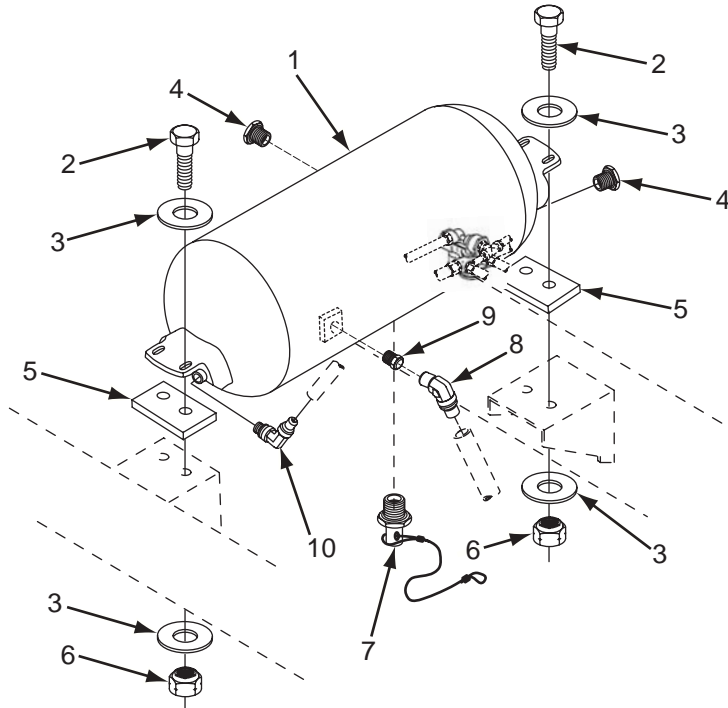


Figure 1. Air Reservoir

INSTALLATION

1. Install air reservoir (1) to mounts using four hex screws (2), eight washers (3), two rubber pads (5), and four new locknuts (6).
2. Apply sealing compound (sealant, silicone) to all fittings (8, 9, and 10), plugs (4), and air release valve (7), and install on air reservoir.

AIR RESERVOIRS REPLACEMENT - Continued**FOLLOW-ON TASKS**

- Install spring valve (WP 0043 00-3).
- Connect semitrailer to prime mover.
- Remove tire chocks.
- Raise landing legs.
- Remove/store ground boards.
- Pressurize system.
- Check for air leaks (WP 0044 00-1).
- Verify proper/safe operation.

END OF WORK PACKAGE

SERVICE AND EMERGENCY GLADHANDS REPLACEMENT

INITIAL SETUP

Equipment Conditions

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Lock Washer (WP 0080 00-15)
- Sealant, Silicone (WP 0086 00-3)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

NOTE

Emergency gladhand and service gladhand are replaced the same way. Emergency gladhand is shown.

REMOVAL

1. Disconnect tube (1) from connector (2).

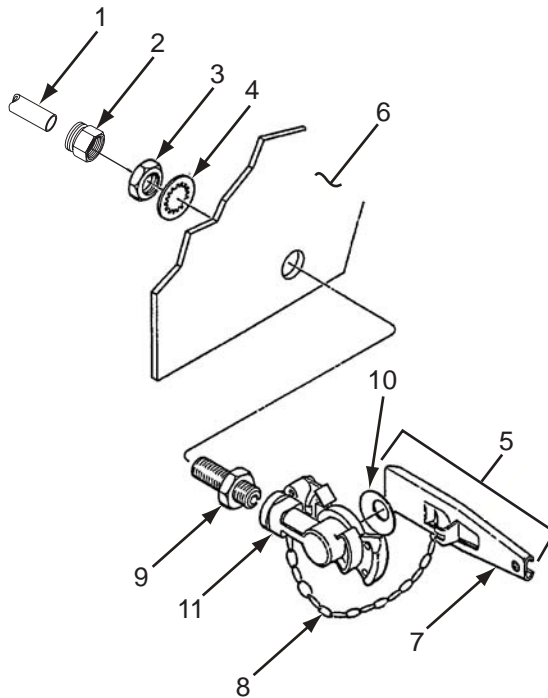


Figure 1. Emergency Gladhand

SERVICE AND EMERGENCY GLADHANDS REPLACEMENT - Continued**REMOVAL - Continued****NOTE**

It is not necessary to remove gladhand to replace gladhand seal.

2. Remove connector (2), nut (3), lock washer (4), and gladhand assembly (5) from bracket (6). Discard lockwasher.
3. Remove dummy coupling (7), chain (8), bulkhead fitting (9), and seal (10) from gladhand (11).

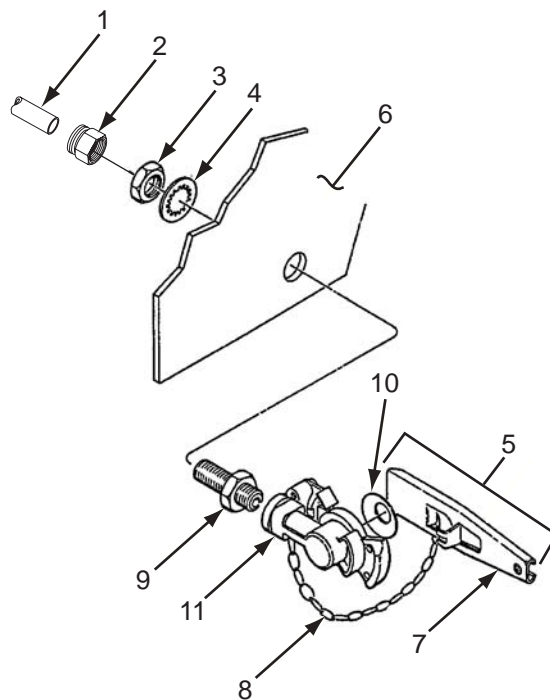


Figure 1. Emergency Gladhand

SERVICE AND EMERGENCY GLADHANDS REPLACEMENT - Continued**INSTALLATION**

1. Install seal (10), chain (8), and dummy coupling (7) on gladhand (11).

**WARNING**

- Adhesives and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. To avoid injury or death, keep away from open fire and use in a well-ventilated area. If adhesives or sealing compound contacts skin or clothing, wash immediately with soap and water.
- Ensure all air lines and fittings are clear of debris, and that excess pipe sealing compound does not enter air lines or fittings. Failure to follow this warning could result in injury to personnel or damage to equipment.

NOTE

Dispose of all hazardous materials in accordance with TB 43-0244

2. Lightly coat threads of bulkhead fitting (9) with sealing compound (sealant, silicone). Install bulkhead fitting (9) on gladhand (11).
3. Install gladhand assembly (5) on bracket (6) with new lock washer (4) and nut (3).
4. Lightly coat threads of connector (2) with sealing compound (sealant, silicone). Install connector (2) on bulkhead fitting (9).
5. Connect tube (1) to connector (2).
6. Start vehicle and build air pressure. Check for leaks.

FOLLOW-ON TASKS

- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove/store chocks and ground boards.
- Check for air leaks.

END OF WORK PACKAGE

TRUNNION BUSHING MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Wheels Removed (WP 0016 00-2).

Materials/Parts

- Flange Nuts (WP 0080 00-28)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
 - Common No. 1 Shop Set (WP 0077 00-9)
 - Floor Jack
 - Jack Stands
-

REMOVAL

1. Remove four flange nuts (2), screws (5), and trunnion cap (3) from equalizing beam (4). Discard flange nuts.
2. Position floor jack under trunnion bracket (1) and raise trunnion bracket (1) until trunnion bushing (6) is not resting on equalizing beam (4).
3. Remove trunnion bushing (6) from tube (7) and equalizing beam (4).

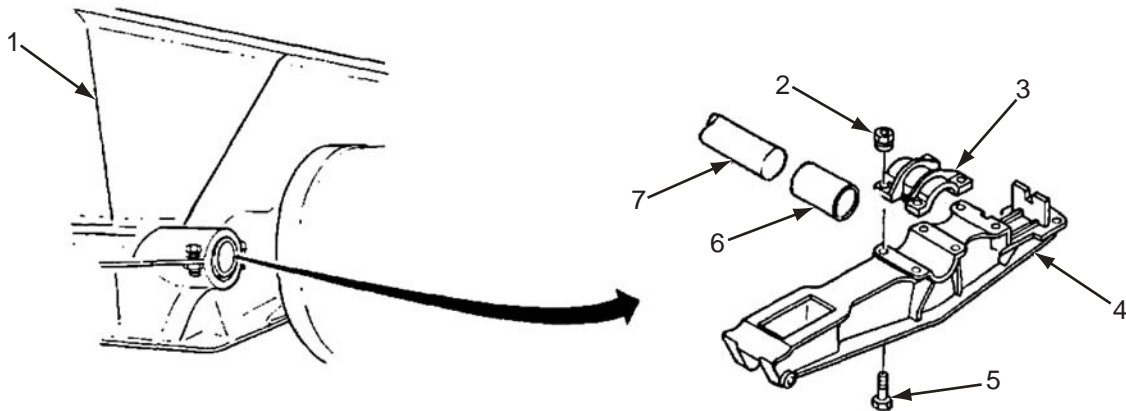


Figure 1. Trunnion Bushing

INSPECTION

1. Inspect trunnion bushing (6) for tears and holes.
2. Discard bushing (6) if there are any tears, holes or signs of wear.

TRUNNION BUSHING MAINTENANCE

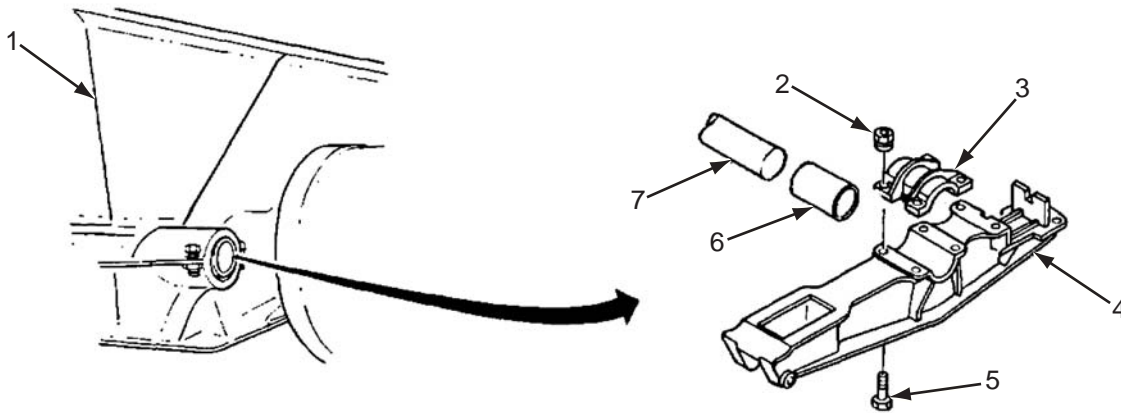


Figure 1. Trunnion Bushing

INSTALLATION

1. Position new trunnion bushing (6) on tube (7) and equalizing beam (4).
2. Install trunnion cap (3) with four screws (5), and new flange nuts (2). Torque flange nuts to 600 lb-ft (814 N•m) lubricated.
3. Remove floor jack from under trunnion bracket (1).

FOLLOW-ON TASKS

- Install wheels (WP 0016 00-3).

END OF WORK PACKAGE

DOCK BUMPER REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Locknuts (WP 0080 00-21, Item 9)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

**WARNING**

Chock tires to prevent semitrailer from moving when brakes are released (caged). Failure to follow this warning may result in injury or death.

NOTE

There are two dock bumpers that are removed and installed the same way. The following procedure is for one dock bumper.

REMOVAL

Remove four locknuts (1), bolts (4), washers (3), and bumper (2). Discard locknuts.

INSTALLATION

Install bumper (2), with four washers (3), bolts (4), and new locknuts (1).

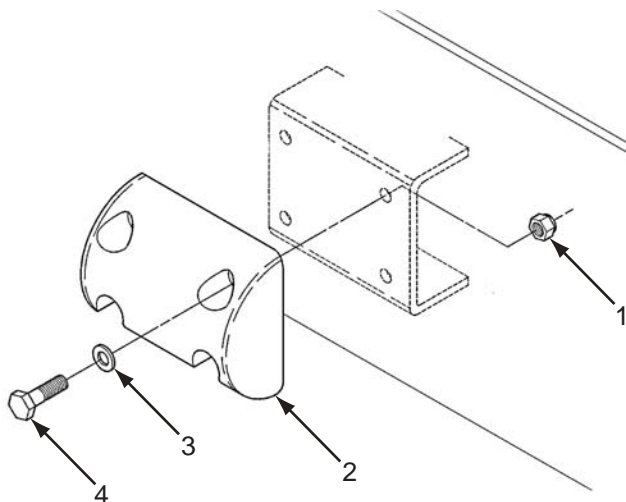


Figure 1. Dock Bumper

DOCK BUMPERS REPLACEMENT - Continued

FOLLOW-ON TASKS

- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove/store chocks and ground boards.

END OF WORK PACKAGE

RETRACTABLE TWIST LOCKS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Oil, Lubricating (WP 0086 00-2, Item 9)
- Roll Pin (WP 0080 00-22)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

NOTE

- Make sure twistlock pocket is clean and free of debris.
- There are twelve retractable twist locks and they are removed and installed the same way. This procedure covers one retractable twist lock.

RETRACTABLE TWIST LOCKS REPLACEMENT - Continued**REMOVAL**

Remove roll pin (2), handle (3), and twistlock (1). Discard roll pin.

INSTALLATION

Install twistlock (1), handle (3) and new roll pin (2).

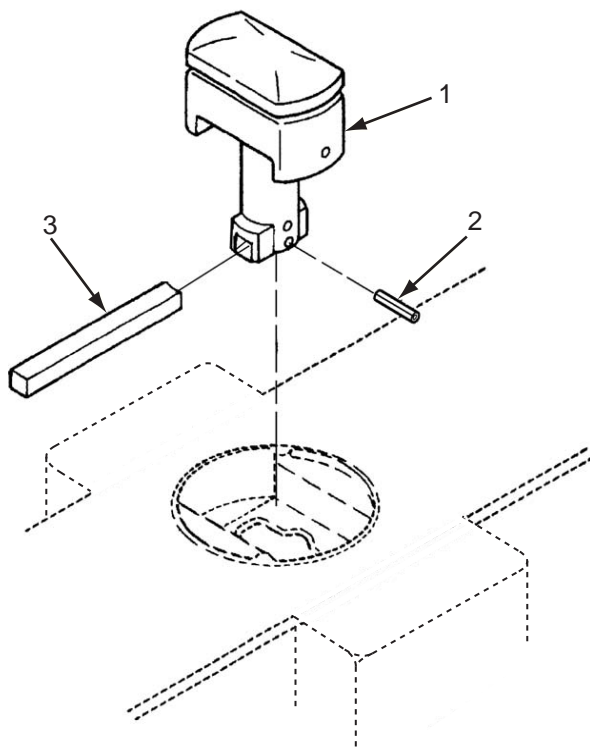


Figure 1. Twist Locks
Figure 1. Retractable Twist Lock

FOLLOW-ON TASKS

- Lubricate per WP 0022 00-3.
- Make sure twist lock operates freely with no binding.
- Remove/store chocks and ground boards.

END OF WORK PACKAGE

TIEDOWN RINGS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Oil, Lubricating (WP 0086 00-2, Item 9)
- Cotter Pin (WP 0080 00-37)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

CAUTION

Replace damaged/deformed D-Rings.

NOTE

All tiedown rings are removed and installed the same way. This procedure covers one tiedown ring.

REMOVAL

Remove cotter pin (4), nut (3), bolt (7), sleeve (6), upper ring (5), and lower ring (2) from deck pinning (1). Discard cotter pin.

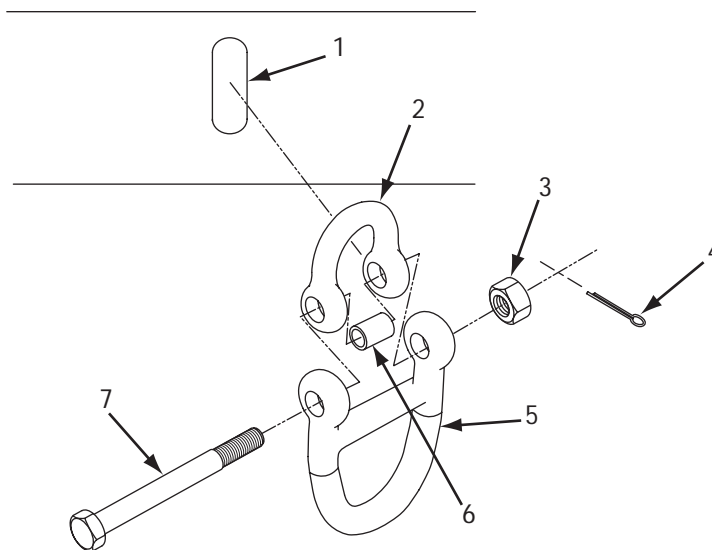


Figure 1. Tiedown Rings

TIEDOWN RINGS REPLACEMENT - Continued**INSTALLATION****NOTE**

Hand tighten nut against D-ring. Make sure D-ring does not bind.

1. Install lower ring (2) into deck pinning (1).
2. Install upper ring (5), to lower ring (2) using sleeve (6), bolt (7), nut (3), and new cotter pin (4).

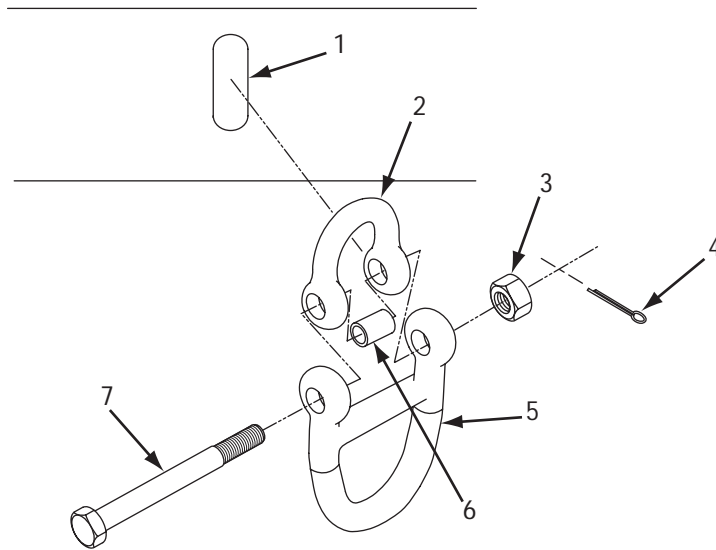


Figure 1. Tiedown Rings

FOLLOW-ON TASKS

- Lubricate per WP 0022 00-3.
- Ensure tiedown ring does not bind.
- Connect semitrailer to prime mover.
- Raise landing legs.
- Remove and store chocks and ground boards.

END OF WORK PACKAGE

SPARE TIRE HOIST REPLACEMENT

INITIAL SETUP**Equipment Condition**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Spare Tire Removed (WP 0016 00-1)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

Materials/Parts

- Locknuts (WP 0080 00-26)
-

REMOVAL

Remove four locknuts (1), bolts (3), and spare tire hoist (2). Discard locknuts.

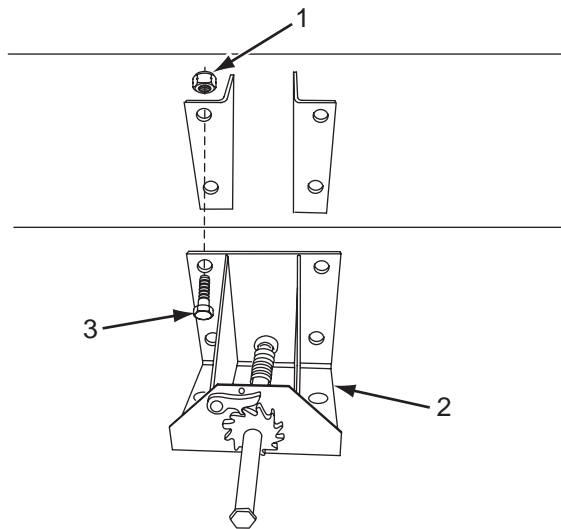


Figure 1. Spare Tire Hoist

INSTALLATION

Install spare tire hoist (2) with four bolts (3), and new locknuts (1).

FOLLOW-ON TASKS

- Install spare tire (WP 0016 00-5).

END OF WORK PACKAGE

SPARE TIRE CARRIER CABLE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Spare Tire Removed (WP 0016 00-1)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Common No. 1 Tool Kit (WP 0077 00-9)

Materials/Parts

- Swagging Sleeve (WP 0080 00-26)
-

REMOVAL

Cut both cable loops above swagging sleeves (4) and remove old cable (2) from spare tire holder (3) and spare tire carrier (1).

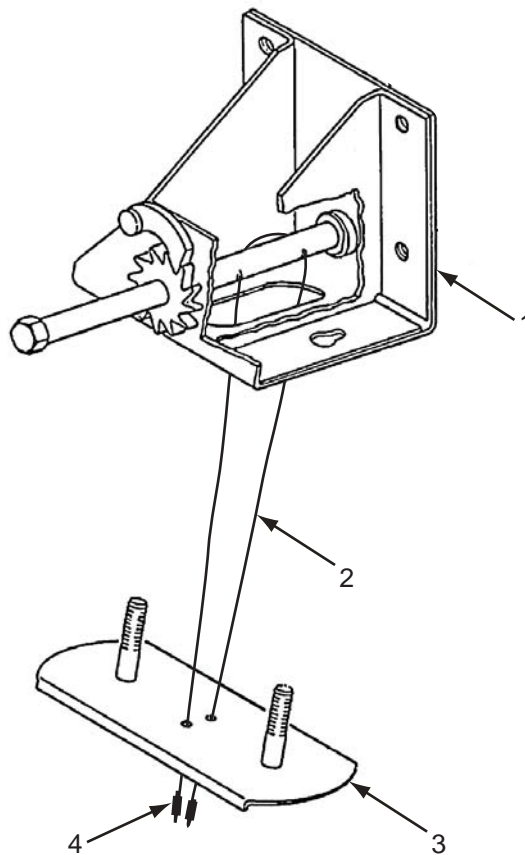


Figure 1. Spare Tire Carrier

SPARE TIRE CARRIER CABLE REPLACEMENT - Continued**INSTALLATION**

Insert ends of new cable (2) in spare tire carrier (1) and spare tire holder (3). Close cable loops with new swagging sleeves (4).

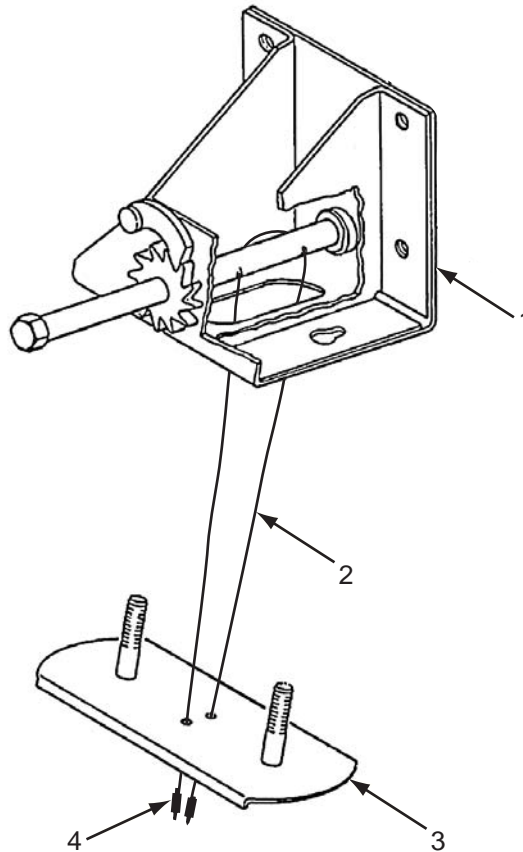


Figure 1. Spare Tire Carrier

FOLLOW-ON TASK

- Install spare tire (WP 0016 00-5).

END OF WORK PACKAGE

LANDING LEG MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Wheels Chocked

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

Materials/Parts

- Locknuts (WP 0080 00-27)
- Locknuts (WP 0080 00-27)

Personnel Required

- Two
-

**WARNING**

- Do not raise landing leg assembly unless the trailer is coupled to a towing vehicle. The trailer may fall, causing injury to personnel.
- Landing leg without the gear box weighs 110 lbs. (50 kgs) and landing leg with the gear box weighs 124 lbs. (56 kgs). Failure to follow the maintenance procedures could result in damage to equipment and/or injury to personnel.

NOTE

Right and left side landing legs are removed the same way.

LANDING LEG REMOVAL

1. Position suitable support under front of semitrailer.
2. Raise landing legs enough to relieve load from landing gear.
3. Remove two locknuts (5), washers (3), screws (2), and shaft (4) from landing legs (1). Discard locknuts.

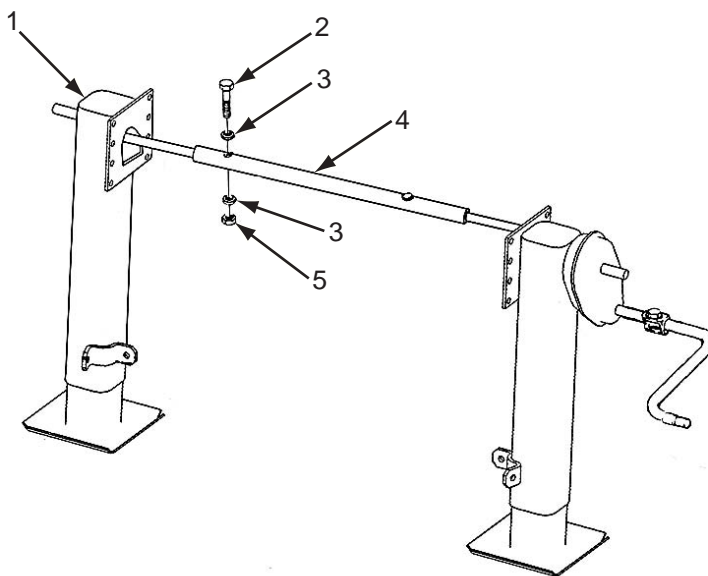


Figure 1. Landing Leg

LANDING LEG MAINTENANCE - Continued

4. Remove locknuts (15), screws (17), and brace (18) from landing leg (1). Discard locknuts.
5. Remove locknuts (13), screw (14), brace (12), and cross-brace (16) from landing leg (1). Discard locknuts.

NOTE

Step 6 is only required when replacing the landing leg with the gear box.

6. Remove locknut (11), washers (9), screw (8), and crank (10) from landing leg (1). Discard locknuts.
7. Remove eight locknuts (6), screws (7), and landing leg (1) from mounting bracket. Discard locknuts.

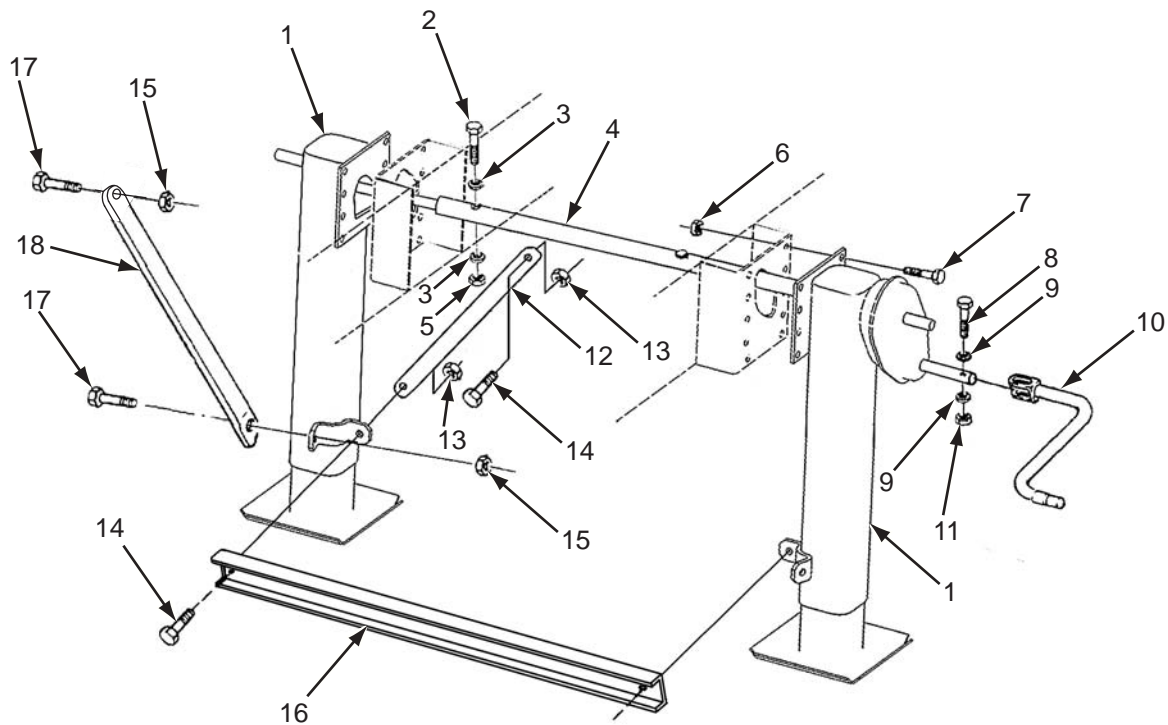


Figure 2. Landing Leg Assembly

LANDING LEG MAINTENANCE - Continued**LANDING LEG INSTALLATION**

1. Install landing legs on mounting bracket using eight screws (7), and new locknuts (6).

NOTE

Step 2 is only required when replacing the landing leg with the gear box.

2. Install crank (10) on landing leg (1) using screw (8), washers (9), and new locknut (11).
3. Install cross brace (16) and brace (12) with two screws (14), and new locknuts (13).
4. Install brace (18) on landing legs (1) with screw (17) and new locknut (15).
5. Install shaft (4) on landing legs (1) with two screws (2), washers (3), and new locknuts (5).
6. Check squareness and operation of landing legs (1).

LANDING LEG ALIGNMENT**NOTE**

Landing leg alignment must be done on a flat level surface.

1. Lower landing legs until one or both legs touches the ground.
2. If legs do not touch the ground together, measure the higher to ensure it is not more than 3/4 inch from the ground.
3. If legs are not within 3/4 inch of each other, remove screw from end of cross shaft nearest landing leg with gear box per WP 0053 00-1, Step 3.
4. Turn crank handle in the direction that brings the bottom of the landing legs within 3/4 inch of each other.
5. Install screw in cross shaft and check landing leg operations.

END OF WORK PACKAGE

SLING PROVISION ASSEMBLY MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Wheels Chocked

Materials/Parts

- Locknut (WP 0080 00-24)
- Locknut (WP 0080 00-24)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)

Personnel

- Two
-

**WARNING**

Sling provision weighs 97 lbs. (44 kgs). Use caution when lifting and moving to avoid serious injury.

NOTE

- Step 3 is only required if pin (6) needs to be replaced.
- There are four sling provisioning locations on the trailer. Lift eye replacement is the same for all.

REMOVAL

1. Remove pin (6) from siderail (2).
2. Remove locknut (1), screw (7), and lift eye (8) from siderail (2). Discard locknut.
3. Remove locknut (3), washer (4), pin (6) and bolt (5) from frame. Discard locknut.

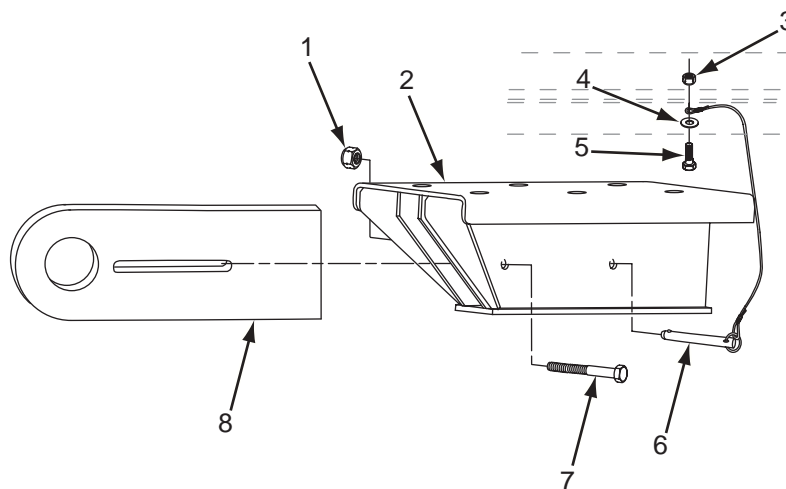


Figure 1. Sling Provision

SLING PROVISION ASSEMBLY MAINTENANCE - Continued**INSTALLATION****NOTE**

Step 3 is only required if pin (6) needs to be replaced.

1. Install bolt (5), washer (4), and new locknut (3) to frame.
2. Install lift eye (8) in siderail (2) with screw (7) and new locknut (1).
3. Install pin (6) in siderail (2).

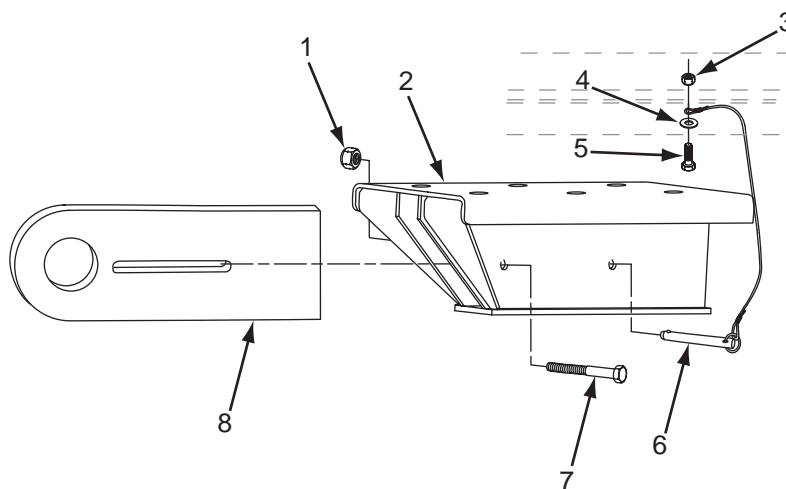


Figure 1. Sling Provision

END OF WORK PACKAGE

BULKHEAD AND STOWAGE RACK ASSEMBLY REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Sideboards/Stakes Removed from Bulkhead and Stowage Racks

Materials/Parts

- Locknuts (WP 0080 00-30)
- Bolts (WP 0080 00-30)

Personnel

- Two

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

REMOVAL**WARNING**

Bulkhead assembly weighs 250 lbs. (113.4 kg). Failure to secure bulkhead during replacement may cause serious injury or death.

1. Remove two locknuts (5), washers (6), and bolts (7), from curbside and roadside bulkhead assembly (1). Discard locknuts and bolts.
2. Remove four locknuts (4), eight washers (3), and four bolts (2). Discard locknuts and bolts.
3. Carefully lay the bulkhead (1) on the deck of the trailer.
4. Remove bulkhead (1) from trailer deck.

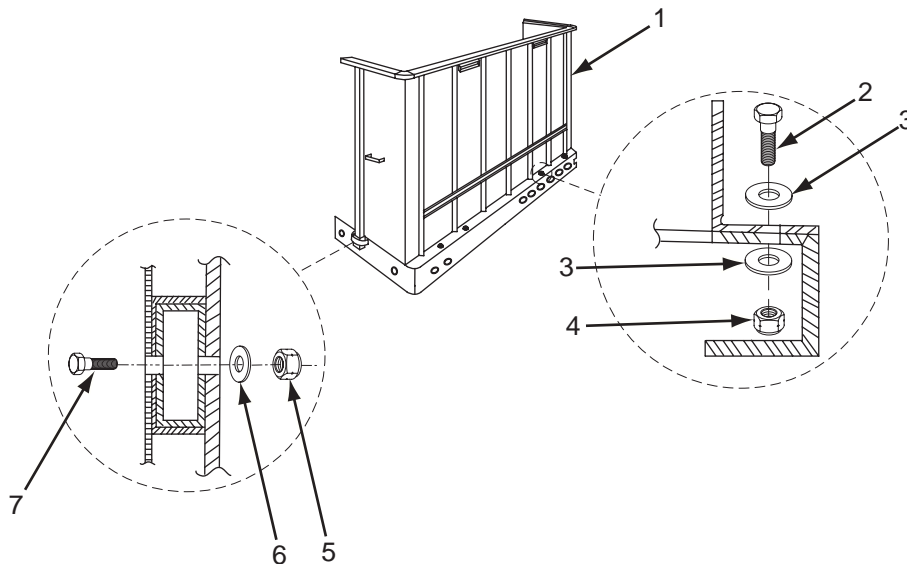


Figure 1. Bulkhead and Stowage Rack

BULKHEAD AND STOWAGE RACK ASSEMBLY REPLACEMENT - Continued**INSTALLATION****WARNING**

Bulkhead assembly weighs 250 lbs. (113.4 kg). Failure to secure bulkhead during replacement may cause serious injury or death.

1. Place bulkhead (1) on trailer deck.
2. Carefully place bulkhead (1) in position.
3. Secure bulkhead (1) using four new bolts (2), eight washers (3), and four new locknuts (4).
4. Install two new bolts (7), washers (6), and new locknuts (5). Torque per WP 0088 00-2.

NOTE

During snow or freezing conditions, cover bulkhead stowage area with a tarp and secure with bungee cords. This will help prevent the stored components from freezing together.

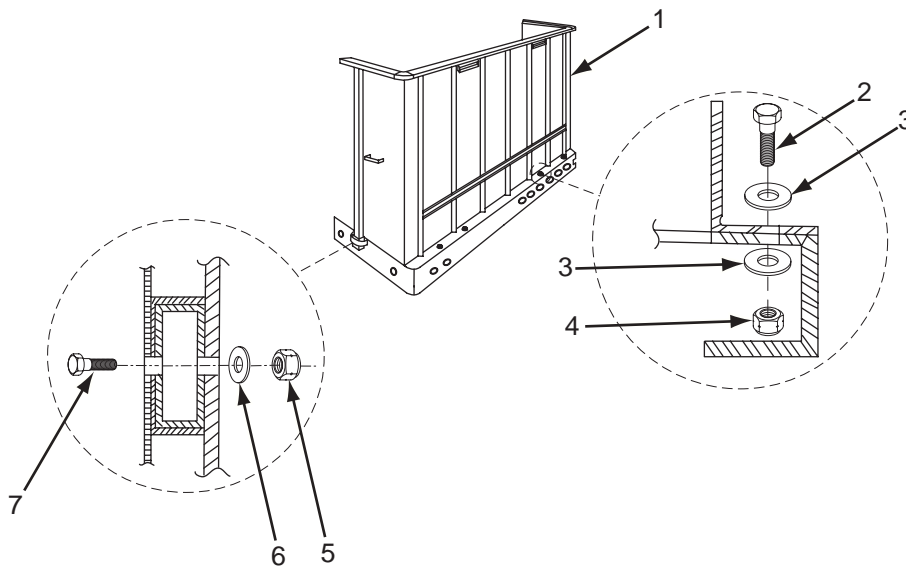


Figure 1. Bulkhead and Stowage Rack

FOLLOW-ON TASKS

- Replace side boards and stakes if removed (WP 0007 00-5).

END OF WORK PACKAGE

BUMPER ASSEMBLY REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Locknuts (WP 0080 00-20)

Personnel

- Two

Tools/Test Equipment

- General Mechanics Tool Kit (WP 0077 00-9)
 - Jack Stands
 - Shop Equipment Common No. 1 (WP 0077 00-9)
-

REMOVAL**WARNING**

The bumper weighs 112 lbs. (51 kgs). Use caution when lifting and moving to avoid serious injury.

NOTE

Support bumper assembly so it does not fall when hardware is removed.

1. Remove four locknuts (1), bolts (2), and two caps (6) from top of bumper. Discard locknuts.
2. Remove two pins (5) from bumper support (4).
3. Remove bumper (3).

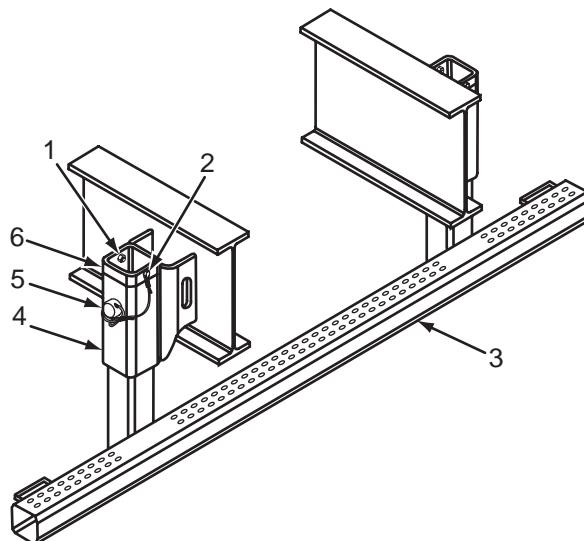


Figure 1. Bumper Assembly

BUMPER ASSEMBLY REPLACEMENT - Continued**INSTALLATION**

1. Install bumper (3) using two pins (5) inserted through the bumper (3) and the bumper supports (4).
2. Install two caps (6), four bolts (2), and new locknuts (1) into the top of the bumper.

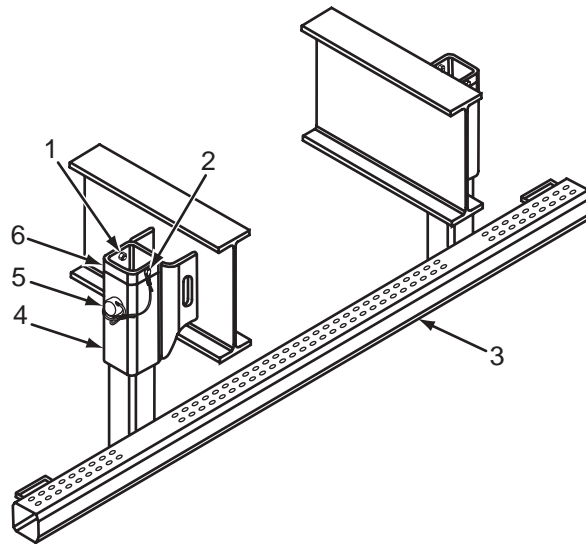


Figure 1. Bumper Assembly

END OF WORK PACKAGE

RADIUS RODS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Wheels Chocked

Materials/Parts

- Locknuts (WP 0080 00-28)

Tools/Test Equipment

- Common No. 1 Tool Kit (WP 0077 00-9)
-

REMOVAL

1. Remove two locknuts (6), washers (5), and bolts (2) from radius rod (3).
2. Remove radius rod (3) from axle brackets (1 and 4). Discard locknuts.

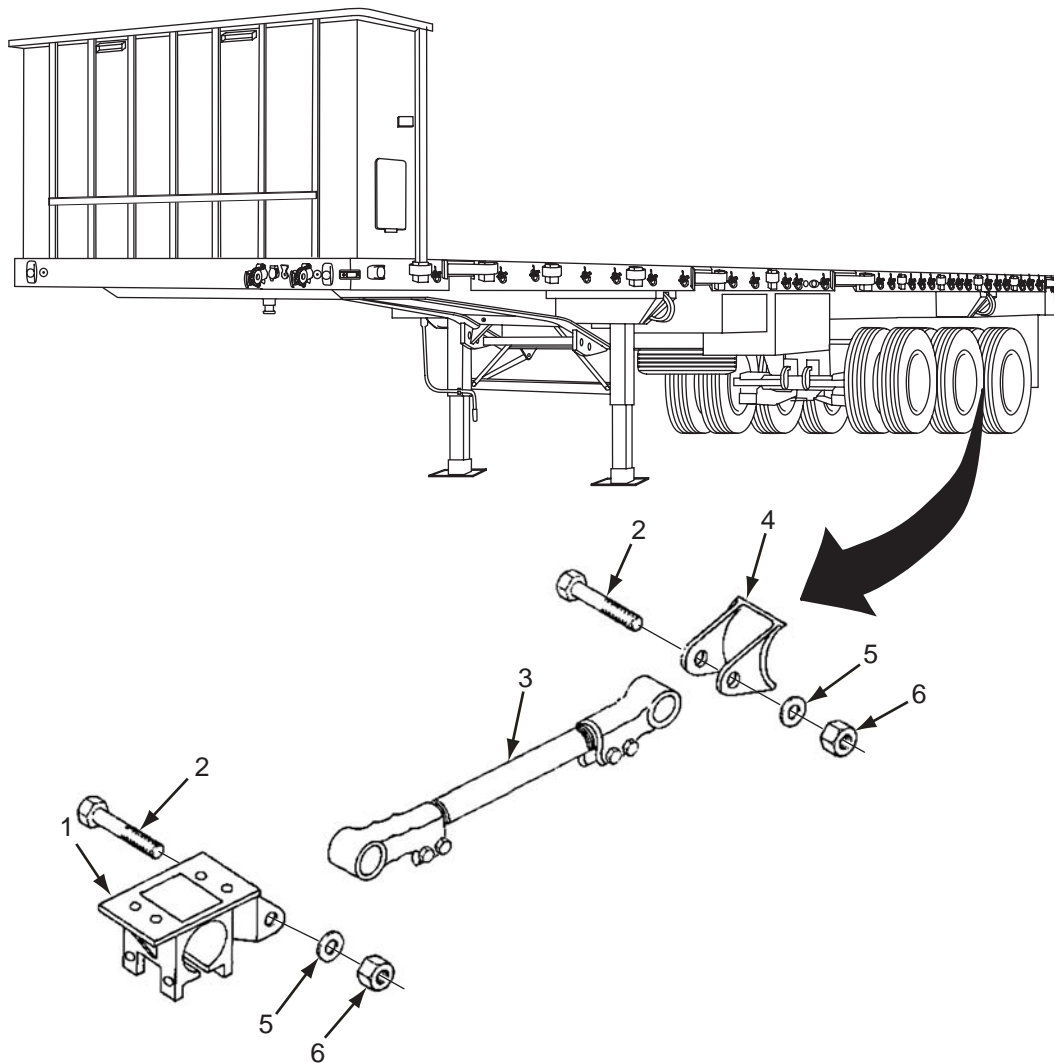


Figure 1. Radius Rods

RADIUS RODS REPLACEMENT - Continued**INSTALLATION**

1. Install radius rod (3) on axle brackets (1 and 4) with two bolts (2), washers (5), and new locknuts (6).
2. Torque all fasteners according to WP 0016 00-4.

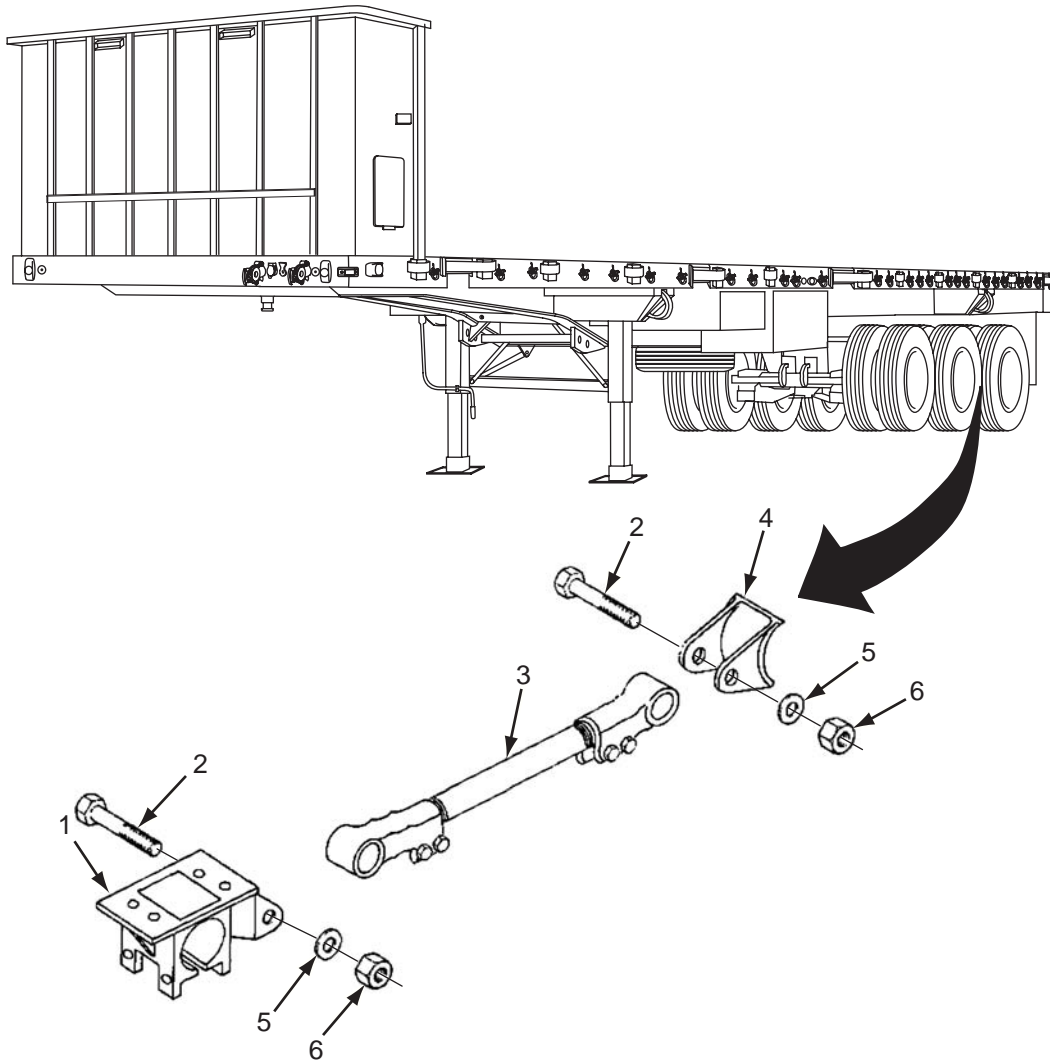


Figure 1. Radius Rods

FOLLOW-ON TASKS

- Align axle (WP 0071 00-3).

END OF WORK PACKAGE

STOWAGE BOX MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover
- Stowage Box Emptied

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Common No. 1 Tool Kit (WP 0077 00-9)

Materials/Parts

- Oil, Lubricating (WP 0086 00-2, Item 9)
- Locknuts (WP 0080 00-31)
- Rubber Washers (WP 0080 00-31)

Personnel

- Two

REMOVAL**WARNING**

The small stowage boxes weigh 114 lbs. (52 kgs) and the large stowage box weighs 184 lbs. (84 kgs). Proper support of stowage boxes during removal and replacement procedures will prevent damage to equipment and serious injury to personnel.

NOTE

There are four storage boxes on the semitrailer. All are replaced using the same procedures. Procedures are for one box.

STOWAGE BOX MAINTENANCE - Continued

1. Remove second deck floorboard from the outside edge of trailer directly above stowage box being removed per WP 0061 00-1.
2. Remove eight locknuts (1), screws (4), washers (3), rubber washers (2), and stowage box (12) from trailer frame. Discard rubber washers and locknuts.

STOWAGE BOX COMPONENTS REPLACEMENT

1. Stowage box components (6, 7, 10, and 11) are removed by removing the locknuts (9), washers (8), and screws (5) holding the item in place. Discard locknuts.
2. Components (6, 7, 10, and 11) are installed by attaching the new item to the stowage box (12) with screws (5), washers (8) and new locknuts (9).

INSTALLATION

1. Install stowage box (12), eight screws (4), washers (3), new rubber washers (2), and new locknuts (1). Torque per WP 0088 00-1.
2. Install deck floorboard removed per WP 0061 00-2.

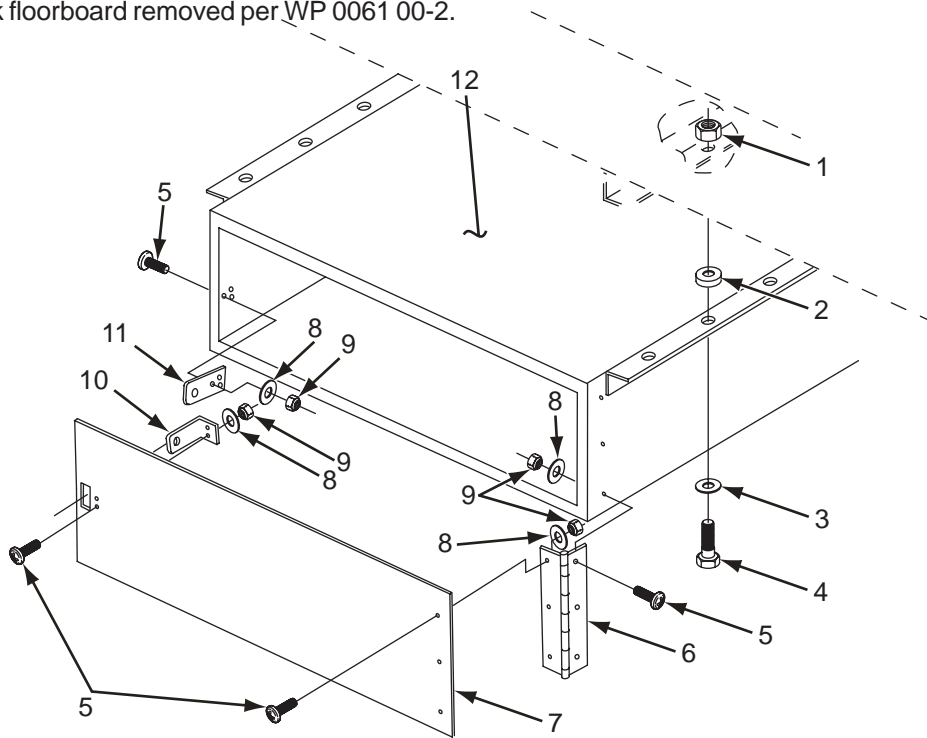


Figure 1. Stowage Box

FOLLOW ON TASKS

- Replace BII items in stowage box and secure.

END OF WORK PACKAGE

DOCUMENT BOX REPLACEMENT

INITIAL SETUP**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Rivets (WP 0080 00-32)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
 - Common No. 1 Tool Kit (WP 0077 00-9)
-

REMOVAL

Remove four rivets (2) and document box (1) from semitrailer. Discard rivets.

INSTALLATION

Install document box (1) with four new rivets (2).

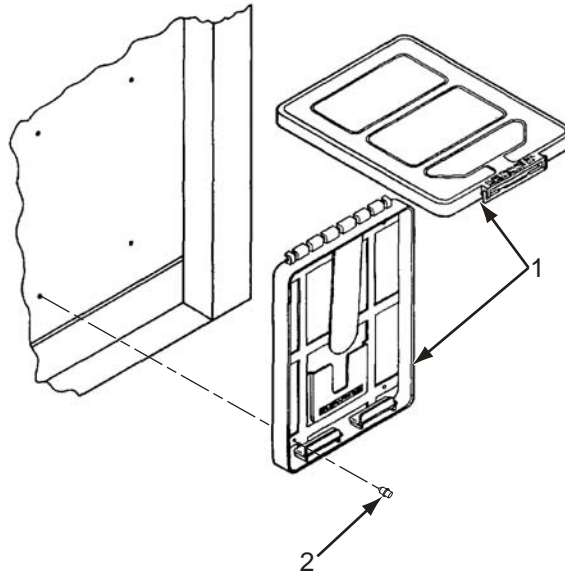


Figure 1. Document Box

END OF WORK PACKAGE

MUDFLAP REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Wheels Chocked

Materials/Parts

- Locknuts (WP 0080 00-33)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

REPLACEMENT

1. Remove four locknuts (1), washers (2), strap (3), mudflap (6), washers (2) and screws (5) from bracket (4). Discard locknuts.
2. Install four screws (5), washers (2), mudflap (6) strap (3), washers (2), and new locknuts (1) on bracket (4).

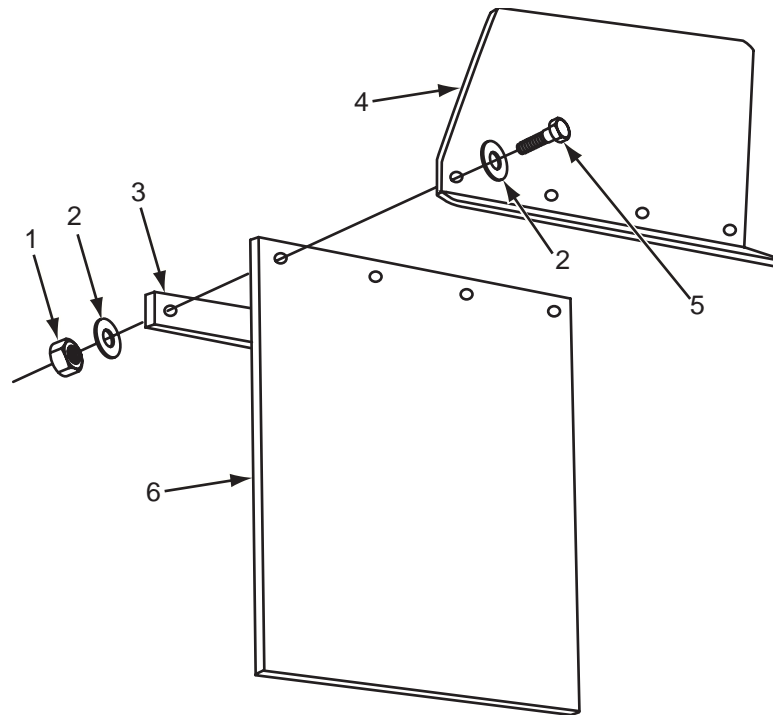


Figure 72. Mudflap

END OF WORK PACKAGE

FLOOR DECK BOARDS REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Screws (WP 0080 00-19)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
 - Common No. 1 Tool Kit (WP 0077 00-9)
-

NOTE

- Measure board width and length to ensure proper replacement board.
- Deck screws must be ordered separately, they are not part of a kit.
- Procedures are for single board replacement. Follow the same procedures for every board replaced.

REMOVAL

Remove screws (1) from floor board (2) being replaced and remove floor board (2) from semitrailer. Discard screws.

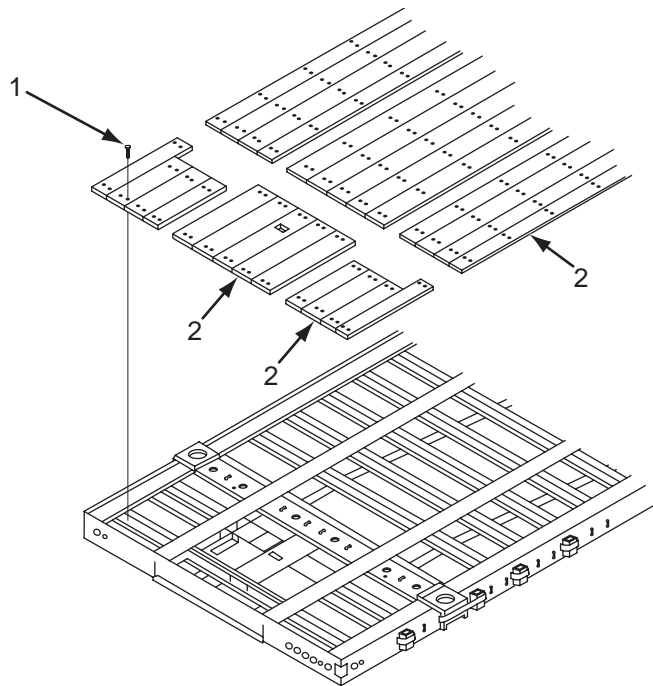


Figure 1. Floor Deck Boards

FLOOR DECK BOARDS REPLACEMENT - Continued**INSTALLATION**

Install floor boards (2) to semitrailer using two new screws (1) per fastening point.

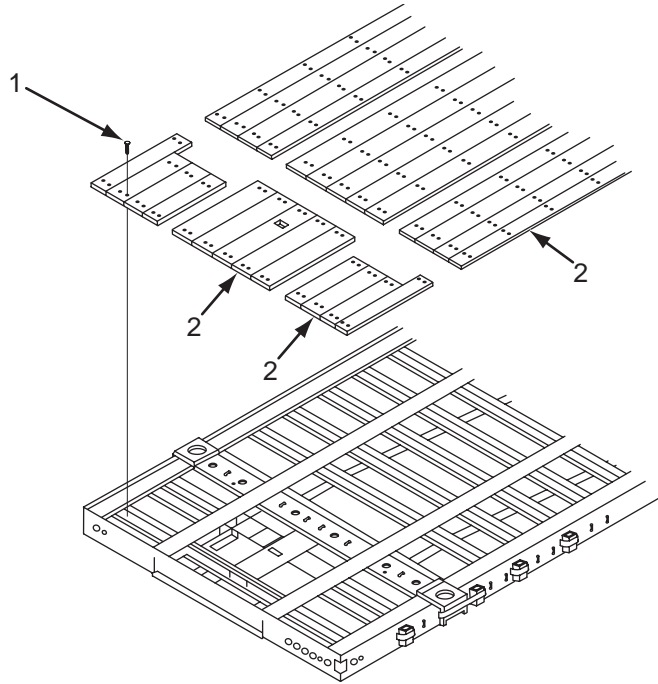


Figure 1. Floor Deck Boards

END OF WORK PACKAGE

DATA PLATES REPLACEMENT

INITIAL SETUP:

Equipment Conditions

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Rivets (WP 0080 00-35)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Common No. 1 Tool Kit (WP 0077 00-9)

NOTE

Transcribe pertinent information onto new decals and data plates.

REMOVAL

Remove four rivets (2) and remove data plate (1) from semitrailer. Discard rivets.

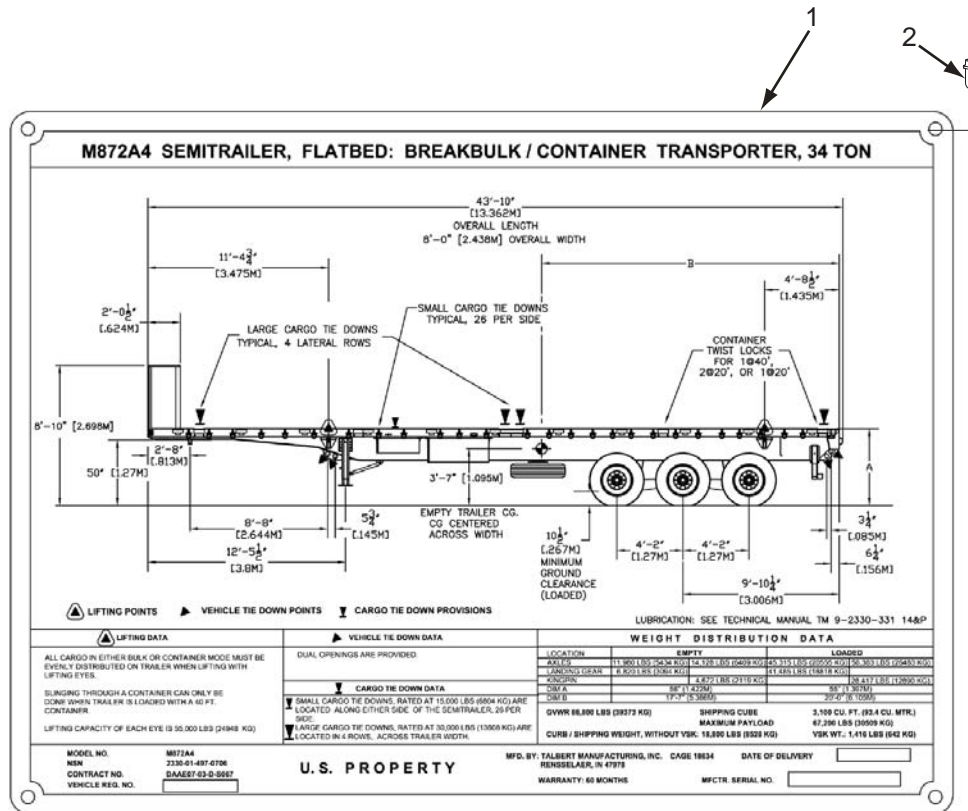


Figure 1. Data Plate

DATA PLATES REPLACEMENT - Continued

INSTALLATION

Install new dataplate (1) on semitrailer using four new rivets (2).

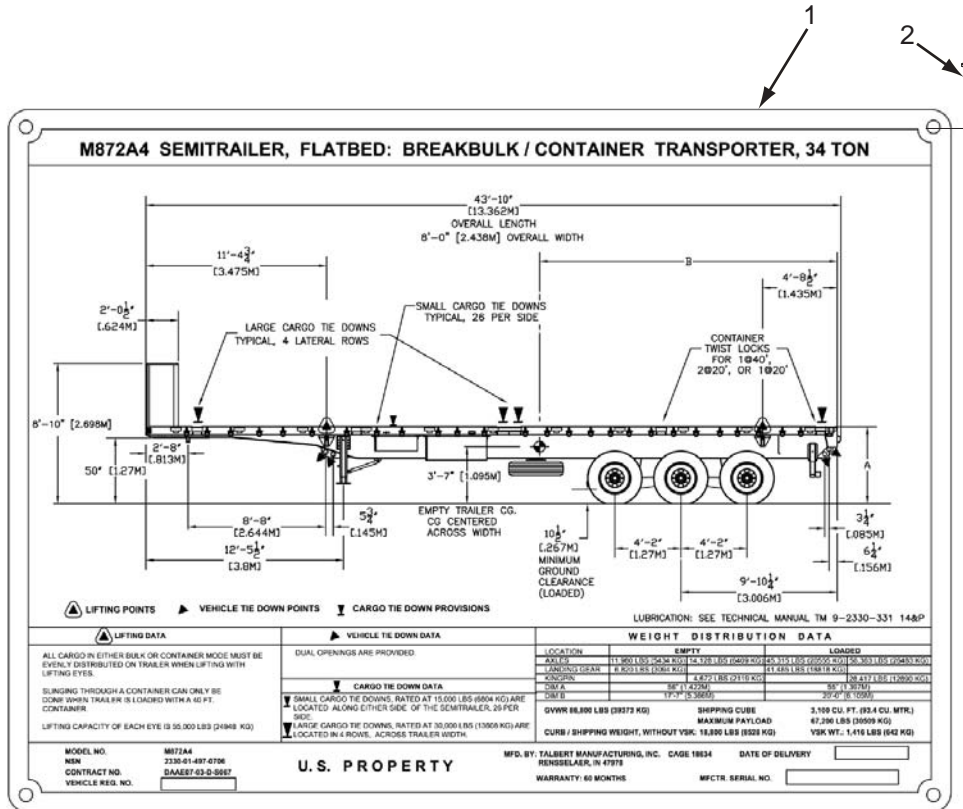


Figure 1. Data Plate

END OF WORK PACKAGE

HUBODOMETER REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Landing Legs Down
- Semitrailer Disconnected from Prime Mover
- Tires Chocked
- Ground Boards Emplaced

Materials/Parts

- Locknut (WP 0080 00-36)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

CAUTION

Do not stand on hubodometer.

NOTE

When ordering a new hubodometer, specify the mileage from the old hubodometer.

REMOVAL

1. Remove two hubcap screws securing hubodometer bracket (4).
2. Remove hubodometer bracket (4).
3. Remove locknut (3), washer (2), and hubodometer (1) from hubodometer bracket (4). Discard locknut.

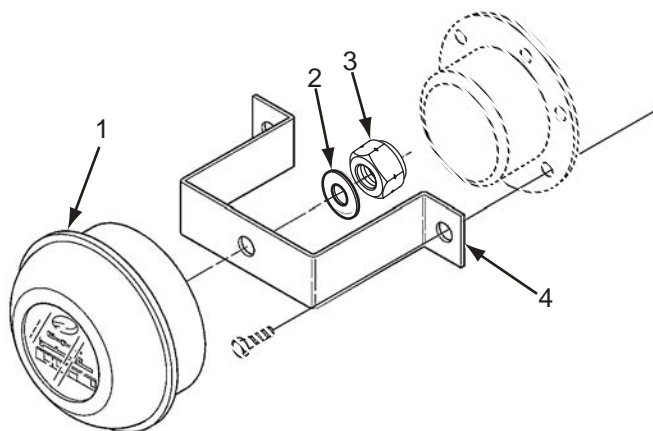


Figure 1. Hubodometer

HUBODOMETER REPLACEMENT - Continued**INSTALLATION**

1. Install hubodometer (1), washers (2), and new locknut (3) to hubodometer bracket (4).
2. Install hubodometer bracket (4) with two screws from hubcap.

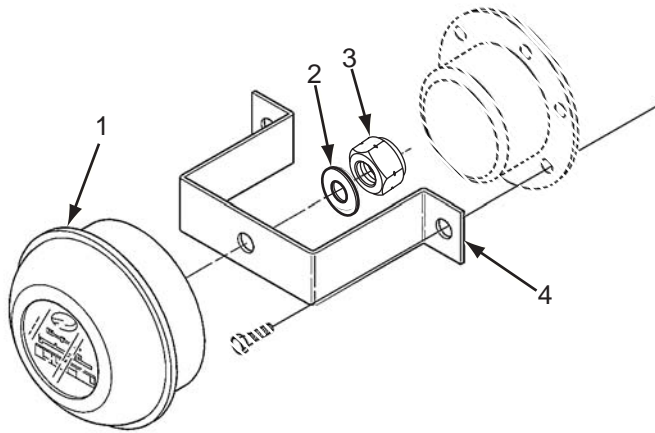


Figure 1. Hubodometer

END OF WORK PACKAGE

REFLECTIVE TAPE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Tools and Special Tools

- General Mechanic's Tool Kit (WP 0077 00-9)

REMOVAL

Remove reflective tape (1, 2, and 3) from semitrailer and rear bumper as necessary. Discard reflective tape.

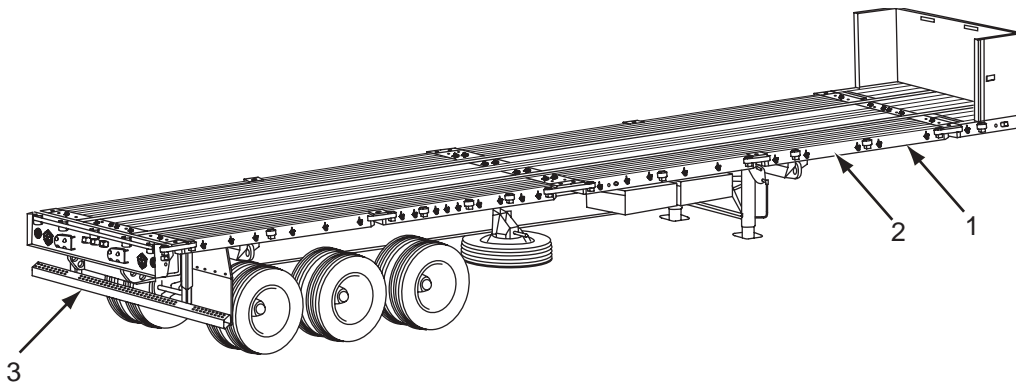


Figure 1. Semitrailer - Rear View

REFLECTIVE TAPE REPLACEMENT - Continued**INSTALLATION****NOTE**

Make sure surface area to be taped is clean and dry.

Apply 2" (5.1 cm) red/white reflective tape (1, 2, and 3) to side of semitrailer and along full width of rear bumper. Centered between side stake pockets.

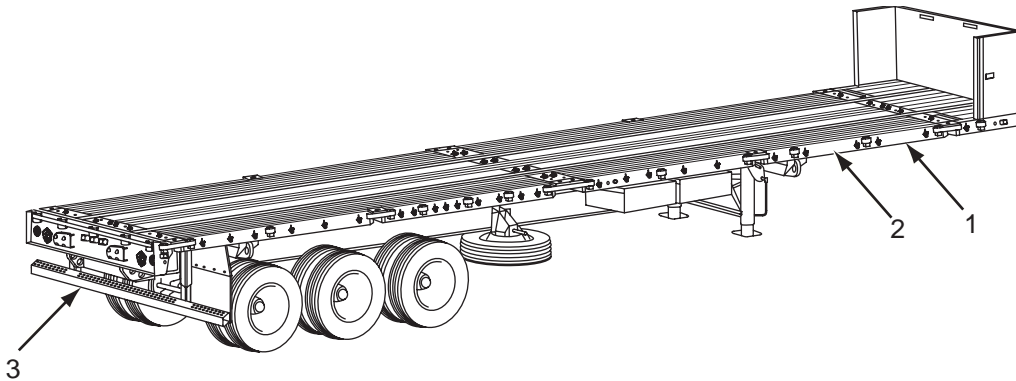


Figure 1. Semitrailer - Rear View

END OF WORK PACKAGE

CONTAINER GUIDE ASSEMBLY REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Locknut (WP 0080 00-23)
- Pushnut (WP 0080 00-23)
- Lock Washer (WP 0080 00-23)
- Locknut (WP 0080 00-23)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
-

NOTE

There are two container guide assemblies that are replaced using the same procedures. Procedures are for one container guide assembly.

CONTAINER GUIDE REMOVAL

1. Remove locknut (9), washers (8), and screw (7) from pin (2). Discard locknut.
2. Remove pin (2) from container guide (1).
3. Remove container guide (1).

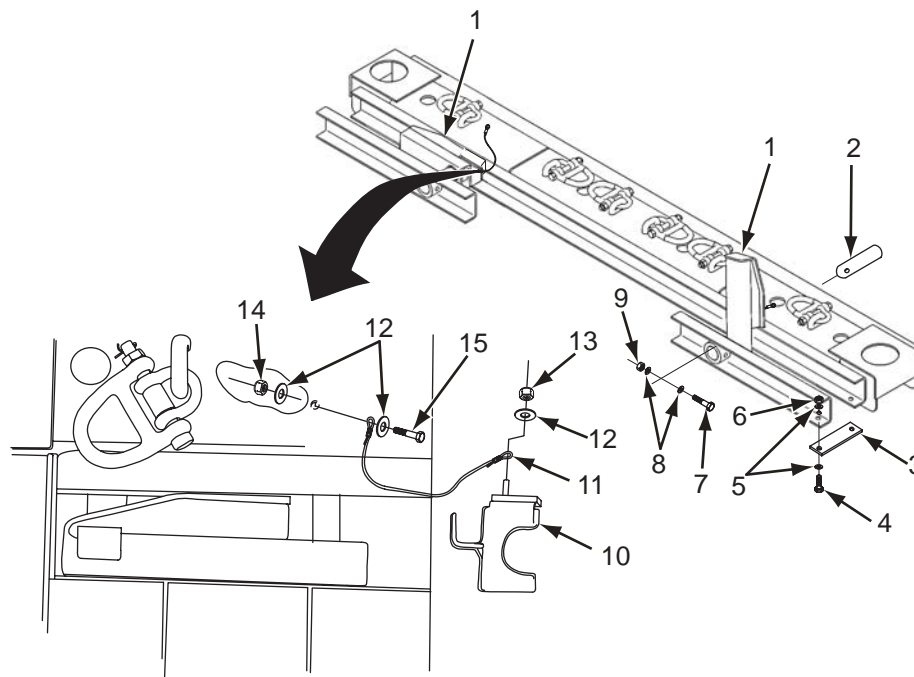


Figure 1. Container Guide

CONTAINER GUIDE ASSEMBLY REPLACEMENT - Continued**CONTAINER GUIDE INSTALLATION**

1. Install container guide (1) using pin (2).
2. Secure pin (2) in place with screw (7), washers (8), and new locknut (9).

CONTAINER GUIDE STOP REMOVAL

1. Remove nuts (6), lock washers (5), and screws (4) from container guide stop (3). Discard lock washers.
2. Remove container guide stop (3).

CONTAINER GUIDE STOP INSTALLATION

Install container guide stop (3) using two screws (4), new lock washers (5), and nuts (6).

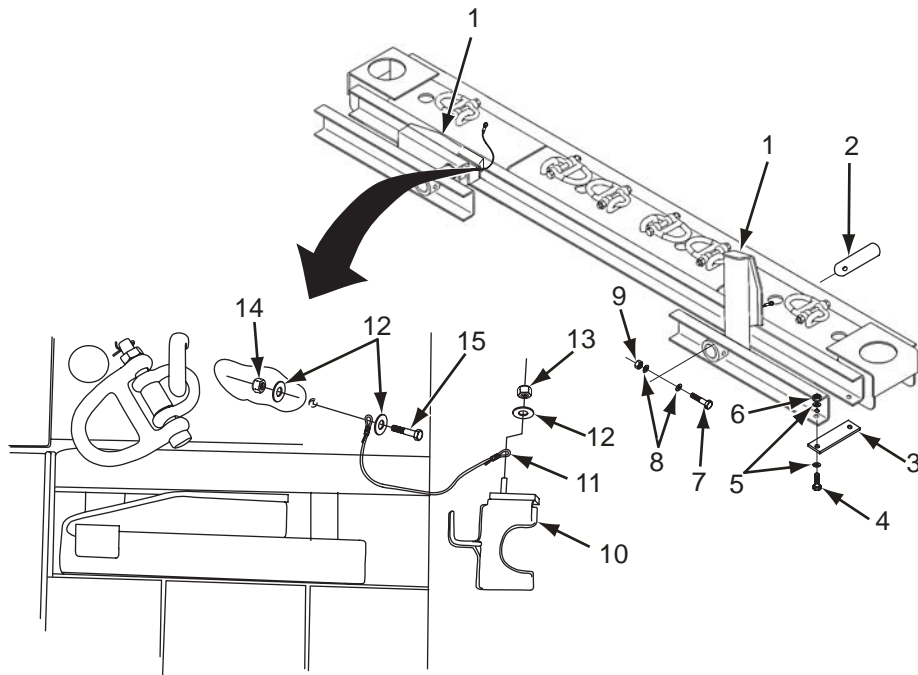


Figure 1. Container Guide

CONTAINER GUIDE ASSEMBLY REPLACEMENT - Continued**CONTAINER GUIDE STORAGE BRACKET REMOVAL**

1. Remove locknut (14), washers (12), cable (11), and bolt (15) from frame. Discard Locknuts.
2. Remove pushnut (13), washer (12), and cable (11) from container guide storage bracket (10). Discard pushnut.
3. Remove container guide storage bracket (10).

CONTAINER GUIDE STORAGE BRACKET INSTALLATION

1. Install cable (11), washer (12), and new pushnut (13) on container guide storage bracket (10).
2. Attach container guide storage bracket (10) to frame using bolt (15), washers (12), cable (11), and new locknut (14).

END OF WORK PACKAGE

PREPARATION FOR STORAGE OR SHIPMENT

GENERAL

- a. This section contains requirements and procedures for administrative storage of equipment that is issued to and in use by Army activities worldwide.
- b. The requirements specified herein are necessary to maintain equipment in administrative storage in such a way as to achieve the maximum readiness condition.
- c. Equipment that is placed in administrative storage should be capable of being readied to perform its mission within a 24-hour period, or as otherwise prescribed by the approving authority. Before equipment is placed in administrative storage, a current Preventive Maintenance Checks and Services (PMCS) should be completed and deficiencies corrected.
- d. Report equipment in administrative storage as prescribed for all reportable equipment.
- e. Perform inspections, maintenance services, and lubrication as specified herein.
- f. Records and reports to be maintained for equipment in administrative storage are those prescribed by DA PAM 738-751, for equipment in use.
- g. A 10% variance is acceptable on time, running hours, or mileage used to determine the required maintenance actions.
- h. Accomplishment of applicable PMCS, as mentioned throughout this section, will be on a quarterly basis.

DEFINITION OF ADMINISTRATIVE STORAGE

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

PREPARATION OF EQUIPMENT FOR ADMINISTRATIVE STORAGE**a. STORAGE SITE**

- (1) Select the best available site for administrative storage. Separate stored equipment from equipment in use. Conspicuously mark the area "Administrative Storage".
- (2) Covered space is preferred.
- (3) Open sites should be improved hardstand, if available. Unimproved sites should be firm, well-drained, and kept free of excessive vegetation.

PREPARATION OF EQUIPMENT FOR ADMINISTRATIVE STORAGE - Continued**b. STORAGE PLAN**

- (1) Store equipment to provide maximum protection from the elements and to provide access for inspection, maintenance, and exercising. Anticipate removal or deployment problems and take suitable precautions.
- (2) Take into consideration environmental conditions, such as extreme heat or cold; high humidity; blowing sand, dust, or loose debris; soft ground; mud; heavy snows; or any combination of conditions and take adequate precautions.
- (3) Establish a fire plan and provide for adequate firefighting equipment and personnel.

c. MAINTENANCE SERVICES AND INSPECTION

- (1) **Maintenance Services.** Prior to storage, perform the next scheduled organizational PMCS.
- (2) **Inspection.** Inspect and approve the equipment prior to storage. Do not place equipment in storage in a nonmission-capable condition.

d. AUXILIARY EQUIPMENT AND BASIC ISSUE ITEMS

- (1) Process auxiliary equipment and basic issue items simultaneously with the major item to which they are assigned.
- (2) If possible, store auxiliary equipment and basic issue items with the major item.
- (3) If stored apart from the major item, mark auxiliary equipment and basic issue items with tags indicating the major item, its registration or serial number and location, and store in protective type closures. In addition, place a tag or list indicating the location of the removed items in a conspicuous place on the major item.

e. CORRECTION OF SHORTCOMINGS AND DEFICIENCIES

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

f. LUBRICATION

Lubricate equipment in accordance with instructions in WP 0022 00.

PREPARATION OF EQUIPMENT FOR ADMINISTRATIVE STORAGE - Continued**g. GENERAL CLEANING, PAINTING, AND PRESERVATION****CAUTION**

Do not direct water or steam, under pressure, against unsealed electrical systems or any exterior opening. Failure to follow this caution may result in damage to equipment.

NOTE

Dispose of all hazardous material in accordance with TB 43-0244.

- (1) **Cleaning.** Clean the equipment of dirt, grease, and other contaminants, but do not use vapor degreasing.
- (2) **Painting.** Remove rust and damaged paint by scraping, wire brushing, sanding, or buffing. Sand to a smooth finish and spot paint as necessary (TB 43-0209).
- (3) **Preservation.** After cleaning and drying, immediately coat unpainted metal surfaces with oil or grease, as appropriate (WP 0022 00-1).

NOTE

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

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

CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE

- a. Maintenance Services.** After equipment has been placed in administrative storage, inspect, service, and exercise as specified herein.
- b. Inspection.** Inspection will usually be visual and must consist of at least a walk-around examination of all equipment to detect any deficiencies. Inspect equipment in open storage weekly and equipment in covered storage monthly. Inspect all equipment immediately after any severe storm or environmental change. The following are examples of things to look for during a visual inspection:
- (1) Low or flat tires.
 - (2) Condition of preservatives, seals, and wraps.
 - (3) Corrosion or deterioration.
 - (4) Missing or damaged parts.
 - (5) Water in compartments.
 - (6) Any other readily recognizable shortcomings or deficiencies.
- c. Repair During Administrative Storage.** Keep equipment in an optimum state of readiness. Accomplish the required services and repairs as quickly as possible. Whenever possible, perform all maintenance on-site.
- d. Exercising.** Exercise equipment in accordance with Table 5, *Exercise Schedule*, and the following instructions.
- (1) **Vehicle Major Exercise.** Depreserve equipment by removing only that material restricting exercise. Close all drains, remove blocks, and perform all before-operation checks (WP 00 15 00). Couple semitrailer to towing vehicle, and drive for at least 25 mi (40 km). Make several right and left 90° turns. Make several hard braking stops without skidding. Do the following during exercising when it is convenient and safe: operate all other functional components and perform all during- and after-operation checks.
 - (2) **Scheduled Services.** Scheduled services will include inspection per subparagraph b above, and will be conducted in accordance with Table 5. Lubricate in accordance with instructions in WP 0022 00-1.
 - (3) **Corrective Action.** Immediately take action to correct shortcomings and deficiencies noted. Record inspection and exercise results on DA Form 2404 or DA Form 5988E. Record and report all maintenance actions on DA Form 2407. After exercising, restore the preservation to the original condition. Replenish lubricants used during exercising and note the amount on DA Form 2408.

CARE OF EQUIPMENT IN ADMINISTRATIVE STORAGE - Continued

Table 5. Exercise Schedule

Weeks	2	4	6	8	10	12	14	16	18	20	22	24
PMCS						X						X
Scheduled Services		X		X		X		X		X		
Major Exercise												X

- e. **Rotation.** Rotate items in accordance with any rotational plan that will keep the equipment in an operational condition and reduce the maintenance effort.

PROCEDURES FOR COMMON COMPONENTS AND MISCELLANEOUS ITEMS

- a. **Tires.** Visually inspect tires during each walk-around inspection. This inspection includes checking tires with a tire gage. Inflate, repair, or replace as necessary those found to be low, damaged, or excessively worn. Mark inflated and repaired tires with a crayon for checking at the next inspection.
- b. **Air Lines and Air Reservoirs.** Drain air lines and air reservoirs of condensation, and leave draincocks open. Attach a caution tag, annotated to provide for closing of draincock when the equipment is exercised. Place tags in a conspicuous location.
- c. **Seals.** Seals may develop leaks during storage, or shortly thereafter. If leaking persists, refer to the applicable maintenance section in this manual for corrective maintenance procedures.

REMOVAL OF EQUIPMENT FROM ADMINISTRATIVE STORAGE

- a. **Activation.** Restore the equipment to normal operating condition in accordance with the instructions contained in WP 0018 00-1.
- b. **Servicing.** Resume the maintenance service schedule in effect at the commencement of storage, or service the equipment before the scheduled dates in order to produce a staggered maintenance workload.

PREPARATION OF EQUIPMENT FOR SHIPMENT

CAUTION

- **Raise the bumper per WP 0016 00-6 prior to shipping trailer on air or water borne vessels. Failure to do so may cause damage to equipment.**
- **The tractor’s fifth wheel should be at its lowest adjustment when ascending/descending at the bottom of the 15 degree roll-on/roll-off ramp and it should be at its highest adjustment when ascending/descending at the top of the 15 degree roll-on/roll-off ramp. This will prevent the equalizer beam from getting stuck.**

PREPARATION OF EQUIPMENT FOR SHIPMENT - Continued

- a.** Refer to TM 38-400 and FM 4-01.011 for additional instructions on processing, storage, and shipment of materiel.
- b.** Semitrailers that have been removed from storage for shipment do not have to be reprocessed if they will reach their destination within the administrative storage period. Reprocess only if inspection reveals any corrosion, or if anticipated in-transit weather conditions make it necessary.
- c.** When a semitrailer is received and has already been processed for domestic shipment, as indicated on DD Form 1397, the semitrailer does not have to be reprocessed for storage unless corrosion and deterioration is found during the inspection upon receipt. List on SF 364 all discrepancies found because of poor preservation, packaging, packing, marking, handling, loading, storage, or excessive preservation. Repairs that cannot be handled by the receiving unit must have tags attached listing needed repairs. A report of these conditions will be submitted by the unit commander for action by an ordnance maintenance unit.

END OF WORK PACKAGE

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CHAPTER 7

DIRECT SUPPORT MAINTENANCE PROCEDURES

DIRECT SUPPORT MAINTENANCE PROCEDURES INDEX

WP Sequence No.

DIRECT SUPORT MAINTENANCE PROCEDURES

Frame and Towing Attachments Maintenance	0069 00-1
Center Axle Maintenance	0070 00-1
Front and Rear Axle Replacement	0071 00-1
Kingpin Replacement	0072 00-1
Suspension Maintenance	0073 00-1

FRAME AND TOWING ATTACHMENTS MAINTENANCE

FRAME REPAIR

Refer to TB 9-2300-247-40, TB 9-2510-242-40, TB 43-0213, and TC 9-237 for instructions on frame repair and corrosion prevention and control.

END OF WORK PACKAGE

CENTER AXLE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Radius Rods Removed (WP 0057 00-1)
- Brake Drums Removed (WP 0036 00-2)

Personnel Required

- Two

Tools/Test Equipment

- Common No. 1 Tool Kit (WP 0077 00-9)
 - Floor Jack
 - Jack Stand
-

CENTER AXLE REMOVAL**WARNING**

- **Jack must be positioned directly under axle to prevent slippage. Direct all personnel to stay clear of vehicle when vehicle is supported in the air. Failure to do so could result in serious injury and damage to equipment.**
- **To prevent shifting of trailer, floor jack should be used only on a hard, level surface. Failure to follow this warning could result in serious injury and damage to equipment.**
- **The axle weighs 774 lbs. (351 kgs). Use caution when lifting and moving to avoid serious injury.**

CENTER AXLE REPLACEMENT-continued**CENTER AXLE REMOVAL-continued**

1. Raise semitrailer and position jackstand under axle not being removed.
2. Disconnect ABS sensor cables on axle assembly (1).
3. Remove brake chambers per WP 0042 00-2.

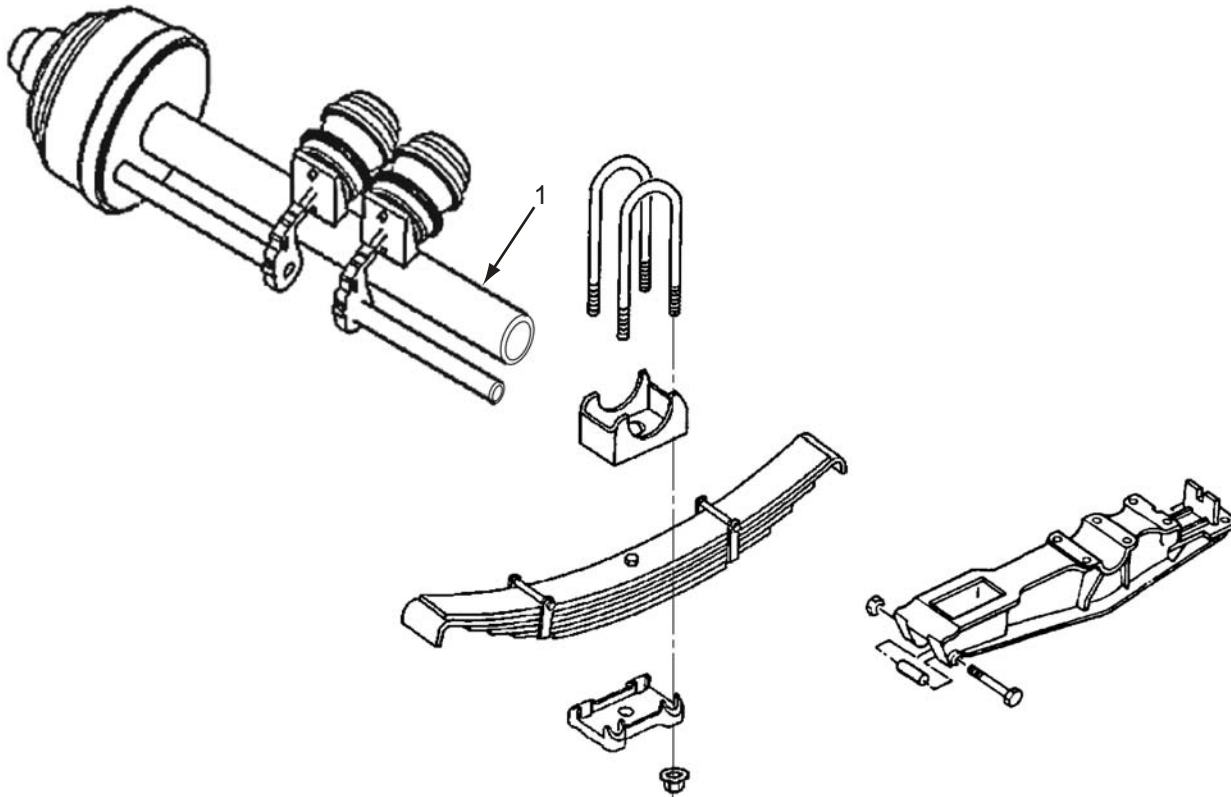


Figure 1

NOTE

Some components from the old axle may be used on the new axle.

4. Remove suspension per WP 0073 00-1.
5. Remove axle assembly (1).

CENTER AXLE REPLACEMENT-continued

CENTER AXLE INSTALLATION

1. Install suspension per WP 0073 00-2.
2. Connect all hoses and ABS sensor cables on axle assembly.
3. Torque all fasteners per WP 0019 00-3.

FOLLOW-ON TASKS

- Install Radius rods (WP 0057 00-2).
- Install Brake drums (WP 0036 00-2).
- Align Axle (WP 0071 00-3).

END OF WORK PACKAGE

FRONT AND REAR AXLE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Remove Brake Drums (WP 0036 00-2)

Materials/Parts

- Nut, Plain, Extended Washer (WP 0080 00-28)
- Rubber Strips (WP 0080 00-28)

Personnel

- Two

Tools/Test Equipment

- Common No. 1 Tool Kit (WP 0077 00-9)
 - Floor Jack
 - Jack Stands
-

FRONT AND REAR AXLE REMOVAL**WARNING**

The axle weighs 774 lbs. (351 kgs). Use caution when lifting and moving to avoid serious injury.

NOTE

Front and rear axles are replaced the same way.

FRONT AND REAR AXLE REPLACEMENT-continued**FRONT AND REAR AXLE REMOVAL-continued**

1. Raise semitrailer and position jackstand under center axle not being removed.
2. Disconnect ABS sensor cables as necessary.
3. Remove eight flange nuts (nut, plain, extended washer) (7), washers (2), screws (1), two axle end caps (9), and rubber strips (8) from axle (3) and equalizing beam (6). Discard flange nuts and rubber strips.
4. Remove axle (2), two axle adapters (3), and rubber pads (5) from equalizing beam (6).

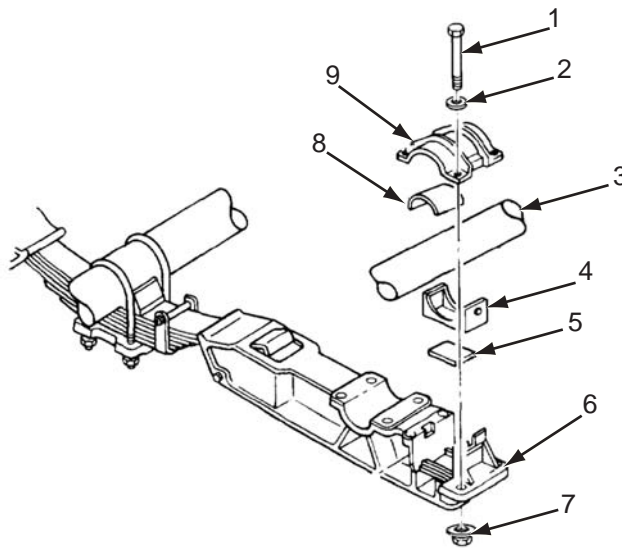


Figure 1. Axle

FRONT AND REAR AXLE INSTALLATION

1. Position two rubber pads (5), axle adapters (4), and axle (3) on equalizing beam (6).
2. Position two new rubber strips (8) and axle end caps (9) on axle (3). Install eight screws (1), washers (2), and new flange nuts (nut, plain, extended washer) (7).
3. Torque all fasteners per WP 0019 00-3.

FRONT AND REAR AXLE REPLACEMENT

AXLE ALIGNMENT

NOTE

- Ensure that semitrailer is unloaded and level from side to side and from front to rear.
 - Install radius rods per WP 0057 00-2.
1. Measure distances "A" and "B" from kingpin to axle spindles. Measurements should be within 1/8 in. (3.2 mm) of each other.
 2. Measure distances "C" and "D" between axle spindles. Measurements should be within 1/8 in. (3.2 mm) of each other.
 3. Measure distances "E" and "F" between axle spindles. Measurements should be within 1/8 in. (3.2 mm) of each other.

NOTE

Perform step 4 if improper measurements were obtained in steps 1 through 3.

4. Loosen two nuts (17) on radius rod (18) and turn radius rod to adjust. Ensure that nuts are tightened when alignment is obtained.
5. If true alignment cannot be obtained, inspect and replace worn or bent suspension parts, (WP 0073 00-2) or replace affected axle.
6. Install outer wheels (WP 0016 00-3).

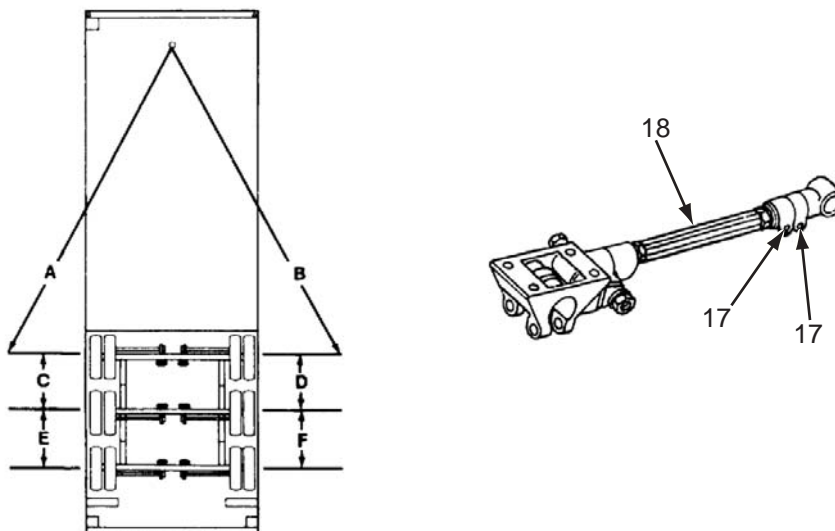


Figure 2. Axle Alignment

END OF WORK PACKAGE

KINGPIN/UPPER COUPLER PLATE REPLACEMENT

INITIAL SETUP:**Equipment Conditions**

- Ground Boards Emplaced
- Landing Legs Down
- Tires Chocked
- Semitrailer Disconnected from Prime Mover

Materials/Parts

- Locknuts (WP 0080 00-25)
- Bolts (WP 0080 00-25)
- Washers (WP 0080 00-25)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Shop Equipment, Field Maintenance (WP 0077 00-9)
- Welder's Tool Kit (WP 0077 00-9)

References

- TC 9-237

Personnel

- Two
-

REMOVAL**WARNING**

Kingpin/upper coupler plate weighs 302 lbs. (137 kgs). Caution must be used during removal and installation to avoid serious injury or death.

CAUTION

When replacing kingpin, inspect all supporting structures for rust, broken welds, and proper drainage. Structure area interior must be inspected and protected against rust. Proper drainage must be maintained to prevent damage to equipment.

1. Remove front center floor boards according to WP 0061 00-1.

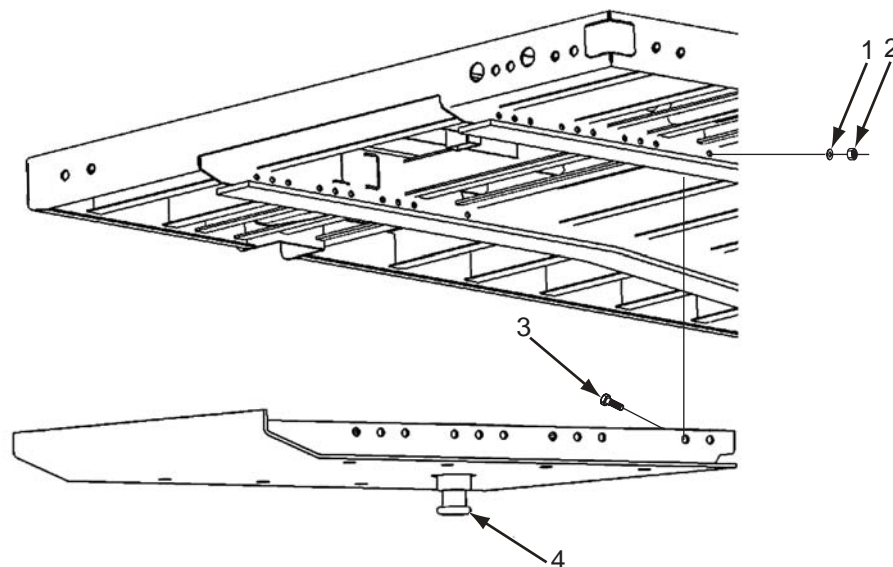


Figure 1. Kingpin/Upper Coupler Plate

KINGPIN/UPPER COUPLER PLATE REPLACEMENT-continued**REMOVAL - Continued****WARNING**

Remove CARC paint around all areas to be cut. Cutting CARC paint-coated metal creates toxic fumes. Failure to follow this warning may cause serious illness or death.

NOTE

Step 2 is only used the first time the kingpin/upper coupler is replaced.

2. Cut fasteners from huck bolts securing kingpin/upper coupler plate (4).
3. Remove locknuts (2), washers (1), and bolts (3) from kingpin/upper coupler plate (4). Discard locknuts and bolts.
4. Using a forklift or other secure method, slide kingpin/upper coupler plate (4) forward and off the main frame of trailer.

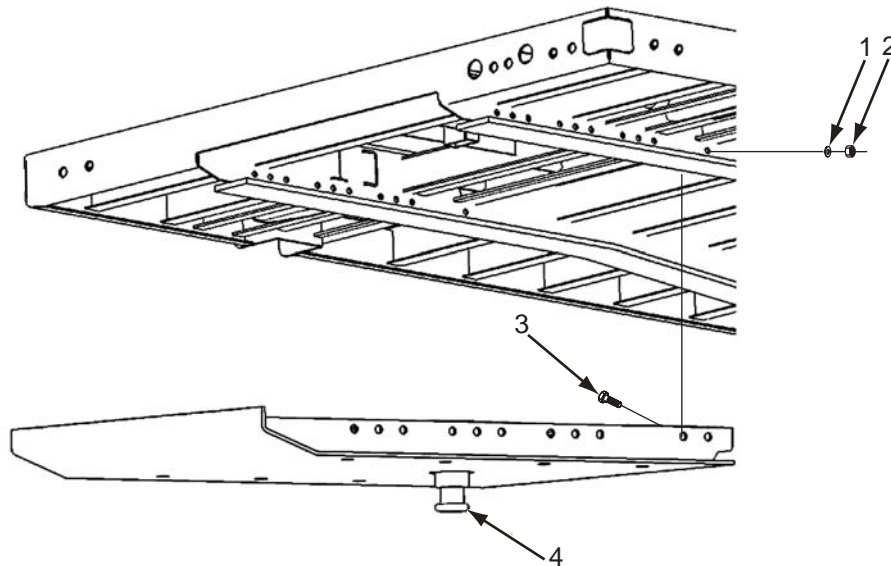


Figure 1. Kingpin/Upper Coupler Plate

KINGPIN/UPPER COUPLER PLATE REPLACEMENT-continued**INSTALLATION****WARNING**

Kingpin/upper coupler plate weighs 302 lbs. (137 kgs). Caution must be used during removal and installation to avoid serious injury or death.

1. Ensure all contact areas between the new kingpin/upper coupler plate, and the trailer structure are clean and smooth. (It is not necessary to remove all of the grease from the surface.)
2. Lift new kingpin/upper coupler plate (4) in place using a forklift or other secure method.

NOTE

A forklift with side movement capability of the forks enhances positioning the kingpin/upper coupler plate.

3. Align the kingpin/upper coupler plate (4) so that it slides into preslots on the main beams. The forward edge of the upper coupler plate (4) is to be flush with the forward face of the frame.
4. Align bolt holes on trailer frame with bolt holes on upper coupler plate (4).
5. Install new bolts (3), washers (1), and new locknuts (2) into bolt holes.
6. Torque locknuts per WP 0088 00-1.
7. Install front floor boards according to WP 0061 00-2.

END OF WORK PACKAGE

SUSPENSION MAINTENANCE

INITIAL SETUP:**Equipment Conditions**

- Trunnion Bushing Removed (equalizing beam removal only) (WP 0047 00-1)

Materials/Parts

- Dry Cleaning Solvent (WP 0086 00-3)
- Locknuts (WP 0080 00-28)
- Nut, Plain, Extended Washer (WP 0080 00-29)

Tools/Test Equipment

- General Mechanic's Tool Kit (WP 0077 00-9)
- Common No. 1 Tool Kit (WP 0077 00-9)

Personnel

- Two
-

REMOVAL

1. Remove two locknuts (8) and screws (7) from springs (3) and equalizing beam (6). Discard locknuts.
2. Remove flange nuts (nut, plain, extended washer) (5), spring seat (4), axle seat (2), and U-bolts (1). Discard flange nuts.
3. Remove springs (3) and equalizing beam (6) from semitrailer.

**WARNING**

Equalizing beam weighs 134 lbs. (61 kgs) and suspension springs weigh 179 lbs (81 kgs). Use caution when lifting and moving to avoid serious injury.

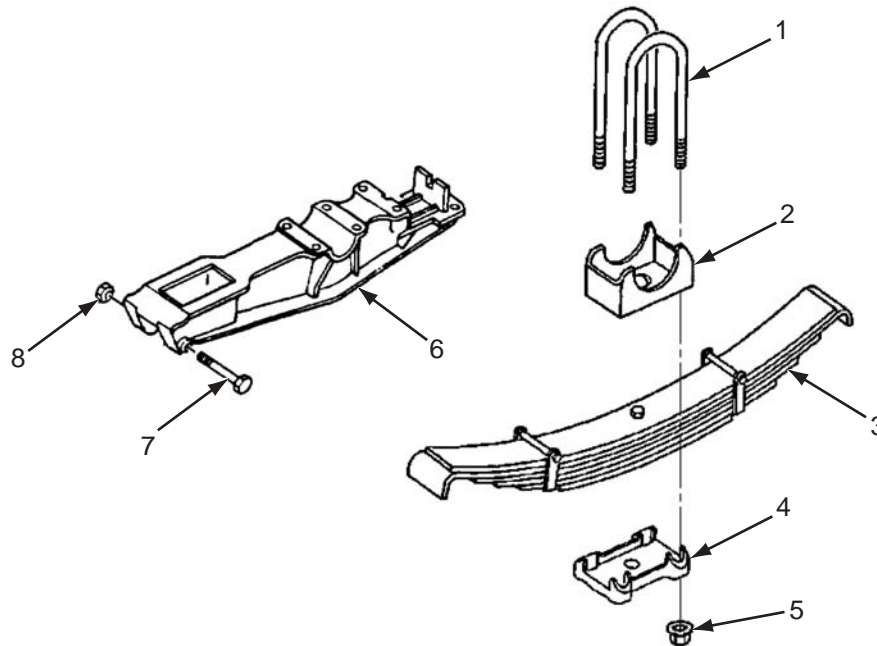


Figure 1. Suspension Assembly

SUSPENSION MAINTENANCE - Continued**CLEANING AND INSPECTION****WARNING**

Dry cleaning solvent is toxic and flammable. Always wear protective goggles and gloves, and use only in a well-ventilated area. Avoid contact with skin, eyes, and clothes, and DO NOT breathe vapors. DO NOT use near open flame or excessive heat. The solvent's flash point is 100°F-138°F (38°C-59°C). If you become dizzy while using cleaning solvent, immediately get fresh air and medical help. If solvent contacts eyes, immediately wash your eyes and get medical aid.

NOTE

Dispose of all hazardous material in accordance with TB 43-0244.

1. Clean springs (3) and equalizing beam (6) with dry cleaning solvent.
2. Inspect leaves and clips for cracks and breaks. Inspect lower leaf of main spring at contact of spring bearing seat for excessive wear.
3. Replace spring if damaged. Inspect equalizing beam (6) for structural cracks or damage. Inspect spring hangers for cracks. Replace defective components.
4. Inspect thickness of equalizing beam walls. Equalizing beam wall measurement should read 4 3/8 in. (11.11 cm). If wear exceeds 1/4 in. (6.35 mm), replace equalizing beam.

INSTALLATION

1. Position equalizing beam (6) and springs (3) on semitrailer.
2. Install springs (3) on equalizing beam (6) with screw (7) and new locknut (8).
3. Install U-bolts (1), axle seat (2), spring seat (4), and new flange nuts (nut, plain, extended washer) (5) around springs (3) and axle.

SUSPENSION MAINTENANCE - Continued

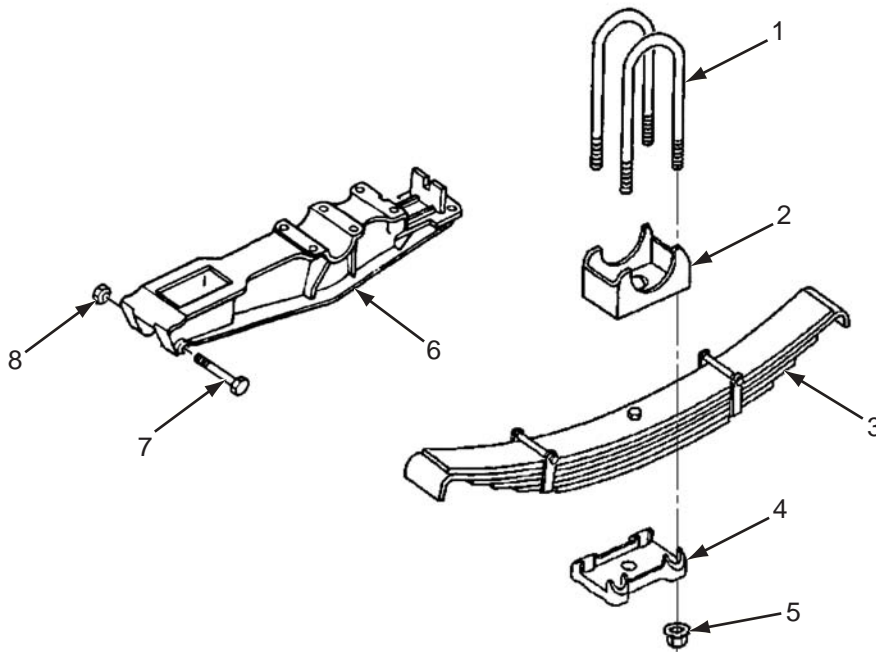


Figure 1. Suspension Assembly

FOLLOW-ON TASKS:

- Install trunnion bushing (WP 0047 00-1).

END OF WORK PACKAGE

TM 9-2330-331-14&P

CHAPTER 8
SUPPORTING INFORMATION

SUPPORTING INFORMATION INDEX

WP Sequence No.

SUPPORTING INFORMATION

References 0075 00-1

Maintenance Allocation Chart Introduction 0076 00-1

Maintenance Allocation Chart 0077 00-1

Repair Parts and Special Tools and Support Introduction 0078 00-1

Repair Parts and Special Tools List (RPSTL) 0079 00-1

 Repair Parts List

 Group 0609 - Light Assemblies 0080 00-1

 Group 0609 - ABS Light 0080 00-2

 Group 0613 - Main Wiring Harness 0080 00-3

 Group 0613 - Rear Wiring Harness 0080 00-4

 Group 0613 - Receptacles 0080 00-5

 Group 0613 - Wiring Harness Clamps and Grommets 0080 00-6

 Group 1100 - Axle Assembly 0080 00-7

 Group 1202 - Camshaft Assembly 0080 00-8

 Group 1202 - Brakeshoe Assembly 0080 00-9

 Group 1202 - Slack Adjuster 0080 00-10

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 Group 1208 - Gladhand Couplings 0080 00-15

 Group 1208 - Air Brake System 0080 00-16

 Group 1311 - Hub and Drum Assembly 0080 00-17

 Group 1311 - Wheel Assembly 0080 00-18

 Group 1501 - Platform Assembly Floorboards 0080 00-19

 Group 1501 - Bumper Assembly 0080 00-20

 Group 1501 - Dock Bumper 0080 00-21

 Group 1501 - Twist Lock Assembly 0080 00-22

 Group 1501 - Container Guide Assembly 0080 00-23

 Group 1501 - Sling Provision 0080 00-24

 Group 1503 - Upper Coupler Plate 0080 00-25

 Group 1504 - Spare Wheel Carrier 0080 00-26

 Group 1507 - Landing Gear and Mounting Hardware 0080 00-27

 Group 1601 - Three Axle Suspension Assembly 0080 00-28

 Group 1601 - Three Axle Springs 0080 00-29

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 Group 1808 - Stowage Compartment Assembly 0080 00-31

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 Group 2202 - Reflectors 0080 00-34

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Group 2202 - Hubodometer	0080 00-36
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Cross Reference - NSN No.	0082 00
Cross Reference - Part No.	0083 00
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Additional Authorization List (AAL)	0085 00
Expendable and Durable Items List	0086 00
Special Tools List (Not Applicable)	0087 00
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REFERENCES

GENERAL

This work package lists the publications referenced in this manual. DA PAM 25-30, Consolidated Index of Army Publications and Blank Forms, should be consulted frequently for the latest changes and revisions, and for new publications relevant to material covered in this manual.

FORMS

Recommended Changes to Publications and Blank Forms	DA Form 2028
Recommended Changes to Equipment Technical Publication	DA Form 2028-2
Organizational Control Record for Equipment	DA Form 2401
Equipment Inspection and Maintenance Worksheet	DA Form 2404
Maintenance Request	DA Form 2407
Equipment Log Assembly (Records)	DA Form 2408
Equipment Inspection and Maintenance Worksheet	DA Form 5988E
Preventive Maintenance Schedule and Record	DD Form 314
Processing and Deprocessing Record for Shipment, Storage and Issue of Vehicles and Spare Engines	DD Form 1397
Report of Discrepancy (ROD)	SF Form 364
Product Quality Deficiency Report	SF Form 368

REGULATIONS

Army Materiel Maintenance Policy and Retail Maintenance Operations	AR 750-1
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FIELD MANUALS

Unit Movement Operations	FM 4-01.011
Operation and Maintenance of Ordnance Materiel in Cold Weather	FM 9-207
Manual for the Wheeled Vehicle Driver (Distribution Restricted)	FM 21-305
First Aid	FM 4-25.11

TECHNICAL MANUALS

Inspection, Care and Maintenance of Antifriction Bearings	TM 9-214
Materials Used for Cleaning, Preserving, Abrading and Cementing Ordnance Materiel and Related Materials Including Chemicals	TM 9-247
Operator's Unit, Direct Support and General Support, Maintenance Manual for Care, Maintenance Repair and Inspection of Pneumatic Tires and Inner Tubes	TM 9-2610-200-14
Painting Instructions for Army Materiel	TM 43-0139
Joint Service Manual (JSM) for Storage and Materials Handling	TM 38-400
Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use	TM 750-244-6

REFERENCES-Continued

PAMPHLETS AND BULLETINS

The Army Maintenance Management System (TAMMS)	DA PAM 738-751
List of Storage and Outloading Drawings for Ammunition	DA PAM 75-5
Towed Wheeled Vehicles, FSC Class 2330, Lunette Trailers and Semitrailers Repair of Frames	TB 9-2510-242-40 (Nov 95)
Tactical Wheeled Vehicles Repair of Frames	TB 9-2300-247-40
Color, Marking, and Camouflage Painting of Military Vehicles, Construction Equipment and Materials Handling Equipment	TB 43-0209
Corrosion Prevention and Control	TB 43-0213
Unit Level Procedures for Handling Service Supplies, Hazardous Materials and Waste	TB 43-0244
Safety Inspection and Testing of Lighting Devices	TB 0142 (Feb 97)

MISCELLANEOUS PUBLICATION

Army Medical Department Expendable/Durable Items	CTA 8-100
Expendable/Durable Items (Except Medical, Class V, Repair Parts and Heraldic Items)	CTA 50-970
Operator's Circular Welding Theory and Application	TC 9-237 (1993)

END OF WORK PACKAGE

MAINTENANCE ALLOCATION CHART (MAC)

INTRODUCTION**THE ARMY MAINTENANCE SYSTEM**

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/organizational 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 from the MAC.

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

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).
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.
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.

MAINTENANCE FUNCTIONS - Continued

6. **Calibrate.** To determine and cause corrections to be made or to 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.

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 or 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 for the level of maintenance under consideration (i.e., identified as maintenance significant).

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

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.
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.)

EXPLANATION OF COLUMNS IN THE MAC - Continued

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 manhours 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 levels are as follows:

Field:

C Operator or crew maintenance
O Unit maintenance
F Direct 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 Specialized Repair Activity (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.

END OF WORK PACKAGE

Table 6. MAC for M872A4 Semitrailer

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE
			FIELD		SUSTAINMENT				
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
06	Electrical System						1	C,J,O	
0609	Lights, Stop & Tail, LED (Red)	Inspect Test Remove/Install Replace	0.1	0.3 0.2 0.2				C,O	
	Lights, Blackout	Inspect Test Remove/Install Replace	0.1	0.3 0.2 0.2				C,O	
	Lights, Marker LED (Amber and Red)	Inspect Test Remove/Install Replace	0.1	0.3 0.1 0.1				C,O	
	Light, ABS LED (Amber)	Inspect Test Remove/Install Replace	0.1	0.2 0.2 0.2				O	
0613	Wiring Harness (Front or Rear)	Inspect Test Remove/Install Repair Replace	0.2	0.5 1.0 0.5 1.0				C,O	
	Wiring Harness Main	Inspect Test Remove/Install Repair Replace	0.2	0.5 1.5 1.5 1.5				O	

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE	
			FIELD		SUSTAINMENT					
			UNIT		DS	GS	DEPOT			
			C	O	F	H	D			
11	Axles Front/Rear						1,3,4	G		
1100	Axle, Front and Rear	Inspect Align Replace	0.2	0.2 2.0	5.0			G		
	Spring, Retainer	Replace		0.1						
	Center Axle	Inspect Align Replace	0.2	0.2 2.0	5.0			G		
12	Brakes						3,4	B,C,L		
1202	Shoe Assembly, Brake	Inspect Test Replace		0.3 0.5 1.5						
	Anchors, Rollers, Retainers, Springs, Bushings, Pins	Inspect Remove/Install Replace		0.5 0.5 0.5				B		
	"S" Cams	Inspect Test Remove/Install Replace		0.2 0.5 0.5 0.7				B		
1206	Slack Adjuster, Automatic	Inspect Test Service Adjust Replace	0.2	0.2 0.5 0.1 0.3 0.5				C		

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE
			FIELD		SUSTAINMENT				
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
1207	Control Unit, Electronic (ECU) and Module	Inspect		0.2				J,O	
		Test		0.5					
		Replace		0.5					
	Sensor, Wheel w/Cable	Inspect		0.1				B,O	
		Test		0.2					
		Adjust Replace		0.3 0.3					
	Cable, Diagnostic	Test		0.2				O	
		Replace		0.2					
1208	Chamber, Air Brake Long Stroke	Inspect	0.1					C	
		Replace		1.0					
	Reservoir, Air	Inspect	0.1					C	
		Service	0.1						
		Test Replace		0.2 1.5					
	Valve, Air Drain & Pull Cables	Inspect	0.1					C	
		Replace		0.3					
	Valve, Multifunction	Inspect	0.1					J	
Test Replace			0.5 0.5						
Air Supply, Gladhand	Inspect	0.1					C		
	Service		0.1						
	Replace Repair		0.3 0.2						
Air Line, Hose Assembly	Inspect	0.1					C		
	Replace		0.3						

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE
			FIELD		SUSTAINMENT				
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
13	Wheel Assembly							B,C,J, L,N	
1311	Wheel	Inspect Remove/Install Service Replace	0.1	0.1 0.3 0.2 0.5				3,4 B,L	
	Hub Caps	Replace		0.5					
	Drum, Brake	Inspect Remove/Install Replace		0.2 0.5 0.5				B	
	Hubs w/Tone Rings	Inspect Remove/Install Replace		0.2 0.3 0.5				B,J	
	Bearings, Inner/Outer (Cone Assembly and Cup)	Inspect Service Replace		0.2 0.3 0.5				B	
	Seal, Wheel	Replace		0.3				B,N	
	Spindle Nut, Pro-Torq	Adjust Replace		0.3 0.3				B	
1313	Tires, Radial, and Spare	Inspect Service Remove/Install Replace	0.2 0.2 0.5 0.5					C	

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE
			FIELD		SUSTAINMENT				
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
15	Frame, Towing Attachments						4,5	C,F,I,L,M	
1501	Weld Mounts, Frame	Inspect Repair	0.2	0.3	0.3 3.0	3.0+		F,I,L,M	
	Twist lock	Inspect Service Replace Repair	0.1 0.2	0.5 0.6				C	
	Dock Bumpers, Rubber (2)	Replace		0.3				C	
	Tiedown Deck "D" Rings	Inspect Service Replace Repair	0.1 0.2	0.1 0.3 0.3				C	
1503	Upper Coupler Plate w/Kingpin	Inspect Test Service Replace	0.1 0.2	0.4 0.5	3.0				
1504	Carrier, Spare Tire	Inspect Replace Repair	0.1	0.5 0.5					
1507	Gear, Landing	Inspect Service Replace	0.2 0.1	2.0				C	
	Crank Handle	Replace		0.1					

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE
			FIELD		SUSTAINMENT				
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
16	Suspension							3,4,5	C,K
1601	Spring Assembly, Leaf	Inspect Adjust Align Replace		0.2 1.5 1.0 4.0	0.2 1.5 1.0 4.0				C
	Tube, Trunnion, Over Slung	Inspect Replace Repair		0.2	0.2 4.0 2.0				C
	Trunnion Bushings, Polyurethane	Inspect Replace		0.2	0.2 1.5				C C
	Plate, Adjustment	Align Replace			0.5 0.5				C
	End Cap and Rubber Pad	Inspect Replace	0.1	0.1 2.0					C,K
	Bump Stop	Inspect Replace	0.1	0.3					C

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE
			FIELD		SUSTAINMENT				
			UNIT		DS	GS	DEPOT		
			C	O	F	H	D		
18	Body						4	C,D,E,L	
1801	Flaps, Mud, Antisail	Inspect Replace	0.1	0.3				C	
	Bulkhead	Inspect Service Replace	0.1 0.2	1.5				C	
1805	Decking	Inspect Service Replace	0.2	0.5 4.0				D,E	
1808	Box, Stowage	Inspect Service Replace Repair	0.1 0.1	0.5 0.3				C,L	
	Box, Manifest	Inspect Replace	0.1	0.3					
22	Accessory Items						1,4	C	
2202	Reflectors	Inspect Replace	0.1	0.1					
	Reflector Tape	Inspect Replace	0.1	0.1				Each Section	
2210	Plates, Data and Decals	Replace		0.2					

Table 6. MAC for M872A4 Semitrailer - Continued

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND TEST EQUIPMENT	(6) REMARKS CODE	
			FIELD		SUSTAINMENT					
			UNIT		DS	GS	DEPOT			
			C	O	F	H	D			
47	Gages (Non-Electrical)									
4701	Hubodometer	Replace Remove/Install Repair		0.2 0.2 0.3				4		

Table 7. Tools and Test Equipment

(1) REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
1	O	Shop Equipment, Automotive Maintenance and Repair; Organizational Maintenance, Common No. 1	4910-00-754-0654	SC 4910-95-CL-A74
2	O	Shop Equipment, Automotive Maintenance and Repair; Organizational Maintenance, Common No. 2	4910-00-754-0650	SC 4910-95-CL-A72
3	O,F,H	Shop Equipment, Automotive Maintenance and Repair: Field Maintenance, Basic, Less Power	4910-00-754-0705	SC 4910-95-CL-A31
4	O,F	Tool Kit, General Mechanic's Automotive	5180-01-177-7033	SC 5180-95-CL-N26
5	F	Shop Equipment, Welding, Field Maintenance	4940-00-348-7596	SC 4940-95-CL-B16

Table 8. Remarks

REFERENCE CODE	REMARKS
A	Times are for one axle only.
B	Times are for one axle end only.
C	Times are for each component/assembly.
D	Annual service to UV protect decking.
E	1.5 hours to replace each board.
F	Reference TB 9-2510-242-40.
G	Unit level checks only the axle alignment.
I	Requires welding.
J	Component comes as an assembly only.
K	New suspension hardware requires wet (oiled) torque values. In service hardware requires dry torque values.
L	Spot painting, tire air/pressure check, oil can points, and cleaning for all like components.
M	Frame deficiencies need to be evaluated at the DS level to determine the events of repair. Some minor deficiencies may be handled at DS. Major repairs such as cracks and damage that requires alignment must go to GS.
N	A correct size seal driver must be used if available to prevent damage/cocking of seal. Hub bore must be clean and seal bottomed.
O	Dielectric grease must be used on pins and connectors.

END OF WORK PACKAGE

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

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

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

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

REPAIR PARTS

Repair parts are listed and illustrated in WP 0080 00 of this manual.

END OF WORK PACKAGE

RPSTL INTRODUCTION

SCOPE

The RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of organizational, and direct support maintenance of the M872A4 Semitrailer, breakbulk/container, transporter, 34-ton. 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 work package, this RPSTL is divided into the following work packages.

1. Repair Parts List Work Packages. Work packages containing lists of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. These work packages also include parts, which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with parts in each group listed in ascending figure and item number sequence. Sending units, brackets, filters, and bolts are listed with the component they mount on. Bulk materials are listed by item name in BULK-1 at the end of the work package. Repair parts kits are listed separately in their own functional group in KITS-1 at the end of the work package. Items listed are shown on the associated illustrations.
2. Special Tools List Work Packages. Work packages containing lists of special tools, special TMDE, and special support equipment authorized by this RPSTL (as indicated by Basis of Issue (BOI) information in the DESCRIPTION AND USABLE ON CODE (UOC) column). Tools that are components of common tool sets and/or Class VII are not listed.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS AND SPECIAL TOOLS LIST WORK PACKAGES.

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

SMR CODE (Column (2)). The SMR code containing supply/requisitioning information, maintenance level authorization criteria, and disposition instruction, as shown in the following breakout:

Source Code	Maintenance Code		Recoverability Code	Demilitarization Code
xx	x	x	x	x
1st two positions: How to get an item.	3rd position: Who can install, replace, or use item.	4th position: Who can complete repair* on the item.	5th position: Who determines disposition action Items on Unserviceable items.	6th position: Method and degree of demilitarizing items when required.

*Complete repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follow:

<u>Source Code</u>	<u>Application/Explanation</u>
PA PB PC PD PE PF PG	Stock items; use the applicable NSN to requisition/request items with these source codes. They are authorized to the level indicated by the code entered in the 3rd 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 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO-Made at unit/ AVUM level MF-Made at DS/ AVIM level MH-Made at GS level ML-Made at SRA MD-Made at depot	Items with these codes are not to be requisitioned/requested individually. They must be made from bulk material which is identified by the P/N in the DESCRIPTION AND USABLE ON CODE (UOC) column and listed in the bulk material group work package of the RPSTL. If the item is authorized to you by the 3rd position code of the SMR code, but the source code indicates it is made at higher level, order the item from higher level of maintenance.
AO-Assembled by unit/AVUM level AF-Assembled by DS/AVIM 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 3rd 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 the next higher assembly. (Refer to NOTE below.)
XB	If an item is not available from salvage, order it using the CAGEC and P/N.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

XC	Installation drawings, diagrams, instruction sheets, field service drawings; identified by manufacturer's P/N.
XD	Item is not stocked. Order an XD-coded item through normal supply channels using the CAGEC and P/N 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 items source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

Maintenance Code. Maintenance codes tell you the level(s) of maintenance authorized to use and repair support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

Third Position. The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance:

Maintenance Code	<u>Application/Explanation</u>
C	Crew or operator maintenance done within unit/AVUM maintenance.
O	Unit level/AVUM maintenance can remove, replace, and use the item.
F	Direct support/AVIM maintenance can remove, replace, and use the item.
H	General support maintenance can remove, replace, and use the item.
L	Specialized repair activity can remove, replace, and use the item.
D	Depot can remove, replace, and use the item.

Fourth Position. The maintenance code entered in the fourth position tells you whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (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.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

Maintenance

<u>Code</u>	<u>Application/Explanation</u>
O	Unit/AVUM is the lowest level that can do complete repair of the item.
F	Direct support/AVIM 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	Nonrepairable. No repair is authorized.
B	No repair is Authorized. No parts or special tools are authorized for maintenance of "B" coded item. However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

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

<u>Recoverability Code</u>	<u>Application/Explanation</u>
Z	Nonrepairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR code.
O	Reparable item. When uneconomically repairable, condemn and dispose of the item at the unit level.
F	Reparable item. When uneconomically repairable, condemn and dispose of the item at the direct support level.
H	Reparable item. When uneconomically repairable, condemn and dispose of the item at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item are not authorized below depot level.
L	Reparable item. Condemnation and disposal of item are not authorized below Specialized Repair Activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (such as precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

NSN (Column (3)). The NSN for an item is listed in this column.

CAGEC (Column (4)). The Commercial and Government Entity Code (CAGEC) is a five-digit code which is used to identify the manufacturer, distributor, or Government agency/activity that supplies the item.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LISTS AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

PART NUMBER (Column (5)). 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 P/N from the one listed.

DESCRIPTION AND USEABLE ON CODE (UOC) (Column (6)). This column includes the following information.

1. The federal item name, and when required, a minimum description to identify the item.
2. P/Ns of bulk materials are referenced in this column in the line entry to be manufactured or fabricated.
3. Hardness Critical Item (HCI). A support item that provides the equipment with special protection from electromagnetic pulse (EMP) damage during a nuclear attack.
4. The statement END OF FIGURE appears just below the last item description column (6) for a given figure in both the repair parts list and the special tools list work packages.

QTY (Column (7)). The QTY (quantity per end item) 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 instead of a quantity indicates that the quantity is variable and quantity may change from application to application.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

1. National Stock Number (NSN) Index Work Package. NSN's in this index are listed in National Item Identification Number (NIIN) sequence.

STOCK NUMBER Column. This column lists the NSN in National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN.

NSN
(e.g., 5385-01-574-1476)
NIIN

When using this column to locate an item, ignore the first four digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

FIG. Column. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in the repair parts list and special tools list work packages.

ITEM Column. The item number identifies the item associated with the figure listed in the adjacent FIG. column. This item is also identified by the NSN listed on the same line.

EXPLANATION OF CROSS-REFERENCE INDEXES WORK PACKAGES FORMAT AND COLUMNS

2. Part Number (P/N) Index Work Package. P/Ns in this index are listed in ascending alphanumeric sequence (vertical arrangement of letter and number combinations which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

PART NUMBER Column. Indicates the P/N assigned to the item.

FIG. Column. This column lists the number of the figure where the item is identified/located in the repair parts list and special tools list work packages.

ITEM Column. The item number is the number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

SPECIAL INFORMATION

UOC. The UOC appears in the lower left corner of the Description Column heading. Useable On Codes are shown as "UOC: ..." in the Description Column (justified left) on the first line under the applicable item/nomenclature. Uncoded items are applicable to all models. Identification of the UOCs used in the RPSTL are:

<u>Code</u>	<u>Used On</u>
2A4	M872A4

Fabrication Instructions. Bulk materials required to manufacture items are listed in the bulk material functional group of this RPSTL. Part numbers for bulk materials are also referenced in the Description Column of the line item entry for the item to be manufactured/fabricated.

Index Numbers. Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross-reference between the NSN / P/N index work packages and the bulk material list in the repair parts list work package.

END OF WORK PACKAGE

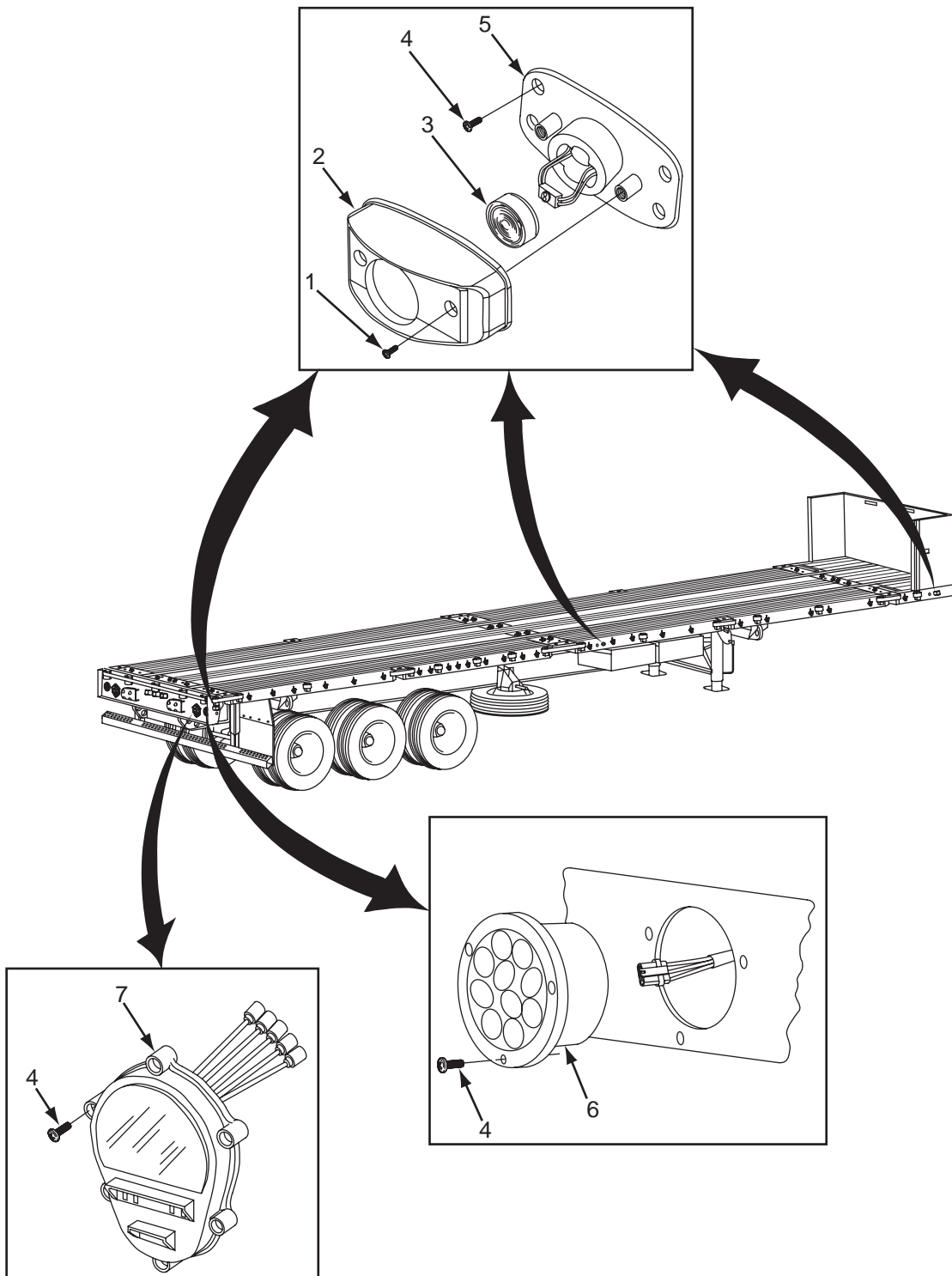


FIGURE 1. LIGHT ASSEMBLIES

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 0609 LIGHTS	(7) QTY
FIG. 1 LIGHT ASSEMBLIES						
1	XDOZZ		13548	6625A	SCREW,PAN HEAD	22
2	PAOZZ	5340-01-527-9898	13548	07198	BRACKET,MULTIPLE AN	11
3	PAOZZ	6220-01-482-5444	13548	30255R	LAMP,UNIT VEHICULAR-RED	5
3	PAOZZ	6220-01-482-5320	13548	30255Y	LAMP,UNIT VEHICULAR-AMBER	6
4	PAOZZ	5305-01-499-5551	0FBD6	52100010	SCREW,SELF-TAPPING	62
5	PAOZZ	5975-01-485-8769	13548	07197	BASE,MOUNTING	11
6	PAOZZ	6220-01-499-3350	0FBD6	50920012	LIGHT, S/T/T, RED LED 4" FLG MTG, 8-32V	2
7	PAOZZ	6220-01-482-9850	13548	07240	LIGHTS, M/C, RED, W/BACKET MODEL 30	2

END OF FIGURE

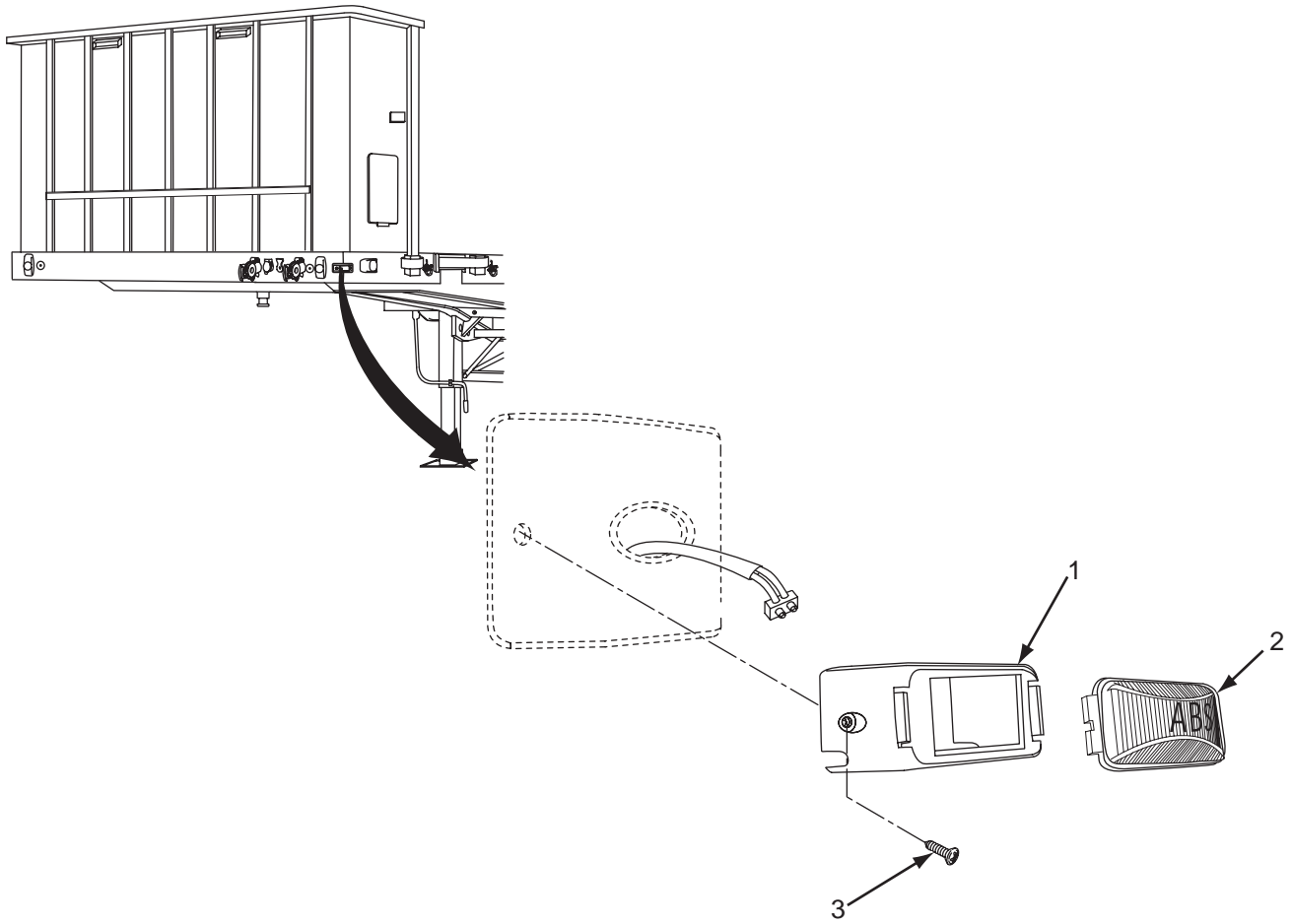


FIGURE 2. ABS LIGHT

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 0609 LIGHTS	(7) QTY
					FIG. 2 ABS LIGHT	
1	PFOZZ		13548	15728	BRACKET, MOUNTING	1
2	PAOZZ	6220-01-522-9731	13548	15203Y	LIGHT, MARKER, CLEARANCE	1
3	PAOZZ	5305-01-499-5551	0FBD6	52100010	SCREW, SELF, TAPPING	2

END OF FIGURE

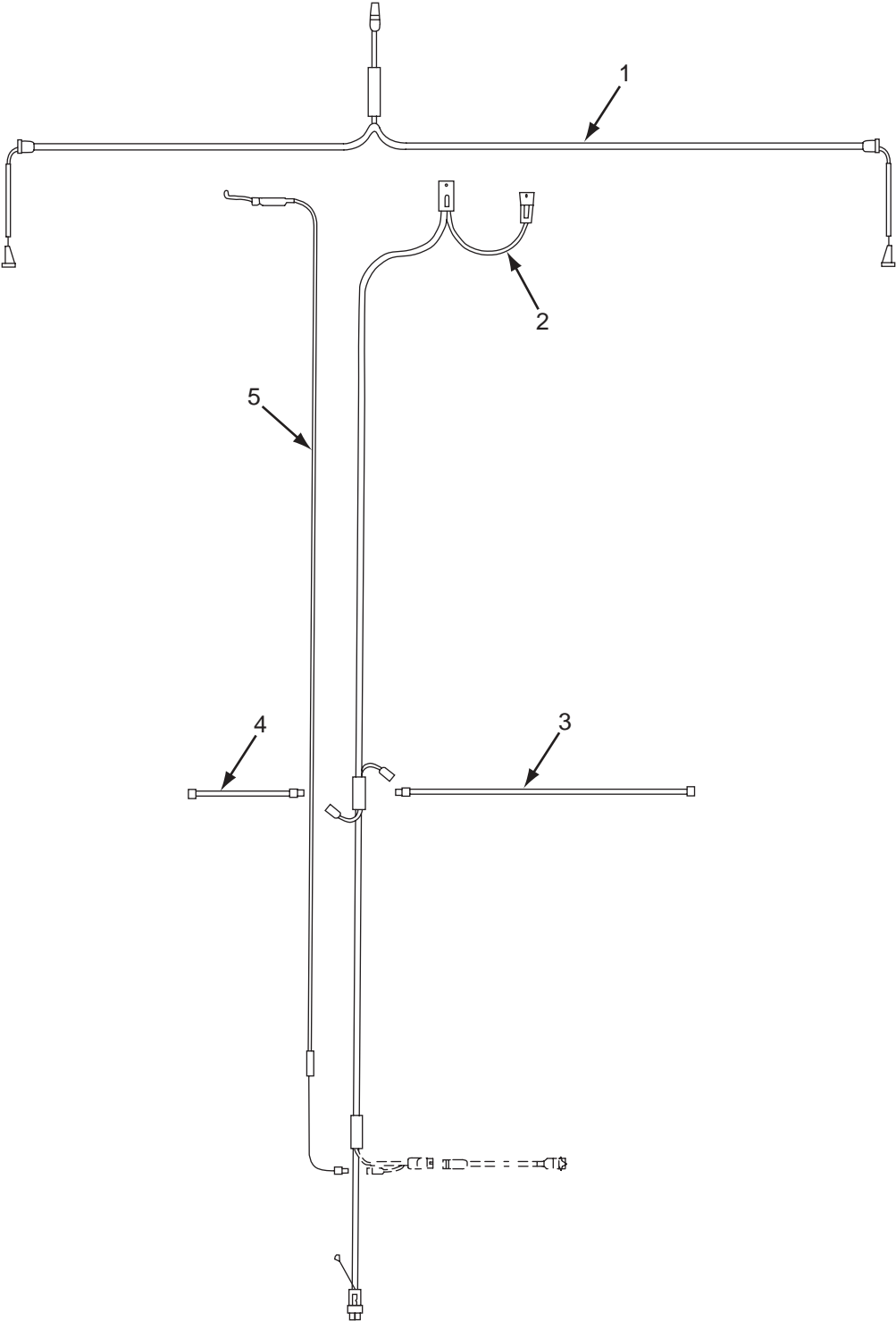


FIGURE 3. MAIN WIRING HARNESES

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 0613 HULL OR CHASSIS WIRING HARNESS	(7) QTY
					FIG. 3 MAIN WIRING HARNESS	
1	PAOZZ	6150-01-522-0958	18634	TAL-400	HRNS MARKER FRONT	1
2	PAOZZ	5995-01-522-0939	18634	TAL-102	HRNS ABS MAIN TRUNK	1
3	PAOZZ	6150-01-522-0962	18634	TAL-401	HRNS MARKER CURBSIDE CENTER	1
4	PAOZZ	6150-01-522-0966	18634	TAL-402	HRNS MARKER ROADSIDE CENTER	1
5	PAOZZ	6150-01-522-0923	18634	TAL-801	JUMPER,ABS WARNING LIGHT, FRONT	1

END Of FIGURE

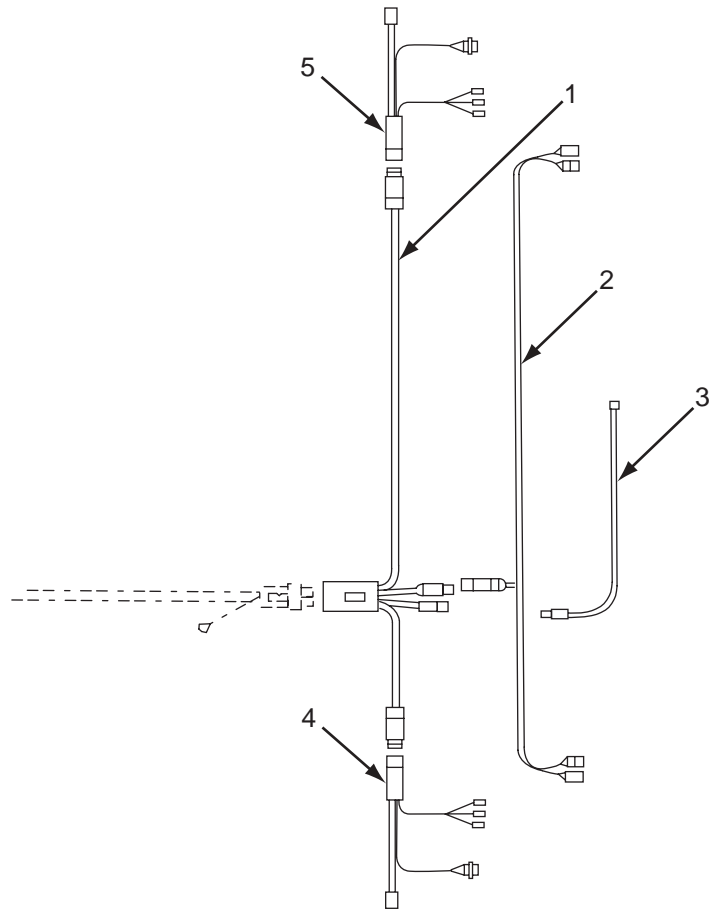


FIGURE 4. REAR WIRING HARNESS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 0613 HULL OR CHASSIS WIRING HARNESS FIG. 4 REAR WIRING HARNESS	(7) QTY
1	PAOZZ	6150-01-522-0946	18634	TAL-200	HRNS REAR SILL	1
2	PAOZZ	5995-01-522-0931	18634	TAL-900	HRNS, BLACK-OUT LIGHT	1
3	PAOZZ	6150-01-522-0967	18634	TAL-600	HRNS IDENTIFICATION BARLAMP	1
4	PAOZZ	6150-01-522-0949	18634	TAL-300	PIGTAIL S/T/T LED RIGHT	1
5	PAOZZ	6150-01-522-0952	18634	TAL-301	PIGTAIL S/T/T LED LEFT	1
END OF FIGURE						

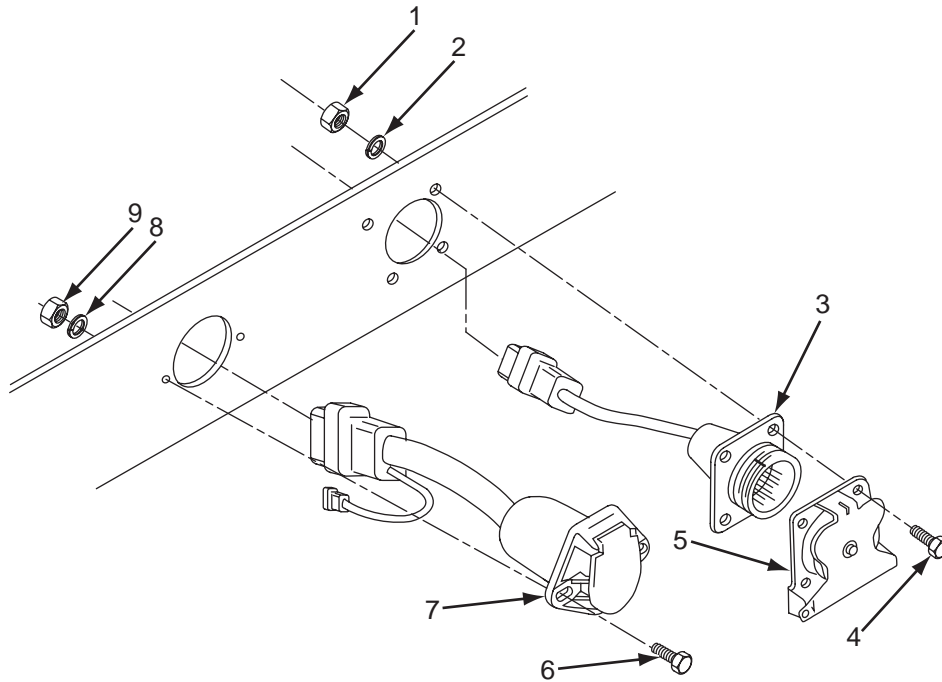


FIGURE 5. RECEPTACLES

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 0613 HULL OR CHASSIS WIRING HARNESS	(7) QTY
FIG. 5 RECEPTACLES						
1	PAOZZ	5310-01-458-7739	63931	11-56374	NUT,SELF-LOCKING, HEX	4
2	PFOZZ	5310-00-027-2556	8V613	369A1605-3	WASHER,FLAT	4
3	PAOZZ	5935-00-846-3883	96906	MS75021-1	CONNECTOR,RECEPTACLE	1
4	PAOZZ	5305-00-988-1724	96906	MS35206-280	SCREW,MACHINE	4
5	PAOZZ	5935-00-773-1428	19207	7731428	COVER,ELECTRICAL,CONNECTOR	1
6	PAOZZ	5305-00-984-5675	80205	MS35206-295	SCREW,MACHINE	2
7	PAOZZ	5935-01-522-8340	64466	16-760	ADAPTER,ELECTRICAL	1
8	PFOZZ	5310-00-038-9417	75418	3058-00843-06	WASHER,FLAT	2
9	PFOZZ	5310-01-501-0957	33968	35252600	NUT,SELF-LOCKING, HEX	2

END OF FIGURE

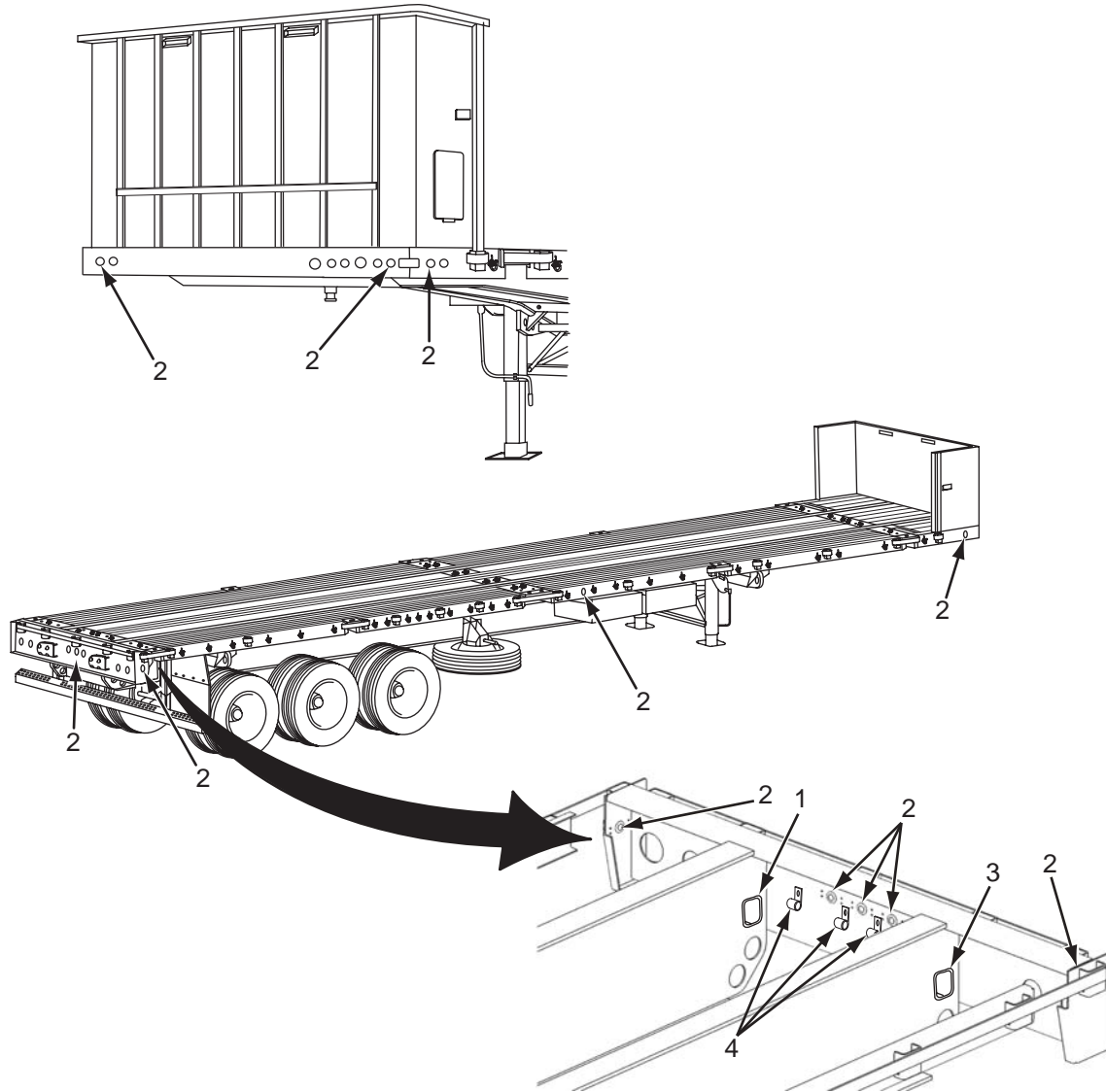


FIGURE 6. WIRING HARNESS CLAMPS AND GROMMETS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 0613 HULL OR CHASSIS WIRING HARNESS FIG. 6 WIRING HARNESS CLAMPS AND GROMMETS	(7) QTY
1	PAOZZ	5325-01-521-6977	18634	GR000150	GROMMET, NONMETALLIC, 3"	4
2	PAOZZ	5325-01-521-7412	18634	GR000149	GROMMET, NONMETALLIC, 3/4"	17
3	PAOZZ	5325-01-521-7378	18634	GR000148	GROMMET NONMETALLIC, 2 1/2"	7
4	PAOZZ	4730-01-522-3811	18634	PACL-19	CLAMP, HOSE	39

END OF FIGURE

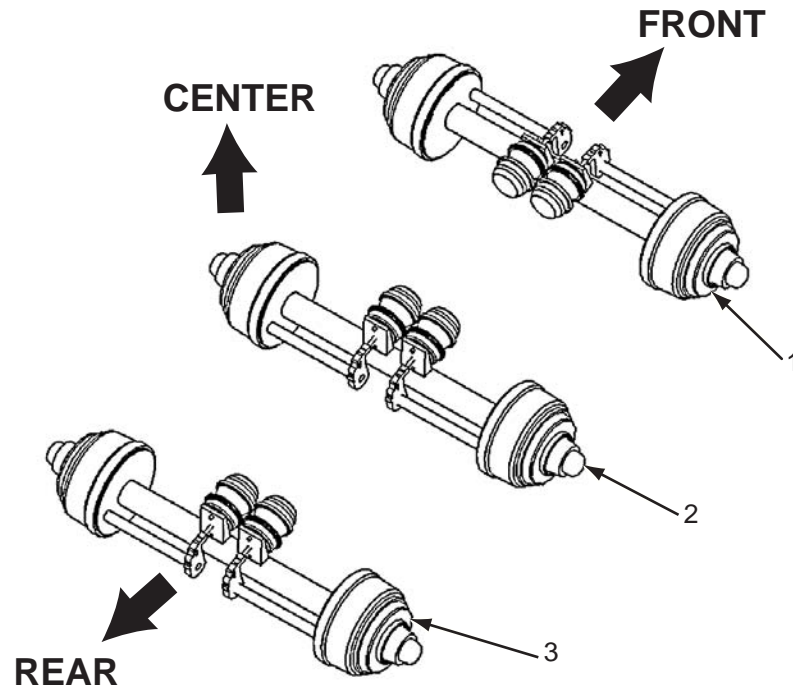


FIGURE 7. AXLE ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1100 REAR AXLE ASSEMBLY	(7) QTY
					FIG. 7 AXLE ASSEMBLY	
1	PFOZZ		18634	M872A4B07005	AXLE ASSEMBLY - FRONT	1
2	PFOZZ		18634	M872A4B07006	AXLE ASSEMBLY - CENTER	1
3	PFOZZ		18634	M872A4B07007	AXLE ASSEMBLY - REAR	1

END OF FIGURE

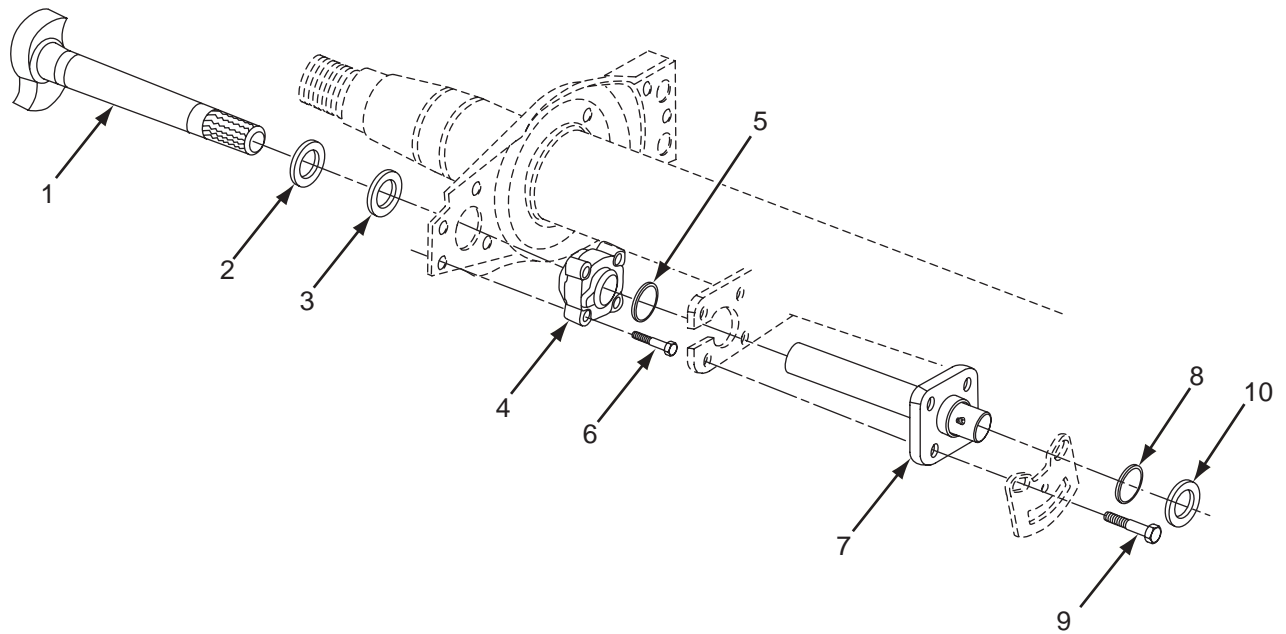


FIGURE 8. CAMSHAFT ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1202 SERVICE BRAKES	(7) QTY
					FIG. 8 CAMSHAFT ASSEMBLY	
1	PAOZZ	2530-01-499-3159	78500	2210-E-6869	CAMSHAFT,ACTUATING,BRAKE SHOE	3
1	PAOZZ	2530-01-499-3135	78500	2210-D-6868	CAMSHAFT,ACTUATING,BRAKE SHOE	3
2	PAOZZ	5310-01-499-3382	3D6E9	1229-R-4100	WASHER,RECESSED	6
3	PAOZZ	5330-01-328-6090	78500	1205-Q-2123	GASKET	6
4	PFOZZ	3120-01-521-8045	78500	A1-3105-Q-1213	BUSHING,RETAINER	6
5	PAOZZ	5331-01-521-7071	78500	1205-S-2697	O-RING	6
6	PAOZZ	5305-01-359-1367	78500	10-X-1421	SCREW,CAP	24
7	PAOZZ	2530-01-311-8410	3D6E9	A3105-V-282	PARTS KIT,BRAKE ADJUSTER	6
8	PAOZZ	5331-01-521-7078	78500	1205-F-2580	O-RING	6
9	PAOZZ	5305-01-315-3563	78500	10-X-1348	SCREW,CAP	24
10	PAOZZ	5310-01-133-5373	78500	1229-B-1848	WASHER,FLAT	6

END OF FIGURE

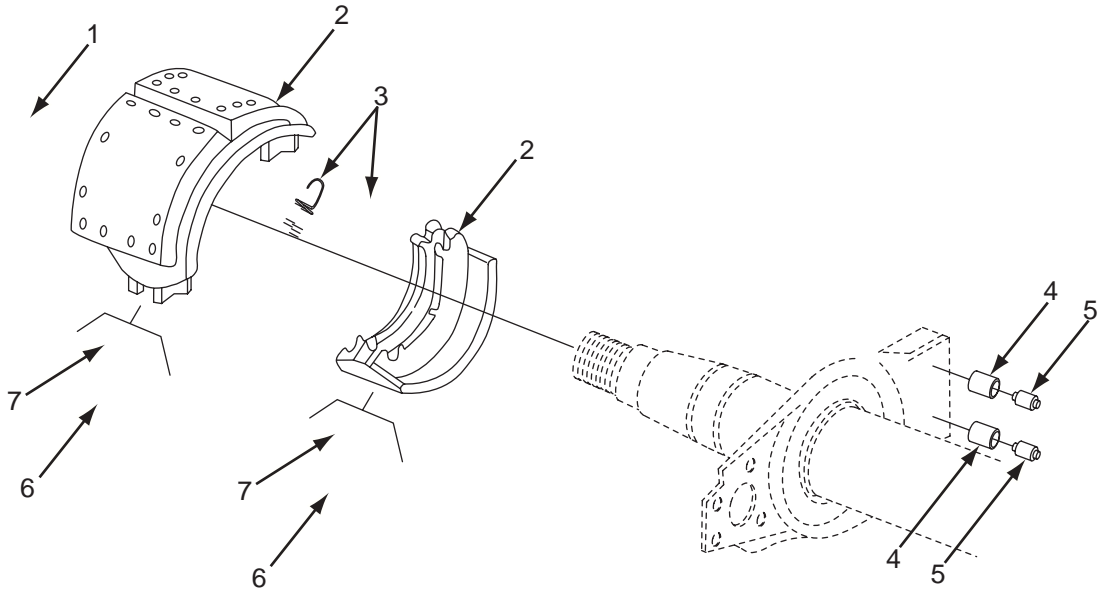


FIGURE 9. BRAKESHOE ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1202 SERVICE BRAKES FIG. 9 BRAKESHOE ASSEMBLY	(7) QTY
1	PAOZZ	5360-01-499-3396	3D6E9	2258-W-803	SPRING,HELICAL,COMPRESSION	6
2	PAOZZ	2530-01-522-0844	78500	SR4034707QPM	SHOE BRAKE SET	12
3	PAOZZ	5360-01-158-1974	3D6E9	2258-Q-615	SPRING, HELICAL, EXTENSION	12
4	PAOZZ	3120-00-255-6042	3D6E9	1225B496	BUSHING,ANCHOR PIN	12
5	PAOZZ	5315-01-129-6898	3D6E9	1259N274	PIN,SHOULDER,HEADLESS	12
6	PAOZZ	5340-01-328-4418	3D6E9	3105B210	CLIP,SPRING TENSION	12
7	KFOZZ	5315-01-344-0715	78500	M1779R18	PIN,SHOULDER,HEADLESS	12

END OF FIGURE

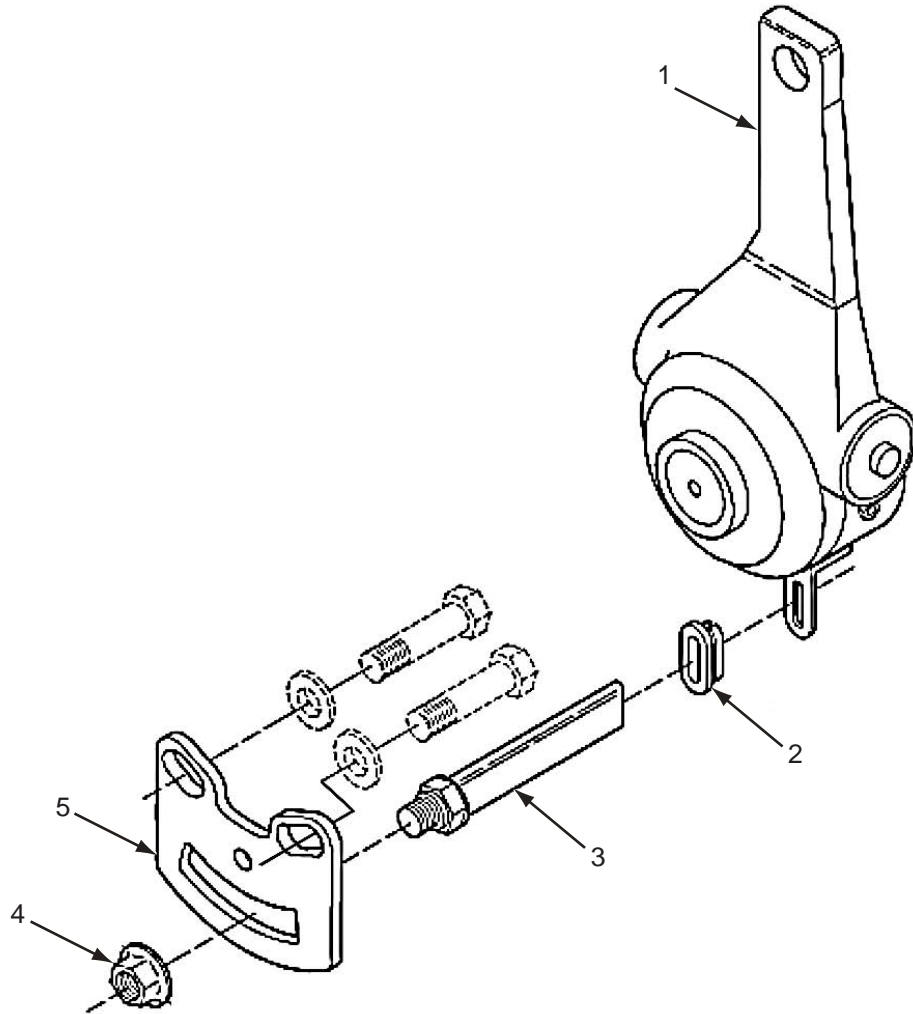


FIGURE 10. SLACK ADJUSTER

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1202 SERVICE BRAKES	(7) QTY
					FIG. 10 SLACK ADJUSTER	
1	PAOZZ	2530-01-499-3399	78502	409-10683	SLACK ADJUSTER, BRAKE	6
2	PAOZZ	5365-01-499-3408	78502	452-10125	BUSHING, NONMETALLIC	6
3	PAOZZ	5340-01-499-3404	78502	443-10290	STANDOFF, THREADED, SPACING	6
4	PAOZZ	5310-01-499-3438	78502	443-10204	NUT, PLAIN, EXTENDED	6
5	PAOZZ	5340-01-499-3405	78502	445-10467	BRACKET, MOUNTING	6

END OF FIGURE

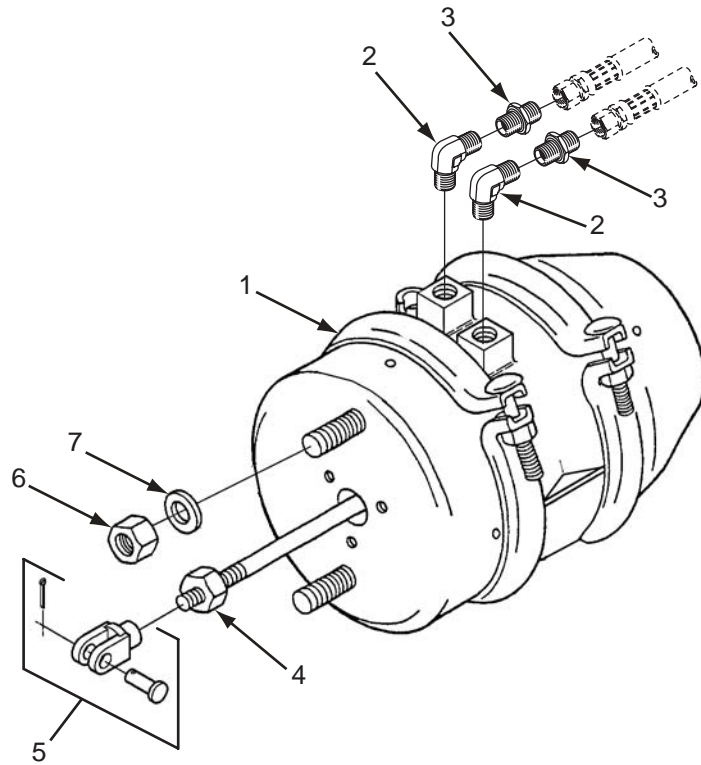


FIGURE 11. AIR BRAKE CHAMBER

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1208 AIR BRAKE SYSTEM	(7) QTY
					FIG. 11 AIR BRAKE CHAMBER	
1	PFOZZ		18634	M872A4K16006	CHAMBER,AIR BRAKE, LONG STROKE	6
2	PAOZZ	4730-00-278-4822	93061	2202P-6-6	ELBOW,PIPE	12
3	PAOZZ	4730-01-522-7184	93061	68RB-6-6	ADAPTER,STRAIGHT,PIPE TO HOSE	12
4	XDOZZ		06721	9999070	NUT,JAM	6
5	PFOZZ	2520-01-499-3439	0FBD6	52125333	UNIVERSAL JOINT,VEHICULAR	6
6	PFOZZ	5310-01-499-5413	06721	9999095	NUT,SELF-LOCKING,HEXAGON	12
7	PFOZZ	5310-01-499-5412	06721	9999093	WASHER,FLAT	12

END OF FIGURE

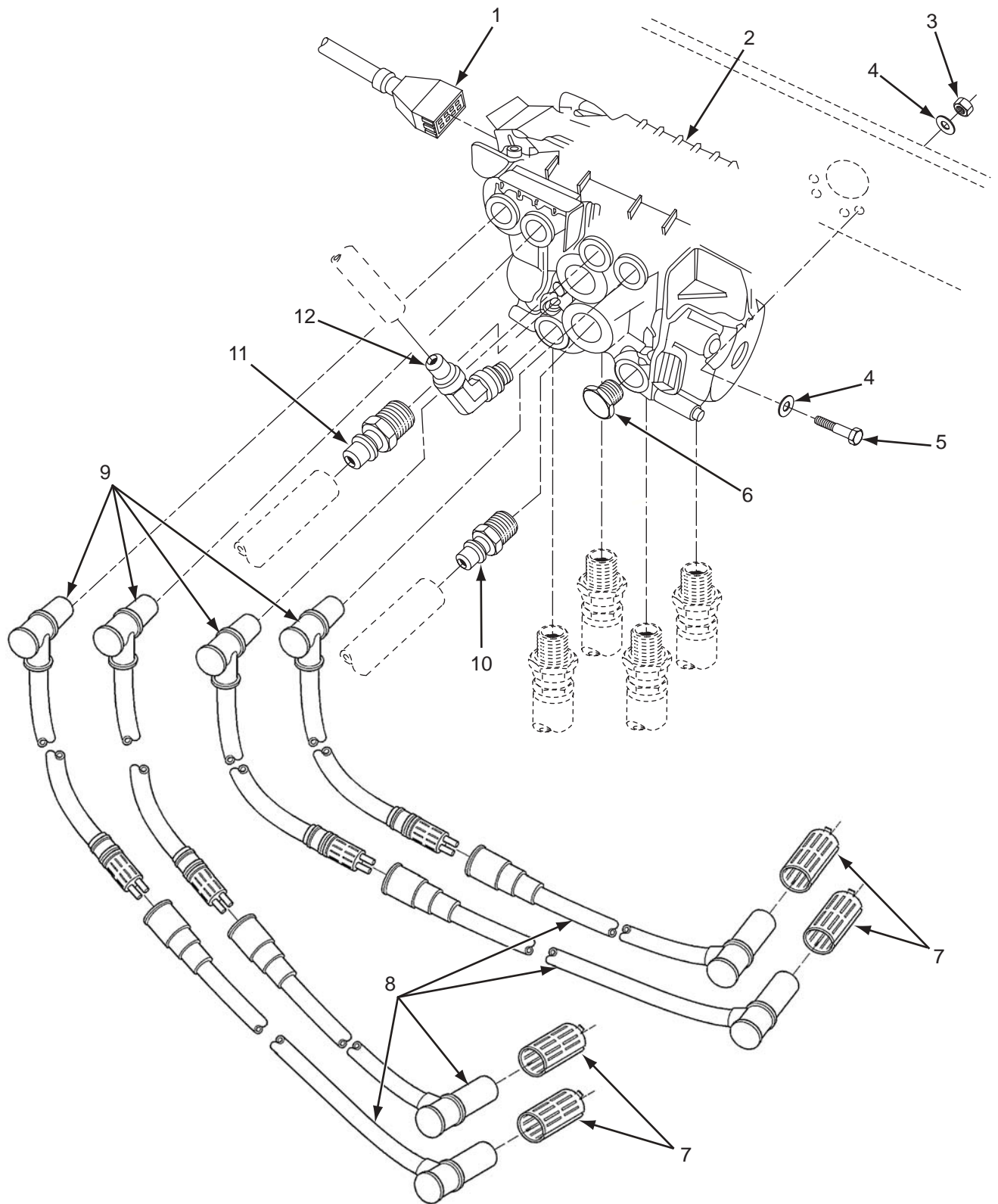


FIGURE 12. ABS ELECTRONIC CONTROL UNIT

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1208 AIRBRAKE SYSTEM FIG. 12 ABS ELECTRONIC CONTROL UNIT	(7) QTY
1	PFOZZ	6150-01-523-4908	18634	TAL-800	CABLE ASSEMBLY, POWER, ELECTRICAL	1
2	PAOZZ	4810-01-499-3407	78500	S4005001030	VALVE ASSEMBLY	1
3	PAOZZ	5310-00-100-6728	19207	8712289-10	NUT, SELF-LOCKING	2
4	PAOZZ	5310-00-318-3257	18876	8191298	WASHER, FLAT	4
5	PAOZZ	5305-00-984-5675	80205	MS35206-295	SCREW, MACHINE	2
6	PAOZZ	4730-00-427-5121	01276	2082-6B	PLUG, HEX HEAD	1
7	PAOZZ	5340-01-499-3481	78500	S8997598154	CLIP, SPRING TENSION	4
8	PAOZZ	6150-01-502-9447	3D6E9	441 032 809 0	CABLE ASSEMBLY, SPECIAL PURPOSE E	4
9	PAOZZ	2530-01-499-3170	78500	S4497130300	SENSOR, ANTI-LOCK BRAKE, VEHICULAR	4
10	PAOZZ	4730-01-134-7759	93061	68NTA 8-8	ADAPTER, STRAIGHT, PIPE TO HOSE	1
11	PAOZZ	4730-00-062-2570	93061	68NTA 6-4	ADAPTER, STRAIGHT, PIPE TO HOSE	1
12	PAOZZ	4730-01-244-1226	93061	VS269NTA 6-6	ELBOW, MALE	1

END OF FIGURE

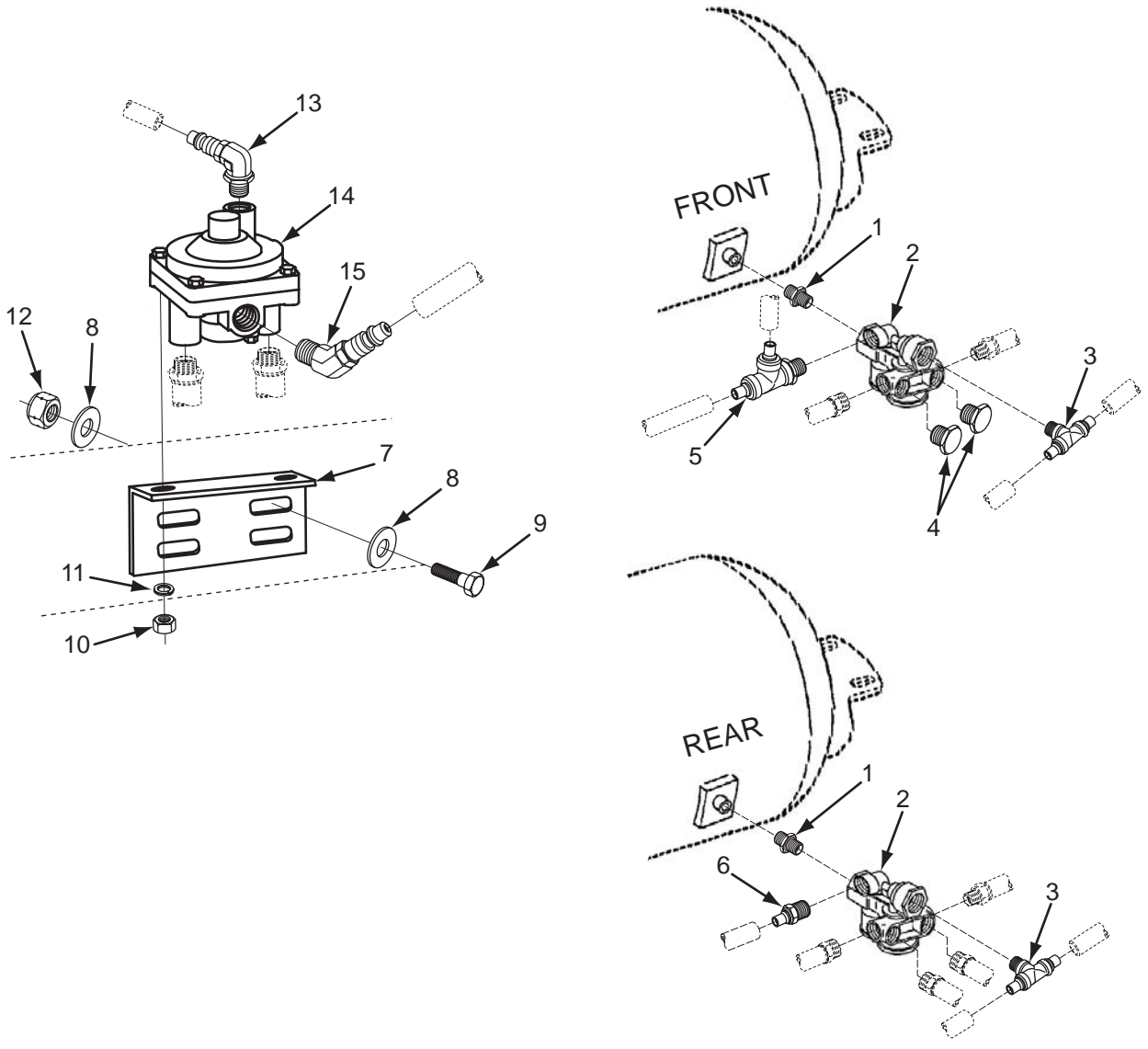


FIGURE 13. SPRING AND RELAY VALVES

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1208 AIRBRAKE SYSTEM	(7) QTY
FIG. 13 SPRING AND RELAY VALVES						
1	PAOZZ	4730-01-522-4083	18634	WAC3069-12-8	NIPPLE,BOSS	2
2	PFOZZ	4820-01-497-8729	10125	110500	VALVE,CHECK	2
3	PAOZZ	4730-01-283-1877	93061	VS272NTA-6-6	TEE,PIPE TO TUBE	2
4	PAOZZ	4730-00-427-5121	01276	2082-6B	PLUG,PIPE	2
5	PAOZZ	4730-01-086-4068	93061	271NTA-6-6	TEE,PIPE TO TUBE	1
6	PAOZZ	4730-01-096-9128	93061	68NTA-6-6	ADAPTER,STRAIGHT,PIPE TO TUBE	1
7	PAOZZ		10125	110485	BRACKET,MOUNTING	1
8	PAOZZ	5310-00-261-7340	78500	WA16	WASHER,LOCK	4
9	PAOZZ	5305-00-068-0511	80204	B1821BH038C125N	SCREW,CAP,HEXAGON HEAD	2
10	PAOZZ	5310-00-012-3475	24617	123475	NUT,PLAIN,HEXAGON	2
11	PAOZZ	5310-00-688-2195	96906	MS51848-12	WASHER, LOCK	2
12	PAOZZ	5310-00-087-4652	81349	M45913/1-6CG5C	NUT,SELF-LOCKING	2
13	PAOZZ	4730-01-244-1226	93061	VS269NTA-6-6	ELBOW,MALE	1
14	PAOZZ		10125	110365	VALVE, RELAY	1
15	PAOZZ	4730-01-079-3275	93061	VS279NTA-8-8	ELBOW 45 DEGREE	1

END OF FIGURE

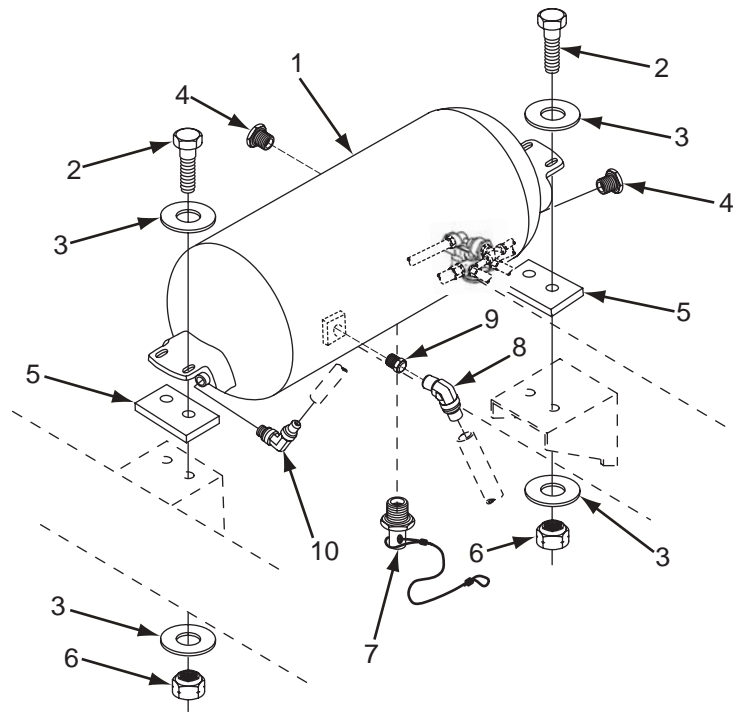


FIGURE 14. AIR RESERVOIR

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1208 AIR BRAKE SYSTEM	(7) QTY
FIG. 14 AIR RESERVOIR						
1	PAOZZ	2530-01-521-7839	1V6N4	HT-12116	TANK,PRESSURE	2
2	PAOZZ	5305-00-068-0511	80204	B1821BH038C125N	SCREW,CAP,HEXAGON HEAD	8
3	PAOZZ	5310-00-261-7340	78500	WA16	WASHER,LOCK	16
4	PAOZZ	4730-00-427-5121	01276	2082-6B	PLUG,PIPE	2
5	PAOZZ	5330-01-521-6967	1V6N4	HT-1068	PACKING,PREFORMED	4
6	PAOZZ	5310-00-087-4652	81349	M45913/1-6CG5C	NUT,SELF-LOCKING	8
7	PAOZZ	4820-01-499-3653	0N972	401095	COCK,DRAIN	2
8	PAOZZ	4730-01-079-3275	93061	VS279NTA-8-8	ELBOW,PIPE TO TUBE	2
9	PAOZZ	4730-00-278-3167	93061	209P-12-8	BUSHING,PIPE	2
10	PAOZZ	4730-01-244-1226	93061	VS269NTA-6-6	ELBOW,PIPE TO TUBE	2

END OF FIGURE

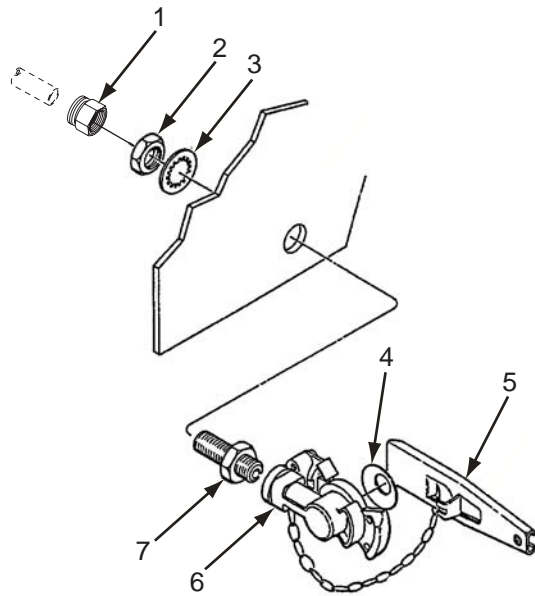


FIGURE 15. GLADHAND COUPLINGS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1208 AIRBRAKE SYSTEM	(7) QTY
FIG. 15 GLADHAND COUPLINGS						
1	PAOZZ	4730-00-062-2570	93061	68NTA6-4	ADAPTER,STRAIGHT,PIPE TO HOSE	2
2	PAOZZ	5310-00-325-1900	80205	NAS1021N17	NUT,SELF-LOCKING	2
3	PAOZZ	5310-00-582-6714	96906	MS35333-49	WASHER,LOCK	2
4	PAOZZ	5330-00-090-2128	06853	213630	PACKING,PREFORMED	2
5	PAOZZ	2530-00-137-9235	19207	7411021	DUMMY COUPLING, AUTO	2
6	PAOOZ	5342-01-336-7391	64466	12-006	COUPLING,CLAMP,GROOVED	1
6	PAOOZ	4730-01-244-5365	64466	12008	COUPLING,HALF,QUICK DISCONNECT	1
7	PAOZZ	2590-00-778-0324	58429	N11246	COUPLING,TRAILER	2

END OF FIGURE

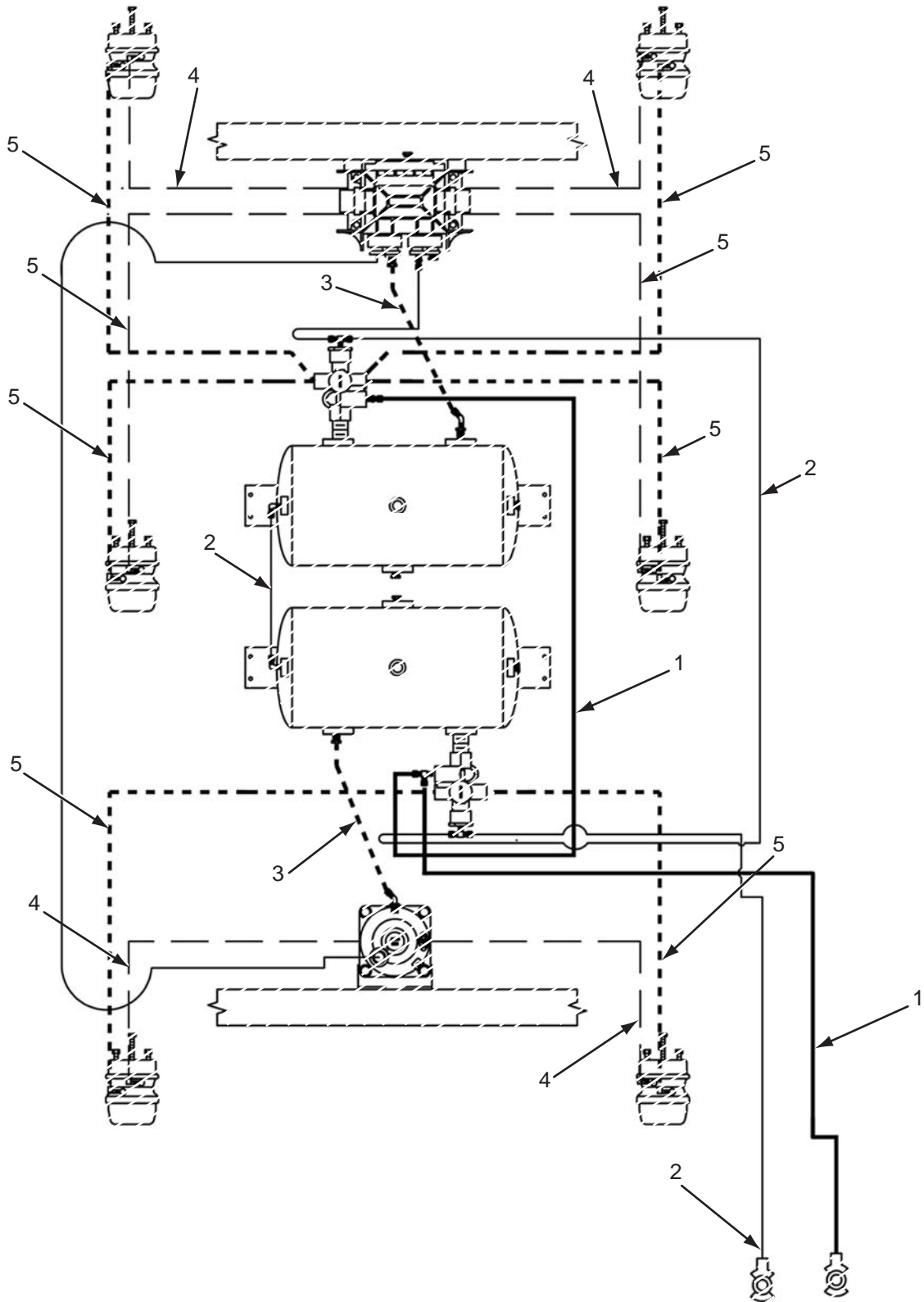


FIGURE 16. AIR BRAKE SYSTEM

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1208 AIRBRAKE SYSTEM	(7) QTY
					FIG. 16 AIR BRAKE SYSTEM	
1	MFOZZ		18634	RED 12	AIR LINE 3/8 RED MAKE FROM PN 48-00101-22	V
2	MFOZZ		18634	BLU 38	AIR LINE 3/8 BLUE MAKE FROM PN PFT-6B-BLU	V
3	MFOZZ		18634	RED 38	AIR LINE 1/2 RED MAKE FROM PN PFT-6B-RED	V
4	PAOZZ	4720-00-441-4926	19239	6-6336	HOSE ASSEMBLY, NONMETALLIC	4
5	PAOZZ	4720-00-442-5781	27315	44Z104903	HOSE ASSEMBLY, NONMETALLIC	8

END OF FIGURE

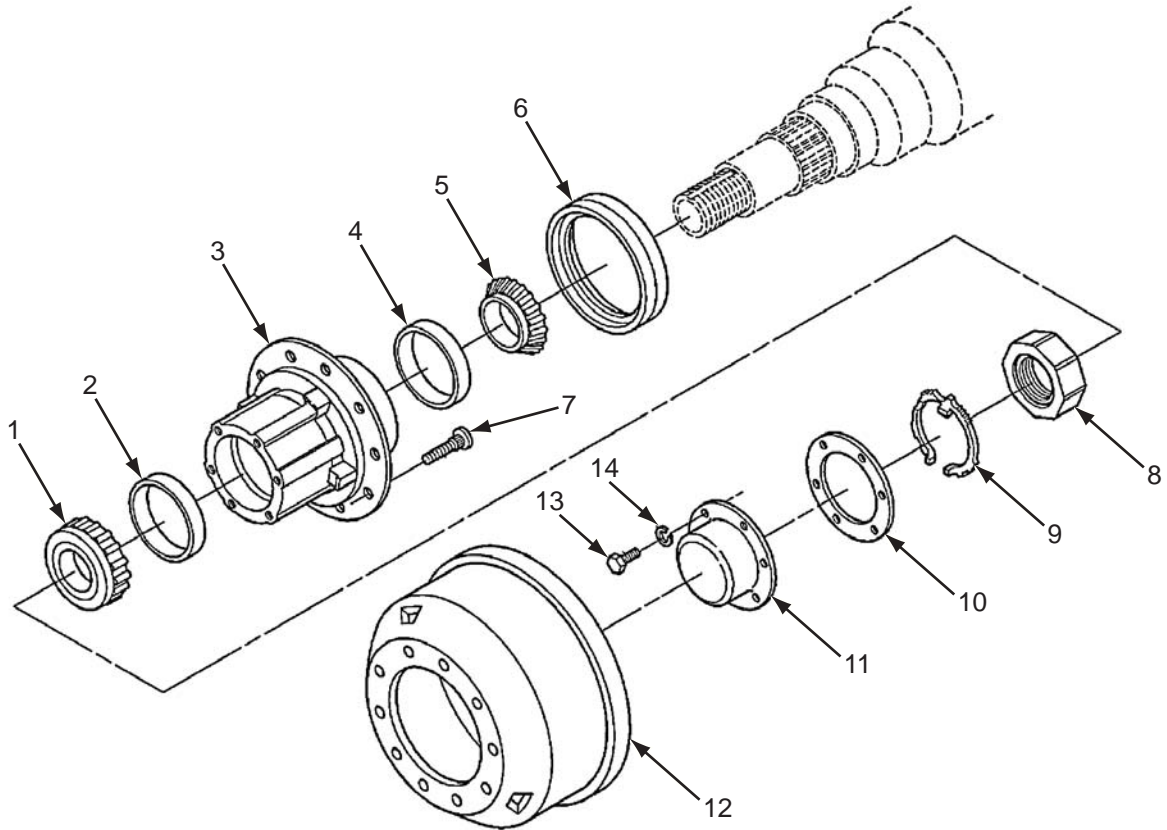


FIGURE 17. HUB AND DRUM ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1311 WHEEL ASSEMBLY	(7) QTY
FIG. 17 HUB AND DRUM ASSEMBLY						
1	PFOZZ	3110-00-293-8998	60038	HM212049	CONE AND ROLLERS, TAPERED ROLLER BEARING	6
2	PFOZZ	3110-00-293-8997	60038	HM212011	CUP, TAPERED ROLLER	6
3	PAOZZ	3040-01-522-7348	78500	14-15501-513	HUB, BODY	6
4	PFOZZ	3110-00-618-0249	60038	HM218210	CUP, TAPERED ROLLER	6
5	PFOZZ	3110-00-618-0248	60038	HM218248	CONE AND ROLLERS, TAPERED ROLLER	6
6	PFOZZ	5330-01-047-9367	78500	KITSTNGS	SEAL, PLAIN	6
7	PAOZZ	5307-01-521-6985	78500	09-001989	STUD, PLAIN	60
8	PAOZZ	5310-01-499-5416	26151	447-4743	NUT, SELF-LOCKING, ASSEMBLED WASHER	6
9	XDOZZ		26151	450-4723	KEEPER, ARM	6
10	PAOZZ	5330-01-387-7303	3D6E9	2208N430 NON-ASB	GASKET, HUBCAP	6
11	PAOZZ	3040-01-521-7837	78500	3262-X-1376	HUB, BODY	6
12	PAOZZ	2530-01-322-9360	78500	03123207002	DRUM, BRAKE	6
13	PFOZZ	5306-00-226-4827	80204	B1821BH031C100N	BOLT, MACHINE	36
14	PFOZZ	5310-00-407-9566	96906	MS35338-45	WASHER, LOCK	36

END OF FIGURE

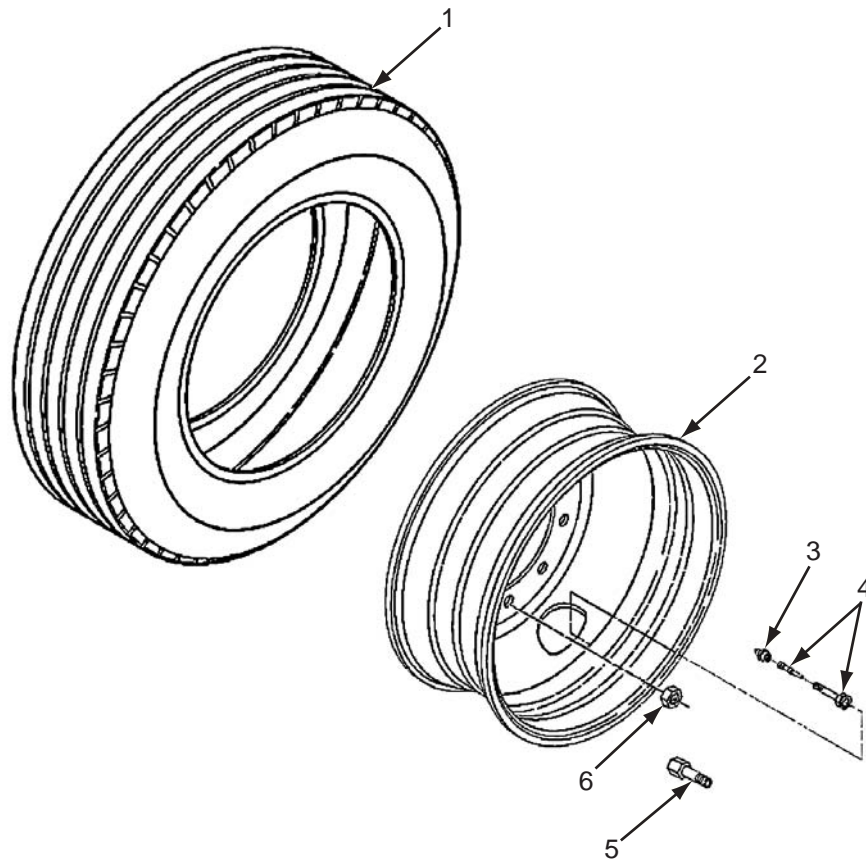


FIGURE 18. WHEEL ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1311 WHEEL ASSEMBLY	(7) QTY
					FIG. 18 WHEEL ASSEMBLY	
1	PCOHH	2610-01-481-5378	12195	62165	TIRE	13
2	PAOZA	2530-01-478-7603	73195	28408PG	WHEEL,PNEUMATIC,TIRE	13
3	PFOZZ	2640-01-098-2029	17875	627	CAP,PNEUMATIC VALVE	13
4	PAOZZ	2640-00-555-2824	27783	TR573	VALVE,PNEUMATIC,TIRE	13
5	PAOZZ	2640-00-050-0827	21450	500827	VALVE EXTENSION,TIRE	6
6	PFOZZ	5310-01-499-3489	0FBD6	50990007	NUT,PLAIN,HEXAGON	60

END OF FIGURE

1
2 THRU 10

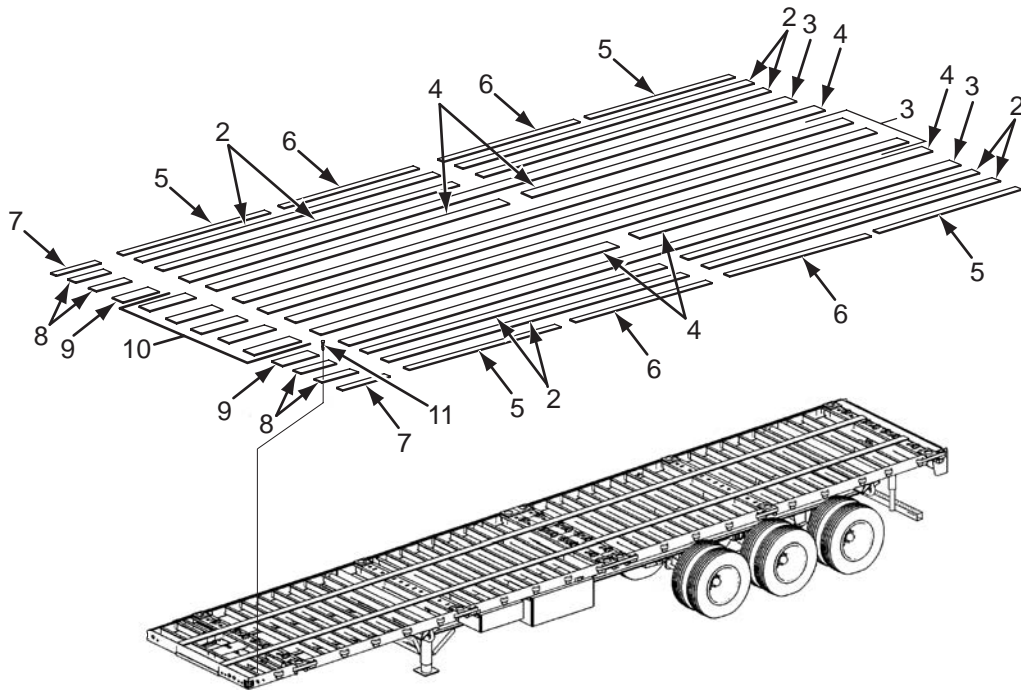


FIGURE 19. PLATFORM ASSEMBLY FLOORBOARDS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1501 FRAME ASSEMBLY	(7) QTY
					FIG. 19 PLATFORM ASSEMBLY FLOORBOARDS	
1	PAOZZ	2510-01-521-8018	8N013	M872-A4	PARTS KIT,FLOOR,VEHICULAR	1
2	PFOZZ	2510-01-521-8034	8N013	872A4C	.FLOOR,BODY,VEHICULAR 5.25x223	8
3	PFOZZ	2510-01-521-8027	8N013	872A4A	.FLOOR,BODY,VEHICULAR 6.5x464.5	5
4	PFOZZ	2510-01-521-7025	8N013	872A4D	.FLOOR,BODY,VEHICULAR 6.5x223	4
5	PFOZZ	2510-01-521-8033	8N013	872A4B	.FLOOR,BODY,VEHICULAR 5x112	4
6	PFOZZ		8N013	872A4E	.FLOOR,BODY,VEHICULAR 5x101	4
7	PFOZZ		8N013	872A4F	.FLOOR,BODY,VEHICULAR 5x31.75	2
8	PFOZZ		8N013	872A4G	.FLOOR,BODY,VEHICULAR 5.25X26	4
9	PFOZZ		8N013	872A4H	.FLOOR,BODY,VEHICULAR 6.5X26	2
10	PFOZZ		8N013	872A4I	.FLOOR,BODY,VEHICULAR 6.5X32.83	5
11	PAOZZ	5305-01-193-2358	98255	SW14342P	SCREW,TAPPING	600

END OF FIGURE

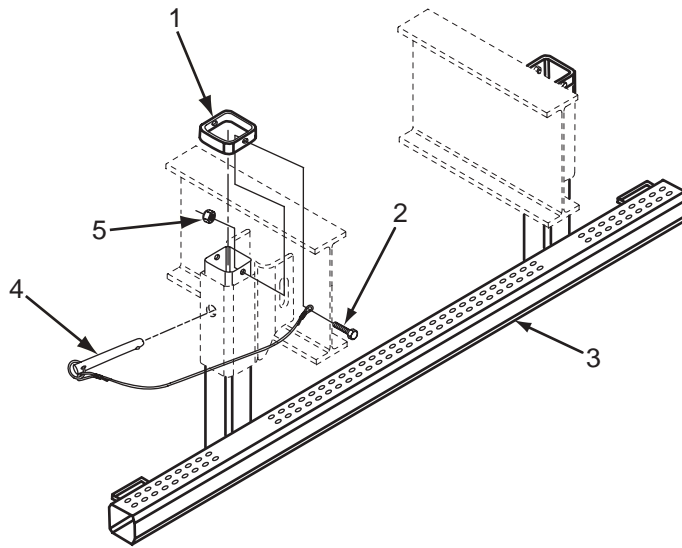


FIGURE 20. BUMPER ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1501 FRAME ASSEMBLY	(7) QTY
					FIG. 20 BUMPER ASSEMBLY	
1	PAOZZ		18634	M872A4C14007	BUMPER, RAISEABLE STOP	2
2	PAOZZ	5306-00-019-0882	24617	190882	BOLT, MACHINE	4
3	PFOZZ		18634	M872A4C14009	BUMPER, RAISEABLE	1
4	PAOZZ	5315-01-521-8342	39428	98404A290	PIN, QUICK, RELEASE	2
5	PAOZZ	5310-00-050-3275	24617	144178	NUT, SELF-LOCKING, HEXAGON	4

END OF FIGURE

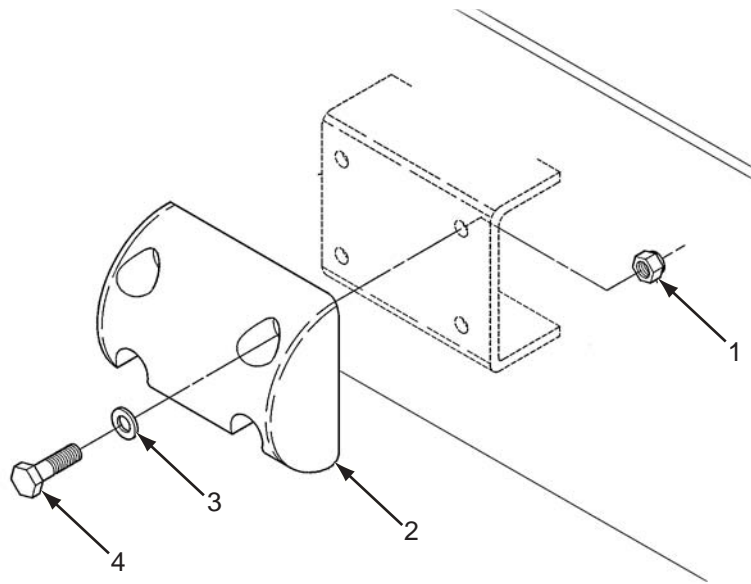


FIGURE 21. DOCK BUMPER

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1501 FRAME ASSEMBLY	(7) QTY
					FIG. 21 DOCK BUMPER	
1	PAOZZ	5310-00-225-6993	81349	M45913/1-8CG5C	NUT, SELF-LOCKING	8
2	PAOZZ	5340-01-112-6396	83473	TB-20	BUMPER, RUBBER	2
3	PAOZZ	5310-00-809-5998	96906	MS27183-18	WASHER, FLAT	8
4	PAOZZ	5305-00-071-2074	80204	B1821BH050C275N	SCREW, CAP, HEXAGON, H	8

END OF FIGURE

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[2,3,4]

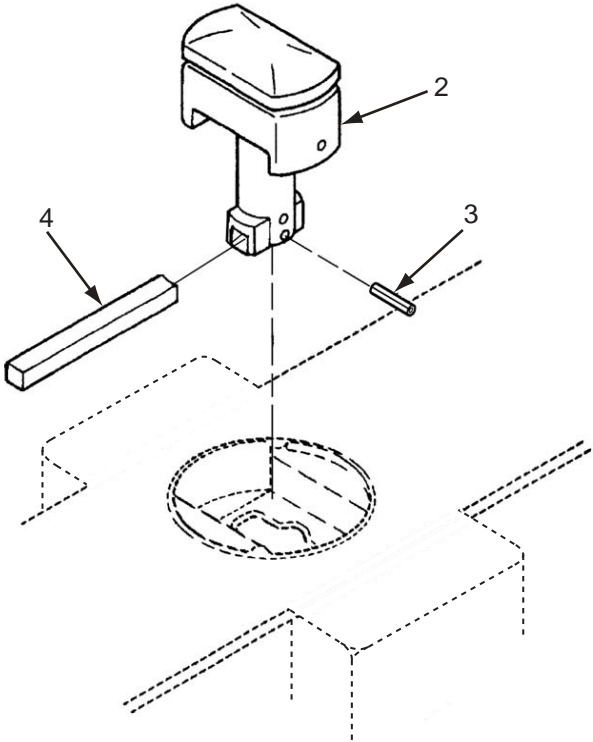


FIGURE 22. TWIST LOCK ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1501 FRAME ASSEMBLY	(7) QTY
					FIG. 22 TWIST LOCK ASSEMBLY	
1	PAOOO	5325-01-514-9957	94658	F804-1-3	FASTENER ASSY, TURN LOCK	12
2	XAOZZ		94658	XAF804-1-3	.TURN LOCK	1
3	PAOZZ	5315-01-499-4195	94658	PRP08-56L	..PIN, SPRING	1
4	PAOZZ	5340-01-499-4198	94658	PH2968-4	..LEVER, MANUAL CONTROL	1
END OF FIGURE						

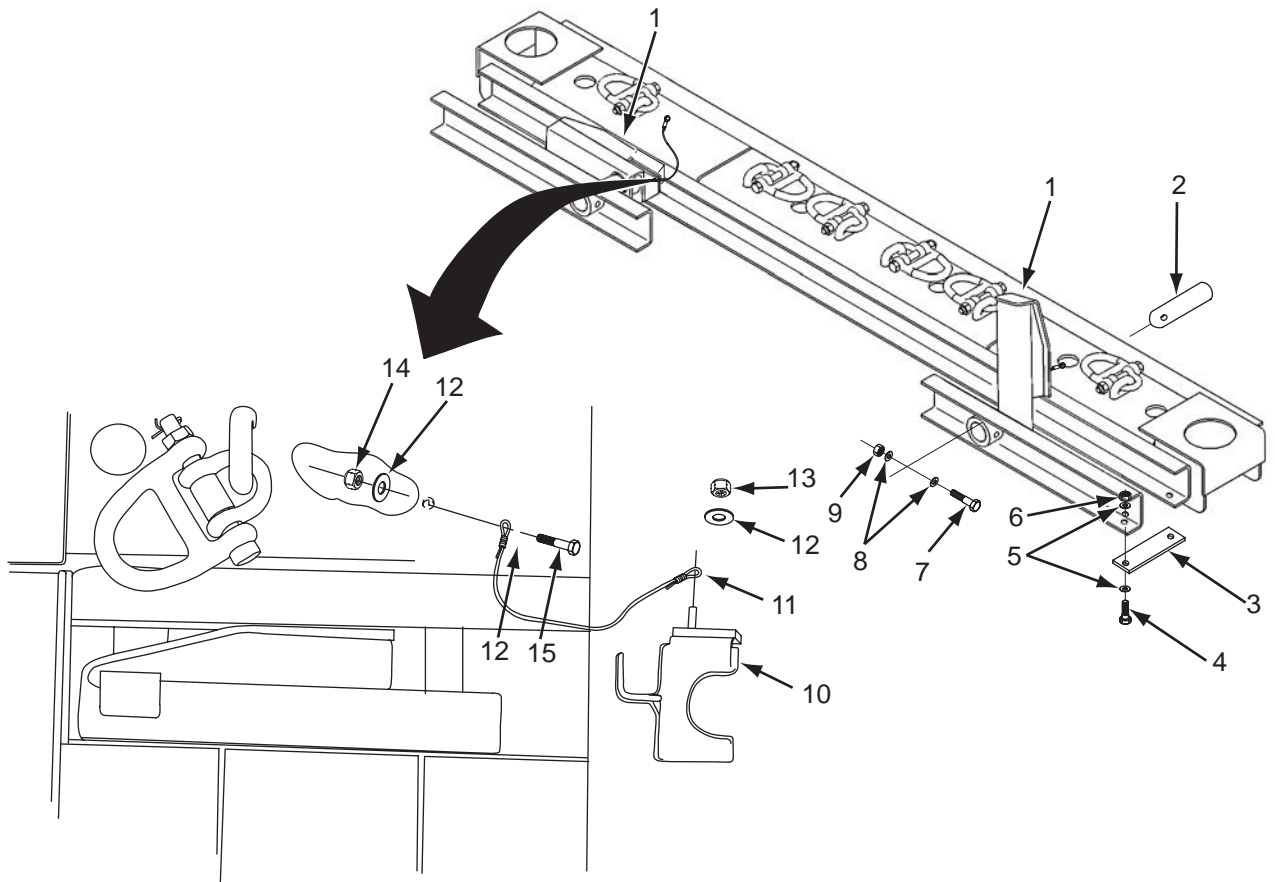


FIGURE 23. CONTAINER GUIDE ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1501 FRAME ASSEMBLY	(7) QTY
FIG 23. CONTAINER GUIDE ASSEMBLY						
1	PAOZZ	5365-01-522-3137	18634	M872A4B13001-LH	SPACER,SLEEVE	1
1	PAOZZ	5365-01-522-3149	18634	M872A4B13001-RH	SPACER,SLEEVE	1
2	PFOZZ	3040-01-522-7819	18634	M872A4C13005	SHAFT,SHOULDERED	2
3	PAOZZ	5340-01-522-0049	18634	M872A4C13010	BUMPER,METALLIC	2
4	PAOZZ	5305-00-273-7408	80205	MS24677-67	SCREW,CAP,SOCKET HEAD	4
5	PAOZZ	5310-01-507-0186	30226	100030	WASHER,LOCK	4
6	PAOZZ	5310-00-022-0066	80212	P40	NUT,PLAIN,HEXAGON	4
7	PAOZZ	5305-01-118-8861	96906	MS51105-424	SCREW,CAP,HEXAGON HEAD	2
8	PAOZZ	5310-01-494-4110	12361	7950150141	WASHER,FLAT	4
9	PAOZZ	5310-01-231-7459	81349	M45913/3-8CG8P	NUT,SELF-LOCKING	2
10	PAOZZ	2590-01-524-6554	18634	M872A4B13002	BRACKET,VEHICULAR	2
11	PAOZZ	4010-01-521-7502	39428	90312A640	WIRE ROPE ASSEMBLY	2
12	PAOZZ	5310-00-011-4948	99238	940B616	WASHER,FLAT	6
13	PAOZZ	5310-00-297-3879	78553	A1037012	NUT,PUSH	2
14	PAOZZ	5310-00-050-3275	24617	144178	NUT,LOCK	2
15	PAOZZ	5306-00-019-0882	24617	190882	BOLT,MACHINE	2

END OF FIGURE

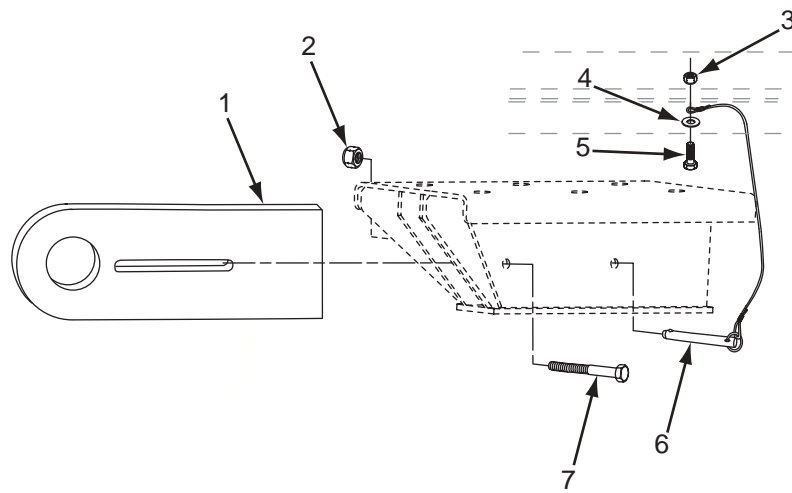


FIGURE 24. SLING PROVISION

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1501 FRAME ASSEMBLY	(7) QTY
					FIG. 24 SLING PROVISION	
1	PAOZZ		18634	M872A4C06006	LIFTING PROVISION	4
2	PAOZZ	5310-01-231-7459	81349	M45913/3-8CG8P	NUT,SELF-LOCKING	4
3	PAOZZ	5310-00-050-3275	24617	144178	NUT,SELF-LOCKING	4
4	PAOZZ	5310-00-011-4948	99238	940B616	WASHER,FLAT	4
5	PAOZZ	5306-00-019-0882	24617	190882	BOLT,MACHINE	4
6	PAOZZ	5315-01-521-8342	39428	98404A290	PIN,QUICK RELEASE	4
7	PAOZZ	5305-01-118-8861	96906	MS51105-424	SCREW,CAP,HEXAGON HEAD	4

END OF FIGURE

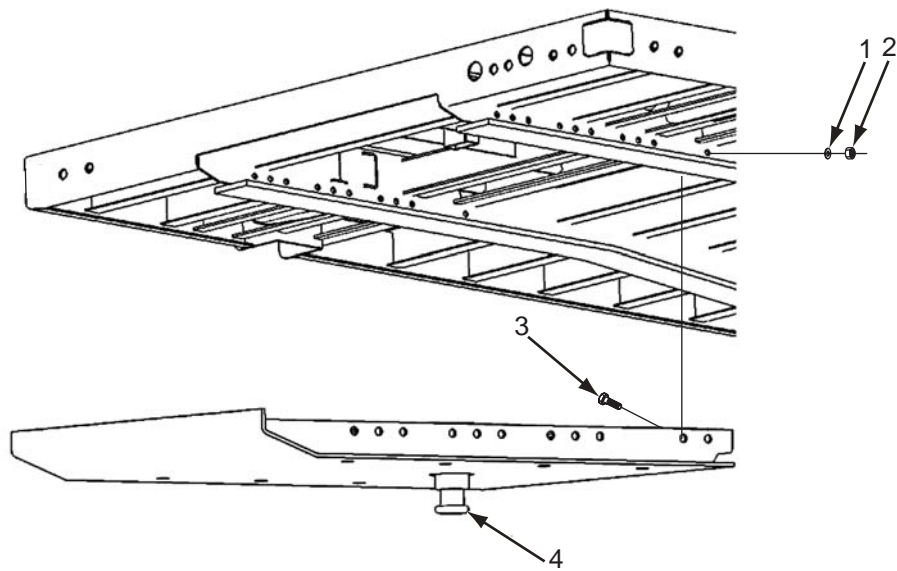


FIGURE 25. UPPER COUPLER PLATE

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1503 PINTLES AND TOWING ATTACHMENTS FIG. 25 UPPER COUPLER PLATE	(7) QTY
1	PAFZZ	5310-00-773-8384	80378	CV15-490557-3	WASHER, FLAT	22
2	PAFZZ	5310-00-198-6691	24617	274639	NUT, SELF-LOCKING	22
3	PAFZZ	5306-01-187-0643	80204	B1821BH063F150C	BOLT	22
4	PFFZZ	2510-01-522-6011	18634	M872A4B01001	KINGPIN, FIFTH WHEEL	1
END OF FIGURE						

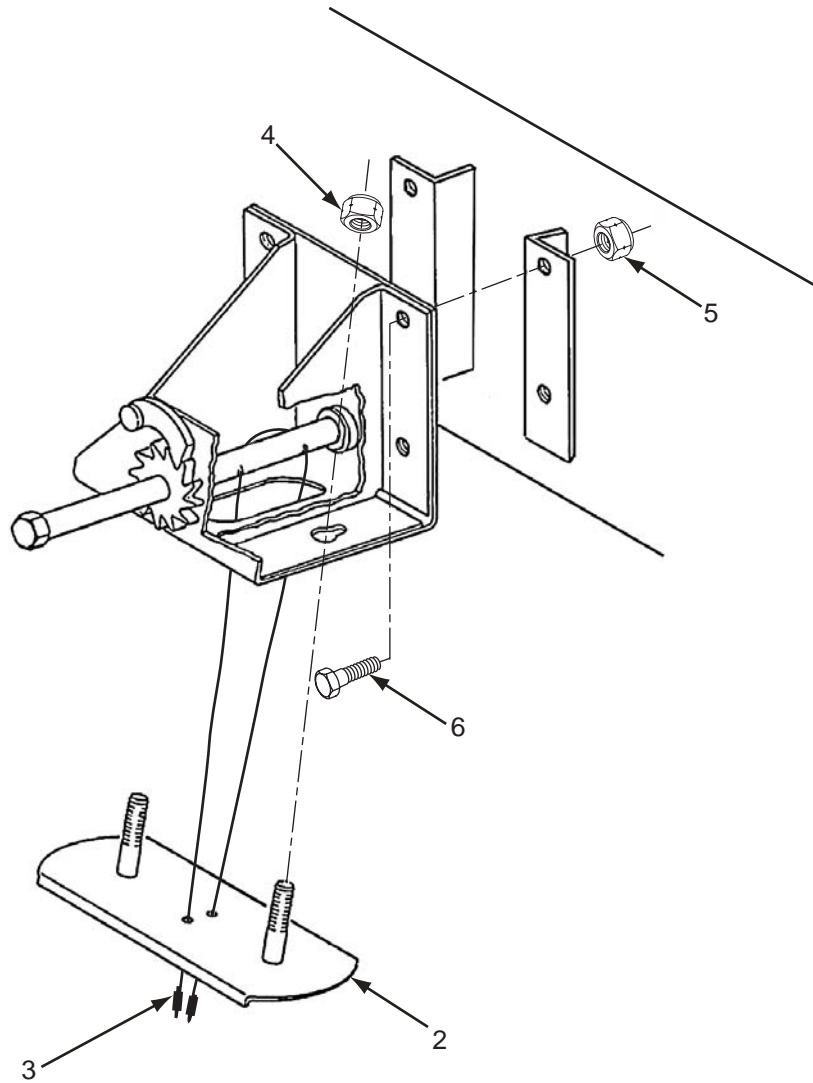
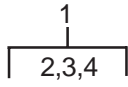


FIGURE 26. SPARE WHEEL CARRIER

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1504 SPARE WHEEL CARRIER AND TIRE LOCK	(7) QTY
					FIG. 26 SPARE WHEEL CARRIER	
1	PAOZZ	2590-01-336-9937	64678	A22-52996-000	BRACKET,VEHICULAR	1
2	PAOZZ	5340-01-336-6446	64678	FITC-05	.BRACKET,DOUBLE ANGLE	1
3	PAOZZ	4030-01-245-4168	96906	MS51844-65	.SWAGGING SLEEVE,WIRE	2
4	PAOZZ	5310-00-915-4891	96906	MS51967-21	.NUT,PLAIN HEXAGON	2
5	PAOZZ	5310-00-269-4040	81349	M45913/1-10CG5C	NUT,SELF-LOCKING HEX	4
6	PAOZZ	5305-00-724-7223	80204	B1821BH063C225N	SCREW,CAP,HEXAGON HEAD	4

END OF FIGURE

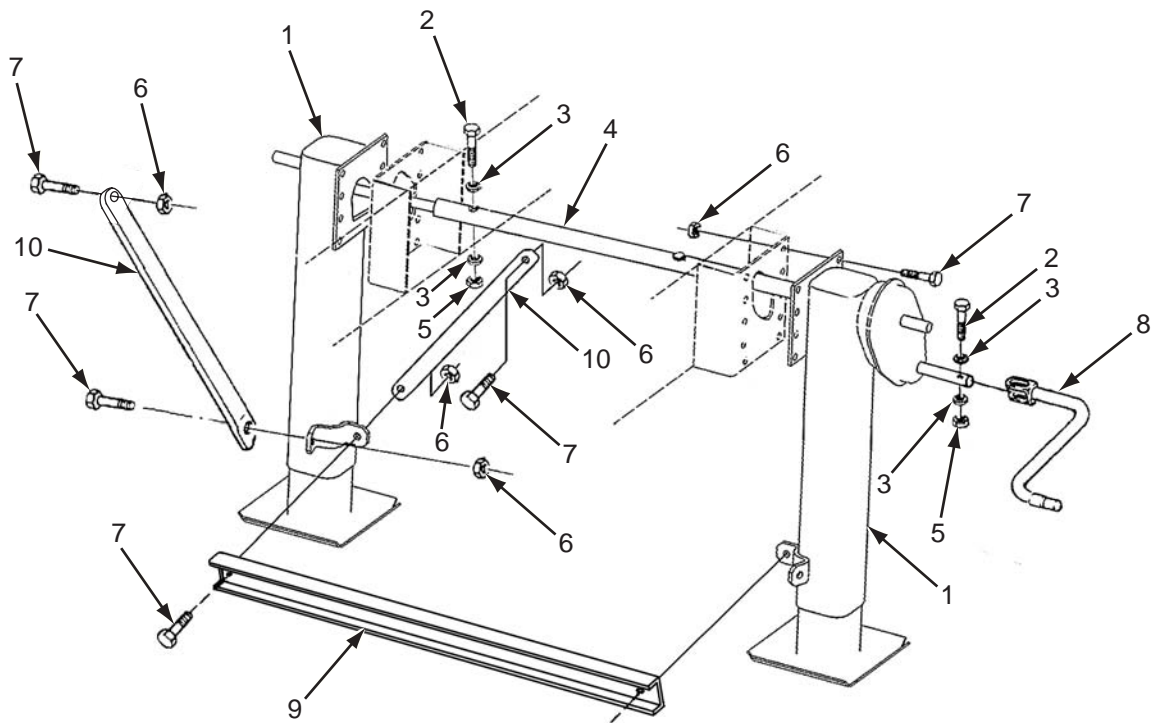


FIGURE 27. LANDING GEAR AND MOUNTING HARDWARE

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1507 LANDING GEAR, LEVELING JACKS FIG. 27 LANDING GEAR AND MOUNTING HARDWARE	(7) QTY
1	PFOZZ	2590-01-522-6745	74410	XA-S8-5C024-533	SUPPORT,RETRACTABLE,LEFT	1
1	PFOZZ	2590-01-522-6749	74410	XA-S9-5C024-533	SUPPORT,RETRACTABLE,RIGHT	1
2	PAOZZ	5305-01-521-6993	74410	XB-V-444-4	SCREW,CAP,HEXAGON HEAD	3
3	PAOZZ	5310-01-522-1709	74410	XB-1108	WASHER,FLAT	6
4	PFOZZ	3040-01-521-9922	74410	XA-V-1910-533	SHAFT,STRAIGHT	1
5	PAOZZ	5310-00-005-0447	72962	79NE066	NUT,SELF-LOCKING,HEX	3
6	PAOZZ	5310-00-269-4040	81349	M45913/1-10CG5C	NUT,SELF-LOCKING,HEX	24
7	PAOZZ	5305-00-724-7223	80204	B1821BH063C225N	SCREW,CAP,HEXAGON HEAD	24
8	PFOZZ	5340-01-521-8248	74410	XA-V-90-10-533	HANDLE,CRANK	1
9	PAOZZ	5340-01-522-1265	18634	M872A4B12002	BRACKET,SUPPORT,HORIZONTAL	1
10	PFOZZ	5340-01-521-6748	18634	BUSB2624	BRACKET,MOUNTING	4

END OF FIGURE

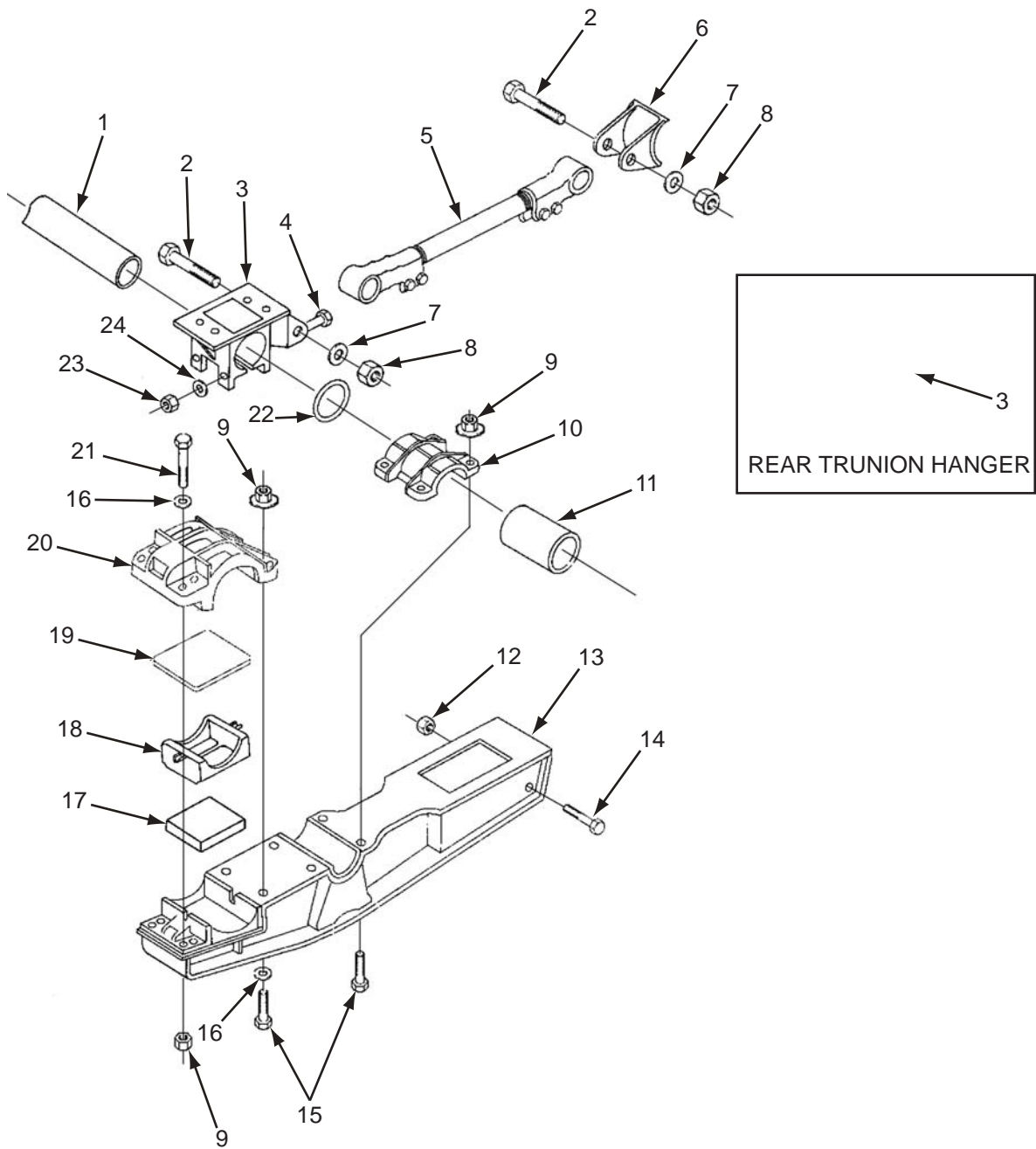


FIGURE 28. THREE AXLE SUSPENSION ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1601 SPRINGS	(7) QTY
FIG. 28 THREE AXLE SUSPENSION ASSEMBLY						
1	PFOZZ	4710-01-243-3391	92967	11446-00	TUBE, METALLIC	1
2	PFOZZ	5306-01-197-1491	92967	11448-00	BOLT, MACHINE	4
3	PBOZZ	2590-01-522-1707	92967	11447-01	BRACKET, VEHICULAR COMPONENTS	2
3	PBOZZ	5340-01-521-9470	92967	11453-00	BRACKET, DOUBLE ANGLE	2
4	PFOZZ	5305-01-192-5742	92967	11456-00	SCREW, CAP, HEXAGON HEAD	4
5	PFOZZ	2530-01-174-0464	92967	11451-00	ROD, ALIGNING, VEHICULAR AXLE	2
6	PFOZZ	5340-01-521-8442	92967	11437-00	BRACKET, RING, SUCTION CANISTER	2
7	PAOZZ	5310-01-098-7246	92967	837-00	WASHER, FLAT	4
8	PFOZZ	5310-01-194-5006	92967	11449-00	NUT, SELF-LOCKING	4
9	PFOZZ	5310-01-192-9307	92967	11514-00	NUT, PLAIN, EXTENDED WASHER	40
10	PFOZZ	5340-01-245-3948	92967	11434-00	STRAP, RETAINING	4
11	PFOZZ	5365-01-198-6608	92967	11442-00	BUSHING, NONMETALLIC	4
12	PFOZZ	5310-01-099-6539	92967	37-03	NUT, SELF-LOCKING	4
13	PFFZZ	5340-01-245-3947	92967	11441-00	STRAP, RETAINING	4
14	PFOZZ	5305-01-195-5042	92967	11439-00	SCREW, CAP, HEXAGON HEAD	4
15	PFOZZ	5305-01-198-4649	80204	7/8-14UNF-2AX2.500-GR8ZINCPLT	SCREW, CAP, HEXAGON HEAD	24
16	PFOZZ	5310-01-195-7956	92967	35-00	WASHER, FLAT	72
17	PFOZZ	5340-01-250-0785	92967	11433-00	BUMPER, NONMETALLIC	4
18	PFOZZ	2520-01-448-9400	92967	11432-00	AXLE ADAPTER	4
19	PFOZZ	5330-01-191-3457	92967	11445-00	RUBBER STRIP	4
20	PFOZZ	5340-01-245-3949	92967	11444-00	STRAP, RETAINING	4
21	PAOZZ	5305-01-244-7970	80204	B1821BH088F750N	SCREW, CAP, HEXAGON HEAD	8
22	PFOZZ	5310-01-244-7572	92967	11452-00	WASHER, FLAT	4
23	PAOZZ	5310-01-098-7827	92967	841-00	NUT, SELF-LOCKING	4
24	PAOZZ	5310-01-098-7245	92967	817-00	WASHER FLAT	4

END OF FIGURE

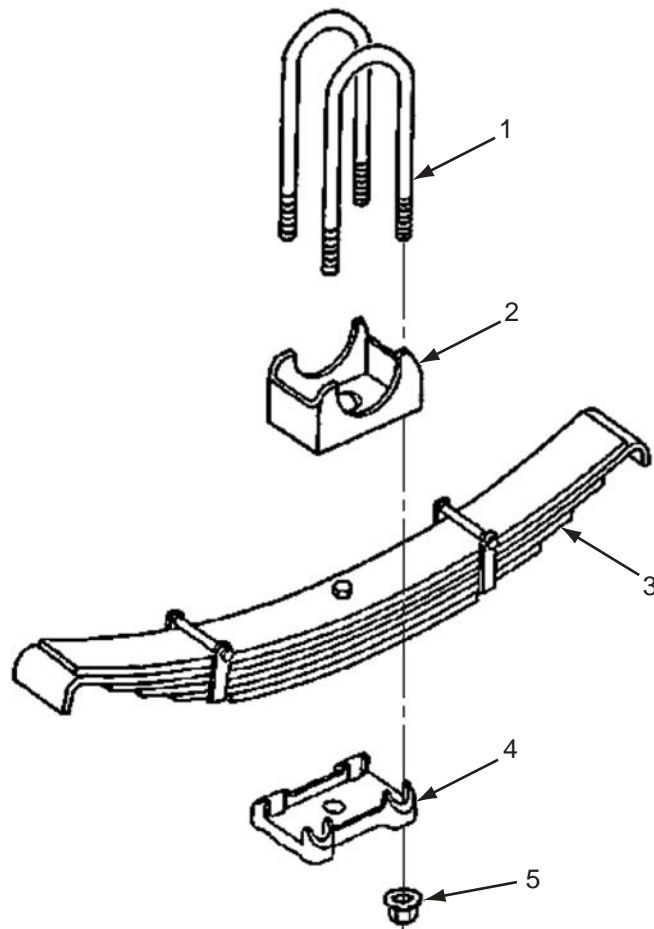


FIGURE 29. THREE AXLE SPRINGS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1601 SPRINGS FIG. 29 THREE AXLE SPRINGS	(7) QTY
1	PFOZZ	5306-01-522-3339	92967	7816-08	BOLT,U	4
2	PFOZZ	5340-01-521-8443	92967	11497-00	SEAT,BALL SOCKET	2
3	PFFZZ	2510-01-243-4940	92967	11436-00	SPRING ASSEMBLY LEAF	2
4	PFFZZ	2510-01-191-6644	92967	11438-00	PLATE,WEAR,LEAF SPRING	2
5	PFOZZ	5310-01-192-9307	92967	11514-00	NUT,PLAIN,EXTENDED WASHER	8

END OF FIGURE

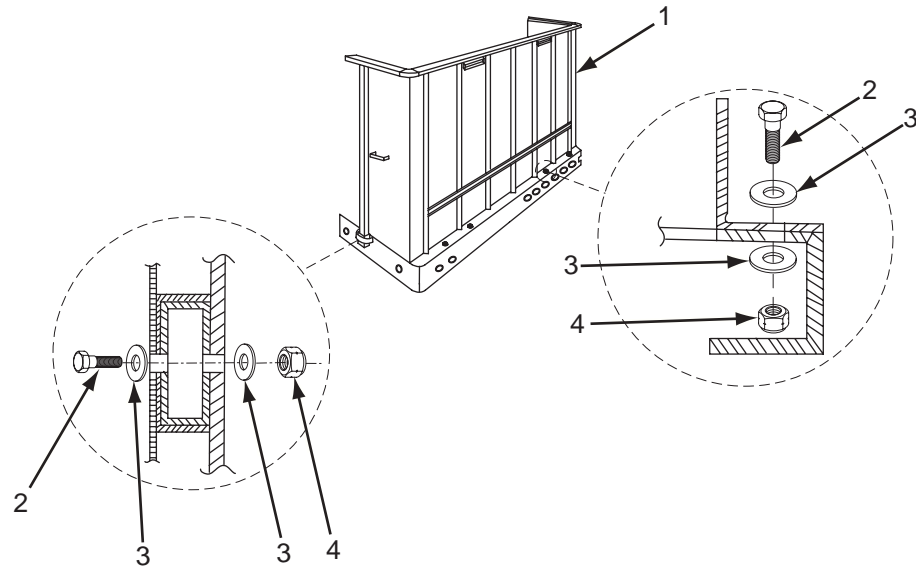


FIGURE 30. BULKHEAD ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES	(7) QTY
					GROUP 1801 BODY, CAB, HOOD, AND HULL ASSEMBLIES	
					FIG. 30 BULKHEAD ASSEMBLY	
1	PFOZZ	2510-01-522-5990	18634	0610-489622-MIL	PANEL,BODY,VEHICULAR	1
2	PAOZZ	5306-01-521-9291	18634	0810-660816	BOLT	6
3	PAOZZ	5310-01-522-0850	18634	0820-680810	WASHER,FLAT	12
4	PAOZZ	5306-01-522-6560	18634	0810-860836	BOLT,ASSEMBLED WASHER	6

END OF FIGURE

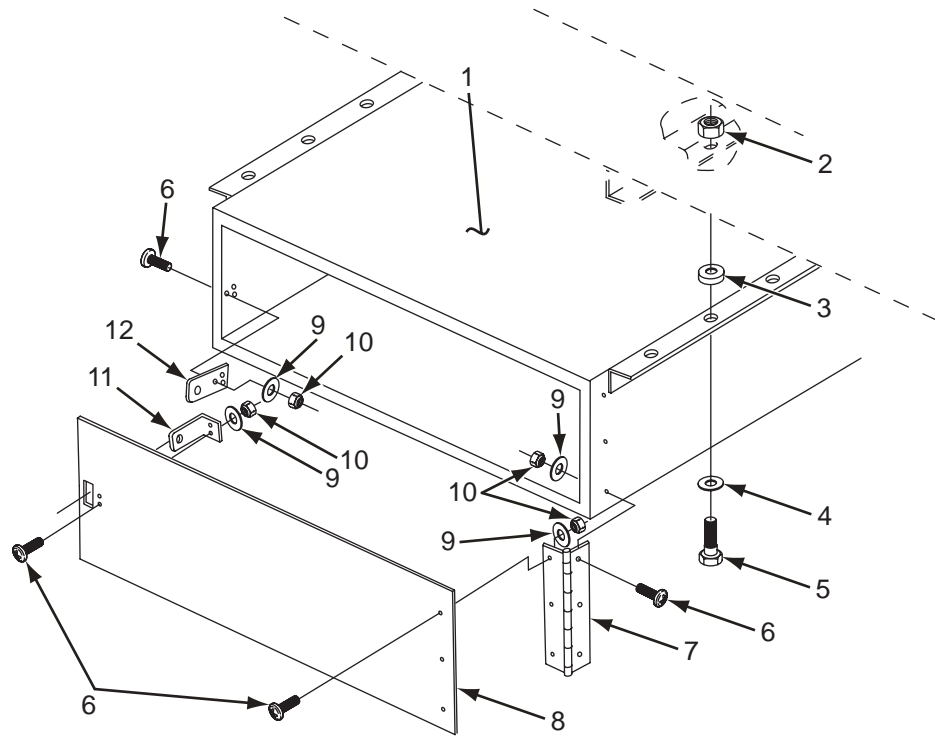


FIGURE 31. STOWAGE COMPARTMENT ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1808 STOWAGE RACKS, BOXES, STRAPS, CARRYING CASES, CABLE REELS, HOSE REELS, ETC. FIG. 31 STOWAGE COMPARTMENT ASSEMBLY	(7) QTY
1	PFOOO	2540-01-522-6482	18634	0630-112432-DS	BOX,ACC,STOW,SM	1
1	PFOOO	2540-01-522-6489	18634	0630-182446-DS	BOX,ACC,STOW,LG	1
1	PFOOO	2540-01-522-6497	18634	0630-112432-PS	BOX,ACC,STOW,SM	2
2	PAOZZ	5310-00-014-5855	53711	2533408PC16	NUT,SELF-LOCKING	32
3	PAOZZ	5310-00-832-7798	19207	8327798	WASHER,FLAT	32
4	PAOZZ	5310-00-011-4948	99238	940B616	WASHER,FLAT	32
5	PAOZZ	5306-01-163-2429	96906	MS18154-66L	BOLT,MACHINE	32
6	PFOZZ	5305-01-521-9304	18634	0810-670451	SCREW,MACHINE	50
7	PFOZZ	5340-01-521-9575	18634	0631-861104	HINGE,ACCESS,DOOR,SM	3
7	PFOZZ	5340-01-521-9615	18634	0631-861103	HINGE,ACCESS,DOOR,LG	1
8	PFOZZ	5340-01-521-9597	18634	0631-861101	DOOR,ACCESS,GENERAL,SM	3
8	PFOZZ	5340-01-521-9565	18634	0631-861102	DOOR,ACCESS,GENERAL,LG	1
9	PFOZZ	5310-01-521-8566	18634	0820-680410	WASHER,FLAT	50
10	PFOZZ	5310-01-521-9335	18634	0815-660451	NUT,SELF-LOCKING	50
11	PFOZZ	5340-01-521-9270	18634	0631-861106	LATCH,THUMB	4
12	PFOZZ	5340-01-521-9268	18634	0631-861105	LATCH,MORTISE	4

END OF FIGURE

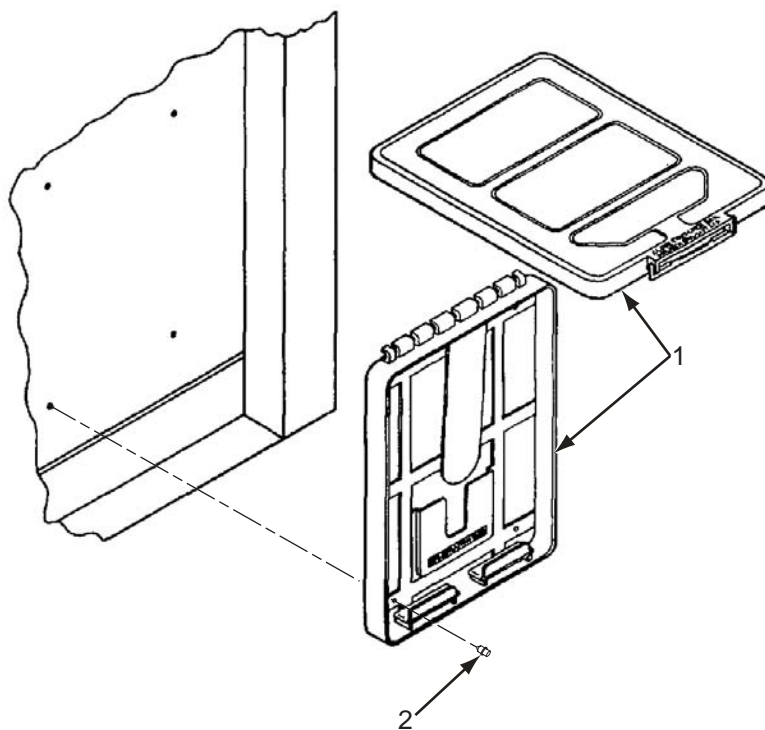


FIGURE 32. DOCUMENT BOX

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 1808 STOWAGE RACKS, BOXES, STRAPS, CARRYING CASES, CABLE REELS, HOSE REELS, ETC. FIG. 32 DOCUMENT BOX	(7) QTY
1	PAOZZ	7520-01-324-3687	1JA34	550	BOX,DOCUMENT	1
2	PAOZZ	5320-01-521-7618	39428	98780A214	RIVET,BLIND	4

END OF FIGURE

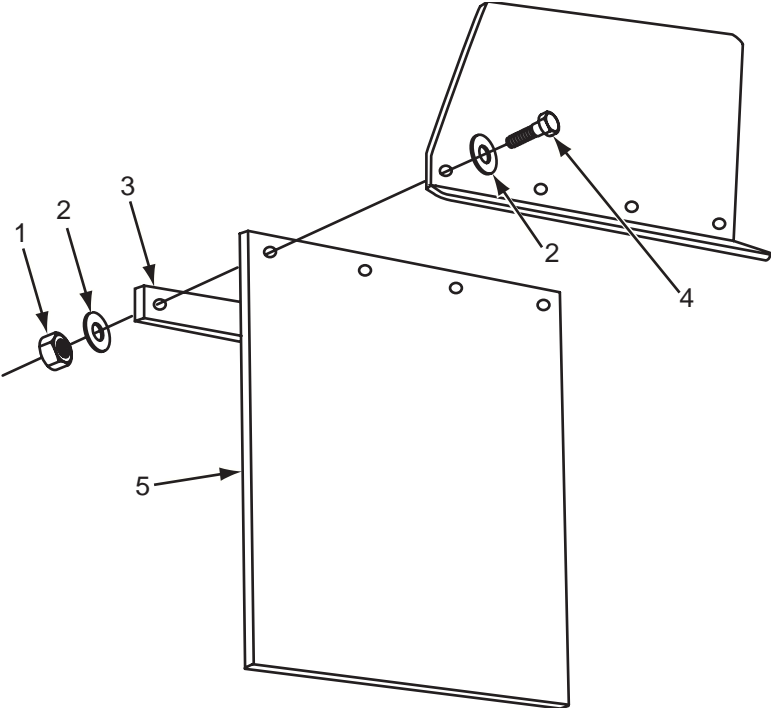


FIGURE 33. MUDFLAP ASSEMBLY

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 2202 ACCESSORY ITEMS	(7) QTY
FIG. 33 MUDFLAP ASSEMBLY						
1	PAOZZ	5310-00-022-0066	19207	BBAX1C	NUT,PLAIN,HEXAGON	8
2	PAOZZ	5310-01-494-4110	12361	7950150141	WASHER,FLAT	16
3	PFOZZ		18634	M872A4C08007	STRIP,RETAINING	2
4	PAOZZ	5305-00-273-7408	80205	MS24677-67	SCREW,CAP,SOCKET HEAD	8
5	PAOZZ		18634	MU-M872A4	MUDFLAP	2

END OF FIGURE

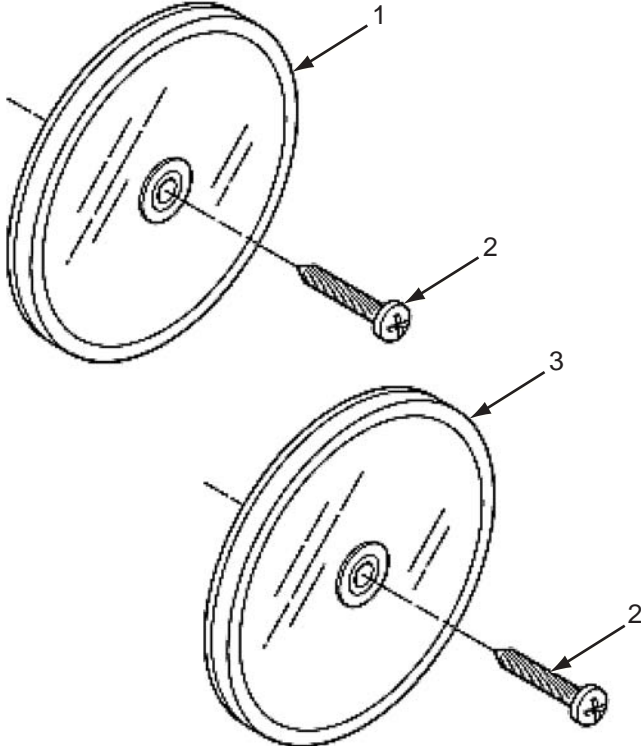


FIGURE 34. REFLECTORS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 2202 ACCESSORY ITEMS	(7) QTY
					FIG. 34 REFLECTORS	
1	PAOZZ	9905-01-070-0471	13548	98007Y	REFLECTOR, INDICATING, AMBER	6
2	PAOZZ	5305-01-499-5551	0FBD6	52100010	SCREW, SELF-TAPPING	8
3	PAOZZ	9905-01-069-7282	13548	98007R	REFLECTOR, INDICATING, RED	2

END OF FIGURE

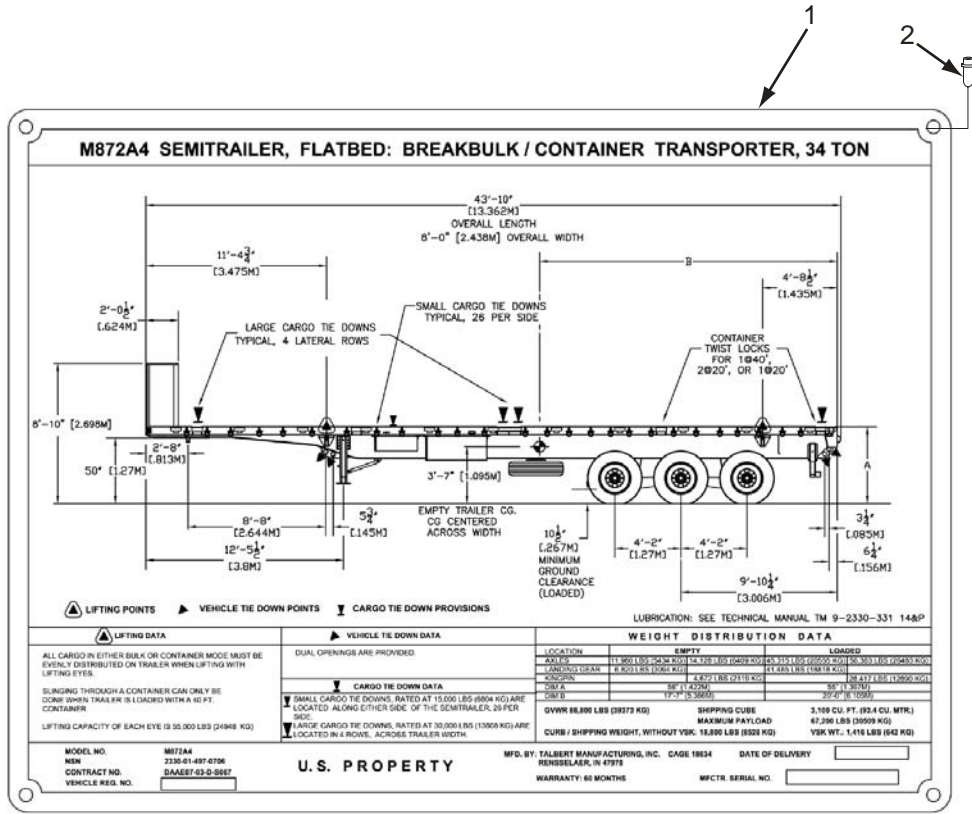


FIGURE 35. DATA PLATE

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 2202 ACCESSORY ITEMS	(7) QTY
					FIG. 35 DATA PLATE	
1	PFOZZ		18634	M872A4C17001	DATA PLATE	1
2	PAOZZ	5320-01-521-7618	39428	98780A214	RIVET,BLIND	4

END OF FIGURE

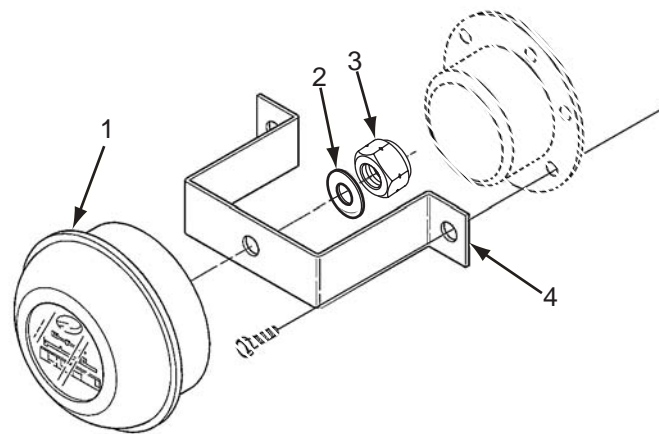


FIGURE 36. HUBODOMETER

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 2202 ACCESSORY ITEMS	(7) QTY
					FIG. 36 HUBODOMETER	
1	PAOZZ	6680-01-522-1212	79142	777717-510	COUNTER,ROTATING	1
2	PAOZZ	5310-01-522-6840	79142	0885005-952	WASHER,FLAT	1
3	PAOZZ	5310-01-522-6843	79142	0513900-048	NUT,SELF-LOCKING	1
4	PFOZZ	5340-01-522-0980	79142	325614-107	BRACKET,MOUNTING	1

END OF FIGURE

1
2 THRU 7

8
9 THRU 14

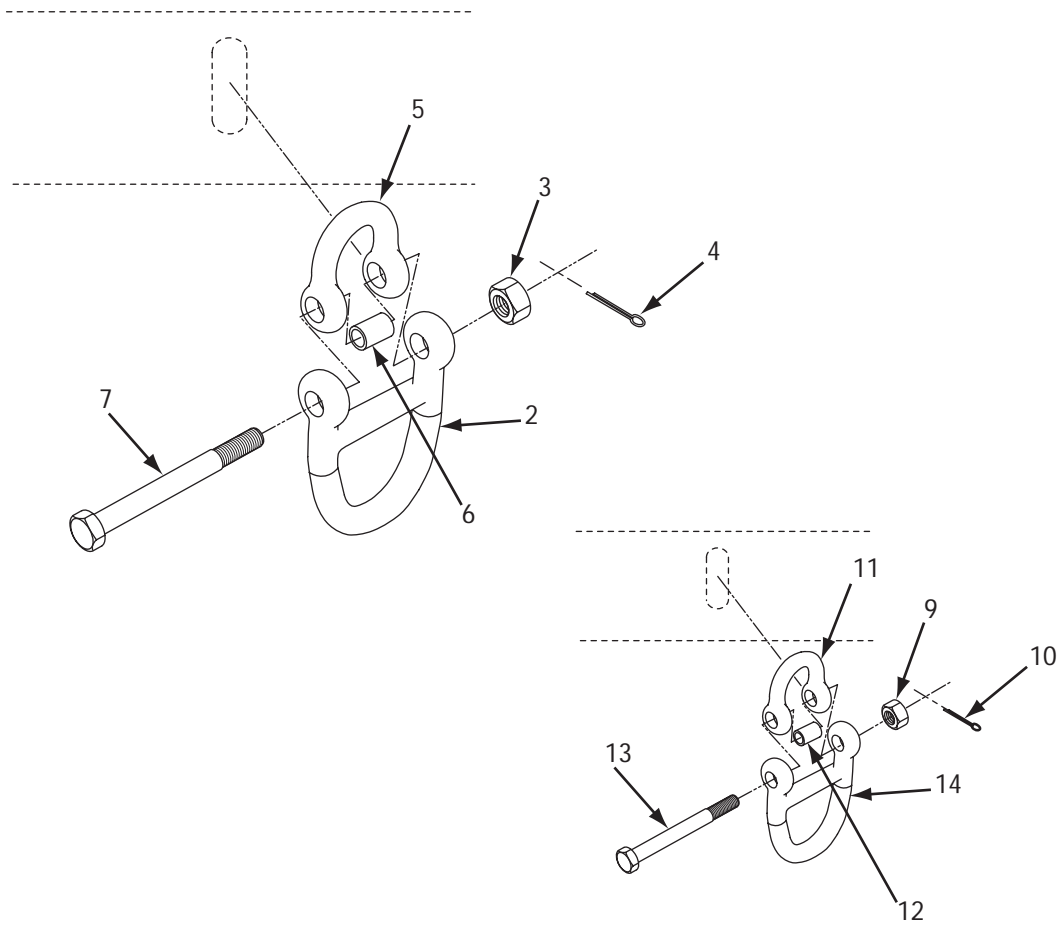


FIGURE 37. TIEDOWN RINGS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES GROUP 2202 ACCESSORY ITEMS	(7) QTY
FIG. 37 TIEDOWN RINGS						
1	PAOOO	5340-01-499-3705	94658	F133-1-1	CLEVIS AND U-BOLT (LG)	24
2	PAOZZ	5340-01-522-0040	94658	F133-15-1	.D-LINK ASSY, GEARBOX	1
3	PAOZZ		94658	PNT04-35-04G	.NUT, PLAIN HEXAGON	1
4	PAOZZ	5315-01-521-8039	94658	PCP28-16N	.PIN, COTTER	1
5	PAOZZ	5340-01-522-0030	94658	PH3593-15	.CONNECTOR, ROD END	1
6	PAOZZ	5365-01-521-6972	94658	PH496-3	.SPACER, SLEEVE	1
7	PAOZZ	5306-01-521-8273	94658	PH3491-3-1	.BOLT, MACHINE	1
8	PAOOO	5340-01-499-3719	94658	F133-2-1	CLEVIS AND U-BOLT (SM)	52
9	PAOZZ	5310-01-522-6847	94658	PNT04-43-04G	.NUT, SELF-LOCKING, HEXAGON	1
10	PAOZZ	5315-01-521-7368	94658	PCP28-24N	.PIN, COTTER	1
11	PAOZZ	5340-01-522-0037	94658	PH3593-30	.CONNECTOR, ROD END	1
12	PAOZZ	5365-01-521-6781	94658	PH496-4	.SPACER, SLEEVE	1
13	PAOZZ	5306-01-521-8272	94658	PH3491-3-2	.BOLT, MACHINE	1
14	PAOZZ	5340-01-522-0027	94658	F133-30-1	.D-LINK ASSY, GEARBOX	1

END OF FIGURE

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES	(7) QTY
					GROUP 94 REPAIR KITS	
					GROUP 9401 REPAIR PARTS KITS	
					FIG. KITS	
KIT 1	KFOZZ	2530-01-314-4392	3D6E9	KIT8000HD	PARTS KIT,BRAKE SHOES	1
	PAOZZ	5315-01-129-6898	78500	1259-N-274	PIN,SHOULDER,HEADLESS	2
	PAOZZ	5315-01-344-0715	3D6E9	2297T7222	.PIN,SHOULDER,HEADLESS	2
	PAOZZ	3120-00-255-6042	3D6E9	1225B496	.PIN BUSHING,ANCHOR	2
	PAOZZ	5315-00-784-0637	78500	1218G85	.PIN,RETURN SPRING	2
	PAOZZ	5340-01-328-4418	3D6E9	3105-B-210	.CLIP,SPRING,TENSION	2
	PAOZZ	5360-01-499-3396	78500	2258-W-803	.SPRING,HELICAL,COMP	1
	PAOZZ	5360-01-158-1974	3D6E9	2258-Q-615	.SPRING,HELICAL,EXTERIOR	2
KIT 2	KFOZZ	2530-01-523-4643	78500	KIT 8091	PARTS KIT,SHOE BRAKES	4
	PAOZZ	3120-01-311-8410	78500	A23105G1151	.PARTS KIT,BRAKE ADJUSTER	2
	PAOZZ	5305-01-315-3563	78500	10-X-1348	.SCREW,SELF-TAPPING	8
	PAOZZ	2530-01-311-8410	78500	A-3105-V-282	.BUSHING,RETAINER	2
	PAOZZ	5310-01-499-3382	3D6E9	1229-R-4100	.WASHER,RECESSED	2
	PAOZZ	5305-01-359-1367	78500	10-X-1421	.SCREW,TAPPING	8
	PAOZZ	5330-01-328-6090	78500	1205-Q-2123	.GASKET	6
	PAOZZ	5310-01-133-5373	78500	1229-B-1848	.WASHER,FLAT	6

END OF KITS

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODES	(7) QTY
					GROUP 95 GENERAL USE STANDARDIZED PARTS GROUP 9501 BULK MATERIAL, COMMON	
					FIG. BULK	
1	PFOZZ	9390-01-470-3620	0C9X4	28	TAPE, REFLECTOR, RED/WHITE 2"	V
2	PAOZZ	4720-01-355-3104	64678	48-00101-022	HOSE, NONMETALLIC	V
3	PAOZZ	4720-01-287-9322	61424	PFT-6B-BLU	TUBING, NONMETALLIC	V
4	PAOZZ	1640-00-285-3705	81349	M83420/1-005	ROPE, WIRE	V
5	PAOZZ	4720-01-287-9313	61424	PFT-6B-RED	HOSE, NONMETALLIC	V

END OF BULK

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
1	1		13548	6625A
1	2	5340-01-527-9898	13548	07198
1	3	6220-01-482-5444	13548	30255R
1	3	6220-01-482-5320	13548	30255Y
1	4	5305-01-499-5551	0FBD6	52100010
1	5	5975-01-485-8769	13548	07197
1	6	6220-01-499-3350	0FBD6	50920012
1	7	6220-01-482-9850	13548	07240
2	1		13548	15728
2	2	6220-01-522-9731	13548	15203Y
2	3	5305-01-499-5551	0FBD6	52100010
3	1	6150-01-522-0958	18634	TAL-400
3	2	5995-01-522-0939	18634	TAL-102
3	3	6150-01-522-0962	18634	TAL-401
3	4	6150-01-522-0966	18634	TAL-402
3	5	6150-01-522-0923	18634	TAL-801
4	1	6150-01-522-0946	18634	TAL-200
4	2	5995-01-522-0931	18634	TAL-900
4	3	6150-01-522-0967	18634	TAL-600
4	4	6150-01-522-0949	18634	TAL-300
4	5	6150-01-522-0952	18634	TAL-301
5	1	5310-01-458-7739	63931	11-56374
5	2	5310-00-027-2556	8V613	369A1605-3
5	3	5935-00-846-3883	96906	MS75021-1
5	4	5305-00-988-1724	96906	MS35206-280
5	5	5935-00-773-1428	19207	7731428
5	6	5305-00-984-5675	80205	MS35206-295
5	7	5935-01-522-8340	64466	16-760
5	8	5310-00-038-9417	75418	3058-00843-06
5	9	5310-01-501-0957	33968	35252600
6	1	5325-01-521-6977	18634	GR000150
6	2	5325-01-521-7412	18634	GR000149
6	3	5325-01-521-7378	18634	GR000148
6	4	4730-01-522-3811	18634	PACL-19
7	1		18634	M872A4B07005
7	2		18634	M872A4B07006
7	3		18634	M872A4B07007
8	1	2530-01-499-3159	78500	2210-E-6869
8	1	2530-01-499-3135	78500	2210-D-6868
8	2	5310-01-499-3382	3D6E9	1229-R-4100
8	3	5330-01-328-6090	78500	1205-Q-2123
8	4	3120-01-521-8045	78500	A1-3105-Q-1213
8	5	5331-01-521-7071	78500	1205-S-2697
8	6	5305-01-359-1367	78500	10-X-1421
8	7	2530-01-311-8410	3D6E9	A3105-V-282
8	8	5331-01-521-7078	78500	1205-F-2580

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
8	9	5305-01-315-3563	78500	10-X-1348
8	10	5310-01-133-5373	78500	1229-B-1848
9	1	5360-01-499-3396	3D6E9	2258-W-803
9	2	2530-01-522-0844	78500	SR4034707QPM
9	3	5360-01-158-1974	3D6E9	2258-Q-615
9	4	3120-00-255-6042	3D6E9	1225B496
9	5	5315-01-129-6898	3D6E9	1259N274
9	6	5340-01-328-4418	3D6E9	3105B210
9	7	5315-01-344-0715	78500	M1779R18
10	1	2530-01-499-3399	78502	409-10683
10	2	5365-01-499-3408	78502	452-10125
10	3	5340-01-499-3404	78502	443-10290
10	4	5310-01-499-3438	78502	443-10204
10	5	5340-01-499-3405	78502	445-10467
11	1		18634	M872A4K16006
11	2	4730-00-278-4822	93061	2202P-6-6
11	3	4730-01-522-7184	93061	68RB-6-6
11	4		06721	9999070
11	5	2520-01-499-3439	0FBD6	52125333
11	6	5310-01-499-5413	06721	9999095
11	7	5310-01-499-5412	06721	9999093
12	1	6150-01-523-4908	18634	TAL-800
12	2	4810-01-499-3407	78500	S4005001030
12	3	5310-00-100-6728	19207	8712289-10
12	4	5310-00-318-3257	18876	8191298
12	5	5305-00-984-5675	80205	MS35206-295
12	6	4730-00-427-5121	01276	2082-6B
12	7	5340-01-499-3481	78500	S8997598154
12	8	6150-01-502-9447	3D6E9	441 032 809 0
12	9	2530-01-499-3170	78500	S4497130300
12	10	4730-01-134-7759	93061	68NTA 8-8
12	11	4730-00-062-2570	93061	68NTA 6-4
12	12	4730-01-244-1226	93061	VS269NTA 6-6
13	1	4730-01-522-4083	18634	WAC3069-12-8
13	2	4820-01-497-8729	10125	110500
13	3	4730-01-283-1877	93061	VS272NTA-6-6
13	4	4730-00-427-5121	01276	2082-6B
13	5	4730-01-086-4068	93061	271NTA-6-6
13	6	4730-01-096-9128	93061	68NTA-6-6
13	7		10125	110485
13	8	5310-00-261-7340	78500	WA16
13	9	5305-00-068-0511	80204	B1821BH038C125N
13	10	5310-00-012-3475	24617	123475
13	11	5310-00-688-2195	96906	MS51848-12
13	12	5310-00-087-4652	81349	M45913/1-6CG5C
13	13	4730-01-244-1226	93061	VS269NTA-6-6

CROSS-REFERENCE INDEXES

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
13	14		10125	110365
13	15	4730-01-079-3275	93061	VS279NTA-8-8
14	1	2530-01-521-7839	1V6N4	HT-12116
14	2	5305-00-068-0511	80204	B1821BH038C125N
14	3	5310-00-261-7340	78500	WA16
14	4	4730-00-427-5121	01276	2082-6B
14	5	5330-01-521-6967	1V6N4	HT-1068
14	6	5310-00-087-4652	81349	M45913/1-6CG5C
14	7	4820-01-499-3653	0N972	401095
14	8	4730-01-079-3275	93061	VS279NTA 8-8
14	9	4730-00-278-3167	93061	209P-12-8
14	10	4730-01-244-1226	93061	VS269NTA-6-6
15	1	4730-00-062-2570	93061	68NTA6-4
15	2	5310-00-325-1900	80205	NAS1021N17
15	3	5310-00-582-6714	96906	MS35333-49
15	4	5330-00-090-2128	06853	213630
15	5	2530-00-137-9235	19207	7411021
15	6	5342-01-336-7391	64466	12-006
15	6	4730-01-244-5365	64466	12008
15	7	2590-00-778-0324	58429	N11246
16	1		18634	RED12
16	2		18634	BLUE38
16	3		18634	RED38
16	4	4720-00-441-4926	19239	6-6336
16	5	4720-00-442-5781	27315	44Z104903
17	1	3110-00-293-8998	60038	HM212049
17	2	3110-00-293-8997	60038	HM212011
17	3	3040-01-522-7348	78500	14-15501-513
17	4	3110-00-618-0249	60038	HM218210
17	5	3110-00-618-0248	60038	HM218248
17	6	5330-01-047-9367	78500	KITSTNGS
17	7	5307-01-521-6985	78500	09-001989
17	8	5310-01-499-5416	26151	447-4743
17	9		26151	450-4723
17	10	5330-01-387-7303	3D6E9	2208N430 NON-ASB
17	11	3040-01-521-7837	78500	3262-X-1376
17	12	2530-01-322-9360	78500	03123207002
17	13	5306-00-226-4827	80204	B1821BH031C100N
17	14	5310-00-407-9566	96906	MS35338-45
18	1	2610-01-481-5378	12195	62165
18	2	2530-01-478-7603	73195	28408PG
18	3	2640-01-098-2029	17875	627
18	4	2640-00-555-2824	27783	TR573
18	5	2640-00-050-0827	21450	500827
18	6	5310-01-499-3489	0FBD6	50990007
19	1	2510-01-521-8018	8N013	M872-A4

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FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
19	2	2510-01-521-8034	8N013	872A4C
19	3	2510-01-521-8027	8N013	872A4A
19	4	2510-01-521-7025	8N013	872A4D
19	5	2510-01-521-8033	8N013	872A4B
19	6		8N013	872A4E
19	7		8N013	872A4F
19	8		8N013	872A4G
19	9		8N013	872A4H
19	10		8N013	872A4I
19	11	5305-01-193-2358	98255	SW14342P
20	1		18634	M872A4C14007
20	2	5306-00-019-0882	24617	190882
20	3		18634	M872A4C14009
20	4	5315-01-521-8342	39428	98404A290
20	5	5310-00-050-3275	24617	144178
21	1	5310-00-225-6993	81349	M45913/1-8CG5C
21	2	5340-01-112-6396	83473	TB-20
21	3	5310-00-809-5998	96906	MS27183-18
21	4	5305-00-071-2074	80204	B1821BH050C275N
22	1	5325-01-514-9957	94658	F804-1-3
22	2		94658	XAF804-1-3
22	3	5315-01-499-4195	94658	PRP08-56L
22	4	5340-01-499-4198	94658	PH2968-4
23	1	5365-01-522-3137	18634	M872A4B13001-LH
23	1	5365-01-522-3149	18634	M872A4B13001-RH
23	2	3040-01-522-7819	18634	M872A4C13005
23	3	5340-01-522-0049	18634	M872A4C13010
23	4	5305-00-273-7408	80205	MS24677-67
23	5	5310-01-507-0186	30226	100030
23	6	5310-00-022-0066	80212	P40
23	7	5305-01-118-8861	96906	MS51105-424
23	8	5310-01-494-4110	12361	7950150141
23	9	5310-01-231-7459	81349	M45913/3-8CG8P
23	10	2590-01-524-6554	18634	M872A4B13002
23	11	4010-01-521-7502	39428	90312A640
23	12	5310-00-011-4948	99238	940B616
23	13	5310-00-297-3879	78553	A1037012
23	14	5310-00-050-3275	24617	144178
23	15	5306-00-019-0882	24617	190882
24	1		18634	M872A4C06006
24	2	5310-01-231-7459	81349	M45913/3-8CG8P
24	3	5310-00-050-3275	24617	144178
24	4	5310-00-011-4948	99238	940B616
24	5	5306-00-019-0882	24617	190882
24	6	5301-01-521-8342	39428	98404A290
24	7	5305-01-118-8861	96906	MS51105-424

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FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
25	1	5310-00-773-8384	80378	CV15-490557-3
25	2	5310-00-198-6691	24617	274639
25	3	5306-01-187-0643	80204	B1821BH063F150C
25	4	2510-01-522-6011	18634	M872A4B01001
26	1	2590-01-336-9937	64678	A22-52996-000
26	2	5340-01-336-6446	64678	FITC-05
26	3	4030-01-245-4168	96906	MS51844-65
26	4	5310-00-915-4891	96906	MS51967-21
26	5	5310-00-269-4040	81349	M45913/1-10CG5C
26	6	5305-00-724-7223	80204	B1821BH063C225N
27	1	2590-01-522-6745	74410	XA-S8-5C024-533
27	1	2590-01-522-6749	74410	XA-S9-5C024-533
27	2	5305-01-521-6993	74410	XB-V-444-4
27	3	5310-01-522-1709	74410	XB-1108
27	4	3040-01-521-9922	74410	XA-V-1910-533
27	5	5310-00-005-0447	72962	79NE066
27	6	5310-00-269-4040	81349	M45913/1-10GC5C
27	7	5305-00-724-7223	80204	B1821BH063C225N
27	8	5340-01-521-8248	74410	XA-V-90-10-533
27	9	5340-01-522-1265	18634	M872A4C12002
27	10	5340-01-521-6748	18634	BUSB2624
28	1	4710-01-243-3391	92967	11446-00
28	2	5306-01-197-1491	92967	11448-00
28	3	2590-01-522-1707	92967	11447-01
28	3	5340-01-521-9470	92967	11453-00
28	4	5305-01-192-5742	92967	11456-00
28	5	2530-01-174-0464	92967	11451-00
28	6	5340-01-521-8442	92967	11437-00
28	7	5310-01-098-7246	92967	837-00
28	8	5310-01-194-5006	92967	11449-00
28	9	5310-01-192-9307	92967	11514-00
28	10	5340-01-245-3948	92967	11434-00
28	11	5365-01-198-6608	92967	11442-00
28	12	5310-01-099-6539	92967	37-03
28	13	5340-01-245-3947	92967	11441-00
28	14	5305-01-195-5042	92967	11439-00
28	15	5305-01-198-4649	80204	7/8-14UNF-2AX2.500 GR&ZINCPLT
28	16	5310-01-195-7956	92967	35-00
28	17	5340-01-250-0785	92967	11433-00
28	18	2520-01-448-9400	92967	11432-00
28	19	5330-01-191-3457	92967	11445-00
28	20	5340-01-245-3949	92967	11444-00
28	21	5305-01-244-7970	80204	B1821BH088F750N
28	22	5310-01-244-7572	92967	11452-00
28	23	5310-01-098-7827	92967	841-00

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FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
28	24	5310-01-098-7245	92967	817-00
29	1	5306-01-522-3339	92967	7816-08
29	2	5340-01-521-8443	92967	11497-00
29	3	2510-01-243-4940	92967	11436-00
29	4	2510-01-191-6644	92967	11438-00
29	5	5310-01-192-9307	92967	11514-00
30	1	2510-01-522-5990	18634	0610-489622-MIL
30	2	5306-01-521-9291	18634	0810-660816
30	3	5310-01-522-0850	18634	0820-680810
30	4	5306-01-522-6560	18634	0810-860836
31	1	2540-01-522-6482	18634	0630-112432-DS
31	1	2540-01-522-6489	18634	0630-182446-DS
31	1	2540-01-522-6497	18634	0630-112432-PS
31	2	5310-00-014-5855	53711	2533408PC16
31	3	5310-00-832-7798	19207	8327798
31	4	5310-00-011-4948	99238	940B616
31	5	5306-01-163-2429	96906	MS18154-66L
31	6	5305-01-521-9304	18634	0810-670451
31	7	5340-01-521-9575	18634	0631-861104
31	7	5340-01-521-9615	18634	0631-861103
31	8	5340-01-521-9597	18634	0631-861101
31	8	5340-01-521-9565	18634	0631-861102
31	9	5310-01-521-8566	18634	0820-680410
31	10	5310-01-521-9335	18634	0815-660451
31	11	5340-01-521-9270	18634	0631-861106
31	12	5340-01-521-9268	18634	0631-861105
32	1	7520-01-324-3687	1JA34	550
32	2	5320-01-521-7618	39428	98780A214
33	1	5310-00-022-0066	19207	BBAX1C
33	2	5310-01-494-4110	12361	7950150141
33	3		18634	M872A4C08007
33	4	5305-00-273-7408	80205	MS24677-67
33	5		18634	MU-M872A4
34	1	9905-01-070-0471	13548	98007Y
34	2	5305-01-499-5551	0FBD6	52100010
34	3	9905-01-069-7282	13548	98007R
35	1		18364	M872A4C17001
35	2	5320-01-521-7618	39428	98780A214
36	1	6680-01-522-1212	79142	777717-510
36	2	5310-01-522-6840	79142	0885005-952
36	3	5310-01-522-6843	79142	0513900-048
36	4	5340-01-522-0980	79142	325614-107
37	1	5340-01-499-3705	94658	F133-1-1
37	2	5340-01-522-0040	94658	F133-15-1
37	3		94658	PNT04-35-04G
37	4	5315-01-521-8039	94658	PCP28-16N

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FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
37	5	5340-01-522-0030	94658	PH3593-15
37	6	5365-01-521-6972	94658	PH496-3
37	7	5306-01-521-8273	94658	PH3491-3-1
37	8	5340-01-499-3719	94658	F133-2-1
37	9	5310-01-522-6847	94658	PNT04-43-04G
37	10	5315-01-521-7368	94658	PCP28-24N
37	11	5340-01-522-0037	94658	PH3593-30
37	12	5365-01-521-6781	94658	PH496-4
37	13	5306-01-521-8272	94658	PH3491-3-2
37	14	5340-01-522-0027	94658	F133-30-1
KITS	1	2530-01-314-4392	3D6E9	KIT8000HD
KITS	2	2530-01-523-4643	78500	KIT 8091
BULK	1	9390-01-470-3620	0C9X4	28
BULK	2	4720-01-355-3104	64678	48-00101-022
BULK	3	4720-01-287-9322	61424	PFT-6B-BLU
BULK	4	1640-00-285-3705	81349	M83420/1-005
BULK	5	4720-01-287-9313	61424	PFT-6B-RED

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STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5310-00-005-0447	27	5	4730-00-427-5121	12	6
5310-00-011-4948	23	12	4730-00-427-5121	13	4
5310-00-011-4948	24	4	4730-00-427-5121	14	4
5310-00-011-4948	31	4	4720-00-441-4926	16	4
5310-00-012-3475	13	10	4720-00-442-5781	16	5
5310-00-014-5855	31	2	2640-00-555-2824	18	4
5306-00-019-0882	20	2	5310-00-582-6714	15	3
5306-00-019-0882	23	15	3110-00-618-0248	17	5
5306-00-019-0882	24	5	3110-00-618-0249	17	4
5310-00-022-0066	23	6	5310-00-688-2195	13	11
5310-00-022-0066	33	1	5305-00-724-7223	26	6
5310-00-027-2556	5	2	5305-00-724-7223	27	7
5310-00-038-9417	5	8	5935-00-773-1428	5	5
2640-00-050-0827	18	5	5310-00-773-8384	25	1
5310-00-050-3275	20	5	2590-00-778-0324	15	7
5310-00-050-3275	23	14	5310-00-809-5998	21	3
5310-00-050-3275	24	3	5310-00-832-7798	31	3
4730-00-062-2570	12	11	5935-00-846-3883	5	3
4730-00-062-2570	15	1	5310-00-915-4891	26	4
5305-00-068-0511	13	9	5305-00-984-5675	12	5
5305-00-068-0511	14	2	5305-00-984-5675	5	6
5305-00-071-2074	21	4	5305-00-988-1724	5	4
5310-00-087-4652	13	12	5330-01-047-9367	17	6
5310-00-087-4652	14	6	9905-01-069-7282	34	3
5330-00-090-2128	15	4	9905-01-070-0471	34	1
5310-00-100-6728	12	3	4730-01-079-3275	13	15
2530-00-137-9235	15	5	4730-01-079-3275	14	8
5310-00-198-6691	25	2	4730-01-086-4068	13	5
5310-00-225-6993	21	1	4730-01-096-9128	13	6
5306-00-226-4827	17	13	2640-01-098-2029	18	3
3120-00-255-6042	9	4	5310-01-098-7245	28	24
5310-00-261-7340	13	8	5310-01-098-7246	28	7
5310-00-261-7340	14	3	5310-01-098-7827	28	23
5310-00-269-4040	26	5	5310-01-099-6539	28	12
5310-00-269-4040	27	6	5340-01-112-6396	21	2
5305-00-273-7408	23	4	5305-01-118-8861	23	7
5305-00-273-7408	33	4	5305-01-118-8861	24	7
4730-00-278-3167	14	9	5315-01-129-6898	9	5
4730-00-278-4822	11	2	5310-01-133-5373	8	10
1640-00-285-3705	BULK	4	4730-01-134-7759	12	10
3110-00-293-8997	17	2	5360-01-158-1974	9	3
3110-00-293-8998	17	1	5306-01-163-2429	31	5
5310-00-297-3879	23	13	2530-01-174-0464	28	5
5310-00-318-3257	12	4	5306-01-187-0643	25	3
5310-00-325-1900	15	2	5330-01-191-3457	28	19
5310-00-407-9566	17	14	2510-01-191-6644	29	4

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STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5305-01-192-5742	28	4	2610-01-481-5378	18	1
5310-01-192-9307	28	9	6220-01-482-5320	1	3
5310-01-192-9307	29	5	6220-01-482-5444	1	3
5305-01-193-2358	19	11	6220-01-482-9850	1	7
5310-01-194-5006	28	8	5975-01-485-8769	1	5
5305-01-195-5042	28	14	5310-01-494-4110	23	8
5310-01-195-7956	28	16	5310-01-494-4110	33	2
5306-01-197-1491	28	2	4820-01-497-8729	13	2
5305-01-198-4649	28	15	2530-01-499-3135	8	1
5365-01-198-6608	28	11	2530-01-499-3159	8	1
5310-01-231-7459	23	9	2530-01-499-3170	12	9
5310-01-231-7459	24	2	6220-01-499-3350	1	6
4710-01-243-3391	28	1	5310-01-499-3382	8	2
2510-01-243-4940	29	3	5360-01-499-3396	9	1
4730-01-244-1226	12	12	2530-01-499-3399	10	1
4730-01-244-1226	13	13	5340-01-499-3404	10	3
4730-01-244-1226	14	10	5340-01-499-3405	10	5
4730-01-244-5365	15	6	4810-01-499-3407	12	2
5310-01-244-7572	28	22	5365-01-499-3408	10	2
5305-01-244-7970	28	21	5310-01-499-3438	10	4
5340-01-245-3947	28	13	2520-01-499-3439	11	5
5340-01-245-3948	28	10	5340-01-499-3481	12	7
5340-01-245-3949	28	20	5310-01-499-3489	18	6
4030-01-245-4168	26	3	4820-01-499-3653	14	7
5340-01-250-0785	28	17	5340-01-499-3705	37	1
4730-01-283-1877	13	3	5340-01-499-3719	37	8
4720-01-287-9313	BULK	5	5315-01-499-4195	22	3
4720-01-287-9322	BULK	3	5340-01-499-4198	22	4
2530-01-311-8410	8	7	5310-01-499-5412	11	7
2530-01-314-4392	KITS	1	5310-01-499-5413	11	6
5305-01-315-3563	8	9	5310-01-499-5416	17	8
2530-01-322-9360	17	12	5305-01-499-5551	1	4
7520-01-324-3687	32	1	5305-01-499-5551	2	3
5340-01-328-4418	9	6	5305-01-499-5551	34	2
5330-01-328-6090	8	3	5310-01-501-0957	5	9
5340-01-336-6446	26	2	6150-01-502-9447	12	8
5342-01-336-7391	15	6	5310-01-507-0186	23	5
2590-01-336-9937	26	1	5325-01-514-9957	22	1
5315-01-344-0715	9	7	5340-01-521-6748	27	10
4720-01-355-3104	BULK	2	5365-01-521-6781	37	12
5305-01-359-1367	8	6	5330-01-521-6967	14	5
5330-01-387-7303	17	10	5365-01-521-6972	37	6
2520-01-448-9400	28	18	5325-01-521-6977	6	1
5310-01-458-7739	5	1	5307-01-521-6985	17	7
9390-01-470-3620	BULK	1	5305-01-521-6993	27	2
2530-01-478-7603	18	2	2510-01-521-7025	19	4

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STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5331-01-521-7071	8	5	6150-01-522-0949	4	4
5331-01-521-7078	8	8	6150-01-522-0952	4	5
5315-01-521-7368	37	10	6150-01-522-0958	3	1
5325-01-521-7378	6	3	6150-01-522-0962	3	3
5325-01-521-7412	6	2	6150-01-522-0966	3	4
4010-01-521-7502	23	11	6150-01-522-0967	4	3
5320-01-521-7618	32	2	5340-01-522-0980	36	4
5320-01-521-7618	35	2	6680-01-522-1212	36	1
3040-01-521-7837	17	11	5340-01-522-1265	27	9
2530-01-521-7839	14	1	2590-01-522-1707	28	3
2510-01-521-8018	19	1	5310-01-522-1709	27	3
2510-01-521-8027	19	3	5365-01-522-3137	23	1
2510-01-521-8033	19	5	5365-01-522-3149	23	1
2510-01-521-8034	19	2	5306-01-522-3339	29	1
5315-01-521-8039	37	4	4730-01-522-3811	6	4
3120-01-521-8045	8	4	4730-01-522-4083	13	1
5340-01-521-8248	27	8	2510-01-522-5990	30	1
5306-01-521-8272	37	13	2510-01-522-6011	25	4
5306-01-521-8273	37	7	2540-01-522-6482	31	1
5315-01-521-8342	20	4	2540-01-522-6489	31	1
5301-01-521-8342	24	6	2540-01-522-6497	31	1
5340-01-521-8442	28	6	5306-01-522-6560	30	4
5340-01-521-8443	29	2	2590-01-522-6745	27	1
5310-01-521-8566	31	9	2590-01-522-6749	27	1
5340-01-521-9268	31	12	5310-01-522-6840	36	2
5340-01-521-9270	31	11	5310-01-522-6843	36	3
5306-01-521-9291	30	2	5310-01-522-6847	37	9
5305-01-521-9304	31	6	4730-01-522-7184	11	3
5310-01-521-9335	31	10	3040-01-522-7348	17	3
5340-01-521-9470	28	3	3040-01-522-7819	23	2
5340-01-521-9565	31	8	5935-01-522-8340	5	7
5340-01-521-9575	31	7	6220-01-522-9731	2	2
5340-01-521-9597	31	8	2530-01-523-4643	KITS	2
5340-01-521-9615	31	7	6150-01-523-4908	12	1
3040-01-521-9922	27	4	2590-01-524-6554	23	10
5340-01-522-0027	37	14	5340-01-527-9898	1	2
5340-01-522-0030	37	5		1	1
5340-01-522-0037	37	11		11	4
5340-01-522-0040	37	2		11	1
5340-01-522-0049	23	3		13	14
2530-01-522-0844	9	2		13	7
5310-01-522-0850	30	3		16	2
6150-01-522-0923	3	5		16	1
5995-01-522-0931	4	2		16	3
5995-01-522-0939	3	2		17	9
6150-01-522-0946	4	1		19	6

CROSS-REFERENCE INDEXES**NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
	19	7			
	19	8			
	19	9			
	19	10			
	2	1			
	20	1			
	20	3			
	22	2			
	24	1			
	33	3			
	33	5			
	35	1			
	37	3			
	7	1			
	7	2			
	7	3			

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
19207	7731428	5935-00-773-1428	5	5
78500	03123207002	2530-01-322-9360	17	12
79142	0513900-048	5310-01-522-6843	36	3
18634	0610-489622-MIL	2510-01-522-5990	30	1
18634	0630-112432-DS	2540-01-522-6482	31	1
18634	0630-112432-PS	2540-01-522-6497	31	1
18634	0630-182446-DS	2540-01-522-6489	31	1
18634	0631-861101	5340-01-521-9597	31	8
18634	0631-861102	5340-01-521-9565	31	8
18634	0631-861103	5340-01-521-9615	31	7
18634	0631-861104	5340-01-521-9575	31	7
18634	0631-861105	5340-01-521-9268	31	12
18634	0631-861106	5340-01-521-9270	31	11
13548	07197	5975-01-485-8769	1	5
13548	07198	5340-01-527-9898	1	2
13548	07240	6220-01-482-9850	1	7
18634	0810-660816	5306-01-521-9291	30	2
18634	0810-670451	5305-01-521-9304	31	6
18634	0810-860836	5306-01-522-6560	30	4
18634	0815-660451	5310-01-521-9335	31	10
18634	0820-680410	5310-01-521-8566	31	9
18634	0820-680810	5310-01-522-0850	30	3
79142	0885005-952	5310-01-522-6840	36	2
78500	09-001989	5307-01-521-6985	17	7
30226	100030	5310-01-507-0186	23	5
78500	10-X-1348	5305-01-315-3563	8	9
78500	10-X-1421	5305-01-359-1367	8	6
10125	110365		13	14
10125	110485		13	7
10125	110500	4820-01-497-8729	13	2
92967	11432-00	2520-01-448-9400	28	18
92967	11433-00	5340-01-250-0785	28	17
92967	11434-00	5340-01-245-3948	28	10
92967	11436-00	2510-01-243-4940	29	3
92967	11437-00	5340-01-521-8442	28	6
92967	11438-00	2510-01-191-6644	29	4
92967	11439-00	5305-01-195-5042	28	14
92967	11441-00	5340-01-245-3947	28	13
92967	11442-00	5365-01-198-6608	28	11
92967	11444-00	5340-01-245-3949	28	20
92967	11445-00	5330-01-191-3457	28	19
92967	11446-00	4710-01-243-3391	28	1
92967	11447-01	2590-01-522-1707	28	3
92967	11448-00	5306-01-197-1491	28	2
92967	11449-00	5310-01-194-5006	28	8
92967	11451-00	2530-01-174-0464	28	5

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
92967	11452-00	5310-01-244-7572	28	22
92967	11453-00	5340-01-521-9470	28	3
92967	11456-00	5305-01-192-5742	28	4
92967	11497-00	5340-01-521-8443	29	2
92967	11514-00	5310-01-192-9307	28	9
92967	11514-00	5310-01-192-9307	29	5
63931	11-56374	5310-01-458-7739	5	1
64466	12-006	5342-01-336-7391	15	6
64466	12008	4730-01-244-5365	15	6
78500	1205-F-2580	5331-01-521-7078	8	8
78500	1205-Q-2123	5330-01-328-6090	8	3
78500	1205-S-2697	5331-01-521-7071	8	5
3D6E9	1225B496	3120-00-255-6042	9	4
78500	1229-B-1848	5310-01-133-5373	8	10
3D6E9	1229-R-4100	5310-01-499-3382	8	2
24617	123475	5310-00-012-3475	13	10
3D6E9	1259N274	5315-01-129-6898	9	5
78500	14-15501-513	3040-01-522-7348	17	3
24617	144178	5310-00-050-3275	20	5
24617	144178	5310-00-050-3275	23	14
24617	144178	5310-00-050-3275	24	3
13548	15203Y	6220-01-522-9731	2	2
13548	15728		2	1
64466	16-760	5935-01-522-8340	5	7
24617	190882	5306-00-019-0882	20	2
24617	190882	5306-00-019-0882	23	15
24617	190882	5306-00-019-0882	24	5
01276	2082-6B	4730-00-427-5121	12	6
01276	2082-6B	4730-00-427-5121	13	4
01276	2082-6B	4730-00-427-5121	14	4
93061	209P-12-8	4730-00-278-3167	14	9
06853	213630	5330-00-090-2128	15	4
93061	2202P-6-6	4730-00-278-4822	11	2
3D6E9	2208N430 NON-ASB	5330-01-387-7303	17	10
78500	2210-D-6868	2530-01-499-3135	8	1
78500	2210-E-6869	2530-01-499-3159	8	1
3D6E9	2258-Q-615	5360-01-158-1974	9	3
3D6E9	2258-W-803	5360-01-499-3396	9	1
53711	2533408PC16	5310-00-014-5855	31	2
93061	271NTA-6-6	4730-01-086-4068	13	5
24617	274639	5310-00-198-6691	25	2
0C9X4	28	9390-01-470-3620	BULK	
173195	28408PG	2530-01-478-7603	18	2
13548	30255R	6220-01-482-5444	1	3
13548	30255Y	6220-01-482-5320	1	3
75418	3058-00843-06	5310-00-038-9417	5	8

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
3D6E9	3105B210	5340-01-328-4418	9	6
79142	325614-107	5340-01-522-0980	36	4
78500	3262-X-1376	3040-01-521-7837	17	11
92967	35-00	5310-01-195-7956	28	16
33968	35252600	5310-01-501-0957	5	9
8V613	369A1605-3	5310-00-027-2556	5	2
92967	37-03	5310-01-099-6539	28	12
0N972	401095	4820-01-499-3653	14	7
78502	409-10683	2530-01-499-3399	10	1
3D6E9	441 032 809 0	6150-01-502-9447	12	8
78502	443-10204	5310-01-499-3438	10	4
78502	443-10290	5340-01-499-3404	10	3
78502	445-10467	5340-01-499-3405	10	5
27315	44Z104903	4720-00-442-5781	16	5
26151	450-4723		17	9
78502	452-10125	5365-01-499-3408	10	2
64678	48-00101-022	4720-01-355-3104	BULK	2
21450	500827	2640-00-050-0827	18	5
0FBD6	50920012	6220-01-499-3350	1	6
26151	447-4743	5310-01-499-5416	17	8
0FBD6	50990007	5310-01-499-3489	18	6
0FBD6	52100010	5305-01-499-5551	1	4
0FBD6	52100010	5305-01-499-5551	2	3
0FBD6	52100010	5305-01-499-5551	34	2
0FBD6	52125333	2520-01-499-3439	11	5
1JA34	550	7520-01-324-3687	32	1
12195	62165	2610-01-481-5378	18	1
17875	627	2640-01-098-2029	18	3
13548	6625A		1	1
19239	6-6336	4720-00-441-4926	16	4
93061	68NTA 6-4	4730-00-062-2570	12	11
93061	68NTA 8-8	4730-01-134-7759	12	10
93061	68NTA6-4	4730-00-062-2570	15	1
93061	68NTA-6-6	4730-01-096-9128	13	6
93061	68RB-6-6	4730-01-522-7184	11	3
80204	7/8-14UNF-2AX2.500GR8ZINCPLT	5305-01-198-4649	28	15
19207	7411021	2530-00-137-9235	15	5
79142	777717-510	6680-01-522-1212	36	1
92967	7816-08	5306-01-522-3339	29	1
12361	7950150141	5310-01-494-4110	23	8
12361	7950150141	5310-01-494-4110	33	2
72962	79NE066	5310-00-005-0447	27	5
92967	817-00	5310-01-098-7245	28	24
18876	8191298	5310-00-318-3257	12	4
19207	8327798	5310-00-832-7798	31	3
92967	837-00	5310-01-098-7246	28	7

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
92967	841-00	5310-01-098-7827	28	23
19207	8712289-10	5310-00-100-6728	12	3
8N013	872A4A	2510-01-521-8027	19	3
8N013	872A4B	2510-01-521-8033	19	5
8N013	872A4C	2510-01-521-8034	19	2
8N013	872A4D	2510-01-521-7025	19	4
8N013	872A4E		19	6
8N013	872A4F		19	7
8N013	872A4G		19	8
8N013	872A4H		19	9
8N013	872A4I		19	10
39428	90312A640	4010-01-521-7502	23	11
99238	940B616	5310-00-011-4948	23	12
99238	940B616	5310-00-011-4948	24	4
99238	940B616	5310-00-011-4948	31	4
13548	98007R	9905-01-069-7282	34	3
13548	98007Y	9905-01-070-0471	34	1
39428	98404A290	5301-01-521-8342	24	6
39428	98404A290	5315-01-521-8342	20	4
39428	98780A214	5320-01-521-7618	32	2
39428	98780A214	5320-01-521-7618	35	2
06721	9999070		11	4
06721	9999093	5310-01-499-5412	11	7
06721	9999095	5310-01-499-5413	11	6
78553	A1037012	5310-00-297-3879	23	13
78500	A1-3105-Q-1213	3120-01-521-8045	8	4
64678	A22-52996-000	2590-01-336-9937	26	1
3D6E9	A3105-V-282	2530-01-311-8410	8	7
80204	B1821BH031C100N	5306-00-226-4827	17	13
80204	B1821BH038C125N	5305-00-068-0511	13	9
80204	B1821BH038C125N	5305-00-068-0511	14	2
80204	B1821BH050C275N	5305-00-071-2074	21	4
80204	B1821BH063C225N	5305-00-724-7223	26	6
80204	B1821BH063C225N	5305-00-724-7223	27	7
80204	B1821BH063F150C	5306-01-187-0643	25	3
80204	B1821BH088F750N	5305-01-244-7970	28	21
19207	BBAX1C	5310-00-022-0066	33	1
18634	BLUE38		16	2
18634	BUSB2624	5340-01-521-6748	27	10
80378	CV15-490557-3	5310-00-773-8384	25	1
94658	F133-1-1	5340-01-499-3705	37	1
94658	F133-15-1	5340-01-522-0040	37	2
94658	F133-2-1	5340-01-499-3719	37	8
94658	F133-30-1	5340-01-522-0027	37	14
94658	F804-1-3	5325-01-514-9957	22	1
64678	FITC-05	5340-01-336-6446	26	2

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CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
18634	GR000148	5325-01-521-7378	6	3
18634	GR000149	5325-01-521-7412	6	2
18634	GR000150	5325-01-521-6977	6	1
60038	HM212011	3110-00-293-8997	17	2
60038	HM212049	3110-00-293-8998	17	1
60038	HM218210	3110-00-618-0249	17	4
60038	HM218248	3110-00-618-0248	17	5
1V6N4	HT-1068	5330-01-521-6967	14	5
1V6N4	HT-12116	2530-01-521-7839	14	1
78500	KIT 8091	2530-01-523-4643	KITS	2
3D6E9	KIT8000HD	2530-01-314-4392	KITS	1
78500	KITSTNGS	5330-01-047-9367	17	6
78500	M1779R18	5315-01-344-0715	9	7
81349	M45913/1-10CG5C	5310-00-269-4040	26	5
81349	M45913/1-10GC5C	5310-00-269-4040	27	6
81349	M45913/1-6CG5C	5310-00-087-4652	13	12
81349	M45913/1-6CG5C	5310-00-087-4652	14	6
81349	M45913/1-8CG5C	5310-00-225-6993	21	1
81349	M45913/3-8CG8P	5310-01-231-7459	23	9
81349	M45913/3-8CG8P	5310-01-231-7459	24	2
81349	M83420/1-005	1640-00-285-3705	BULK	4
8N013	M872-A4	2510-01-521-8018	19	1
18634	M872A4B01001	2510-01-522-6011	25	4
18634	M872A4B07005		7	1
18634	M872A4B07006		7	2
18634	M872A4B07007		7	3
18634	M872A4B13001-LH	5365-01-522-3137	23	1
18634	M872A4B13001-RH	5365-01-522-3149	23	1
18634	M872A4B13002	2590-01-524-6554	23	10
18634	M872A4C06006		24	1
18634	M872A4C08007		33	3
18634	M872A4C12002	5340-01-522-1265	27	9
18634	M872A4C13005	3040-01-522-7819	23	2
18634	M872A4C13010	5340-01-522-0049	23	3
18634	M872A4C14007		20	1
18634	M872A4C14009		20	3
18364	M872A4C17001		35	1
18634	M872A4K16006		11	1
96906	MS18154-66L	5306-01-163-2429	31	5
80205	MS24677-67	5305-00-273-7408	23	4
80205	MS24677-67	5305-00-273-7408	33	4
96906	MS27183-18	5310-00-809-5998	21	3
96906	MS35206-280	5305-00-988-1724	5	4
80205	MS35206-295	5305-00-984-5675	5	6
80205	MS35206-295	5305-00-984-5675	12	5
96906	MS35333-49	5310-00-582-6714	15	3

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CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
18634	MU-M872A4		33	5
58429	N11246	2590-00-778-0324	15	7
80205	NAS1021N17	5310-00-325-1900	15	2
80212	P40	5310-00-022-0066	23	6
18634	PACL-19	4730-01-522-3811	6	4
94658	PCP28-16N	5315-01-521-8039	37	4
94658	PCP28-24N	5315-01-521-7368	37	10
61424	PFT-6B-BLU	4720-01-287-9322	BULK	3
61424	PFT-6B-RED	4720-01-287-9313	BULK	5
94658	PH2968-4	5340-01-499-4198	22	4
94658	PH3491-3-1	5306-01-521-8273	37	7
94658	PH3491-3-2	5306-01-521-8272	37	13
94658	PH3593-15	5340-01-522-0030	37	5
94658	PH3593-30	5340-01-522-0037	37	11
94658	PH496-3	5365-01-521-6972	37	6
94658	PH496-4	5365-01-521-6781	37	12
94658	PNT04-35-04G		37	3
94658	PNT04-43-04G	5310-01-522-6847	37	9
94658	PRP08-56L	5315-01-499-4195	22	3
18634	RED12		16	1
18634	RED38		16	3
78500	S4005001030	4810-01-499-3407	12	2
78500	S4497130300	2530-01-499-3170	12	9
78500	S8997598154	5340-01-499-3481	12	7
78500	SR4034707QPM	2530-01-522-0844	9	2
98255	SW14342P	5305-01-193-2358	19	11
18634	TAL-102	5995-01-522-0939	3	2
18634	TAL-200	6150-01-522-0946	4	1
18634	TAL-300	6150-01-522-0949	4	4
18634	TAL-301	6150-01-522-0952	4	5
18634	TAL-400	6150-01-522-0958	3	1
18634	TAL-401	6150-01-522-0962	3	3
18634	TAL-402	6150-01-522-0966	3	4
18634	TAL-600	6150-01-522-0967	4	3
18634	TAL-800	6150-01-523-4908	12	1
18634	TAL-801	6150-01-522-0923	3	5
18634	TAL-900	5995-01-522-0931	4	2
83473	TB-20	5340-01-112-6396	21	2
27783	TR573	2640-00-555-2824	18	4
93061	VS269NTA 6-6	4730-01-244-1226	12	12
93061	VS269NTA-6-6	4730-01-244-1226	13	13
93061	VS269NTA-6-6	4730-01-244-1226	14	10
93061	VS272NTA-6-6	4730-01-283-1877	13	3
93061	VS279NTA 8-8	4730-01-079-3275	14	8
93061	VS279NTA-8-8	4730-01-079-3275	13	15
78500	WA16	5310-00-261-7340	13	8

CROSS-REFERENCE INDEXES**PART NUMBER INDEX**

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
78500	WA16	5310-00-261-7340	14	3
18634	WAC3069-12-8	4730-01-522-4083	13	1
94658	XAF804-1-3		22	2
74410	XA-S8-5C024-533	2590-01-522-6745	27	1
74410	XA-S9-5C024-533	2590-01-522-6749	27	1
74410	XA-V-1910-533	3040-01-521-9922	27	4
74410	XA-V-90-10-533	5340-01-521-8248	27	8
74410	XB-1108	5310-01-522-1709	27	3
74410	XB-V-444-4	5305-01-521-6993	27	2

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LISTS

SCOPE

This work package lists Components of End Item and Basic Issue Items for the M872A4 Flatbed Semitrailer 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:

1. **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.
2. **Basic Issue Items (BII).** These are the minimum essential items required to place the semitrailer in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged, BII must be with the semitrailer during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII, based upon TOE/MTOE authorizations of the end item.

EXPLANATION OF COLUMNS

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

1. **Column (1) - Illustration Number (Illus Number).** This column indicates the number of the illustration the item is shown.
2. **Column (2) - National Stock Number.** Indicates the National Stock Number (NSN) assigned to the item and will be used for requisitioning purposes.
3. **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.

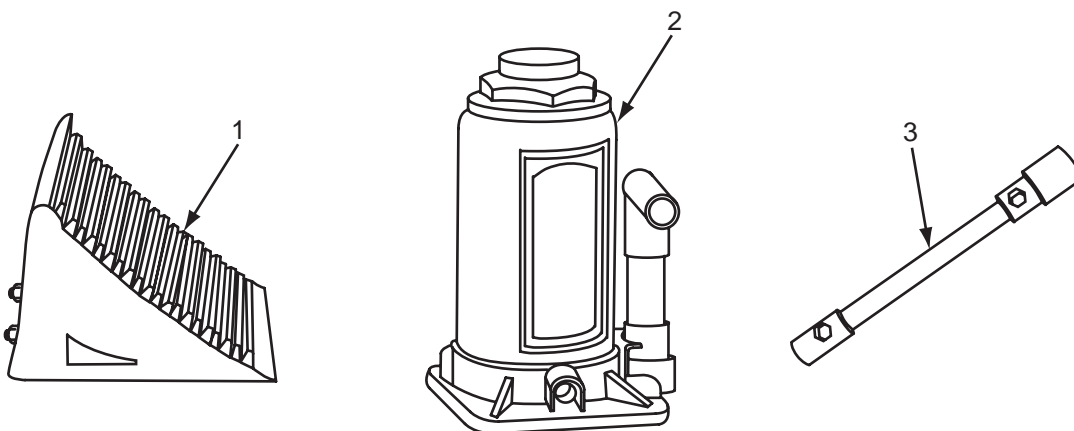
Code	Used On
2A4	M872A4

4. **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).
5. **Column (5) - Quantity Required (Qty Reqd).** Indicated the quantity of the item authorized to be used with/on the equipment.

COMPONENTS OF END ITEM

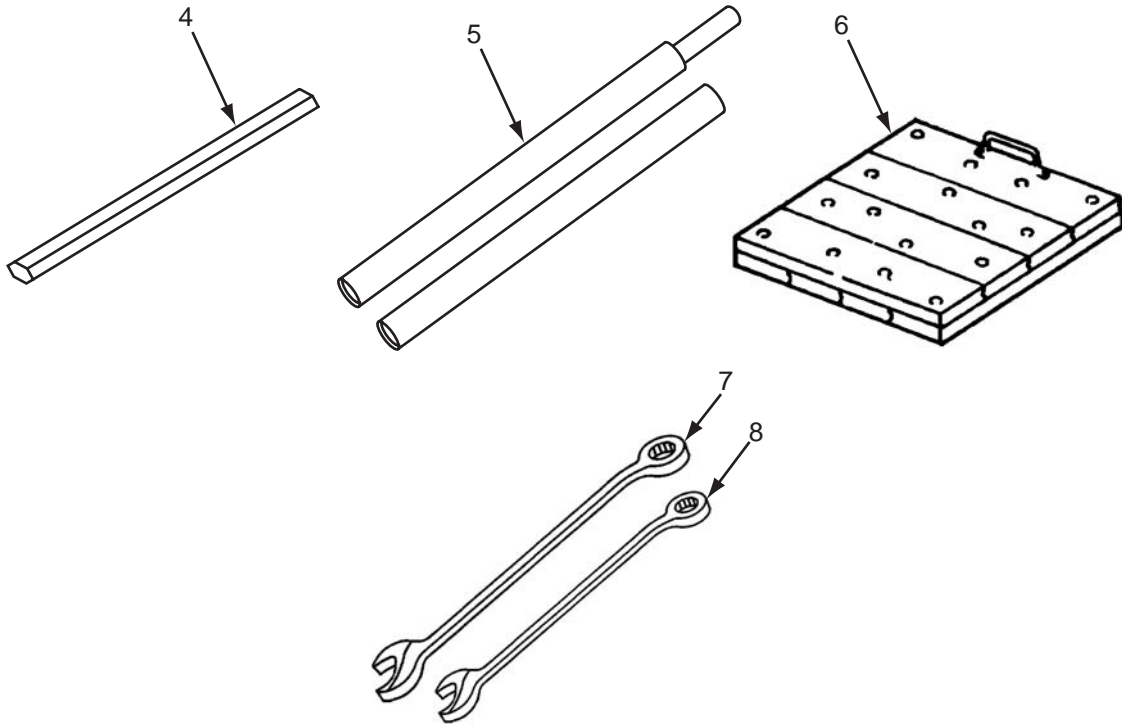
The semitrailers currently do not have any Components of End Item assigned.

BASIC ISSUE ITEMS



(1) Illus Number	(2) National Stock Number	(3) Description CAGE and Part Number	(4) Usable on Code	(5) Qty Reqd
1	2540-01-499-5553	Chock Block (0FBD6) 07758014	ea	2
2	5120-01-351-2074	Jack, 20 Ton (61674) 76520	ea	1
3	5120-00-293-1289	Wrench, Socket (19207) 41-W-3838-30	ea	1

BASIC ISSUE ITEMS - Continued



(1) Illus Number	(2) National Stock Number	(3) Description CAGE and Part Number	(4) Usable on Code U/M	(5) Qty Reqd
4	5120-01-170-4980	Handle, Wrench (0FBD6) 50939002	ea	1
5	5120-01-532-1082	Bar, Cheater (18634) M872A4B08002	ea	1
6	2510-01-499-4251	Board, Ground (18634) M872A4B08004	ea	2
7	5120-01-264-6123	Wrench 15/16" (96508) 1168	ea	1
8	5120-00-228-9510	Wrench 3/4" (05506) 1166	ea	1

END OF WORK PACKAGE

ADDITIONAL AUTHORIZATION LIST (AAL)

SCOPE

This work package lists items you are authorized for the support of the M872A4 Semitrailer.

GENERAL

This work package identifies items that do not have to accompany the semitrailer and do not have to be turned in with it. These items are all authorized to you by Common Table of Allowances (CTA), Modified Table of Organization and Equipment (MTOE), Table of Distribution and Allowances (TDA), or Joint Table of Allowances (JTA).

EXPLANATION OF LISTING

National Stock Numbers (NSN), descriptions, and quantity recommended are provided in WP 0082 00-2 to help you identify and request the additional items you require to support this equipment.

NOTE

Do not use cross chains when using bows and tarp.

Table 9. AAL

(1) NSN	(2) DESCRIPTION	(3) QUANTITY RECOMMENDED
5340-01-029-9085	Strap, Elastic (13435) 13034	43
5340-00-980-9277	Strap, Webbing (Non-Nuclear)(19207) 10900880	35
5340-01-204-3009	Tie Down Cargo (0KHZ6) MIL-PRF-71224-1	35
	Tarpaulin, Bow, Green (18634) 0108-960319-G	12
	Tarpaulin, Bow, Tan (18634) 0108-960319-T	12
	Tarpaulin, Forest Green (18634) KT-M872A4-G	1
	Tarpaulin, Forest Green (18634) KT-M872A4-T	1
	Kit, Side Rack (18634) (PN: M872A4K16007) .Panel, Side Rear (PN: 0101-962269) .Panel, Rear (PN: 0101-962270) .Panel, Side (PN: 0101-962268) .Stake, "T" (PN: 0106-963150) .Stake, Corner, RS (PN: 0106-963152) .Stake, Corner, CS (PN: 0106-963153)	1 2 2 20 21 1 1
5340-01-468-5390	Padlock Set w/Clevis (consists of 2 padlocks and 2 keys) (22107) 5200GLKAZ	3
3990-01-213-1746	Binder, Load-26,000 lb (11,794 kg), type IV (27404)-R-45	4
4010-01-499-5141	Chain, Welded (39428) 3592T31	4-20 ft ea
4010-00-033-6986	Chain Welded - 3/16" (19207) 819886	4
4030-00-539-8052	Hook, Chain, S (Spreader and Corner Chains) (80210)-498	8
2510-01-521-8643	Gage, Profile (Kingpin) (74410) TF-0110	1
3990-01-491-4714	Tie Down Cargo, Veh. - 20 x 7'6" (098P0) B9154-905-240-2R-24C	2
3940-01-503-8193	Net, Draft Cover - 11' x 5' (098P0) STR-60132-20SS	2
	Cover Bow/Bulkhead	1
	Ladder	1

END OF WORK PACKAGE

EXPENDABLE AND DURABLE ITEMS LIST

SCOPE

This work paper lists expendable and durable items that you will need to operate and maintain the M872A4 Semitrailer. This list is for informational purposes only and is not authority to requisition the listed items. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V, Repair Parts, and Heraldic Items), or CTA 8-100, Army Medical Department Expendable/Durable Items.

EXPLANATION OF COLUMNS IN TABLE 10

- Column (1) Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use antiseize compound (Item 4, WP 0086 00-2)
- Column (2) Level. This column identifies the lowest level of maintenance that requires the listed item:
- C = Operator/Crew
 - O = Organizational
- Column (3) National Stock Number (NSN). This is the NSN assigned to the item which you can use to requisition it.
- Column (4) Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number (P/N). This column provides the other information you need to identify the item.
- Column (5) Unit of Measure (U/M). This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

Table 10. Expendable and Durable Items List

(1) ITEM NUMBER	(2) LEVEL	(3) NSN	(4) ITEM NAME, DESCRIPTION CAGEC, P/N	(5) U/M
1	O	5350-00-192-5047 5350-00-192-5049 5350-00-192-5051	Cloth, abrasive (58536) A-A-1048: 80 grit—50 sheets 120 grit—50 sheets 180 grit—50 sheets	EA EA EA
2	O	5350-00-221-0872	Cloth, abrasive, crocus, 50 sheets (81348) P-C-458	EA
3	O	7920-01-004-7847	Cloth, lintfree Rymples cloth 301 purified	EA
4	O	8030-00-753-4953	Compound, antiseize (81349) MIL-A-13881	LB
5	O	7930-00-282-9699	Detergent, nonsudsing, general purpose, liquid (80244) MIL-D-16791, type 1: 1 gal (3.79 L)	GL
6	O	9150-01-197-7691 9150-01-197-7688 9150-01-197-7689 9150-01-197-7690 9150-01-197-7692 9150-01-197-7693	Grease, automotive and artillery (81349) MIL-PRF-10924G: 120-lb (54.4-kg) drum 2-1/4-oz (64-g) tube 6-1/2-lb (2.95-kg) can 1-3/4-lb (0.79-kg) can 35-lb (15.9-kg) can 14-oz (397-g) cartridge	LB OZ LB LB LB OZ
7	O	8540-00-262-7177	Hand cleaner, container (09177) 200-767-4A	EA
8	O	9150-00-402-4478 9150-00-402-2372 9150-00-491-7197	Lubricating oil, internal combustion engine Arctic, OEA (81349) MIL-L-46167: 1-qt (0.95-L) can 5-gal (18.93-L) can 55-gal (208.2-L) drum	QT GL GL
9	O	9150-00-189-6727 9150-00-186-6668 9150-00-191-2772	Lubricating oil, OE/HDO 10W (81349) MIL-L-2104: 1-qt (0.95-L) can 5-gal (18.93-L) can 55-gal (208.2-L) drum	QT GL GL
10	O	7920-00-205-1711	Rags: wiping, cotton and cotton synthetic: 50-lb (22.68-kg) bale (58536) A-A-531	LB

Table 10. Expendable and Durable Items List - Continued

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION CAGE AND PART NUMBER	(5) U/M
11	O	7930-01-328-2030 7930-01-328-4058	Solvent, cleaning compound (OJVH) PF05: 5-gal (18.93-L) can 55-gal (208.2-L) drum	GL GL
12	O	6850-00-664-5685	Solvent, Dry Cleaning (58536) AA59601-1D 5-gal (18.93-L) can	GL
13	O	6850-01-375-5553 6850-01-375-5555	Solvent, cleaning compound (8S927) 0296-06: 5-gal (18.93-L) can 55-gal (208.2-L) drum	GL GL
14	O	6850-01-381-4423 6850-01-381-4401	Solvent, cleaning compound (OK209) SYKSOL 100: 5-gal (18.93-L) can 55-gal (208.2-L) drum	GL GL
15	O	6850-01-381-4420 6850-01-381-4404	Solvent, cleaning compound (OK209) SKYSOL: 5-gal (18.93-L) can 55-gal (208.2-L) drum	GL GL
16	O	8040-01-152-8105	Epoxy adhesive	KT
17	O	8040-00-152-0063	Vinyl adhesive	BT
18	O	5970-00-184-2002	Dielectric tape, electrical	RD
19	O	8030-01-159-4844	Sealant, silicone, RTV: 8-1/2-oz (241-g) tube (11862) 1052734	OZ
20	O	9905-00-537-8954	Tag, marker: 50 each (81349) MIL-T-12755	EA
21	O	5970-00-644-3167	Tape, insulation, electrical: 85-ft (25.9-m) roll (81348) HH-510	FT
22	O	8020-00-689-5379	Paint roller kit: 9-in. (22.86-cm) w/paint tray	KT

Table 10. Expendable and Durable Items List - Continued

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION CAGE AND PART NUMBER	(5) U/M
23	O	8020-00-682-6498	Paint roller cover: 9 in. (22.86 cm), 1-in. (2.54-cm) pile	EA
24	O	8030-01-414-7423	Carwell corrosion treatment (12) 16oz (454-g) bottles	EA
25	O	8030-01-414-8947	Carwell corrosion treatment 5-gal (18.93 L) can	GL
26	O	8030-01-414-7430	Carwell corrosion treatment 55-gal (208.2 L) drum	GL
27	O	8030-01-414-1413	Carwell corrosion treatment 55-gal (208.2 L) drum, Includes applicator and video	GL
28	O	7920-00-263-0328	Wooden extension handle: 60 in. (152.4 cm), for paint roller	EA
29	O	8030-01-282-5626	Rubber preservative compound: (ozone protection for tires)	GL
30	O	5640-00-103-2254	Plastic-coated cloth tape: 2 in. (5.08 cm) wide, 60 yd (54.86 m)	RO
31	O	8010-00-152-3245	Boiled linseed oil for deck wood	GL
32	O	8010-00-684-8789	Boiled linseed oil for deck wood contains 5 gallon	CN
33	O	9150-00-040-3891	Grease, silicone insulated electric motor (dielectric)	TU
34	O	5640-00-103-2254	Tape, pressure sensitive, adhesive: 60 yd (54.86 m)	RO
35	O	5975-00-156-3253	Tiedown straps, nylon: 13-1/2 in. (34.29 cm)	HD

Table 10. Expendable and Durable Items List - Continued

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION CAGE AND PART NUMBER	(5) U/M
36	O	4730-00-289-8148	Cap, lubrication fitting, protective	EA
37	O	5340-00-450-5718	Caps, plugs, protective dust moisture	SET
38	O	8030-01-414-8947	Rust inhibitor: 5 gal (18.93 L) w/pump	CN
39	O	8030-00-015-1295	Anti-seize compound: 1 lb (0.45 kg)	CN
40	O	6810-00-264-6715	Molybdenum disulfide powder (graphite)	LB
41	O	8030-00-938-1947	Corrosion preventive compound	CN
42	O	9150-00-943-6880	Molybdenum disulfide grease	TU
43	O	8010-00-141-7838	Nonslip walkway paint Type II olive drab	GL
44	O	8010-00-641-0427	Nonslip walkway paint Type II black	GL
45	O	8030-00-252-3391	Nonhardening Type II sealing compound	TU
46	O	8040-00-455-5359	Automotive adhesive, black	TU
47	O	7920-00-061-0038	Brush, scrub (83421) 7920-00-061-0038	EA
48	O	8030-00-664-4944	Canvas preservative, liquid, or brush or spray	GL
49	O	8340-01-423-6231	Repair tape, tarp (for small repairs on polyester or duct material) (81349) – MIL-C-44103	RO
50	O	9150-00-186-6681 9150-00-188-9858 9150-00-189-6729	Lubricating oil, Engine, OE/HDO 30W (81349) MIL-L-2104: 1-qt (0.95-L) can 5-gal (18.93-L) can 55-gal (208.2-L) drum	QT GL GL

END OF WORK PACKAGE

SPECIAL TOOLS LIST

No special tools required.

TORQUE LIMITS**SCOPE**

This work package lists standard torque values, as shown in Table 11, and provides general information for applying torque. Special torque values and tightening sequences are indicated in the maintenance procedures for applicable components.








GENERAL

- a. Always use the torque values listed in Table 11 when the maintenance procedure does not give a specific torque value.
- b. Unless otherwise indicated, standard torque tolerance shall be + 10%.
- c. Torque values listed are based on clean, dry threads. Reduce torque by 10% when engine oil is used as a lubricant, Reduce torque by 20% if new plated capscrews are used.
- d. Capscrews threaded into aluminum may require reductions in torque of 30% or more of Grade 5 capscrews torque. Capscrew threaded into aluminum must also attain two capscrew diameters of thread engagement.

CAUTION




If replacement capscrews are of a higher grade than originally supplied, use torque specifications for the original. This will prevent equipment damage due to overtorquing.

Table 11. Standard

Current Usage	Much Used	Much Used	Used at Times	Used at Times
Quality of Material	indeterminate	Minimum Commercial	Medium Commercial	Best Commercial
SAE Grade Number	1 or 2	5	6 or 7	8
Capscrew Head Markings			 	 
Manufacturer's marks may vary				
These are all SAE Grade 5 (3 line)				
Capscrew Body Size (inches) - (Thread)	Torque Ft Lb (Nžm)	Torque Ft Lb (N•m)	Torque Ft Lb (Nžm)	Torque Ft Lb (Nžm)
1/4 20	5 (7)	8 (11)	10 (14)	12 (16)
28	6 (8)	10 (14)		14 (19)
5/16 18	11 (15)	17 (23)	19 (26)	24 (33)
24	13 (18)	19 (26)		27 (37)
3/8 16	18 (24)	31 (42)	34 (46)	44 (60)
24	20 (27)	35 (47)		49 (66)
7/16 14	28 (38)	49 (66)	55 (75)	70 (95)
20	30 (41)	55 (75)		78 (106)
1/2 13	39 (53)	75 (102)	85 (115)	105 (142)
20	41 (56)	85 (115)		120 (163)
9/16 12	51 (69)	110 (149)	120 (163)	155 (210)
18	55 (75)	120 (163)		170 (231)
5/8 11	63 (113)	150 (203)	167 (226)	210 (285)
18	95 (129)	170 (231)		240 (325)
3/4 10	105 (142)	270 (366)	280 (380)	375 (508)
16	115 (156)	295 (400)		420 (569)
7/8 9	160 (217)	395 (536)	440 (597)	605 (820)
14	175 (237)	435 (590)		675 (915)
1 8	235 (319)	590 (800)	660 (895)	910 (1234)
14	250 (339)	660 (895)		990 (1342)

END OF WORK PACKAGE

Table 12. Metric Torque Limits.

DESCRIPTION	 8.8	 10.9 = R10	 12.9 = R12
	High-carbon steel	Alloy steel	Special alloy steel
Diagram per Pitch (mm)	Kgm	Kgm	Kgm
4x0.70	0.37	0.52	0.62
5x0.80	0.72	1.01	1.2
6x1.00	1.23	1.73	2.08
7x1.00	2.02	2.84	3.40
8x1.25	3.02	4.25	5.10
9x1.25	3.88	5.45	6.55
10x1.50	5.36	7.54	9.05
12x1.75	9.09	12.80	15.30
14x2.00	13.80	19.40	23.30
16x2.00	21.00	29.50	35.40
18x2.50	26.30	37.00	44.40
20x2.50	36.60	51.50	61.80
22x2.50	44.40	62.40	74.90
24x3.00	56.90	80.00	96.00

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By Order of the Secretary of the Army:


Official:


SANDRA R. RILEY
*Administrative Assistant to the
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0428101

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ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).	
	0004 00-2	4-7				Wrong POC is listed.	
							
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
TYPED NAME, GRADE OR TITLE Your Name				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION		SIGNATURE Your Signature	

TO: <i>(Forward direct to addressee listed in publication)</i> AMSTALC-LPIT / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630	FROM: <i>(Activity and location) (Include ZIP Code)</i> Your address	DATE Date you filled out this form
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER TM 9-2330-331-14&P	DATE 31 December 2005	TITLE Semitrailer, Flatbed: Breakbulk/Container Transporter, 34 Ton, M872A4
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS *(Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE Your Name	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE Your Signature
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
For use of this form, see AR 25-30; the proponent agency is ODISC4.							
TO: (Forward to proponent of publication or form) (Include ZIP Code) AMSTALC-LPIT / TECH PUBS, TACOM-RI 1 Rock Island Arsenal Rock Island, IL 61299-7630						FROM: (Activity and location) (Include ZIP Code)	
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ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON (Provide exact wording of recommended changes, if possible).	
<i>*Reference to line numbers within the paragraph or subparagraph.</i>							
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THE METRIC SYSTEM AND EQUIVALENTS

LINEAR MEASURE

1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches
 1 Meter = 100 Centimeters = 1,000 Millimeters = 39.37 Inches
 1 Kilometer = 1,000 Meters = 0.621 Miles

WEIGHTS

1 Gram = 0.001 Kilograms = 1,000 Milligrams = 0.035 Ounces
 1 Kilogram = 1,000 Grams = 2.2 Lb
 1 Metric Ton = 1,000 Kilograms = 1 Megagram = 1.1 Short Tons

LIQUID MEASURE

1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces
 1 Liter = 1,000 Milliliters = 33.82 Fluid Ounces

SQUARE MEASURE

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

CUBIC MEASURE

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

TEMPERATURE

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

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	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds Per Square Inch	Kilopascals	6.895
Miles Per Gallon	Kilometers Per Liter	0.425
Miles Per Hour	Kilometers Per Hour	1.609
TO CHANGE	TO	MULTIPLY BY
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Square Centimeters	Square Inches	0.155
Square Meters	Square Feet	10.764
Square Meters	Square Yards	1.196
Square Kilometers	Square Miles	0.386
Square Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds Per Square Inch	0.145
Kilometers Per Liter	Miles Per Gallon	2.354
Kilometers Per Hour	Miles Per Hour	0.621

