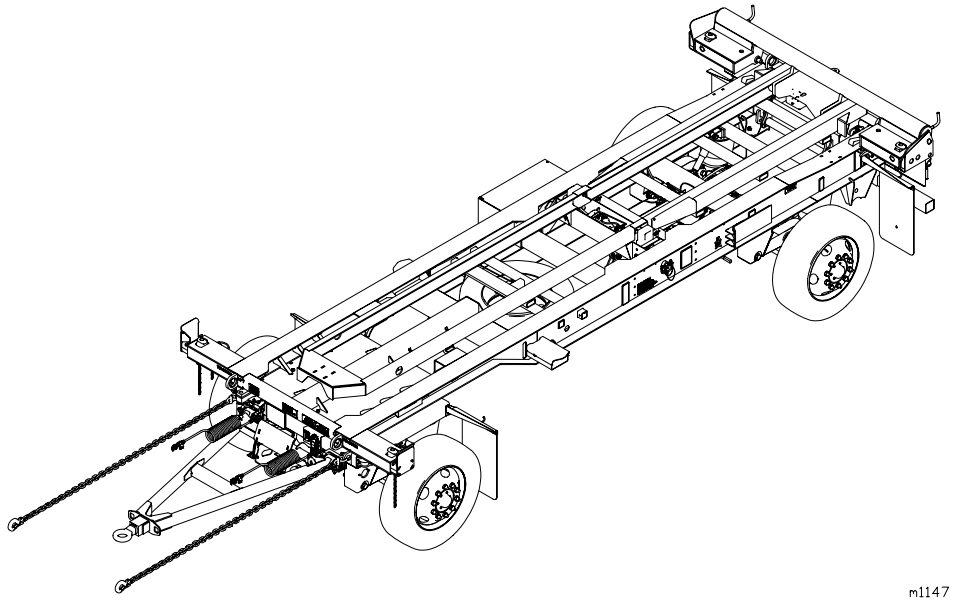
OPERATOR AND FIELD LEVEL MAINTENANCE MANUAL INCLUDING

REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) FOR FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV) LOAD HANDLING SYSTEM TRAILER (LHST)

MODEL	NSN	UOC
TRAILER, FMTV LOAD HANDLING SYSTEM, M1147	2330-01-508-7887	MTB



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HEADQUARTERS, DEPARTMENTS OF THE ARMY

FEBRUARY 2007

WARNING SUMMARY

FIRST AID

First aid is the emergency care given to the sick, injured, or wounded before being treated by medical personnel. First aid data can be found in FM 4-25.11. This manual contains procedures for all types of casualties and the measures described are for use by both male and female service members. Service members may be able to save a life, prevent permanent disability, or reduce long periods of hospitalization by knowing WHAT to do, WHAT NOT to do, and WHEN to seek medical assistance.

HAZARDOUS MATERIALS

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

MAINTENANCE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

WARNING

Do not touch extremely cold metal (below -26° F (-32° C)). Bare skin may freeze to cold metal. Failure to comply may result in injury to personnel.

WARNING

All cleaning procedures must be accomplished in well-ventilated areas. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Protective gloves, clothing, and/or respiratory equipment must be worn whenever caustic, toxic, or flammable cleaning solutions are used. Failure to comply may result in injury to personnel or damage to equipment.

WARNING SUMMARY - Continued

MAINTENANCE - Continued

WARNING

Diesel fuel or gasoline must never be used for cleaning. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

A fire extinguisher must be available and ready during all cleaning operations involving Dry Cleaning Solvent. Failure to comply may result in injury to personnel or damage to equipment.

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). Failure to comply may result in serious injury or death to personnel.

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

WARNING

Some residual compressed air may remain in pneumatic hoses. Use goggles when disconnecting hoses. Failure to comply may result in injury to personnel.

WARNING

If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in serious injury or death to personnel.

INSET LATEST UPDATED PAGES/WORK PACKAGES, DESTROY SUPERSEDED DATA

LIST OF EFFECTIVE PAGES / WORK PACKAGES

NOTE: The portion of text affected by updates are indicated by a vertical line in the outer margins of the page.

Dates of issue for original and updated pages / work packages are:

Original 0.....14 February 2007

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS XX AND TOTAL NUMBER OF WORK PACKAGES IS 169 CONSISTING OF THE FOLLOWING

Page / WP	*Change No.
Cover (Back Blank)	0
A to c (d Blank)	0
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Title (Back Blank)	0
i to iii (iv Blank)	0
WP 0001 00	0
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TM 9-2330-334-13&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 14 February 2007

TECHNICAL MANUAL

OPERATOR AND FIELD LEVEL MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL) FOR
FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV)
LOAD HANDLING SYSTEM TRAILER
(LHST)

MODEL	NSN	UOC
Trailer, FMTV, Load Handling System (LHST)	2330-01-508-7887	MTB

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://aeps@ria.army.mil. The DA Form 2028 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 the 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-LMIT / TECH PUBS, TACOM-RI, 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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WP Sequence No.

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DA FORM 2028

HOW TO USE THIS MANUAL

OVERVIEW

This Technical Manual (TM) is provided to assist you in operating and maintaining the Load Handling System Trailer (LHST)

Front Cover. Provides information about the type of manual and equipment covered by the TM.

Table of Contents. Lists the Chapters, Work Packages, and Alphabetical Index in order of appearance.

General Information/WARRANTY. Provides information on Scope, Maintenance Forms, Records and Reports, Reporting Equipment Improvement Recommendations, Corrosion Prevention and Control, Destruction of Army Materiel to Prevent Enemy Use, Preparation for Stowage or Shipment, and Warranty.

Chapter 1, Description and Theory of Operation. Describes the trailer and provides installed equipment data.

Chapter 2, Operator Instructions. Describes operator's trailer controls and indicators, and operating instructions.

Chapter 3, Troubleshooting Procedures. Provides Operator and Field Level Maintenance instructions for troubleshooting problems with the trailer.

Chapter 4, Maintenance Instructions. Provides instructions for Field Level maintenance of the trailer components.

Chapter 5, Supporting Information. Contains information about references, Components of End Items (COEI) and Basic Issue Items (BII) lists, Additional Authorization List (AAL), Expendable and Durable Items List, and Stowage and Decal/Data Plate Guide.

Subject Index. Lists important subjects contained in this TM in alphabetical order. It also gives the work package and page numbers where each subject is located.

FINDING INFORMATION

There are several ways to find the information you need in this manual. They are as follows:

Table of Contents. Lists Chapters, Sections, and Indexes with Work Package Numbers in order of appearance.

TROUBLESHOOTING

Troubleshooting is contained in Chapter 3. When you have a problem with the operation of your equipment, look at Troubleshooting Table of Contents in Chapter 3. Find the malfunction in the listing. Turn to the Work Package listed for the malfunction. Perform the steps required to correct the malfunction. If you cannot find the malfunction, or the malfunction is not corrected, notify your supervisor.

HOW TO USE THIS MANUAL - Continued

Troubleshooting Instructions:

1) Operational Checkout and Troubleshooting Procedures Work Package.
   This work package covers the operational checkout of the trailer. Step-by-step instructions for checking the proper operation of the trailer are provided. Follow the steps from the beginning to the end of the work package to determine if a malfunction exists.
   a) Steps.
      The procedural steps will determine if a malfunction exists. Once a malfunction has been determined, go to the Indication/Condition next to the procedural step.
   b) Indication/Condition.
      This column may contain one or more malfunctions found from the procedural steps. Select the appropriate Indication/Condition and proceed to the following Corrective Action for that malfunction.
   c) Corrective Action.
      This column may contain troubleshooting procedures or a reference to the corrective action to be taken.
2) Troubleshooting Table of Contents
   All malfunctions may not be detected at the time Operational Checkout is being performed. Use this listing to find the troubleshooting for the malfunction detected.
3) Troubleshooting Work Packages.
   This work package contains step-by-step procedures for identifying, locating, isolating, and repairing equipment malfunctions. The work package title block will match the troubleshooting index.
   a) This Work Package Covers.
      This section indicates the Functional Group Code (FGC) for that system. An effectivity notice will be stated if applicable.
   b) Initial Setup.
      Provides the maintenance technician with general information, equipment, parts, material, and authorized personnel required to perform and complete all the operating tasks included in the work package.
   c) Procedure.
      Warnings, Cautions, and Notes that appear at the beginning of a work package will be effective throughout the whole procedure.
      - Indication/Condition**.** This usually comes in the form of a question requiring a yes or no response.
      - Decision No/Yes. The no and yes decision column is the response from the question. Attached to the response will be a guide to take the technician to either the next step or a series of steps, or to a malfunction and corrective action.
      - Procedural Step. This column provides a step-by-step procedure that will guide the technician to the YES or No conclusion.

HOW TO USE THIS MANUAL - Continued

Troubleshooting Instructions - Continued

OPERATION AND MAINTENANCE

Operation. Before you operate the trailer, familiarize yourself with the controls and indicators (Chapter 2). Perform your BEFORE preventive maintenance. Read the operating instructions contained in Chapter 2. Always follow WARNINGS and CAUTIONS.

Maintenance. When you perform maintenance, look over the entire procedure before starting. Make sure you have the necessary tools and materials at hand. Always observe WARNINGS and CAUTIONS.

REPAIR PARTS AND SPECIAL TOOLS LIST

SCOPE
This Repair Parts and Special Tools Listing (RPSTL) and authorizes spares and repair parts; special tools; Test, Measurement, and Diagnostic Equipment (TMDE); and other special support equipment required for performance of field level maintenance of the LHST. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the Source, Maintenance and Recoverability (SMR) codes. Refer to Introduction to RPSTL work package.

GENERAL INFORMATION/WARRANTY 0001 00

SCOPE

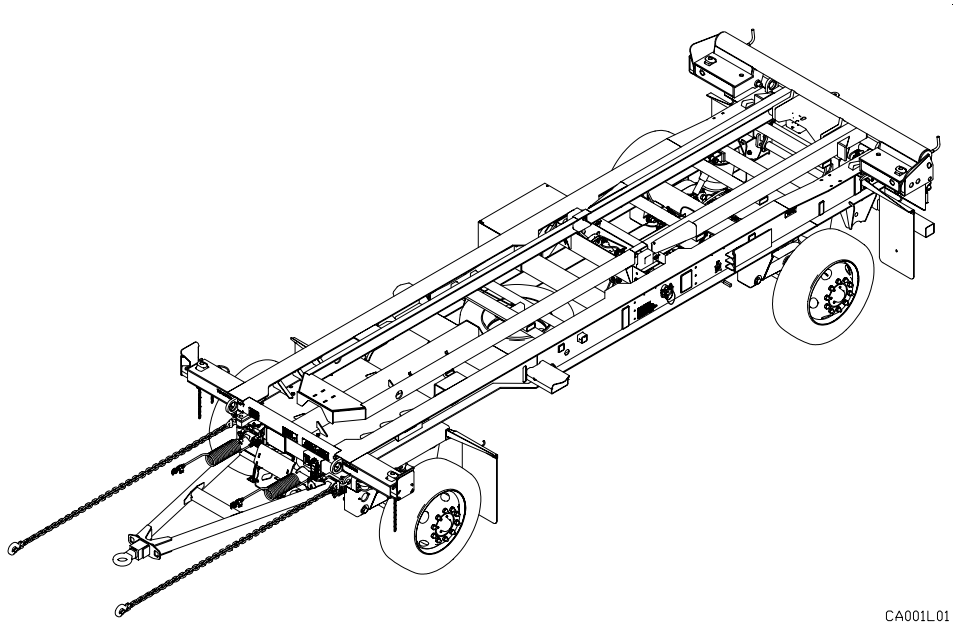
Type of Manual. This manual provides instructions for operation and maintenance of the Family of Medium Tactical Vehicle Load Handling System Trailers (LHST). Maintenance procedures are given at operational, and field levels. In addition, this manual contains a list of repair parts and special tools required for trailer maintenance. The LHST will herein be referred to as the trailer.

Name and Model.

NAME	MODEL
Trailer, FMTV Load Handling System (LHST)	M1147

Purpose of Equipment. The trailer is designed for tactical use. The purpose of the trailer is as follows:

M1147 is a four-wheeled trailer capable of carrying up to 17,600 lb (7,983 kg).



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SCOPE - Continued

MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army (DA) forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750 The Army Maintenance Management System (TAMMS), as contained in the Maintenance Management Update.

REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your trailer needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368. Mail it to us at: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-QRT, Warren, MI 48397-5000. We'll send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

The trailer has a total service life of 20 years which allows for extended periods of operation in a corrosive environment. A corrosive environment includes exposure to high humidity, salt spray, road-deicing chemicals, gravel damage, and atmospheric contamination. No action beyond normal washing and repair of damaged areas is needed to control corrosion.

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

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

If a corrosion problem is identified, it can be reported using form SF 368 (Product Quality Deficiency Report). Using keywords such as "corrosion," "rust," "cracking," or "deterioration" will ensure that the information is identified as a CPC problem.

Form SF 368 should be submitted to the address specified in DA PAM 738-750 The Army Maintenance Management System (TAMMS).

DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Command decision, according to the tactical situation, will determine when the using organization is to destroy a trailer. A destruction plan will be prepared by the using organization, unless one was prepared by a higher authority. For general trailer destruction procedures, refer to TM 750-224-6, Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (U.S. Army Tank-automotive and Armaments Command).

SCOPE - Continued

PREPARATION FOR SHIPMENT

Land, Sea, and Air Shipment.

Instructions for shipment of the trailer by land, sea, and air are contained in the following publications:

MTMCTEA Pam 56-1	Marine Terminal Lifting Guidance
MTMCTEA Pam 55-19	Tiedown Handbook for Rail Movements
TB 55-46-1	Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment (in TOE Line Item Number Sequence)

WARRANTY

1. General. This Section provides implementation instructions for the Warranty on the LHST. It contains instructions for obtaining services and/or supplies covered under warranty. This Section also describes methods of processing warranty claims. For additional information on the LHST or any U.S. Army Tank-automotive and Armaments Command (TACOM) equipment, contact your local Warranty Control Office/Officer (WARCO) or TACOM Logistics Assistance Representative (LAR). If your WARCO or TACOM LAR is not available or if additional information is required, contact TACOM. The number to call is DSN 786-8081, COMMERCIAL (810) 574-8081. The caller should be prepared to provide: (1) name, (2) DSN and commercial telephone numbers, (3) complete unit designation, (4) identification of the equipment, to include the serial number(s), (5) a brief description of the problem, and (6) the contract number (see paragraph 3).

2. Explanation of Terms.

Abuse. The improper use, maintenance, repair, or handling of warranted items that may cause the warranty of those items to become void, for example, not following service intervals, using the equipment for other than what is intended.

Acceptance. The execution of the Acceptance Block and signing of DD Form 250, by the authorized Government representative.

Acceptance Date. The date an item of equipment is accepted into the Army's inventory by the execution of the Acceptance Block and signing of a DD Form 250 or, in case of Material and Workmanship Warranty, date of hand off as evidenced by the user's hand receipt or property book.

Contractor. The supplier of equipment who enters into an agreement directly with the Government to furnish supplies.

Correction. The elimination of a defect.

Defect. Any condition or characteristic in supplies furnished by the Contractor that does not function as intended.

WARRANTY - Continued

Pass-Through Warranty. A vendor's (Michelin) commercial warranty that provides warranty coverage.

Failure. A part, component, or end item that fails to perform its intended use.

Owning Unit. The Army Unit authorized to operate, maintain, and use the equipment.

Reimbursement. A written provision in this warranty in which the Using/Support Unit requests replacement parts from the Contractor to make the necessary repairs, and the Government will be reimbursed for the labor required to correct or repair the end item.

Repair. A maintenance action required to restore an item to serviceable condition without affecting the warranty.

Supplies. All assemblies, subassemblies, and down parts to the lowest level that comprise an end item.

WARCO. Serves as the intermediary between the troops owning the equipment and the local dealer, Contractor, or manufacturer. All warranty claim actions will be processed through the WARCO.

Warranty. A written agreement between the Contractor and the Government which outlines the rights and obligations of both parties for defective supplies.

Warranty Claim. Action started by the equipment user for authorized warranty repair or reimbursement.

Warranty Expiration Date. The date the warranty is no longer valid. The Pass-Through warranty expiration date and the Material and Workmanship warranty expiration date are not the same. The Material and Workmanship Warranty expires 24 months after the Government Acceptance Date.

Warranty Period. Time during which the warranty is in effect. Normally measured as the maximum number of years, months, days, miles, or hours used.

Warranty Start Date. The date the warranty is put into effect.

3. Coverages-Specific. The LHST has a Material and Workmanship and a Pass-Through Warranty which is a Vendor's (Michelin) Commercial Warranty, that are administered by Armor Holdings Tactical Vehicle Systems (TVS). The item identified in Table 1. Supplier Summary Section has a Pass-Through Warranty available. Regardless of the Pass-Through Warranty, all items may be warranted by TVS under the 24 month Material and Workmanship Warranty which covers parts and labor for claims having a total value of $300.00 or more, parts and labor combined, calculated at Contractor cost of parts plus labor. The LHST is manufactured by Armor Holdings Tactical Vehicle Systems (TVS) under contract number DAAE07-03-C-S023. To find out if the Pass-Through Warranty for the item listed in Table 1. Supplier Summary Section, the Material and Workmanship Warranty are still in effect, simply contact your local WARCO. Your local WARCO can inquiry TVS's website (www.tvsonlinesupport.com) or contact TVS at 1-800-221-3688, and ask for the Warranty Department. The Warranty Department will need the information in paragraph 3.b. to determine if the warranty is still in effect.

WARRANTY - Continued

a. Defects. If a defect/failure is caused by (or falls within) any of the following categories, it is not considered warrantable and a claim should not be initiated:

a. Misuse or negligence
b. Accidents
c. Improper operation
d. Improper storage
e. Improper transport
f. Improper or insufficient maintenance service
g. Improper alterations or repair
h. Defect/failure discovered or occurring after warranty expiration date
i. Fair wear and tear items (brake shoes, etc)
j. Foreign object damage
k. Improper packing or handling
l. Combat damage
m. Consequential damages resulting from a defect or failure
n. Failure of parts/components resulting in less than $300.00 combined, labor and Contractor cost of parts (Not applicable to Pass-Through Warranties)

b. Pass-Through, Material and Workmanship Warranty. The Pass-Through Warranty is provided by the vendor in Table 1. Supplier Summary Section, but will be administered by TVS through your local WARCO. Material and Workmanship Warranty are supplied by TVS through your local WARCO. To obtain services for Pass-Through, Material and Workmanship Warranty, your local WARCO contacts TVS through their website (www.tvsonlinesupport.com) or calls 1-800-221-3688, asks for the Warranty Department, and provides the following information:

- Customer work order number
- Customer complete address
- Equipment serial number
- Defective component part number
- Manufacturer cage code
- Defective component National Stock Number
- Description of the defect including codes from the electronic boxes
- Component serial number or date code, if available
- Quantity
- Person to contact on the request for warranty, to include: telephone, fax number and shipping address. This information can be sent by your local WARCO to TVS's website (www.tvsonlinesupport.com) or electronic mail (warranty@armorholdings.com).

c. Warranty Start Dates.

- Information to determine the Pass-Through Warranty start date for Michelin is listed later in this Bulletin. Material and Workmanship Warranty start at hand off as evidenced by the user's hand receipt or property book and expire 24 months later.

WARRANTY - Continued

c. Warranty Start Dates (Cont).

- For Pass-Through, Material and Workmanship Warranty, your local WARCO contacts TVS through their website (www.tvsonlinesupport.com) or calls 1-800-221-3688, asks for the Warranty Department, and provides the information in paragraph 3.b. TVS will obtain the warranty start date and notify the Government if the warranty period has expired.

4. Material and Workmanship Warranties.

a. Warranty Period. The warranty period for the Material and Workmanship Warranty is 24 months and begins with hand off to the unit as evidenced by the unit's hand receipt or property book.

b. Coverage. The Material and Workmanship Warranty covers the complete equipment, parts and labor, excluding those items identified in paragraph 3.a. No warranty claims will be submitted for less than $300.00 total value, Contractor cost of parts and labor.

c. Procedure. The unit will submit a DA Form 2407 or DA Form 5504 to their local WARCO for submittal to TVS for warranty consideration. Upon claim approval, TVS will begin appropriate repair action as identified by the warranty claim.

5. Pass-Through Warranties.

Table 1. Supplier Summary Section

VENDOR	VENDOR PART NO	NSN	DESCRIPTION
Michelin	42407	2610-01-518-5292	Tire, Pneumatic

Michelin

1. Warranty Period. The warranty is 5 years from the date of tire manufacture, or the life of the original usable tread down to 2/32nds of an inch of tread remaining. The date of manufacture is determined from the "DOT" number on the lower side above the bead. It will end in "X" and 4 numerics. The numerics represent the week and year of manufacture (i.e., "4804" = 48th week of 2004)

1. Coverage. The user must pay for the cost of a new tire on a pro-rata basis calculated by multiplying the current negotiated TACOM replacement price or the Government Open Market price, whichever is applicable, by the percentage of usable tread. This warranty does not include any mounting, balancing or other charges.

2. Procedure. Unit will submit a DA Form 2407 or DA Form 5504 to their WARCO for warranty consideration. During the first 2 years of vehicle warranty, the WARCO will address all claims to TVS under the Material and Workmanship Warranty. Upon expiration of the Material and Workmanship Warranty, the WARCO will address all claims to the Michelin Government Sales Department at webtruck@us.michelin.com.

WARRANTY - Continued

6. Contractor Responsibilities.

a. Government Correction. When the owning unit has elected to perform corrective action, the Contractor will ship all replacement parts required to affect correction within 3 calendar days of notification. If the Contractor is unable to meet the 3 calendar days, the repair site will be notified of any delay and the anticipated ship date. CONUS requirements, including Alaska and Hawaii, will be shipped to the repair location. OCONUS requirements will be shipped to a Government provided APO or CONUS Port of Embarkation. The Contractor shall reimburse the Government for the cost of labor involved in Government correction. Labor will be calculated at the current fiscal years labor rate for the maintenance level identified in the Maintenance Allocation Chart (MAC) multiplied by the actual number of labor hours incurred, not to exceed the labor hours in the MAC. The Government will notify the Contractor in writing via DA Form 2407 for the reimbursement required.

b. Contractor Correction. When the owning unit has directed the Contractor to correct the Supplies, the Contractor will furnish all material required to correct the defective supplies. The Contractor will complete repairs on site or at an approved repair facility, and will maintain an overall repair time equal to 5 calendar days or less from the notification date.

c. Defective Parts. The Contractor has the right to inspect parts found to be defective and will be allowed to take possession of failed parts following their replacement. All freight charges for the return of defective/failed parts are the responsibility of the Contractor.

7. Government Responsibilities. The Major Subordinate Command for the M1147 LHST is the U.S. Army Tank-automotive and Armaments Command (TACOM), Warren, MI 48397-5000. TACOM is responsible for managing and implementing the warranty. Warranty claims will be reported to:

WARRANTY - Continued

Technical Publication Information Office
TACOM-RI
1 Rock Island Arsenal
Rock Island, IL 61299-7630
Email: tacom-tech-pubs@ria.army.mil
Fax: DSN 793-0726
Commercial: (309) 782-0726

a. TACOM will:

- Verify, review, process and if valid and complete, submit claims (reimbursable and /or disputes) to the Contractor.
- Reject claims that are not valid and send them back to the local WARCO with a short explanation of why the claim is rejected.
- Request additional information for incomplete claims.
- Provide warranty claim acknowledgement/closeout letters and/or parts/assemblies disposition instructions to the local WARCO.
- Ensure the Contractor performs in accordance with the terms of the contract.

b. Equipment owning unit will:

- Identify defects/failures and verify that the defects/failures are warrantable.
- Submit warranty claims, using DA Form 2407 and DA Form 2407-1 or DA Form 5504 Maintenance Request through channels to the supporting repair facility.
- Tag and retain, pieces of parts and/or assemblies removed at the owning unit level and as a result of a warrantable defect/failure and/or correction, in accordance with DA PAM 738-750 The Army Maintenance Management System (TAMMS) and this Technical Bulletin.

c. Supporting repair facility will:

- Identify defects/failures as warrantable (if owning unit has not already identified them). Verify defects/failures are warrantable.
- Review, process, and submit valid warranty claims to the local WARCO if the Maintenance Request is complete and correctly filled out.
- Reject invalid warranty claims or request additional information for incomplete and incorrect claims.
- Coordinate with the owning unit and decide which option for repair is desired to correct the warrantable defect/failure.

WARRANTY - Continued

- Depending upon which repair option was selected (Government or Contractor repair), provide labor and Contractor furnished parts to accomplish the warrantable repairs.

- Tag and retain (in accordance with DA PAM 738-750 The Army Maintenance Management System (TAMMS) and this Technical Bulletin) all parts, pieces or parts and/or assemblies removed as a result of warrantable defect/failure and/or correction.

d. Local WARCO will:

- Verify, administer, and process warranty claims to the TACOM WARCO (in accordance with DA PAM 738-750 The Army Maintenance Management System (TAMMS) and this Technical Bulletin).

- Act as a liaison with the owning unit, the Contractor, supporting repair facility, and TACOM.

- Notify the owning units of all warranty claim acknowledgements/closeouts, information and/or instructions received from TACOM or the Contractor.

- Act as a liaison between local dealers and the Army.

e. Alterations/Modifications. Alterations/modifications shall not be applied unless authorized by TACOM.

8. Claim Procedures.

a. The procedures for reporting warranty claims are found in DA PAM 738-750 The Army Maintenance Management System (TAMMS) and this Work Package. Responsibilities of the Major Army Command (MACOM) are found in AR 700-139 Army Warranty Program, Concepts and Policies. Units should use DA Form 2407 or DA Form 5504 for making warranty claims. It is very important to fill in the blocks on the forms as accurately as possible.

b. The Contractor may be notified in writing via their website, (www.tvsonlinesupport.com), electronic mail (warranty@armorholdings.com), or telephonically (1-800-221-3688), followed up in writing by DA Form 2407 or DA Form 5504 from the local WARCO following the discovery of a defect in supplies which requires Contractor/Vendor repair and/or replacement parts. This shall constitute formal notification of a warranty claim. The notification shall include all items identified in paragraph 3.b of this Technical Bulletin. At this time, the Contractor will further be informed whether the owning unit has elected: (1) to correct the defect themselves or; (2) to direct the Contractor to correct the defect. Upon completion of Contractor/Vendor repair, forward completed warranty claims (Information Only) to TACOM. Additionally, the local WARCO will forward claims to TACOM utilizing DA Form 2407 or DA Form 5504 for any warrantable repairs accomplished by the owning unit which requires Contractor reimbursement to the Government.

c. The Contractor shall reimburse the Government for the cost of labor involved in the Government correction of a defect. The cost of labor involved will be computed at the current Fiscal Years labor rate for the maintenance level identified in the Maintenance Allocation Chart (MAC) multiplied by the number of actual hours incurred, not to exceed the labor hours in the MAC. The Contractor shall ship replacement parts for Government correction in accordance with paragraph 6.a.

WARRANTY - Continued

d. Identification of Failed Items. Failed warranty items shall be tagged/identified to prevent improper repair or use and must identify the trailer serial number from the trailer which they were removed. Documents that describe the use of DA Form 2402 Exchange Tag and DA Form 2407 Maintenance Request shall be referenced. Items requiring special handling, storage or shipment during the processing of claims shall be identified.

e. Disposition. The repair activity shall return defective supplies to the Contractor's representative or ship them back at the Contractor's expense using the replacement part carton/container.

f. Invalid Warranty Claims. When supplies are inspected by the Contractor/Vendor and found to be non-warrantable, or the supplies are found to be serviceable, the repair activity submitting the claim will be required to make reimbursement for Contractor/Vendor services. Additionally, regarding Contractor/Vendor repair, the local WARCO must stipulate at the time of request for services that either non-warranty work be stopped at the time it is determined non-warrantable or be prepared to pay for completion of such work. In either case, the WARCO must be prepared to pay for diagnosis and trip charges for non-warranty service.

g. Air Force Warranty Claims. Air Force warranty claims shall be submitted as follows:

(1) For letter warranty claims:

WR-ALC/LVR
225 Ocmulgee Ct
Robbins AFB, GA 31098-1647
DSN 468-7161
COML (912) 926-7126

(2) For teletype warranty claims:

WR-ALC ROBBINS AFB GS/LVR

9. Reimbursement for Army Repair. The Contractor shall remit payment by the fifteenth (15) day of the month for all warrantable claims by the Government for reimbursement which were received by the Contractor in the previous month. Payment shall be sent to the PM, MTV, Attn: Business Management Office, with checks made payable to "The Treasurer of the United States". In the event that the repair activity should receive any reimbursement from the Contractor, the monies must be forwarded to the PM, MTV.

10. Claim Denials/Disputes. TACOM will handle all denials or disputes.

11. Reporting. Reporting or recording action on a failed item shall be as specified in DA PAM 738-750 The Army Maintenance Management System (TAMMS). Forms that are unique to the Contractor or Repair Activity shall not be used.

12. Storage/Shipment/Handling.

a. Storage. See paragraphs 2, 3.a, 3.c, 5.a and TM Care and Storage Requirements for the Trailer.
b. Shipment. See paragraphs 3.a, 7.a, 7.c, 8.b, 8.c, 9.d, and 9.e.
c. Handling. See paragraphs 3.a, 7.a, 7.c, 8.b, 8.c, 9.d, and 9.e.

CHAPTER 1
DESCRIPTION and THEORY OF OPERATION

EQUIPMENT DESCRIPTION AND DATA 0002 00

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

Characteristics

The Load Handling System Trailer (LHST) is towed by an FMTV Loading Handling System (LHS) vehicle. The trailers is designed for use over all types of roads, cross-country terrain, and in all weather conditions.

Capabilities

1. The trailers can ford water up to 30 in. (76 cm) deep.
2. The trailers may be transported by highway, rail, and sea.
3. The LHST carries loads up to 17,600 lbs (7,983 kgs).

Features

1. Air-operated, cam-actuated drum brakes that incorporate Anti-lock Braking System (ABS) on all wheels. Spring-applied (air-actuated) parking/emergency brakes are provided for all wheels.
2. Service and emergency gladhands at the front of the trailer to allow towing.
3. Pneumatically actuated drawbar assembly for attachment to an LHS towing vehicle pintle hook.
4. Pneumatically actuated pressure gauge for testing maximum load capacity (52 psi).

EQUIPMENT DESCRIPTION AND DATA - Continued 0002 00

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

Major External Components Common to all LHSTs

Table 1 describes the common external components found on LHSTs.

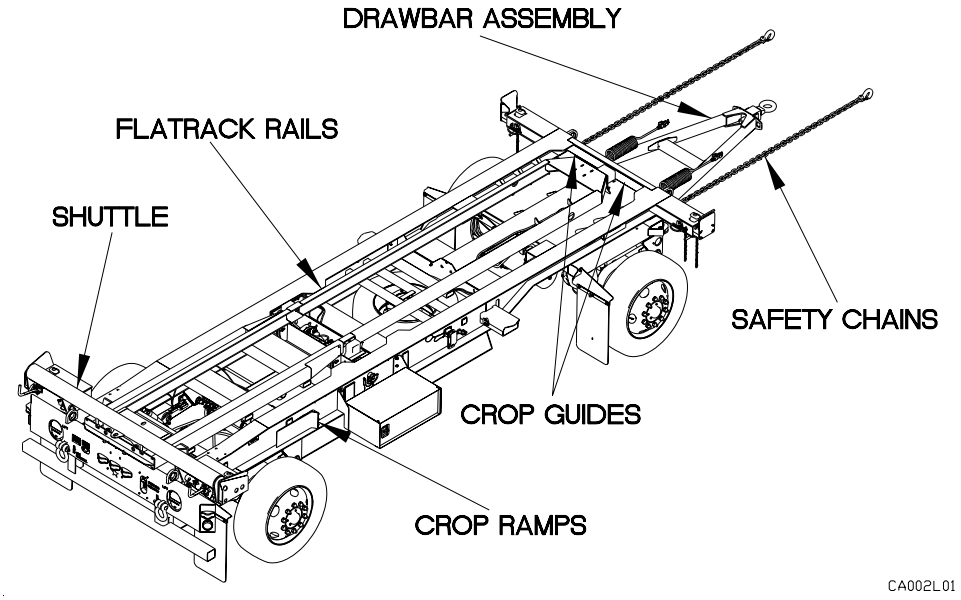


Table 1. Common External Components of LHSTs.

COMPONENT	DESCRIPTION
Drawbar Assembly	Towing vehicle pintle hook attaches to drawbar assembly for towing operations.
Safety Chains	Attached to towing vehicle during towing operations to prevent trailer breakaway in event of drawbar assembly or pintle hook failure.
Shuttle	Used when loading and unloading an ISO container.
Flatrack Rails	Used when loading and unloading a flatrack.
Crop ramps	Used when loading and unloading a crop.
Crop guides	Used to restrain crop at front of trailer.

EQUIPMENT DESCRIPTION AND DATA - Continued 0002 00

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

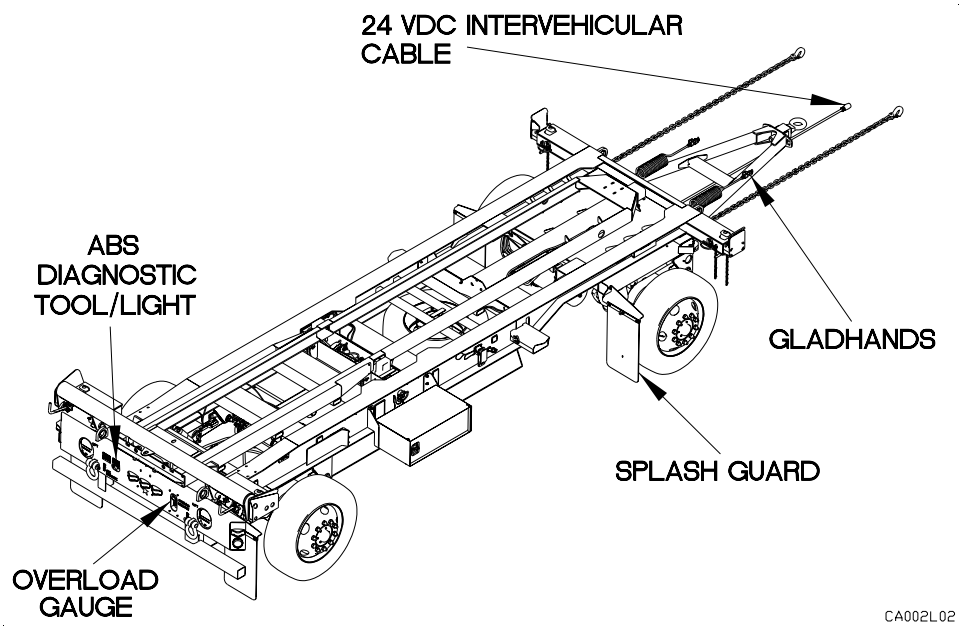


Table 1. Common External Components of LHSTs - Continued.

COMPONENT	DESCRIPTION
Gladhands	Allows connection of brake air supply from towing vehicle to trailer during towing operations.
24 VDC Intervehicular cable	The 24 VDC intervehicular cable is plugged into the appropriate connector to supply electrical power from LHS towing vehicle to trailer. When a 24 VDC intervehicular cable is used, the converter reduces voltage to 12 volts to properly operate the trailer lights and Anti-lock Braking System (ABS).
Splash Guards	Keep road debris, mud, and water from being thrown from tires while trailer is being towed.
Overload Gauge	When actuated, measures pressure of load being carried on trailer. Load pressure should not exceed 52 psi.
ABS Diagnostic Tool/Light	Allows reading of ABS Diagnostic Codes.

EQUIPMENT DESCRIPTION AND DATA - Continued 0002 00

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued

Major Internal Components Common to all LHSTs.

Table 2 describes the common internal components found on LHSTs.

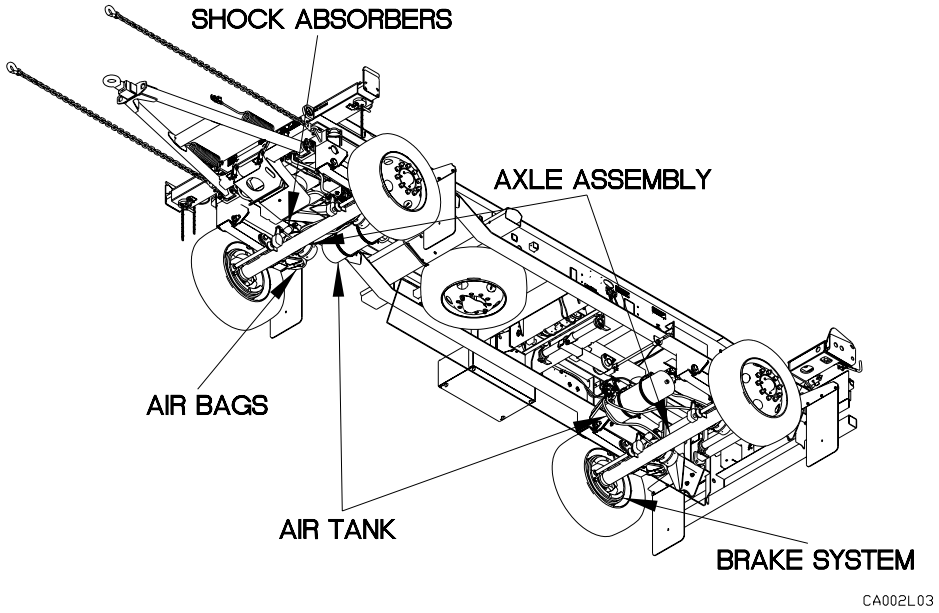


Table 2. Common Internal Components of LHSTs.

COMPONENT	DESCRIPTION
Shock Absorbers	Dual-acting hydraulic shocks used to improve trailer stability by dampening vertical wheel motion and keeping wheels in firmer contact with ground.
Air Tank	Stores compressed air transferred from towing vehicle to operate trailer brakes.
Brake System	Uses air-operated, s-cam-actuated drum brakes that incorporate ABS on all wheels. Spring-applied (air-actuated) parking/emergency brakes are provided for all wheels on LMTVT and rear MTVT wheels.
Axle Assembly	The shaft on which the wheels revolve. The axles support shock absorbers and brakes. The LMTVT has a single axle and the MTVT has dual axles.
Air Bags	Axle suspension that supports the load, transmits brake action to the chassis, and cushions cargo.

EQUIPMENT DATA

Table 3. Features shows various features and operating parameters unique to the LHST.

Table 3. Features

FEATURE	LHST
Body Feature	
Overall Width (For Transport)	96 in. (244 cm)
Overall Width W/ISO Container or Shelter	101.5 in. (258 cm)
Weight	9480 lbs (4300 kgs)
Trailer Length	335 in. (851 cm)
Deck Height	47.5 in. (121 cm)
Operating Function	
Cargo transport of loads	17,600 lbs (7,983 kgs)
Gross Vehicle Weight (GVW)	27,080 lbs (12,283 kgs)

EQUIPMENT DESCRIPTION AND DATA - Continued 0002 00

EQUIPMENT DATA - Continued

WARNING

Do not exceed maximum speed and grade limitations during normal operations. Do not exceed maximum side slope or departure angles or ford water greater than maximum depth. Failure to comply may result in serious injury or death to personnel.

Table 4. Trailer Performance Data provides information for the LHST.

Table 4. Trailer Performance Data.

Maximum Speed (primary roads, 2% grade)	Maximum Speed (primary roads, 3% grade)	Maximum Grade Ability	Maximum Side Slope Ability	Maximum Departure Angle	Maximum Fording Depth (without preparation)	Minimum Ground Clearance
35 mph (72 km/h)	25 mph (64 km/h).	30%	30%	30 degrees	30 in.(76 cm)	22 in. (56 cm)

Table 5. System Data provides detailed information for the major components of the LHST.

Table 5. System Data.

VOLTAGE REGULATOR

Make ..... Dantronics, Inc.

Model DT324B

Type ..... Solid State, 12/24 VDC negative ground

AXLES

Make ..... Dexter

Type ..... Non-driving

SUSPENSION SYSTEM

Make ..... Dexter

Type ..... Air Bags

OVERLOAD GAUGE

Make ..... Haldex Brake Products, Corp.

Type ..... Silicone filled, sealed face

Pressure Range ..... 100 psi (689.5 kPa)

Max Pressure of Load Carried ..... 52 psi (358.5 kPa)

EQUIPMENT DATA - Continued

Table 5. System Data - Continued.

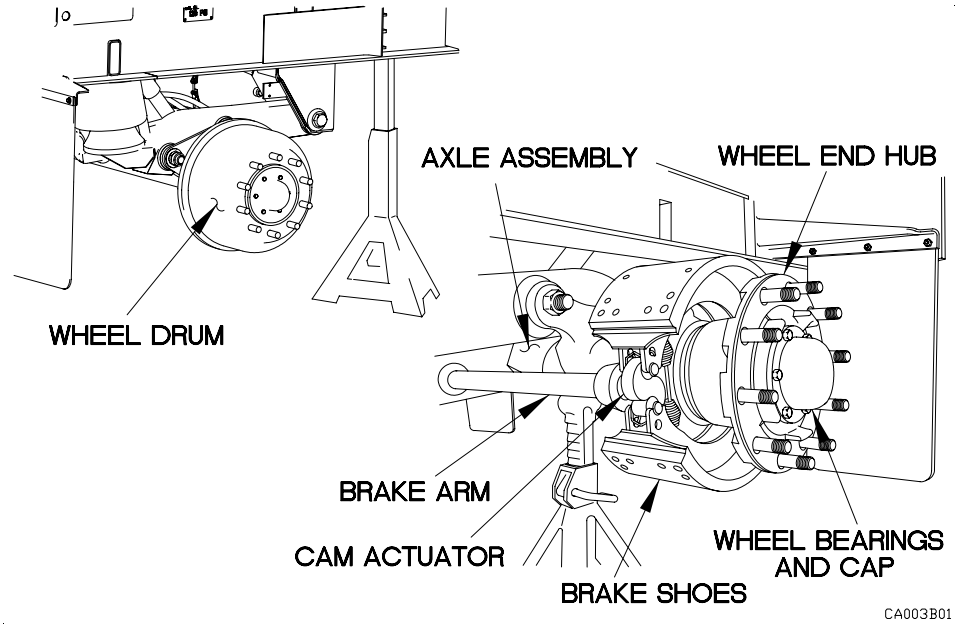
BRAKE SYSTEM	
Make	Dexter
Model	Dexter Brakes 16 ½" X 7"
Type	Full air, cam -type, self-adjusting
Drum Size	16.62 in. (42 cm) diameter
Number of Brake Air Chambers	2 per axle
Pressure Range	100 psi (689.5 kPa)
DRAWBAR ASSEMBLY	
Make	Landoll
Maximum Load Capacity, pulling (maximum gross trailer weight)	45,000 lbs (20,412 kgs)
Maximum Load Capacity, vertical	9,000 lbs (4,082 kgs)
WHEELS	
Make	Accuride
Rim Size and Type	22.5 x 8.25, one-piece
Quantity	4
Studs Per Wheel	10
Maximum Wheel, Pneumatic Tire Rate Load Capacity	8,000 lbs (3,629 kgs) at 120 psi (830 kPa)
TIRES	
Make	Michelin North America
Size	275/70 R22.5 XML
Tread Design	Non-directional, on-off road
Tube or Tubeless	Tubeless
Load Range	J
Maximum Load, Single Tire, Highway Conditions:	
55 mph (89 km/h), Cold Inflation Pressure of 120 psi (830 kPa)	6,940 lbs (3,148 kgs)

THEORY OF OPERATION 0003 00

The trailer suspension assembly includes the axle and air bag assemblies. The suspension assembly supports the trailer and its cargo and provides an efficient, safe ride by transmitting shock and torque from the wheels to the frame.

AXLE ASSEMBLY

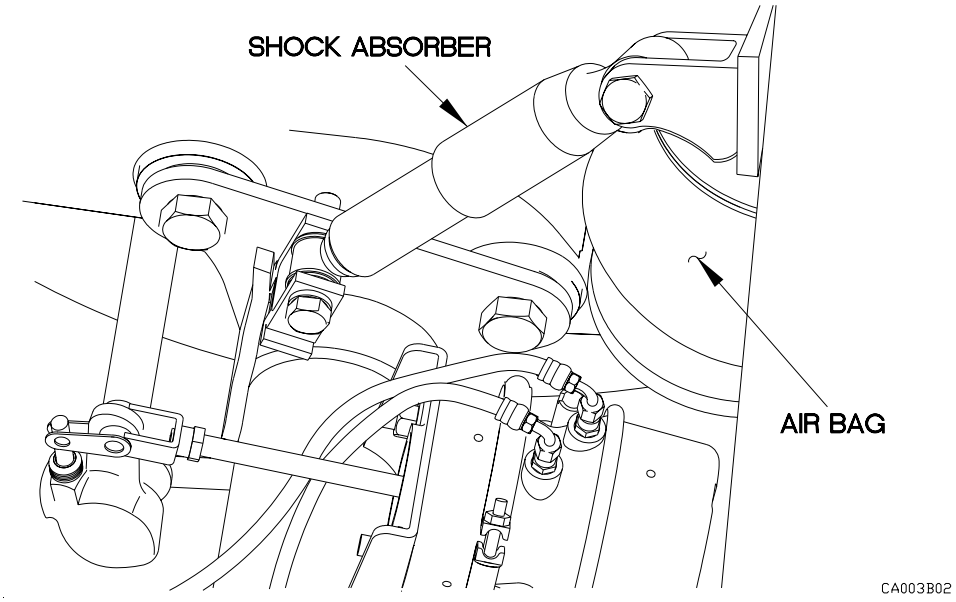
The trailer axle is a non-powered axle, able to support the trailer but not transmit power (the axle does not have gears to transmit power from a vehicle's engine and transmission). The axle assembly includes a tubular axle beam, cam-actuated service brakes, spring-actuated emergency brakes, wheel-end components such as bearings and hubs.



THEORY OF OPERATION - Continued 0003 00

SUSPENSION ASSEMBLY

The shock absorbers attach to the axle and frame to cushion the load. In addition there are air bags that assist in absorbing road shock and torque from the brakes and transmitting these to the frame.



THEORY OF OPERATION - Continued 0003 00

ELECTRICAL SYSTEM

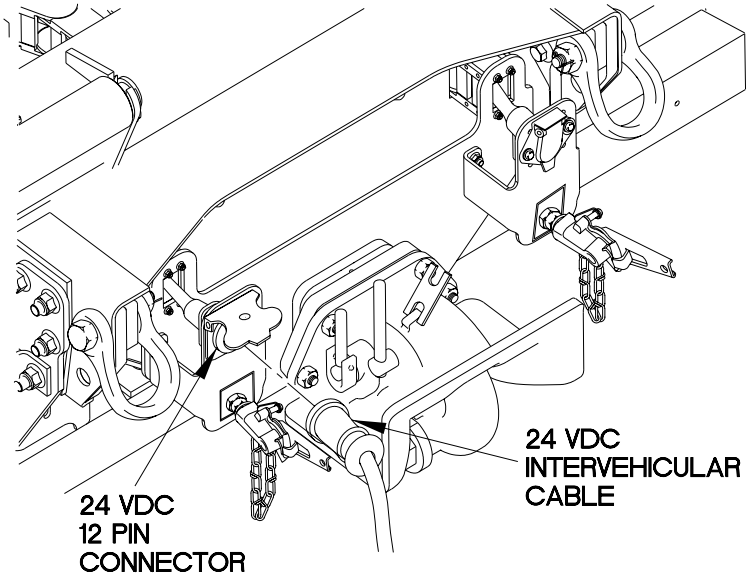
The towing vehicle electrical system supplies all electrical power to the trailer by way of a 24 vdc (12-pin) connector at the rear of the towing vehicle.

In order for the towing vehicle to supply electrical power to the trailer lights, the main light switch of the towing vehicle must be on.

The master power switch of the towing vehicle must be positioned to on in order for electrical power to be supplied to the trailer Anti-lock Braking System (ABS) Electronic Control Unit (ECU).

The trailer electrical system is dependent on the towing vehicle electrical system. The towing vehicle electrical system must be operational in order for the trailer electrical system to be operational. The trailer lights and ABS ECU operate on 12 vdc.

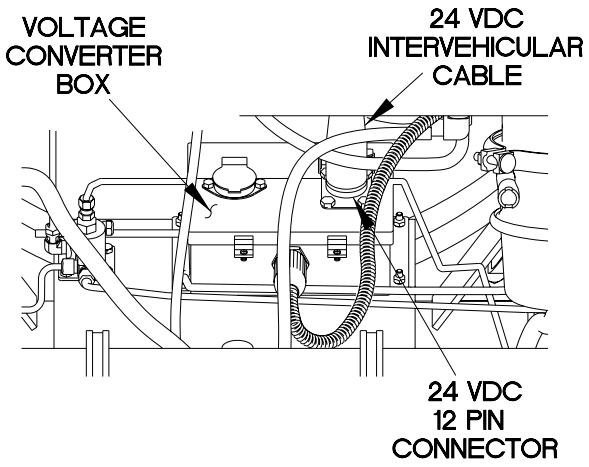
All power to the trailer lights and ABS ECU is routed from a a 24 vdc (12-pin) intervehicular cable to a voltage converter box before allowing power to flow to the lights or ABS ECU.



THEORY OF OPERATION - Continued 0003 00

VOLTAGE CONVERTER BOX

The voltage converter box, mounted underneath the trailer towards the front, is where the 24 vdc (12-pin) intervehicular cable routes to. The voltage converter box is equipped with five solid state switches that convert 24 vdc to 12 vdc when the 24 vdc (12-pin) intervehicular cable is used. Circuit breakers located in the voltage converter box prevent excessive voltage or amperage from being supplied to the trailer electrical system and causing damage to the circuits.



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THEORY OF OPERATION - Continued 0003 00

TRAILER LIGHTS

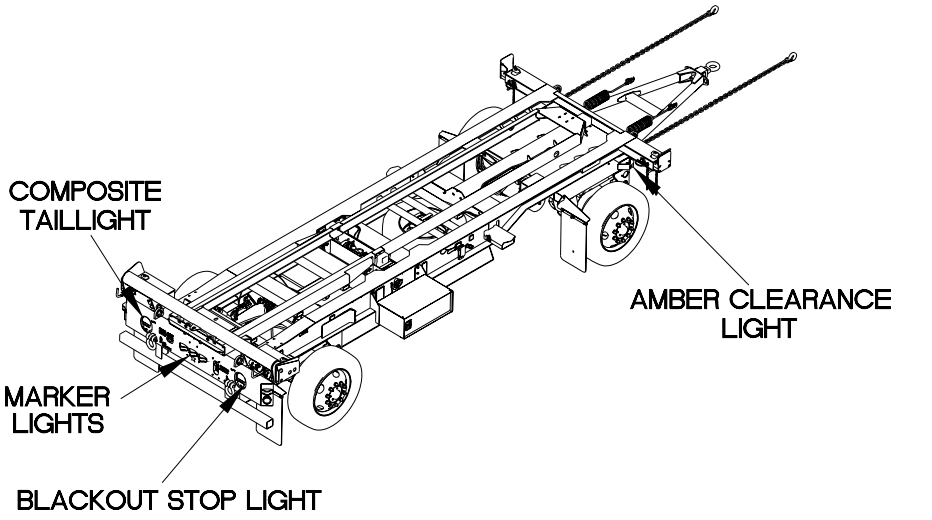
The trailer lights consist of clearance and marker lights and rear composite taillights. The front clearance lights are located on the left and right side of the trailer frame rail. The rear clearance lights are located on the left and right of the trailer frame rail. The marker lights are located on the rear marker light bracket. The rear composite taillights are located on the rear bumper.

After electrical power is routed through the voltage converter box, 12 vdc is then supplied to the trailer lights through an electrical harness.

Service Lighting.
The Service Lighting System includes the rear composite taillights and clearance and marker lights. They are energized by positioning the main light switch of the towing vehicle to the appropriate position.

Blackout Lighting.
The Blackout Lighting System includes the rear blackout marker lights and blackout stop lights. These lights are energized by positioning the main light switch of the towing vehicle to the appropriate position.

Blackout lights operate only with 24 vdc intervehicular cable.



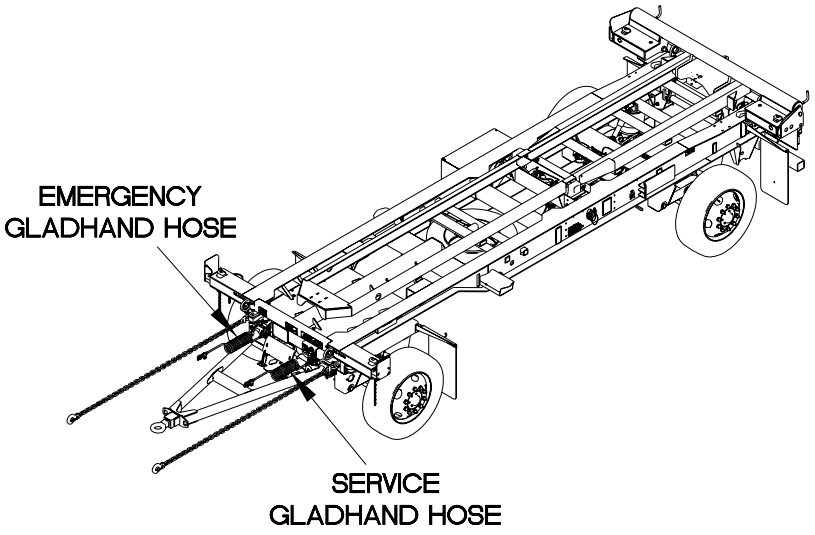
THEORY OF OPERATION - Continued 0003 00

GENERAL

The trailer is equipped with an air brake system which complies with the Federal Motor Vehicle Safety Standard (FMVSS) 121, S5.5. The trailer brake system operates in tandem with the towing vehicle brake system. The trailer brake system is made up of a number of components including EMERGENCY and SERVICE gladhand hoses, an air tank, an Anti-lock Braking System (ABS) Electronic Control Unit (ECU), ABS external diagnostic capability, and several valves which control the application and release of the brakes.

EMERGENCY AND SERVICE GLADHAND HOSES

The EMERGENCY and SERVICE gladhand hoses provide air for operation of the trailer brakes from the towing vehicle. One hose is for SERVICE brake operation; the other hose is for EMERGENCY brake operation. Both hoses have gladhand couplings.



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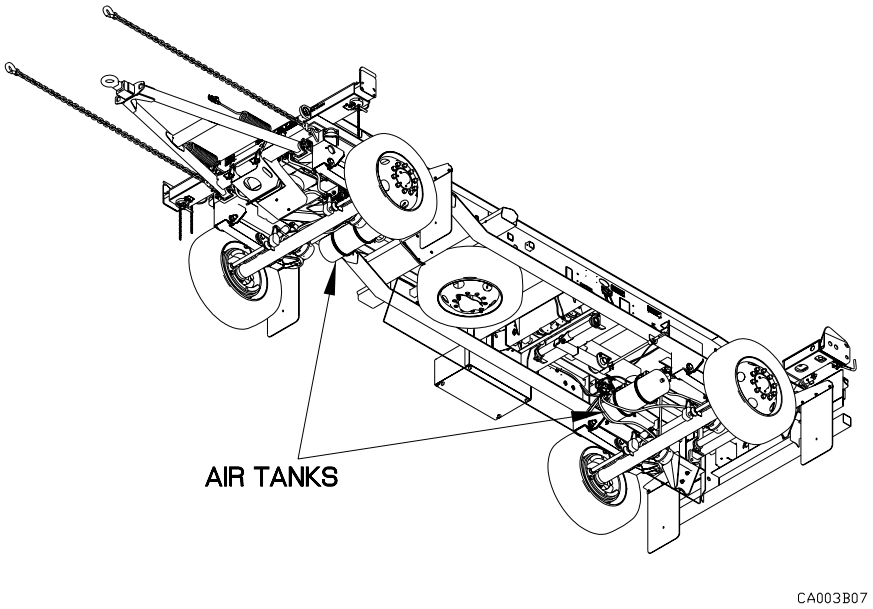
THEORY OF OPERATION - Continued 0003 00

AIR TANKS

The air tanks store pressurized air from the towing vehicle for use in the trailer brake system.



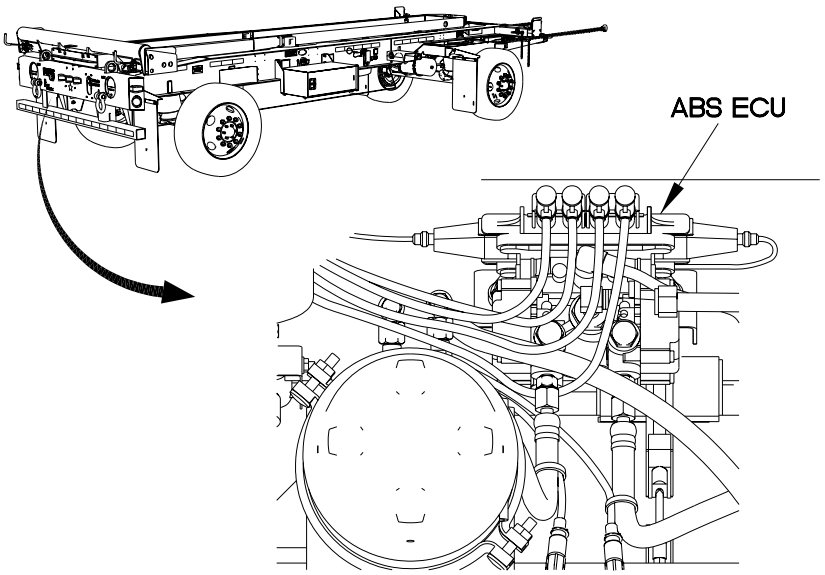
THEORY OF OPERATION - Continued 0003 00

ABS ECU

The ABS ECU is mounted towards the rear of the trailer right behind the rear air tank. The ABS ECU monitors and regulates release of air to the service brake air chambers using two relay valves that are triggered when speed sensors (one on each wheel) detect trailer wheel lock-up. The relay valves modulate the air supply by sending pulses of air. In between air pulses, the service brakes release, thereby preventing wheel lock-up.

ABS ECU Valve Assembly.

The ABS ECU valve assembly contains the two relay valves.



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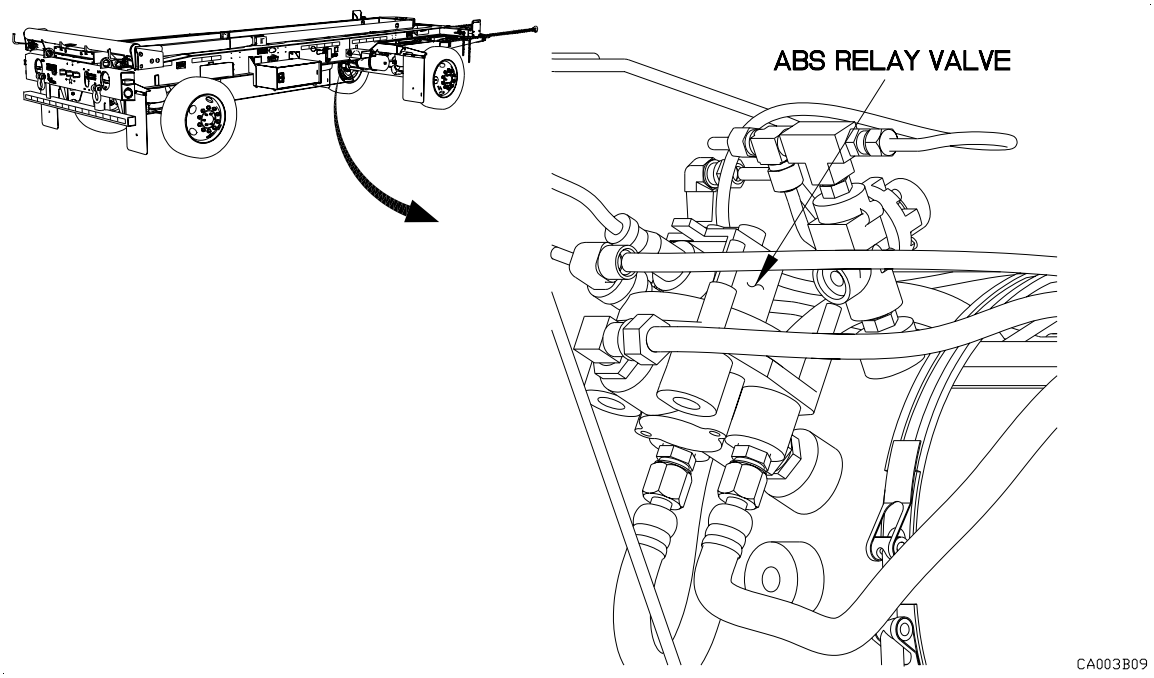
THEORY OF OPERATION - Continued 0003 00

ABS ECU - Continued

ABS Relay Valve.

The external ABS relay valve is the third relay valve. The ECU valve assembly services rear brake air chambers. The external ABS relay valve services front brake air chambers.

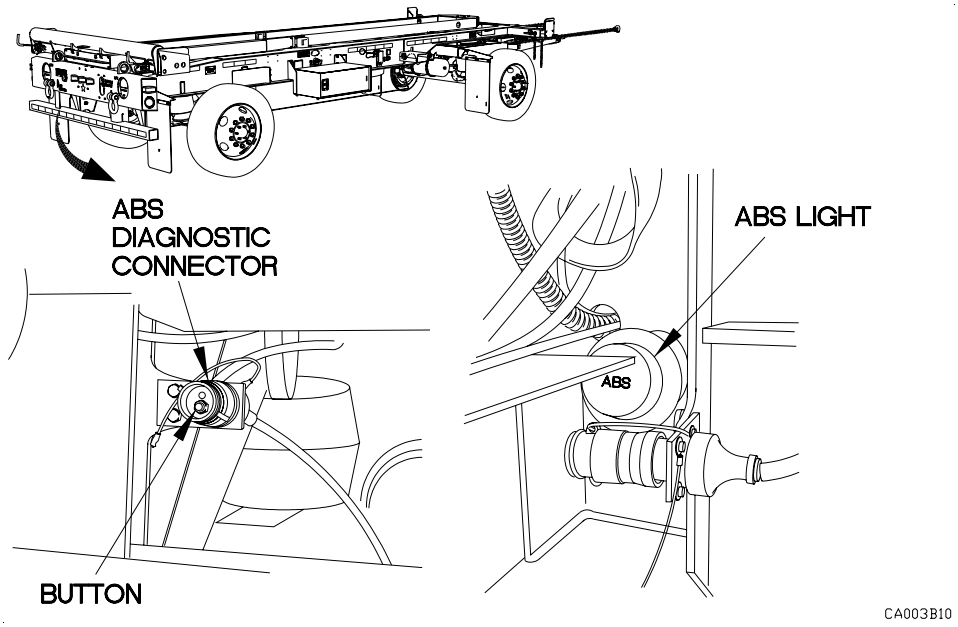


THEORY OF OPERATION - Continued 0003 00

ABS ECU - Continued

ABS Diagnostic.

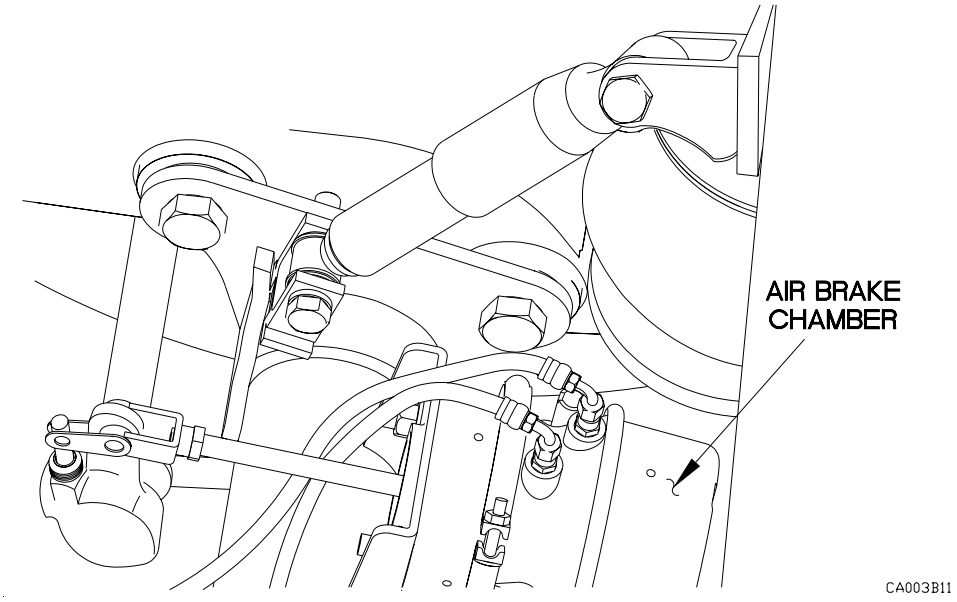
The trailer brake system has a connector on the ECU valve assembly for external ABS DIAGNOSTIC capability.



THEORY OF OPERATION - Continued 0003 00

BRAKE AIR CHAMBERS

After exiting either the ABS front relay valve or the ABS ECU, the hose assembly is plumbed directly to the brake air chambers. The cam-actuated type brake design uses singe brake air chambers per brake. Within the brake air chambers, air pressure is converted to mechanical force to create braking action.



CHAPTER 2
OPERATOR INSTRUCTIONS

TRAILER CONTROLS 0004 00

GENERAL

The following paragraphs contain illustrations that show the location of each control for the Load Handling System Trailer. Each control is clearly labeled as it appears on the trailers. Find numbers on the illustration are keyed to the tabular listing which contains the name and the functional description of each control. Operator must become thoroughly familiar with this section before attempting to operate trailer.

CONTROLS/MISC.

Table 1 describes all controls on the exterior of the trailer.

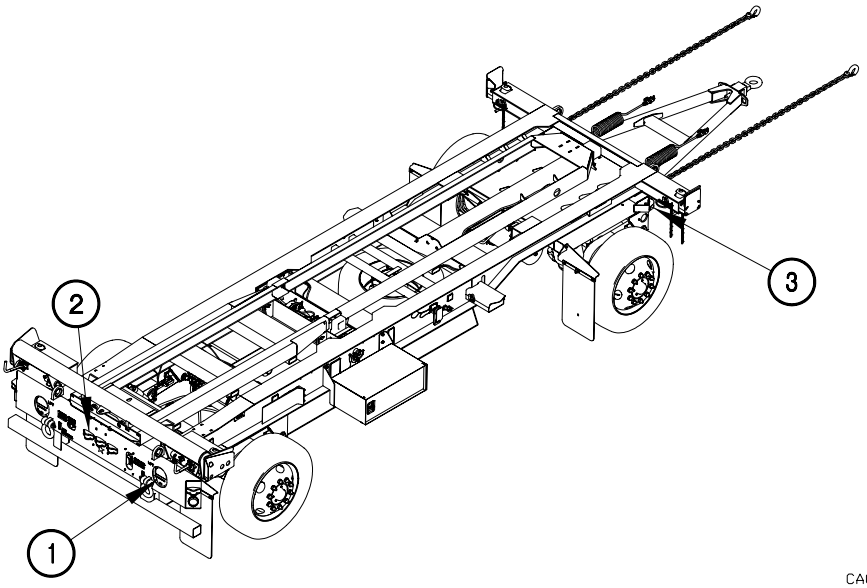


Table 1. Controls/MISC.

KEY	CONTROL	FUNCTION
1	Rear composite taillights	Two composite taillights located on the rear trailer bumper. Each contains tail, stop, and turn lights plus blackout tail and blackout stop lights. Towing vehicle controls each light.
2	Marker lights	Three red identification lights centered at the trailer rear on the crossmember. Illuminate when towing vehicle drive lights or parking lights are on.
3	Amber clearance lights	Two lights located on the front trailer corners. They illuminate when towing vehicle drive lights or parking lights are on.

TRAILER CONTROLS - Continued 0004 00

CONTROLS/MISC. - Continued

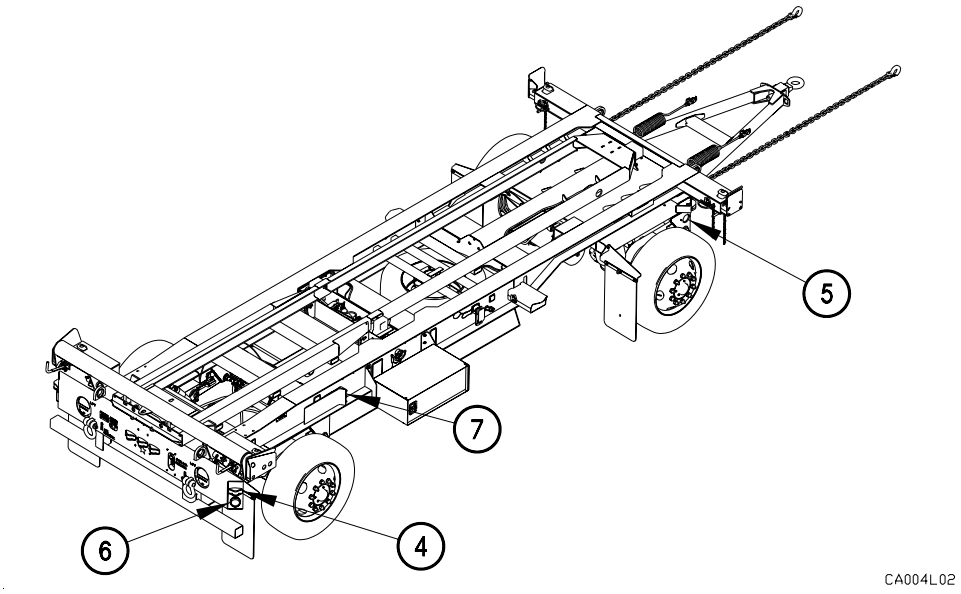


Table 1. Controls/MISC. - Continued.

KEY	CONTROL	FUNCTION
4	Red clearance lights	Two lights located on the corners of the rear trailer bumper. They illuminate when towing vehicle drive lights or parking lights are on.
5	Amber front reflectors	Two reflectors located on the trailer sides, at the front left and front right.
6	Red rear reflectors	Two reflectors located on the corners of the rear trailer bumper, beneath red clearance lights.
7	Crop ramps	Used in conjunction while loading a crop on LHST.

CONTROLS/MISC. - Continued

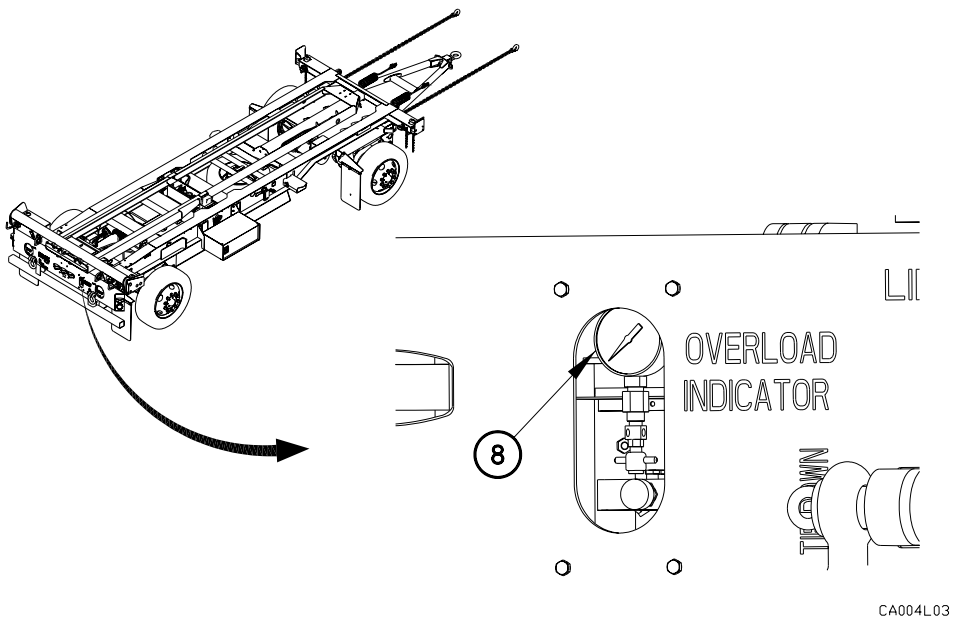


Table 1. Controls/MISC. - Continued.

KEY	CONTROL	FUNCTION
8	Overload Indicator	Gage used to indicate if trailer is overloaded or not. Located on RH rear of LHST.

DRAWBAR

Table 2 describes the drawbar controls.

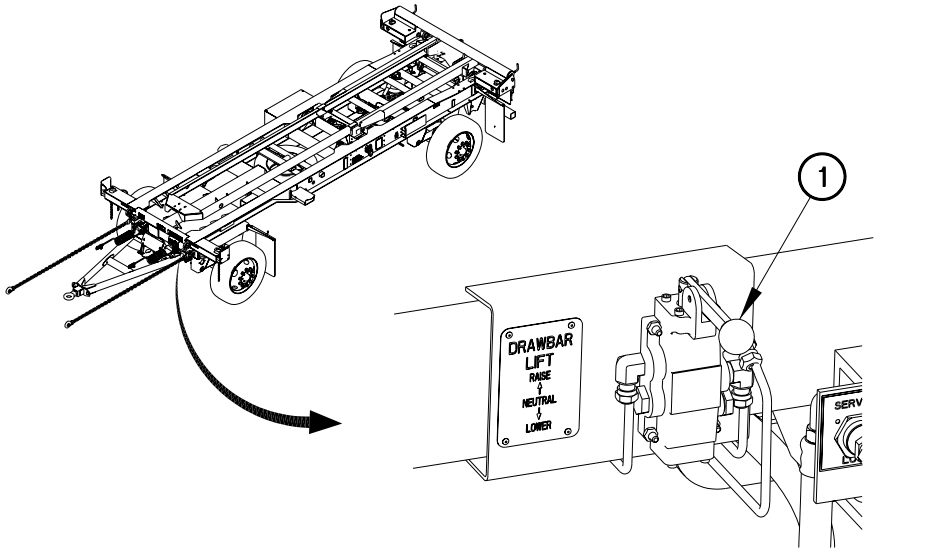


Table 2. Drawbar.

KEY	CONTROL	FUNCTION
1	Drawbar lift handle	Pneumatically raises or lowers drawbar for coupling and uncoupling. Located on upper left front of LHST.

SPARE TIRE

Table 3 describes the spare tire controls.

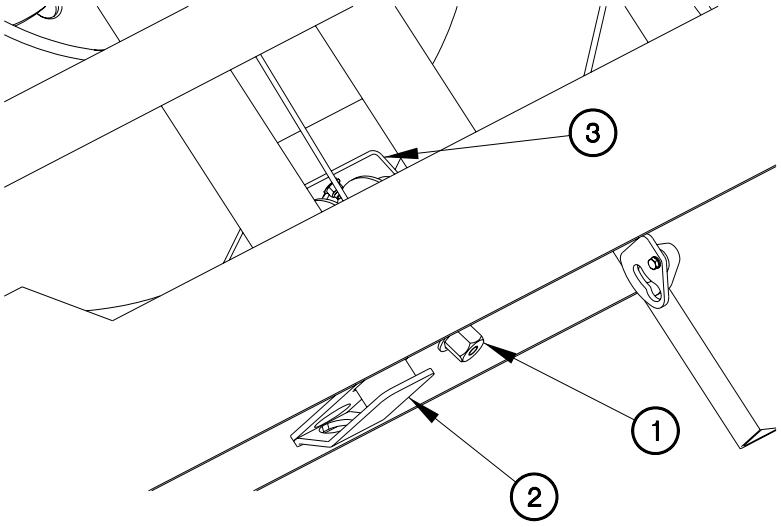


Table 3. Spare Tire.

KEY	CONTROL	FUNCTION
1	Spare tire rod	Attach the winch crank from the tool box to this to lower and raise the spare tire. Located on RH side middle of LHST.
2	Spare tire outrigger	Extends out so the snatch block from the tool box can be attached. Aids in removal of spare tire from underneath LHST.
3	Spare tire winch	Used to raise and lower spare tire.

AIR BAG/SUSPENSION CONTROLS

Table 4 describes the air bag/suspension controls.

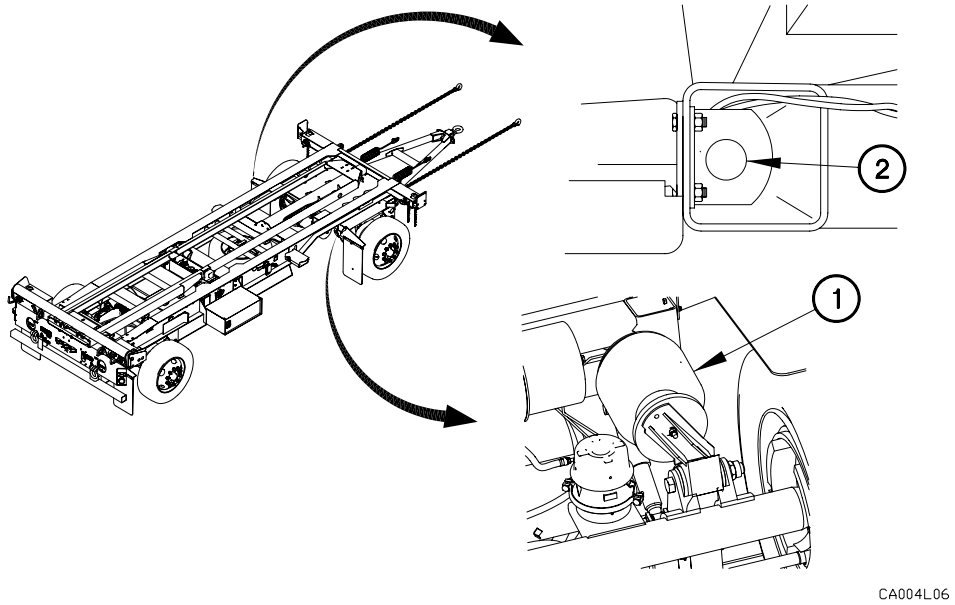
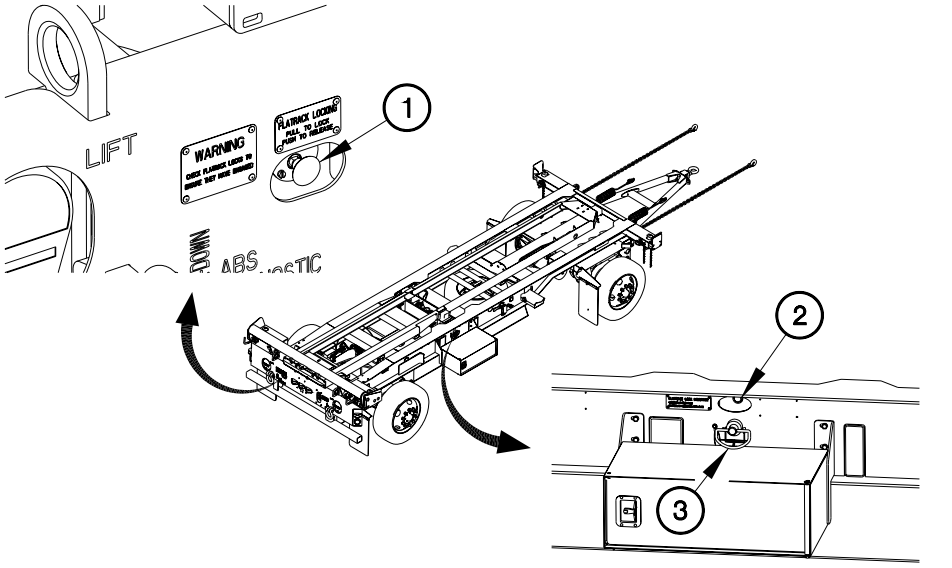


Table 4. Air Bag/Suspension.

KEY	CONTROL	FUNCTION
1	Air bags	Aids in ride control of LHST in conjunction with shock absorbers. Also lowering of air bags allows for ease of loading flatracks and crops.
2	Height Actuation Control Valve	Allows for lowering of front and rear air bags to aid in ease of loading flatracks and crops.

FLATRACK RAIL LOCK SYSTEM

Table 5 describes the flatrack rail lock system controls.



CA004L07

Table 5. Flatrack Rail Lock System Controls.

KEY	CONTROL	FUNCTION
1	Flatrack Locking knob	Locks and releases flatrack rail locking system. Pull to lock, push to release. Located on LH rear of LHST.
2	Flatrack Lock Indicator	Indicates what position the locks are in. Pin through the plate; locked. Pin pulled back from plate, unlocked. Located on both middle sides of LHST.
3	Flatrack Locking Pin	Pins Flatrack locks in position, regardless of locked or unlocked position. Located on both middle sides of LHST.

FLATRACK RAIL LOCK SYSTEM - Continued

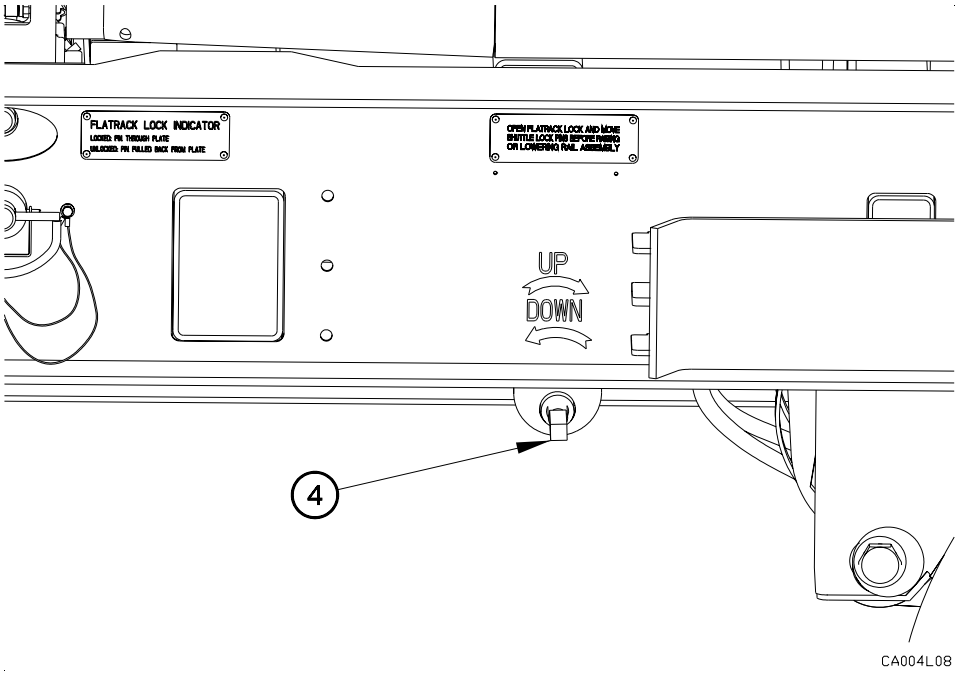
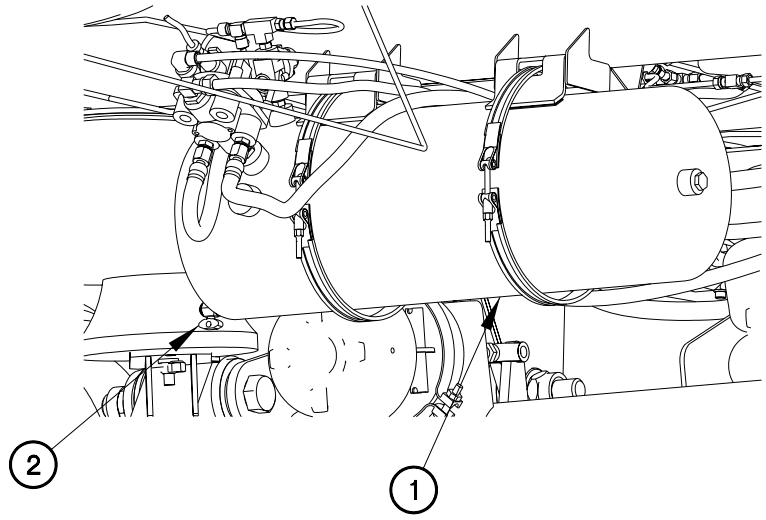


Table 5. Flatrack Rail Lock System Controls – Continued.

KEY	CONTROL	FUNCTION
4	Flatrack gear lug	Attach the winch crank from the tool box to this to raise and lower the flatrack rails. Located on LH side middle of LHST.

AIR SYSTEM

Table 6 describes the air system controls.



CA004L09

Table 6. Air System Controls.

KEY	CONTROL	FUNCTION
1	Air tank	Reservoir that maintains air reserve for the LHST. There are two on the LHST, located behind the front axle and in front of the rear axle.
2	Air tank drain petcocks	Allows for the manual release of air from LHST air system. Located on each air tank.

RAIL ASSEMBLY OPERATION 0005 00

INITIAL SETUP:

Maintenance Level:
Operator

Equipment Conditions:
Trailer air system charged

GENERAL

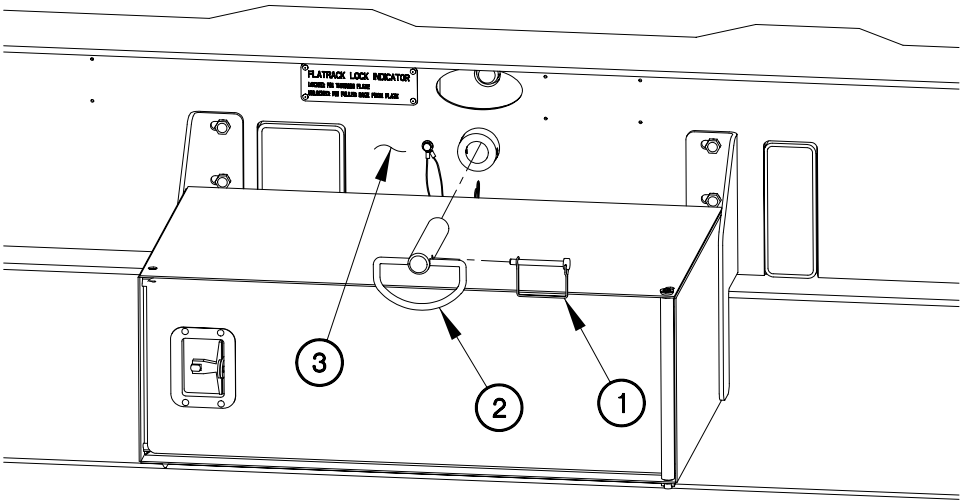
The paragraphs in this work package provide the data and procedures to raise and lower the rail assembly.

RAISING RAIL OPERATION

NOTE

LH and RH flatrack locking pins, outer stowage pins, and DIN blocking plates are removed the same way. LH side shown.

1. Remove retaining pin (1) from flatrack locking pin (2).
2. Remove flatrack locking pin (2) from trailer (3).



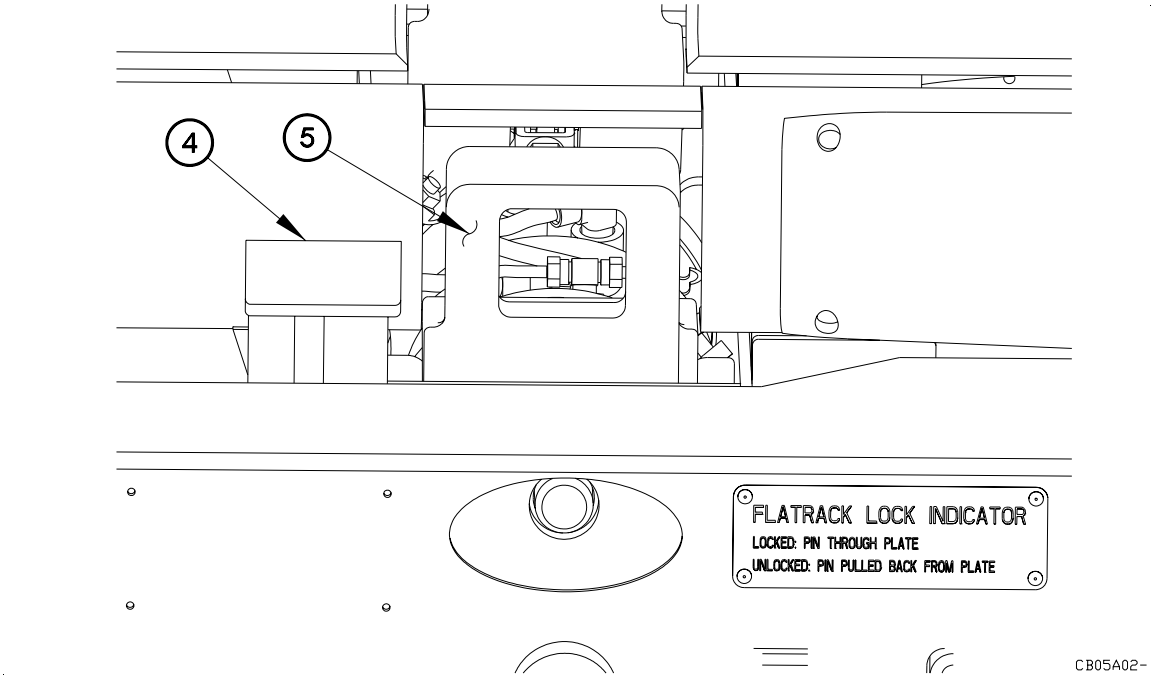
CB05A01-

RAIL ASSEMBLY OPERATION - CONTINUED 0005 00

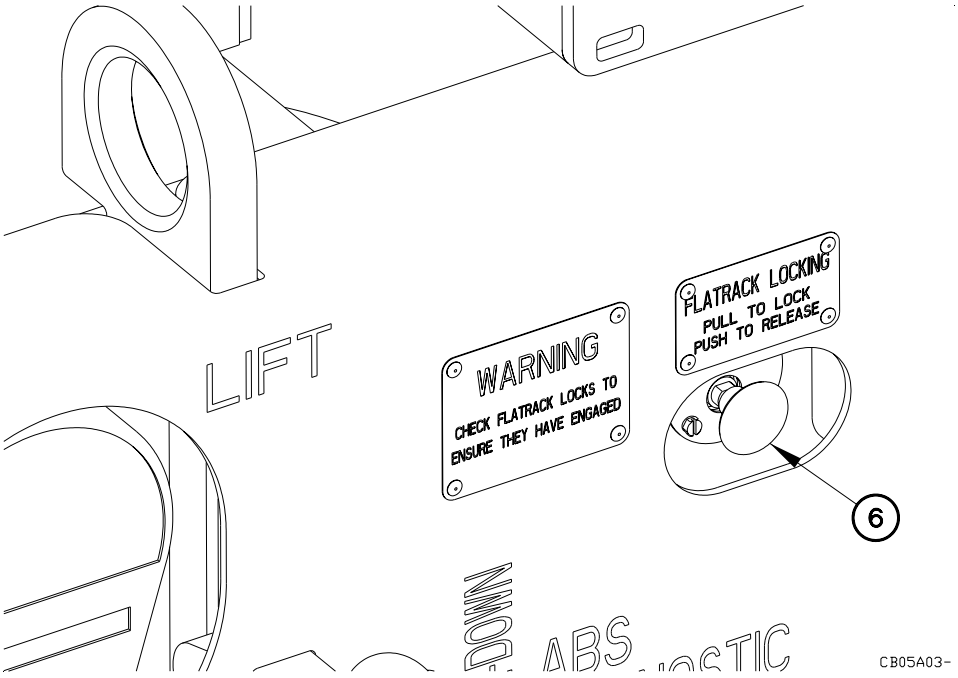
RAISING RAIL OPERATION - Continued

3. Move DIN blocking plate (4) up and lower down, clear of DIN lock (5).

4. Perform previous three steps on RH flatrack locking pin, outer stowage pin and DIN locking plate.



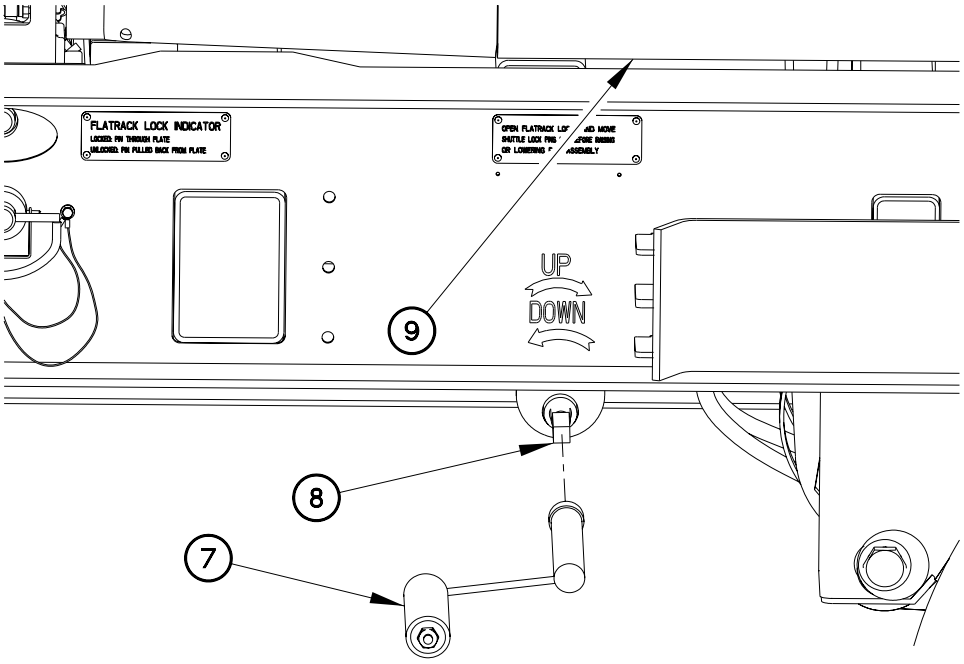
5. Press flatrack locking knob (6) to RELEASE.



RAISING RAIL OPERATION - Continued

6. Install crank handle (7) on gear lug (8).

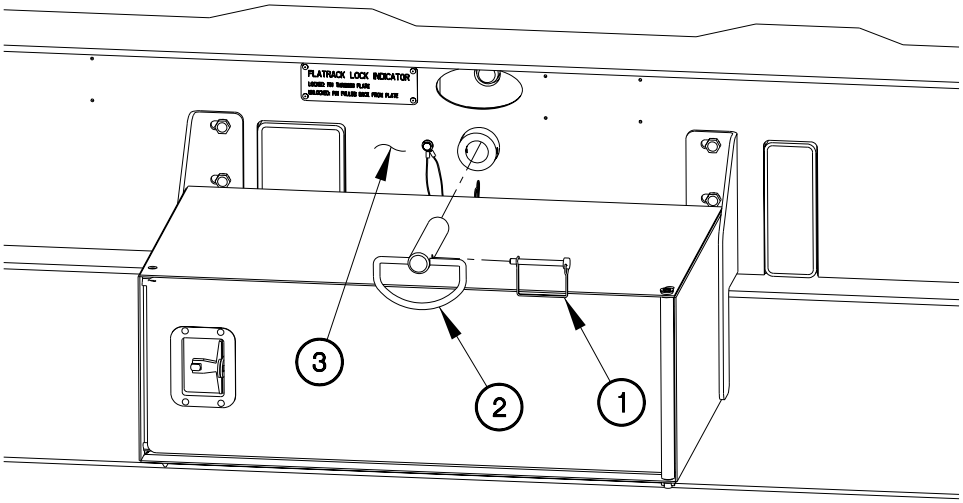
7. Rotate crank handle (7) clockwise until flatrack guide (9) is completely raised.



CB05A04-

8. Install flatrack locking pin (2) in trailer (3).

9. Install retaining pin (1) in flatrack locking pin (2).

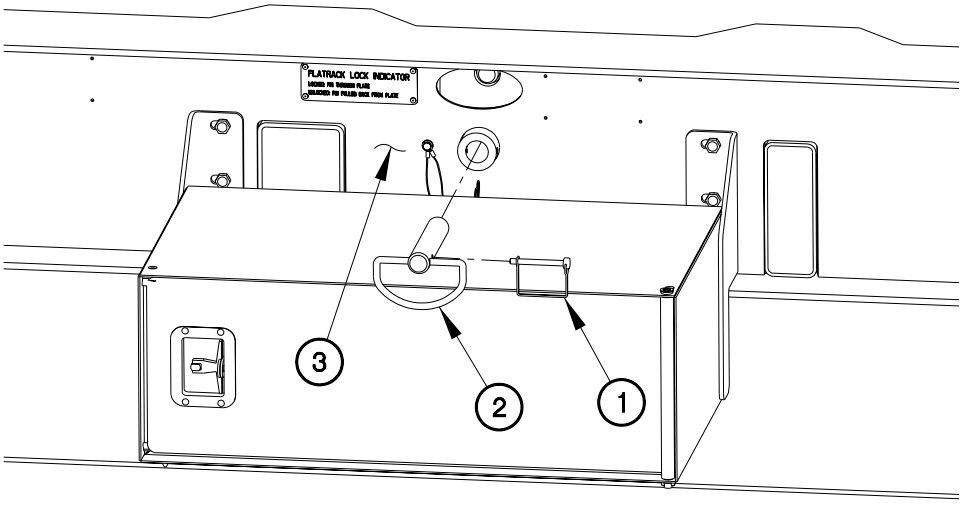


CB05A01-

RAIL ASSEMBLY OPERATION - CONTINUED 0005 00

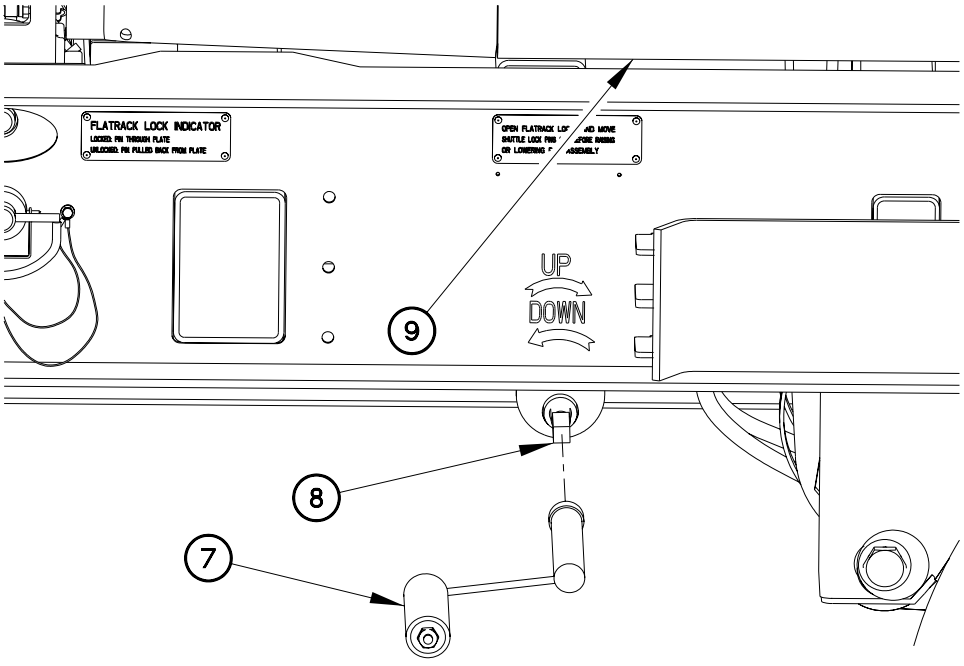
LOWERING RAIL OPERATION

1. Remove retaining pin (1) from flatrack locking pin (2).
2. Remove flatrack locking pin (2) from trailer (3).



CB05A01-

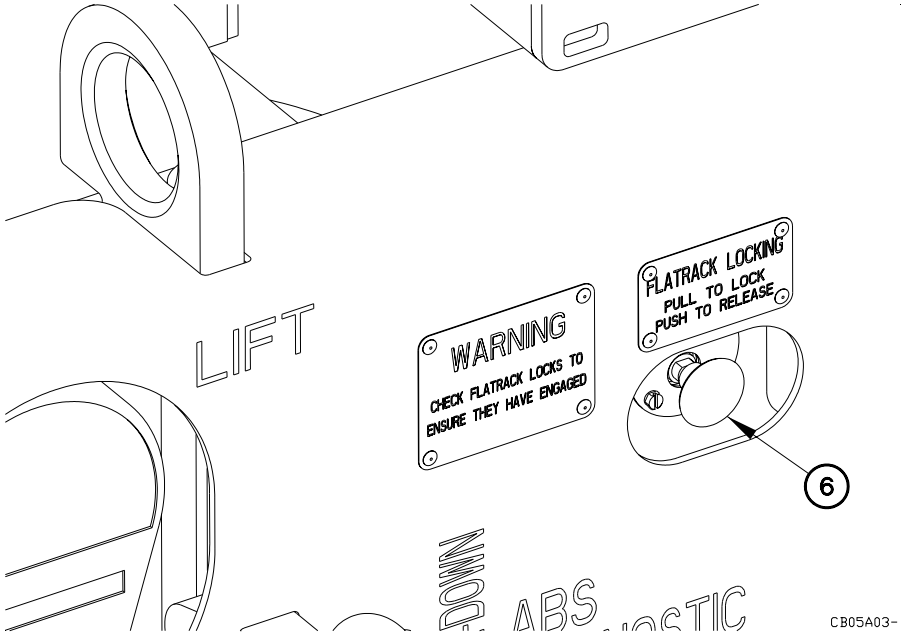
3. Install crank handle (7) on gear lug (8).
4. Rotate crank handle (7) counter-clockwise until flatrack guide (9) is completely lowered.



CB05A04-

LOWERING RAIL OPERATION - Continued

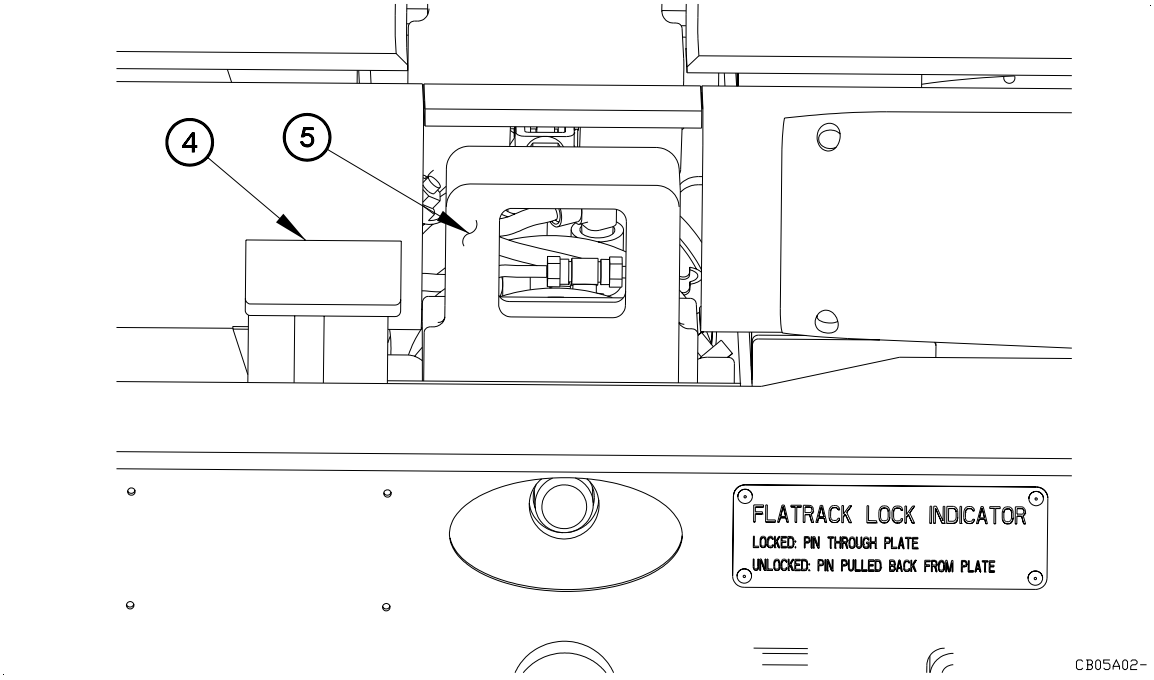
5. Pull flatrack locking knob (6) to LOCK.



NOTE

LH and RH flatrack locking pins, outer stowage pins, and DIN blocking plates are installed the same way. LH side shown.

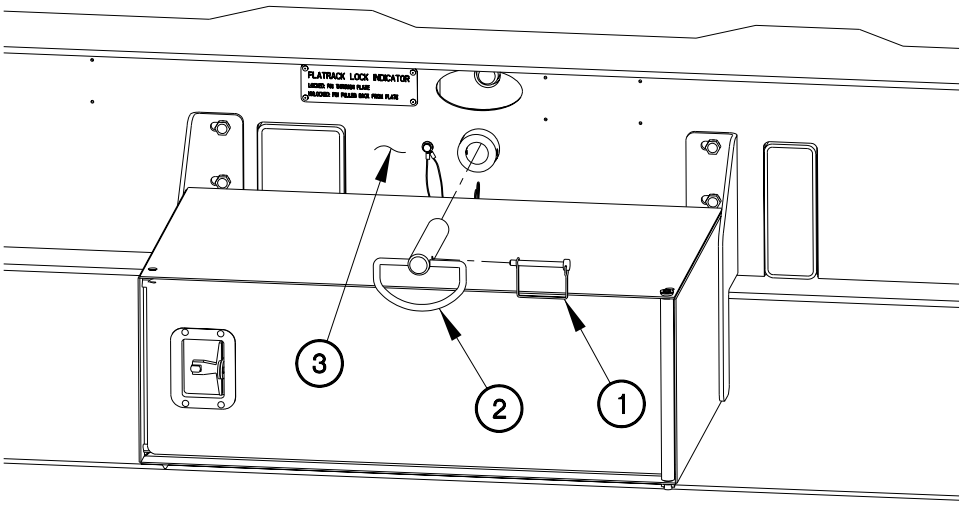
6. Pull DIN blocking plate (4) up and lower down over DIN lock (5).



RAIL ASSEMBLY OPERATION - CONTINUED 0005 00

LOWERING RAIL OPERATION - Continued

7. Install flatrack locking pin (2) in trailer (3).
8. Install retaining pin (1) in flatrack locking pin (2).
9. Perform previous three steps on RH flatrack locking pin, outer stowage pin and DIN locking plate.



CB05A01-

END OF WORK PACKAGE

OPERATION IN EXTREME COLD, -26° F TO -65° F (-32° C TO -54° C)

0006 00

INITIAL SETUP:

Maintenance Level:
Operator

References:
FM 9-207
FM 31-70
FM 31-71
FM 21-305

GENERAL

The LHST is designed for use in a wide range of conditions. The paragraphs in this work package provide the data and procedures to be used by the Operator when operating the LHST in extreme cold. Items covered include operation in extreme cold and at-halt parking.

OPERATION IN EXTREME COLD

WARNING

Do not touch extremely cold metal (below -26° F (-32° C)). Bare skin may freeze to cold metal. Failure to comply may result in injury to personnel.

CAUTION

Before operating ensure the LHST has been prepared for cold weather environment in accordance with FM 9-207. Refer to FM 31-70, FM 31-71, and FM 21-305 for additional information on operation in cold environment. Failure to comply may result in damage to equipment.

Park in shelter when possible. If shelter is not available, park so LHST does not face into wind. Follow procedures in FM 9-207 to prevent LHST from freezing in place. Failure to comply may result in damage to equipment.

All snow and ice should be removed from LHST as soon as possible. Snow and ice may slow or prevent movement of equipment. Failure to comply may result in damage to equipment.

1. Caution must be taken when placing LHST in operation after a shutdown. Hardened lubricants can cause part failure.

2. Check that tires have not frozen to ground or have a flat spot if they are under inflated.

3. Test braking to ensure that brake shoes are not frozen to brake drums.

4. Refer to FM 9-207 and FM 21-305 for special instructions on driving hazards in snow and ice that may be encountered during extremely cold weather conditions.

OPERATION IN EXTREME COLD (-26° F, (-32° C) TO -65° F, (-54° C)) - Continued

AT-HALT PARKING

1. For short shutdown periods, park in a sheltered area out of the wind.
2. For long shutdown periods, if high, dry ground is not available, prepare a footing of planks or brush.
3. Remove all built-up snow and ice as soon as possible after parking.
4. Cover and shield trailer with canvas covers (if available). Keep ends of covers elevated to prevent them from freezing to ground.

END OF WORK PACKAGE

OPERATION IN EXTREME HEAT 0007 00

INITIAL SETUP:

Maintenance Level
Operator

GENERAL

The LHST is designed for use in a wide range of conditions. The paragraphs in this work package provide the data and procedures to be used by the Operator when operating the LHST in extreme heat.

OPERATION IN EXTREME HEAT

NOTE

Extreme temperature is defined as temperatures in excess of 100° F (38° C).

1. Do not park LHST in sun for long periods of time as heat and sunlight will shorten life of tires and will cause paint to pit and/or blister.

2. During extended shutdown periods, cover LHST with canvas (if available) to protect it from heat, sun, and dust.

END OF WORK PACKAGE

OPERATION IN RAINY OR HUMID CONDITIONS 0008 00

0INITIAL SETUP:

Maintenance Level	References
Operator	TM 9-247

GENERAL

The LHST is designed for use in a wide range of conditions. The paragraphs in this work package provide the data and procedures to be used by the Operator when operating the LHST in rainy or humid conditions.

OPERATION IN RAINY OR HUMID CONDITIONS

Frequently inspect, clean, and lubricate inactive equipment to prevent the accumulation of corrosion and fungus. Notify Field Level Maintenance if corrosion is found. Clean fungus with appropriate solution. Refer to TM 9-247 for cleaning instructions.

END OF WORK PACKAGE

OPERATION IN SALT WATER AREAS 0009 00

INITIAL SETUP:

Maintenance Level
Operator

GENERAL

The LHST is designed for use in a wide range of conditions. The paragraph in this work package provide the data and procedures to be used by the Operator when operating the LHST in salt water areas.

OPERATION IN SALT WATER AREAS

1. The LHST can ford water to a depth of 30 in. (76 cm).

2. Salt water will cause metal parts to rust and corrode. LHST must be cleaned (WP 0054 00, Cleaning Trailer) and lubricated immediately after salt water fording, or as soon as tactical situation permits. Notify Field Level Maintenance if corrosion is found.

END OF WORK PACKAGE

OPERATION IN SNOW OR ICE 0010 00

INITIAL SETUP:

Maintenance Level	References
Operator	FM 9-207 FM 21-305 FM 31-70 FM 31-71 WP 0006 00

GENERAL

The trailer is designed for use in a wide range of conditions. The paragraph in this work package provide the data and procedures to be used by the Operator when operating the trailer in snow or ice.

OPERATION IN SNOW OR ICE

CAUTION

Before operating ensure the trailer has been prepared for cold weather environment in accordance with FM 9-207. Refer to FM 31-70, FM 31-71, and FM 21-305 for additional information on operation in a cold environment with snow or ice. Failure to comply may result in damage to equipment.

NOTE

Refer to WP 0006 00, Operation in Extreme Cold, -26° F TO -65° F (-32° C TO -54° C) when operating in extremely cold environment.

Do not push trailer from rear if it becomes stuck in snow or ice. Damage to trailer could result.

1. If one or more wheels sink into snow, it may be necessary to jack up the stuck wheel(s) and insert planking or matting beneath wheel(s).

CAUTION

All snow and ice should be removed from trailer as soon as possible. Snow and ice may slow or prevent movement of equipment. Failure to comply may result in damage to equipment.

2. Remove all snow and ice build-up from trailer as soon as tactical situation permits.

3. Park in shelter when possible. If shelter is not available, park so trailer does not face into wind. Follow procedures in FM 9-207 to prevent trailer from freezing in place.

END OF WORK PACKAGE

OPERATION IN MUD 0011 00

INITIAL SETUP:

Maintenance Level	References
Operator	WP 0054 00

GENERAL

The trailer is designed for use in a wide range of conditions. The paragraphs in this work package provide the data and procedures to be used by the Operator when operating the trailer in mud.

OPERATION IN MUD

WARNING

Operating in mud causes brake linings to get covered with mud and can impair trailer braking. Dry brakes by towing trailer about 500 ft (153 m) while applying service brakes often. If adequate braking is not restored by drying brakes, notify Field Level Maintenance. Failure to comply may result in injury to personnel or damage to equipment.

CAUTION

Do not push trailer from rear if it becomes stuck in mud. Damage to trailer could result.

1. If one or more wheels is stuck in mud, it may necessary to jack up stuck wheel(s) and insert planking or matting under wheel(s).

2. Frequently clean (WP 0054 00, Cleaning Trailer), inspect, and lubricate trailer after operation in mud or as soon as tactical operation permits.

END OF WORK PACKAGE

OPERATION IN DUSTY OR SANDY AREAS 0012 00

INITIAL SETUP:

Maintenance Level	References
Operator	WP 0054 00

GENERAL

The trailer is designed for use in a wide range of conditions. The paragraphs in this work package provide the data and procedures to be used by the Operator when operating the trailer in dusty or sandy areas.

OPERATION IN DUSTY OR SANDY AREAS

WARNING

Do not straddle or drive on sides of sand mounds. Loose sand will not support trailer on steep slopes. Trailer may roll over. Failure to comply may result in serious injury or death to personnel or damage to equipment.

CAUTION

Do not push trailer from the rear if it becomes stuck in sand. Damage to trailer may result.

1. If one or more wheels sink into sand, it may be necessary to jack up the stuck wheel(s) and insert planking or matting beneath wheel(s).

2. Frequently clean (WP 0054 00, Cleaning Trailer), inspect, and lubricate trailer after operation in dusty or sandy areas or as soon as tactical operation permits.

3. If possible, park trailer out of blowing dust or sand during extended shutdown periods. If sheltered area is not available, cover and shield trailer with canvas covers (if available).

END OF WORK PACKAGE

CHAPTER 3
TROUBLESHOOTING PROCEDURES

OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURES 0013 00

THIS WORK PACKAGE COVERS:

Operational checkout and troubleshooting for the Load Handling System Trailer (LHST).

INITIAL SETUP:

Maintenance Level
Operator

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

NOTE

This work package does not supercede Preventative Maintenance Checks and Service (PMCS). After you have determined that your LHST is fully functional, perform scheduled PMCS (WP 0052 00).

OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURES

-Continued 0013 00

OPERATIONAL CHECKOUT AND TROUBLESHOOTING - Continued

Table 1. Operational Checkout and Troubleshooting Procedures

STEP	INDICATION/CONDITION	CORRECTIVE ACTION
1. Check if lights illuminate.	Lights do not illuminate when activated in towing vehicle.	Check towing vehicle to ensure light controls are in correct mode. Check connector points at each light not working. If fault still exists, notify field maintenance.
2. Check if drawbar will raise/lower.	Drawbar does not raise and/or lower.	Check for kinks or leaks in pneumatic hoses. If fault still exists, notify field maintenance.
3. Check if flatrack locks will lock/release.	Flatrack locks will not lock and/or release.	Check for kinks or leaks in pneumatic hoses. If fault still exists, notify field maintenance.
4. Check if front suspension will raise/lower using height actuation valve.	Front suspension will not raise and/or lower.	Check for kinks or leaks in pneumatic hoses. If fault still exists, notify field maintenance.
5. Check if ABS Diagnostic Tool is operating.	ABS Diagnostic Tool does not operate	Notify field maintenance.
6. Check if flatrack rail will raise/lower.	Flatrack rail will not raise and/or lower	Check for debris/rust in path. If fault still exists, notify field maintenance.
7. Check if shuttle will operate.	Shuttle will not roll forward and/or backward.	Check for debris/rust in path. If fault still exists, notify field maintenance.

END OF WORK PACKAGE

FRONT MARKER LIGHTS DO NOT ILLUMINATE 0014 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Electrical 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

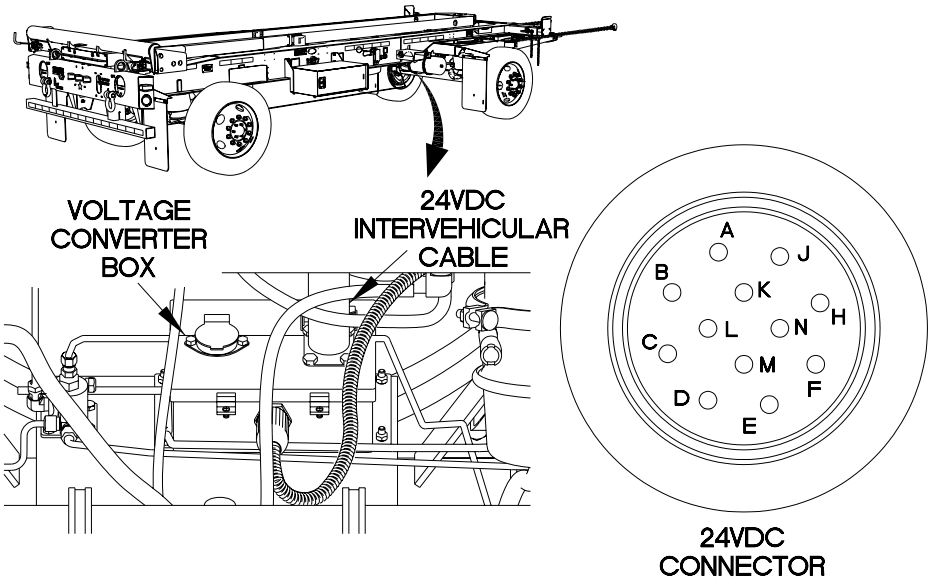
Refer to Electrical Schematic at the end of this chapter as required.

FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued 0014 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin E?	**No.** Replace intervehicular cable (WP 0062 00). **Yes.** Go to (Indication/Condition 2).	1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to SER DRIVE on towing vehicle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin E. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.

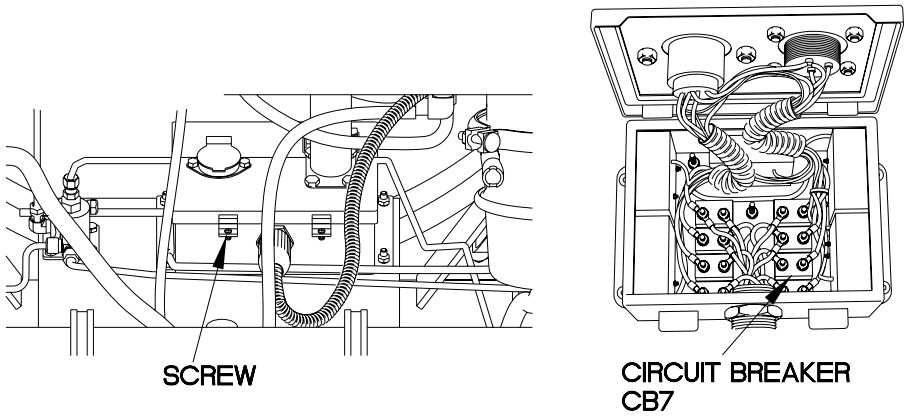


FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued 0014 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB7?	**No.** Replace circuit breaker CB7 (WP 0057 00). **Yes.** Go to (Indication/Condition 3).	1. Set multimeter to ohms. 2. Remove two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB7. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB7 and note reading on multimeter.

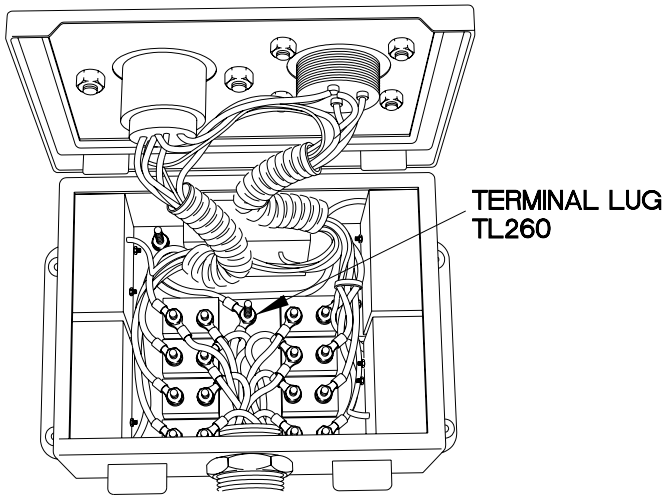


FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued 0014 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present from TL260 to a known good ground?	**No.** Repair wire 105 or replace main electrical harness (WP 0066 00).	1. Set multimeter to ohms.
	Yes. Replace main electrical harness (WP 0066 00).	2. Connect positive (+) probe of multimeter to TL260.
		3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



CC014R03

END OF WORK PACKAGE

RIGHT FRONT MARKER LIGHT DOES NOT ILLUMINATE 0015 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Electrical 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

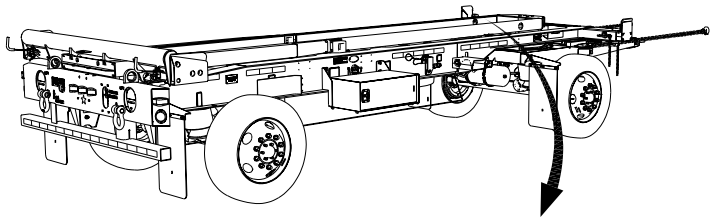
Refer to Electrical Schematic at the end of this chapter as required.

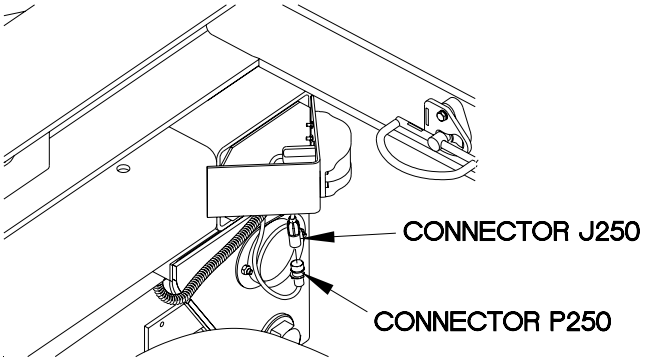
RIGHT FRONT MARKER LIGHT DOES NOT ILLUMINATE-Continued 0015 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Front Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J250?	**No.** Repair wire 107B (EM 0195) or replace main electrical harness (WP 0066 00).	1. Set multimeter to VDC.
	Yes. Replace right front marker light (WP 0061 00).	2. Disconnect connector J250 from right front marker light connector P250. 3. Position main light switch to SER DRIVE on towing vehicle. 4. Connect positive (+) probe of multimeter to connector J250. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.





CC015R01

END OF WORK PACKAGE

LEFT FRONT MARKER LIGHT DOES NOT ILLUMINATE 0016 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Electrical 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

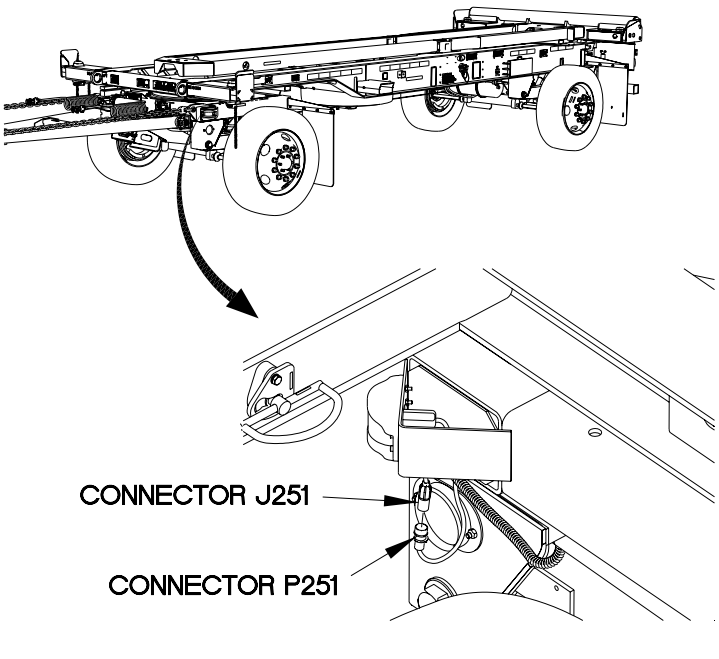
Refer to Electrical Schematic at the end of this chapter as required.

LEFT FRONT MARKER LIGHT DOES NOT ILLUMINATE-Continued 0016 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Front Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J251?	**No.** Repair wire 107C (EM 0195) or replace main electrical harness (WP 0066 00).	1. Set multimeter to VDC.
	Yes. Replace left front marker light (WP 0061 00).	2. Disconnect connector J251 from left front marker light. 3. Position main light switch to SER DRIVE on towing vehicle. 4. Connect positive (+) probe of multimeter to connector J251. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



END OF WORK PACKAGE

SIDE REAR MARKER LIGHTS DO NOT ILLUMINATE 0017 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Electrical 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

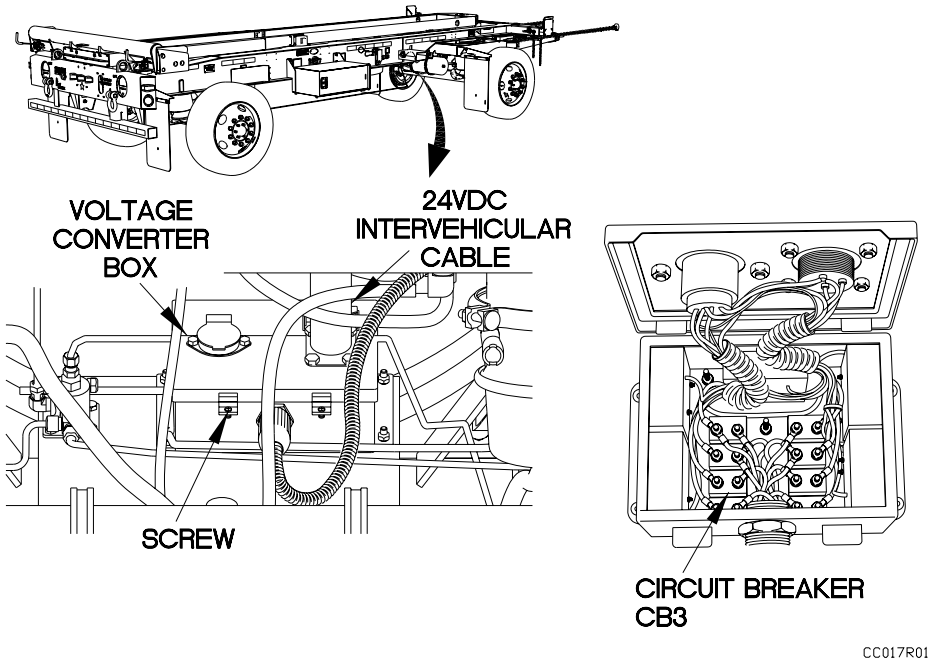
Refer to Electrical Schematic at the end of this chapter as required.

SIDE REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0017 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Side Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is continuity present across circuit breaker CB3?	**No.** Replace circuit breaker CB3 (WP 0057 00). **Yes.** Go to (Indication/Condition 2).	1. Set multimeter to ohms. 2. Disconnect 24 VDC intervehicular cable connector from voltage converter box on trailer. 3. Remove two screws and raise lid on voltage converter box. 4. Connect positive (+) probe of multimeter to one terminal on CB3. 5. Connect negative (-) probe of multimeter to other terminal on CB3 and note reading on multimeter.

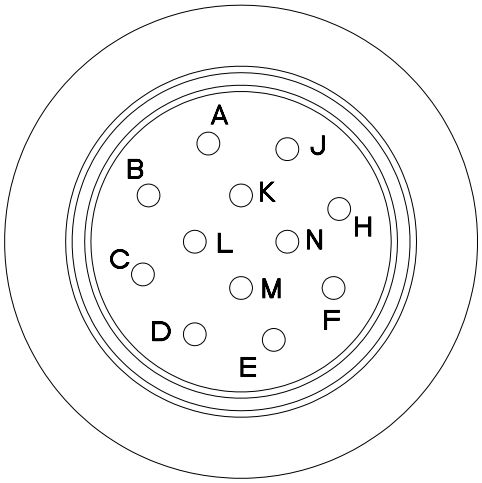


SIDE REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0017 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Side Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 18-30 VDC present at 24 VDC intervehicular cable connector pin E?	**No.** Replace 24 VDC intervehicular cable (WP 0062 00). **Yes.** Replace voltage converter box (WP 0058 00).	1. Set multimeter to VDC. 2. Connect positive (+) probe of button probe to 24 VDC intervehicular connector pin E. 3. Connect negative (-) probe of button probe to a known good ground. 4. Position master power switch to on (TM 9-2320-392-10). 5. Position main light switch to SER DRIVE and note reading on multimeter.



24VDC CONNECTOR

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END OF WORK PACKAGE

LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE 0018 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Electrical 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

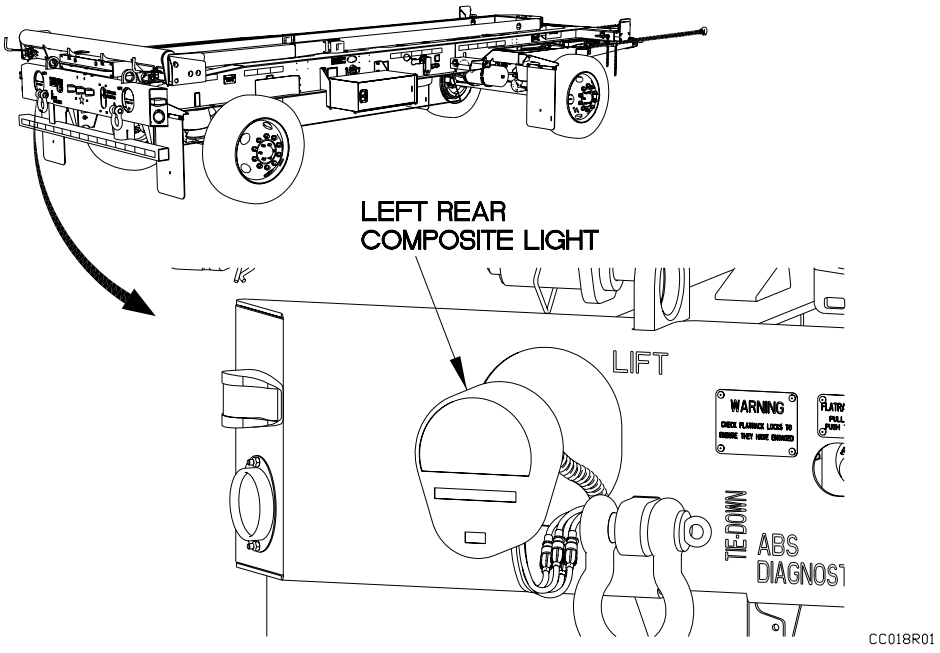
Refer to Electrical Schematic at the end of this chapter as required.

LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0018 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Rear Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J260?	**No.** Repair wire 118B (EM 0195) or replace left rear electrical harness (WP 0064 00).	1. Set multimeter to VDC.
	Yes. Replace left rear marker light (WP 0061 00).	2. Remove left rear composite light from trailer for access (WP 0060 00).

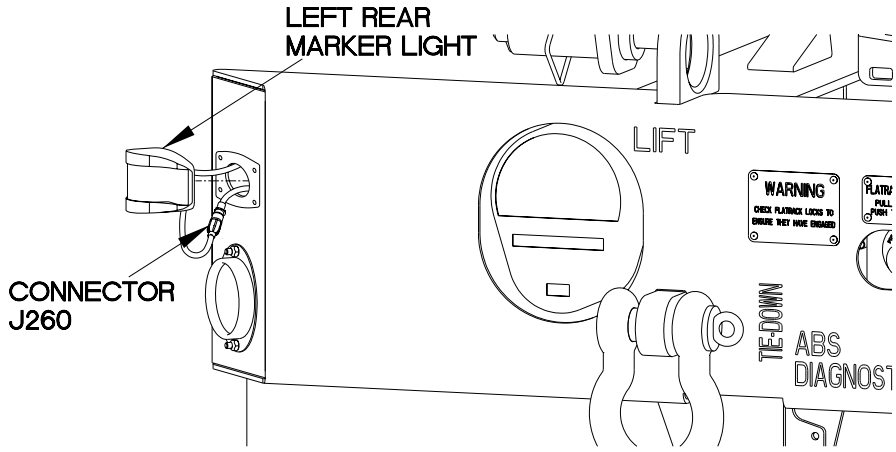


LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0018 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Rear Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J260? (Cont)	**No.** Repair wire 118B (EM 0195) or replace left rear electrical harness (WP 0064 00).	3. Remove left rear marker light for access (WP 0061 00).
	Yes. Replace left rear marker light (WP 0061 00).	4. Disconnect connector J260 from left rear marker light. 5. Connect positive (+) probe of multimeter to connector J260. 6. Connect negative (-) probe of multimeter to a known good ground. 7. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE 0019 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

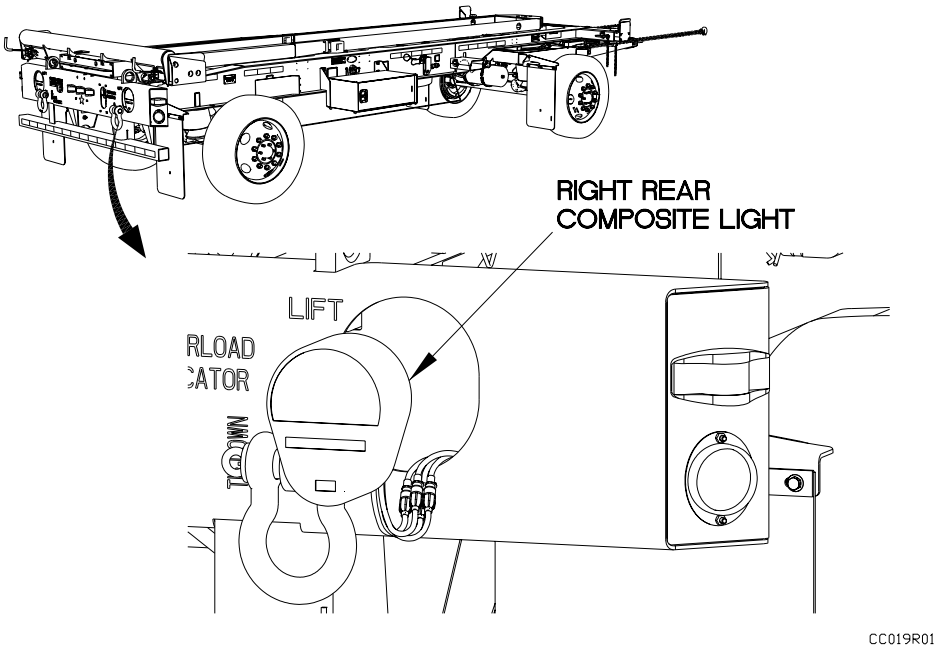
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0019 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Rear Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J256?	**No.** Repair wire 113A (EM 0195) or replace right rear electrical harness (WP 0063 00).	1. Set multimeter to VDC.
	Yes. Replace right rear marker light (WP 0061 00).	2. Remove right rear composite light from trailer for access (WP 0060 00).

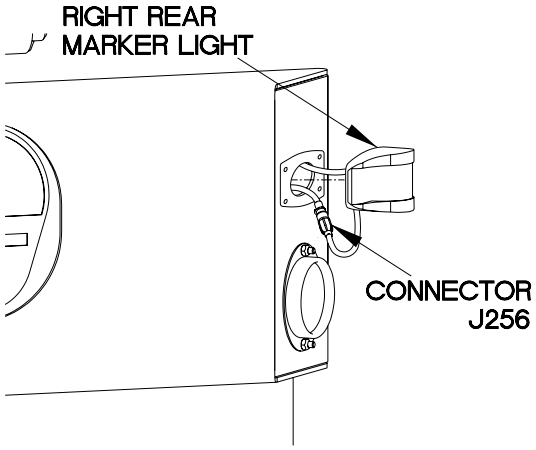


RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0019 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Rear Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J256? (Cont)	**No.** Repair wire 113A (EM 0195) or replace right rear electrical harness (WP 0063 00).	3. Remove right rear marker light for access (WP 0061 00).
	Yes. Replace right rear marker light (WP 0061 00).	4. Disconnect connector J256 from right rear marker light. 5. Connect positive (+) probe of multimeter to connector J256. 6. Connect negative (-) probe of multimeter to a known good ground. 7. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



CC019R02

END OF WORK PACKAGE

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE 0020 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

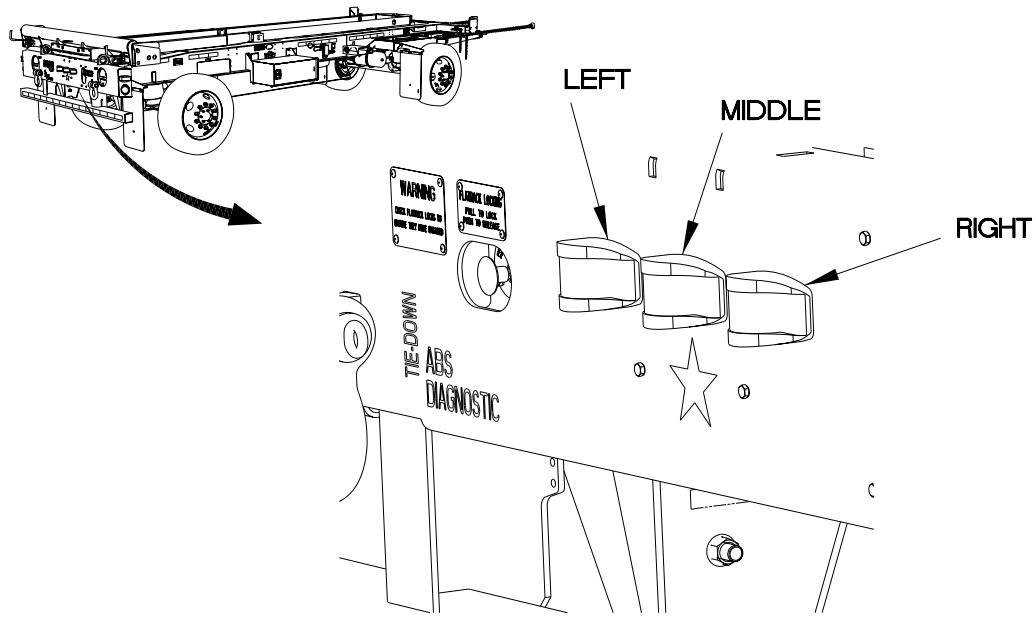
Refer to Electrical Schematic at the end of this chapter as required.

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Which center rear marker light does not illuminate?	**Left** Go to (Indication/Condition 2). **Right** Go to (Indication/Condition 3). **Middle** Go to (Indication/Condition 4). **All** Repair wire 124 (EM 0195) or replace rear electrical harness (WP 0065 00).	1. Position main light switch to SER DRIVE. 2. Note which center rear marker light does not illuminate.



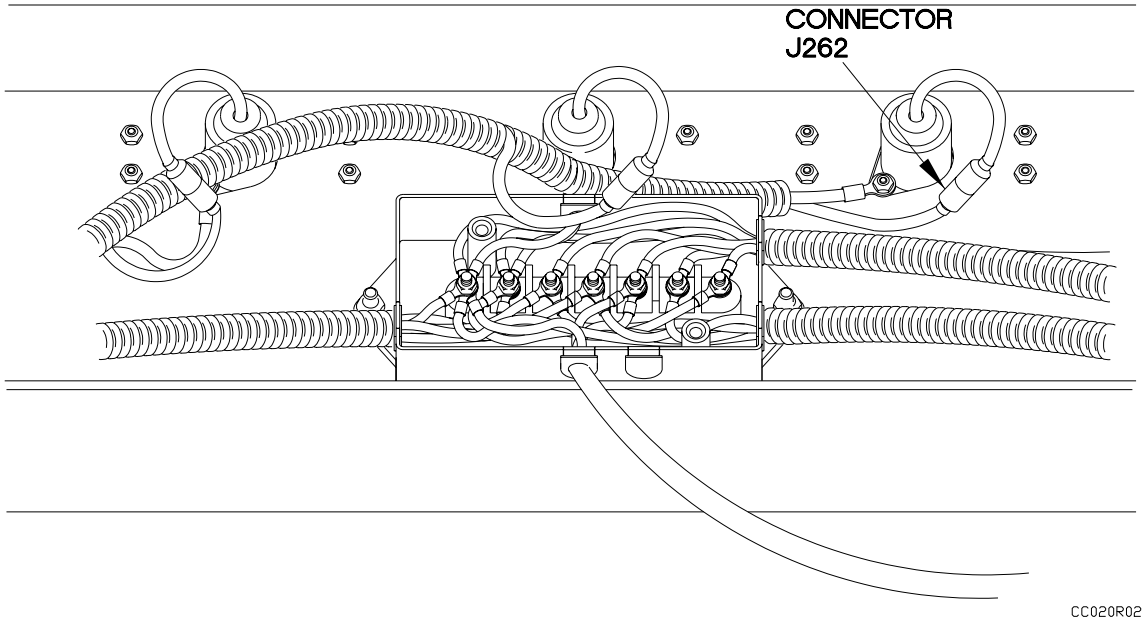
CC020R01

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 8-14 VDC present at connector J262?	**No.** Repair wire 121 (EM 0195) or replace rear electrical harness (WP 0065 00).	1. Set multimeter to VDC.
	Yes. Replace center left marker light (WP 0061).	2. Disconnect connector J262 from center left marker light connector. 3. Connect positive (+) probe of multimeter to connector J262. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to SER DRIVE and note reading on multimeter.

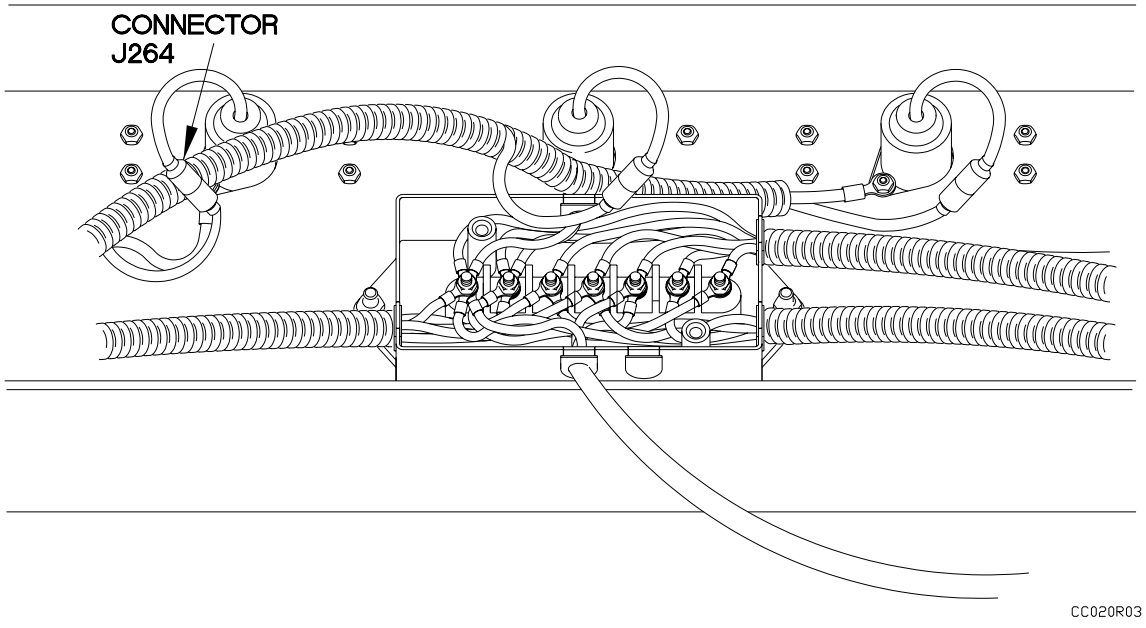


CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is 8-14 VDC present at connector J264?	**No.** Repair wire 123 or replace rear electrical harness (WP 0065 00).	1. Set multimeter to VDC.
	Yes. Replace center right marker light (WP 0061 00).	2. Disconnect connector J264 from center right marker light connector. 3. Connect positive (+) probe of multimeter to connector J264. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to SER DRIVE and note reading on multimeter.

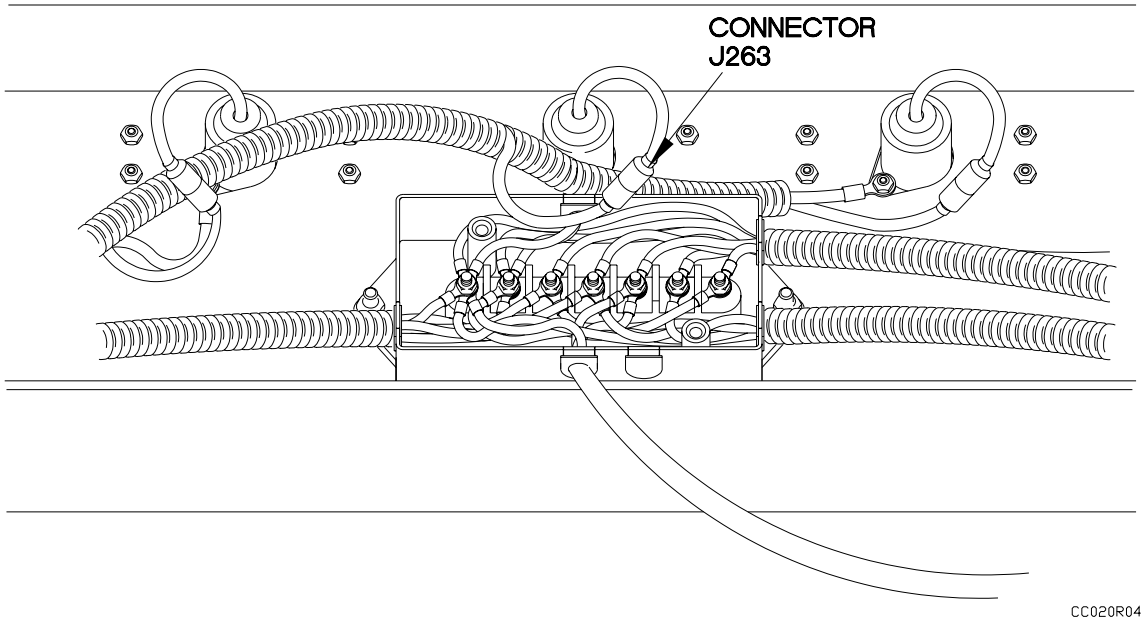


CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is 8-14 VDC present at connector J263?	**No.** Repair wire 122 or replace rear electrical harness (WP 0065 00).	1. Set multimeter to VDC.
	Yes. Replace center middle marker light (WP 0061 00).	2. Disconnect connector J263 from center middle marker light connector. 3. Connect positive (+) probe of multimeter to connector J263. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to SER DRIVE and note reading on multimeter.



END OF WORK PACKAGE

RIGHT TAILLIGHT DOES NOT ILLUMINATE 0021 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

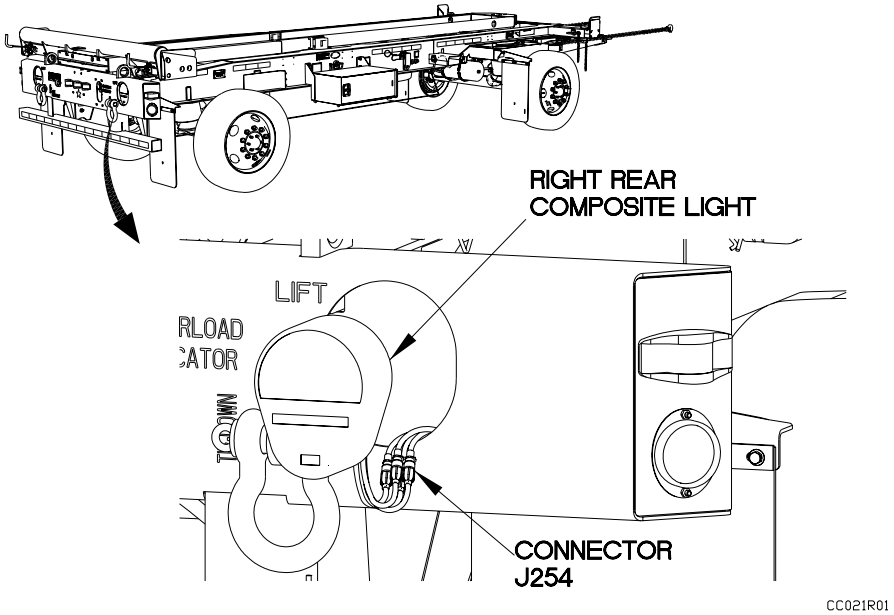
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT TAILLIGHT DOES NOT ILLUMINATE-Continued 0021 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J254?	**No.** Repair wire 113B (EM 0195) or replace right rear electrical harness (WP 0063 00).	1. Set multimeter to VDC.
	Yes. Replace right rear composite taillight (WP 0060 00).	2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J254 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J254. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

RIGHT STOPLIGHT DOES NOT ILLUMINATE 0022 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

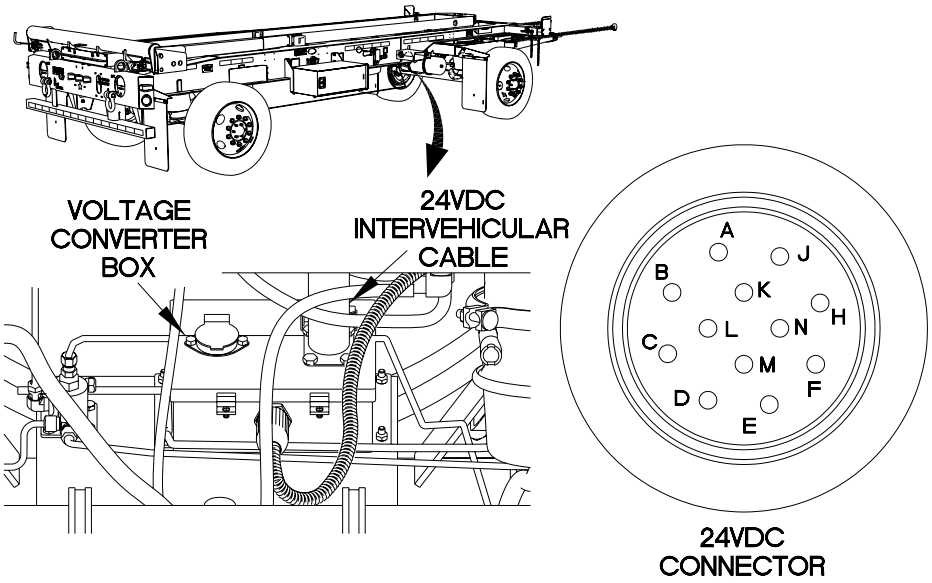
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT STOPLIGHT DOES NOT ILLUMINATE-Continued 0022 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin B?	**No.** Replace intervehicular cable (WP 0062 00). **Yes.** Go to (Indication/Condition 2).	1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake peddle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin B. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter. 6. Position main light switch to ALL OFF.

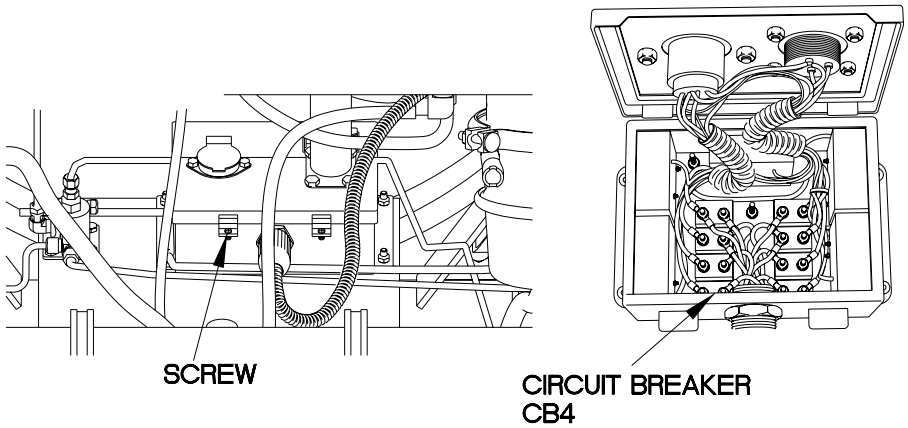


RIGHT STOPLIGHT DOES NOT ILLUMINATE-Continued 0022 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

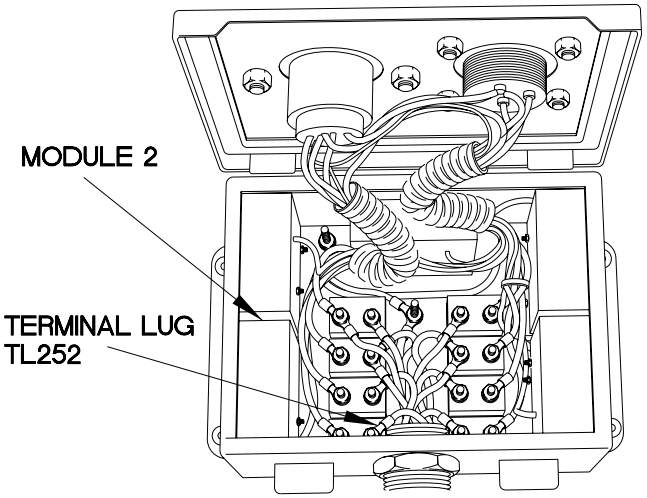
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB4?	**No.** Replace circuit breaker CB4 (WP 0057 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 3).	2. Loosen two screws and open voltage converter box.
		3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB4.
		4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB4 and note reading on multimeter.



RIGHT STOPLIGHT DOES NOT ILLUMINATE-Continued 0022 00

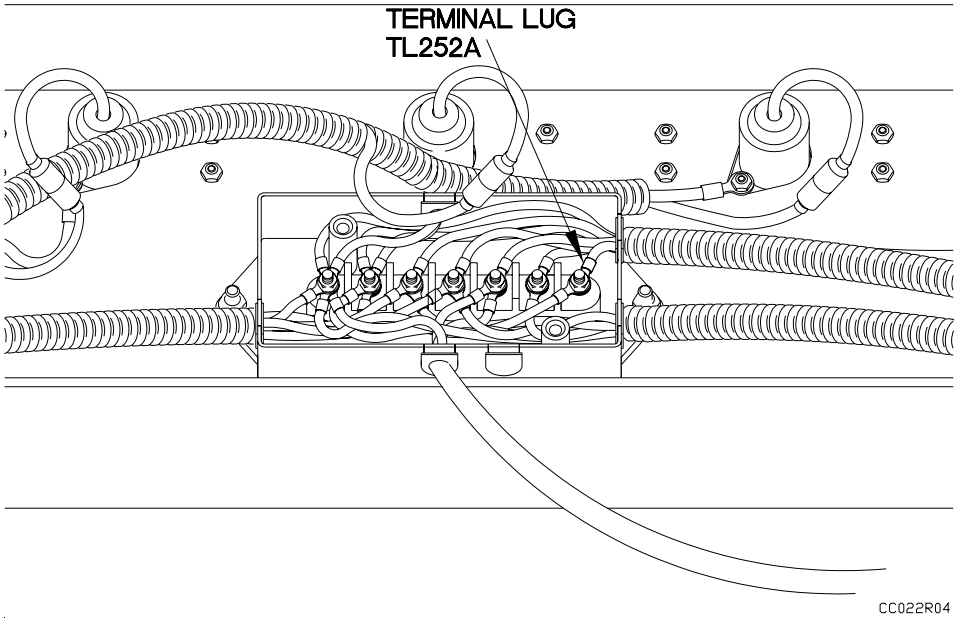
ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is 8-16 VDC present at TL252?	**No.** Replace module 2 (WP 0057 00). **Yes.** Go to (Indication/Condition 4).	1. Set multimeter to VDC. 2. Connect intervehicular cable connector to voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake pedal. 4. Connect positive (+) probe of multimeter to TL252. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.  CC022R03 6. Position main light switch to ALL OFF.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

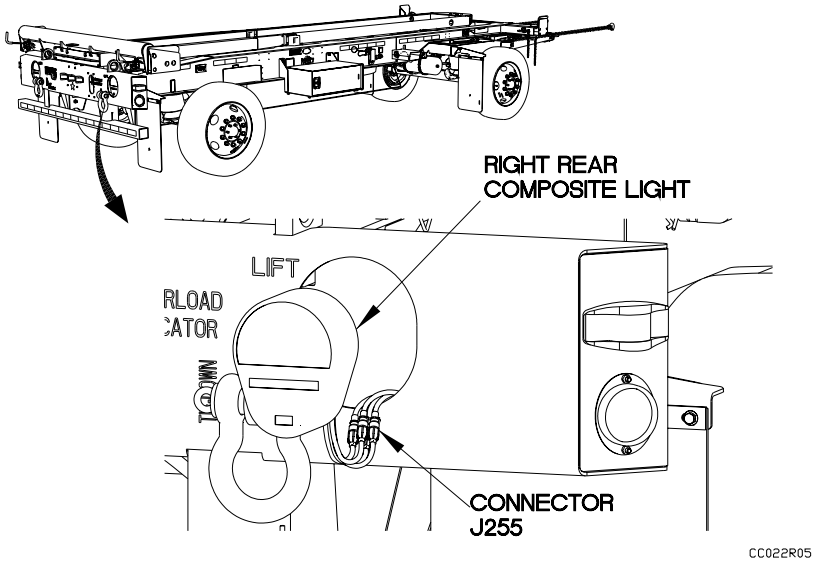
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is 8-14 VDC present at terminal lug TL252A?	**No.** Repair wire 110 (EM 0195) or replace main electrical harness (WP 0066 00). **Yes.** Go to (Indication/Condition 5).	1. Set multimeter to VDC. 2. Remove two screws and cover from junction box. 3. Connect positive (+) probe of multimeter to terminal lug TL252A 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to STOP LIGHT. 6. Depress brake pedal and note reading on multimeter.  7. Position main light switch to ALL OFF.

RIGHT STOPLIGHT DOES NOT ILLUMINATE-Continued 0022 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is 8-16 VDC present at connector J255?	**No.** Repair wire 114 (EM 0195) or replace right rear electrical harness (WP 0063 00).	1. Set multimeter to VDC.
	Yes. Go to (Indication/Condition 6).	2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J255 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J255. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to STOP LIGHT on towing vehicle, depress brake pedal, and note reading on multimeter.

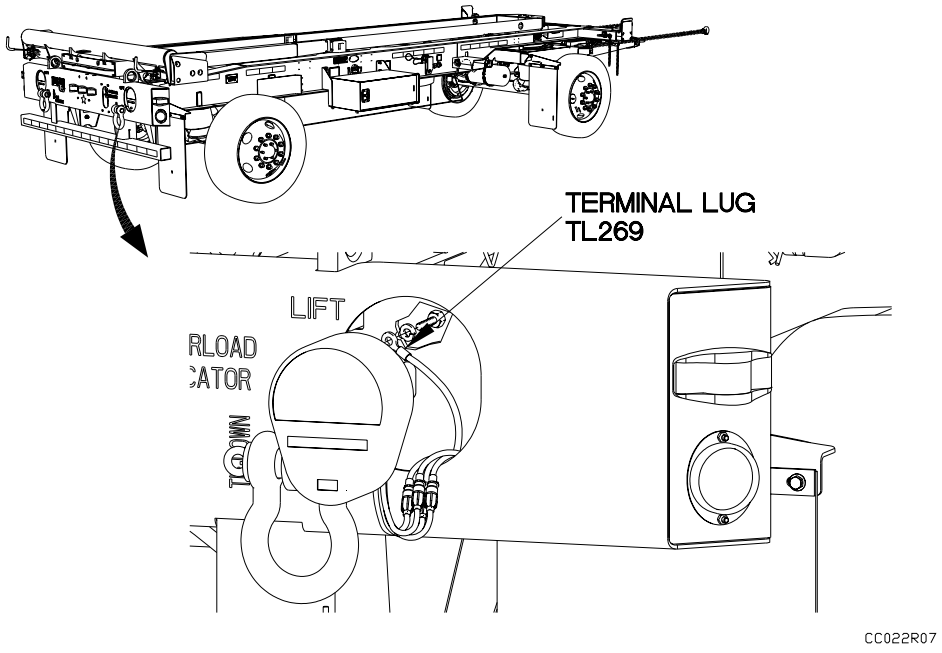


RIGHT STOPLIGHT DOES NOT ILLUMINATE-Continued 0022 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is continuity present from terminal lug TL269 to a known good ground?	**No.** Repair wire 115B (EM 0195) or replace right rear electrical harness (WP 0063 00).	1. Set multimeter to ohms.
	Yes. Replace right rear composite taillight (WP 0060 00).	2. Connect positive (+) probe of multimeter to terminal lug TL269. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



END OF WORK PACKAGE

LEFT TAILLIGHT DOES NOT ILLUMINATE 0023 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Refer to Electrical Schematic at the end of this chapter as required.

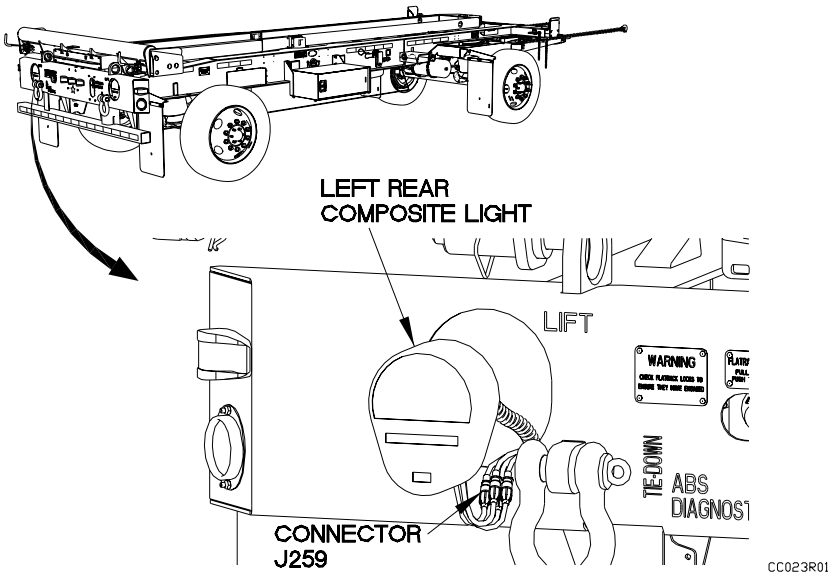
LEFT TAILLIGHT DOES NOT ILLUMINATE-Continued 0023 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

Table 1: Left Taillight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J259?	**No.** Repair wire 118A (EM 0195) or replace left rear electrical harness (WP 0064 00).	1. Set multimeter to VDC.
	Yes. Replace left rear composite taillight (WP 0060 00).	2. Remove left rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J259 from left rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J259. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

LEFT STOPLIGHT DOES NOT ILLUMINATE 0024 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

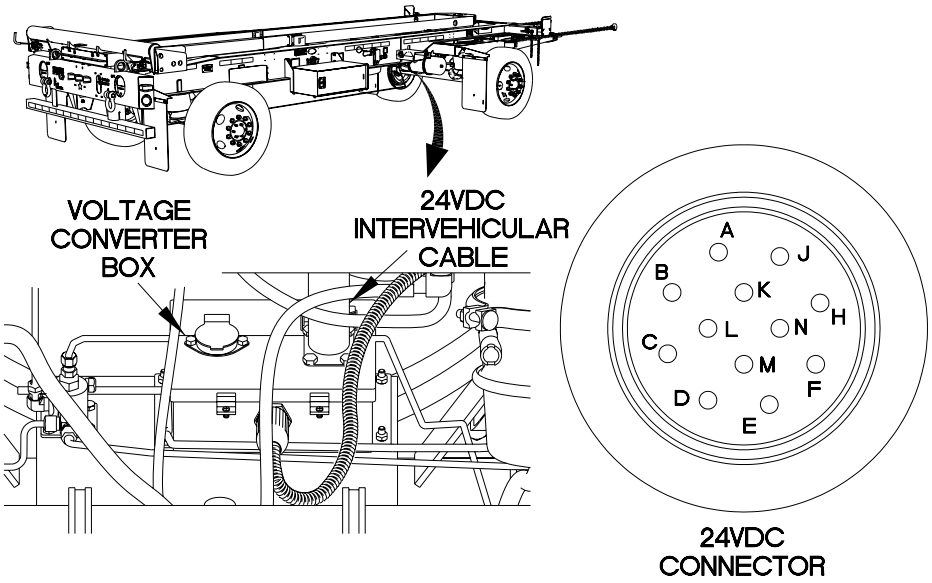
Refer to Electrical Schematic at the end of this chapter as required.

LEFT STOPLIGHT DOES NOT ILLUMINATE-Continued 0024 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin B?	**No.** Replace intervehicular cable (WP 0062 00). **Yes.** Go to (Indication/Condition 2).	1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake peddle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin B. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter. 6. Position main light switch to ALL OFF.

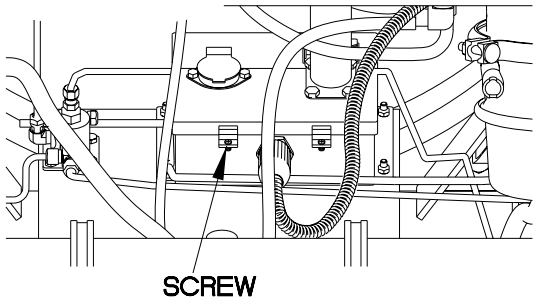


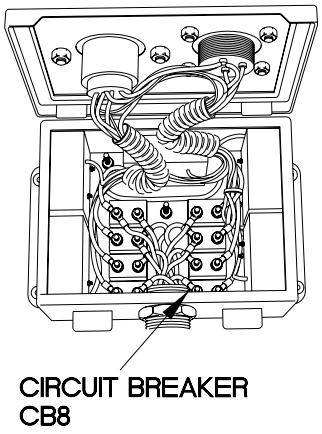
LEFT STOPLIGHT DOES NOT ILLUMINATE-Continued 0024 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB8?	**No.** Replace circuit breaker CB8 (WP 0057 00). **Yes.** Go to (Indication/Condition 3).	1. Set multimeter to ohms. 2. Remove two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB8. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB8 and note reading on multimeter.





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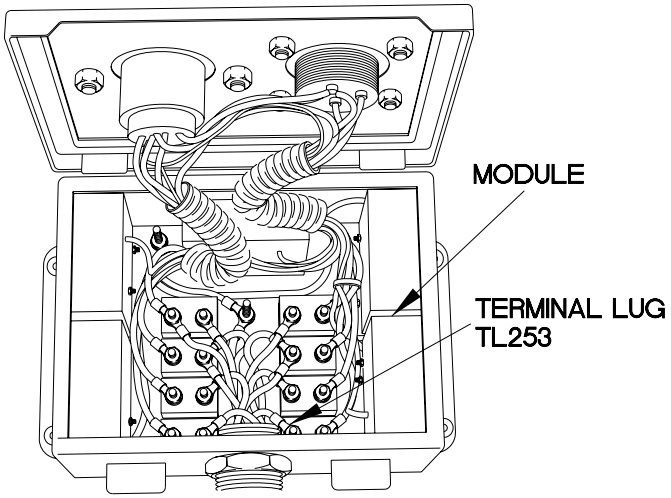
LEFT STOPLIGHT DOES NOT ILLUMINATE-Continued 0024 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

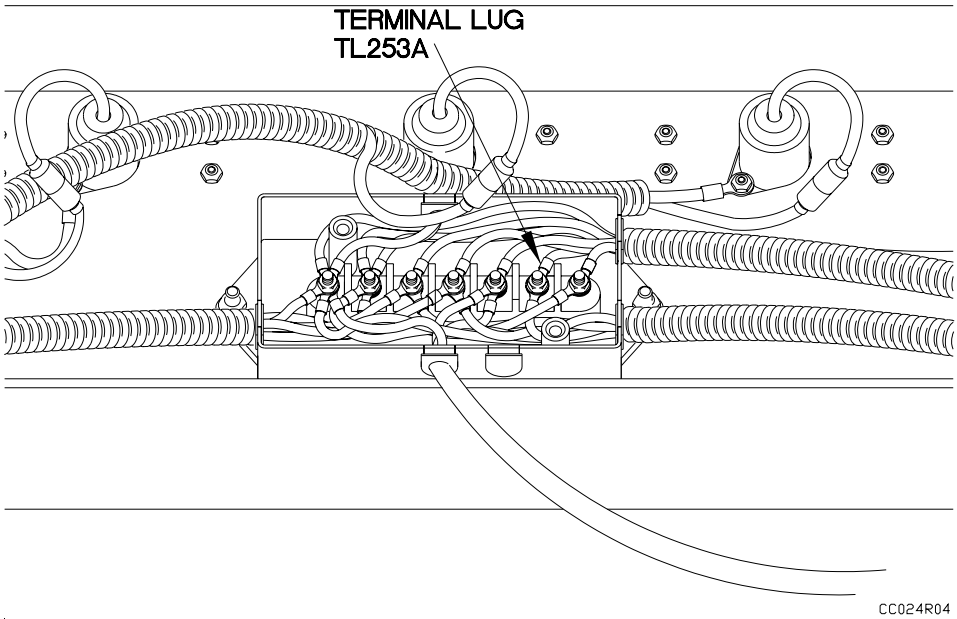
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is 8-16 VDC present at TL253?	**No.** Replace module 4 (WP 0057 00). **Yes.** Go to (Indication/Condition 4).	1. Set multimeter to VDC. 2. Connect intervehicular cable connector from voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake pedal. 4. Connect positive (+) probe of multimeter to TL253. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.  6. Position main light switch to ALL OFF.

LEFT STOPLIGHT DOES NOT ILLUMINATE-Continued 0024 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is 8-14 VDC present at terminal lug TL253A?	**No.** Repair wire 109 (EM 0195) or replace main electrical harness (WP 0066 00). **Yes.** Go to (Indication/Condition 5).	1. Set multimeter to VDC. 2. Remove cover of junction box (WP 0059 00). 3. Connect positive (+) probe of multimeter to terminal lug TL253A. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to STOP LIGHT. 6. Depress brake pedal and note reading on multimeter.



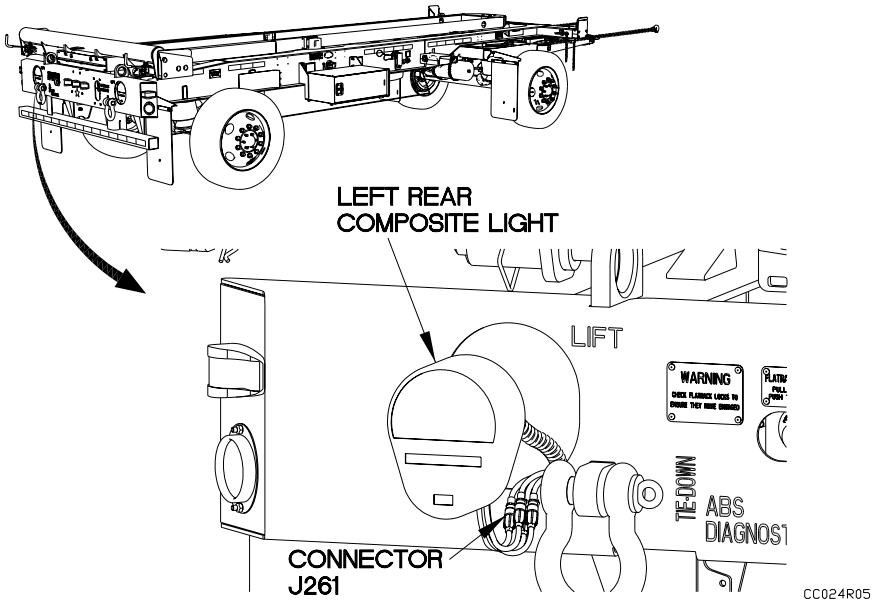
		6. Position main light switch to ALL OFF.

LEFT STOPLIGHT DOES NOT ILLUMINATE-Continued 0024 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is 8-16 VDC present at connector J261?	**No.** Repair wire 119 (EM 0195) or replace left rear electrical harness (WP 0064 00). **Yes.** Go to (Indication/Condition 6).	1. Set multimeter to VDC. 2. Remove left rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J261 from left rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J261. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to STOP LIGHT on towing vehicle, depress brake pedal, and note reading on multimeter.

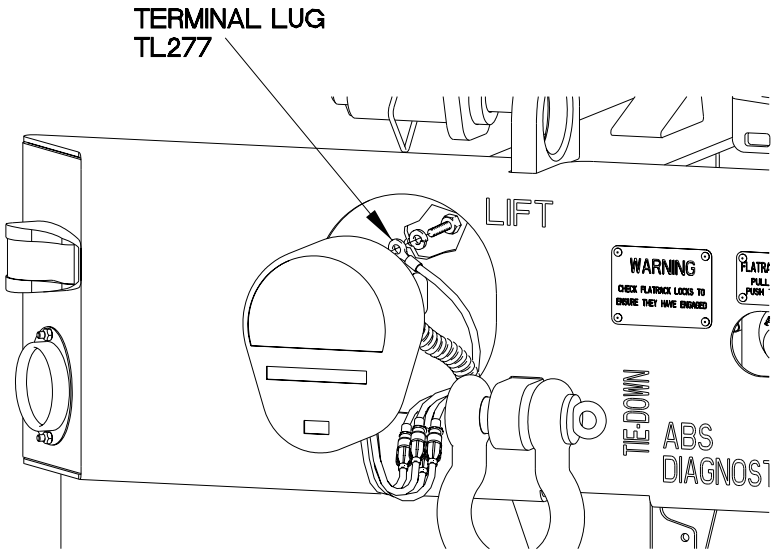


LEFT STOPLIGHT DOES NOT ILLUMINATE-Continued 0024 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is continuity present from terminal lug TL277 to a known good ground?	**No.** Repair wire 120B (EM 0195) or replace left rear electrical harness (WP 0064 00).	1. Set multimeter to ohms.
	Yes. Replace left rear composite taillight (WP 0060 00).	2. Connect positive (+) probe of multimeter to terminal lug TL277. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



END OF WORK PACKAGE

RIGHT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE 0025 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Refer to Electrical Schematic at the end of this chapter as required.

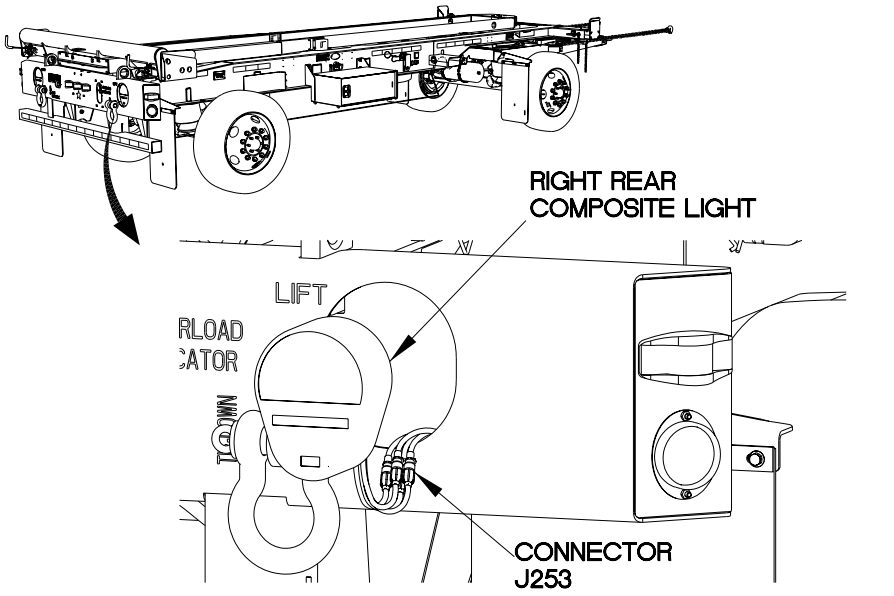
RIGHT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE-Continued 0025 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

Table 1: Right Blackout Taillight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J253?	**No.** Repair wire 112 (EM 0195) or replace right rear electrical harness (WP 0063 00).	1. Set multimeter to VDC.
	Yes. Replace right rear composite taillight (WP 0060 00).	2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J253 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J253. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to B.O. MARKER on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

RIGHT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE 0026 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Refer to Electrical Schematic at the end of this chapter as required.

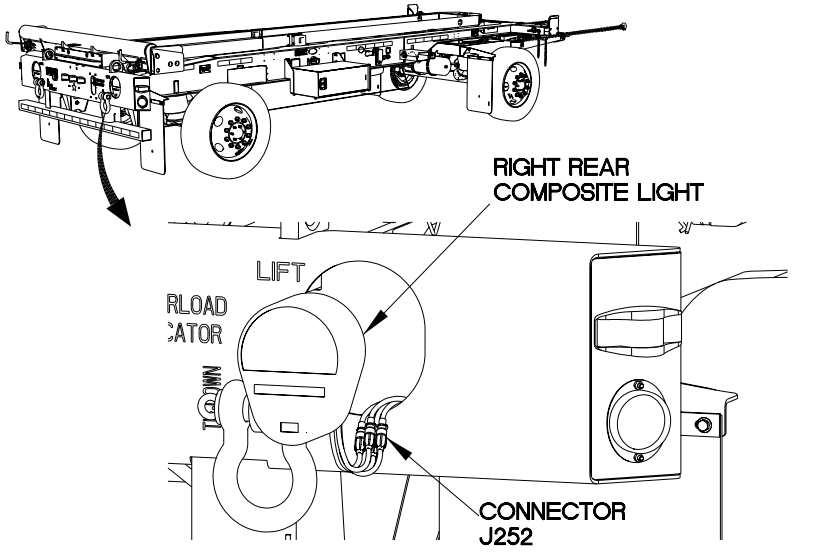
RIGHT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE-Continued 0026 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

Table 1: Right Blackout Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J252?	**No.** Repair wire 111 (EM 0195) or replace right rear electrical harness (WP 0063 00).	1. Set multimeter to VDC.
	Yes. Replace right rear composite taillight (WP 0060 00).	2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J252 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J252. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to B.O. DRIVE on towing vehicle, depress brake pedal, and note reading on multimeter.



END OF WORK PACKAGE

LEFT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE 0027 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Refer to Electrical Schematic at the end of this chapter as required.

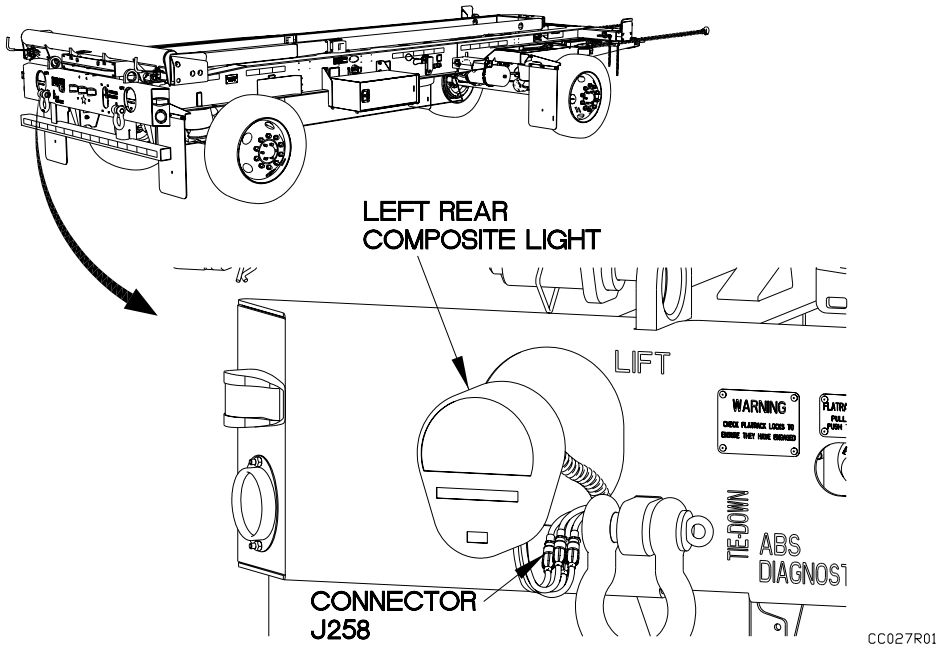
LEFT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE-Continued 0027 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

Table 1: Left Blackout Taillight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J258?	**No.** Repair wire 117 (EM 0195) or replace left rear electrical harness (WP 0064 00).	1. Set multimeter to VDC.
	Yes. Replace left rear composite taillight (WP 0060 00).	2. Remove left rear composite light from trailer for access (WP 0060 00).
		3. Disconnect connector J258 from left rear composite taillight.
		4. Connect positive (+) probe of multimeter to connector J258.
		5. Connect negative (-) probe of multimeter to a known good ground.
		6. Position main light switch to B.O. MARKER on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

LEFT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE 0028 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Refer to Electrical Schematic at the end of this chapter as required.

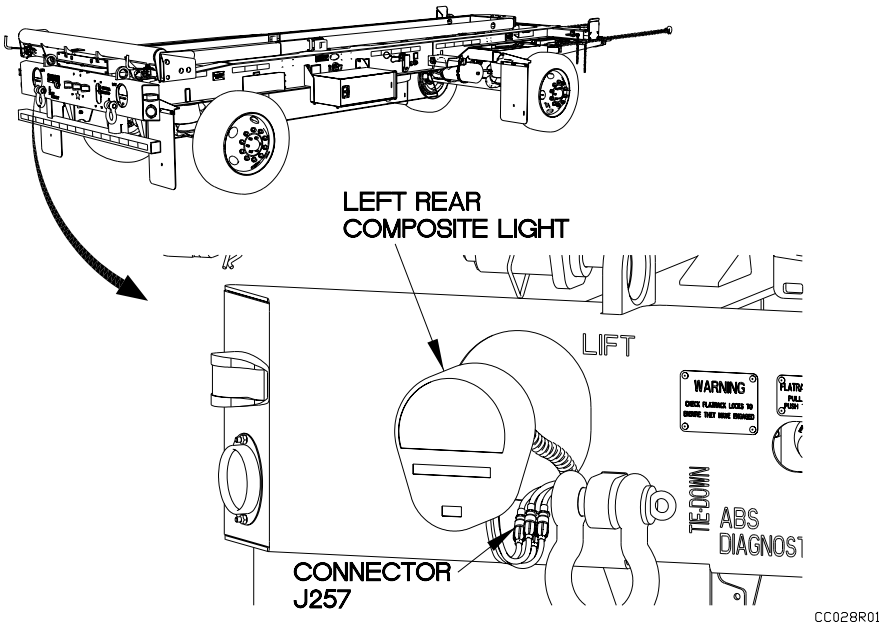
LEFT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE-Continued 0028 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

Table 1: Left Blackout Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J257?	**No.** Repair wire 116 (EM 0195) or replace left rear electrical harness (WP 0064 00).	1. Set multimeter to VDC.
	Yes. Replace left rear composite taillight (WP 0060 00).	2. Remove left rear composite light from trailer for access (WP 0060 00).
		3. Disconnect connector J257 from left rear composite taillight.
		4. Connect positive (+) probe of multimeter to connector J257.
		5. Connect negative (-) probe of multimeter to a known good ground.
		6. Position main light switch to B.O. DRIVE on towing vehicle, depress brake pedal, and note reading on multimeter.



END OF WORK PACKAGE

BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE 0029 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

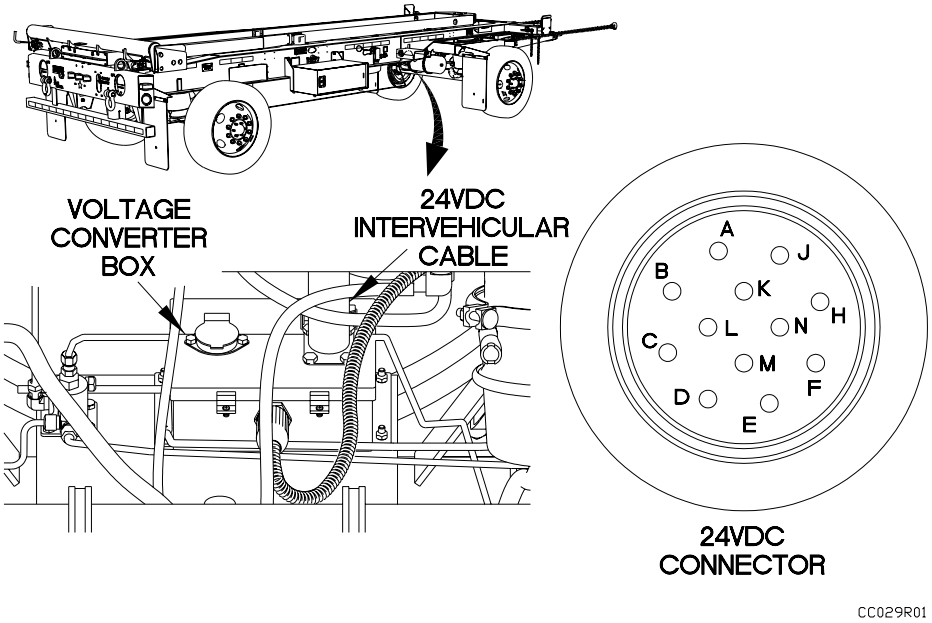
Refer to Electrical Schematic at the end of this chapter as required.

BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE-Continued 0029 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin F?	**No.** Replace intervehicular cable (WP 0062 00). **Yes.** Go to (Indication/Condition 2).	1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to B.O. DRIVE on towing vehicle and depress brake peddle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin F. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter. 6. Position main light switch to ALL OFF.

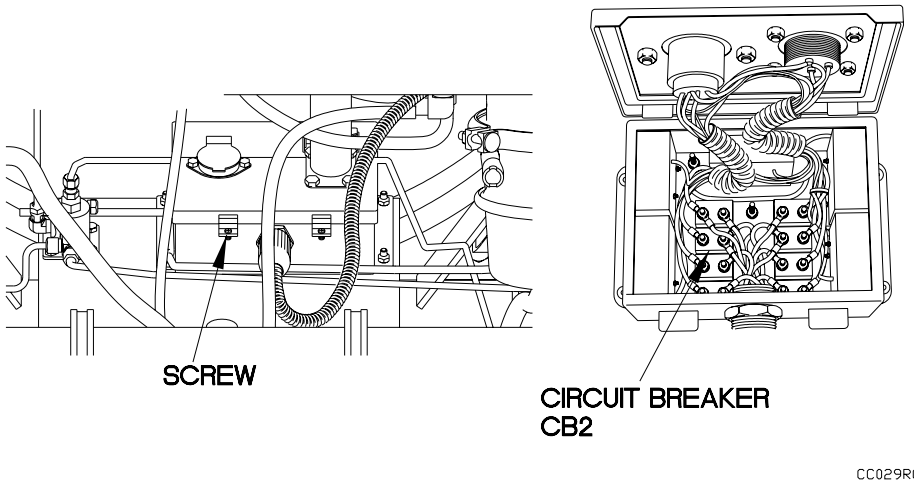


BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE-Continued 0029 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB2?	**No.** Replace circuit breaker CB2 (WP 0057 00). **Yes.** Go to (Indication/Condition 3).	1. Set multimeter to ohms. 2. Remove two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB2. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB2 and note reading on multimeter.

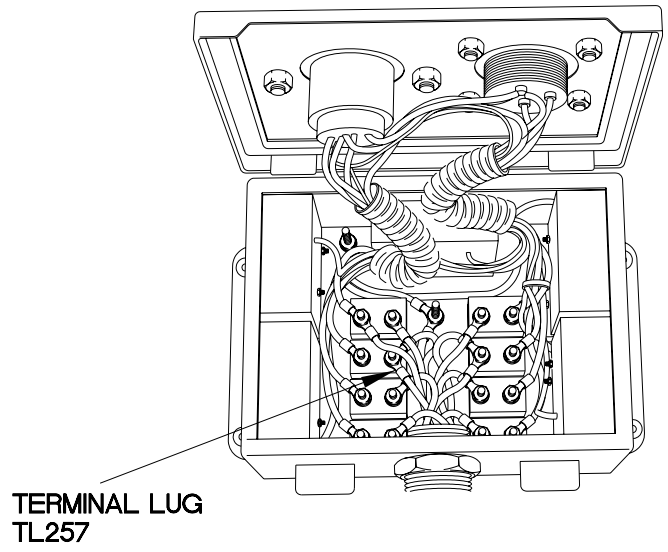


BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE-Continued 0029 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is 18-30 VDC present at TL257?	**No.** Repair wire or replace voltage converter box (WP 0058 00).	1. Set multimeter to VDC.
	Yes. Repair wire 104 (EM 0195) or replace main electrical harness (WP 0066 00).	2. Connect intervehicular cable connector to voltage converter box. 3. Position main light switch to B.O. DRIVE on towing vehicle and depress brake pedal. 4. Connect positive (+) probe of multimeter to TL257. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



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END OF WORK PACKAGE

ALL LIGHTS DO NOT ILLUMINATE 0030 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1)
Towing vehicle main light switch set to off (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Refer to Electrical Schematic at the end of this chapter as required.

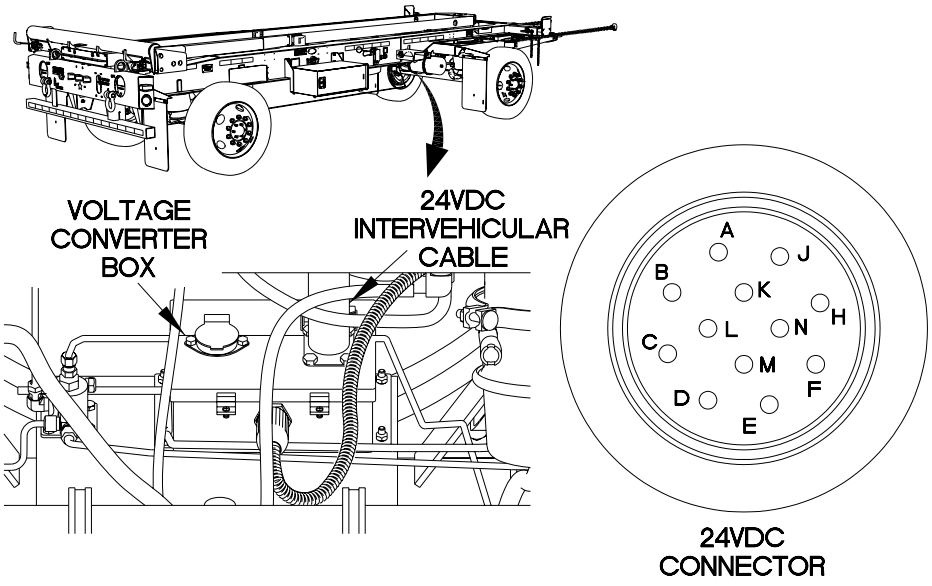
Remove plastic cable ties as required.

ALL LIGHTS DO NOT ILLUMINATE-Continued 0030 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. All Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin E?	**No.** Replace intervehicular cable (WP 0062 00). **Yes.** Replace voltage converter box (WP 0058 00).	1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Connect positive (+) probe of multimeter to intervehicular cable pin E. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE 0031 00

THIS WORK PACKAGE COVERS:
Brakes System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
24 VDC intervehicular cable connected to towing vehicle (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

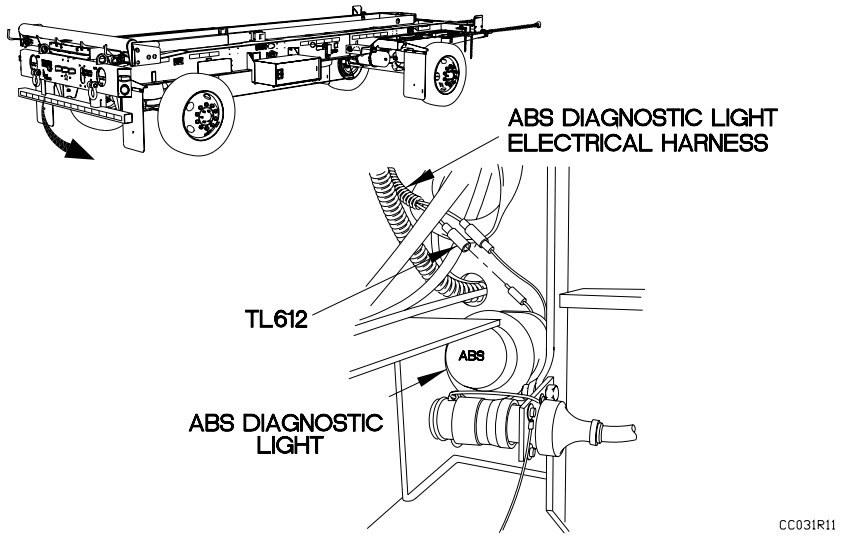
Refer to Electrical Schematic at the end of this chapter as required.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at terminal lug TL612 of ABS diagnostic light electrical harness?	**No.** Go to (Indication/Condition 3).	1. Set multimeter to VDC.
	Yes. Go to (Indication/Condition 2).	2. Disconnect terminal lug TL612 from ABS diagnostic light lead. 3. Connect positive (+) probe of multimeter to terminal lug TL612. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position towing vehicle master power switch to on and note reading on multimeter.

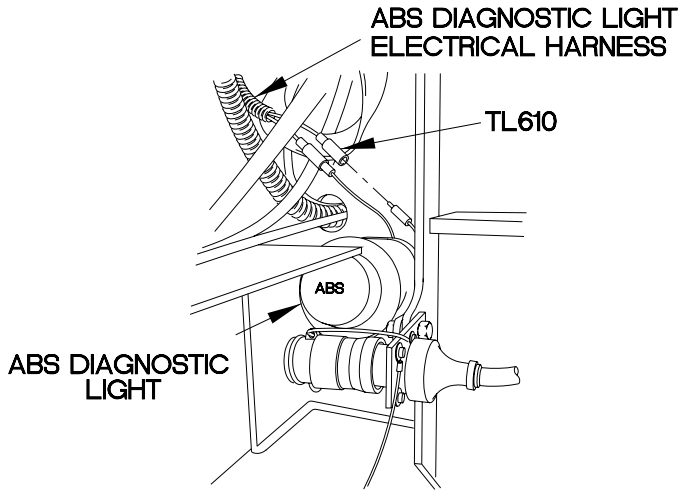


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present between terminal lug TL610 and a known good ground?	**No.** Go to (Indication/Condition 4). **Yes.** Replace ABS diagnostic light (WP 0074 00).	1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Disconnect terminal lug TL610 from ABS diagnostic light lead. 4. Connect positive (+) probe of multimeter to terminal lug TL610. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



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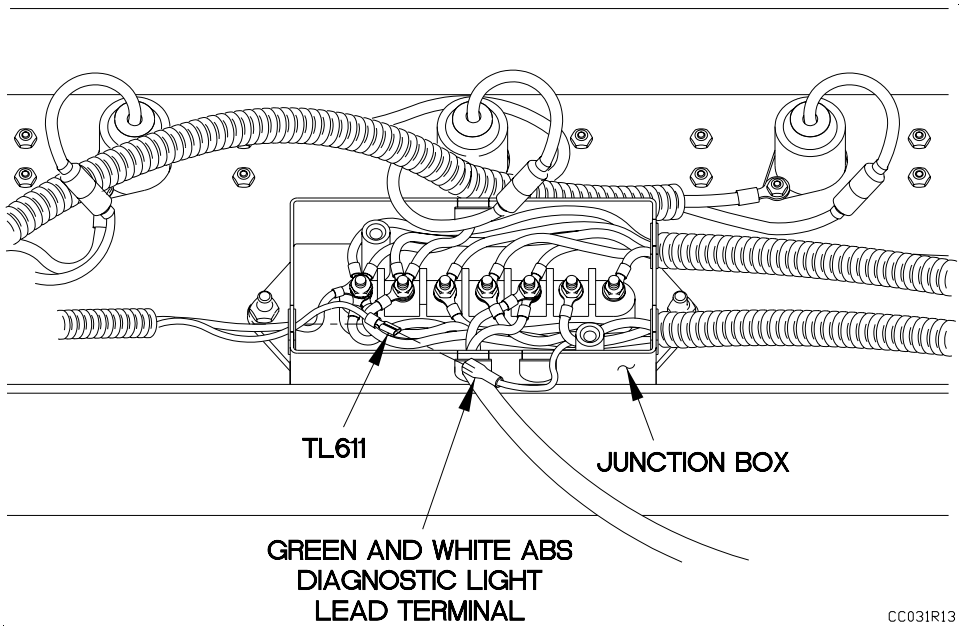
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is 8-16 VDC present at green and white ABS diagnostic light lead terminal lug?	**No.** Go to (Indication/Condition 5).	1. Set multimeter to VDC.
	Yes. Replace ABS diagnostic light harness (WP 0077 00).	2. Remove junction box cover for access (WP 0059 00).
		3. Disconnect green and white ABS diagnostic light lead terminal lug from terminal lug TL611.
		4. Connect positive (+) probe of multimeter to green and white ABS diagnostic light terminal lug.
		5. Connect negative (-) probe of multimeter to a known good ground.
		6. Position towing vehicle master power switch to on and note reading on multimeter.

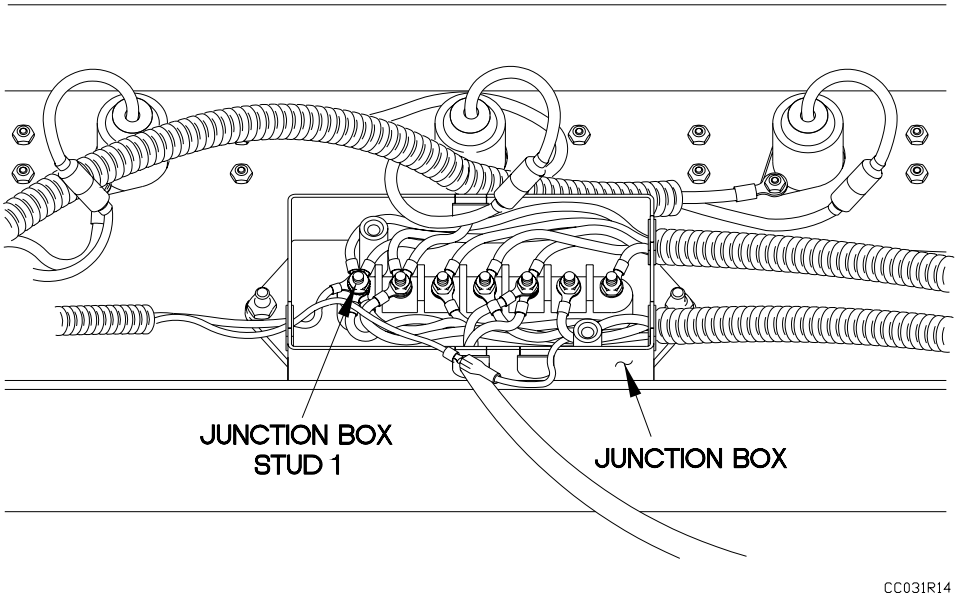


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present between junction box stud 1 and a known good ground?	**No.** Replace junction box (WP 0059 00). **Yes.** Replace ABS diagnostic light harness (WP 0077 00).	1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Connect positive (+) probe of multimeter to junction box stud 1. 4. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.

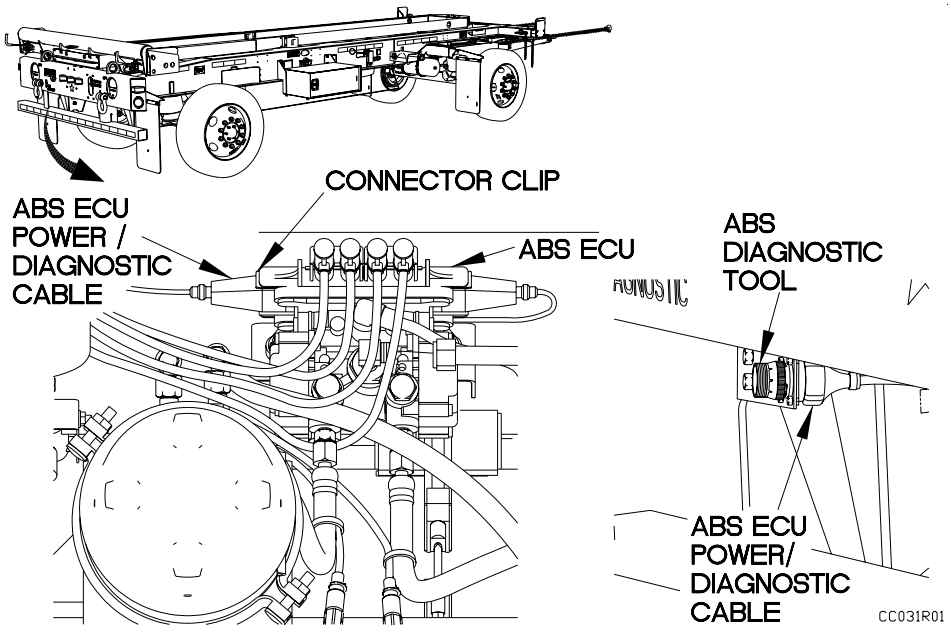


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is continuity present from ABS diagnostic tool connector pin A to ABS ECU Power/Diagnostic Cable Pin 8?	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 6).	2. Disconnect ABS diagnostic tool connector from ABS diagnostic tool. 3. Lift up on connector clip on ABS ECU Power/Diagnostic cable connector.

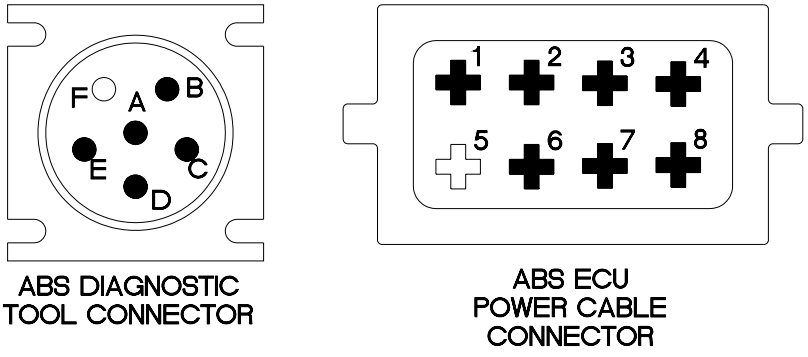


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is continuity present from ABS diagnostic tool connector pin A to ABS ECU Power/Diagnostic Cable Pin 8? (Cont)	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	4. Disconnect ABS ECU Power/Diagnostic cable from ABS ECU.
	Yes. Go to (Indication/Condition 6).	5. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin A. 6. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 8 and note reading on multimeter.

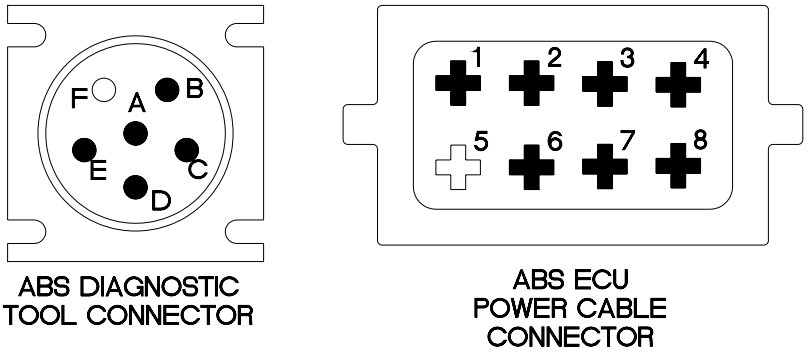


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is continuity present from ABS diagnostic tool connector pin B to ABS ECU Power/Diagnostic Cable Pin 7?	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin B.
	Yes. Go to (Indication/Condition 7).	2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 7 and note reading on multimeter.

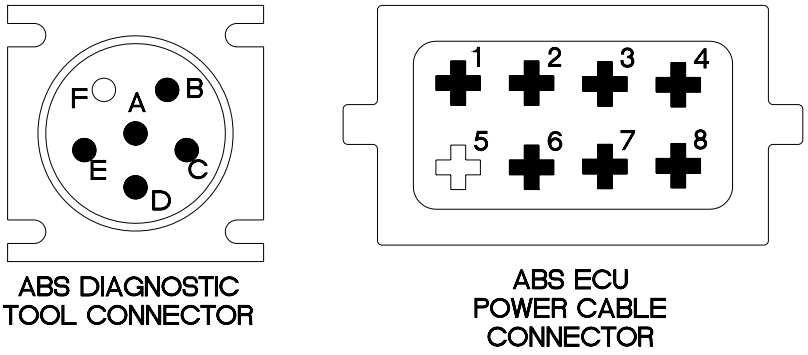


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is continuity present from ABS diagnostic tool connector pin C to ABS ECU Power/Diagnostic Cable Pin 6?	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin C.
	Yes. Go to (Indication/Condition 8).	2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 6 and note reading on multimeter.

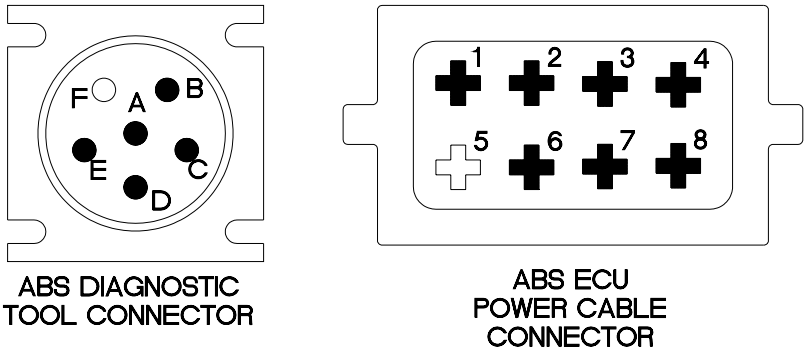


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is continuity present from ABS diagnostic tool connector pin D to ABS ECU Power/Diagnostic Cable Pin 1?	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin D.
	Yes. Go to (Indication/Condition 9).	2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 1 and note reading on multimeter.

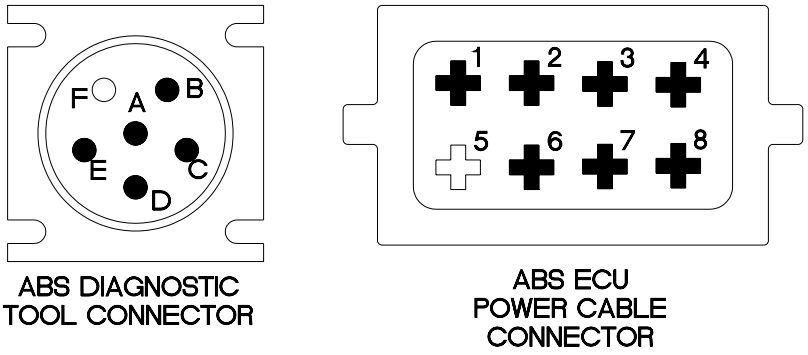


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Is continuity present from ABS diagnostic tool connector pin E to ABS ECU Power/Diagnostic Cable Pin 4?	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin E.
	Yes. Go to (Indication/Condition 10).	2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 4 and note reading on multimeter.

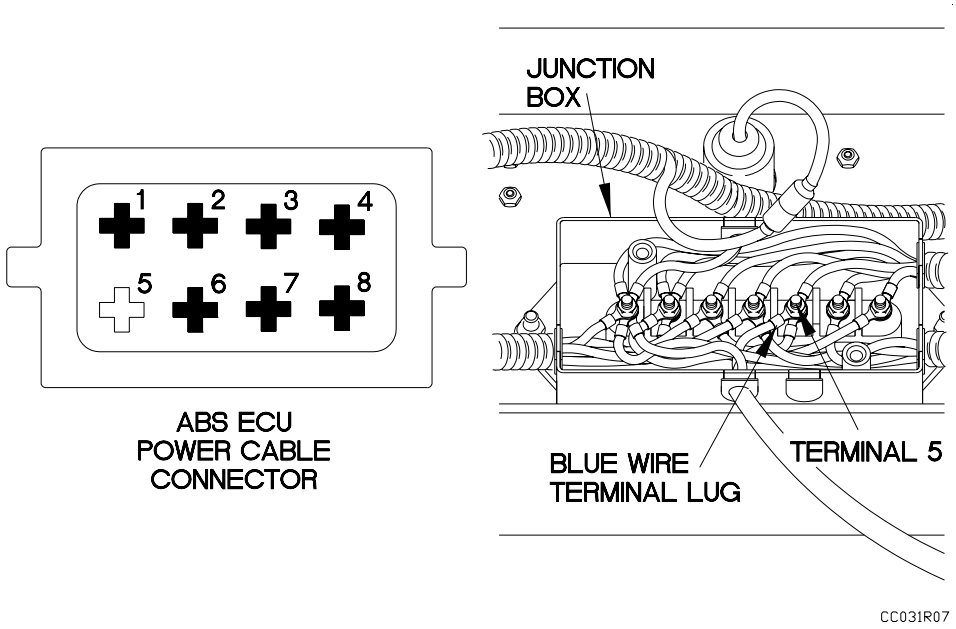


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is continuity present from ABS Power/Diagnostic cable blue wire to ABS ECU Power/Diagnostic Cable pin 3?	**No.** Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).	1. Remove cover on junction box for access (WP 0059 00).
	Yes. Go to (Indication/Condition 11).	2. Connect positive (+) probe of multimeter to ABS Power/Diagnostic cable blue wire terminal lug (located on terminal 5 of junction box). 3. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 3 and note reading on multimeter.

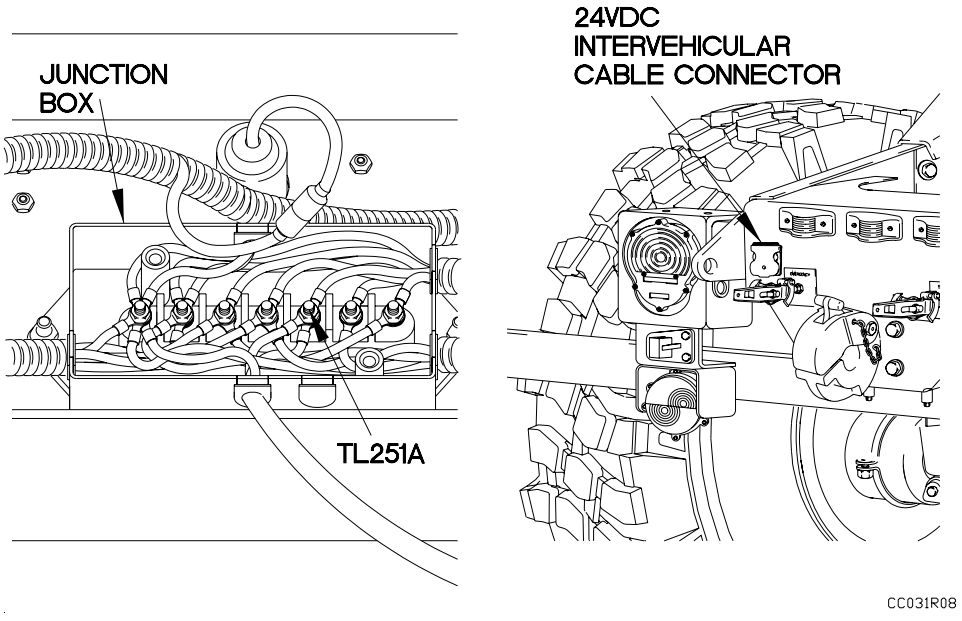


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Is 8-16 VDC present at terminal lug TL251A?	**No.** Go to (Indication/Condition 12). **Yes.** Replace ABS ECU (WP 0071 00).	1. Set multimeter to VDC. 2. Connect positive (+) probe of multimeter to terminal lug TL 251A (located on terminal 5 in junction box). 3. Connect negative (-) probe of multimeter to a known good ground. 4. Position master power switch to on and note reading on multimeter.

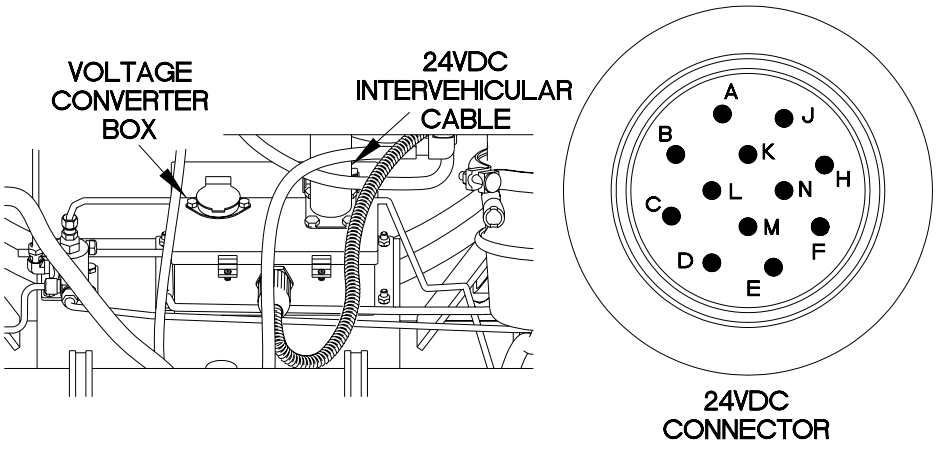


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
12. Is 18-30 VDC present at 24 VDC intervehicular cable pin K?	**No.** Replace 24 VDC intervehicular cable (WP 0062 00).	1. Position towing vehicle master power switch to off.
	Yes. Go to (Indication/Condition 13).	2. Disconnect 24 VDC intervehicular cable from voltage converter box.
		3. Connect positive (+) probe of multimeter to 24 VDC intervehicular cable pin K.
		4. Connect negative (-) probe of multimeter to a known good ground.
		5. Position master power switch to on and note reading on multimeter.

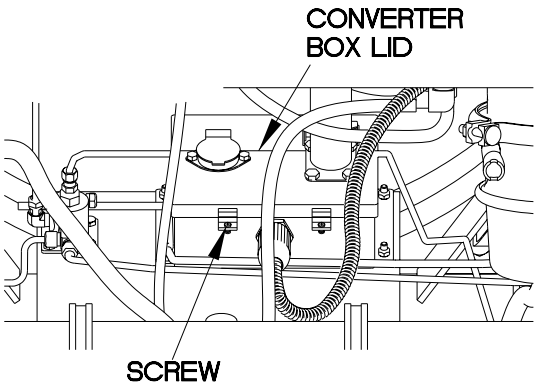


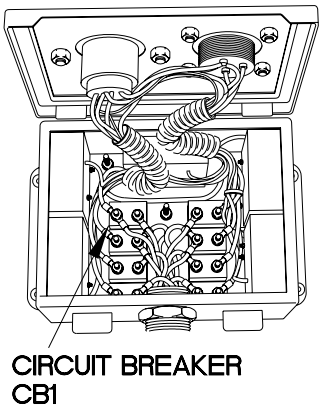
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued 0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
13. Is continuity present across circuit breaker CB1?	**No.** Replace circuit breaker CB1 (WP 0057 00). **Yes.** Replace module 5 (WP 0057 00).	1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Loosen two screws and open lid of voltage converter box. 4. Connect positive (+) probe of multimeter to one terminal of circuit breaker CB1. 5. Connect negative (-) probe of multimeter to other terminal of circuit breaker CB1 and note reading on multimeter.





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ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES 0032 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

Do not pry or push ABS wheel speed sensor with sharp objects. Failure to comply may result in damage to equipment.

NOTE

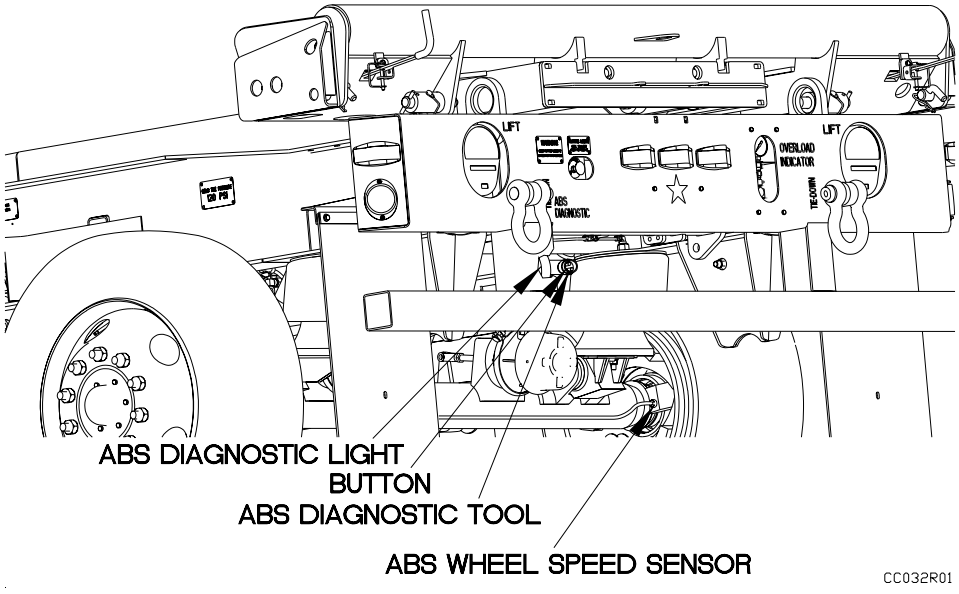
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued 0032 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Three Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after right rear ABS wheel speed sensor position is reset?	**No.** Fault corrected.	1. Push right rear ABS wheel speed sensor in until it contacts tooth wheel.
	Yes. Go to (Indication/Condition 2).	2. Start engine of towing vehicle.
	NOTE Trailer must be operated more than 4 mph (6 km/h) during road test.	
		3. Road test trailer. 4. Park towing vehicle. 5. Press button on ABS diagnostic tool for 1 second. 6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.

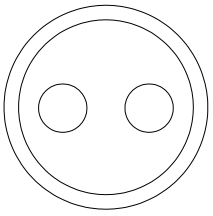


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued 0032 00

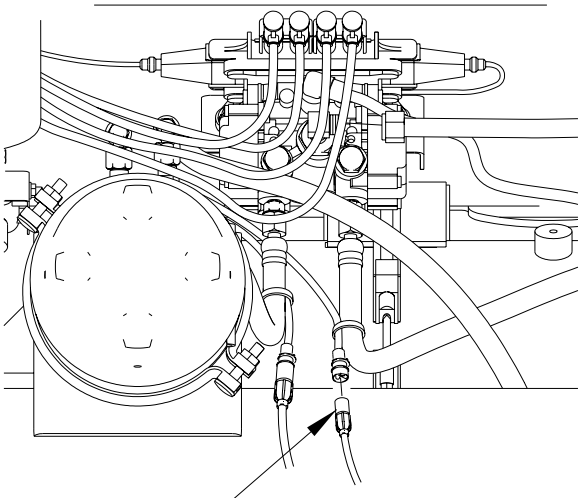
BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Three Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 700-3000 ohms of resistance is present across right rear ABS wheel speed sensor.	**No.** Replace right rear ABS wheel speed sensor (WP 0070 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 3).	2. Disconnect right rear ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR

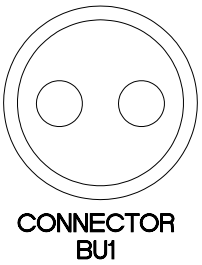
CC032R02

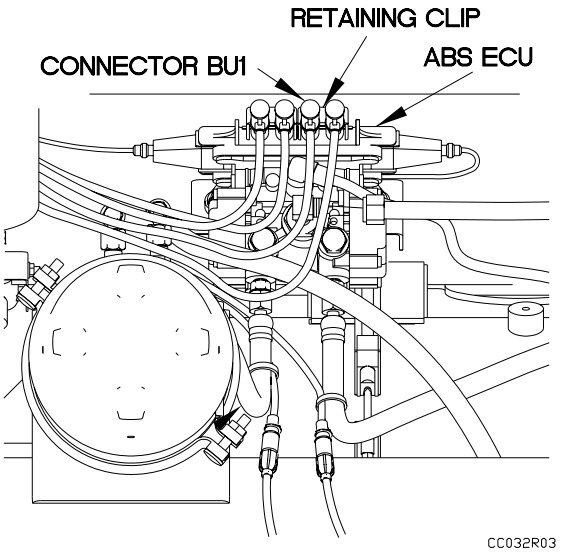
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued 0032 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Three Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present across right rear ABS control sensor harness connector with jumper wire across connector BU1?	**No.** Replace ABS control sensor harness (WP 0073 00).	1. Loosen retaining clip on connector BU1.
	Yes. Replace ABS ECU (WP 0071 00).	2. Disconnect connector BU1 from ABS ECU. 3. Install jumper wire across connector BU1. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.





END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES 0033 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

Do not pry or push ABS wheel speed sensor with sharp objects. Failure to comply may result in damage to equipment.

NOTE

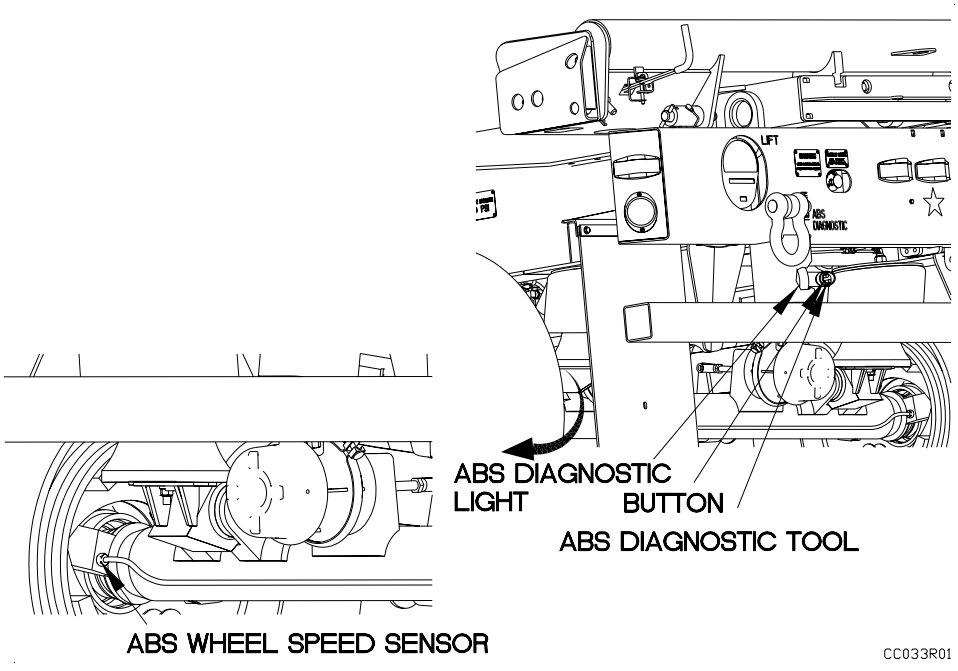
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued 0033 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Four Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after left rear ABS wheel speed sensor position is reset?	**No.** Fault corrected.	1. Push left rear ABS wheel speed sensor in until it contacts tooth wheel.
	Yes. Go to (Indication/Condition 2).	2. Start engine of towing vehicle.
NOTE Trailer must be operated more than 4 mph (6 km/h) during road test.		
		3. Road test trailer. 4. Park towing vehicle. 5. Press button on ABS diagnostic tool for 1 second. 6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.

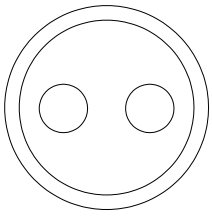


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued 0033 00

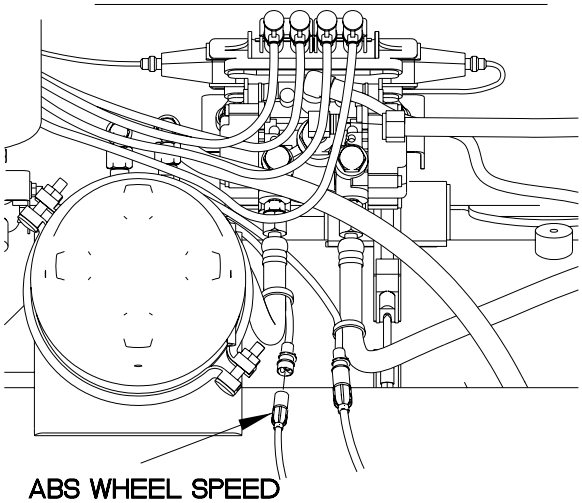
BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Four Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 700-3000 ohms of resistance is present across left rear ABS wheel speed sensor.	**No.** Replace left rear ABS wheel speed sensor (WP 0070 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 3).	2. Disconnect left rear ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR

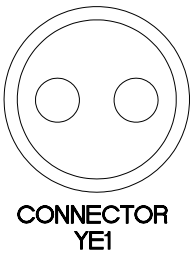
CC033R02

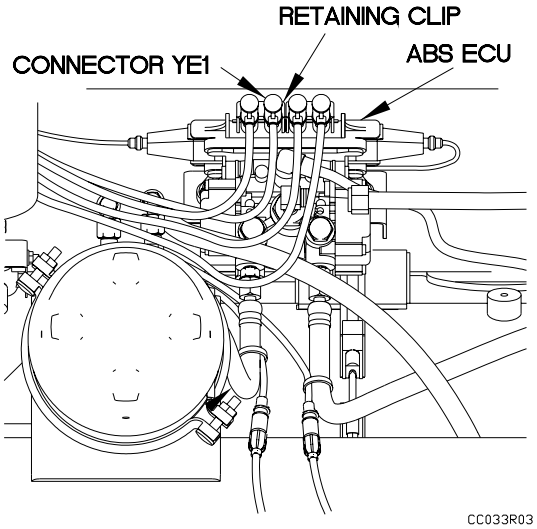
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued 0033 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Four Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present across left rear ABS control sensor harness connector with jumper wire across connector YE1?	**No.** Replace ABS control sensor harness (WP 0073 00).	1. Loosen retaining clip on connector YE1.
	Yes. Replace ABS ECU (WP 0071 00).	2. Disconnect connector YE1 from ABS ECU. 3. Install jumper wire across connector YE1. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.





END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES 0034 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

Do not pry or push ABS wheel speed sensor with sharp objects. Failure to comply may result in damage to equipment.

NOTE

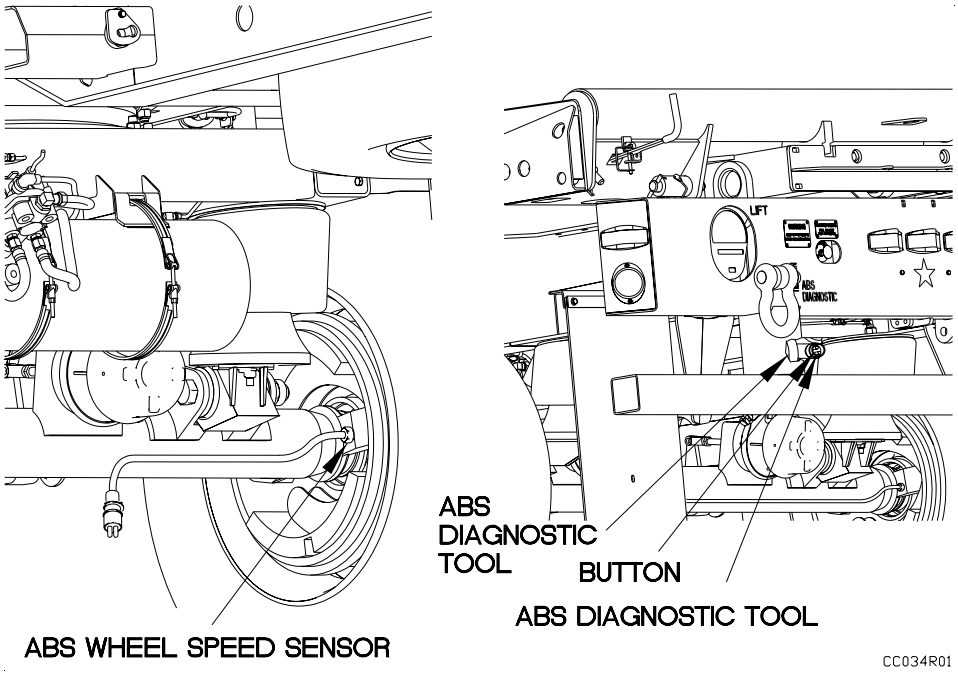
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued 0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Five Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after right front ABS wheel speed sensor position is reset?	**No.** Fault corrected.	1. Push right front ABS wheel speed sensor in until it contacts tooth wheel.
	Yes. Go to (Indication/Condition 2).	2. Start engine of towing vehicle.
		NOTE Trailer must be operated more than 4 mph (6 km/h) during road test.
		3. Road test trailer. 4. Park towing vehicle. 5. Press button on ABS diagnostic tool for 1 second. 6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.

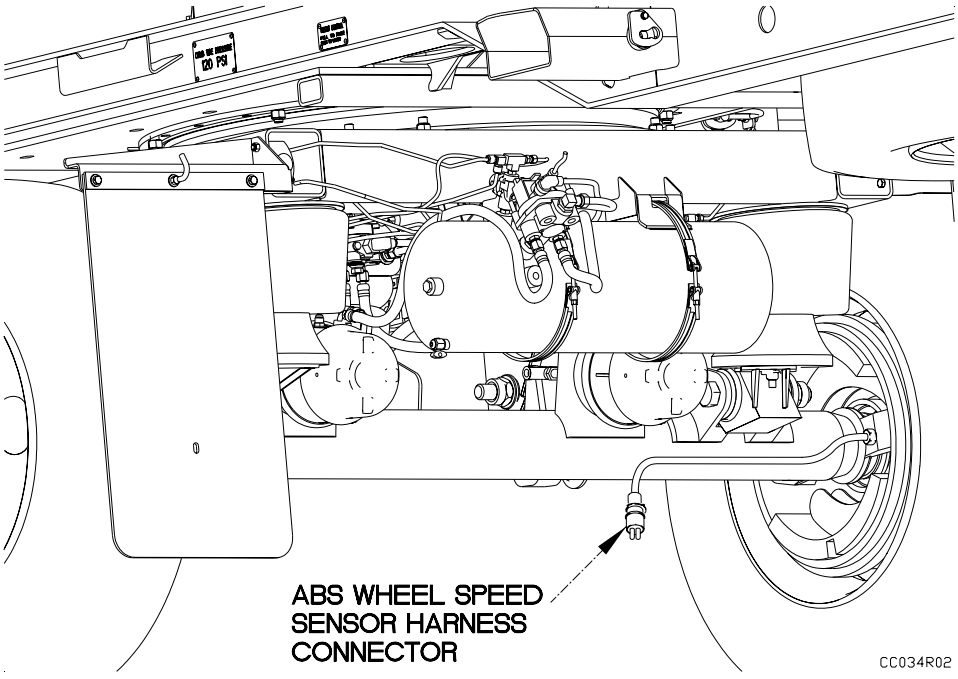


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued 0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Five Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 700-3000 ohms of resistance is present across right front ABS wheel speed sensor.	**No.** Replace right front ABS wheel speed sensor (WP 0070 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 3).	2. Disconnect right front ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.

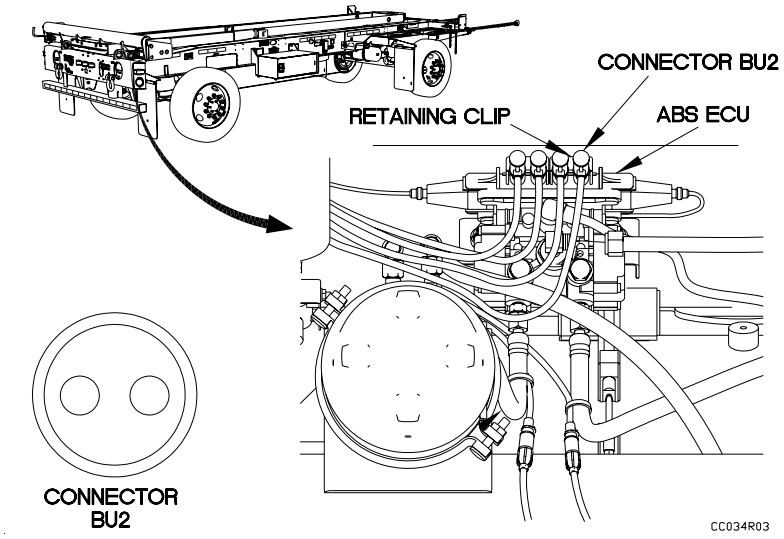


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued 0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Five Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present across right front ABS control sensor harness connector with jumper wire across connector BU2?	**No.** Replace ABS control sensor harness (WP 0073 00).	1. Loosen retaining clip on connector BU2.
	Yes. Replace ABS ECU (WP 0071 00).	2. Disconnect connector BU2 from ABS ECU. 3. Install jumper wire across connector BU2. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES 0035 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

Do not pry or push ABS wheel speed sensor with sharp objects. Failure to comply may result in damage to equipment.

NOTE

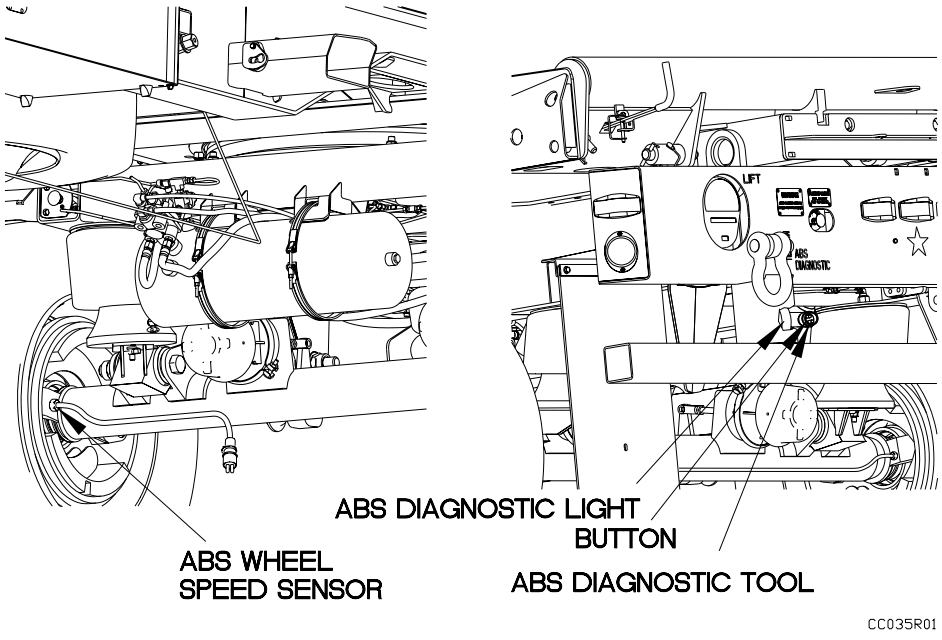
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued 0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after left front ABS wheel speed sensor position is reset?	**No.** Fault corrected.	1. Push left front ABS wheel speed sensor in until it contacts tooth wheel.
	Yes. Go to (Indication/Condition 2).	2. Start engine of towing vehicle.
		NOTE Trailer must be operated more than 4 mph (6 km/h) during road test.
		3. Road test trailer. 4. Park towing vehicle. 5. Press button on ABS diagnostic tool for 1 second. 6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.

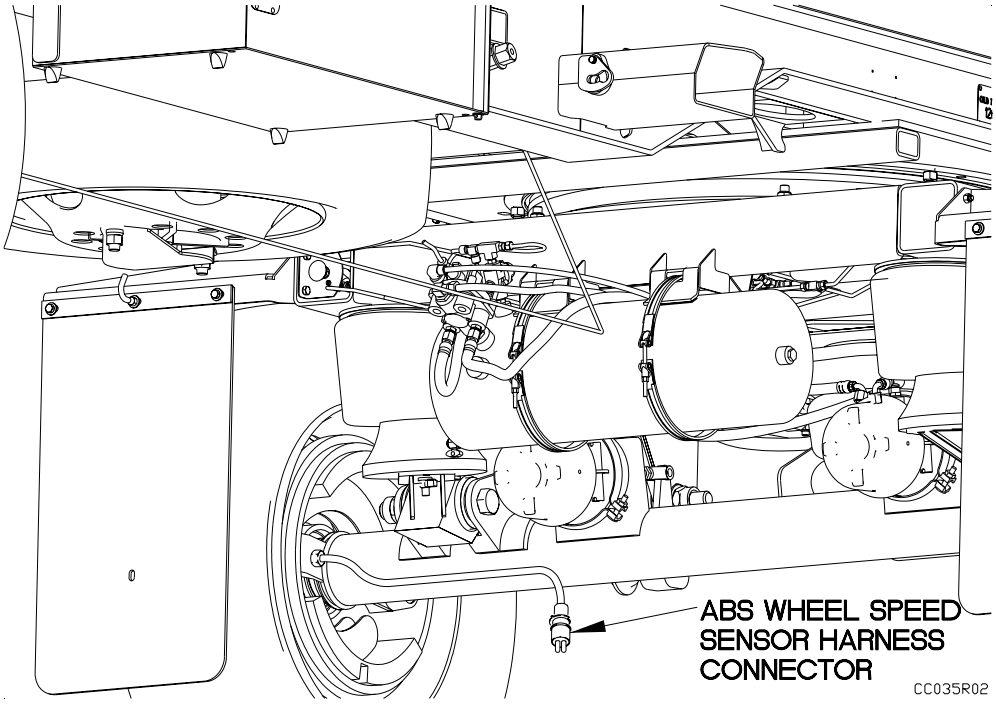


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued 0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 700-3000 ohms of resistance is present across left front ABS wheel speed sensor.	**No.** Replace left front ABS wheel speed sensor (WP 0070 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 3).	2. Disconnect left front ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.

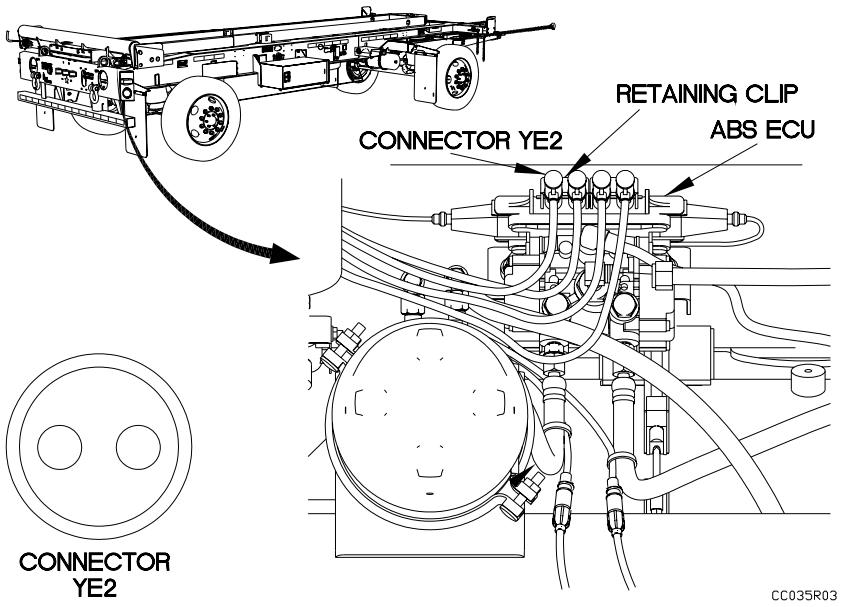


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued 0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present across left front ABS control sensor harness connector with jumper wire across connector YE2?	**No.** Replace ABS control sensor harness (WP 0073 00).	1. Loosen retaining clip on connector YE2.
	Yes. Replace ABS ECU (WP 0071 00).	2. Disconnect connector YE2 from ABS ECU. 3. Install jumper wire across connector YE2. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES 0036 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Cable Ties, Plastic (Item 20, WP 0165 00)
Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

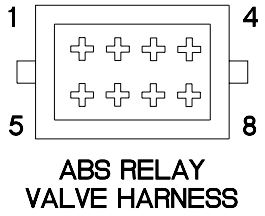
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

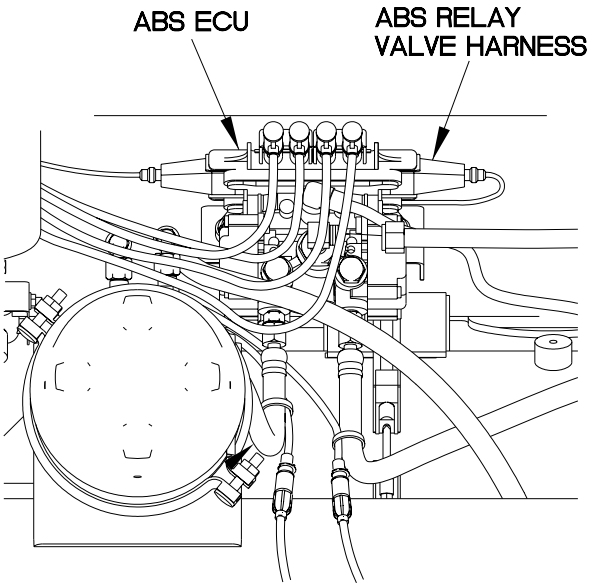
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued 0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 4-8 ohms of resistance present across ABS relay valve harness pin 5 to pin 6?	**No.** Replace ABS relay valve (WP 0075 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 2).	2. Disconnect ABS relay valve harness from ABS ECU valve. 3. Connect positive (+) probe of multimeter to ABS relay valve harness pin 5. 4. Connect negative (-) probe of multimeter to ABS relay valve harness pin 6 and note reading on multimeter.



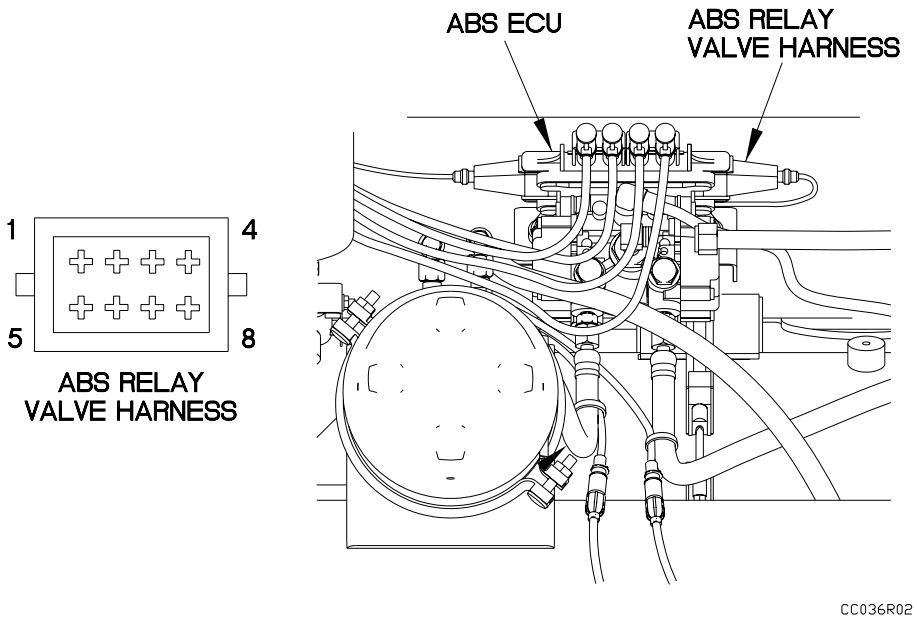


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued 0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 4-8 ohms of resistance present across ABS relay valve harness pin 5 to pin 7?	**No.** Replace ABS relay valve (WP 0075 00). **Yes.** Go to (Indication/Condition 3).	1. Connect positive (+) probe of multimeter to ABS relay valve harness pin 5. 2. Connect negative (-) probe of multimeter to ABS relay valve harness pin 7 and note reading on multimeter.

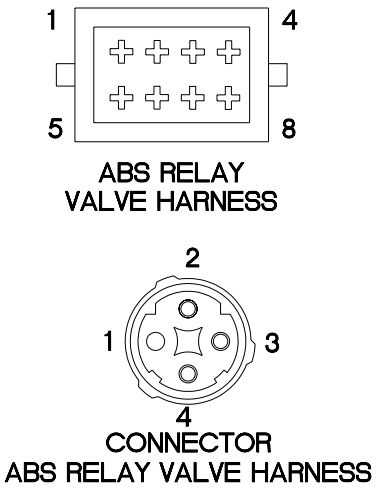


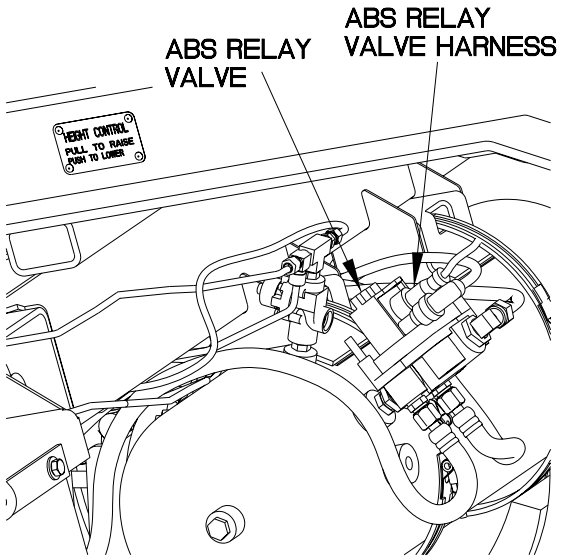
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued 0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present from ABS ECU cable connector pin 5 to ABS relay valve connector pin 2?	**No.** Replace ABS relay valve harness (WP 0072 00).	1. Disconnect ABS relay harness connector from ABS relay valve.
	Yes. Go to (Indication/Condition 4).	2. Connect positive (+) probe of multimeter to ABS relay harness connector pin 2.
		3. Connect negative (-) probe of multimeter to ABS ECU connector pin 5 and note reading on multimeter.





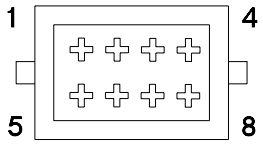
CC036R03

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued 0036 00

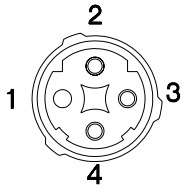
BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present from ABS ECU cable connector pin 6 to ABS relay valve connector pin 4?	**No.** Replace ABS relay valve harness (WP 0072 00).	1. Connect positive (+) probe of multimeter to ABS relay harness connector pin 4.
	Yes. Go to (Indication/Condition 5).	2. Connect negative (-) probe of multimeter to ABS ECU connector pin 6 and note reading on multimeter.
5. Is continuity present from ABS ECU cable connector pin 7 to ABS relay valve connector pin 3?	**No.** Replace ABS relay valve harness (WP 0072 00).	1. Connect positive (+) probe of multimeter to ABS relay harness connector pin 3.
	Yes. Replace ABS ECU (WP 0071 00).	2. Connect negative (-) probe of multimeter to ABS ECU connector pin 7 and note reading on multimeter.



ABS RELAY
VALVE HARNESS



CONNECTOR
ABS RELAY VALVE HARNESS

CC036R04

END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS NINE TIMES 0037 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Cable Ties, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

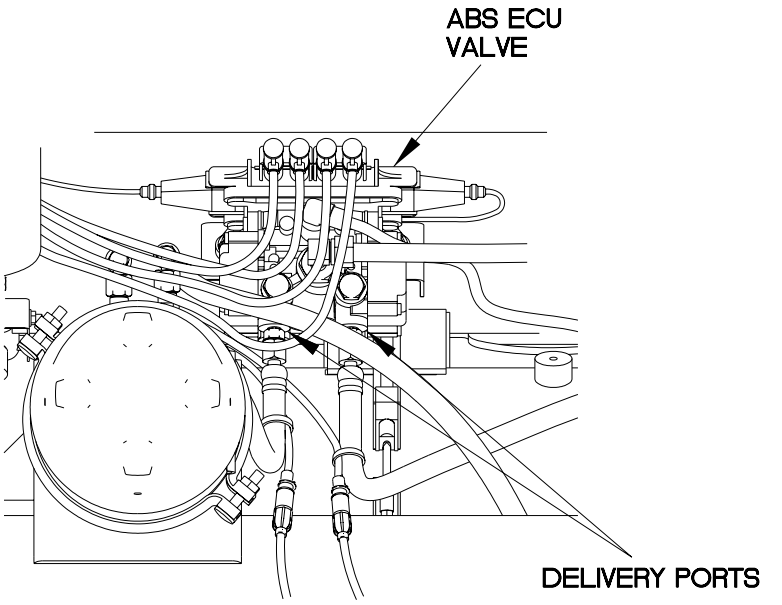
Remove plastic cable ties as required.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS NINE TIMES-Continued 0037 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Nine Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at two delivery ports on ABS ECU valve?	**No.** Replace ABS ECU valve (WP 0071 00). **Yes.** Go to (Indication/Condition 2).	1. Loosen air hoses of two delivery ports of ABS ECU. 2. Start towing vehicle engine. 3. Depress brakes. 4. Check for presence of air at two delivery ports of ABS ECU valve. 5. Shut off towing vehicle engine. 6. Tighten hoses to ABS ECU delivery ports.

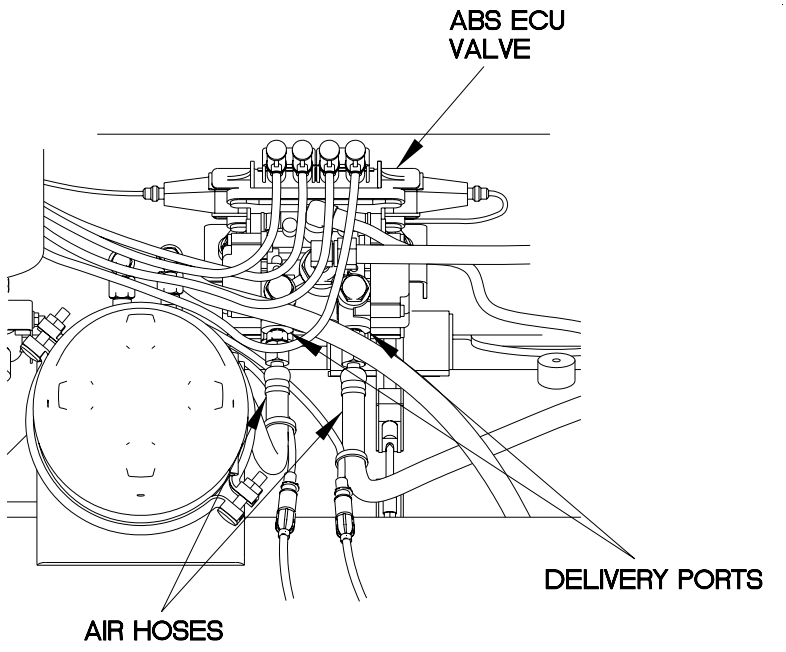


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS NINE TIMES-Continued 0037 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake Systm (ABS) Diagnostic Light Blinks Nine Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does either delivery air hose have any kinks, leaks, or holes?	**No.** Replace ABS ECU valve (WP 0071 00).	1. Apply soapy water solution to air hoses and fittings.
	Yes. Replace air hoses from ABS ECU valve delivery ports.	2. Check air hoses between ABS ECU valve and rear brake air chambers for bubbles indicating holes or leaks.
		3. Check fittings for bubbles indicating leaks.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES 0038 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Cable Ties, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Remove plastic cable ties as required.

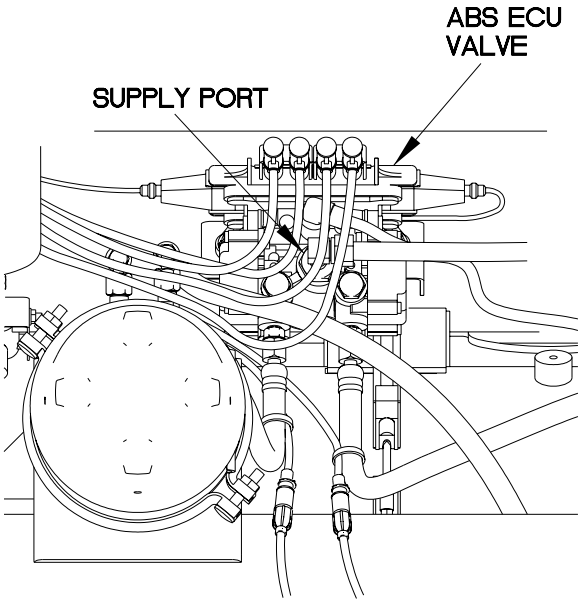
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES 0038 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Ten Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at supply port of ABS ECU valve?	**No.** Replace ABS ECU valve (WP 0071 00). **Yes.** Go to (Indication/Condition 2).	1. Loosen air hose of supply port of ABS ECU. 2. Start towing vehicle engine. 3. Depress brakes. 4. Release brakes. 5. Check for presence of air at exhaust port of ABS ECU valve. 6. Shut off towing vehicle engine.



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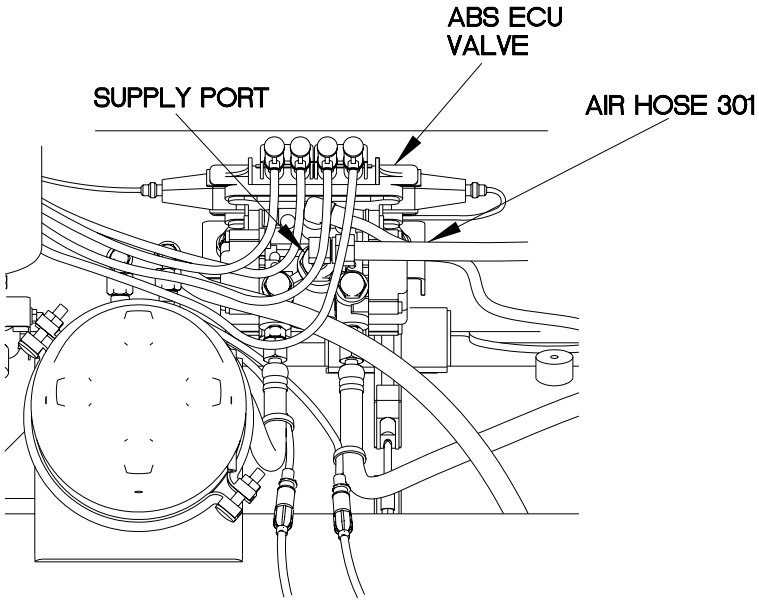
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES 0038 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Ten Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does supply air hose 301 have any kinks, leaks, or holes?	**No.** Replace ABS ECU valve (WP 0071 00). **Yes.** Replace air hose 301.	1. Apply soapy water solution to air hose 301 and fittings of supply port. 2. Check air hoses between ABS ECU valve and air tank for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS ELEVEN TIMES 0039 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Cable Ties, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Remove plastic cable ties as required.

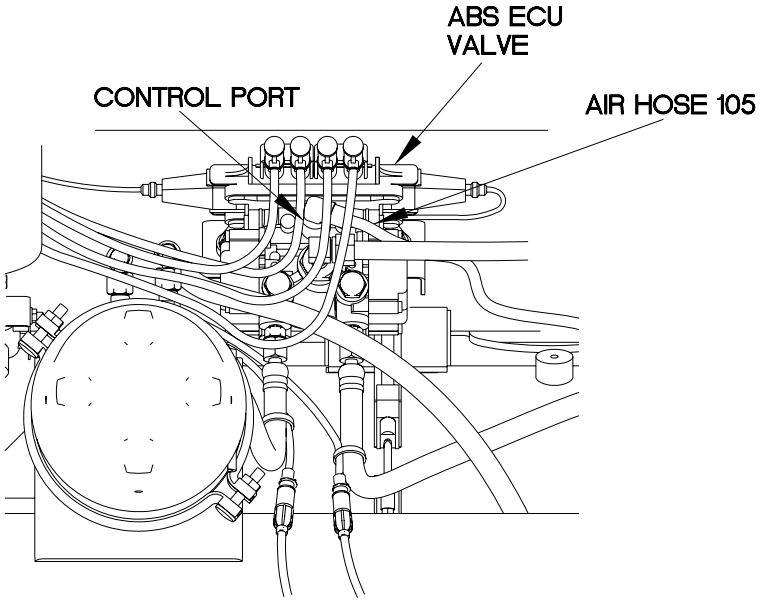
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS ELEVEN TIMES 0039 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Eleven Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at control port on ABS ECU valve?	**No.** Go to (Indication/Condition 2).	1. Start towing vehicle engine.
	Yes. Replace ABS ECU valve (WP 0071 00).	2. Loosen connection of air hose 105 at control port of ABS ECU.
		3. Depress brakes.
		4. Check for presence of air at control port of ABS ECU valve.
		5. Release brakes.
		6. Shut off towing vehicle engine.
		7. Tighten air hose 105 to ABS ECU valve control port.



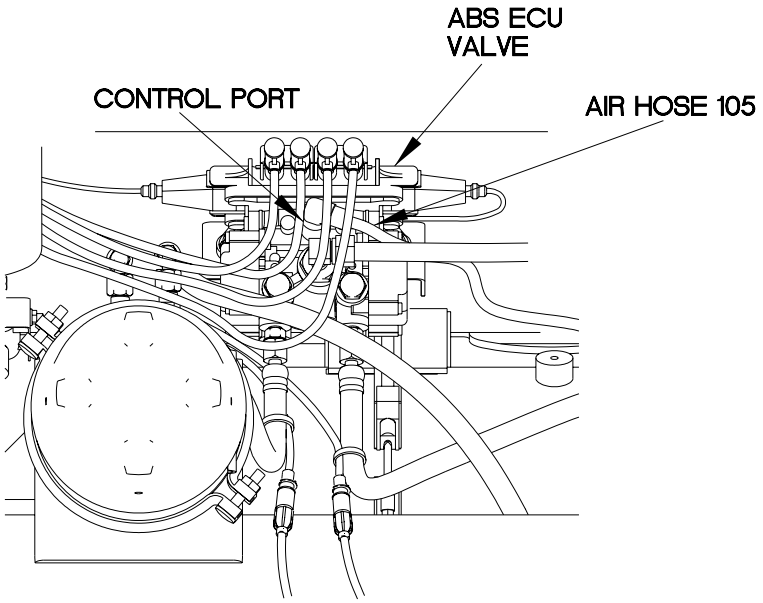
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS ELEVEN TIMES 0039 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Eleven Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does air hose 105 have any kinks, leaks or holes?	**No.** Go to Air System Loses Pressure During Operation/Slow Air Pressure Buildup (WP 0042 00).	1. Apply soapy water solution to air hose 105 and fittings of control port.
	Yes. Replace air hose 105.	2. Start towing vehicle engine. 3. Depress brakes. 4. Check air hose 105 between ABS ECU and rear four port task valve for bubbles indicating holes or leaks.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES 0040 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

Materials/Parts
Cable Ties, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

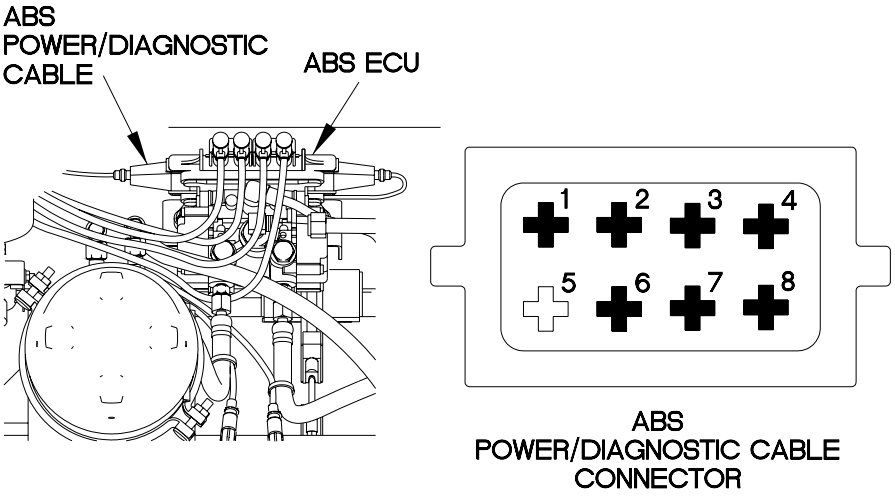
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-14 VDC present at ABS ECU power/diagnostic connector pin 3?	**No.** Go to (Indication/Condition 3).	1. Set multimeter to VDC.
	Yes. Go to (Indication/Condition 2).	2. Disconnect ABS ECU power/diagnostic cable connector from ABS ECU. 3. Connect positive (+) probe of multimeter to ABS ECU power/diagnostic cable connector pin 3. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Start engine on towing vehicle and note reading on multimeter.

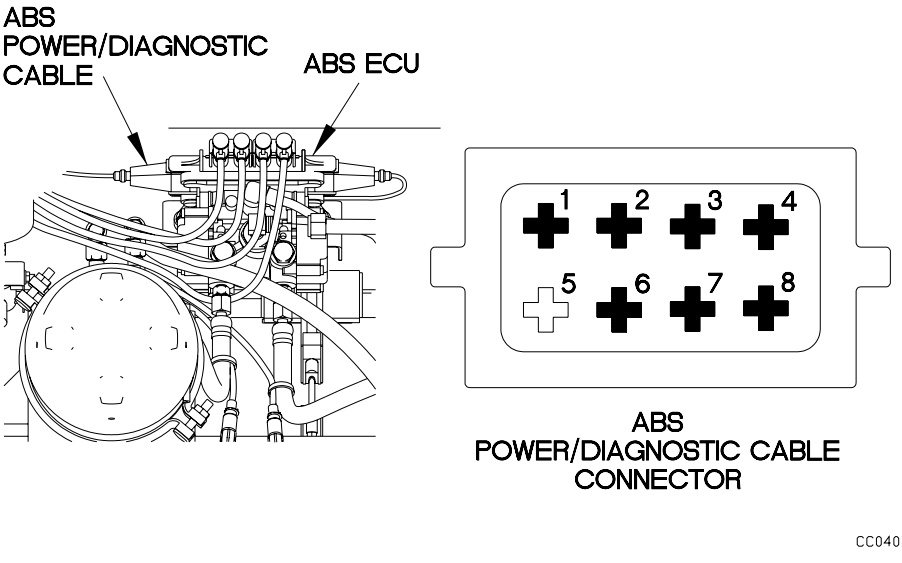


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present from ABS ECU Power/Diagnostic cable connector pin 4 to a known good ground?	**No.** Go to (Indication/Condition 7).	1. Set multimeter to ohms.
	Yes. Replace ABS ECU (WP 0071 00).	2. Connect positive (+) probe of multimeter to ABS ECU Power/Diagnostic cable connector pin 4. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.

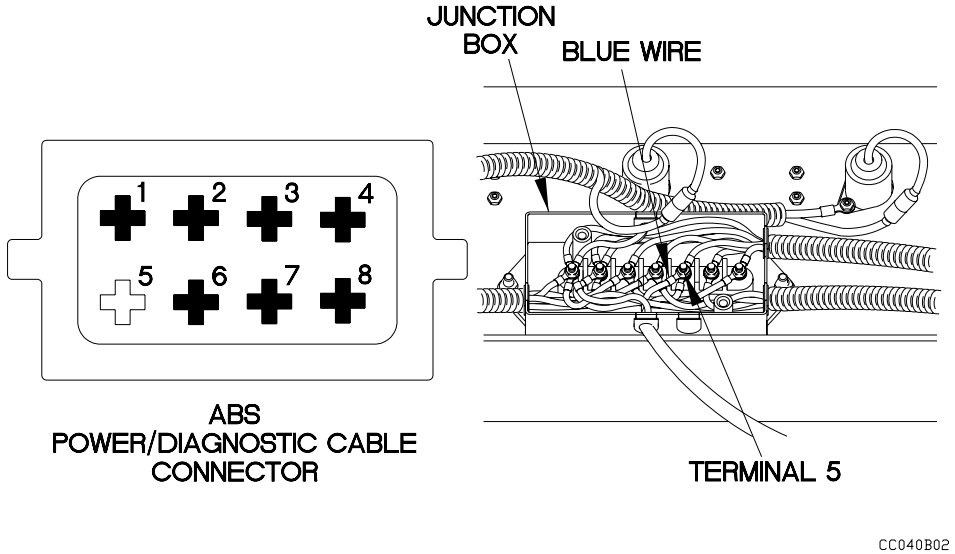


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present from ABS Power/Diagnostic cable connector pin 3 to blue wire on terminal 5 of Junction box?	**No.** Replace ABS ECU Power/Diagnostic control harness (WP 0074 00).	1. Set multimeter to ohms.
	Yes. Go to (Indication/Condition 4).	2. Remove cover from junction box (WP 0059 00). 3. Connect positive (+) probe of multimeter to ABS Power/Diagnostic cable connector pin 3. 4. Connect negative (-) probe of multimeter to blue wire on terminal 5 of Junction box and note reading on multimeter.

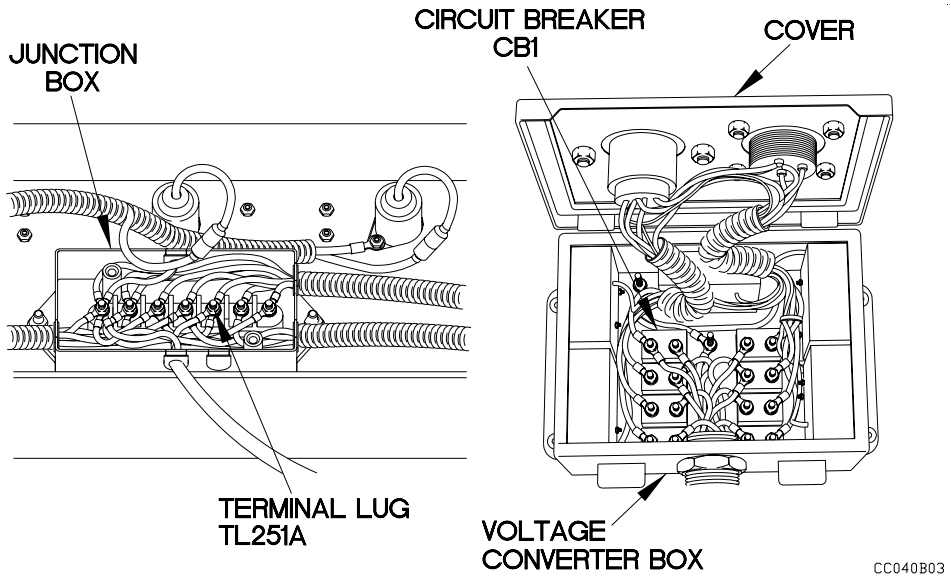


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present from terminal lug TL251A to right side of circuit breaker CB1?	**No.** Repair wire 108 or replace main electrical harness (WP 0066 00).	1. Open cover on voltage converter box (WP 0058 00).
	Yes. Go to (Indication/Condition 5).	2. Connect positive (+) probe of multimeter to terminal lug TL251A.
		3. Connect negative (-) probe of multimeter to right side of circuit breaker CB1 and note reading on multimeter.

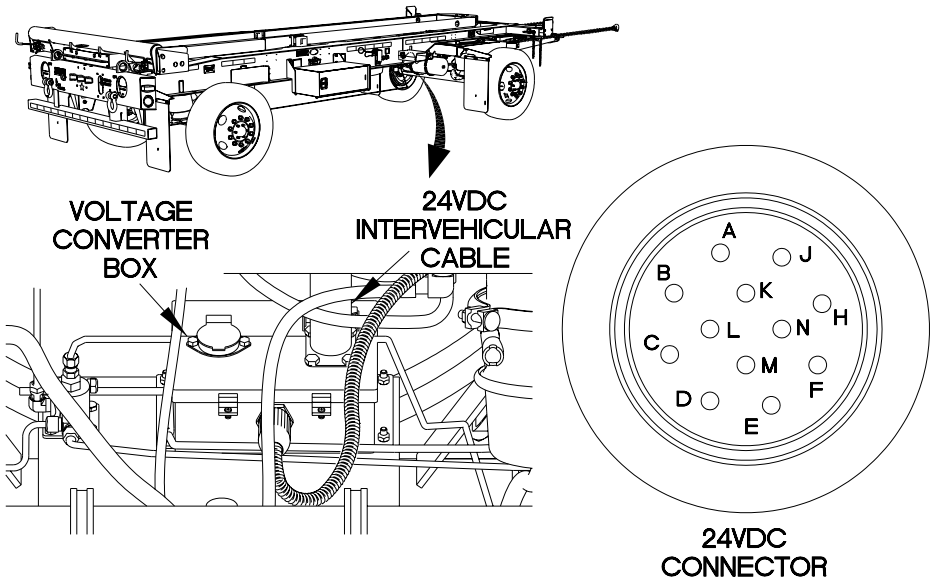


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is 18-30 VDC present at 24 VDC Intervehicular cable connector pin K?	**No.** Replace 24 VDC Intervehicular Cable (WP 0062 00). **Yes.** Go to (Indication/Condition 6).	1. Set multimeter to VDC. 2. Disconnect intervehicular cable from voltage converter box. 3. Connect positive (+) probe of multimeter to 24 VDC Intervehicular cable connector pin K. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Start engine of towing vehicle and note reading on multimeter.

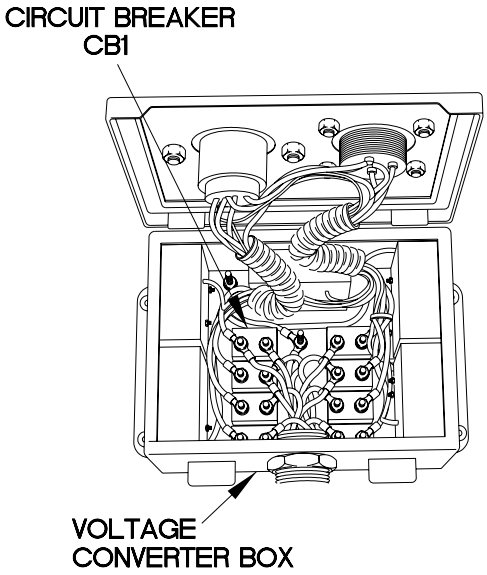


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is continuity present across circuit breaker CB1?	**No.** Replace circuit breaker CB1 (WP 0057 00). **Yes.** Replace voltage converter box (WP 0058 00).	1. Set multimeter to ohms. 2. Connect positive (+) probe of multimeter to one terminal of circuit breaker CB1. 3. Connect negative (-) probe of multimeter to other terminal of circuit breaker CB1 and note reading on multimeter.

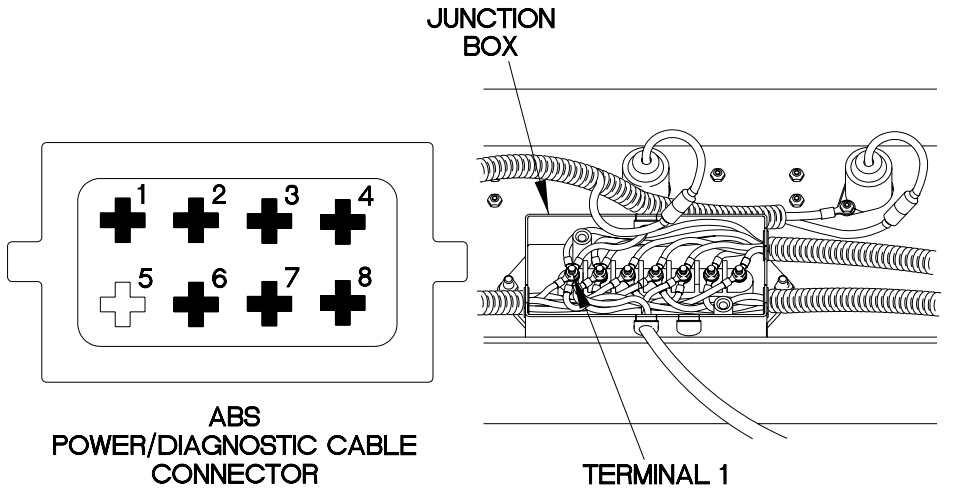


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is continuity present from ABS Power connector pin 4 to ABS ground terminal lug (unmarked) on terminal 1 on Junction box?	**No.** Replace ABS Power/Diagnostic cable (WP 0074 00).	1. Remove cover on junction box (WP 0059 00).
	Yes. Go to (Indication/Condition 8).	2. Connect positive (+) probe of multimeter to ABS power/diagnostic connector pin 4. 3. Connect negative (-) probe of multimeter to ABS ground terminal lug (unmarked) on terminal 1 of junction box and note reading on multimeter.

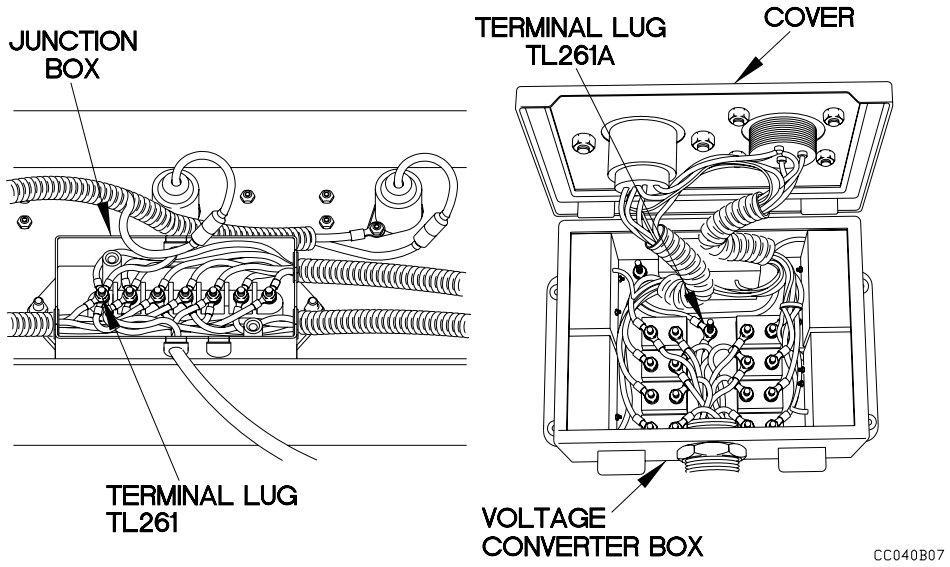


ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued 0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is continuity present from terminal lug TL261A to terminal lug TL261?	**No.** Replace main electrical harness (WP 0066 00).	1. Open cover on voltage converter box (WP 0058 00).
	Yes. Replace voltage converter box (WP 0058 00).	2. Connect positive (+) probe of multimeter to terminal lug TL261A.
		3. Connect negative (-) probe of multimeter to terminal lug TL261 and note reading on multimeter.



END OF WORK PACKAGE

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIFTEEN TIMES 0041 00

THIS WORK PACKAGE COVERS:

Brakes System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer coupled (TM 9-2320-392-10-1).

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

CAUTION

Use care when testing electrical connectors. Do not damage connector pins or sockets with multimeter probes. Failure to comply may result in damage to equipment.

NOTE

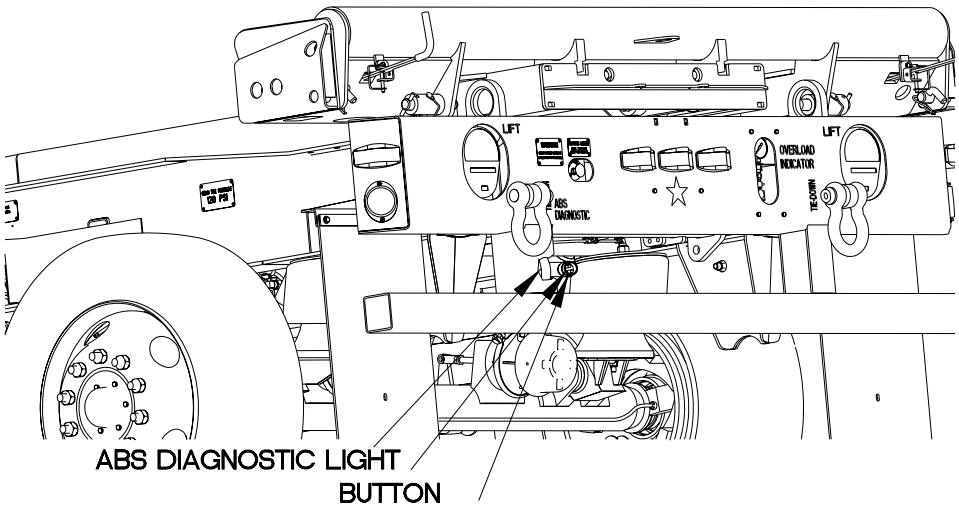
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIFTEEN TIMES-Continued 0041 00

BRAKES SYSTEM TROUBLESHOOTING - Continued

Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fifteen Times

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after trailer is given road test?	**No.** Fault corrected.	1. Start engine of towing vehicle.
	Yes. Replace ABS ECU (WP 0071 00).	2. Road test trailer.
	NOTE Trailer must be operated more than 4 mph (6 km/h) during road test.	
		3. Park towing vehicle.
		4. Press button on ABS diagnostic tool for 1 second and release.
		5. Check to see if ABS diagnostic tool and ABS diagnostic light blink.



END OF WORK PACKAGE

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

THIS WORK PACKAGE COVERS:
Air System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

References
Towing vehicle operators manual

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

Equipment Conditions
Air system charged (TM 9-2320-392-10-1)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

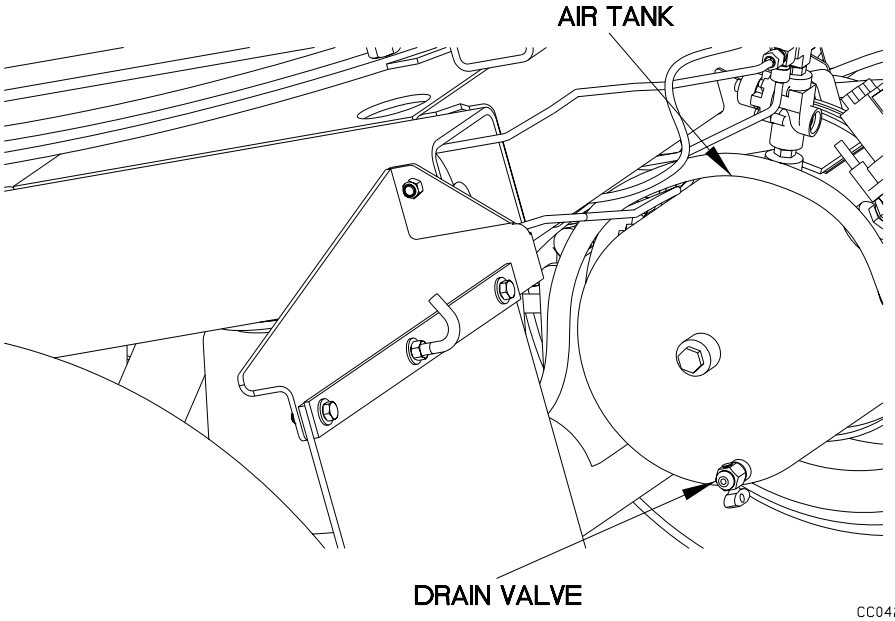
Reference pneumatic schematic at end of chapter as required.

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

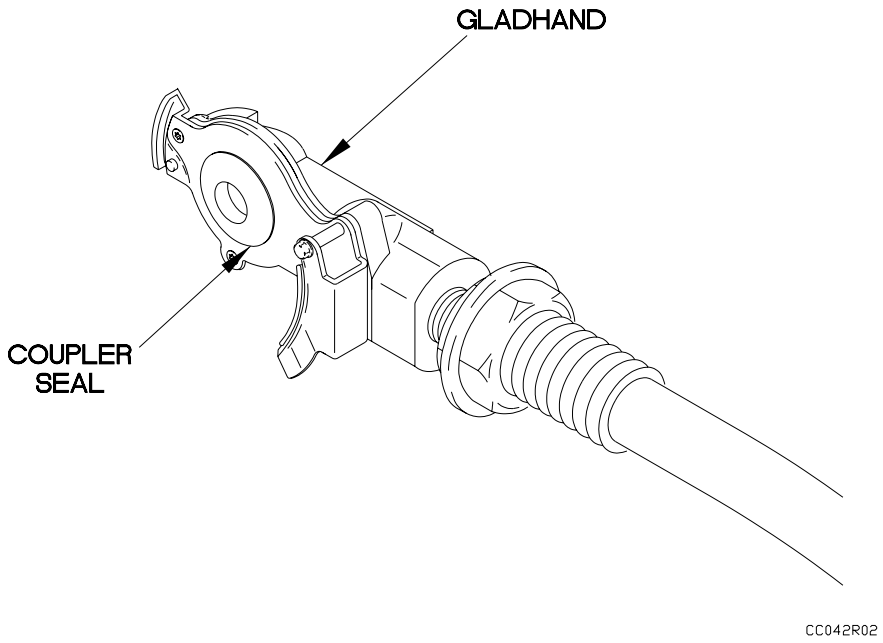
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air tank drain valve open or leaking?	**No** Go to (Indication/Condition 2).	1. Ensure air tank drain valve is closed.
	Yes Replace air tank drain valve (WP 0078 00).	2. Feel for air escaping from air tank drain valve.



AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

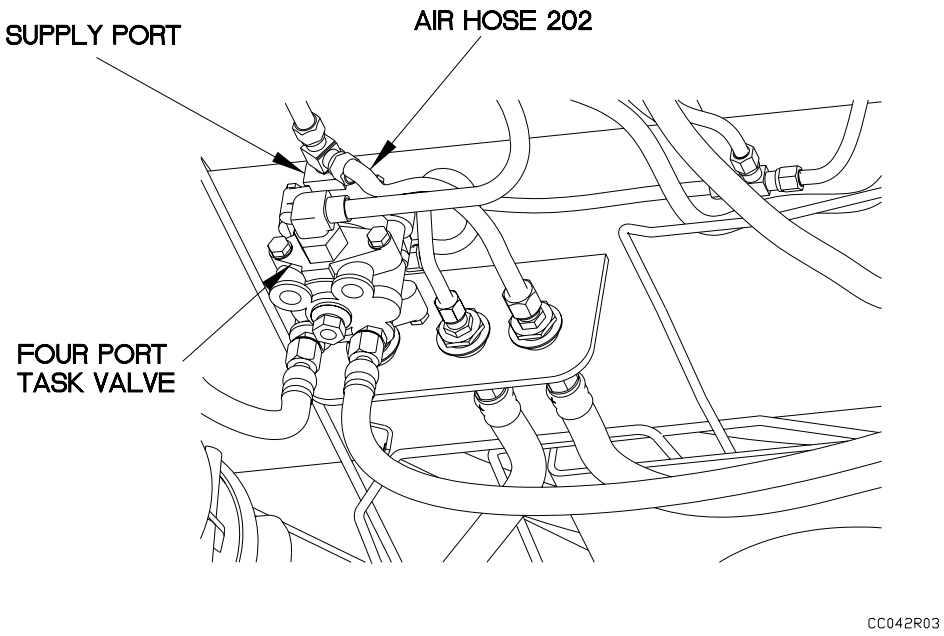
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Are coupler seals on gladhands damaged or missing?	**No** Go to (Indication/Condition 3). **Yes** Replace gladhand coupler seal (WP 0079 00).	1. Check for missing or damaged coupler seal on both service and emergency gladhands.
		
3. Do trailer service brakes operate properly?	**No** Proceed to Service Brakes Do Not Apply (WP 0043 00). **Yes** Go to (Indication/Condition 4).	1. Start towing vehicle engine. 2. Depress brake pedal. 3. Check to see if trailer brakes operate. 4. Shut off towing vehicle engine.

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at supply port of front four port task valve?	**No** Replace air hose 202.	1. Loosen air hoses at front four port task valve supply port.
	Yes Go to (Indication/Condition 5).	2. Start towing vehicle engine.
		3. Depress towing vehicle brake pedal.
		4. Check for presence of air.
		5. Shut down towing vehicle engine.
		6. Tighten air hoses to four port task valve supply port.

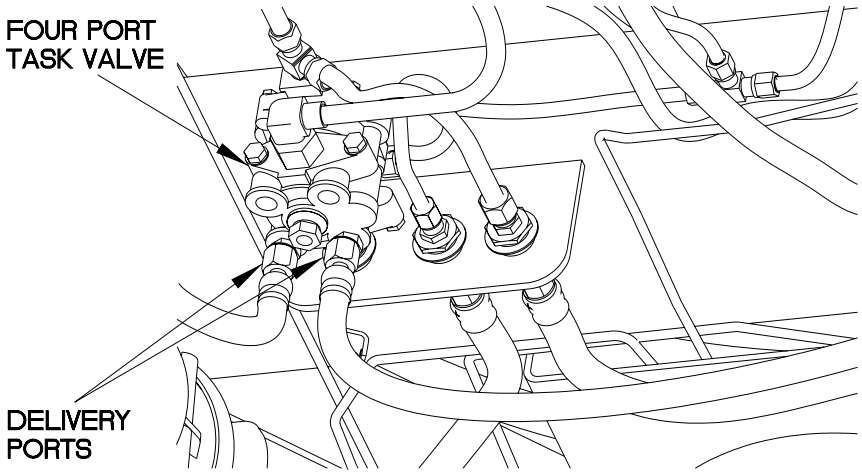


AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at delivery ports of front four port task valve?	**No** Replace front four port task valve (WP 0109 00). **Yes** Go to (Indication/Condition 6).	1. Loosen air hoses at front four port task valve delivery port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to front four port task valve supply port.



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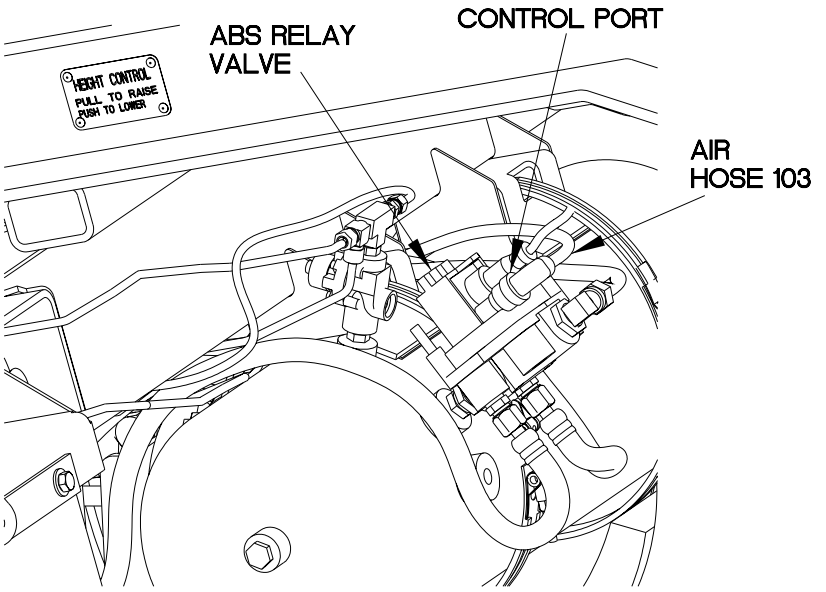
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at control port of ABS relay valve?	**No** Replace air hose 103. **Yes** Go to (Indication/Condition 7).	1. Loosen air hoses at ABS relay valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS relay valve control port.

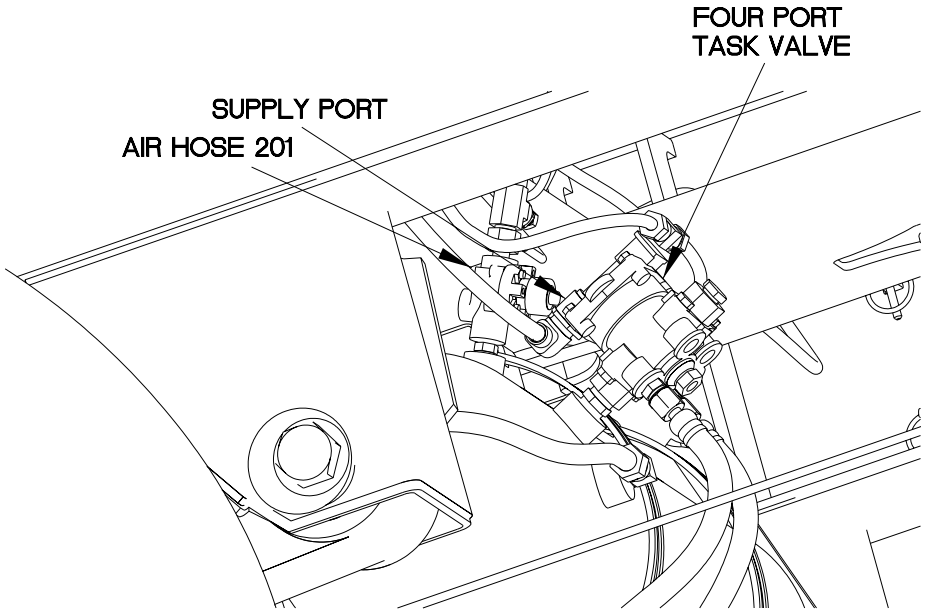


AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at supply port of rear four port task valve?	**No** Replace air hose 201. **Yes** Go to (Indication/Condition 8).	1. Loosen air hoses at rear four port task valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to rear four port valve supply port.

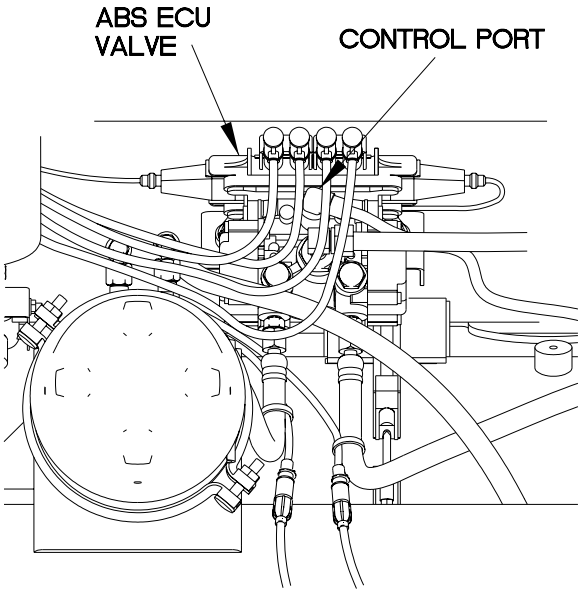


AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at control port of ABS ECU?	**No** Go to (Indication/Condition 9). **Yes** Go to (Indication/Condition 10).	1. Loosen air hoses at ABS ECU valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS ECU valve control port.



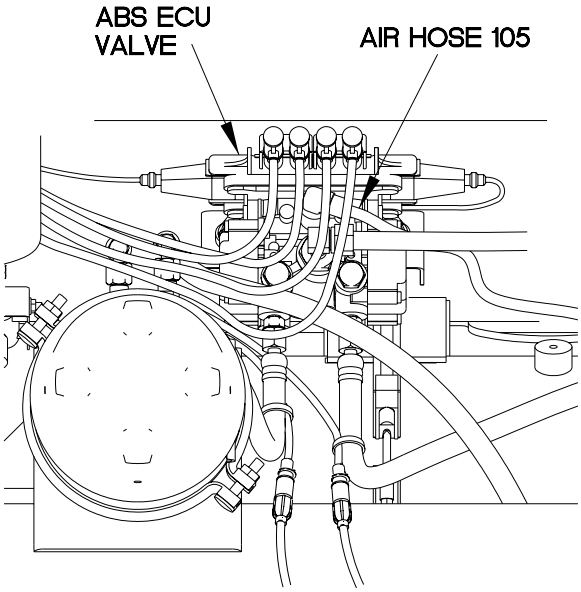
CC042R07

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 105 have any kinks, leaks or holes?	**No** Replace rear four port task valve (WP 0109 00). **Yes** Replace air hose 105.	1. Apply soapy water solution to air hose 105 and fittings. 2. Check air hose 105 between ABS ECU valve and four port task valve for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



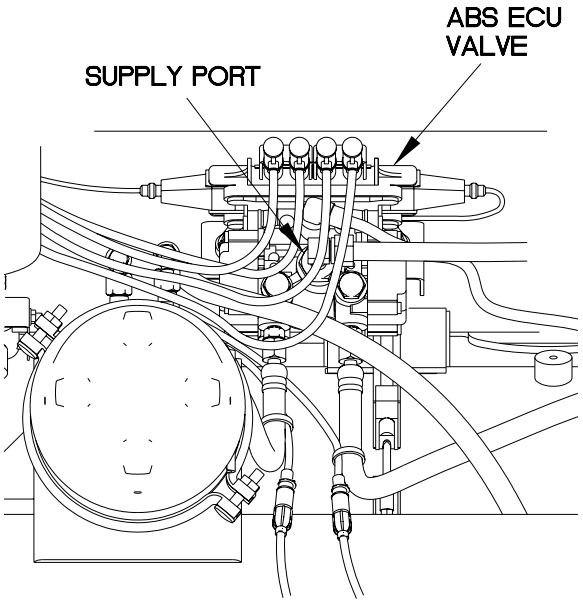
CC042R08

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at supply port of ABS ECU valve?	**No** Go to (Indication/Condition 11). **Yes** Replace air tank (WP 0078 00).	1. Loosen air hose at ABS ECU valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose to ABS ECU valve supply port.



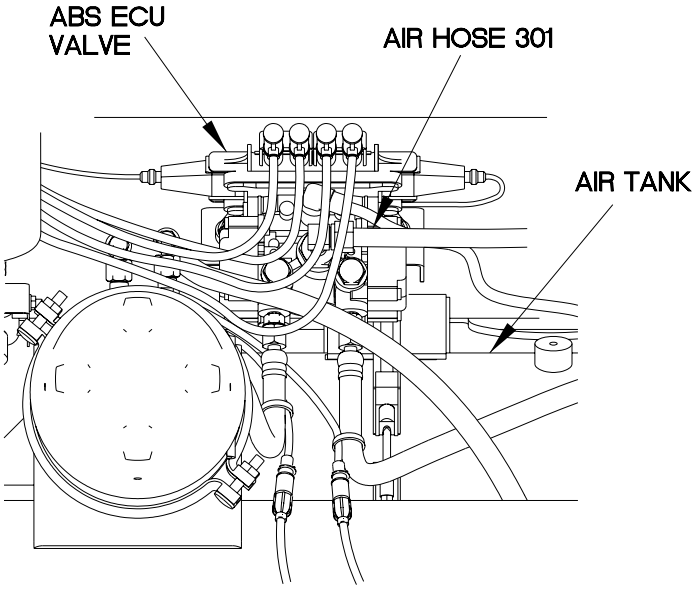
CC042R09

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP 0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1: Air System Loses Pressure During Operation/Slow Air Pressure Buildup

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Does air hose 301 have any kinks, leaks or holes?	**No** Replace ABS ECU valve (WP 0071 00). **Yes** Replace air hose 301.	1. Apply soapy water solution to air hose 301 and fittings. 2. Check air hose 301 between ABS ECU valve and air tank for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



END OF WORK PACKAGE

SERVICE BRAKES DO NOT APPLY 0043 00

THIS WORK PACKAGE COVERS:
Brakes Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

References
Towing vehicle operators manual

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

Equipment Conditions
Air system charged (TM 9-2320-392-10-1)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Remove plastic cable ties as required.

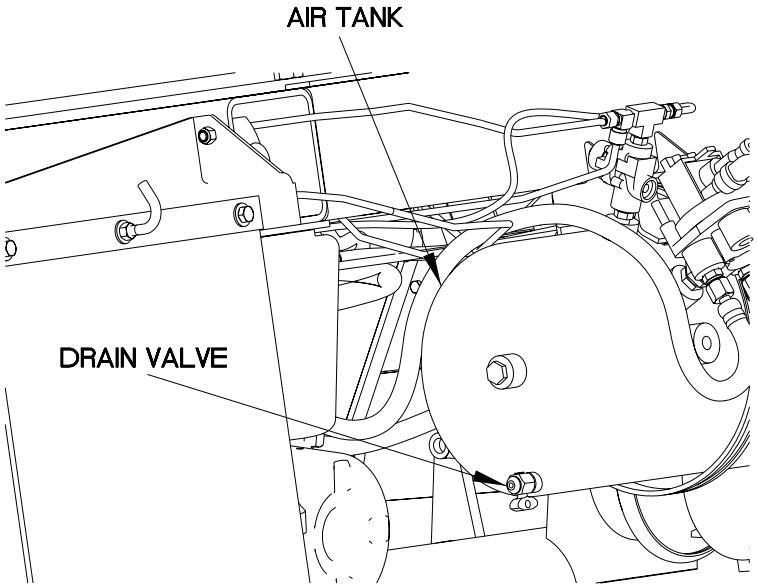
Reference pneumatic schematic at end of chapter as required.

SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air tank drain valve open or leaking?	**No** Go to (Indication/Condition 2).	1. Ensure air tank drain valve is closed.
	Yes Replace air tank drain valve (WP 0078 00).	2. Feel for air escaping from air tank drain valve.

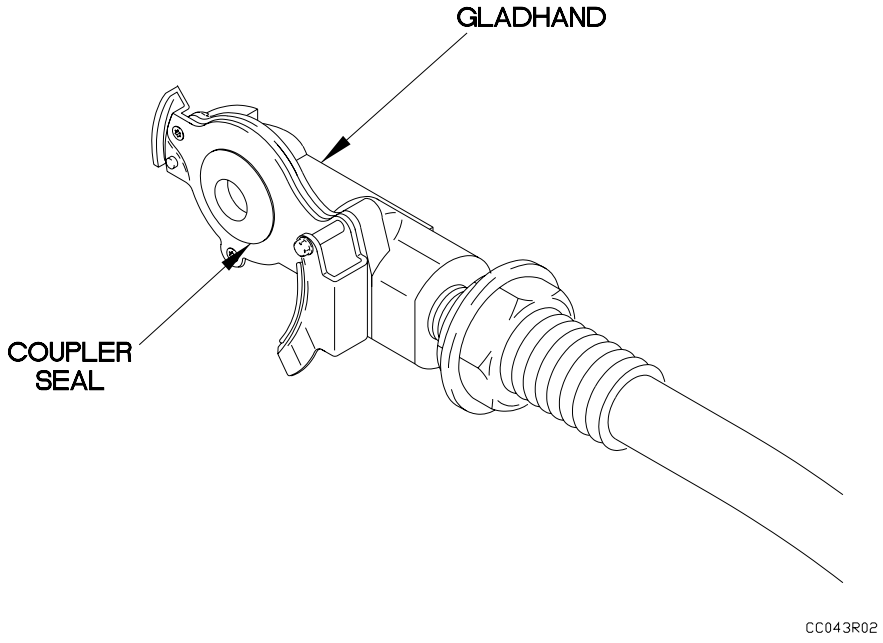


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Are coupler seals on gladhands damaged or missing?	**No** Go to (Indication/Condition 3). **Yes** Replace gladhand coupler seal (WP 0079 00).	1. Check for missing or damaged coupler seal on both service and emergency gladhands.

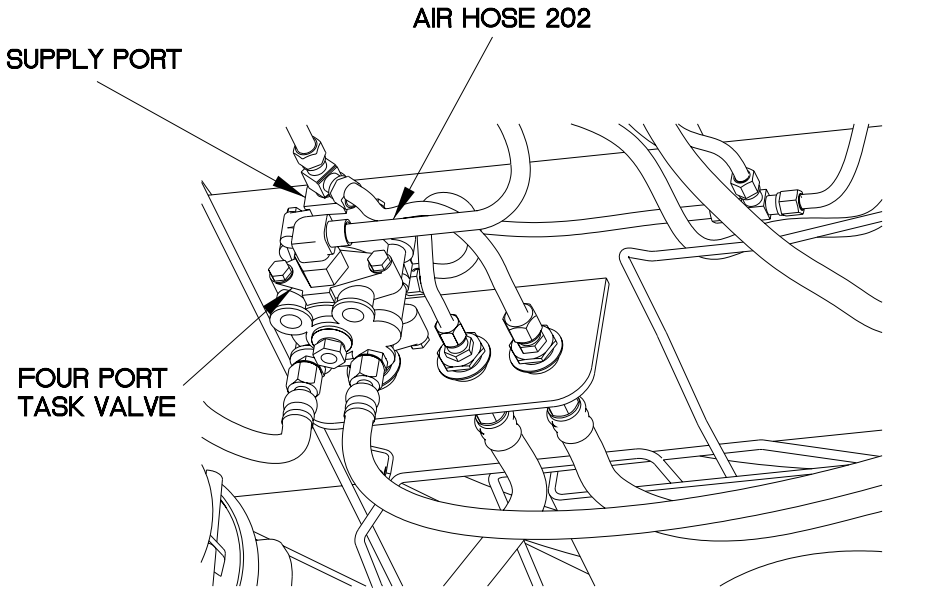


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is air present at supply port of front four port task valve?	**No** Replace air hose 202.	1. Loosen air hose 202 from supply port on four port task valve.
	Yes Go to (Indication/Condition 4).	2. Start towing vehicle engine.
		3. Depress towing vehicle brake pedal.
		4. Check for presence of air.
		5. Shut down towing vehicle engine.
		6. Tighten air hose202 to four port task valve supply port.

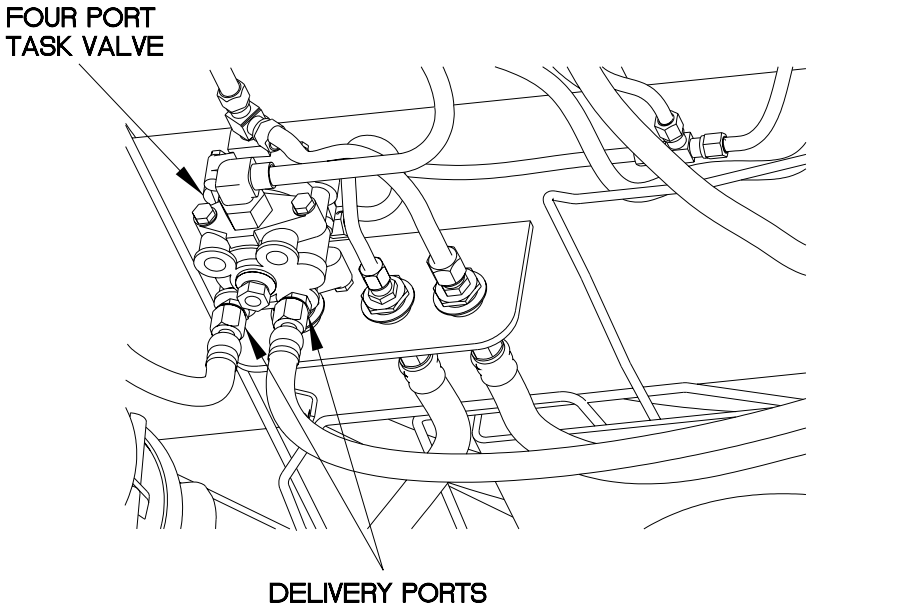


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at delivery ports of front four port task valve?	**No** Replace front four port task valve (WP 0109 00).	1. Loosen air hoses at front four port task valve delivery ports.
	Yes Go to (Indication/Condition 5).	2. Start towing vehicle engine.
		3. Depress towing vehicle brake pedal.
		4. Check for presence of air.
		5. Shut down towing vehicle engine.
		6. Tighten air hoses to four port task valve delivery ports.

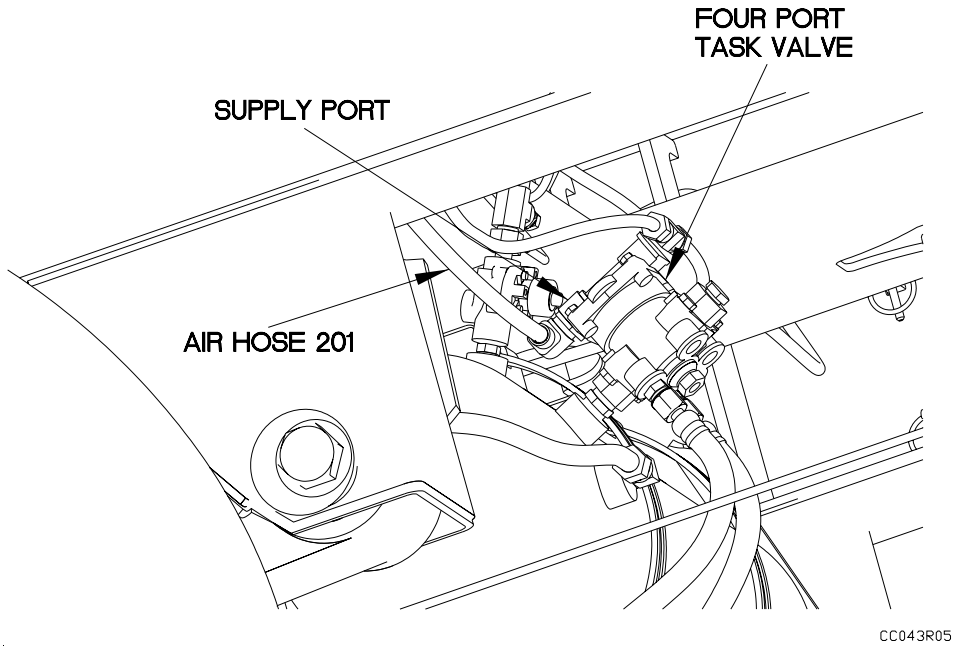


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at supply port of rear four port task valve?	**No** Replace air hose 201.	1. Loosen air hose 201 at rear four port task valve supply port.
	Yes Go to (Indication/Condition 6).	2. Start towing vehicle engine.
		3. Depress towing vehicle brake pedal.
		4. Check for presence of air.
		5. Shut down towing vehicle engine.
		6. Tighten air hose 201 to rear four port task valve supply port.

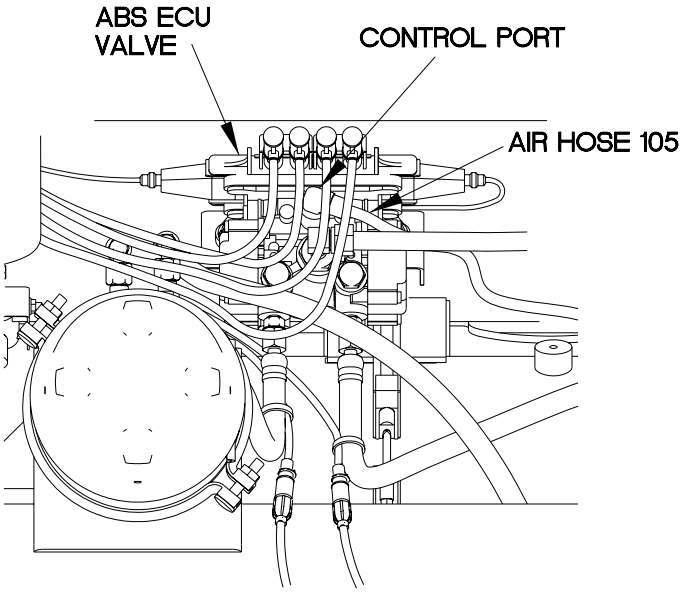


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at control port of ABS ECU?	**No** Go to (Indication/Condition 7). **Yes** Go to (Indication/Condition 8).	1. Loosen air hose 105 at ABS ECU valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 105 to ABS ECU valve control port.



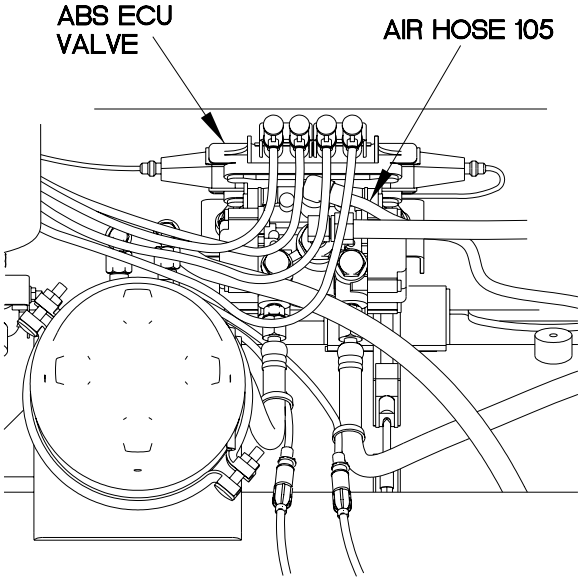
CC043R06

SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Does air hose 105 have any kinks, leaks, or holes?	**No** Replace rear four port task valve (WP 0109 00). **Yes** Replace air hose 105.	1. Apply soapy water solution to air hose 105 and fittings. 2. Check air hose 105 between ABS ECU valve and rear four port task valve for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



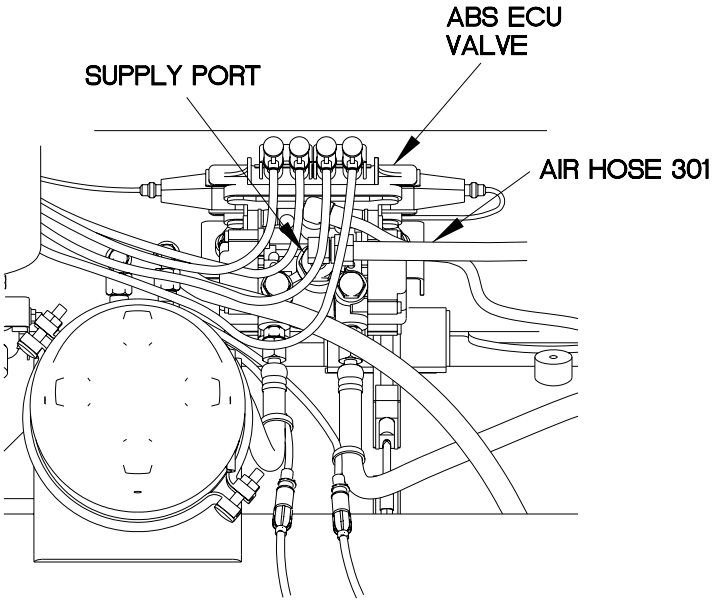
CC043R07

SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at supply port of ABS ECU?	**No** Go to (Indication/Condition 9). **Yes** Go to (Indication/Condition 10).	1. Loosen air hose 301 at ABS ECU valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 301 to ABS ECU valve supply port.

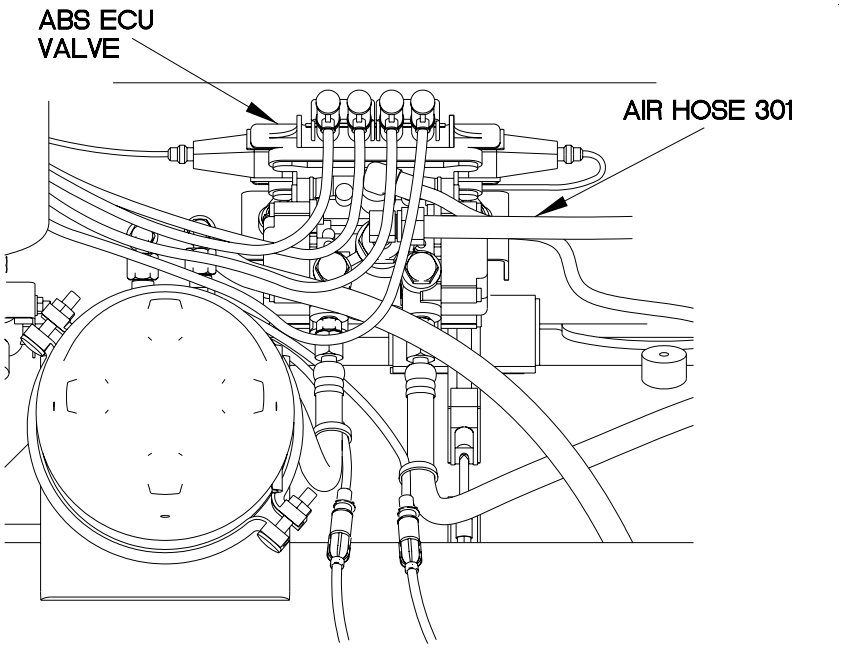


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 301 have any kinks, leaks or holes?	**No** Replace rear four port task valve (WP 0109 00). **Yes** Replace air hose 301.	1. Apply soapy water solution to air hose 301 and fittings. 2. Check air hose 301 between ABS ECU valve and air tank for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.

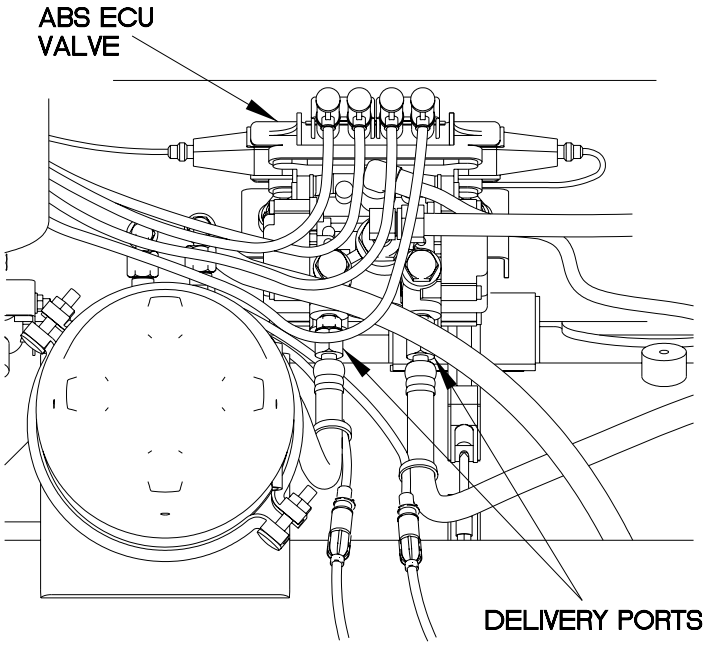


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at two delivery ports of ABS ECU valve?	**No** Replace ABS ECU valve (WP 0071 00). **Yes** Go to (Indication/Condition 11).	1. Loosen air hoses at ABS ECU valve delivery ports. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS ECU valve delivery ports.

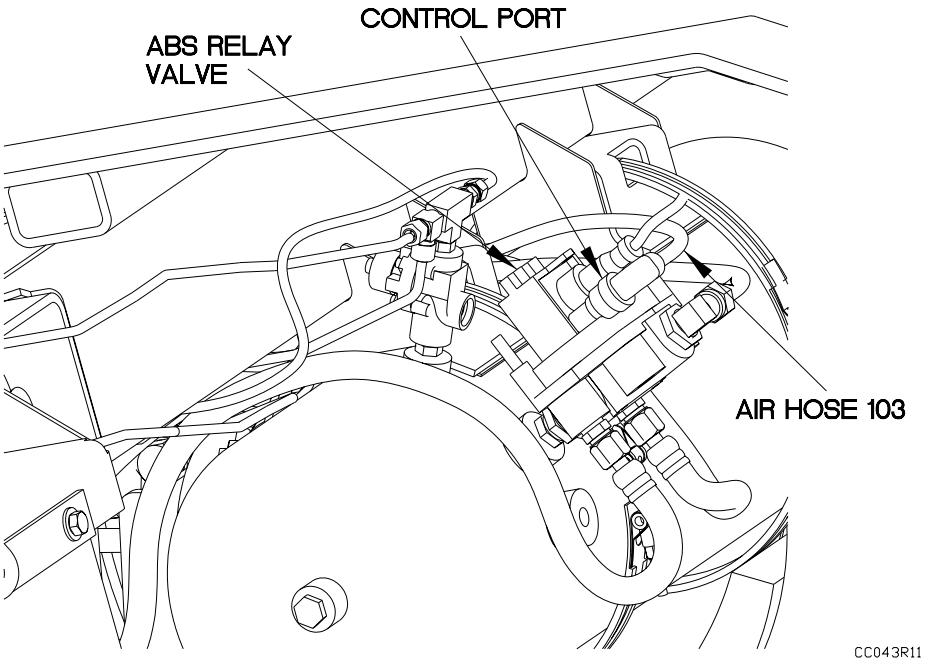


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Is air present at control port of ABS relay valve?	**No** Replace air hose 103. **Yes** Go to (Indication/Condition 12).	1. Loosen air hose 103 at ABS relay valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 103 to ABS relay valve control port.

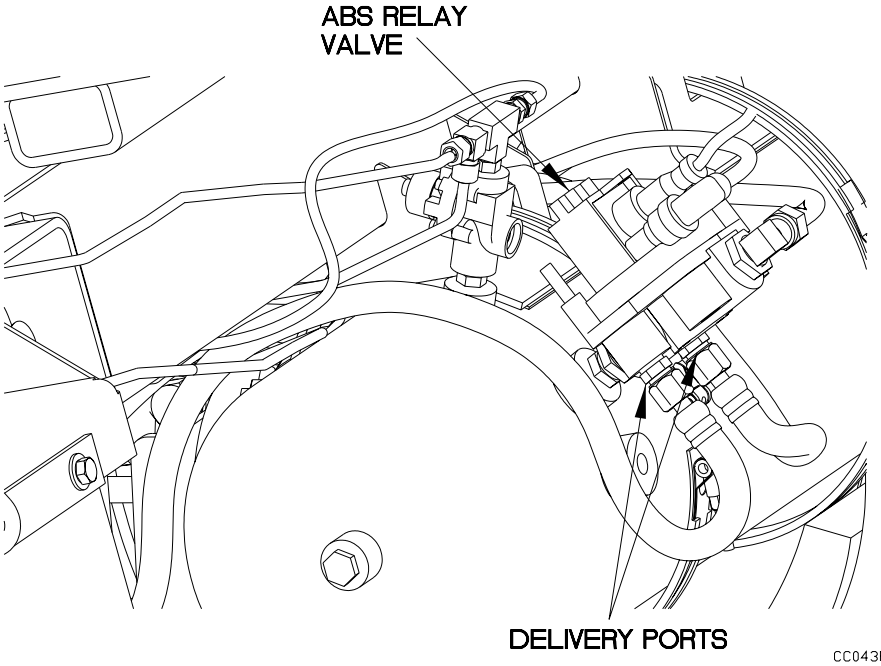


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
12. Is air present at two delivery port of ABS relay valve?	**No** Replace ABS relay valve (WP 0075 00). **Yes** Go to (Indication/Condition 13).	1. Loosen air hoses at ABS relay valve delivery ports. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS relay valve delivery ports.

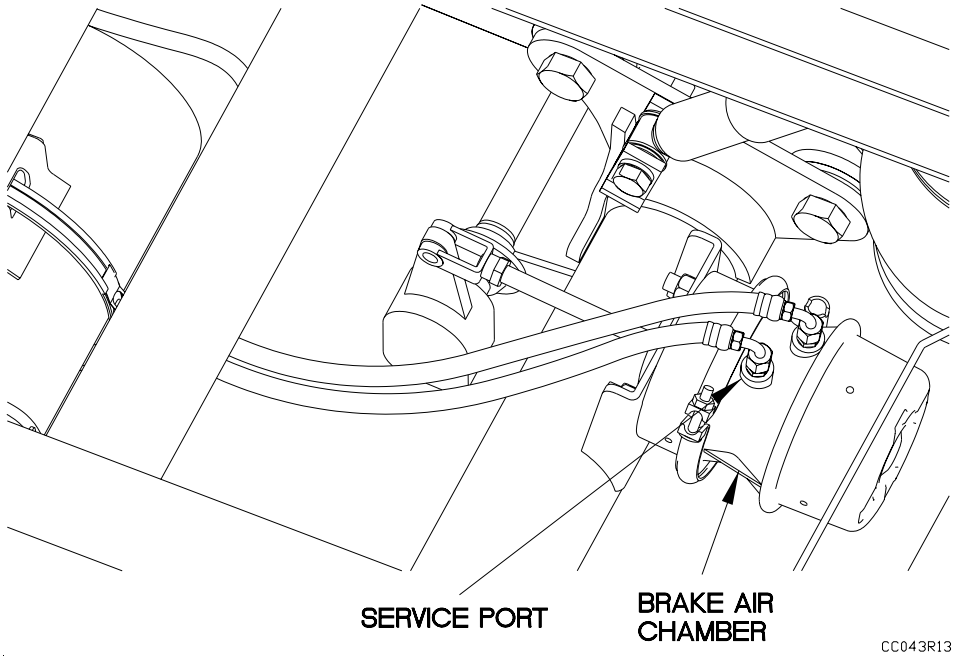


SERVICE BRAKES DO NOT APPLY-Continued 0043 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
13. Is air present at service port of brake air chambers?	**No** Replace service brake air supply hoses. **Yes** Replace brake air chambers (WP 0081 00).	1. Loosen air hoses at service ports of brake air chambers. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to service ports of brake air chambers.



END OF WORK PACKAGE

TRAILER BRAKES UNEVENLY OR BRAKES PULL TO ONE SIDE OR GRAB 0044 00

THIS WORK PACKAGE COVERS:
Brakes Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)

Personnel Required
Two

References
Towing vehicle operators manual

Equipment Conditions
Air system charged (TM 9-2320-392-10-1)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

Reference pneumatic schematic at end of chapter as required.

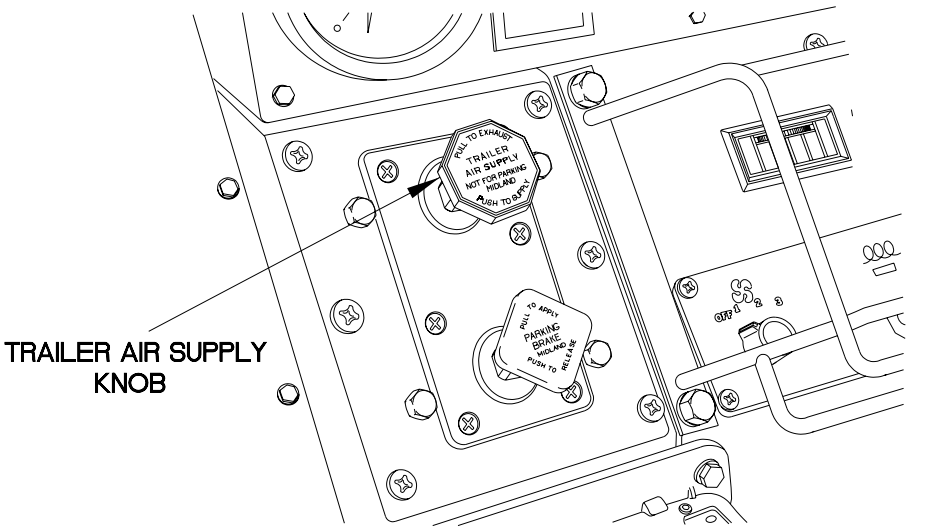
TRAILER BRAKES UNEVENLY OR BRAKES

PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is the TRAILER AIR SUPPLY knob on the towing vehicle pulled out?	**No** Go to (Indication/Condition 2). **Yes** Push TRAILER AIR SUPPLY knob of towing vehicle to supply air (TM 9-2320-392-10-1).	1. Check TRAILER AIR SUPPLY knob in cab to see if it is engaged.



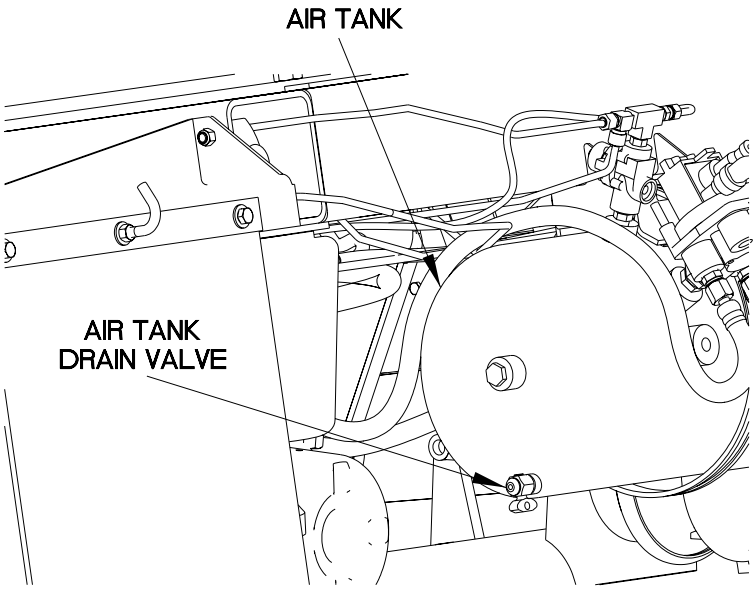
TRAILER BRAKES UNEVENLY OR BRAKES

PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is air tank drain valve leaking?	**No** Go to (Indication/Condition 3).	1. Ensure air tank drain valve is closed.
	Yes Replace air reservoir tank (WP 0078 00).	2. Feel for air escaping from air tank drain valve.



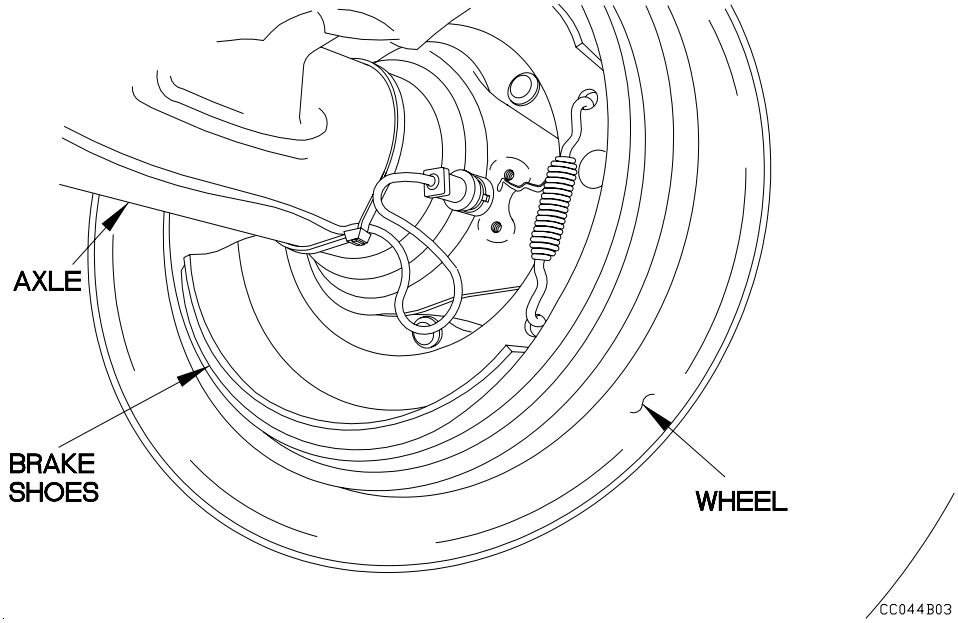
TRAILER BRAKES UNEVENLY OR BRAKES

PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Are brake shoes free from contamination, oil, and grease?	**No** Replace wheel bearing seals (WP 0085 00).	1. Jack up axle of each affected wheel/brake.
	Yes Go to (Indication/Condition 4).	2. Support axle assembly on trestles. 3. Rotate wheel and check for contamination of brake shoe linings from leaking oil, grease or debris.



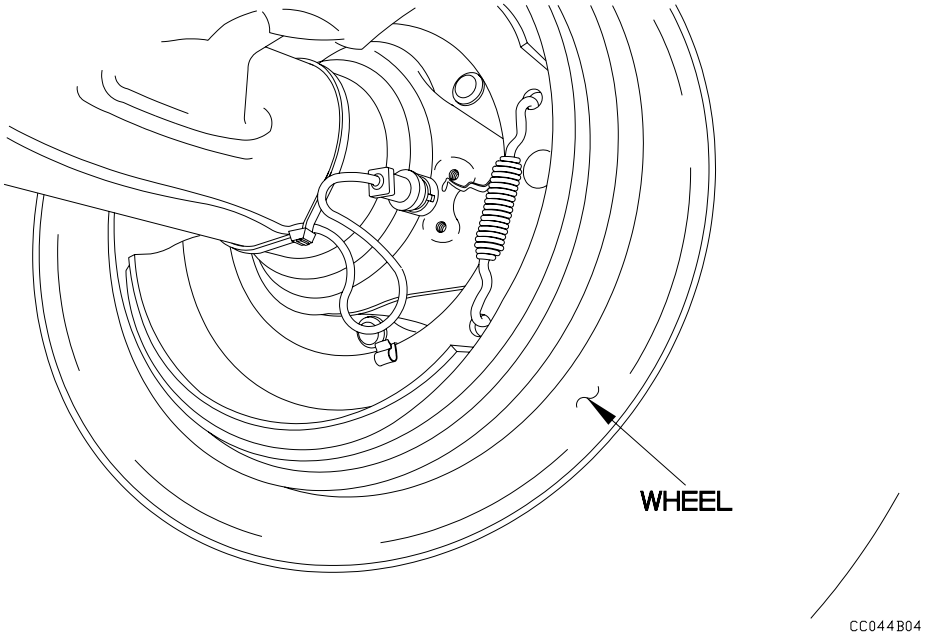
TRAILER BRAKES UNEVENLY OR BRAKES

PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Do individual wheels/brakes lockup or drag while applying brakes and manually spinning wheel?	**No** Go to (Indication/Condition 5).	1. Start towing vehicle engine (EM 0195).
	Yes Adjust brake shoe clearance (WP 0069 00).	2. Allow brake air pressure to fully charge. 3. Depress brake pedal. 4. Have assistant spin wheels, one at a time. 5. Shut down towing vehicle engine.

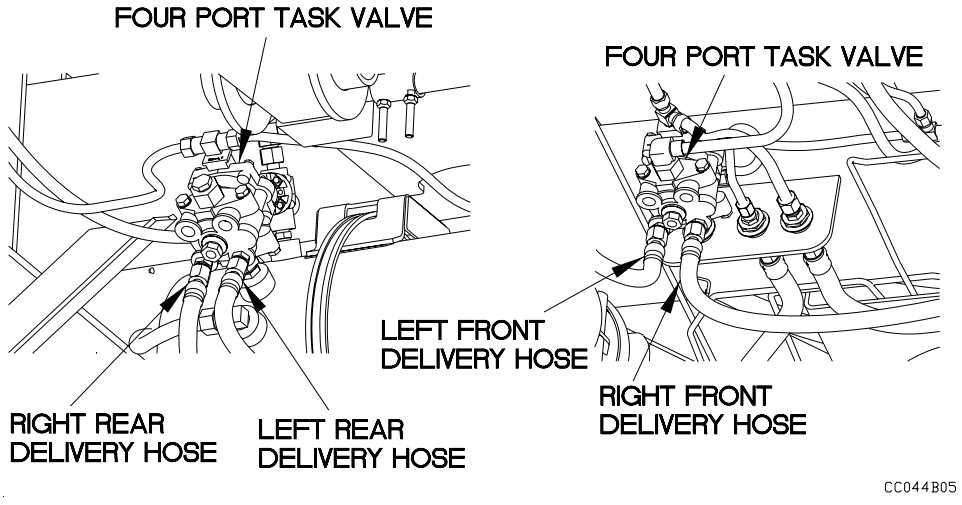


TRAILER BRAKES UNEVENLY OR BRAKES PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at four port task valve delivery port to affected wheel(s)/brake(s) when brakes are applied?	**No** Replace four port task valve (WP 0109 00).	1. Remove trestles from axle assembly.
	Yes Go to (Indication/Condition 6).	2. Lower jack to place trailer on ground. 3. Loosen air delivery hoses to spring brakes at delivery ports of four port task valve. 4. Start towing vehicle engine. 5. Allow brake air pressure to fully charge. 6. Depress brake pedal and have assistant check for presence of air escaping at delivery port of four port task valve and air hoses. 7. Shut down towing vehicle engine.

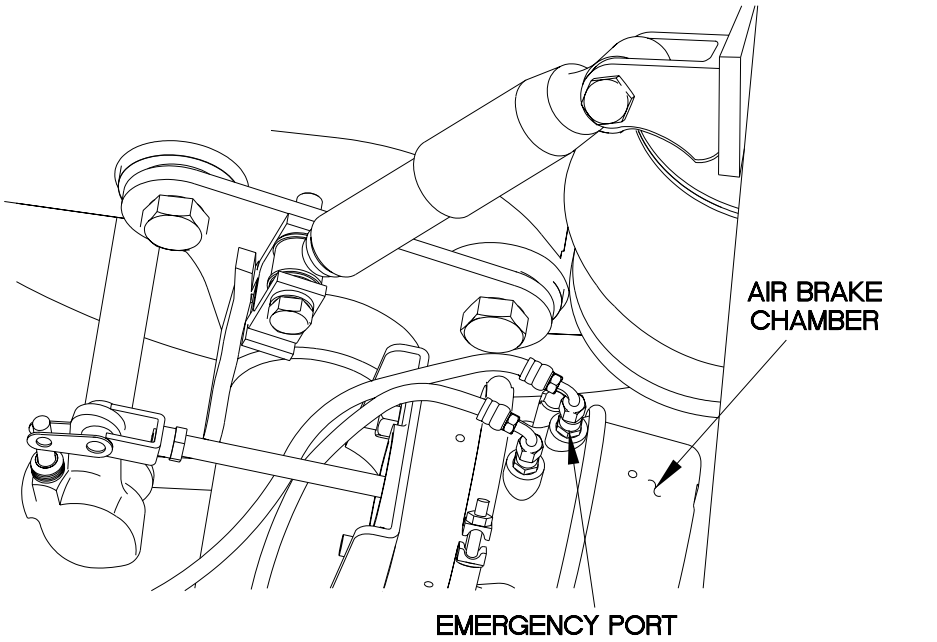


TRAILER BRAKES UNEVENLY OR BRAKES PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at emergency port of brake air chamber of affected wheel(s)/brake(s) when brakes are applied?	**No** Replace damaged or blocked air hoses.	1. Tighten hoses at delivery ports of four port task valve.
	Yes Go to (Indication/Condition 7).	2. Loosen hoses at emergency port of brake air chamber of affected wheel(s)/brake(s). 3. Start towing vehicle engine. 4. Allow brake air pressure to fully charge. 5. Depress brake pedal and have assistant check for presence of air escaping at emergency port of air brake chambers and air hoses. 6. Shut down towing vehicle engine.

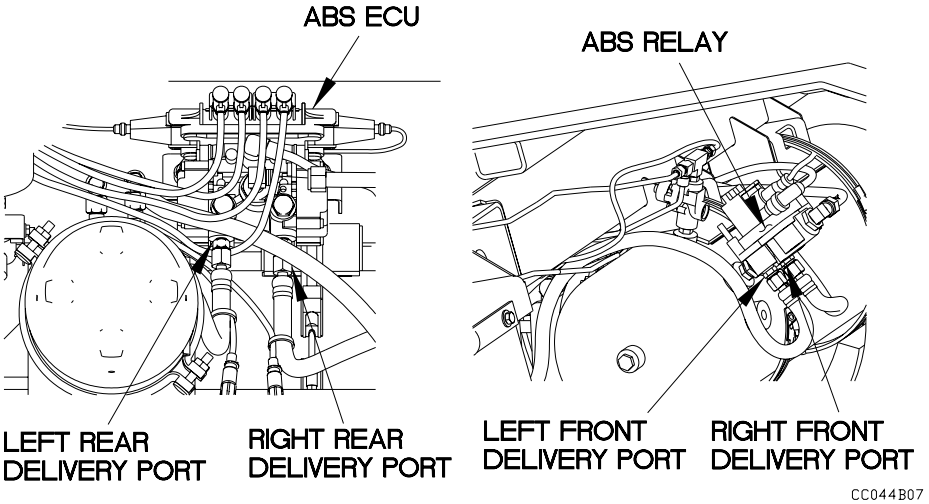


TRAILER BRAKES UNEVENLY OR BRAKES PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at relay valve delivery port(s) (front) or ABS ECU valve port(s) (rear) to affected wheel(s)/brakes?	**No** Replace ABS relay valve (front) (WP 0075 00) or ABS ECU valve (rear) (WP 0071 00).	1. Tighten air hoses at emergency ports of brake air chambers.
	Yes Go to (Indication/Condition 8).	2. Loosen air delivery hoses to spring brakes at delivery ports of ABS relay valve (front) or ABS ECU valve (rear). 3. Start towing vehicle engine. 4. Allow brake air pressure to fully charge. 5. Depress brake pedal and have assistant check for presence of air escaping at delivery port of ABS relay valve (front) or ABS ECU valve (rear) and air hoses. 6. Shut down towing vehicle engine.

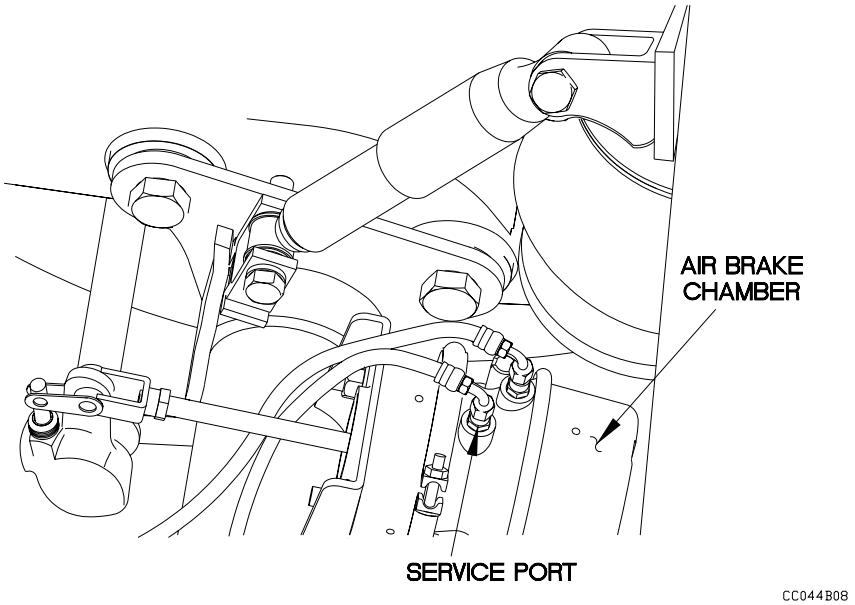


TRAILER BRAKES UNEVENLY OR BRAKES PULL TO ONE SIDE OR GRAB -Continued 0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1: Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at service port of brake air chamber of affected wheel(s)/brake(s) while brakes are applied?	**No** Replace damaged or blocked air hoses.	1. Tighten hoses at delivery ports of ABS relay valve (front) or ABS ECU valve (rear).
	Yes Replace spring brake chamber (WP 0081 00).	2. Loosen hoses at service port of brake air chamber of affected wheel(s)/brake(s). 3. Start towing vehicle engine. 4. Allow brake air pressure to fully charge. 5. Depress brake pedal and have assistant check for presence of air escaping at service port of air brake chambers and air hoses. 6. Shut down towing vehicle engine.



END OF WORK PACKAGE

SUSPENSION SYSTEM SITS UNEVEN 0045 00

THIS WORK PACKAGE COVERS:

Pneumatic System troubleshooting.

INITIAL SETUP:

Maintenance Level

Field

Tools/Special Tools

Gage, Pressure, 0-150 psi. (Item 5, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts

Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)
Bushing, Pipe (Item 4, WP 0165 00)

Personnel Required

Two

Equipment Conditions

Trailer air system charged (TM 9-2320-392-10-1)

PROCEDURE

WARNING

Wear appropriate eye protection when working under vehicle due to the possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

Select the appropriate fault to determine where troubleshooting continues:

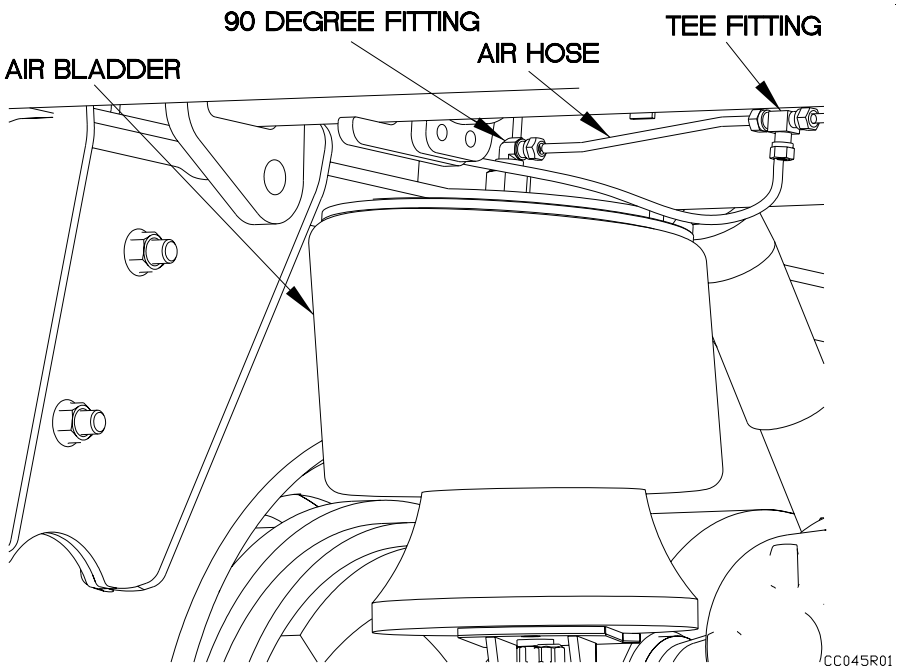
1. One air spring does not inflate (Table 1, Indication/Condition 1).
2. Rear air springs do not inflate (Table 1, Indication/Condition 2).
3. Front Suspension Does Not Raise/Lower (WP 0047 00).

SUSPENSION SYSTEM SITS UNEVEN-Continued 0045 00

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at affected air spring?	**No.** Replace air hose from air spring to tee fitting. **Yes.** Replace air bladder (WP 0096 00).	1. Drain air tanks (WP 0004 00) 2. Disconnect air hose from 90-degree fitting. 3. Charge air system (EM 0195). 4. Check for the presents of air from open air hose.

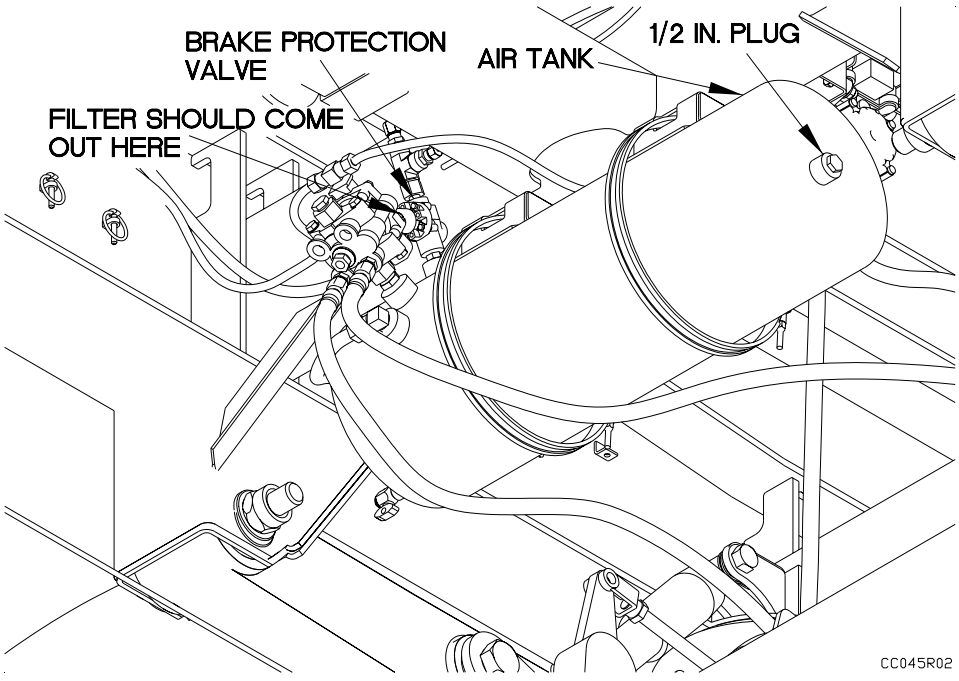


SUSPENSION SYSTEM SITS UNEVEN-Continued 0045 00

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System

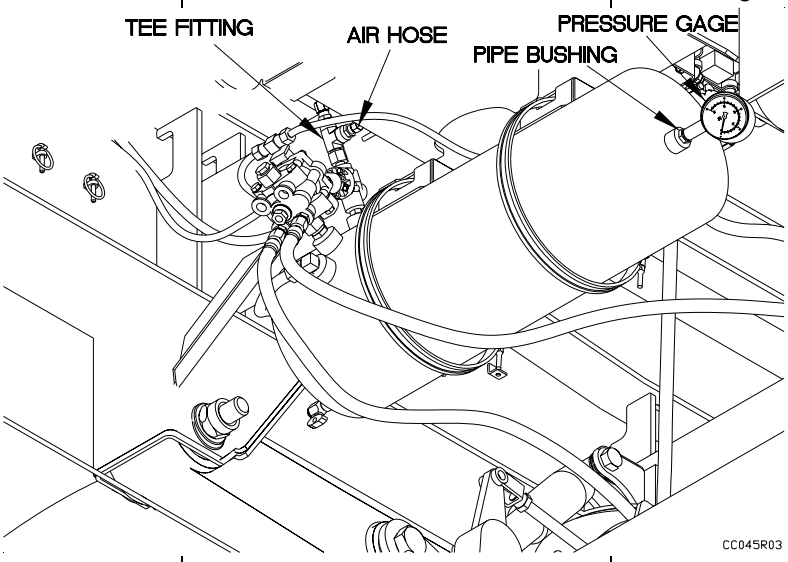
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does rear air hoses or fittings have air leaks?	**No.** Go to (Indication/Condition 3).	1. With the use of a soapy water solution check for bubbles indicating air leaks.
	Yes. Replace leaking hose(s) and/or fittings.	
3. Is brake protection valve filter free from damage or obstructions?	**No.** Clean or replace brake protection valve filter (WP 0075 00).	1. Remove filter from brake protection valve (WP 0075 00) and check for damage or obstructions.
	Yes. Go to (Indication/Condition 4).	
4. Does brake protection valve operate properly?	**No.** Replace brake protection valve (WP 0075 00).	1. Drain rear air tank.
	Yes. Go to (Indication/Condition 5).	2. Remove ½ in. plug from rear air tank.
		3. Install pipe bushing and pressure gage in air tank.



SUSPENSION SYSTEM SITS UNEVEN-Continued 0045 00

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Does brake protection valve operate properly? (Cont)	**No.** Replace brake protection valve (WP 0075 00). **Yes.** Go to (Indication/Condition 5).	4. Disconnect air hose from tee fitting. 5. Begin pressurizing air system and note if brake protection valve opens at 70-75 psi. indicating proper operation. 6. Drain air tank and note if brake protection valve closes at 60-65 psi. indicating proper operation. 7. Connect air hose to tee fitting.  8. Remove pressure gage and pipe bushing from air tank. 9. Install ½ inch plug in air tank.
5. Does height control valve operate properly?	**No.** Replace height control valve (WP 0084 00). **Yes.** Properly adjust linkage (WP 0084 00).	1. Check height control valve for proper installation and operation (WP 0084 00).

END OF WORK PACKAGE

SUSPENSION SYSTEM DOES NOT SUPPORT TRAILER LOAD 0046 00

THIS WORK PACKAGE COVERS:
Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer air system charged (TM 9-2320-392-10-1)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00).

PROCEDURE

WARNING

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

1. Perform WP 0042 00 before proceeding to step 2.
2. Replace shock absorber(s) (WP 0095 00).

END OF WORK PACKAGE

FRONT SUSPENSION DOES NOT RAISE/LOWER 0047 00

THIS WORK PACKAGE COVERS:
Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Trailer air system charged (TM 9-2320-392-10)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris and to protect from release of high pressure air. Failure to comply may result in injury to personnel.

Wear protective goggles to protect against possible injury from release of high pressure air. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

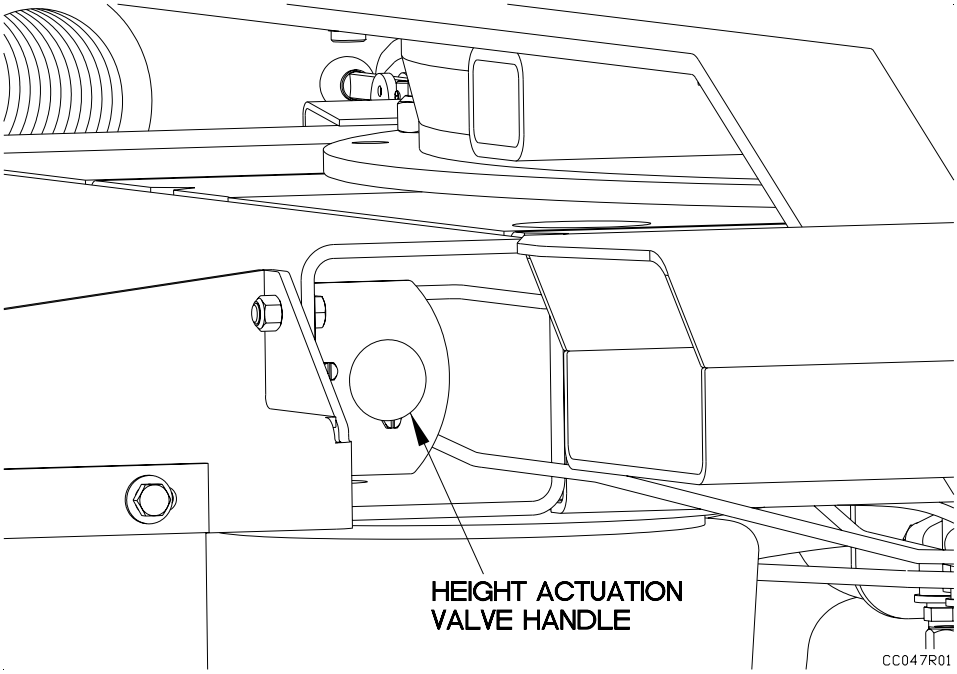
Remove plastic cable ties as required.

FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Does front suspension fail to raise or lower?	**Raise** Go to (Indication/Condition 6). **Lower** Go to (Indication/Condition 2).	1. Charge air system and note if front suspension will raise. 2. Push in height actuation valve handle and note if front suspension will lower.

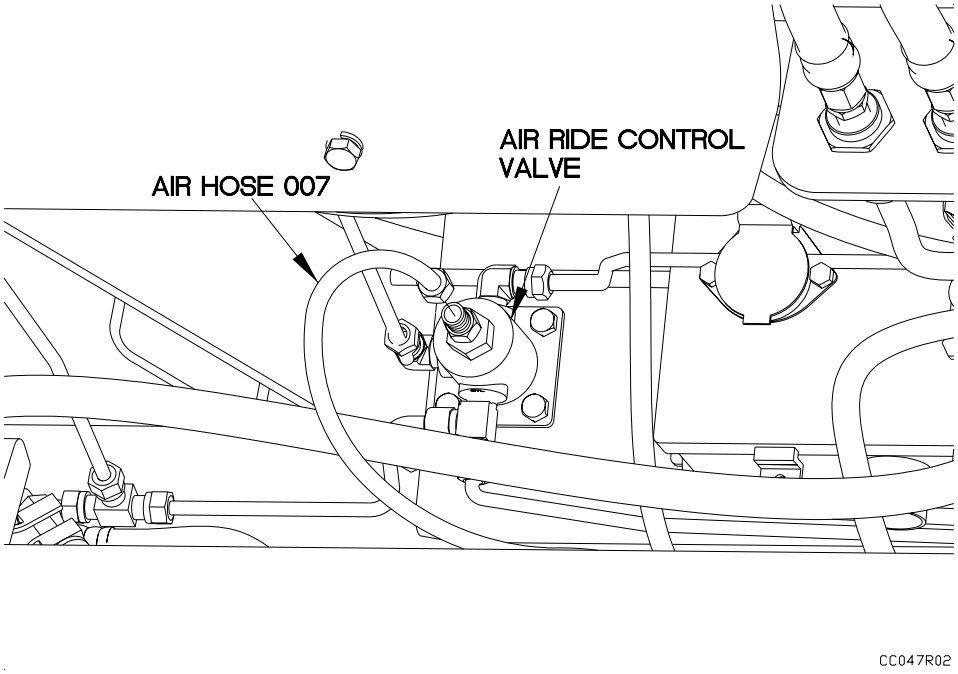


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is air present at hose 007 connection point on air ride control valve?	**No** Go to (Indication/Condition 3).	1. Disconnect hose 007 from air ride control valve.
	Yes Go to (Indication/Condition 4).	2. Push height actuation valve handle in and feel for air escaping from end of hose 007.

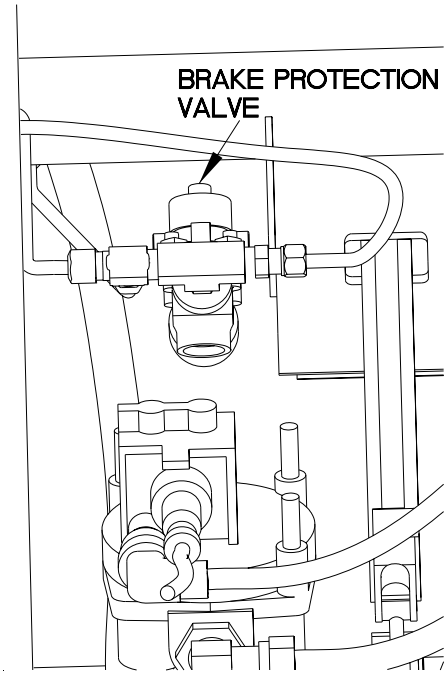


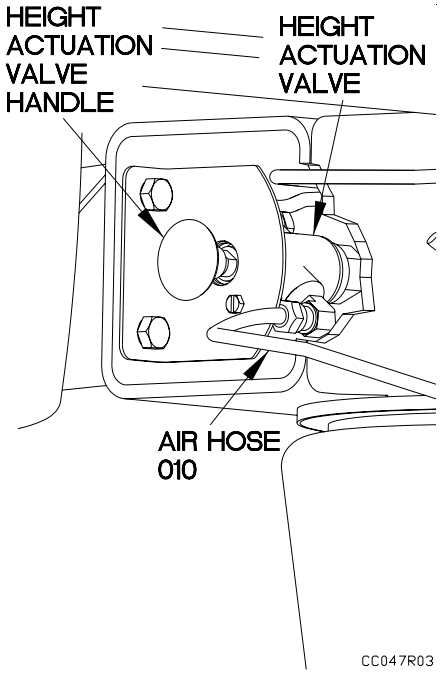
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Does air hose 010 have any kinks, leaks, or holes?	**No** Replace height actuation valve (WP 0110 00). **Yes** Replace hose 010.	1. Apply soapy water solution to air hose 010 and fittings. 2. Push in handle on height actuation valve and check air hose 010 between brake protection valve and height actuation valve for bubbles indicating holes or leaks. 3. Check hose 010 for kinks.



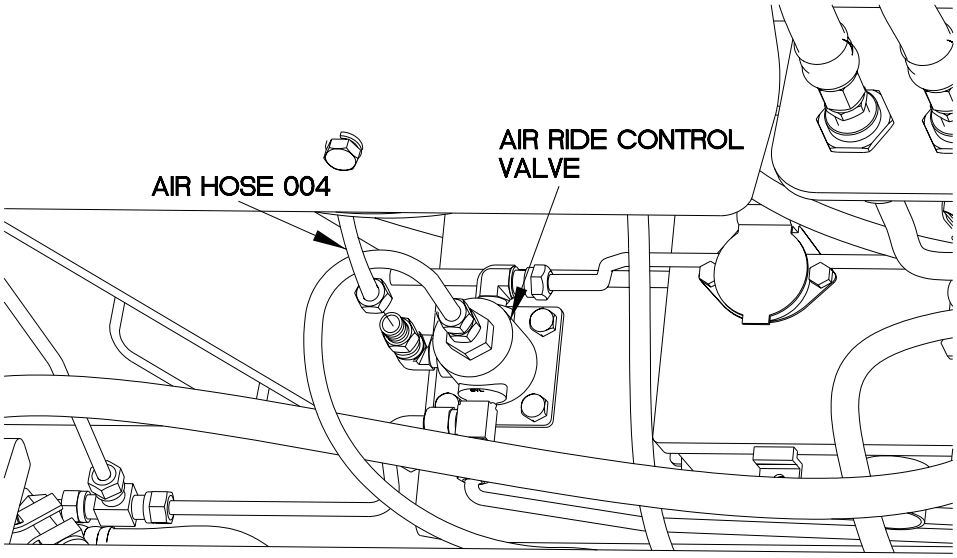


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at air ride control valve connection air hose 004?	**No** Replace air ride control valve (WP 0080 00). **Yes** Go to (Indication/Condition 5).	1. Disconnect air hose 004 at connection point on air ride control valve. 2. Push height actuation valve handle in and feel for air escaping from connection point on air ride control valve.

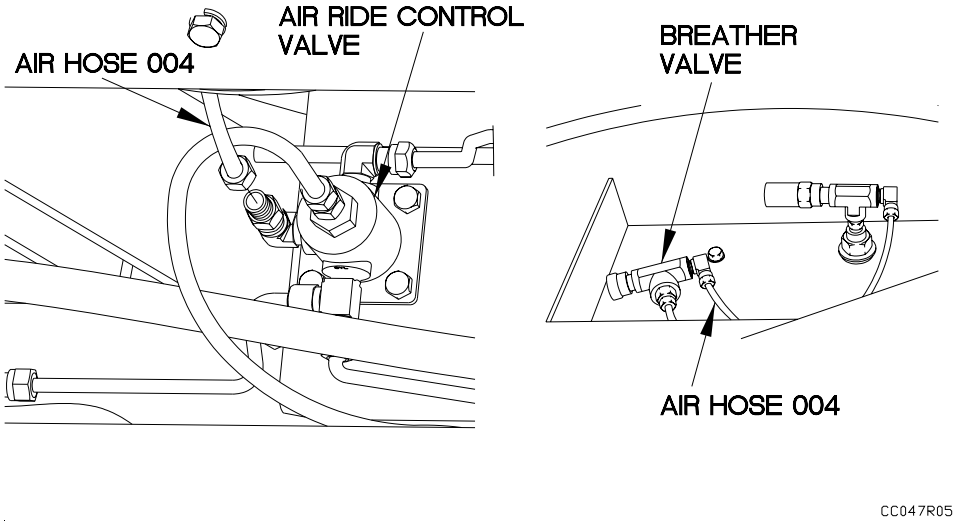


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Does air hose 004 have any kinks?	**No** Replace breather valve (WP 0082 00). **Yes** Replace air hose 004.	1. Connect air hose 004 at connection point on air ride control valve. 2. Lift turntable from frame for access (WP 0099 00). 3. Follow path of air hose 004 from air ride control valve to breather valve to check for any kinks in air hose.

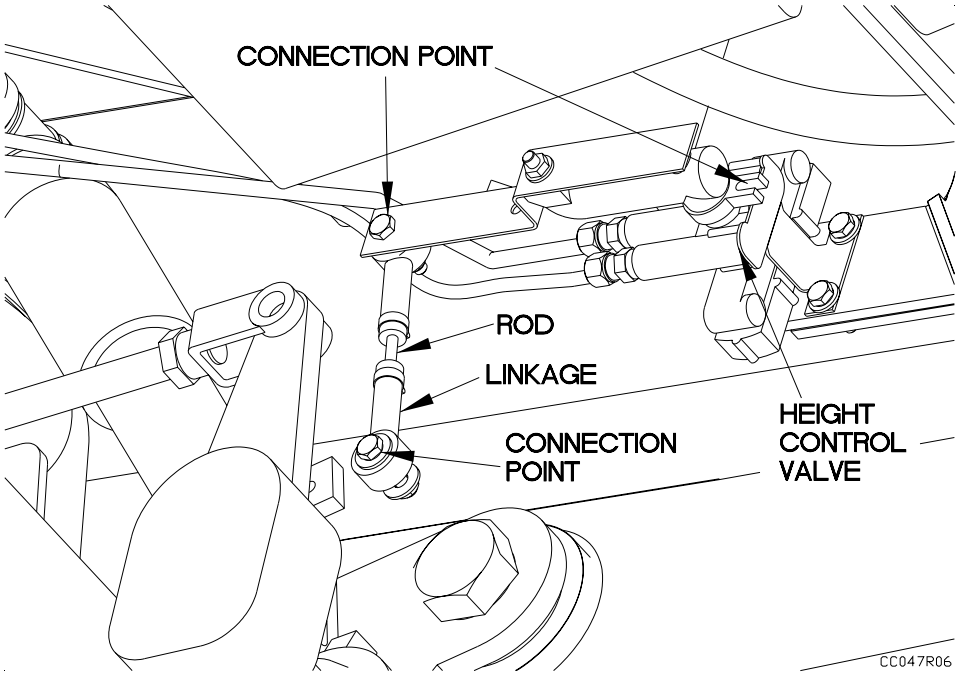


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is the height control valve linkage functioning properly?	**No** Replace height control linkage (WP 0084 00). **Yes** Go to (Indication/Condition 7).	1. Visually inspect height control linkage, connection points, and rod to ensure it is not damaged or malfunctioning.

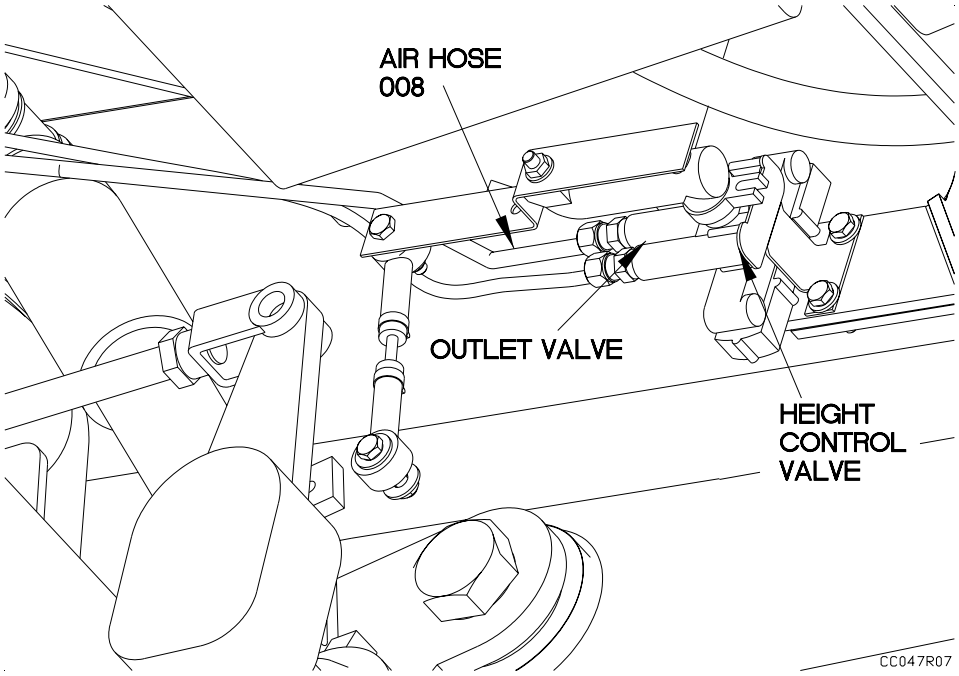


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at outlet port of height control valve?	**No** Go to (Indication/Condition 8).	1. Disconnect air hose 008 from outlet port of height control valve.
	Yes Go to (Indication/Condition 9).	2. Attempt to charge air system (TM 9-2320-392-10).
		3. Listen and feel for air discharging from outlet port on height control valve.

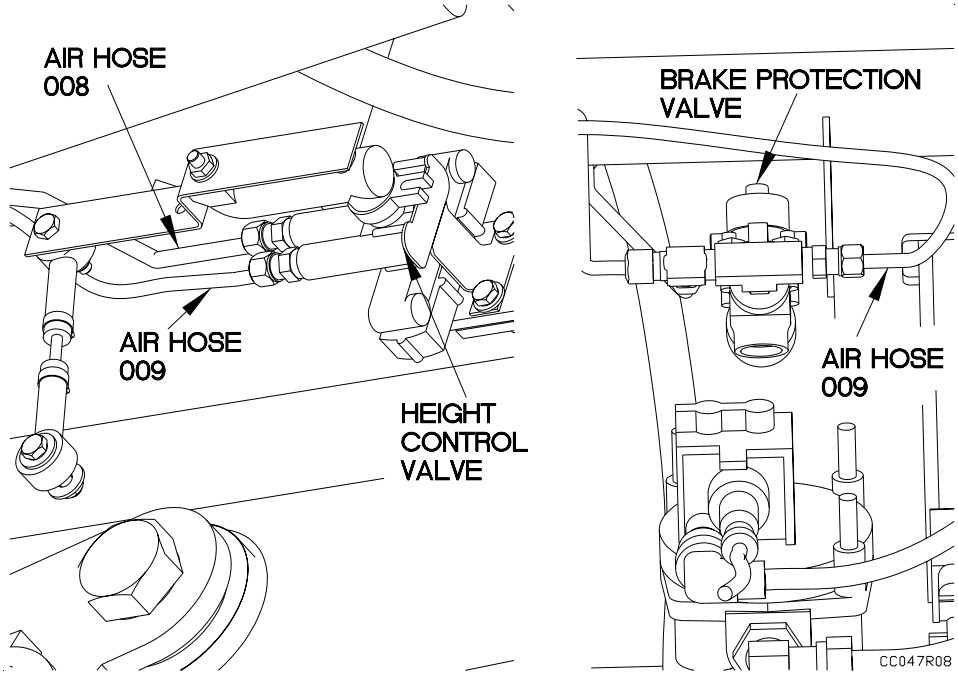


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Does air hose 009 have any kinks, leaks or holes?	**No** Replace height control valve (WP 0084 00). **Yes** Replace air hose 009.	1. Connect air hose 008 to outlet port of height control valve. 2. Apply soapy water solution to air hose 009 and fittings. 3. Attempt to charge air system (TM 9-2320-392-10). 4. Check air hose 009 from height control valve to brake protection valve for any bubbles indicating leaks or holes.

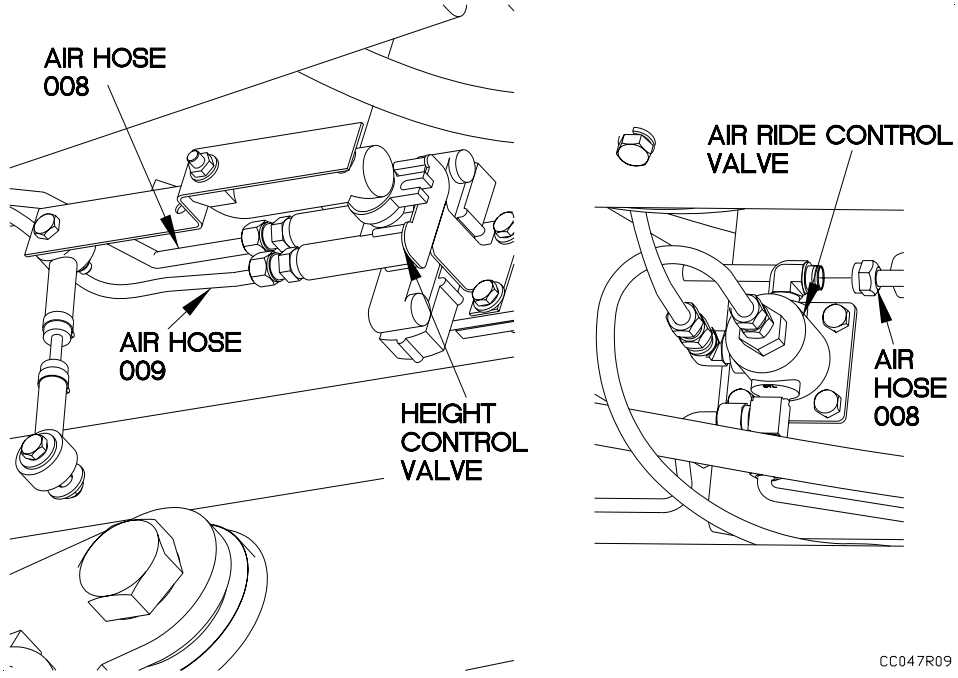


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 008 have any kinks, leaks or holes?	**No** Go to (Indication/Condition 10).	1. Connect air hose 008 to outlet port of height control valve.
	Yes Replace air hose 008.	2. Apply soapy water solution to air hose 008 and fittings.
		3. Attempt to charge air system (TM 9-2320-392-10).
		4. Check air hose 008 from height control valve to air ride control valve for any bubbles indicating leaks or holes.

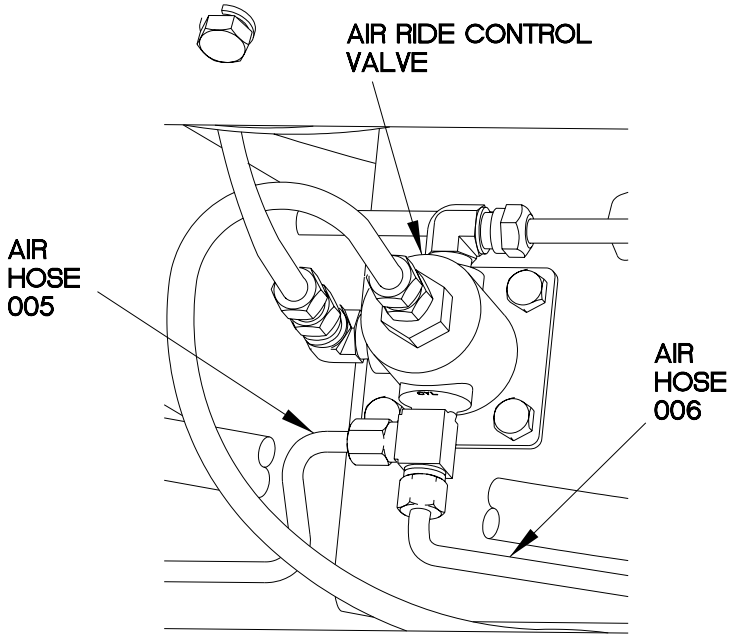


FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued 0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at outlet port of air ride control valve?	**No** Replace air ride control valve (WP 0080 00). **Yes** Replace air hose 005.	1. Disconnect air hose 005 and air hose 006 from outlet port on air ride control valve. 2. Attempt to charge air system (TM 9-2320-392-10). 3. Listen and feel for air discharging from outlet port on air ride control valve.



END OF WORK PACKAGE

RAIL ASSEMBLY DOES NOT RAISE/LOWER 0048 00

THIS WORK PACKAGE COVERS:
Rail Assembly Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Rail lock pin removed (WP 0005 00)
Rail lift jack handle installed (WP 0005 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Ensure rail assembly is in a secure position and cannot fall or shift onto personnel. Failure to comply may result in injury to personnel.

CAUTION

Ensure no corrosion, debris or any obstruction is present in rail guide tracks that would prevent rail assembly from operating properly. Failure to comply may result in damage to equipment.

NOTE

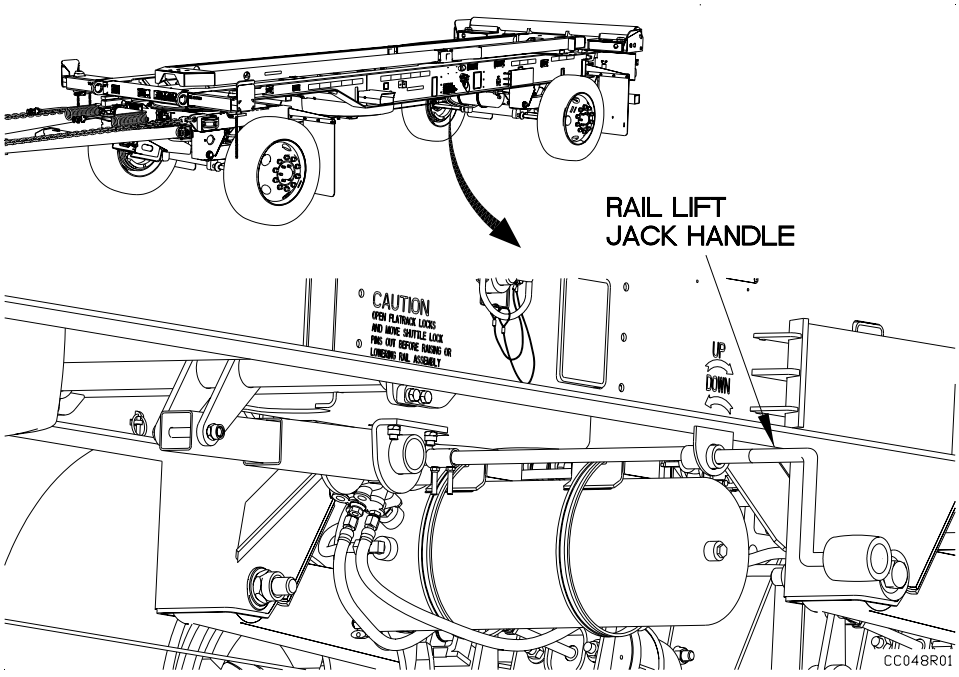
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

RAIL ASSEMBLY DOES NOT RAISE/LOWER -Continued 0048 00

RAIL ASSEMBLY TROUBLESHOOTING - Continued

Table 1: Rail Assembly Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is rail lift jack spinning freely?	**No.** Replace rail assembly (WP 0089 00). **Yes.** Replace rail lift jack (WP 0102 00).	1. Remove shuttle lock pins. 2. Push knob of flatrack lock control to release flatrack locks. 3. Turn rail lift jack handle. 4. Check to see if handle will spin freely.



END OF WORK PACKAGE

FLATRACK LOCKS DO NOT RELEASE/LOCK 0049 00

THIS WORK PACKAGE COVERS:
Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

Personnel Required
Two

Equipment Conditions
Air system charged (TM 9-2320-392-10)
Trailer unloaded (TM 9-2320-392-10)
Rail assembly raised (WP 0005 00)

References
TM 9-2320-392-10

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

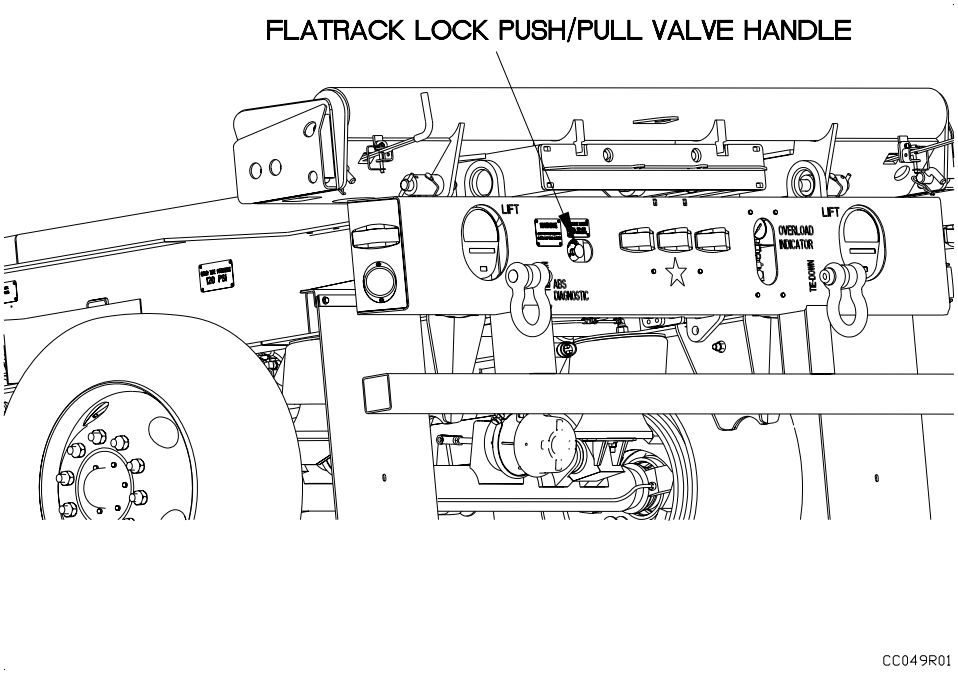
Remove plastic cable ties as required.

FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Do flatrack locks not release or lock?	**Lock.** Go to (Indication/Condition 2). **Release.** Go to (Indictation/Condition 5).	1. Disengage DIN blocking plates from flatrack locks. 2. Push or pull handle of flatrack lock control push/pull valve to test function of flatrack locks.

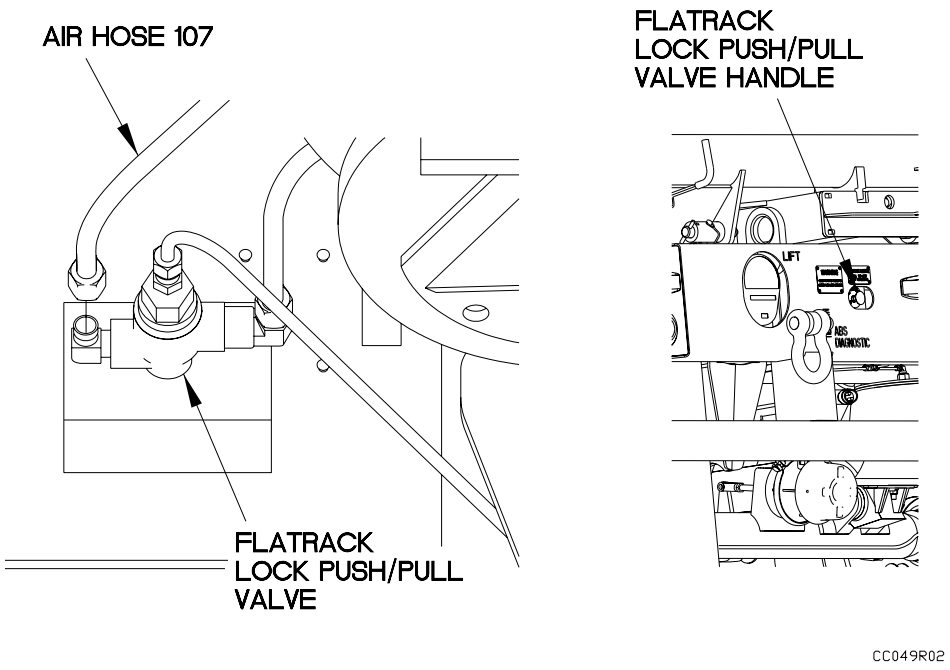


FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is air pressure present at outlet port of flatrack lock push/pull valve?	**No.** Go to (Indication/Condition 3).	1. Disconnect air hose 107 from flatrack lock push/pull valve.
	Yes. Go to (Indication/Condition 4).	2. Pull handle of flatrack lock push/pull valve out and feel for air escaping from outlet port.

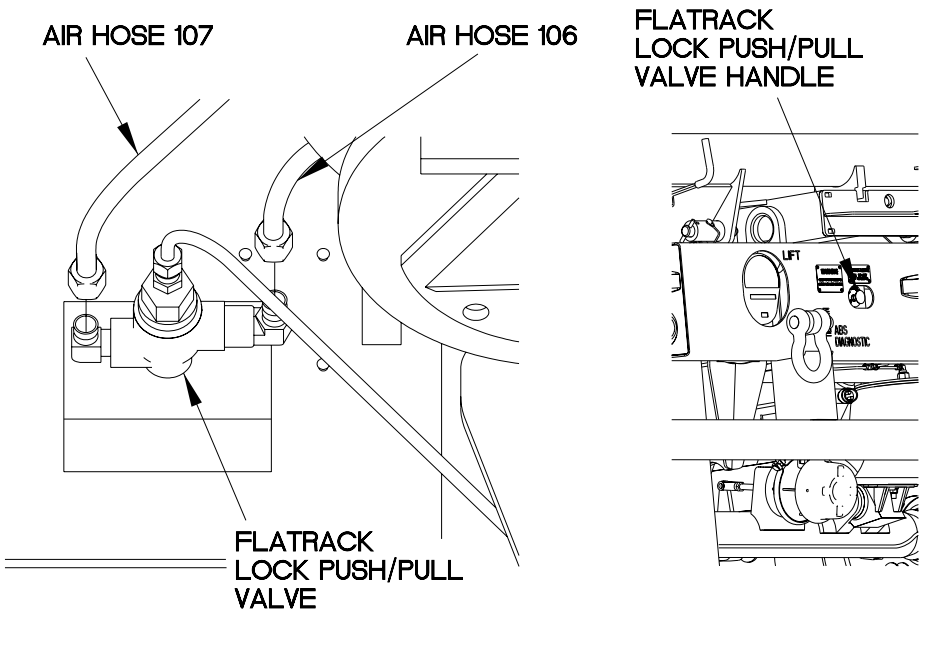


FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Does air hose 106 have any kinks, leaks, or holes?	**No.** Replace flatrack lock push/pull valve (WP 0108 00). **Yes.** Replace air hose 106.	1. Connect air hose 107 to flatrack lock push/pull valve. 2. Apply soapy water to air hose 106 and connection points. 3. Pull handle of flatrack lock push/pull valve out. 4. Look for bubbles escaping from hose indicating leaks and examine hose for kinks.

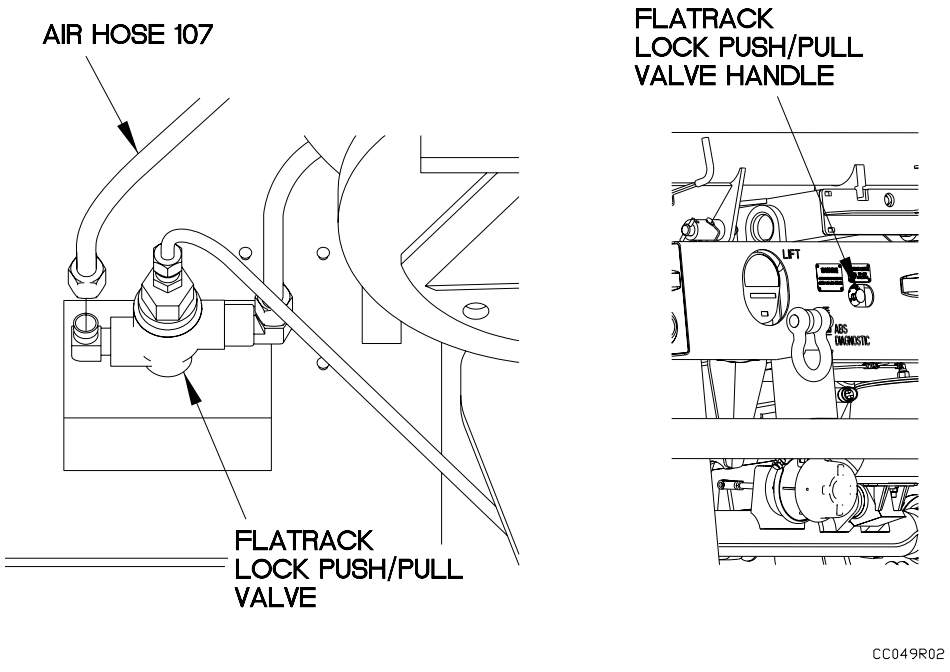


FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Does air hose 107 have any kinks, leaks, or holes?	**No.** Replace flatrack air chamber (WP 0107 00). **Yes.** Replace air hose 107.	1. Connect air hose 107 to flatrack lock push/pull valve. 2. Apply soapy water to air hose 107 and connection points. 3. Pull handle of flatrack lock push/pull valve out. 4. Look for bubbles escaping from hose indicating leaks and examine hose for kinks.

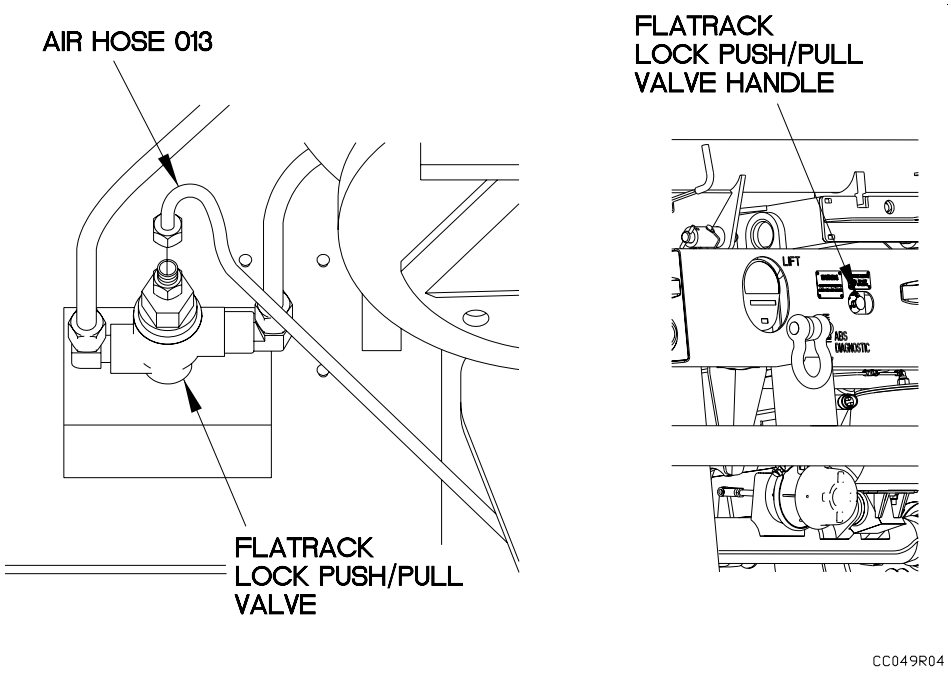


FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air pressure present at port on flatrack push/pull valve at hose 013 connection?	**No.** Go to (Indication/Condition 6).	1. Disconnect air hose 013 from flatrack lock push/pull valve.
	Yes. Go to (Indication/Condition 7).	2. Push handle of flatrack lock push/pull valve in. 3. Feel for air escaping from open port on flatrack lock push/pull valve.

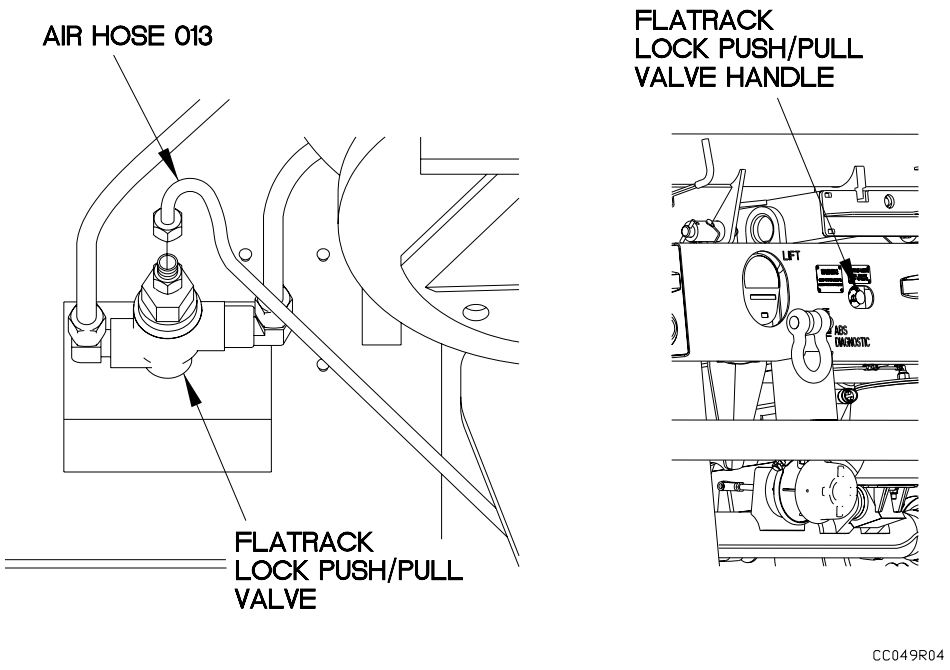


FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Does air hose 013 have any kinks, leaks, or holes?	**No.** Replace flatrack lock push/pull valve (WP 0108 00). **Yes.** Replace air hose 013.	1. Connect air hose 013 to flatrack lock push/pull valve. 2. Apply soapy water to air hose 013 and connection points. 3. Push handle of flatrack lock push/pull valve in and look for air bubbles indication leaks and check hose for kinks.

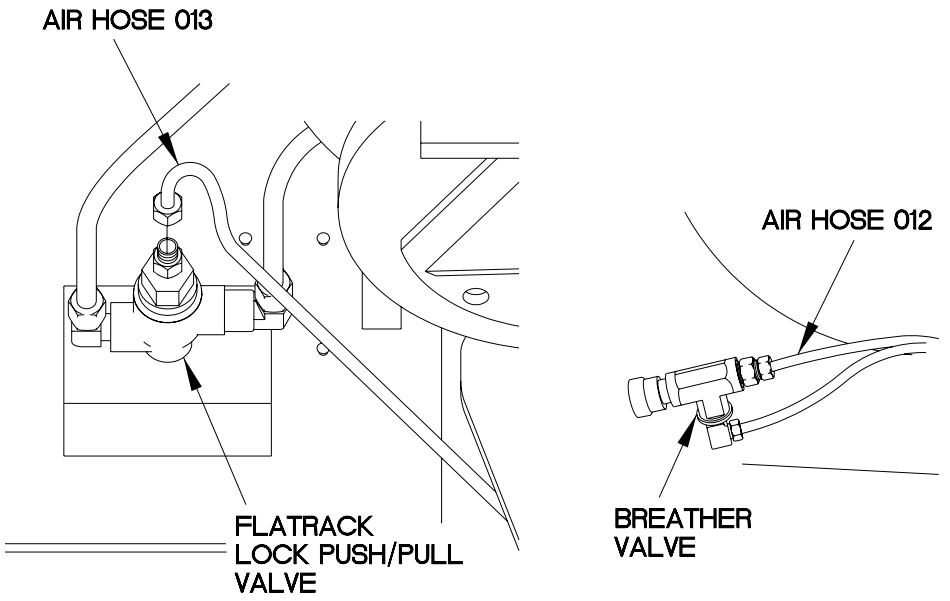


FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air pressure present at end of air hose 012 at connection on breather valve?	**No.** Go to (Indication/Condition 8).	1. Connect air hose 013 to flatrack lock push/pull valve.
	Yes. Replace breather valve (WP 0082 00).	2. Remove LH composite taillight for access to breather valve. 3. Disconnect air hose 012 from breather valve. 4. Push handle of flatrack lock push/pull valve in and feel for air escaping from air hose 012.

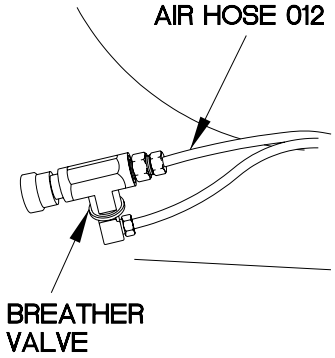


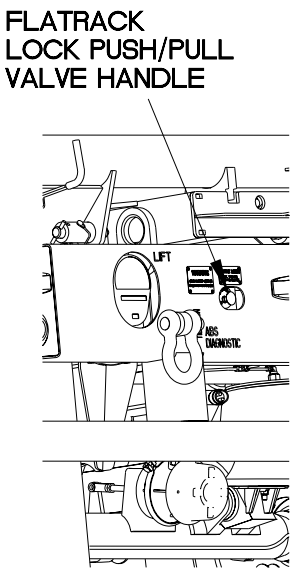
FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued 0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Does air hose 012 have any kinks, leaks, or holes?	**No.** Replace flatrack air chamber (WP 0107 00). **Yes.** Replace air hose 012.	1. Connect air hose 012 to breather valve. 2. Apply soapy water to air hose 012 and connection points. 3. Push handle of flatrack lock push/pull valve in. 4. Look for bubbles on air hose 012 indication air escaping from air hose 012.





CC049R06

END OF WORK PACKAGE

DRAWBAR DOES NOT RAISE/LOWER 0050 00

THIS WORK PACKAGE COVERS:
Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Air tanks charged (TM 9-2320-392-10)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

References
TM 9-2320-392-10

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

WARNING

Wear appropriate eye protection when working under trailer due to possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout Work Package WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

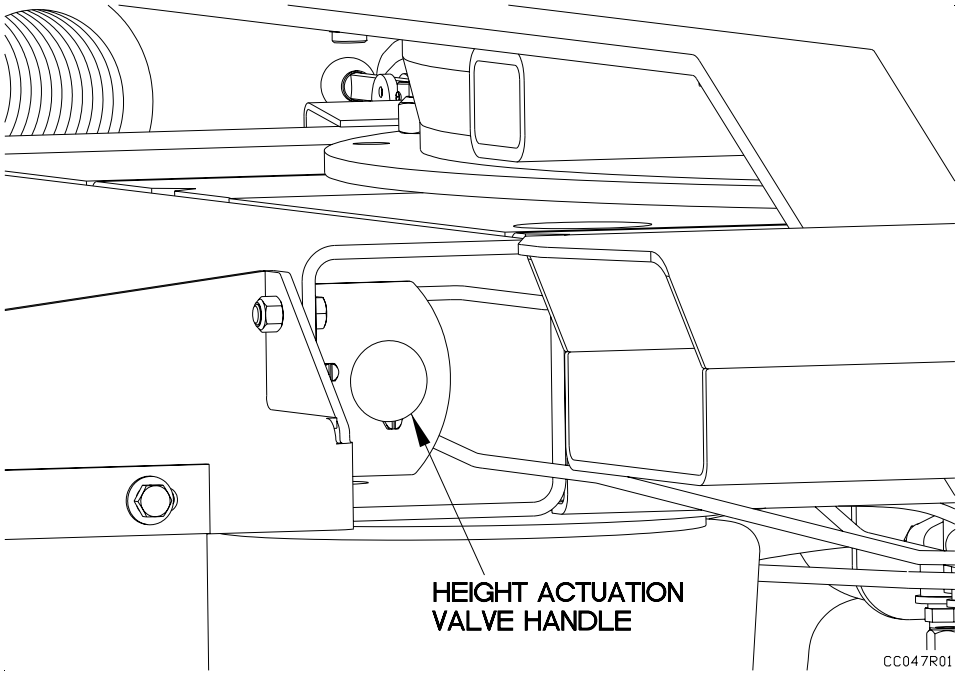
Remove plastic cable ties as required.

DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Does front suspension raise and lower?	No Proceed to Suspension System Sits Uneven (WP 0045 00). Yes Go to (Indication/Condition 2).	1. Push in height control valve knob. 2. Look to see if front suspension will lower. 3. Pull out height control knob. 4. Look to see if front suspension will raise.

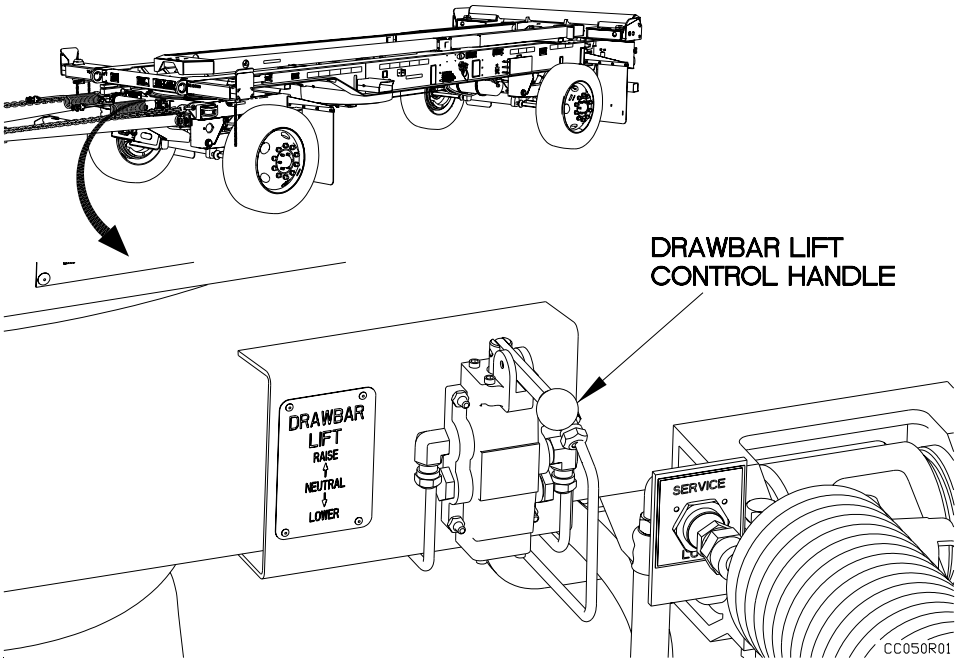


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does the drawbar not raise or lower?	**Won't Raise** Go to (Indication/Condition 3). **Won't Lower** Go to (Indication/Condition 4).	1. Raise drawbar lift control handle up to see if drawbar will raise. 2. Lower drawbar lift control handle down to see if drawbar will lower.

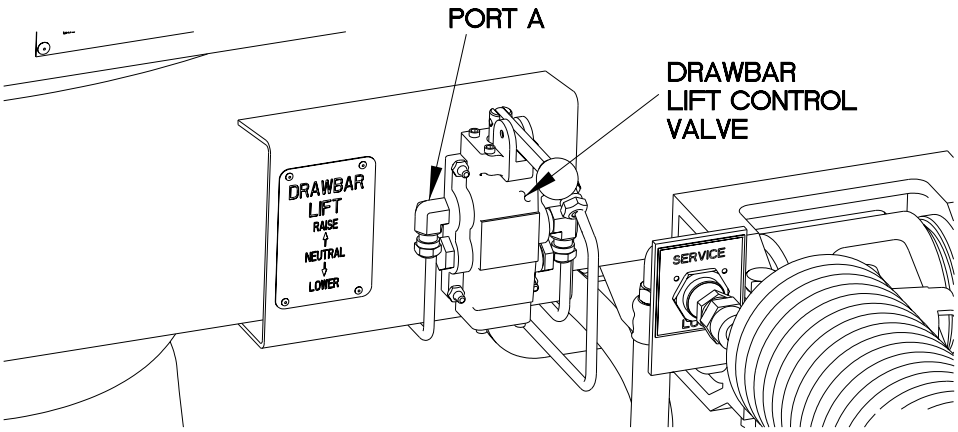


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is air pressure present at drawbar lift control port A?	**No** Go to (Indication/Condition 5). **Yes** Go to (Indication/Condition 6).	1. Disconnect connector on port A from drawbar lift control valve. 2. Lift handle on drawbar lift control valve. 3. Listen and feel for air escaping from port A.

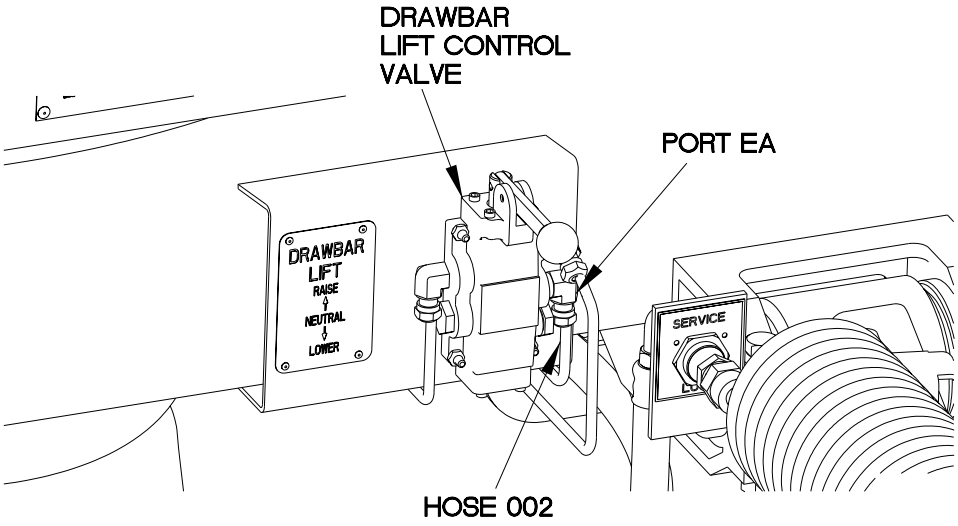


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air pressure present at port EA of drawbar lift control valve?	**No** Replace drawbar lift control valve (WP 0094 00). **Yes** Replace breather valve (WP 0082 00).	1. Disconnect hose 002 from port EA on drawbar lift control valve. 2. Lower handle on drawbar lift control valve. 3. Listen and feel for air escaping from port EA on drawbar lift control valve. 4. Release handle of drawbar lift control valve.

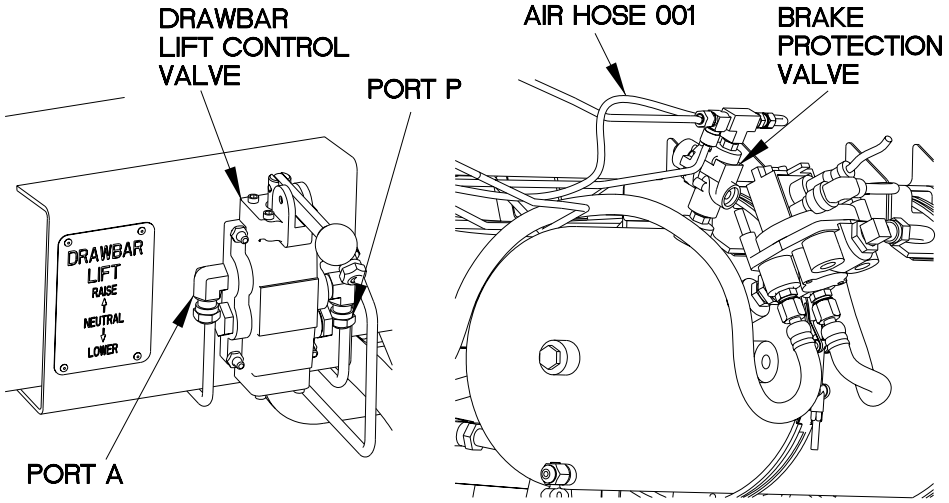


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Does air hose 001 have any kinks, holes, leaks?	**No** Replace brake protection valve (WP 0075 00).	1. Connect hose 003 to drawbar lift control valve port A.
	Yes Replace air hose 001.	2. Apply soapy water solution to air hose 001, fittings, and port P.
		3. Check air hose 001 between drawbar lift control valve and brake protection valve for bubbles indicating holes or leaks.
		4. Check fittings for bubbles indicating leaks.

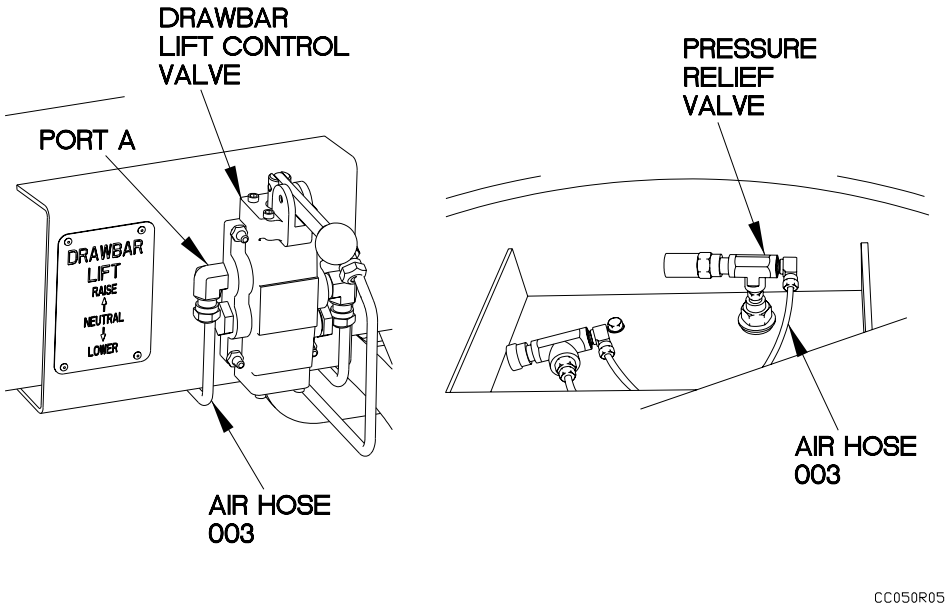


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Does air hose 003 have any kinks, holes, leaks?	**No** Go to (Indication/Condition 7).	1. Connect air hose 003 to port A on drawbar lift control valve.
	Yes Replace air hose 003.	2. Lift turntable from frame for access (WP 0099 00).
		3. Apply soapy water solution to air hose 003, fittings, and connector A on drawbar lift control valve.
		4. Raise handle on drawbar lift control valve.
		5. Check air hose 003 and fittings between drawbar lift control valve and pressure relief valve for bubbles indicating holes or leaks.

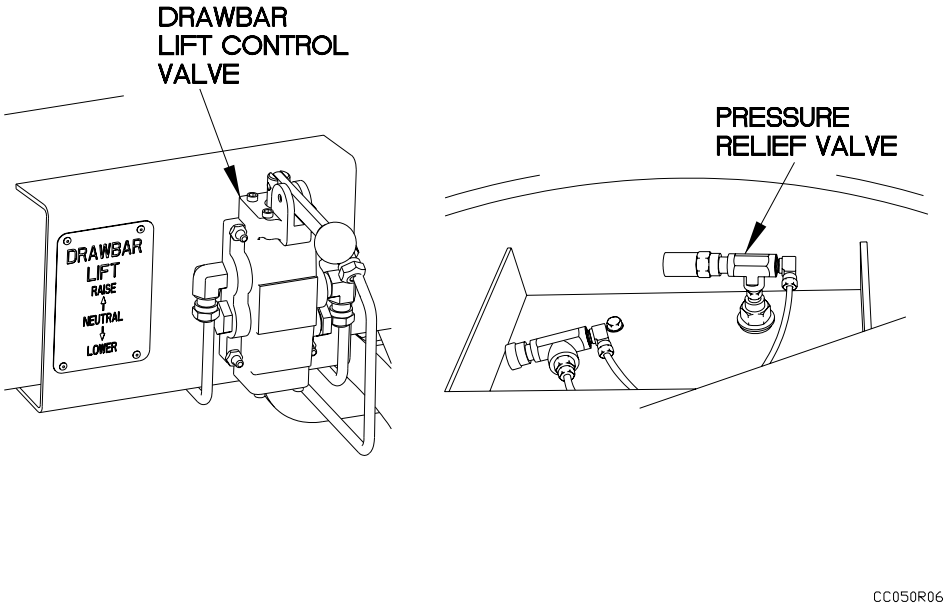


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air escaping from pressure relief valve?	**No** Go to (Indication/Condition 8). **Yes** Replace pressure relief valve (WP 0068 00).	1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle on drawbar lift control valve. 3. Listen and feel for air escaping from pressure relief valve. 4. Release drawbar lift control handle.

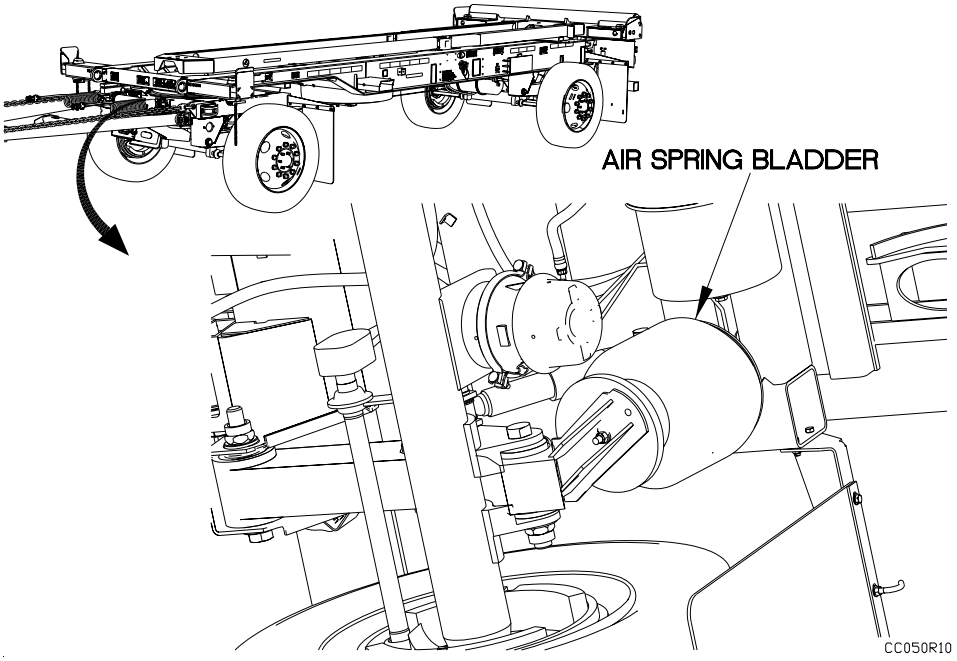


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air escaping from air spring bladder?	**No** Go to (Indication/Condition 9). **Yes** Replace air spring bladder (WP 0096 00).	1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle on drawbar lift control valve. 3. Apply soapy water solution to air spring bladder. 4. Look for bubbles to show air escaping from air spring bladder. 5. Release drawbar lift control handle.

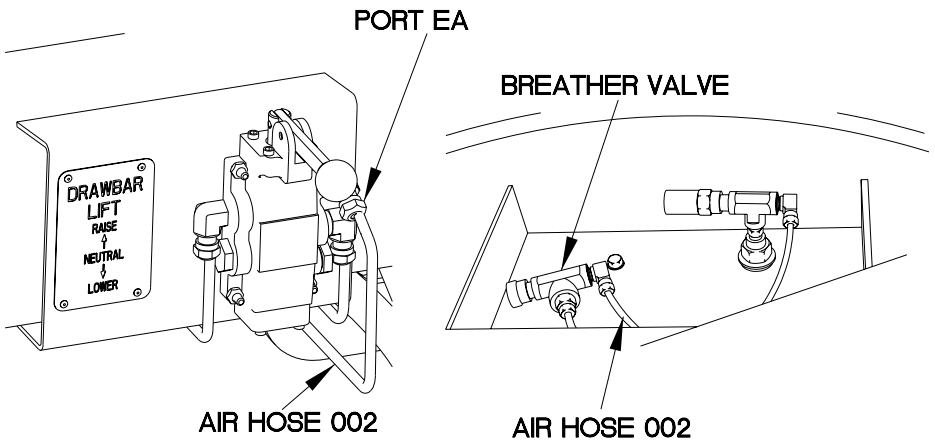


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 002 have any kinks, holes, or leaks?	**No** Go to (Indication/Condition 10).	1. Apply soapy water solution to air hose 002, fittings, and connector EA on drawbar lift control valve.
	Yes Replace air hose 002.	2. Raise drawbar lift control valve handle.
		3. Check air hose 002 between drawbar lift control valve and breather valve for bubbles indicating holes or leaks.
		4. Check fittings for bubbles indicating leaks.
		5. Release handle on drawbar lift control valve.

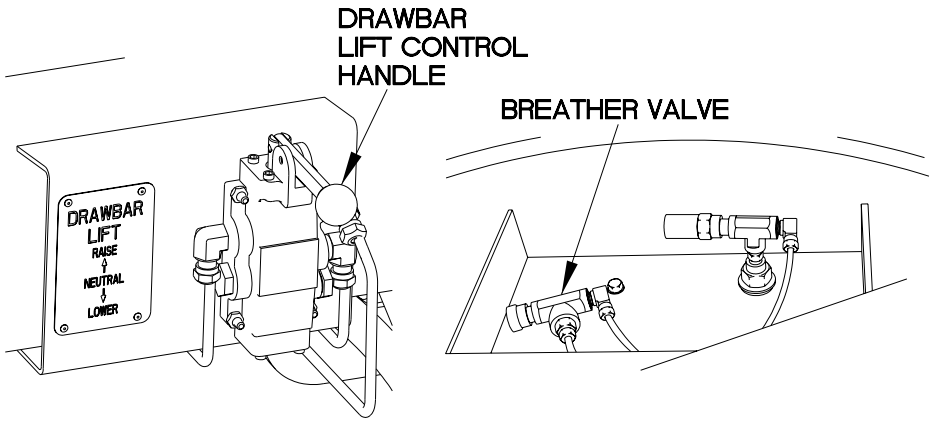


DRAWBAR DOES NOT RAISE/LOWER -Continued 0050 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air escaping from breather valve?	**No** Replace drawbar lift control valve (WP 0094 00). **Yes** Replace breather valve (WP 0082 00).	1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle on drawbar lift control valve. 3. Listen and feel for air escaping from breather valve. 4. Release drawbar lift control handle.



END OF WORK PACKAGE

OVERLOAD INDICATOR DOES NOT OPERATE 0051 00

THIS WORK PACKAGE COVERS:
Pneumatic System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

Tools/Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Air system charged (TM 9-2320-392-10)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)

References
TM 9-2320-392-10

PROCEDURE

WARNING

Remove rings, bracelets, watches, necklaces, and any other jewelry before working around vehicle. Jewelry can catch on equipment and cause injury or short across electrical circuit and cause severe burns or electrical shock. Failure to comply may result in injury to personnel.

Wear appropriate eye protection when working under trailer due to possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

Tag hoses and connection points prior to disconnecting.

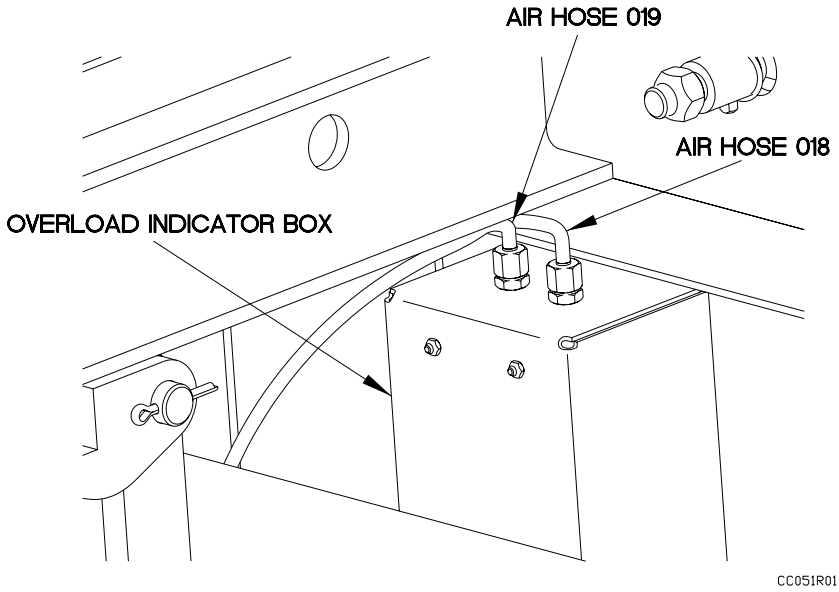
Remove plastic cable ties as required.

OVERLOAD INDICATOR DOES NOT OPERATE-Continued 0051 00

THIS WORK PACKAGE COVERS:

Pneumatic System Troubleshooting

Table 1: Overload Indicator Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at connection points to gauge at air hoses 018 and 019?	**No.** Go to (Indication/Condition 2). **Yes.** Replace Overload Indicator (WP 0106 00).	1. Loosen air hoses 018 and 019 from overload indicator connection points. 2. Charge air system. 3. Check to see if air escapes at connection points of air hoses. 4. Tighten air hose connections at overload indicator.
		
2. Do air hoses 018 or 019 have any kinks, leaks or holes in them?	**No.** Proceed to Suspension System Sits Uneven (WP 0045 00). **Yes.** Replace air hoses 018 and/or 019.	1. Apply soapy water solution to air hoses 018 and 019 and fittings. 2. Check air hoses 018 and 019 between overload indicator for bubbles indicating holes or leaks. 3. Check hoses 018 and 019 for kinks.

END OF WORK PACKAGE

CHAPTER 4
MAINTENANCE INSTRUCTIONS

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS

0052 00

THIS WORK PACKAGE COVERS:

Introduction, Leakage Definition, Inspection, Lubrication Service Intervals - Normal Conditions, Lubrication Service Intervals - Unusual Conditions, Cleaning and Lubrication, PMCS Procedures

INITIAL SETUP:

Maintenance Level

Operator

Tools and Special Tools

Bar, Socket Wrench Handle (Item 1, WP 0167 00)
Screwdriver, Crosstip (Item 14 WP 0167 00)
Screwdriver, Crosstip (Item 15, WP 0167 00)
Wrench, Adjustable, 8 in. (Item 29, WP 0167 00)
Wrench, Adjustable, 12 in. (Item 28, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Inflator-Gage, Tire w/Hose (Item 9, WP 0167 00)
Gloves, Welder's (Item 7, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Gloves, Rubber (Item 6, WP 0167 00)

Materials/Parts

Grease, Automotive and Artillery (GAA) (Item 7, WP 0165 00)
Grease, Wire-Rope and Exposed Gear (Item 8, WP 0165 00)
Oil, Lubricating, Gear, GO (Item 10, WP 0165 00)

Materials/Parts (Cont)

Corrosion Prevention Compound (Item 5, WP 0165 00)
Rag, Wiping (Item 11, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)
Brush Set (Item 3, WP 0165 00)

Personnel

(2)

References

Towing Vehicle Operator Manual

INTRODUCTION

General

Preventive Maintenance Checks and Services (PMCS) are performed to keep the Load Handling System Trailer (LHST) in operating condition. The checks are used to find, correct, or report problems. Crew members are to do the PMCS jobs as shown in the PMCS tables. PMCS are done every day the trailer is operated, using the PMCS tables.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued 0052 00

INTRODUCTION - Continued

General - Continued

Pay attention to WARNING and CAUTION statements. A WARNING means someone could be hurt. A CAUTION means equipment could be damaged.

Before you begin operating the trailer and/or its equipment, do Before PMCS.

During operation, do During PMCS.

After operation, do After PMCS.

Once a week do Weekly PMCS. If trailer has not been operated in a week, also do Before PMCS at the same time.

Do Monthly PMCS once a month. If trailer has not been operated in a month, also do After PMCS at the same time.

Field Level Maintenance performs SEMIANNUAL PMCS once every six months.

Field Level Maintenance performs ANNUAL PMCS once every 12 months.

If you are operating the trailer for the first time, do your Weekly and Monthly PMCS the first time you do your Before PMCS.

If you find something wrong when performing PMCS, fix it if you can, using troubleshooting procedures and/or maintenance procedures.

The right-hand column of the PMCS table lists conditions that make the trailer Not Fully Mission Capable. Write up items not fixed on DA Form 2404 for Field Level Maintenance. For further information on how to use this form, see DA PAM 738-750.

Explanation Of Table Entries

Item Number Column. Numbers in this column are for reference. When completing DA Form 2404 (Equipment Inspection and Maintenance Worksheet), include the Item Number for the Check/Service indicating a fault. Item Numbers also appear in the order that you must perform Checks and Services for the intervals listed.

Interval Column. This column tells you when you must perform the procedure in the procedure column. BEFORE procedures must be performed before you operate or use the trailer. DURING procedures must be performed during operation of the trailer. AFTER procedures must be performed immediately after you have operated the trailer. WEEKLY procedures must be performed every seven days. MONTHLY procedures must be performed approximately every 30 days. SEMIANNUAL procedures must be performed every six months. ANNUAL procedures must be performed every 12 months.

Man-hour Column. This column describes the number of man-hours required to complete all prescribed lubrication service. It is stated to the nearest tenth of an hour.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued 0052 00

INTRODUCTION - Continued

Explanation Of Table Entries - Continued

Item to be Checked/Serviced Column. This column provides the location and the item(s) to be checked or serviced.

Procedure Column. This column provides the procedure to check or to service the item(s) listed in the check/service column.

Equipment Not Ready/Available If: Column. This column tells you what faults will keep the trailer from being capable of performing the primary mission. If you perform check and service procedures that show faults listed in this column, do not operate the trailer. Follow standard operating procedures for maintaining the trailer or reporting equipment failure.

LEAKAGE DEFINITION

It is necessary for you to know how fluid leakage affects the status of the trailer. The following are definitions of the classes of leakage you need to know to be able to determine the status of the trailer. Learn these leakage definitions and REMEMBER - WHEN IN DOUBT, REFER TO NEXT MAINTENANCE LEVEL.

NOTE

Equipment operation is allowable with minor leakages (Class I or II). Consideration must be given to the fluid capacity of the item or system being checked. When Operators are in doubt, refer to Field Level Maintenance.

When operating with Class I or II leaks, continue to check fluid levels as required in your PMCS.

CAUTION

Operators must report Class III leaks to Field Level Maintenance. Failure to comply may result in damage to equipment.

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.

INSPECTION

Look for signs of a problem or trouble. Senses help here. You can feel, smell, hear, or see many problems. Be alert when on the trailer.

Inspect to see if items are in good condition. Are they correctly assembled, stowed, and secured, or excessively worn, leaking, corroded, or improperly lubricated? Correct any problems found or notify the next level of maintenance.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued 0052 00

INSPECTION - Continued

There are some common items to check all over the trailer. These include the following:

1. Bolts, clamps, nuts, and screws: Continuously check for looseness. Look for chipped paint, rust, or corrosion around bolt and screw heads and nuts. Tighten them when you find them loose. If tools are not available, notify the next level of maintenance.

2. Welds: Many items on the trailer are welded. To check these welds, look for chipped paint, rust corrosion, or gaps. When these conditions exist, Operators must notify Field Level Maintenance on DA Form 2404.

3. Electrical wires, connectors, and harnesses: Tighten loose connectors. Look for cracked or broken insulation, bare wires, and broken connectors. If any are found, Operators must notify Field Level Maintenance.

4. Hoses and fluid lines: Look for wear, damage and leaks, and make sure clamps and fittings are tight. Wet spots mean a leak. A stain by a fitting or connector can also mean a leak. When you find a leak, Operators must notify Field Level Maintenance.

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS

General

For safer, more trouble-free operations, make sure that your trailer is serviced when it needs it. Proper lubrication and service intervals which are the responsibility of the Operator/Crew and Field level maintenance are found in this work package.

Adherence

Intervals (on-condition or hard time) and the related man-hour times are based on normal operation. The man-hour time specified is the time needed to do all the services prescribed for a particular interval. On-condition (OC) oil sample intervals shall be applied. Change the hard time interval if lubricants are contaminated or if operating the equipment under adverse operating conditions, included longer-than-usual operating hours. The calendar interval may be extended during periods of low activity. If extended, adequate preservation precautions must be taken. Hard time intervals must be applied during the warranty period.

Intervals shown in this work package are based on calendar times. An example of a calendar interval is: Q, which means quarterly (every three months). The lubrication is to be performed at whichever interval indicated for the trailer.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued 0052 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 °F (38 °C) and for Type II is 138 °F (50 °C). Failure to comply may result in serious injury or death to personnel.

If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in serious injury or death to personnel.

Cleaning Fittings Before Lubrication. Clean parts with Dry Cleaning Solvent (SD II, P-D-680) or equivalent. Dry before lubricating. Dashed arrows indicate lubrication on both sides of equipment.

Lubrication After Fording. If a fording operation occurs, lubricate all fittings below fording depth and check submerged gear boxes for presence of water.

Lubrication After High Pressure Washing. After a thorough washing, lubricate all grease fittings and oil can points outside and underneath trailer.

Lubrication Local Views. A reference to the appropriate localized view is given after most lubrication entries.

Corrosion Control

Refer to WP 0001 00, Corrosion Prevention and Control (CPC), for appropriate corrosion control procedures.

Hard Time Lubrication Intervals

For equipment under manufacturer's warranty, hard time lubrication intervals shall be followed. Intervals shall be shortened if lubricants are known to be contaminated or if operation is under adverse conditions (e.g. longer than usual operating hours, extended idling periods, extreme dust).

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued 0052 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued

Lubrication Interval Symbols

The following lubrication interval symbols will be used as applicable:
M-monthly
S-semiannually

Lubrication Man-Hour Requirements

Table 1: Lubrication Man-Hours

Intervals		Total Man-Hours – LHST
Monthly (M)	Lubrication performed once every month	0.3
Semi-annually (S)	Lubrication performed once every six months*	6.0

LUBRICATION KEY

Table 2: Lubricants

Specification	Type
MIL-G-10924 (GAA)	Grease, Automotive and Artillery
MIL-L-2105 (GO)	Lubricating Oil, Gear, Multipurpose

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued 0052 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued

Table 3: Cleaning Agents

Specification	Type
P/N WD-40	Corrosion Preventive Compound

Table 4: Cleaning Agent/Temperature

DESCRIPTION	CAPACITY	EXPECTED TEMPERATURES*		
		Above +15°F (Above -9°C)	+15°F to -15°F (-9°C to -26°C)	-15°F to -50°F (-26°C to -46°C)
All metal parts as required.	A/R	Corrosion Preventive Compound		

*For arctic operation refer to FM 9-207, Operation and Maintenance of Ordnance Materiel in Cold Weather (0 degrees to minus 65°F).

LUBRICATION SERVICE INTERVALS - UNUSUAL CONDITIONS

The trailer will require extra service and care when you operate under unusual conditions. High or low temperatures, long periods of hard use, or continued use in sand, water, mud, or snow will break down the lubricant requiring you to add or change lubricant more often.

CLEANING AND LUBRICATION

WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 °F (38 °C) and for Type II is 138 °F (50 °C). Failure to comply may result in serious injury or death to personnel.

If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in serious injury or death to personnel.

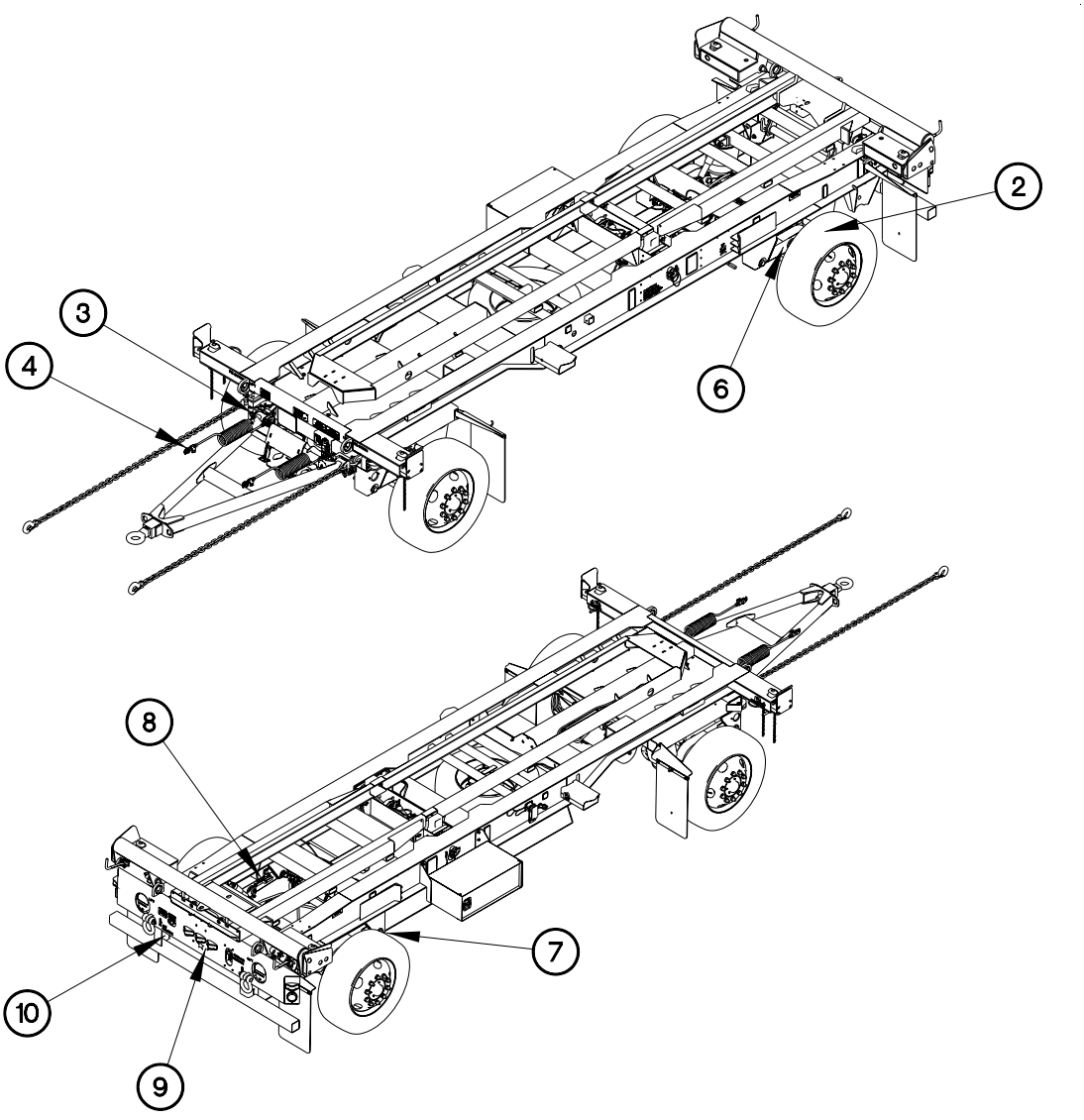
Dirt, grease, oil, and debris only get in the way and may cover up a serious problem. Use Dry Cleaning Solvent on metal surfaces where directed.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

PMCS PROCEDURES

Before PMCS Procedures for Trailer

These illustrations will help you perform BEFORE trailer PMCS. Callouts match PMCS item numbers/procedures.



CD052P01

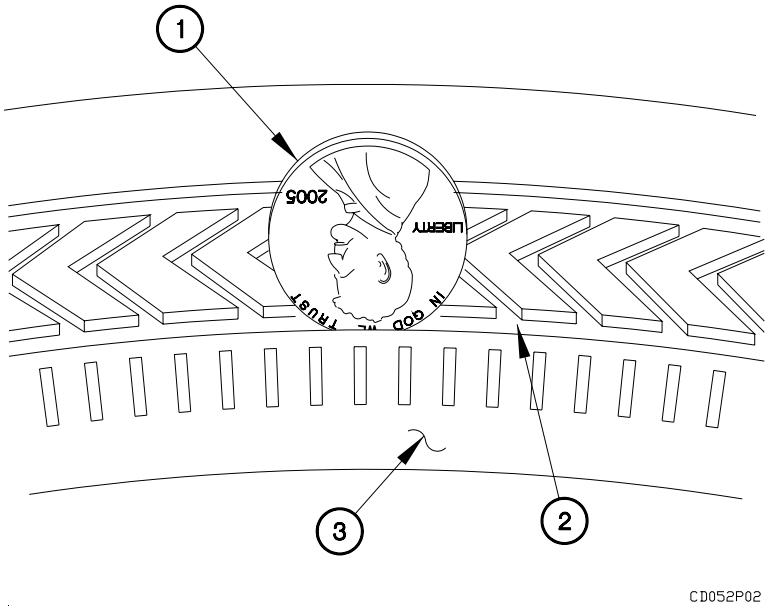
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Before		Exterior of Trailer	Look under trailer for signs of fluid leakage (grease or water).	Class III leak is evident.
2	Before		Wheels and Tires (all four)	1. Using a penny (1), insert upside down in the most shallow tread groove (2). If the top of Lincoln's head remains visible (approximately 0.0625 inches or 1.6 mm), tire (3) should be replaced.	Top of Lincoln's head remains visible.

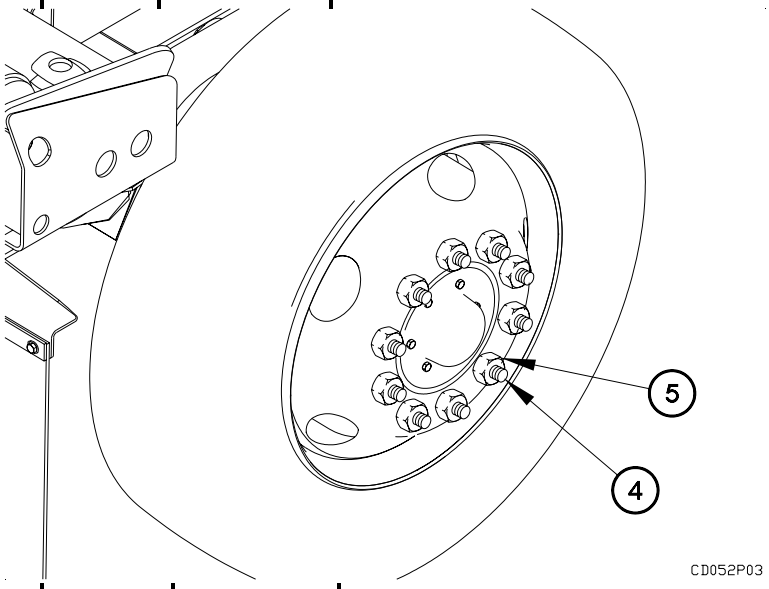


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before.

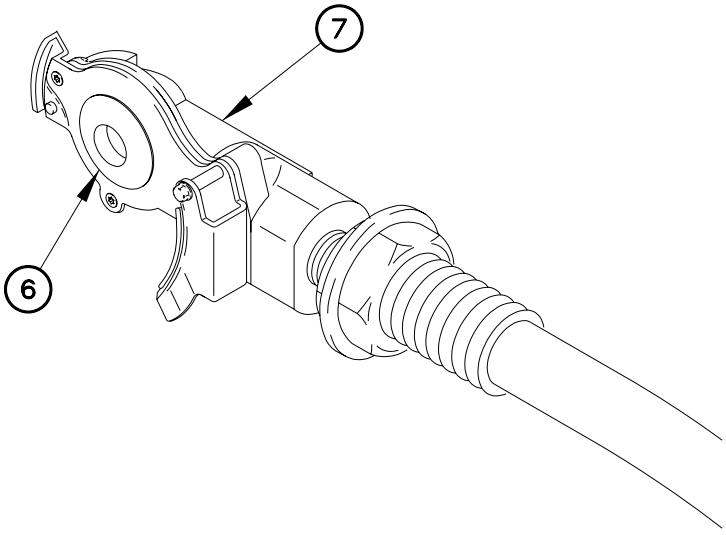
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Before		Wheels and Tires (all four) - Continued	2. Check wheel assembly for damage. If damaged, remove wheel and check wheel for cracked, broken, or bent surfaces.	Wheel is cracked, broken, or bent.
				3. Check wheel studs (4) and nuts (5) for obvious looseness. Check for bent or broken studs and missing or loose nuts. Notify Field Level Maintenance if any nuts are loose or missing or if any studs are broken or bent.	Two or more studs (4) or nuts (5) on same wheel are missing, loose, or broken.
					
				4. Check tire pressures with tire inflator/gage for 120 psi (cold).	

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Before		Coupler Seals on LH and RH Trailer and Towing Vehicle Gladhands	Check that coupler seals (6) on gladhands (7) are free of dirt, sand, or other abrasive materials. Clean if dirt, sand, or other abrasive materials are present (WP 0054 00, General, Table 1. General Cleaning Instructions).	



CD052P40

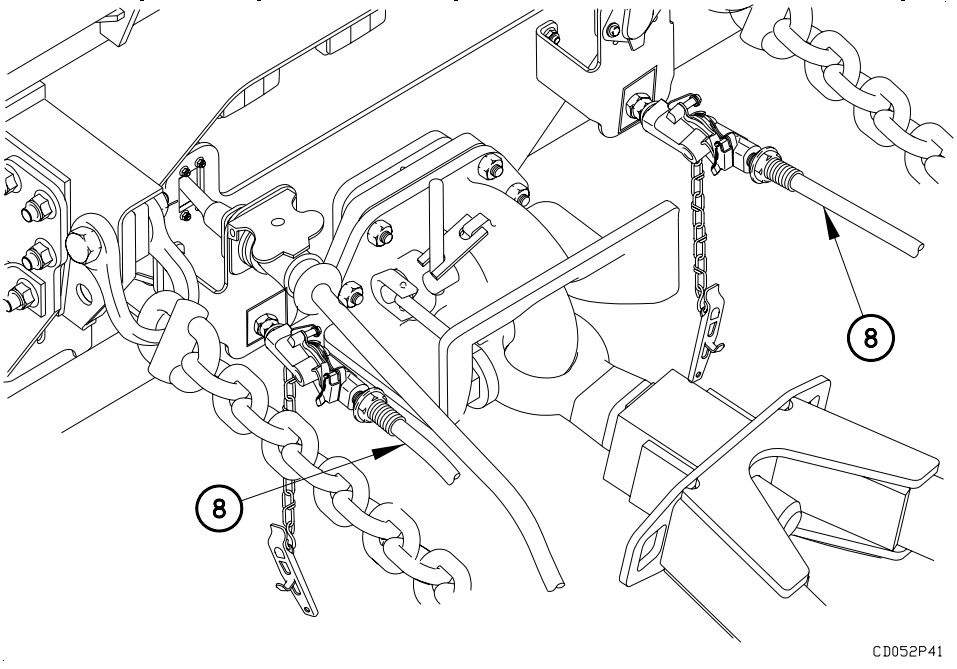
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		LH and RH SERVICE and EMERGENCY Gladhand Hoses with Trailer Coupled to Towing Vehicle	1. Check that SERVICE and EMERGENCY gladhand hoses (8) are securely connected to towing vehicle.	Both SERVICE and EMERGENCY gladhand hoses (8) cannot be securely connected to towing vehicle.



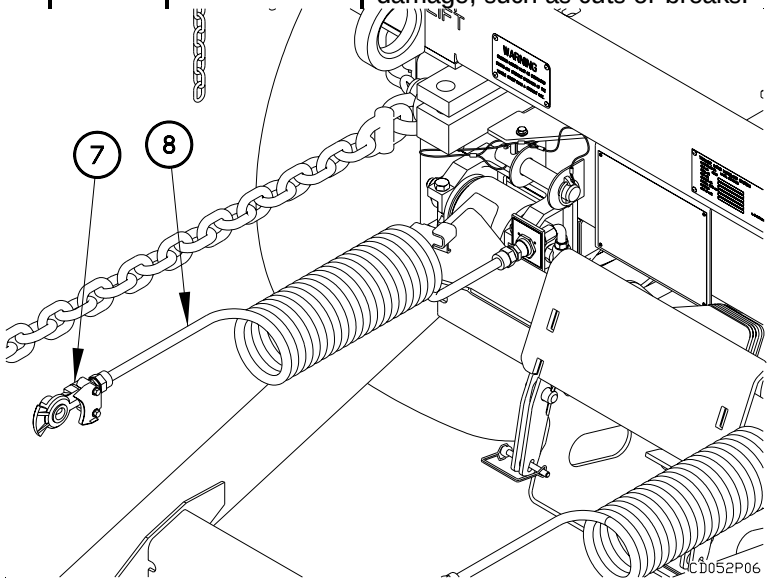
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Before		LH and RH SERVICE and EMERGENCY Gladhand Hoses with Trailer Coupled to Towing Vehicle - Continued	1. Start towing vehicle engine (WP 0020 00). 2. Check SERVICE and EMERGENCY gladhand hoses (8) and gladhands (7) for leaks and other obvious damage, such as cuts or breaks.	SERVICE and EMERGENCY gladhand hoses (8) and gladhands (7) are leaking or damaged.



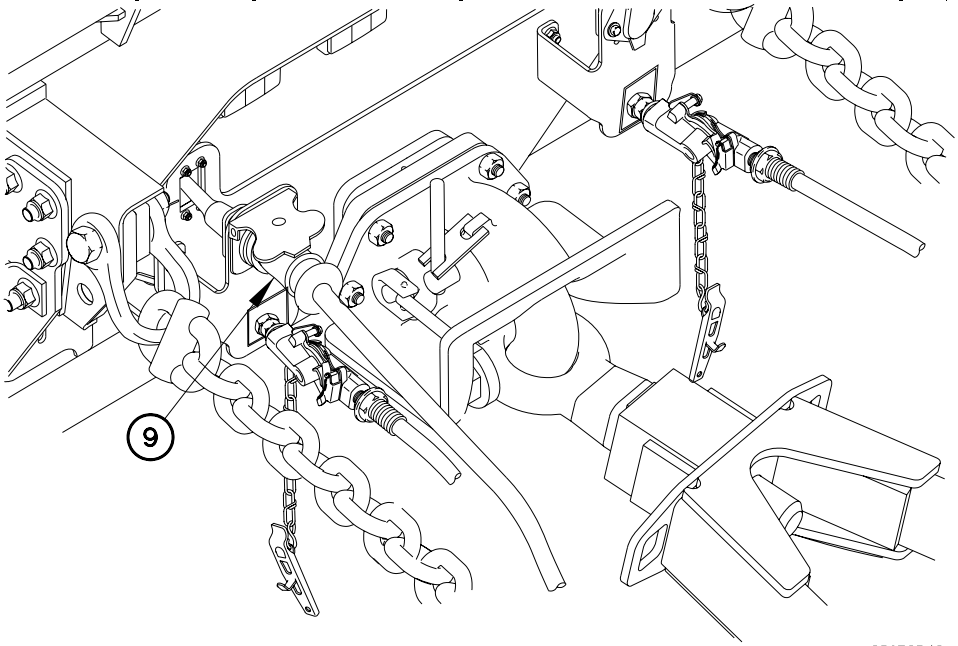
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5 Preventive Maintenance Checks and Services (PMCS) - Before - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Before		Intervehicular Cable with Trailer Coupled to Towing Vehicle	1. Check for secure attachment of intervehicular cable (9) to trailer and towing vehicle.	Intervehicular cable (9) cannot be securely connected to trailer and towing vehicle.
				2. Check intervehicular cable (9) for cracked insulation, bent pins or bare wires.	Intervehicular cable (9) has cracked insulation, bent pins, or bare wires.

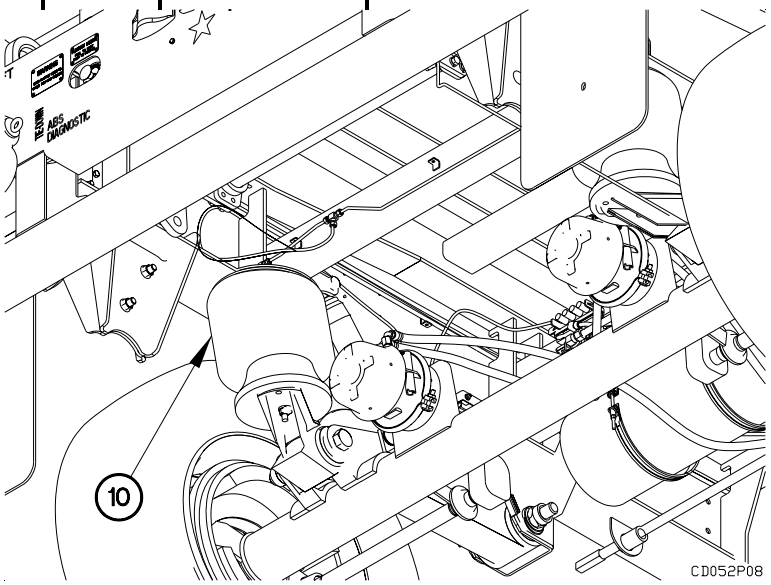


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Before		Air Bag Suspension (all four)	Check air bags (10), suspension components, and attaching hardware for any sign of damage, looseness, wear, cracks, or cuts.	Attaching hardware is loose or air bags (10) are cracked, cut or unable to hold 75 psi.

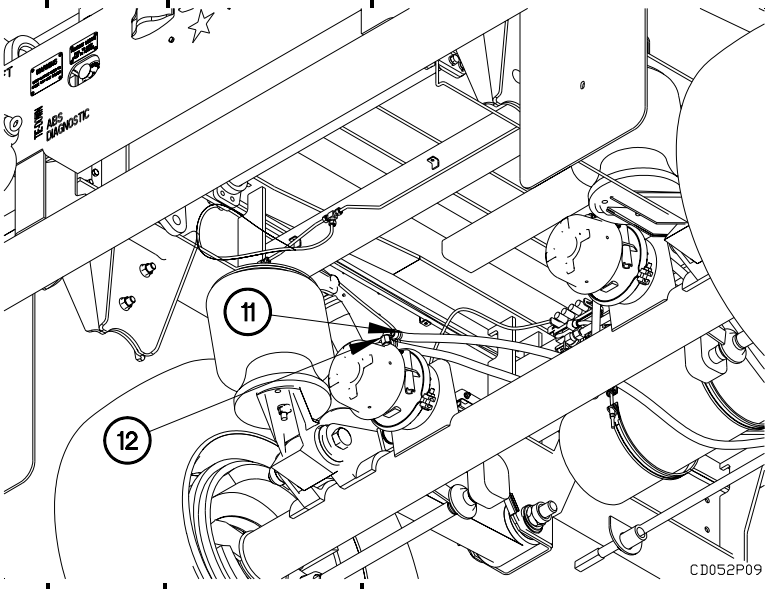


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Before		Brake System (Front and Rear)	1. Check air hoses (11) for chafing, bends, kinks, or damaged fittings (12). Notify Field Maintenance if fittings are damaged.	Fittings (12) are damaged or hoses (11) are damaged to the point of leaking air.
					
8	Before		Trailer	Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. Tighten loose bolts, nuts, and clamps. If bolts, nuts, clamps, hoses, or tubes are missing, broken, cannot be tightened, or are damaged to the point of leaking, notify Field Level Maintenance. The following should be checked:	

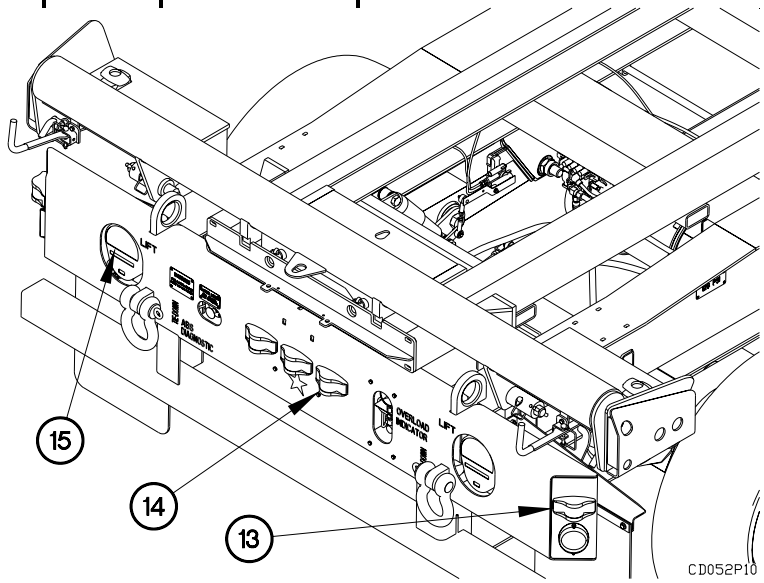
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
9	Before		Trailer Lights/ABS Diagnostic	1. Couple trailer to towing vehicle (move forward for air) (WP 0043 23, TM 9-2320-392-10-1). 2. Position the main light switch of the towing vehicle to the appropriate position to check all lights. 3. Check trailer clearance lights (13) marker lights (14), turn signals (15), taillights (15), stoplights (15), and blackout stop lights (15) for damage and proper operation (WP 0004 00, Controls) at every rest break.	One or more trailer marker lights(14), turn signals (15), taillights (15), stoplights (15), and blackout stop lights (15) are missing, damaged, or not operational.



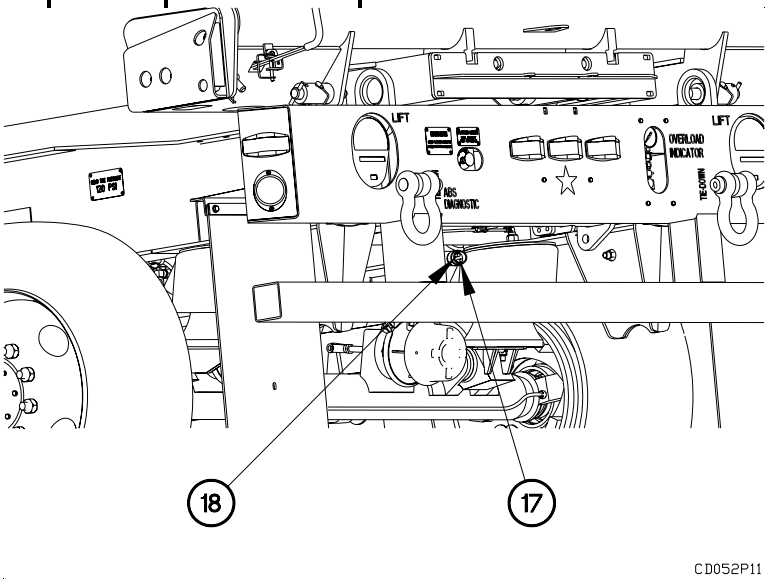
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Before PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Before - Continued

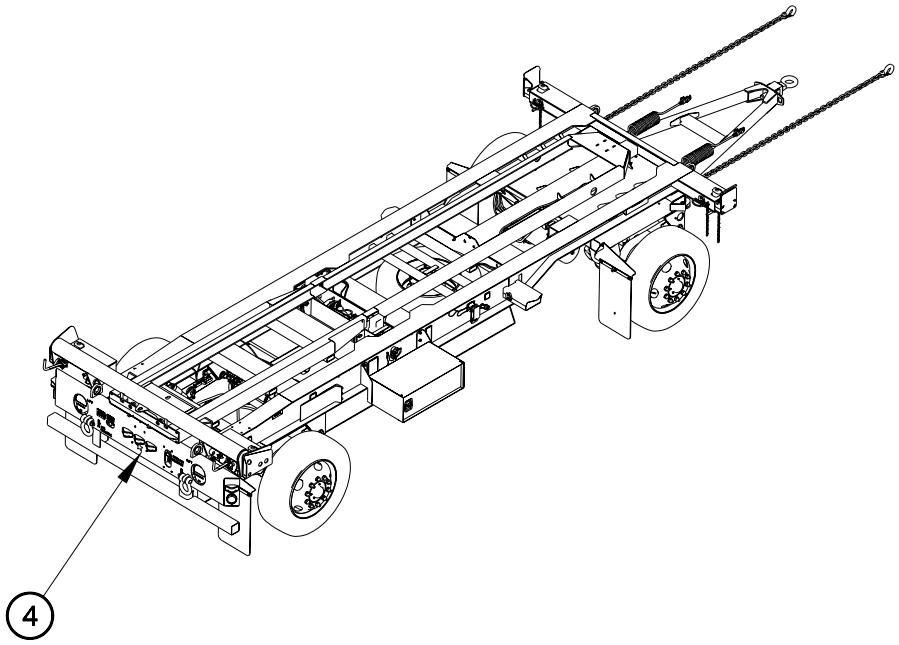
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Before		Trailer Lights/ABS Diagnostic Continued.	4. Press blink code button on ABS diagnostic connector (17) once for one second and release the button. If there are no faults the LED (18) will go off, come back on and remain on. If there are faults, the LED will flash (blink).	If the ABS diagnostic LED (18) flashes (blinks).



PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

During PMCS Procedures for Trailer

These illustrations will help you perform DURING trailer PMCS. The callouts match PMCS item numbers/procedures.



CD052P12

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

During PMCS Procedures for Trailer - Continued

Table 6: Preventive Maintenance Checks and Services (PMCS) - During.

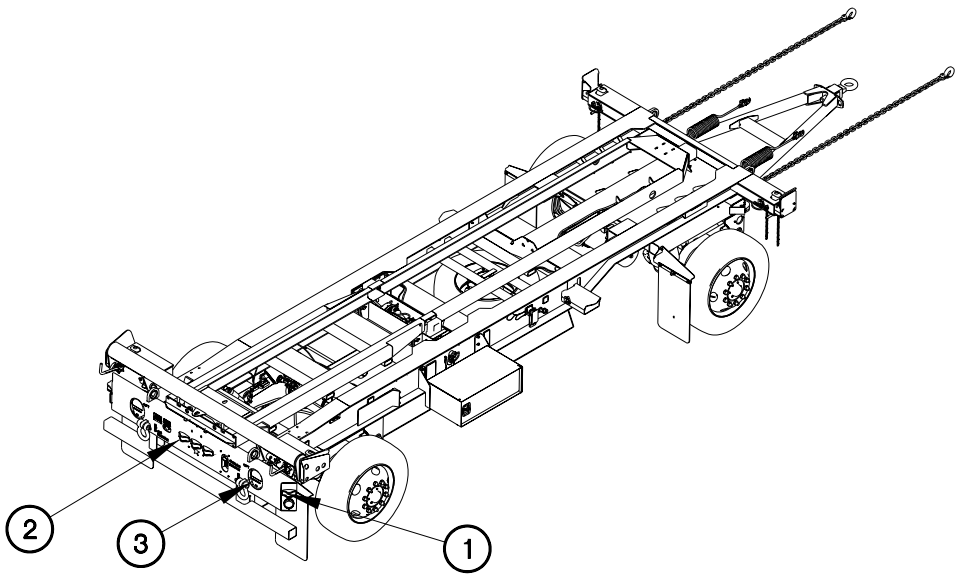
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	During		Steering With Trailer Coupled to Towing Vehicle	Check for any unusual steering noise, binding, or difficulty in turning during operation.	Steering binds or is unresponsive.
2	During		Service Brakes With Trailer Coupled to Towing Vehicle	1. Check if adequate braking is available to stop trailer during operation.	System does not provide adequate braking to trailer.
				2. Check if trailer is pulled to one side when brakes are applied during operation.	Trailer pulls to one side when brakes are applied.
				3. Listen for unusual noises (chattering, grinding, groaning, or excessive squealing) during braking. Notify Field Level Maintenance if unusual noises are present.	
3	During		Wheel Alignment	Check tracking for indication of wheel misalignment.	Serious wheel misalignment is present.

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

During PMCS Procedures for Trailer - Continued

Table 6: Preventive Maintenance Checks and Services (PMCS) - During - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	During		Trailer Lights	Check trailer clearance lights (1), marker lights (2), turn signals (3), taillights (3), stoplights (3), and blackout stop lights (3) for proper operation at every rest break (WP 0007 00, Trailer Controls).	One or more marker lights (2), turn signals (3), taillights (3), stoplights (3), and blackout stop lights (3) are not operational.



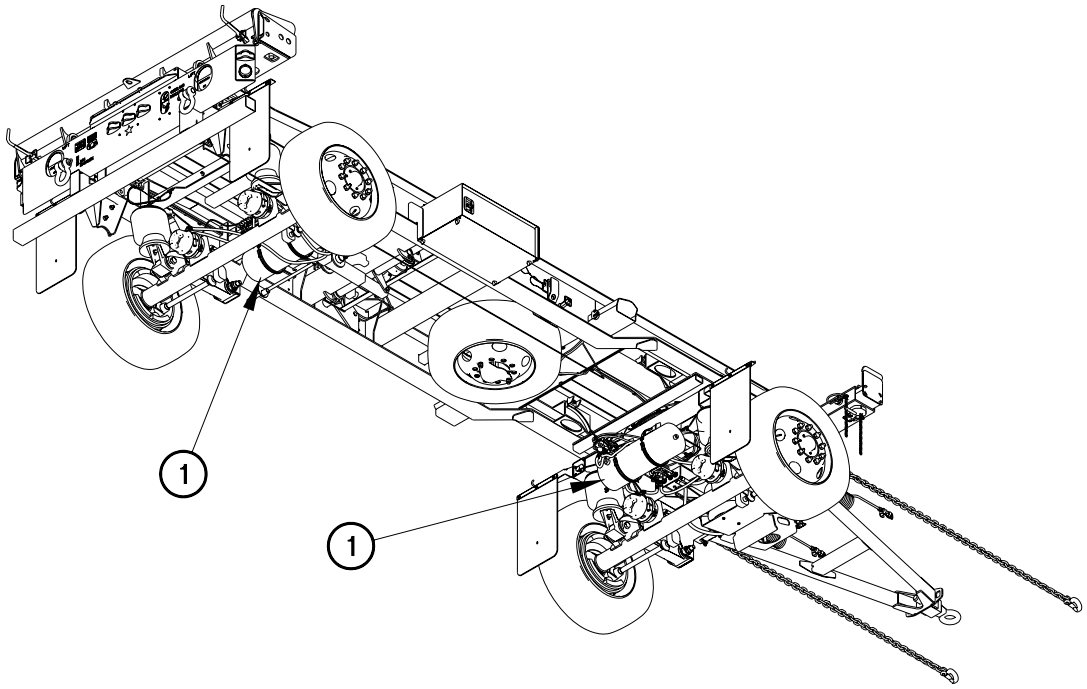
CD052P13

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

After PMCS Procedures for Trailer

These illustrations will help you perform AFTER trailer PMCS. The callouts match PMCS item numbers/procedures.



CD052P14

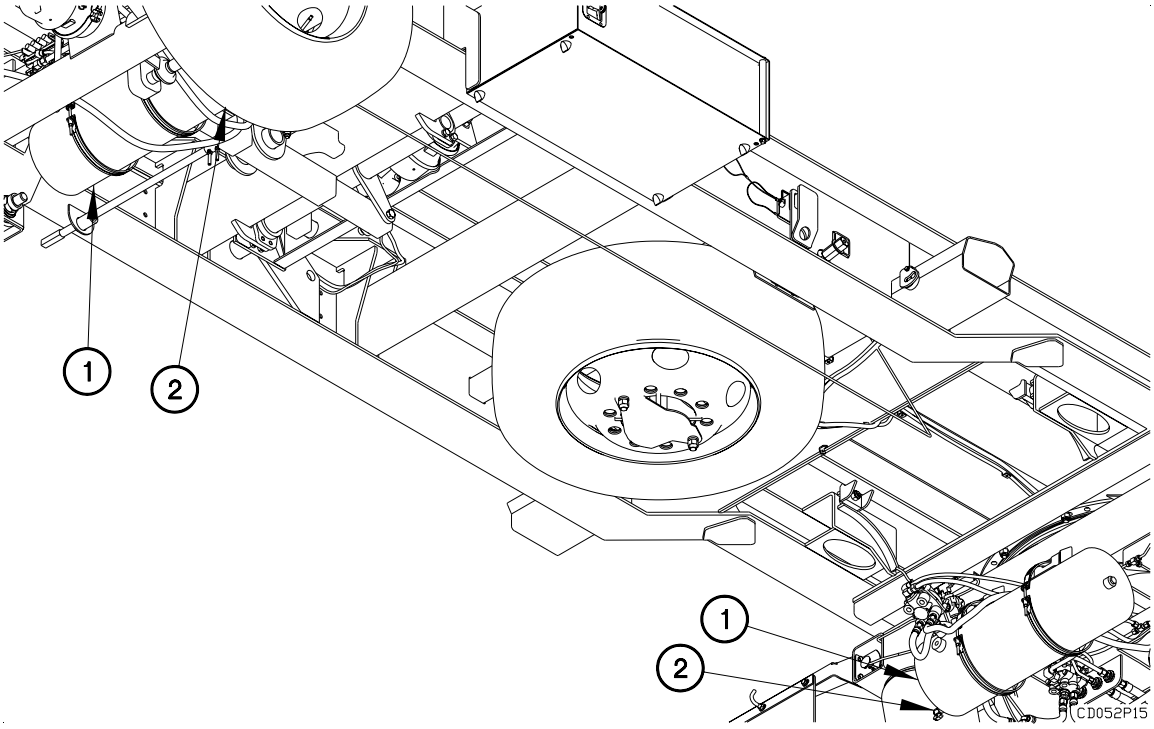
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

After PMCS Procedures for Trailer - Continued

Table 7: Preventive Maintenance Checks and Services (PMCS) - After.

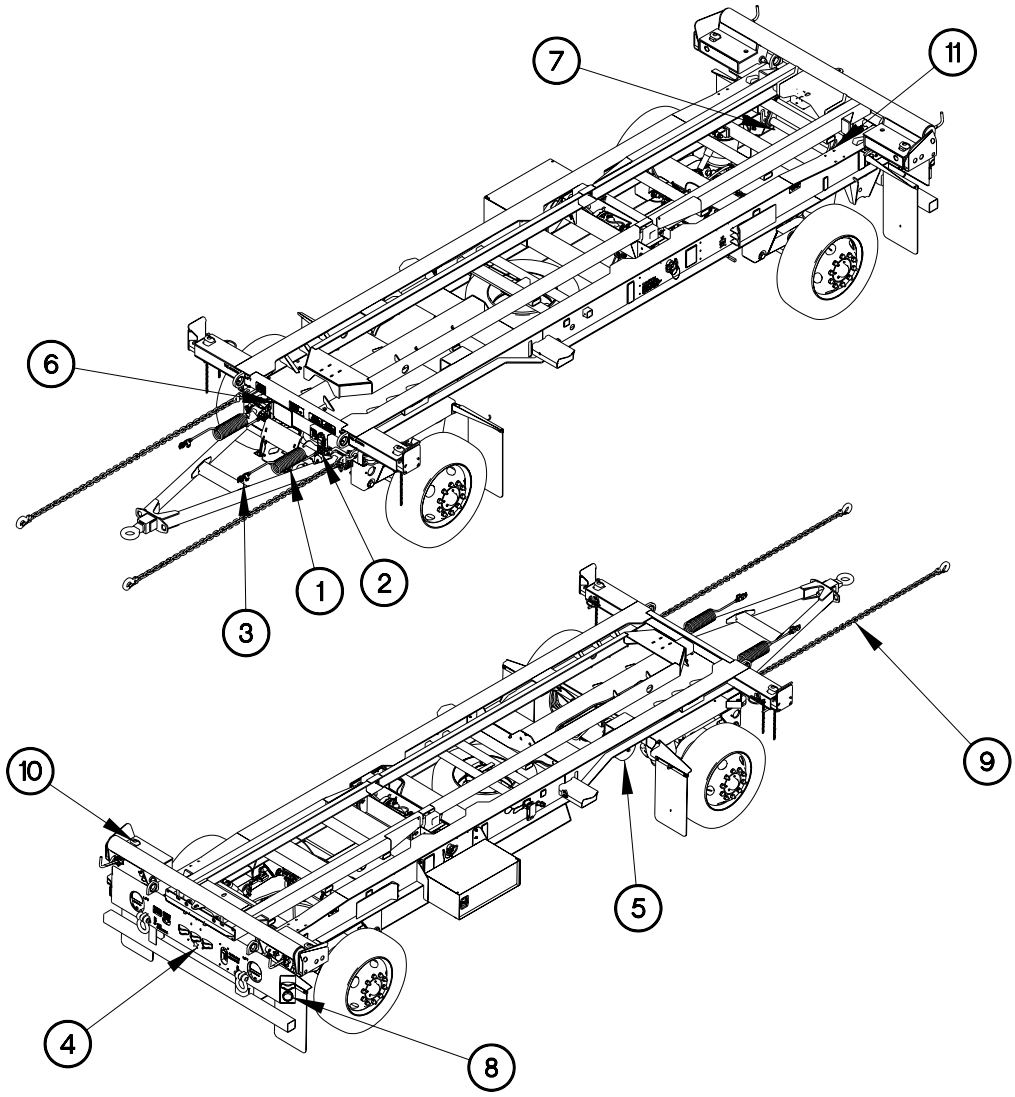
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	After		Air Tanks	1. With trailer parked and towing vehicle engine shut down, listen for sound of air leaks around trailer air tanks (1). 2. Open air tank drain valves (2) and drain moisture (WP 0004 00, Draining Air Tanks).	Air leak(s) heard around air tanks.



PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Weekly PMCS Procedures for Trailer

These illustrations will help you perform WEEKLY trailer PMCS. The callouts match PMCS item numbers/procedures.



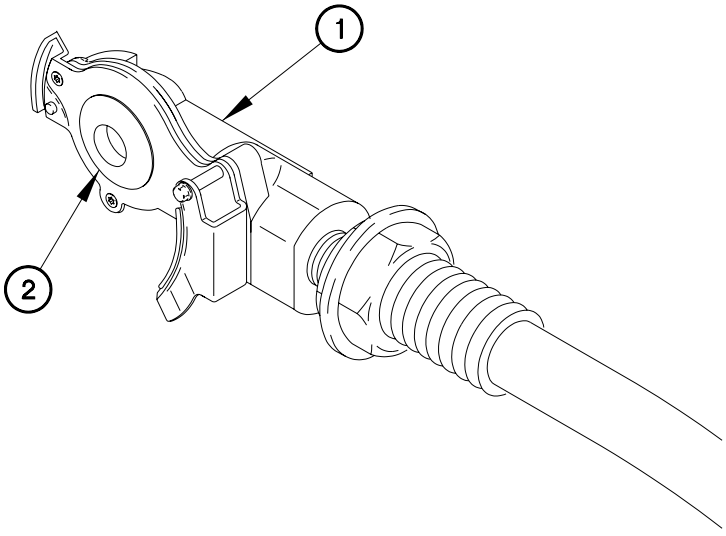
CD052P16

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		LH and RH Mounting/ Coupling Hardware and Hoses/ Tubes	Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. Tighten loose bolts, nuts, and clamps. If bolts, nuts, clamps, hoses, or tubes are missing, broken, cannot be tightened, or are damaged to the point of leaking, notify Field Level Maintenance. The following should be checked: 1. Air intake system, including SERVICE and EMERGENCY gladhand hoses (1).	



CD052P43

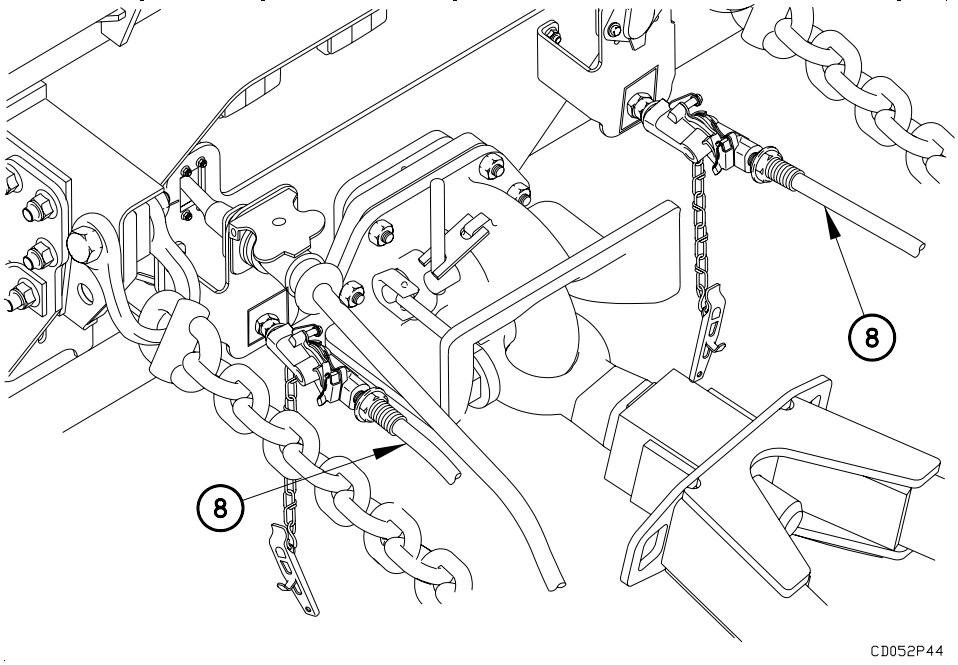
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer – Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) – Weekly.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Weekly		Coupler Seals on Trailer and Towing Vehicle Gladhands	Check that coupler seals (2) on gladhands are free of dirt, sand, or other abrasive materials. Clean if dirt, sand, or other abrasive materials are present (WP 0054 00, General, Table 1. General Cleaning Instructions).	



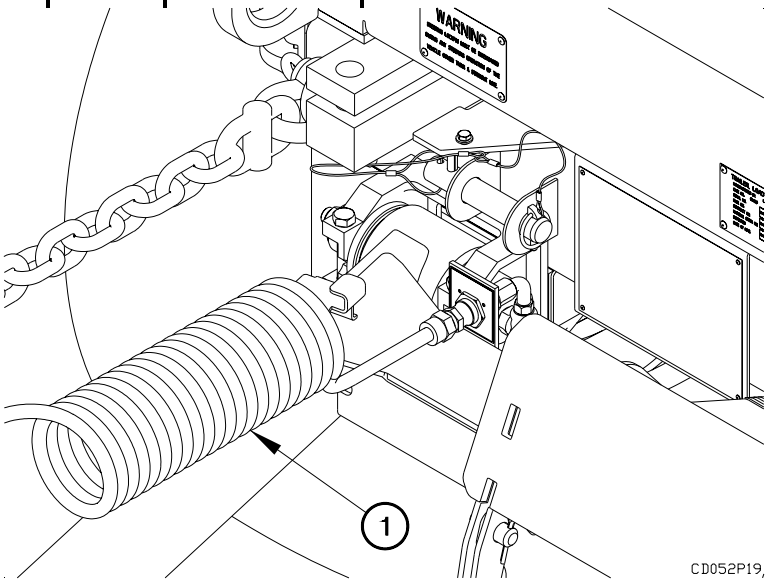
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) – Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Weekly		LH and RH SERVICE and EMERGENCY Gladhand Hoses with Trailer Coupled to Towing Vehicle	1. Check that SERVICE and EMERGENCY gladhand hoses (1) are securely connected to towing vehicle.	Both SERVICE and EMERGENCY gladhand hoses (1) cannot be securely connected to towing vehicle.



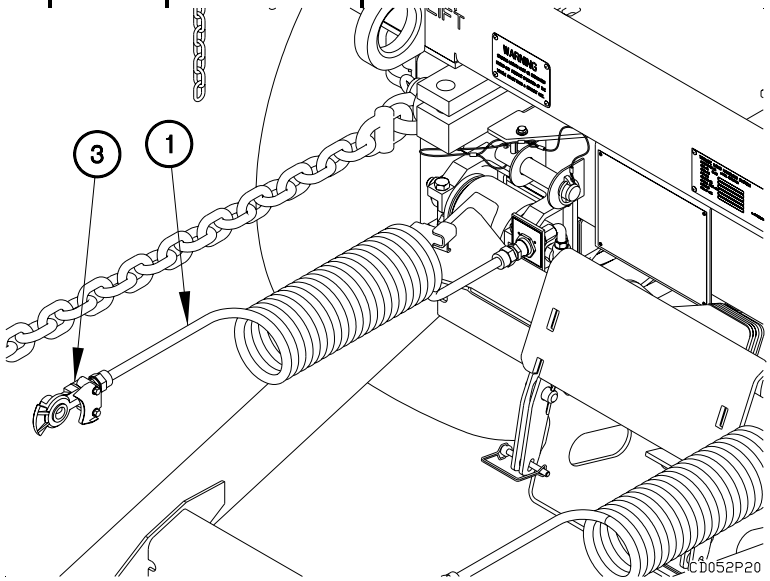
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Weekly		SERVICE and EMERGENCY Gladhand Hoses with Trailer Coupled to Towing Vehicle - Continued	2. Check SERVICE and EMERGENCY gladhand hoses (1) and gladhands (3) for leaks and other obvious damage, such as cuts or breaks.	SERVICE and EMERGENCY gladhand hoses (1) and gladhands (3) are leaking or damaged.

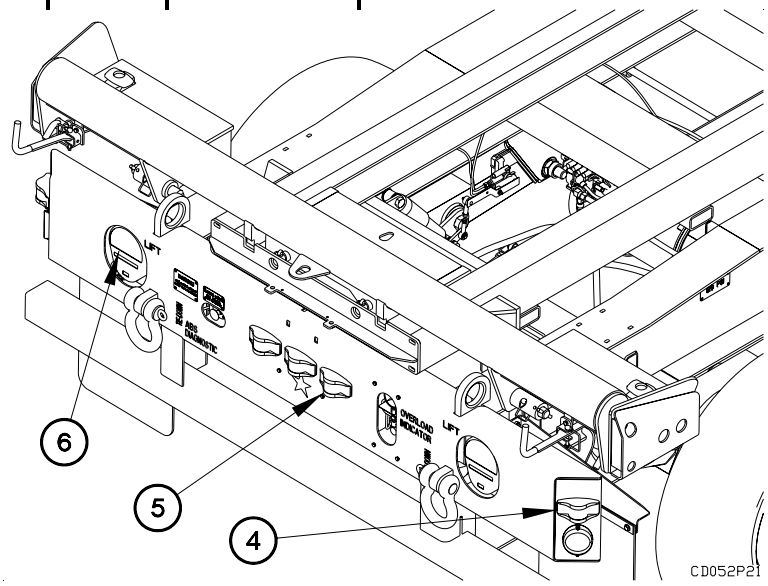


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Weekly		Trailer Lights/ABS Diagnostic	1. Couple trailer to towing vehicle (move forward for air) (WP 0043 23, Coupling Trailer). 2. Position the main light switch of the towing vehicle to the appropriate position. 3. Check trailer clearance lights (4), marker lights (5), turn signals (6), taillights (6), stoplights (6), and blackout lights (6) for damage and proper operation (WP 0004 00, Controls).	One or more trailer marker lights (5), turn signals (6), taillights (6), stoplights (6), and blackout stop lights (6) are missing, damaged, or not operational.



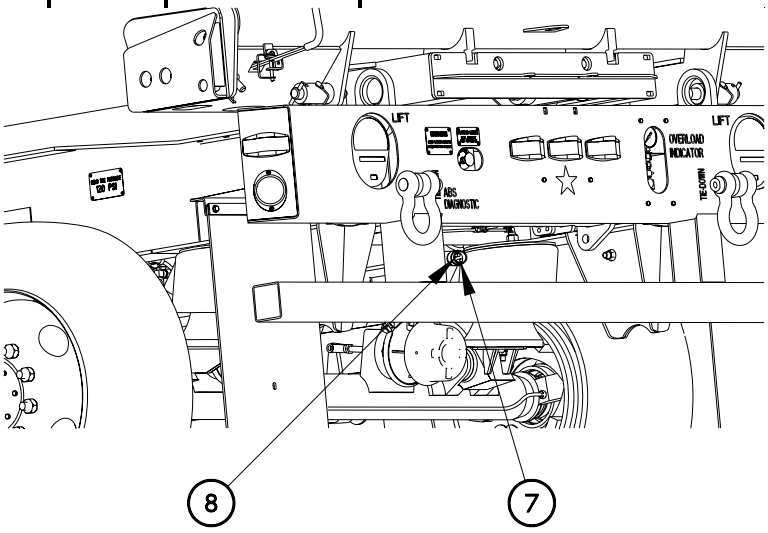
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Weekly		Trailer Lights/ABS Diagnostic Continued.	4. Press blink code button on ABS diagnostic connector (7) once for one second and release the button. If there are no faults the LED (8) will go off, come back on and remain on. If there are faults, the LED will flash (blink).	If the ABS diagnostic LED (8) flashes (blinks).



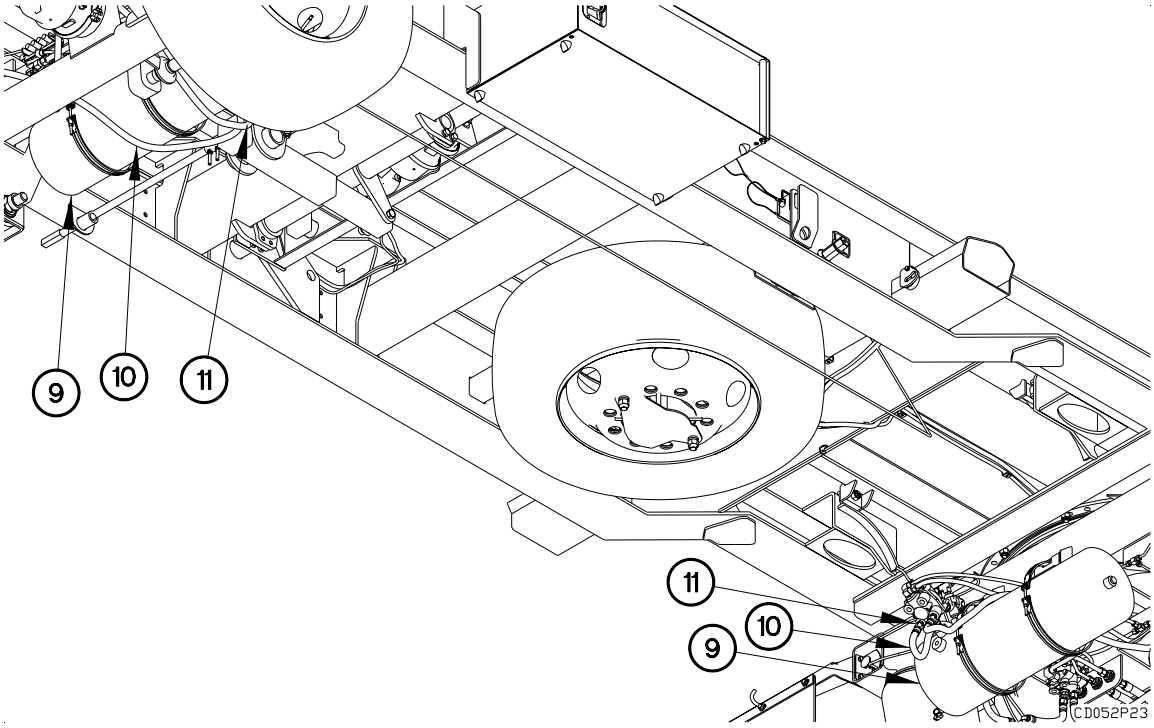
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
5	Weekly		Mounting/ Coupling Hardware and Hoses/ Tubes - Continued	Check front and rear air tanks (9) for damage. Check air hoses (10) and tubes for chafing, bends, kinks or damaged fittings (11). Notify Field Maintenance if fittings are damaged.	Fittings (11) are damaged or hoses (10) are damaged to the point of leaking air.

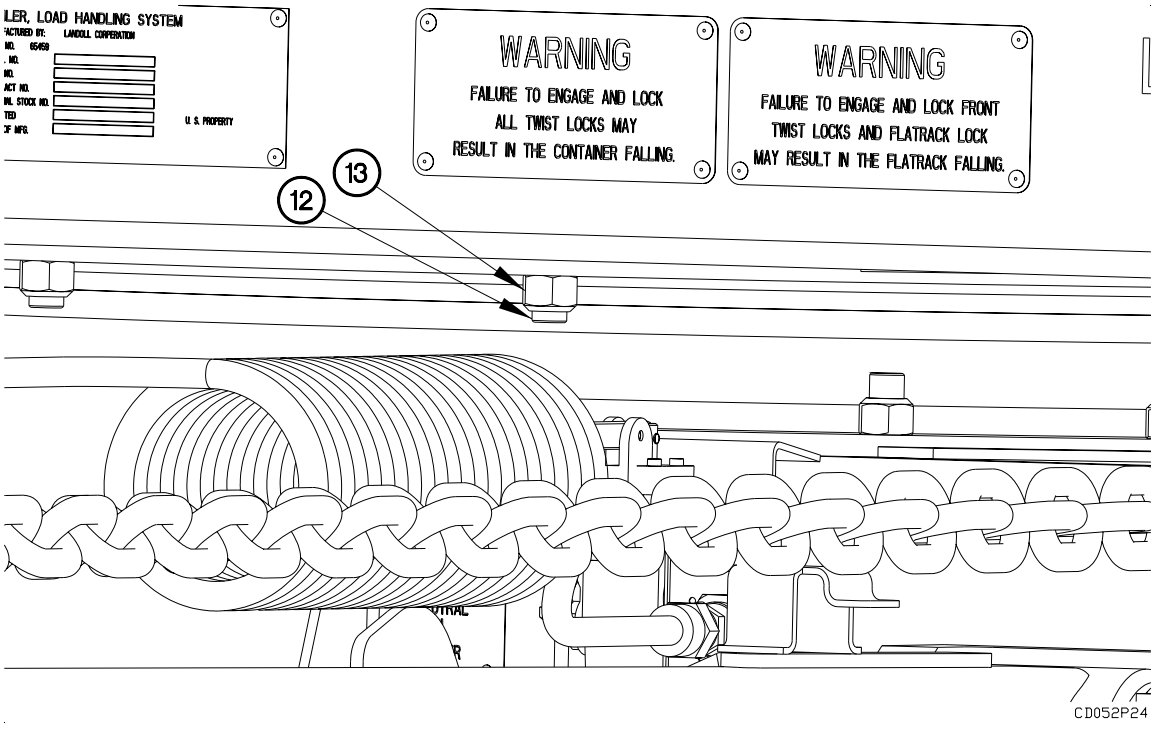


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Weekly		Turntable	Check bolts (12) and nuts (13) for looseness, missing, or broken conditions. Tighten loose bolts and nuts. If bolts and nuts are missing, broken, cannot be tightened, notify Field Level Maintenance.	Bolts (12) or nuts (13) are loose, missing, or broken.

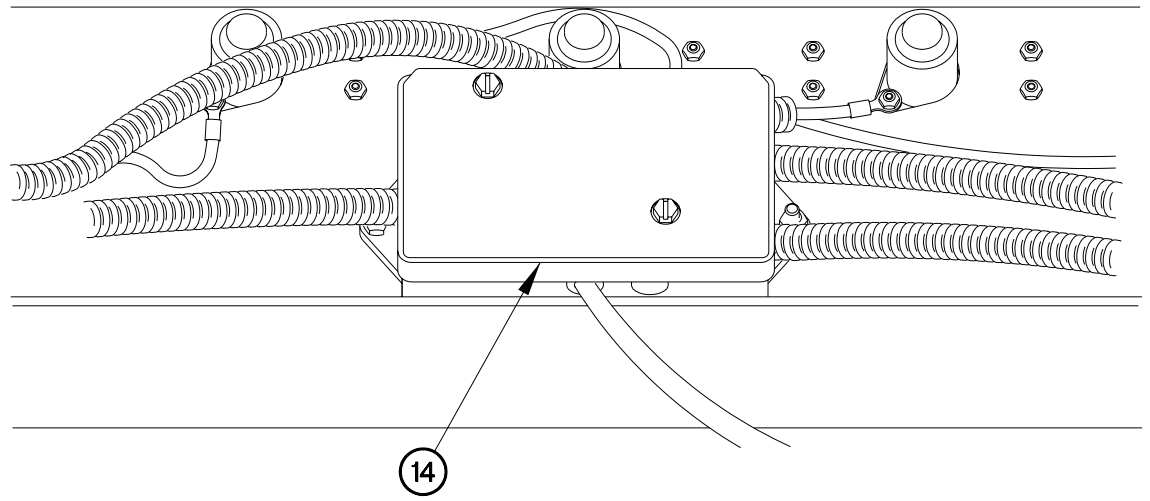


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
7	Weekly		Electrical Connectors	Check electrical connectors and covers (14) for damage.	Electrical connectors are damaged.

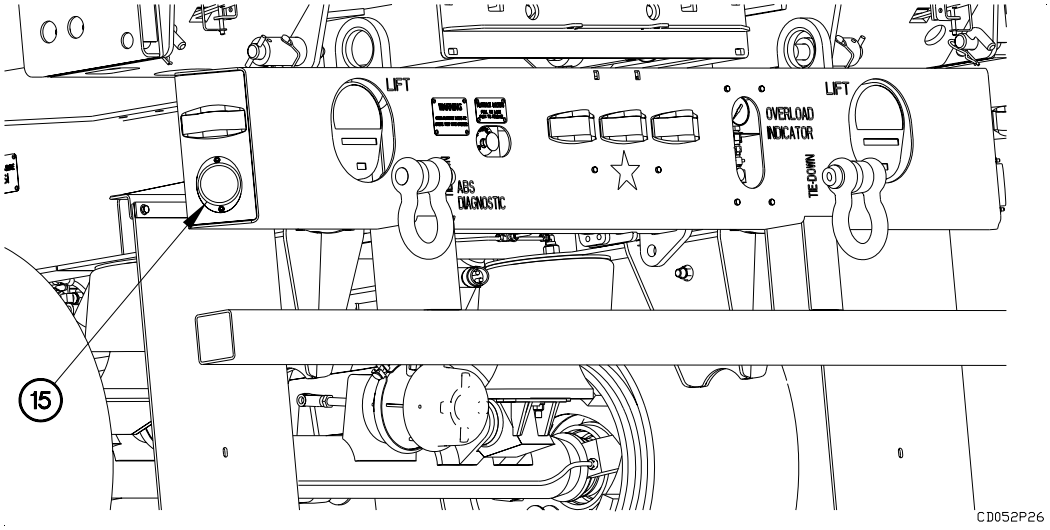
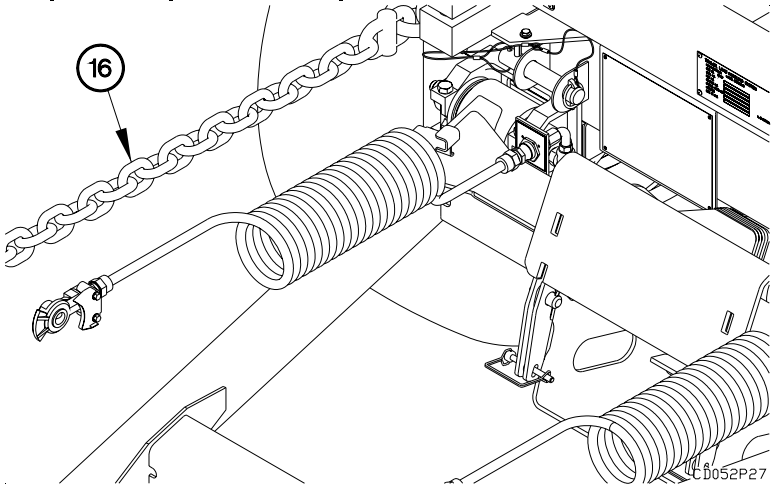


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
8	Weekly		Reflectors	Check for missing or damaged reflectors (15).	
					
9	Weekly		Safety Chains	Check safety chains (16) for looseness and/or damaged fastening mechanism.	One or both safety chains is damaged.
					

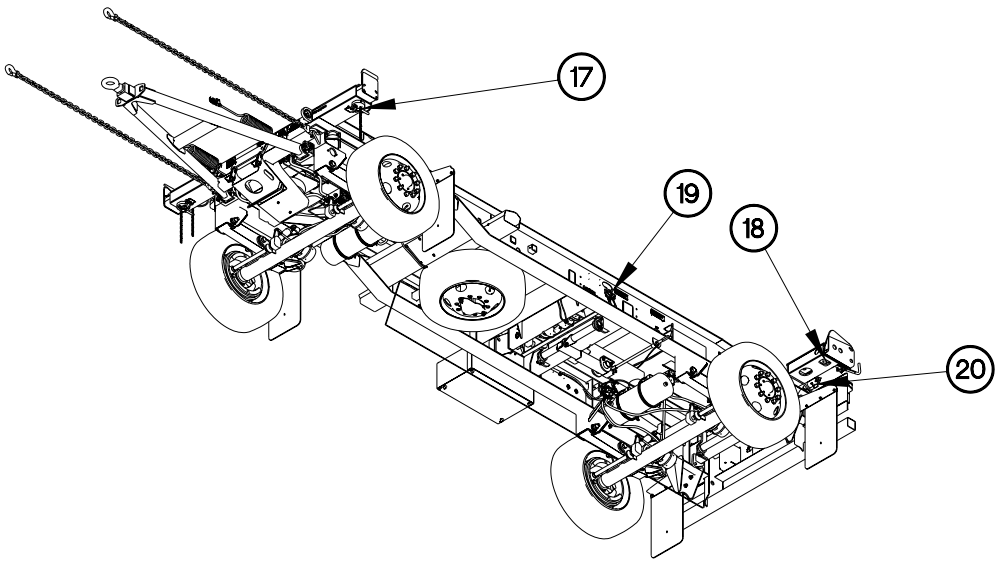
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
10	Weekly	.1	Twistlocks/ Rockshaft Pivots/ Lockpins/ and Pivot Pins	1. Inspect Twistlocks (17), Rockshaft Pivots (18), Lockpins (19), and Pivot pins (20) for damage.	Damage is present.
				2. Clean and lubricate twistlocks (17), Rockshaft Pivots (18), Lockpins (19), and Pivot Pins (20).	
				Oil Can Points As Required	
				Temperatures	
				Above 40° F (4° C) / 40° to -15°F (4° to -26° C) / -15° to -50°F (-26° to -46° C)	
				WD-40 / WD-40 / WD-40	



CD052P28

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

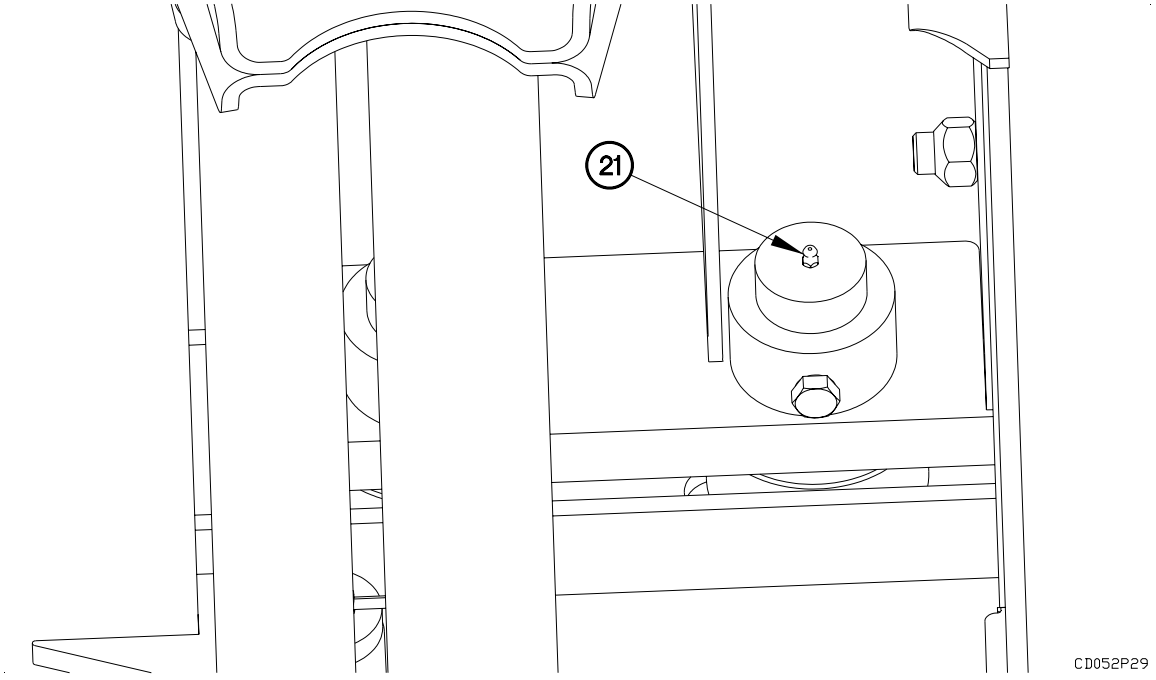
0052 00

Weekly PMCS Procedures for Trailer - Continued

Table 8: Preventive Maintenance Checks and Services (PMCS) - Weekly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
11	Weekly	.1	Shuttle Rollers	1. Lubricate shuttle rollers (21).	

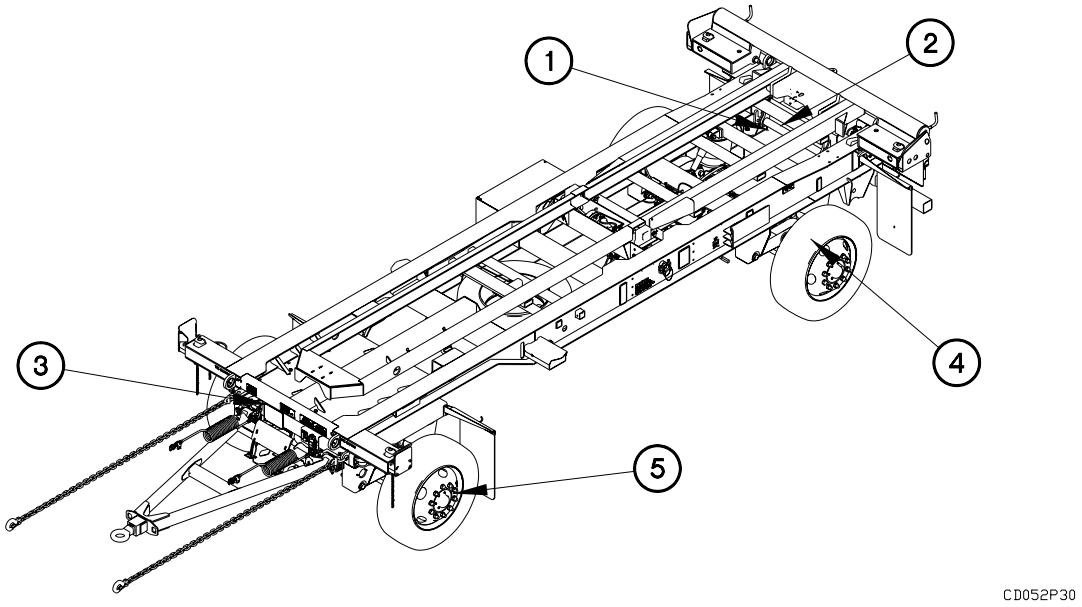
Lubrication fittings		
As Required		
Temperatures		
Above 40° F (4° C)	40° to -15°F (4° to -26° C)	-15° to -50°F (-26° to -46° C)
GAA	GAA	GAA



PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Monthly PMCS Procedures for Trailer

These illustrations will help you perform MONTHLY trailer PMCS. The callouts match PMCS item numbers/procedures.



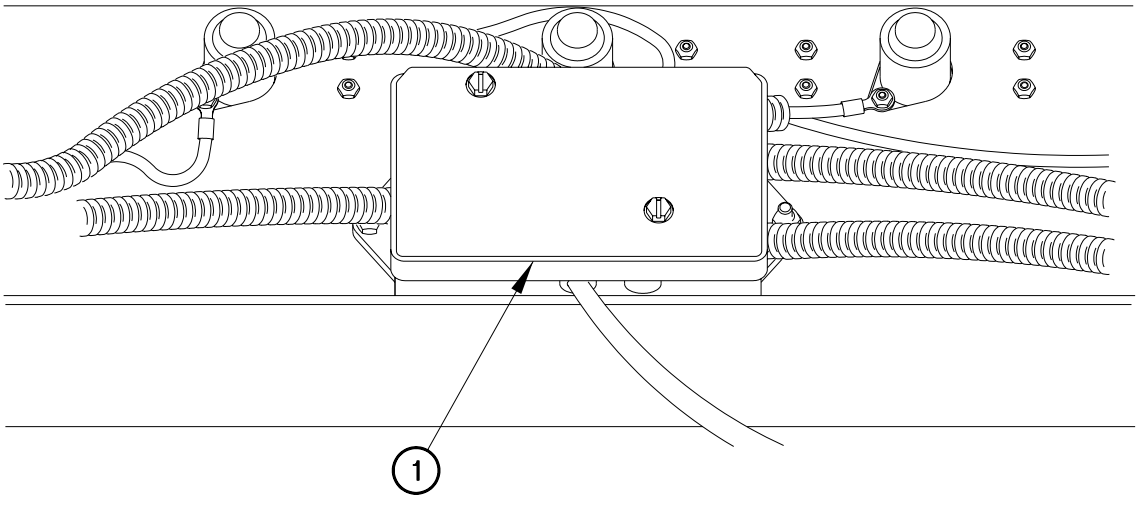
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Monthly PMCS Procedures for Trailer - Continued

Table 9: Preventive Maintenance Checks and Services (PMCS) - Monthly.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Monthly		Mounting/ Coupling Hardware and Hoses/ Tubes	Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. Tighten loose bolts, nuts, and clamps. If bolts, nuts, clamps, hoses, or tubes are missing, broken, cannot be tightened, or are damaged to the point of leaking, notify Field Level Maintenance. The following should be checked:	
2	Monthly		Electrical Connectors	Check electrical connectors and covers (1) for damage.	Electrical connectors are damaged.



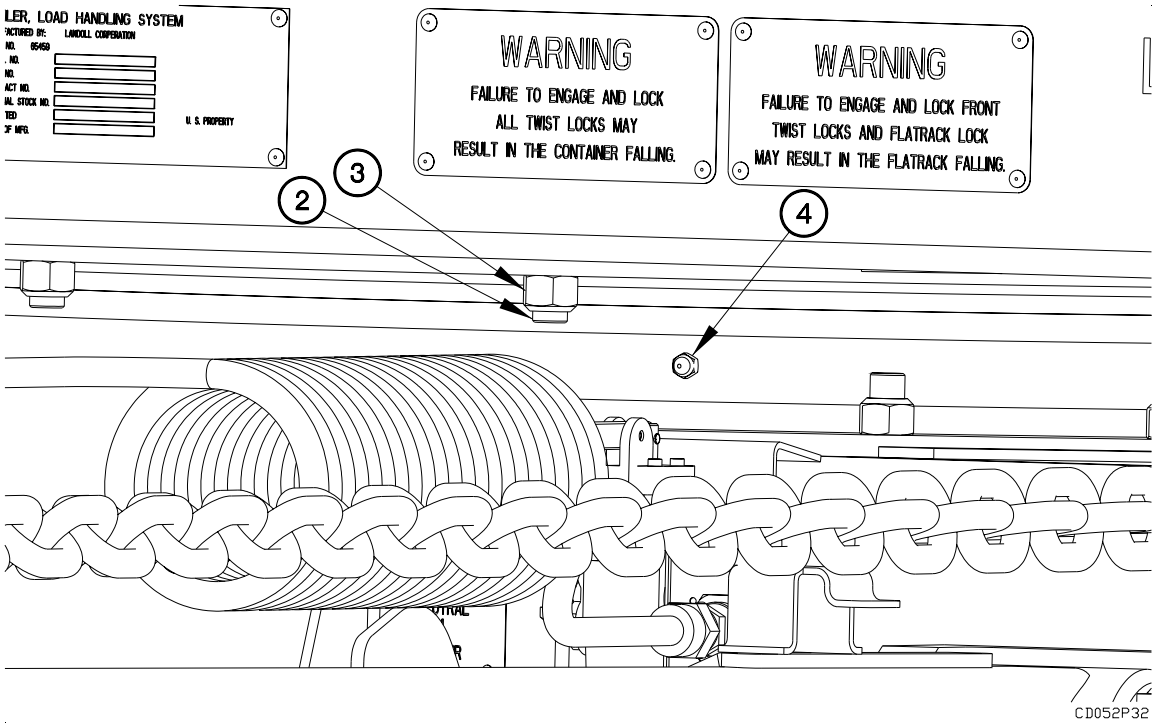
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Monthly PMCS Procedures for Trailer - Continued

Table 9: Preventive Maintenance Checks and Services (PMCS) - Monthly.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
3	Monthly	.2	Turntable	1. Check bolts (2) and nuts (3) for looseness, missing, or broken conditions. Tighten loose bolts and nuts. If bolts and nuts are missing, broken, cannot be tightened, notify Field Level Maintenance. 2. Lubricate turntable (4).	Bolts (2) or nuts (3) are loose, missing, or broken.



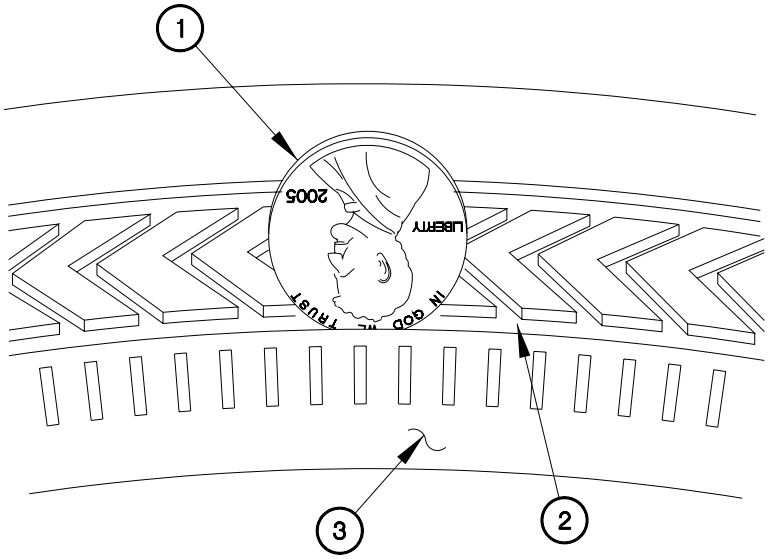
Lubrication points As Required		
Temperatures		
Above 40° F (4° C)	40° to -15°F (4° to -26° C)	-15° to -50°F (-26° to -46° C)
???	???	???

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Monthly PMCS Procedures for Trailer - Continued

Table 9: Preventive Maintenance Checks and Services (PMCS) - Monthly.

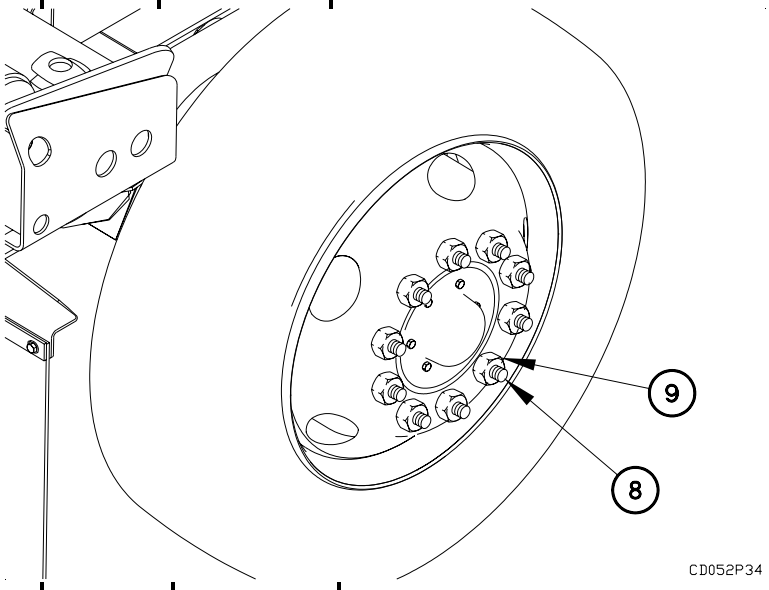
ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Monthly	.1	Wheels and Tires (all four)	1. Using a penny (5), insert upside down in the most shallow tread groove (6). If the top of Lincoln's head remains visible (approximately 0.0625 inches or 1.6 mm), tire (7) should be replaced.	Top of Lincoln's head remains visible.
				 CD052P33	
5	Monthly		Brake System	1. Lubricate slack adjusters cam shafts, and cam shaft bushings (WP 0076 00).	

Lubrication points		
As Required		
Temperatures		
Above 40° F (4° C)	40° to -15°F (4° to -26° C)	-15° to -50°F (-26° to -46° C)
GAA	**GAA**	**GAA**

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Monthly PMCS Procedures for Trailer - Continued

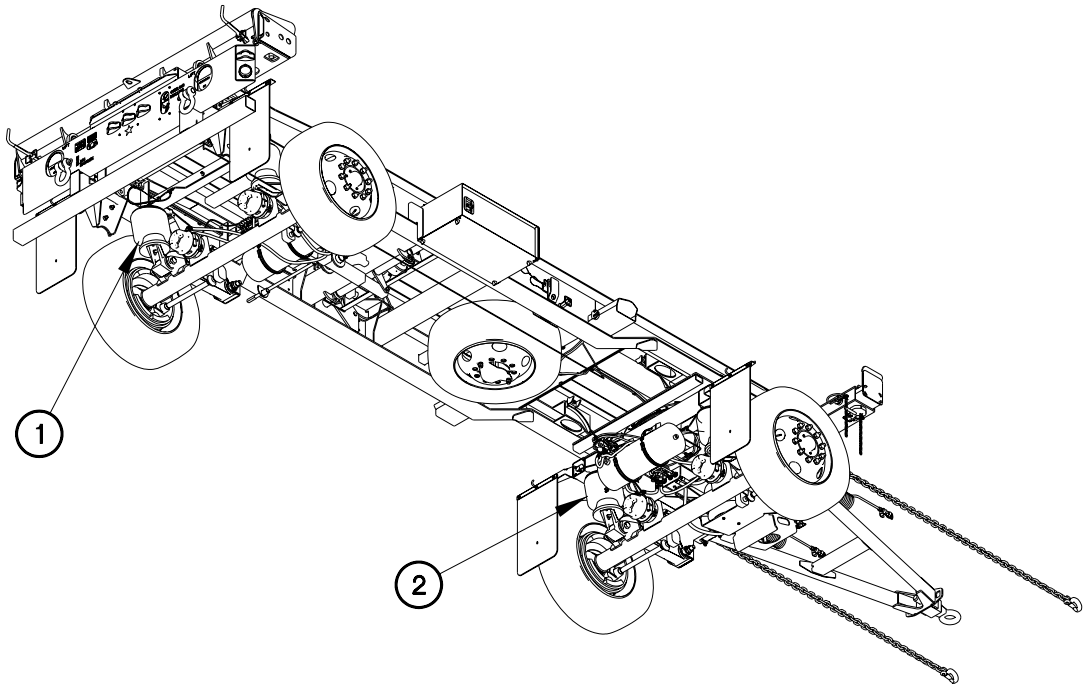
Table 5: Preventive Maintenance Checks and Services (PMCS) - Monthly.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
6	Monthly		Wheels and Tires (all four) - Continued	2. Check wheel assembly for damage. If damaged, remove wheel and check wheel for cracked, broken, or bent surfaces.	Wheel is cracked, broken, or bent.
				3. Check wheel studs (8) and nuts (9) for obvious looseness. Check for bent or broken studs and missing or loose nuts. Notify Field Level Maintenance if any nuts are loose or missing or if any studs are broken or bent.	Two or more studs (8) or nuts (9) on same wheel are missing, loose, or broken.
					
				4. Check tire pressures with tire inflator/gage for 120 psi (cold).	

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Quarterly PMCS Procedures for Trailer (Field Level)

These illustrations will help you perform QUARTERLY (Field Level) trailer PMCS. The callouts match PMCS item numbers/procedures.



CD052P35

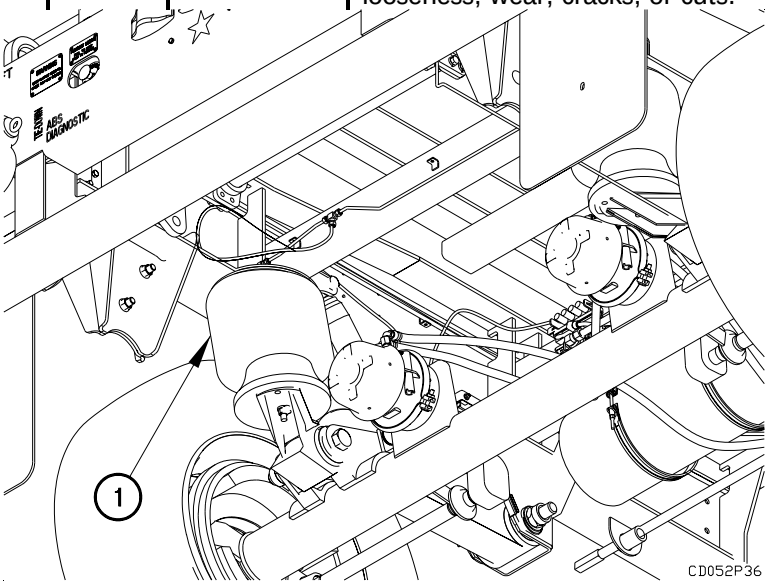
PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Quarterly PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Quarterly.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	FIELD-LEVEL MAINTENANCE PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Quarterly		Air Bag Suspension	1. Couple trailer to towing vehicle and charge air system (WP 0043 23). 2. Check air bags (1), suspension components, and attaching hardware for any sign of damage, looseness, wear, cracks, or cuts.	Attaching hardware is loose or air bags (1) are cracked, cut or unable to hold 75 psi.

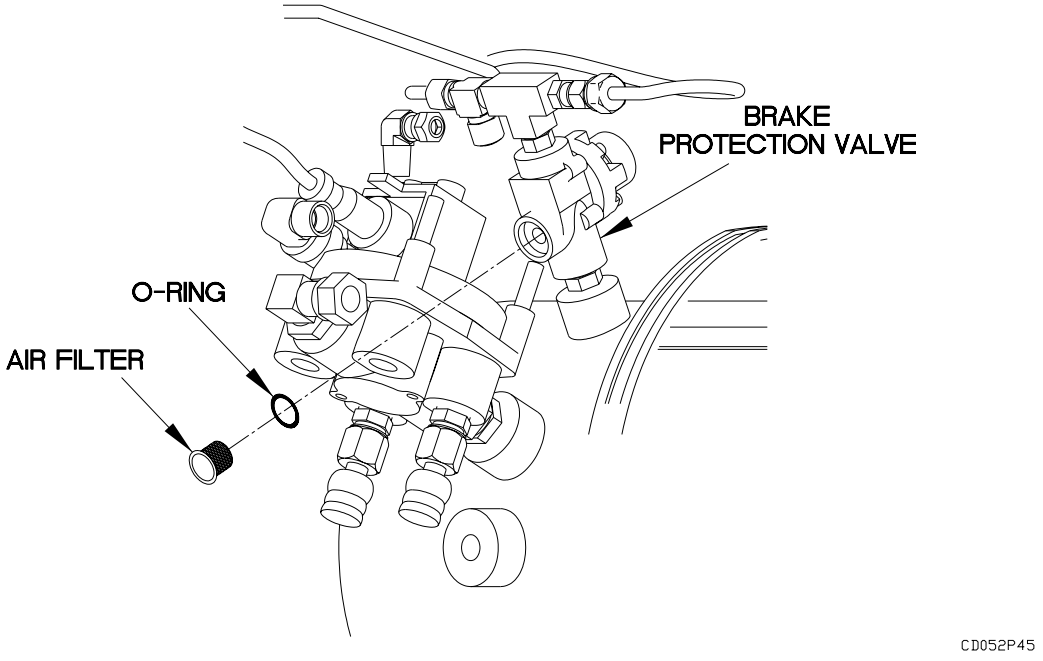


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS

Quarterly PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) - Quarterly.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	FIELD-LEVEL MAINTENANCE PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Quarterly		Brake Protection Valve	Remove and replace air filters from both brake protection valves.	

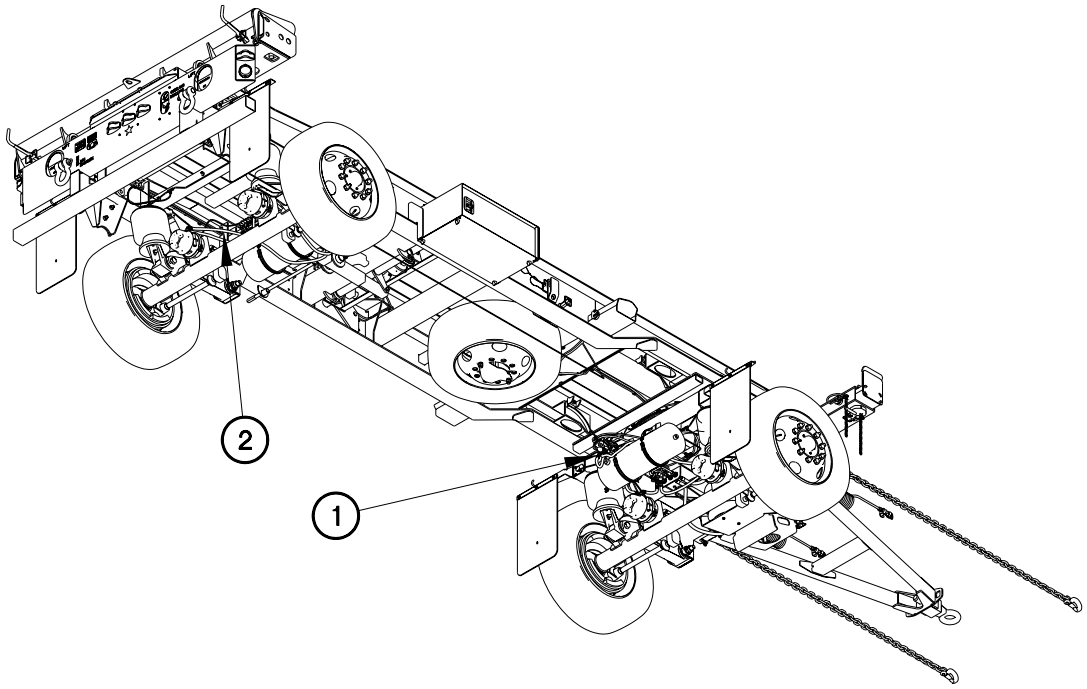


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

0052 00

Semiannual PMCS Procedures for Trailer (Field Level)

These illustrations will help you perform SEMIANNUAL (Field Level) trailer PMCS. The callouts match PMCS item numbers/procedures.



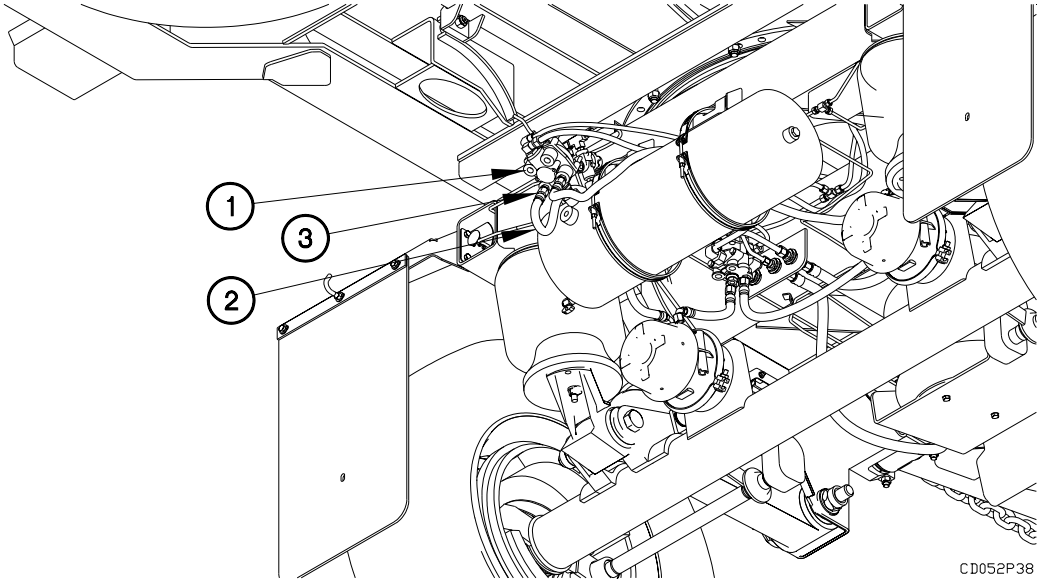
CD052P37

PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Semiannual PMCS Procedures for Trailer (Field Level) - Continued

Table 10: Preventive Maintenance Checks and Services (PMCS) - Semiannual (Field Level).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	FIELD-LEVEL MAINTENANCE PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
1	Semiannual		Relay Valves	1. Inspect relay valves (1) and hoses (2) for chafing, bends, kinks, or damaged fittings (3). Notify Field Maintenance if fittings are damaged.	Hoses (2) are bent, kinked, or damaged. Fittings (3) are damaged.

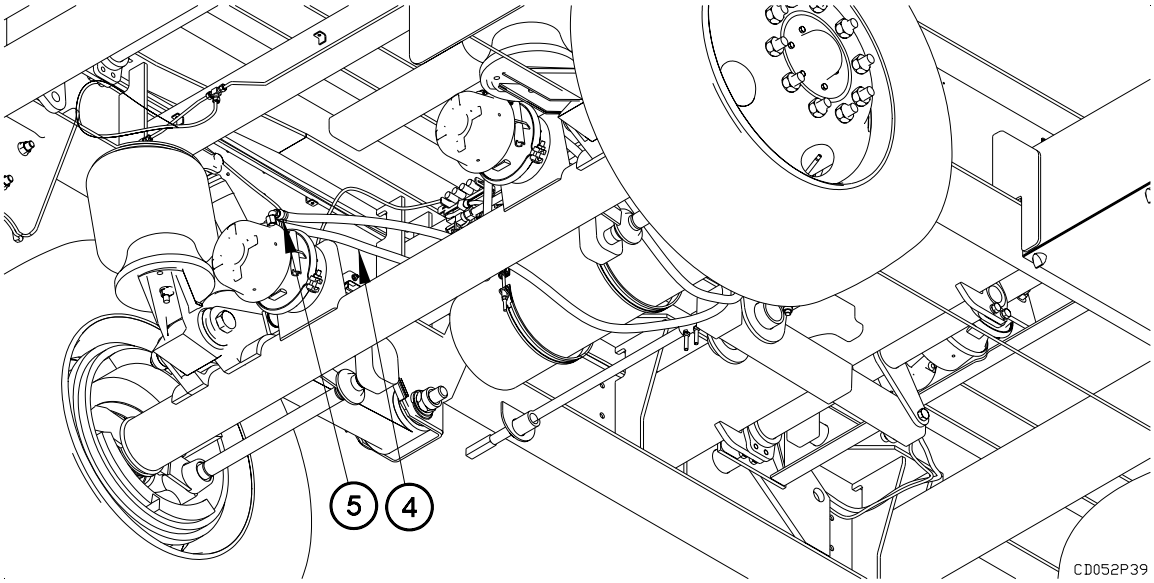


PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Semiannual PMCS Procedures for Trailer (Field Level) - Continued

Table 10: Preventive Maintenance Checks and Services (PMCS) - Semiannual (Field Level).

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	FIELD-LEVEL MAINTENANCE PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Semiannual		Brake System (Front and Rear)	1. Check air hoses (4) for chafing, bends, kinks, or damaged fittings (5). Notify Field Maintenance if fittings are damaged.	Fittings (5) are damaged or hoses (4) are damaged to the point of leaking air.



PREVENTIVE MAINTENANCE CHECKS AND SERVICES, INCLUDING LUBRICATION INSTRUCTIONS - Continued

Semiannual PMCS Procedures for Trailer - Continued

Table 5: Preventive Maintenance Checks and Services (PMCS) – Semiannual - Continued

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
2	Semiannual		Brake System – Continued	1. Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. Tighten loose bolts, nuts, and clamps. If bolts, nuts, clamps, hoses, or tubes are missing, broken, cannot be tightened, or are damaged to the point of leaking, notify Field Level Maintenance. The following should be checked: 2. Notify Field Level Maintenance to perform brake adjustment (WP 0069 00).	
		8	Hub and Drum	3. Notify Field Level Maintenance to perform hub lube replacement and to inspect and lubricate wheel bearings (WP 0085 00).	
		6	Air Ride Suspension	1. Notify Field Level Maintenance to check torque of air ride suspension bracket to 800 ft-lbs (WP 0083 00).	

END OF WORK PACKAGE

CHANGING/SERVICING SPARE TIRE 0053 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Operator

Personnel
(2)

Tools and Special Tools
Inflator, Gage (Item 9, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP 0167 00)
Wrench, Lug (BII)
Wheel Chock (2)(BII)

Equipment Conditions
Trailer uncoupled (TM 9-2320-392-10)

Reference
TM 9-2320-392-10-1
TM 9-4910-687-14&P

GENERAL

This work package contains information and instructions about replacing, servicing, and checking air pressure of tires.

LOWER SPARE TIRE

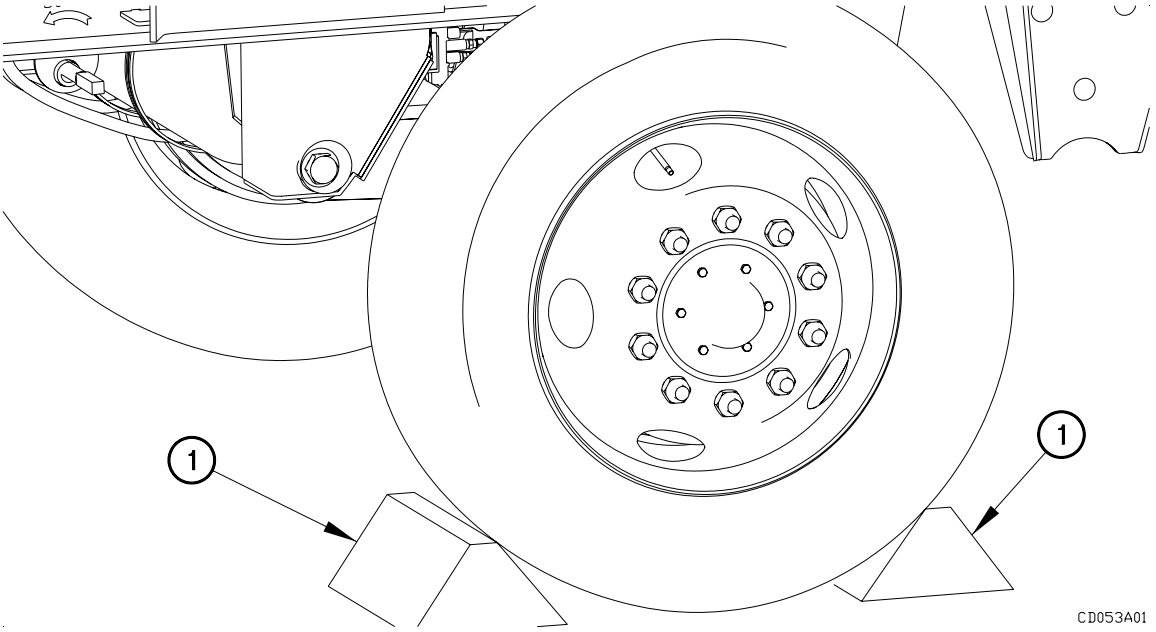
WARNING

Ensure trailer is parked on level ground before changing flat tire. Trailer may roll. Failure to comply may result in injury or death to personnel.

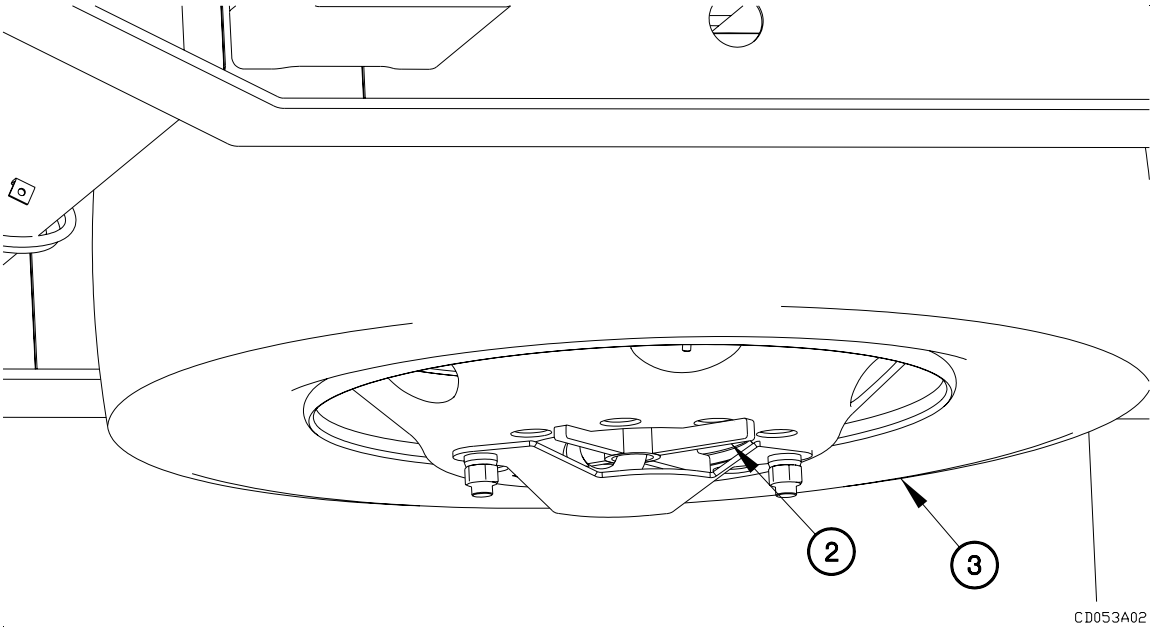
CHANGING/SERVICING SPARE TIRE - Continued 0053 00

LOWER SPARE TIRE - Continued

1. Install two wheel chocks (1) on tire opposite side of flat tire.



2. Check that lift bracket (2) is in place on spare tire (3).

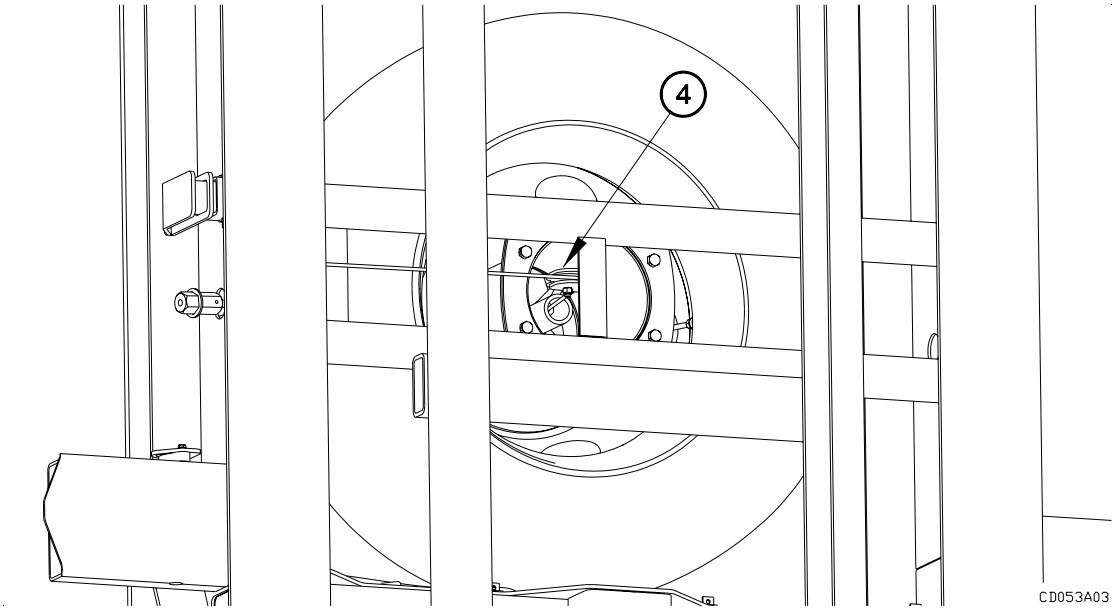


LOWER SPARE TIRE - Continued

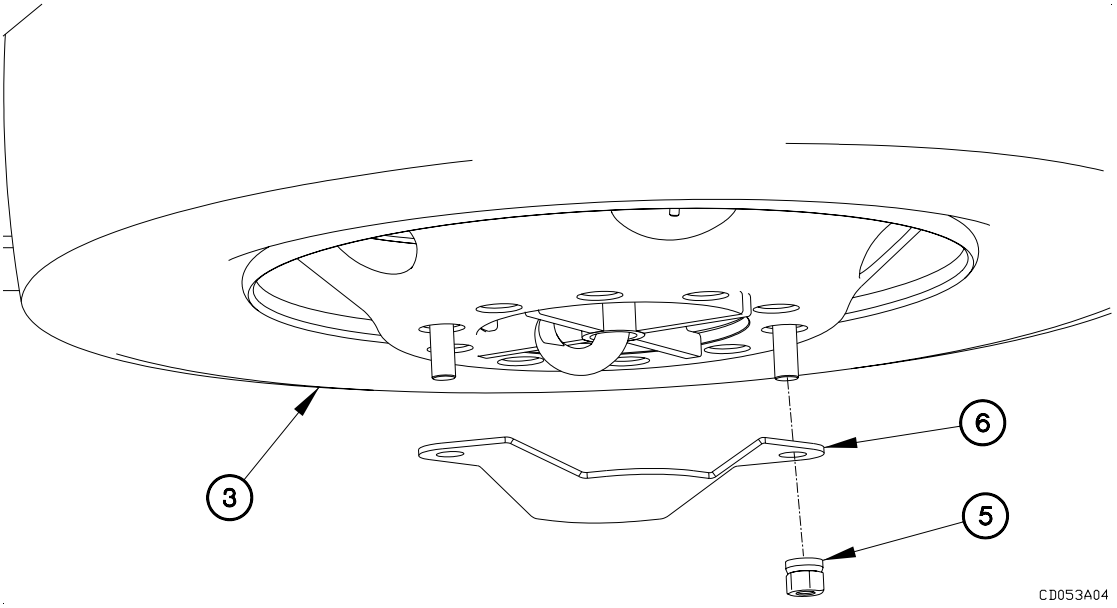
WARNING

Wear heavy leather-palmed work gloves when handling cable. Cables can become frayed or contain broken wires. Never let moving cable slide through hands, even when wearing gloves. Failure to comply may result in injury to personnel.

3. Check that winch cable (4) is snug.



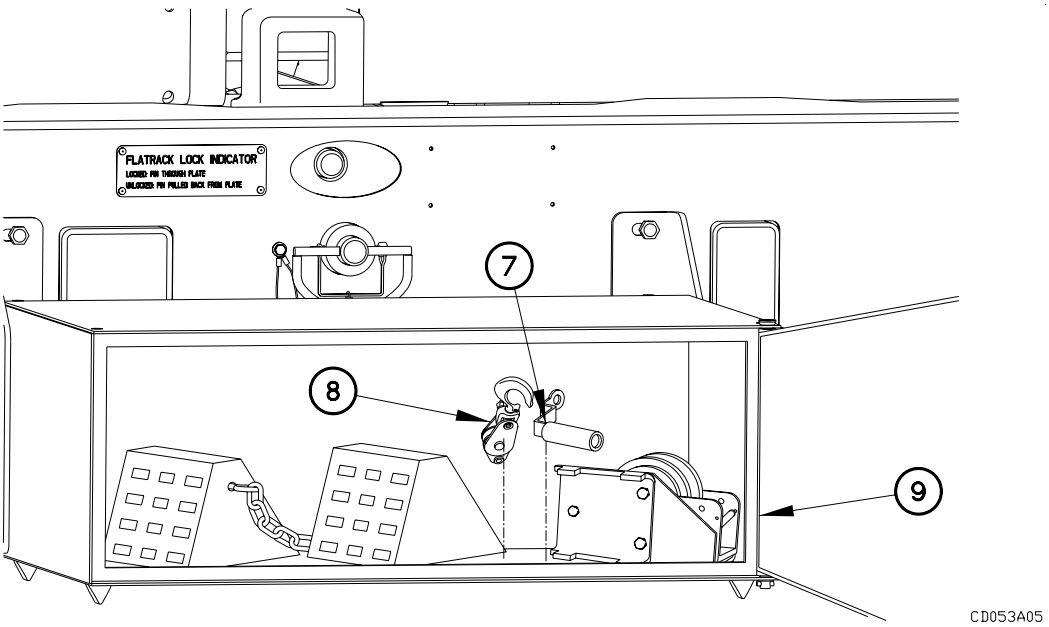
4. Remove two lug nuts (5) and support plate (6) from spare tire (3).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

LOWER SPARE TIRE - Continued

5. Remove winch crank (7) and snatch block (8) from tool box (9).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

LOWER SPARE TIRE - Continued

6. Install winch crank (7) on rod (10).

WARNING

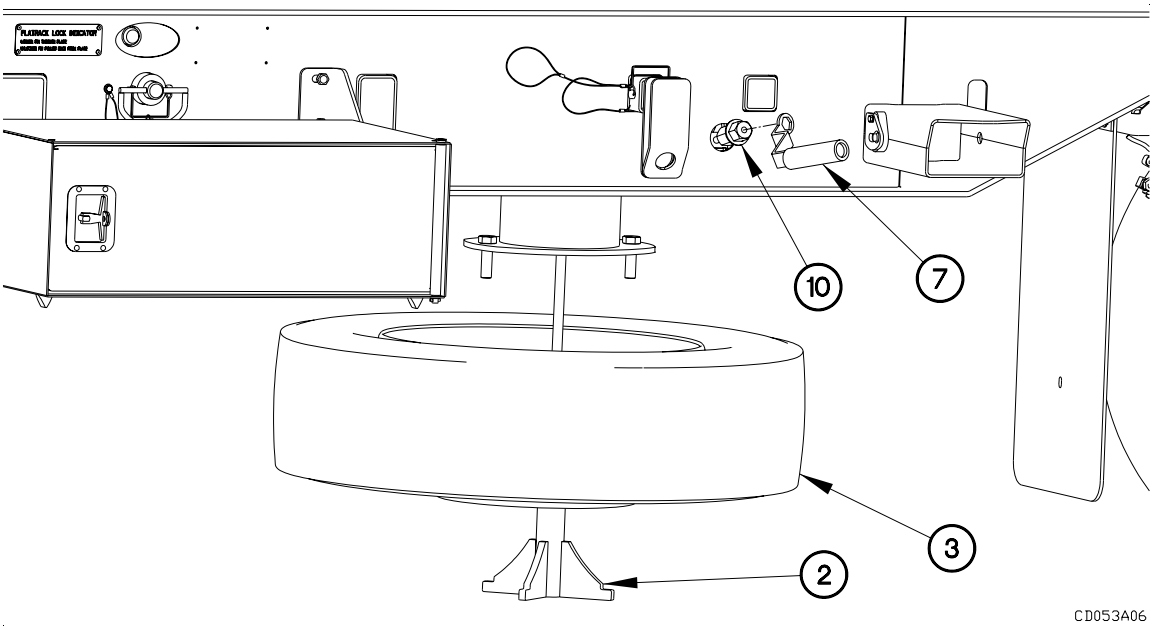
Have an assistant hold the tire level while lowering to the ground. If not held level, tire could come loose from lift bracket and fall. Failure to comply may result in injury to personnel.

NOTE

The following step requires the aid of an assistant.

7. Turning winch crank (7) counter-clockwise, lower spare tire (3) to ground.

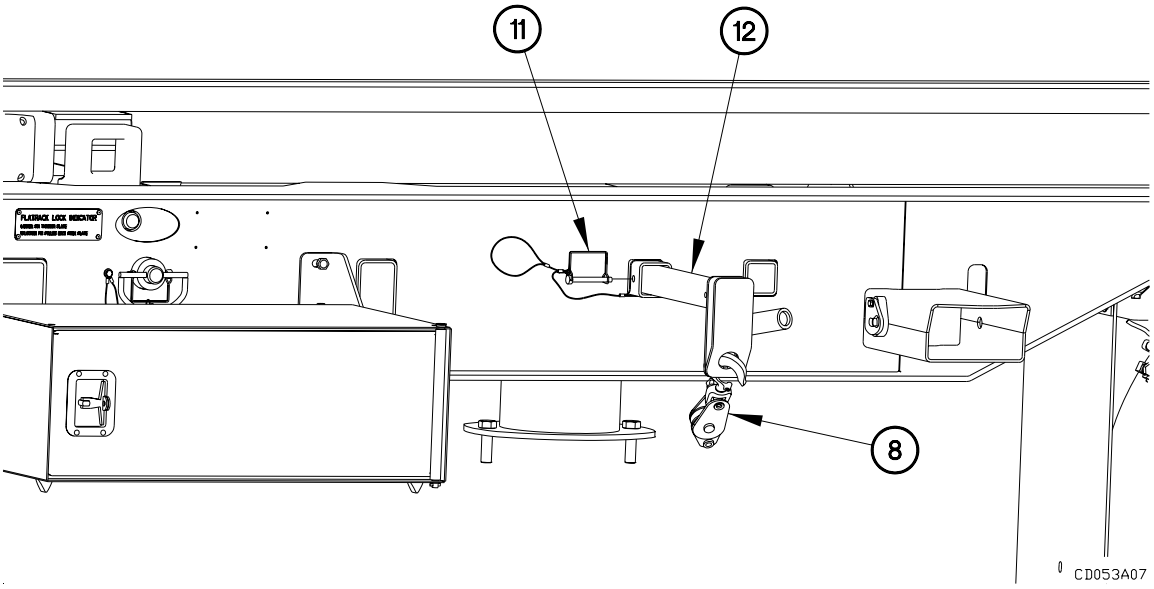
8. Remove lift bracket (2) from spare tire (3).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

LOWER SPARE TIRE - Continued

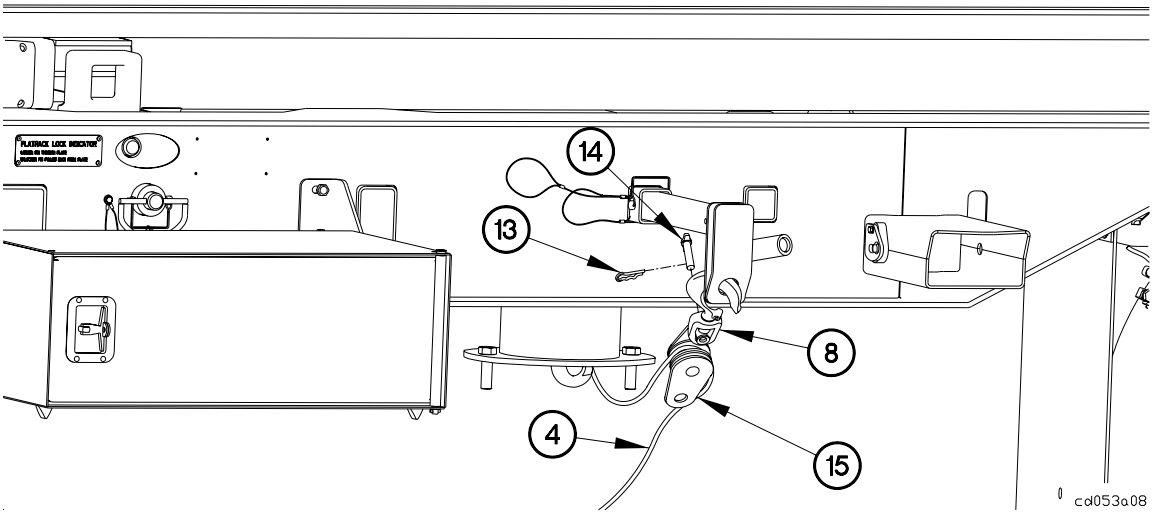
9. Remove safety pin (11) from spare tire outrigger (12).
10. Extend spare tire outrigger (12) out fully.
11. Install safety pin (11) in spare tire outrigger (12).
12. Install snatch block (8) on spare tire outrigger (12).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

LOWER SPARE TIRE - Continued

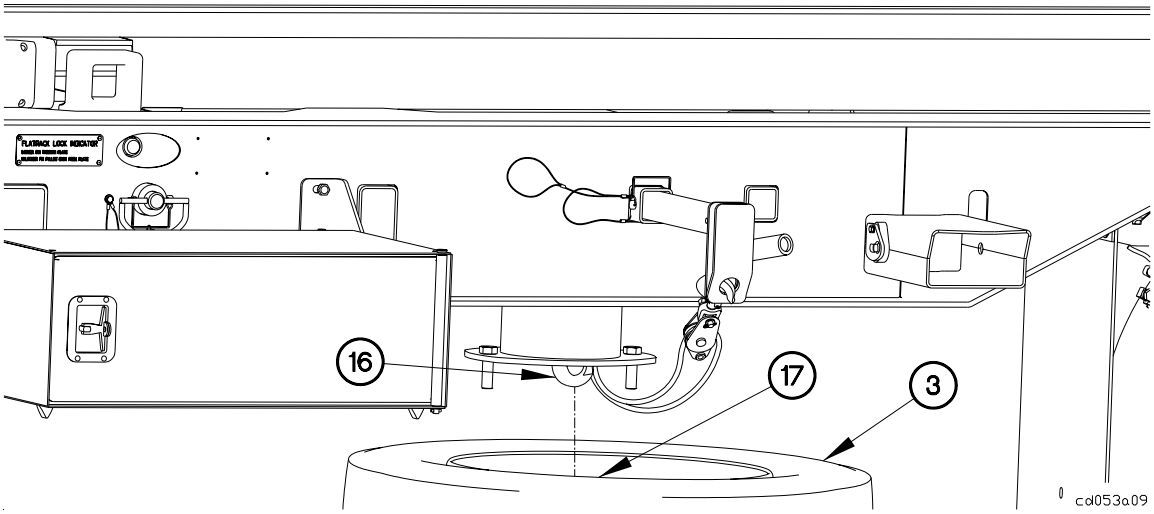
13. Remove retaining pin (13) from pin (14).
14. Remove pin (14) and retaining plate (15) from snatch block (8).
15. Pay out winch cable (4) over snatch block (8).
16. Install retaining plate (15) on snatch block (8) with pin (14).
17. Install retaining pin (13) in pin (14).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

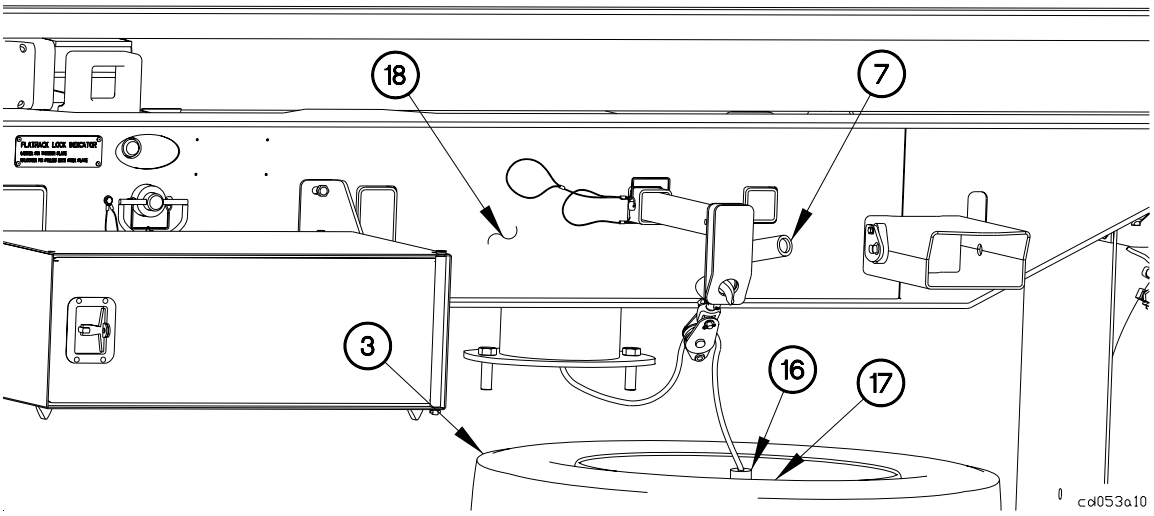
LOWER SPARE TIRE - Continued

18. Install hook (16) on mounting hole (17) on spare tire (3).



19. Turning winch crank (7) clockwise, remove spare tire (3) from under trailer (18).

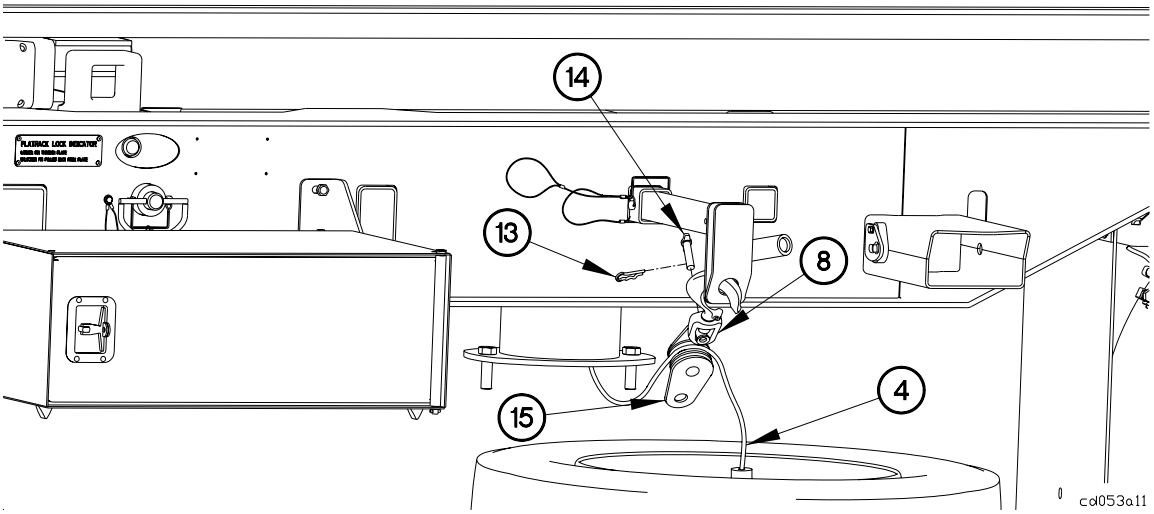
20. Remove hook (16) from mounting hole (17) on spare tire (3).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

LOWER SPARE TIRE - Continued

21. Remove retaining pin (13) from pin (14).
22. Remove pin (14) and retaining plate (15) from snatch block (8).
23. Remove winch cable (4) from snatch block (8).
24. Install retaining plate (15) on snatch block (8) with pin (14).
25. Install retaining pin (13) in pin (14).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

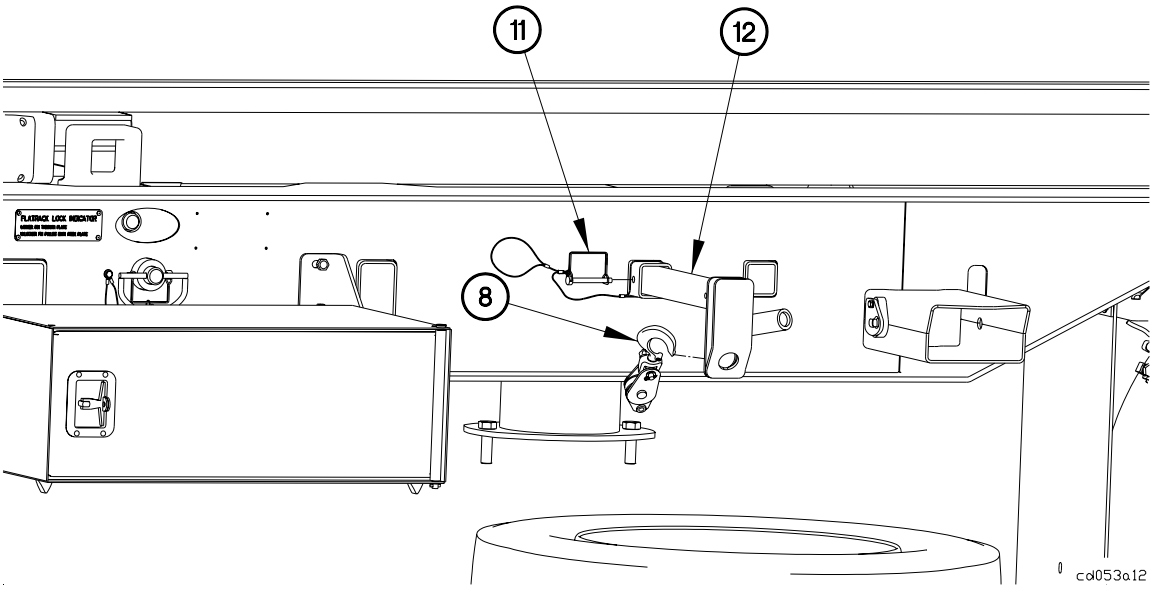
LOWER SPARE TIRE - Continued

26. Remove snatch block (8) from spare tire outrigger (12).

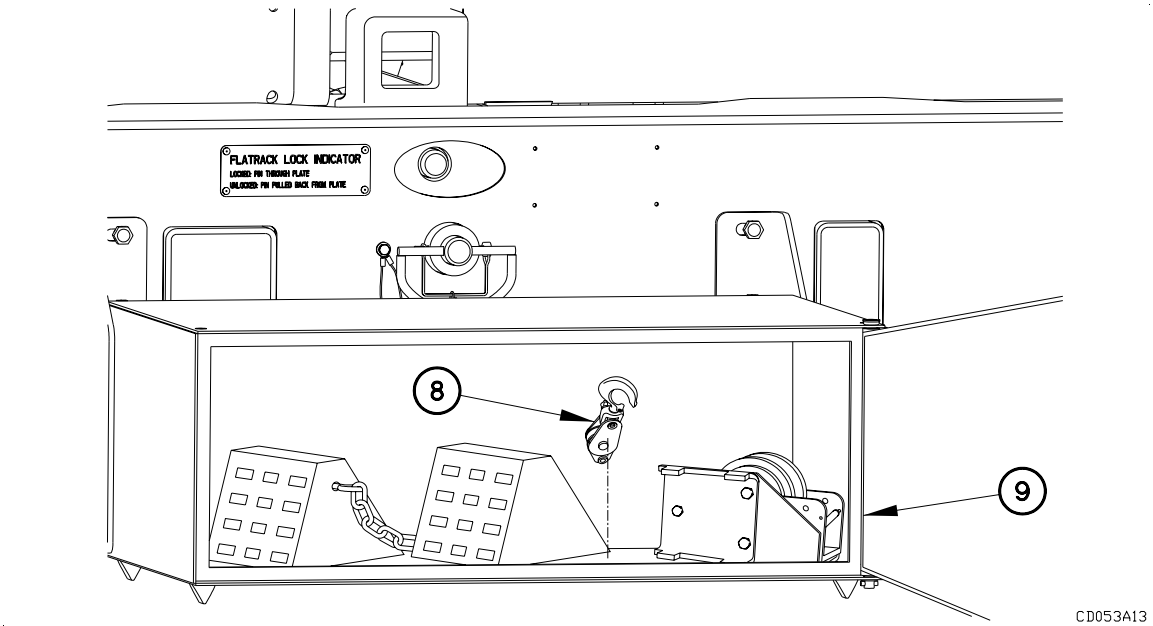
27. Remove safety pin (11) from spare tire outrigger (12).

28. Push spare tire outrigger (12) in fully.

29. Install safety pin (11) in spare tire outrigger (12).



30. Store snatch block (8) in tool box (9).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

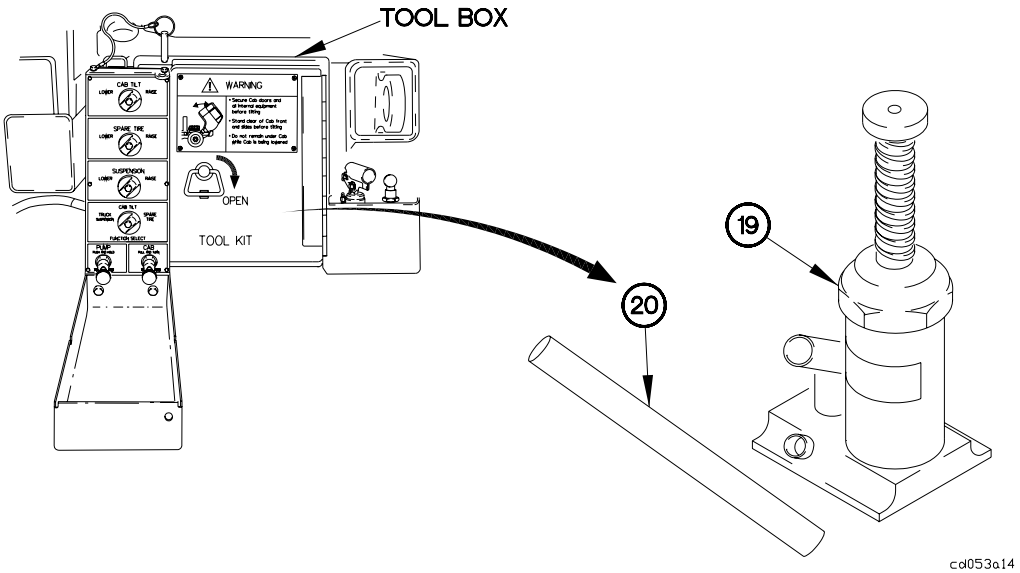
TIRE REMOVAL

WARNING

Place hydraulic jack on flat surface. Do not allow personnel under trailer when jacking. Failure to comply may result in serious injury or death to personnel.

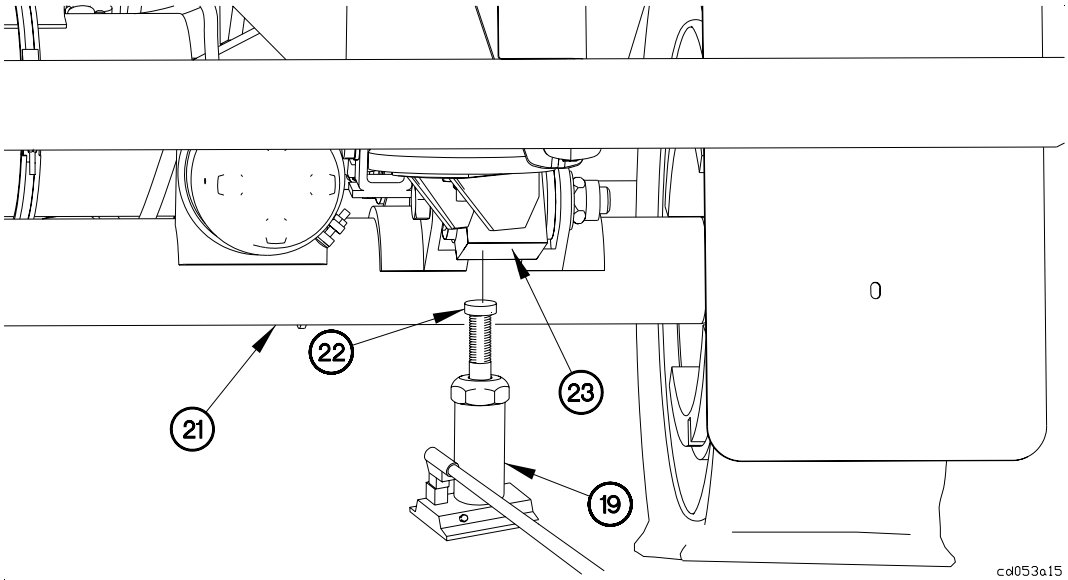
Handle flat tire assembly with care. Failure to comply may result in injury to personnel.

1. Remove jack (19) and handle (20) from tool box of towing vehicle.



2. Position jack (19) under axle (21).

3. Unscrew jack ram (22) until it touches air bag bracket (23) on axle (21).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

TIRE REMOVAL-Continued

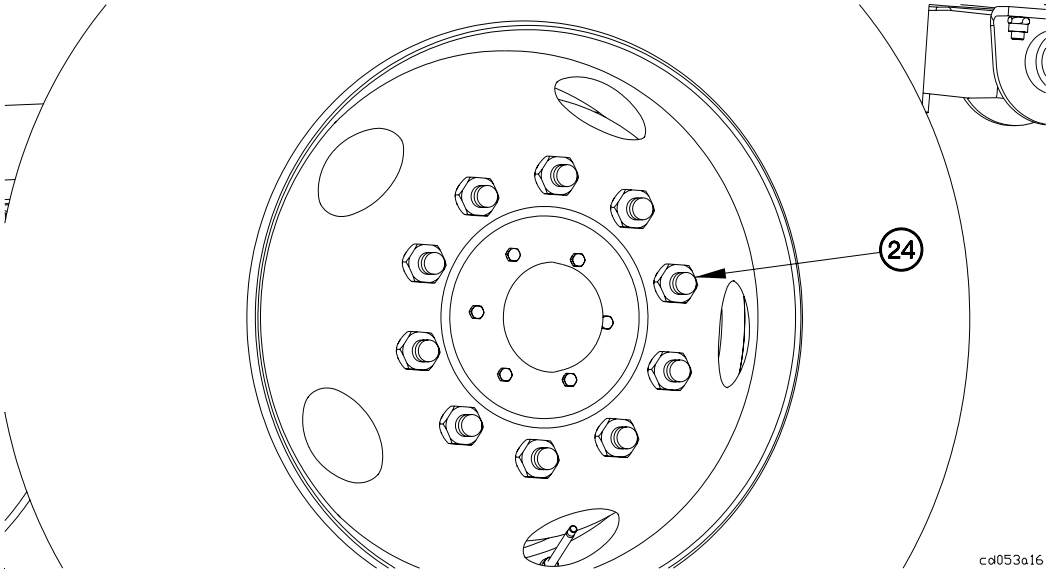
NOTE

All tires are removed the same way.

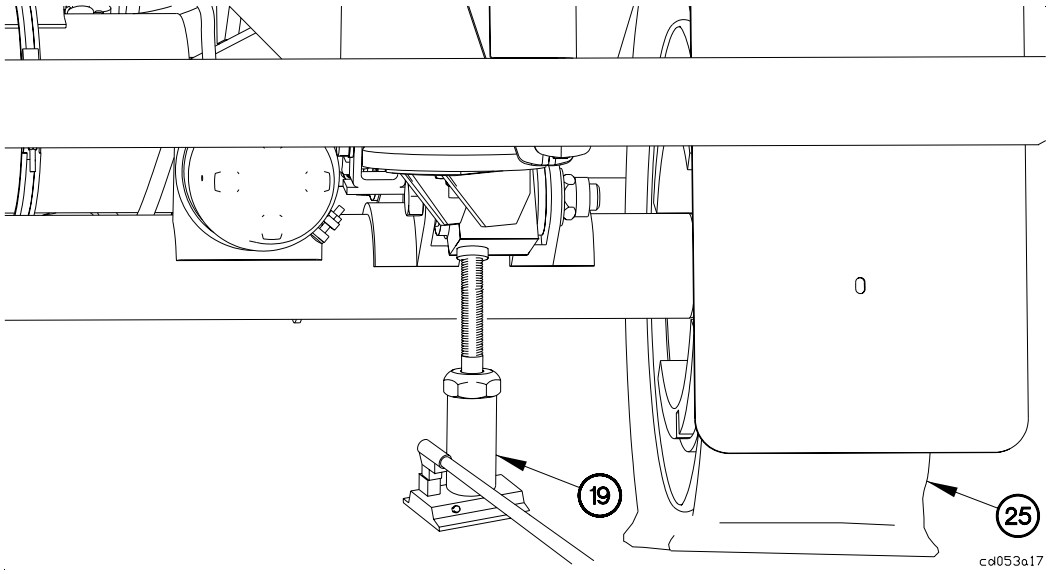
Wheel stud and lugnuts on left side of trailer have left-hand threads. Rotate lugnuts clockwise to loosen, and counterclockwise to tighten.

Wheel studs and lugnuts on right side of trailer have right-hand threads. Rotate lugnuts counterclockwise to loosen, clockwise to tighten.

4. Loosen, but do not remove, 10 lugnuts (24).



5. Raise jack (19) until flat tire (25) is off ground.



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

TIRE REMOVAL - Continued

WARNING

Tire weighs approximately 100 lbs (45 kgs). Use caution when handling tire. Failure to comply may result in injury to personnel.

6. Remove 10 lugnuts (24) from flat tire (25).

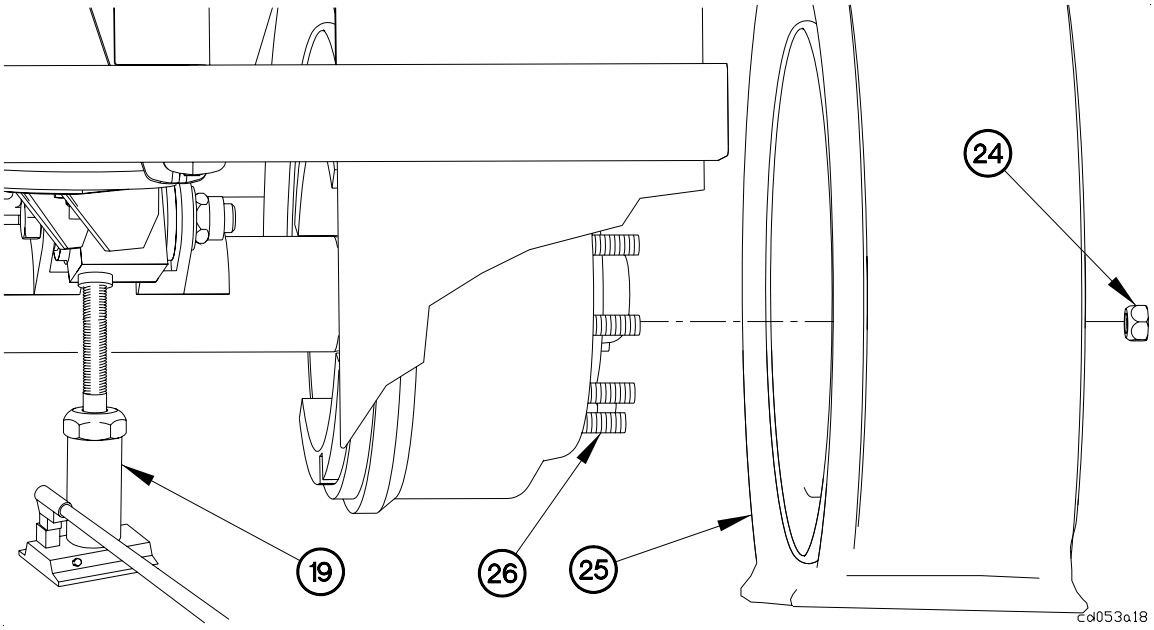
7. While assistant holds flat tire (25), lower jack (19) until flat tire is just touching ground.

CAUTION

Do not drag tire across wheel studs during removal. Failure to comply may result in damage to equipment.

8. Pull top of flat tire (25) outward while assistant raises jack (19) slightly.

9. Remove flat tire (25) from wheel studs (26).



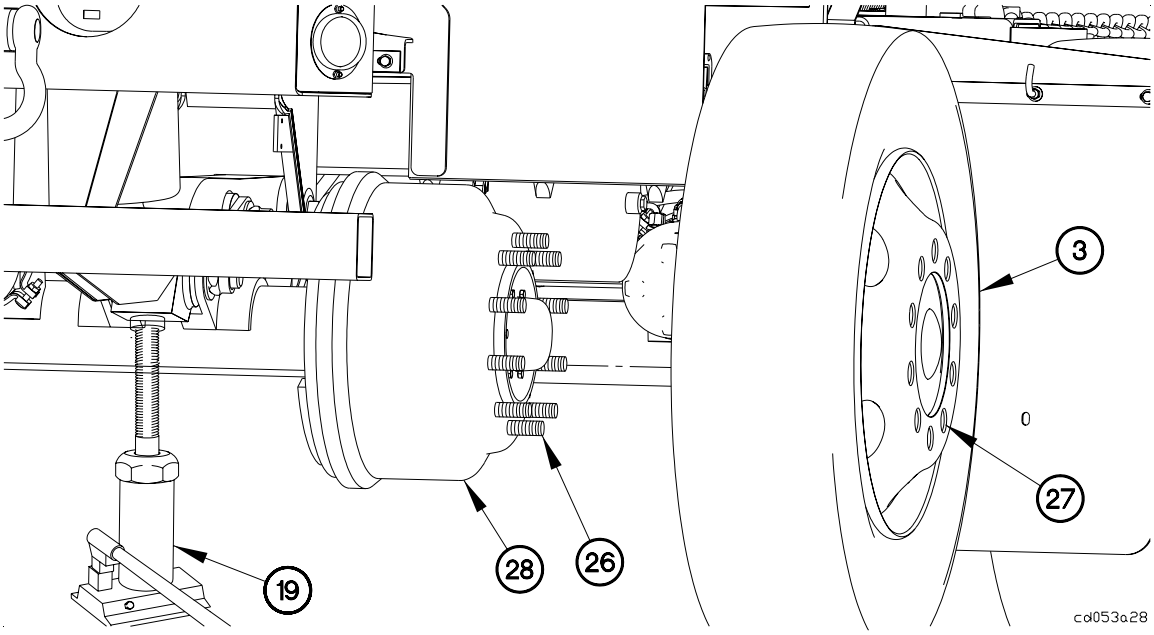
TIRE INSTALLATION

NOTE

Steps (1) through (5) require the aid of an assistant.

All tires are installed the same way. Rear tire installation shown.

1. Raise jack (19) until spare tire holes (27) are aligned with wheel studs (26).
2. Roll spare tire (3) up to hub (28).



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

TIRE INSTALLATION - Continued

WARNING

Tire weighs approximately 100 lbs (45 kgs). Use caution when handling tire. Failure to comply may result in injury to personnel.

2. Align 10 spare tire holes (27) in spare tire (3) with wheel studs (26).

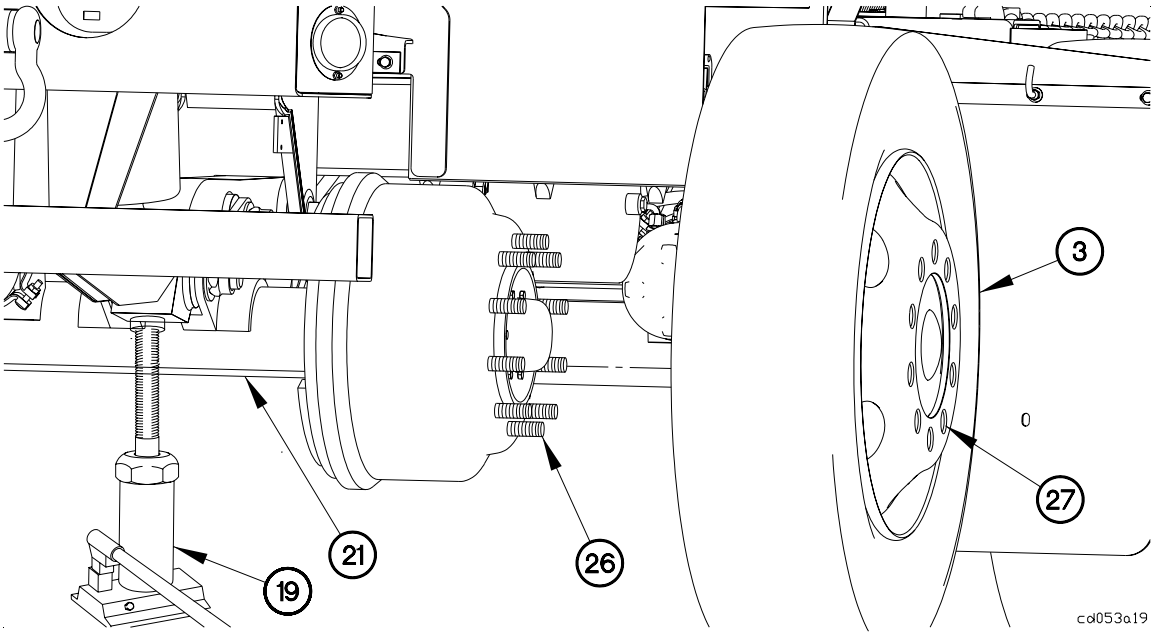
3. Lean top of spare tire (3) against wheel studs (26).

CAUTION

Do not drag spare tire across wheel studs or crossthread lugnuts. Failure to comply may result in damage to equipment.

4. Slide spare tire (3) onto wheel studs (26) while assistant raises axle (21) with jack (19). Bottom of spare tire (3) should swing toward trailer.

5. Repeat step (4) until spare tire (3) is seated on wheel studs (26).



TIRE INSTALLATION - Continued

WARNING

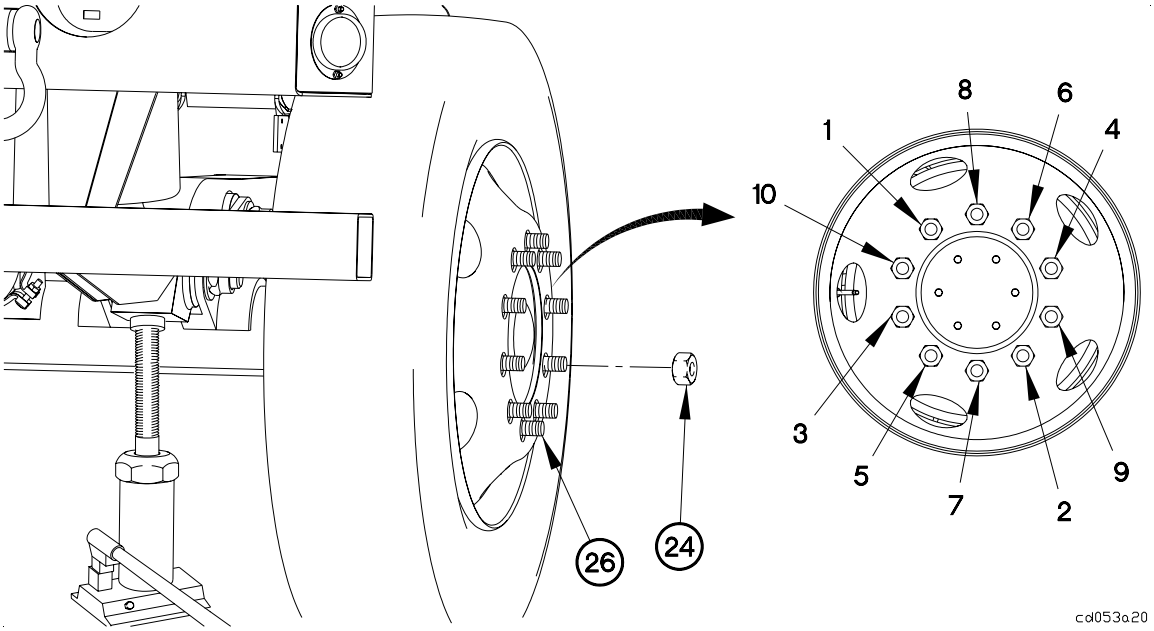
Notify Field Level Maintenance that lugnuts must be tightened to 450-500 lb-ft (610-677 N·m) as soon as possible. Wheel may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

NOTE

Wheel studs and lugnuts on left side of trailer have left-hand threads. Rotate lugnuts clockwise to loosen, counterclockwise to tighten.

Wheel studs and lugnuts on right side of trailer have right-hand threads. Rotate lugnuts counterclockwise to loosen, clockwise to tighten.

6. Install 10 lugnuts (24) on wheel studs (26) in sequence shown.



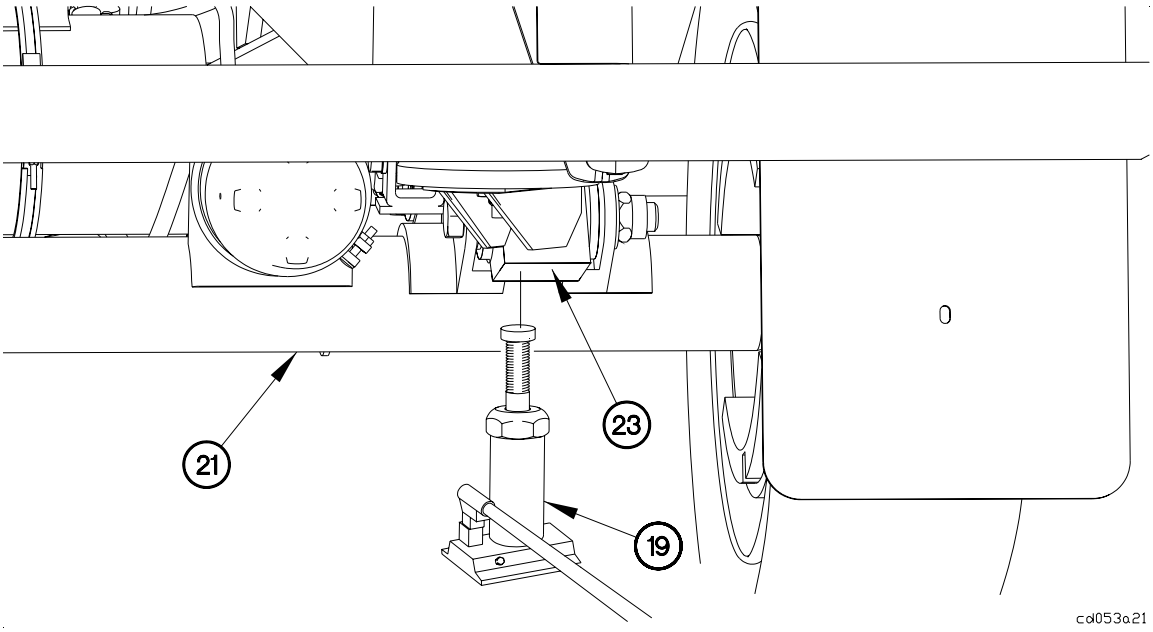
CHANGING/SERVICING SPARE TIRE – Continued 0053 00

TIRE INSTALLATION - Continued

WARNING

Ensure lugnuts are tightened fully before operation of trailer. Failure to comply may result in serious injury or death to personnel.

7. Lower trailer to ground with jack (19).
8. Remove jack (19) from air bag bracket (23) on axle (21).

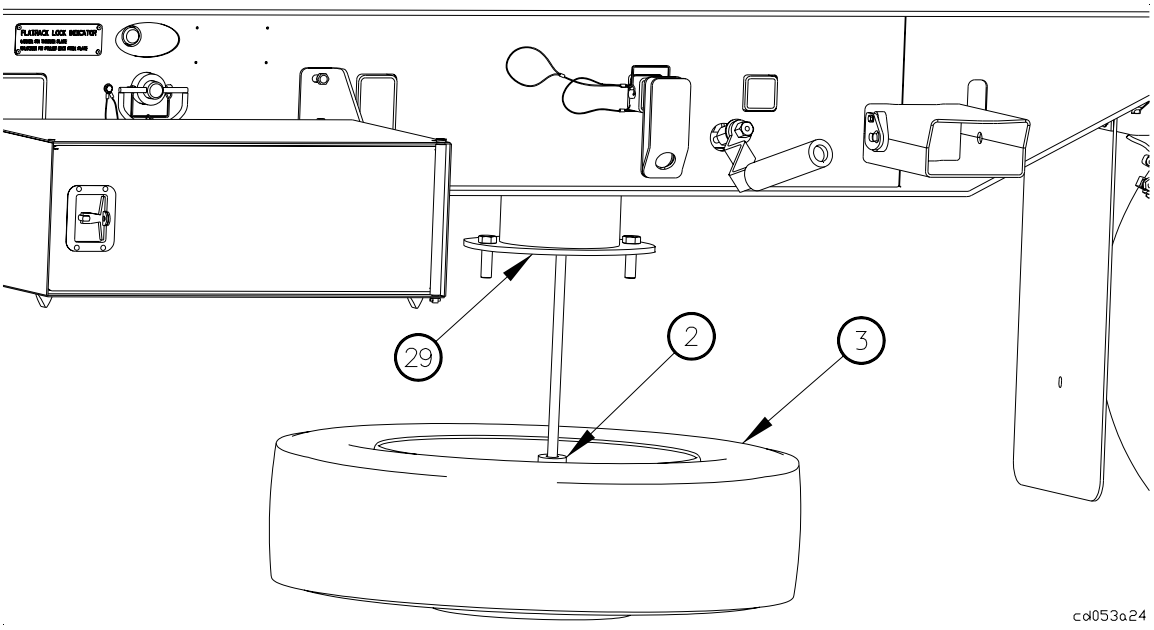


CHANGING/SERVICING SPARE TIRE – Continued 0053 00

RAISE SPARE TIRE

1. Position spare tire (3) near spare tire storage (29).

2. Position lift bracket (2) on center of spare tire (3) with concave side facing upwards.



CHANGING/SERVICING SPARE TIRE – Continued 0053 00

RAISE SPARE TIRE - Continued

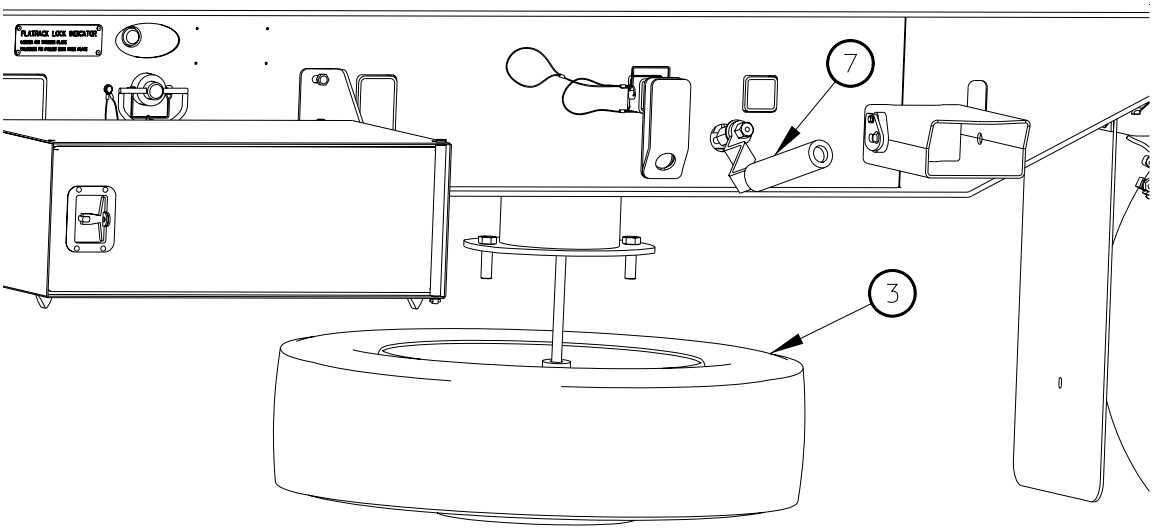
WARNING

Have an assistant hold the tire level while raising from the ground. If not held level, tire could come loose from lift bracket and fall. Failure to comply may result in injury to personnel.

CAUTION

If winch cable is loose, keep tight by hand while cranking until cable tightens. Failure to comply may result in cable not reeling evenly on winch.

3. Turning winch crank (7) clockwise, raise spare tire (3).



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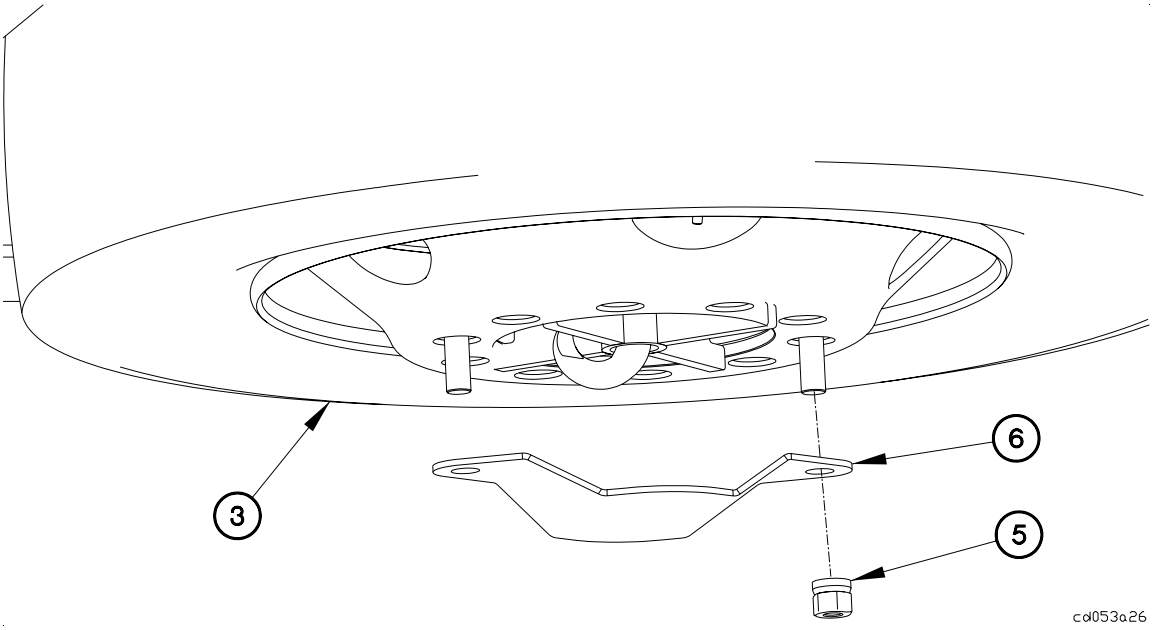
CHANGING/SERVICING SPARE TIRE – Continued 0053 00

RAISE SPARE TIRE - Continued

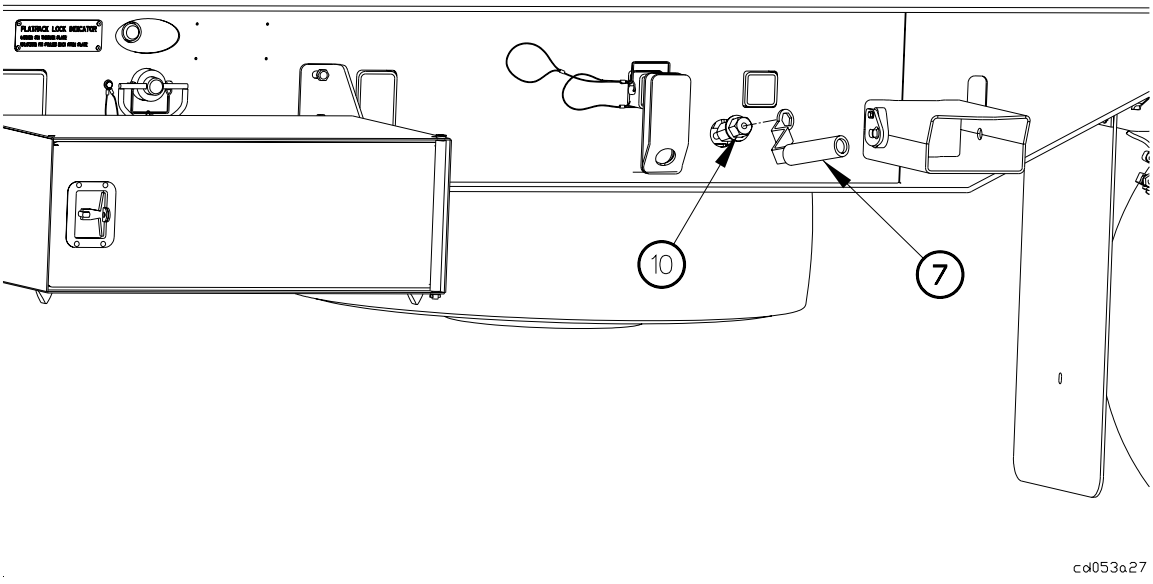
WARNING

Notify Field Level Maintenance that lugnuts must be tightened to 290-350 lb-ft (393-475 N·m) as soon as possible. Wheel may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

4. Install support plate (6) on spare tire (3) with two lugnuts (5).

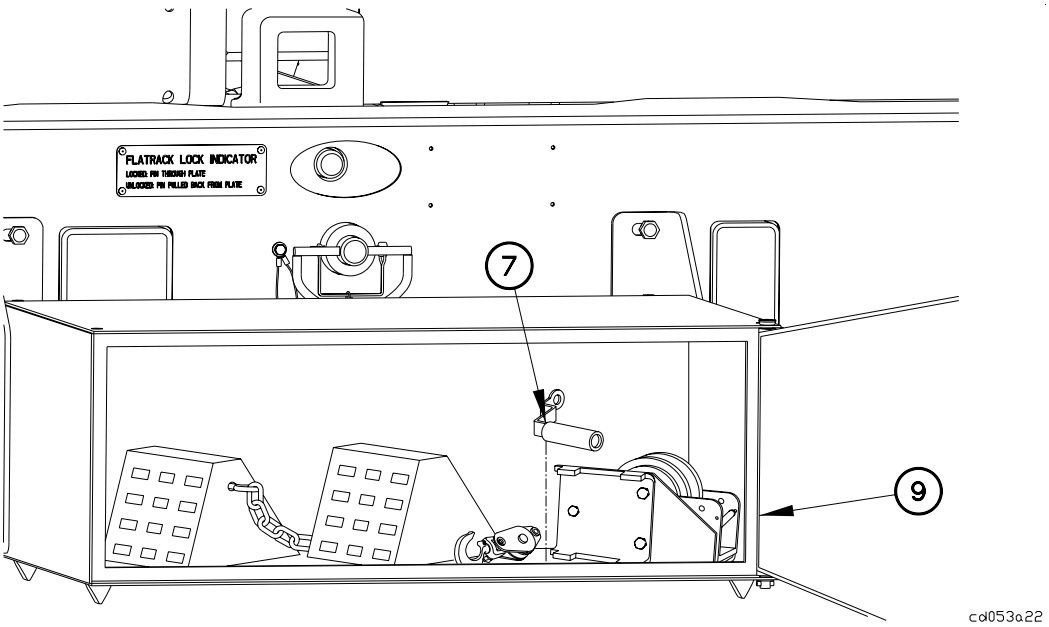


5. Remove winch crank (7) from rod (10).



RAISE SPARE TIRE - Continued

6. Store winch crank (7) in tool box (9).



CHECKING TIRE PRESSURES

WARNING

Ensure tires have correct tire pressure (within ± 3 psi (21 kPa)) for driving speed (refer to Table 1: Cold Tire Inflation Pressures). Failure to comply may result in serious injury or death to personnel.

Check tire pressures with tire inflator-gage.

Table 1. Cold Tire Inflation Pressures

Operating Mode	Maximum Vehicle Speed	Operating Time Restriction	Tire Pressure
Highway	55 mph (88 km/h)	NONE	120 psi (827 kPa)

MANUALLY INFLATING TIRES

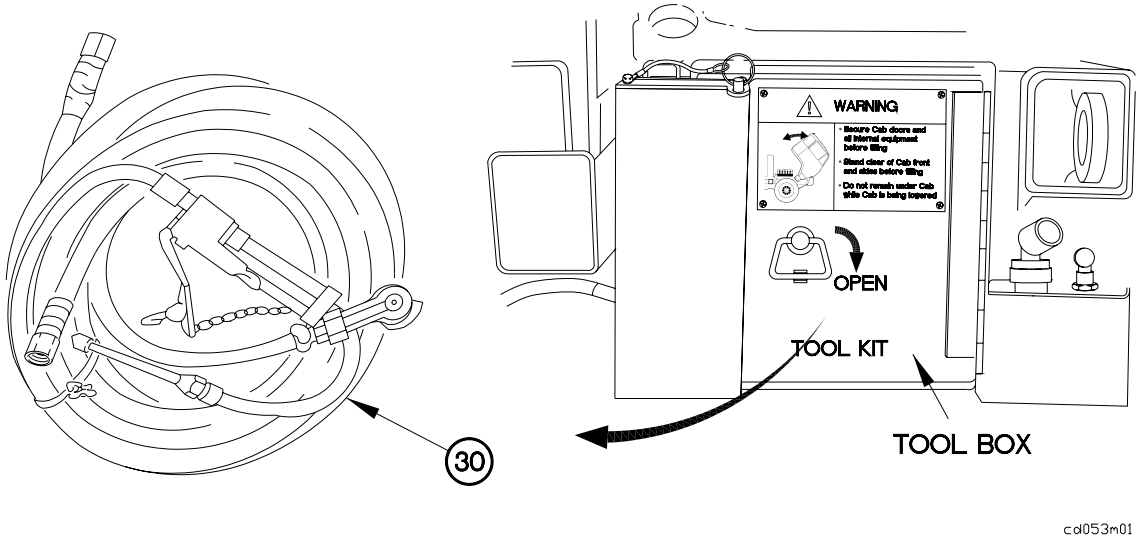
WARNING

Use caution when inflating tire. Over inflation may cause tire to blow apart. Failure to comply may result in serious injury or death to personnel or damage to equipment.

NOTE

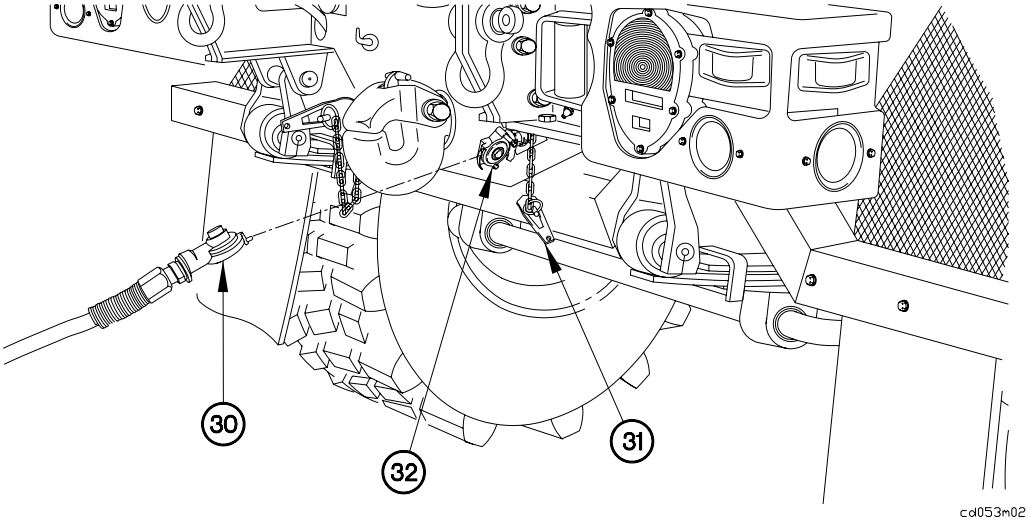
SERVICE or EMERGENCY gladhands at rear of vehicle are used to manually inflate tires.

1. Remove tire inflator-gage with hose (30) from tool box.



MANUALLY INFLATING TIRES - Continued

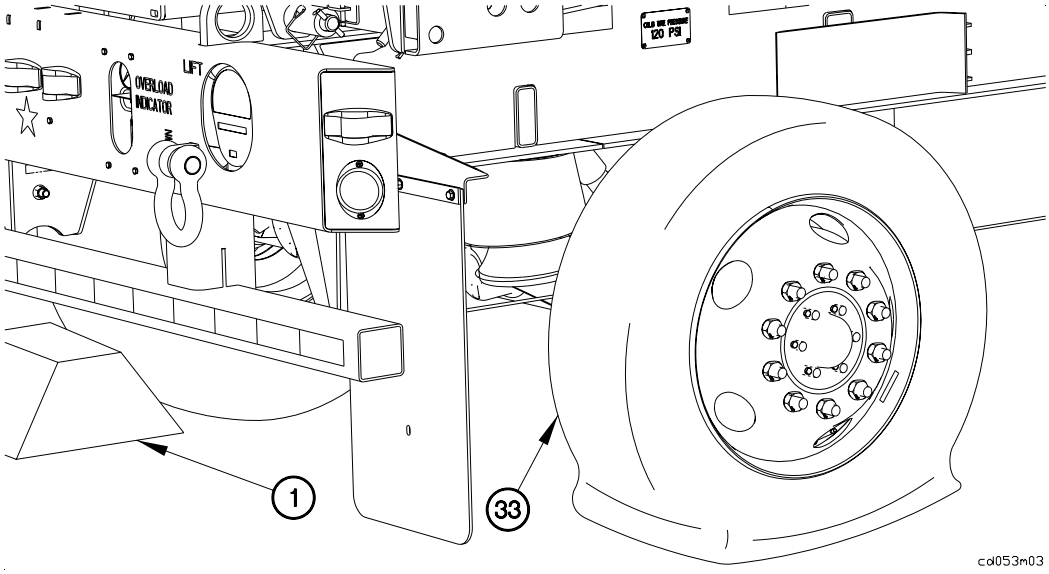
2. Remove dummy coupling (31) from SERVICE or EMERGENCY gladhand (32) at rear of vehicle.
3. Connect tire inflator-gage and hose (30) to SERVICE or EMERGENCY gladhand (32).
4. Start engine (WP 0020 00, TM 9-2320-392-10-1).



WARNING

Wheels must be chocked and service brakes applied before parking brake is released. Vehicle may roll if wheels are not chocked. Failure to comply may result in serious injury or death to personnel.

5. Install two wheel chocks (1) against tire across from tire (33) that is to be inflated.



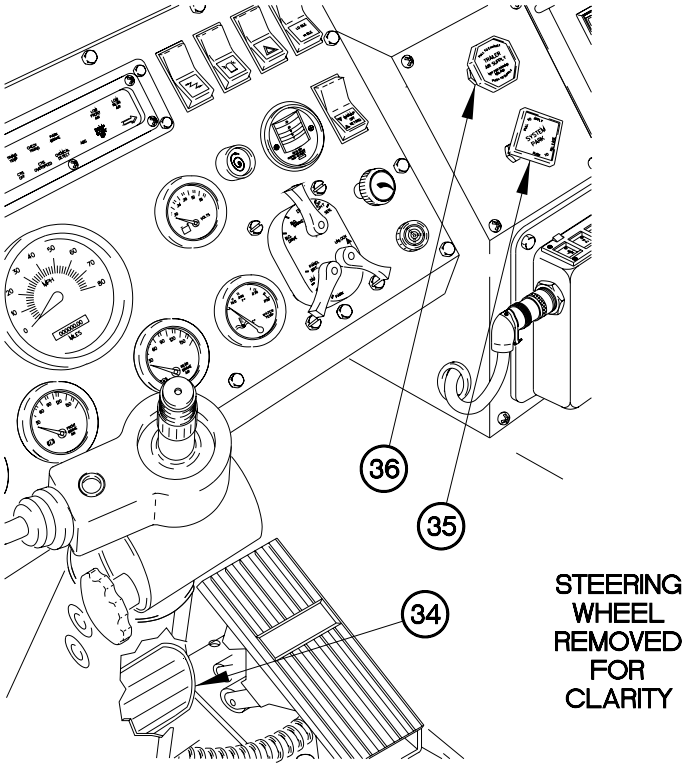
MANUALLY INFLATING TIRES - Continued

NOTE

Air is available at service gladhand as long as brake pedal is applied. Air is available at emergency gladhand once SYSTEM PARK and TRAILER AIR SUPPLY valves are depressed.

Steps 6 through 14 require the aid of an assistant.

6. Depress brake pedal (34).
7. Push in SYSTEM PARK control (35).
8. Push in TRAILER AIR SUPPLY control (36).



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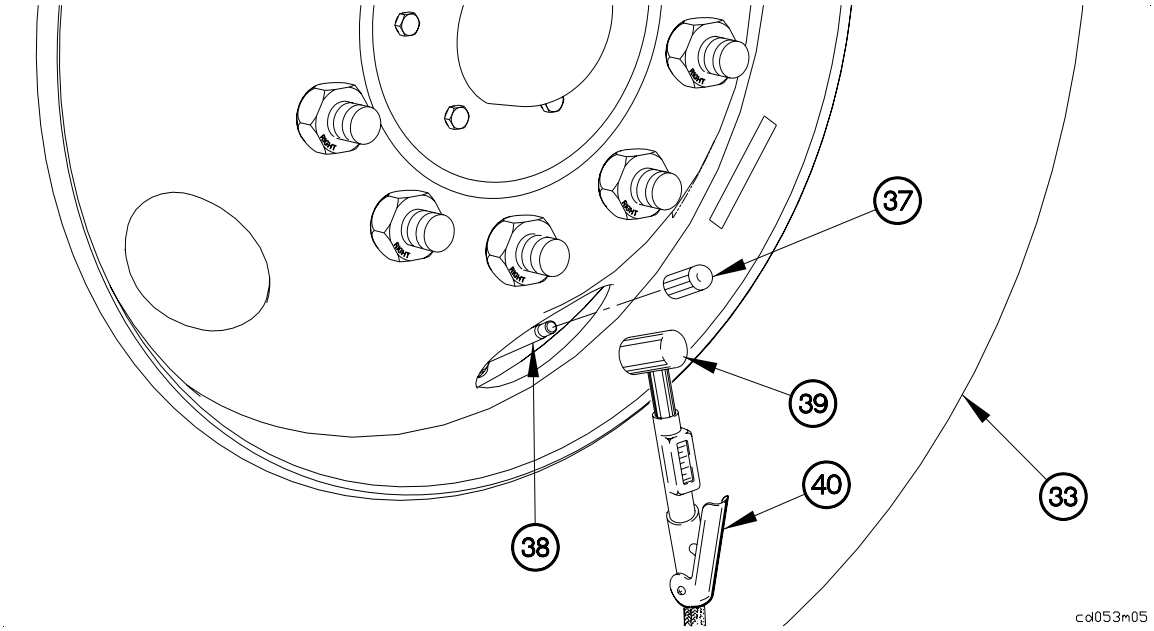
CHANGING/SERVICING SPARE TIRE – Continued 0053 00

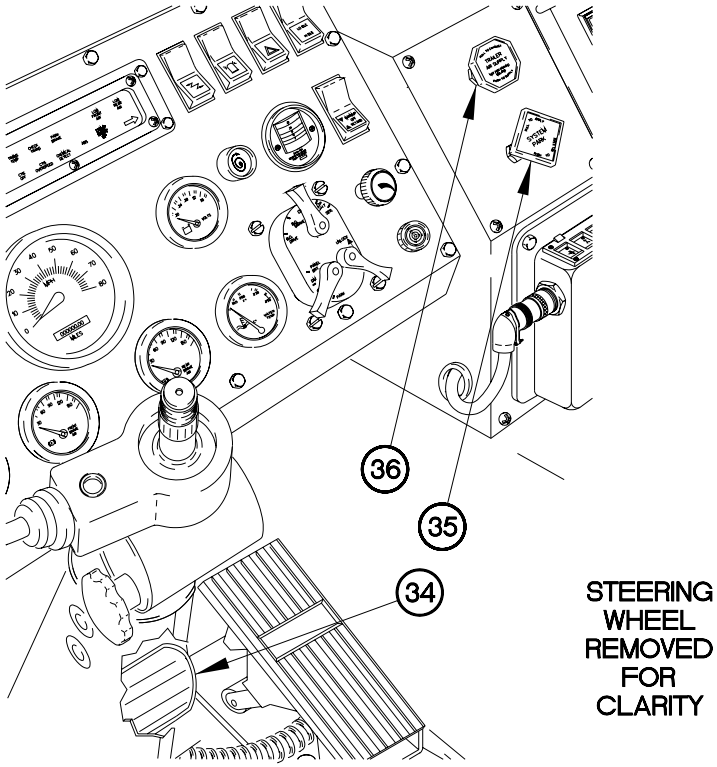
MANUALLY INFLATING TIRES - Continued

9. Remove cap (37) from valve stem (38).
10. Press chuck of tire inflator-gage (39) over valve stem (38) and squeeze handle (40).
11. Add air to tire (33) as required by **Table 1: Cold Tire Inflation.**
12. Remove chuck of tire inflator-gage (39) from valve stem (38).
13. Install cap (37) on valve stem (38).



MANUALLY INFLATING TIRES - Continued

14. Pull out SYSTEM PARK control (35).
15. Pull out TRAILER AIR SUPPLY control (36).
16. Release brake pedal (34).
17. Shut down engine (WP 0020 00, TM 9-2320-392-10-1).



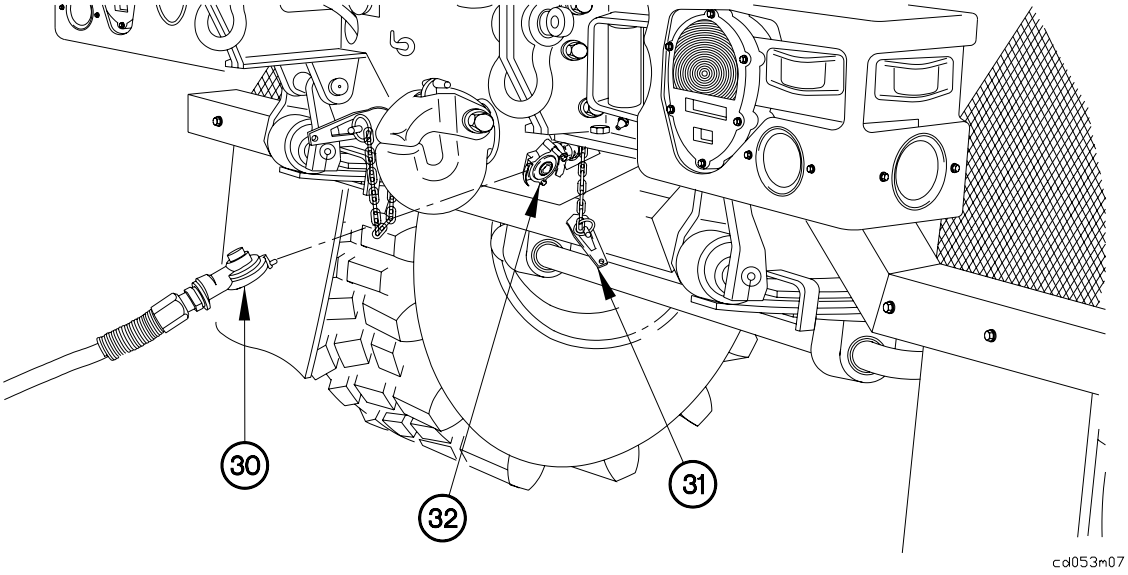
cd053m06

MANUALLY INFLATING TIRES - Continued

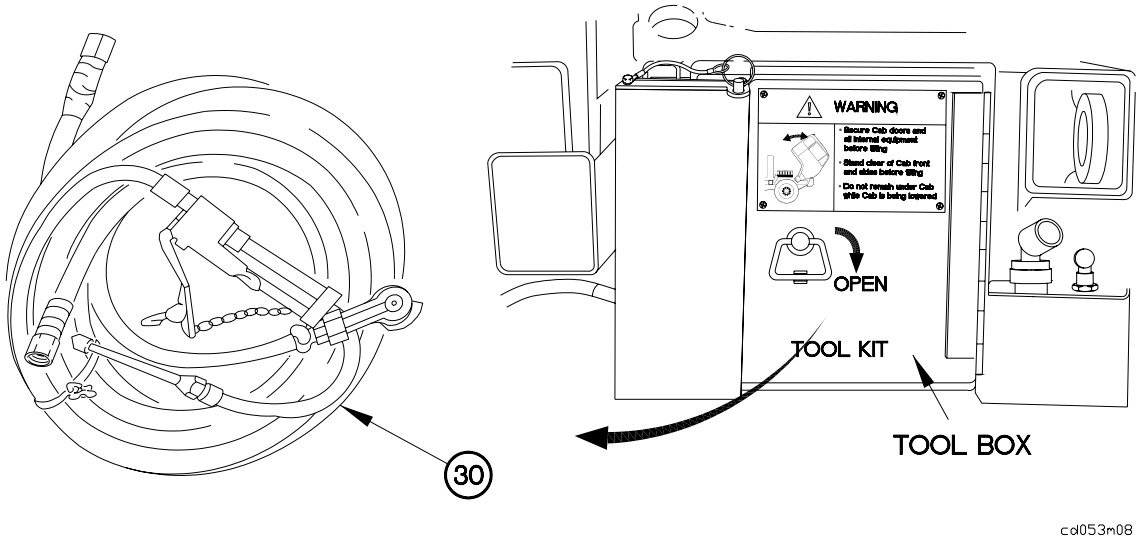
18. Remove tire inflator-gage with hose (30) from SERVICE or EMERGENCY gladhand (32).

19. Install dummy coupling (31) on SERVICE or EMERGENCY gladhand (32).

20. Remove wheel chocks.



21. Stow tire inflator-gage with hose (30) in tool box.



END OF WORK PACKAGE

CLEANING TRAILER 0054 00

THIS WORK PACKAGE COVERS:
General, Cleaning Trailer

INITIAL SETUP:

Maintenance Level
Operator

Tools/Special Tools
Gloves, Rubber (Item 6, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts
Rag, Wiping (Item 11, WP 0165 00)
Soap, Laundry (Item 16, WP 0165 00)
Solvent, Dry Cleaning (Item 18, WP 0165 00)

Materials/Parts (Cont)
Corrosion Prevention Compound (Item 5, WP 0165 00).
Brush Set (Item 3, WP 0165 00)

Personnel Required
Two

References
TM 9-247

Equipment Conditions
Wheels chocked (TM 9-2320-392-10).

GENERAL

This work package contains information and instructions to clean the Load Handling System Trailer (LHST).

WARNING

All cleaning procedures must be accomplished in well-ventilated areas. Failure to comply may result in injury to personnel or damage to equipment.

Protective gloves, clothing, and/or respiratory equipment must be worn whenever caustic, toxic, or flammable cleaning solutions are used. Failure to comply may result in injury to personnel or damage to equipment.

Diesel fuel or gasoline must never be used for cleaning. Failure to comply may result in injury to personnel or damage to equipment.

A fire extinguisher must be available and ready during all cleaning operations involving Dry Cleaning Solvent. Failure to comply may result in injury to personnel or damage to equipment.

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). Failure to comply may result in serious injury or death to personnel.

CLEANING TRAILER - Continued 0054 00

GENERAL - Continued

WARNING

If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and seek medical attention. Failure to comply may result in serious injury or death to personnel.

Wear appropriate eye protection when using high pressure water to clean trailer. Failure to comply may result in injury to personnel.

CAUTION

Do not wipe dirt off trailer when it is dry. Dirt, stones, or debris may scratch and damage trailer. Failure to comply may result in damage to equipment.

Do not direct high-pressure water stream at plastic surfaces, seals, or any other component of trailer that could be easily damaged by high-pressure water stream. Failure to comply may result in damage to equipment.

Do not use strong detergent or abrasives. Failure to comply may result in damage to equipment.

Do not allow cleaning compounds to come into contact with rubber, or vinyl materials. Failure to comply may result in damage to equipment.

Do not allow corrosion-removing cleaning compounds to contact painted surfaces. Failure to comply may result in damage to equipment.

Do not steam clean any part of trailer that has been rustproofed. Failure to comply may result in damage to equipment.

NOTE

Detailed description of specific cleaning compounds, Dry Cleaning Solvents, and corrosion-removing compounds are found in TM 9-247.

Table 1, General Cleaning Instructions, provides a general guideline to cleaning materials used in removing contaminants from various trailer surfaces.

CLEANING TRAILER - Continued 0054 00

GENERAL - Continued

Table 1: General Cleaning Instructions.

Cleaning Materials Used to Remove			
Surface	**Oil/Grease**	**Salt/Mud/ Dust/Debris**	**Surface Rust/Corrosion**
Body	Grease-cleaning compound, running water, and damp or dry rags.	High pressure water, soapy warm water, soft brush, and damp or dry rags.	Corrosion-removing compound, bristle brush, dry rags, and lubricating oil.*
Frame and Flatrack Rail	Grease-cleaning compound rinsed with running water and rags.	High pressure water, soapy warm water, wire brush, and damp or dry rags.	Corrosion-removing compound, bristle brush, dry rags, and lubricating oil.*
Gladhands	Damp or dry rags.**	Damp or dry rags.**	Not applicable.
Glass	Glass cleaning solution and clean, dry rags.	Glass cleaning solution and clean, dry rags.	Not applicable.
Rubber	Damp or dry rags.	Damp or dry rags.	Not applicable.
Tires	Soapy water and bristle brush.	High pressure water and bristle brush.	Not applicable.
Electrical plugs/ connectors	Rag moistened with Dry Cleaning Solvent	Rag moistened with Dry Cleaning Solvent	Not applicable.
Winch Cable	Cleaning compound and wire brush.	Wire brush.	Wire brush and lubricating oil.*
* After cleaning, apply light grade of lubricating oil to all unprotected surfaces to prevent continued rust.			
** After cleaning, apply light grade of lubricating oil to all unprotected surfaces to prevent drying and cracking.			

CLEANING TRAILER

Clean trailer per Table 1. General Cleaning Instructions.

END OF WORK PACKAGE

SPRING BRAKE CAGING PROCEDURES 0055 00

THIS WORK PACKAGE COVERS:
Caging Spring Brakes, Uncaging Spring Brakes

INITIAL SETUP:

Maintenance Level
Operator

Personnel Required
Two

Tools and Special Tools
Wrench, Adjustable, 8 in. (Item 29, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Equipment Conditions
Wheels Chocked (TM 9-2320-392-10)

CAGING SPRING BRAKES

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result may result in injury to personnel.

Trailer wheels must be chocked before caging parking/emergency spring brakes. Failure to comply may result in injury to personnel.

CAUTION

Do not attempt to tow the trailer with spring brakes caged except to move the trailer out of the traveled portion of the highway. Failure to comply may result in damage to equipment.

NOTE

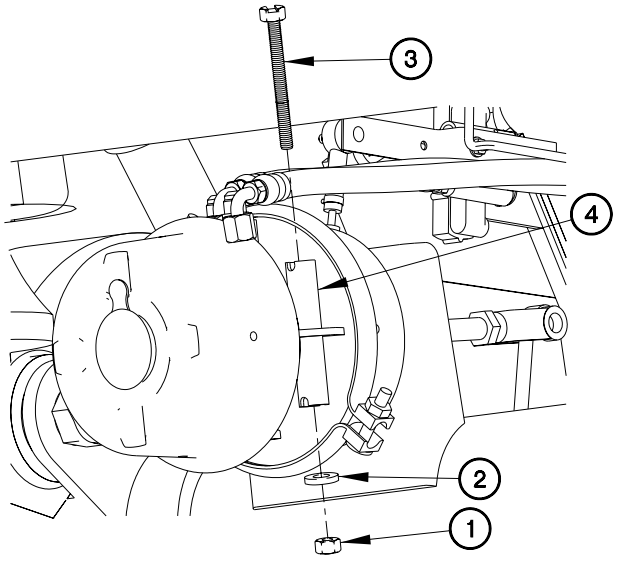
To cage spring brakes, caging procedures apply to both front and rear brake air chambers.

CAGING SPRING BRAKES

NOTE

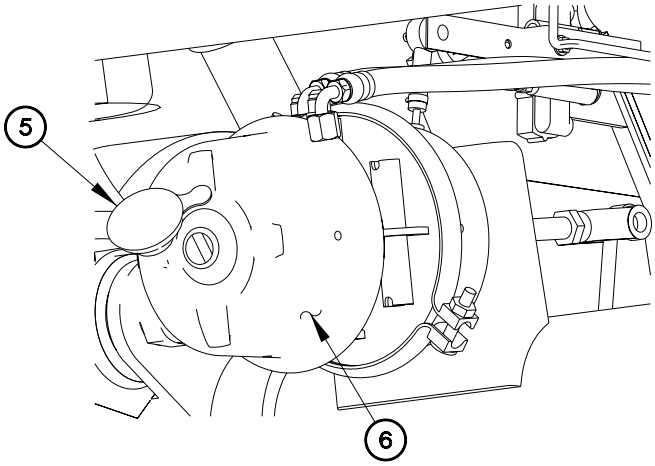
All spring brakes are caged the same way. RH shown.

1. Drain air tanks.
2. Remove nut (1) and washer (2) from caging bolt (3).
3. Remove caging bolt (3) from caging bolt holder (4).



cd055P01

4. Remove rubber cap (5) from back of brake air chamber (6).



cd055P02

SPRING BRAKE CAGING PROCEDURES-Continued 0055 00

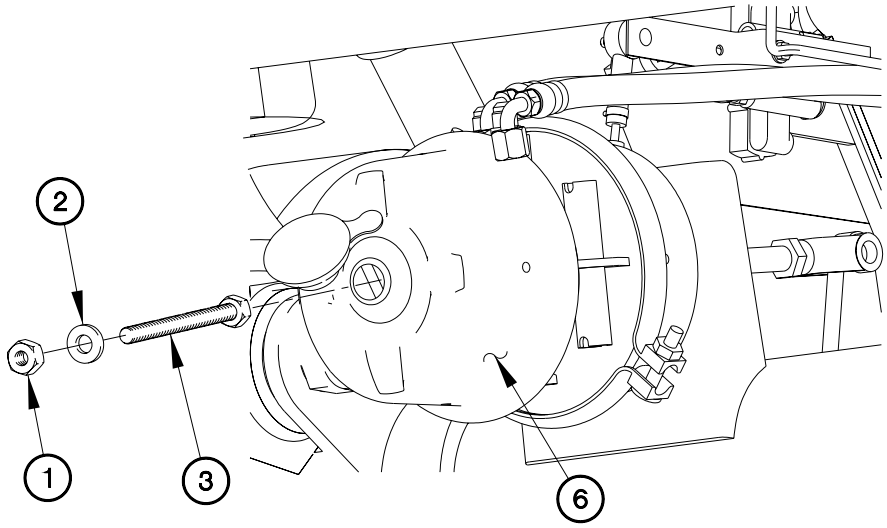
CAGING SPRING BRAKES

5. Insert T-end of caging bolt (3) in back of brake air chamber (6) and lock in place by turning caging bolt (3) ¼ turn clockwise.

6. Install washer (2) and nut (1) on caging bolt (3).

7. Tighten nut (1).

8. Perform previous steps seven steps on remaining brake air chambers.



cd055P03

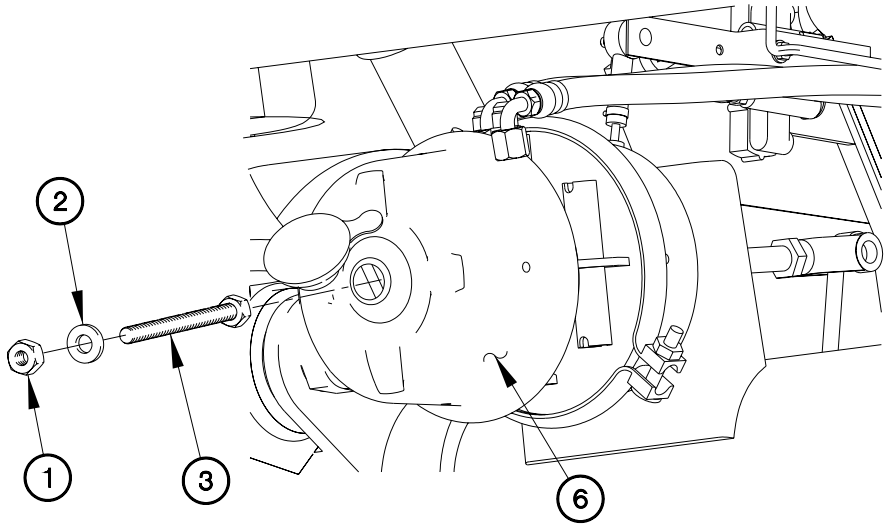
SPRING BRAKE CAGING PROCEDURES - Continued 0055 00

UNCAGING SPRING BRAKES

NOTE

All spring brakes are uncaged the same way. RH shown.

1. Remove nut (1) and washer (2) from caging bolt (3).
2. Turn caging bolt (3) to the left ¼ turn and remove from brake air chamber (6).

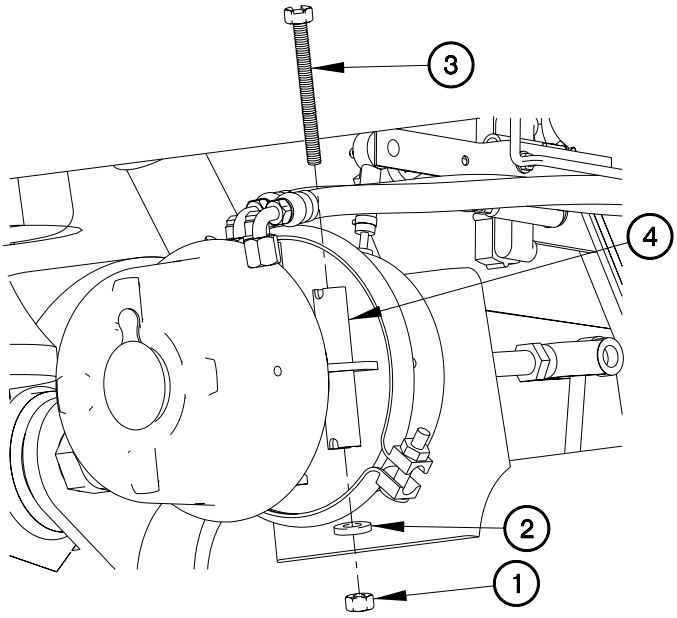


cd055P03

UNCAGING SPRING BRAKES

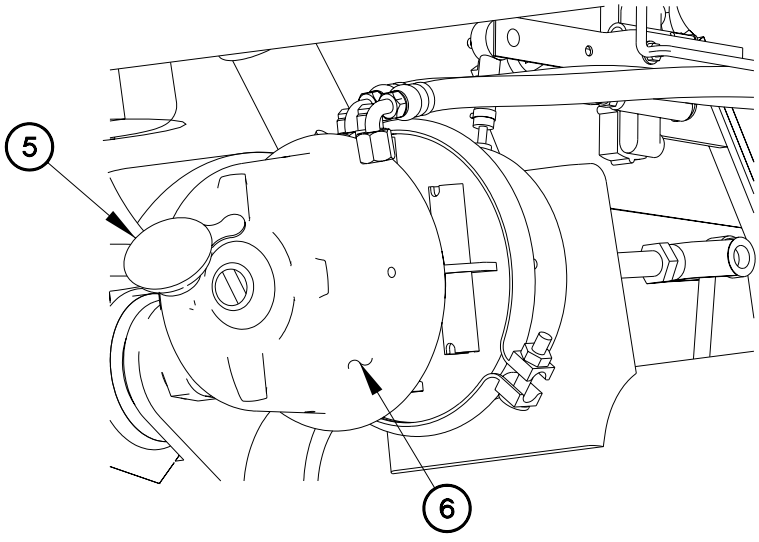
3. Install caging bolt (3) in caging bolt holder (4).

4. Install washer (2) and nut (1) on caging bolt (3).



cd055P01

5. Install rubber cap (5) on brake air chamber (6).



cd055P02

END OF WORK PACKAGE

PREPARATION FOR TRANSPORT 0056 00

THIS WORK PACKAGE COVERS:
Stacking Trailer, Preparation for Transport

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Took Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 31, WP 0167 00)

Materials/Parts
Lockwashers (6) (Item 18, WP 0168 00)
Chains (15) (NSN 4010-01-371-5772)
Binder, Load (8) (NSN 3990-01-440-5975)

Equipment Conditions
Trailer uncoupled (TM 9-2320-392-1)
Flatrack rail in down position (WP 0005 00)

References
TM 9-2320-392-10-1

GENERAL

This work package contains information and instructions to stack and transport the Load Handling System Trailer (LHST).

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

CAUTION

Front guides must be properly stored on both LH and RH sides of the trailer to meet with transport width requirements. Failure to comply may result in damage to equipment.

Trailer must be unloaded of all containers and cargo. Failure to comply may result in damage to equipment.

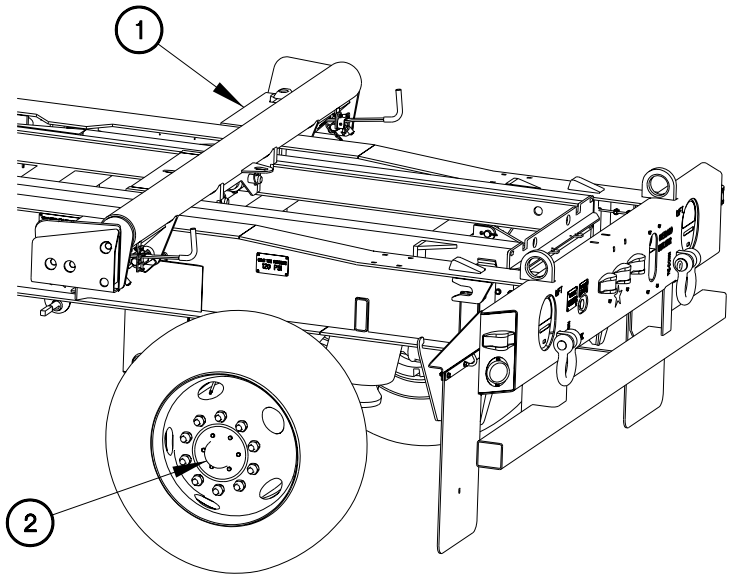
NOTE
Lug wrench to remove stacking brackets and shuttle guide brackets included in trailer stowage box.

Combine securing chains as needed to achieve desired lengths.

PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING

1. Pull shuttle (1) of bottom trailer just forward of rear axle (2).



CD056P01

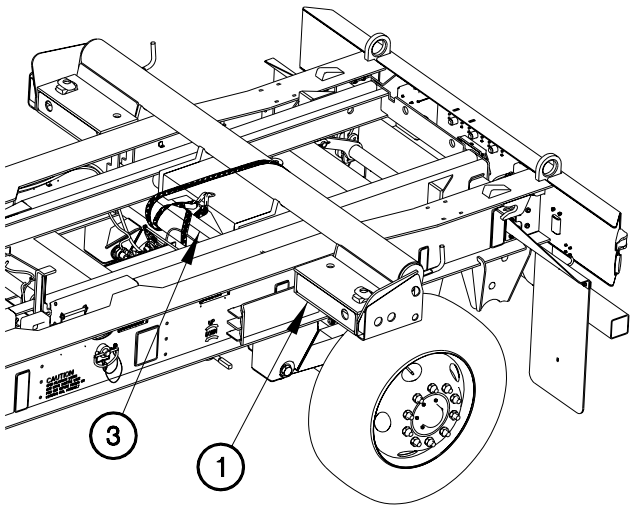
PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

CAUTION

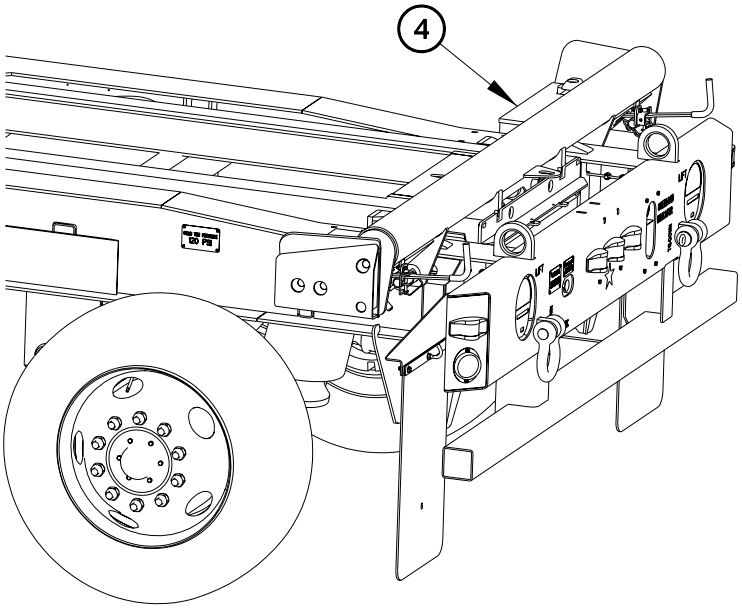
Ensure chains are clear of rear air tank and air hoses under cross member. Failure to comply may result in damage to equipment.

2. Secure shuttle (1) of bottom trailer to cross member (3) with chain and binder.



CD056P02

3. Secure shuttle (4) of top trailer in the rear stowed position.



CD056P03

PREPARATION FOR TRANSPORT - Continued 0056 00

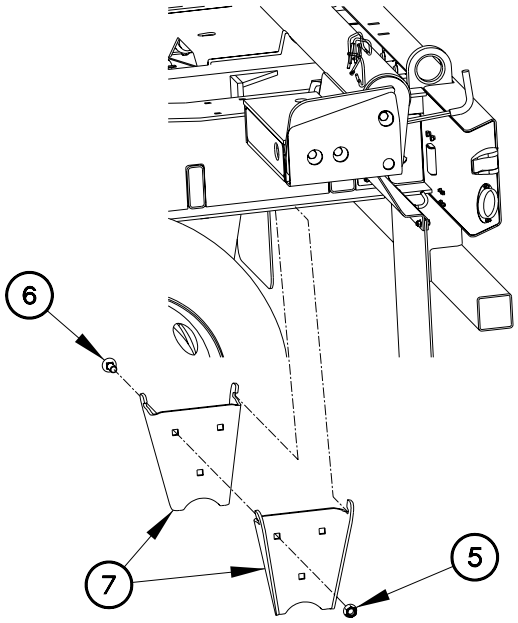
STACKING - Continued

NOTE

Transport brackets are removed and installed the same way on both RH and LH side. LH side shown.

4. Remove three nuts (5) and bolts (6) on transport brackets (7) from both top and bottom trailer.

5. Remove transport brackets (7) from both top and bottom trailer.



CD056P04

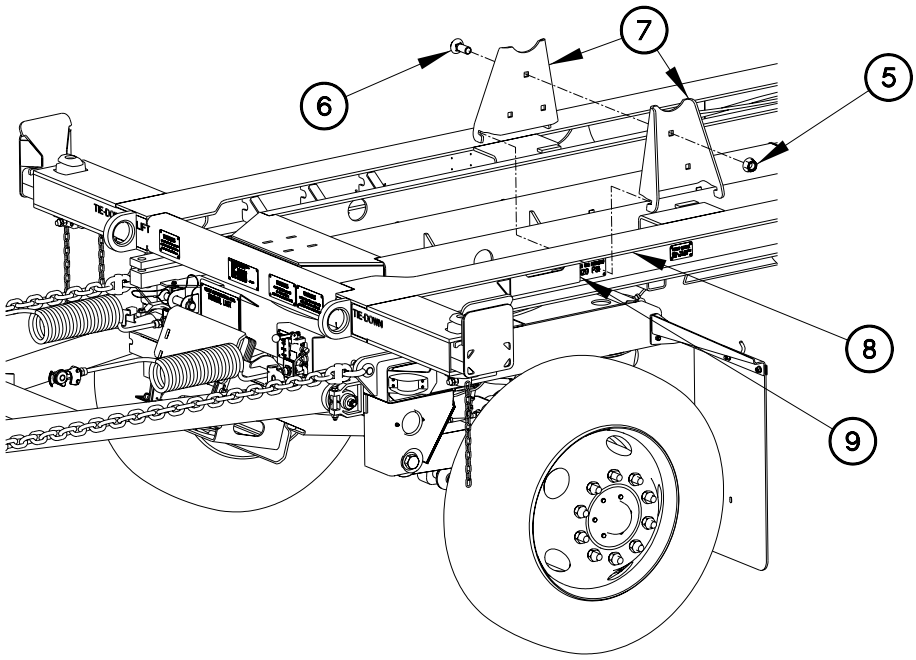
PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

6. Rotate transport brackets (7) 180 degrees.

7. Position front transport brackets (7) on top flange (8) of bottom trailer just behind hold down brackets (9).

8. Install three bolts (6) and nuts (5) in front transport brackets (7).



CD056P05

PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

NOTE

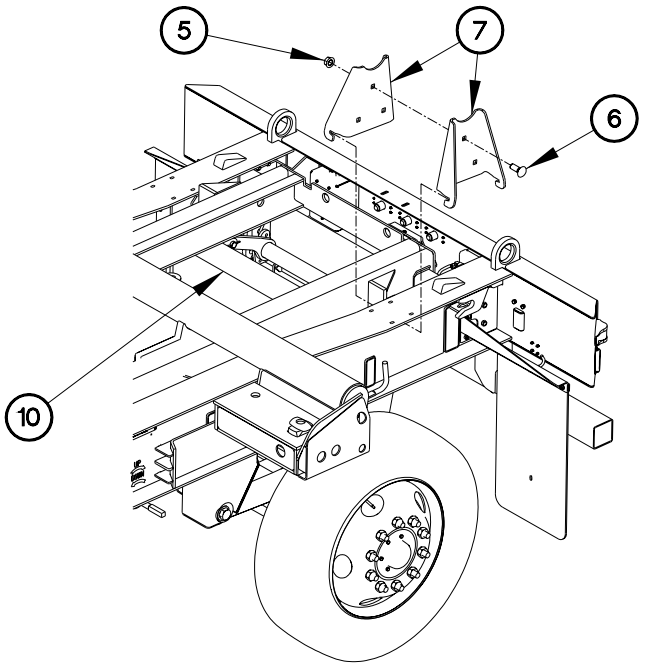
Transport brackets should be approximately 183-5/8 inches apart center to center. Some adjustment may be necessary.

9. Position rear transport brackets (7) centered over rear axle crossmember (10).

NOTE

Position nuts to inside of trailer.

10. Install three bolts (6) and nuts (5) in rear transport brackets (7). Do not fully tighten nuts.



CD056P06

PREPARATION FOR TRANSPORT - Continued 0056 00

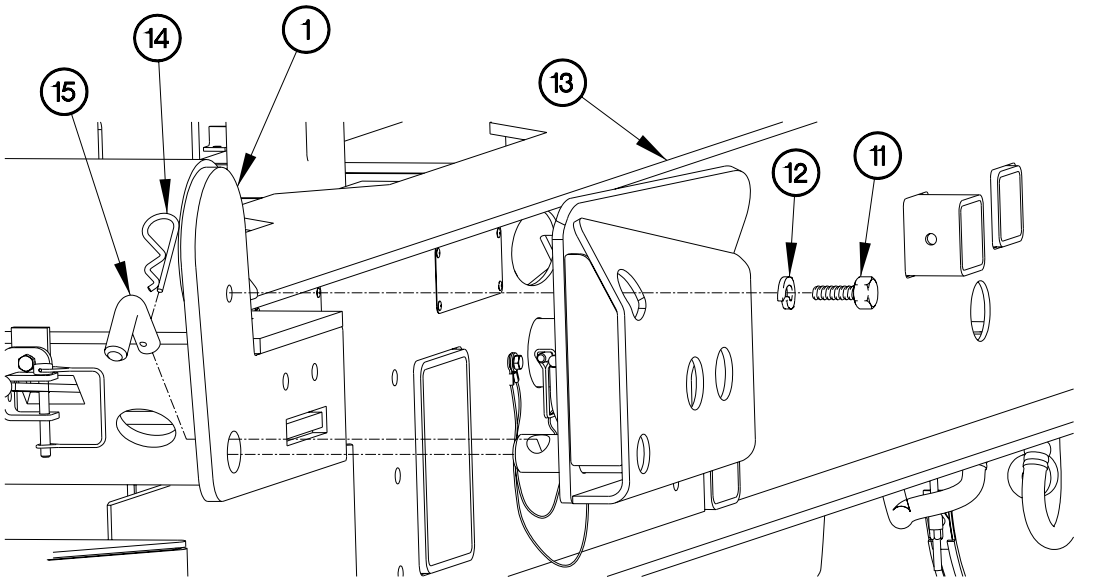
STACKING - Continued

NOTE

Shuttle guide brackets are removed the same way on both LH and RH side. RH side shown. Stow brackets and hardware in stowage box after removal.

11. Remove three bolts (11) and lockwashers (12) from shuttle guide bracket (13) on both top and bottom trailers. Discard lockwashers.

12. Remove retaining pin (14), pin (15), and shuttle guide bracket (13) from shuttle (1) on both top and bottom trailers.



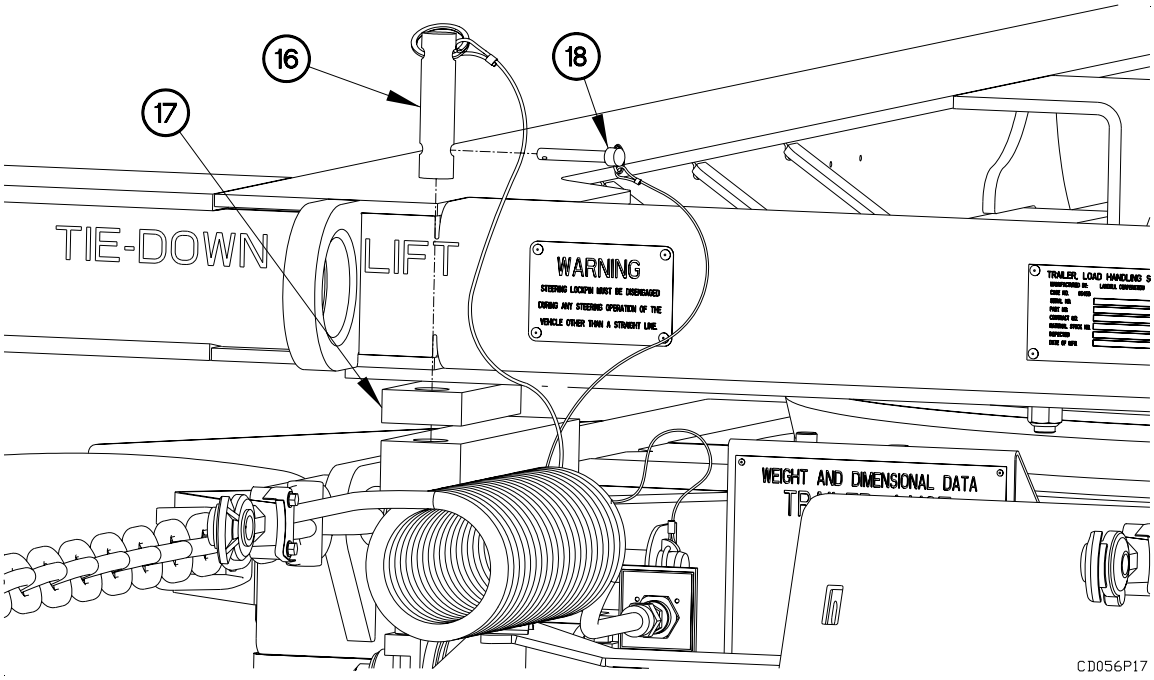
CD056P07

PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

13. Install turntable pin (16) in turntable (17) on top trailer.

14. Install pin (18) in turntable pin (16).

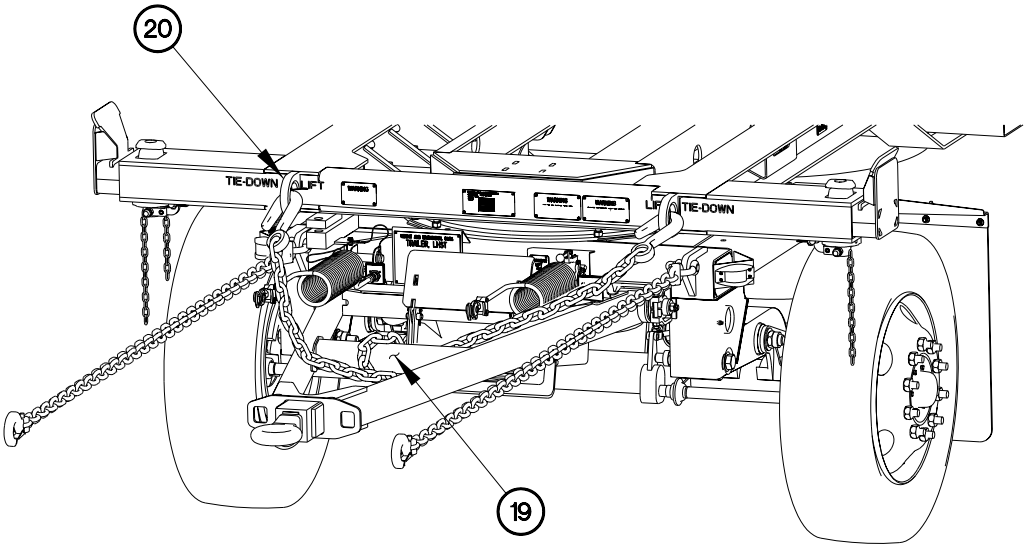


PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

15. Raise drawbar (19) until parallel to ground (WP 0043 24, TM 2320-392-10-1).

16. Secure front cross member of drawbar (19) of top trailer to front tie downs (20) of top trailer with chain.



CD056P08

PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

17. Attach chains from front (20) and rear (21) lifting eyes to overhead lifting device.

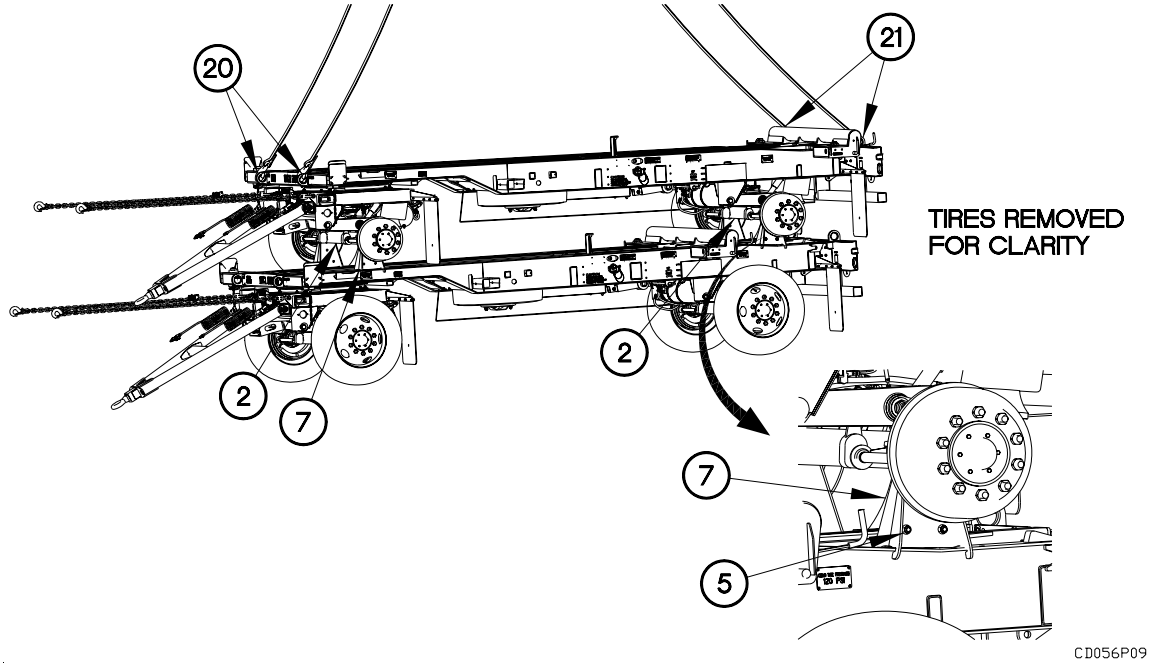
18. Position top trailer above bottom trailer using an overhead lifting device.

NOTE

Adjustment of transport brackets may be necessary to secure front and rear axles of top trailer onto transport brackets of bottom trailer.

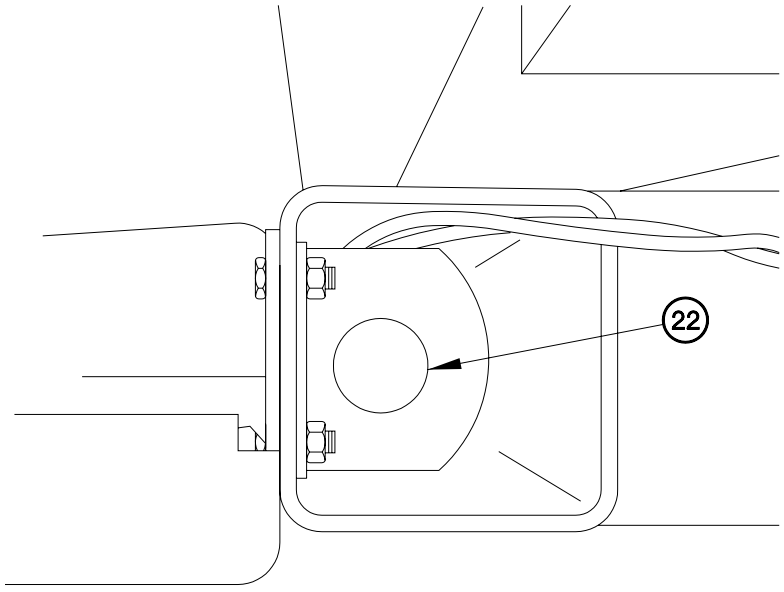
19. Place axles (2) of top trailer into recesses in transport brackets (7) on bottom trailer.

20. Fully tighten nuts (5) on all transport brackets (7).



STACKING - Continued

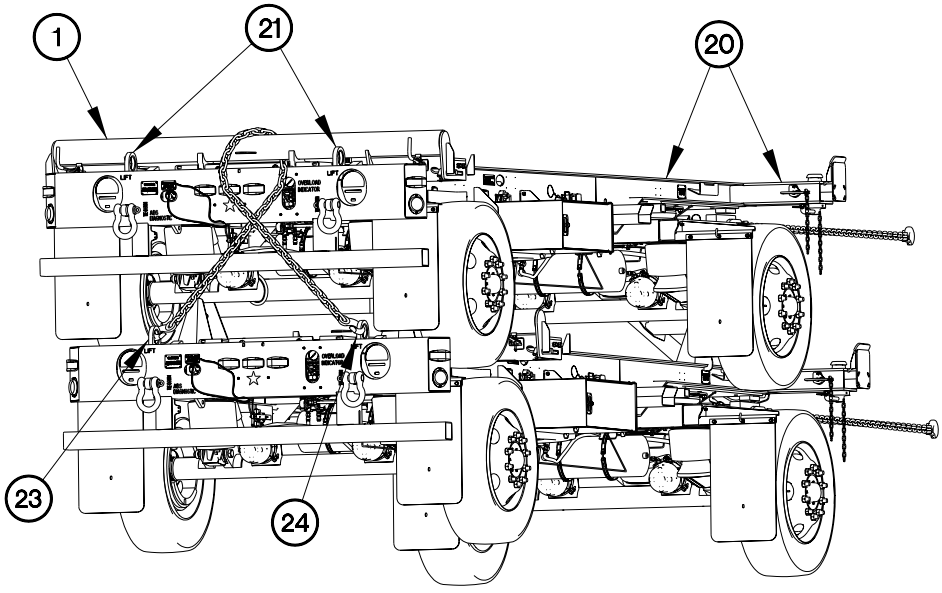
21. Press height actuation valve knob (22) in to lower suspension of top trailer.



CD056P18

22. Remove lifting chains from front (20) and rear (21) lifting eyes of top trailer.

23. Place chain over shuttle (1) of top trailer and secure one end to left rear lifting eye (23) of bottom trailer and other end to right rear lifting eye (24) of bottom trailer.



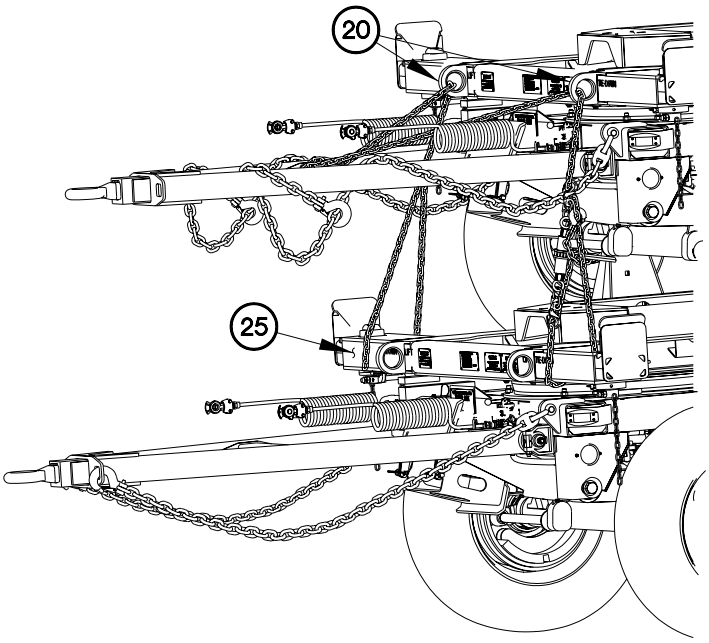
CD056P19

PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

24. Position chain through both front lifting eyes (20) of top trailer.

25. Wrap chain around front cross member (25) of bottom trailer on both RH and LH side and secure with binder.



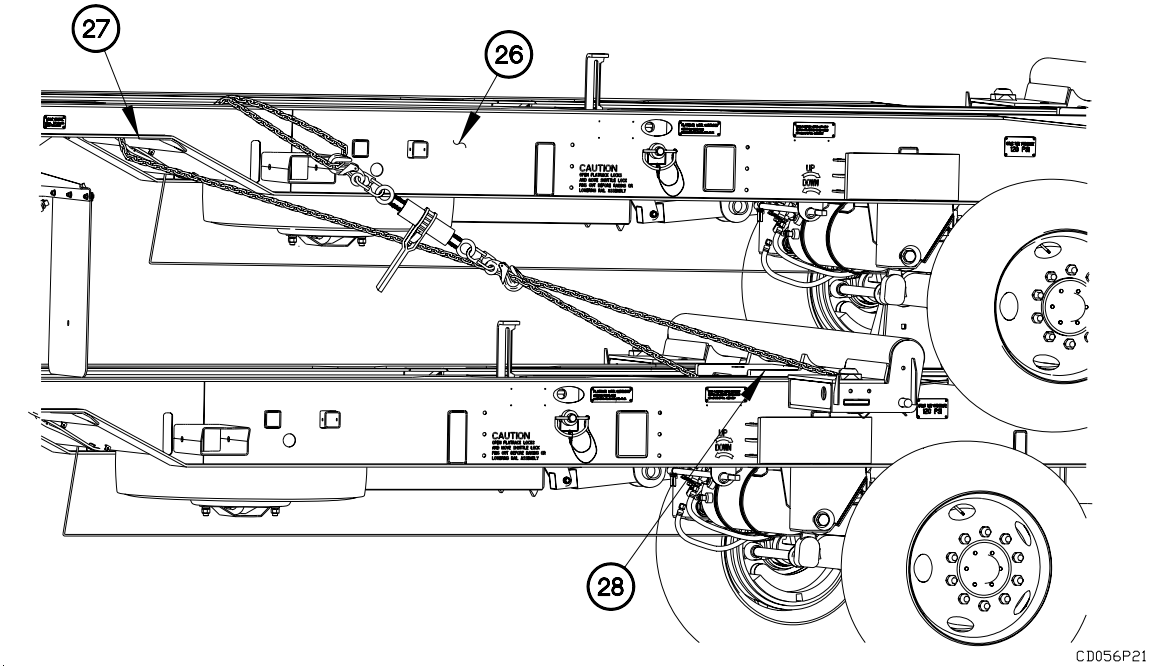
CD056P20

PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

26. Place chain over frame rail (26) at triangular cross member (27) of top trailer and loop around cross member (28) of bottom trailer and secure with binder. LH side shown.

27. Repeat previous step on RH side of trailer.



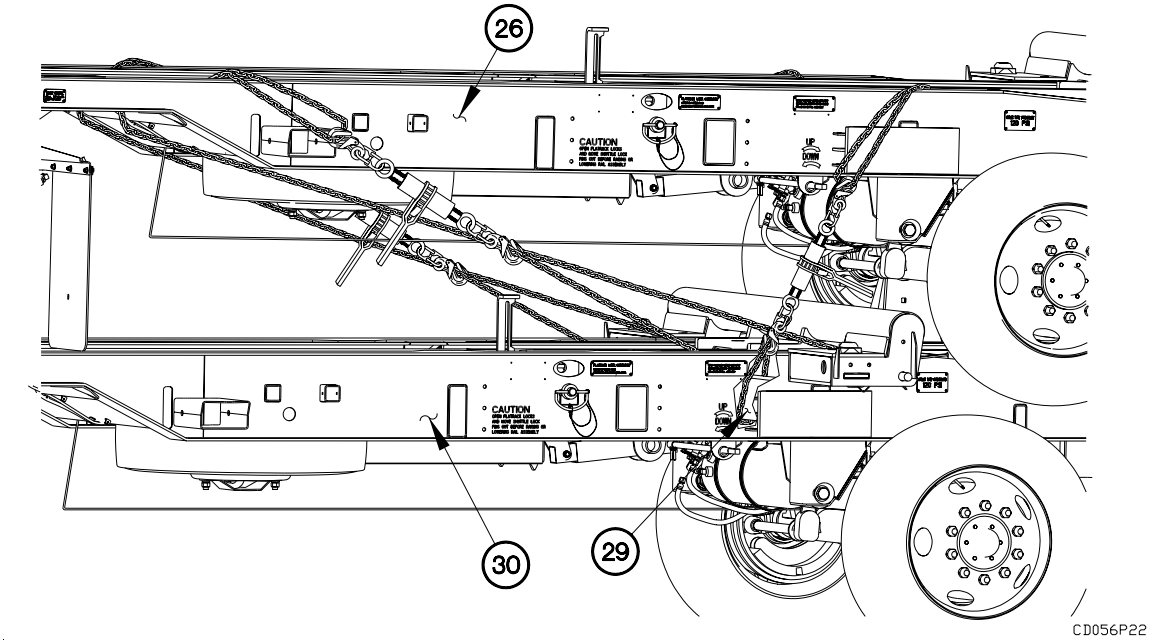
STACKING - Continued

NOTE

The chain on the inside of the cross member must pass through the opening made by the brace of the suspension hanger.

28. Place chain over frame rail (26) at suspension hangers of top trailer and loop around cross member (29) behind din locks (30) of bottom trailer and secure with binder. LH side shown.

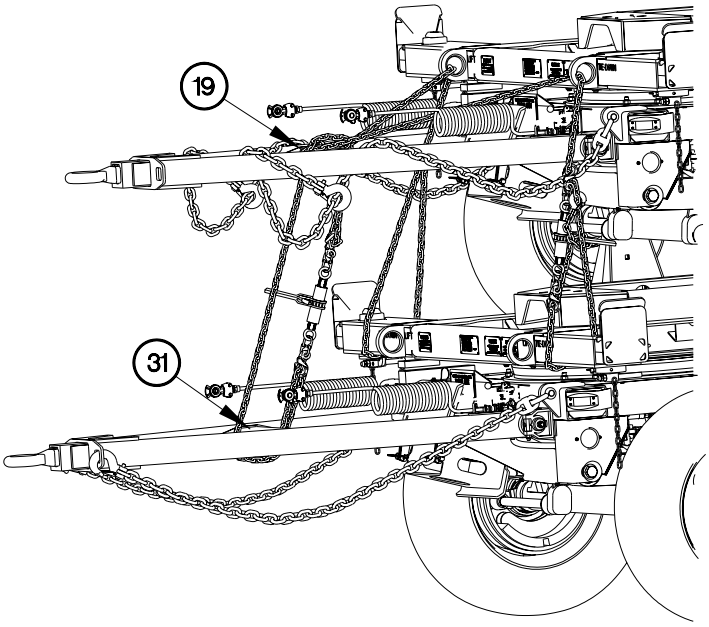
29. Repeat previous step on RH side of trailer.



PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

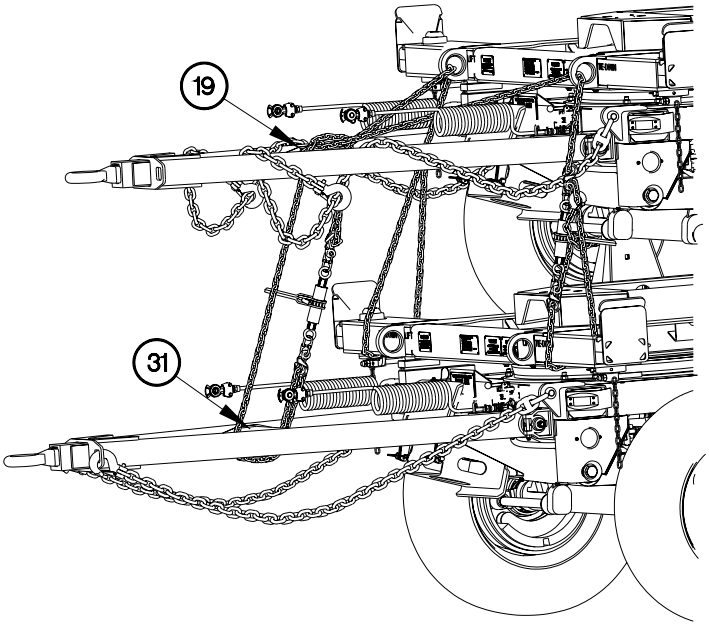
30. Place chain over drawbar crossmember (19) of top trailer around drawbar cross member (31) of bottom trailer.



CD056P23

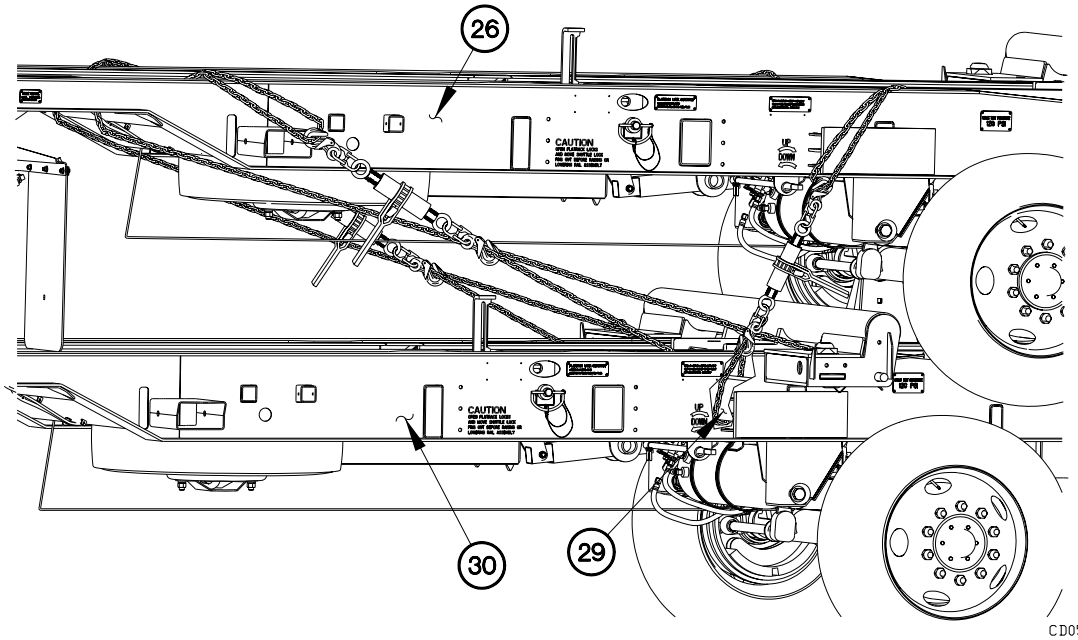
UNSTACKING

1. Remove chain from drawbar crossmember (19) of top trailer and drawbar crossmember (31) of bottom trailer.



CD056P23

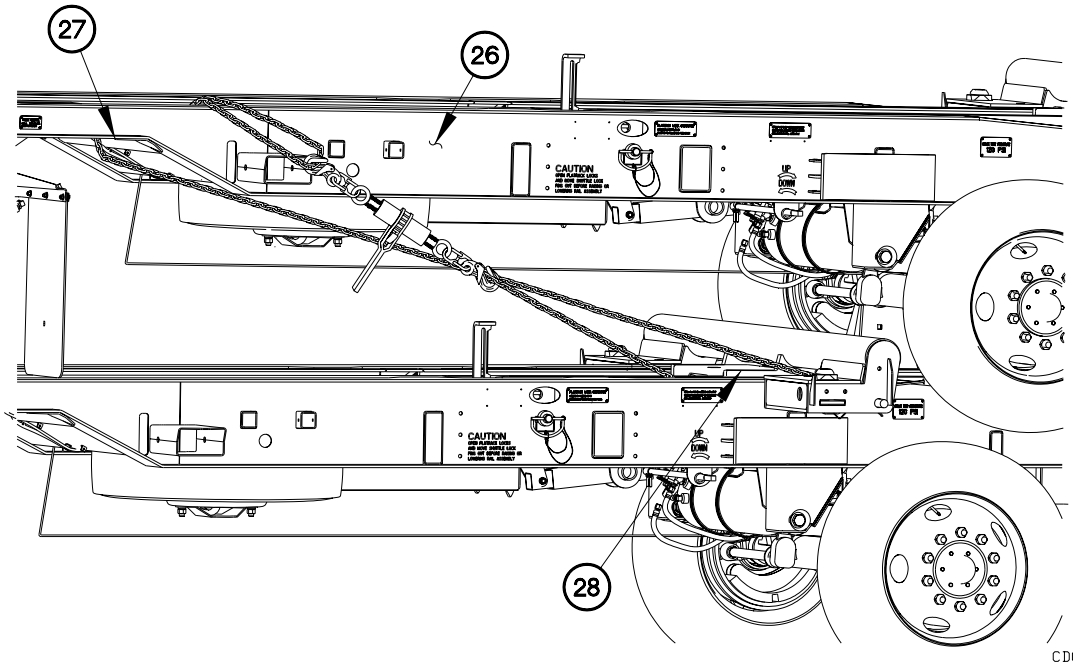
2. Remove chain from frame rail (26) at suspension hanger of top trailer and crossmember (29) behind din locks (30) of bottom trailer.



CD056P22

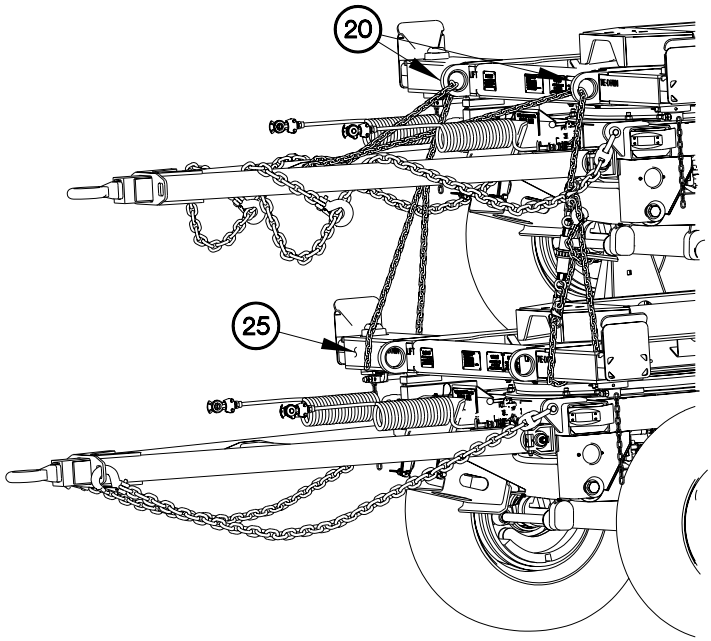
UNSTACKING-Continued

3. Remove chain over frame rail (26) at triangular crossmember (27) of top trailer and crossmember (28) of bottom trailer.



CD056P21

4. Remove chain from front crossmember (25) of bottom trailer and front lifting eyes (20) of top trailer.

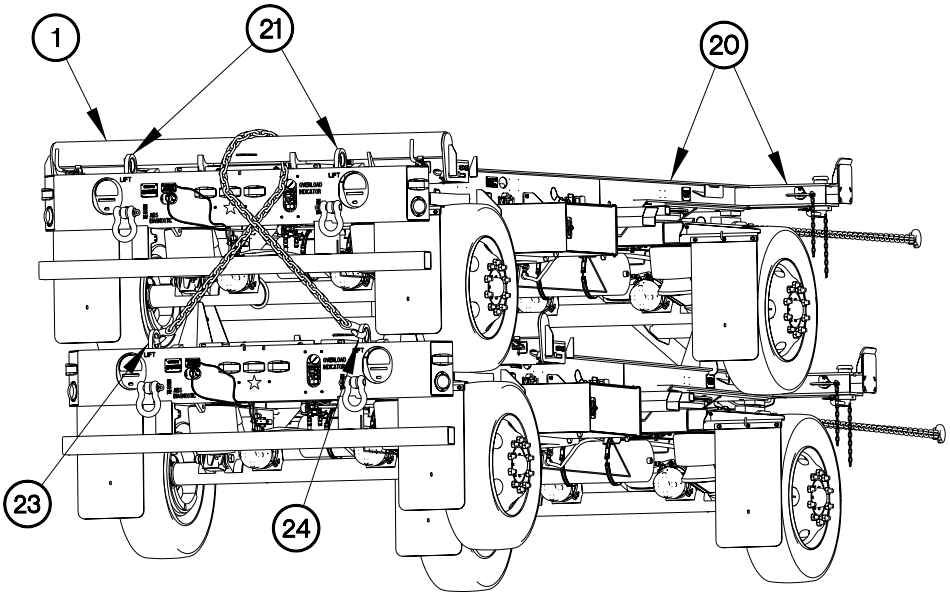


CD056P20

PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

5. Remove chain over shuttle (1) of top trailer and left (23) and right rear lifting eyes (24) of bottom trailer.

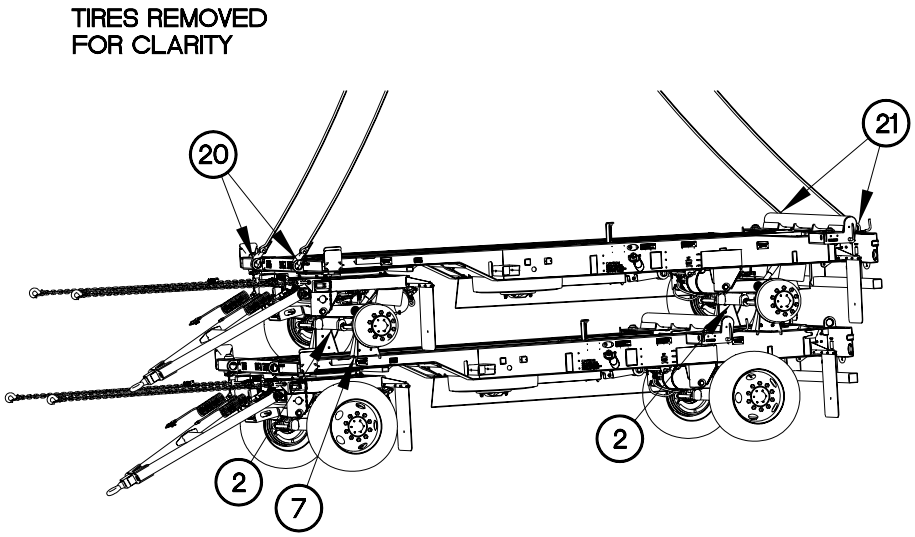


CD056P19

UNSTACKING-Continued

6. Attach chains from front (20) and rear (21) lifting eyes of top trailer to overhead lifting device.

7. Lift top trailer front and rear axles (2) from transport brackets (7) on bottom trailer using overhead lifting device and place on ground.



CD056P14

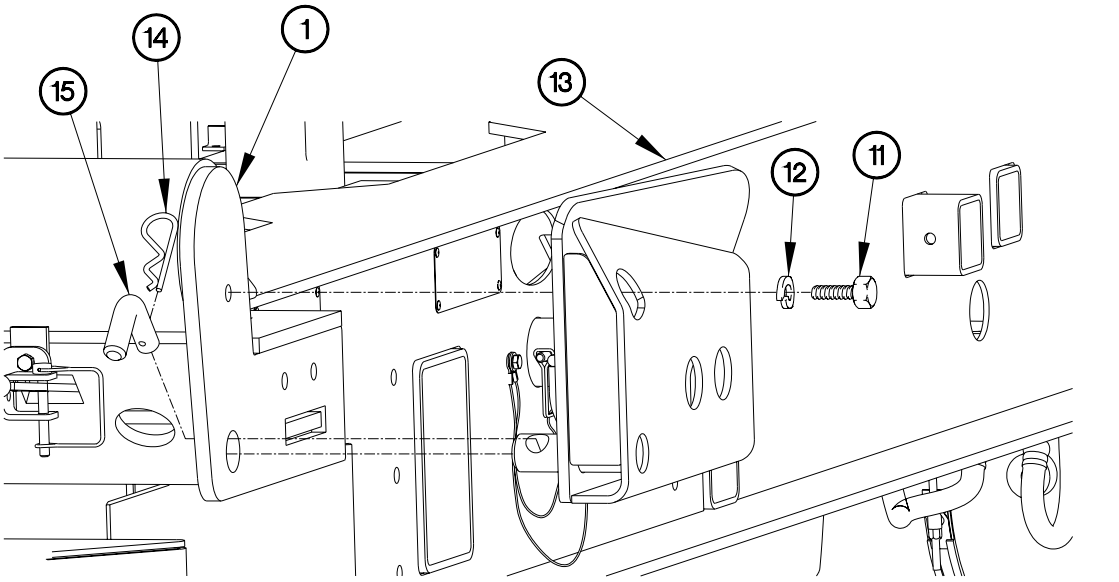
PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

NOTE

Shuttle guide brackets are installed the same way on both LH and RH side. RH side shown.

8. Install shuttle guide bracket (13) on shuttle (1) with pin (15) and retaining pin (14).
9. Install three lockwashers (12) and bolts (11) in shuttle guide brackets (13).
10. Tighten three bolts (11) to 150-190 lb-ft (203-258 N•m).



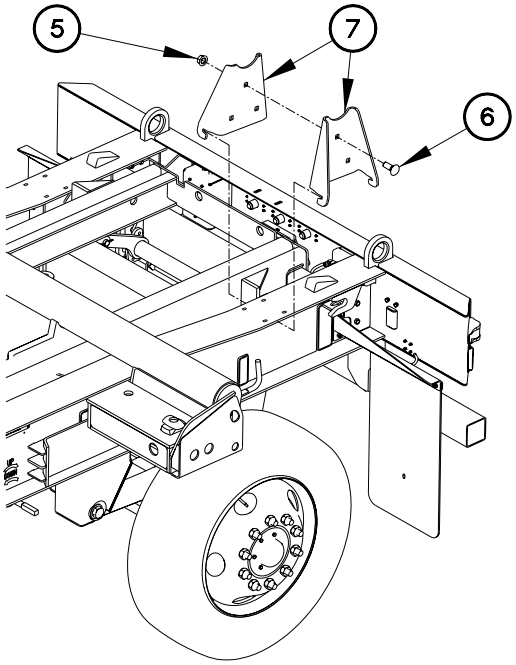
CD056P07

PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

11. Remove three nuts (5) and bolts (6) from all four sets of transport brackets (7) on bottom trailer.

12. Remove transport brackets (7) from bottom trailer.



CD056P15

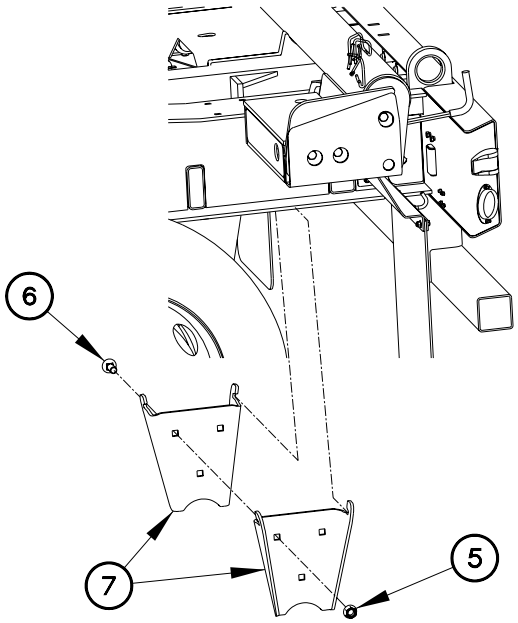
PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

13. Rotate transport brackets (7) 180 degrees.

14. Position transport brackets (7) under rear splash guards on both top and bottom trailer.

15. Install three nuts (5) and bolts (6) in all four sets of transport brackets (7).



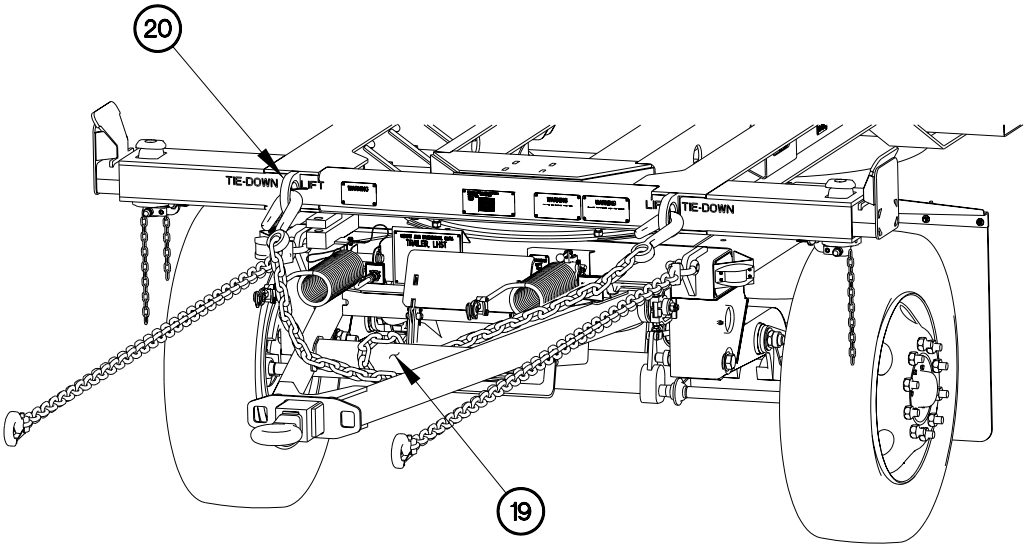
CD056P04

PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

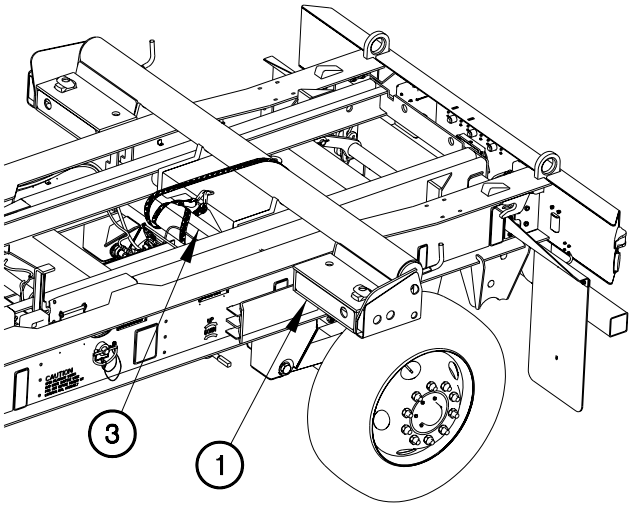
16. Remove chain from crossmember of drawbar (19) to front lifting eyes (20).

17. Lower drawbar (19) to ground (WP 0043 24, TM 2320-392-10-1).



CD056P08

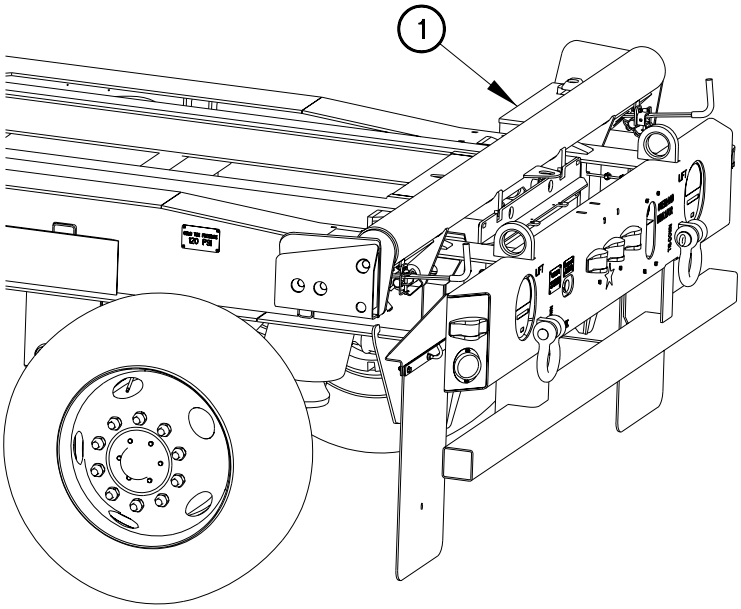
18. Remove chain from shuttle (1) to crossmember (3) of bottom trailer.



CD056P12

UNSTACKING-Continued

19. Secure shuttle (1) of bottom trailer in rear stowed position.



CD056P16

END OF WORK PACKAGE

CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT

0057 00

THIS WORK PACKAGE COVERS:

Circuit Breaker Removal, Circuit Breaker Installation, Module Removal, Module Installation, 12 VDC Connector Removal, 12 VDC Connector Installation, 24 VDC Connector Removal, 24 VDC Connector Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Soldering and Brazing Outfit, Resistance Heating (Item 20, WP 0167 00)
Took Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)
Solder, Tin Alloy (Item 17, WP 0165 00)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont)
Washer, Lock (3) (Item 11, WP 0168 00)
Washer, Lock (4) (Item 12, WP 0168 00)
Washer, Lock (2) (Item 13, WP 0168 00)
Washer, Lock (3) (Item 16, WP 0168 00)

Personnel Required
Two

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Voltage converter box removed (WP 0058 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) circuit breakers and modules.

CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT-Continued

CIRCUIT BREAKER REMOVAL

NOTE

Tag connections and connection points prior to disconnecting.

Remove plastic cable ties as required.

Circuit breakers 1,2,3,5,6,and 7 removed the same way. Circuit breaker position 1 shown.

Perform the following step on circuit breakers 1, 2, 3, 5, 6, and 7.

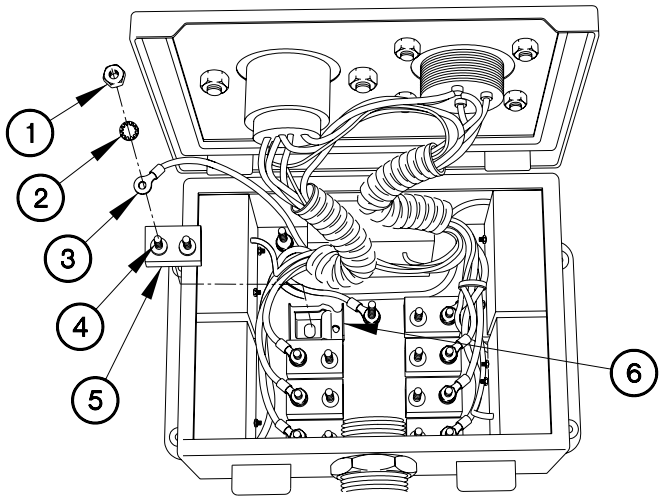
1. Remove nut (1), lockwasher (2), and terminal lug (3) from circuit breaker “BAT” terminal stud (4). Discard lockwasher.

NOTE

Perform the following step on circuit breakers 4 and 8.

2. Remove nut (1), lockwasher (2), and two terminal lugs (3) from circuit breaker “BAT” terminal stud (4). Discard lockwasher.

3. Remove circuit breaker (5) from circuit breaker base (6).



CD057R01

CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

CIRCUIT BREAKER INSTALLATION

NOTE

Install plastic cable ties as required.

Circuit breakers 1, 2, 3, 5, 6, and 7 are installed the same way. Circuit breaker position 1 shown.

1. Position circuit breaker (5) on circuit breaker base (6).

NOTE

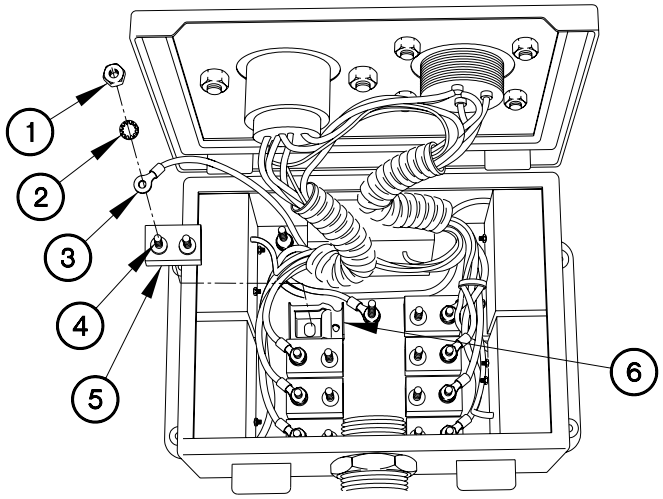
Perform the following step on circuit breakers 4 and 8.

2. Install two terminal lugs (3) on circuit breaker “BAT” terminal stud (4) with lockwasher (2) and nut (1).

NOTE

Perform the following step on circuit breakers 1, 2, 3, 5, 6, and 7.

3. Install terminal lug (3) on circuit breaker “BAT” terminal stud (4) with lockwasher (2) and nut (1).



CD057R01

CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

0057 00

MODULE REMOVAL

NOTE

This task shows locations of Voltage converter box module wiring connection points. Modules 1 through 5 are removed the same way, Module 3 shown.Refer to **Table 1: Voltage Converter Box Module Wiring Connections for details.**

Tag wires and connection points prior to disconnecting.

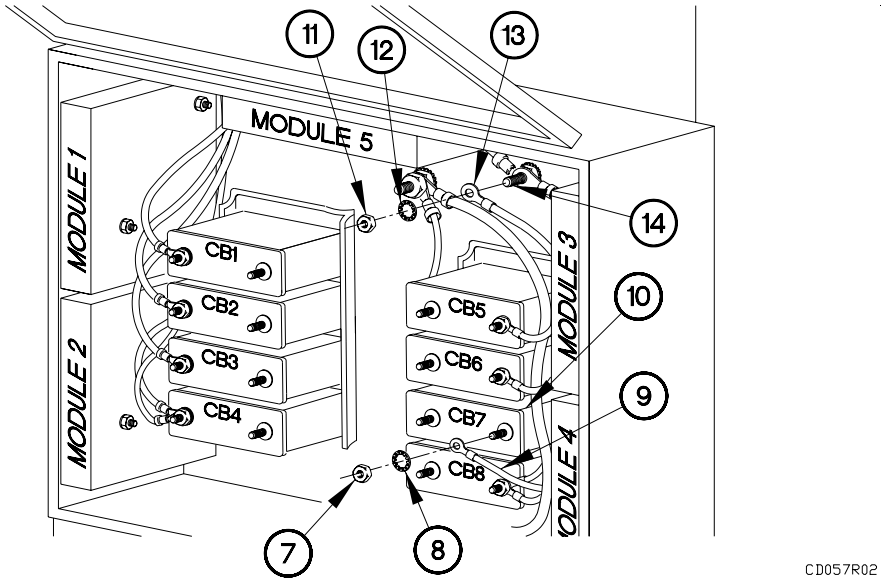
Remove plastic cable ties and convoluted tubing as required.

1. Remove nut (7), lockwasher (8), and wire (9) from circuit breaker CB7 “BAT” terminal stud (10). Discard lockwasher.

2. Remove nut (11), lockwasher (12), and wire (13) from right ground stud (14). Discard lockwasher.

Table 1: Voltage Converter Box Module Wiring Connections.

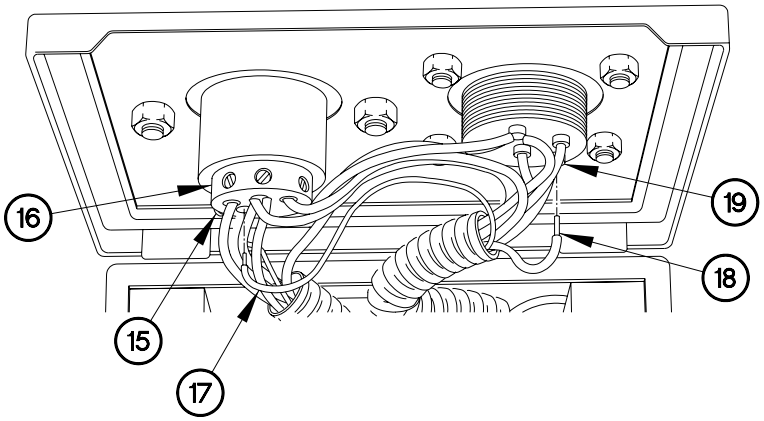
MODULE	CONNECTION POINTS
1	CB3, left ground stud, Position 2BL-12 VDC connector, E-Pin-24 VDC connector
2	CB4, left ground stud, Positions 4RED/ 5GRN-12 VDC connector, J-Pin-24 VDC connector
3	CB7, right ground stud, Position 6BRN-12 VDC connector, E pin –24 VDC connector
4	CB8, right ground stud, Positions 3YEL/ 4RED-12 VDC connector, B-Pin-24 VDC connector
5	CB1, right ground stud, Positions 7BLU/ 4RED-12 VDC connector, B-/J-/K-Pins-24 VDC connector



CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

MODULE REMOVAL – Continued

3. Loosen screw (15) at position 6BRN on 12 VDC connector (16).
4. Remove wire (17) from position 6BRN on 12 VDC connector (16).
5. Remove wire (18) from pin E on 24 VDC connector (19).

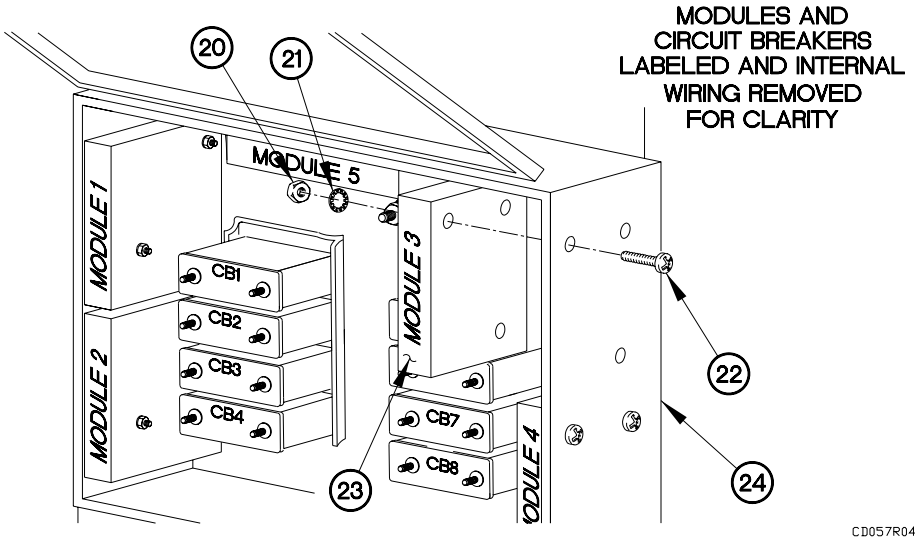


CD057R03

CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

MODULE REMOVAL - Continued

6. Remove three nuts (20), lockwashers (21), screws (22), and module (23) from voltage converter box (24). Discard lockwashers.



CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

0057 00

MODULE INSTALLATION

NOTE

This task shows locations of voltage converter box module wiring connection points. Refer to **Table 1. Voltage Converter Box Module Wiring Connections** for details.

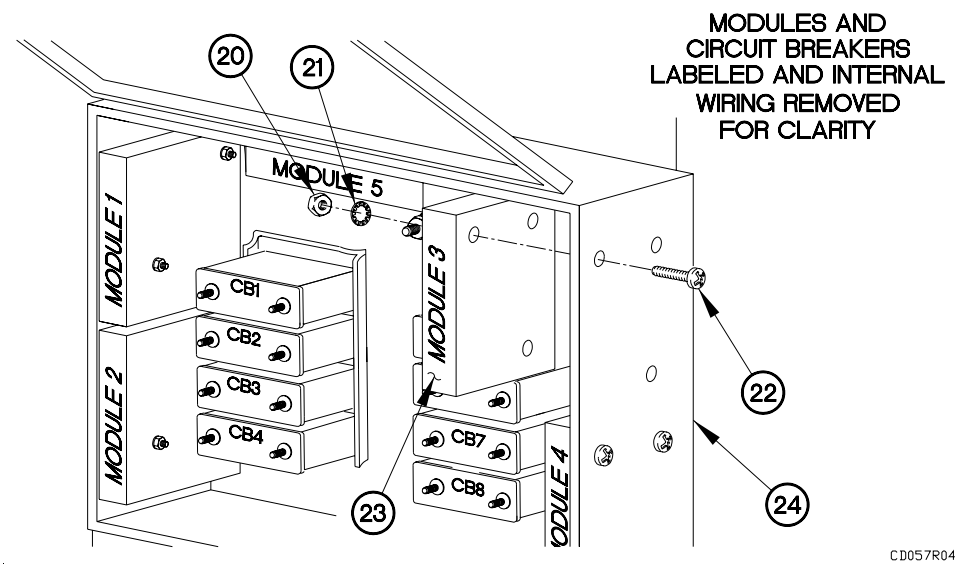
Modules 1 through 5 are installed the same way, Module 3 shown.

Install plastic cable ties and convoluted tubing as required.

Table 1: Voltage Converter Box Module Wiring Connections.

MODULE	CONNECTION POINTS
1	CB3, left ground stud, Position 2BL-12 VDC connector, E-Pin-24 VDC connector
2	CB4, left ground stud, Positions 4RED/ 5GRN-12 VDC connector, J-Pin-24 VDC connector
3	CB7, right ground stud, Position 6BRN-12 VDC connector, E pin –24 VDC connector
4	CB8, right ground stud, Positions 3YEL/ 4RED-12 VDC connector, B-Pin-24 VDC connector
5	CB1, right ground stud, Positions 7BLU/ 4RED-12 VDC connector, B-/J-/K-Pins-24 VDC connector

1. Install module (23) in voltage converter box (24) with three screws (22), lockwashers (21), and nuts (20).

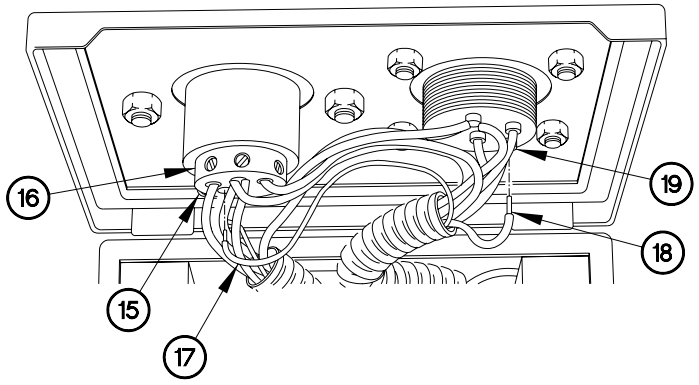


CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

0057 00

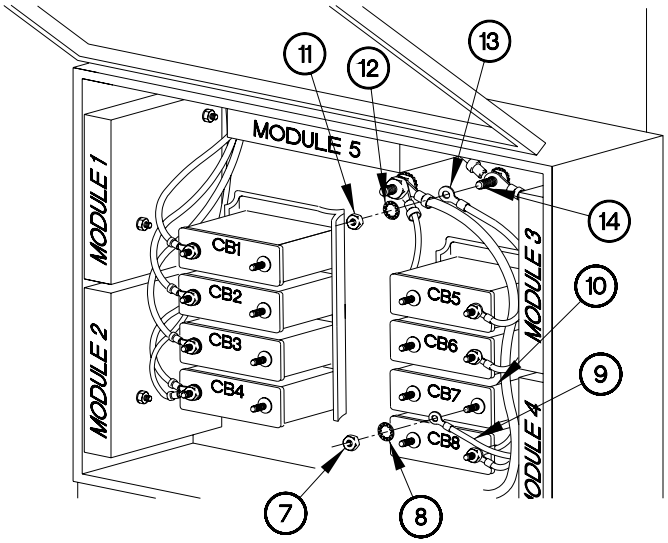
MODULE INSTALLATION - Continued

2. Strip approximately 1/4 in. (0.6 cm) of insulation from wire (18).
3. Solder wire (18) to pin E on 24 VDC connector (19).
4. Position wire (17) at position BRN on 12 VDC connector (16).
5. Tighten screw (15) at position BRN on 12 VDC connector (16).



CD057R03

6. Install wire (13) on right ground stud (14) with lockwasher (12) and nut (11).
7. Install wire (9) on circuit breaker CB7 “BAT” terminal stud (10) with lockwasher (8) and nut (7).



CD057R02

CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

0057 00

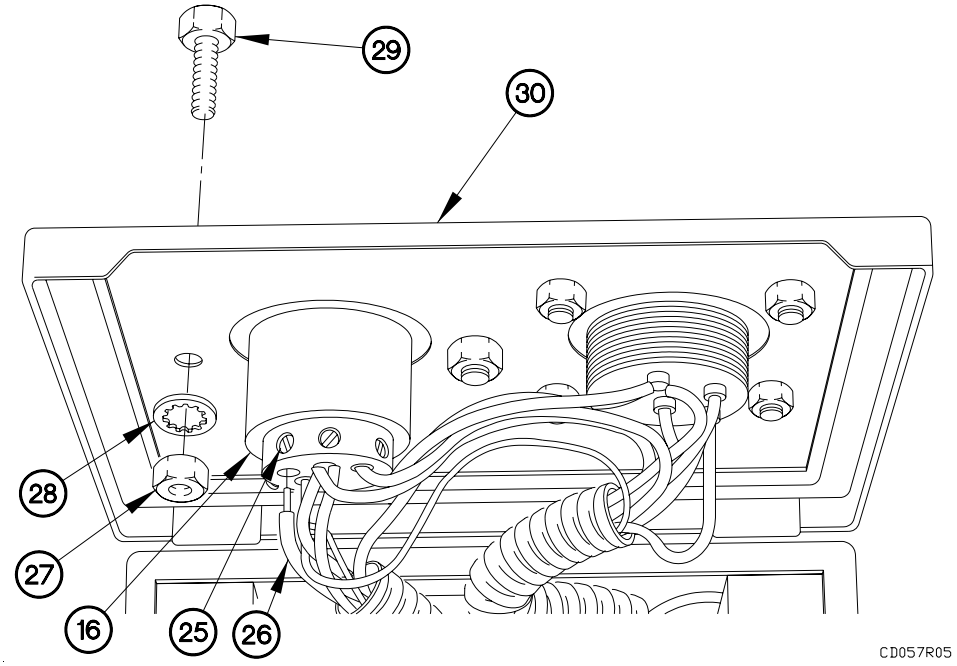
12 VDC CONNECTOR REMOVAL

NOTE

All 12 VDC connector wires are removed the same way.

Tag wires and connection points prior to disconnecting.

1. Loosen screw (25) at position 1WHT on 12 VDC connector (16).
2. Remove wire (26) from position 1 WHT on 12 VDC connector (16).
3. Perform the previous two steps on remaining wires.
4. Remove two nuts (27), lockwashers (28), bolts (29), and 12 VDC connector (16) from voltage converter box cover (30). Discard lockwashers.



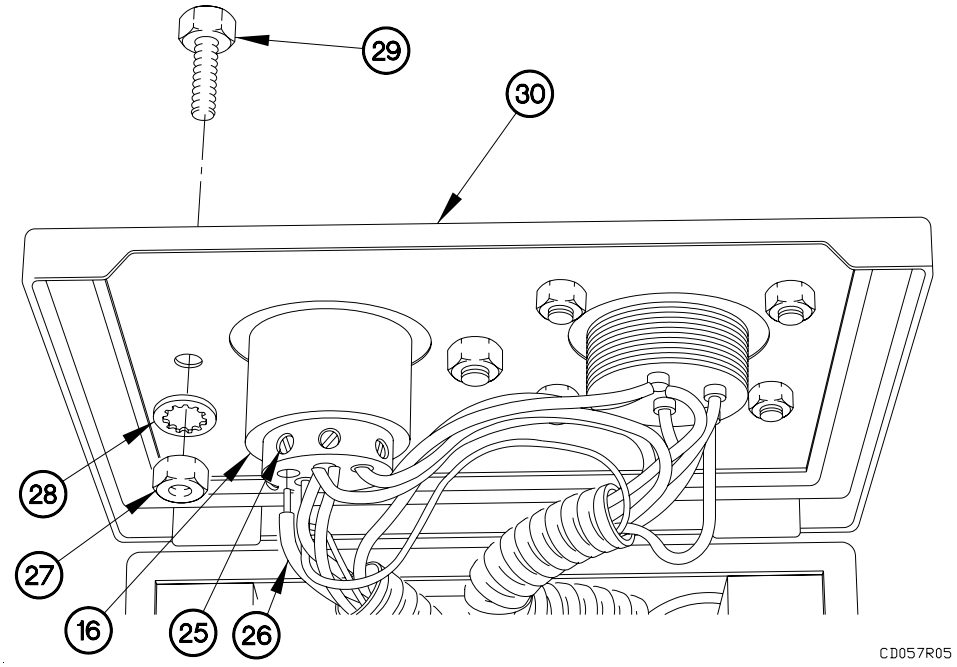
CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

12 VDC CONNECTOR INSTALLATION

NOTE

All 12 VDC connector wires are installed the same way.

1. Install 12 VDC connector (16) on voltage converter box cover (30) with two bolts (29), lockwashers (28), and nuts (27).
2. Position wire (26) on position 1WHT on 12 VDC connector (16).
3. Tighten screw (25) at position 1WHT on 12 VDC connector (16).
4. Perform the previous two steps on remaining wires.



CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

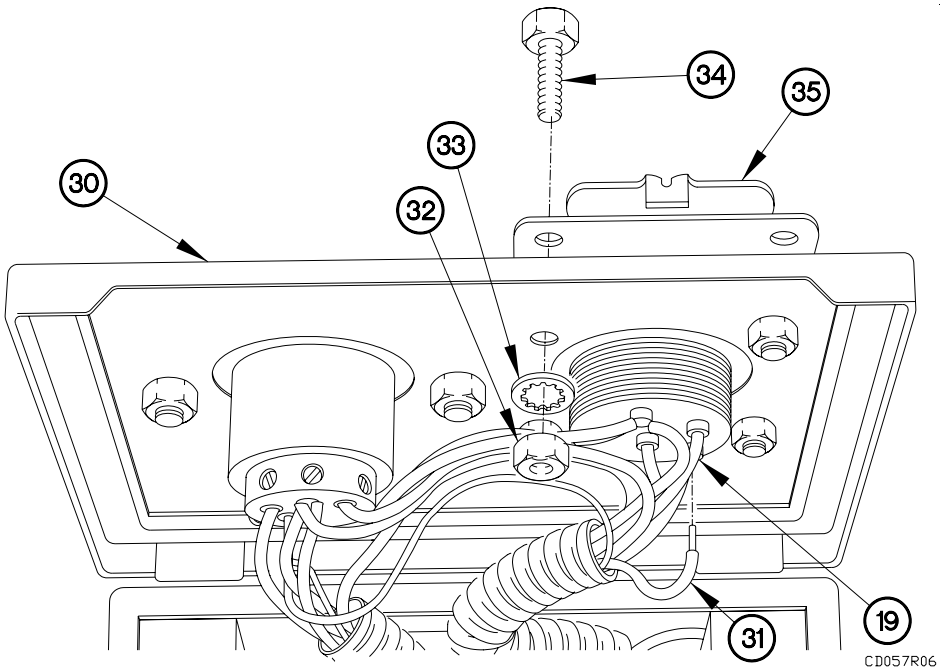
24 VDC CONNECTOR REMOVAL

NOTE

All 24 VDC connector wires are removed the same way.

Tag wires and connection points prior to disconnecting.

1. Remove wire (31) from ground pin on 24 VDC connector (19).
2. Perform the previous step on remaining wires.
3. Remove four nuts (32), lockwashers (33), screws (34), cover (35), and 24 VDC connector (19) from voltage converter box cover (30). Discard lockwashers.



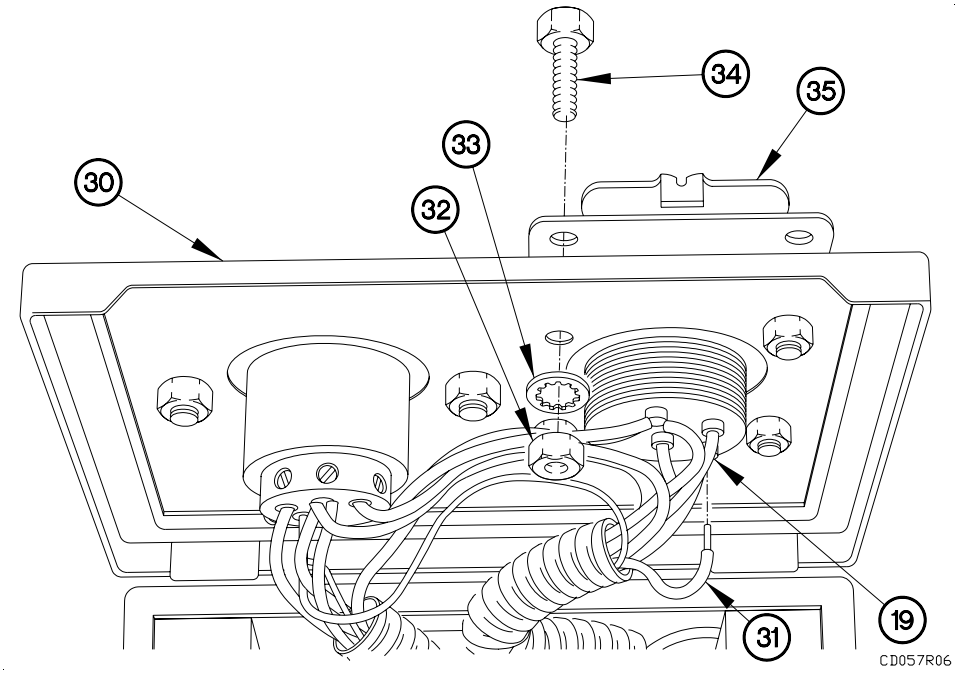
CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

24 VDC CONNECTOR INSTALLATION

NOTE

All 24 VDC connector wires are installed the same way.

1. Install 24 VDC connector (19) and cover (35) on voltage converter box cover (30) with four screws (34), lockwashers (33), and nuts (32).
2. Strip approximately 1/4 in. (0.6 cm) of insulation from wire (31).
3. Solder wire (31) to ground pin on 24 VDC connector (19).
4. Perform the previous two steps on remaining wires.



CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

OPERATIONAL CHECKS

1. Couple Trailer (WP 0043 23, Coupling Trailer).
2. Check for proper operation of trailer electrical system affected by replaced circuit breaker, module, or connector (WP 0052 00, Table 5. Preventive Maintenance Checks and Services (PMCS) - Before).
3. Uncouple trailer (WP 0043 24, Uncoupling Trailer).

END OF WORK PACKAGE

VOLTAGE CONVERTER BOX REPLACEMENT 0058 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Check

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Took Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Ties, Cable, Plastic (Item 20, WP 0165 00)

Materials/Parts (Cont)
Washer, Lock (9) (Item 16, WP 0168 00)
Nuts, Self-Locking (4) (Item 27, WP 0168 00)

Personnel Required
Two

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Disconnect 24 VDC intervehicular cable (WP 0062 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) voltage converter box.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

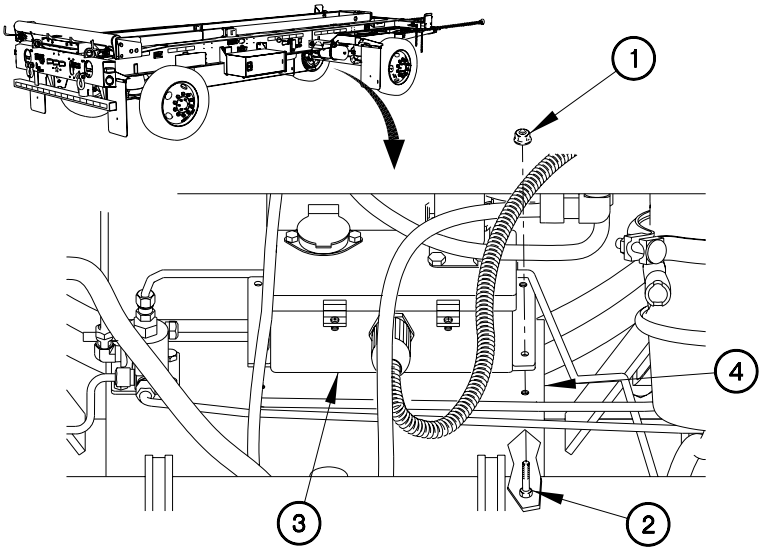
VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

REMOVAL

NOTE

The following step requires the aid of an assistant.

1. Remove four self-locking nuts (1), bolts (2), and voltage converter box (3) from voltage converter box bracket (4). Discard self-locking nuts.

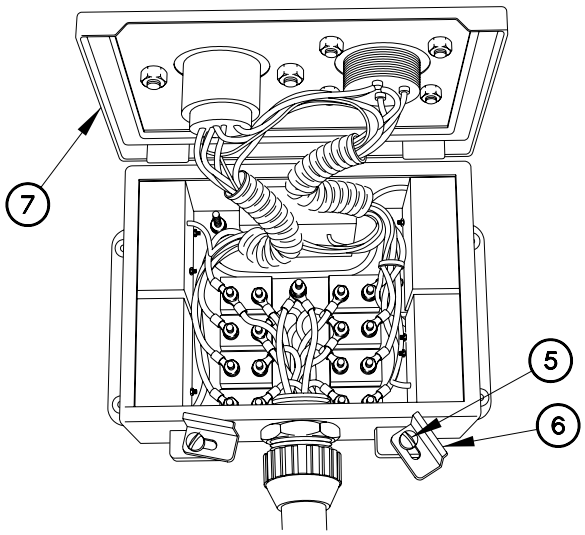


CD058R01

2. Loosen two screws (5) on voltage converter box latches (6).

3. Remove latches (6) from voltage converter box cover (7).

4. Lift up voltage converter box cover (7).



CD058R02

VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

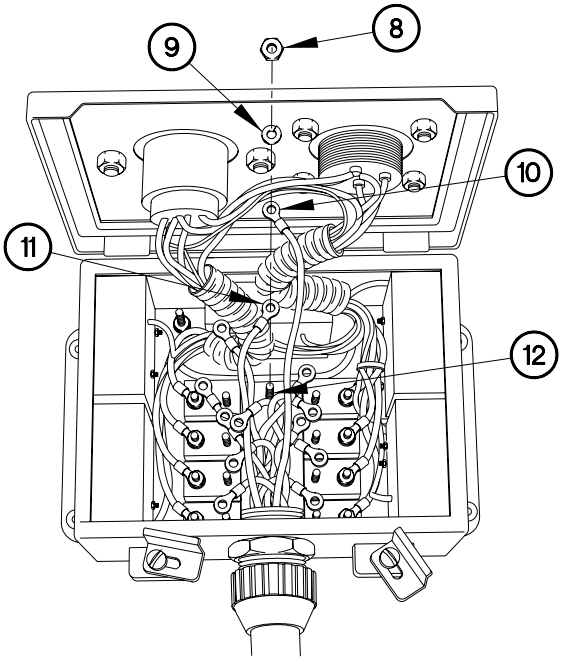
REMOVAL – Continued

NOTE

Tag connections and connection points prior to disconnecting.

Remove plastic cable ties as required.

5. Remove nut (8), lockwasher (9) and terminal lugs TL260 and TL261 (10 and 11) from ground stud B (12). Discard lockwasher.



CD058R04

VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

REMOVAL – Continued

NOTE

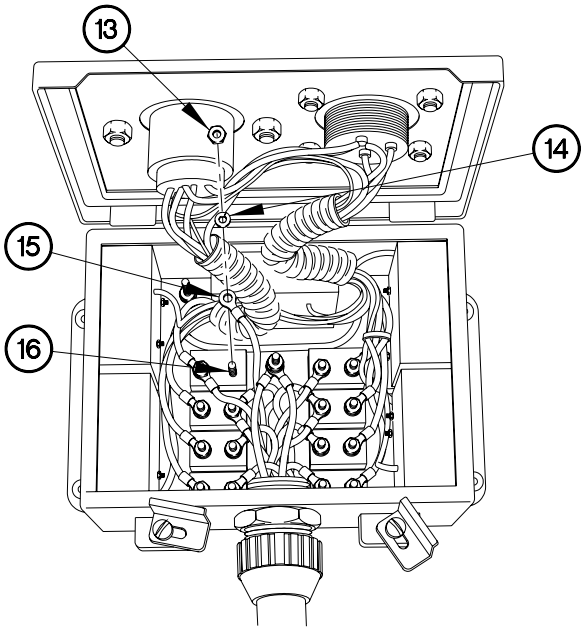
All converter box circuit breaker terminal lugs are removed the same way. Terminal lug 251 shown. Refer to **Table 1: Converter Box Circuit Breaker Main Electric Harness Terminal Lug Locations** for details.

6. Remove nut (13), lockwasher (14), and terminal lug (15) from circuit breaker CB1 “AUX” terminal stud (16). Discard lockwasher.

7. Perform the previous step on remaining circuit breakers.

Table 1: Converter Box Circuit Breaker Main Electrical Harness Terminal Lug Locations

Circuit Breaker “AUX” Terminal Stud	Main Electrical Harness Wire Terminal Lug
CB1	TL251
CB2	TL257
CB3	TL250
CB4	TL252
CB5	TL256
CB6	TL259
CB7	TL255
CB8	TL253

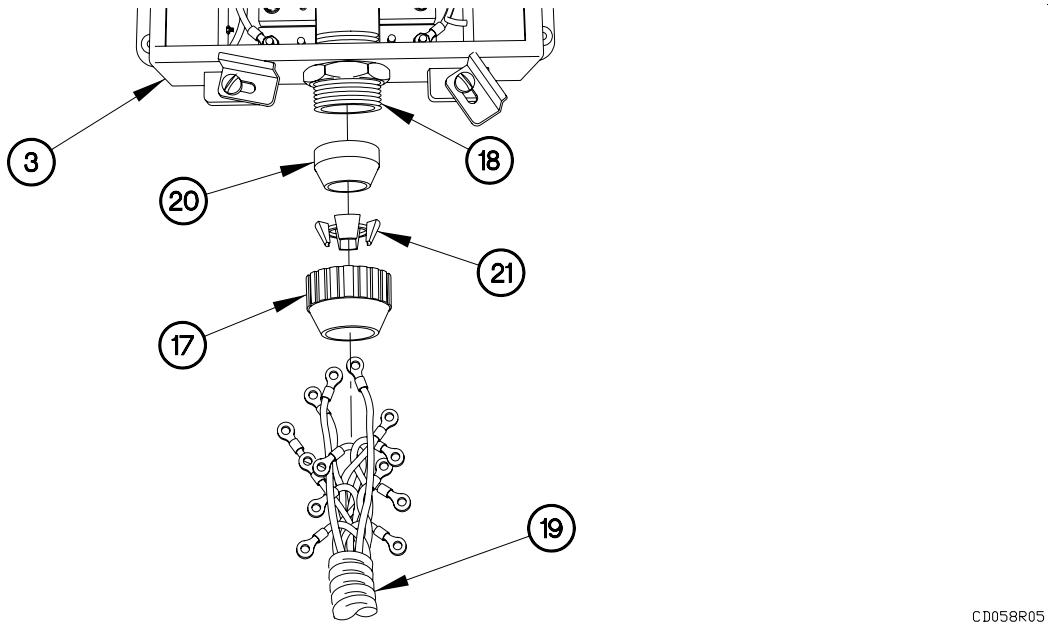


CD058R03

VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

REMOVAL – Continued

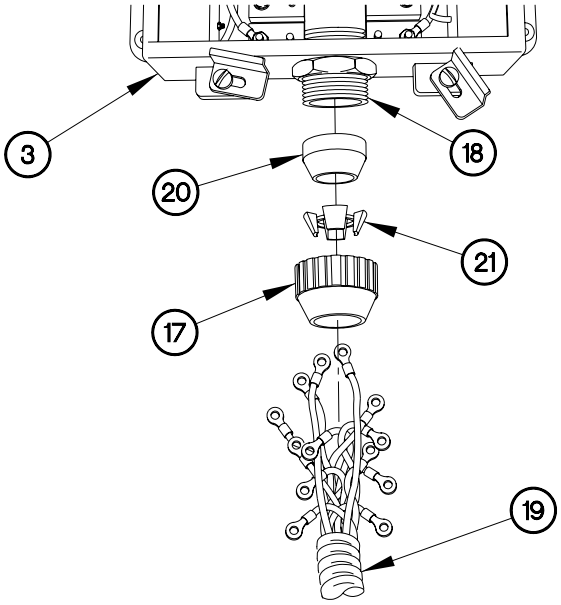
8. Remove fitting collar (17) from fitting (18).
9. Remove main electrical harness (19) from voltage converter box (3).
10. Remove protector (20) and swedge (21) from main electrical harness (19).



VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

INSTALLATION

1. Position swedge (21), and protector (20) on main electrical harness (19).
2. Position main electrical harness (19) in voltage converter box (3).
3. Install fitting collar (17) on fitting (18).



CD058R05

VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

INSTALLATION - Continued

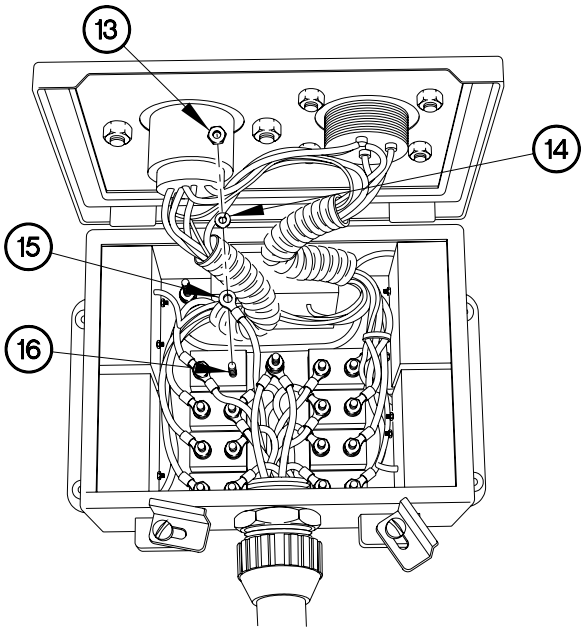
NOTE

Install plastic cable ties as required.

All converter box circuit breaker terminal lugs are installed the same way. Terminal lug 251 shown. Refer to **Table 1: Converter Box Circuit Breaker Main Electrical Harness Terminal Lug Locations** for details.

4. Install terminal lug (15) on circuit breaker CB1 “AUX” terminal stud (16) with lockwasher (14) and nut (13).

5. Perform the previous step on remaining circuit breakers.

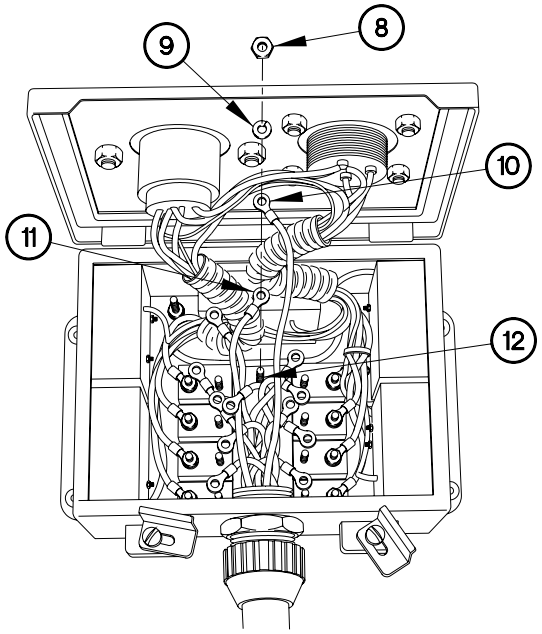


CD058R03

VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

INSTALLATION - Continued

6. Install terminal lugs TL260 and TL261 (10 and 11) on ground stub B (12) with lockwasher (9) and nut (8).

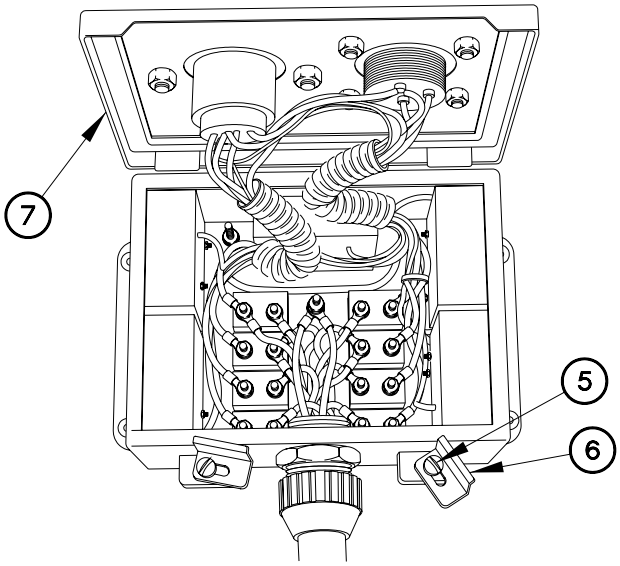


CD058R04

7. Close voltage converter box cover (7).

8. Position voltage converter box latches (6) to voltage converter box cover (7).

9. Tighten two screws (5) on voltage converter box latches (6).



CD058R02

VOLTAGE CONVERTER BOX REPLACEMENT - Continued 0058 00

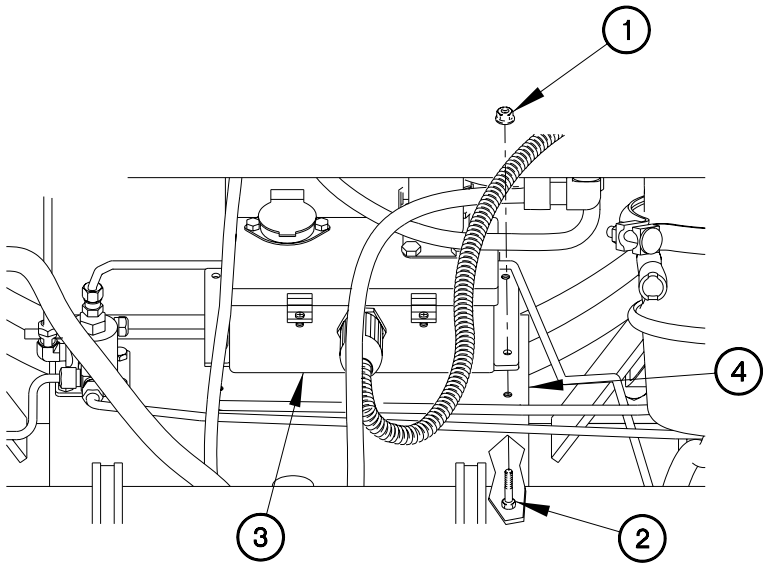
INSTALLATION - Continued

NOTE

The following step requires the aid of an assistant.

10. Position voltage converter box (3) on voltage converter box bracket (4) with four bolts (2) and self-locking nuts (1).

11. Tighten four self-locking nuts (1) to 96-120 lb-in. (11-14 N•m).



CD058I01

OPERATIONAL CHECK

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).

2. Check for proper operation of trailer lights (WP 0052 00, Table 5. Preventive Maintenance Checks and Services (PMCS) - Before).

3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

JUNCTION BOX REPLACEMENT 0059 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Took Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts
Ties, Cable, Plastic (Item 20, WP 0165 00)

Materials/Parts (Cont)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Washer, Lock (9) (Item 9, WP 0168 00)
Nut, Self-Locking (2) (Item 27, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) junction box.

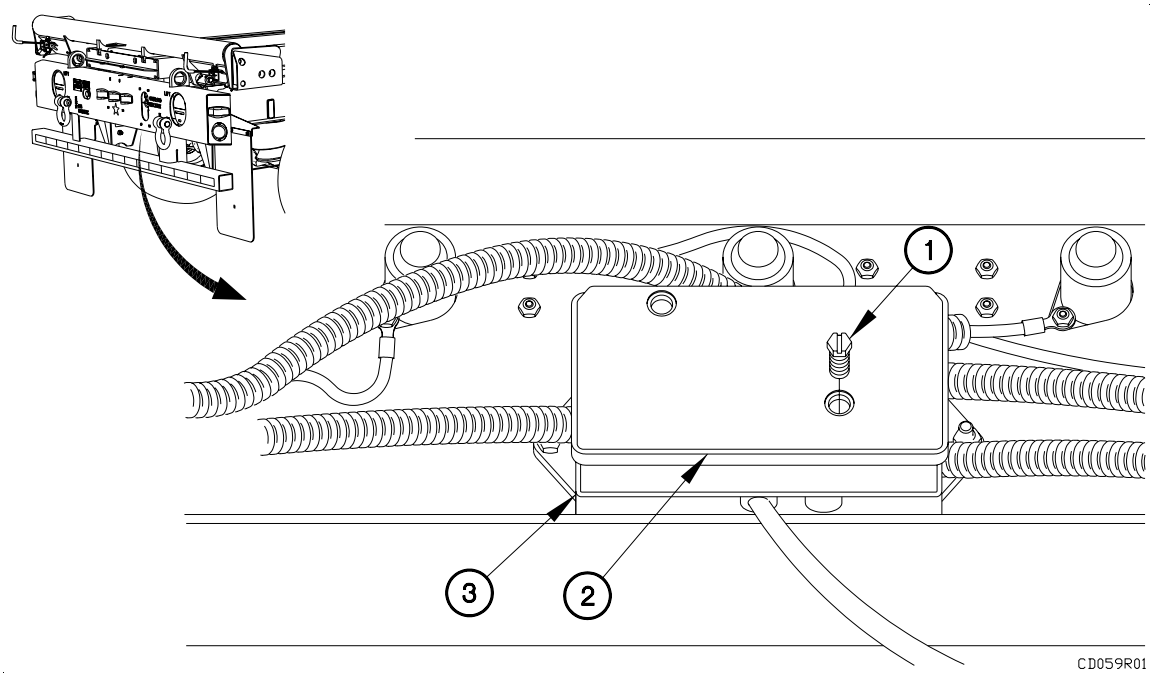
WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

JUNCTION BOX REPLACEMENT - Continued 0059 00

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



JUNCTION BOX REPLACEMENT - Continued 0059 00

REMOVAL – Continued

NOTE

All junction box terminal lugs are removed the same way. Terminal lug 1 shown. Refer to **Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations** for details.

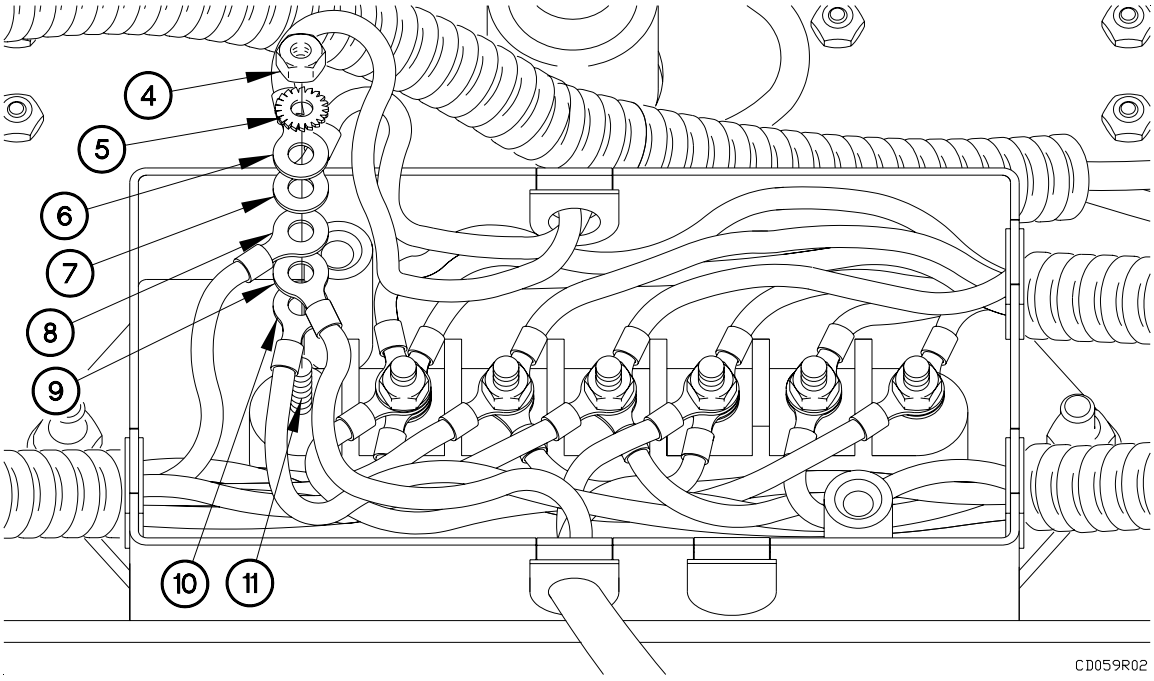
Tag terminal lugs and terminal studs prior to removal.

2. Remove nut (4), lockwasher (5), and terminal lugs TL261A (6), TL264 (7), TL275 (8), TL282 (9), and ABS ground terminal lug (10) from junction box terminal stud 1 (11). Discard lockwashers.

3. Perform the previous step on remaining junction box terminal studs.

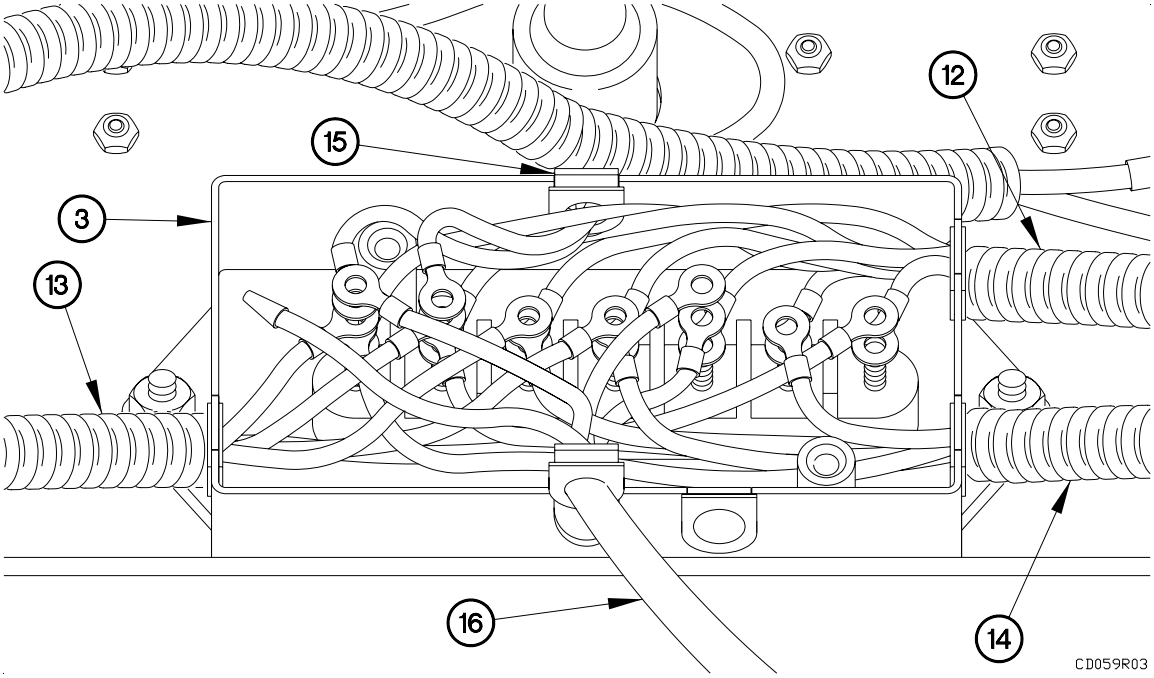
Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations

Junction Box Terminal Stud Position	Electrical Harness Terminal Lugs
Stud Position 1	TL261A, TL264, TL275, TL282, ABS Ground Terminal Lug
Stud Position 2	TL255A, TL267, TL273, TL281
Stud Position 3	TL257A, TL265, TL271
Stud Position 4	TL256A, TL266, TL272
Stud Position 5	TL251A, ABS Constant Power, ABS Stop Light Power
Stud Position 6	TL253A, TL274
Stud Position 7	TL252A, TL268

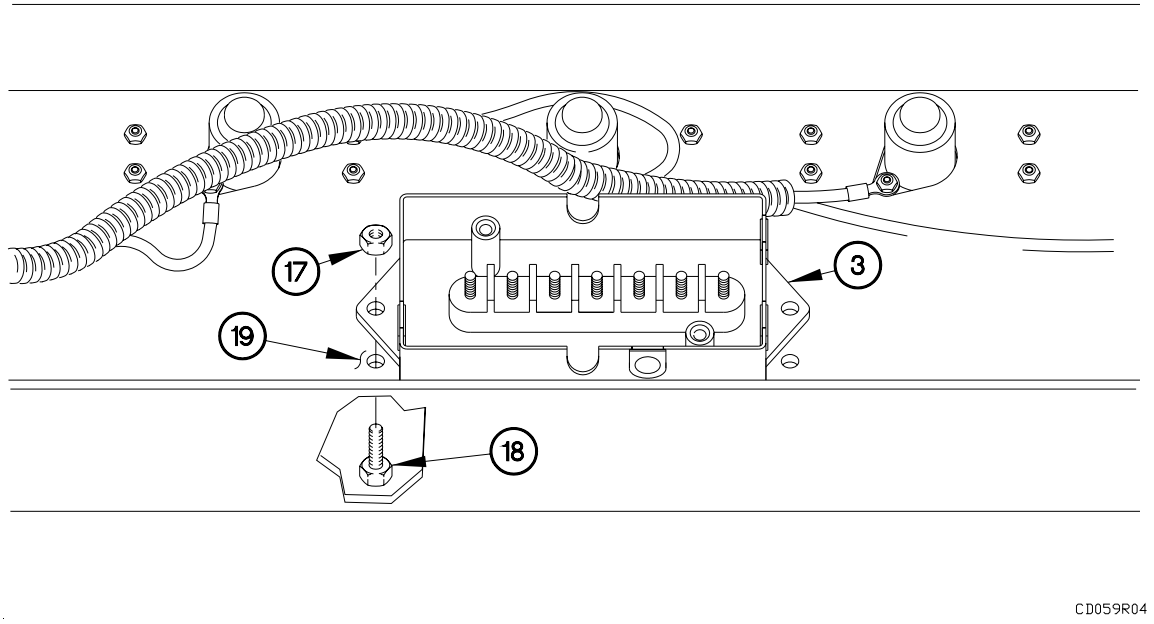


REMOVAL – Continued

4. Remove main electrical harness (12), right rear electrical harness (13), left rear electrical harness (14), rear electrical harness (15), and ABS power and diagnostic harness (16) from junction box (3).



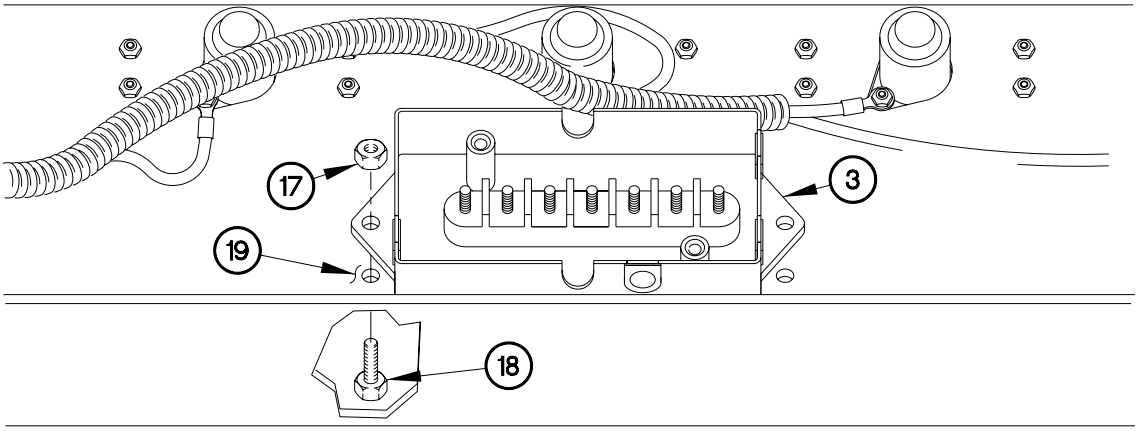
5. Remove two self-locking nuts (17), bolts (18), and junction box (3) from rear panel assembly (19). Discard self-locking nuts.



JUNCTION BOX REPLACEMENT - Continued 0059 00

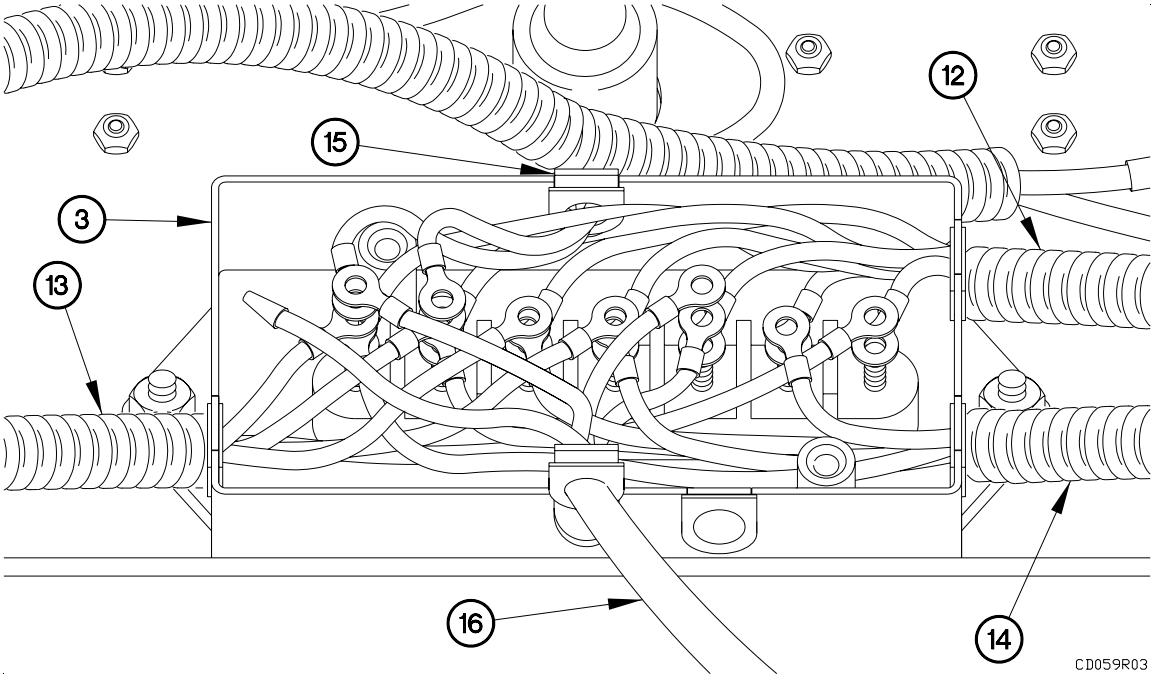
INSTALLATION

1. Position junction box (3) on rear panel assembly (19) with two bolts (18) and self-locking nuts (17).
2. Tighten two self-locking nuts (17) to 96-120 lb-in. (11-14 N•m).



CD059R04

3. Position ABS power and diagnostic harness (16), rear electrical harness (15), left rear electrical harness (14), right rear electrical harness (13), and main electrical harness (12) in junction box (3).



CD059R03

JUNCTION BOX REPLACEMENT - Continued 0059 00

INSTALLATION - Continued

NOTE

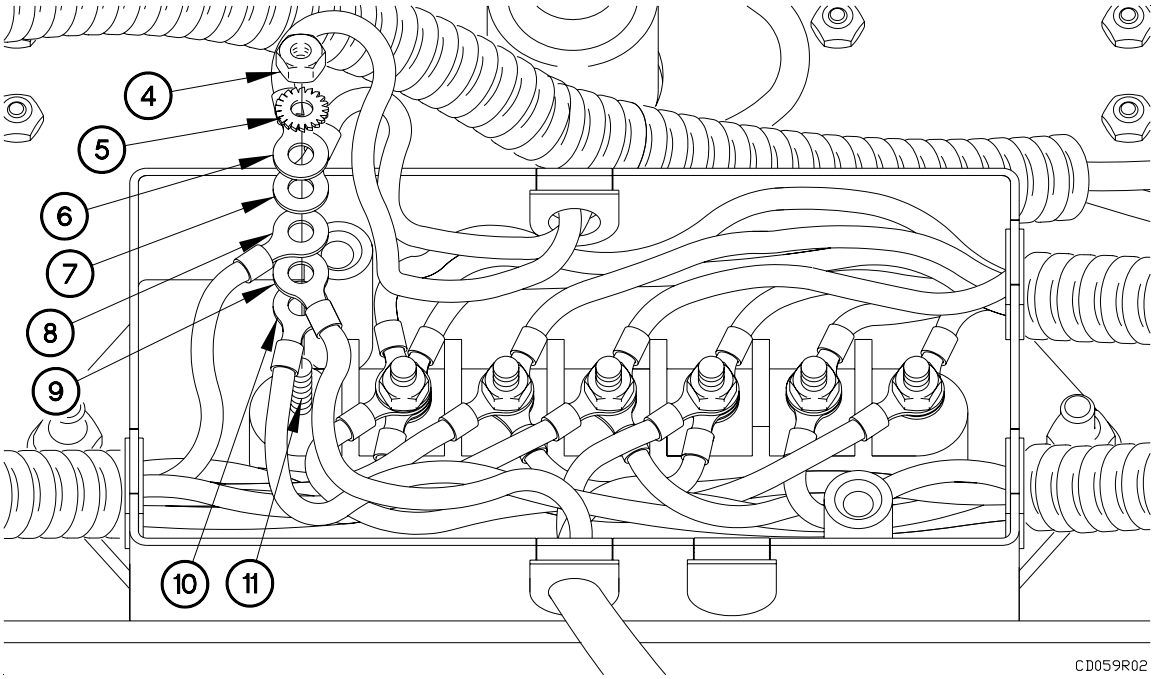
All junction box terminal lugs are installed the same way. Terminal lug 1 shown. Refer to **Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations** for details.

4. Install ABS ground terminal lug (10) and terminal lugs TL282 (9), TL275 (8), TL264 (7), and TL261A (6) on junction box terminal stud 1 (11) with lockwasher (5) and nut (4).

5. Perform the previous step on remaining junction box terminal studs.

Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations

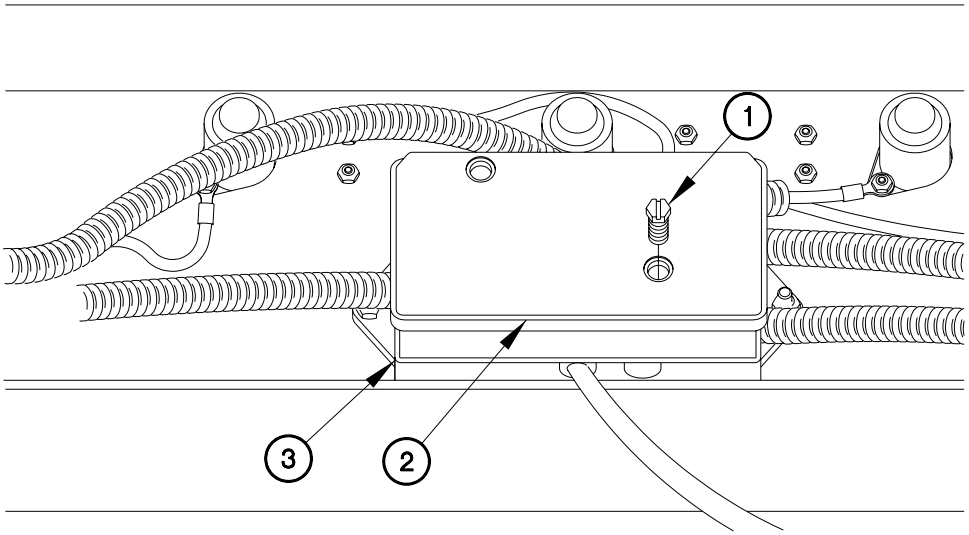
Junction Box Terminal Stud Position	Electrical Harness Terminal Lugs
Stud Position 1	TL261A, TL264, TL275, TL282, ABS Ground Terminal Lug
Stud Position 2	TL255A, TL267, TL273, TL281
Stud Position 3	TL257A, TL265, TL271
Stud Position 4	TL256A, TL266, TL272
Stud Position 5	TL251A, ABS Constant Power, ABS Stop Light Power
Stud Position 6	TL253A, TL274
Stud Position 7	TL252A, TL268



JUNCTION BOX REPLACEMENT - Continued 0059 00

INSTALLATION - Continued

6. Install junction box cover (2) on junction box (3) with two bolts (1).



CD059:01

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check for proper operation of trailer lights (0052 00, Table 5 Preventive Maintenance Checks and Services (PMCS) – Before).
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT 0060 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Washer, Lock (2) (Item 21, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) composite taillights.

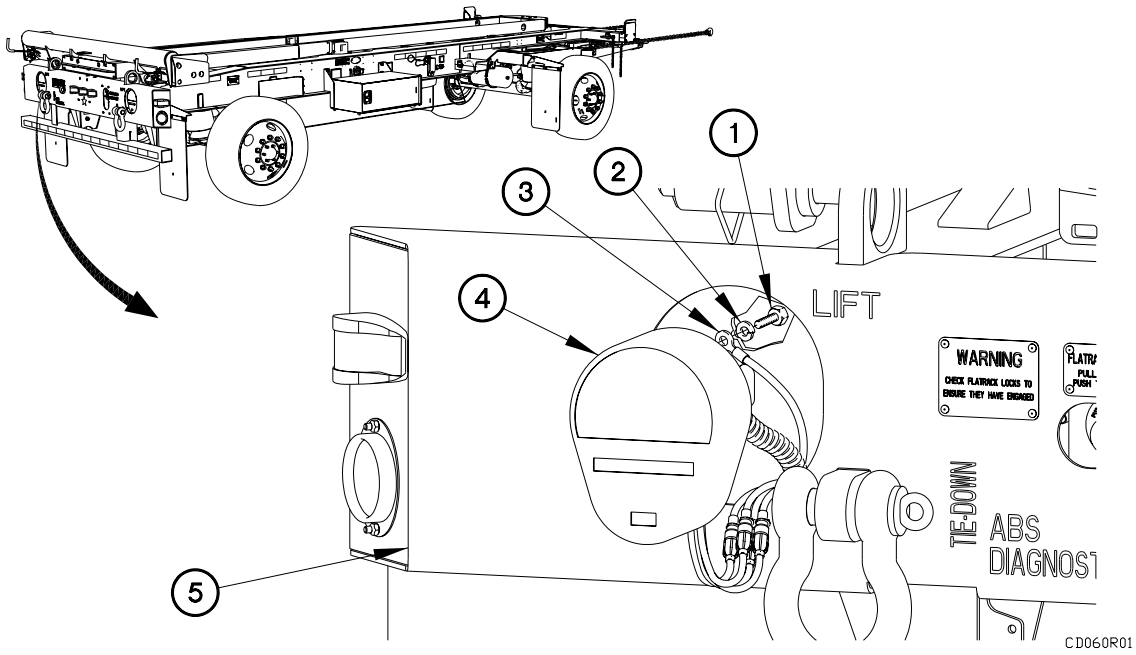
COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued 0060 00

REMOVAL

NOTE

LH and RH composite taillight assemblies are removed the same way. LH composite taillight assembly shown.

1. Remove two bolts (1), lockwashers (2), ground terminal lug TL277 (3), and composite taillight assembly (4) from rear panel assembly (5). Discard lockwashers.



COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued 0060 00

REMOVAL - Continued

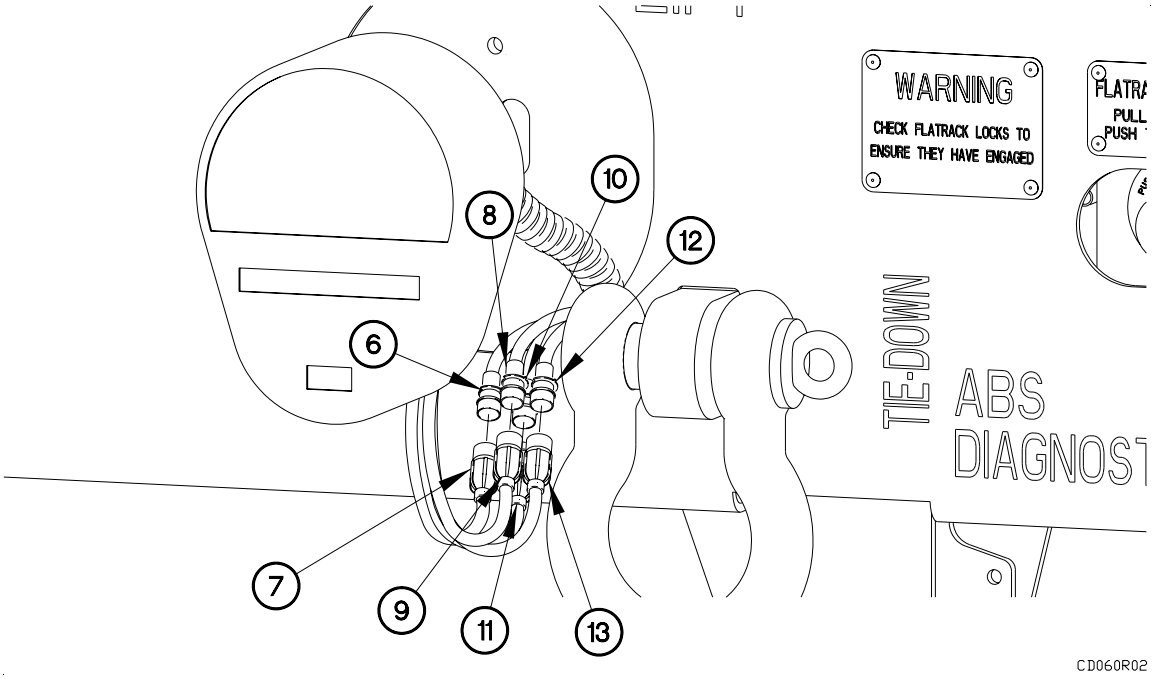
NOTE

Tag connections and connection points prior to removal. Refer to **Table 1: Composite Taillight Assembly Connections and Connections Points** for details.

2. Disconnect harness connector J257 (6) from composite taillight assembly connector 23 (7).
3. Disconnect harness connector J258 (8) from composite taillight assembly connector 24 (9).
4. Disconnect harness connector J259 (10) from composite taillight assembly connector 21 (11).
5. Disconnect harness connector J261 (12) from composite taillight assembly connector 460, 461, 22 (13).

Table 1 Composite Taillight Assembly Connections and Connection Points

RH		LH	
Vehicle Connection	Taillight Connector	Vehicle Connection	Taillight Connector
Harness Connector J252	23	Harness Connector J257	23
Harness Connector J253	24	Harness Connector J258	24
Harness Connector J254	21	Harness Connector J259	21
Harness Connector J255	460, 461, 22	Harness Connector J261	460, 461, 22
Rear Panel Assembly	TL269	Rear Panel Assembly	TL277



COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued 0060 00

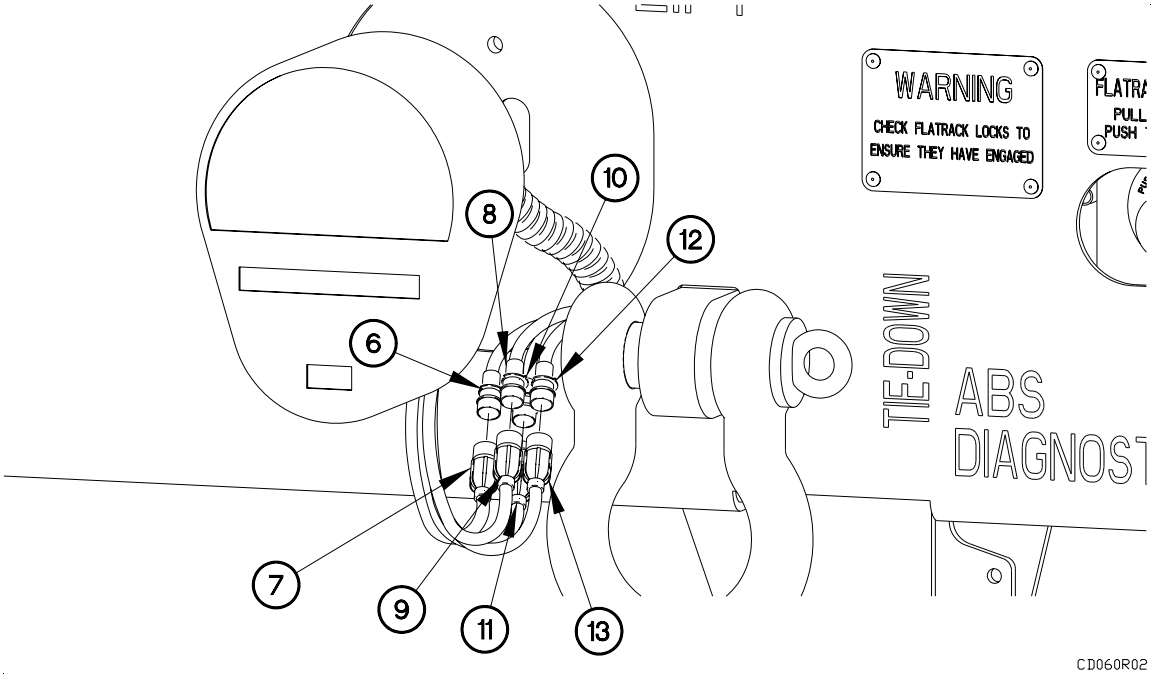
INSTALLATION

NOTE

LH and RH composite taillight assemblies are installed the same way. LH composite taillight assembly shown.

Refer to **Table 1: Composite Taillight Assembly Connections and Connection Points** for info on RH composite taillight assembly.

1. Connect harness connector J261 (12) to composite taillight assembly connector 460, 461, 22 (13).
2. Connect harness connector J259 (10) to composite taillight assembly connector 21 (11).
3. Connect harness connector J258 (8) to composite taillight assembly connector 24 (9).
4. Connect harness connector J257 (6) to composite taillight assembly connector 23 (7).

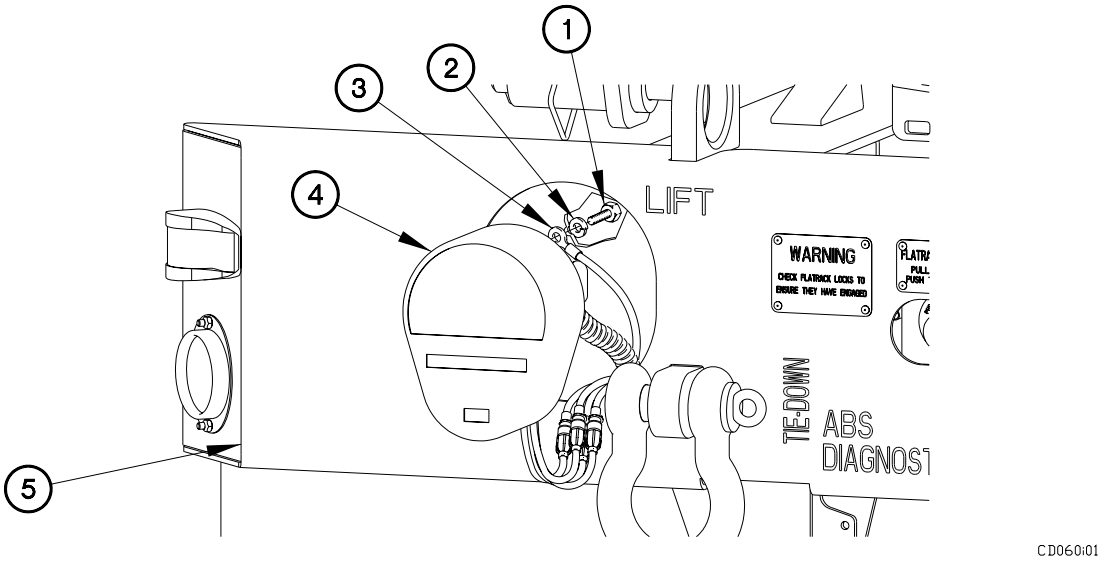


COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued 0060 00

INSTALLATION - Continued

5. Position ground terminal lug TL277 (3) and composite taillight assembly (4) on rear panel assembly (5) with two lockwashers (2) and bolts (1).

6. Tighten two bolts (1) to 18-23 lb-ft (24-31 N•m).



COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued 0060 00

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check operation of taillights.
3. Check operation of brake lights.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

MARKER LIGHT ASSEMBLY REPLACEMENT 0061 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 35, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts

Washer, Lock (2) (RH or LH rear corner Marker Light assembly) (Item 21, WP 0168 00)
Washer, Lock (Item 8, WP 0168 00)
Nut, Self-Locking (4) (Item 36, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) marker lights.

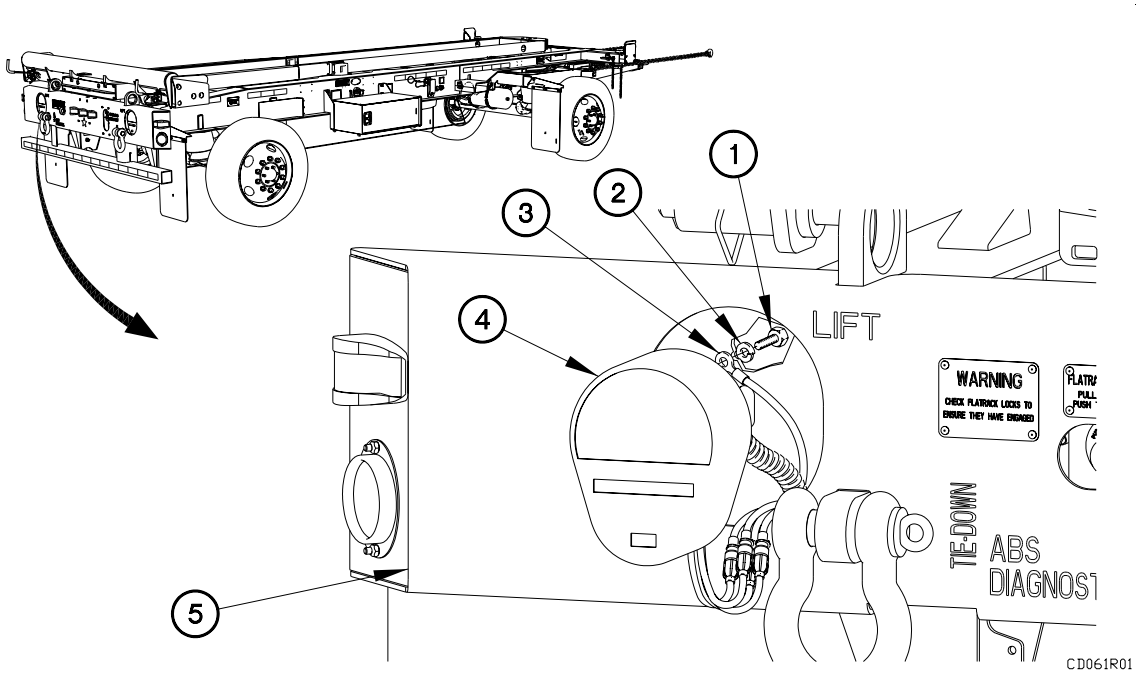
MARKER LIGHT ASSEMBLY REPLACEMENT - Continued 0061 00

REMOVAL

NOTE

Perform the following step on LH and RH rear corner marker light assemblies.

1. Remove two bolts (1), lockwashers (2), ground terminal lug TL277 (3), and composite taillight assembly (4) from trailer (5). Discard lockwashers.



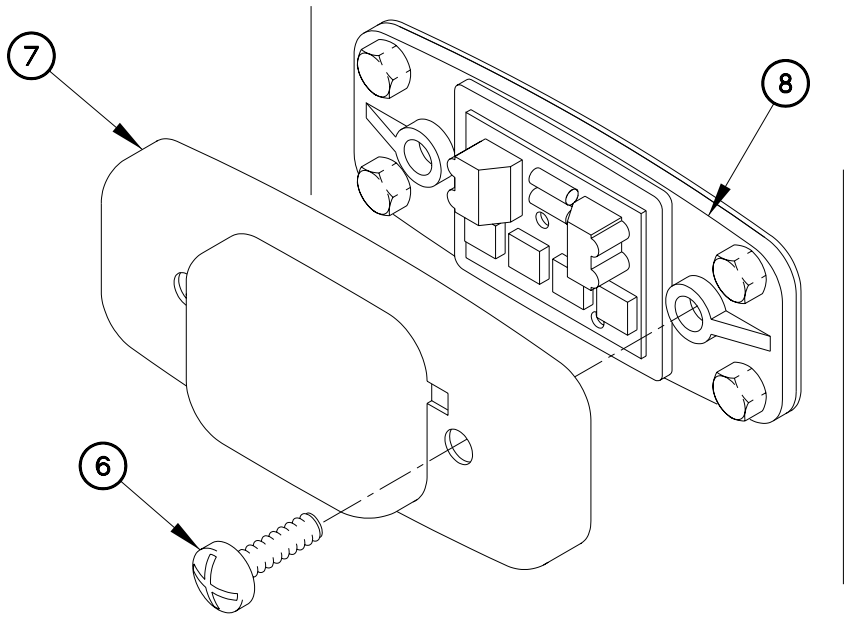
MARKER LIGHT ASSEMBLY REPLACEMENT - Continued 0061 00

REMOVAL - Continued

NOTE

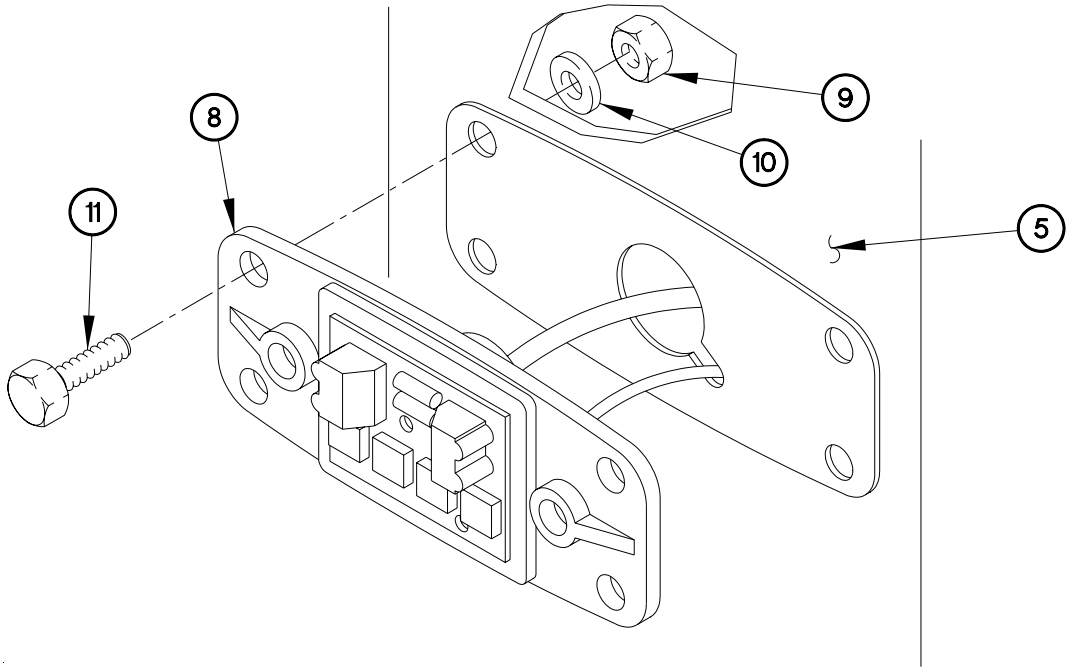
All marker light assemblies are removed the same way. LH rear corner marker light assembly shown.

2. Remove two screws (6) and cover (7) from base (8).



CD061R02

3. Remove four self-locking nuts (9), washers (10), screws (11), and base (8), from trailer (5). Discard self-locking nuts.



CD061R03

MARKER LIGHT ASSEMBLY REPLACEMENT - Continued 0061 00

REMOVAL - Continued

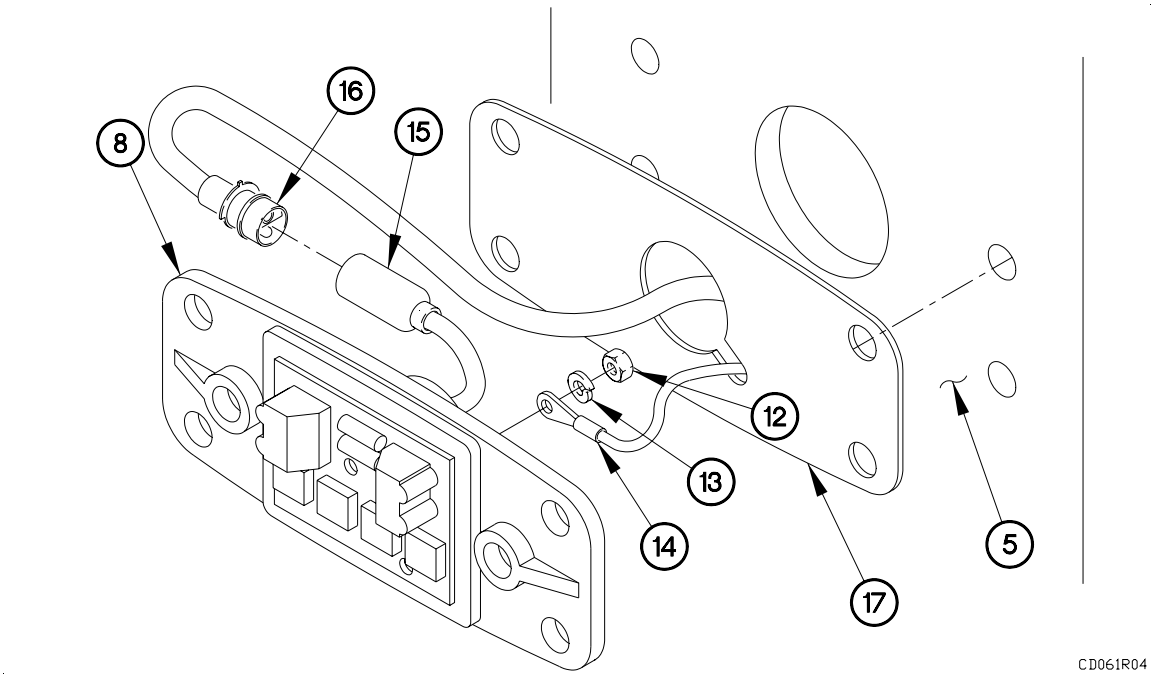
NOTE

Tag all terminal lugs, connectors, and connection points prior to removal. Refer to **Table 1: Marker Light Locations, Connectors, and Terminal Lugs** for details.

4. Remove nut (12), lockwasher (13), and terminal lug TL276 (14) from base (8). Discard lockwasher.
5. Disconnect marker light assembly connector (15) from connector J260 (16).
6. Remove gasket (17) from trailer (5).

Table 1: Marker Light Locations, Connectors, and Terminal Lugs

Location	Connector	Terminal Lug
LH Rear Corner	J260	TL276
RH Rear Corner	J256	TL270
RH Rear Center	J262	TL280
Center Rear Center	J263	TL279
LH Rear Center	J264	TL278
LH Front Corner	J251	TL263
RH Front Corner	J250	TL262



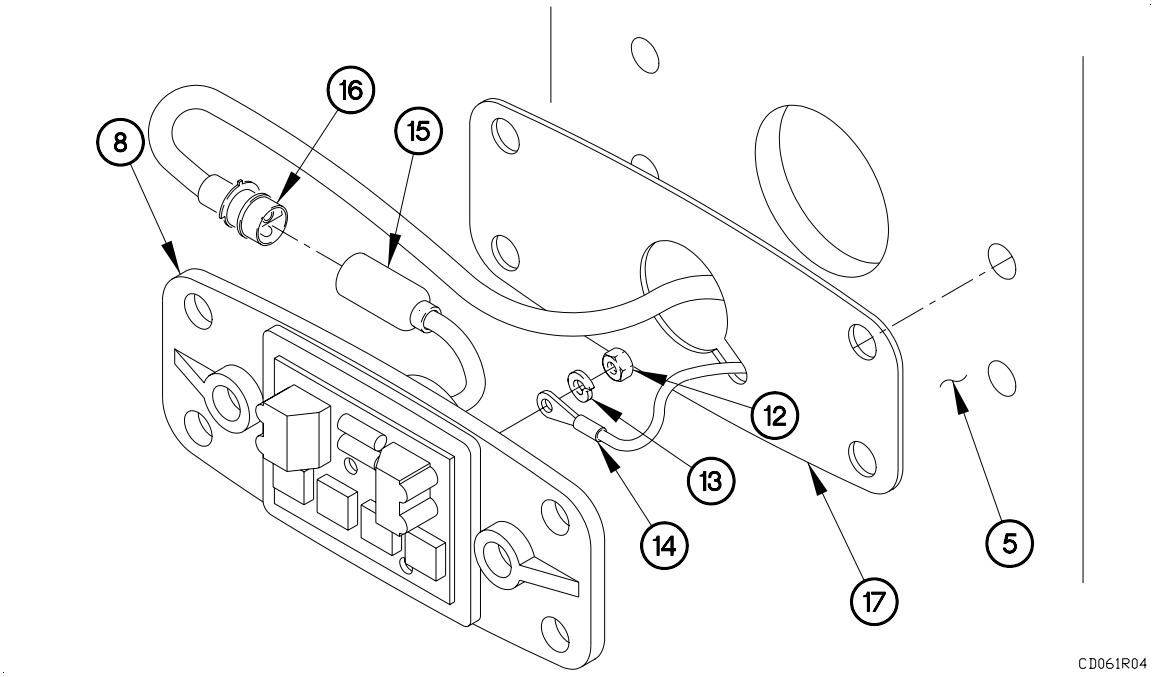
MARKER LIGHT ASSEMBLY REPLACEMENT - Continued 0061 00

INSTALLATION

NOTE

All marker light assemblies are installed the same way. LH rear corner marker light assembly shown. Refer to **Table 1: Marker Light Locations, Connectors, and Terminal Lugs** for details.

1. Position gasket (17) on trailer (5).
2. Connect connector J260 (16) to marker light assembly connector (15).
3. Install terminal lug TL276 (14) on base (8) with lockwasher (13) and nut (12).

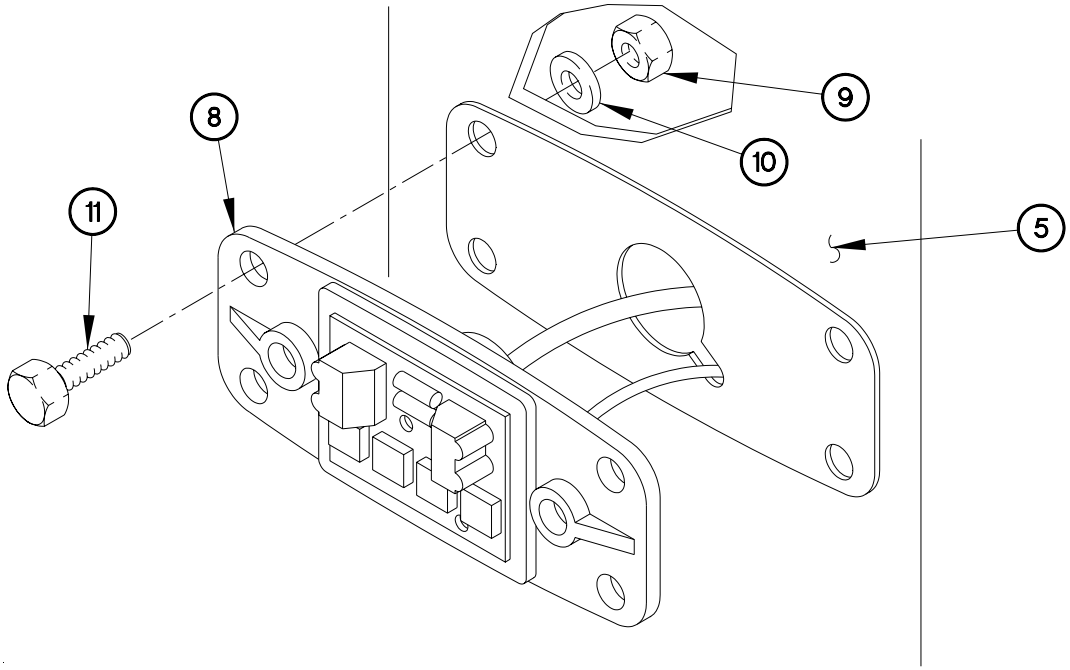


MARKER LIGHT ASSEMBLY REPLACEMENT - Continued 0061 00

INSTALLATION - Continued

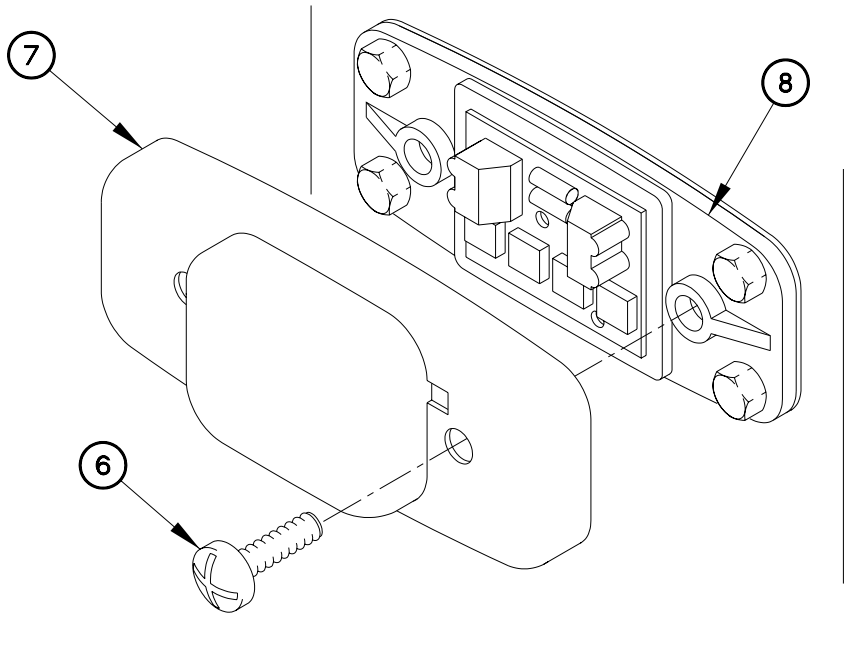
4. Position base (8) on trailer (5) with four screws (11), washers (10), and self-locking nuts (9).

5. Tighten four self-locking nuts (9) to 32-38 lb-in. (3-4 N•m).



6. Install cover (7) on base (8) with two screws (6).

7. Install cover (7) on base (8) with two screws (6).



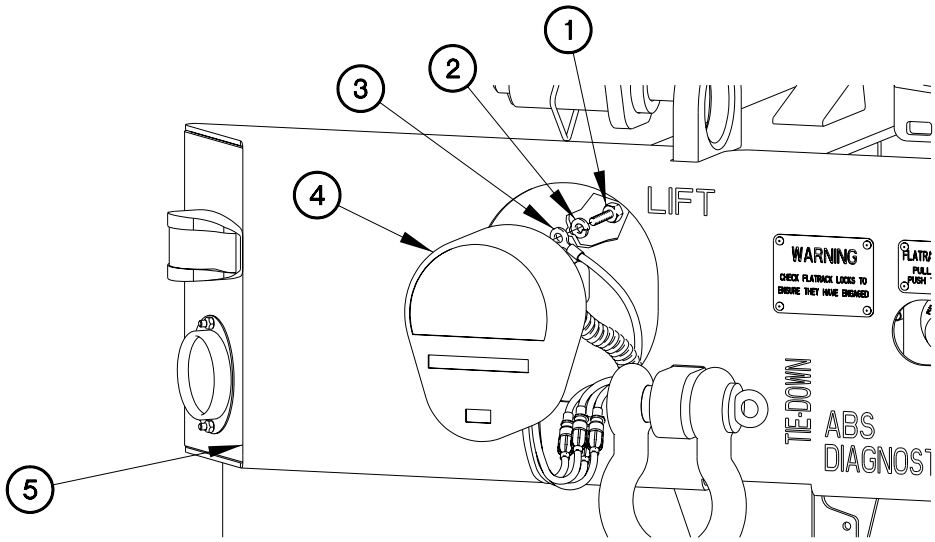
INSTALLATION - Continued

NOTE

Perform the following step on LH and RH rear corner marker light assemblies. RH composite taillight terminal lug and is TL269.

8. Position ground terminal lug TL277 (3), and composite taillight assembly (4) on trailer (5) with two lockwashers (2) and bolts (1).

9. Tighten two bolts (1) to 18-23 lb-ft (24-31 N•m).



CD061I01

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check marker light operation.
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

24 VDC INTERVEHICULAR CABLE REPLACEMENT 0062 00

THIS WORK PACKAGE COVERS:
Removal, Installation

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 0-175 lb-ft (Item 32, WP 0167 00)

Materials/Parts References
Nut, Self-Locking (2) (Item 27, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 9-2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) 24 VDC intervehicular cable.

WARNING

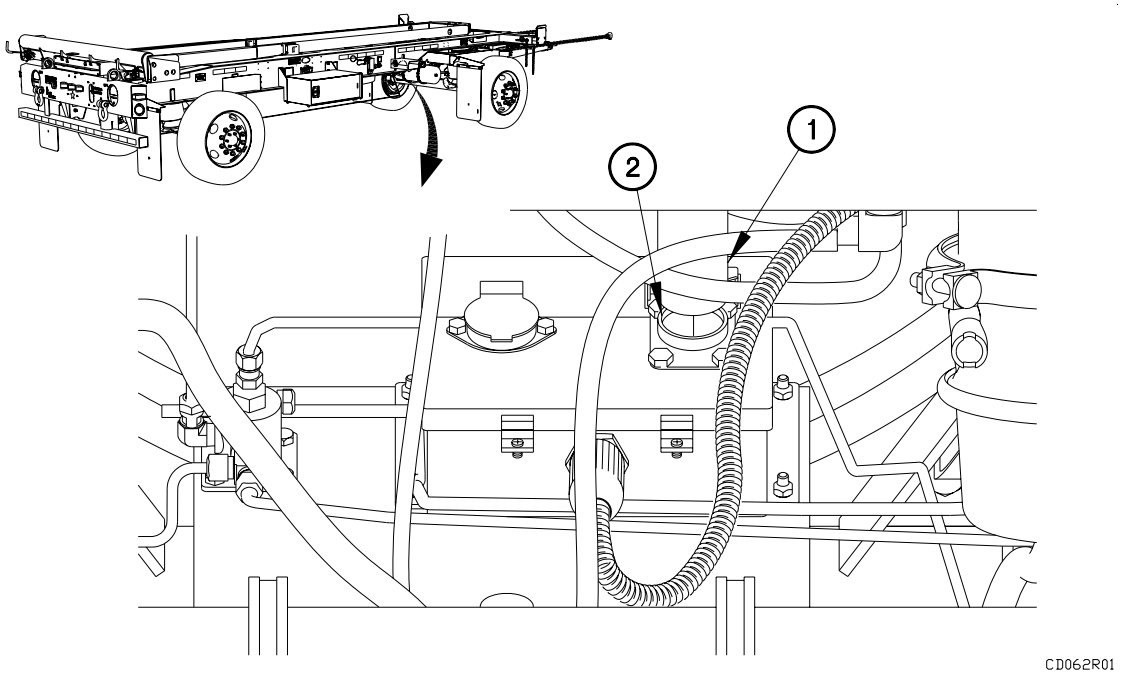
Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrical shock. Failure to comply may result in serious injury or death to personnel.

24 VDC INTERVEHICULAR CABLE REPLACEMENT - Continued 0062 00

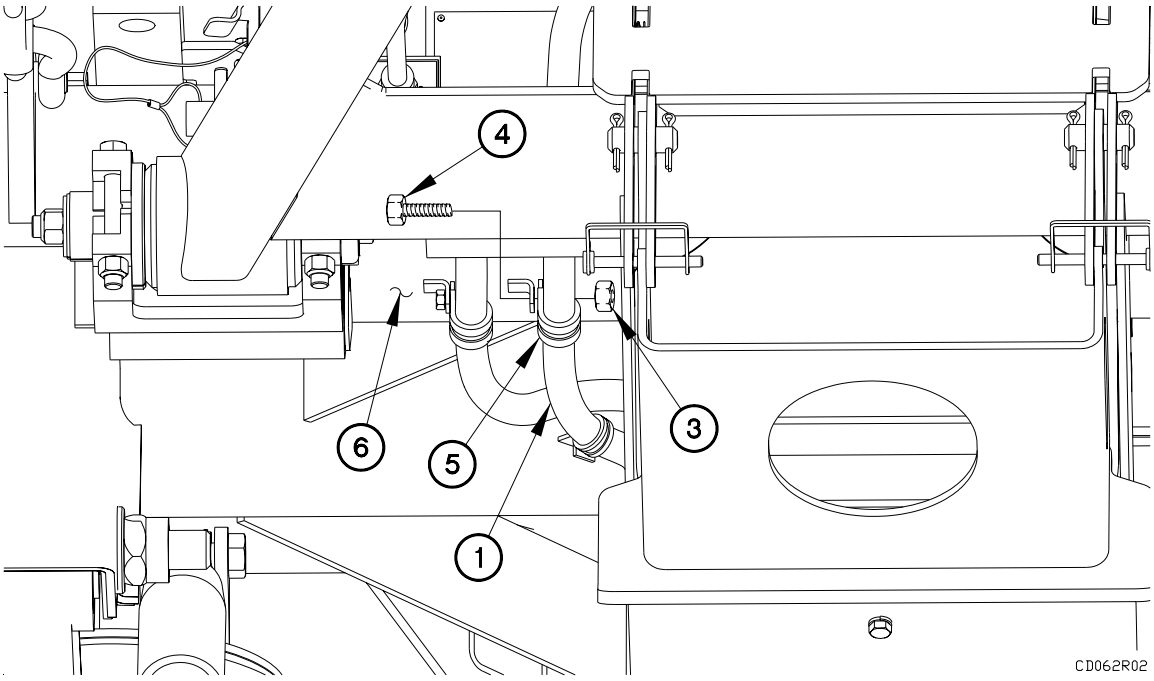
REMOVAL

1. Disconnect 24 VDC intervehicular cable (1) from 24 VDC intervehicular cable connector (2).



2. Remove two self-locking nuts (3), bolts (4), clamps (5), and 24 VDC intervehicular cable (1) from turntable (6). Discard self-locking nuts.

3. Remove 24 VDC intervehicular cable (1) from two clamps (5).



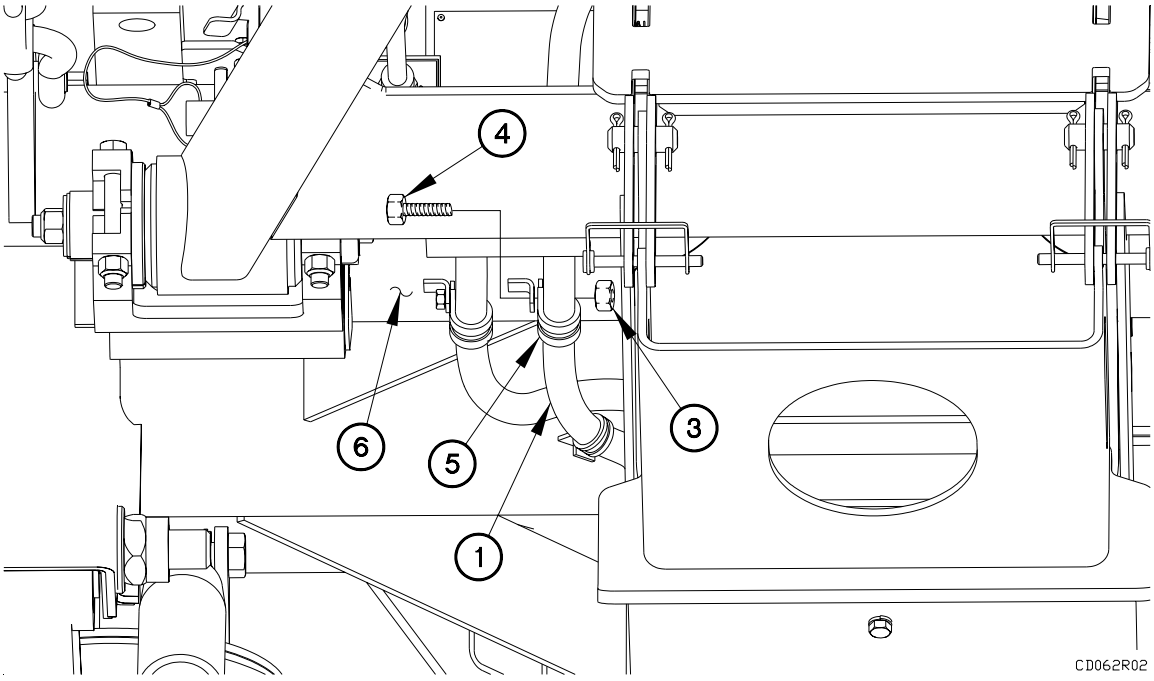
24 VDC INTERVEHICULAR CABLE REPLACEMENT - Continued 0062 00

INSTALLATION

1. Position 24 VD intervehicular cable (1) in two clamps (5).

2. Install intervehicular cable (1) on turntable (6) with two clamps (5), bolts (4), and self-locking nuts (3).

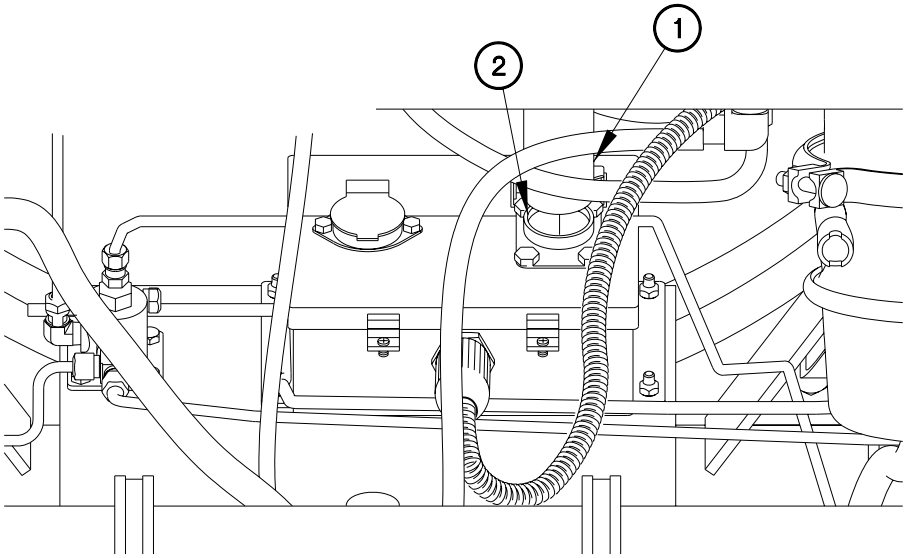
3. Tighten self locking nuts (3) to 8-10 ft-lbs (10-14 N•m).



24 VDC INTERVEHICULAR CABLE REPLACEMENT - Continued 0062 00

INSTALLATION - Continued

4. Connect 24 VDC intervehicular cable (1) to 24 VDC intervehicular cable connector (2).



END OF WORK PACKAGE

RIGHT REAR ELECTRICAL HARNESS REPLACEMENT 0063 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Washer, Lock (5) (Item 15, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Right rear composite taillight assembly removed (WP 0060 00).
Right rear marker light assembly removed (WP 0061 00).

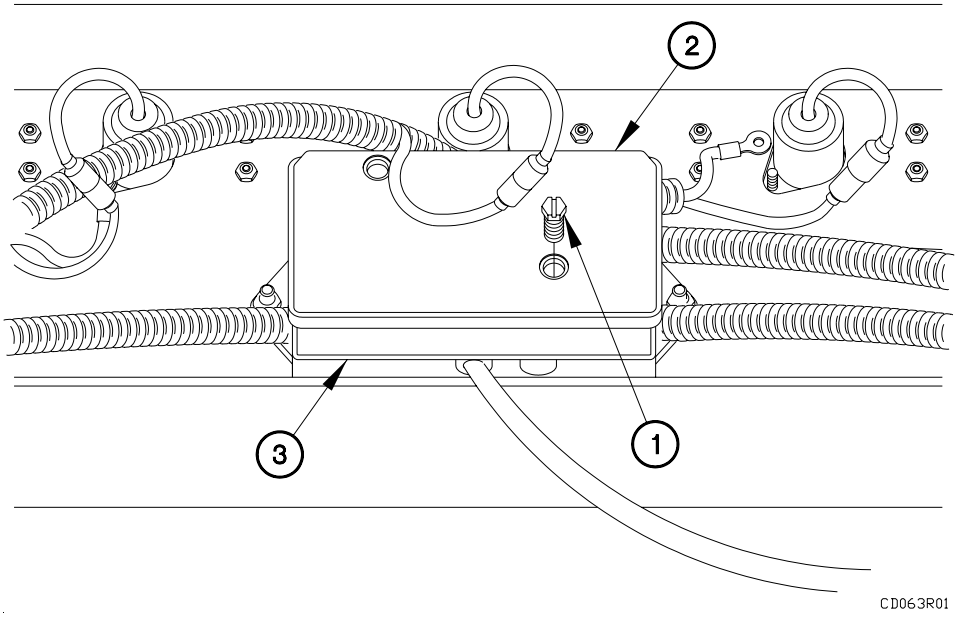
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) right rear electrical harness.

RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0063 00

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0063 00

REMOVAL - Continued

NOTE

Other terminal lugs are present at these locations. Tag all terminal lugs and connection points prior to disconnecting.

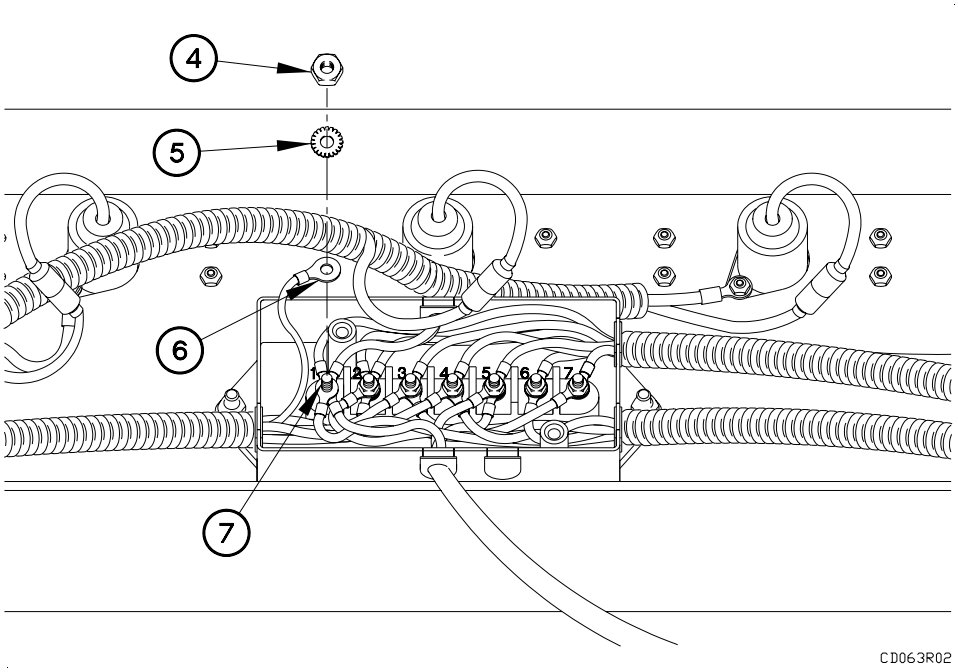
All right rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1: Right Rear Electrical Harness To Junction Box Connection Points** for details.

Table 1 : Right Rear Electrical Harness To Junction Box Connection Points

Junction Box Terminal Stud	Right Rear Electrical Harness Terminal Lug
1	TL264
2	TL267
3	TL265
4	TL266
7	TL268

2. Remove nut (4), lockwasher (5), and terminal lug TL264 (6) from junction box terminal stud 1 (GRD.) (7). Discard lockwasher.

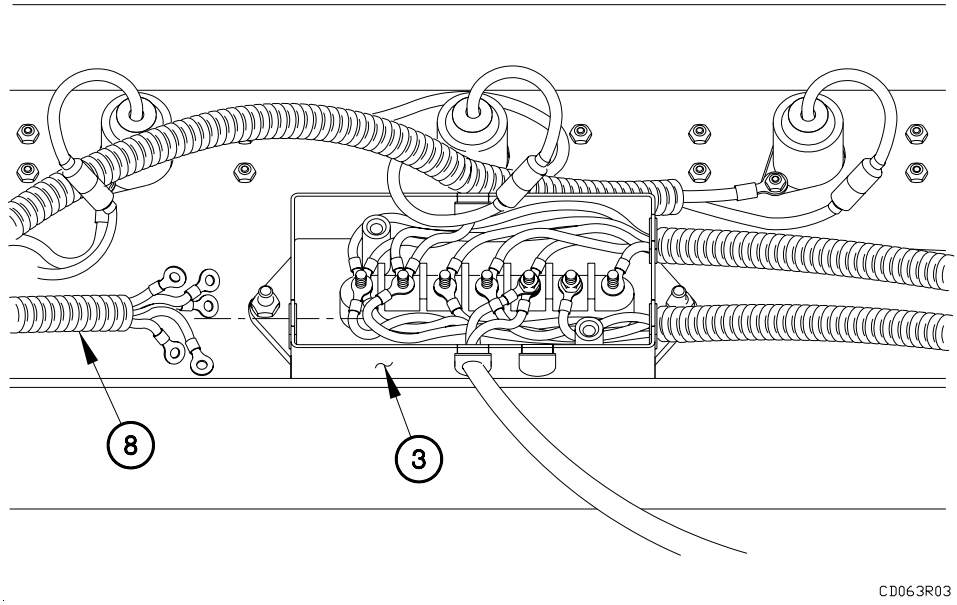
3. Perform the previous step on remaining right rear electrical harness to junction box terminal lugs.



RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0063 00

REMOVAL - Continued

4. Remove right rear electrical harness (8) from junction box (3).



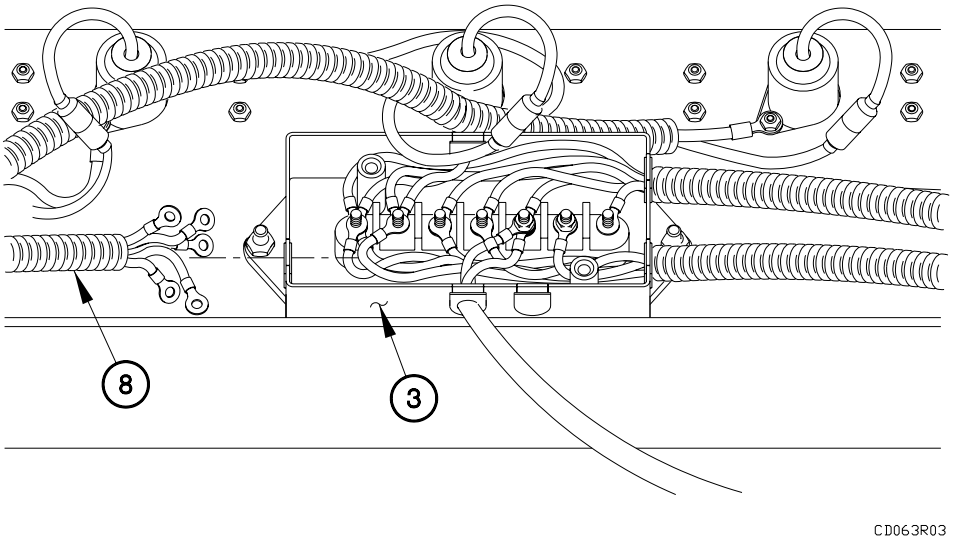
RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0063 00

INSTALLATION

NOTE

Other terminal lugs are present at this location. Tag all terminal lugs and connection points prior to disconnecting.

1. Position right rear electrical harness (8) in junction box (3).



RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0063 00

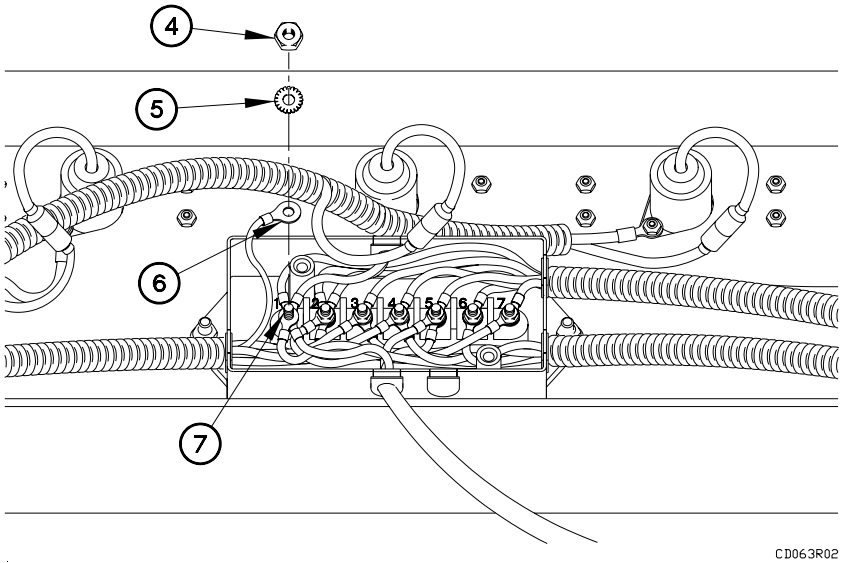
INSTALLATION - Continued

NOTE
Other terminal lugs are present at these locations.

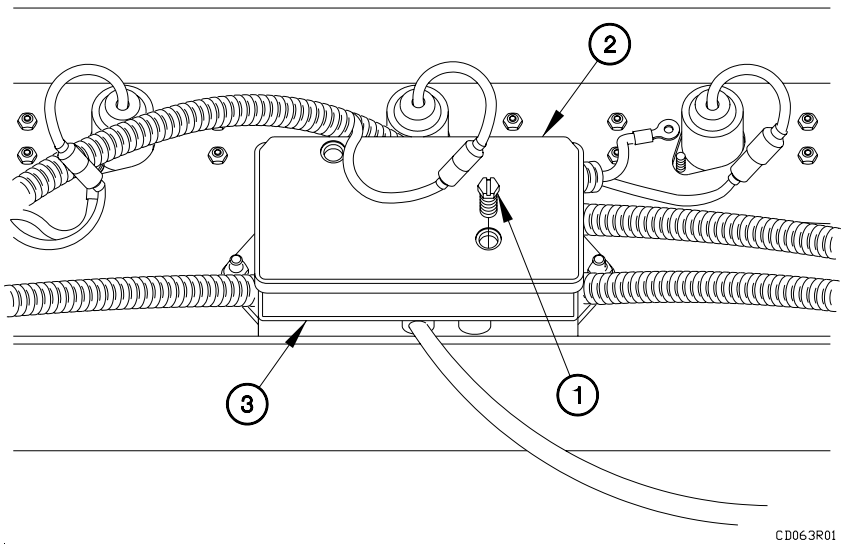
All right rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1: Right Rear Electrical Harness To Junction Box Connection Points** for details.

2. Install terminal lug TL264 (6) on junction box terminal stud 1 (GRD.) (7) with lockwasher (5) and nut (4).

3. Perform the previous step on remaining right rear electrical harness to junction box terminal studs.



4. Install junction box cover (2) on junction box (3) with two bolts (1).



RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0063 00

OPERATIONAL CHECKS

1. Install right rear marker light assembly (WP 0061 00).
2. Install right rear composite taillight assembly (WP 0060 00).
3. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
4. Check for proper operation of right rear lights.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

LEFT REAR ELECTRICAL HARNESS REPLACEMENT 0064 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive tape (Item 6, WP 0165 00)
Washer, Lock (5) (Item 15, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Left rear composite taillight assembly removed (WP 0060 00).
Left rear marker light assembly removed (WP 0061 00).

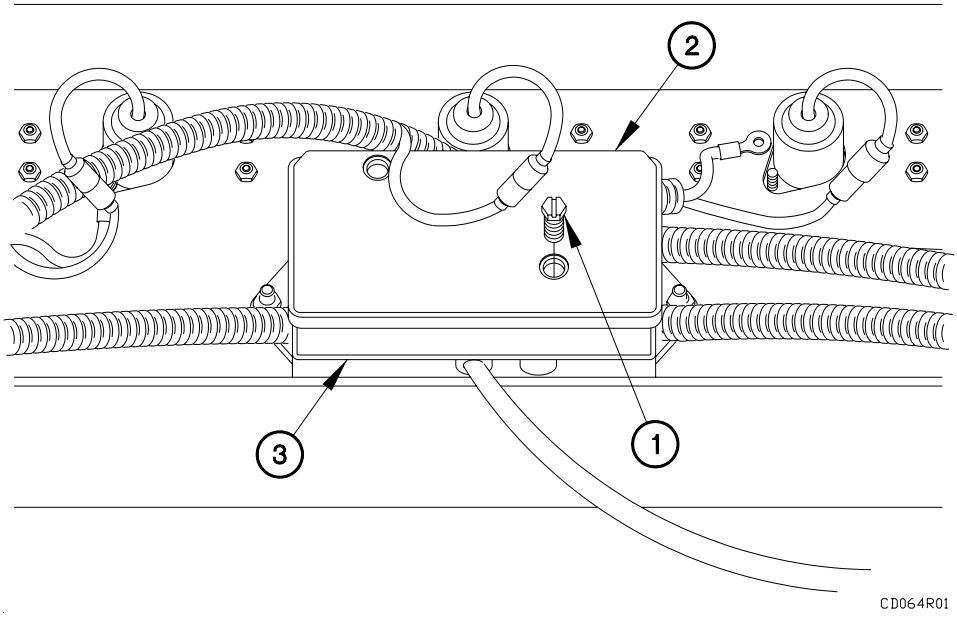
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) left rear electrical harness.

LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

REMOVAL - Continued

NOTE

Other terminal lugs are present at these locations. Tag terminal lugs and connection points prior to disconnecting.

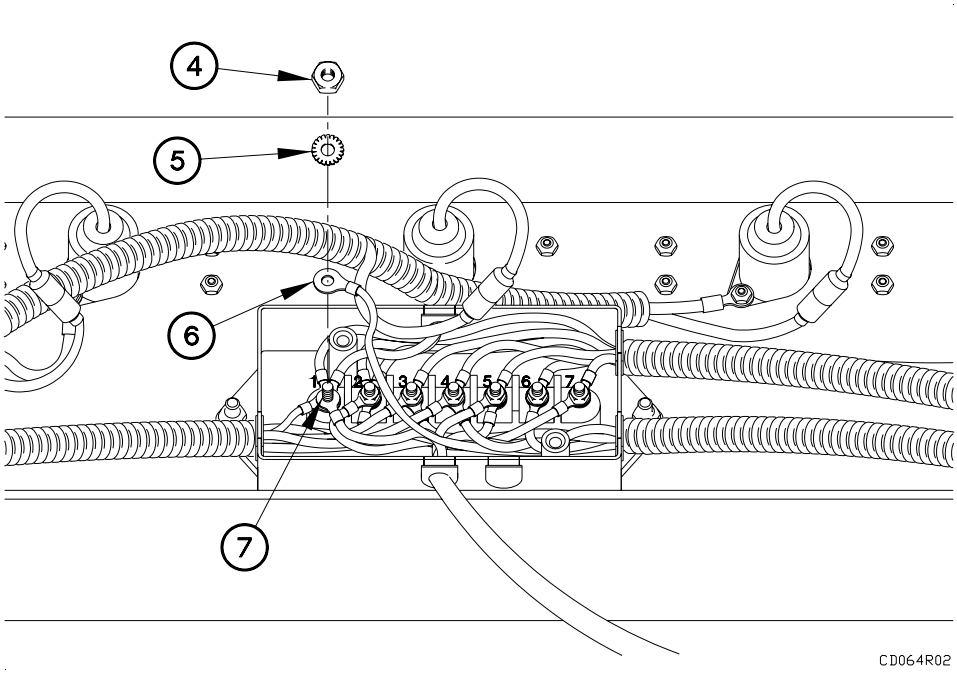
All left rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1: Left Rear Electrical Harness To Junction Box Connection Points** for details.

Table 1 : Left Rear Electrical Harness To Junction Box Connection Points

Junction Box Terminal Stud	Left Rear Electrical Harness Terminal Lug
1	TL275
2	TL273
3	TL271
4	TL272
6	TL274

2. Remove nut (4), lockwasher (5), and terminal lug TL275 (6) from junction box terminal stud 1 (GRD.) (7). Discard lockwasher.

3. Perform the previous step on remaining left rear electrical harness to junction box terminal lugs.

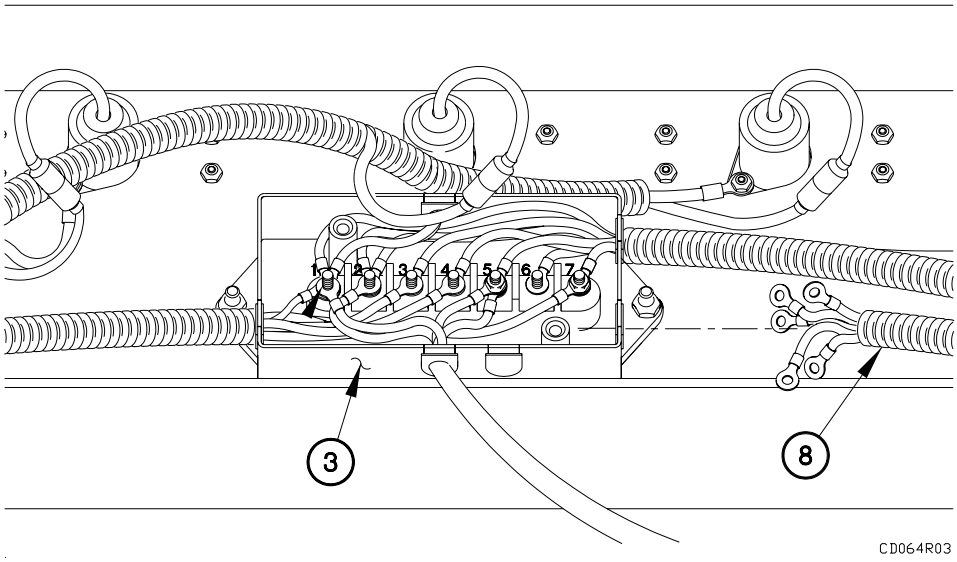


LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

REMOVAL – Continued

LEFT REAR ELECTRICAL HARNESS REMOVAL

4. Remove left rear electrical harness (8) from junction box (3).



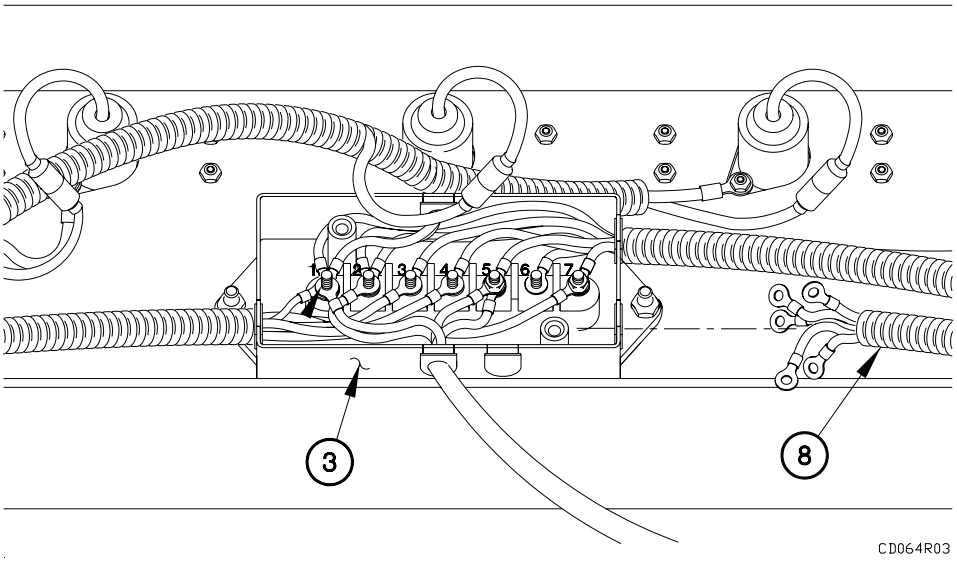
LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

INSTALLATION

NOTE

Other terminal lugs are present at this location. Tag terminal lugs and connection points prior to removal.

1. Position left rear electrical harness (8) in junction box (3).



LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

INSTALLATION - Continued

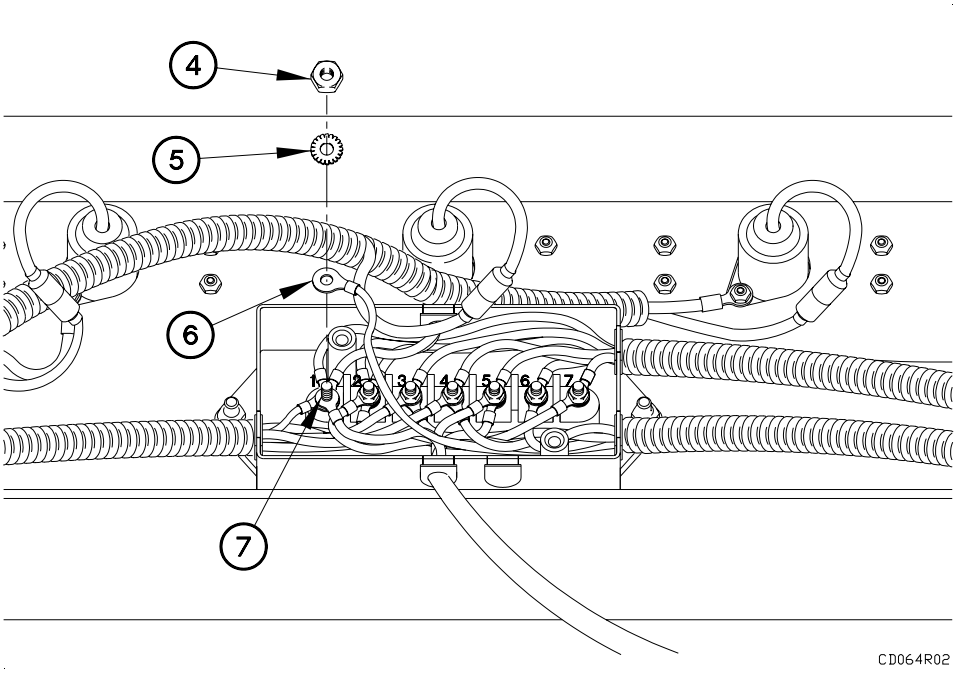
NOTE

Other terminal lugs are present at these locations.

All left rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1 : Left Rear Electrical Harness To Junction Box Connection Points** for details.

2. Install terminal lug TL275 (6) on junction box terminal stud 1 (GRD.) (7) with lockwasher (5) and nut (4).

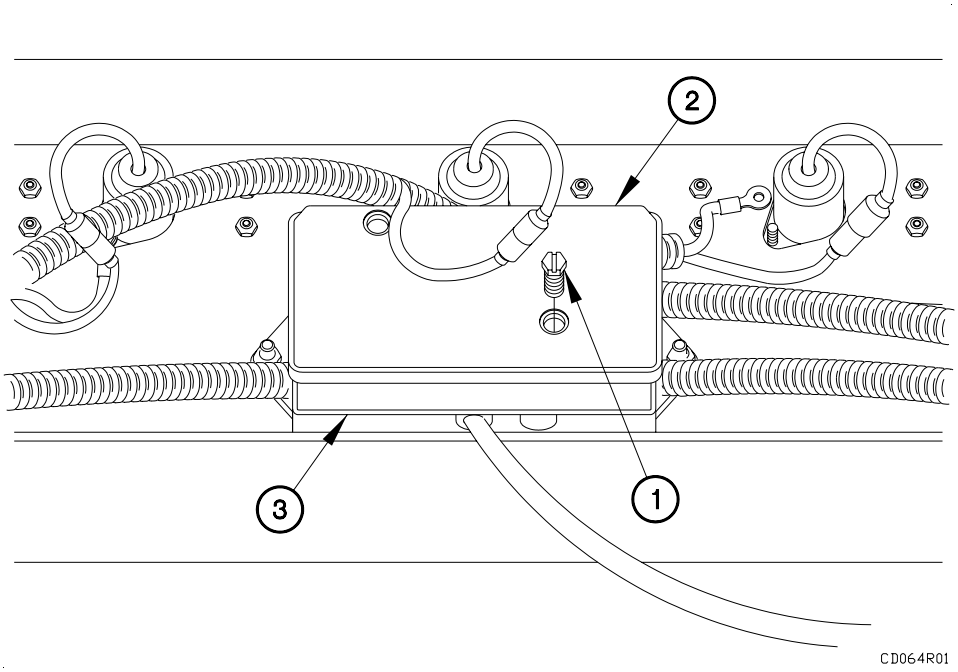
3. Perform the previous step on remaining left rear electrical harness to junction box terminal studs.



LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

INSTALLATION - Continued

4. Install junction box cover (2) on junction box (3) with two bolts (1).



LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0064 00

OPERATIONAL CHECKS

1. Install left rear marker light assembly (WP 0061 00).
2. Install left rear composite taillight assembly (WP 0060 00).
3. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
4. Check for proper operation of left rear lights.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

REAR ELECTRICAL HARNESS REPLACEMENT 0065 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Took Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont)
Washer, Lock (2) (Item 16, WP 0168 00)
Washer, Lock (3) (Item 14, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) rear electrical harness.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0065 00

REMOVAL

NOTE

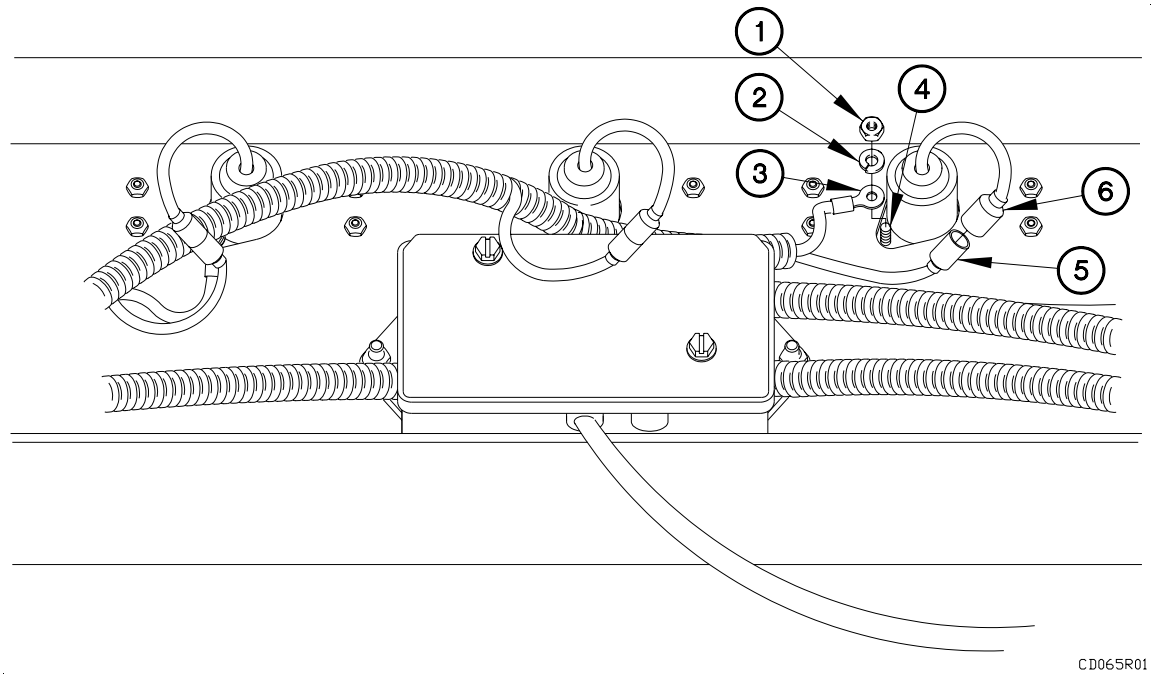
All three rear electrical harness connectors and terminal lugs are removed from the center rear marker lights the same way. Left center marker light connections shown.

Tag connectors and connection points prior to removal. Refer to **Table 1, Rear Electrical Harness Connectors and Connection Points,** for details on remaining lights.

1. Remove nut (1), lockwasher (2), and terminal lug TL278 (3), from marker light terminal stud (4). Discard lockwasher.
2. Disconnect rear electrical harness connector J264 (5) from marker light connector (6).
3. Perform the previous two steps on remaining center rear marker lights.

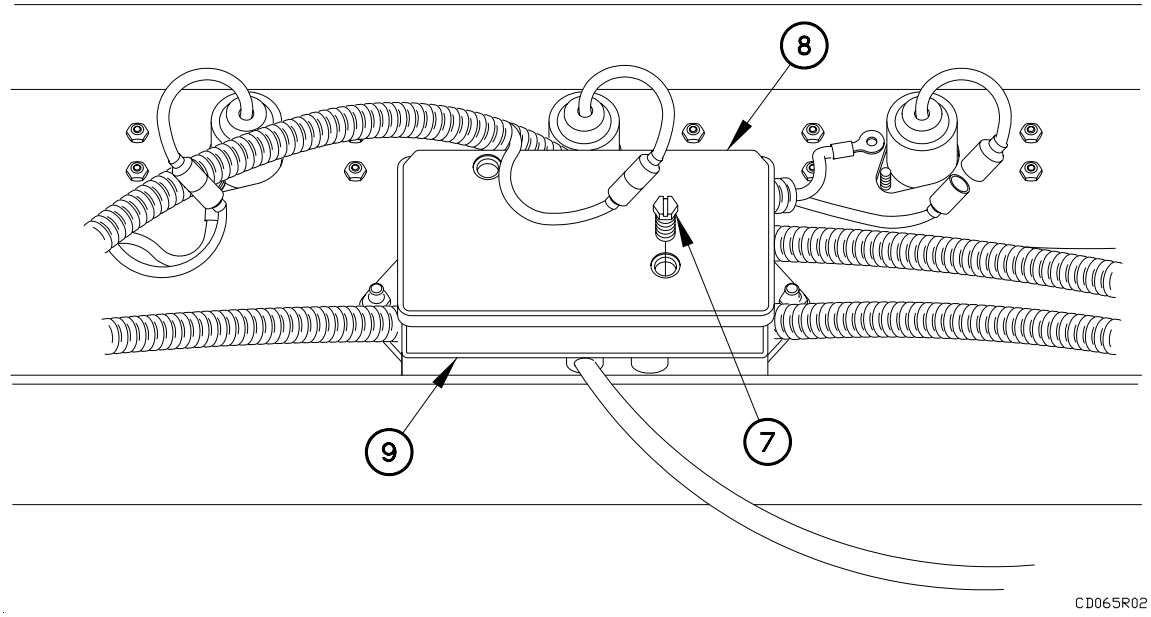
Table 1 Rear Electrical Harness Connectors and Connection Points

Rear Center Marker Lights		
Left	Center	Right
TL278	TL279	TL280
Connector J264	Connector J263	Connector J262
Junction Box		
Terminal Stud 1 (GRD.)	Terminal Stud 2 (CLEAR)	
TL282	TL281	



REMOVAL - Continued

4. Remove two bolts (7) and junction box cover (8) from junction box (9).

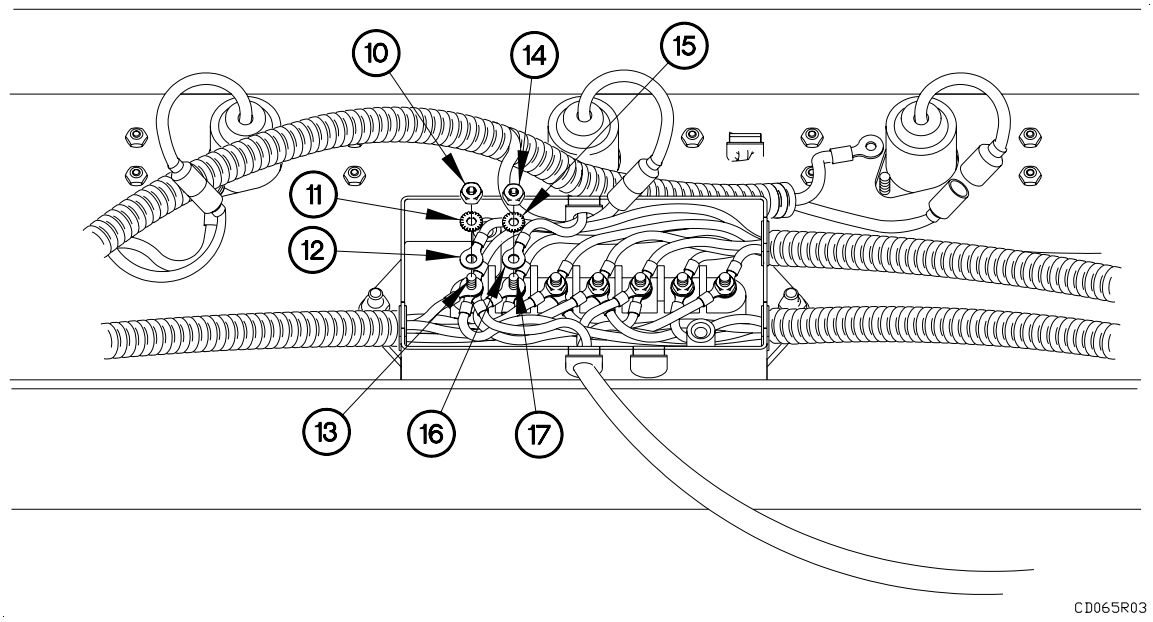


NOTE

Other terminal lugs are present at these locations.

5. Remove nut (10), lockwasher (11), and terminal lug TL282 (12) from junction box terminal stud 1 (GRD.) (13). Discard lockwasher

6. Remove nut (14), lockwasher (15), and terminal lug TL281 (16) from junction box terminal stud 2 (CLEAR) (17). Discard lockwasher.



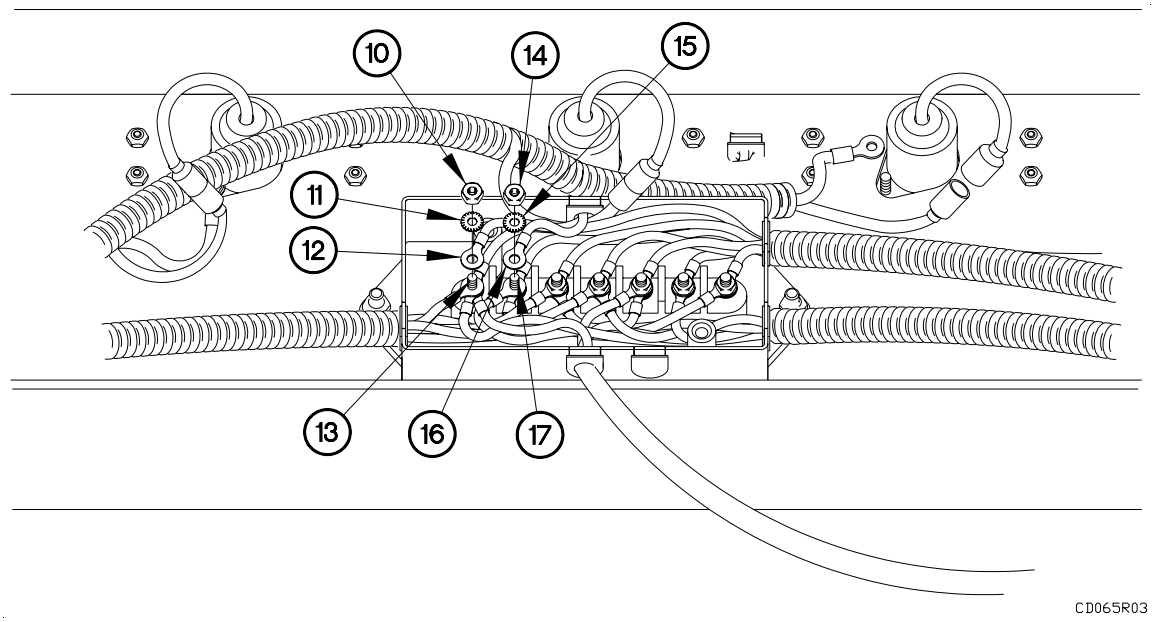
INSTALLATION

NOTE

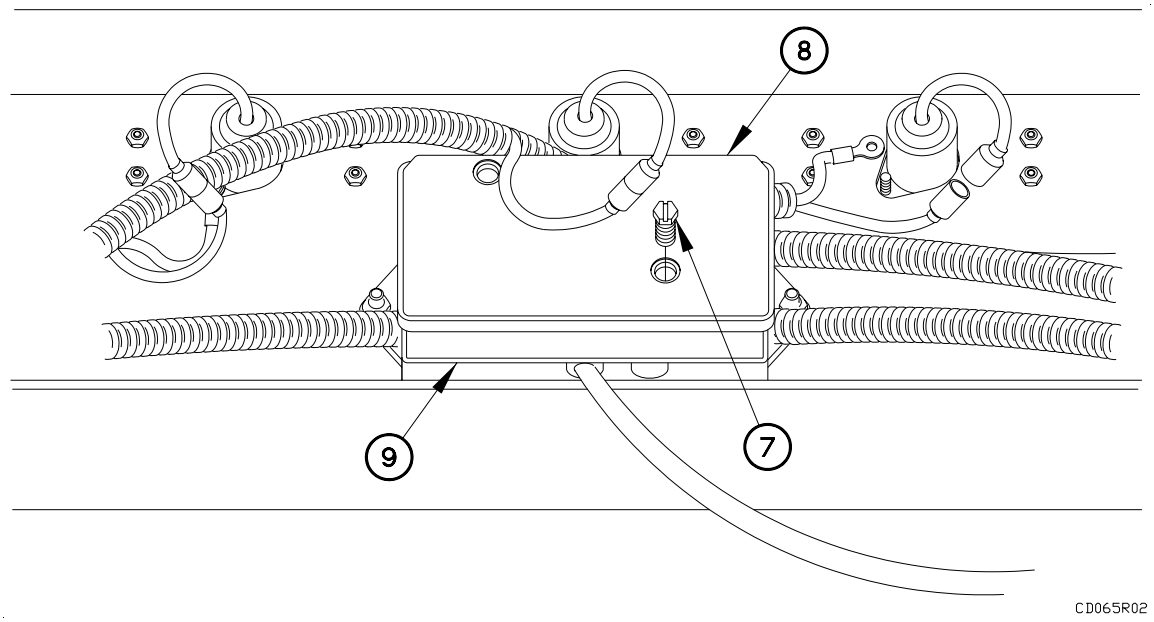
Other terminal lugs are present at these locations.

1. Install terminal lug TL281 (16) on junction box terminal stud 2 (CLEAR) (17) with lockwasher (15) and nut (14).

2. Install terminal lug TL282 (12) on junction box terminal stud 1 (GRD.) (13) with lockwasher (11) and nut (10).



3. Install junction box cover (8) on junction box (9) with two bolts (7).



REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0065 00

INSTALLATION – Continued

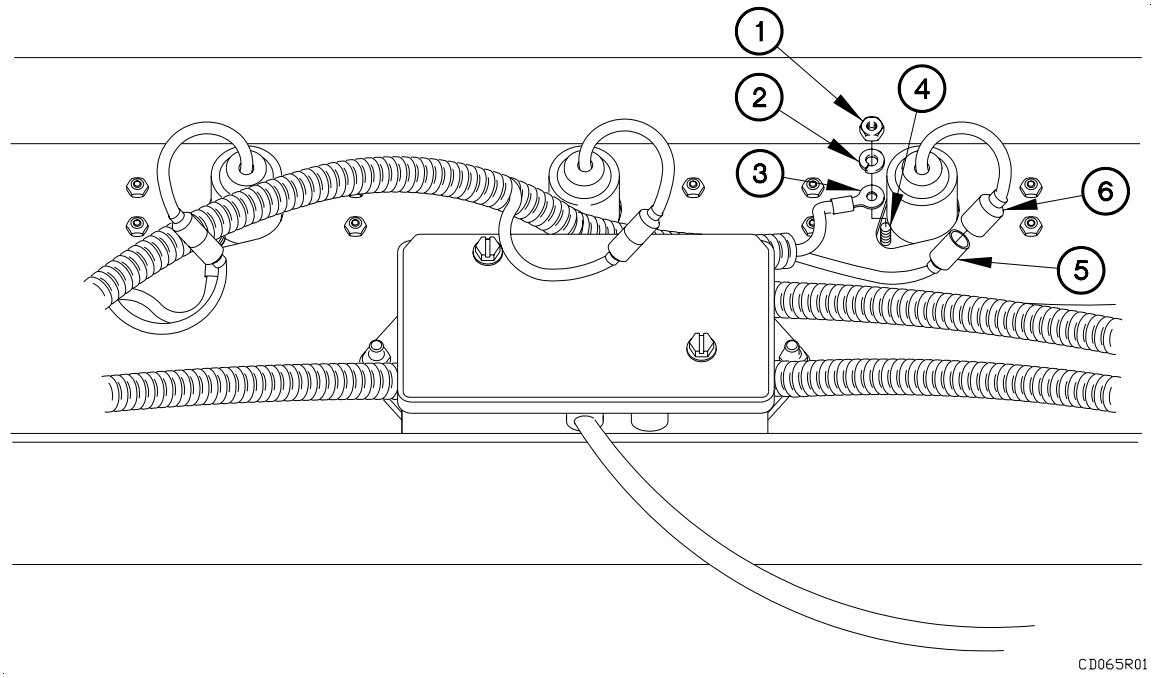
NOTE

All three rear electrical harness connectors and terminal lugs are installed on the center rear marker lights the same way. Left center marker light connections shown.

Refer to **Table 1 Rear Electrical Harness Connectors and Connection Points** for details on remaining lights.

4. Connect rear electrical harness connector J261 (5) to marker light connector (6).

5. Install terminal lug TL278 (3) on marker light terminal stud (4) with lockwasher (2) and nut (1).



REAR ELECTRICAL HARNESS REPLACEMENT - Continued 0065 00

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check operation of center marker lights
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

MAIN ELECTRICAL HARNESS REPLACEMENT 0066 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Goggles, Industrial (Item 8, WP 0167 00)
Took Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Ties, Cable, Plastic (Item 20, WP 0165 00)

Materials/Parts (Cont)
Washer, Lock (7) (Item 15, WP 0168 00)
Nut, Self-Locking (11) (Item 27, WP 0168 00)

Personnel Required
Two

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Voltage converter box removed (WP 0058 00).
Front marker lights removed (WP 0061 00).

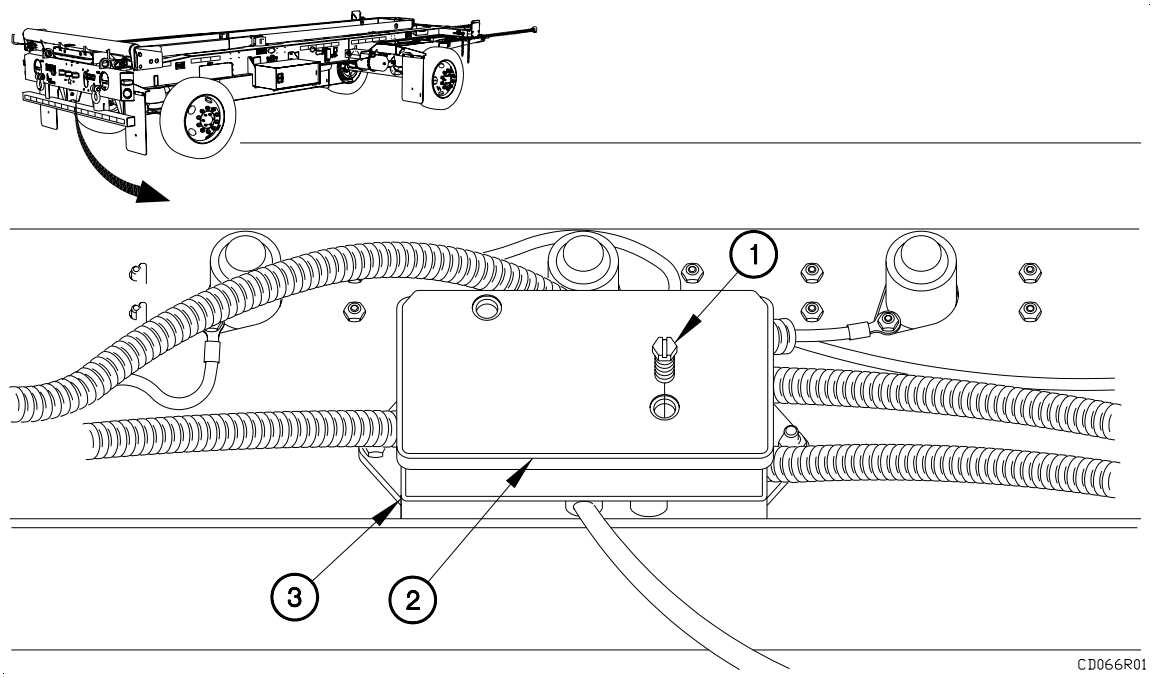
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) main electrical harness.

MAIN ELECTRICAL HARNESS REPLACEMENT - Continued 0066 00

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



MAIN ELECTRICAL HARNESS REPLACEMENT - Continued 0066 00

REMOVAL – Continued

NOTE

All main electrical harness terminal lugs are removed the same way. Junction box terminal lug 1 shown. Refer to **Table 1, Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations,** for details.

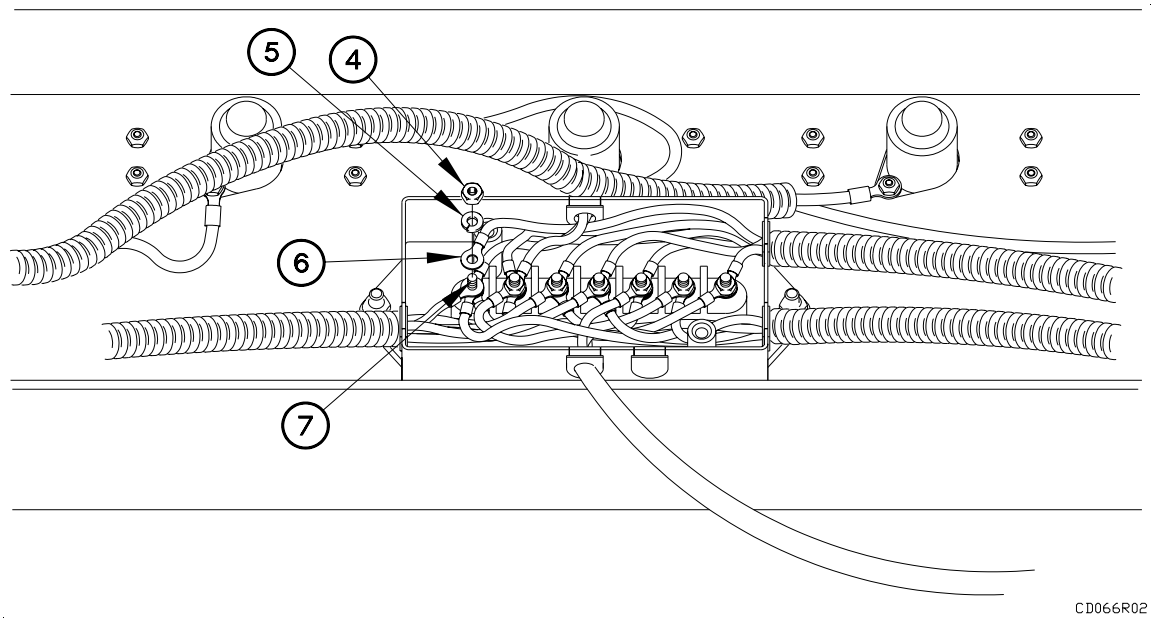
Tag all terminal lugs and terminal studs prior to removal.

2. Remove nut (4), lockwasher (5), and terminal lug TL261A (6), from junction box terminal stud 1 (7). Discard lockwasher.

3. Repeat the previous step on remaining main electrical harness terminal lugs.

Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A

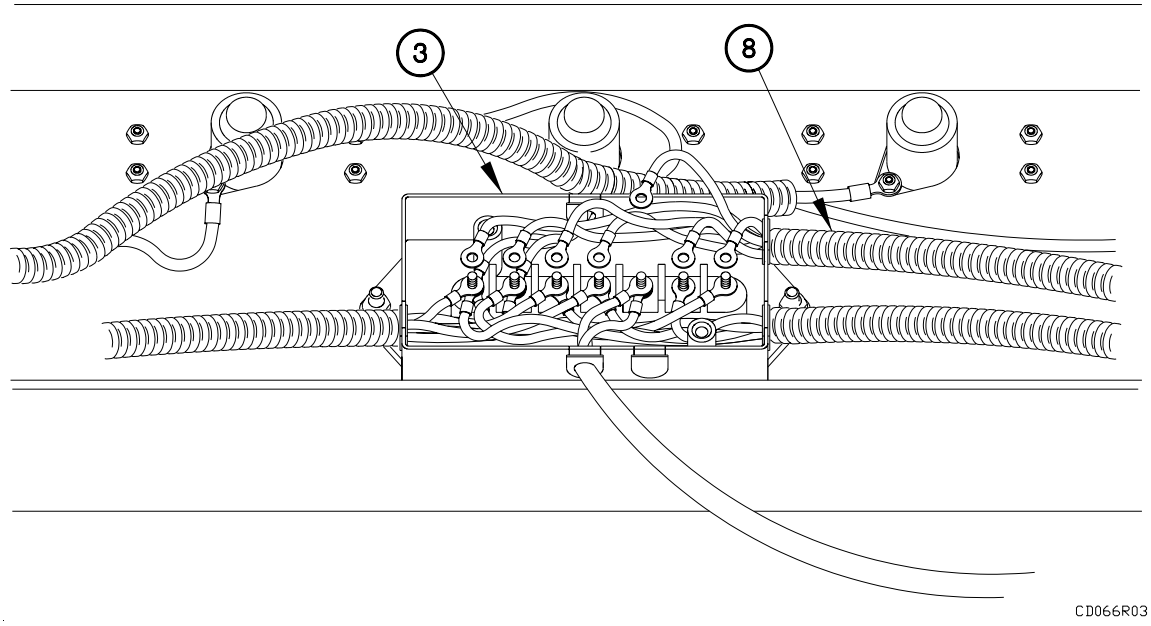


REMOVAL – Continued

4. Remove main electrical harness (8) from junction box (3).

Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A



MAIN ELECTRICAL HARNESS REPLACEMENT - Continued 0066 00

REMOVAL – Continued

NOTE

All main electrical harness clamps are removed the same way. One shown.

Remove plastic cable ties as required.

Remove convoluted tubing as required.

5. Remove self-locking nut (9), bolt (10), and clamp (11) from rail assembly (12). Discard self-locking nut.

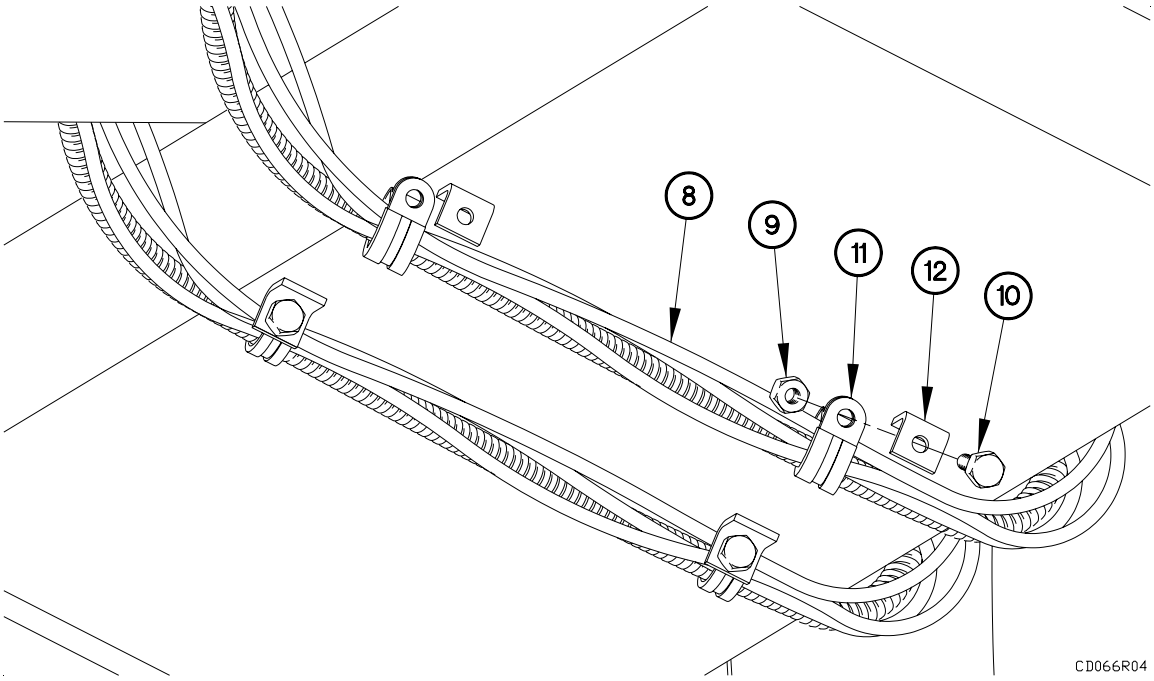
6. Remove main electrical harness (8) from clamp (11).

NOTE

The following two steps require the aid of an assistant.

7. Perform the previous two steps on remaining clamps.

8. Remove main electrical harness (8) from trailer.



MAIN ELECTRICAL HARNESS REPLACEMENT - Continued 0066 00

INSTALLATION

NOTE

All main electrical harness clamps are installed the same way. One shown.

Install plastic cable ties as required.

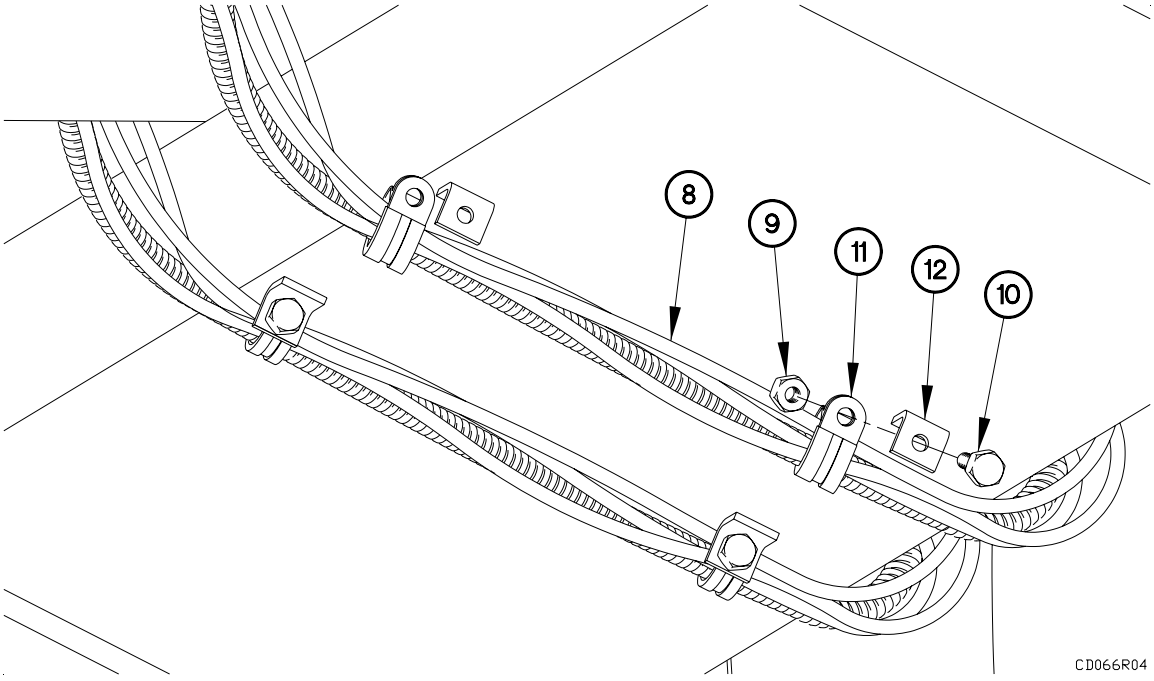
Install convoluted tubing as required.

1. Position main electrical harness (8) on trailer.
2. Position main electrical harness (8) in clamp (11).

NOTE

Do not tighten clamps until harness is connected to junction box and there's enough slack to connect harness to converter box.

3. Position clamp (11) on rail assembly (12) with self-locking nut (9) and bolt (10).
4. Perform the previous two steps on remaining clamps.



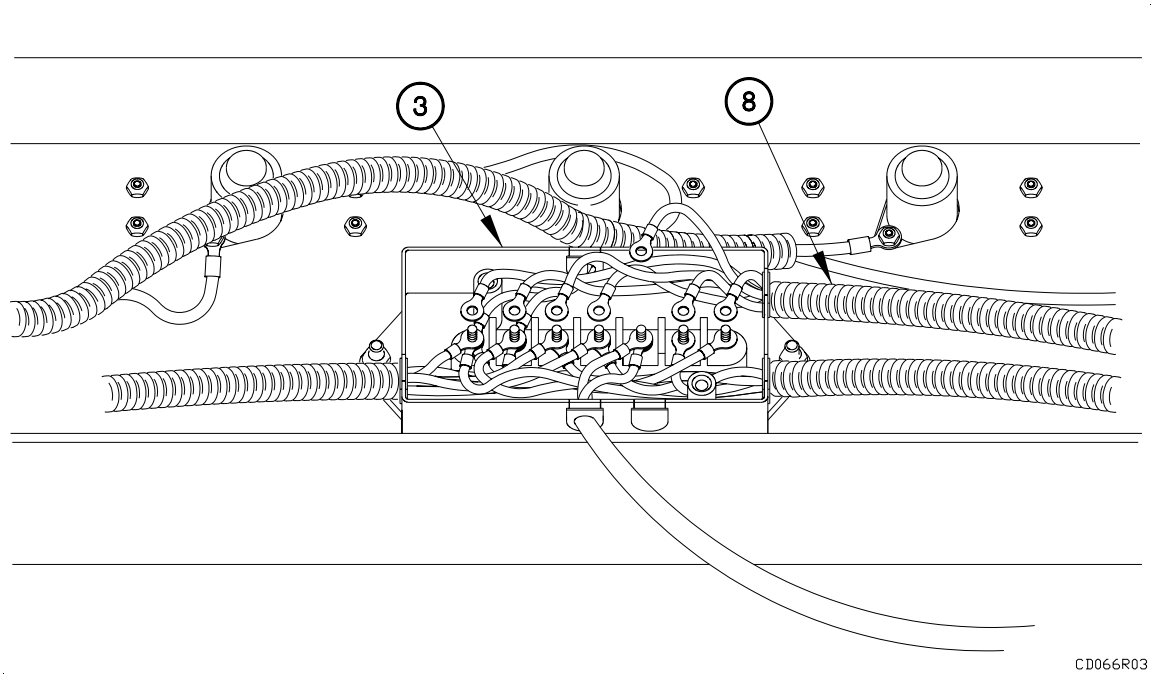
MAIN ELECTRICAL HARNESS REPLACEMENT - Continued 0066 00

INSTALLATION - Continued

5. Route main electrical harness (8) into junction box (3).

Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A



INSTALLATION - Continued

NOTE

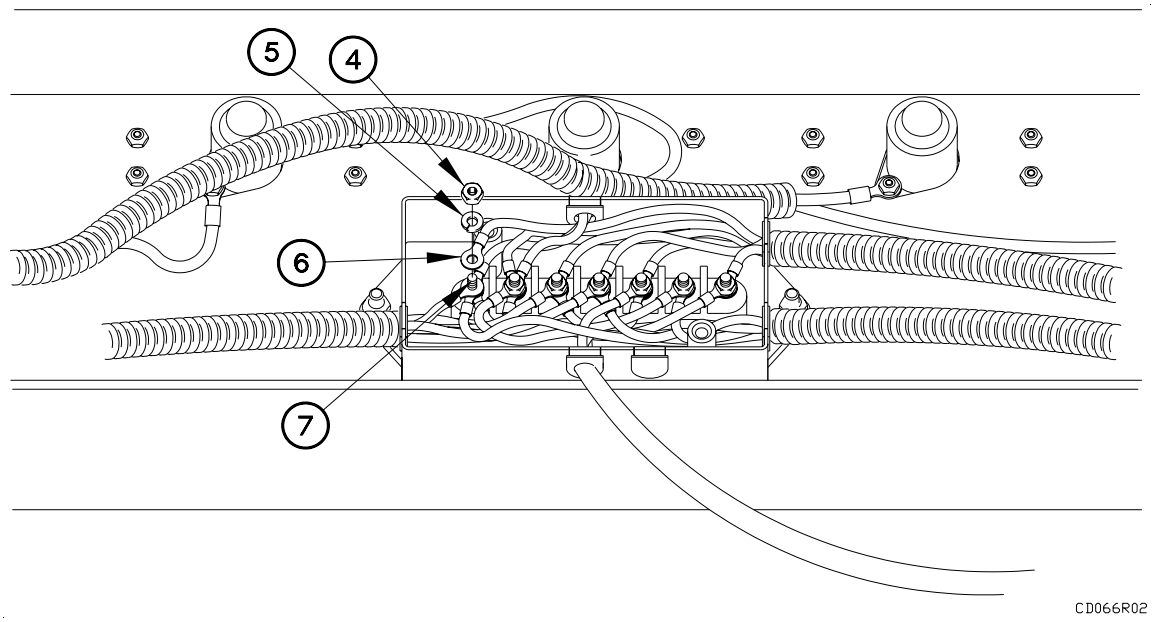
All main electrical harness terminal lugs are installed the same way. Junction box terminal lug 1 shown. Refer to **Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations** for details.

Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A

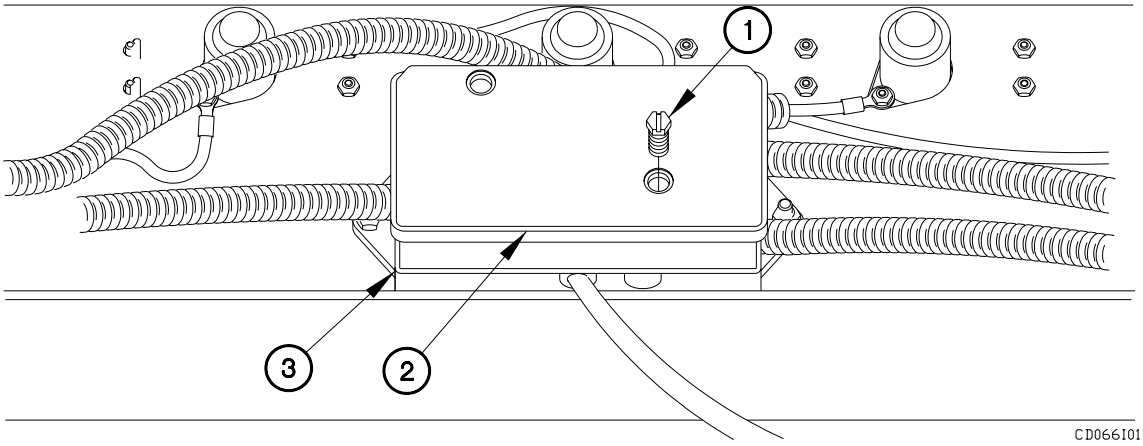
6. Install terminal lug TL261A (6) on junction box terminal stud 1 (7) with lockwasher (5) and nut (4).

7. Repeat the previous step on remaining main electrical harness terminal lugs.



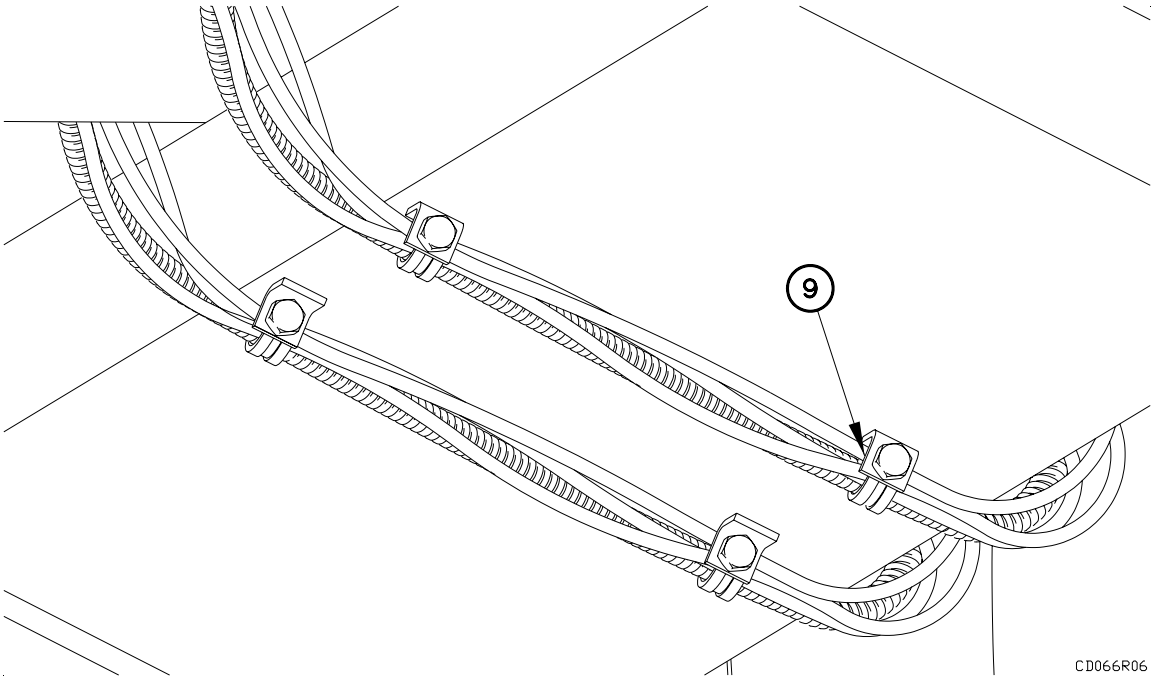
INSTALLATION - Continued

8. Install junction box cover (2) on junction box (3) with two bolts (1).



9. Tighten self-locking nut (9) to 96-120 lb-in. (11-14 N•m).

10. Perform the previous step on remaining clamps.



MAIN ELECTRICAL HARNESS REPLACEMENT - CONTINUED 0066 00

OPERATIONAL CHECKS

1. Install front marker lights (WP 0061 00, Installation).
2. Install voltage converter box (WP 0058 00, Installation).
3. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
4. Check rear marker light operation.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

AXLE ASSEMBLY REPLACEMENT 0067 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Took Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 34, WP 0167 00)
Multiplier, Torque Wrench (Item 13, WP 0167 00)
Jack, Leveling Support (Item 11, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP 0167 00)
Wrench Set, Socket (Item 26, WP 0167 00)
Wrench Set, Crowfoot Ratcheting (Item 27, WP 0167 00)
Lift, Transmission and Differential (Item 12, WP 0167 00)
Trestle, Motor Vehicle Maintenance (2) (Item 24, WP 0167 00).

Materials/Parts

Washer, Lock (2) (Item 5, WP 0168 00)
Nut, Self-locking (6) (Item 25, WP 0168 00)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Ties, Cable, Plastic (Item 20, WP 0165 00)
Nut, Self-Locking (2) (Item 26, WP 0168 00)
Washer, Lock (2) (Item 4, WP 0168 00)

Personnel Required

Two

Equipment Conditions

Tires removed (on axle being replaced) (WP 0053 00).
Air tanks drained (WP 0004 00).
Air brake air chamber removed (WP 0081 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) axle.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

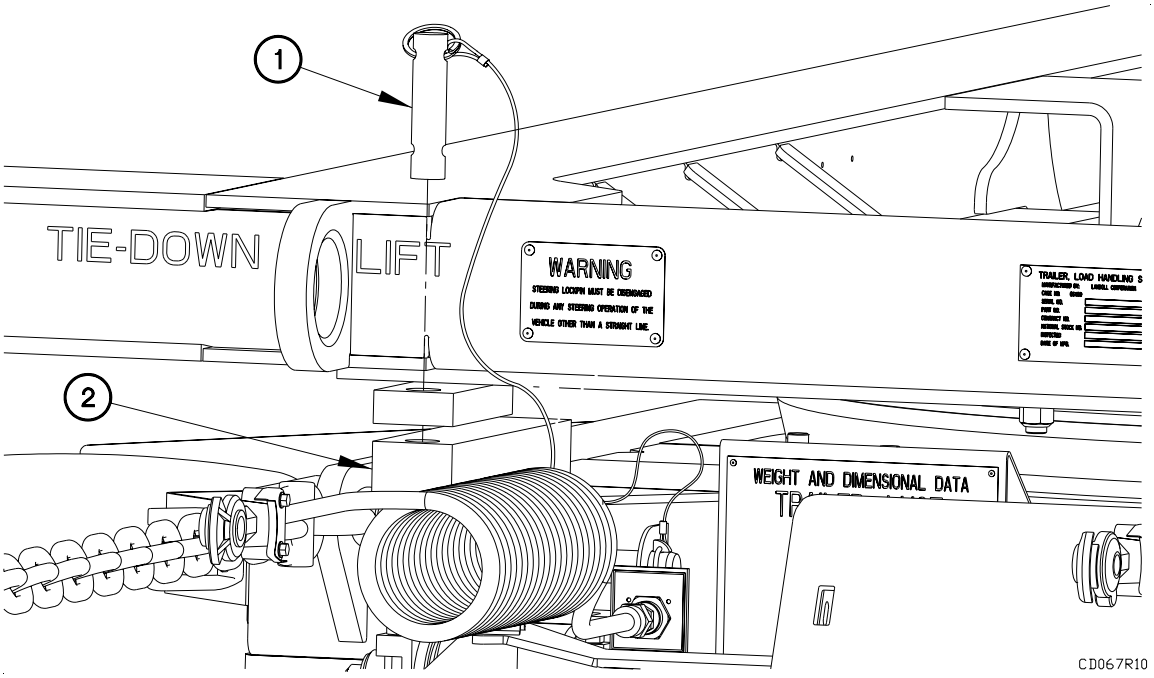
AXLE ASSEMBLY REPLACEMENT 0067 00

REMOVAL

NOTE

Remove plastic cable ties as required.

1. Install turntable retaining pin (1) in turntable (2).



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

REMOVAL - Continued

NOTE

Both axles are removed the same way. Rear axle assembly shown.

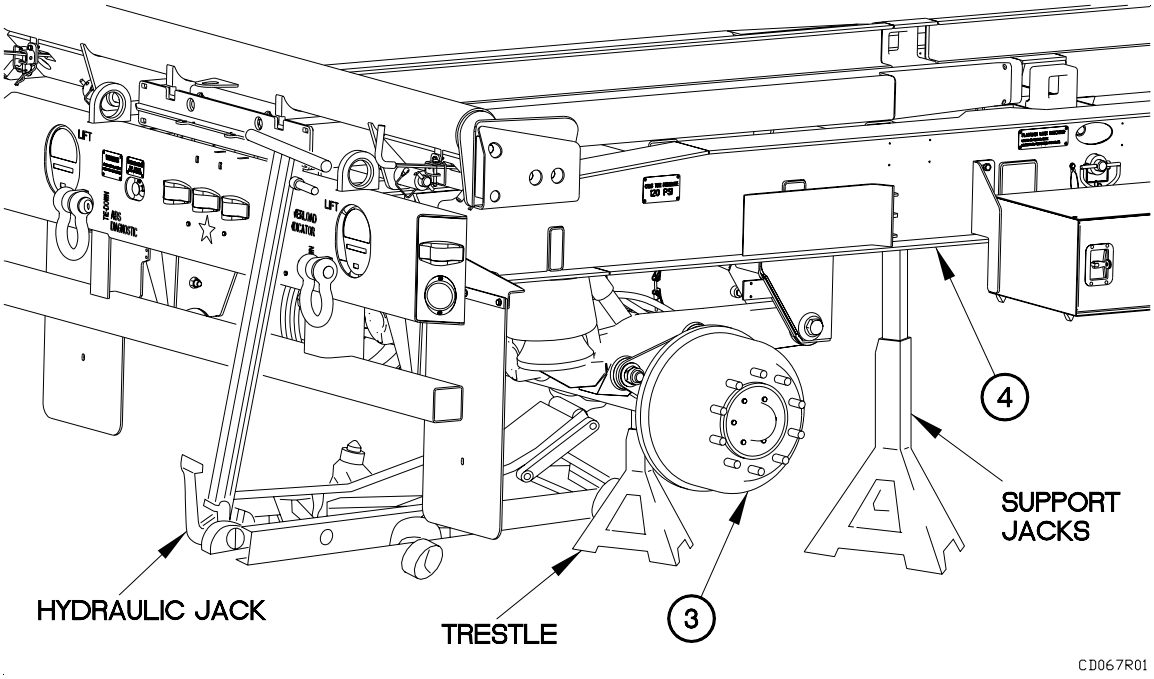
2. Position hydraulic jack under axle assembly (3).

CAUTION

Raise trailer so that swing arm is fully extended before positioning vehicle leveling support jacks. Failure to comply may result in damage to equipment.

3. Position two leveling support jacks under frame (4).

4. Position two trestles under axle assembly (3).



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

REMOVAL - Continued

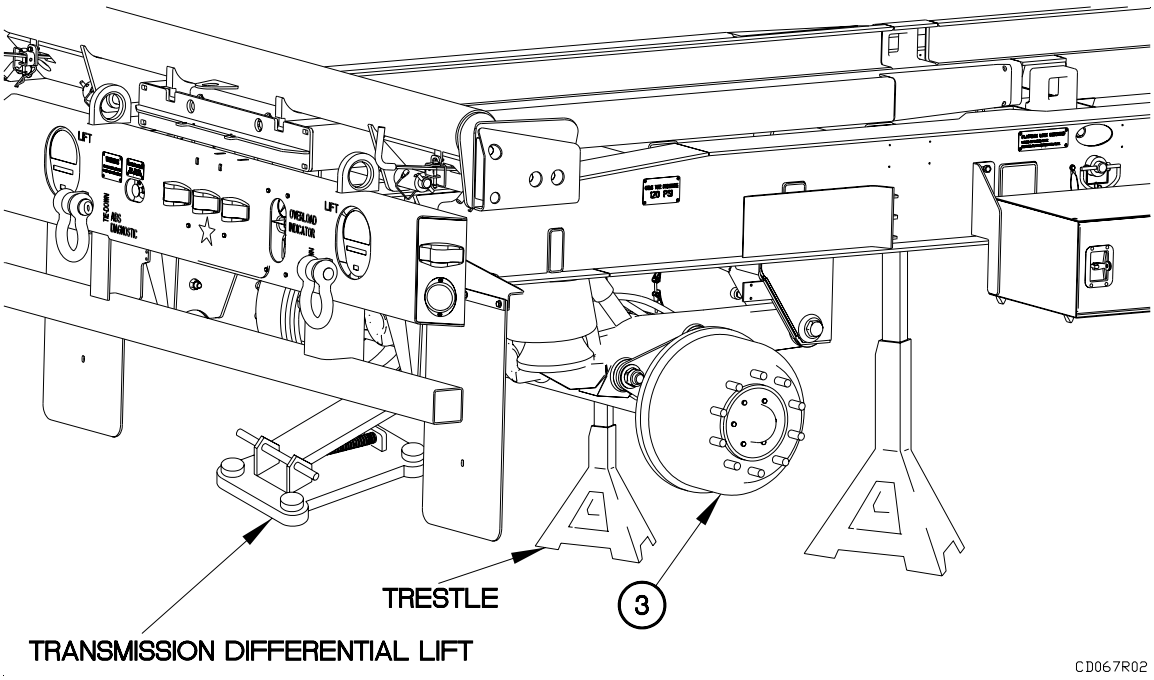
5. Remove hydraulic jack.

WARNING

Axle assembly weighs approximately 600 lbs (272 kgs). Axle assembly must be supported during removal. Failure to comply may result in injury to personnel or damage to equipment.

6. Position transmission/differential lift under axle assembly (3).

7. Remove two trestles from under axle assembly (3).



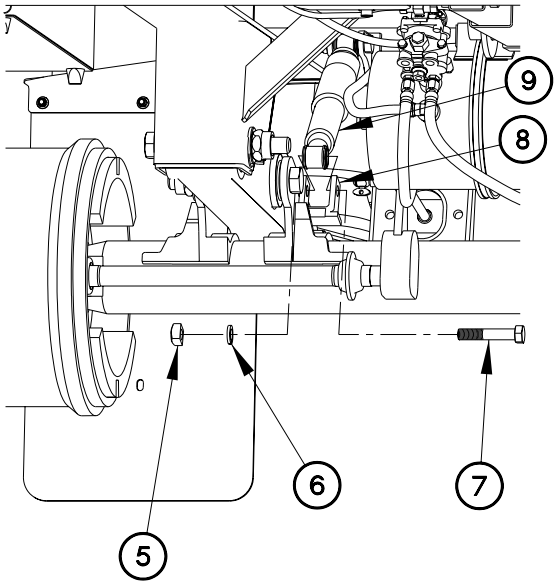
AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

REMOVAL - Continued

NOTE

LH and RH side of axle assembly is removed the same way. LH side shown.

8. Remove nut (5), lockwasher (6), and bolt (7) from lower bracket (8). Discard lockwasher.
9. Position shock absorber (9) away from lower bracket (8).

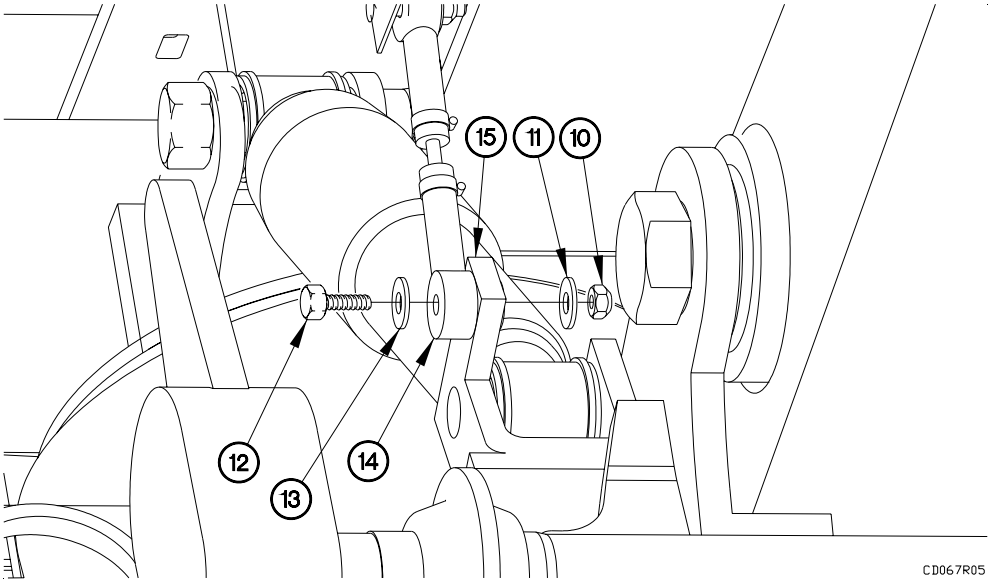


CD067R03

AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

REMOVAL - Continued

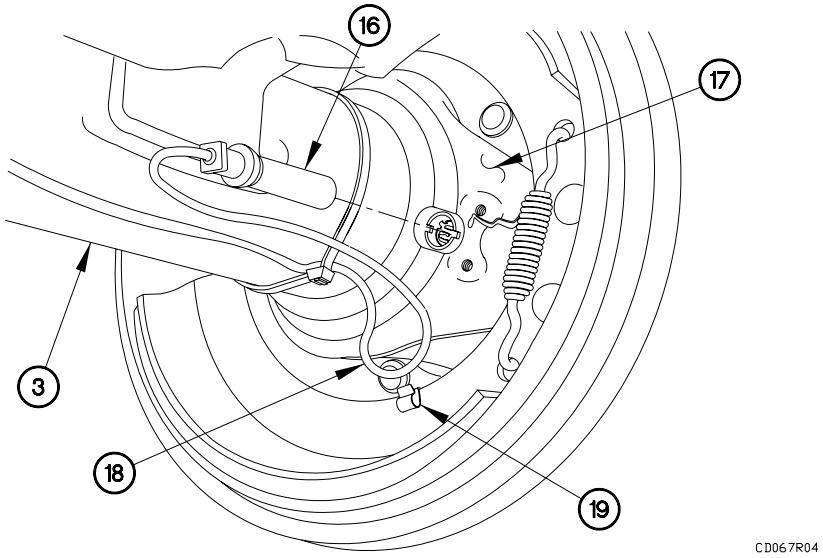
10. Remove self-locking nut (10), washer (11), bolt (12), washer (13), and height control linkage (14) from lower shock bracket (15). Discard self-locking nut.



11. Remove ABS wheel speed sensor (16) from wheel hub (17).

12. Remove cable (18) from clamp (19).

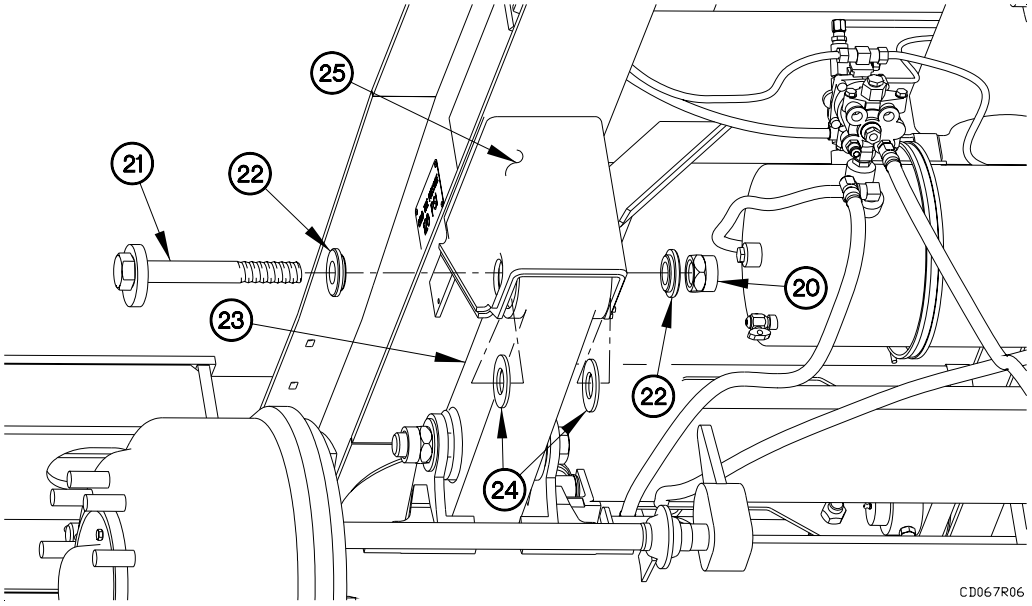
13. Position ABS wheel speed sensor (16) and cable (18) away from axle assembly (3).



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

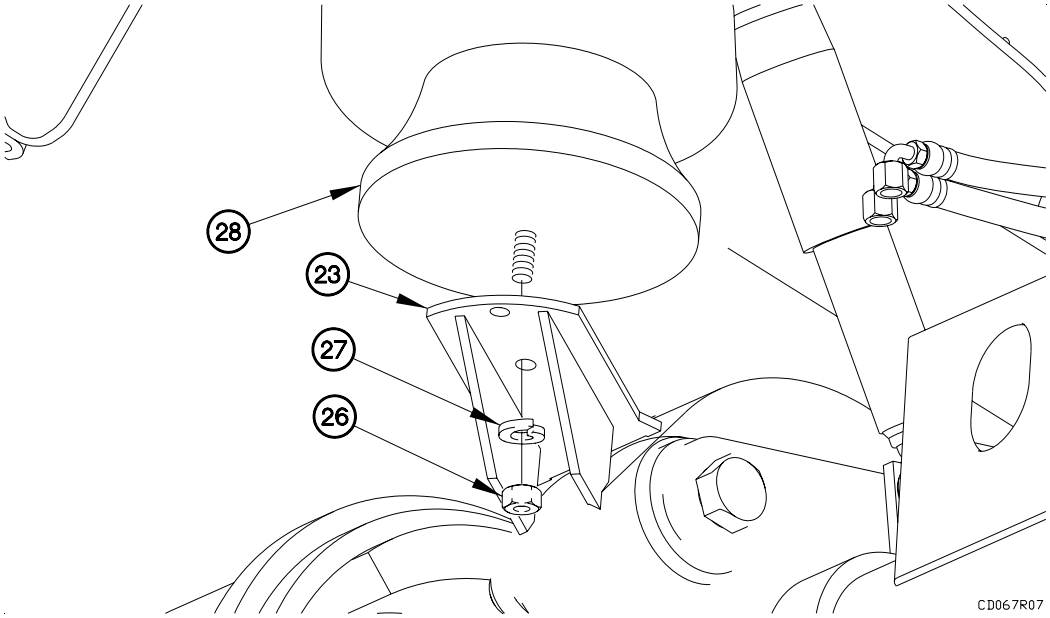
REMOVAL - Continued

14. Remove self-locking nut (20), bolt (21), spacer (22), equalizing beam (23), and two washers (24) from frame rail (25). Discard self-locking nut.



15. Remove nut (26), lockwasher (27), and air bag base (28) from equalizing beam (23). Discard lockwasher.

16. Perform the previous eight steps on RH side of axle assembly.

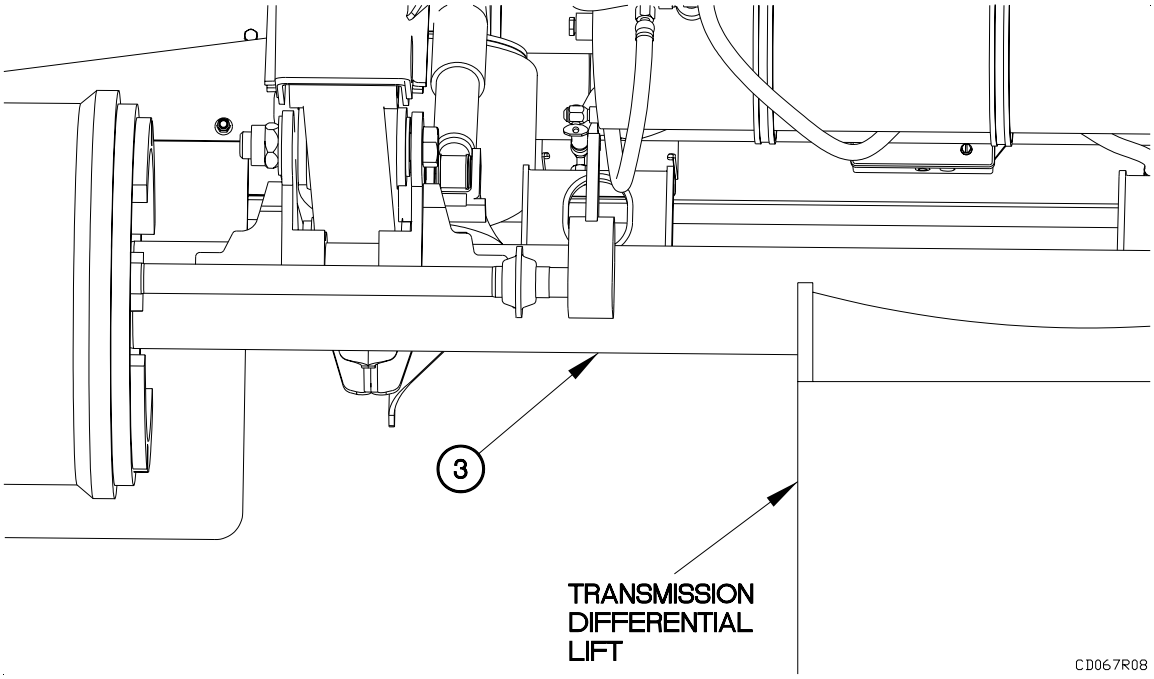


REMOVAL - Continued

NOTE

The following step requires the aid of two assistants.

17. Remove axle assembly (3) from underneath trailer.



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

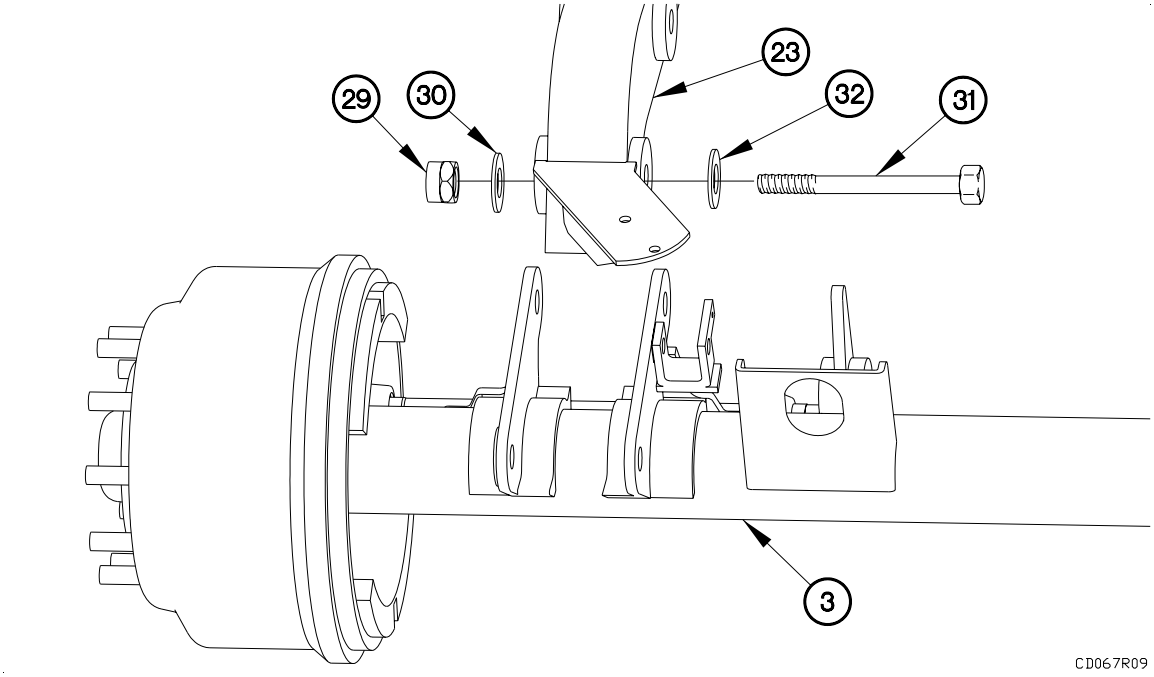
REMOVAL - Continued

NOTE

LH and RH equalizing beams are removed the same way. RH side shown.

18. Remove two self-locking nuts (29), washers (30), bolts (31), washers (32), and equalizing beam (23) from axle assembly (3). Discard self-locking nuts.

19. Perform previous step on LH side equalizing beam.



INSTALLATION

WARNING

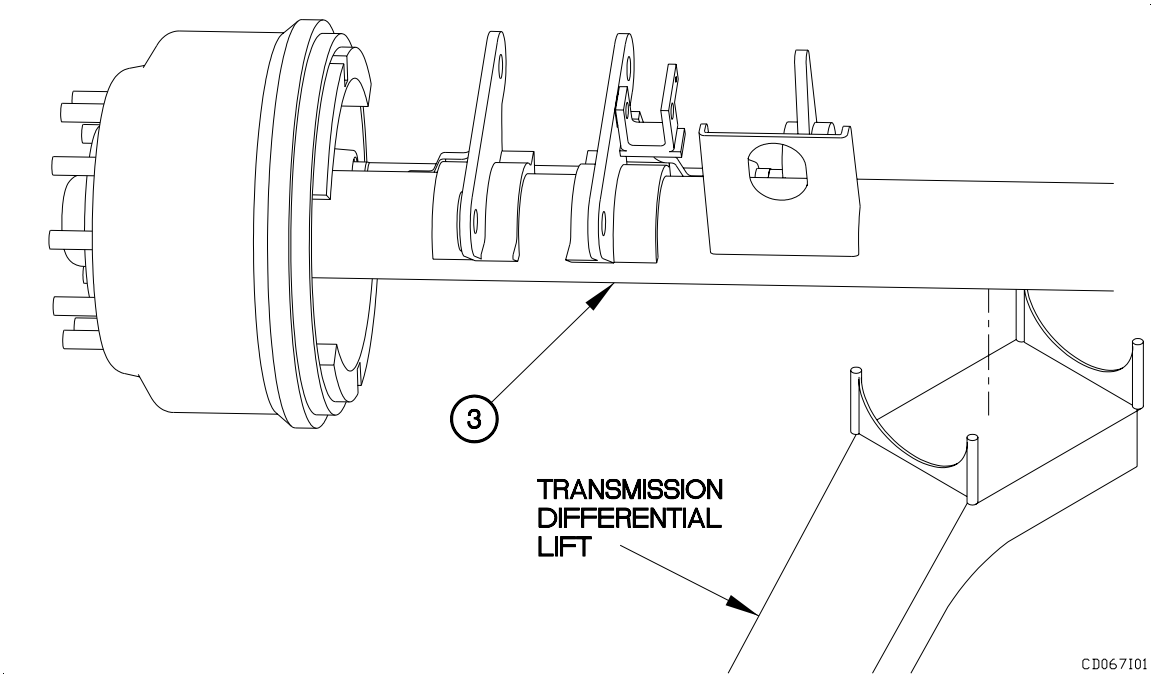
Axle assembly weighs approximately 600 lbs (272 kgs). Axle assembly must be supported during installation. Failure to comply may result in injury to personnel or damage to equipment.

NOTE

Perform the following step if replacing axle assembly.

1. Remove air brake chamber (WP 0081 00).

2. Position axle assembly (3) on transmission differential lift.



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

INSTALLATION - Continued

NOTE

The following two steps require the aid of two assistants.

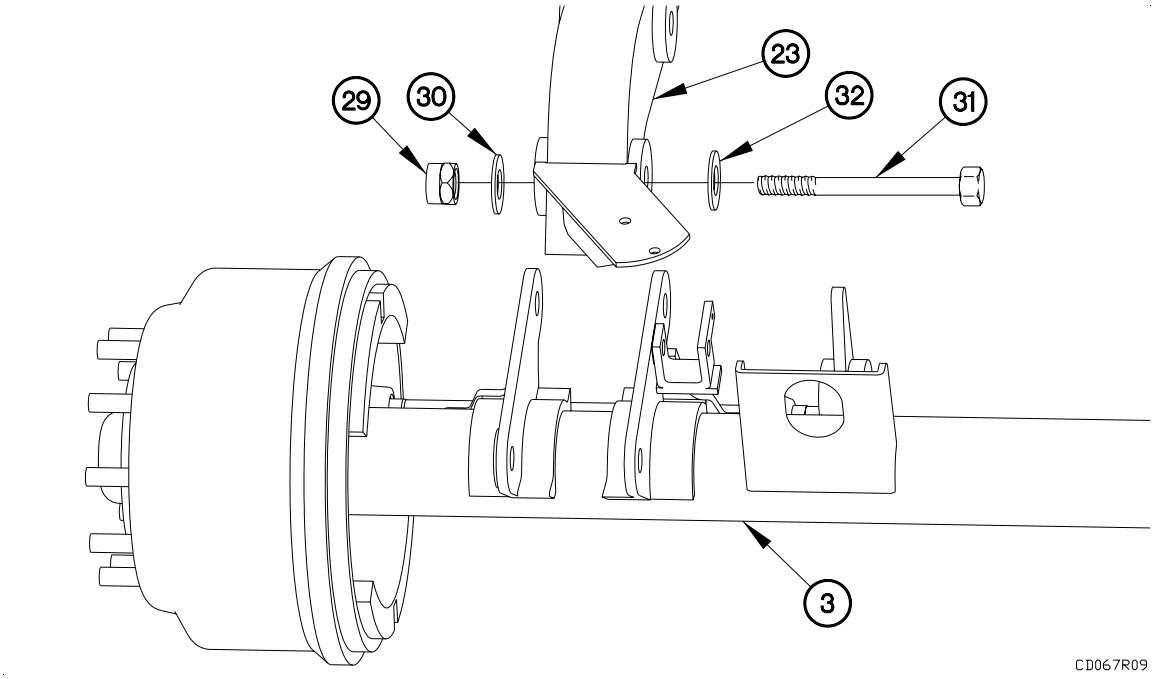
Both axles are installed the same way. Rear axle assembly shown.

LH and RH equalizing beams are installed the same way. RH side shown.

3. Position equalizing beam (23) on axle assembly (3) with two washers (32), bolts (31), washers (30), and self-locking nuts (29).

4. Tighten two self-locking nuts (29) to 760-840 lb-ft (1030-1139 N•m).

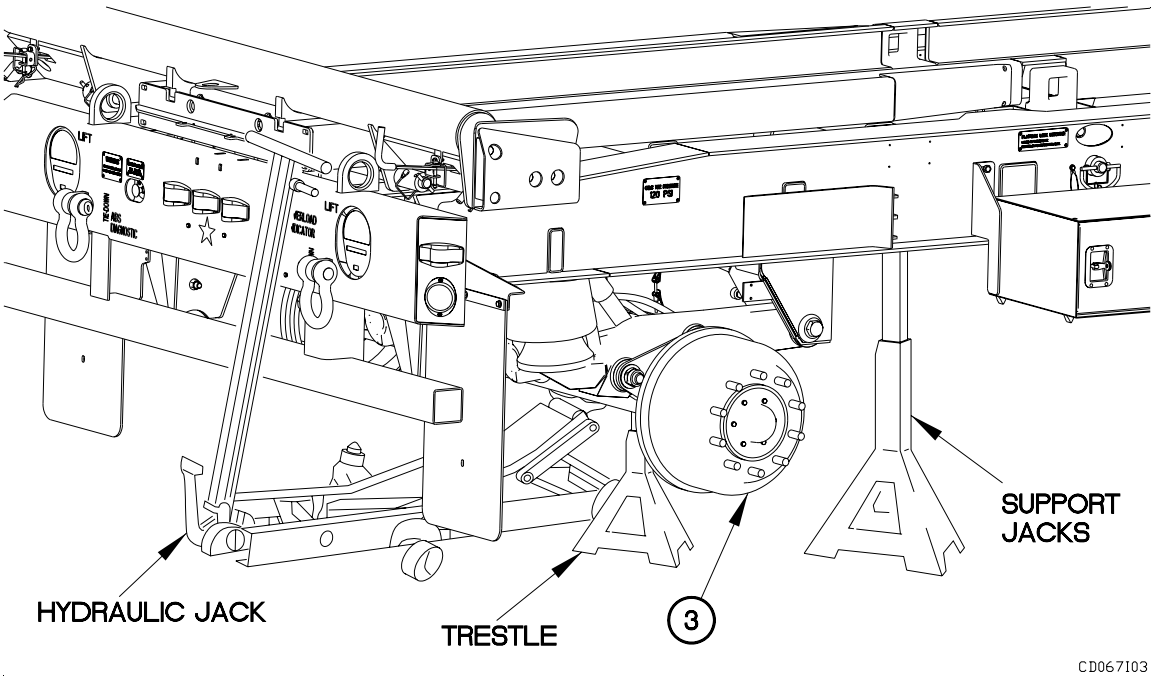
5. Perform previous two steps on LH side equalizing beam.



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

INSTALLATION - Continued

6. Position axle assembly (3) underneath trailer with transmission differential lift.
7. Position two trestles under axle assembly (3).
8. Remove transmission differential lift from axle assembly (3).
9. Position hydraulic jack under axle assembly (3).
10. Remove two trestles from under axle assembly (3).



AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

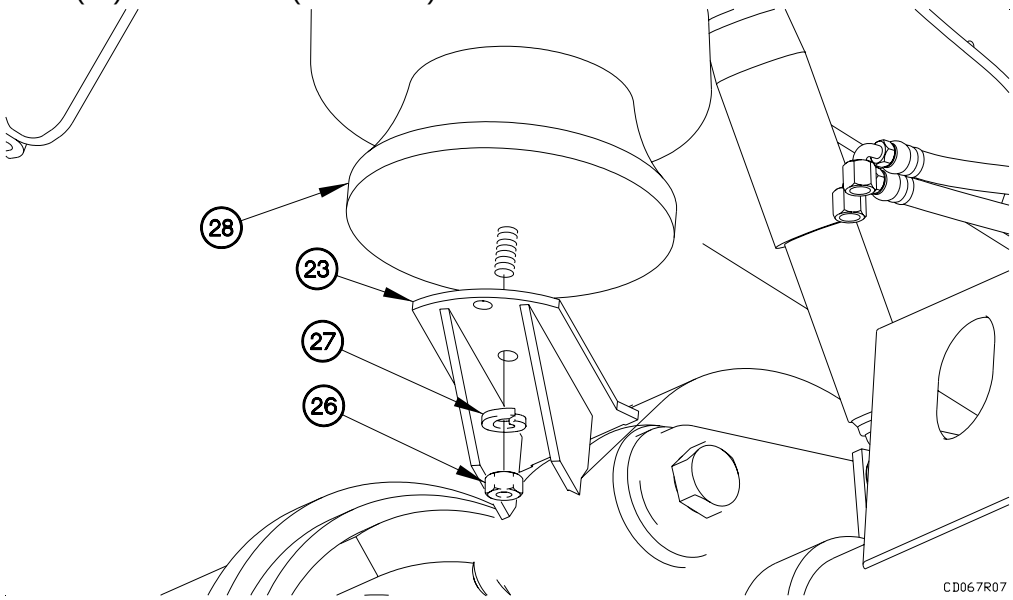
INSTALLATION - Continued

NOTE

LH and RH side of axle assembly is installed the same way. LH side shown.

11. Position air bag base (28) on equalizing beam (23) with lockwasher (27) and nut (26).

12. Tighten nut (26) to 33-37 lb-ft (45-50 N•m).

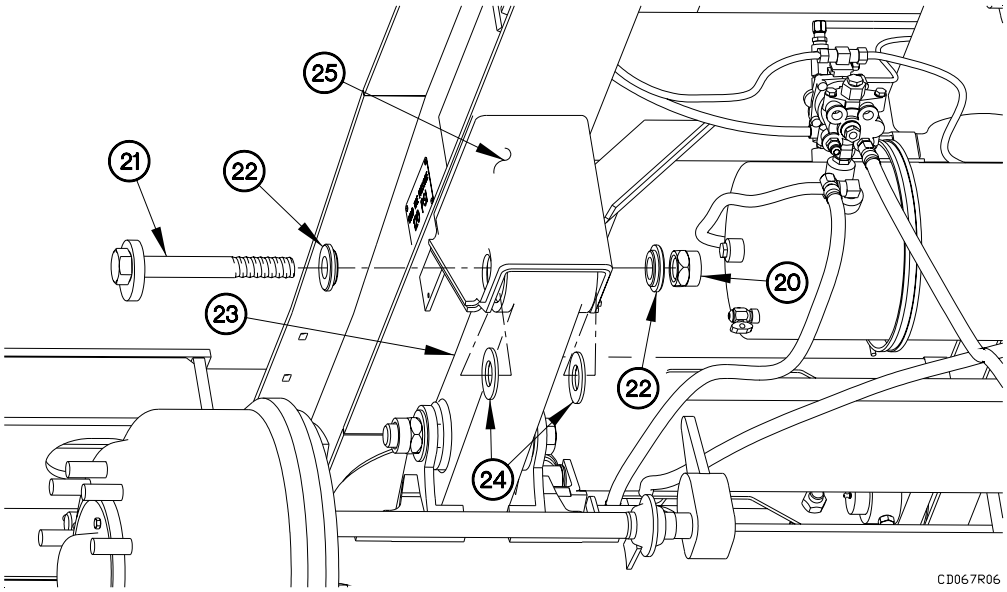


AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

INSTALLATION - Continued

13. Position equalizing beam (23) on frame rail (25) with two washers (24), spacer (22), bolt (21) and self-locking nut (20).

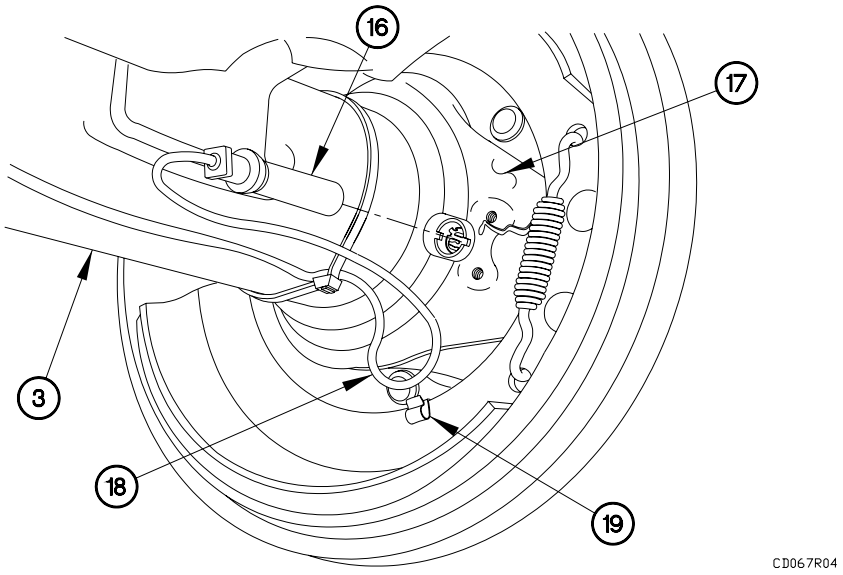
14. Tighten self-locking nut (20) to 523-578 lb-ft (709-784 N•m).



15. Position cable (18) and ABS wheel speed sensor (17) on axle assembly (3).

16. Install cable (18) in clamp (19).

17. Install ABS wheel speed sensor (16) in wheel hub (17).

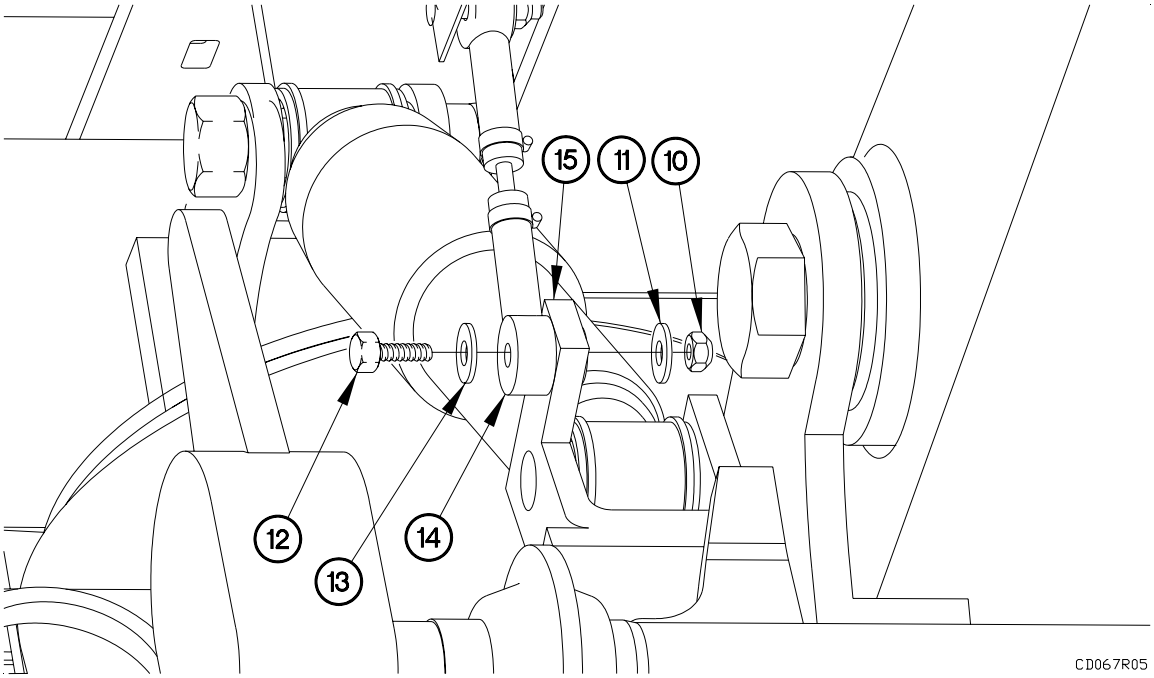


AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

INSTALLATION - Continued

18. Position height control linkage (14) on lower shock bracket (15) with washer (13), bolt (12), washer (11), and self-locking nut (10).

19. Tighten self-locking nut (10) to 8-10 lb-ft (11-14 N•m).



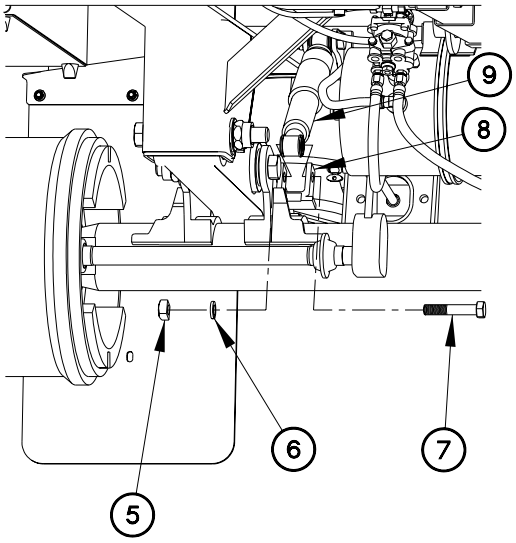
AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

INSTALLATION - Continued

20. Position shock absorber (9) in lower bracket (8) with bolt (7), lockwasher (6), and nut (5).

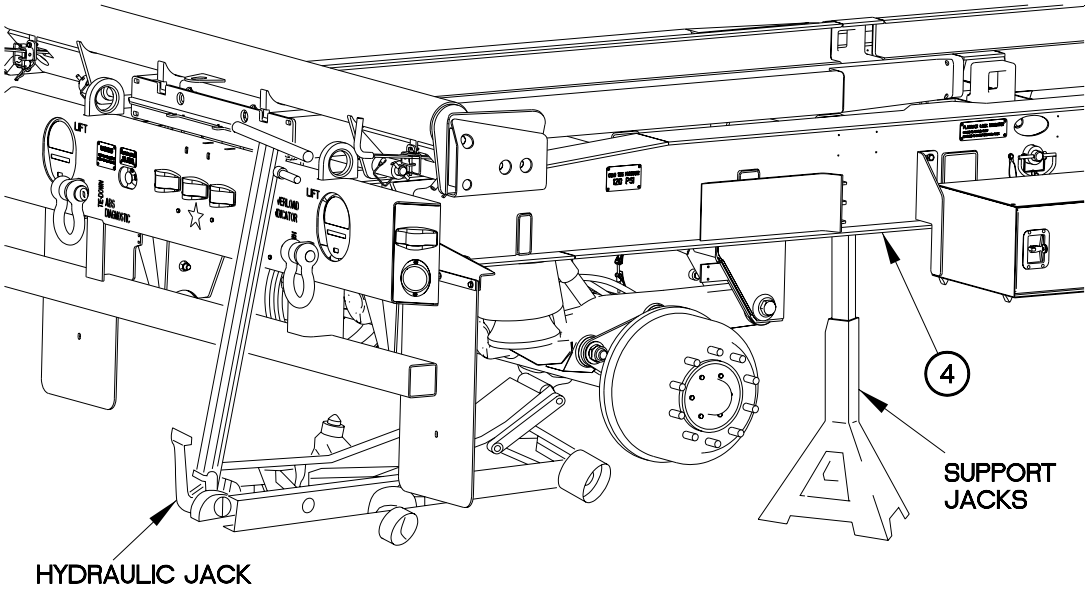
21. Tighten nut (5) to 143-158 lb-ft (194-214 N•m).

22. Perform previous 11 steps on RH side of axle assembly.



CD067R03

23. Remove two leveling support jacks from frame (4).

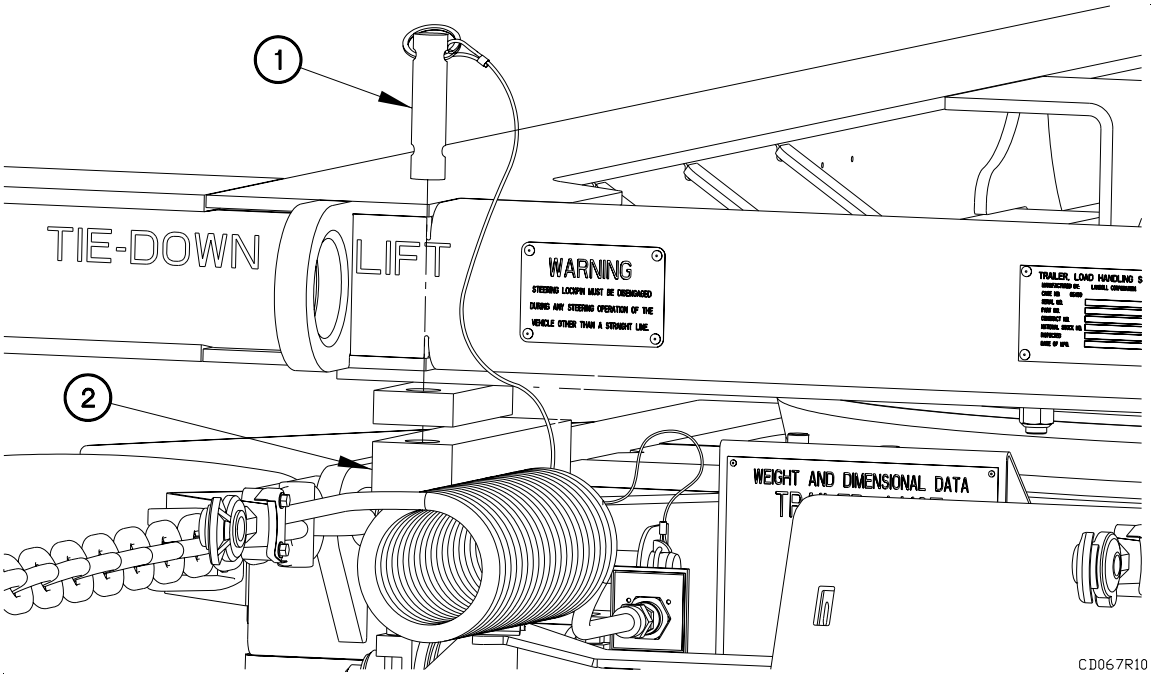


CD067I04

AXLE ASSEMBLY REPLACEMENT - Continued 0067 00

INSTALLATION - Continued

24. Install turntable retaining pin (1) in turntable (2).



OPERATIONAL CHECKS

1. Install air brake air chambers (WP 0081 00).
2. Install tires (on axle being replaced) (WP 0053 00).
3. Road test trailer and check for proper operation (WP 0043 23, TM 9-2320-392-10-1).

END OF WORK PACKAGE

PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT 0068 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts - Continued

Sealing Compound (Item 13, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Turntable removed for access (WP 0099 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) pressure relief valve.

WARNING

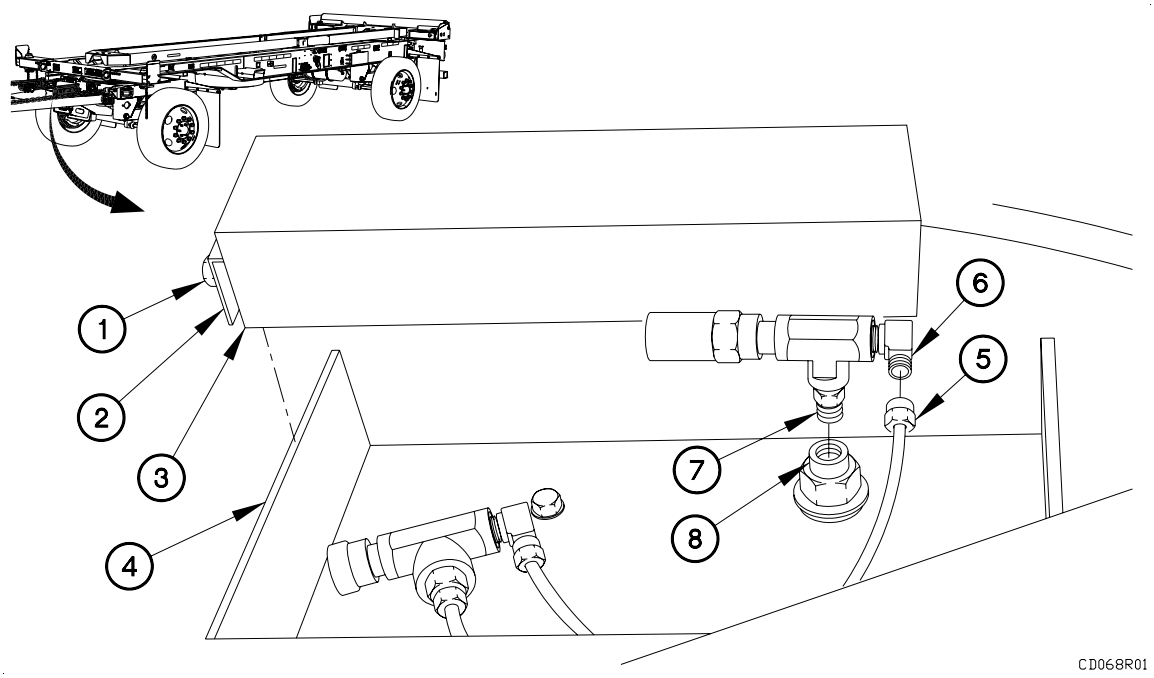
Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Use extreme caution when working in between frame rail and turntable assembly. Make sure multiple precautions have been taken to support frame rail from turntable assembly (jack stands, cargo sling, wooden blocks, etc). Failure to comply may result in serious injury or death to personnel or damage to equipment.

PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued 0068 00

REMOVAL

1. Loosen four screws (1) on two cover clamps (2).
2. Remove cover (3) from turntable (4).
3. Disconnect hose (5) from 90 degree fitting (6).
4. Remove fitting (7) from air bladder (8).



PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued 0068 00

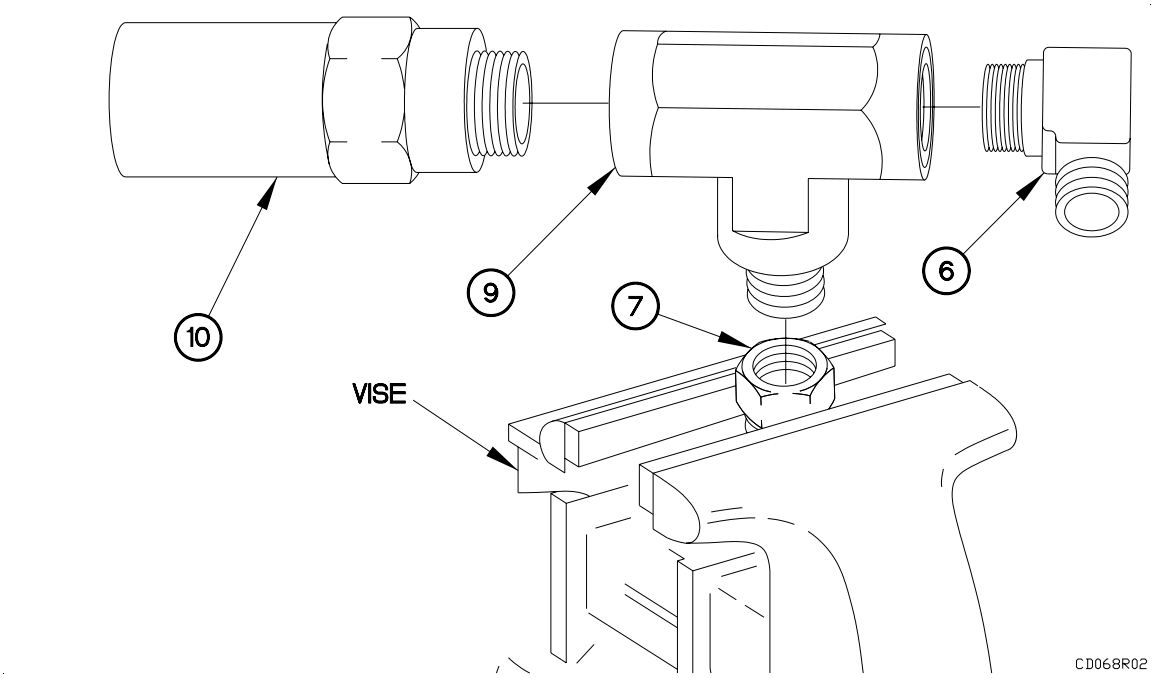
REMOVAL - Continued

5. Place pressure relief valve assembly in a vise.

NOTE

Note orientation of 90 degree fitting prior to removal.

6. Remove 90 degree fitting (6) from tee fitting (9)
7. Remove fitting (7) from tee fitting (9).
8. Remove pressure relief valve (10) from tee fitting (9).



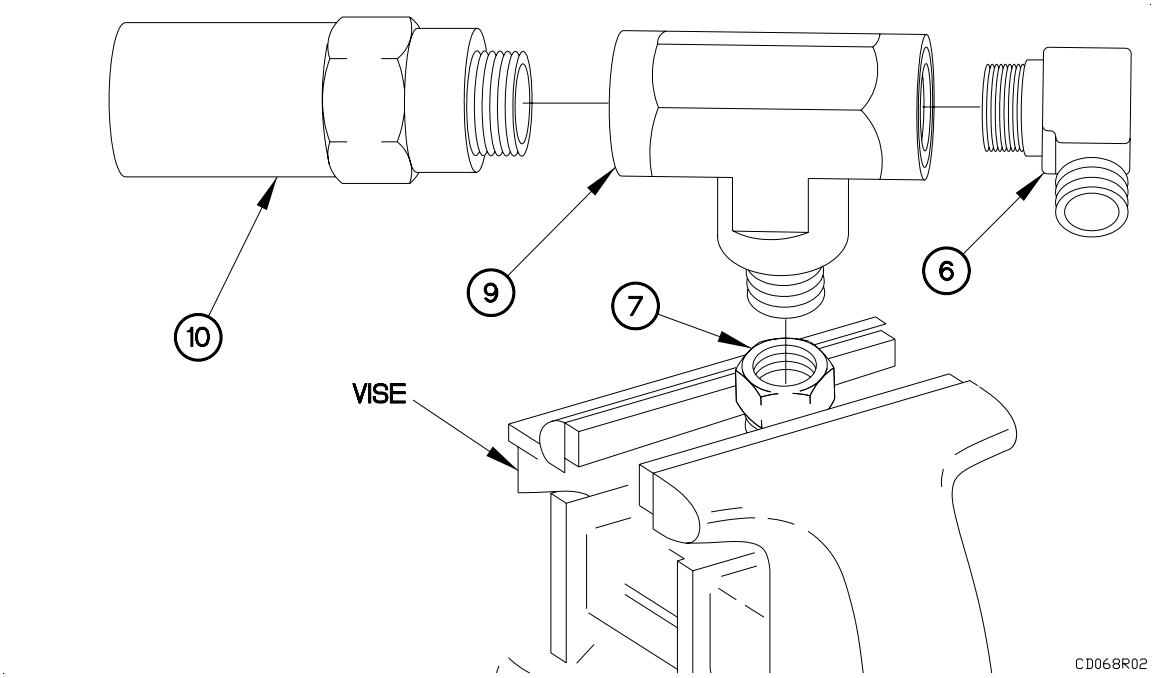
PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued 0068 00

INSTALLATION

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use ion well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

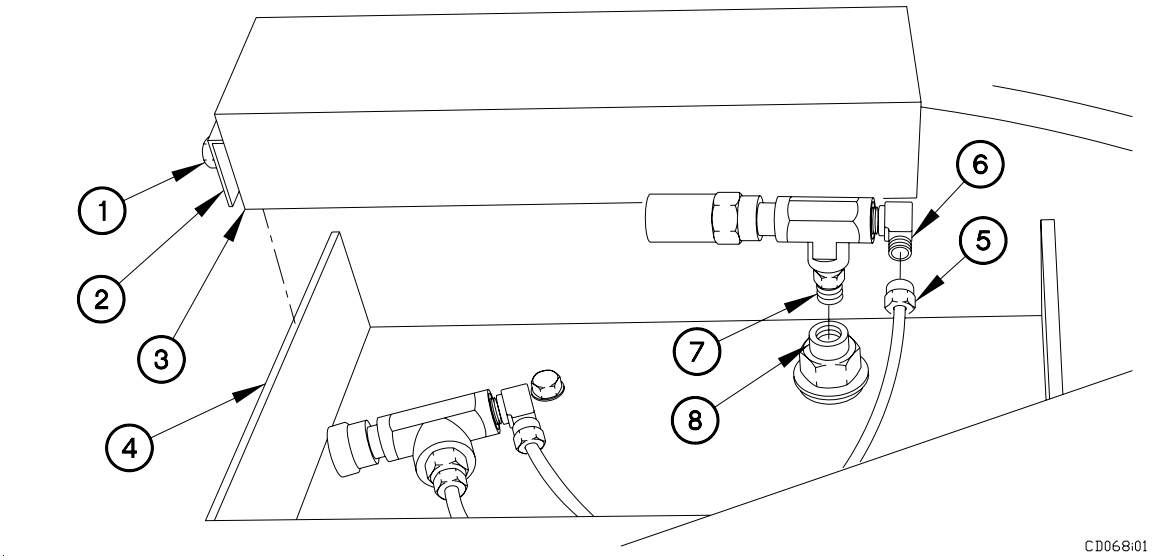
1. Apply sealing compound to threads of pressure relief valve (10), 90 degree fitting (6), and fitting (7).
2. Install pressure relief valve (10) on tee fitting (9).
3. Install fitting (7) on tee fitting (9).
4. Install 90 degree fitting (6) on tee fitting (9).



PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued 0068 00

INSTALLATION - Continued

5. Install fitting (7) on air bladder (8).
6. Connect hose (5) to 90 degree fitting (6).
7. Position cover (3) and two clamps (2) on turntable (4) with four screws (1).
8. Tighten four screws (1) to 96-120 lb-in. (11-14 N•m).



PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued 0068 00

OPERATIONAL CHECKS

1. Install turntable (WP 0099 00).
2. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
3. Operate drawbar lift valve.
4. Check for leaks in pressure relief valve assembly hoses.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

BRAKES REPLACEMENT/ADJUSTMENT 0069 00

THIS WORK PACKAGE COVERS:

Removal, Cleaning/Inspection, Installation, Adjustment, Operational Check

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Trestle, Motor Vehicle Maintenance (Item 24, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Rag, Wiping (Item 11, WP 0165 00)
Grease, Automotive and Artillery (GAA) (Item 7, WP 0165 00)

Materials/Parts (Cont)

Pin, Cotter (Item 43, WP 0168 00)
Pin, Cotter (Item 41, WP 0168 00)

Personnel Required

Two

References

Towing vehicle Operator manual

Equipment Conditions

Tire removed (WP 0053 00).
Spring brakes caged (WP 0055 00).

REMOVAL

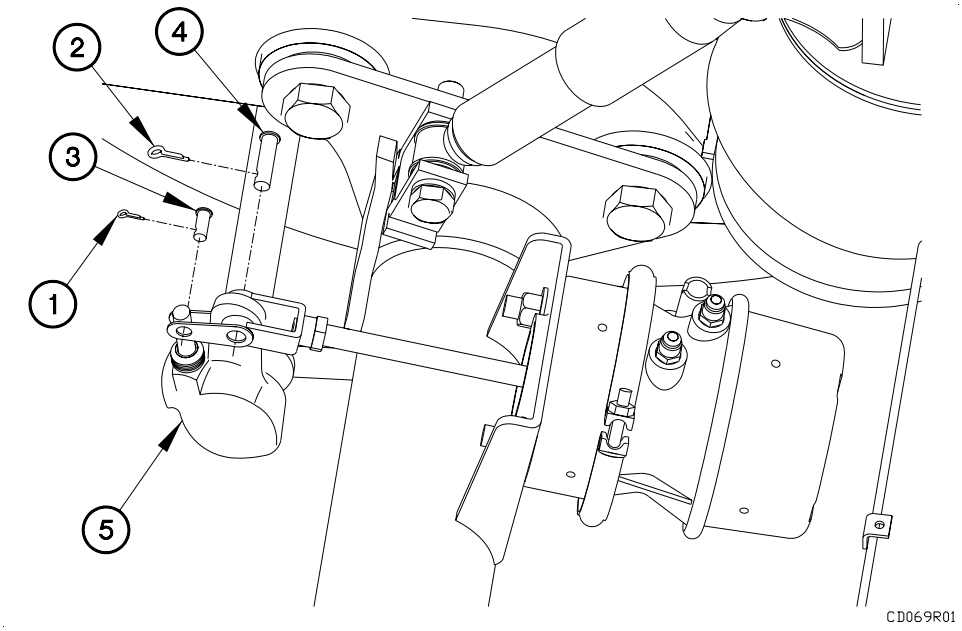
WARNING

Brake shoes may be covered with dust. Breathing this dust may be harmful to your health. Do not use compressed air to clean brake shoes. Wear a filter mask approved for use against brake dust. Failure to comply may result in injury to personnel.

BRAKES REPLACEMENT/ADJUSTMENT - Continued 0069 00

REMOVAL - Continued

1. Remove cotter pins (1 and 2) and pins (3 and 4) from slack adjuster (5). Discard cotter pins.

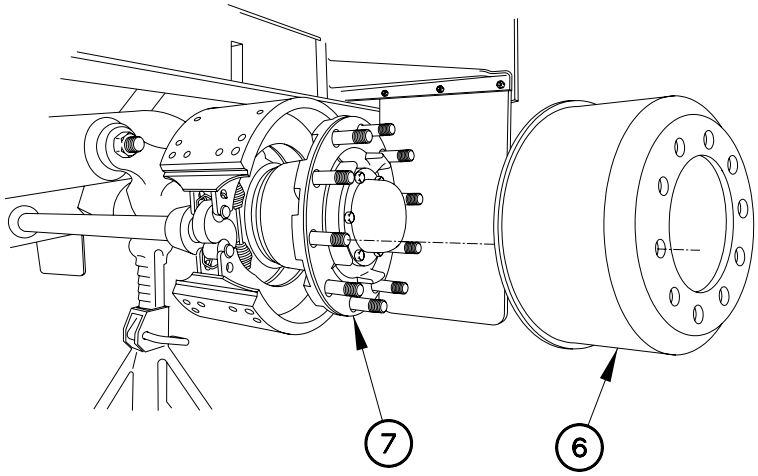


REMOVAL - Continued

WARNING

Wheel drum weighs approximately 90 lbs (41 kgs). Use the aid of an assistant to help remove wheel drum. Failure to comply may result in injury to personnel.

2. Remove wheel drum (6) from wheel hub (7).



CD069R02

REMOVAL - Continued

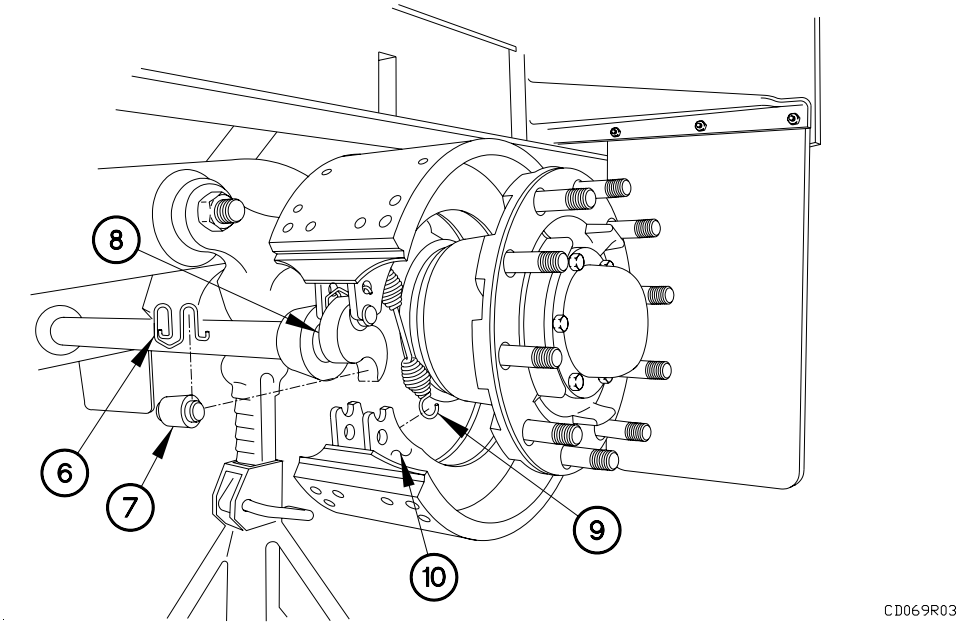
NOTE

Two rollers by the brake arm cam have retaining rings. Two rollers on opposite side of brake shoes aren't equipped with retaining rings. Note orientation of retaining rings prior to removal.

Note position of two retaining rings prior to removal.

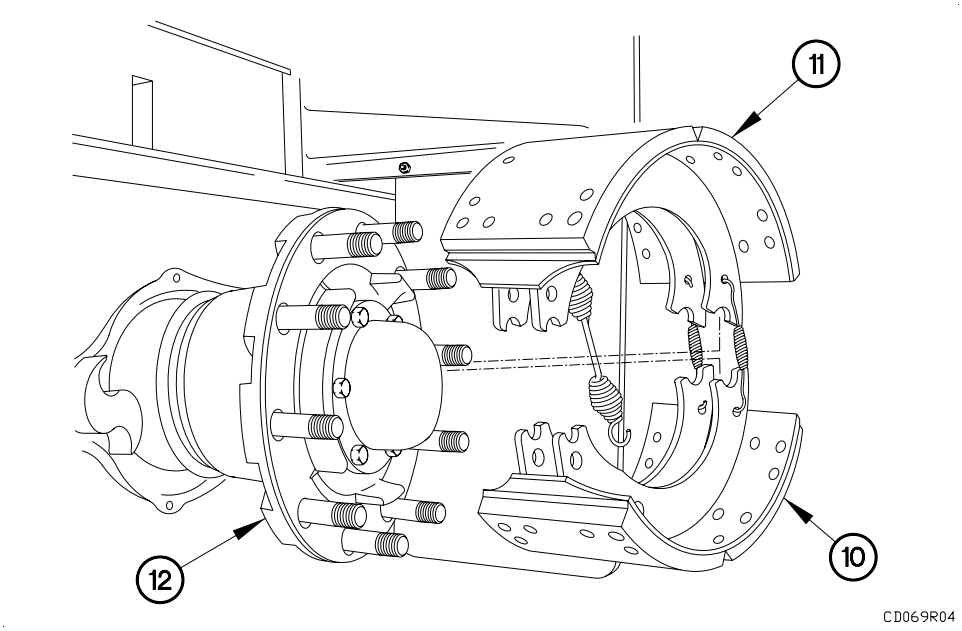
3. Unhook and remove two retaining rings (6) and rollers (7) from brake arm cam (8).

4. Remove spring (9) from lower brake shoe (10).



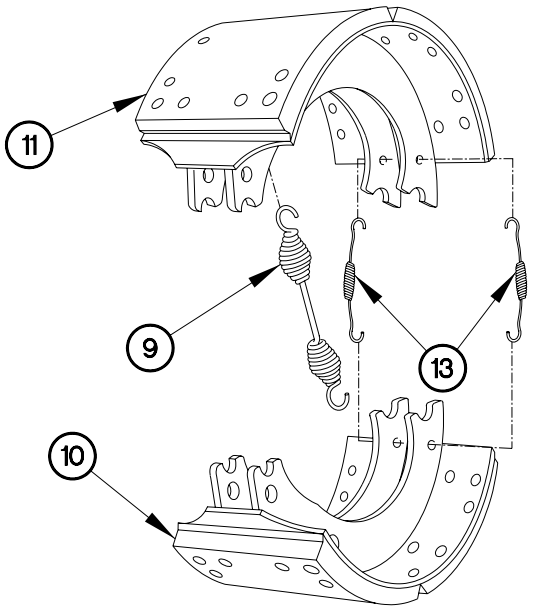
REMOVAL - Continued

5. Remove brake shoes (10 and 11) from wheel end (12).



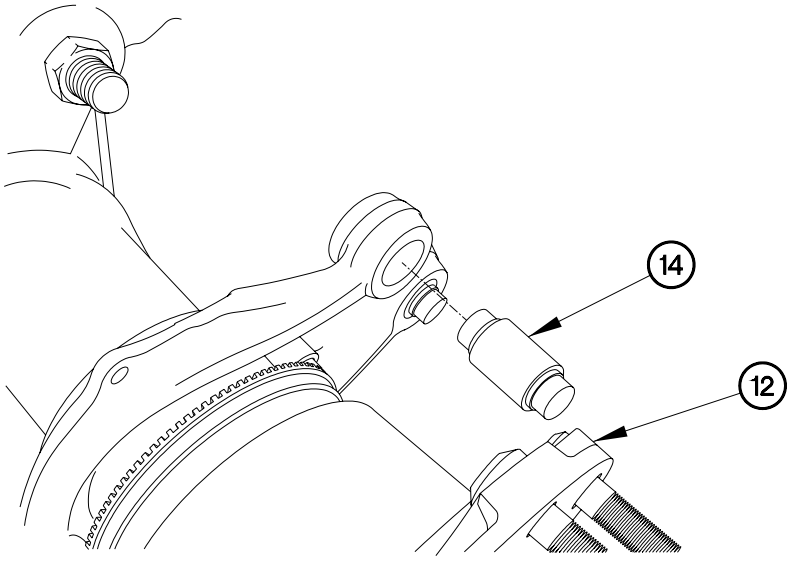
REMOVAL - Continued

6. Remove spring (9) and two springs (13) from brake shoes (10 and 11).



CD069R05

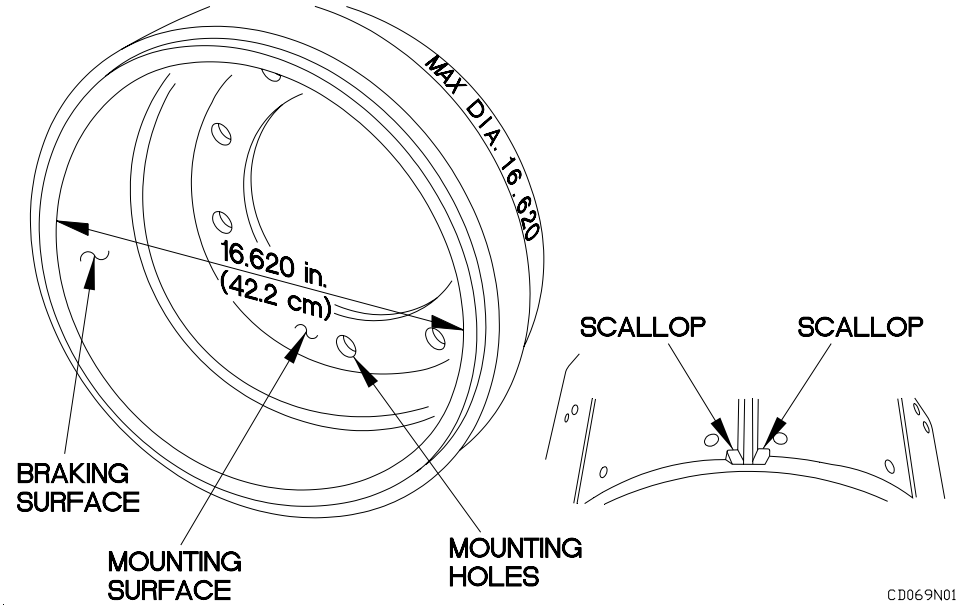
7. Remove two rollers (14) from wheel end (12).



CD069R06

CLEANING/INSPECTION

1. Clean wheel drums of all mud, sand, and debris.
2. Inspect wheel drums for the following:
   a. Braking surface of wheel drums must be free of scoring and cracks.
   b. Maximum inside diameter, which is stamped on wheel drum, does not exceed 16.620 in. (42.2 cm).
   c. Wheel drum mounting holes must not be egg-shaped or have cracks around edges.
   d. Wheel drum mounting surface must be flat.
3. Inspect brake shoes for presence of scallops at brake shoe lining four inner corners.



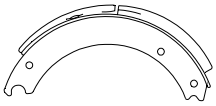
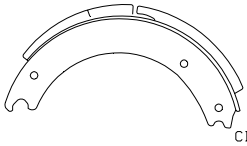
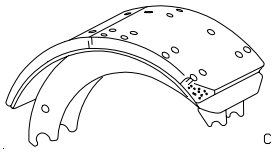
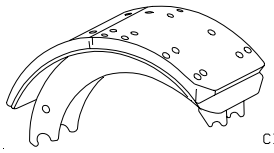
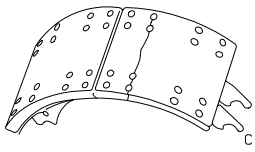
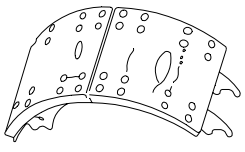
INSPECTION - Continued

NOTE

Over time, a ridge will form on the outer edge of the brake shoes. This is normal and does not affect brake shoe serviceability.

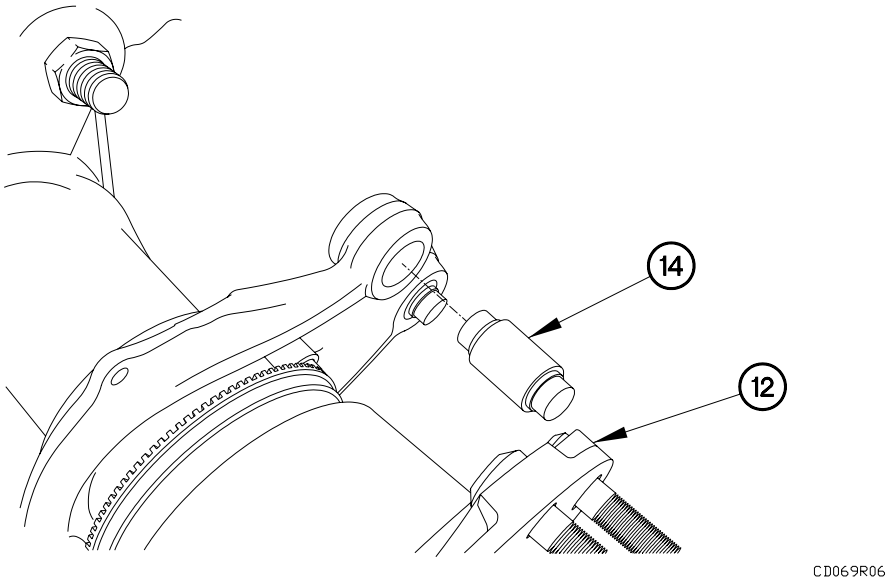
4. Inspect brake shoes for OUT-OF-SERVICE and IN-SERVICE criteria as shown in Table 1, Brake Shoe Service Criteria.

Table 1. Brake Shoe Service Criteria

OUT-OF-SERVICE	IN-SERVICE
 CD069N02	 CD069N05
Cracks or voids that exceed 1/16 in. (0.16 cm) in width. Cracks that exceed 1-1/2 in. (3.75 cm) in length.	Vertical or horizontal cracks in lining edge not exceeding 1/16 in. (0.16 cm) in width or not exceeding 1-1/2 in. (3.75 cm) in length.
 CD069N03	 CD069N06
Portion of lining missing that exposes a fastening device, or worn to the point that a fastening device is exposed.	Corner segment missing with no fastening device (rivet or bolt) exposed.
 CD069N04	 CD069N07
Cracks across the lining face that extend through the lining edges.	Surface cracks in lining face that can extend from hole to hole. Pitting and material erosion on the lining face.

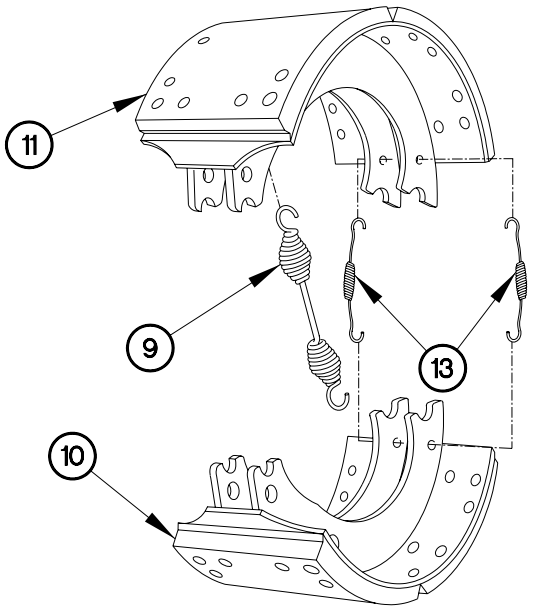
INSTALLATION

1. Position two rollers (14) in wheel end (12).



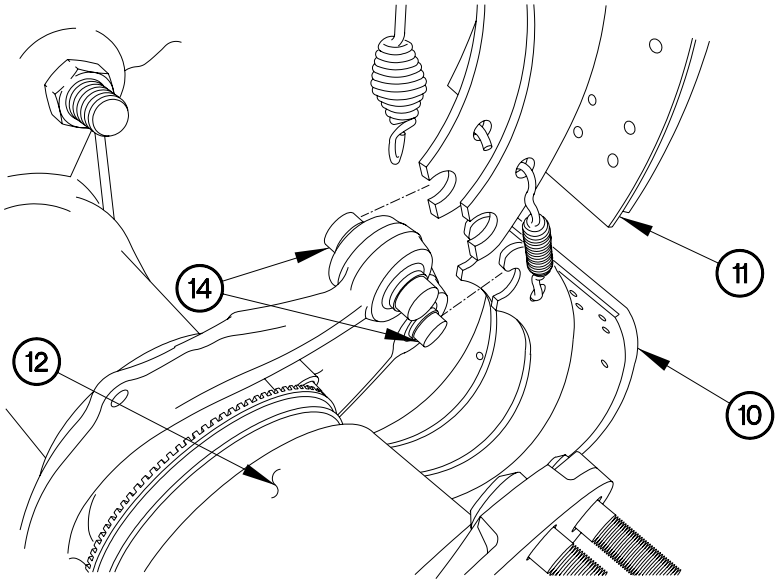
INSTALLATION - Continued

2. Install spring (9) and two springs (13) on brake shoes (10 and 11).



CD069R05

3. Install brake shoes (10 and 11) on two rollers (14) on wheel end (12).



CD069I01

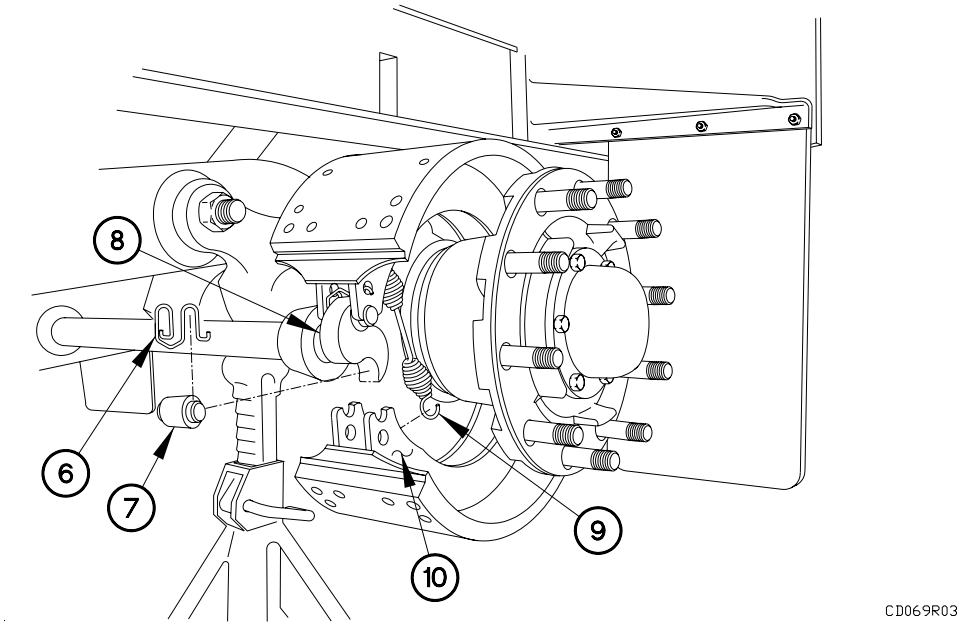
INSTALLATION - Continued

4. Install spring (9) on lower brake shoe (10).

NOTE

Position retaining rings as noted during removal.

5. Install two retaining rings (6) and rollers (7) in brake arm cam (8).



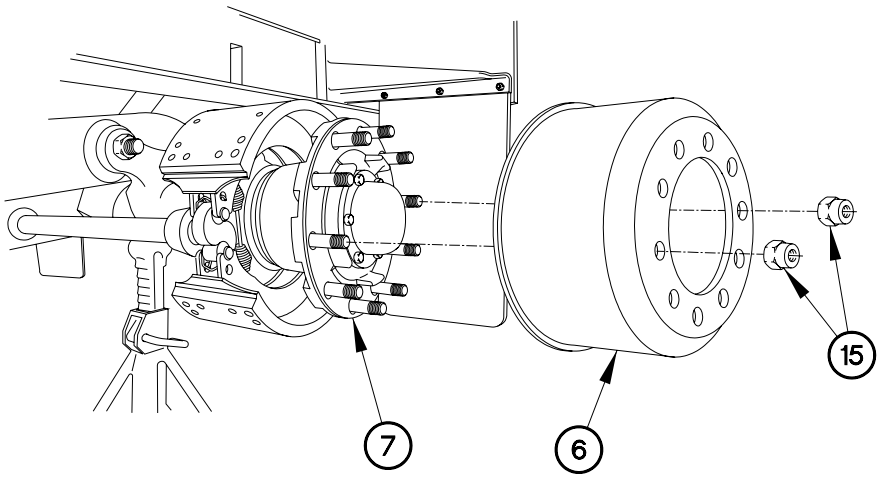
INSTALLATION - Continued

WARNING

Wheel drum weighs approximately 90 lbs (41 kgs). Use the aid of an assistant to help install wheel drum. Failure to comply may result in injury to personnel.

6. Install wheel drum (6) on wheel hub (7).

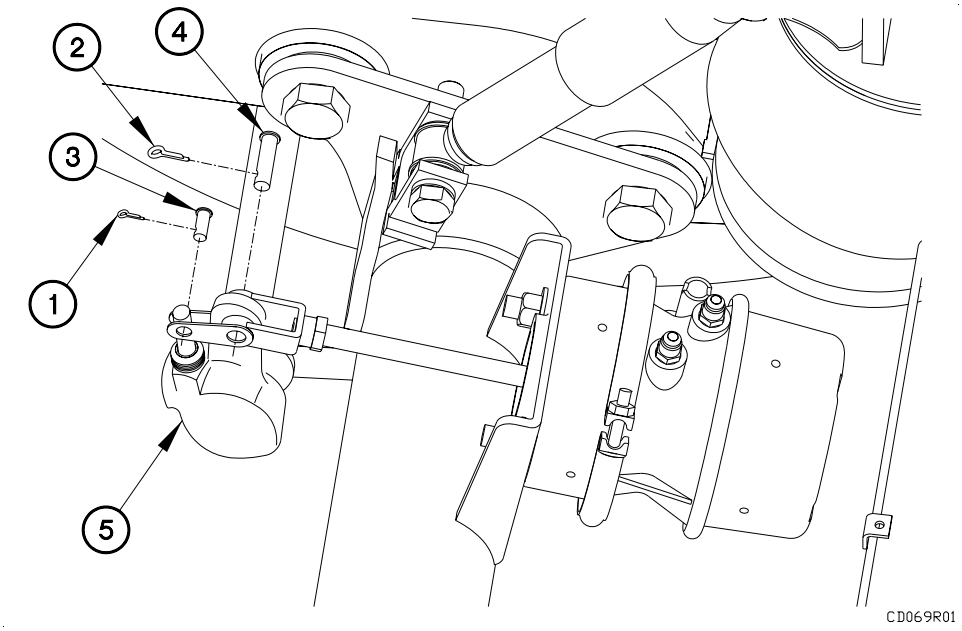
7. Install two lug nuts (15) on wheel hub (7).



CD069I02

INSTALLATION - Continued

8. Install pins (3 and 4) in slack adjuster (5) with cotter pins (1 and 2).



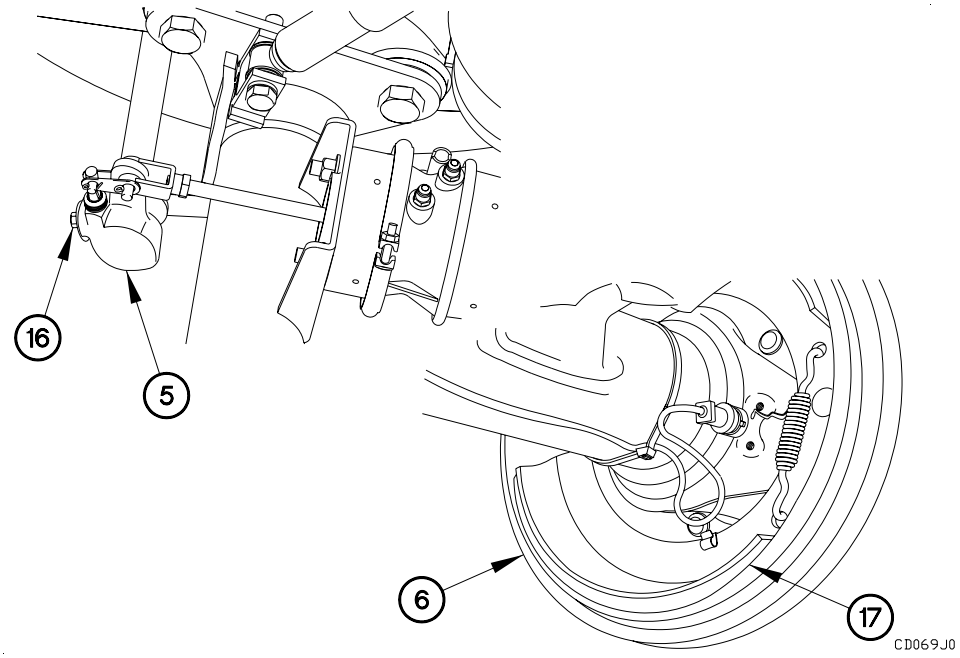
ADJUSTMENT

1. Uncage brakes (WP 0055 00).

NOTE

Perform the following step if brand new brake shoes were installed.

2. Turn adjustment nut (16) on slack adjuster (5) until brake lining (17) comes into contact with wheel drum (6).



ADJUSTMENT - Continued

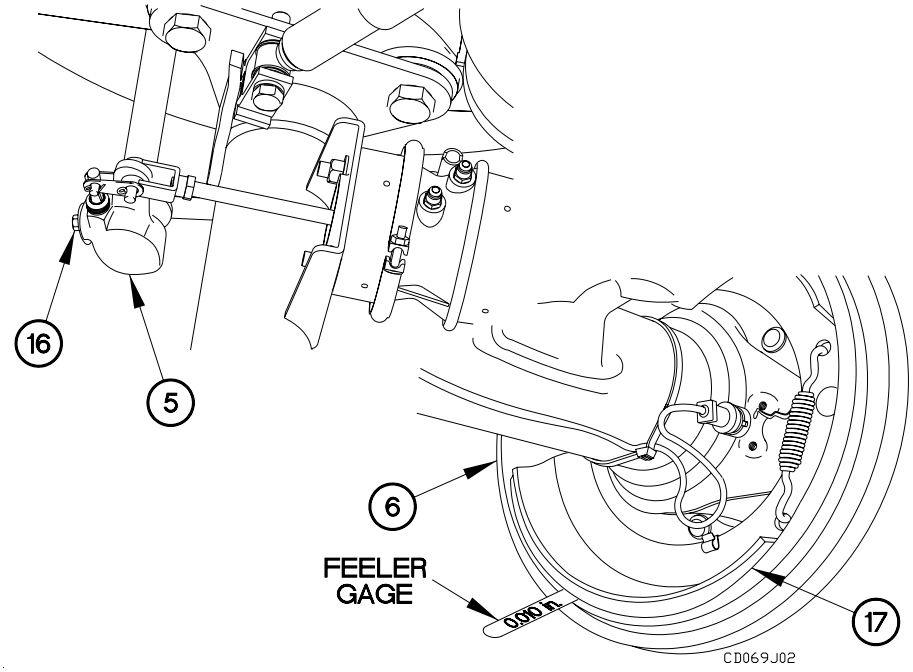
NOTE

Perform the following step if used brake shoes were re-installed.

3. Turn adjustment nut (16) on slack adjuster (5) until brake lining (17) comes into contact with wheel drum (6).

4. Back off adjustment nut (16) until 0.010 in. clearance is between brake lining (17) and wheel drum (6).

5. Charge air system (WP 0043 23, TM 9-2320-392-10-1)



ADJUSTMENT – Continued

NOTE

The following step requires the aid of an assistant.

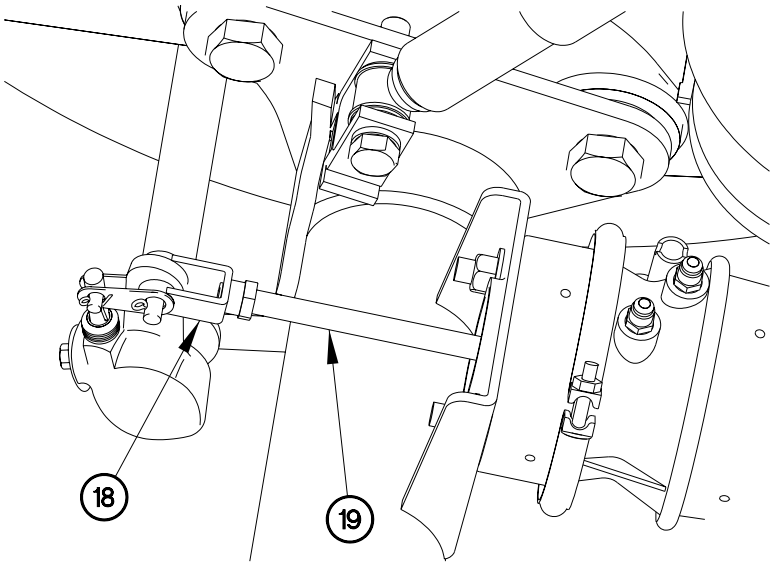
6. Apply brakes on towing vehicle (WP 0020 00, TM 9-2320-392-10-1).

NOTE

Travel for new brakes should not exceed 2 in. (51 mm). Travel for used brakes should be under 1 ¾" in. (44 mm).

Keep brakes applied for the following two steps.

7. Check travel of push rod (18) on air brake chamber (19).



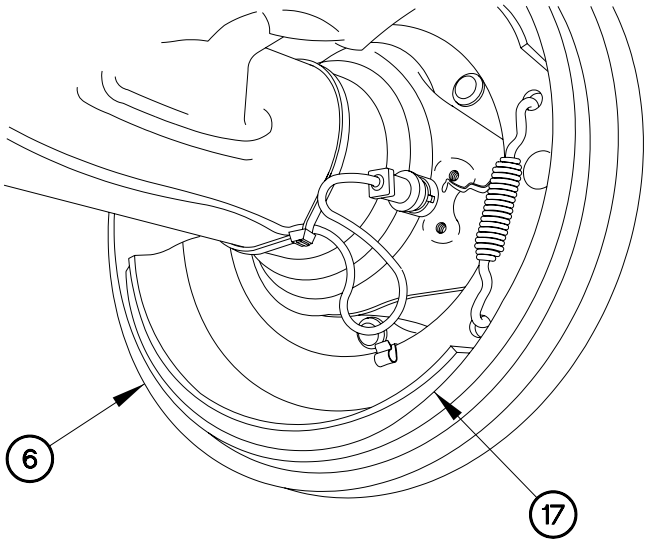
CD069J03

ADJUSTMENT – Continued

NOTE

If the following step is in doubt, use a 0.010 in. feeler gage. It should not fit between the lining and wheel drum.

8. Verify brake lining (17) is contacting wheel drum (6).
9. If brake lining (17) doesn't contact wheel drum (6), re-adjust slack adjuster per steps (1) through (4).
10. Release air pressure from brakes (WP 0020 00, TM 9-2320-392-10-1).
11. Verify all brakes release properly.



CD069J04

OPERATIONAL CHECK

1. Install tire (WP 0053 00, Tire Installation).

3. Couple trailer (WP 0043 23, TM 9-2320-392-10-1).

4. Operate trailer and check for normal brake operation (WP 0011 00, TM 9-2320-392-10-1).

5. Uncouple trailer (WP 0043 24, TM 9-2320-392-10-1).

END OF WORK PACKAGE

ANTI-LOCK BRAKING SYSTEM (ABS) WHEEL SPEED SENSOR REPLACEMENT 0070 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Ties, Cable, Plastic (Item 20, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) wheel speed sensors.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

One ABS wheel speed sensor is located behind each wheel. All ABS wheel speed sensors are removed the same way. Front RH ABS wheel speed sensor shown.

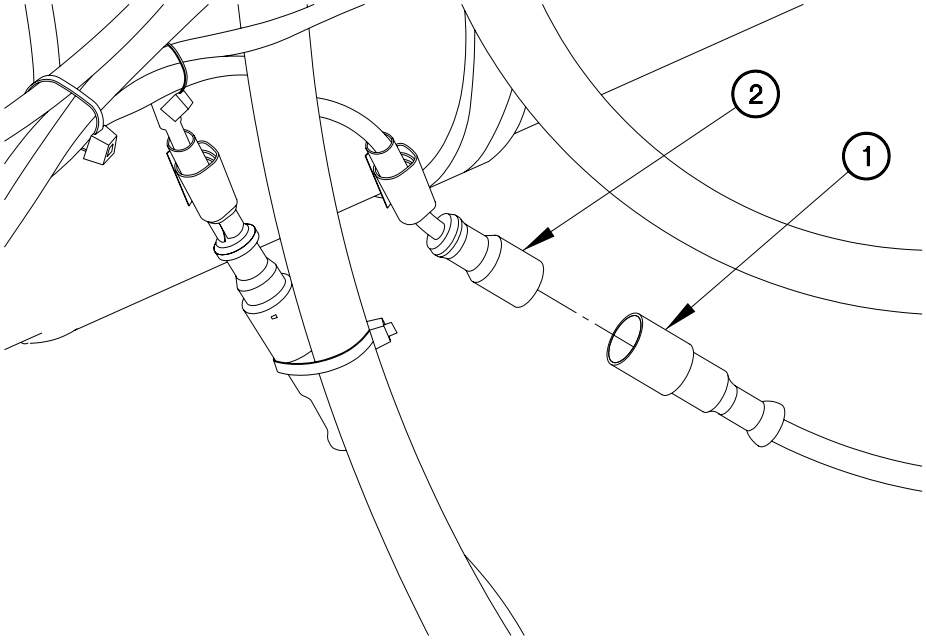
Remove plastic cable ties as required.

Tag connectors and connection points prior to disconnecting.

ANTI-LOCK BRAKING SYSTEM (ABS) WHEEL SPEED SENSOR REPLACEMENT - Continued 0070 00

REMOVAL

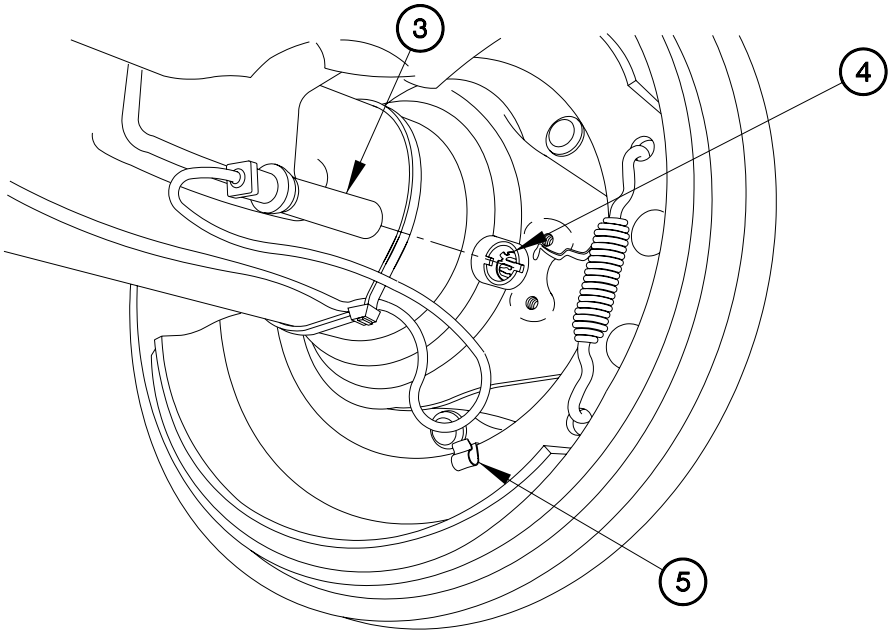
1. Disconnect ABS wheel speed sensor connector (1) from control sensor extension cable connector (2).



CD070R01

2. Remove ABS wheel speed sensor (3) from wheel hub (4).

3. Remove ABS wheel speed sensor (3) from clamp (5).



CD070R02

ANTI-LOCK BRAKING SYSTEM (ABS) WHEEL SPEED SENSOR REPLACEMENT - Continued 0070 00

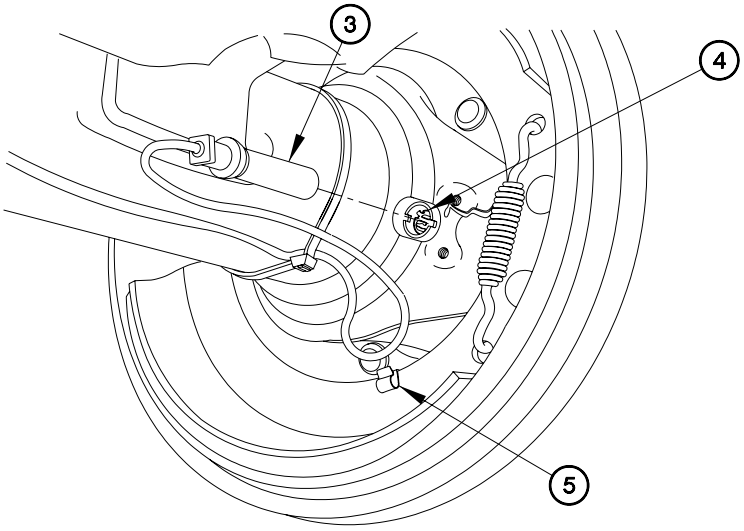
INSTALLATION

NOTE

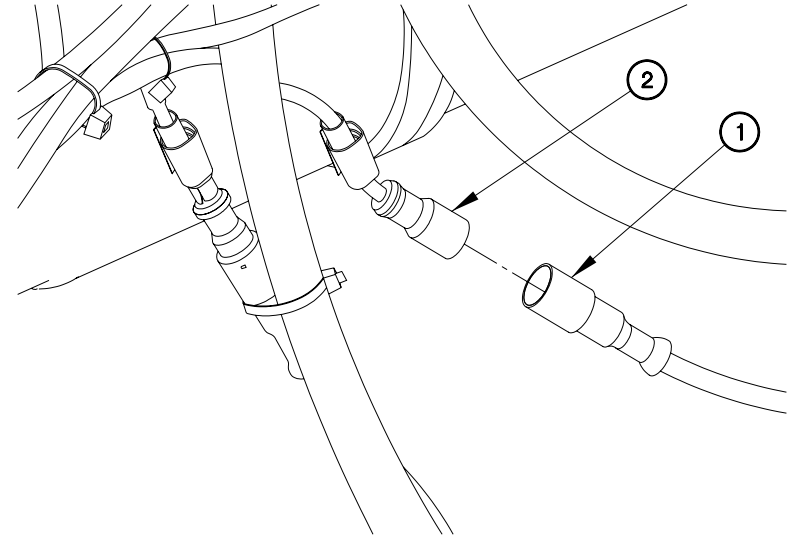
One ABS wheel speed sensor is located behind each wheel. All ABS wheel speed sensors are installed the same way. Right side shown.

Install plastic cable ties as required.

1. Install ABS wheel speed sensor (3) on clamp (5).
2. Install ABS wheel speed sensor (3) on wheel hub (4).



3. Connect ABS wheel speed sensor connector (1) to control sensor extension cable connector (2).



ANTI-LOCK BRAKING SYSTEM (ABS) WHEEL SPEED SENSOR REPLACEMENT - Continued 0070 00

OPERATIONAL CHECKS

1. Install brake shoes (WP 0069 00, Brake Shoe Installation).
2. Install tire (WP 0053 00, Tire Installation).
3. Check the output voltage of the sensor while rotating the wheel at approximately one-half revolution per second. If minimum output is less than 0.5 volt AC, push the ABS wheel speed sensor toward the tooth wheel. Recheck sensor output.
4. Uncage spring brakes (WP 0055 00, Uncaging Spring Brakes).
5. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
6. Operate trailer and check for normal brake operation.
7. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT 0071 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Vise, Machinist's (Item 25, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Sealing Compound (Item 13, WP 0165 00)
Nut, Self-Locking (2) (Item 29, WP 0168 00)
Ties, Cable, Plastic (Item 20, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) ECU valve.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrocution. Failure to comply may result in injury to personnel.

ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued

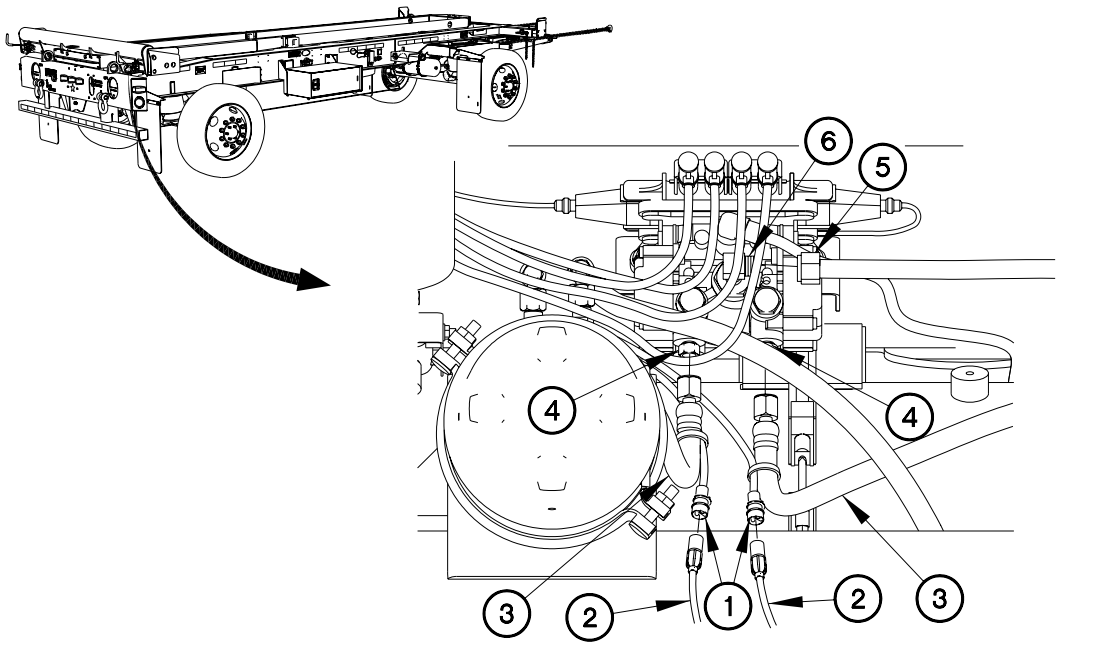
0071 00

REMOVAL

NOTE

Tag air hoses, electrical cables, and connection points prior to disconnecting.

1. Drain air tanks.
2. Disconnect two electrical connectors (1) from electrical connectors (2).
3. Disconnect two hoses (3) from fittings (4).
4. Disconnect hose (5) from 90-degree fitting (6).

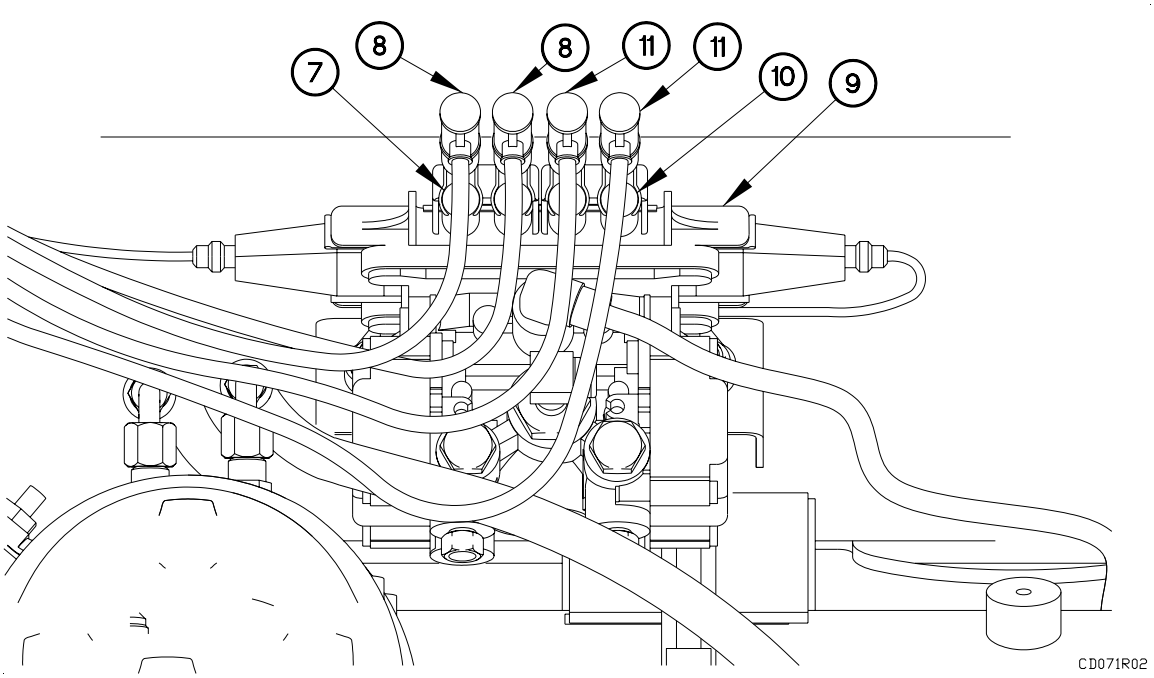


CD071R01

ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

REMOVAL - Continued

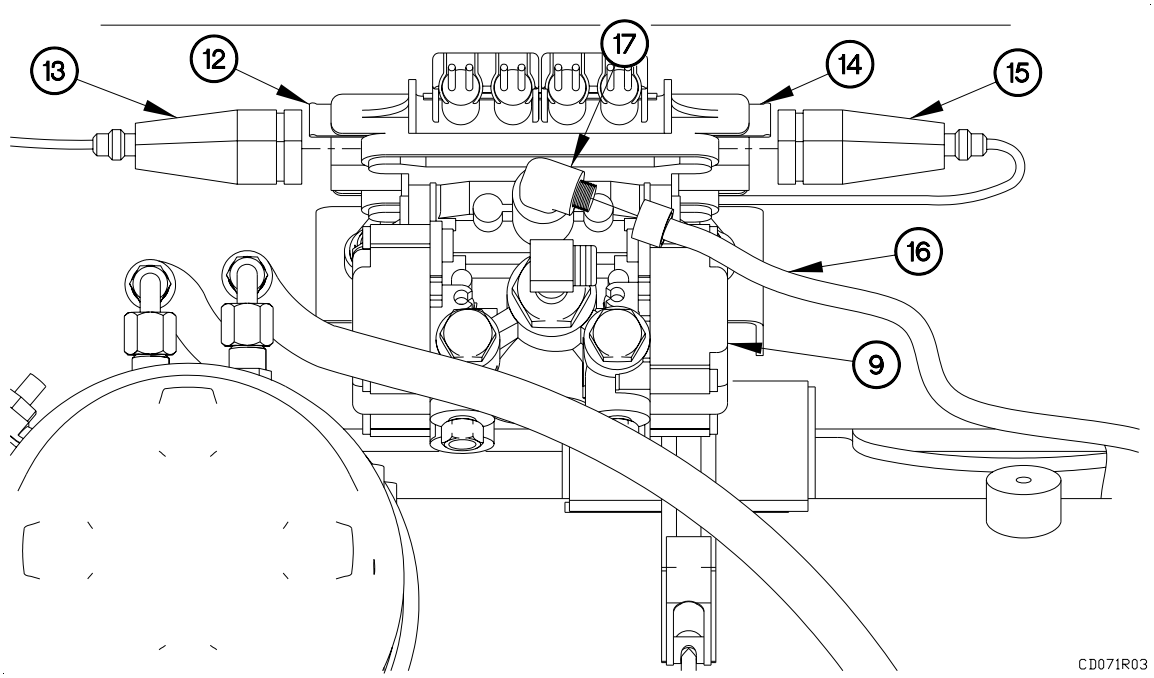
5. Disconnect clip (7) from two electrical connectors (8).
6. Disconnect two electrical connectors (8) from Anti-Lock Braking System (ABS) ECU valve (9).
7. Disconnect clip (10) from two electrical connectors (11).
8. Disconnect two electrical connectors (11) from ABS ECU valve (9).



ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

REMOVAL - Continued

9. Disconnect clip (12) from electrical connector (13).
10. Disconnect electrical connector (13) from ABS ECU valve (9).
11. Disconnect clip (14) from electrical connector (15).
12. Disconnect electrical connector (15) from ABS ECU valve (9).
13. Disconnect hose (16) from 90-degree fitting (17).

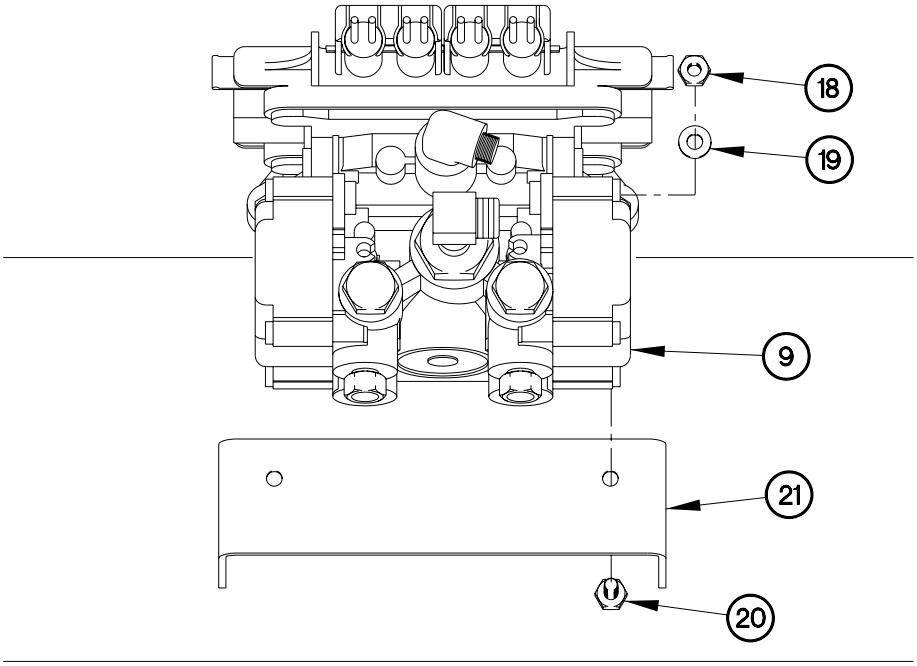


ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued

0071 00

REMOVAL - Continued

14. Remove two self-locking nuts (18), washers (19), bolts (20), and ABS ECU valve (9) from bracket (21). Discard self-locking nuts.



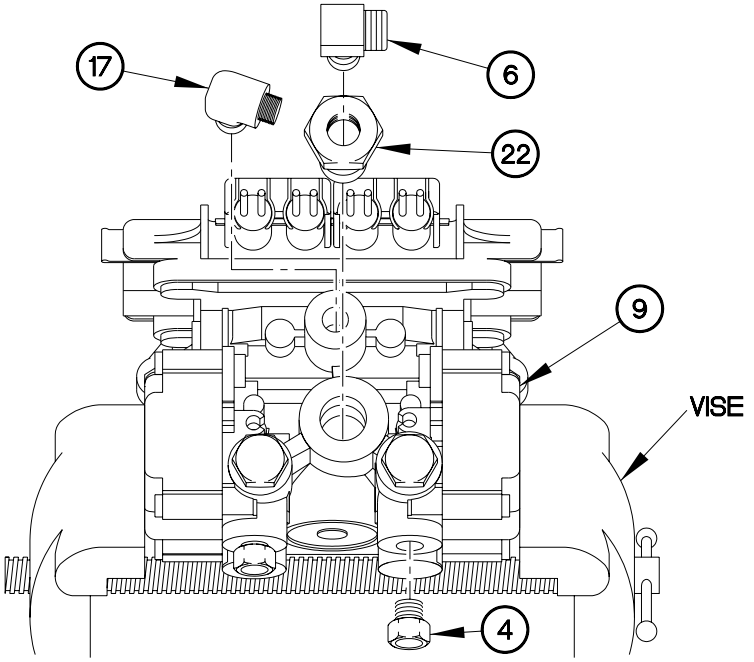
CD071R04

ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued

0071 00

REMOVAL - Continued

15. Position ABS ECU valve (9) in vise.
16. Remove two fittings (4) from ABS ECU valve (9).
17. Remove 90-degree fitting (17) from ABS ECU valve (9).
18. Remove 90-degree fitting (6) from bushing (22).
19. Remove bushing (22) from ABS ECU valve (9).



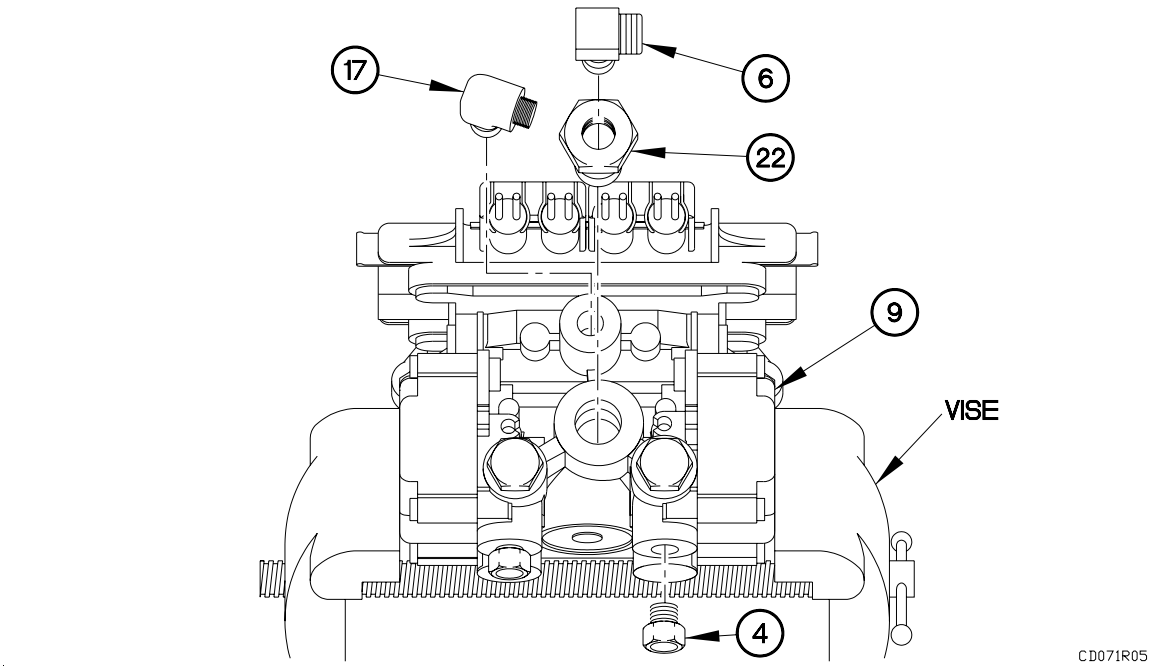
ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

INSTALLATION

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use ion well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

1. Apply sealing compound to threads of bushing (22), 90-degree fittings (6 and 17), and two fittings (4).
2. Position ABS ECU valve (9) in vise.
3. Install bushing (22) on Anti-lock Braking System (ABS) ECU valve (9).
4. Install 90-degree fitting (6) in bushing (22).
5. Install 90-degree fitting (17) in ABS ECU valve (9).
6. Install two fittings (4) in ABS ECU valve (9).

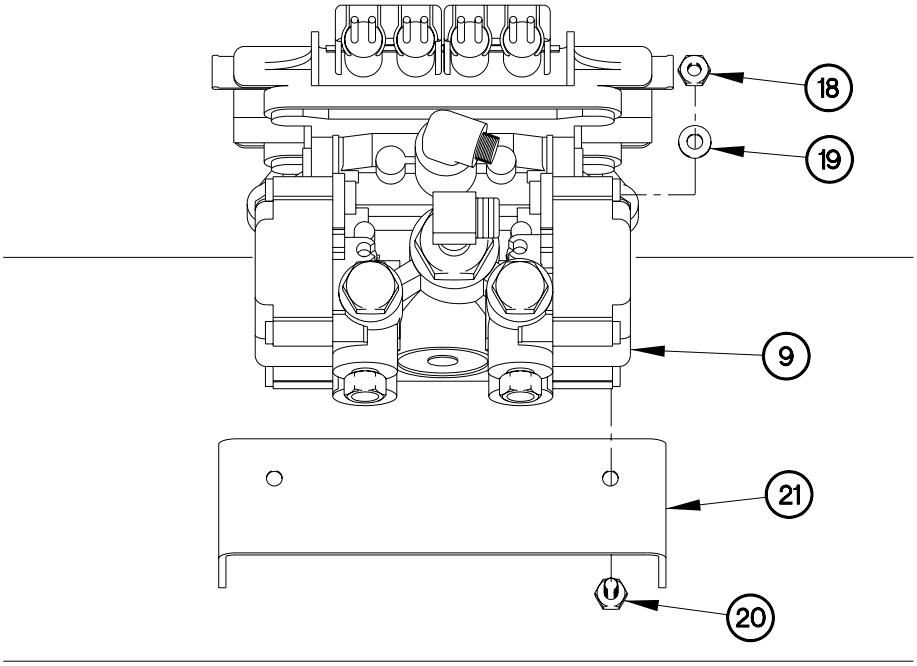


ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

INSTALLATION - Continued

7. Position ABS ECU valve (9) on bracket (21) with two bolts (20), washers (19), and self-locking nuts (18).

8. Tighten self-locking nuts (18) to 33-37 lb-ft (45-50 N•m).

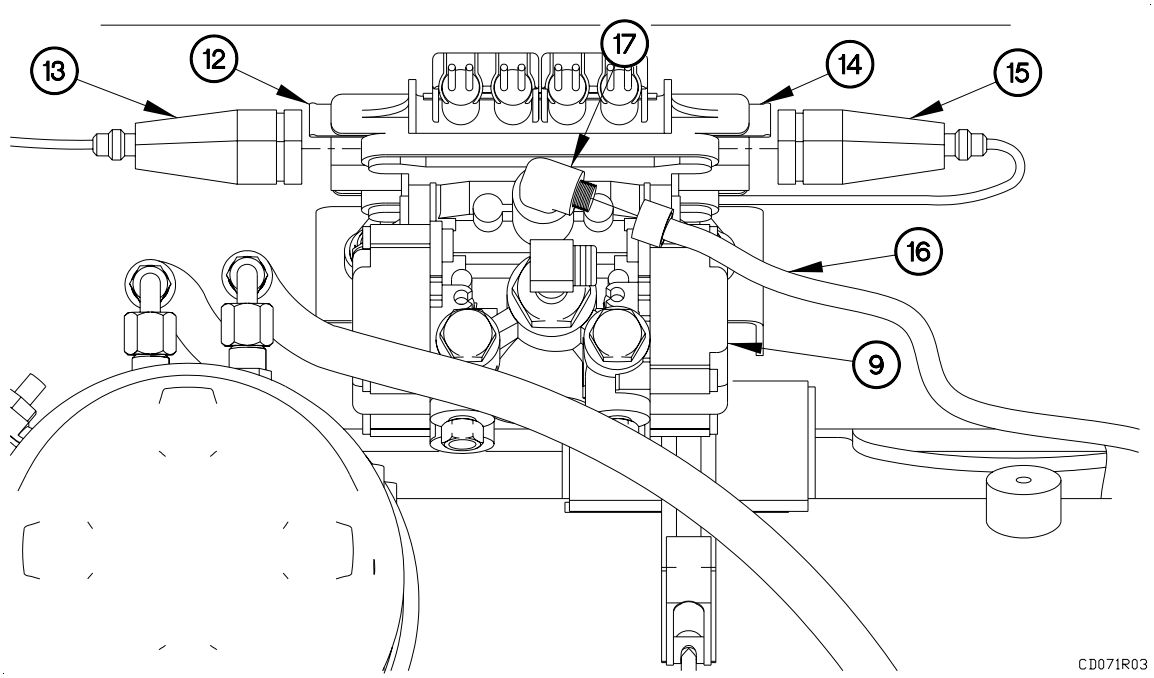


CD071R04

ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

INSTALLATION - Continued

9. Connect hose (16) to 90-degree fitting (17).
10. Connect electrical connector (15) to ABS ECU valve (9).
11. Connect clip (14) on electrical connector (15).
12. Connect electrical connector (13) to ABS ECU valve (9).
13. Connect clip (12) on electrical connector (13).



ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

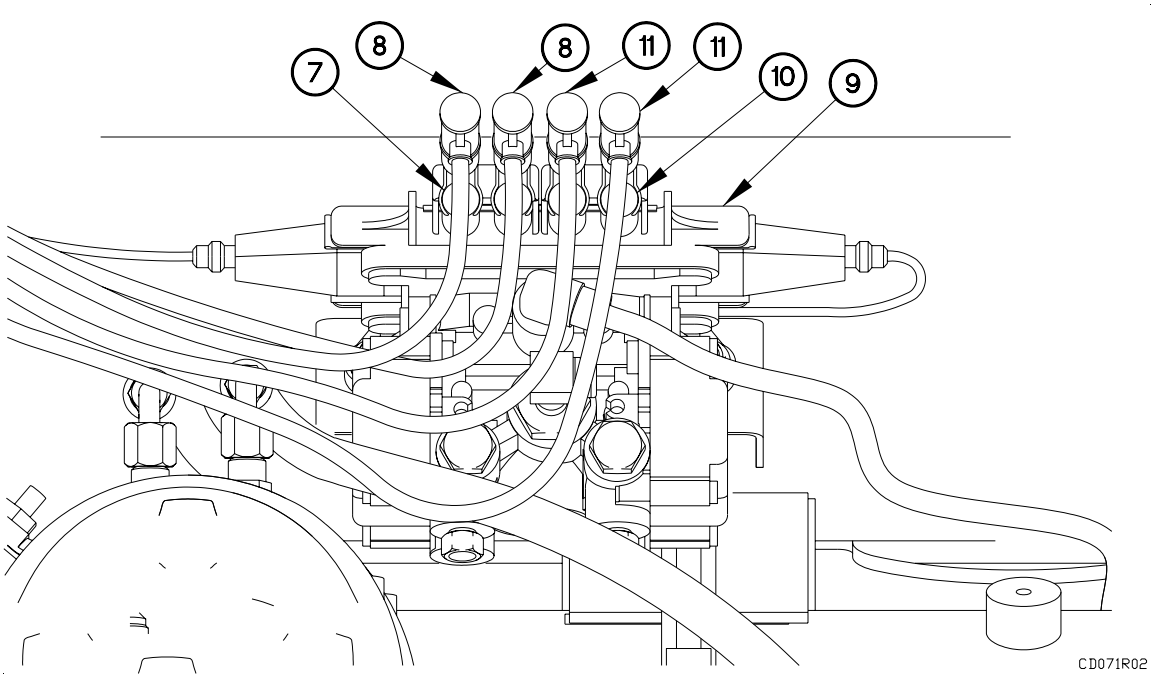
INSTALLATION - Continued

14. Connect two electrical connectors (11) to ABS ECU valve (9).

15. Connect clip (10) on two electrical connectors (11).

16. Connect two electrical connectors (8) to ABS ECU valve (9).

17. Connect clip (7) on two electrical connectors (8).



ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued

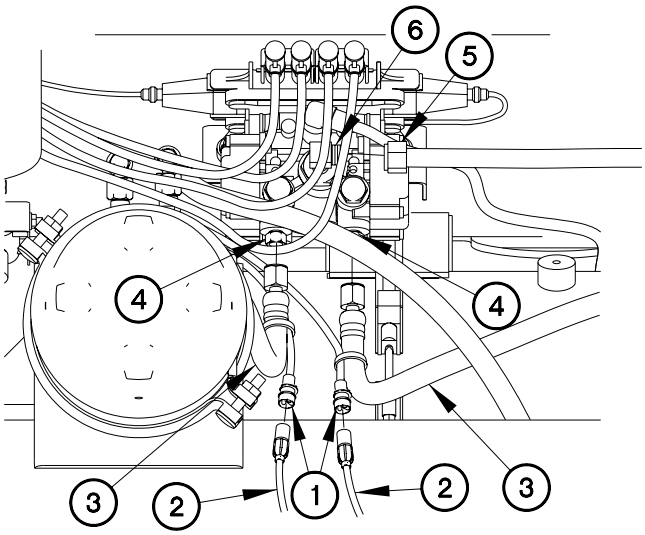
0071 00

INSTALLATION - Continued

18. Connect hose (5) to 90-degree fitting (6).

19. Connect two hoses (3) to fittings (4).

20. Connect two electrical connectors (1) to electrical connectors (2).



CD071i01

ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE REPLACEMENT - Continued 0071 00

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Start towing vehicle engine and allow time for air pressure to reach normal operating air pressure.
3. Check around ABS ECU valve and hoses for air leaks.
4. Road test trailer and check for proper brake operation.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE CABLE REPLACEMENT 0072 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Ties, Cable, Plastic (Item 20, WP 0165 00)
Nut, Self-Locking (10) (Item 27, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) relay valve cable assembly.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrical shock. Failure to comply may result in serious injury or death to personnel.

NOTE

Note routing of cable prior to removal.

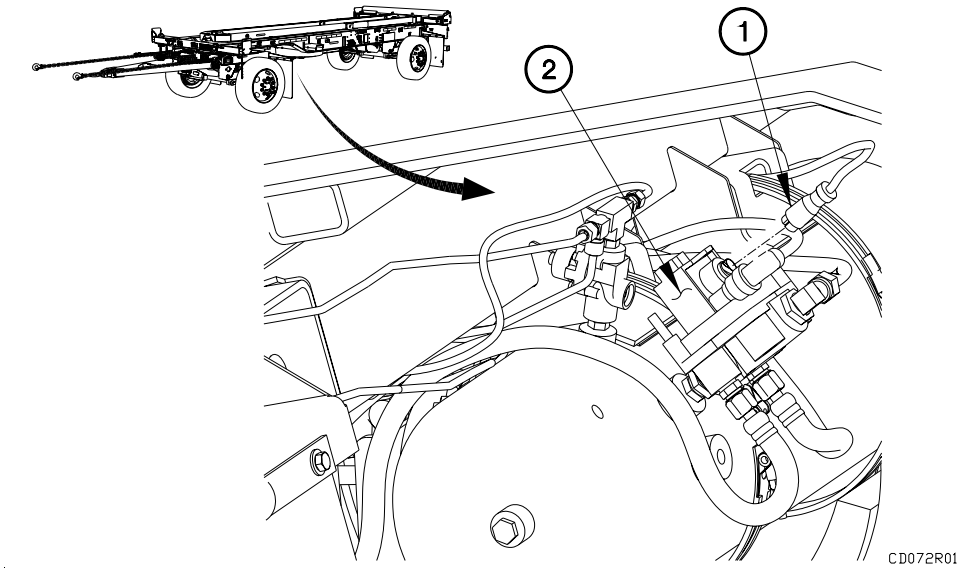
Remove plastic cable ties as required.

ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE CABLE REPLACEMENT - Continued

0072 00

REMOVAL

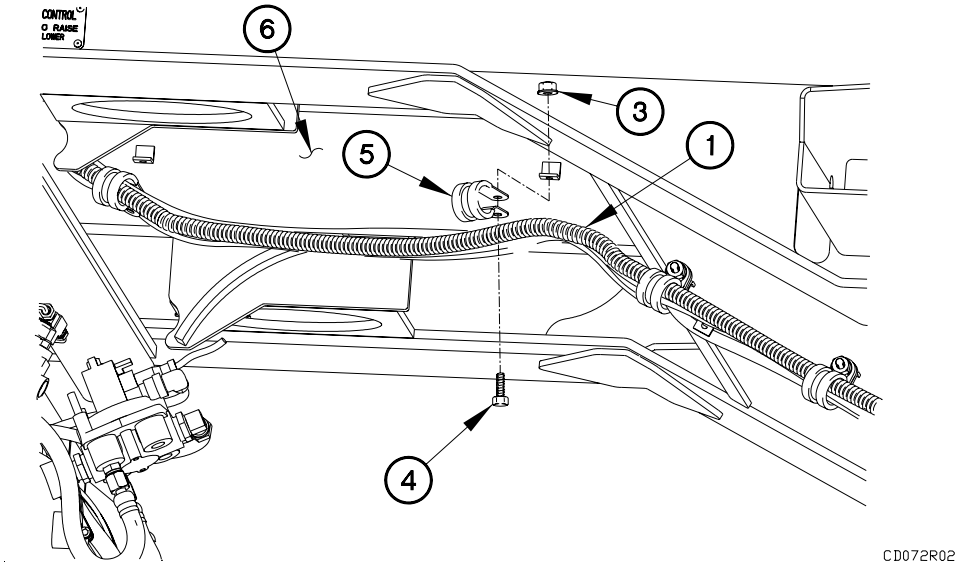
1. Disconnect Anti-Lock Braking System (ABS) relay valve cable (1) from ABS relay valve (2).



NOTE

All ABS relay valve cable clamps are removed the same way. One shown.

2. Remove self-locking nut (3), bolt (4), and clamp (5) from rail assembly (6). Discard self-locking nut.
3. Remove ABS relay valve cable (1) from clamp (5).
4. Perform the previous two steps on remaining clamps.

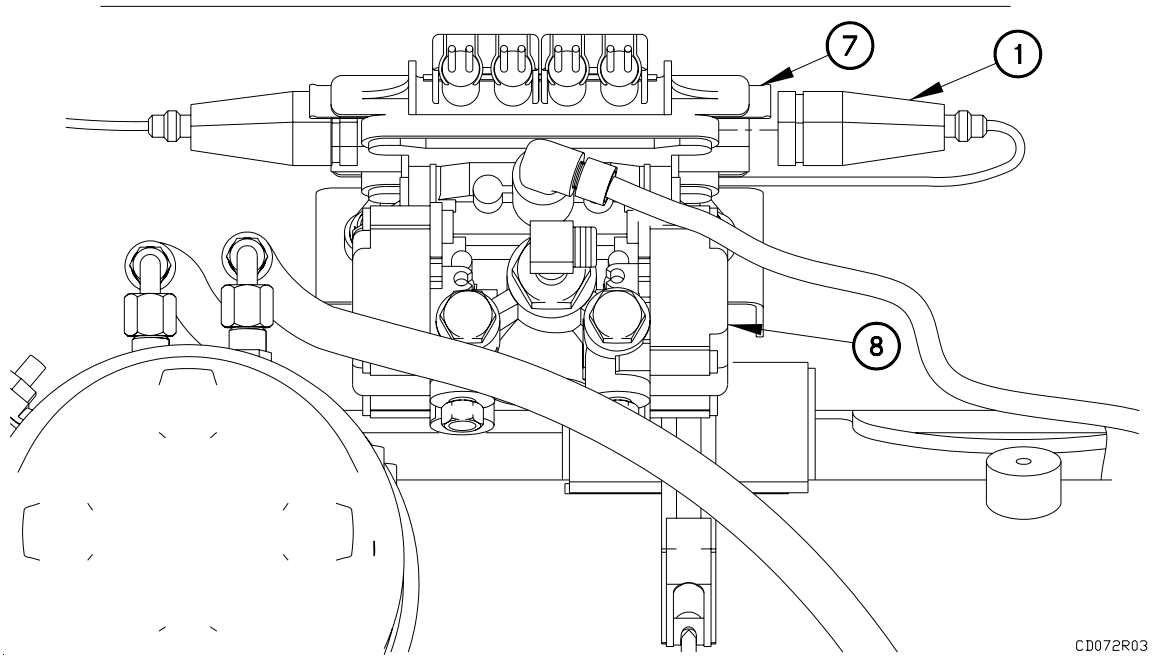


ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE CABLE REPLACEMENT - Continued

0072 00

REMOVAL - Continued

5. Push up on connector retainer clip (7).
6. Disconnect ABS relay valve cable (1) from ABS ECU (8).
7. Remove ABS relay valve cable (1) from trailer.



ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE CABLE REPLACEMENT - Continued

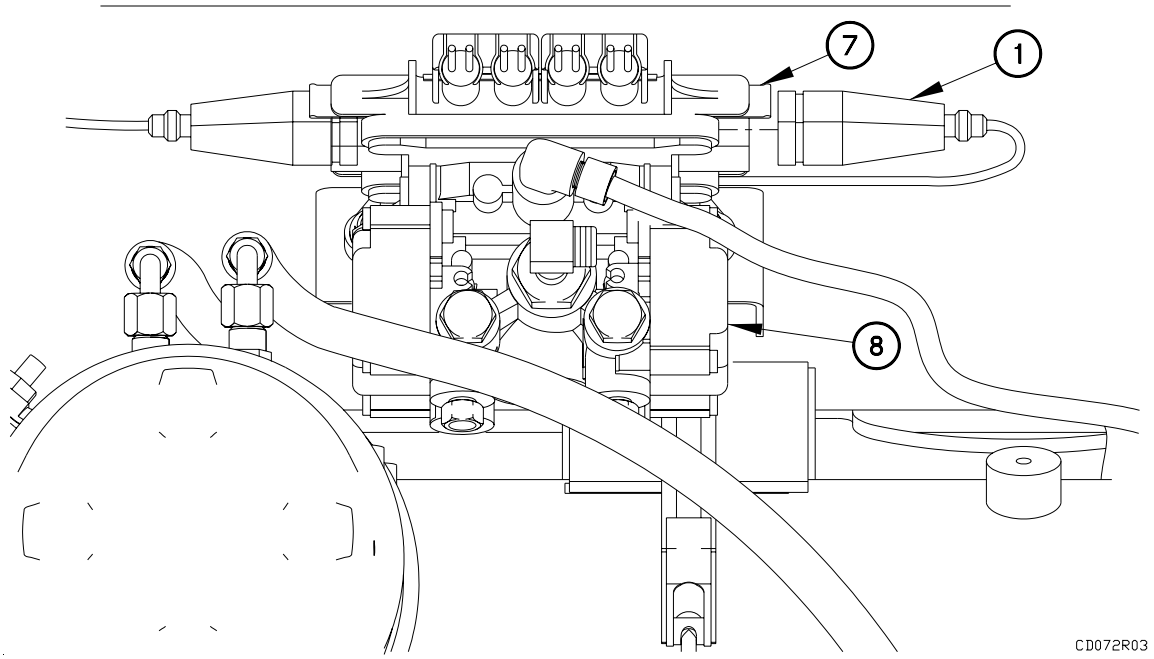
0072 00

INSTALLATION

NOTE

Install plastic cable ties as required.

1. Position ABS relay valve cable (1) on trailer.
2. Connect ABS relay valve cable (1) to ABS ECU valve (8).
3. Push down on connector retainer clip (7) to secure.



ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE CABLE REPLACEMENT - Continued

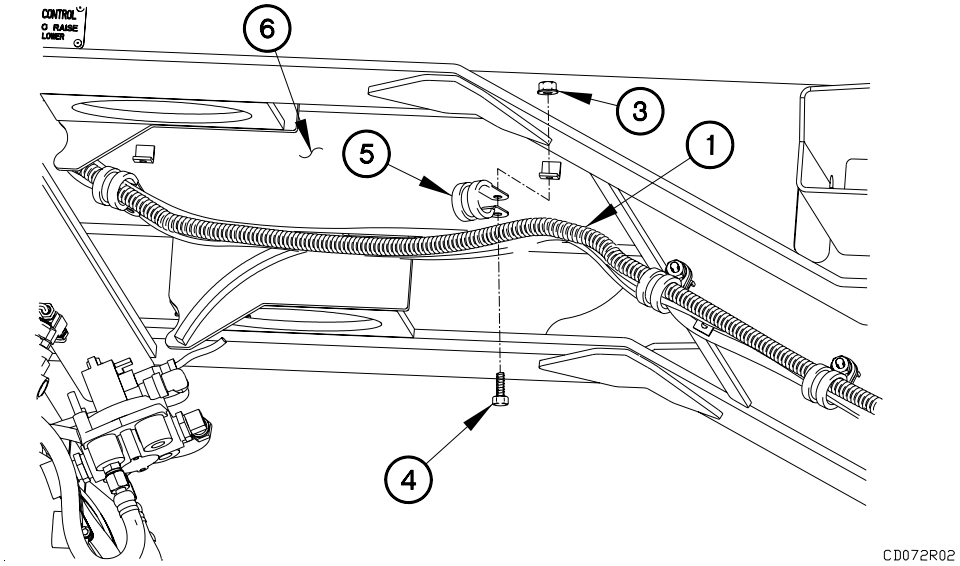
0072 00

INSTALLATION – Continued

NOTE

All ABS relay valve cable clamps are installed the same way. One shown.

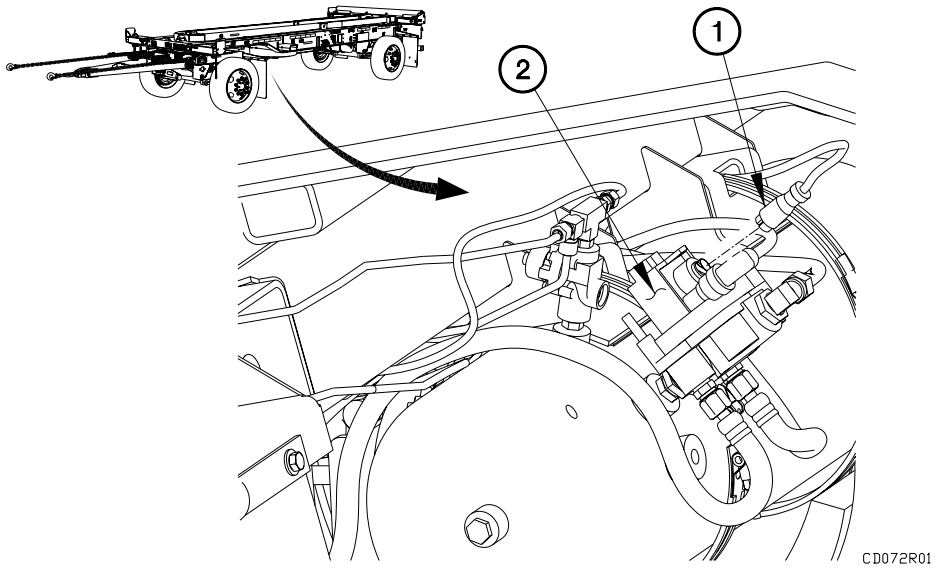
4. Position ABS relay valve cable (1) in clamp (5).
5. Position clamp (5) on rail assembly (6) with bolt (4) and self-locking nut (3).
6. Tighten self-locking nut (3) to 96-120 lb-in. (11-14 N•m).
7. Perform the previous three steps on remaining clamps.



ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE CABLE REPLACEMENT - CONTINUED 0072 00

INSTALLATION - Continued

8. Connect ABS relay valve cable (1) to ABS relay valve (2).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Trailer Coupling).
2. Start towing vehicle engine.
3. Road test trailer and check for proper brake operation.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT 0073 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Nut, Self-Locking (10) (Item 27, WP 0168 00)
Ties, Cable, Plastic (Item 20, WP 0165 00)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) control sensor extension cable.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

All Anti-Lock Braking System (ABS) control sensor extension cables are removed the same way. Right front shown.

ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued

REMOVAL

NOTE

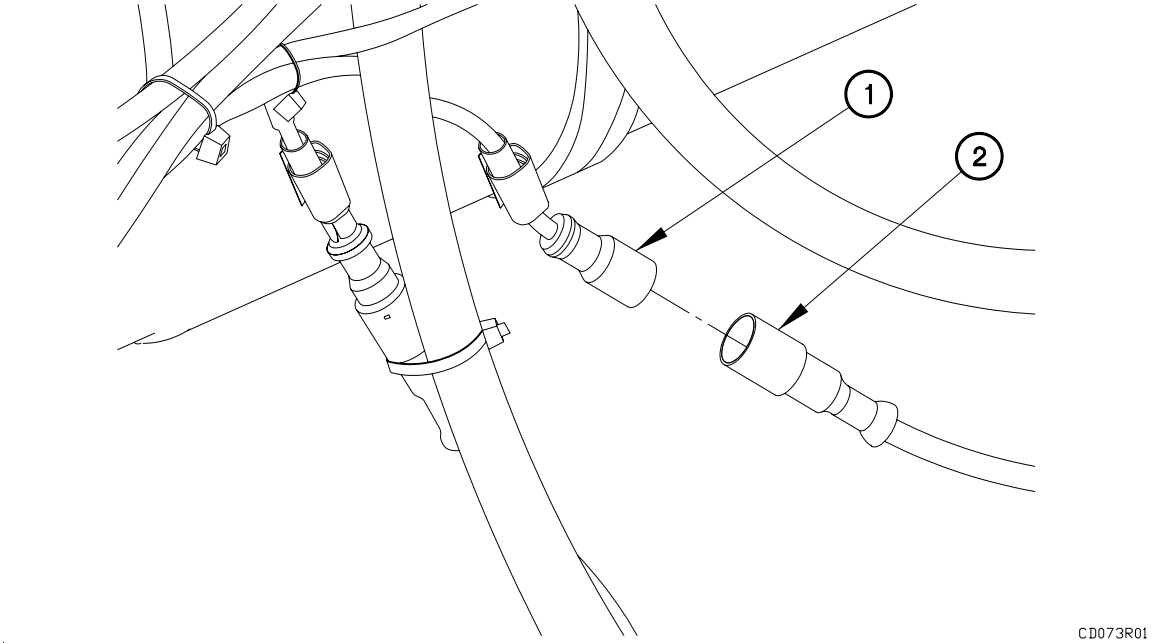
Note routing of ABS control sensor extension cable prior to removal.

Remove plastic cable ties as required.

Control sensor extension cable to control sensor extension cable connectors correspond to the following ABS wheel speed sensor lead connectors:

Left Front:	12423014-005
Right Front:	12423014-006
Left Rear:	12423014-007
Right Rear:	12423014-008

1. Disconnect ABS control sensor extension cable (1) from ABS wheel speed sensor (2).



ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued

0073 00

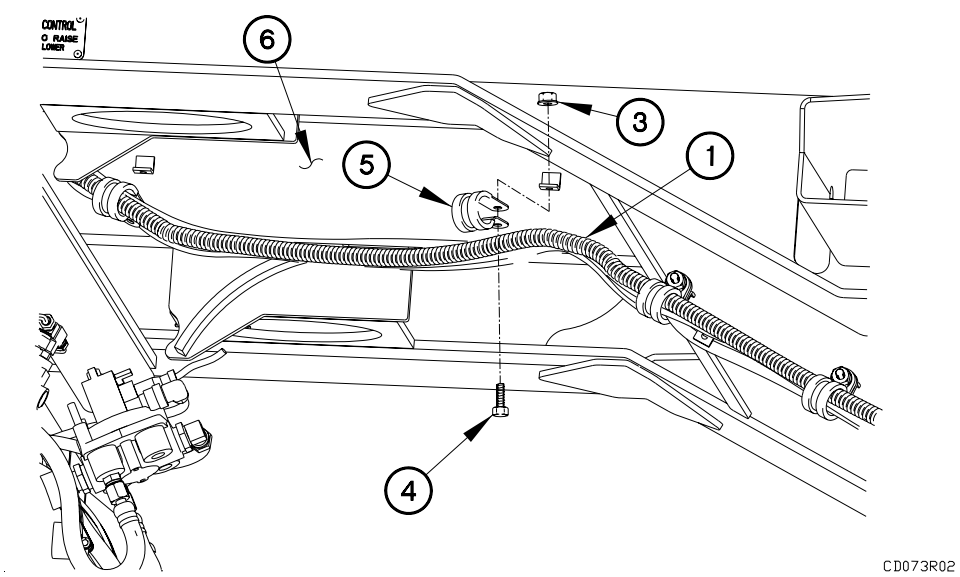
REMOVAL – Continued

NOTE

Perform the following three steps for the front ABS control sensor extension cables only.

All ABS control sensor extension cable clamps are removed the same way. One shown.

2. Remove self-locking nut (3), bolt (4), and clamp (5) from rail assembly (6). Discard self-locking nut.
3. Remove ABS control sensor extension cable (1) from clamp (5).
4. Perform the previous two steps on remaining clamps.



ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued 0073 00

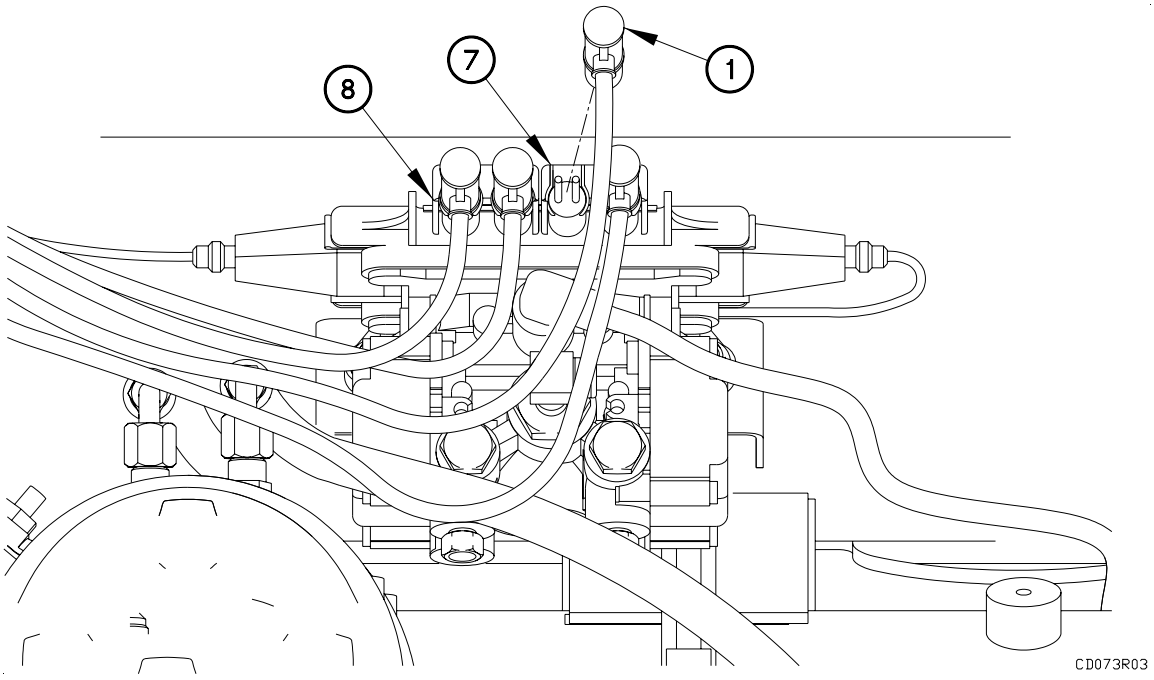
REMOVAL - Continued

NOTE

ABS control sensor extension cable connectors correspond to the following ports in the ABS control assembly:

Right side front:	BU1
Right side rear:	BU2
Left side front:	YE2
Left side rear:	YE1

5. Push up on connector retainer clip (7).
6. Disconnect ABS control sensor extension cable (1) from ABS ECU (8).
7. Remove ABS control sensor extension cable (1) from trailer.



ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued

0073 00

INSTALLATION

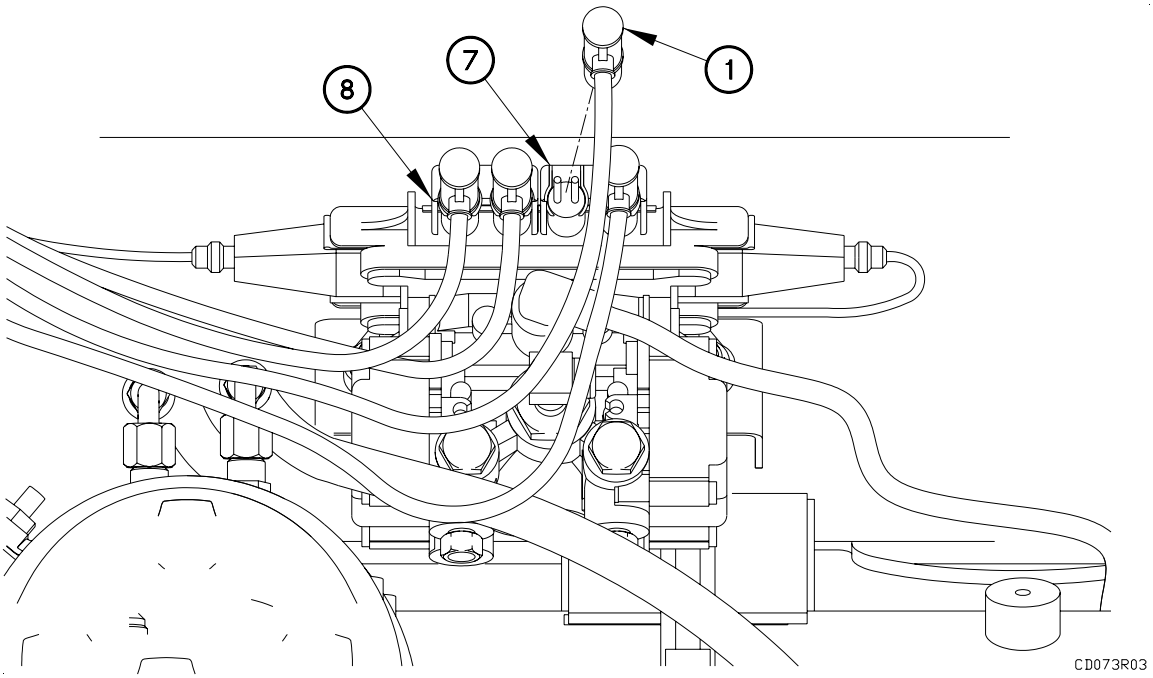
NOTE

Install plastic cable ties as required.

ABS control sensor extension cable connectors correspond to the following ports in the ABS ECU:

Right side front:	BU1
Right side rear:	BU2
Left side front:	YE2
Left side rear:	YE1

1. Position ABS control sensor extension cable (1) on trailer.
2. Connect ABS control sensor extension cable (1) to ABS ECU (8).
3. Push down on connector retainer clip (7) to secure.



ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued

0073 00

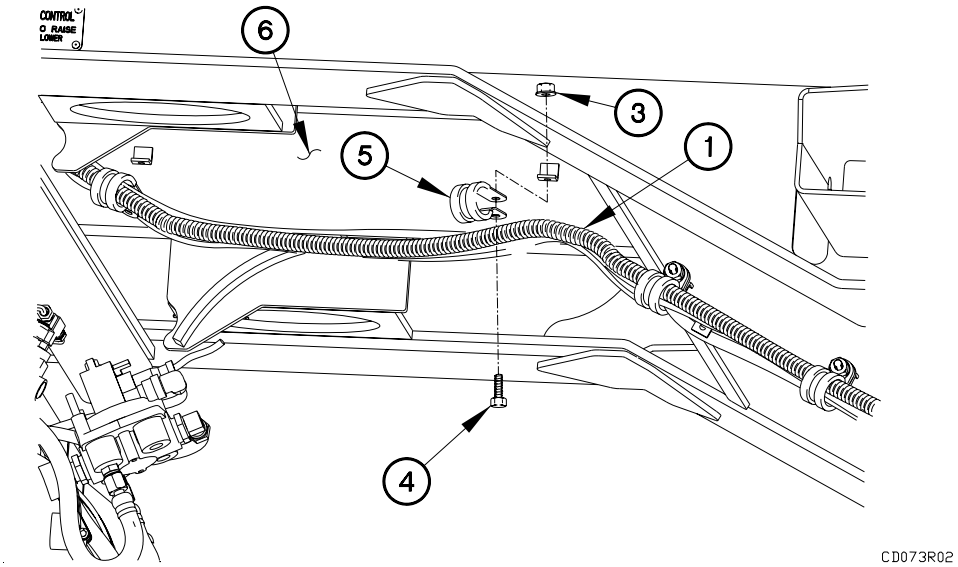
INSTALLATION – Continued

NOTE

Perform the following three steps for the front ABS control sensor extension cables only.

All ABS control sensor extension cable clamps are installed the same way. One shown.

4. Install ABS control sensor extension cable (1) in clamp (5).
5. Position clamp (5) on rail assembly (6) with bolt (4) and self-locking nut (3).
6. Tighten self-locking nut (3) to 96-120 lb-in. (11-14 N•m).
7. Perform the previous two steps on remaining clamps.



ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued

0073 00

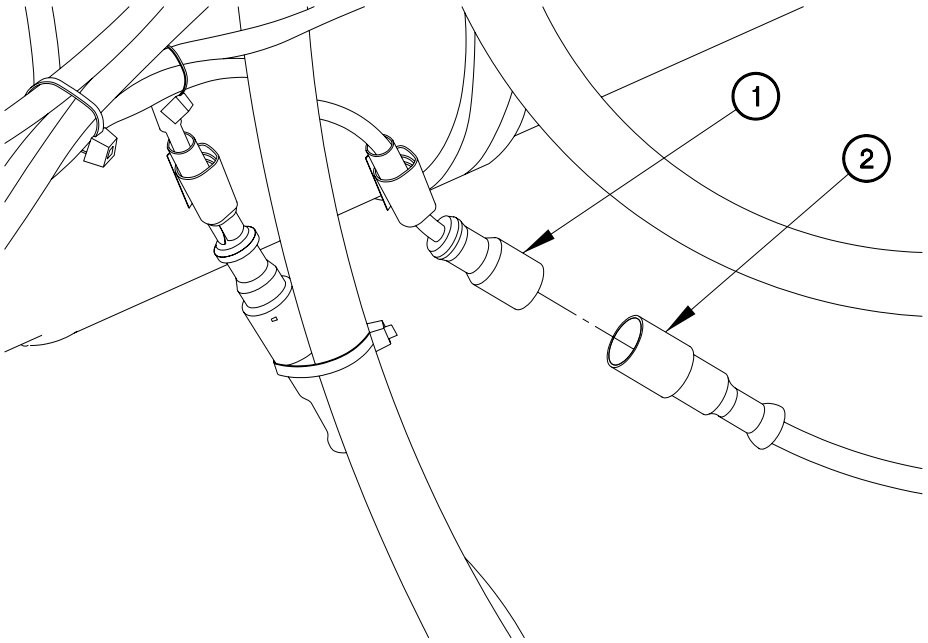
INSTALLATION - Continued

NOTE

ABS control sensor extension cable connectors correspond to the following ABS wheel speed sensor lead connectors:

Left Front:	12423014-005
Right Front:	12423014-006
Left Rear:	12423014-007
Right Rear:	12423014-008

8. Connect ABS control sensor extension cable (1) to ABS wheel speed sensor (2).



CD073R01

ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR EXTENSION CABLE REPLACEMENT - Continued 0073 00

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Start towing vehicle engine.
3. Road test trailer and check for proper brake operation.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT 0074 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level Personnel

Field

Tools and Special Tools

Took Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 167)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont)

Ties, Cable, Plastic (Item 20, WP 0165 00)
Nut, Self-Locking (4) (Item 27, WP 0168 00)
Washer, Lock (7) (Item 15, WP 0168 00)

Personnel Required

Two

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) power and diagnostic cable and bracket.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrocution. Failure to comply may result in injury to personnel.

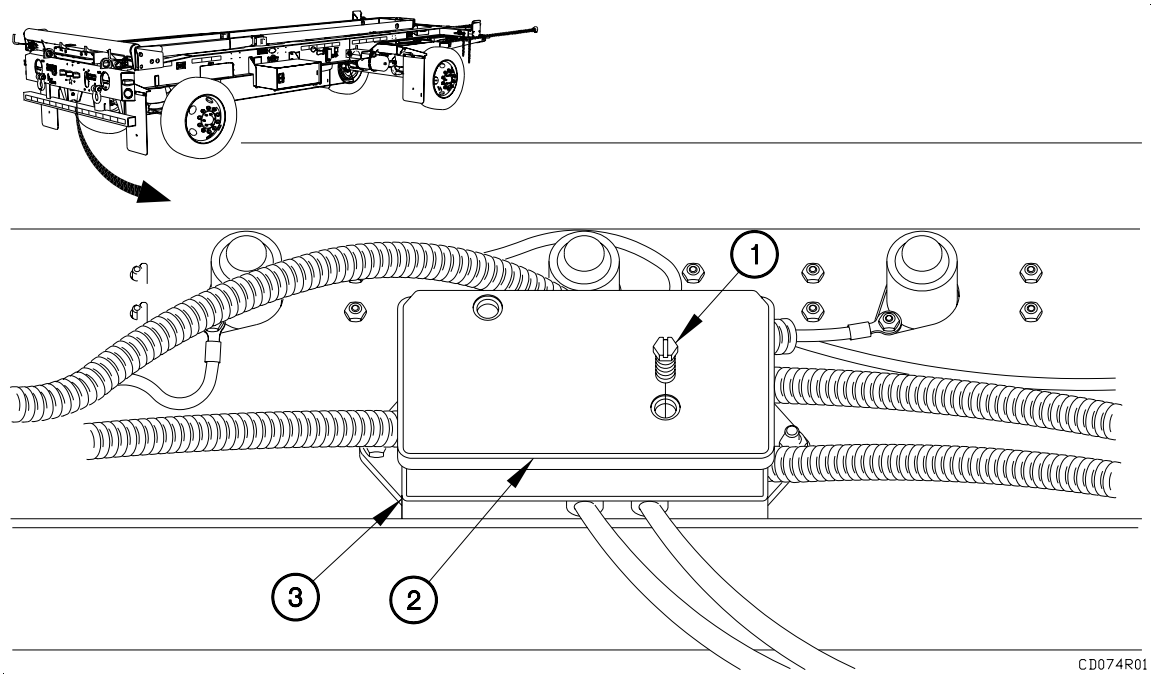
NOTE

Remove plastic cable ties as required.

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

REMOVAL

1. Remove two screws (1) and cover (2) from junction box (3).



ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

REMOVAL

NOTE

Junction box connections for main electrical harness and ABS power and diagnostic harness must be disconnected to remove ABS power and diagnostic cable from vehicle.

All main electrical harness and ABS power and diagnostic cable terminal lugs are removed the same way. Junction box terminal lug 1 shown. Refer to **Table 1, Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations** for details.

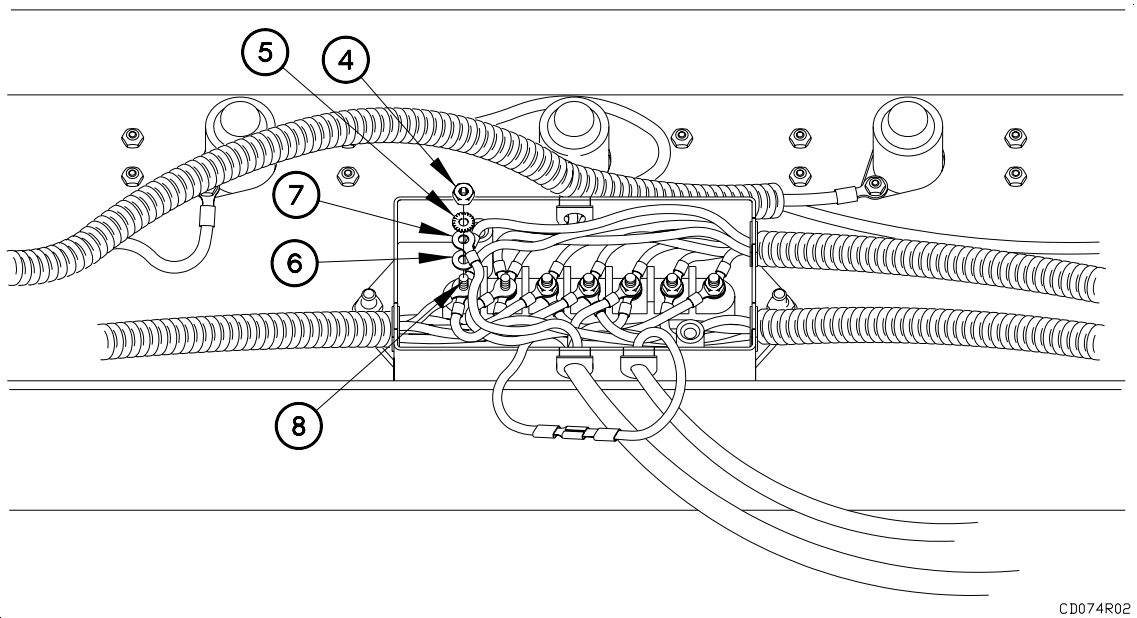
Tag all terminal lugs and terminal studs prior to removal.

2. Remove nut (4), lockwasher (5), TL609 (white ABS power and diagnostic cable ground terminal) (6), and terminal lug TL261A (7), from junction box terminal stud 1 (8). Discard lockwasher.

3. Repeat the previous step on remaining main electrical harness and ABS power and diagnostic cable terminal lugs.

Table 1 Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL609, TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A, Red ABS Terminal Lug, Blue ABS Terminal Lug
Stud Position 6	TL253A
Stud Position 7	TL252A

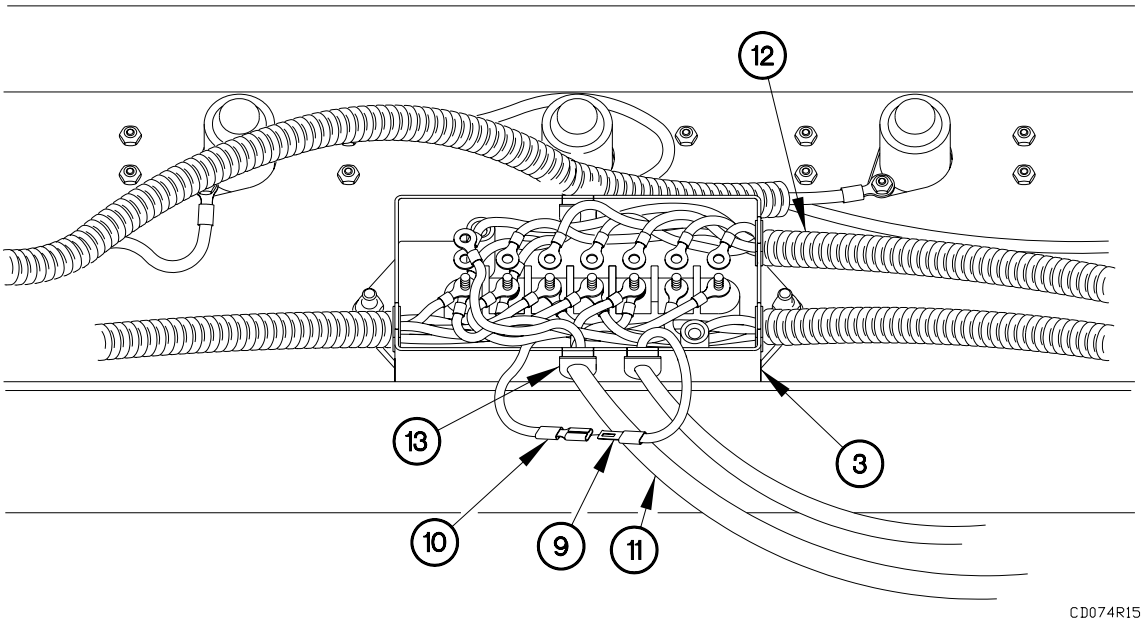


ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

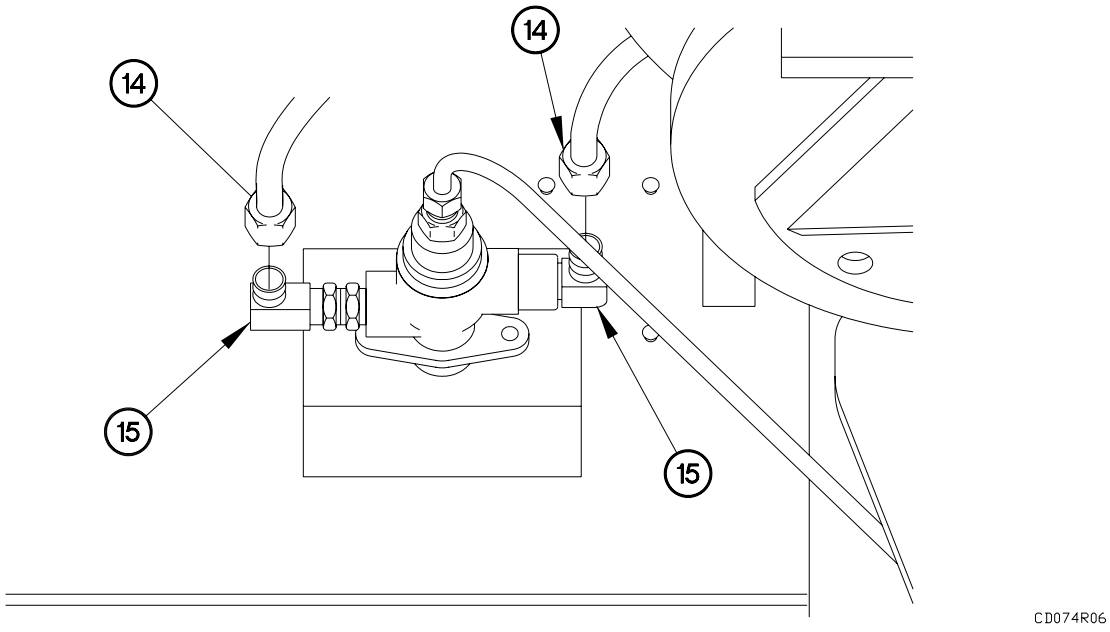
REMOVAL – Continued

4. Disconnect terminal lug TL611 (9) from green and white ABS warning light terminal tab (10).

5. Remove ABS power and diagnostic cable (11) and main electrical harness (12) from two grommets (13) on junction box (3).



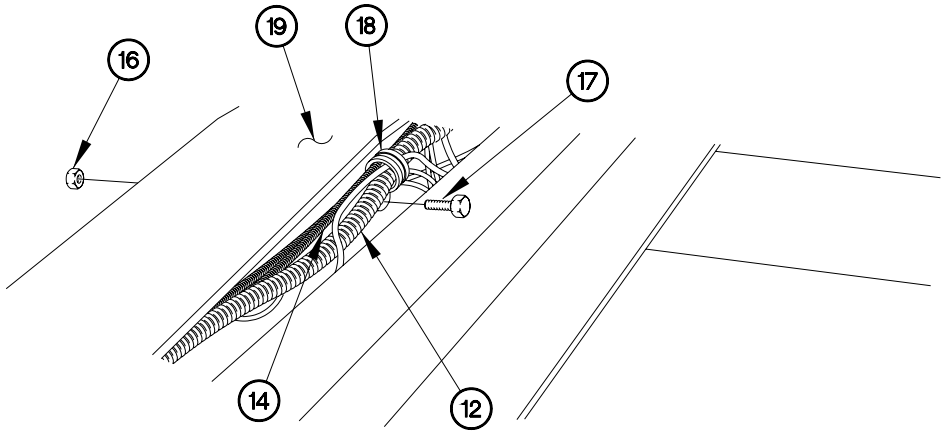
6. Disconnect two hoses (14) from 90-degree fittings (15).



ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

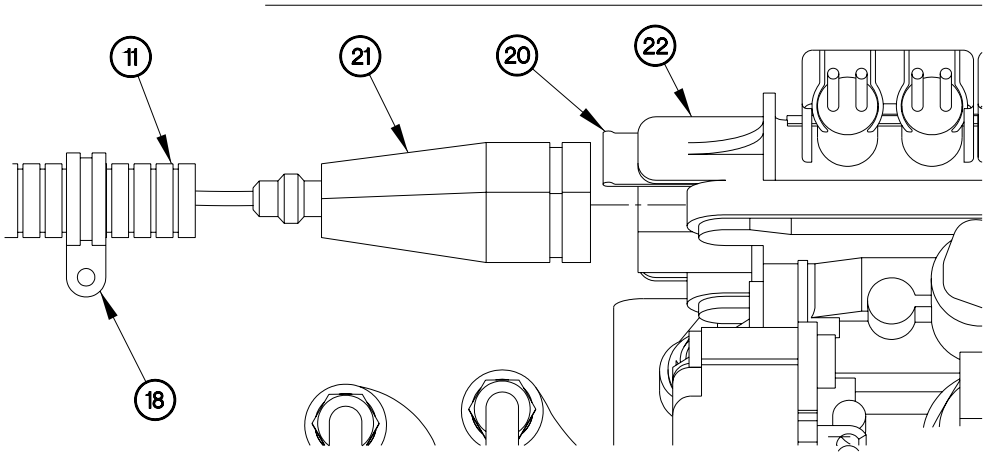
REMOVAL – Continued

7. Remove two self-locking nuts (16), bolts (17), and clamps (18) from LH frame rail (19).
8. Remove main electrical harness (12), and two hoses (14) from two clamps (18).
9. Remove main electrical harness (12) and two hoses (14) from LH frame rail (19).



CD074R07

10. Push up connector retainer clip (20).
11. Disconnect connector (21) from ABS ECU valve (22).
12. Remove ABS power and diagnostic cable (11) from two clamps (18).

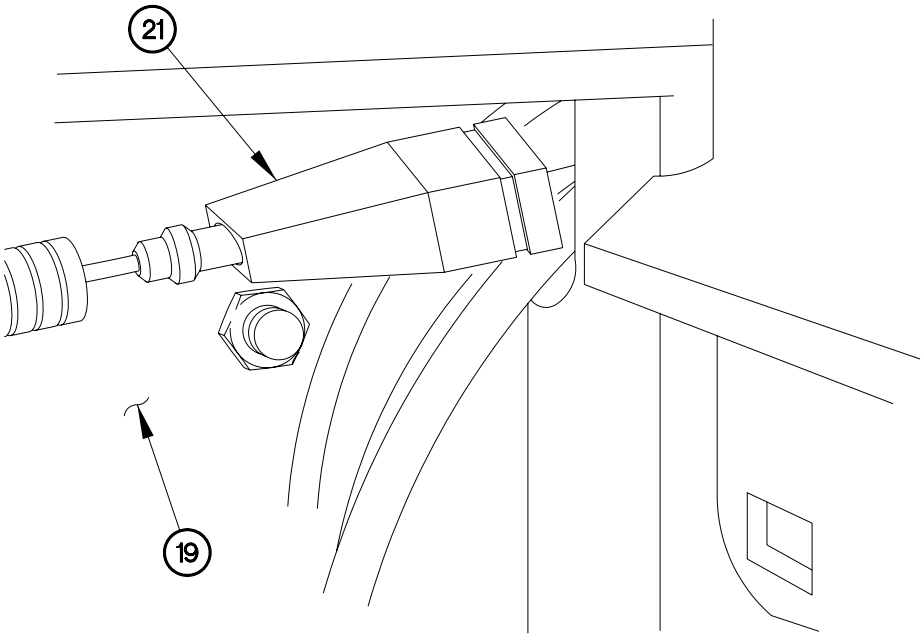


CD074R08

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

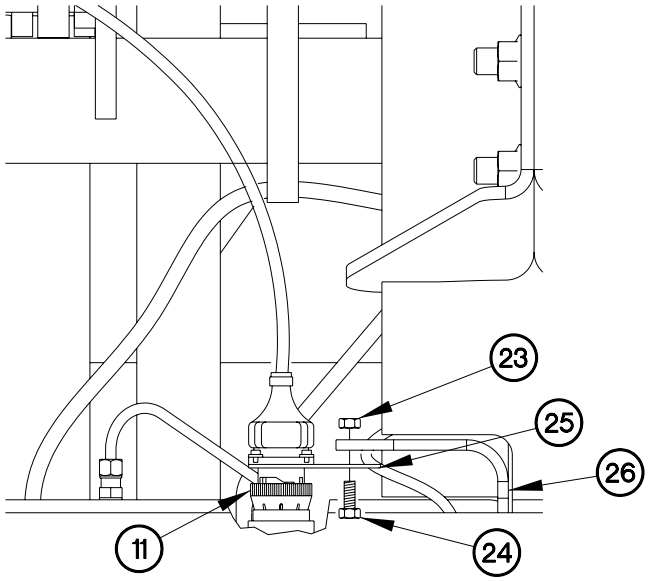
REMOVAL – Continued

13. Route connector (21) through LH frame rail (19).



CD074R09

14. Remove two self-locking nuts (23), bolts (24), ABS power and diagnostic cable (11), and mounting bracket (25) from rear panel assembly (26). Discard self-locking nuts.



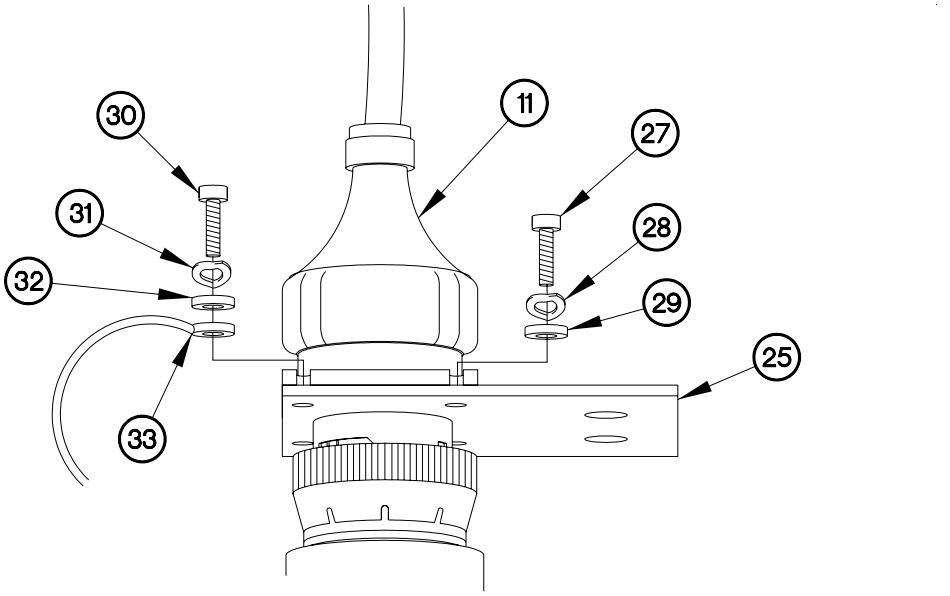
CD074R10

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

REMOVAL – Continued

15. Remove two screws (27), lockwashers (28), and washers (29) from ABS power and diagnostic cable (11) and mounting bracket (25).

16. Remove screw (30), lockwasher (31), washer (32), and lanyard (33) from ABS power and diagnostic cable (11) and mounting bracket (25).



CD074R11

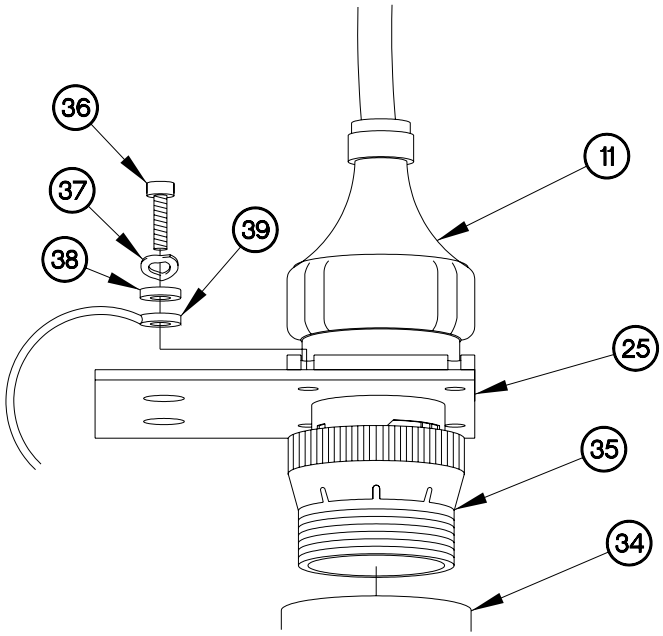
ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

REMOVAL – Continued

17. Remove cover (34) from ABS diagnostic tool (35).

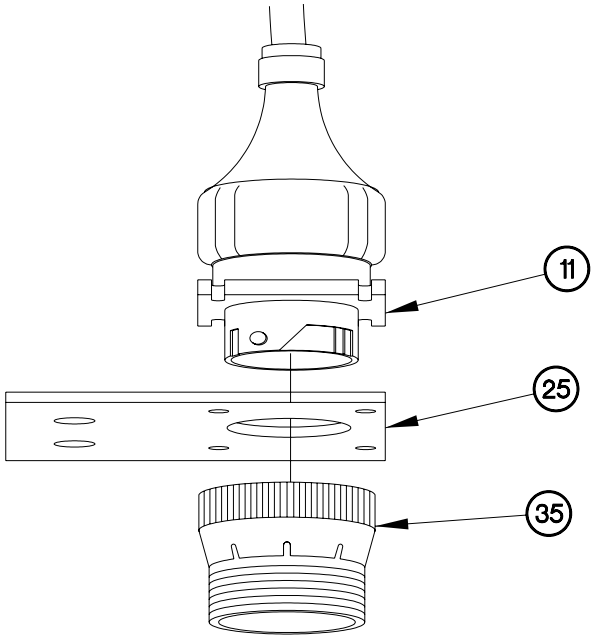
18. Remove screw (36), lockwasher (37), washer (38), and lanyard (39) from ABS power and diagnostic cable (11) and mounting bracket (25).



CD074R12

19. Disconnect ABS diagnostic tool (35) from ABS power and diagnostic cable (11).

20. Remove mounting bracket (25) from ABS power and diagnostic cable (11).



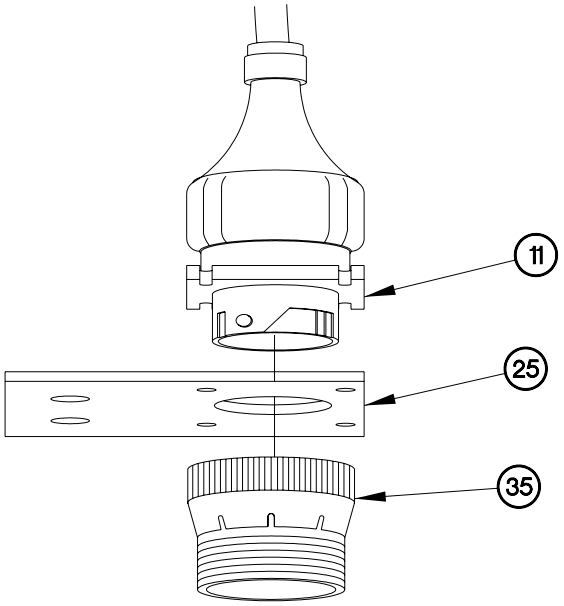
CD074R13

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

INSTALLATION

1. Install mounting bracket (25) on ABS power and diagnostic cable (11).

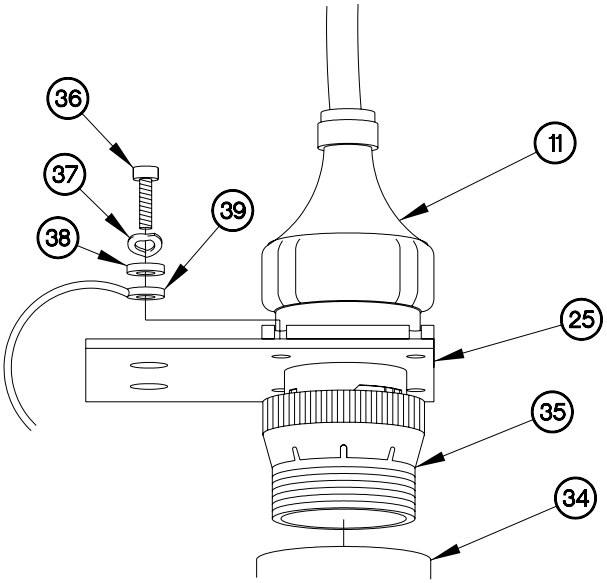
2. Connect ABS diagnostic tool (35) to ABS power and diagnostic cable (11).



CD074R13

3. Install lanyard (39) on ABS power and diagnostic cable (11) and mounting bracket (25) with washer (38), lockwasher (37), and screw (36).

4. Install cover (34) on ABS diagnostic tool (35).



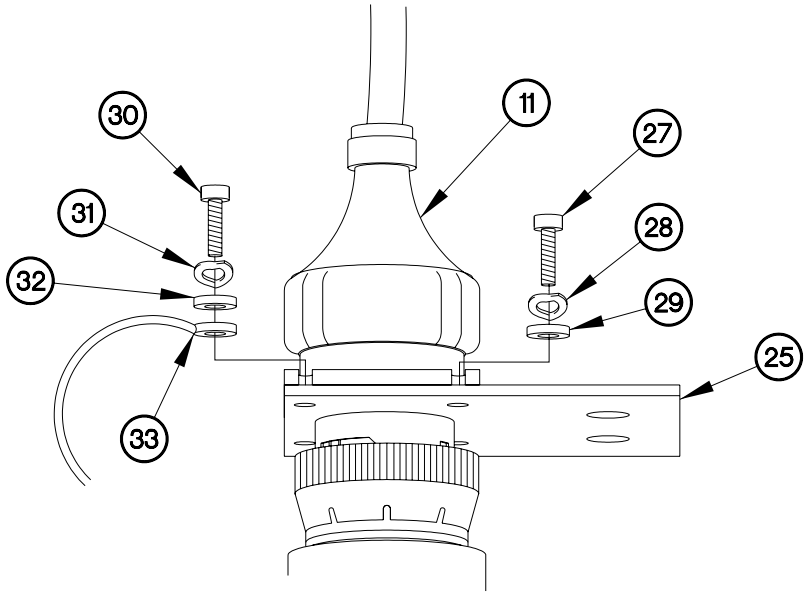
CD074R12

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

INSTALLATION – Continued

5. Install lanyard (33) on ABS power and diagnostic cable (11) and mounting bracket (25) with washer (32), lockwasher (31), and screw (30).

6. Install two washers (29), lockwashers (28), and screws (27) on ABS power and diagnostic cable (11) and mounting bracket (25).

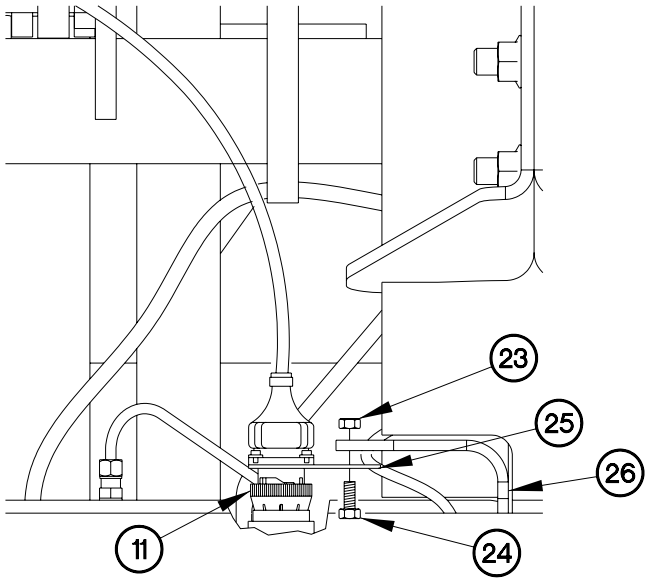


CD074R11

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

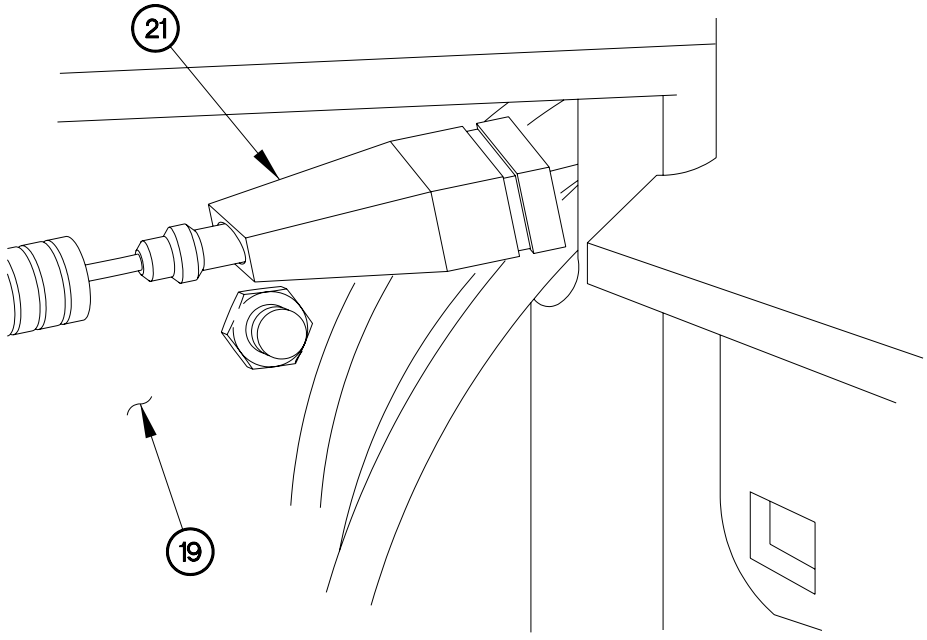
INSTALLATION – Continued

7. Install mounting bracket (25) and ABS power and diagnostic cable (11) on rear panel assembly (26) with two bolts (24) and self-locking nuts (23).



CD074R10

8. Route connector (21) through LH frame rail (19).

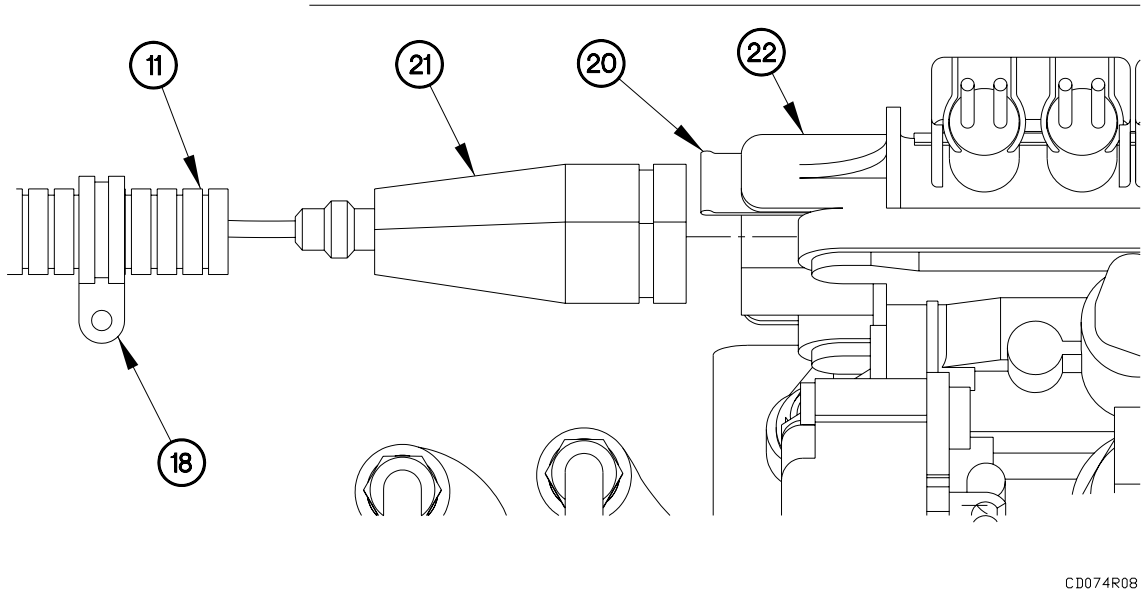


CD074R09

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

INSTALLATION – Continued

9. Position ABS power and diagnostic cable (11) in two clamps (18).
10. Connect connector (21) to ABS ECU valve (22).
11. Push down connector retainer clip (20).



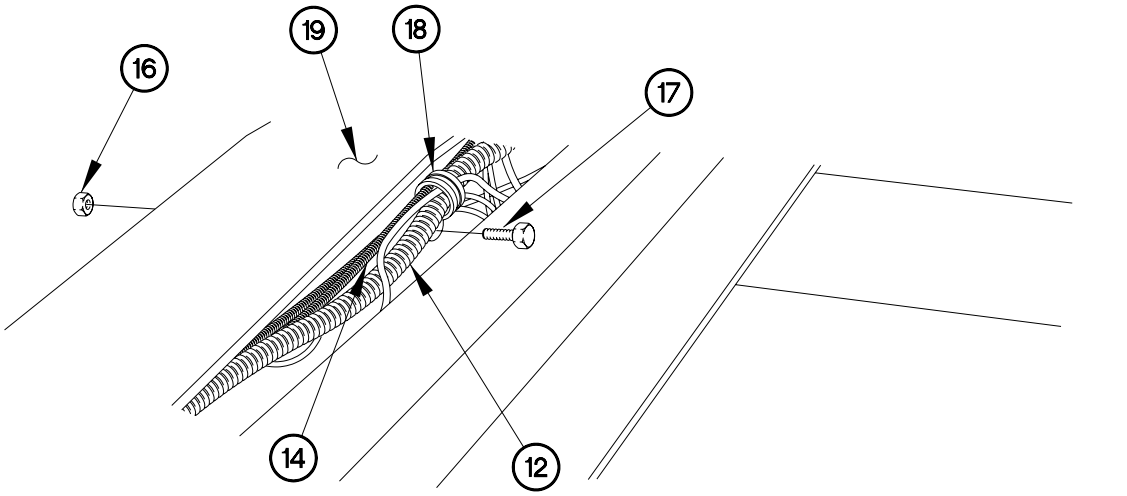
ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

INSTALLATION – Continued

NOTE

Install plastic cable ties as required.

12. Route two hoses (14) and main electrical harness (12) through LH frame rail (19).
13. Position two hoses (14) and main electrical harness (12) in two clamps (18).
14. Position two clamps (18) on LH frame rail (19) with two bolts (17) and self-locking nuts (16).
15. Tighten two self-locking nuts (16) to 96-120 lb-in. (11-14 N•m).

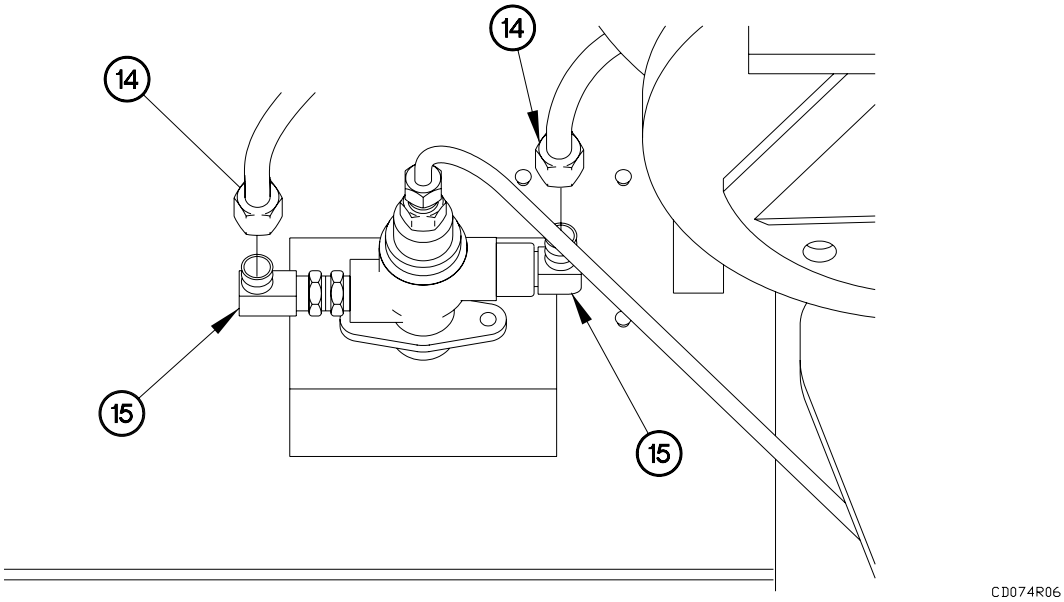


CD074R07

ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

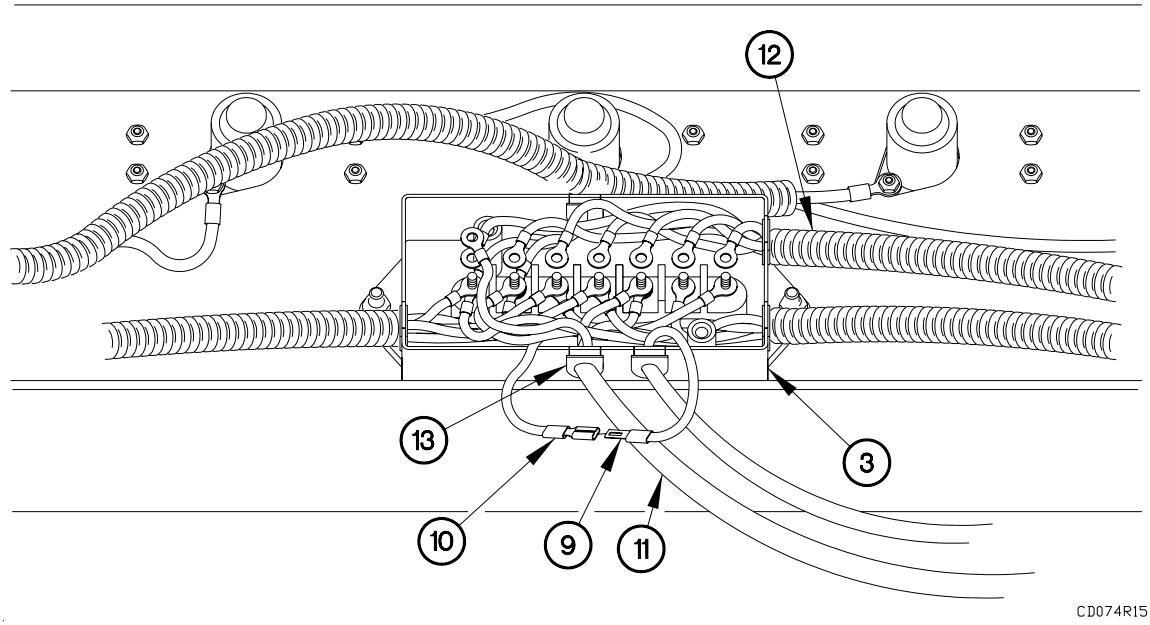
INSTALLATION – Continued

16. Connect two hoses (14) to 90-degree fittings (15).



17. Position main electrical harness (12) and ABS power and diagnostic cable (11) in junction box (3) through two grommets (13).

18. Connect terminal lug TL611 (9) to ABS warning light terminal tab (10).



ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

INSTALLATION – Continued

NOTE

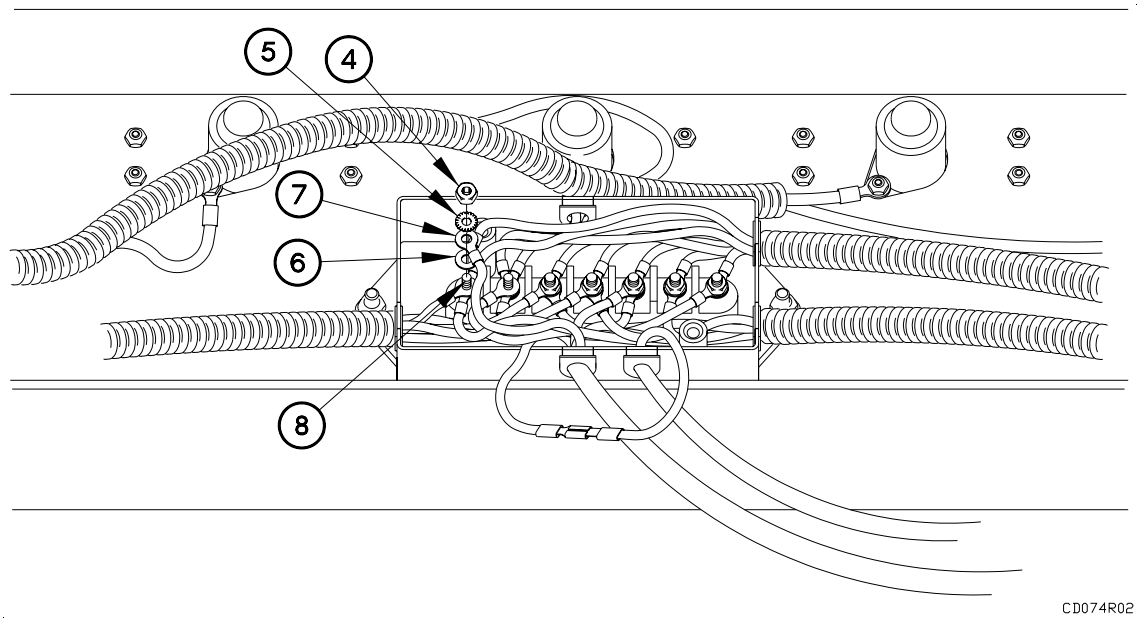
All main electrical harness and ABS power and diagnostic cable terminal lugs are installed the same way. Junction box terminal lug 1 shown. Refer to **Table 1, Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations** for details.

19. Install terminal lug TL261A (7) and TL609 (white ABS power and diagnostic cable ground terminal) (6) on junction box terminal stud 1 (8) with lockwasher (5) and nut (4).

20. Repeat the previous step on remaining main electrical harness and ABS power and diagnostic cable terminal lugs.

Table 1 Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations

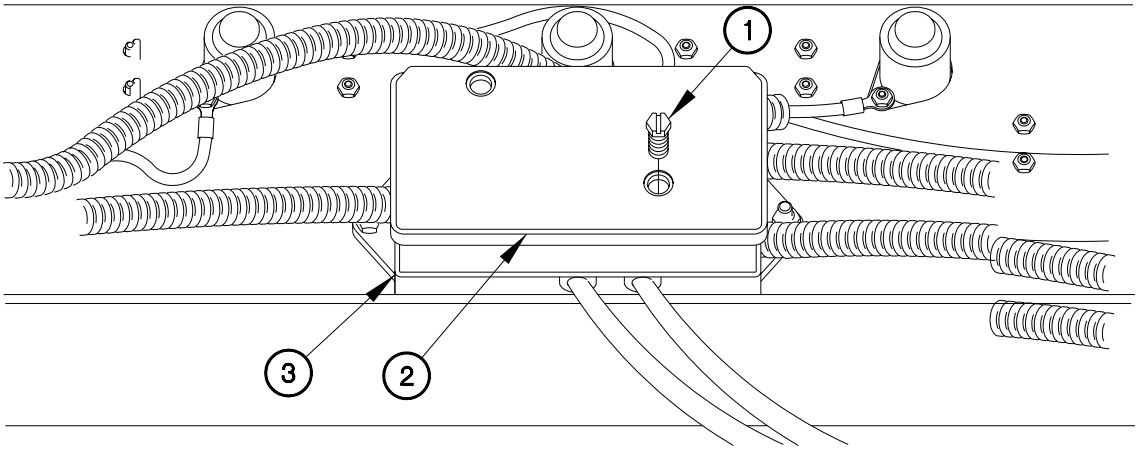
Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL609, TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A, Red ABS Terminal Lug, Blue ABS Terminal Lug
Stud Position 6	TL253A
Stud Position 7	TL252A



ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued 0074 00

INSTALLATION – Continued

21. Install cover (2) on junction box (3) with two screws (1).



CD074i01

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check for proper operation of ABS diagnostic tool (WP 0013 00).
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT 0075 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech Item 22, WP 0167 00)

Materials/Parts
Antiseize Compound (Item 2, WP 0165 00)
Ties, Cable Plastic (Item 20, WP 0165 00)

Materials/Parts (Cont)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Kit, Pressure Protection Valve (Item 3, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 9-2320-392-10-1)
Flatrack Rail Assembly raised (WP 0005 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) relay valve and brake protection valve.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

NOTE

Tag air hoses, electrical cables and connection points prior to disconnecting.

Remove plastic cable ties as required.

ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued

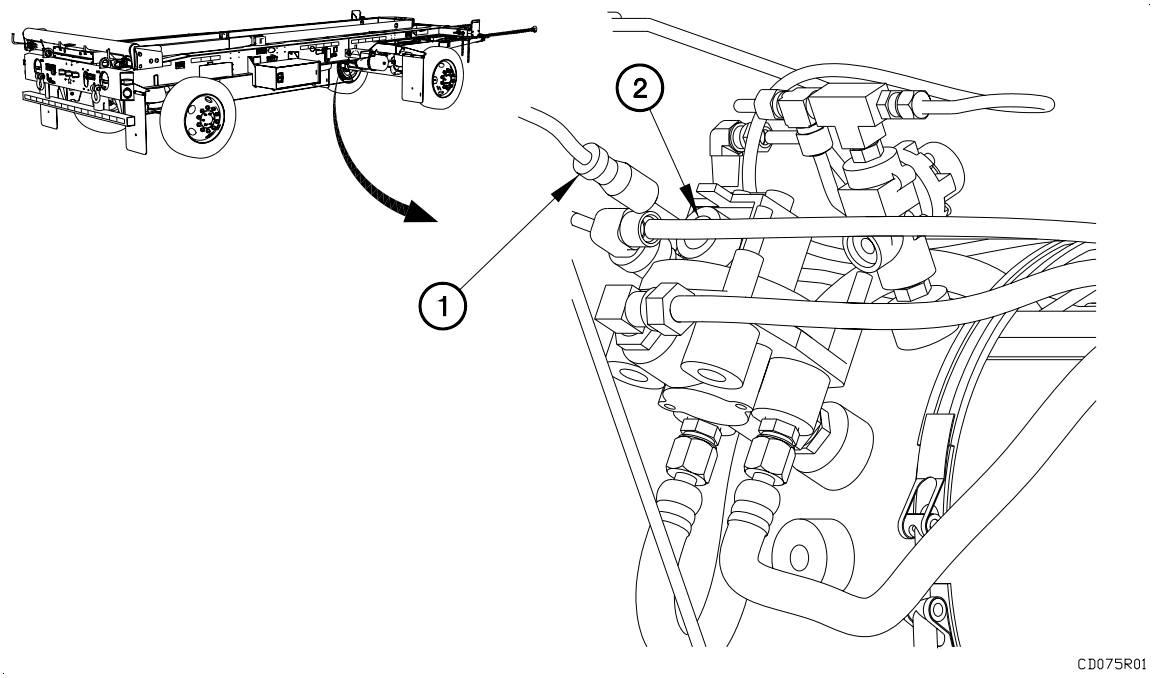
0075 00

REMOVAL

NOTE

Note orientation of fittings prior to removal.

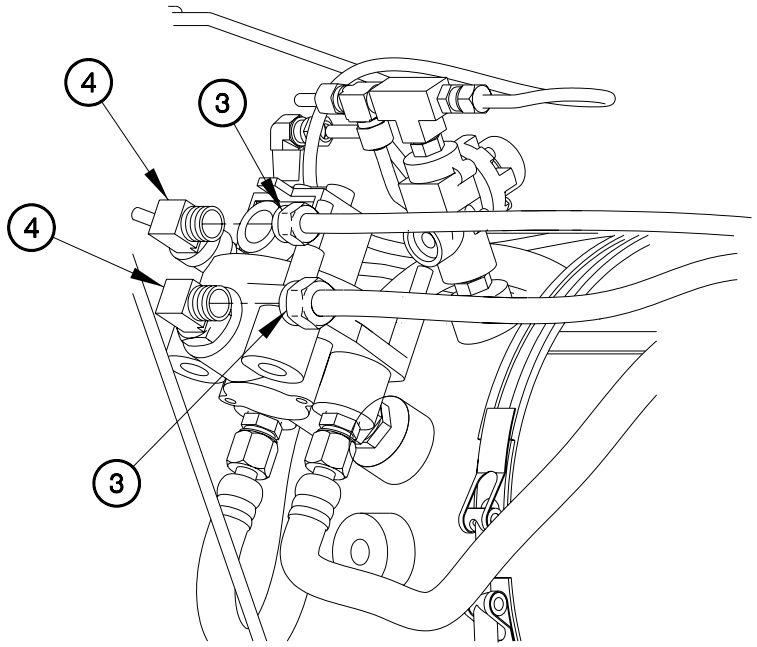
1. Disconnect ABC ECU connector (1) from relay valve cable connector (2).



ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued

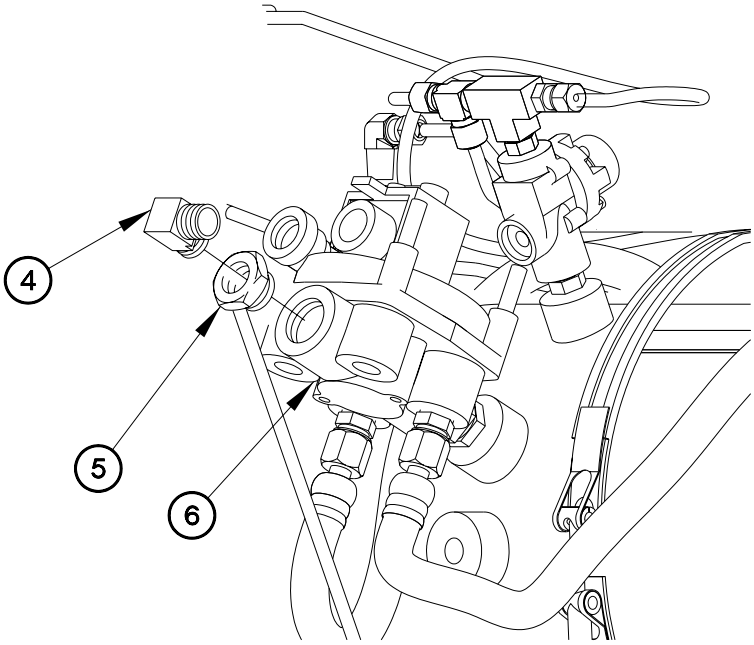
REMOVAL - Continued

2. Disconnect two air hoses (3) from 90-degree fittings (4).



CD075R02

3. Remove two 90-degree fittings (4) and adapters (5) from ABS relay valve (6).



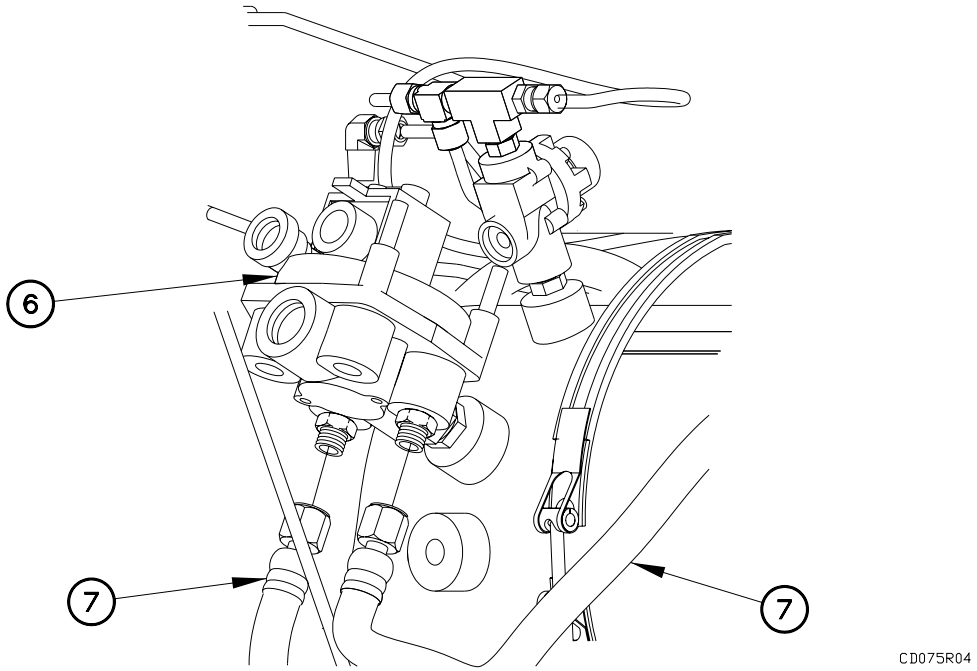
CD075R03

ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued

0075 00

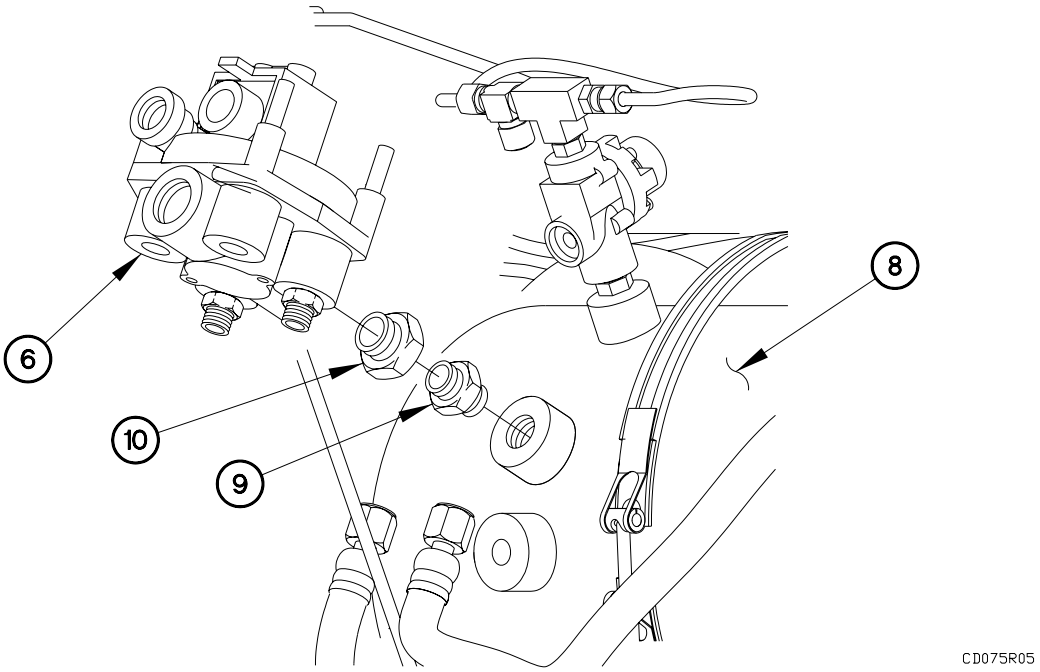
REMOVAL - Continued

4. Disconnect two hoses (7) from ABS relay valve (6).



5. Remove ABS relay valve (6) from air tank (8).

6. Remove adapter (9) and fitting (10) from ABS relay valve (6).



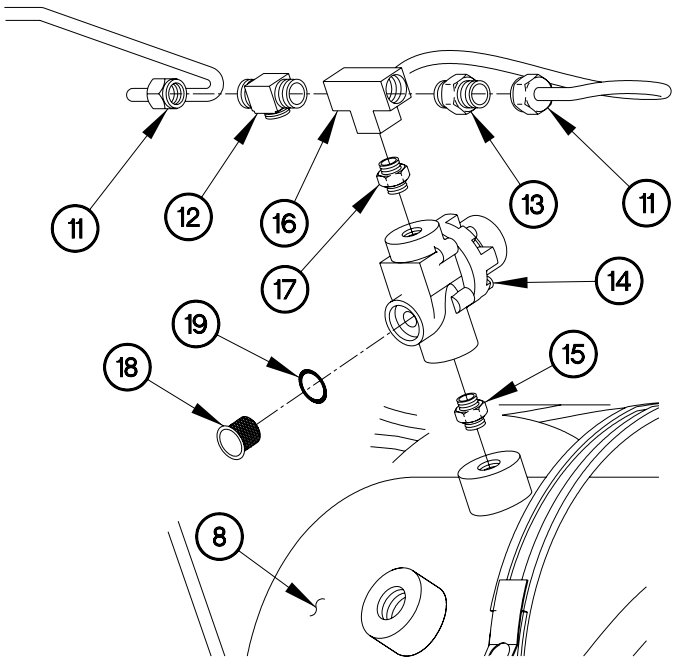
ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued

REMOVAL – Continued

NOTE

Perform the following seven steps on front brake protection valve.

7. Disconnect two air hoses (11) from adapters (12 and 13).
8. Remove front brake protection valve (14) from air tank (8).
9. Remove adapter (15) from front brake protection valve (14).
10. Remove adapters (12 and 13) from tee fitting (16).
11. Remove tee fitting (16) from adapter (17).
12. Remove adapter (17) from front brake protection valve (14).
13. Remove air filter (18) and preformed packing (19) from front brake protection valve (14). Discard air filter and preformed packing.



CD075R06

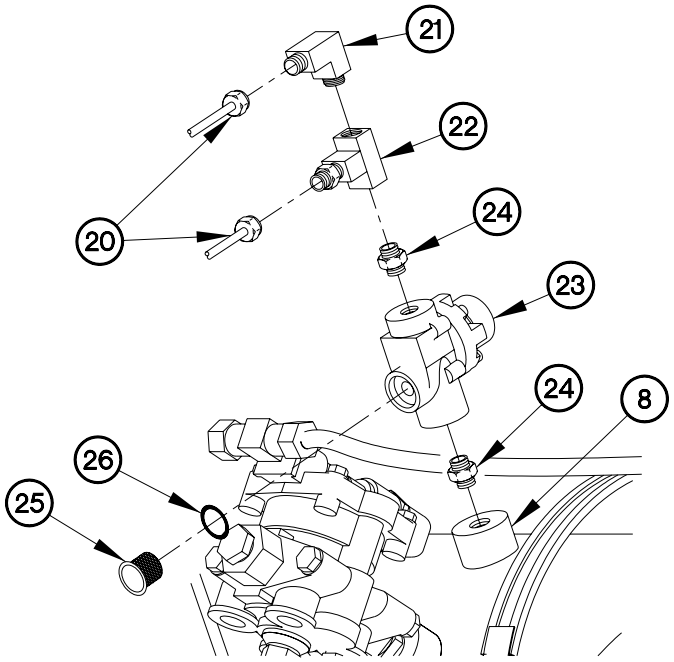
ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued 0075 00

REMOVAL - Continued

NOTE

Perform the following six steps on rear brake protection valve.

14. Disconnect two air hoses (20) from 90-degree fitting (21) and tee fitting (22).
15. Remove rear brake protection valve (23) from air tank (8).
16. Remove 90-degree fitting (21) from tee fitting (22)
17. Remove tee fitting (22) from adapter (24)
18. Remove two adapters (24) from rear brake protection valve (23).
19. Remove air filter (25) and preformed packing (26) from rear brake protection valve (23). Discard air filter and preformed packing.



ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued

0075 00

INSTALLATION

WARNING

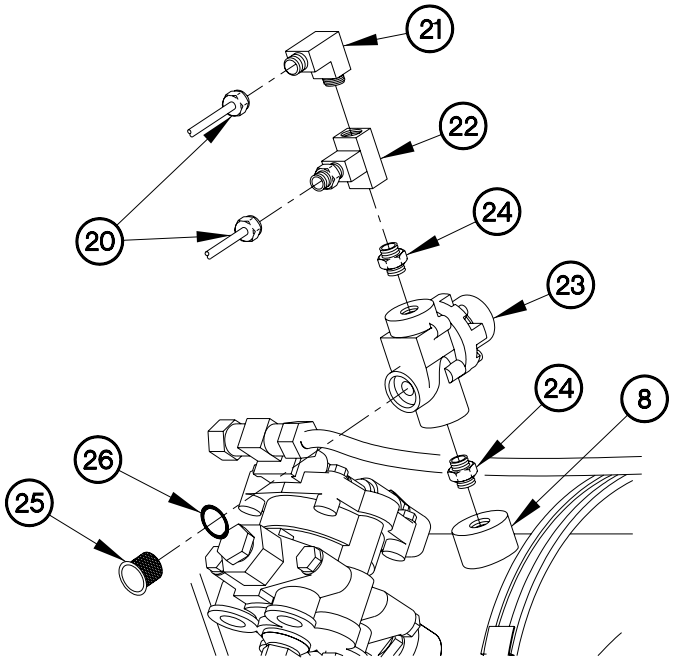
Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Perform the following seven steps on rear brake protection valve.

Install plastic cable ties as required.

1. Apply sealing compound to threads of 90-degree fitting (21) and two adapters (24).
2. Install preformed packing (26) and air filter (25) in rear brake protection valve (23).
3. Install two adapters (24) in rear brake protection valve (23).
4. Install tee fitting (22) on adapter (24).
5. Install 90-degree fitting (21) on tee fitting (22).
6. Install rear brake protection valve (23) on air tank (8).
7. Connect two air hoses (20) to 90-degree fitting (21) and tee fitting (22).



CD075R07

ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued 0075 00

INSTALLATION - Continued

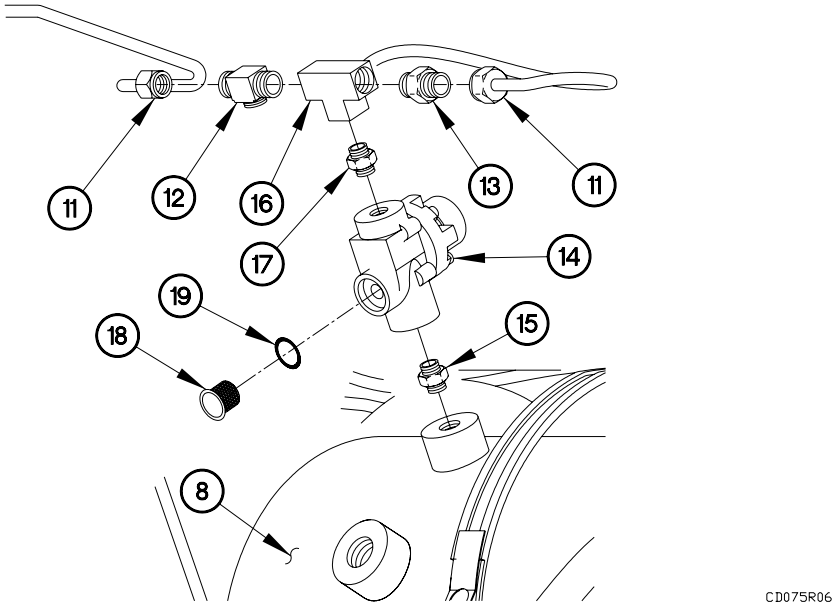
WARNING

Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Perform the following eight steps on front brake protection valve.

8. Apply sealing compound to threads of adapters (12 and 13), adapter (15), and adapter (17).
9. Install preformed packing (19) and air filter (18) in front brake protection valve (14).
10. Install adapter (17) in front brake protection valve (14).
11. Install tee fitting (16) on adapter (17).
12. Install adapters (12 and 13) in tee fitting (16).
13. Install adapter (15) in front brake protection valve (14).
14. Install front brake protection valve (14) on air tank (8).
15. Connect two air hoses (11) to adapters (12 and 13).



ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued 0075 00

INSTALLATION - Continued

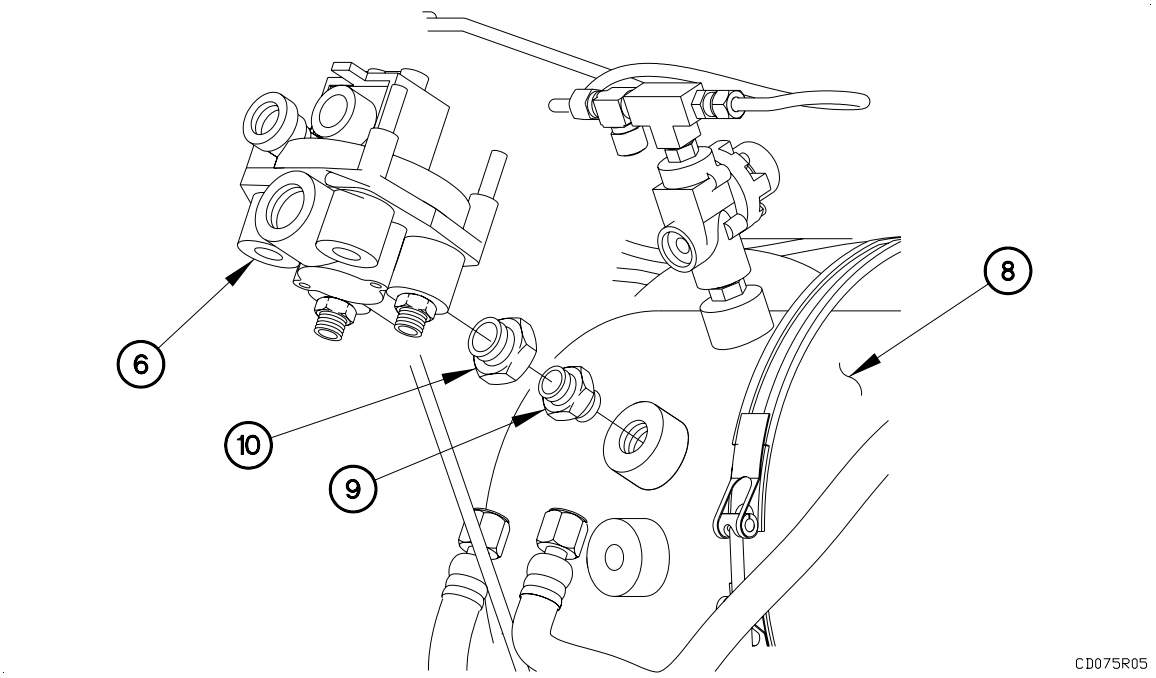
WARNING

Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

16. Apply sealing compound to threads of adapter (9) and fitting (10).

17. Install adapter (9) and fitting (10) on ABS relay valve (6).

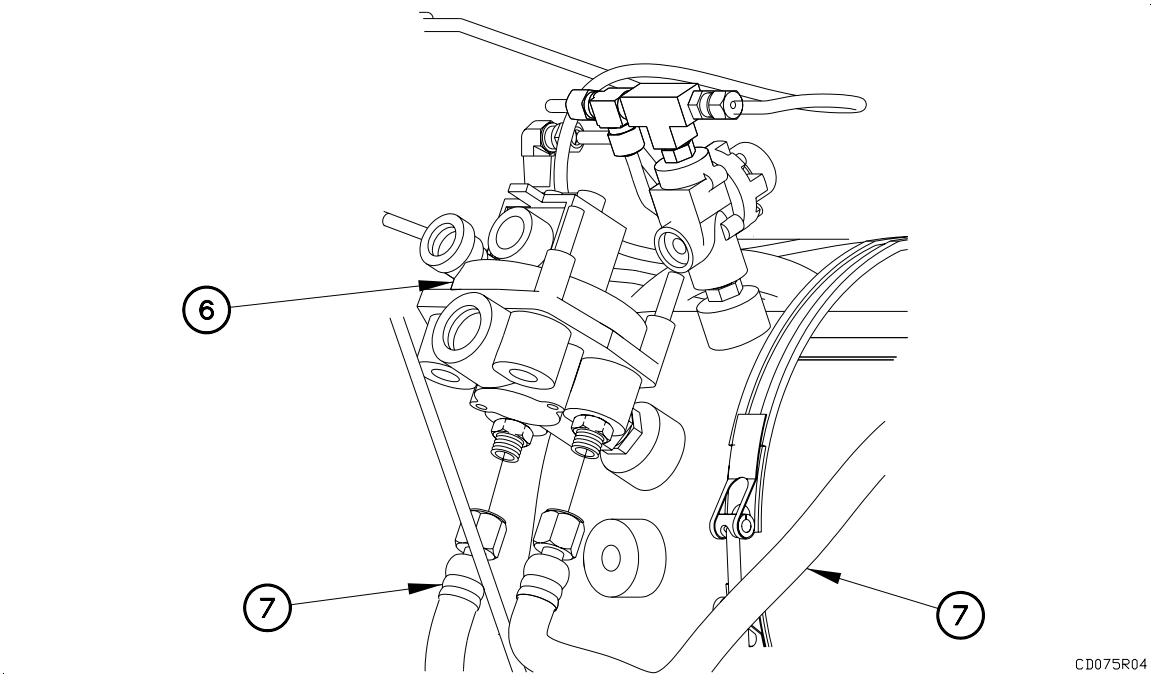
18. Install ABS relay valve (6) on air tank (8).



ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued 0075 00

INSTALLATION - Continued

19. Connect two hoses (7) to ABS relay valve (6).



ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued 0075 00

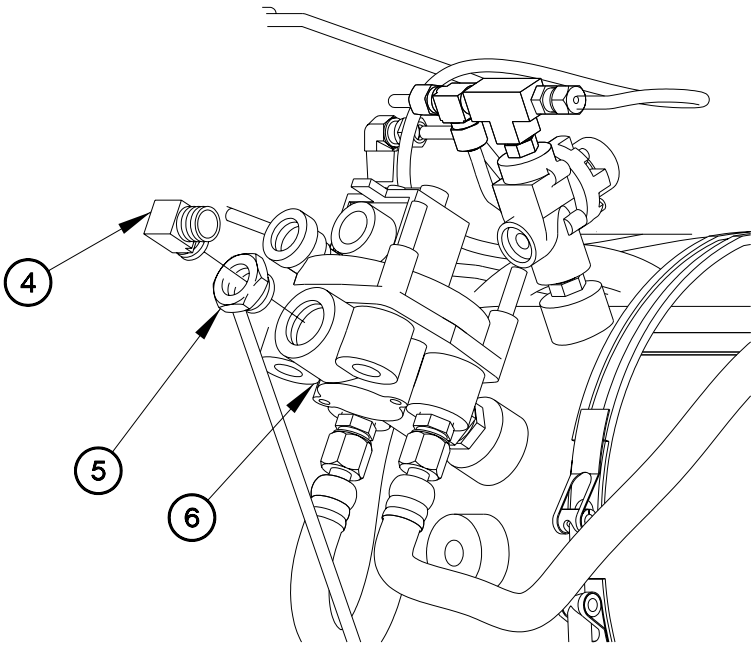
INSTALLATION - Continued

WARNING

Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

20. Apply sealing compound to threads of two adapters (5) and 90-degree fittings (4).

21. Install two adapters (5) and 90-degree fittings (4) on ABS relay valve (6).



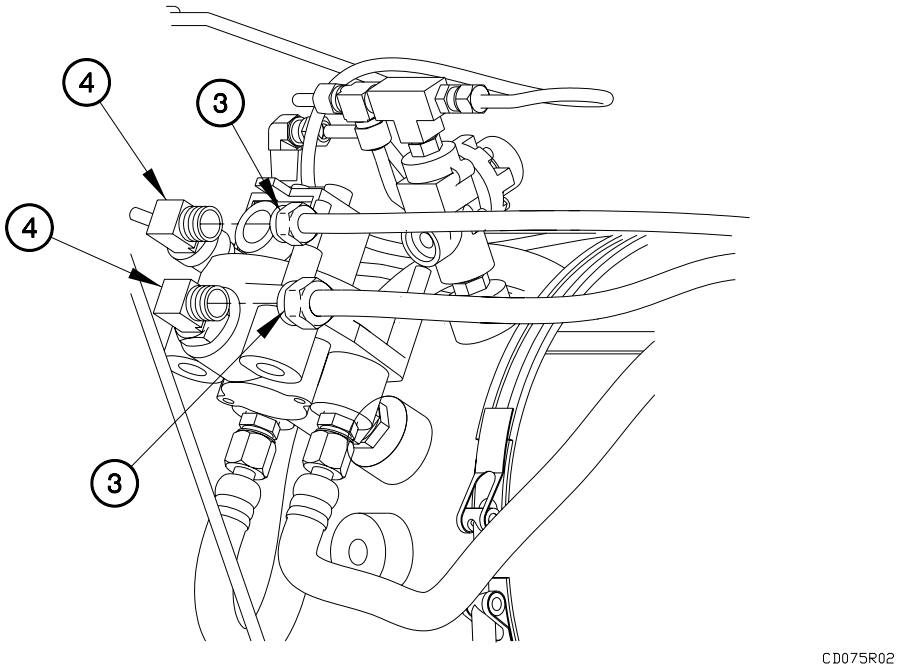
CD075R03

ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued

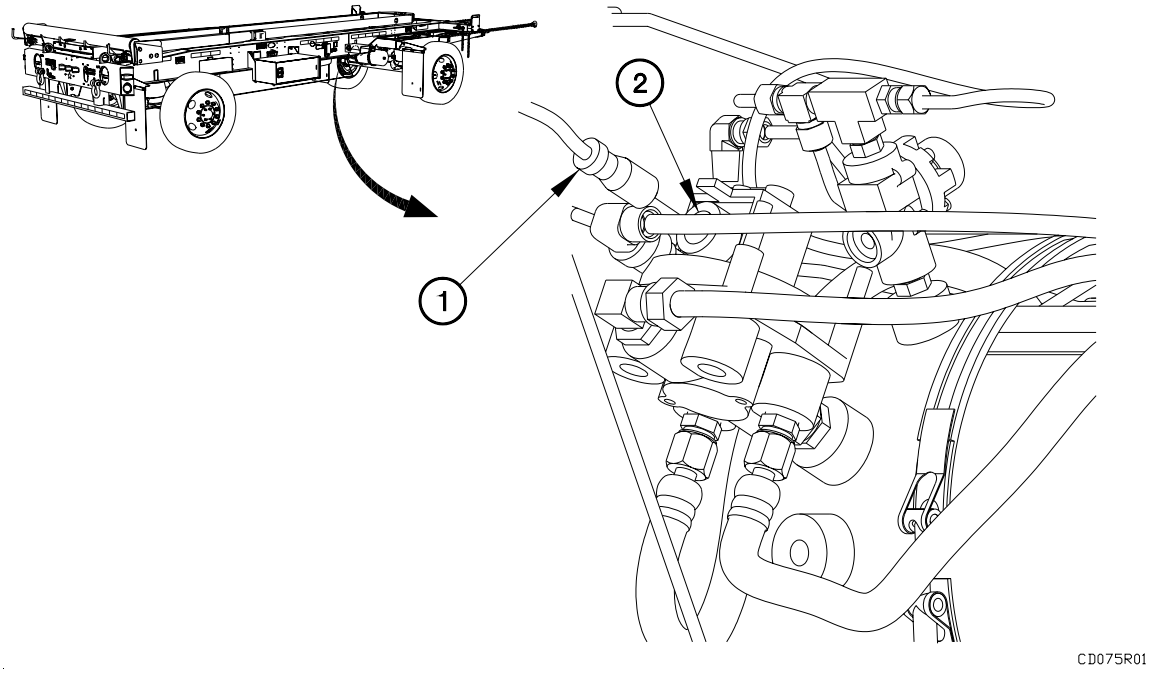
0075 00

INSTALLATION - Continued

22. Connect two air hoses (3) to 90-degree fittings (4).



23. Connect ABC ECU connector (1) to relay valve cable connector (2).



ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT 0075 00

OPERATIONAL CHECKS

1. Lower flatrack rail (WP 0005 00).
2. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
3. Operate vehicle, checking for proper operation of ABS relay valve and brake protection valve (WP 0020 00, TM 9-2320-392-10-1).
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

AIR BRAKE ARM REPLACEMENT 0076 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts

Seal, Grease (2) (Item 51, WP 0168 00)
Washer, Lock (4) (Item 6, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Air brake chamber removed (WP 0081 00).
Wheel hub removed (WP 0085 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) air brake arm.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

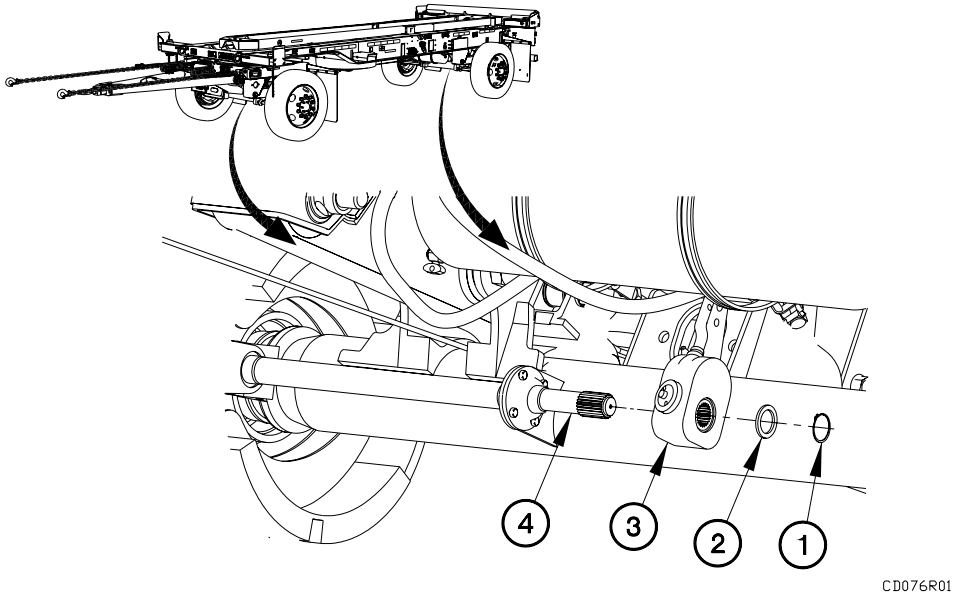
AIR BRAKE ARM REPLACEMENT - Continued 0076 00

REMOVAL

WARNING

Retaining rings are under tension and can act as projectiles when released causing severe eye injury. Use care when removing retaining rings. Failure to comply may result in injury to personnel.

1. Remove snap ring (1), washer (2), and slack adjuster (3) from air brake arm (4).



AIR BRAKE ARM REPLACEMENT - Continued 0076 00

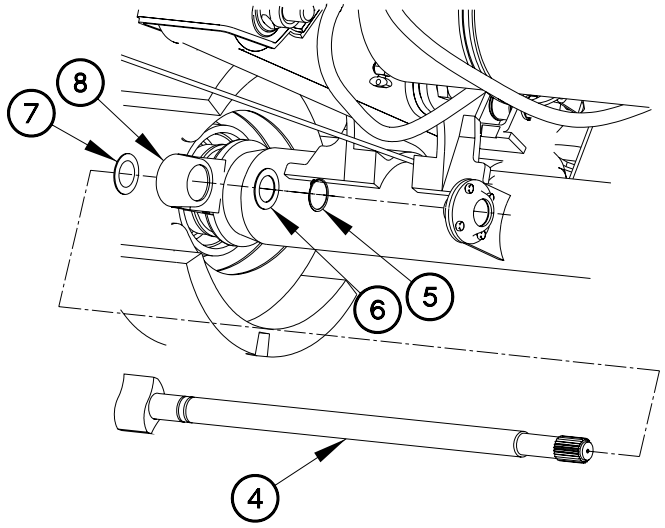
REMOVAL - Continued

2. Release snap ring (5) on air brake arm (4).

CAUTION

Match mark cam end of air brake arm and axle prior to removal. Transfer match mark to new air brake arm. Failure to comply may result in damage to equipment.

3. Remove snap ring (5), washer (6), air brake arm (4), and washer (7) from axle (8).



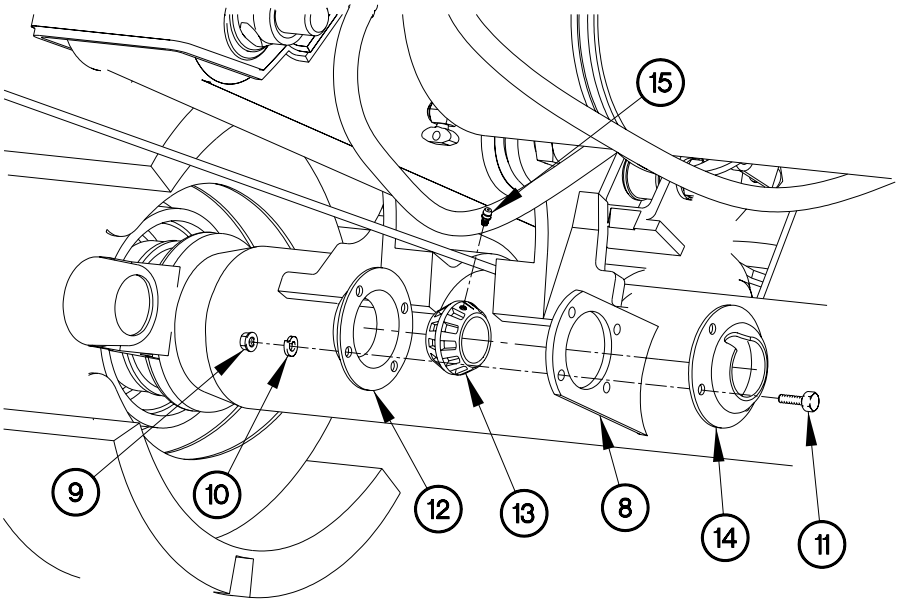
CD076R02

AIR BRAKE ARM REPLACEMENT - Continued 0076 00

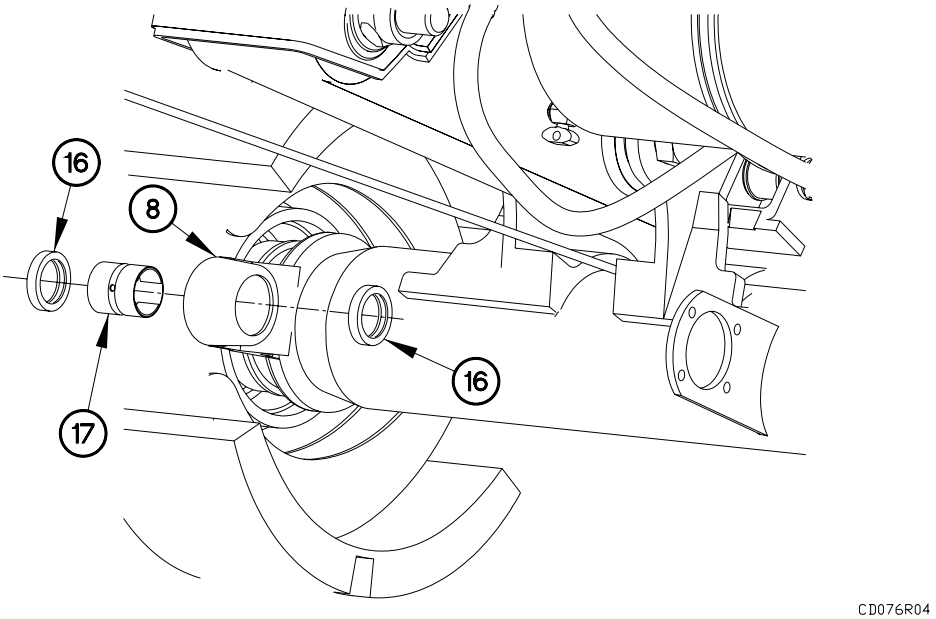
REMOVAL - Continued

4. Remove four nuts (9), lockwashers (10), bolts (11), bushing retainer plate (12), bushing (13), and bushing retainer plate (14) from axle (8). Discard lockwashers.

5. Remove grease fitting (15) from bushing (13).



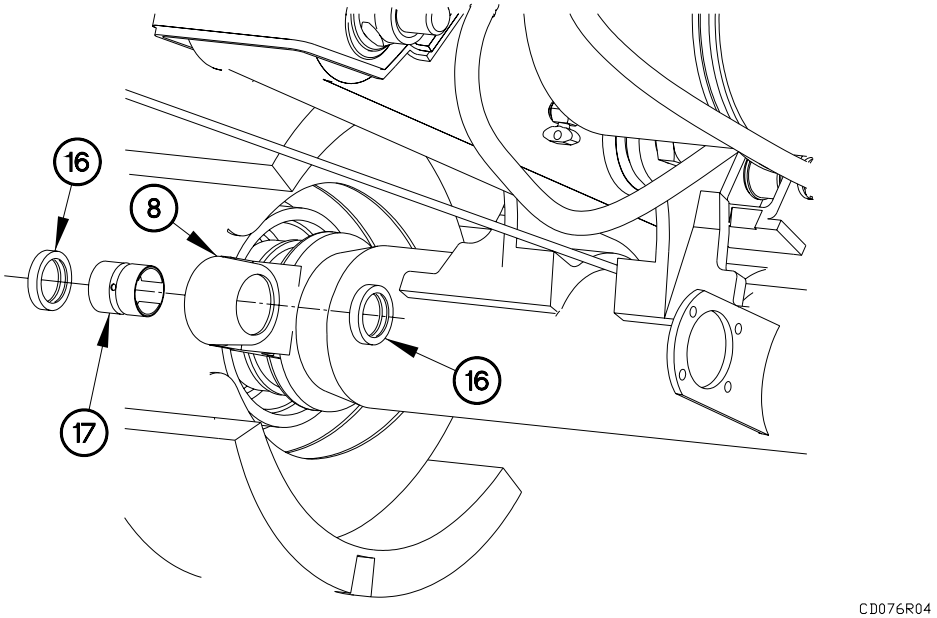
6. Remove two seals (16) and bushing (17) from axle (8). Discard seals.



AIR BRAKE ARM REPLACEMENT - Continued 0076 00

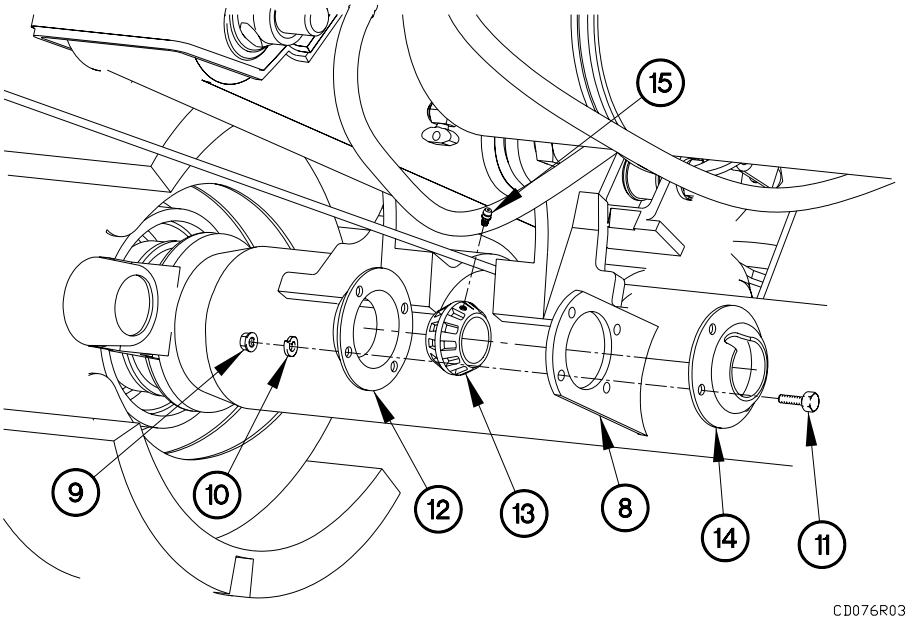
INSTALLATION

1. Install bushing (17) and two seals (16) on axle (8).



2. Install grease fitting (15) on bushing (13).

3. Install bushing (13) and bushing retainer plates (14 and 12) on axle (8) with four bolts (11), lockwashers (10), and nuts (9).



AIR BRAKE ARM REPLACEMENT - Continued 0076 00

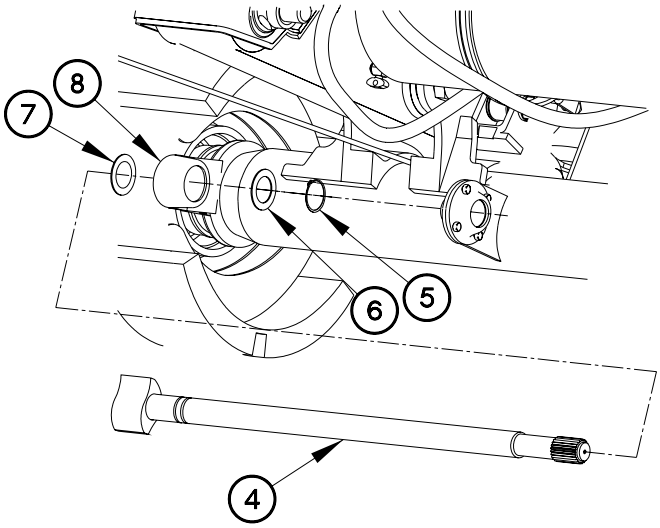
INSTALLATION – Continued

CAUTION

Line up match marks on cam end of air brake arm and axle during installation. Failure to comply may result in damage to equipment.

4. Position washer (7) air brake arm (4), washer (6), and snap ring (5) on axle (8).

5. Install snap ring (5) on air brake arm (4).



CD076R02

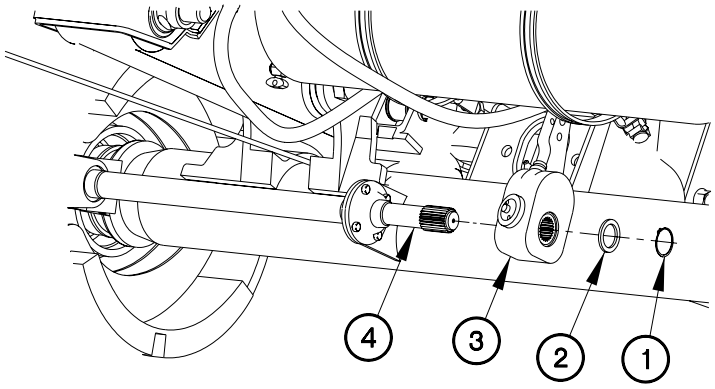
AIR BRAKE ARM REPLACEMENT - Continued 0076 00

INSTALLATION - Continued

WARNING

Retaining rings are under tension and can act as projectiles when released causing severe eye injury. Use care when installing retaining rings. Failure to comply may result in injury to personnel.

6. Install slack adjuster (3) on air brake arm (4) with washer (2) and snap ring (1).



CD076I01

OPERATIONAL CHECKS

1. Install wheel hub (WP 0085 00).
2. Install air brake chamber (WP 0081 00).
3. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
4. Operate trailer and check for normal brake operation (WP 0011 00, TM 9-2320-392-10-1).
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

ANTI-LOCK BRAKING SYSTEM (ABS) DIAGNOSTIC LIGHT ASSEMBLY REPLACEMENT

0077 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont)

Ties, Cable, Plastic (Item 20, WP 0165 00)
Washer, Lock (Item 15, WP 0168 00)
Nut, Self-Locking (2) (Item 27, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-293-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) Anti-Lock Braking System (ABS) diagnostic light assembly.

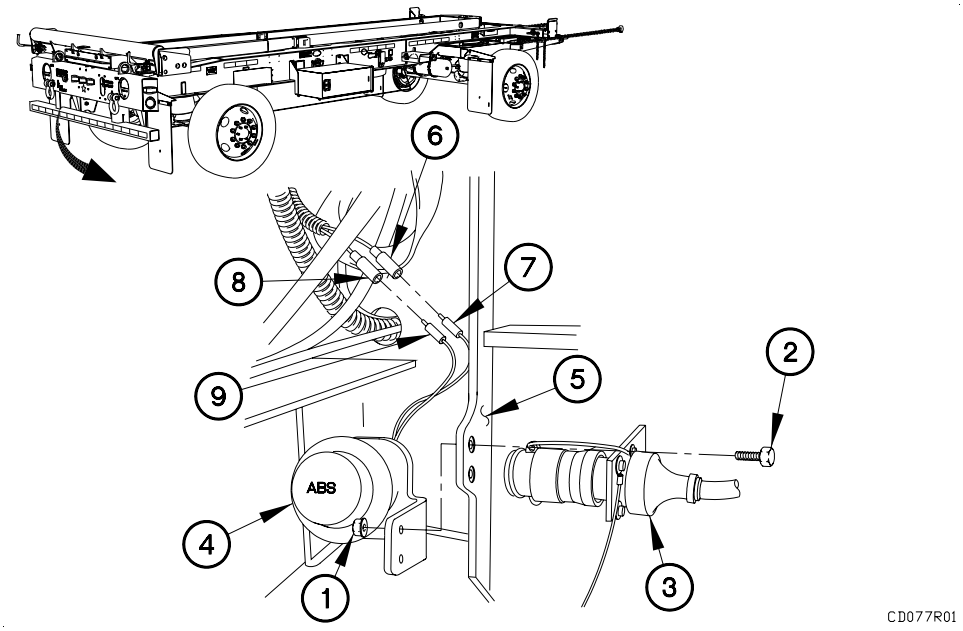
ANTI-LOCK BRAKING SYSTEM (ABS) DIAGNOSTIC LIGHT ASSEMBLY REPLACEMENT - Continued

REMOVAL

NOTE

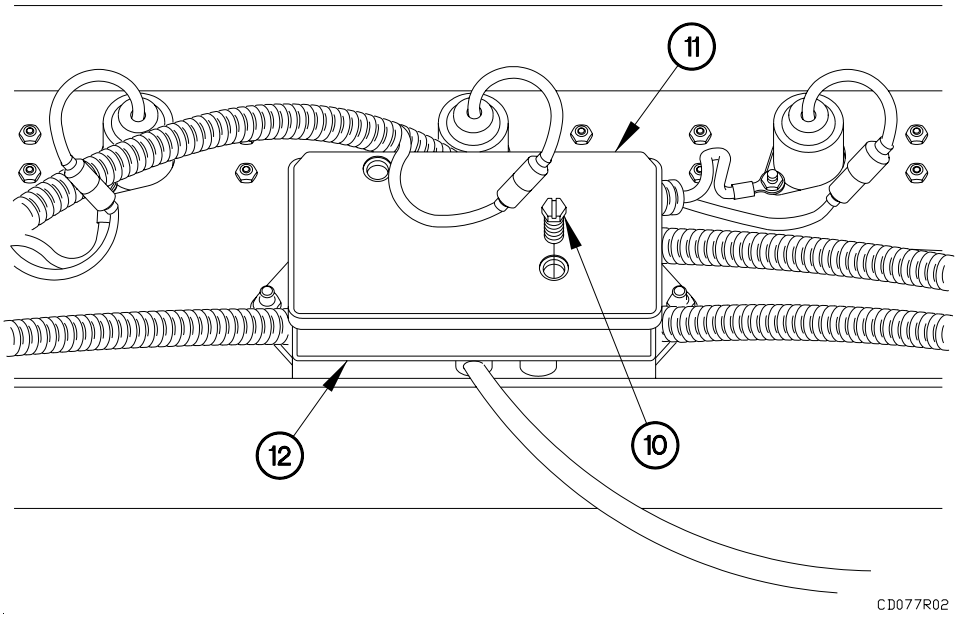
Remove plastic cable ties as required.

1. Remove two self-locking nuts (1), bolts (2), ABS power and diagnostic cable and tool (3), and ABS diagnostic light (4) from rear panel assembly (5). Discard self-locking nuts.
2. Disconnect bullet connector TL610 (6) from ABS diagnostic light ground connector (7).
3. Disconnect bullet connector TL612 (8) from ABS diagnostic light power connector (9).



REMOVAL - Continued

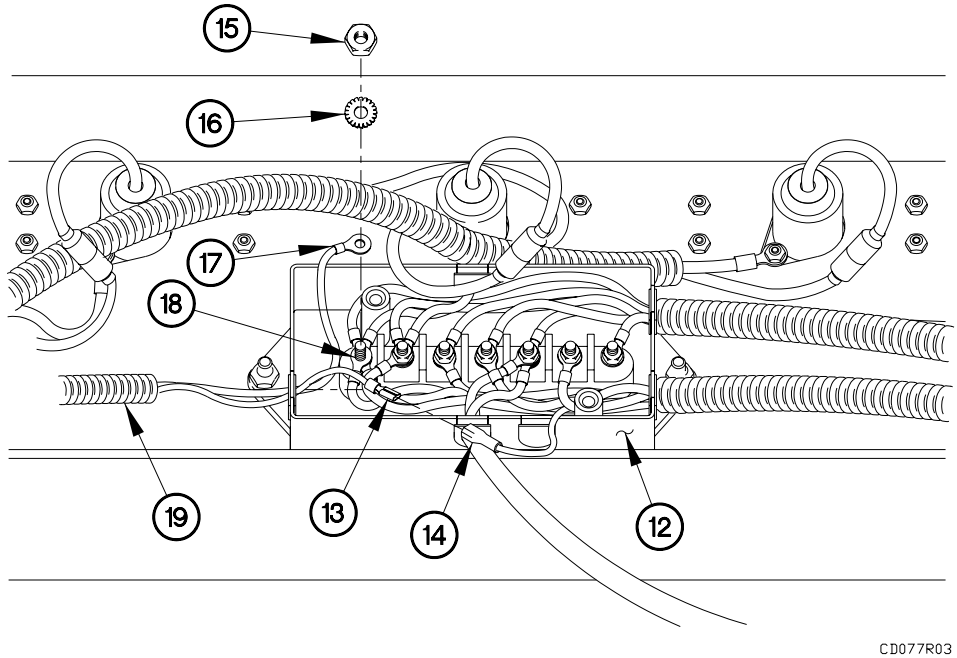
4. Remove two bolts (10) and cover (11) from junction box (12).



5. Disconnect terminal lug TL611 (13) from ABS power and diagnostic cable lead (14).

6. Remove nut (15), lockwasher (16), and terminal lug TL609 (17) from junction box terminal stud 1 GND (18). Discard lockwasher.

7. Remove ABS diagnostic light cable assembly (19) from junction box (12).

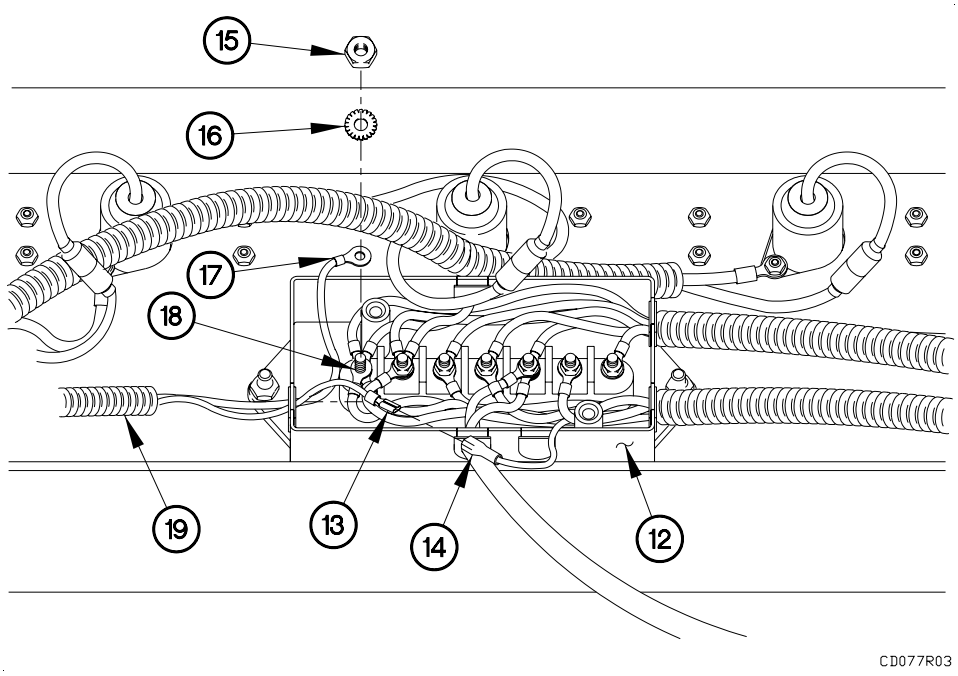


INSTALLATION

NOTE

Install plastic cable ties as required.

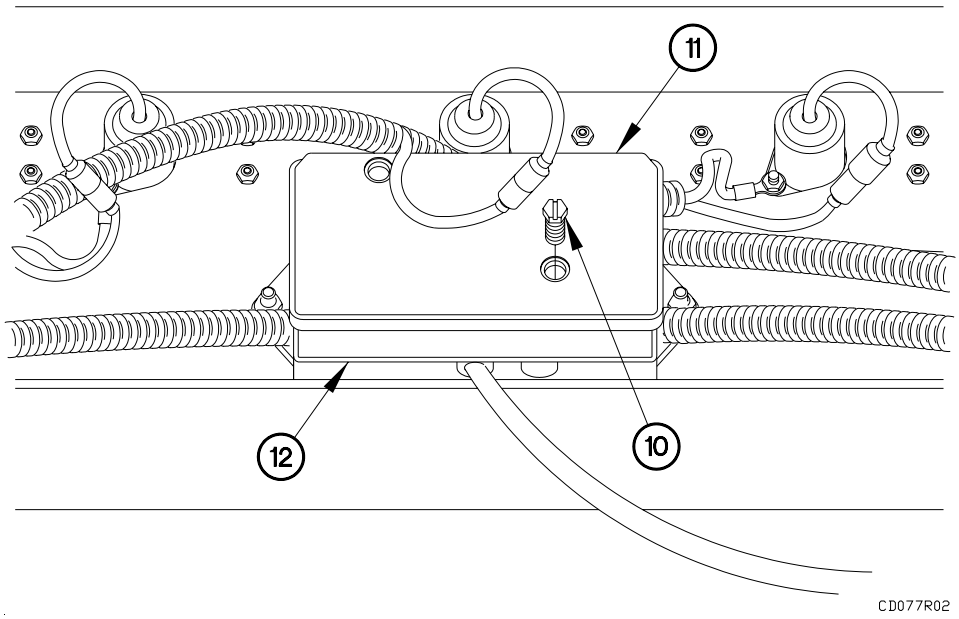
1. Position ABS diagnostic cable assembly (19) in junction box (12).
2. Install terminal lug TL609 (17) on junction box terminal stud 1 GRN (18) with lockwasher (16) and nut (15).
3. Connect terminal lug TL611 (13) to ABS power and diagnostic cable lead (14).



ANTI-LOCK BRAKING SYSTEM (ABS) DIAGNOSTIC LIGHT ASSEMBLY REPLACEMENT - Continued

INSTALLATION-Continued

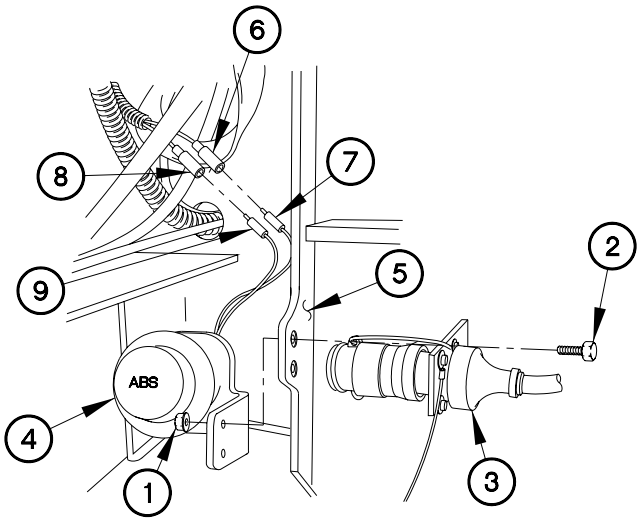
4. Install cover (11) on junction box (12) with two bolts (10).



ANTI-LOCK BRAKING SYSTEM (ABS) DIAGNOSTIC LIGHT ASSEMBLY REPLACEMENT - Continued

INSTALLATION - Continued

5. Connect bullet connector TL612 (8) to ABS diagnostic light power connector (9).
6. Disconnect bullet connector TL610 (6) from ABS diagnostic light ground connector (7).
7. Position ABS diagnostic light (4) and ABS power and diagnostic cable and tool (3) on rear panel assembly (5) with two bolts (2) and self-locking nuts (1).
8. Tighten two self-locking nuts (1) to 60-84 lb-in. (7-9 N•m).



CD077I01

OPERATIONAL CHECKS

1. Remove one of the ABS wheel speed sensors.
2. Couple trailer (WP 0043 23, TM 2320-392-10-1, Trailer Coupling).
3. Check for ABS warning light illumination.
4. Replace ABS wheel speed sensor.
5. Operate trailer over 4 mph.
6. ABS light should go out.
7. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

AIR TANK REPLACEMENT 0078 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Check

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Sealing Compound (Item 15, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Relay valve removed (0075 00).
Brake protection valve removed (0075 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) air tanks and drain valves.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

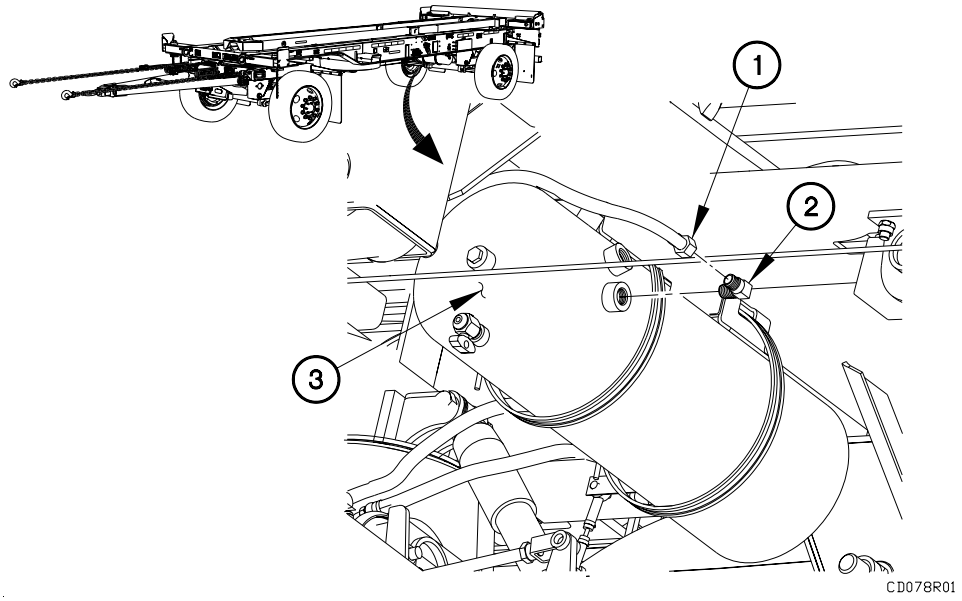
REMOVAL

NOTE

Perform the following two steps on rear air tank.

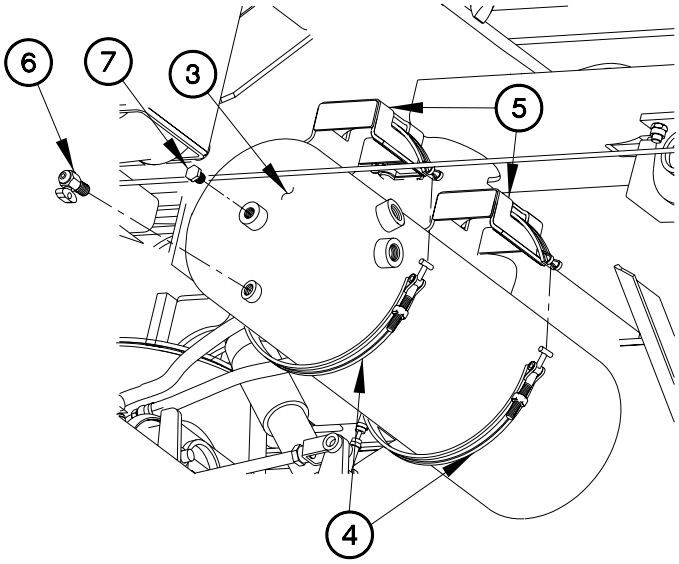
1. Disconnect hose (1) from fitting (2).

2. Remove 90-degree fitting (2) from air tank (3).



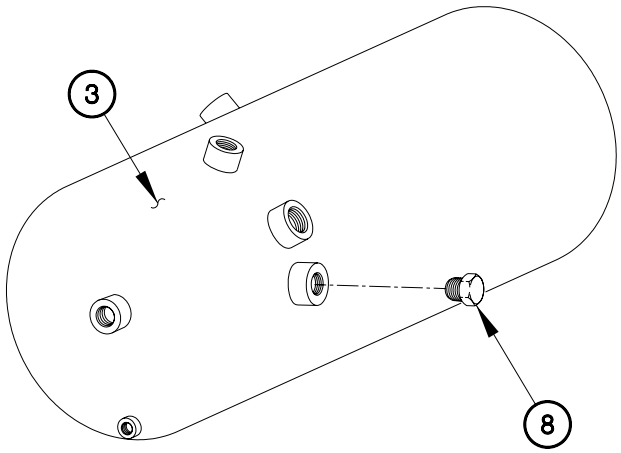
REMOVAL-Continued

3. Remove two clamps (4) and air tank (3) from brackets (5).
4. Remove drain valve (6) from air tank (3).
5. Remove fitting (7) from air tank (3).



CD078R02

6. Remove plug (8) from air tank (3).



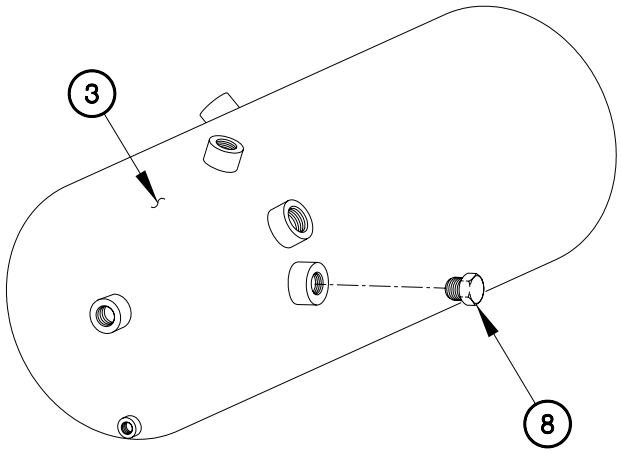
CD078R03

INSTALLATION

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

1. Apply sealing compound to plug (8) prior to installation.
2. Install plug (8) in air tank (3).



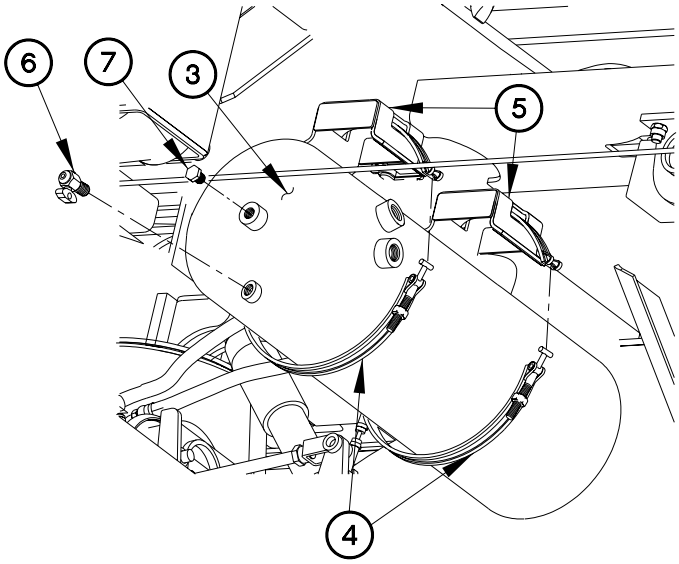
CD078R03

INSTALLATION-Continued

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

3. Apply sealing compound to threads of fitting (7) and drain valve (6).
4. Install fitting (7) in air tank (3).
5. Install drain valve (6) in air tank (3).
6. Install air tank (3) on brackets (5) with two clamps (4).



CD078R02

INSTALLATION-Continued

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

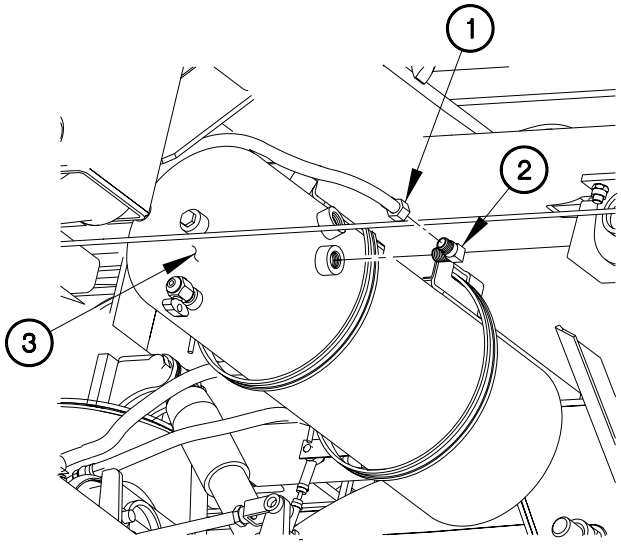
NOTE

Perform the following two steps on rear air tank.

7. Apply sealing compound to threads of 90-degree fitting (2).

8. Install 90-degree fitting (2) in air tank (3).

9. Connect hose (1) to 90-degree fitting (2).



CD078I01

OPERATIONAL CHECK

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer). Allow towing vehicle time for air pressure to reach normal operating pressure.

2. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer). Do not drain air tank as part of trailer uncoupling task.

3. Check around drain valve and fittings for air leaks.

OPERATIONAL CHECK-Continued

4. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
5. Road-test trailer and check for proper brake operation.
6. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

EMERGENCY/SERVICE GLADHAND AND HOSE REPLACEMENT 0079 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Sealing Compound (Item 15, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-293-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) emergency/service gladhands and hoses.

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

REMOVAL-Continued

WARNING

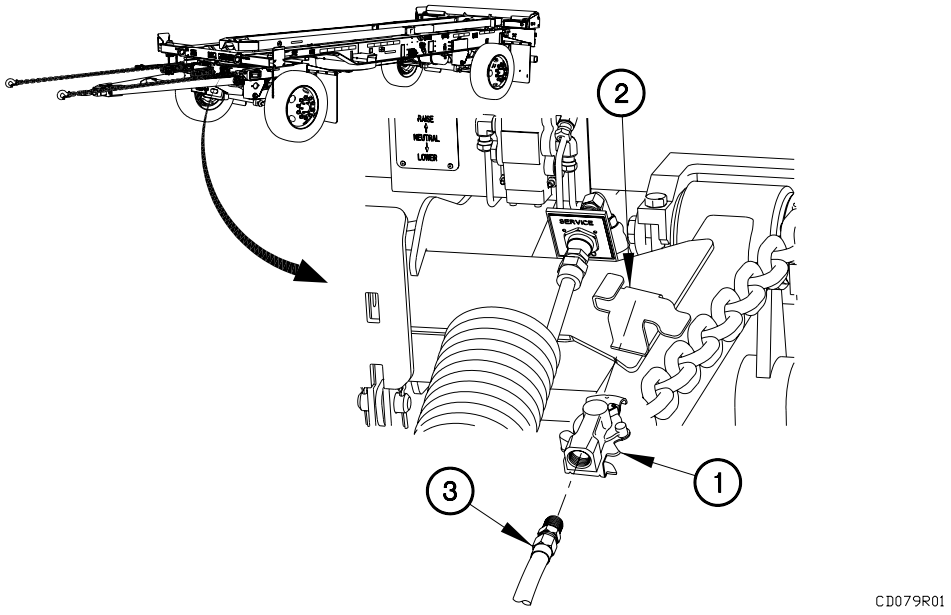
Vent air system before disconnecting air hoses. Pressurized air can blow dirt and debris with sufficient force to cause injury. Safety goggles must be worn when working with compressed air. Failure to comply may result in injury to personnel.

NOTE

Perform the following seven steps on EMERGENCY/SERVICE gladhand hoses. Both EMERGENCY and SERVICE gladhand hoses are removed the same way. SERVICE gladhand hose shown.

1. Remove SERVICE gladhand (1) from bracket (2).

2. Remove SERVICE gladhand (1) from SERVICE gladhand hose (3).

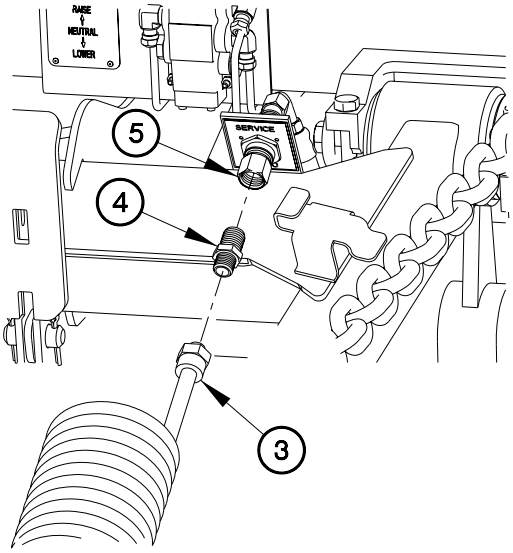


EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

REMOVAL-Continued

3. Remove SERVICE gladhand hose (3) from adapter (4).

4. Remove adapter (4) from coupling (5).

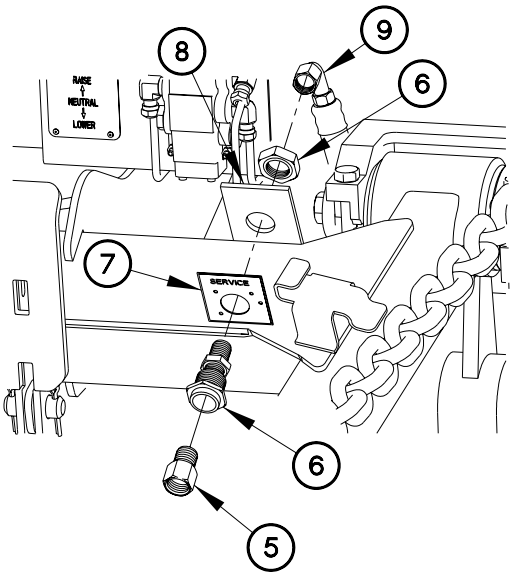


CD079R02

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

REMOVAL – Continued

5. Remove coupling (5) from tubing connector (6).
6. Remove tubing connector (6) and data plate (7) from frame rail (8).
7. Remove tubing connector (6) from hose (9).



CD079R03

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

INSTALLATION

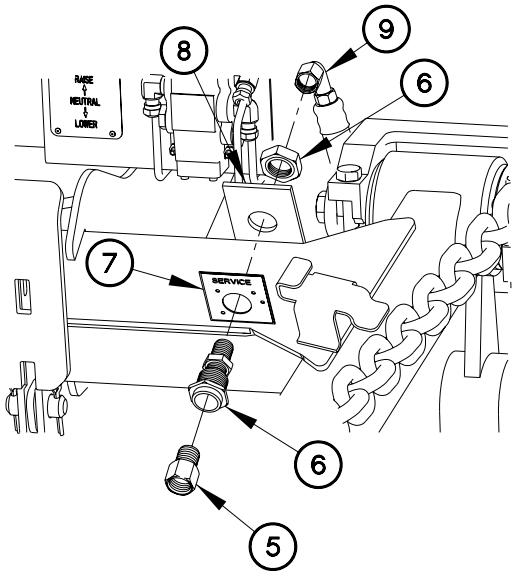
WARNING

Adhesives and compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in a well-ventilated area. If adhesive or compound get on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Perform the following eight steps on EMERGENCY/SERVICE gladhand hoses. Both EMERGENCY and SERVICE gladhand hoses are installed the same way. SERVICE gladhand hose shown.

1. Apply sealant to tubing connector (6).
2. Install tubing connector (6) in hose (9).
3. Install data plate (7) and tubing connector (6) on frame rail (8).
4. Install coupling (5) in tubing connector (6).



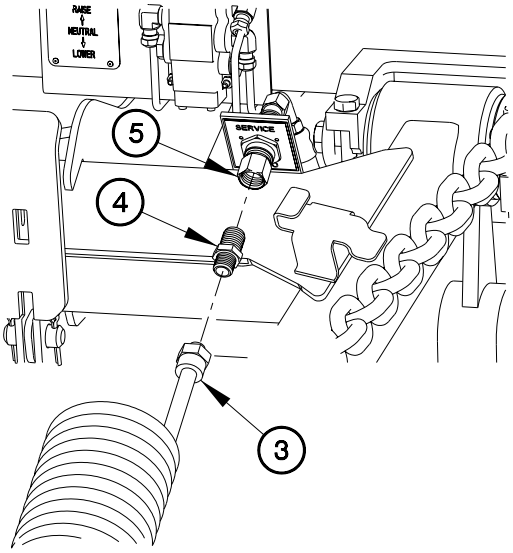
CD079R03

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

INSTALLATION-Continued

5. Install adapter (4) in coupling (5).

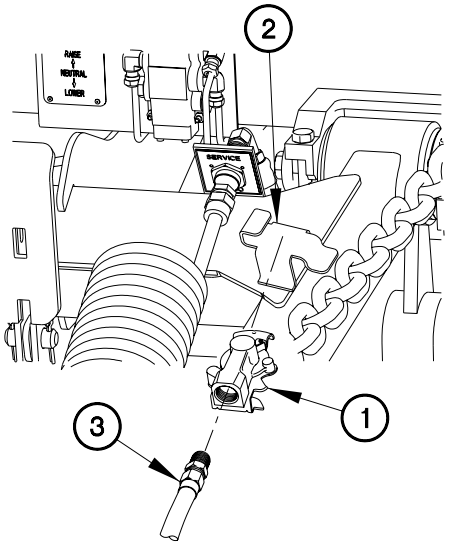
6. Connect SERVICE gladhand hose (3) to adapter (4).



CD079R02

7. Install SERVICE gladhand hose (3) in SERVICE gladhand (1).

8. Install SERVICE gladhand (1) in bracket (2).



CD079I01

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check Emergency/Service gladhand air hoses for leaks.
3. Check for proper operation of Emergency/Service galdhands (WP 0013 00).
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

AIR RIDE CONTROL VALVE REPLACEMENT 0080 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts (Cont)

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Sealing Compound (Item 15, WP 0165 00)
Nut, Self-Locking (4) (Item 27, WP 0168)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) air ride control valve.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

WARNING

Vent air system before disconnecting air lines. Pressurized air can blow dirt and debris with sufficient force to cause injury. Safety goggles must be worn when working with compressed air. Failure to comply may result in injury to personnel.

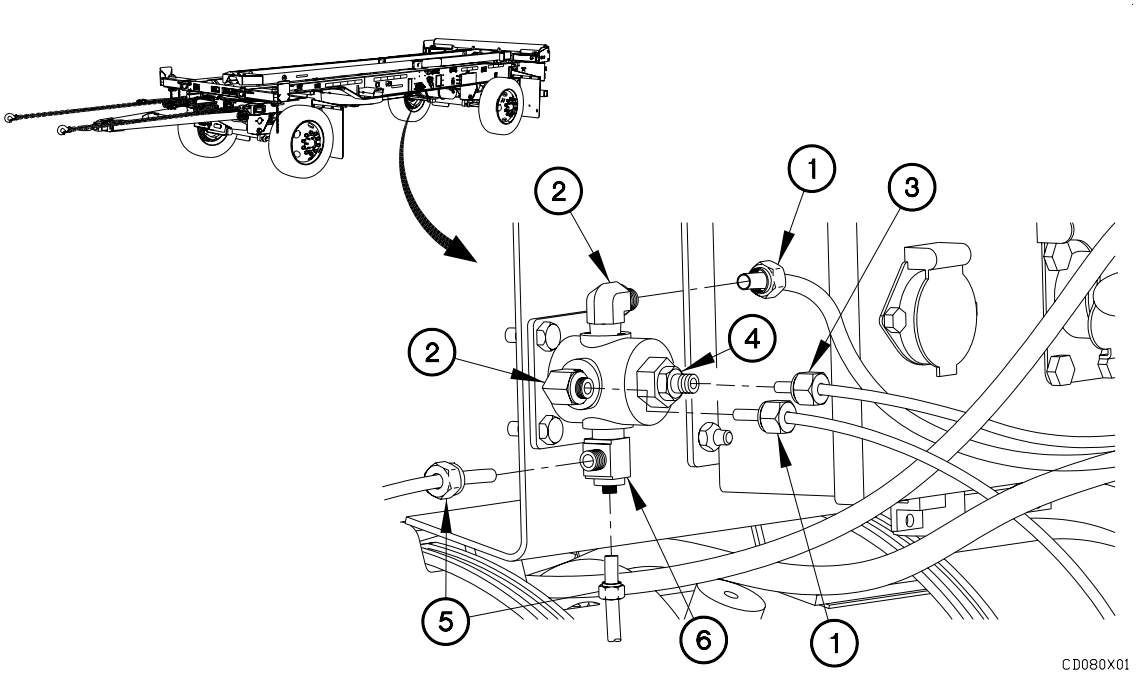
AIR RIDE CONTROL VALVE REPLACEMENT - Continued 0080 00

REMOVAL

NOTE

Tag air hoses and connection points prior to disconnecting.

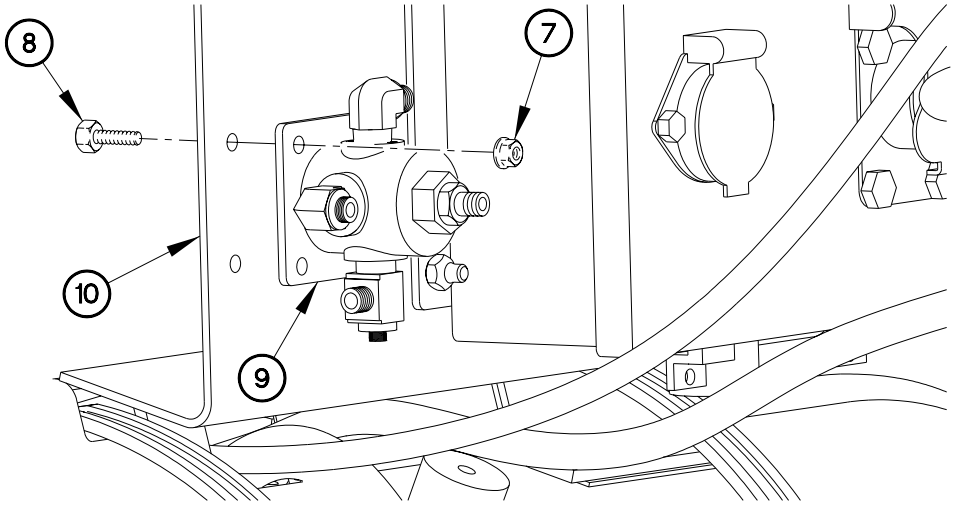
1. Drain air tanks.
2. Disconnect two hoses (1) from 90-degree fittings (2).
3. Disconnect hose (3) from fitting (4).
4. Disconnect two hoses (5) from tee-fitting (6).



AIR RIDE CONTROL VALVE REPLACEMENT - Continued 0080 00

REMOVAL - Continued

5. Remove four self-locking nuts (7), bolts (8), and air ride control valve (9) from bracket (10). Discard self-locking nuts.

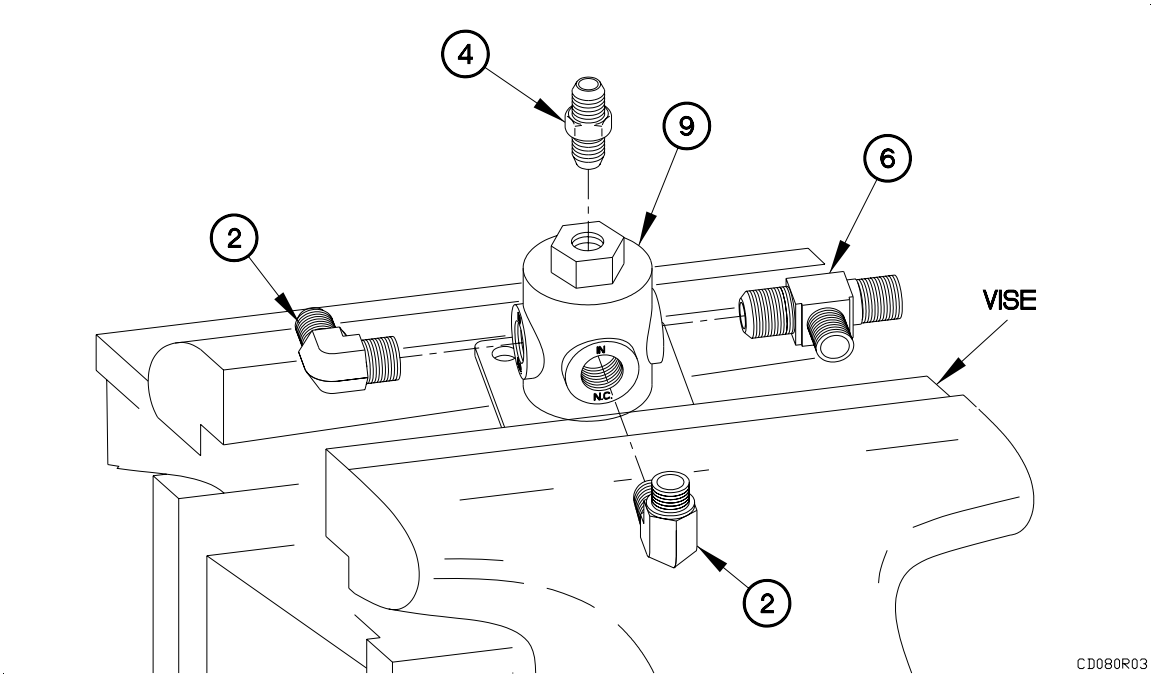


CD080R02

AIR RIDE CONTROL VALVE REPLACEMENT - Continued 0080 00

REMOVAL - Continued

6. Place air ride control valve (9) in a vise.
7. Remove two 90-degree fittings (2) from air ride control valve (9).
8. Remove fitting (4) from air ride control valve (9).
9. Remove tee-fitting (6) from air ride control valve (9).



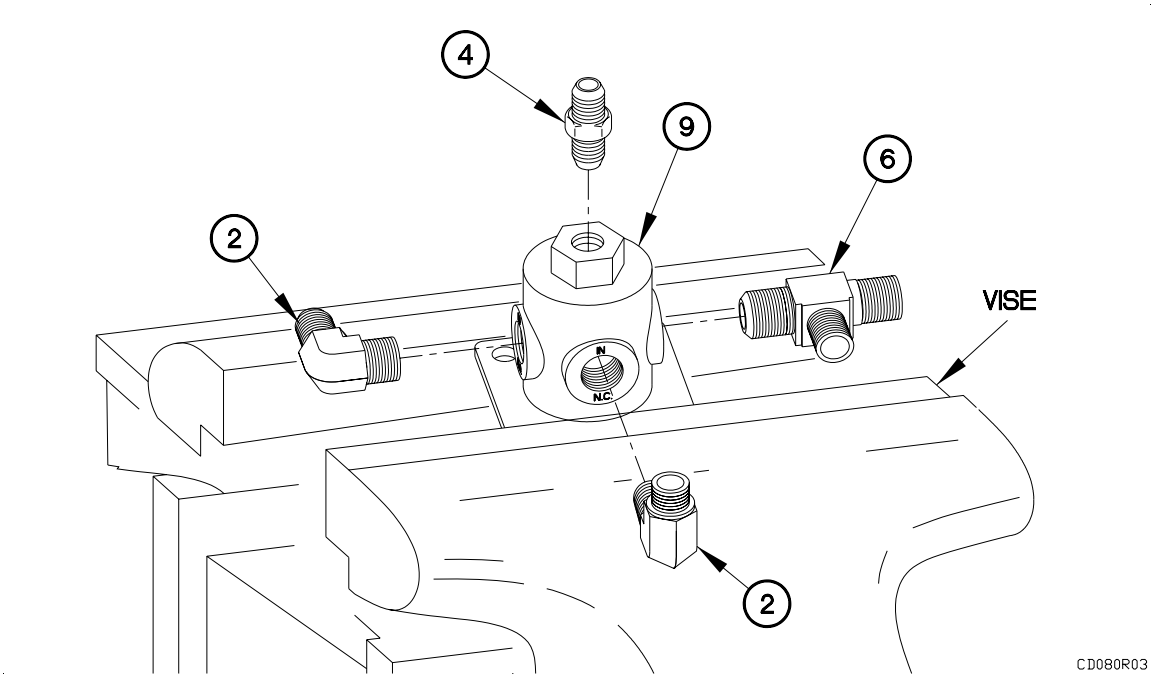
AIR RIDE CONTROL VALVE REPLACEMENT - Continued 0080 00

INSTALLATION

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use ion well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

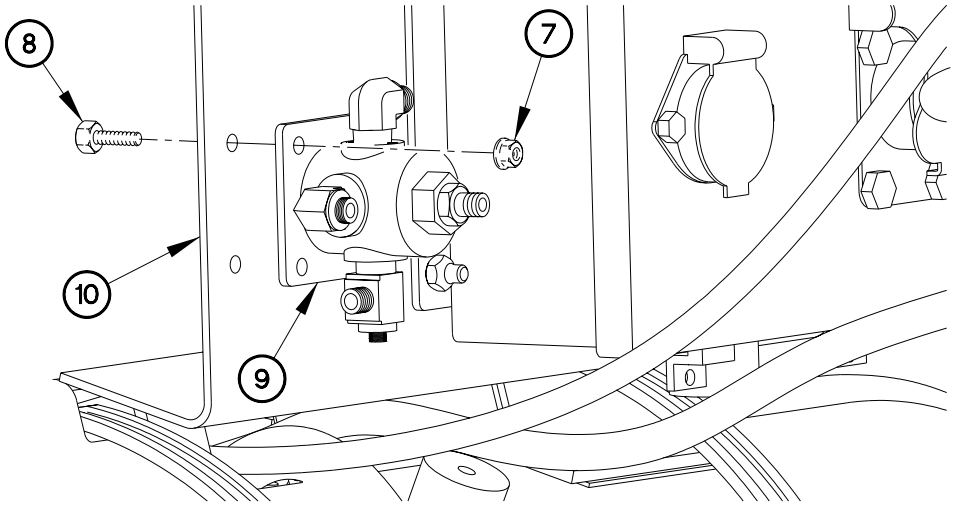
1. Apply sealing compound to threads of tee-fitting (6), fitting (4), and two 90-degree fittings (2).
2. Place air ride control valve (9) in a vise.
3. Install tee-fitting (6) on air ride control valve (9).
4. Install fitting (4) on air ride control valve (9).
5. Install two 90-degree fittings (2) on air ride control valve (9).



AIR RIDE CONTROL VALVE REPLACEMENT - Continued 0080 00

INSTALLATION - Continued

6. Position air ride control valve (9) on bracket (10) with four bolts (8) and self-locking nuts (7).
7. Tighten self-locking nuts (7) to 96-120 lb-in. (11-13 N•m).

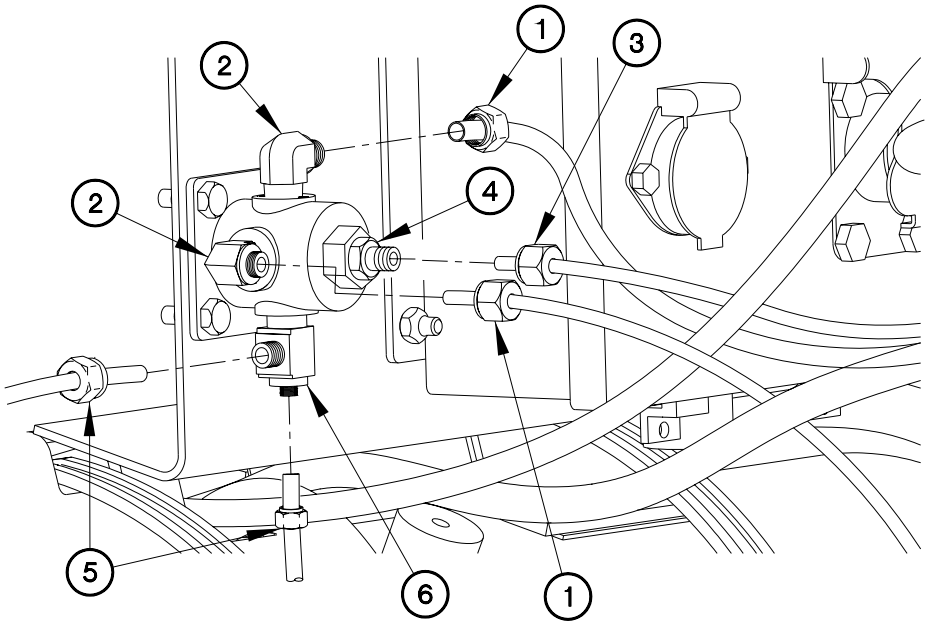


CD080R02

AIR RIDE CONTROL VALVE REPLACEMENT - Continued 0080 00

INSTALLATION - Continued

8. Connect two hoses (5) to tee-fitting (6).
9. Connect hose (3) to fitting (4).
10. Connect two hoses (1) to 90-degree fittings (2).



CD080R01

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check air ride control valve air hoses for leaks.
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

AIR BRAKE CHAMBER REPLACEMENT 0081 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP 00 0167)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts
Washer, Lock (2) (Item 18, WP 0168 00)

Materials/Parts (Cont)
Pin, Cotter (Item 41, WP 0168 00)
Pin, Cotter (Item 43, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Spring brakes caged (WP 0055 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) air brake arms.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Spring brakes must be caged prior to removal of air chamber. Failure to comply may result in serious injury or death to personnel.

CAUTION

Avoid pinching air hoses when positioning trestles. Failure to comply may result in damage to equipment.

NOTE

LH and RH air brake chambers are installed the same way. LH air brake chamber shown.

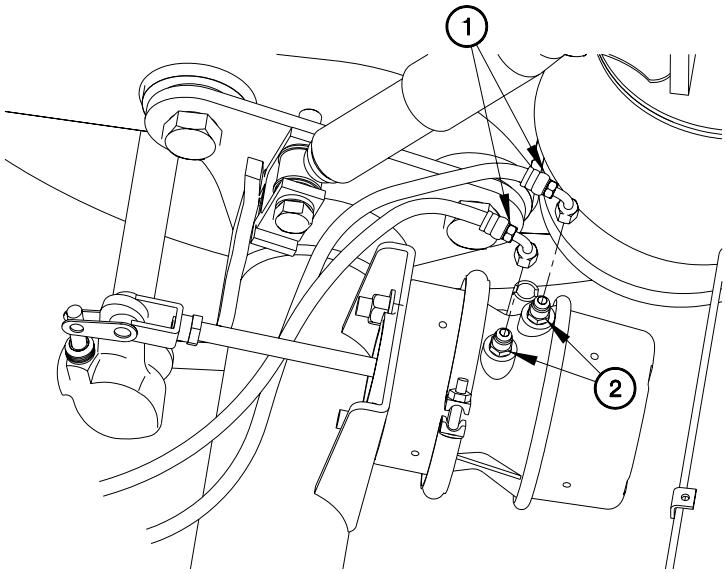
REMOVAL

1. Drain air tanks.

NOTE

Tag hoses and connection points prior to removal.

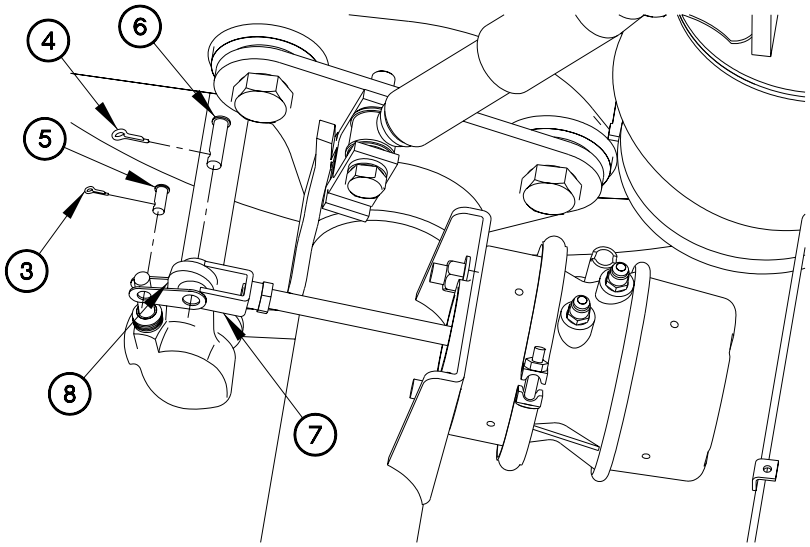
2. Disconnect two hoses (1) from fittings (2).



CD081R01

3. Remove cotter pins (3 and 4) from clevis pins (5 and 6). Discard cotter pins.

4. Remove clevis pins (5 and 6) from air brake chamber (7) and slack adjuster (8).



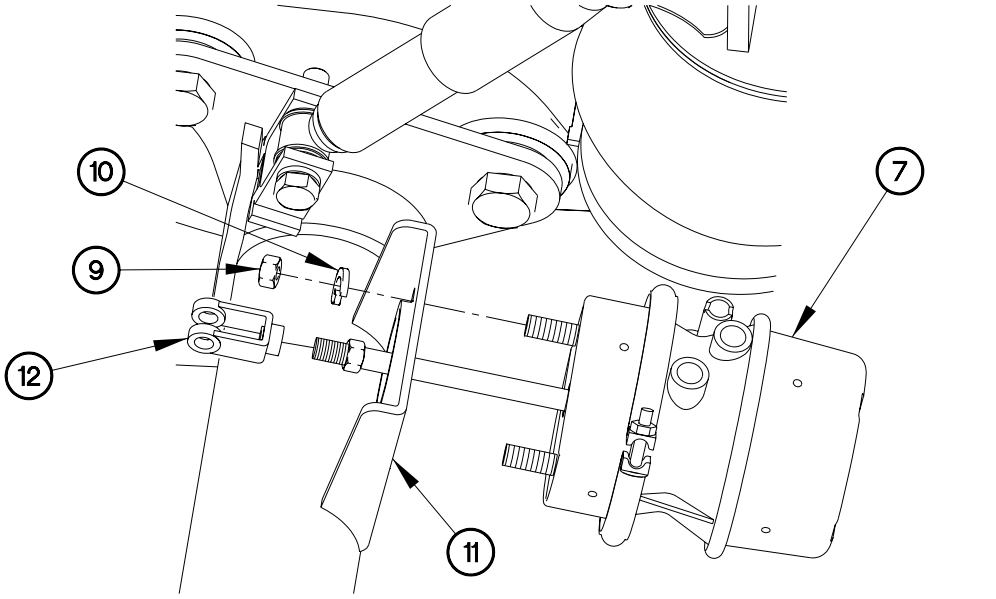
CD081R02

AIR BRAKE CHAMBER REPLACEMENT - Continued 0081 00

REMOVAL - Continued

5. Remove two nuts (9), lockwashers (10), and air brake chamber (7) from axle (11). Discard lockwashers.

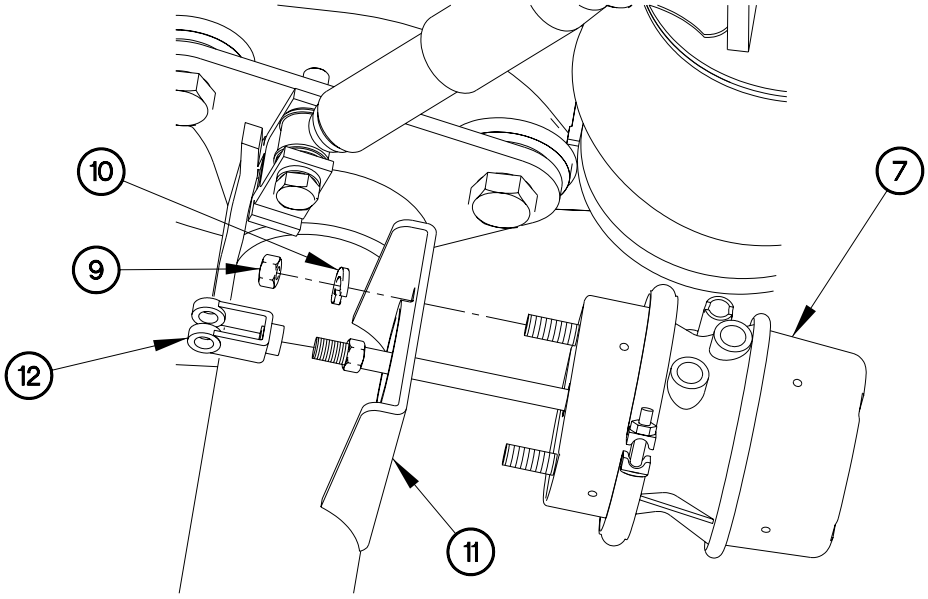
6. Remove clevis (12) from air brake chamber (7).



AIR BRAKE CHAMBER REPLACEMENT - Continued 0081 00

INSTALLATION

1. Install clevis (12) on air brake chamber (7).
2. Install air brake chamber (7) on axle (11) with two lockwashers (10) and nuts (9).

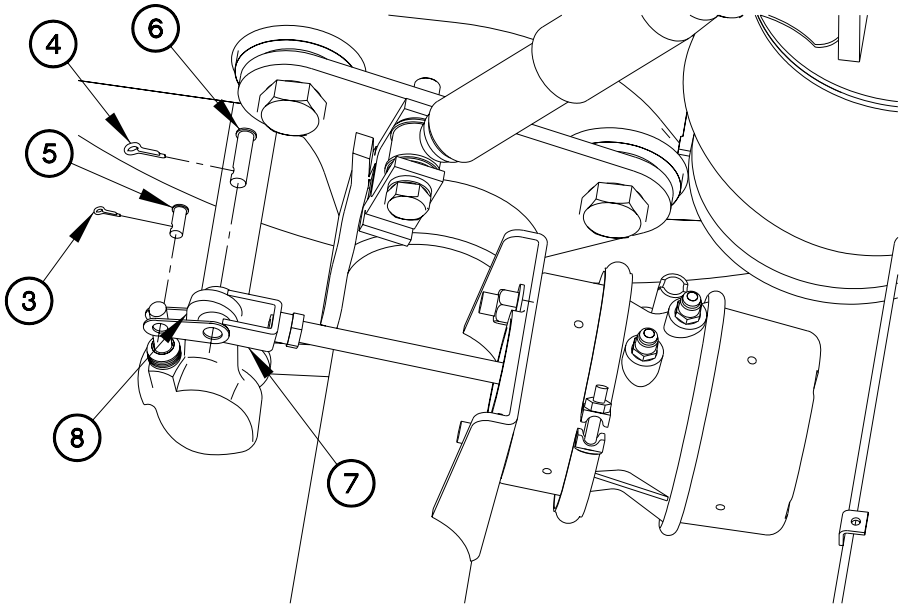


AIR BRAKE CHAMBER REPLACEMENT - Continued 0081 00

INSTALLATION - Continued

3. Install air brake chamber (7) on slack adjuster (8) with clevis pins (5 and 6).

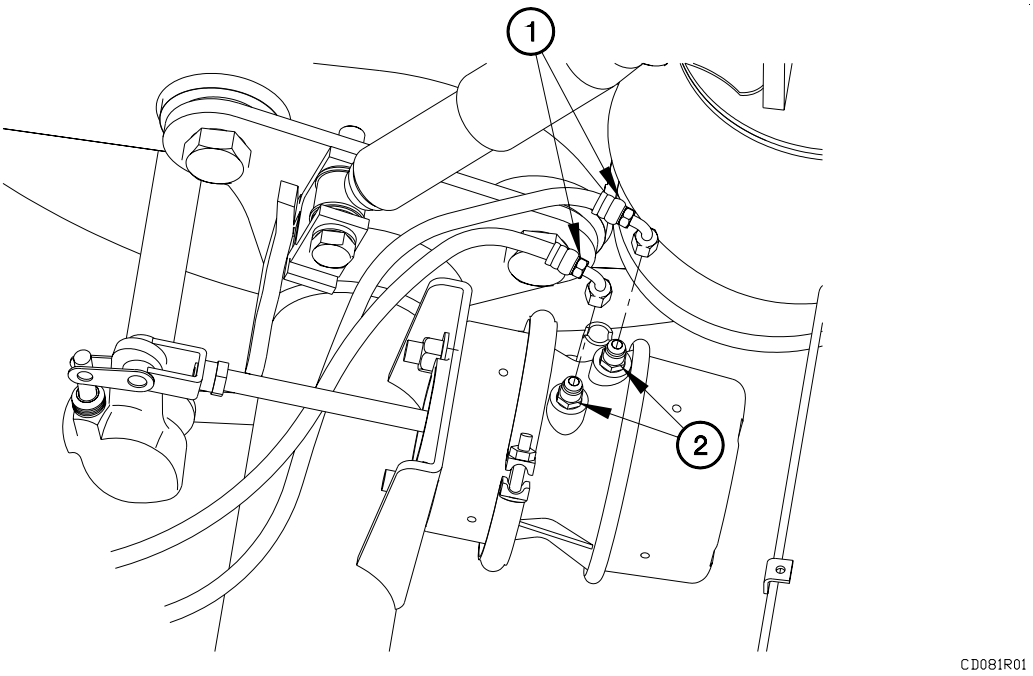
4. Install cotter pins (3 and 4) on clevis pins (5 and 6).



CD081R02

INSTALLATION - Continued

5. Connect two hoses (1) to fittings (2).



OPERATIONAL CHECKS

1. Uncage spring brakes. (WP 0055 00).
2. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
3. Operate trailer and check for normal brake operation (WP 0011 00, TM 9-2320-392-10-1).
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

BREATHER VALVE REPLACEMENT 0082 00

THIS WORK PACKAGE COVERS:

Removal, Installation. Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 00 0167)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont)

Sealing Compound (Item 2, WP 0165 00)

Equipment Conditions

Turntable removed for access (WP 0099 00) (front breather valve only).
Composite taillight assembly removed (WP 0060 00) (rear breather valve only)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) breather valve.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Use extreme caution when working in between frame rail and turntable assembly. Make sure multiple precautions have been taken to support frame rail from turntable assembly (jack stands, cargo sling, wooden blocks, etc). Failure to comply may result in serious injury or death to personnel or damage to equipment.

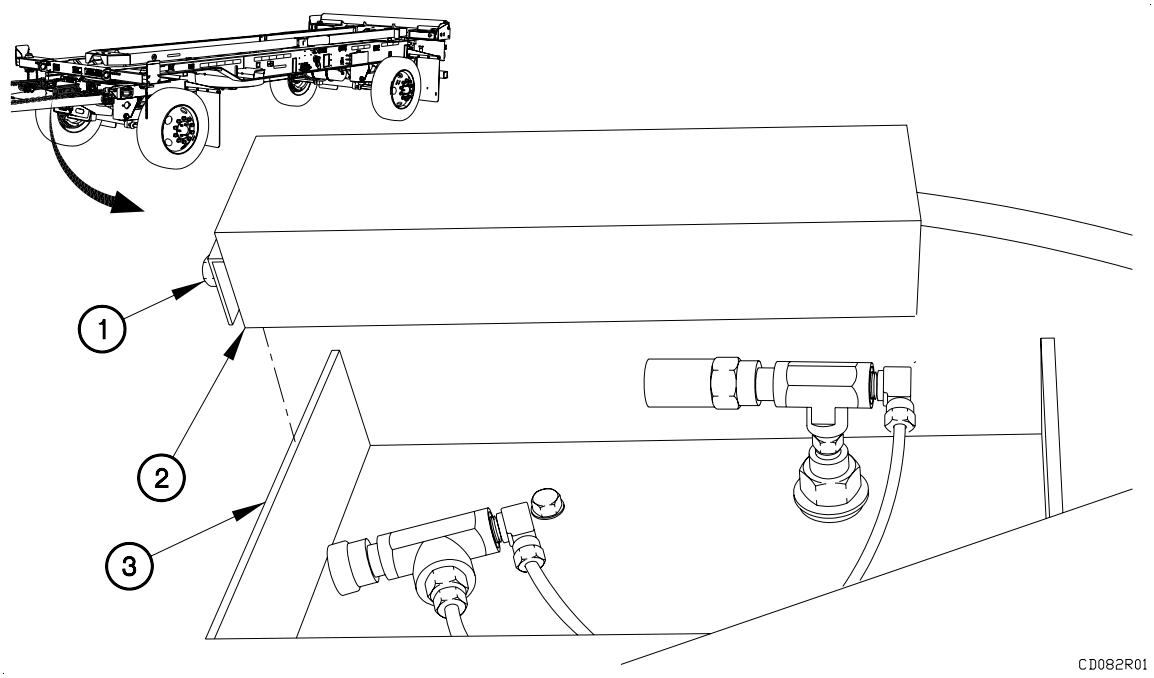
BREATHER VALVE REPLACEMENT - Continued 0082 00

REMOVAL

NOTE

Perform the following two steps if replacing the front breather valve.

1. Loosen four screws (1) on cover (2).
2. Remove cover (2) from trailer (3).



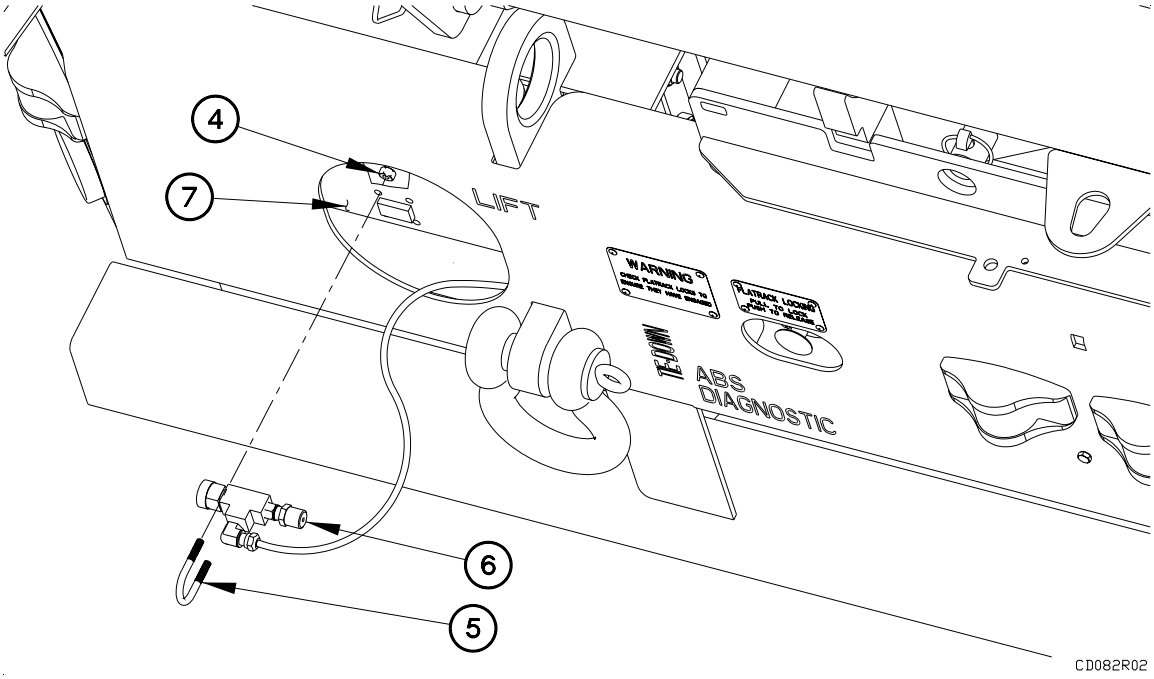
BREATHER VALVE REPLACEMENT - Continued 0082 00

REMOVAL - Continued

NOTE

Perform the following step if replacing rear breather valve.

3. Remove four self-locking nuts (4), two u-bolts (5), and breather valve assembly (6) from rear crossmember (7). Discard self-locking nuts.



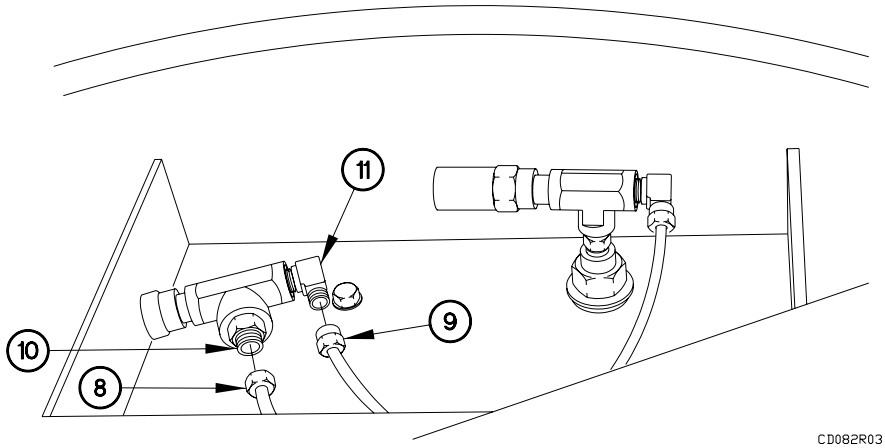
BREATHER VALVE REPLACEMENT - Continued 0082 00

REMOVAL - Continued

NOTE

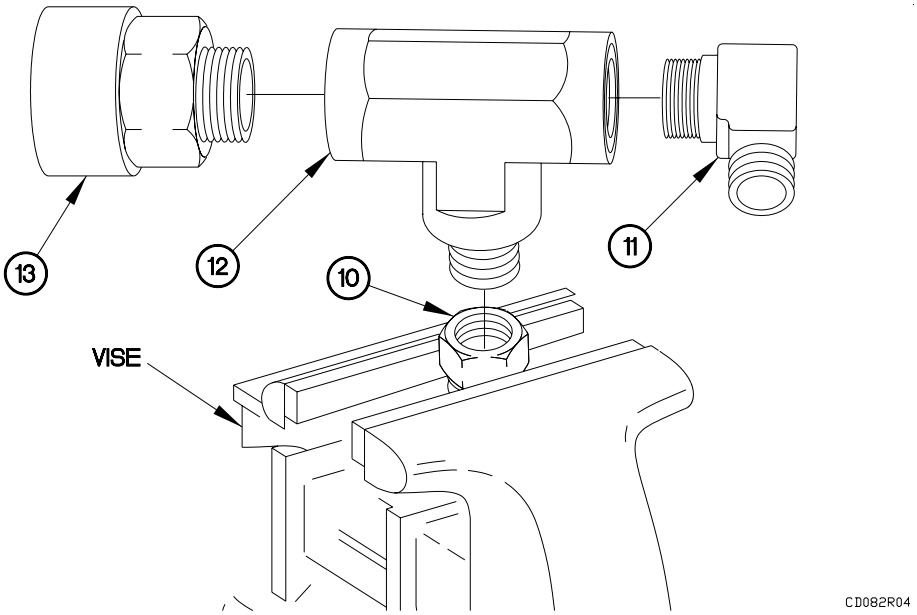
Tag hoses and connection points prior to disconnecting.

4. Disconnect hoses (8 and 9) from adapter (10) and 90-degree fitting (11).



5. Remove adapter (10) and 90-degree fitting (11) from tee fitting (12).

6. Remove breather valve (13) from tee fitting (12).



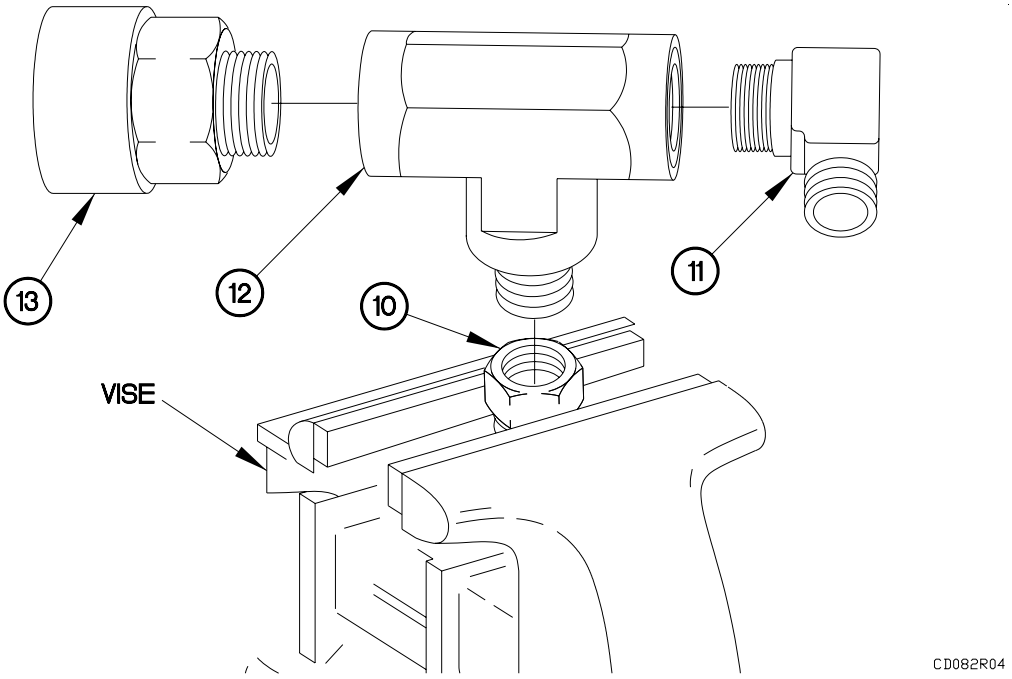
BREATHER VALVE REPLACEMENT - Continued 0082 00

INSTALLATION

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

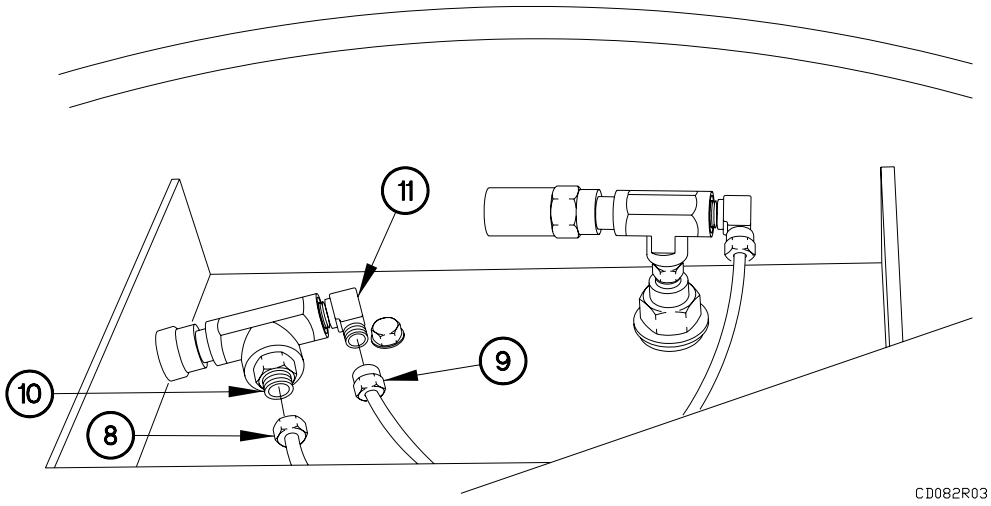
1. Apply sealing compound to threads of adapter (10), 90-degree fitting (11), and breather valve (13).
2. Install breather valve (13) in tee fitting (12).
3. Install adapter (10) and 90-degree fitting (11) in tee fitting (12).



BREATHER VALVE REPLACEMENT - Continued 0082 00

INSTALLATION – Continued

7. Connect hoses (8 and 9) to adapter (10) and 90-degree fitting (11).



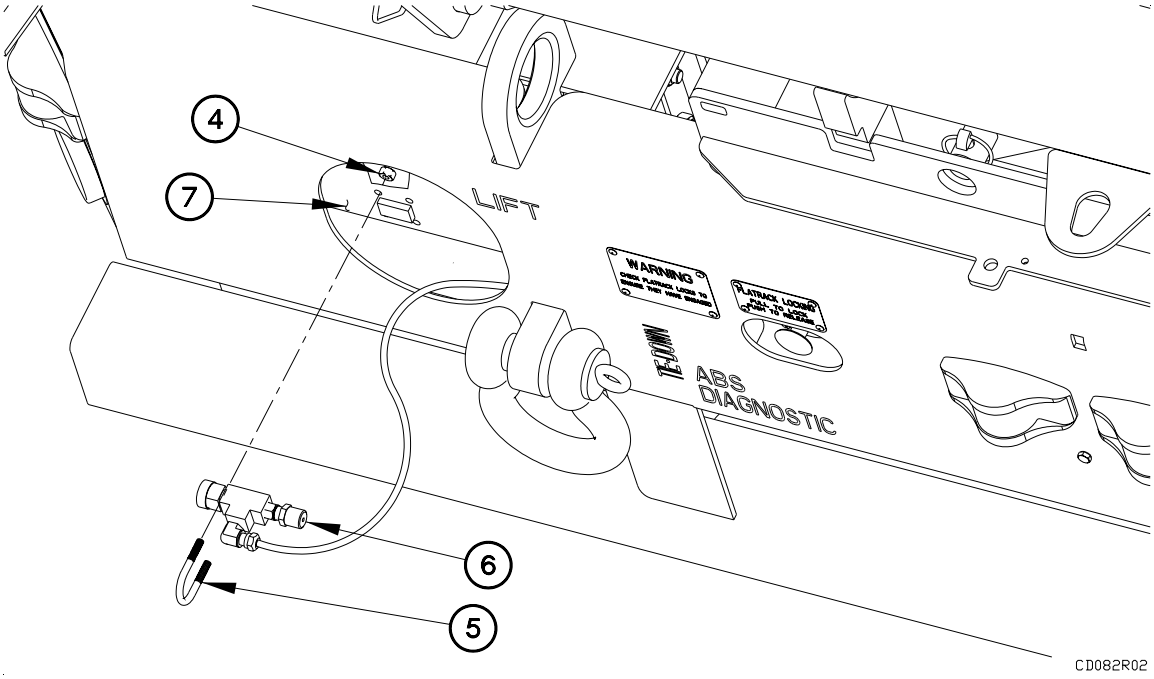
BREATHER VALVE REPLACEMENT - Continued 0082 00

INSTALLATION – Continued

NOTE

Perform the following step if installing rear breather valve.

8. Install breather valve assembly (6) on rear crossmember (7) with two u-bolts (5) and four self-locking nuts (4).



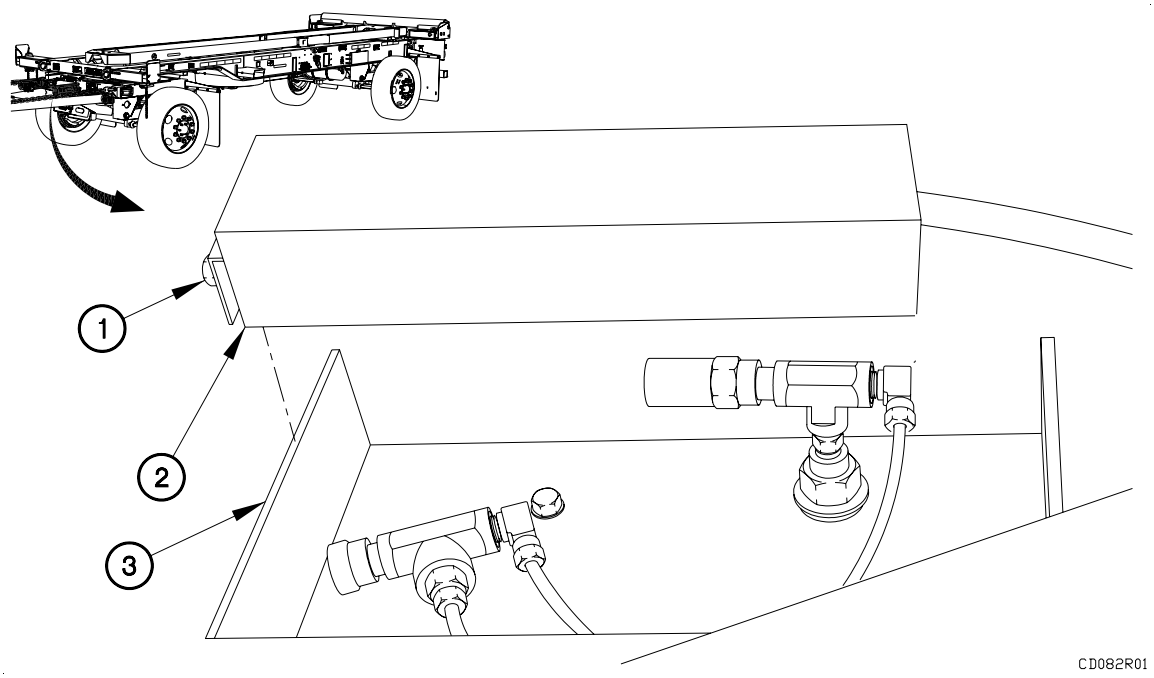
BREATHER VALVE REPLACEMENT - Continued 0082 00

INSTALLATION – Continued

NOTE

Perform the following two steps if installing the front breather valve.

9. Position cover (2) on trailer (3).
10. Tighten four screws (1) to 96-120 lb-in. (11-14 N•m).



OPERATIONAL CHECKS

1. Install composite taillights (WP 0060 00) (rear breather valve only).
2. Install turntable (WP 0099 00) (front breather valve only).
3. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
4. Check breather valve air hoses for leaks.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

SUSPENSION ASSEMBLY REPLACEMENT 0083 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 34, WP 0167 00)
Multiplier, Torque Wrench (Item 13, WP 0167 00)
Jack, Leveling Support (2) (Item 11, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP 0167 00)
Wrench Set, Socket (Item 26, WP 1068 00)

Materials/Parts
Nut, Self-locking (3) (Item 25, WP 0168 00)

Personnel Required
Two

Equipment Conditions
Tires removed (on both sides suspension assembly is being replaced) (WP 0053 00).
Air brake air chamber removed (on side suspension assembly is being replaced) (WP 0081 00).

REMOVAL

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

SUSPENSION ASSEMBLY REPLACEMENT - Continued 0083 00

REMOVAL - Continued

CAUTION

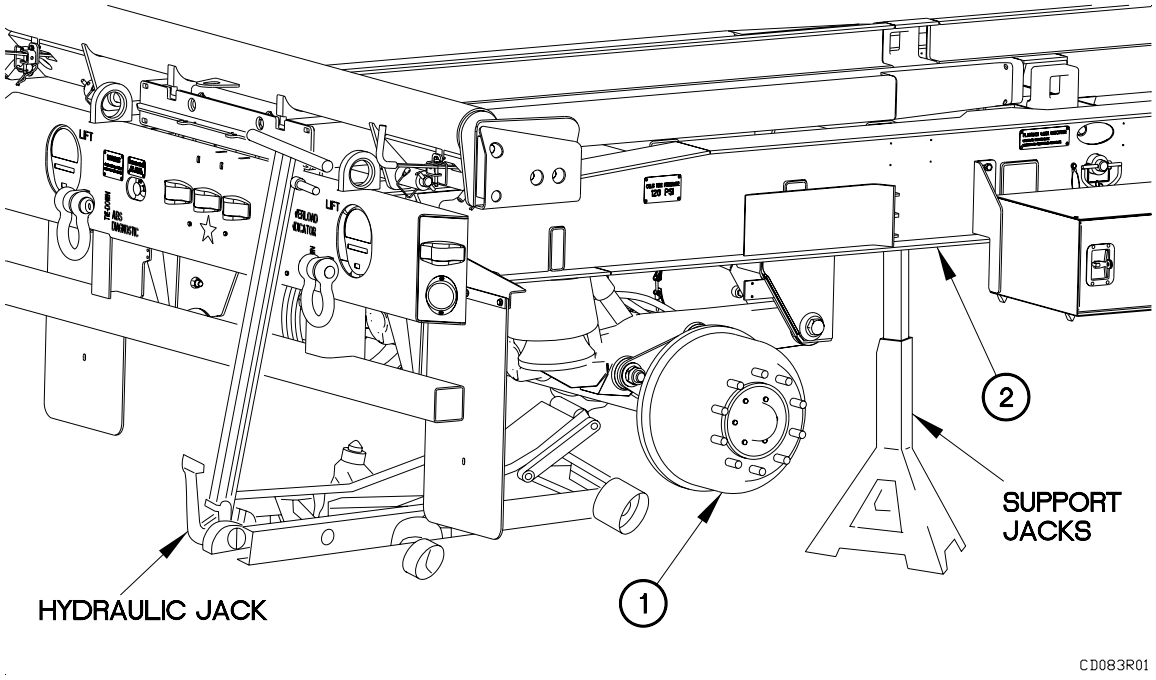
Raise trailer so that swing arm is fully extended before positioning vehicle leveling support jacks. Failure to comply may result in damage to equipment.

NOTE

Front and rear suspension assemblies are removed the same way. Rear right suspension assembly assembly shown.

1. Position hydraulic jack under axle assembly (1).

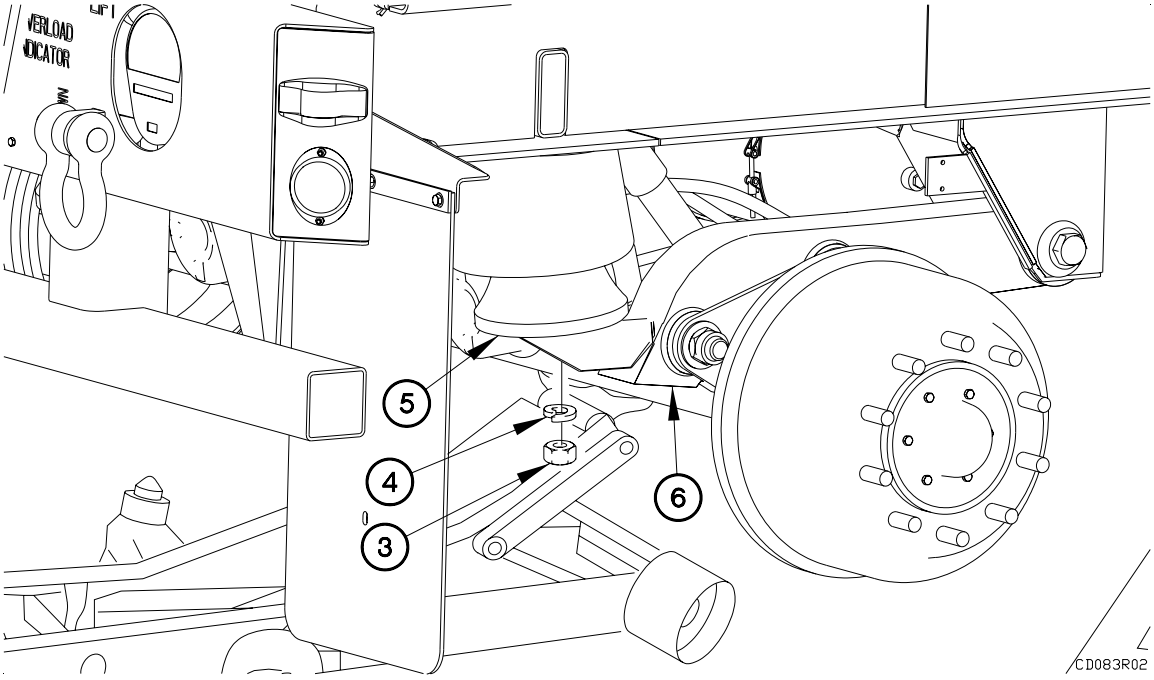
2. Position two leveling support jacks under frame rail (2).



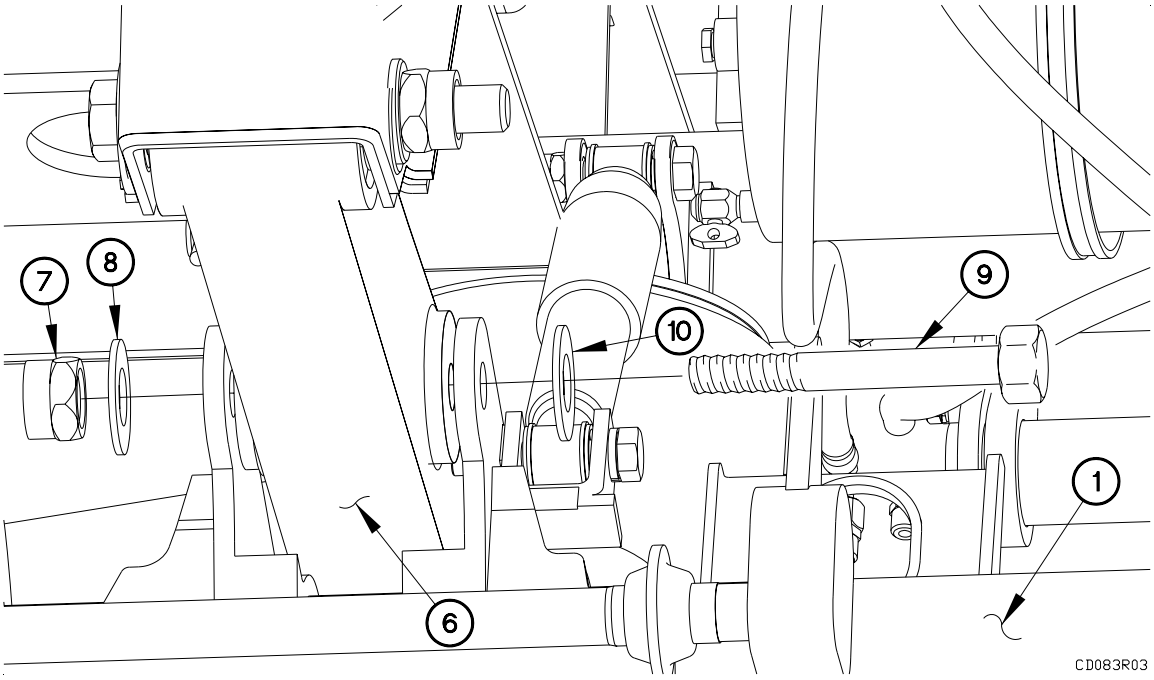
SUSPENSION ASSEMBLY REPLACEMENT - Continued 0083 00

REMOVAL - Continued

3. Remove nut (3), lockwasher (4), and air bag base (5) from equalizing beam (6). Discard lockwasher.

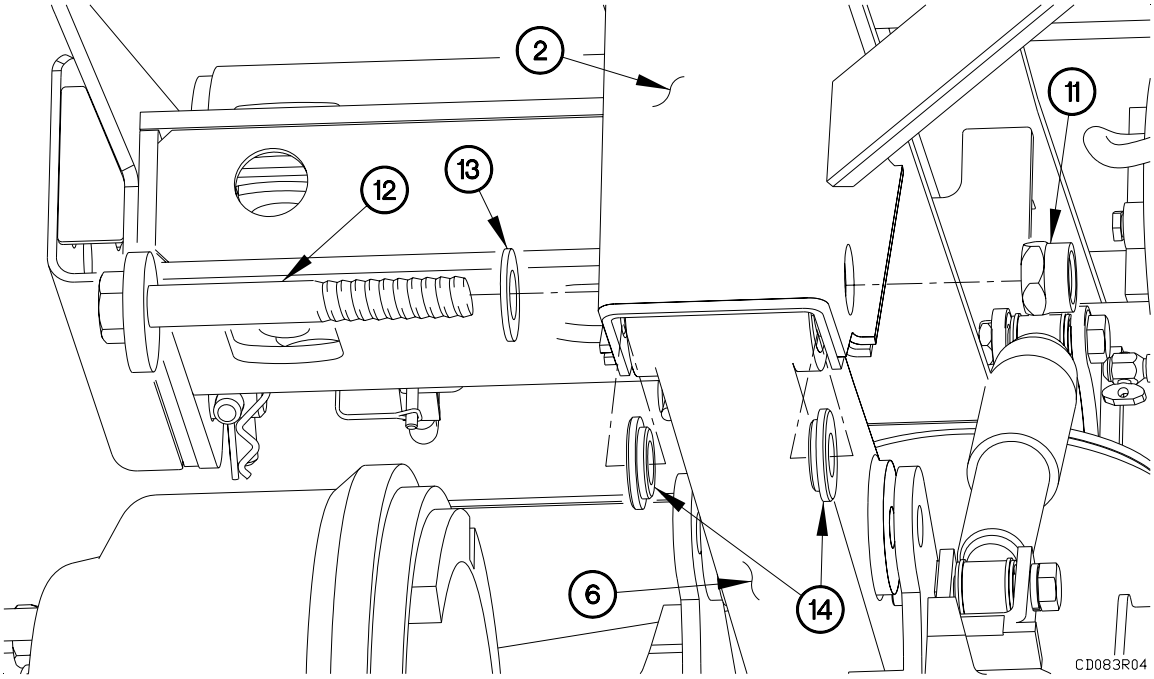


4. Remove two self-locking nuts (7), washers (8), bolts (9), washers (10), and equalizing beam (6) from axle assembly (1). Discard self-locking nuts.

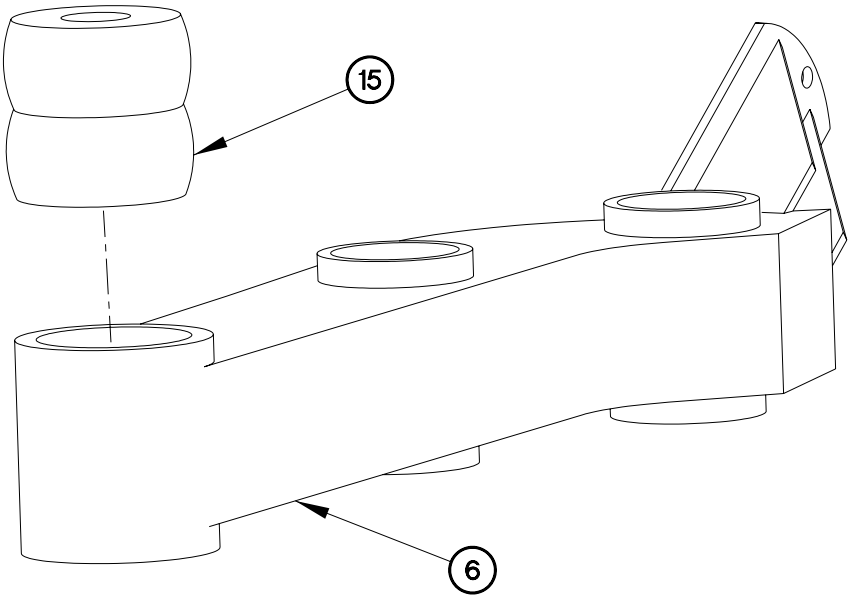


REMOVAL - Continued

5. Remove self-locking nut (11), bolt (12), spacer (13), two washers (14) and equalizing beam (6) from frame rail (2). Discard self-locking nut.



6. Remove three rubber bushings (15) from equalizing beam (6).

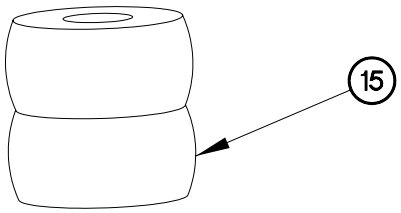


INSPECTION

NOTE

Replace a bushing if it fails any of the visual inspections.

1. Inspect three rubber bushings (15) for cracks, wear, or deformation.



CD083n01

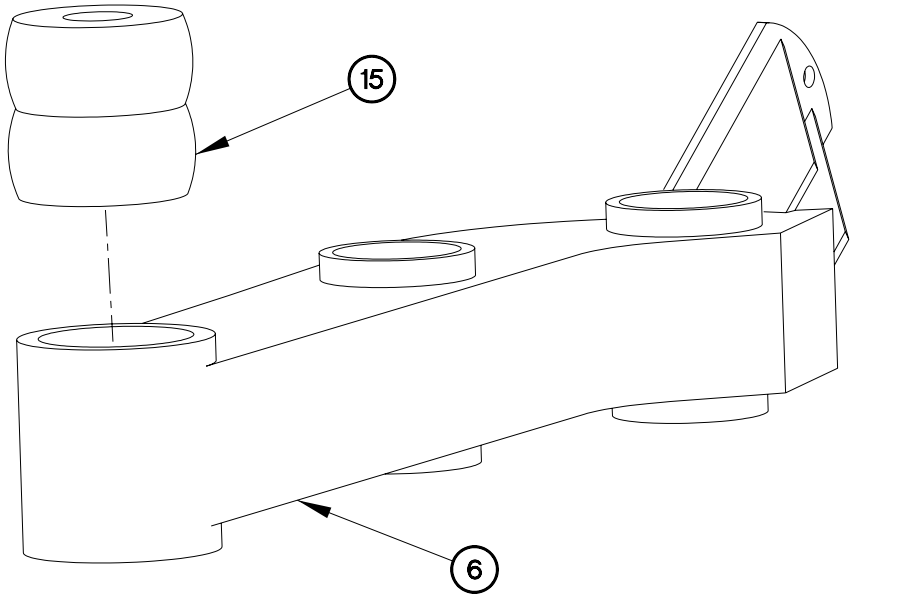
SUSPENSION ASSEMBLY REPLACEMENT - Continued 0083 00

INSTALLATION

NOTE

Front and rear suspension assemblies are installed the same way. Rear right suspension assembly assembly shown.

1. Install three rubber bushings (15) in equalizing beam (6).

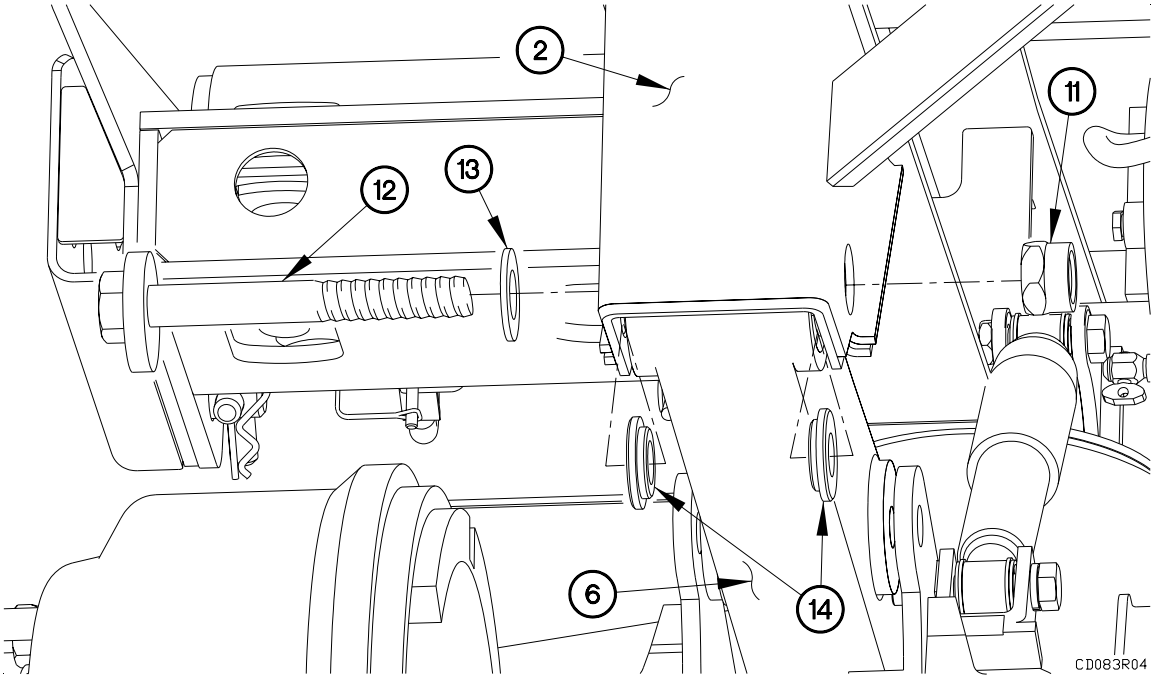


SUSPENSION ASSEMBLY REPLACEMENT - Continued 0083 00

INSTALLATION - Continued

2. Position equalizing beam (6) on frame rail (2) with two washers (14), spacer (13), bolt (12) and self-locking nut (11).

3. Tighten self-locking nut (11) to 523-578 lb-ft (709-784 N•m).

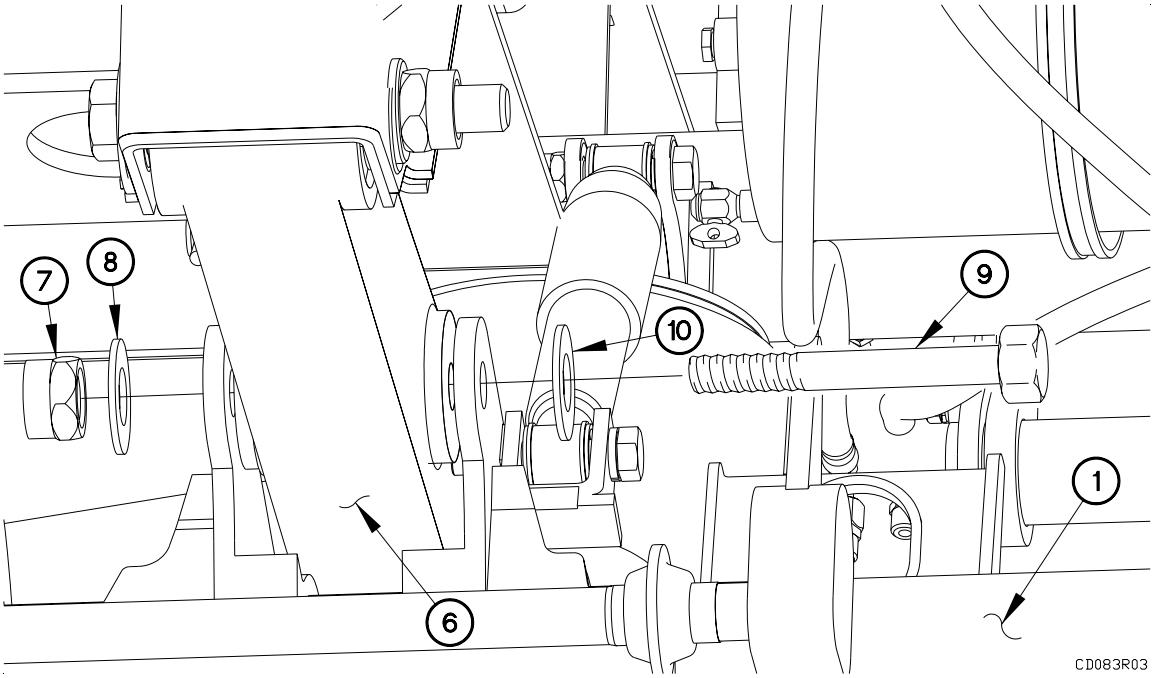


SUSPENSION ASSEMBLY REPLACEMENT - Continued 0083 00

INSTALLATION - Continued

4. Position equalizing beam (6) on axle assembly (1) with two washers (10), bolts (9), washers (8), and self-locking nuts (7).

5. Tighten two self-locking nuts (7) to 760-840 lb-ft (1030-1139 N•m).

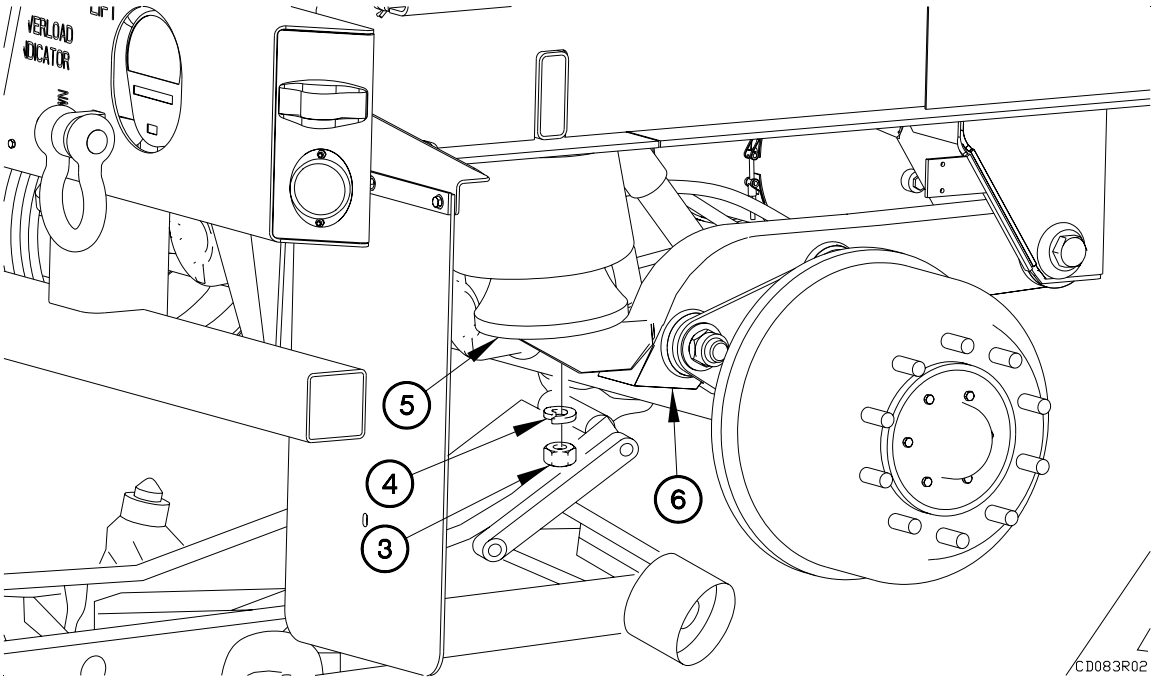


SUSPENSION ASSEMBLY REPLACEMENT - Continued 0083 00

INSTALLATION - Continued

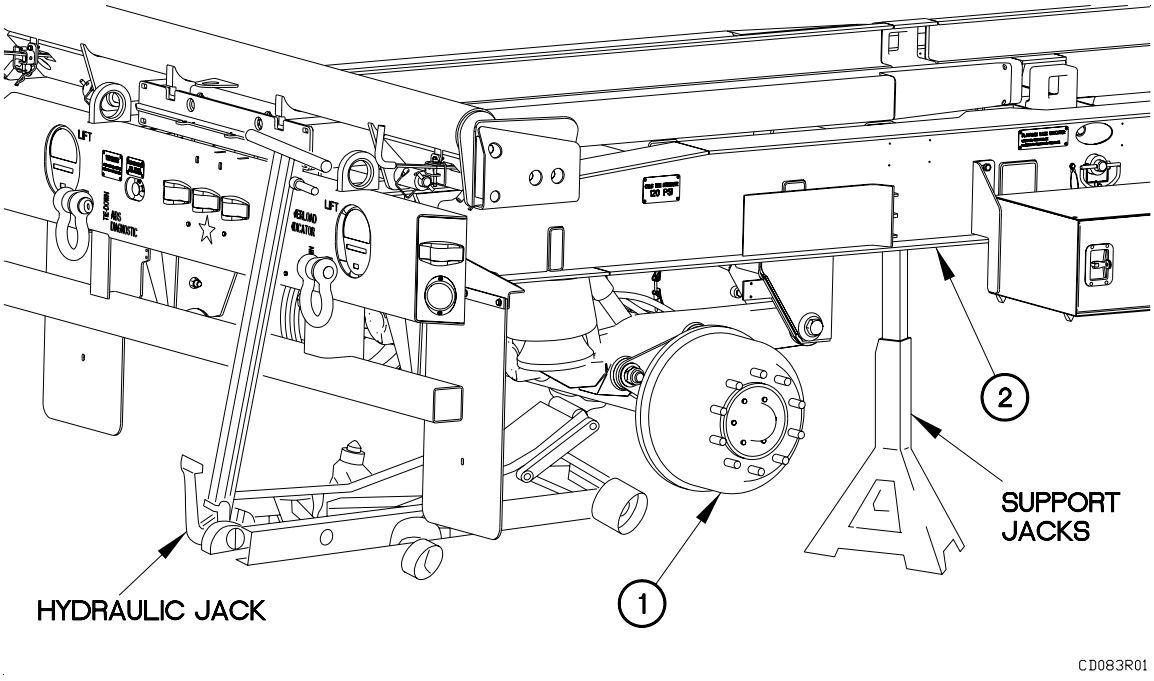
6. Position air bag base (5) on equalizing beam (6) with lockwasher (4) and nut (3).

7. Tighten nut (3) to 33-37 lb-ft (45-50 N•m).



INSTALLATION - Continued

8. Position hydraulic jack under axle assembly (1).
9. Remove two leveling support jacks from frame rail (2).
10. Remove hydraulic jack.



OPERATIONAL CHECK

1. Install air brake air chamber (on side suspension assembly was replaced) (WP 0081 00).
2. Install tires (on both sides suspension assembly was replaced) (WP 0053 00).

END OF WORK PACKAGE

HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT 0084 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont)

Sealing Compound (Item 15, WP 0165 00)
Nut, Self-Locking (2) (Item 26, WP 0168 00)
Nut, Self-Locking (2) (Item 34, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) height control valve and linkage.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Vent air system before disconnecting air hoses. Pressurized air can blow dirt and debris with sufficient force to cause injury. Safety goggles must be worn when working with compressed air. Failure to comply may result in injury to personnel.

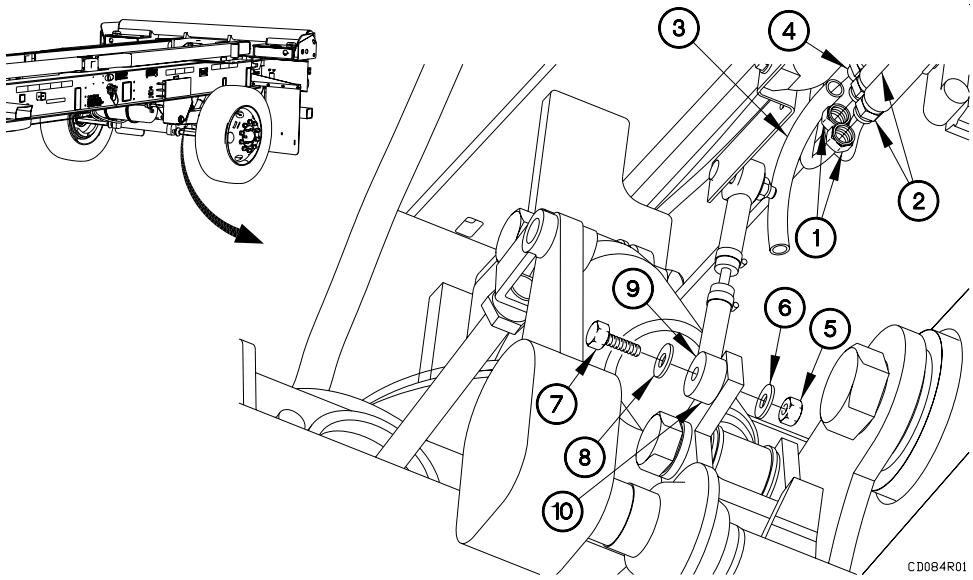
NOTE

Tag air hoses and connection points prior to disconnecting.

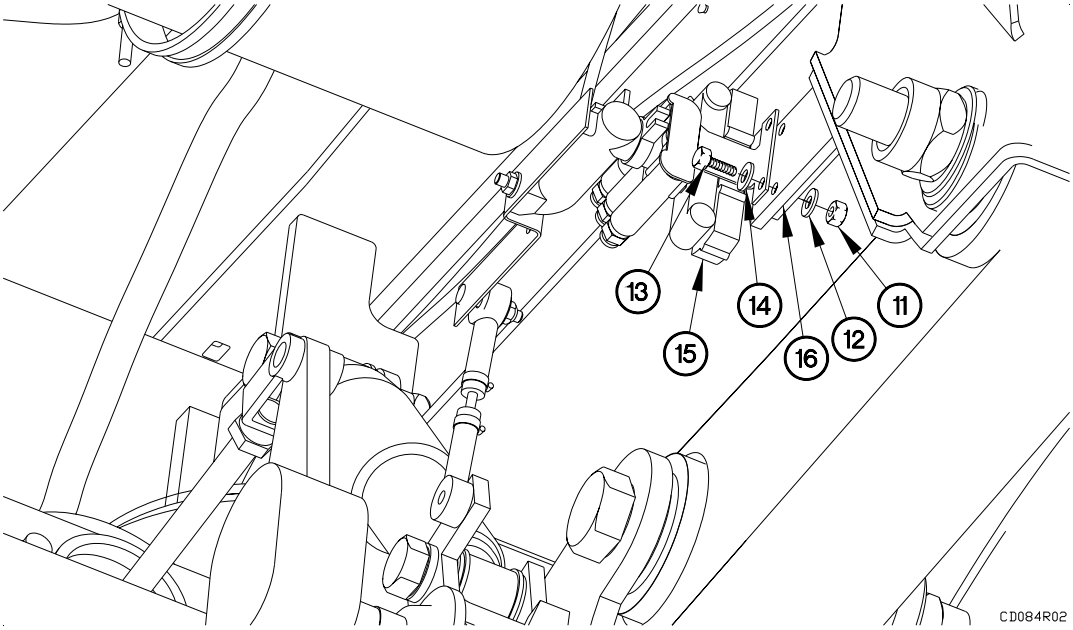
HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT - Continued 0084 00

REMOVAL

1. Drain air tanks.
2. Disconnect two hoses (1) from fittings (2).
3. Disconnect hose (3) from nylon fitting (4).
4. Remove self-locking nut (5), washer (6), bolt (7), washer (8), and height control linkage (9) from lower shock bracket (10). Discard self-locking nut.



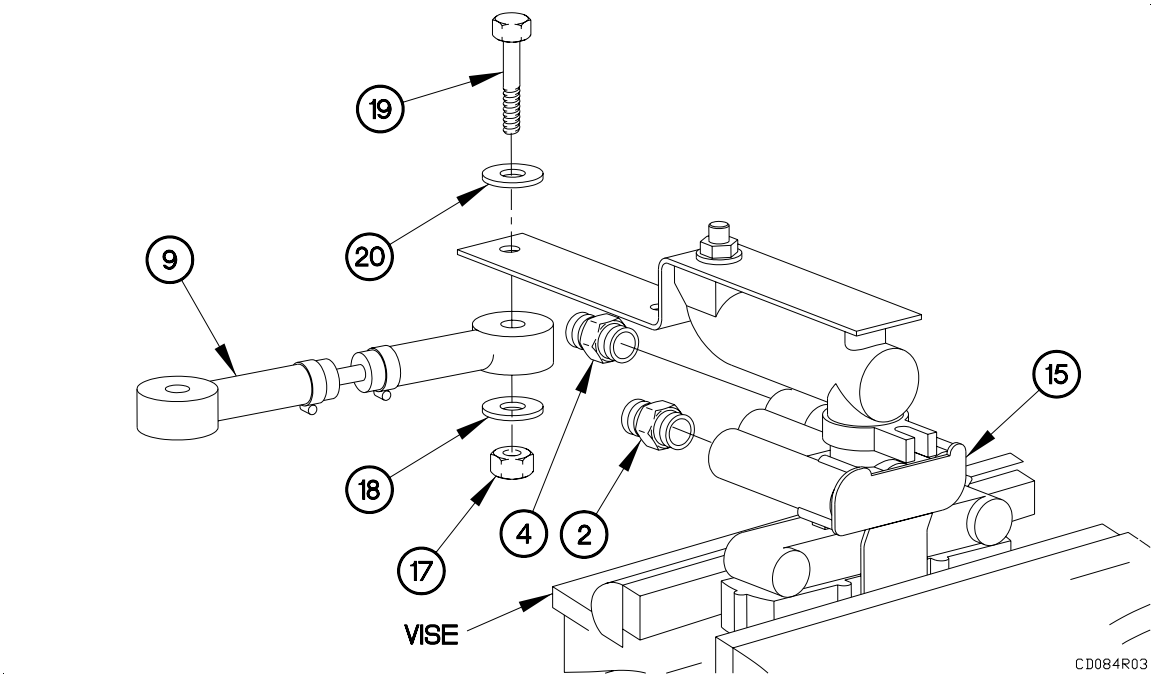
5. Remove two self-locking nuts (11), washers (12), screws (13), washers (14), and height control valve (15) from bracket (16). Discard self-locking nuts.



HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT - Continued 0084 00

REMOVAL - Continued

6. Place height control valve (15) in vise.
7. Remove two fittings (2) from height control valve (15).
8. Remove nylon fitting (4) from height control valve (15).
9. Remove self-locking nut (17), washer (18), bolt (19), washer (20), and height control linkage (9) from height control valve (15). Discard self-locking nut.



HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT - Continued 0084 00

INSTALLATION

1. Position height control linkage (9) on height control valve (15) with washer (20), bolt (19), washer (18), and self-locking nut (17).

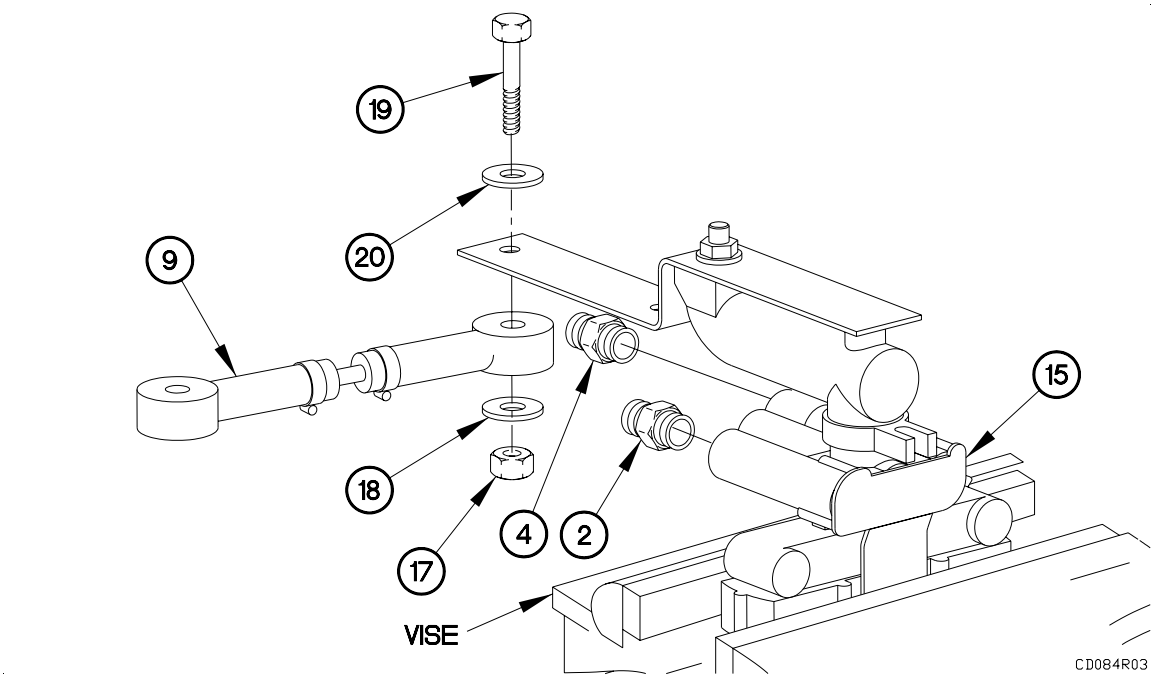
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

2. Apply sealing compound to threads of two fittings (2).

3. Install two fittings (2) on height control valve (15).

4. Install nylon fitting (4) on height control valve (15).

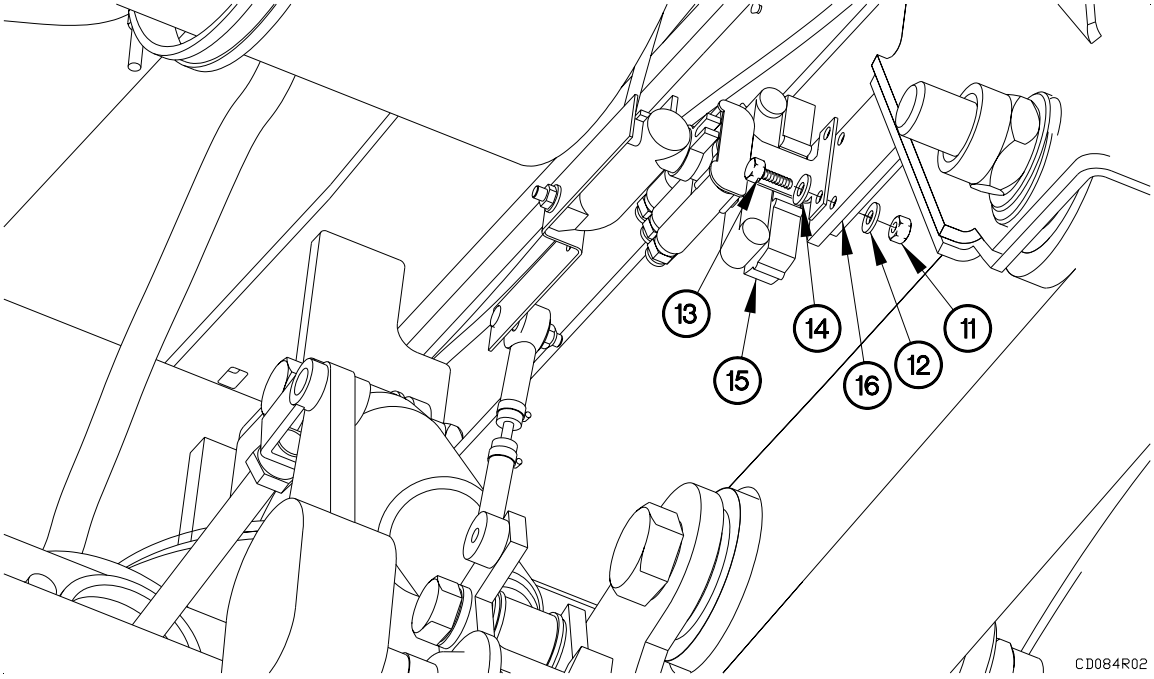


HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT - Continued 0084 00

INSTALLATION - Continued

5. Position height control valve (15) on bracket (16) with two washers (14), screws (13), washers (12), and self-locking nuts (11).

6. Tighten self-locking nuts (11) to 96-120 lb-in. (11-14 N•m).



HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT - Continued 0084 00

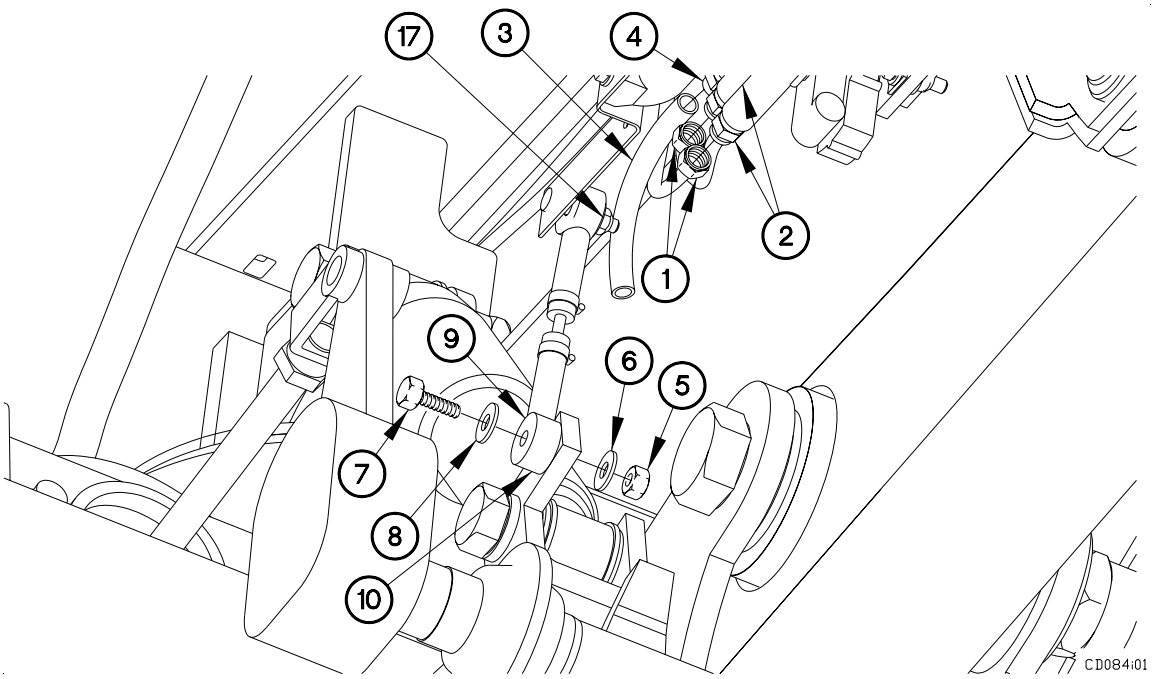
INSTALLATION - Continued

7. Position height control linkage (9) on lower shock bracket (10) with washer (8), bolt (7), washer (6), and self-locking nut (5).

8. Tighten self-locking nuts (5) and (17) to 24-48 lb-in. (3-5 N•m).

9. Connect hose (3) to nylon fitting (4).

10. Connect two hoses (1) to fittings (2).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).

2. Operate trailer and check for normal suspension operation (WP 0013 00).

3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

WHEEL BEARING/HUB SEAL REPLACEMENT 0085 00

THIS WORK PACKAGE COVERS:

Removal, Cleaning/Inspection, Installation, Operational Check

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Gloves, Rubber (Item 6, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Jack, Dolly Type, Hydraulic, (Item 10, WP 0167 00)
Wrench Set, Socket (Item 26, WP 0167 00)
Socket Set, Socket Wrench (Item 19, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 34, WP 0167 00)

Materials/Parts

Grease, Automotive and Artillery (GAA) (Item 7, WP 0165 00)
Tape, Duct (Item 19, WP 0165 00)
Gasket, Hub Cap (Item 2, WP 0168 00)
Washer, Lock (6) (Item 7, WP 0168 00)
Seal, Unitized (Item 52, WP 0168 00)
Solvent, Dry Cleaning (Item 18, WP 0165 00)
Rag, Wiping (Item 11, WP 0165 00)

Equipment Conditions

Brake shoes removed (WP 0069 00).

GENERAL

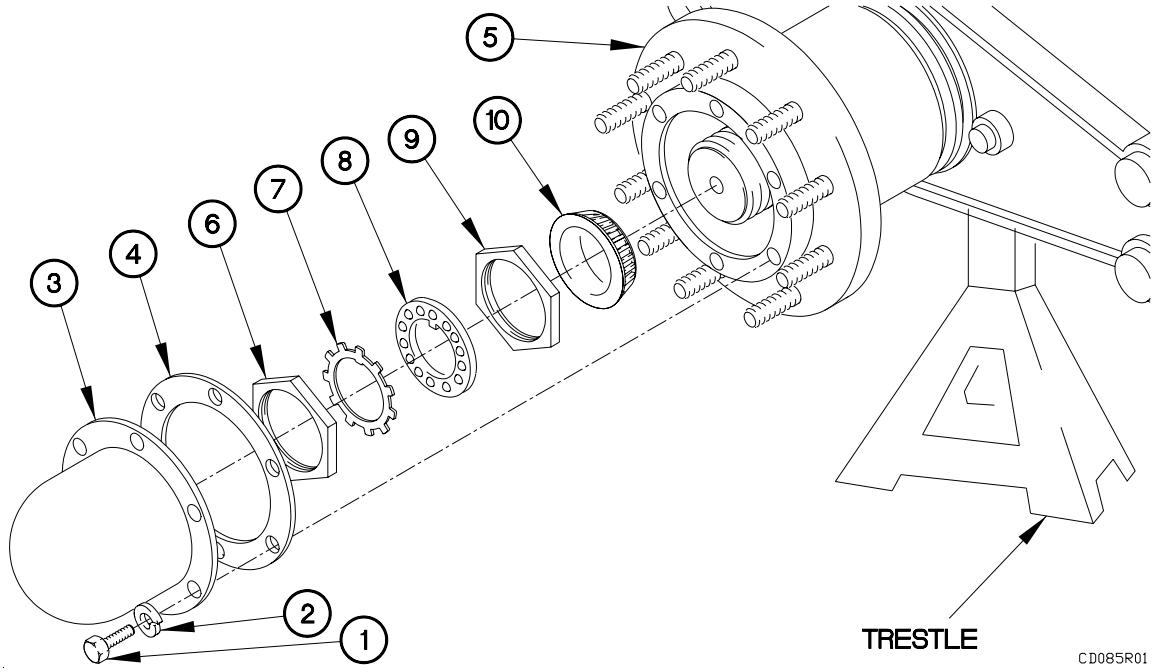
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) wheel hub, bearing, and seal.

WHEEL BEARING/HUB SEAL REPLACEMENT - Continued 0085 00

REMOVAL

1. Remove six bolts (1) lockwashers (2), hubcap (3), and gasket (4) from wheel end hub (5). Discard lockwashers and gasket.

2. Remove outer wheel bearing nut (6), locking tang washer (7), tab lockwasher (8), inner wheel bearing nut (9), and outer wheel bearing cone (10) from wheel end hub (5).



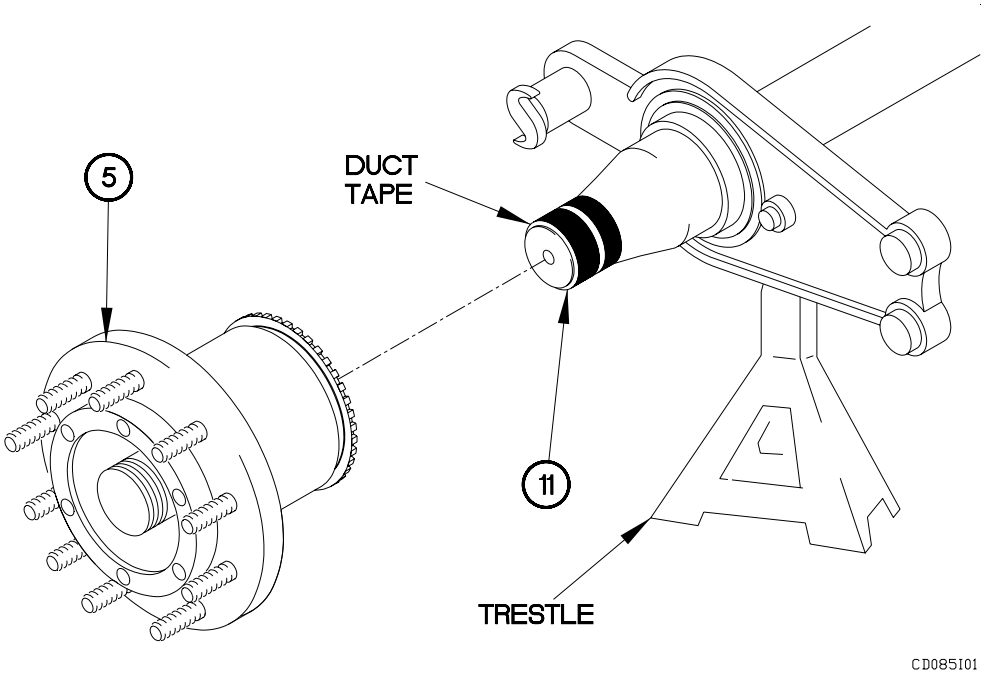
REMOVAL - Continued

3. Apply two wraps of duct tape to splined and threaded portions of spindle (11).

CAUTION

Use care when removing wheel end hub from spindle. Failure to comply may damage hub seal and cause early failure of hub seal.

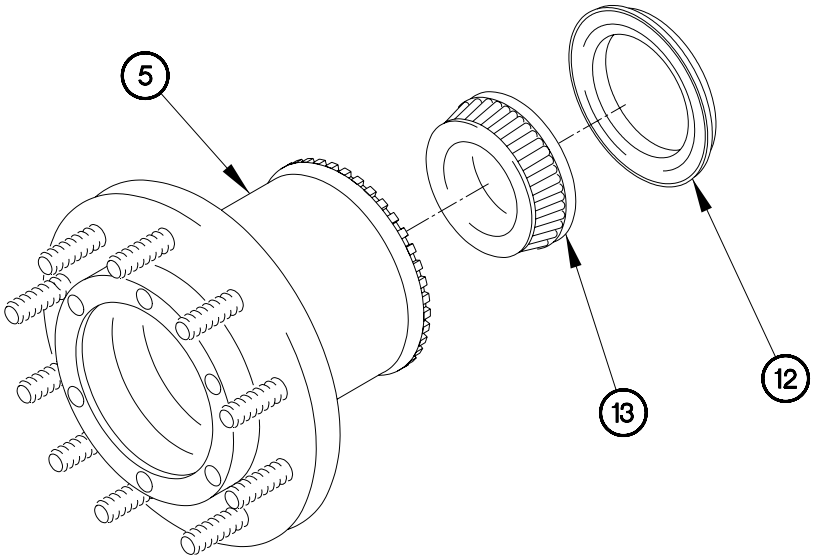
4. Remove wheel end hub (5) from spindle (11).



REMOVAL – Continued

5. Remove hub seal (12) from wheel end hub (5). Discard hub seal.

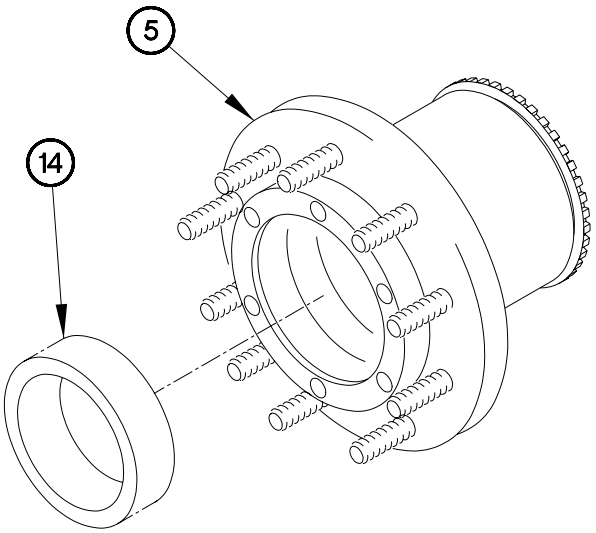
6. Remove inner wheel bearing cone (13) from wheel end hub (5).



CD085R03

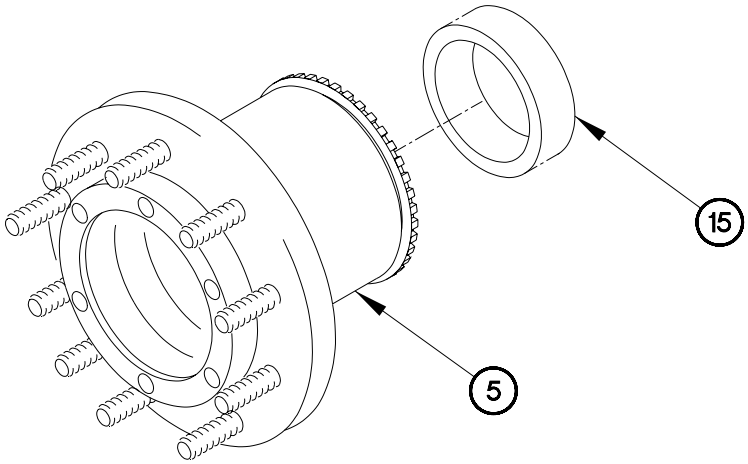
REMOVAL – Continued

7. Remove cup (14) from wheel end hub (5).



CD085R04

8. Remove cup (15) from wheel end hub (5).



CD085R05

CLEANING/INSPECTION

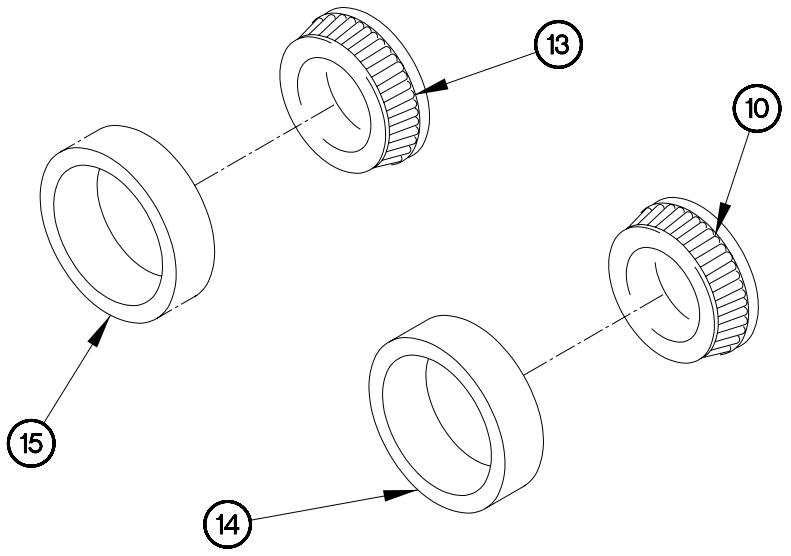
WARNING

Dry Cleaning Solvent (P-D-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Dry Cleaning Solvent; the flashpoint for Type I Dry Cleaning Solvent is 100 °F (38 °C) and for Type II is 138 °F (50 °C). Failure to comply may result in serious injury or death to personnel.

If personnel become dizzy while using Dry Cleaning Solvent, immediately get fresh air and medical help. If Dry Cleaning Solvent contacts skin or clothes, flush with cold water. If Dry Cleaning Solvent contacts eyes, immediately flush eyes with water and get medical attention. Failure to comply may result in serious injury or death to personnel.

1. Thoroughly clean all metal parts with Dry Cleaning Solvent and dry with wiping rag prior to inspection.

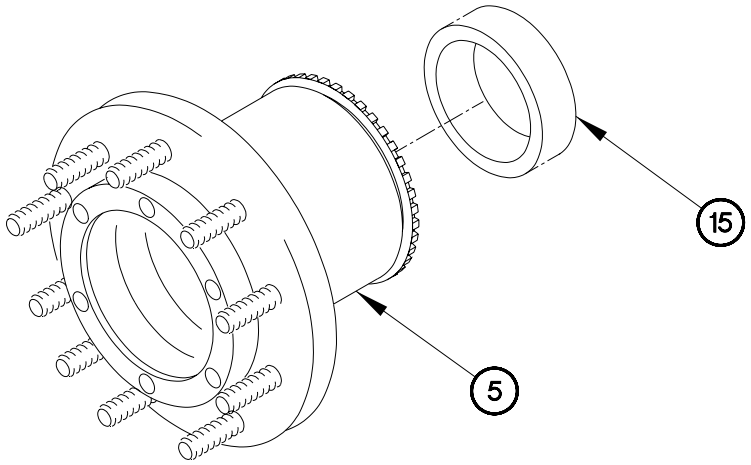
2. Inspect inner wheel bearing cone (13), outer wheel bearing cone (10), cup (15), and cup (14) for scoring, pitting, corrosion, and excessive wear. Replace both wheel bearing cones and cups if either fails visual inspection.



CD085N01

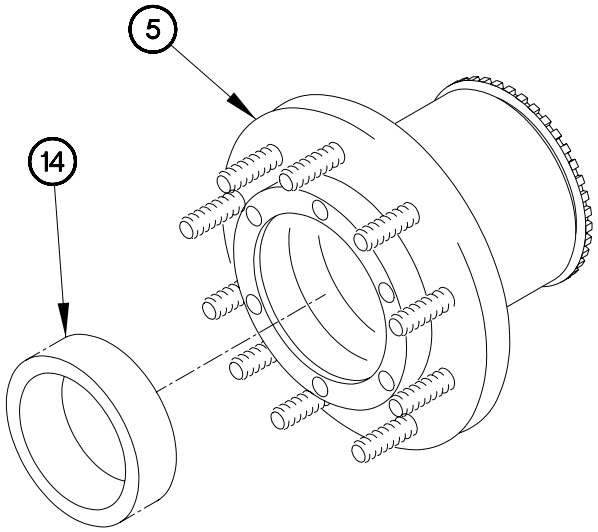
INSTALLATION

1. Install cup (15) in wheel end hub (5).



CD085R05

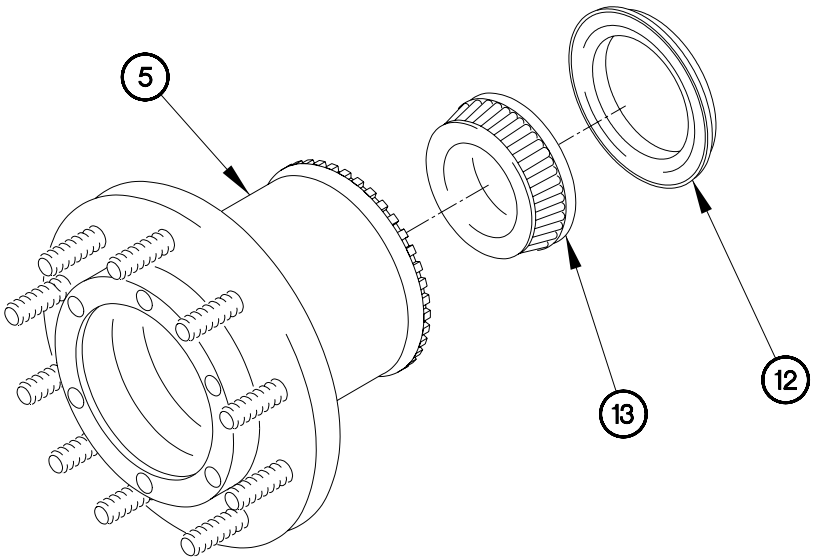
2. Install cup (14) in wheel end hub (5).



CD085R04

INSTALLATION - Continued

3. Pack inner wheel bearing cone (13) with grease.
4. Install inner wheel bearing cone (13) in wheel end hub (5).
5. Install hub seal (12) into wheel end hub (5).

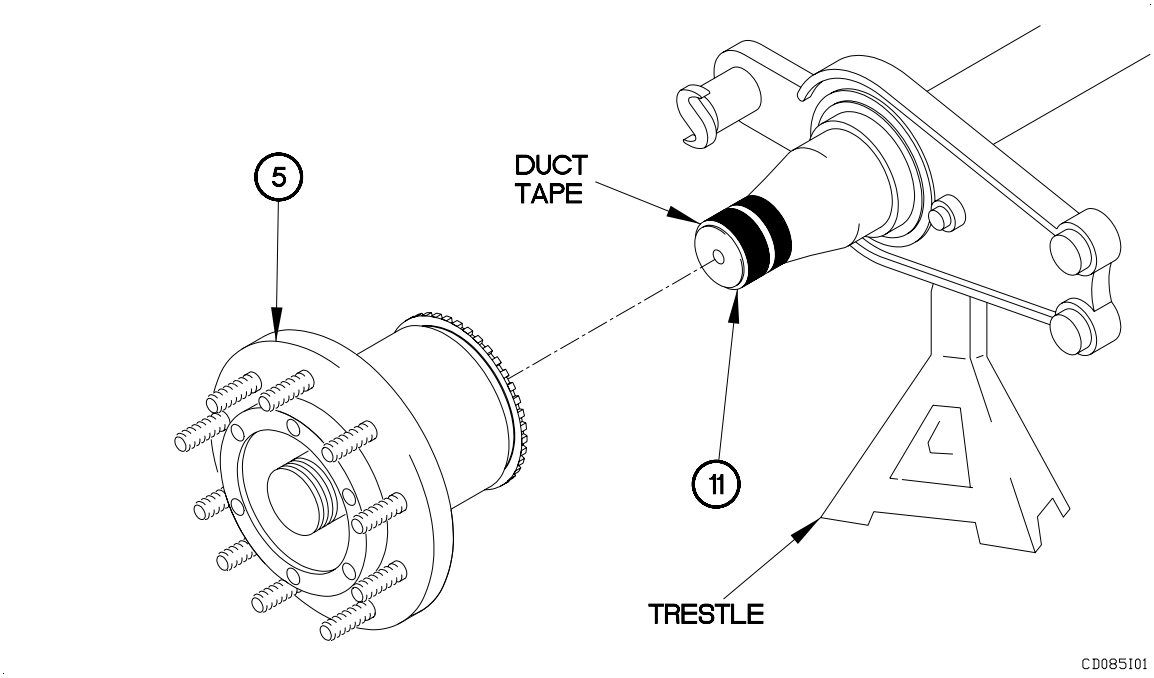


CD085R03

INSTALLATION - Continued

6. Install wheel end hub (5) on spindle (11).

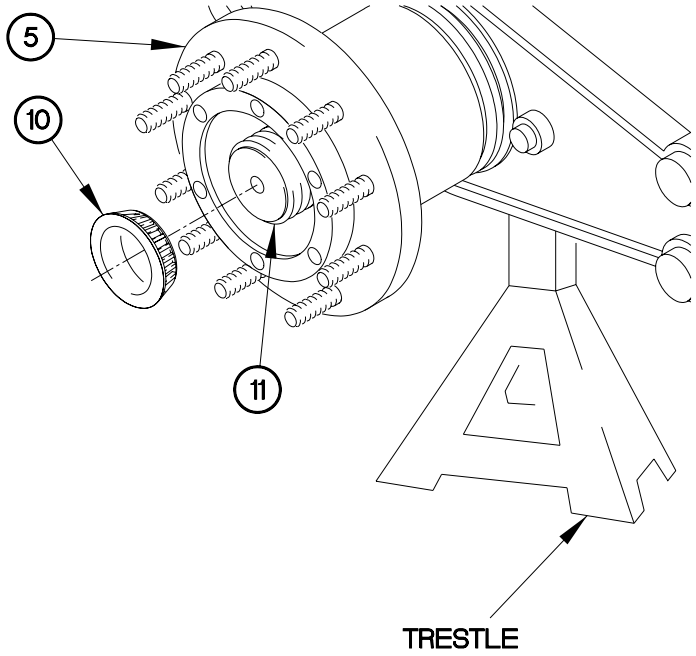
7. Remove duct tape from spindle (11).



INSTALLATION - Continued

8. Pack outer wheel bearing cone (10) with grease.

9. Install outer wheel bearing cone (10) in wheel end hub (5).



INSTALLATION - Continued

NOTE

Ensure inner wheel bearing nut is installed on spindle with nub facing out from wheel end hub.

10. Position inner wheel bearing nut (9) on spindle (11).

CAUTION

Rotate wheel end hub to the left and to the right while tightening wheel bearing nut. Failure to comply may result in damage to equipment.

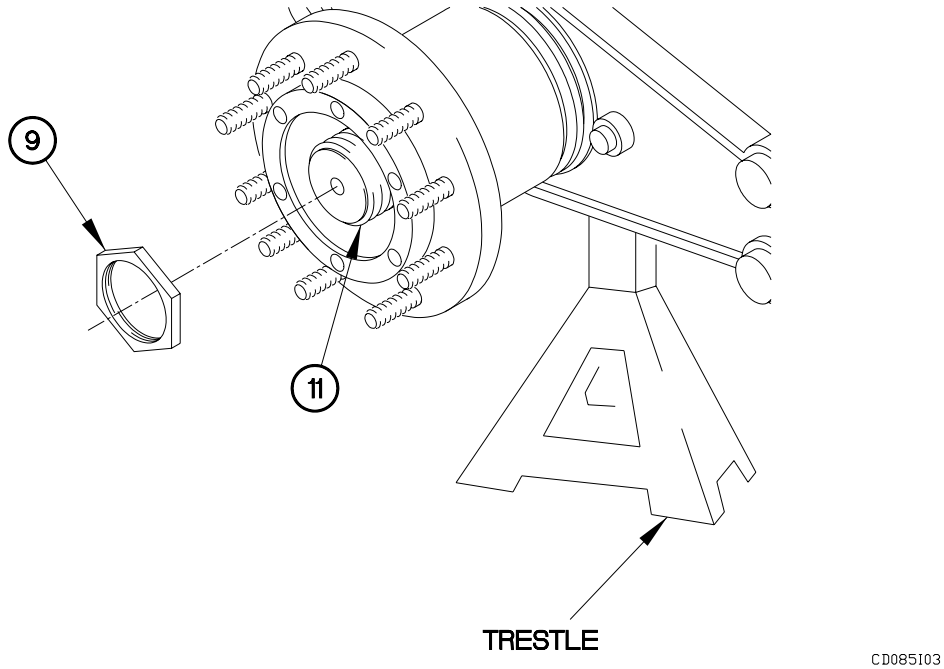
11. Tighten inner wheel bearing nut (9) to 100 lb-ft (136 N•m).

12. Loosen inner wheel bearing nut (9) one full turn (360 degrees).

CAUTION

Do not over tighten inner wheel bearing nut. Failure to comply may result in damage to equipment.

13. Hand-tighten inner wheel bearing nut (9).



INSTALLATION - Continued

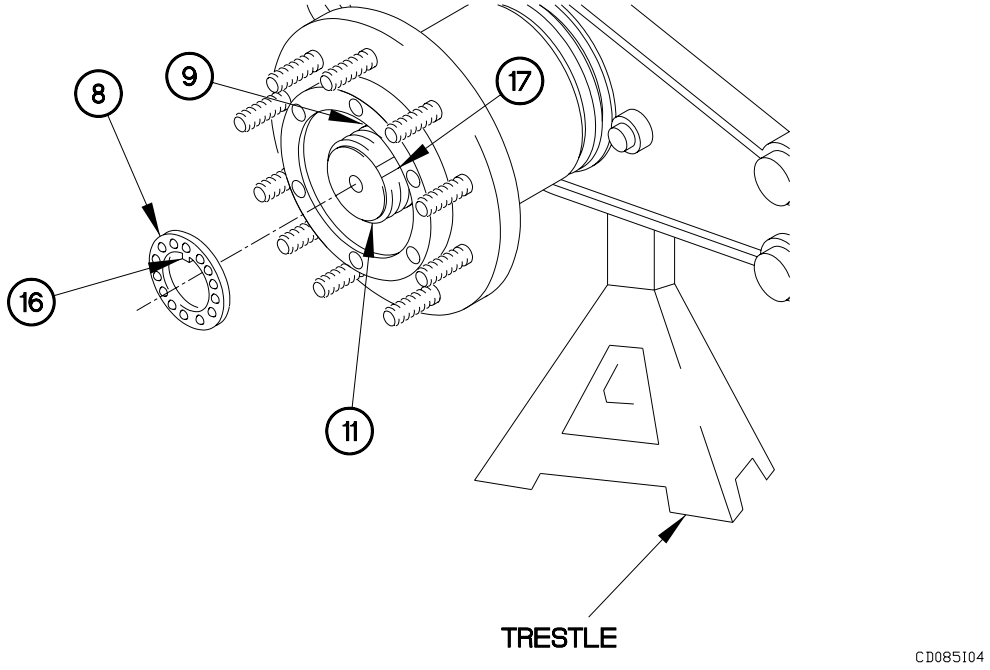
14. Position tab lockwasher (8) on spindle (12) with tab (16) inserted in spindle groove (17).

NOTE

Loosen inner wheel bearing nut only enough to align nub of inner wheel bearing nut with hole in tab lockwasher but no more than 1/4 turn.

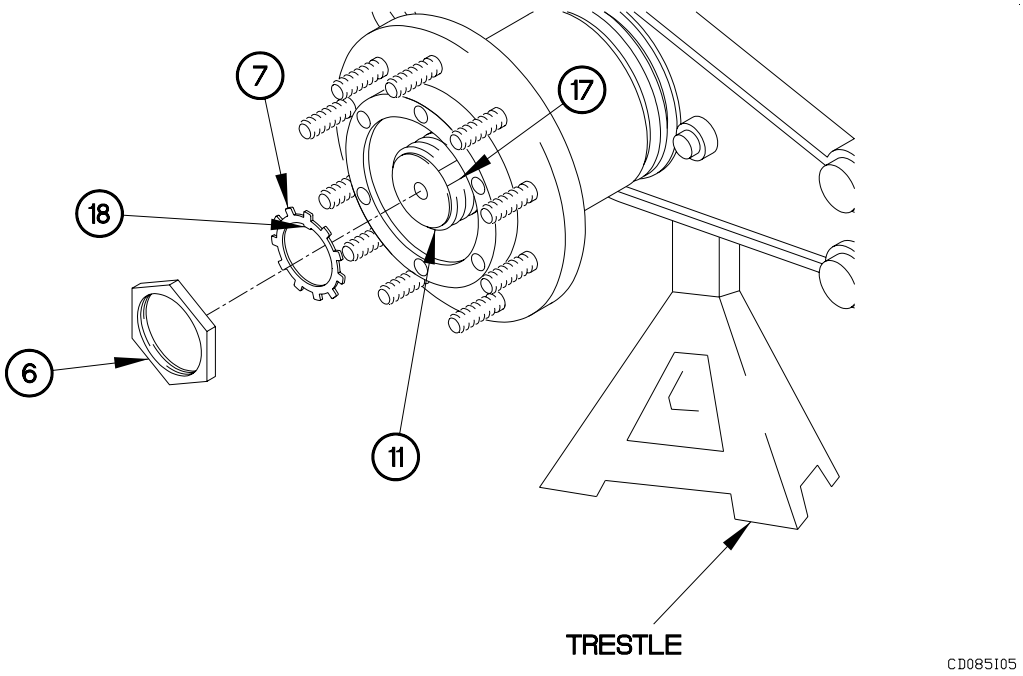
15. Loosen inner wheel bearing nut (9) to align nub with hole in tab lockwasher (8).

16. Install tab lockwasher (8) over nub on inner wheel bearing nut (9).



INSTALLATION - Continued

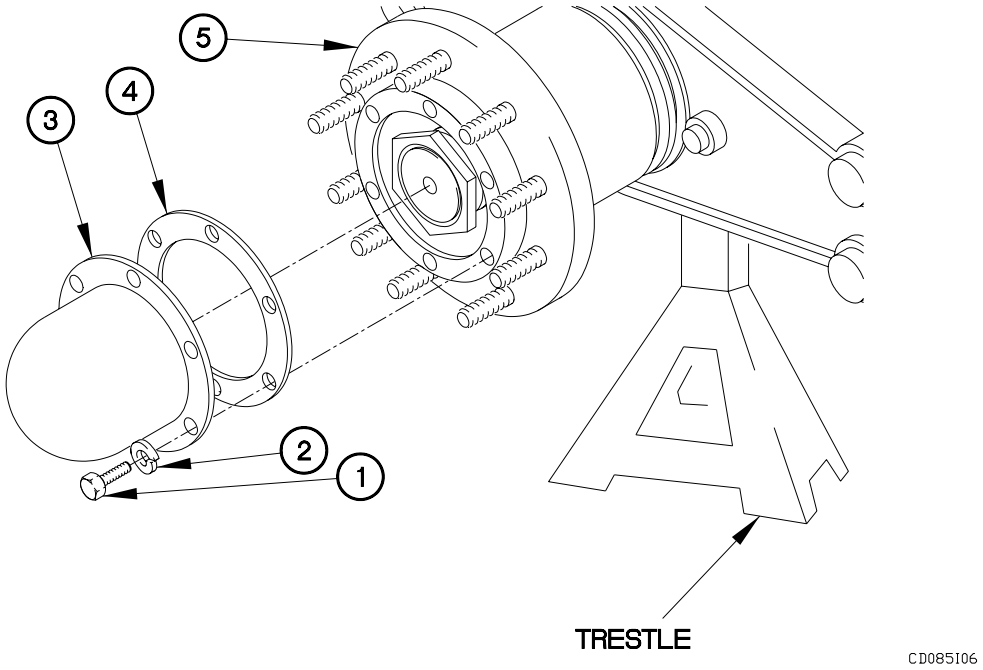
17. Position locking tang washer (7) on spindle (11) with tab (18) inserted in spindle groove (17).
18. Position outer wheel bearing nut (6) on spindle (12).
19. Tighten outer wheel bearing nut (6) to 250-300 lb-ft (339-407 N•m).
20. Bend three tabs on locking tang washer (7) over outer wheel bearing nut (6).



INSTALLATION - Continued

21. Position gasket (4) and hubcap (3) on wheel end hub (5) with six lockwashers (2) and bolts (1).

22. Tighten six bolts (1) to 15-20 lb-ft (20-27 N•m).



OPERATIONAL CHECK

1. Install and adjust brake shoes (WP 0069 00, Installation).
2. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
3. Road test trailer and check for proper tracking and excessive wheel end vibration.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

TIEDOWN RING REPLACEMENT 0086 00

THIS WORK PACKAGE COVERS:
Removal, Installation

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts
Pin, Cotter (Item 47, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

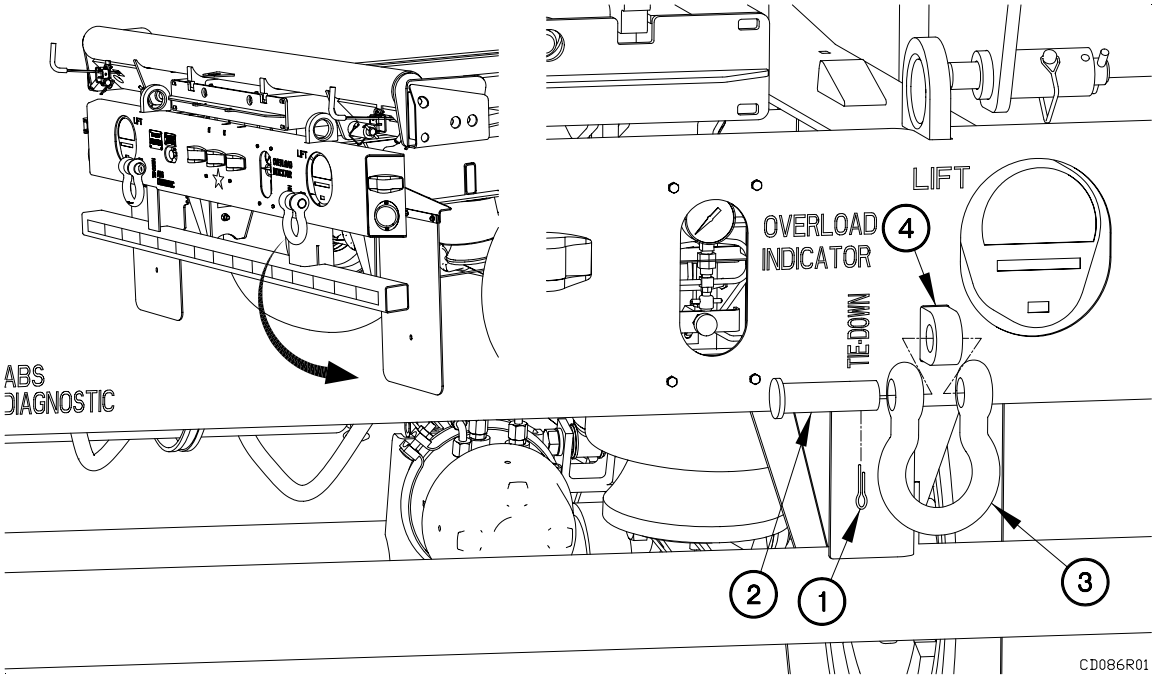
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) tiedown rings.

REMOVAL

NOTE

LH and RH rear tiedown rings are removed the same way. RH rear shown.

1. Remove cotter pin (1), pin (2), and tiedown ring (3) from tiedown bracket (4). Discard cotter pin.



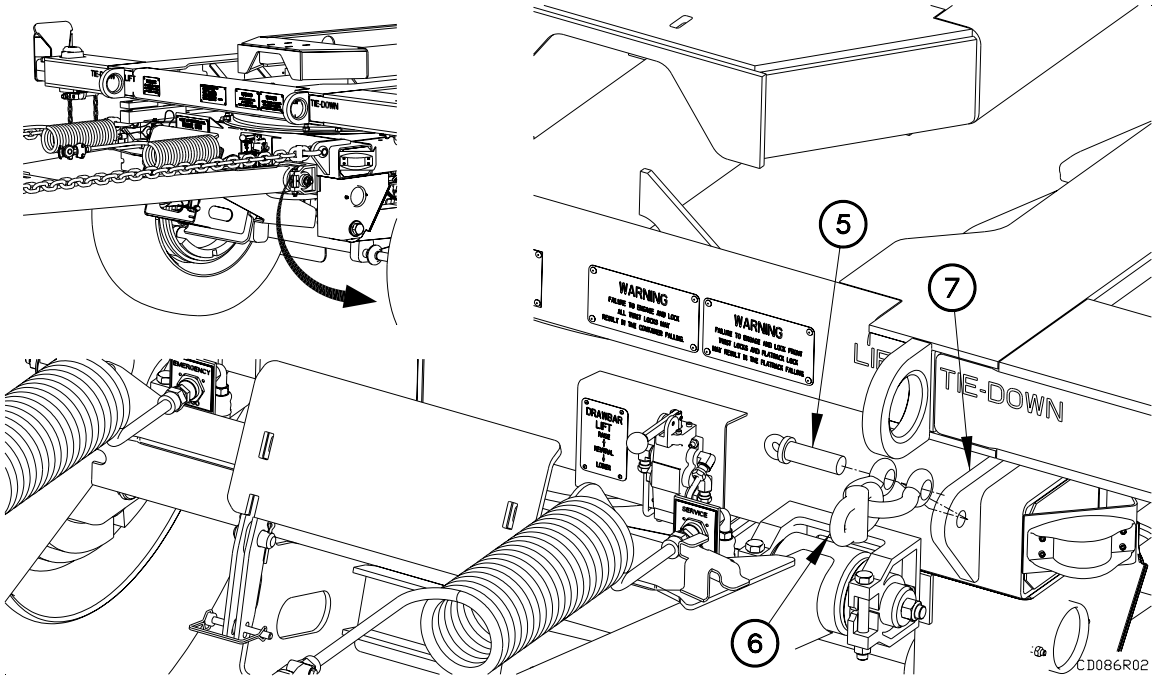
TIEDOWN RING REPLACEMENT-Continued 0086 00

REMOVAL - Continued

NOTE

LH and RH front tiedowns are removed the same way. LH front tiedown shown.

2. Remove pin (5) and tiedown ring (6) from bracket (7).



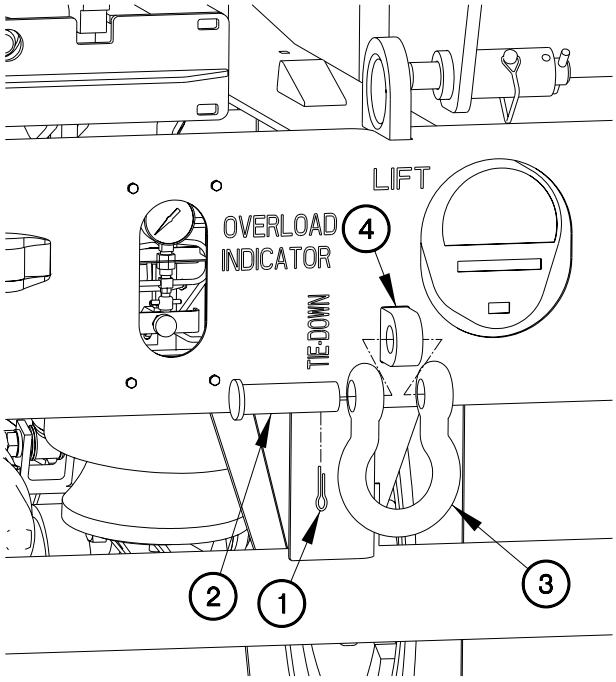
TIEDOWN RING REPLACEMENT - Continued 0086 00

INSTALLATION

NOTE

LH and RH rear tiedown rings are installed the same way. RH rear shown.

1. Install tiedown ring (3) on tiedown bracket (4) with pin (2).
2. Install cotter pin (1) in pin (2).



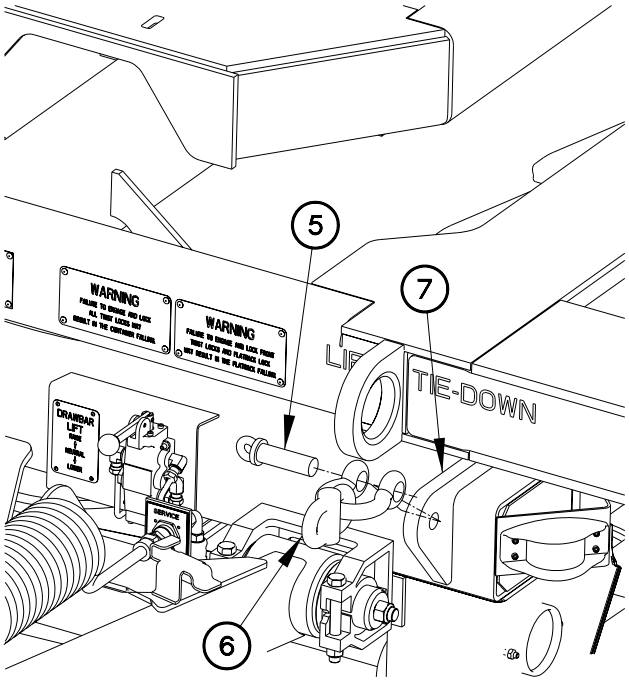
CD086i01

INSTALLATION - Continued

NOTE

LH and RH front tiedown rings are installed the same way. LH front shown.

3. Install tiedown ring (6) on bracket (7) with pin (5).



CD086i02

END OF WORK PACKAGE

FRAME RAIL REPLACEMENT 0087 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Sling, Multiple Leg (Item 17, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Multiplier, Torque Wrench (Item 13, WP 0167 00)
Jack, Leveling Support, Vehicular (Item 11, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP 0167 00)
Wrench Set, Socket (Item 26, WP 0167 00)

Materials/Parts

Washer, Lock (2) (Item 4, WP 0168 00)
Nut, Self-Locking (2) (Item 25, WP 0168 00)
Sealing Compound (Item 2, WP 0165 00)

Equipment Conditions

Flatrack rail and pivots removed (WP 0089 00).
Main electrical harness removed (WP 0066 00).
Composite taillights removed (WP 0060 00).
Rear marker lights removed (WP 0061 00).
Rear air tank removed (WP 0078 00).

Equipment Conditions (Cont)

Overload indicator removed (WP 0106 00).
Flatrack lock Push/Pull valve removed (WP 0108 00).
Height Actuation Valve removed (WP 0110 00).
ABS ECU valve removed (WP 0071 00).
ABS Relay Valve Harness Removed (WP 0072 00).
ABS Power and Diagnostic Cable and Diagnostic Tool removed (WP 0074 00).
Rear Electrical Harness Removed (WP 0065 00).
Left rear electrical harness removed (WP 0064 00).
Right rear electrical harness removed (WP 0063 00).
Junction box removed (WP 0059 00).
Rear Breather Valve removed (WP 0082 00).
Tire carrier removed (WP 0093 00).
Spare tire carrier winch removed (WP 0103 00).
Rear splashguards removed (WP 0097 00).
Toolbox removed (WP 0098 00).
Rear shock absorbers removed (WP 0095 00).

GENERAL

This work package contains information and instructions to frame rail on the Load Handling System Trailer (LHST).

FRAME RAIL REPLACEMENT - Continued 0087 00

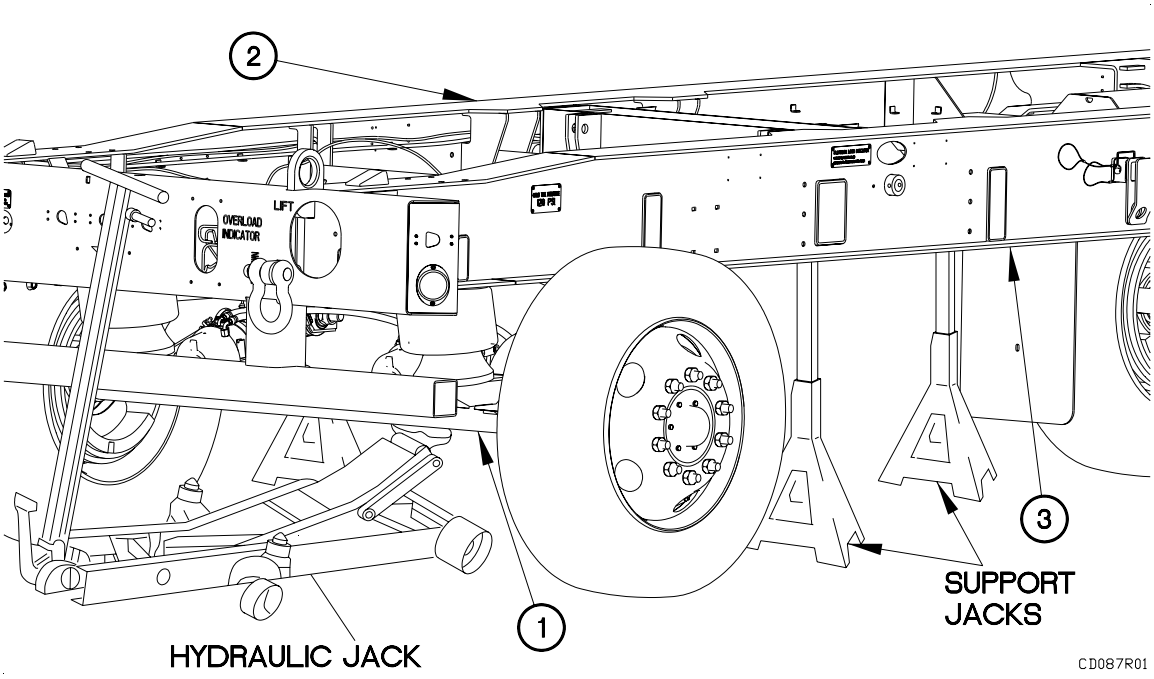
REMOVAL

NOTE

Rear of trailer must be positioned on jack stands to remove weight from rear suspension.

LH and RH sides of rear of trailer are positioned the same way. LH side shown.

1. Position floor jack under rear axle (1).
2. Raise rear of trailer (2).
3. Position jack stand under frame rail (3).
4. Lower rear of trailer (2).
5. Perform previous four steps on RH side of trailer



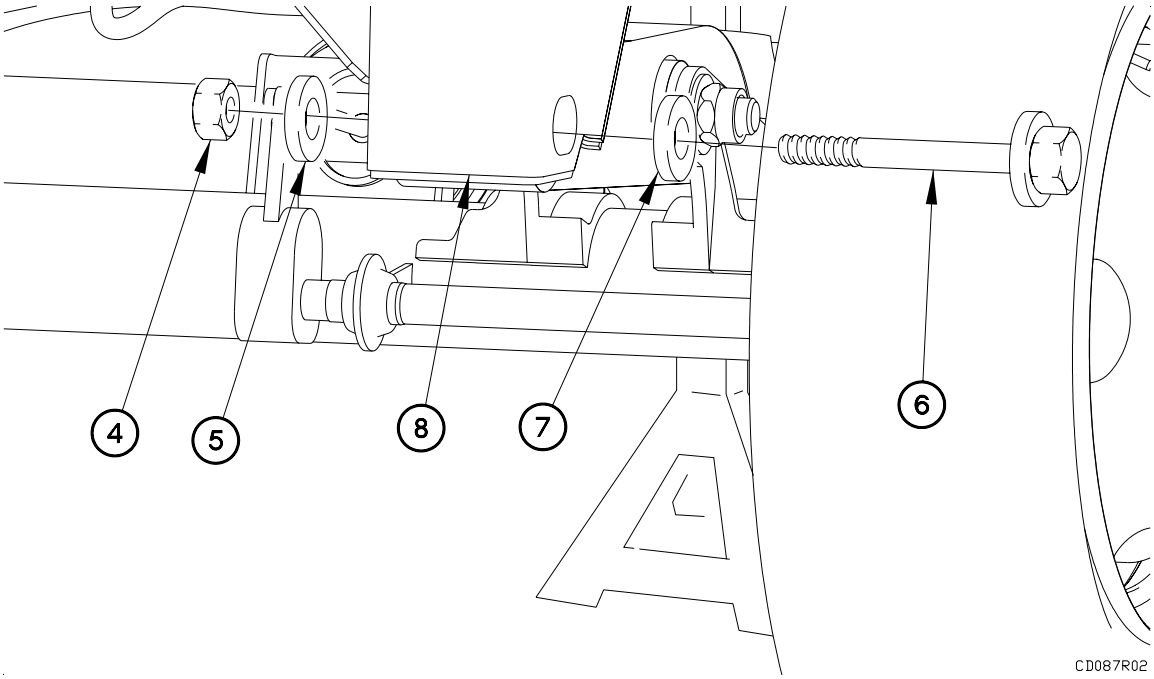
FRAME RAIL REPLACEMENT - Continued 0087 00

REMOVAL - Continued

NOTE

LH and RH sides of suspension is removed from axle the same way. LH side shown.

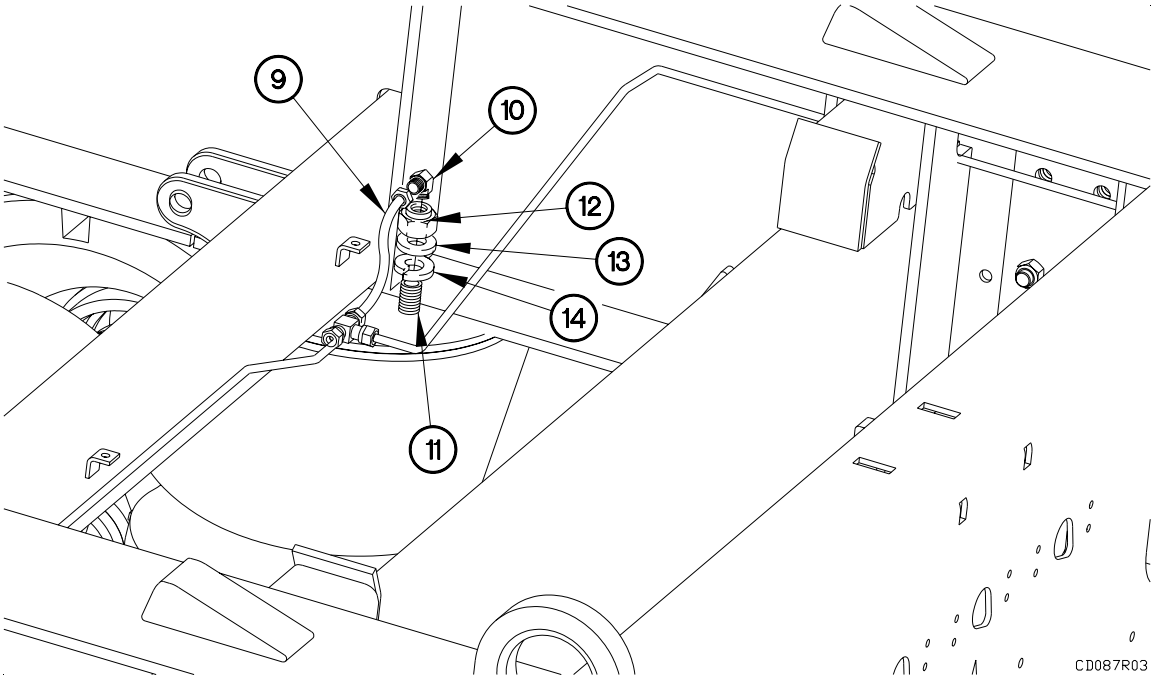
6. Remove self-locking nut (4), washer (5), bolt (6), and washer (7) from suspension arm (8). Discard self-locking nut



FRAME RAIL REPLACEMENT - Continued 0087 00

REMOVAL - Continued

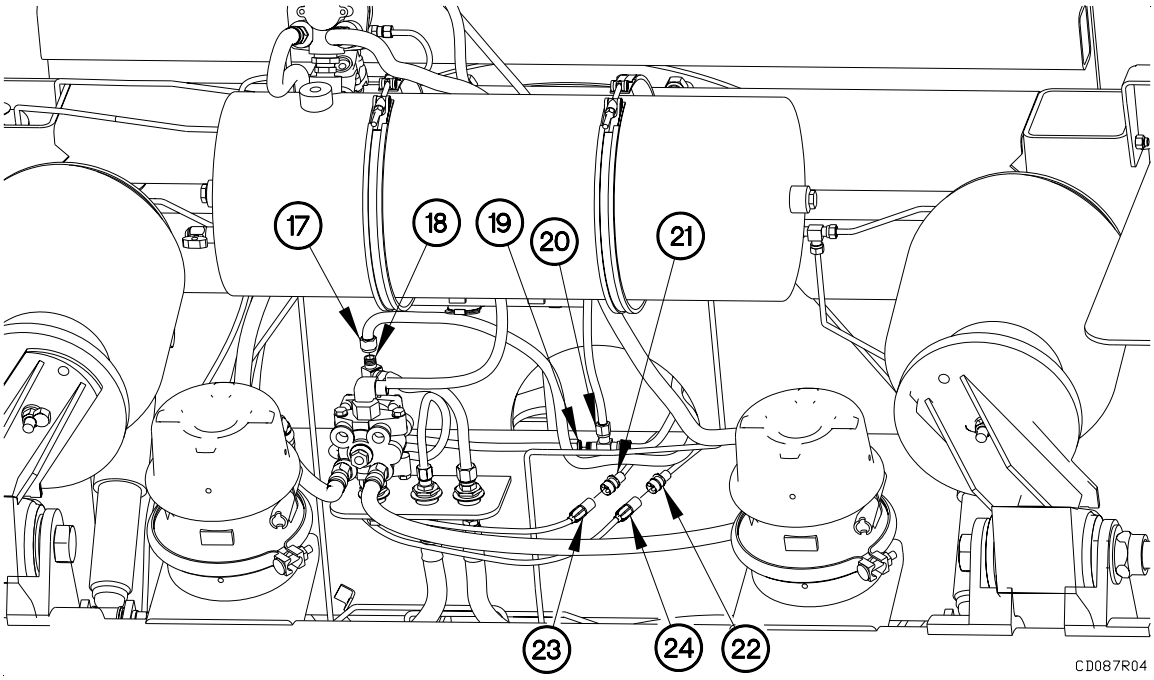
7. Disconnect air hose (9) from 90-degree fitting (10).
8. Remove 90-degree fitting (10) from air bladder (11).
9. Remove nut (12), washer (13), and lockwasher (14) from air bladder (11). Discard lockwasher.
10. Perform the previous four steps on RH side of suspension.



FRAME RAIL REPLACEMENT - Continued 0087 00

REMOVAL - Continued

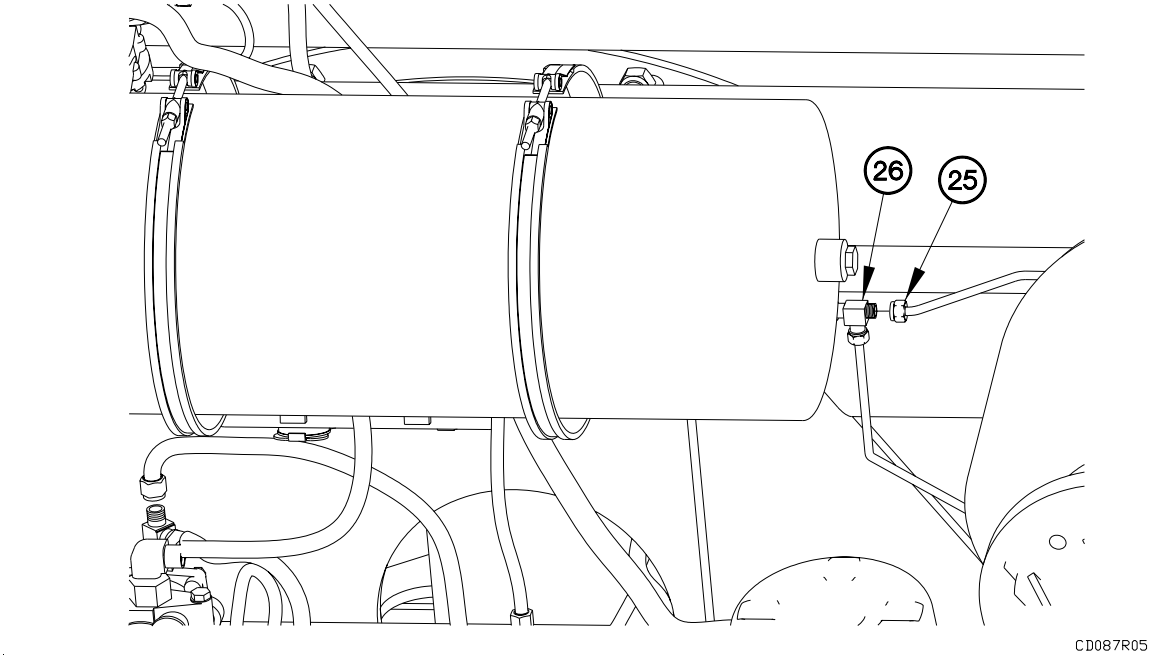
11. Disconnect hose (17) from tee fitting (18).
12. Disconnect hose (19) from tee fitting (20).
13. Disconnect ABS sensor connectors (21 and 22) from ABS sensor connectors (23 and 24).



FRAME RAIL REPLACEMENT - Continued 0087 00

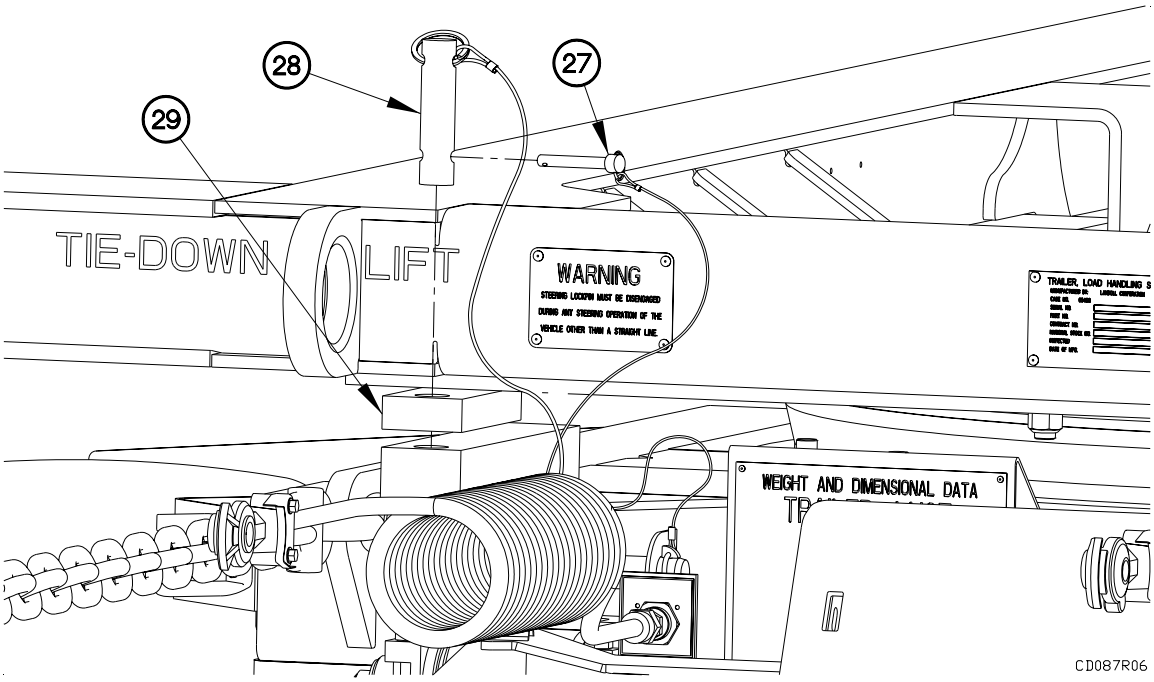
REMOVAL - Continued

14. Disconnect hose (25) from tee fitting (26).



15. Remove pin (27) from turntable pin (28).

16. Remove turntable pin (28) from turntable (29).



FRAME RAIL REPLACEMENT - Continued 0087 00

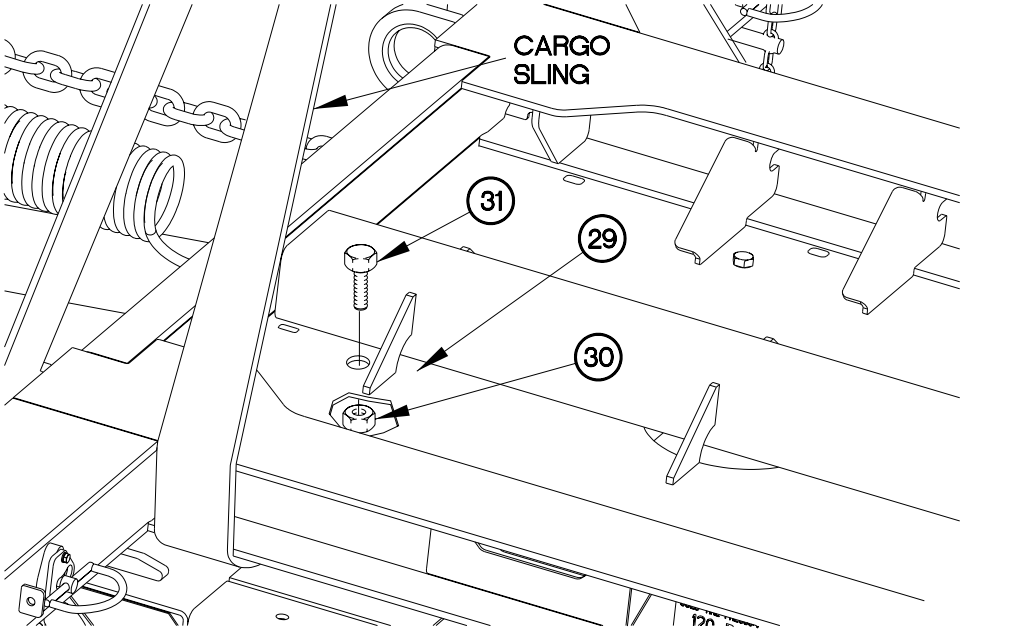
REMOVAL - Continued

17. Attach two cargo slings to trailer (2), as shown.

CAUTION

Ensure loose hoses and cables are removed from top of turntable prior to removal. Failure to comply may result in damage to equipment.

18. Remove eight self-locking nuts (30) and bolts (31) from turntable (29). Discard self-locking nuts.



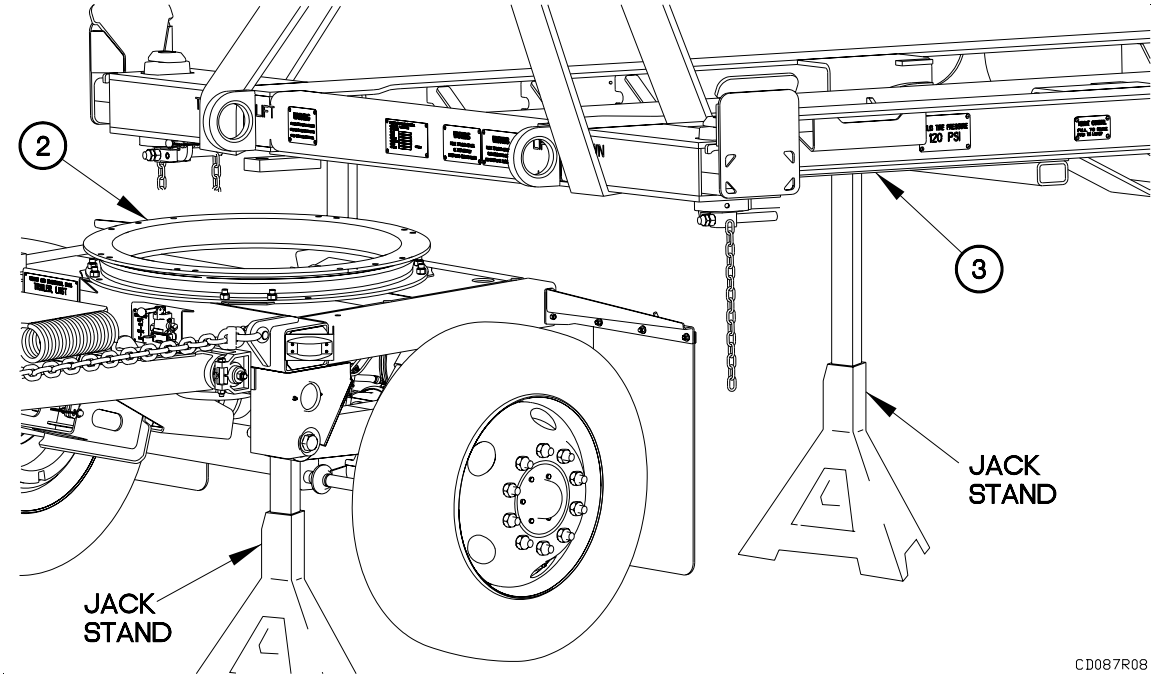
FRAME RAIL REPLACEMENT - Continued 0087 00

REMOVAL - Continued

WARNING

Frame rail weighs approximately 4000 lbs (1814 kgs). Attach a suitable lifting device to frame rail prior to removal from turntable assembly and from jack stands. Failure to comply may result in serious injury or death to personnel or damage to equipment.

19. Remove frame rail (3) from turntable (2) and jack stands.



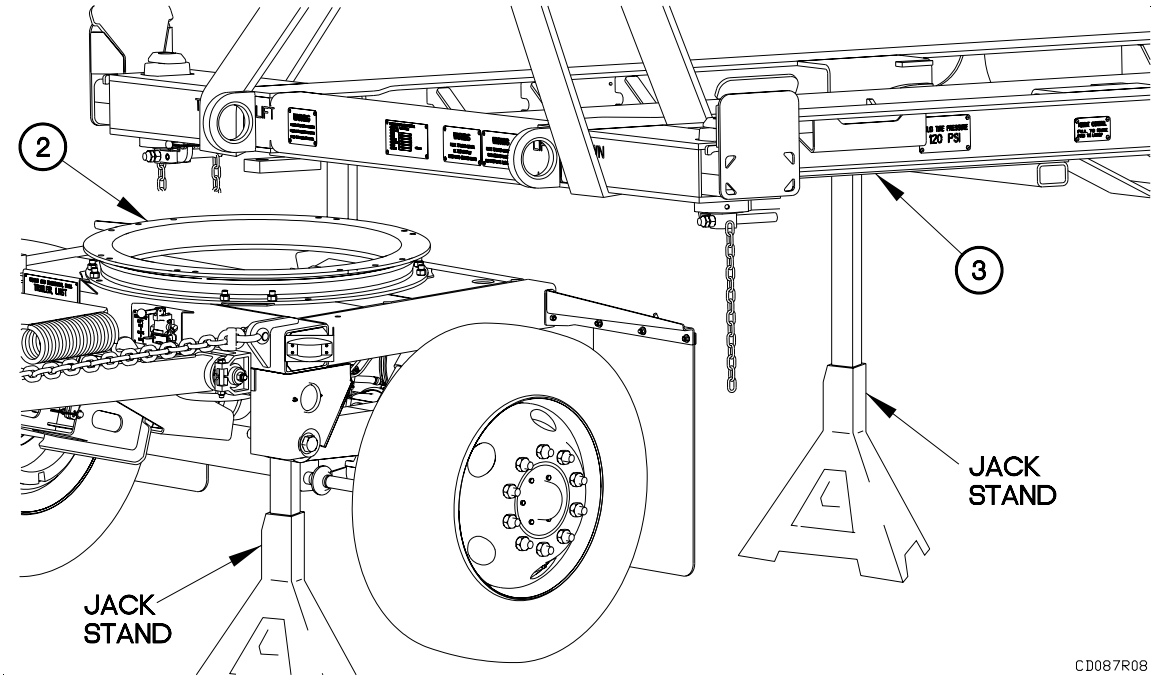
FRAME RAIL REPLACEMENT - Continued 0087 00

INSTALLATION

WARNING

Frame rail weighs approximately 4000 lbs (1814 kgs). Attach a suitable lifting device to frame rail prior to installation on turntable assembly and jack stands. Failure to comply may result in serious injury or death to personnel or damage to equipment.

1. Position frame rail (3) on turntable (2) and jack stands.

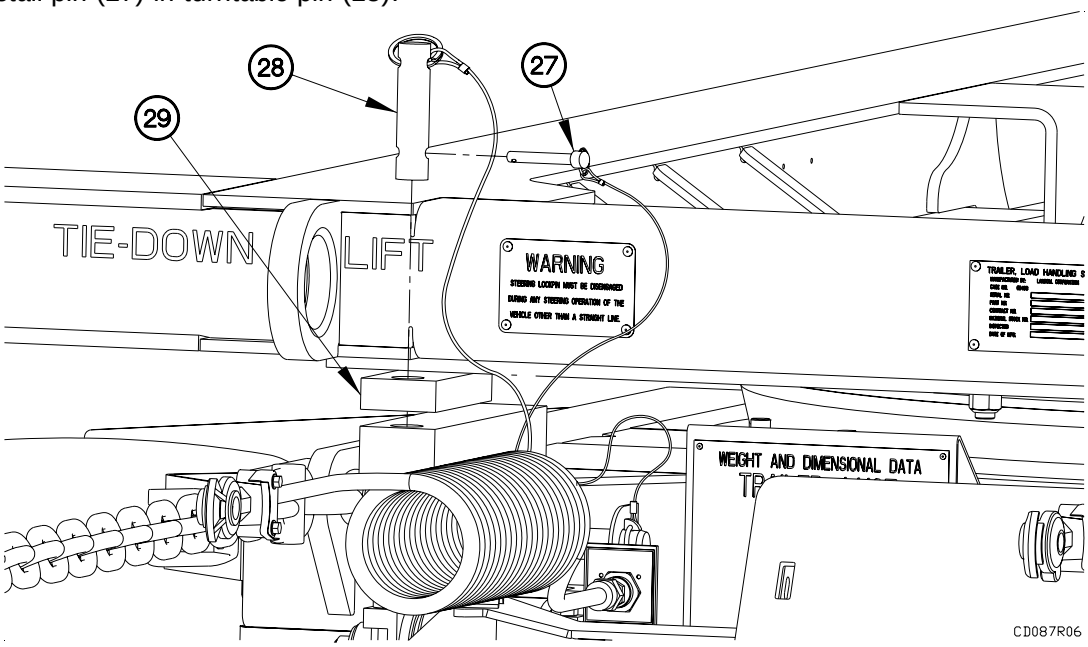


FRAME RAIL REPLACEMENT - Continued 0087 00

INSTALLATION - Continued

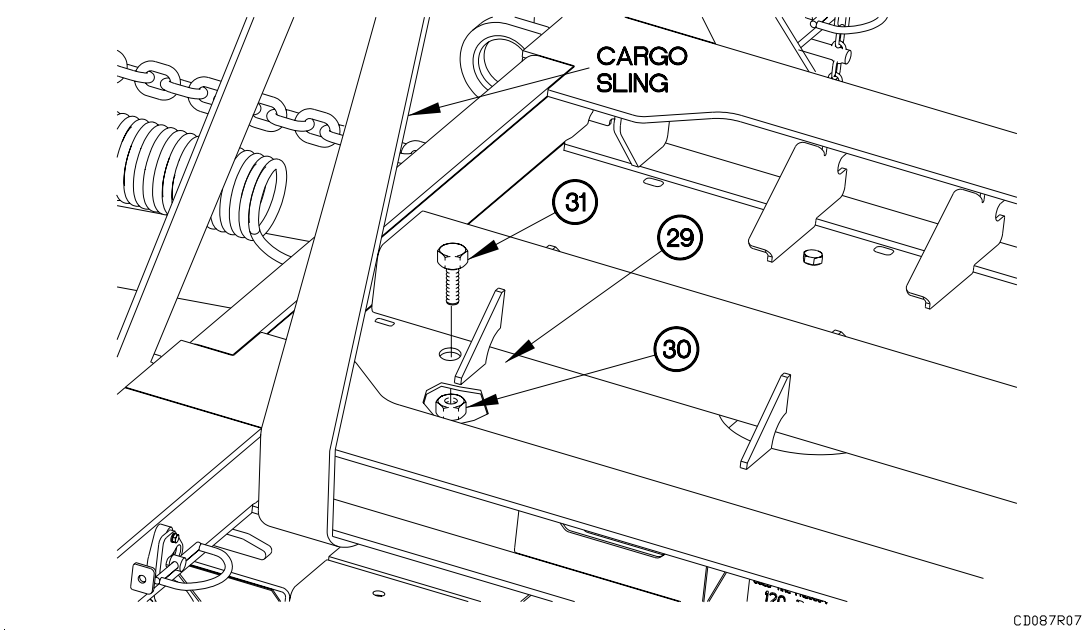
2. Install turntable pin (28) in turntable (29).

3. Install pin (27) in turntable pin (28).



4. Position eight bolts (31) and self-locking nuts (30) in turntable (29).

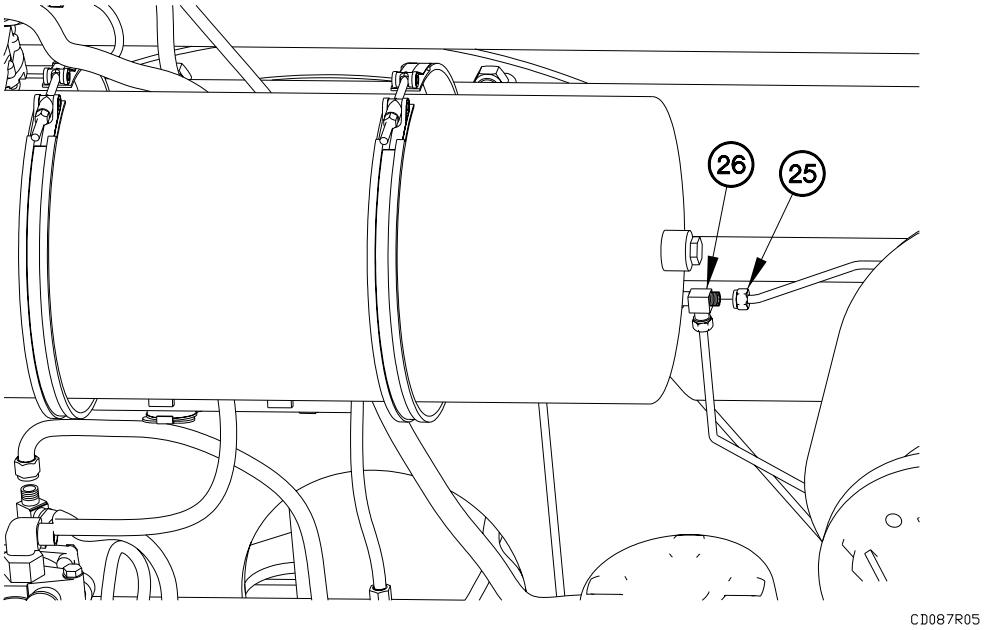
5. Tighten eight self-locking nuts (30) to 155-185 lb-ft (210-251 N•m).



FRAME RAIL REPLACEMENT - Continued 0087 00

INSTALLATION - Continued

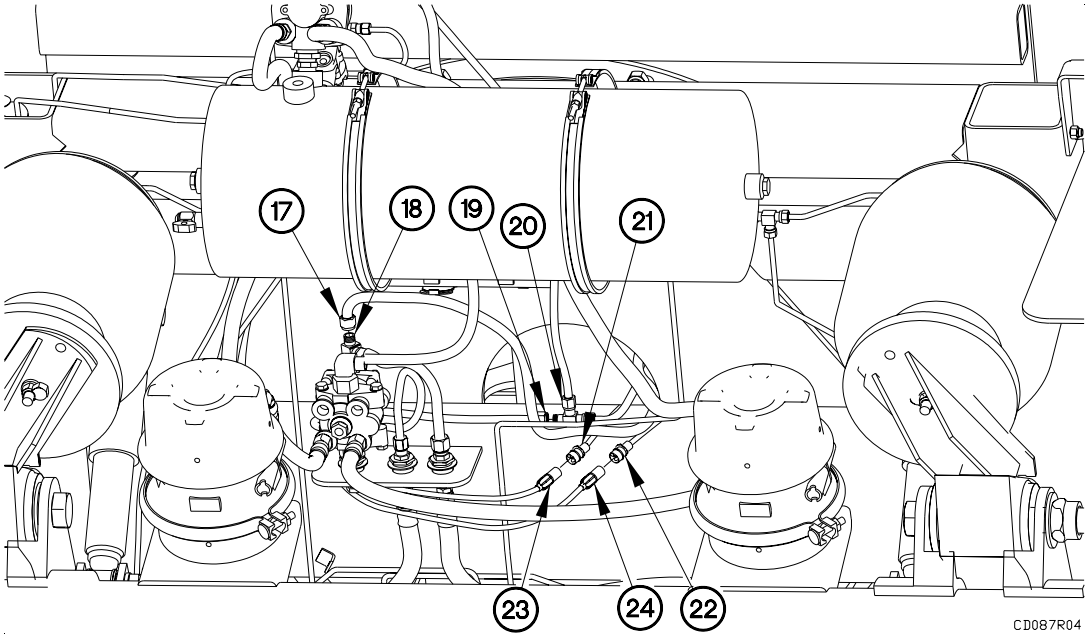
6. Connect hose (25) to tee fitting (26).



7. Connect ABS sensor connectors (21 and 22) to ABS sensor connectors (23 and 24).

8. Connect hose (19) to tee fitting (20).

9. Connect hose (17) to tee fitting (18).



FRAME RAIL REPLACEMENT - Continued 0087 00

INSTALLATION – Continued

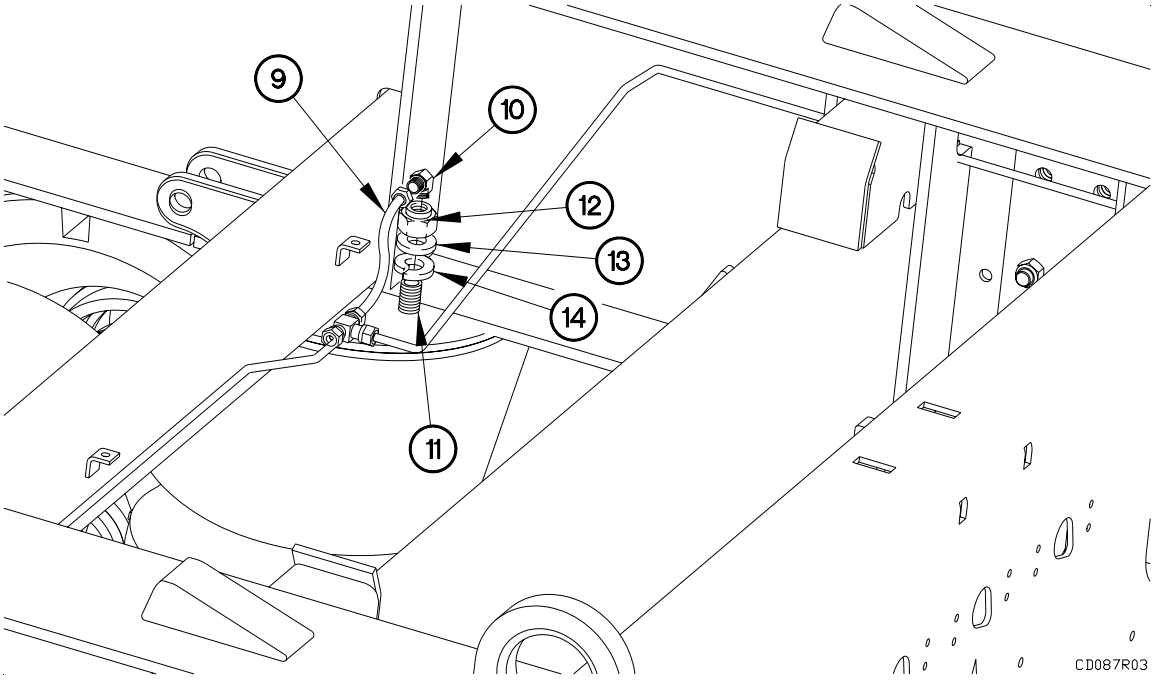
WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

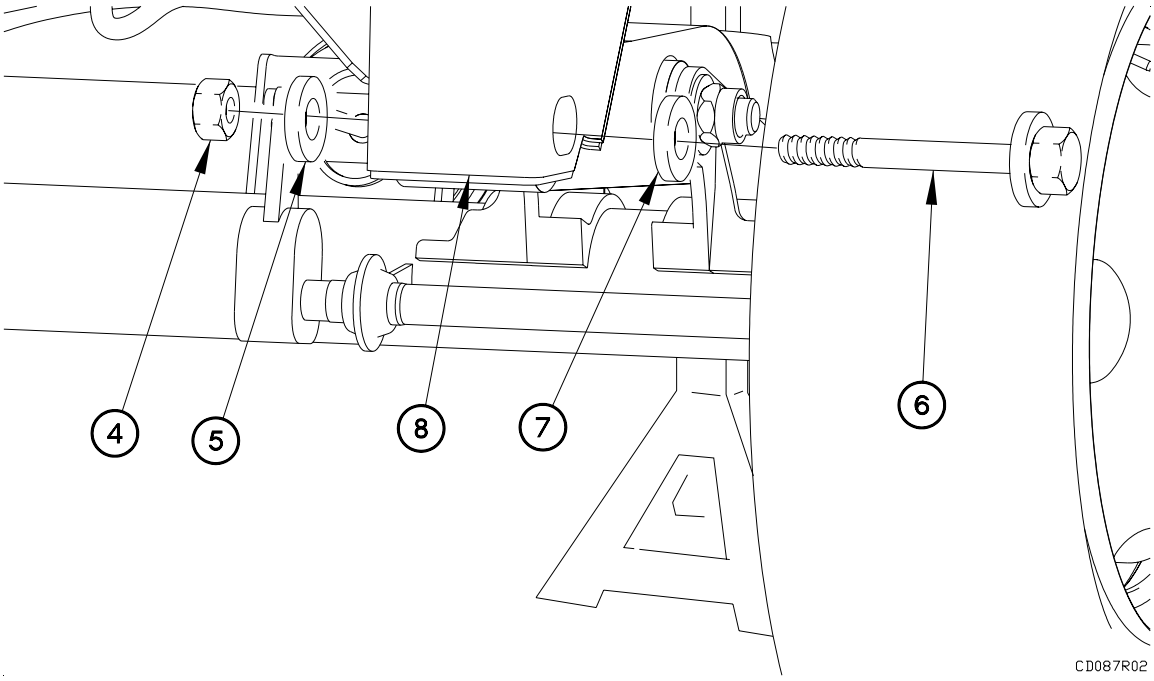
LH and RH sides of suspension is installed on axle the same way. LH side shown.

10. Position lockwasher (14), washer (13), and nut (12) on air bladder (11).
11. Tighten nut (12) to 35 lb-ft (47 N•m).
12. Apply sealing compound to threads of 90-degree fitting (10).
13. Install 90-degree fitting (10) in air bladder (11).
14. Connect air hose (9) to 90-degree fitting (10).



INSTALLATION – Continued

15. Position washer (7) and bolt (6) in suspension arm (8) with washer (5) and self-locking nut (4).
16. Tighten self-locking nut (4) to 493-577 lb-ft (668-782 N•m).
17. Perform previous seven steps on RH side of suspension.



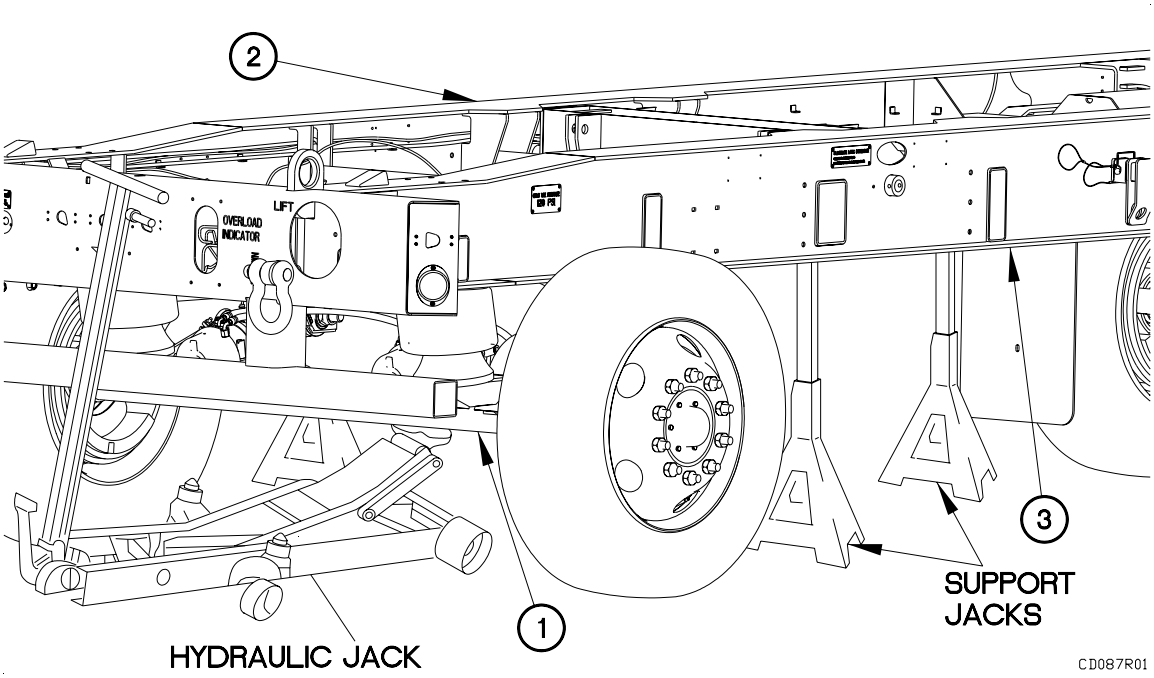
FRAME RAIL REPLACEMENT - Continued 0087 00

INSTALLATION – Continued

NOTE

LH and RH side jack stands are removed the same way. LH side shown.

18. Position floor jack under rear axle (1).
19. Raise rear of trailer (2).
20. Remove jack stand from frame rail (3).
21. Lower rear of trailer (2).
22. Perform previous four steps on RH side of trailer



FRAME RAIL REPLACEMENT - Continued 0087 00

OPERATIONAL CHECKS

1. Install rear shock absorbers (WP 0095 00).
2. Install toolbox (WP 0098 00).
3. Install rear splashguards (WP 0097 00).
4. Install spare tire carrier winch (WP 0103 00).
5. Install spare tire carrier (WP 0093 00).
6. Install rear breather valve (WP 0082 00).
7. Install junction box (WP 0059 00).
8. Install right rear electrical harness (WP 0063 00).
9. Install left rear electrical harness (WP 0064 00).
10. Install rear electrical harness (WP 0065 00).
11. Install ABS power and diagnostic cable and diagnostic tool (WP 0074 00).
12. Install ABS relay valve harness (WP 0072 00).
13. Install ABS ECU valve (WP 0071 00).
14. Install height actuation valve (WP 0110 00).
15. Install flatrack lock push/pull valve (WP 0108 00).
16. Install overload indicator (WP 0106 00).
17. Install rear air tank (WP 0078 00).
18. Install rear marker lights (WP 0061 00).
19. Install composite taillights (WP 0060 00).
20. Install main electrical harness (WP 0066 00).
21. Install flatrack rail and pivots (WP 0089 00).

END OF WORK PACKAGE.

TWIST LOCK ASSEMBLY REPLACEMENT 0088 00

THIS WORK PACKAGE COVERS:
Removal, Installation

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP0167 00)

Materials/Parts
Nut, Self-locking (Item 37, WP 0168 00)
Nut, Self-locking (Item 39, WP 0168 00)

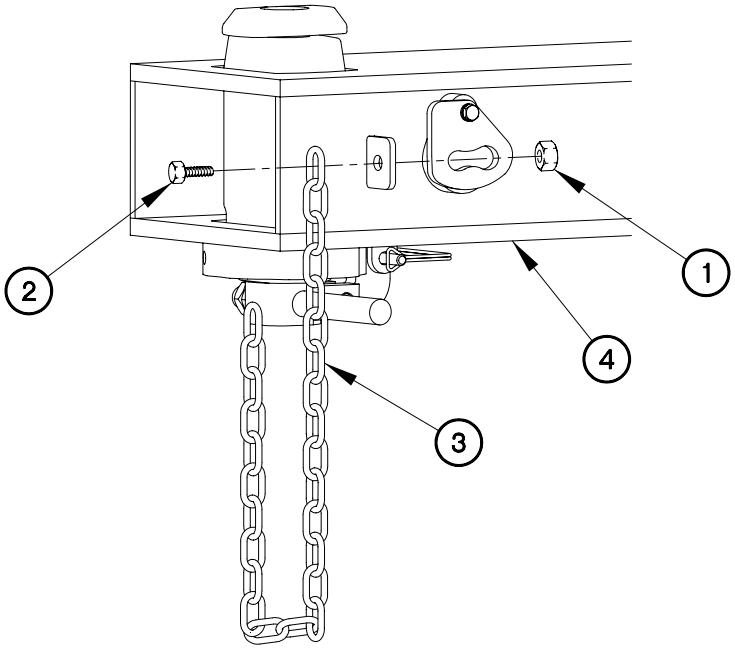
Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

WARNING

Use caution when removing ISO locks. Failure to comply may result in injury to personnel.

REMOVAL

1. Remove nut (1) from bolt (2).
2. Remove bolt (2) from chain (3) and trailer crossmember (4).

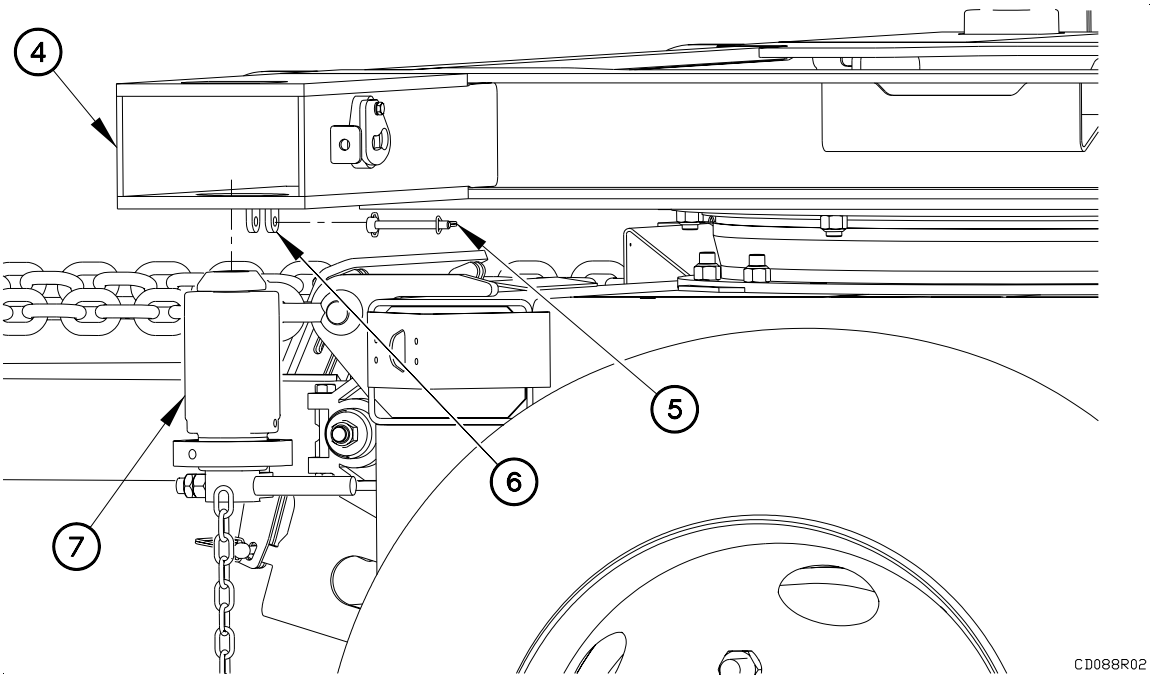


CD088R01

TWIST LOCK ASSEMBLY REPLACEMENT - Continued 0088 00

REMOVAL – Continued

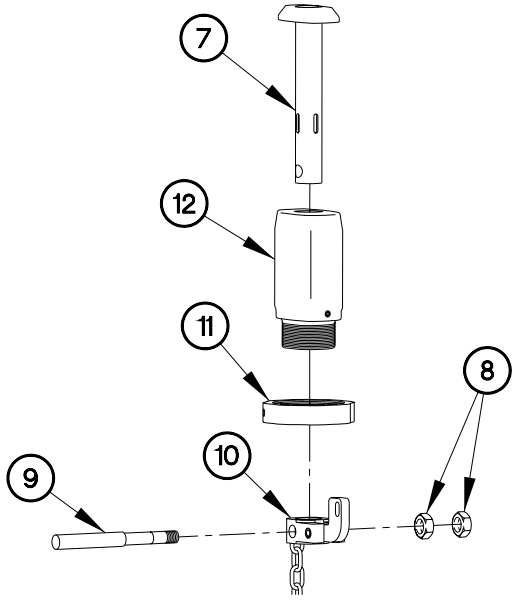
3. Remove retaining pin (5) from cap (6).
4. Rotate bottom of ISO lock (7) 90 degrees.
5. Remove ISO lock from trailer crossmember (4).



TWIST LOCK ASSEMBLY REPLACEMENT - Continued 0088 00

REMOVAL – Continued

6. Remove nuts (8) from retaining pin (9).
7. Remove retaining pin (9) and lock handle (7) from cap (10).
8. Remove lock handle (7) from lock body (12).
9. Remove hand screw (11) from lock body (12).

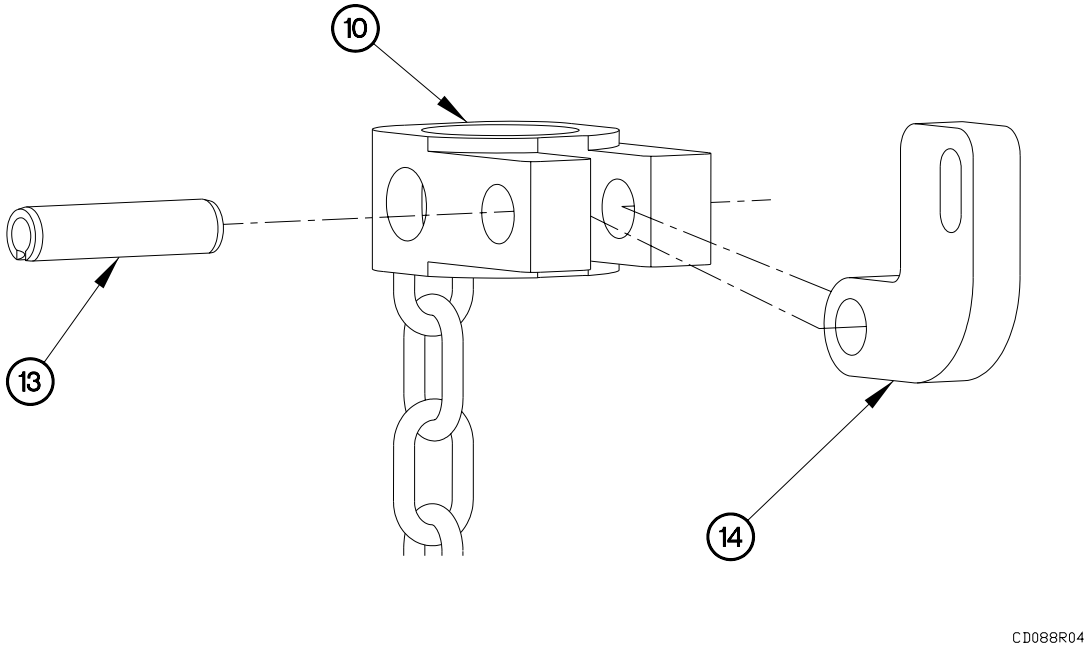


CD088R03

TWIST LOCK ASSEMBLY REPLACEMENT - Continued 0088 00

REMOVAL – Continued

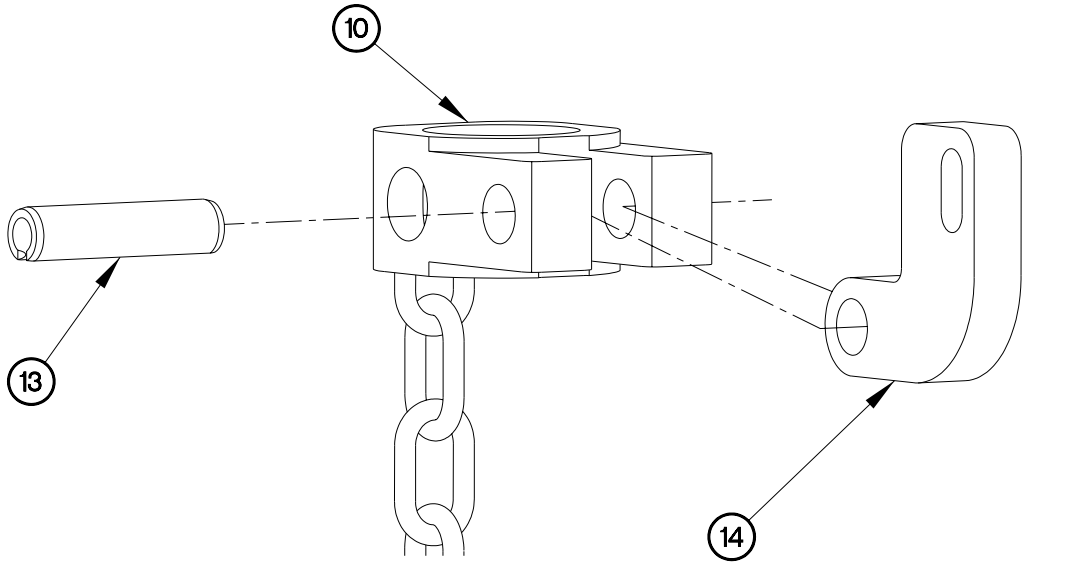
10. Remove roll pin (13) and retaining bracket (14) from cap (10).



TWIST LOCK ASSEMBLY REPLACEMENT - Continued 0088 00

INSTALLATION

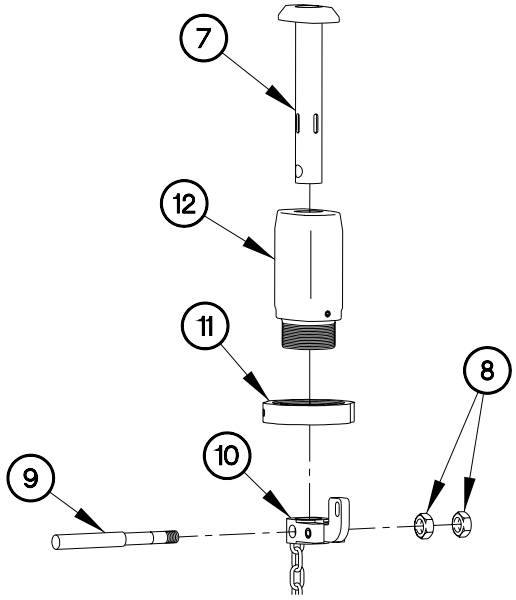
1. Install roll pin (13) in retaining pin (14) and cap (10).



TWIST LOCK ASSEMBLY REPLACEMENT - Continued 0088 00

INSTALLATION – Continued

2. Install hand screw (11) to lock body (12).
3. Install lock handle (7) into lock body (12).
4. Install retaining pin (9) into lock handle (7).
5. Install nuts (8) to retaining pin (9).

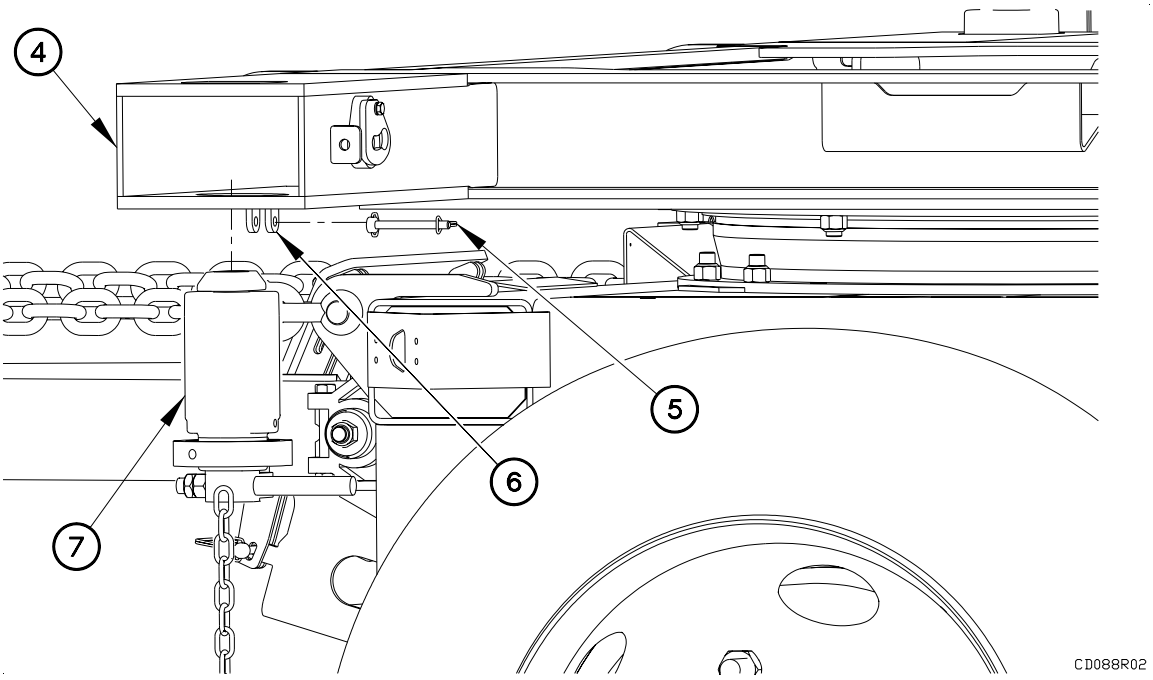


CD088R03

TWIST LOCK ASSEMBLY REPLACEMENT - Continued 0088 00

INSTALLATION – Continued

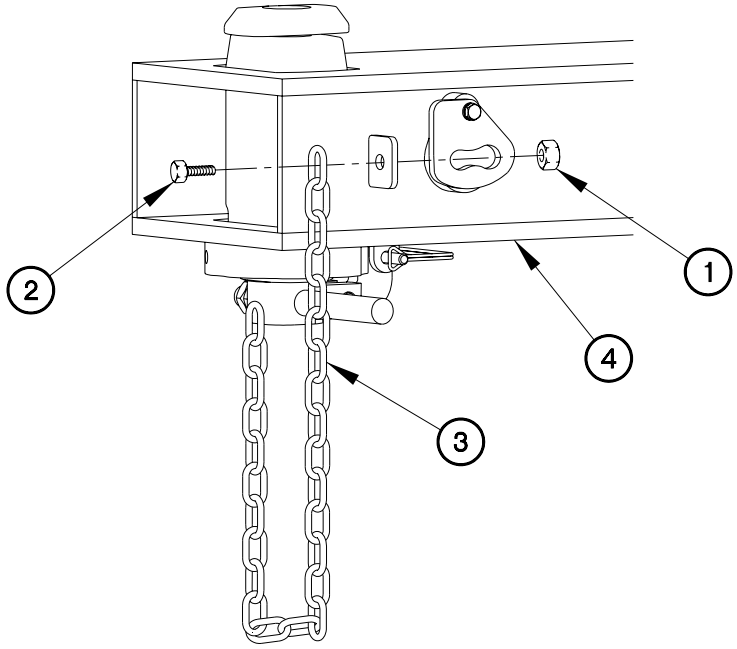
6. Insert lock handle (7) into LHST frame (4).
7. Rotate bottom of ISO lock 90 degrees.
8. Attach retaining pin (5) to cap (6).



INSTALLATION – Continued

9. Insert bolt (2) into chain (3) and trailer crossmember (4).

10. Attach nut (1) to bolt (2).



CD088R01

END OF WORK PACKAGE

FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 31, WP 0167 00)
Sling, Cargo (Item 16, WP 0167 00)

Materials/Parts

Pin, Cotter (4) (Item 46, WP 0168 00)

Materials/Parts (Cont)

Washer, Lock (6) (Item 23, WP 0168 00)
Nut, Self-Locking (Item 31, WP 0168 00)
Nut, Self-Locking (2) (Item 38, WP 0168 00)
Anaerobic Adhesive (Item 1, WP 0165 00)

Equipment Conditions

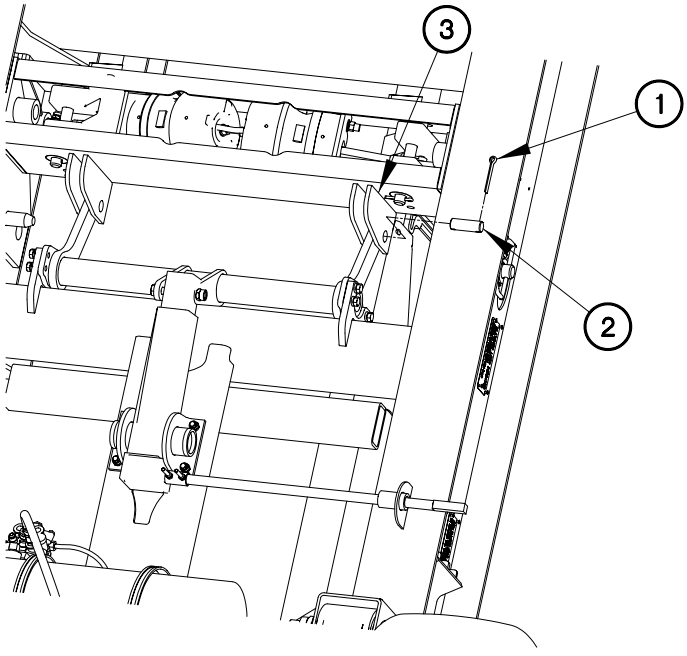
Shuttle removed (WP 0100 00).
Flatrack Air Chambers and Locks removed (WP 0107 00).

REMOVAL

NOTE

All four retaining pins are removed the same way. One shown.

1. Remove two cotter pins (1) and retaining pin (2) from flatrack rail (3). Discard cotter pin.
2. Perform previous step on remaining retaining pins.

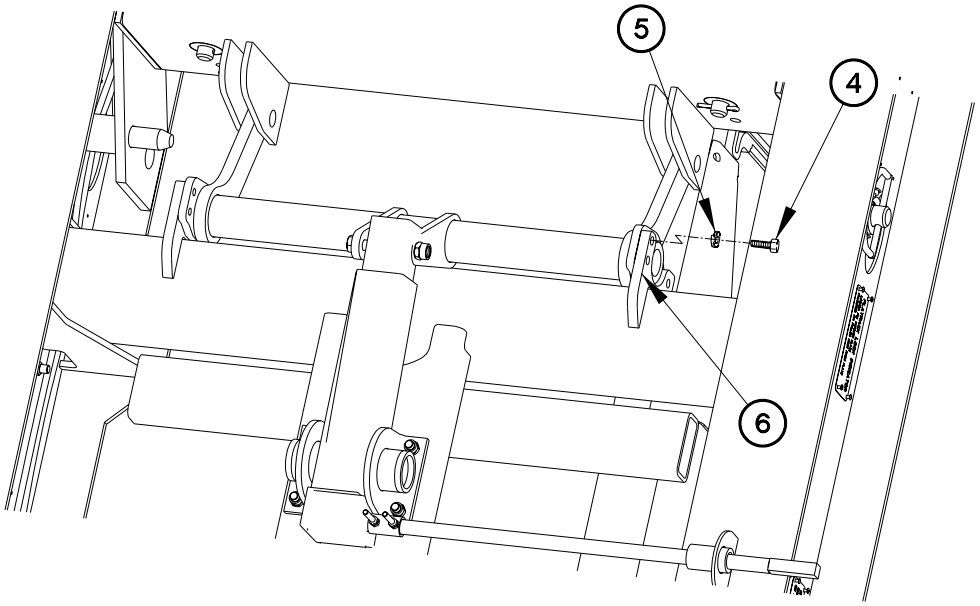


CD089R01

FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

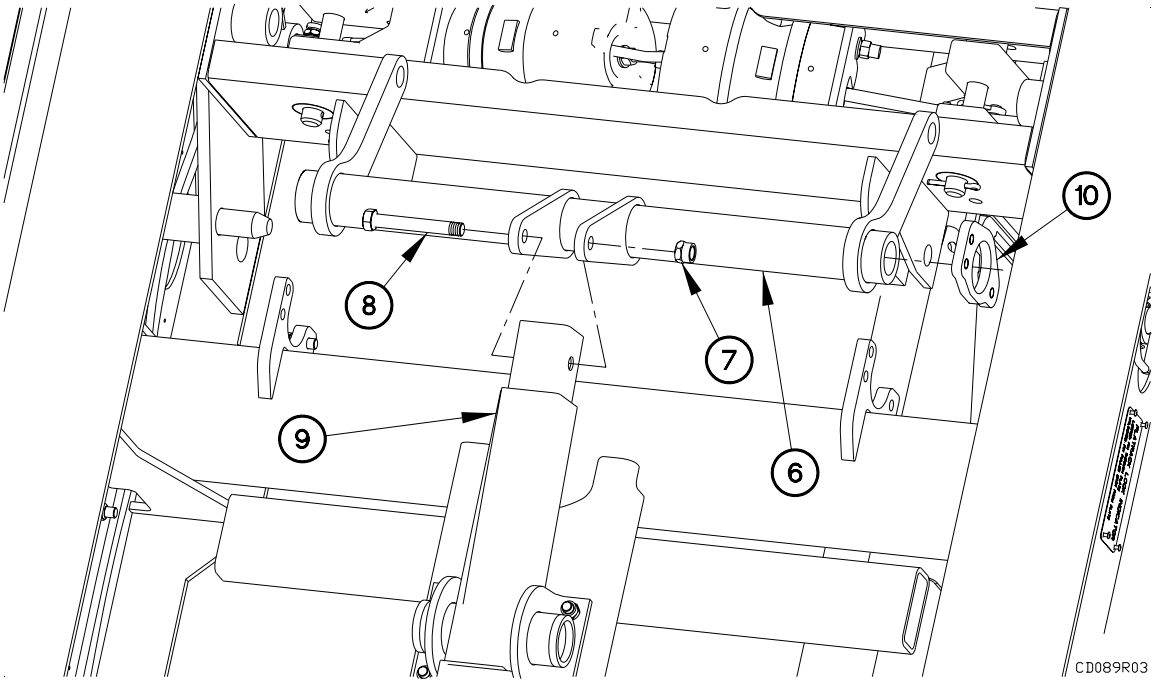
REMOVAL - Continued

3. Remove six bolts (4) and lockwashers (5) from pivot bracket (6). Discard lockwashers.



4. Remove self-locking nut (7), bolt (8), and pivot bracket (6) from rail lift jack (9). Discard self-locking nut.

5. Remove two retaining plates (10) from pivot bracket (6).



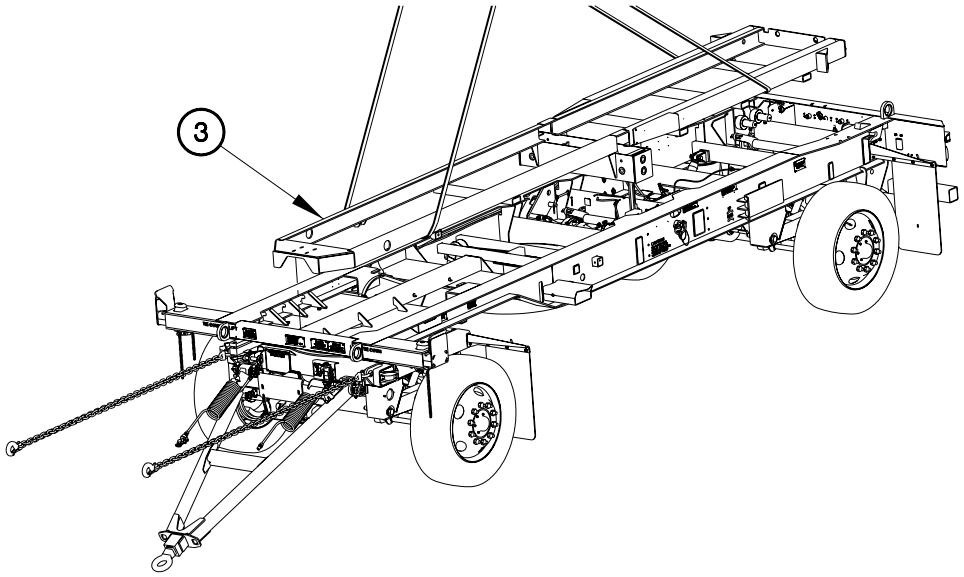
FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

REMOVAL - Continued

WARNING

Flatrack rail weighs approximately 600 lbs (272 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury or death to personnel or damage to equipment.

6. Remove flatrack rail (3) from vehicle.

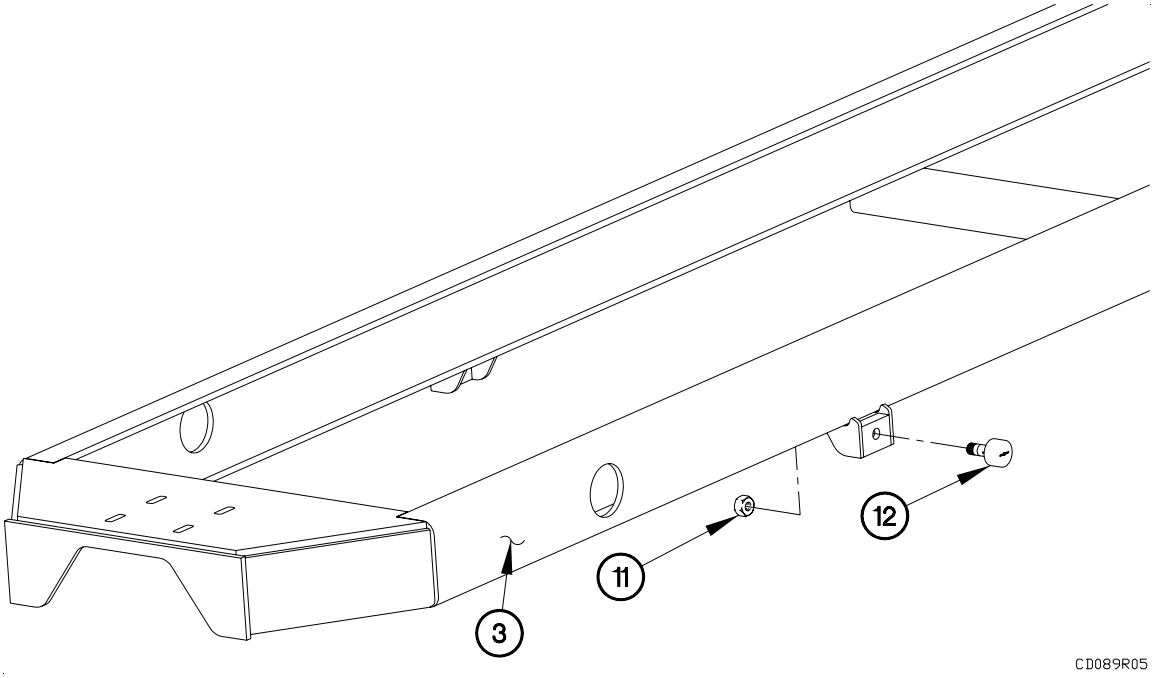


CD089R04

FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

REMOVAL - Continued

7. Remove two self-locking nuts (11) and cam followers (12) from flatrack rail (3). Discard self-locking nuts.



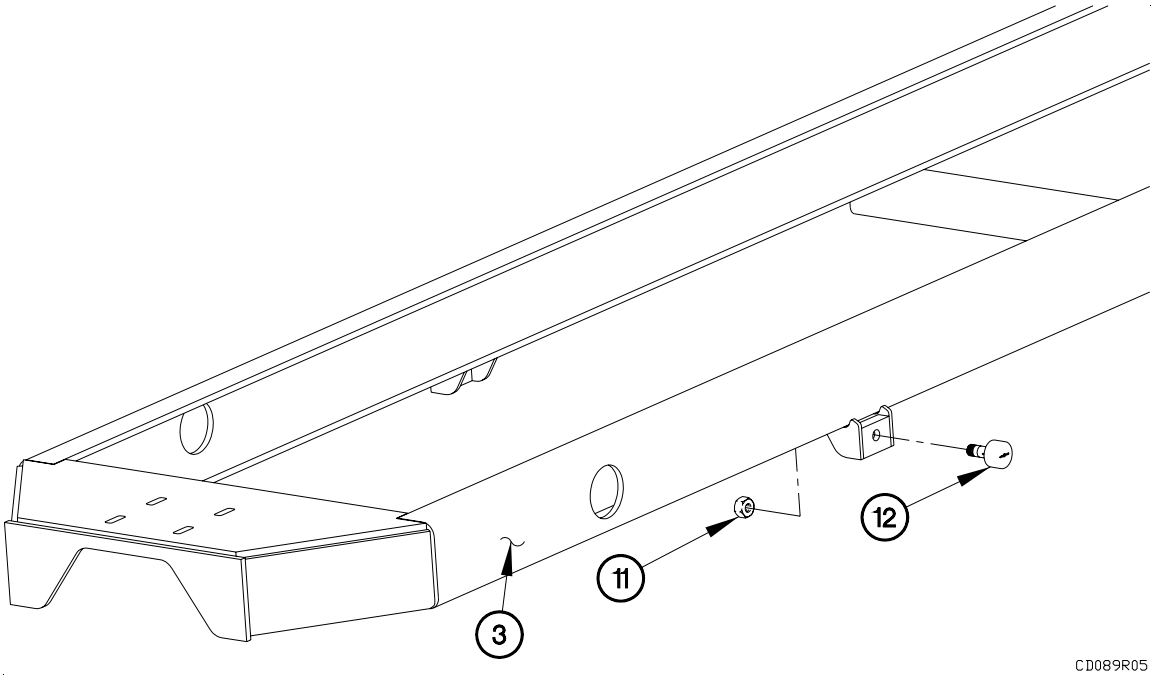
FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

INSTALLATION

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

1. Apply adhesive to threads of two cam followers (12).
2. Position two cam followers (12) on flatrack rail (3) with two self-locking nuts (11).
3. Tighten two self-locking nuts (11) to 29-35 lb-ft (39-47 N•m).



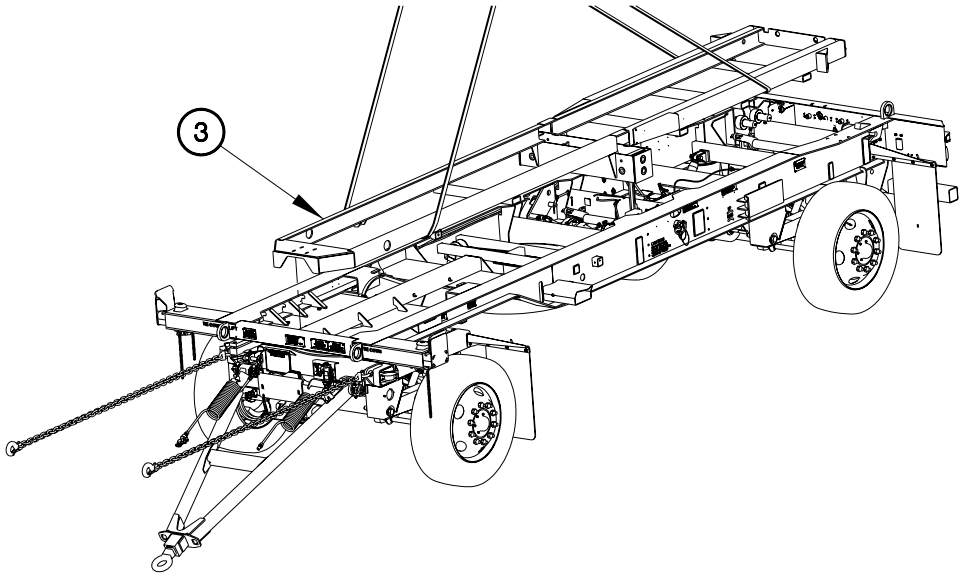
FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

INSTALLATION - Continued

WARNING

Flatrack rail weighs approximately 600 lbs (272 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury or death to personnel or damage to equipment.

4. Position flatrack rail (3) on vehicle.

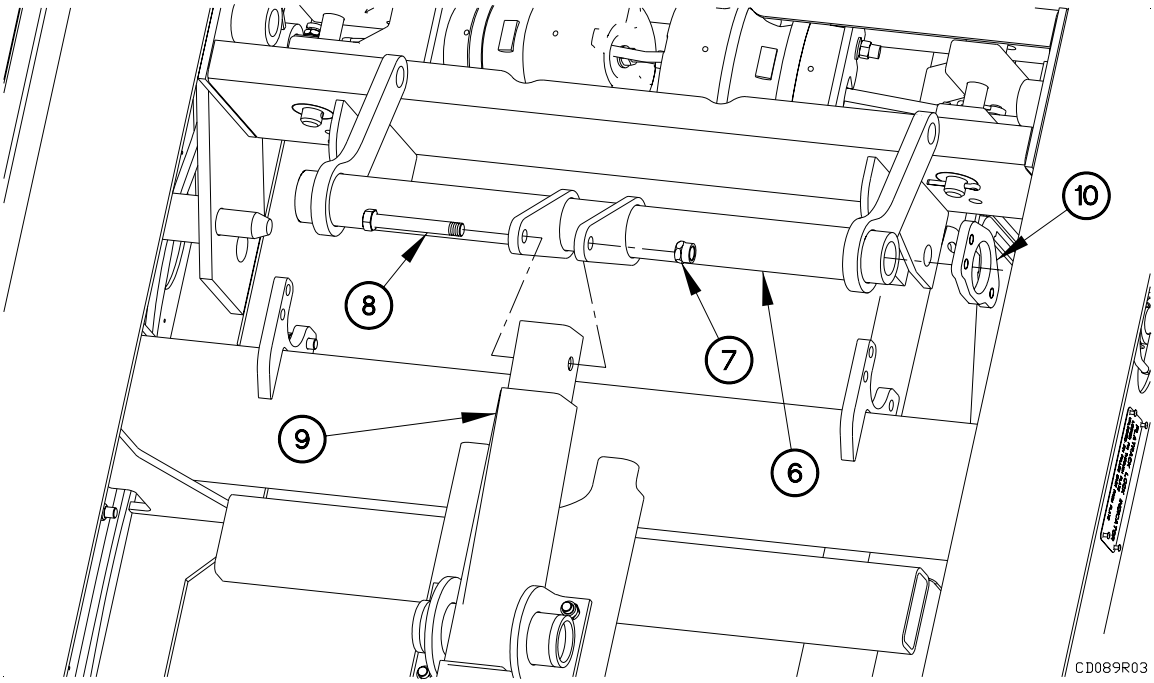


CD089R04

FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

INSTALLATION - Continued

5. Position two retaining plates (10) on pivot bracket (6).
6. Position pivot bracket (6) on rail lift jack (9) with bolt (8) and self-locking nut (7).
7. Tighten self-locking nut (7) to 150-190 lb-ft (203-257 N•m).

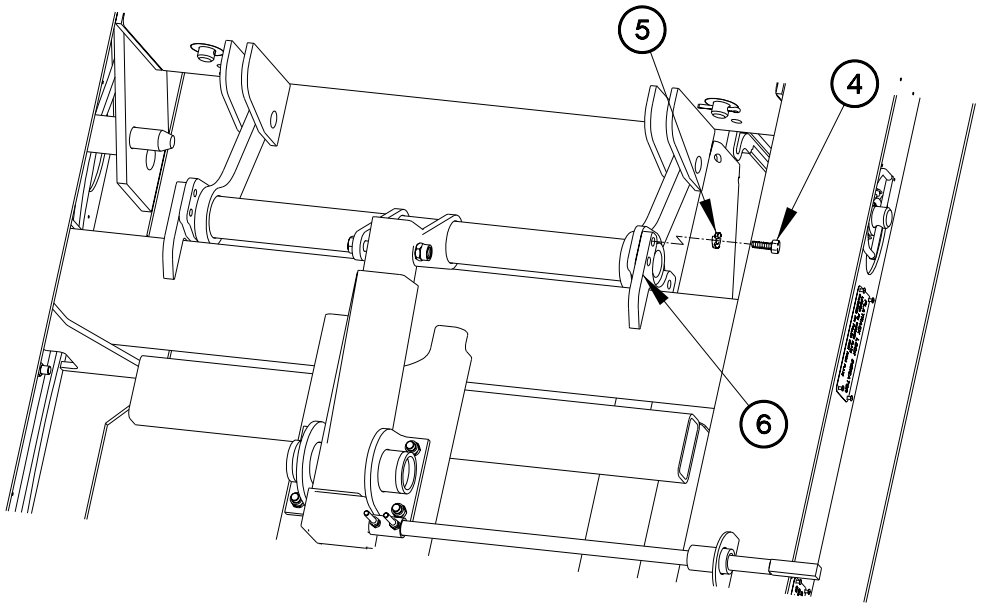


FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT 0089 00

INSTALLATION - Continued

8. Position six lockwashers (5) and bolts (4) in pivot bracket (6).

9. Tighten six bolts (4) to 70-90 lb-ft (95-122 N•m).



CD089R02

FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT - CONTINUED 0089 00

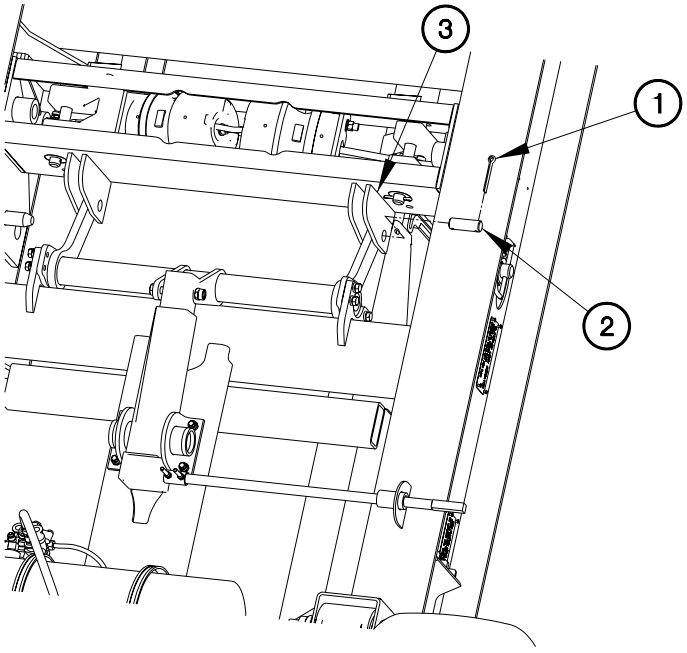
INSTALLATION - Continued

NOTE

All four retaining pins are installed the same way. One shown.

10. Install retaining pin (2) in flatrack rail (3) with two cotter pins (1).

11. Perform previous step on remaining retaining pins.



OPERATIONAL CHECKS

1. Install flatrack air chambers and locks (WP 0107 00).

2. Install shuttle (WP 0100 00).

3. Perform flatrack loading and unloading procedures (WP 0043 13 and WP 0043 14, TM 9-2320-392-10-1).

END OF WORK PACKAGE

DRAWBAR REPLACEMENT 0090 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools/Special Tools

Gloves, Rubber (Item 6, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Sling, Cargo (Item 16, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Impact, Pneumatic (Item 30, WP 0167 00)
Socket Set, Impact (Item 18, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)

Materials/Parts

Bolt and Self-Locking Nut (4) (Item 1, WP 0168 00)

Materials/Parts (Cont)

Washer, Lock (4) (Item 17, WP 0168 00)
Nut (2) (Item 9, WP 0165 00)
Nut, Self-Locking (2) (Item 33, WP 0168 00)
Screw (2) (Item 12, WP 0165 00)
Washer (8) (Item 21, WP 0165 00)

Personnel Required

Two

Equipment Conditions

Gladhand hoses removed (WP 0079 00).
Bump stop and bump stop extension removed (WP 0104 00).
Drawbar lift valve removed (WP 0094 00).
Drawbar eye removed (WP 0092 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) drawbar.

WARNING

Drawbar weighs approximately 215 lbs (97 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

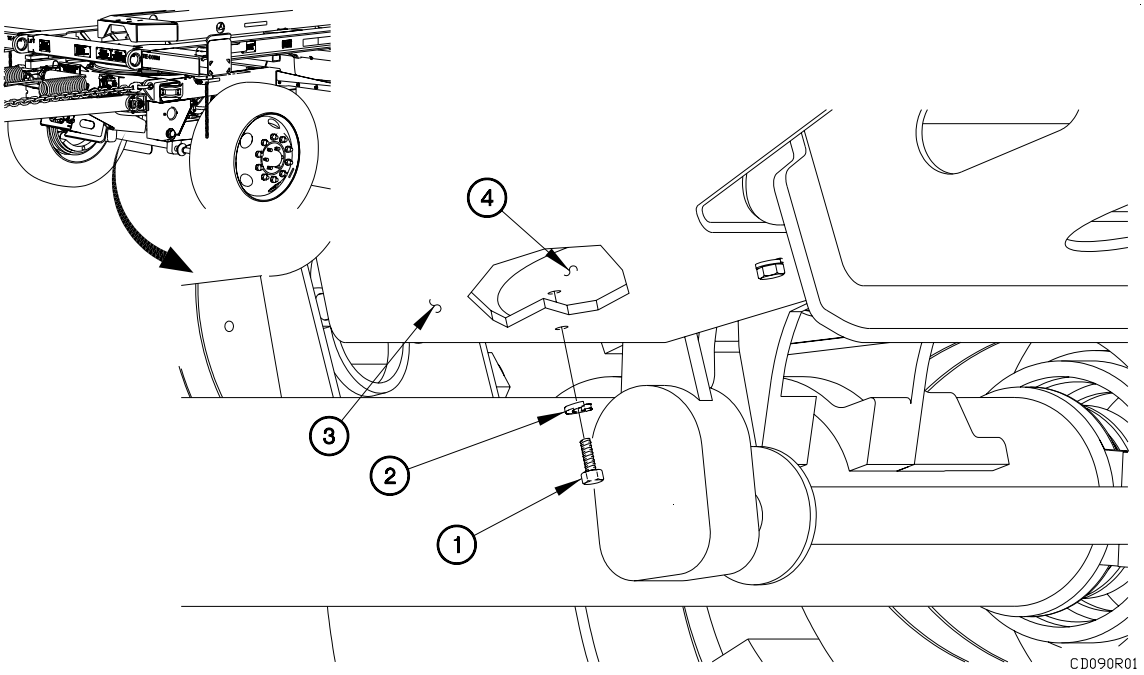
Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

DRAWBAR REPLACEMENT - Continued 0090 00

REMOVAL

1. Drain air tanks.

2. Remove two bolts (1) and lockwashers (2) from drawbar (3) and air bladder (4). Discard lockwashers.



DRAWBAR REPLACEMENT - Continued 0090 00

REMOVAL - Continued

NOTE

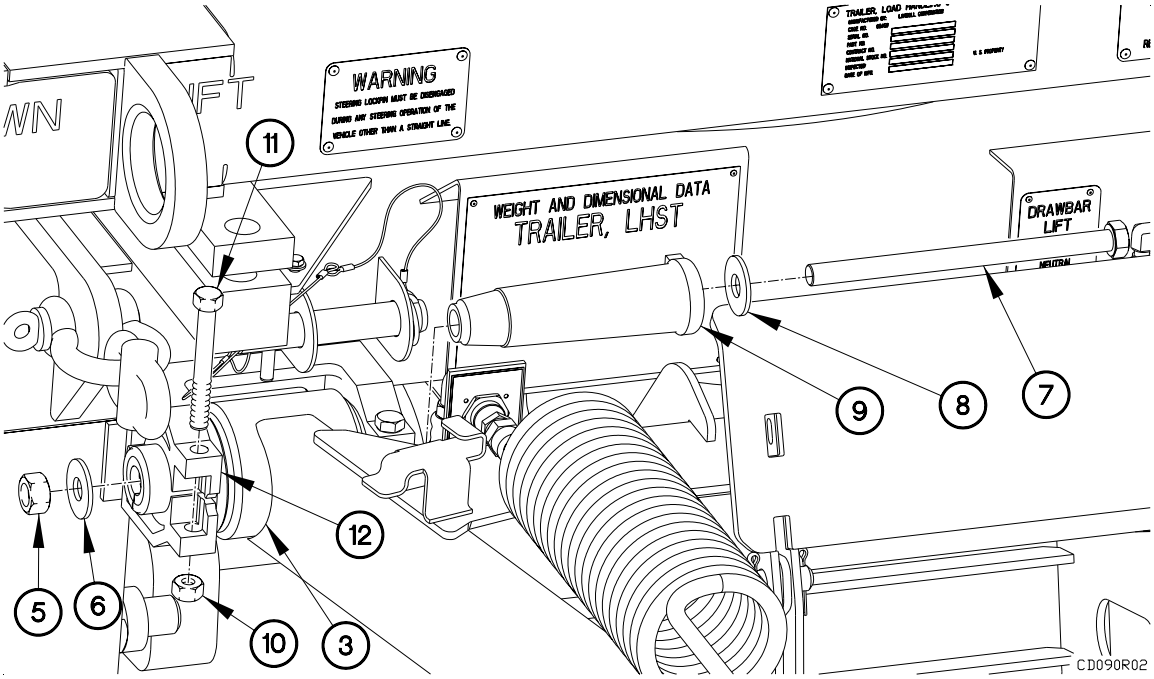
LH and RH drawbar hinges are removed the same way. RH drawbar hinge shown.

3. Remove self-locking nut (5), washer (6), bolt (7), and washer (8) from taper pin (9). Discard self-locking nut.

4. Remove two self-locking nuts (10) and bolts (11) from drawbar hinge bracket (12). Discard self-locking nuts.

5. Remove taper pin (9) from drawbar (3) and drawbar hinge bracket (12).

6. Perform the previous three steps on LH drawbar hinge.



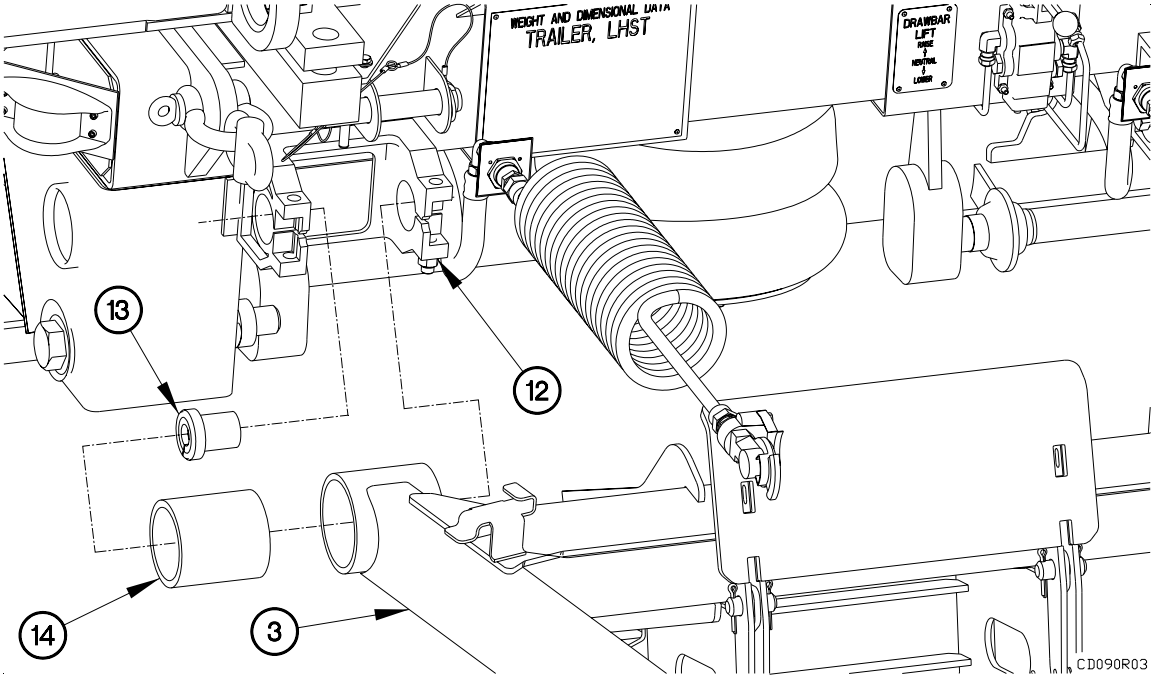
DRAWBAR REPLACEMENT - Continued 0090 00

REMOVAL - Continued

NOTE

The following step requires the aid of an assistant.

7. Remove drawbar (3) from two drawbar hinge brackets (12).
8. Remove two flanges (13) from drawbar hinge brackets (12).
9. Remove two drawbar hinge bushings (14) from drawbar (3).



DRAWBAR REPLACEMENT - Continued 0090 00

INSTALLATION

WARNING

Drawbar weighs approximately 215 lbs (97 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

CAUTION

Drawbar hinge bushing openings are tapered to fit taper pins. Be sure to install bushings with wider opening towards the inside of the drawbar. Failure to comply may result in damage to equipment.

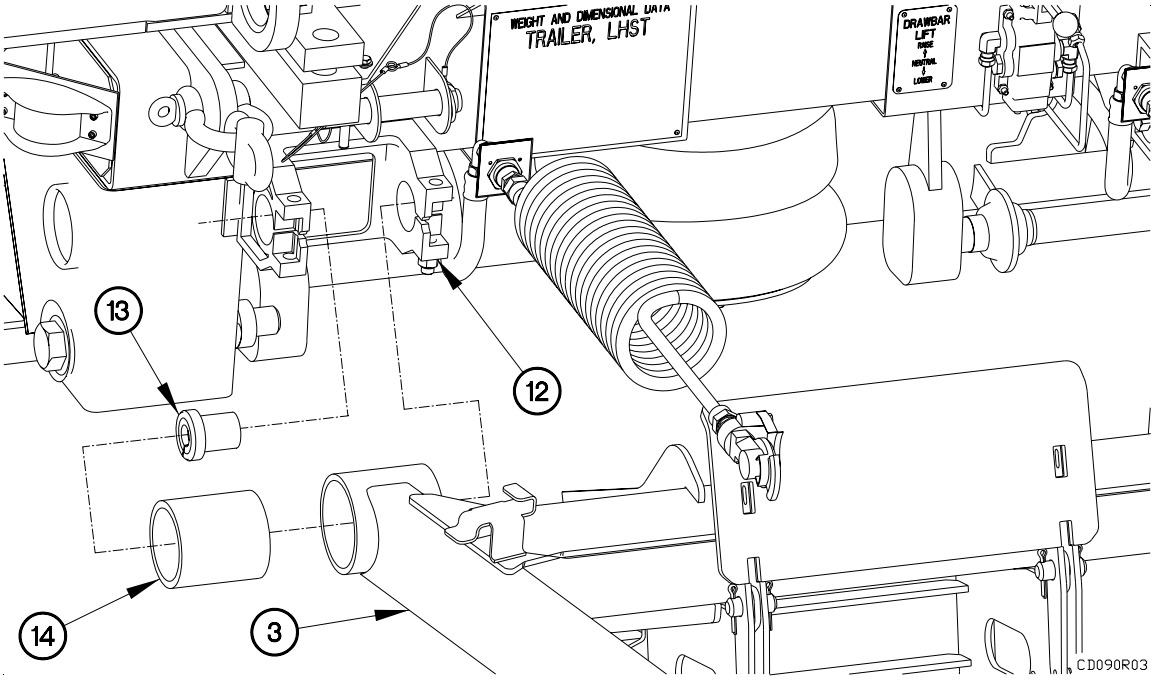
Line up slots on drawbar hinge flanges with slots on drawbar hinge brackets. Failure to comply may result in damage to equipment.

1. Install two drawbar hinge bushings (14) on drawbar (3).
2. Install two flanges (13) on drawbar hinge brackets (12).

NOTE

The following step requires the aid of an assistant.

3. Position drawbar (3) on two drawbar hinge brackets (12).



DRAWBAR REPLACEMENT - Continued 0090 00

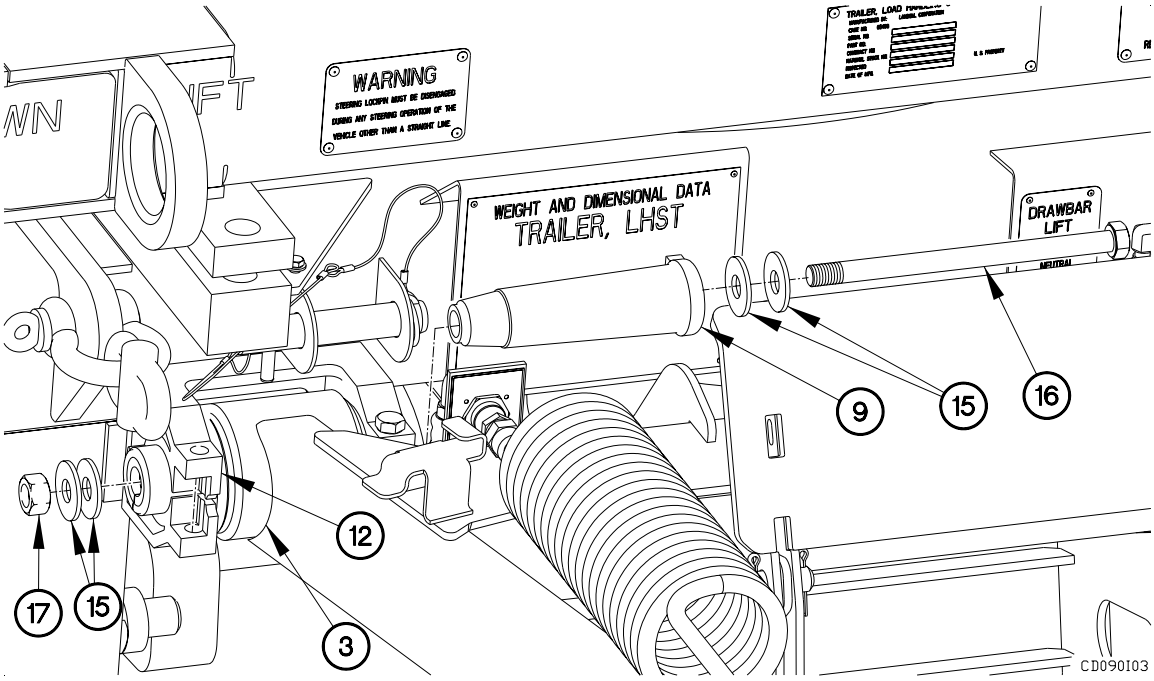
INSTALLATION – Continued

NOTE

LH and RH drawbar hinges are installed the same way. RH drawbar hinge shown.

Line up flat spot on taper pin with flat spot on drawbar hinge bracket.

4. Position taper pin (9) on drawbar hinge bracket (12) and drawbar (3).
5. Position four washers (15), bolt (16), and nut (17) on taper pin (9).
6. Tighten nut (17) until the head of the taper pin (9) is flush with the drawbar hinge bracket (12).
7. Remove nut (17), bolt (16), and four washers (15) from taper pin (9). Discard nut, bolt, and washers.



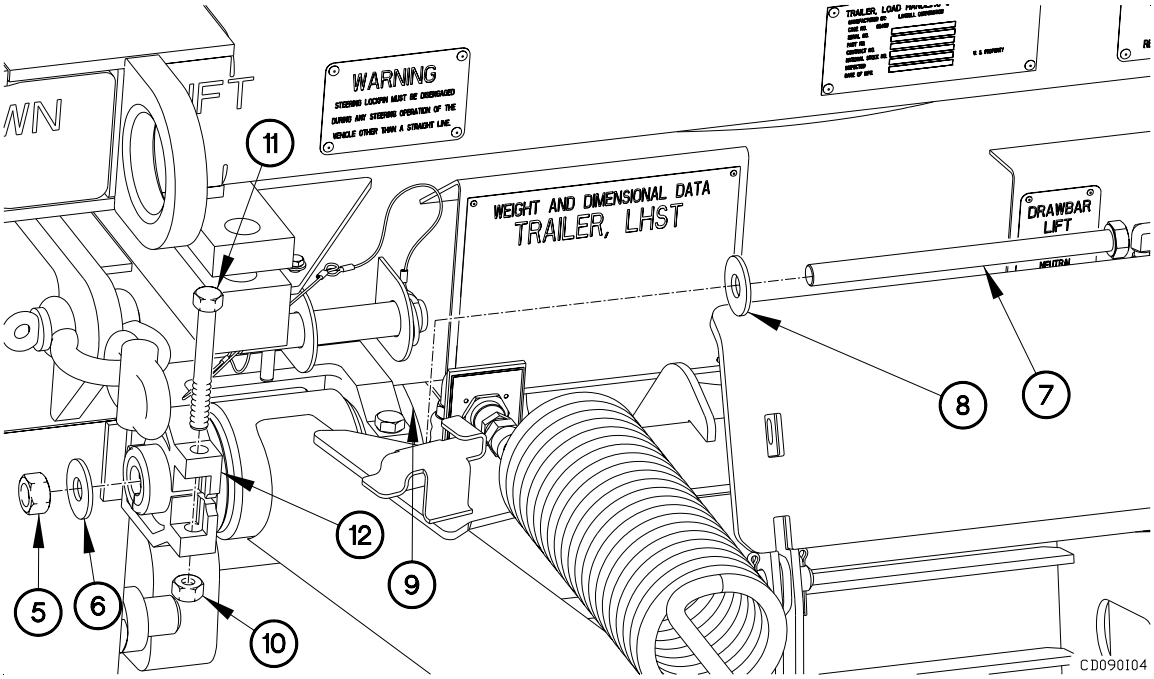
DRAWBAR REPLACEMENT - Continued 0090 00

INSTALLATION – Continued

8. Position two bolts (11) on drawbar hinge bracket (12) with two self-locking nuts (10).

9. Position washer (8) and bolt (7) on taper pin (9) with washer (6) and self-locking nut (5).

10. Perform the previous three steps on LH drawbar hinge.

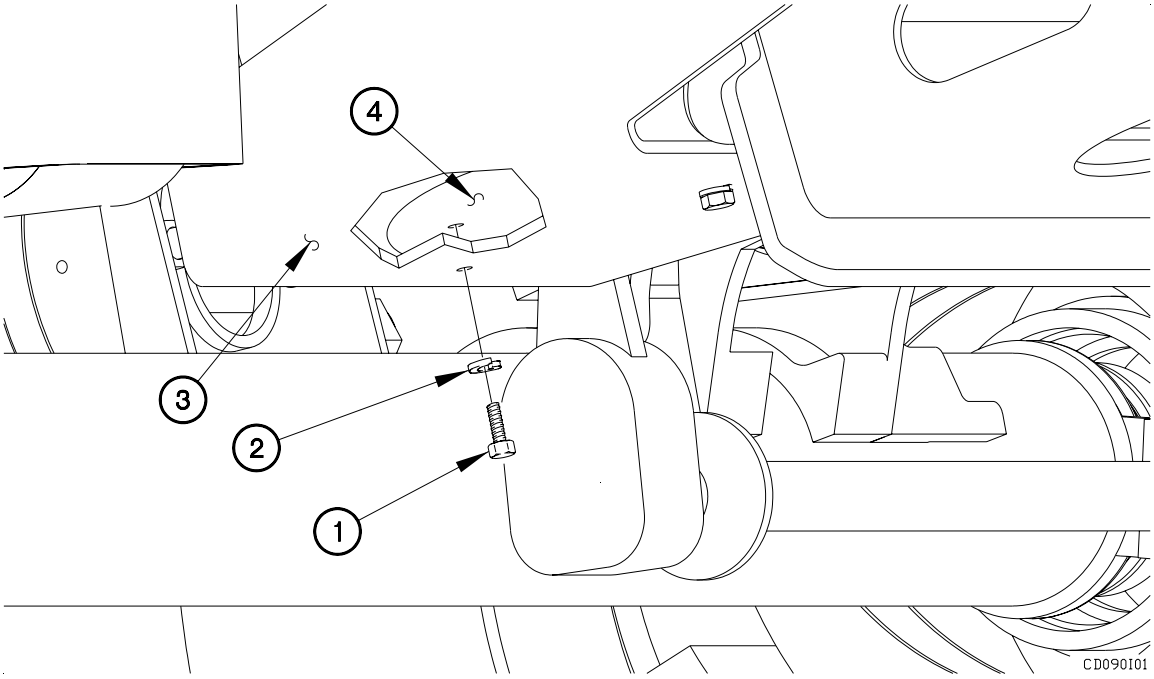


DRAWBAR REPLACEMENT - Continued 0090 00

DRAWBAR INSTALLATION - Continued

11. Position two lockwashers (2) and screws (1) in drawbar (3) and air bladder (4).

12. Tighten two screws (1) to 33-37 lb-ft (45-50 N•m).



DRAWBAR REPLACEMENT - Continued 0090 00

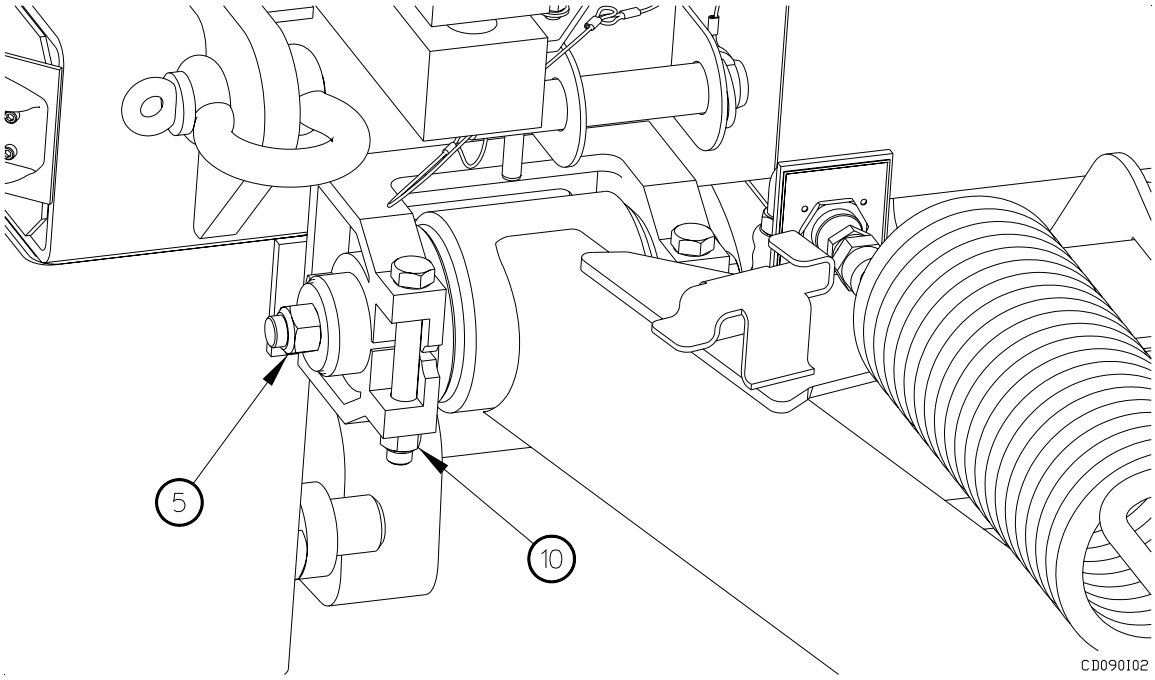
DRAWBAR INSTALLATION - Continued

NOTE

Tighten self-locking nuts until bushing is visible around the edges of drawbar hinge bushing.

13. Tighten two self-locking nuts (5).

14. Tighten four self-locking nuts (10) to 106-118 lb-ft (144-160 N•m).



OPERATIONAL CHECKS

1. Install drawbar eye (WP 0092 00, Installation).
2. Install drawbar lift valve (WP 0094 00, Installation).
3. Install bump stop and bump stop extension (WP 0104 00, Installation).
4. Install gladhand hoses (WP 0079 00, Installation).
5. Fill air tanks.

END OF WORK PACKAGE

SAFETY CHAIN ASSEMBLY REPLACEMENT 0091 00

THIS WORK PACKAGE COVERS:
Removal, Installation

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

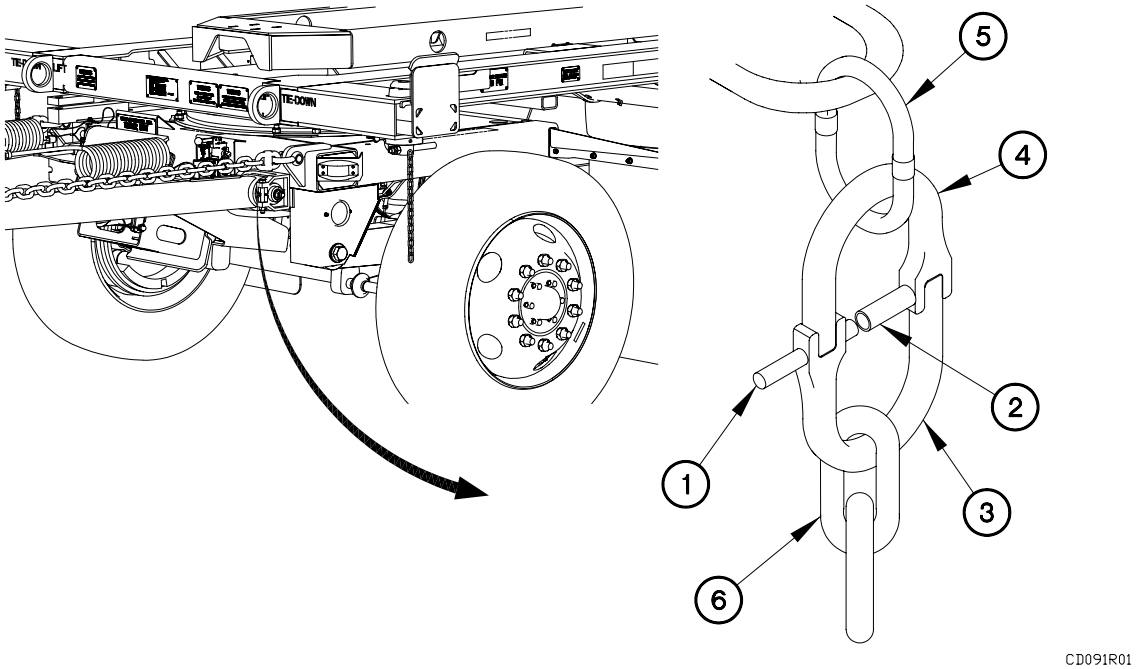
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) safety chain assembly.

REMOVAL

NOTE

Left and right safety chain assemblies are removed the same way. Left safety chain assembly shown.

1. Remove pin (1), spring collar (2), and clamp half (3) from clamp half (4).
2. Remove clamp half (4) from chain link (5).
3. Remove clamp half (3) from safety chain assembly (6).



CD091R01

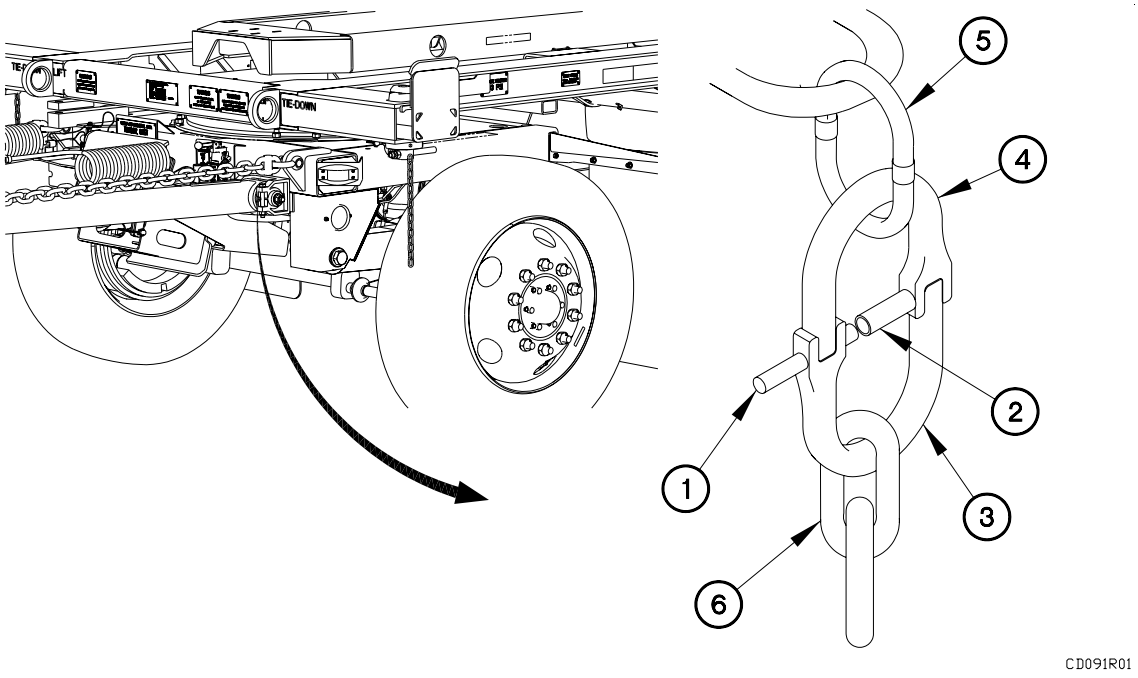
SAFETY CHAIN ASSEMBLY REPLACEMENT - Continued 0091 00

INSTALLATION

NOTE

Left and right safety chain assemblies are installed the same way. Left safety chain assembly shown.

1. Position clamp half (3) in safety chain assembly (6).
2. Position clamp half (4) in chain link (5).
3. Install clamp half (4) in clamp half (3) with spring collar (2) and pin (1).



END OF WORK PACKAGE

DRAWBAR EYE REPLACEMENT 0092 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Multiplier, Torque Wrench (Item 13, WP 0 0167)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Bar, Wrecking (Item 2, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 34, WP 0167 00)
Socket Set, Socket Wrench (Item 19, WP 0167 00)

Materials/Parts

Pin, Cotter (Item 48, WP 0168 00)
Grease, Automotive and Artillery (GAA) (Item 7, WP 0165 00)

Personnel Required

Two

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) drawbar eye.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

DRAWBAR EYE REPLACEMENT - Continued 0092 00

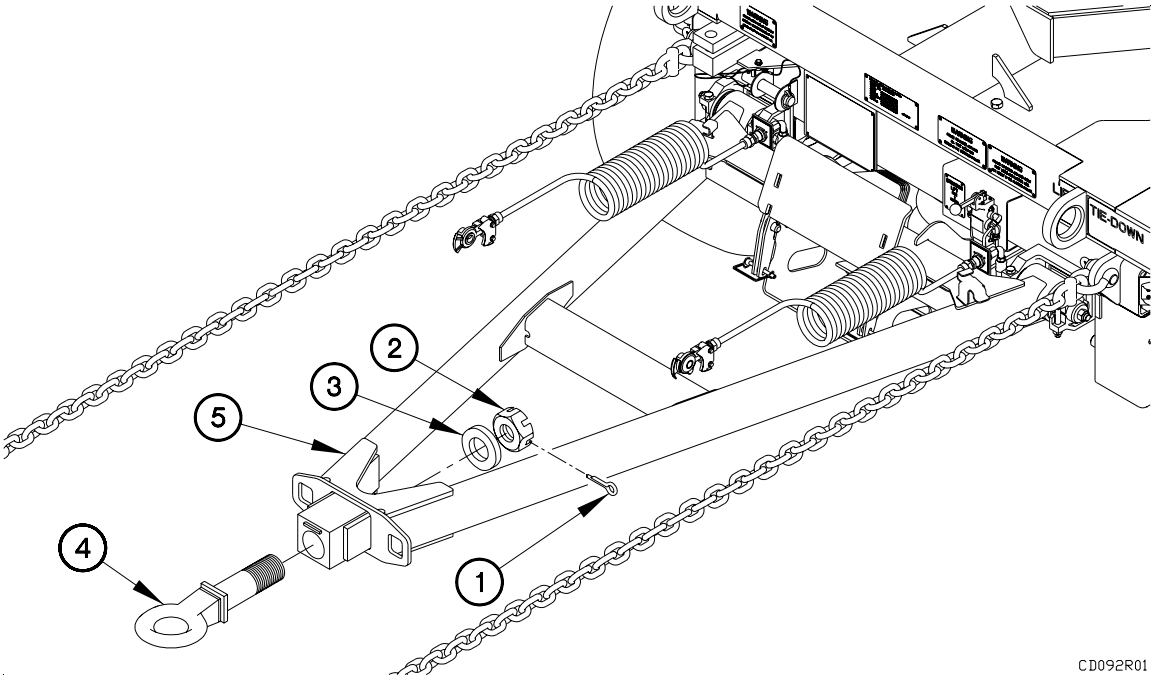
REMOVAL

1. Remove cotter pin (1) from nut (2). Discard cotter pin.

NOTE

The following step requires an assistant.

2. Remove nut (2), washer (3), and drawbar eye (4) from drawbar (5).



DRAWBAR EYE REPLACEMENT - Continued 0092 00

INSTALLATION

1. Position drawbar eye (4) on drawbar (5) with washer (3) and nut (2).

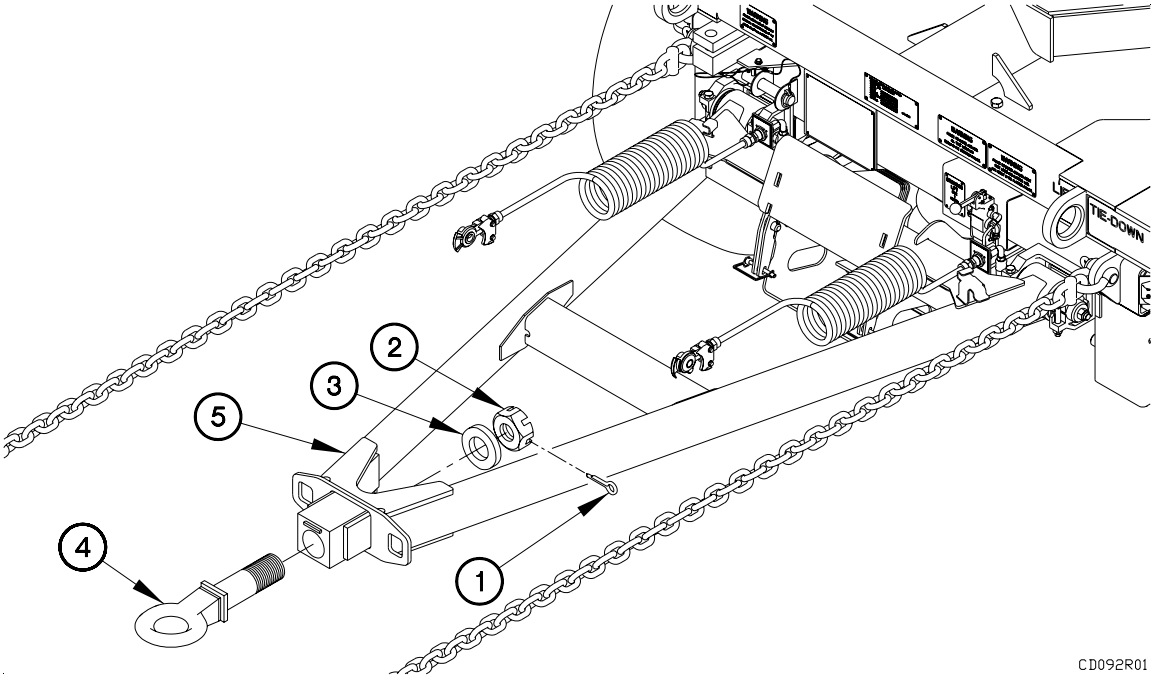
NOTE

Ensure slot in nut aligns to hole in drawbar eye while tightening to proper torque to allow cotter pin to be inserted.

Step (2) requires the aid of an assistant.

2. Tighten nut (2) to 450-650 lb-ft (610-881 N•m).

3. Install cotter pin (1) in nut (2).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).

2. Tow trailer and check for proper operation.

3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

SPARE TIRE CARRIER REPLACEMENT 0093 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Wrench Set, Crowfoot, Ratcheting (Item 27, WP 0167 00)

Materials/Parts References

Nut, Self-Locking (4) (Item 30, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Spare tire lowered (WP 0053 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) spare tire carrier.

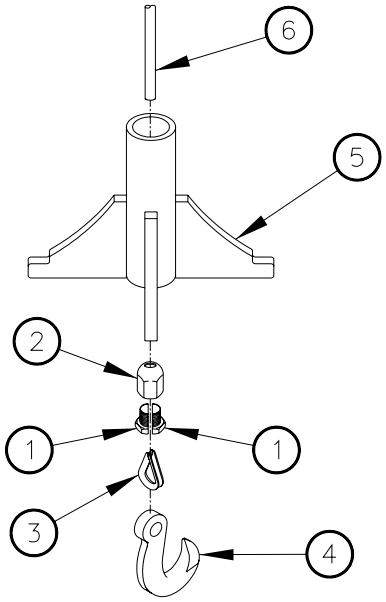
WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

SPARE TIRE CARRIER REPLACEMENT - Continued 0093 00

REMOVAL

1. Remove two clamp plug halves (1), clamp socket (2), thimble (3), hook (4), and spare tire lift bracket (5) from wire rope (6).



CD093R01

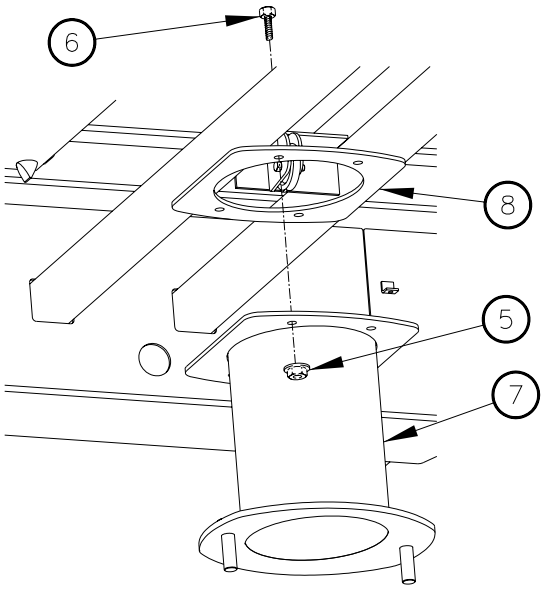
SPARE TIRE CARRIER REPLACEMENT - Continued 0093 00

REMOVAL - Continued

NOTE

The following step requires the aid of an assistant.

2. Remove four self-locking nuts (5), screws (6), and spare tire carrier (7) from carrier bracket (8). Discard self-locking nuts.



CD093R02

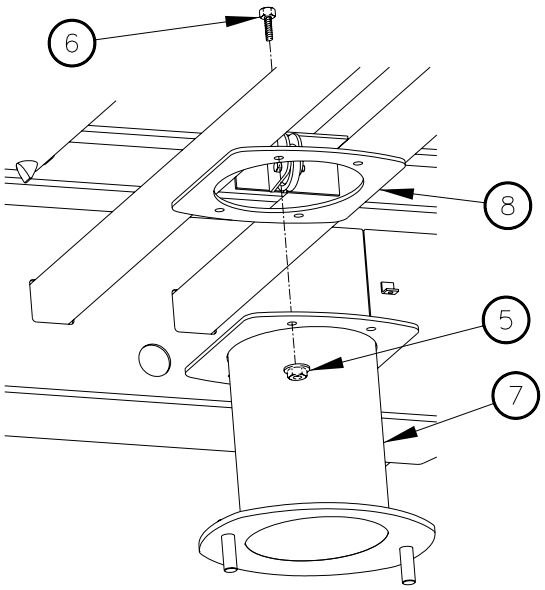
SPARE TIRE CARRIER REPLACEMENT - Continued 0093 00

INSTALLATION

NOTE

The following step requires the aid of an assistant.

1. Position spare tire carrier (7) on carrier bracket (8) with four screws (6) and self-locking nuts (5).
2. Tighten four self-locking nuts (5) to 72-88 lb-ft (98-119 N•m).



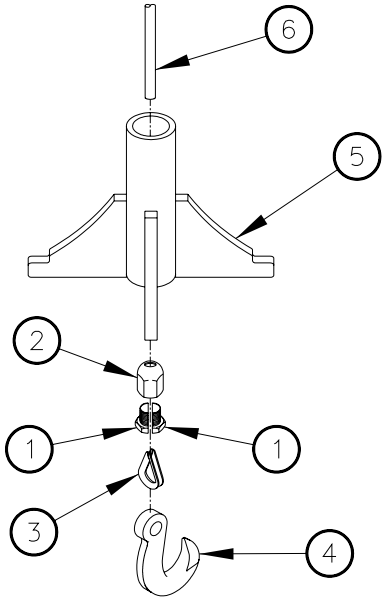
CD093R02

SPARE TIRE CARRIER REPLACEMENT - Continued 0093 00

INSTALLATION – Continued

3. Position tire lift bracket (5), clamp socket (2), hook (4), thimble (3), and two clamp plug halves (1), on wire rope (6).

4. Tighten two clamp plug halves (1) to 72-88 lb-ft (98-119 N•m).



CD093R01

OPERATIONAL CHECKS

1. Raise spare tire (WP 0053 00).

END OF WORK PACKAGE

DRAWBAR LIFT VALVE REPLACEMENT 0094 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 35, WP 0167 00)
Vise, Machinist's (Item 25, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts - (Cont)

Sealing Compound (Item 15, WP 0165 00)
Nut, Self-Locking (4) (Item 26, WP 0168 00)

References

Towing Vehicle Operator's Manual (WP 0043 16)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) drawbar lift valve.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

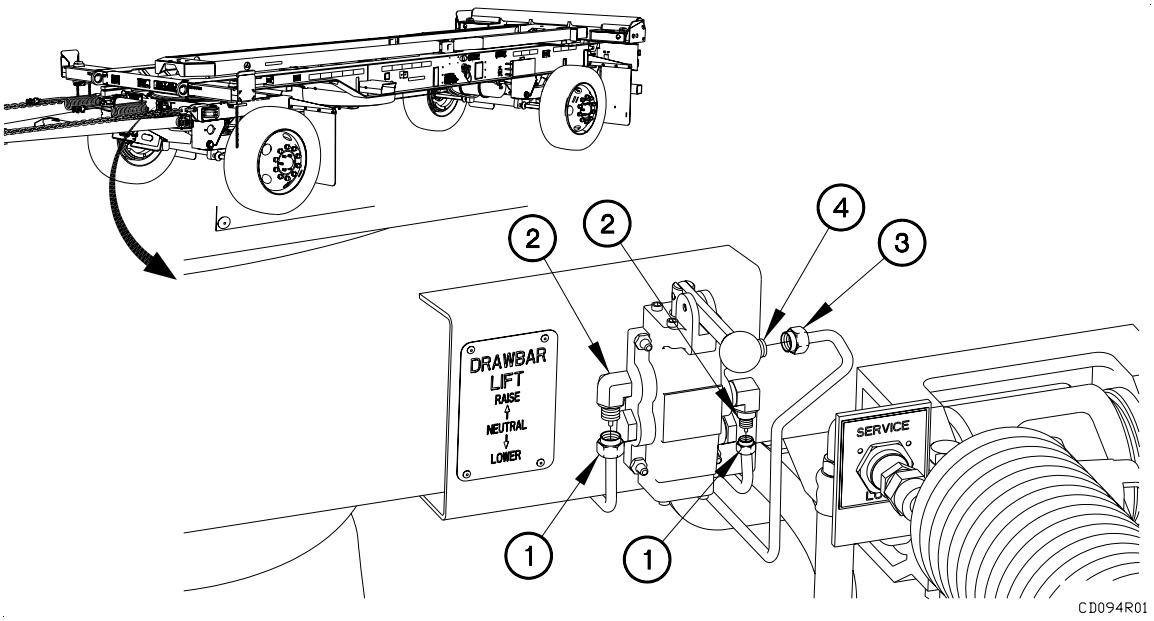
DRAWBAR LIFT VALVE REPLACEMENT - Continued 0094 00

REMOVAL

NOTE

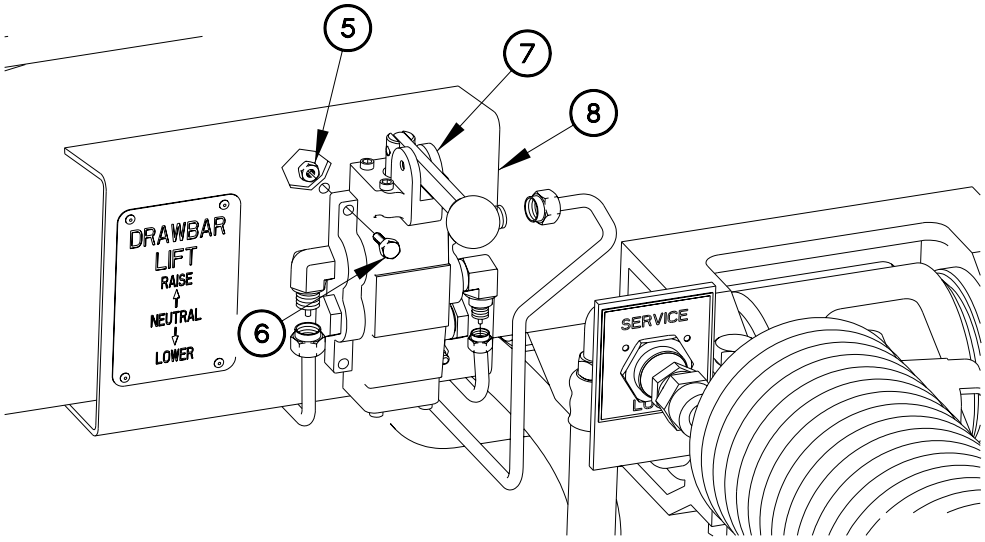
Tag air hoses and connection points prior to disconnecting.

1. Drain air tanks.
2. Disconnect two hoses (1) from 90-degree fittings (2).
3. Disconnect hose (3) from fitting (4).



CD094R01

4. Remove four self-locking nuts (5), bolts (6), and drawbar lift valve (7) from bracket (8). Discard self-locking nuts.



CD094R02

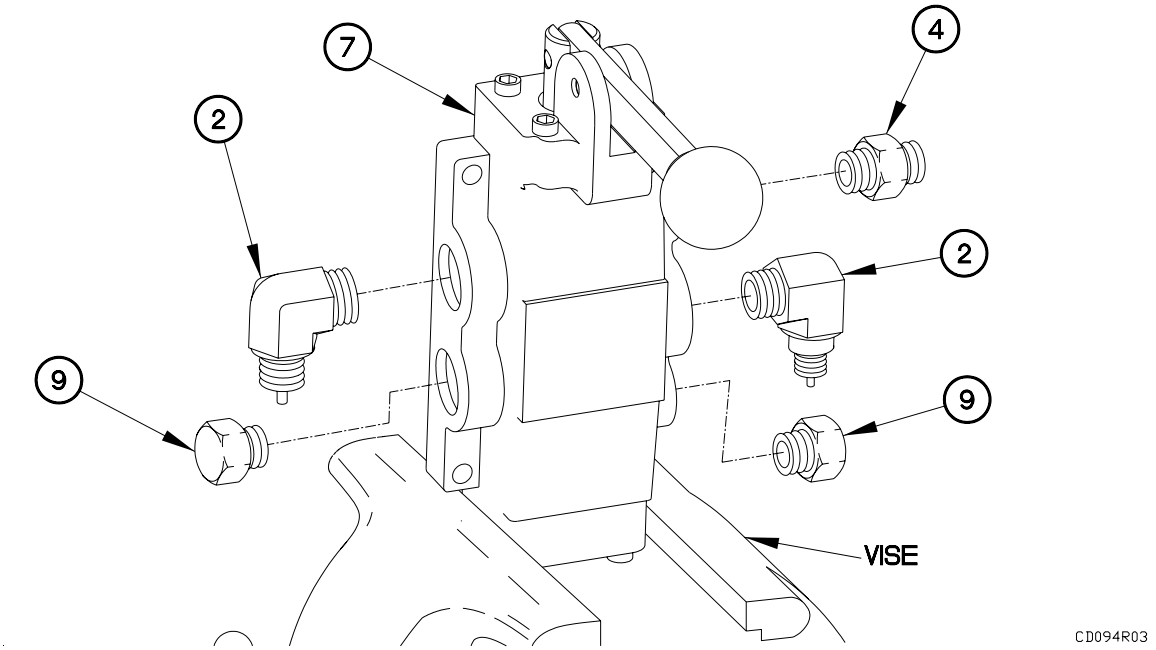
DRAWBAR LIFT VALVE REPLACEMENT - Continued 0094 00

REMOVAL - Continued

NOTE

Note fitting locations prior to removal.

5. Position drawbar lift valve (7) in vise.
6. Remove two plugs (9) from drawbar lift valve (7).
7. Remove fitting (4) from drawbar lift valve (7).
8. Remove two 90-degree fittings (2) from drawbar lift valve (7).



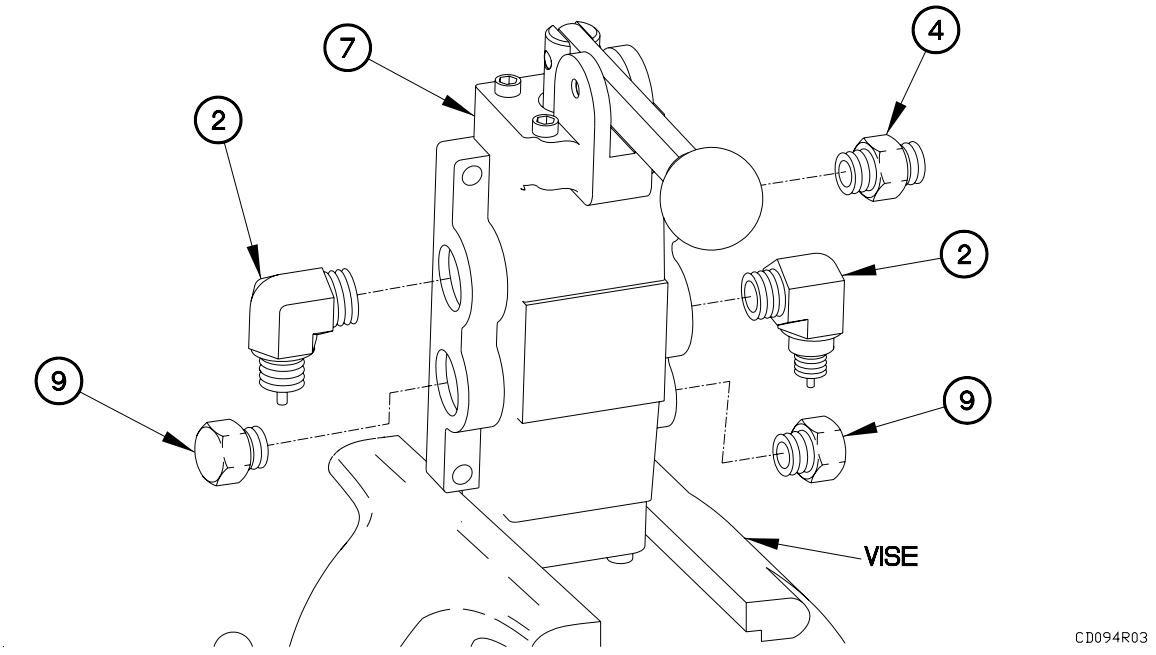
DRAWBAR LIFT VALVE REPLACEMENT - Continued 0094 00

INSTALLATION

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

1. Apply sealing compound to threads of two plugs (9), fitting (4), and two 90-degree fittings (2).
2. Position drawbar lift valve (7) in vise.
3. Install two 90-degree fittings (2) on drawbar lift valve (7).
4. Install fitting (4) on drawbar lift valve (7).
5. Install two plugs (9) on drawbar lift valve (7).

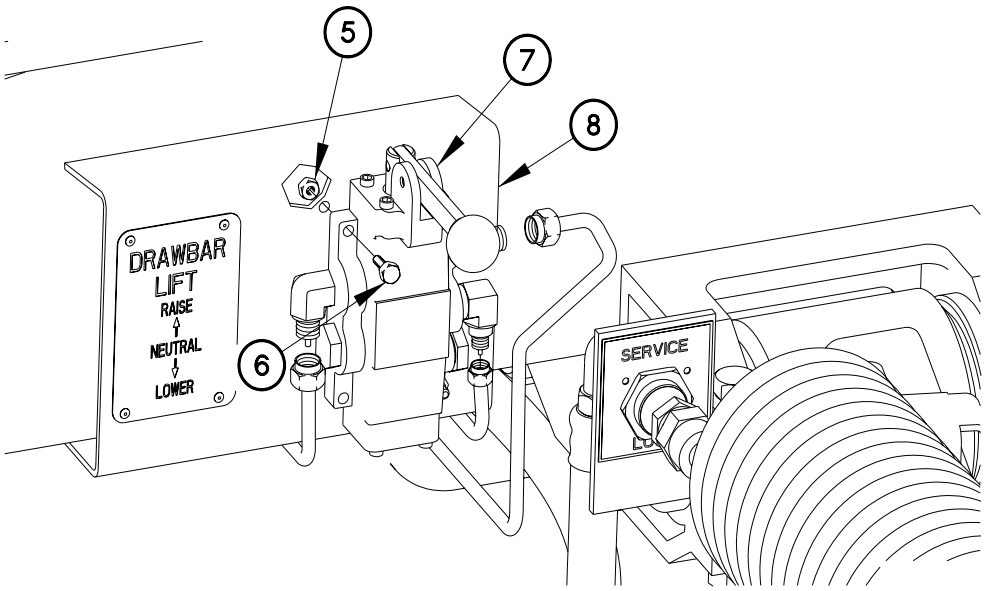


DRAWBAR LIFT VALVE REPLACEMENT - Continued 0094 00

INSTALLATION - Continued

6. Position drawbar lift valve (7) on bracket (8) with four bolts (6) and self-locking nuts (5).

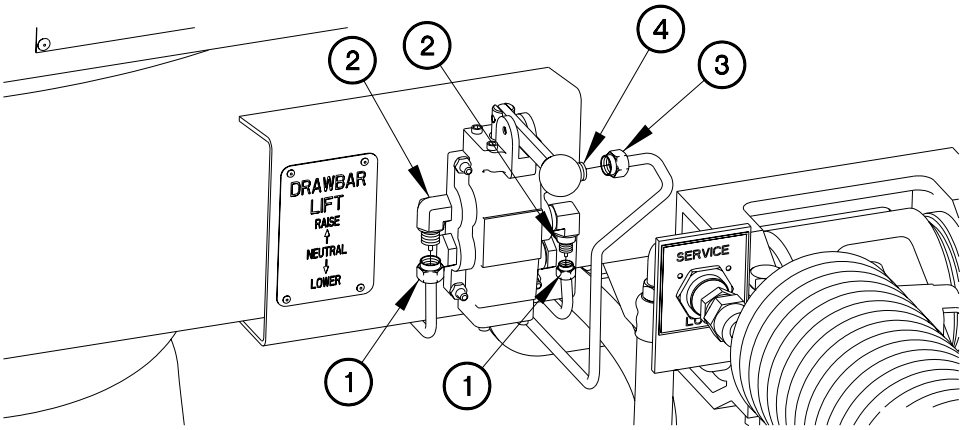
7. Tighten four self-locking nuts (5) to 24-36 lb-in. (3-4 N•m).



CD094R02

INSTALLATION – Continued

9. Connect hose (3) to fitting (4).
10. Connect two hoses (1) to 90-degree fittings (2).



CD094I01

OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Operate drawbar lift valve.
3. Check for leaks in drawbar lift valve hoses.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

SHOCK ABSORBER REPLACEMENT 0095 00

THIS WORK PACKAGE COVERS:

Removal, Installation

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Socket Set, Impact (Item 18, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Impact, Pneumatic (Item 30, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)

Materials/Parts

Washer, Lock (2) (Item 5, WP 0168 00)
Nut, Self-Locking (2) (Item 24, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) shock absorbers.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

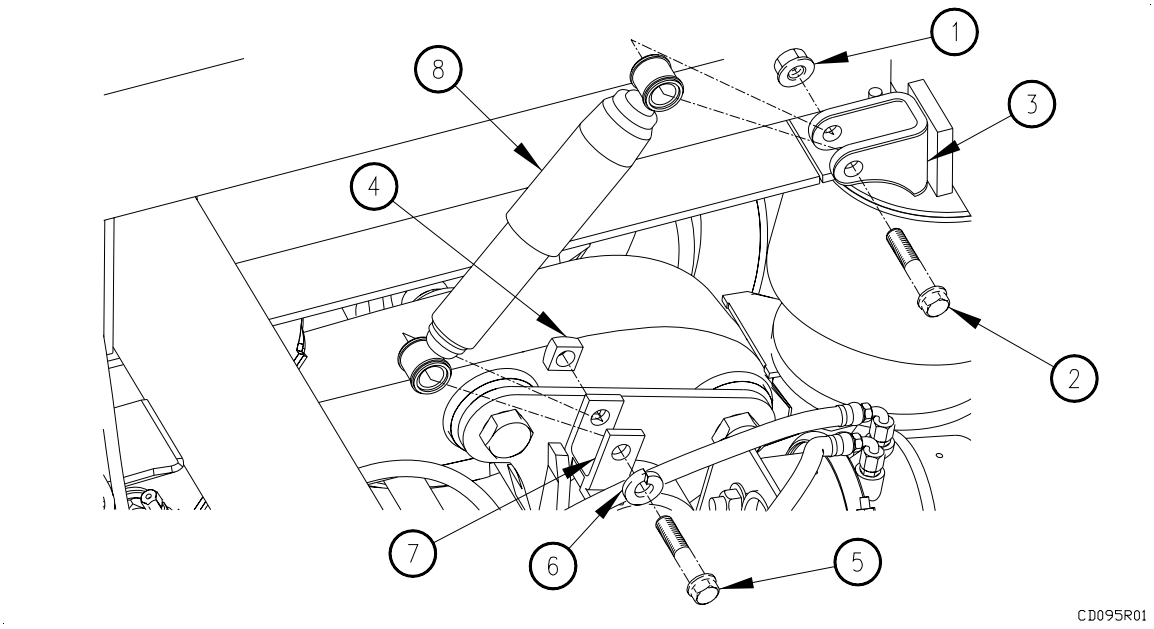
SHOCK ABSORBER REPLACEMENT - Continued 0095 00

REMOVAL

NOTE

LH and RH rear and front shock absorbers are removed the same way. RH rear shown.

1. Remove self-locking nut (1) and screw (2) from upper bracket (3). Discard self-locking nut.
2. Remove nut (4), screw (5), and lockwasher (6) from lower bracket (7). Discard lockwasher.
3. Remove shock absorber (8) from upper bracket (3) and lower bracket (7).



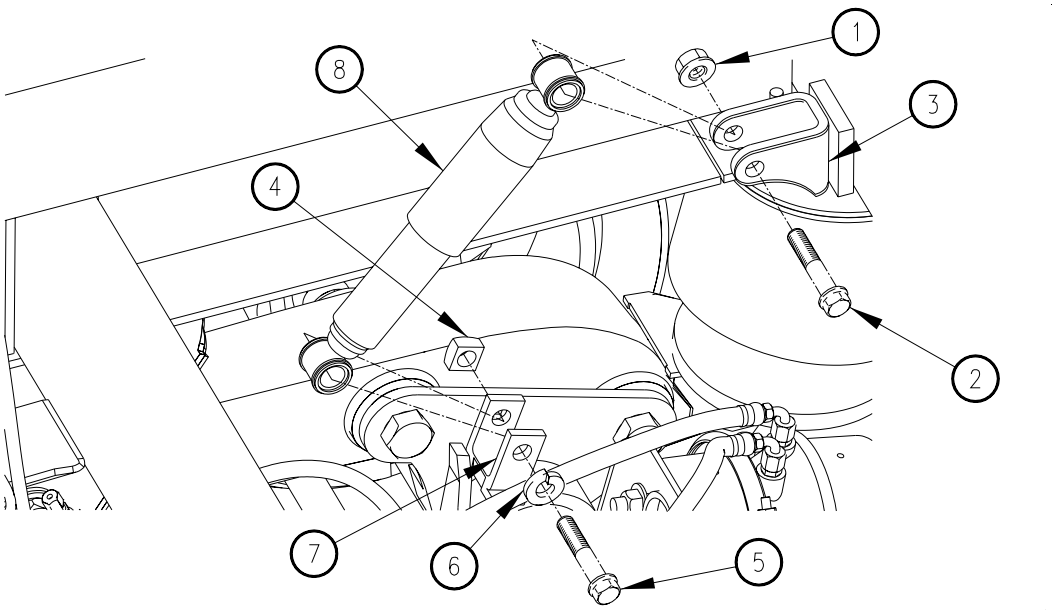
SHOCK ABSORBER REPLACEMENT - Continued 0095 00

INSTALLATION

NOTE

Left and right side shock absorbers are installed the same way. Right side shown.

1. Position shock absorber (8) on upper bracket (3) and lower bracket (7).
2. Install screw (5), lockwasher (6), and nut (4) on lower bracket (7).
3. Install screw (2) and self-locking nut (1) on upper bracket (3).
4. Tighten screws (2 and 5) to 142-157 lb-ft (194-213 N•m).



END OF WORK PACKAGE

AIR BLADDER REPLACEMENT 0096 00

THIS WORK PACKAGE COVERS:
Removal, Installation

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Jack, Dolly Type Hydraulic (Item 10, WP 0167 00)
Trestle, Motor Vehicle Maintenance (Item 24, WP 0167 00)

Materials/Parts
Sealing Compound (Item 2, WP 0165 00)
Washer, Lock (Item 4, WP 0168 00)
Washer, Lock (Item 5, WP 0168 00)

Equipment Conditions
Air system charged (WP 0043 23 TM 9-2330-392-10-1)

GENERAL

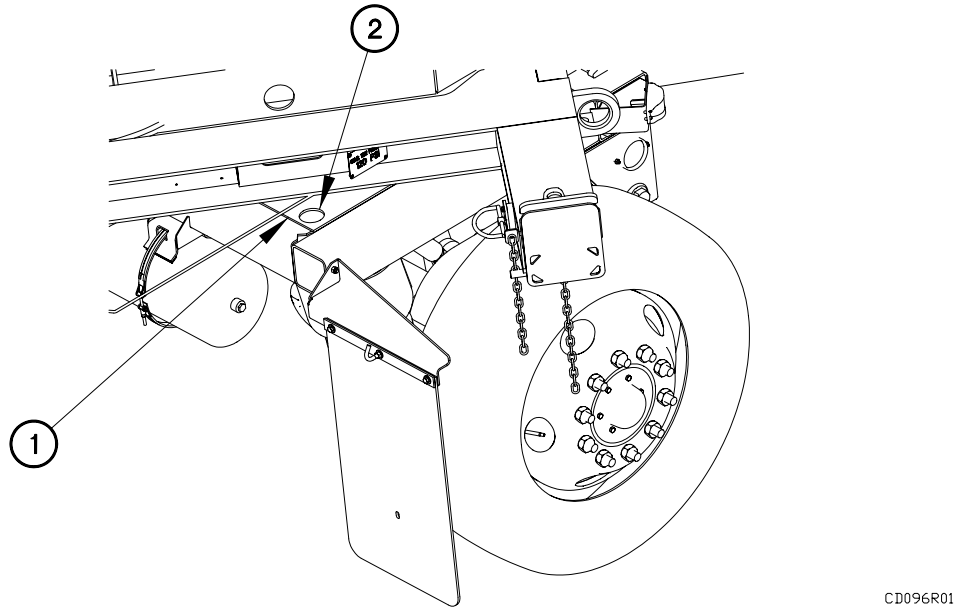
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) air bladder.

REMOVAL

NOTE

Perform the following step on front air bladders. RH side shown.

1. Rotate turntable (1) for access to maintenance hole (2).



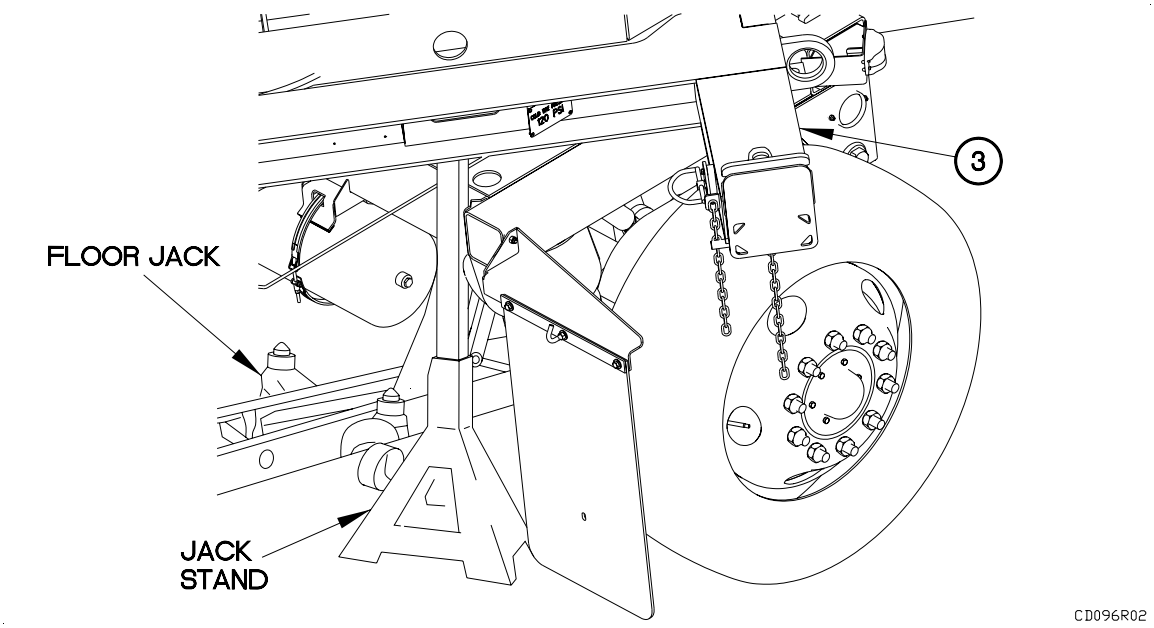
AIR BLADDER REPLACEMENT - Continued 0096 00

REMOVAL - Continued

NOTE

LH and RH air bladders are removed the same way. Front RH side shown.

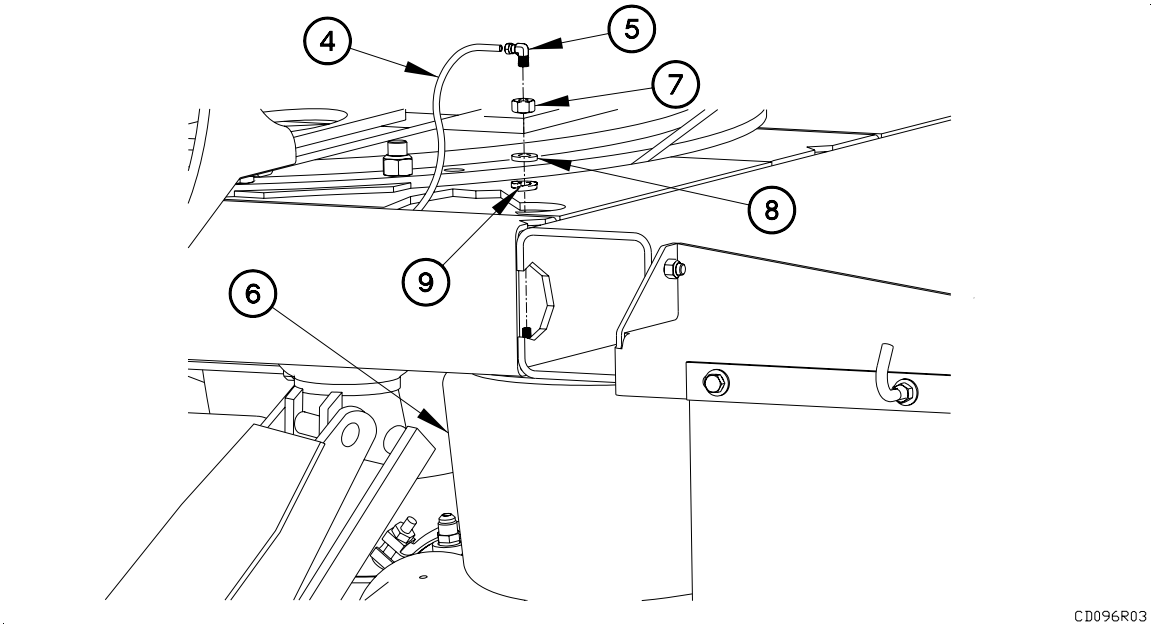
2. Position floor jack under frame (3).
3. Raise floor jack until frame (3) is off ground.
4. Position jack stand under frame (3).
5. Lower floor jack onto jack stand.
6. Drain air system (WP 0004 00).



AIR BLADDER REPLACEMENT - Continued 0096 00

REMOVAL - Continued

7. Disconnect air hose (4) from 90-degree fitting (5).
8. Remove 90-degree fitting (5) from air bladder (6).
9. Remove nut (7), washer (8), and lockwasher (9) from air bladder (6). Discard lockwasher.

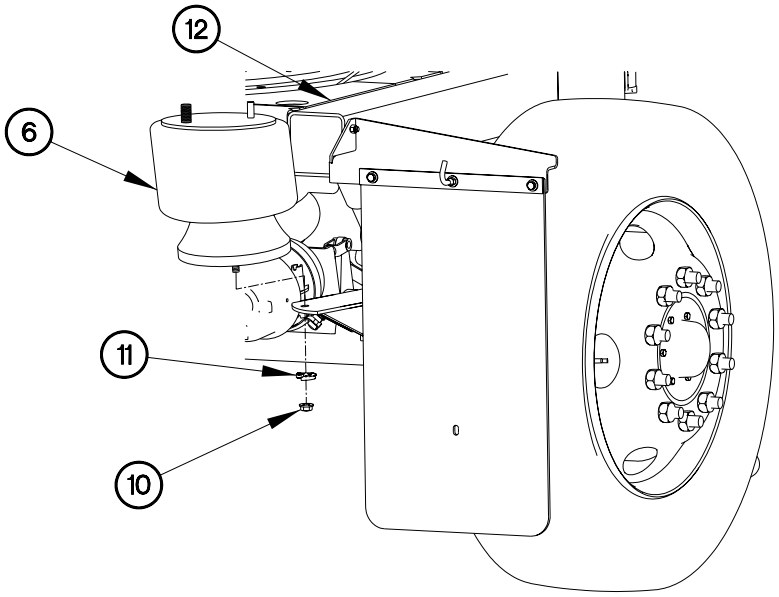


AIR BLADDER REPLACEMENT - Continued 0096 00

REMOVAL - Continued

10. Remove nut (10) and lockwasher (11) from air bladder (6). Discard lockwasher.

11. Remove air bladder (6) from trailer (12).



CD096R04

AIR BLADDER REPLACEMENT - Continued 0096 00

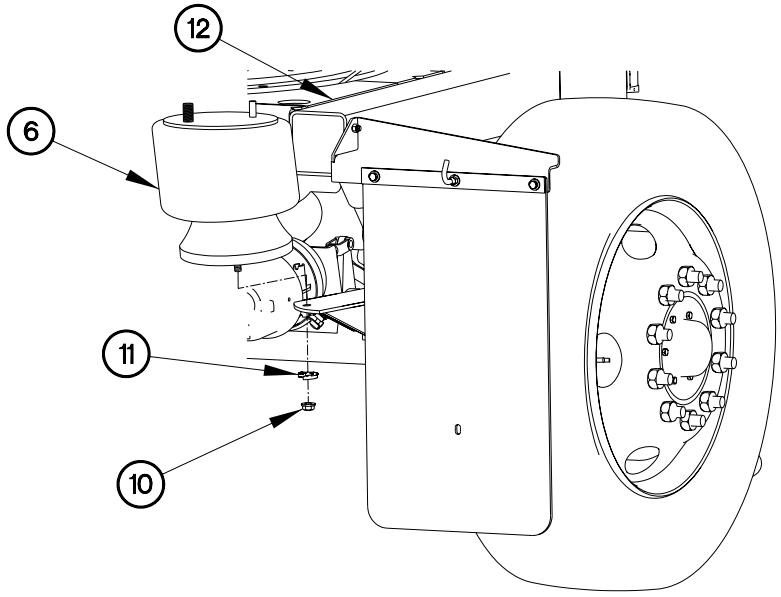
INSTALLATION

NOTE

LH and RH air bladders are installed the same way. Front RH side shown.

Nipple on top of air bladder goes in hole in frame of trailer.

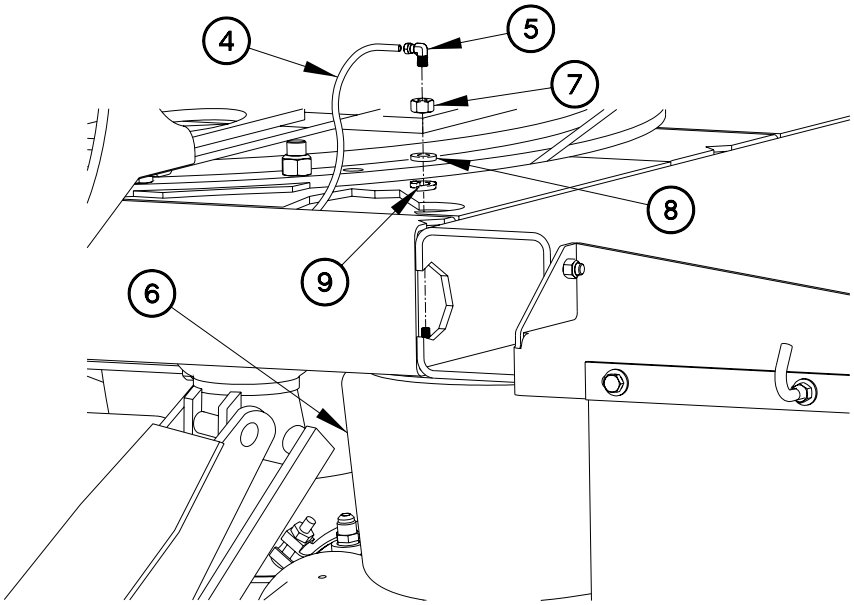
1. Position air bladder (6) on trailer (12) with lockwasher (11) and nut (10).



CD096R04

2. Position lockwasher (9), washer (8), and nut (7) on air bladder (6).

3. Tighten nuts (7 and 10) to 35 lb-ft (47 N•m).



CD096R03

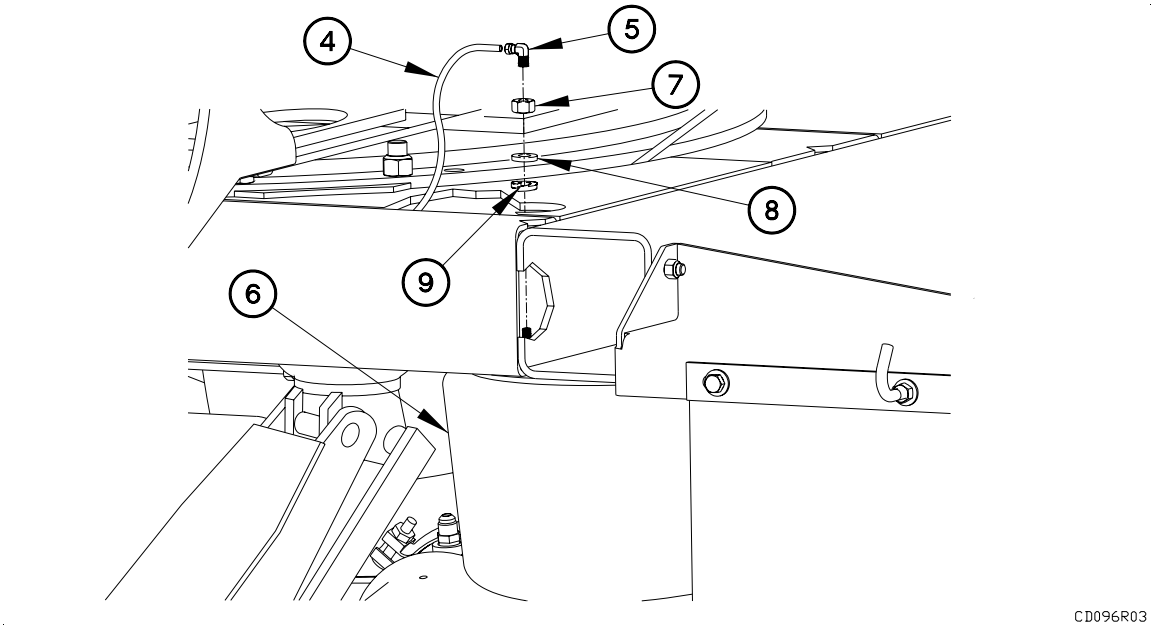
AIR BLADDER REPLACEMENT - Continued 0096 00

INSTALLATION - Continued

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

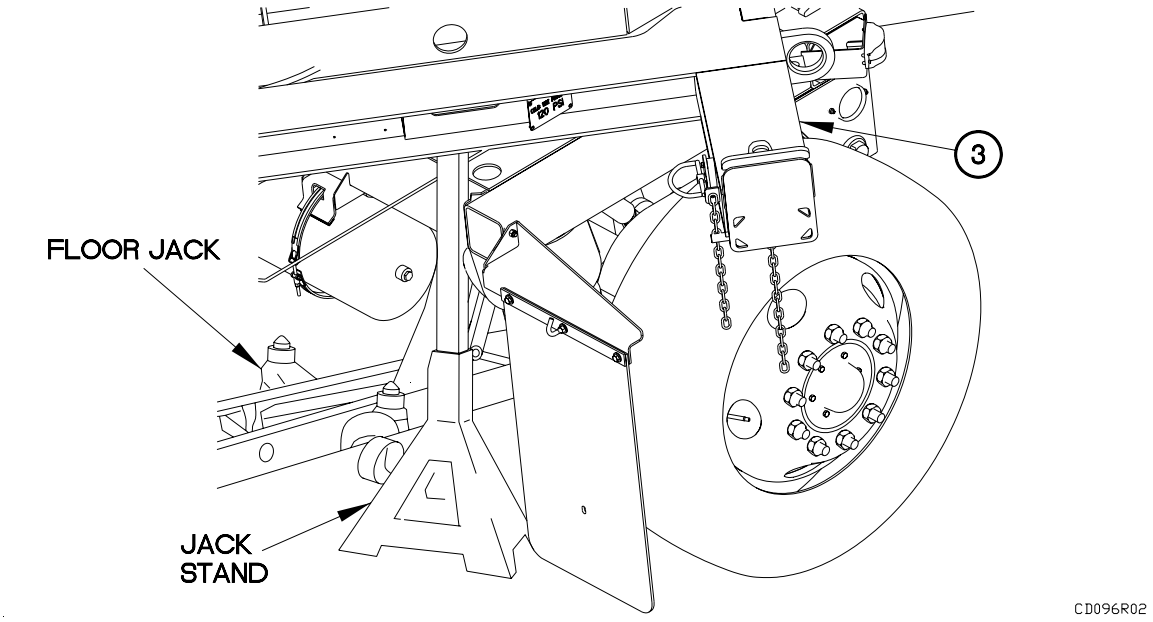
4. Apply sealing compound to threads of 90-degree fitting (5).
5. Install 90-degree fitting (5) in air bladder (6).
6. Connect air hose (4) to 90-degree fitting (5).



AIR BLADDER REPLACEMENT - Continued 0096 00

INSTALLATION - Continued

7. Position floor jack under frame (3).
8. Raise floor jack until frame (3) is off ground.
9. Remove jack stand from under frame (3).
10. Lower floor jack completely.
11. Remove floor jack from under frame (3).

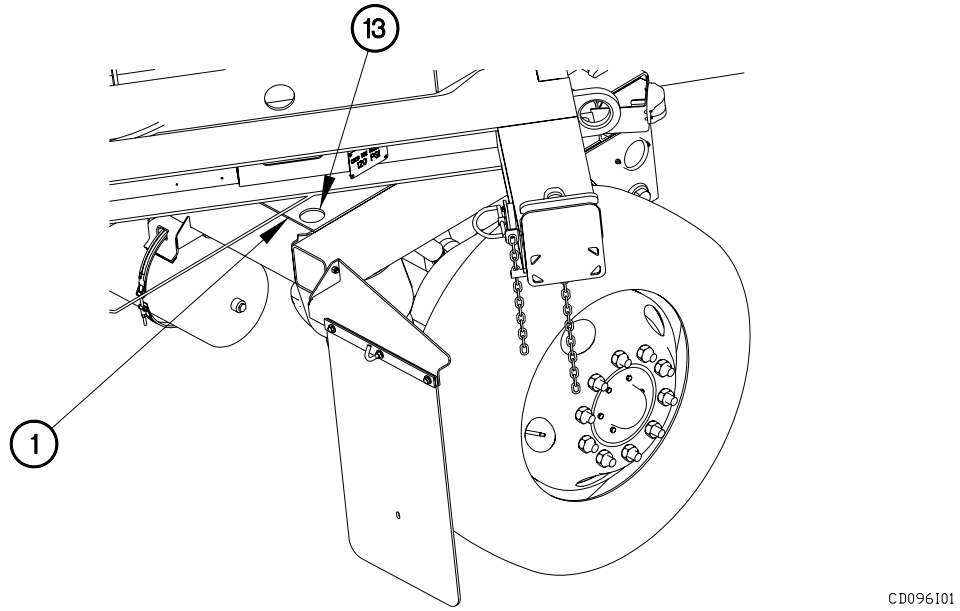


INSTALLATION - Continued

NOTE

Perform the following step on front air bladders. RH side shown.

12. Rotate turntable (1) until drawbar (13) faces forward.



END OF WORK PACKAGE

SPLASH GUARD REPLACEMENT 0097 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools/Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)

Materials/Parts

Nut, Self Locking (8) (Item 31, WP 0168 00)
Nut, Self Locking (10) (Item 29, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 9-2320-392-10-1).

GENERAL

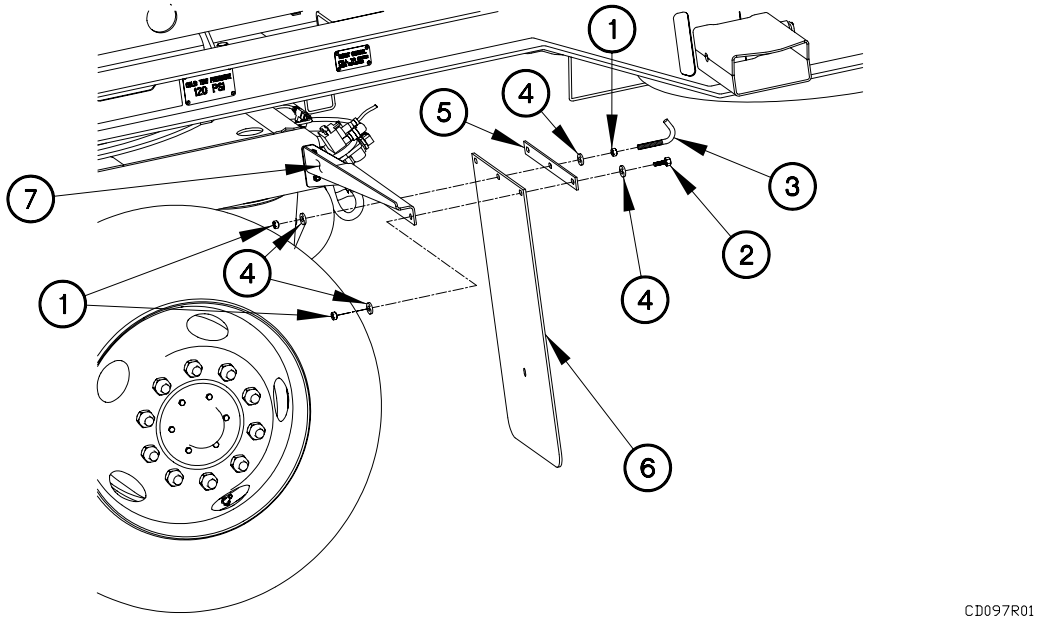
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) splash guards.

REMOVAL

NOTE

All splash guards are removed the same way. Front LH side shown.

1. Remove four nuts (1), two screws (2), one hook screw (3), six washers (4), mounting plate (5), and splash guard (6) from bracket (7).



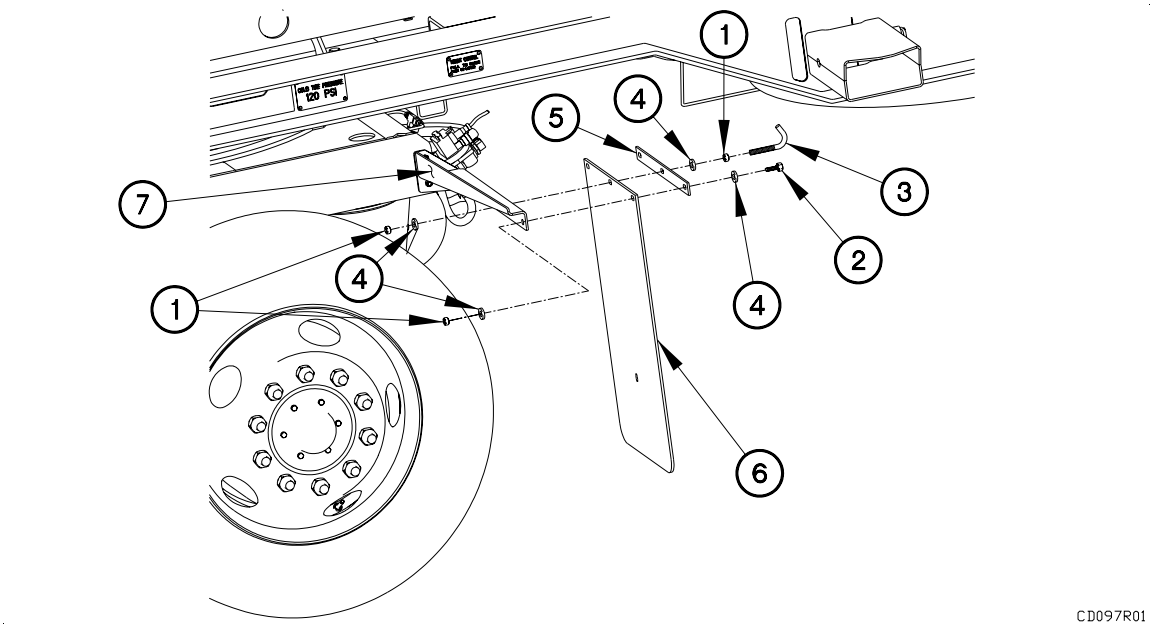
SPLASH GUARD REPLACEMENT 0097 00

INSTALLATION

NOTE

All splash guards are installed the same way. Front LH side shown.

1. Install splash guard (6), mounting plate (5) with two screws (2), one hook screw (3), six washers, and four nuts (1) on bracket (7).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Operate trailer and check for proper operation of splash guards.
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

TOOL BOX ASSEMBLY REPLACEMENT/REPAIR 0098 00

THIS WORK PACKAGE COVERS:

Tool Box Removal, Tool Box Door Removal, Tool Box Door Assembly, Tool Box Installation

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22), (WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Tool Kit, Blind Rivet, (Item 21, WP 0167 00)
Drill, Portable, Electric, (Item 3, WP 0167 00)
Drill, Set, Twist (Item 4, WP 0167 00)

Material/Parts

Nut, Self-Locking (6) (Item 30, WP 0168 00)
Nut, Self-Locking (2) (Item 27, WP 0168 00)
Preformed Packing (Item 40, WP 0168 00)
Weather Strip (82") (Item 53, WP 0168 00)
Rivet, Blind (4) (Item 50, WP 0168 00)

Equipment Condition

Flatrack rail assembly raised (WP (WP 0005
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) tool box assembly.

TOOL BOX ASSEMBLY REPLACEMENT/REPAIR - Continued 0098 00

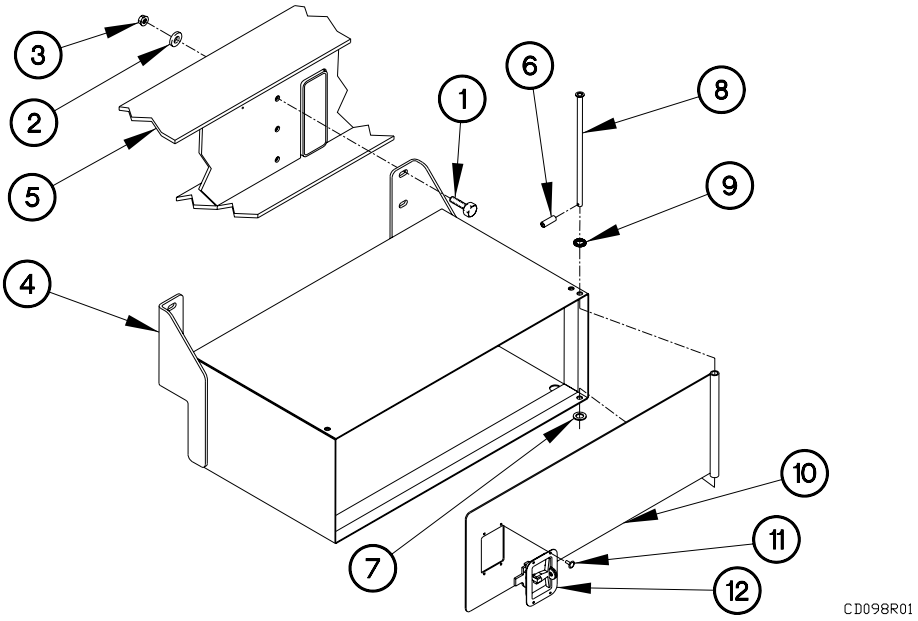
REMOVAL

WARNING

Tool box weighs approximately 90 lbs (41 kgs). Use extreme care when removing or handling tool box. Requires two persons and use of appropriate lifting device. Failure to comply may result in injury to personnel or equipment.

Wear appropriate eye protection when drilling out rivets. Failure to comply may result in injury to personnel.

1. Remove six screws (1), washers (2), self-locking nuts (3), and tool box (4) from trailer chassis (5). Discard self-locking nuts.

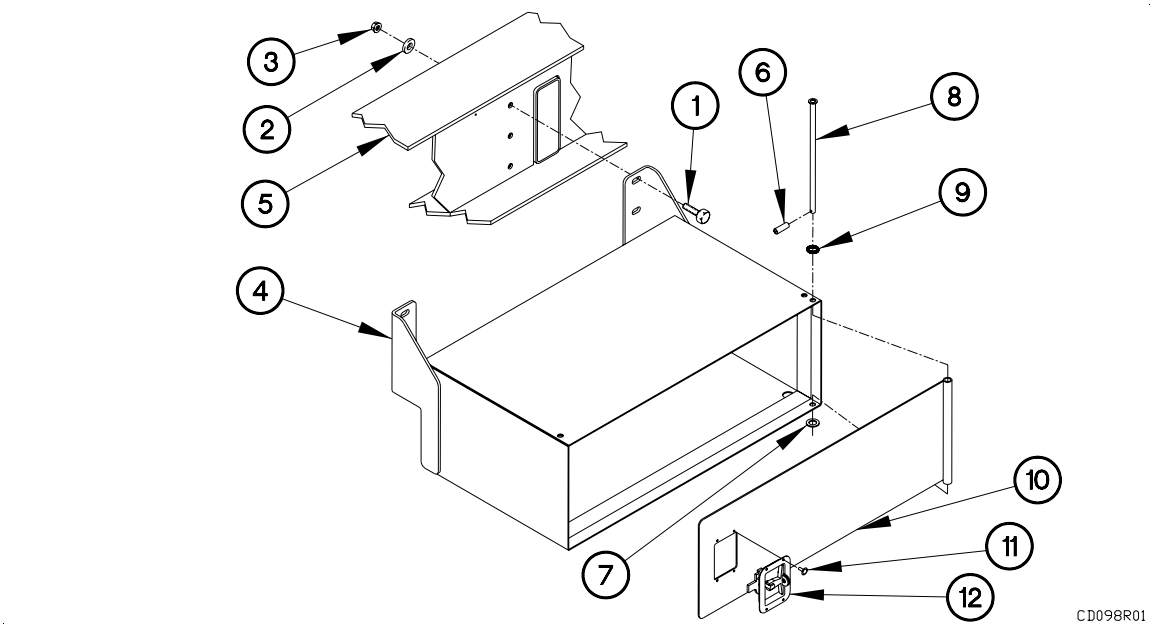


TOOL BOX ASSEMBLY REPLACEMENT/REPAIR - Continued 0098 00

REMOVAL - Continued

2. Remove roll pin (6), washer (7), rod (8), preformed packing (9), and tool box door (10) from tool box (4). Discard preformed packing.

3. Remove four rivets (11) and folding latch (12) from tool box door (10). Discard rivets.



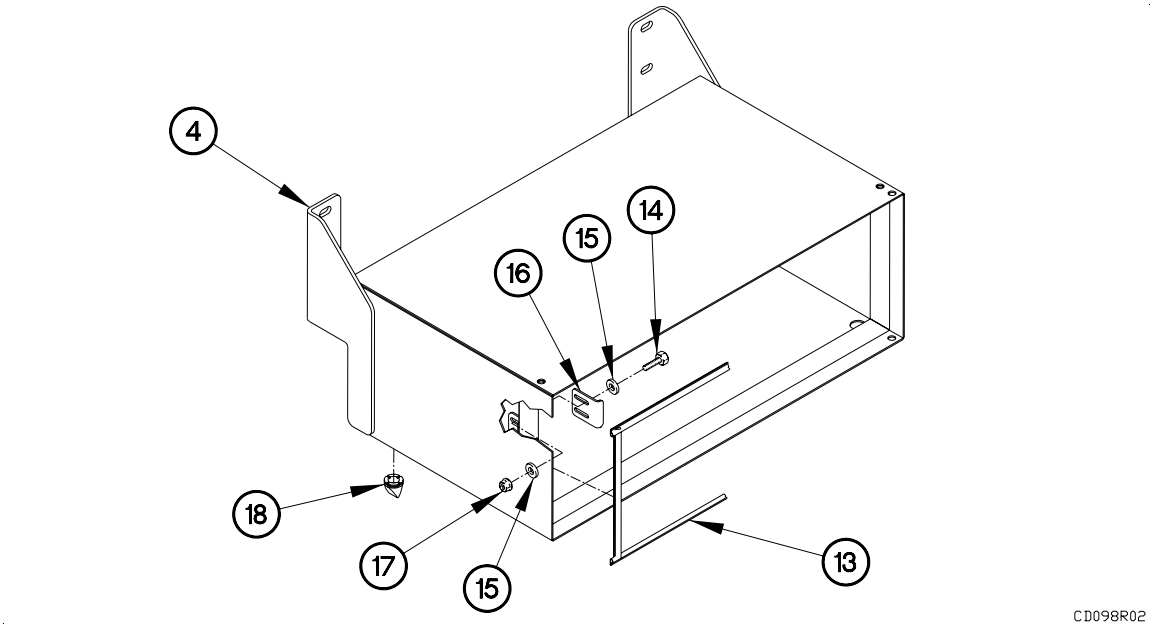
TOOL BOX ASSEMBLY REPLACEMENT/REPAIR - Continued 0098 00

REMOVAL - Continued

4. Remove weather strip (13) from tool box (4). Discard weather strip.

5. Remove screw (14), two washers (15), striker (16), and self-locking nut (17) from tool box (4). Discard self-locking nut.

6. Remove four vacuator valves (18) from tool box (4).



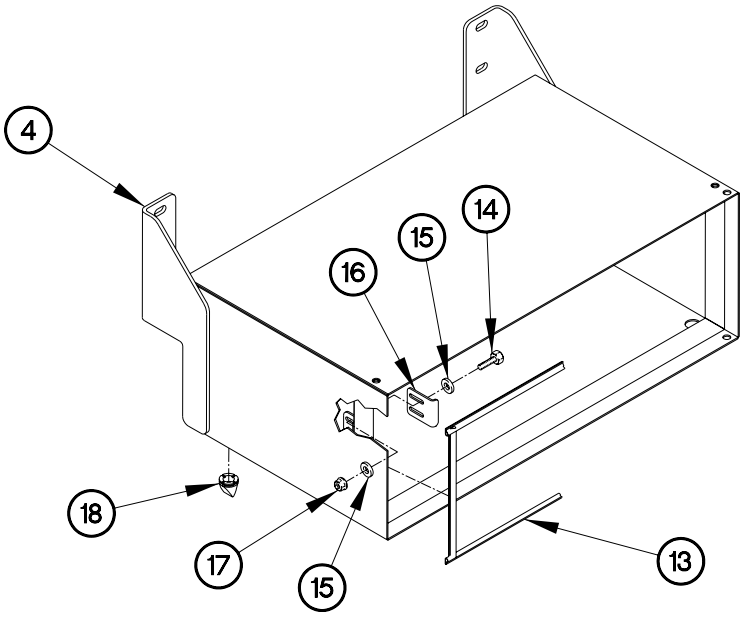
TOOL BOX ASSEMBLY REPLACEMENT/REPAIR - Continued 0098 00

INSTALLATION

WARNING

Tool box weighs approximately 90 lbs (41 kgs). Use extreme care when installing or handling tool box. Requires two persons and use of appropriate lifting device. Failure to comply may result in injury to personnel or equipment.

1. Install weather strip (13) on tool box (4).
2. Install striker (16) on tool box (4) with two washers (15), screw (14), and self locking nut (17).
3. Install four vacuator valves (18) on tool box (4).



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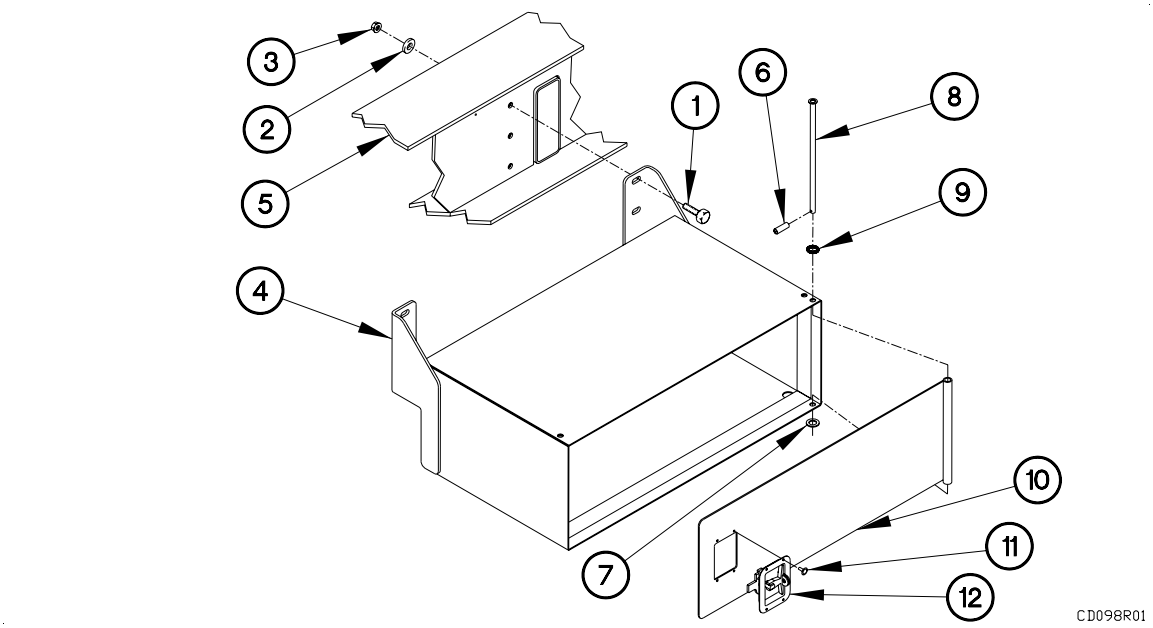
TOOL BOX ASSEMBLY REPLACEMENT/REPAIR - Continued 0098 00

INSTALLATION - Continued

4. Install tool box door (10) on tool box (4) with preformed packing (9), rod (8), washer (7), and roll pin (6).

5. Install folding latch (12) on tool box door (10) with four rivets (11).

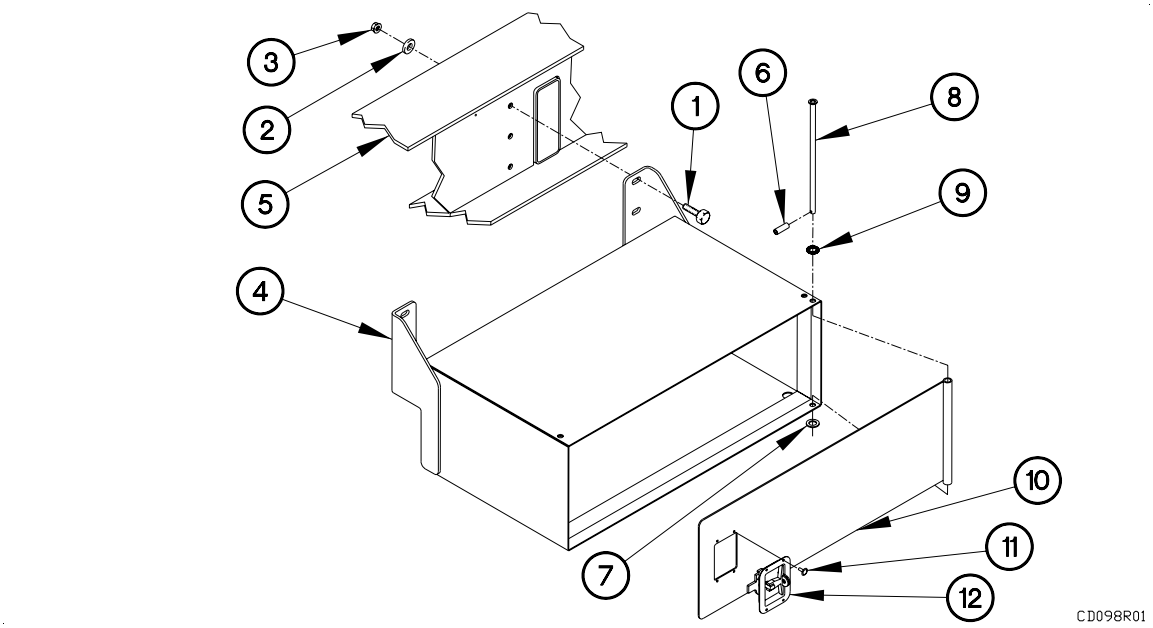


TOOL BOX ASSEMBLY REPLACEMENT/REPAIR - Continued 0098 00

INSTALLATION - Continued

6. Position tool box (4) on trailer chassis (5) with six screws (1), washers (2), and self-locking nuts (3).

7. Tighten six self-locking nuts (3) to 72-88 lb-ft (98-119 N•m).



TURNTABLE REPLACEMENT 0099 00

THIS WORK PACKAGE COVERS:
Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Sling, Cargo (2) (Item 16, WP 0167 00)
Jack, Leveling Support (4) (Item 11, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 31, WP 0167 00)

Materials/Parts
Nut, Self-Locking (16) (Item 31, WP 0168 00)

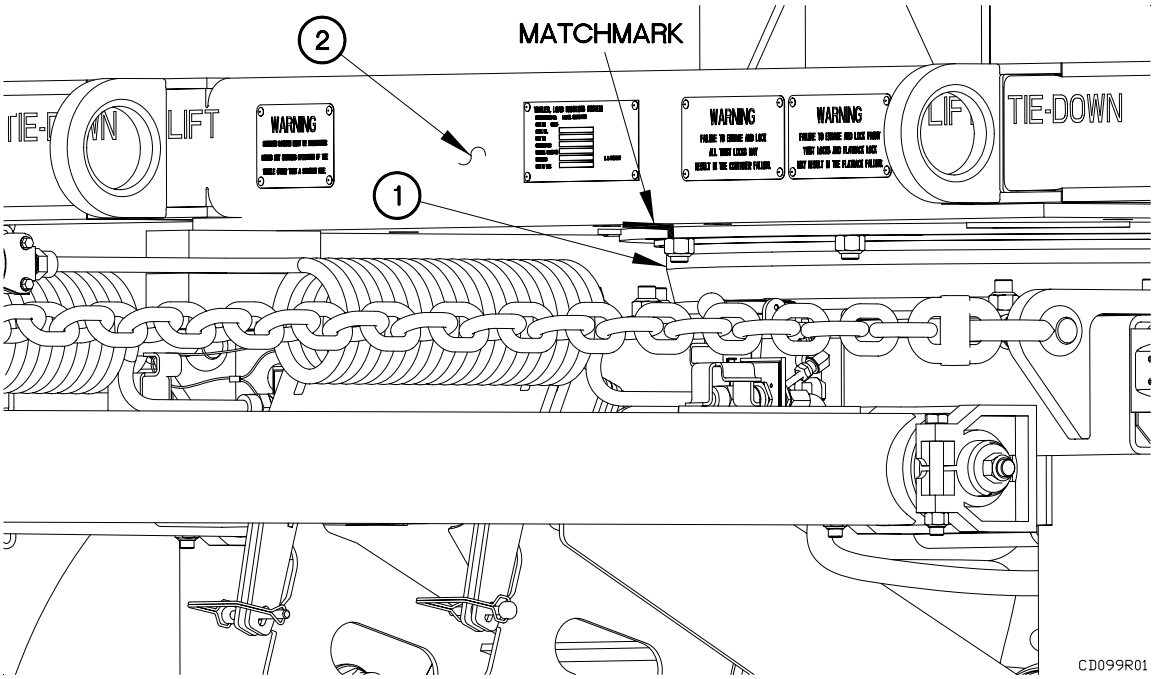
Equipment Conditions
Trailer coupled to towing vehicle (WP 0043 23, TM 2320-392-10-1).
Brakes caged (WP 0055 00).
Emergency/Service gladhands disconnected (WP 0043 24).
Main electrical harness removed (from turntable) (WP 0066 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) turntable.

REMOVAL

1. Match mark turntable (1) to frame (2).

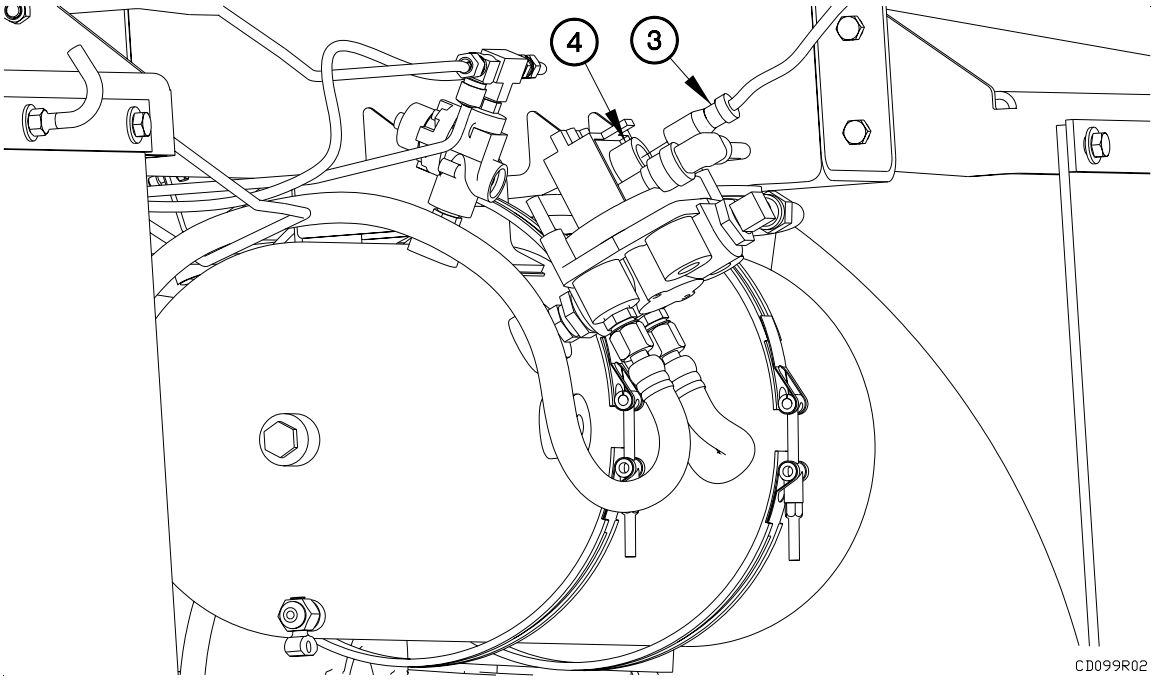


TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

2. Drain air tanks.

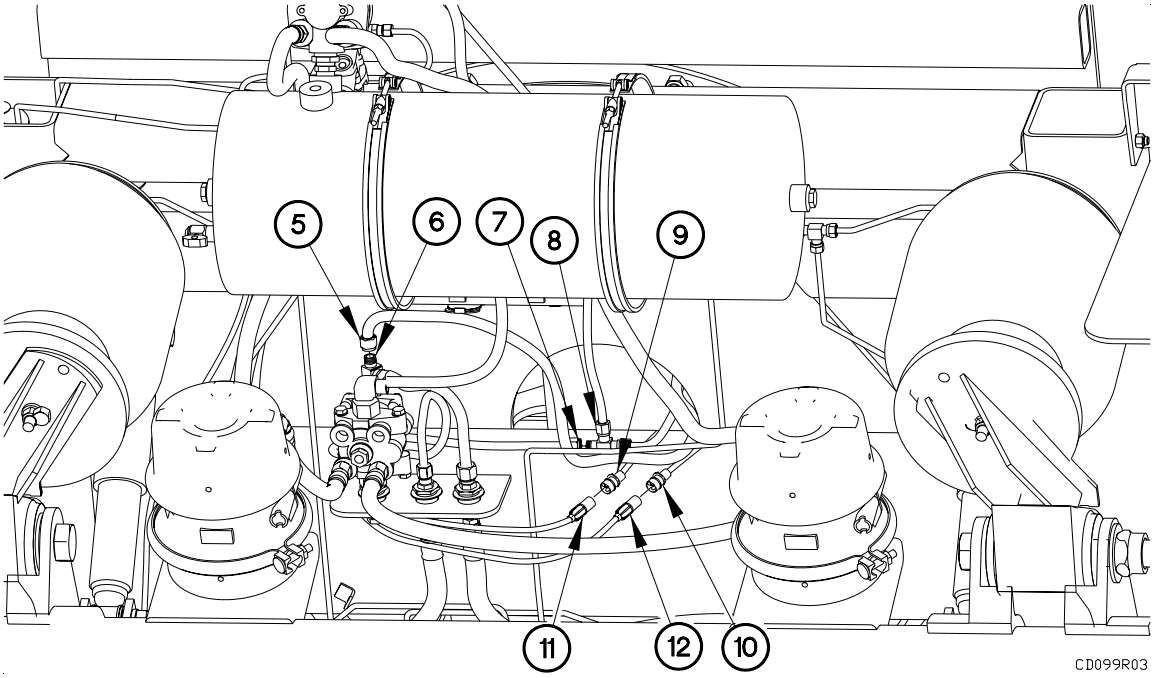
3. Disconnect ABS relay sensor relay connector (3) from ABS relay sensor (4).



TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

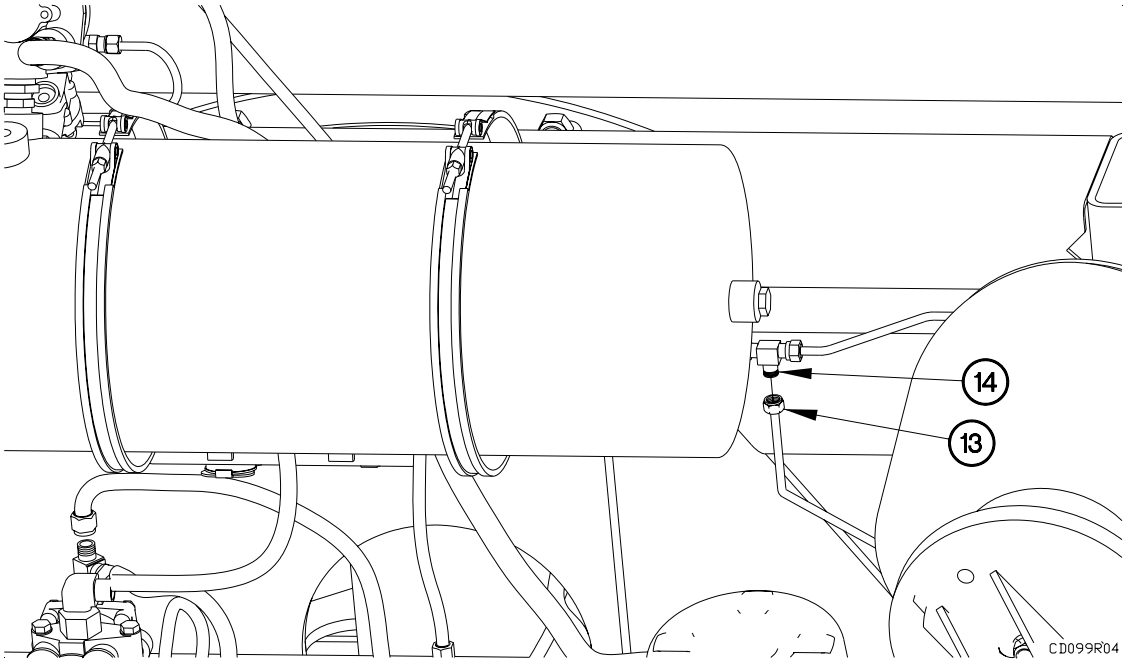
4. Disconnect hose (5) from tee fitting (6).
5. Disconnect hose (7) from tee fitting (8).
6. Disconnect ABS sensor connectors (9 and 10) from ABS sensor connectors (11 and 12).



TURNTABLE REPLACEMENT - Continued 0099 00

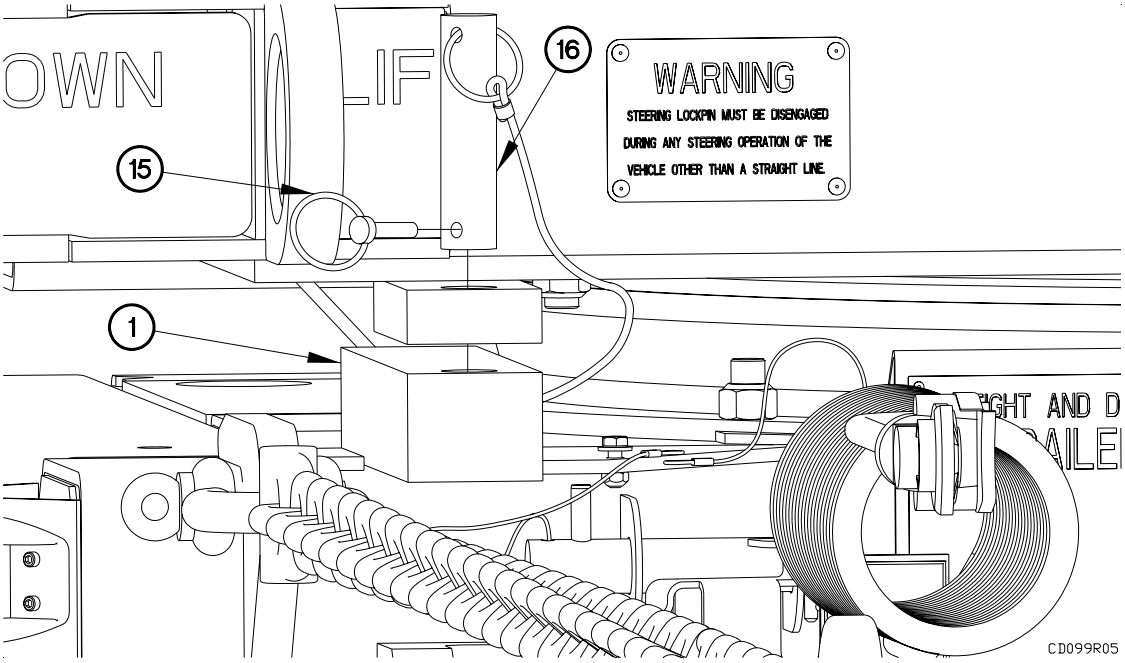
REMOVAL - Continued

7. Disconnect hose (13) from tee fitting (14).



8. Remove pin (15) from turntable pin (16).

9. Remove turntable pin (16) from turntable (1).



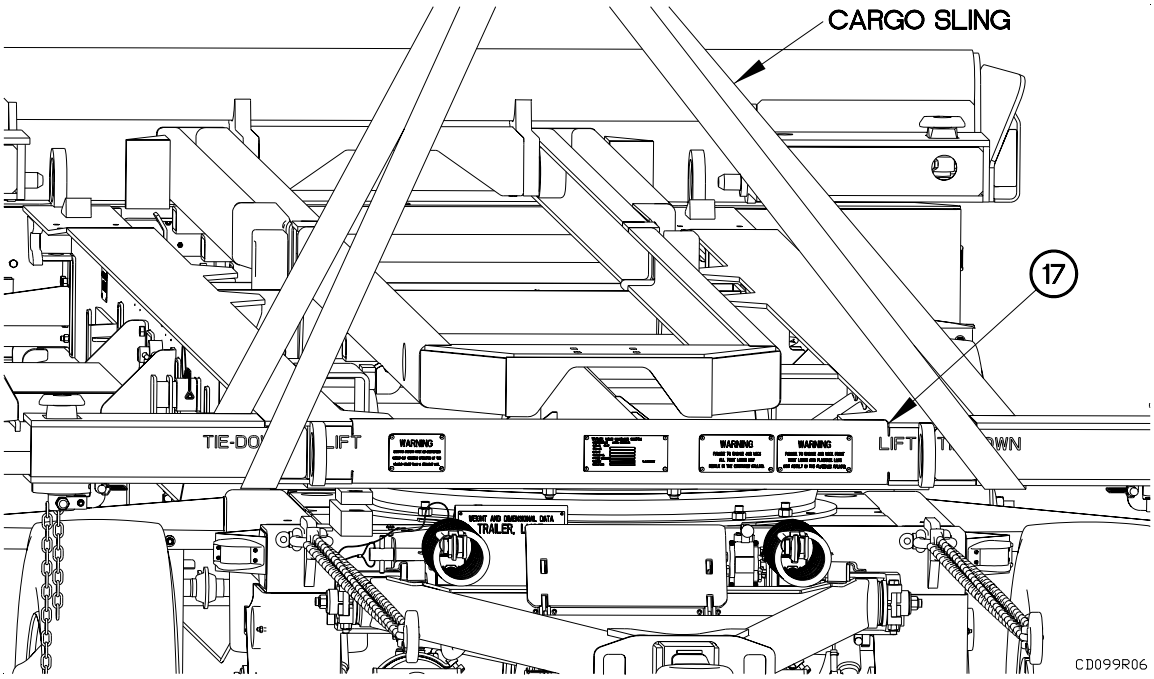
TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

WARNING

Front of trailer frame weighs approximately 1000 lbs (454 kgs). Attach a suitable lifting device to trailer frame prior to removal from turntable assembly from trailer. Failure to comply may result in serious injury or death to personnel or damage to equipment.

10. Attach two cargo slings to trailer (17), as shown.



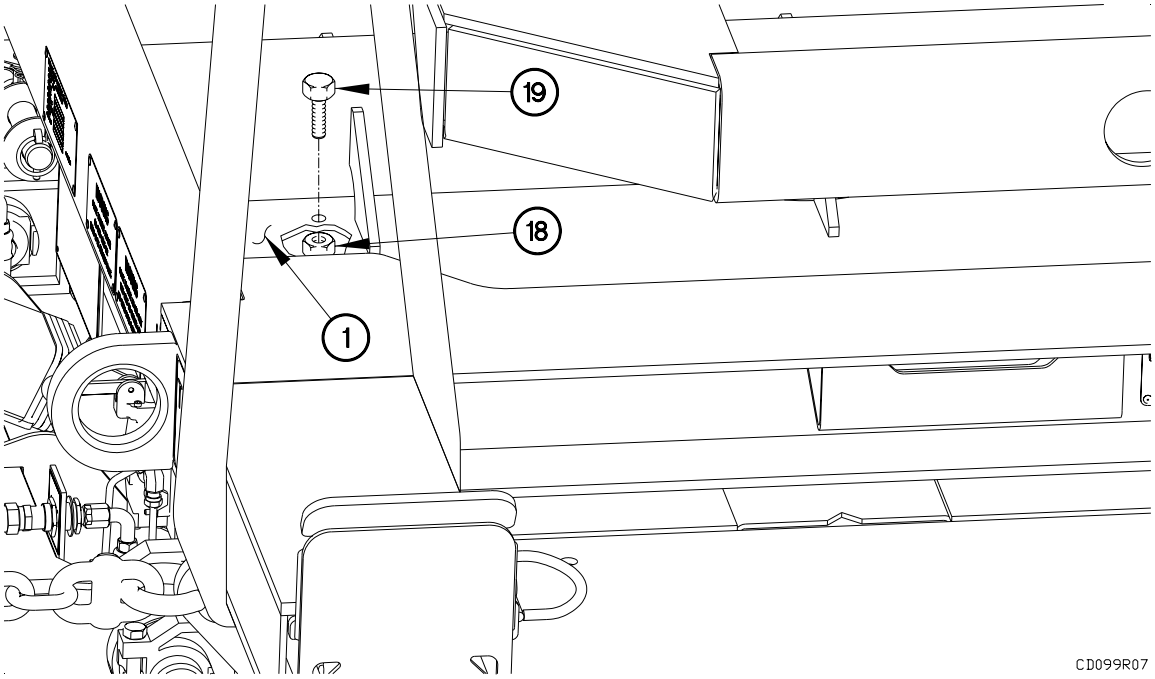
TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

CAUTION

Ensure loose hoses and cables are removed from top of turntable prior to removal. Failure to comply may result in damage to equipment.

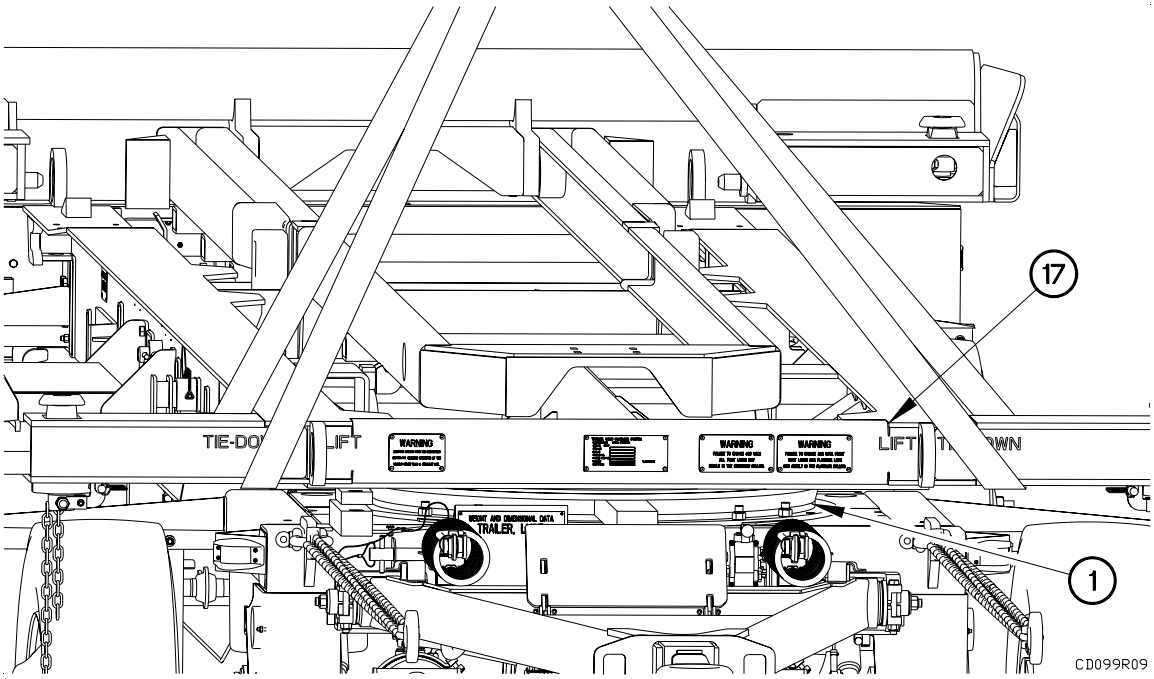
11. Remove eight self-locking nuts (18) and bolts (19) from turntable (1). Discard self-locking nuts.



TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

12. Remove trailer (17) from turntable (1).



TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

WARNING

During removal of turntable from underneath trailer, ensure turntable doesn't pitch forward. Failure to comply may result in serious injury to personnel or damage to equipment.

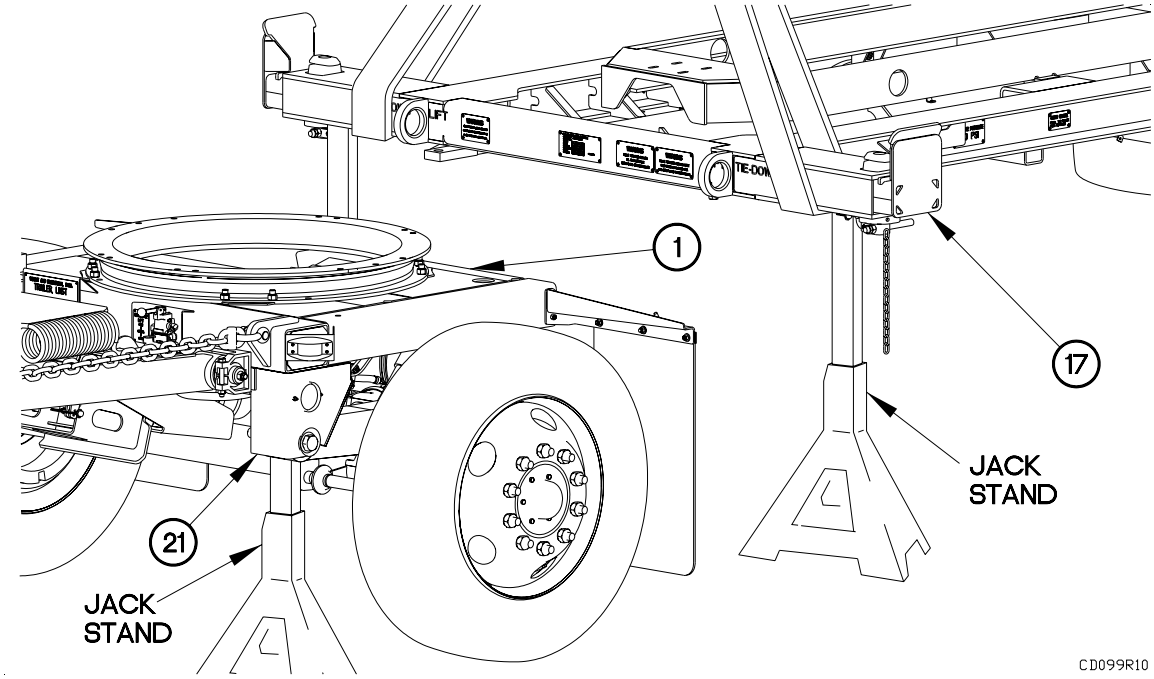
13. Start engine of coupled vehicle and pull forward (TM 9-2320-392-10-1, WP 0020 00).

14. Remove turntable (1) from trailer (17).

15. Position two jack stands underneath trailer (17).

16. Lower trailer (17) on two jack stands.

17. Position two jack stands underneath front axle (21).



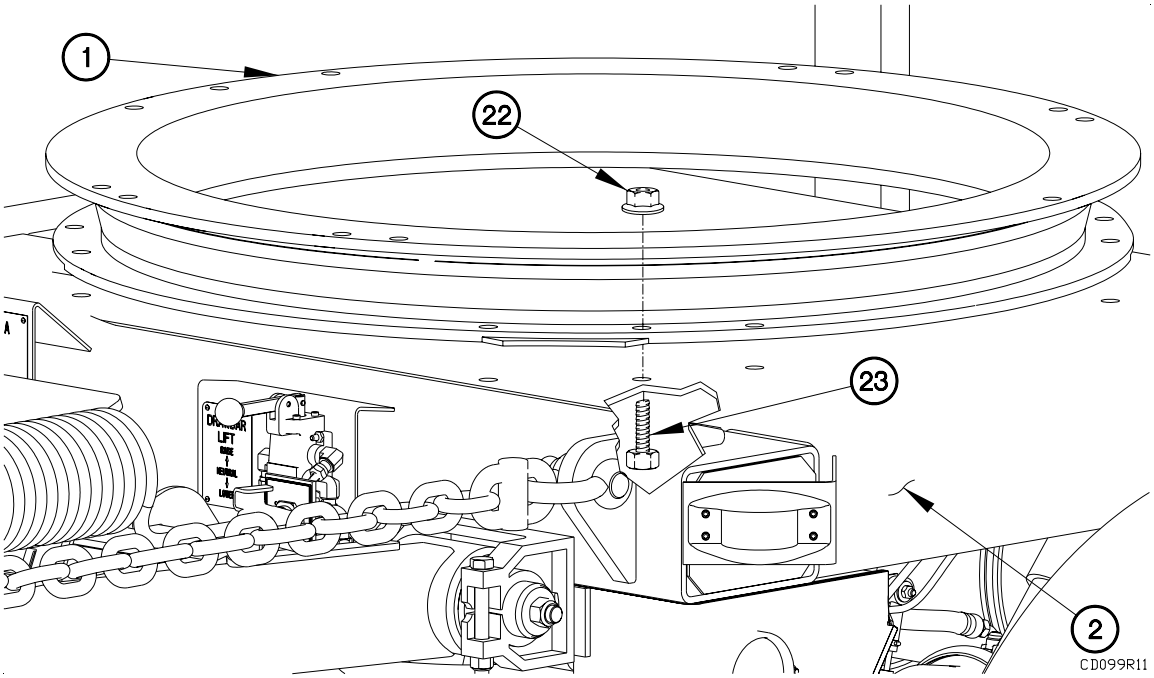
TURNTABLE REPLACEMENT - Continued 0099 00

REMOVAL - Continued

WARNING

Turntable weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in injury to personnel or damage to equipment.

18. Remove eight self-locking nuts (22), bolts (23), and turntable (1) from frame (2). Discard self-locking nuts.



TURNTABLE REPLACEMENT - Continued 0099 00

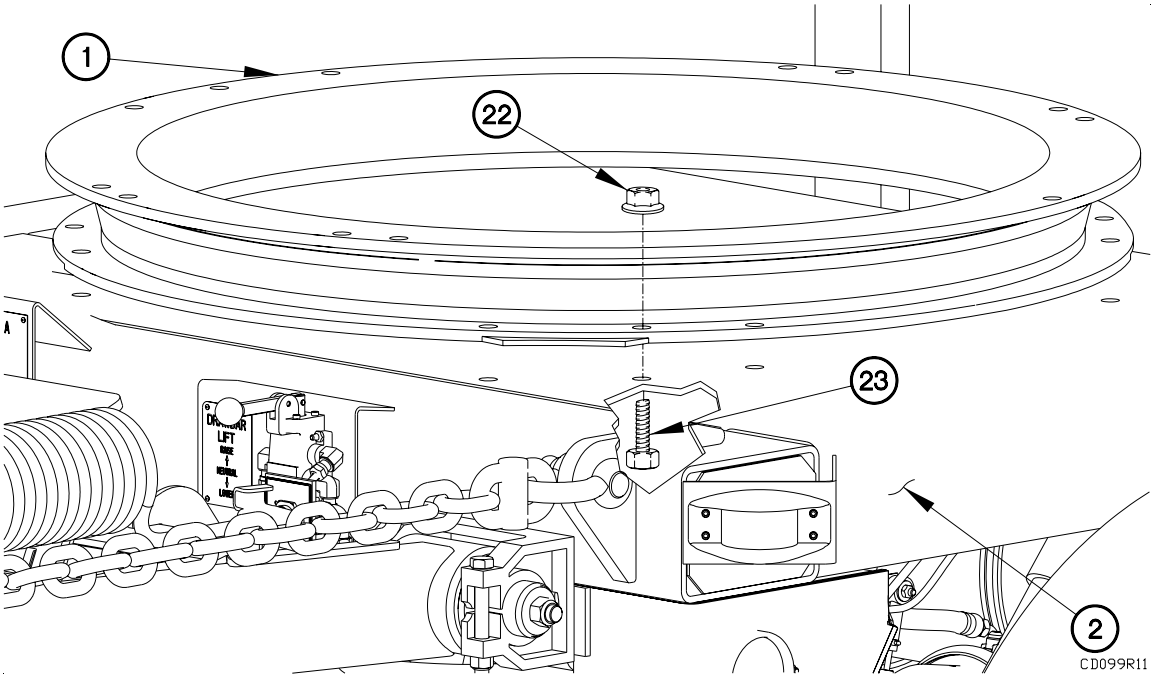
INSTALLATION

WARNING

Turntable weighs approximately 200 lbs (91 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in injury to personnel or damage to equipment.

1. Position turntable (1) on frame (2) with eight bolts (23) and self-locking nuts (22).

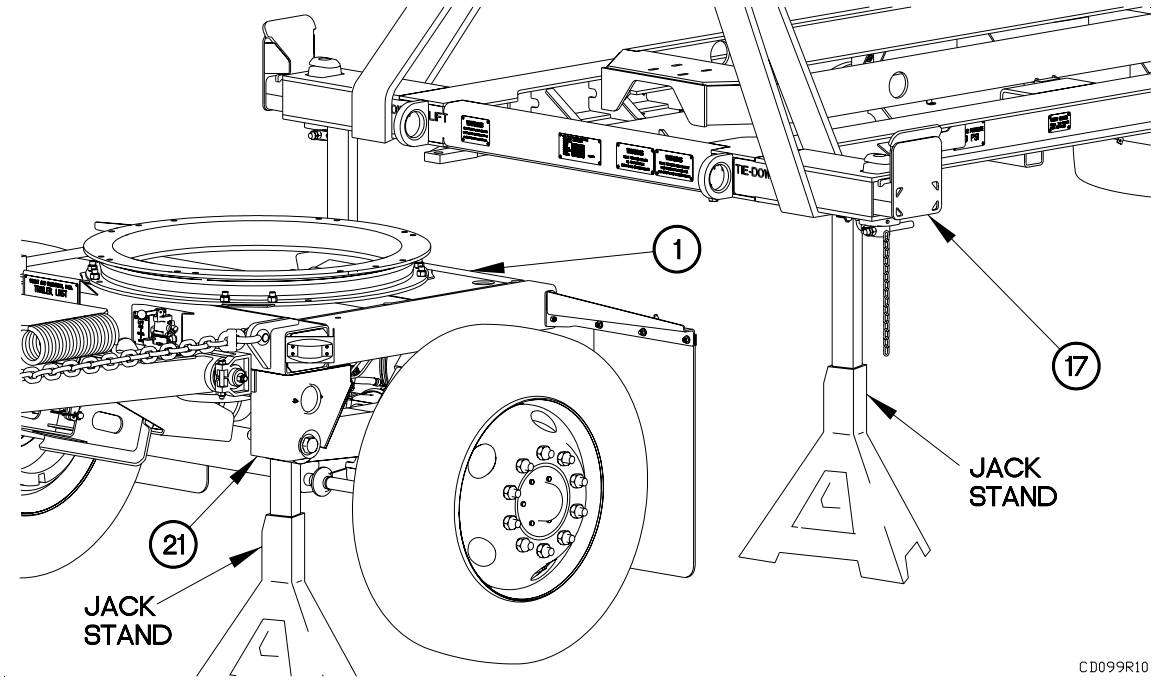
2. Tighten eight self-locking nuts (22) to 95-105 lb-ft (129-142 N•m).



TURNTABLE REPLACEMENT - Continued 0099 00

INSTALLATION - Continued

3. Remove two jack stands from underneath front axle (21).
4. Raise trailer (17) from two jack stands.
5. Remove two jack stands from underneath trailer (17).
6. Start engine of coupled vehicle and push rearward (TM 9-2320-392-10-1, WP 0020 00).
7. Position turntable (1) underneath trailer (17).



TURNTABLE REPLACEMENT - Continued 0099 00

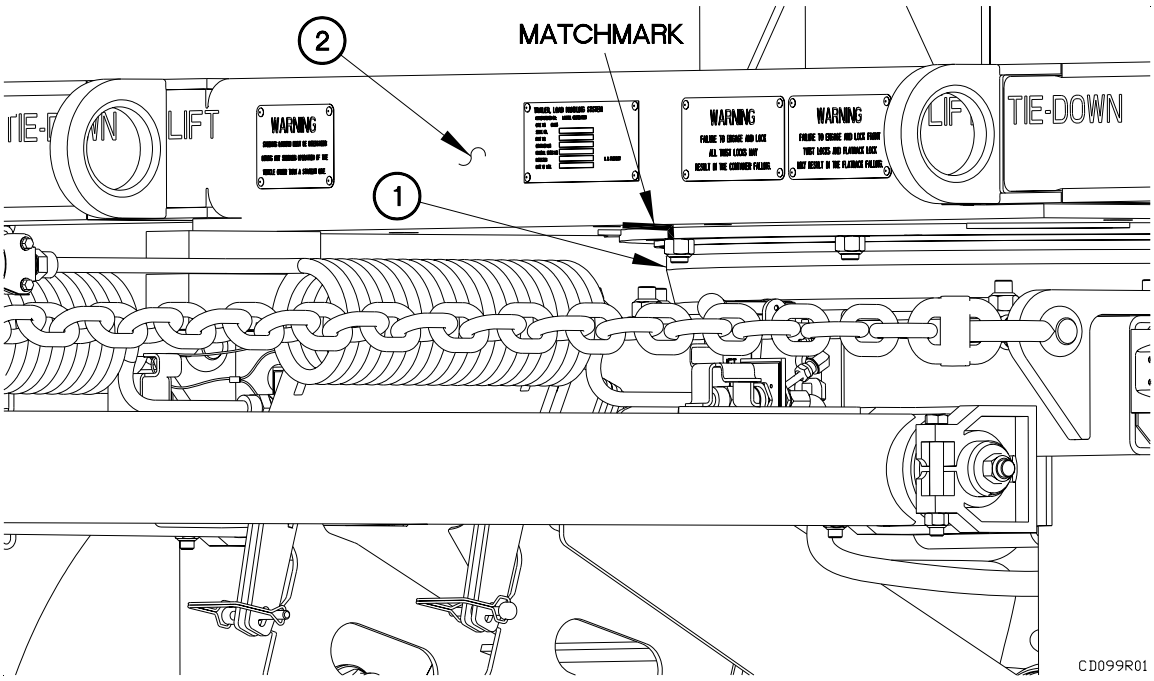
INSTALLATION – Continued

8. Align matchmarks from turntable (1) to frame (2).

WARNING

Front of trailer frame weighs approximately 1000 lbs (454 kgs). Attach a suitable lifting device to trailer frame prior to installation of turntable assembly to trailer. Failure to comply may result in serious injury or death to personnel or damage to equipment.

9. Lower frame (2) on turntable (1).

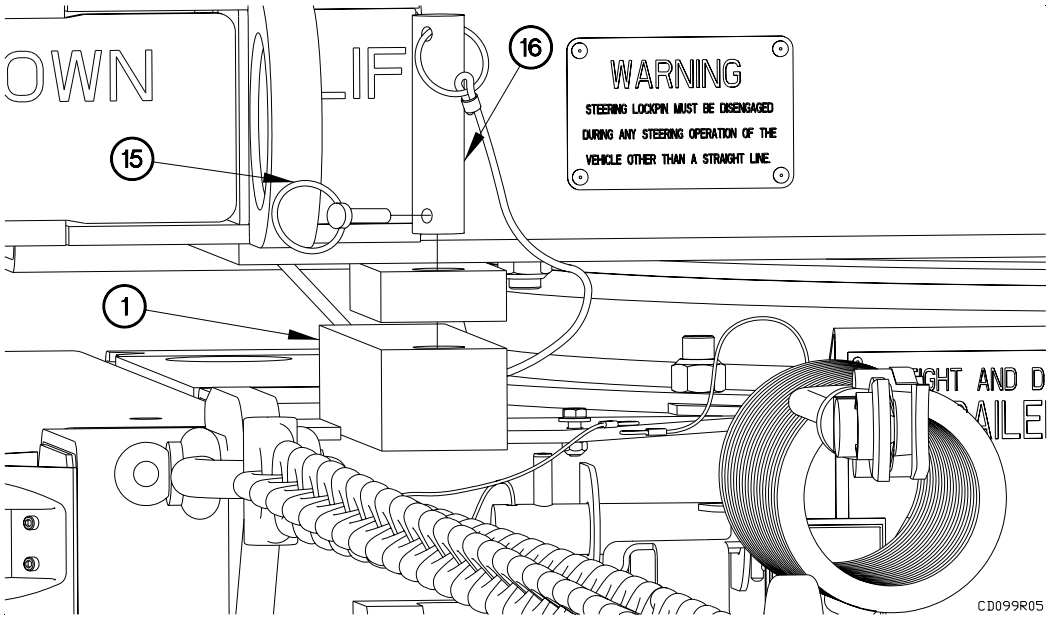


TURNTABLE REPLACEMENT - Continued 0099 00

INSTALLATION – Continued

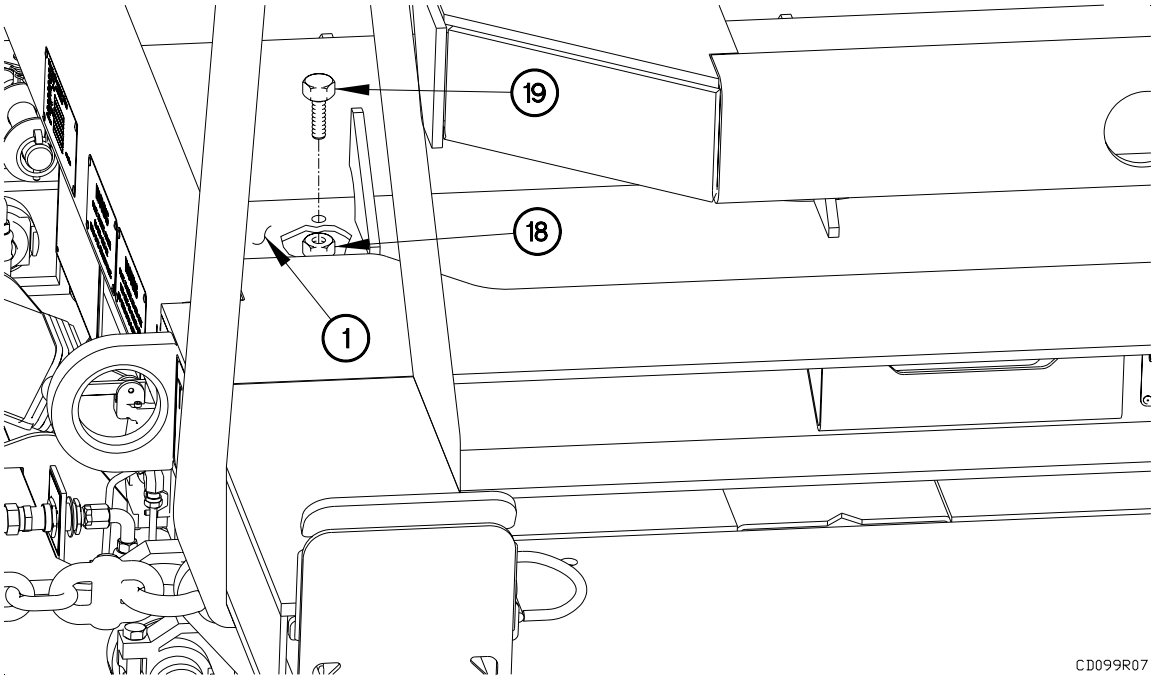
10. Install turntable pin (16) in turntable (1).

11. Install pin (15) in turntable pin (16).



12. Position eight bolts (19) and self-locking nuts (18) in turntable (1).

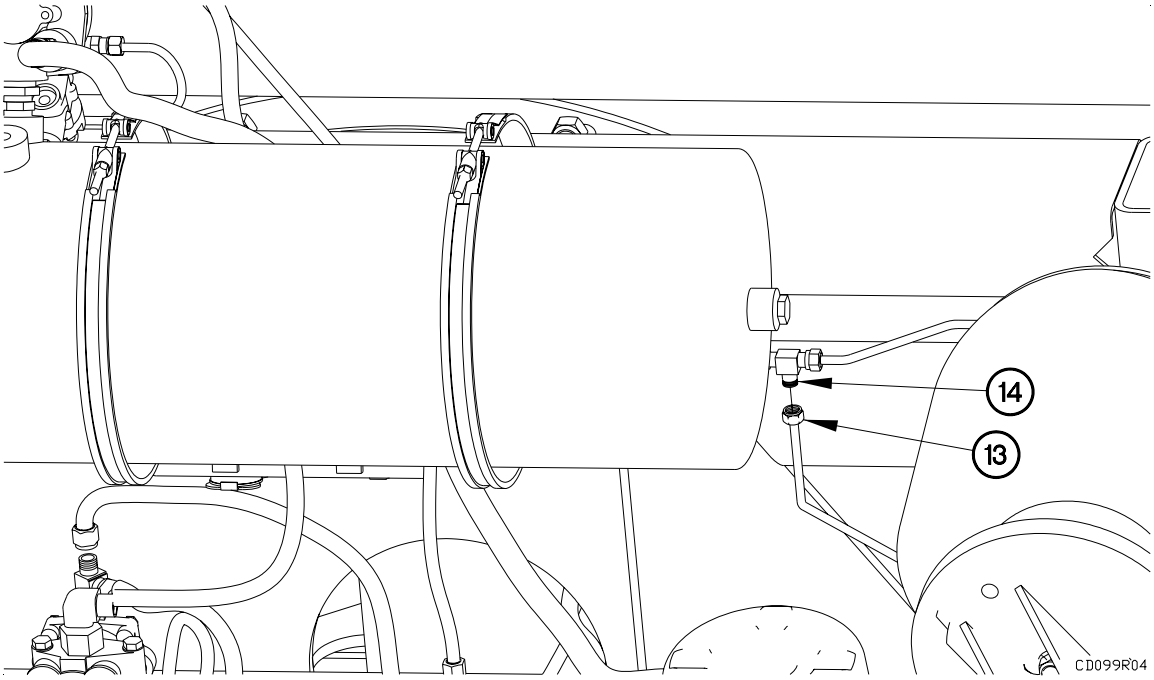
13. Tighten eight self-locking nuts (18) to 155-185 lb-ft (210-251 N•m).



TURNTABLE REPLACEMENT - Continued 0099 00

INSTALLATION - Continued

14. Connect hose (13) to tee fitting (14).



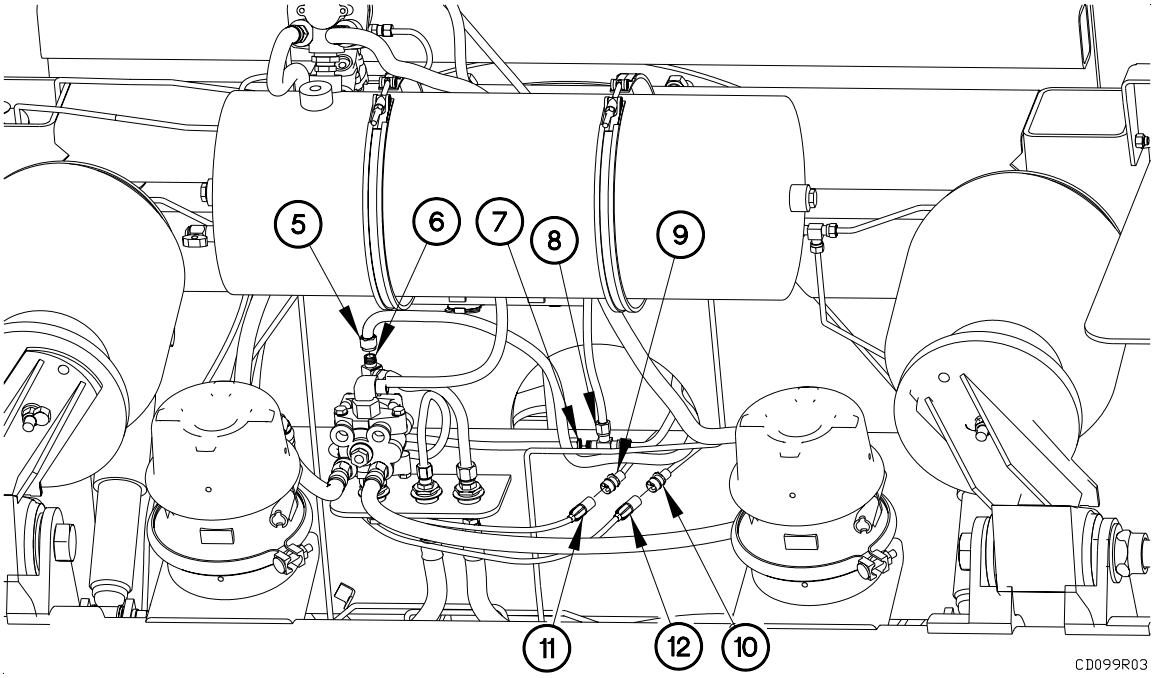
TURNTABLE REPLACEMENT - Continued 0099 00

INSTALLATION – Continued

15. Connect ABS sensor connectors (9 and 10) to ABS sensor connectors (11 and 12).

16. Connect hose (7) to tee fitting (8).

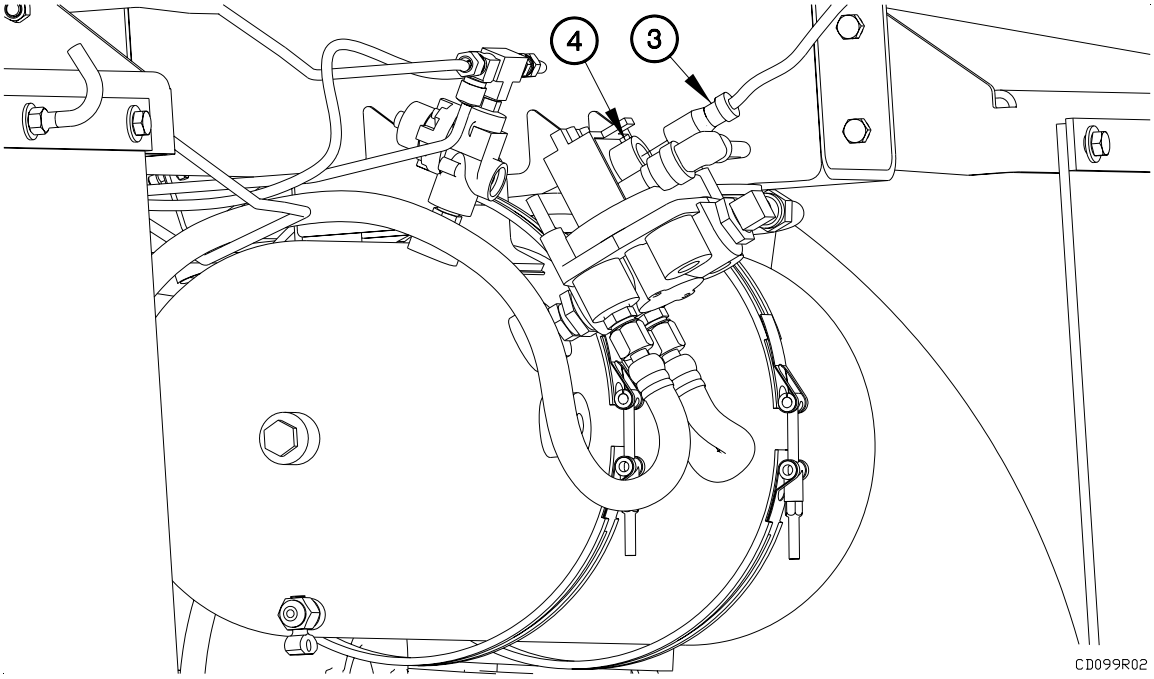
17. Connect hose (5) to tee fitting (6).



TURNTABLE REPLACEMENT - Continued 0099 00

INSTALLATION – Continued

18. Connect ABS relay sensor relay connector (3) to ABS relay sensor (4).



OPERATIONAL CHECKS

1. Install main electrical harness (WP 0066 00).
2. Connect Emergency/Service gladhands (WP 0043 00).
3. Uncage spring brakes (WP 0055 00).
4. Operate trailer to ensure ABS is functioning properly (TM 9-2320-392-10).

END OF WORK PACKAGE

SHUTTLE AND GUIDE BRACKET REPLACEMENT 0100 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Check

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 31, WP 0167 00)
Wrench, Torque 0-600 lb-ft (Item 34, WP 0167 00)
Sling, Cargo (Item 16, WP 0167 00)

Materials/Parts

Washer, Lock (3) (Item 18, WP 0168 00)
Nut, Self-Locking (2) (Item 32, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Twistlocks removed (WP 0088 00).

References

TM 9-2320-392-10-1

GENERAL

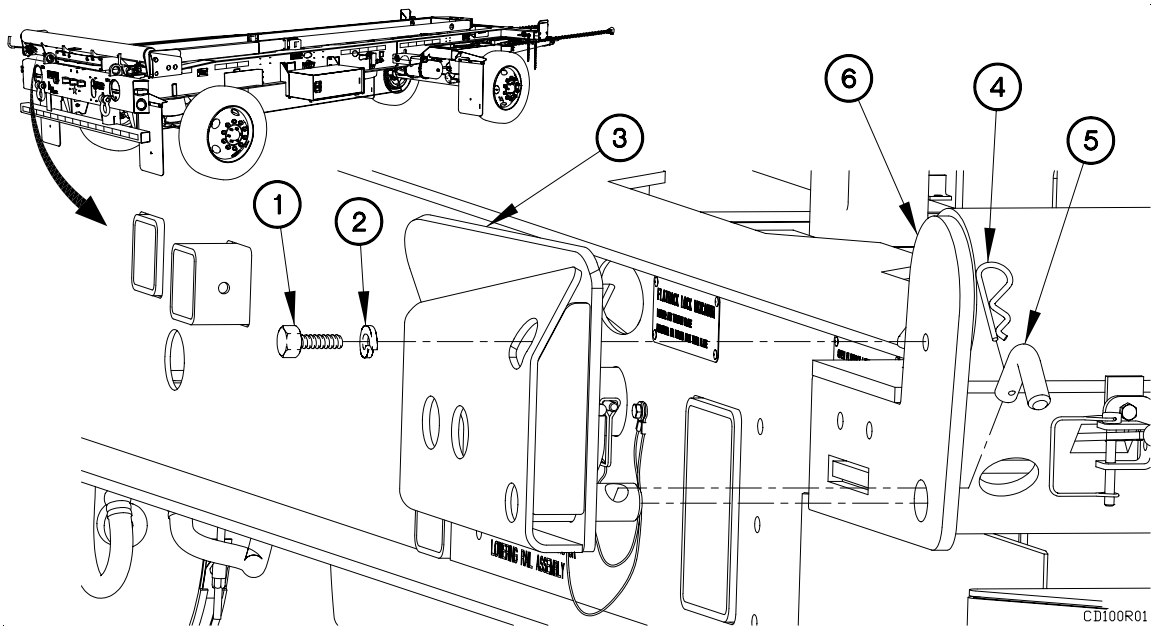
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) shuttle and guide brackets.

REMOVAL

NOTE

LH and RH shuttle guide brackets are removed the same way. LH side shown.

1. Remove three bolts (1) and lockwashers (2) from shuttle guide bracket (3). Discard lockwashers.
2. Remove retaining pin (4), pin (5), and shuttle guide bracket (3) from shuttle (6).

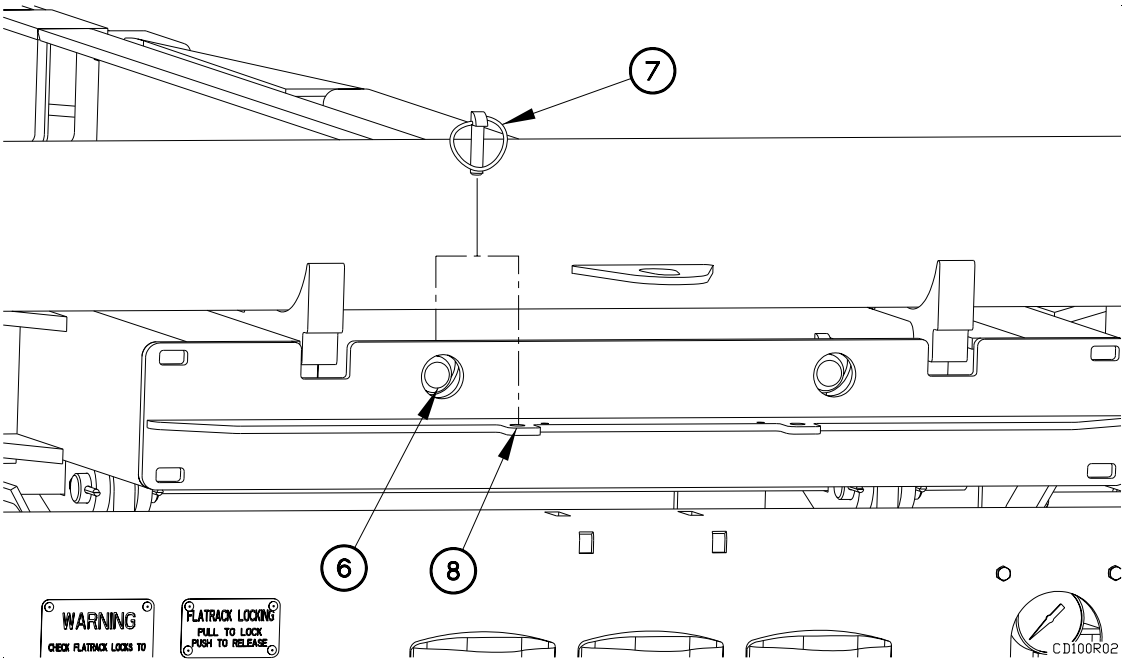


SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

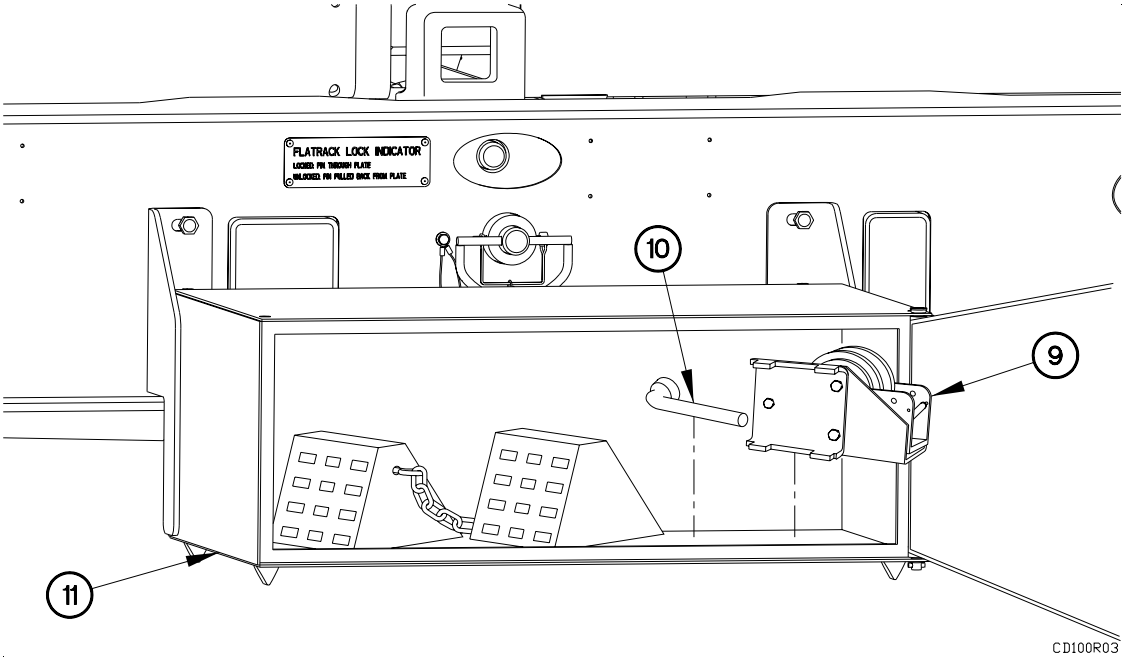
REMOVAL - Continued

3. Remove two inner rear lock pins (7) from shuttle (6).

4. Install two inner rear lock pins (7) in trailer (8).



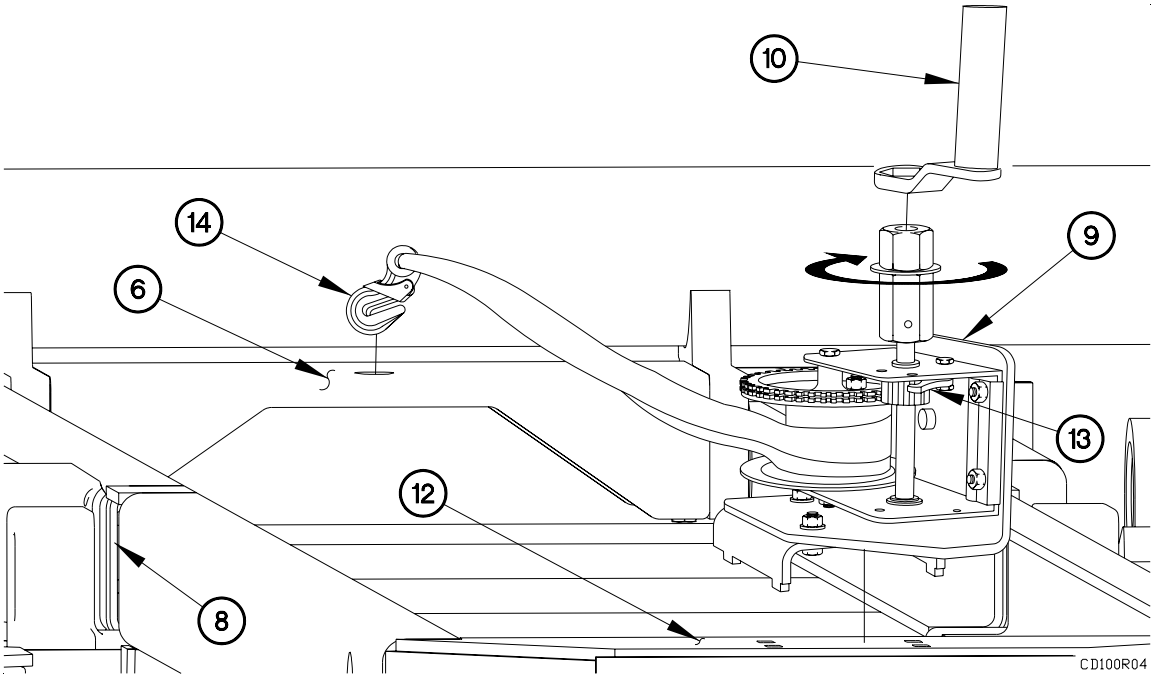
5. Remove winch (9) and crank handle (10) from tool box (11).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

REMOVAL - Continued

6. Install winch (9) in front of rail assembly (12).
7. Install crank handle (10) on winch (9).
8. Move lock (13) to the OFF position.
9. Install hook (14) on shuttle (6).
10. Move lock (13) to the ON position.
11. Crank winch (9) clockwise until shuttle (6) is to the front of trailer (8).
12. Remove hook (14) from shuttle (6).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

REMOVAL - Continued

NOTE

If shuttle cannot be moved by hand, reinstall hook from winch and perform previous two steps until alignment is achieved.

LH and RH front and rear roller pins are removed the same way. Front LH roller pin shown.

13. Align roller pin (15) with service hole (16) on rail (17).

WARNING

Retaining rings are under tension and can act as projectiles when released, causing severe eye injury. Use care when removing retaining rings. Failure to comply may result in injury to personnel.

14. Remove retaining ring (18) from roller pin (15).

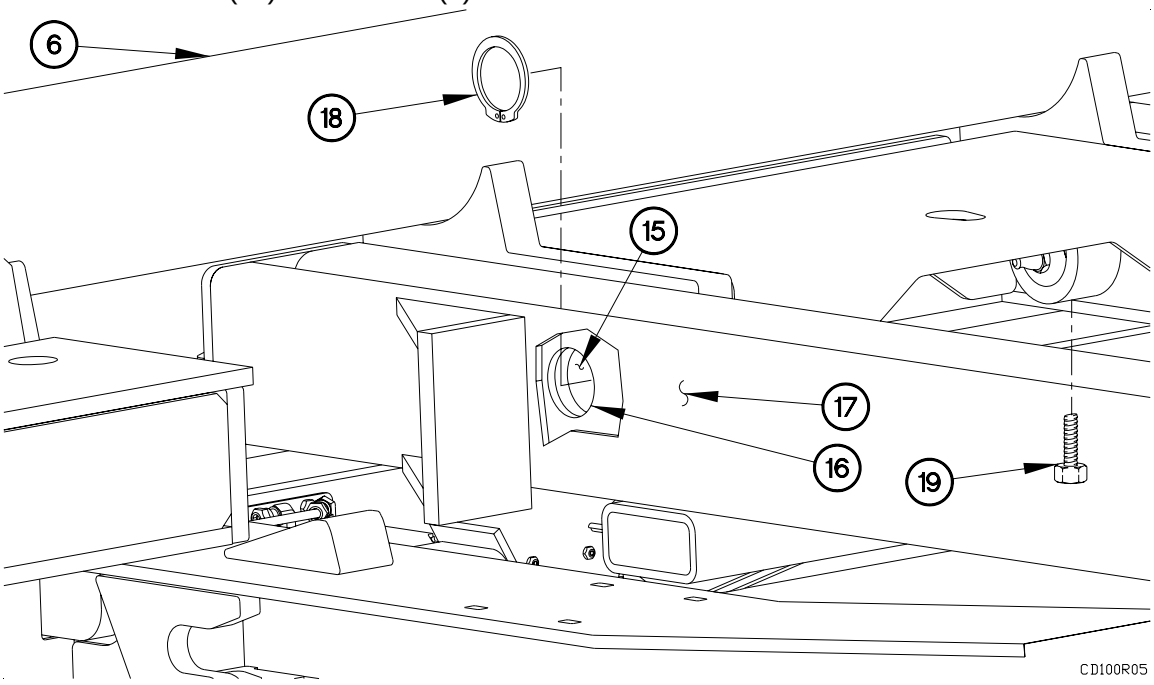
15. Perform previous two steps on remaining roller pins.

NOTE

If shuttle cannot be moved by hand, move winch to rear of trailer, reinstall hook and perform steps 5 through 10.

16. Push shuttle (6) back approximately 3 feet (91 cm) for access to four bolts (19).

17. Remove four bolts (19) from shuttle (6).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

REMOVAL - Continued

NOTE

If shuttle cannot be moved by hand, reinstall winch to front of trailer, reinstall hook and perform steps 5 through 10.

18. Align roller pin (15) with service hole (16) on rail (17).

WARNING

Shuttle weighs approximately 550 lbs (250 kgs). Attach a suitable lifting device prior to removal. Failure to comply may result in serious injury to personnel or damage to equipment.

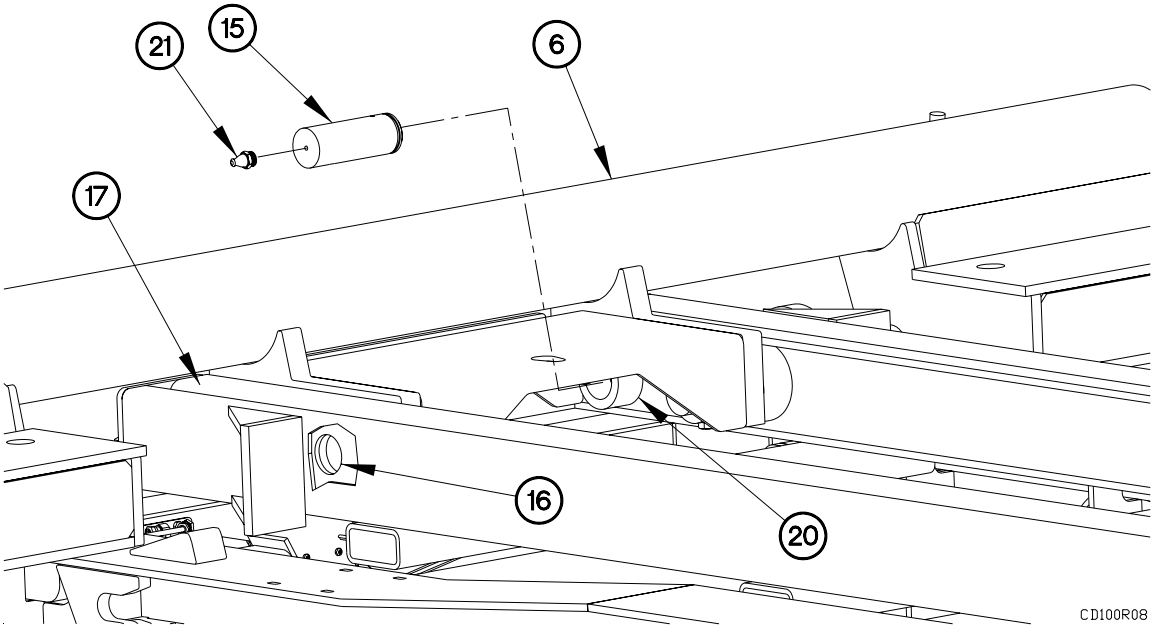
NOTE

LH and RH front and rear roller pins are removed the same way. Front LH roller pin shown.

19. Push roller pin (15) through roller (20) and shuttle (6).

20. Perform previous step on remaining roller pins.

21. Remove four grease fittings (21) from roller pins (15).



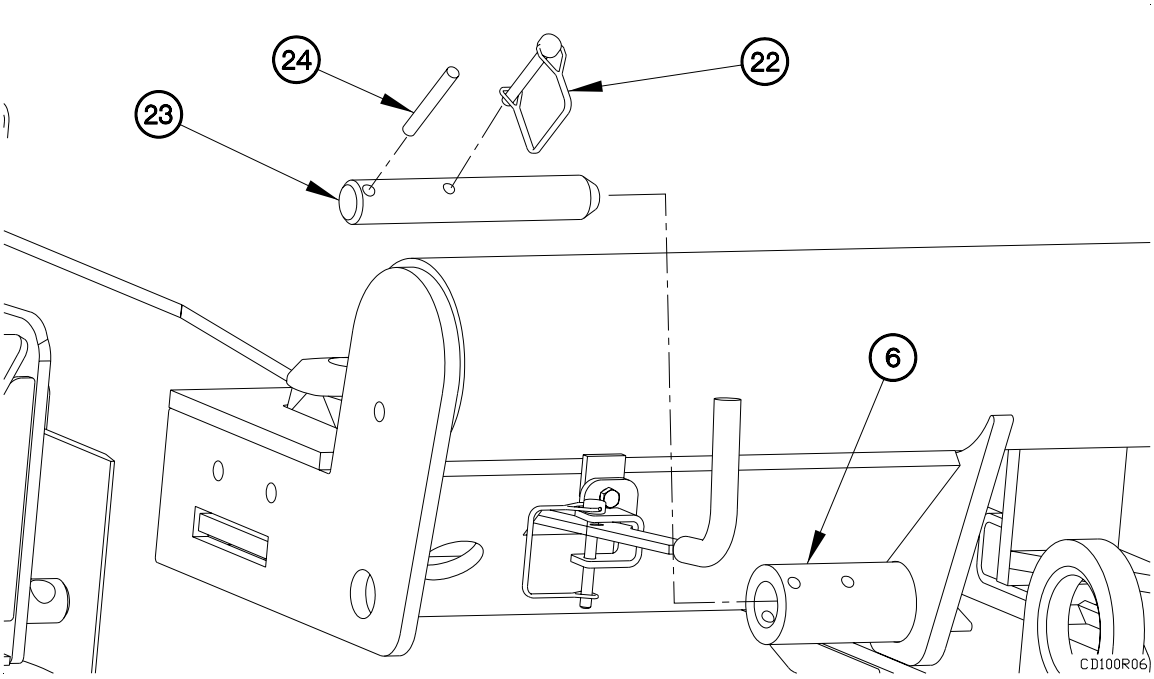
SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

REMOVAL - Continued

NOTE

LH and RH shuttle locking pins are removed the same way. LH side shown.

22. Remove retaining pin (22) from shuttle locking pin (23).
23. Remove shuttle locking pin (23) from shuttle (6).
24. Remove roller pin (24) from shuttle locking pin (23).
25. Perform previous three steps on remaining shuttle locking pins.

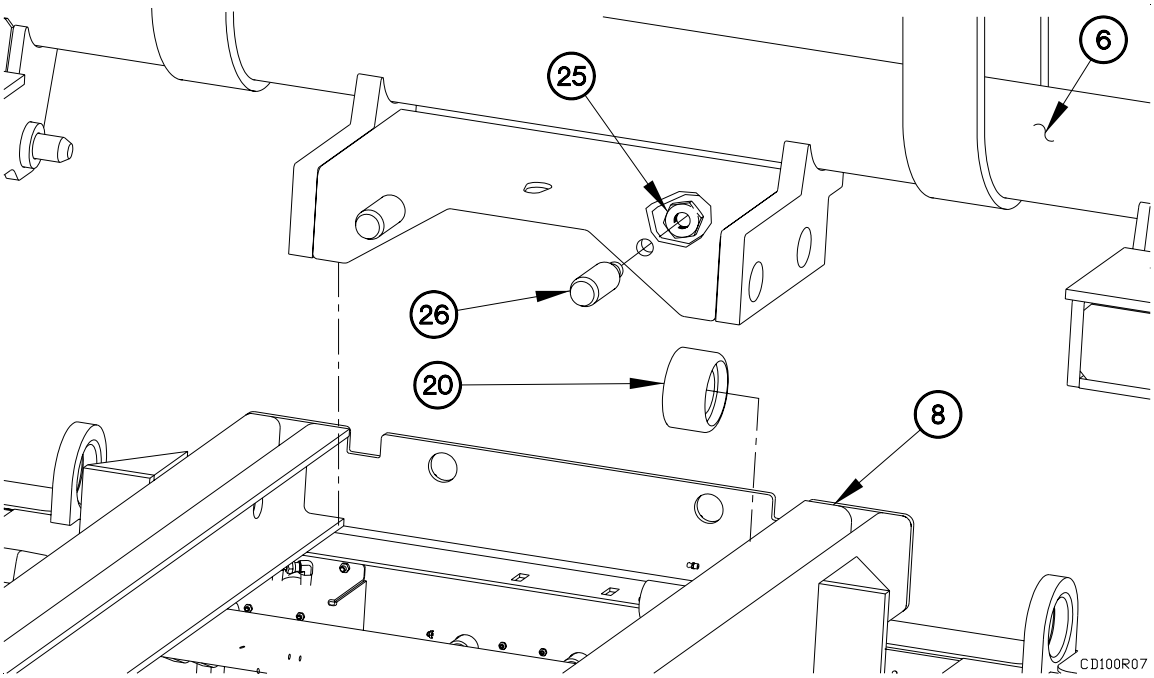


SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

REMOVAL - Continued

26. Remove two self-locking nuts (25) and alignment studs (26) from shuttle (6). Discard self-locking nuts.

27. Remove four rollers (20) from trailer (8).



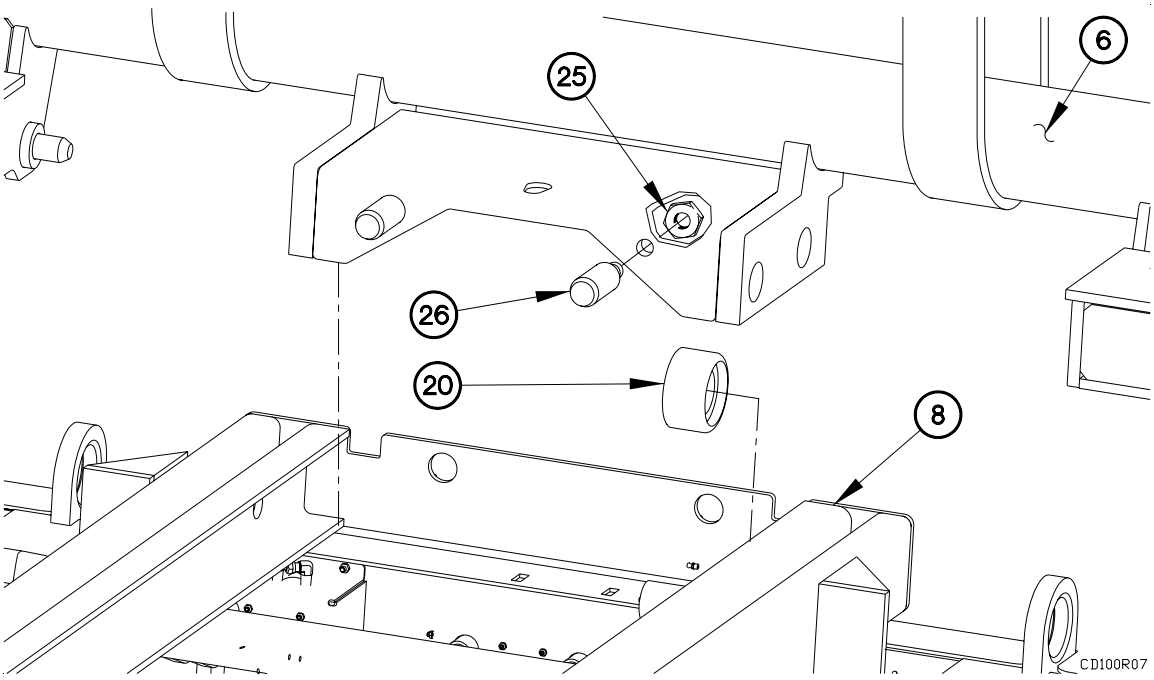
SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

INSTALLATION

NOTE

Holes in alignment studs align vertically.

1. Position two alignment studs (26) in shuttle (6) with two self-locking nuts (25).
2. Tighten two self-locking nuts (25) to 225-275 lb-ft (305-373 N•m).
3. Position four rollers (20) on trailer (8).



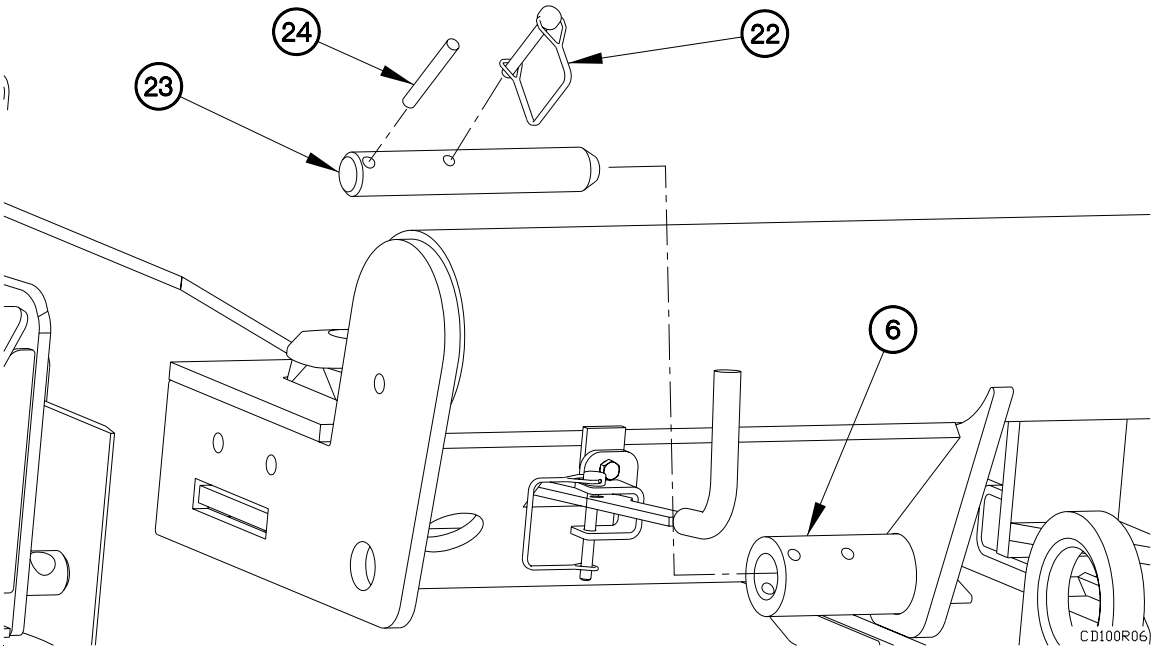
SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

INSTALLATION - Continued

NOTE

LH and RH shuttle locking pins are installed the same way. LH side shown.

5. Install roller pin (24) in shuttle locking pin (23).
6. Install shuttle locking pin (23) in shuttle (6).
7. Install retaining pin (22) in shuttle locking pin (23).
8. Perform previous three steps on remaining shuttle locking pins.



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

INSTALLATION - Continued

9. Install four retaining rings (18) on roller pins (15).

10. Align roller pin (15) with service hole (16) on rail (17).

11. Install four grease fittings (21) in roller pins (15).

WARNING

Shuttle weighs approximately 550 lbs (250 kgs). Attach a suitable lifting device prior to installation. Failure to comply may result in serious injury to personnel or damage to equipment.

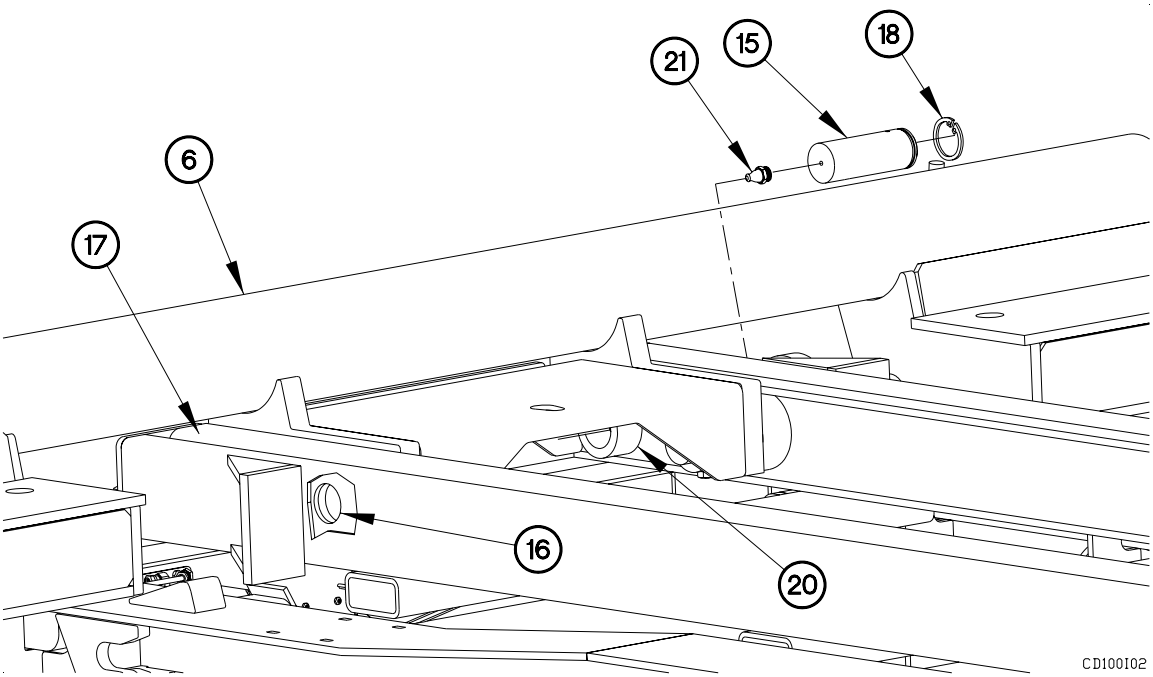
NOTE

LH and RH front and rear roller pins are installed the same way. Front LH roller pin shown.

Install front two roller pins prior to rear for ease of installation.

12. Push roller pin (15) through roller (20) and shuttle (6).

13. Perform previous step on remaining roller pins.



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

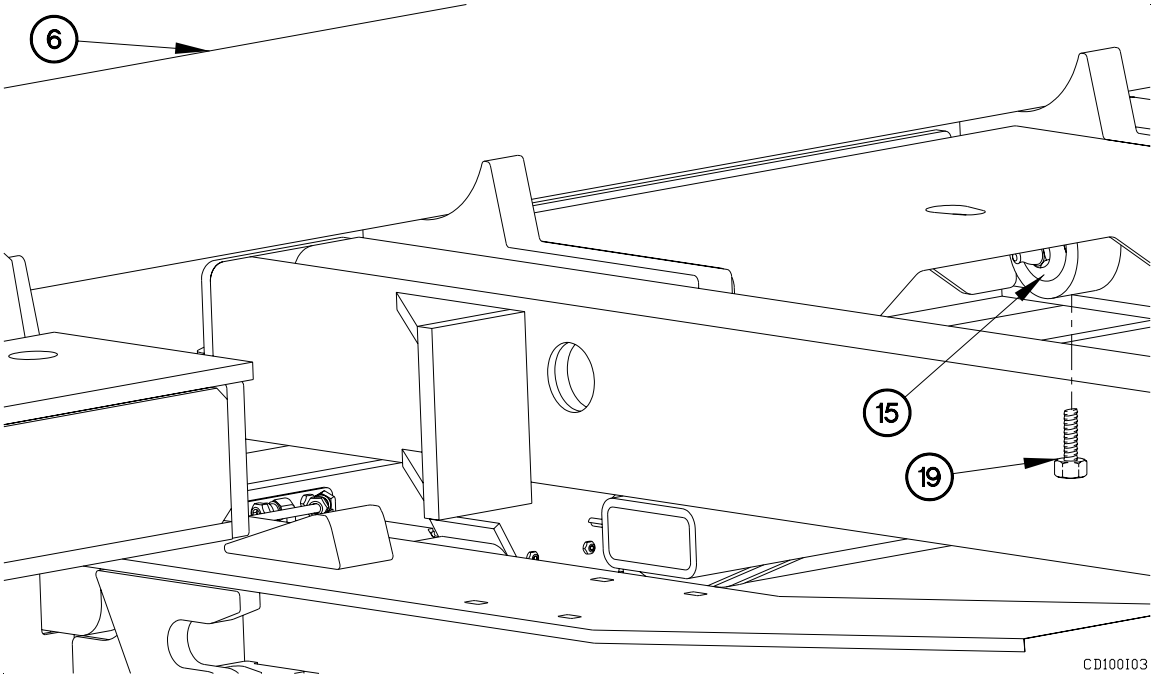
INSTALLATION - Continued

NOTE

The following step requires the aid of an assistant.

Leave cargo sling attached to shuttle to keep weight off rollers and roller pins.

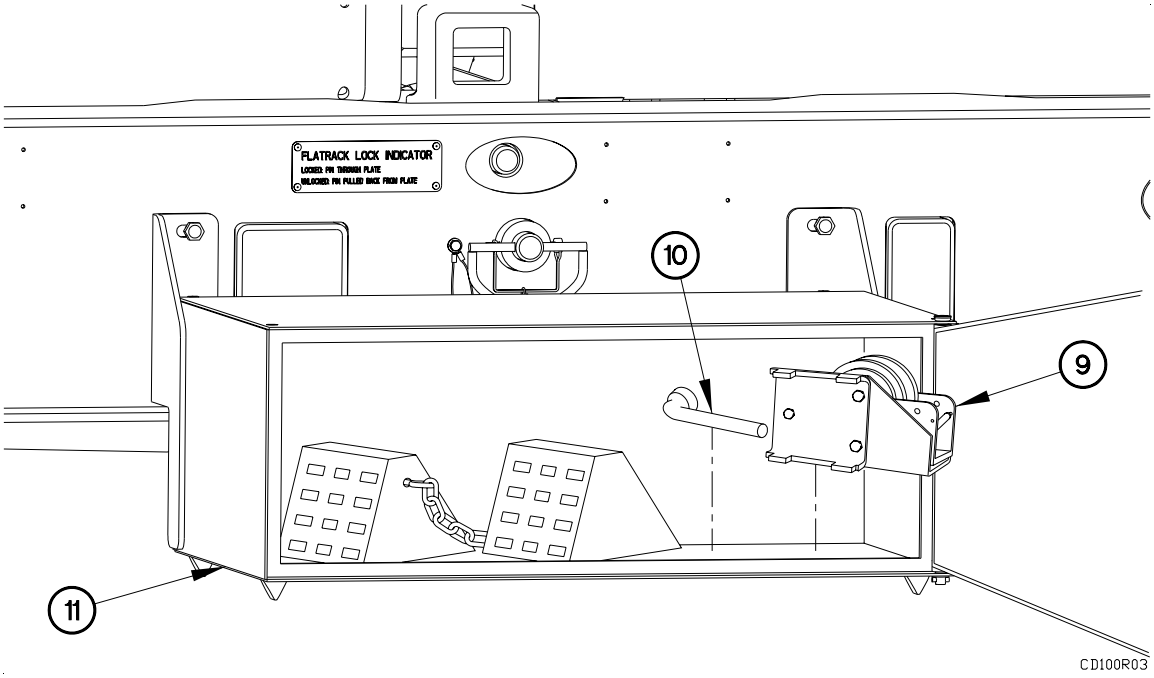
14. Rotate roller pins (15) until holes in roller pins align with bolt holes in shuttle (6).
15. Push shuttle (6) back approximately 3 feet (91 cm) for access to roller pins (15).
16. Install four bolts (19) in shuttle (6).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

INSTALLATION – Continued

17. Install winch (9) and crank handle (10) in tool box (11).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued 0100 00

INSTALLATION – Continued

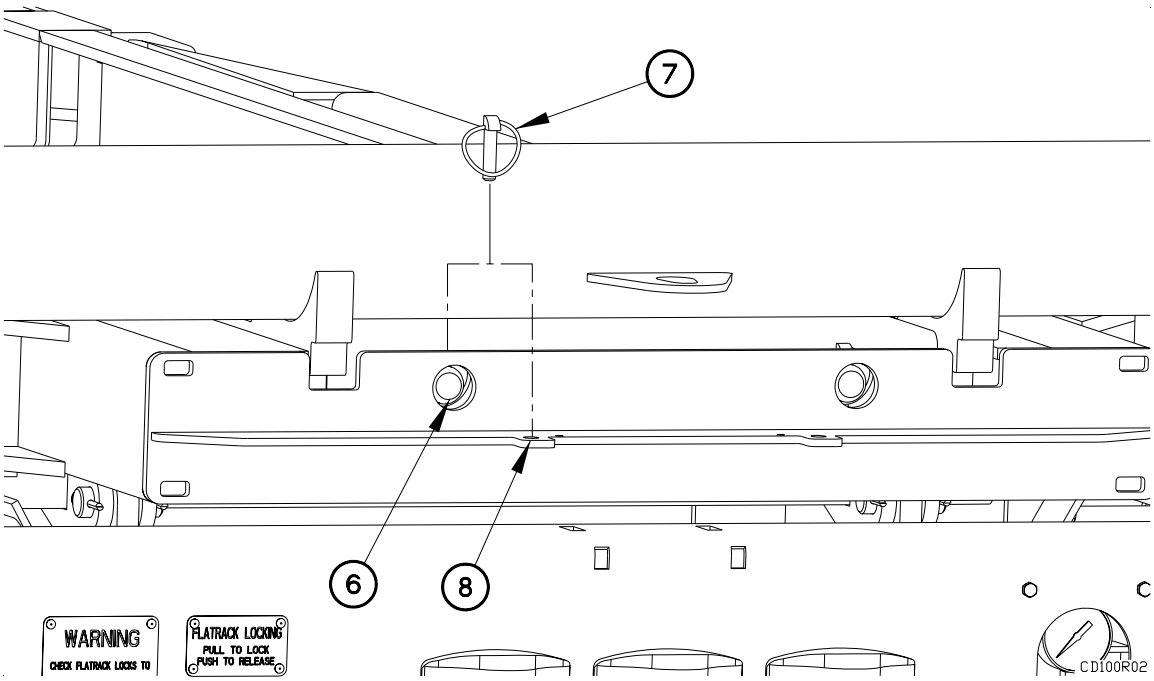
NOTE

The following step requires the aid of an assistant.

18. Push shuttle (6) to rear of trailer (8).

19. Remove two inner rear lock pins (7) from trailer (8).

20. Install two inner rear lock pins (7) in shuttle (6).



INSTALLATION – Continued

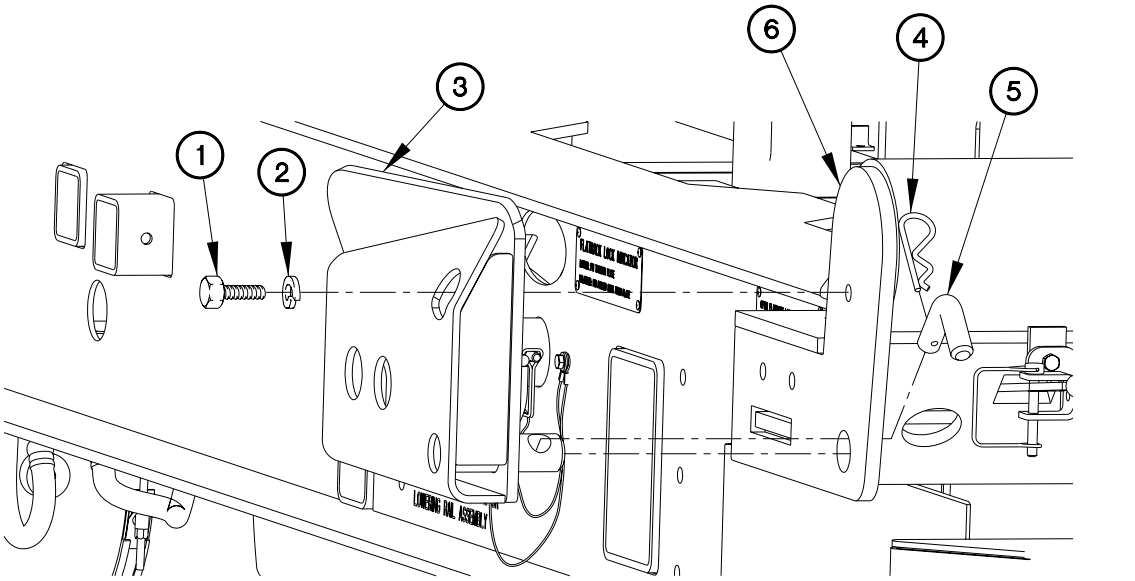
NOTE

LH and RH shuttle guide brackets are installed the same way. LH side shown.

21. Install shuttle guide bracket (3) on shuttle (6) with pin (5) and retaining pin (4).

22. Position three lockwashers (2) and bolts (1) in shuttle guide bracket (3).

23. Tighten three bolts (1) to 150-190 lb-ft (203-258 N•m).



CD100I01

OPERATIONAL CHECK

1. Install twistlocks (WP 0101 00).

2. Lubricate roller pins (WP 0052 00).

END OF WORK PACKAGE

SHUTTLE TWIST LOCK REPLACEMENT 0101 00

THIS WORK PACKAGE COVERS:

Removal, Installation

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 31, WP 0167 00)

Materials/Parts

Nut, Self-Locking (Item 31, WP 0168 00)
Nut, Self-Locking (Item 28, WP 0168 00)

Equipment Conditions

Trailer Uncoupled (WP 0043 24, TM 2320-392-10-1)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) shuttle twist lock.

SHUTTLE TWIST LOCK REPLACEMENT - CONTINUED 0101 00

REMOVAL

NOTE

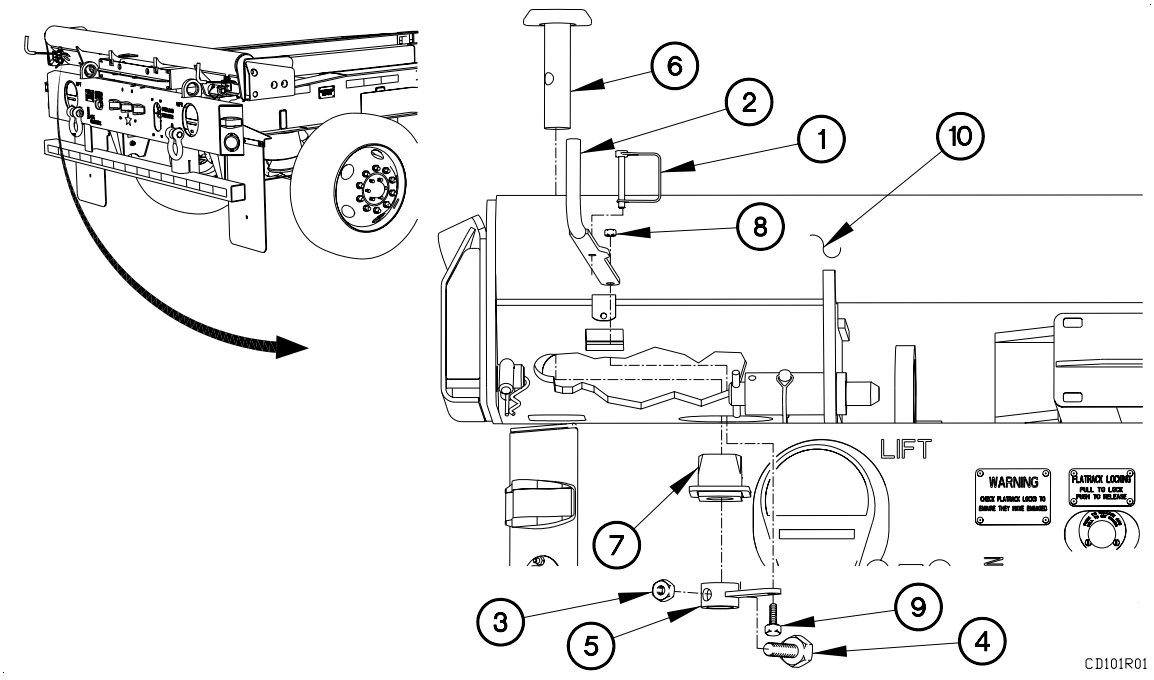
LH and RH twist locks are removed the same way. LH side shown.

1. Remove retaining pin (1) from handle (2).
2. Position handle (2) for access to self-locking nut (3).
3. Remove self-locking nut (3) and bolt (4) from swivel arm (5) and pivot lock (6). Discard self-locking nut.
4. Remove pivot lock (6) from swivel arm (5) and block (7).

NOTE

Note orientation of handle, swivel, and bolt prior to removal.

5. Remove self-locking nut (8), bolt (9) and handle (2) from swivel arm (5). Discard self-locking nut.
6. Remove swivel arm (5) and block (7) from shuttle (10).



SHUTTLE TWIST LOCK REPLACEMENT - CONTINUED 0101 00

INSTALLATION

NOTE

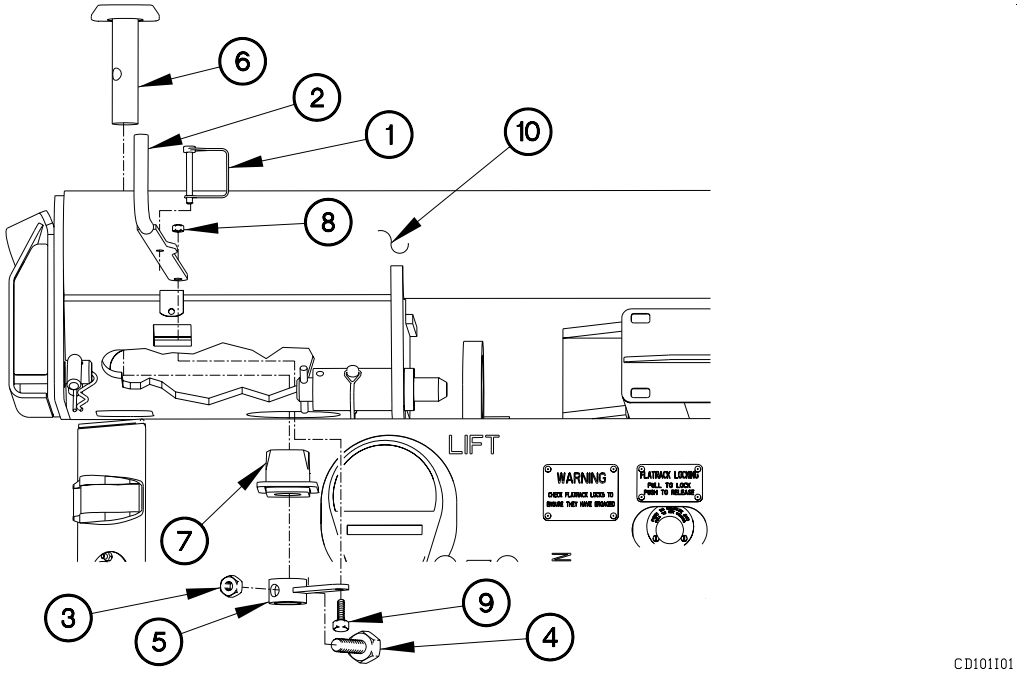
LH and RH twist locks are installed the same way. LH side shown.

1. Position block (7) and swivel arm (5) in shuttle (10).

NOTE

Tighten self-locking nut snuggly and loosen one half turn to allow joint to pivot.

2. Install handle (2) on swivel arm (5) with bolt (9) and self-locking nut (8).
3. Install pivot lock (6) in swivel arm (5) and block (7).
4. Position bolt (4) through swivel arm (5) and pivot lock (6) with self-locking nuts (3).
5. Tighten self-locking nut (3) to 150-170 lb-ft (203-258 N•m).
6. Install retaining pin (1) in handle (2).



CD101I01

END OF WORK PACKAGE.

RAIL LIFT JACK REPLACEMENT 0102 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 0-175 lb-ft (Item 32, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 34, WP 0167 00)

Materials/Parts

Nut, Self-Locking (Item 28, WP 0168 00)
Nut, Self-Locking (4) (Item 30, WP 0168 00)
Nut, Self-Locking (Item 31, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) rail lift jack.

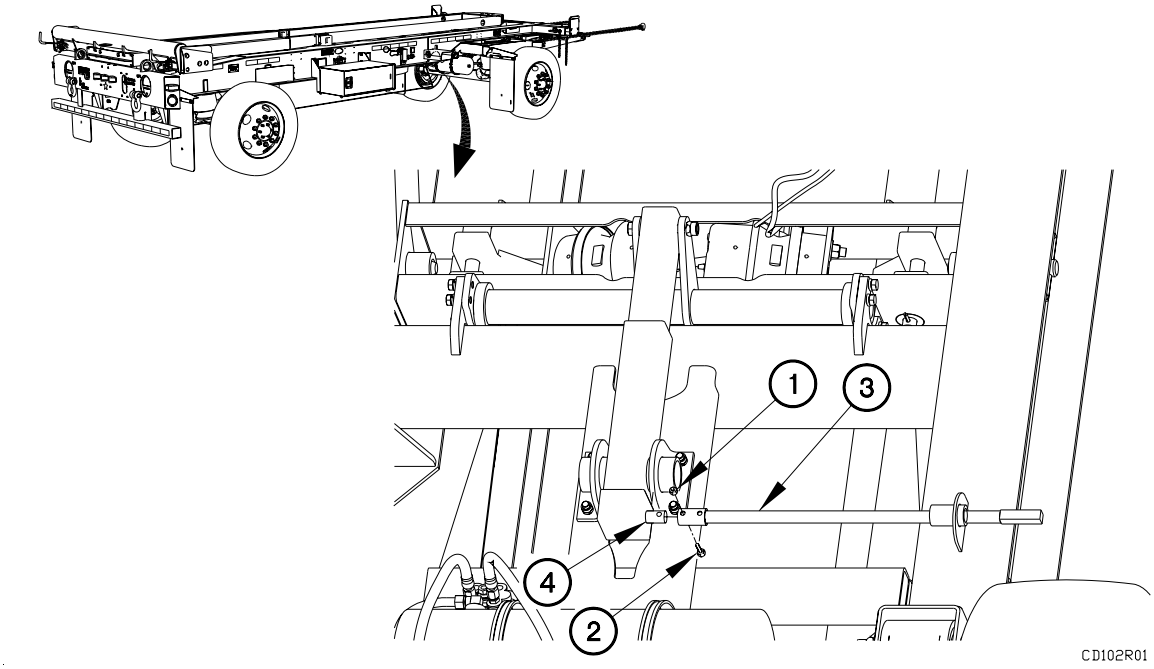
WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

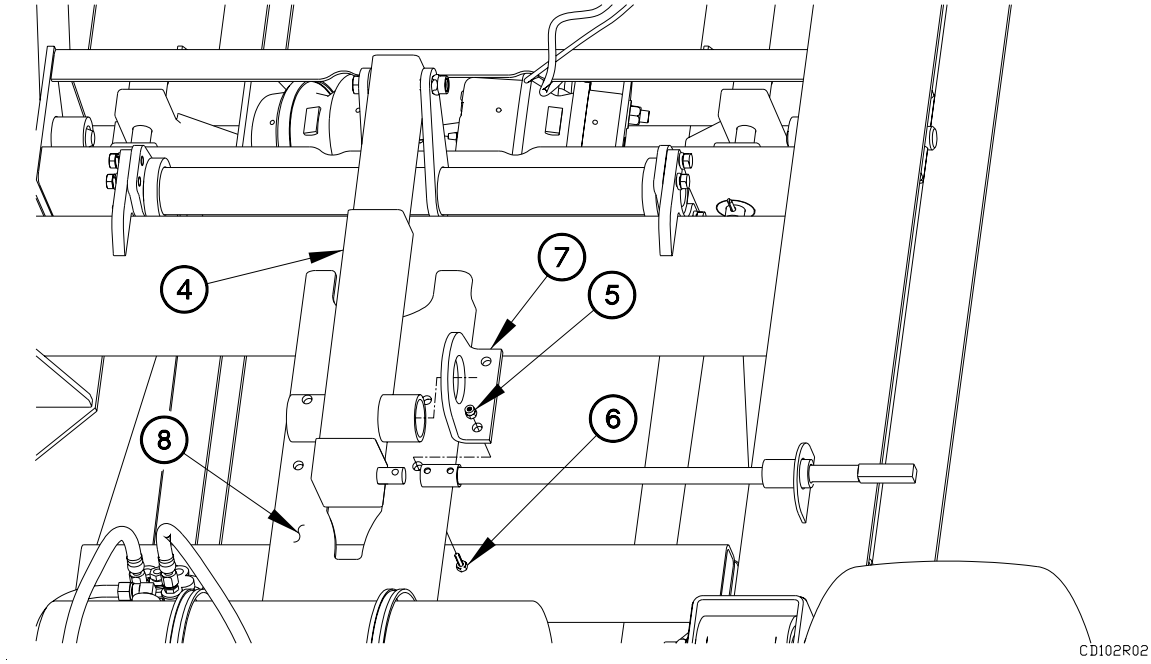
RAIL LIFT JACK REPLACEMENT - Continued 0102 00

REMOVAL

1. Remove self-locking nut (1), bolt (2), and shaft (3) from rail lift jack (4). Discard self-locking nut.



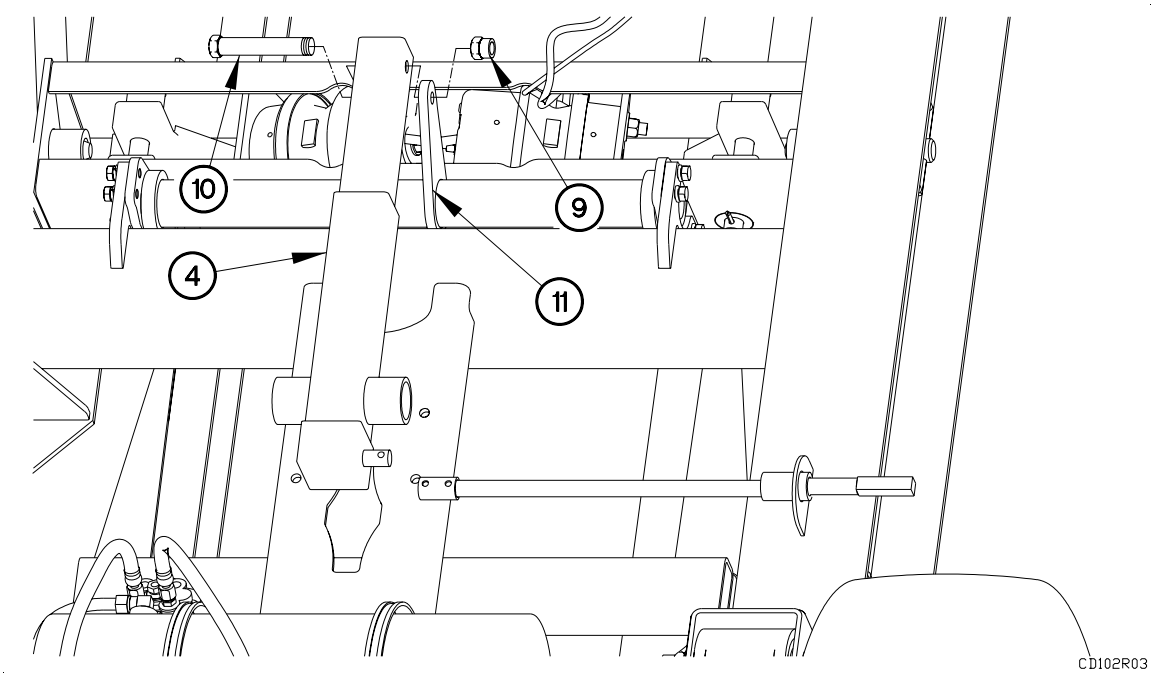
2. Remove four self-locking nuts (5), bolts (6), two brackets (7), and rail lift jack (4) from mounting plate (8). Discard self-locking nuts.



RAIL LIFT JACK REPLACEMENT - Continued 0102 00

REMOVAL - Continued

3. Remove self-locking nut (9), bolt (10), and rail lift jack (4) from rockshaft jack brackets (11). Discard self-locking nut.

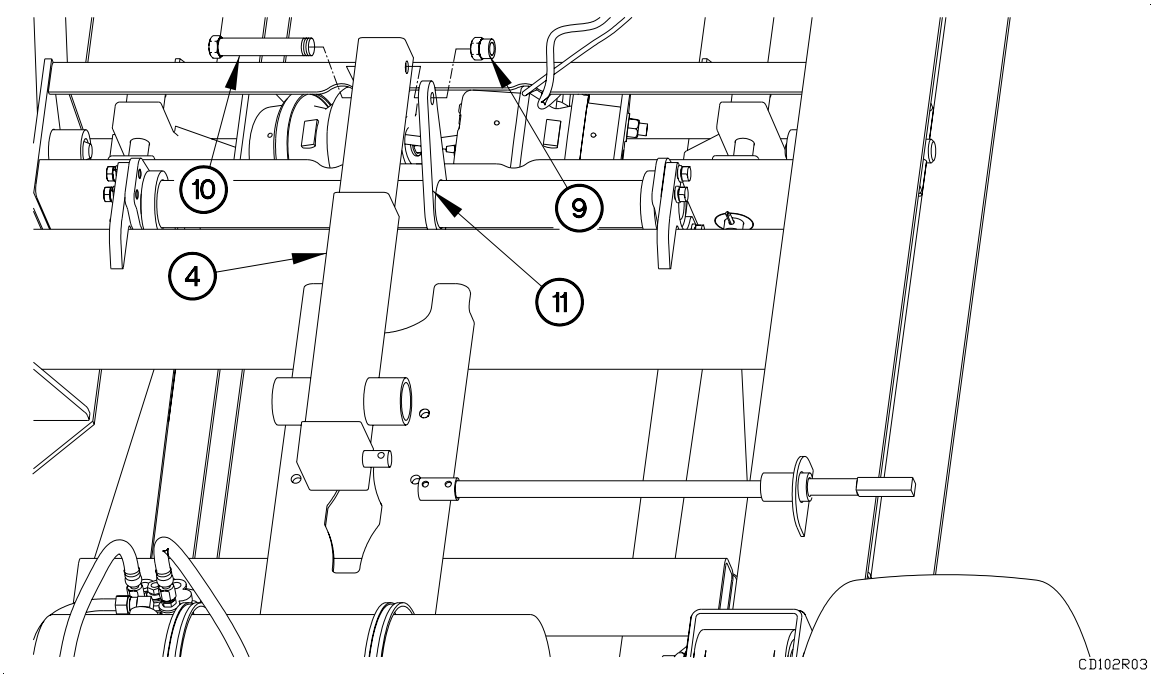


RAIL LIFT JACK REPLACEMENT - Continued 0102 00

INSTALLATION

1. Position rail lift jack (4) on rockshaft jack brackets (11) with bolt (10) and self-locking nut (9).

2. Tighten self-locking nut (9) to 150-190 lb-ft (203-258 N•m).

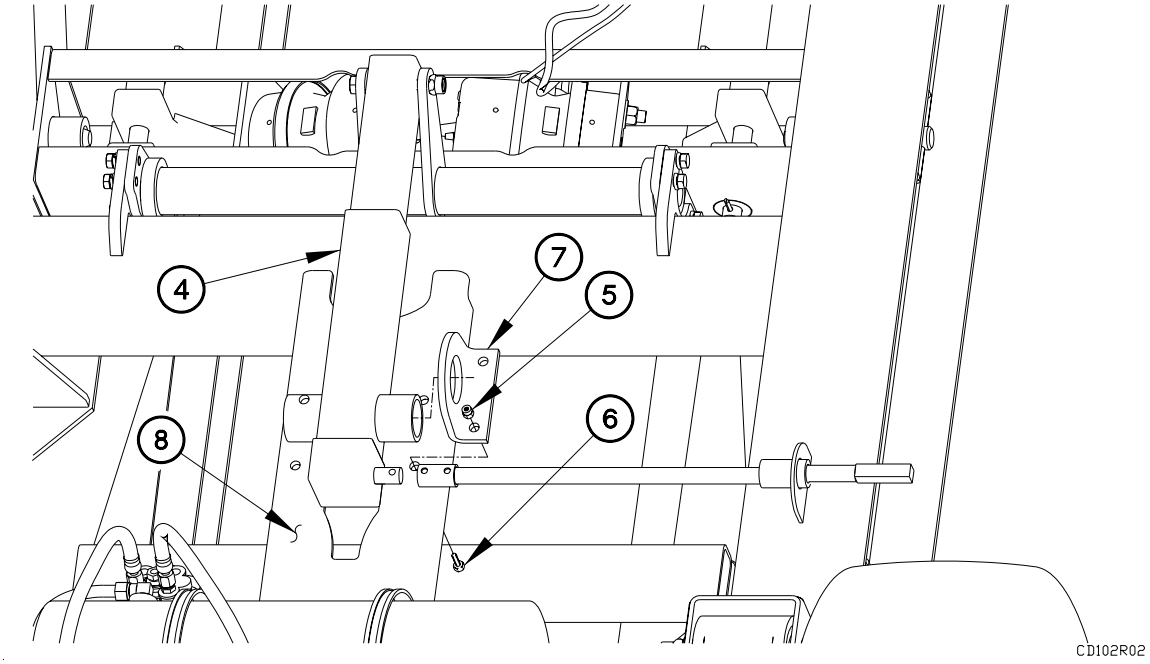


RAIL LIFT JACK REPLACEMENT - Continued 0102 00

INSTALLATION - Continued

3. Position two brackets (7) and rail lift jack (4) on mounting plate (8) with four bolts (6) and self-locking nuts (5).

4. Tighten four self-locking nuts (5) to 70-90 lb-ft (95-122 N•m).

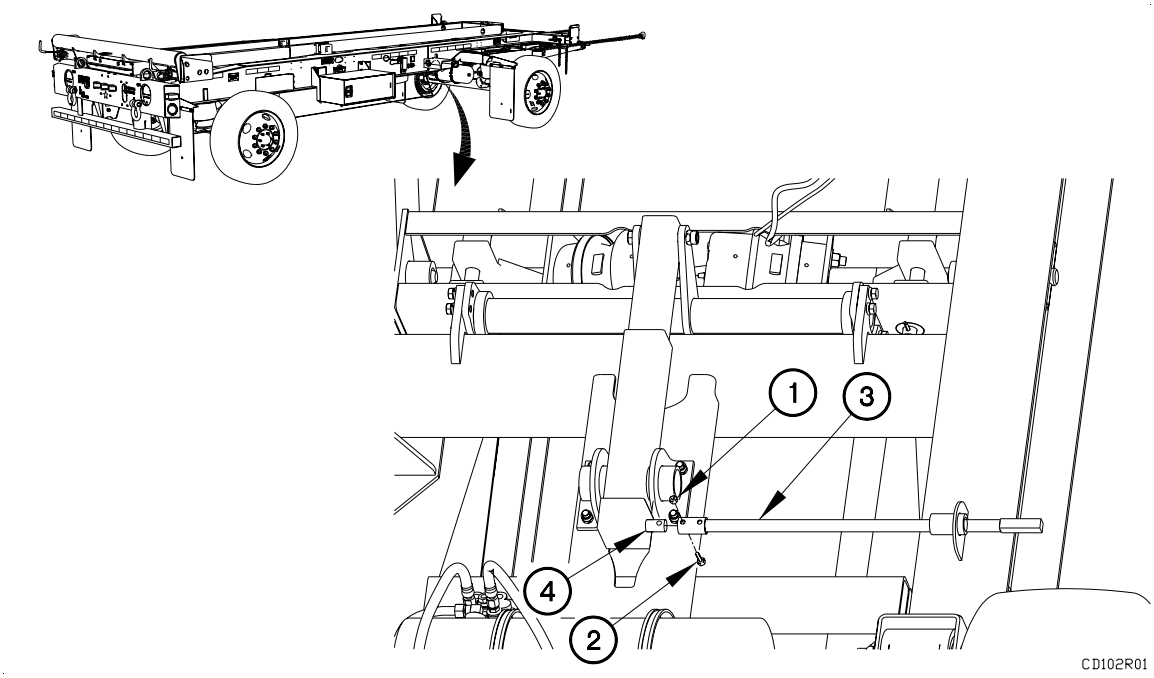


RAIL LIFT JACK REPLACEMENT - Continued 0102 00

INSTALLATION - Continued

5. Position shaft (3) on rail lift jack (4) with bolt (2) and self-locking nut (1).

6. Tighten self-locking nut (1) to 16-20 lb-ft (22-27 N•m).



OPERATIONAL CHECKS

1. Check for proper operation of rail lift jack (WP 0005 00).

END OF WORK PACKAGE

SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT 0103 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)
Wrench Set, Crowfoot, Ratcheting (Item 27, WP 0167 00)

Materials/Parts References

Nut, Self-Locking (4) (Item 30, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Spare tire lowered (WP 0053 00).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) tire carrier winch assembly.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

REMOVAL

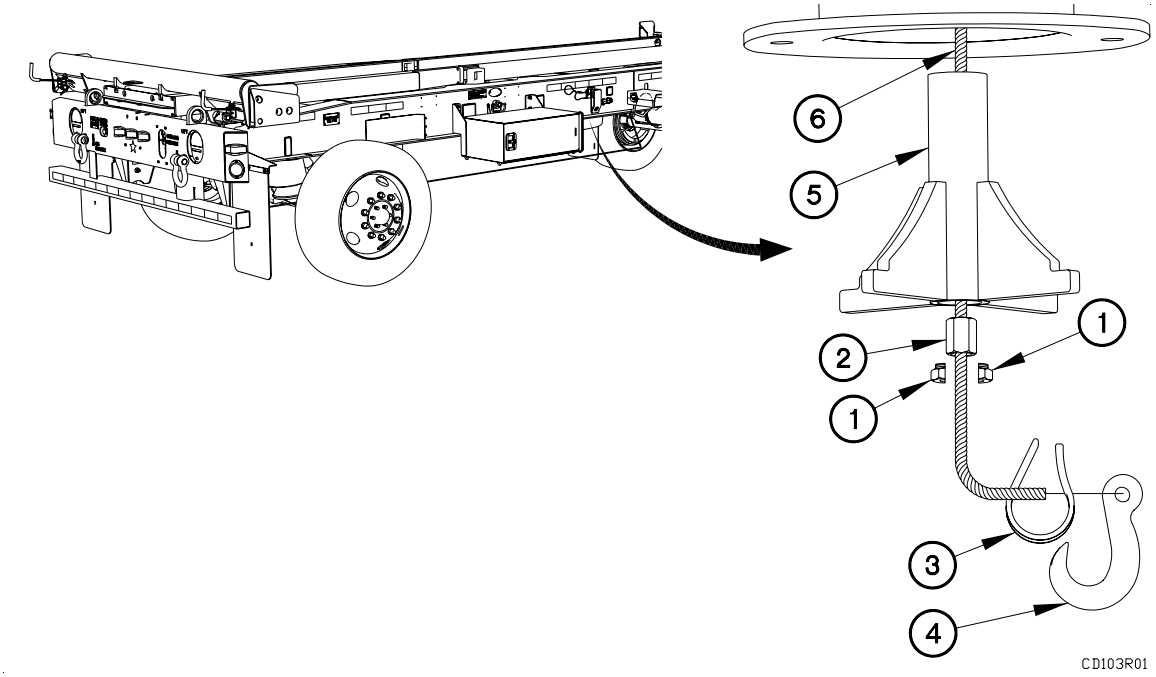
1. Remove two clamp plug halves (1), clamp socket (2), thimble (3), hook (4), and tire lift bracket (5) from wire rope (6).

NOTE

Keep wire rope tight while reeling it in.

2. Reel in wire rope past pulley to reel.

3. Secure wire rope at reel.

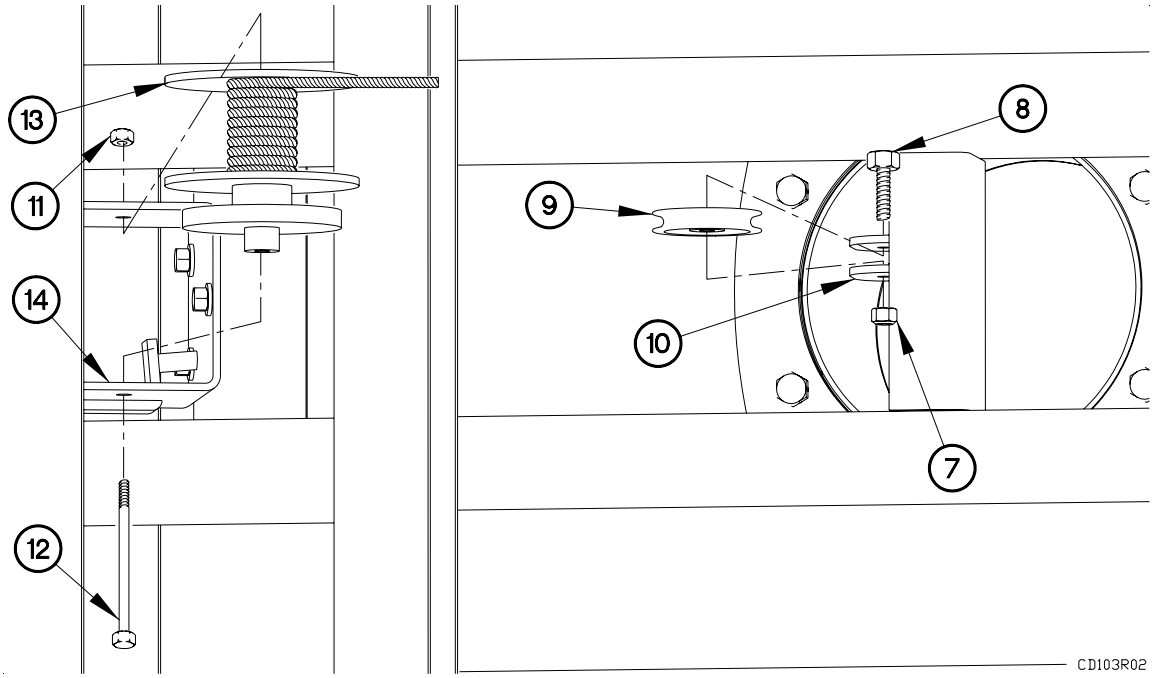


SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

REMOVAL - Continued

4. Remove self-locking nut (7), bolt (8), and pulley (9) from bracket (10).

5. Remove nut (11), bolt (12), and reel (13) from tire carrier winch frame (14).

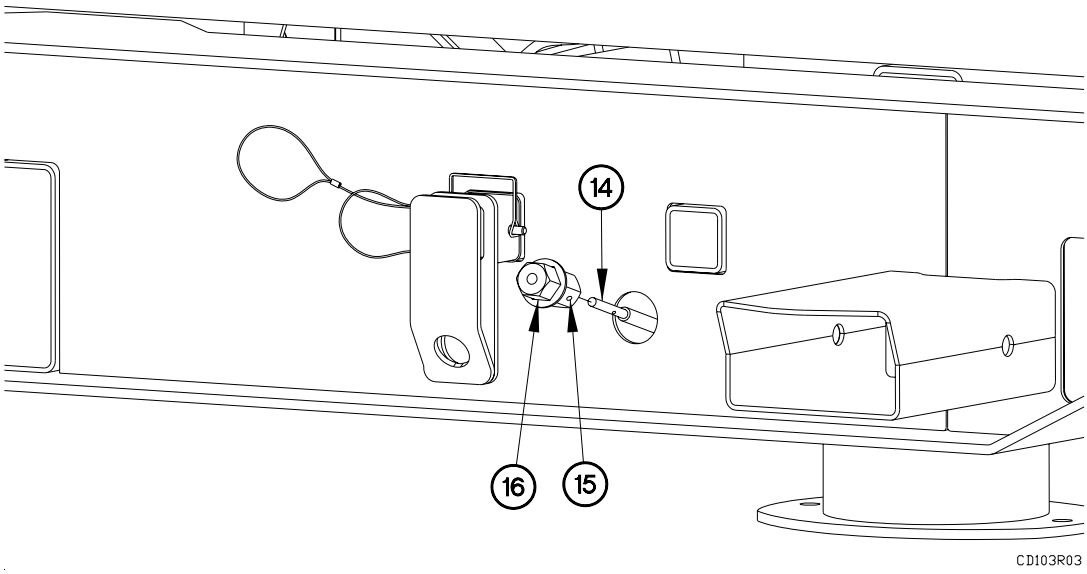


SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

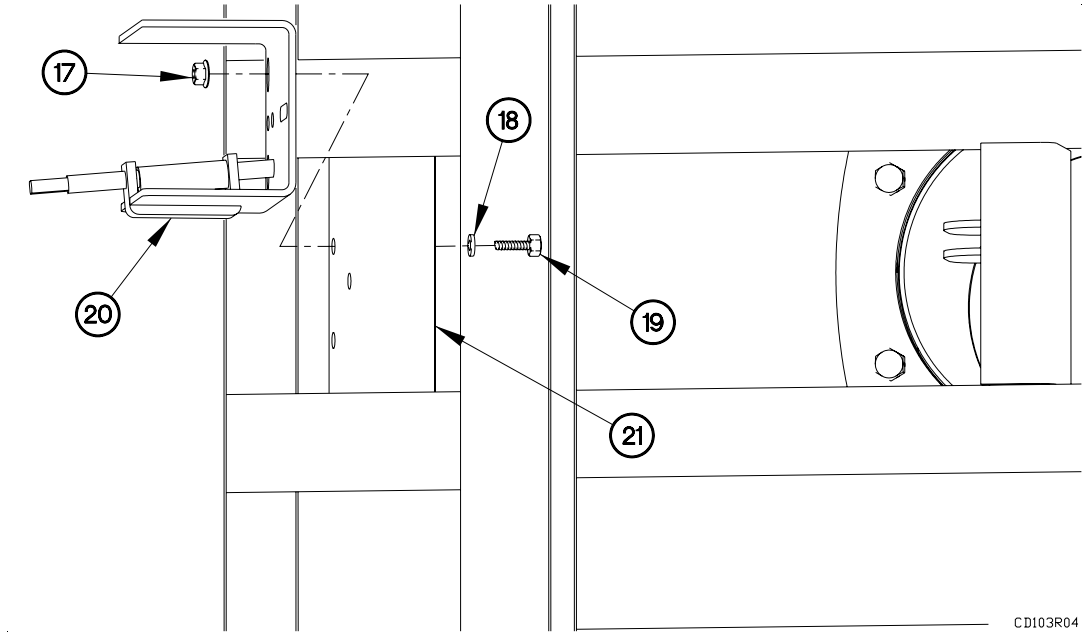
REMOVAL – Continued

6. Loosen set screw (15) on extension (16).

7. Remove extension (16) from tire carrier winch frame (14).



8. Remove four self-locking nuts (17), washers (18), bolts (19), and tire carrier winch frame (20) from bracket (21). Discard self-locking nuts.

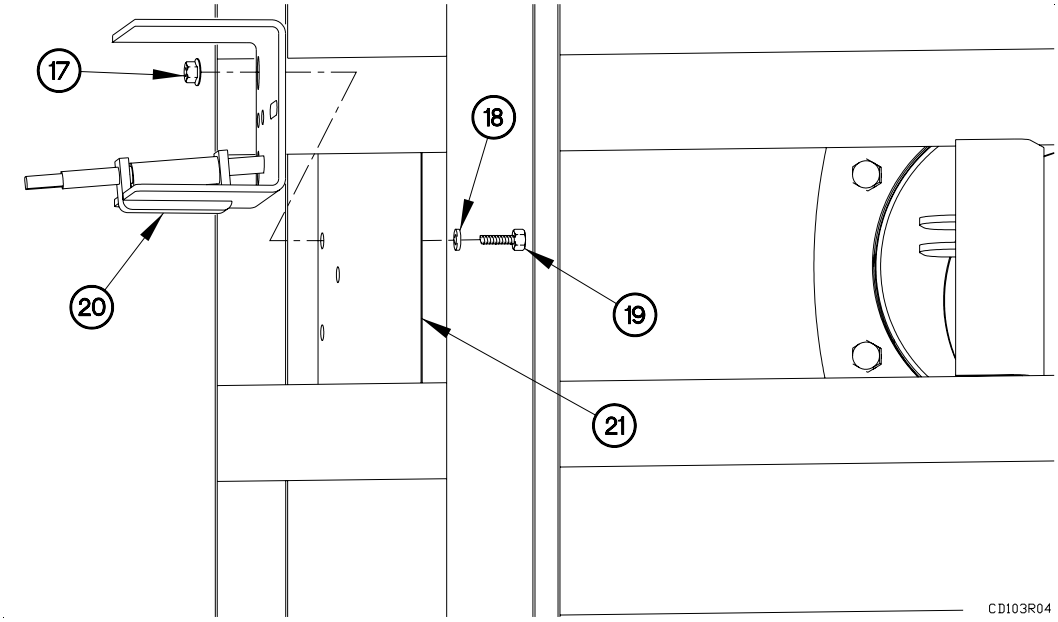


SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

INSTALLATION

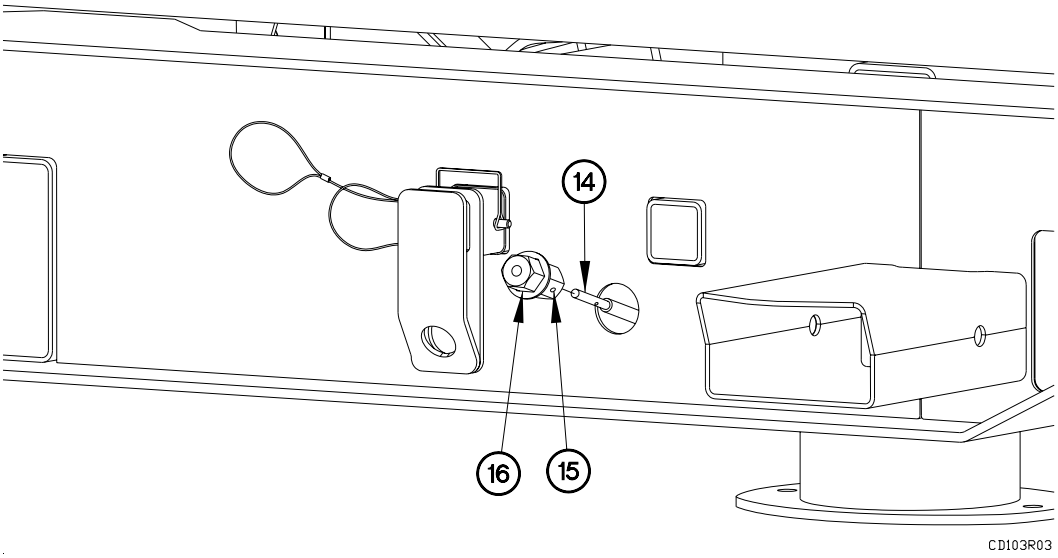
1. Position tire carrier winch frame (20) on bracket (21) with three bolts (19), washers (18), and self-locking nuts (17).

2. Tighten three self-locking nuts (17) to 32-38 lb-ft (43-51 N•m).



3. Install extension (16) on tire carrier winch frame (14).

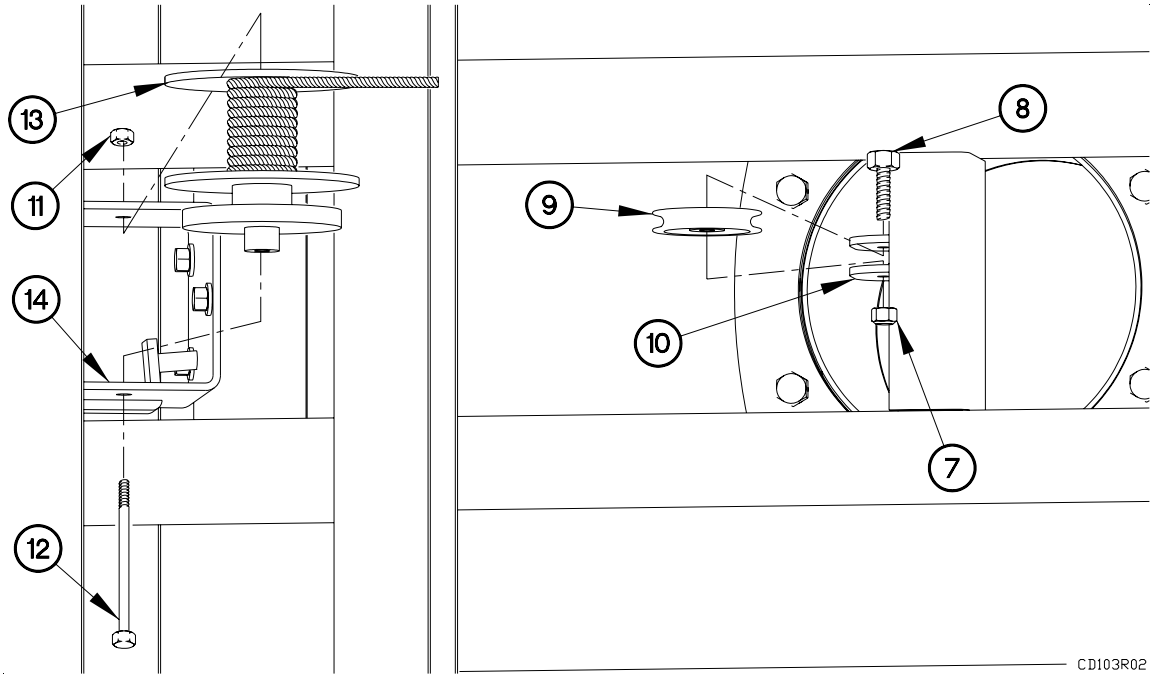
4. Tighten set screw (15) on extension (16).



SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

INSTALLATION – Continued

5. Install reel (13) on tire carrier winch frame (14) with bolt (12) and nut (11).
6. Position pulley (9) on bracket (10) with bolt (8) and self-locking nut (7).
7. Tighten self-locking nut (7) to 32-38 lb-ft (43-51 N•m).



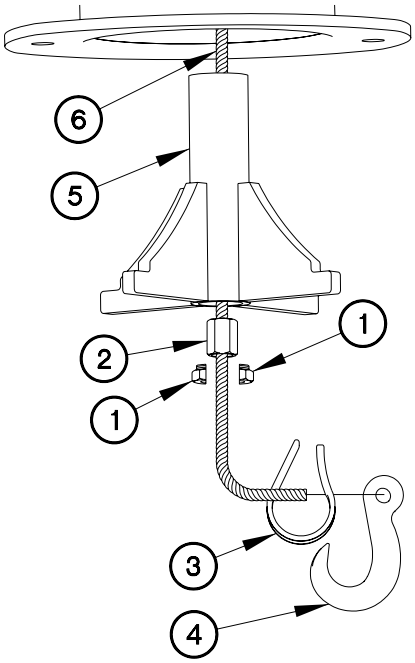
SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

INSTALLATION – Continued

8. Route wire rope from reel through pulley.

9. Position tire lift bracket (5), clamp socket (2), hook (4), thimble (3), and two clamp plug halves (1), on wire rope (6).

10. Tighten two clamp plug halves (1) to 72-88 lb-ft (98-119 N•m).



CD103i01

SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT - Continued 0103 00

OPERATIONAL CHECKS

1. Raise spare tire (WP 0053 00).

END OF WORK PACKAGE

BUMP STOP AND EXTENSION REPLACEMENT 0104 00

THIS WORK PACKAGE COVERS:

Removal, Installation

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 0-75 lb-in. (Item 35, WP 0167 00)

Materials/Parts

Washer, Lock (2) (Item 22, WP 0168 00)
Pin, Cotter (4) (Item 45, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

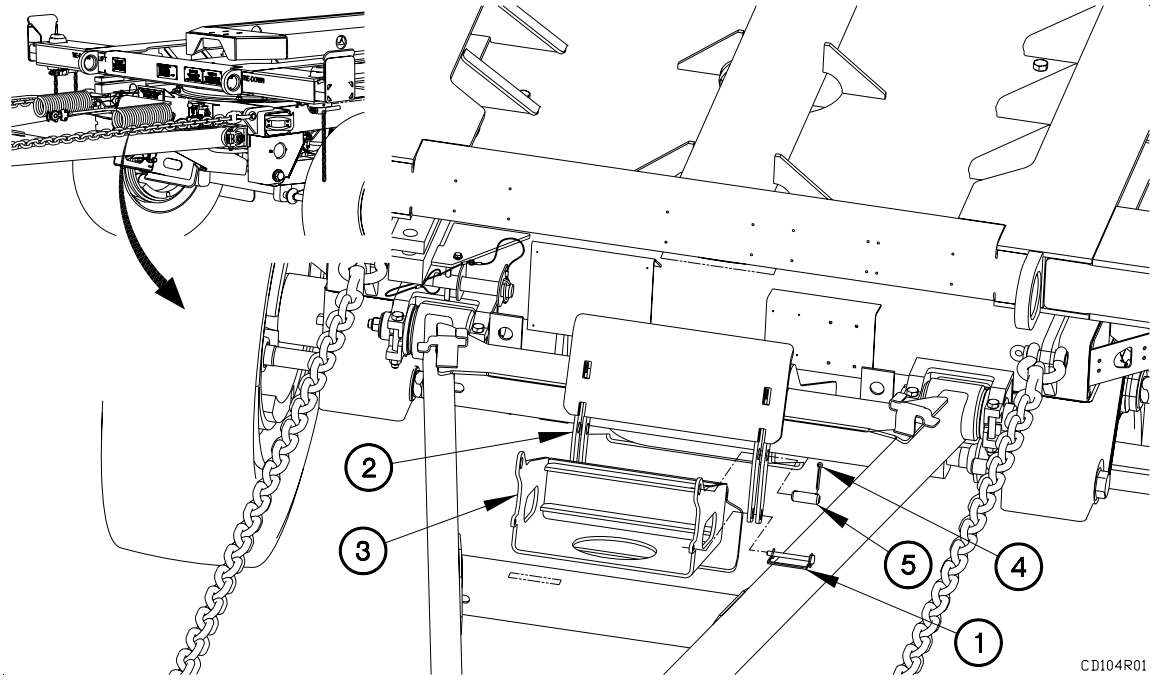
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) bump stop and extension.

BUMP STOP AND EXTENSION REPLACEMENT - Continued 0104 00

REMOVAL

1. Remove two lock pins (1) from bump stop (2) and bump stop extension (3).
2. Remove four cotter pins (4) from bump stop (2) and bump stop extension (3).
3. Remove bump stop pins (5) from bump stop extension (3)
4. Remove bump stop extension (3) from bump stop (2).

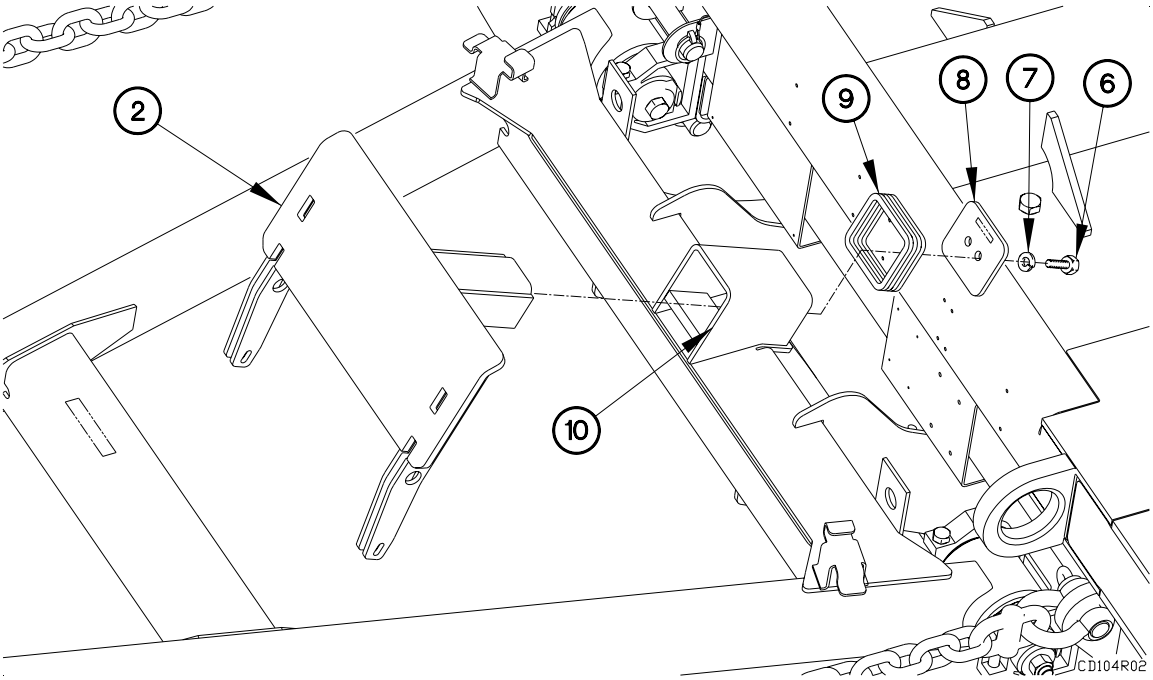


BUMP STOP AND EXTENSION REPLACEMENT - Continued 0104 00

REMOVAL - Continued

5. Remove two screws (6), lockwashers (7), bump stop cap (8), and four shims (9) from bump stop (2). Discard lockwashers.

6. Remove bump stop (2) from bump stop tube (10).



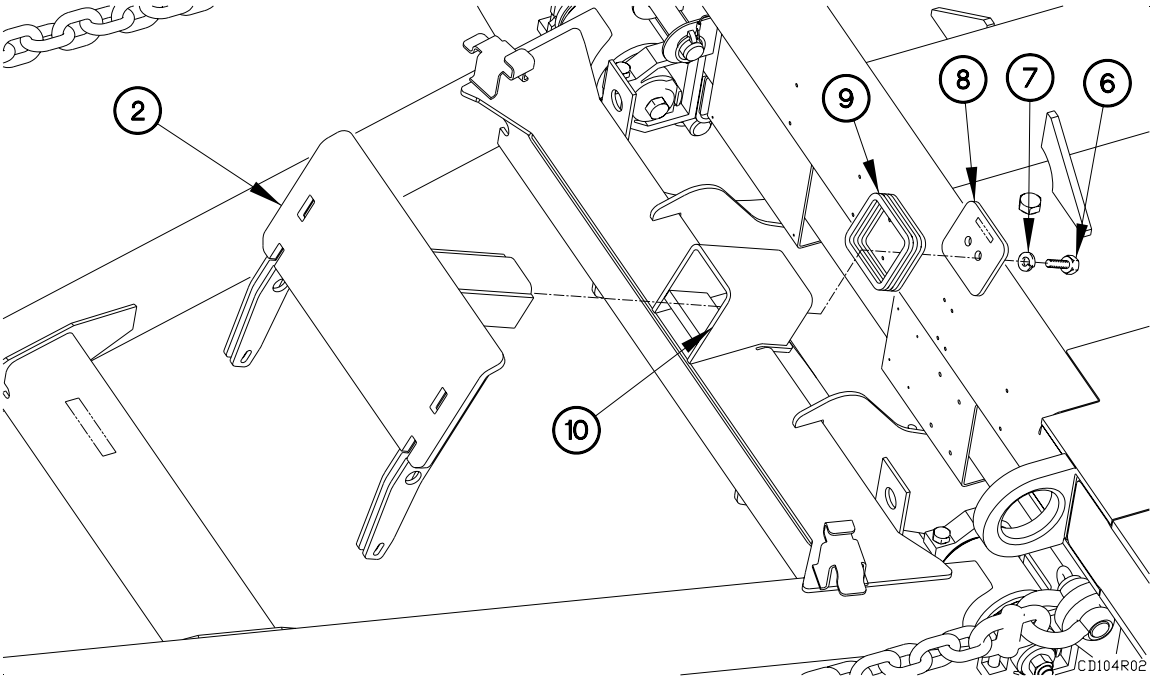
BUMP STOP AND EXTENSION REPLACEMENT - Continued 0104 00

INSTALLATION

1. Position bump stop (2) on bump stop tube (10).

2. Install four shims (9) and bump stop cap (8), on bump stop with two lockwashers (7) and screws (6).

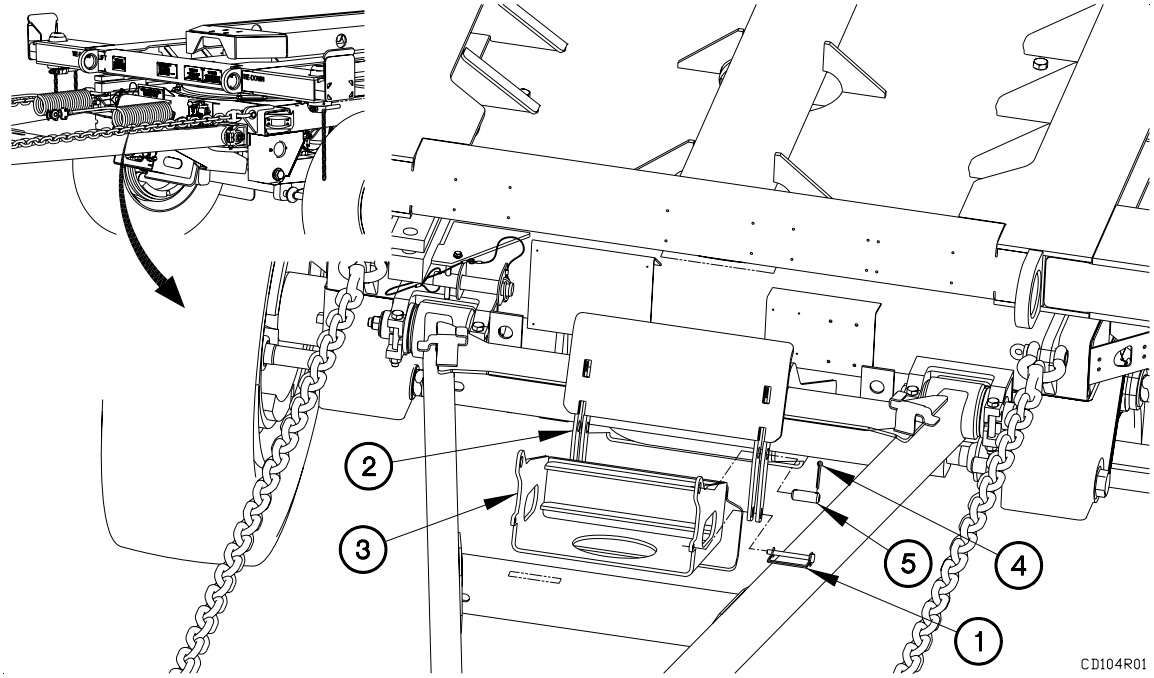
4. Tighten two screws to 28-34 lb-in. (38-47 N•m).



BUMP STOP AND EXTENSION REPLACEMENT - Continued 0104 00

INSTALLATION - Continued

5. Install bump stop extension (3) on bump stop (2) with two lock pins (1).
6. Install bump stop pins (5) on bump stop extension (3).
7. Install four cotter pins (4) on bump stop (2) and bump stop extension (3).



END OF WORK PACKAGE

REFLECTORS REPLACEMENT 0105 00

THIS WORK PACKAGE COVERS:

Front Reflector Removal, Rear Reflector Removal, Rear Reflector Installation, Front Reflector Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Nut, Self-Locking (2) (Item 35, WP 0168 00)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Equipment Conditions

Composite taillight assembly removed (WP 0060 00) (Rear reflectors only).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) reflectors.

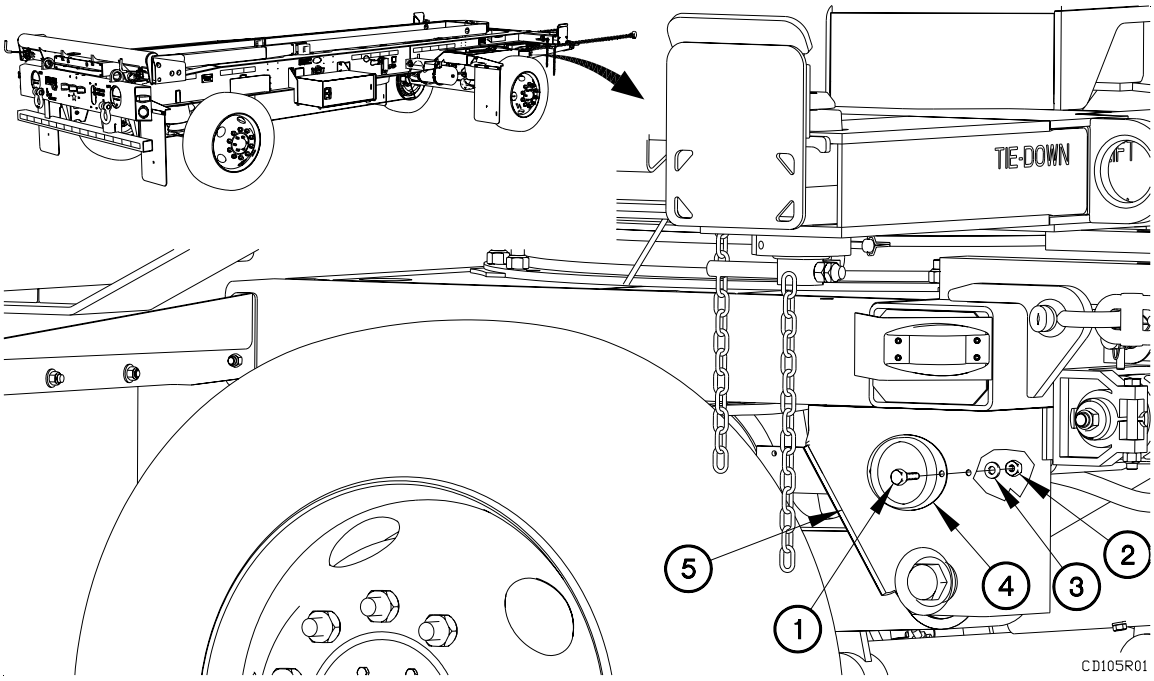
REFLECTORS REPLACEMENT 0105 00

FRONT REFLECTOR REMOVAL

NOTE

Both front reflectors are removed the same way. RH side front reflector shown.

Remove two screws (1), self-locking nuts (2), washers (3), and reflector (4) from trailer (5). Discard self-locking nuts.



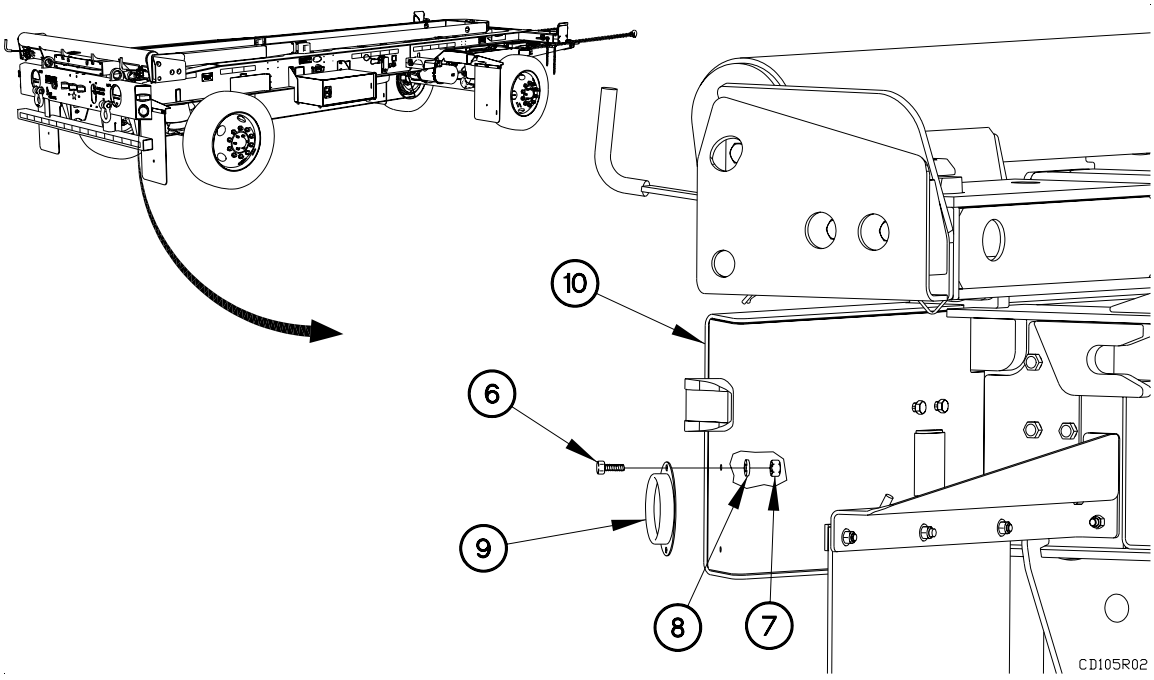
REFLECTORS REPLACEMENT - CONTINUED 0105 00

REAR REFLECTOR REMOVAL

NOTE

Both rear reflectors are removed the same way. RH side rear reflector shown.

Remove two screws (6), self-locking nuts (7), washers (8), and reflector (9) on rear bumper (10). Discard self-locking nuts.



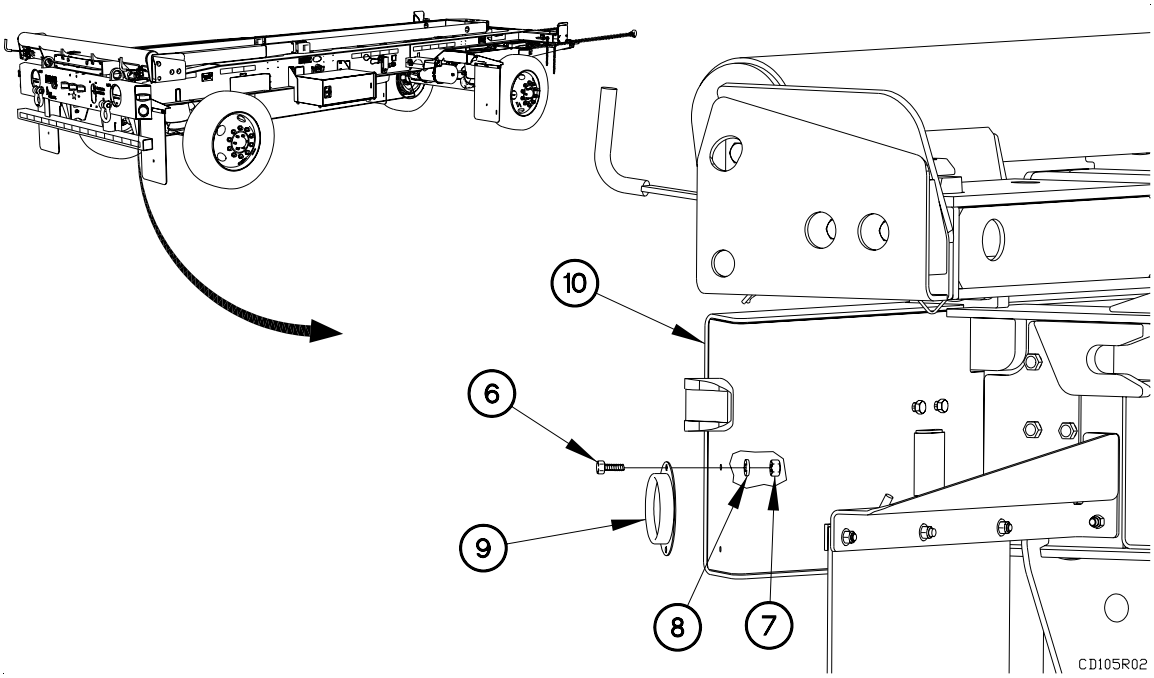
REAR REFLECTOR INSTALLATION

NOTE

Both rear reflectors are installed the same way. RH side rear reflector shown.

1. Position reflector (9) on rear bumper (10) with two screws (6), washers (8), and self-locking nuts (7).

2. Tighten two self-locking nuts (7) to 72-108 lb-in. (8-12 N•m).



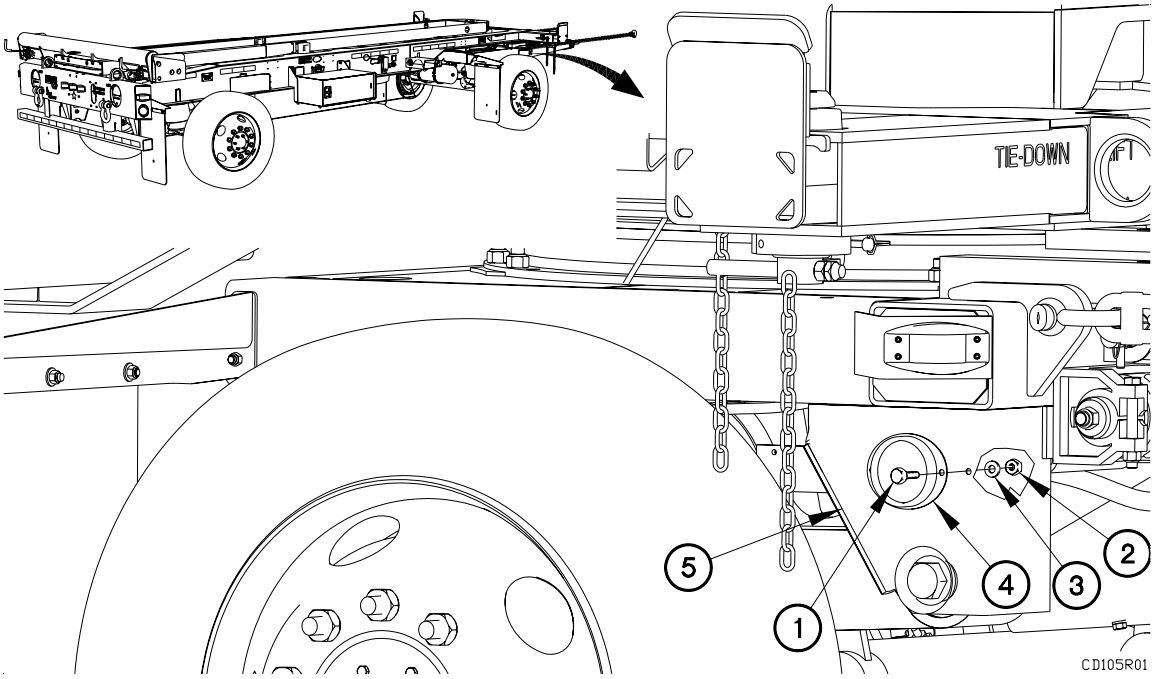
REFLECTORS REPLACEMENT 0105 00

FRONT REFLECTOR INSTALLATION

NOTE

Both front reflectors are installed the same way. RH side front reflector shown.

1. Position reflector (4) on trailer (5) with two screws (1), washers (3), and self-locking nuts (2).
2. Tighten two self-locking nuts (2) to 72-108 lb-in. (8-12 N•m).



Operational Checks

Install composite taillight assembly (WP 0060 00) (Rear reflectors only).

END OF WORK PACKAGE

OVERLOAD INDICATOR ASSEMBLY REPLACEMENT 0106 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

Materials/Parts

Nut, Self-Locking (3) (Item 26, WP 0168 00)
Nut, Self-Locking (4) (Item 27, WP 0168 00)
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) overload indicator assembly.

OVERLOAD INDICATOR ASSEMBLY REPLACEMENT 0106 00

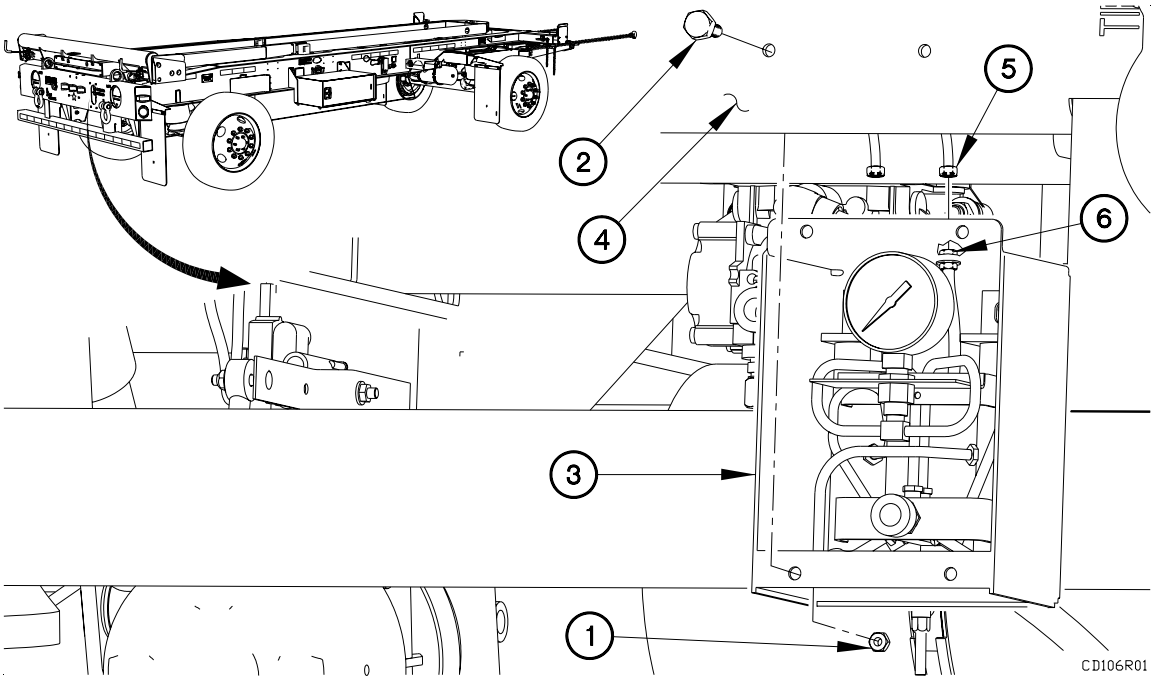
REMOVAL

1. Remove four self-locking nuts (1), bolts (2), and box (3) from rear panel assembly (4). Discard self-locking nuts.

NOTE

Tag hoses and fittings prior to removal.

2. Disconnect two hoses (5) from fittings (6).

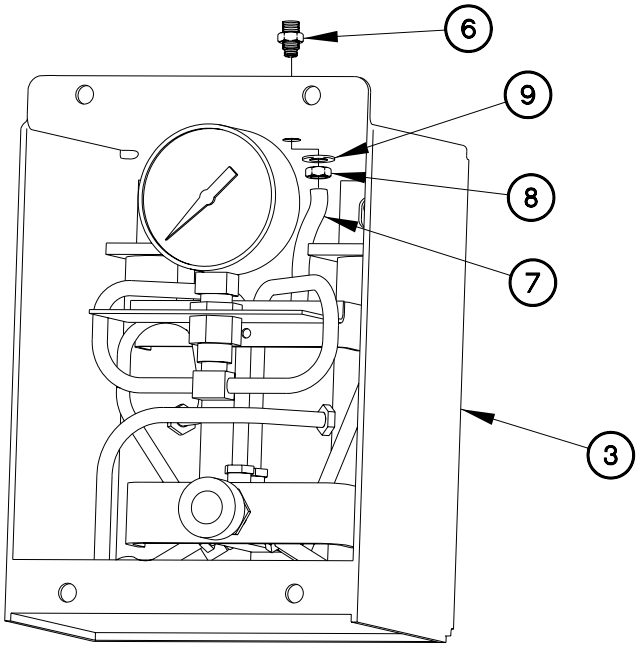


OVERLOAD INDICATOR ASSEMBLY REPLACEMENT - Continued 0106 00

REMOVAL - Continued

3. Remove two hoses (7) from fittings (6).

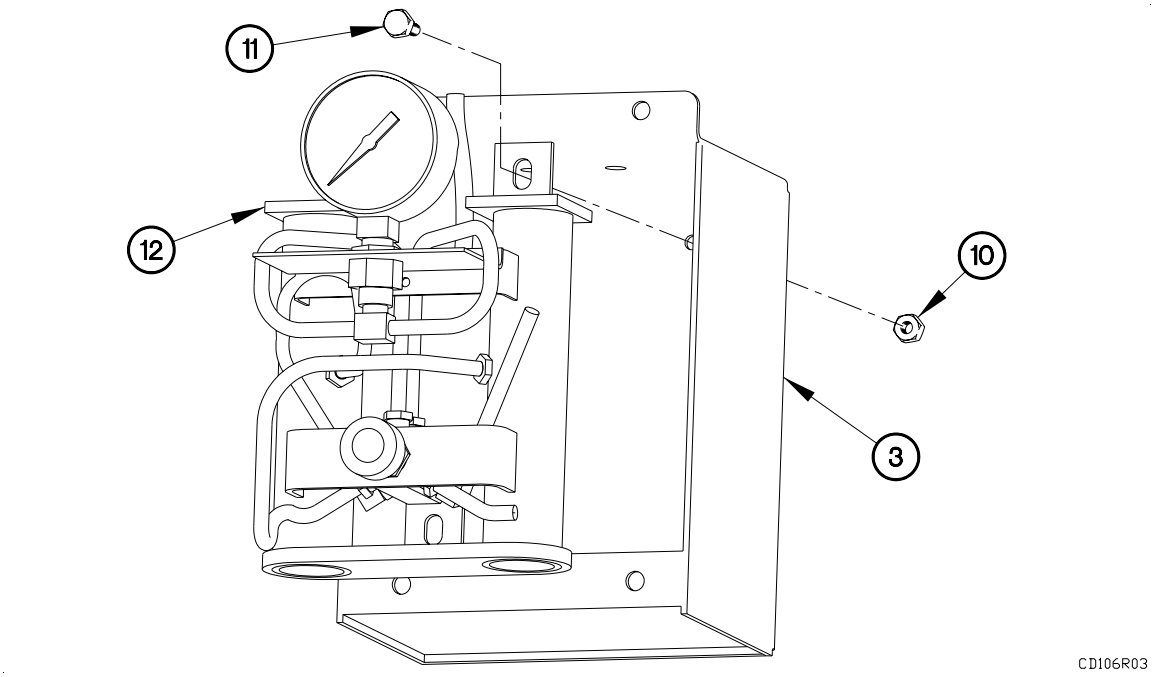
4. Remove two nuts (8), washers (9), and fittings (6) from box (3).



OVERLOAD INDICATOR ASSEMBLY REPLACEMENT - Continued 0106 00

REMOVAL - Continued

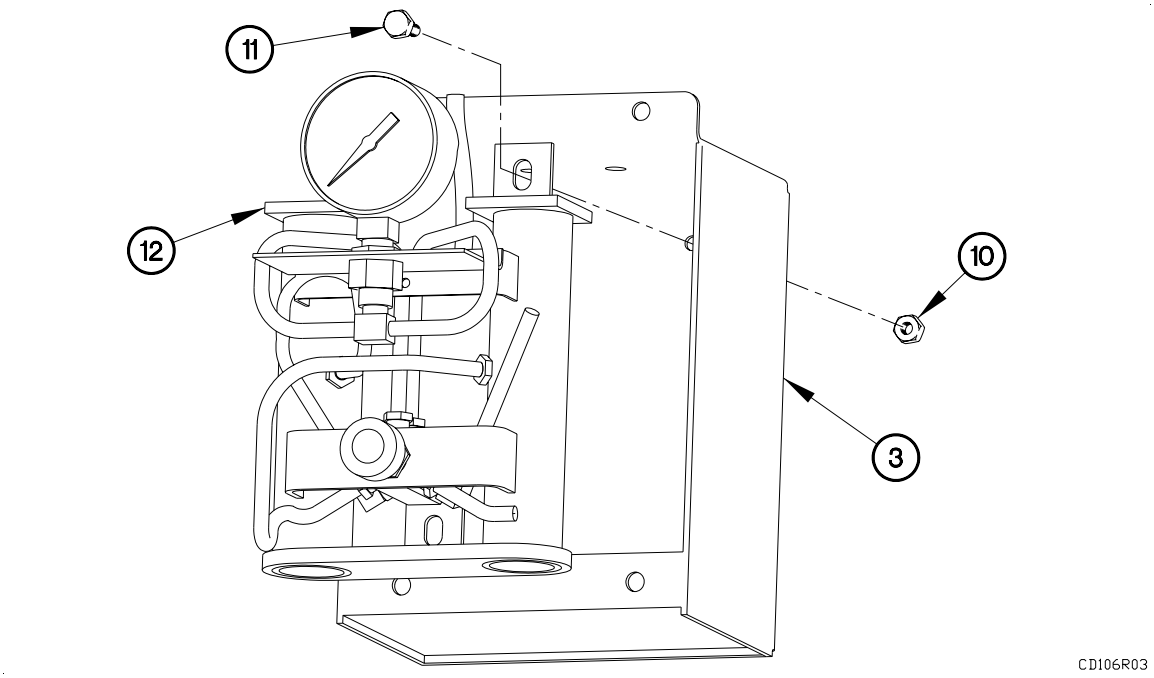
5. Remove three self-locking nuts (10), bolts (11), and overload indicator assembly (12) from box (3). Discard self-locking nuts.



OVERLOAD INDICATOR ASSEMBLY REPLACEMENT - Continued 0106 00

INSTALLATION

1. Install overload indicator assembly (12) on box (3) with three bolts (11) and self-locking nuts (10).

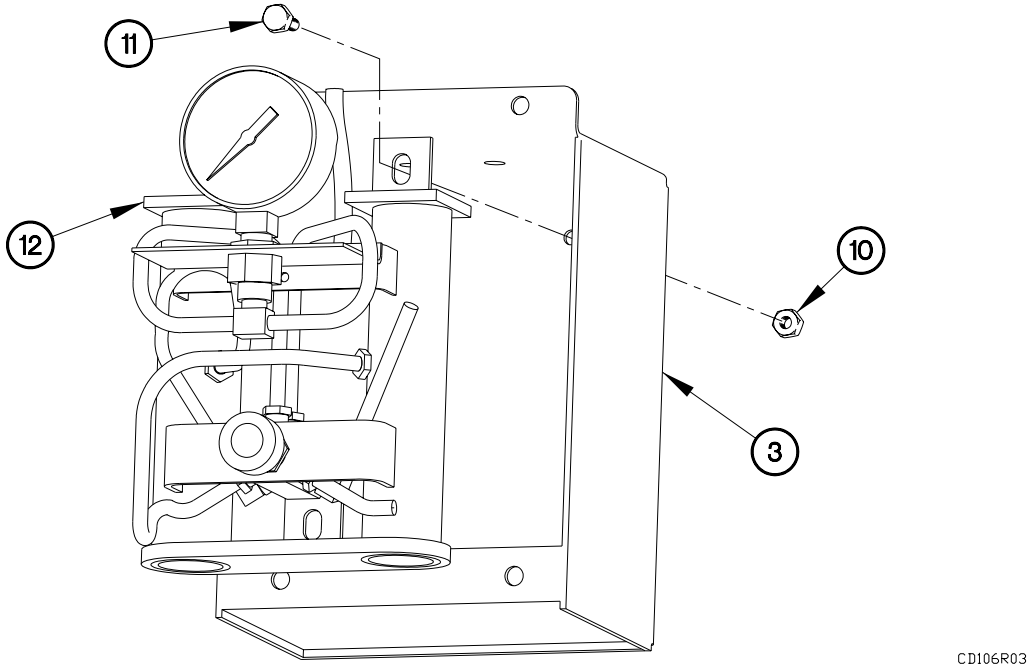


OVERLOAD INDICATOR ASSEMBLY REPLACEMENT - Continued 0106 00

INSTALLATION - Continued

2. Install two fittings (6) on box (3) with two washers (9) and nuts (8).

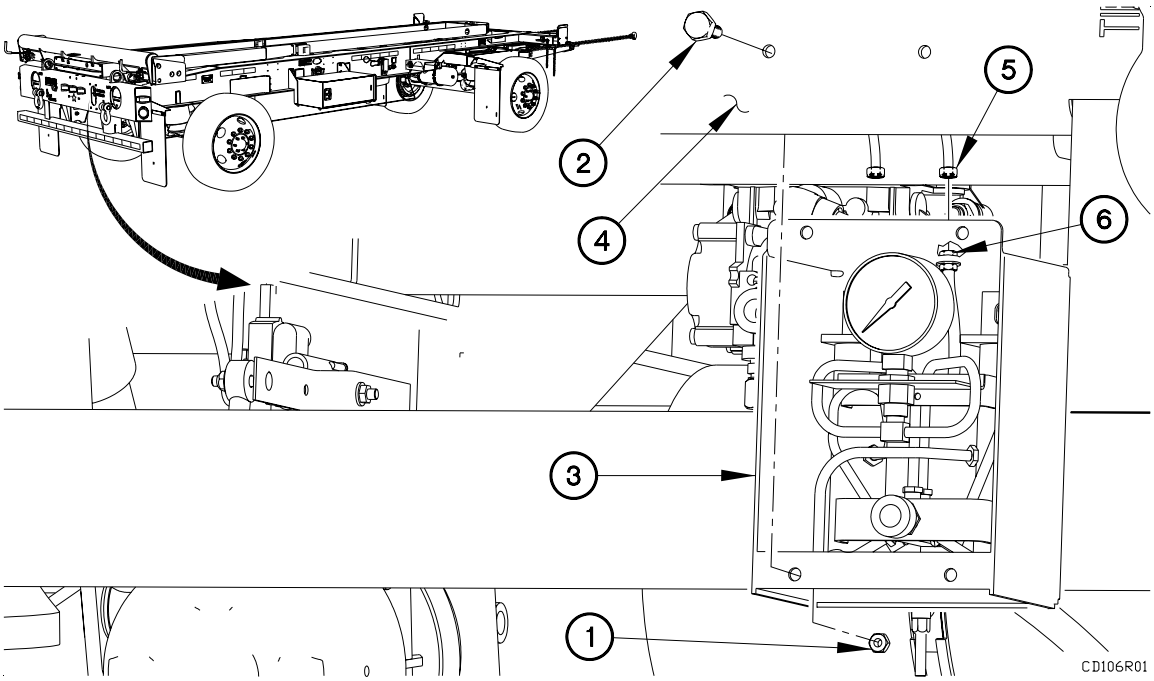
3. Install two hoses (7) on fittings (6).



OVERLOAD INDICATOR ASSEMBLY REPLACEMENT 0106 00

INSTALLATION - Continued

4. Connect two hoses (5) to fittings (6).
5. Position box (3) on rear panel assembly (4) with four bolts (2) and self-locking nuts (1).
6. Tighten self-locking nuts (1) to 96-120 lb-in. (11-14 N•m).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check overload indicator assembly air hoses for leaks.
3. Check for proper operation of overload indicator assembly (WP 0013 00).
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT 0107 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Adjustment, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 31, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Pin, Cotter (2) (Item 49, WP 0168 00)

Materials/Parts (Cont)

Pin, Cotter (Item 42, WP 0168 00)
Washer, Lock (2) (Item 18, WP 0168 00)
Nut, Self-Locking (Item 30, WP 0168 00)
Pin, Cotter (Item 44, WP 0168 00)
Sealing Compound (Item 14, WP 0165 00)

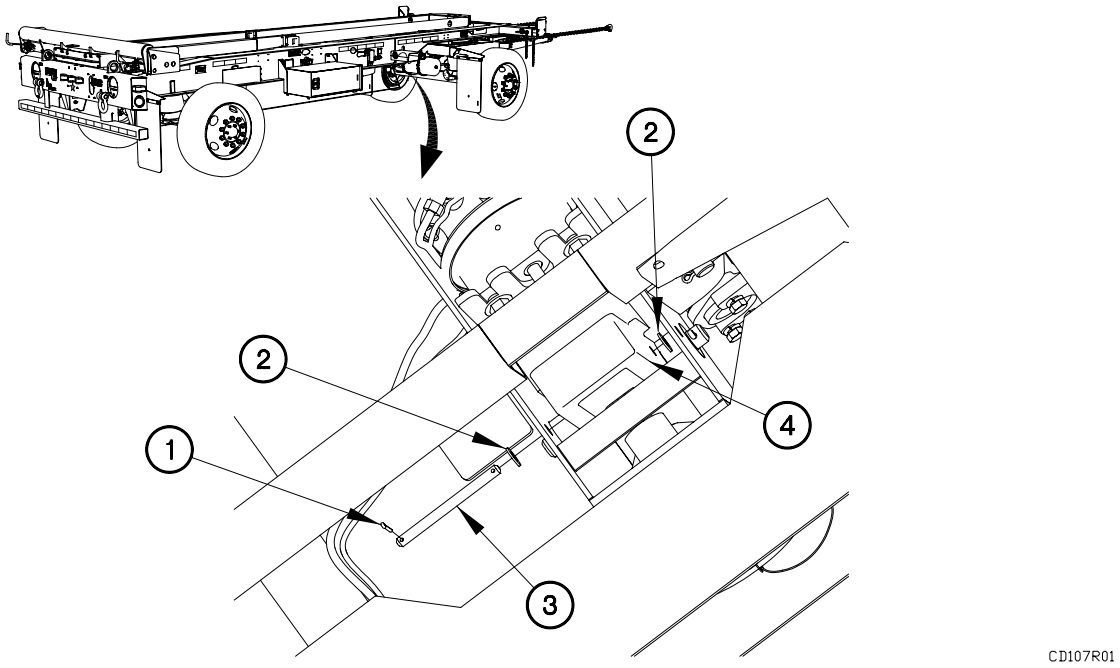
Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).
Flatrack rail assembly raised (WP 0005 00)
Air tanks drained (WP 0004 00)

REMOVAL

1. Remove two cotter pins (1) and washers (2) from retaining pin (3). Discard cotter pins.

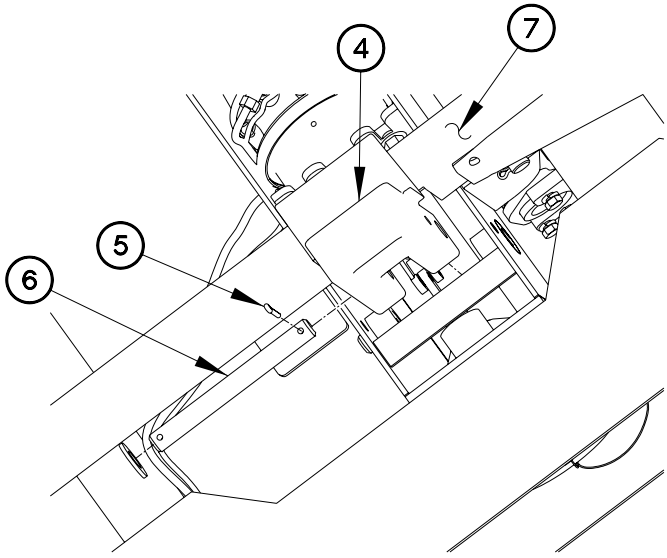
2. Remove retaining pin (3) from flatrack lock (4).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

REMOVAL - Continued

3. Remove cotter pin (5) from retaining pin (6). Discard cotter pin.
4. Remove retaining pin (6) from flatrack lock (4).
5. Remove flatrack lock (4) from trailer (7).



CD107R02

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

REMOVAL - Continued

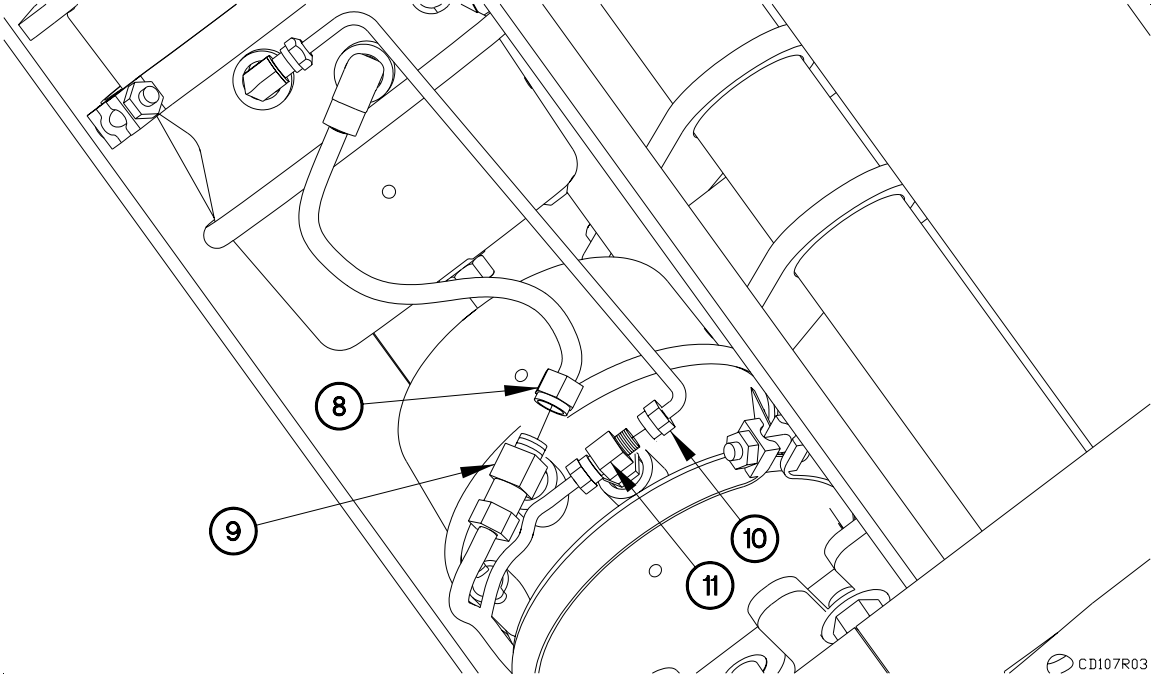
NOTE

Perform the following two steps on LH air chamber.

Tag hoses and connection points prior to disconnection.

6. Disconnect two hoses (8) from tee fitting (9).

7. Disconnect two hoses (10) from tee fitting (11).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

REMOVAL - Continued

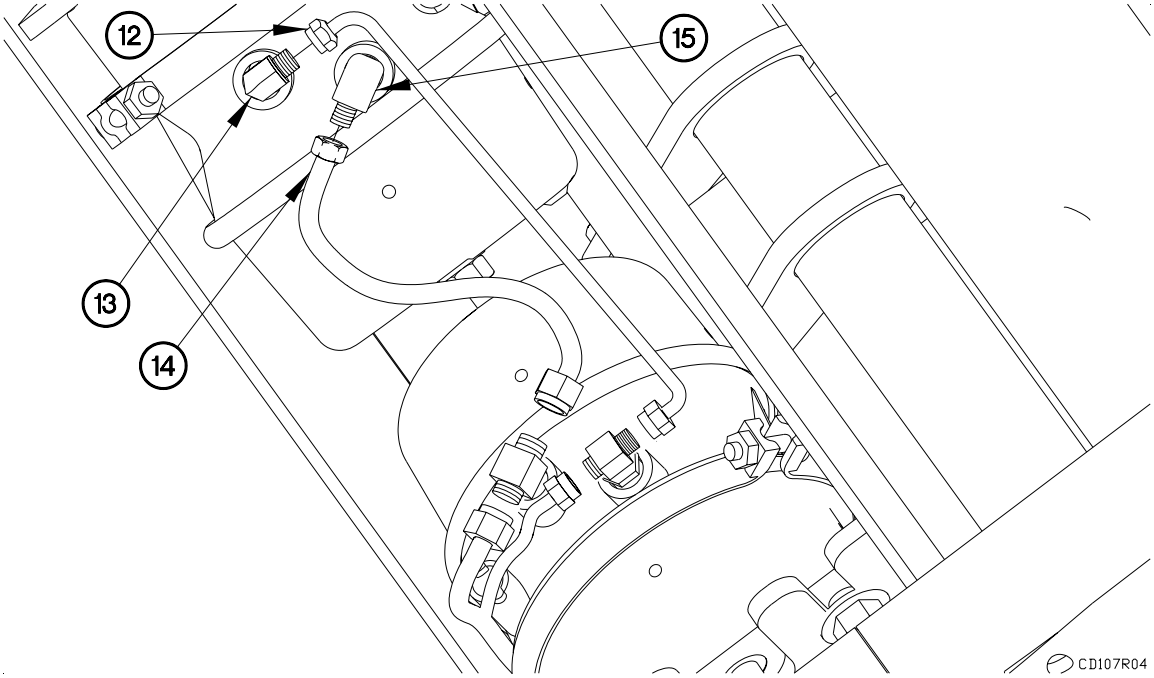
NOTE

Perform the following two steps on RH air chamber.

Tag hoses and connection points prior to disconnection.

8. Disconnect hose (12) from 90-degree fitting (13).

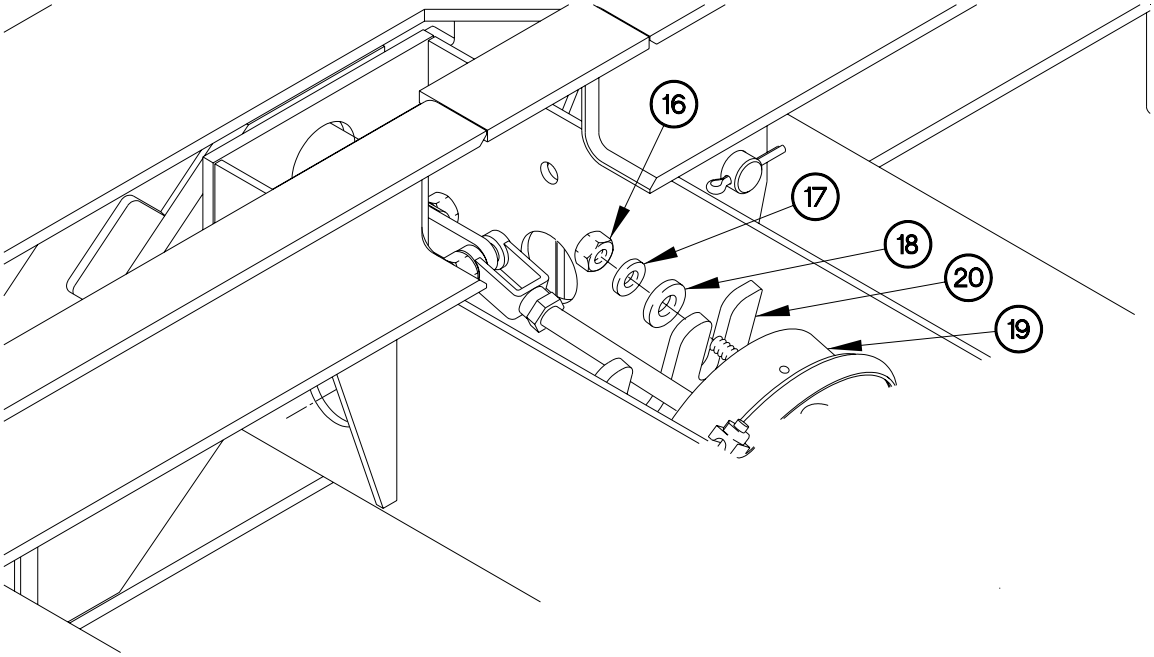
9. Disconnect hose (14) from 90-degree fitting (15).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

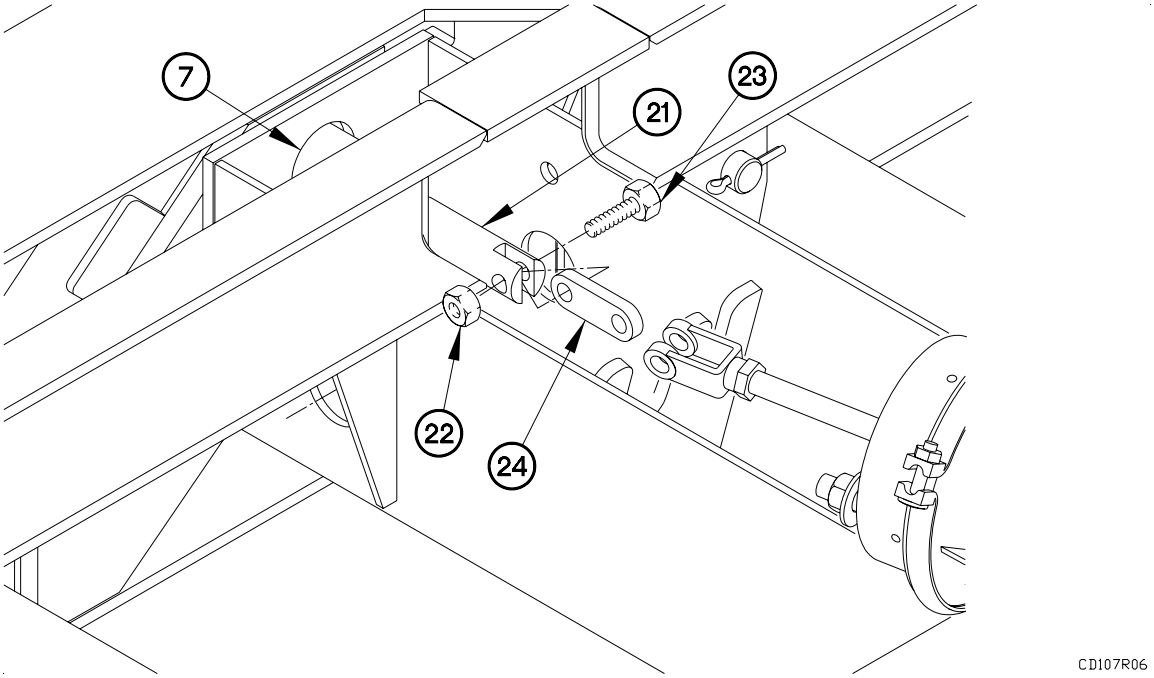
REMOVAL - Continued

10. Remove two nuts (16), lockwashers (17), spacer (18), and air chamber (19) from air chamber bracket (20). Discard lockwashers.



11. Remove pivot pin (21) from trailer (7).

12. Remove self-locking nut (22), bolt (23), and pivot bracket (24) from pivot pin (21). Discard self-locking nut.



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

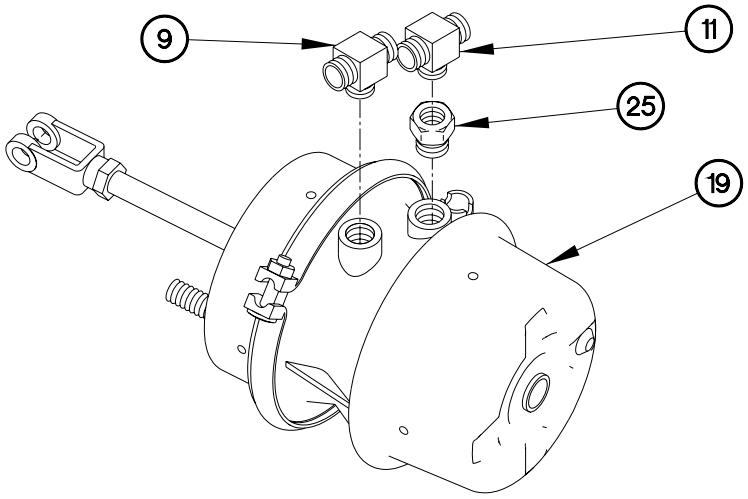
REMOVAL - Continued

NOTE

LH air chamber has tee fittings. RH air chamber has 90-degree fittings. LH air chamber shown.

Note orientation of fittings prior to removal.

13. Remove tee fitting (9) from air chamber (19).
14. Remove tee fitting (11) from adapter fitting (25).
15. Remove adapter fitting (25) from air chamber (19).



CD107R07

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

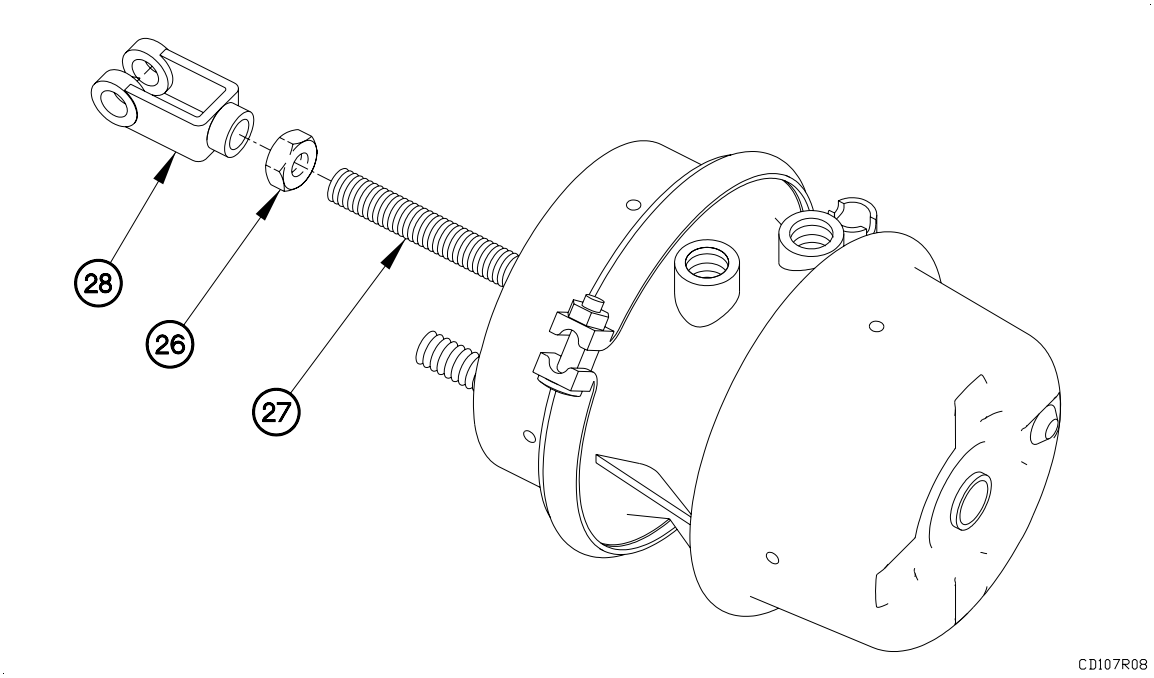
REMOVAL - Continued

NOTE

Note orientation and thread count of pin latch prior to removal.

16. Loosen nut (26) on threaded rod (27).

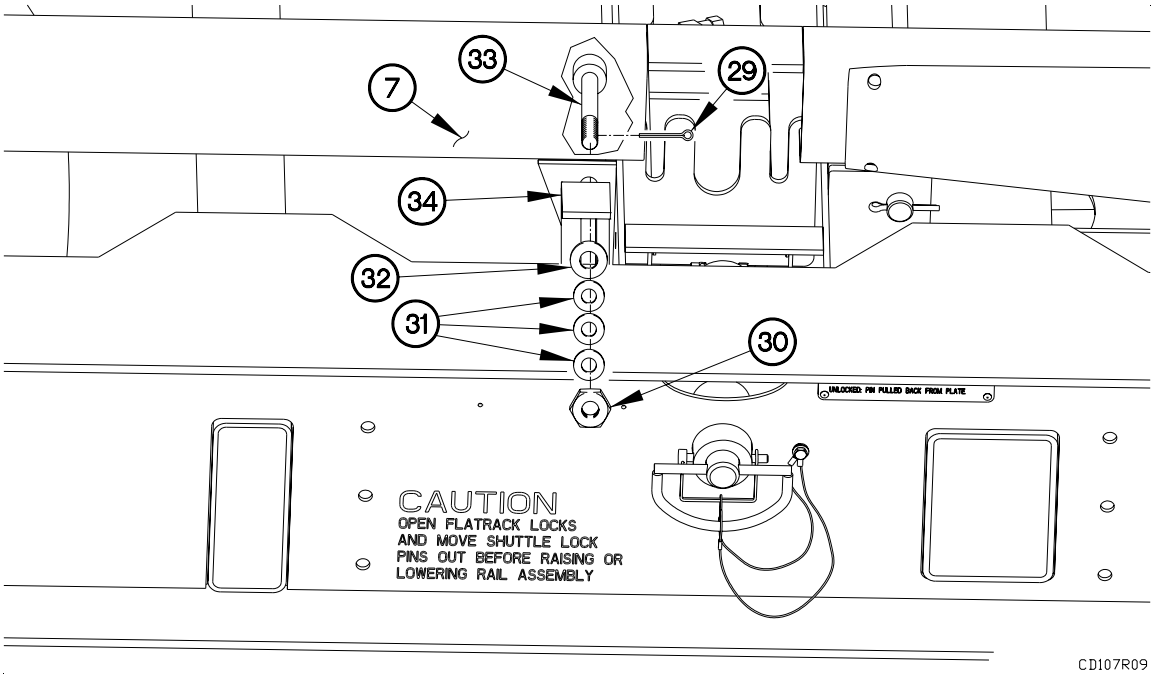
17. Remove pin latch (28) and nut (26) from threaded rod (27).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

REMOVAL - Continued

18. Remove cotter pin (29), collet nut (30), three wave washers (31), washer (32), bolt (33), and locking bracket (34) from trailer (7). Discard cotter pin.



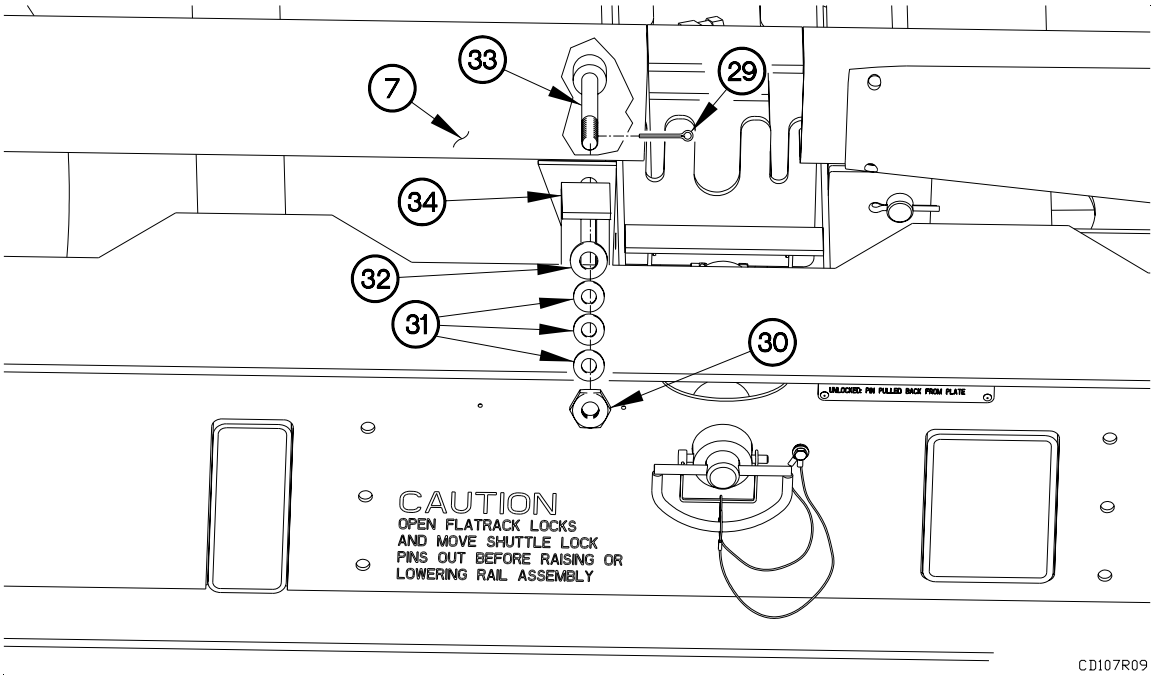
FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

INSTALLATION

NOTE

Leave bolt loose enough so that locking bracket can move freely.

1. Install locking bracket (34) on trailer (7) with bolt (33), washer (32), three wave washers (31), collet nut (30), and cotter pin (29).



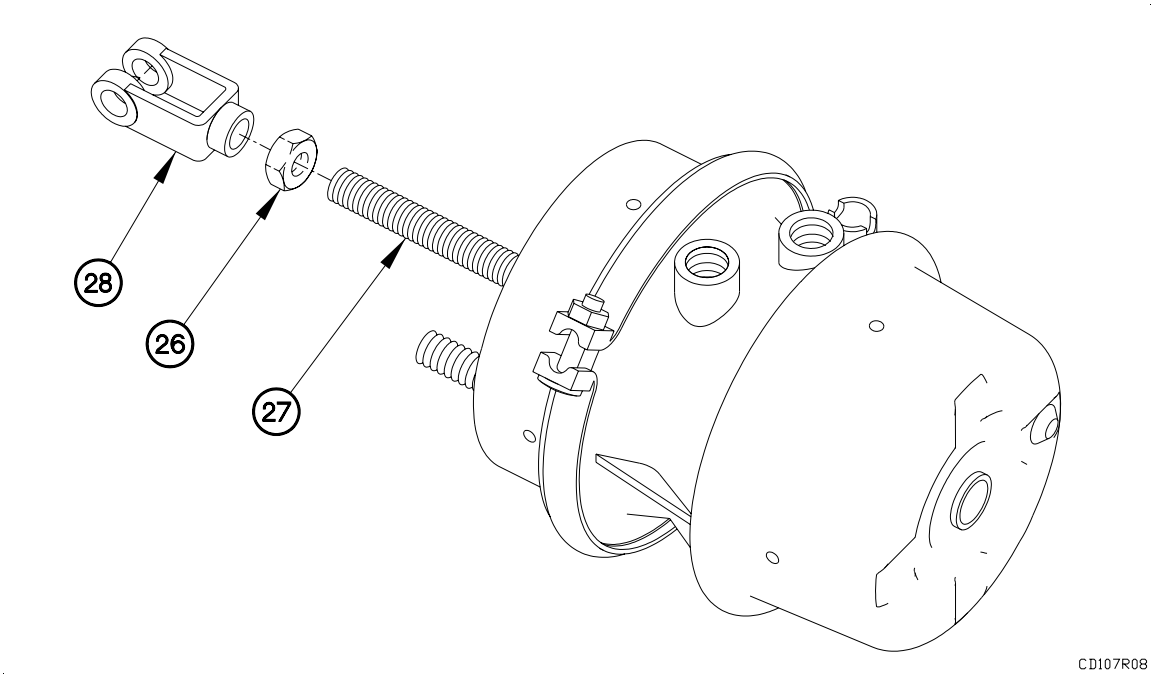
FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

INSTALLATION - Continued

NOTE

Position nut and pin latch using thread count and orientation as noted in removal.

2. Install nut (26) and pin latch (28) on threaded rod (27).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

INSTALLATION - Continued

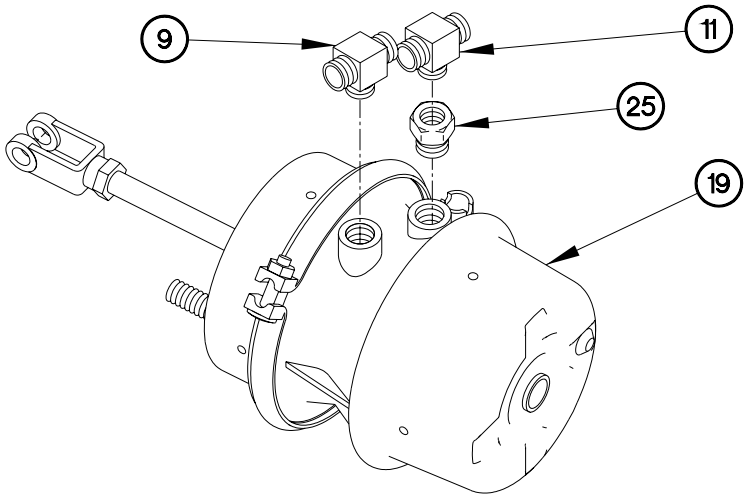
WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

LH air chamber has tee fittings. RH air chamber has 90-degree fittings. LH air chamber shown.

3. Apply sealing compound to threads of adapter fitting (25) and tee fittings (9 and 11).
4. Install adapter fitting (25) in air chamber (19).
5. Install tee fitting (11) in adapter fitting (25).
6. Install tee fitting (9) in air chamber (19).



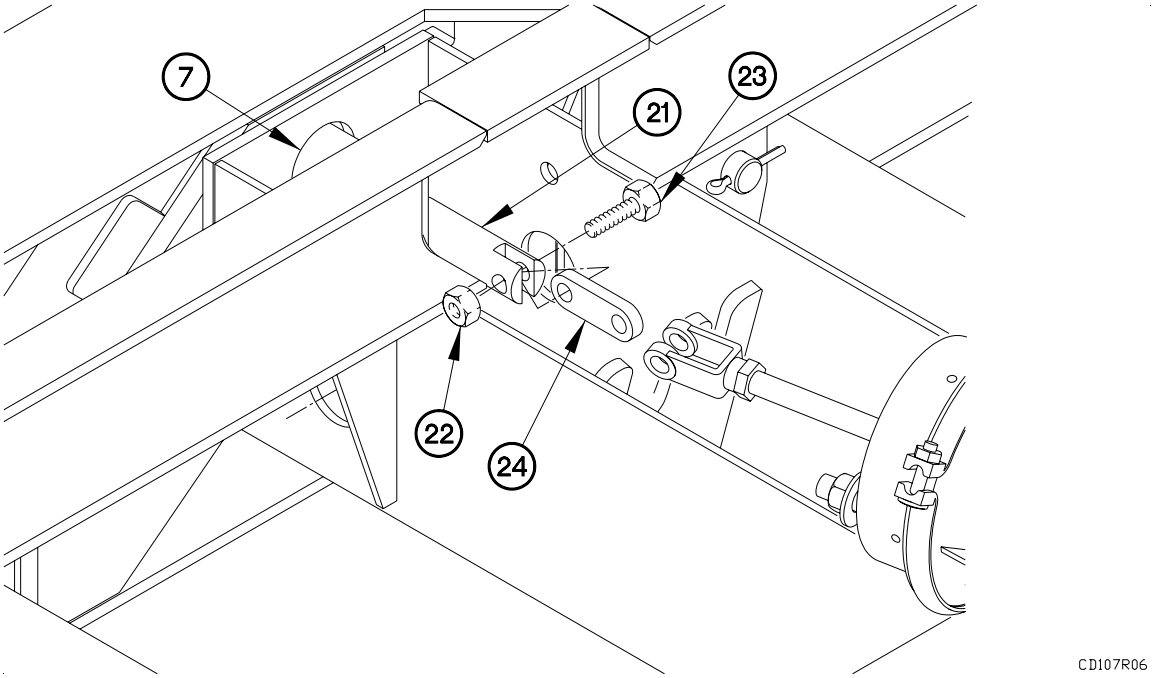
CD107R07

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

INSTALLATION - Continued

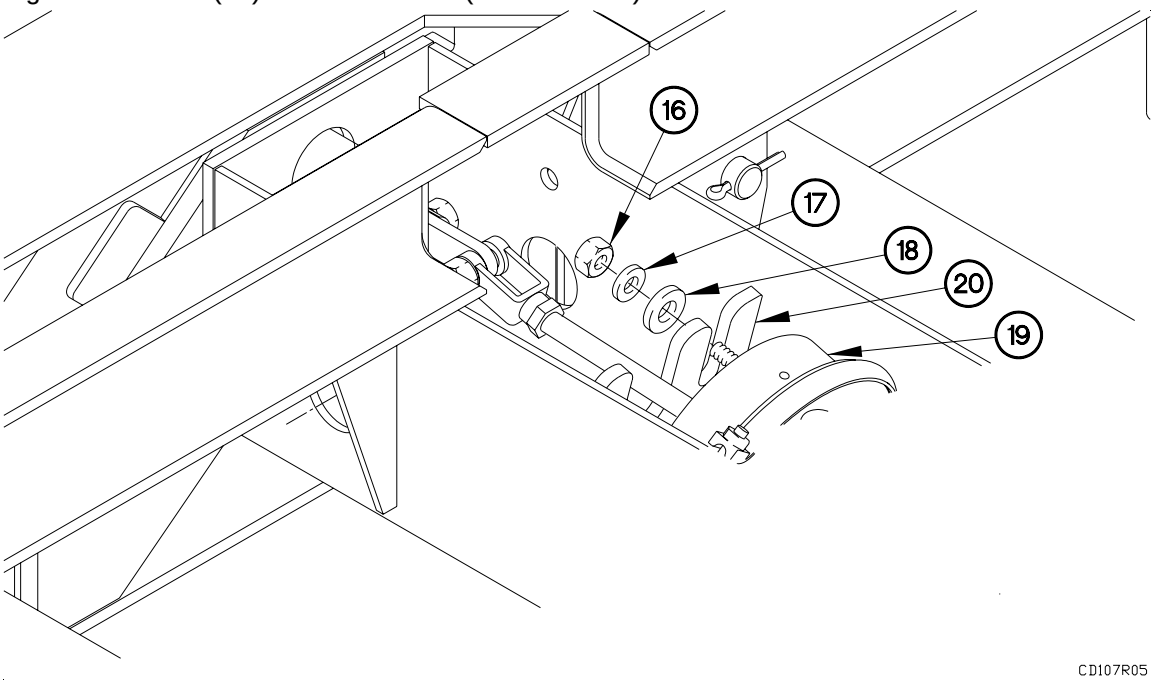
7. Install pivot bracket (24) in pivot pin (21) with bolt (23) and self-locking nut (22).

8. Install pivot pin (21) in trailer (7).



9. Position air chamber (19) on air chamber bracket (20) with two spacers (18), lockwashers (17), and nuts (16).

10. Tighten two nuts (16) to 135-165 lb-ft (183-224 N•m).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

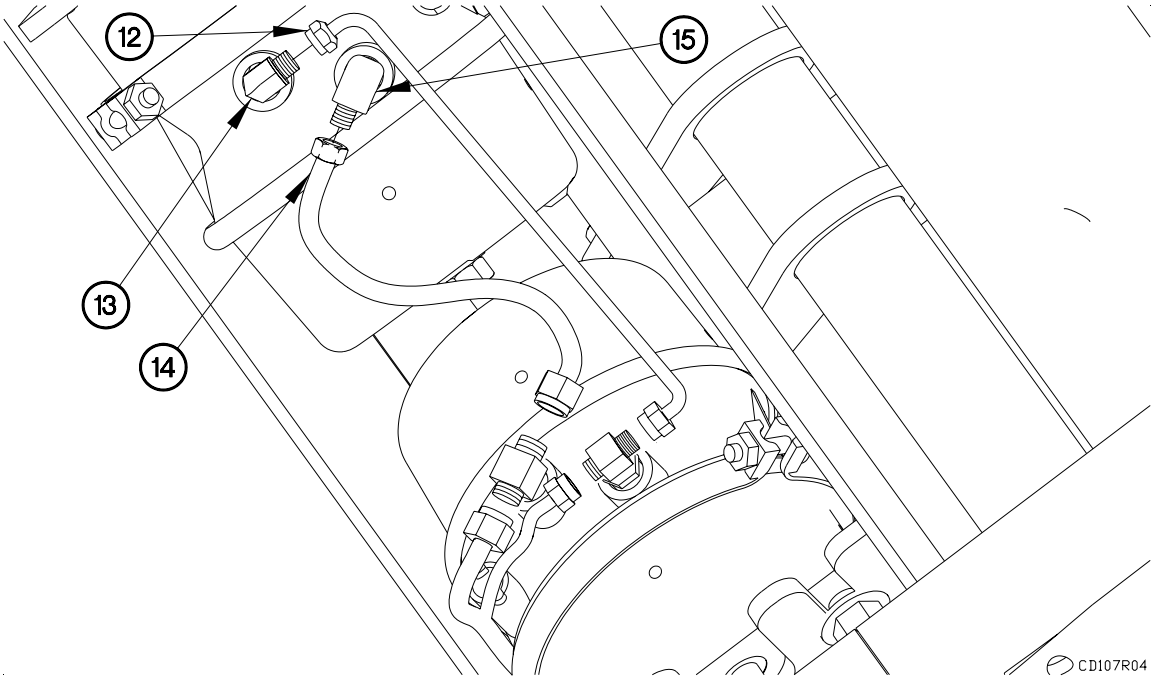
INSTALLATION - Continued

NOTE

Perform the following two steps on RH air chamber.

11. Connect hose (14) to 90-degree fitting (15).

12. Connect hose (12) to 90-degree fitting (13).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

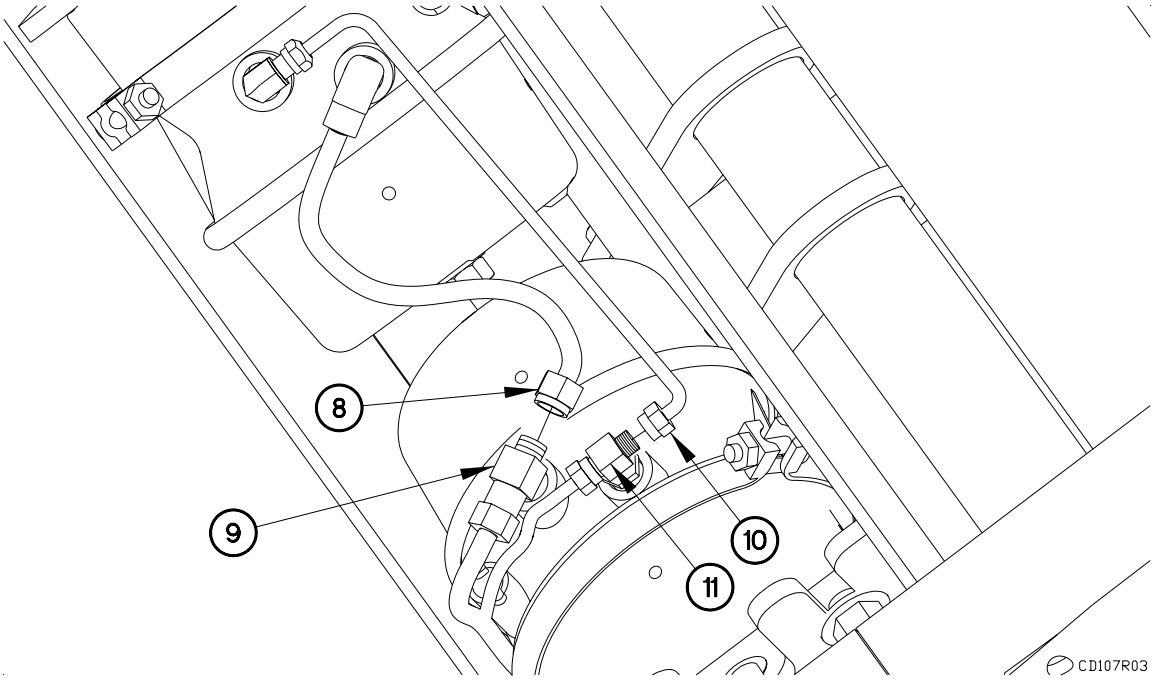
INSTALLATION - Continued

NOTE

Perform the following two steps on LH air chamber.

13. Connect two hoses (10) to tee fitting (11).

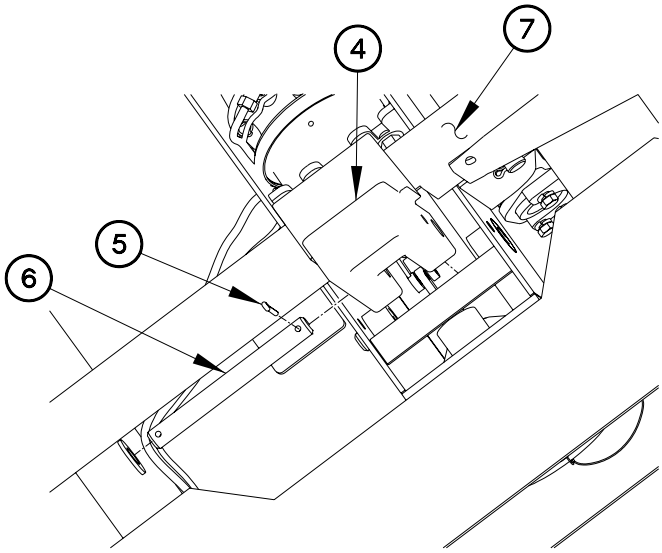
14. Connect two hoses (8) to tee fitting (9).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

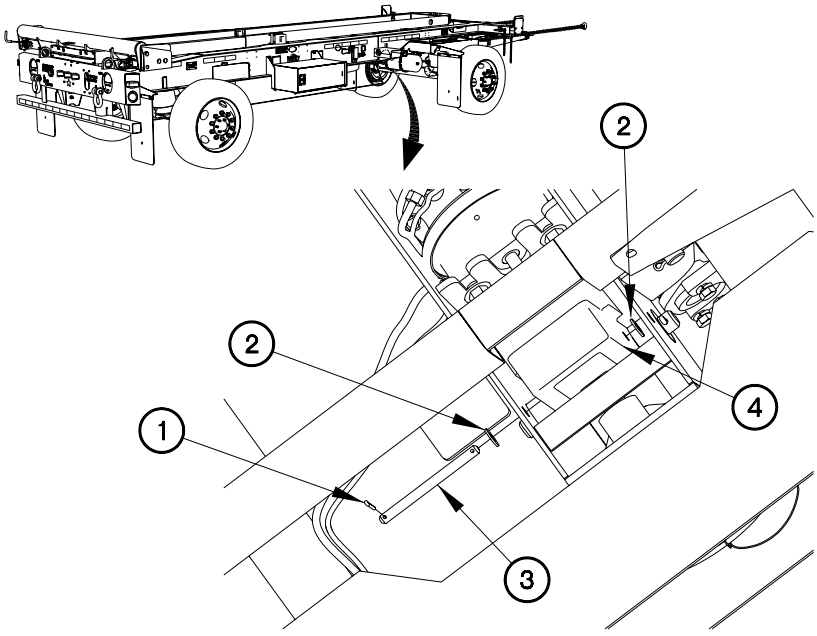
INSTALLATION - Continued

15. Install flatrack lock (4) in trailer (7).
16. Install retaining pin (6) in flatrack lock (4).
17. Install cotter pin (5) in retaining pin (6).



CD107R02

18. Install retaining pin (3) in flatrack lock (4).
19. Install two washers (2) and cotter pins (1) on retaining pin (3).



CD107R01

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

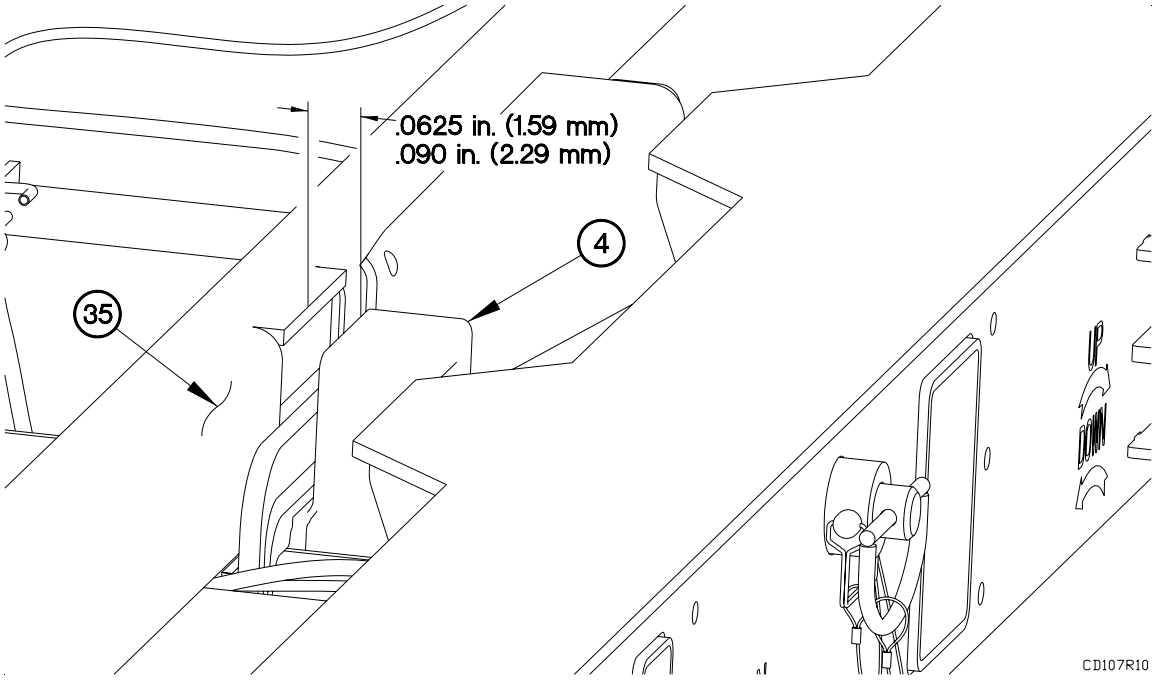
ADJUSTMENT

1. Push flatrack lock (4) towards flatrack rail assembly (35).
2. Measure distance between flatrack lock (4) and flatrack rail assembly (35).
3. Pull flatrack lock (4) away from flatrack rail assembly (35).

NOTE

Distance between two measurements should be between .0625 in. and .090 in.

4. Measure distance between flatrack lock (4) and flatrack rail assembly (35).



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

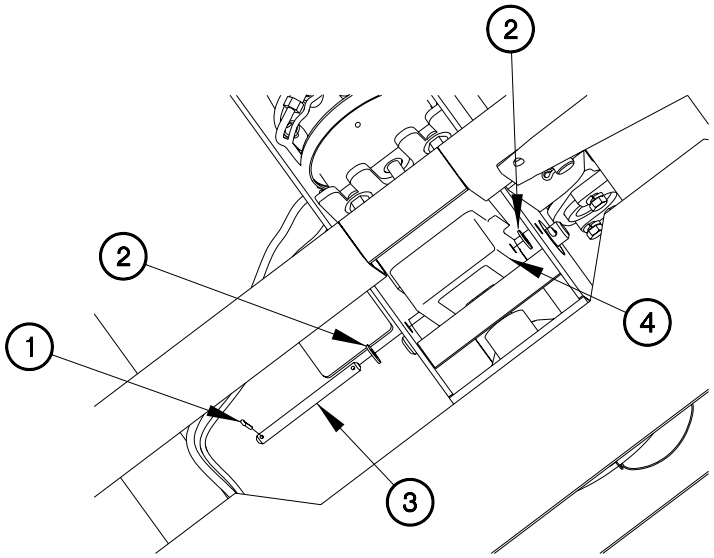
ADJUSTMENT – Continued

NOTE

Perform the following steps if distance between two measurements is less than .0625 in. or more than .090 in.

5. Remove two cotter pins (1) and washers (2) from retaining pin (3).

6. Remove retaining pin (3) from flatrack lock (4).

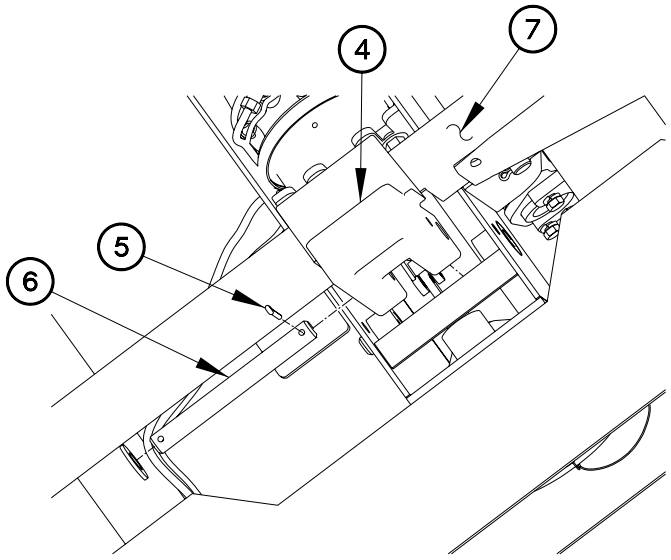


CD107R11

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

ADJUSTMENT – Continued

7. Remove cotter pin (5) from retaining pin (6). Discard cotter pin.
8. Remove retaining pin (6) from flatrack lock (4).
9. Remove flatrack lock (4) from trailer (7).

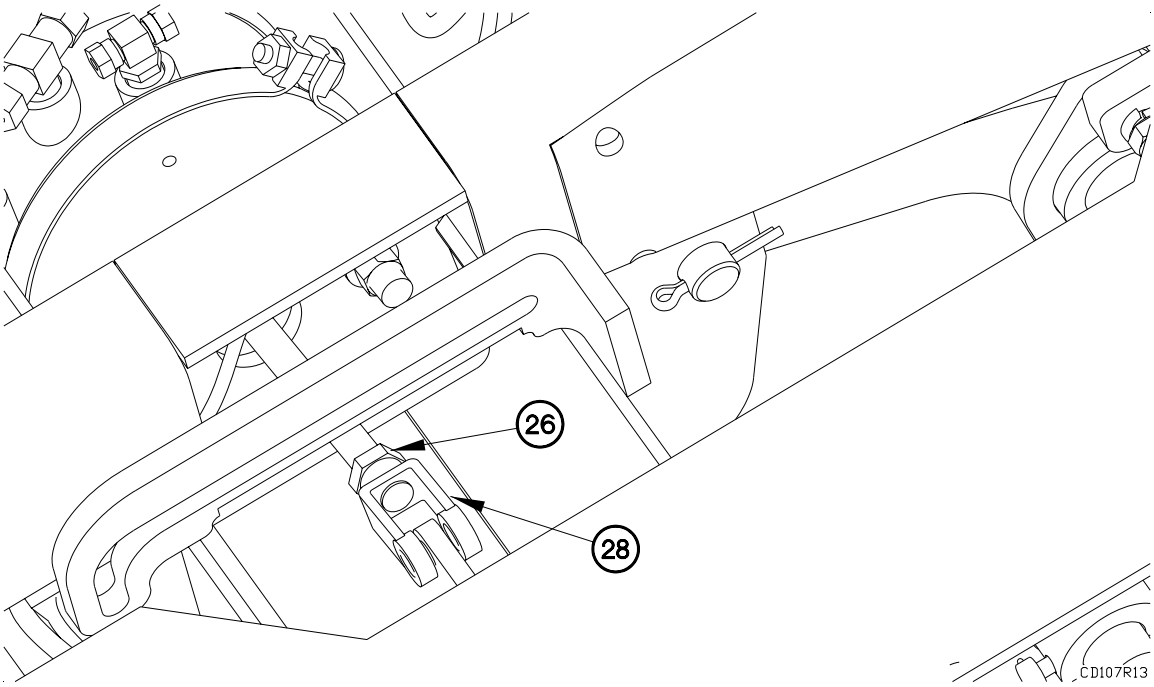


CD107R12

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

ADJUSTMENT – Continued

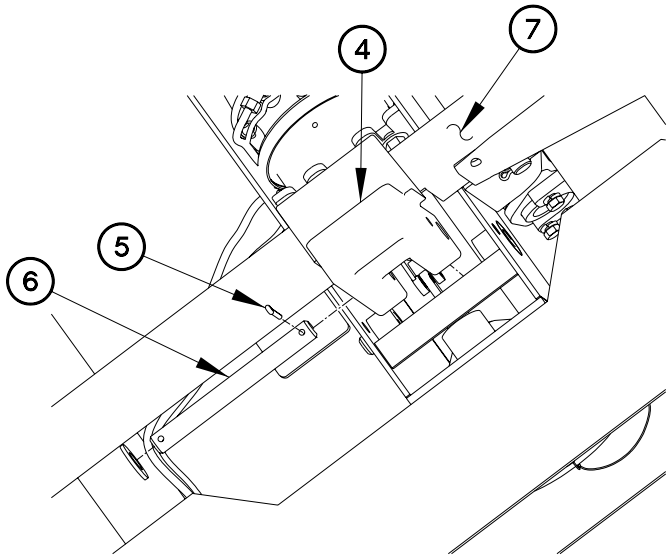
10. Loosen or tighten nut (26) and pin latch (28) as necessary.



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

ADJUSTMENT – Continued

11. Install flatrack lock (4) in trailer (7).
12. Install retaining pin (6) in flatrack lock (4).
13. Install cotter pin (5) in retaining pin (6).

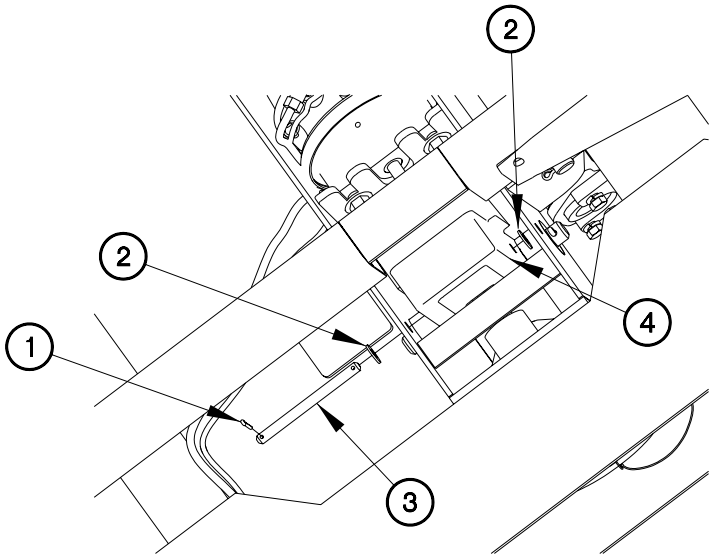


CD107R14

FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

ADJUSTMENT – Continued

14. Install retaining pin (3) in flatrack lock (4).
15. Install two washers (2) and cotter pins (1) on retaining pin (3).
16. Repeat steps 1-4.
17. If difference between two measurements is less than .0625 in. or more than .090 in., repeat steps 5-16.



FLATRACK, AIR CHAMBER, AND LOCK REPLACEMENT - Continued 0107 00

OPERATIONAL CHECKS

1. Couple trailer and charge air system (WP 0043 23, TM 2320-392-10-1).
2. Lower flatrack rail assembly (WP 0005 00).
3. Check flatrack air chamber for air leaks.

END OF WORK PACKAGE

FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT 0108 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 22, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Sealing Compound (Item 2, WP 0165 00)
Washer, Lock (2) (Item 20, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

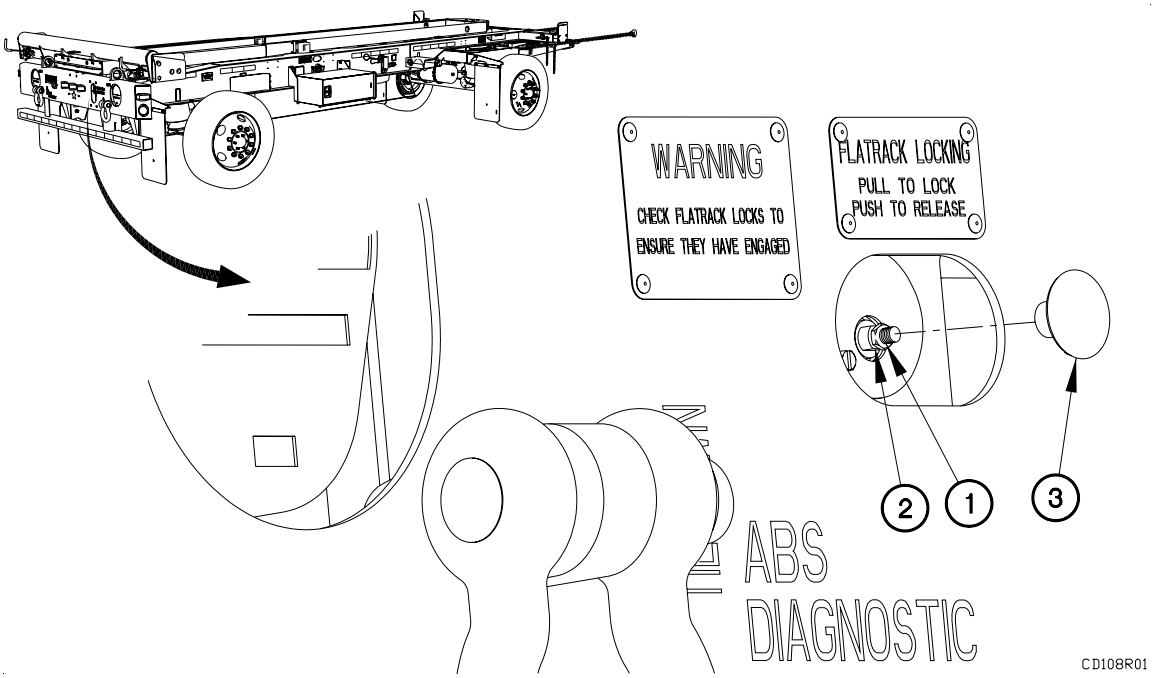
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) flatrack lock push/pull valve.

FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT - Continued 0108 00

REMOVAL

1. Drain air tanks.
2. Loosen nut (1) on flatrack lock push/pull valve (2).
3. Remove knob (3) from flatrack lock push/pull valve (2).

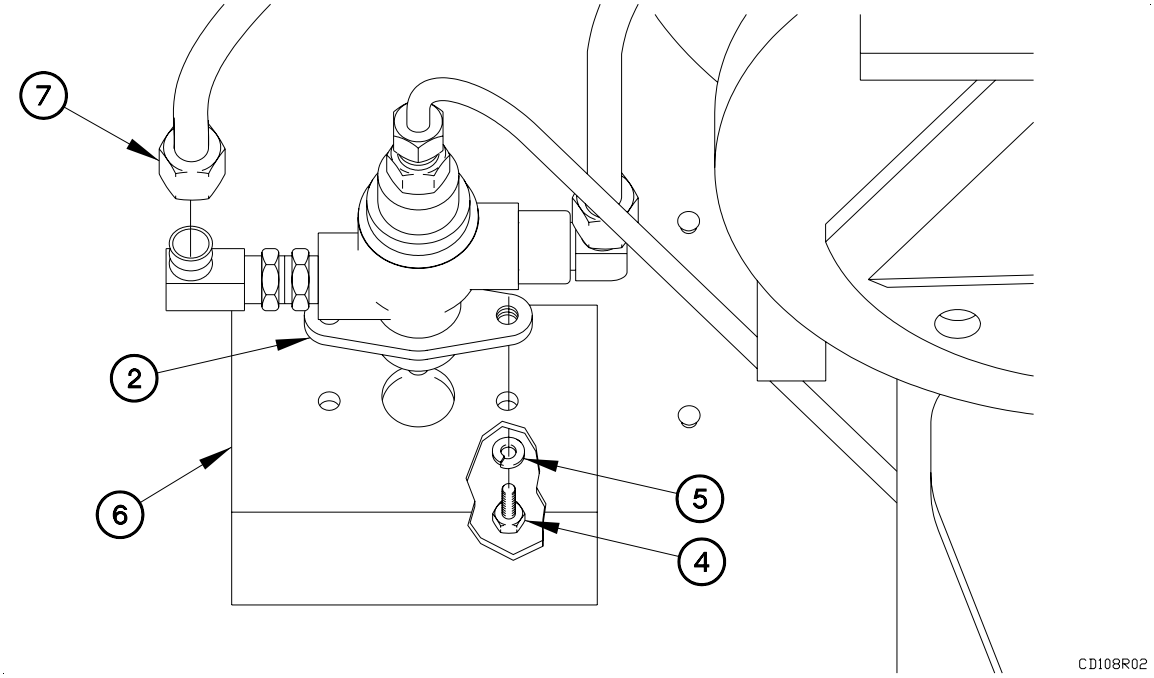


FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT - Continued 0108 00

REMOVAL - Continued

4. Remove two screws (4), lockwashers (5), and flatrack lock push/pull valve (2) from trailer (6). Discard lockwashers.

5. Disconnect three hoses (7) from flatrack lock push/pull valve (2).

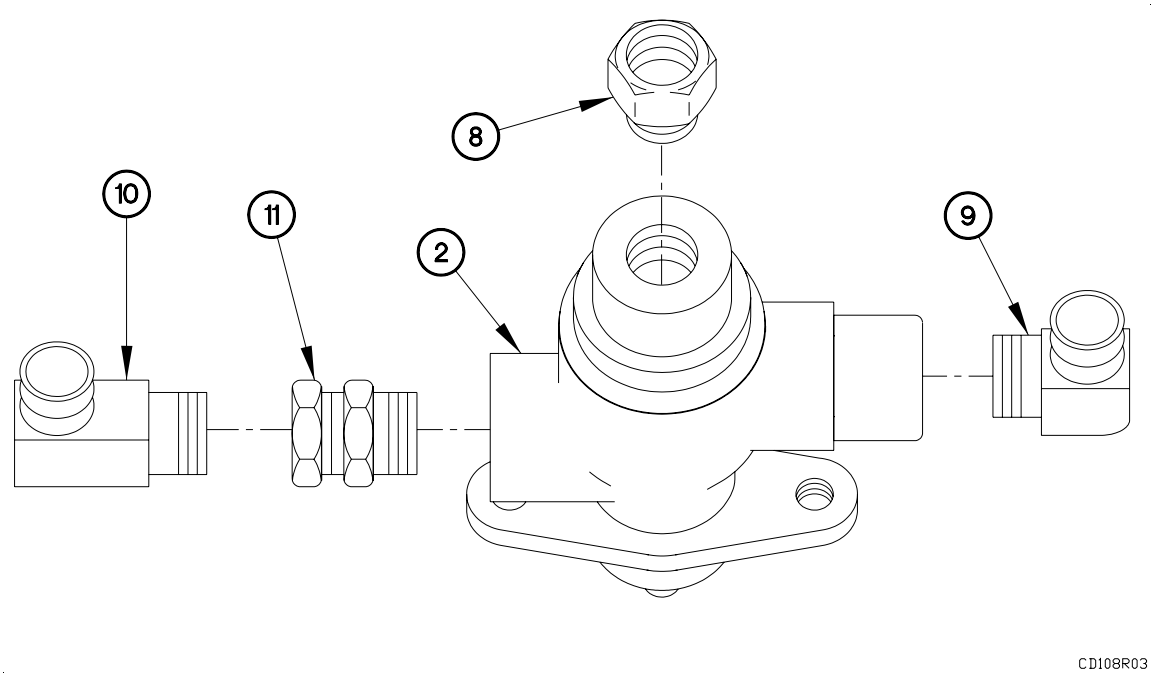


FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT - Continued 0108 00

REMOVAL - Continued

6. Remove adapter (8) and 90-degree fitting (9) from flatrack lock push/pull valve (2).

7. Remove 90-degree fitting (10) and adapter (11) from flatrack lock push/pull valve (2).



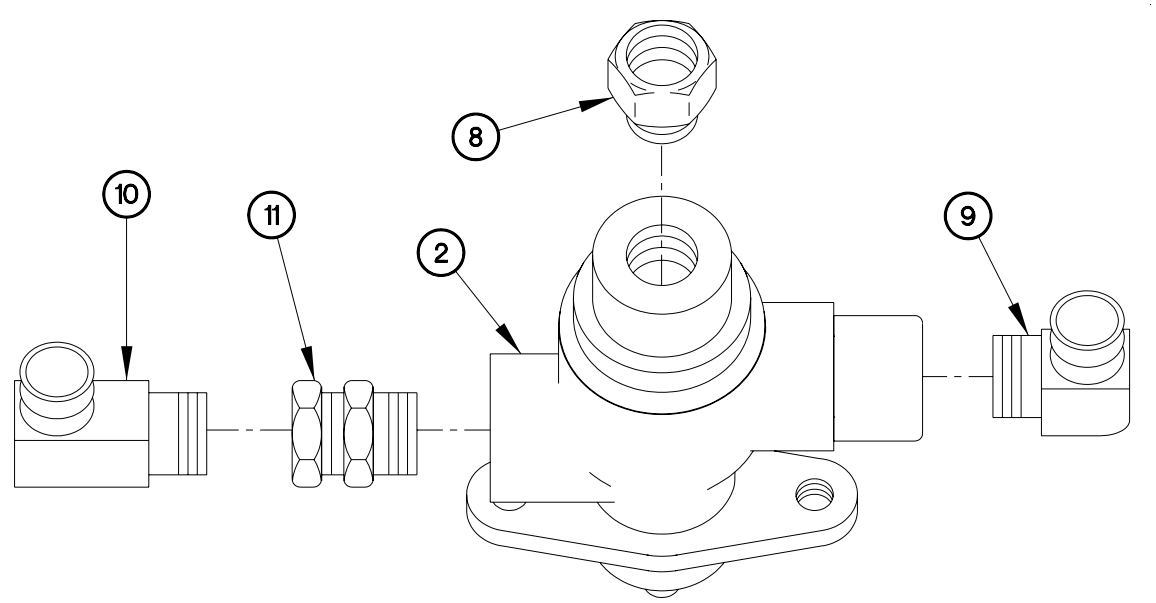
FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT - Continued 0108 00

INSTALLATION

WARNING

Adhesives, solvents, 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 adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

1. Apply sealing compound to threads of adapters (8 and 11) and 90-degree fittings (9 and 10).
2. Install adapter (11) and 90-degree fitting (10) in flatrack lock push/pull valve (2).
3. Install 90-degree fitting (9) and adapter (8) in flatrack lock push/pull valve (2).

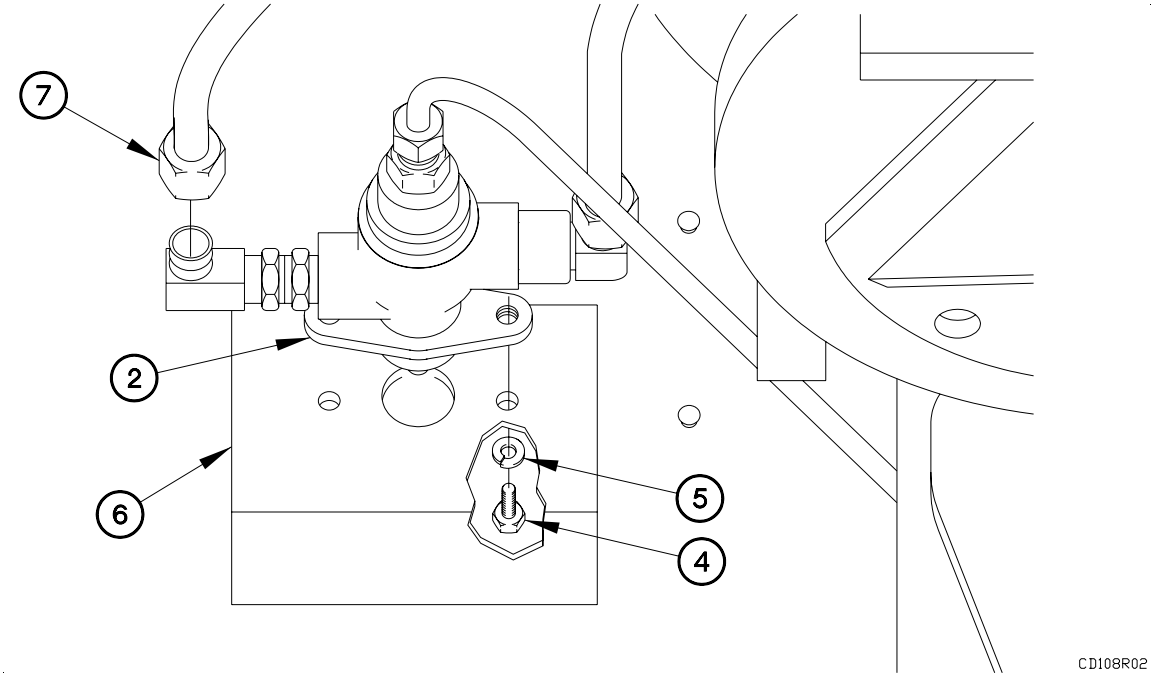


FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT - Continued 0108 00

INSTALLATION - Continued

4. Connect three hoses (7) in flatrack lock push/pull valve (2).

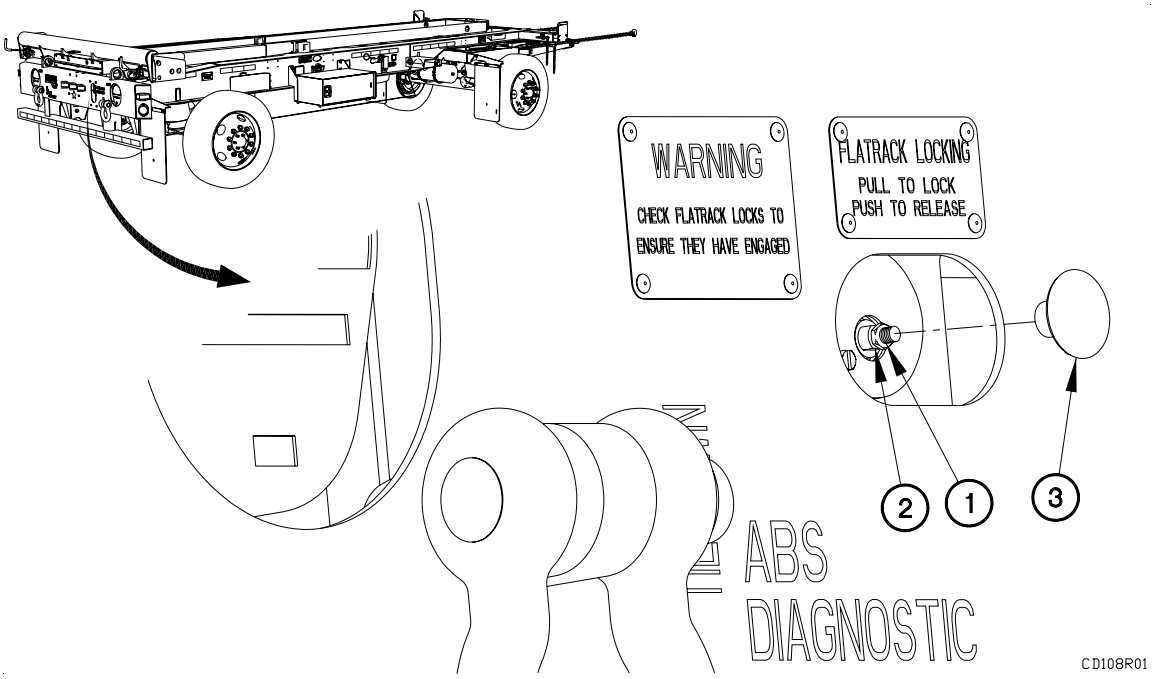
5. Install flatrack lock push/pull valve (2) on trailer (6) with two lockwashers (5) and screws (4).



FLATRACK LOCK PUSH/PULL VALVE REPLACEMENT - Continued 0108 00

INSTALLATION - Continued

6. Install knob (3) on flatrack lock push/pull valve (2).
7. Tighten nut (1) on flatrack lock push/pull valve (2).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check flatrack push/pull valve air hoses for leaks.
3. Check for proper operation of flatrack push/pull valve (WP 0005 00).
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

FOUR PORT TASK VALVE REPLACEMENT 0109 00

THIS WORK PACKAGE COVERS:
Removal, Installation

INITIAL SETUP:

Maintenance Level
Field

Tools and Special Tools
Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Vise, Machinist's (Item 25, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 35, WP 0167 00)

Materials/Parts
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)
Sealing Compound (Item 15, WP 0165 00)
Washer, Lock (Item 10, WP 0168 00)

Equipment Conditions
Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) four port task valves.

WARNING

Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

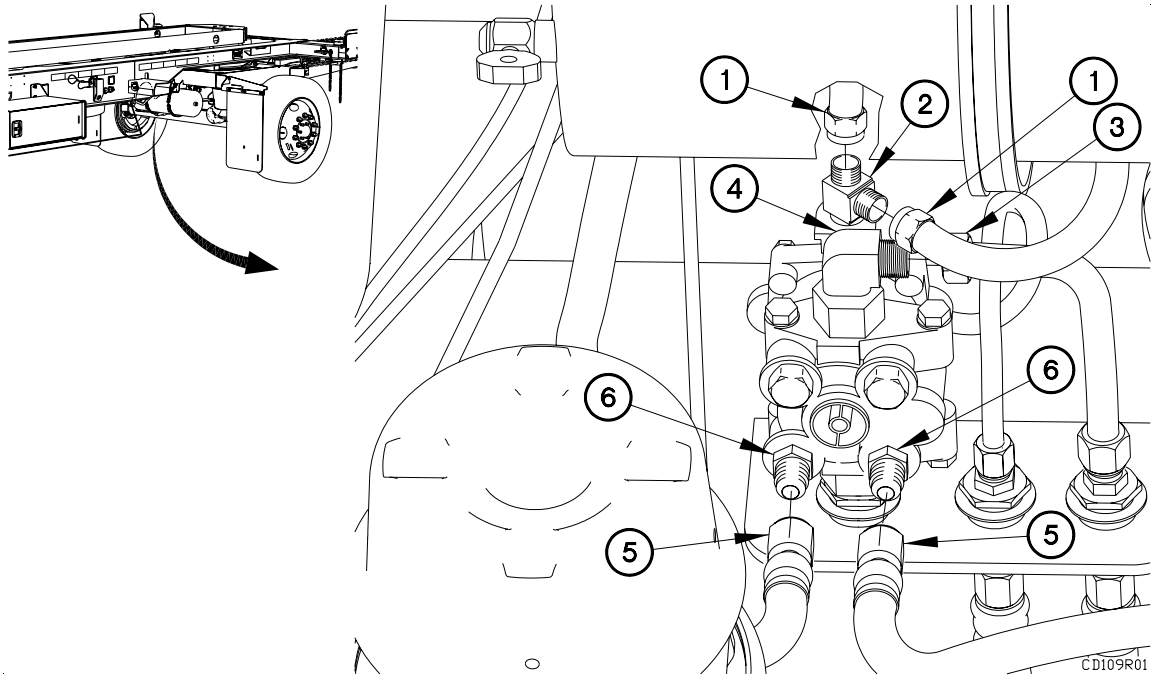
REMOVAL

NOTE

Front and rear four port valve air hoses are removed the same way. Front four port valve air hoses shown.

Tag air hoses and connection points prior to disconnecting.

1. Drain air tanks.
2. Remove four hoses (1) from two tee-fittings (2).
3. Remove hose (3) from 90-degree fitting (4).
4. Remove two hoses (5) from fittings (6).



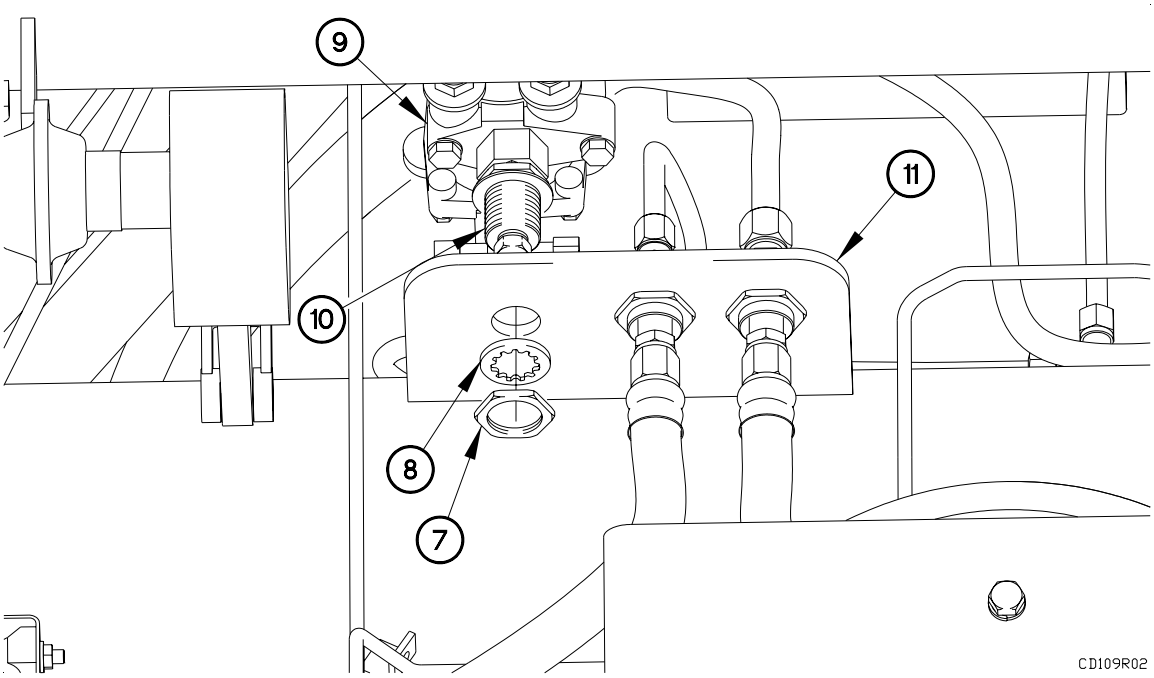
FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

REMOVAL - Continued

NOTE

Perform the following step on the front four port task valve.

5. Remove nut (7), lockwasher (8), four port task valve (9), and bulkhead fitting (10) from brake valve bracket (11).



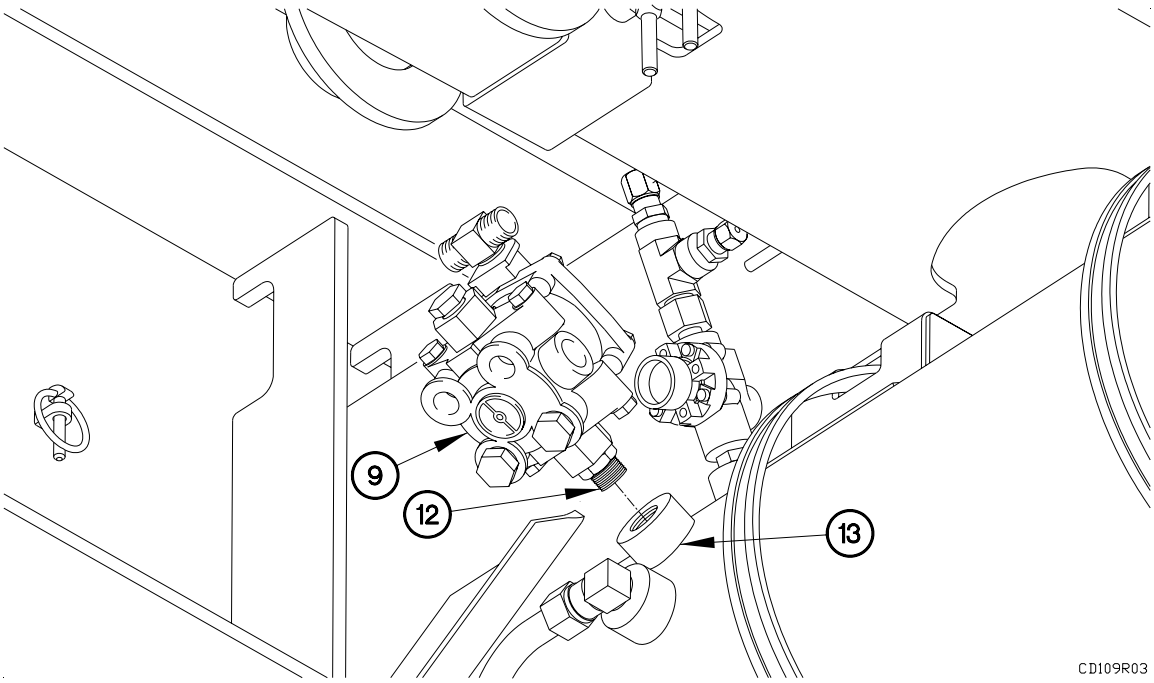
FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

REMOVAL - Continued

NOTE

Perform the following step on the rear four port task valve.

6. Remove four port task valve (9) and fitting (12) from air tank (13).



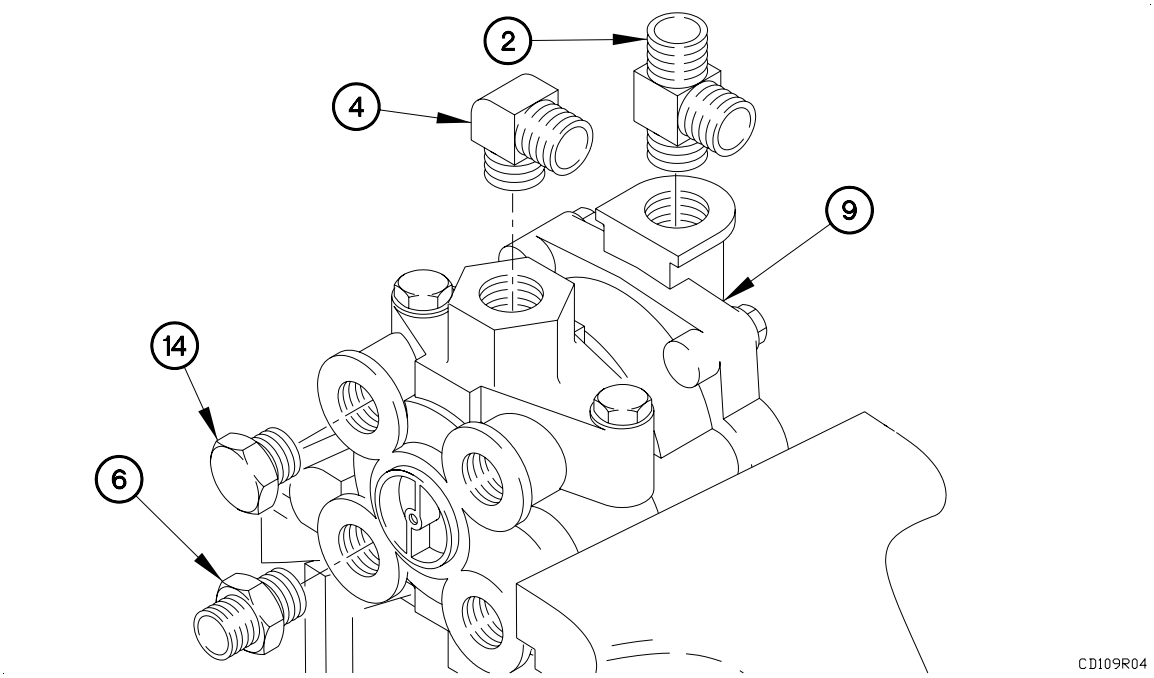
FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

REMOVAL – Continued

NOTE

Note orientation of tee fittings and 90-degree fitting prior to removal.

7. Place four port task valve in a vise.
8. Remove two tee fittings (2) from four port task valve (9).
9. Remove 90-degree fitting (4) from four port task valve (9).
10. Remove two fittings (6) from four port task valve (9).
11. Remove two plugs (14) from four port task valve (9).



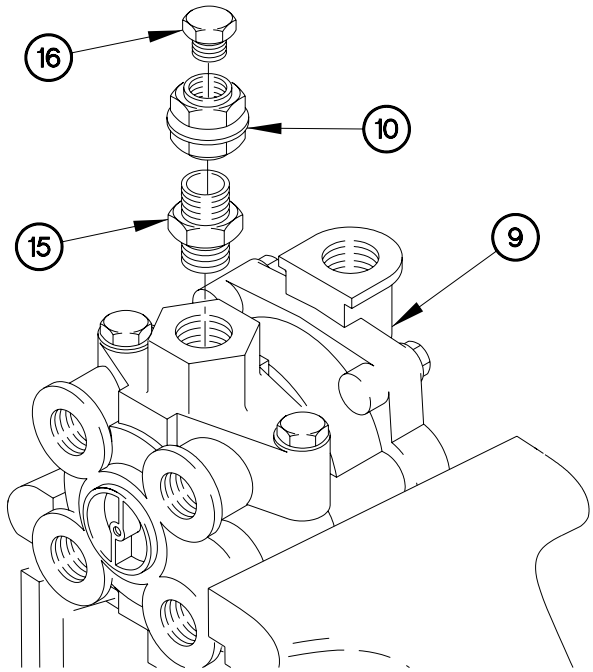
FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

REMOVAL – Continued

NOTE

Perform the following two steps on the front four port task valve.

12. Remove fitting (15) from four port task valve (9).
13. Remove bulkhead fitting (10) from fitting (15).
14. Remove plug (16) from bulkhead fitting (10).



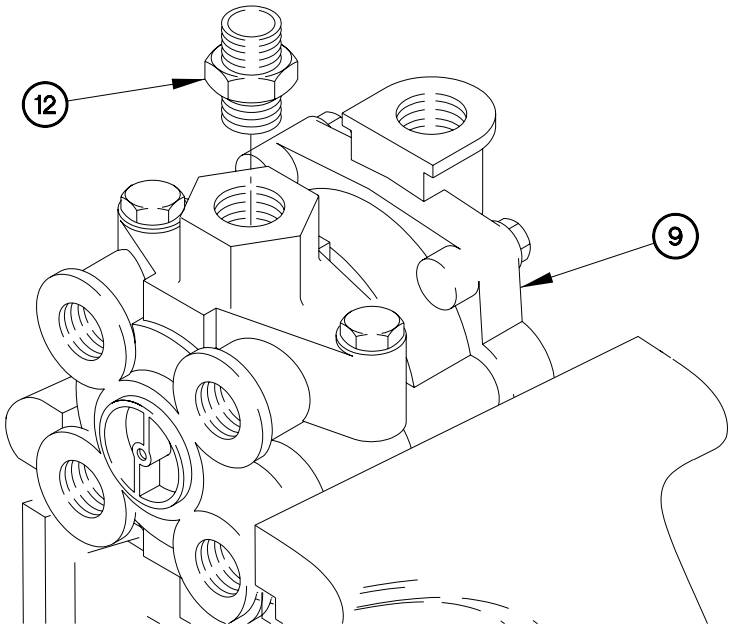
FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

REMOVAL – Continued

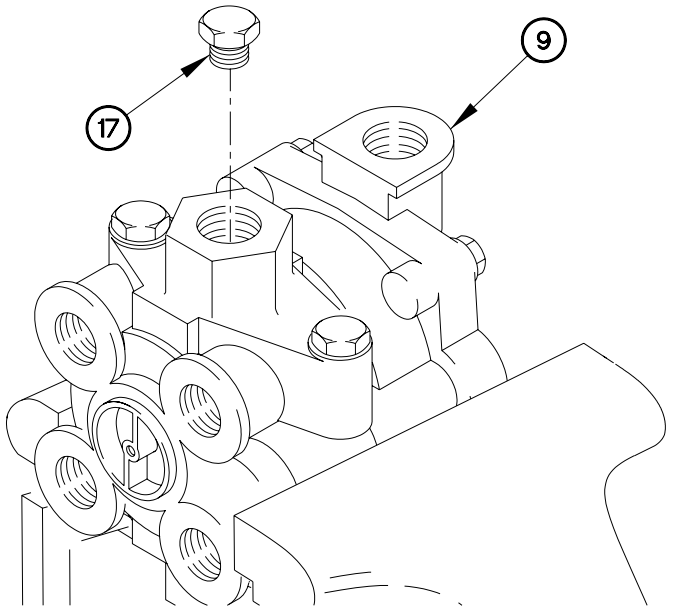
NOTE

Perform the following two steps on the rear four port task valve.

15. Remove fitting (12) from four port task valve (9).



16. Remove plug (17) from four port task valve (9).



FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

INSTALLATION

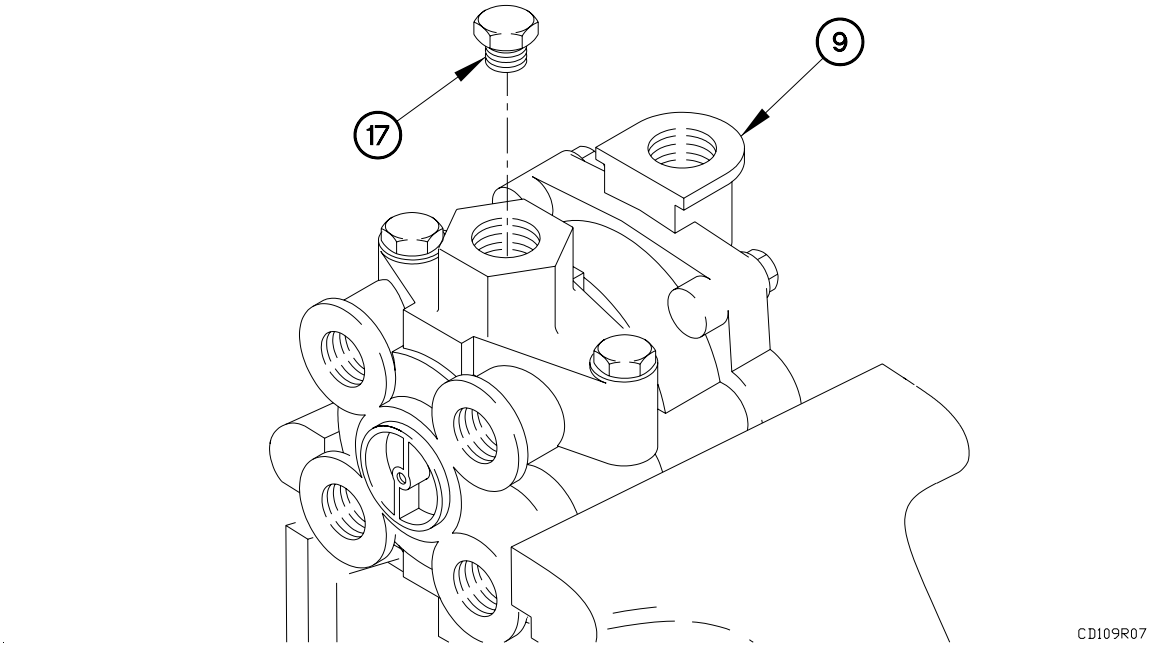
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Perform the following three steps on the rear four port task valve.

1. Apply sealing compound to threads of plug (17).
2. Install plug (17) on four port task valve (9).



FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

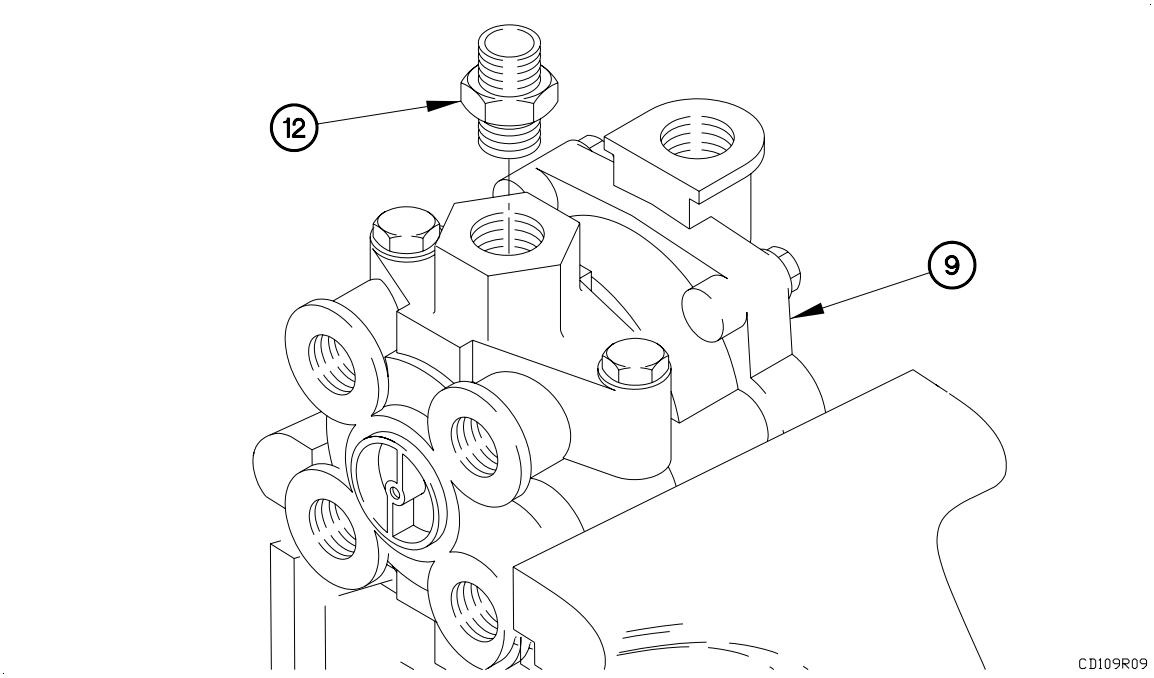
INSTALLATION - Continued

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

3. Apply sealing compound to threads of fitting (12).

4. Install fitting (12) on four port task valve (9).



FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

INSTALLATION - Continued

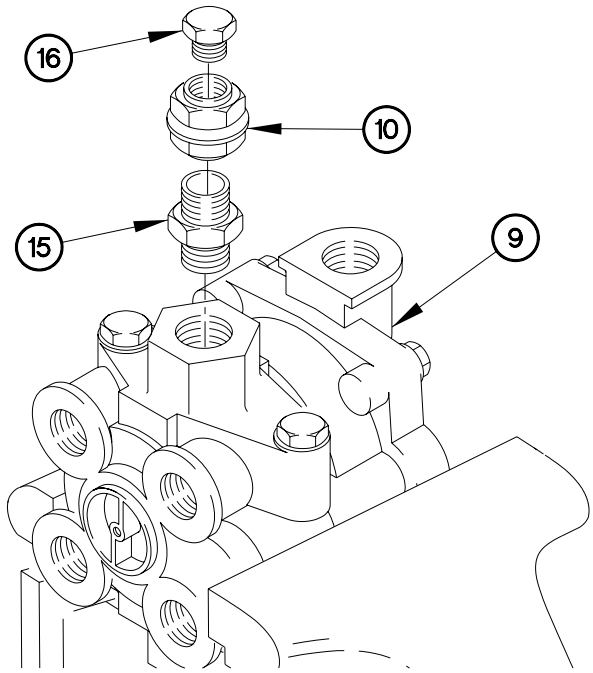
WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

NOTE

Perform the following three steps on the front four port task valve.

5. Apply sealing compound to threads of plug (16), fitting (15), and bulkhead fitting (10).
6. Install plug (16) on bulkhead fitting (10).
7. Install fitting (15) on bulkhead fitting (10).
8. Install fitting (15) on four port task valve (9).



CD109R06

FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

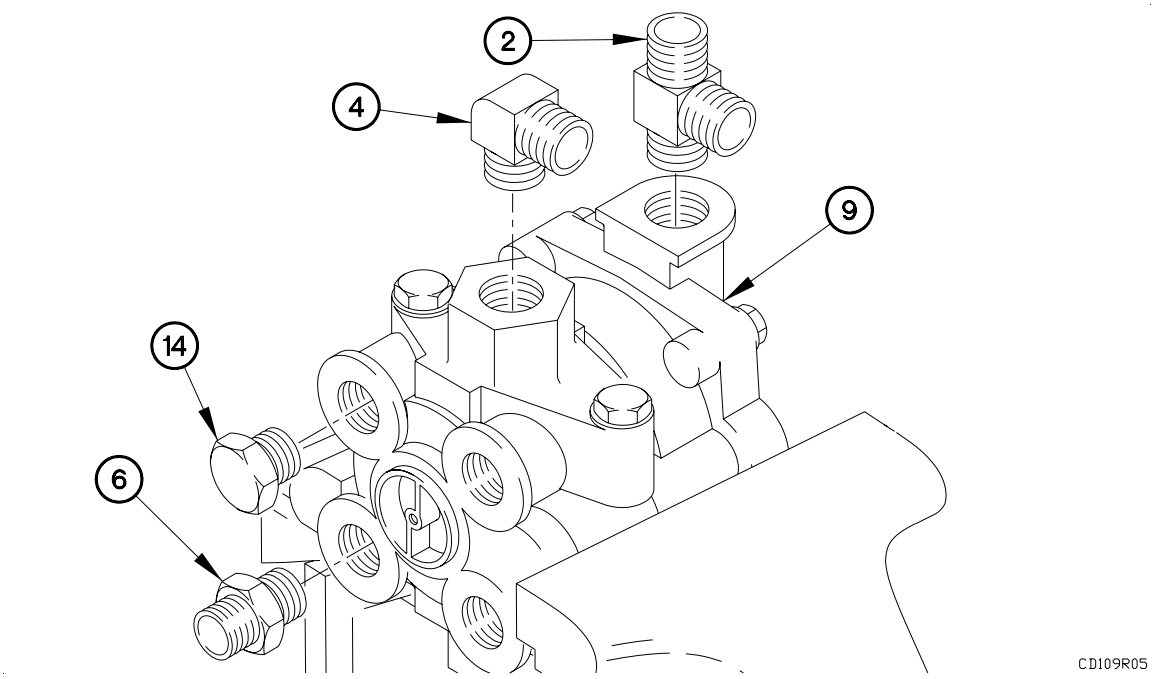
INSTALLATION - Continued

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

9. Apply sealing compound to threads of two plugs (14), two fittings (6), 90-degree fitting (4), and two tee fittings (2).

10. Install two plugs (14), two fittings (6), 90-degree fitting (4), and two tee fittings (2) on four port task valve (9).



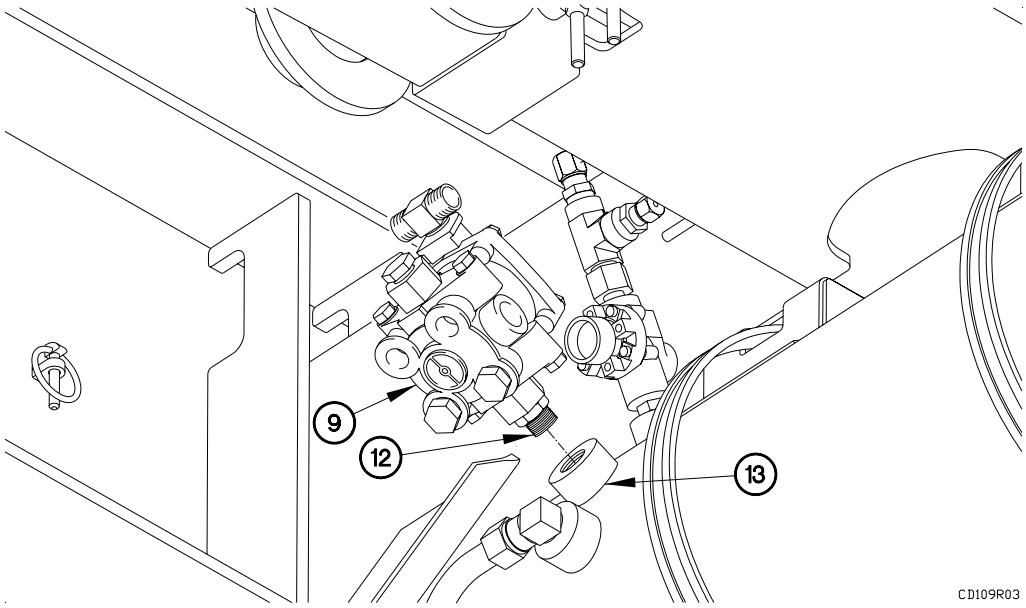
FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

INSTALLATION - Continued

NOTE

Perform the following step on the rear four port task valve.

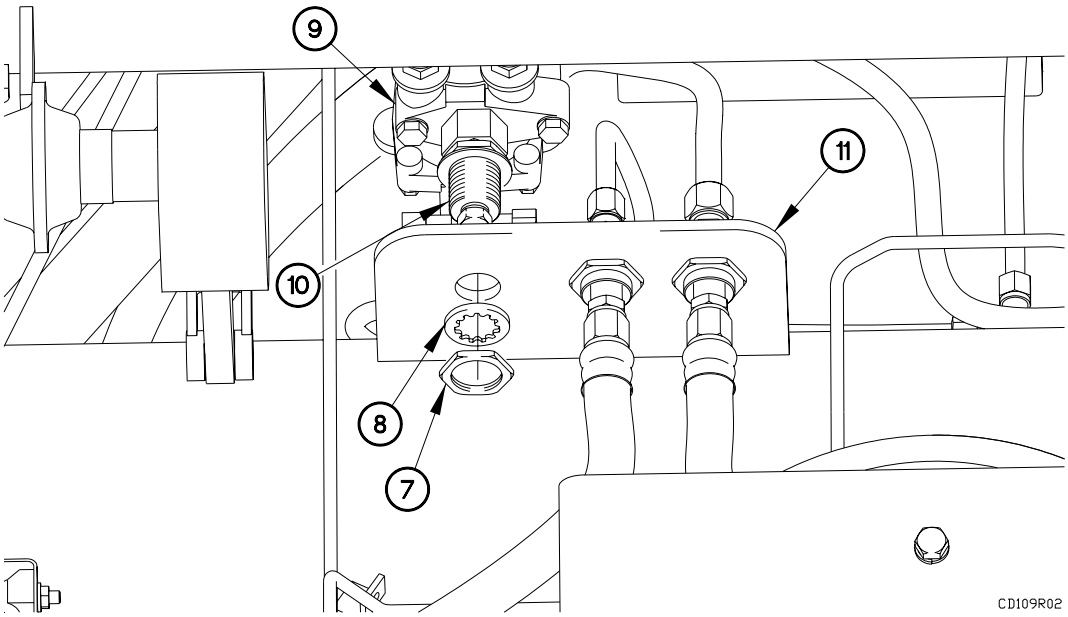
11. Install four port task valve (9) and fitting (12) on air tank (13).



NOTE

Perform the following step on the front four port task valve.

12. Install bulkhead fitting (10) and four port task valve (9) on brake valve bracket (11) with lockwasher (8) and nut (7).



FOUR PORT TASK VALVE REPLACEMENT - Continued 0109 00

INSTALLATION – Continued

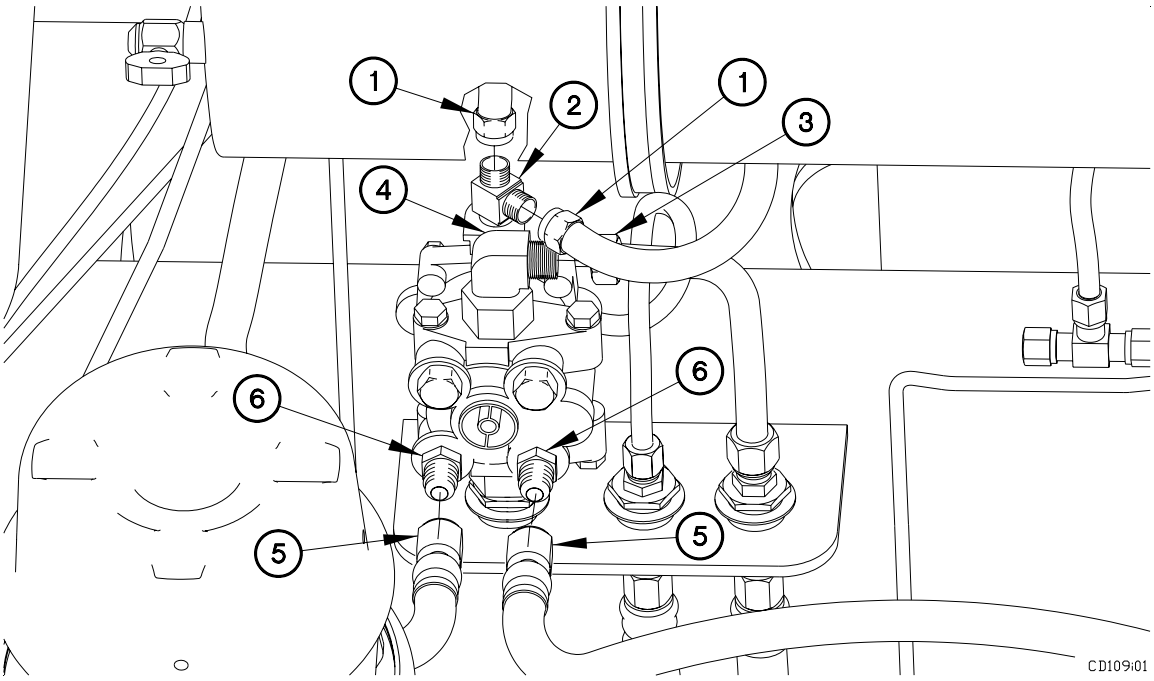
NOTE

Front and rear four port valve air hoses are installed the same way. Front four port valve air hoses shown.

13. Connect two hoses (5) to fittings (6).

14. Connect hose (3) to 90-degree fitting (4).

15. Connect four hoses (1) to two tee fittings (2).



END OF WORK PACKAGE

HEIGHT ACTUATION VALVE REPLACEMENT 0110 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 22, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 35, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts - Continued

Sealing Compound (Item 15, WP 0165 00)
Nut, Self-Locking (4) (Item 26, WP 0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) height actuation valve.

WARNING

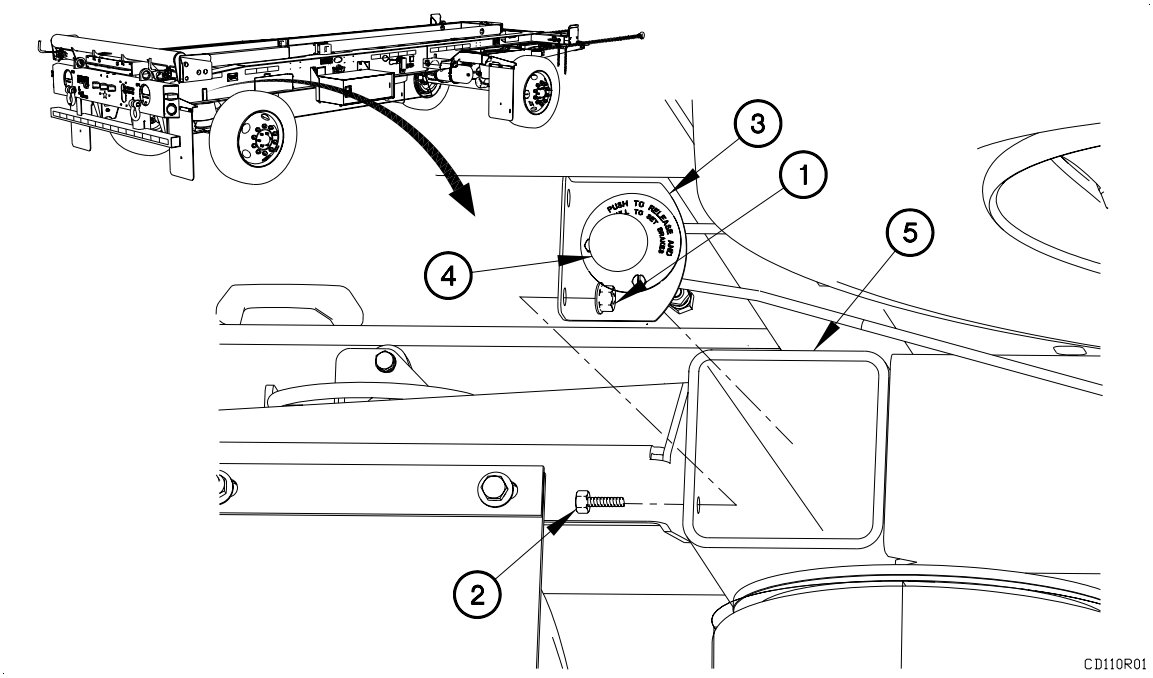
Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

Vent air system before disconnecting air hoses. Pressurized air can blow dirt and debris with sufficient force to cause injury. Safety goggles must be worn when working with compressed air. Failure to comply may result in injury to personnel.

HEIGHT ACTUATION VALVE REPLACEMENT - Continued 0110 00

REMOVAL

1. Remove two self-locking nuts (1), bolts (2), splashguard bracket (3), and height actuation valve (4) from turntable tube (5). Discard self-locking nuts.



HEIGHT ACTUATION VALVE REPLACEMENT - Continued 0110 00

REMOVAL - Continued

NOTE

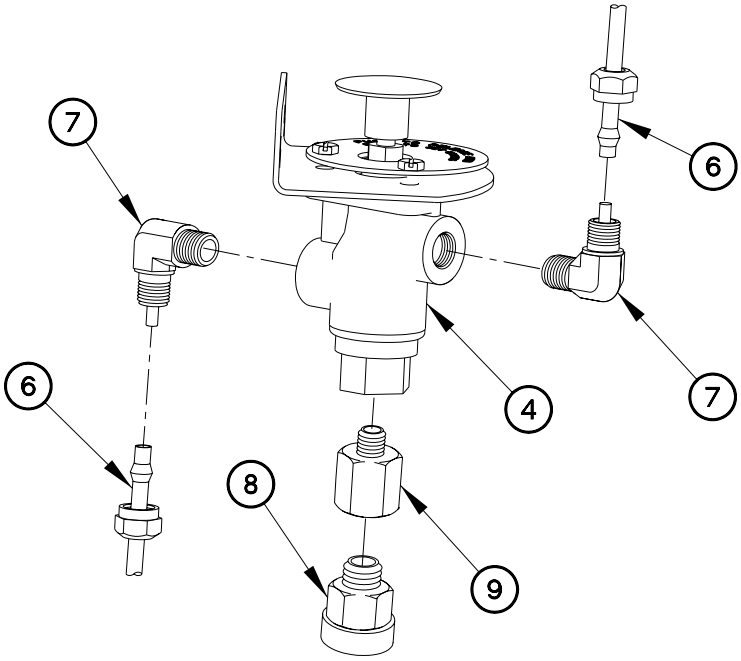
Tag air hoses and connection points prior to disconnecting.

2. Disconnect two hoses (6) from 90-degree fittings (7).

NOTE

Note orientation of fittings prior to removal.

3. Remove two 90-degree fittings (7) from height actuation valve (4).
4. Remove breather valve (8) from reducer (9).
5. Remove reducer (9) from height actuation valve (4).



CD110R02

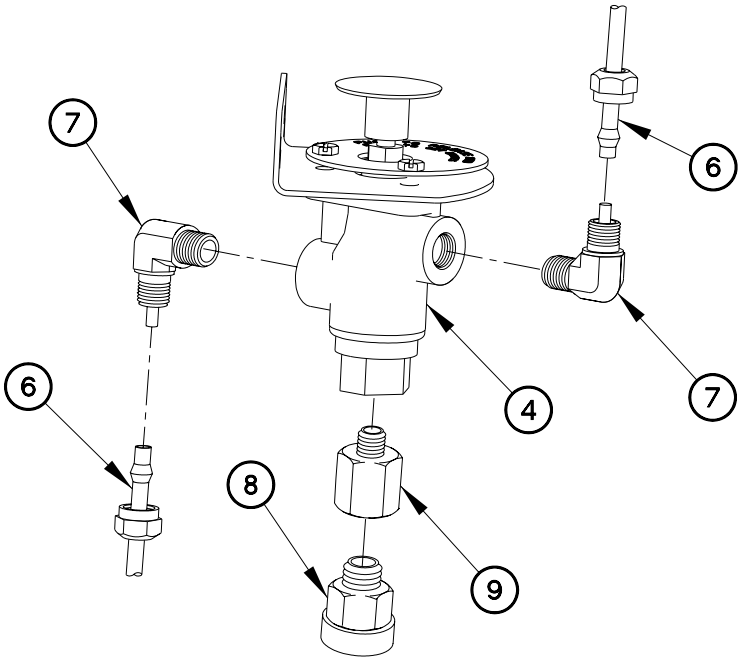
HEIGHT ACTUATION VALVE REPLACEMENT - Continued 0110 00

INSTALLATION

WARNING

Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.

1. Apply sealing compound to threads of reducer (9), breather valve (8), and two 90-degree fittings (7).
2. Install reducer (9) on height actuation valve (4).
3. Install breather valve (8) on reducer (9).
4. Install two 90-degree fittings (7) on height actuation valve (4).
5. Connect two hoses (6) to 90-degree fittings (7).

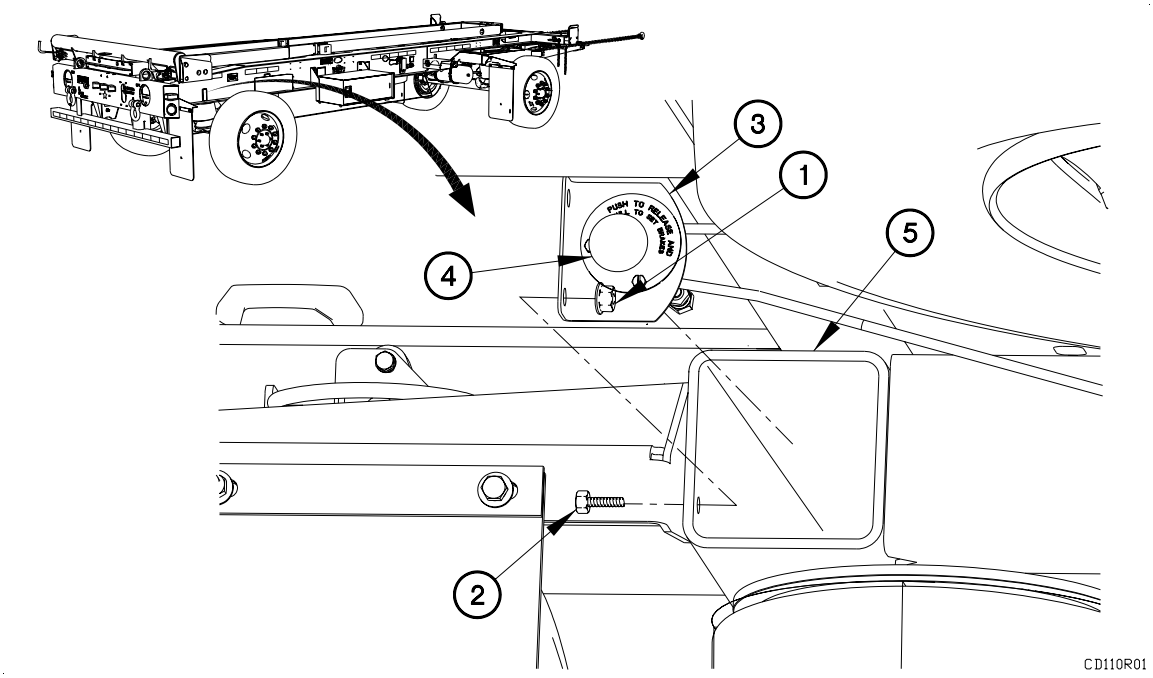


CD110R02

INSTALLATION - Continued

6. Position height actuation valve (4) on splashguard bracket (3) with four bolts (2) and self-locking nuts (1).

7. Tighten two self-locking nuts (1) to 24-36 lb-in. (3-4 N•m).



OPERATIONAL CHECKS

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).

2. Check height actuation valve air hoses for leaks.

3. Check for proper operation of height actuation valve (WP 0013 00).

4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

END OF WORK PACKAGE

CHAPTER 5
SUPPORTING INFORMATION

REFERENCES 0111 00

SCOPE

This appendix lists all forms, field manuals, technical manuals, and other publications referenced in this manual. Publications that should be consulted for additional information about vehicle operations are also listed.

PUBLICATIONS INDEX

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

Consolidated Index of Army Publications and Blank Forms..... DA PAM 25-30

FORMS

The following forms pertain to this manual. See DA PAM 25-30 for index of blank forms. See DA PAM 738-750, The Army Maintenance Management System (TAMMS), for instructions on the use of maintenance forms pertaining to this material.

Recommended Changes to DA Publications and Blank Forms..... DA FORM 2028
Equipment Inspection and Maintenance Worksheet ..... DA FORM 2404
Maintenance Request..... DA FORM 2407
Equipment Control Record..... DA FORM 2408-9
Processing and Deprocessing Record of Shipping, Storage, and Issue of Vehicles and Packaging Improvement Report..... DD FORM 6
Report of Item Discrepancy (ROID) ..... SF 364
Product Quality Deficiency Report ..... SF 368

OTHER PUBLICATIONS

The following publications contain information pertinent to the LHST and associated equipment.

Safety

Security of Tactical Wheeled Vehicles..... TB 9-2300-422-20

MTV

Operator's Manual for M1083A1 Series, 5-Ton, 6x6, Medium Tactical Vehicle (MTV)..... TM 9-2320-392-10
Operator's, Organizational, Direct Support and General Support Maintenance Manual .... TM9-4910-687-14&P

OTHER PUBLICATIONS - Continued

General Maintenance and Repair

Corrosion Prevention and Control Including Rustproofing Procedures for Tactical Vehicles and Trailers ..... TB 43-0213
Rigging ..... FM 5-725
Materials Used for Cleaning, Preserving, Abrading, and Cementing Ordnance Materiel and Related Materials Including Chemicals ..... TM 9-247
Camouflage Pattern Painting ..... FM 5-20
Metal Body Repair and Related Operations ..... FM 43-2
Description, Use, Bonding Techniques, and Properties of Adhesives ..... TB ORD 1032
Equipment Improvement Report and Maintenance Digest: TACOM Equipment ..... TB 43-0001-39-1
Color, Marking, and Camouflage Painting of Military Vehicles ..... TB 43-0209
CARC Spot Painting ..... TB 43-0242
Painting Instructions for Field Use ..... TM 43-0139
Equipment Improvement Report and Maintenance Summary ..... TM 43-0143
Welding Theory and Application ..... TM 9-237
Organizational Care, Maintenance, and Repair of Pneumatic Tires and Inner Tubes ..... TM 9-2610-200-14

Cold Weather Operation

Basic Cold Weather Manual ..... FM 31-70
Northern Operations ..... FM 31-71

Decontamination

Decontamination Operations Facilities & Equipment ..... TB 700-4
NBC Protection ..... FM 3-4
NBC Decontamination ..... FM 3-5

General

Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive and Armaments Command) ..... TM 750-244-6
The Army Maintenance Management System (TAMMS) ..... DA PAM 738-750

OTHER PUBLICATIONS - Continued

Land, Sea, and Air Shipment

Marine Terminal Lifting Guidance ..... MTMCTEA PAM 56-1
Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment (in TOE Line Sequence) ..... TB 55-46-1
Tiedown Handbook for Rail Movements ..... MTMCTEA PAM 55-19
Tiedown Handbook for Truck Movements ..... MTMCTEA Ref 92-55-20
Marine Lifting and Lashing Handbook ..... MTMCTEA Ref 95-55-22
Containerization of Military Vehicles ..... MTMCTEA Ref 95-55-23

INTRODUCTION 0112 00

SCOPE

This RPSTL lists and authorizes spares and repair parts; special tools; special test, measurement, diagnostic equipment (TMDE); and other special support equipment required for performance of field level maintenance for the Load Handling System Trailer (LHST). 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 spare parts authorized by the 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 the parts in each group listed in ascending figure and item number sequence.

2. Cross-Reference Index Work Packages. There are two cross-reference indexes work packages in this RPSTL. The National Stock Number (NSN) Index and the Part Number (P/N) Index work packages. The National Stock Number Index work package refers you to the figure and item number. The Part Number Index work package refers you to the figure and item number.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES

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**
xx	xx		x
1st two positions: How to get an item.	3rd position: Who can install, replace, or use the item.	4th position: Who can do complete repair* on the item.	5th position: Who determines disposition action on unserviceable items.

*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.

INTRODUCTION - Continued 0112 00

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

ITEM NO. (Column (1)). Indicates the number used to identify items called out in the illustration.

Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanation of source codes follows:

Source Code	Application/Explanation
PA PB PC PD PE PF PG	Stocked 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 Field/ AVUM level MF-Made at Field/ AVIM level MH-Made at Sustainment 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 of the SMR code, but the source code indicates it is made at higher level, order the item from the higher level of maintenance.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

Source Code	Application/Explanation
AO-Assembled by Field/AVUM level AF-Assembled by Field/AVIM level AH-Assembled by Sustainment 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 its next higher assembly. (Refer to NOTE below.)
XB	If an item is not available from salvage, order it using the CAGEC and P/N.
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.

INTRODUCTION - Continued 0112 00

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

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 the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following levels of maintenance:

Maintenance Code		Application/Explanation
C	-	Crew or operator maintenance done within field level/AVUM maintenance.
O	-	Field level/AVUM maintenance can remove, replace, and use the item.
F	-	Sustainment Level/AVIM maintenance can remove, replace, and use the item.
H	-	Sustainment Level 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 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.

Maintenance Code		Application/Explanation
O	-	Field/AVUM is the lowest level that can do complete repair of the item.
F	-	Sustainment Level/AVIM is the lowest level that can do complete repair of the item.
H	-	Sustainment Level is the lowest level that can do complete repair of the item.
L	-	Specialized repair activity is the lowest level that can do complete repair of the item.
D	-	Depot is the lowest level that can do complete repair of the item.
Z	-	Nonreparable. No repair is authorized.

EXPLANATION OF COLUMNS IN THE REPAIR PARTS LIST AND SPECIAL TOOLS LIST WORK PACKAGES - Continued

Maintenance Code	Application/Explanation
B	No repair is authorized. No parts or special tools are authorized for the 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 entered in the fifth position of the SMR Code as follows:

Recoverability Code	Application/Explanation
Z	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the third position of the SMR Code.
O	Reparable item. When uneconomically reparable, condemn and dispose of the item at the field level.
F	Reparable item. When uneconomically reparable, condemn and dispose of the item at the Sustainment level.
H	Reparable item. When uneconomically reparable, condemn and dispose of the item at the Sustainment level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
L	Reparable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (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 the 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 LIST 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 received may have a different P/N from the number listed.

DESCRIPTION AND USABLE 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 item 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 in Column (6) for a given figure in both the repair parts list and special tools list work packages.

QTY (Column (7)). The QTY (quantity per figure) column indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column 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.

STOCK NUMBER Column. This column lists the NSN by National item identification number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN

NSN (e.g., 5305-01-674-1467). 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 - Continued

2. Part Number (PN) 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 that 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. Usable 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 UOC's used in the RPSTL are:

Code	Used On
Trailer, Load Handling System	**MTB**

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.

HOW TO LOCATE REPAIR PARTS

1. When NSNs or P/Ns Are Not Known.

First. Using the table of contents, determine the assembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and lists are divided into the same groups.

Second. Find the figure covering the functional group or the subfunctional group to which the item belongs.

Third. Identify the item on the figure and note the number(s).

Fourth. Look in the repair parts list work packages for the figure and item numbers. The NSNs and part numbers are on the same line as the associated item numbers.

When NSN Is Known.

First. If you have the NSN, look in the STOCK NUMBER column of the NSN index work package. The NSN is arranged in NIIN sequence. Note the figure and item number next to the NSN.

Second. Turn to the figure and locate the item number. Verify that the item is the one you are looking for.

When P/N Is Known.

First. If you have the P/N and not the NSN, look in the PART NUMBER column of the P/N index work package. Identify the figure and item number.

Second. Look up the item on the figure in the applicable repair parts list work package.

ABBREVIATIONS

Abbreviation	Explanation
ABS	Anti-Lock Braking System
ECU	Electronic Control Unit

END OF WORK PACKAGE

MAINTENANCE ALLOCATION CHART (MAC) 0113 00

INTRODUCTION

The Army Maintenance System MAC

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.

This MAC 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 level, which are shown on the MAC in column (4) as:

Field –- includes two columns, Unit Maintenance and Direct Support maintenance. The Unit maintenance column is divided again into two more subcolumns, C for Operator or Crew and O for Unit maintenance.

Sustainment –- includes two subcolumns, General Support (H) and Depot (D).

The tools and test equipment requirements 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 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). This includes scheduled inspection and gagings and evaluation of common tubes.

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

3. Service. Operations required periodically to keep an item in proper operating condition, e.g. to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:
   a. Unpack. To remove from packing box for service or when required for the performance of maintenance operations.
   b. Repack. To return item to packing box after service and or maintenance operation.
   c. Clean. To rid the item of contamination.
   d. Touch up. To spot paint scratched or blistered surfaces.
   e. Mark. To restore obliterated identifications.

MAINTENANCE ALLOCATION CHART (MAC) - CONTINUED 0113 00

Maintenance Functions – Continued

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

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

6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of Test, Measurement, and Diagnostic Equipment (TMDE) used in precision measurement. Consists of comparison 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. Paint. To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indication primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.

9. 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.

MAINTENANCE ALLOCATION CHART (MAC) - CONTINUED 0113 00

MAINTENANCE ALLOCATION CHART

Table 1. MAC FOR LHST

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			Field			Sustainment			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
0608	Circuit Breaker and Module	Replace		0.50				1	B
060801	Voltage Converter Box	Replace		2.00				1,3	A,B
060802	Junction Box	Replace		1.10				1,3	A,B
0609	Composite Taillight	Replace		0.25				1,3	A,B
060901	Marker Light 24VDC	Replace		0.40				1,3	A,B
0613	Intervehicular Cable	Replace		0.50				1	B
061301	Right Rear Electrical Harness	Replace		1.00				1	B
061302	Left Rear Electrical Harness	Replace		1.00				1	B
061303	Rear Electrical Harness	Replace		0.50				1	B
061304	Main Electrical Harness	Replace		2.80				1,3	A,B
1000	Axle Assembly	Replace		2.00				1,3	A,B
1202	Brakes	Replace		1.00				1,3	A,B
		Adjust		0.50				1	B
1208	Pressure Relief Valve	Replace		0.50				1	B
120801	ABS Wheel Speed Sensor	Replace		0.20				1,3	A,B
120802	ABS ECU Valve	Replace		0.90				1,3	A,B
120803	ABS Relay Harness	Replace		0.90				1,3	A,B

MAINTENANCE ALLOCATION CHART - Continued

Table 1. MAC FOR LHST

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			Field			Sustainment			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
120804	ABS Control Sensor Extension Cable	Replace		0.90				1	B
120805	Diagnostic Cable	Replace		0.25				1	B
120806	Brake Protection Valve	Replace		0.40				1	B
120807	Air Brake Arm	Replace		1.50				1	B
120808	ABS Diagnostic Light	Replace		0.50				1,3	A,B
120809	Air Reserve Tank	Replace		1.25				1	B
120810	Air Ride Control Valve	Replace		0.75				1,3	A,B
120811	Air Brake Chamber	Replace		0.50				1	B
120812	Breather Valve	Replace		0.75				1,3	A,B
120813	Height Control Valve	Replace		0.62				1,3	A,B
120814	Drawbar Lift Valve	Replace		0.50				1,3	A,B
120815	Air Bladder	Replace		0.50				1,3	A,B
120816	Flatrack Lock Valve	Replace		0.50				1	B
120817	Four Port Task Valve	Replace		0.50				1,3	A,B
120818	Height Actuation Valve	Replace		0.50				1,3	A,B

MAINTENANCE ALLOCATION CHART (MAC) - CONTINUED 0113 00

MAINTENANCE ALLOCATION CHART - Continued

Table 1. MAC FOR LHST

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			Field			Sustainment			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
1211	Gladhands	Replace		0.50				1	B
1301	Suspension Assembly	Replace		3.00				1	B
1311	Wheel End	Replace		1.00				1,2,3	A,B
1501	Frame Rail	Replace			16.0			1,3	A,B
150101	Twist Lock Assembly	Replace		0.50				1	B
150102	Flatrack Rail	Replace		1.00				1,3	A,B
150103	Safety Chain	Replace		0.10				1	B
150104	Shuttle and Guide	Replace		1.00				1,3,4	A,B
150505	Shuttle Twist Lock	Replace		1.00				1,3	A,B
150106	Bump Stop	Replace		0.25				1,3	A,B
150107	Flatrack Air Chamber and Lock	Replace		0.50				1,3	A,B
1503	Drawbar	Replace		2.00				1,3,4	A,B
150301	Drawbar Eye	Replace		0.50				1,3	A,B
1601	Shock Absorber	Replace		0.75				1,3	A,B
1802	Splashguard	Replace		0.25				1,3	A,B
1808	Toolbox	Replace		0.32				1,3	A,B
1810	Tiedown Ring	Replace		0.50				1	B
1904	Turntable	Replace		2.50				1,3,4	A,B
2001	Tire Carrier	Replace		0.30				1,3	A,B
200101	Rail Lift Jack	Replace		0.6				1,3	A,B
200102	Tire Carrier Winch	Replace		0.50				1,3	A,B

MAINTENANCE ALLOCATION CHART (MAC) - CONTINUED 0113 00

MAINTENANCE ALLOCATION CHART – Continued

Table 1. MAC FOR LHST

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment Ref Code	(6) Remarks Code
			Field			Sustainment			
			Unit		Direct Support	General Support	Depot		
			C	O	F	H	D		
2202	Reflectors	Replace		0.10				1,3	A,B
4706	Overload Indicator	Replace		0.50				1,3	A,B

Table 2 Tools and Test Equipment for LHST

Tool/Test Equipment	Maintenance Level	Nomenclature	National Stock Number	Tool Number
1	F/O	Tool Kit, General Mechanics	5180-01-454-3787	5180-95-B47
2	F/O	3 13/16 Socket		1927 (45225)
3	F/O	Shop Equipment, Automotive Vehicle	4910-01-490-6453	4910-95-A81
4	F/O	Sling, Cargo	1670-00-823-5043	CTA 50-970
5	F/O	Sling, Multileg	3940-00-777-5743	A170

Table 3 Remarks for LHST Tool Sets

Remarks Code	Remarks
A	2 Level Shop Set 4910-95-A81 replaces 3 Level Maintenance Shop Sets 4910-95-A72, 4910-95-A73, and 4910-94-A74.
B	2 Level Genl Mech Tool Kit SC5180-95-B47 replaces 3 Level Genl Mech Tool Kit SC 5180-90-CL-N26

END OF WORK PACKAGE

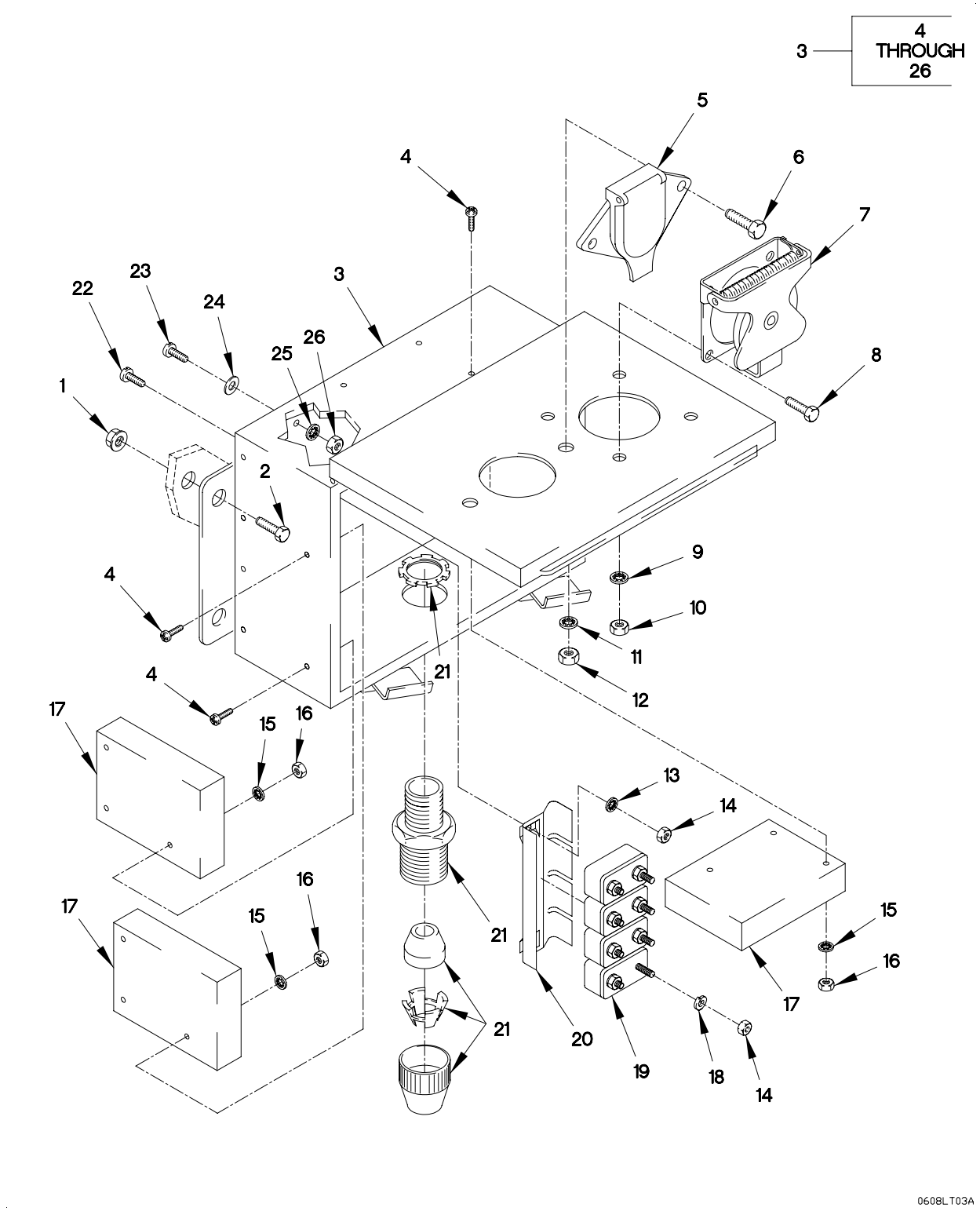


Figure 1. Group 0608 VOLTAGE CONVERTER

GROUP 0608 VOLTAGE CONVERTER – Continued 0114 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	NUT,SELF-LOCKING,HE	6
2	PAOZZ	5305-01-540-1515	80204	S210NA38CAD14	SCREW,HEX,CAP	2
3	PAOOO		19207	12442971-001	VOLTAGE CONVERTER B	1
4	PAOZZ	5305-00-984-4980	96906	MS35206-223	.SCREW,MACHINE	15
5	PAOZZ	5935-00-856-3513	81343	SAEJ560	.CONNECTOR,PLUG,ELEC	1
6	PAOZZ	5306-00-226-4825	80204	B1821BH031C07	.BOLT,MACHINE	2
7	PAOZZ	5935-00-846-3884	96906	MS75021-2	.CONNECTOR,RECEPTACL	1
8	PAOZZ	5305-00-068-0502	80205	MS90725-6	.SCREW,CAP,HEXAGON H	4
9	PAOZZ	5310-00-550-1130	80205	MS35333-40	.WASHER,LOCK	4
10	PAOZZ	5310-00-761-6882	96906	MS51967-2	.NUT,PLAIN,HEXAGON	4
11	PAOZZ	5310-00-167-0721	96906	MS35333-41	.WASHER,LOCK	2
12	PAOZZ	5310-00-880-7744	96906	MS51967-5	.NUT,PLAIN,HEXAGON	2
13	PAOZZ		96906	MS35333-38	.WASHER,LOCK	4
14	PAOZZ	5310-00-934-9757	80205	MS35649-282	.NUT,PLAIN,HEXAGON	12
15	PAOZZ	5310-00-193-7577	96906	MS35333-36	.WASHER,LOCK	15
16	PAOZZ	5310-00-934-9739	80205	MS35649-242	.NUT,PLAIN,HEXAGON	15
17	PAOZZ	6110-01-479-8558	4J564	DT-VR(SS)	.REGULATOR,VOLTAGE	5
18	PAOZZ	5310-00-045-3299	96906	MS35338-42	.WASHER,LOCK	8
19	PAOZZ	5925-00-900-1904	13445	30056-10	.CIRCUIT BREAKER	8
20	PAOZZ	5925-01-214-3228	98343	1512-0-4	.BASE,CIRCUIT BREAKE	18
21	PAOZZ	5975-01-480-5396	56501	2678	.BOX CONNECTOR,ELECT	1
22	PAOZZ	5305-00-984-6191	80205	MS35206-243	.SCREW,MACHINE	4
23	PAOZZ	5305-00-995-3442	96906	MS35207-268	.SCREW,MACHINE	3
24	PAOZZ	5310-00-809-8544	96906	MS27183-7	.WASHER,FLAT	4
25	PAOZZ	5310-00-576-5752	80205	MS35333-39	.WASHER,LOCK	3
26	PAOZZ	5310-00-852-8593	96906	MS35649-103	.NUT,PLAIN,HEXAGON	3

END OF FIGURE

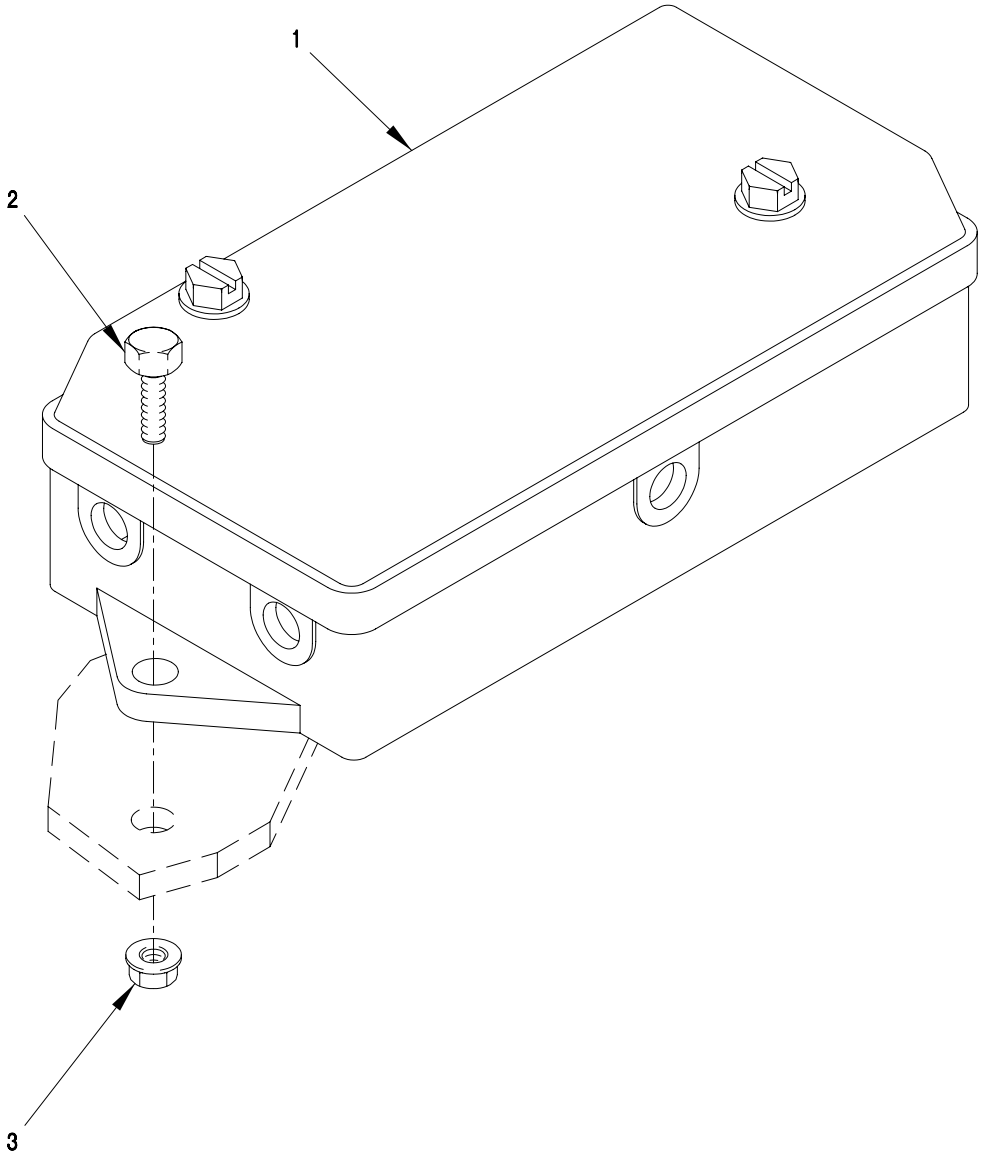


Figure 2. Group 0608 JUNCTION BOX

GROUP 0608 JUNCTION BOX – Continued 0115 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5940-01-540-1367	6721	300634AM	TERMINAL BOX	1
2	PAOZZ	5305-00-225-3839	80205	MS90725-8	SCREW,HEX CAP	2
3	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	NUT,SELF-LOCKING,HE	4
					END OF FIGURE	

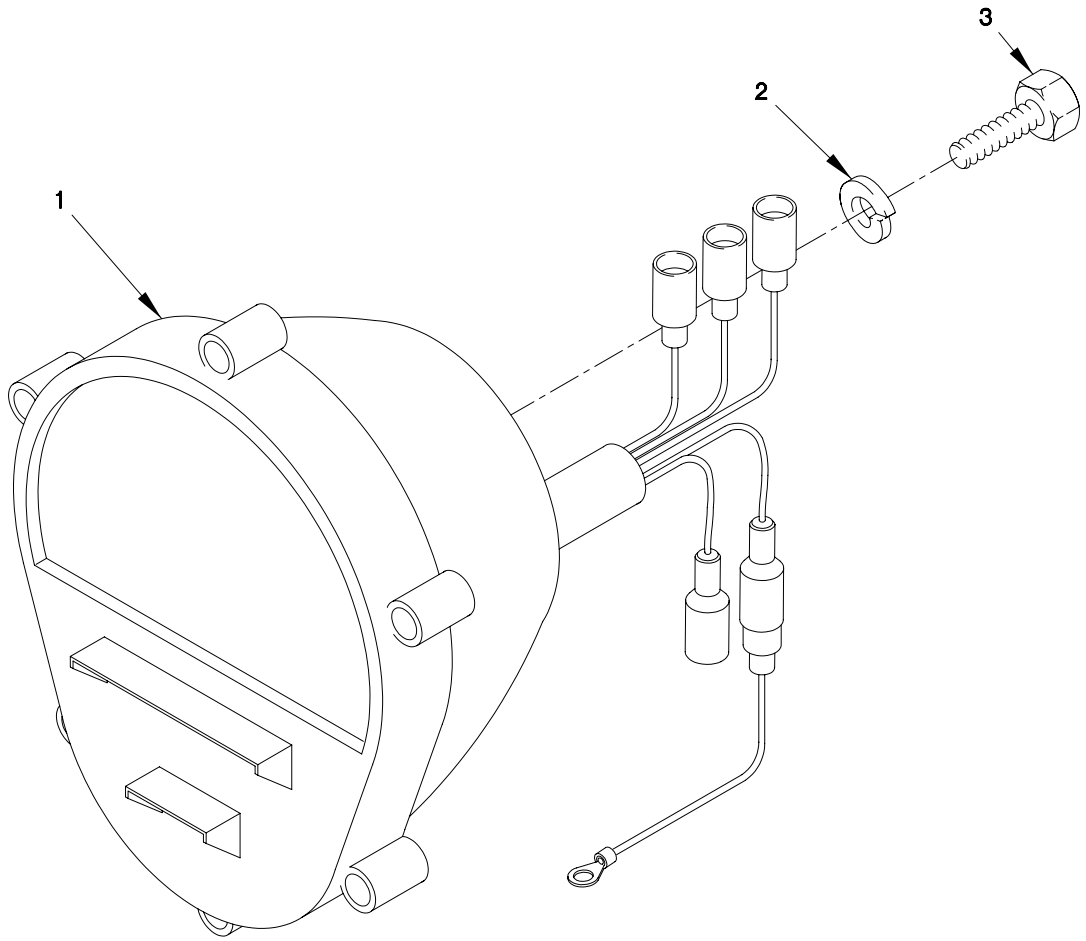


Figure 3. Group 0609 COMPOSITE LIGHT

GROUP 0609 COMPOSITE LIGH – Continued 0116 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12422958	LED COMPOSITE LIGHT	2
2	PAOZZ	5310-00-984-7042	96906	MS35338-141	WASHER, LOCK	4
3	PAOZZ		96906	MS51849-137C	SCREW,MACHINE-STEEL	4
					END OF FIGURE	

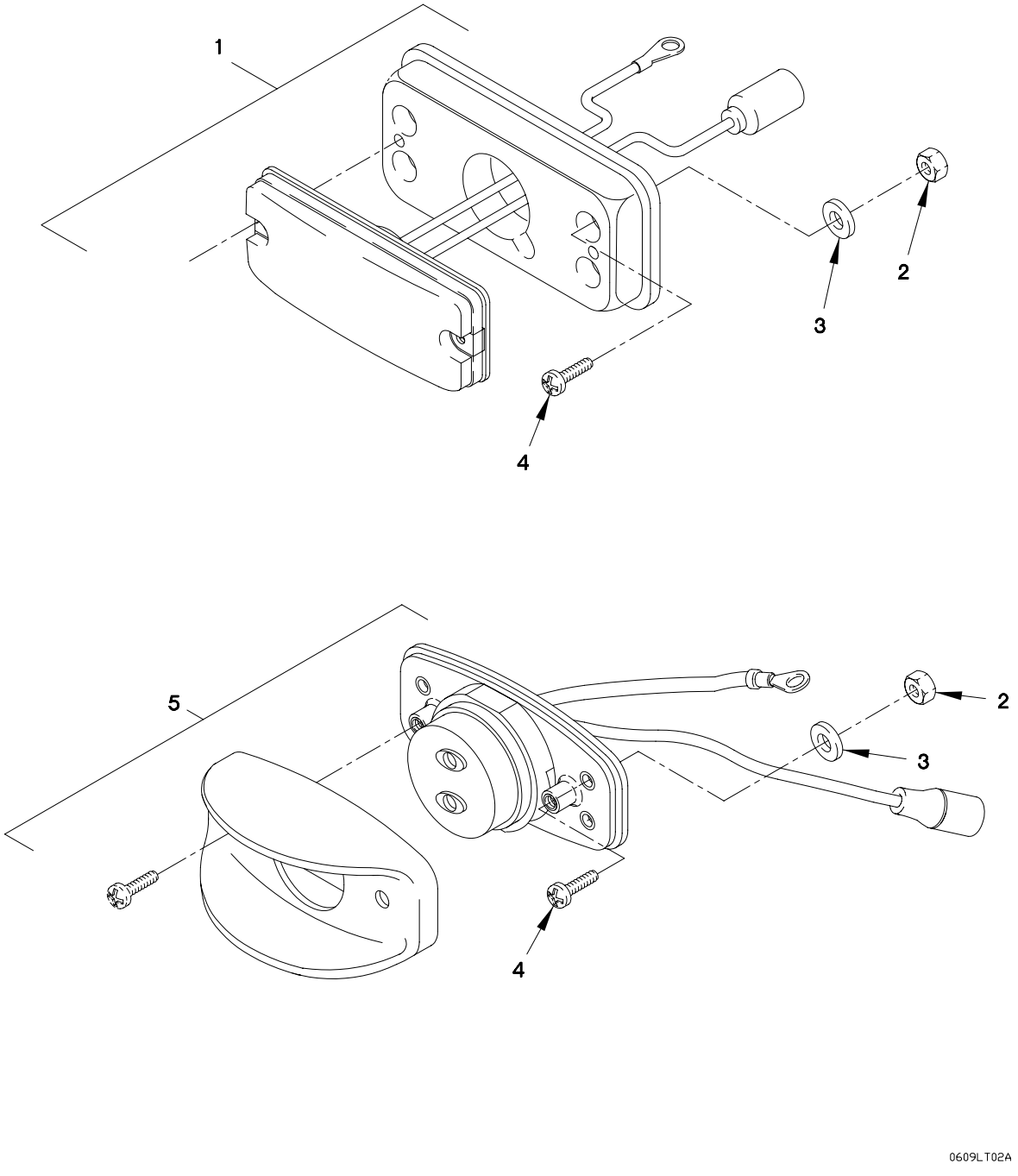


Figure 4. Group 0609 LED MARKER LIGHT ASSEMBLY

GROUP 0609 LED MARKER LIGHT ASSEMBLY – Continued 0117 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO	6220-01-521-7648	19207	12422657-002	LIGHT,MARKR,CLEARAN	3
2	PAOZZ	5310-01-436-3290	80205	MS17830-010C	NUT,PLAIN,HEXAGON	28
3	PAOZZ	5310-01-352-9575	19207	NAS1149C0363R	WASHER,FLAT	28
4	PAOZZ	5305-01-357-8159	96906	MS51849-77C	SCREW,MACHINE-STEEL	28
5	PAOZZ		19207	12422973-002	LED, 45 DEGREE	2
					END OF FIGURE	

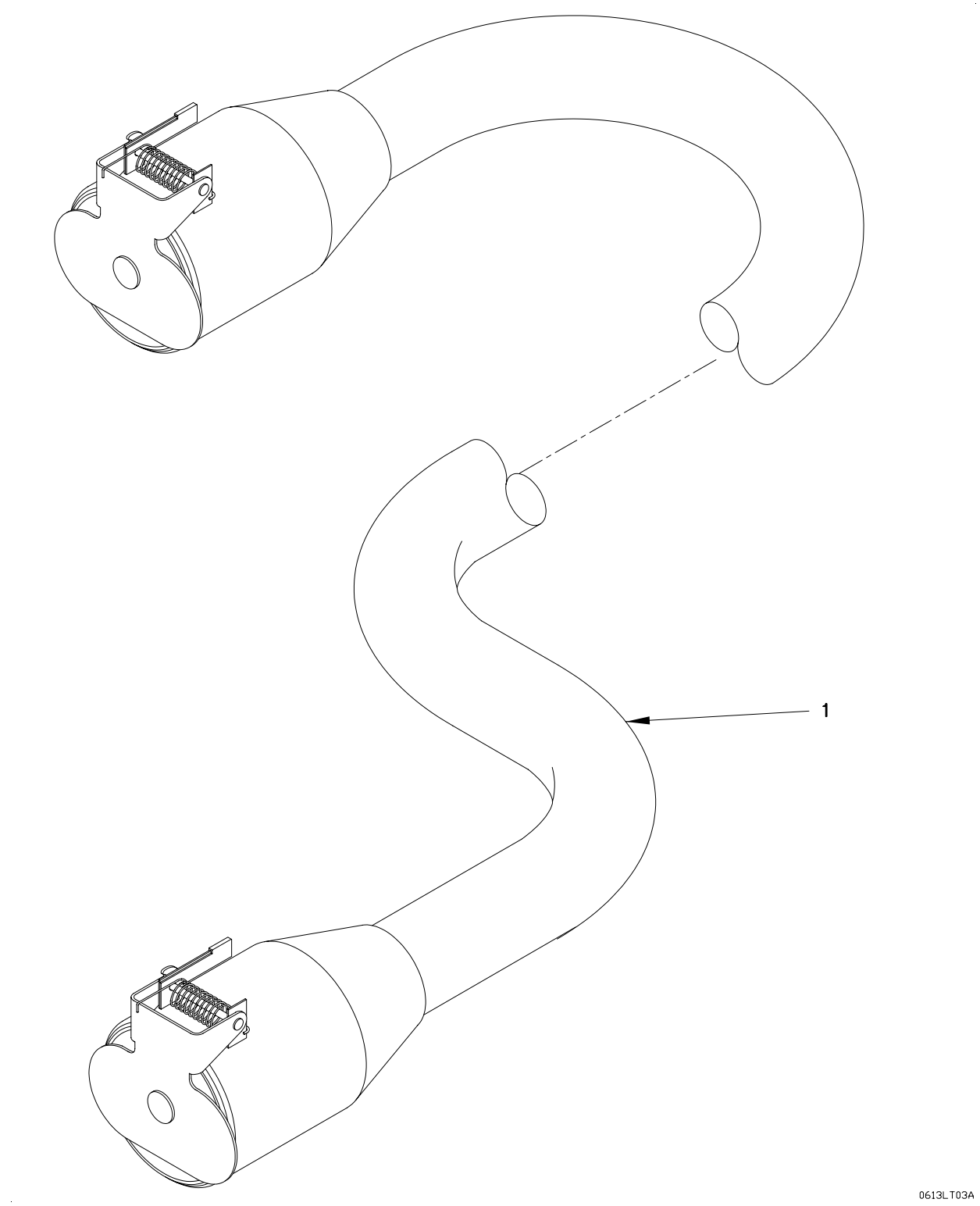


Figure 5. Group 0613 LED MARKER LIGHT ASSEMBLY

GROUP 0613 24VDC INTERVEHICULAR CABLE ASSEMBLY – Continued 0118 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	6150-00-772-8814	19207	7728814	CABLE ASSEMBLY,SPEC	1
					END OF FIGURE	

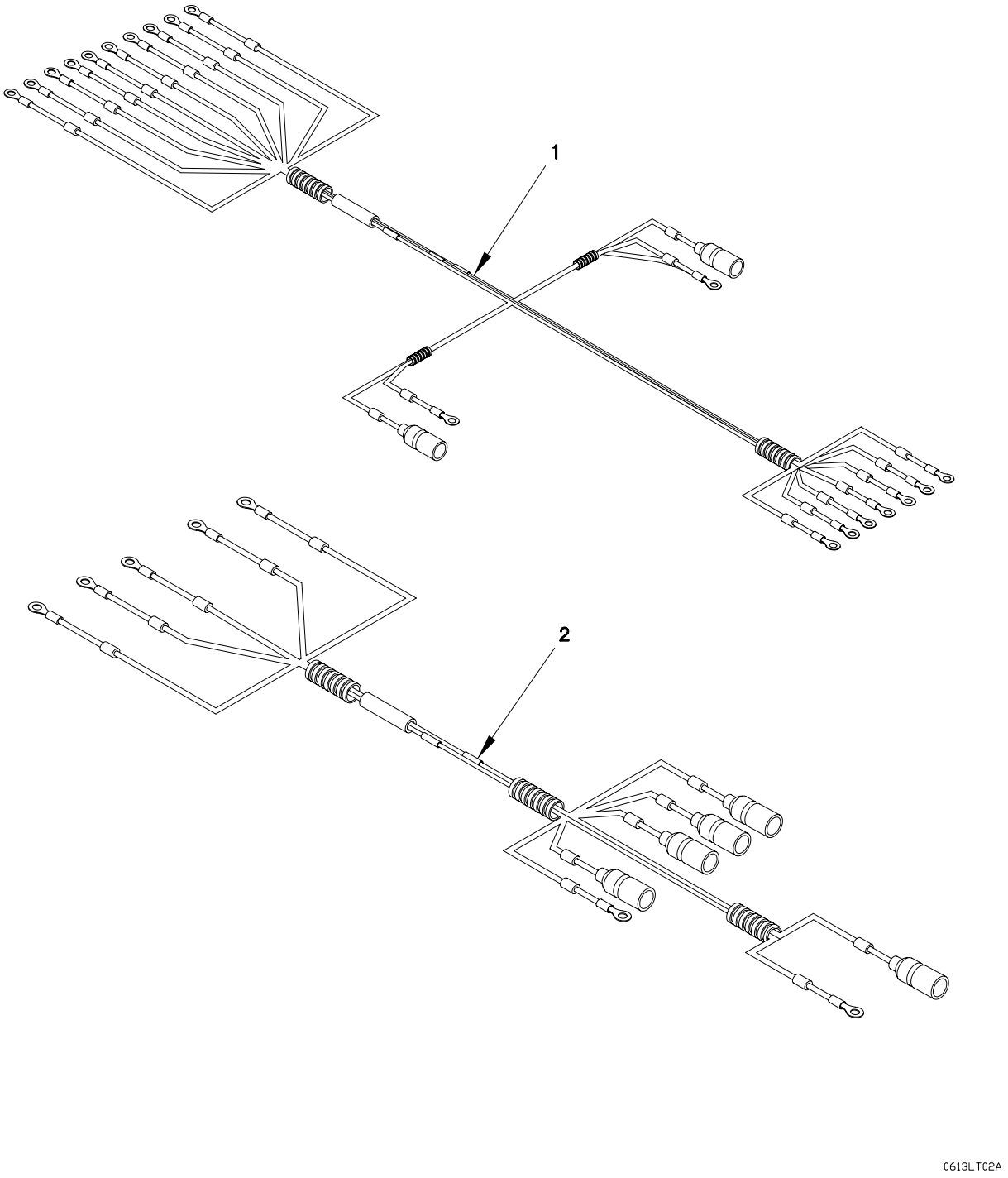


Figure 6. Group 0613 CHASSIS ELECTRICAL HARNESSES (Sheet 1 of 2)

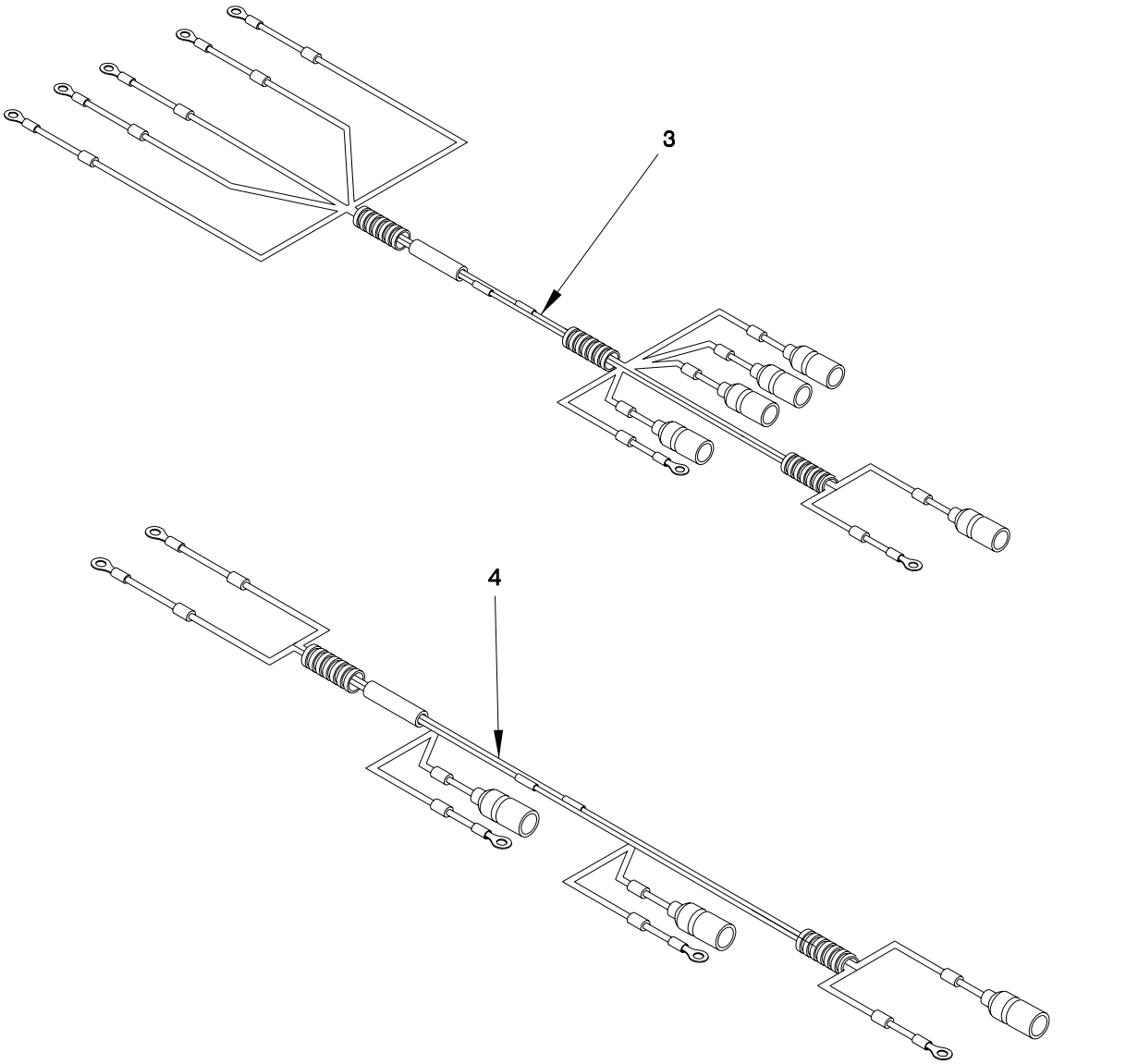


Figure 6. Group 0613 CHASSIS ELECTRICAL HARNESSES (Sheet 2 of 2)

GROUP 0613 CHASSIS ELECTRICAL HARNESSES – Continued 0119 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO	6150-01-540-3851	19207	12486330	HARNESS,ELECTRICAL	1
2	PAOOO	6150-01-540-1346	19207	12486338	RIGHT REAR ELE HARN	1
3	PAOOO		19207	12486339	HARNESS,ELECTRICAL	1
4	PAOOO		19207	12486340	HARNESS,ELECTRICAL	1
					END OF FIGURE	

GROUP 0613 CABLE ROUTING CLAMPS 0120 00

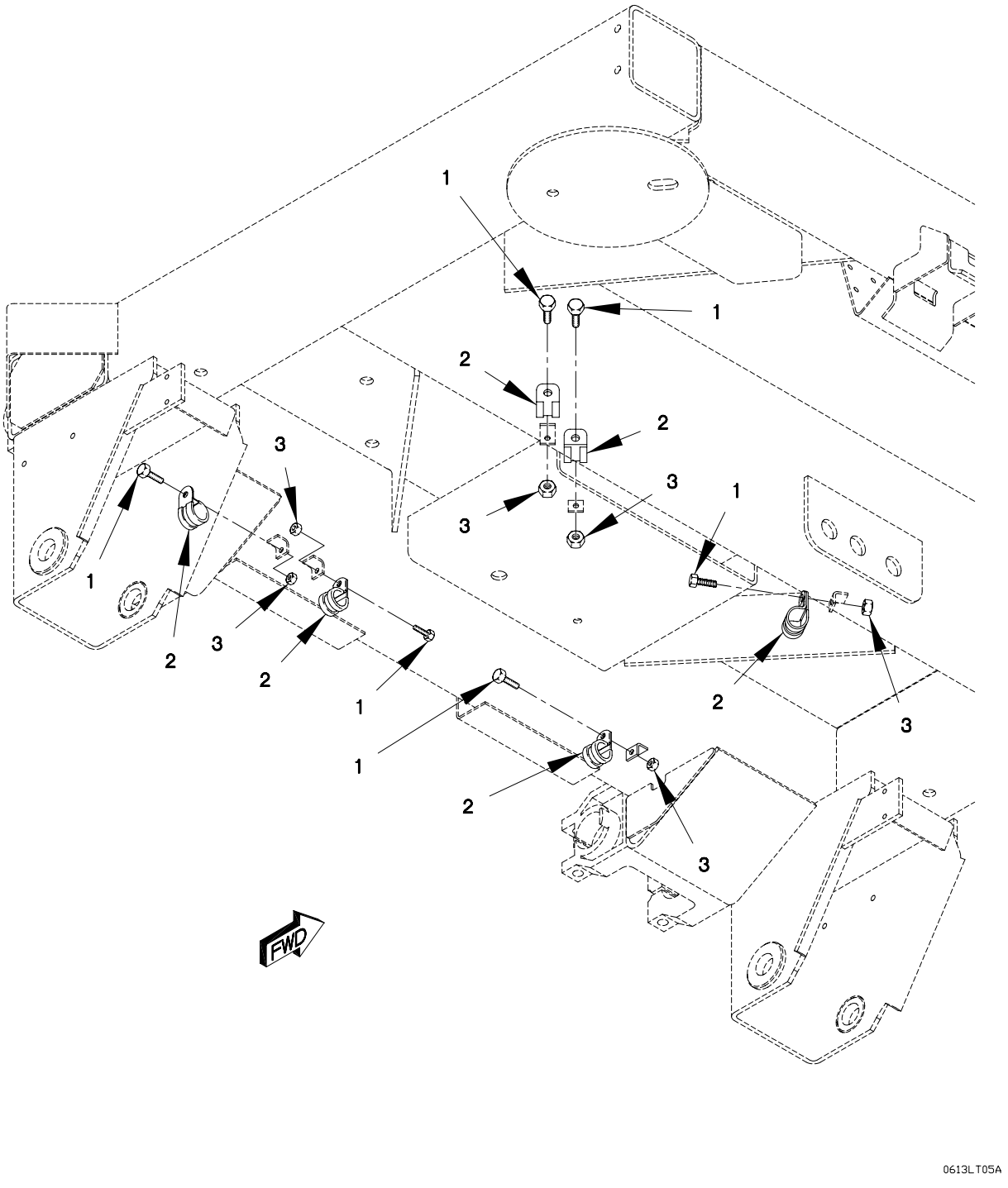


Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 1 of 4)

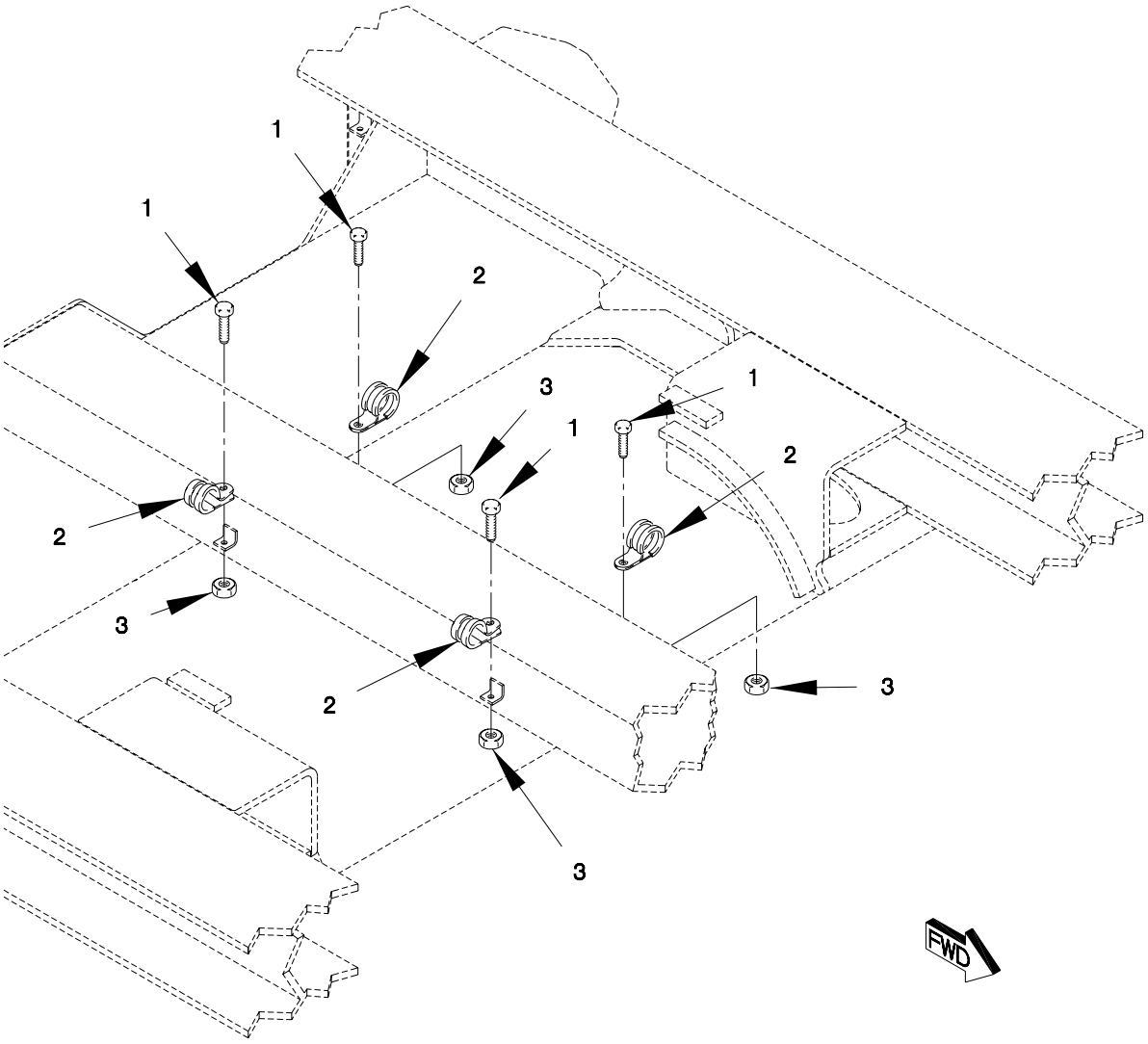


Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 2 of 4)

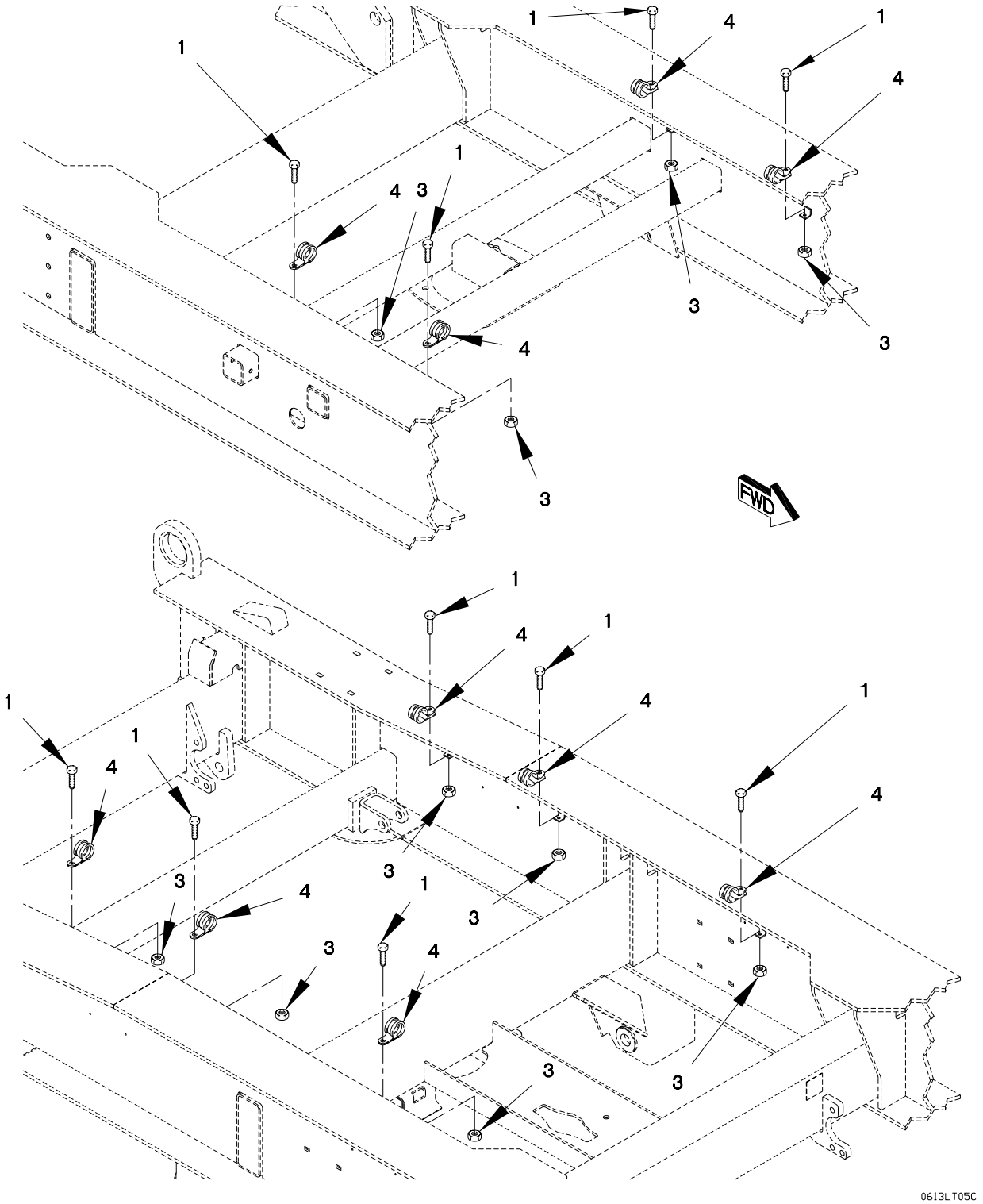


Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 3 of 4)

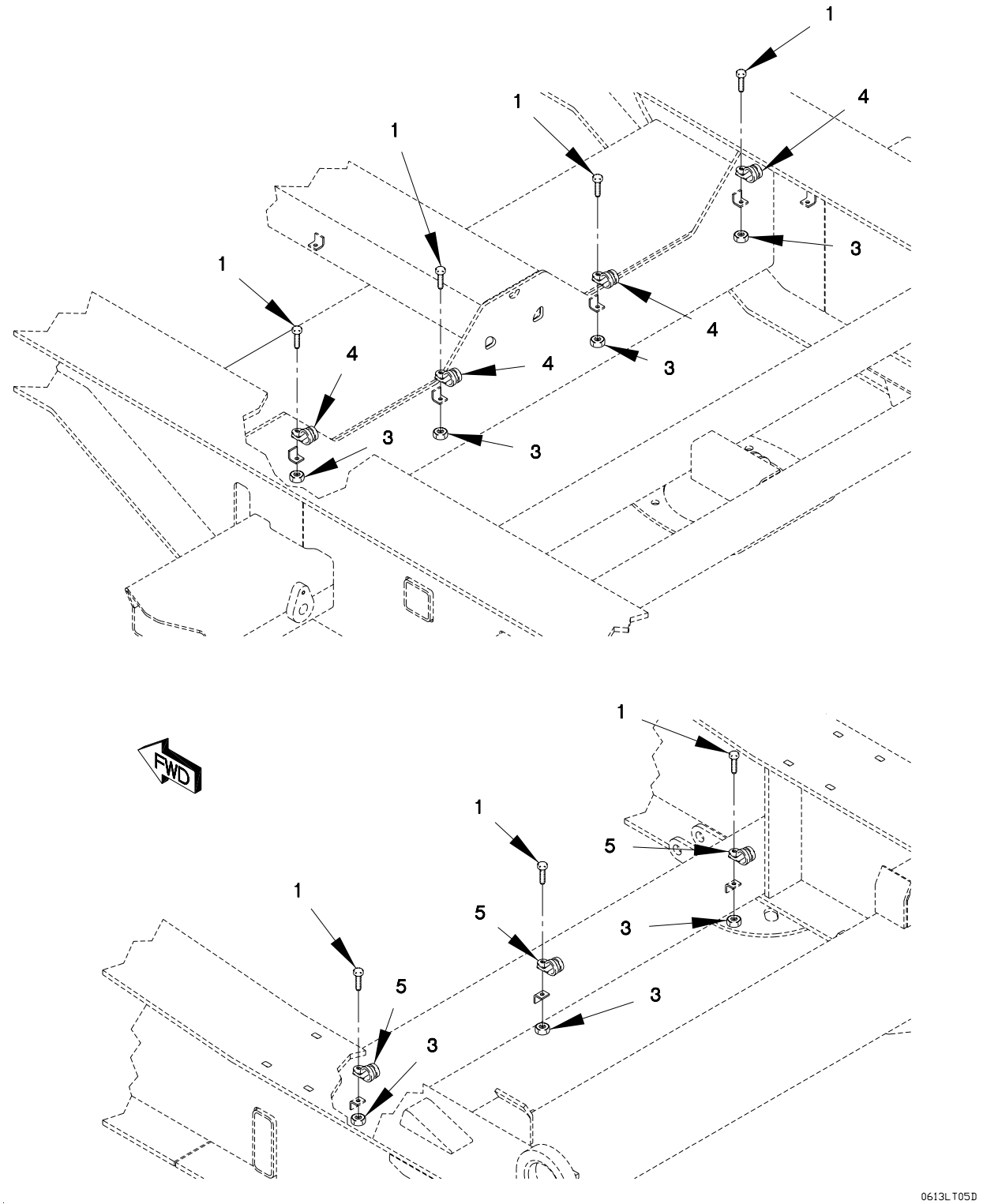


Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 4 of 4)

GROUP 0613 CABLE ROUTING CLAMPS – Continued 0120 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		80204	S210NA38CAD17 354 BNCHI	SCREW,HEX CAP	31
2	PAOZZ		19207	12419079-004	CLAMP,LOOP	12
3	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	NUT,SELF-LOCKING,HE	31
4	PAOZZ		19207	12419079-005	CLAMP,LOOP,HEAVY DU	16
5	PAOZZ		19207	12419079-001	CLAMP,LOOP,HEAVY DU	3
					END OF FIGURE	

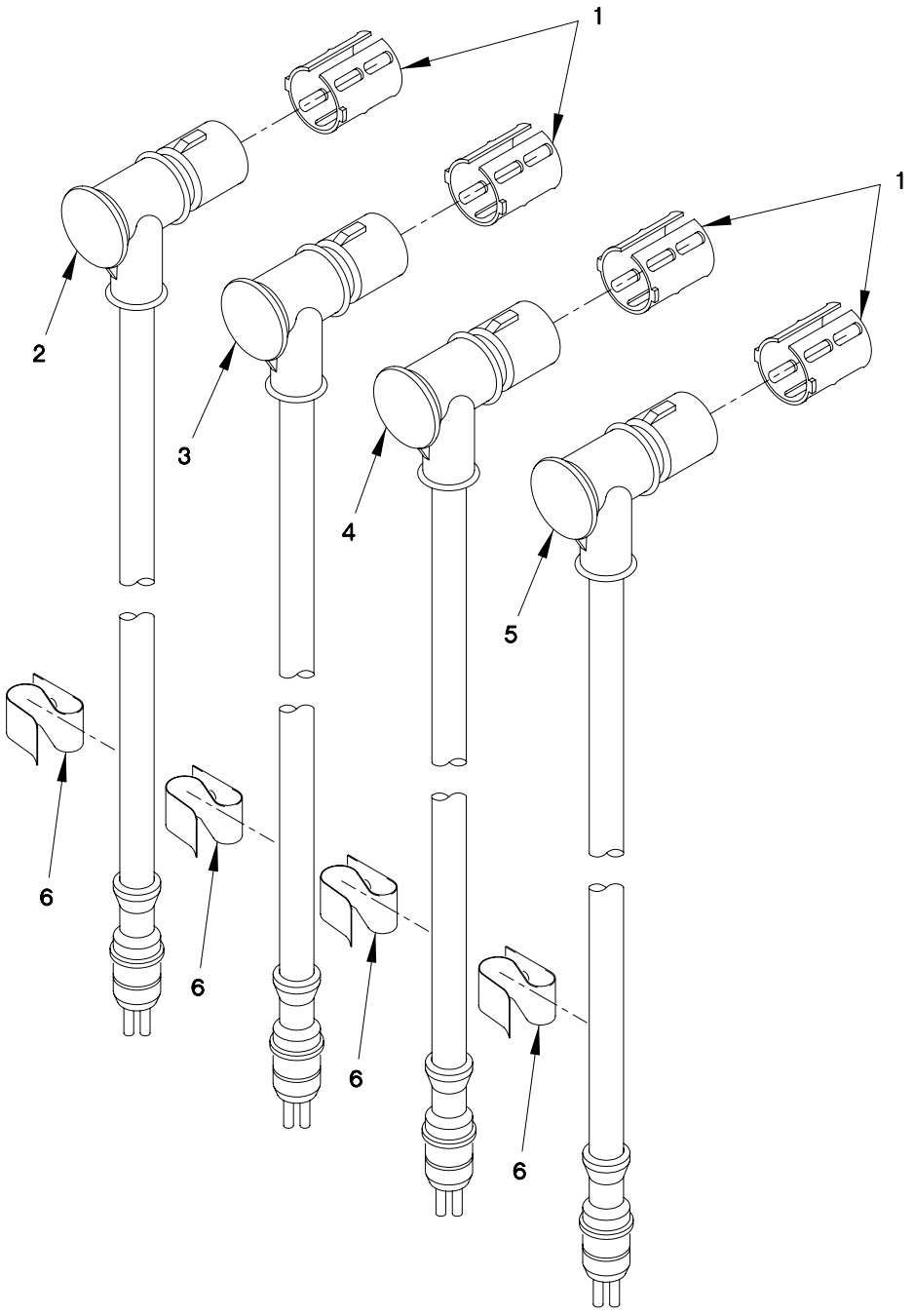


Figure 8. Group 0613 SPEED SENSORS

GROUP 0613 SPEED SENSORS – Continued 0121 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	6150-01-540-3382	19207	12423014-005	EXTENSION,SENSOR (FRONT ROADSIDE)	1
2	PAOZZ	6150-01-540-3395	19207	12423014-007	EXTENSION,SENSOR (REAR ROADSIDE)	1
3	PAOZZ	6150-01-540-3404	19207	12423014-008	EXTENSION,SENSOR (REAR CURBSIDE)	1
4	PAOZZ		19207	12423014-006	EXTENSION,SENSOR (FRONT CURBSIDE)	1
5	PAOZZ		56459	139222	CLIP,SENSOR	4
					END OF FIGURE	

GROUP 0613 ABS RELAY VALVE HARNESS 0122 00

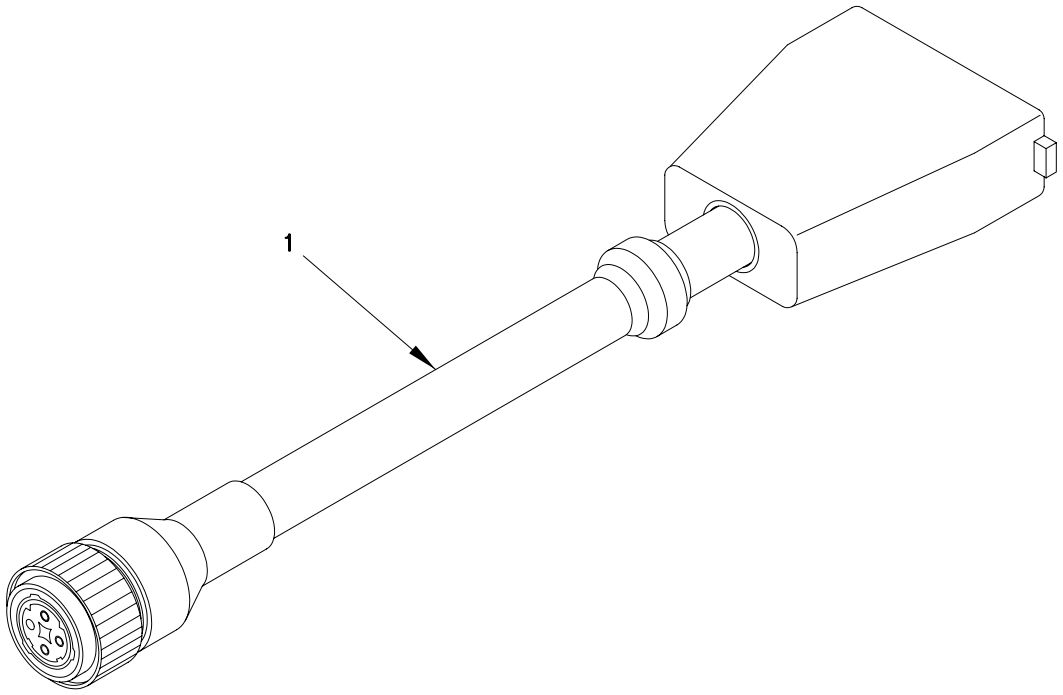


Figure 9. Group 0613 ABS RELAY VALVE HARNESS

GROUP 0613 ABS RELAY VALVE HARNESS – Continued 0122 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	6150-01-540-1512	19207	12486365	CABLE,RELAY	1
					END OF FIGURE	

GROUP 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET 0123 00

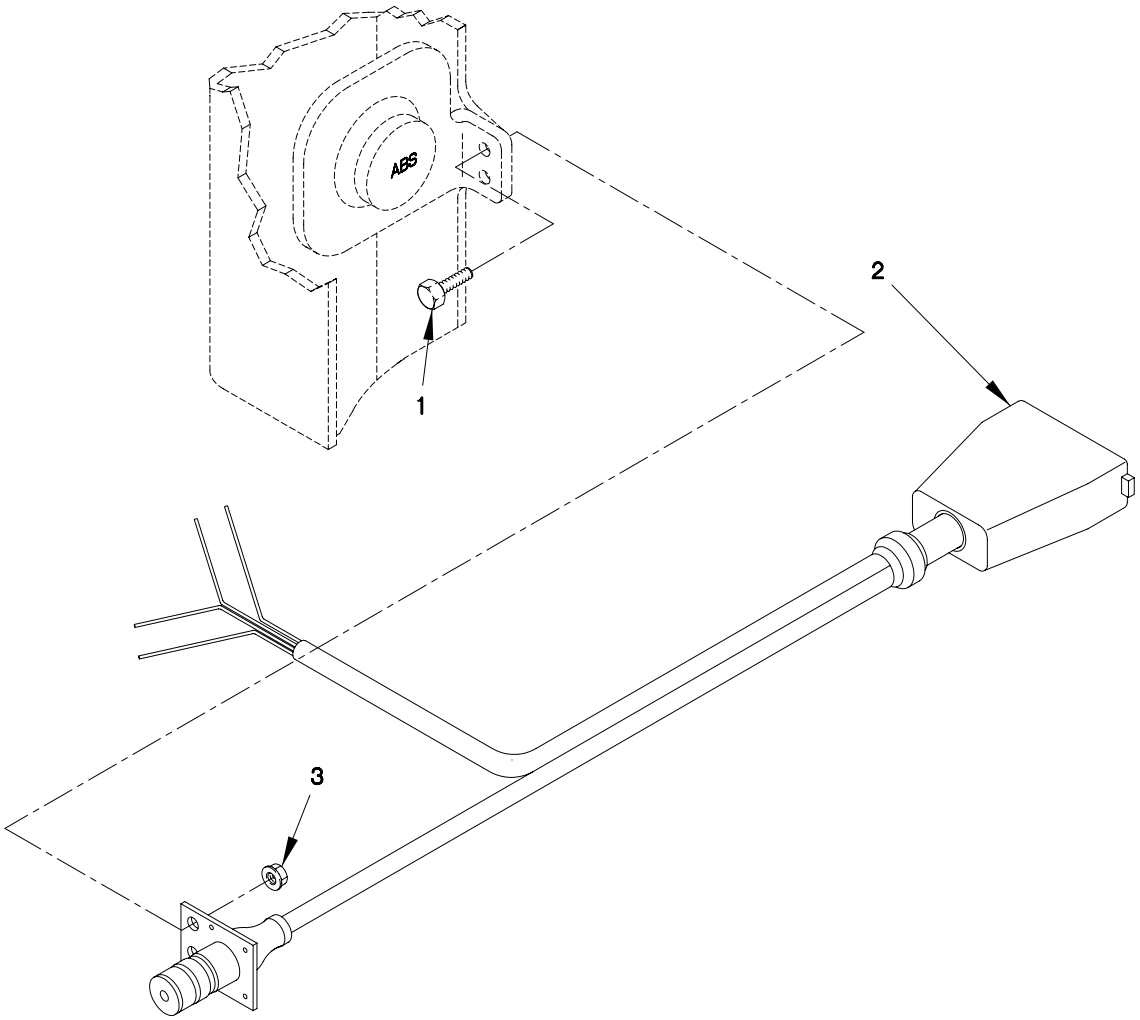


Figure 10. Group 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET (Sheet 1 of 2)
0123 00-1

GROUP 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET – 0123 00 Continued

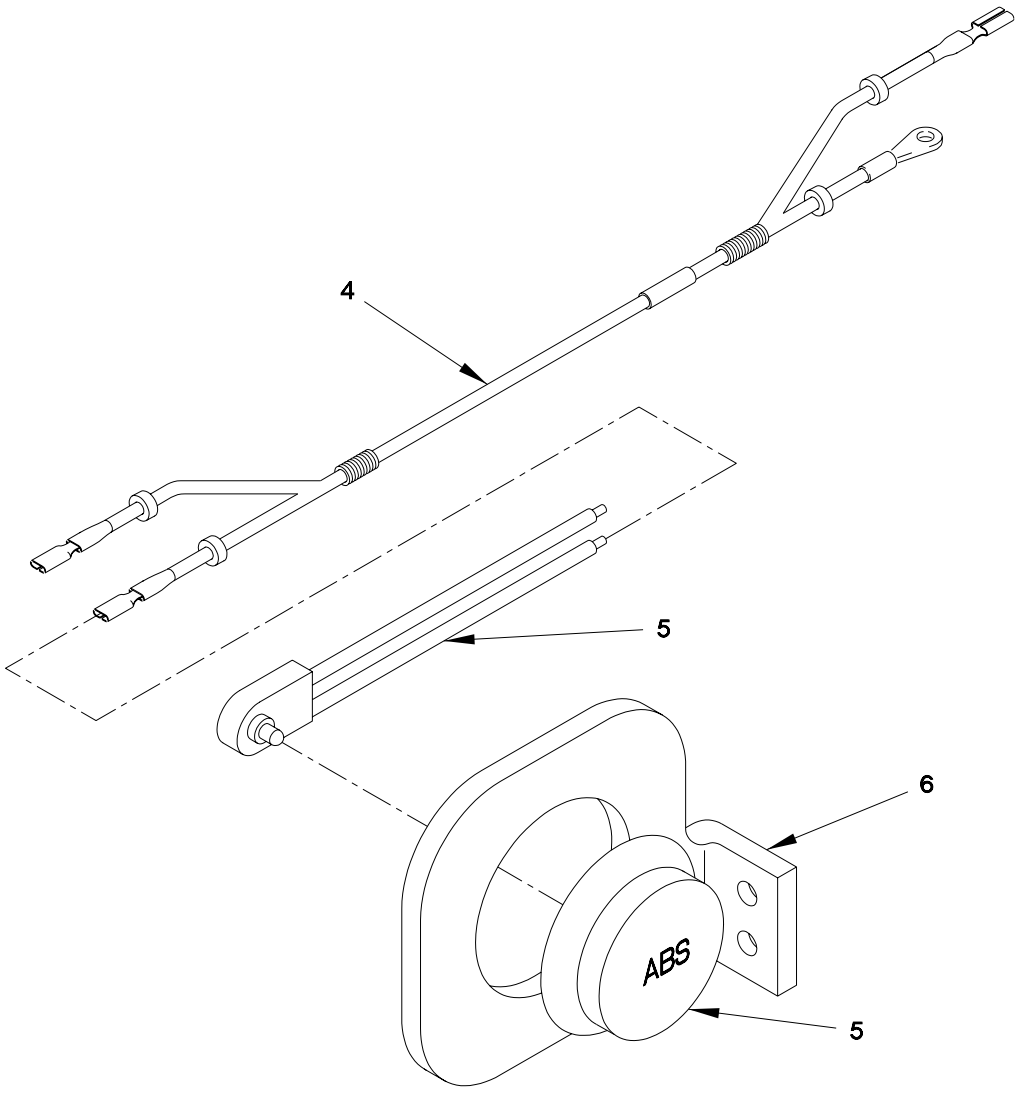


Figure 10. Group 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET (Sheet 2 of 2)

GROUP 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET – 0123 00 Continued

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5305-00-071-2509	80204	B1821BH025C150N	SCREW,CAP,HEXAGON H	2
2	PAOZZ		19207	12443612-001	PWR/DIAGNOSTIC CBL	1
3	PAOZZ	5310-00-761-6882	96906	MS51967-2	NUT,PLAIN,HEXAGON	2
4	PAOZZ		19207	12486421	HARNESS,ABS LIGHT	1
5	PAOZZ		19207	12486432	LIGHT ASSEMBLY,WARN	1
6	PAOZZ		19207	12486416	BRACKET,WARNING LIG	1
					END OF FIGURE	

GROUP 0613 TURNTABLE (FRONT) AXLE & WHEEL END ASSEMBLY 0124 00

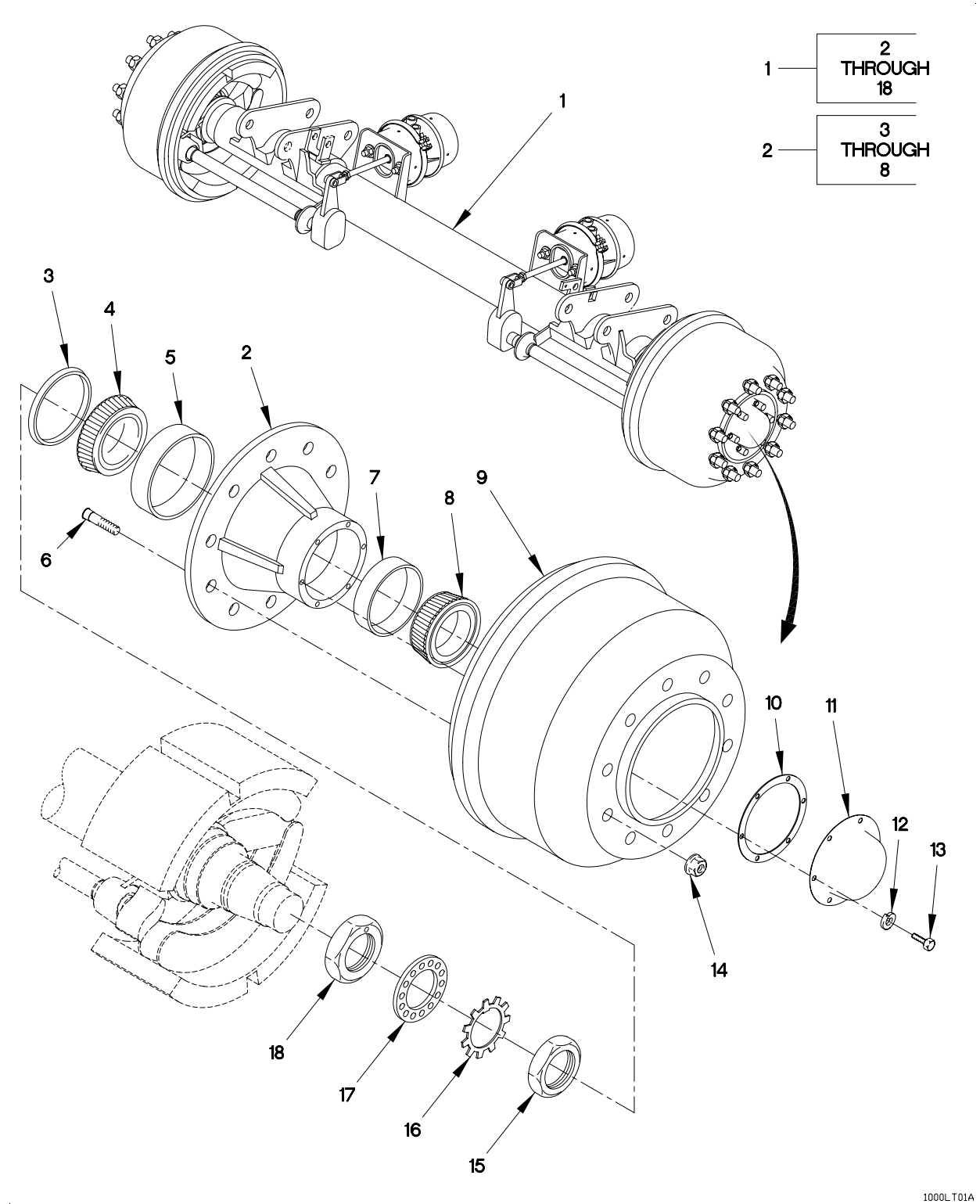


Figure 11. Group 1000 TURNTABLE (FRONT) AXLE & WHEEL END ASSEMBLY

GROUP 0613 TURNTABLE (FRONT) AXLE & WHEEL END ASSEMBLY – 0124 00 Continued

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO		19207	12486370	AXLE ASSEMBLY	1
2	PAOOO	2530-01-540-5291	15460	008-290-13	.HUB ASSEMBLY,10 STU	2
3	PAOZZ		15460	010-055-00	..SEAL	1
4	PAOZZ		15460	031-026-02	..CONE,INNER,BEARING	1
5	PAOZZ	3110-01-540-3474	15460	031-026-01	..BEARING,INNER CUP	1
6	PAOZZ	5307-01-540-5874	15460	007-194-00	..STUD,PRESS-IN	10
7	PAOZZ	3110-01-540-1373	15460	031-027-01	..BEARING,OUTER CUP	1
8	PAOZZ		15460	031-027-02	..CONE,OUTER,BEARING	1
9	PAOZZ		15460	009-043-03	.DRUM	2
10	PAOZZ	5330-01-540-2080	15460	071-124-00	.GASKET,OIL CAP	2
11	PAOZZ	2590-01-539-8686	15460	021-038-02	.OIL CAP	2
12	PAOZZ		15460	005-100-00	.LOCKWASHER,OIL CAP	12
13	PAOZZ		15460	007-157-00	.SCREW,CAP,OIL	12
14	PAOZZ		15460	006-064-02	.NUT,WHEEL,RH	10
14	PAOZZ		15460	006-064-01	.NUT,WHEEL,LH	10
15	PAOZZ	5310-01-540-1948	15460	006-115-00	.NUT,OUTER SPINDLE	2
16	PAOZZ	5310-01-540-0933	15460	005-099-00	.LOCKWASHER,TAB	2
17	PAOZZ	5310-01-540-1394	15460	005-098-00	.LOCKWASHER,INDEXING	2
18	PAOZZ		15460	006-114-00	.NUT,INNER SPINDLE B	2
					END OF FIGURE	

GROUP 1000 TURNTABLE (FRONT) AIR BRAKE ARM & SLACK ADJUSTER 0125 00

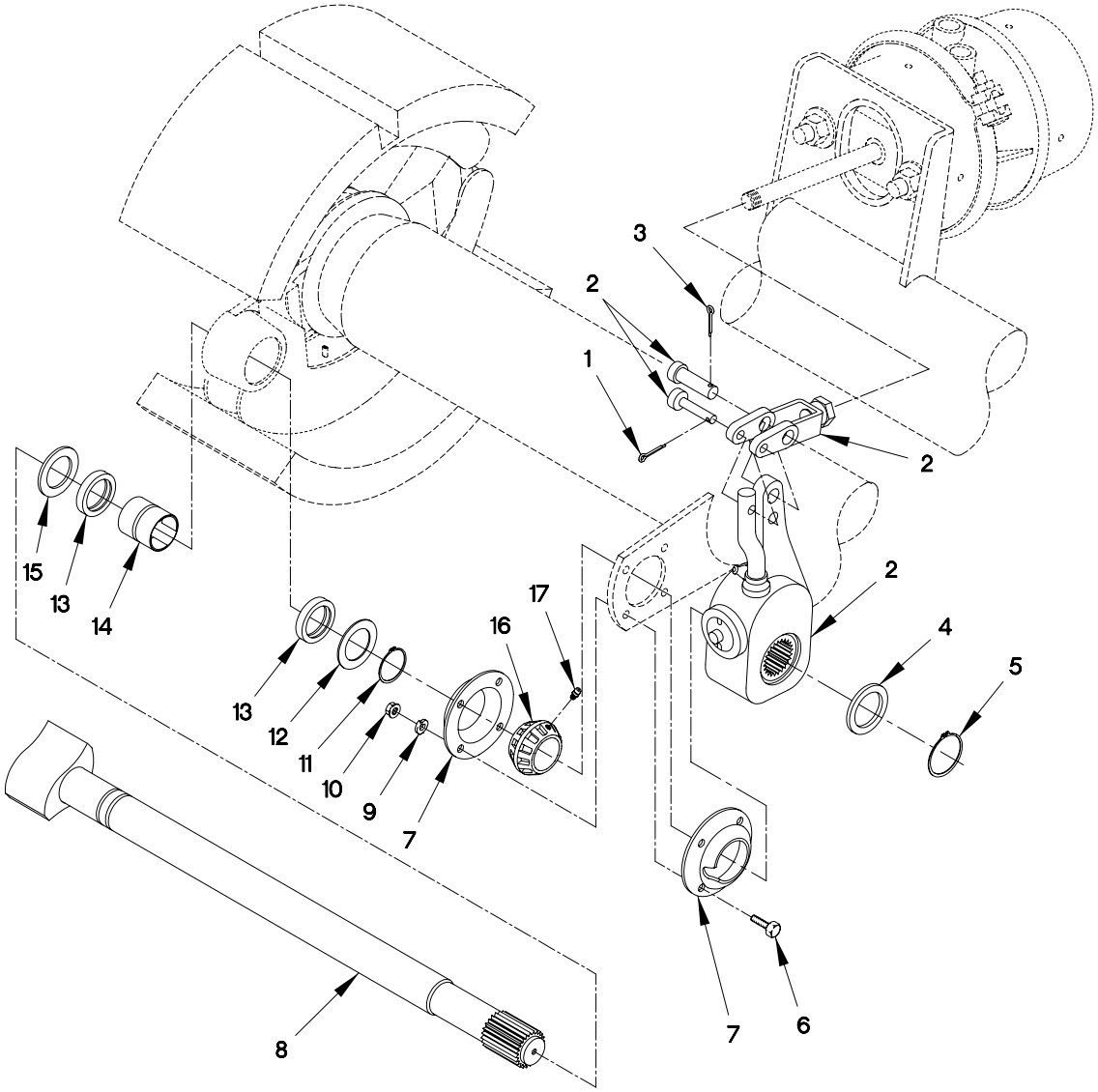


Figure 12. Group 1000 TURNTABLE (FRONT) AIR BRAKE ARM & SLACK ADJUSTER

GROUP 1000 TURNTABLE (FRONT) AIR BRAKE ARM & SLACK ADJUSTER – Continued 0125 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5315-00-252-5986	80205	MS24665-140	PIN,COTTER	2
2	PAOZZ		15460	055-040-98	ADJUSTER,SLACK	2
3	PAOZZ	5315-00-013-7214	80205	MS24665-359	PIN,COTTER	2
4	PAOZZ		15460	005-134-00	WASHER,CAMSHAFT	2
5	PAOZZ		15460	069-078-00	RETAINER,CAMSHAFT	2
6	PAOZZ		15460	007-139-00	BOLT,RETAINER PLATE	8
7	PAOZZ		15460	034-032-00	PLATE,RETAINER	4
8	PAOZZ	2530-01-539-8724	15460	034-192-08	CAMSHAFT	2
9	PAOZZ		15460	005-079-00	LOCKWASHER,COVER	8
10	PAOZZ		15460	006-099-00	NUT,RETAINER PLATE	8
11	PAOZZ		15460	069-020-00	RING,SNAP	2
12	PAOZZ	5310-01-540-0261	15460	005-097-00	WASHER	2
13	PAOZZ	5330-01-487-4641	15460	010-052-00	SEAL,GREASE	4
14	PAOZZ		15460	014-056-00	BUSHING,CAMSHAFT	2
15	PAOZZ		15460	005-096-00	WASAHER,CAMSHAFT	2
16	PAOZZ	5365-01-540-1469	15460	014-058-00	BUSHING,CAMSHAFT	2
17	PAOZZ		15460	061-006-00	FITTING,GREASE,65	2
					END OF FIGURE	

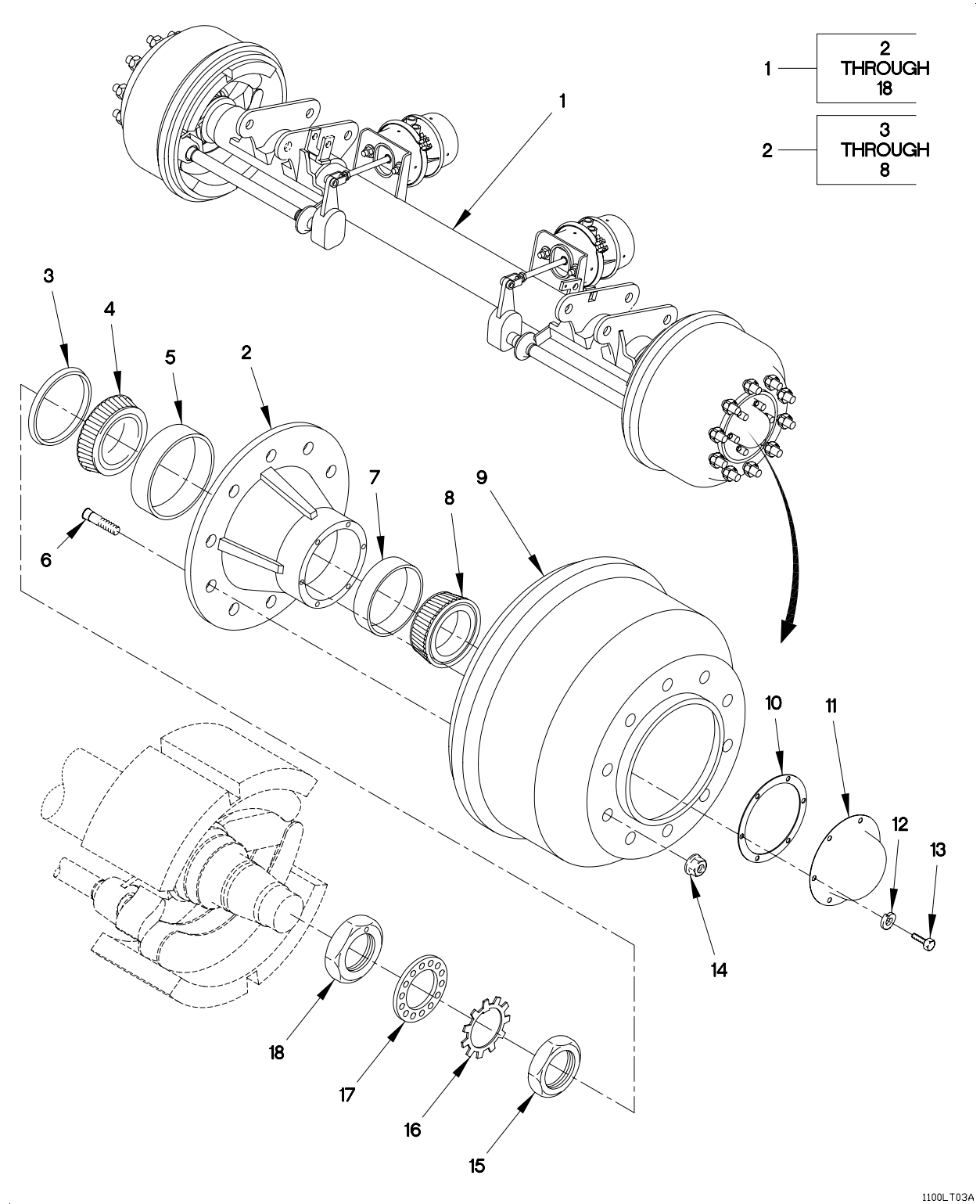


Figure 13. Group 1100 REAR AXLE & WHEEL END ASSEMBLY

GROUP 1100 REAR AXLE & WHEEL END ASSEMBLY – Continued 0126 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO		19207	12486370	AXLE ASSEMBLY	1
2	PAOOO	2530-01-540-5291	15460	008-290-13	.HUB ASSEMBLY,10 STU	2
3	PAOZZ		15460	010-055-00	..SEAL	1
4	PAOZZ		15460	031-026-02	..CONE,INNER,BEARING	1
5	PAOZZ	3110-01-540-3474	15460	031-026-01	..BEARING,INNER CUP	1
6	PAOZZ	5307-01-540-5874	15460	007-194-00	..STUD,PRESS-IN	10
7	PAOZZ	3110-01-540-1373	15460	031-027-01	..BEARING,OUTER CUP	1
8	PAOZZ		15460	031-027-02	..CONE,OUTER,BEARING	1
9	PAOZZ		15460	009-043-03	.DRUM	2
10	PAOZZ	5330-01-540-2080	15460	071-124-00	.GASKET,OIL CAP	2
11	PAOZZ	2590-01-539-8686	15460	021-038-02	.OIL CAP	2
12	PAOZZ		15460	005-100-00	.LOCKWASHER,OIL CAP	12
13	PAOZZ		15460	007-157-00	.SCREW,CAP,OIL	12
14	PAOZZ		15460	006-064-02	.NUT,WHEEL,RH	10
14	PAOZZ		15460	006-064-01	.NUT,WHEEL,LH	10
15	PAOZZ	5310-01-540-1948	15460	006-115-00	.NUT,OUTER SPINDLE	2
16	PAOZZ	5310-01-540-0933	15460	005-099-00	.LOCKWASHER,TAB	2
17	PAOZZ	5310-01-540-1394	15460	005-098-00	.LOCKWASHER,INDEXING	2
18	PAOZZ		15460	006-114-00	.NUT,INNER SPINDLE B	2
					END OF FIGURE	

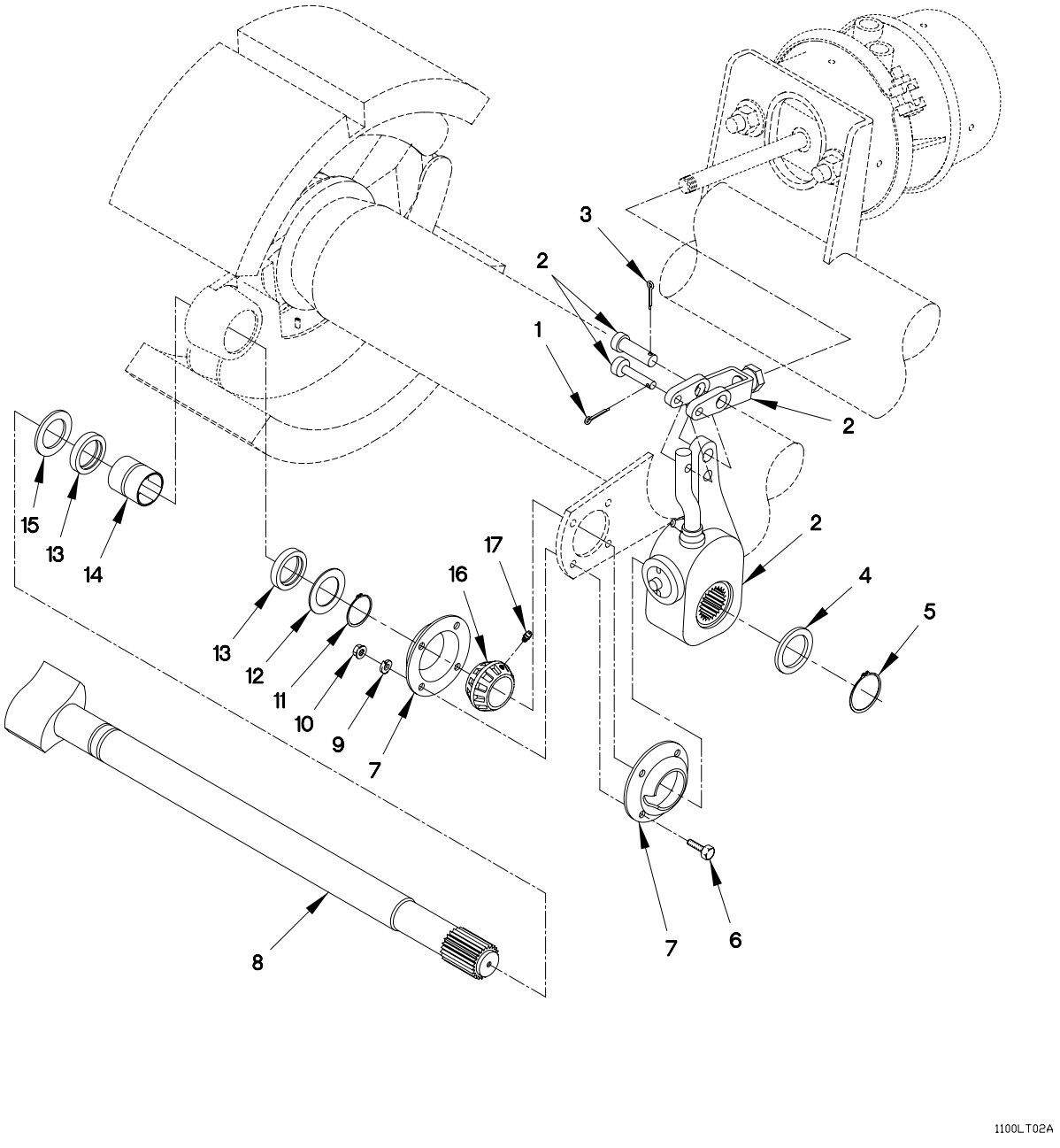


Figure 14. Group 1100 REAR AIR BRAKE ARM & SLACK ADJUSTER

GROUP 1100 REAR AIR BRAKE ARM & SLACK ADJUSTER – Continued 0127 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5315-00-252-5986	80205	MS24665-140	PIN,COTTER	2
2	PAOZZ		15460	055-040-98	ADJUSTER,SLACK	2
3	PAOZZ	5315-00-013-7214	80205	MS24665-359	PIN,COTTER	2
4	PAOZZ		15460	005-134-00	WASHER,CAMSHAFT	2
5	PAOZZ		15460	069-078-00	RETAINER,CAMSHAFT	2
6	PAOZZ		15460	007-139-00	BOLT,RETAINER PLATE	8
7	PAOZZ		15460	034-032-00	PLATE,RETAINER	4
8	PAOZZ	2530-01-539-8724	15460	034-192-08	CAMSHAFT	2
9	PAOZZ		15460	005-079-00	LOCKWASHER,COVER	8
10	PAOZZ		15460	006-099-00	NUT,RETAINER PLATE	8
11	PAOZZ		15460	069-020-00	RING,SNAP	2
12	PAOZZ	5310-01-540-0261	15460	005-097-00	WASHER	2
13	PAOZZ	5330-01-487-4641	15460	010-052-00	SEAL,GREASE	4
14	PAOZZ		15460	014-056-00	BUSHING,CAMSHAFT	2
15	PAOZZ		15460	005-096-00	WASAHER,CAMSHAFT	2
16	PAOZZ	5365-01-540-1469	15460	014-058-00	BUSHING,CAMSHAFT	2
17	PAOZZ		15460	061-006-00	FITTING,GREASE,65	2
					END OF FIGURE	

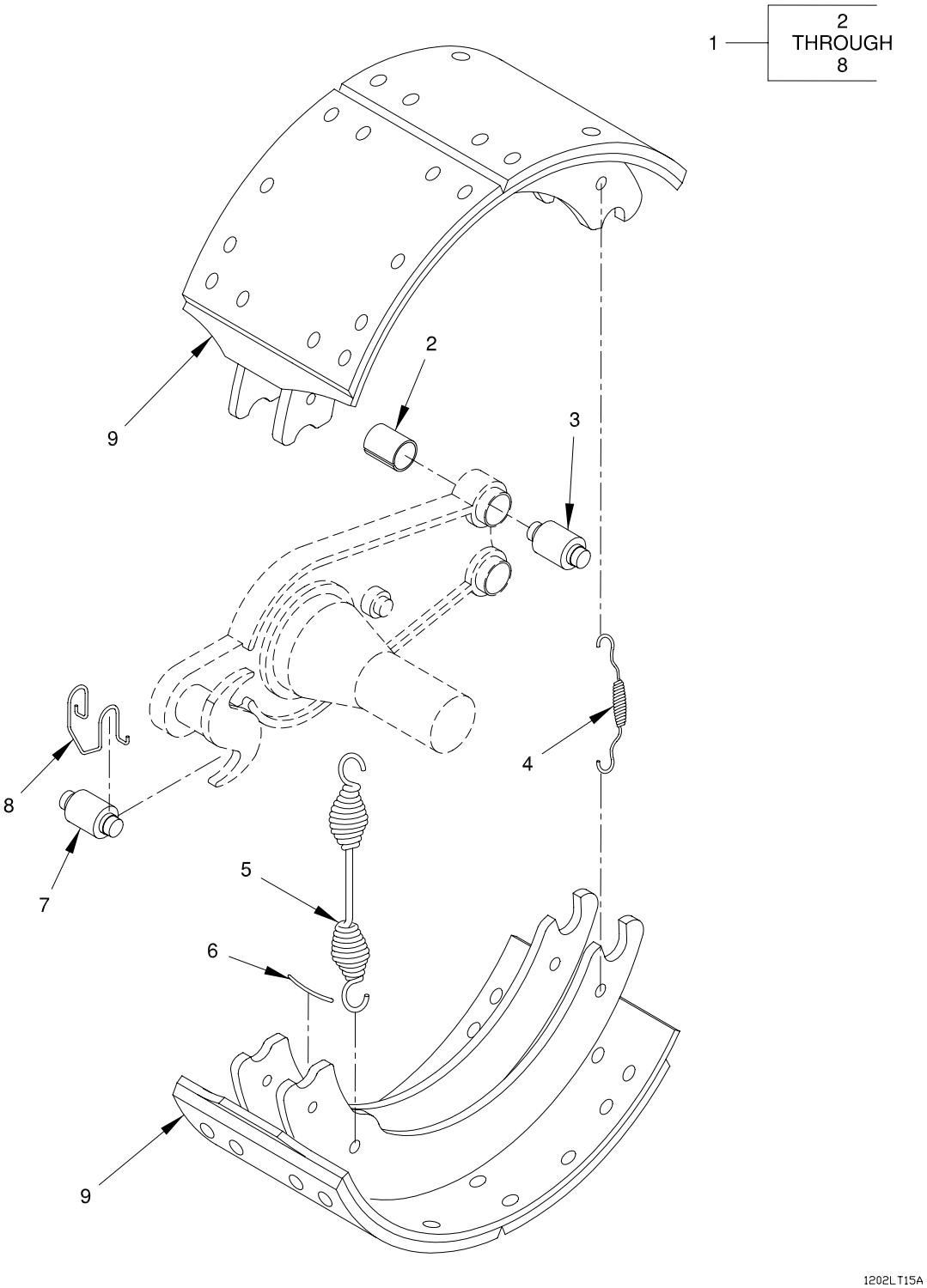


Figure 15. Group 1202 BRAKE PADS ASSEMBLY

GROUP 1202 BRAKE PADS ASSEMBLY – Continued 0128 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAFZZ	2530-01-539-8697	15460	K71-136-00	BRAKE SHOE KIT	2
2	KFFZZ		15460	014-068-00	.BUSHING,SPIDER	2
3	PFFZZ		15460	056-017-00	.PIN,ANCHOR	2
4	KFFZZ		15460	046-097-00	.SPRING-KEEPER	2
5	PFFZZ		15460	046-096-00	.SPRING-RETRACTOR	1
6	PFFZZ		15460	056-018-00	.SPRING-RETAINER	2
7	KFFZZ		15460	014-065-00	.ROLLER	2
8	PFFZZ	5340-01-540-1257	15460	071-122-00	.ROLLER-RETAINER	2
9	PAOZZ		15460	040-180-00	BRAKE SHOE	4
					END OF FIGURE	

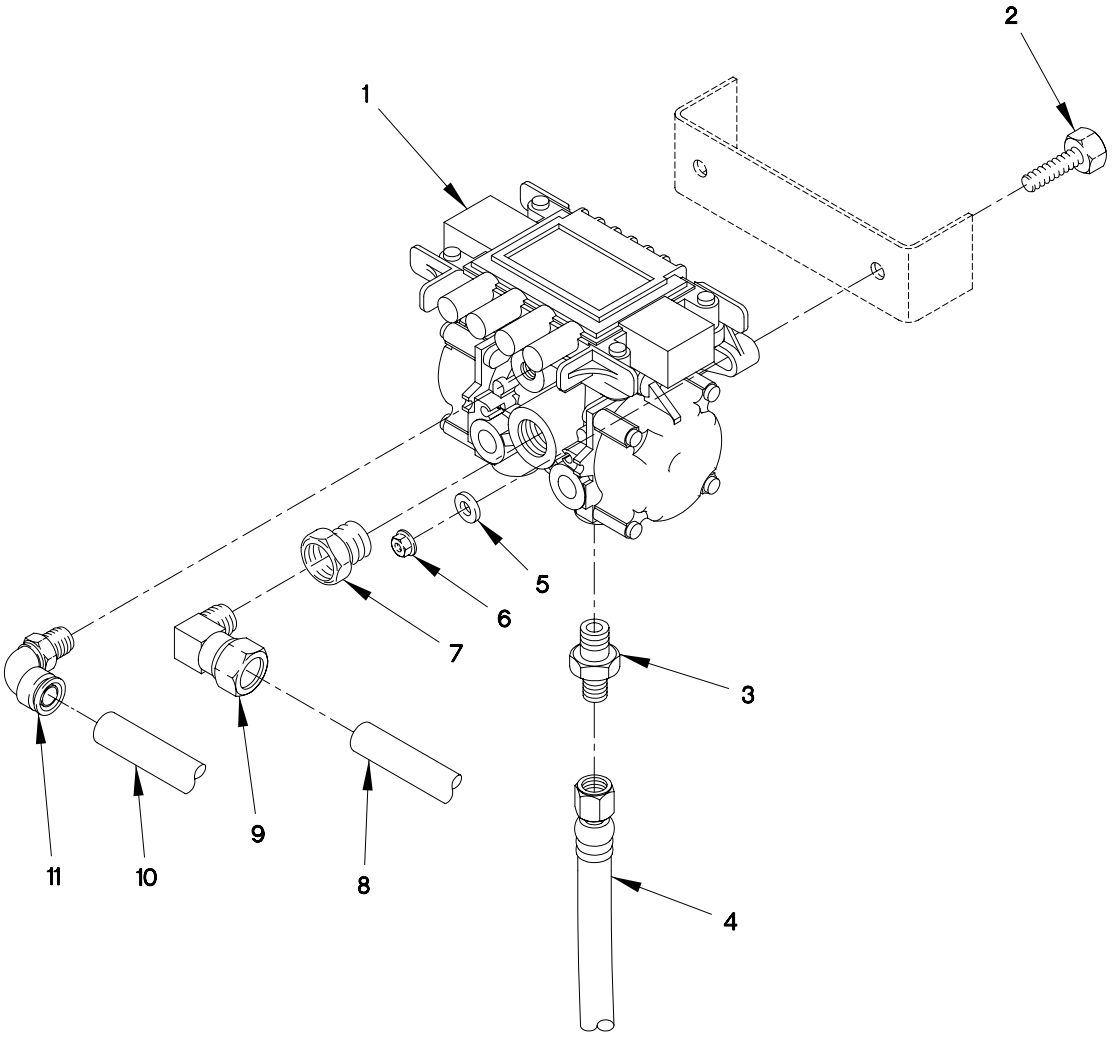


Figure 16. Group 1208 ABS CONTROL UNIT, FITTINGS, HOSES & TUBING

GROUP 1208 ABS CONTROL UNIT, FITTINGS, HOSES & TUBING – Continued 0129 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5963-01-500-2303	0FW39	12443610	ELECT CONTROL UNIT	1
2	PAOZZ	5305-01-325-8387	96906	MS90725-64	SCREW,CAP,HEXAGON H	2
3	PAOZZ	4730-00-439-1722	79470	48X6X6	ADAPTER,STRAIGHT	2
4	PAOZZ	4720-01-540-1542	19207	12420062-020	HOSE,NON-METALLIC	2
5	PAOZZ	5310-00-167-0804	80205	AN960C616	WASHER, FLAT	2
6	PAOZZ	5310-01-445-6346	19207	12412476-09	NUT,SELF-LOCKING,HE	2
7	PAOZZ	4730-01-311-0242	81343	12-8 130140B	BUSHING,PIPE	1
8	MOOZZ		0FW39	12420572-010X	HOSE,NONMETALLIC	V
9	PAOZZ	4730-01-102-4123	81343	10-8 100202BA	ELBOW,PIPE TO TUBE	1
10	MOOZZ		0FW39	12420572-006X	TUBE,NONMETALLIC	V
11	PAOZZ	4730-01-274-1825	81343	6-6 100202BA	ELBOW,PIPE TO TUBE	1
					END OF FIGURE	

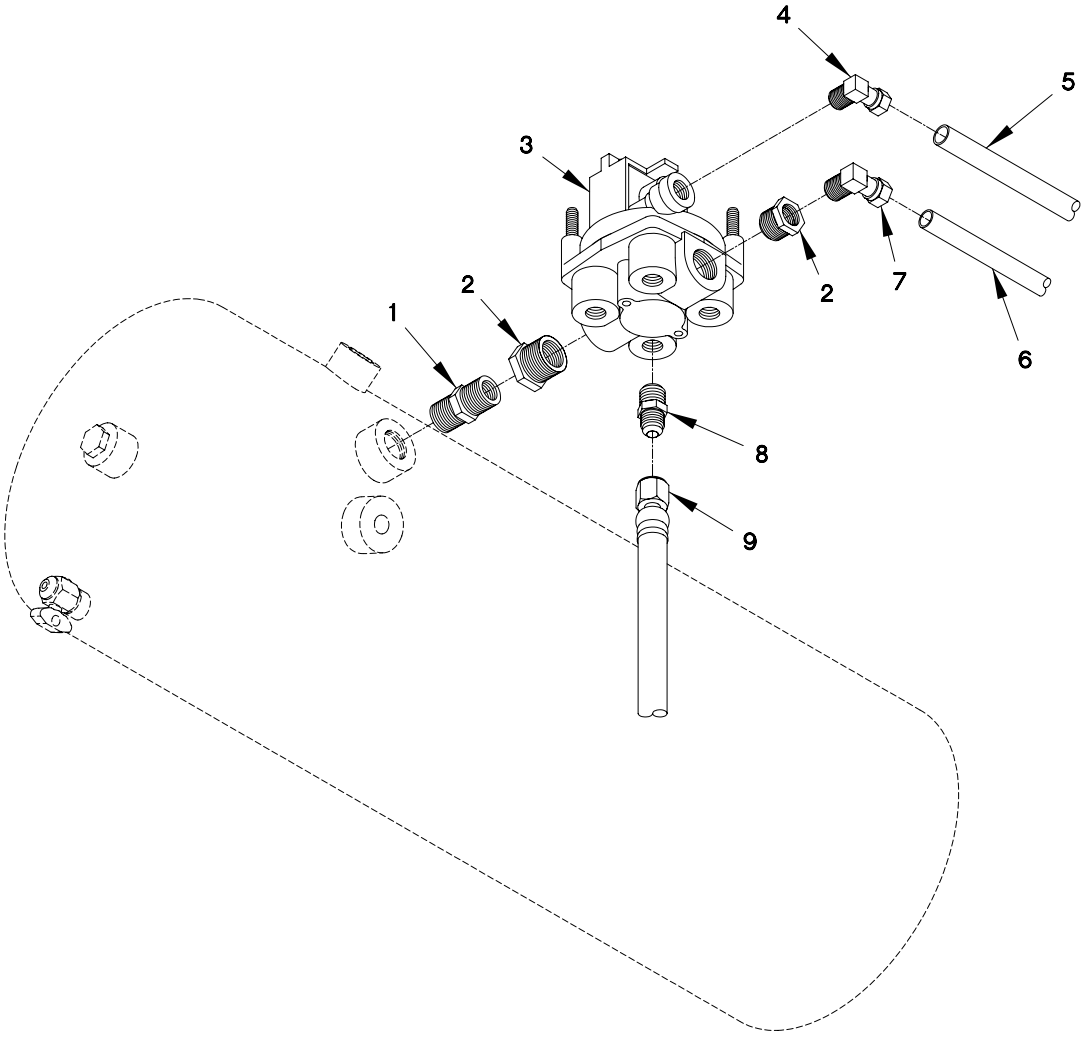


Figure 17. Group 1208 ABS RELAY MODULATOR VALVE

GROUP 1208 ABS RELAY MODULATOR VALVE – Continued 0130 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	4730-01-540-1489	81343	8-6 140137B	BUSHING,PIPE	1
2	PAOZZ	4730-01-311-0242	81343	12-8 130140B	BUSHING,PIPE	2
3	PAOZZ		19207	12486369	MODULATOR,RELAY ABS	1
4	PAOZZ	4730-01-274-1825	81343	6-6 100202BA	ELBOW,PIPE TO TUBE	1
5	MOOZZ		0FW39	12420572-006X	TUBE,NONMETALLIC	V
6	MOOZZ		0FW39	12420572-008X	HOSE,NONMETALLIC	V
7	PAOZZ	4730-01-115-6643	81343	8-8 100202BA	ELBOW,PIPE TO TUBE	1
8	PAOZZ	4730-00-439-1722	79470	48X6X6	ADAPTER,STRAIGHT	2
9	PAOZZ	4720-01-540-1542	19207	12420062-020	HOSE,NON-METALLIC	2
					END OF FIGURE	

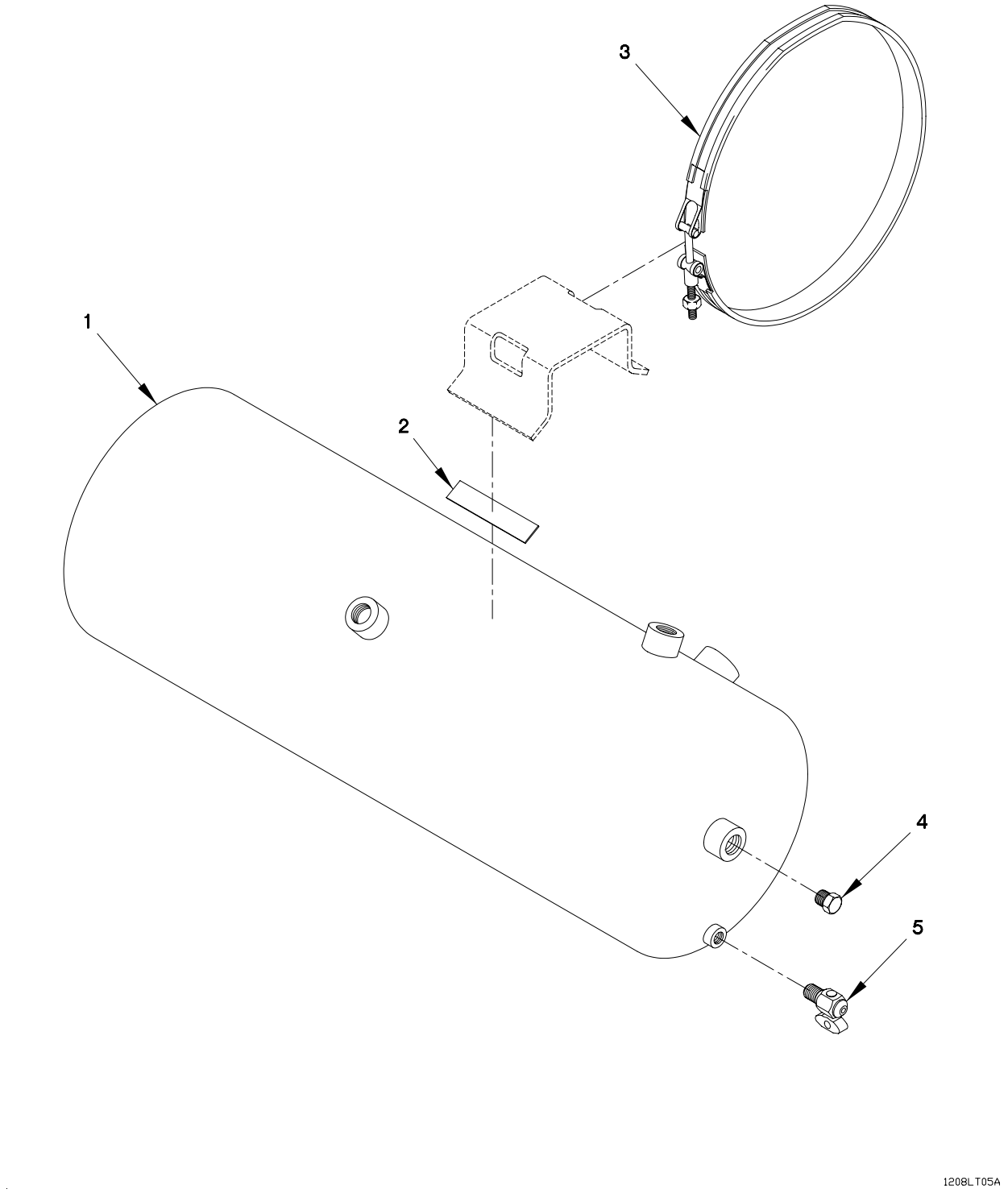


Figure 18. Group 1208 AIR TANKS, DRAIN VALVE, CLAMPS & FITTINGS

GROUP 1208 AIR TANKS, DRAIN VALVE, CLAMPS & FITTINGS – Continued 0131 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5430-01-479-5606	19207	12442962-006	TANK,PRESSURE	2
2	PAOZZ		19207	12486397	PAD,ISOLATION	8
3	PAOZZ		19207	12421379-013	CLAMP,UTILITY BAND	4
4	PAOZZ	4730-01-213-7733	81343	6 130109AB	PLUG,PIPE	4
5	PAOZZ	4820-01-363-2117	6721	N-30256-C	COCK,SHUTOFF,SCREW	2
					END OF FIGURE	

GROUP 1208 EMERGENCY/SERVICE GLADHANDS, HOSES & FITTINGS 0132 00

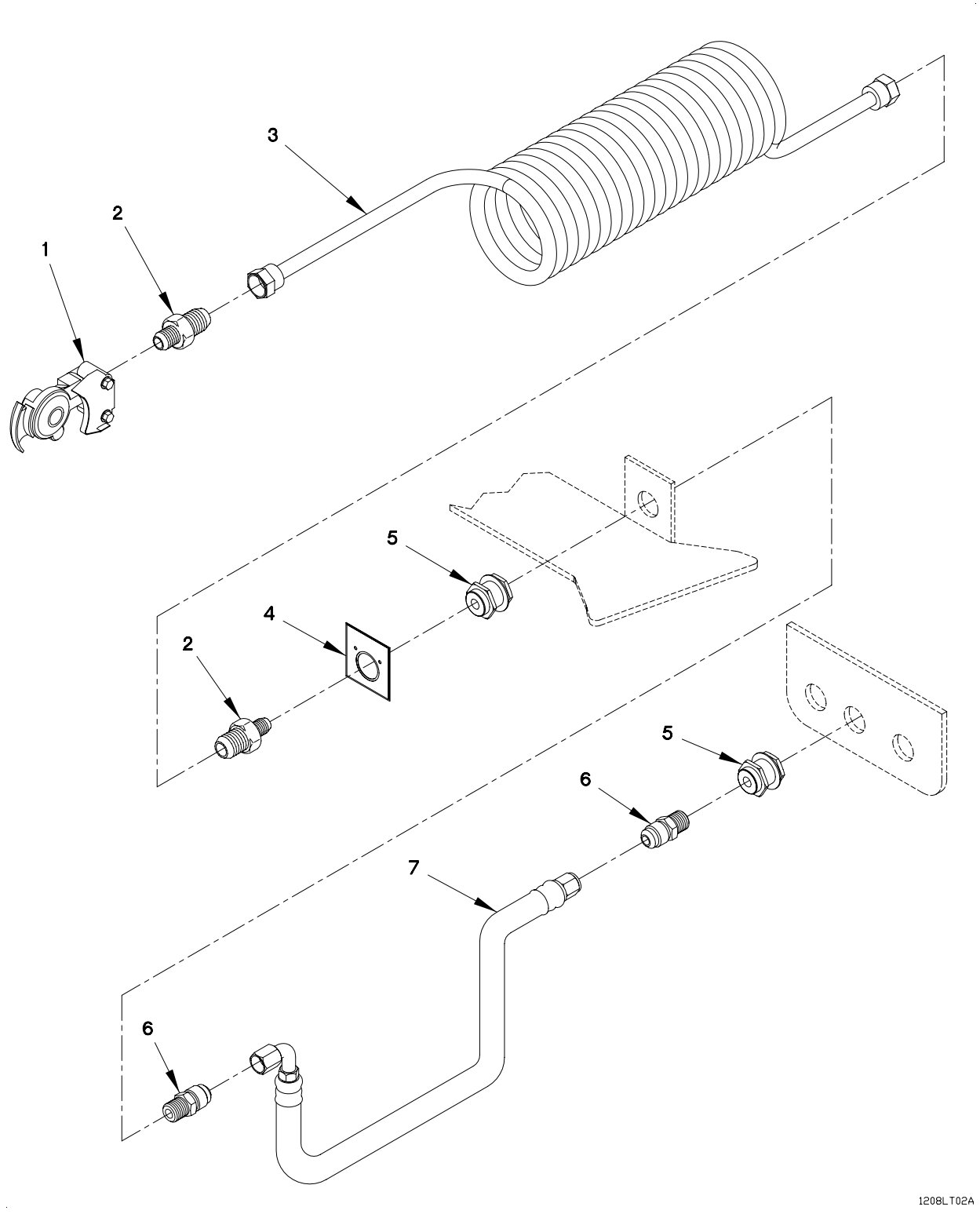


Figure 19. Group 1208 EMERGENCY/SERVICE GLADHANDS, HOSES & FITTINGS

GROUP 1208 EMERGENCY/SERVICE GLADHANDS, HOSES & FITTINGS – Continued

0132 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	3040-01-382-8736	19207	12414667-001	COUPLER,AIR BRAKE EMERGENCY	1
1	PAOZZ	4730-01-384-1441	19207	12414668-001	GLADHAND,SERVICE AS SERVICE	1
2	PAOZZ	4730-01-540-1489	81343	8-6 140137B	BUSHING,PIPE	4
3	PAOZZ	4720-01-479-7709	19207	12419965-001	HOSE ASSEMBLY,NONME SERVICE	1
3	PAOZZ	4720-01-479-7711	19207	12419965-002	HOSE ASSEMBLY,NONME EMERGENCY	1
4	PAOZZ		19207	12378849	PLATE,IDENTIFICATIO EMERGENCY	1
4	PAOZZ	9905-01-446-0253	19207	12378849-001	PLATE,IDENTIFICATIO SERVICE	1
5	PAOZZ	4730-01-540-1267	19207	12417661-002	COUPLING PIPE	4
6	PAOZZ		81343	8-6-010102B	CONNECTOR MALE	4
7	PAOZZ		19207	12420062-022	HOSE,NON-METELLIC EMERGENCY	4
7	PAOZZ	4720-01-540-1477	19207	12420062-023	HOSE,NON-METELLIC SERVICE	4

END OF FIGURE

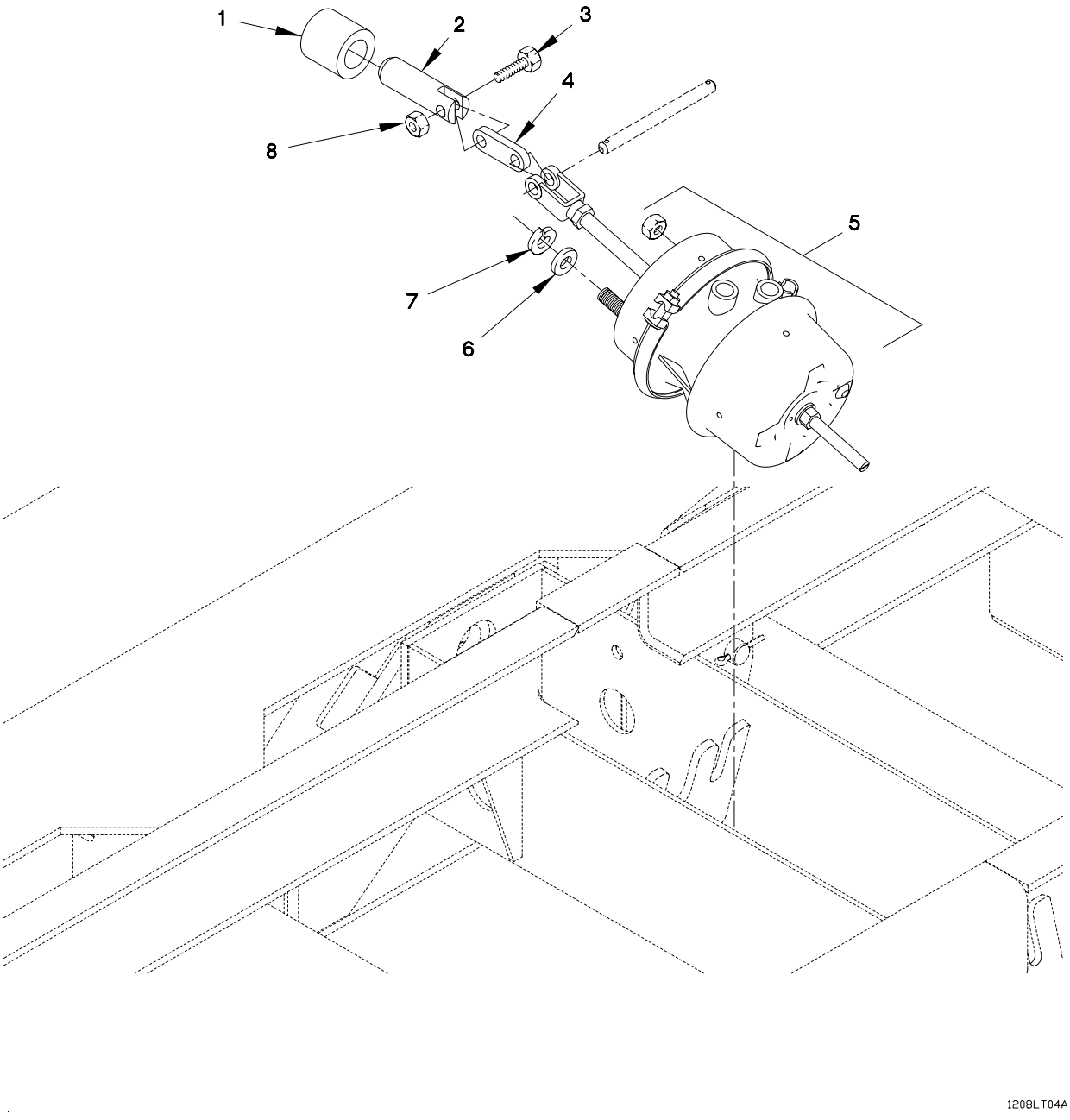


Figure 20. Group 1208 AIR CHAMBERS & SPRING BRAKE (Sheet 1 of 2)

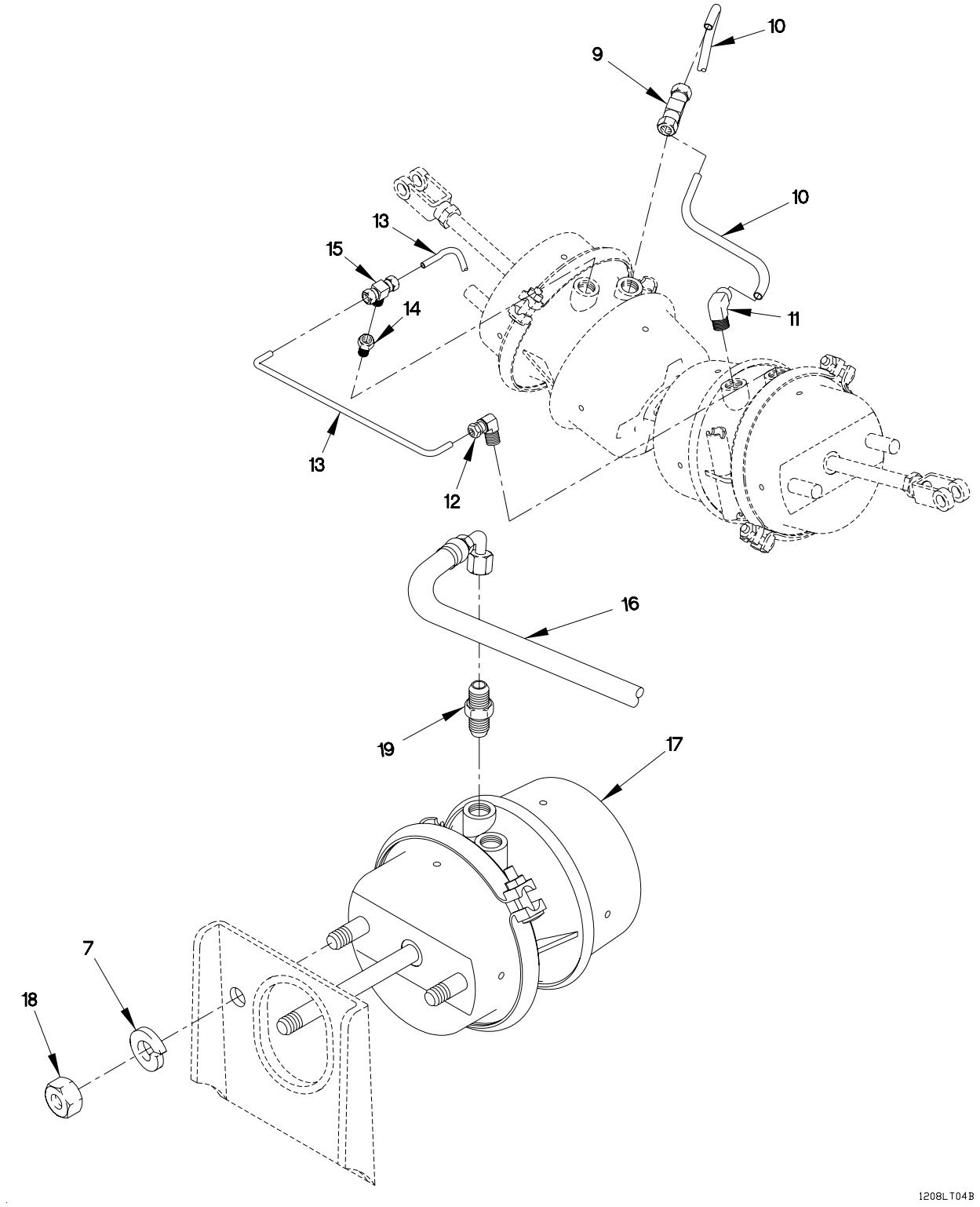


Figure 20. Group 1208 AIR CHAMBERS & SPRING BRAKE (Sheet 2 of 2)

GROUP 1208 AIR CHAMBERS & SPRING BRAKE – Continued 0133 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	XAOZZ		19207	12486514-117	BUSHING,LOAD BEARIN	1
2	PAOZZ	5315-01-540-1498	19207	12486417	PIN,RAIL LOCK	2
3	PAOZZ	5305-00-071-2071	80204	B1821BH050C200N	SCREW,CAP,HEXAGON H	2
4	PAOZZ	5340-01-540-3726	19207	12486420	LINK,PIN,RAIL LOCK	2
5	PAOZZ	3040-01-540-3475	19207	12486571	AIR CHAMBER,SPRING	2
6	PAOZZ		19207	12414314-009	WASHER,FLAT	2
7	PAOZZ	5310-00-820-6653	80205	MS35338-50	WASHER,LOCK	12
8	PAOZZ	5310-01-407-7178	19207	12412476-11	NUT,SELF-LOCKING,HE	2
9	PAOZZ	4730-01-283-1877	81343	6-6-6 100425BA	TEE,PIPE TO TUBE	1
10	MOOZZ		0FW39	12420572-006X	TUBE,NONMETALLIC	V
11	PAOZZ	4730-01-274-1825	81343	6-6 100202BA	ELBOW,PIPE TO TUBE	1
12	PAOZZ	4730-01-085-6577	81343	4-6 100202BA	ELBOW,PIPE TO TUBE	1
13	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
14	PAOZZ	4730-00-202-6491	93061	209P-6-4	BUSHING,PIPE	1
15	PAOZZ	4730-01-123-2946	81343	4-4-4 100425BA	TEE,PIPE TO TUBE	1
16	PAOZZ	4720-01-540-1752	19207	12420062-021	HOSE,NON-METALLIC	4
17	PAOZZ	2530-01-539-8888	15460	034-058-01	AIR CHAMBER ASSEMBL	4
18	PAOZZ	5310-00-763-8920	96906	MS51967-20	NUT,PLAIN,HEXAGON	8
19	PAOZZ	4730-00-439-1722	79470	48X6X6	ADAPTER,STRAIGHT	4

END OF FIGURE

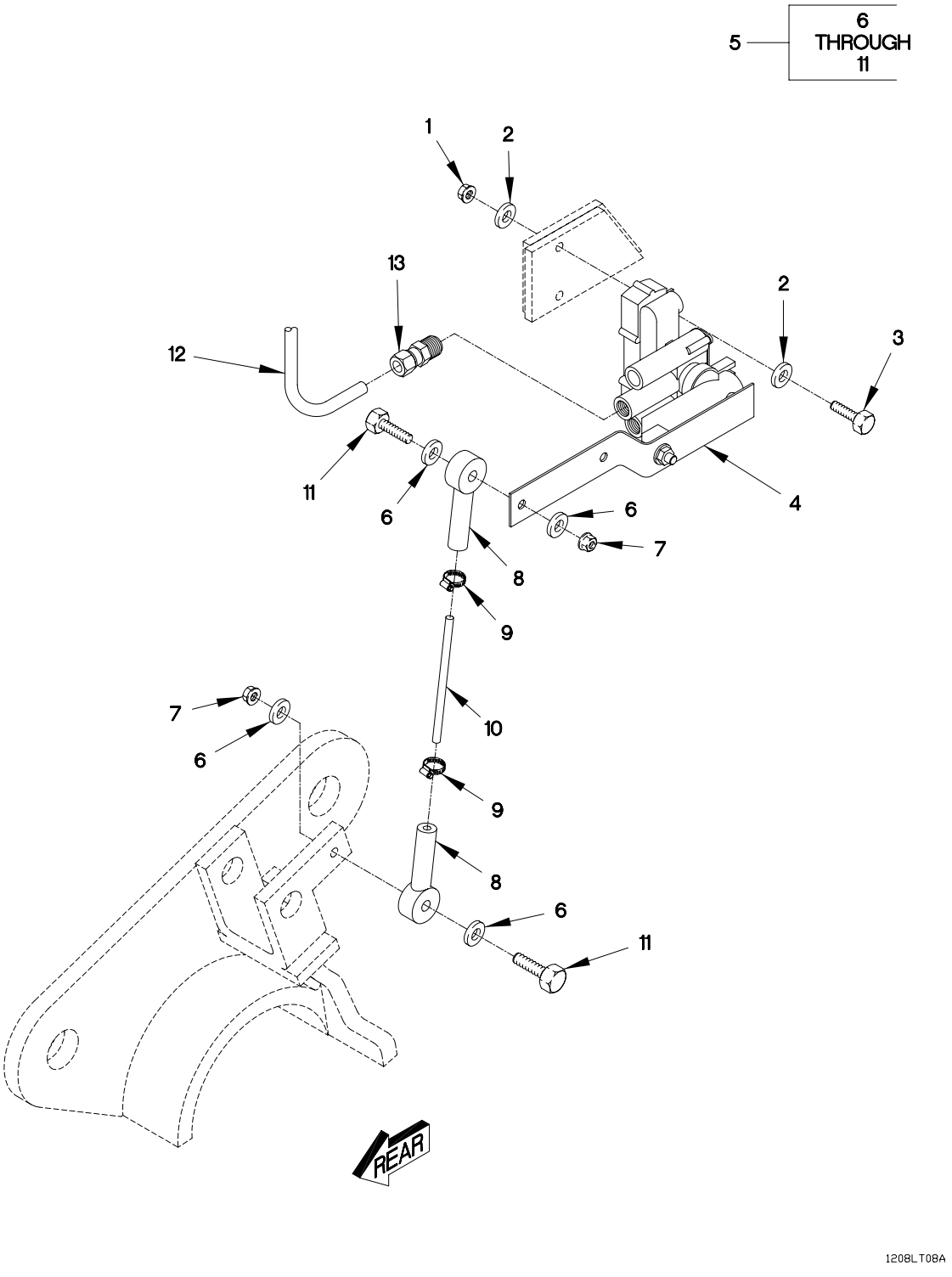


Figure 21. Group 1208 HEIGHT CONTROL VALVE, LINKAGE & FITTINGS (Sheet 1 of 2)
0134 00-1

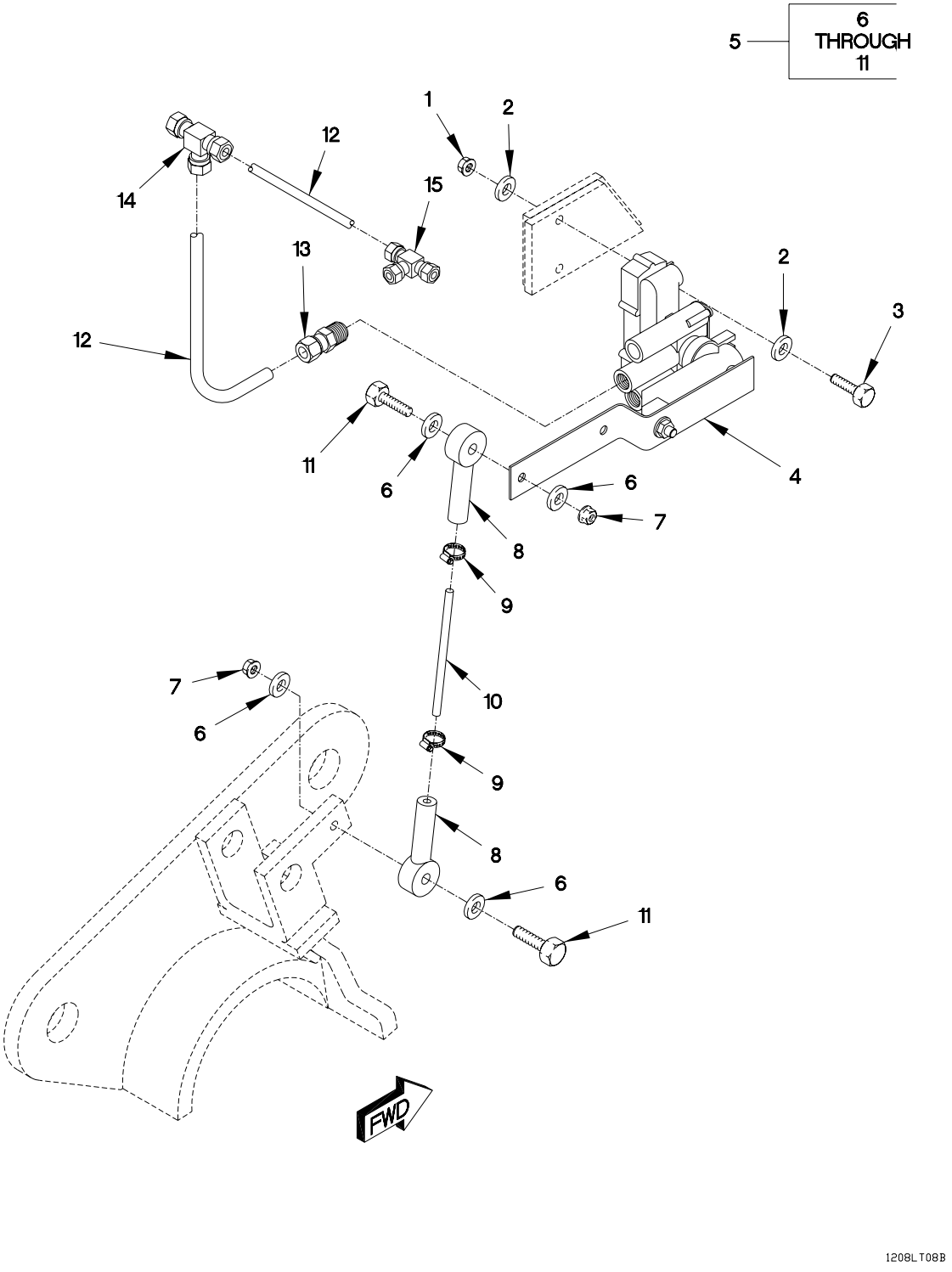


Figure 21. Group 1208 HEIGHT CONTROL VALVE, LINKAGE & FITTINGS (Sheet 2 of 2)
0134 00-2

GROUP 1208 HEIGHT CONTROL VALVE, LINKAGE & FITTINGS – Continued 0134 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	NUT,SELF-LOCKING,HE	2
2	PAOZZ	5310-01-352-9575	19207	NAS1149C0363R	WASHER,FLAT	8
3	PAOZZ	5305-00-225-3839	80205	MS90725-8	SCREW,HEX CAP	2
4	PAOZZ		19207	12486362	VALVE,HEIGHT CONTRL	2
5	PAOOO		19207	12486411	LINKAGE,ADJUSTABLE	2
6	PAOZZ	5310-00-823-8804	96906	MS27183-9	.WASHER,FLAT	4
7	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	.NUT,SELF-LOCKING,HE	2
8	PAOZZ		6721	90054516	.ADJUSTABLE LINKAGE	2
9	PAOZZ		6721	93900198	.CLAMP	2
10	XAOZZ		6721	90006396	.ROD	1
11	PAOZZ	5305-01-485-6049	80205	MS90725-10	.SCREW,CAP,HEXAGON H	2
12	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
13	PAOZZ	4730-01-091-9212	81343	4-4-100102BA	ADAPTER,STRAIGHT,PI	2
14	PAOZZ	4730-01-095-3430	93061	264NTA-4	TEE,TUBE	2
					END OF FIGURE	

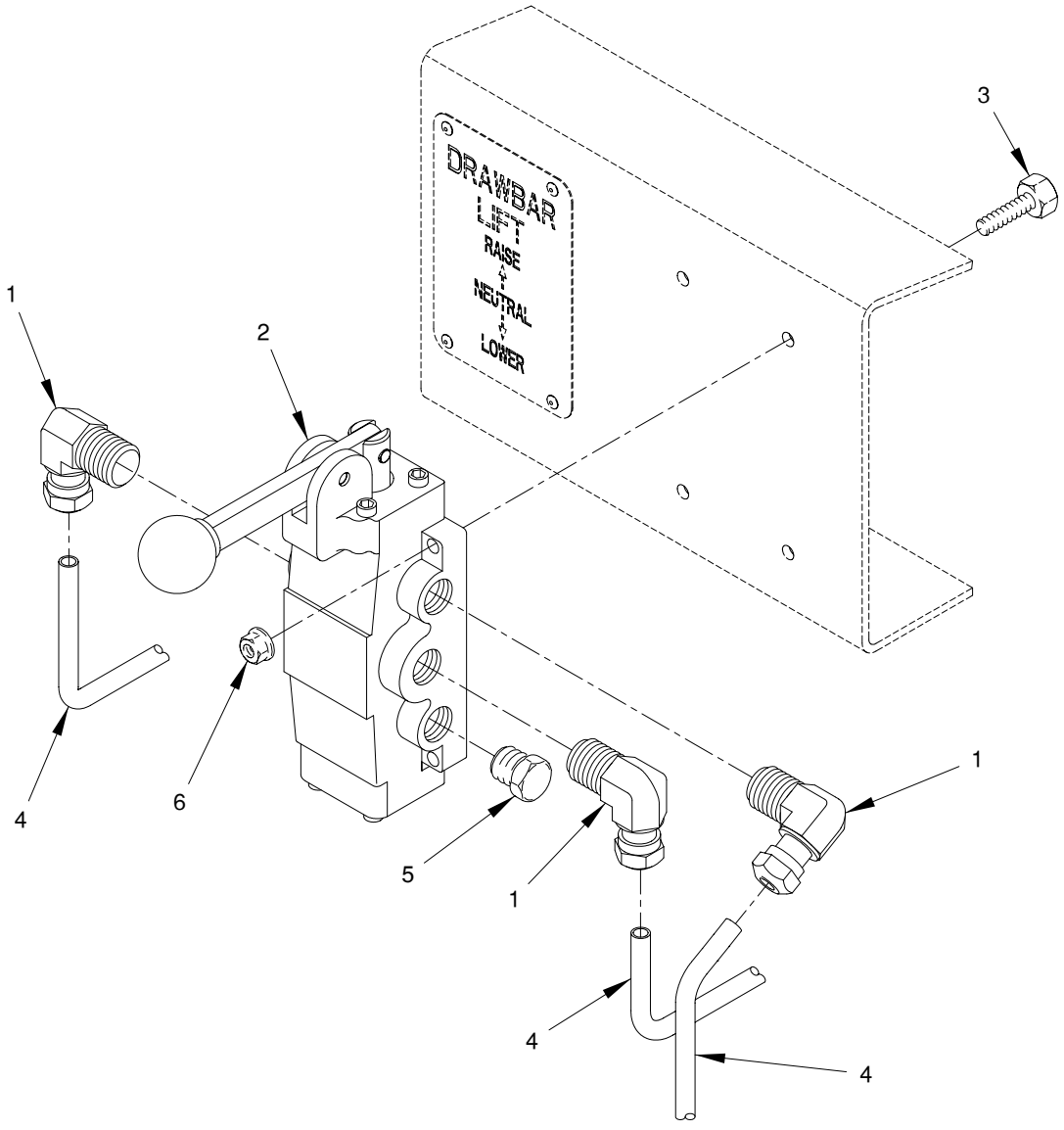


Figure 22. Group 1208 DRAWBAR LIFT AIR VALVE

GROUP 1208 DRAWBAR LIFT AIR VALVE – Continued 0135 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	4730-01-085-6577	81343	4-6 100202BA	ELBOW,PIPE TO TUBE	3
2	PAOOO	2510-01-540-1337	19207	12486447	AIR VALVE	1
3	PAOZZ	5305-00-984-6214	80205	MS35206-267	SCREW HEX 10-24 X 1	4
4	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
5	PAOZZ	4730-01-213-7733	81343	6 130109AB	PLUG,PIPE	2
6	PAOZZ	5310-01-466-0565	0FW39	12412476-04	NUT,SELF-LOCKING,CO	4
					END OF FIGURE	

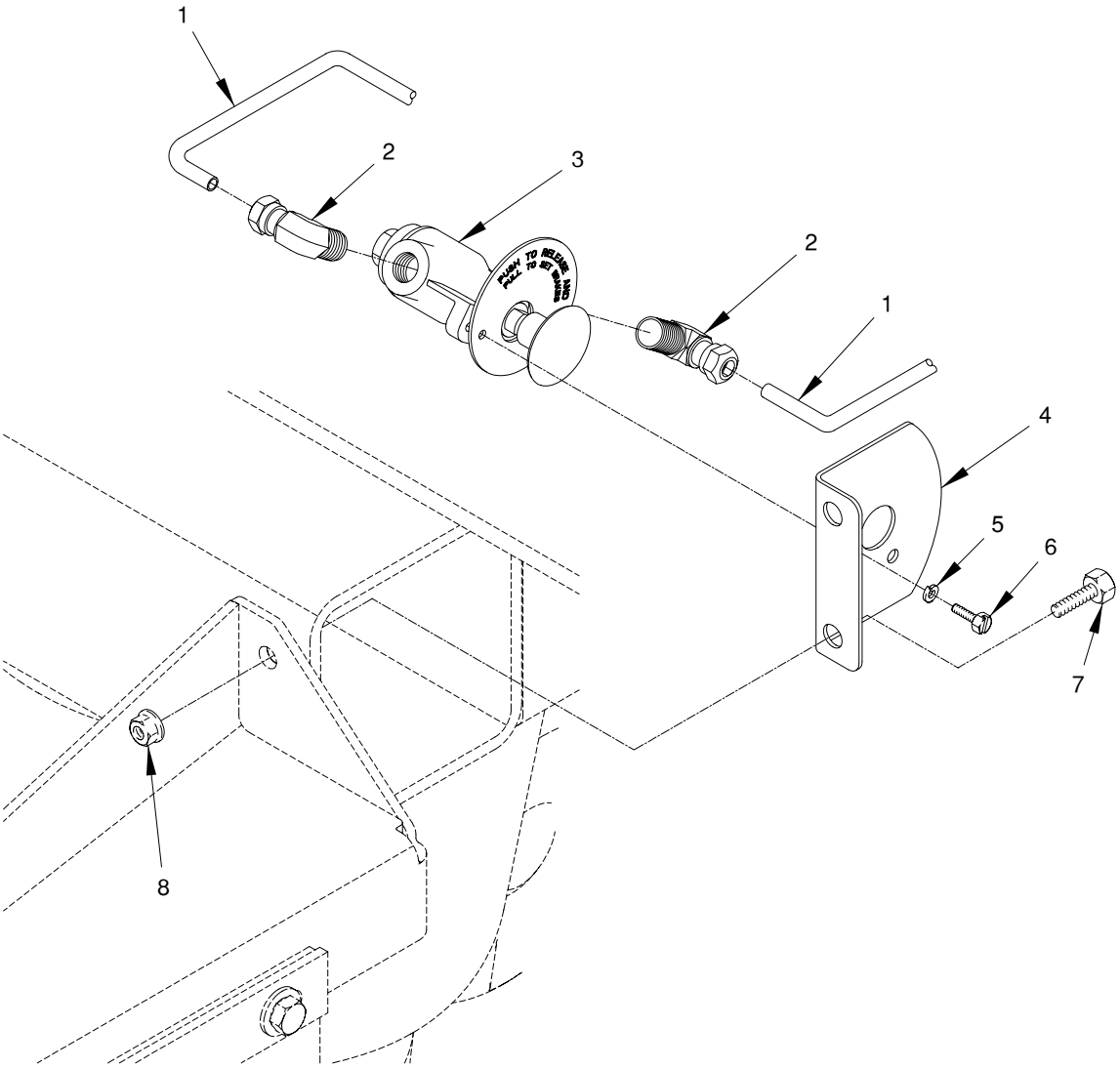


Figure 23. Group 1208 PUSH/PULL VALVES, TUBING & FITTINGS (Sheet 1 of 2)
0136 00-1

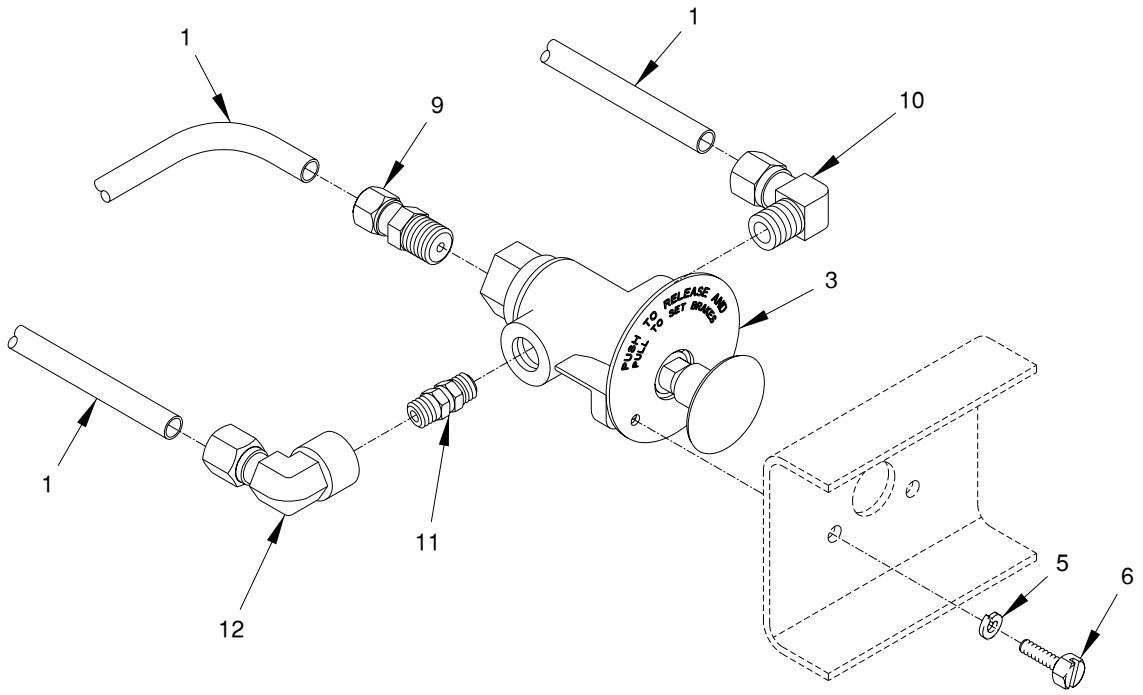


Figure 23. Group 1208 PUSH/PULL VALVES, TUBING & FITTINGS (Sheet 2 of 2)
0136 00-2

GROUP 1208 PUSH/PULL VALVES, TUBING & FITTINGS – Continued 0136 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
2	PAOZZ	4730-01-086-4064	79470	1469X4X4	ELBOW,PIPE TO TUBE	2
3	PAOZZ		19207	12442963	PUSH-PULL VALVE	2
4	PAOZZ	5340-01-540-0480	19207	12486730	BRACKET,VALVE	1
5	PAOZZ	5310-00-933-8120	96906	MS35338-138	WASHER, LOCK, CRES	4
6	PAOZZ	5305-01-367-1294	96906	MS51849-64C	SCREW,MACHINE	4
7	PAOZZ	5305-00-269-3211	80205	MS90725-60	SCREW,ROLLER ASSEMB	2
8	PAOZZ	5310-01-445-6346	19207	12412476-09	NUT,SELF-LOCKING,HE	2
9	PAOZZ	4730-01-091-9212	81343	4-4-100102BA	ADAPTER,STRAIGHT,PI	1
10	PAOZZ	4730-00-069-1187	81343	6-4 100202BA	ELBOW,PIPE TO TUBE	1
11	PAOZZ	4820-01-540-3453	0FW39	12421167-001	VALVE,CHECK	1
12	PAOZZ	4730-01-134-6989	81343	6-4 100203BA	ELBOW,PIPE TO TUBE	1
					END OF FIGURE	

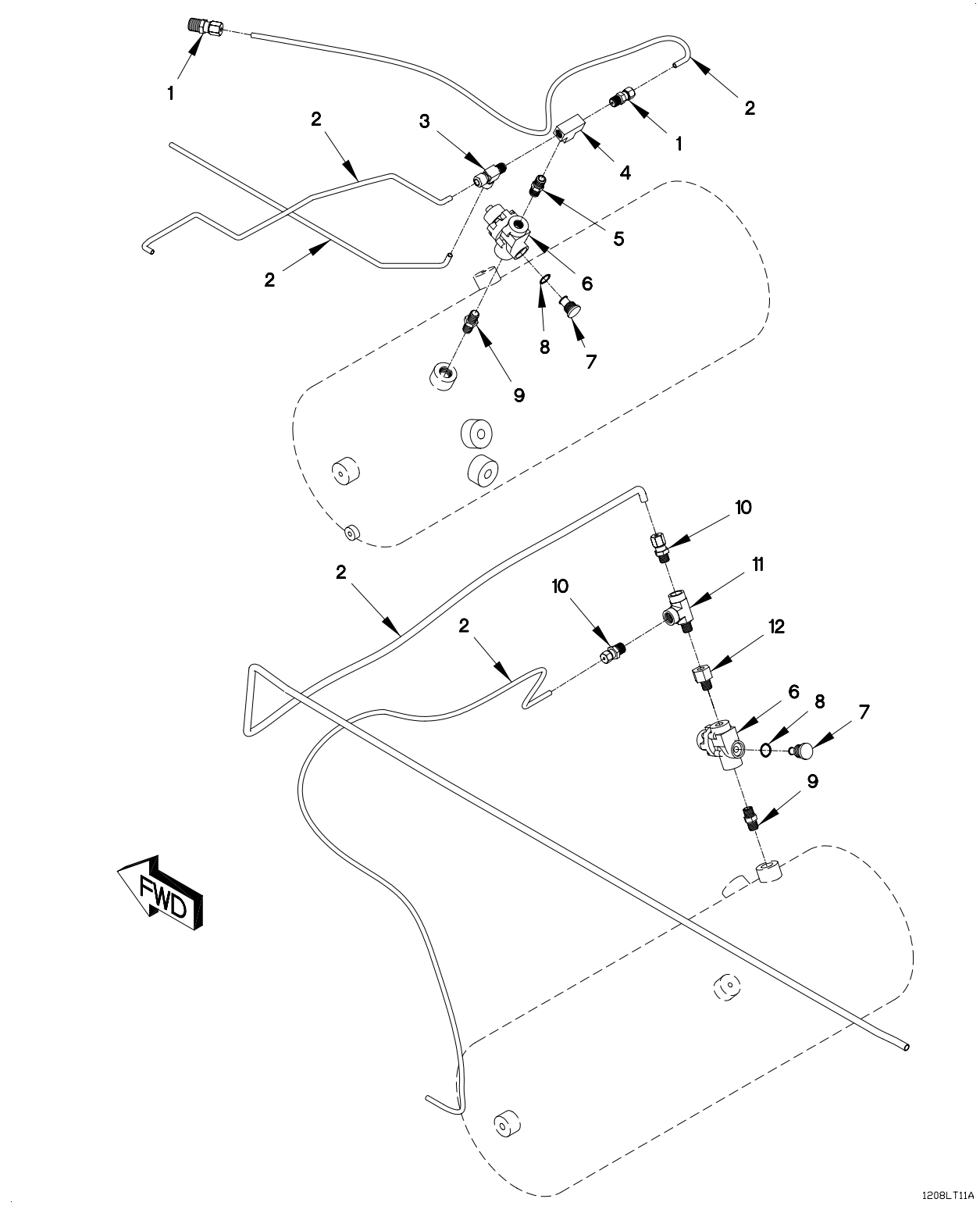


Figure 24. Group 1208 BRAKE PROTECTION VALVE TUVES & FITTINGS

GROUP 1208 BRAKE PROTECTION VALVE TUVES & FITTINGS – Continued 0137 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	4730-01-091-9212	81343	4-4-100102BA	ADAPTER,STRAIGHT,PI	3
2	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
3	PAOZZ	4730-01-372-6528	81343	4-4-4 100424BA	TEE,PIPE TO TUBE	1
4	PAOZZ	4730-01-268-2402	81343	4-4-4 140438B	TEE,PIPE	1
5	PAOZZ		81343	4-130137B	NIPPLE,HEX	1
6	PAOZZ		19207	12486633	BRAKE PROTECT VALVE	2
7	PAOZZ		6721	90054466	.FILTER,FITTING PLUG	1
8	PAOZZ		6721	90054859	.0-RING	1
9	PAOZZ		81343	8-4 130137B	FITTING,NIPPLE	2
10	PAOZZ	4730-01-096-9398	81343	4-6 100102BA	ADAPTER,STRAIGHT,PI	2
11	PAOZZ	4730-01-539-9850	81343	6-6-6-140424B	FITTING,PIPE	1
12	PAOZZ	4730-00-200-0257	81343	6-4 130139B	REDUCER,PIPE	1
					END OF FIGURE	

GROUP 1208 AIR SPRING, PRESSURE-RELIEF VALVE, TUBES & FITTINGS 0138 00

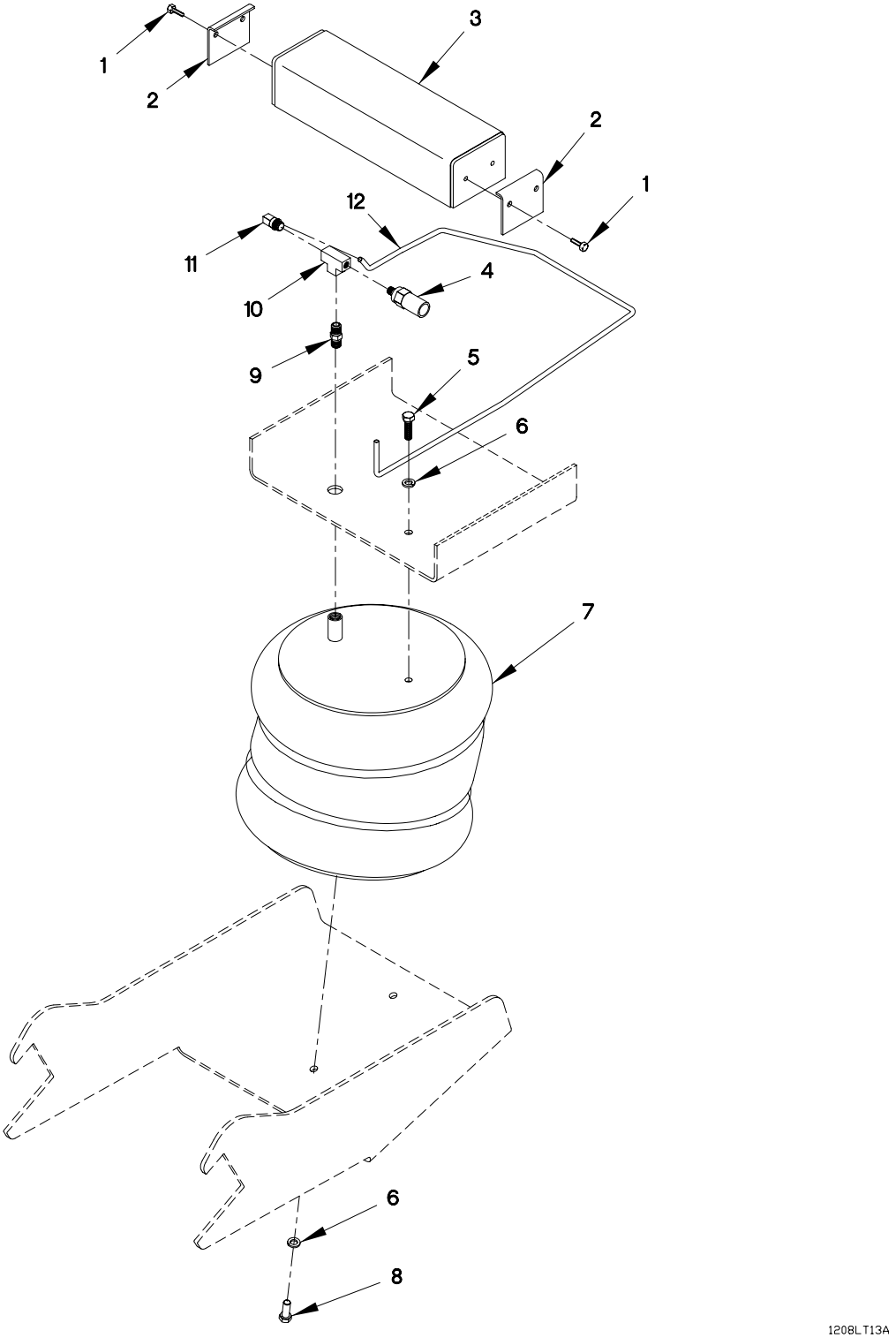


Figure 25. Group 1208 AIR SPRING, PRESSURE-RELIEF VALVE, TUBES & FITTINGS

GROUP 1208 AIR SPRING, PRESSURE-RELIEF VALVE, TUBES & FITTINGS – Continued 0138 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5305-00-489-0743	96906	MS51849-96	SCREW, HEX CAP	4
2	PAOZZ	4820-01-540-0493	19207	12486361	CLAMP,COVER,VALVE	2
3	PAOZZ		19207	12486817	COVER,SAFETY VALVE	1
4	PAOZZ		19207	12486760	VALVE,SAFETY 35PSI	1
5	PAOZZ	5305-00-269-3213	80205	MS90725-62	SCREW,CAP HEXAGON H	1
6	PAOZZ	5310-00-004-5033	80205	MS35338-46	WASHER, LOCK	3
7	PAOZZ		19207	12486603	AIR SPRING CONVOLU	1
8	PAOZZ	5305-00-269-3211	80205	MS90725-60	SCREW,ROLLER ASSEMB	2
9	PAOZZ		81343	4-130137B	NIPPLE,HEX	1
10	PAOZZ	4730-01-268-2402	81343	4-4-4 140438B	TEE,PIPE	1
11	PAOZZ	4730-01-086-4064	79470	1469X4X4	ELBOW,PIPE TO TUBE	1
12	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
					END OF FIGURE	

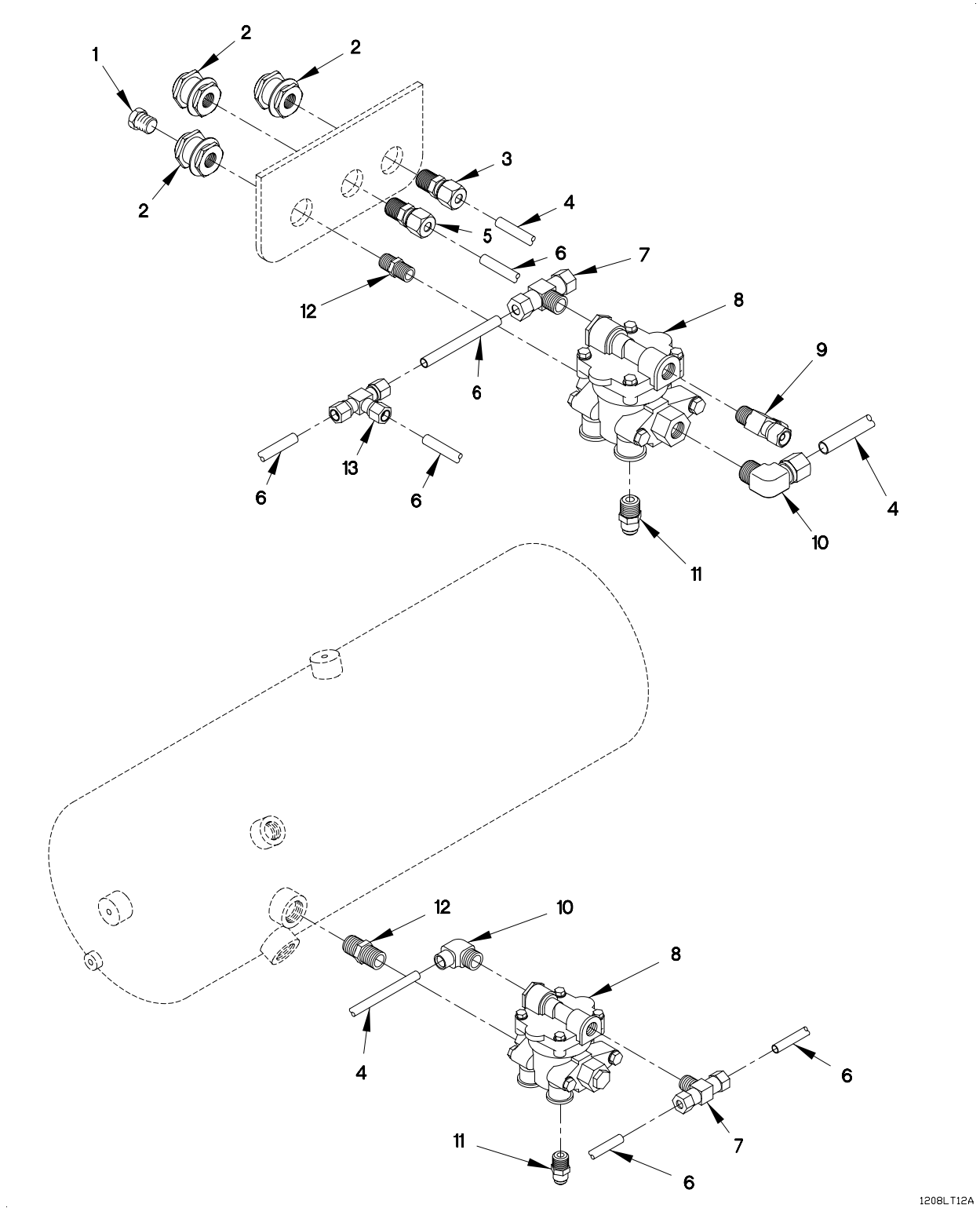


Figure 26. Group 1208 TASK VALVE, TUBES & FITTINGS

GROUP 1208 TASK VALVE, TUBES & FITTINGS – Continued 0139 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	4730-01-213-7733	81343	6 130109AB	PLUG,PIPE	1
2	PAOZZ	4730-01-540-1267	19207	12417661-002	COUPLING PIPE	3
3	PAOZZ	4730-01-091-8032	1276	1468X8	ADAPTER,STRAIGHT,PI	1
4	MOOZZ		0FW39	12420572-008X	HOSE,NONMETALLIC	V
5	PAOZZ	4730-01-096-9128	1276	1468X6X6	ADAPTER,STRAIGHT,PI	1
6	MOOZZ		0FW39	12420572-006X	TUBE,NONMETALLIC	V
7	PAOZZ	4730-01-283-1877	81343	6-6-6 100425BA	TEE,PIPE TO TUBE	1
8	PAOZZ	2530-01-483-3949	19207	12442787	ACTUATOR,SPRING BRA	2
9	PAOZZ	4730-01-134-3568	81343	8-6-8 100424BA	TEE,PIPE TO TUBE	1
10	PAOZZ	4730-01-095-7717	81343	8-6 100202BA	ELBOW,PIPE TO TUBE	2
11	PAOZZ	4730-00-439-1722	79470	48X6X6	ADAPTER,STRAIGHT	2
12	PAOZZ	4730-01-540-1489	81343	8-6 140137B	BUSHING,PIPE	1
13	PAOZZ	4730-01-134-3571	81343	6-6-6 100401BA	TEE,TUBE	1
					END OF FIGURE	

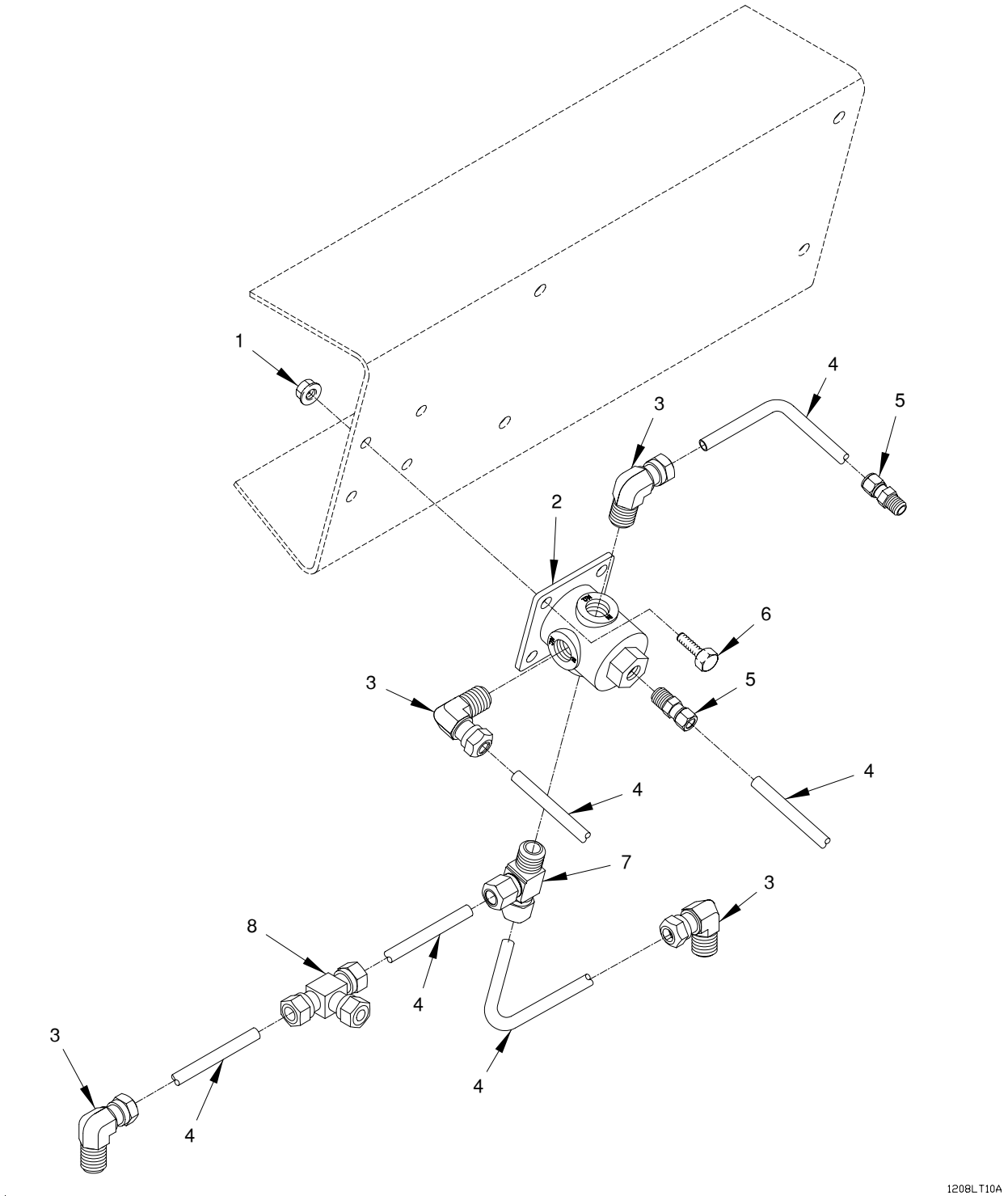


Figure 27. Group 1208 AIR RIDE CONTROL VALVE, TUBES & FITTINGS

GROUP 1208 AIR RIDE CONTROL VALVE, TUBES & FITTINGS – Continued 0140 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	NUT,SELF-LOCKING,HE	4
2	PAOZZ		19207	12486363	VALVE,AIR RIDE CONT	1
3	PAOZZ	4730-01-086-4064	79470	1469X4X4	ELBOW,PIPE TO TUBE	4
4	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
5	PAOZZ	4730-01-091-9212	81343	4-4-100102BA	ADAPTER,STRAIGHT,PI	2
6	PAOZZ	5305-00-489-0743	96906	MS51849-96	SCREW, HEX CAP	4
7	PAOZZ	4730-01-372-6528	81343	4-4-4 100424BA	TEE,PIPE TO TUBE	1
8	PAOZZ	4730-01-095-3430	93061	264NTA-4	TEE,TUBE	1
					END OF FIGURE	

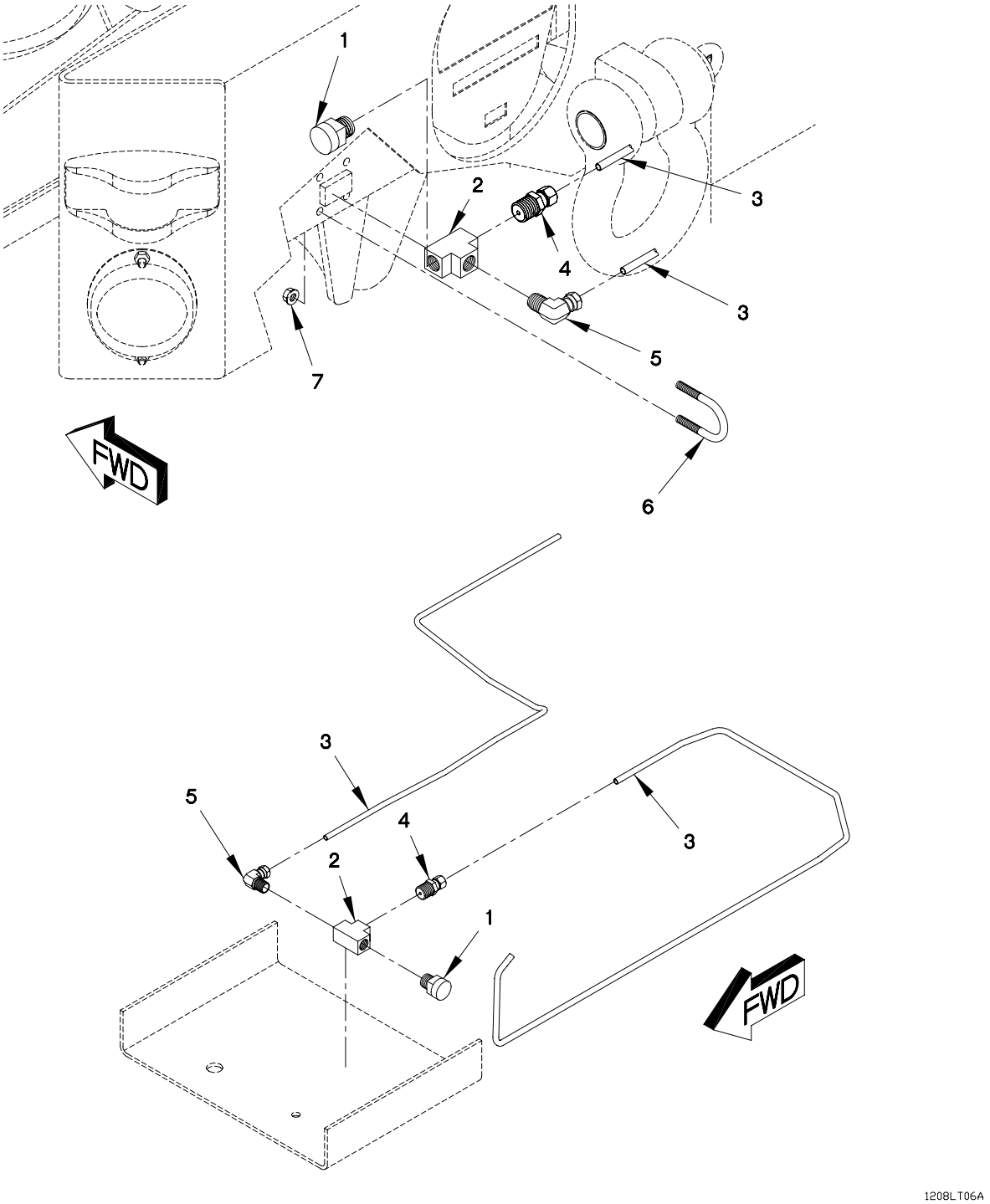


Figure 28. Group 1208 BREATHER VALVES, TUBES & FITTINGS

GROUP 1208 BREATHER VALVES, TUBES & FITTINGS – Continued 0141 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	2440-01-360-7372	19207	12422997	VALVE,BREATHER	2
2	PAOZZ	4730-01-539-9303	81343	6-6-6 140438B	TEE,PIPE	2
3	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
4	PAOZZ	4730-01-096-9398	81343	4-6 100102BA	ADAPTER,STRAIGHT,PI	2
5	PAOZZ	4730-01-085-6577	81343	4-6 100202BA	ELBOW,PIPE TO TUBE	2
6	PAOZZ		19207	12484560-001	U-BOLT	2
7	PAOZZ	5310-01-436-3290	80205	MS17830-010C	NUT,PLAIN,HEXAGON	4
					END OF FIGURE	

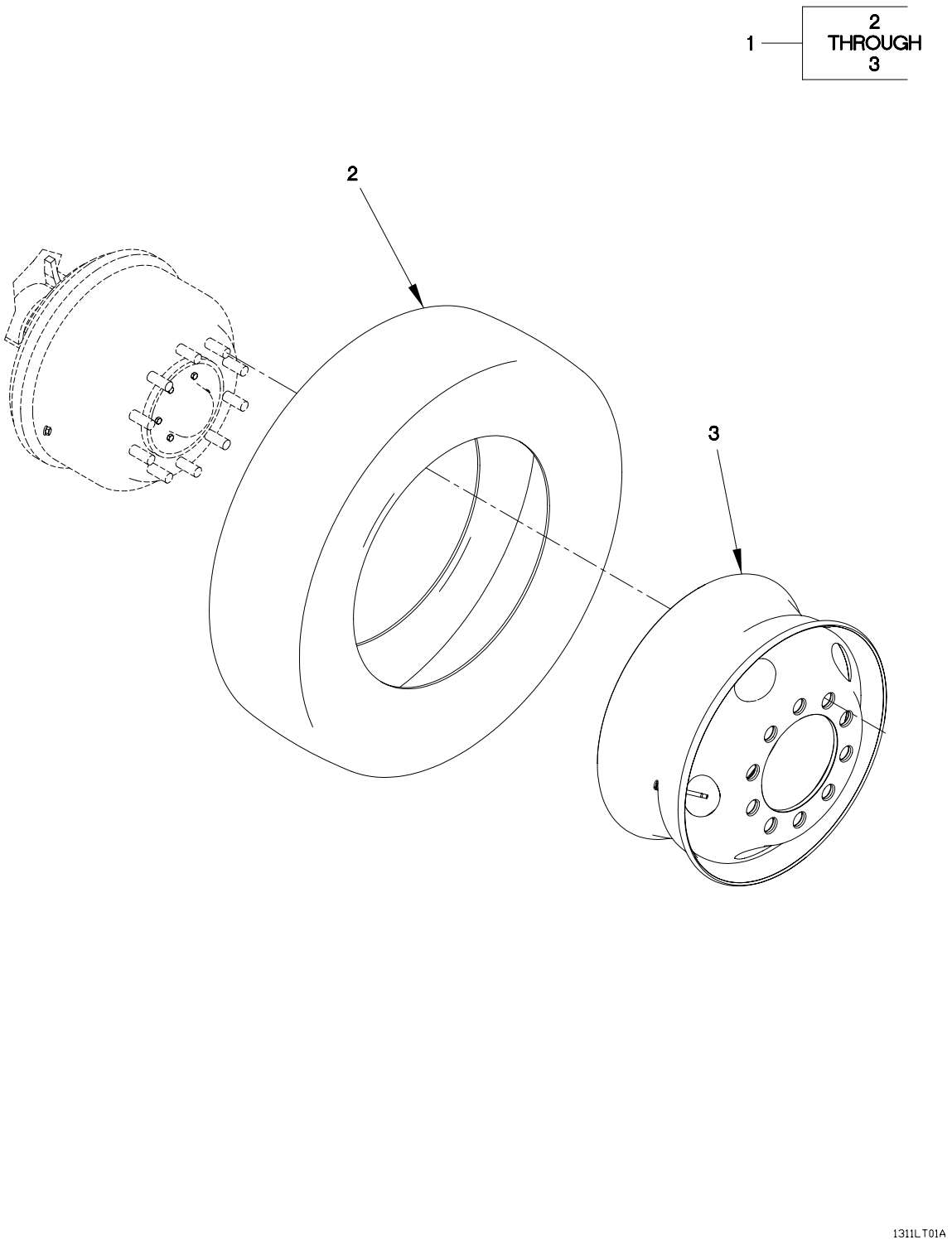


Figure 29. Group 1311 TIRE & WHEEL ASSEMBLY

GROUP 1311 TIRE & WHEEL ASSEMBLY – Continued 0142 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO		19207	12486322	TIRE,ON-OFF HIGHWAY	5
2	PCFZZ	2610-01-518-5292	12195	42407	.TIRE OFF-ROAD	1
3	PAOZZ		19207	12486616	.WHEEL OFF-ROAD	5
					END OF FIGURE	

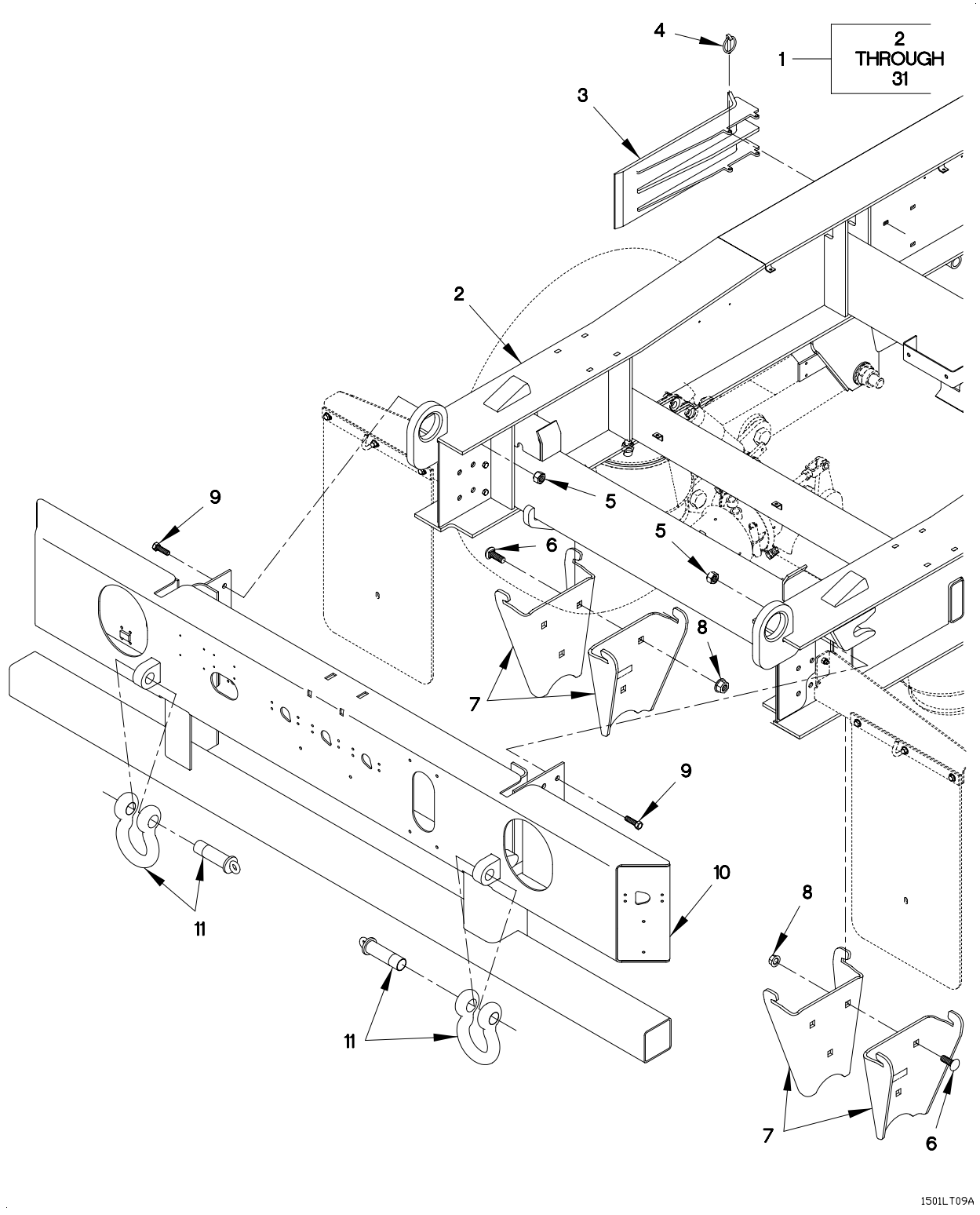


Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 1 of 4)

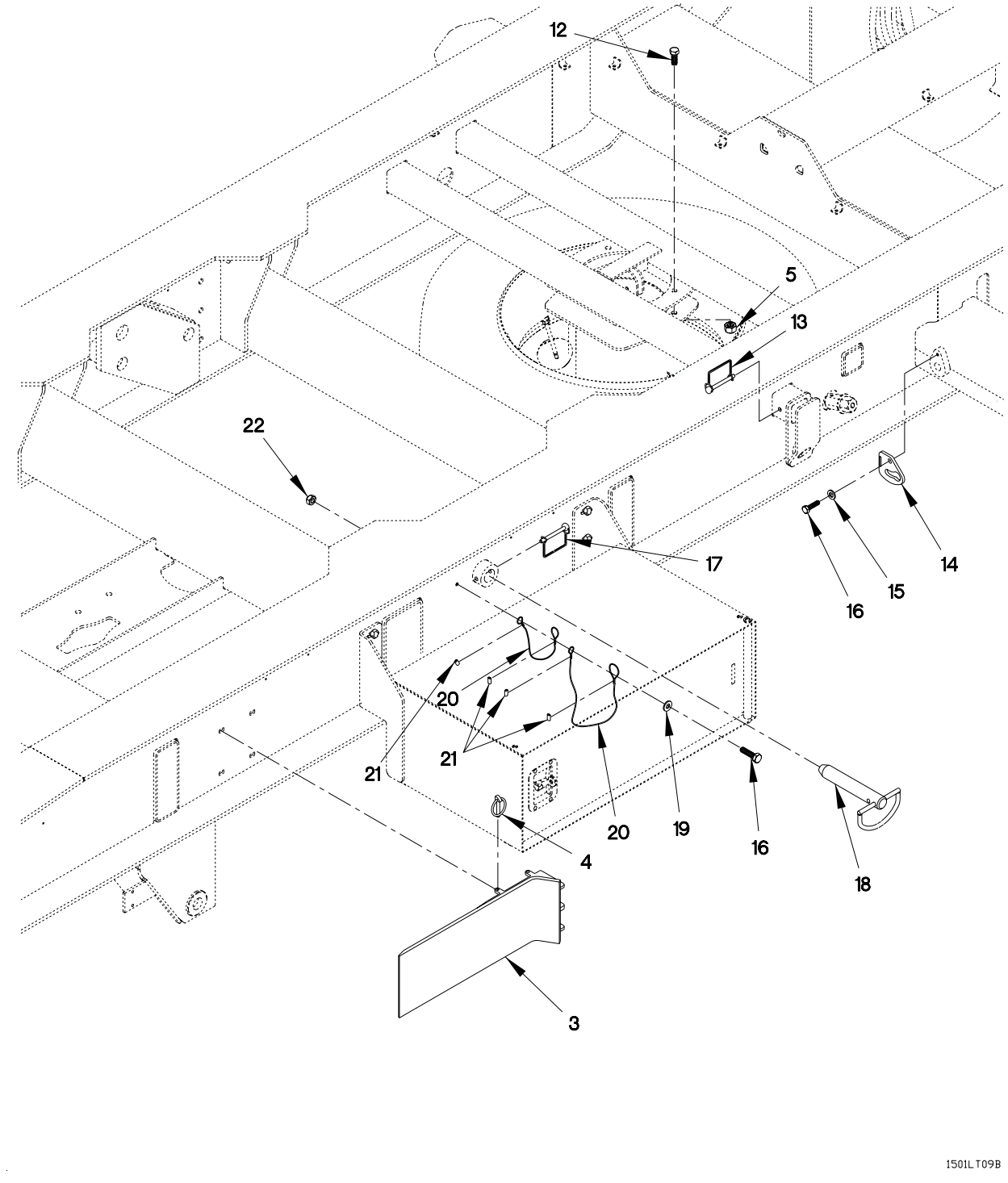


Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 2 of 4)
0143 00-2

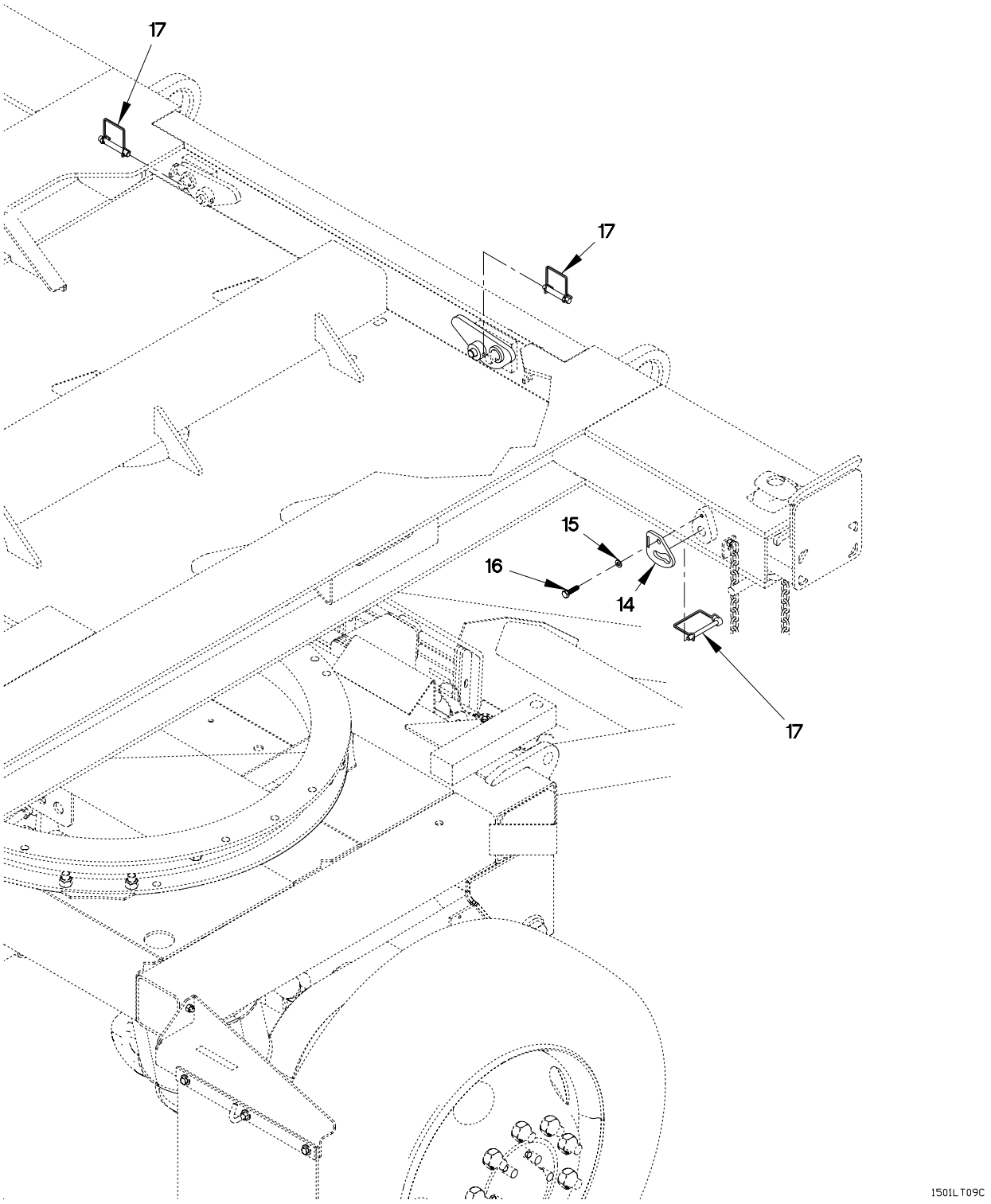


Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 3 of 4)

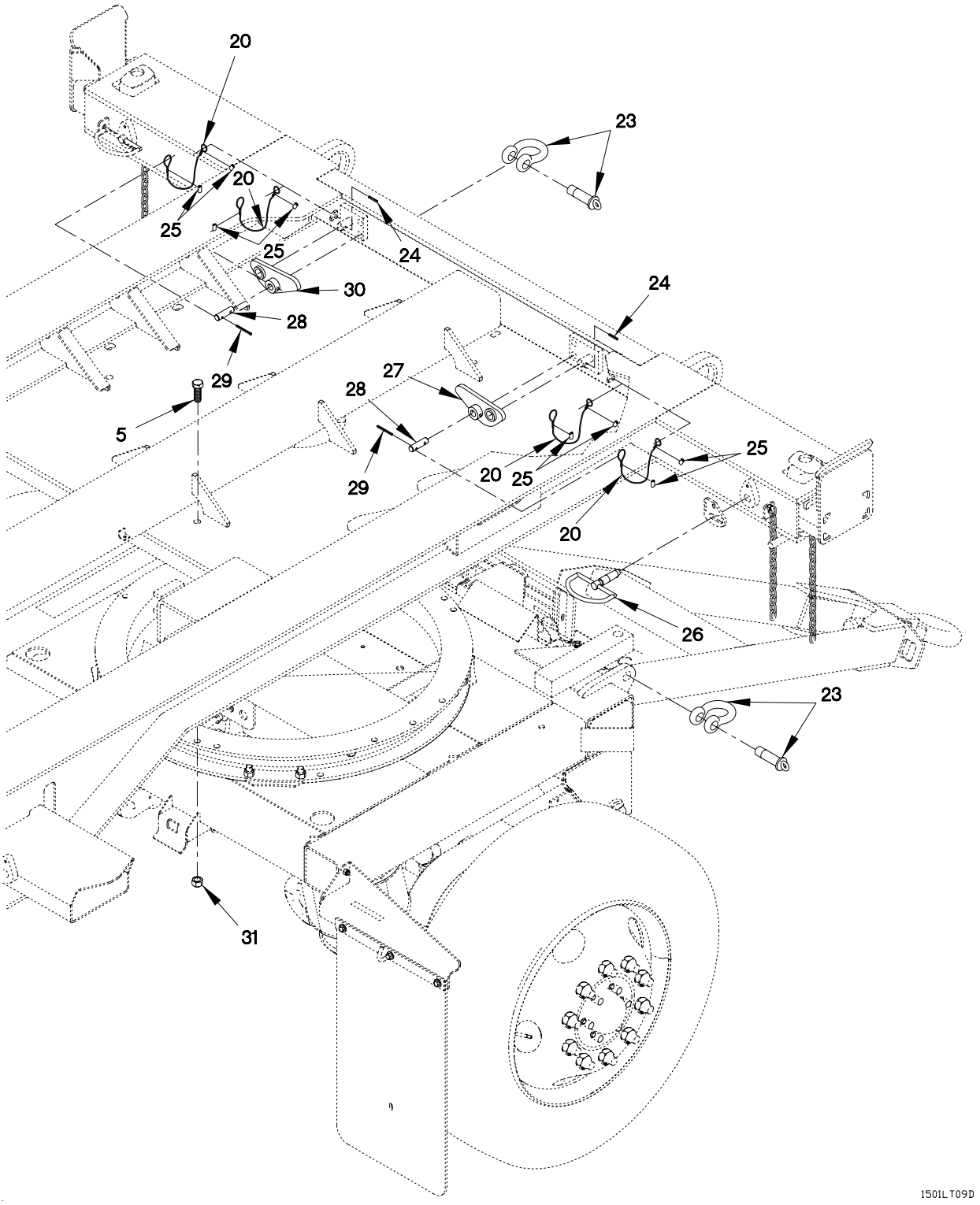
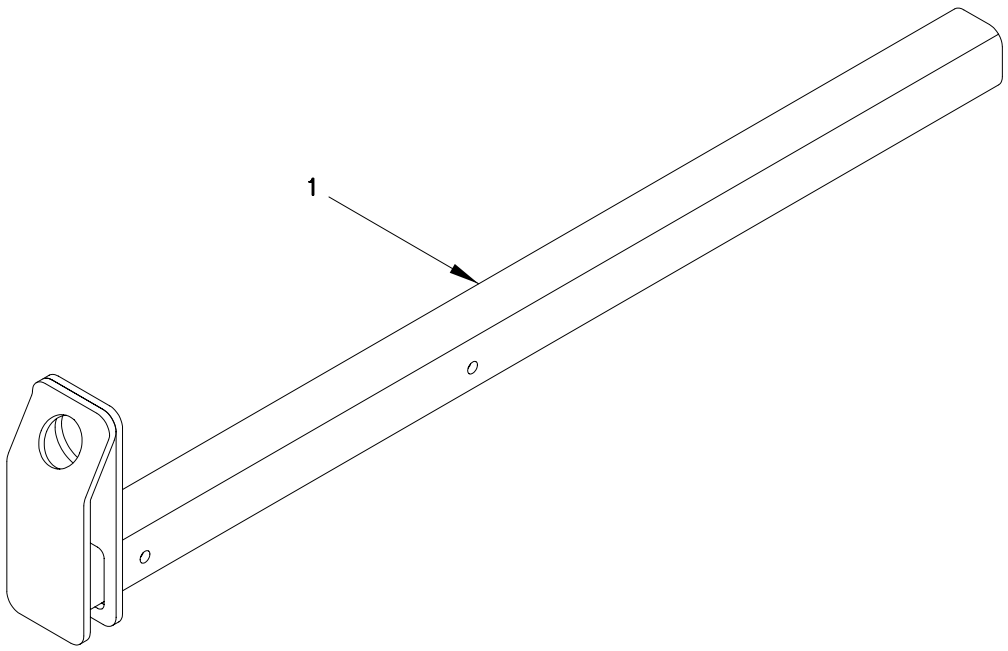


Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 4 of 4)

GROUP 1501 CHASSIS & REAR PANEL ASSEMBLY – Continued 0143 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	XCOFH		19207	12486588	CHASSIS	1
2	XAOZZ		19207	12486511	.FRAME,LHST	1
3	PAOZZ	3990-01-540-1432	19207	12486736	.RAMP,CROP	2
4	PAOZZ		19207	12486602	.PIN,LYNCH	8
5	PAOZZ	5310-00-225-6993	81349	M45913/1-8CG5C	.NUT,SELF-LOCKING,HE	22
6	PAOZZ	5305-01-540-0890	80205	MS90725-163	.BOLT	14
7	PAOZZ		19207	12486777	.TRANSPORT BRACKET	4
8	PAOZZ	5310-00-763-8920	96906	MS51967-20	.NUT,PLAIN,HEXAGON	6
9	PAOZZ	5305-01-325-8388	80205	MS90725-113	.SCREW, HEX CAP	12
10	PAOZZ		19207	12486512	.PANEL,REAR ASSEMBLY	1
11	PAOZZ		19207	12378642-005	.SHACKLE, ANCHOR TIE	2
12	PAOZZ		80205	MS90725-111	.SCREW, HEX CAP	3
13	PAOZZ	4010-01-540-2119	19207	12486533	.LANDYARD ASSY	1
14	PAOZZ		19207	12486816	.PLATE,PIN LOCK	4
15	PAOZZ	5310-01-352-9593	80205	NAS1149C0463R	.WASHER,FLAT	4
16	PAOZZ	5305-00-225-3839	80205	MS90725-8	.SCREW,HEX CAP	6
17	PAOZZ	5315-01-406-7423	19207	12412608	.PIN, LOCK	4
18	PAOZZ		19207	12486342	.PIN,RAIL HAND LOCK	2
19	PAOZZ	5310-01-103-6042	96906	MS51412-4	.WASHER,FLAT	2
20	PAOZZ	4010-00-451-3533	81349	M83420/4-002	.ROPE,WIRE	8
21	PAOZZ	4030-00-145-5721	96906	MS51844-64	.SWAGING SLEEVE,W	8
22	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	.NUT,SELF-LOCKING,HE	2
23	PAOZZ	4030-01-540-1269	19207	12378642-006	.SHACKLE, ANCHOR TIE	2
24	PAOZZ		0FW39	1-647-010004217	ROLL PIN,1/4 X 1.5	2
25	PAOZZ	4030-01-088-2952	96906	MS51844-62	.SWAGING SLEEVE,WIRE	8
26	PAOZZ	5315-01-539-8499	19207	12486720	.PIN ASSEMBLY,FRONT	2
27	PAOZZ		19207	12486435-002	.GUIDE PLATE,CROP RH	1
28	PAOZZ		19207	12486437	.PIN,LOCK,CROP GUIDE	2
29	PAOZZ		0FW39	118650	.PIN,ROLL,1/4 X 2.5 SLTD	2
30	PAOZZ		19207	12486435-001	.GUIDE PLATE,CROP LH	1
31	PAOZZ		81349	M45913/1-10CG5C	.NUT,SELF-LOCKING HE	8
					END OF FIGURE	



1501LT01A

Figure 31. Group 1501 OUTRIGGER
0144 00-1 Blank/2

GROUP 1501 OUTRIGGER – Continued 0144 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486528	OUTRIGGER WELDMENT	1
					END OF FIGURE	

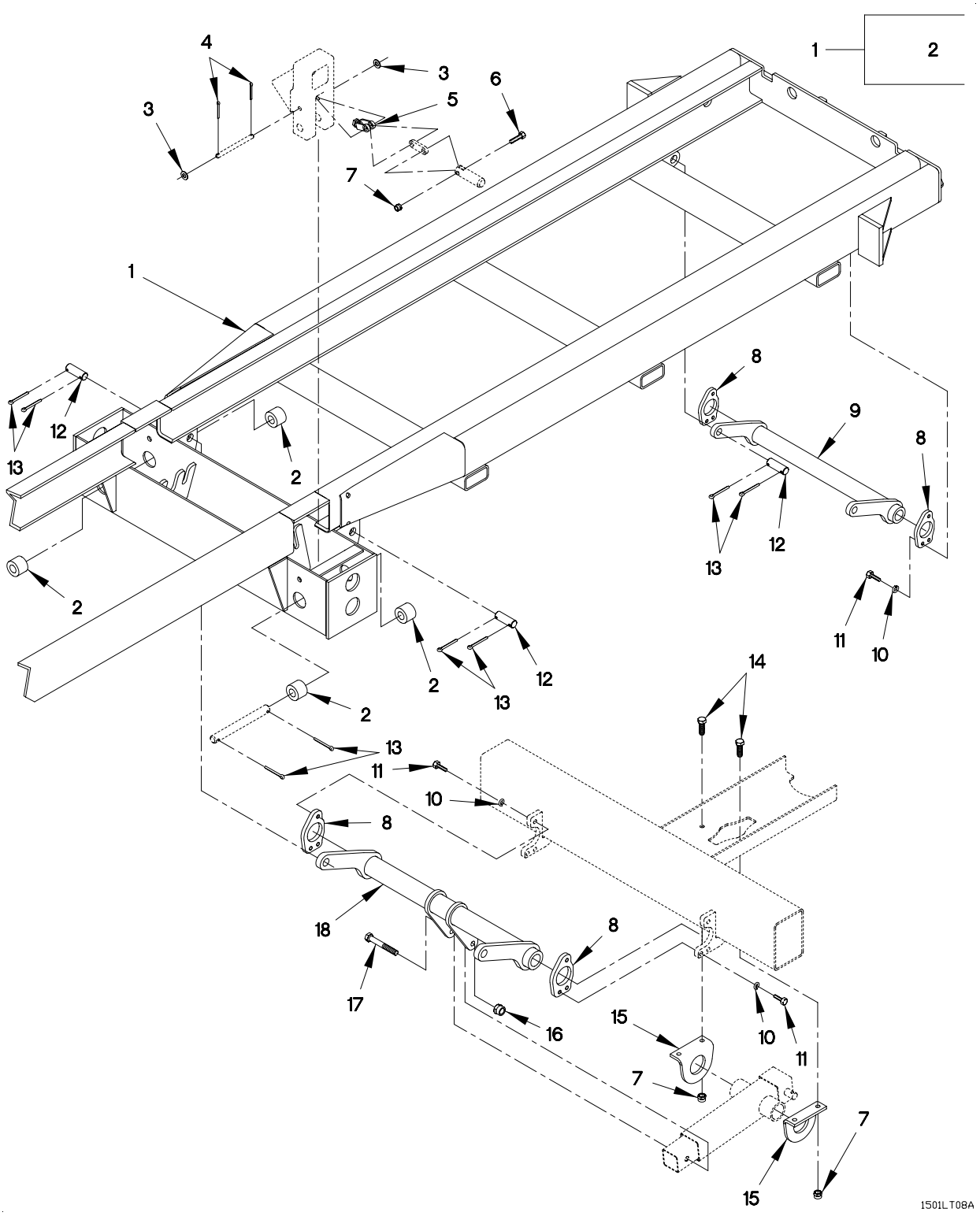


Figure 32. Group 1501 FLATRACK RAIL ASSEMBLY & BRACKETS (Sheet 1 of 2)

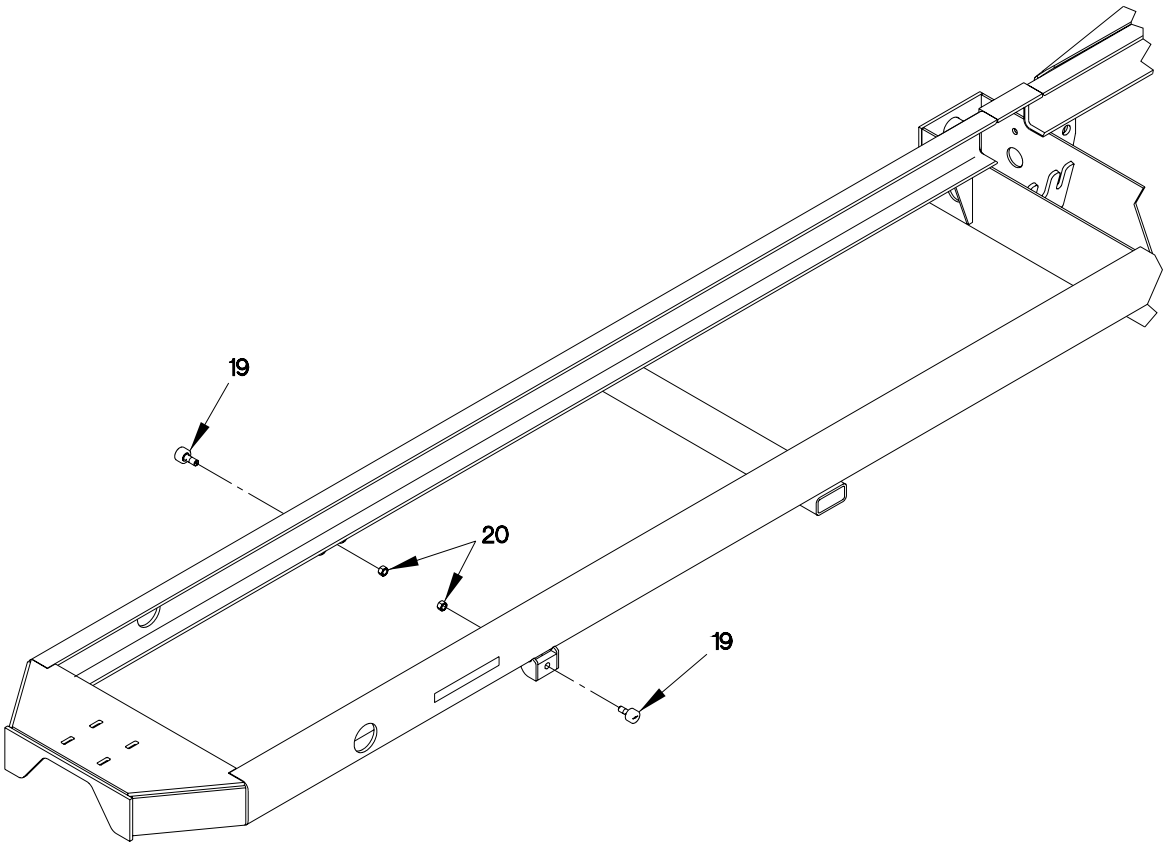


Figure 32. Group 1501 FLATRACK RAIL ASSEMBLY & BRACKETS (Sheet 2 of 2)

GROUP 1501 FLATRACK RAIL ASSEMBLY & BRACKETS – Continued 0145 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PFOZZ		19207	12486514	RAIL ASSEMBLY	1
2	XAOZZ		19207	12486514-116	.BUSHING,LATCH PIVOT	4
3	PAOZZ	5310-01-167-4064	19207	12414473-015	WASHER, PLAIN	4
4	PAOZZ		19207	12443617-027	PIN,COTTER, 5/32	4
5	PAOZZ	5340-01-540-0312	19207	12486350	CLEVIS YOKE	2
6	PAOZZ	5305-00-071-2071	80204	B1821BH050C200N	SCREW,CAP,HEXAGON H	2
7	PAOZZ	5310-01-407-7178	19207	12412476-11	NUT,SELF-LOCKING,HE	6
8	PAOZZ		19207	12486426	BRACKET,ROCKSHAFT	4
9	PAOZZ		19207	12486431	ROCKSHAFT,REAR	1
10	PAOZZ	5310-00-926-5880	80205	MS35338-162	WASHER, LKG HLCL	12
11	PAOZZ	5305-00-071-2067	80204	B1821BH050C125N	SCREW,CAP,HEXAGON H	12
12	PAOZZ	5315-01-540-1921	19207	12486621	PIN,RADIUS ROD	4
13	PAOZZ	5315-00-209-7273	80205	MS24665-625	PIN,COTTER	12
14	PAOZZ	5305-00-071-2069	80204	B1821BH050C150N	SCREW,CAP,HEXAGON H	4
15	PAOZZ		19207	12486433	BRACKET,JACK RAIL	2
16	PAOZZ	5310-01-407-7181	19207	12412476-13	NUT,SELF-LOCKING,HE	1
17	PAOZZ	5305-00-724-7266	80204	B1821BH063C500N	SCREW,CAP,HEXAGON H	1
18	PAOZZ	3040-01-540-2430	19207	12486430	RAIL,ROCKSHAFT	1
19	PAOZZ	3120-01-540-1977	19207	12486623	CAM FOLLOWER	2
20	PAOZZ	5310-00-880-7744	96906	MS51967-5	NUT,PLAIN,HEXAGON	2

END OF FIGURE

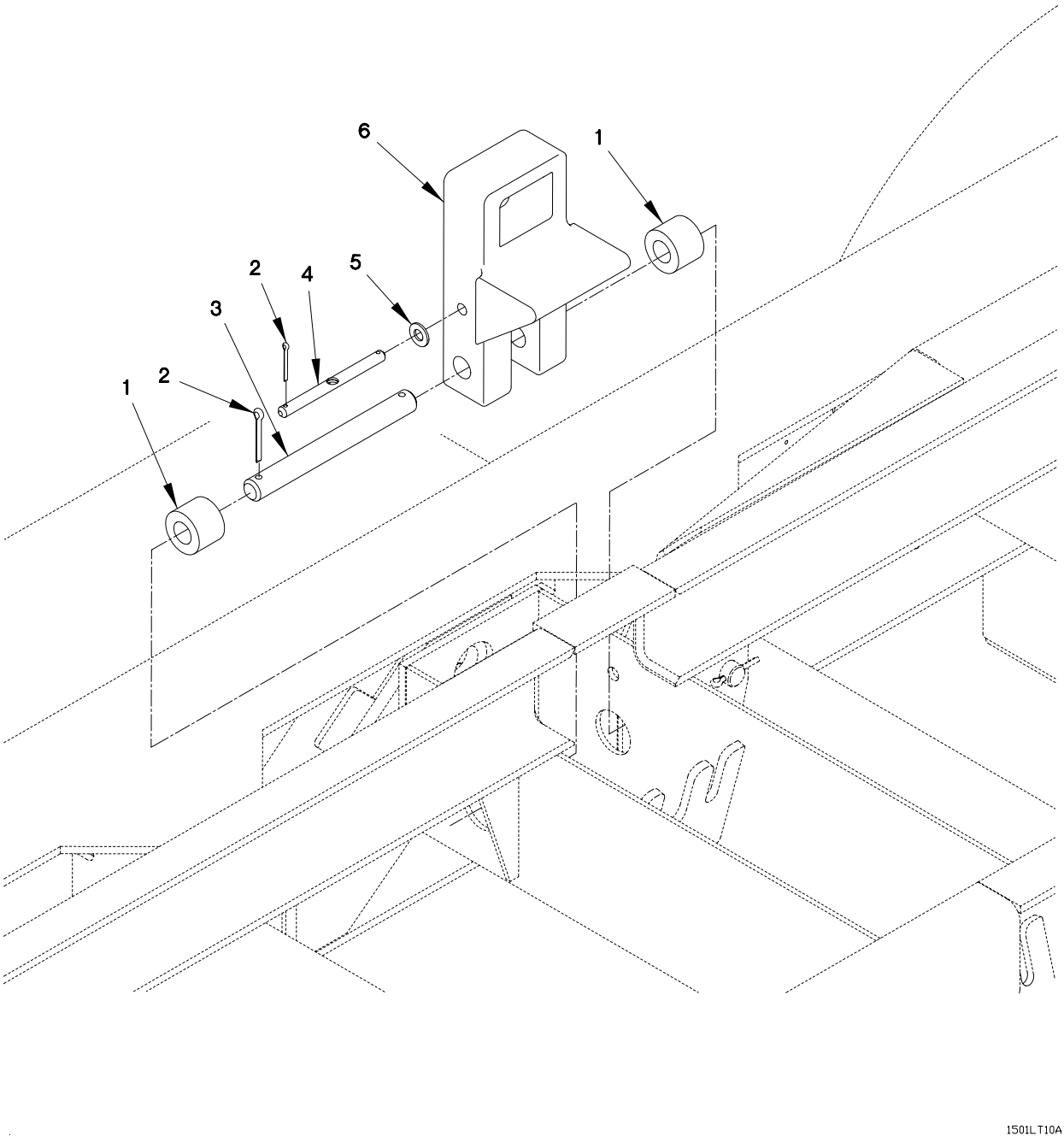


Figure 33. Group 1501 FLAT RACK LOCK

GROUP 1501 FLAT RACK LOCK – Continued 0146 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	XAOZZ		19207	12486514-116	BUSHING,LATCH PIVOT	4
2	PAOZZ	5315-00-209-7273	80205	MS24665-625	PIN,COTTER	4
3	PAOZZ	5315-01-540-0943	19207	12486418	PIN,PIVOT,FR LOCK	2
4	PAOZZ		19207	12486419	PIN,AIR POD,LOCK	2
5	PAOZZ	5310-01-167-4064	19207	12414473-015	WASHER, PLAIN	2
6	PAOZZ	5340-01-539-8490	19207	12486515	LOCK,,FLATRACK	2
					END OF FIGURE	

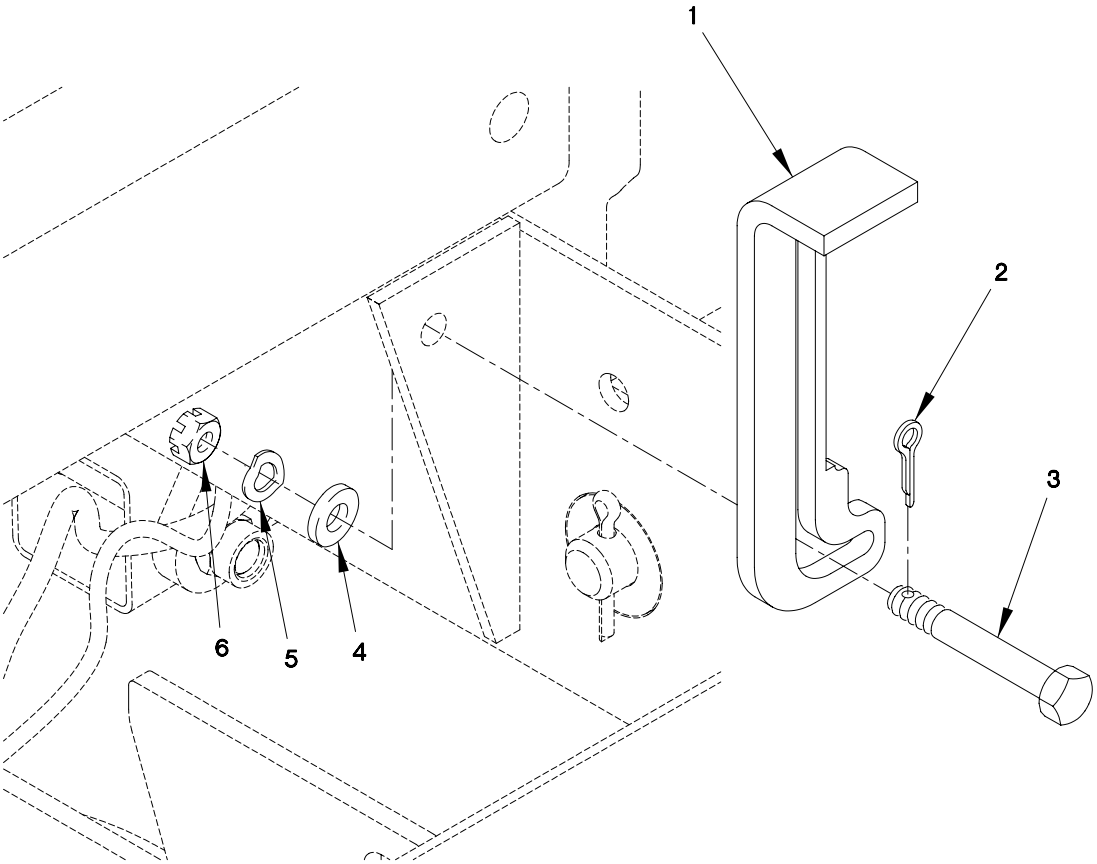


Figure 34. Group 1501 FLAT RACK LOCK & RETAINER

GROUP 1501 FLAT RACK LOCK & RETAINER – Continued 0147 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486412-001	PLATE,LOCK,LH	1
1	PAOZZ		19207	12486412-002	PLATE,LOCK,RH	1
2	PAOZZ	5315-00-234-1864	80205	MS24665-302	PIN, COTTER	2
3	PAOZZ	5306-00-150-9995	80205	AN8-15	BOLT,MACHINE	2
4	PAOZZ		5047	W221NAAW050 NN436 BNQA1	WASHER,FLAT	2
5	PAOZZ	5310-01-312-1057	81349	M12133/2-505	WASHER,SPRING TENSI	2
6	PAOZZ		5047	N220N05FAMNN 5630 2BCH1	NUT,HEX	2
					END OF FIGURE	

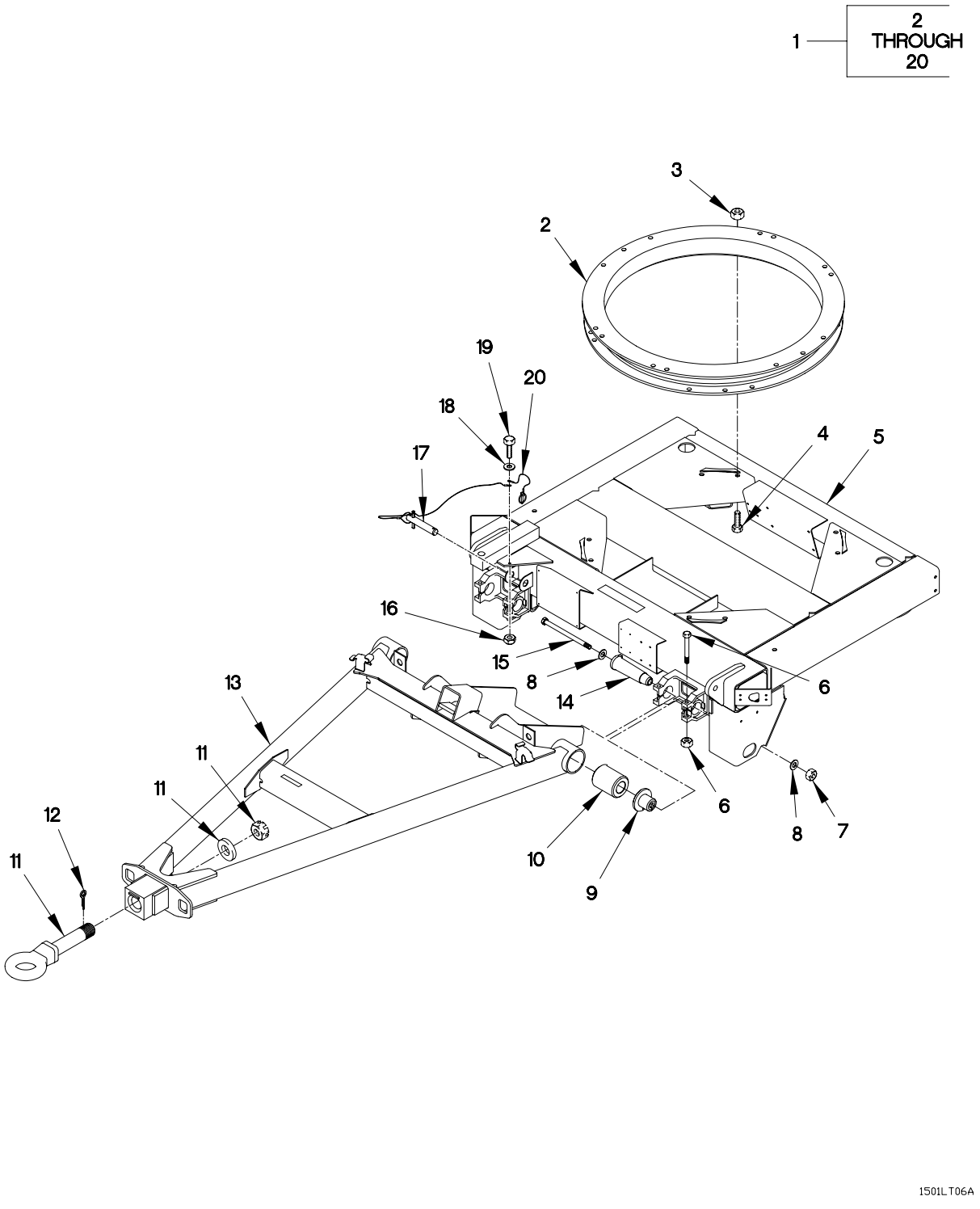


Figure 35. Group 1501 TURNTABLE & DRAWBAR ASSEMBLY

GROUP 1501 TURNTABLE & DRAWBAR ASSEMBLY – Continued 0148 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	XCOOO		19207	12486589	TURNTABLE ASSEMBLY	1
2	PAOZZ		19207	12486615	.TURNTABLE	1
3	PAOZZ	5310-01-407-7181	19207	12412476-13	.NUT,SELF-LOCKING,HE	8
4	PAOZZ	5305-01-540-0890	80205	MS90725-163	.BOLT	8
5	PAOZZ		19207	12486319	.FRAME FRONT SUSP	1
6	PAOZZ	5305-01-540-2008	19207	12486359-506	.BOLT&SLFLKG HEX NUT	4
7	PAOZZ	5310-01-540-1433	19207	12486359-502	.NUT,SLFLKG HEX NUT	2
8	PAOZZ	5310-01-540-2063	19207	12486359-503	.WASHER,FLAT	4
9	PAOZZ	3120-01-540-1417	19207	12486359-508	.FLANGE	2
10	PAOZZ	3120-01-539-8481	19207	12486359-504	.BUSHING	2
11	PAOZZ	5306-01-269-8693	19207	DB-1249-49	.BOLT,EYE	1
12	PAOZZ	5315-01-383-0048	74410	XB-121	.PIN,COTTER	1
13	PAOZZ		19207	12486320	.DRAWBAR	1
14	PAOZZ		19207	12486359-507	.TAPPER PIN	1
15	PAOZZ	5305-01-540-2092	19207	12486359-501	.BOLT	2
16	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	.NUT,SELF-LOCKING,HE	1
17	PAOZZ	5315-01-540-2949	19207	12486329	.PIN,LOCK ASSEMBLY	1
18	PAOZZ	5310-01-352-9593	80205	NAS1149C0463R	.WASHER,FLAT	1
19	PAOZZ	5305-00-489-0743	96906	MS51849-96	.SCREW, HEX CAP	1
20	PAOZZ	4010-01-539-9335	19207	12486534	.LANDYARD ASSY	1

END OF FIGURE

GROUP 1501 SHUTTLE GUIDE & BRACKET 0149 00

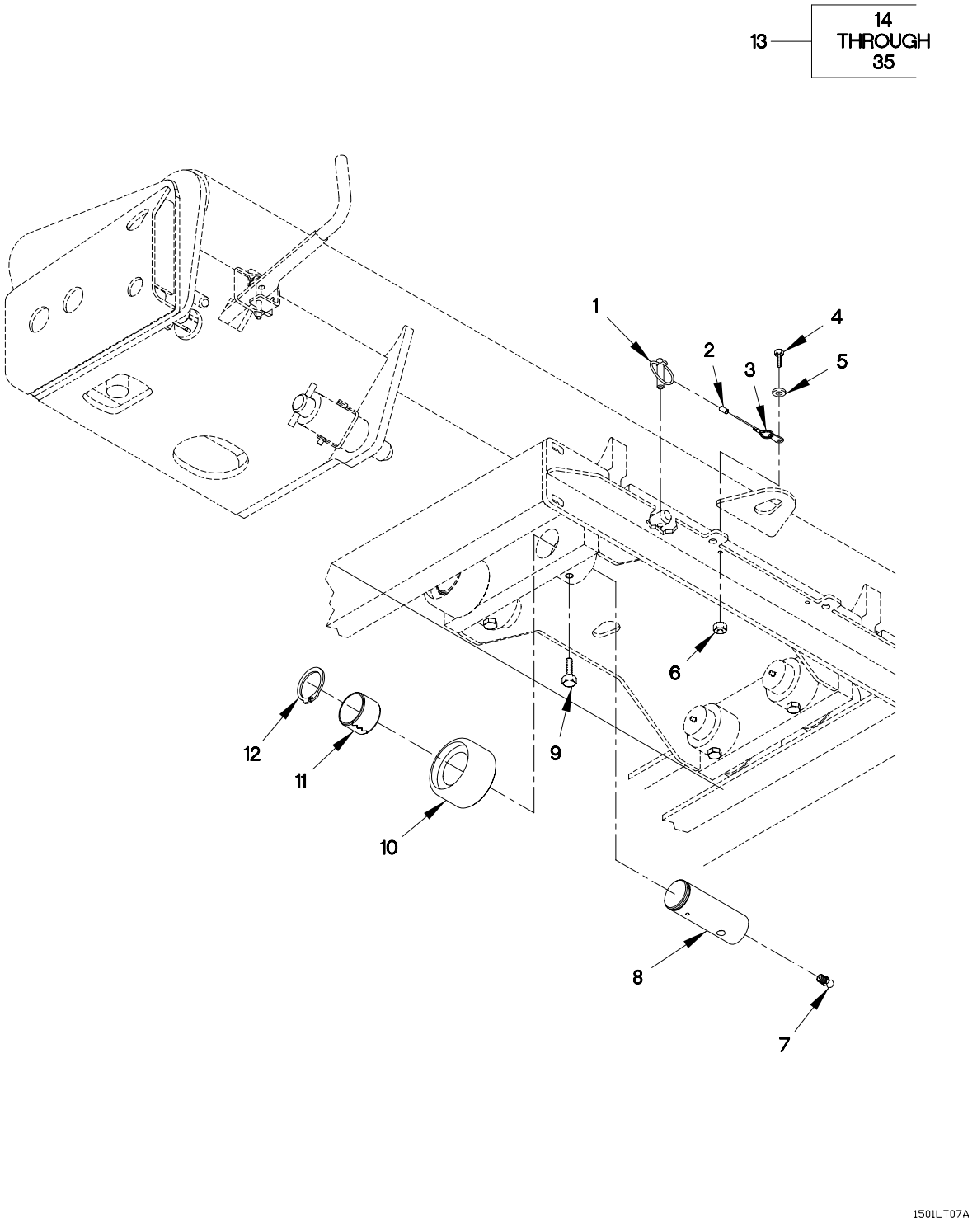


Figure 36. Group 1501 SHUTTLE GUIDE & BRACKET (Sheet 1 of 2)
0149 00-1

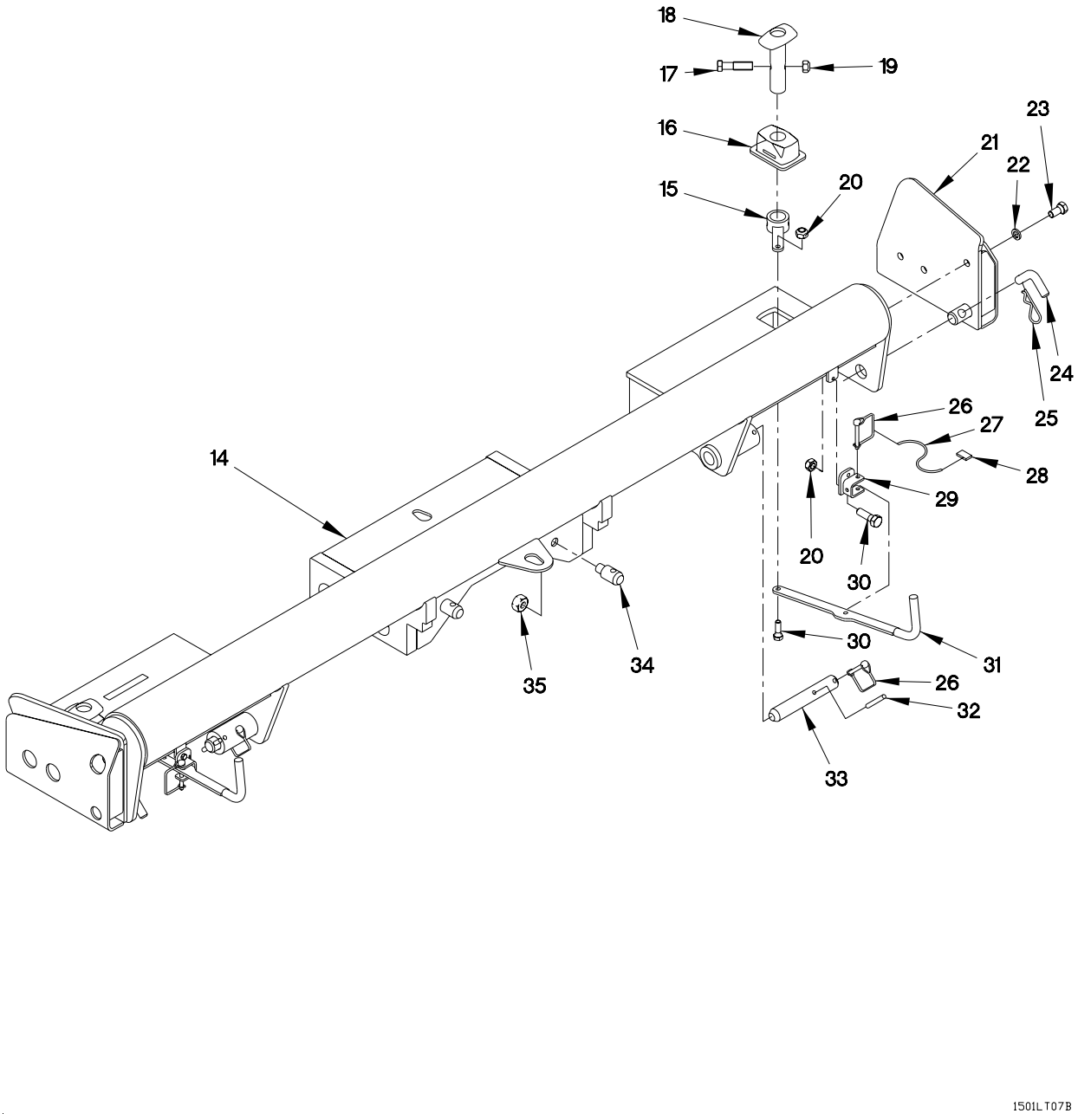


Figure 36. Group 1501 SHUTTLE GUIDE & BRACKET (Sheet 2 of 2)
0149 00-2

GROUP 1501 SHUTTLE GUIDE & BRACKET – Continued 0149 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486602-001	PIN,LYNCH	2
2	PAOZZ	4030-01-088-2952	96906	MS51844-62	SWAGING SLEEVE,WIRE	4
3	PAOZZ	4010-00-451-3533	81349	M83420/4-002	ROPE,WIRE	2
4	PAOZZ	5305-01-357-8159	96906	MS51849-77C	SCREW,MACHINE-STEEL	2
5	PAOZZ	5310-01-352-9593	80205	NAS1149C0463R	WASHER,FLAT	2
6	PAOZZ	5310-01-436-3290	80205	MS17830-010C	NUT,PLAIN,HEXAGON	2
7	PAOZZ	4730-00-050-4203	81343	AS15001-1	FITTING,LUBRICATION	4
8	PAOZZ		19207	12486364	SHAFT,ROLLER,SHUTTL	4
9	PAOZZ		80205	MS90725-111	SCREW, HEX CAP	4
10	PAOZZ	3130-01-540-1910	19207	12486366	ROLLER	4
11	PAOZZ	3120-01-540-1487	19207	12486375	BUSHING,SPRING	4
12	PAOZZ		96906	MS3217-4200	RING,RETAINING	4
13	PAOOO	2590-01-539-8740	19207	12486644	SHUTTLE	1
14	PAOZZ		19207	12486652	.SHUTTLE,LHST	1
15	PAOZZ	5365-01-540-2121	19207	12486704	.TWISTLOCK BUSHING	2
16	PAOZZ	5340-01-540-1854	19207	12486700	.TWISTLOCK BODY	2
17	PAOZZ	5305-00-724-6761	80205	MS90725-167	.SCREW,CAP,HEXAGON	2
18	PAOZZ		19207	12486705-001	.CAP TWISTLOCK RH	1
18	PAOZZ	5340-01-539-9878	19207	12486705-002	.CAP TWISTLOCK LH	1
19	PAOZZ	5310-01-407-7181	19207	12412476-13	.NUT,SELF-LOCKING,HE	2
20	PAOZZ	5310-01-473-7114	19207	12412476-08	.NUT,SELF-LOCKING,HE	20
21	PAOZZ	2590-01-539-8879	19207	12486658	.GUIDE,LH	1
21	PAOZZ		19207	12486659	.GUIDE,RH	1
22	PAOZZ	5310-00-820-6653	80205	MS35338-50	.WASHER,LOCK	6
23	PAOZZ	5305-00-044-5503	96906	MS90725-160	.SCREW,CAP,HEXAGON	6
24	PAOZZ	5315-01-539-9357	19207	12486670	.PIN,L-SHAPE	2
25	PAOZZ	5315-01-540-1478	19207	12486647	.PIN,HAIR 3/16 DIA	2
26	PAOZZ	5315-01-406-7423	19207	12412608	.PIN, LOCK	4
27	PAOZZ	4010-00-451-3533	81349	M83420/4-002	.ROPE,WIRE	8
28	PAOZZ	4030-01-088-2952	96906	MS51844-62	.SWAGING SLEEVE,WIRE	4
	PAOZZ		19207	12486809	.BRACKET,HANDLE,RH	1
29	PAOZZ		19207	12486810	.BRACKET,HANDLE,LH	1
30	PAOZZ	5305-00-725-4092	80205	MS90726-158	.SCREW,CAP,HEXAGON	4
31	PAOZZ		19207	12486804-001	.ROD,PUSH RH	1
31	PAOZZ		19207	12486804-002	.ROD,PUSH LH	1
32	PAOZZ	5315-00589834	80205	MS16562-271	.PIN,SPRING	2
33	PAOZZ	5315-01-540-3735	19207	12486384	.PIN,LOCK,SHUTTLE	2
34	PAOZZ	5315-01-539-9488	19207	12486761	.PIN,SHUTTLE HOLD	2
35	PAOZZ	5310-01-540-3022	19207	12412476-14	.NUT,SELF-LOCKING HX	2
					END OF FIGURE	

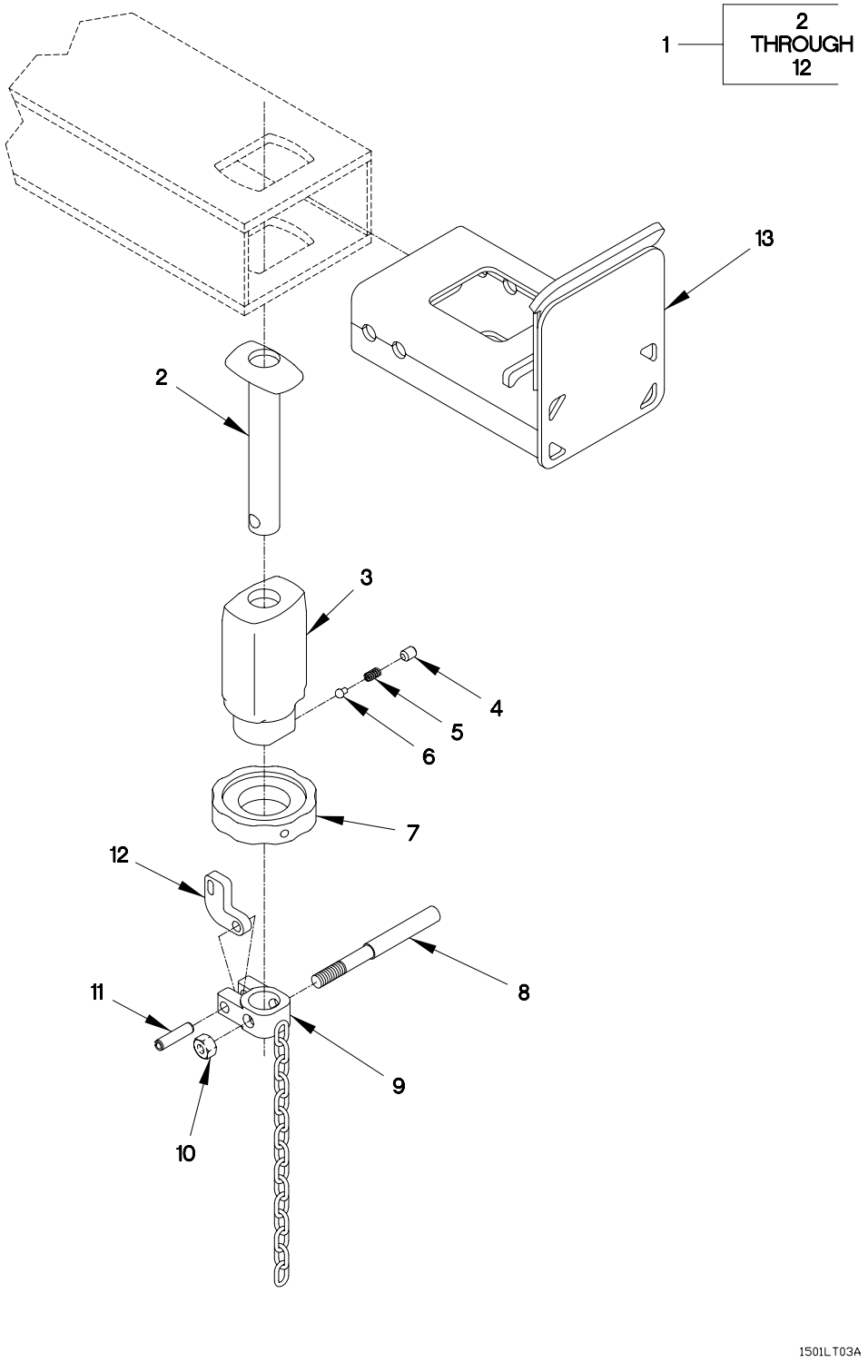


Figure 37. Group 1501 TWIST LOCK ASSEMBLY & FRONT GUIDE

GROUP 1501 TWIST LOCK ASSEMBLY & FRONT GUIDE – Continued 0150 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO		19207	12486557-001	TWIST LOCK ASSEMBLY	1
1	PAOOO		19207	12486557-002	TWIST LOCK ASSEMBLY	1
2	PAOZZ	5340-01-540-3779	19207	12486550	.CAP,TWIST LOCK ASSY	1
3	PAOZZ		19207	12486548	.TWIST LOCK BODY	1
4	PAOZZ	5305-01-512-0392	96906	MS90725-55	.SCREW,CAP,HEXAGON H	1
5	PAOZZ	5360-01-540-0956	19207	12486547	.SPRING,DETENT,TWIST	1
6	PAOZZ	5340-01-540-1323	19207	12486556	.PIN,DETENT,TWIST LO	1
7	PAOZZ		19207	12486557-102	.SCREW,HAND,TWIST LO	1
8	PAOZZ		19207	12486557-104	.HANDLE,TWIST LOCK	1
9	PAOZZ	5340-01-540-0721	19207	12486812	.HANDLE BLOCK ASSY	1
10	PAOZZ		5047	N220N04CAPNN 5630 3NCH1	.NUT,LOCK	2
11	PAOZZ	5315-00-702-3529	80205	MS16562-280	.PIN,SPRING	1
12	PAOZZ	5340-01-540-1250	19207	12486557-103	.PLATE,LOCK,TWIST LO	1
13	PAOZZ	5340-01-540-1255	19207	12486714	GUIDE,FRONT	2
					END OF FIGURE	

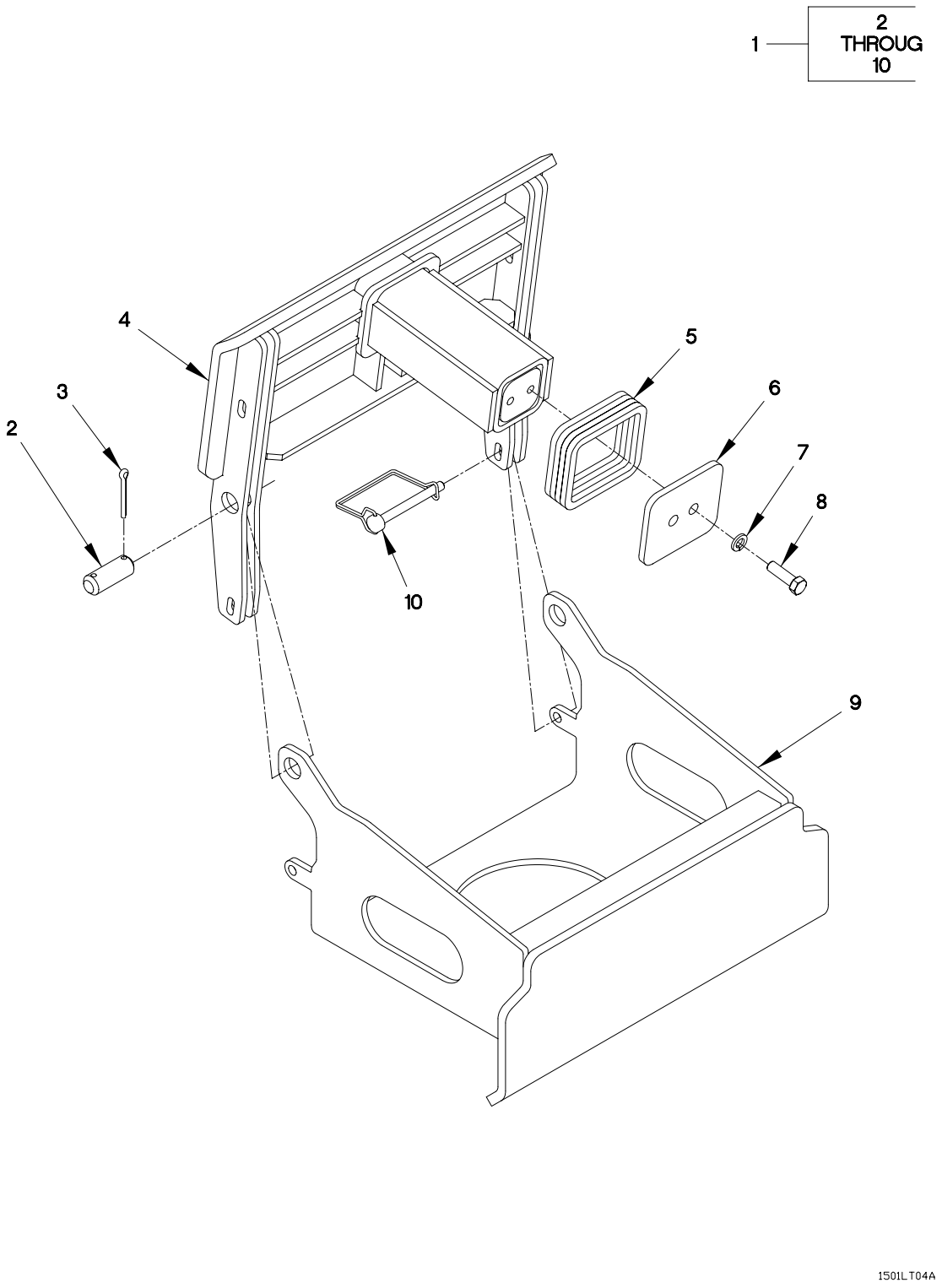
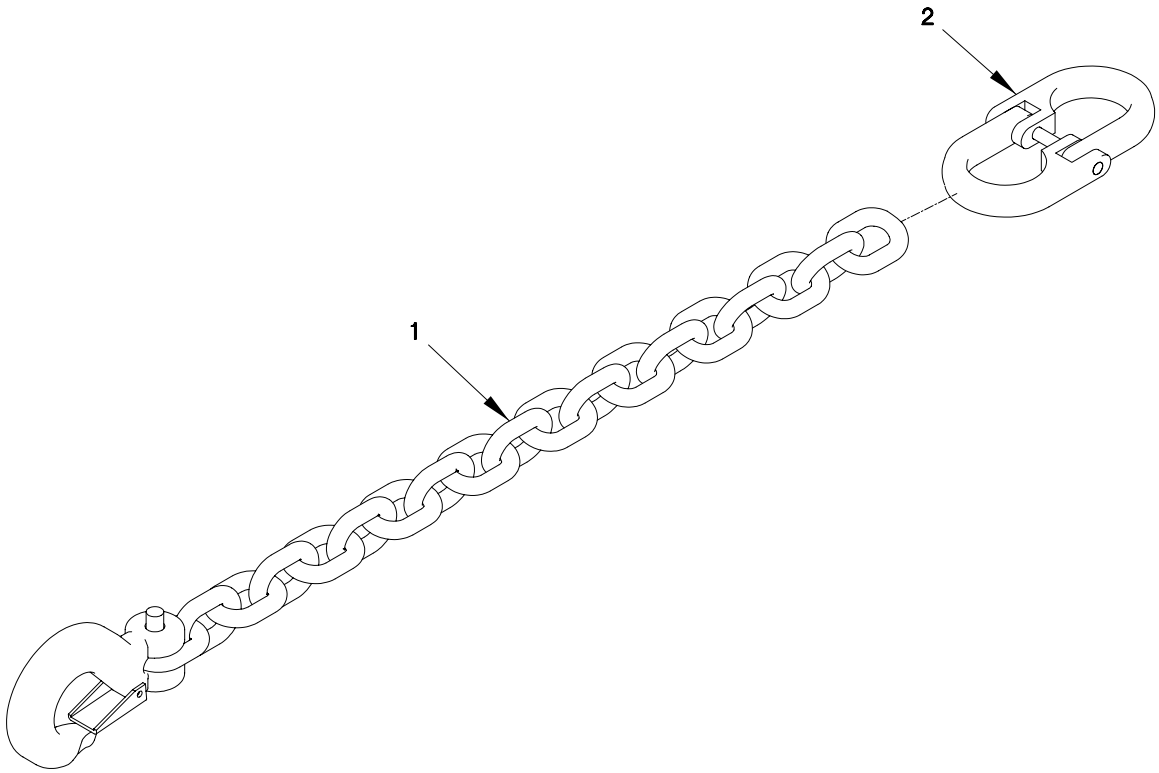


Figure 38. Group 1501 BUMP STOP INSTALLATION

GROUP 1501 BUMP STOP INSTALLATION – Continued 0151 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO		19207	12486697	BUMP STOP ASSY	1
2	PAOZZ	5315-01-540-0949	19207	12486696	.PIN,BUMP STOP	2
3	PAOZZ	5315-00-239-8032	80205	MS24665-513	.PIN,COTTER	4
4	PAOZZ	5305-01-540-0242	19207	12486694	.STOP,BUMP	1
5	PAOZZ	5365-01-540-0265	19207	12486787	.SHIM,BUMP STOP	4
6	PAOZZ		19207	12486786	.CAP,BUMP STOP	1
7	PAOZZ	5310-00-926-5877	96906	MS35338-160	.WASHER,LOCK	2
8	PAOZZ	5305-01-540-0242	5047	S210NA38CAK23 354 BNCH3	.SCREW,HEX HEAD	2
9	PAOZZ		19207	12486695	.EXTENSION,BUMP STOP	1
10	PAOZZ	5315-01-406-7423	19207	12412608	.PIN, LOCK	2
					END OF FIGURE	



1503LT02A

Figure 39. Group 1503 SAFETY CHAIN ASSEMBLY

GROUP 1503 SAFETY CHAIN ASSEMBLY – Continued 0152 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	4010-01-540-2045	19207	12441163-002	CHAIN,SAFETY ASSEMB	2
2	PAOZZ	2040-01-442-4055	19207	12443057	CONNECTING,LINK	2
					END OF FIGURE	

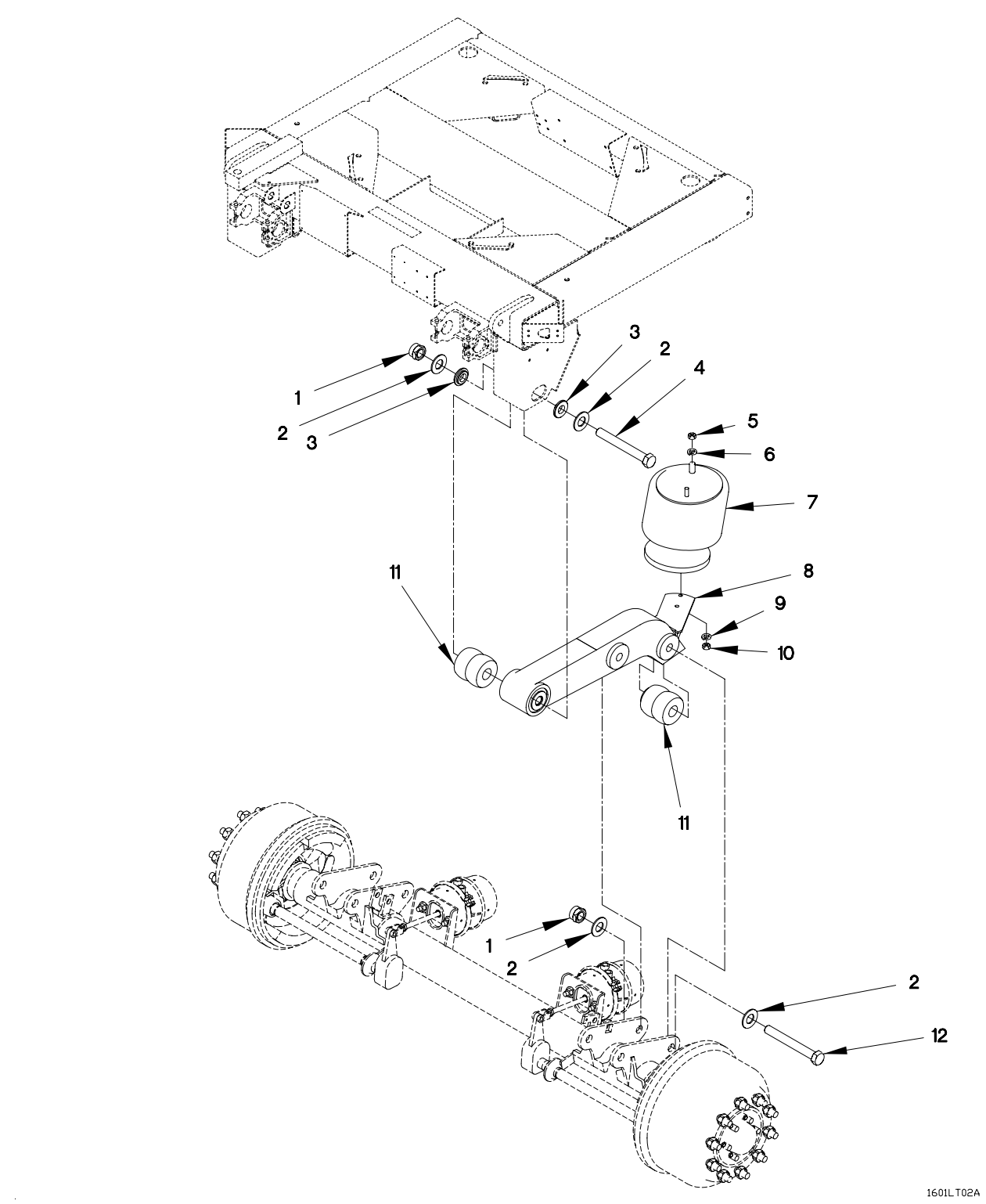


Figure 40. Group 1601 TURNTABLE (FRONT) AXLE SUSPENSION

GROUP 1601 TURNTABLE (FRONT) AXLE SUSPENSION – Continued 0153 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486400-516	NUT,HEX,SELF-LOCK	2
2	PAOZZ		19207	12486400-510	WASHER,FLAT	8
3	PAOZZ		19207	12486400-519	BUSHING,ALIGNMENT	4
4	PAOZZ		19207	12486400-517	SCREW,HEX,CAP	2
5	PAOZZ	5310-01-540-3407	19207	12486400-523	NUT,HEX	2
6	PAOZZ		19207	12486400-522	WASHER,LOCK	2
7	PAOZZ		19207	12486400-513	SPRING,AIR	2
8	PAOZZ		19207	12486400-511	BEAM,EQUALIZING,LH	1
8	PAOZZ		19207	12486400-512	BEAM,EQUALIZING,RH	1
9	PAOZZ		19207	12486400-520	WASHER,LOCK	2
10	PAOZZ		19207	12486400-521	NUT,HEX,SELF-LOCK	2
11	PAOZZ		19207	12486400-525	BUSHING,RUBBER	6
12	PAOZZ		19207	12486400-515	SCREW,HEX CAP	2
					END OF FIGURE	

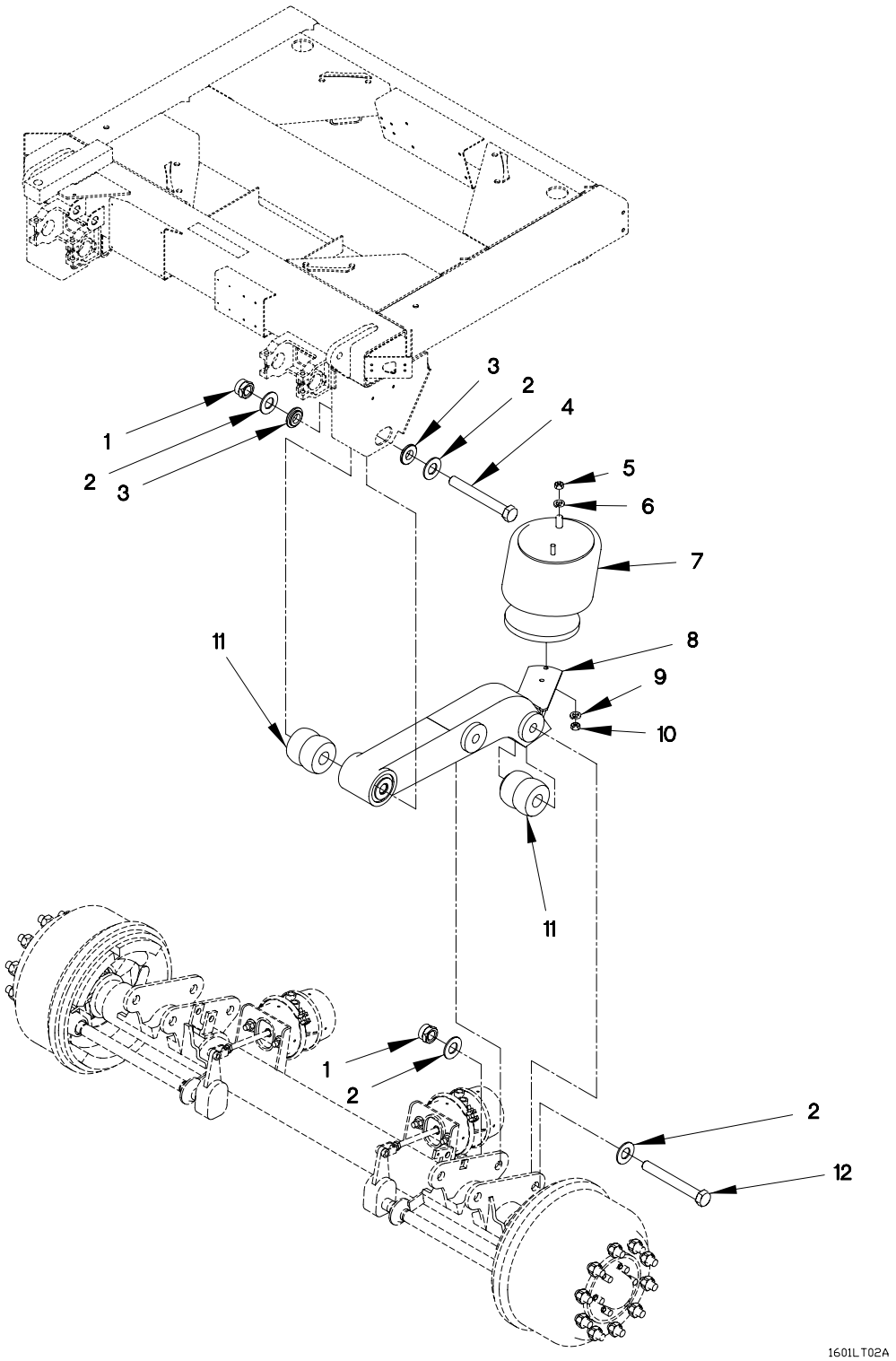


Figure 41. Group 1601 REAR AXLE SUSPENSION
0154 00-1 Blank/2

GROUP 1601 REAR AXLE SUSPENSION – Continued 0154 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	XCOOO		19207	12486400	SUSPENSION ASSY	1
2	XAFZZ		19207	12486400-001	.SUSPENSION,LEFT FRONT AXLE	1
2	XAFZZ		19207	12486400-002	.SUSPENSION,RIGHT REAR AXLE	1
3	PAOZZ		19207	12486400-516	..NUT,HEX,SELF-LOCK	6
4	PAOZZ		19207	12486400-510	..WASHER,FLAT	12
5	PAOZZ		19207	12486400-519	..BUSHING,ALIGNMENT	4
6	PAOZZ		19207	12486400-517	..SCREW,HEX,CAP	2
7	PAOZZ	4730-01-086-4064	79470	1469X4X4	ELBOW,PIPE TO TUBE	2
8	PAOZZ	5310-01-540-3407	19207	12486400-523	..NUT,HEX	2
9	PAOZZ		19207	12486400-522	..WASHER,LOCK	4
10	PAOZZ		19207	12486400-513	..SPRING,AIR	2
11	PAOZZ		19207	12486400-511	..BEAM,EQUALIZING,LH ASSEMBLY,LEFT HAND	1
11	PAOZZ		19207	12486400-512	..BEAM,EQUALIZING,RH ASSEMBLY,RIGHT HAND	1
12	PAOZZ		19207	12486400-520	..WASHER,LOCK	2
13	PAOZZ		19207	12486400-521	..NUT,HEX,SELF-LOCK	2
14	PAOZZ		19207	12486400-525	..BUSHING,RUBBER	6
15	PAOZZ		19207	12486400-515	..SCREW,HEX CAP	4

END OF FIGURE

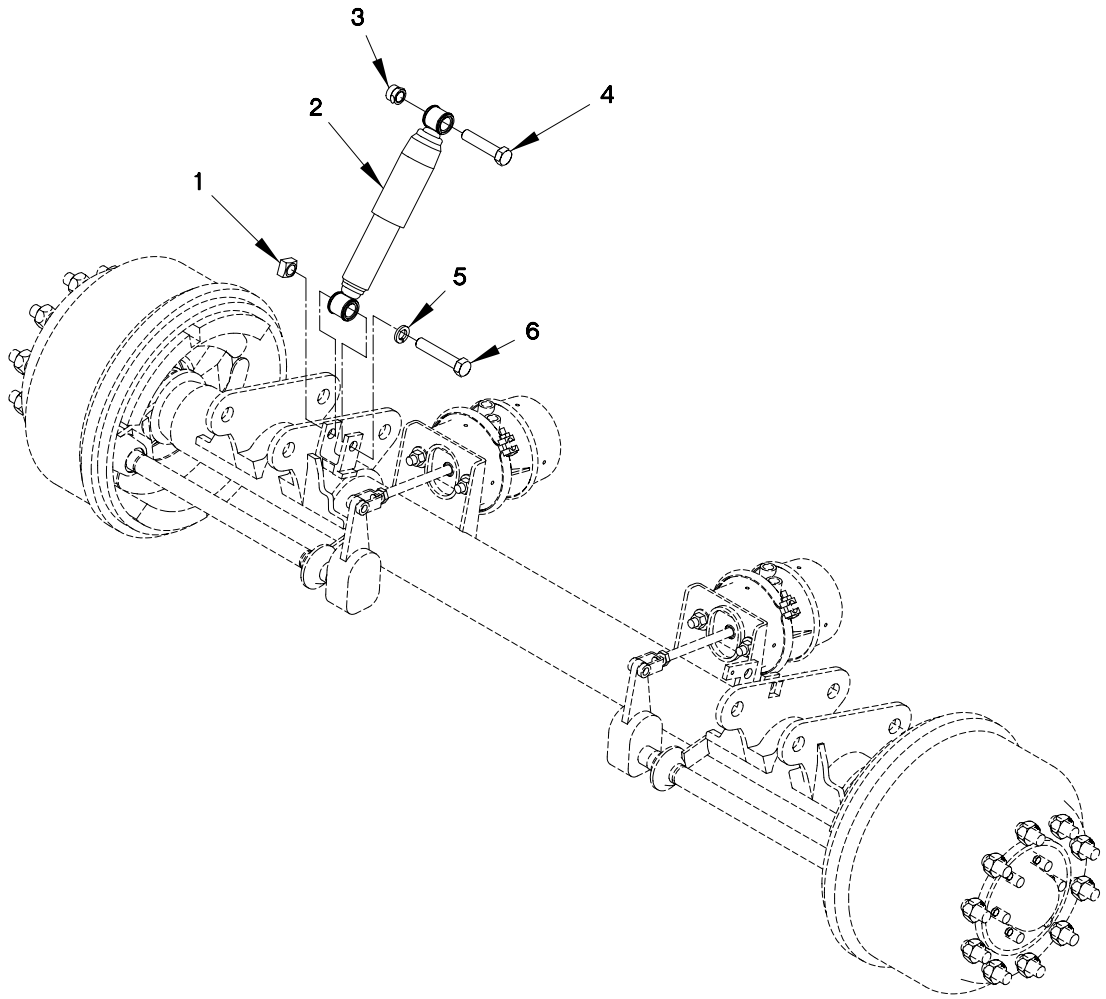


Figure 42. Group 1604 SHOCK ABSORBERS

GROUP 1604 SHOCK ABSORBERS – Continued 0155 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486400-504	NUT,SQUARE,3/4-10	4
2	PAOZZ		19207	12486400-514	SHOCK ABSORBER	4
3	PAOZZ		19207	12486400-524	NUT,HEX,SELF-LOCK	4
4	PAOZZ		19207	12486400-526	SCREW,HEX	4
5	PAOZZ		19207	12486400-522	WASHER,LOCK	4
6	PAOZZ		19207	12486400-518	SCREW,HEX	4
					END OF FIGURE	

GROUP 1802 TURNTABLE SPLASH GUARDS 0156 00

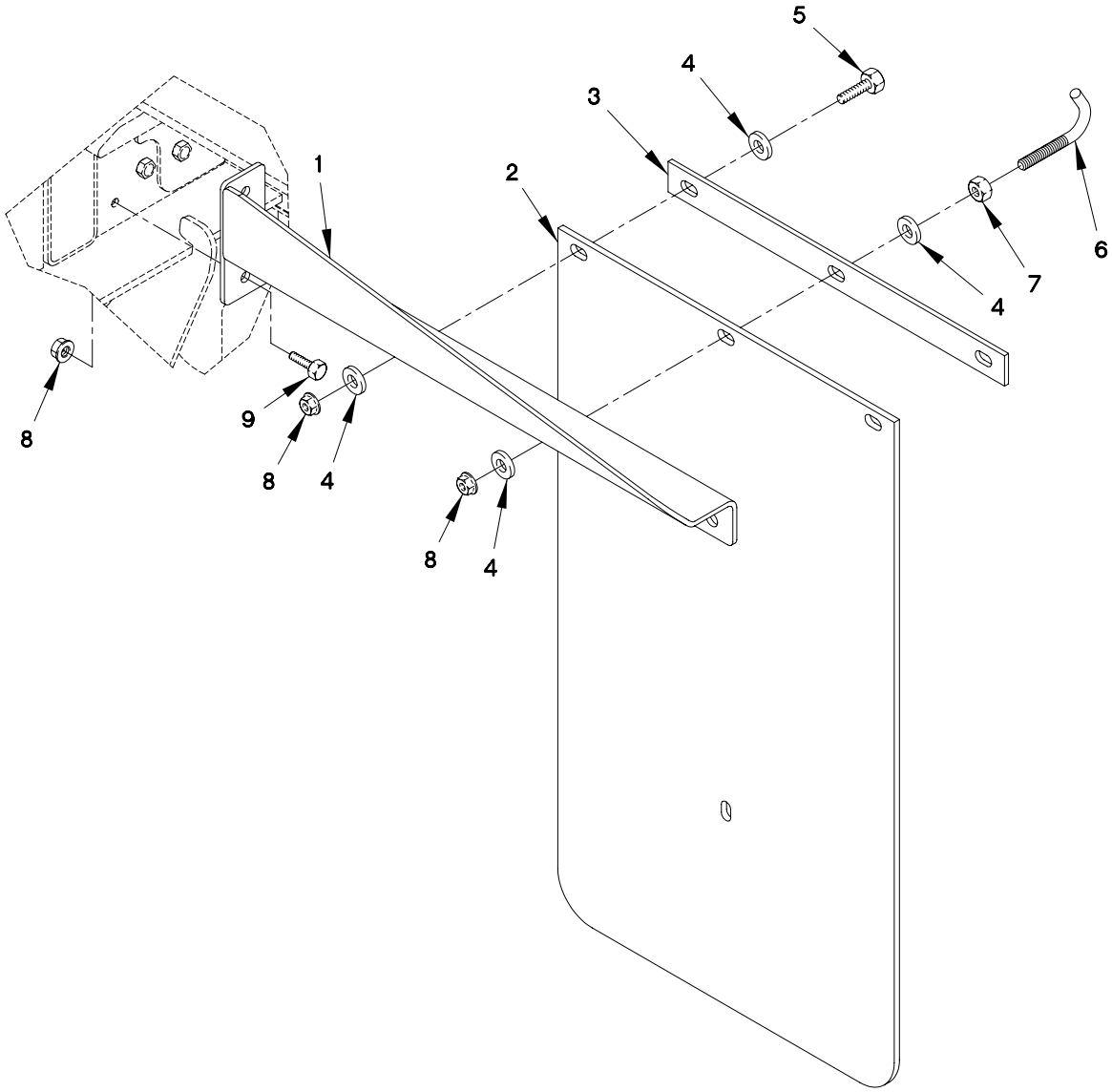


Figure 43. Group 1802 TURNTABLE SPLASH GUARDS (Sheet 1 of 2)
0156 00-1

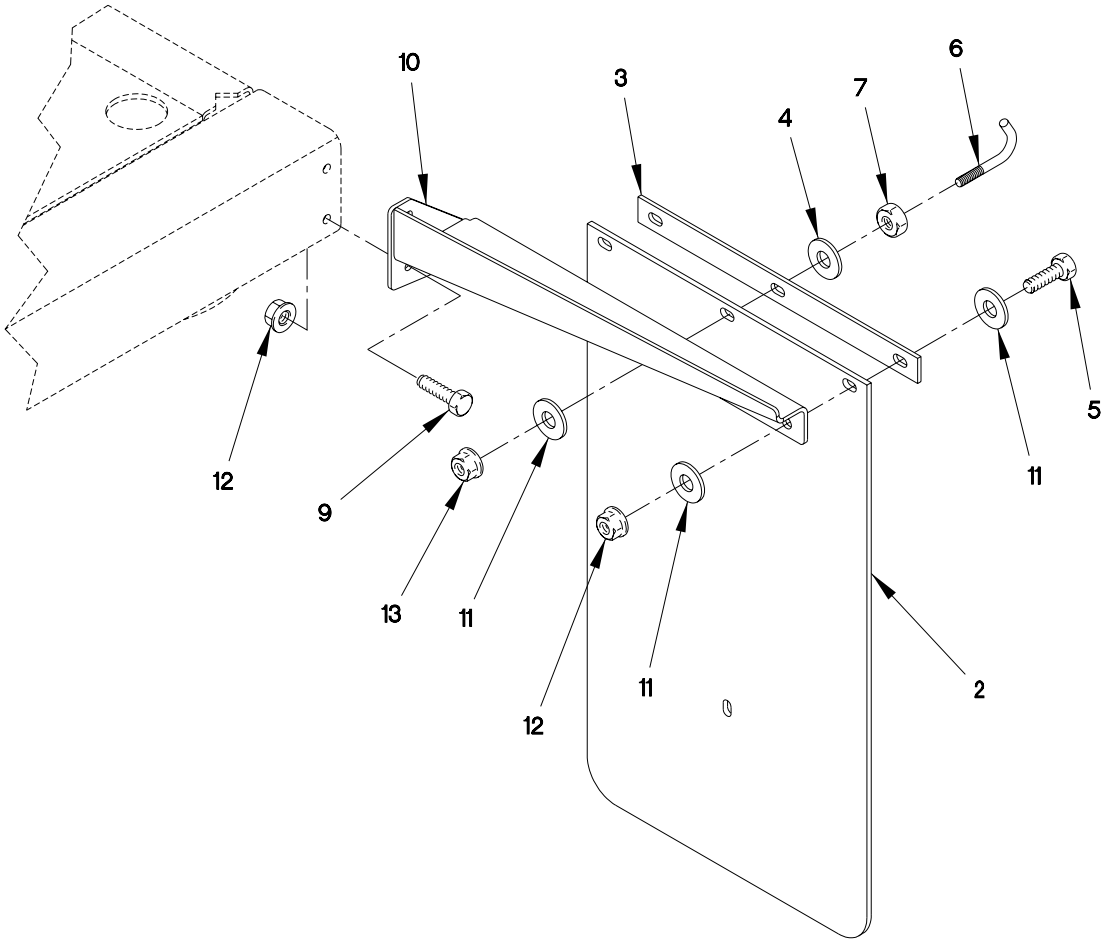


Figure 43. Group 1802 TURNTABLE SPLASH GUARDS (Sheet 2 of 2)
0156 00-2

GROUP 1802 TURNTABLE SPLASH GUARDS – Continued 0156 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486351-001	BRACKET,MUD FLAP,LH REAR	1
1	PAOZZ		19207	12486351-002	BRACKET,MUD FLAP,RH REAR	1
2	PAOZZ		19207	12486541	GUARD,SPLASH,LHST	4
3	PAOZZ	5340-01-540-1470	19207	12486721	BRACKET,SPLASH GUAR	4
4	PAOZZ	5310-00-167-0804	80205	AN960C616	WASHER, FLAT	15
5	PAOZZ	5305-00-269-3213	80205	MS90725-62	SCREW,CAP HEXAGON H	9
6	PAOZZ	5306-01-540-1422	19207	12486722	HOOK,SPLASH GUARD	4
7	PAOZZ	5310-00-477-6768	96906	MS35649-2384	NUT, PLAIN, HEXAGO	2
8	PAOZZ	5310-01-445-6346	19207	12412476-09	NUT,SELF-LOCKING,HE	15
9	PAOZZ	5305-01-540-1757	80204	B1821BH038C100N	SCREW,CAP,HEXAGON H	8
10	PAOZZ	5340-01-540-1427	19207	12486542-001	BRACKET,MUD FLAP,RH FRONT	1
10	PAOZZ	5340-01-540-1254	19207	12486542-002	BRACKET,MUD FLAP,LH FRONT	1
11	PAOZZ	5310-00-167-0804	80205	AN960C616	WASHER, FLAT	12
12	PAOZZ	5310-00-087-4652	81349	M45913/1-6CG5C	NUT,SELF-LOCKING,HE	10
13	PAOZZ		5047	N220N04CAKNN 5630 1BCH1	NUT,HEX	2
					END OF FIGURE	

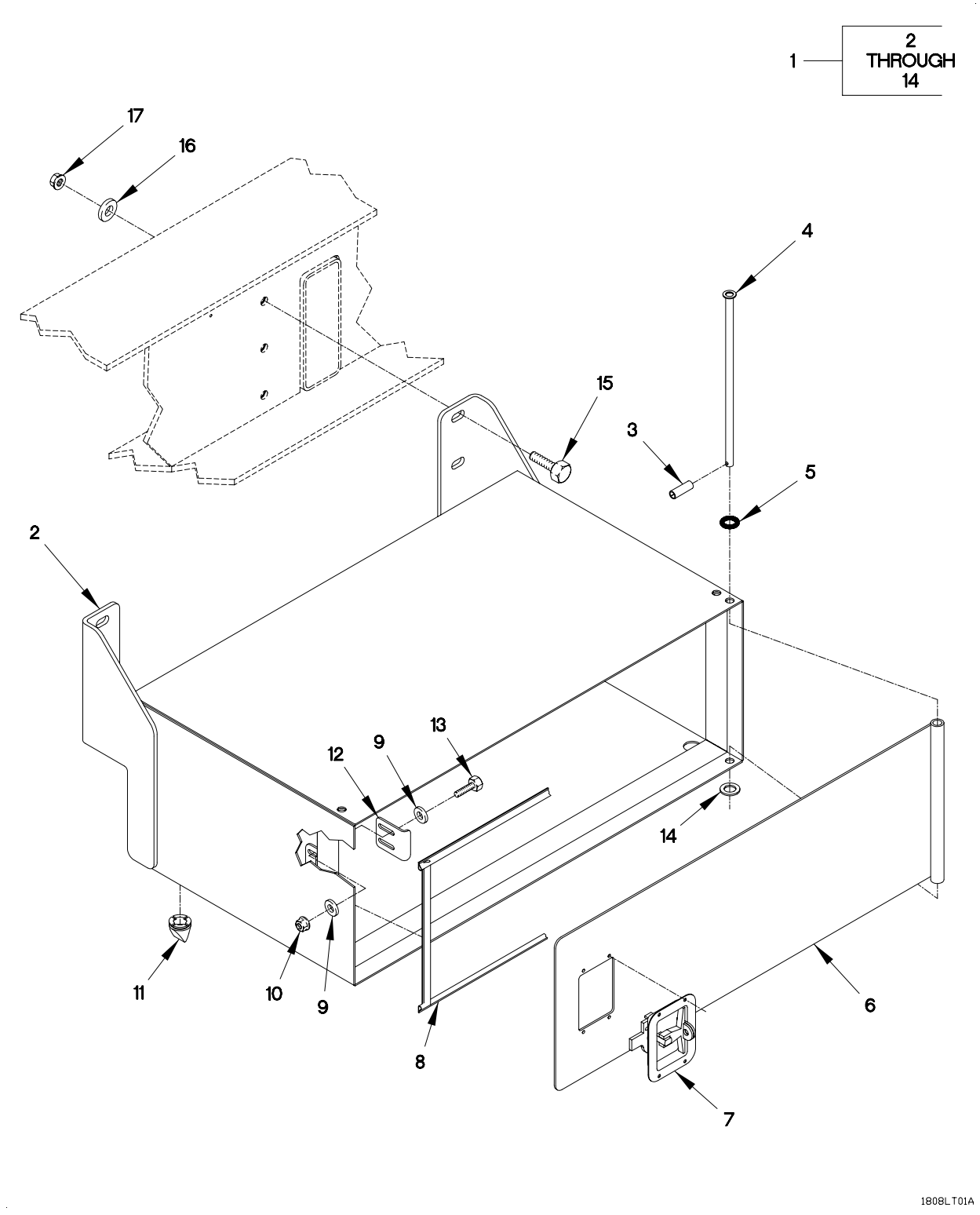


Figure 44. Group 1808 TOOL BOX ASSEMBLY

GROUP 1808 TOOL BOX ASSEMBLY – Continued 0157 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOOO		19207	12486485	TOOLBOX ASSEMBLY	1
2	XAFFF		19207	12486474	.TOOL BOX	1
3	PAOZZ	5315-00-058-9782	80205	MS16562-236	.PIN,ROLL	1
4	PAOZZ	5315-01-540-3759	19207	12486487	.ROD,TOOLBOX	1
5	PAOZZ	5331-01-188-9652	81343	MS28775-205	.O-RING	1
6	PAOZZ	2540-01-540-4053	19207	12486483	.TOOLBOX DOOR	1
7	PAOZZ		19207	12486520	.LATCH,FOLDING	1
8	MOOZZ		19207	12486559	.WEATHER STRIP	1
9	PAOZZ		80205	NAS1149F0463B	.WASHER,FLAT	4
10	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	.NUT,SELF-LOCKING,HE	2
11	PAOZZ		19207	12486573	.VALVE,VACUATOR	4
12	PAOZZ	5340-01-539-8494	19207	12486605	.MOUNT,ADJ,STRIKER	1
13	PAOZZ	5305-00-489-0743	96906	MS51849-96	.SCREW, HEX CAP	2
14	PAOZZ	5310-01-539-9991	80205	NAS1149F0763B	.WASHER,FLAT	1
15	PAOZZ	5305-01-325-8388	80205	MS90725-113	SCREW, HEX CAP	6
16	PAOZZ		80205	NAS1149C0863R	WASHER,FLAT	6
17	PAOZZ	5310-01-407-7178	19207	12412476-11	NUT,SELF-LOCKING,HE	6
					END OF FIGURE	

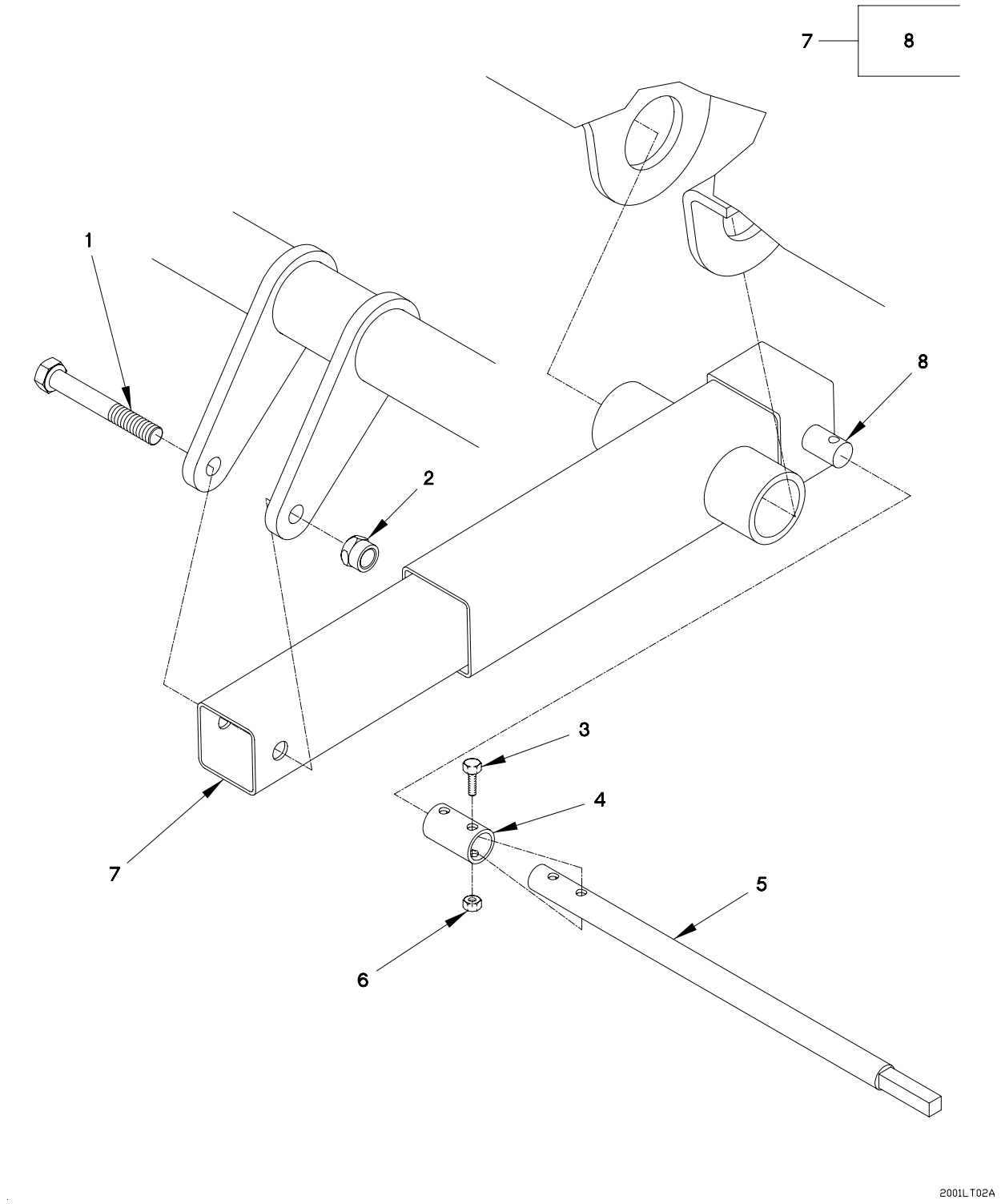


Figure 45. Group 2001 RAIL LIFT JACK
0158 00-1 Blank/2

GROUP 2001 RAIL LIFT JACK – Continued 0158 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5305-00-724-7266	80204	B1821BH063C500N	SCREW,CAP,HEXAGON H	1
2	PAOZZ	5310-01-407-7181	19207	12412476-13	NUT,SELF-LOCKING,HE	1
3	PAOZZ	5306-00-226-4832	80204	B1821BH063F175N	SCREW,HEX HEAD	2
4	PAOZZ	3010-01-540-3113	19207	12486373	COLLAR,CRANKSHAFT	1
5	PAOZZ	3040-01-539-8014	19207	12486444	TUBE,EXT,RAIL JACK	1
6	PAOZZ	5310-01-473-7114	19207	12412476-08	NUT,SELF-LOCKING,HE	2
7	PAOZZ		19207	12486617	JACK,RAIL LIFT	1
8	PAOZZ		7443	134947	.SHAFT	1
					END OF FIGURE	

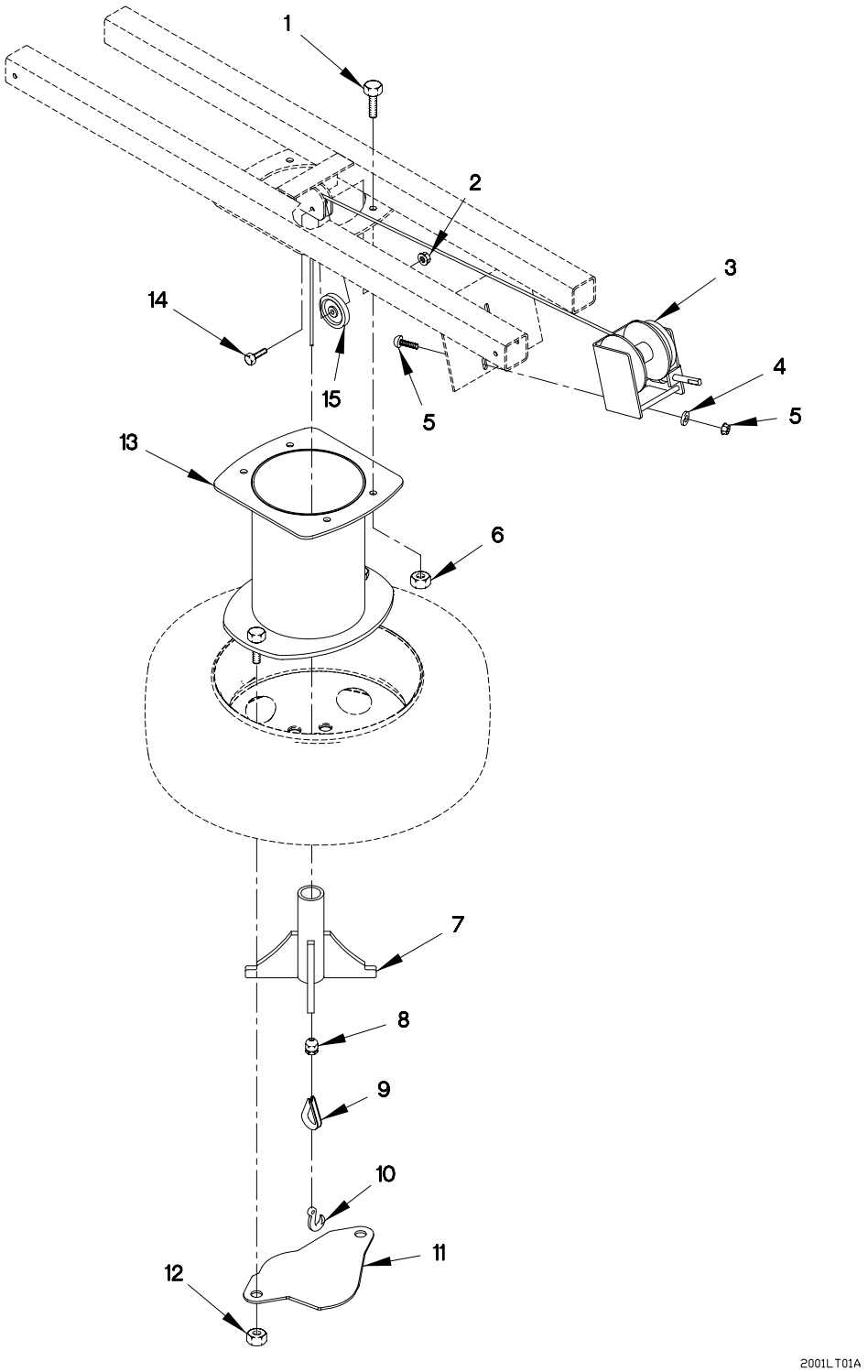


Figure 46. Group 2001 SPARE TIRE CARRIER & WINCH

GROUP 2001 SPARE TIRE CARRIER & WINCH – Continued 0159 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		80205	MS90725-111	SCREW, HEX CAP	1
2	PAOZZ	5310-00-087-4652	81349	M45913/1-6CG5C	NUT,SELF-LOCKING,HE	2
3	PAOZZ	3950-01-540-2964	19207	12486522	WINCH,TIRE CARRIER	1
4	PAOZZ	5310-00-167-0804	80205	AN960C616	WASHER, FLAT	1
5	PAOZZ	5305-00-269-3211	80205	MS90725-60	SCREW,ROLLER ASSEMB	2
6	PAOZZ	5310-01-407-7178	19207	12412476-11	NUT,SELF-LOCKING,HE	1
7	PAOZZ	4910-01-539-7847	19207	12486507	BRACKET,TIRE LIFT	1
8	PAOZZ	4030-01-540-1262	19207	12486757	CLAMP,SPLIT	1
9	PAOZZ		19207	12486390	THIMBLE	1
10	PAOZZ		19207	12486506	HOOK,SPECIAL	1
11	PAOZZ		19207	12486749	PLATE,SUPPORT,TIRE	1
12	PAOZZ	5310-01-045-3709	58536	A52427-R-0.750	NUT,PLAIN,SINGLE	2
13	PAOZZ		19207	12486510	CARRIER,TIRE	1
14	PAOZZ	5305-00-725-2317	80204	B1821BH038C150N	SCREW,CAP,HEXAGON H	1
15	PAOZZ		19207	12486529	PULLY,TIRE CARRIER	1
					END OF FIGURE	

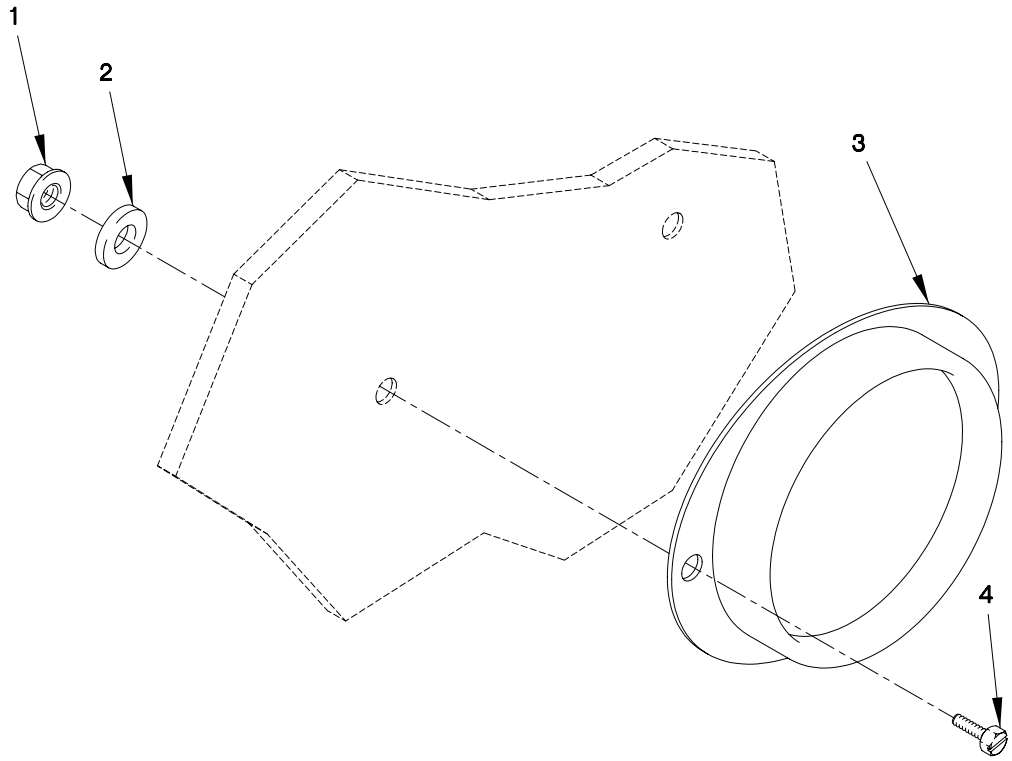


Figure 47. Group 2202 REFLECTORS

GROUP 2202 REFLECTORS – Continued 0160 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	5310-01-481-5015	96906	MS17830-C4	NUT,PLAIN,HEXAGON	8
2	PAOZZ	5310-01-352-9593	80205	NAS1149C0463R	WASHER,FLAT	8
3	PAOZZ	9905-00-205-2795	58536	AA52428-1	REFLECTOR,INDICATIN RED	2
3	PAOZZ	9905-00-202-3639	58536	AA52428-2	REFLECTOR,INDICATIN AMBER	2
4	PAOZZ	5305-01-357-8160	96906	MS51849-97C	SCREW,MACHINE	8
					END OF FIGURE	

GROUP 4706 OVERLOAD INDICATOR & COVER 0161 00

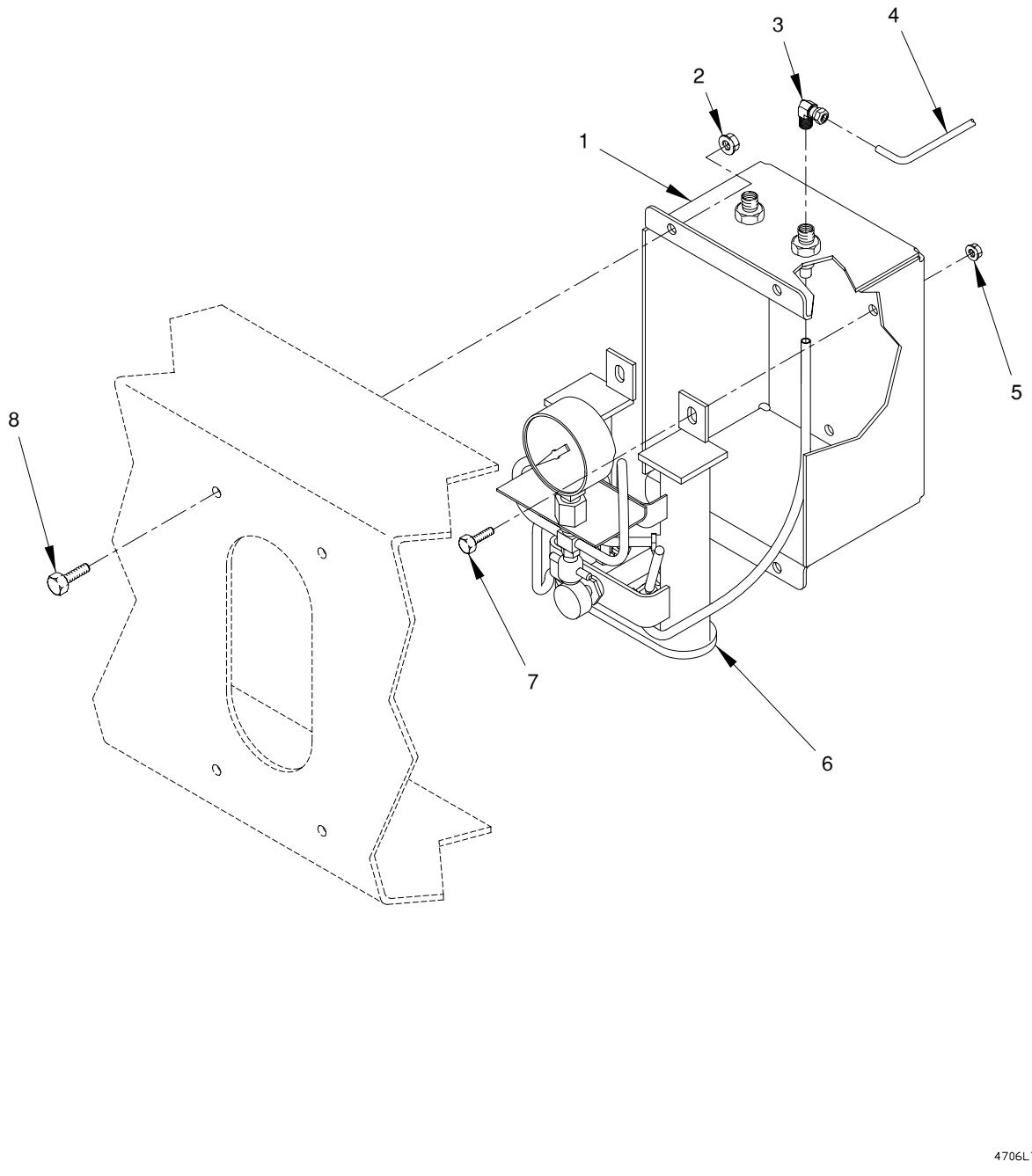


Figure 48. Group 4706 OVERLOAD INDICATOR & COVER

GROUP 4706 OVERLOAD INDICATOR & COVER – Continued 0161 00

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ		19207	12486771	LOAD INDICATOR BOX	1
2	PAOZZ	5310-00-088-1251	81349	M45913/1-4CG5C	NUT,SELF-LOCKING,HE	4
3	PAOZZ	4730-01-086-4064	79470	1469X4X4	ELBOW,PIPE TO TUBE	2
4	MOOZZ		0FW39	12420572-004X	TUBING,NONMETALLIC	V
5	PAOZZ	5310-01-466-0565	0FW39	12412476-04	NUT,SELF-LOCKING,CO	3
6	PAOZZ		19207	12486410	INDICATOR,LOAD	1
7	PAOZZ		80204	S300NA44CAA17574 NNCH1	SCREW,HEX	3
8	PAOZZ	5305-01-540-1515	80204	S210NA38CAD14354 BNCH1	SCREW,HEX,CAP	4
					END OF FIGURE	

UNIT MAINTENANCE
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM
2040-01-442-4055	39	2
2440-01-360-7372	28	1
2530-01-483-3949	26	8
3040-01-382-8736	19	1
4010-00-451-3533	30	20
4030-00-145-5721	30	21
4030-01-088-2952	30	25
4720-01-479-7709	19	3
4720-01-479-7711	19	3
4730-00-050-4203	36	7
4730-00-069-1187	23	10
4730-00-200-0257	24	12
4730-00-202-6491	20	14
4730-00-439-1722	16	3
4730-01-085-6577	20	12
4730-01-086-4064	23	2
4730-01-091-8032	26	3
4730-01-091-9212	21	13
4730-01-095-3430	21	14
4730-01-095-7717	26	10
4730-01-096-9128	26	5
4730-01-096-9398	24	10
4730-01-102-4123	16	9
4730-01-115-6643	17	7
4730-01-123-2946	20	15
4730-01-134-3568	26	9
4730-01-134-3571	26	13
4730-01-134-6989	23	12
4730-01-213-7733	18	4
4730-01-268-2402	24	4
4730-01-274-1825	16	11
4730-01-283-1877	20	9
4730-01-311-0242	16	7
4730-01-372-6528	24	3
4730-01-384-1441	19	1
4820-01-363-2117	18	5
5305-00-044-5503	36	23
5305-00-068-0502	1	8
5305-00-068-0511	43	5
5305-00-071-2067	32	11
5305-00-071-2069	32	14
5305-00-071-2071	20	3
5305-00-225-3839	2	2
5305-00-269-3211	23	7
5305-00-269-3213	25	5
5305-00-489-0743	25	1
5305-00-724-5911	30	6
5305-00-724-6761	36	17
5305-00-724-7266	32	17
5305-00-725-2317	47	14
5305-00-725-4092	36	30
5305-00-984-4980	1	4
5305-00-984-6191	1	22
5305-00-984-6214	22	3
5305-00-995-3442	1	23
5305-01-325-8387	16	2
5305-01-325-8388	30	9
5305-01-357-8159	4	4
5305-01-357-8160	48	4
5305-01-367-1294	23	6
5305-01-485-6049	21	11
5306-00-150-9995	34	3
5306-00-226-4825	1	6
5306-00-226-4832	46	3
5306-01-269-8693	35	11
5310-00-045-3299	1	18
5310-00-087-4652	43	12
5310-00-088-1251	21	7
5310-00-167-0721	1	11
5310-00-167-0804	16	5
5310-00-193-7577	1	15
5310-00-225-6993	30	5
5310-00-477-6768	43	7
5310-00-516-5566	47	12
5310-00-550-1130	1	9
5310-00-576-5752	1	25
5310-00-637-9541	25	6
5310-00-761-6882	1	10
5310-00-763-8920	20	18
5310-00-809-8544	1	24
5310-00-820-6653	20	7
5310-00-823-8804	21	6

UNIT MAINTENANCE
NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM
5310-00-852-8593	1	26
5310-00-880-7744	1	12
5310-00-926-5877	38	7
5310-00-926-5880	32	10
5310-00-933-8120	23	5
5310-00-934-9739	1	16
5310-00-934-9757	1	14
5310-00-984-7042	3	2
5310-01-103-6042	30	19
5310-01-167-4064	32	3
5310-01-312-1057	34	5
5310-01-352-9575	4	3
5310-01-352-9593	30	15
5310-01-407-7177	1	1
5310-01-407-7178	20	8
5310-01-407-7181	32	16
5310-01-436-3290	4	2
5310-01-445-6346	16	6
5310-01-466-0565	22	6
5310-01-473-7114	36	20
5310-01-481-5015	48	1
5315-00-013-7214	12	3
5315-00-058-9782	45	3
5315-00-209-7273	32	13
5315-00-234-1864	34	2
5315-00-239-8032	38	3
5315-00-252-5986	12	1
5315-00-702-3529	37	11
5315-01-215-7505	37	13
5315-01-383-0048	35	12
5315-01-406-7423	30	17
5330-01-487-4641	12	13
5331-01-188-9652	45	5
5430-01-479-5606	18	1
5925-00-900-1904	1	19
5925-01-214-3228	1	20
5935-00-846-3884	1	7
5935-00-856-3513	1	5
5963-01-500-2303	16	1
5975-01-480-5396	1	21
6110-01-479-8558	1	17
6150-00-772-8814	5	1
6220-01-521-7648	4	1
9905-00-202-3639	48	3
9905-00-205-2795	48	3

UNIT MAINTENANCE
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
005-079-00	12	9
005-079-00	14	9
005-096-00	12	15
005-096-00	14	15
005-097-00	12	12
005-097-00	14	12
005-098-00	11	14
005-098-00	13	14
005-099-00	11	13
005-099-00	13	13
005-100-00	11	9
005-100-00	13	9
005-134-00	12	4
005-134-00	14	4
006-099-00	12	10
006-099-00	14	10
006-114-00	11	15
006-114-00	13	15
006-115-00	11	12
006-115-00	13	12
007-139-00	12	6
007-139-00	14	6
007-157-00	11	10
007-157-00	13	10
007-194-00	11	5
007-194-00	13	5
008-290-13	11	2
008-290-13	13	2
010-052-00	12	13
010-052-00	14	13
010-055-00	11	3
010-055-00	13	3
014-056-00	12	14
014-056-00	14	14
014-058-00	12	16
014-058-00	14	16
014-065-00	15	7
014-068-00	15	2
021-038-02	11	8
021-038-02	13	8
031-026-01	11	3
031-026-01	13	3
031-026-02	11	4
031-026-02	13	4
031-027-01	11	4
031-027-01	13	4
031-027-02	11	4
031-027-02	13	4
034-032-00	12	7
034-032-00	14	7
034-058-01	20	17
034-192-08	12	8
034-192-08	14	8
040-180-00	15	9
046-096-00	15	5
046-097-00	15	4
055-040-98	12	2
055-040-98	14	2
056-017-00	15	3
056-018-00	15	6
061-006-00	12	17
061-006-00	14	17
069-020-00	12	11
069-020-00	14	11
069-078-00	12	5
069-078-00	14	5
071-122-00	15	8
071-124-00	11	7
071-124-00	13	7
1-647-010004217	30	24
10-8 100202BA	16	9
118650	30	29
12-8 130140B	16	7
12-8 130140B	17	2
12378642-005	30	11
12378642-006	30	23

UNIT MAINTENANCE
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
12378849	19	4
12378849-001	19	4
12412476-04	22	6
12412476-04	49	5
12412476-06	1	1
12412476-06	2	3
12412476-06	7	3
12412476-06	21	1
12412476-06	27	1
12412476-06	35	16
12412476-06	45	10
12412476-06	49	2
12412476-08	36	20
12412476-08	46	6
12412476-09	16	6
12412476-09	23	8
12412476-09	44	8
12412476-11	20	8
12412476-11	32	7
12412476-11	45	17
12412476-11	47	6
12412476-13	32	16
12412476-13	35	3
12412476-13	36	19
12412476-13	46	2
12412476-14	36	35
12412608	30	17
12412608	36	26
12412608	38	10
12414314-009	20	6
12414473-015	32	3
12414667-001	19	1
12414668-001	19	1
12417661-002	19	5
12417661-002	26	2
12419079-001	7	5
12419079-004	7	2
12419079-005	7	4
12419965-001	19	3
12419965-002	19	3
12420062-020	16	4
12420062-020	17	9
12420062-021	20	16
12420572-004X	20	13
12420572-004X	21	12
12420572-004X	22	4
12420572-004X	23	1
12420572-004X	24	2
12420572-004X	25	12
12420572-004X	27	4
12420572-004X	28	3
12420572-004X	49	4
12420572-006X	16	10
12420572-006X	17	5
12420572-006X	20	10
12420572-006X	26	6
12420572-008X	17	6
12420572-008X	26	4
12420572-010X	16	8
12421167-001	23	11
12421379-013	18	3
12422657-002	4	1
12422958	3	1
12422973-001	4	5
12422973-002	4	5
12422997	28	1
12423014-005	8	1
12423014-006	8	4
12423014-007	8	2
12423014-008	8	3
12441163-002	39	1
12442787	26	8
12442962-006	18	1
12442963	23	3

UNIT MAINTENANCE
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
12442971-001	1	3
12443057	39	2
12443610	16	1
12443612-001	10	1
12443617-027	32	4
12484560-001	28	6
12420062-022	19	7
12420062-023	19	7
12486319	35	5
12486320	35	13
12486321-102	11	11
12486321-102	13	11
12486321-103	11	11
12486321-103	13	11
12486321-104	11	6
12486321-104	13	6
12486322	29	1
12486329	35	17
12486330	6	1
12486338	6	2
12486339	6	3
12486340	6	4
12486342	30	18
12486350	32	5
12486351-001	44	1
12486351-002	44	1
12486359-501	35	15
12486359-502	35	7
12486359-503	35	8
12486359-504	35	10
12486359-506	35	6
12486359-507	35	14
12486359-508	35	9
12486361	25	2
12486362	21	4
12486363	27	2
12486364	36	8
12486365	9	1
12486366	36	10
12486369	17	3
12486370	11	1
12486390	47	9
12486397	18	2
12486400	41	1
12486370	13	1
12486373	46	4
12486375	36	11
12486384	36	33
12486400-001	41	2
12486400-002	41	2
12486400-504	42	1
12486400-510	40	2
12486400-510	41	4
12486400-511	40	8
12486400-511	41	11
12486400-512	40	8
12486400-512	41	11
12486400-513	40	7
12486400-513	41	10
12486400-514	42	2
12486400-515	40	12
12486400-515	41	15
12486400-516	40	1
12486400-516	41	3
12486400-517	40	4
12486400-517	41	6
12486400-518	42	6
12486400-519	40	3
12486400-519	41	5
12486400-520	40	9
12486400-520	41	12
12486400-521	40	10
12486400-521	41	13
12486400-522	40	6

UNIT MAINTENANCE
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
12486400-522	41	9
12486400-522	42	5
12486400-523	40	5
12486400-523	41	8
12486400-524	42	3
12486400-525	40	11
12486400-525	41	14
12486400-526	42	4
12486410	49	6
12486411	21	5
12486412-001	34	1
12486412-002	34	1
12486416	10	5
12486417	20	2
12486418	33	3
12486419	33	4
12486420	20	4
12486421	10	3
12486426	32	8
12486430	32	18
12486431	32	9
12486432	10	4
12486433	32	15
12486435-001	30	30
12486435-002	30	27
12486437	30	28
12486444	46	5
12486447	22	2
12486474	45	2
12486483	45	6
12486485	45	1
12486487	45	4
12486506	47	10
12486507	47	7
12486510	47	13
12486511	30	2
12486512	30	10
12486514	32	1
12486514-116	32	2
12486514-116	33	1
12486514-117	20	1
12486515	33	6
12486520	45	7
12486522	47	3
12486528	31	1
12486529	47	15
12486533	30	13
12486534	35	20
12486541	44	2
12486542-001	44	10
12486542-002	44	10
12486547	37	5
12486548	37	3
12486550	37	2
12486556	37	6
12486557-001	37	1
12486557-002	37	1
12486557-102	37	7
12486557-103	37	12
12486557-104	37	8
12486559	45	8
12486571	20	5
12486573	45	11
12486588	30	1
12486589	35	1
12486602	30	4
12486602-001	36	1
12486603	25	7
12486605	45	12
12486614	29	2
12486615	35	2
12486616	29	3
12486617	46	7
12486621	32	12

UNIT MAINTENANCE
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PART NUMBER	FIG.	ITEM
12486623	32	19
12486633	24	6
12486644	36	13
12486647	36	25
12486652	36	14
12486658	36	21
12486659	36	21
12486670	36	24
12486694	38	4
12486695	38	9
12486696	38	2
12486697	38	1
12486700	36	16
12486704	36	15
12486705-001	36	18
12486705-002	36	18
12486714	37	13
12486720	30	26
12486721	44	3
12486722	44	6
12486730	23	4
12486736	30	3
12486749	47	11
12486757	47	8
12486760	25	4
12486761	36	34
12486771	49	1
12486777	30	7
12486786	38	6
12486787	38	5
12486804-001	36	31
12486804-002	36	31
12486809	36	29
12486810	36	29
12486812	37	9
12486816	30	14
12486817	25	3
134947	46	8
139222	8	5
1468X6X6	26	5
1468X8	26	3
1469X4X4	23	2
1469X4X4	25	11
1469X4X4	27	3
1469X4X4	41	7
1469X4X4	49	3
1512-0-4	1	20
209P-6-4	20	14
264NTA-4	21	14
264NTA-4	27	8
2678	1	21
30056-10	1	19
300634AM	2	1
4 130137B	24	5
4 130137B	25	9
4-4-100102BA	21	13
4-4-100102BA	23	9
4-4-100102BA	24	1
4-4-100102BA	27	5
4-4-4 100424BA	24	3
4-4-4 100424BA	27	7
4-4-4 100425BA	20	15
4-4-4 140438B	24	4
4-4-4 140438B	25	10
4-6 100102BA	24	10
4-6 100102BA	28	4
4-6 100202BA	20	12
4-6 100202BA	22	1
4-6 100202BA	28	5
48X6X6	16	3
48X6X6	17	8
48X6X6	20	19
48X6X6	26	11
6 130109AB	18	4
6 130109AB	22	5
6 130109AB	26	1

UNIT MAINTENANCE
PART NUMBER INDEX

PART NUMBER	FIG.	ITEM
6-4 100202BA	23	10
6-4 100203BA	23	12
8-6-010102B	19	6
8-6-8 100424BA	26	9
8-8 100202BA	17	7
90006396	21	10
90054466	24	7
6-4 130139B	24	12
6-6 100202BA	16	11
6-6 100202BA	17	4
6-6 100202BA	20	11
6-6-6 100401BA	26	13
6-6-6 100425BA	20	9
6-6-6 100425BA	26	7
6-6-6 140438B	28	2
6-6-6-140424B	24	11
7728814	5	1
8-4 130137B	24	9
8-6 100202BA	26	10
8-6 140137B	17	1
8-6 140137B	19	2
8-6 140137B	26	12
90054516	21	8
90054859	24	8
93900198	21	9
A 13 DIN125-ST	33	5
A52427-L-0.750	47	12
AA52428-1	48	3
AA52428-2	48	3
AN8-15	34	3
AN960C616	16	5
AN960C616	44	4
AN960C616	44	11
AN960C616	47	4
AS15001-1	36	7
B1821BH031C075N	1	6
B1821BH031C175N	46	3
B1821BH038C125N	44	5
B1821BH038C150N	47	14
MS16562-271	36	32
MS16562-280	37	11
B1821BH050C125N	32	11
B1821BH050C150N	32	14
B1821BH050C200N	20	3
B1821BH050C200N	32	6
B1821BH063C500N	32	17
B1821BH063C500N	46	1
DB-1249-49	35	11
DT-VR(SS)	1	17
K71-136-00	15	1
M12133/2-505	34	5
M45913/1-10CG5C	30	31
M45913/1-4CG5C	21	7
M45913/1-4CG5C	30	22
M45913/1-6CG5C	44	12
M45913/1-6CG5C	47	2
M45913/1-8CG5C	30	5
M83420/4-002	30	20
M83420/4-002	36	3
M83420/4-002	36	27
MS16562-236	45	3
MS17830-010C	4	2
MS17830-010C	28	7
MS17830-010C	36	6
MS17830-C4	48	1
MS24665-140	12	1
MS24665-140	14	1
MS24665-302	34	2
MS24665-359	12	3
MS24665-359	14	3
MS24665-513	38	3
MS24665-625	32	13
MS24665-625	33	2
MS27183-7	1	24

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PART NUMBER	FIG.	ITEM
MS27183-9	21	6
MS28775-205	45	5
MS3217-4200	36	12
MS35206-223	1	4
MS35206-243	1	22
MS35206-267	22	3
MS35207-268	1	23
MS35333-36	1	15
MS35333-38	1	13
MS35333-39	1	25
MS35333-40	1	9
MS35333-41	1	11
MS35338-138	23	5
MS35338-141	3	2
MS35338-160	38	7
MS35338-162	32	10
MS35338-42	1	18
MS35338-46	25	6
MS35338-50	20	7
MS35338-50	36	22
MS35649-103	1	26
MS35649-2384	44	7
MS35649-242	1	16
MS35649-282	1	14
MS51412-4	30	19
MS51844-62	30	25
MS51844-62	36	2
MS51844-62	36	28
MS51844-64	30	21
MS51849-137C	3	3
MS51849-64C	23	6
MS51849-77C	4	4
MS51849-77C	36	4
MS51849-96	25	1
MS51849-96	27	6
MS51849-96	35	19
MS51849-96	45	13
MS51849-97C	48	4
MS51967-2	1	10
MS51967-2	10	2
MS51967-20	20	18
MS51967-20	30	8
MS51967-5	1	12
MS51967-5	32	20
MS75021-2	1	7
MS90725-10	21	11
MS90725-111	30	12
MS90725-111	36	9
MS90725-111	47	1
MS90725-113	30	9
MS90725-113	45	15
MS90725-160	36	23
MS90725-163	30	6
MS90725-167	36	17
MS90725-6	1	8
MS90725-60	23	7
MS90725-60	25	8
MS90725-60	47	5
MS90725-62	25	5
MS90725-64	16	2
MS90725-8	2	2
MS90725-8	21	3
MS90725-8	30	16
MS90726-158	36	30
N-30256-C	18	5
N220N04CAKNN56301BCH1	44	13
N220N04CAPNN56303NCH1	37	10
N220N05FAMNN56302BCH1	34	6
NAS1149C0363R	4	3
NAS1149C0363R	21	2
NAS1149C0463R	30	15
NAS1149C0463R	35	18
NAS1149C0463R	36	5
NAS1149C0463R	48	2
NAS1149C0863R	45	16
NAS1149F0463B	45	9

UNIT MAINTENANCE
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PART NUMBER	FIG.	ITEM
NAS1149F0763B	45	14
S210NA38CAD14354BNCH1	1	2
S210NA38CAD14354BNCH1	49	8
S210NA38CAD17354BNCHI	7	1
S210NA38CAK17354BNCH1	44	9
S210NA38CAK23354BNCH3	38	8
S210NA38CAP23354BNCH1	35	4
S300NA44CAA17574NNCHI	49	7
S300NB20CAK10912NNCG1	37	4
SAEJ560	1	5
W221NAAW050NN436BNQA1	34	4
XB-121	35	12

PART NUMBER	FIG.	ITEM

BASIC ISSUE ITEMS (BII) LIST 0164 00

SECTION I. INTRODUCTION

SCOPE

This appendix lists BII items for the LHST to help you inventory the items for safe and efficient operation of the equipment.

GENERAL

The BII information is the following list:

Basic Issue Items (BII).

These essential items are required to place the LHST in operation, operate it, and for emergency repairs. Although shipped separately packaged, BII must be with the LHST during operation and when it is transferred between property accounts. Listing these items is your authority to request/requisition them for replacement based on authorization of the end item by the TOE/MTOE. Illustrations are furnished to help you find and identify the items.

EXPLANATION OF COLUMNS

Column (1) – Illustration Number. Gives you the number of the item illustrated.

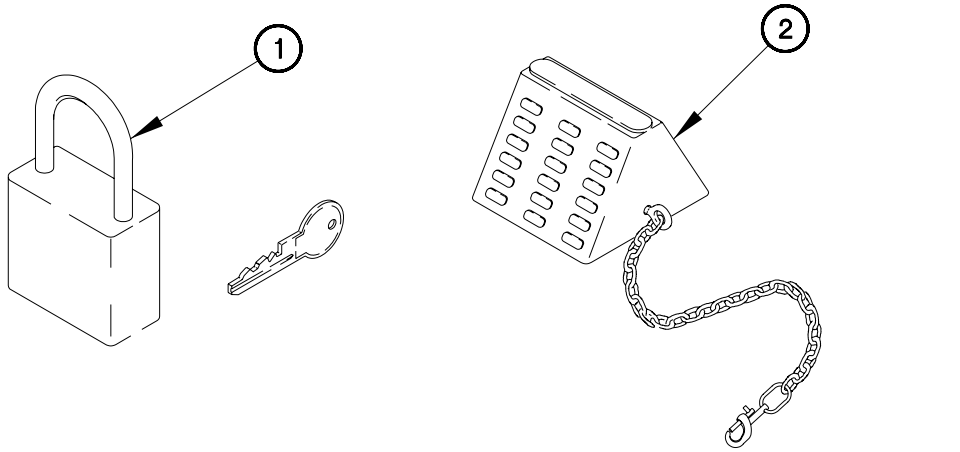
Column (2) – National Stock Number. Identifies the stock number of the item to be used for requisitioning purposes.

Column (3) – Description, CAGEC, and Part Number. Identifies the Federal item name (in all capital letters) followed by a minimum description when needed. The stowage location of COEI is also included in this column. The last line below the description is the CAGEC (commercial and Government entity code) (in parentheses) and the part number.

Column (4) – U/M (Unit of Measure). Indicates how the item is issued for the National Stock Number shown in column (2).

Column (5) – Qty REQD. Indicates the quantity required.

SECTION II. BASIC ISSUE ITEMS (BII)



CD165B01

Table 1. Basic Issue Items List

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) U/M	(5) QTY REQD
1	5340-01-468-5390	PADLOCKS SET (19207) 12422368	EA	1
2	2540-01-500-6119	CHOCK BLOCKS A-52475-2	EA	2

SECTION II. BASIC ISSUE ITEMS (BII) - Continued

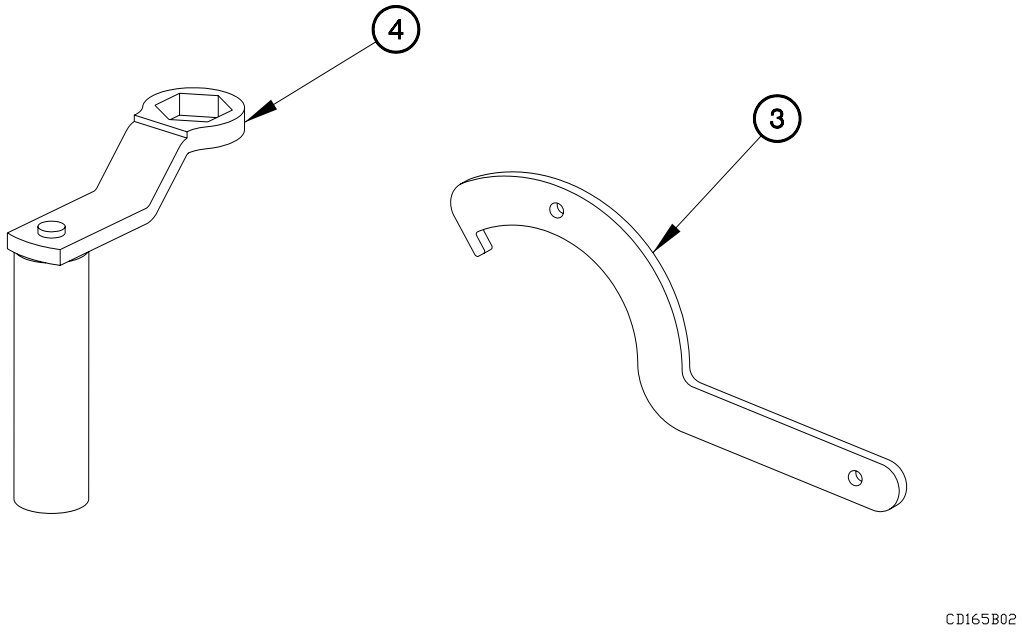
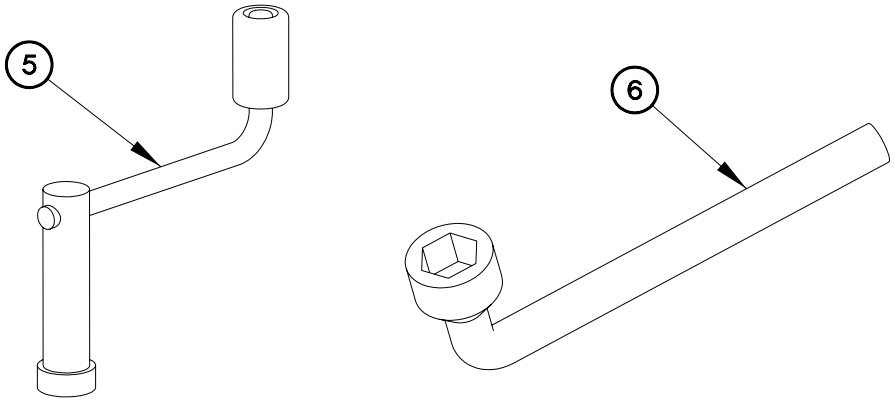


Table 1. Basic Issue Items List - Continued

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) U/M	(5) QTY REQD
3		TOOL, TWIST LOCK (19207) 12486776	EA	1
4		CRANK, TIRE/SHUTTLE (19207)12486769	EA	1

SECTION II. BASIC ISSUE ITEMS (BII) - Continued



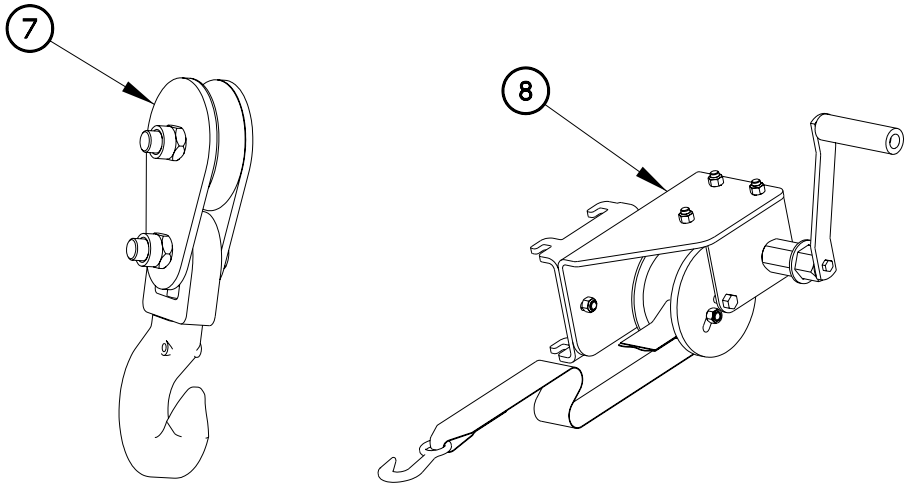
CD165B03

Table 1. Basic Issue Items List - Continued

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) U/M	(5) QTY REQD
5		HANDLE, CRANK (19207) 12486755	EA	1
6		WRENCH, 15/16, SHUTTLE GUIDE (19207) 12486731	EA	1

BASIC ISSUE ITEMS (BII) LIST-Continued 0164 00

SECTION II. BASIC ISSUE ITEMS (BII) - Continued



CD165D04

Table 1. Basic Issue Items List - Continued

(1) ILLUS NUMBER	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION, CAGEC, AND PART NUMBER	(4) U/M	(5) QTY REQD
7	3940-01-391-1848	SNATCH BLOCK (19207) 12378672-004	EA	1
8		WINCH ASSEMBLY, SHUTTLE (19207) 12486356	EA	1

EXPENDABLE/DURABLE ITEMS LIST 0165 00

INTRODUCTION

Scope

This work package lists expendable and durable items that you will need to operate and maintain the LHS trailers. This listing is for information 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 50-909, Field and Garrison Furnishings and Equipment, or CAT 8-100, Army Medical Department Expendable/Durable Items.

Explanation of Columns in the Expendable/Durable Items List

Column (1) -- Item Number. This number is assigned to each entry in the list and is referenced in the narrative instructions to identify the item (e.g., "Antiseize Compound (Item 2, WP 0166 00)").

Column (2) -- Level. This column identifies the lowest level of maintenance that requires the listed item (C = Operator/Crew, O = Field, F = Sustainment).

Column (3) -- National Stock Number (NSN). This is the NSN assigned to the item; us it to requisition the item.

Column (4) -- Item Name, Description, Part Number/(CAGEC). This column provides the other information you need to identify the item. The last line below the description is the part number and Commercial and Government Entity Code (CAGEC) (in parentheses).

Column (5) -- Unit of Issue (U/I). This code shows the physical measurement or count of an item, such as gallon, dozen, gross, etc.

EXPENDABLE AND DURABLE ITEMS LIST

Table 1. Expendable and Durable Items List

(1) Item No.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
1	O		Anaerobic Adhesive SAF-T-Lok T77 Type 1 Grade L (AN0211 IAW ASTM-D-5363)	BT
2	O	8030-00-597-5367	Antiseize Compound (73165) 51008	CN
3	O	5977-00-758-9555	Brush Set (35510) 71035	EA
4	O	4730-01-348-6542	Bushing, Pipe (93061) 209P-8-4	EA
5	O	8030-01-418-9008	Corrosion Prevention Compound (09137) WD-40	CN
6	O	7520-01-209-1152	Dispenser, Pressure Sensitive Adhesive Tape (55203) 5006-0-9	CN

Table 1. Expendable and Durable Items List - (Cont)

(1) Item NO.	(2) Level	(3) National Stock Number (NSN)	(4) Item Name, Description, Part Number/(CAGEC)	(5) U/I
7	O		Grease, Automotive and Artillery (GAA) (81349) (MIL-G-10924)	
		9150-01-197-7688	2-1/4 oz tube	TU
		9150-01-197-7690	1.75 lb can	CN
		9150-01-197-7689	6.5 lb can	CN
		9150-01-197-7692	35 lb can	CN
8	O	9150-00-530-6814	Grease, Wire Rope-Exposed Gear (81349) (MIL-G-18458) 35 lb can	CN
9	O		Nut (1-512-010007-11)	EA
10	O		Oil, Lubricating, Gear, GO 75W (81349) (MIL-L-2105)	
		9150-01-035-5390	1 qt can	CN
		9150-01-035-5391	5 gl can	CN
11	O	7920-00-205-1711	Rag, Wiping (64067) 50 lb bale	EA
12			Screw (101387)	EA
13	O	8030-01-218-0321	Sealing Compound (05972) (592)	TU
14	O	8030-00-204-9149	Sealing Compound (05972) (592-14)	TU
15	O	8030-01-218-0321	Sealing Compound (61603) 392030	TU
16	O	7930-00-634-3935	Soap, Laundry (81348) P-S-1792 200 lb drum	DR
17	O	3439-00-006-7764	Solder, Tin Alloy (81346) ASTM B32	SL
18	O		Solvent, Dry Cleaning SD (P-D-680)	
		6850-00-281-1985	1 gl can	CN
		6850-00-664-5685	1 qt can	CN
19	O	5640-00-103-2254	Tape, Duct (39428) 1791K70	EA
20	O	5975-01-379-4997	Ties, Cable, Plastic (06383) PLT 35-C-O	HD
21	O		Washer (1-861-010032-19)	EA
22	O	6145-01-148-2263	Wire, Electrical (80009) 175-0825-00 50 ft	LG

END OF WORK PACKAGE

STOWAGE AND DECAL/DATA PLATE GUIDE 0166 00

INTRODUCTION

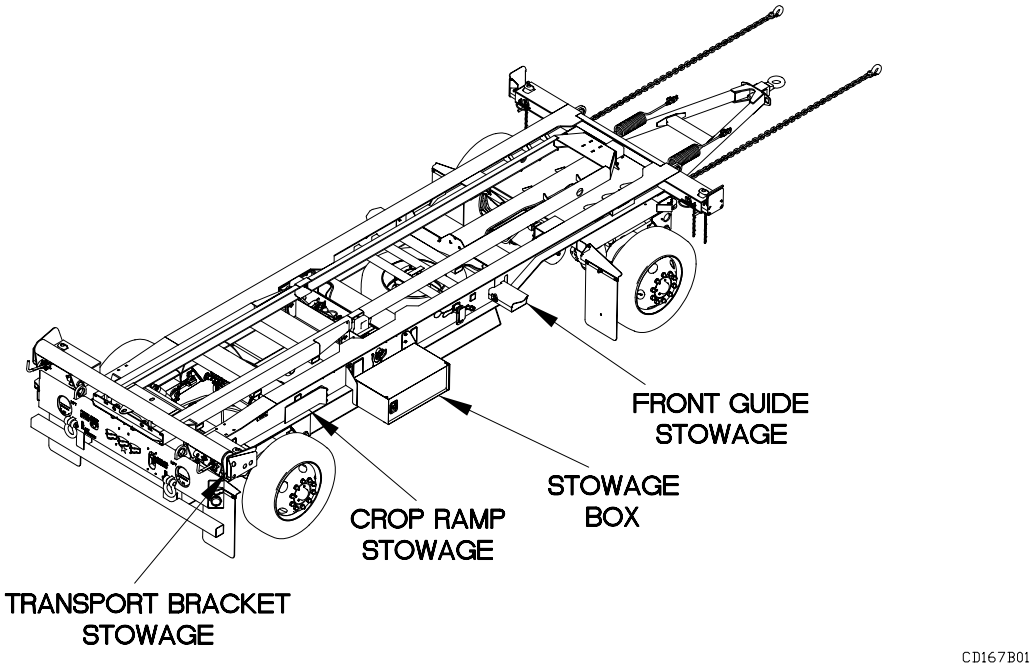
Scope

This work package shows the location for stowage of equipment and material required to be carried on the Load Handling System Trailer (LHST) and locations of decals, stencils, and data plates that are required to be in place on the trailer.

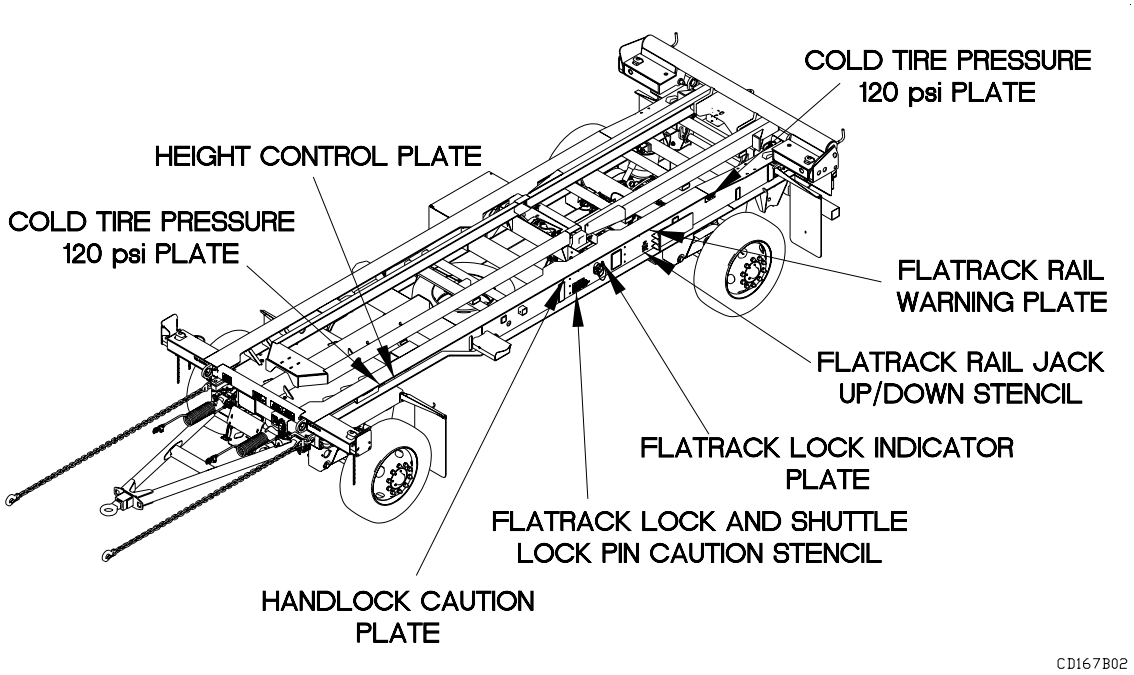
General

The equipment stowage locator is designed to help inventory items required for safe and efficient operation. The equipment locator is representative of COEI and applicable AAL stowage on the LHST.

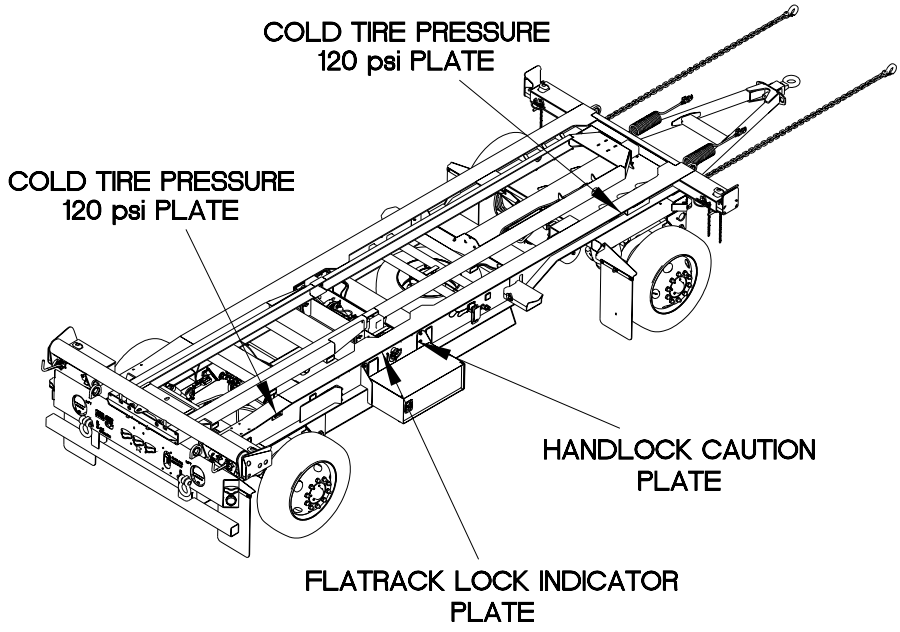
STOWAGE LOCATIONS



DECALS/STENCILS/DATA PLATES

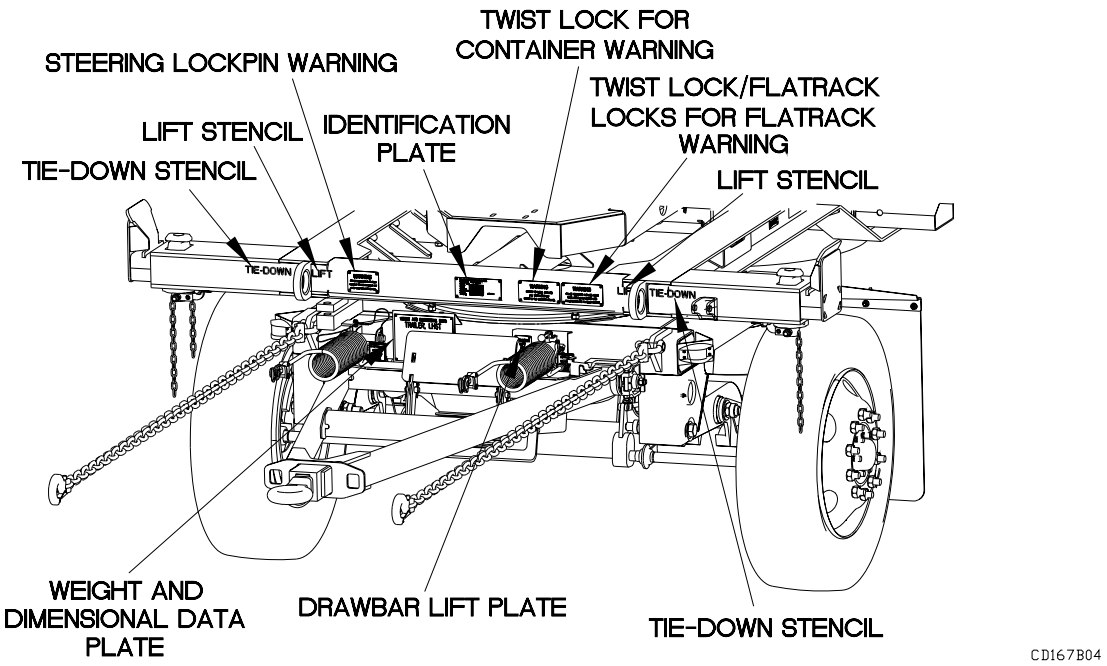


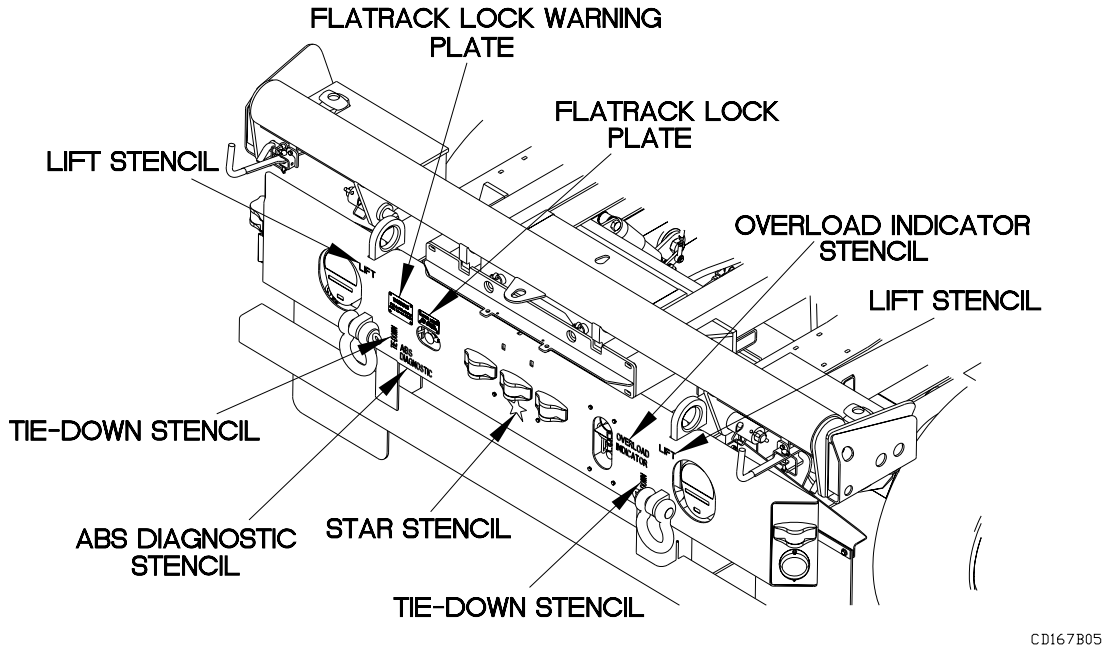
CD167B02



CD167B03

DECALS/STENCILS/DATA PLATES





TOOL IDENTIFICATION LIST 0167 00

INTRODUCTION

Scope

This work package lists common tools and supplements and special tools/fixtures needed to maintain the LHS trailer.

Explanation of columns in the Tool Identification List

Column (1) -- Item Number. This number is assigned to the entry in the list and is referenced in the initial setup to identify the item (e.g., "Adjusting Tool, Brake Shoe (Item 1, WP 0161 00)").

Column (2) -- Item Name. This column lists the item by noun nomenclature and other descriptive features (e.g., “Gloves, Rubber”).

Column (3) -- National Stock Number (NSN). This is the National Stock Number (NSN) assigned to the item; use it to requisition the item.

Column (4) -- Part Number/(CAGEC). 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. The manufacturer’s Commercial and Government Entity Code (CAGEC) is also included.

Column (5) -- Reference. This column identifies the authorizing supply catalog or RPSTL for items listed in this work package.

TOOL IDENTIFICATION LIST

Table 1. Tool Identification List

(1) Item No.	(2) Item Name	(3) National Stock Number (NSN)	(4) Part Number/ (CAGEC)	(5) Reference
1	Bar, Socket Wrench Handle	5120-00-243-2419	DX5741A (56442)	6695-92-A08
2	Bar, Wrecking	5120-00-293-0665	55-130 (57068)	SC 4910-95-CL-A72
3	Drill, Portable, Electric	5130-00-293-1849	W-D-661 (81348)	SC 4910-95-CL-A74
4	Drill, Set, Twist	5130-00-293-0983	58 (13130)	SC 4910-95-CL-A74
5	Gage, Pressure, 0-150 psi	6685-00-474-5721	111T1D05A01 (59018)	

TOOL IDENTIFICATION LIST - Continued

Table 1. Tool Identification List (Cont)

(1) Item No.	(2) Item Name	(3) National Stock Number (NSN)	(4) Part Number/ (CAGEC)	(5) Reference
6	Gloves, Rubber	8415-00-641-4601	ZZ-G-381 (81348)	SC 4910-95-CL-A74
7	Gloves, Welder's	8415-00-268-7859	A-A-50022 (58536)	SC 4910-95-CL-A72
8	Goggles, Industrial	4240-00-052-3776	A-A-1110 (58536)	SC 4910-95-CL-A74
9	Inflator-Gage, Tire w/Hose	4910-01-038-2820	11677140-5 (19207)	
10	Jack, Dolly Type, Hydraulic	5120-01-374-0532	D-51013 (OE3L5)	
11	Jack, Leveling Support	2590-00-23107418	10876244 (19207)	
12	Lift, Transmission and Differential	4910-00-585-3622	49 (79260)	SC 4910-95-A62
13	Multiplier, Torque Wrench	5120-00-574-9318	292 (87641)	SC 4910-95-CL-A72
14	Screwdriver, Crosstip	5120-00-234-8912	11655777-9 (19207)	5180-92-S02
15	Screwdriver, Crosstip	5120-00-234-8913	11655777-12 (19207)	
16	Sling, Cargo	1670-00-823-5043	63J4261-13 (07878)	CTA-50-970
17	Sling, Multiple Leg	3940-00-777-5743	A170 (32413)	
18	Socket Set, Impact	5130-01-117-0466	4151MMY (55719)	SC 4910-95-A31
19	Socket Set, Socket Wrench	5120-00-169-4586	Z62D (45225)	SC 4910-95-A81
20	Soldering and Brazing Outfit, Resistance Heating	3439-00-460-7198	W-TCP-K (97049)	SC 4940-95-CL-B20
21	Tool Kit, Blind Rivet	5180-01-201-4978	D-100-MIL-1(64878)	SC 4910-95-CL-A72

TOOL IDENTIFICATION LIST - Continued

Table 1. Tool Identification List (Cont)

(1) Item No.	(2) Item Name	(3) National Stock Number (NSN)	(4) Part Number/ (CAGEC)	(5) Reference
22	Tool Kit, Genl Mech (2 Level Maintenance)	5180-01-454-3787	12B470000 (59678)	SC 9999-01-SKO
23	Tool Kit, Genl Mech (3 Level Maintenance)	5180-00-177-7033	SC 5180-90-CL-N26 (50980)	SC 9999-01-SKO
24	Trestle, Motor Vehicle Maintenance	4910-00-251-8013	306 (79805)	SC 4910-95-CL-A74
25	Vice, Machinist's	5120-00-293-1439	504M2 (79416)	SC 4910-95-CL-A74
26	Wrench Set, Socket	5120-00-148-3706	ANSI-B107.5	4940-95-B21
27	Wrench Set, Crowfoot Ratcheting	5120-00-293-0013	GGG-W-646 (80244)	
28	Wrench, Adjustable, 12 in	5120-00-264-3796	11655778-5 (19207)	
29	Wrench, Adjustable, 8 in	5120-00-240-5328	11655778-3 (19207)	
30	Wrench, Impact, Pneumatic	5130-01-334-7693	2906P1 (65853)	
31	Wrench, Torque, 50-250- lb-ft	5120-01-042-0982	B107.14M (05047)	SC 4910-95-CL-A74
32	Wrench, Torque, 0-175 lb-ft	5120-00-640-6364	1753LDF (08194)	SC 4910-95-CL-A74
33	Wrench, Torque, 0-200 lb-in	5120-00-853-4538	B10714M	SC 4910-95-CL-A72
34	Wrench, Torque, 0-600 lb-ft	5120-00-221-7983	SW130-301 (10001)	SC 4910-95-CL-A72
35	Wrench, Torque, 0-75 lb-in	5120-01-112-9532	TQS6A (55719)	SC 4910-95-CL-A72

END OF WORK PACKAGE

MANDATORY REPLACEMENT PARTS 0168 00

SCOPE

This work package includes a list of all mandatory replacement parts referenced in the task initial setups and procedures. These are items that must be replaced during maintenance whether they have failed or not. This includes items based on usage intervals such as miles, time, rounds, fired, etc.

Table 1. Mandatory Replacement Parts List

Item No.	Part Number/ (CAGEC)	National Stock Number (NSN)	Nomenclature	Qty
1	12486359-506		Bolt and Self-Locking Nut	As Indicated in Task
2	071-124-00 (7M245)	5330-01-528-3271	Gasket, Hub Cap	As Indicated in Task
3	481-00-200		Kit, Pressure Protection Valve	As Indicated in Task
4	93600072 (19207)	5310-00-584-5272	Washer, Lock	As Indicated in Task
5	93600077 (19207)	5310-00-584-7888	Washer, Lock	As Indicated in Task
6	005-079-00		Washer, Lock	As Indicated in Task
7	005-100-00 (7M245)	5310-01-528-2962	Washer, Lock	As Indicated in Task
8	12414570-009 (19207)	5310-01-439-6781	Washer, Lock	As Indicated in Task
9	12414570-013 (19207)	5310-01-374-4515	Washer, Lock	As Indicated in Task
10	D70336/3-52 (81349)	5310-01-439-2543	Washer, Lock	As Indicated in Task
11	MS35333-36 (96906)	5310-00-193-7577	Washer, Lock	As Indicated in Task
12	MS35333-40 (96906)	5310-00-550-1130	Washer, Lock	As Indicated in Task
13	MS35333-41 (96906)	5310-00-167-0721	Washer, Lock	As Indicated in Task

Table 1. Mandatory Replacement Parts List (Cont)

Item No.	Part Number/ (CAGEC)	National Stock Number (NSN)	Nomenclature	Qty
14	MS35335-58 (96906)	5310-00-209-1366	Washer, Lock	As Indicated in Task
15	MS35335-60 (96906)	5310-00-209-1239	Washer, Lock	As Indicated in Task
16	MS35338-42 (96906)	5310-00-045-3299	Washer, Lock	As Indicated in Task
17	MS35338-46 (96906)	5310-01-637-9541	Washer, Lock	As Indicated in Task
18	MS35338-50 (96906)	5310-00-820-6653	Washer, Lock	As Indicated in Task
19	MS35338-60 (96906)	5310-00-274-8702	Washer, Lock	As Indicated in Task
20	MS35338-138 (80205)	5310-00-933-8120	Washer, Lock	As Indicated in Task
21	MS35338-141 (96906)	5310-00-984-7042	Washer, Lock	As Indicated in Task
22	MS35338-160 (96906)	5310-00-926-5877	Washer, Lock	As Indicated in Task
23	MS35338-162 (96906)	5310-00-926-5880	Washer, Lock	As Indicated in Task
24	93400492 (19207)	5310-01-061-1310	Nut, Self-Locking	As Indicated in Task
25	93400506 (19207)	5310-01-309-6495	Nut, Self-Locking	As Indicated in Task
26	12412476-04 (19207)	5310-01-466-0565	Nut, Self-Locking	As Indicated in Task
27	12412476-06 (19207)	5310-01-407-7177	Nut, Self-Locking	As Indicated in Task

Table 1. Mandatory Replacement Parts List (Cont)

Item No.	Part Number/ (CAGEC)	National Stock Number (NSN)	Nomenclature	Qty
28	12412476-08 (19207)	5310-01-473-7114	Nut, Self-Locking	As Indicated in Task
29	12412476-09 (19207)	5310-01-445-6346	Nut, Self-Locking	As Indicated in Task
30	12412476-11 (19207)	5310-01-407-7178	Nut, Self-Locking	As Indicated in Task
31	12412476-13 (OFW39)	5310-01-407-7181	Nut, Self-Locking	As Indicated in Task
32	12412476-14		Nut, Self-Locking	As Indicated in Task
33	12486359-502		Nut, Self-Locking	As Indicated in Task
34	M45913/1-4CG5C (81349)	5310-00-088-1251	Nut, Self-Locking	As Indicated in Task
35	MS17830-4C (96906)	5310-01-389-6996	Nut, Self-Locking	As Indicated in Task
36	MS17830-010C (96906)	531000-436-3290	Nut, Self-Locking	As Indicated in Task
37	N220N03CAPNN 56303NCH1		Nut, Self-Locking	As Indicated in Task
38	N220N03FAPNN 56306BCH1		Nut, Self-Locking	As Indicated in Task
39	N220N04CAPNN 56303NCH1		Nut, Self-Locking	As Indicated in Task
40	MS28775-205 (81343)	5331-01-188-9652	O-Ring	As Indicated in Task

Table 1. Mandatory Replacement Parts List (Cont)

Item No.	Part Number/ (CAGEC)	National Stock Number (NSN)	Nomenclature	Qty
41	137214 (24617)	5315-00-013-7214	Pin, Cotter	As Indicated in Task
42	12443617-041		Pin, Cotter	As Indicated in Task
43	CVAN65-701-1899324 Piece 174 (53711)	5315-01-458-4502	Pin, Cotter	As Indicated in Task
44	MS24665-302 (80205)	5315-00-234-1864	Pin, Cotter	As Indicated in Task
45	MS24665-513 (96906)	5315-00-239-8032	Pin, Cotter	As Indicated in Task
46	MS24665-625 (80205)	5315-00-209-7273	Pin, Cotter	As Indicated in Task
47	MS24665-733 (80205)	5315-01-390-5849	Pin, Cotter	As Indicated in Task
48	XB-121 (74410)	5315-01-383-0048	Pin, Cotter	As Indicated in Task
49	12443617-027		Pin, Cotter	As Indicated in Task
50	M24243/1-F604 (81349)	5320-01-219-5431	Rivet, Blind	As Indicated in Task
51	010-052-00 (15460)	5330-01-487-4641	Seal, Grease	As Indicated in Task
52	010-055-00 (7M245)		Seal, Unitized	As Indicated in Task
53	12486559		Strip, Weather	As Indicated in Task

END OF WORK PACKAGE

GENERAL TORQUE SPECIFICATIONS

THIS CHART PROVIDES TIGHTENING TORQUES FOR GENERAL PURPOSE APPLICATIONS WHEN SPECIAL TORQUES ARE NOT SPECIFIED ON PROCESS OR DRAWING.
ASSEMBLY TORQUES APPLY TO PLATED NUTS AND CAPSCREWS ASSEMBLED WITHOUT SUPPLEMENTAL LUBRICATION (AS RECEIVED CONDITION). THEY DO NOT APPLY IF SPECIAL GRAPHITE MOLY-DISULFIDE OR OTHER EXTREME PRESSURE LUBRICANTS ARE USED.
WHEN FASTENERS ARE DRY (SOLVENT CLEANED), ADD 33% TO AS RECEIVED CONDITION TORQUE.
BOLT HEAD IDENTIFICATION MARKS INDICATE GRADE AND MAY VARY FROM MANUFACTURER TO MANUFACTURER.
THICK NUTS MUST BE USED ON GRADE 8 CAPSCREWS.
USE VALUE IN [ ] IF USING PREVAILING TORQUE NUTS.
TORQUE IS SPECIFIED IN FOOT POUNDS

UNC Size	SAE Grade 2		SAE Grade 5		SAE Grade 8		UNF Size	SAE Grade 2		SAE Grade 5		SAE Grade 8	
1/4-20	4	[5]	6	[7]	9	[11]	1/4-28	5	[6]	7	[9]	10	[12]
5/16-18	8	[10]	13	[16]	18	[22]	5/16-24	9	[11]	14	[17]	20	[25]
3/8-16	15	[19]	23	[29]	35	[43]	3/8-24	17	[21]	25	[31]	35	[44]
7/16-14	24	[30]	35	[43]	55	[62]	7/16-20	27	[34]	40	[50]	60	[75]
1/2-13	35	[43]	55	[62]	80	[100]	1/2-20	40	[50]	65	[81]	90	[112]
9/16-12	55	[62]	80	[100]	110	[137]	9/16-18	60	[75]	90	[112]	130	[162]
5/8-11	75	[94]	110	[137]	170	[212]	5/8-18	85	[106]	130	[162]	180	[225]
3/4-10	130	[162]	200	[250]	280	[350]	3/4-16	150	[188]	220	[275]	320	[400]
7/8-9	125	[156]	320	[400]	460	[575]	7/8-14	140	[175]	360	[450]	500	[625]
1-8	190	[237]	408	[506]	680	[850]	1-14	210	[263]	540	[675]	760	[950]
1-1/8-7	270	[337]	600	[750]	960	[1200]	1-1/8-12	300	[375]	660	[825]	1080	[1350]
1-1/4-7	380	[475]	840	[1050]	1426	[1782]	1-1/4-12	420	[525]	920	[1150]	1500	[1875]
1-3/8-6	490	[612]	110	[1375]	1780	[2225]	1-3/8-12	560	[700]	1260	[1575]	2010	[2512]
1/1-2-6	650	[812]	1460	[1825]	2360	[2950]	1/1-2-12	730	[912]	1640	[2050]	2660	[3325]

METRIC

COARSE THREAD METRIC CLASS 10.9 FASTENERS AND CLASS 10.0 NUTS AND THROUGH HARDENED FLAT WASHERS, PHOSPHATE COATED, ROCKWELL "C" 38-45.
USE VALUE IN [ ] IF USING PREVAILING TORQUE NUTS.

Nominal Thread Diameter mm	Standard Torque				Nominal Thread Diameter mm	Standard Torque			
	Newton-Meters		Foot-Pounds			Newton-Meters		Foot-Pounds	
6	10	[14]	7	[10]	20	385	[450]	290	[335]
7	16	[22]	12	[16]	24	670	[775]	500	[625]
8	23	[32]	17	[24]	27	980	[1105]	730	[825]
10	46	[60]	34	[47]	30	1330	[1470]	990	[1090]
12	80	[101]	60	[75]	33	1790	[1950]	1340	[1450]
14	125	[155]	90	[115]	36	2325	[2515]	1730	[1870]
16	200	[240]	150	[180]	39	3010	[3210]	2240	[2380]
18	275	[330]	205	[245]					

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Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times 0035 00
Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times 0036 00
Anti-Lock Brake System (ABS) Diagnostic Light Blinks Nine Times 0037 00
Anti-Lock Brake System (ABS) Diagnostic Light Blinks Ten Times 0038 00
Anti-Lock Brake System (ABS) Diagnostic Light Blinks Eleven Times 0039 00
Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times 0040 00
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Left Stoplight Does Not Illuminate	0024 00
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE Date you filled out this form
TO: *(Forward to proponent of publication or form) (Include ZIP Code)*	**FROM:** *(Activity and location) (Include ZIP Code)* Enter your mailing address	

PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
	Publication Date	Publication Title

ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON
10	15-33 19-6	15-7 19-2		4		Item 10. Change Illustration. Reason: Text calls out 90-degree fitting. Art shows straight fitting. Text is correct. Step (4) of removal says to disconnect four hydraulic hoses from manifold. The correct number of hydraulic hoses is five. correct the text to reflect the actual quantity of hydraulic hoses. The supporting illustration is correct.

SAMPLE

** Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your title	Your telephone number	Your signature

TO: *(Forward direct to addressee listed in publication)*	FROM: *(Activity and location) (Include ZIP Code)*	DATE
	Enter your mailing address	Date you filled out this form.

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
	Publication Date	Your Title

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	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Your title	Your telephone number	Your signature

SAMPLE

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is OAASA	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: *(Forward to proponent of publication or form) (Include ZIP Code)*	**FROM:** *(Activity and location) (Include ZIP Code)*	

PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE

ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON

** Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO: *(Forward direct to addressee listed in publication)*	**FROM:** *(Activity and location) (Include ZIP Code)*	**DATE**

PART II - REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

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TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
0630607

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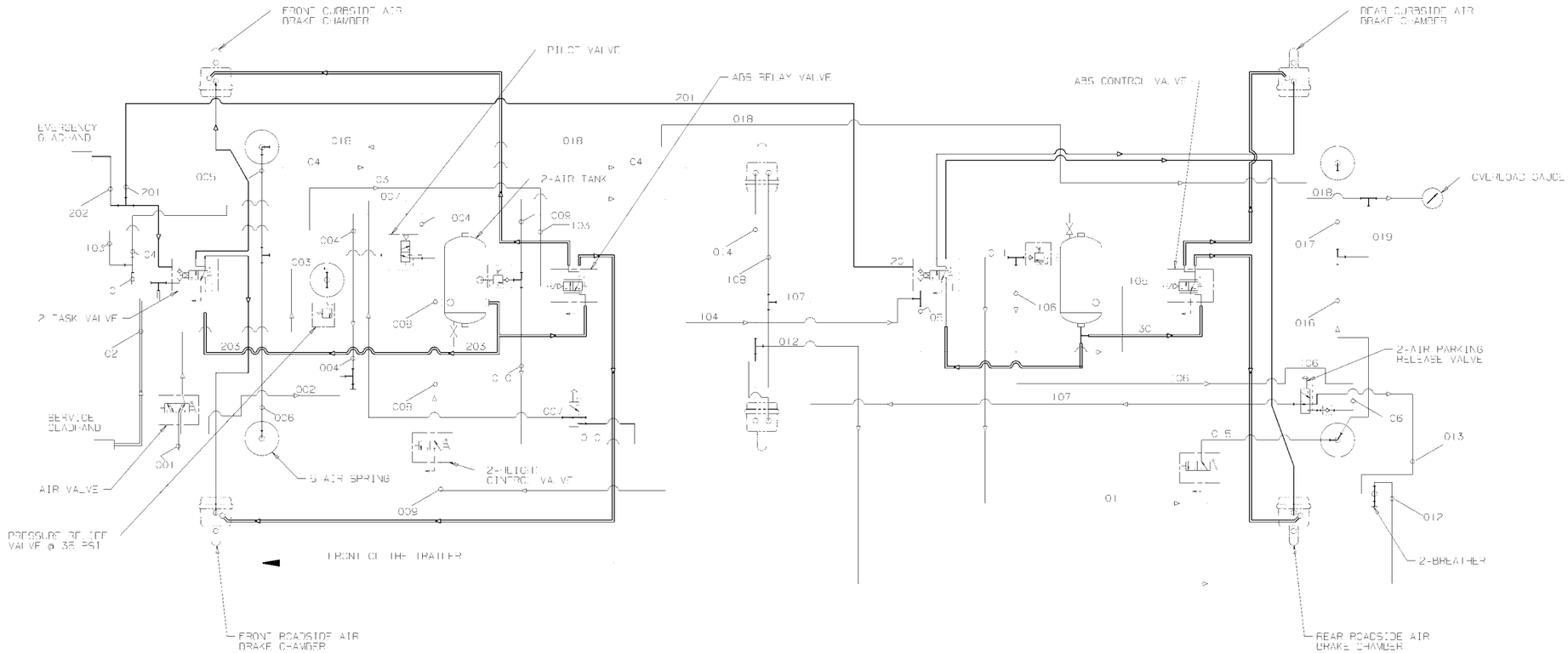
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	—	-INITIAL RELEASE- -PRODUC BASELINE- DRN 556 J7692	—	—

NOTES:

1. APPLICABLE STANDARDS/SPECIFICATIONS:
   A. ASME Y14. 00-2000
   B. ASME Y14.5M-1994
2. ASTM E380 APPLIES. METHOD B SHALL BE USED IN CONVERTING AND ROUNDING OFF. 1 INCH 25.4mm APPLIES.
3. CALLOUTS ARE FOR REFERENCE AND IDENTIFICATION PURPOSES ONLY, NOT TO BE USED IN CONJUNCTION WITH PARTS LIST.
4. FOR PNEUMATIC SYSTEM INSTALLATION REFER TO DRAWING NUMBER 12486593.
5. LINE IDENTIFICATION NUMBERS CORRESPOND WITH DRAWING NUMBER 12486593.
6. THE GRAPHIC SYMBOLS FOR THIS SCHEMATIC ARE IAW ANSI Y32.10.



DAAE07-03-C-S023
CM APPROVED
DOCUMENT
4/07/05

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PENDING ERR APPROVAL

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MECHANICAL PROPERTIES	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS TOLERANCES ON PLACE .2 PLACE .1	CONTRACT NUMBER: DAAE07-99-C-S030
THIRD ANGLE PROJECTION	CONTRACTOR: STEWART & STEVENSON SERVICES SEALY, TEXAS U.S.A.
12486593 LIST	DRAWN BY: R.DUTAN 04-08-3
NEXT ASSY USED ON	CHECKER: R.DUTAN CHAD MA
APPLICATION	DRAWING APPROVAL (USATT): M.KAHN
	DESIGN APPROVAL (USATT): M.KAHN
	MATL SPEC: M.CHURCH
	DESIGN ACTIVITY: U.S. ARMY, TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48397-5000
	PNEUMATIC SCHEMATIC, HST TRAILER
	SIZE: I ZONE CODE: 1920 DWG NO: 12486596
	SCALE: NONE WT: LB SHEET 1 OF 1
	FILE NAME: R486596.DGN FORM F M7800

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
–	–	-INITIAL RELEASE- -PRODUCT BASELINE- ERR SSS-V1388	—	—

NOTES:
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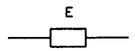
   B. ASME Y14.5M-1994

CIRCUIT BREAKER	 SPLICE	CONNECTOR	TERMINAL BLOCK	LAMP
LED	BLACKOUT MARKER	DIODE	CONNECTION	GROUND

EQUIPMENT LIST REF

REFERENCE DESIGNATION	DESCRIPTION	SHEET NUMBER	LOCATION
CB1	CIRCUIT BREAKER (ABS POWER)	2	B6
CB2	CIRCUIT BREAKER (B.O. STOP)	2	D6
CB3	CIRCUIT BREAKER (REAR MARKERS)	2	C6
CB4	CIRCUIT BREAKER (RIGHT TURN/STOP)	2	C6
CB5	CIRCUIT BREAKER (B.O. LEFT TURN)	2	D6
CB6	CIRCUIT BREAKER (B.O. RIGHT TURN)	2	D6
CB7	CIRCUIT BREAKER (MARKER)	2	C6
CB8	CIRCUIT BREAKER (LEFT TURN/STOP)	2	B6
E125	SPLICE	2	D5
E126	SPLICE	2	C5
E127	SPLICE	2	C2
E128	SPLICE	2	G3
E129	SPLICE	2	G3
E130	SPLICE	2	E3
E131	SPLICE	2	E3
E132	SPLICE	2	B2
E133	SPLICE	2	C3

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PART NO. 12486439

12486592	LHST	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS. TOLERANCES ON 1 PLACE ± 2 PLACE ±	DAAE07-03-C-S023	U.S. ARMY, TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48397-5000
NEXT ASSY	USED ON	THIRD ANGLE PROJECTION	STEWART & STEVENSON SERVICES SEALY TEXAS U.S.A.	SCHEMATIC, LHS TRAILER
APPLICATION		P. FIESTER	M.PETERS 06-04-04	
		M. CHURCH	R.SELBY C.ESPINOZA	
			K.MALKIEWICZ	SIZE E / CAGE CODE 19207 / DWG NO 12486439
			K. MALKIEWICZ	SCALE NONE / WEIGHT — / SHEET 1 OF 2

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
-	-	ALL REVISIONS LISTED ON SH 1	-	-
-	-	-INITIAL RELEASE- -PRODUCT BASELINE- ERR SSS-V1368	-	-

JUNCTION BOX

GROUND 1 | MARKER 2 | B.O. STOP 3 | B.O. TURN 4 | ABS POWER 5 | LEFT/TURN STOP 6 | RIGHT/TURN STOP 7

TL609 TL261A TL282 TL275 TL264 TL255A TL281 TL273 TL267 TL257A TL271 TL265 TL256A TL272 TL266 TL251A TL253A TL274 TL252A TL268

ABS ECU

5 GROUND
7 INLET SOLENOID
6 EXHAUST SOLENOID
1
2 ABS STOPLIGHT (RED)
3 ABS CONSTANT POWER (BLUE)
4
6
7
8
YE2 FRONT LEFT WHEEL SENSOR
YE1 REAR LEFT WHEEL SENSOR
BU1 REAR RIGHT WHEEL SENSOR
BU2 FRONT RIGHT WHEEL SENSOR

ABS RELAY MODULATOR VALVE

1
2
3

ABS WARNING LIGHT

GRN/WHITE TL611 J1015 TL610

ABS GND (WHITE)

ABS DIAGNOSTIC TOOL

A
B
C
D
E

CONVERTER BOX

24 VDC CONNECTOR

B.O. LEFT TURN A
LEFT TURN/STOP B
B.O. RIGHT TURN C
GROUND D
MARKER E
B.O. STOP F
H
RIGHT TURN/STOP J
AUX ABS POWER K
GROUND L
BRAKE M
BRAKE N

TL261 TL260

CB5/10A TL256 B.O. L TURN
CB6/10A TL259 B.O. R TURN
CB2/10A TL257 B.O. STOP
CB7/10A TL255 MARKER
CB3/10A TL250 REAR MARKERS
CB4/10A TL252 R TURN/STOP
CB8/10A TL253 L TURN/STOP
CB1/10A TL251 ABS POWER

MODULE 3
MODULE 1
MODULE 2
MODULE 4
MODULE 5

12 VDC CONNECTOR

MARKER 2
STOP 4
LEFT TURN 3
RIGHT TURN 5
TAIL/MARKER 6
AUX ABS 7
GROUND 1

103 105 101 100 104 106 107 110 109 108 128 105 102 E125 106A E126 107A

113 E128 113A J256 RIGHT REAR MARKER TL270
115 E129 115A
112 J253 24 RIGHT REAR COMPOSITE B.O. TURN
113B J254 21 RIGHT REAR COMPOSITE MARKER
114 J255 22 RIGHT REAR, COMPOSITE TURN/STOP
111 J252 23 RIGHT REAR COMPOSITE B.O. STOP
115B TL269

RIGHT REAR COMPOSITE

118 E130 118B J260 LEFT REAR MARKER TL276
120 E131 120A
119 J261 22 LEFT REAR COMPOSITE TURN/STOP
118A J259 21 LEFT REAR COMPOSITE MARKER
117 J258 24 LEFT REAR COMPOSITE B.O. TURN
116 J257 23 LEFT REAR COMPOSITE B.O. STOP
120B TL277

LEFT REAR COMPOSITE

124 E133
107C J251 LEFT FRONT MARKER
107B J250 TL263 RIGHT FRONT MARKER TL262
105A
123 J264 CENTER CURBSIDE MARKER TL278
125
E127 E132
122 J263 REAR CENTER MARKER TL279
126
121 J262 CENTER ROADSIDE MARKER TL280
127

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PART NO. 12486439

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THIRD ANGLE PROJECTION	STEWART & STEVENSON SERVICES SEALY, TEXAS U.S.A.
DRAWN BY M.PETERS 06-04-04	U.S. ARMY, TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48397-5000
ENGINEER R.SELBY	DESIGN AGENCY C.ESPINOZA
APPROVED - DEPT P. FIESTER	SCHEMATIC, LHS TRAILER
APPROVED - DEPT K.MALKIEWICZ	SIZE E 19207 DWG NO 12486439
DEPT. CHIEF M. CHURCH	DESIGN APPROVAL - DEPT K. MALKIEWICZ
NEXT ASSY APPLICATION / USED ON	SCALE NONE SHEET 2 OF 2

PIN: 083675-000