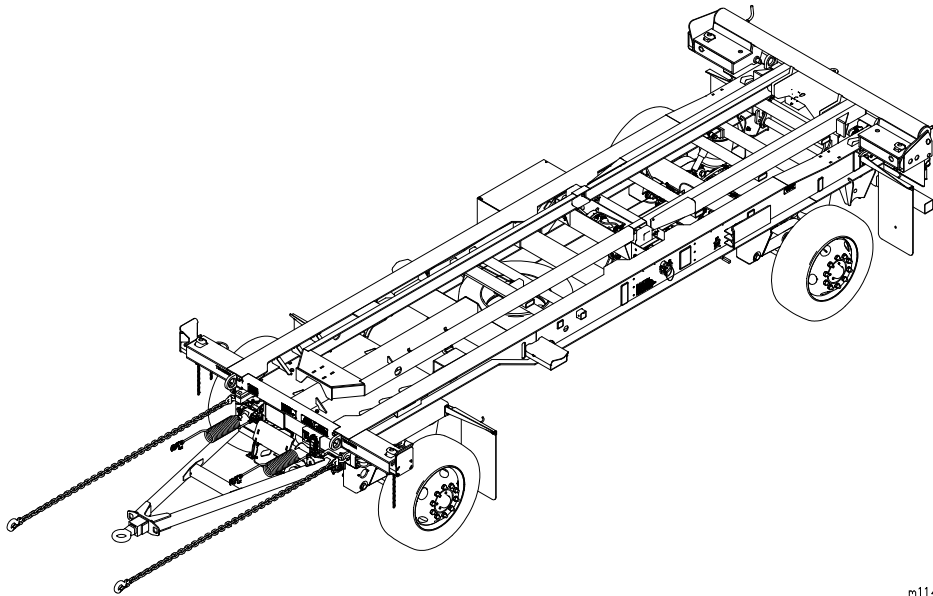


**TECHNICAL MANUAL
OPERATOR AND FIELD LEVEL MAINTENANCE MANUAL INCLUDING
REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL)
FOR
FAMILY OF MEDIUM TACTICAL VEHICLES (FMTV)
LOAD HANDLING SYSTEM TRAILER (LHST)
M1147 A1
NSN 2330-01-508-7887 (EIC CA2)**



m1147

DISTRIBUTION STATEMENT A - Approved for public release; distribution is unlimited.

**HEADQUARTERS, DEPARTMENT OF THE ARMY
14 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

Solvent, Cleaning Compound (MIL-PRF-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 Cleaning Solvent; the flashpoint for Type I Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). When not using MIL-PRF-680 solvents, ensure MIL-PRF-680 solvent container is sealed. Store, handle, and dispose of unused and spent solvents in accordance with local procedures and plans. 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.

CHANGE
NO. 1

HEADQUARTERS,
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WASHINGTON D.C., 20 DECEMBER 2013

**TECHNICAL MANUAL
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TM 9-2330-334-13&P, 14 February 2007: is updated as follows;

1. File this change sheet in front of the publication for reference purposes.
2. New or changed material is indicated by an asterisk adjacent to the item number.
3. New or updated text is indicated by a vertical bar in the outer margin of the page.
4. Remove old pages and insert new pages as indicated below.

Remove Pages

Front Cover
a and b
A and B
Title Block
i to vi
vii to x
Index-1 to Index-4
2028s
Pneumatic Schematics
Electrical Schematics

Insert Pages

Front Cover
a and b
A to D
i and ii
iii to viii
ix to xii
INDEX-1 to INDEX-4
2028s
Pneumatic Schematics
Electrical Schematics

TM9-2320-334-13&P

5. Replace the following work packages with their revised version:

Work Package Number

WP 0001 00
WP 0003 00
WP 0004 00
WP 0008 00
WP 0014 00
WP 0015 00
WP 0016 00
WP 0017 00
WP 0018 00
WP 0019 00
WP 0020 00
WP 0021 00
WP 0022 00
WP 0023 00
WP 0024 00
WP 0025 00
WP 0026 00
WP 0027 00
WP 0028 00
WP 0029 00
WP 0030 00
WP 0031 00
WP 0032 00
WP 0033 00
WP 0034 00
WP 0035 00
WP 0036 00
WP 0037 00
WP 0038 00
WP 0039 00
WP 0040 00
WP 0042 00
WP 0043 00
WP 0044 00
WP 0045 00
WP 0046 00
WP 0047 00
WP 0048 00

Work Package Number

WP 0049 00
WP 0050 00
WP 0051 00
WP 0052 00
WP 0053 00
WP 0054 00
WP 0056 00
WP 0057 00
WP 0058 00
WP 0059 00
WP 0060 00
WP 0061 00
WP 0062 00
WP 0065 00
WP 0066 00
WP 0067 00
WP 0068 00
WP 0070 00
WP 0071 00
WP 0072 00
WP 0073 00
WP 0074 00
WP 0075 00
WP 0076 00
WP 0077 00
WP 0078 00
WP 0079 00
WP 0080 00
WP 0081 00
WP 0084 00
WP 0085 00
WP 0088 00
WP 0090 00
WP 0092 00
WP 0093 00
WP 0094 00
WP 0095 00
WP 0097 00

TM9-2320-334-13&P

Work Package Number

Work Package Number

WP 0098 00
WP 0099 00
WP 0101 00
WP 0103 00
WP 0104 00
WP 0106 00
WP 0107 00
WP 0109 00
WP 0110 00
WP 0111 00
WP 0114 00
WP 0120 00
WP 0123 00
WP 0143 00
WP 0148 00
WP 0149 00
WP 0150 00
WP 0155 00
WP 0156 00
WP 0157 00
WP 0165 00
WP 0166 00
WP 0167 00
WP 0168 00

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Change 1 20 December 2013

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 58, AND TOTAL NUMBER OF WORK PACKAGES IS 170, CONSISTING OF THE FOLLOWING:

Page/WP No.	Change No.	Page/WP No.	Change No.
Front cover	1	WP 0028 00 (2 pages)	1
Blank	0	WP 0029 00 (4 pages)	1
Warning Summary (2 pages)	1	WP 0030 00 (2 pages)	1
i - ii blank	0	WP 0031 00 (16 pages)	1
iii - viii blank	1	WP 0032 00 (4 pages)	1
ix - xii blank	0	WP 0033 00 (4 pages)	1
Chapter 1 title page	0	WP 0034 00 (4 pages)	1
Blank	0	WP 0035 00 (4 pages)	1
WP 0001 00 (10 pages)	1	WP 0036 00 (6 pages)	1
WP 0001 01 (12 pages)	1	WP 0037 00 (4 pages)	1
WP 0002 00 (8 pages)	0	WP 0038 00 (4 pages)	1
WP 0003 00 (12 pages)	1	WP 0039 00 (4 pages)	1
Chapter 2 title page	0	WP 0040 00 (10 pages)	1
Blank	0	WP 0041 00 (2 pages)	0
WP 0004 00 (10 pages)	1	WP 0042 00 (12 pages)	1
WP 0005 00 (6 pages)	0	WP 0043 00 (14 pages)	1
WP 0006 00 (2 pages)	0	WP 0044 00 (10 pages)	1
WP 0007 00 (2 pages)	0	WP 0045 00 (4 pages)	1
WP 0008 00 (2 pages)	1	WP 0046 00 (2 pages)	1
WP 0009 00 (2 pages)	0	WP 0047 00 (12 pages)	1
WP 0010 00 (2 pages)	0	WP 0048 00 (2 pages)	1
WP 0011 00 (2 pages)	0	WP 0049 00 (10 pages)	1
WP 0012 00 (2 pages)	0	WP 0050 00 (12 pages)	1
Chapter 3 title page	0	WP 0051 00 (2 pages)	1
Blank	0	Chapter 4 title page	0
WP 0013 00 (2 pages)	0	Blank	0
WP 0014 00 (4 pages)	1	WP 0052 00 (48 pages)	1
WP 0015 00 (2 pages)	1	WP 0053 00 (28 pages)	1
WP 0016 00 (2 pages)	1	WP 0054 00 (4 pages)	1
WP 0017 00 (4 pages)	1	WP 0055 00 (6 pages)	0
WP 0018 00 (4 pages)	1	WP 0056 00 (24 pages)	1
WP 0019 00 (4 pages)	1	WP 0057 00 (14 pages)	1
WP 0020 00 (6 pages)	1	WP 0058 00 (10 pages)	1
WP 0021 00 (2 pages)	1	WP 0059 00 (8 pages)	1
WP 0022 00 (8 pages)	1	WP 0060 00 (6 pages)	1
WP 0023 00 (2 pages)	1	WP 0061 00 (8 pages)	1
WP 0024 00 (8 pages)	1	WP 0062 00 (6 pages)	1
WP 0025 00 (2 pages)	1	WP 0063 00 (8 pages)	0
WP 0026 00 (2 pages)	1	WP 0064 00 (4 pages)	0
WP 0027 00 (2 pages)	1	WP 0065 00 (6 pages)	1

TM 9-2330-334-13&P

Page/WP No.	Change No.	Page/WP No.	Change No.
WP 0066 00 (10 pages)	1	WP 0116 00 (4 pages)	0
WP 0067 00 (18 pages)	1	WP 0117 00 (4 pages)	0
WP 0068 00 (6 pages)	1	WP 0118 00 (4 pages)	0
WP 0069 00 (18 pages)	0	WP 0119 00 (4 pages)	0
WP 0070 00 (4 pages)	1	WP 0120 00 (6 pages)	1
WP 0071 00 (12 pages)	1	WP 0121 00 (4 pages)	0
WP 0072 00 (8 pages)	1	WP 0122 00 (4 pages)	0
WP 0073 00 (8 pages)	1	WP 0123 00 (4 pages)	1
WP 0074 00 (16 pages)	1	WP 0124 00 (4 pages)	0
WP 0075 00 (14 pages)	1	WP 0125 00 (4 pages)	0
WP 0076 00 (8 pages)	1	WP 0126 00 (4 pages)	0
WP 0077 00 (6 pages)	1	WP 0127 00 (4 pages)	0
WP 0078 00 (8 pages)	1	WP 0128 00 (4 pages)	0
WP 0079 00 (8 pages)	1	WP 0129 00 (4 pages)	0
WP 0080 00 (8 pages)	1	WP 0130 00 (4 pages)	0
WP 0081 00 (6 pages)	1	WP 0131 00 (4 pages)	0
WP 0082 00 (8 pages)	0	WP 0132 00 (4 pages)	0
WP 0083 00 (10 pages)	0	WP 0133 00 (4 pages)	0
WP 0084 00 (12 pages)	1	WP 0134 00 (4 pages)	0
WP 0085 00 (14 pages)	1	WP 0135 00 (4 pages)	0
WP 0086 00 (4 pages)	0	WP 0136 00 (4 pages)	0
WP 0087 00 (16 pages)	0	WP 0137 00 (4 pages)	0
WP 0088 00 (8 pages)	1	WP 0138 00 (4 pages)	0
WP 0089 00 (10 pages)	0	WP 0139 00 (4 pages)	0
WP 0090 00 (10 pages)	1	WP 0140 00 (4 pages)	0
WP 0091 00 (2 pages)	0	WP 0141 00 (4 pages)	0
WP 0092 00 (4 pages)	1	WP 0142 00 (4 pages)	0
WP 0093 00 (6 pages)	1	WP 0143 00 (6 pages)	1
WP 0094 00 (6 pages)	1	WP 0144 00 (4 pages)	0
WP 0095 00 (4 pages)	1	WP 0145 00 (4 pages)	0
WP 0096 00 (8 pages)	0	WP 0147 00 (4 pages)	0
WP 0097 00 (2 pages)	1	WP 0148 00 (4 pages)	1
WP 0098 00 (8 pages)	1	WP 0149 00 (4 pages)	1
WP 0099 00 (18 pages)	1	WP 0150 00 (4 pages)	1
WP 0100 00 (14 pages)	0	WP 0151 00 (4 pages)	0
WP 0101 00 (4 pages)	1	WP 0152 00 (4 pages)	0
WP 0102 00 (6 pages)	0	WP 0153 00 (4 pages)	0
WP 0103 00 (8 pages)	1	WP 0154 00 (4 pages)	0
WP 0104 00 (6 pages)	1	WP 0155 00 (4 pages)	1
WP 0105 00 (6 pages)	0	WP 0156 00 (4 pages)	1
WP 0106 00 (8 pages)	1	WP 0157 00 (4 pages)	1
WP 0107 00 (22 pages)	1	WP 0158 00 (4 pages)	0
WP 0108 00 (8 pages)	0	WP 0159 00 (4 pages)	0
WP 0109 00 (14 pages)	1	WP 0160 00 (4 pages)	0
WP 0110 00 (6 pages)	1	WP 0161 00 (4 pages)	0
Chapter 5 title page	0	WP 0162 00 (2 pages)	0
Blank	0	WP 0163 00 (8 pages)	0
WP 0111 00 (2 pages)	1	WP 0164 00 (6 pages)	0
WP 0112 00 (8 pages)	0	WP 0165 00 (2 pages)	1
WP 0113 00 (6 pages)	0	WP 0166 00 (4 pages)	1
WP 0114 00 (4 pages)	1	WP 0167 00 (4 pages)	1
WP 0115 00 (4 pages)	0	WP 0168 00 (6 pages)	1
		WP 0169 00 (2 pages)	0

Page/WP No.	Change No.	Page/WP No.	Change No.
INDEX -1 - INDEX-4	0		
Pneumatic Schematics (8 pages)	1		
Electrical Schematics (8 pages)	1		
Metrics/Back Cover	0		

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)
M1147 A1
NSN 2330-01-508-7887 (EIC CA2)**

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TABLE OF CONTENT

WP Sequence No.

HOW TO USE THIS MANUAL

GENERAL INFORMATION/WARRANTY (BAE)0001 00

GENERAL INFORMATION/WARRANTY (Oshkosh).....0001 01

CHAPTER 1 – DESCRIPTION AND THEORY OF OPERATION

Equipment Description and Data0002 00

Theory of Operation0003 00

CHAPTER 2 - OPERATOR INSTRUCTIONS

Operator Controls and Indicators

Trailer controls.....0004 00

Operation Under Usual Conditions Work Package

Rail Assembly Operation0005 00

Operation Under Unusual Conditions Work Package

Operation in Extreme Cold -26°F to -65°F (-32°C to -54°C)0006 00

Operation in Extreme Heat.....0007 00

Operation in Rainy or Humid Conditions0008 00

Operation in Salt Water Areas0009 00

Operation in Snow or Ice0010 00

Operation in Mud0011 00

Operation in Dusty or Sandy Areas0012 00

CHAPTER 3 - TROUBLESHOOTING PROCEDURES

Operator Level Work Packages

Operational Checkout and Troubleshooting Procedures.....0013 00

Field Level Work Packages

Front Marker Lights Do Not Illuminate.....0014 00

Right Front Marker Light Does Not Illuminate0015 00

Left Front Marker Light Does Not Illuminate0016 00

Side Rear Marker Lights Do Not Illuminate0017 00

Left Rear Marker Light Does Not Illuminate0018 00

Right Rear Marker Light Does Not Illuminate0019 00

Center Rear Marker Lights Do Not Illuminate0020 00

Right Taillight Does Not Illuminate.....0021 00

Right Stoplight Does Not Illuminate0022 00

Left Taillight Does Not Illuminate.....0023 00

Left Stoplight Does Not Illuminate0024 00

Right Blackout Taillight Does Not Illuminate0025 00

Right Blackout Stoplight Does Not Illuminate0026 00

Left Blackout Taillight Does Not Illuminate0027 00

Left Blackout Stoplight Does Not Illuminate0028 00

Both Blackout Stoplights Do Not Illuminate.....0029 00

All Lights Do Not Illuminate.....0030 00

TABLE OF CONTENT - CONTINUED

CHAPTER 3 - TROUBLESHOOTING PROCEDURES-Continued

Field Level Work Packages-Continued

WP Sequence No.

Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate0031 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Three Times.....0032 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Four Times0033 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Five Times0034 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times.....0035 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times0036 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Nine Times0037 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Ten Times0038 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Eleven Times0039 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times..0040 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fifteen Times0041 00
 Air System Loses Pressure During Operation/Slow Air Pressure Buildup.0042 00
 Service Brakes Do Not Apply0043 00
 Trailer Brakes Unevenly or Brakes Pull To One Side or Grab.....0044 00
 Suspension System Sits Uneven0045 00
 Suspension System Does Not Support Trailer Load.....0046 00
 Front Suspension Does Not Raise/Lower0047 00
 Rail Assembly Does Not Raise/Lower0048 00
 Flatrack Locks Do Not Release/Lock.....0049 00
 Drawbar Does Not Raise/Lower0050 00
 Overload Indicator Does Not Operate.....0051 00

CHAPTER 4 - MAINTENANCE INSTRUCTIONS

Operator Level Work Packages

Preventive Maintenance Checks and Services (PMCS) Including
 Lubrication Instructions0052 00
 Changing/Servicing Spare Tire.....0053 00
 Cleaning Trailer.....0054 00
 Spring Brake Caging Procedure0055 00

Field Level Work Packages

Stacking Trailer/Preparation for Transport0056 00
 Circuit Breaker, Module, and Connector Replacement.....0057 00
 Voltage Converter Box Replacement0058 00
 Junction Box Replacement0059 00
 Composite Taillight Assembly Replacement.....0060 00
 Marker Light Assembly Replacement0061 00
 24 VDC Intervehicular Cable Replacement.....0062 00
 Right Rear Electrical Harness Replacement.....0063 00
 Left Rear Electrical Harness Replacement.....0064 00
 Rear Electrical Harness Replacement0065 00
 Main Electrical Harness Replacement0066 00
 Axle Assembly Replacement0067 00
 Pressure Relief Valve Assembly Replacement.....0068 00
 Brake Shoe Replacement/Adjustment.....0069 00

TABLE OF CONTENT - CONTINUED

CHAPTER 4 - MAINTENANCE INSTRUCTIONS-Continued

Field Level Work Packages-Continued

	<u>WP Sequence No.</u>
Anti-Lock Brake System (ABS) Wheel Speed Sensor Replacement.....	0070 00
Anti-Lock Brake System (ABS) ECU Valve Replacement	0071 00
Anti-Lock Brake System (ABS) Relay Valve Harness Replacement	0072 00
Anti-Lock Brake System (ABS) Control Sensor Extension Cable Replacement.....	0073 00
Anti-Lock Brake System (ABS) Power and Diagnostic Cable and Diagnostic Tool Replacement	0074 00
Anti-Lock Brake System (ABS) Relay Valve and Brake Protection Valve Replacement	0075 00
Air Brake Arm Replacement.....	0076 00
Anti-Lock Brake System (ABS) Diagnostic Light Assembly Replacement.....	0077 00
Air Tank Replacement.....	0078 00
Emergency/Service Gladhand and Hose Replacement.....	0079 00
Air Ride Control Valve Replacement	0080 00
Air Brake Air Chamber Replacement.....	0081 00
Breather Valve Replacement	0082 00
Suspension Assembly Replacement.....	0083 00
Height Control Valve and Linkage Replacement/Adjustment.....	0084 00
Wheel Bearing/Hub Seal Replacement.....	0085 00
Tiedown Ring Replacement.....	0086 00
Frame Rail Replacement	0087 00
Twist Lock Assembly Replacement.....	0088 00
Flatrack Rail and Pivot Brackets Replacement	0089 00
Drawbar Replacement	0090 00
Safety Chain Assembly Replacement.....	0091 00
Drawbar Eye Replacement	0092 00
Spare Tire Carrier Replacement	0093 00
Drawbar Lift Valve Replacement	0094 00
Shock Absorber Replacement	0095 00
Air Bladder Replacement.....	0096 00
Splashguard Replacement.....	0097 00
Toolbox Assembly Replacement/Repair	0098 00
Turntable Assembly Replacement	0099 00
Shuttle and Guide Bracket Replacement.....	0100 00
Shuttle Twist Lock Replacement	0101 00
Rail Lift Jack Replacement.....	0102 00
Spare Tire Carrier Winch Assembly Replacement.....	0103 00
Bump Stop and Extension Replacement	0104 00
Reflectors Replacement	0105 00
Overload Indicator Assembly Replacement	0106 00
Flatrack, Air Chamber, and Lock Replacement	0107 00
Flatrack Lock Push/Pull Valve Replacement.....	0108 00
Four Port Task Valve Replacement.....	0109 00
Height Actuation Valve Replacement.....	0110 00

TABLE OF CONTENT - CONTINUED

CHAPTER 5 - SUPPORTING INFORMATION

	<u>WP Sequence No.</u>
■ References	0111 00
Introduction.....	0112 00
Maintenance Allocation Chart (MAC)	0113 00
■ Group 0608 Voltage Converter	0114 00
Group 0608 Junction Box	0115 00
Group 0609 Composite Light	0116 00
Group 0609 LED Marker Light Assembly	0117 00
Group 0613 24VDC Intervehicular Cable Assembly	0118 00
Group 0613 Chassis Electrical Harness	0119 00
■ Group 0613 Cable Routing Clamps.....	0120 00
Group 0613 Speed Sensors	0121 00
Group 0613 ABS Relay Valve Harness	0122 00
■ Group 0613 ABS Power & Diagnostic Cable Assy w/Bracket	0123 00
Group 1000 Turntable (Front) Axle & Wheel End Assembly	0124 00
Group 1000 Turntable (Front) Air Brake Arm & Slack Adjuster.....	0125 00
Group 1100 Rear Axle & Wheel End Assembly	0126 00
Group 1100 Rear Air Brake Arm and Slack Adjuster.....	0127 00
Group 1202 Brake Pads Assembly.....	0128 00
Group 1208 ABS Control Unit, Fittings, Hoses & Tubing	0129 00
Group 1208 ABS Relay Modulator Valve	0130 00
Group 1208 Air Tanks, Drain Valve, Clamps & Fittings	0131 00
Group 1208 Emergency/Service Gladhands, Hoses & Fittings	0132 00
Group 1208 Air Chambers & Spring Brake	0133 00
Group 1208 Height Control Valve, Linkage & Fittings.....	0134 00
Group 1208 Drawbar Lift Air Valve.....	0135 00
Group 1208 Push/Pull Valves, Tubing & Fittings	0136 00
Group 1208 Brake Protection Valve, Tubes & Fittings	0137 00
Group 1208 Air Spring, Pressure-Relief Valve, Tubes & Fittings	0138 00
Group 1208 Task Valve, Tubes & Fittings	0139 00
Group 1208 Air Ride Control Valve, Tubes & Fittings	0140 00
Group 1208 Breather Valves, Tubes & Fittings	0141 00
Group 1311 Tire & Wheel Assembly	0142 00
■ Group 1501 Chassis & Rear Panel Assembly	0143 00
Group 1501 Outrigger	0144 00
Group 1501 Flatrack Rail Assembly & Brackets	0145 00
Group 1501 Flatrack Lock	0146 00
Group 1501 Flat Rack Lock & Retainer	0147 00
■ Group 1501 Turntable & Drawbar Assembly	0148 00
Group 1501 Shuttle Guide & Bracket.....	0149 00
Group 1501 Twist Lock Assembly & Front Guide	0150 00
Group 1501 Bump Stop Installation	0151 00
Group 1503 Safety Chain Assembly	0152 00
Group 1601 Turntable (Front) Axle Suspension	0153 00
Group 1601 Rear Axle Suspension	0154 00
■ Group 1604 Shock Absorbers	0155 00
Group 1802 Turntable Splash Guards	0156 00

TABLE OF CONTENT - CONTINUED

CHAPTER 5 - SUPPORTING INFORMATION – Continued

	<u>WP Sequence No.</u>	
Group 1808 Tool Box Assembly	0157 00	■
Group 2001 Rail Lift Jack	0158 00	
Group 2001 Spare Tire Carrier & Winch	0159 00	
Group 2202 Reflectors	0160 00	
Group 4706 Overload Indicator & Cover	0161 00	
National Stock Number Index	0162 00	
Part Number Index	0163 00	
Basic Issue Items (BII) Lists	0164 00	
Expendable and Durable Items List	0165 00	■
Stowage and Decal/Data Plate Guide	0166 00	
Tool Identification List	0167 00	
Mandatory Replacement Parts	0168 00	
Torque Limits	0169 00	
INDEX		
DIAGRAMS		
Pneumatic Schematics		■
Electrical Schematics		

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 List (RPSTL) 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.

SCOPE

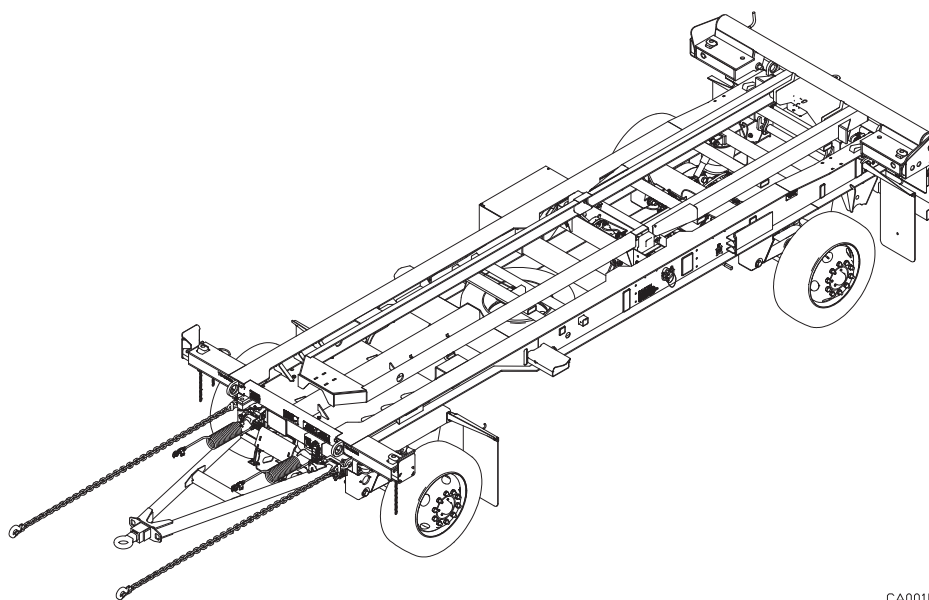
Type of Manual. This manual provides instructions for operation and maintenance of the Family of Medium Tactical Vehicle Load Handling System Trailers (LHST). Maintenance procedures are given at operational, and field levels. In addition, this manual contains a list of repair parts and special tools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

Name and Model.

<u>NAME</u>	<u>MODEL</u>
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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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.

SCOPE - Continued**REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)**

If your LHST needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you do not like about your equipment. Let us know why you do not like the design or performance.

All non-Aviation/Missile EIRs and PQDRs must be submitted through the Product Data Reporting and Evaluation Program (PDREP) Web site. The PDREP site is: <https://www.pdrep.csd.disa.mil/>.

If you do not have Internet access, you may submit your information using an SF 368 (Product Quality Deficiency Report). You can send your SF 368 using email, regular mail, or fax using the addresses/fax numbers specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual. We will send you a reply.

CORROSION PREVENTION AND CONTROL (CPC)

Corrosion prevention and control of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items. The term "corrosion" means the deterioration of a material or its properties due to a reaction of that material with its chemical environment. An example is the rusting of iron. Corrosion damage in metals can be seen, depending on the metal, as tarnishing, pitting, fogging, surface residue, and/or cracking. Plastics, composites, and rubbers can also degrade (also considered to be corrosion based on the above definition of corrosion). Degradation is caused by thermal (heat), oxidation (oxygen), solvation (solvents), or photolytic (light, typically ultraviolet) processes. The most common exposures are excessive heat or light. Damage from these processes will appear as cracking, softening, swelling, and/or breaking. The US Army has defined the following nine (9) forms of corrosion used to evaluate the deterioration of metals. These shall be used when evaluating and documenting corrosion.

UNIFORM (or general attack): Affects a large area of exposed metal surface, like rust on steel or tarnish on silver. It gradually reduces the thickness of the metal until it fails.

CREVICE: Occurs in crevices created by rubber seals, gaskets, bolt heads, lap joints, dirt or other surface deposits. It will develop anywhere moisture or other corrosive agents are trapped and unable to drain or evaporate.

SELECTIVE LEACHING: One element, usually the anodic element of an alloy, corrodes away, leaving the cathodic element. This can create holes in metal.

INTERGRANULAR: Metal deterioration caused by corrosion on the bonds between or across the grain boundaries of the metal. The metal will appear to be peeling off in sheets, flaking, or being pushed apart by layers. A particular type of intergranular corrosion is exfoliation.

PITTING: This can result from conditions similar to those for crevice corrosion. Pits can develop on various materials due to their composition. Rifle boxes are big victims of pitting.

EROSION: Results when a moving fluid (liquid or gas) flows across a metal surface, particularly when solid particles are present in the fluid. Corrosion actually occurs on the surface of the metal, but the moving fluid washes away the corrosion and exposes a new metal surface, which also corrodes.

FRETTING: Occurs as a result of small, repetitive movements (e.g., vibration) between two surfaces in contact with each other. It's usually identified by a black powder corrosion product or pits on the surface.

GALVANIC: Occurs when two different types of metal come in contact with each other, like steel bolts on aluminum, for example. This is a common problem on aircraft because of their mix of metals.

STRESS: Term used to describe corrosion cracking and corrosion fatigue.

SCOPE – Continued**CORROSION PREVENTION AND CONTROL (CPC)**

Where an item is not ready/available due to one of these forms of corrosion, it shall be recorded as a corrosion failure in the inspection record and the appropriate code (170) for corrosion shall be used when requesting/performing maintenance.

SF Form 368, Product Quality Deficiency Report should be submitted to the address specified in DA PAM 750-8, The Army Maintenance Management System (TAMMS) Users Manual.

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).

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 786-7560, Commercial (586) 282-7560. 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.

WARRANTY – Continued**2. Explanation of Terms (Cont).**

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.

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 – Continued**2. Explanation of Terms (Cont).**

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 BAE Systems 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 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.

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:

- 1) Misuse or negligence
- 2) Accidents
- 3) Improper operation
- 4) Improper storage
- 5) Improper transport
- 6) Improper or insufficient maintenance service
- 7) Improper alterations or repair
- 8) Defect/failure discovered or occurring after warranty expiration date
- 9) Fair wear and tear items (brake shoes, etc)
- 10) Foreign object damage
- 11) Improper packing or handling
- 12) Combat damage
- 13) Consequential damages resulting from a defect or failure
- 14) Failure of parts/components resulting in less than \$300.00 combined, labor and Contractor cost of parts (Not applicable to Pass-Through Warranties)

WARRANTY – Continued**3. Coverages-Specific (Cont).**

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 the TVS website (www.tvsonlinesupport.com) or electronic mail (warranty@baesystems.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.
- 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.

WARRANTY – Continued

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)

2. 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.

3. 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.

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.

WARRANTY – Continued

- 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:

Commander U.S. Army TACOM
6501 East 11 Mile Road
Warren, MI 48397-5000
ATTN: AMSTA-LCL-MIM/MS419

DODAAC - Call or send message to:
Voice: (586) 282-7330, DSN 786-7330
Fax: (586) 282-6323, DSN 786-6323
Email: tacomwarco@tacom.arm.mil
Send message to: CDR TACOM WARREN MI//AMSTA-LCL-MIM//

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 work package.

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.
- 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 work package) all parts, pieces or parts and/or assemblies removed as a result of warrantable defect/failure and/or correction.

WARRANTY - Continued**7. Government Responsibilities (Cont).****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 work package).
- 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@baesystems.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 work package. 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.

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.

WARRANTY - Continued**8. Claim Procedures (Cont).**

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.

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.

END OF WORK PACKAGE

SCOPE

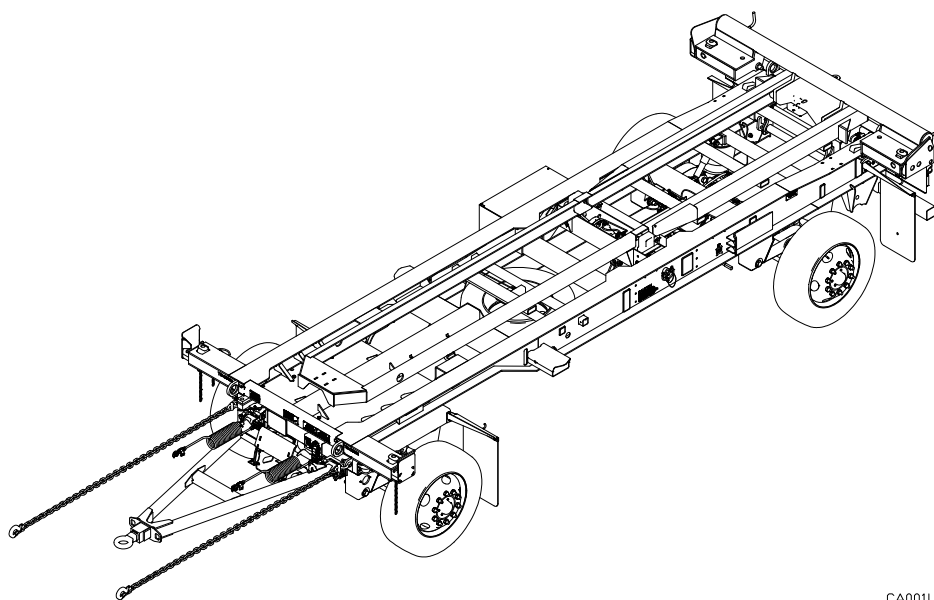
Type of Manual. This manual provides instructions for operation and maintenance of the Family of Medium Tactical Vehicle Load Handling System Trailers (LHST). Maintenance procedures are given at operational and field levels. In addition, this manual contains a list of repair parts and special tools required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

Name and Model.

<u>NAME</u>	<u>MODEL</u>
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 - FMTV Serial Numbers 720000 and above.

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 786-7560, Commercial (586) 282-7560. 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 (Goodyear) 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 (Goodyear) Commercial Warranty that are administered by Oshkosh Corporation (OSK). The items 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 OSK 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 Oshkosh Corporation (OSK) under contract number W56HZV-09-D-0159. 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 contact OSK at 1-920-235-9151, 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**3. Coverage's-Specific. (cont).**

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:

- 1) Misuse or negligence
- 2) Accidents
- 3) Improper operation
- 4) Improper storage
- 5) Improper transport
- 6) Improper or insufficient maintenance service
- 7) Improper alterations or repair
- 8) Defect/failure discovered or occurring after warranty expiration date
- 9) Fair wear and tear items (brake shoes, etc)
- 10) Foreign object damage
- 11) Improper packing or handling
- 12) Combat damage
- 13) Consequential damages resulting from a defect or failure
- 14) 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 vendors in Table 1. Supplier Summary Section, but will be administered by OSK through your local WARCO. Material and Workmanship Warranty are supplied by OSK through your local WARCO. To obtain services for Pass-Through, Material and Workmanship Warranty, your local WARCO contacts OSK or calls 1-920-235-9151, 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 OSK.

c. Warranty Start Dates.

- Information to determine the Pass-Through Warranty start date for Goodyear is listed later in this Work Package. 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 OSK or calls 1-920-235-9151, asks for the Warranty Department, and provides the information in paragraph 3.b. OSK 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 an Equipment Deficiency Report, DA Form 2407 or DA Form 5504 to their local WARCO for submittal to OSK for warranty consideration. Upon claim approval, OSK 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
Goodyear	12505840	N/A	Tire, Pneumatic

Goodyear

- 1. Coverage.** Goodyear Tire & Rubber Company will repair or replace any tire delivered by Oshkosh Defense on the FMTV system if such tire fails to deliver satisfactory service due to a material or workmanship related condition.
- 2. Procedure.** Unit will submit DA Form 2407 or DA Form 5504 to their WARCO for warranty consideration and include a complete explanatory report for any tire which is claimed not to comply with the manufacturer's specifications or fails to deliver satisfactory service due to a workmanship or material related condition. If Goodyear agrees the tire does not comply with their specifications or fails to deliver satisfactory service due to a workmanship or material related condition, Goodyear will repair or replace the tire without charge. During the first two (2) years of vehicle warranty, the WARCO will address all claims to Oshkosh under the Material and Workmanship Warranty. Upon expiration of the Material and Workmanship Warranty, the WARCO will address all claims to:

The Goodyear Tire and Rubber Company
 Government Sales Dept 709
 1144 East Market Street
 Akron, OH 44316-0001
 Attention: Military Ground Tire Warranty.
 Telephone: 888-453-0021 (option 3, then option 1)

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:

Commander U.S. Army TACOM
6501 East 11 Mile Road
Warren, MI 48397-5000
ATTN: AMSTA-LCL-MIM/MS419

DODAAC - Call or send message to:
Voice: (586) 282-7330, DSN 786-7330
Fax: (586) 282-6323, DSN 786-6323
Email: tacomwarco@tacom.arm.mil
Send message to: CDR TACOM WARREN MI//AMSTA-LCL-MIM//

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.

WARRANTY - Continued**7. Government Responsibilities. (Cont.).****b. Equipment owning unit will:**

- Identify defects/failures and verify that the defects/failures are warrantable.
- Submit warranty claims, using Equipment Deficiency Reports, 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 Work Package.

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.
- 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 Work Package) 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 Work Package).
- 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.

WARRANTY - Continued**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 or telephonically (1-920-235-9151), followed up in writing by Equipment Deficiency Report, 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 Work Package. 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.
- 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.

WARRANTY - Continued

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. In the event the Government places vehicles in storage following acceptance and shipment from manufactures facility prior to hand-off, the warranty shall be extended for the length of time the vehicles are in storage, or for 12 months, whichever comes first. Any vehicles placed into storage, the contractor must be notified in writing and a list of vehicles serial numbers must be provided to support storage. TM Care and Storage Requirements for the Vehicles must be IAW TM 9-2320-334-13&P.

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.

Oshkosh On Site Deficiency Report																	
(Requestor fills out blocks A-J, P, and T-Z)																	
A. Deficiency Report #: _____	B. Receiving Unit: _____																
C. Inspection Date: _____	D: Field Site Lead/ Fault Identifier: _____ Fielding Site Lead Departs: _____																
E. Location: _____																	
F. Site Requestor: _____																	
G. Model: _____	H. Serial #: _____ (last six)																
I. Miles: _____	J. Hours: _____																
(TO BE COMPLETED BY OSHKOSH ONLY):																	
K Required Ship Date(OSK only): _____																	
L. Service Provider: _____	M. Date Notified: _____																
N. Date Completed: _____	O. Location Returned to (OSK only) _____																
P: Deficiencies:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; text-align: center;">1)</td><td></td></tr> <tr><td style="text-align: center;">2)</td><td></td></tr> <tr><td style="text-align: center;">3)</td><td></td></tr> <tr><td style="text-align: center;">4)</td><td></td></tr> <tr><td style="text-align: center;">5)</td><td></td></tr> <tr><td style="text-align: center;">6)</td><td></td></tr> <tr><td style="text-align: center;">7)</td><td></td></tr> <tr><td style="text-align: center;">8)</td><td></td></tr> </table>	1)		2)		3)		4)		5)		6)		7)		8)	
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Q. Trouble shooting / Assessment:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; text-align: center;">1)</td><td></td></tr> <tr><td style="text-align: center;">2)</td><td></td></tr> <tr><td style="text-align: center;">3)</td><td></td></tr> <tr><td style="text-align: center;">4)</td><td></td></tr> <tr><td style="text-align: center;">5)</td><td></td></tr> <tr><td style="text-align: center;">6)</td><td></td></tr> <tr><td style="text-align: center;">7)</td><td></td></tr> <tr><td style="text-align: center;">8)</td><td></td></tr> </table>	1)		2)		3)		4)		5)		6)		7)		8)	
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R. Corrective Actions Taken:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20px; text-align: center;">1)</td><td></td></tr> <tr><td style="text-align: center;">2)</td><td></td></tr> <tr><td style="text-align: center;">3)</td><td></td></tr> <tr><td style="text-align: center;">4)</td><td></td></tr> <tr><td style="text-align: center;">5)</td><td></td></tr> <tr><td style="text-align: center;">6)</td><td></td></tr> <tr><td style="text-align: center;">7)</td><td></td></tr> <tr><td style="text-align: center;">8)</td><td></td></tr> </table>	1)		2)		3)		4)		5)		6)		7)		8)	
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S. Parts Required: (Must have Item, Cage #, NSN and Quantity required) Only FSR or Service Provider																	
T. UNIT: _____	DODDAC: _____ U. UIC: _____																
V. POC: _____																	
W. Unit: _____	X. email: _____																
Y. Address: _____																	
Z. Phone: _____																	

TM 9-2330-334-13&P

CHAPTER 1
EQUIPMENT DESCRIPTION AND DATA
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 are 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 Brake 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).

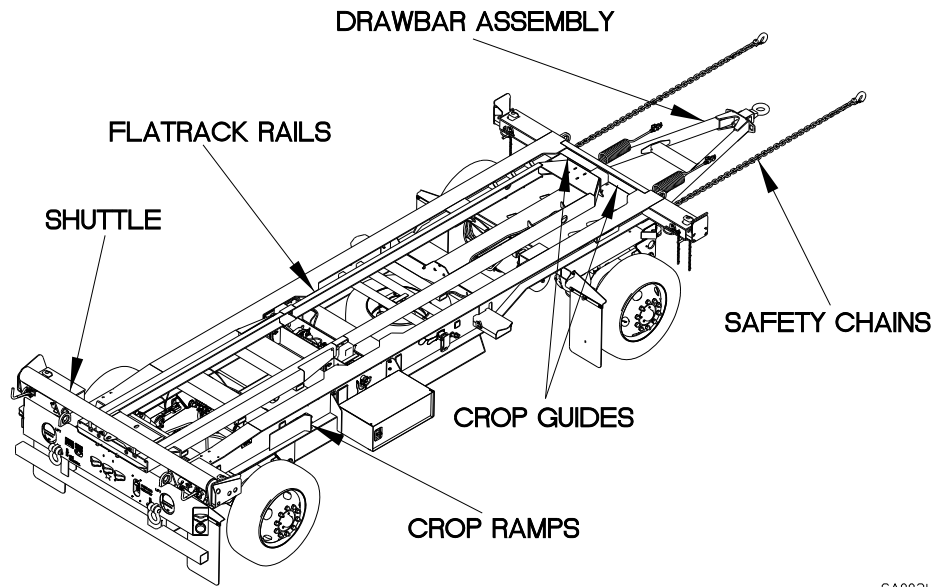
EQUIPMENT DESCRIPTION AND DATA - Continued

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.

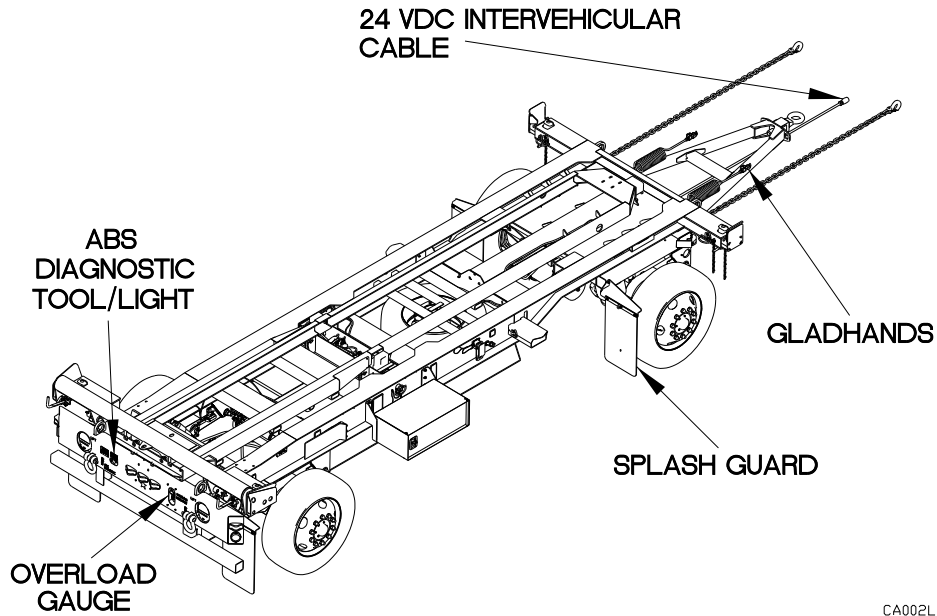


CA002L01

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.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS - Continued



CA002L02

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 Brake 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.

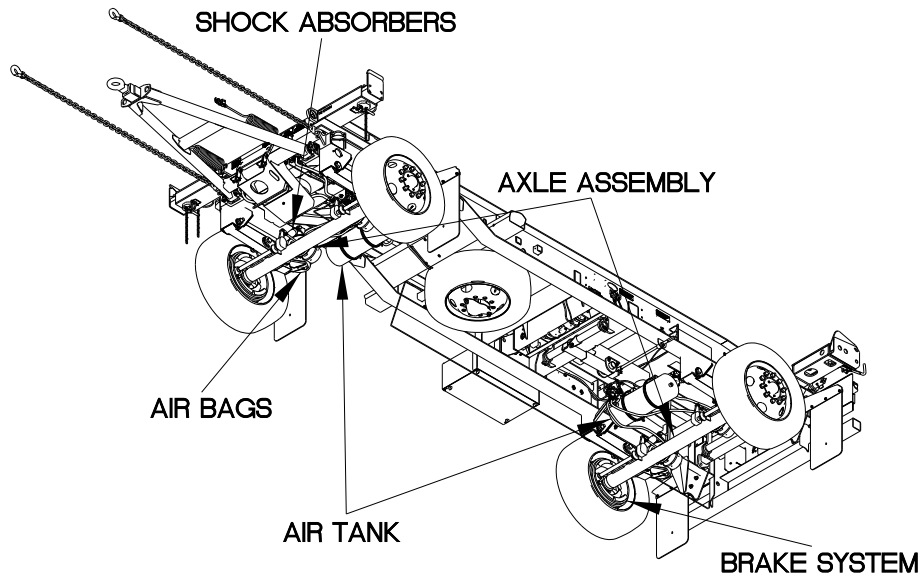
EQUIPMENT DESCRIPTION AND DATA - Continued

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.



CA002L03

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 show 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.
 ModelDT324B
 Type Solid State, 12/24 VDC negative ground

AXLES

Make Dexter
 Type Non-driving

SUSPENSION SYSTEM

Make Dexter
 Type Air Bags

OVERLOAD GAUGE

MakeHaldex Brake Products, Corp.
 Type Silicone filled, sealed face
 Pressure Range100 psi (689.5 kPa)
 Max Pressure of Load Carried52 psi (358.5 kPa)

EQUIPMENT DESCRIPTION AND DATA

0002 00

EQUIPMENT DATA - Continued

Table 5. System Data - Continued.

BRAKE SYSTEM

Make Dexter
 ModelDexter Brakes 16 1/2" 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 Range100 psi (689.5 kPa)

DRAWBAR ASSEMBLY

MakeLandoll
 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

MakeAccuride
 Rim Size and Type.....22.5 x 8.25, one-piece
 Quantity 4
 Studs Per Wheel..... 10
 Maximum Wheel, Pneumatic Tire Rate Load Capacity8,000 lbs (3,629 kgs) at 120 psi (830 kPa)

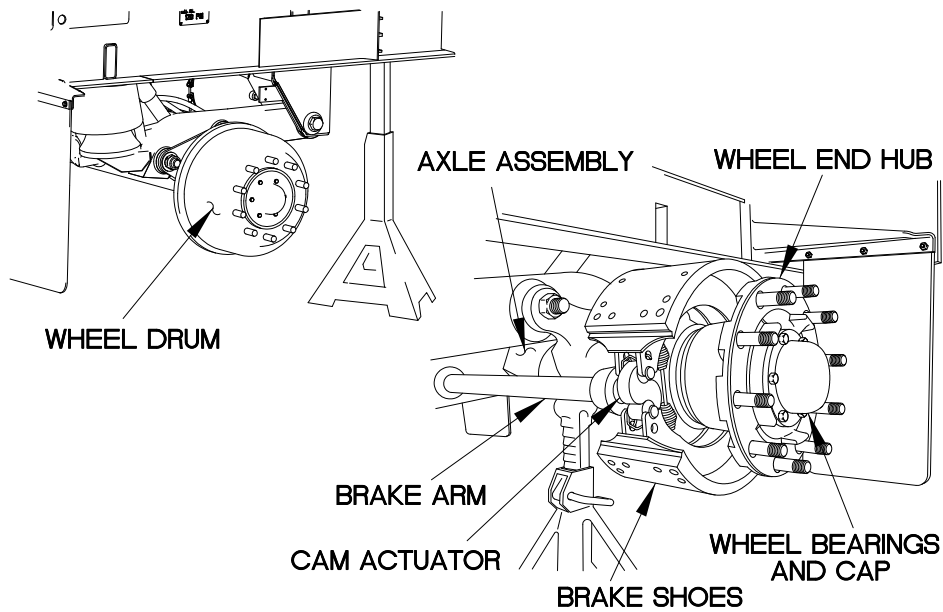
TIRES

MakeMichelin North America
 Size275/70 R22.5 XML
 Tread Design Non-directional, on-off road
 Tube or Tubeless..... Tubeless
 Load RangeJ
 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)

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

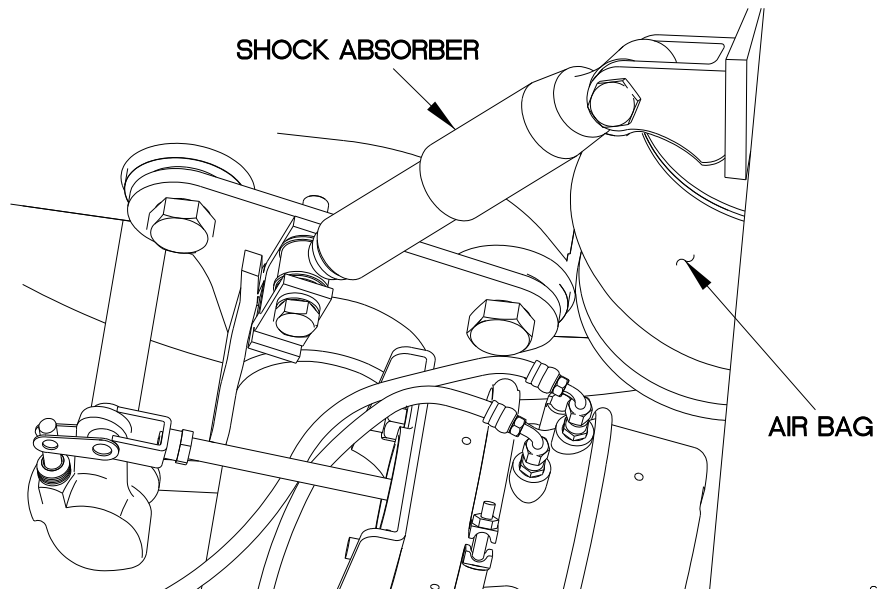
The trailer axle is a non-powered axle and able to support the trailer but not transmit power (axle does not have gears to transmit power from a vehicle's engine and transmission). The axle assembly includes a tubular axle beam, cam-actuated service brakes, spring-actuated emergency brakes, wheel-end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



CA003B01

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.



CA003B02

ELECTRICAL SYSTEM

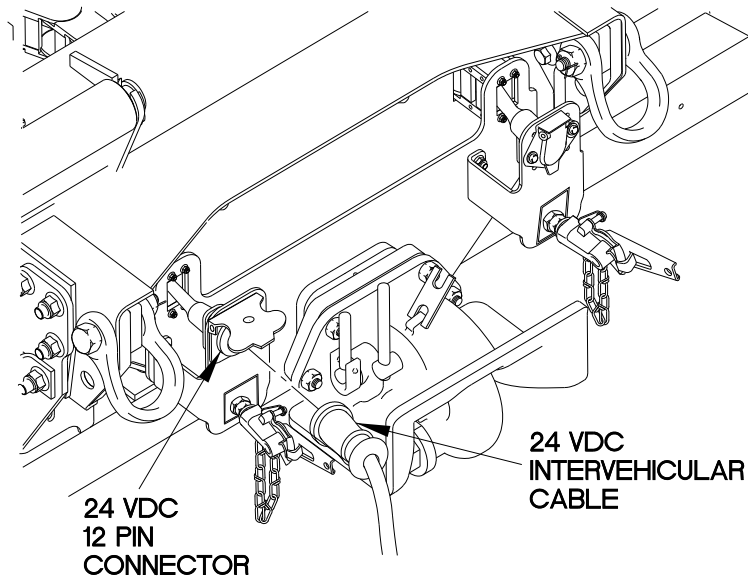
The towing vehicle electrical system supplies all electrical power to the trailer by way of a 24 VDC (12-pin) connector at the rear of the towing vehicle.

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 Brake 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.

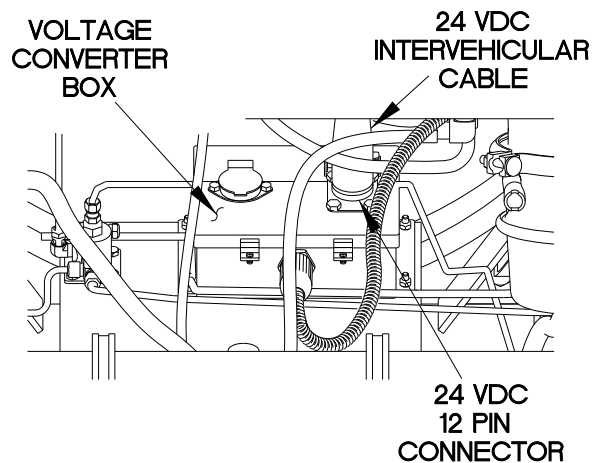
All power to the trailer lights and ABS ECU is routed from a 24 VDC (12-pin) intervehicular cable to a voltage converter box before allowing power to flow to the lights or ABS ECU.



CA003B03

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.



CA003B04

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.

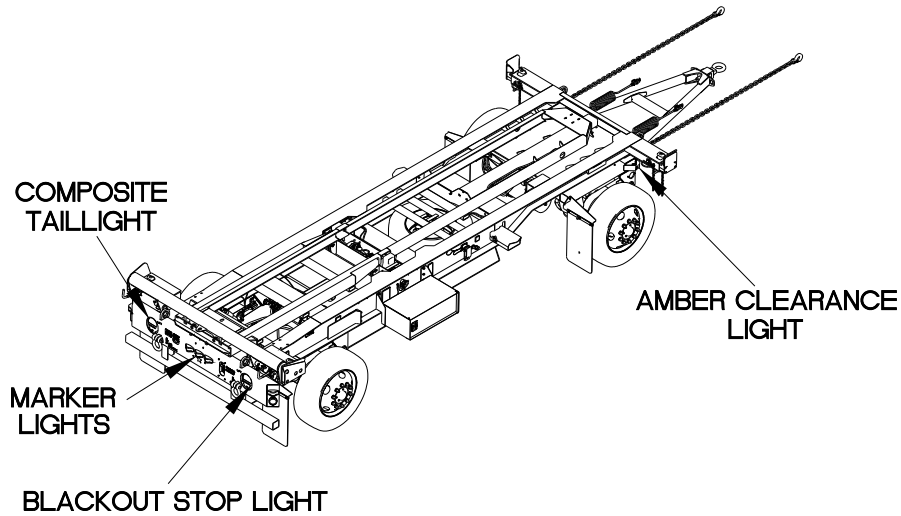
Service Lighting

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.



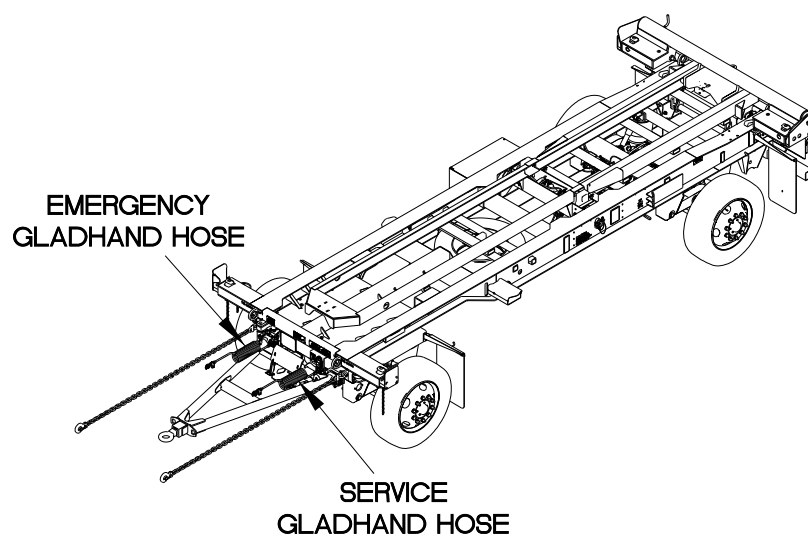
CA003B05

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 Brake 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

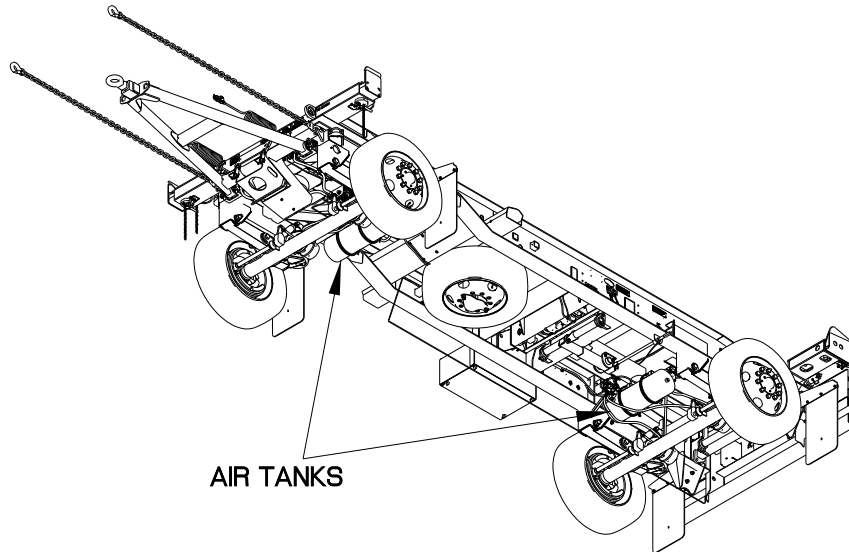
The EMERGENCY and SERVICE gladhand hoses provide air for operation of the trailer brakes from the towing vehicle. One hose is for SERVICE brake operation; the other hose is for EMERGENCY brake operation. Both hoses have gladhand couplings.



CA003B06

AIR TANKS

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



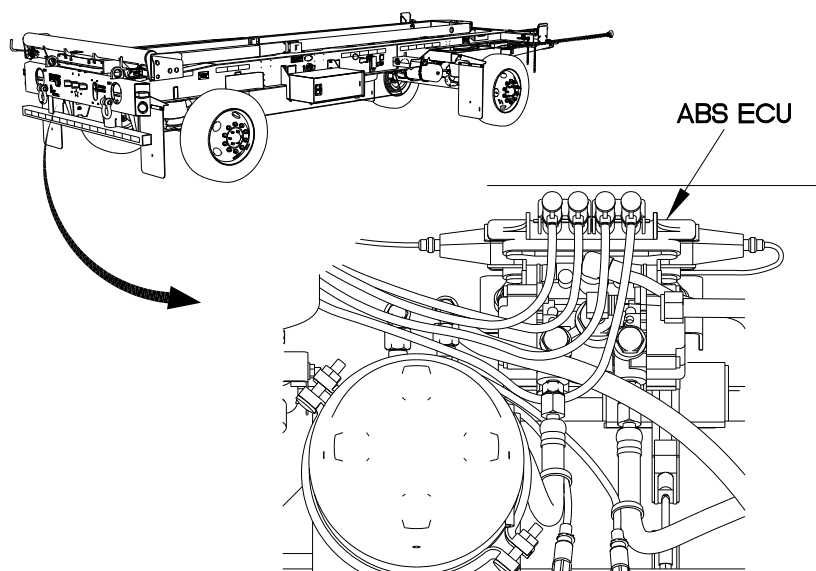
CA003B07

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

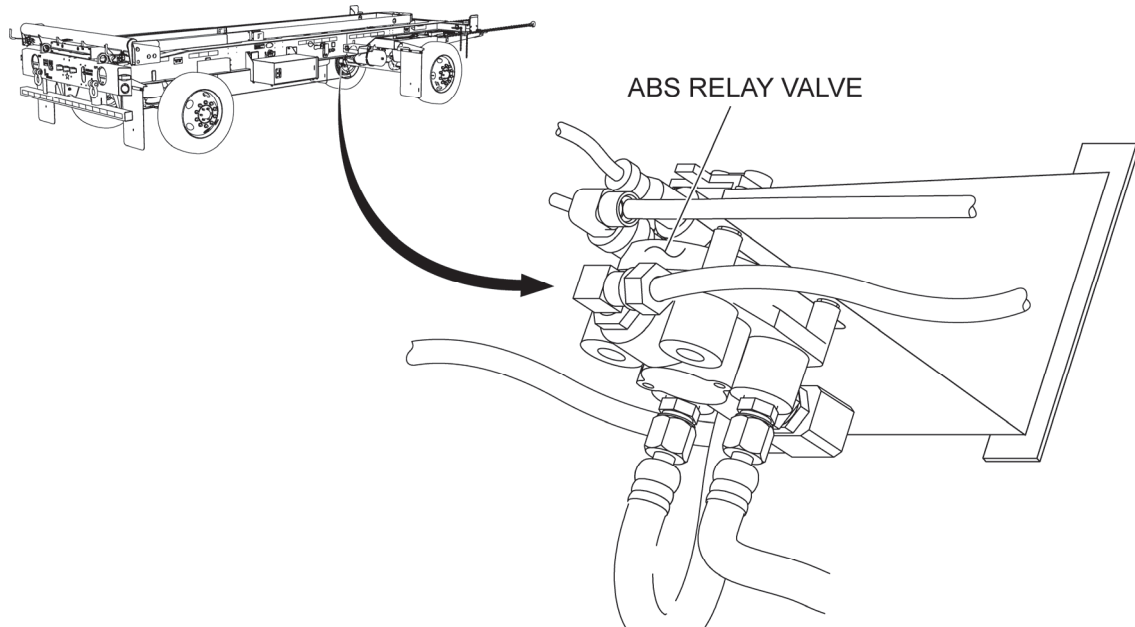
The ABS ECU valve assembly contains the two relay valves.



CA003B08

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.

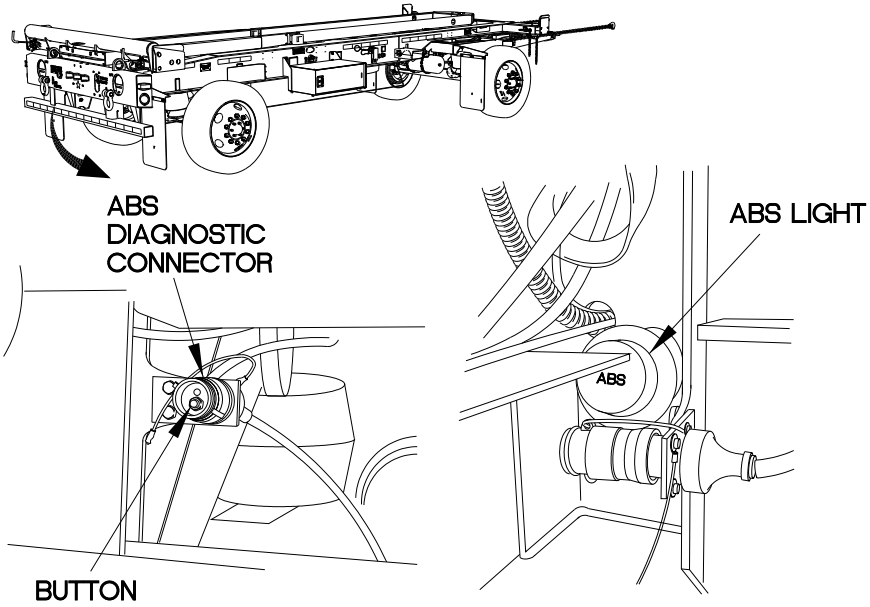


CA003B09

ABS ECU - Continued

ABS Diagnostic

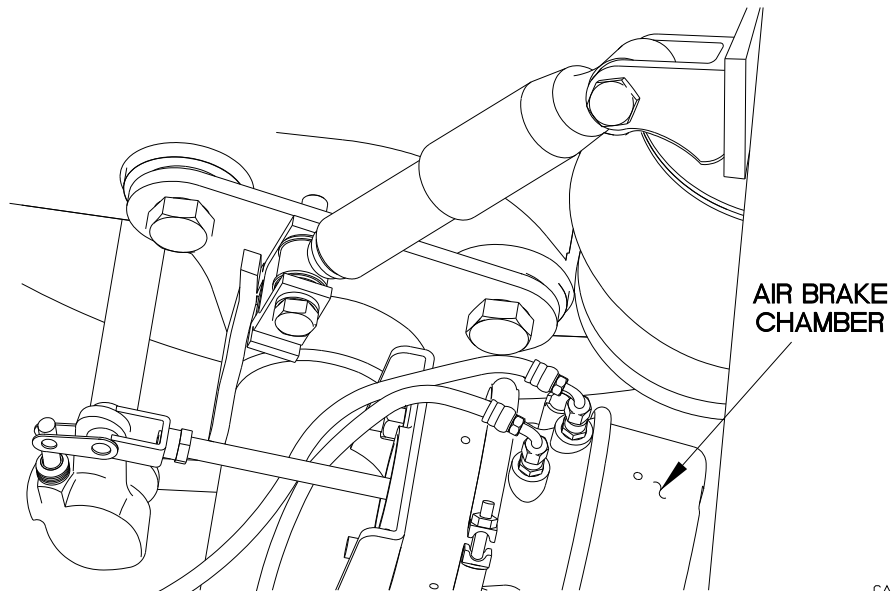
The trailer brake system has a connector on the ECU valve assembly for external ABS DIAGNOSTIC capability.



CA003B10

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 single brake air chambers per brake. Within the brake air chambers, air pressure is converted to mechanical force to create braking action.



CA003B11

TM 9-2330-334-13&P

**CHAPTER 2
OPERATOR INSTRUCTIONS**

TRAILER CONTROLS

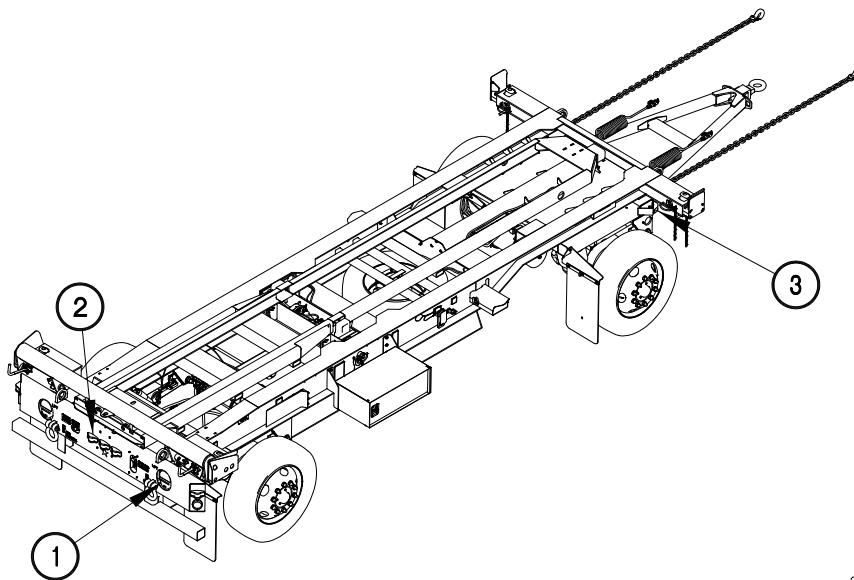
0004 00

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.

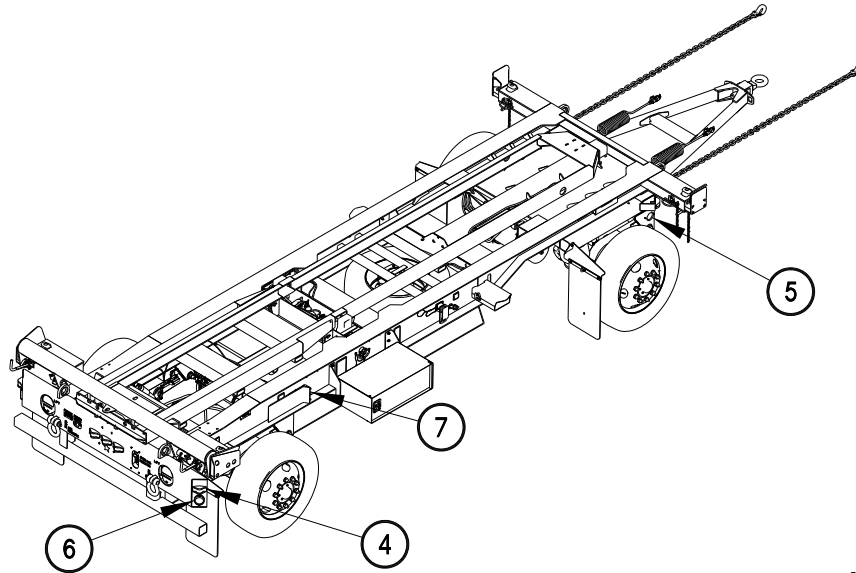


CA004L01

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.

CONTROLS/MISC. - Continued

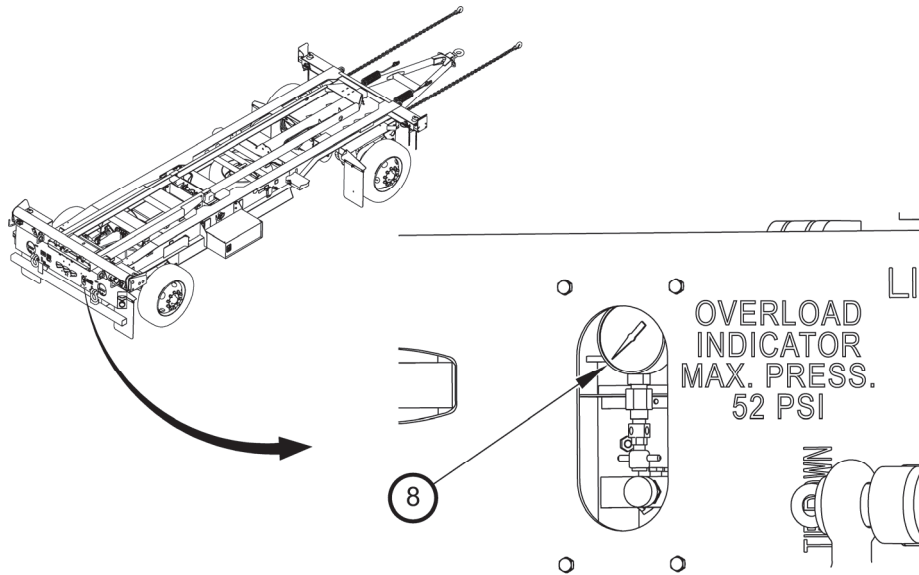


CA004L02

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



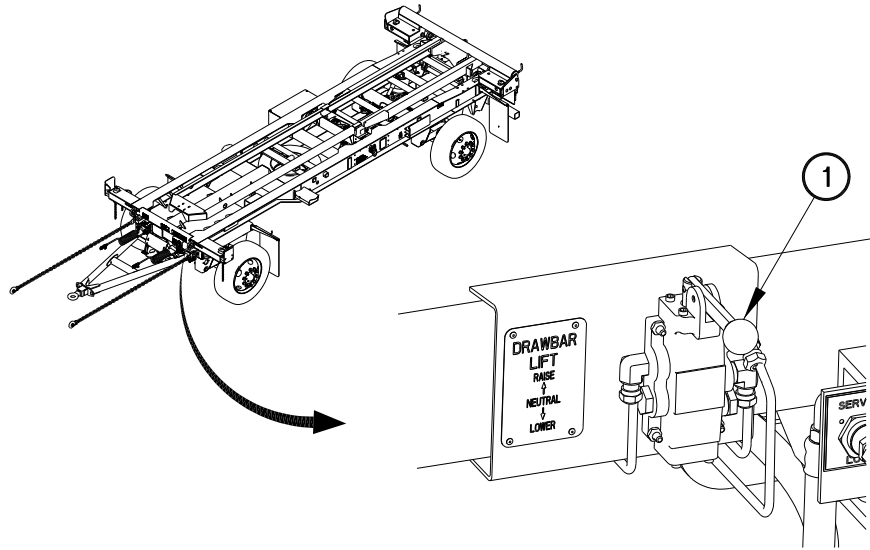
D05933

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.



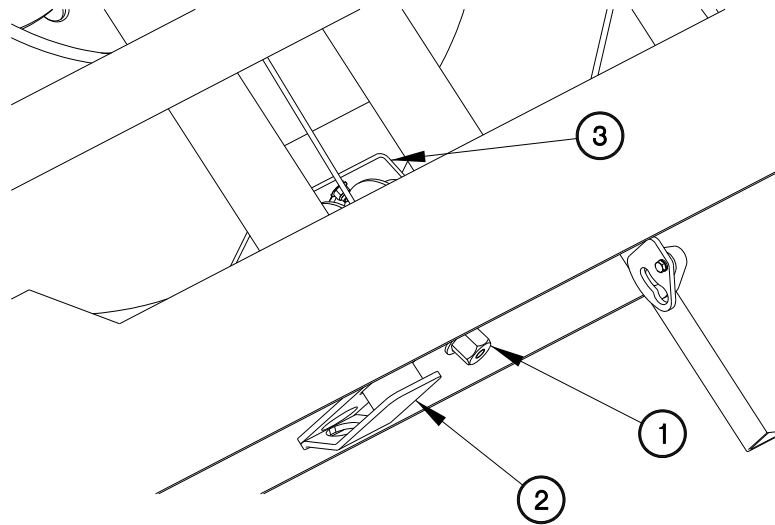
CA004L04

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.



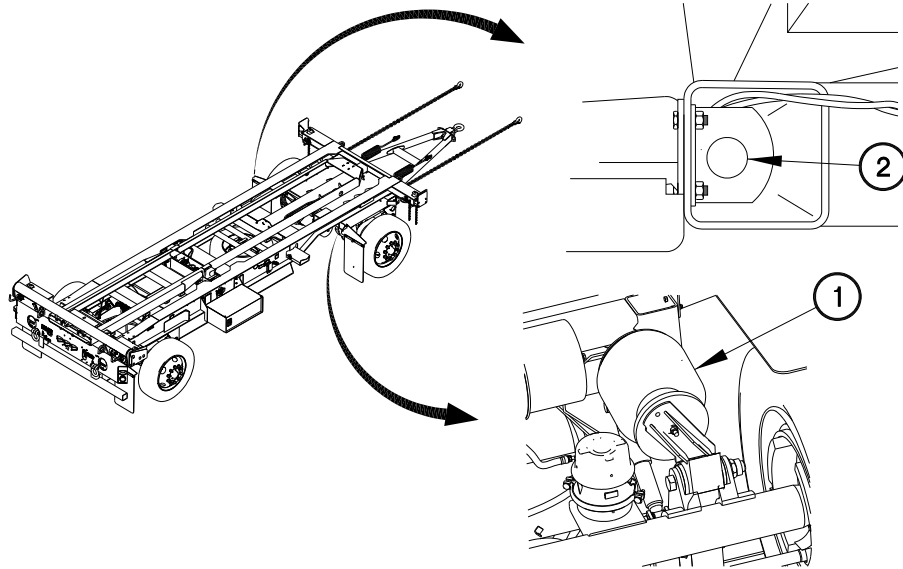
CA004L05

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.



CA004L06

Table 4. Air Bag/Suspension.

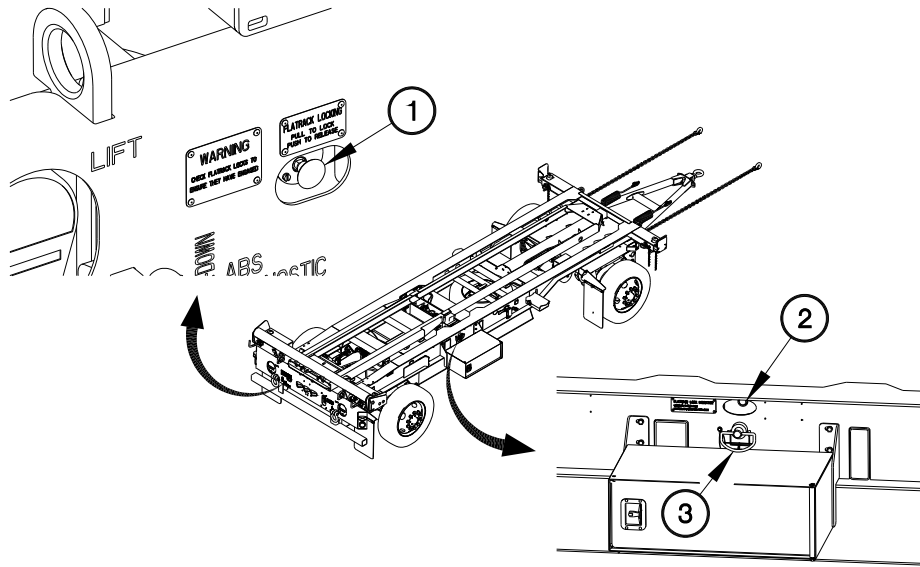
KEY	CONTROL	FUNCTION
1	Air bags	Aids in ride control of LHST in conjunction with shock absorbers. Also lowering of air bags allows for ease of loading flatracks and crops.
2	Height Actuation Control Valve	Allows for lowering of front and rear air bags to aid in ease of loading flatracks and crops.

TRAILER CONTROLS - Continued

0004 00

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

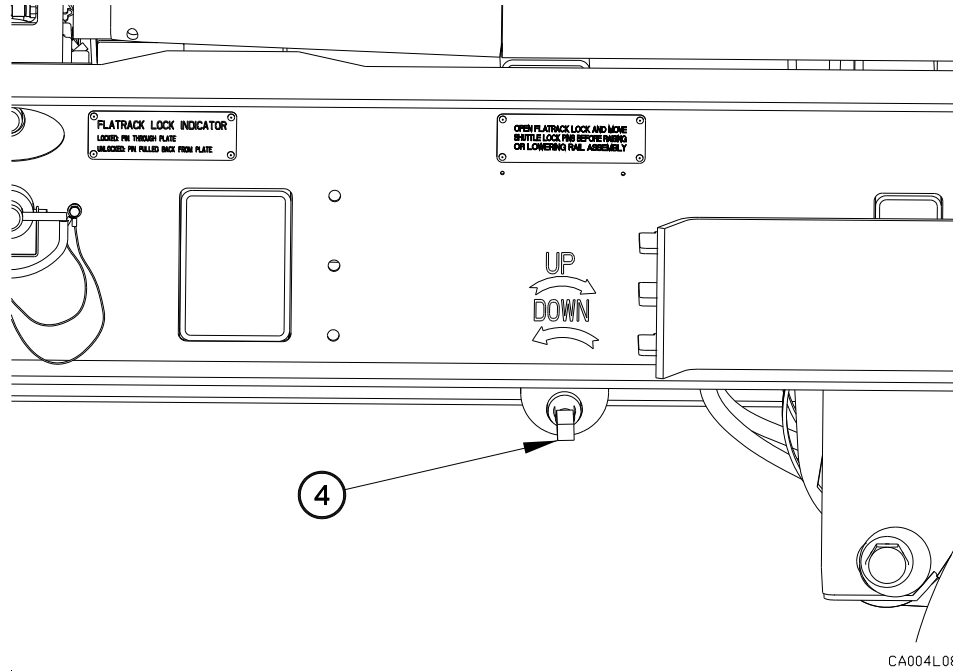
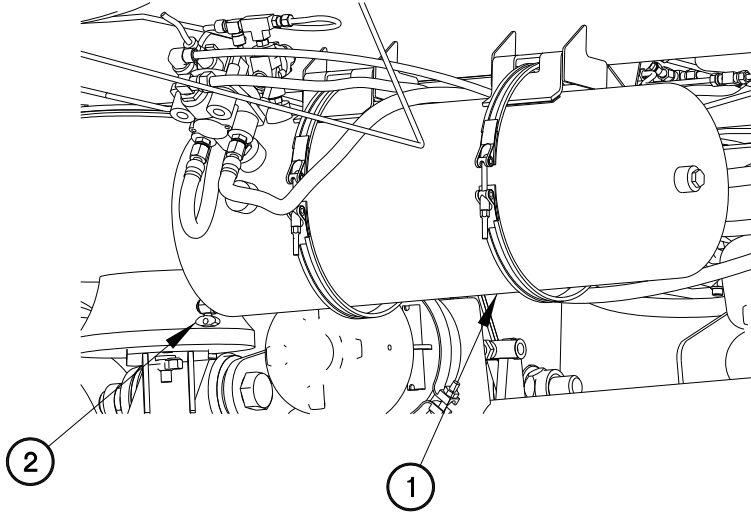


Table 5. Flatrack Rail Lock System Controls – Continued.

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.

INITIAL SETUP:**Maintenance Level:**

Operator

Equipment Conditions:

Trailer air system charged

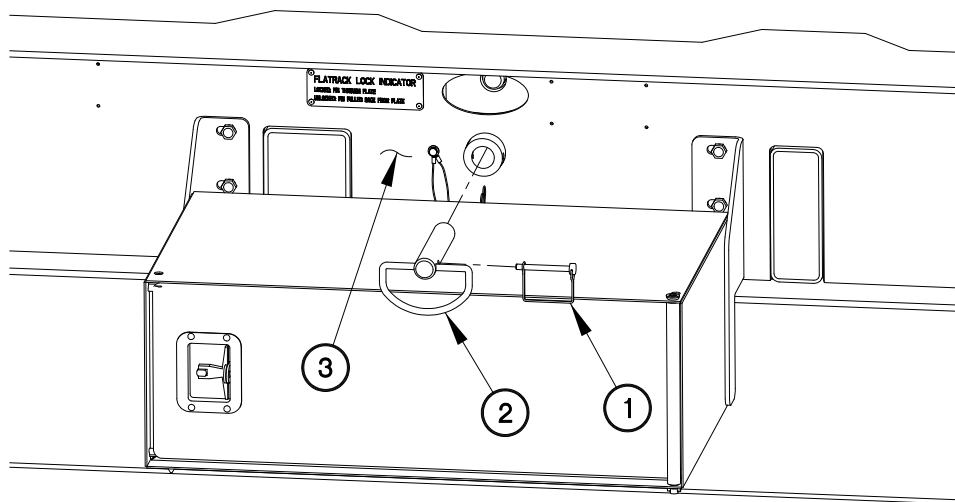
GENERAL

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 is shown.

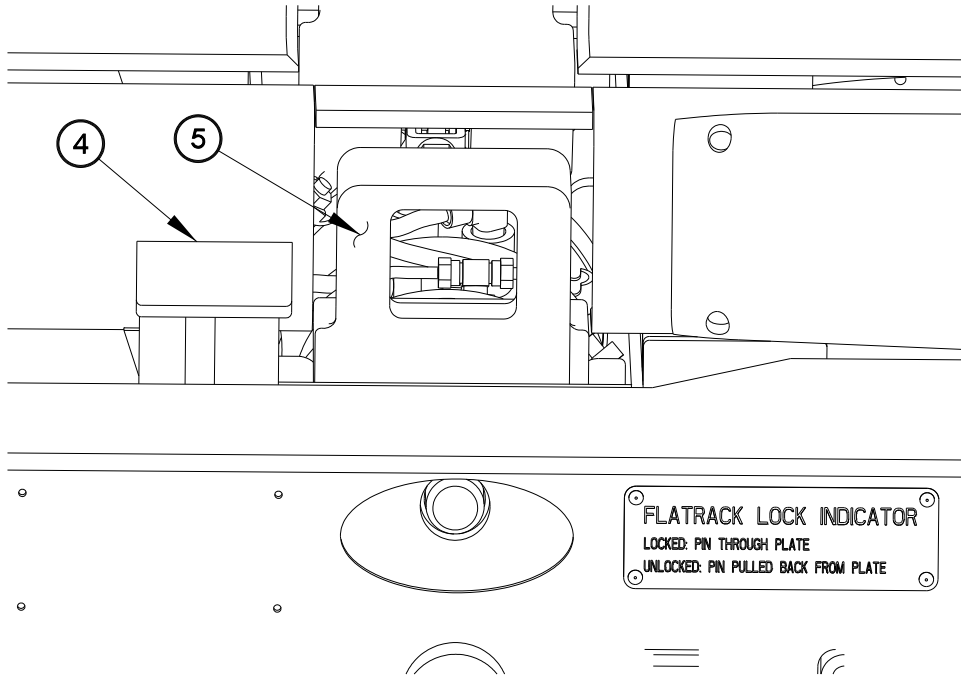
1. Remove retaining pin (1) from flatrack locking pin (2).
2. Remove flatrack locking pin (2) from trailer (3).



CB05A01-

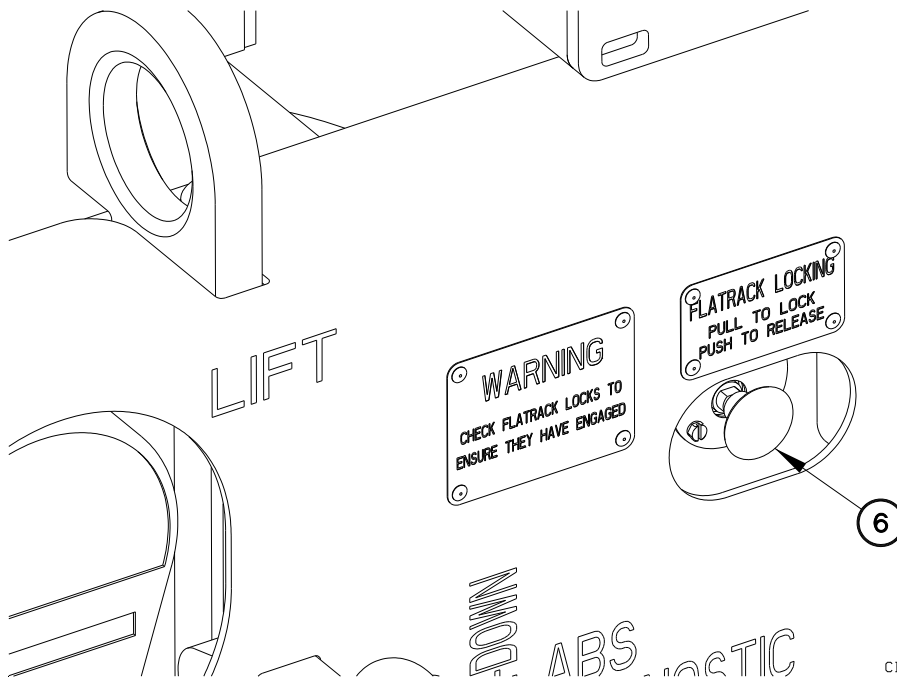
RAISING RAIL OPERATION - Continued

- 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.



CB05A02-

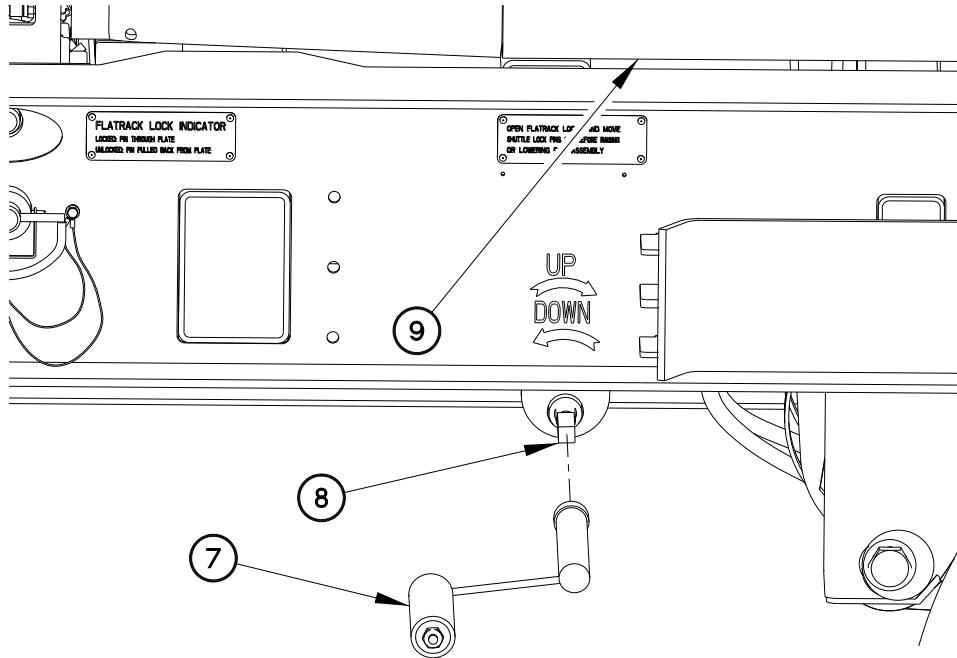
- 5. Press flatrack locking knob (6) to RELEASE.



CB05A03-

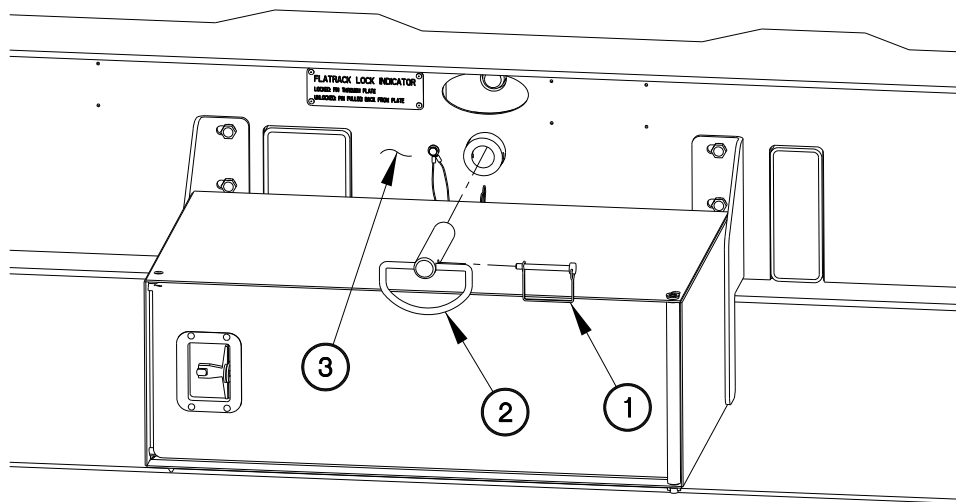
RAISING RAIL OPERATION - Continued

6. Install crank handle (7) on gear lug (8).
7. Rotate crank handle (7) clockwise until flatrack guide (9) is completely raised.



CB05A04-

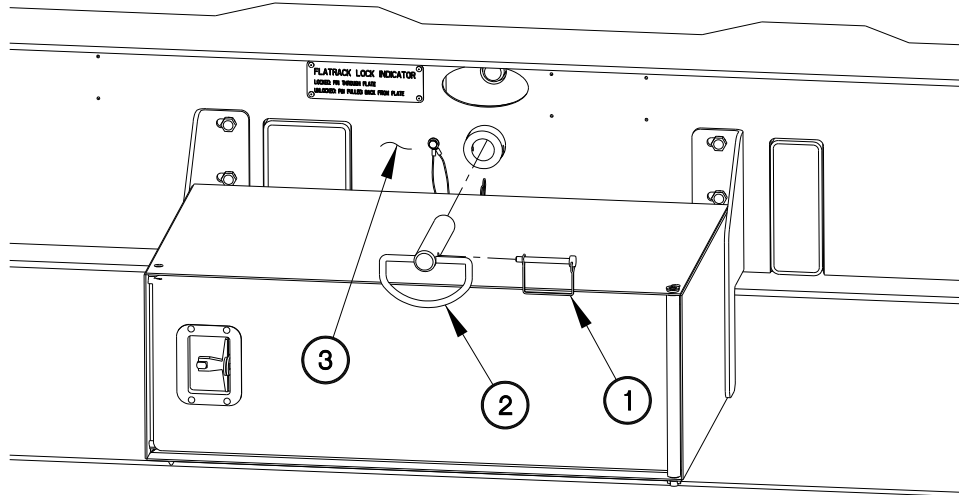
8. Install flatrack locking pin (2) in trailer (3).
9. Install retaining pin (1) in flatrack locking pin (2).



CB05A01-

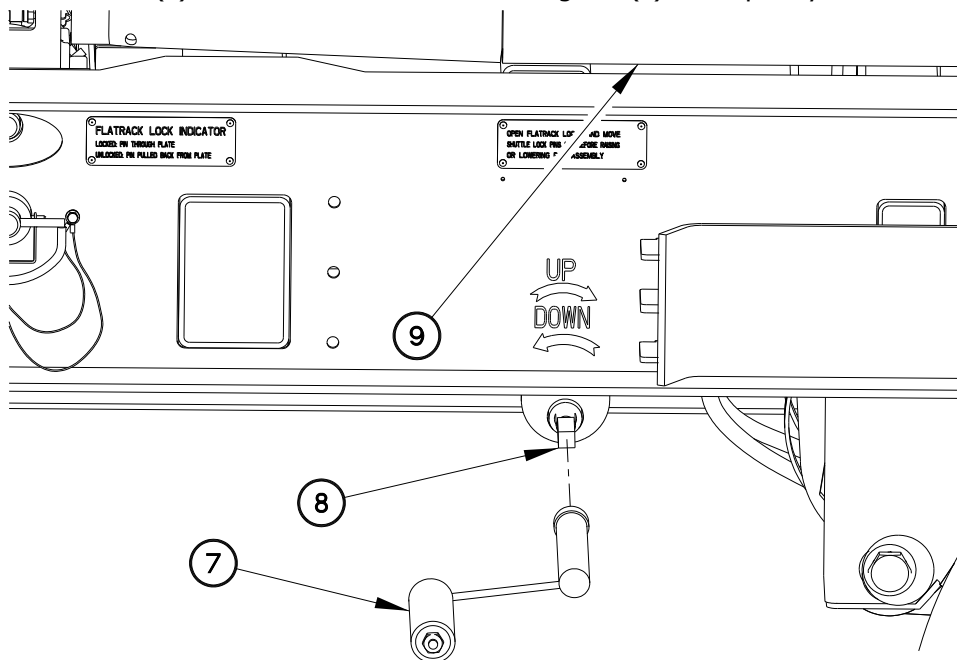
LOWERING RAIL OPERATION

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



CB05A01-

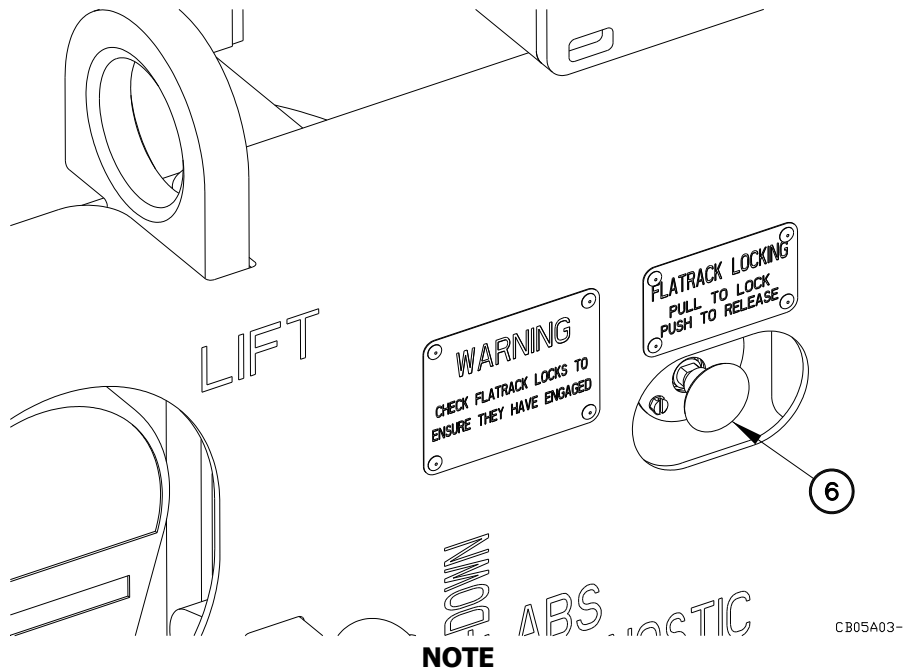
3. Install crank handle (7) on gear lug (8).
4. Rotate crank handle (7) counter-clockwise until flatrack guide (9) is completely lowered.



CB05A04-

LOWERING RAIL OPERATION - Continued

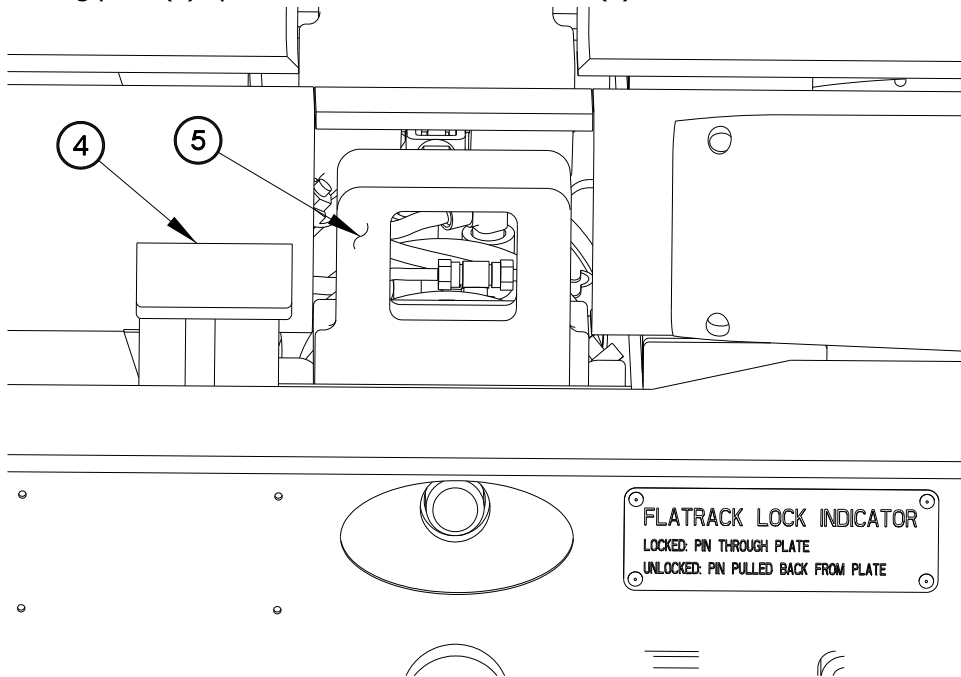
5. Pull flattrack locking knob (6) to LOCK.



NOTE

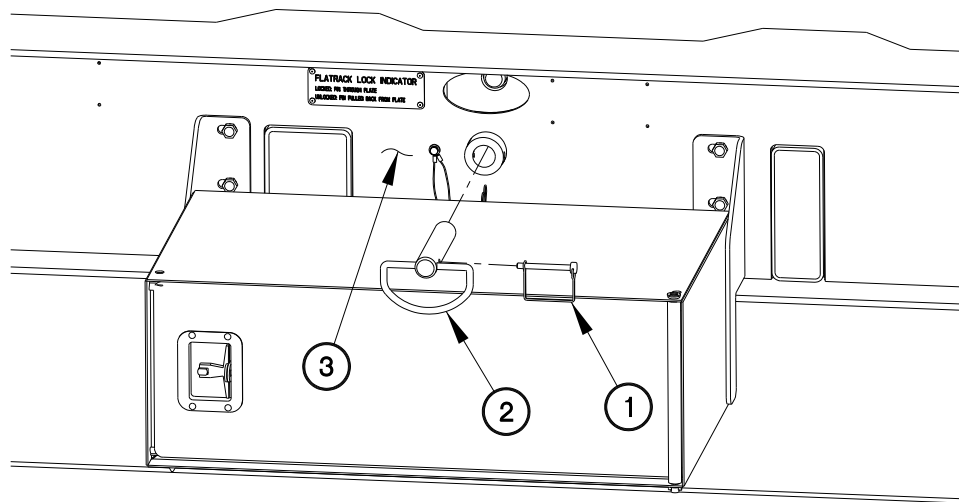
LH and RH flattrack locking pins, outer stowage pins, and DIN blocking plates are installed the same way. LH side is shown.

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



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 TO -65° F (-32° C TO -54° C) - Continued

0006 00

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

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 applicable) to protect it from heat, sun, and dust.

END OF WORK PACKAGE

OPERATION IN RAINY OR HUMID CONDITIONS

0008 00**INITIAL SETUP:****Maintenance Level**

Operator

References

TB 43-0213 |

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 TB 43-0213 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 provides 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

Operator

References

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**

Operator

ReferencesWP 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 are stuck in mud, it may be 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**

Operator

ReferencesWP 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

TM 9-2330-334-13&P

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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Electrical 50 ft (Item 21, 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.

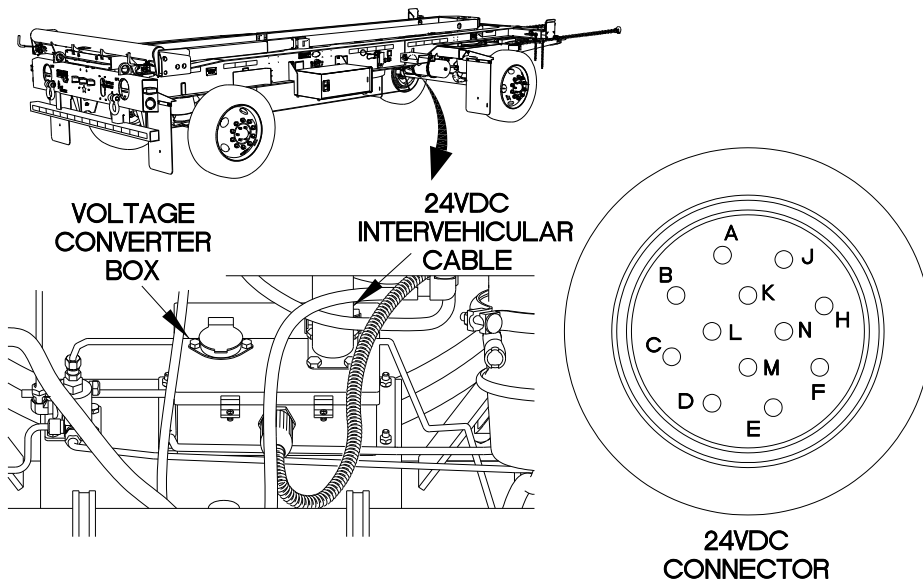
FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued

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?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 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.



CC014R01

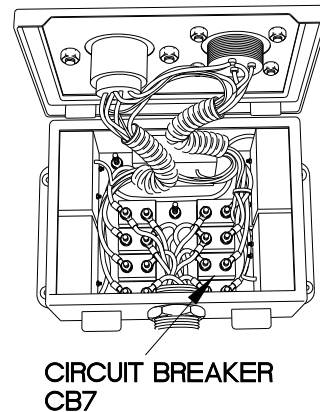
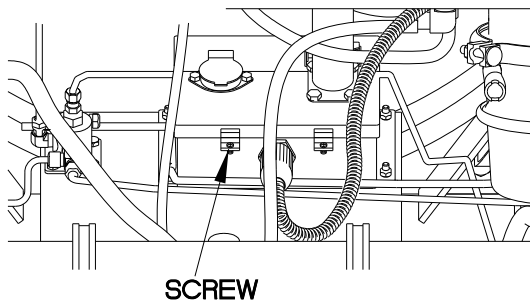
FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued

0014 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB7?	<p>No. Replace circuit breaker CB7 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 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.



CC014R02

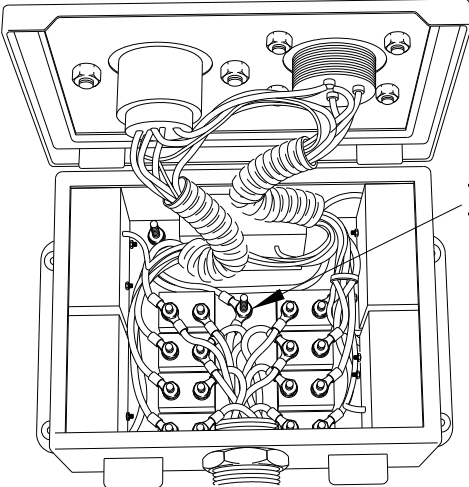
FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued

0014 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present from TL260 to a known good ground?</p>	<p>No. Repair wire 105 or replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace main electrical harness (WP 0066 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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 24, 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 19, WP 0165 00)

Wire, Electrical 50 ft (Item 21, 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

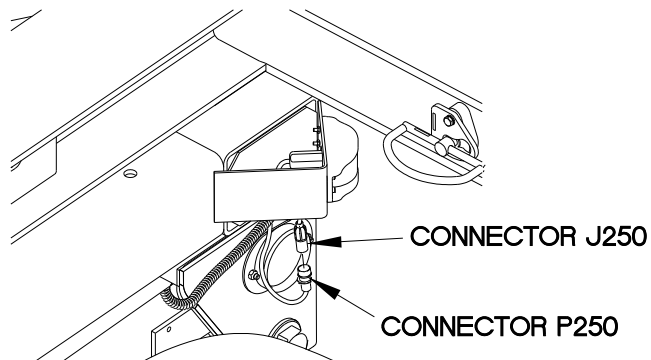
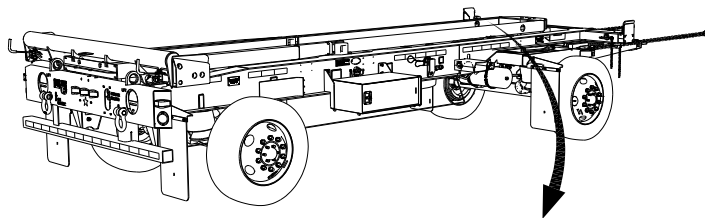
- Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.
- Refer to Electrical Schematic at the end of this chapter as required.

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?	<p>No. Repair wire 107B (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace right front marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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 24, 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 19, WP 0165 00)

Wire, Electrical 50 ft (Item 21, 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.

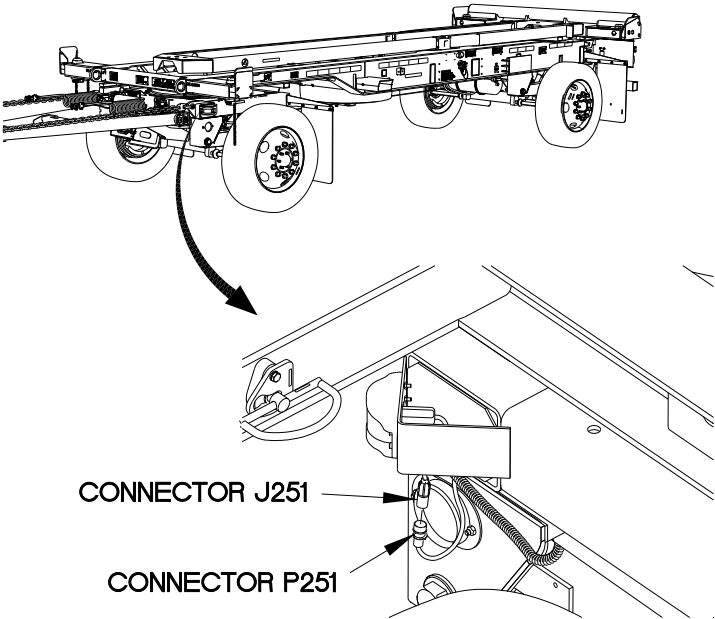
LEFT FRONT MARKER LIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 107C (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace left front marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC016R01

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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Electrical 50 ft (Item 21, 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.

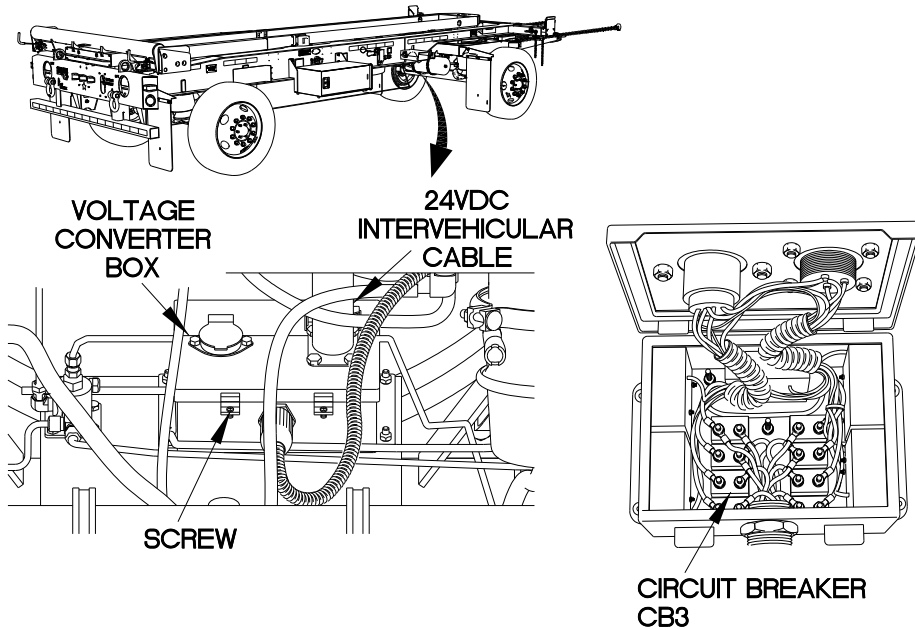
SIDE REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued

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?	<p>No. Replace circuit breaker CB3 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 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.

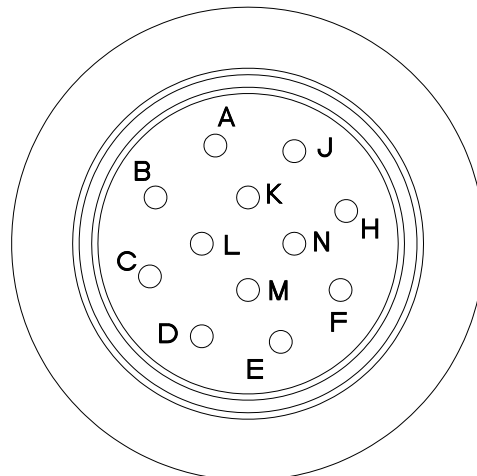


CC017R01

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Side Rear Marker Lights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 18-30 VDC present at 24 VDC intervehicular cable connector pin E?	<p>No. Replace 24 VDC intervehicular cable (WP 0062 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 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

CC017R02

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 24, 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 19, WP 0165 00)

Wire, Electrical 50 ft (Item 21, 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.

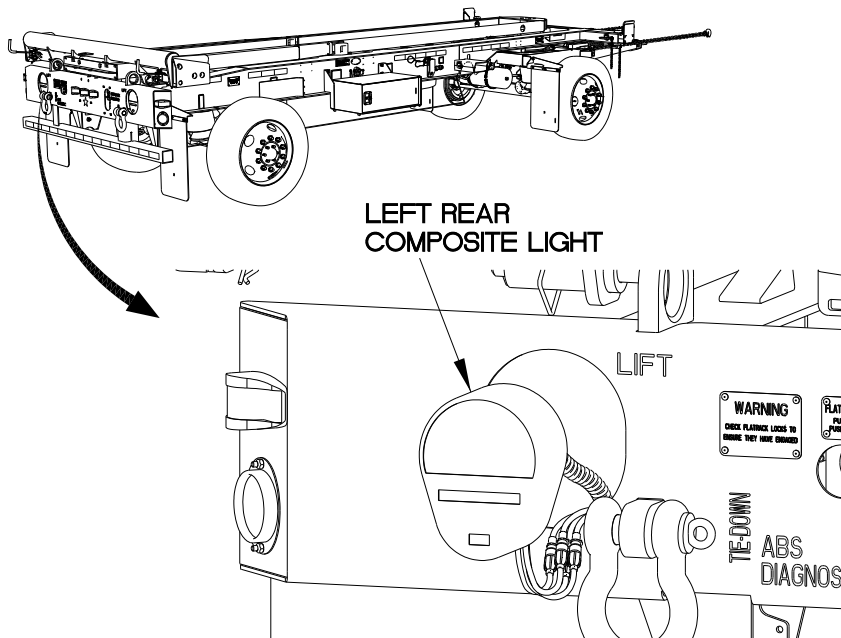
LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 118B (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear marker light (WP 0061 00).</p>	1. Set multimeter to VDC. 2. Remove left rear composite light from trailer for access (WP 0060 00).



CC018R01

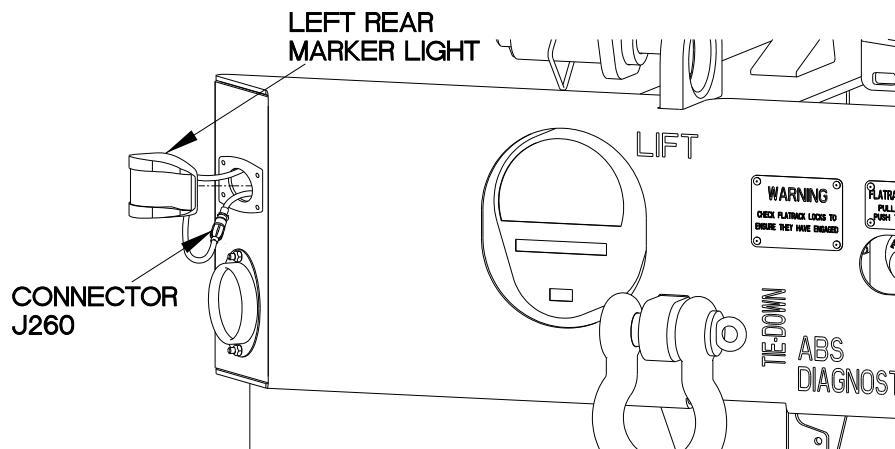
LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued

0018 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Rear Marker Light Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J260? (Cont)	<p>No. Repair wire 118B (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear marker light (WP 0061 00).</p>	3. Remove left rear marker light for access (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.



CC018R02

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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

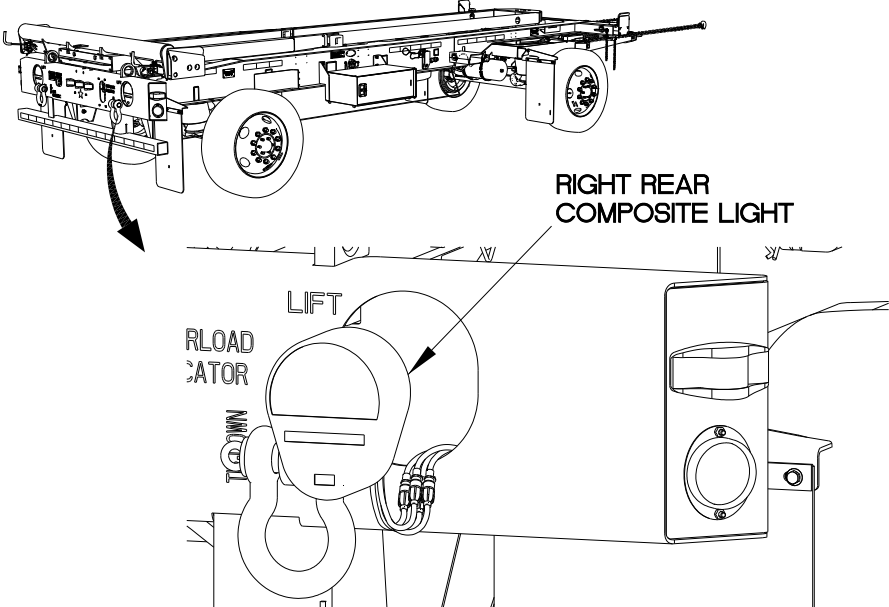
RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 113A (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove right rear composite light from trailer for access (WP 0060 00).



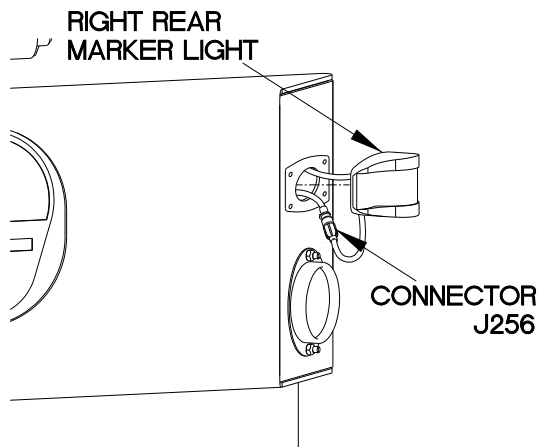
CC019R01

RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0019 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Rear Marker Light Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J256? (Cont)	<p>No. Repair wire 113A (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear marker light (WP 0061 00).</p>	3. Remove right rear marker light for access (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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)
Wire, Elect, 50 ft (Item 21, 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

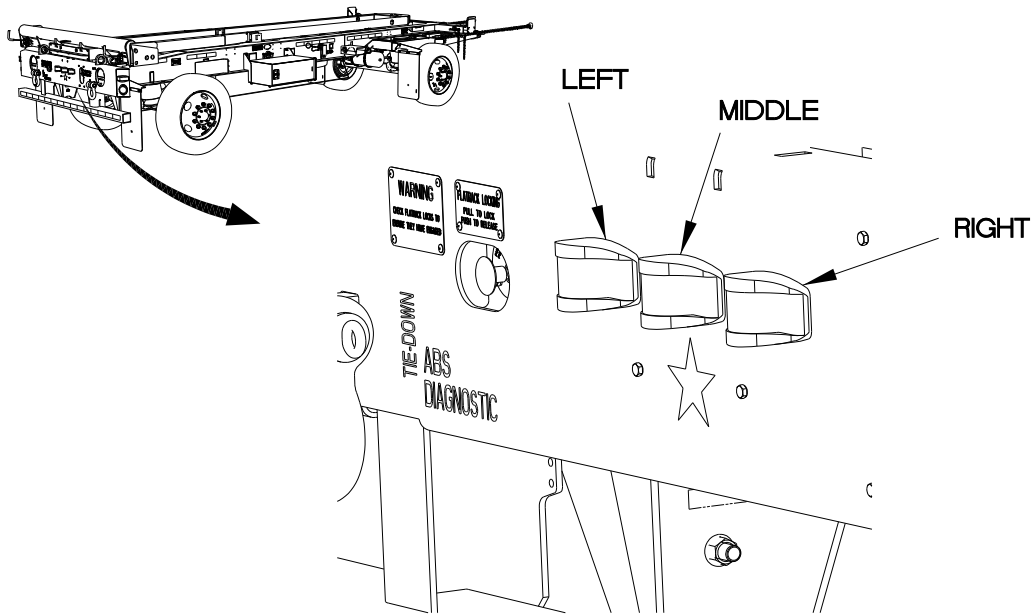
- Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.
- Refer to Electrical Schematic at the end of this chapter as required.

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?	<p>Left Go to (Indication/Condition 2).</p> <p>Right Go to (Indication/Condition 3).</p> <p>Middle Go to (Indication/Condition 4).</p> <p>All Repair wire 124 (EM 0195) or replace rear electrical harness (WP 0065 00).</p>	1. Position main light switch to SER DRIVE. 2. Note which center rear marker light does not illuminate.



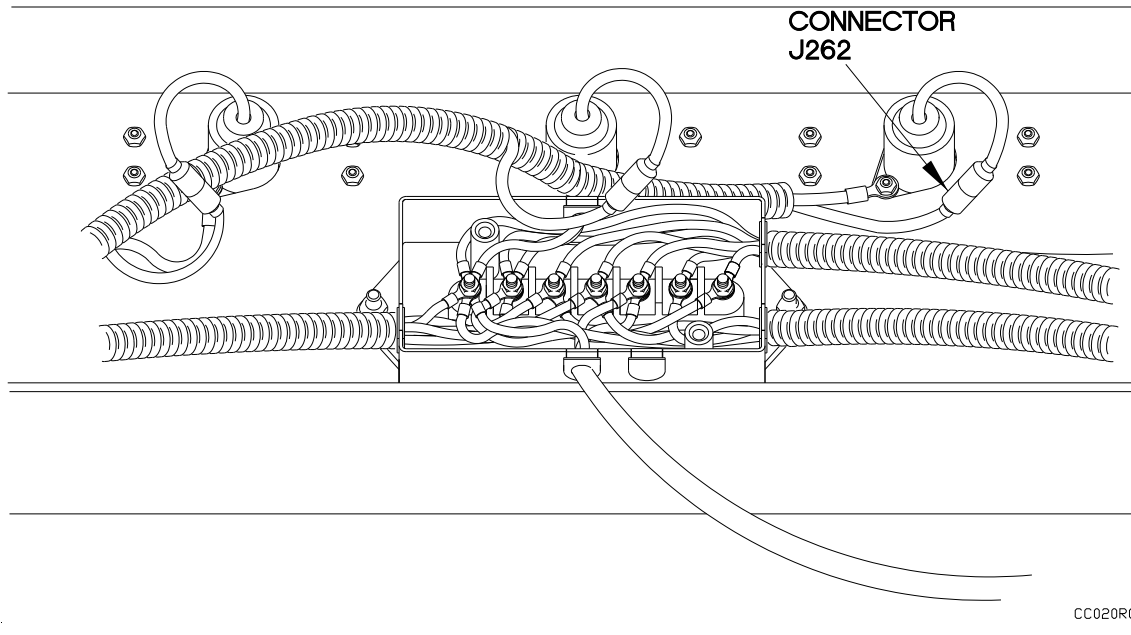
CC020R01

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 8-14 VDC present at connector J262?	<p>No. Repair wire 121 (EM 0195) or replace rear electrical harness (WP 0065 00).</p> <p>Yes. Replace center left marker light (WP 0061).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC020R02

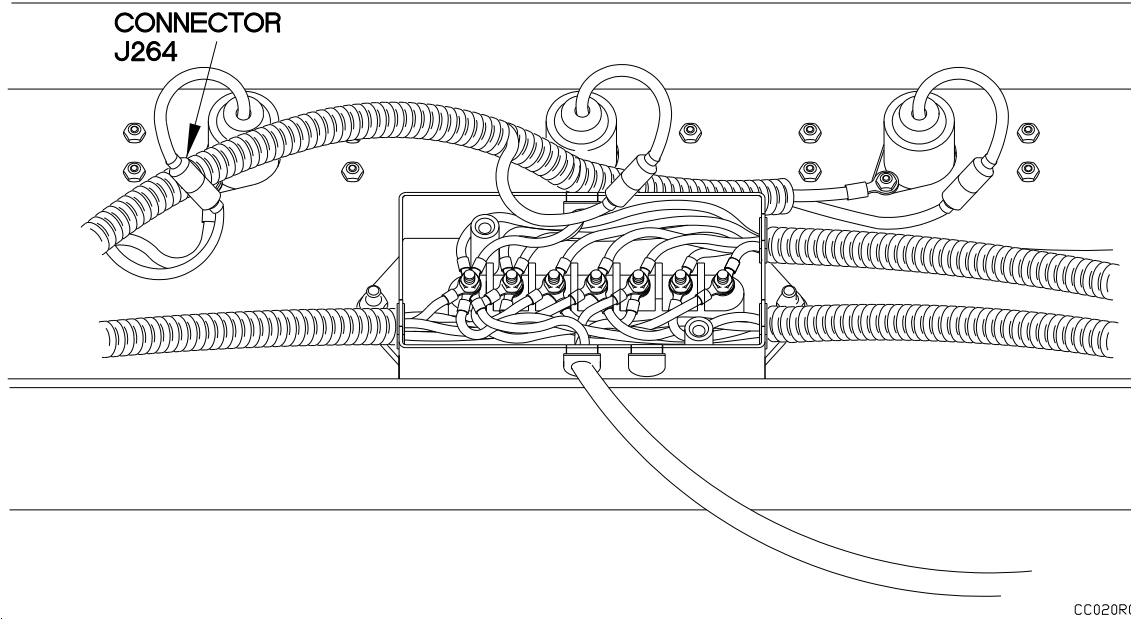
CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued

0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 8-14 VDC present at connector J264?</p>	<p>No. Repair wire 123 or replace rear electrical harness (WP 0065 00).</p> <p>Yes. Replace center right marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



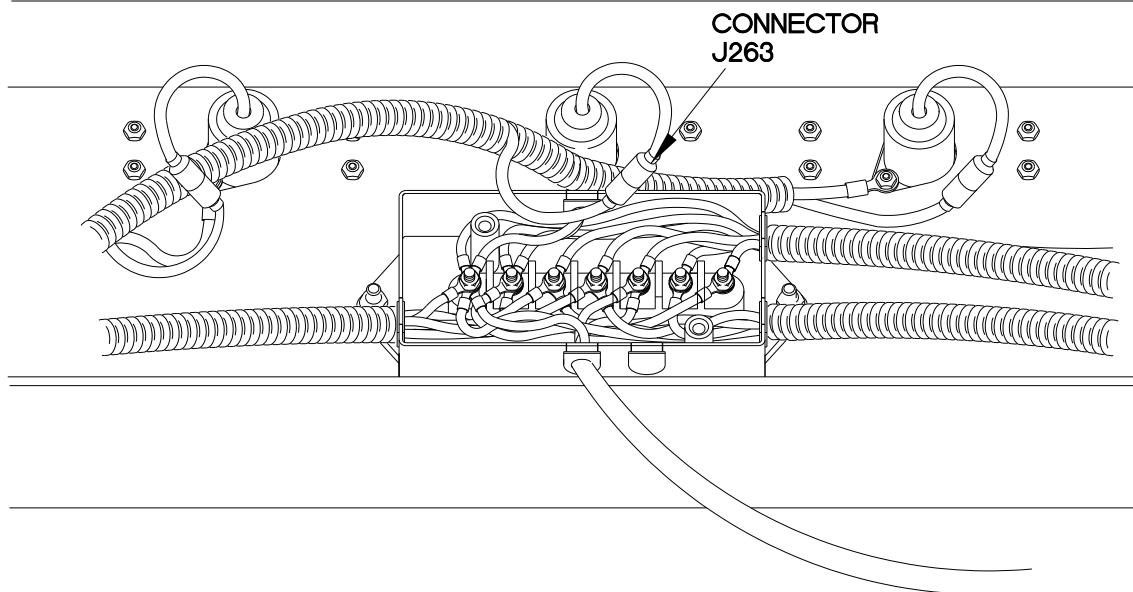
CC020R03

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Is 8-14 VDC present at connector J263?</p>	<p>No. Repair wire 122 or replace rear electrical harness (WP 0065 00).</p> <p>Yes. Replace center middle marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC020R04

END OF WORK PACKAGE

RIGHT TAILLIGHT DOES NOT ILLUMINATE

0021 00**THIS WORK PACKAGE COVERS:**Electrical System Troubleshooting

INITIAL SETUP:**Maintenance Level**

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

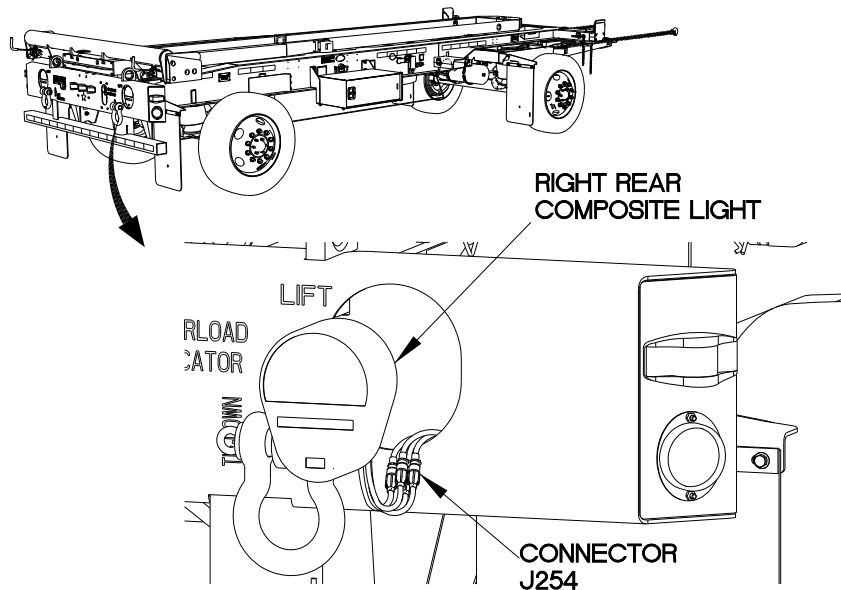
RIGHT TAILLIGHT DOES NOT ILLUMINATE-Continued

0021 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

Table 1. Right Taillight Does Not Illuminate.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J254?	<p>No. Repair wire 113B (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC021R01

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 24, 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 19, WP 0165 00)
Wire, Elect, 50 ft (Item 21, 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

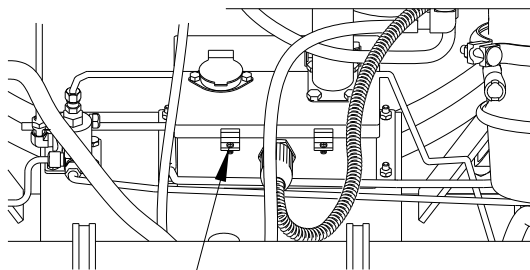
Table 1. Right Stoplight Does Not Illuminate.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin B?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 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 pedal. 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.
<p>The diagram illustrates the physical components involved in the troubleshooting process. The top part shows a side view of a vehicle chassis with an arrow pointing to the location of the voltage converter box and the 24VDC intervehicular cable. The bottom left shows a close-up of the voltage converter box with the intervehicular cable connected. The bottom right shows a top-down view of the 24VDC connector, which is a circular multi-pin connector with pins labeled A through M.</p>		<p style="text-align: center;">24VDC CONNECTOR</p> <p style="text-align: center;">CC022R01</p> <ol style="list-style-type: none"> 6. Position main light switch to ALL OFF.

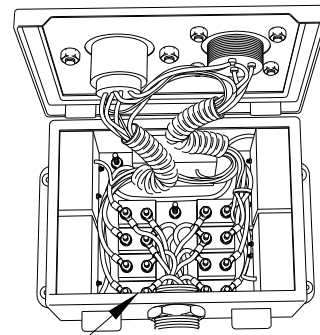
ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB4?	<p>No. Replace circuit breaker CB4 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



SCREW

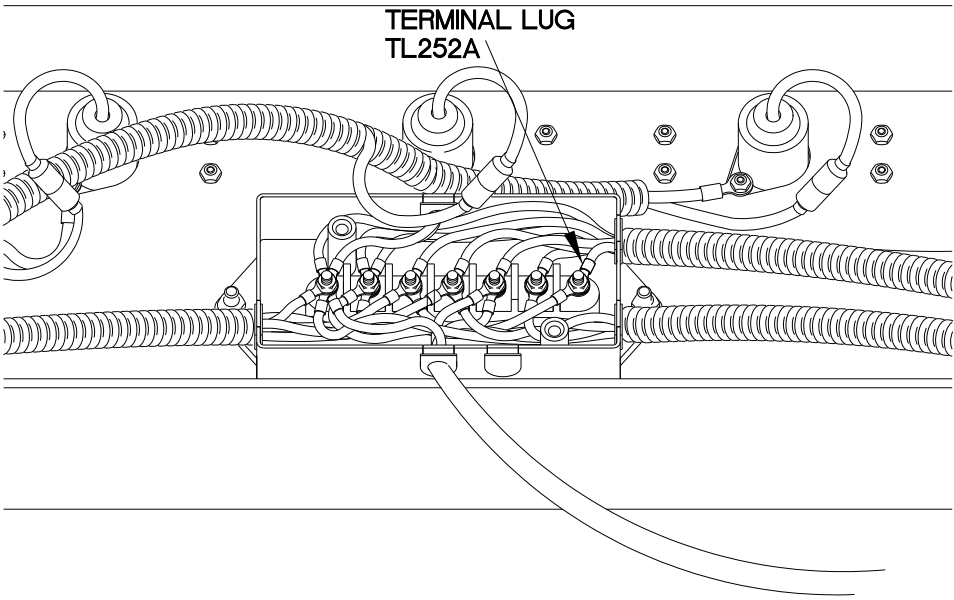


CIRCUIT BREAKER
CB4

CC022R02

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

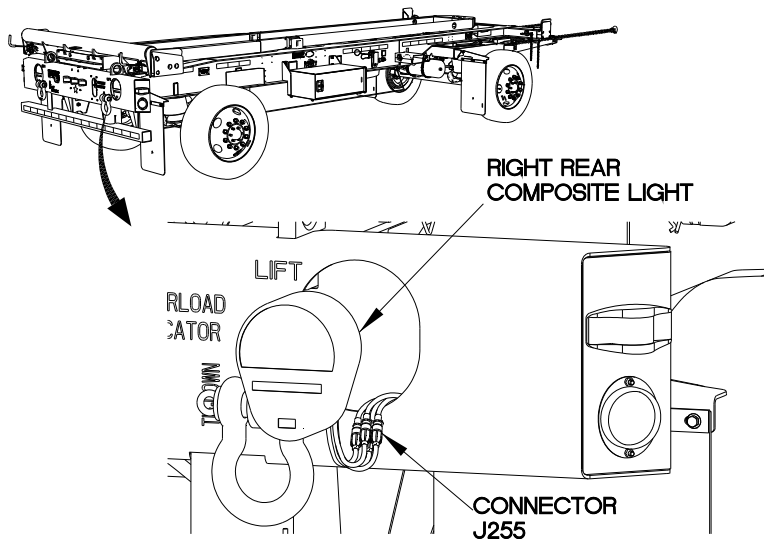
Table 1. Right Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Is 8-14 VDC present at terminal lug TL252A?</p>	<p>No. Repair wire 110 (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 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.
 <p>The diagram shows a top-down view of an electrical junction box. A terminal lug labeled 'TERMINAL LUG TL252A' is located on the right side of the box. A multimeter probe is shown connected to this terminal. The box contains several wires and terminals. The diagram is labeled 'CC022R04' in the bottom right corner.</p>		
		<ol style="list-style-type: none"> 7. Position main light switch to ALL OFF.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>5. Is 8-16 VDC present at connector J255?</p>	<p>No. Repair wire 114 (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.

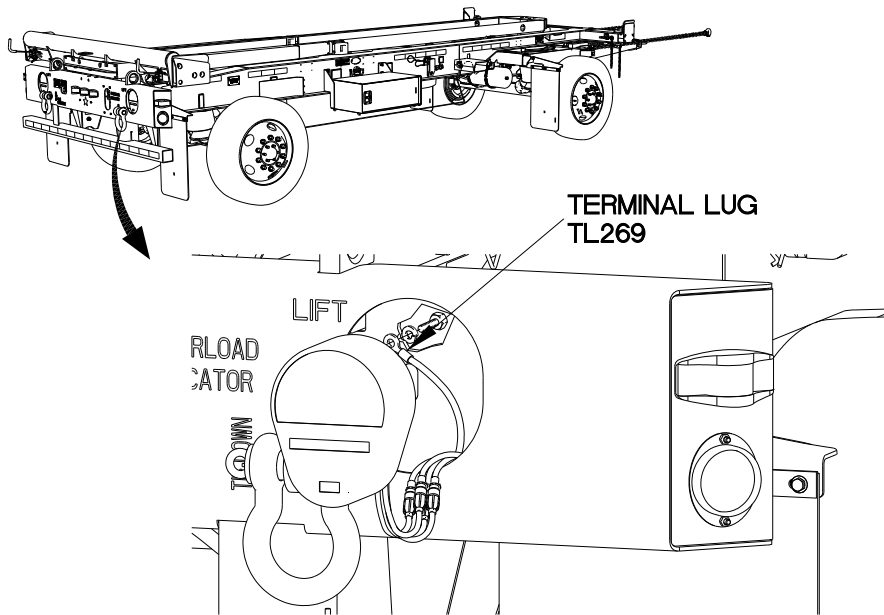


CC022R05

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Is continuity present from terminal lug TL269 to a known good ground?</p>	<p>No. Repair wire 115B (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



CC022R07

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 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

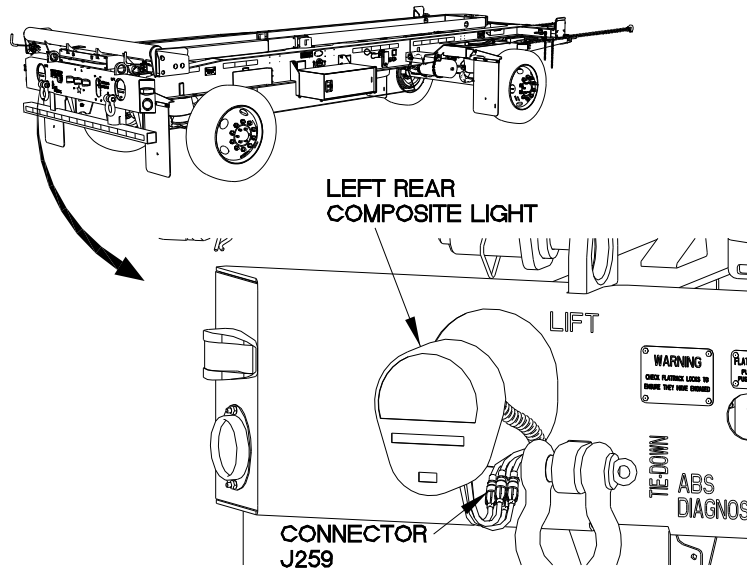
LEFT TAILLIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 118A (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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 24, 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 19, WP 0165 00)
Wire, Elect, 50 ft (Item 21, 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.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate.

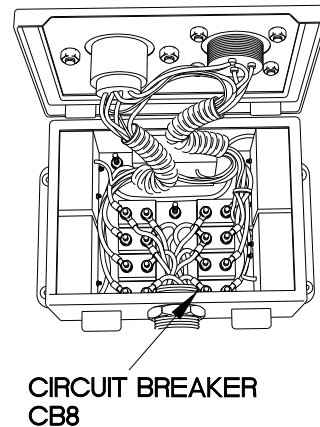
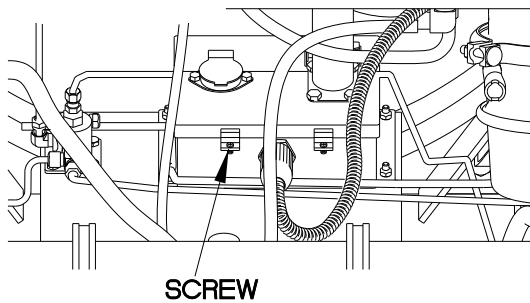
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin B?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake pedal. 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.
<p>The diagram illustrates the electrical components for the left stoplight system. It shows a side view of a vehicle chassis with a callout to a detailed view of the voltage converter box and the 24VDC intervehicular cable. A separate circular diagram shows the 24VDC connector with 12 pins labeled A through M. Pin B is the specific point of interest for the troubleshooting step.</p>		<ol style="list-style-type: none"> 6. Position main light switch to ALL OFF.

CC024R01

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB8?	<p>No. Replace circuit breaker CB8 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 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.

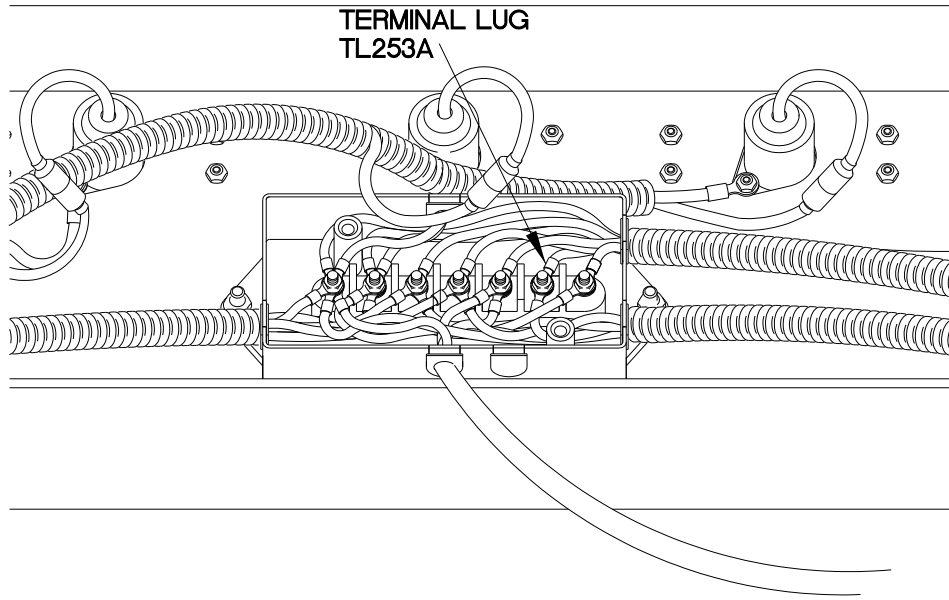


CC024R02

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is 8-14 VDC present at terminal lug TL253A?	<p>No. Repair wire 109 (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 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.



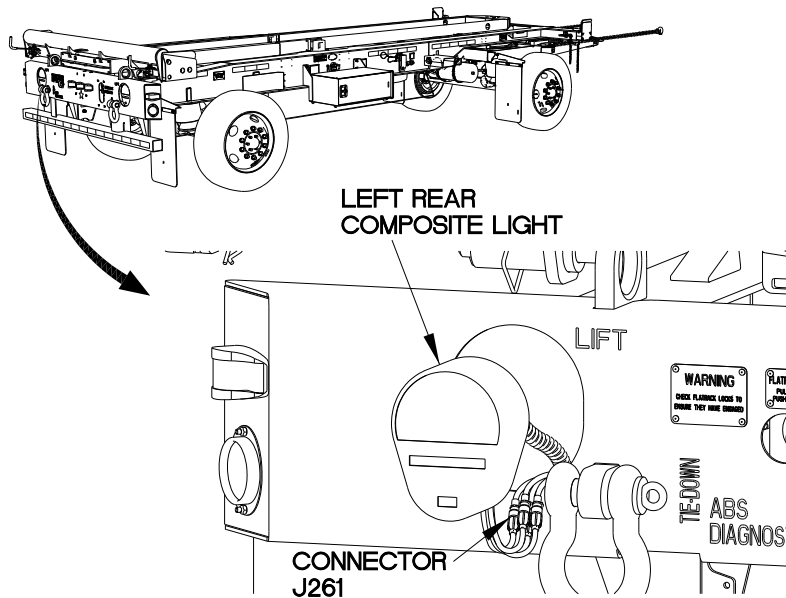
CC024R04

6. Position main light switch to ALL OFF.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate - Continued.

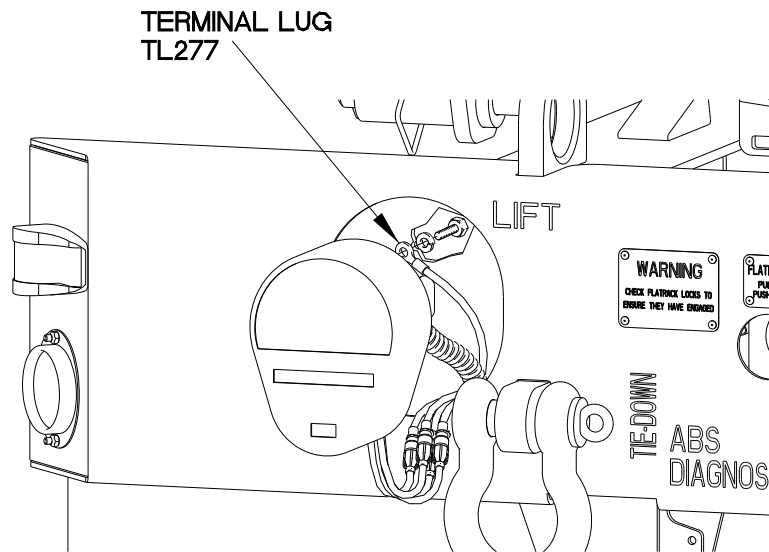
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>5. Is 8-16 VDC present at connector J261?</p>	<p>No. Repair wire 119 (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Is continuity present from terminal lug TL277 to a known good ground?</p>	<p>No. Repair wire 120B (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



CC024R07

END OF WORK PACKAGE

RIGHT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE

0025 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

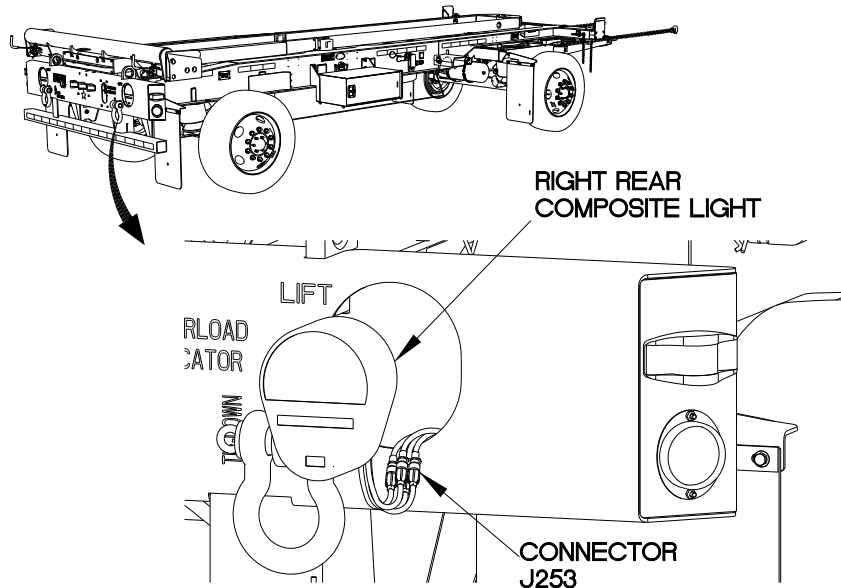
RIGHT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 112 (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC025R01

RIGHT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE

0026 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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

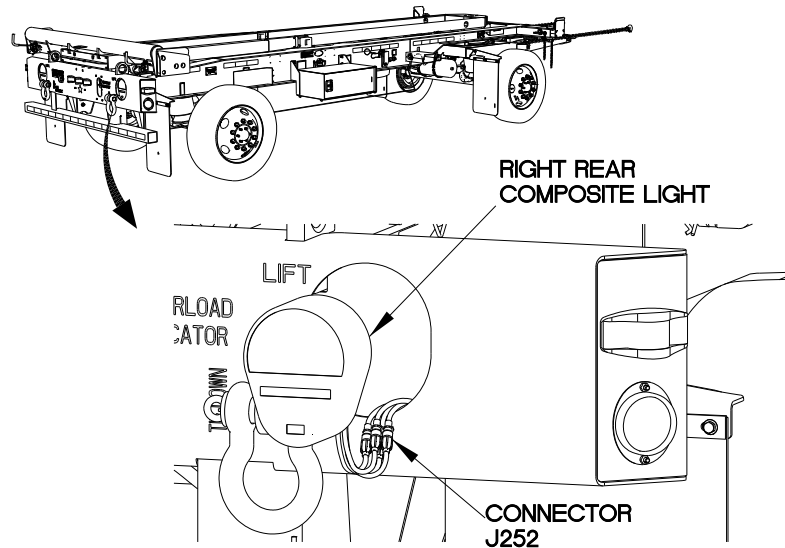
- Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.
- Refer to Electrical Schematic at the end of this chapter as required.

RIGHT 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?	<p>No. Repair wire 111 (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC026R01

END OF WORK PACKAGE

Change 1

0026 00-2

LEFT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE

0027 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

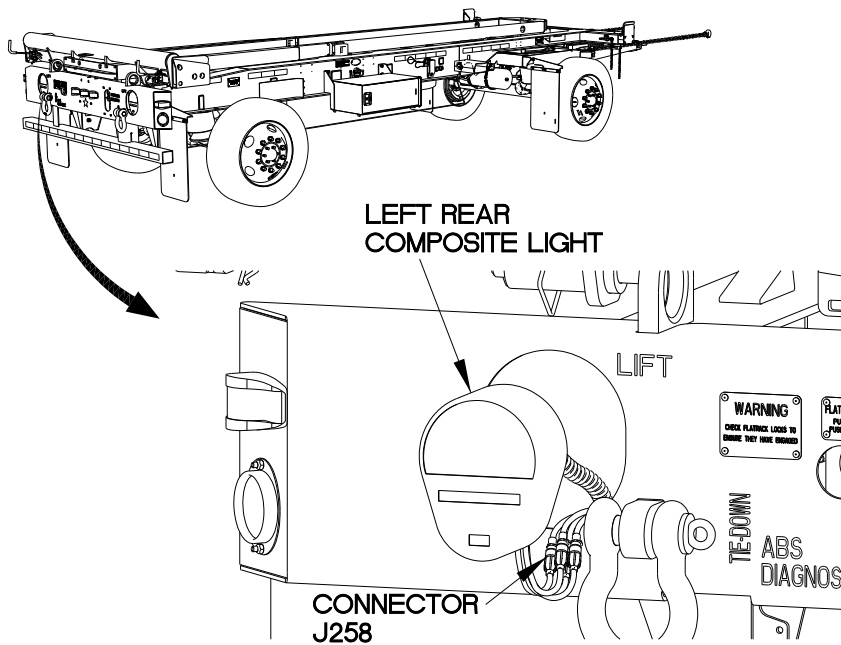
LEFT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 117 (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC027R01

LEFT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE

0028 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)
Wire, Elect, 50 ft (Item 21, 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.

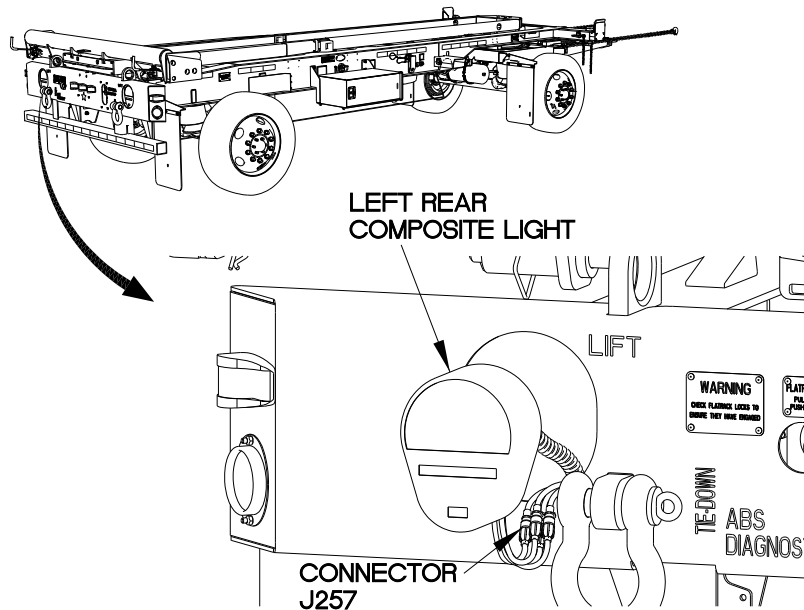
LEFT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE-Continued

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?	<p>No. Repair wire 116 (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC028R01

BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE

0029 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)
Wire, Elect, 50 ft (Item 21, 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.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate.

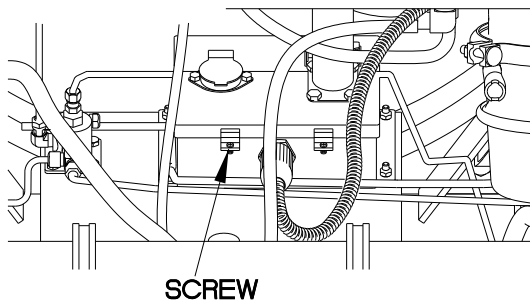
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin F?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to B.O. DRIVE on towing vehicle and depress brake pedal. 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.
<p>The diagram illustrates the physical components involved in the troubleshooting process. On the left, a side-view cutaway of a vehicle chassis shows the 'VOLTAGE CONVERTER BOX' and the '24VDC INTERVEHICULAR CABLE' connected to the rear. On the right, a circular '24VDC CONNECTOR' is shown with 12 pins labeled A through L. Pin F is specifically highlighted as the point of interest for the diagnostic step.</p>		<ol style="list-style-type: none"> 6. Position main light switch to ALL OFF.

CC029R01

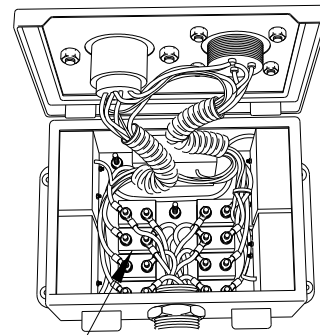
ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB2?	<p>No. Replace circuit breaker CB2 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 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.



SCREW



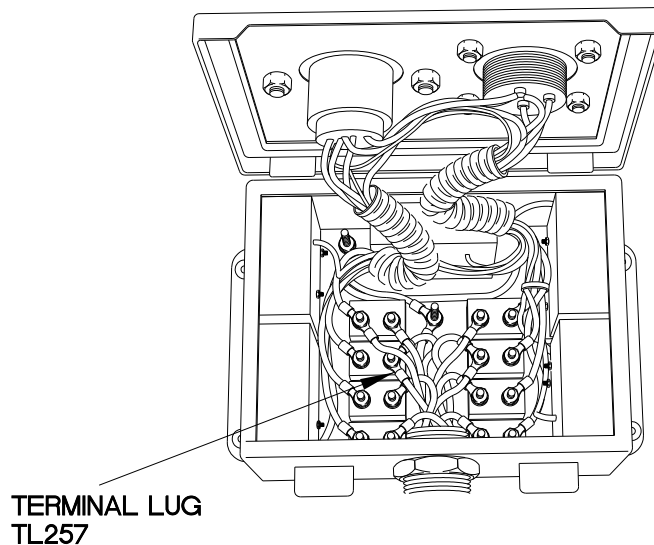
CIRCUIT BREAKER
CB2

CC029R02

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 18-30 VDC present at TL257?</p>	<p>No. Repair wire or replace voltage converter box (WP 0058 00).</p> <p>Yes. Repair wire 104 (EM 0195) or replace main electrical harness (WP 0066 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC029R03

END OF WORK PACKAGE

ALL LIGHTS DO NOT ILLUMINATE

0030 00**THIS WORK PACKAGE COVERS:**Electrical System Troubleshooting

INITIAL SETUP:**Maintenance Level**

Field

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

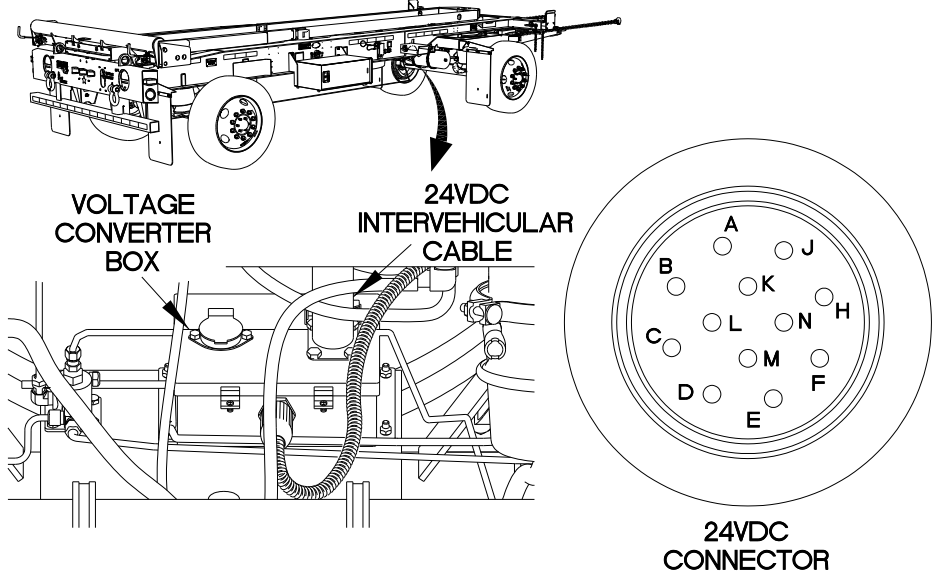
NOTE

- 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.
- Remove plastic cable ties as required.

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?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 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.



The diagram illustrates the physical components involved in the troubleshooting process. On the left, a side-view schematic of a vehicle chassis shows the 'VOLTAGE CONVERTER BOX' and the '24VDC INTERVEHICULAR CABLE' connected to the vehicle's electrical system. On the right, a circular '24VDC CONNECTOR' is shown with 13 pins labeled A through M. Pin E is specifically highlighted as the point of interest for the diagnostic step.

CC030R01

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 24, 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 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

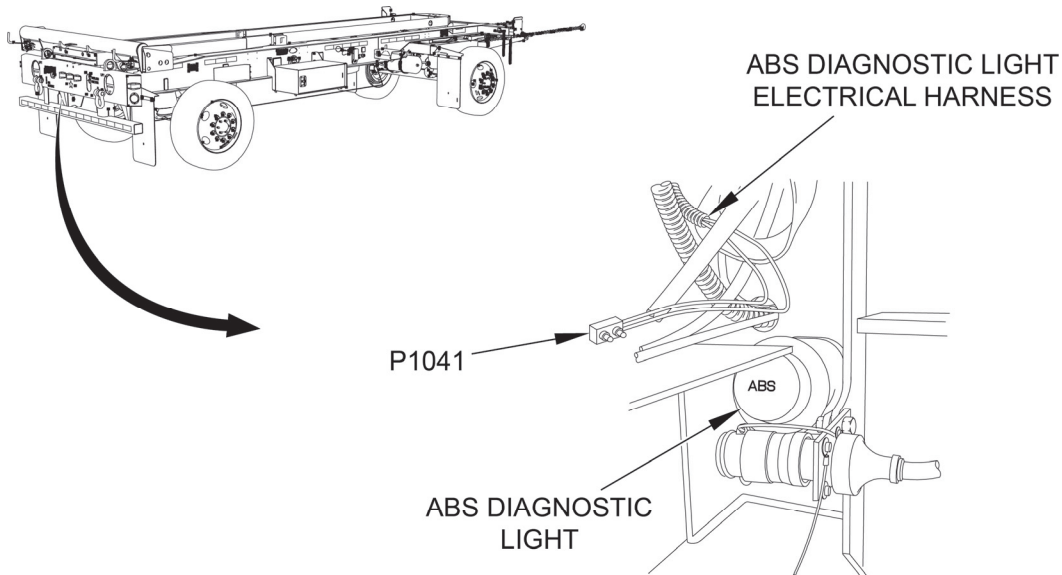
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

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 P1041 (+) (black wire) of ABS diagnostic light electrical harness?	<p>No. Go to (Indication/Condition 3).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect terminal lug P1041 from ABS diagnostic light. 3. Connect positive (+) probe of multimeter to terminal lug P1041 (+) (black wire). 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.



D052319

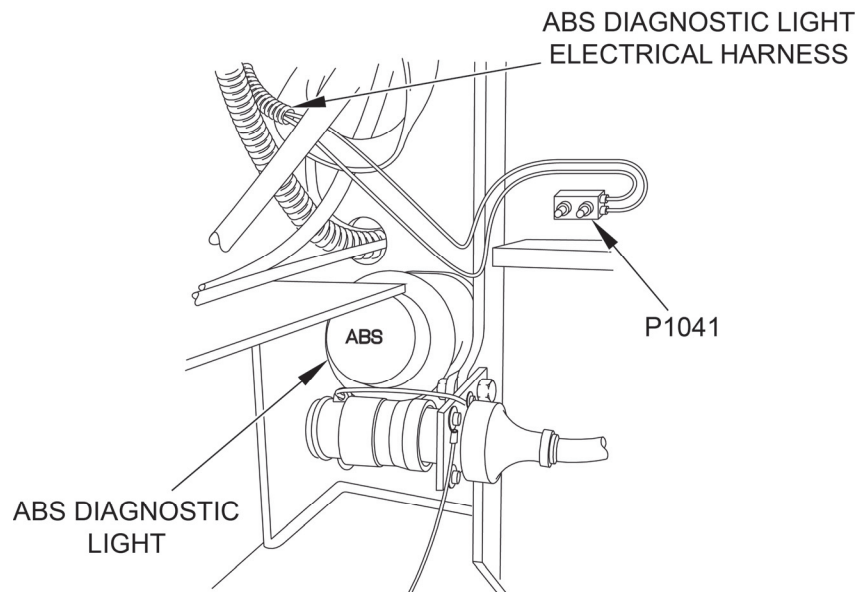
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present between terminal lug P1041 (-) (white wire) and a known good ground?	<p>No. Go to (Indication/Condition 4).</p> <p>Yes. Replace ABS diagnostic light (WP 0074 00).</p>	<ol style="list-style-type: none"> 1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Disconnect terminal lug P1041 from ABS diagnostic light. 4. Connect positive (+) probe of multimeter to terminal lug P1041 (-) (white wire). 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



D052320

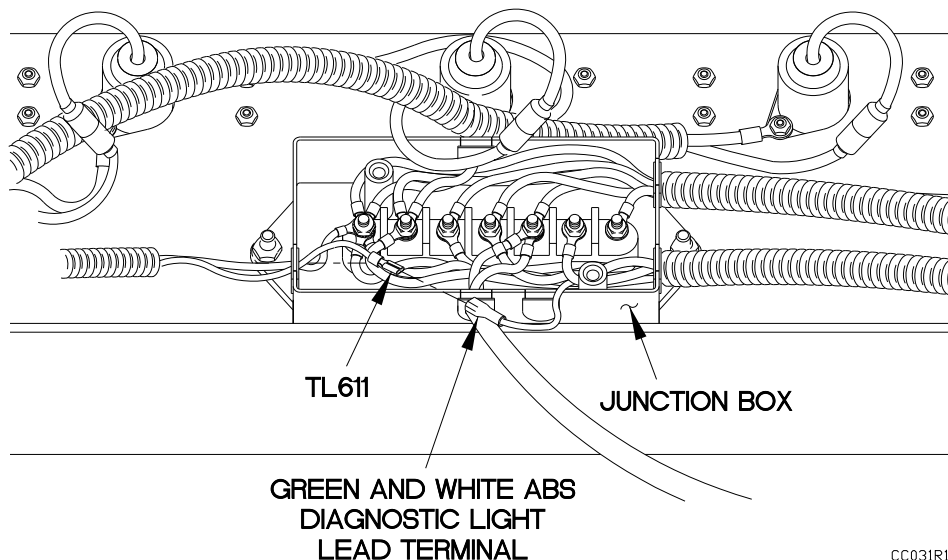
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 8-16 VDC present at green and white ABS diagnostic light lead terminal lug?</p>	<p>No. Go to (Indication/Condition 5).</p> <p>Yes. Replace ABS diagnostic light harness (WP 0077 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



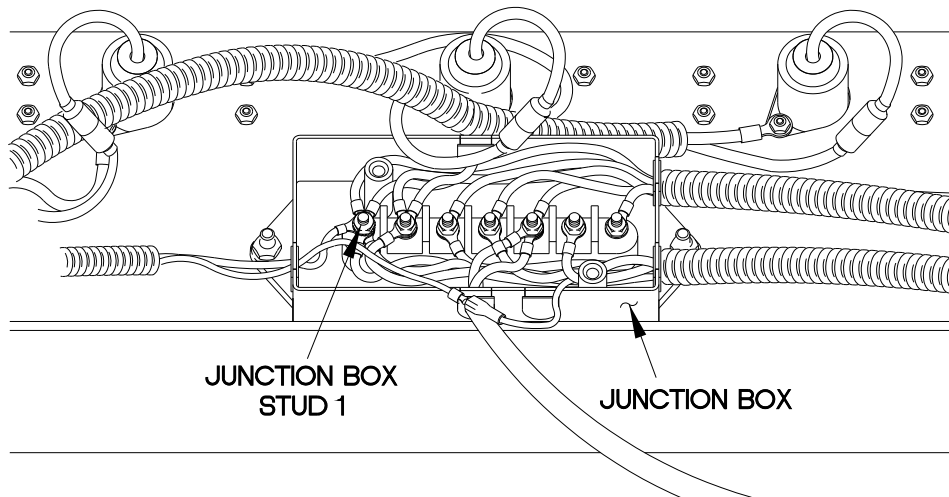
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present between junction box stud 1 and a known good ground?	<p>No. Replace junction box (WP 0059 00).</p> <p>Yes. Replace ABS diagnostic light harness (WP 0077 00).</p>	<ol style="list-style-type: none"> 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.



CC031R14

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 - Continued.

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?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect ABS diagnostic tool connector from ABS diagnostic tool. 3. Lift up on connector clip on ABS ECU Power/Diagnostic cable connector.

CONNECTOR CLIP

ABS ECU POWER / DIAGNOSTIC CABLE

ABS DIAGNOSTIC TOOL

ABS ECU POWER / DIAGNOSTIC CABLE

CC031R01

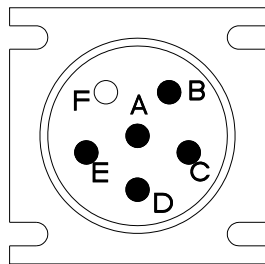
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

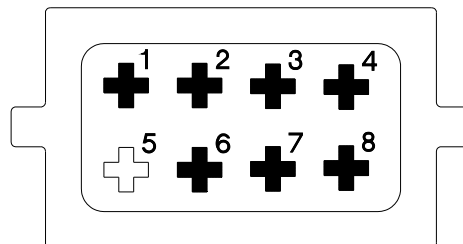
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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).	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	4. Disconnect ABS ECU Power/Diagnostic cable from ABS ECU. 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.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R02

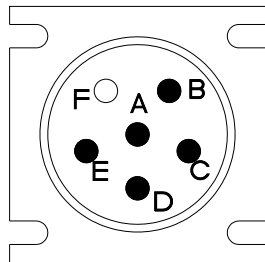
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

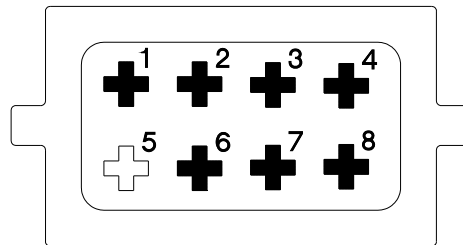
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin B. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 7 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R03

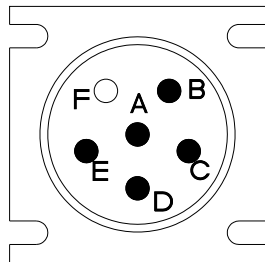
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

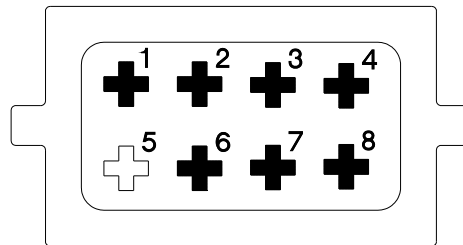
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin C. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 6 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R04

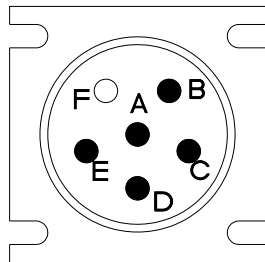
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

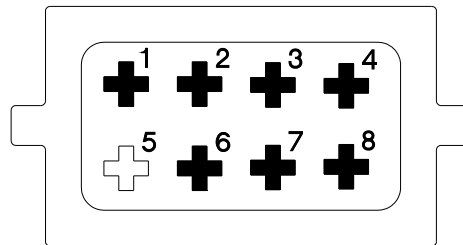
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 9).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin D. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 1 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R05

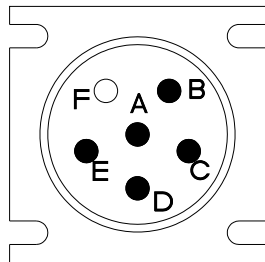
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

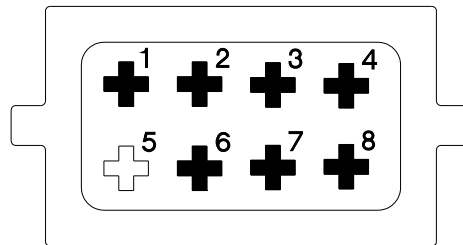
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 10).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin E. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 4 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R06

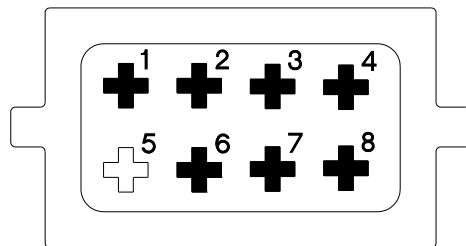
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

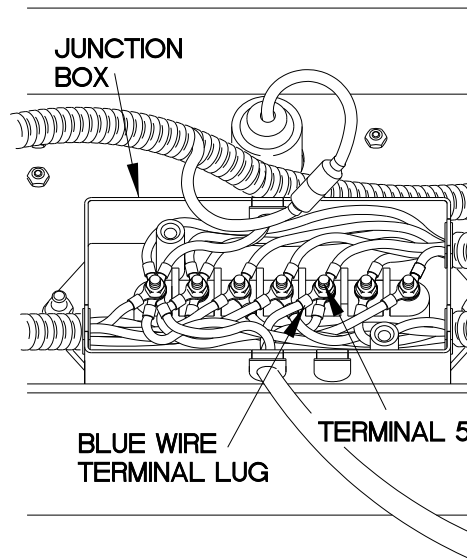
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 11).</p>	<ol style="list-style-type: none"> 1. Remove cover on junction box for access (WP 0059 00). 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.



ABS ECU
POWER CABLE
CONNECTOR



CC031R07

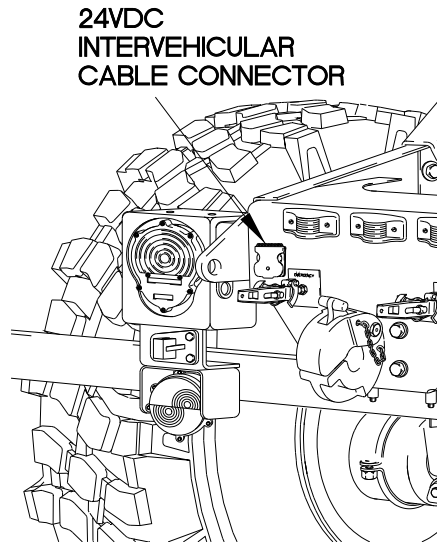
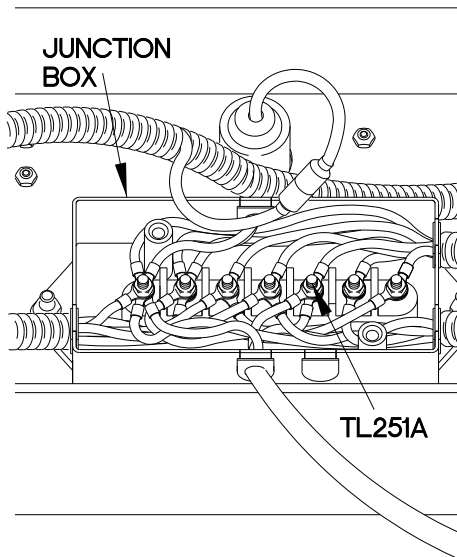
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Is 8-16 VDC present at terminal lug TL251A?	<p>No. Go to (Indication/Condition 12).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 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.



CC031R08

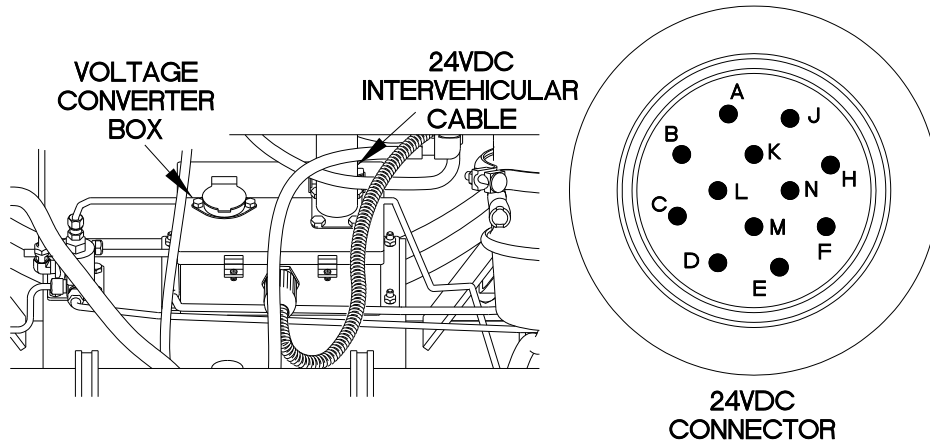
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>12. Is 18-30 VDC present at 24 VDC intervehicular cable pin K?</p>	<p>No. Replace 24 VDC intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 13).</p>	<ol style="list-style-type: none"> 1. Position towing vehicle master power switch to off. 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.



CC031R09

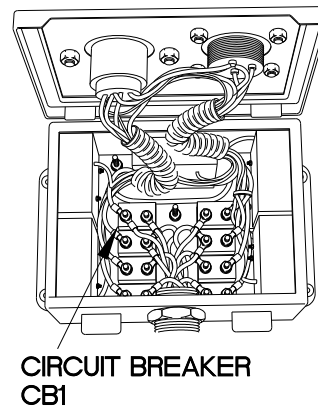
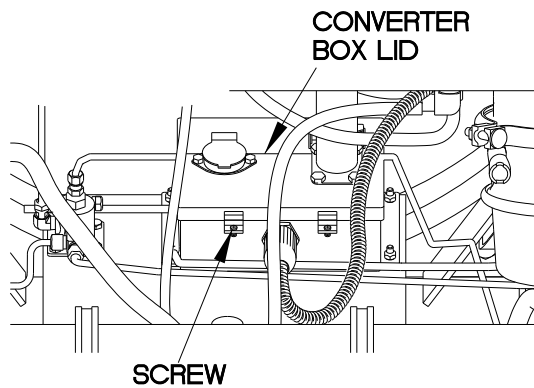
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
13. Is continuity present across circuit breaker CB1?	<p>No. Replace circuit breaker CB1 (WP 0057 00).</p> <p>Yes. Replace module 5 (WP 0057 00).</p>	<ol style="list-style-type: none"> 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.



CC031R10

**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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, 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.

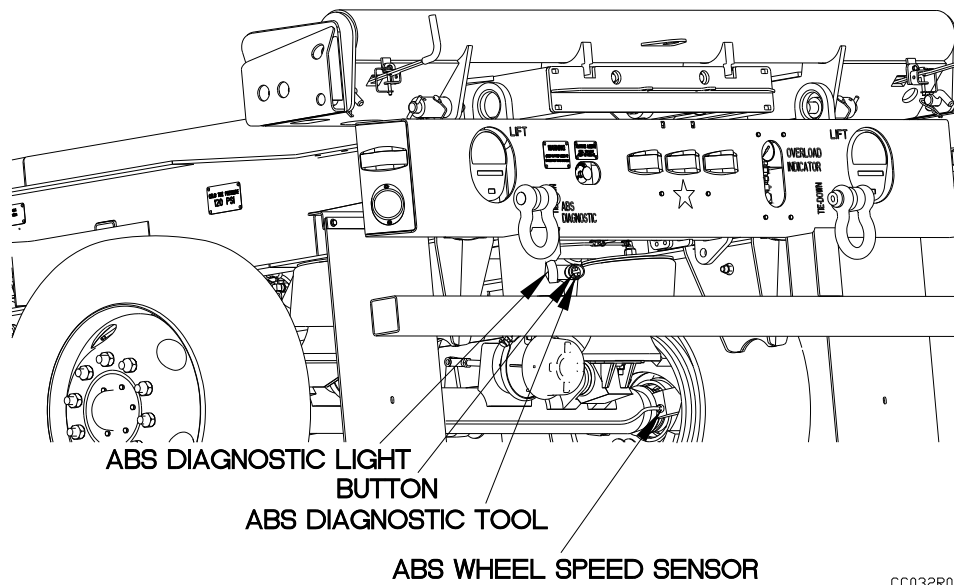
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued

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?	<p>No. Fault corrected.</p> <p>Yes. Go to (Indication/Condition 2).</p>	1. Push right rear ABS wheel speed sensor in until it contacts tooth wheel. 2. Start engine of towing vehicle.
<p>NOTE</p>		
<p>Trailer must be operated more than 4 mph (6 km/h) during road test.</p>		
		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.



CC032R01

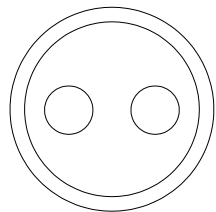
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued

0032 00

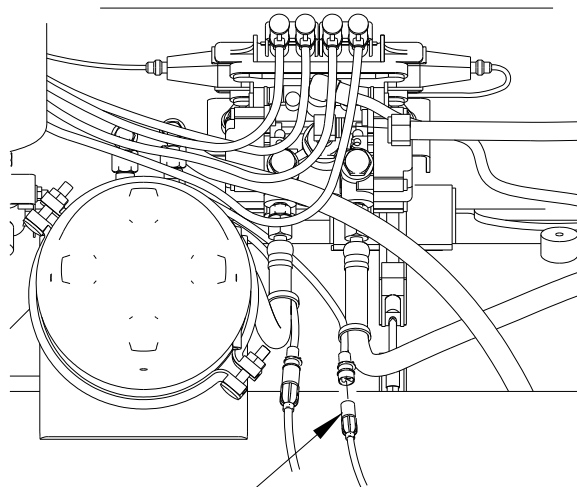
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Is 700-3000 ohms of resistance present across right rear ABS wheel speed sensor?</p>	<p>No. Replace right rear ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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

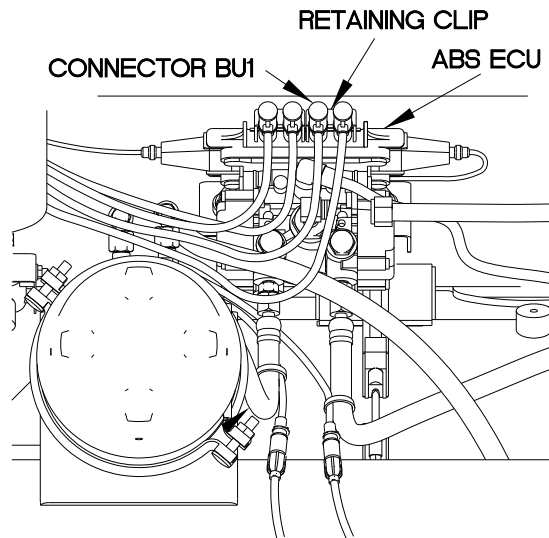
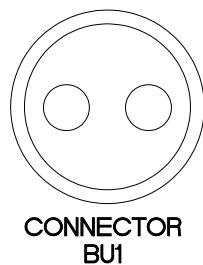
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued

0032 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across right rear ABS control sensor harness connector with jumper wire across connector BU1?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector BU1. 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.



CC032R03

END OF WORK PACKAGE

Change 1

0032 00-4

**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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, 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

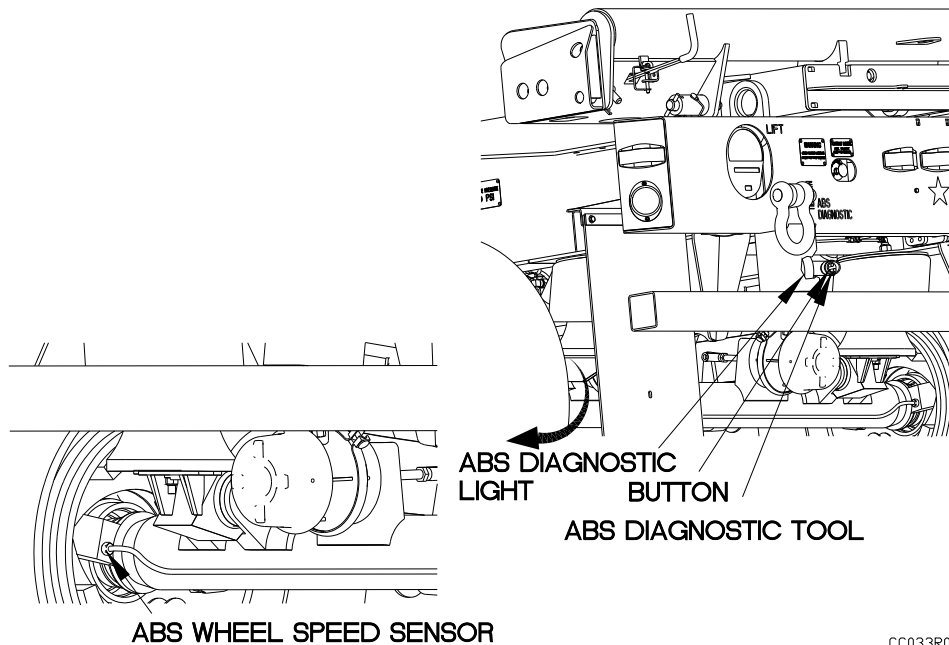
Table 1. Anti-Lock Brake System (ABS) Diagnostic Light Blinks Four Times.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after left rear ABS wheel speed sensor position is reset?	<p>No. Fault corrected.</p> <p>Yes. Go to (Indication/Condition 2).</p>	<p>1. Push left rear ABS wheel speed sensor in until it contacts tooth wheel.</p> <p>2. Start engine of towing vehicle.</p>

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.



CC033R01

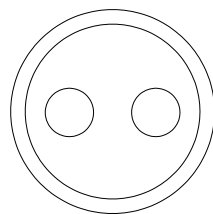
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued

0033 00

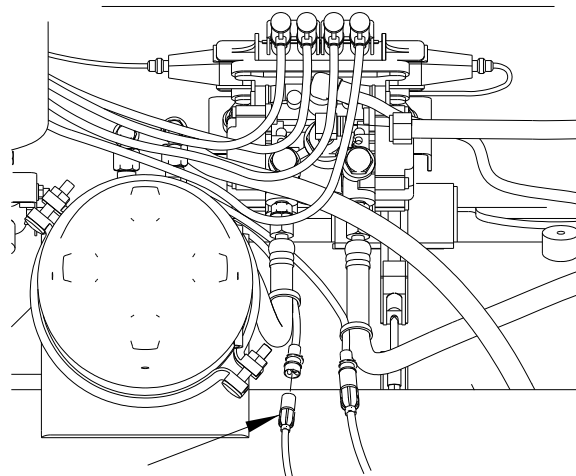
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 700-3000 ohms of resistance present across left rear ABS wheel speed sensor?	<p>No. Replace left rear ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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

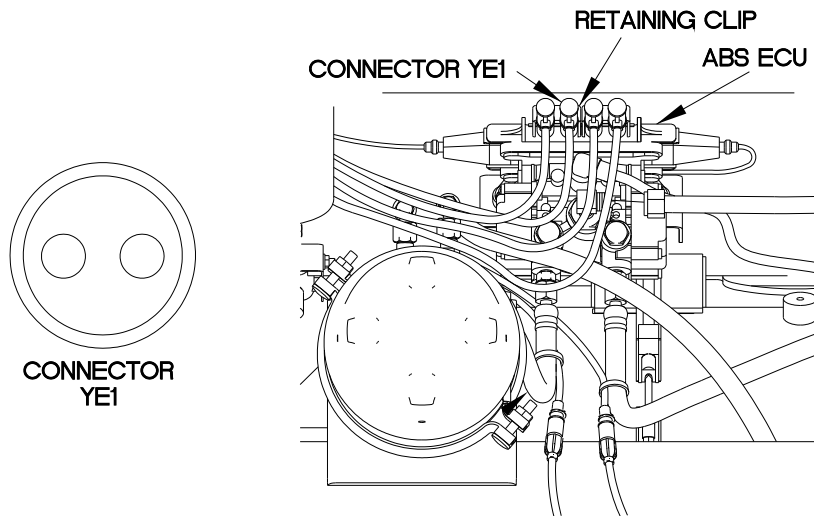
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued

0033 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across left rear ABS control sensor harness connector with jumper wire across connector YE1?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector YE1. 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.



CC033R03

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, 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

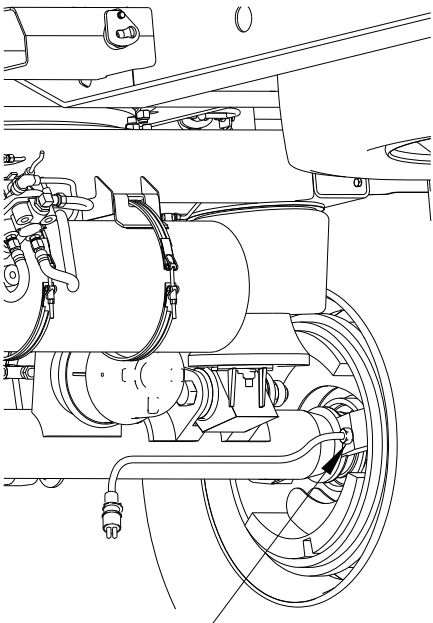
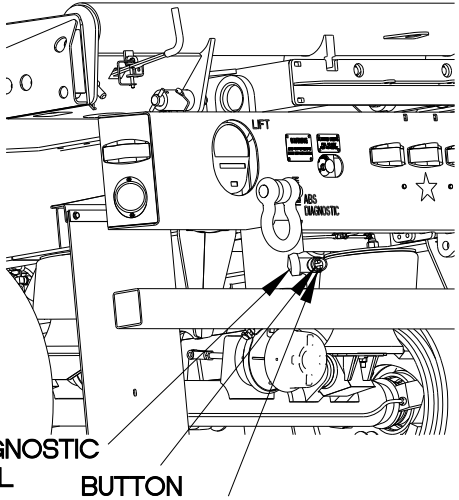
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

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?	<p>No. Fault corrected.</p> <p>Yes. Go to (Indication/Condition 2).</p>	1. Push right front ABS wheel speed sensor in until it contacts tooth wheel. 2. Start engine of towing vehicle.
<p>NOTE</p>		
<p>Trailer must be operated more than 4 mph (6 km/h) during road test.</p>		
		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.
 <p>ABS WHEEL SPEED SENSOR</p>		 <p>ABS DIAGNOSTIC TOOL BUTTON</p> <p>ABS DIAGNOSTIC TOOL</p>

CC034R01

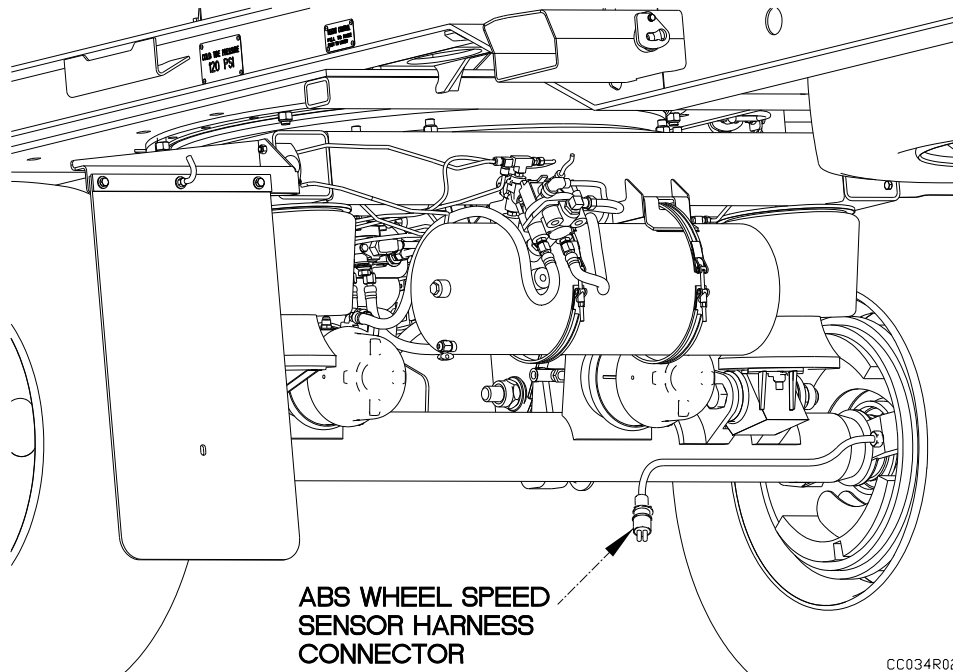
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued

0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 700-3000 ohms of resistance present across right front ABS wheel speed sensor?	<p>No. Replace right front ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



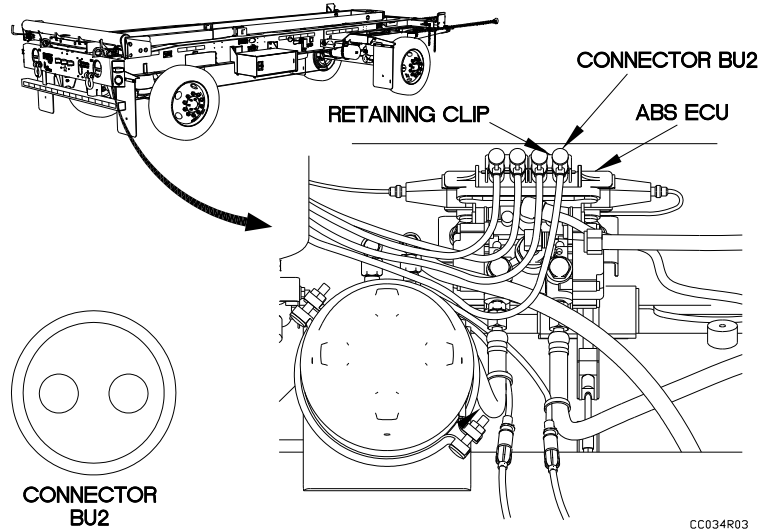
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued

0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across right front ABS control sensor harness connector with jumper wire across connector BU2?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector BU2. 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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, 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.

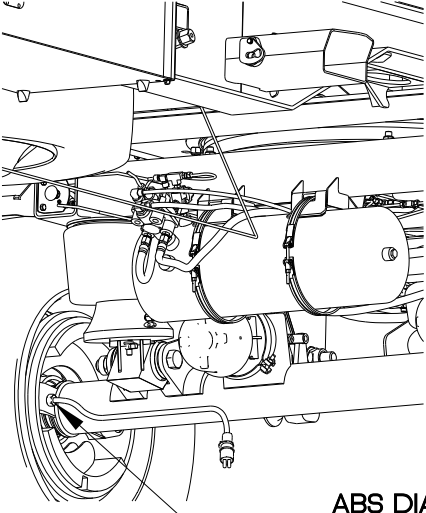
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued

0035 00

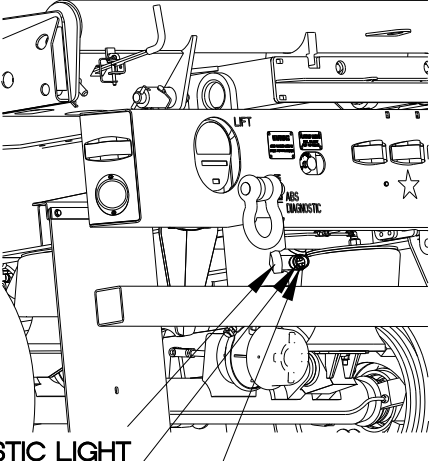
BRAKE SYSTEM TROUBLESHOOTING - Continued

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?	<p>No. Fault corrected.</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Push left front ABS wheel speed sensor in until it contacts tooth wheel. 2. Start engine of towing vehicle. <p style="text-align: center;">NOTE</p> <p style="text-align: center;">Trailer must be operated more than 4 mph (6 km/h) during road test.</p> <ol style="list-style-type: none"> 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.



ABS WHEEL SPEED SENSOR



ABS DIAGNOSTIC LIGHT BUTTON

ABS DIAGNOSTIC TOOL

CC035R01

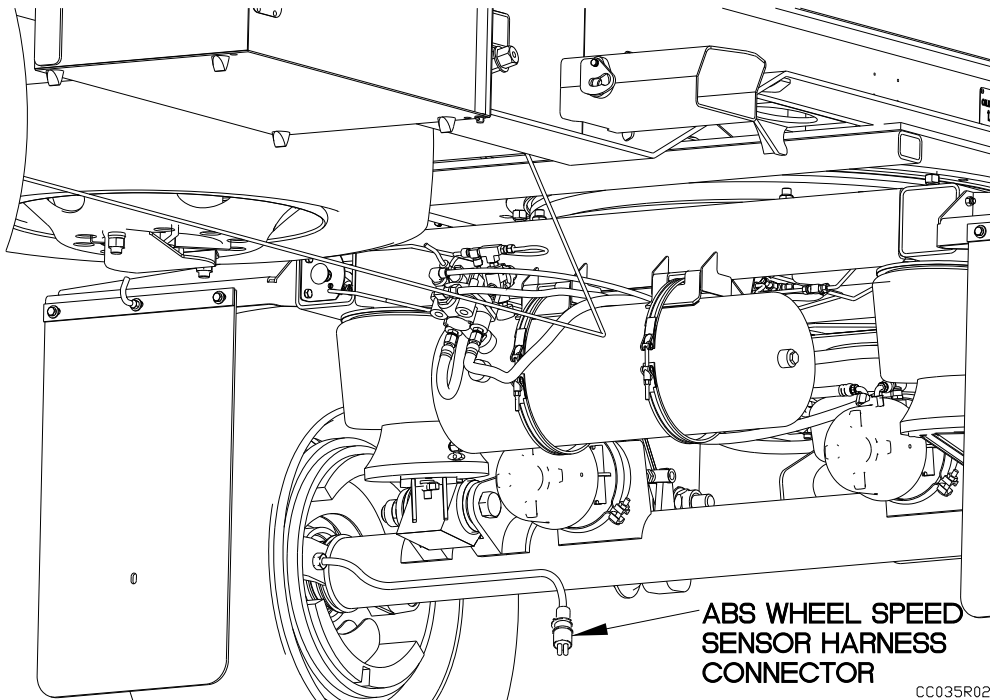
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued

0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Is 700-3000 ohms of resistance present across left front ABS wheel speed sensor?</p>	<p>No. Replace left front ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



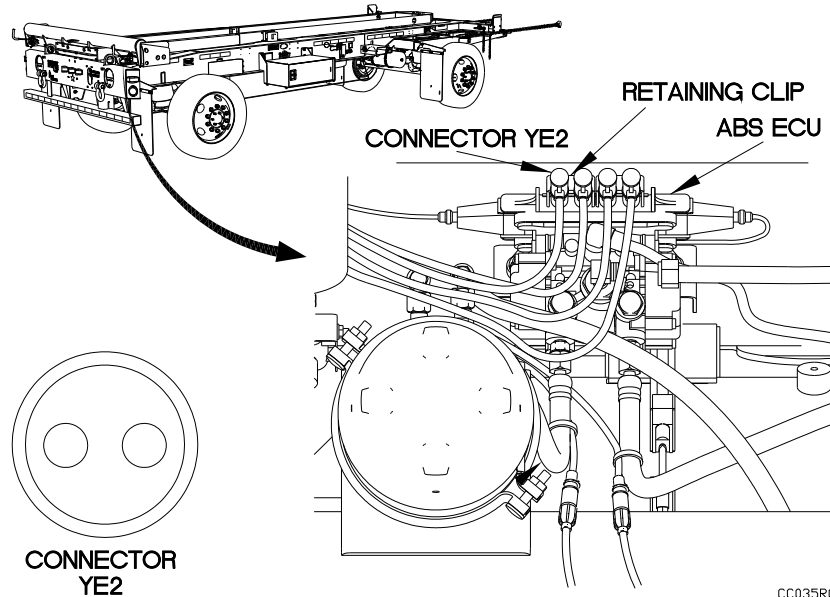
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued

0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across left front ABS control sensor harness connector with jumper wire across connector YE2?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector YE2. 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.



CC035R03

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Wire, Elect, 50 ft (Item 21, 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.

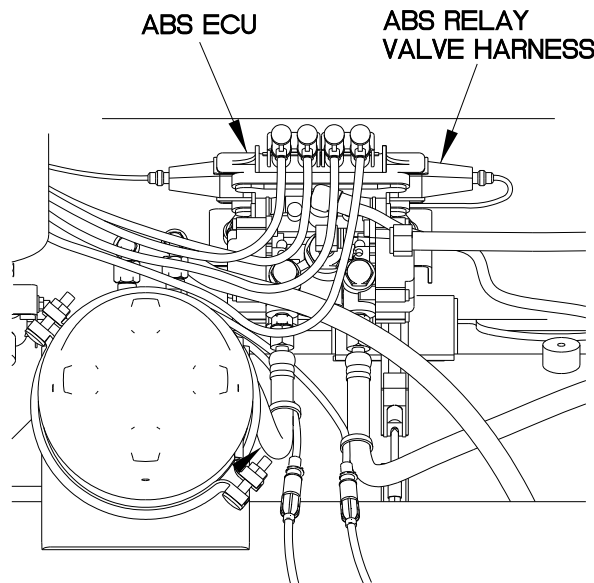
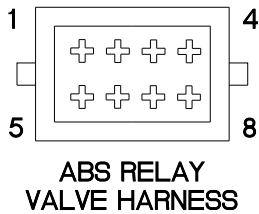
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued

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?	<p>No. Replace ABS relay valve (WP 0075 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



CC036R01

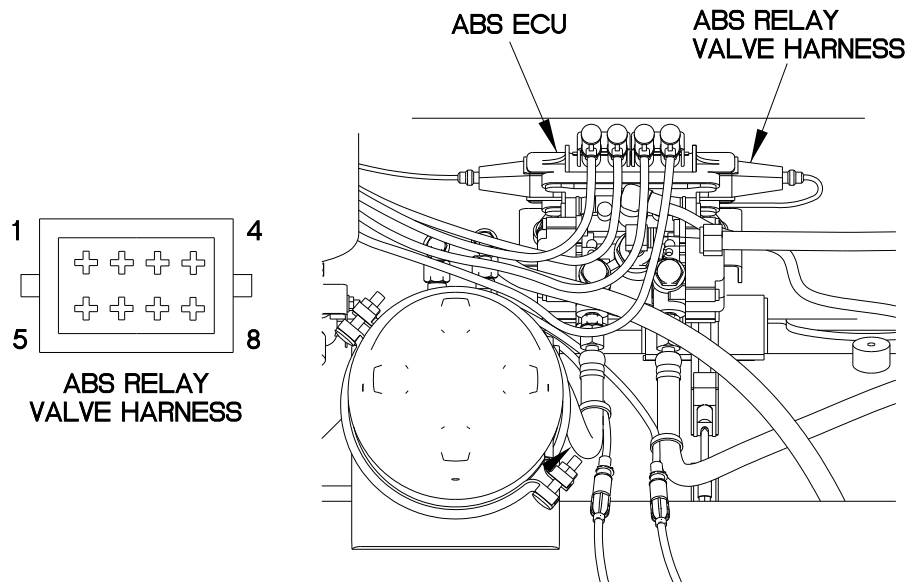
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS SEVEN TIMES-Continued**

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS relay valve (WP 0075 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 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.



CC036R02

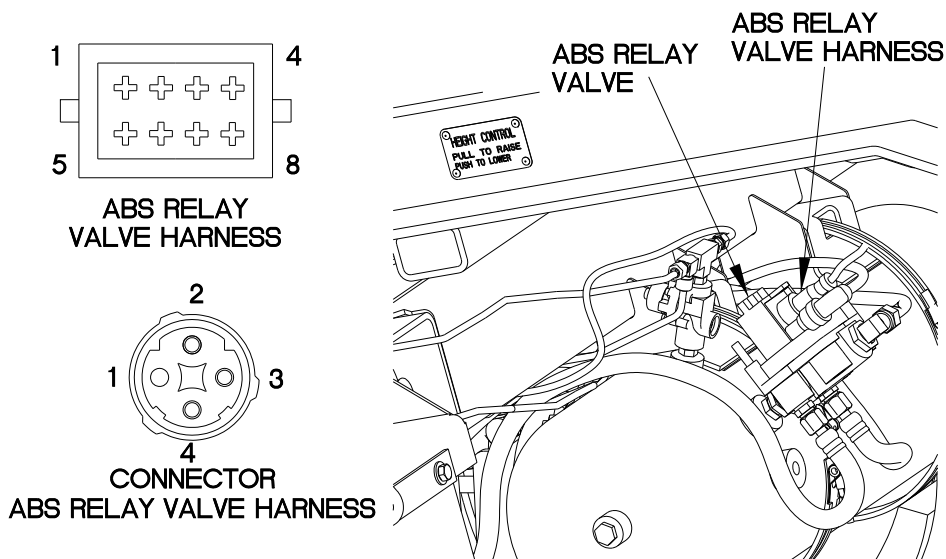
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present from ABS ECU cable connector pin 5 to ABS relay valve connector pin 2?</p>	<p>No. Replace ABS relay valve harness (WP 0072 00).</p> <p>Yes. Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Disconnect ABS relay harness connector from ABS relay valve. 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

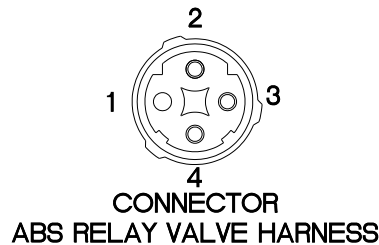
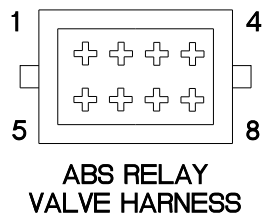
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Replace ABS relay valve harness (WP 0072 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS relay valve harness connector pin 4. 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?	<p>No. Replace ABS relay valve harness (WP 0072 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS relay valve harness connector pin 3. 2. Connect negative (-) probe of multimeter to ABS ECU connector pin 7 and note reading on multimeter.



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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

■ Ties, Cable, Plastic (Item 19, 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.

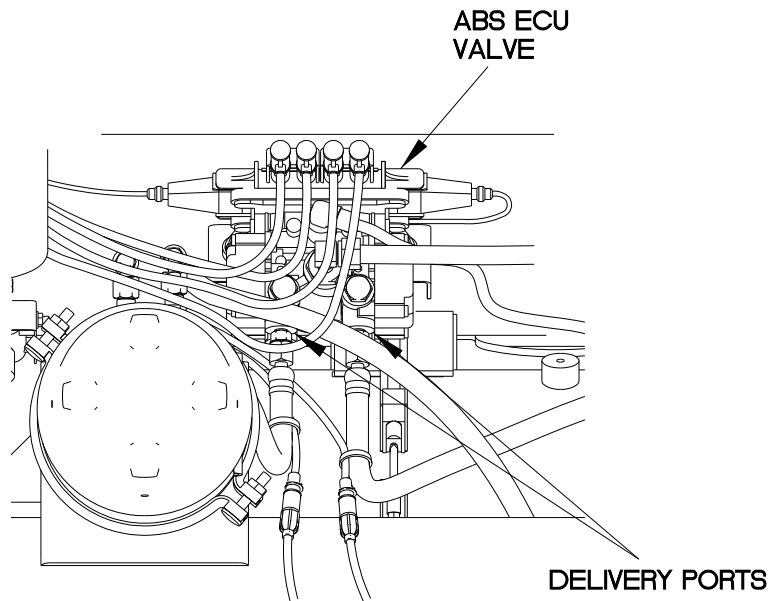
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS NINE TIMES-Continued

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?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 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.



CC037R01

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

0037 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

Table 1. Anti-Lock Brake S (ABS) Diagnostic Light Blinks Nine Times - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does either delivery air hose have any kinks, leaks, or holes?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Replace air hoses from ABS ECU valve delivery ports.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hoses and fittings. 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.

The diagram shows a top-down view of the ABS ECU valve assembly. It features a central valve body with four delivery ports extending downwards. Two air hoses are connected to these ports. Labels with arrows point to the 'ABS ECU VALVE' at the top, the 'AIR HOSES' on the left, and the 'DELIVERY PORTS' on the right.

CC037R02

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

█ Ties, Cable, Plastic (Item 19, 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.

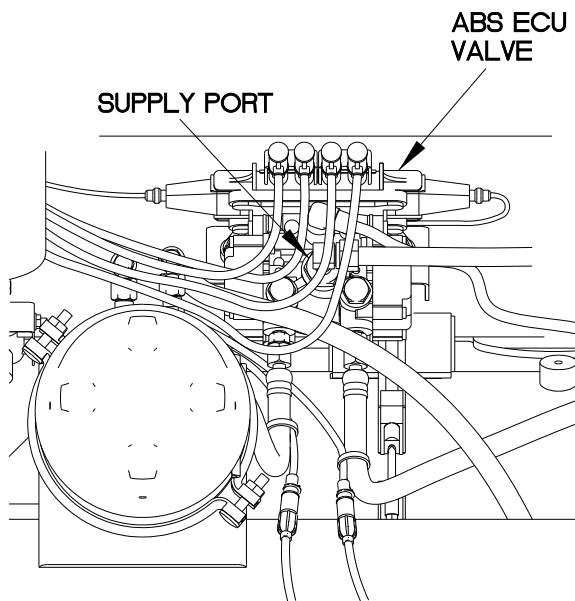
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES

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?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 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.



CC038R01

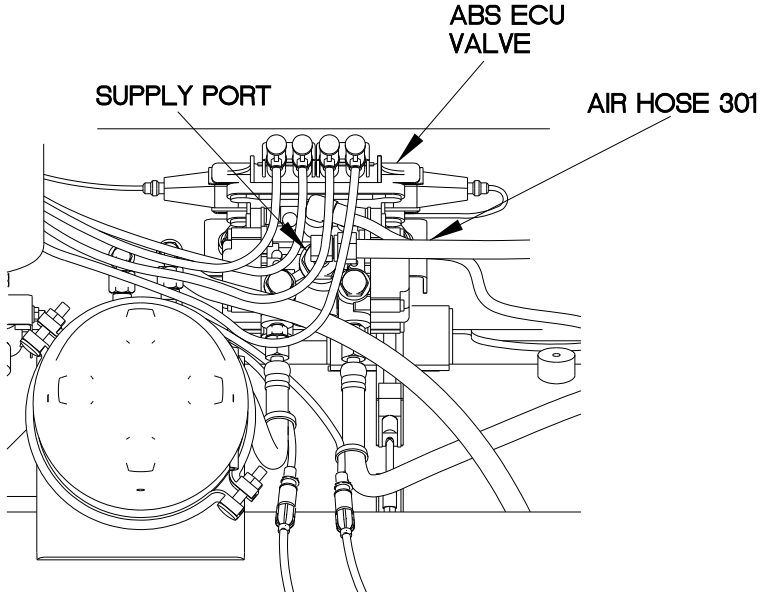
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES

0038 00

THIS WORK PACKAGE COVERS:
 Brake System Troubleshooting

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does supply air hose 301 have any kinks, leaks, or holes?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Replace air hose 301.</p>	<ol style="list-style-type: none"> 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.



The diagram shows a top-down view of the ABS ECU valve assembly. It features a central 'SUPPLY PORT' with several hoses connected to it. To the right, the 'ABS ECU VALVE' is labeled, and a specific hose, 'AIR HOSE 301', is also labeled and shown extending from the valve area. The assembly is mounted on a base, and various electrical and hydraulic connections are visible.

CC038R02

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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.

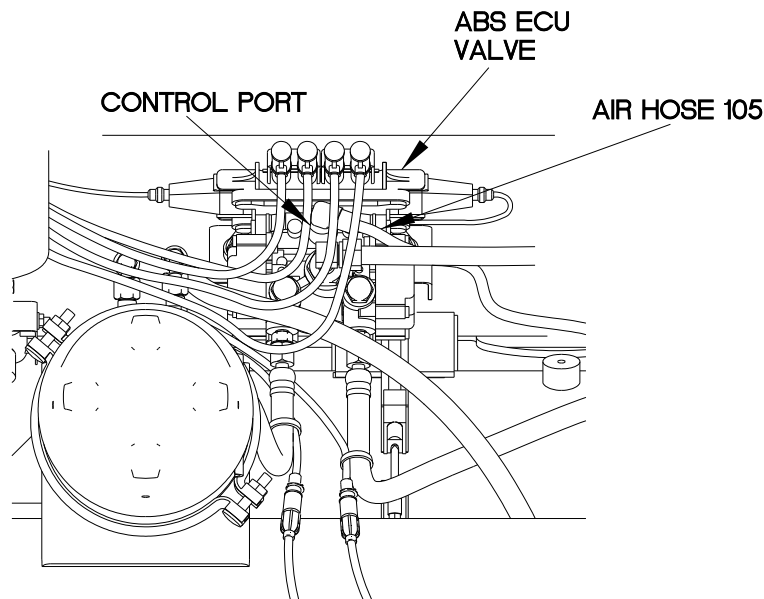
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS ELEVEN TIMES

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?	<p>No. Go to (Indication/Condition 2).</p> <p>Yes. Replace ABS ECU valve (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Start towing vehicle engine. 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.



CC039R01

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

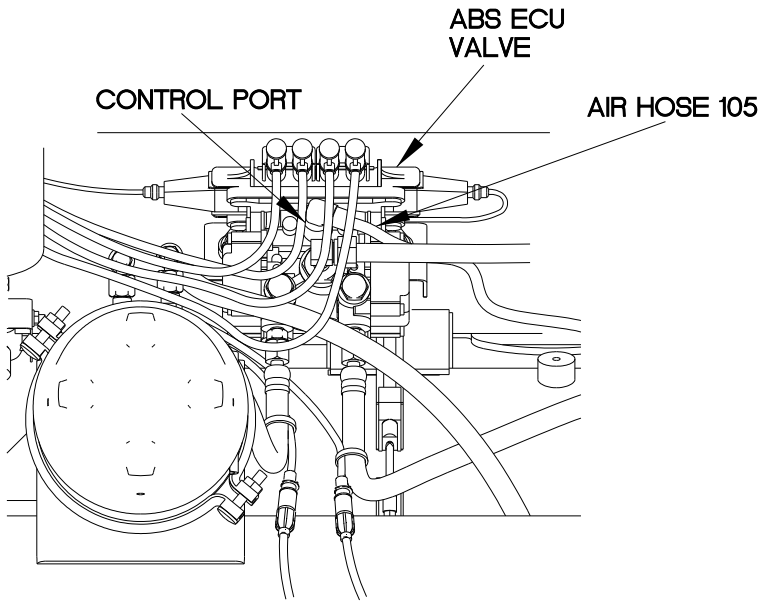
0039 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does air hose 105 have any kinks, leaks or holes?	<p>No. Go to Air System Loses Pressure During Operation/Slow Air Pressure Buildup (WP 0042 00).</p> <p>Yes. Replace air hose 105.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 105 and fittings of control port. 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.



The diagram shows a top-down view of the ABS ECU valve assembly. It features a central valve body with several ports. A 'CONTROL PORT' is indicated on the left side. The 'ABS ECU VALVE' label points to the main valve body. 'AIR HOSE 105' is shown connected to the right side of the valve assembly. Various hoses and electrical wires are connected to the assembly.

CC039R01

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, 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.

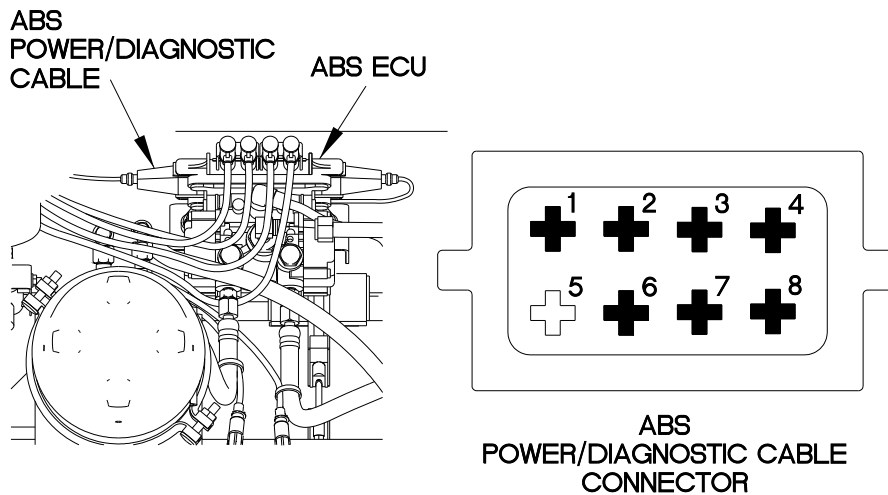
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

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 cable connector pin 3?	<p>No. Go to (Indication/Condition 3).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 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.



CC040B01

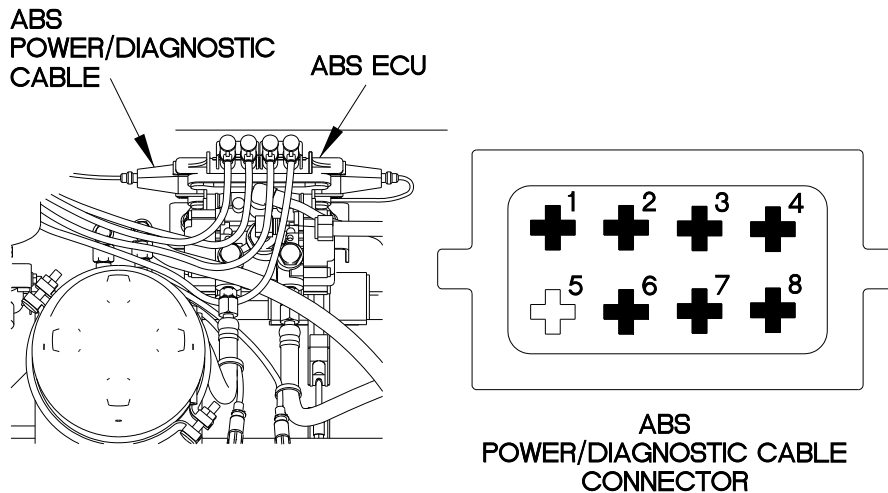
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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?	<p>No. Go to (Indication/Condition 7).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



CC040B01

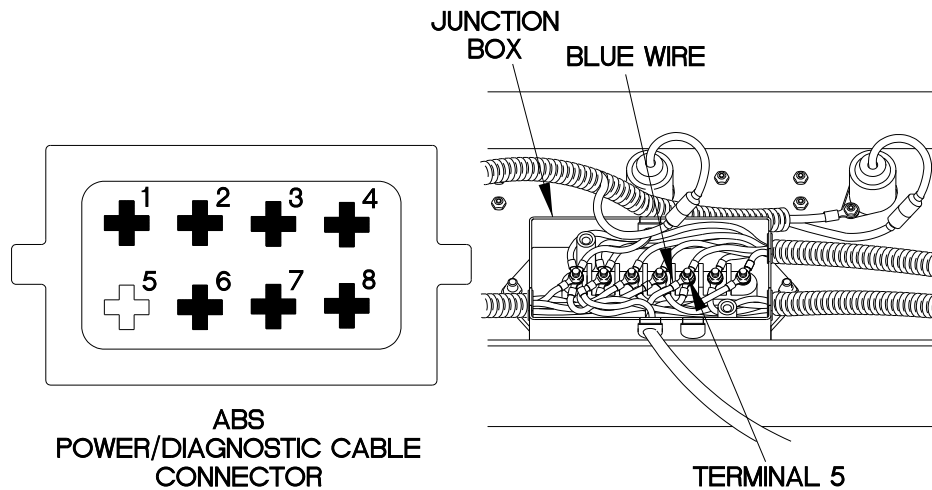
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present from ABS Power/Diagnostic cable connector pin 3 to blue wire on terminal 5 of Junction box?</p>	<p>No. Replace ABS ECU Power/Diagnostic control harness (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 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.



CC040B02

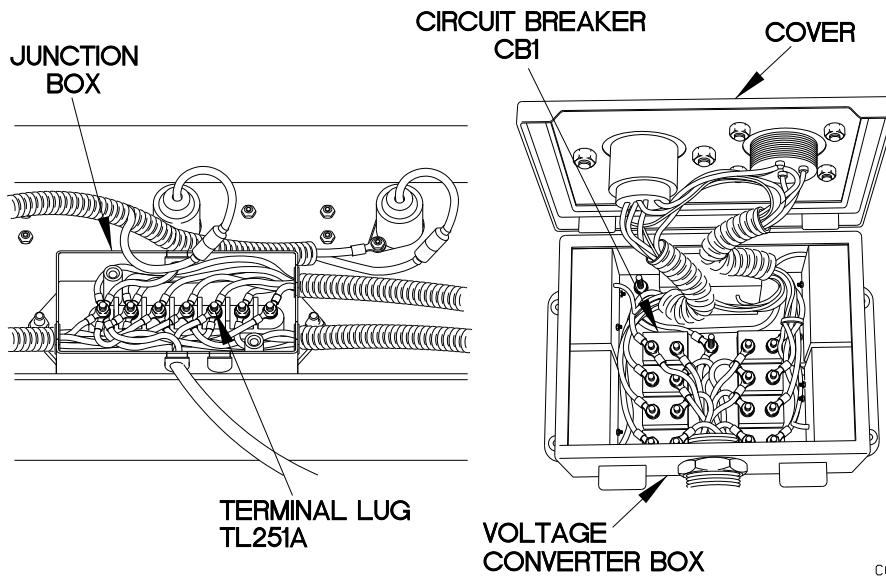
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present from terminal lug TL251A to right side of circuit breaker CB1?	<p>No. Repair wire 108 or replace main electrical harness (WP 0066 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Open cover on voltage converter box (WP 0058 00). 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.



CC040B03

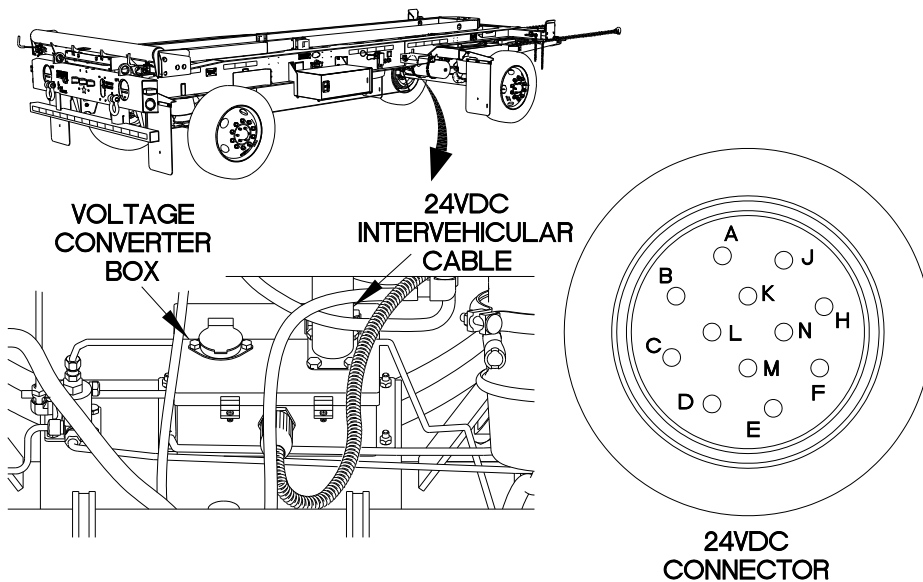
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is 18-30 VDC present at 24 VDC Intervehicular cable connector pin K?	<p>No. Replace 24 VDC Intervehicular Cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 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.



CC040B04

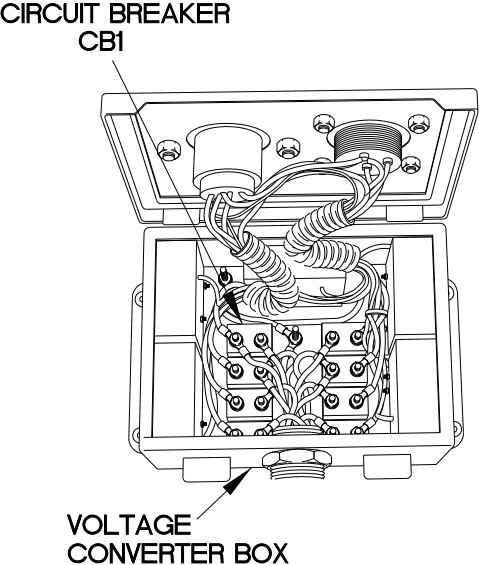
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Is continuity present across circuit breaker CB1?</p>	<p>No. Replace circuit breaker CB1 (WP 0057 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 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.



The diagram shows a top-down view of the ABS diagnostic light assembly. It consists of a rectangular housing with a lid. Inside, there are several electrical terminals and components. A label 'CIRCUIT BREAKER CB1' points to a component located near the top of the housing. Another label 'VOLTAGE CONVERTER BOX' points to a component located near the bottom of the housing. The diagram illustrates the internal wiring and the placement of these components within the assembly.

CC040B05

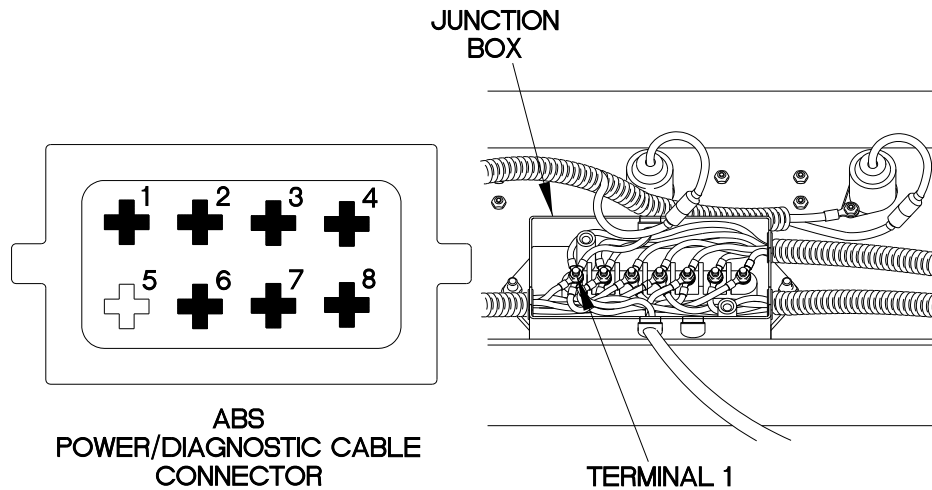
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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



CC040B06

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 - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is continuity present from terminal lug TL261A to terminal lug TL261?	<p>No. Replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 1. Open cover on 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.

JUNCTION BOX

TERMINAL LUG TL261

TERMINAL LUG TL261A

COVER

VOLTAGE CONVERTER BOX

CC040B07

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 24, 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.

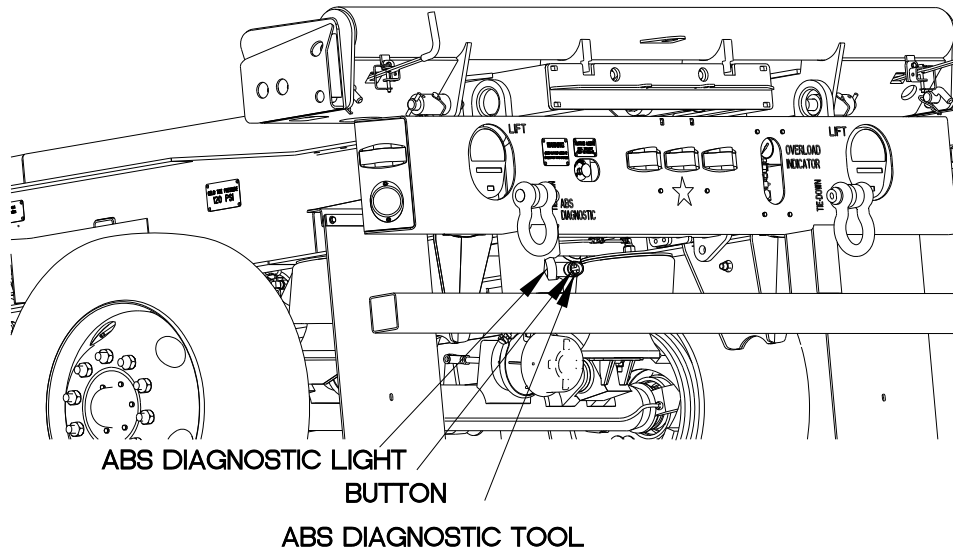
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIFTEEN TIMES-Continued

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?	<p>No. Fault corrected.</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	1. Start engine of towing vehicle. 2. Road test trailer.
<p>NOTE</p>		
<p>Trailer must be operated more than 4 mph (6 km/h) during road test.</p>		
		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.



CC041R01

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 24, WP 0167 00)

References

Towing vehicle operators manual

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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.

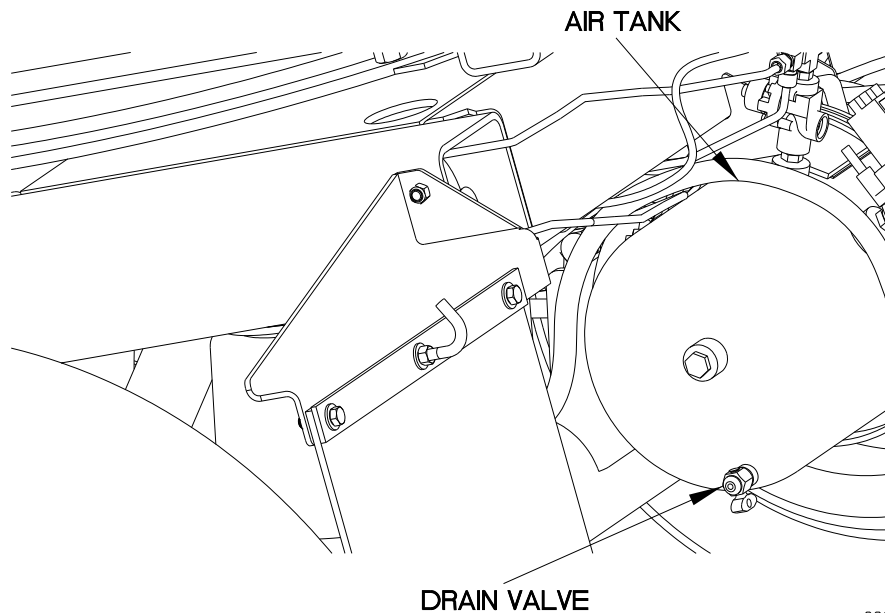
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

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?	<p>No Go to (Indication/Condition 2).</p> <p>Yes Replace air tank drain valve (WP 0078 00).</p>	<p>1. Ensure air tank drain valve is closed.</p> <p>2. Feel for air escaping from air tank drain valve.</p>



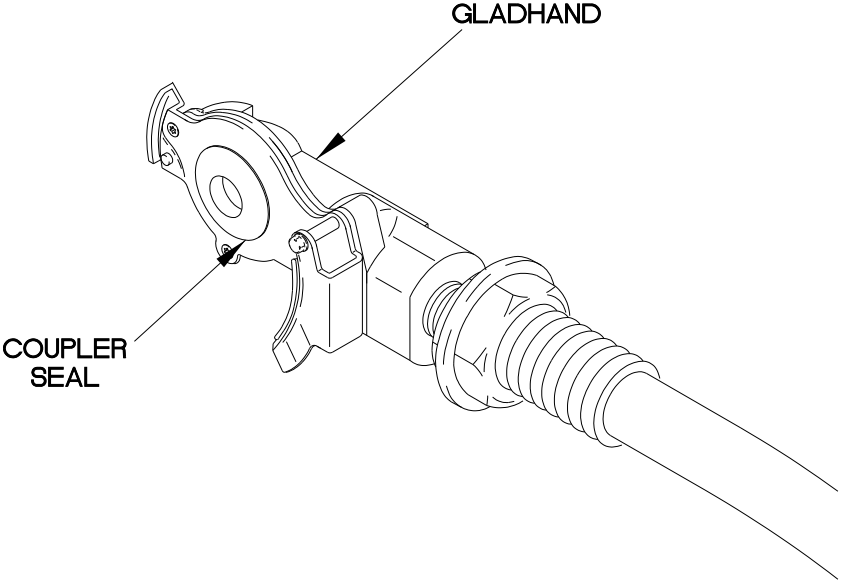
CC042R01

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 - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Are coupler seals on gladhands damaged or missing?</p>	<p>No Go to (Indication/Condition 3).</p> <p>Yes Replace gladhand coupler seal (WP 0079 00).</p>	<p>1. Check for missing or damaged coupler seal on both service and emergency gladhands.</p>
 <p>The diagram shows a side view of a gladhand coupler. A label 'GLADHAND' points to the main body of the coupler. Another label 'COUPLER SEAL' points to a small circular seal located at the junction where the coupler meets the hose. The hose has a threaded end and a smooth end.</p>		
<p>3. Do trailer service brakes operate properly?</p>	<p>No Proceed to Service Brakes Do Not Apply (WP 0043 00).</p> <p>Yes Go to (Indication/Condition 4).</p>	<p>1. Start towing vehicle engine.</p> <p>2. Depress brake pedal.</p> <p>3. Check to see if trailer brakes operate.</p> <p>4. Shut off towing vehicle engine.</p>

CC042R02

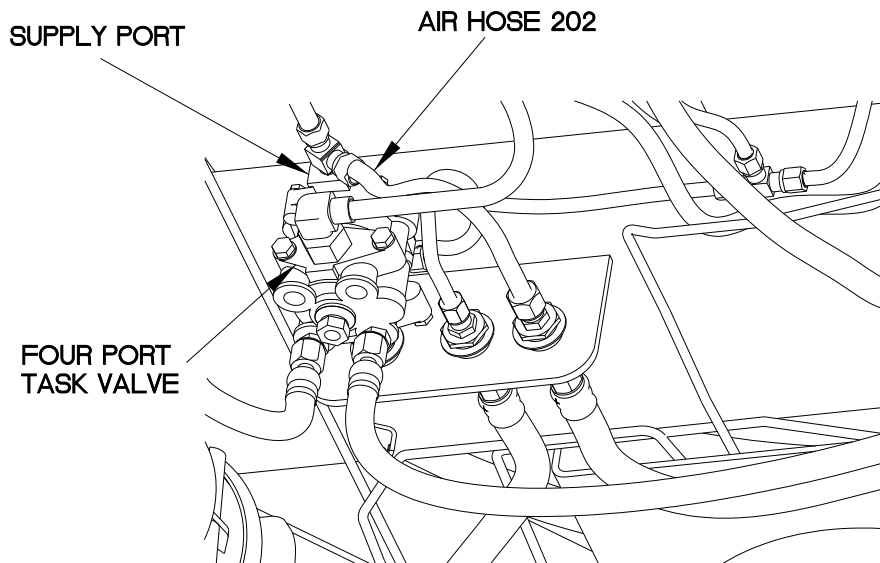
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at supply port of front four port task valve?	<p>No Replace air hose 202.</p> <p>Yes Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at front 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 four port task valve supply port.



CC042R03

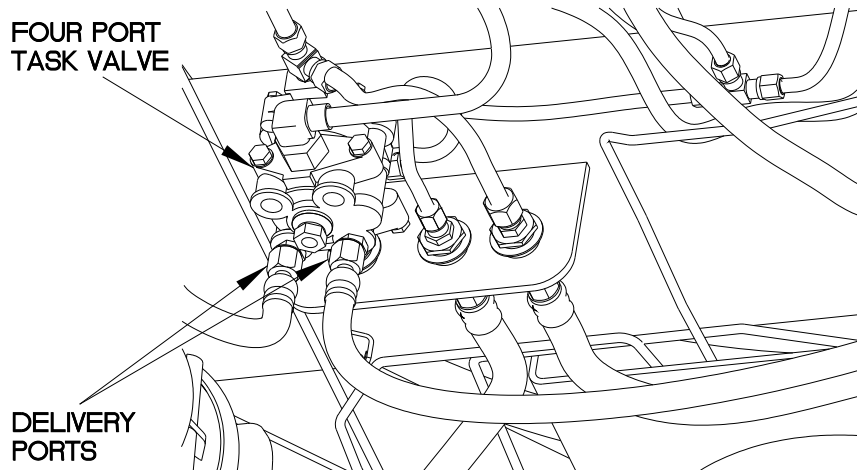
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at delivery ports of front four port task valve?	<p>No Replace front four port task valve (WP 0109 00).</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 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.



CC042R04

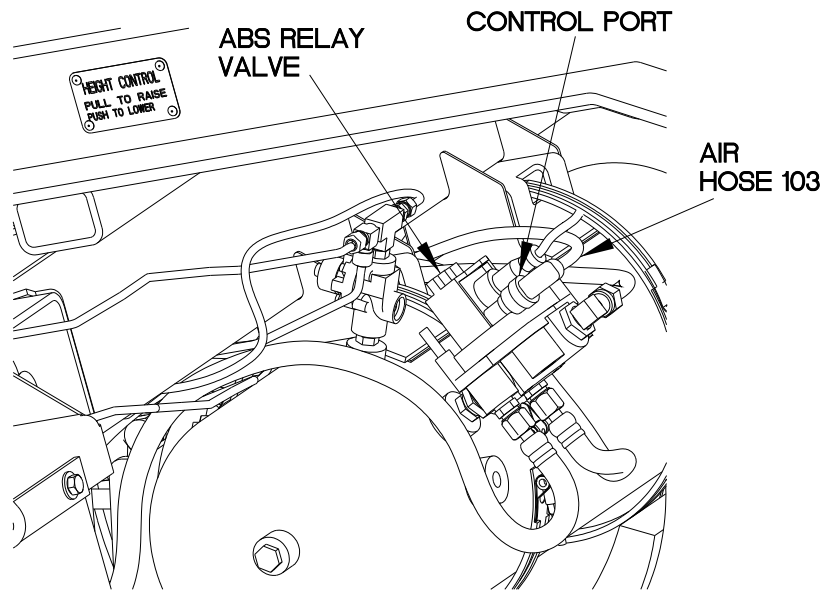
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at control port of ABS relay valve?	<p>No Replace air hose 103.</p> <p>Yes Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 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.



CC042R05

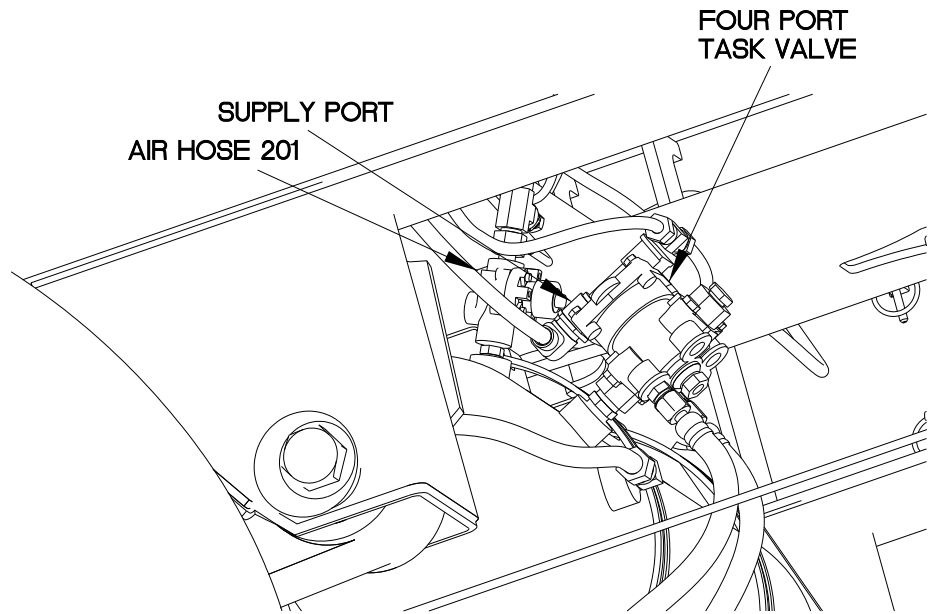
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at supply port of rear four port task valve?	<p>No Replace air hose 201.</p> <p>Yes Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 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.



CC042R06

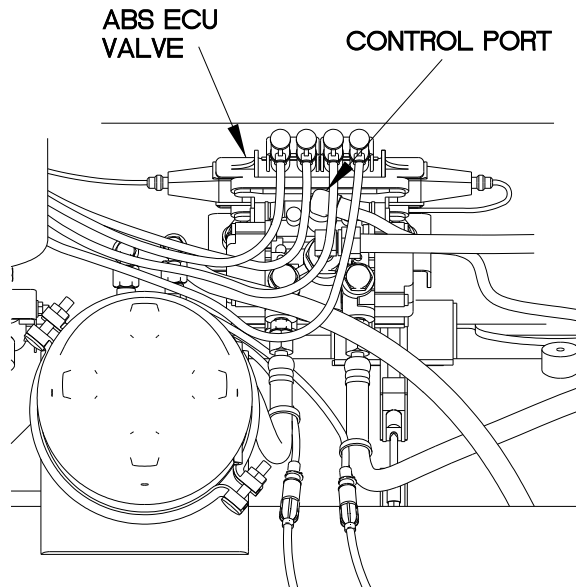
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at control port of ABS ECU?	<p>No Go to (Indication/Condition 9).</p> <p>Yes Go to (Indication/Condition 10).</p>	<ol style="list-style-type: none"> 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

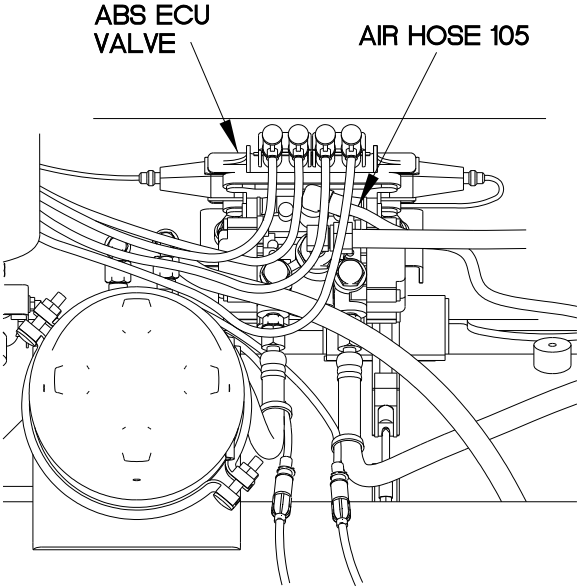
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 105 have any kinks, leaks or holes?	<p>No Replace rear four port task valve (WP 0109 00).</p> <p>Yes Replace air hose 105.</p>	<ol style="list-style-type: none"> 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.



The diagram shows a technical drawing of the ABS ECU valve assembly. It features a circular ABS ECU valve on the left with four ports. To its right is the rear four-port task valve. Air hose 105 is shown connecting these two valves. Labels with arrows point to the 'ABS ECU VALVE' and 'AIR HOSE 105'.

CC042R08

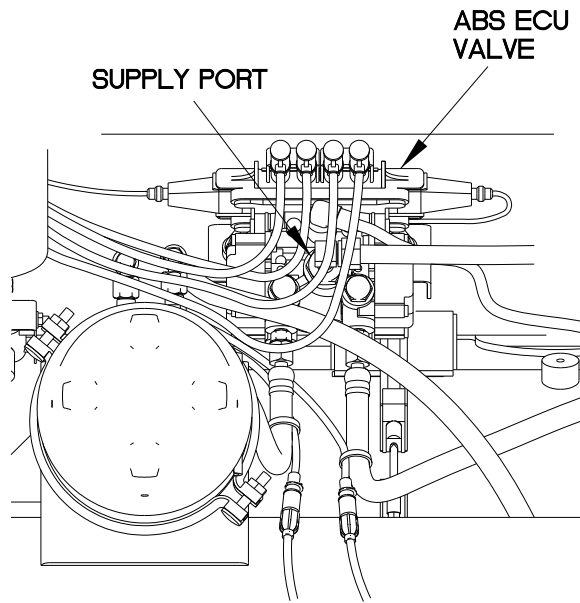
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at supply port of ABS ECU valve?	<p>No Go to (Indication/Condition 11).</p> <p>Yes Replace air tank (WP 0078 00).</p>	<ol style="list-style-type: none"> 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

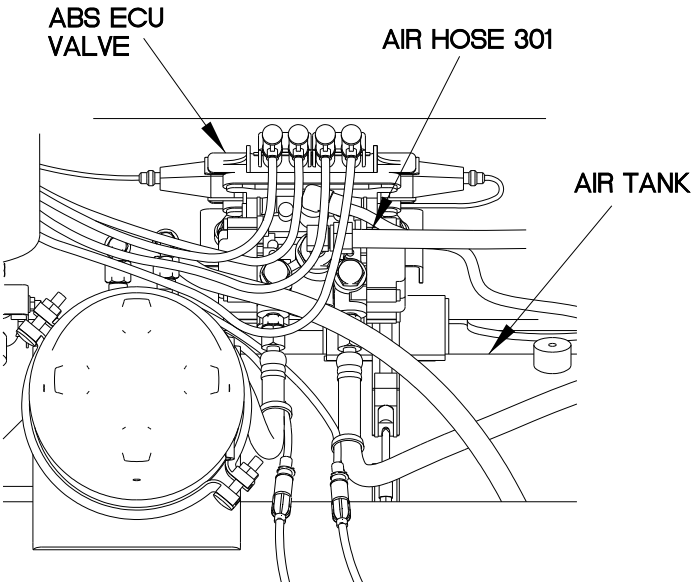
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

Table 1. Air System Loses Pressure During Operation/Slow Air Pressure Buildup - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Does air hose 301 have any kinks, leaks or holes?	<p>No Replace ABS ECU valve (WP 0071 00).</p> <p>Yes Replace air hose 301.</p>	<ol style="list-style-type: none"> 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.



The diagram is a technical line drawing of an air system. It shows a large circular air tank on the left side. From the tank, several hoses and lines extend to the right. At the top center, there is a component labeled 'ABS ECU VALVE' with four small circular ports. A hose labeled 'AIR HOSE 301' is shown connecting the air tank area to the ABS ECU valve. Other hoses and fittings are visible, including a smaller cylindrical component on the right side labeled 'AIR TANK'.

CC042R10

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 24, WP 0167 00)

References

Towing vehicle operators manual

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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.**

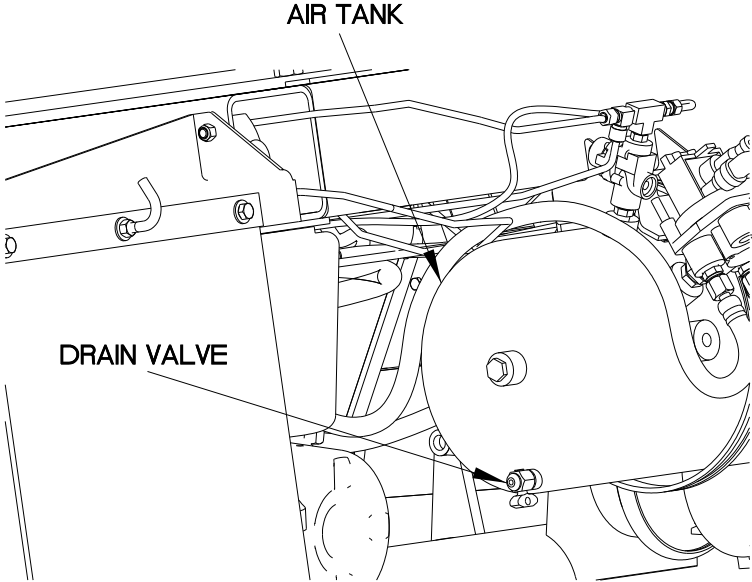
NOTE

- 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.

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?	<p>No Go to (Indication/Condition 2).</p> <p>Yes Replace air tank drain valve (WP 0078 00).</p>	1. Ensure air tank drain valve is closed. 2. Feel for air escaping from air tank drain valve.



AIR TANK

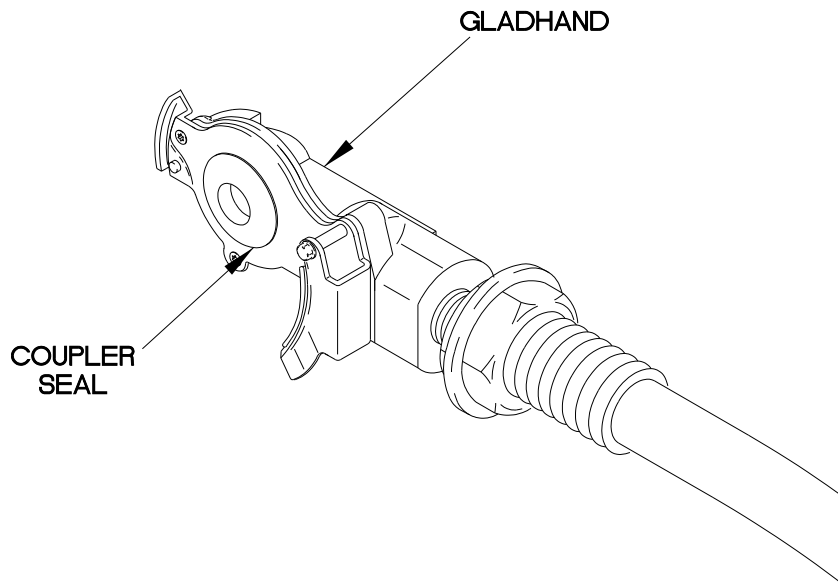
DRAIN VALVE

CC043R01

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

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

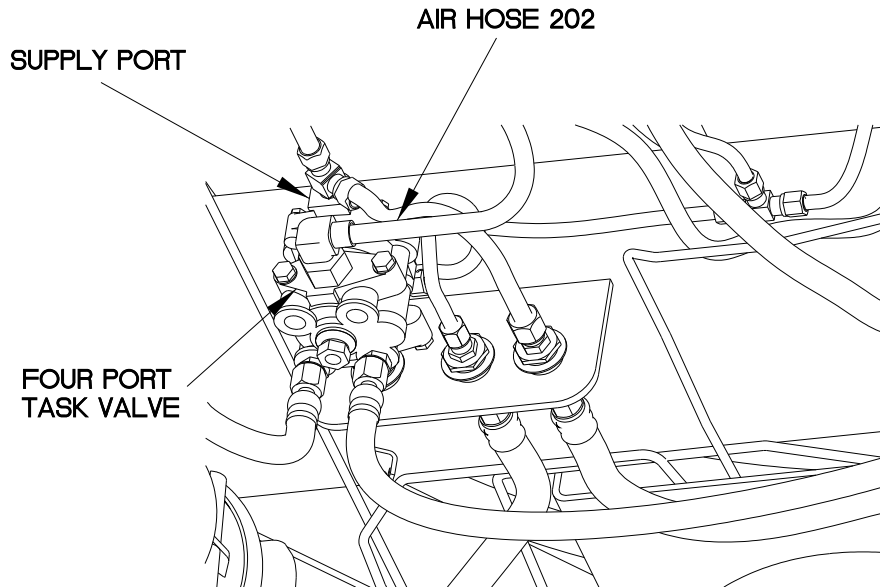


CC043R02

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is air present at supply port of front four port task valve?	<p>No Replace air hose 202.</p> <p>Yes Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 202 from supply port on four port task valve. 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 202 to four port task valve supply port.



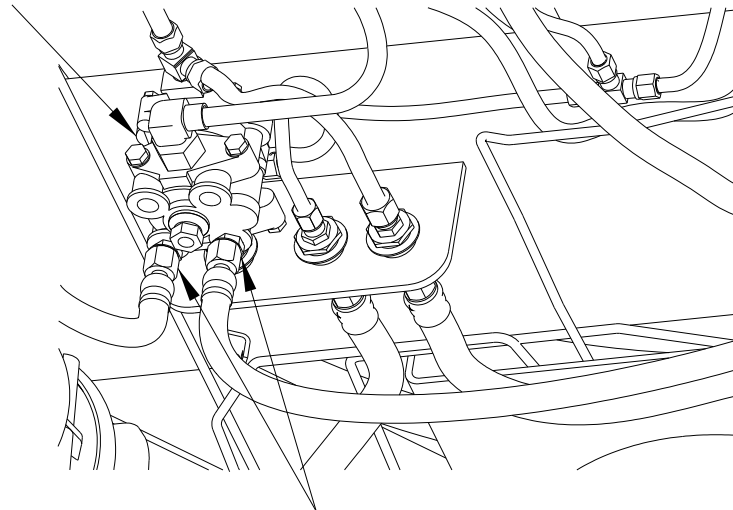
CC043R03

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at delivery ports of front four port task valve?	<p>No Replace front four port task valve (WP 0109 00).</p> <p>Yes Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at front four port task 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 four port task valve delivery ports.

FOUR PORT TASK VALVE



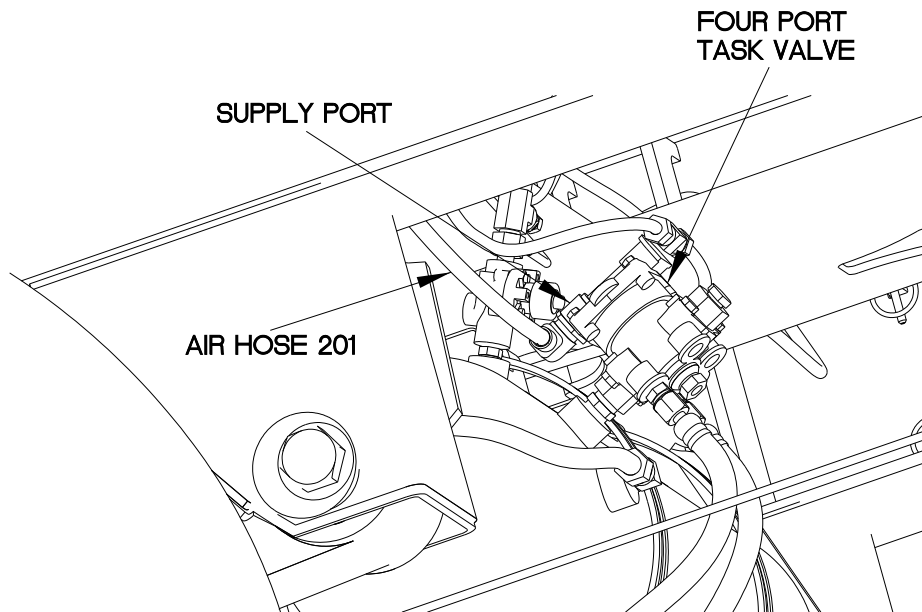
DELIVERY PORTS

CC043R04

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at supply port of rear four port task valve?	<p>No Replace air hose 201.</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 201 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 hose 201 to rear four port task valve supply port.

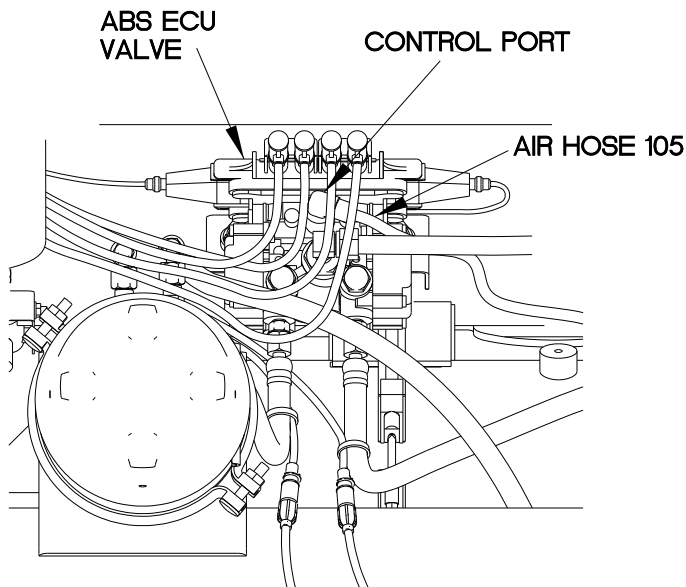


CC043R05

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at control port of ABS ECU?	<p>No Go to (Indication/Condition 7).</p> <p>Yes Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 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.

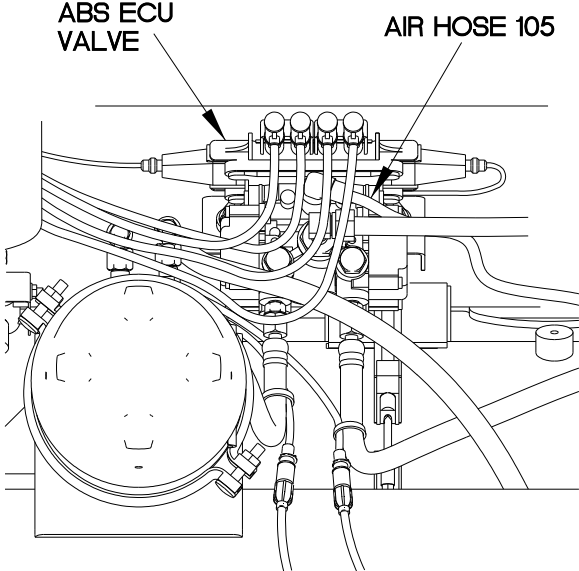


CC043R06

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Does air hose 105 have any kinks, leaks, or holes?	<p>No Replace rear four port task valve (WP 0109 00).</p> <p>Yes Replace air hose 105.</p>	<ol style="list-style-type: none"> 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.



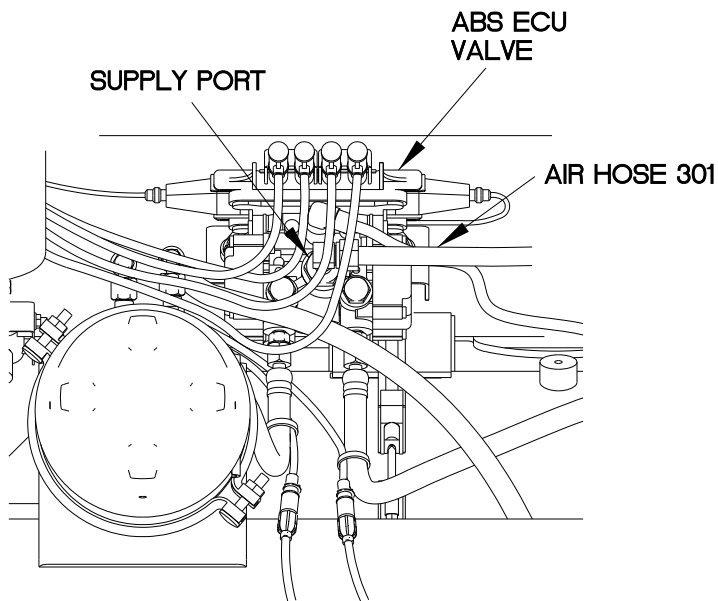
The diagram shows a technical drawing of the ABS ECU valve assembly. It features a circular valve body with several ports. A hose labeled 'AIR HOSE 105' is connected to one of the ports. Another hose is connected to the 'ABS ECU VALVE' port. The diagram is used to illustrate the location of the air hose 105 for inspection during troubleshooting.

CC043R07

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at supply port of ABS ECU?	<p>No Go to (Indication/Condition 9).</p> <p>Yes Go to (Indication/Condition 10).</p>	<ol style="list-style-type: none"> 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.



CC043R08

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 301 have any kinks, leaks or holes?	<p>No Replace rear four port task valve (WP 0109 00).</p> <p>Yes Replace air hose 301.</p>	<ol style="list-style-type: none"> 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.

ABS ECU
VALVE

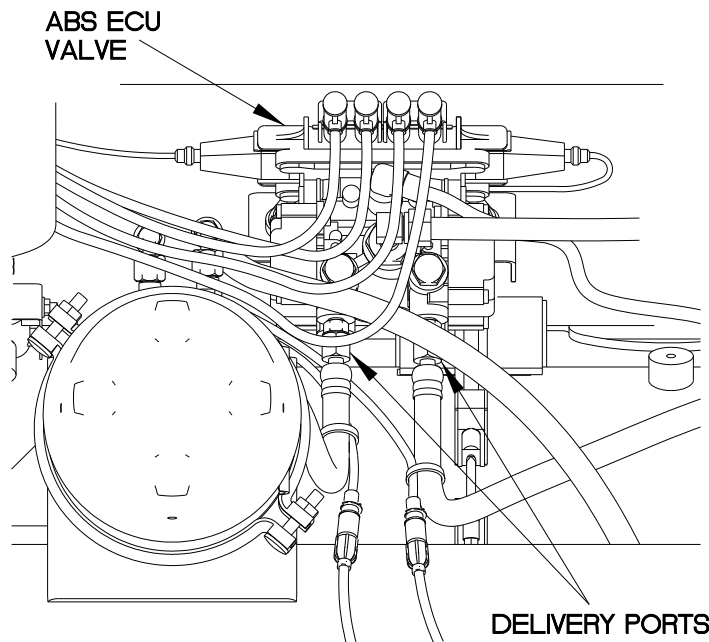
AIR HOSE 301

CC043R09

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at two delivery ports of ABS ECU valve?	<p>No Replace ABS ECU valve (WP 0071 00).</p> <p>Yes Go to (Indication/Condition 11).</p>	<ol style="list-style-type: none"> 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.

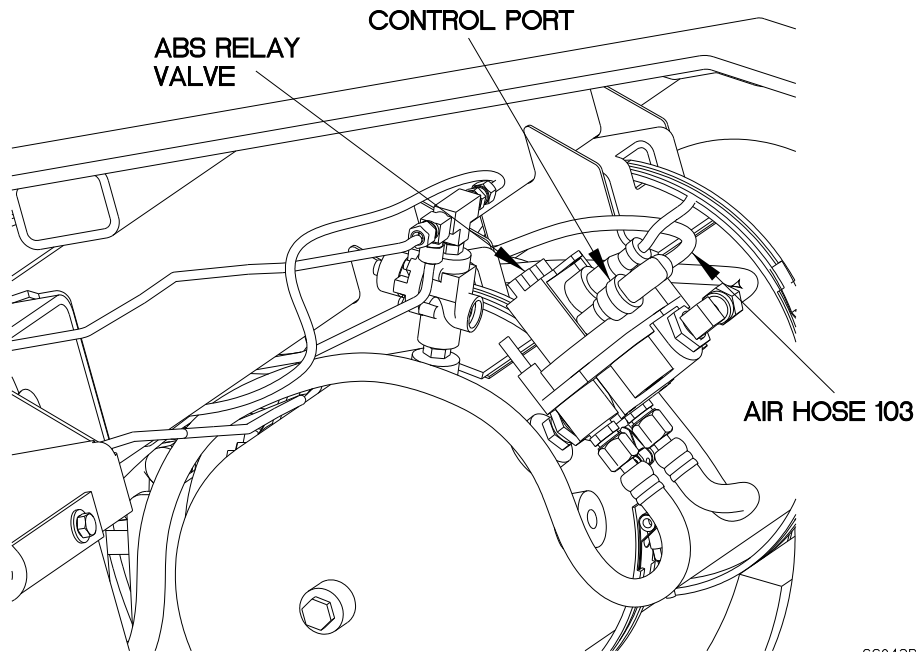


CC043R10

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Is air present at control port of ABS relay valve?	<p>No Replace air hose 103.</p> <p>Yes Go to (Indication/Condition 12).</p>	<ol style="list-style-type: none"> 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.

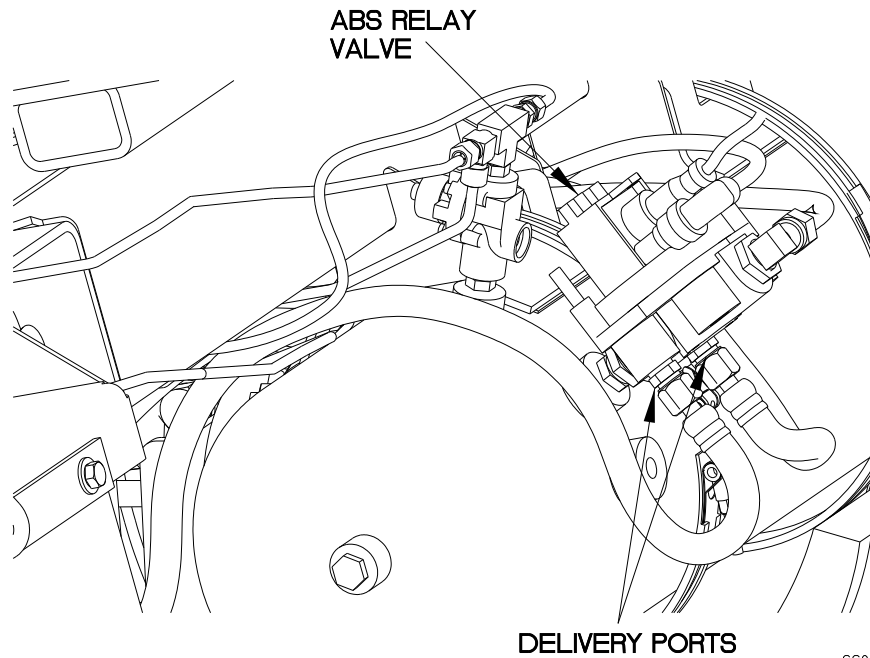


CC043R11

BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

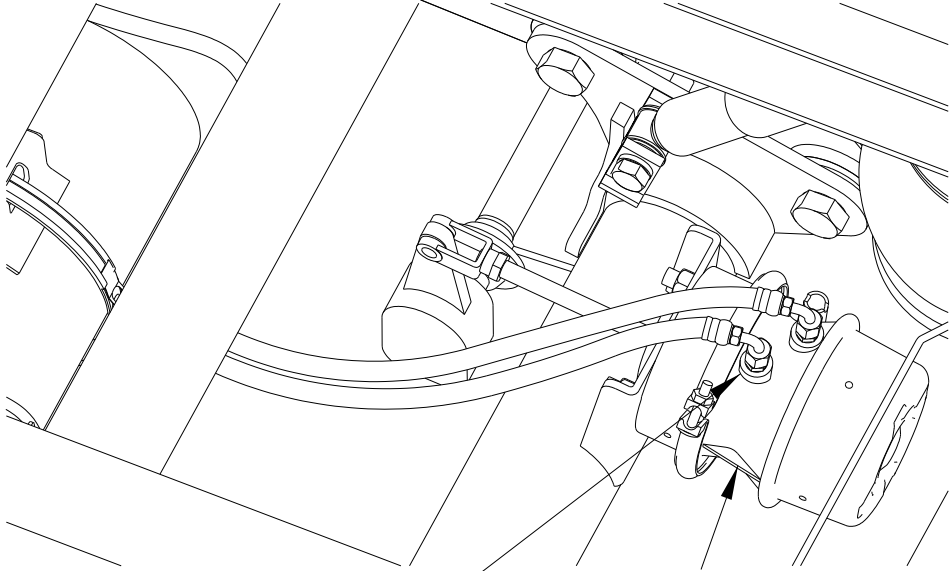
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
12. Is air present at two delivery port of ABS relay valve?	<p>No Replace ABS relay valve (WP 0075 00).</p> <p>Yes Go to (Indication/Condition 13).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at ABS relay valve delivery ports. 2. 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.



BRAKES TROUBLESHOOTING - Continued

Table 1. Service Brakes Do Not Apply - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
13. Is air present at service port of brake air chambers?	<p>No Replace service brake air supply hoses.</p> <p>Yes Replace brake air chambers (WP 0081 00).</p>	<ol style="list-style-type: none"> 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.



CC043R13

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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP
0167 00)

References

Towing vehicle operators manual

Materials/Parts

Ties, Cable, Plastic (Item 19, 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.

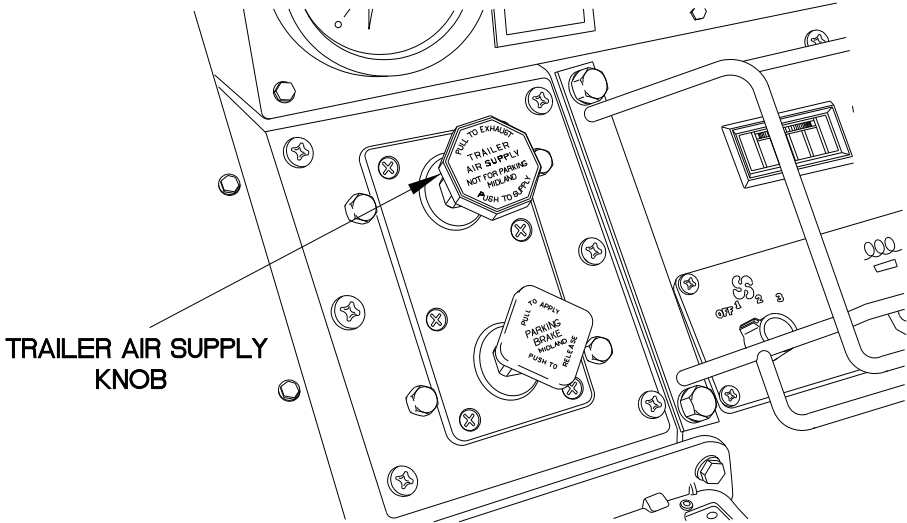
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

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
<p>1. Is the TRAILER AIR SUPPLY knob on the towing vehicle pulled out?</p>	<p>No Go to (Indication/Condition 2).</p> <p>Yes Push TRAILER AIR SUPPLY knob of towing vehicle to supply air (TM 9-2320-392-10-1).</p>	<p>1. Check TRAILER AIR SUPPLY knob in cab to see if it is engaged.</p>



TRAILER AIR SUPPLY KNOB

CC044B01

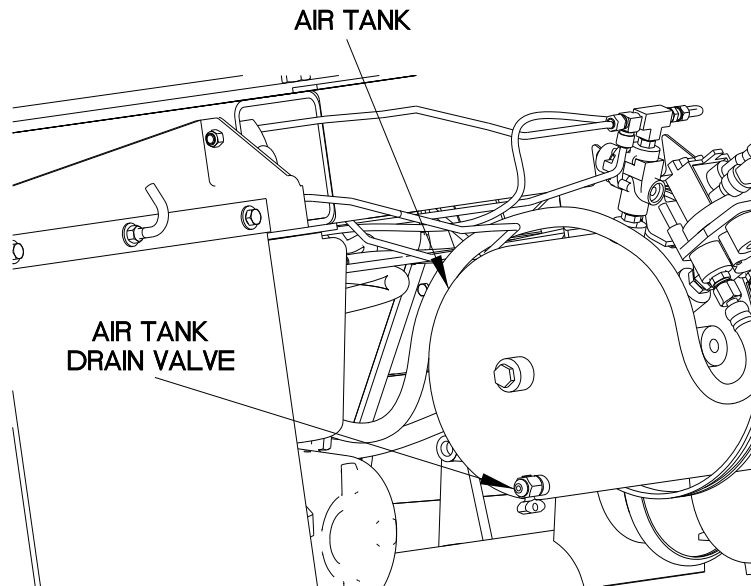
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

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



CC044B02

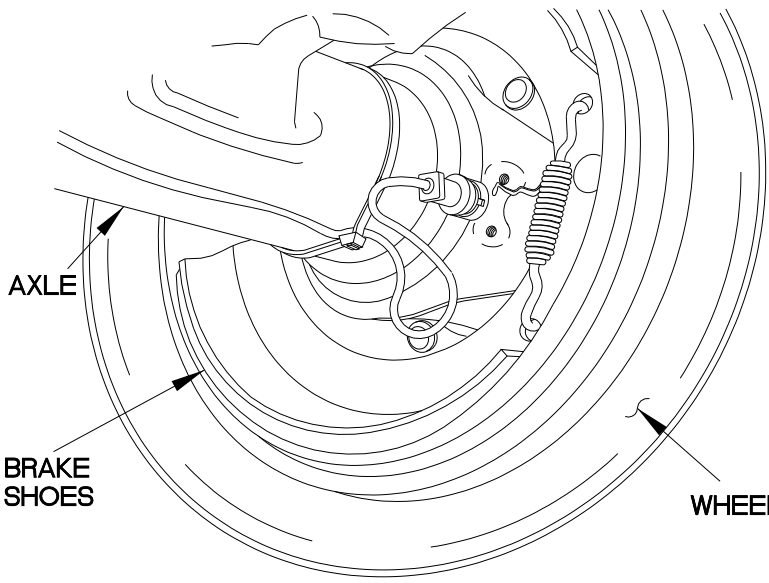
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Are brake shoes free from contamination, oil, and grease?</p>	<p>No Replace wheel bearing seals (WP 0085 00).</p> <p>Yes Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Jack up axle of each affected wheel/brake. 2. Support axle assembly on trestles. 3. Rotate wheel and check for contamination of brake shoe linings from leaking oil, grease or debris.



CC044B03

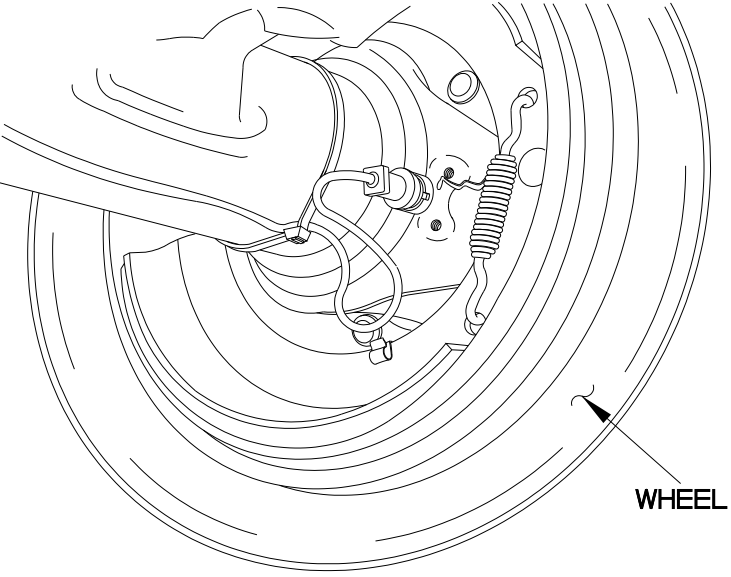
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Do individual wheels/brakes lockup or drag while applying brakes and manually spinning wheel?	<p>No Go to (Indication/Condition 5).</p> <p>Yes Adjust brake shoe clearance (WP 0069 00).</p>	<ol style="list-style-type: none"> 1. Start towing vehicle engine (EM 0195). 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.



WHEEL

CC044B04

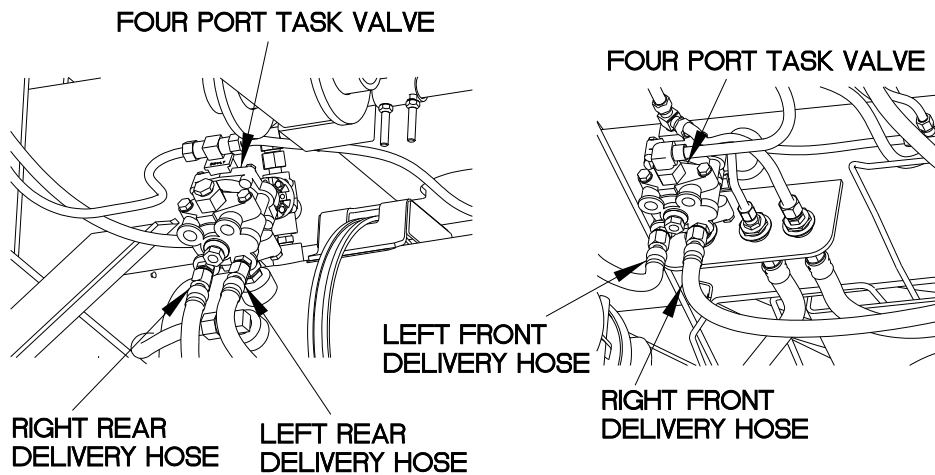
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

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?	<p>No Replace four port task valve (WP 0109 00).</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Remove trestles from axle assembly. 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.



CC044B05

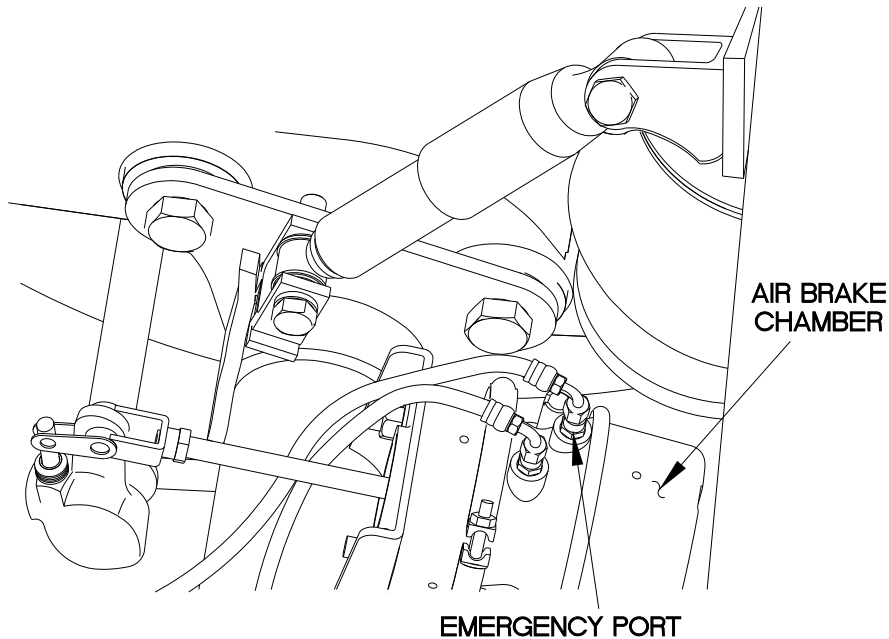
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Is air present at emergency port of brake air chamber of affected wheel(s)/brake(s) when brakes are applied?</p>	<p>No Replace damaged or blocked air hoses.</p> <p>Yes Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 1. Tighten hoses at delivery ports of four port task valve. 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.



CC044B06

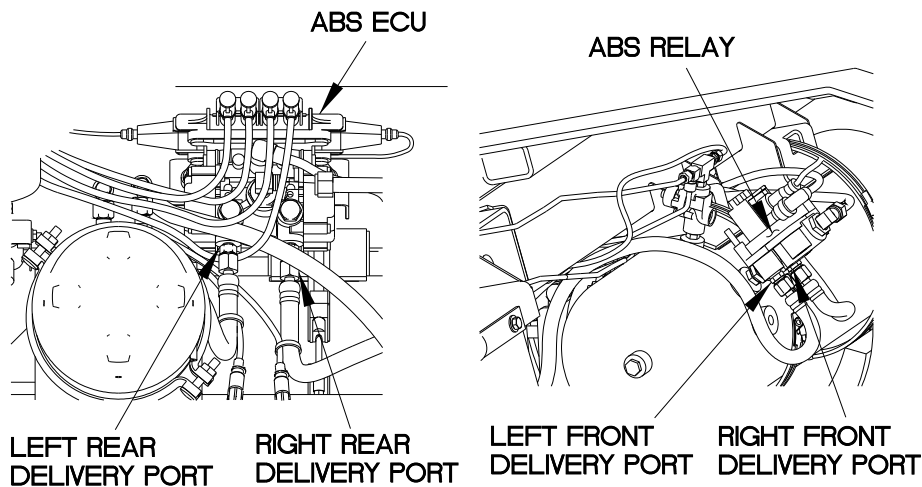
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

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?	<p>No Replace ABS relay valve (front) (WP 0075 00) or ABS ECU valve (rear) (WP 0071 00).</p> <p>Yes Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Tighten air hoses at emergency ports of brake air chambers. 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.



CC044B07

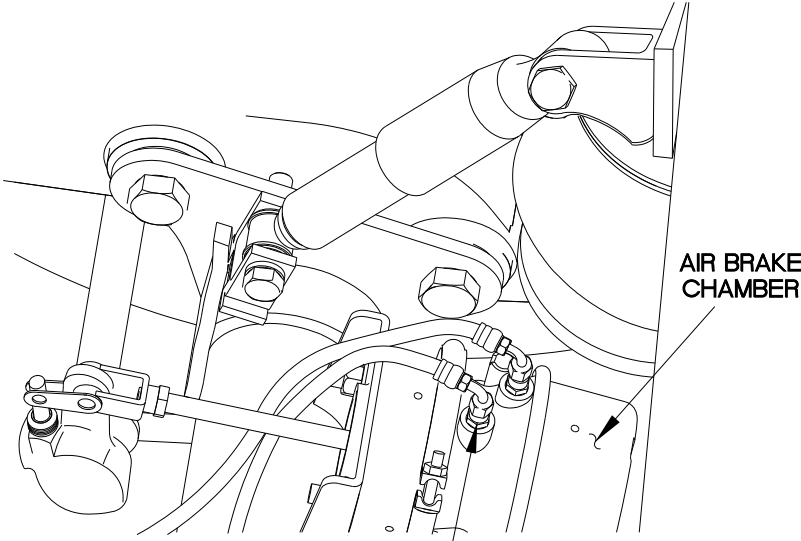
**TRAILER BRAKES UNEVENLY OR BRAKES
PULL TO ONE SIDE OR GRAB -Continued**

0044 00

BRAKES TROUBLESHOOTING - Continued

Table 1. Trailer Brakes Unevenly Or Brakes Pull To One Side Or Grab - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>8. Is air present at service port of brake air chamber of affected wheel(s)/brake(s) while brakes are applied?</p>	<p>No Replace damaged or blocked air hoses.</p> <p>Yes Replace spring brake chamber (WP 0081 00).</p>	<ol style="list-style-type: none"> 1. Tighten hoses at delivery ports of ABS relay valve (front) or ABS ECU valve (rear). 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.



CC044B08

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 24, WP 0167 00)
 Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)
 Soap, Laundry (Item 15, 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.

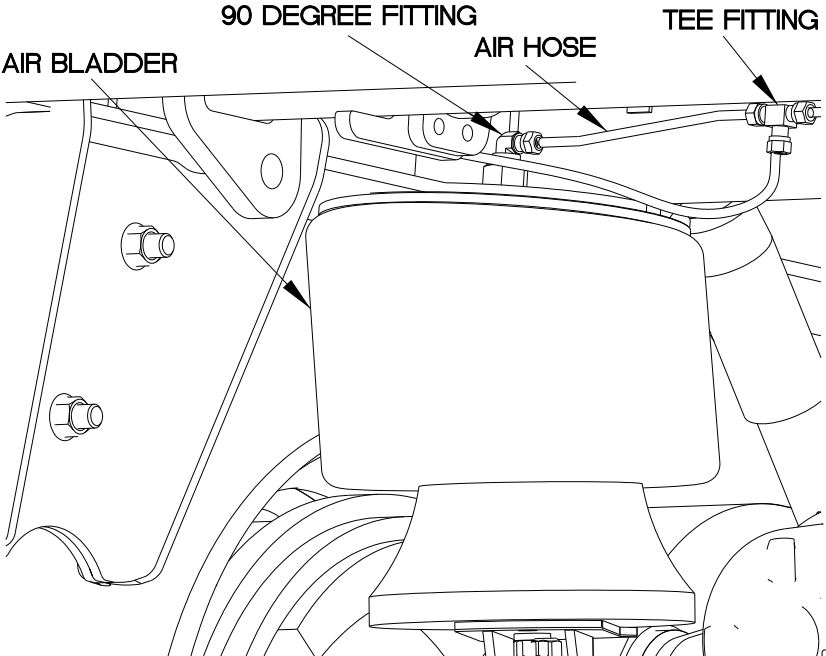
Select the appropriate fault to determine where troubleshooting continues:

- One air spring does not inflate (Table 1, Indication/Condition 1).
- Rear air springs do not inflate (Table 1, Indication/Condition 2).
- Front Suspension Does Not Raise/Lower (WP 0047 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?	<p>No. Replace air hose from air spring to tee fitting.</p> <p>Yes. Replace air bladder (WP 0096 00).</p>	<ol style="list-style-type: none"> 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.



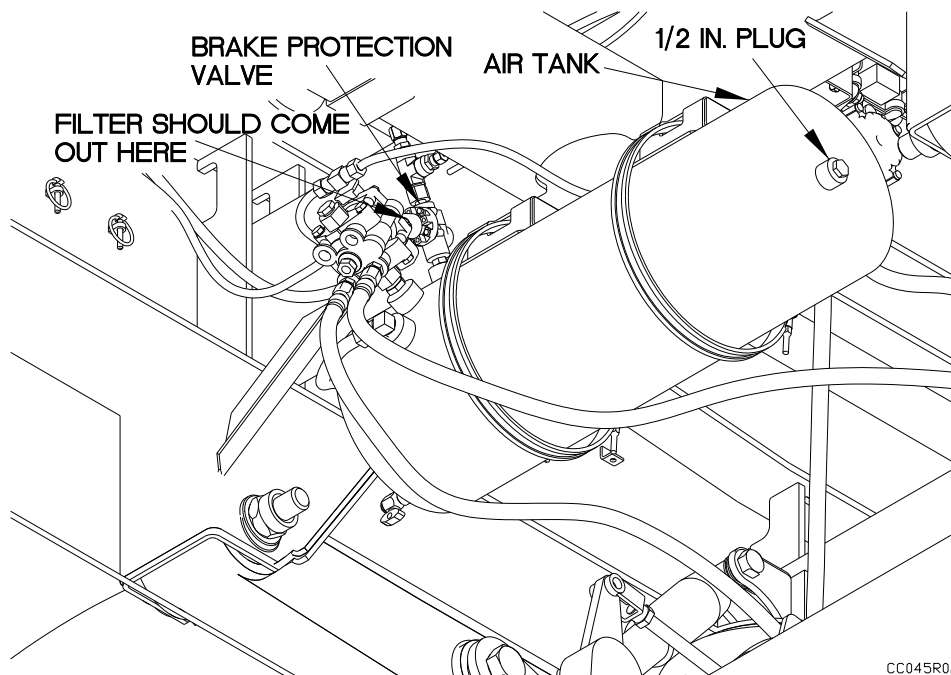
The diagram illustrates a portion of a vehicle's suspension system. It shows a large, rectangular air bladder mounted on a metal frame. An air hose is connected to the bladder and runs horizontally to the right. At the end of the hose, it connects to a tee fitting. A 90-degree fitting is also shown, connected to the air hose. Labels with arrows point to the AIR BLADDER, 90 DEGREE FITTING, AIR HOSE, and TEE FITTING. The diagram is a technical line drawing showing the mechanical components and their connections.

CC045R01

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System - Continued.

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



CC045R02

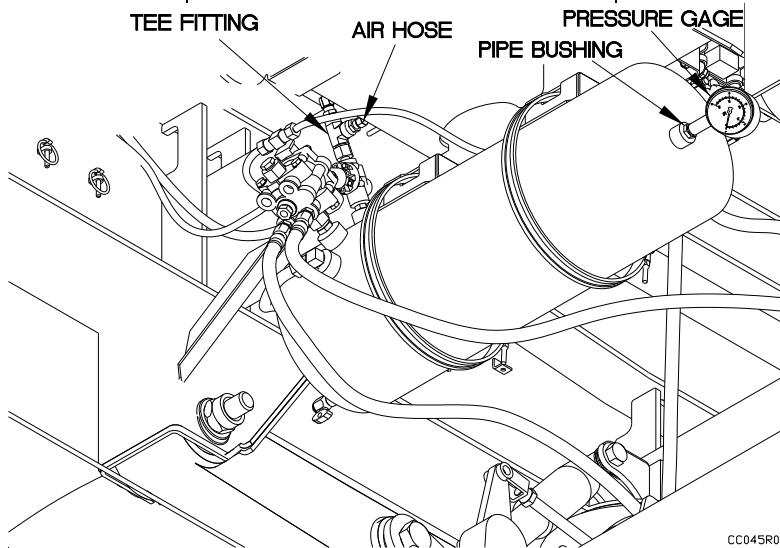
SUSPENSION SYSTEM SITS UNEVEN-Continued

0045 00

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Does brake protection valve operate properly? (Cont)</p>	<p>No. Replace brake protection valve (WP 0075 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<p>4. Disconnect air hose from tee fitting.</p> <p>5. Begin pressurizing air system and note if brake protection valve opens at 70-75 psi. indicating proper operation.</p> <p>6. Drain air tank and note if brake protection valve closes at 60-65 psi. indicating proper operation.</p> <p>7. Connect air hose to tee fitting.</p>
<p>5. Does height control valve operate properly?</p>	<p>No. Replace height control valve (WP 0084 00).</p> <p>Yes. Properly adjust linkage (WP 0084 00).</p>	<p>8. Remove pressure gage and pipe bushing from air tank.</p> <p>9. Install 1/2 inch plug in air tank.</p> <p>1. Check height control valve for proper installation and operation (WP 0084 00).</p>



CC045R03

END OF WORK PACKAGE

Change 1

0045 00-4

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)
Soap, Laundry (Item 15, 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.**
- **Wear protective goggles to protect against possible injury from release of high pressure air. Failure to comply may result in injury to personnel.**

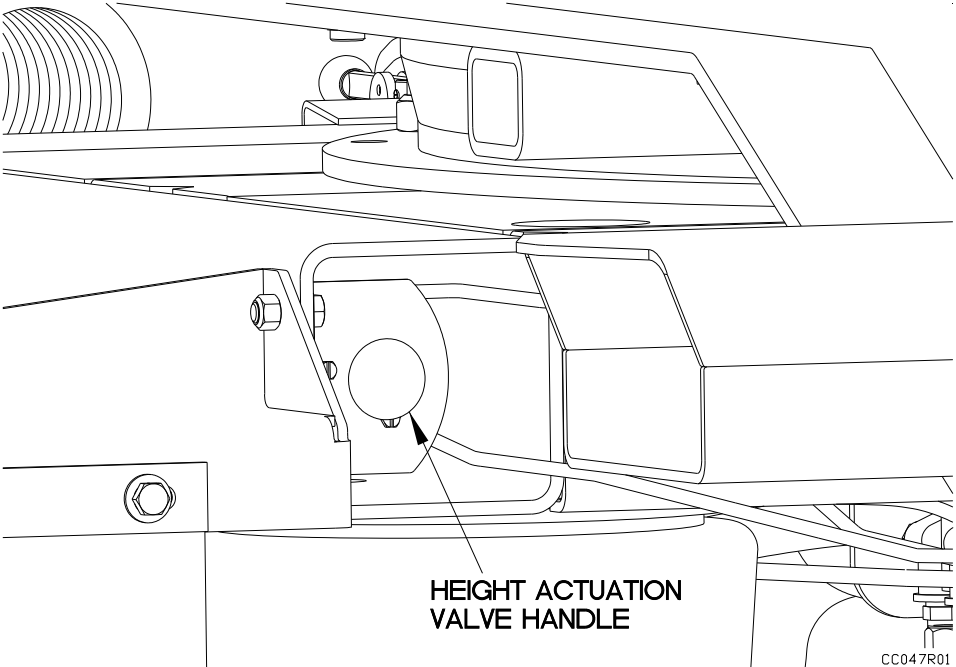
NOTE

- 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.

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?	<p>Raise Go to (Indication/Condition 6).</p> <p>Lower Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 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.



HEIGHT ACTUATION VALVE HANDLE

CC047R01

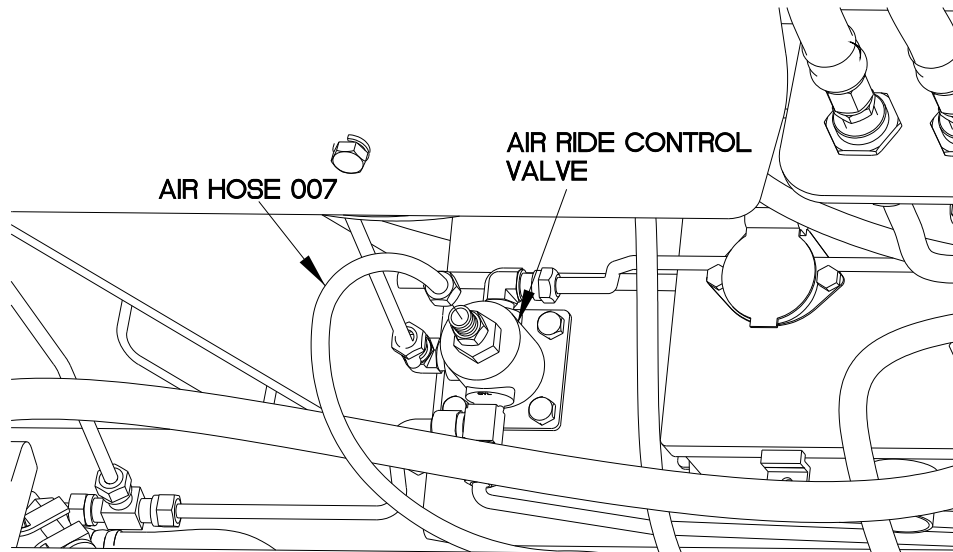
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

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



CC047R02

FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Does air hose 010 have any kinks, leaks, or holes?</p>	<p>No Replace height actuation valve (WP 0110 00). Yes Replace hose 010.</p>	<ol style="list-style-type: none"> 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.

BRAKE PROTECTION VALVE

HEIGHT ACTUATION VALVE HANDLE

HEIGHT ACTUATION VALVE

AIR HOSE 010

CC047R03

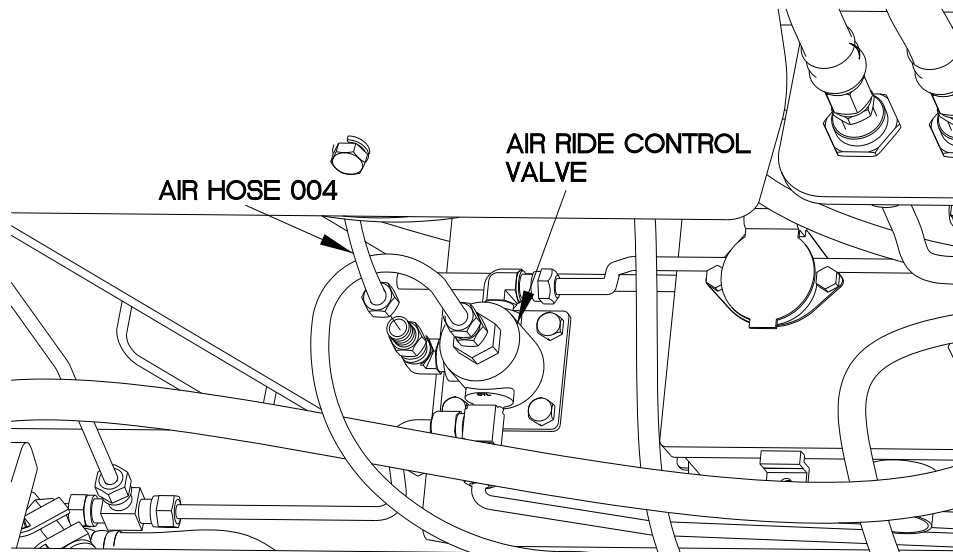
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at air ride control valve connection air hose 004?	<p>No Replace air ride control valve (WP 0080 00).</p> <p>Yes Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 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.



CC047R04

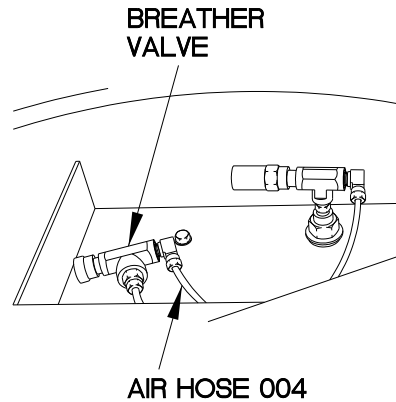
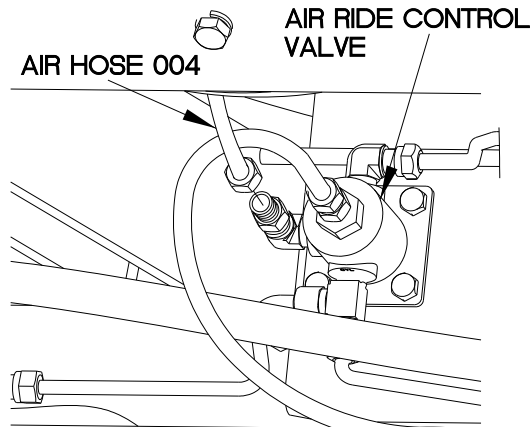
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Does air hose 004 have any kinks?	<p>No Replace breather valve (WP 0082 00).</p> <p>Yes Replace air hose 004.</p>	<ol style="list-style-type: none"> 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.



CC047R05

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is the height control valve linkage functioning properly?	<p>No Replace height control linkage (WP 0084 00).</p> <p>Yes Go to (Indication/Condition 7).</p>	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 - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at outlet port of height control valve?	<p>No Go to (Indication/Condition 8).</p> <p>Yes Go to (Indication/Condition 9).</p>	<ol style="list-style-type: none"> 1. Disconnect air hose 008 from outlet port of height control valve. 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.

CC047R07

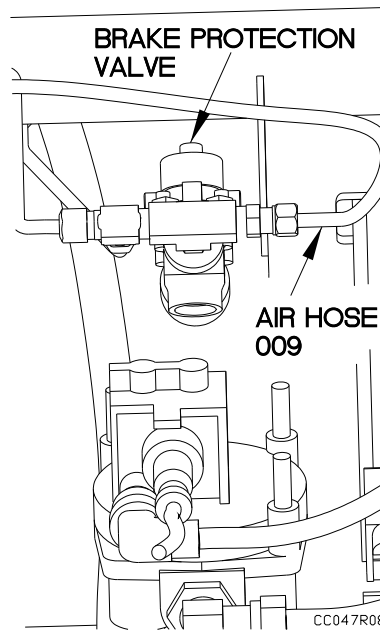
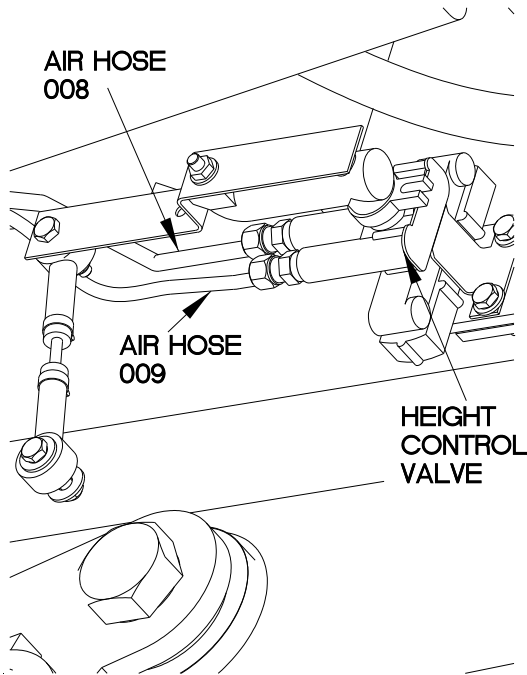
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>8. Does air hose 009 have any kinks, leaks or holes?</p>	<p>No Replace height control valve (WP 0084 00).</p> <p>Yes Replace air hose 009.</p>	<ol style="list-style-type: none"> 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.



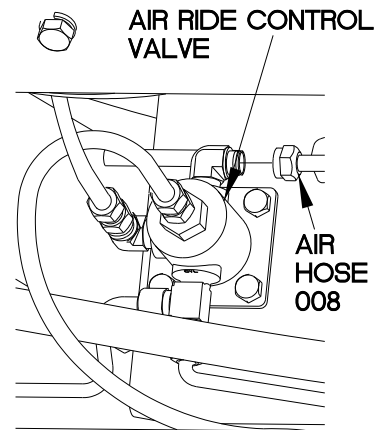
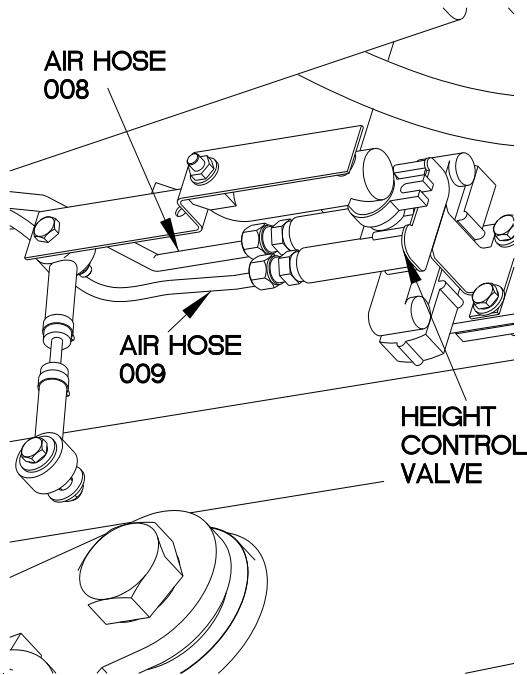
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 008 have any kinks, leaks or holes?	<p>No Go to (Indication/Condition 10).</p> <p>Yes Replace air hose 008.</p>	<ol style="list-style-type: none"> 1. Connect air hose 008 to outlet port of height control valve. 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.



CC047R09

FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Front Suspension Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at outlet port of air ride control valve?	<p>No Replace air ride control valve (WP 0080 00).</p> <p>Yes Replace air hose 005.</p>	<ol style="list-style-type: none"> 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 24, 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 19, 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.

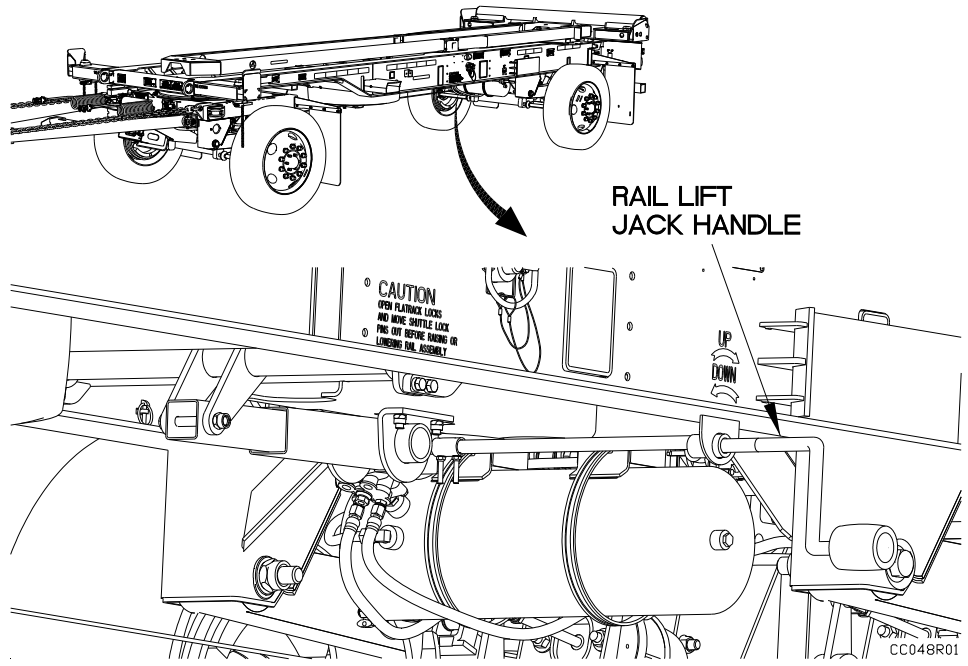
NOTE

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 TROUBLESHOOTING - Continued

Table 1. Rail Assembly Does Not Raise/Lower.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is rail lift jack spinning freely?	<p>No. Replace rail assembly (WP 0089 00).</p> <p>Yes. Replace rail lift jack (WP 0102 00).</p>	<ol style="list-style-type: none"> 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

Personnel Required

Two

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Equipment Conditions

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

Trailer unloaded (TM 9-2320-392-10)

Rail assembly raised (WP 0005 00)

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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

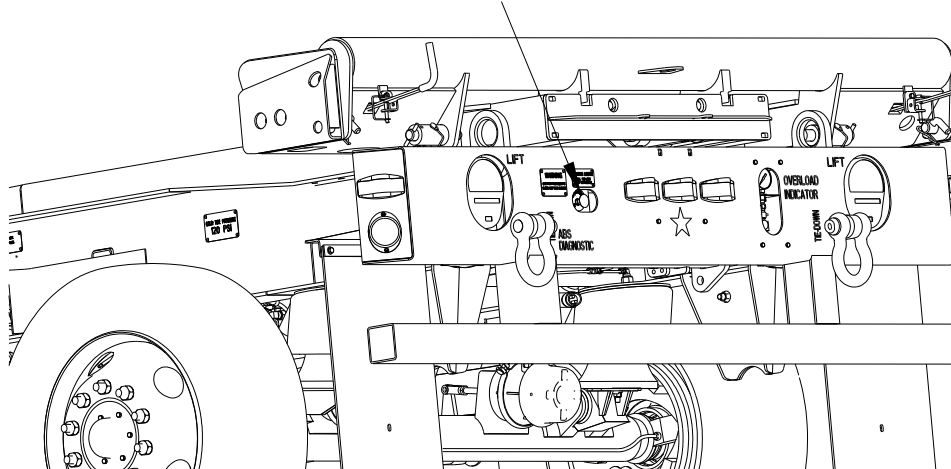
- Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.
- Tag hoses and connection points prior to disconnecting.
- Remove plastic cable ties as required.

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?	<p>Lock. Go to (Indication/Condition 2).</p> <p>Release. Go to (Indication/Condition 5).</p>	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 LOCK PUSH/PULL VALVE HANDLE

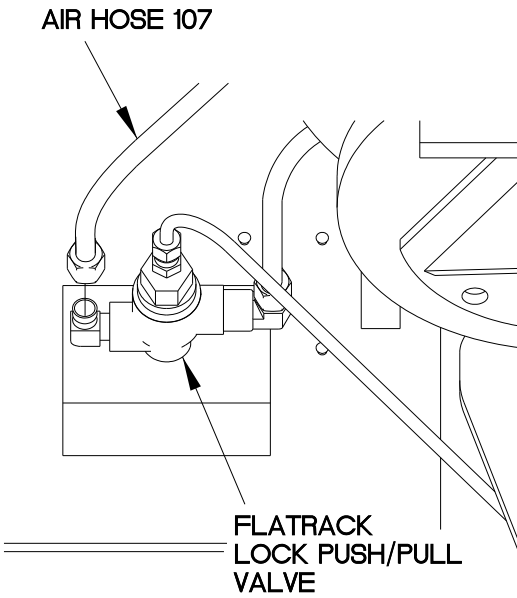


CC049R01

PNEUMATIC TROUBLESHOOTING - Continued

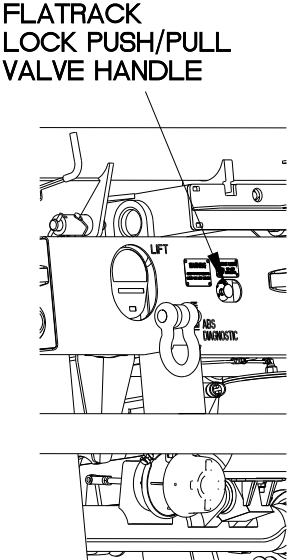
Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is air pressure present at outlet port of flatrack lock push/pull valve?	<p>No. Go to (Indication/Condition 3).</p> <p>Yes. Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Disconnect air hose 107 from flatrack lock push/pull valve. 2. Pull handle of flatrack lock push/pull valve out and feel for air escaping from outlet port.



AIR HOSE 107

FLATRACK LOCK PUSH/PULL VALVE



FLATRACK LOCK PUSH/PULL VALVE HANDLE

CC049R02

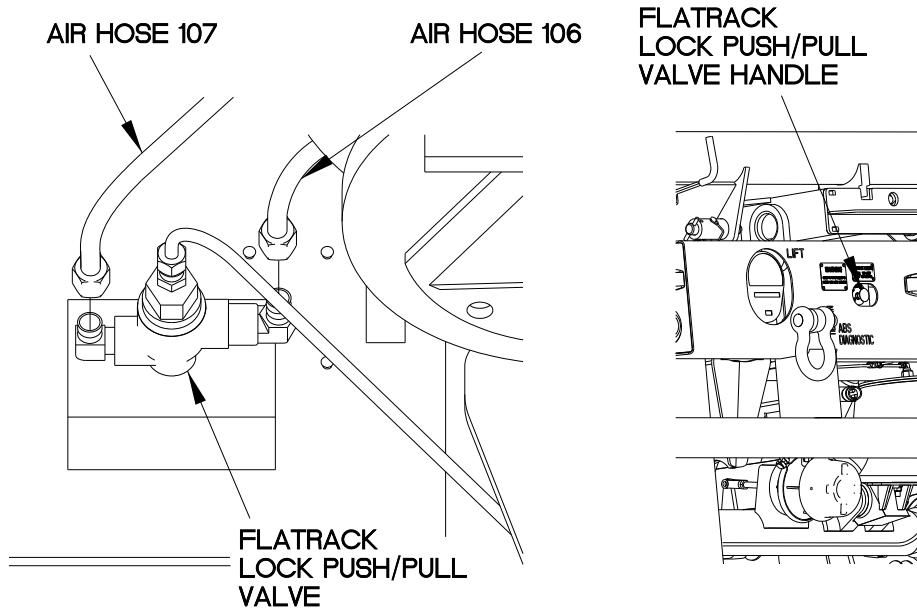
FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued

0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Does air hose 106 have any kinks, leaks, or holes?</p>	<p>No. Replace flatrack lock push/pull valve (WP 0108 00).</p> <p>Yes. Replace air hose 106.</p>	<ol style="list-style-type: none"> 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.



CC049R03

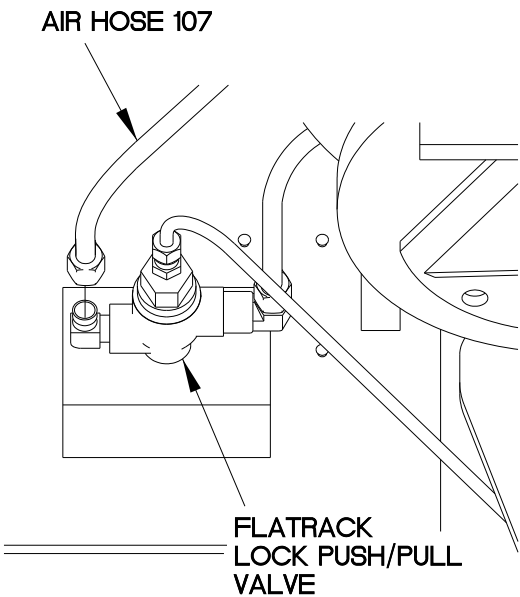
FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued

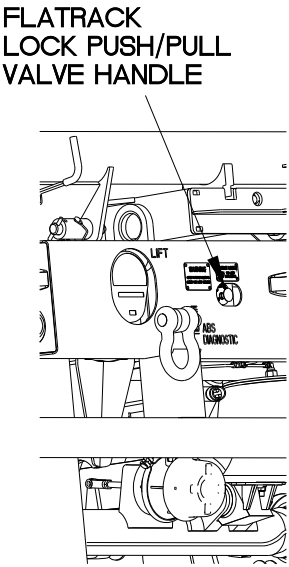
0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Does air hose 107 have any kinks, leaks, or holes?</p>	<p>No. Replace flatrack air chamber (WP 0107 00). Yes. Replace air hose 107.</p>	<ol style="list-style-type: none"> 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.



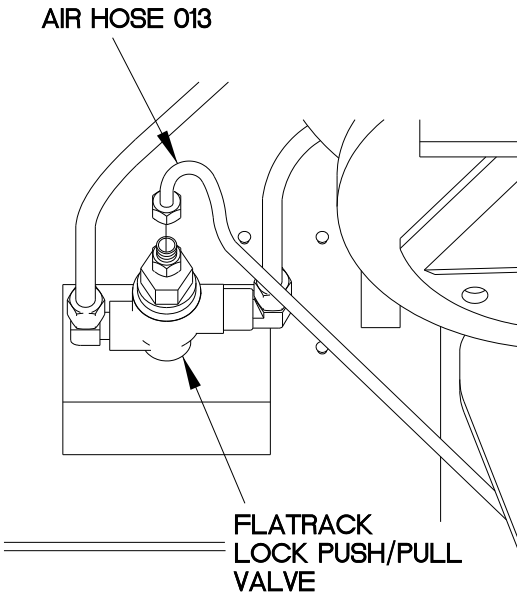


CC049R02

PNEUMATIC TROUBLESHOOTING - Continued

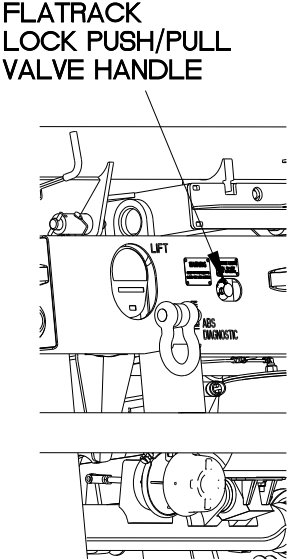
Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>5. Is air pressure present at port on flatrack lock push/pull valve at hose 013 connection?</p>	<p>No. Go to (Indication/Condition 6).</p> <p>Yes. Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 1. Disconnect air hose 013 from flatrack lock push/pull valve. 2. Push handle of flatrack lock push/pull valve in. 3. Feel for air escaping from open port on flatrack lock push/pull valve.



AIR HOSE 013

FLATRACK LOCK PUSH/PULL VALVE



FLATRACK LOCK PUSH/PULL VALVE HANDLE

CC049R04

FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued

0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Does air hose 013 have any kinks, leaks, or holes?</p>	<p>No. Replace flatrack lock push/pull valve (WP 0108 00).</p> <p>Yes. Replace air hose 013.</p>	<ol style="list-style-type: none"> 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.

AIR HOSE 013

FLATRACK LOCK PUSH/PULL VALVE

FLATRACK LOCK PUSH/PULL VALVE HANDLE

CC049R04

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>7. Is air pressure present at end of air hose 012 at connection on breather valve?</p>	<p>No. Go to (Indication/Condition 8).</p> <p>Yes. Replace breather valve (WP 0082 00).</p>	<ol style="list-style-type: none"> 1. Connect air hose 013 to flatrack lock push/pull valve. 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.

AIR HOSE 013

FLATRACK LOCK PUSH/PULL VALVE

AIR HOSE 012

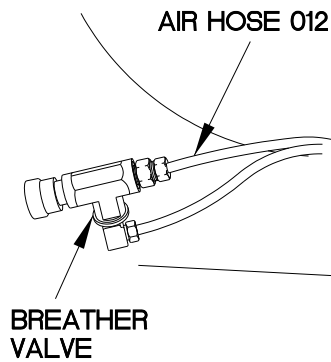
BREATHER VALVE

CC049R05

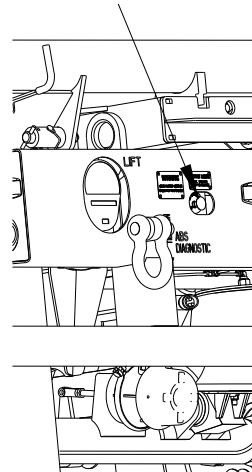
PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Flatrack Locks Do Not Release/Engage - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Does air hose 012 have any kinks, leaks, or holes?	<p>No. Replace flatrack air chamber (WP 0107 00).</p> <p>Yes. Replace air hose 012.</p>	<ol style="list-style-type: none"> 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.



FLATRACK LOCK PUSH/PULL VALVE HANDLE



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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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.**

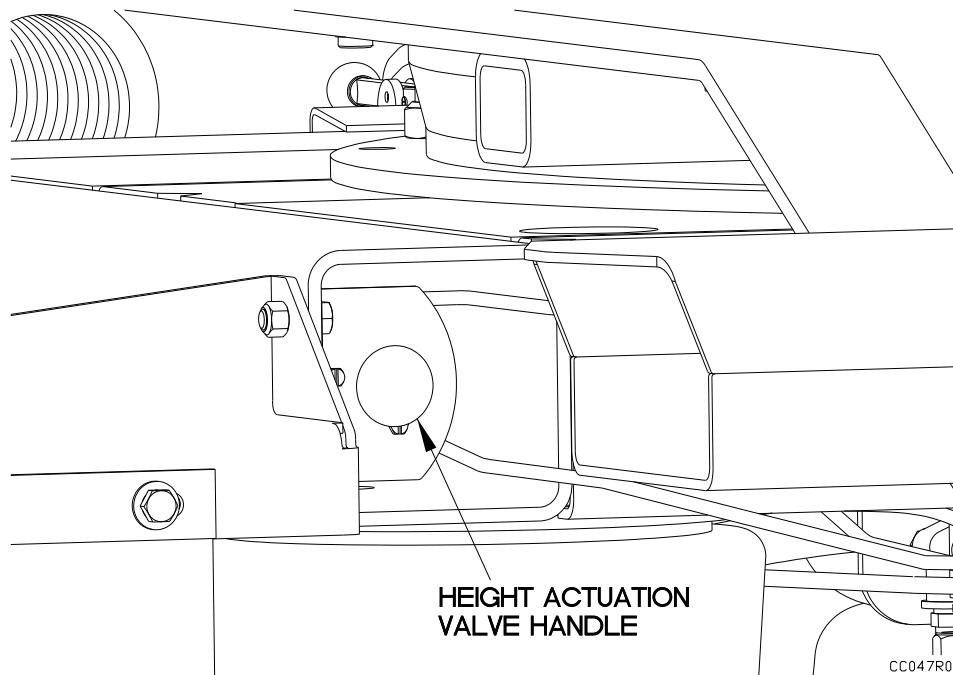
NOTE

- Return vehicle to mission capable condition and perform (Operational Checkout 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.

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower.

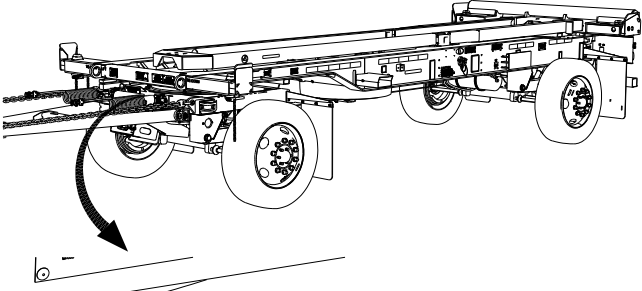
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Does front suspension raise and lower?	No Proceed to Suspension System Sits Uneven (WP 0045 00). Yes Go to (Indication/Condition 2).	1. Push in height control valve knob. 2. Look to see if front suspension will lower. 3. Pull out height control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



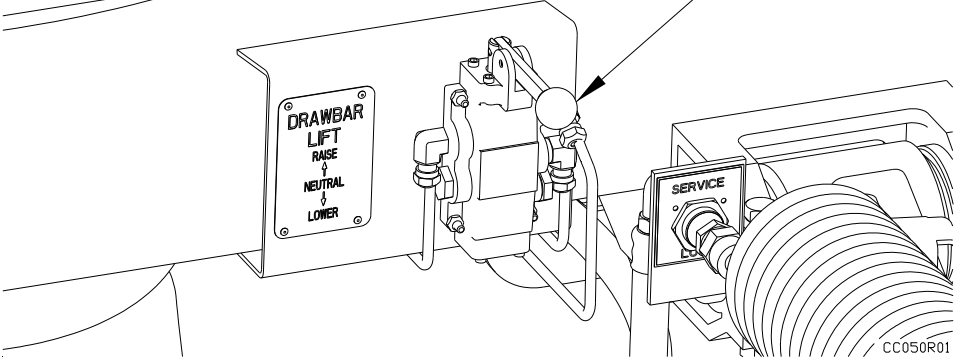
PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does the drawbar not raise or lower?	<p>Won't Raise Go to (Indication/Condition 3).</p> <p>Won't Lower Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Raise drawbar lift control handle up to see if drawbar will rise. 2. Lower drawbar lift control handle down to see if drawbar will lower.



DRAWBAR LIFT CONTROL HANDLE



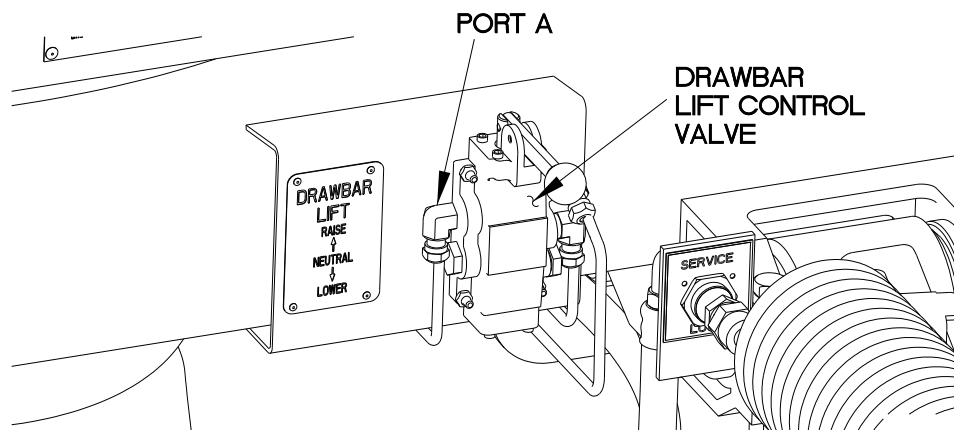
DRAWBAR DOES NOT RAISE/LOWER -Continued

0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is air pressure present at drawbar lift control port A?	<p>No Go to (Indication/Condition 5).</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 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.

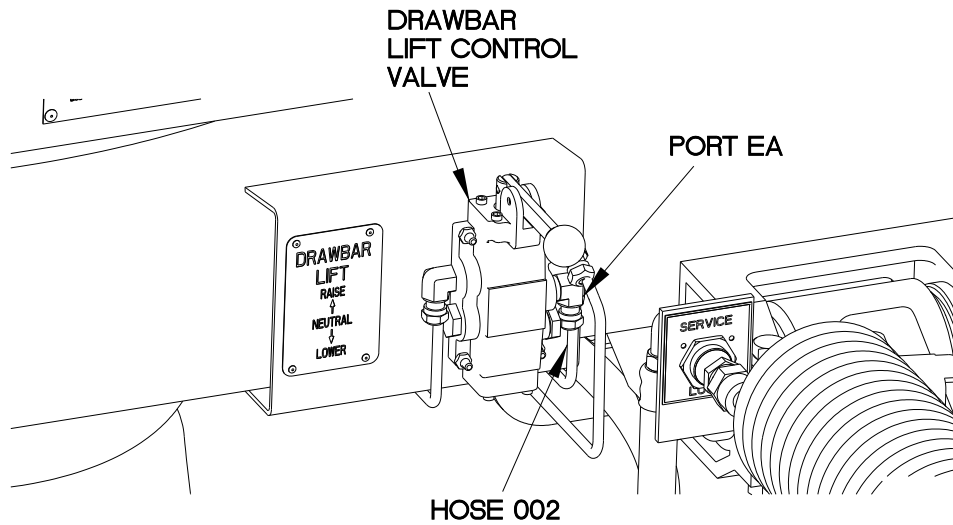


CC050R02

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air pressure present at port EA of drawbar lift control valve?	<p>No Replace drawbar lift control valve (WP 0094 00).</p> <p>Yes Replace breather valve (WP 0082 00).</p>	<ol style="list-style-type: none"> 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.



CC050R03

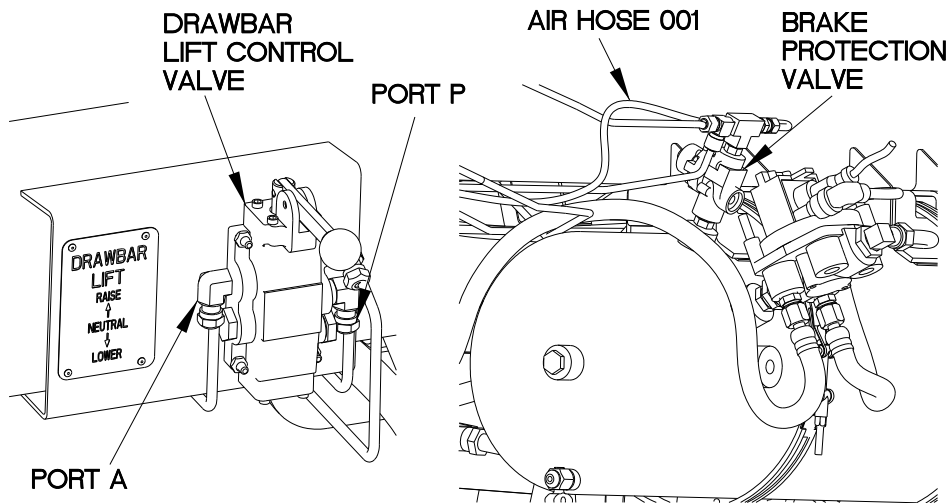
DRAWBAR DOES NOT RAISE/LOWER -Continued

0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Does air hose 001 have any kinks, holes, leaks?	<p>No Replace brake protection valve (WP 0075 00).</p> <p>Yes Replace air hose 001.</p>	<ol style="list-style-type: none"> 1. Connect hose 003 to drawbar lift control valve port A. 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.



CC050R04

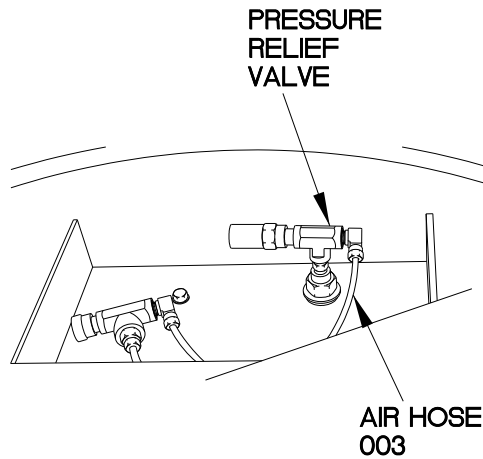
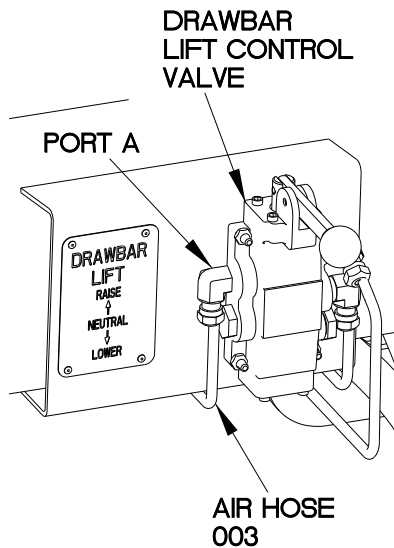
DRAWBAR DOES NOT RAISE/LOWER -Continued

0050 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Does air hose 003 have any kinks, holes, leaks?</p>	<p>No Go to (Indication/Condition 7).</p> <p>Yes Replace air hose 003.</p>	<ol style="list-style-type: none"> 1. Connect air hose 003 to port A on drawbar lift control valve. 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.

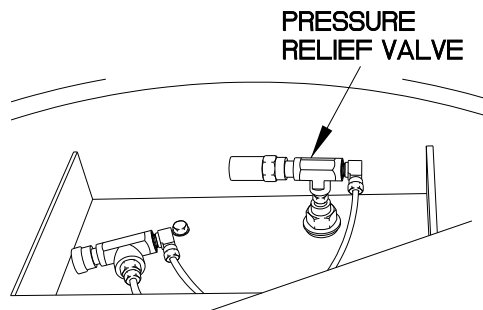
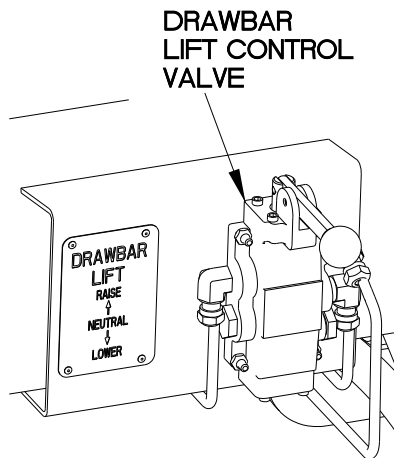


CC050R05

PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air escaping from pressure relief valve?	<p>No Go to (Indication/Condition 8).</p> <p>Yes Replace pressure relief valve (WP 0068 00).</p>	<ol style="list-style-type: none"> 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.

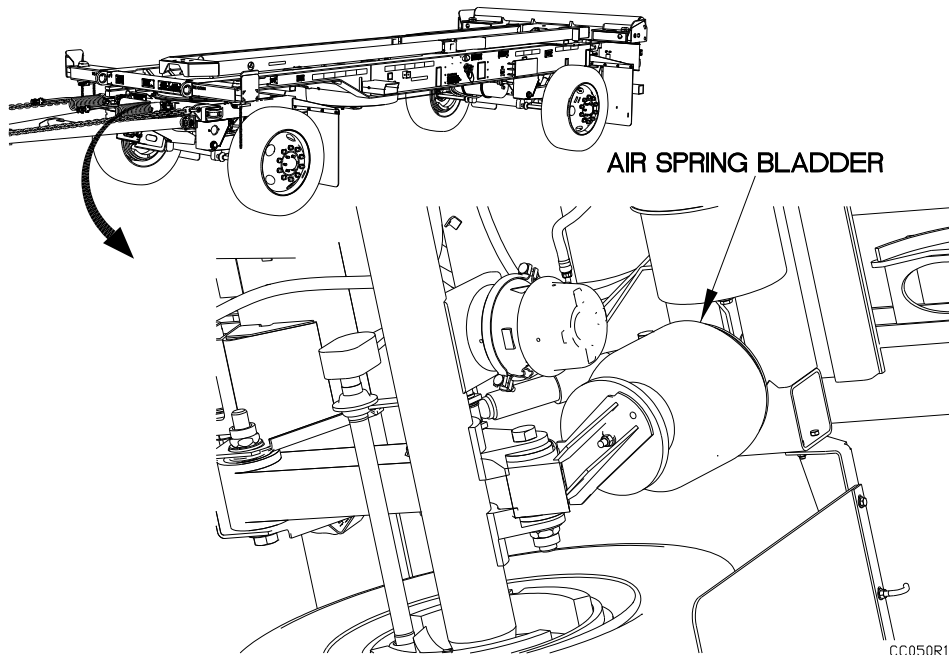


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PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

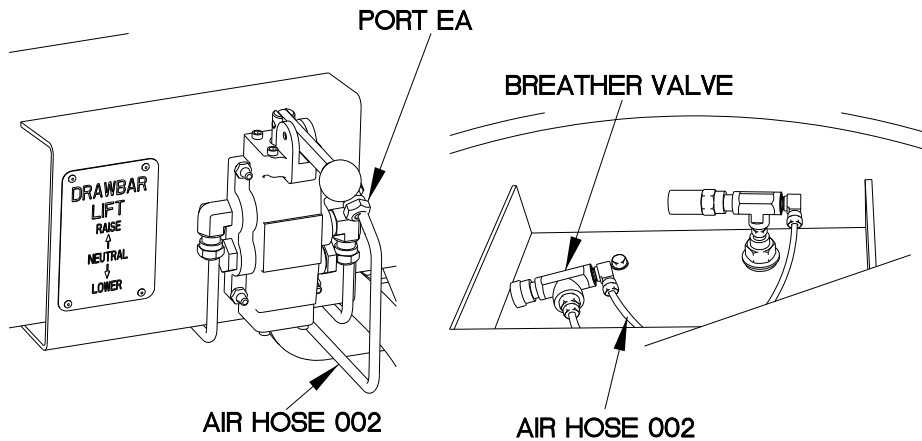
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>8. Is air escaping from air spring bladder?</p>	<p>No Go to (Indication/Condition 9).</p> <p>Yes Replace air spring bladder (WP 0096 00).</p>	<ol style="list-style-type: none"> 1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle 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.



PNEUMATIC TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>9. Does air hose 002 have any kinks, holes, or leaks?</p>	<p>No Go to (Indication/Condition 10).</p> <p>Yes Replace air hose 002.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 002, fittings, and connector EA on drawbar lift control valve. 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.

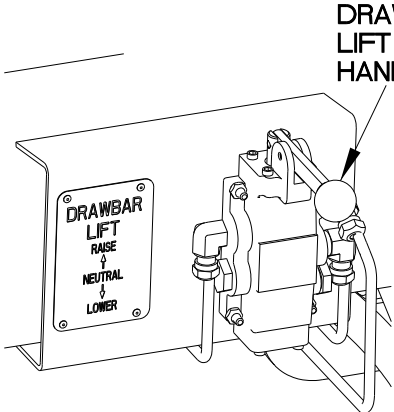


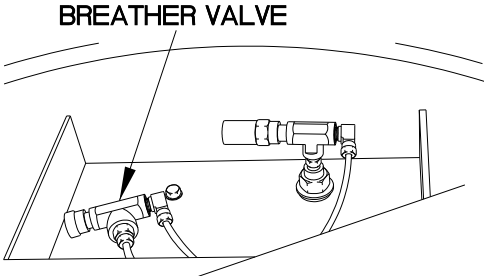
CC050R07

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Drawbar Does Not Raise/Lower - Continued.

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air escaping from breather valve?	<p>No Replace drawbar lift control valve (WP 0094 00).</p> <p>Yes Replace breather valve (WP 0082 00).</p>	<ol style="list-style-type: none"> 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.





CC050R08

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 24, WP 0167 00)

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Soap, Laundry (Item 15, 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
<p>1. Is air present at connection points to gauge at air hoses 018 and 019?</p>	<p>No. Go to (Indication/Condition 2).</p> <p>Yes. Replace Overload Indicator (WP 0106 00).</p>	<ol style="list-style-type: none"> 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.
<p style="text-align: right; font-size: small;">CC051R01</p>		
<p>2. Do air hoses 018 or 019 have any kinks, leaks or holes in them?</p>	<p>No. Proceed to Suspension System Sits Uneven (WP 0045 00).</p> <p>Yes. Replace air hoses 018 and/or 019.</p>	<ol style="list-style-type: none"> 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

Change 1

0051 00-2

TM 9-2330-334-13&P

**CHAPTER 4
MAINTENANCE INSTRUCTIONS**

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
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 31, WP 0167 00)
Wrench, Adjustable, 12 in. (Item 30, WP 0167 00)
Tool Kit, Genl Mech (Item 24, 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 15, 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 (PMCS)
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 (PMCS)
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 FIELD MAINTENANCE.

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 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 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 (PMCS)
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 (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

LUBRICATION SERVICE INTERVALS - NORMAL CONDITIONS - Continued**WARNING**

- **Solvent, Cleaning Compound (MIL-PRF-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 Cleaning Solvent; the flashpoint for Type I Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). When not using MIL-PRF-680 solvents, ensure MIL-PRF-680 solvent container is sealed. Store, handle, and dispose of unused and spent solvents in accordance with local procedures and plans. 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, MIL-PRF-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 (PMCS)
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 (PMCS)
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

- **Solvent, Cleaning Compound (MIL-PRF-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 Cleaning Solvent; the flashpoint for Type I Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). When not using MIL-PRF-680 solvents, ensure MIL-PRF-680 solvent container is sealed. Store, handle, and dispose of unused and spent solvents in accordance with local procedures and plans. 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.

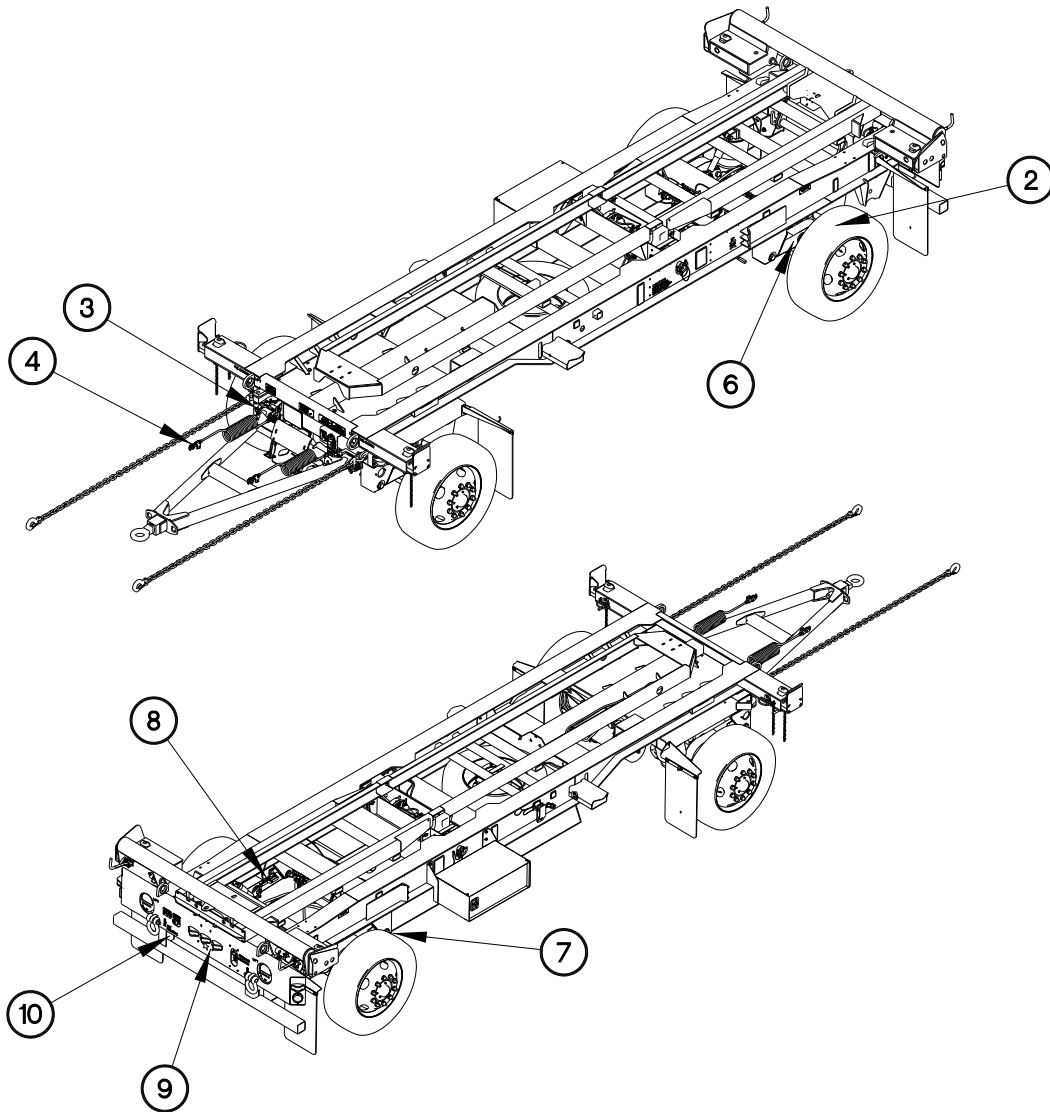
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

PMCS PROCEDURES

Before PMCS Procedures for Trailer

These illustrations will help you perform BEFORE trailer PMCS. Callouts match PMCS item numbers/procedures.



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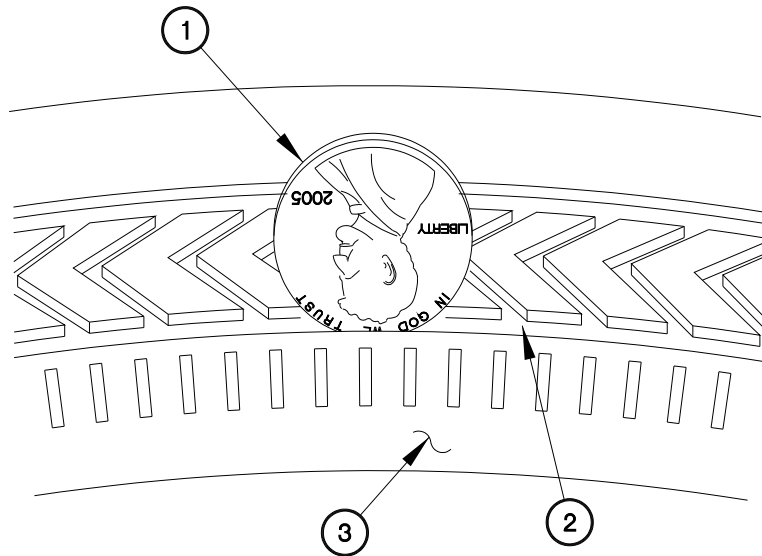
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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). 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.



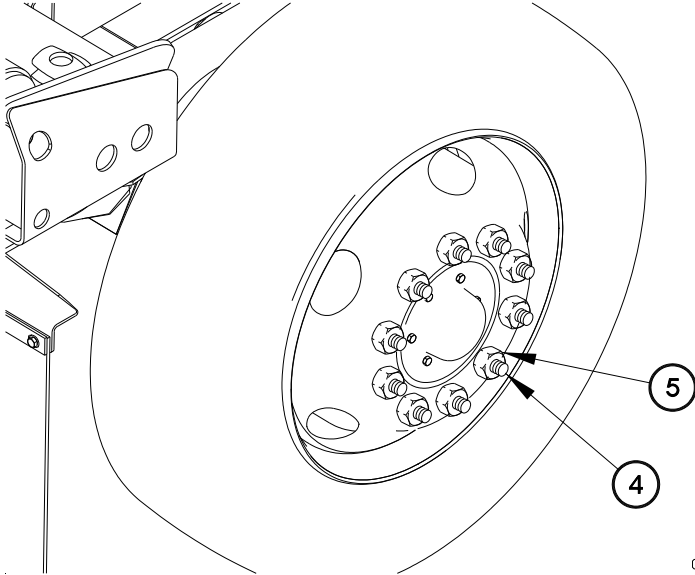
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**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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:
2	Before		Wheels and Tires (all four) - Continued	<p>2. Check wheel assembly for damage. If damaged, remove wheel and check wheel for cracked, broken, or bent surfaces.</p> <p>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.</p>	<p>Wheel is cracked, broken, or bent.</p> <p>Two or more studs (4) or nuts (5) on same wheel are missing, loose, or broken.</p>
			 <p style="text-align: right; font-size: small;">CD052P03</p>		
			<p>4. Check tire pressures with tire inflator/gage for 120 psi (cold).</p>		

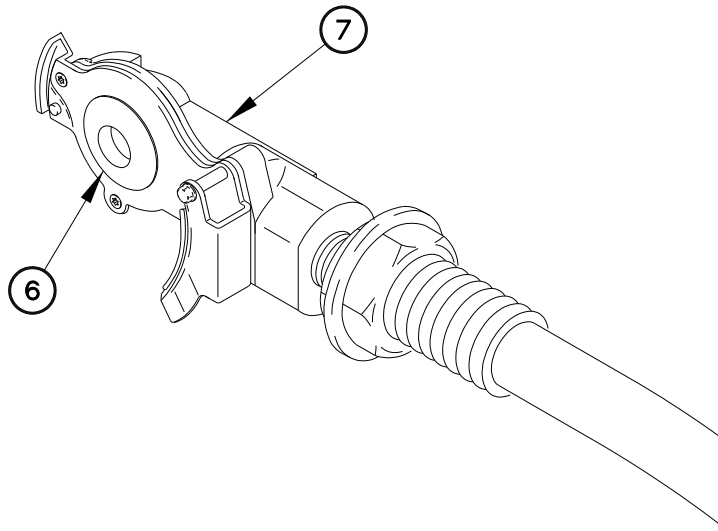
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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:
3	Before		Coupler Seals on LH and RH Trailer and Towing Vehicle Gladhands	1. Check that coupler seals (6) on gladhands (7) are free of dirt, sand, or other abrasive materials. 2. Clean if dirt, sand, or other abrasive materials are present (WP 0054 00, General, Table 1. General Cleaning Instructions).	



CD052P40

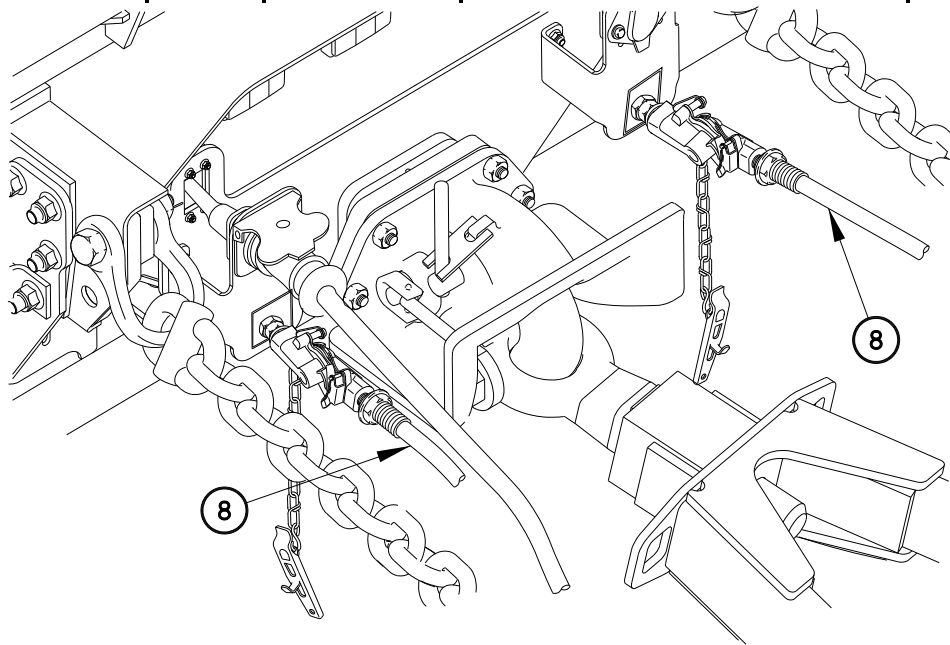
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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.



CD052P41

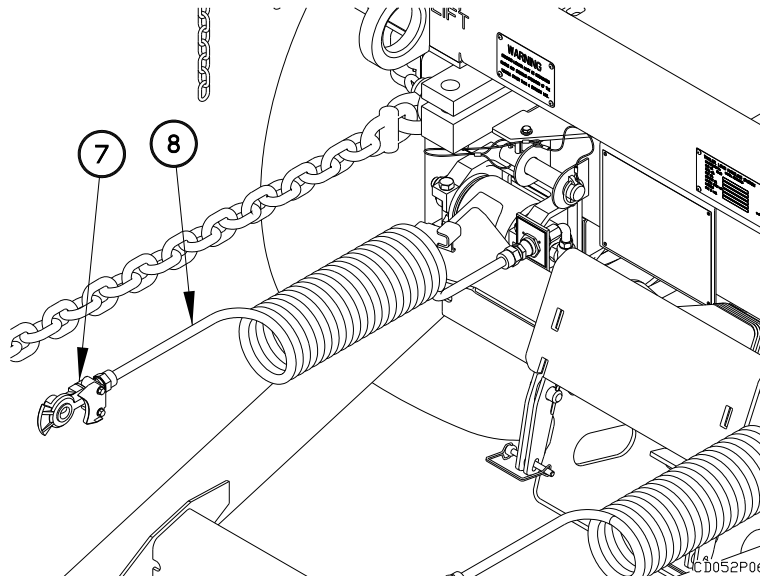
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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	2. Start towing vehicle engine (WP 0020 00). 3. 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.



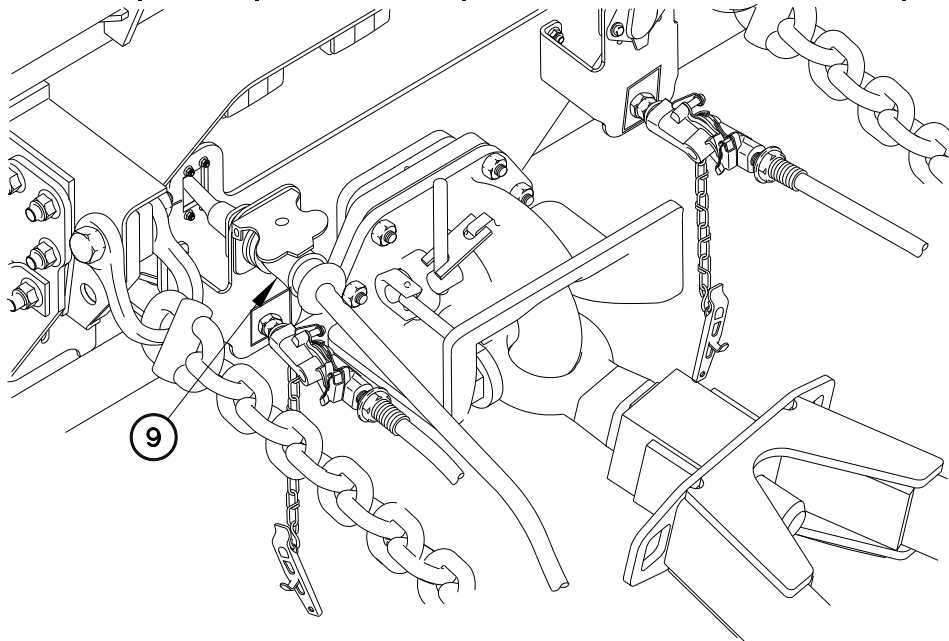
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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. 2. Check intervehicular cable (9) for cracked insulation, bent pins or bare wires.	Intervehicular cable (9) cannot be securely connected to trailer and towing vehicle. Intervehicular cable (9) has cracked insulation, bent pins, or bare wires.



CD052P42

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
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:
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.

CD052P08

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
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)	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.
<p>The diagram is a technical line drawing of the underside of a trailer chassis, focusing on the brake system. It shows two wheels with brake assemblies. Two air hoses, labeled with a circled '11', run across the chassis. Various fittings and connections are labeled with a circled '12'. The drawing includes structural members of the trailer frame and suspension components. A small 'ABS DIAGNOSTIC' label is visible on the left side. The drawing number 'C.D052P09' is located in the bottom right corner.</p>					
8	Before		Trailer	<ol style="list-style-type: none"> 1. Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. 2. Tighten loose bolts, nuts, and clamps. 3. If bolts, nuts, clamps, hoses, or tubes are missing, broken, cannot be tightened, or are damaged to the point of leaking, notify Field Maintenance. 4. The following should be checked: 	

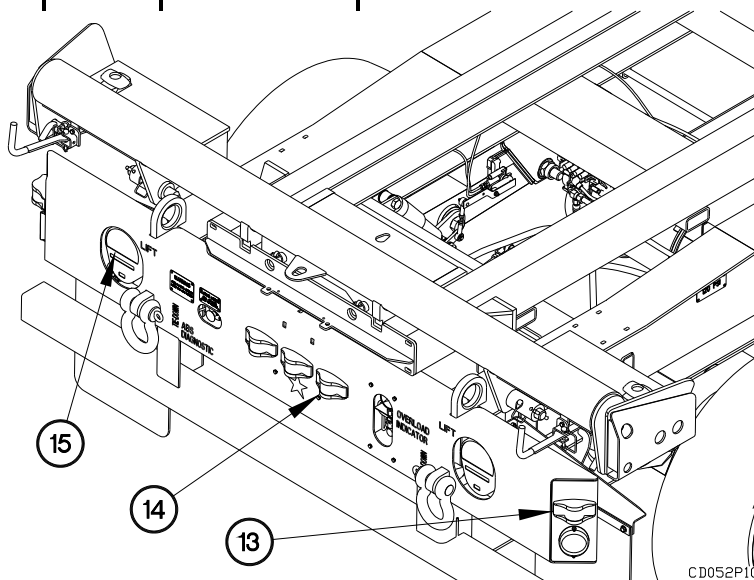
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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.



CD052P10

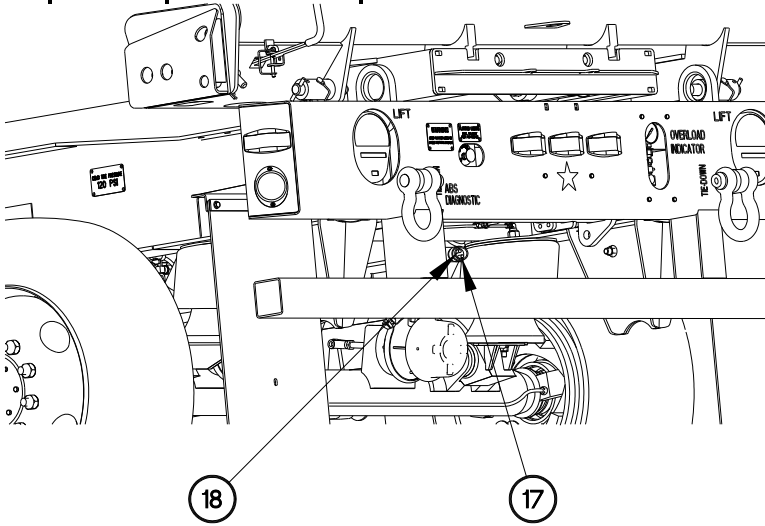
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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.	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).



The diagram shows a side view of a vehicle's chassis and wheel assembly. A callout labeled '17' points to a small rectangular diagnostic connector located near the wheel hub. Another callout labeled '18' points to a small circular LED light mounted on the chassis above the wheel. The diagram also shows other components like the 'ABS DIAGNOSTIC' label, 'OVERLOAD INDICATOR', and 'LIFT' points.

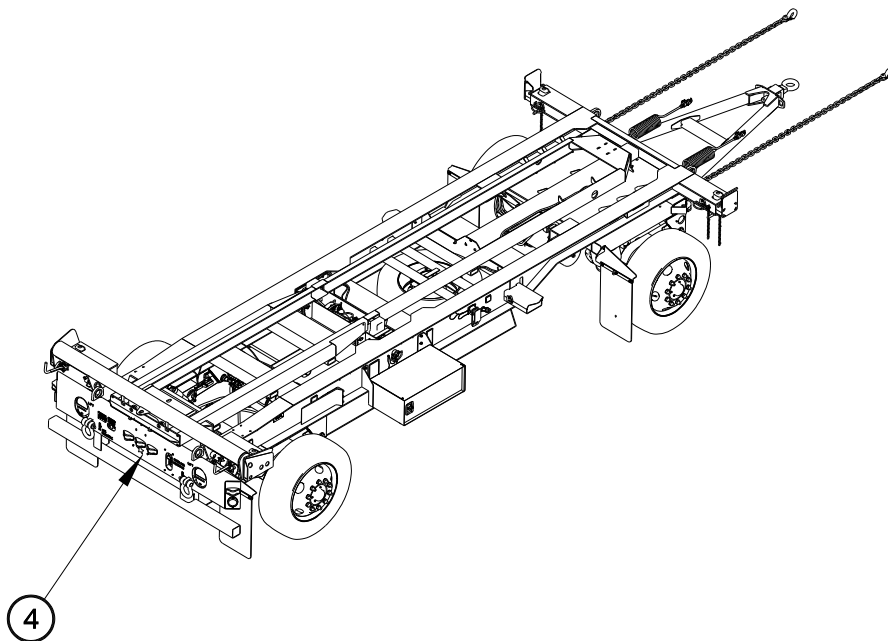
CD052P11

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

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 (PMCS)
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	<p>1. Check if adequate braking is available to stop trailer during operation.</p> <p>2. Check if trailer is pulled to one side when brakes are applied during operation.</p> <p>3. Listen for unusual noises (chattering, grinding, groaning, or excessive squealing) during braking. Notify Field Level Maintenance if unusual noises are present.</p>	<p>System does not provide adequate braking to trailer.</p> <p>Trailer pulls to one side when brakes are applied.</p>
3	During		Wheel Alignment	Check tracking for indication of wheel misalignment.	Serious wheel misalignment is present.

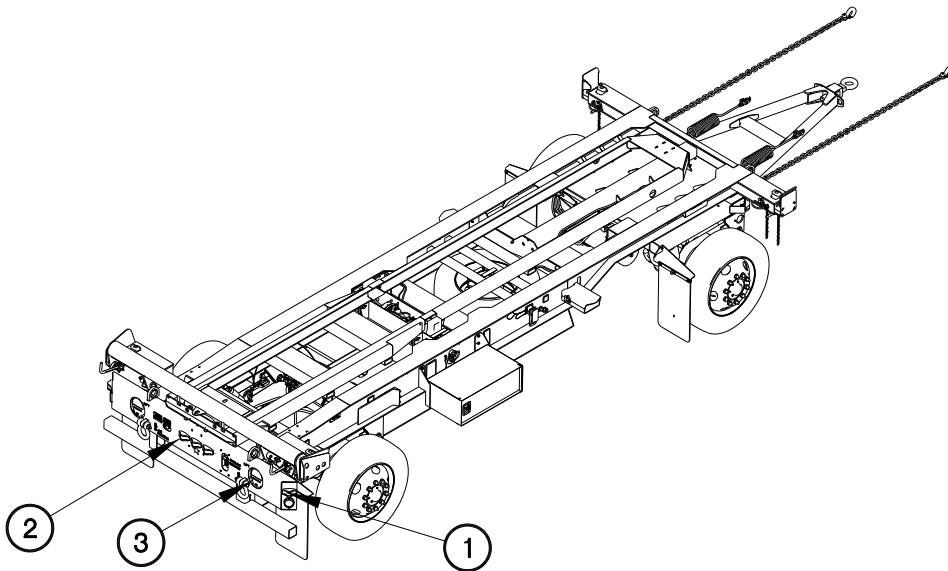
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

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.



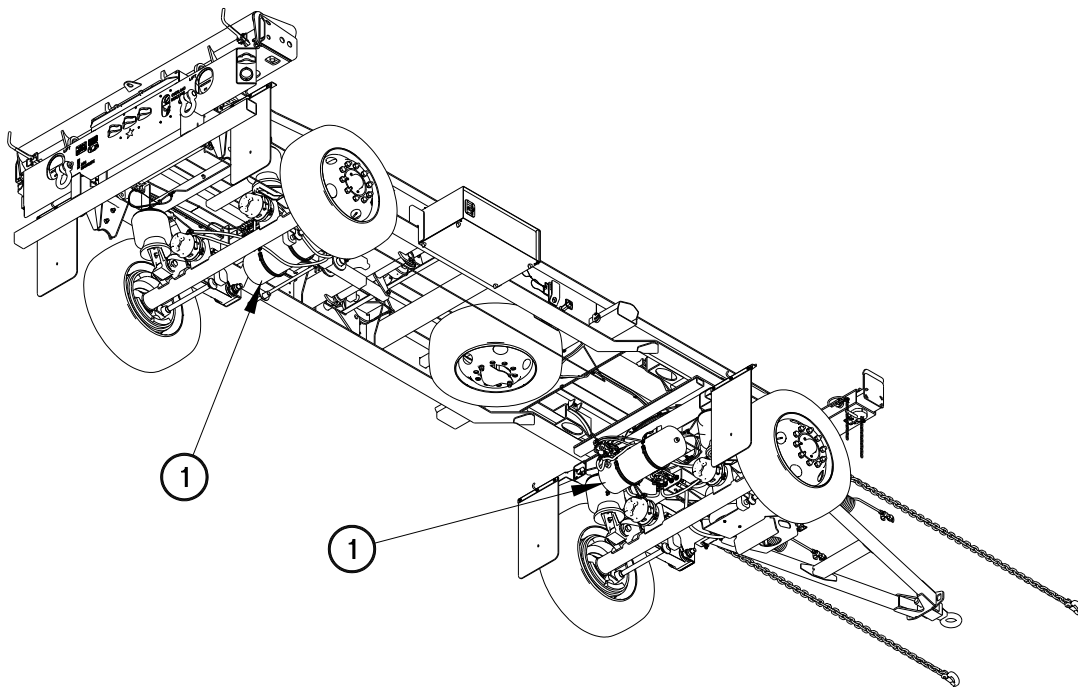
CD052P13

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
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

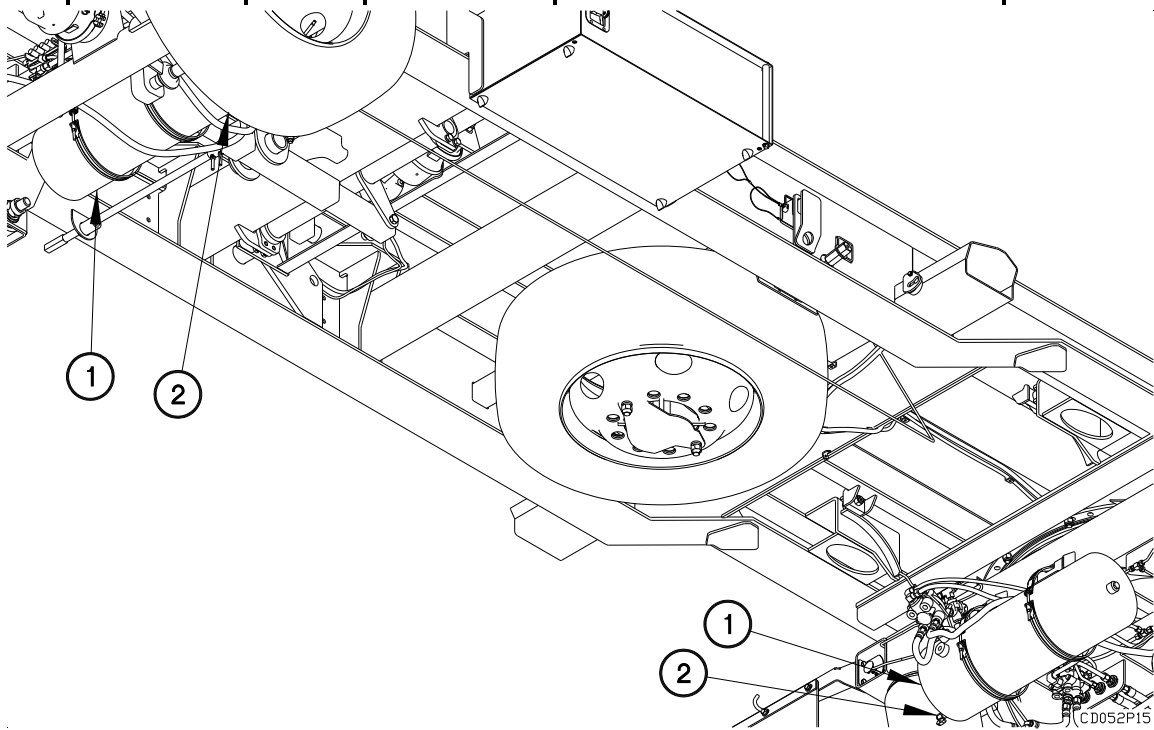
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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.

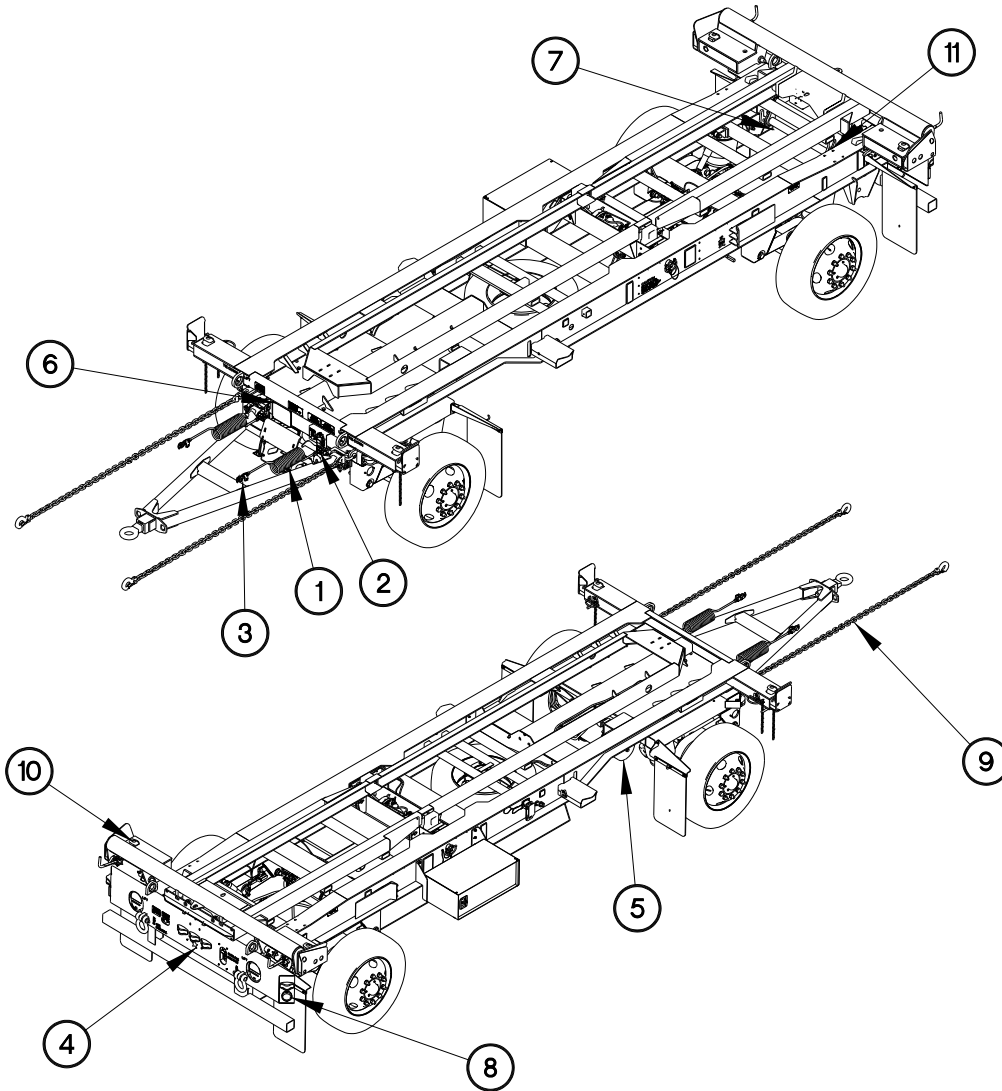


**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Weekly PMCS Procedures for Trailer

These illustrations will help you perform WEEKLY trailer PMCS. The callouts match PMCS item numbers/procedures.



CD052P16

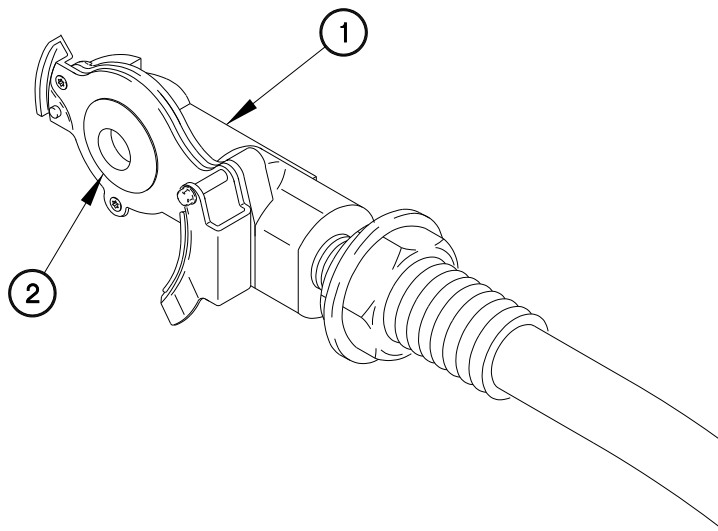
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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		LH and RH Mounting/ Coupling Hardware and Hoses/ Tubes	1. Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. 2. Tighten loose bolts, nuts, and clamps. 3. 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. 4. The following should be checked: a. Air intake system, including SERVICE and EMERGENCY gladhand hoses (1).	



CD052P43

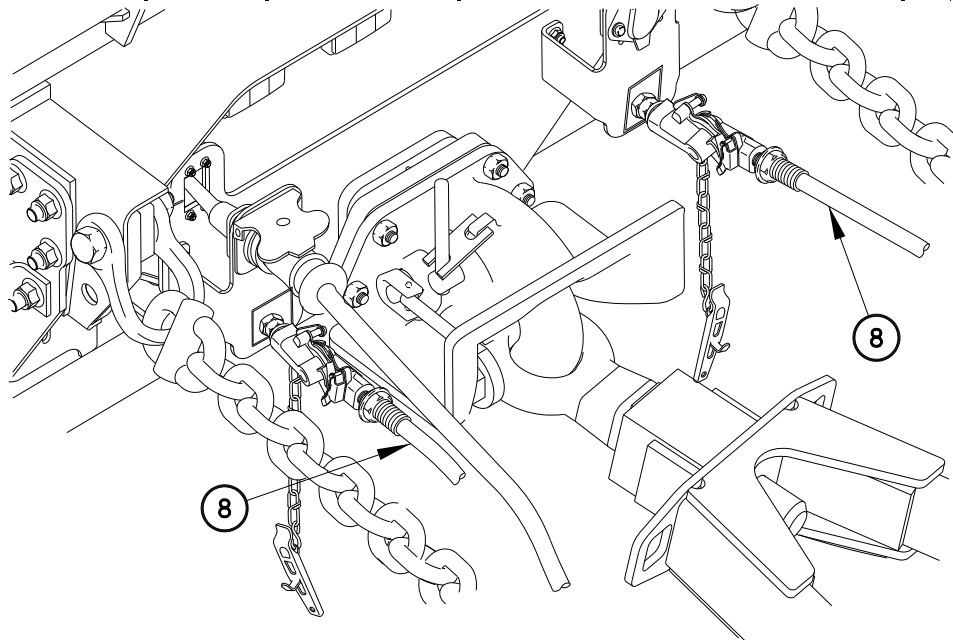
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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		Coupler Seals on Trailer and Towing Vehicle Gladhands	1. Check that coupler seals (2) on gladhands are free of dirt, sand, or other abrasive materials. 2. Clean if dirt, sand, or other abrasive materials are present (WP 0054 00, General, Table 1. General Cleaning Instructions).	



CD052P44

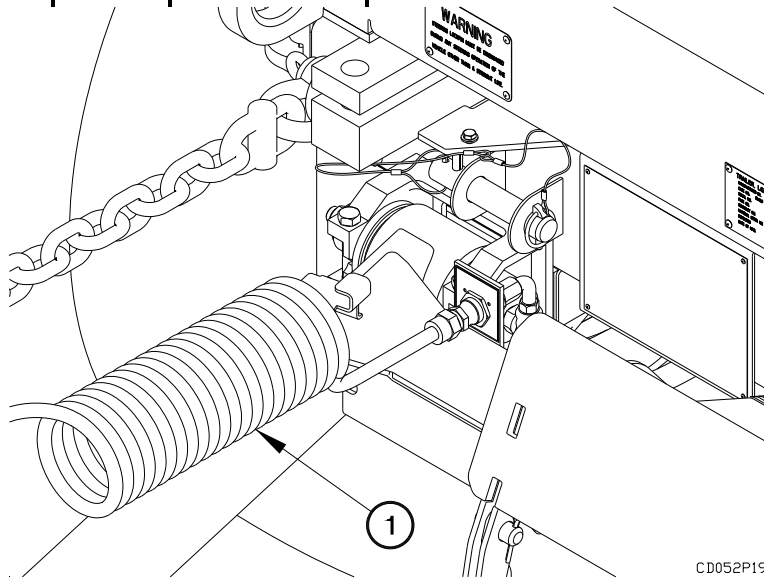
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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		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.



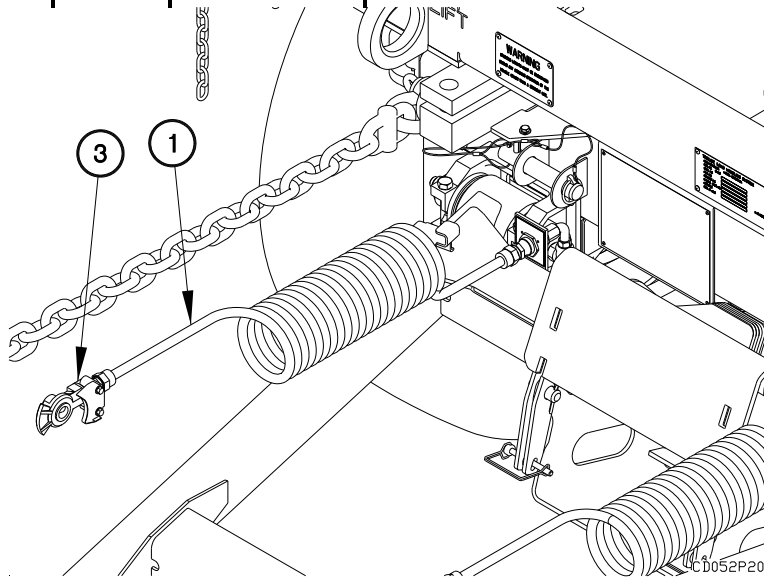
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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		LH and RH 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.



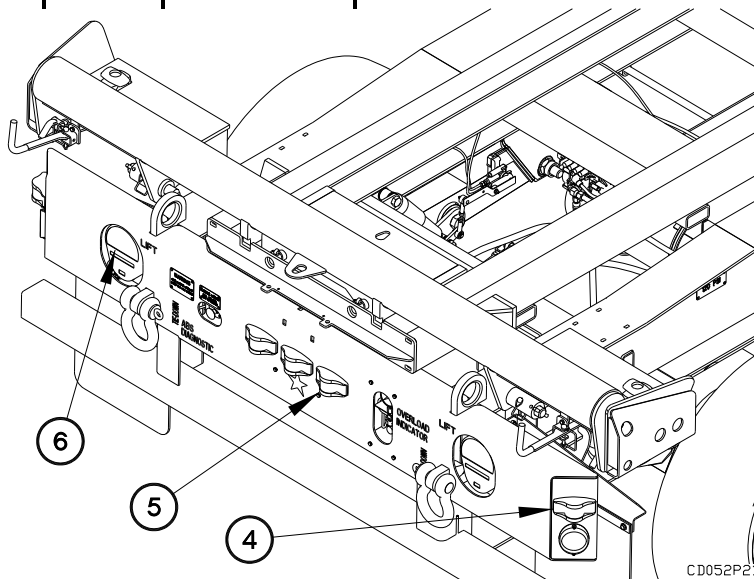
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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:
4	Weekly		Trailer Lights/ABS Diagnostic	<ol style="list-style-type: none"> 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.



CD052P21

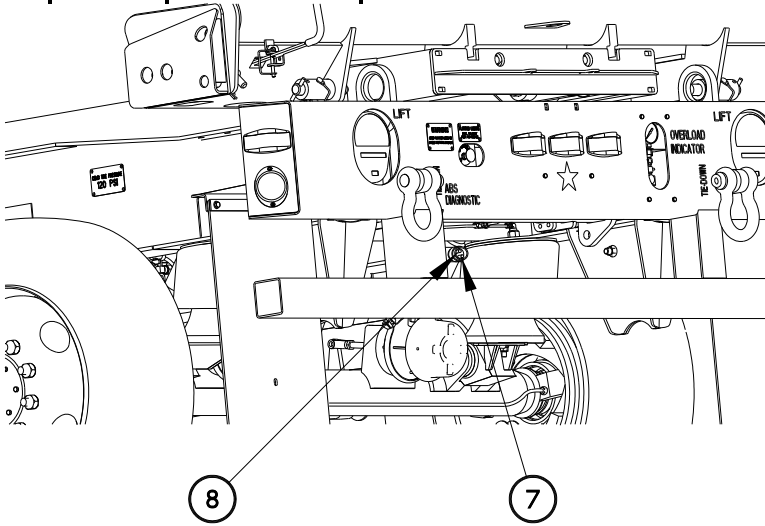
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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:
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).



CD052P22

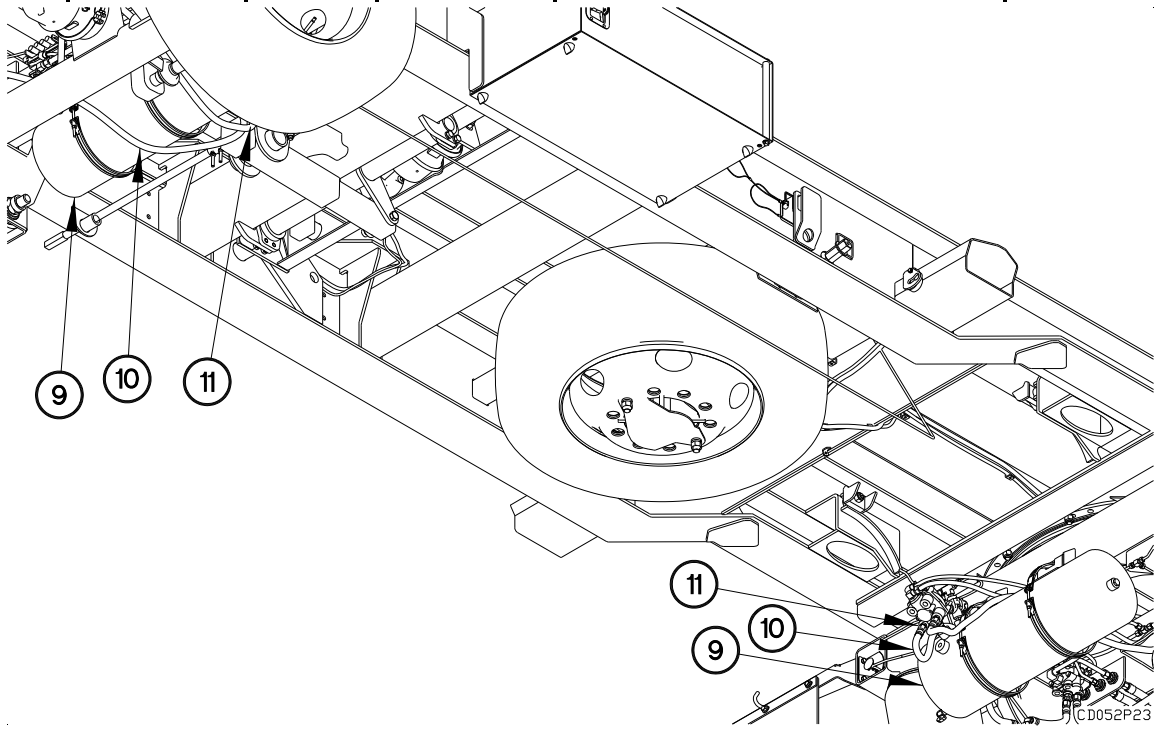
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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.



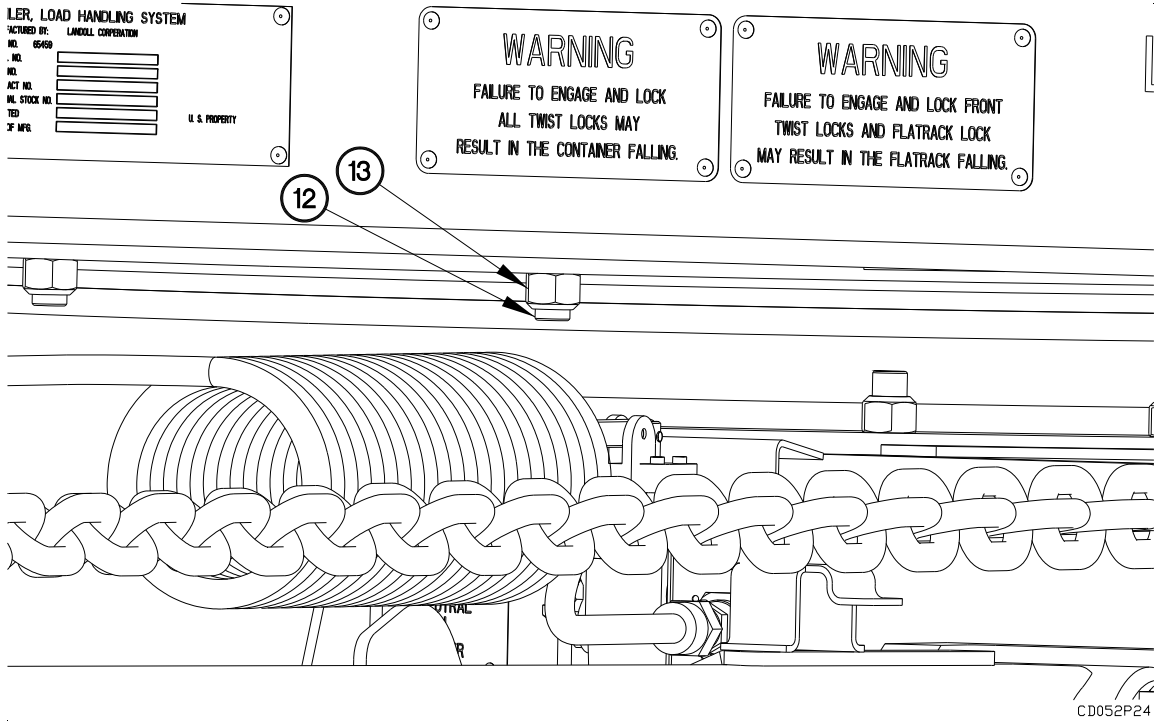
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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:
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.



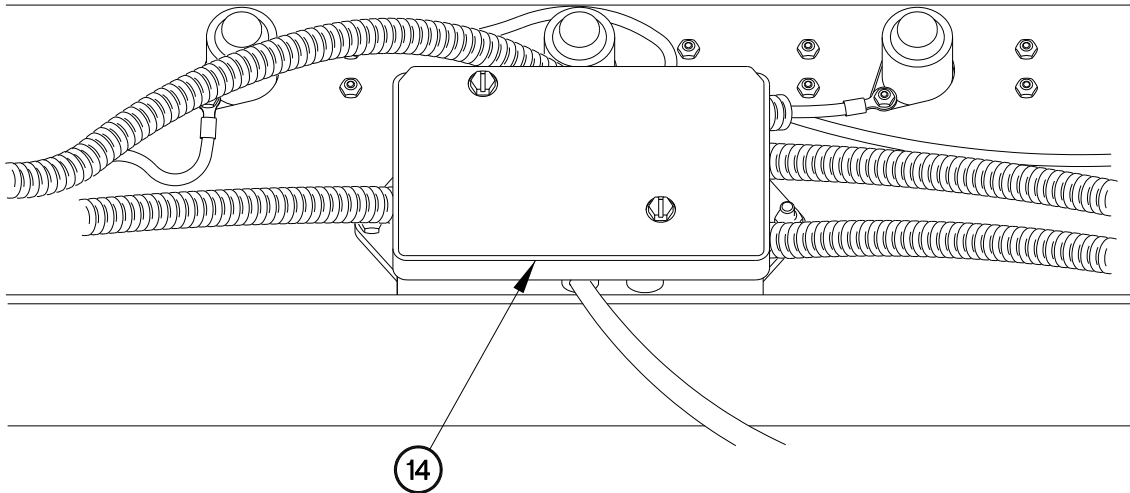
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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:
7	Weekly		Electrical Connectors	Check electrical connectors and covers (14) for damage.	Electrical connectors are damaged.



CD052P25

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
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.

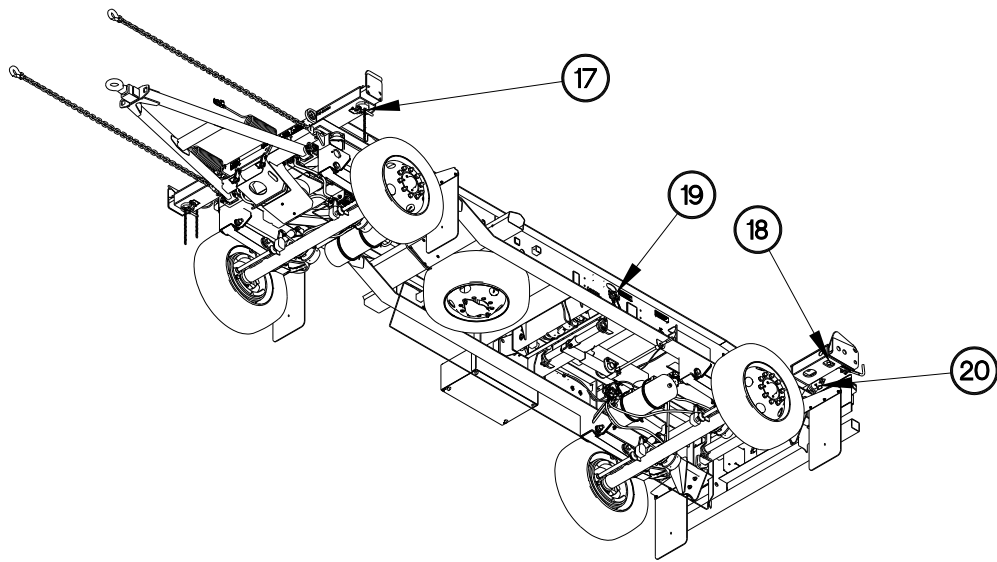
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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	<p>1. Inspect Twistlocks (17), Rockshaft Pivots (18), Lockpins (19), and Pivot pins (20) for damage.</p> <p>2. Clean and lubricate Twistlocks (17), Rockshaft Pivots (18), Lockpins (19), and Pivot Pins (20).</p> <p style="text-align: center;">Oil Can Points As Required</p> <p style="text-align: center;">Temperatures</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Above 40°F (4°C)</td> <td style="width: 33%;">40° to -15°F (4° to -26°C)</td> <td style="width: 33%;">-15° to -50°F (-26° to -46°C)</td> </tr> <tr> <td>WD-40</td> <td>WD-40</td> <td>WD-40</td> </tr> </table>	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	Damage is present.
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

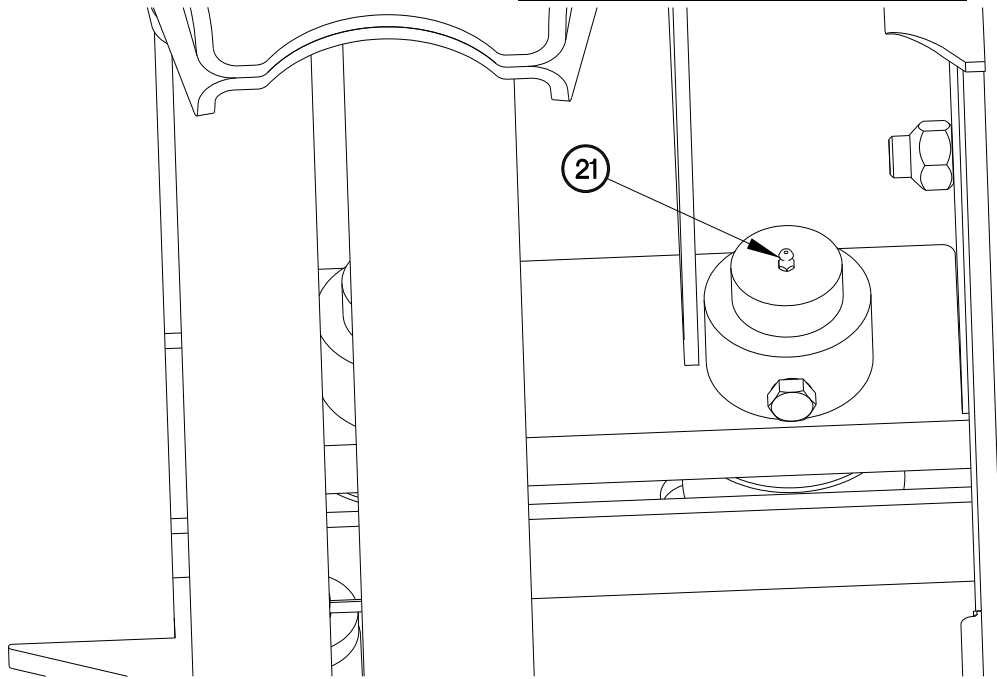
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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



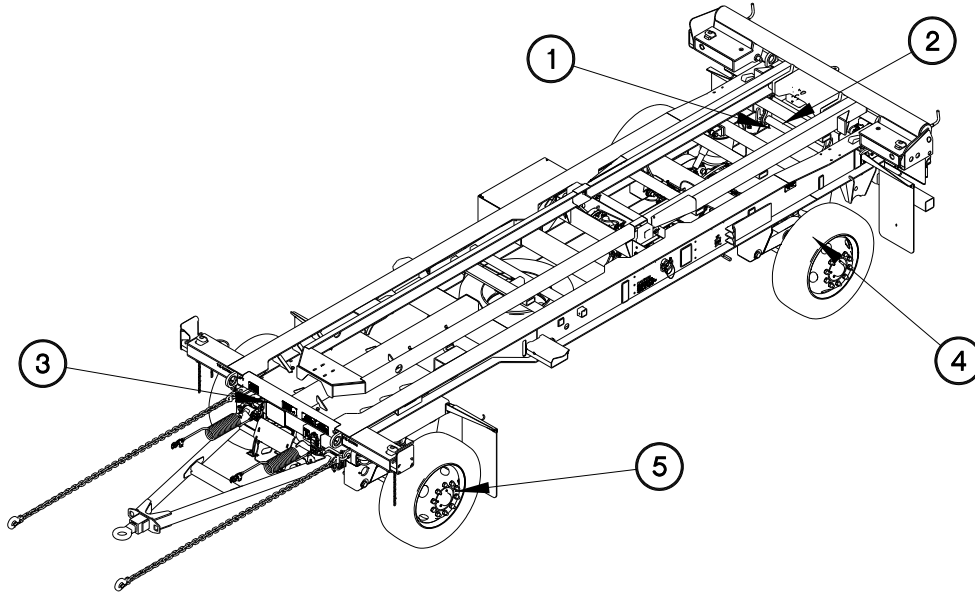
CD052P29

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Monthly PMCS Procedures for Trailer

These illustrations will help you perform MONTHLY trailer PMCS. The callouts match PMCS item numbers/procedures.



CD052P30

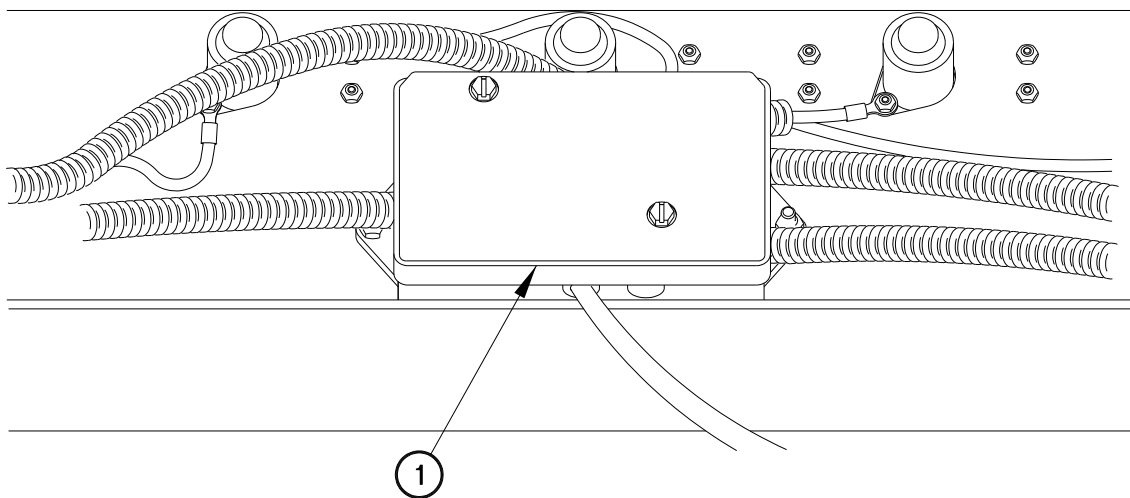
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

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	1. Check bolts, nuts, clamps, hoses, and tubes for looseness and missing, broken, or leaking conditions. 2. Tighten loose bolts, nuts, and clamps. 3. 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. 4. The following should be checked:	
2	Monthly		Electrical Connectors	Check electrical connectors and covers (1) for damage.	Electrical connectors are damaged.



CD052P31

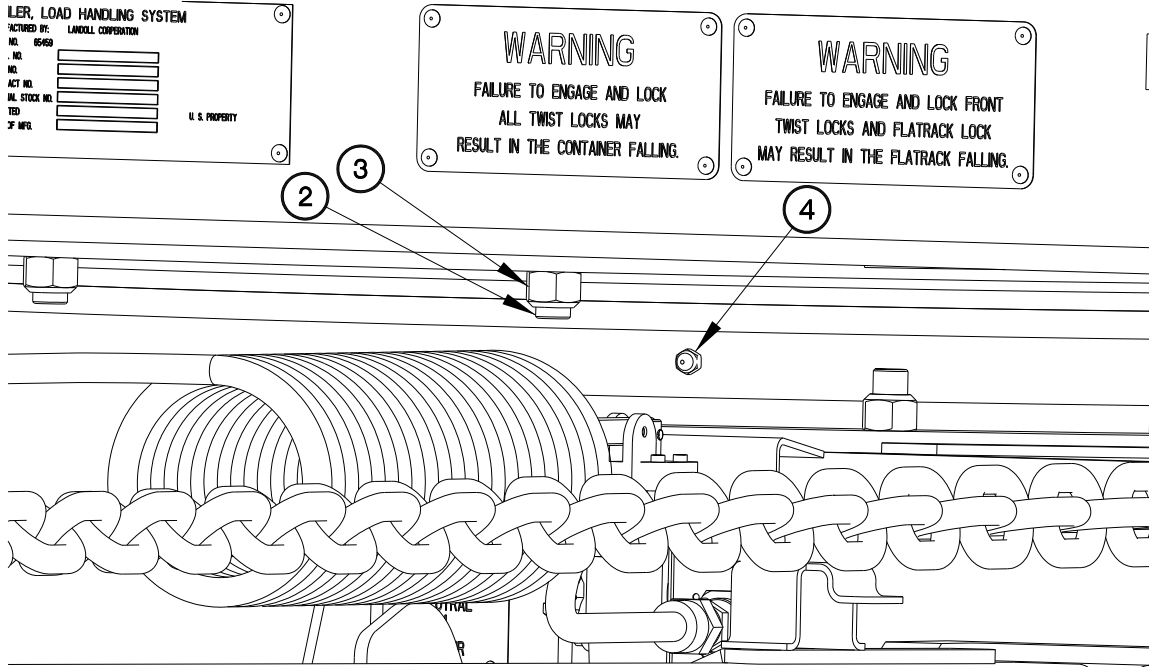
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Monthly PMCS Procedures for Trailer - Continued

Table 9. Preventive Maintenance Checks and Services (PMCS) - Monthly - Continued.

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.



ILLER, LOAD HANDLING SYSTEM
 MANUFACTURED BY: LANDOLL CORPORATION
 NO. 85450
 SER. NO. _____
 ACT. NO. _____
 INL. STOCK NO. _____
 TED. _____
 OF INFL. _____
 U. S. PROPERTY

WARNING
 FAILURE TO ENGAGE AND LOCK
 ALL TWIST LOCKS MAY
 RESULT IN THE CONTAINER FALLING.

WARNING
 FAILURE TO ENGAGE AND LOCK FRONT
 TWIST LOCKS AND FLATRACK LOCK
 MAY RESULT IN THE FLATRACK FALLING.

CD052P32

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

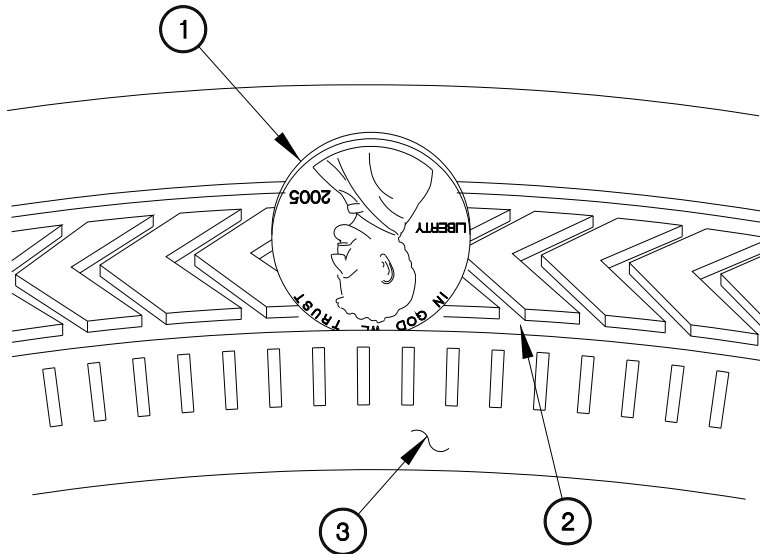
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Monthly PMCS Procedures for Trailer - Continued

Table 9. Preventive Maintenance Checks and Services (PMCS) - Monthly - Continued.

ITEM NO.	INTERVAL	MAN-HOUR	ITEM TO BE CHECKED OR SERVICED	CREWMEMBER PROCEDURE	EQUIPMENT NOT READY/ AVAILABLE IF:
4	Monthly	0.1	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.



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

CD052P33

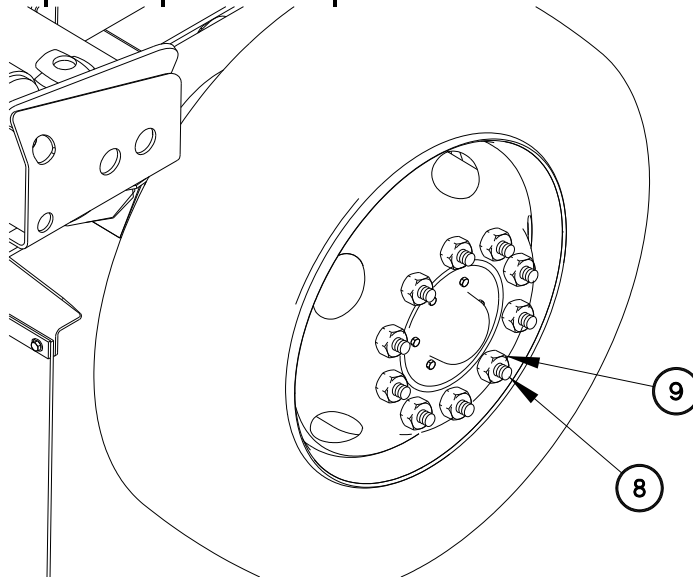
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Monthly PMCS Procedures for Trailer - Continued

Table 9. Preventive Maintenance Checks and Services (PMCS) - Monthly - Continued.

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	<p>2. Check wheel assembly for damage. If damaged, remove wheel and check wheel for cracked, broken, or bent surfaces.</p> <p>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.</p> <p>4. Check tire pressures with tire inflator/gage for 120 psi (cold).</p>	<p>Wheel is cracked, broken, or bent.</p> <p>Two or more studs (8) or nuts (9) on same wheel are missing, loose, or broken.</p>



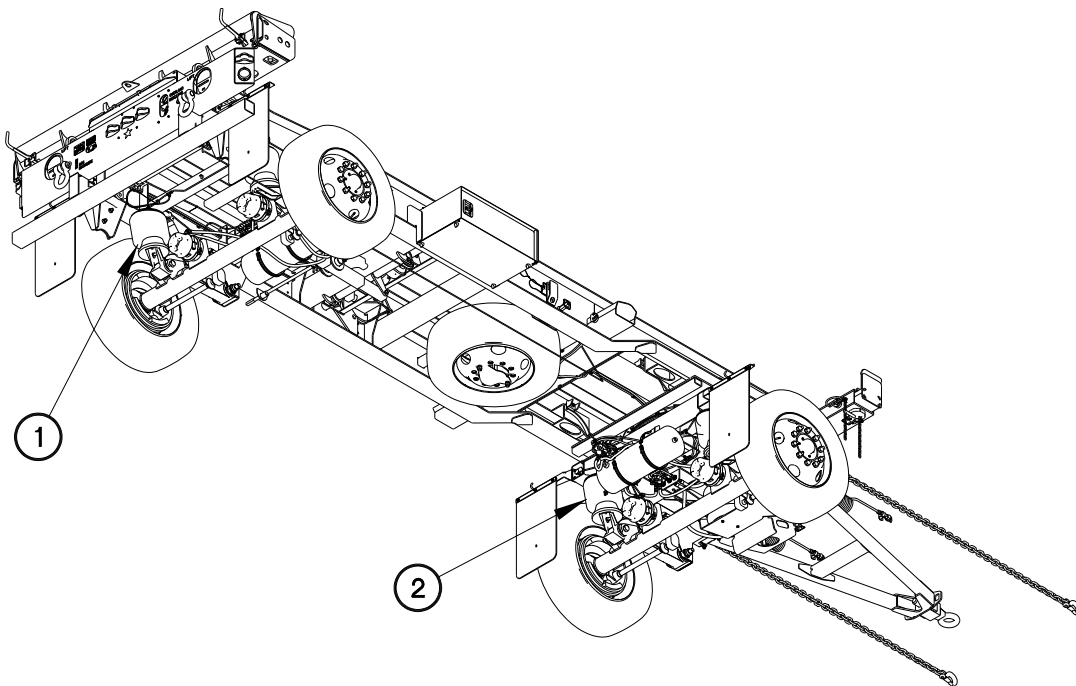
CD052P34

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

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.



C0052P35

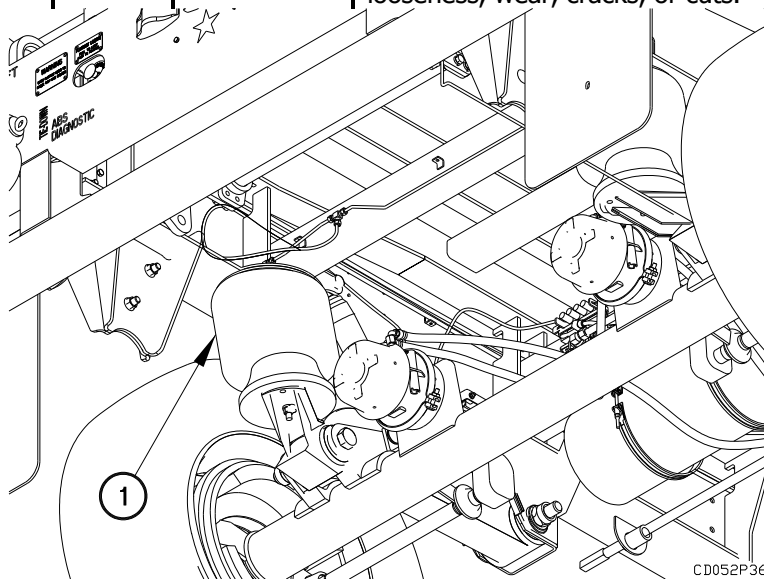
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Quarterly PMCS Procedures for Trailer - Continued

Table 10. 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.



C0052P36

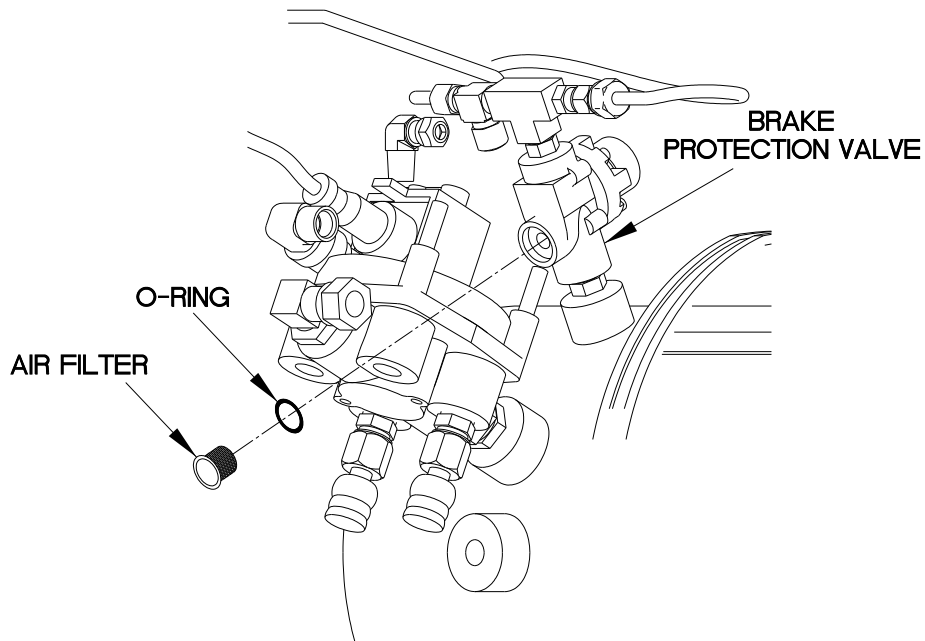
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Quarterly PMCS Procedures for Trailer - Continued

Table 10. Preventive Maintenance Checks and Services (PMCS) - Quarterly - Continued.

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.	



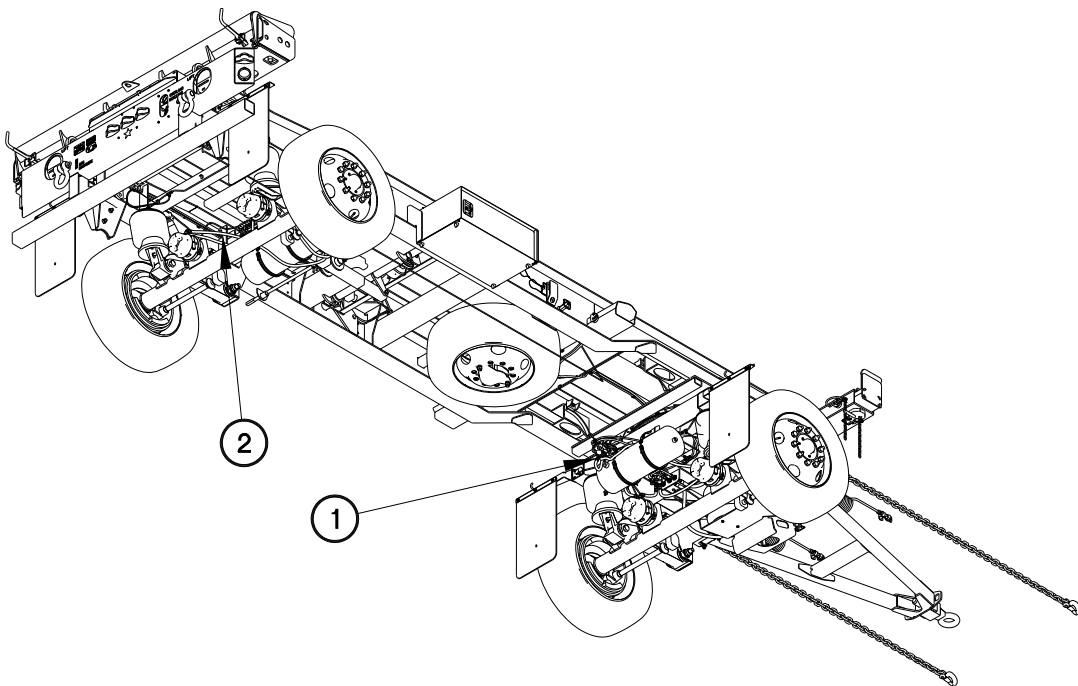
CD052P45

**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
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 (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Semiannual PMCS Procedures for Trailer (Field Level) - Continued

Table 11. 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.

The diagram shows a side view of the hydraulic system on a trailer. Callout 1 points to a relay valve assembly. Callout 2 points to a hose connected to the system. Callout 3 points to a fitting on the hose. The drawing includes various components like the hydraulic pump, reservoir, and lines.

CD052P38

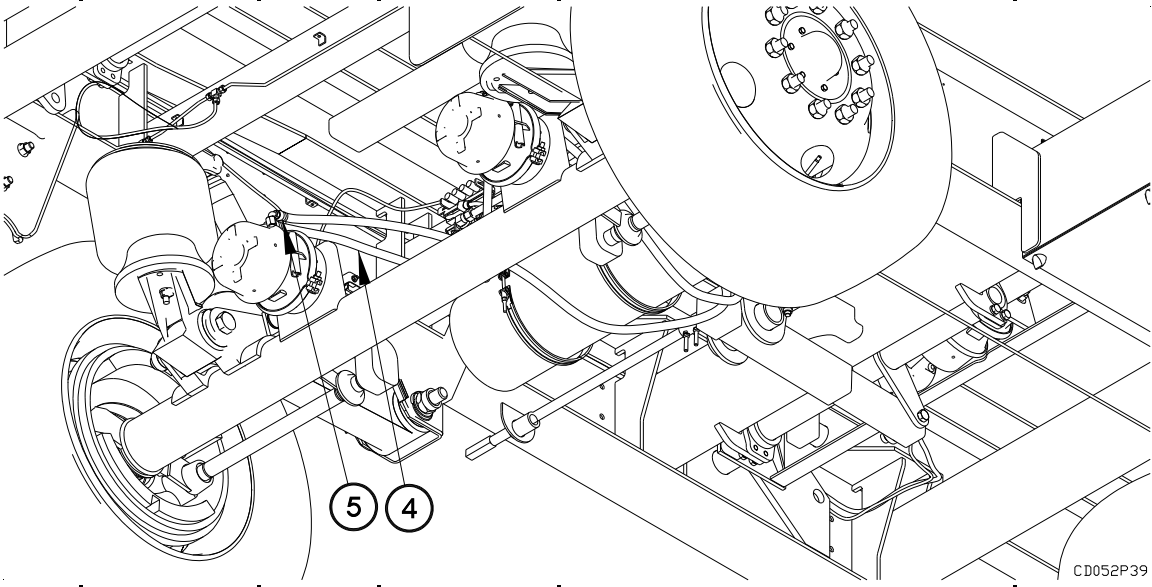
**PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)
INCLUDING LUBRICATION INSTRUCTIONS - Continued**

0052 00

Semiannual PMCS Procedures for Trailer (Field Level) - Continued

Table 11. Preventive Maintenance Checks and Services (PMCS) - Semiannual (Field Level) - Continued.

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.



CD052P39

CHANGING/SERVICING SPARE TIRE

0053 00**THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

INITIAL SETUP:**Maintenance Level**

Operator

Personnel

Two

Tools and Special Tools

Inflator, Gage (Item 9, WP 0167 00)
Jack, Dolly Type, Hydraulic (Item 10, WP
0167 00)
Wrench, Lug (Item 6, WP 0164 00)
Wheel Chock (2) (Item 2, WP 0164 00)

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.

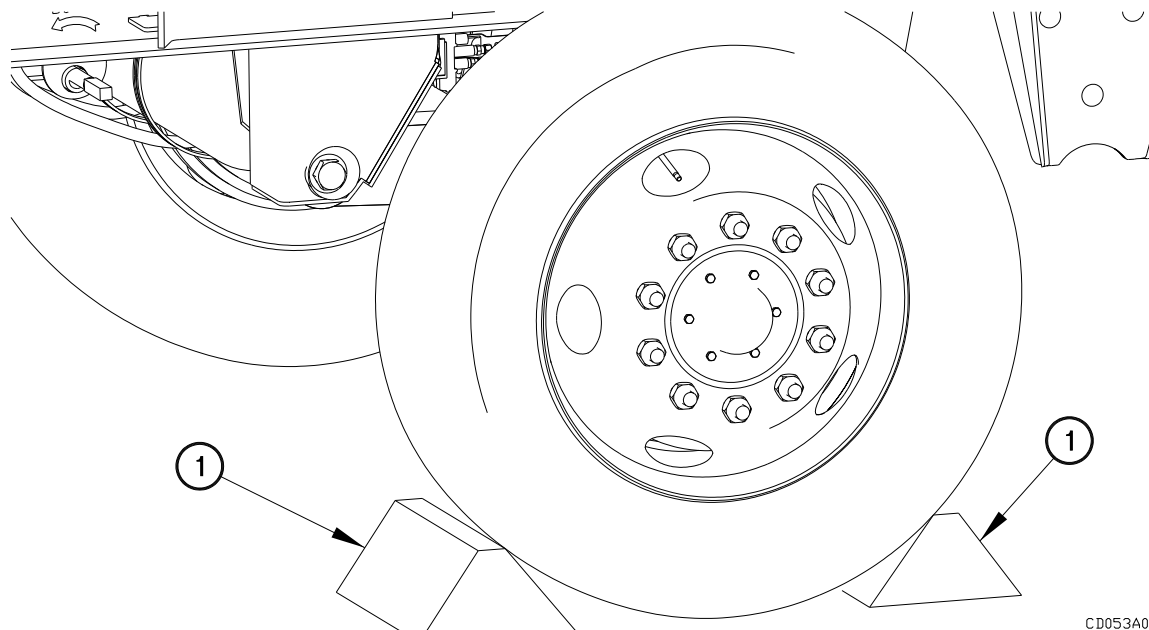
LOWER SPARE TIRE

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.

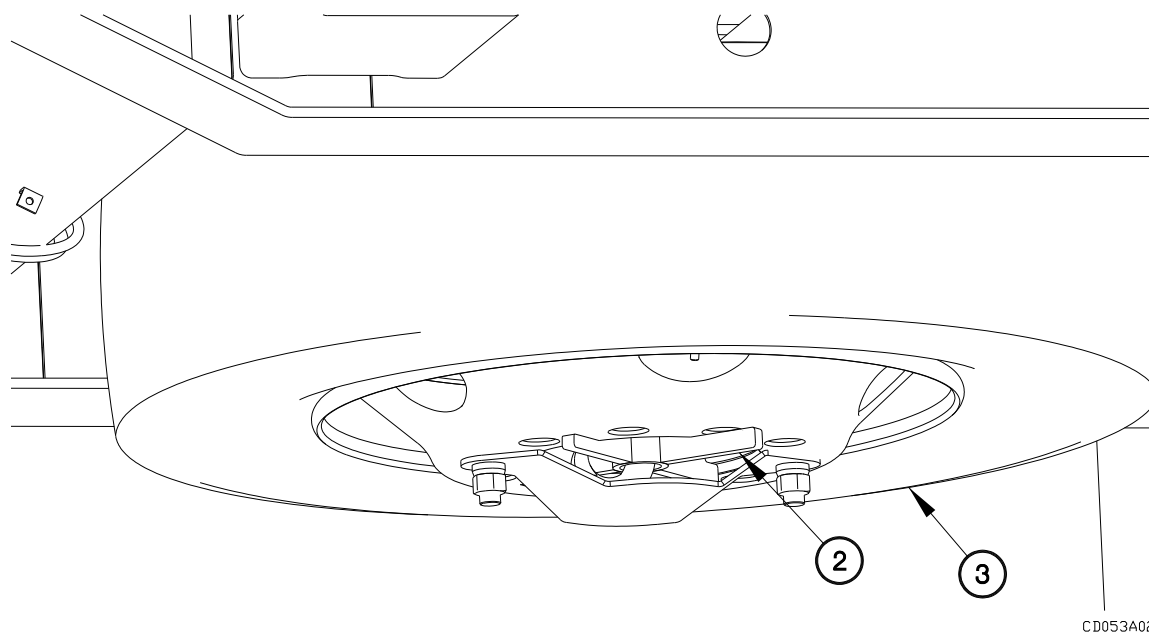
LOWER SPARE TIRE - Continued

1. Install two wheel chocks (1) on tire opposite side of flat tire.



CD053A01

2. Check that lift bracket (2) is in place on spare tire (3).



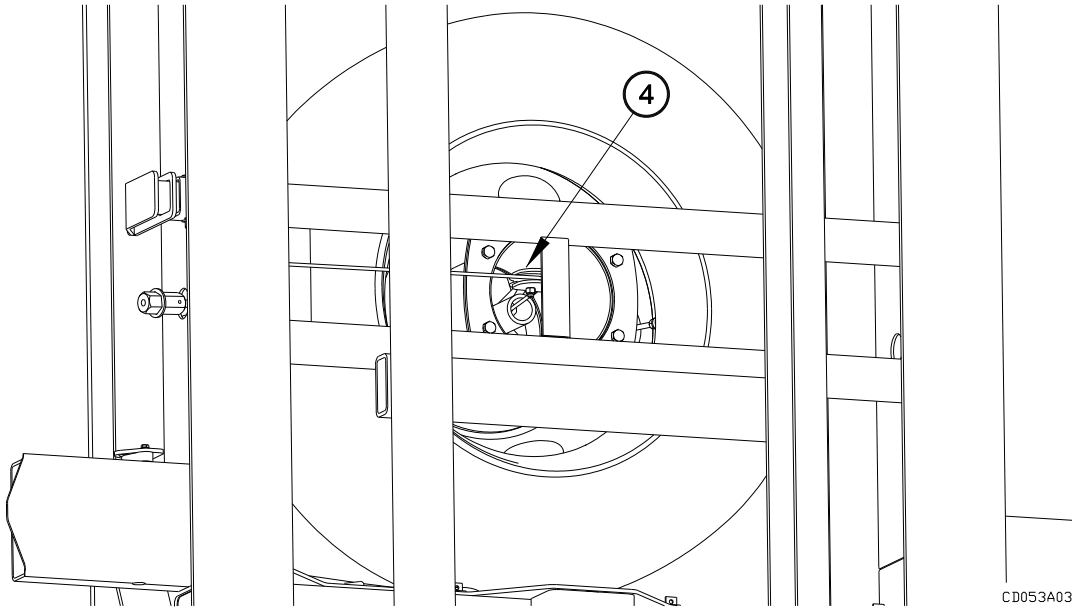
CD053A02

LOWER SPARE TIRE - Continued

WARNING

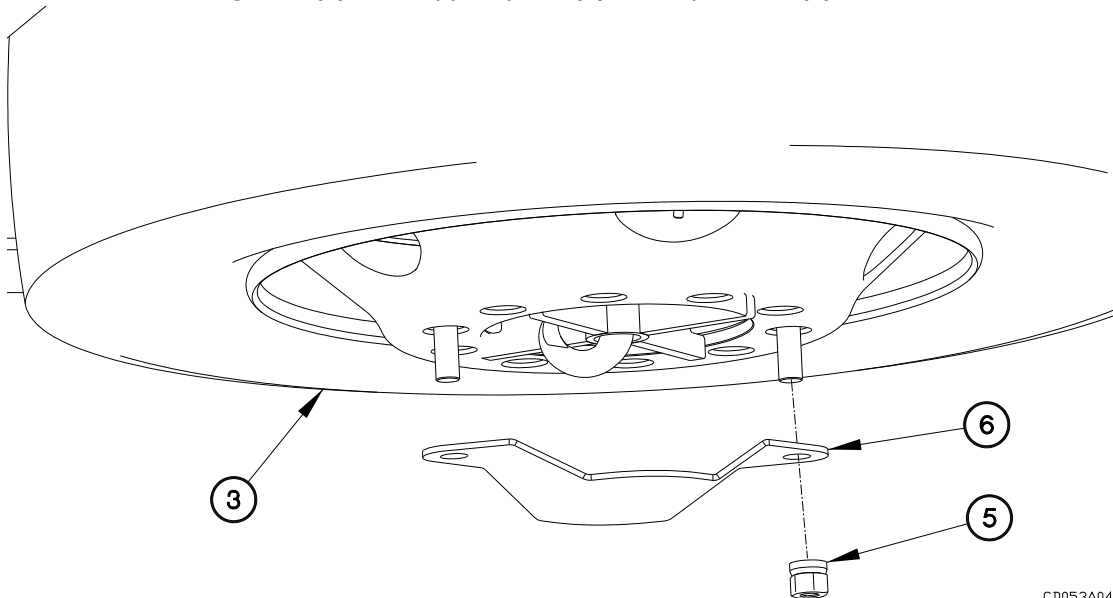
Wear heavy leather-palmed work gloves when handling cable. Cables can become frayed or contain broken wires. Never let moving cable slide through hands, even when wearing gloves. Failure to comply may result in injury to personnel.

3. Check that winch cable (4) is snug.



CD053A03

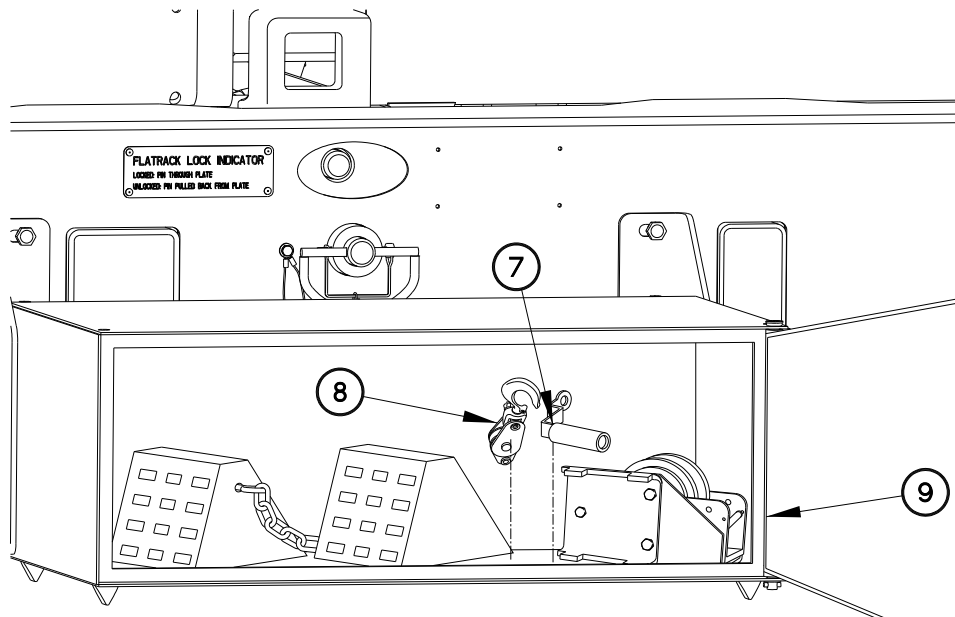
4. Remove two lug nuts (5) and support plate (6) from spare tire (3).



CD053A04

LOWER SPARE TIRE - Continued

5. Remove winch crank (7) and snatch block (8) from tool box (9).



CD053A05

LOWER SPARE TIRE - Continued

6. Install winch crank (7) on rod (10).

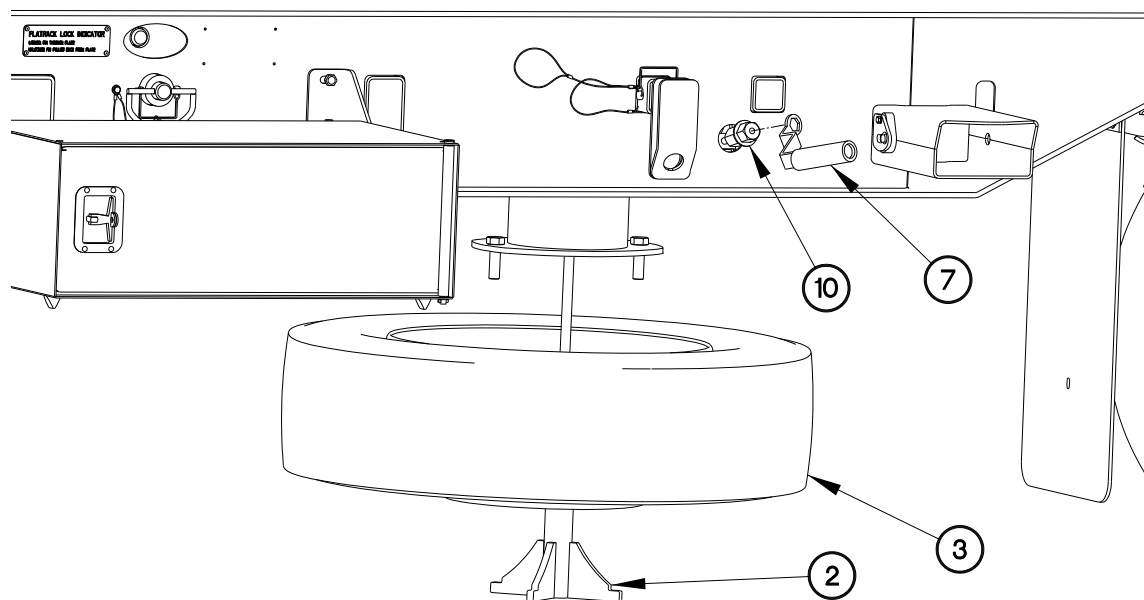
WARNING

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.

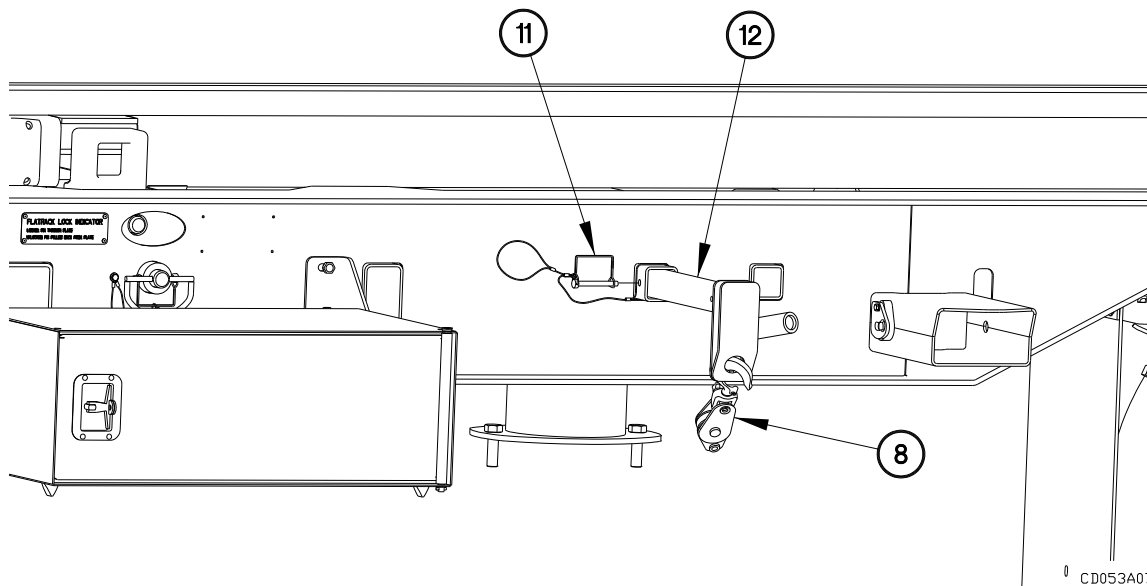
7. Turning winch crank (7) counter-clockwise, lower spare tire (3) to ground.
8. Remove lift bracket (2) from spare tire (3).



CD053A06

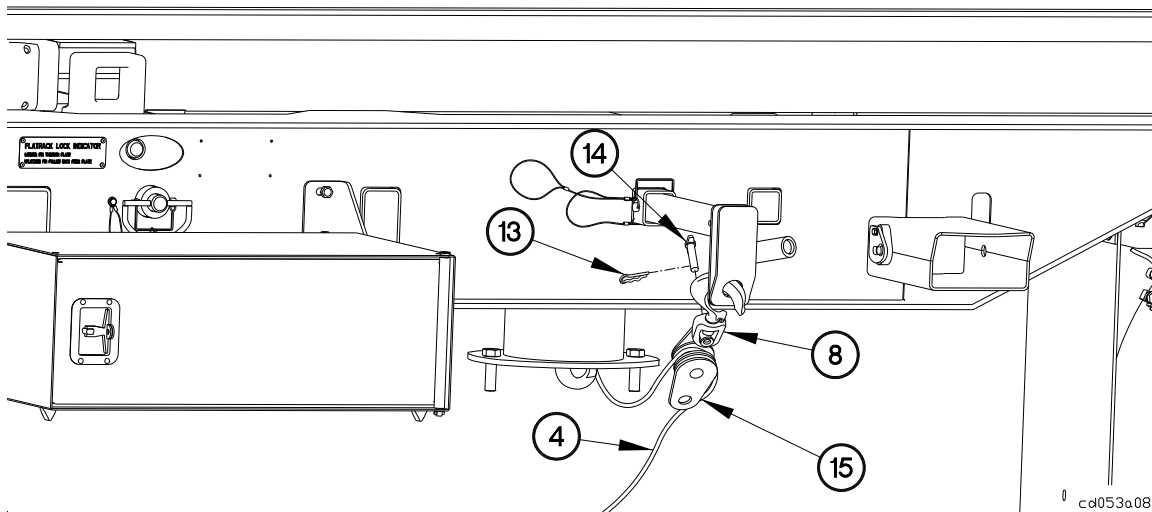
LOWER SPARE TIRE - Continued

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).



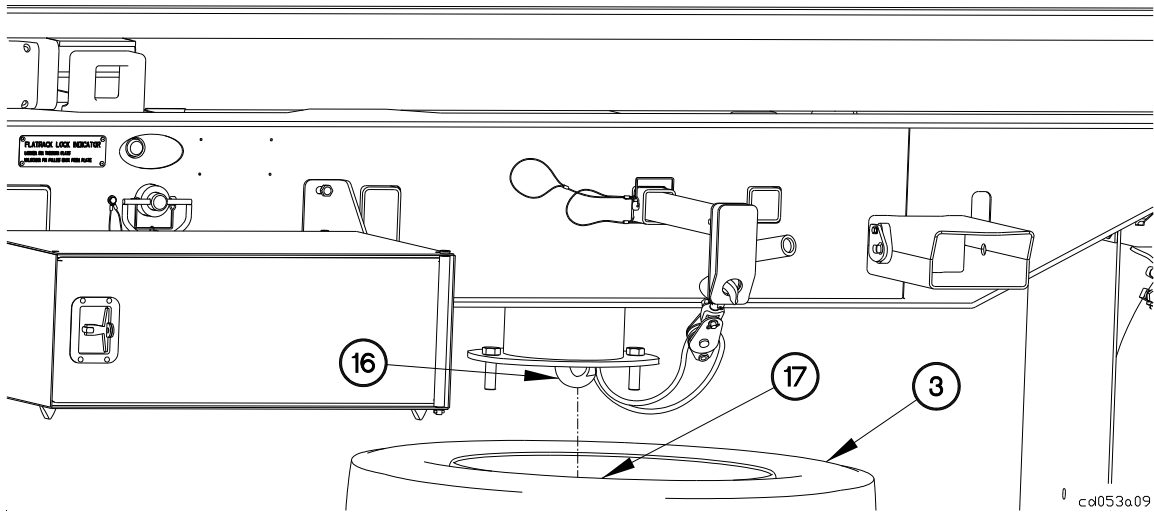
LOWER SPARE TIRE - Continued

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).



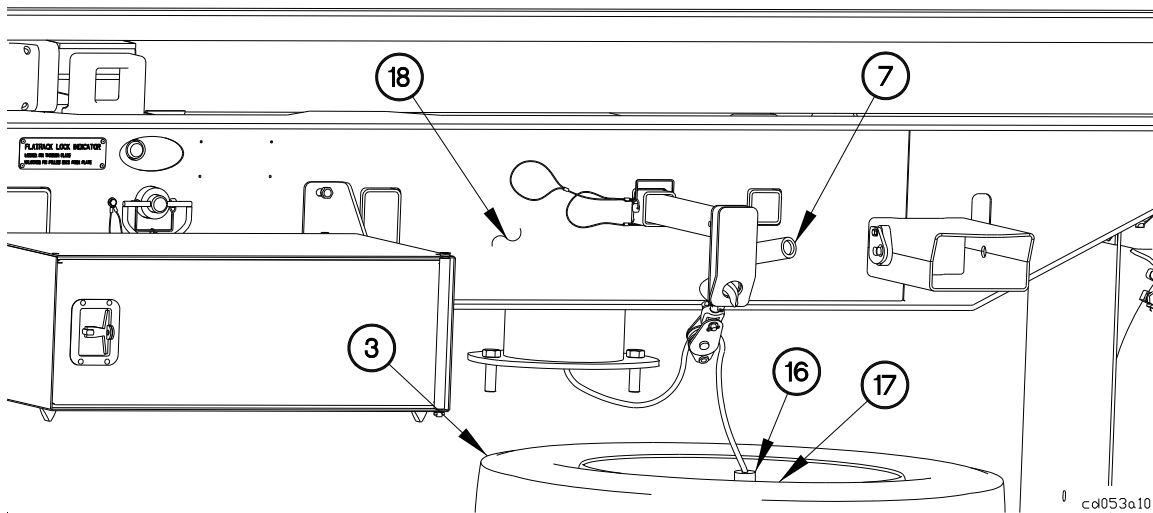
LOWER SPARE TIRE - Continued

18. Install hook (16) on mounting hole (17) on spare tire (3).



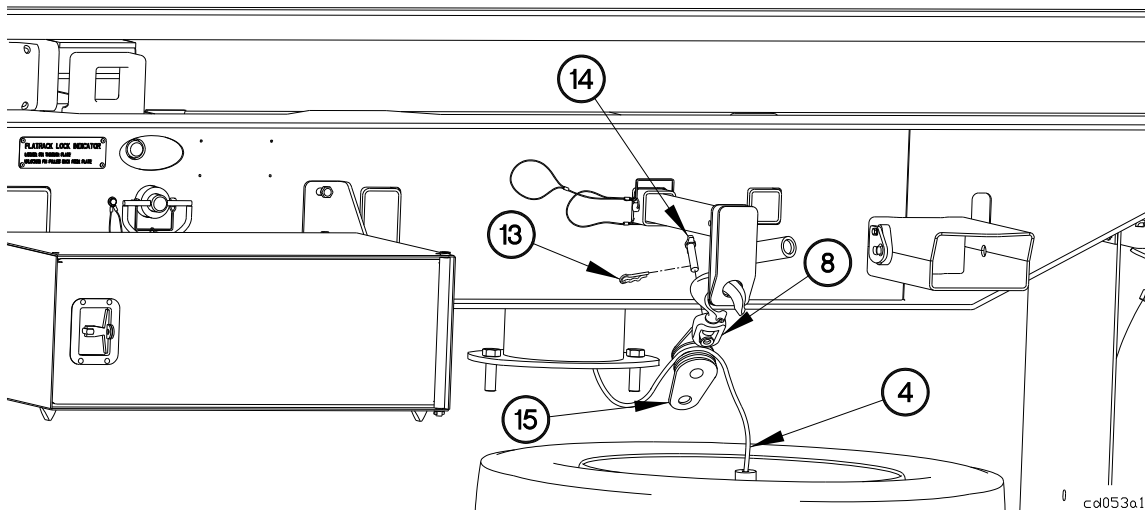
19. Turning winch crank (7) clockwise, remove spare tire (3) from under trailer (18).

20. Remove hook (16) from mounting hole (17) on spare tire (3).



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).

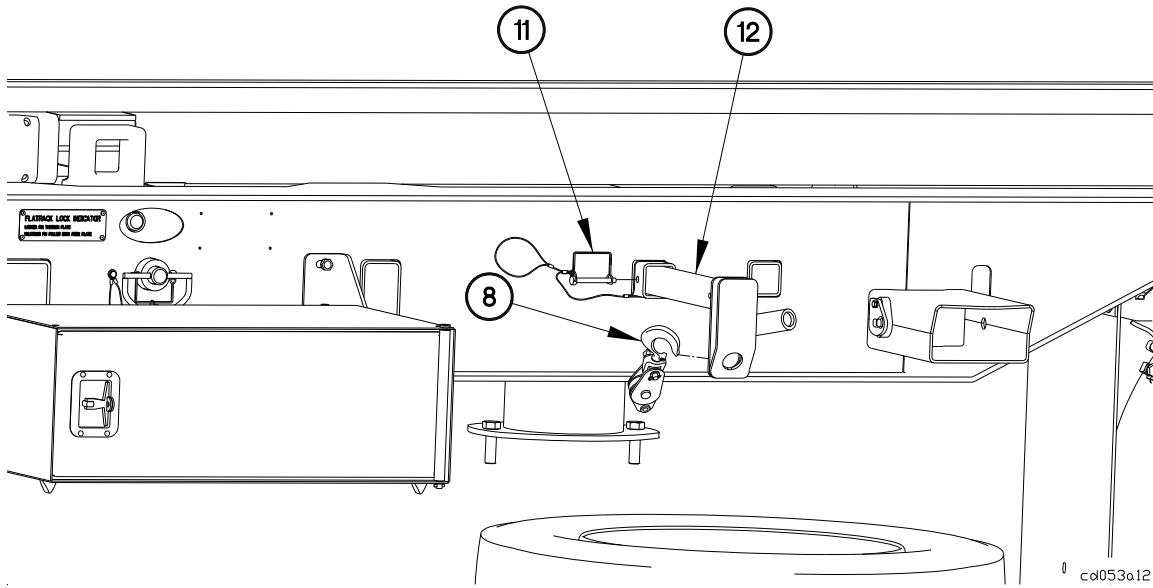


CHANGING/SERVICING SPARE TIRE – Continued

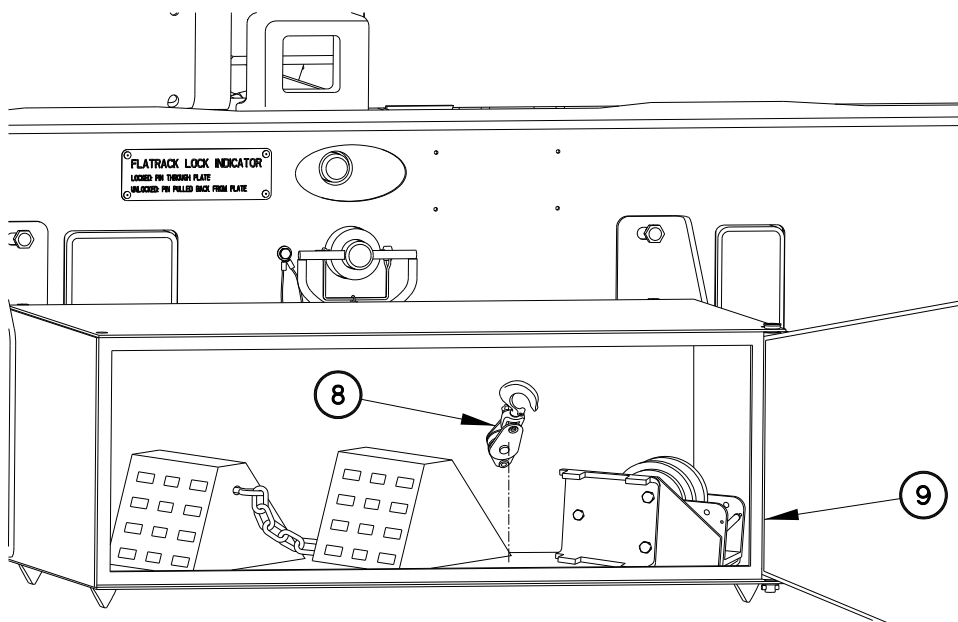
0053 00

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).

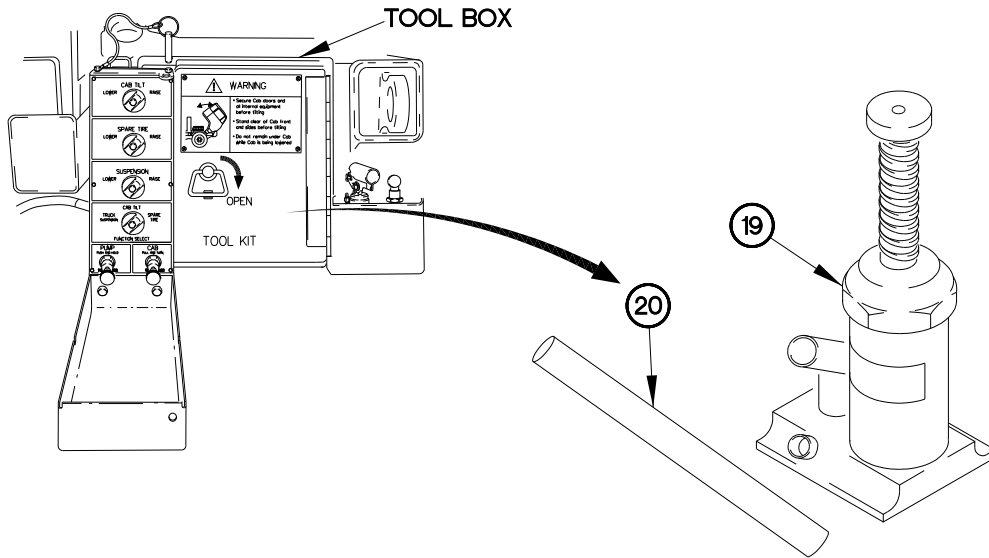


TIRE REMOVAL

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.**

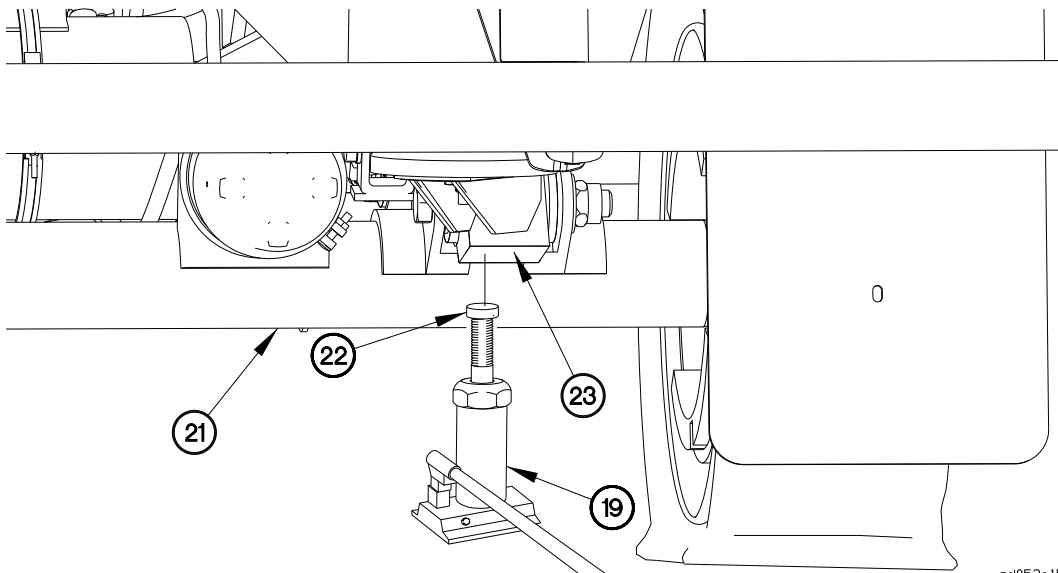
1. Remove jack (19) and handle (20) from tool box of towing vehicle.



c0053a14

2. Position jack (19) under axle (21).

3. Unscrew jack ram (22) until it touches air bag bracket (23) on axle (21).



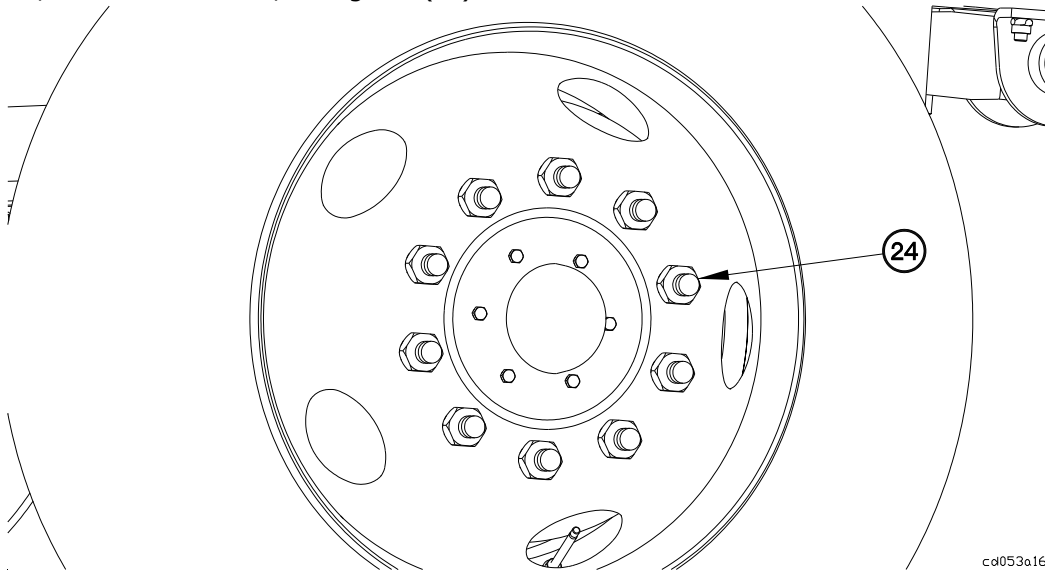
c0053a15

TIRE REMOVAL- Continued

NOTE

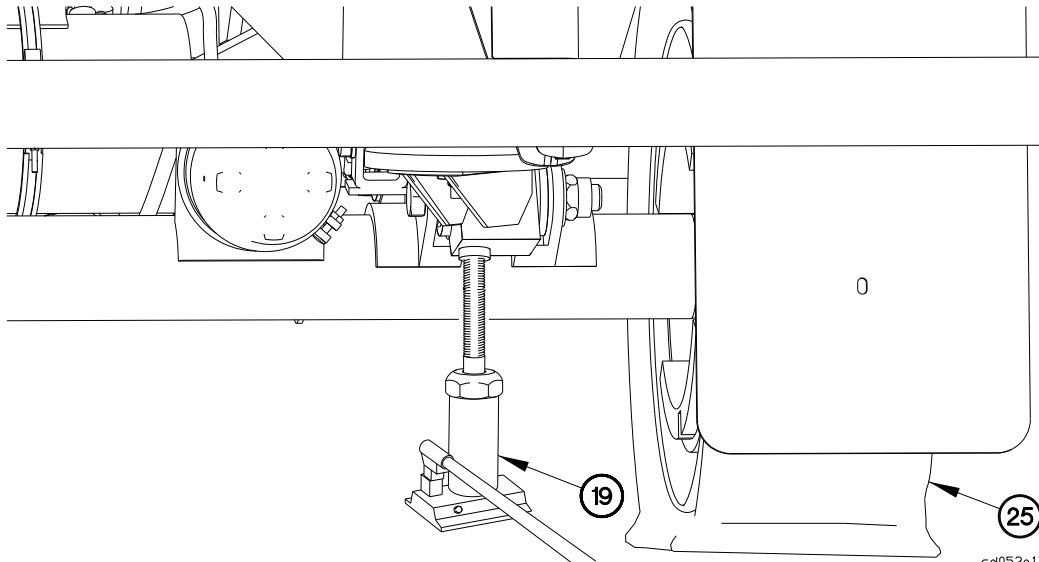
- All tires are removed the same way.
- Wheel stud and lugnuts on left side of trailer have left-hand threads. Rotate lugnuts clockwise to loosen, counterclockwise to tighten.
- Wheel studs and lugnuts on right side of trailer have right-hand threads. Rotate lugnuts counterclockwise to loosen, clockwise to tighten.

4. Loosen, but do not remove, 10 lugnuts (24).



cd053a16

5. Raise jack (19) until flat tire (25) is off ground.



cd053a17

TIRE REMOVAL - Continued**WARNING**

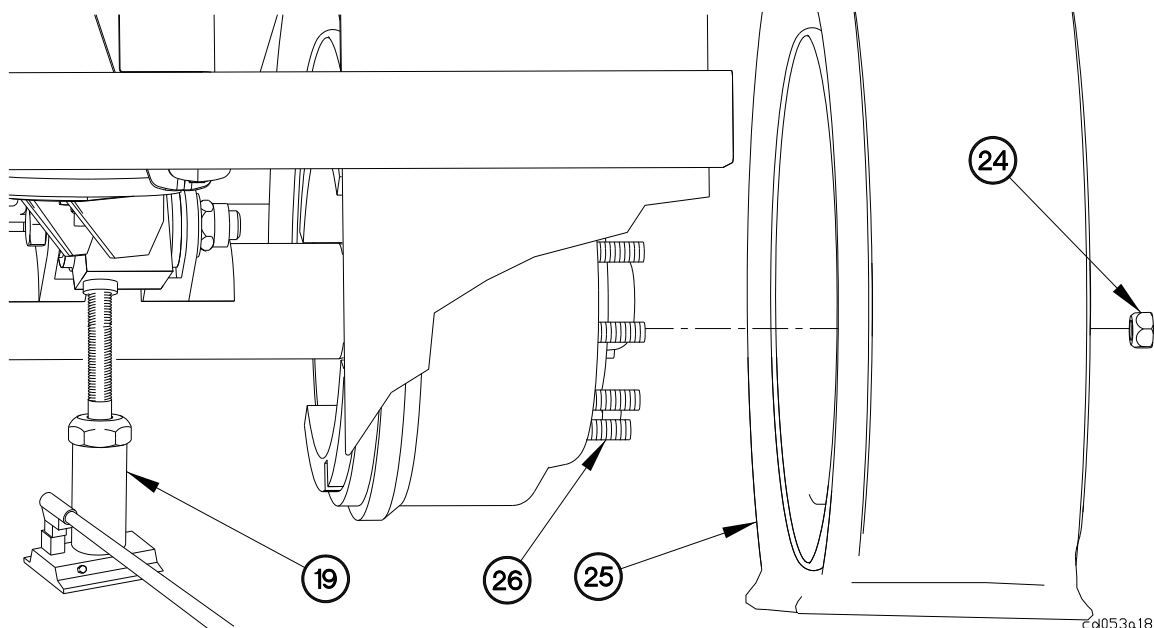
Tire weighs approximately 100 lbs (45 kgs). Use caution when handling tire. Failure to comply may result in injury to personnel.

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.

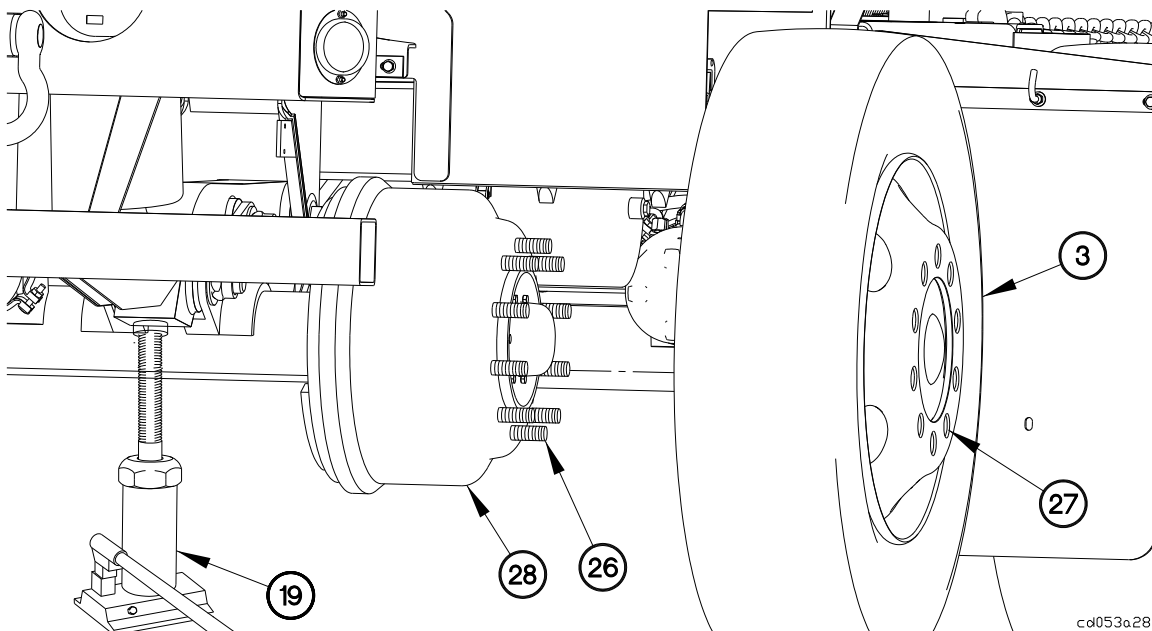
8. Pull top of flat tire (25) outward while assistant raises jack (19) slightly.
9. Remove flat tire (25) from wheel studs (26).



TIRE INSTALLATION**NOTE**

- Steps (1) through (5) require the aid of an assistant.
- All tires are installed the same way. Rear tire installation is 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).



TIRE INSTALLATION - Continued**WARNING**

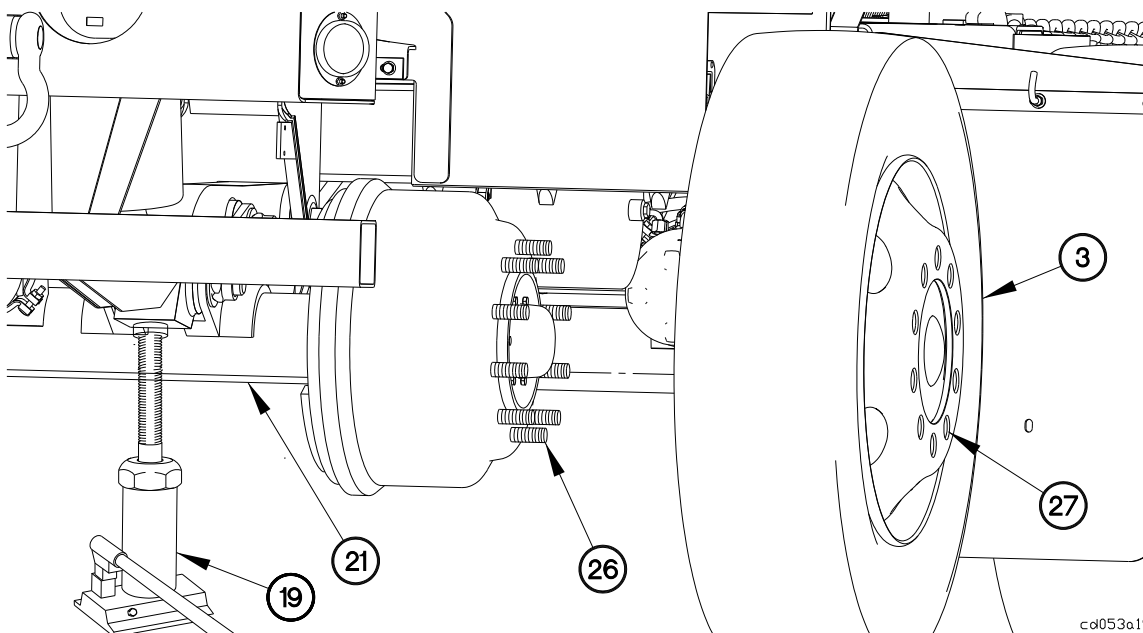
Tire weighs approximately 100 lbs (45 kgs). Use caution when handling tire. Failure to comply may result in injury to personnel.

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

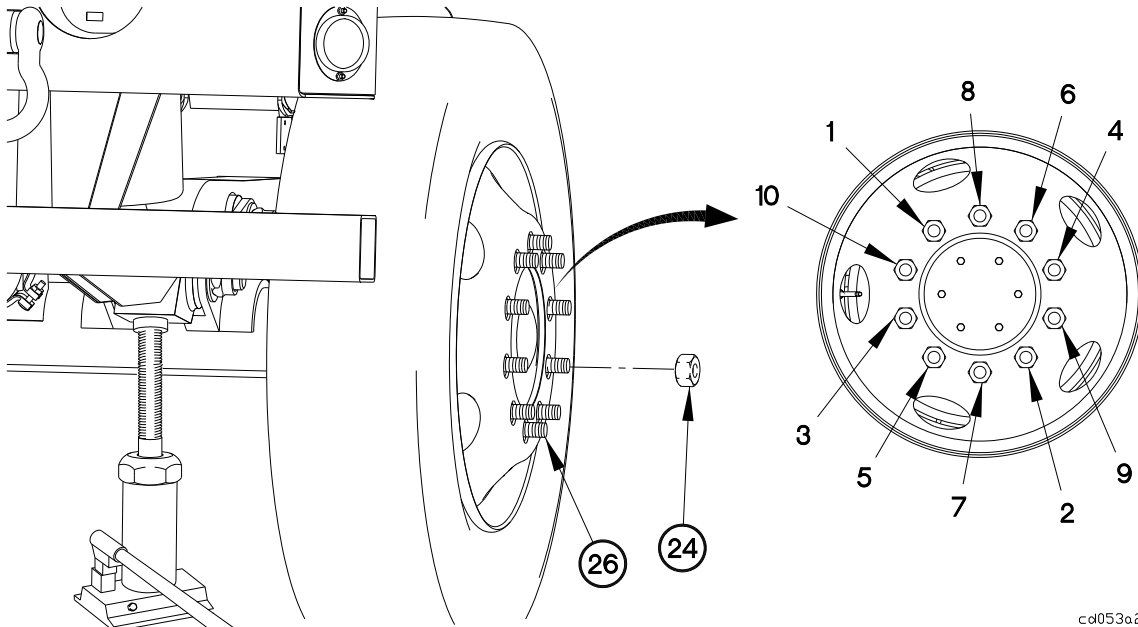
WARNING

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.

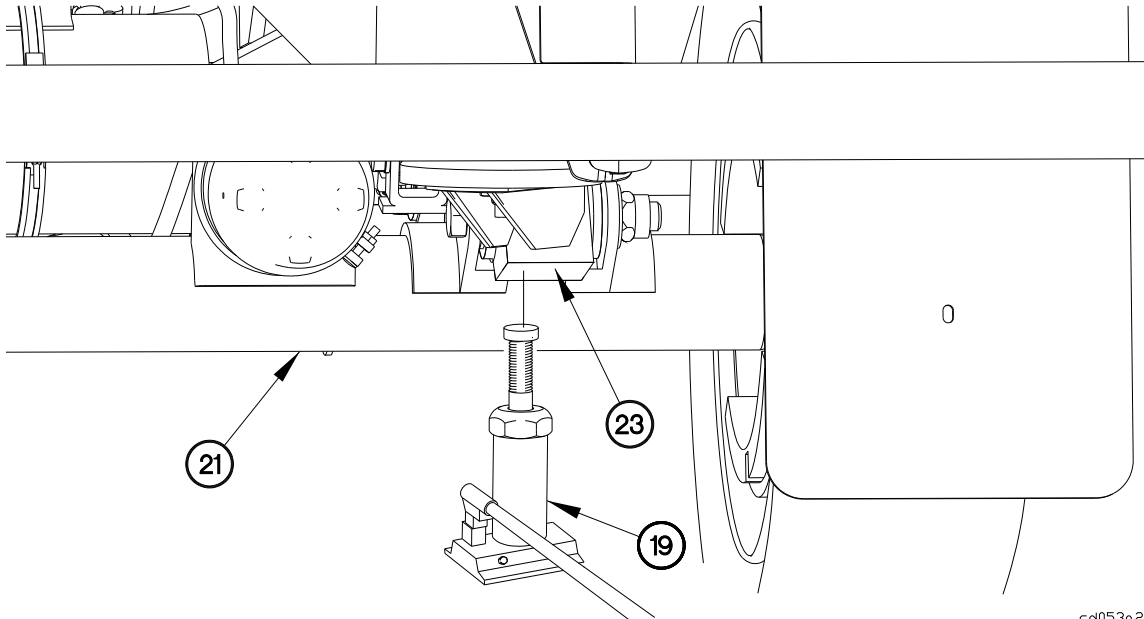


c-d053a20

TIRE INSTALLATION - Continued**WARNING**

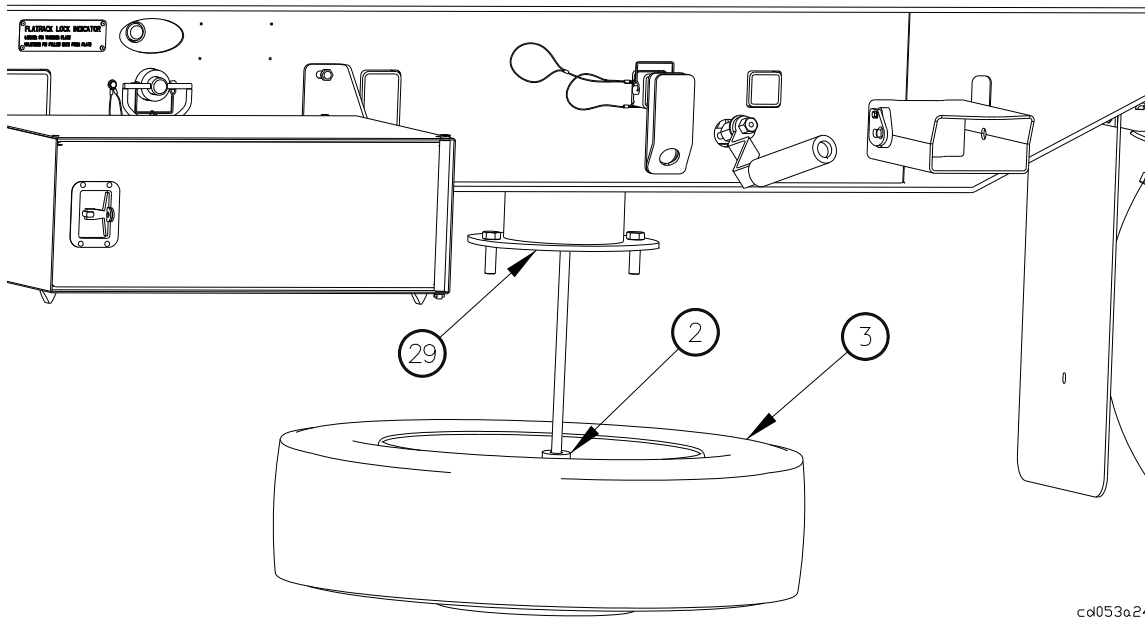
Ensure lugnuts are tightened fully before operation of trailer. Failure to comply may result in serious injury or death to personnel.

7. Lower trailer to ground with jack (19).
8. Remove jack (19) from air bag bracket (23) on axle (21).



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.



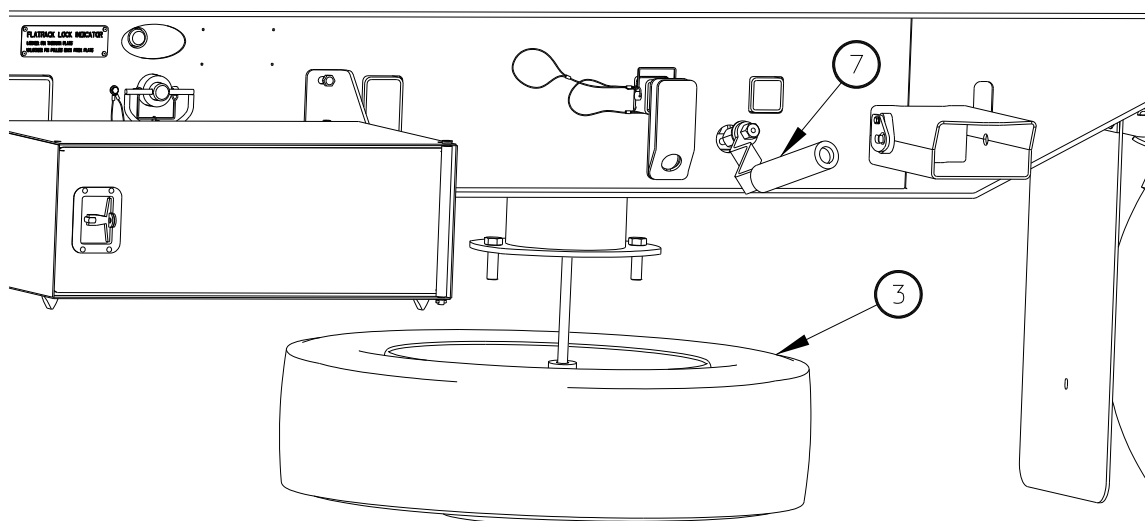
RAISE SPARE TIRE - Continued**WARNING**

Have an assistant hold the tire level while raising it 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).



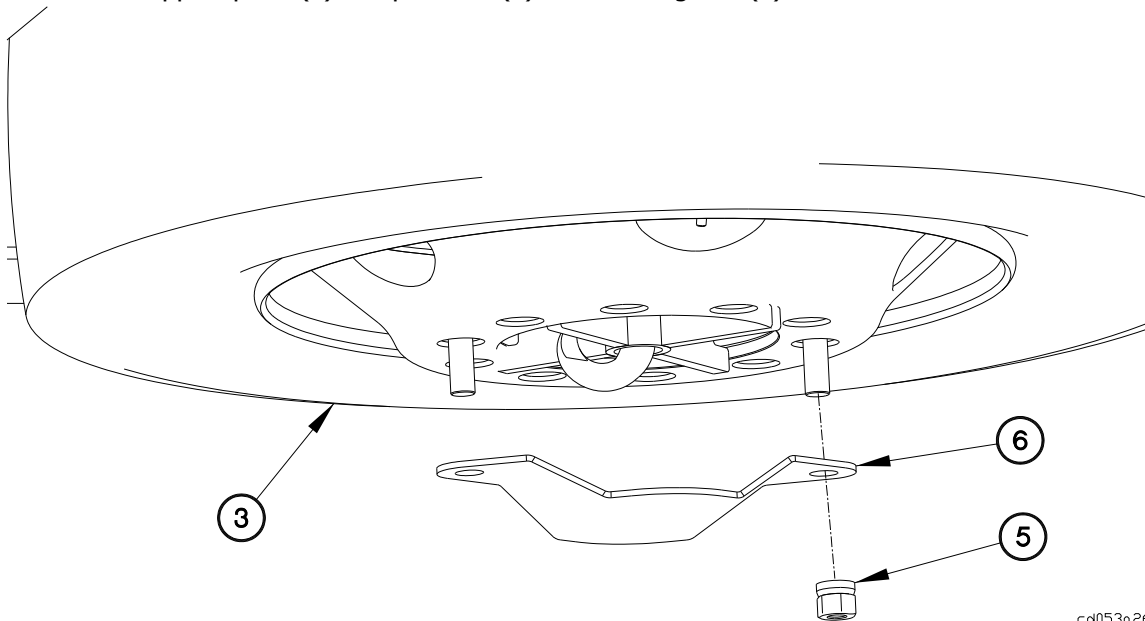
cd053a25

RAISE SPARE TIRE - Continued

WARNING

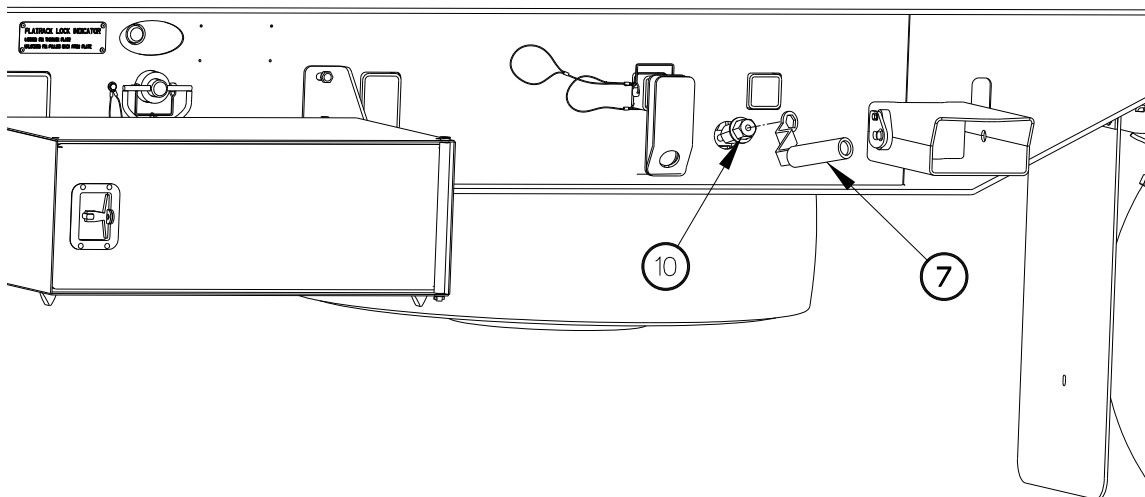
Notify Field Level Maintenance that lugnuts must be tightened to 290-350 lb-ft (393-475 N·m) as soon as possible. Wheel may come loose if lugnuts are not tightened to proper torque. Failure to comply may result in serious injury or death to personnel.

4. Install support plate (6) on spare tire (3) with two lugnuts (5).



c0053a26

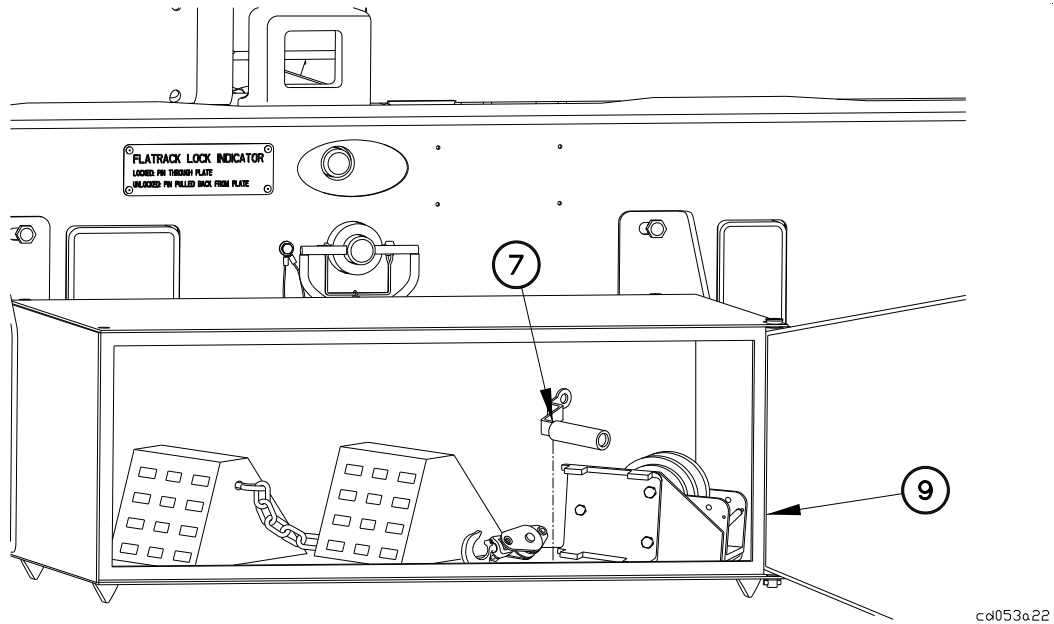
5. Remove winch crank (7) from rod (10).



c0053a27

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

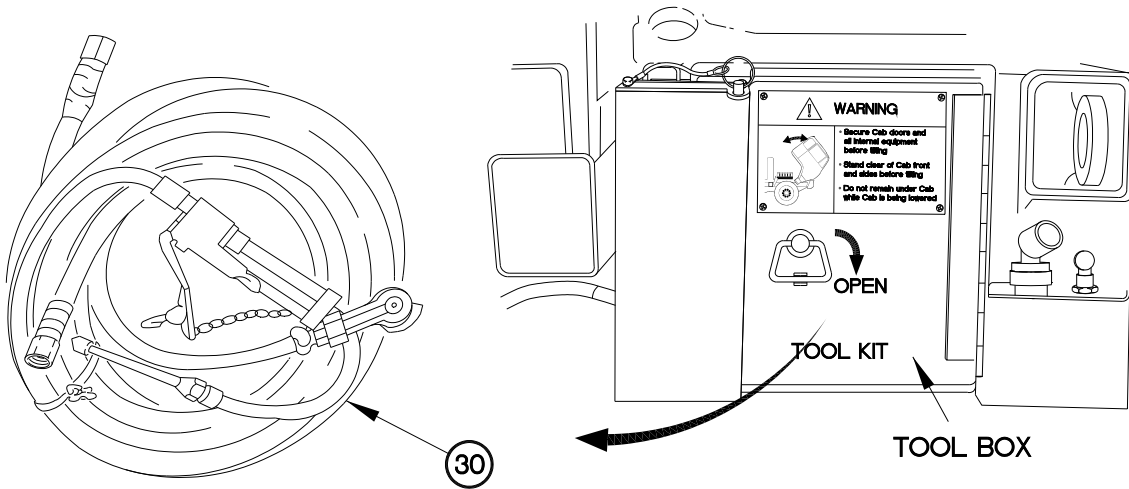
WARNING

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.

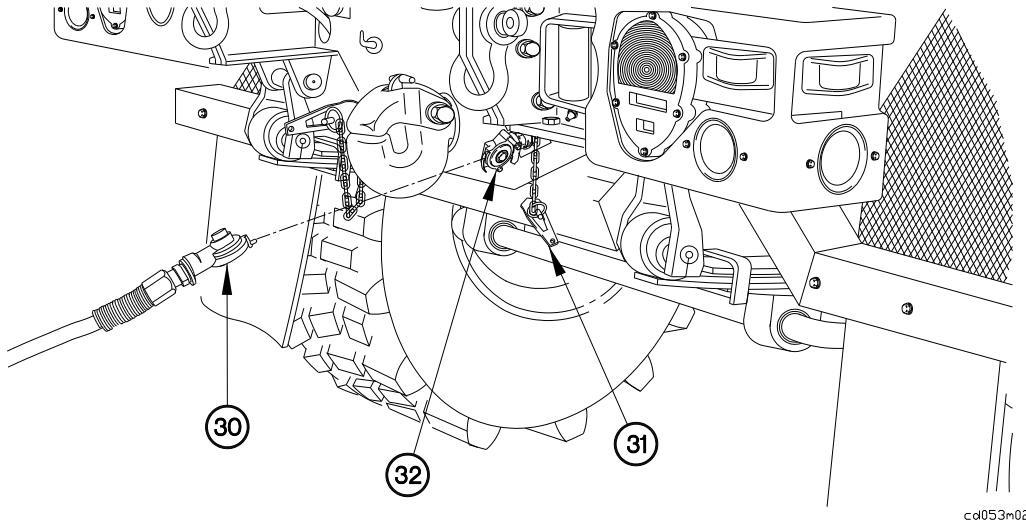
1. Remove tire inflator-gage with hose (30) from tool box.



cd053m01

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).

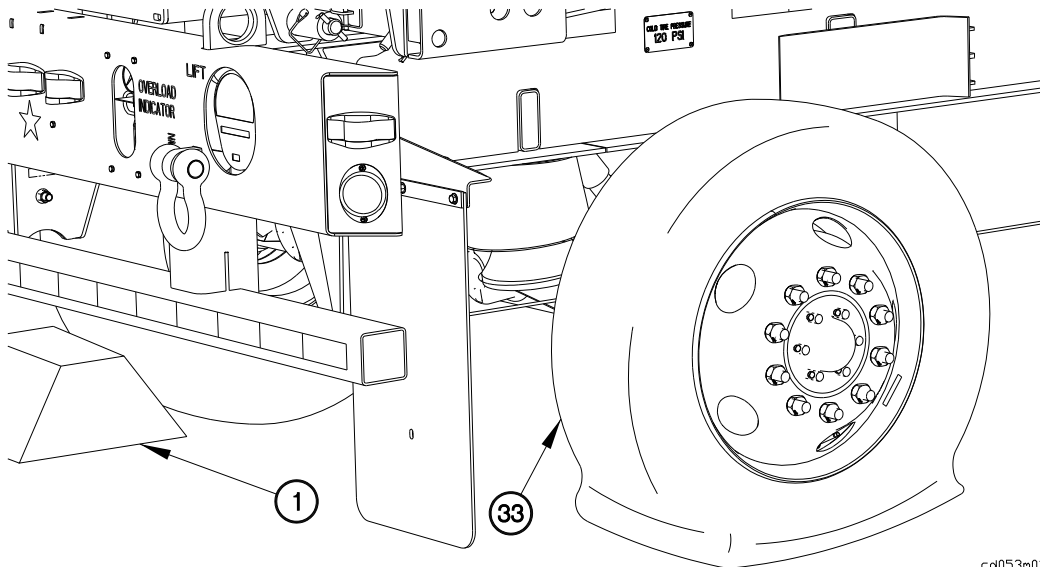


cd053m02

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.

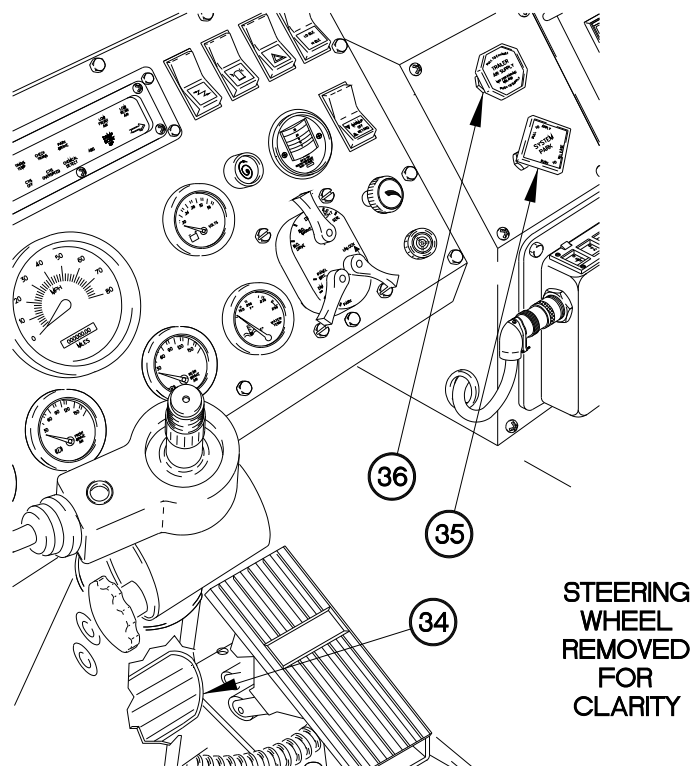
4. Install two wheel chocks (1) against tire across from tire (33) that is to be inflated.



cd053m03

MANUALLY INFLATING TIRES - Continued**NOTE**

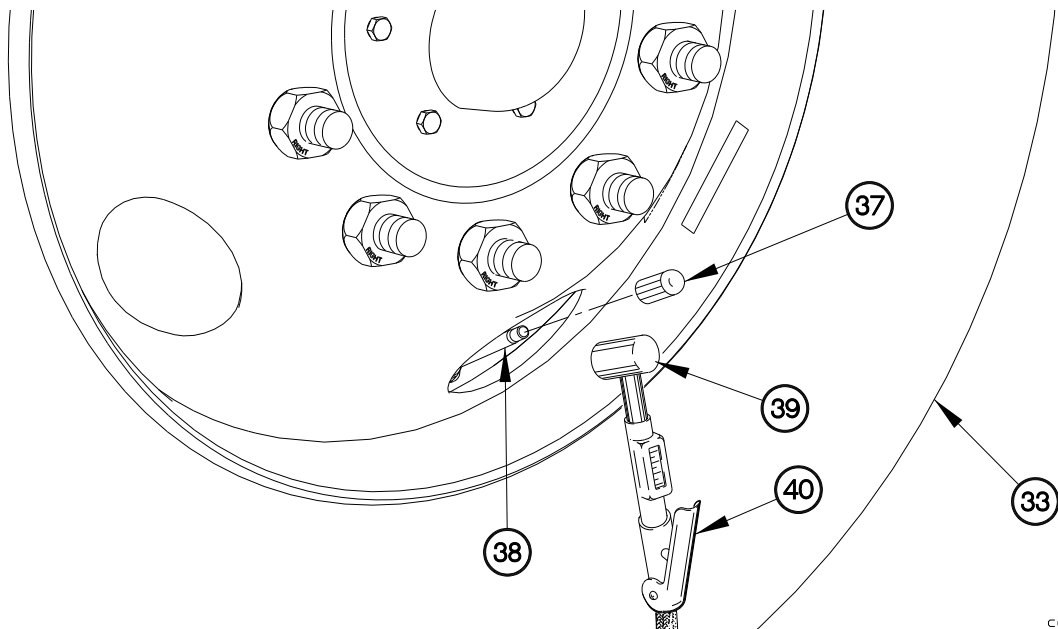
- Air is available at service gladhand as long as brake pedal is applied. Air is available at emergency gladhand once SYSTEM PARK and TRAILER AIR SUPPLY valves are depressed.
 - Steps 6 through 14 require the aid of an assistant.
6. Depress brake pedal (34).
 7. Push in SYSTEM PARK control (35).
 8. Push in TRAILER AIR SUPPLY control (36).



cd053m04

MANUALLY INFLATING TIRES - Continued

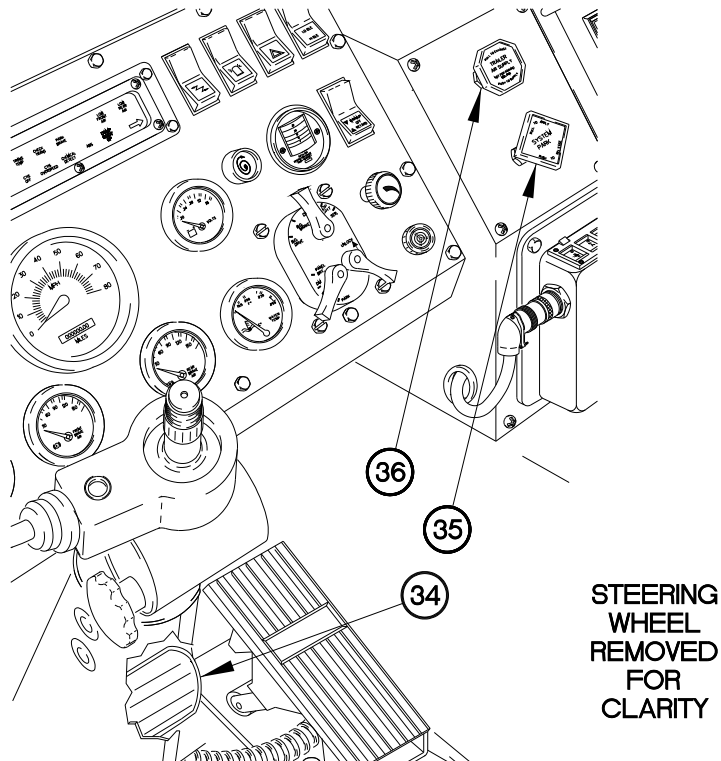
9. Remove cap (37) from valve stem (38).
10. Press chuck of tire inflator-gage (39) over valve stem (38) and squeeze handle (40).
11. Add air to tire (33) as required by Table 1: Cold Tire Inflation.
12. Remove chuck of tire inflator-gage (39) from valve stem (38).
13. Install cap (37) on valve stem (38).



cd053m05

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).



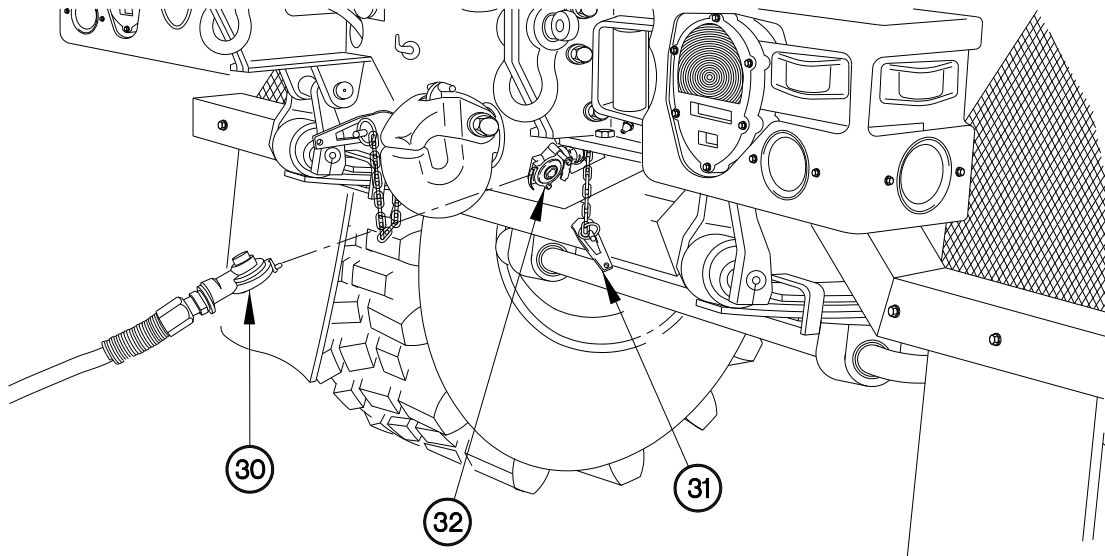
c0053m06

CHANGING/SERVICING SPARE TIRE - Continued

0053 00

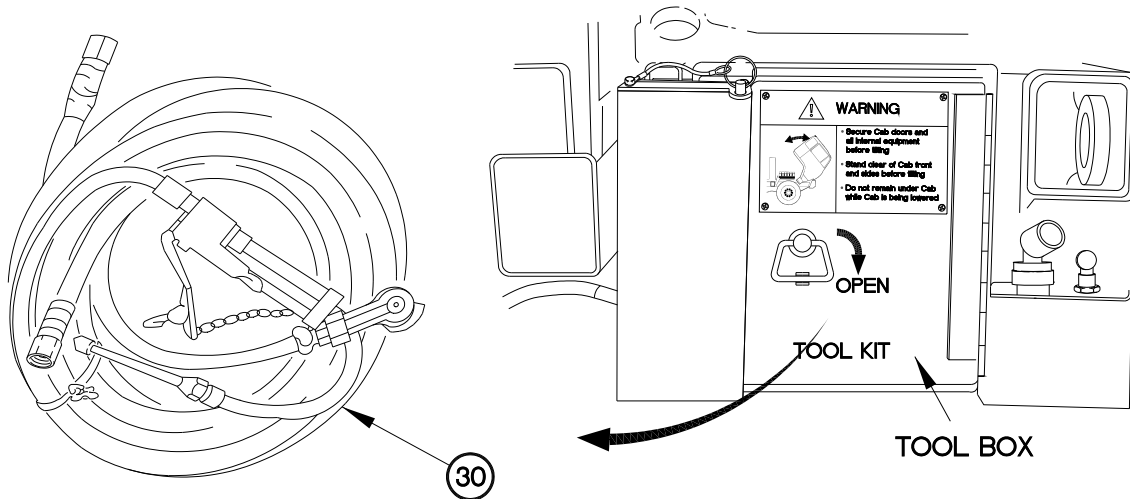
MANUALLY INFLATING TIRES - Continued

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.



c0053m07

21. Stow tire inflator-gage with hose (30) in tool box.



c0053m08

END OF WORK PACKAGE

CLEANING TRAILER

0054 00

THIS WORK PACKAGE COVERS:

General, Cleaning Trailer

INITIAL SETUP:

Maintenance Level

Operator

Materials/Parts (Cont)

Corrosion Prevention Compound (Item 5, WP 0165 00)
 Brush Set (Item 3, WP 0165 00)

Tools/Special Tools

Gloves, Rubber (Item 6, WP 0167 00)
 Goggles, Industrial (Item 8, WP 0167 00)

Personnel Required

Two

Materials/Parts

Rag, Wiping (Item 11, WP 0165 00)
 Soap, Laundry (Item 15, WP 0165 00)
 Solvent, Dry Cleaning (Item 17, WP 0165 00)

References

TB 43-0213

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

- **Solvent, Cleaning Compound (MIL-PRF-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 Cleaning Solvent; the flashpoint for Type I Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). When not using MIL-PRF-680 solvents, ensure MIL-PRF-680 solvent container is sealed. Store, handle, and dispose of unused and spent solvents in accordance with local procedures and plans. 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 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.**
- **All cleaning procedures must be accomplished in well-ventilated areas. Failure to comply may result in injury to personnel or damage to equipment.**

GENERAL - Continued

WARNING - Continued

- **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.**

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 TB 43-0213.
- Table 1, General Cleaning Instructions, provides a general guideline to cleaning materials used in removing contaminants from various trailer surfaces.

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 31,
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 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.

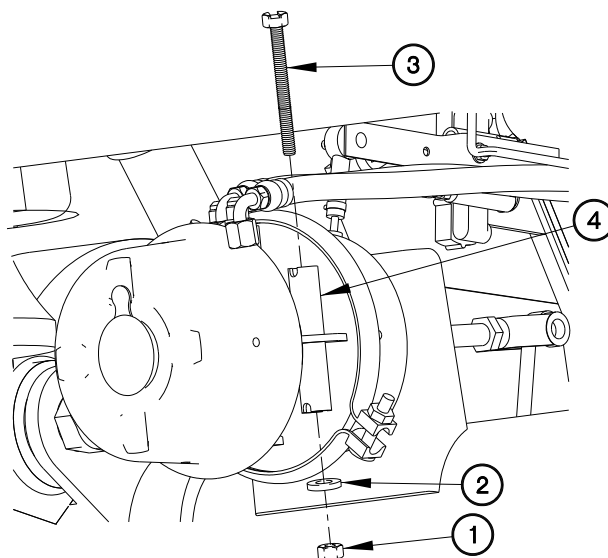
NOTE

To cage spring brakes, caging procedures apply to both front and rear brake air chambers.

CAGING SPRING BRAKES**NOTE**

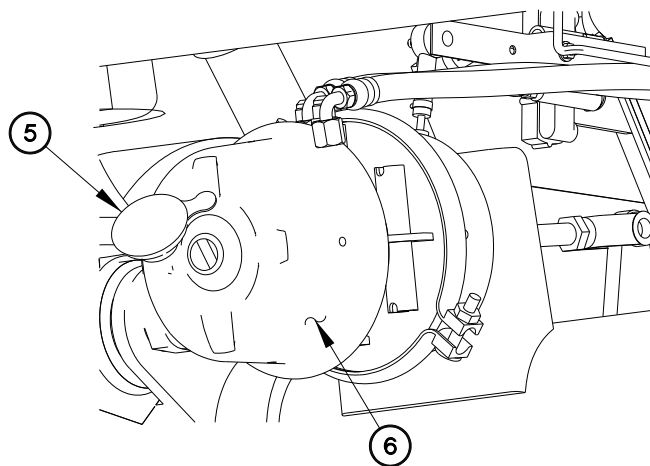
All spring brakes are caged the same way. RH is shown.

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

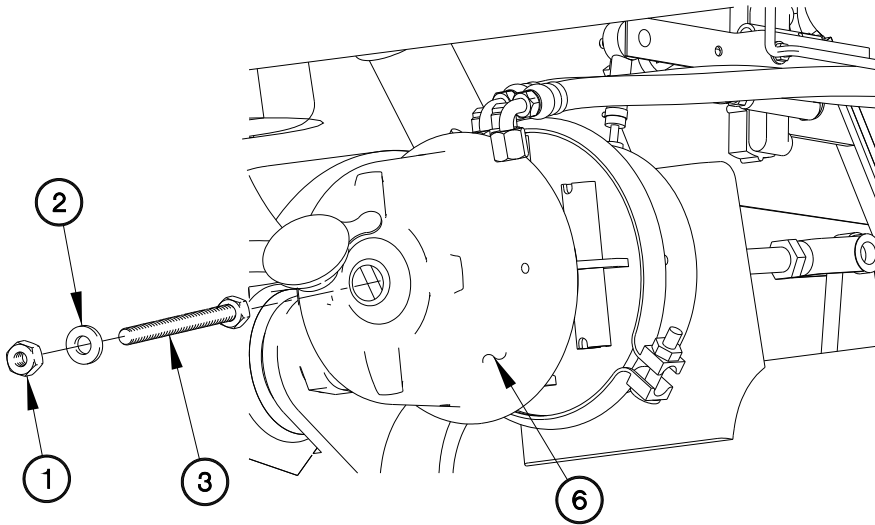
4. Remove rubber cap (5) from back of brake air chamber (6).



cd055P02

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 seven steps on remaining brake air chambers.

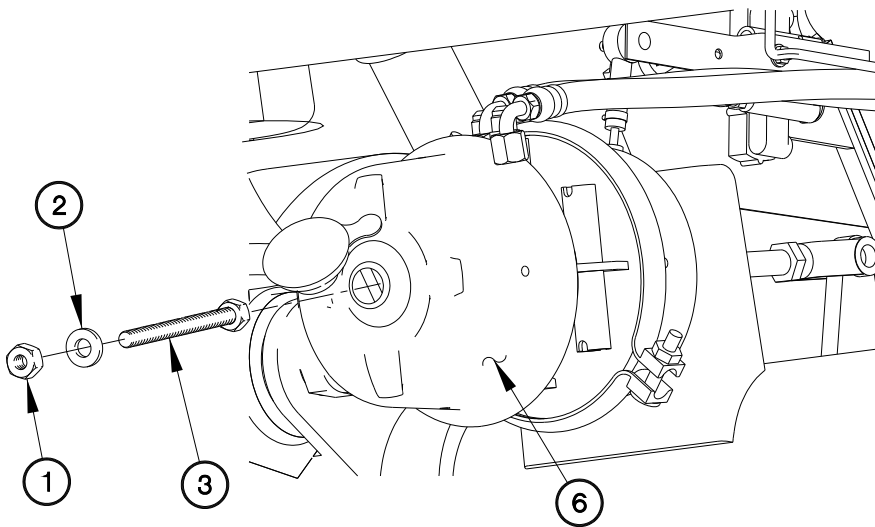


cd055P03

UNCAGING SPRING BRAKES**NOTE**

All spring brakes are uncaged the same way. RH is shown.

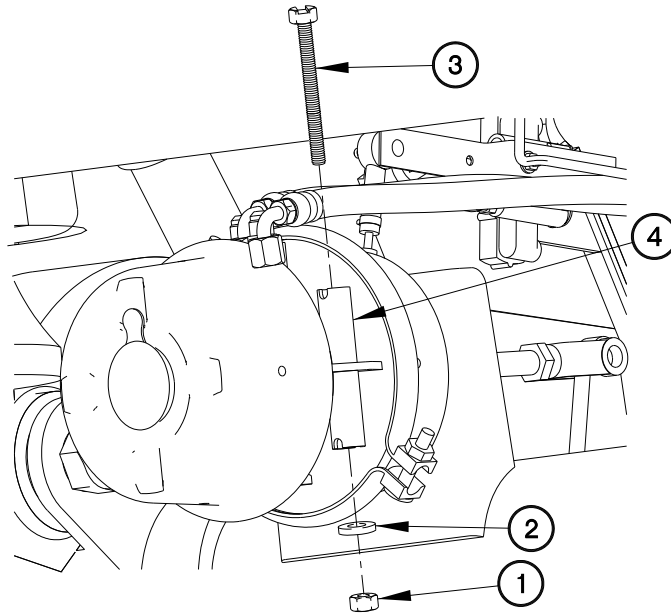
1. Remove nut (1) and washer (2) from caging bolt (3).
2. Turn caging bolt (3) to the left $\frac{1}{4}$ turn and remove from brake air chamber (6).



cd055P03

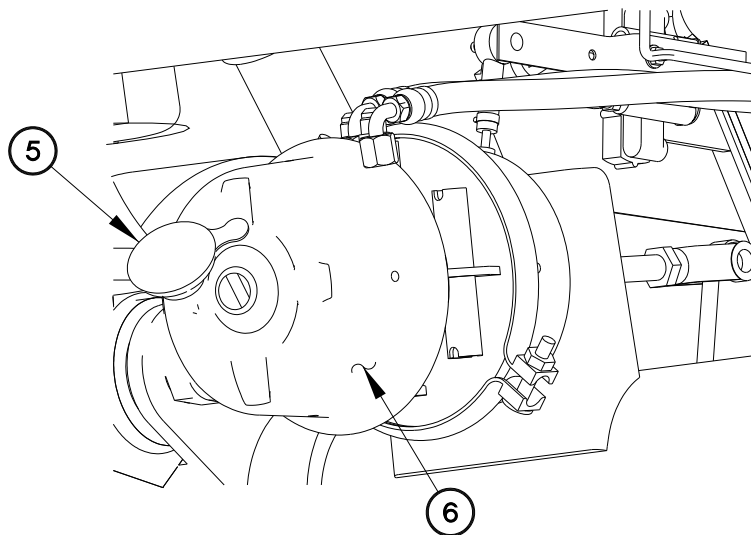
UNCAGING SPRING BRAKES

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

STACKING TRAILER/PREPARATION FOR TRANSPORT

0056 00

THIS WORK PACKAGE COVERS:

Stacking Trailer, Preparation for Transport

INITIAL SETUP:

Maintenance Level

Field

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 33,
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.

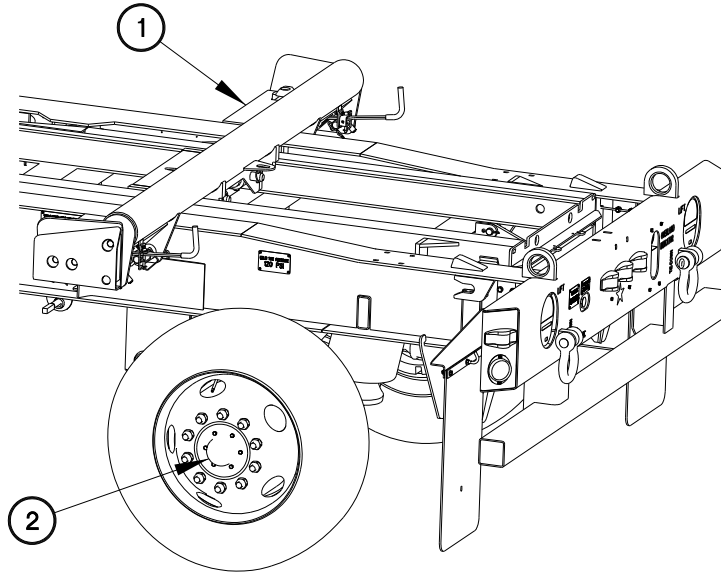
NOTE

- Lug wrench to remove stacking brackets and shuttle guide brackets included in trailer stowage box.
- Combine securing chains as needed to achieve desired lengths.

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING

1. Pull shuttle (1) of bottom trailer just forward of rear axle (2).



CD056P01

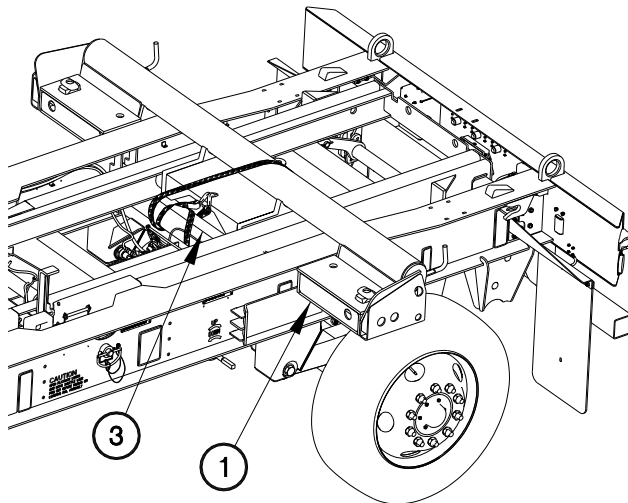
STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

CAUTION

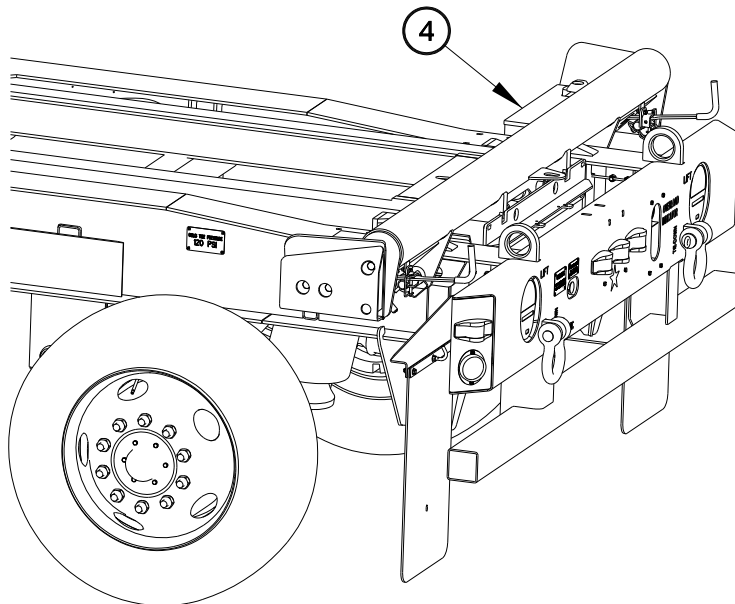
Ensure chains are clear of rear air tank and air hoses under cross member. Failure to comply may result in damage to equipment.

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

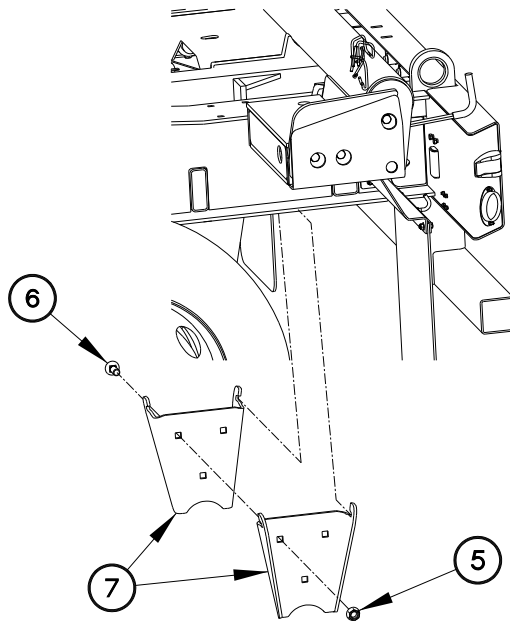
STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

NOTE

Transport brackets are removed and installed the same way on both RH and LH side. LH side is 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.

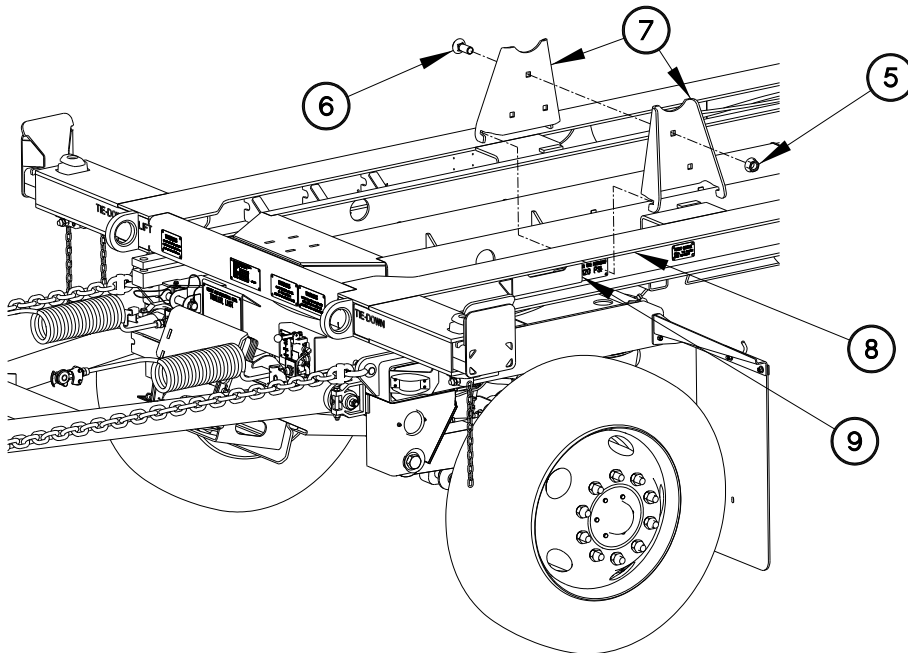


CD056P04

STACKING TRAILER/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

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

NOTE

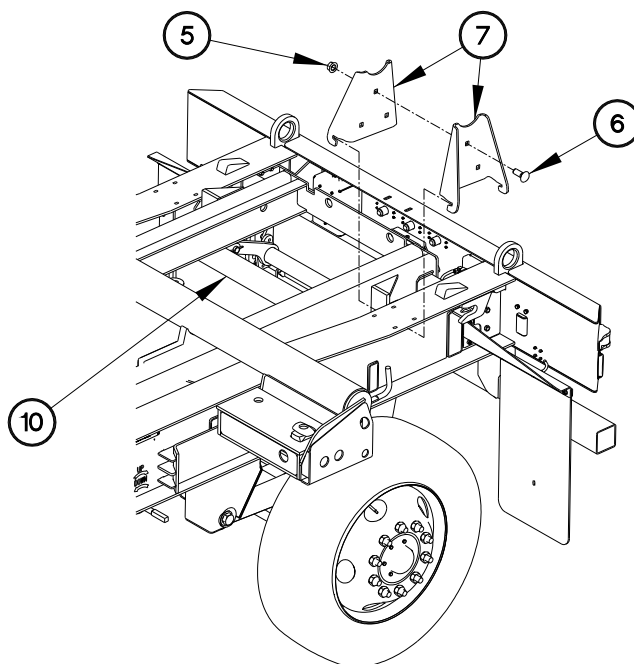
Transport brackets should be approximately 183-5/8 inches apart center to center.
Some adjustment may be necessary.

9. Position rear transport brackets (7) centered over rear axle crossmember (10).

NOTE

Position the nuts to inside of the trailer.

10. Install three bolts (6) and nuts (5) in rear transport brackets (7). Do not fully tighten nuts.



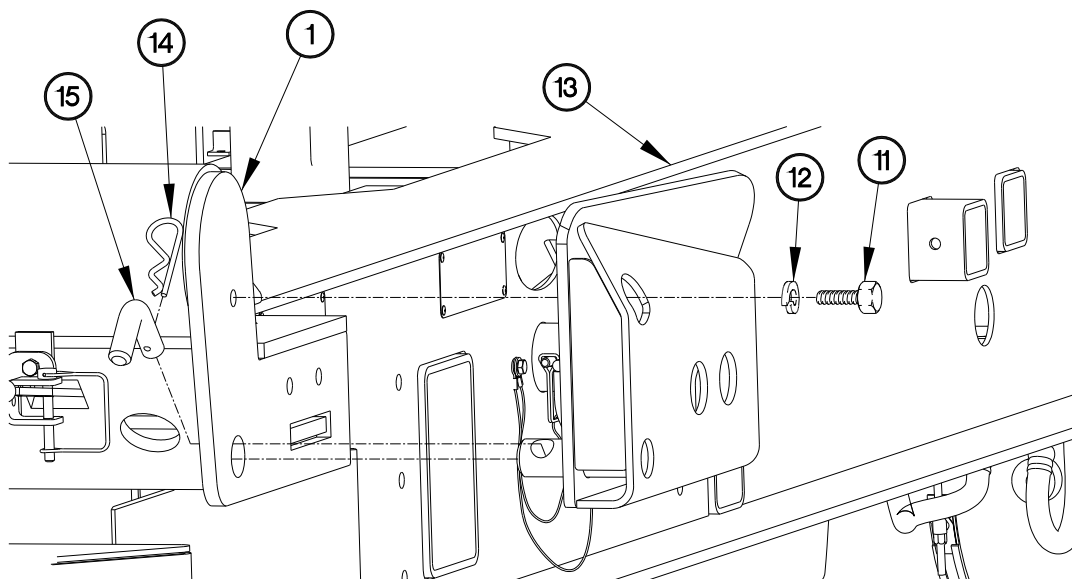
CD056P06

STACKING TRAILER/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 is 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.



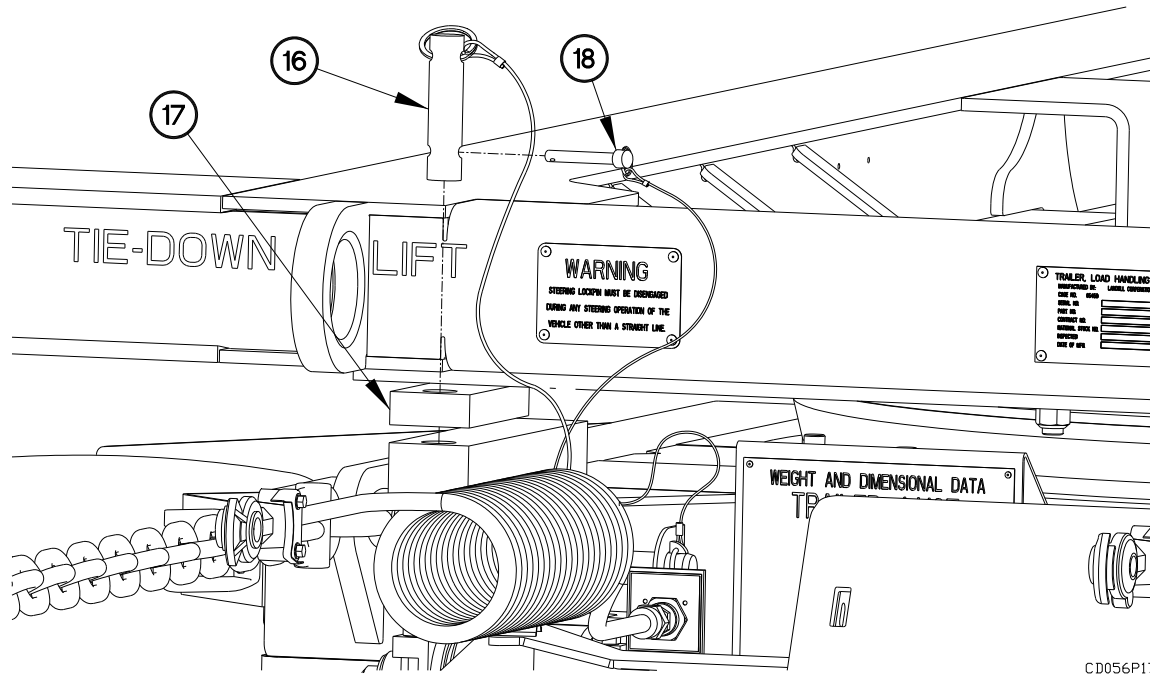
CD056P07

STACKING TRAILER/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).

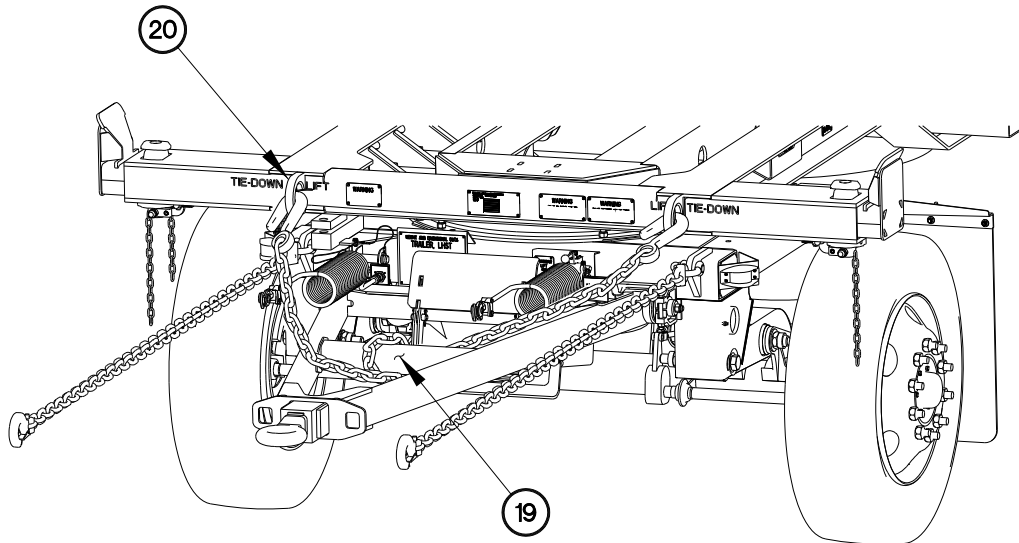


CD056P17

STACKING TRAILER/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

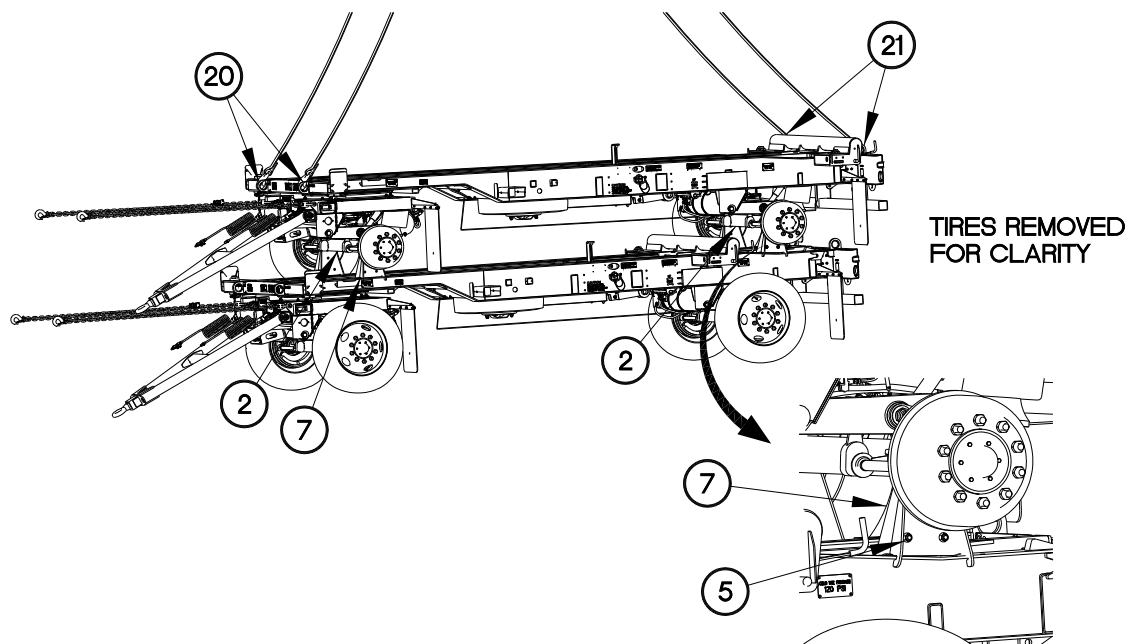
STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00**STACKING - Continued**

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. Tighten nuts (5) to 126-148 lb-ft (171-201 N·m) on all transport brackets (7).

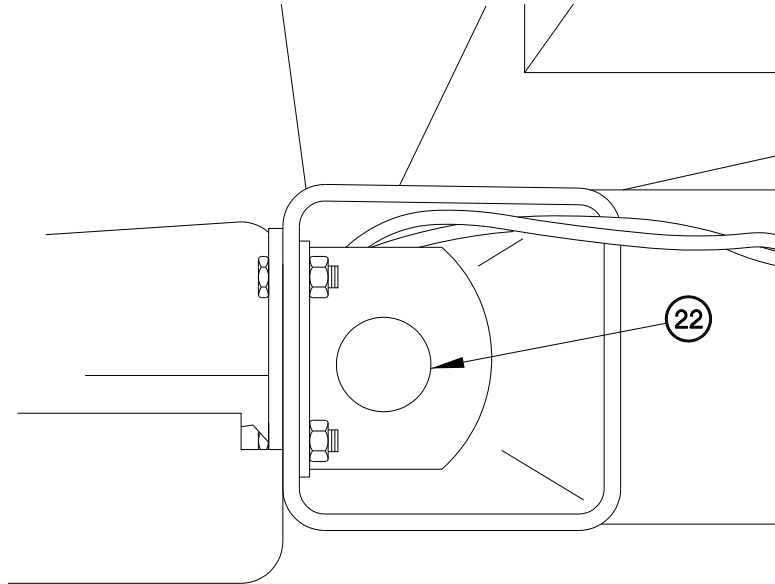


CD056P09

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

STACKING - Continued

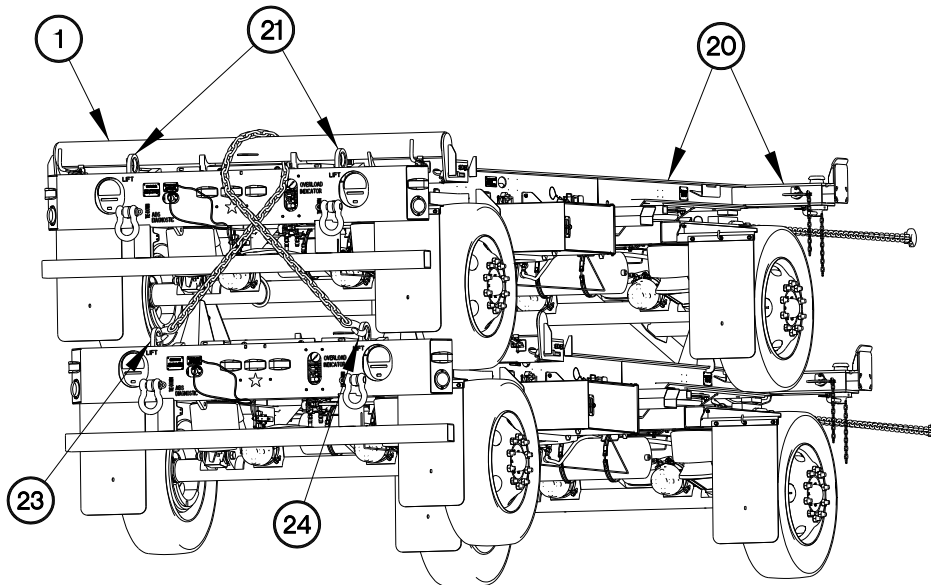
21. Press height actuation valve knob (22) in to lower suspension of top trailer.



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.

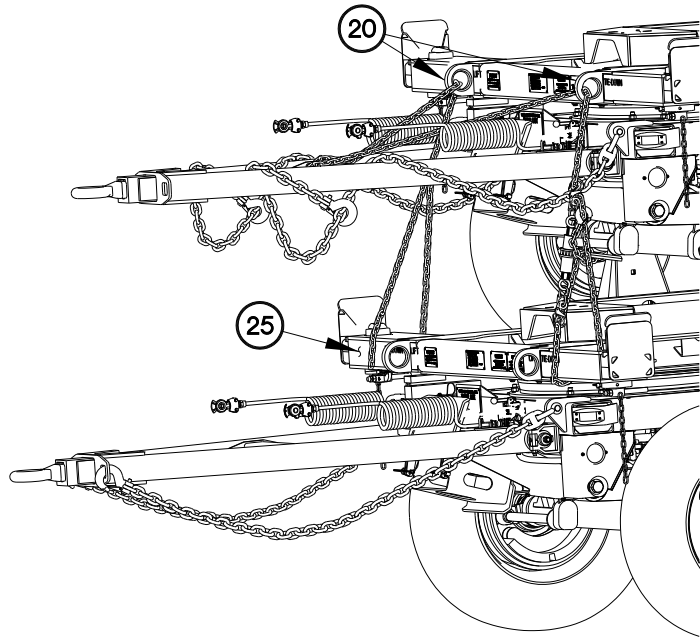


CD056P19

STACKING TRAILER/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.

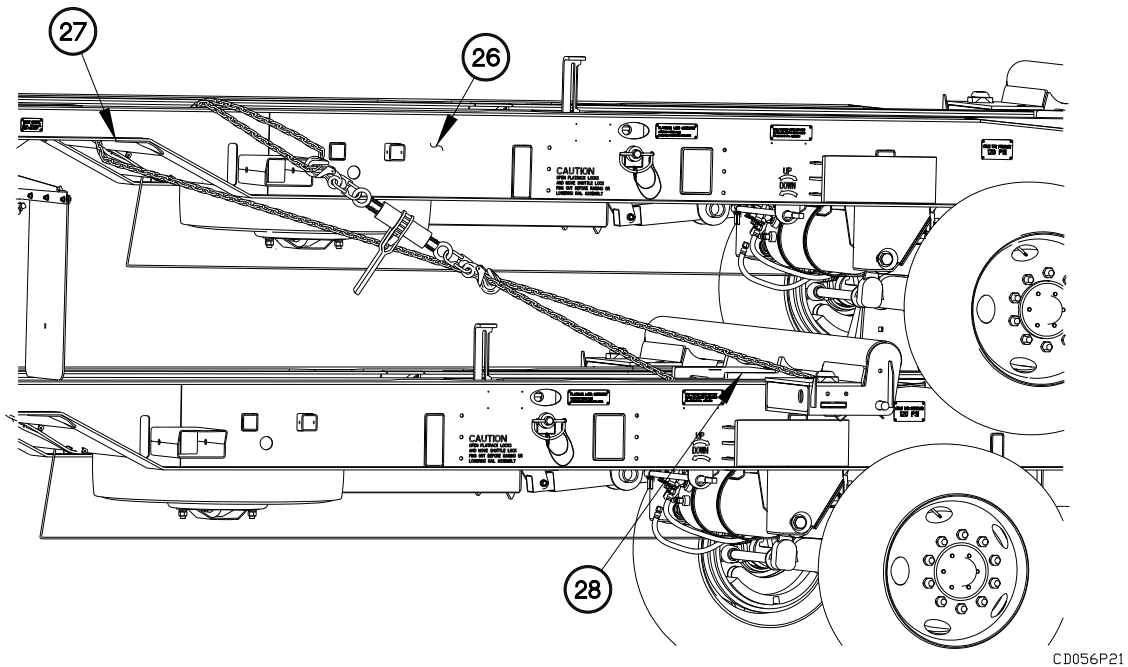


CD056P20

STACKING TRAILER/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.

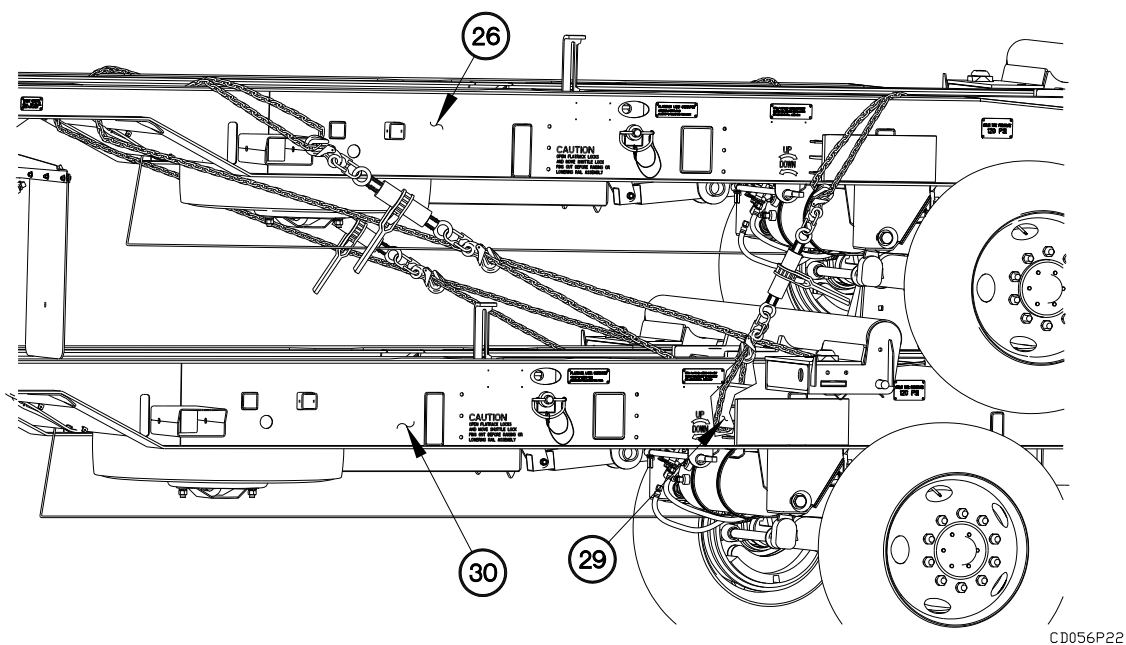


C0056P21

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00**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.

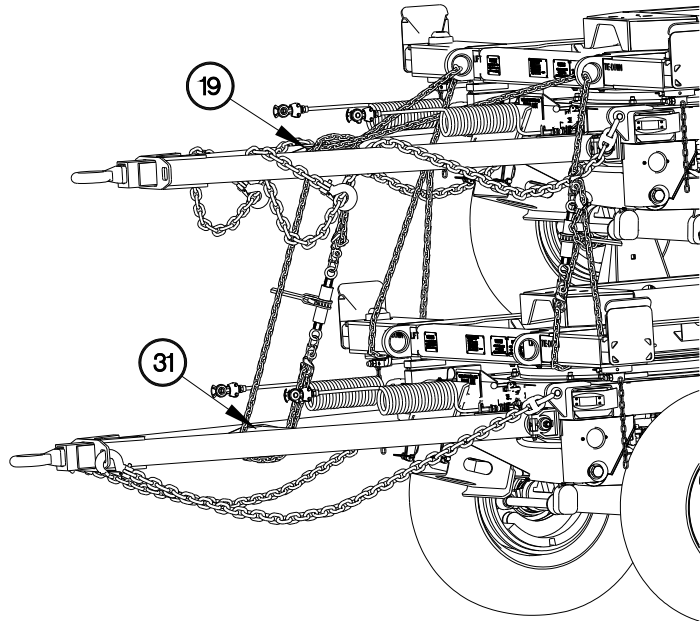
28. Place chain over frame rail (26) at suspension hangers of top trailer and loop around cross member (29) behind din locks (30) of bottom trailer and secure with binder. LH side shown.
29. Repeat previous step on RH side of trailer.



STACKING 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.

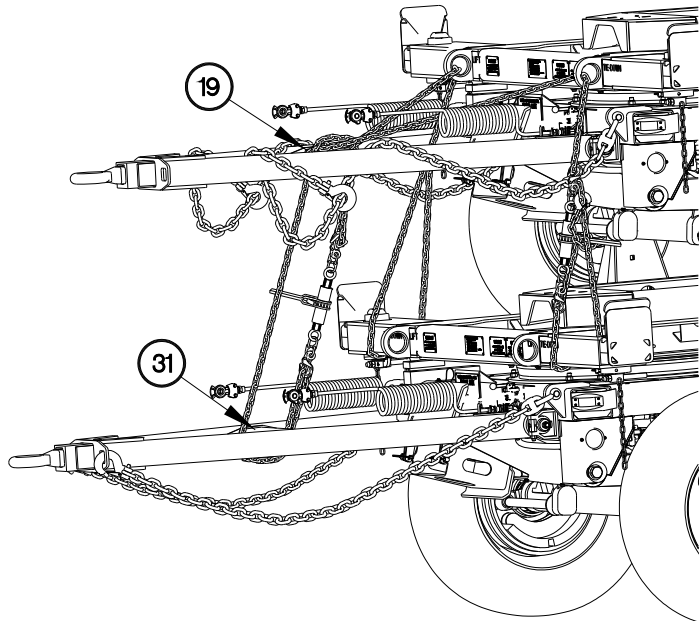


CD056P23

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

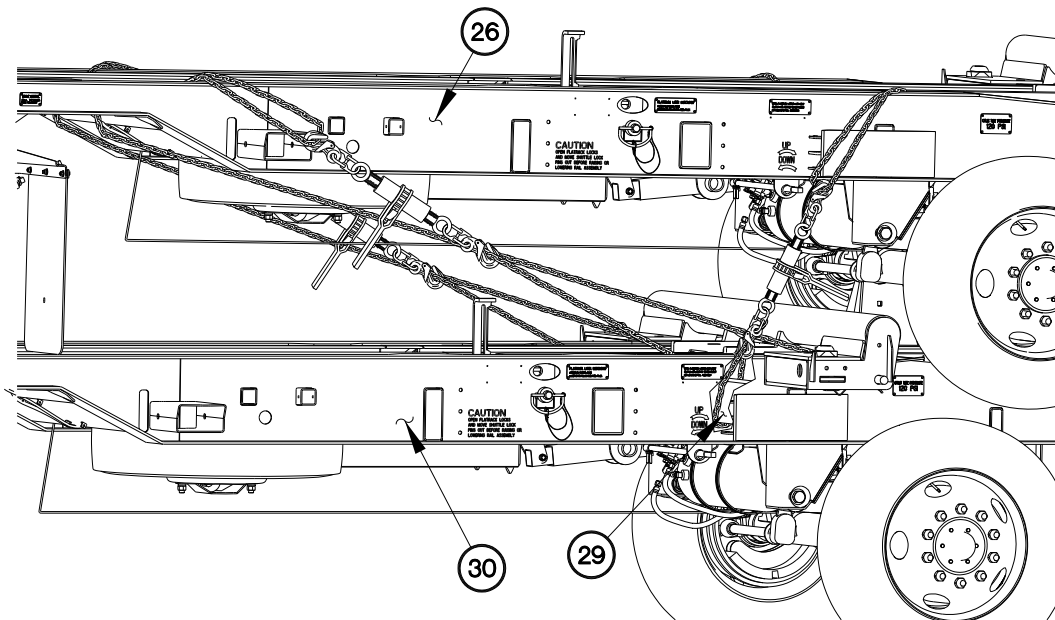
UNSTACKING

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.

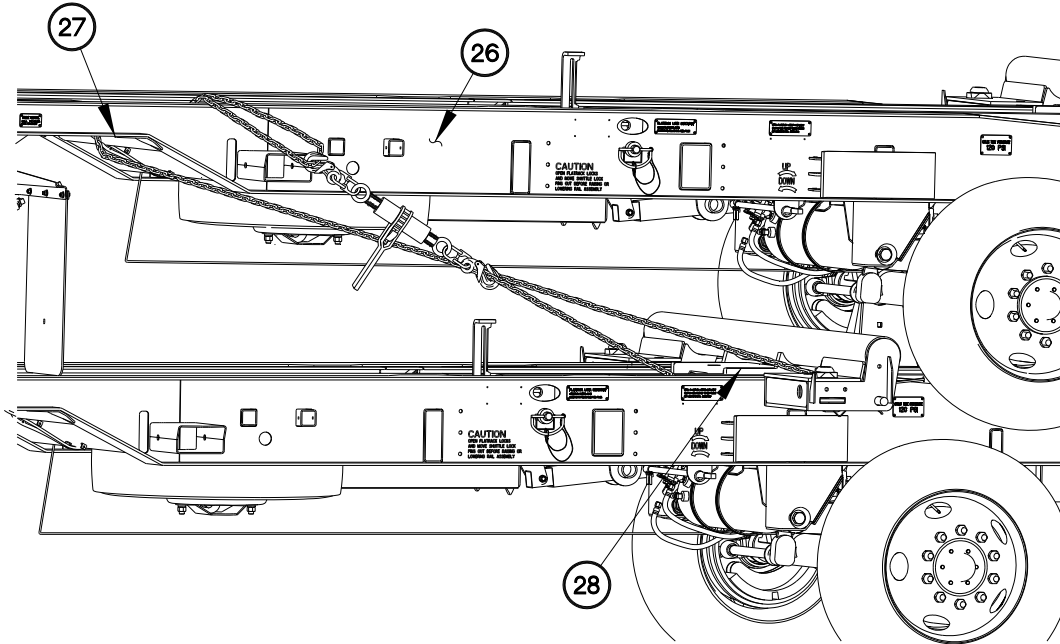


CD056P22

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

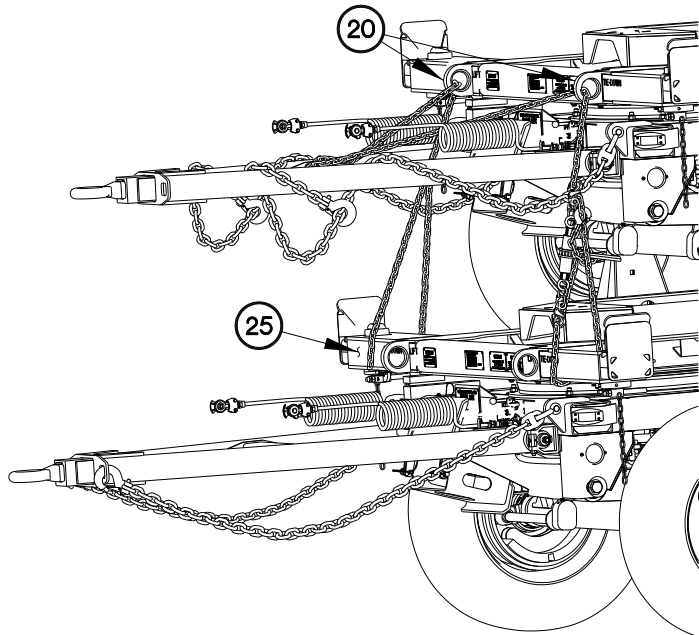
UNSTACKING-Continued

3. Remove chain over frame rail (26) at triangular crossmember (27) of top trailer and crossmember (28) of bottom trailer.



C.D056P21

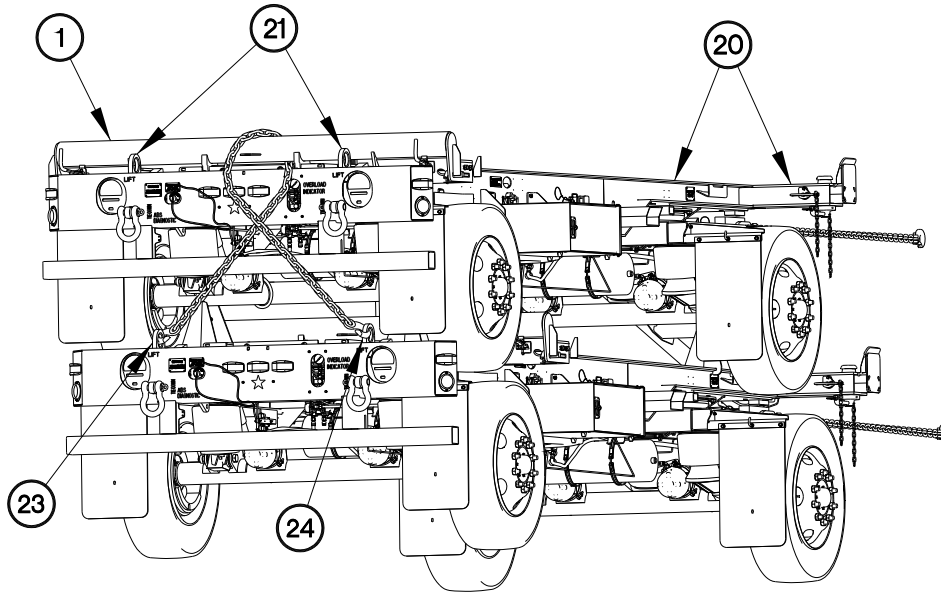
4. Remove chain from front crossmember (25) of bottom trailer and front lifting eyes (20) of top trailer.



C.D056P20

STACKING TRAILER/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.



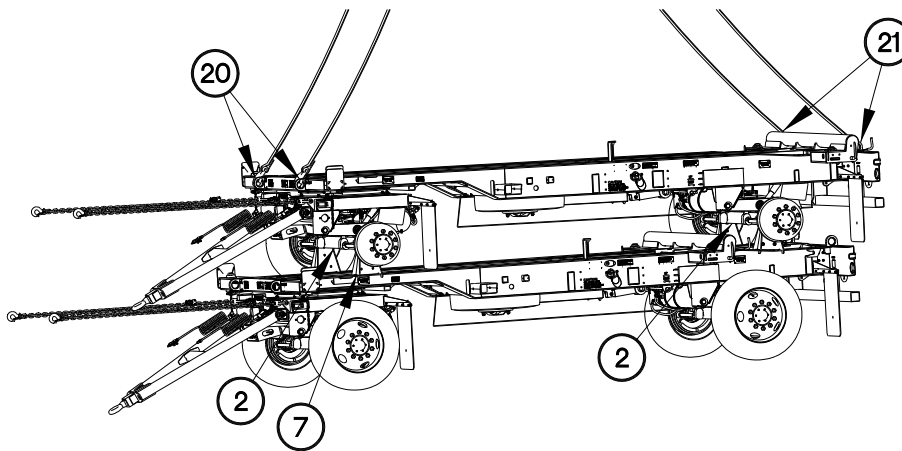
CD056P19

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

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.

TIRES REMOVED
FOR CLARITY



CD056P14

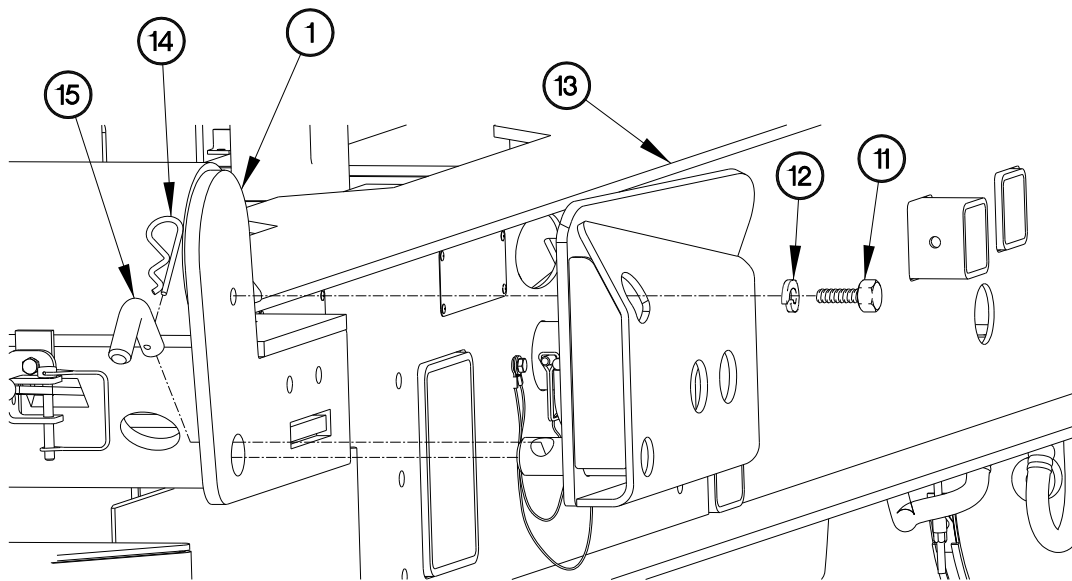
STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

NOTE

Shuttle guide brackets are installed the same way on both LH and RH side. RH side is 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).

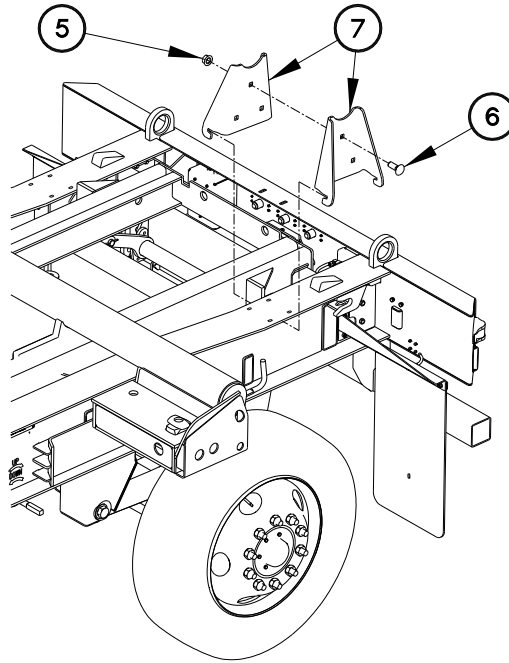


CD056P07

STACKING TRAILER/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.

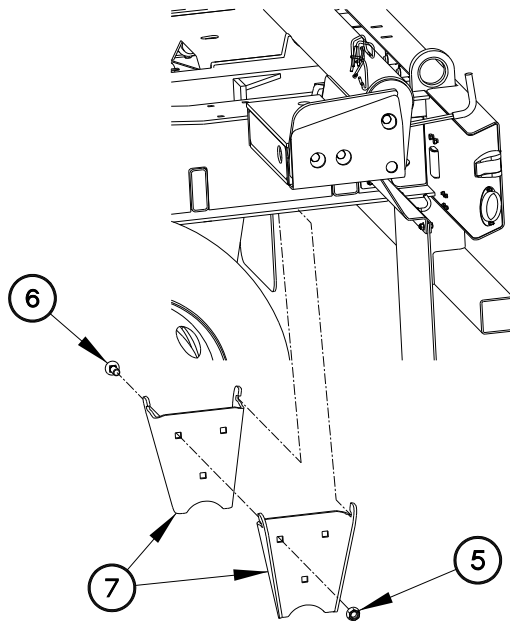


CD056P15

STACKING TRAILER/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).
- 16. Tighten nuts (5) to 126-148 lb ft (171-201 N·m) on all transport brackets (7).

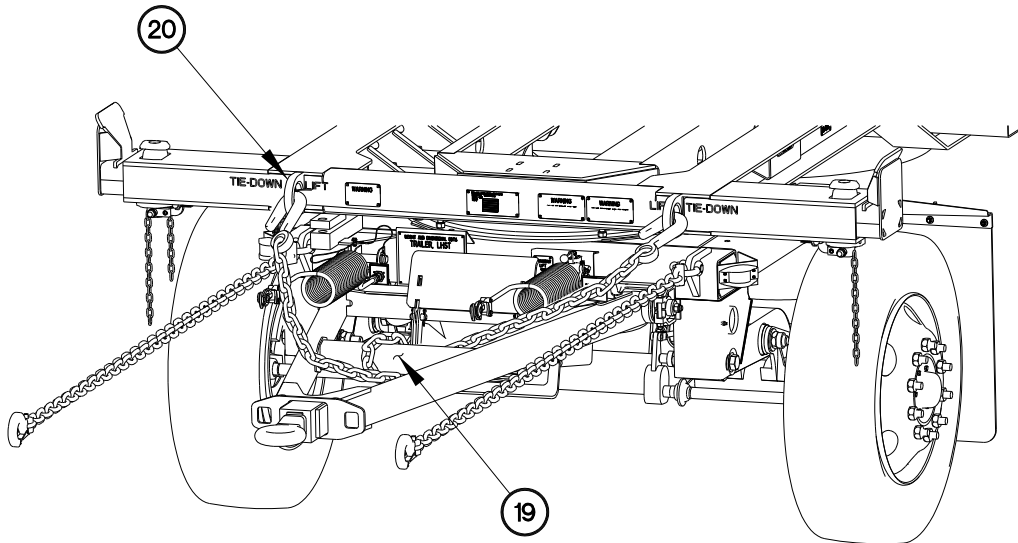


CD056P04

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

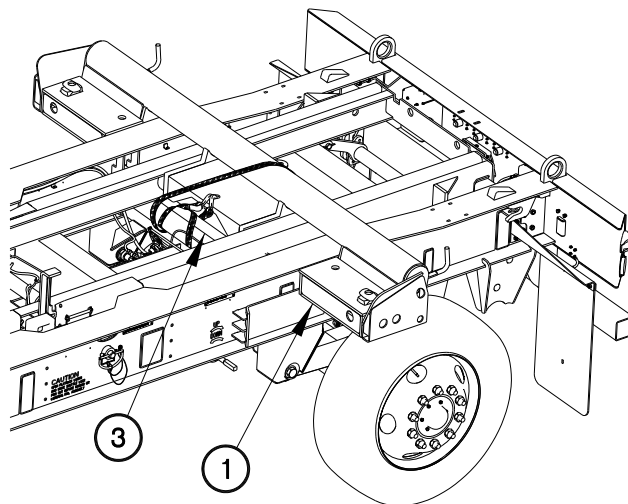
UNSTACKING-Continued

- 17. Remove chain from crossmember of drawbar (19) to front lifting eyes (20).
- 18. Lower drawbar (19) to ground (WP 0043 24, TM 2320-392-10-1).



CD056P08

- 19. Remove chain from shuttle (1) to crossmember (3) of bottom trailer.

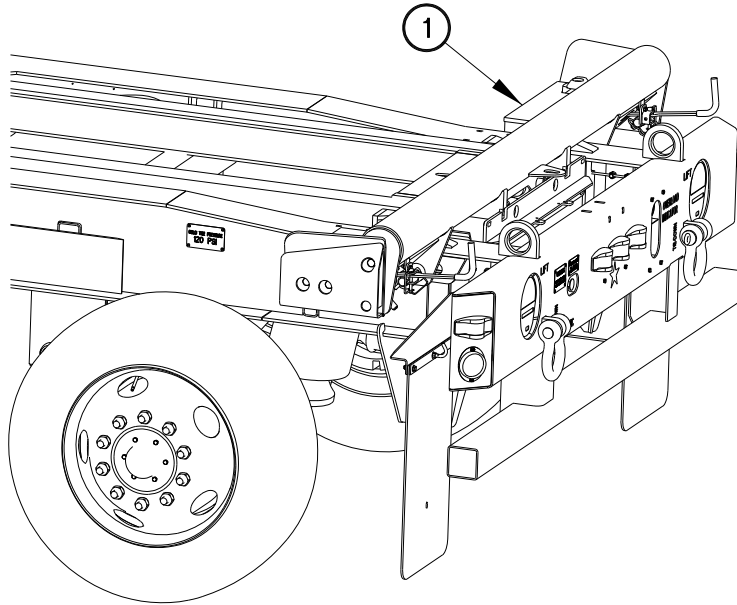


CD056P12

STACKING TRAILER/PREPARATION FOR TRANSPORT - Continued 0056 00

UNSTACKING-Continued

20. 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)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)
Solder, Tin Alloy (Item 16, 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**

0057 00

CIRCUIT BREAKER REMOVAL

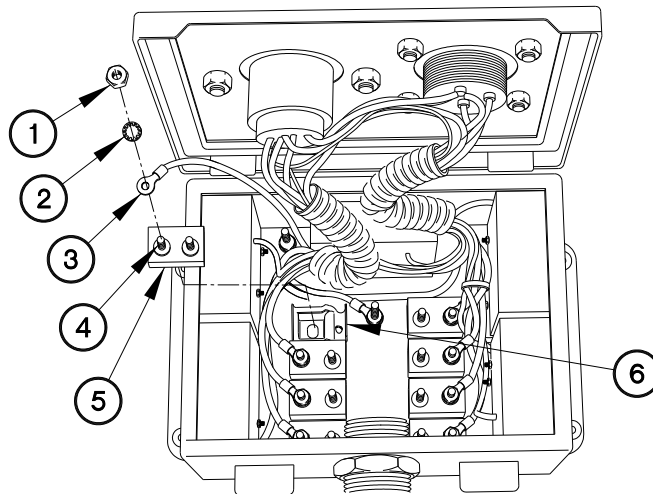
NOTE

- 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****0057 00****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 is shown.

1. Position circuit breaker (5) on circuit breaker base (6).

NOTE

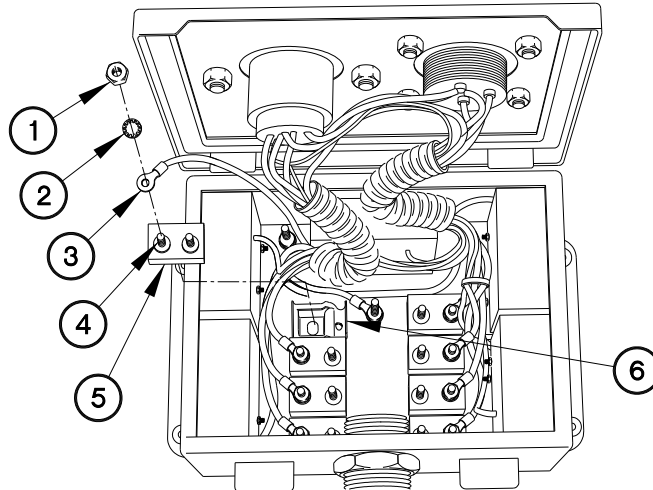
Perform the following step on circuit breakers 4 and 8.

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

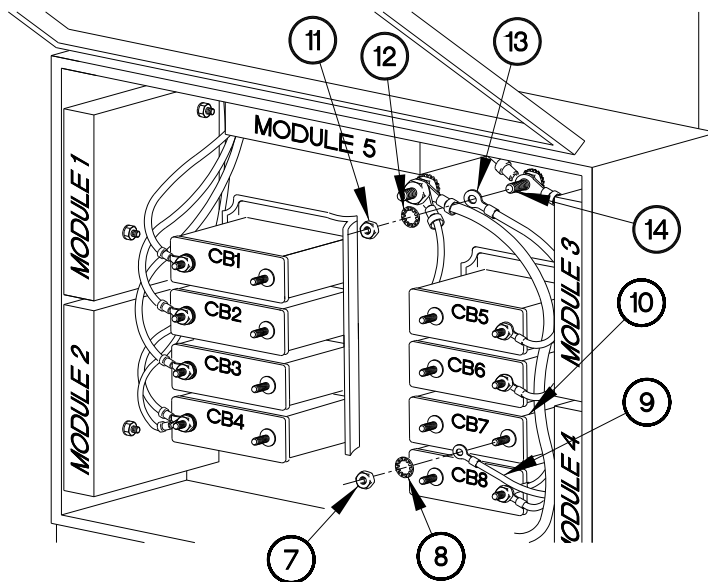
NOTE

- This task shows locations of Voltage converter box module wiring connection points. Modules 1 through 5 are removed the same way, Module 3 is 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.

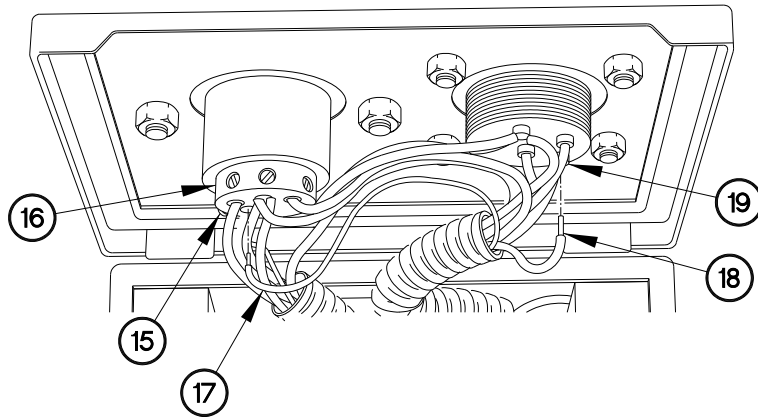
MODULE	CONNECTION POINTS
1	CB3, left ground stud, Position 2BL-12 VDC connector, E-Pin-24 VDC connector
2	CB4, left ground stud, Positions 4RED/ 5GRN-12 VDC connector, J-Pin-24 VDC connector
3	CB7, right ground stud, Position 6BRN-12 VDC connector, E pin -24 VDC connector
4	CB8, right ground stud, Positions 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



C.D057R02

**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued****0057 00****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).



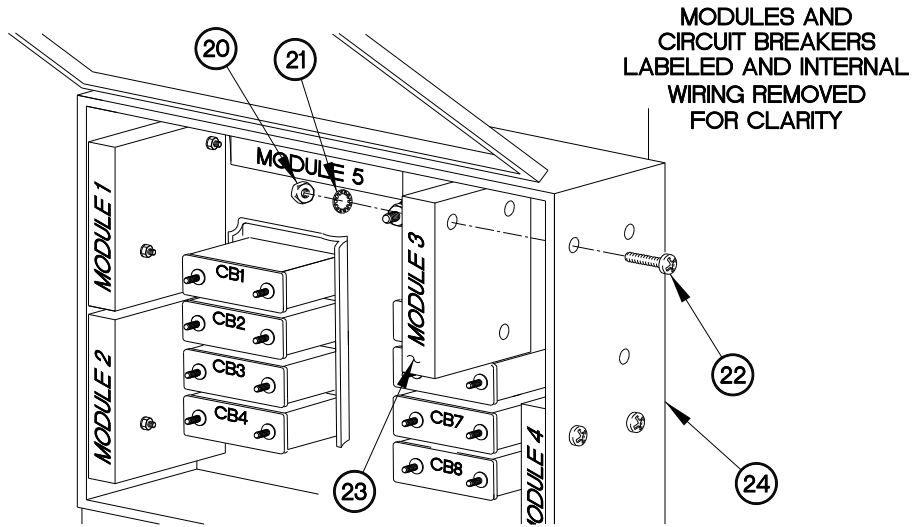
CD057R03

**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued**

0057 00

MODULE REMOVAL - Continued

6. Remove three nuts (20), lockwashers (21), screws (22), and module (23) from voltage converter box (24). Discard lockwashers.



CD057R04

**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued**

0057 00

MODULE INSTALLATION

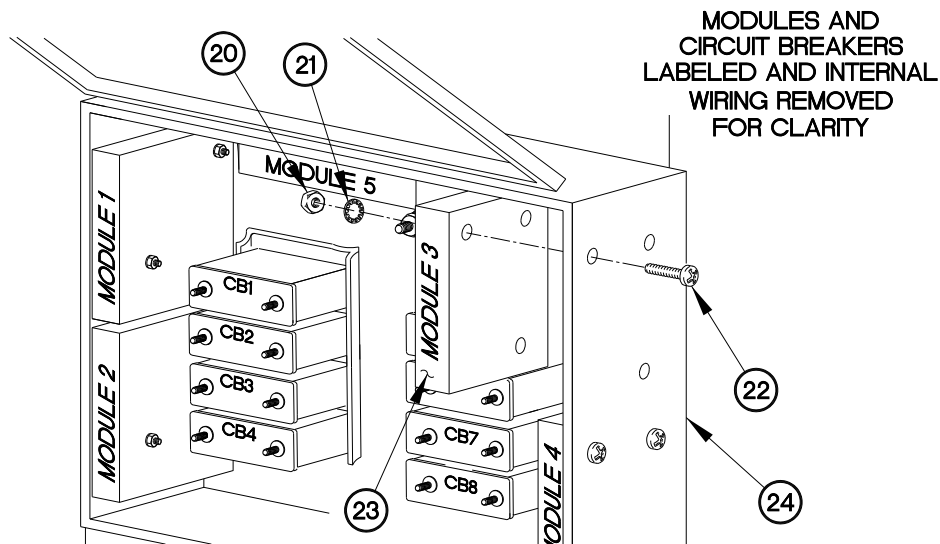
NOTE

- This task shows locations of voltage converter box module wiring connection points. Refer to **Table 2. 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 2. 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).



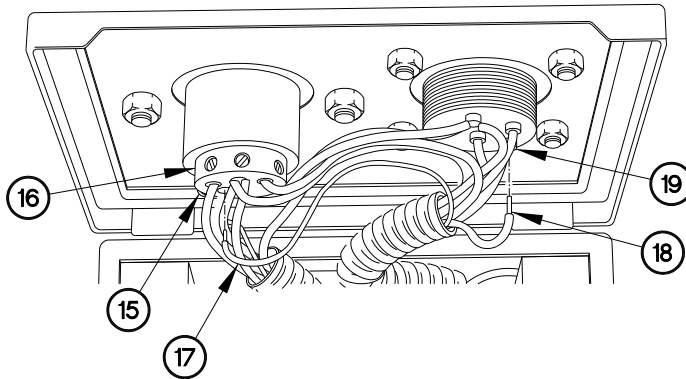
CD057R04

**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued**

0057 00

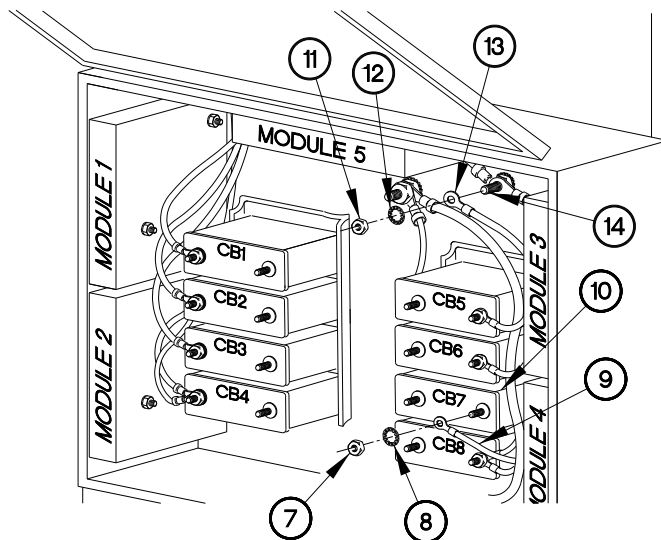
MODULE INSTALLATION - Continued

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

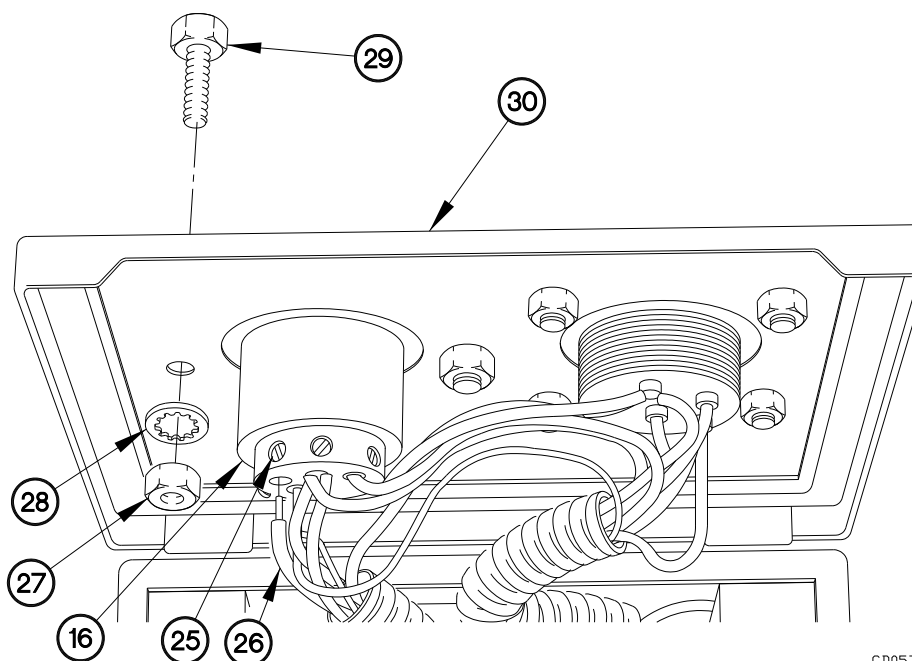
6. Install wire (13) on right ground stud (14) with lockwasher (12) and nut (11).
7. Install wire (9) on circuit breaker CB7 "BAT" terminal stud (10) with lockwasher (8) and nut (7).



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.

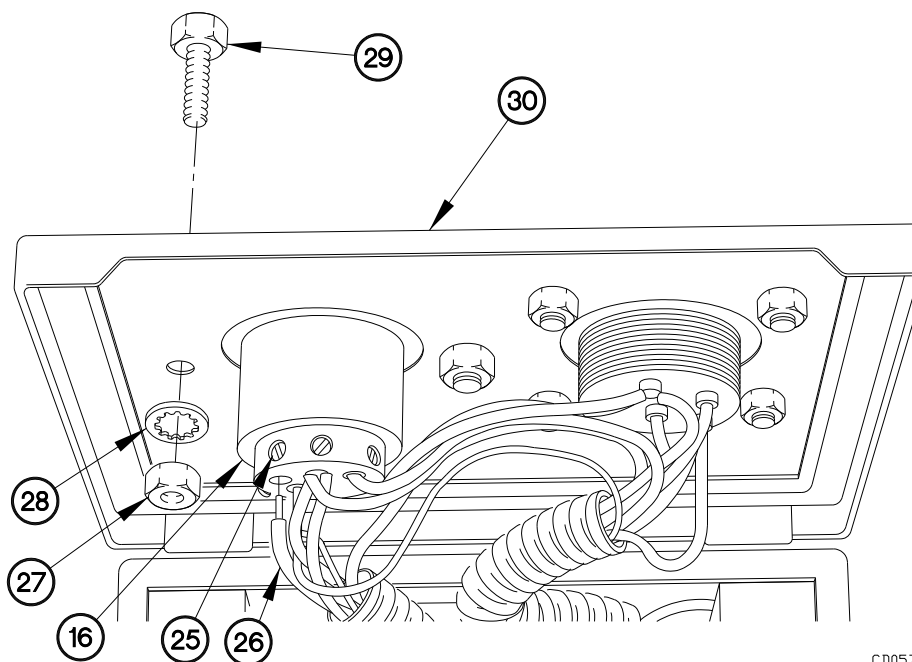


CD057R05

**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued****0057 00****12 VDC CONNECTOR INSTALLATION****NOTE**

All 12 VDC connector wires are installed the same way.

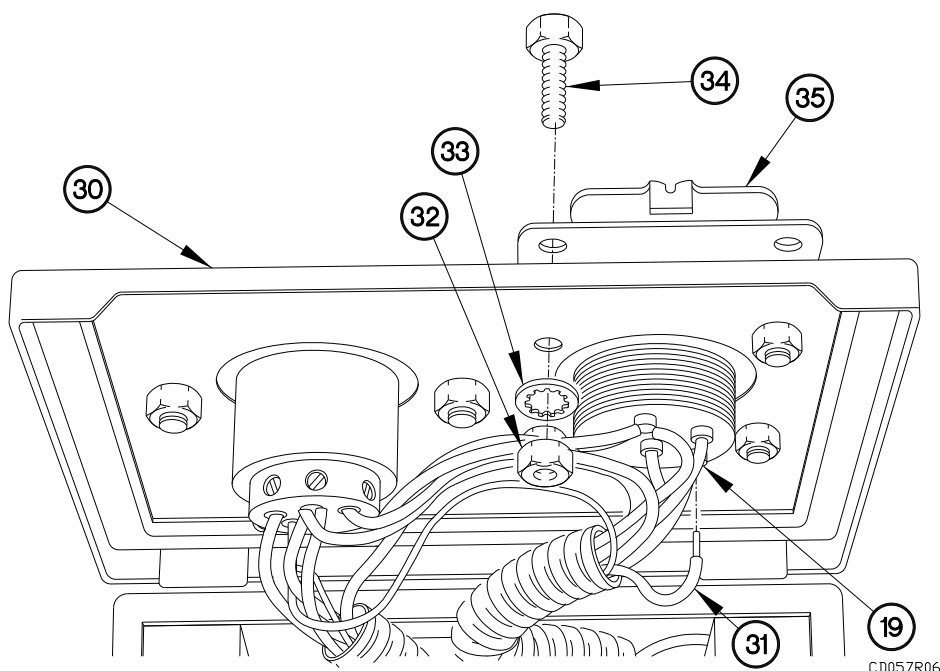
1. Install 12 VDC connector (16) on voltage converter box cover (30) with two bolts (29), lockwashers (28), and nuts (27).
2. Position wire (26) on position 1WHT on 12 VDC connector (16).
3. Tighten screw (25) at position 1WHT on 12 VDC connector (16).
4. Perform the previous two steps on remaining wires.



CD057R05

**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued****0057 00****24 VDC CONNECTOR REMOVAL****NOTE**

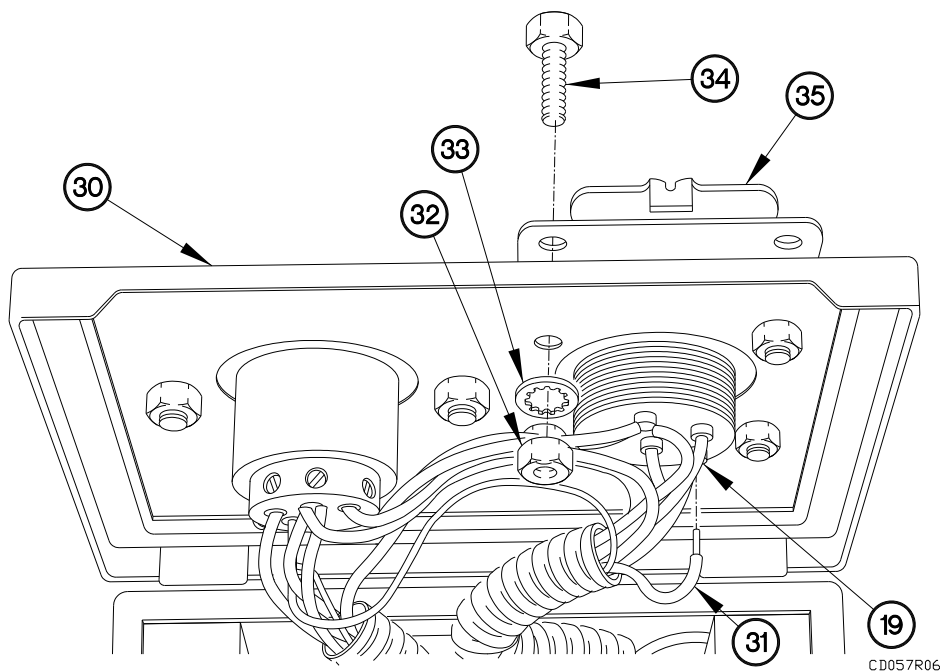
- All 24 VDC connector wires are removed the same way.
 - Tag wires and connection points prior to disconnecting.
1. Remove wire (31) from ground pin on 24 VDC connector (19).
 2. Perform the previous step on remaining wires.
 3. Remove four nuts (32), lockwashers (33), screws (34), cover (35), and 24 VDC connector (19) from voltage converter box cover (30). Discard lockwashers.



**CIRCUIT BREAKER, MODULE,
AND CONNECTOR REPLACEMENT - Continued****0057 00****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**

0057 00

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

Materials/Parts (Cont)

Washer, Lock (9) (Item 16, WP 0168 00)

Nuts, Self-Locking (4) (Item 27, WP 0168 00)

Tools and Special Tools

■ Tool Kit, Genl Mech (Item 24, WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

■ Wrench, Torque, 0-200 lb-in.

(Item 35, WP 0167 00)

Personnel Required

Two

Equipment Conditions

Trailer uncoupled

(WP 0043 24, TM 2320-392-10-1)

Disconnect 24 VDC intervehicular cable

(WP 0062 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)

■ Ties, Cable, Plastic (Item 19, WP 0165 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) voltage converter box.

WARNING

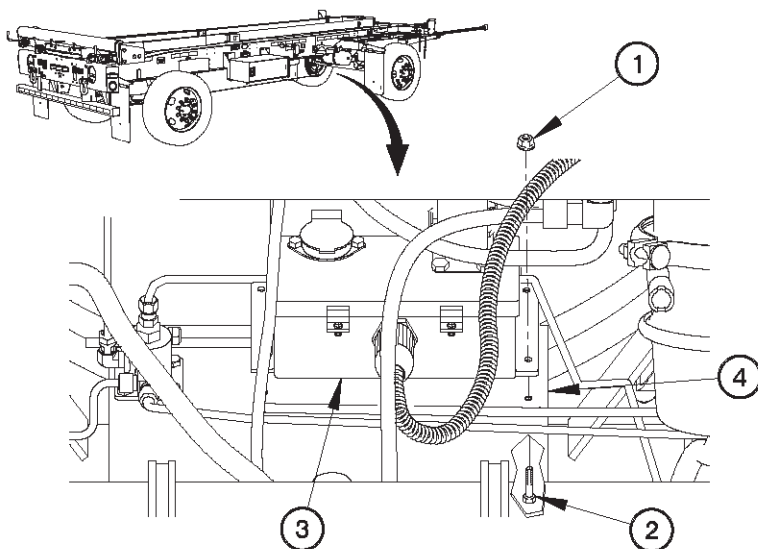
Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

REMOVAL

NOTE

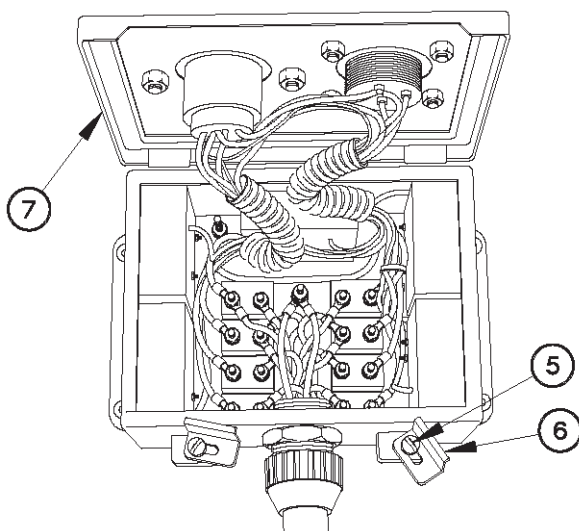
The following step requires the aid of an assistant.

1. Remove four self-locking nuts (1), bolts (2), and voltage converter box (3) from voltage converter box bracket (4). Discard self-locking nuts.



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).

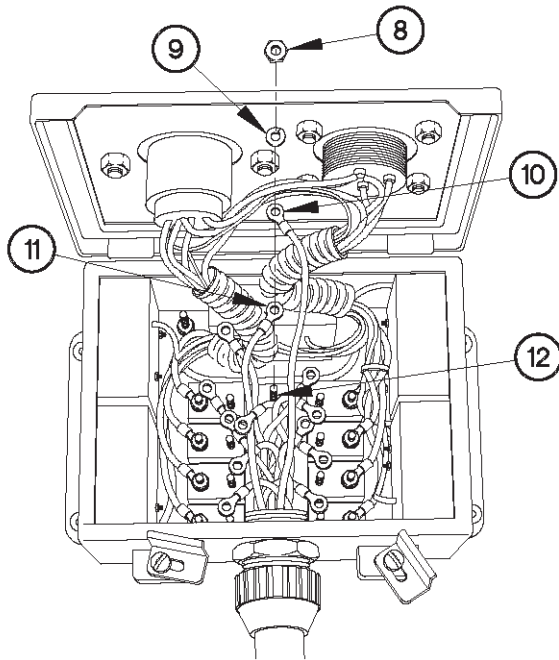
CD058R01



CD058R02

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

REMOVAL – Continued

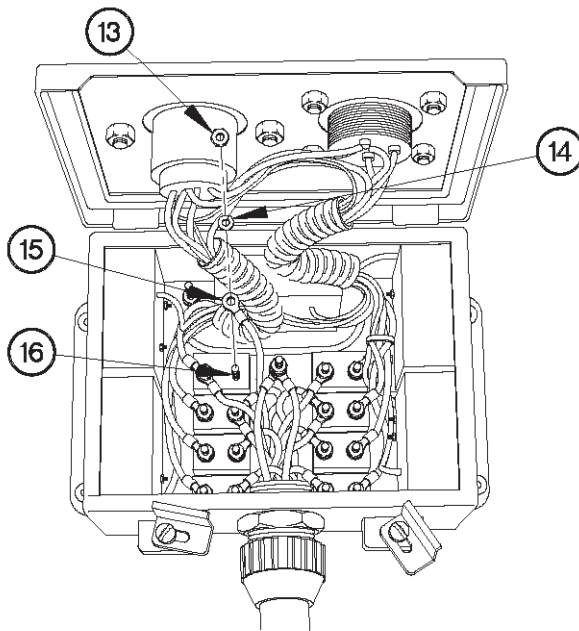
NOTE

All converter box circuit breaker terminal lugs are removed the same way. Terminal lug 251 is shown. Refer to **Table 1. Converter Box Circuit Breaker Main Electrical 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.

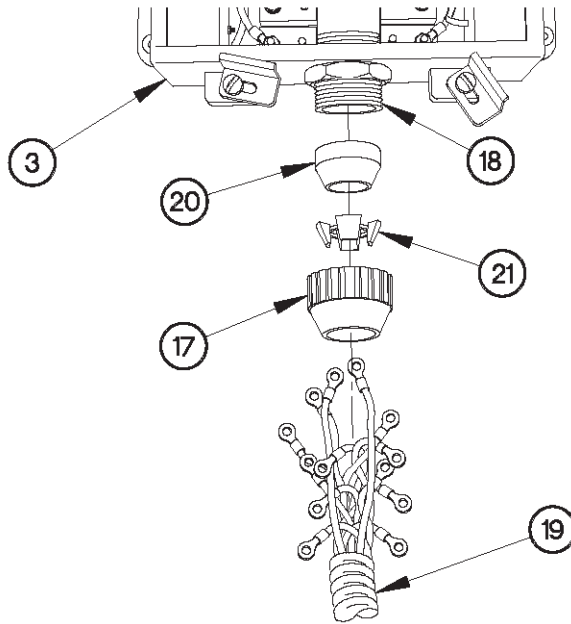
Circuit Breaker "AUX" Terminal Stud	Main Electrical Harness Wire Terminal Lug
CB1	TL251
CB2	TL257
CB3	TL250
CB4	TL252
CB5	TL256
CB6	TL259
CB7	TL255
CB8	TL253



CD058R03

REMOVAL – Continued

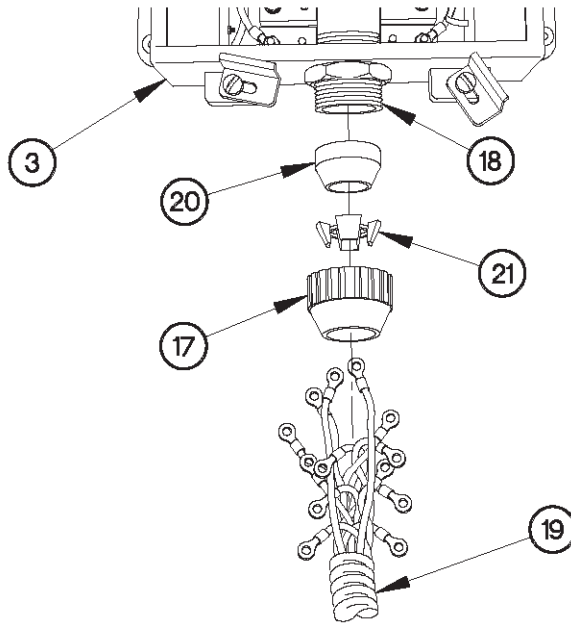
8. Remove fitting collar (17) from fitting (18).
9. Remove main electrical harness (19) from voltage converter box (3).
10. Remove protector (20) and swedge (21) from main electrical harness (19).



CD058R05

INSTALLATION

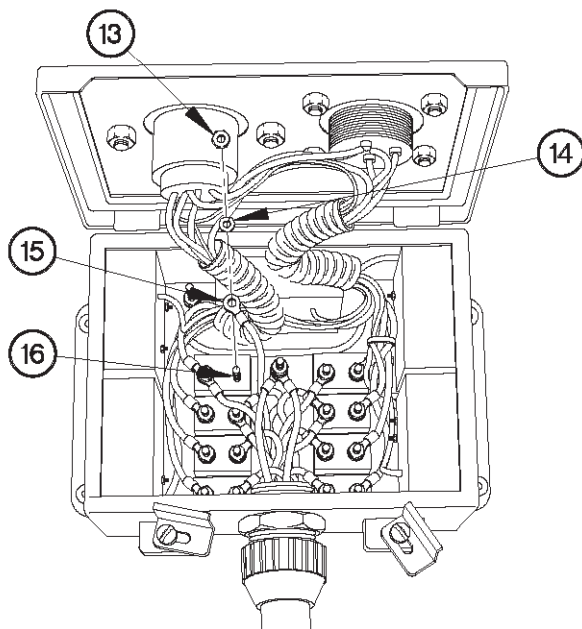
1. Position swedge (21) and protector (20) on main electrical harness (19).
2. Position main electrical harness (19) in voltage converter box (3).
3. Install fitting collar (17) on fitting (18).



CD058R05

INSTALLATION - Continued**NOTE**

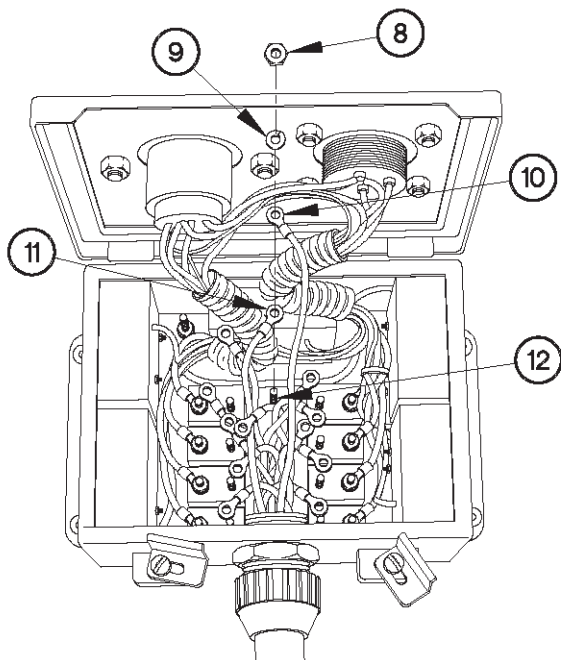
- Install plastic cable ties as required.
 - All converter box circuit breaker terminal lugs are installed the same way. Terminal lug 251 is shown. Refer to **Table 1. Converter Box Circuit Breaker Main Electrical Harness Terminal Lug Locations** for details.
4. Install terminal lug (15) on circuit breaker CB1 "AUX" terminal stud (16) with lockwasher (14) and nut (13).
 5. Perform the previous step on remaining circuit breakers.



CD058R03

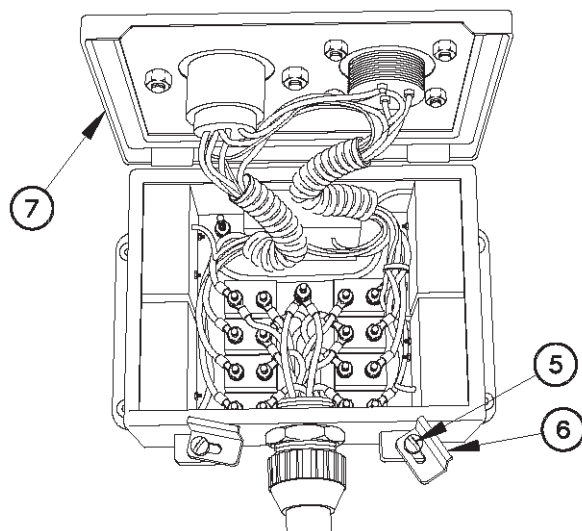
INSTALLATION - Continued

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).

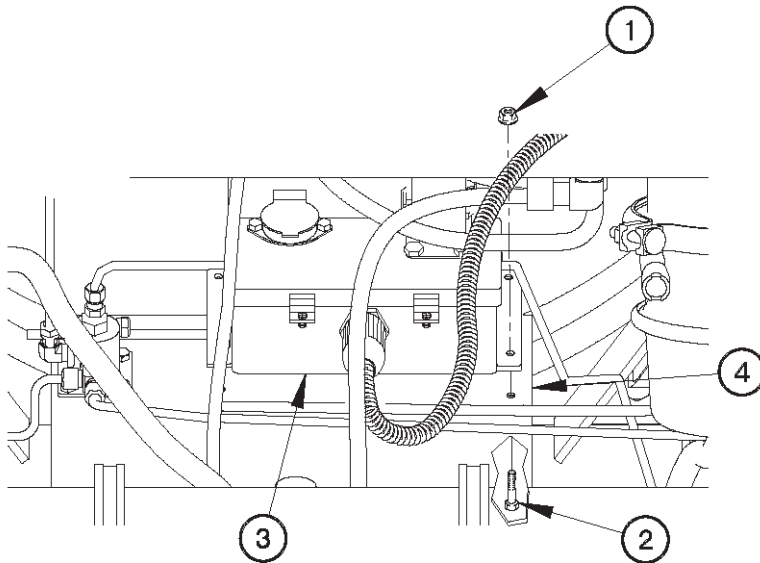


CD058R02

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).



CD058101

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

■ Tool Kit, Genl Mech (Item 24, WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

■ Wrench, Torque, 0-200 lb-in. (Item 35, WP 0167 00)

Materials/Parts

■ Ties, Cable, Plastic (Item 19, 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

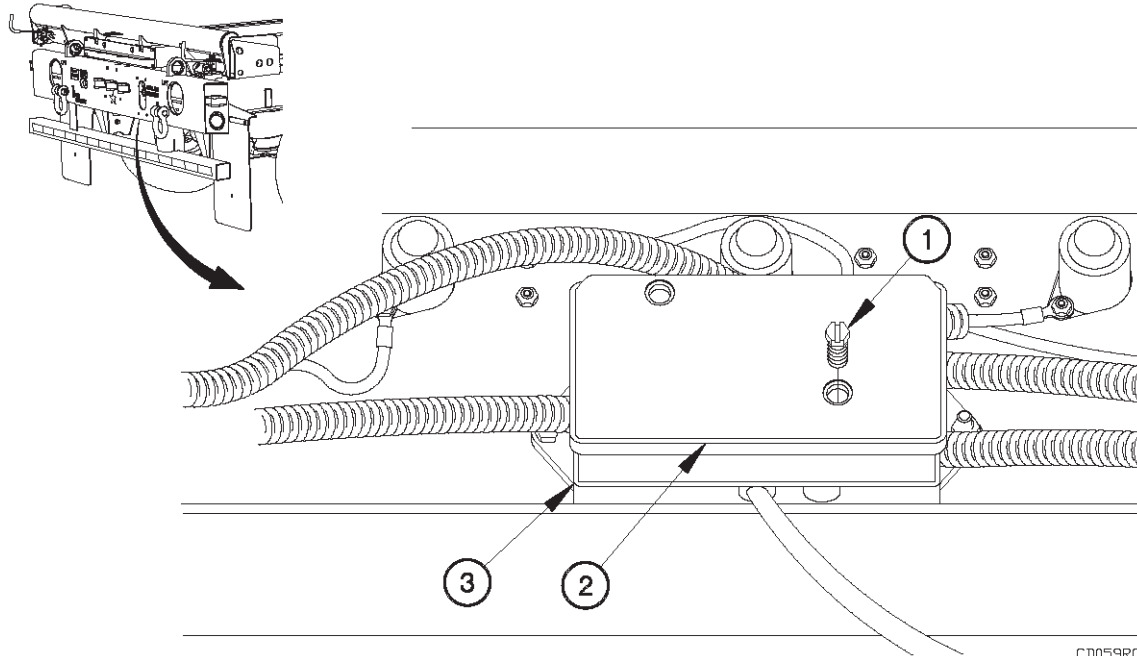
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) junction box.

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.

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



CD059R01

JUNCTION BOX REPLACEMENT - Continued

0059 00

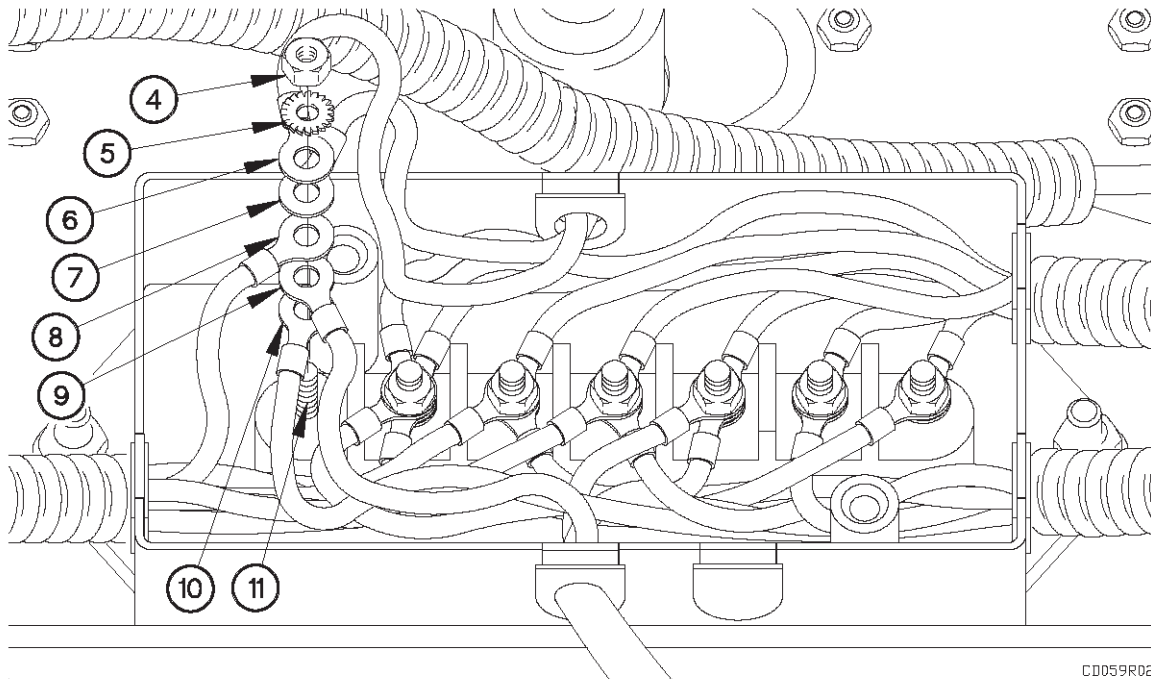
REMOVAL – Continued

NOTE

- All junction box terminal lugs are removed the same way. Terminal lug 1 is 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.

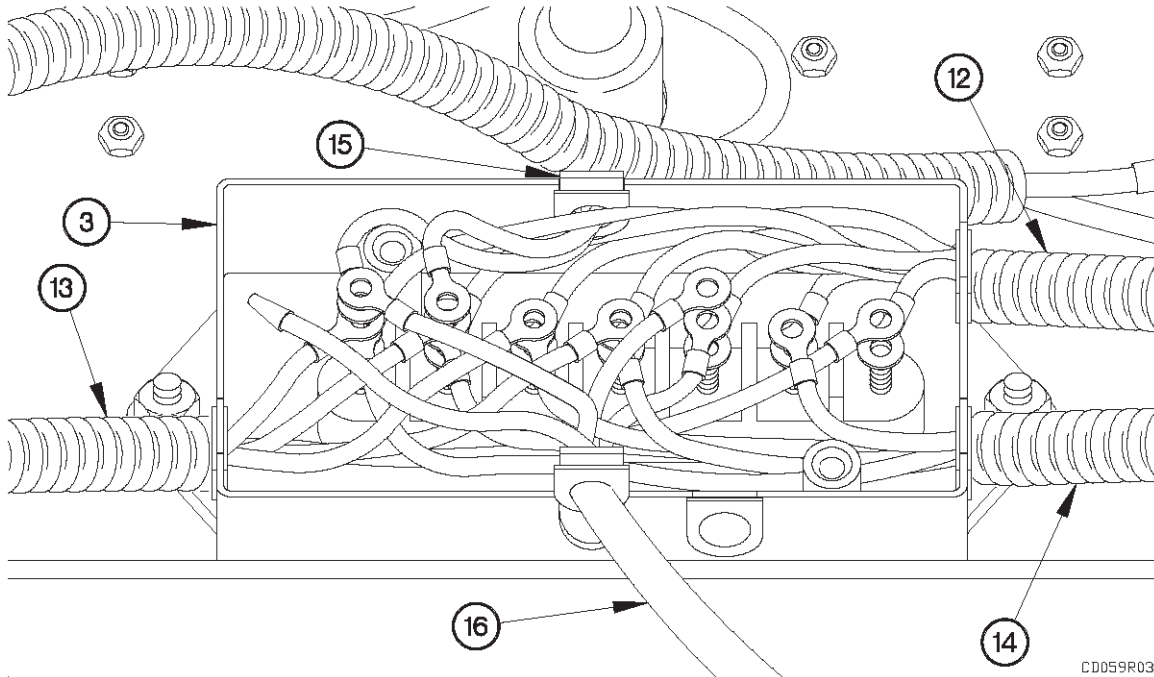
Junction Box Terminal Stud Position	Electrical Harness Terminal Lugs
Stud Position 1	TL261A, TL264, TL275, TL282, ABS Ground Terminal Lug
Stud Position 2	TL255A, TL267, TL273, TL281
Stud Position 3	TL257A, TL265, TL271
Stud Position 4	TL256A, TL266, TL272
Stud Position 5	TL251A, ABS Constant Power, ABS Stop Light Power
Stud Position 6	TL253A, TL274
Stud Position 7	TL252A, TL268



CD059R02

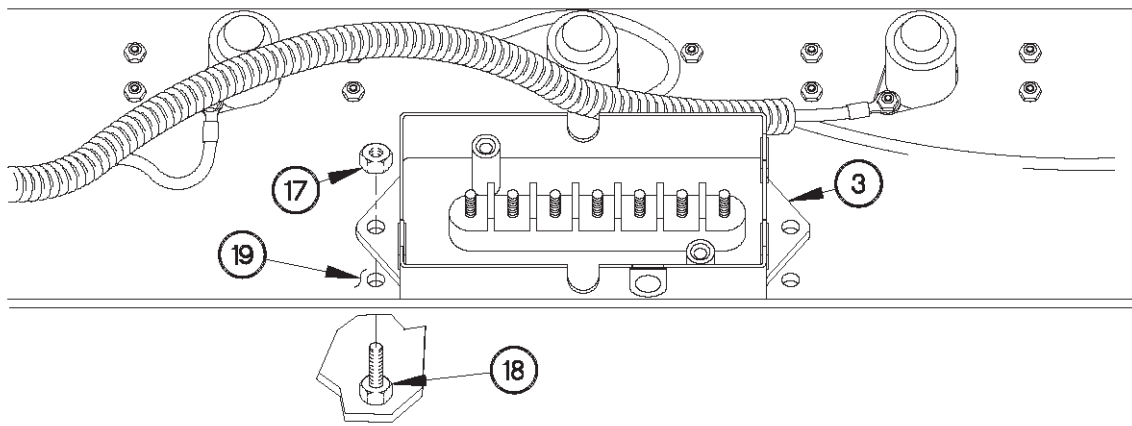
REMOVAL – Continued

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).



CD059R03

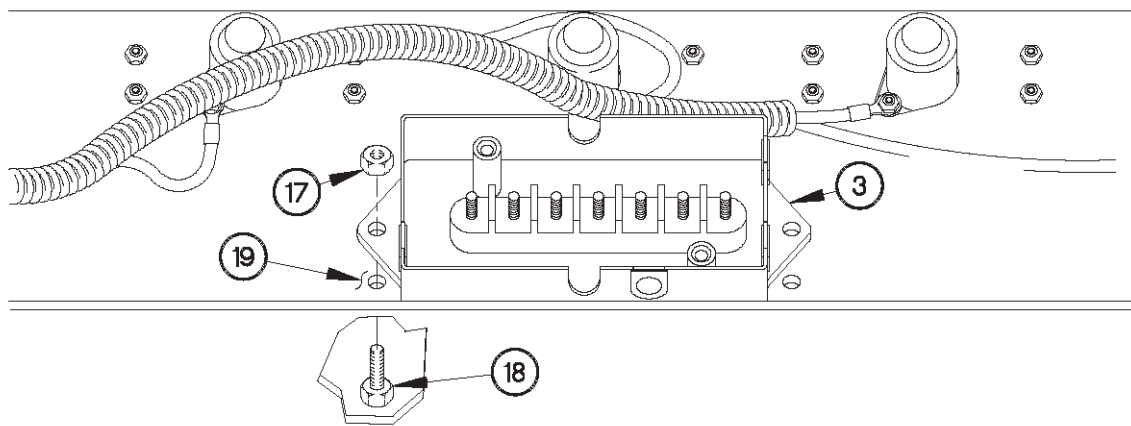
5. Remove two self-locking nuts (17), bolts (18), and junction box (3) from rear panel assembly (19). Discard self-locking nuts.



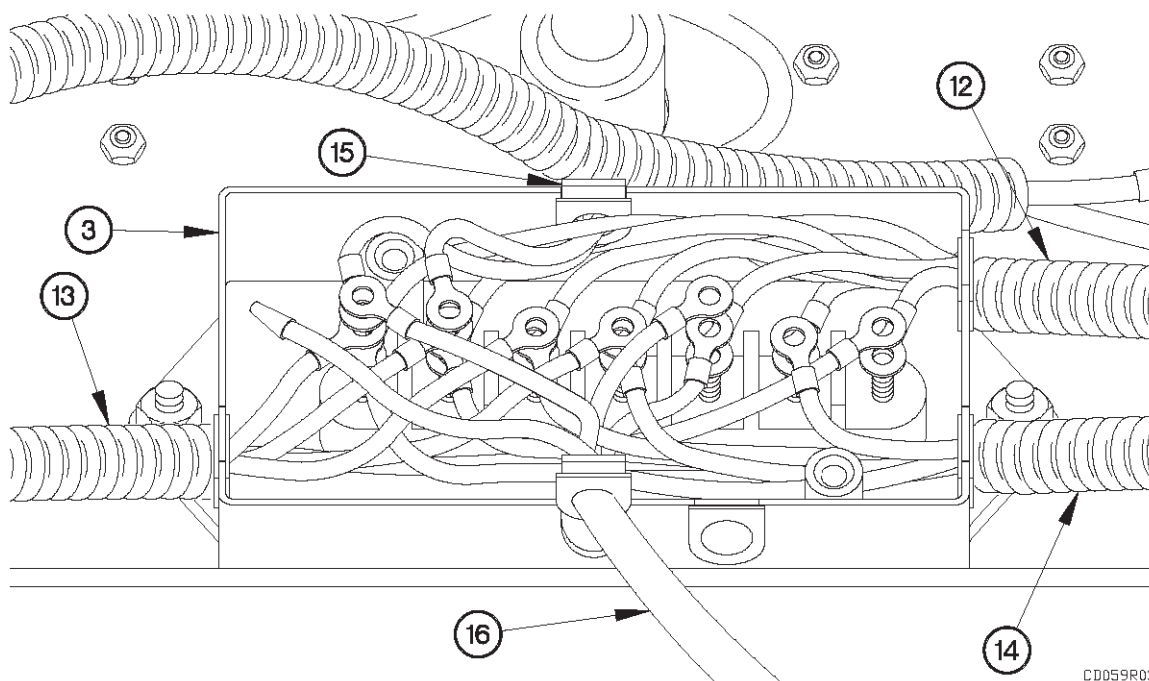
CD059R04

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).



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).



CD059R04

CD059R03

JUNCTION BOX REPLACEMENT - Continued

0059 00

INSTALLATION - Continued

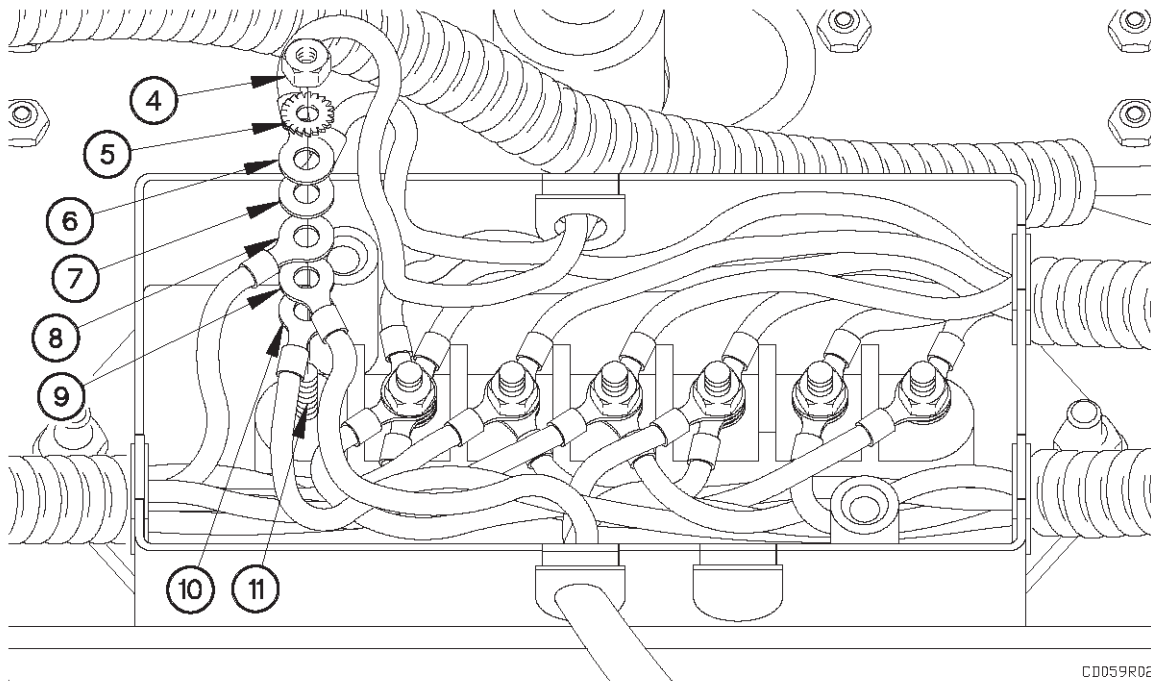
NOTE

All junction box terminal lugs are installed the same way. Terminal lug 1 is shown. Refer to **Table 2. 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.

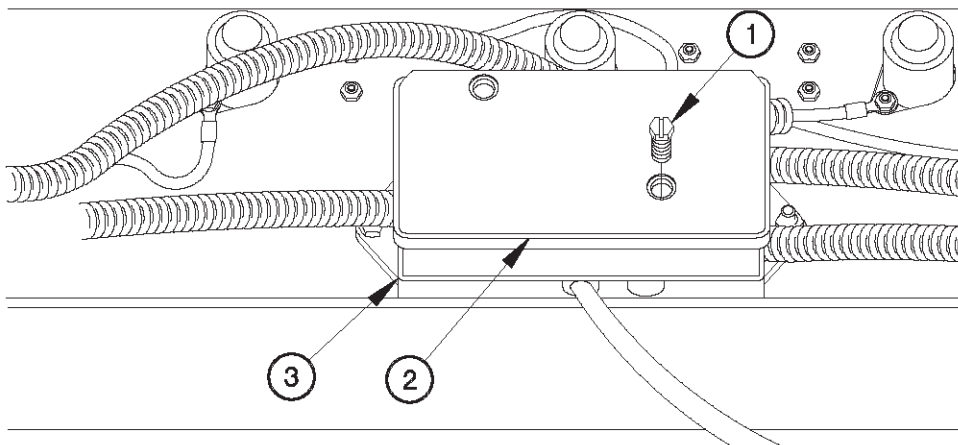
Table 2. Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations.

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



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

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)

Washer, Lock (2) (Item 21, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Wrench, Torque, 0-175 lb-ft (Item 34,
WP 0167 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24,
TM 2320-392-10-1)

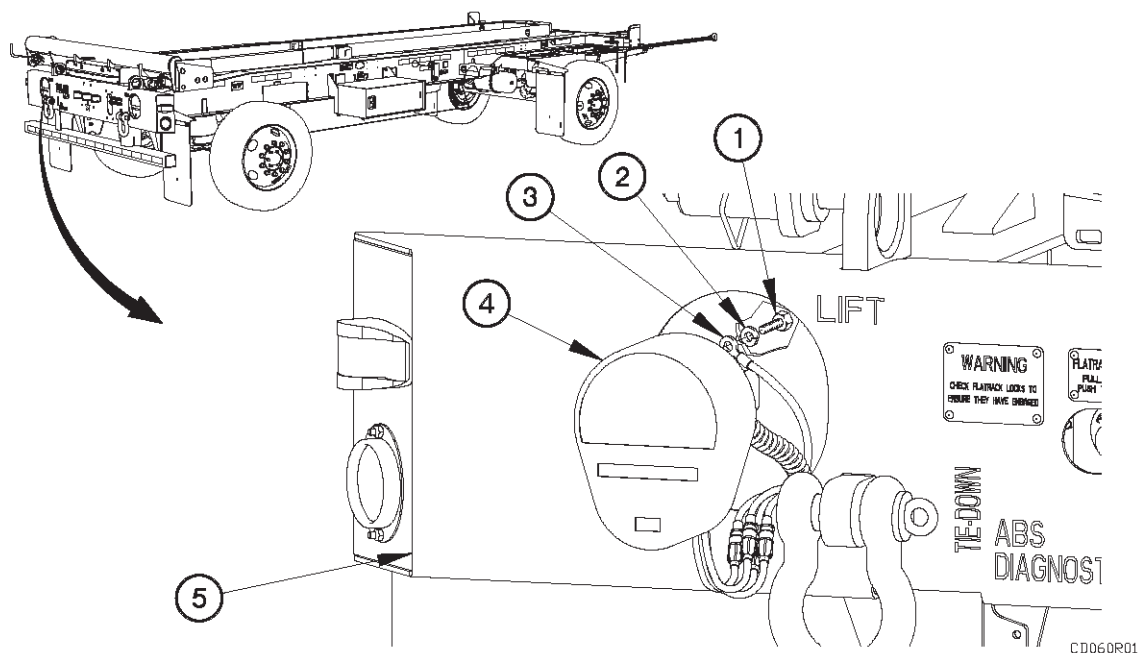
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) 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 is 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

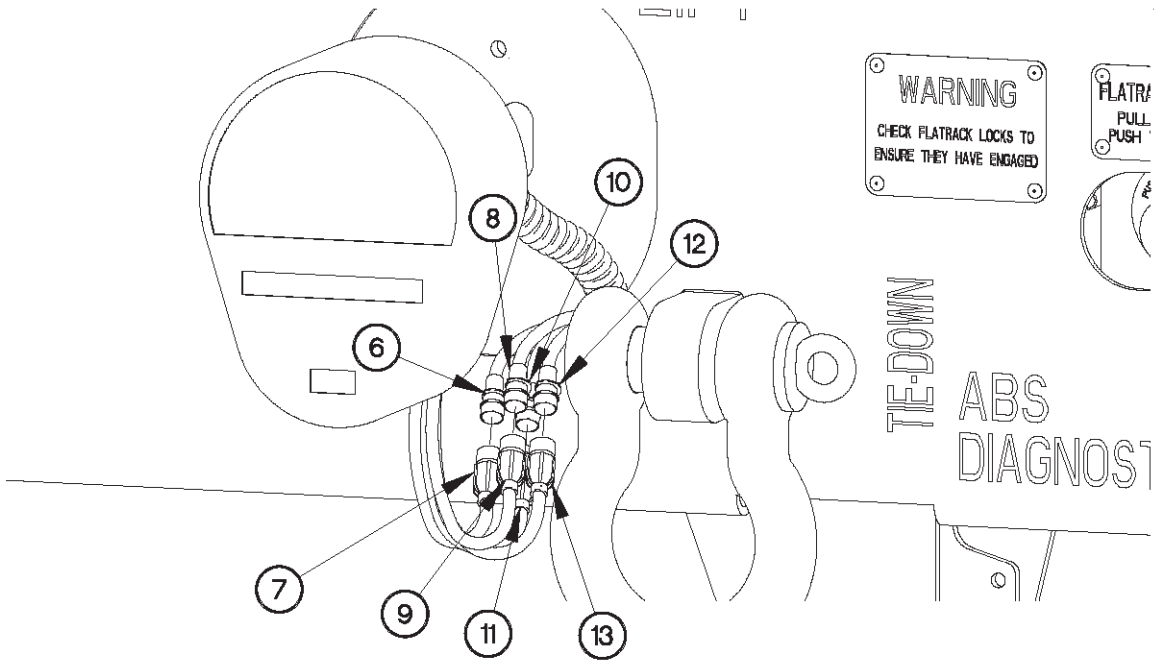
NOTE

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.

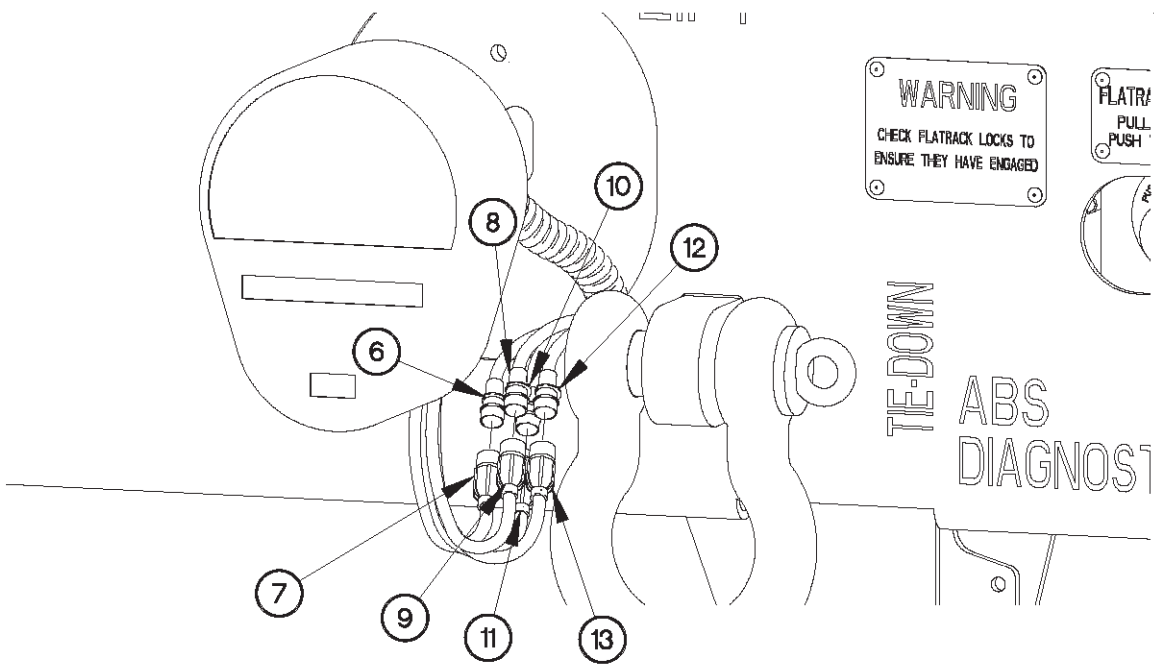
RH		LH	
Vehicle Connection	Taillight Connector	Vehicle Connection	Taillight Connector
Harness Connector J252	23	Harness Connector J257	23
Harness Connector J253	24	Harness Connector J258	24
Harness Connector J254	21	Harness Connector J259	21
Harness Connector J255	460, 461, 22	Harness Connector J261	460, 461, 22
Rear Panel Assembly	TL269	Rear Panel Assembly	TL277



INSTALLATION

NOTE

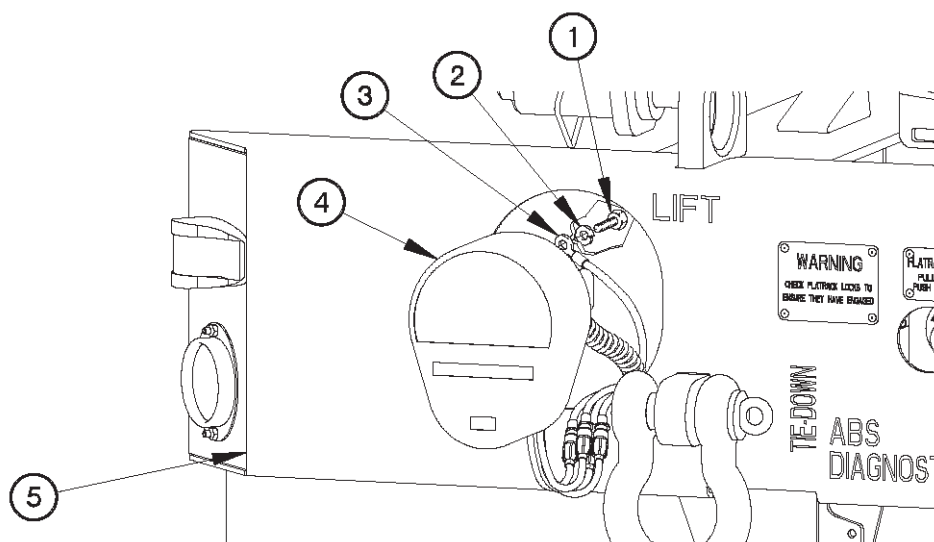
- LH and RH composite taillight assemblies are installed the same way. LH composite taillight assembly shown.
 - Refer to **Table 1. Composite Taillight Assembly Connections and Connection Points** for info on RH composite taillight assembly.
1. Connect harness connector J261 (12) to composite taillight 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).



CD060R02

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).



CD060101

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 24, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 37,
WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34,
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)

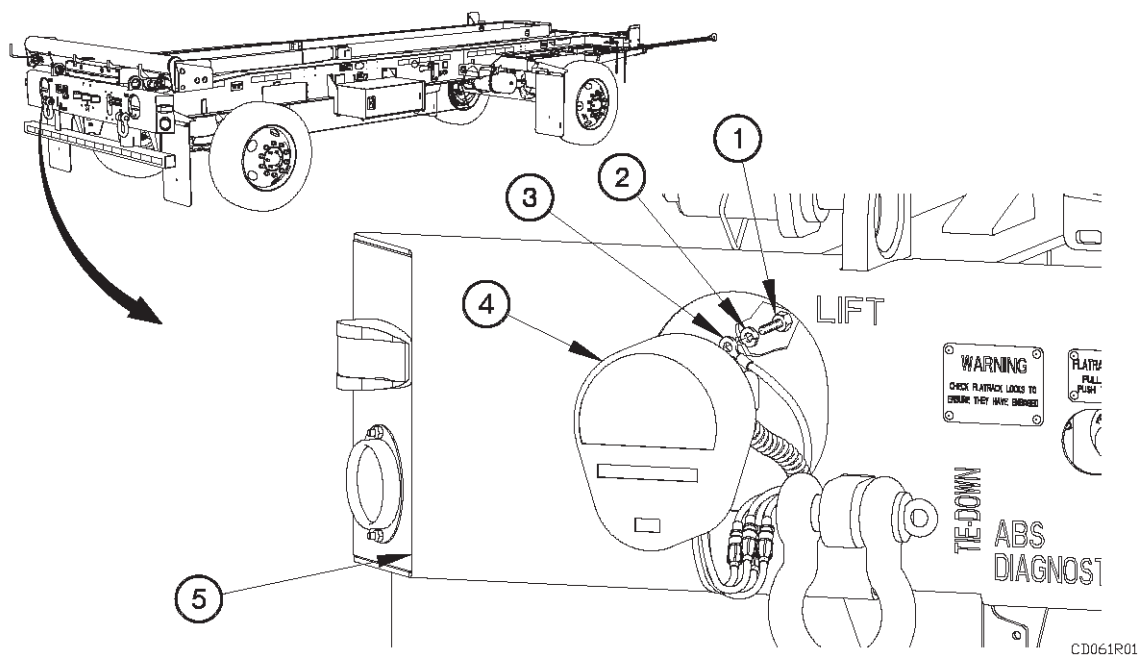
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) marker lights.

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.

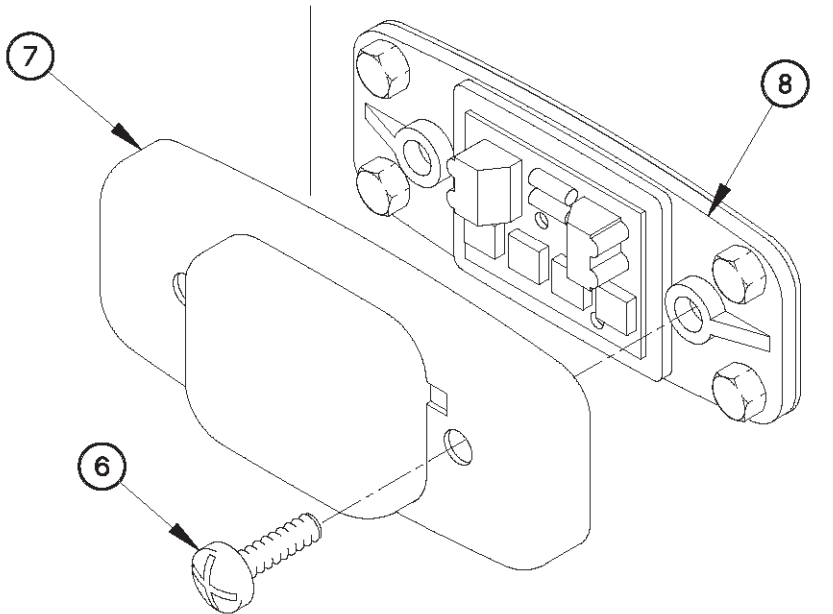


REMOVAL - Continued

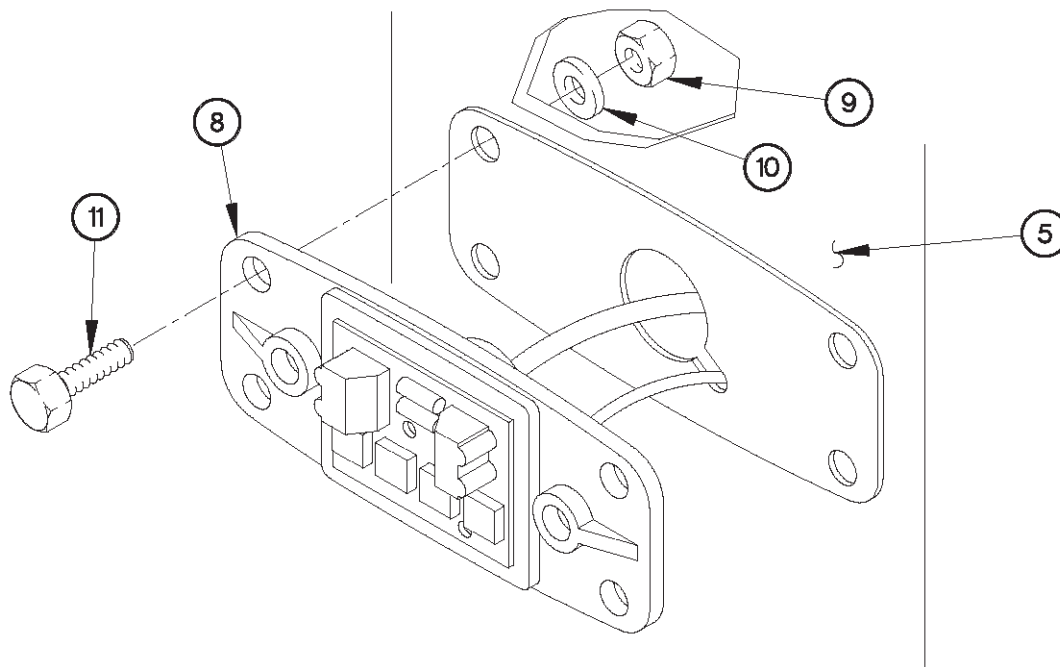
NOTE

All marker light assemblies are removed the same way. LH rear corner marker light assembly is shown.

- Remove two screws (6) and cover (7) from base (8).



- Remove four self-locking nuts (9), washers (10), screws (11), and base (8), from trailer (5). Discard self-locking nuts.



CD061R02

CD061R03

MARKER LIGHT ASSEMBLY REPLACEMENT - Continued

0061 00

REMOVAL - Continued

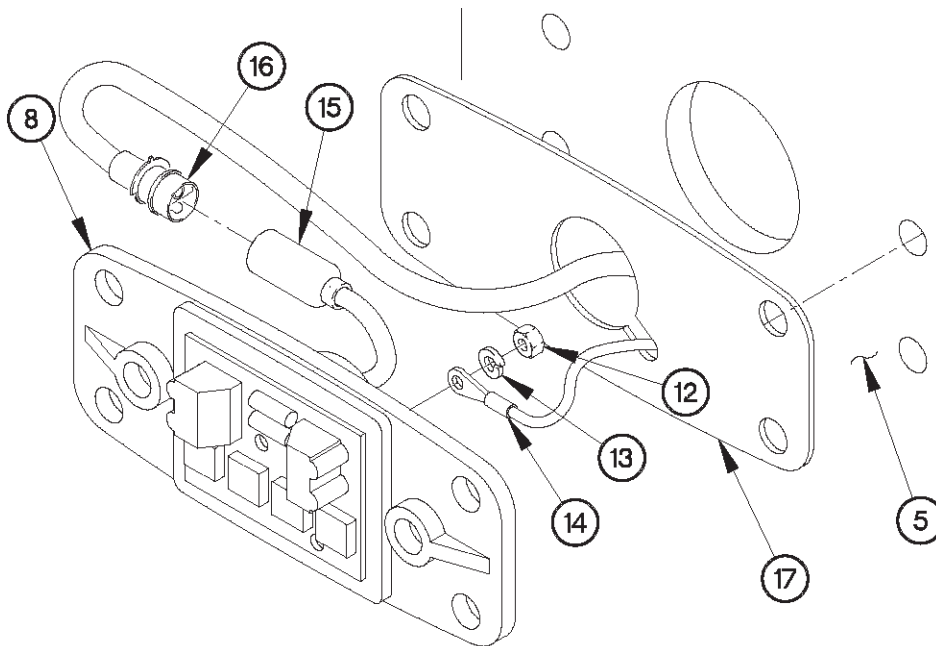
NOTE

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

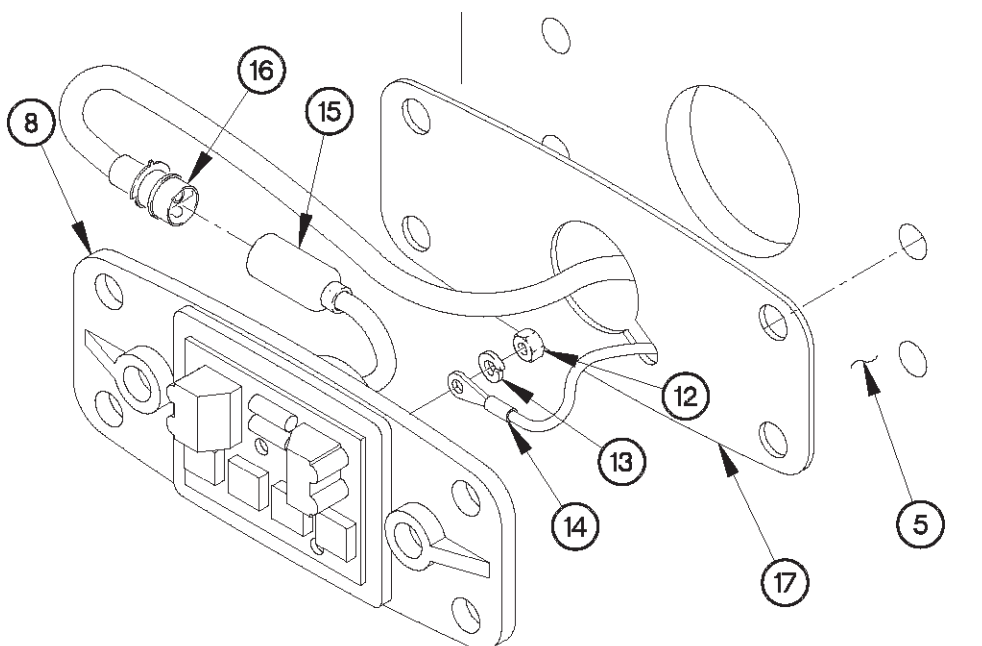


CD061R04

INSTALLATION**NOTE**

All marker light assemblies are installed the same way. LH rear corner marker light assembly is shown. Refer to **Table 1. Marker Light Locations, Connectors, and Terminal Lugs** for details.

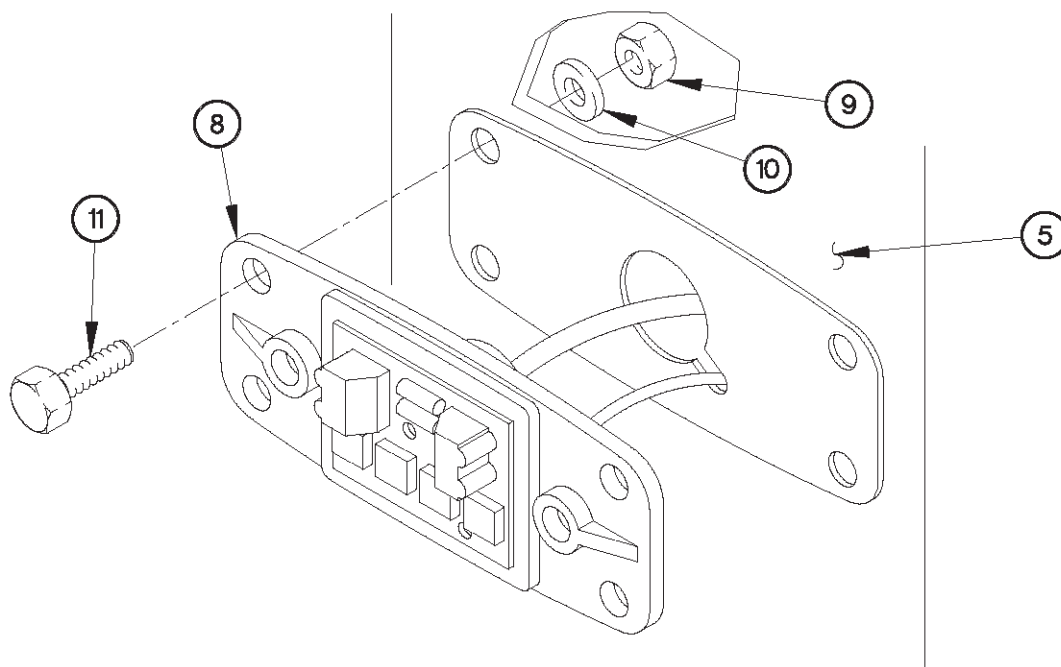
1. Position gasket (17) on trailer (5).
2. Connect connector J260 (16) to marker light assembly connector (15).
3. Install terminal lug TL276 (14) on base (8) with lockwasher (13) and nut (12).



CD061R04

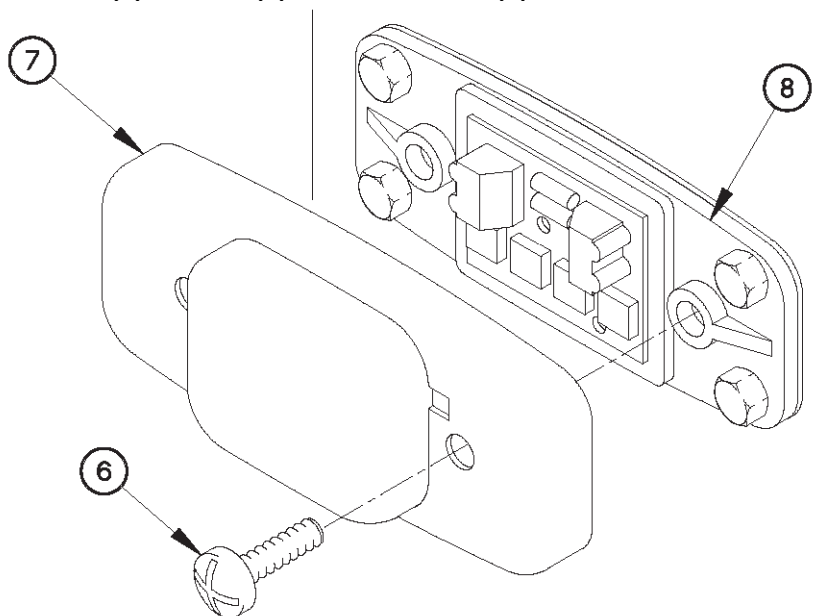
INSTALLATION - Continued

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).



CD061R03

6. Install cover (7) on base (8) with two screws (6).
7. Install cover (7) on base (8) with two screws (6).

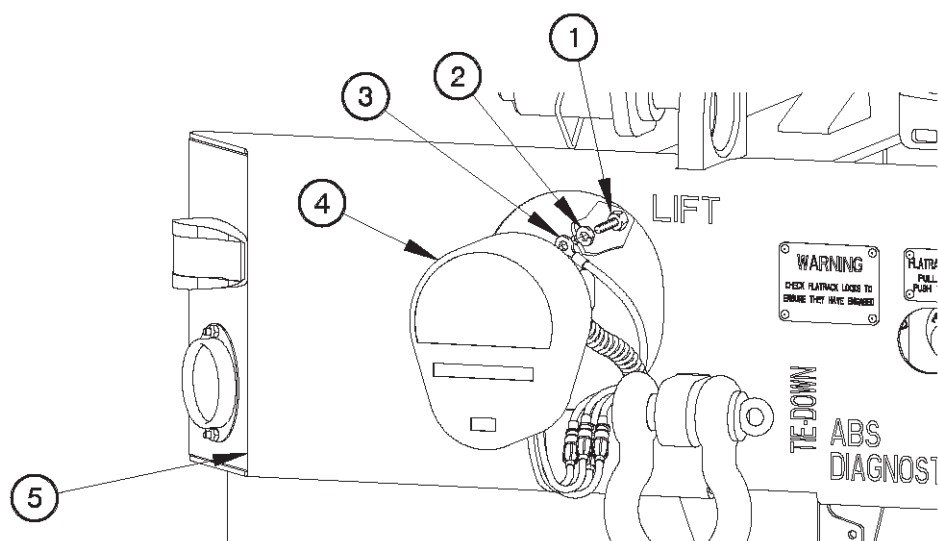


CD061R02

INSTALLATION - Continued**NOTE**

Perform the following step on LH and RH rear corner marker light assemblies. RH composite taillight terminal lug 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).



CD061101

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

Materials/Parts References

Nut, Self-Locking (2) (Item 27, WP 0168 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
 Tool Kit, Genl Mech (Item 24, WP 0167 00)
 Wrench, Torque 0-175 lb-ft (Item 34, WP
 0167 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

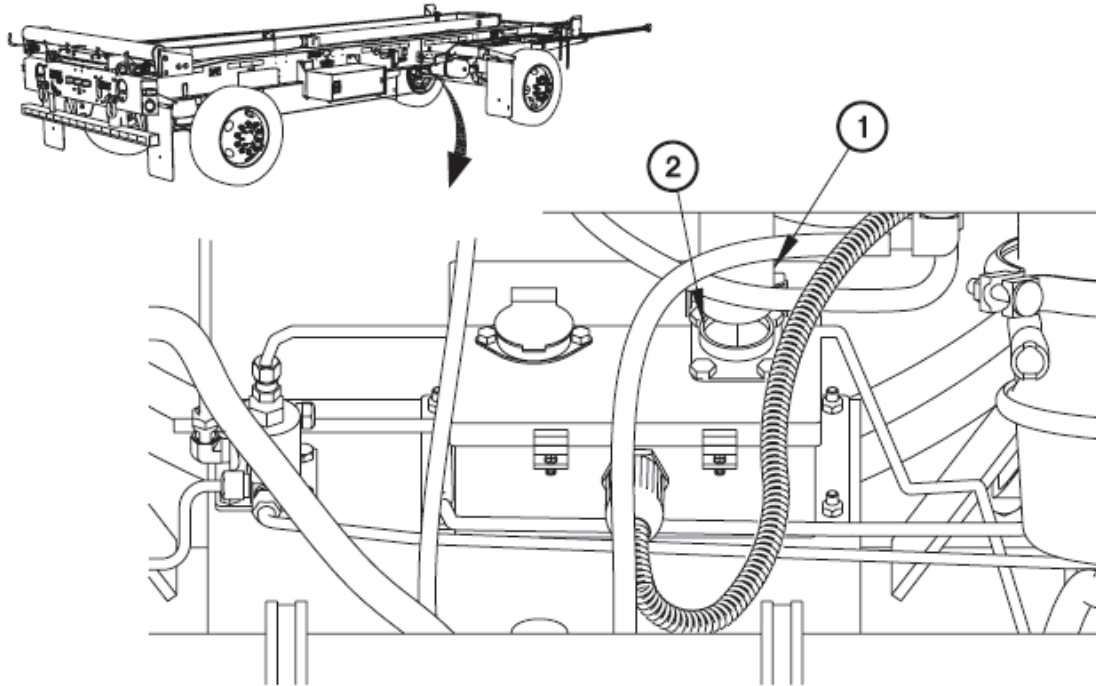
- **Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.**
- **Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrical shock. Failure to comply may result in serious injury or death to personnel.**

24 VDC INTERVEHICULAR CABLE REPLACEMENT - Continued

0062 00

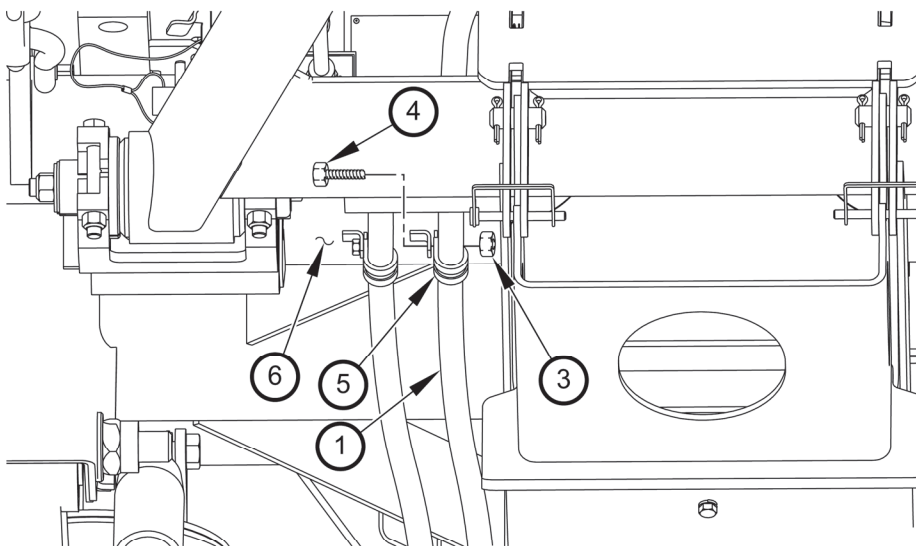
REMOVAL

1. Disconnect 24 VDC intervehicular cable (1) from 24 VDC intervehicular cable connector (2).



CD062R01

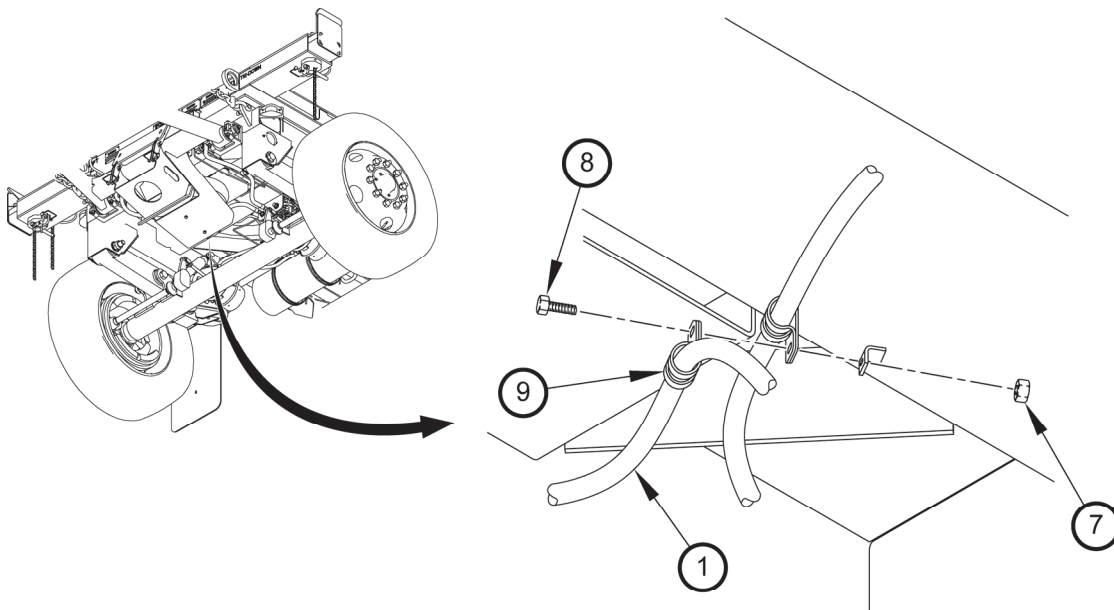
2. Remove self-locking nut (3), bolt (4), clamp (5), and 24 VDC intervehicular cable (1) from turntable (6). Discard self-locking nut.
3. Remove 24 VDC intervehicular cable (1) from clamp (5).



CD062R02A

REMOVAL - Continued

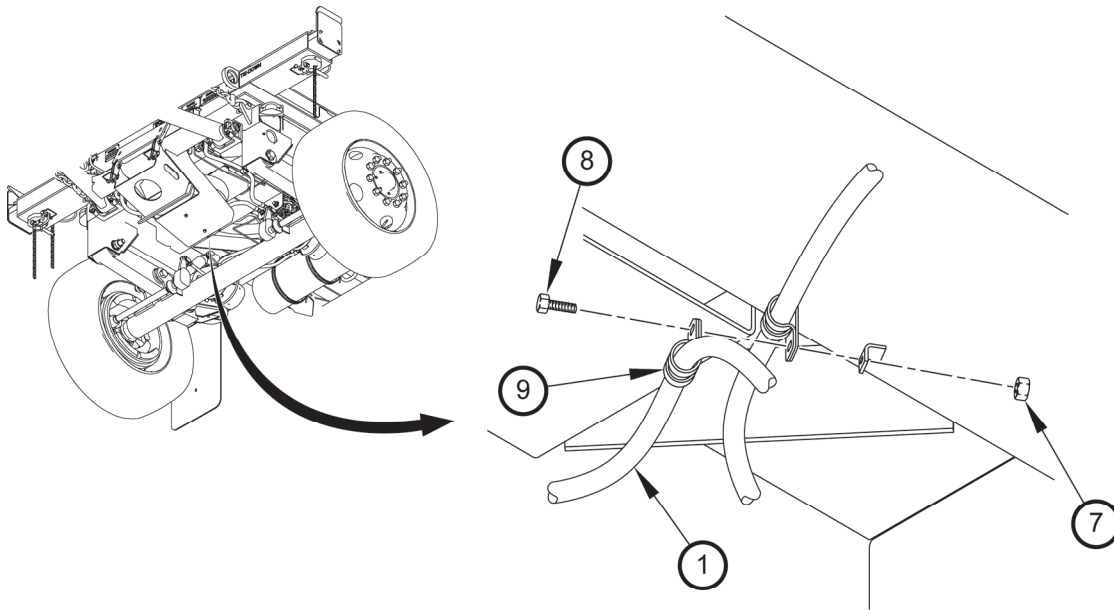
4. Remove self-locking nut (7), bolt (8), clamp (9), and 24 VDC intervehicular cable (1) from bracket. Discard self-locking nuts.
5. Remove 24 VDC intervehicular cable (1) from clamp (9).



CD062R02

INSTALLATION

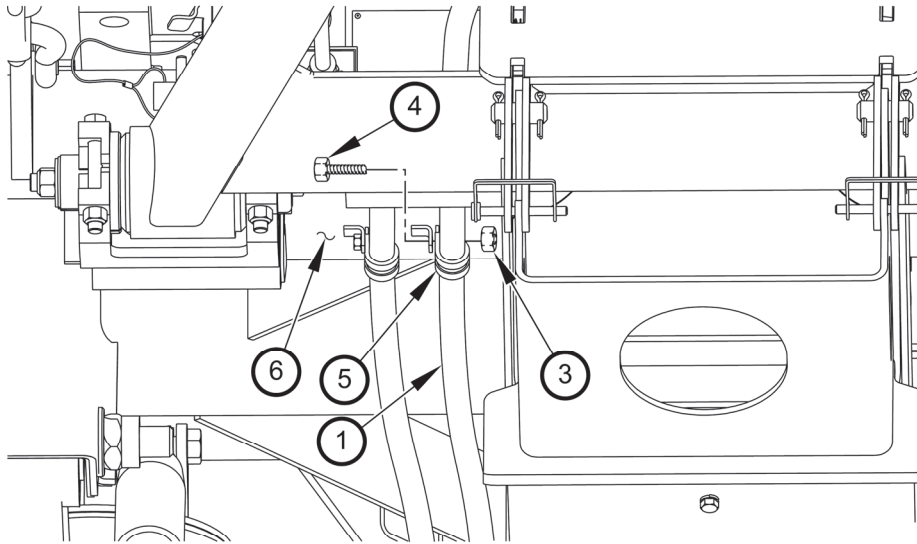
1. Position 24 VDC intervehicular cable (1) in clamp (9).
2. Install intervehicular cable (1) on bracket with clamp (9), bolt (8), and self-locking nut (7).
3. Tighten self locking nut (7) to 8-10 ft-lbs (10-14 N•m).



CD062R02

INSTALLATION – Continued

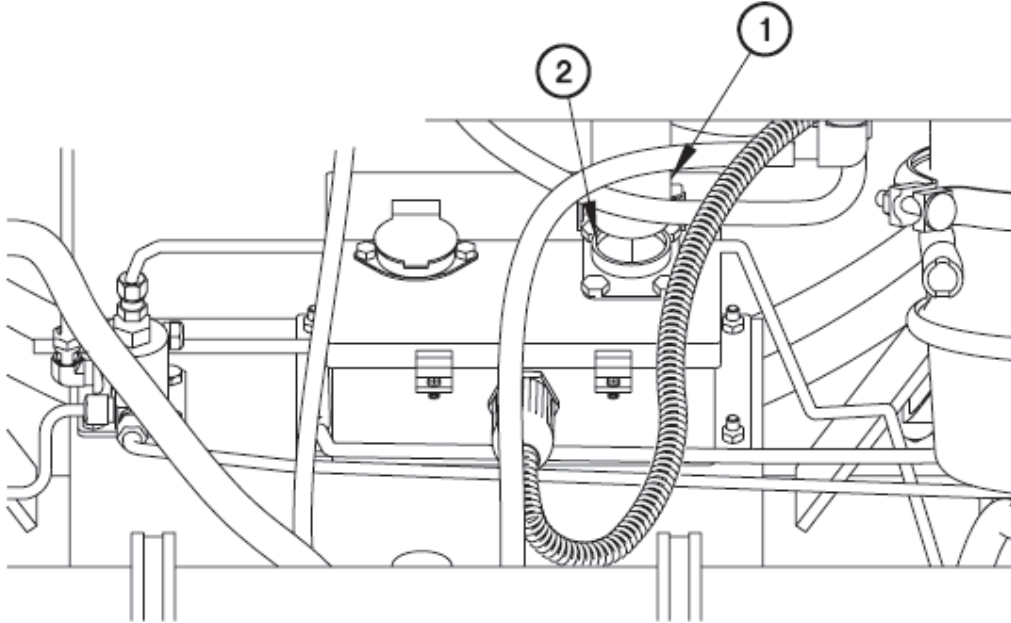
4. Position 24 VDC intervehicular cable (1) in clamp (5).
5. Install intervehicular cable (1) on turntable (6) with clamp (5), bolt (4), and self-locking nut (3).
6. Tighten self locking nut (3) to 8-10 ft-lbs (10-14 N•m).



CD062R02

INSTALLATION - Continued

7. Connect 24 VDC intervehicular cable (1) to 24 VDC intervehicular cable connector (2).



CD062101

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 24, 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)

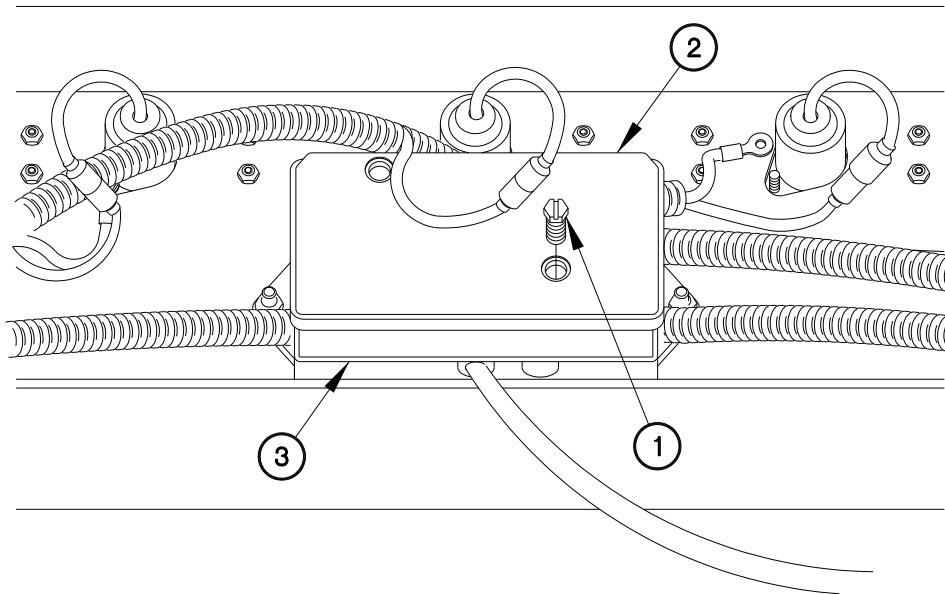
Right rear marker light assembly removed (WP 0061 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) right rear electrical harness.

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



CD063R01

RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued **0063 00**

REMOVAL - Continued

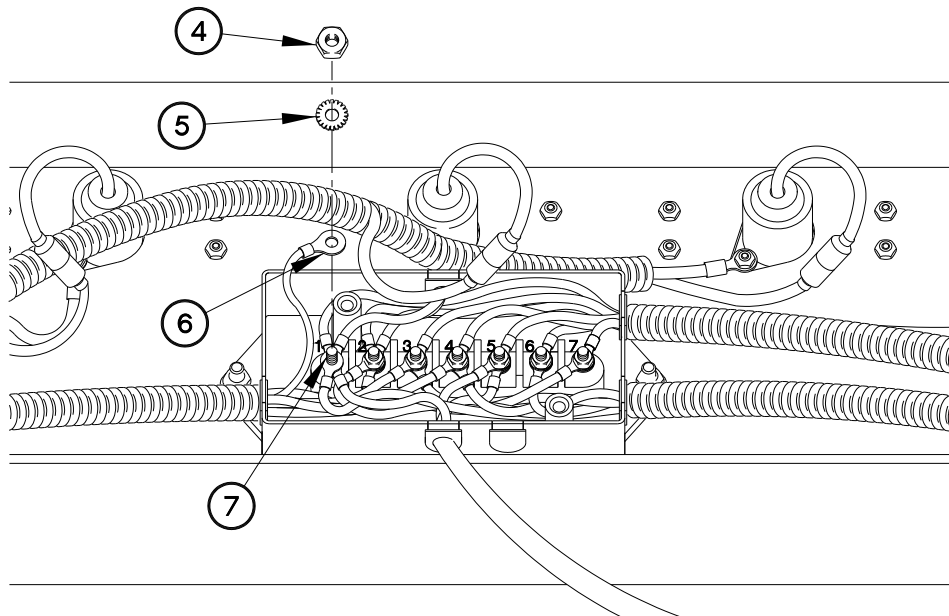
NOTE

- 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

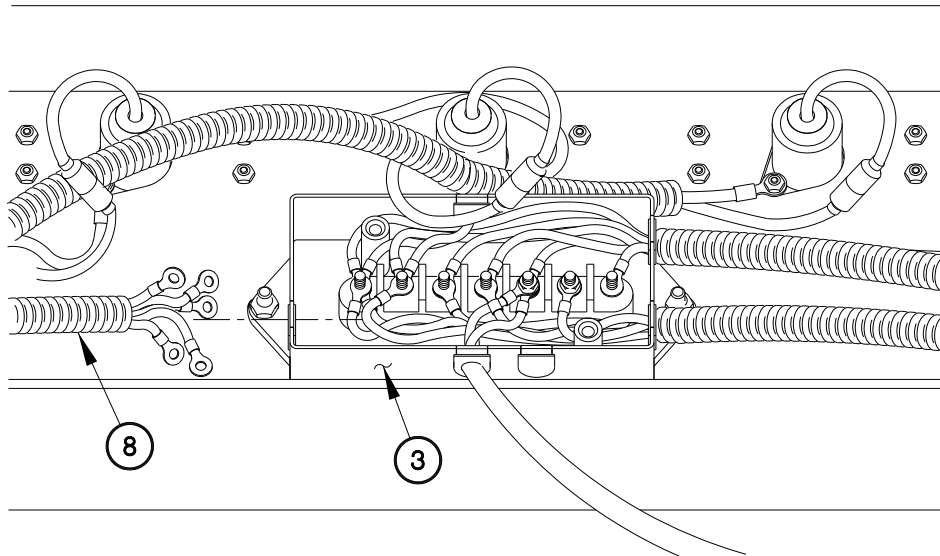
2. Remove nut (4), lockwasher (5), and terminal lug TL264 (6) from junction box terminal stud 1 (GRD.) (7). Discard lockwasher.
3. Perform the previous step on remaining right rear electrical harness to junction box terminal lugs.



CD063R02

REMOVAL - Continued

4. Remove right rear electrical harness (8) from junction box (3).

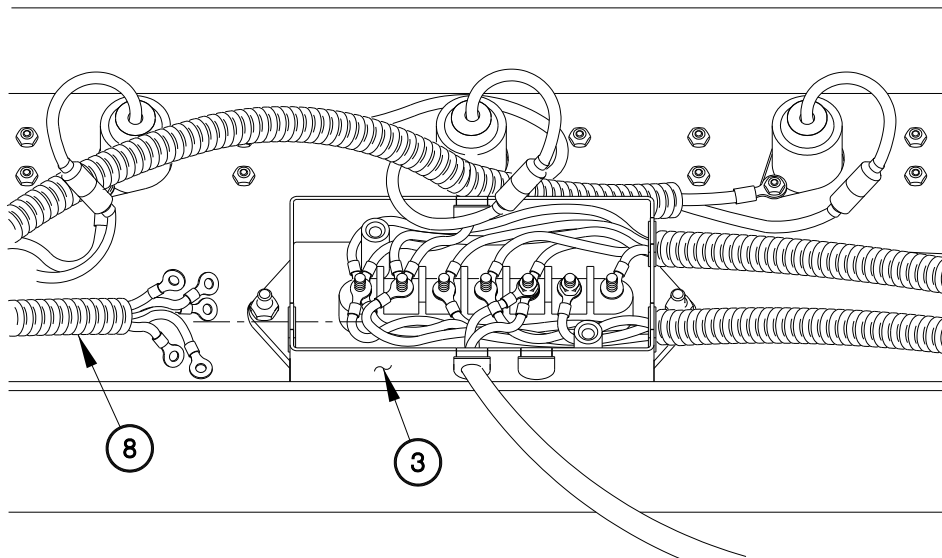


CD063R03

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).



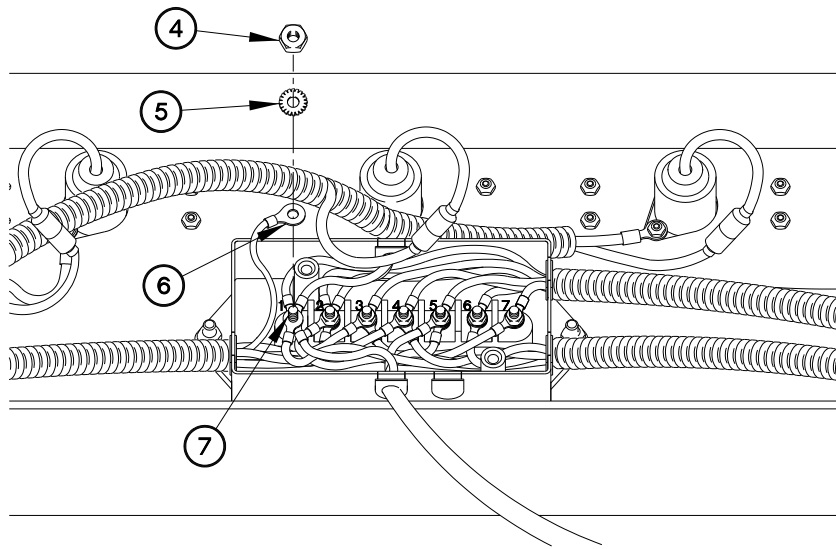
CD063R03

INSTALLATION - Continued

NOTE

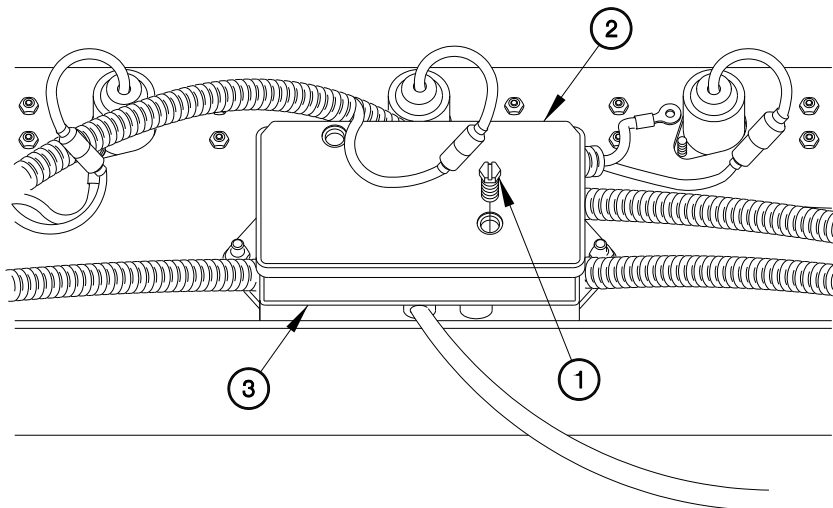
- Other terminal lugs are present at these locations.
- All right rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1. Right Rear Electrical Harness To Junction Box Connection Points** for details.

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.



CD063R02

4. Install junction box cover (2) on junction box (3) with two bolts (1).



CD063R01

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

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Left rear composite taillight assembly removed (WP 0060 00)

Left rear marker light assembly removed (WP 0061 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive tape (Item 6, WP 0165 00)

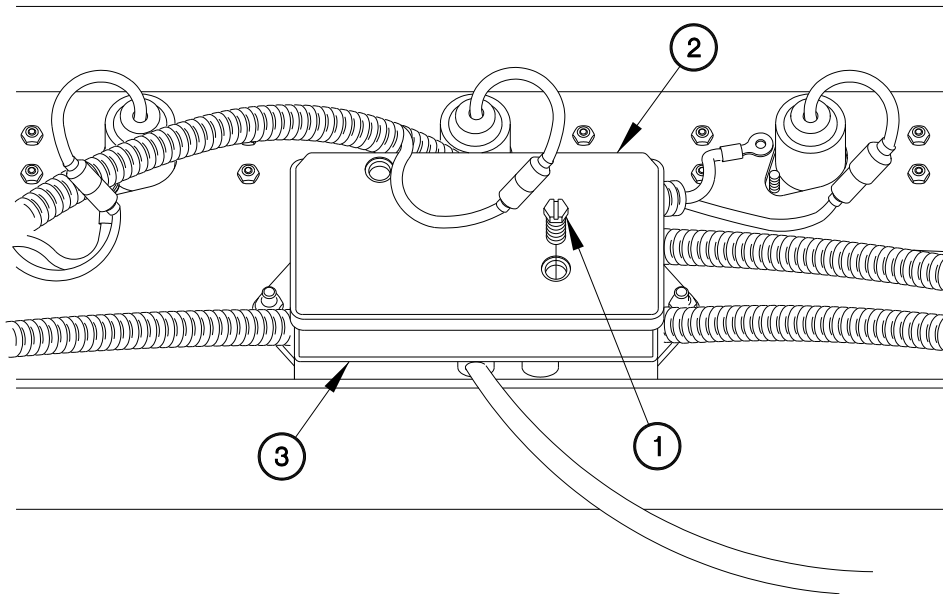
Washer, Lock (5) (Item 15, WP 0168 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) left rear electrical harness.

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



CD064R01

REMOVAL - Continued

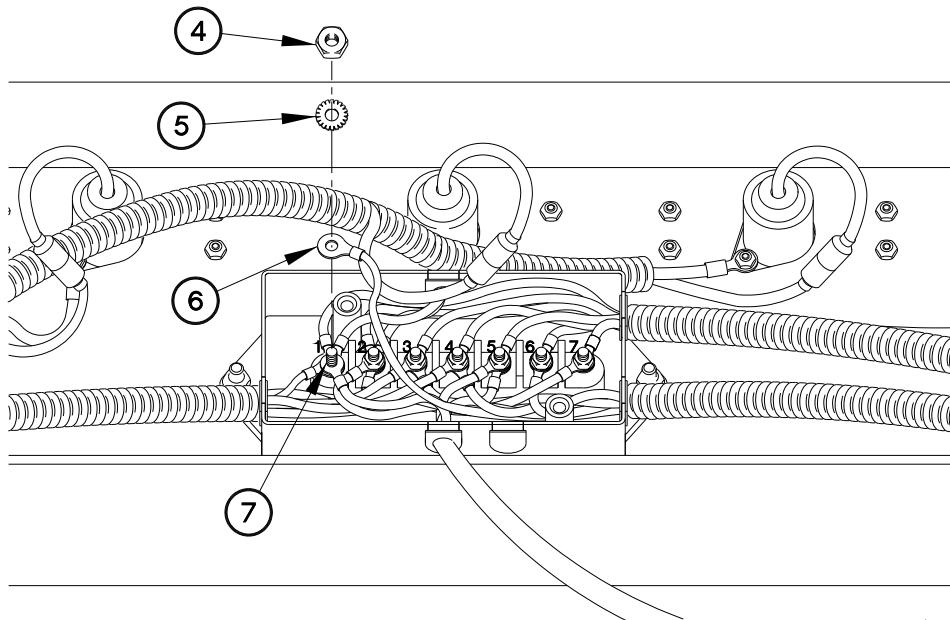
NOTE

- 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.

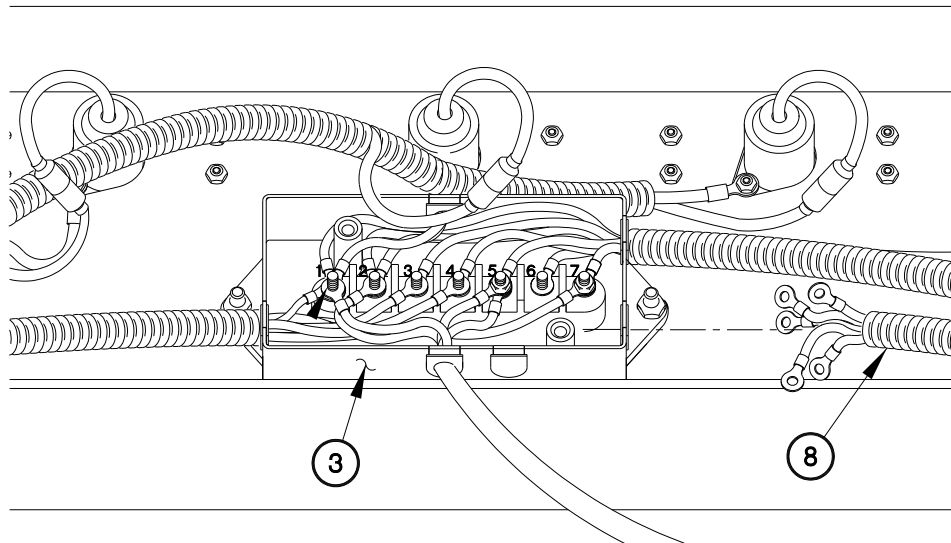


CD064R02

REMOVAL – Continued

LEFT REAR ELECTRICAL HARNESS REMOVAL

4. Remove left rear electrical harness (8) from junction box (3).



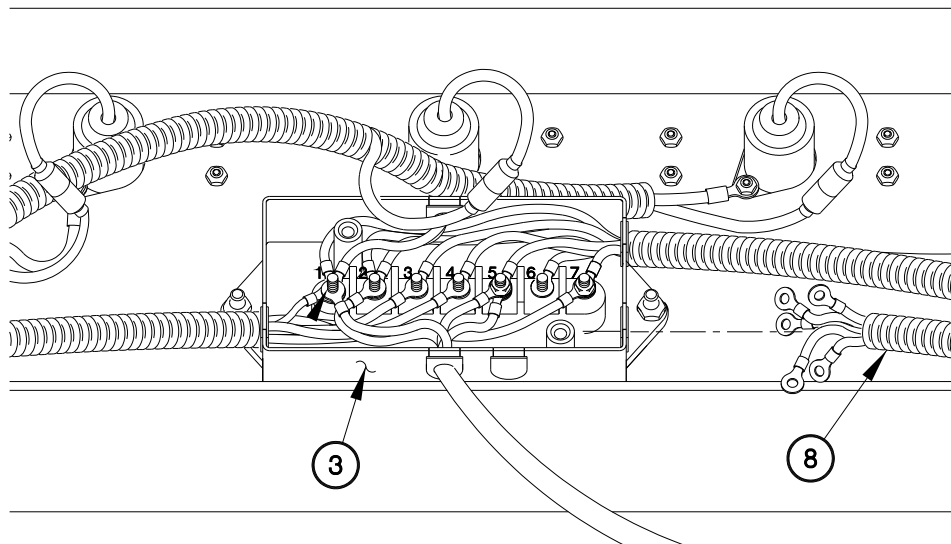
CD064R03

INSTALLATION

NOTE

Other terminal lugs are present at this location. Tag terminal lugs and connection points prior to removal.

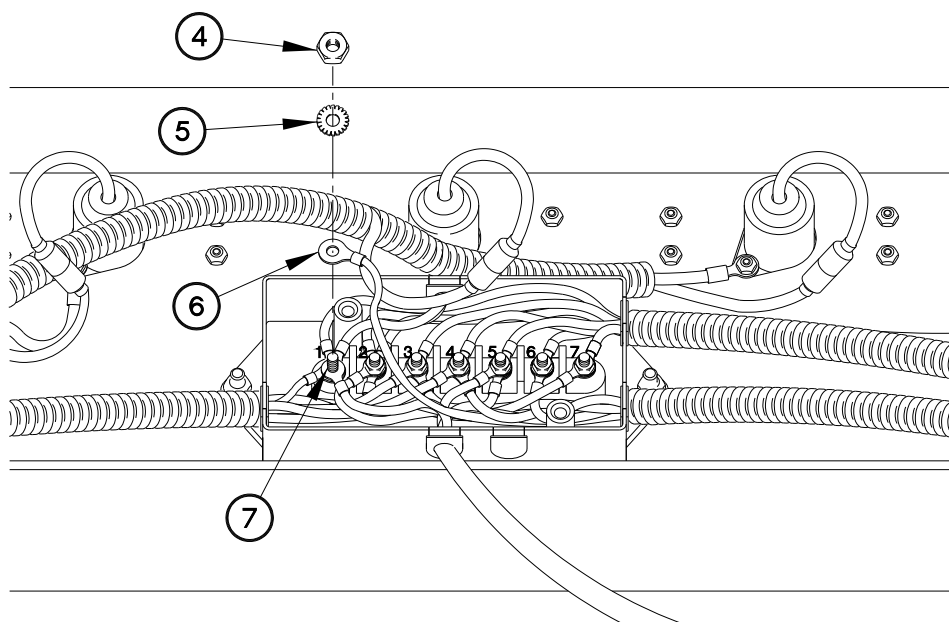
1. Position left rear electrical harness (8) in junction box (3).



CD064R03

INSTALLATION - Continued**NOTE**

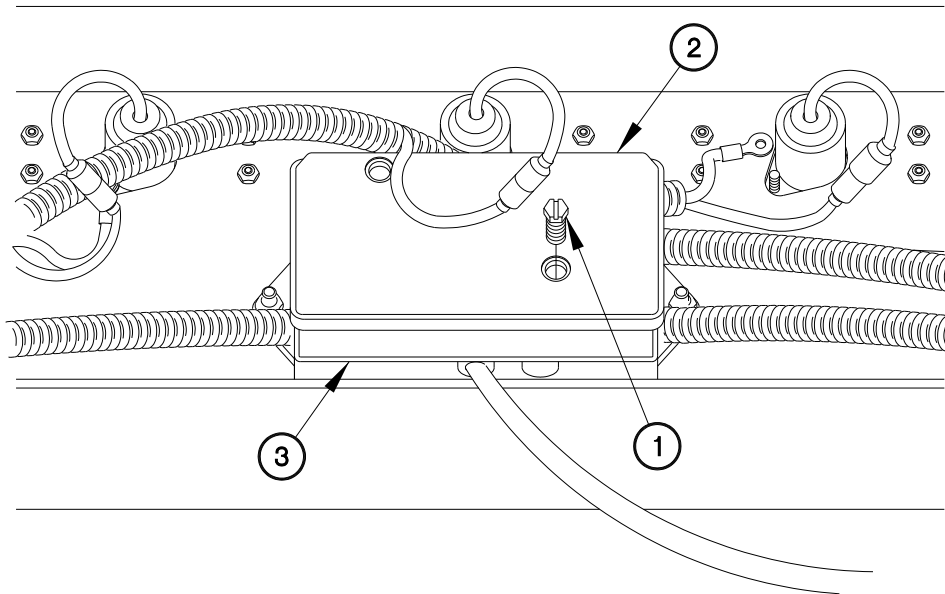
- Other terminal lugs are present at these locations.
 - All left rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1. Left Rear Electrical Harness To Junction Box Connection Points** for details.
2. Install terminal lug TL275 (6) 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.



CD064R02

INSTALLATION - Continued

4. Install junction box cover (2) on junction box (3) with two bolts (1).



CD064R01

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

Materials/Parts (Cont)

Washer, Lock (2) (Item 16, WP 0168 00)

Washer, Lock (3) (Item 14, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24,

TM 2320-392-10-1)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape

(Item 6, WP 0165 00)

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

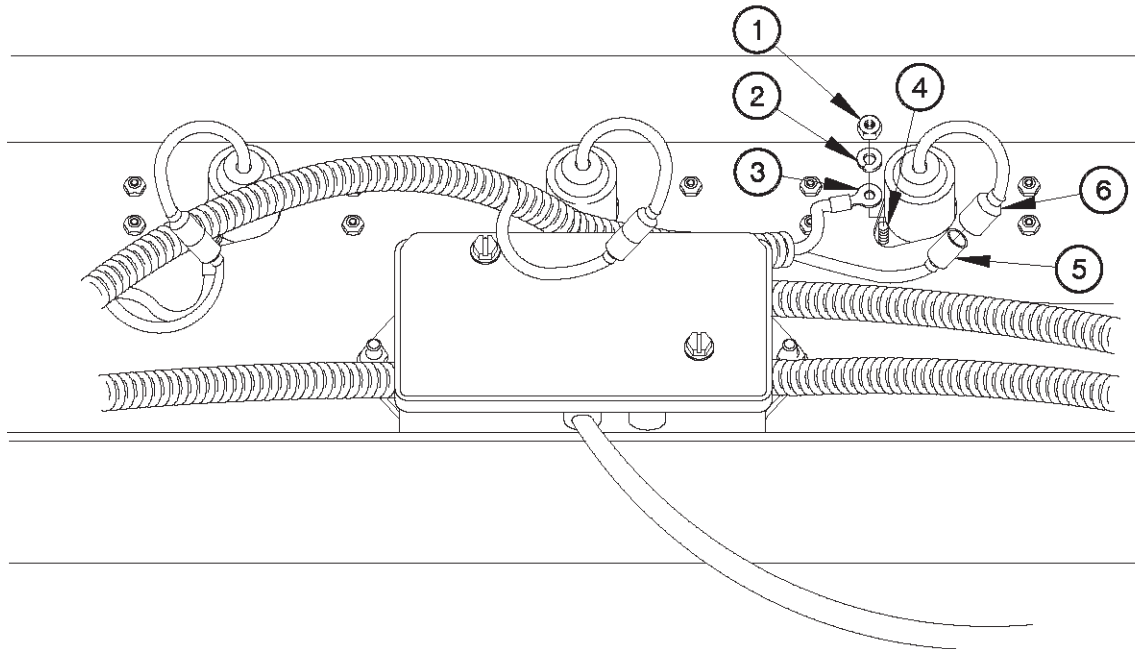
NOTE

- 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.

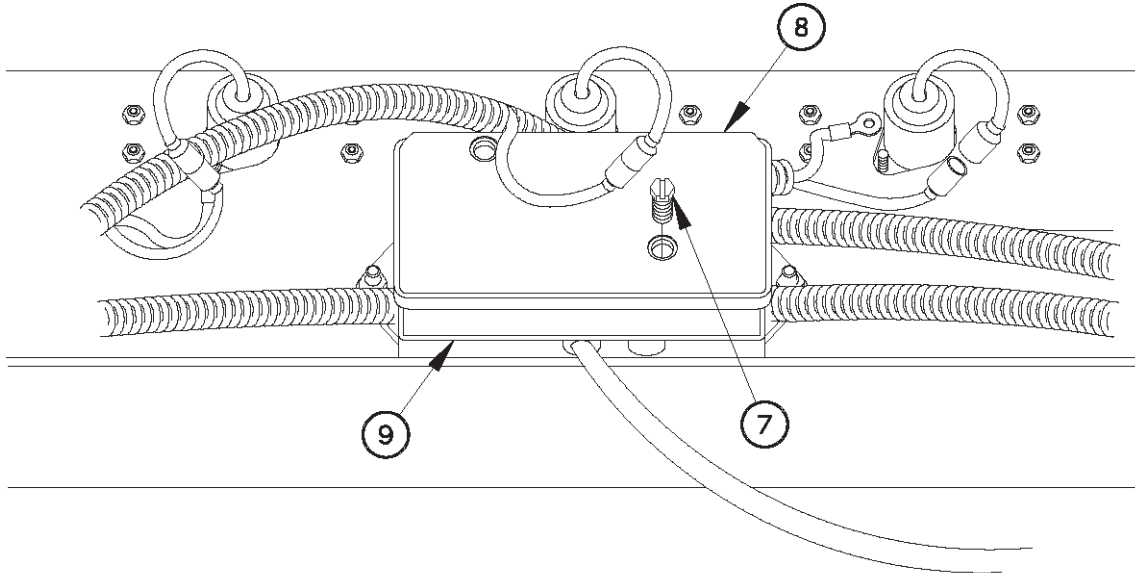
Rear Center Marker Lights		
Left	Center	Right
TL278	TL279	TL280
Connector J264	Connector J263	Connector J262
Junction Box		
Terminal Stud 1 (GRD.)		Terminal Stud 2 (CLEAR)
TL282		TL281



CD065R01

REMOVAL - Continued

4. Remove two bolts (7) and junction box cover (8) from junction box (9).

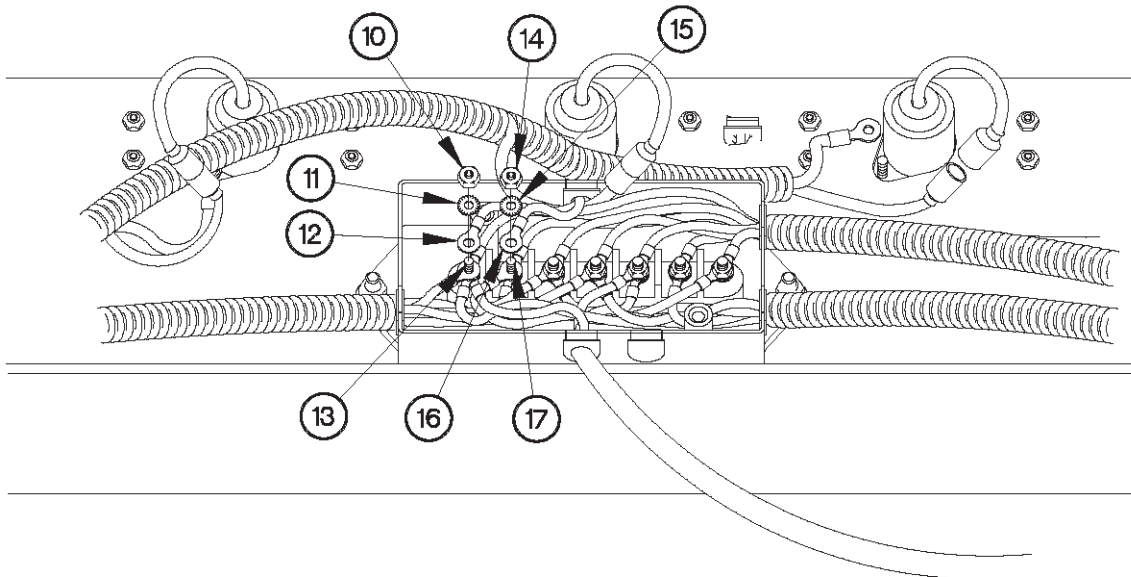


NOTE

Other terminal lugs are present at these locations.

CD065R02

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.



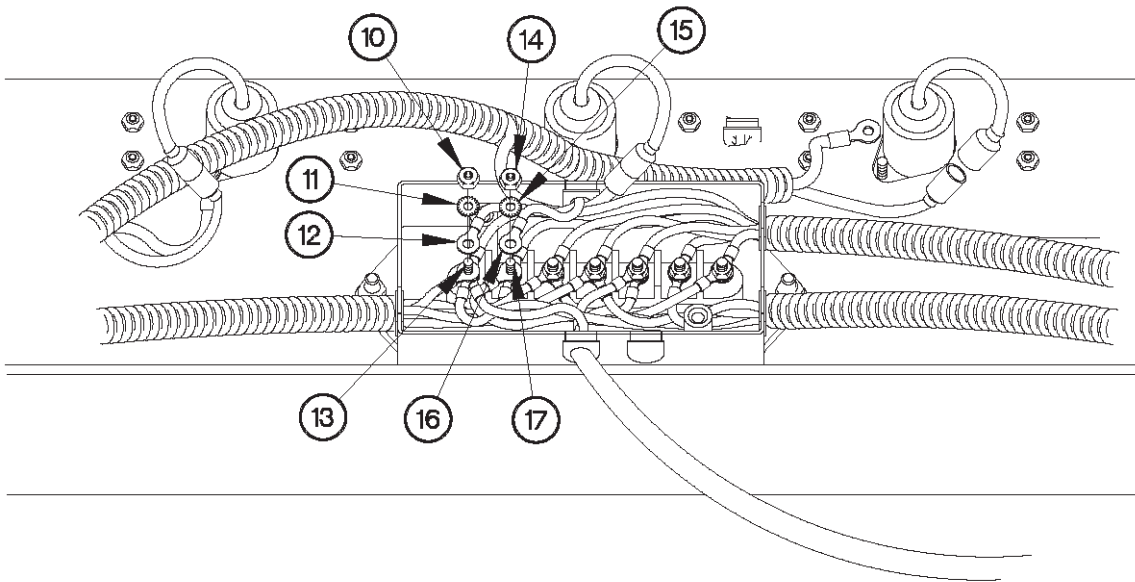
CD065R03

INSTALLATION

NOTE

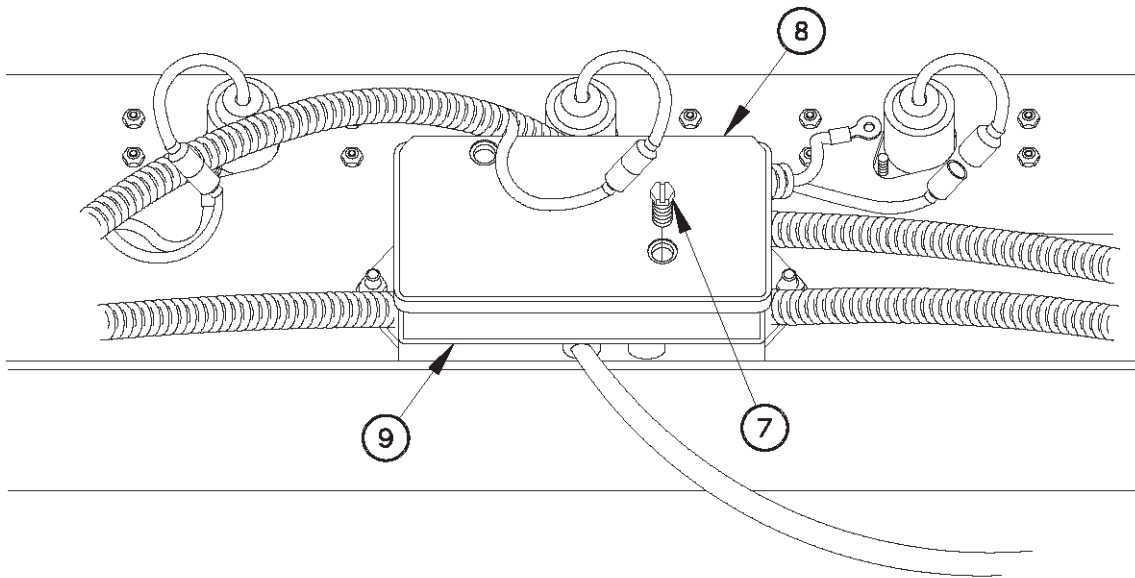
Other terminal lugs are present at these locations.

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).



CD065R03

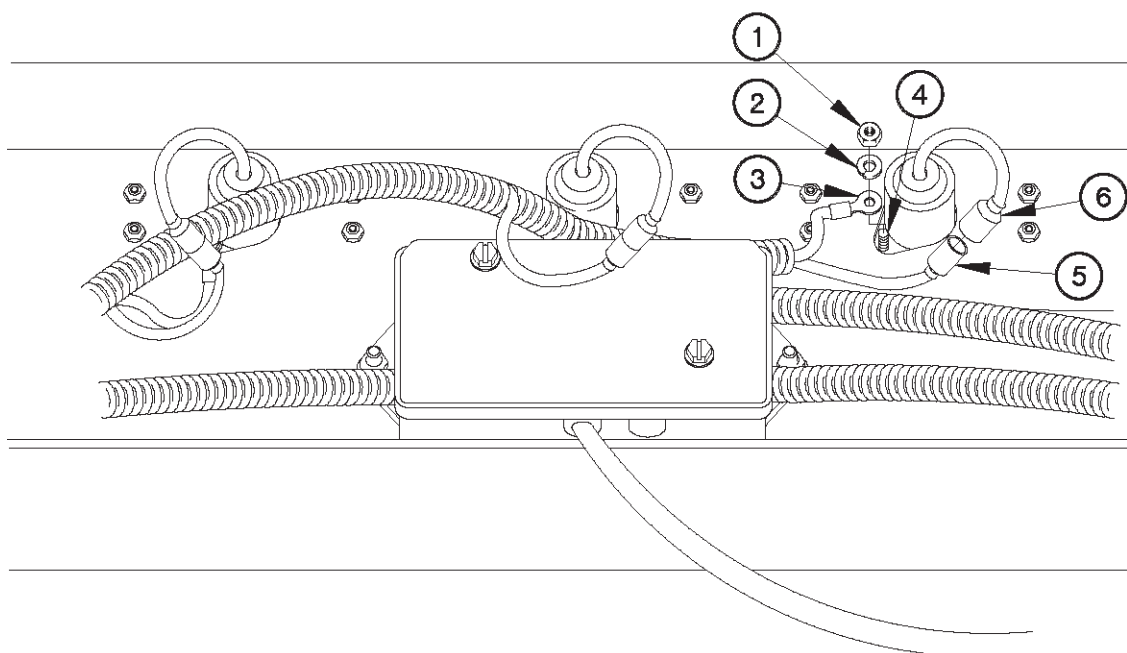
3. Install junction box cover (8) on junction box (9) with two bolts (7).



CD065R02

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).



C0065R01

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)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35,
WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)
Ties, Cable, Plastic (Item 19, 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

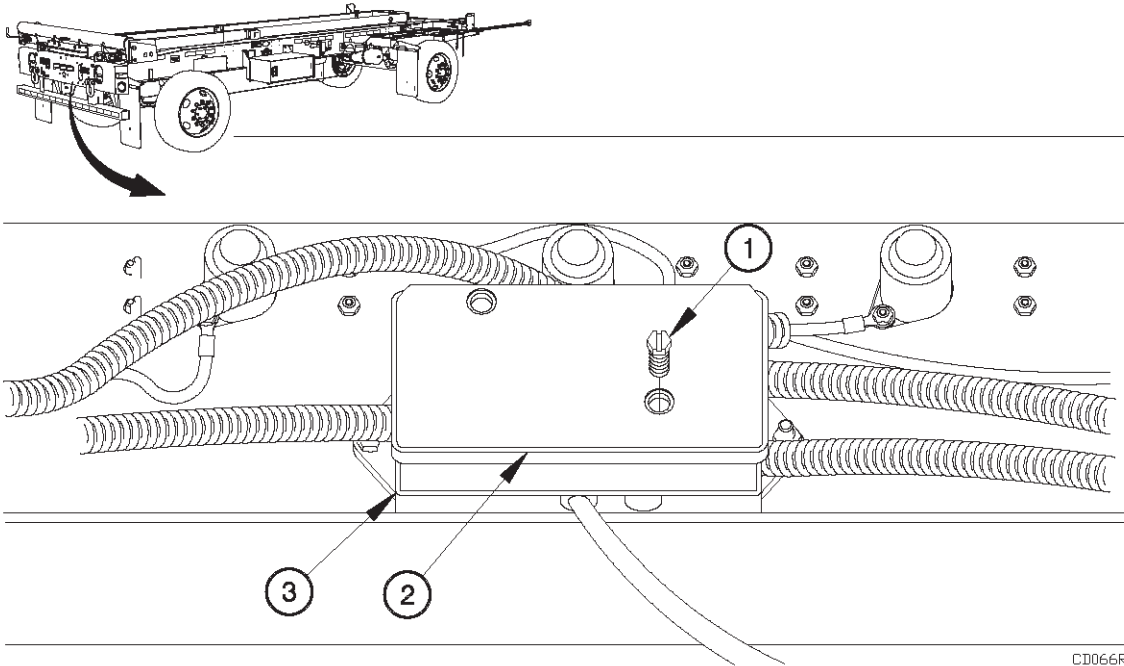
Trailer uncoupled (WP 0043 24,
TM 2320-392-10-1)
Voltage converter box removed
(WP 0058 00)
Front marker lights removed (WP 0061 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) main electrical harness.

REMOVAL

1. Remove two bolts (1) and junction box cover (2) from junction box (3).



CD066R01

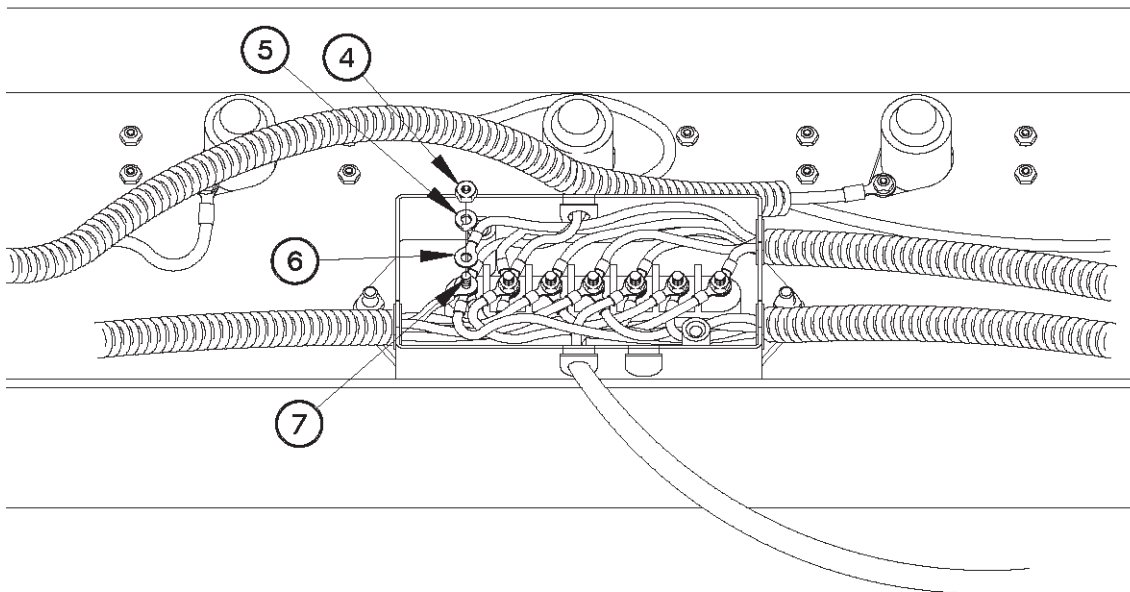
REMOVAL – Continued

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



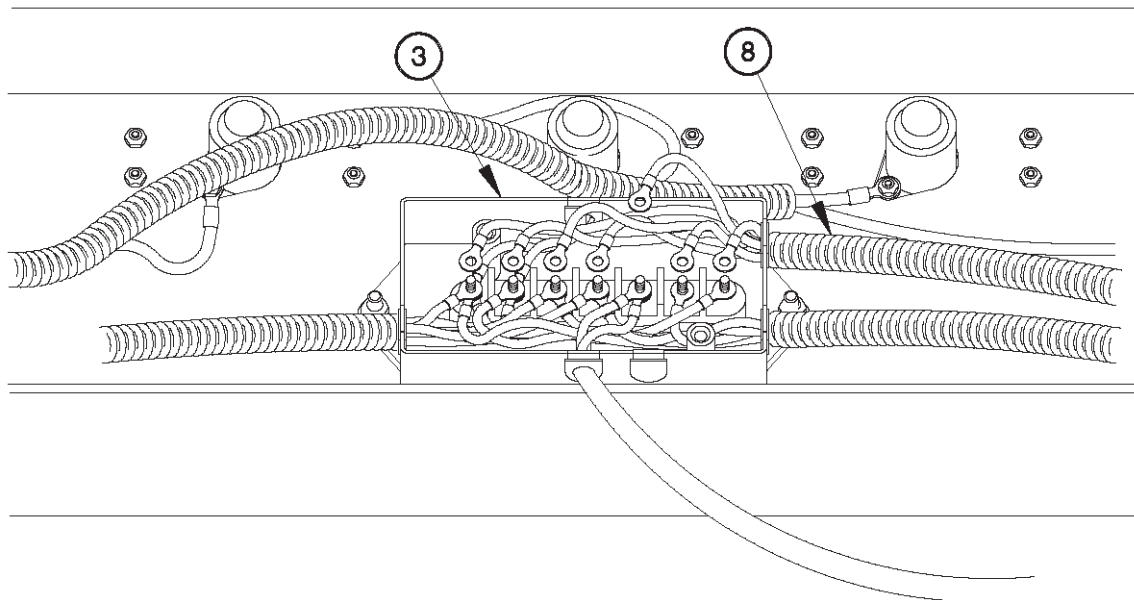
CD066R02

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 - Continued.

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



CD066R03

REMOVAL – Continued**NOTE**

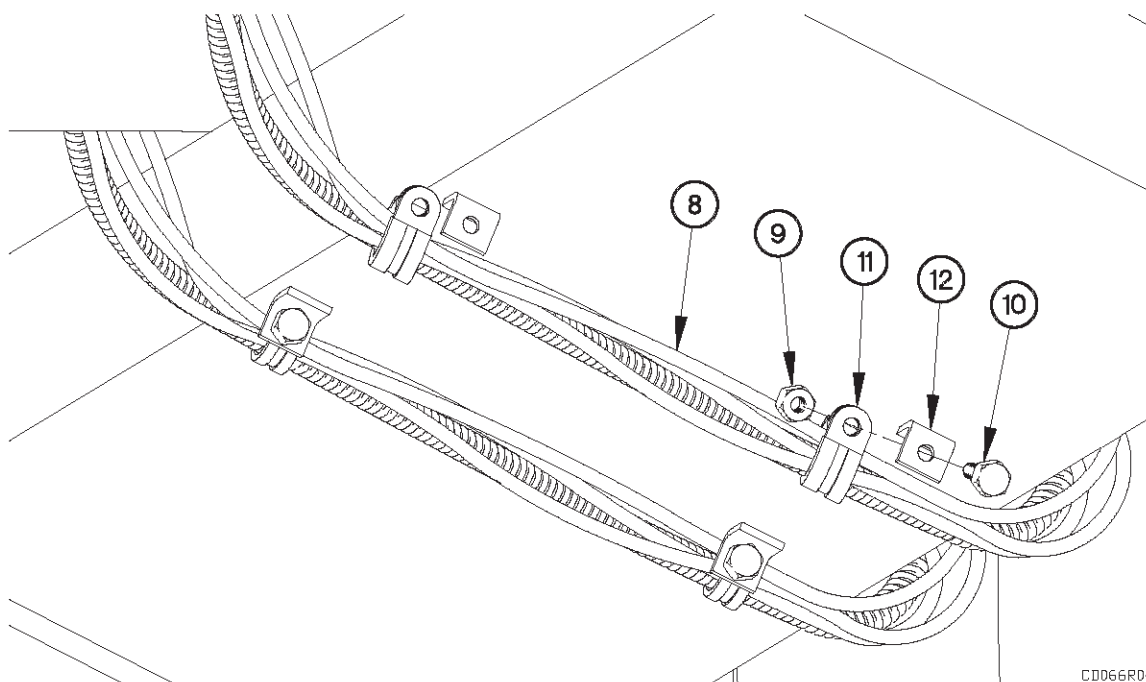
- All main electrical harness clamps are removed the same way. One shown.
- Remove plastic cable ties as required.
- Remove convoluted tubing as required.

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.



INSTALLATION**NOTE**

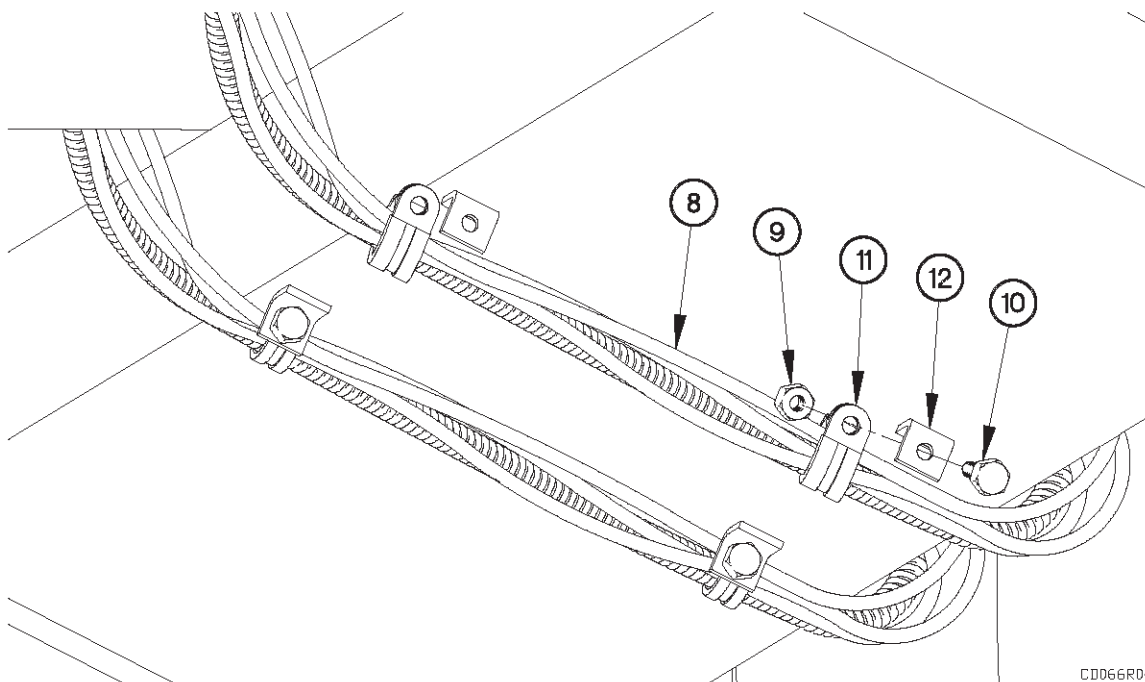
- All main electrical harness clamps are installed the same way. One shown.
- Install plastic cable ties as required.
- Install convoluted tubing as required.

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.



CD066R04

MAIN ELECTRICAL HARNESS REPLACEMENT - Continued

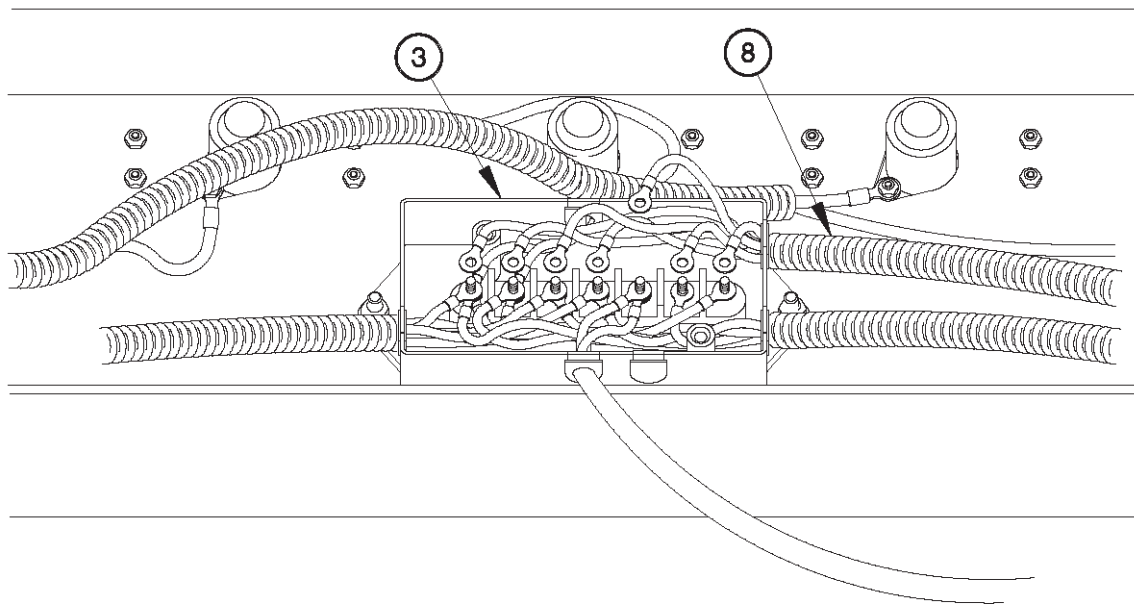
0066 00

INSTALLATION - Continued

- Route main electrical harness (8) into junction box (3).

Table 1. Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations - Continued.

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



CD066R03

INSTALLATION - Continued

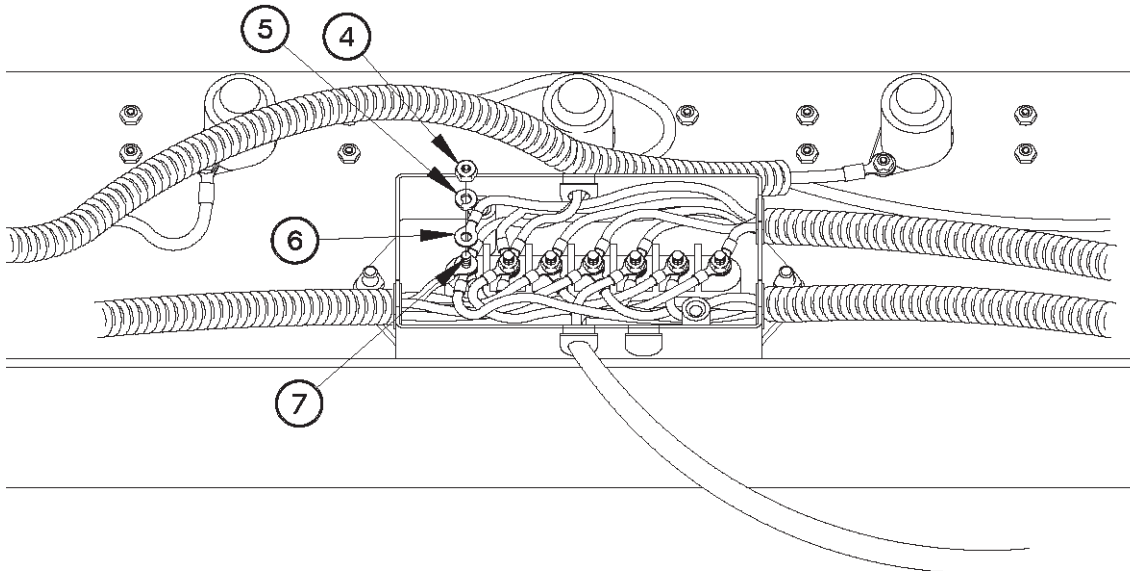
NOTE

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 - Continued.

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

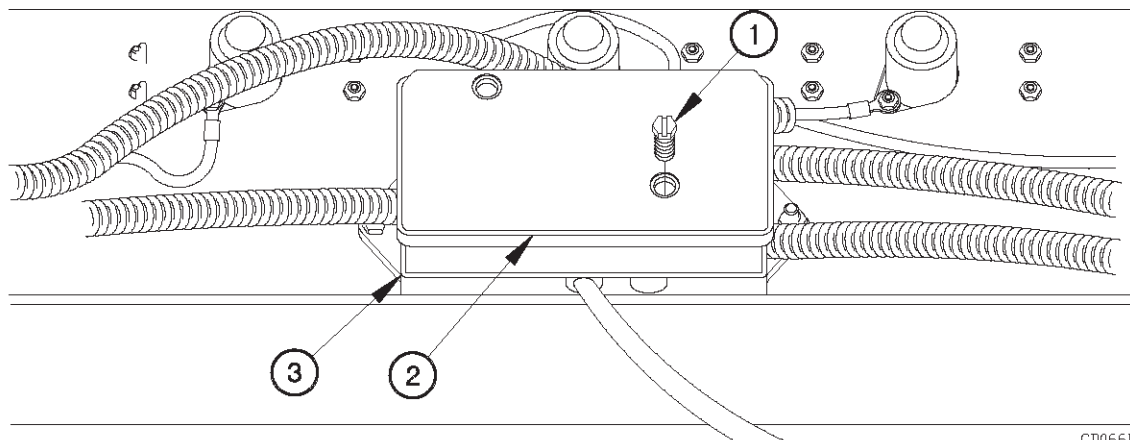
6. Install terminal lug TL261A (6) on junction box terminal stud 1 (7) with lockwasher (5) and nut (4).
7. Repeat the previous step on remaining main electrical harness terminal lugs.



C0066R02

INSTALLATION - Continued

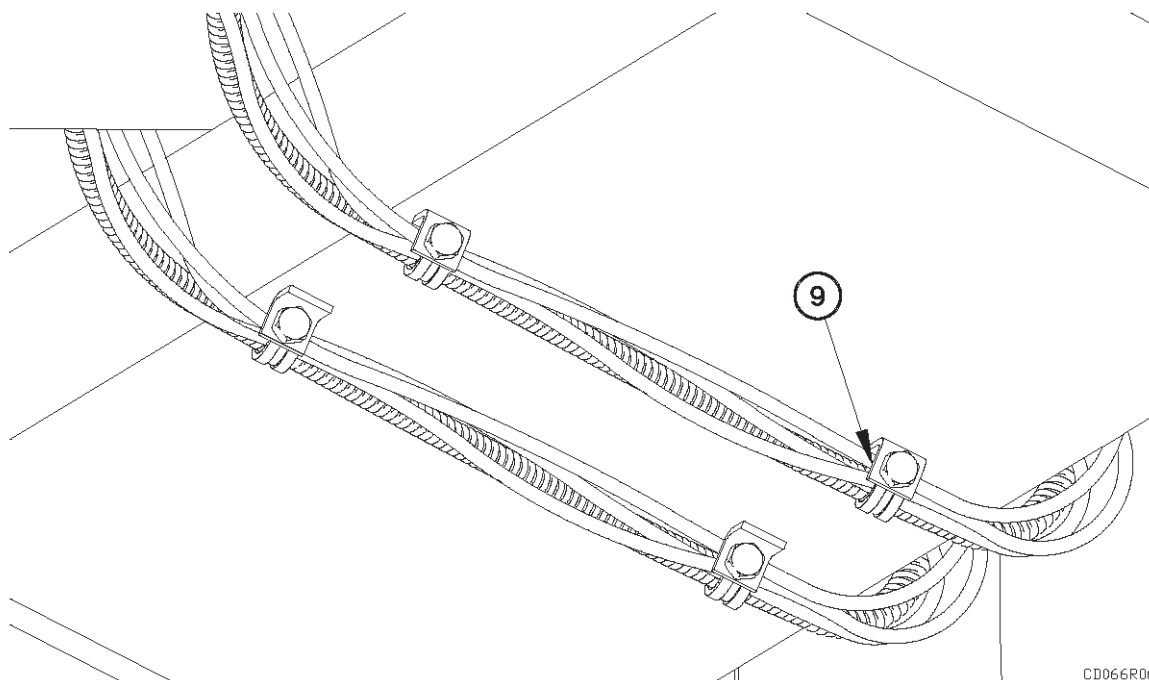
8. Install junction box cover (2) on junction box (3) with two bolts (1).



CD066101

9. Tighten self-locking nut (9) to 96-120 lb-in. (11-14 N·m).

10. Perform the previous step on remaining clamps.



CD066R06

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

- Tool Kit, Genl Mech (Item 24, WP 0167 00)
- Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)
- Goggles, Industrial (Item 8, WP 0167 00)
- Wrench, Torque, 0-600 lb-ft (Item 36, 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 28, WP 0167 00)
- Wrench Set, Crowfoot Ratcheting (Item 29, WP 0167 00)
- Lift, Transmission and Differential (Item 12, WP 0167 00)
- Trestle, Motor Vehicle Maintenance (2) (Item 26, 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 19, WP 0165 00)
- Nut, Self-Locking (2) (Item 26, WP 0168 00)
- Washer, Lock (2) (Item 4, WP 0168 00)

Personnel Required

Three

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.

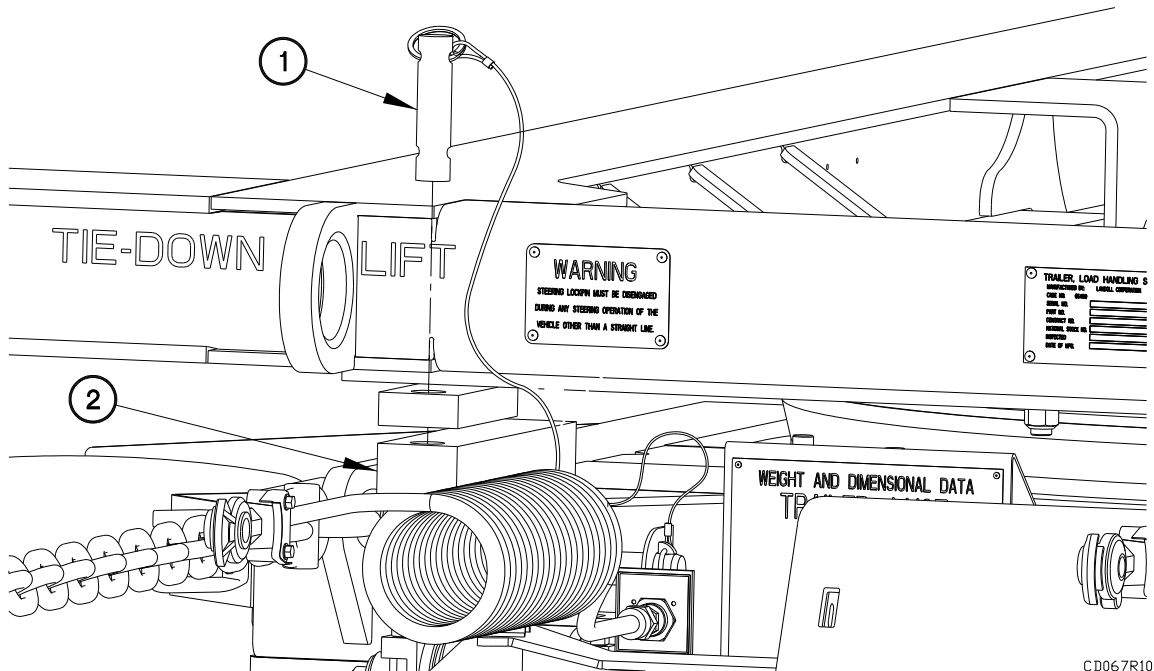
WARNING

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

REMOVAL**NOTE**

Remove plastic cable ties as required.

1. Install turntable retaining pin (1) in turntable (2).



REMOVAL - Continued**NOTE**

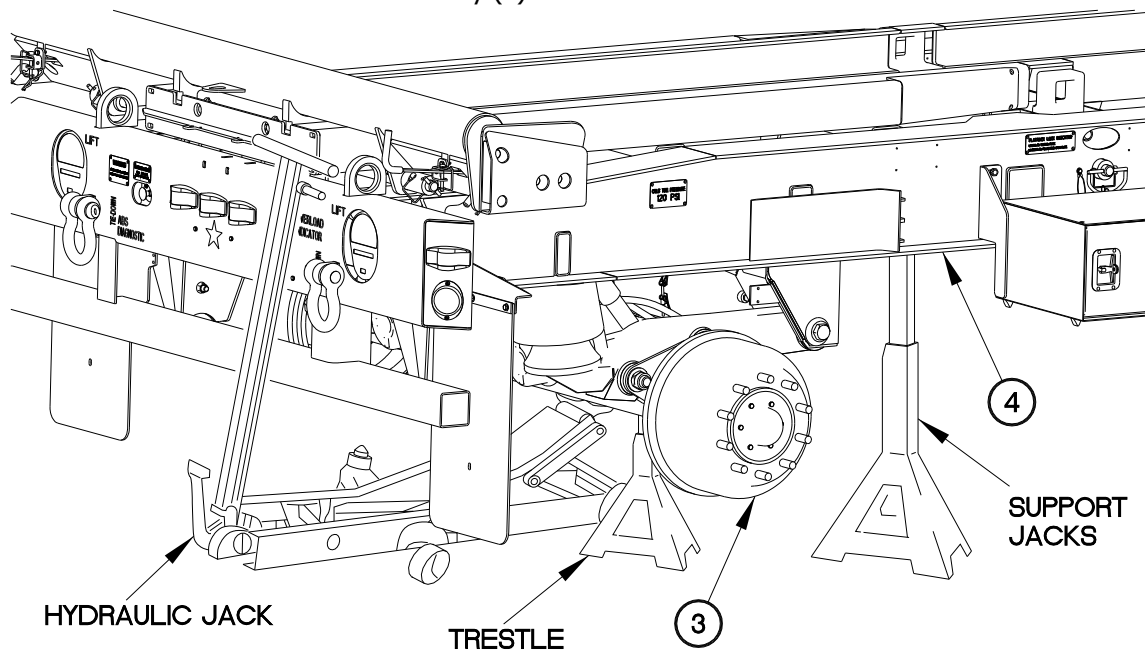
Both axles are removed the same way. Rear axle assembly shown.

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).



CD067R01

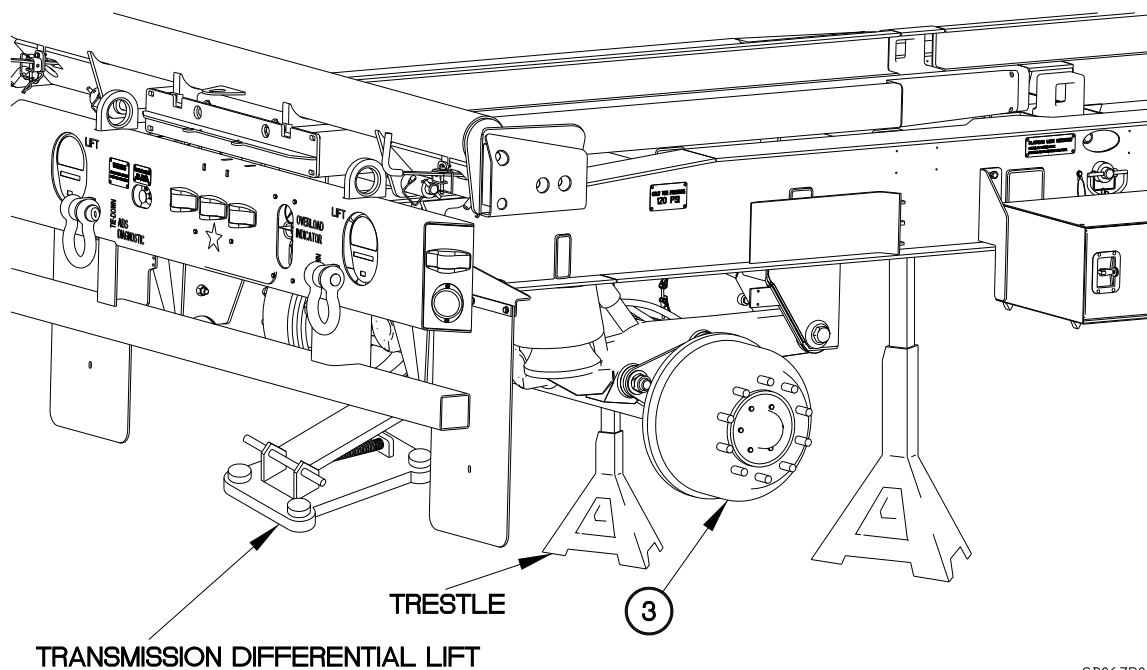
REMOVAL - Continued

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).

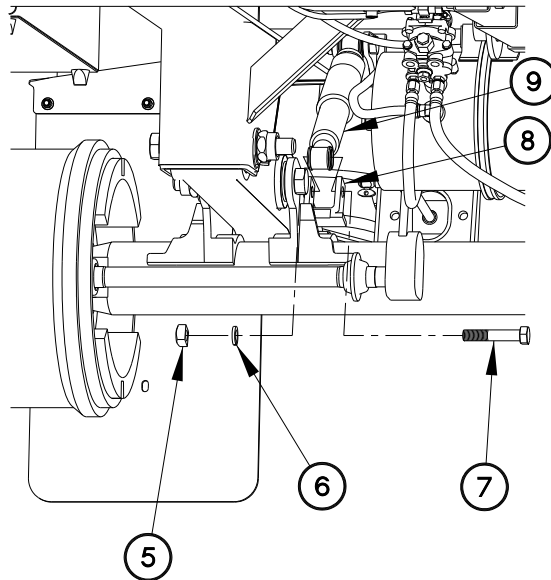


CD067R02

REMOVAL - Continued**NOTE**

LH and RH side of axle assembly is removed the same way. LH side is shown.

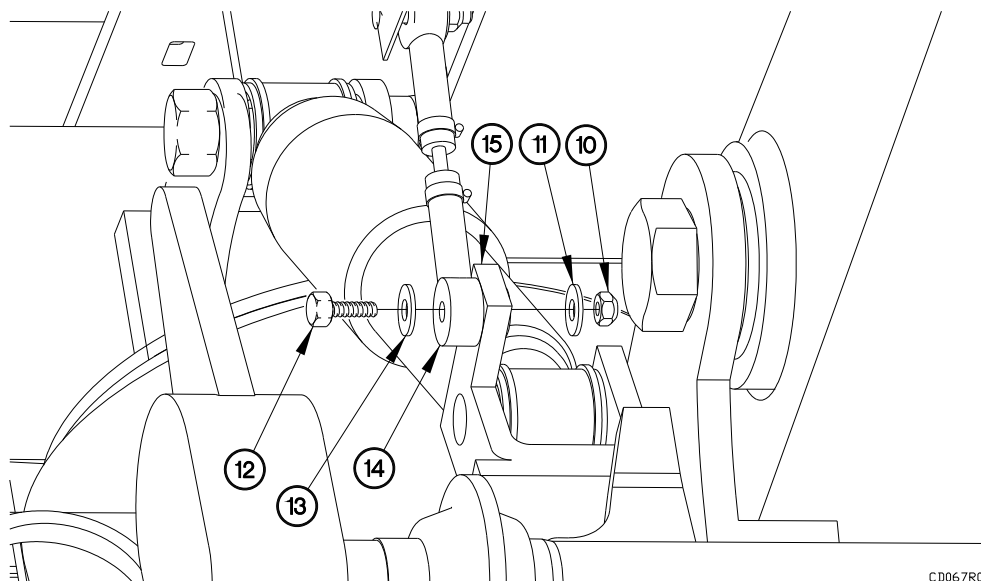
8. Remove nut (5), lockwasher (6), and bolt (7) from lower bracket (8). Discard lockwasher.
9. Position shock absorber (9) away from lower bracket (8).



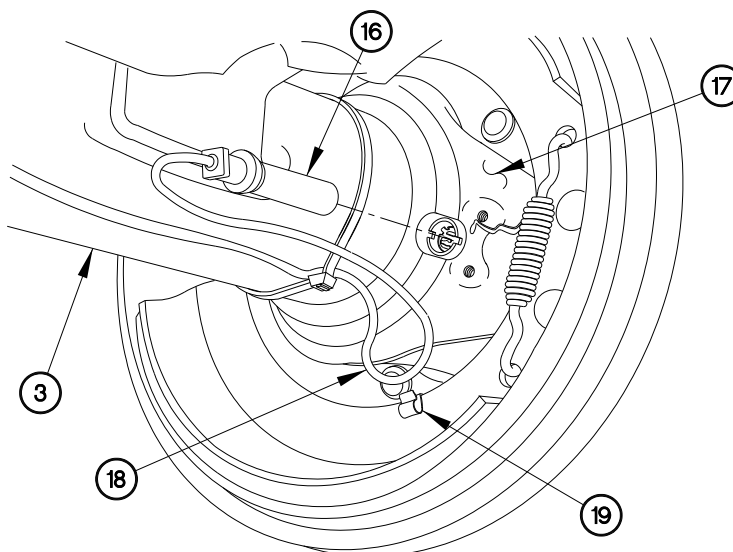
CD067R03

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).

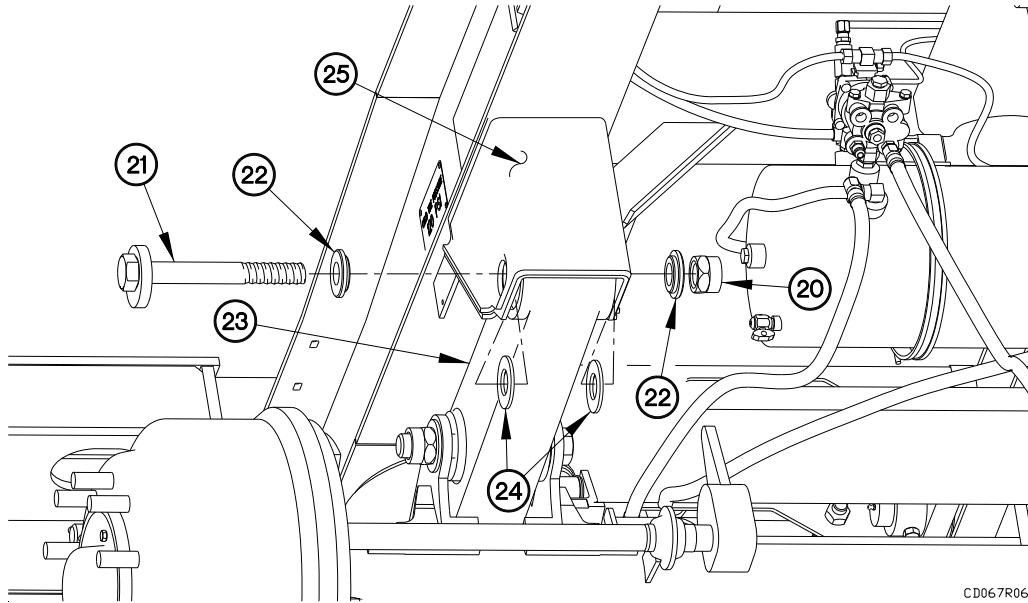


AXLE ASSEMBLY REPLACEMENT - Continued

0067 00

REMOVAL - Continued

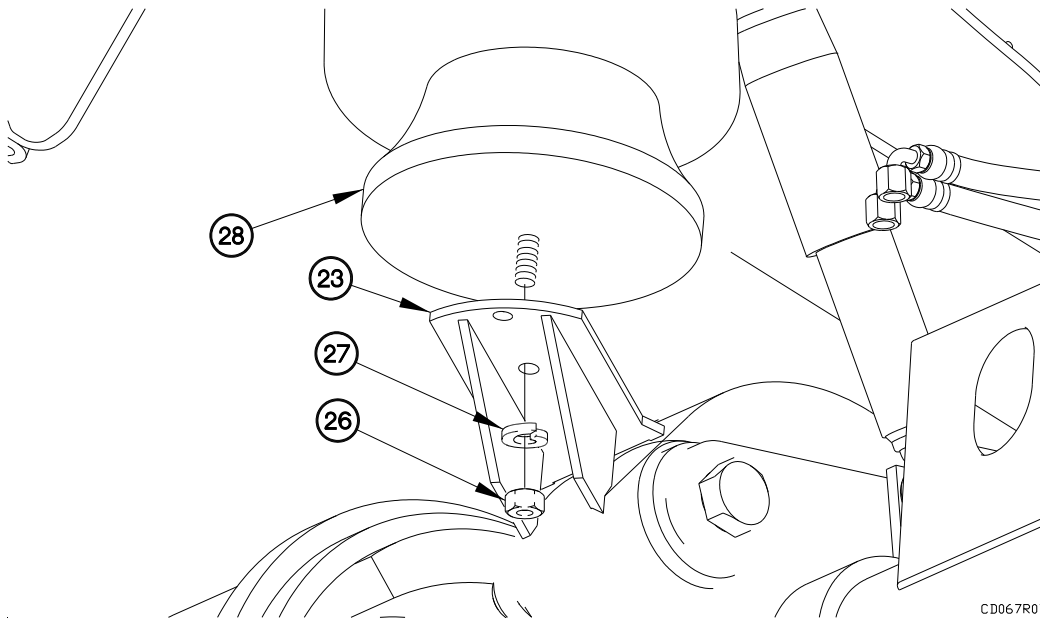
14. Remove self-locking nut (20), bolt (21), spacer (22), equalizing beam (23), and two washers (24) from frame rail (25). Discard self-locking nut.



CD067R06

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.



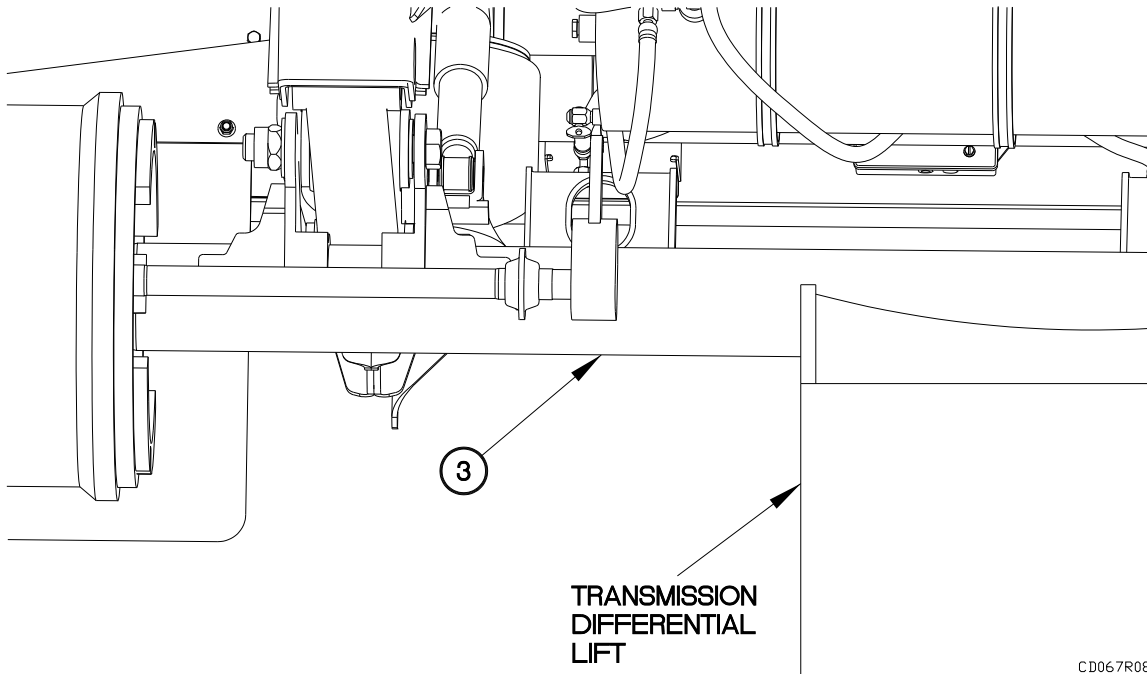
CD067R07

REMOVAL - Continued

NOTE

The following step requires the aid of two assistants.

17. Remove axle assembly (3) from underneath trailer.

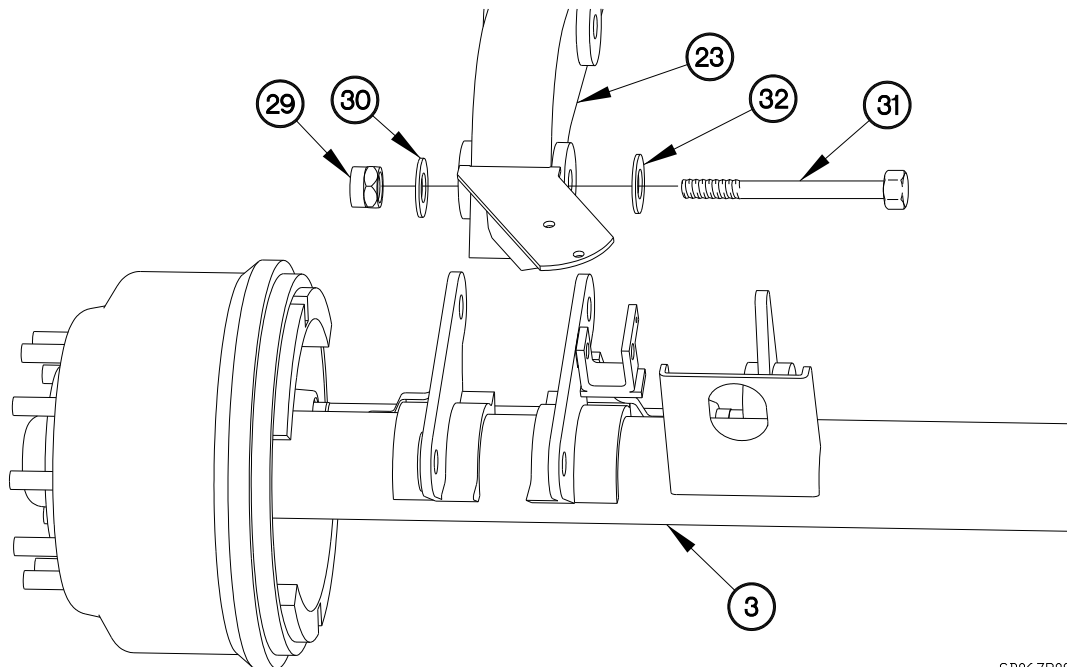


CD067R08

REMOVAL - Continued**NOTE**

LH and RH equalizing beams are removed the same way. RH side is 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.



CD067R09

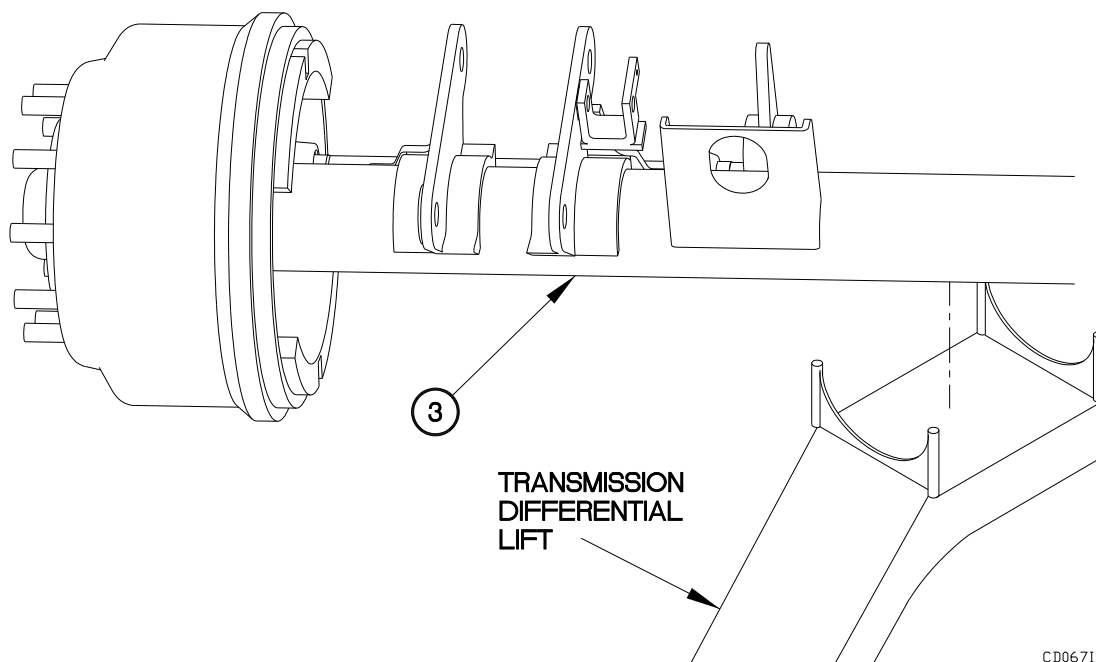
INSTALLATION**WARNING**

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.

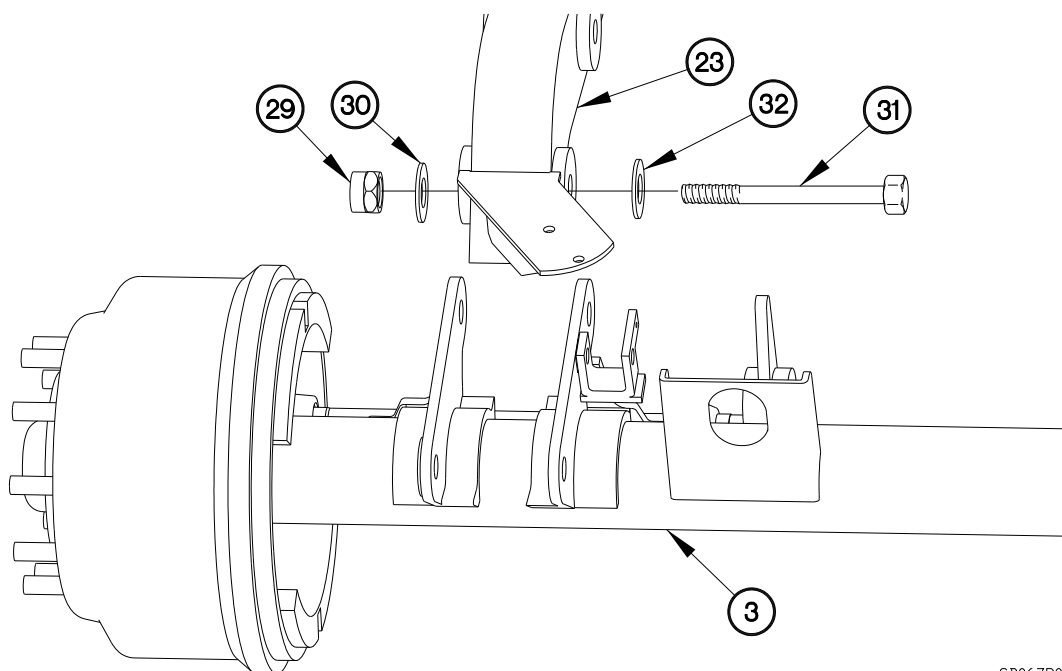
1. Remove air brake chamber (WP 0081 00).
2. Position axle assembly (3) on transmission differential lift.



CD067101

INSTALLATION - Continued**NOTE**

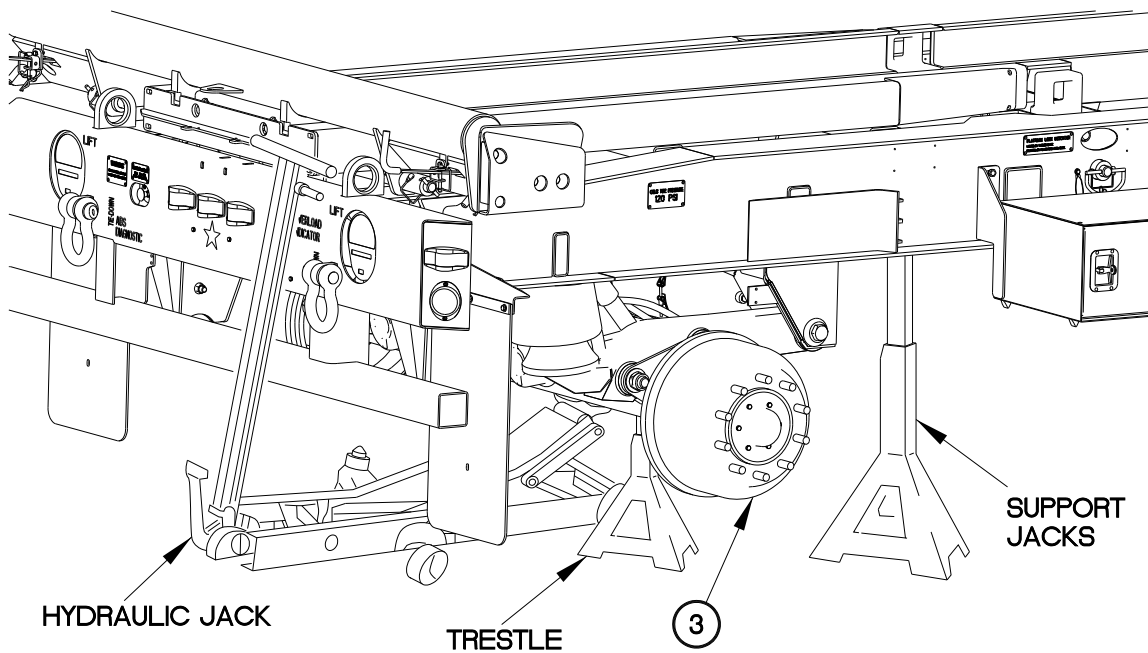
- The following two steps require the aid of two assistants.
 - Both axles are installed the same way. Rear axle assembly shown.
 - LH and RH equalizing beams are installed the same way. RH side is shown.
3. Position equalizing beam (23) on axle assembly (3) with two washers (32), bolts (31), washers (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.



CD067R09

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).

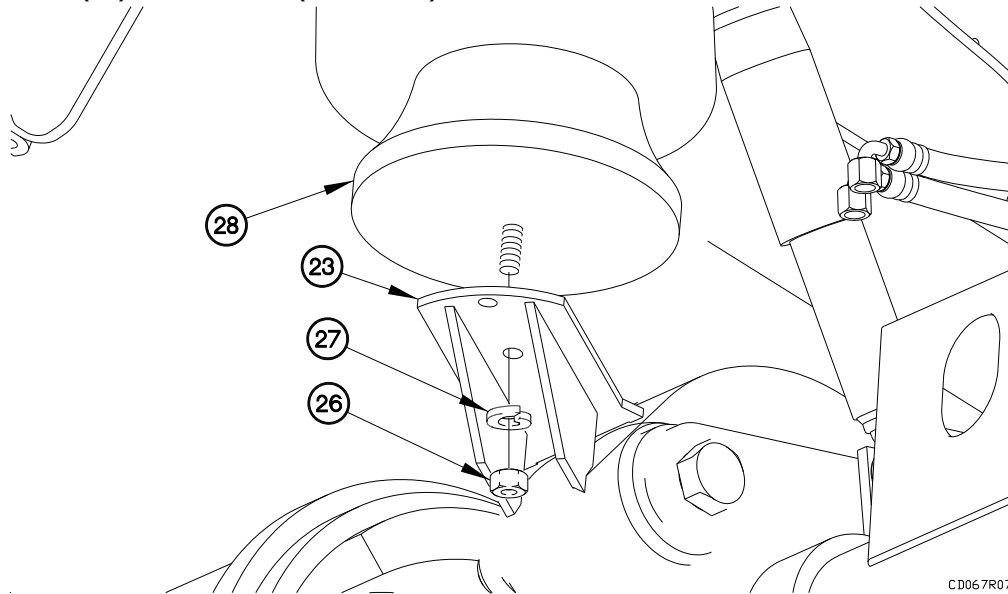


C0067103

INSTALLATION - Continued**NOTE**

LH and RH side of axle assembly is installed the same way. LH side is 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).

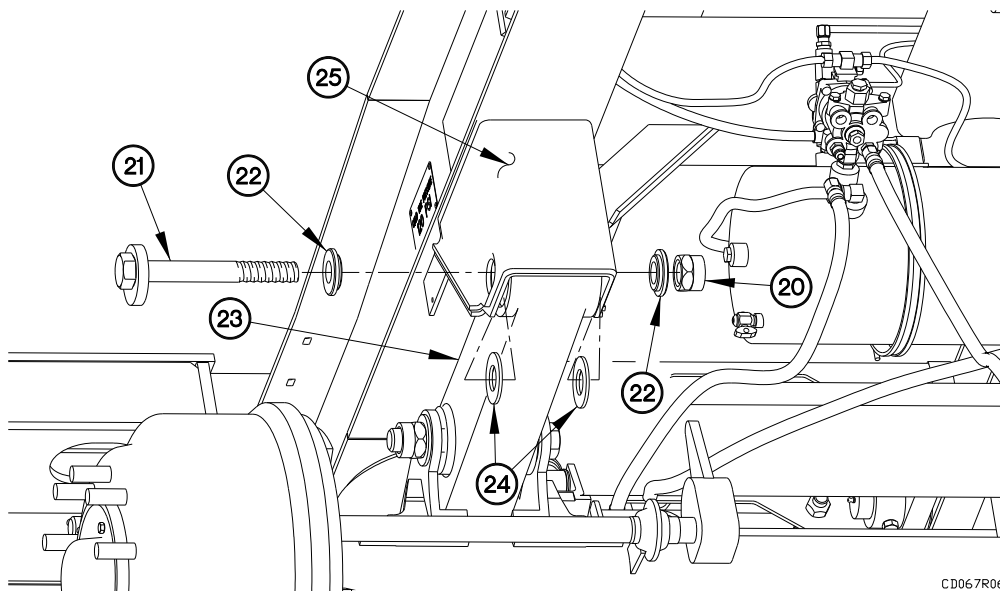


AXLE ASSEMBLY REPLACEMENT - Continued

0067 00

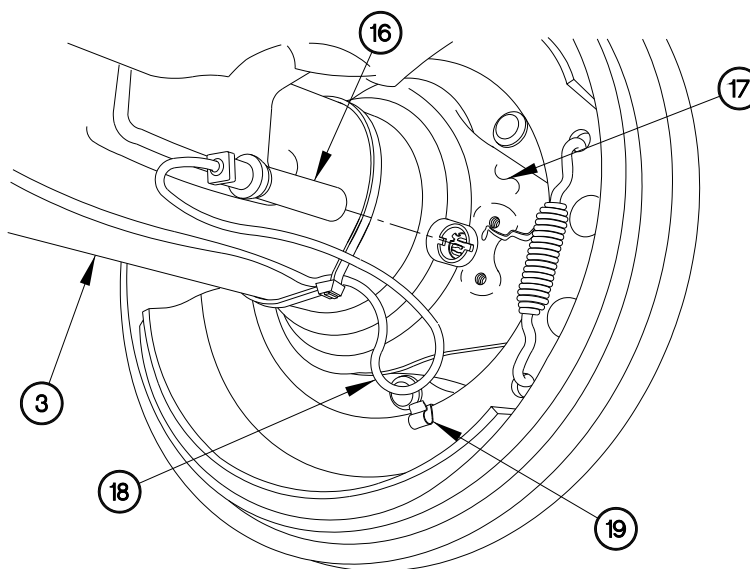
INSTALLATION - Continued

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).



CD067R06

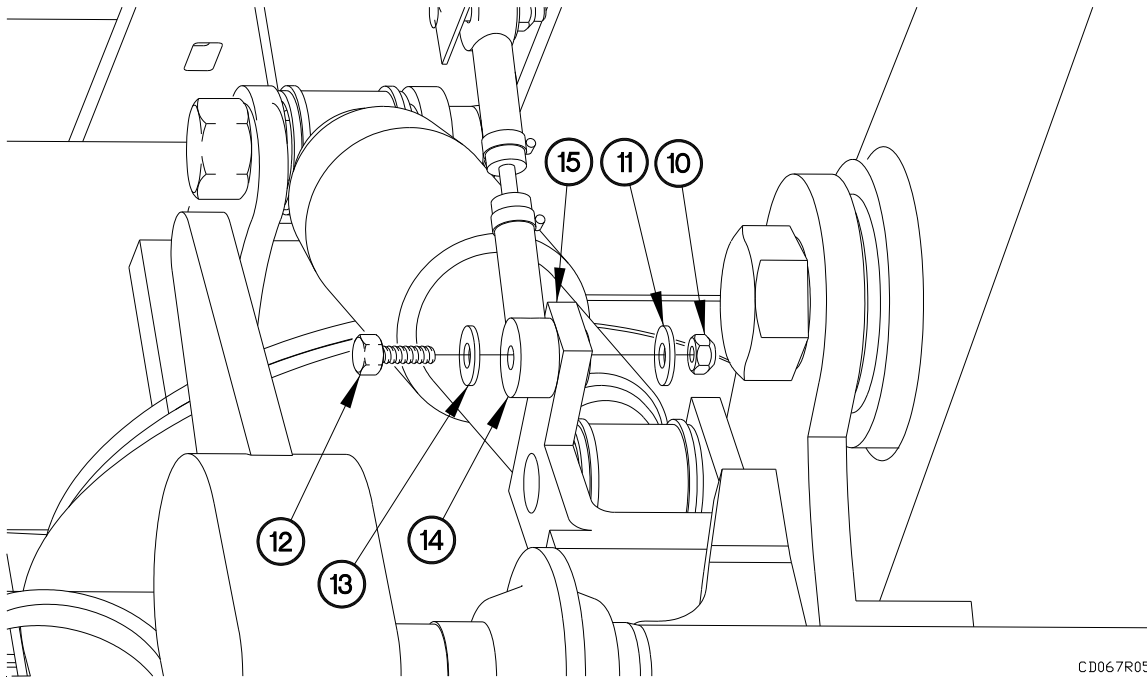
15. Position cable (18) and ABS wheel speed sensor (17) on axle assembly (3).
16. Install cable (18) in clamp (19).
17. Install ABS wheel speed sensor (16) in wheel hub (17).



CD067R04

INSTALLATION - Continued

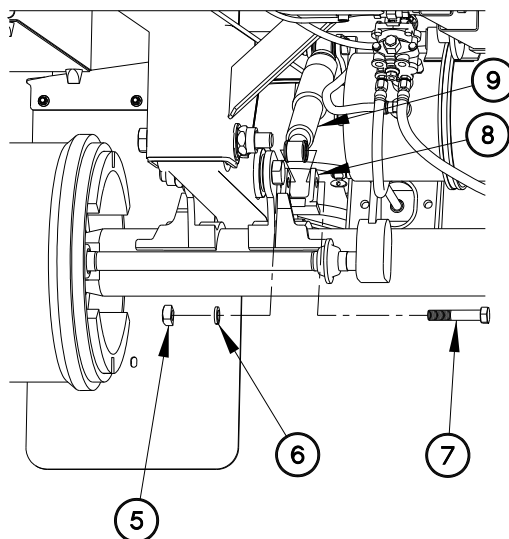
18. Position height control linkage (14) on lower shock bracket (15) with washer (13), bolt (12), washer (11), and self-locking nut (10).
19. Tighten self-locking nut (10) to 8-10 lb-ft (11-14 N·m).



CD067R05

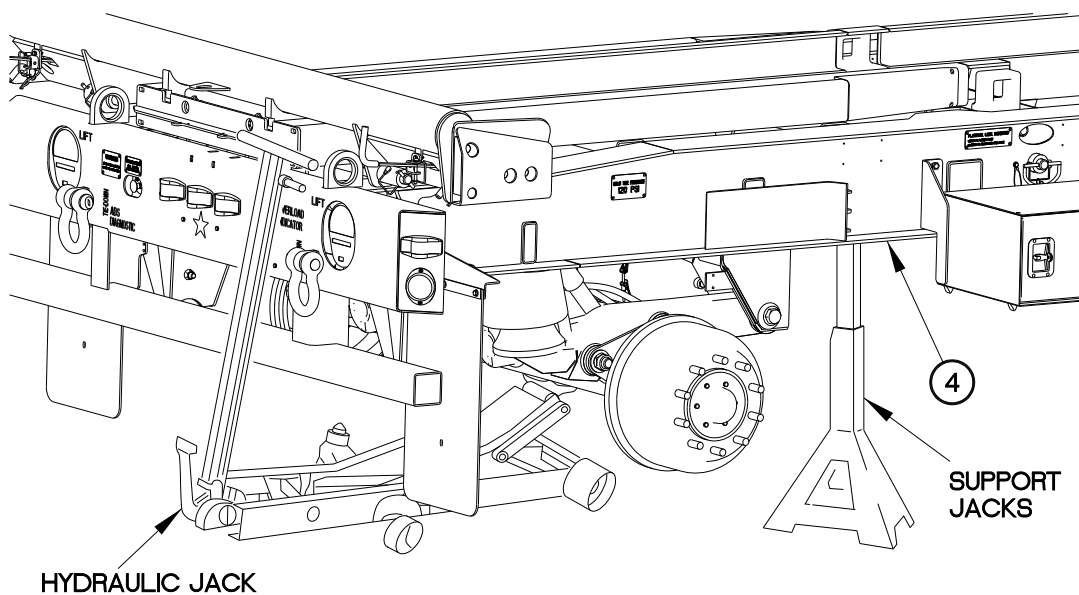
INSTALLATION - Continued

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

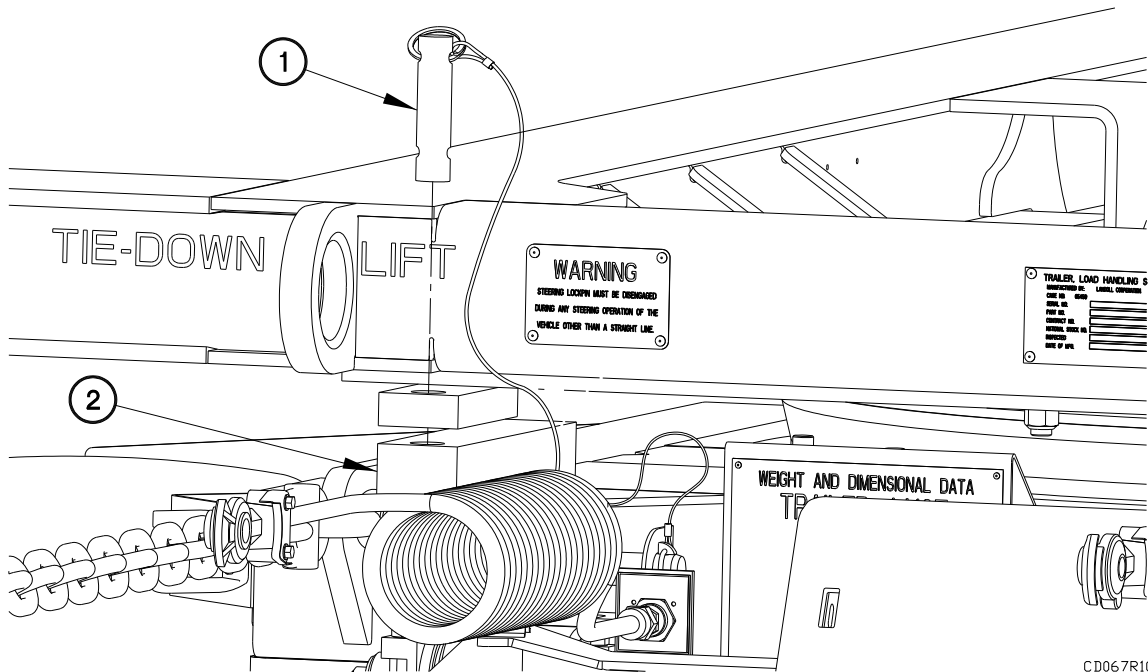
23. Remove two leveling support jacks from frame (4).



CD067104

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

Materials/Parts - Continued

Sealing Compound (Item 14, WP 0165 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
 Tool Kit, Genl Mech (Item 24, WP 0167 00)
 Wrench, Torque, 0-200 lb-in. (Item 35,
 WP 0167 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.

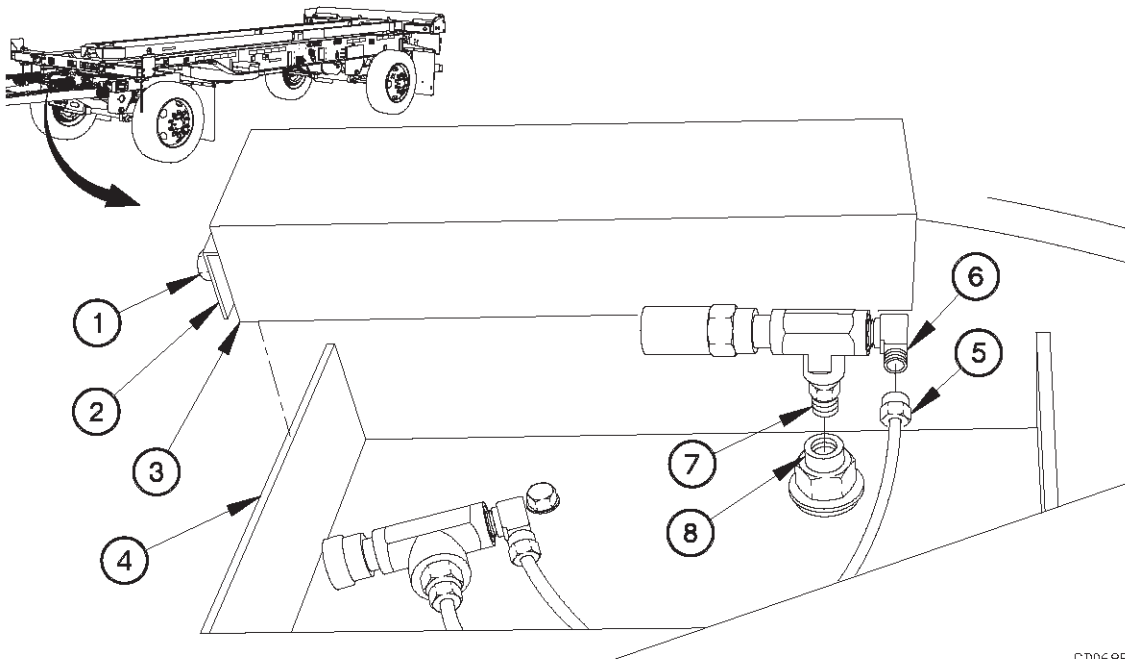
WARNING

- **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).



CD068R01

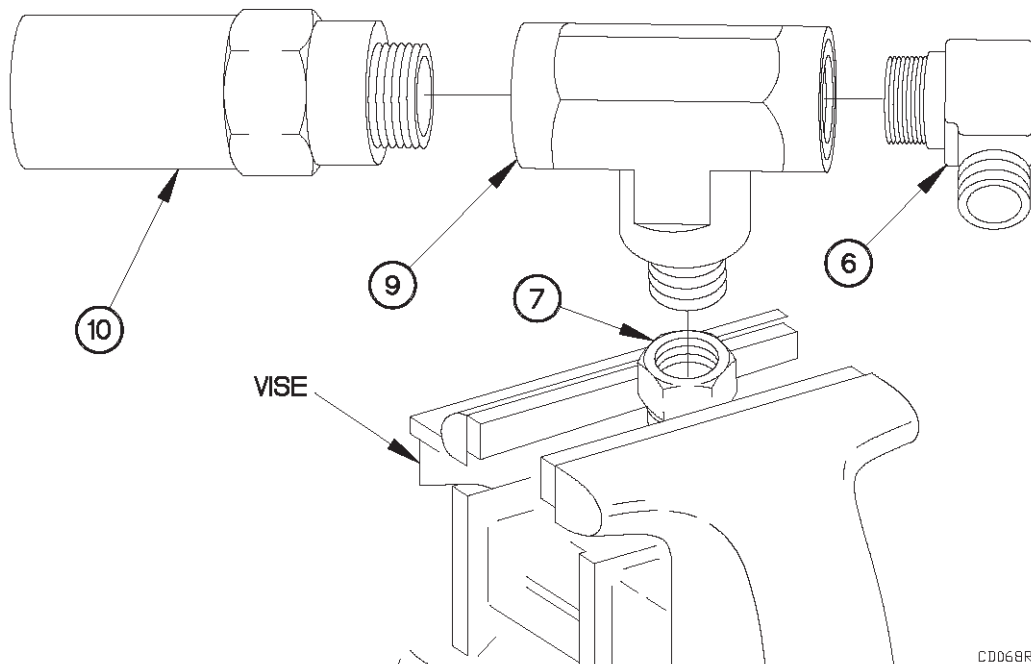
PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued **0068 00****REMOVAL - Continued**

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).

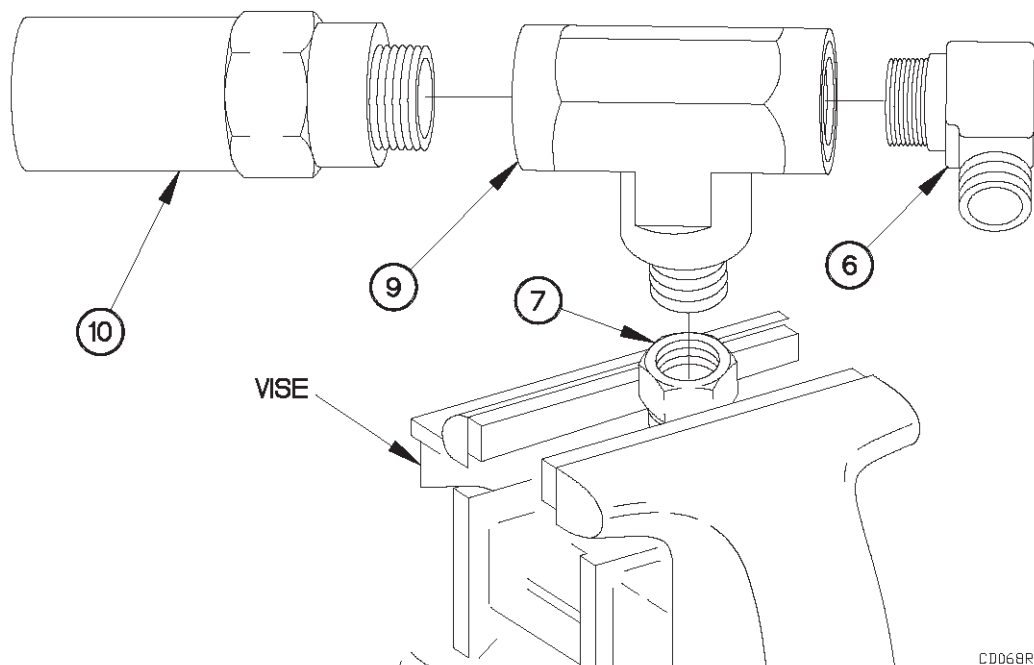


CDD68R02

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 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.

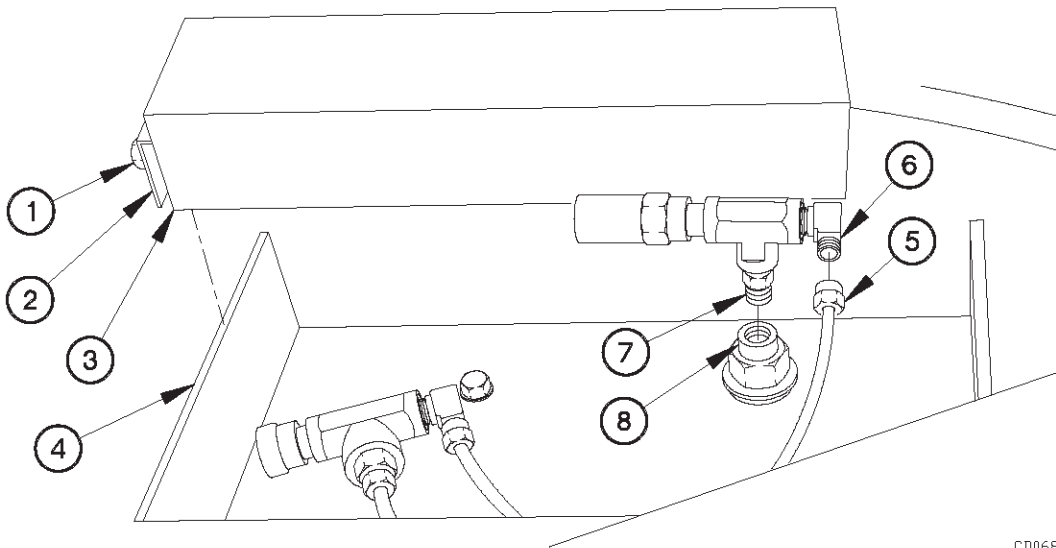
1. Apply sealing compound to threads of pressure relief valve (10), 90 degree fitting (6), and fitting (7).
2. Install pressure relief valve (10) on tee fitting (9).
3. Install fitting (7) on tee fitting (9).
4. Install 90 degree fitting (6) on tee fitting (9).



CDD68R02

INSTALLATION - Continued

5. Install fitting (7) on air bladder (8).
6. Connect hose (5) to 90 degree fitting (6).
7. Position the 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).



CD06901

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

Materials/Parts (Cont)

Pin, Cotter (Item 43, WP 0168 00)

Pin, Cotter (Item 41, WP 0168 00)

Tools and Special ToolsTrestle, Motor Vehicle Maintenance (Item 26,
WP 0167 00)

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Personnel Required

Two

Materials/Parts

Rag, Wiping (Item 11, WP 0165 00)

Grease, Automotive and Artillery (GAA)
(Item 7, WP 0165 00)**References**

Towing vehicle Operator manual

Equipment Conditions

Tire removed (WP 0053 00)

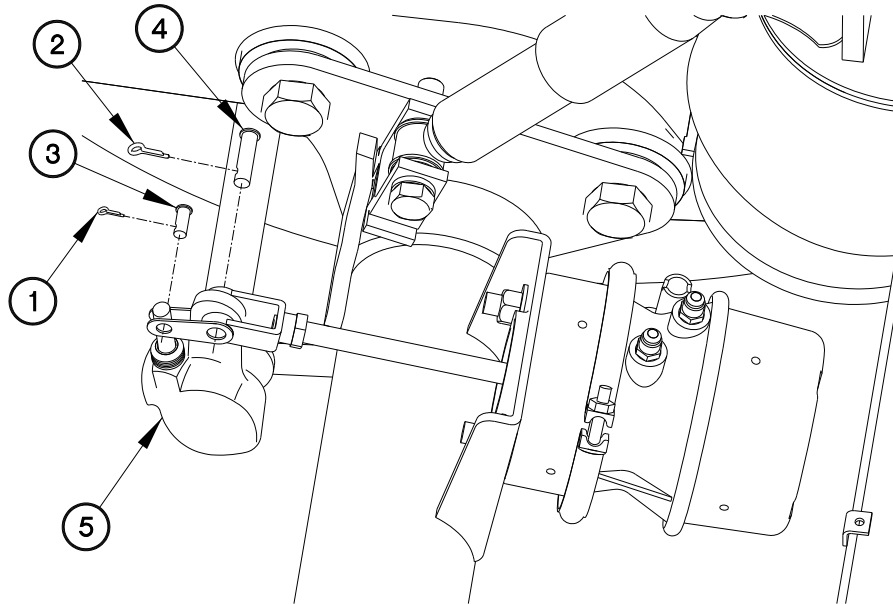
Spring brakes caged (WP 0055 00)

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.

REMOVAL - Continued

1. Remove cotter pins (1 and 2) and pins (3 and 4) from slack adjuster (5). Discard cotter pins.

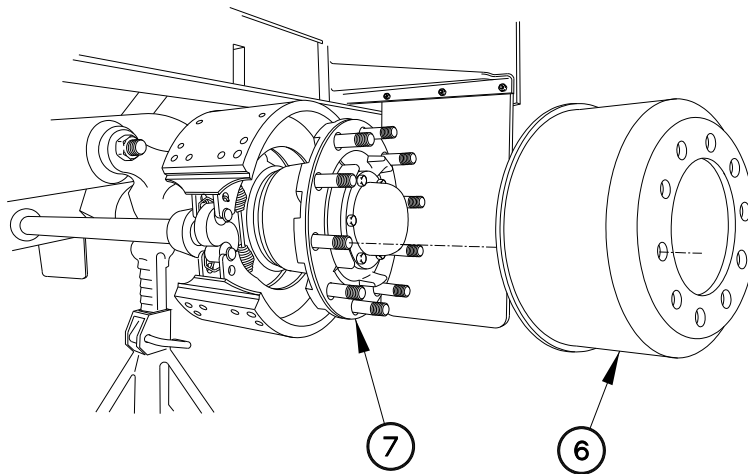


CD069R01

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.

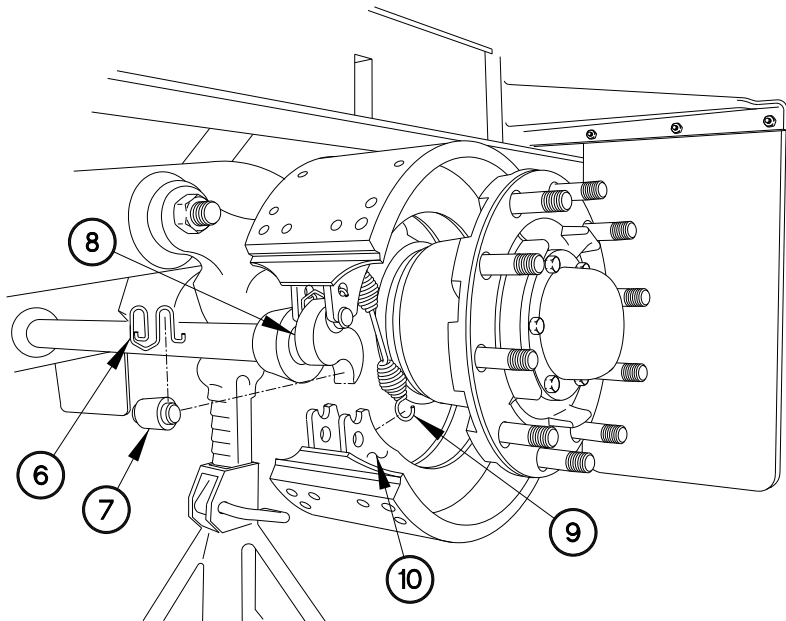
2. Remove wheel drum (6) from wheel hub (7).



CD069R02

REMOVAL - Continued**NOTE**

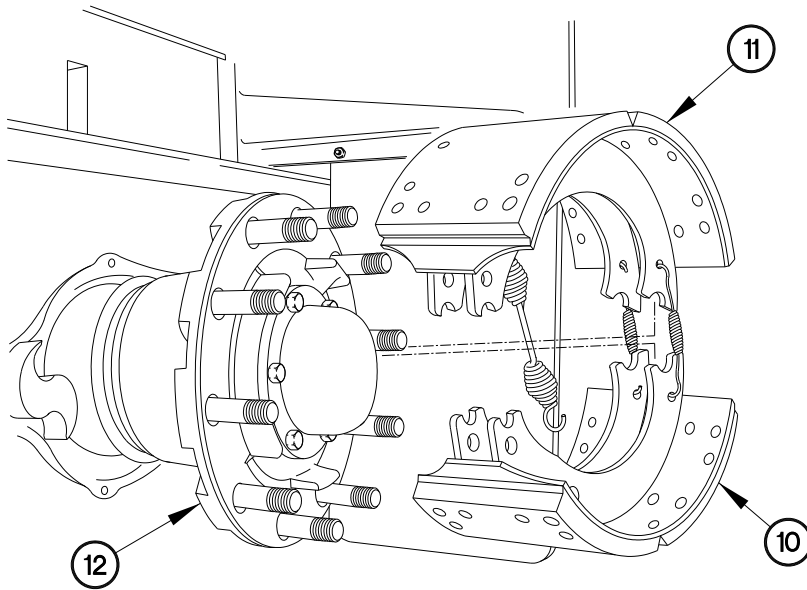
- Two rollers by the brake arm cam have retaining rings. Two rollers on opposite side of brake shoes aren't equipped with retaining rings. Note orientation of retaining rings prior to removal.
 - Note position of two retaining rings prior to removal.
3. Unhook and remove two retaining rings (6) and rollers (7) from brake arm cam (8).
 4. Remove spring (9) from lower brake shoe (10).



CD069R03

REMOVAL - Continued

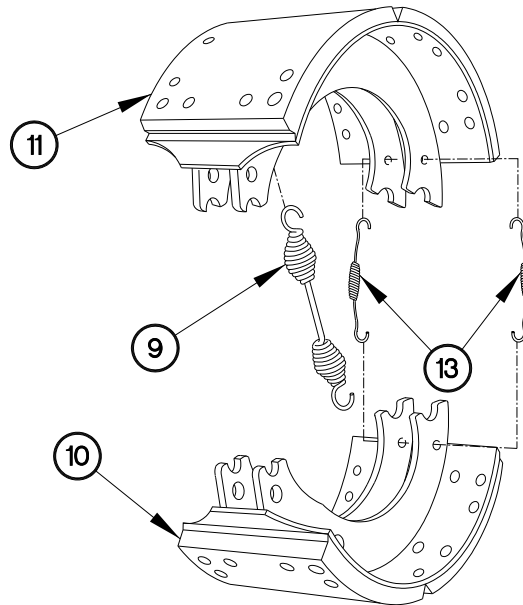
5. Remove brake shoes (10 and 11) from wheel end (12).



C.D069R04

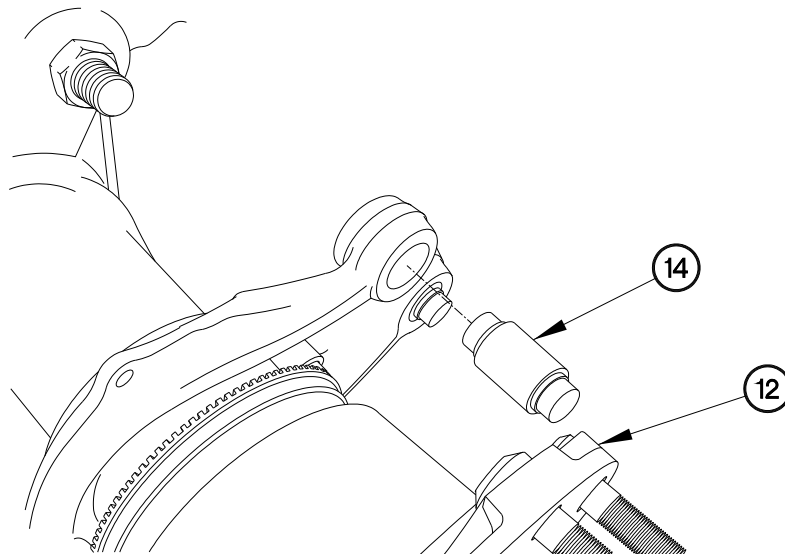
REMOVAL - Continued

6. Remove spring (9) and two springs (13) from brake shoes (10 and 11).



C.D069R05

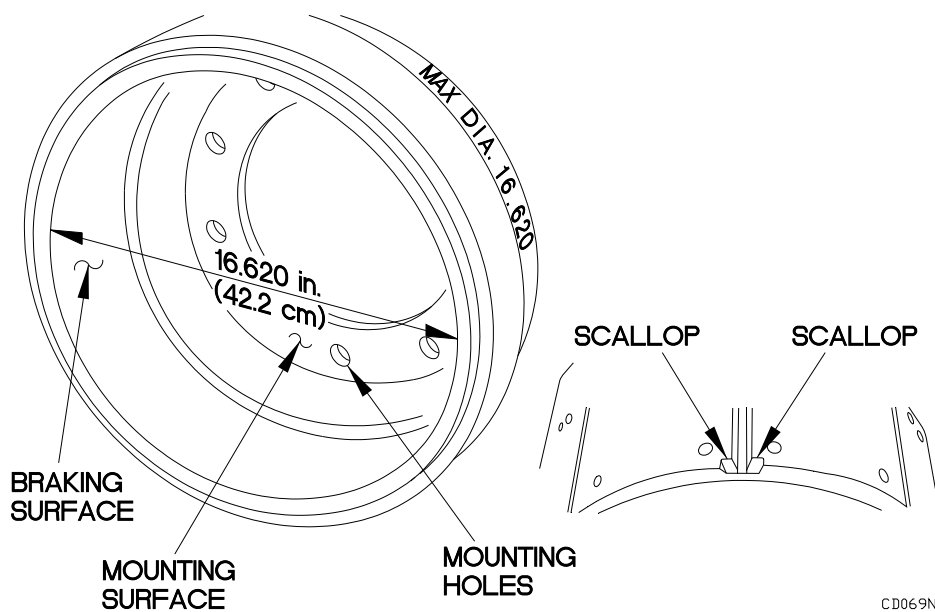
7. Remove two rollers (14) from wheel end (12).



C.D069R06

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.



CD069N01

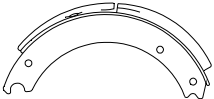
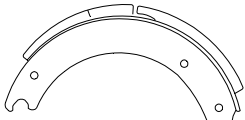
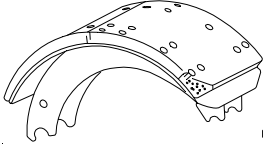
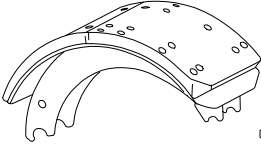
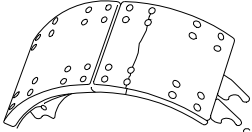
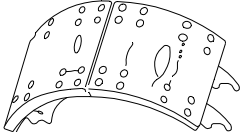
INSPECTION - Continued

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.

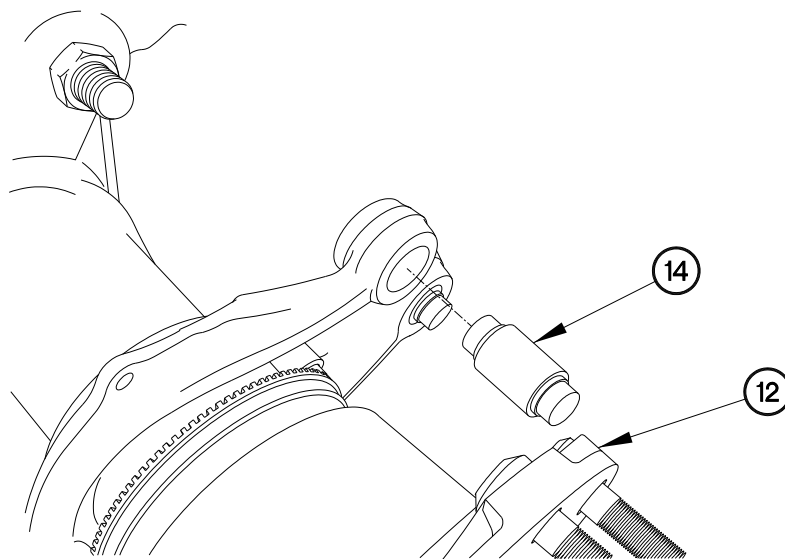
4. Inspect brake shoes for OUT-OF-SERVICE and IN-SERVICE criteria as shown in Table 1, Brake Shoe Service Criteria.

Table 1. Brake Shoe Service Criteria.

OUT-OF-SERVICE	IN-SERVICE
 <p>CD069N02</p> <p>Cracks or voids that exceed 1/16 in. (0.16 cm) in width.</p> <p>Cracks that exceed 1-1/2 in. (3.75 cm) in length.</p>	 <p>CD069N05</p> <p>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.</p>
 <p>CD069N03</p> <p>Portion of lining missing that exposes a fastening device, or worn to the point that a fastening device is exposed.</p>	 <p>CD069N06</p> <p>Corner segment missing with no fastening device (rivet or bolt) exposed.</p>
 <p>CD069N04</p> <p>Cracks across the lining face that extend through the lining edges.</p>	 <p>CD069N07</p> <p>Surface cracks in lining face that can extend from hole to hole.</p> <p>Pitting and material erosion on the lining face.</p>

INSTALLATION

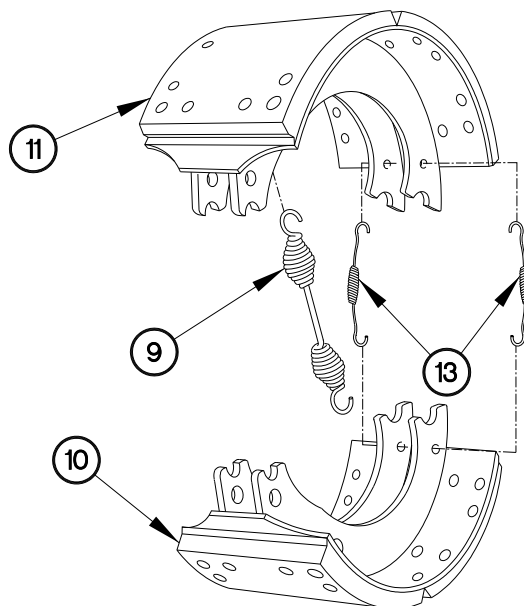
1. Position two rollers (14) in wheel end (12).



CD069R06

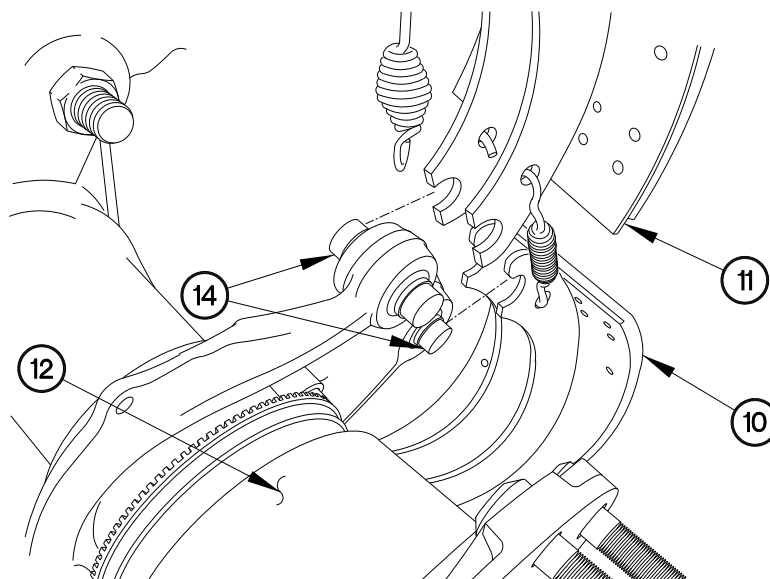
INSTALLATION - Continued

2. Install spring (9) and two springs (13) on brake shoes (10 and 11).



C.D069R05

3. Install brake shoes (10 and 11) on two rollers (14) on wheel end (12).



CD069I01

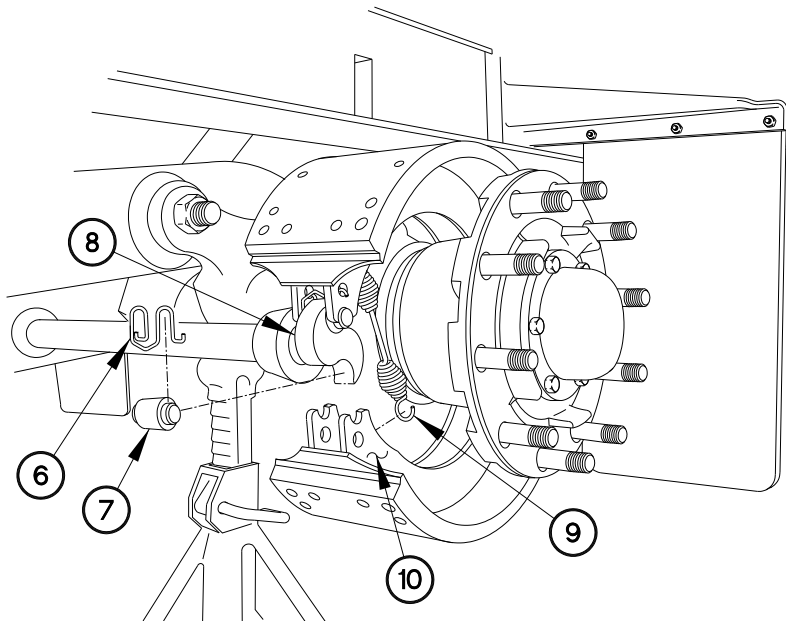
INSTALLATION - Continued

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).

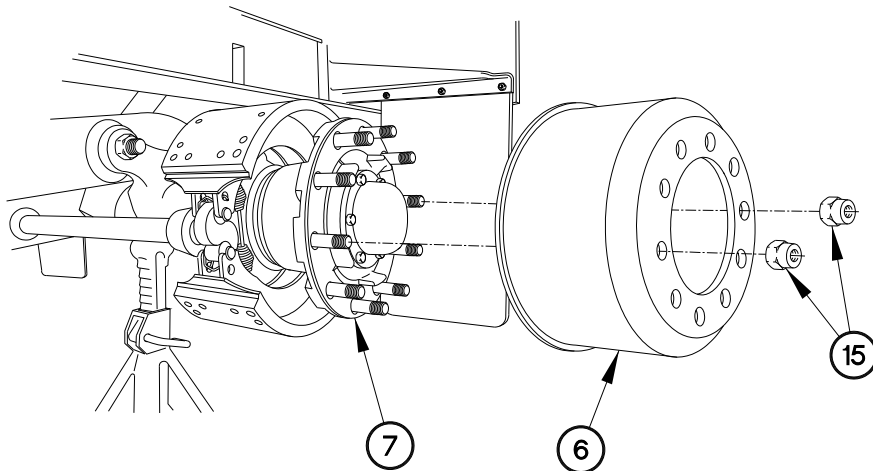


C.D069R03

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.

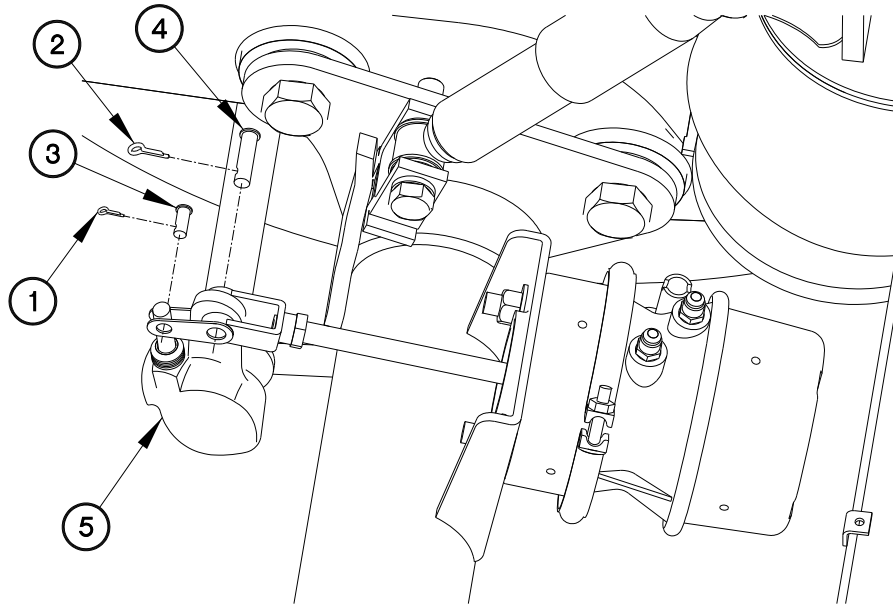
6. Install wheel drum (6) on wheel hub (7).
7. Install two lug nuts (15) on wheel hub (7).



CD069102

INSTALLATION - Continued

8. Install pins (3 and 4) in slack adjuster (5) with cotter pins (1 and 2).



CD069R01

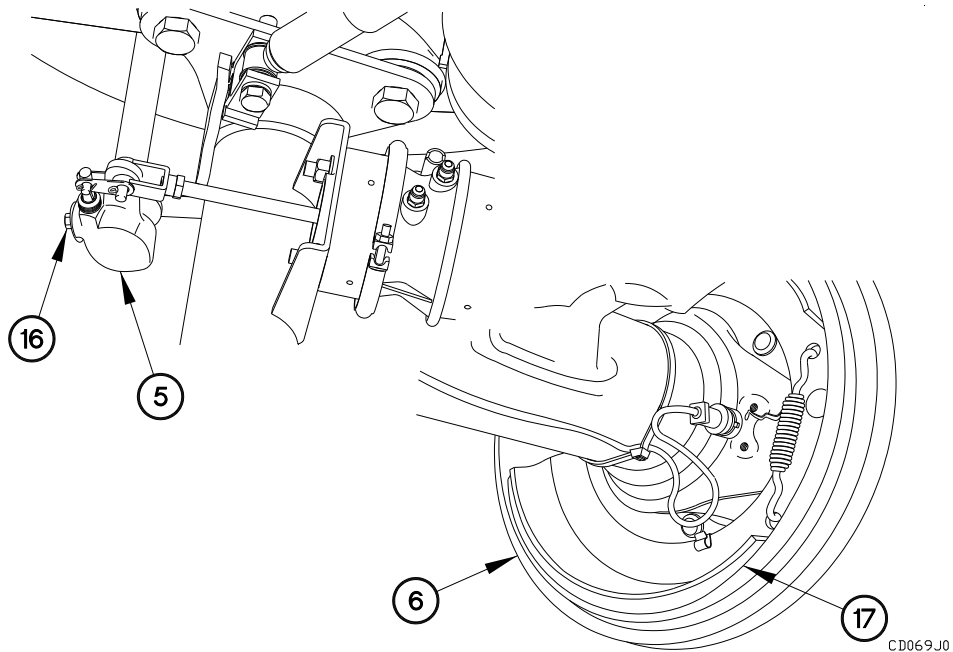
ADJUSTMENT

1. Uncage brakes (WP 0055 00).

NOTE

Perform the following step if brand new brake shoes were installed.

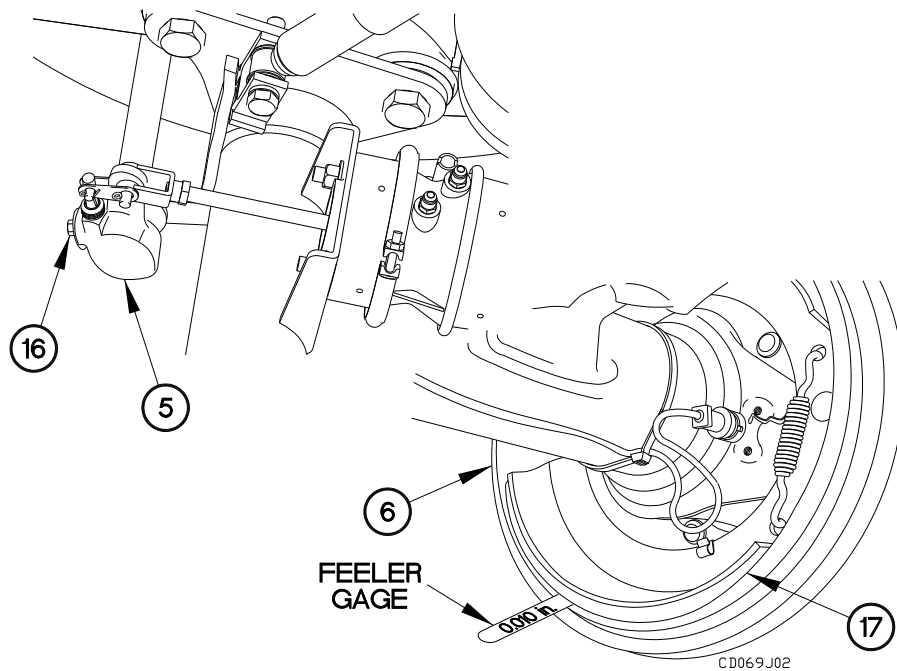
2. Turn adjustment nut (16) on slack adjuster (5) until brake lining (17) comes into contact with wheel drum (6).



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**

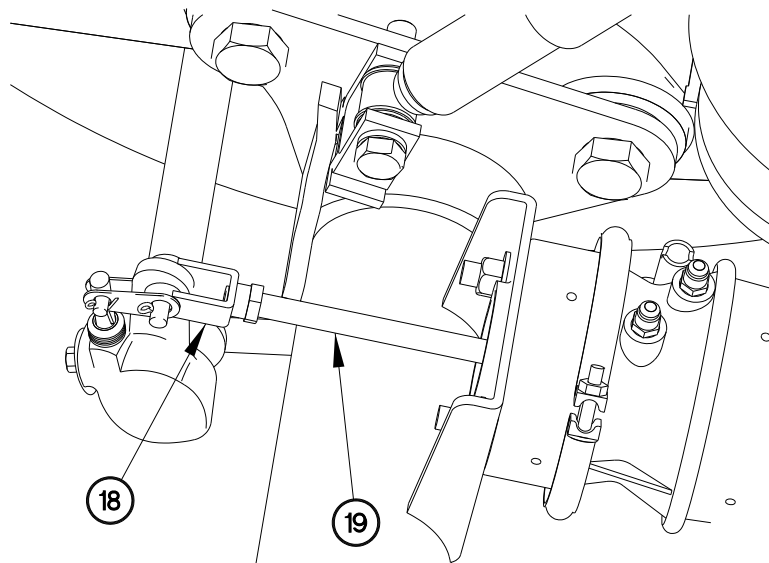
The following step requires the aid of an assistant.

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 $\frac{3}{4}$ in. (44 mm).
- Keep brakes applied for the following two steps.

7. Check travel of push rod (18) on air brake chamber (19).

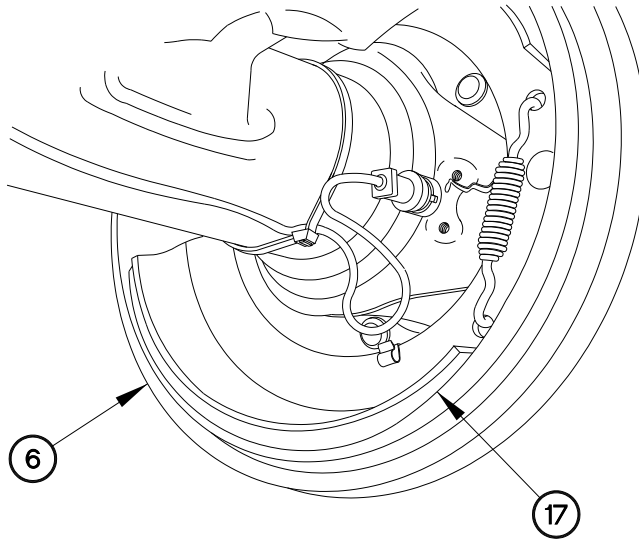


CD069J03

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 BRAKE SYSTEM (ABS) WHEEL SPEED SENSOR
REPLACEMENT**

0070 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 24, 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) Anti-Lock Brake 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

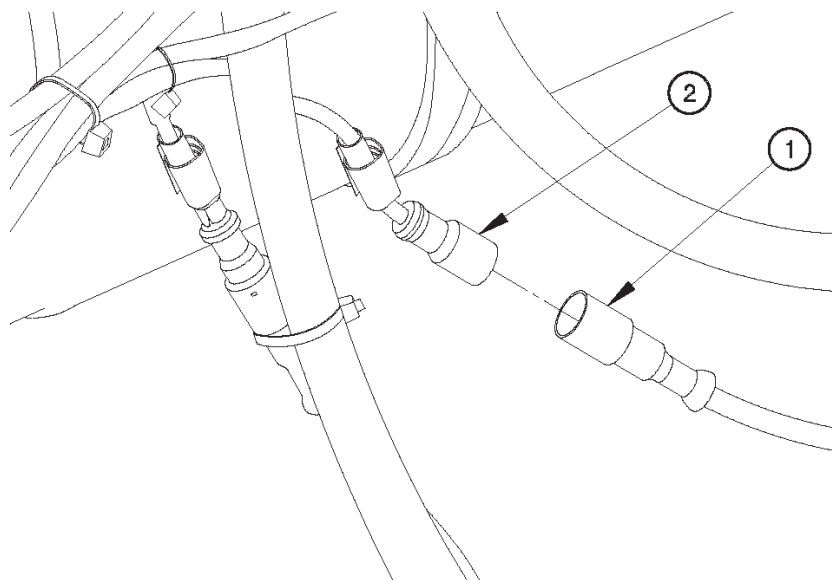
- One ABS wheel speed sensor is located behind each wheel. All ABS wheel speed sensors are removed the same way. Front RH ABS wheel speed sensor shown.
- Remove plastic cable ties as required.
- Tag connectors and connection points prior to disconnecting.

**ANTI-LOCK BRAKE SYSTEM (ABS) WHEEL SPEED SENSOR
REPLACEMENT - Continued**

0070 00

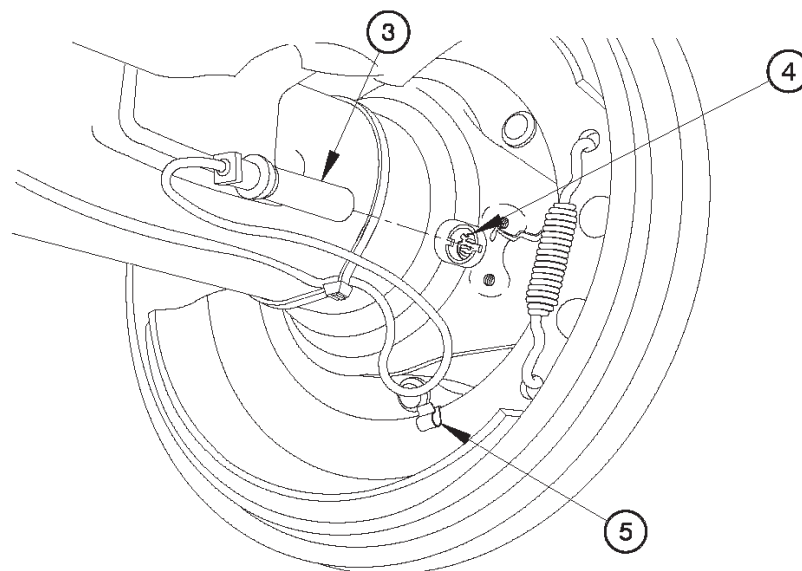
REMOVAL

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).

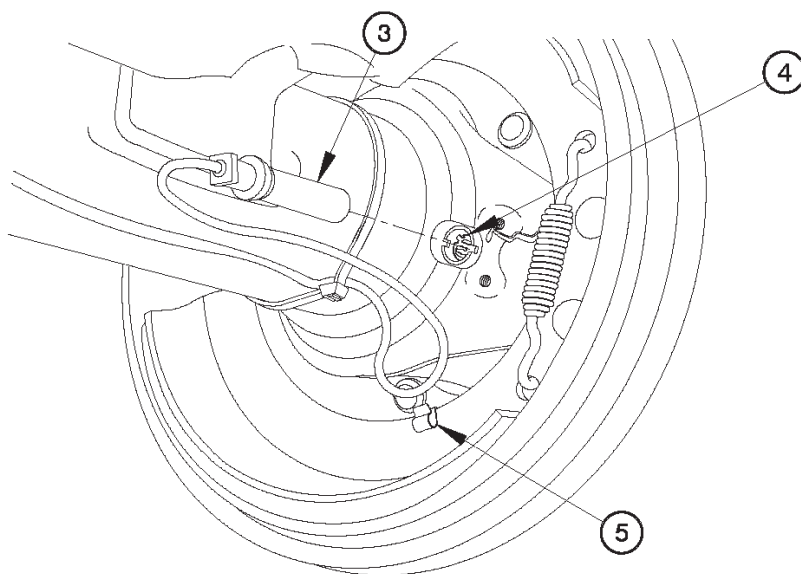


CD070R02

**ANTI-LOCK BRAKE SYSTEM (ABS) WHEEL SPEED SENSOR
REPLACEMENT - Continued****0070 00****INSTALLATION****NOTE**

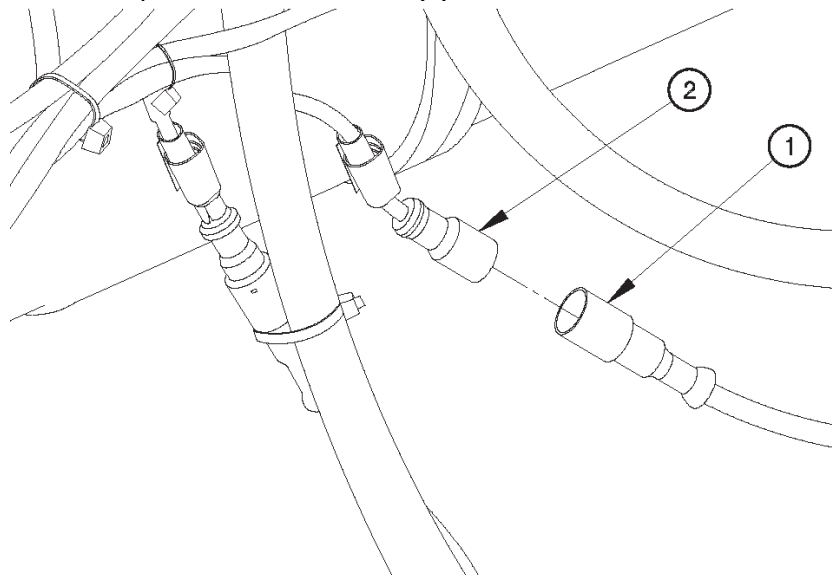
- One ABS wheel speed sensor is located behind each wheel. All ABS wheel speed sensors are installed the same way. Right side is shown.
- Install plastic cable ties as required.

1. Install ABS wheel speed sensor (3) on clamp (5).
2. Install ABS wheel speed sensor (3) on wheel hub (4).



CD070R02

3. Connect ABS wheel speed sensor connector (1) to control sensor extension cable connector (2).



CD070R01

**ANTI-LOCK BRAKE 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 BRAKE SYSTEM (ABS) ECU VALVE REPLACEMENT

0071 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Sealing Compound (Item 14, WP 0165 00)

Nut, Self-Locking (2) (Item 29, WP 0168 00)

Ties, Cable, Plastic (Item 19, WP 0165 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

Vise, Machinist's (Item 27, 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) Anti-Lock Brake System (ABS) ECU valve.

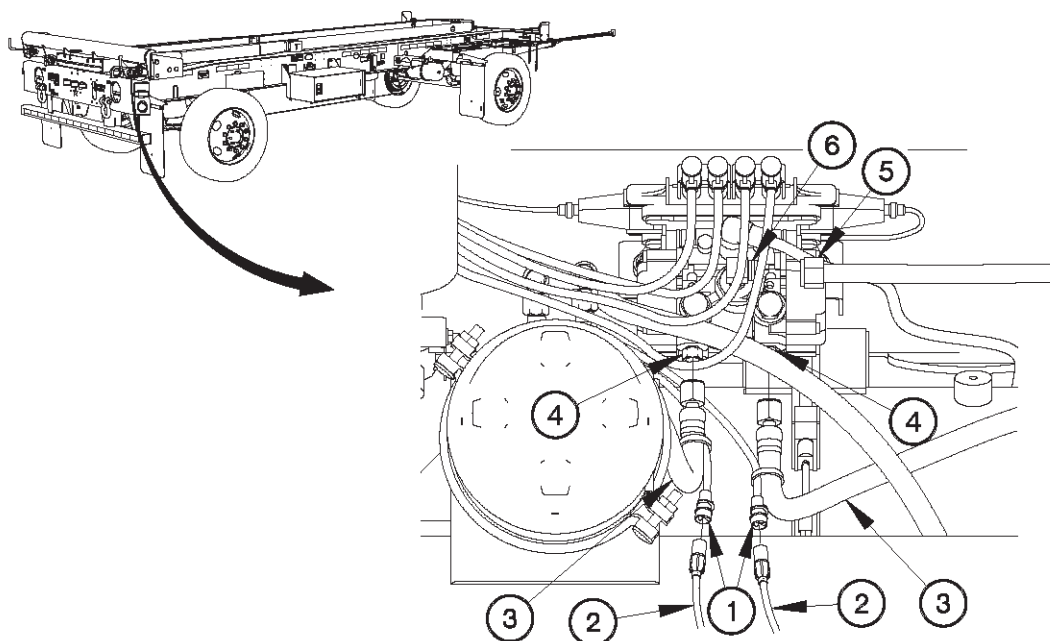
WARNING

- **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 BRAKE SYSTEM (ABS) ECU VALVE
REPLACEMENT - Continued****0071 00****REMOVAL****NOTE**

Tag air hoses, electrical cables, and connection points prior to disconnecting.

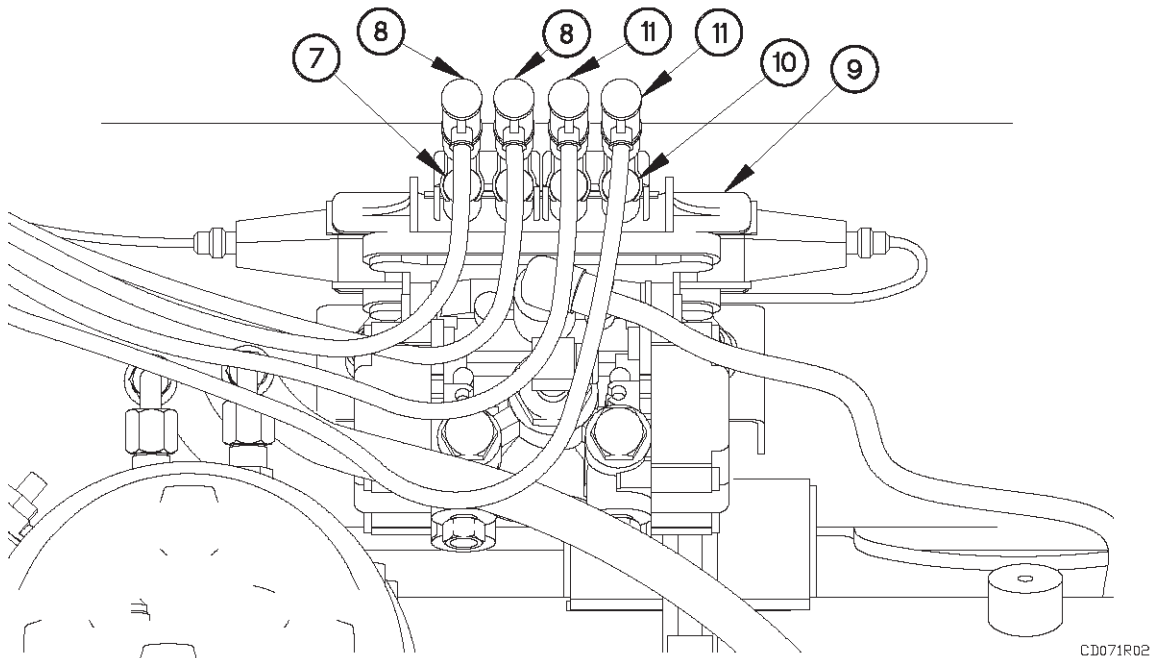
1. Drain air tanks.
2. Disconnect two electrical connectors (1) from electrical connectors (2).
3. Disconnect two hoses (3) from fittings (4).
4. Disconnect hose (5) from 90-degree fitting (6).



CD071R01

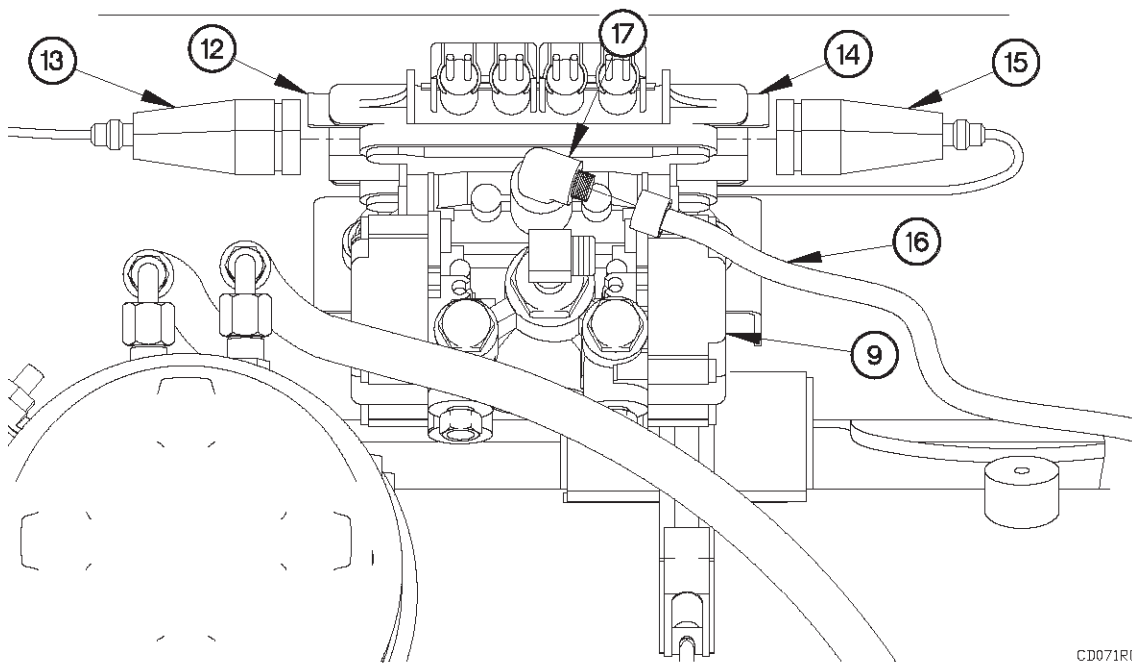
**ANTI-LOCK BRAKE SYSTEM (ABS) ECU VALVE
REPLACEMENT - Continued****0071 00****REMOVAL - Continued**

5. Disconnect clip (7) from two electrical connectors (8).
6. Disconnect two electrical connectors (8) from Anti-Lock Brake 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 BRAKE SYSTEM (ABS) ECU VALVE
REPLACEMENT - Continued****0071 00****REMOVAL - Continued**

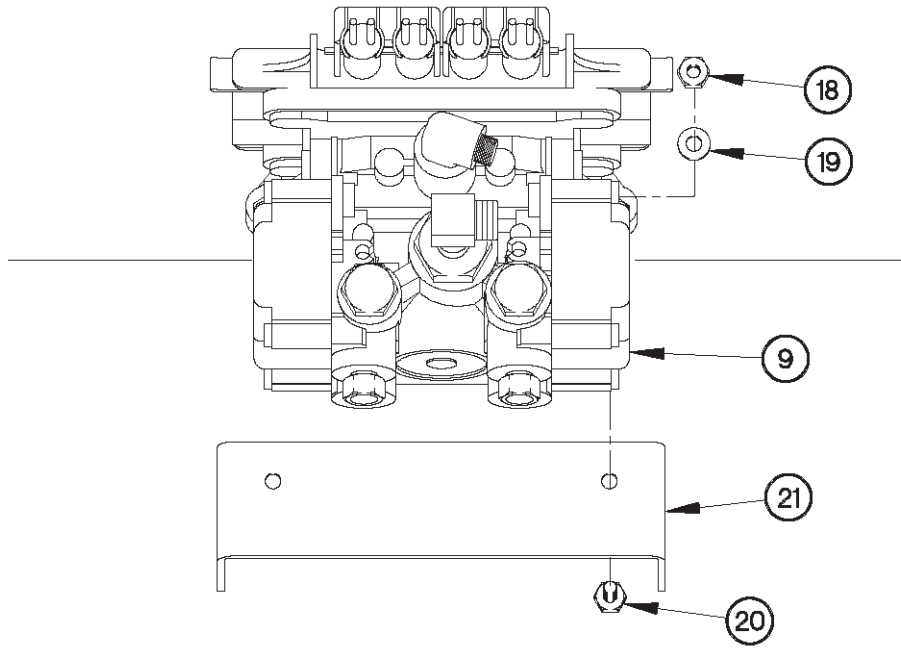
9. Disconnect clip (12) from electrical connector (13).
10. Disconnect electrical connector (13) from ABS ECU valve (9).
11. Disconnect clip (14) from electrical connector (15).
12. Disconnect electrical connector (15) from ABS ECU valve (9).
13. Disconnect hose (16) from 90-degree fitting (17).



CD071R03

**ANTI-LOCK BRAKE SYSTEM (ABS) ECU VALVE
REPLACEMENT - Continued****0071 00****REMOVAL - Continued**

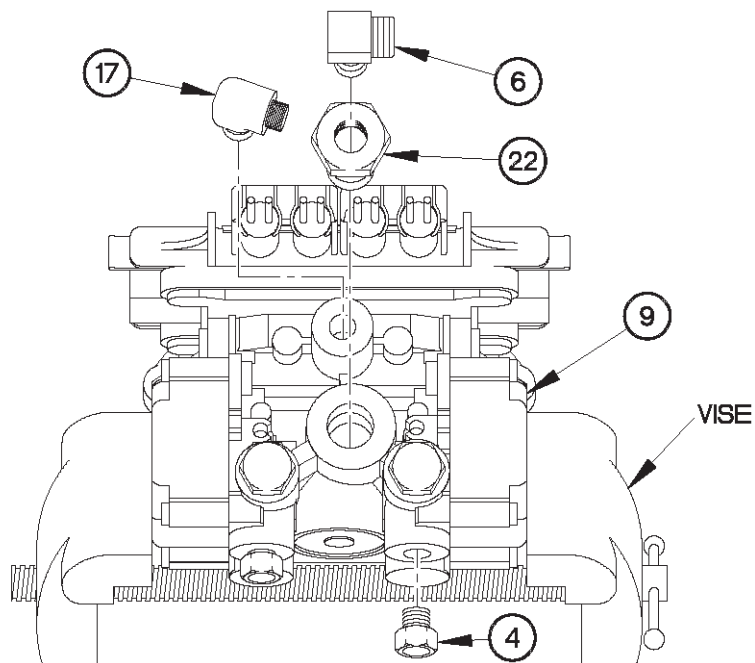
14. Remove two self-locking nuts (18), washers (19), bolts (20), and ABS ECU valve (9) from bracket (21). Discard self-locking nuts.



CD071R04

**ANTI-LOCK BRAKE 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).

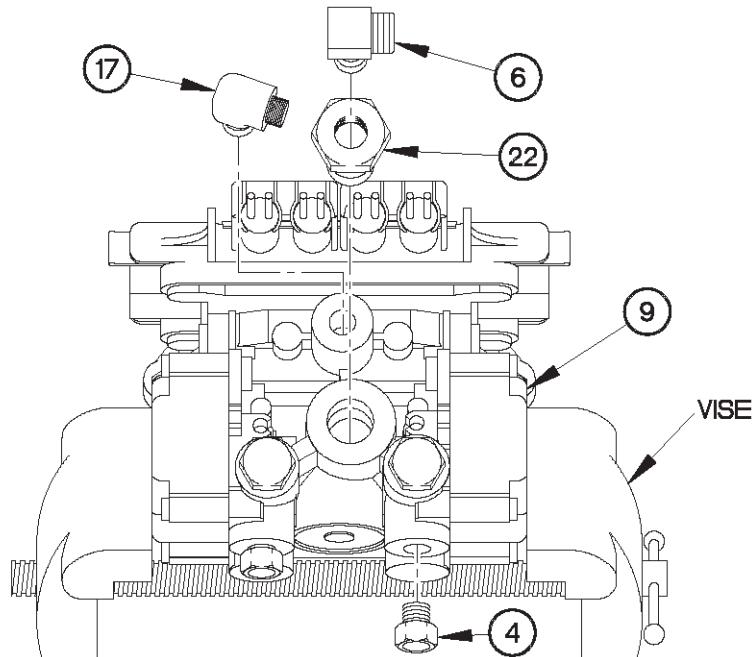


CD071R05

**ANTI-LOCK BRAKE 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 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.

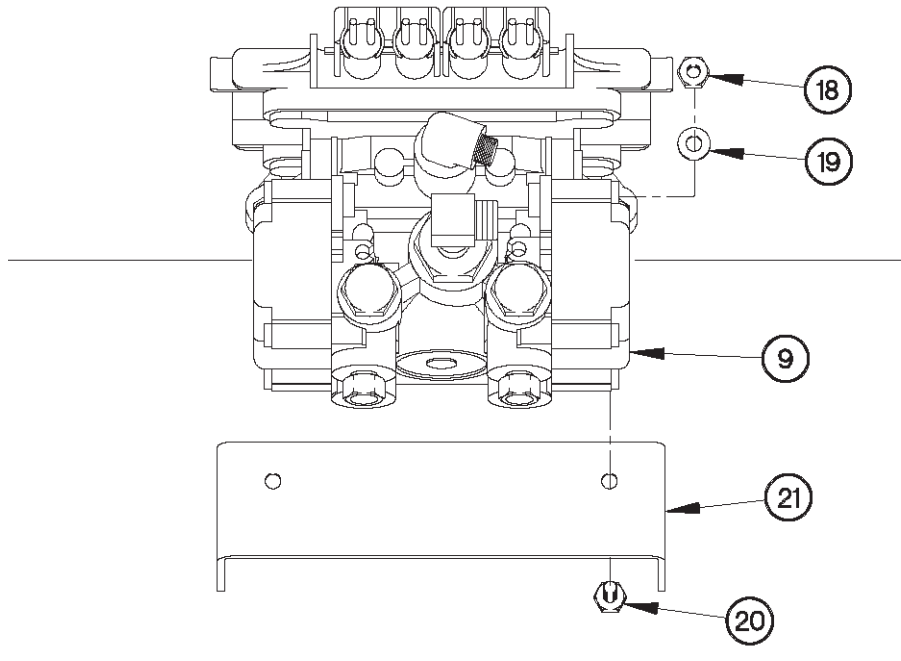
1. Apply sealing compound to threads of bushing (22), 90-degree fittings (6 and 17), and two fittings (4).
2. Position ABS ECU valve (9) in vise.
3. Install bushing (22) on Anti-Lock Brake System (ABS) ECU valve (9).
4. Install 90-degree fitting (6) in bushing (22).
5. Install 90-degree fitting (17) in ABS ECU valve (9).
6. Install two fittings (4) in ABS ECU valve (9).



CD071R05

**ANTI-LOCK BRAKE SYSTEM (ABS) ECU VALVE
REPLACEMENT - Continued****0071 00****INSTALLATION - Continued**

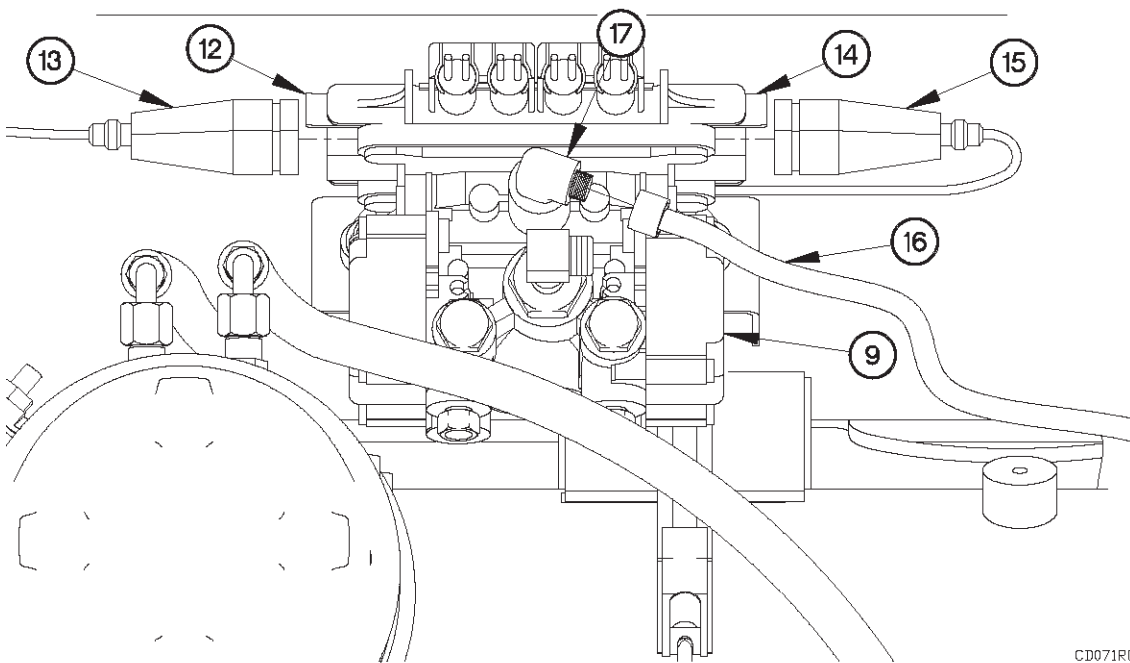
7. Position ABS ECU valve (9) on bracket (21) with two bolts (20), washers (19), and self-locking nuts (18).
8. Tighten self-locking nuts (18) to 33-37 lb-ft (45-50 N·m).



CD071R04

**ANTI-LOCK BRAKE SYSTEM (ABS) ECU VALVE
REPLACEMENT - Continued****0071 00****INSTALLATION - Continued**

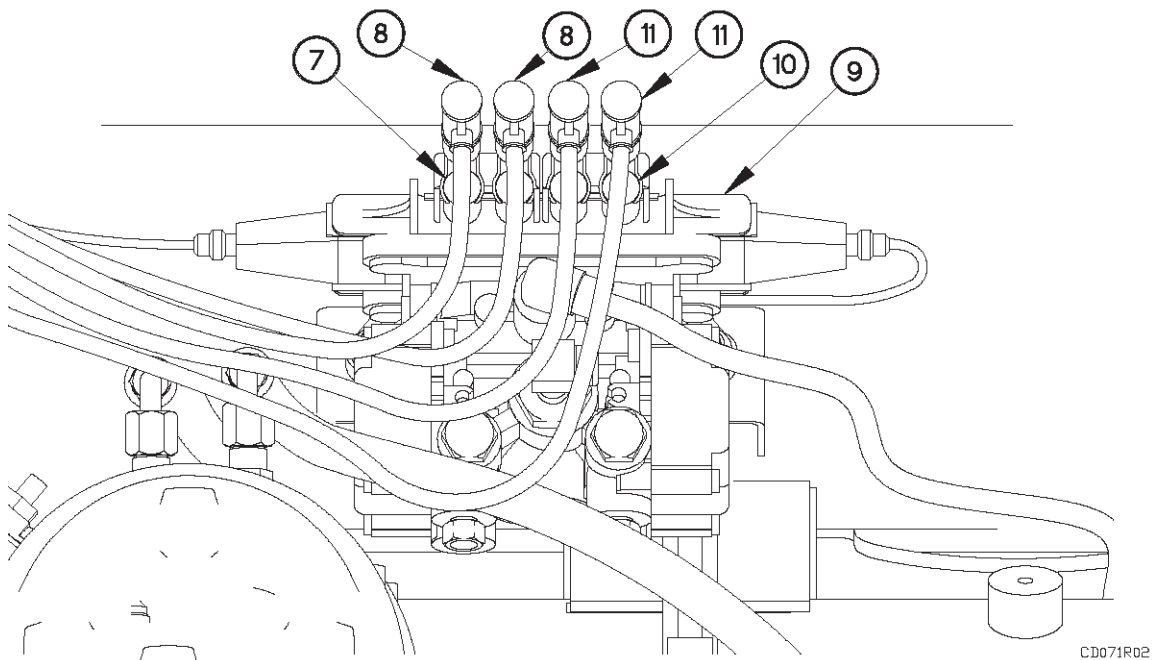
9. Connect hose (16) to 90-degree fitting (17).
10. Connect electrical connector (15) to ABS ECU valve (9).
11. Connect clip (14) on electrical connector (15).
12. Connect electrical connector (13) to ABS ECU valve (9).
13. Connect clip (12) on electrical connector (13).



CD071R03

**ANTI-LOCK BRAKE 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).



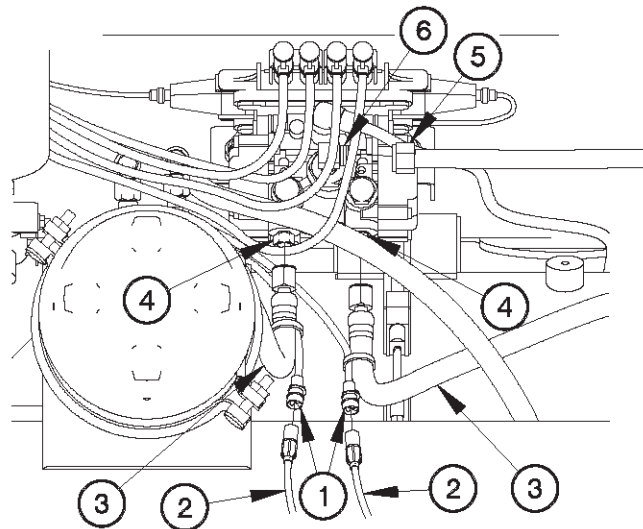
CD071R02

**ANTI-LOCK BRAKE 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).



CDD7101

**ANTI-LOCK BRAKE 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 BRAKE SYSTEM (ABS) RELAY VALVE
HARNES REPLACEMENT**

0072 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Ties, Cable, Plastic (Item 19, WP 0165 00)
Nut, Self-Locking (10) (Item 27, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35, 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) Anti-Lock Brake System (ABS) relay valve cable assembly.

WARNING

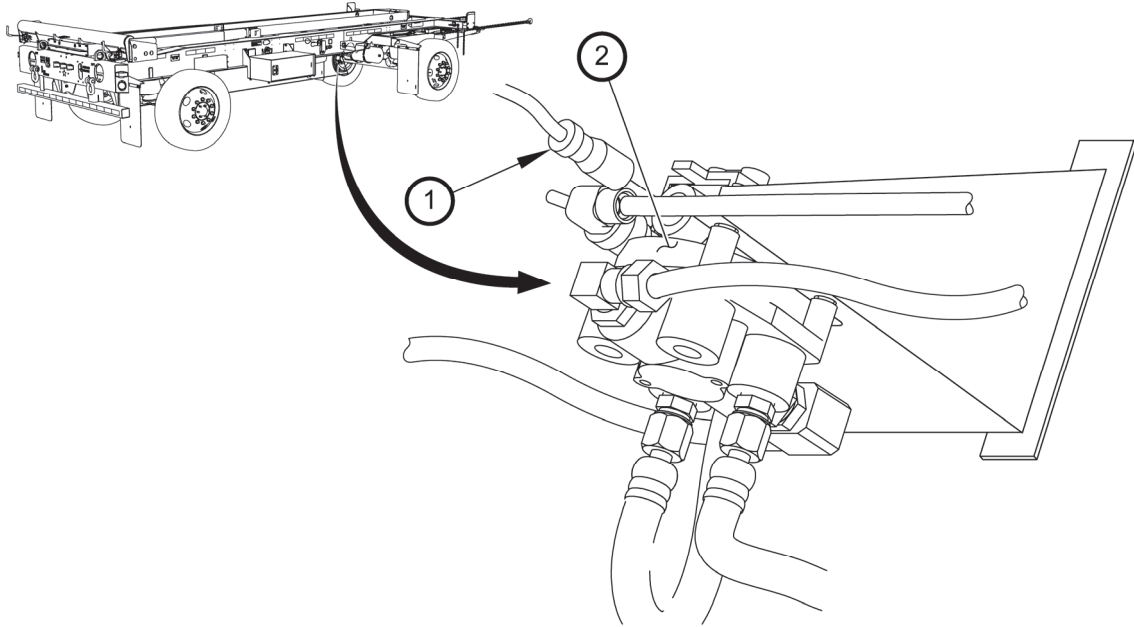
- **Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.**
- **Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrical shock. Failure to comply may result in serious injury or death to personnel.**

NOTE

- Note routing of cable prior to removal.
- Remove plastic cable ties as required.

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE
HARNESS REPLACEMENT - Continued****0072 00****REMOVAL**

1. Disconnect Anti-Lock Brake System (ABS) relay valve cable (1) from ABS relay valve (2).

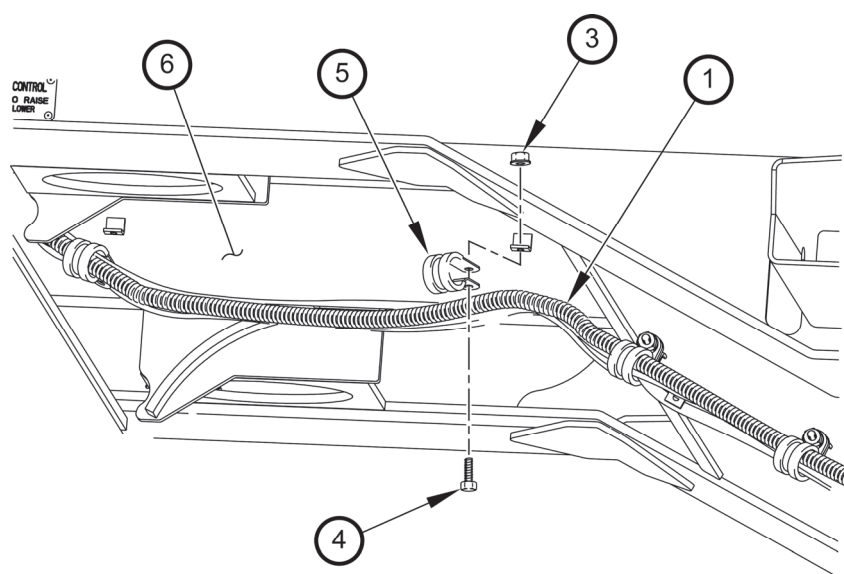


CD072R01

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE
HARNESS REPLACEMENT - Continued****0072 00****REMOVAL - Continued****NOTE**

All ABS relay valve cable clamps are removed the same way. One is shown.

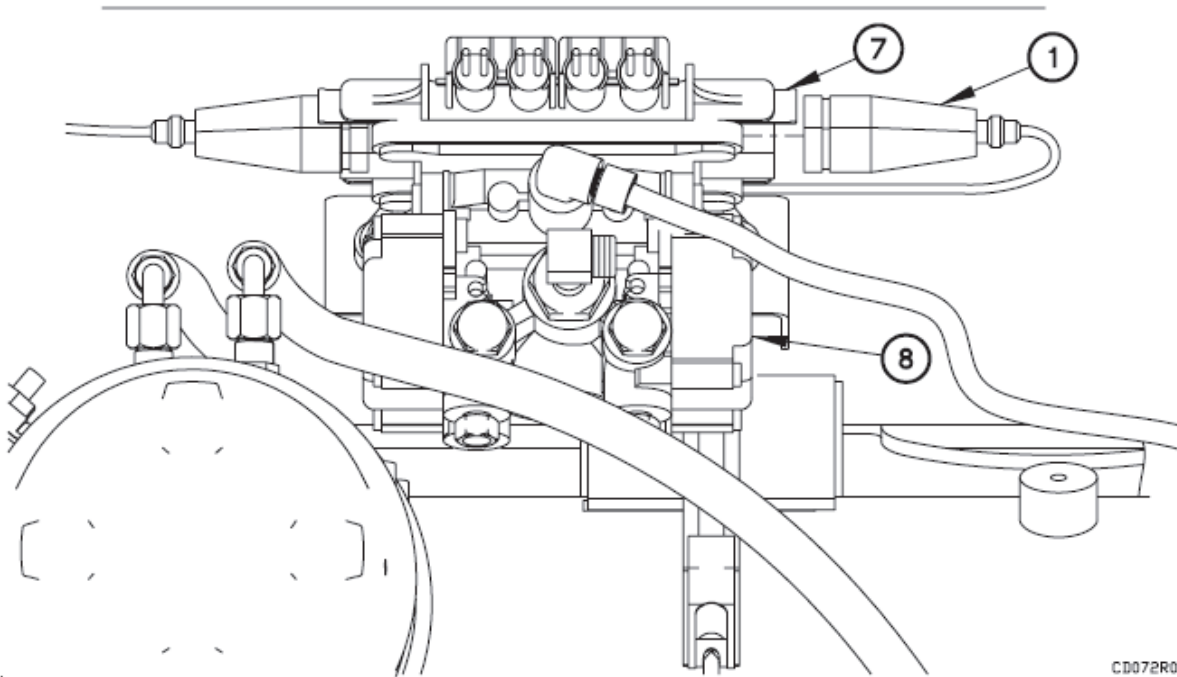
2. Remove self-locking nut (3), bolt (4), and clamp (5) from rail assembly (6). Discard self-locking nut.
3. Remove ABS relay valve cable (1) from clamp (5).
4. Perform the previous two steps on remaining clamps.



CD072R02

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE
HARNESS 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.

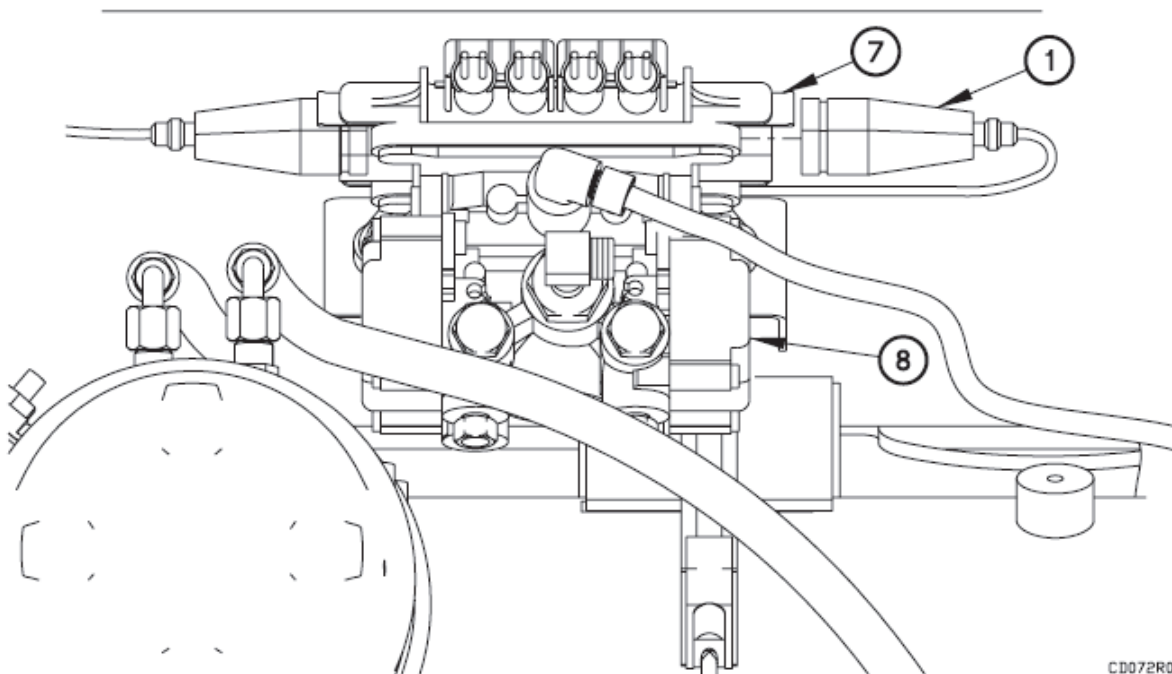


CD072R03

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE
HARNESS 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.

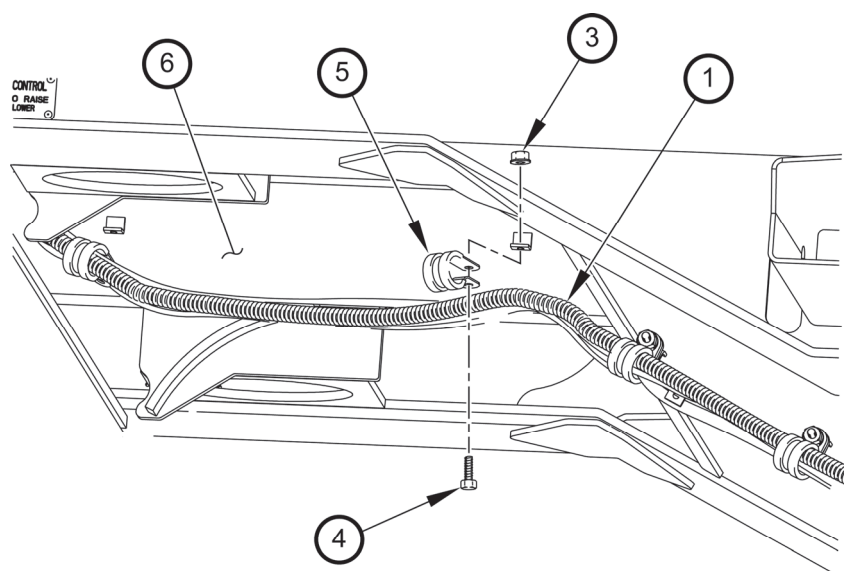


CD072R03

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE
HARNESS REPLACEMENT - Continued****0072 00****INSTALLATION – Continued****NOTE**

All ABS relay valve cable clamps are installed the same way. One is shown.

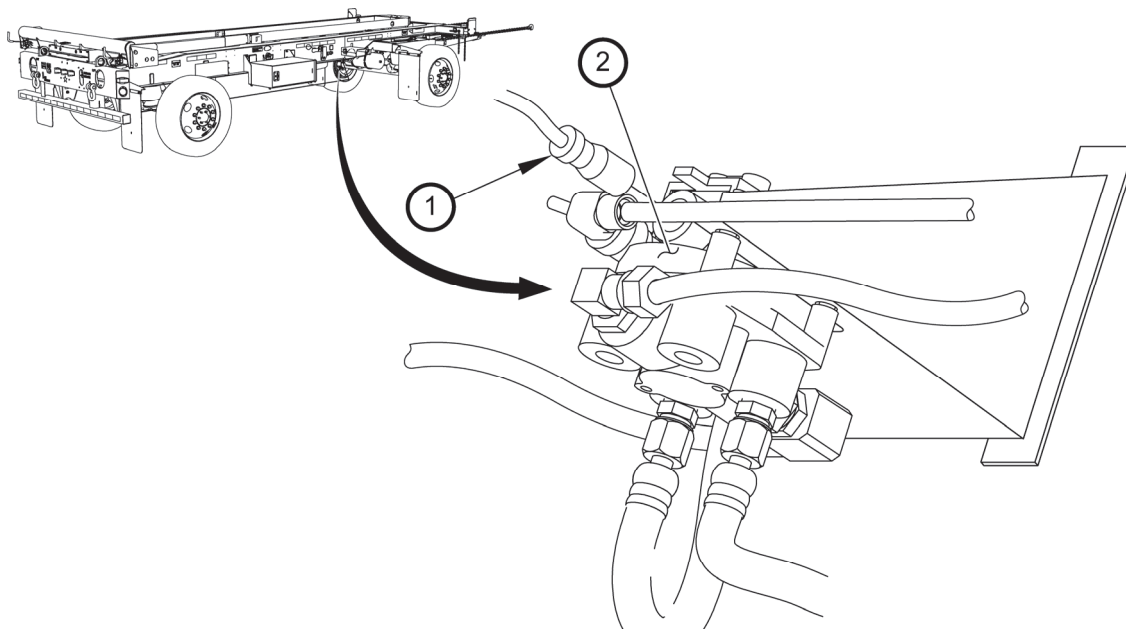
4. Position ABS relay valve cable (1) in clamp (5).
5. Position clamp (5) on rail assembly (6) with bolt (4) and self-locking nut (3).
6. Tighten self-locking nut (3) to 96-120 lb-in. (11-14 N·m).
7. Perform the previous three steps on remaining clamps.



CD072R02

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE
HARNESS REPLACEMENT - CONTINUED****0072 00****INSTALLATION - Continued**

8. Connect ABS relay valve cable (1) to ABS relay valve (2).



CD072R01

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 BRAKE 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 24, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35, WP
0167 00)

Materials/Parts

Nut, Self-Locking (10) (Item 27, WP 0168
00)
Ties, Cable, Plastic (Item 19, 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 Brake 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.

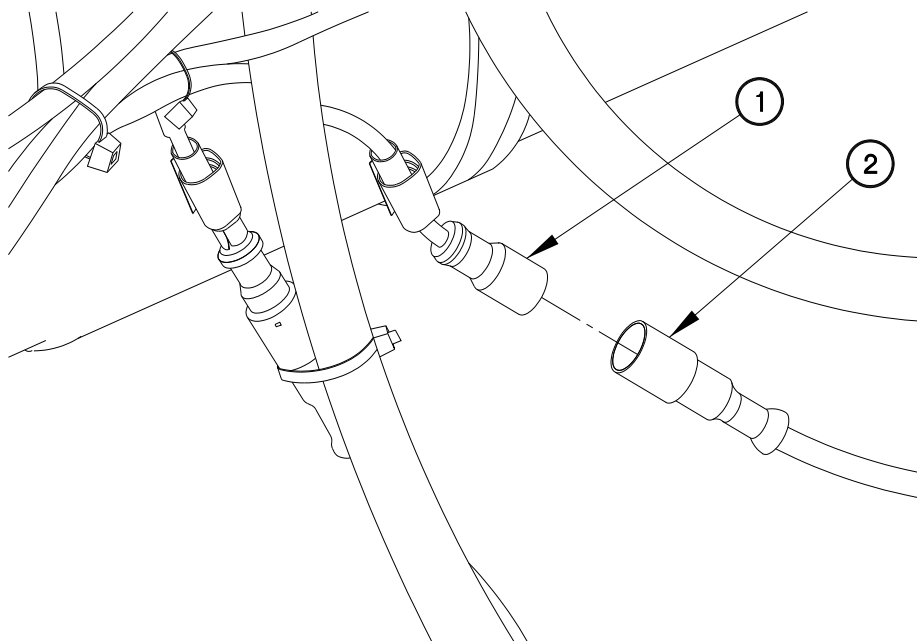
NOTE

All Anti-Lock Brake System (ABS) control sensor extension cables are removed the same way. Right front is shown.

**ANTI-LOCK BRAKE SYSTEM (ABS) CONTROL SENSOR
EXTENSION CABLE REPLACEMENT – Continued****0073 00****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

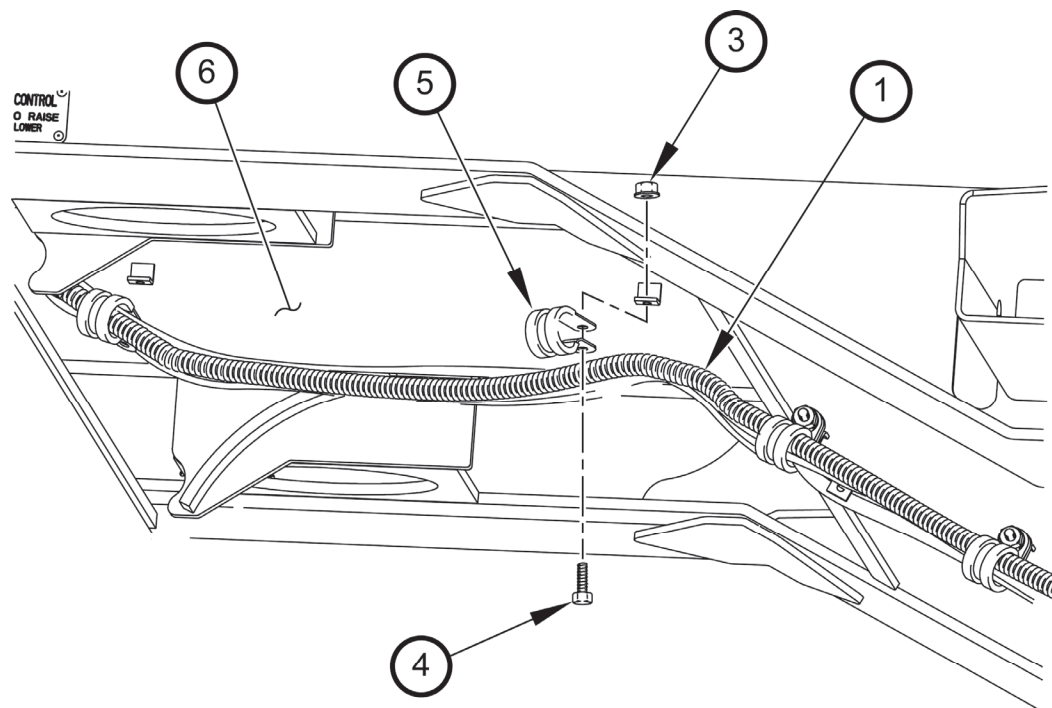
1. Disconnect ABS control sensor extension cable (1) from ABS wheel speed sensor (2).



CD073R01

**ANTI-LOCK BRAKE 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 is 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.



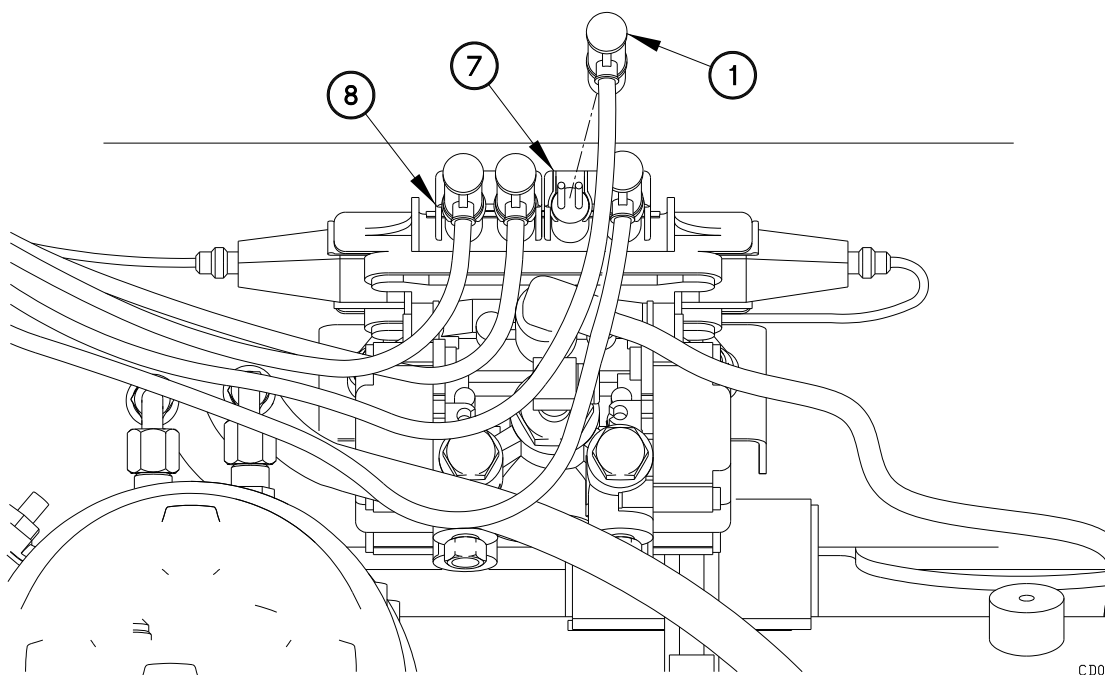
CD073R02

**ANTI-LOCK BRAKE 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.



CD073R03

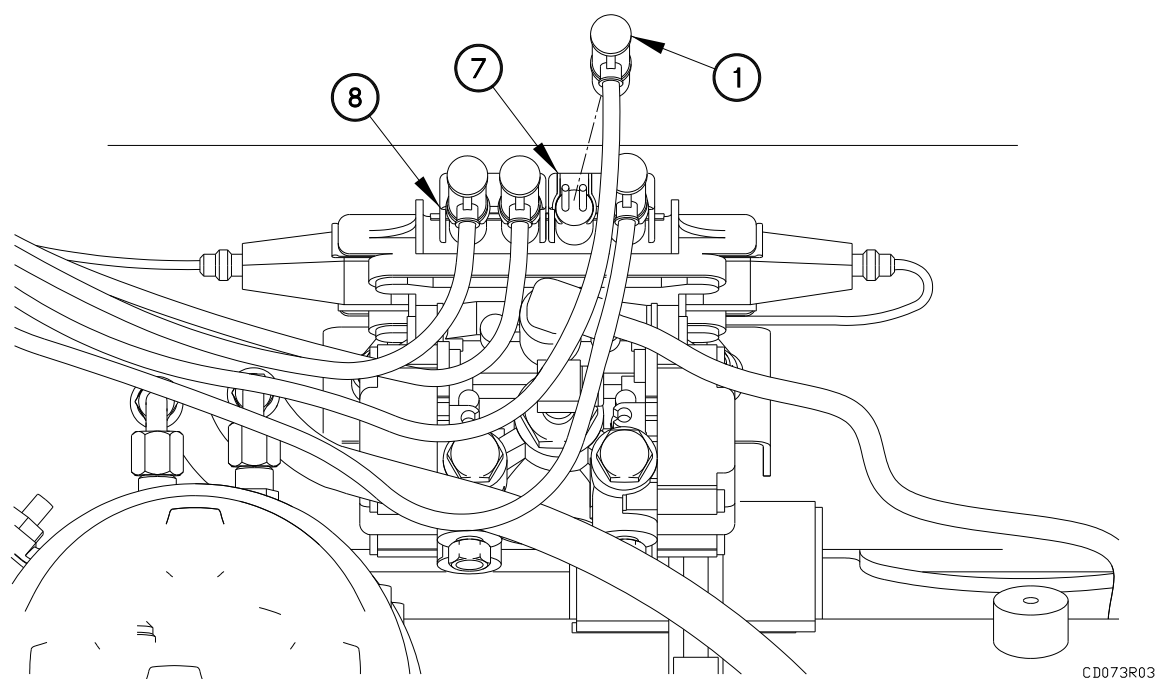
**ANTI-LOCK BRAKE SYSTEM (ABS) CONTROL SENSOR
EXTENSION CABLE REPLACEMENT – Continued****0073 00****INSTALLATION****NOTE**

Install plastic cable ties as required.

ABS control sensor extension cable connectors correspond to the following ports in the ABS ECU:

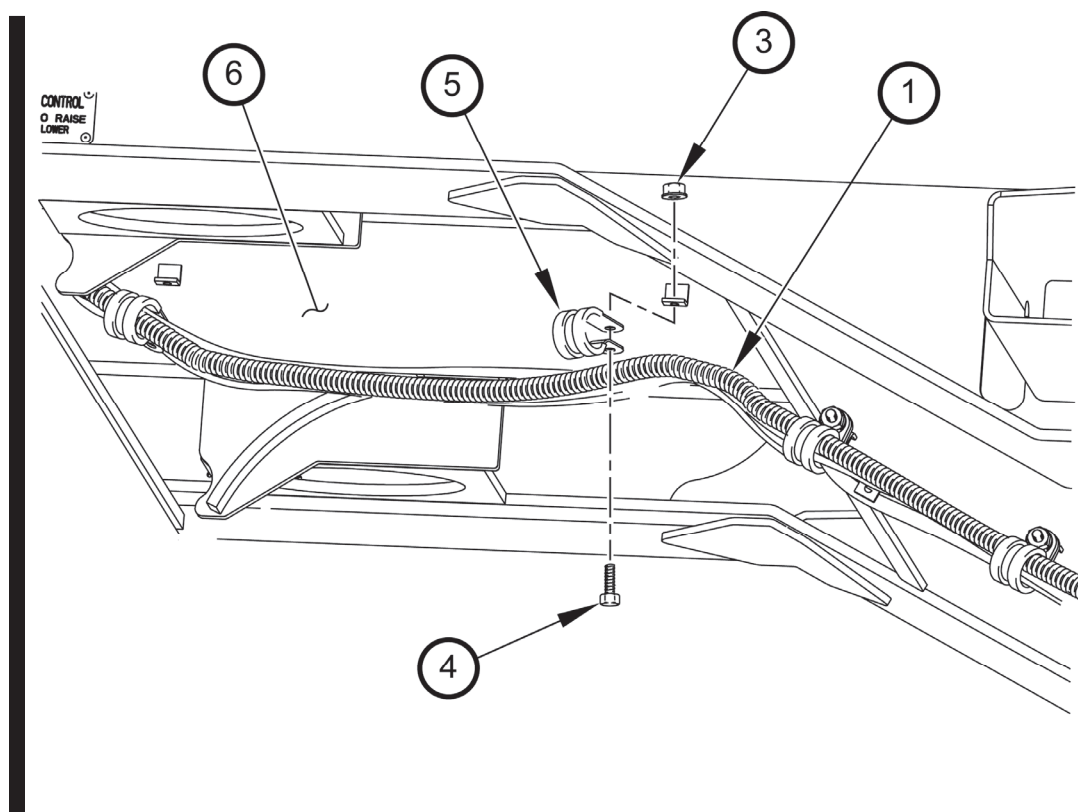
- Right side front: BU1
- Right side rear: BU2
- Left side front: YE2
- Left side rear: YE1

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 BRAKE 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 is 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.



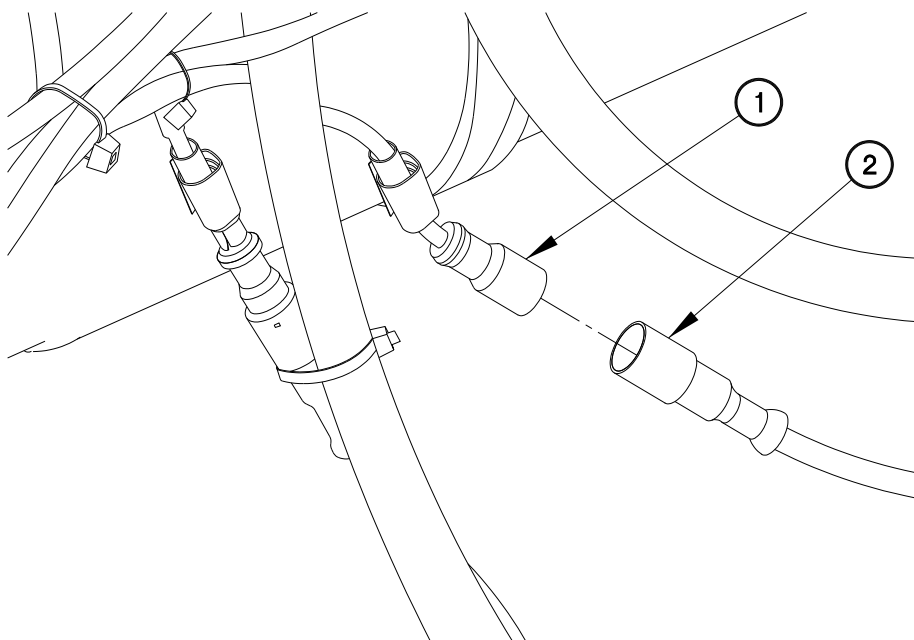
CD073R02

**ANTI-LOCK BRAKE 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 BRAKE 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 BRAKE 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

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35, WP 167)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

Materials/Parts (Cont.)

Ties, Cable, Plastic (Item 19, 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 Brake 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

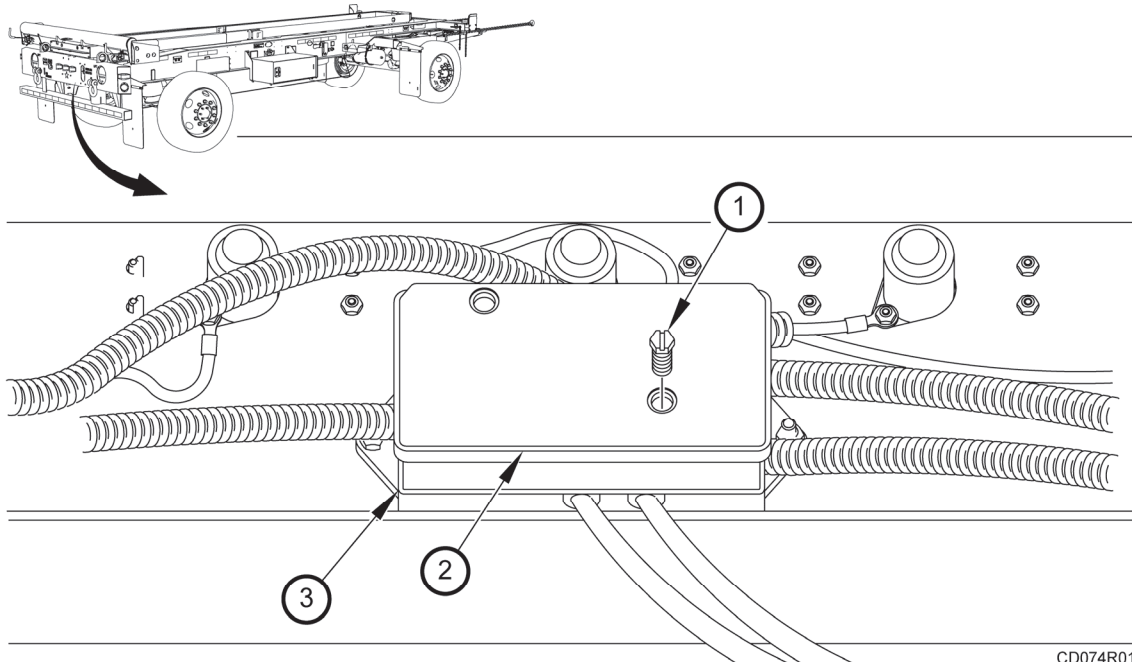
Remove plastic cable ties as required.

**ANTI-LOCK BRAKE 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).



CD074R01

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

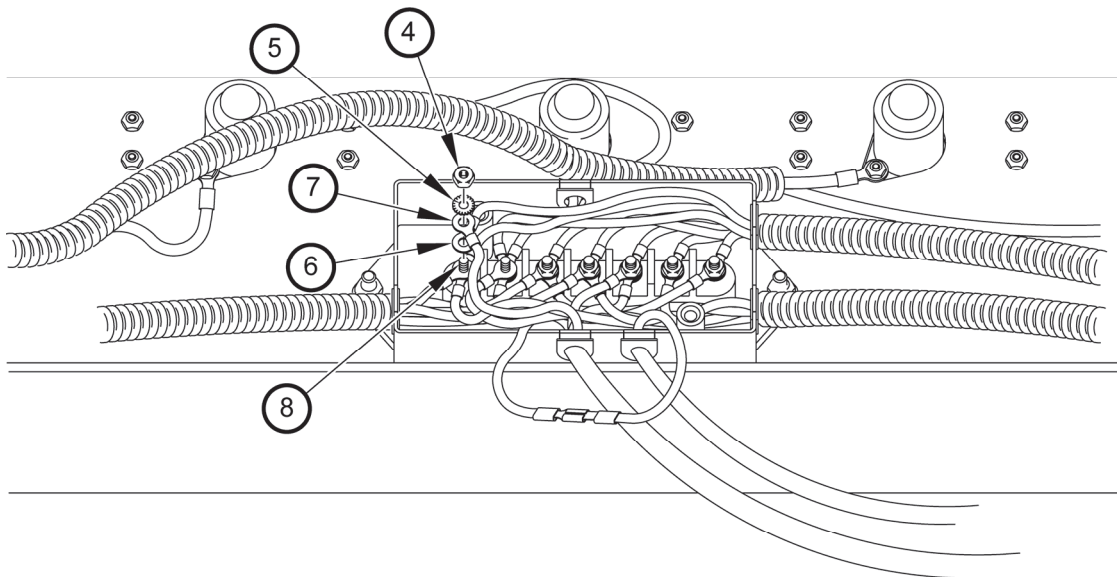
REMOVAL - Continued

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



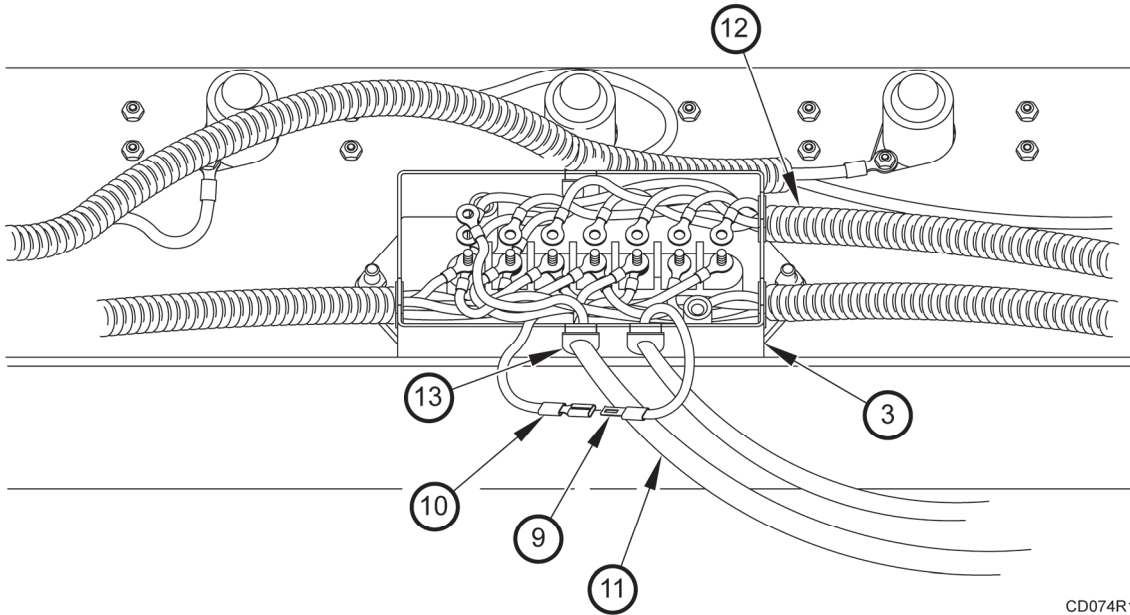
CD074R02

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

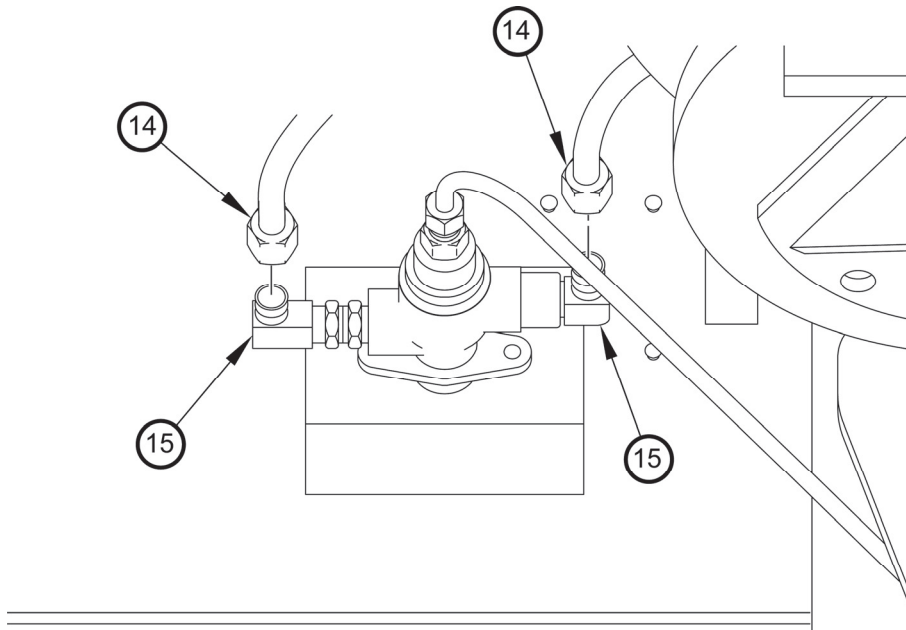
REMOVAL – Continued

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).



CD074R15

6. Disconnect two hoses (14) from 90-degree fittings (15).



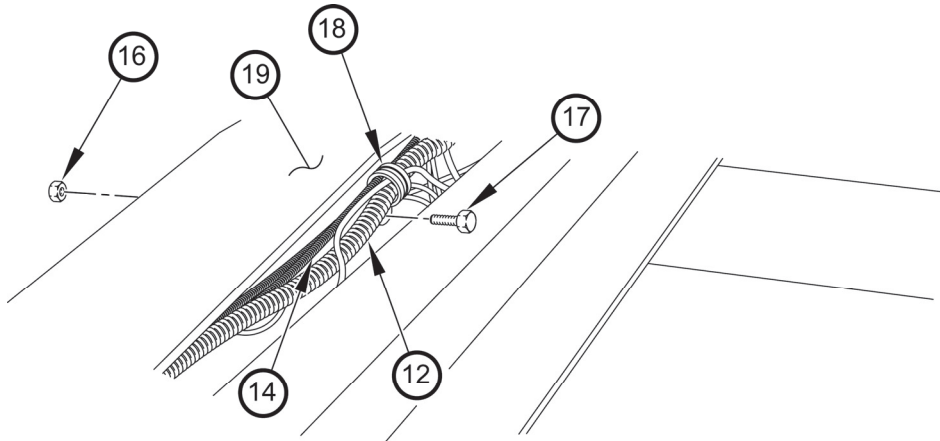
CD074R06

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

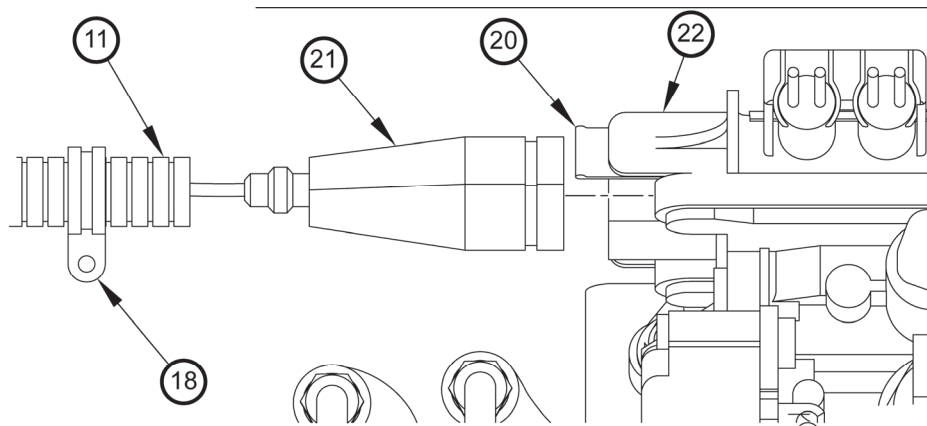
REMOVAL – Continued

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).



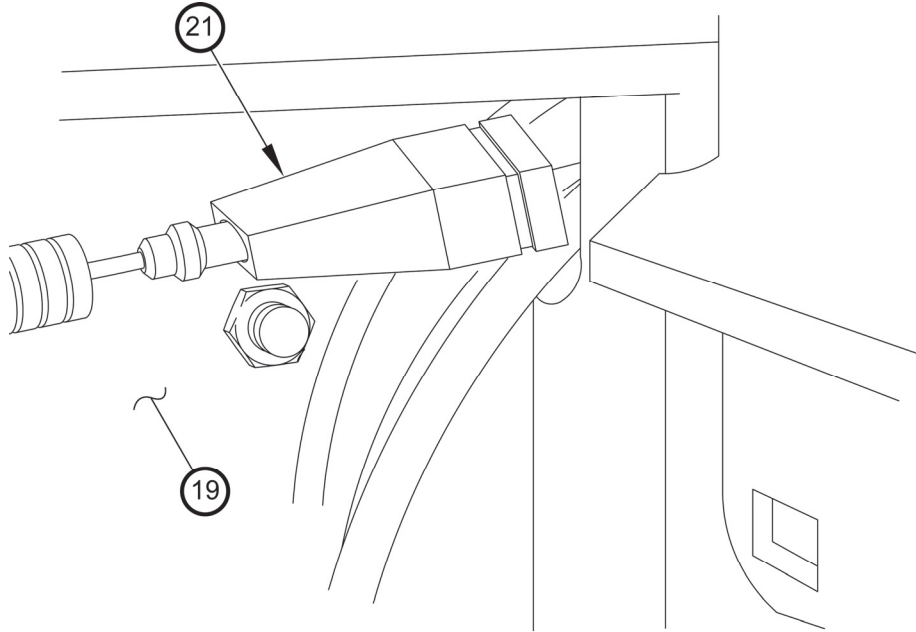
CD074R08

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

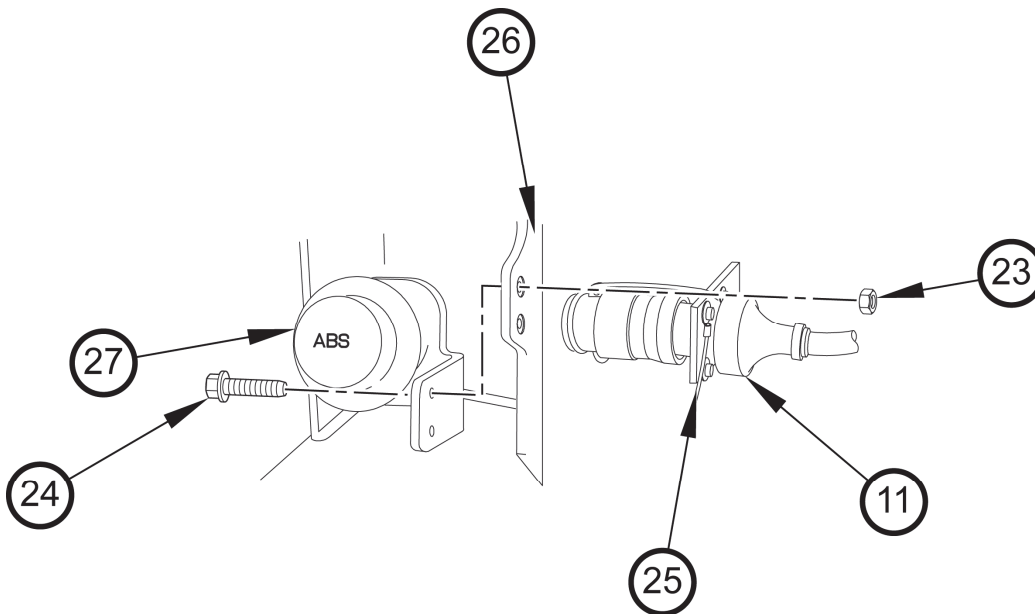
REMOVAL – Continued

13. Route connector (21) through LH frame rail (19).



CD074R09

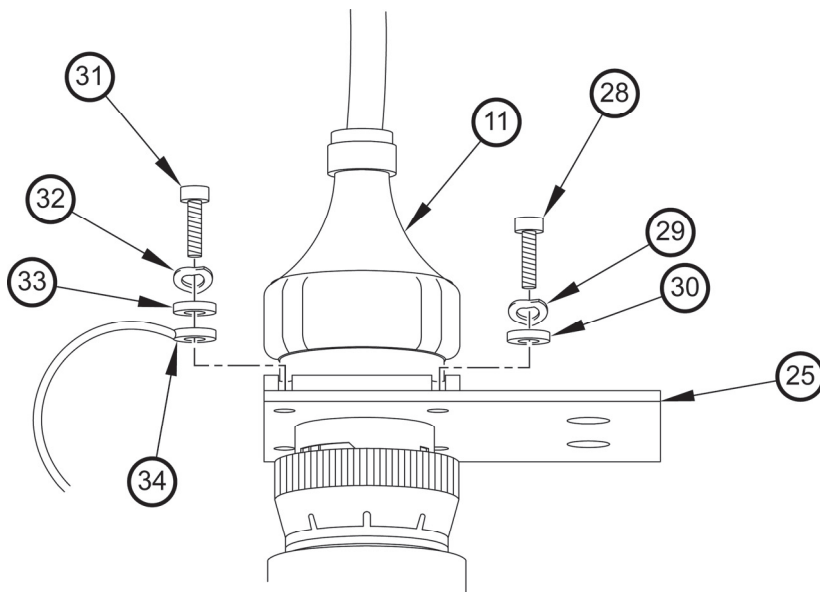
14. Remove two self-locking nuts (23), bolts (24), ABS power and diagnostic cable (11), mounting bracket (25), and ABS Diagnostic Light (27) from rear panel assembly (26). Discard self-locking nuts.



D06974

**ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****REMOVAL – Continued**

15. Remove two screws (28), lockwashers (29), and washers (30) from ABS power and diagnostic cable (11) and mounting bracket (25).
16. Remove screw (31), lockwasher (32), washer (33), and lanyard (34) from ABS power and diagnostic cable (11) and mounting bracket (25).



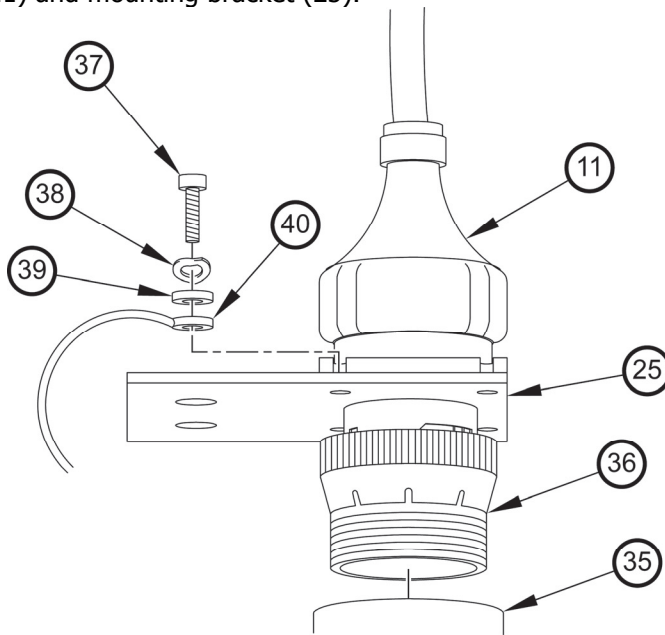
CD074R11

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

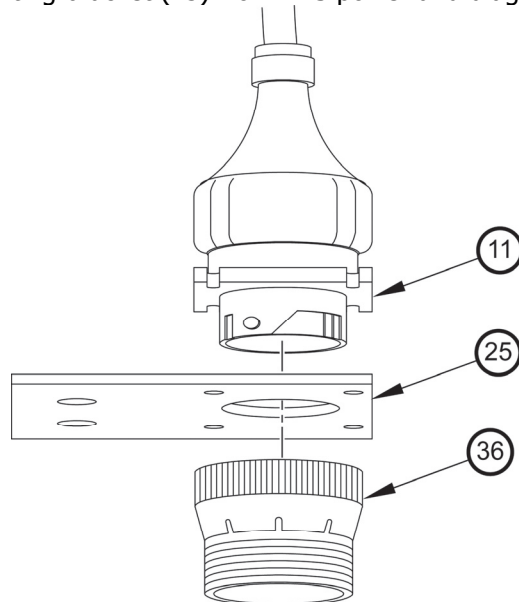
REMOVAL – Continued

17. Remove cover (35) from ABS diagnostic tool (36).
18. Remove screw (37), lockwasher (38), washer (39), and lanyard (40) from ABS power and diagnostic cable (11) and mounting bracket (25).



CD074R12

19. Disconnect ABS diagnostic tool (36) from ABS power and diagnostic cable (11).
20. Remove mounting bracket (25) from ABS power and diagnostic cable (11).



CD074R13

END OF TASK

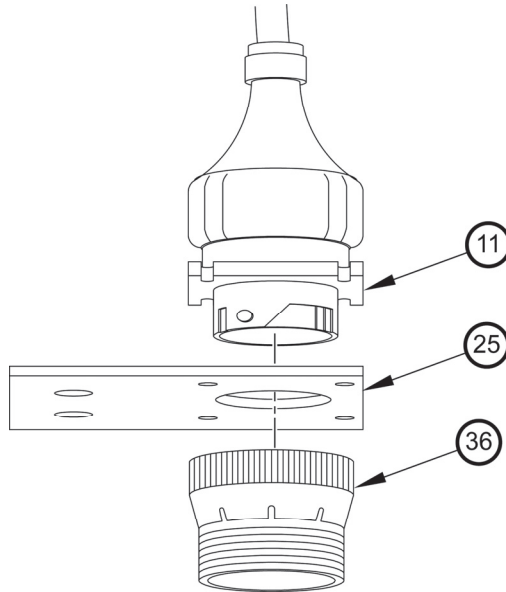
Change 1

0074 00-8

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

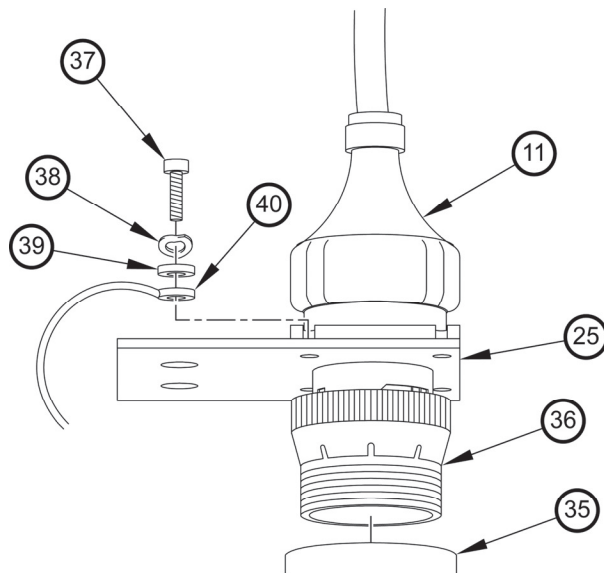
INSTALLATION

1. Install mounting bracket (25) on ABS power and diagnostic cable (11).
2. Connect ABS diagnostic tool (36) to ABS power and diagnostic cable (11).



CD074R13

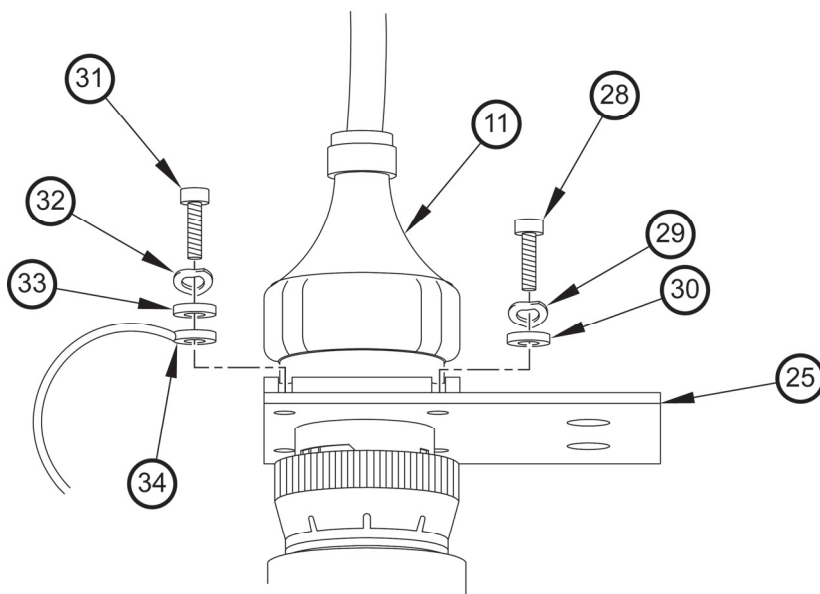
3. Install lanyard (40) on ABS power and diagnostic cable (11) and mounting bracket (25) with washer (39), lockwasher (38), and screw (37).
4. Install cover (35) on ABS diagnostic tool (36).



CD074R12

**ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****INSTALLATION – Continued**

5. Install lanyard (34) on ABS power and diagnostic cable (11) and mounting bracket (25) with washer (33), lockwasher (32), and screw (31).
6. Install two washers (30), lockwashers (29), and screws (28) on ABS power and diagnostic cable (11) and mounting bracket (25).

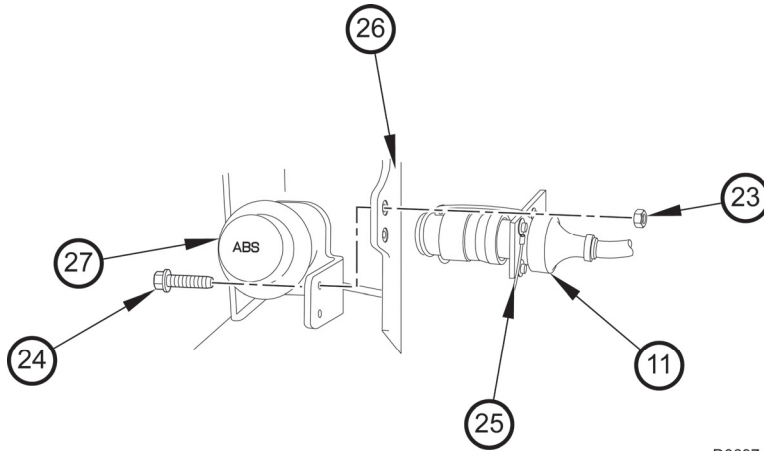


CD074R11

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

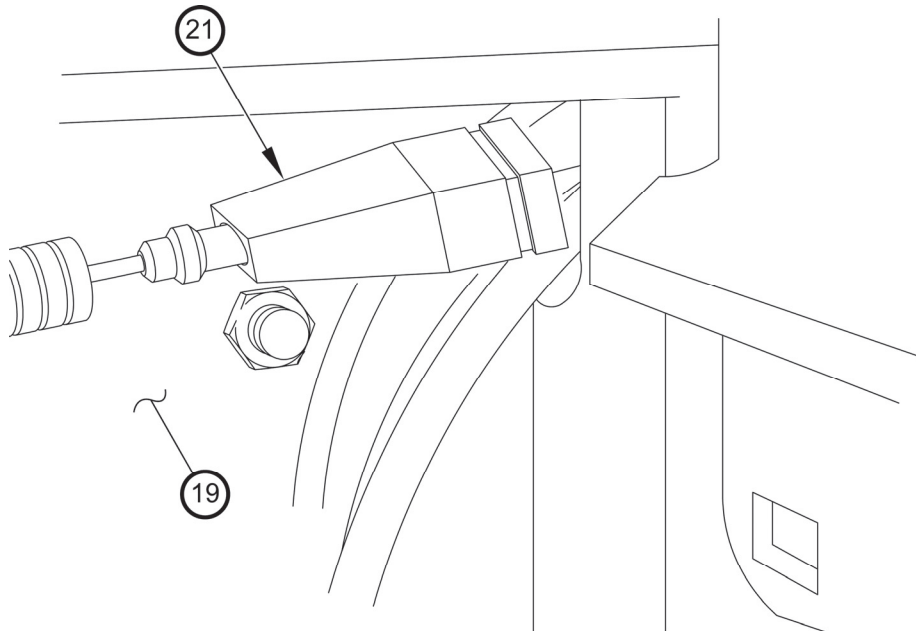
INSTALLATION – Continued

7. Install ABS Diagnostic Light (27), mounting bracket (25) and ABS power and diagnostic cable (11) on rear panel assembly (26) with two bolts (24) and self-locking nuts (23).



D06974

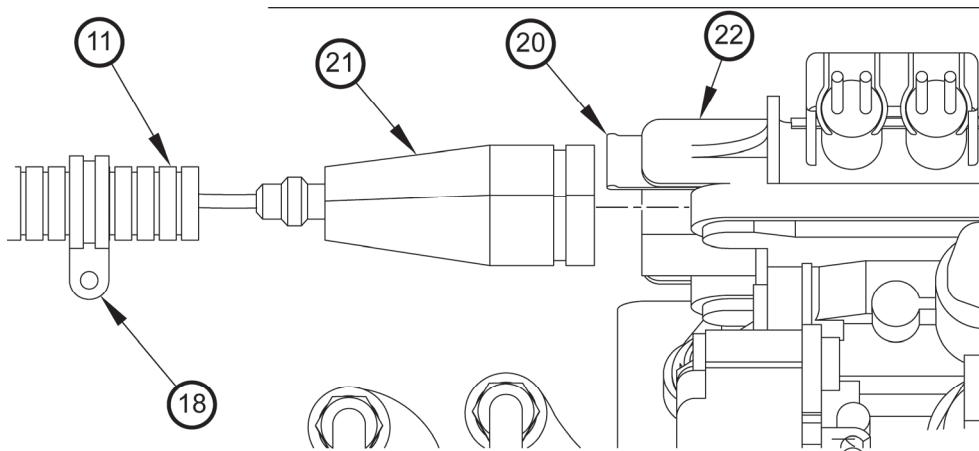
8. Route connector (21) through LH frame rail (19).



CD074R09

**ANTI-LOCK BRAKE 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).

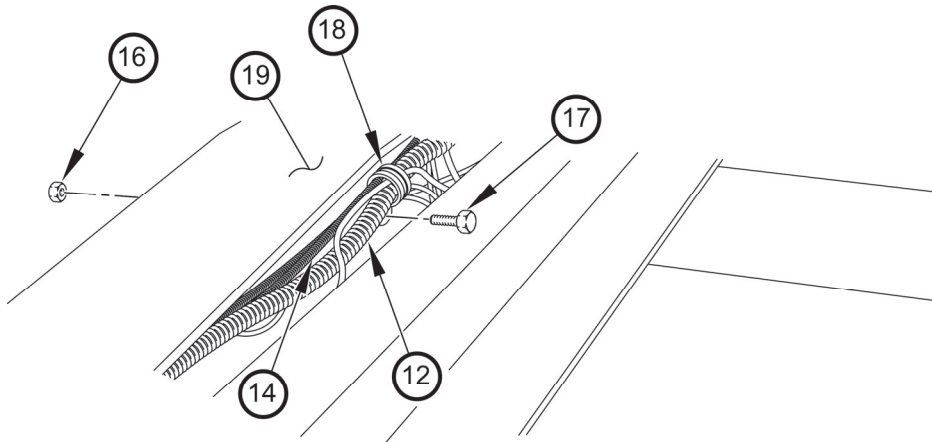


CD074R08

**ANTI-LOCK BRAKE 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) into 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).



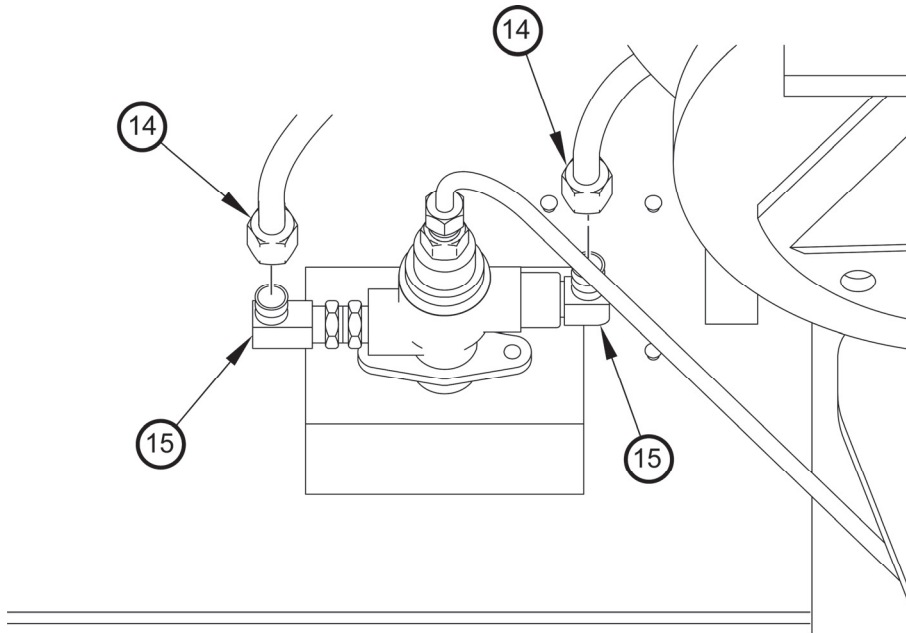
CD074R07

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

0074 00

INSTALLATION – Continued

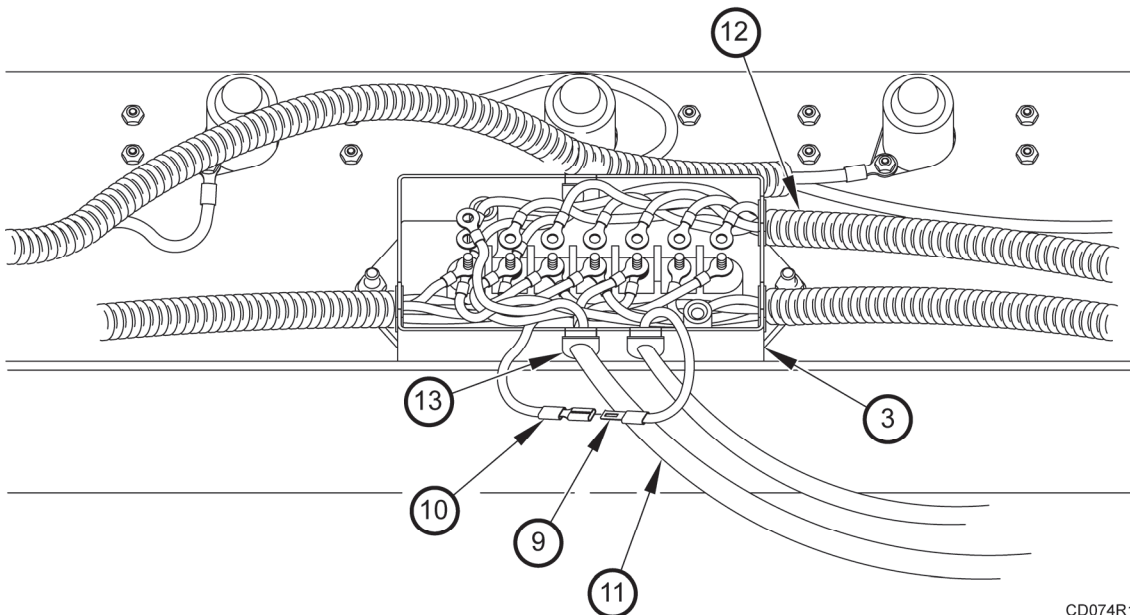
16. Connect two hoses (14) to 90-degree fittings (15).



CD074R06

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).



CD074R15

ANTI-LOCK BRAKE SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued

INSTALLATION – Continued

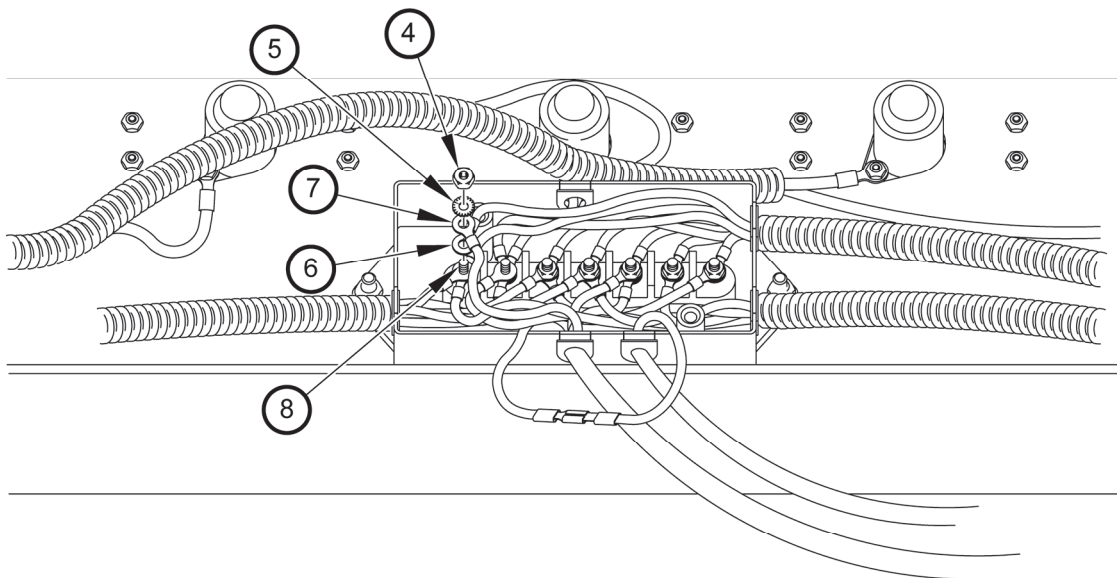
NOTE

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 2. 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 2. Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations - Continued.

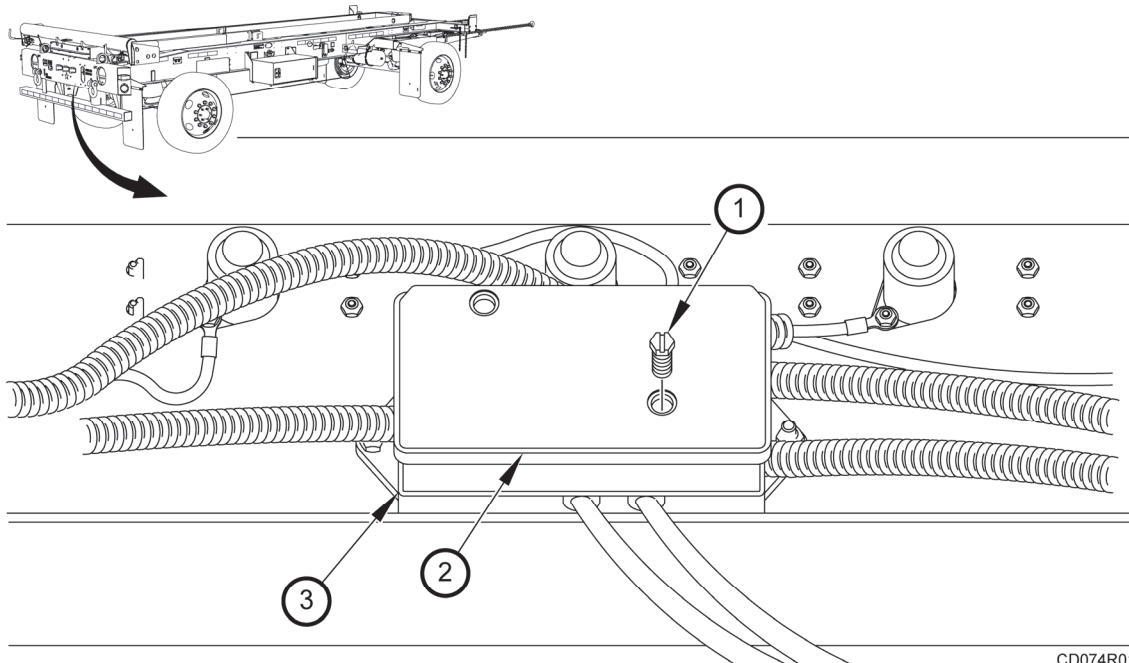
Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL609, TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A, Red ABS Terminal Lug, Blue ABS Terminal Lug
Stud Position 6	TL253A
Stud Position 7	TL252A



CD074R02

**ANTI-LOCK BRAKE 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).



CD074R01

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 TASK**END OF WORK PACKAGE**

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE
PROTECTION VALVE REPLACEMENT**

0075 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts (Cont)

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)

Tools and Special Tools

Tool Kit, Genl Mech Item 24, WP 0167 00)

Kit, Pressure Protection Valve (Item 3, WP
0168 00)

Materials/Parts

Antiseize Compound (Item 2, WP 0165 00)
Ties, Cable Plastic (Item 19, WP 0165 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 Brake System (ABS) relay valve and brake protection 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.

NOTE

- Tag air hoses, electrical cables and connection points prior to disconnecting.
- Remove plastic cable ties as required.

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued

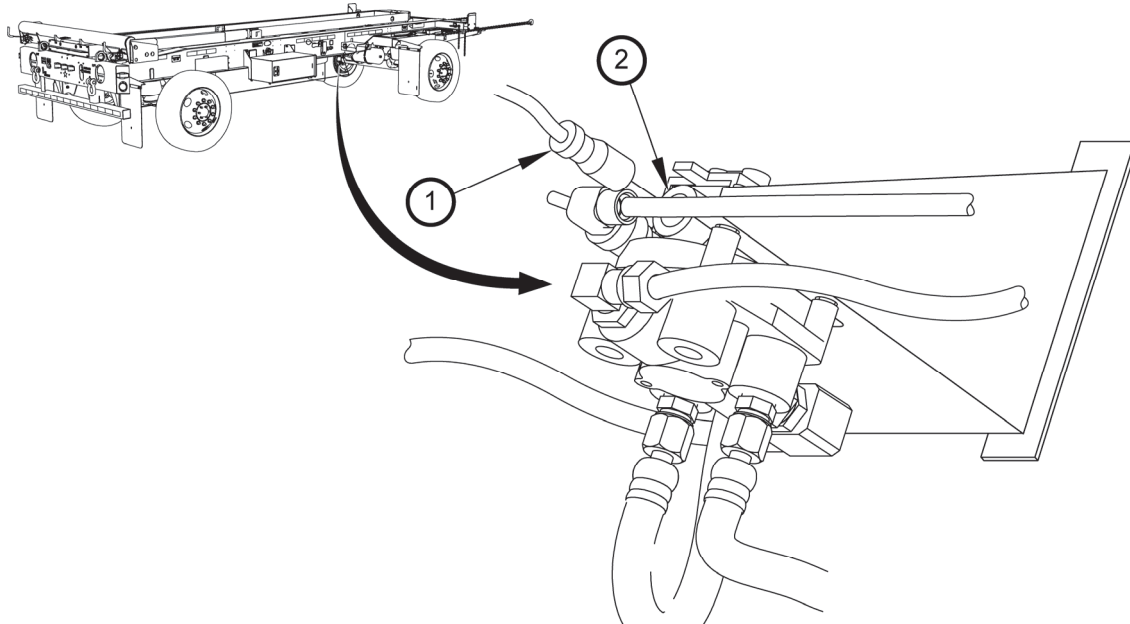
0075 00

REMOVAL

NOTE

Note orientation of fittings prior to removal.

1. Disconnect ABC ECU connector (1) from relay valve cable connector (2).



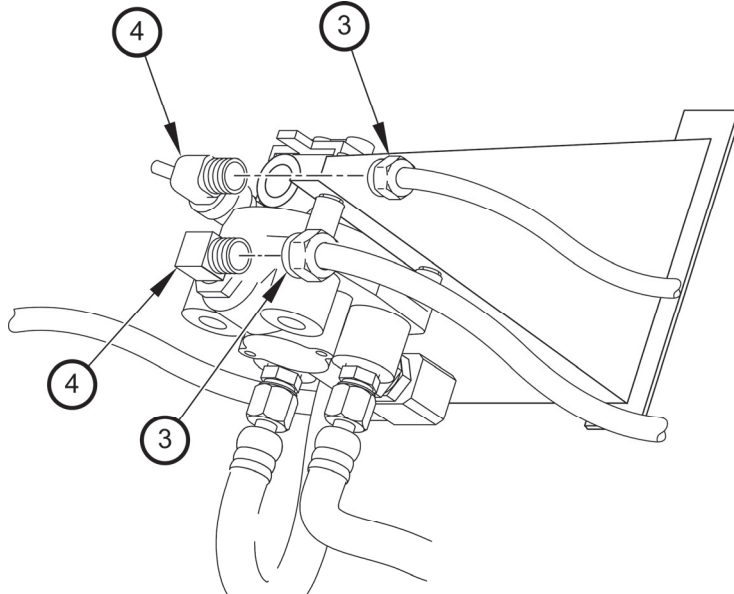
CD075R01

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued

0075 00

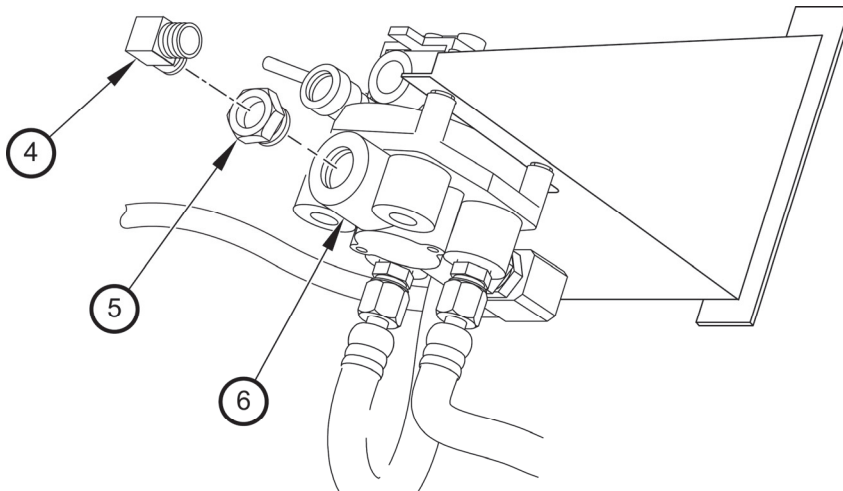
REMOVAL – Continued

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

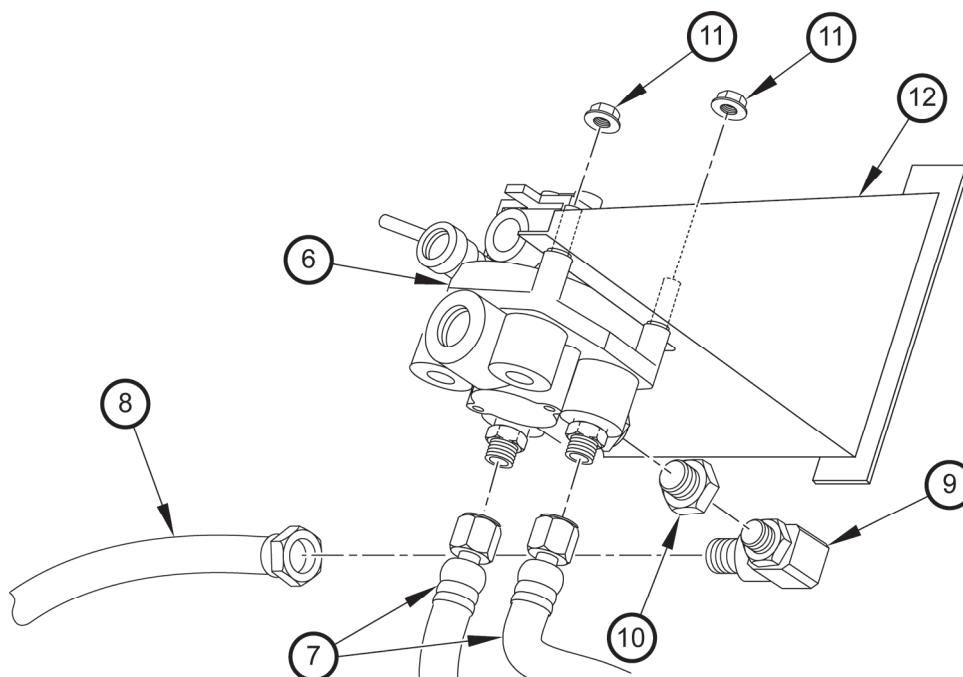
ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued**0075 00****REMOVAL – Continued**

4. Disconnect two hoses (7) from ABS relay valve (6).
5. Disconnect hose (8) from 90-degree fitting (9) on ABS relay valve (6).
6. Remove 90-degree fitting (9) and adapter (10) from ABS relay valve (6).

NOTE

All locknuts are removed the same way. Two locknuts are shown.

7. Remove three locknuts (11) from ABS relay valve (6).
8. Remove ABS relay valve (6) from bracket (12).



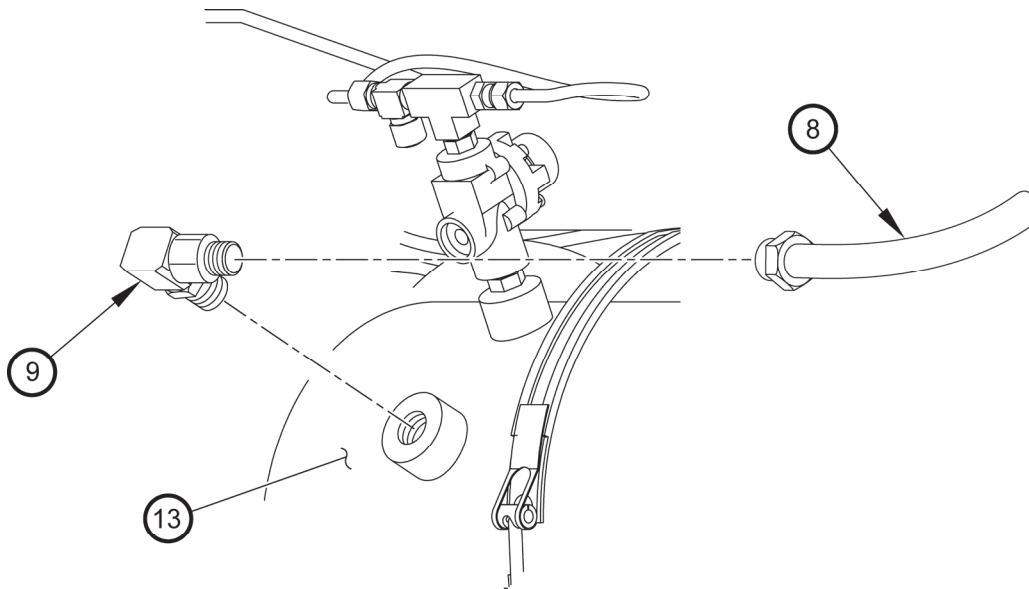
CD075R04

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued

0075 00

REMOVAL – Continued

9. Remove hose (8) from 90-degree fitting (9) on air tank (13).
10. Remove 90-degree fitting (9) from air tank (13).

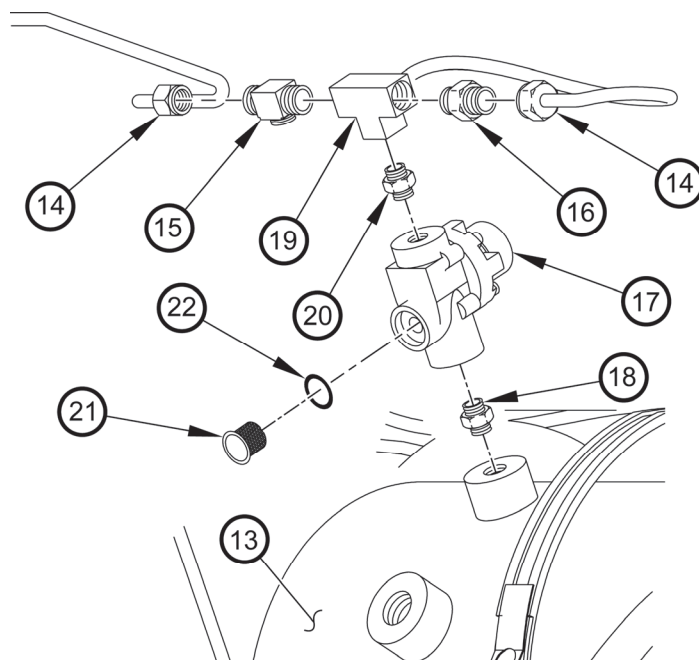


CD075R05

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued**0075 00****REMOVAL – Continued****NOTE**

Perform the following seven steps on front brake protection valve.

11. Disconnect two air hoses (14) from adapters (15 and 16).
12. Remove front brake protection valve (17) from air tank (13).
13. Remove adapter (18) from front brake protection valve (17).
14. Remove adapters (15 and 16) from tee fitting (19).
15. Remove tee fitting (19) from adapter (20).
16. Remove adapter (20) from front brake protection valve (17).
17. Remove air filter (21) and preformed packing (22) from front brake protection valve (17). Discard air filter and preformed packing.

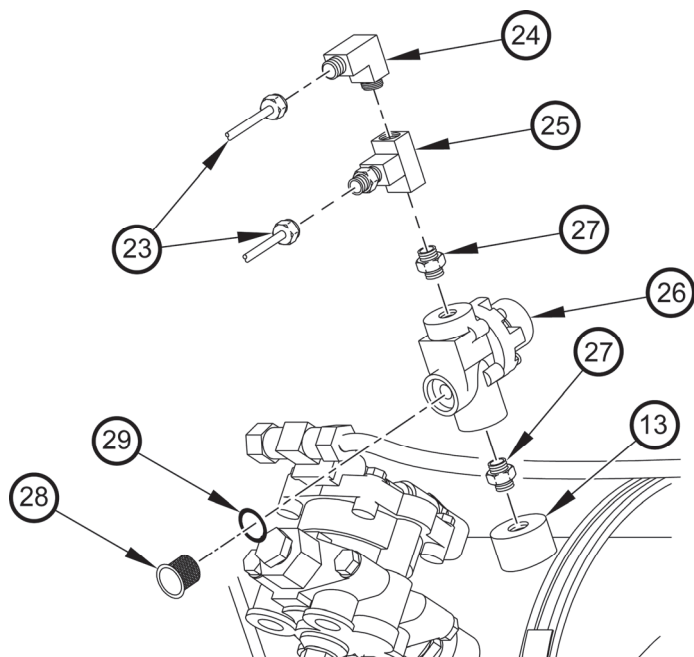


CD075R06

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued**0075 00****REMOVAL – Continued****NOTE**

Perform the following six steps on rear brake protection valve.

18. Disconnect two air hoses (23) from 90-degree fitting (24) and tee fitting (25).
19. Remove rear brake protection valve (26) from air tank (13).
20. Remove 90-degree fitting (24) from tee fitting (25)
21. Remove tee fitting (25) from adapter (27)
22. Remove two adapters (27) from rear brake protection valve (26).
23. Remove air filter (28) and preformed packing (29) from rear brake protection valve (26). Discard air filter and preformed packing.



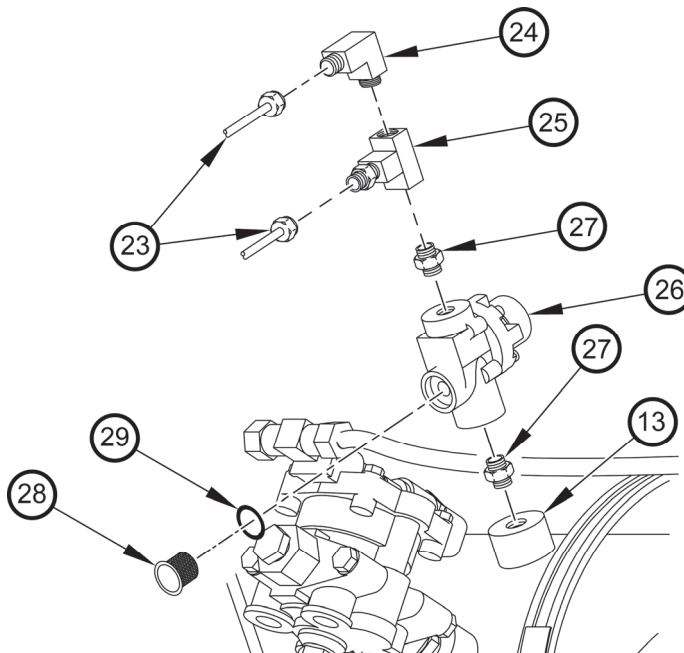
CD075R07

ANTI-LOCK BRAKE SYSTEM (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 (23) and two adapters (27).
 2. Install preformed packing (29) and air filter (28) in rear brake protection valve (26).
 3. Install two adapters (27) in rear brake protection valve (26).
 4. Install tee fitting (25) on adapter (27).
 5. Install 90-degree fitting (24) on tee fitting (25).
 6. Install rear brake protection valve (26) on air tank (13).
 7. Connect two air hoses (23) to 90-degree fitting (24) and tee fitting (25).



CD075R07

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued

0075 00

INSTALLATION – Continued

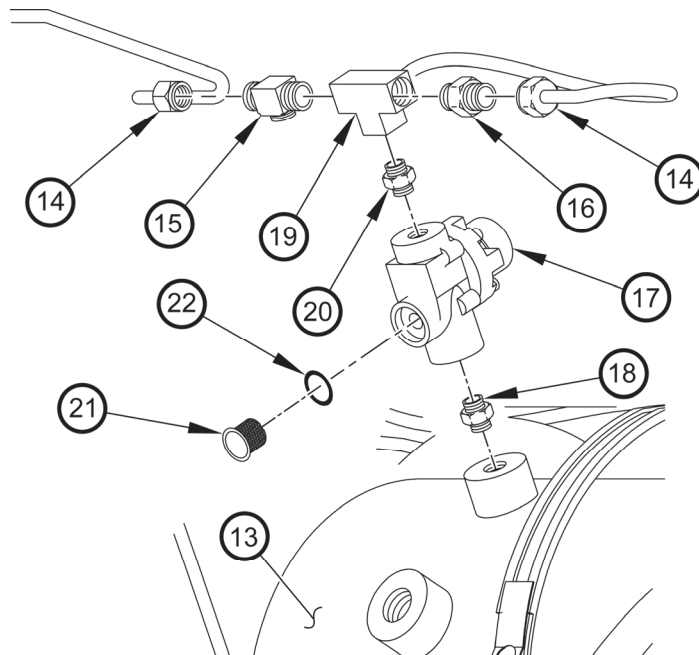
WARNING

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.

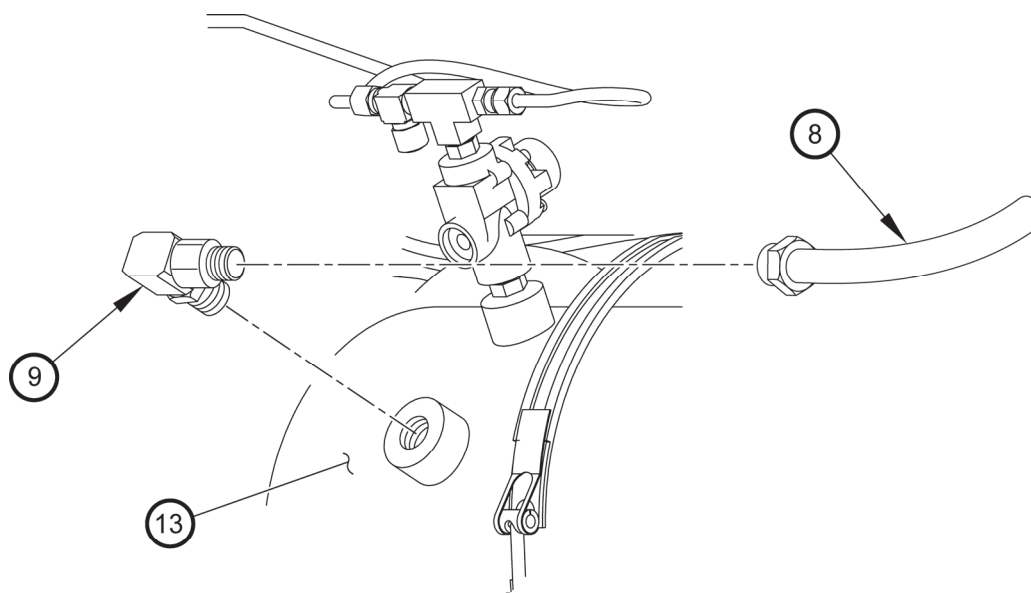
8. Apply sealing compound to threads of adapters (15 and 16), adapter (18), and adapter (20).
9. Install preformed packing (22) and air filter (21) in front brake protection valve (17).
10. Install adapter (20) in front brake protection valve (17).
11. Install tee fitting (19) on adapter (20).
12. Install adapters (15 and 16) in tee fitting (19).
13. Install adapter (18) in front brake protection valve (17).
14. Install front brake protection valve (17) on air tank (13).
15. Connect two air hoses (14) to adapters (15 and 16).



**ANTI-LOCK BRAKE SYSTEM (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 90-degree fitting (9).
17. Install 90-degree fitting (9) on air tank (13).
18. Connect hose (8) to 90-degree fitting (9).



CD075R05

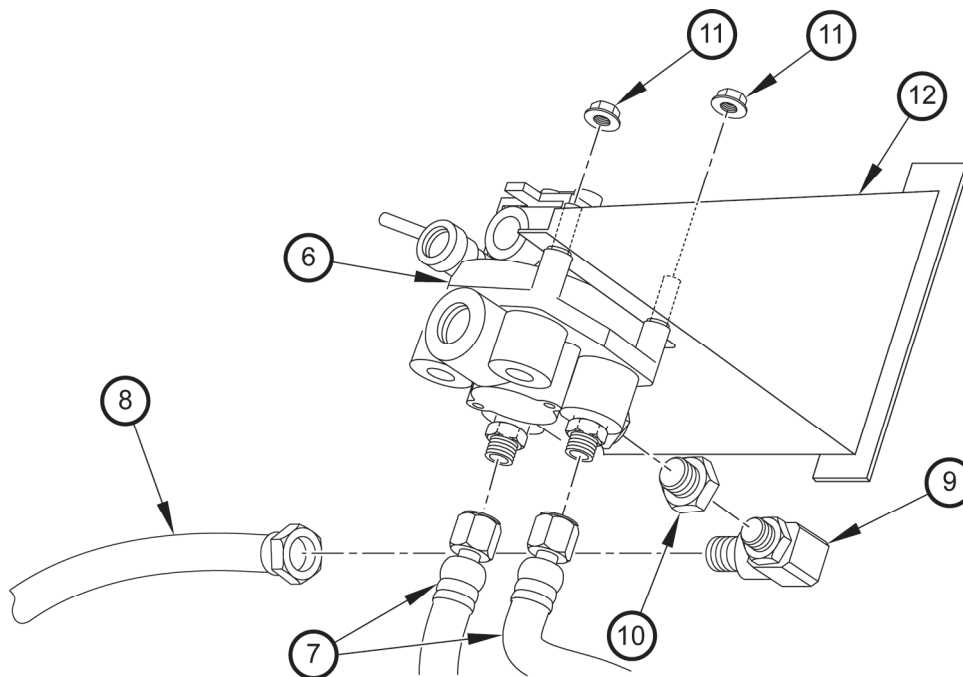
ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued**0075 00****INSTALLATION – Continued****WARNING**

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

All locknuts are installed the same way. Two locknuts are shown.

19. Install ABS relay valve (6) on bracket (12) with three locknuts (11).
20. Apply sealing compound to threads of adapter (10) and 90-degree fitting (9).
21. Install adapter (10) and 90-degree fitting (9) on ABS relay valve (6).
22. Connect hose (8) to 90-degree fitting (9).
23. Connect two hoses (7) to ABS relay valve (6).

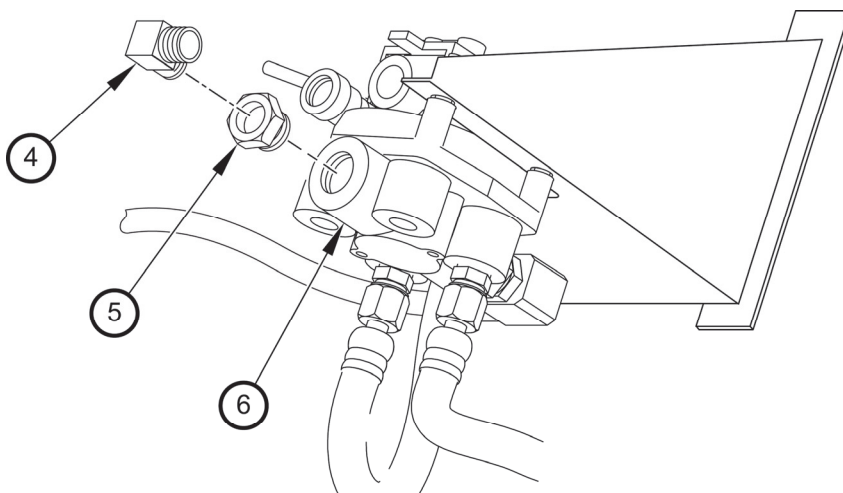


CD075R04

**ANTI-LOCK BRAKE SYSTEM (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.

24. Apply sealing compound to threads of adapters (5) and 90-degree fittings (4).
25. Install adapters (5) and 90-degree fittings (4) on ABS relay valve (6).



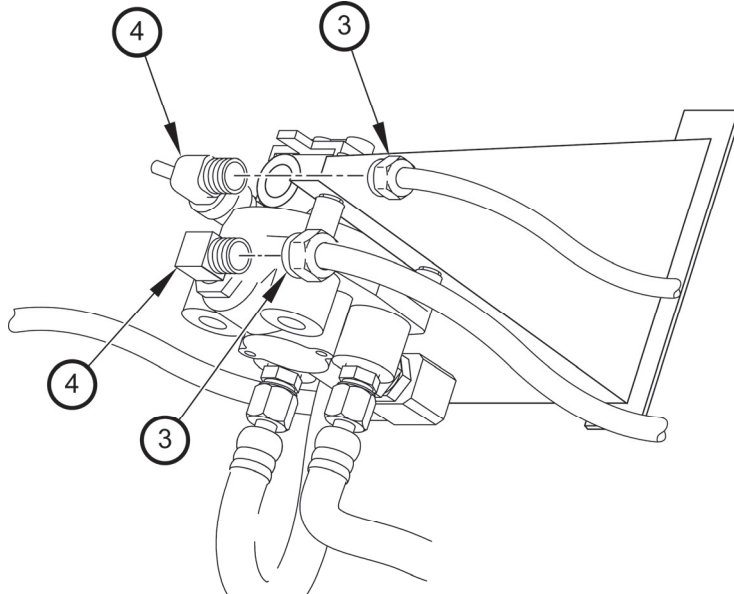
CD075R03

ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT – Continued

0075 00

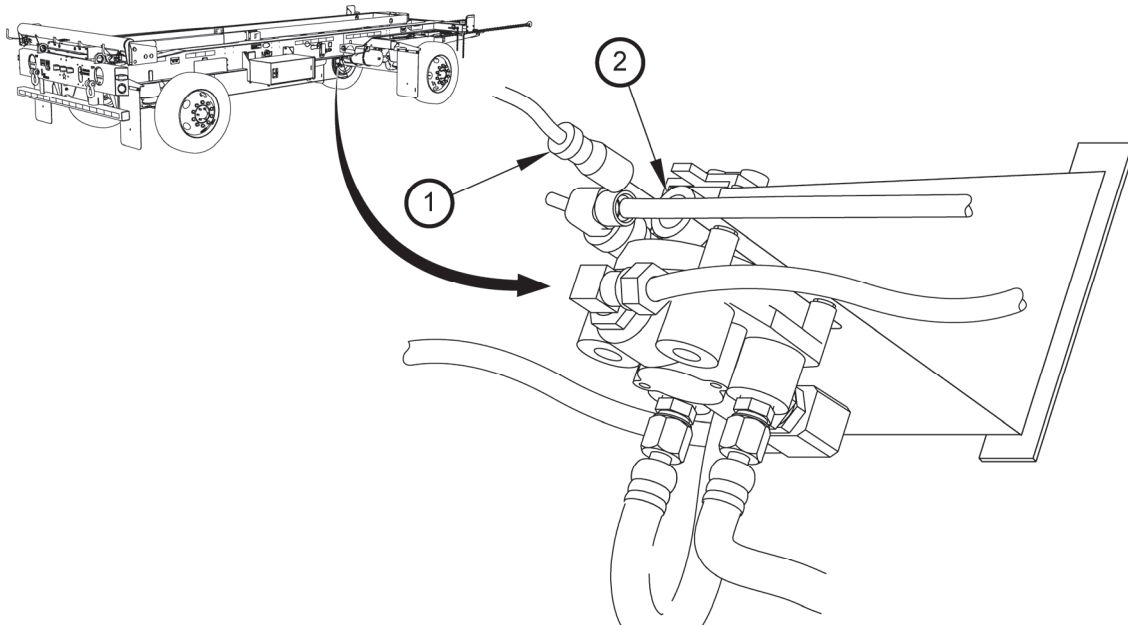
INSTALLATION – Continued

26. Connect two air hoses (3) to 90-degree fittings (4).



CD075R02

27. Connect ABC ECU connector (1) to relay valve cable connector (2).



CD075R01

**ANTI-LOCK BRAKE SYSTEM (ABS) RELAY VALVE AND BRAKE
PROTECTION VALVE REPLACEMENT – Continued**

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

Materials/Parts

Seal, Grease (2) (Item 51, WP 0168 00)

Washer, Lock (4) (Item 6, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 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.

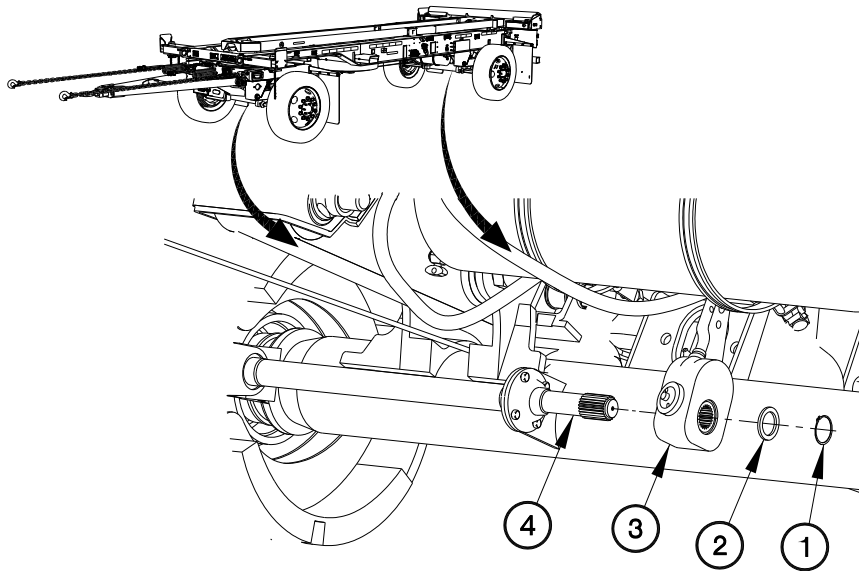
WARNING

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

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).



CD076R01

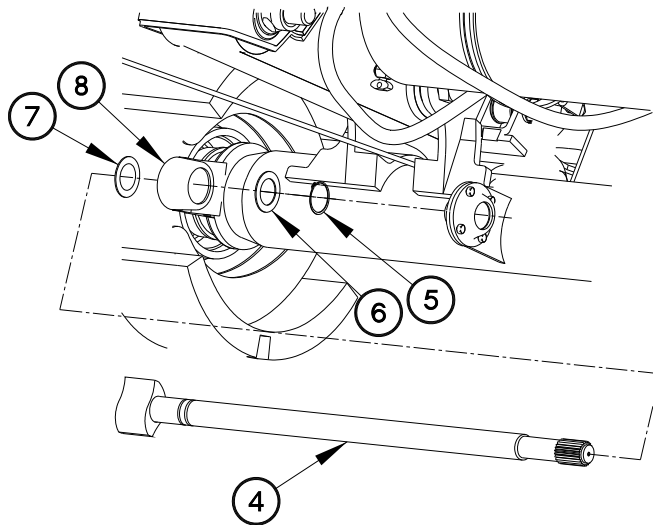
AIR BRAKE ARM REPLACEMENT - Continued**0076 00****REMOVAL - Continued**

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).



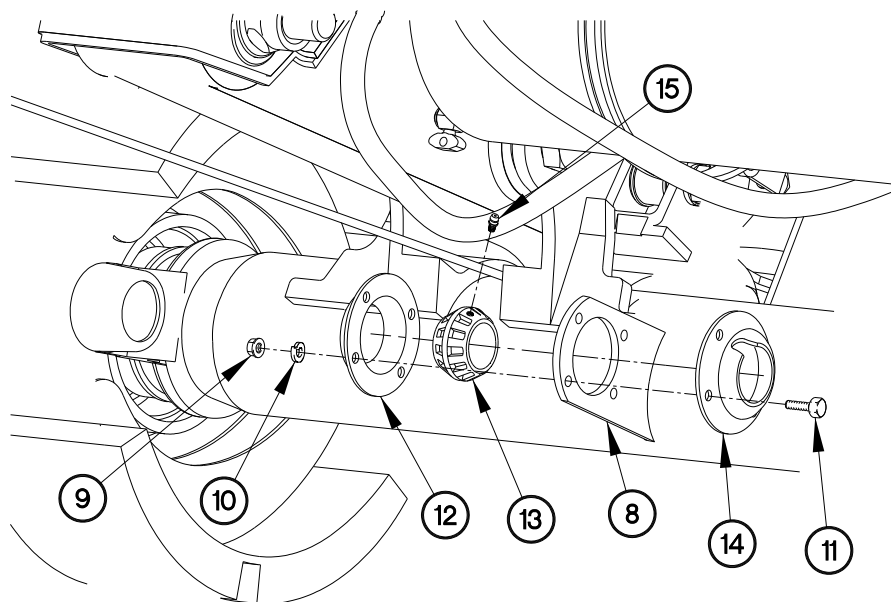
CD076R02

AIR BRAKE ARM REPLACEMENT - Continued

0076 00

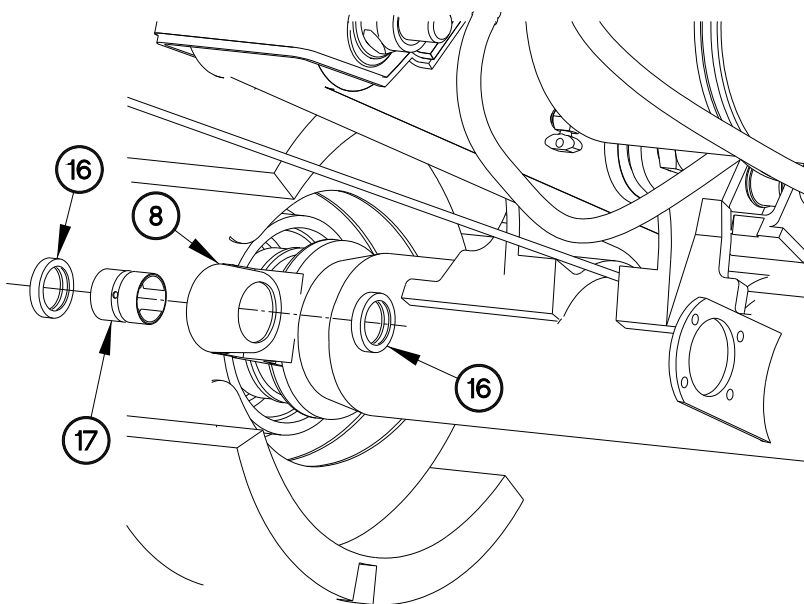
REMOVAL - Continued

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).



CD076R03

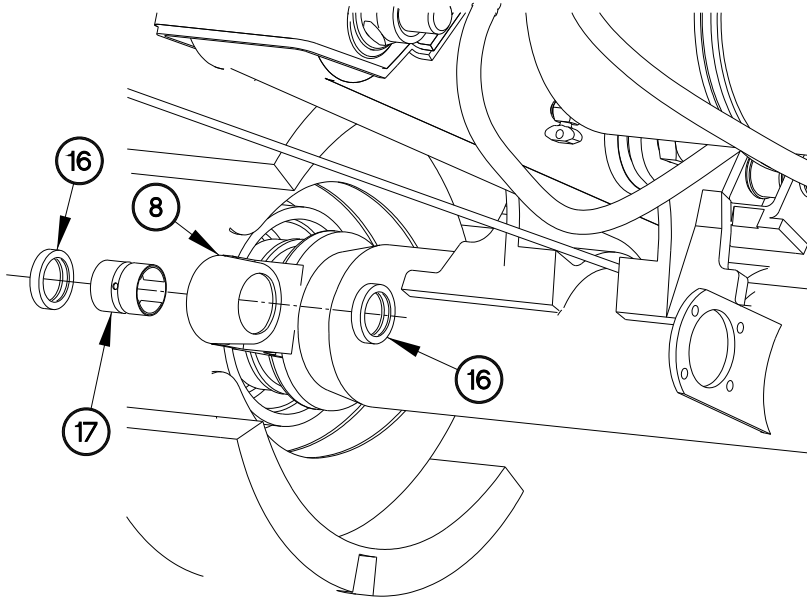
6. Remove two seals (16) and bushing (17) from axle (8). Discard seals.



CD076R04

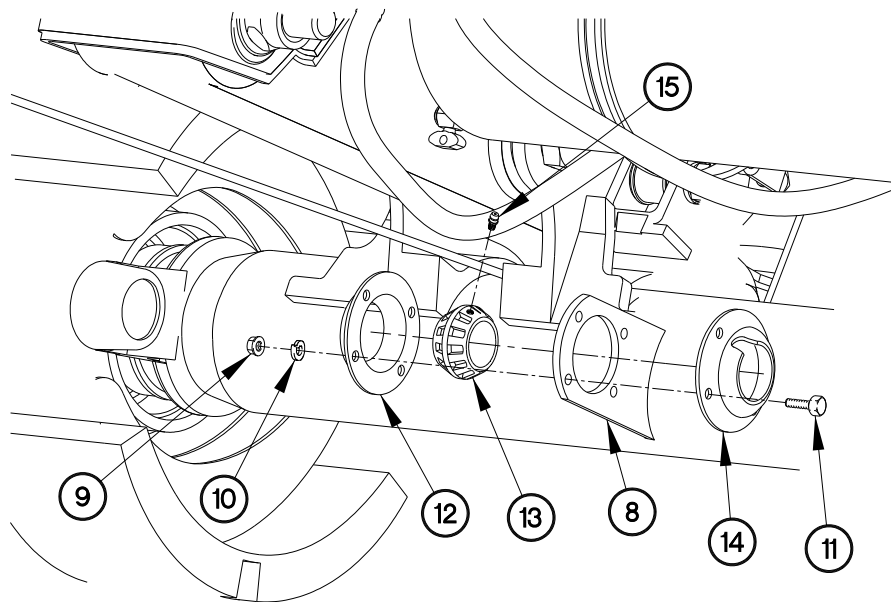
INSTALLATION

1. Install bushing (17) and two seals (16) on axle (8).



CD076R04

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).

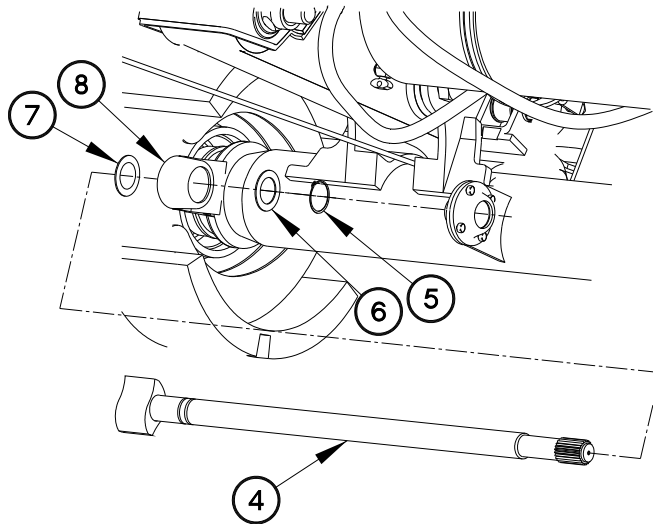


CD076R03

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).

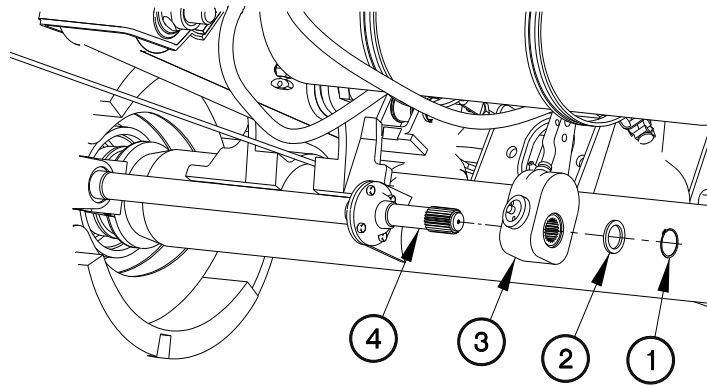


CD076R02

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).



CD076101

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 BRAKE 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 24, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35, WP
0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)

Materials/Parts (Cont)

Ties, Cable, Plastic (Item 19, 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)

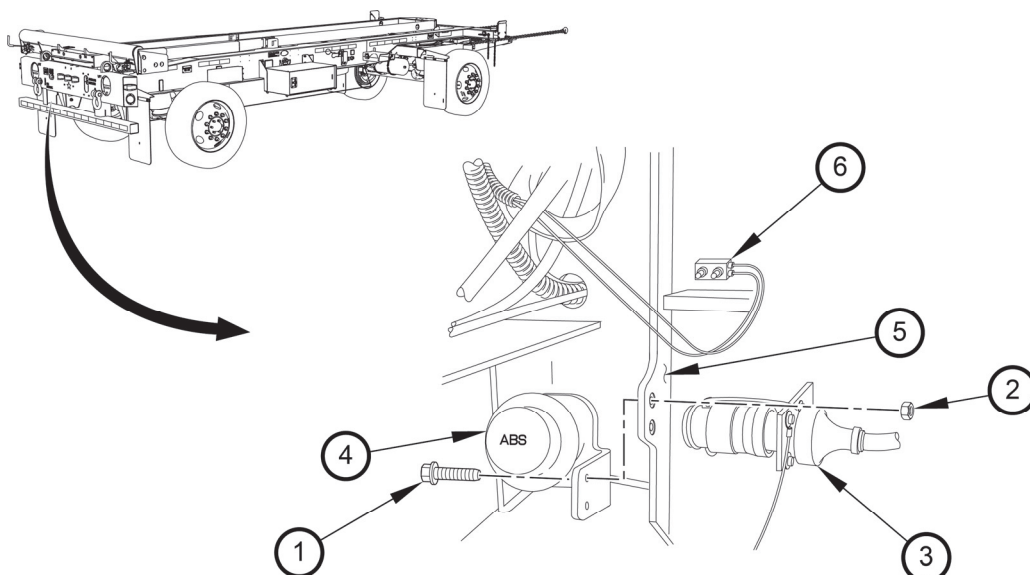
GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) Anti-Lock Brake System (ABS) diagnostic light assembly.

**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT ASSEMBLY REPLACEMENT - Continued****0077 00****REMOVAL****NOTE**

Remove plastic cable ties as required.

1. Remove two self-locking nuts (2), bolts (1), 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 terminal plug 1041 (6) from ABS diagnostic light (4).

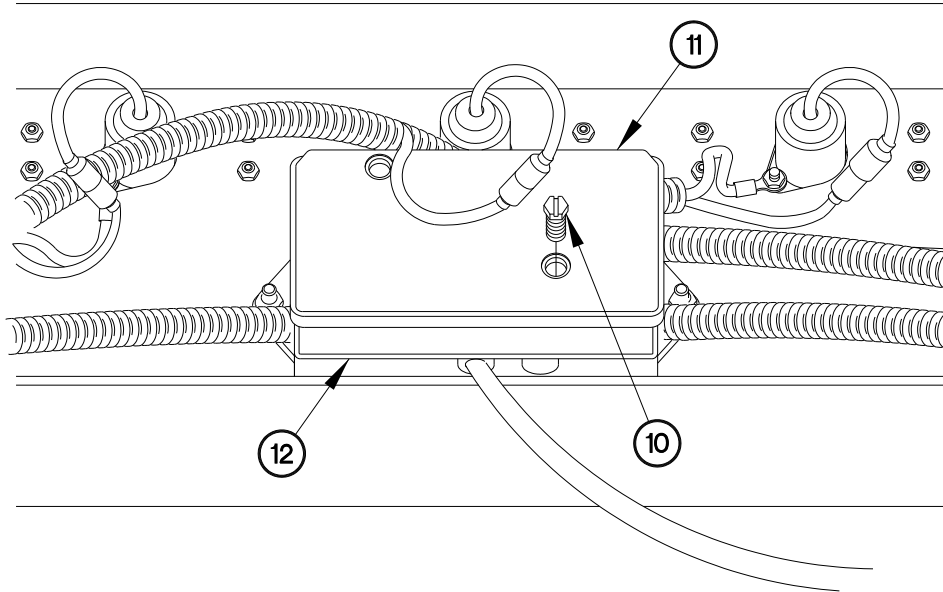


D052321

**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT ASSEMBLY REPLACEMENT - Continued**

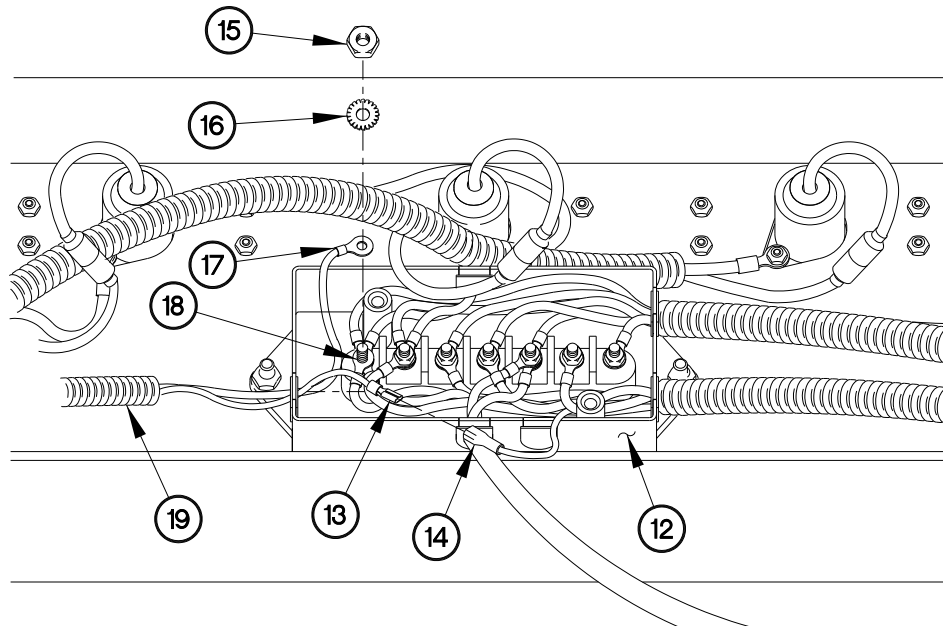
REMOVAL - Continued

3. Remove two bolts (10) and cover (11) from junction box (12).



CD077R02

4. Disconnect terminal lug TL611 (13) from ABS power and diagnostic cable lead (14).
5. Remove nut (15), lockwasher (16), and terminal lug TL609 (17) from junction box terminal stud 1 GND (18). Discard lockwasher.
6. Remove ABS diagnostic light cable assembly (19) from junction box (12).

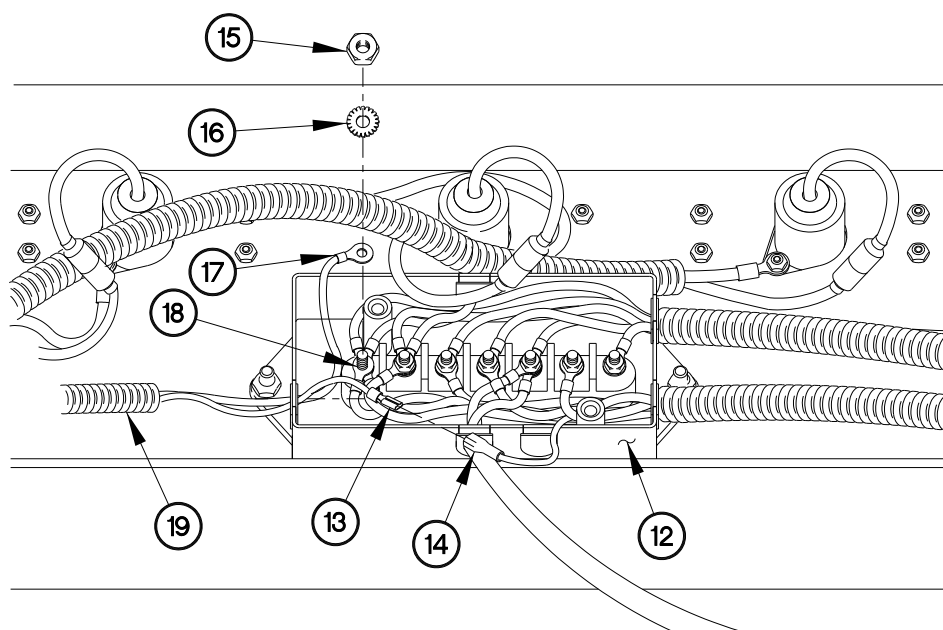


CD077R03

**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT ASSEMBLY REPLACEMENT - Continued****0077 00****INSTALLATION****NOTE**

Install plastic cable ties as required.

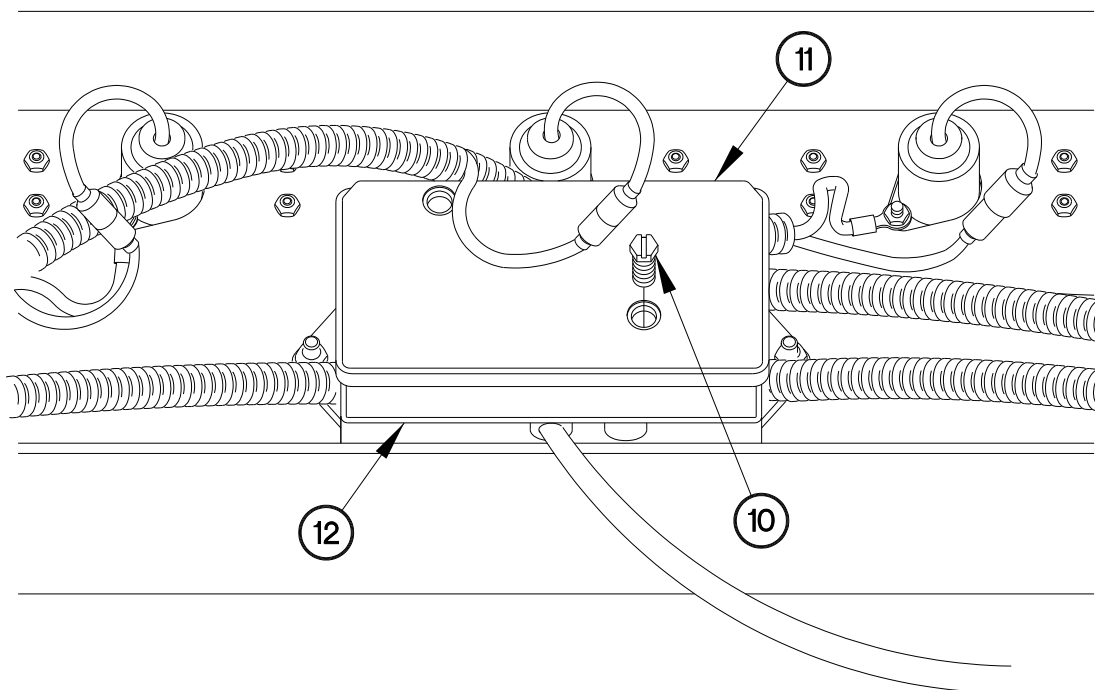
1. Position ABS diagnostic cable assembly (19) in junction box (12).
- 2. Install terminal lug TL609 (17) on junction box terminal stud 1 GND (18) with lockwasher (16) and nut (15).
3. Connect terminal lug TL611 (13) to ABS power and diagnostic cable lead (14).



CD077R03

**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT ASSEMBLY REPLACEMENT - Continued****0077 00****INSTALLATION - Continued**

4. Install cover (11) on junction box (12) with two bolts (10).



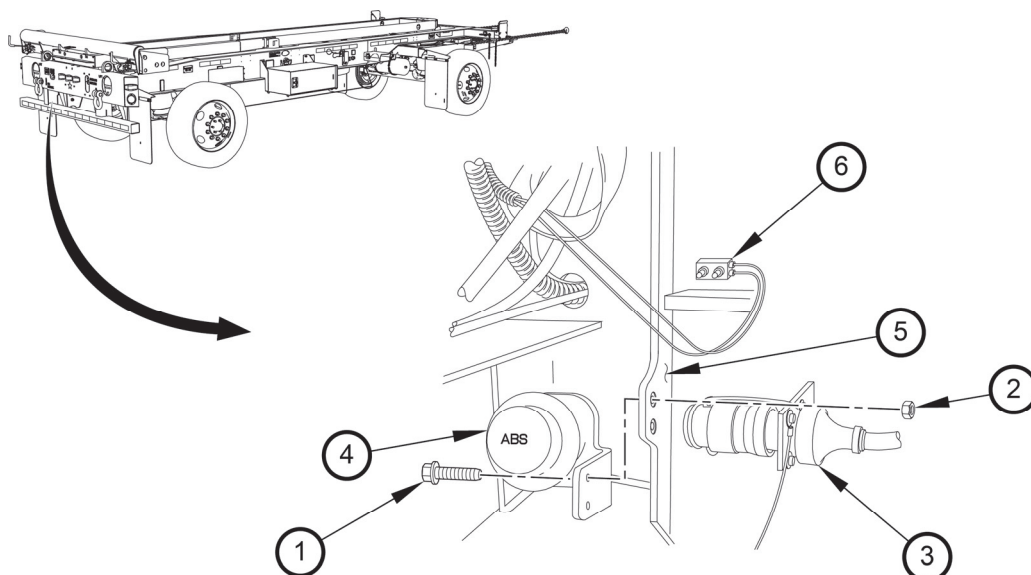
CD077R02

ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT ASSEMBLY REPLACEMENT - Continued

0077 00

INSTALLATION - Continued

5. Connect bullet connector terminal lug P1041 (6) to ABS diagnostic light (4).
6. Position ABS diagnostic light (4) and ABS power and diagnostic cable and tool (3) on rear panel assembly (5) with two bolts (1) and self-locking nuts (2).
7. Tighten two self-locking nuts (2) to 60-84 lb-in. (7-9 N·m).



D052321

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

Materials/Parts

Sealing Compound (Item 14, WP 0165 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 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.

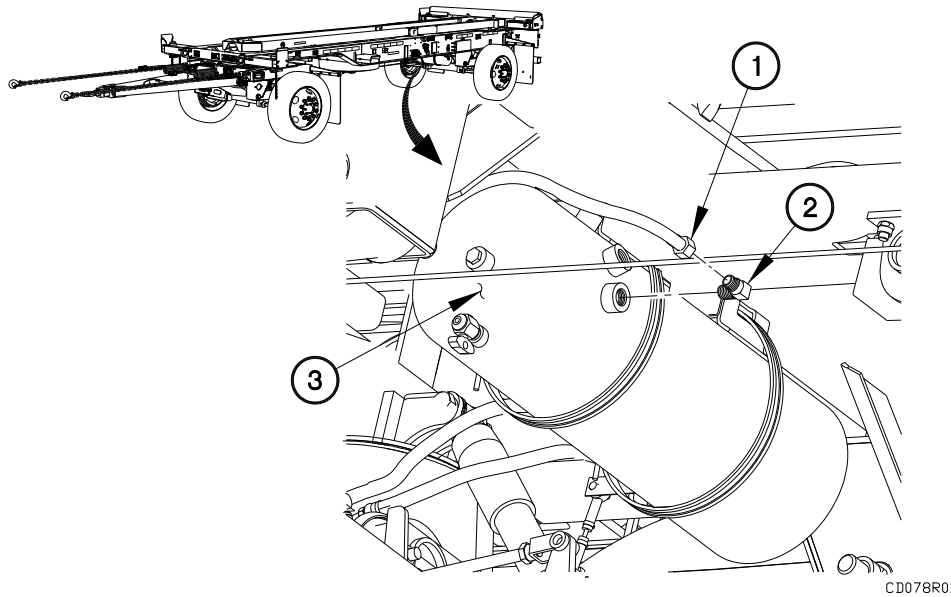
WARNING

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**

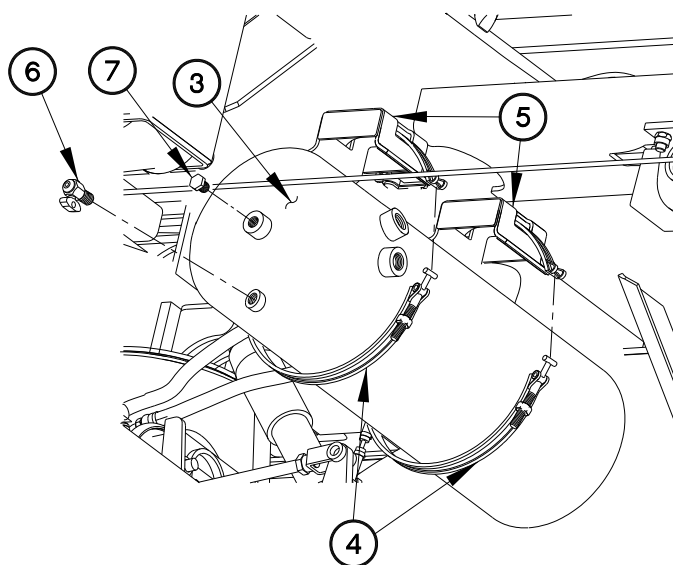
Perform the following two steps on rear air tank.

1. Disconnect hose (1) from fitting (2).
2. Remove 90-degree fitting (2) from air tank (3).



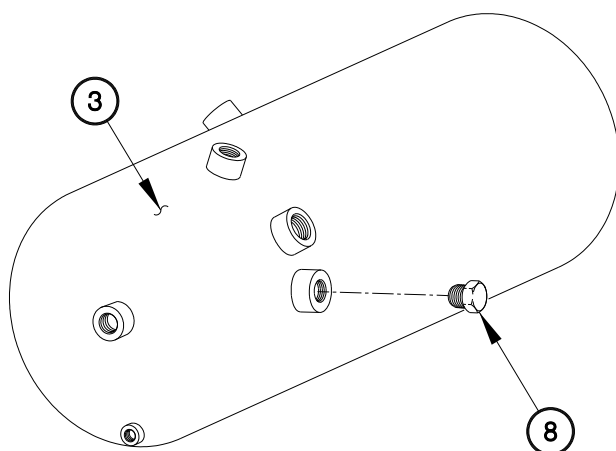
REMOVAL-Continued

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).



C.D078R02

6. Remove plug (8) from air tank (3).

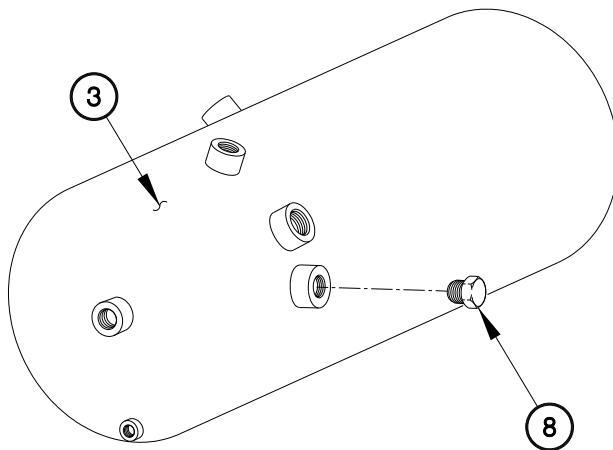


C.D078R03

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).

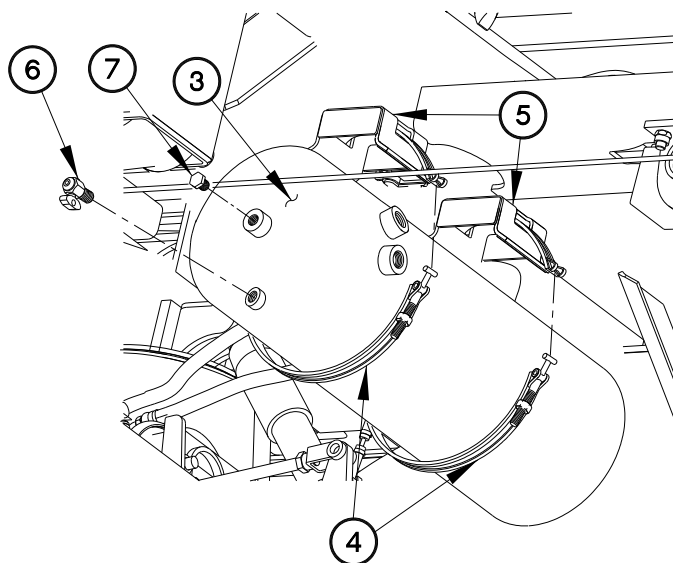


C.D078R03

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

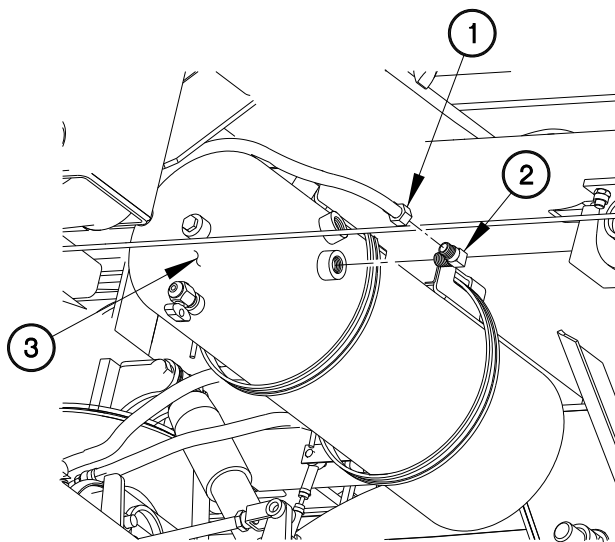
INSTALLATION-Continued**WARNING**

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).



CD078101

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.
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

Materials/Parts

Sealing Compound (Item 14, WP 0165 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 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

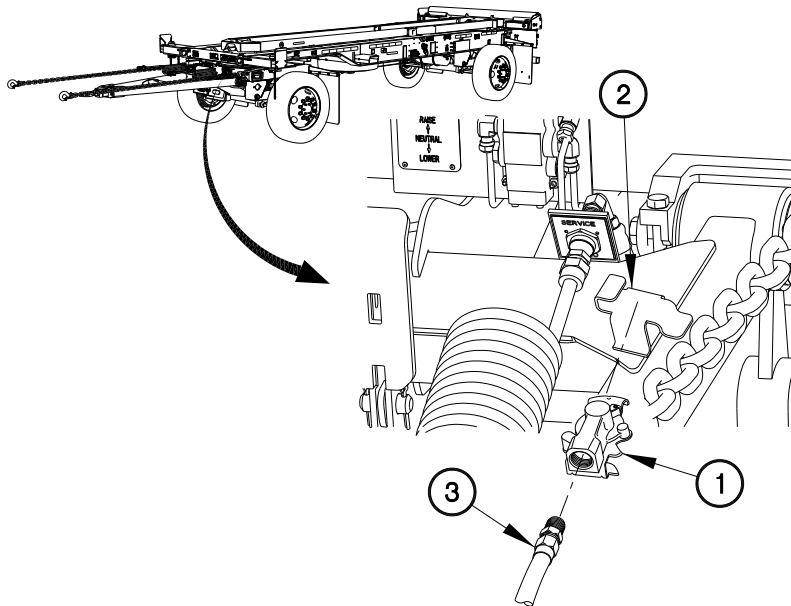
WARNING

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 is shown.

1. Remove SERVICE gladhand (1) from bracket (2).
2. Remove SERVICE gladhand (1) from SERVICE gladhand hose (3).

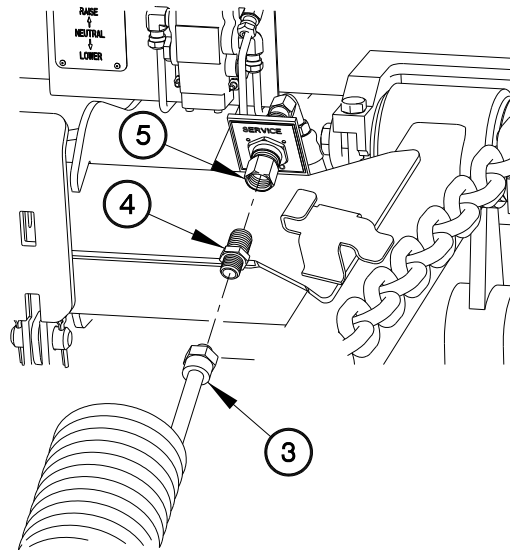


CD079R01

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).

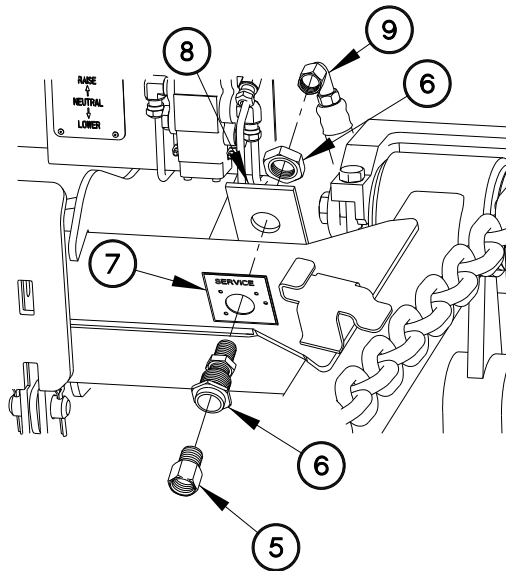


C.D079R02

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).



C.D079R03

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

INSTALLATION

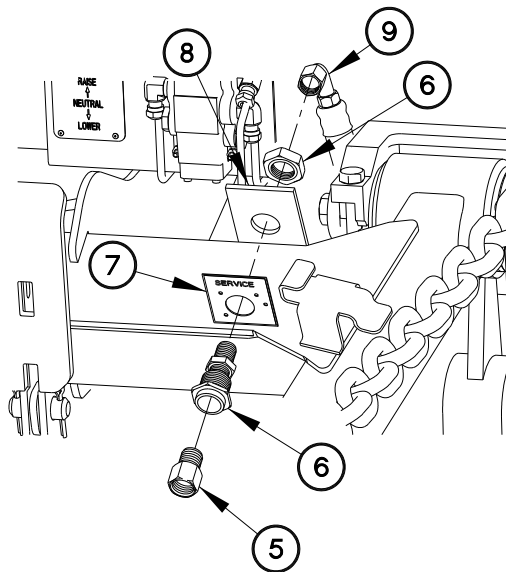
WARNING

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 is 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).

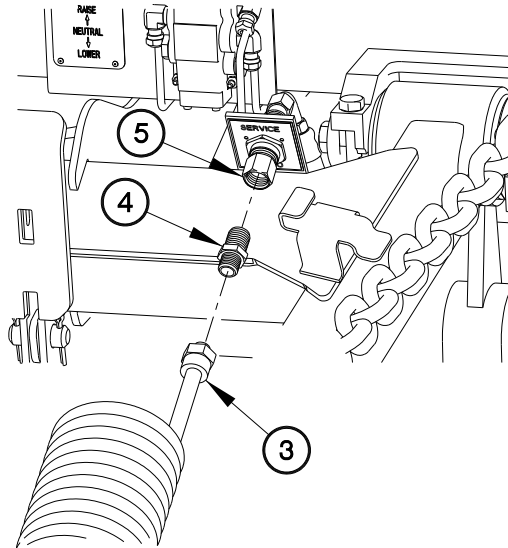


CD079R03

EMERGENCY/SERVICE GLADHAND HOSE REPLACEMENT - Continued 0079 00

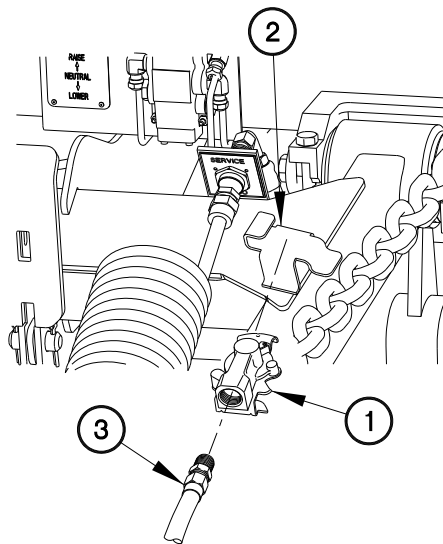
INSTALLATION-Continued

5. Install adapter (4) in coupling (5).
6. Connect SERVICE gladhand hose (3) to adapter (4).



C.D079R02

7. Install SERVICE gladhand hose (3) in SERVICE gladhand (1).
8. Install SERVICE gladhand (1) in bracket (2).



CD079101

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 gladhands (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 24, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35,
WP 0167 00)

Materials/Parts (Cont)

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)
Sealing Compound (Item 14, 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

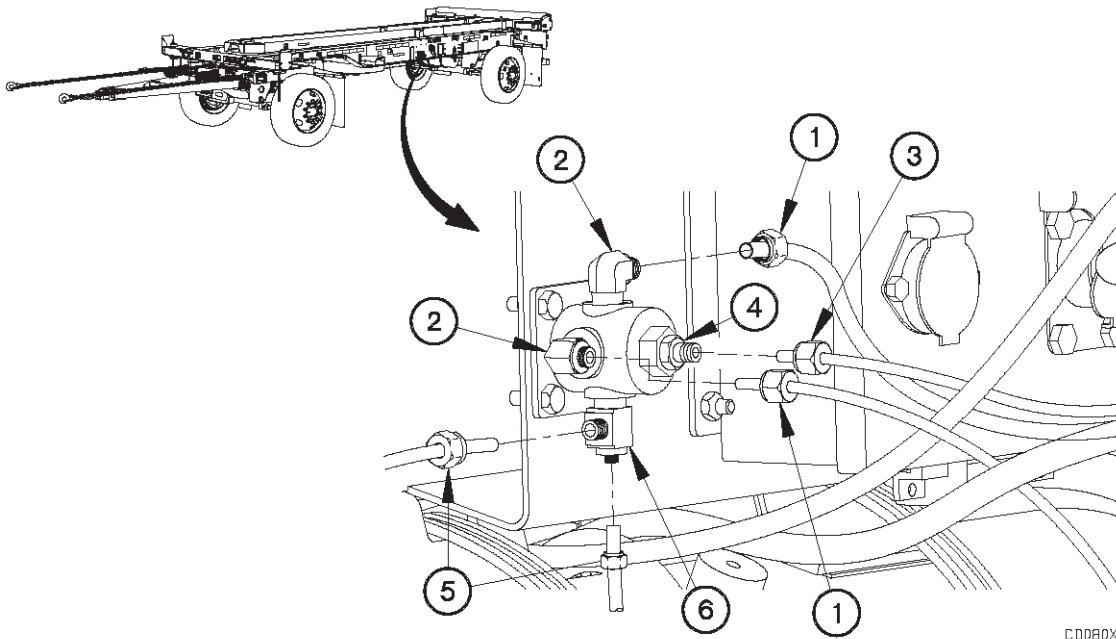
- **Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.**
- **Vent air system before disconnecting air lines. Pressurized air can blow dirt and debris with sufficient force to cause injury. Safety goggles must be worn when working with compressed air. Failure to comply may result in injury to personnel.**

REMOVAL

NOTE

Tag air hoses and connection points prior to disconnecting.

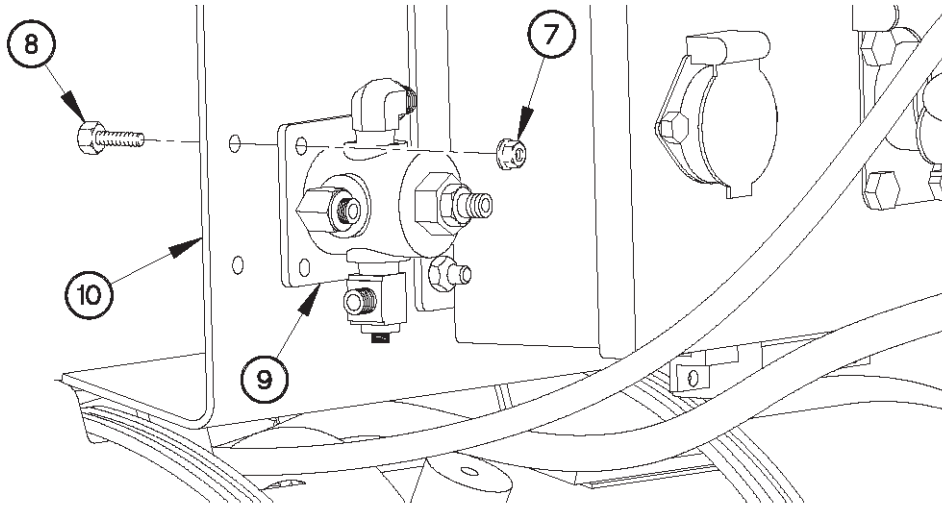
1. Drain air tanks.
2. Disconnect two hoses (1) from 90-degree fittings (2).
3. Disconnect hose (3) from fitting (4).
4. Disconnect two hoses (5) from tee-fitting (6).



CDD80X01

REMOVAL - Continued

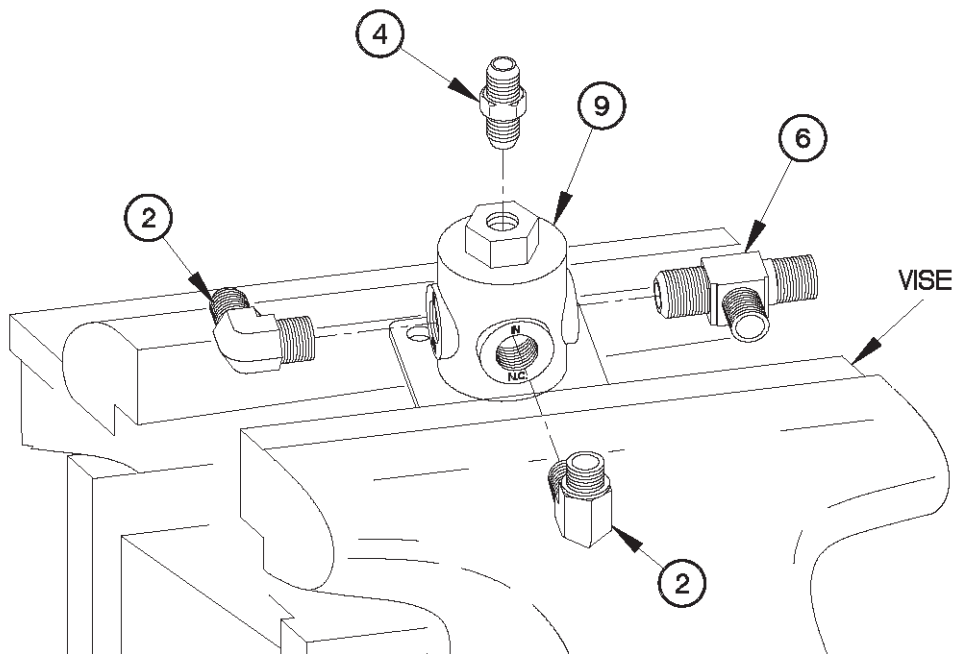
5. Remove four self-locking nuts (7), bolts (8), and air ride control valve (9) from bracket (10). Discard self-locking nuts.



CD080R02

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).

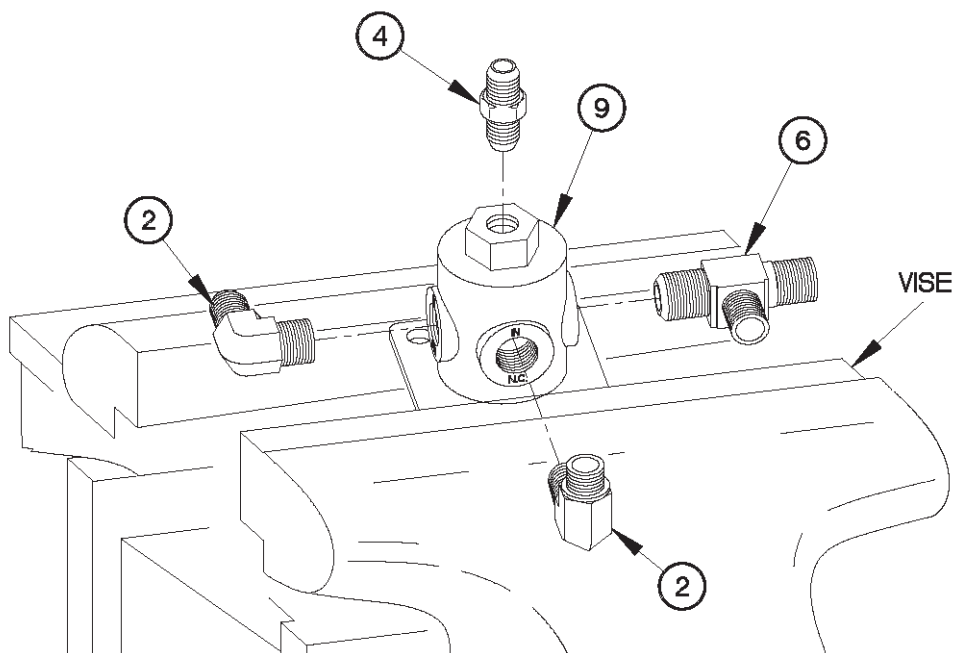


CD080R03

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 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.

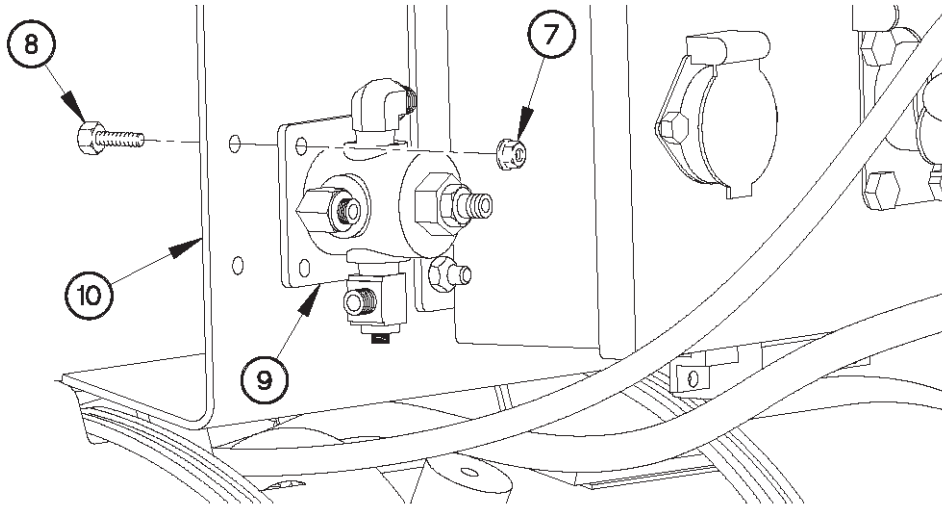
1. Apply sealing compound to threads of tee-fitting (6), fitting (4), and two 90-degree fittings (2).
2. Place air ride control valve (9) in a vise.
3. Install tee-fitting (6) on air ride control valve (9).
4. Install fitting (4) on air ride control valve (9).
5. Install two 90-degree fittings (2) on air ride control valve (9).



CD080R03

INSTALLATION - Continued

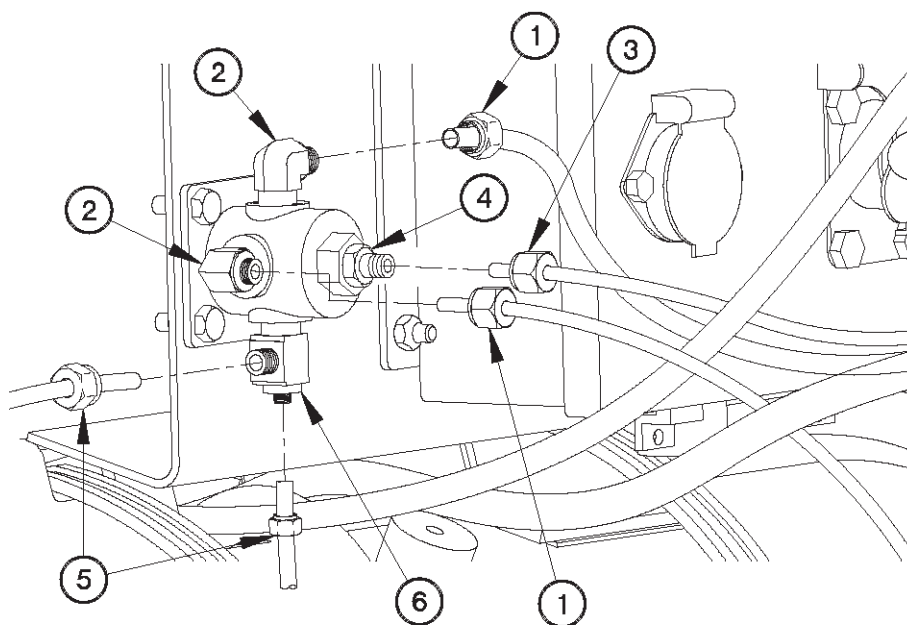
6. Position air ride control valve (9) on bracket (10) with four bolts (8) and self-locking nuts (7).
7. Tighten self-locking nuts (7) to 96-120 lb-in. (11-13 N·m).



CD080R02

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).



C0080R01

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 AIR CHAMBER REPLACEMENT

0081 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts (Cont)

Pin, Cotter (Item 41, WP 0168 00)

Pin, Cotter (Item 43, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 00 0167)

Goggles, Industrial (Item 8, WP 0167 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24,

TM 2320-392-10-1)

Spring brakes caged (WP 0055 00)

Materials/Parts

Washer, Lock (2) (Item 18, WP 0168 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 is shown.

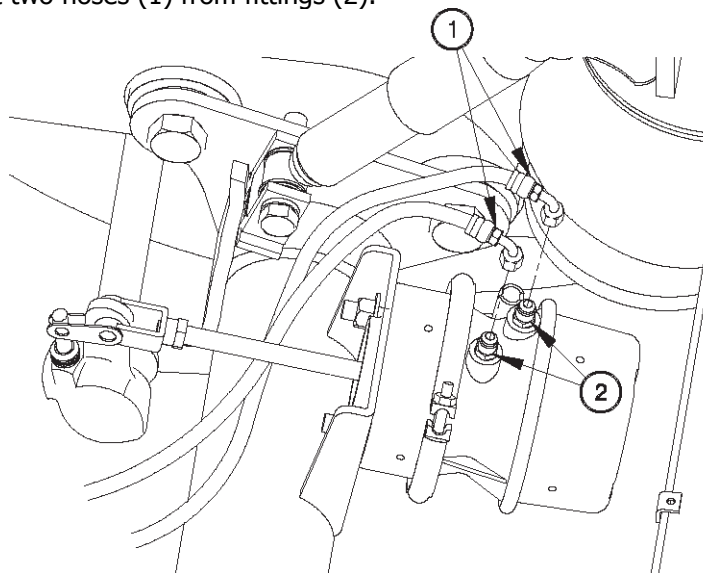
REMOVAL

1. Drain air tanks.

NOTE

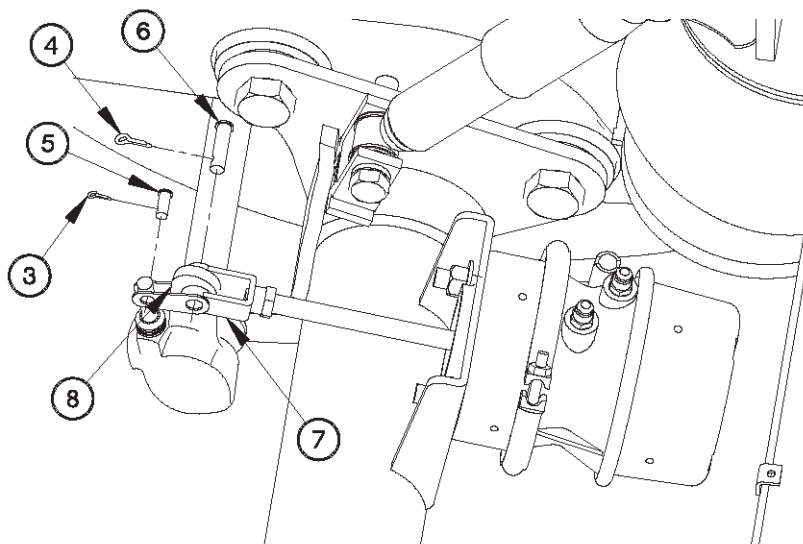
Tag hoses and connection points prior to removal.

2. Disconnect two hoses (1) from fittings (2).



CD081R01

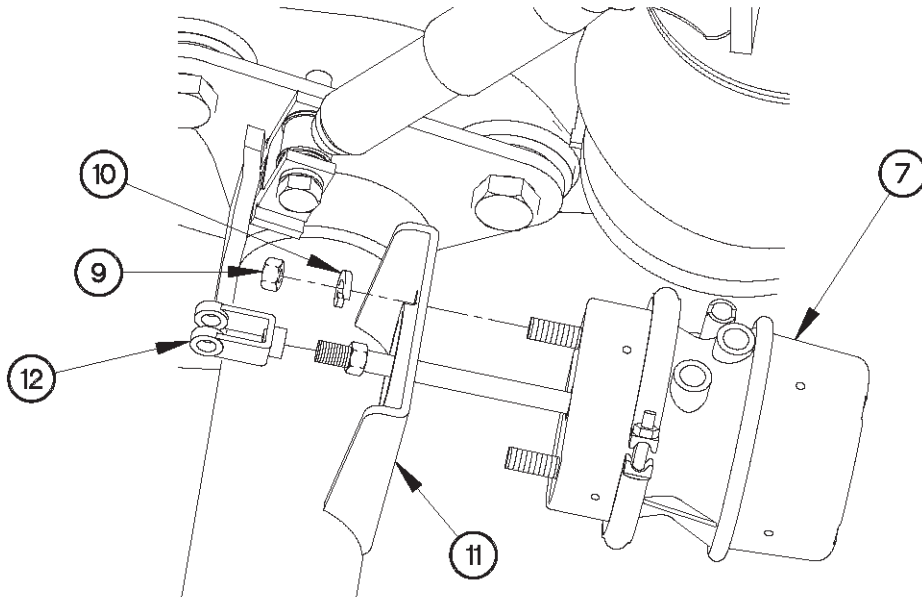
3. Remove cotter pins (3 and 4) from clevis pins (5 and 6). Discard cotter pins.
4. Remove clevis pins (5 and 6) from air brake chamber (7) and slack adjuster (8).



CD081R02

REMOVAL - Continued

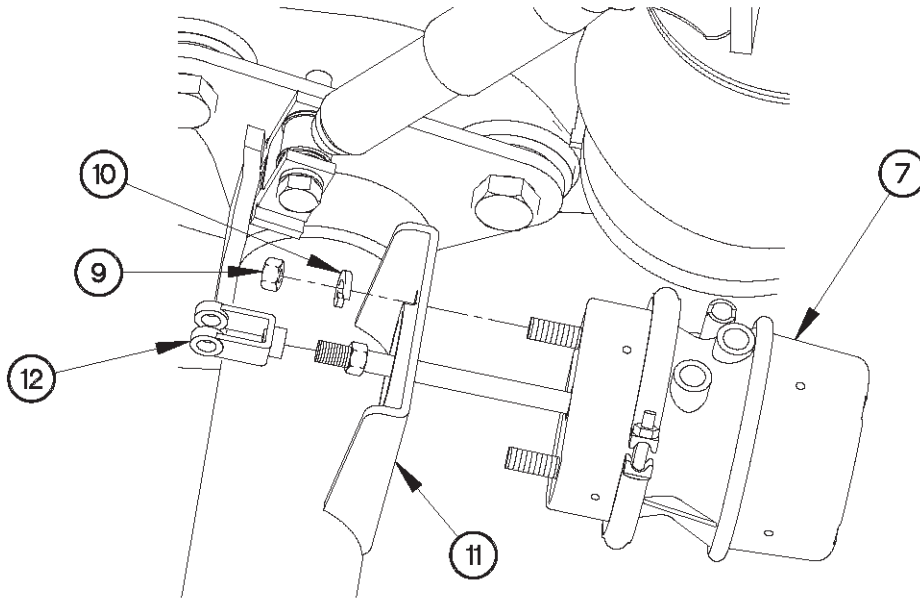
5. Remove two nuts (9), lockwashers (10), and air brake chamber (7) from axle (11). Discard lockwashers.
6. Remove clevis (12) from air brake chamber (7).



CD081R03

INSTALLATION

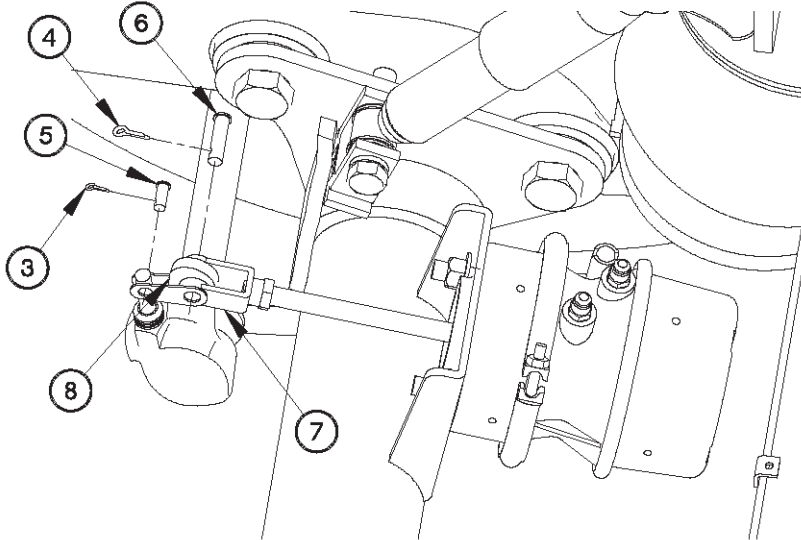
1. Install clevis (12) on air brake chamber (7).
2. Install air brake chamber (7) on axle (11) with two lockwashers (10) and nuts (9).



CD081R03

INSTALLATION - Continued

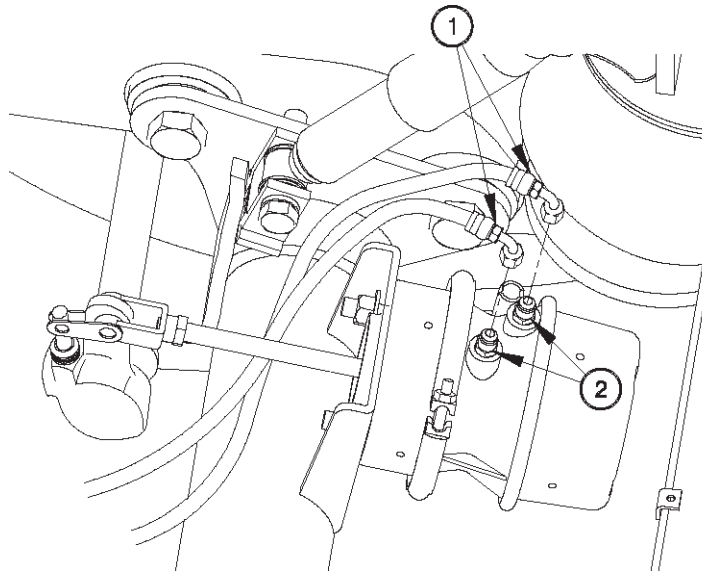
3. Install air brake chamber (7) on slack adjuster (8) with clevis pins (5 and 6).
4. Install cotter pins (3 and 4) on clevis pins (5 and 6).



CD061R02

INSTALLATION - Continued

5. Connect two hoses (1) to fittings (2).



CD081R01

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

Materials/Parts (Cont)

Sealing Compound (Item 2, WP 0165 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 00 0167)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque 0-200 lb-in. (Item 35, WP 0167 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)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) breather valve.

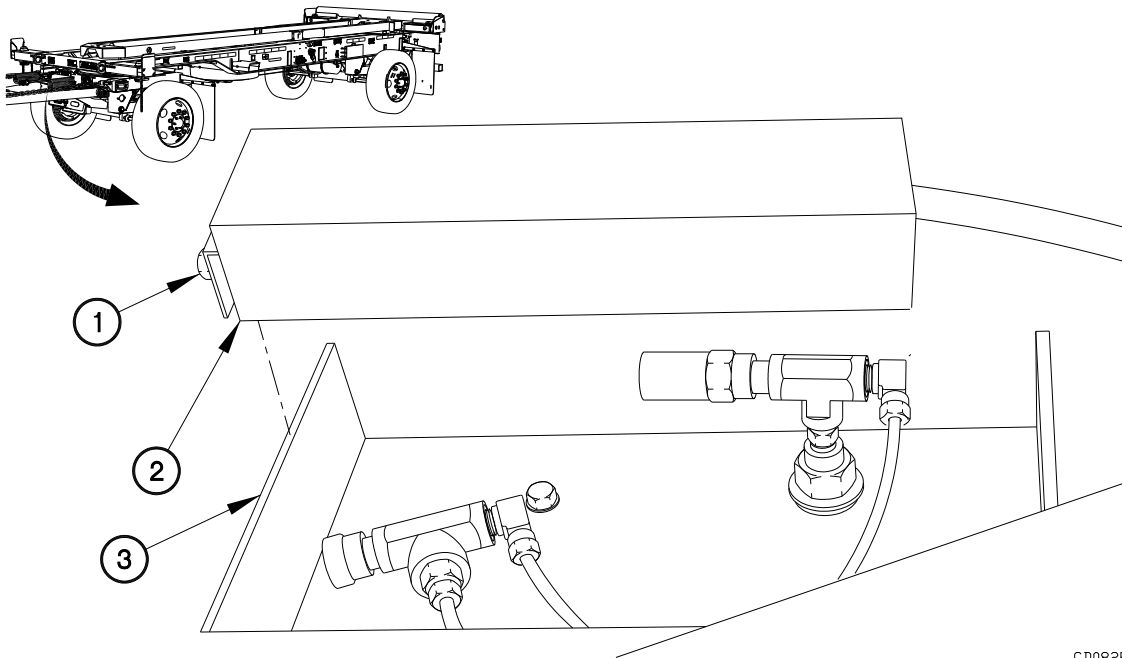
WARNING

- **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.**

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).

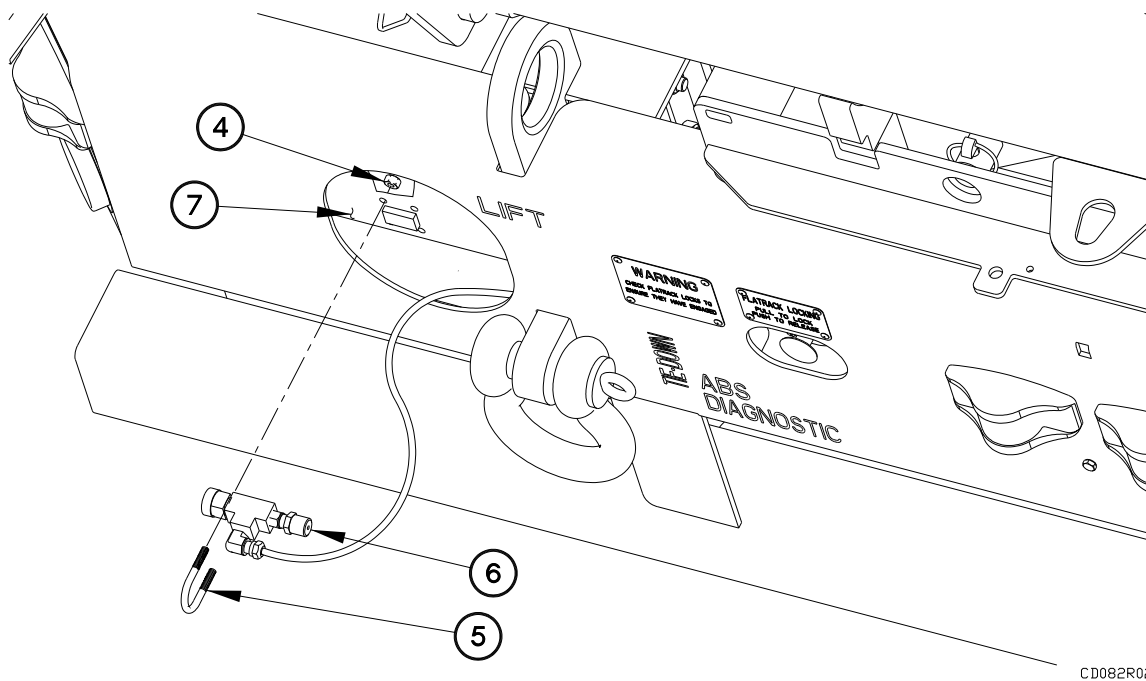


CD082R01

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.

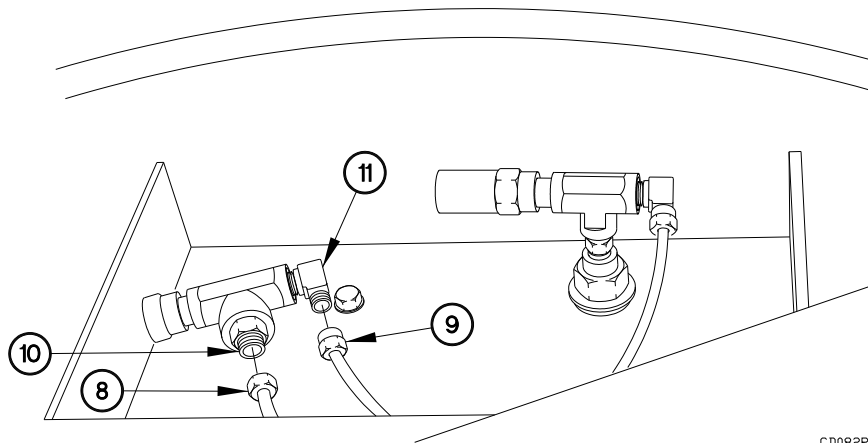


REMOVAL - Continued

NOTE

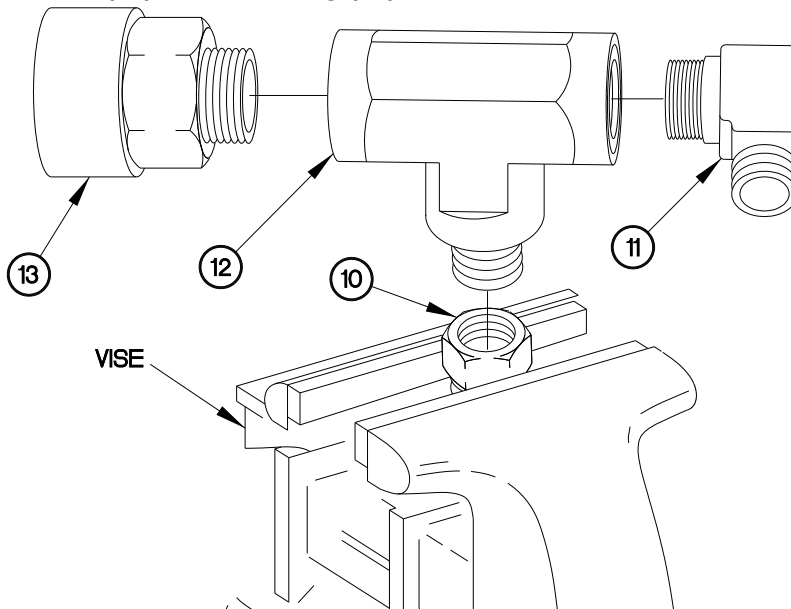
Tag hoses and connection points prior to disconnecting.

4. Disconnect hoses (8 and 9) from adapter (10) and 90-degree fitting (11).



CD082R03

5. Remove adapter (10) and 90-degree fitting (11) from tee fitting (12).
6. Remove breather valve (13) from tee fitting (12).

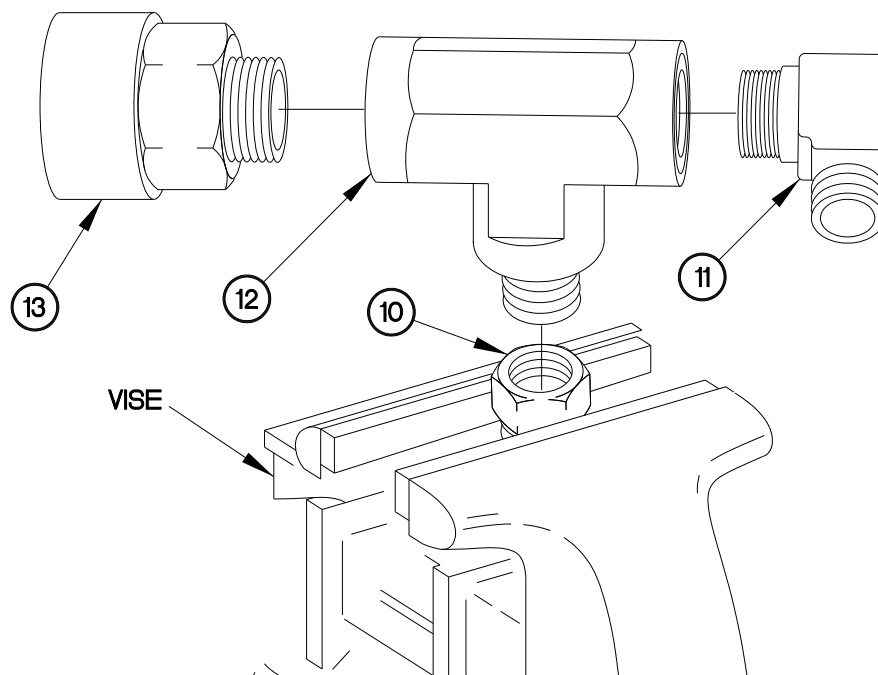


CD082R04

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.

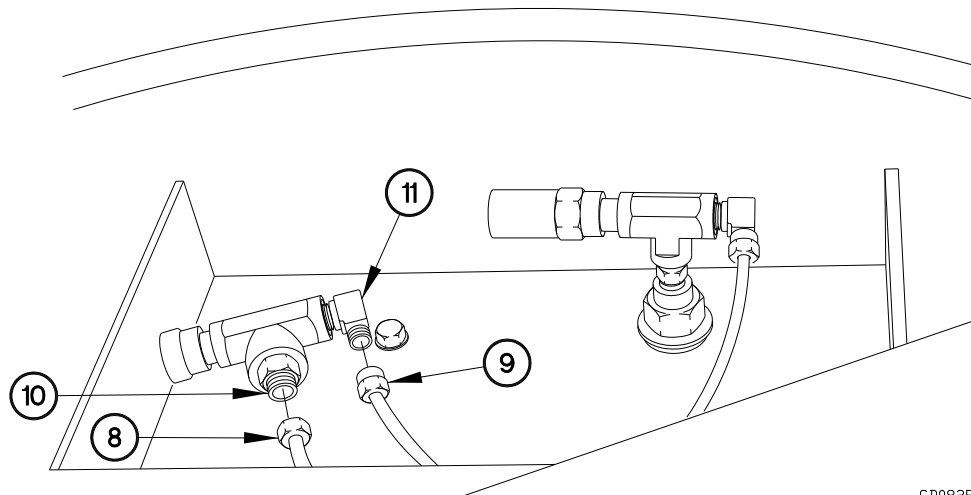
1. Apply sealing compound to threads of adapter (10), 90-degree fitting (11), and breather valve (13).
2. Install breather valve (13) in tee fitting (12).
3. Install adapter (10) and 90-degree fitting (11) in tee fitting (12).



CD082R04

INSTALLATION – Continued

7. Connect hoses (8 and 9) to adapter (10) and 90-degree fitting (11).

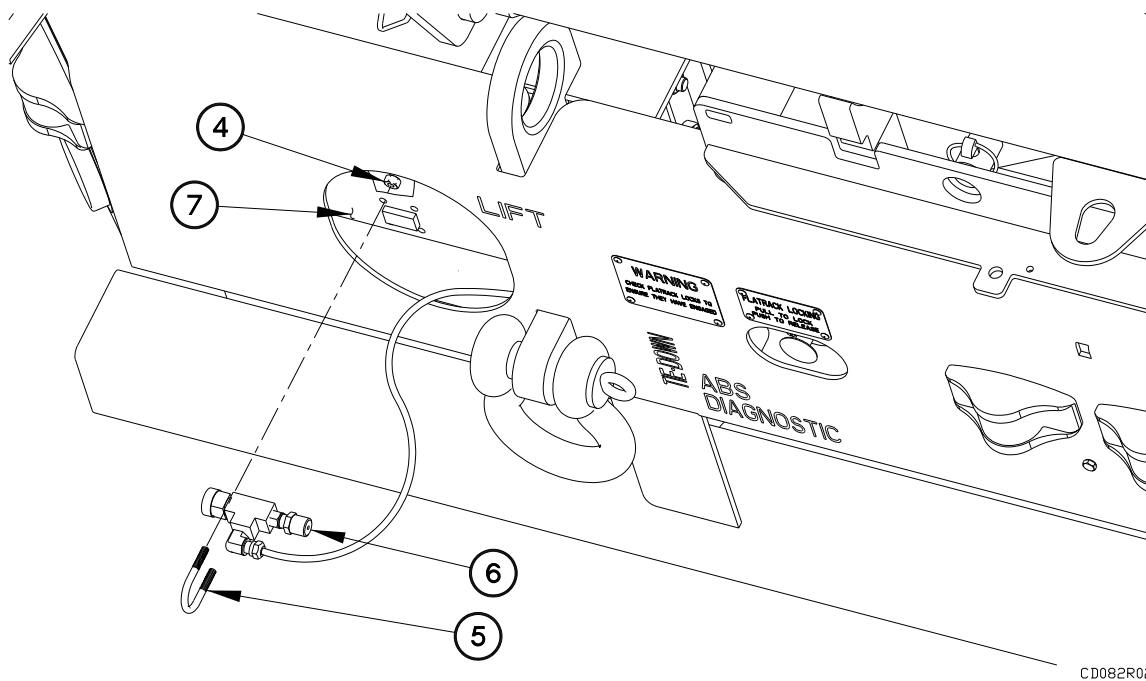


C.D082R03

INSTALLATION – Continued**NOTE**

Perform the following step if installing rear breather valve.

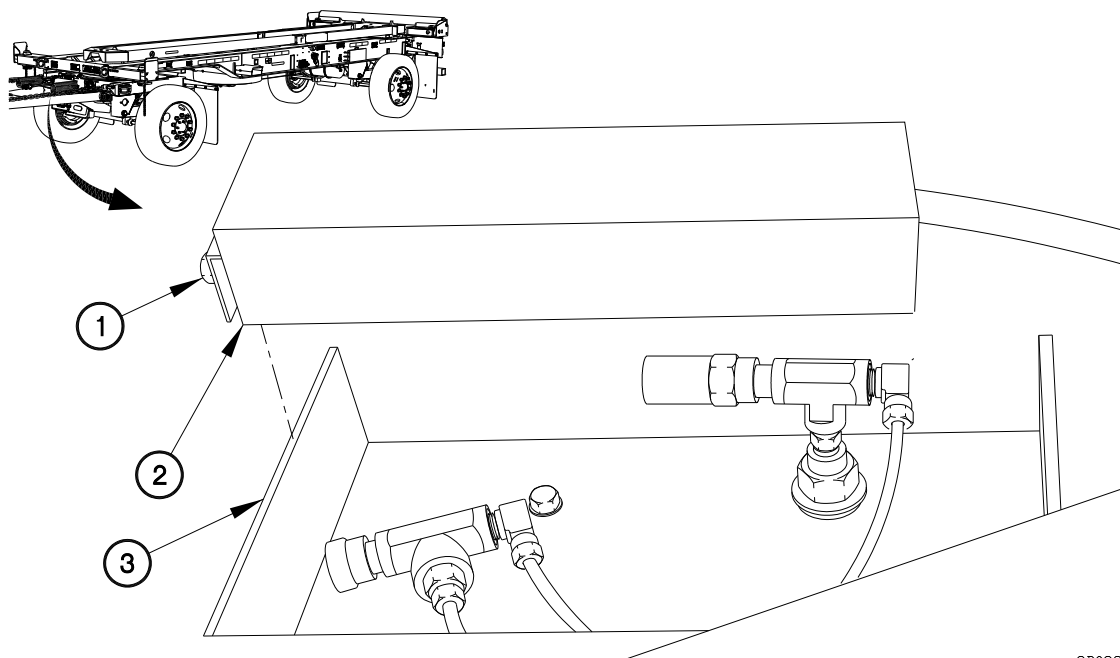
8. Install breather valve assembly (6) on rear crossmember (7) with two u-bolts (5) and four self-locking nuts (4).



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).



CD082R01

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

Materials/Parts

Nut, Self-locking (3) (Item 25, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Goggles, Industrial (Item 8, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 36, 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 28, WP 1067 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.

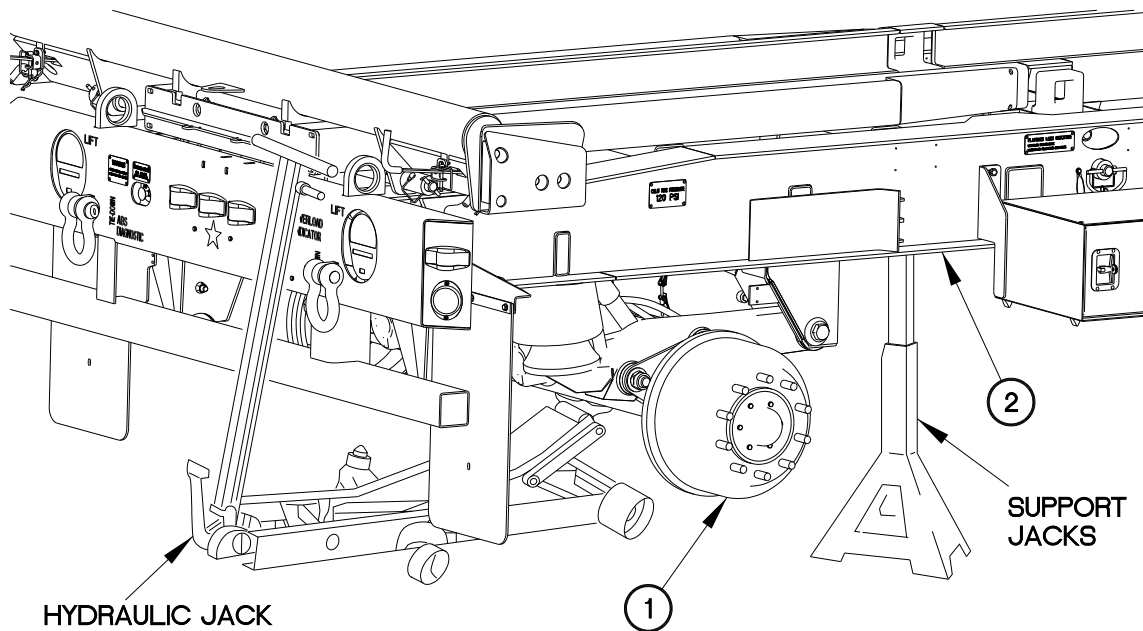
REMOVAL - Continued**CAUTION**

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 shown.

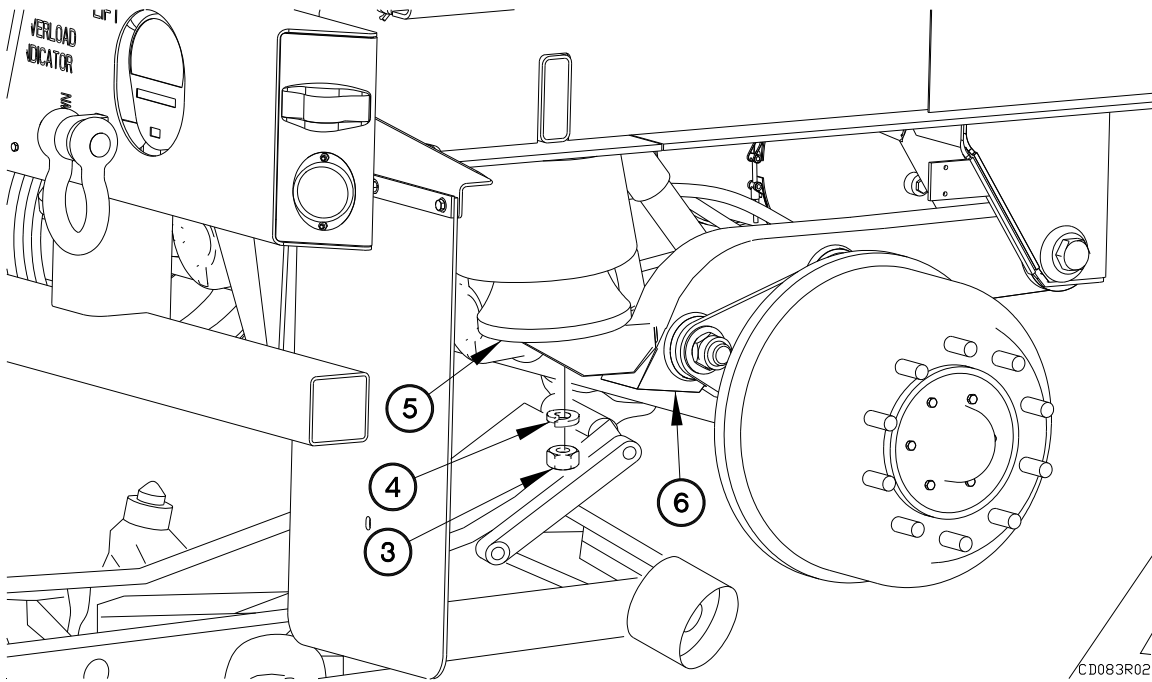
1. Position hydraulic jack under axle assembly (1).
2. Position two leveling support jacks under frame rail (2).



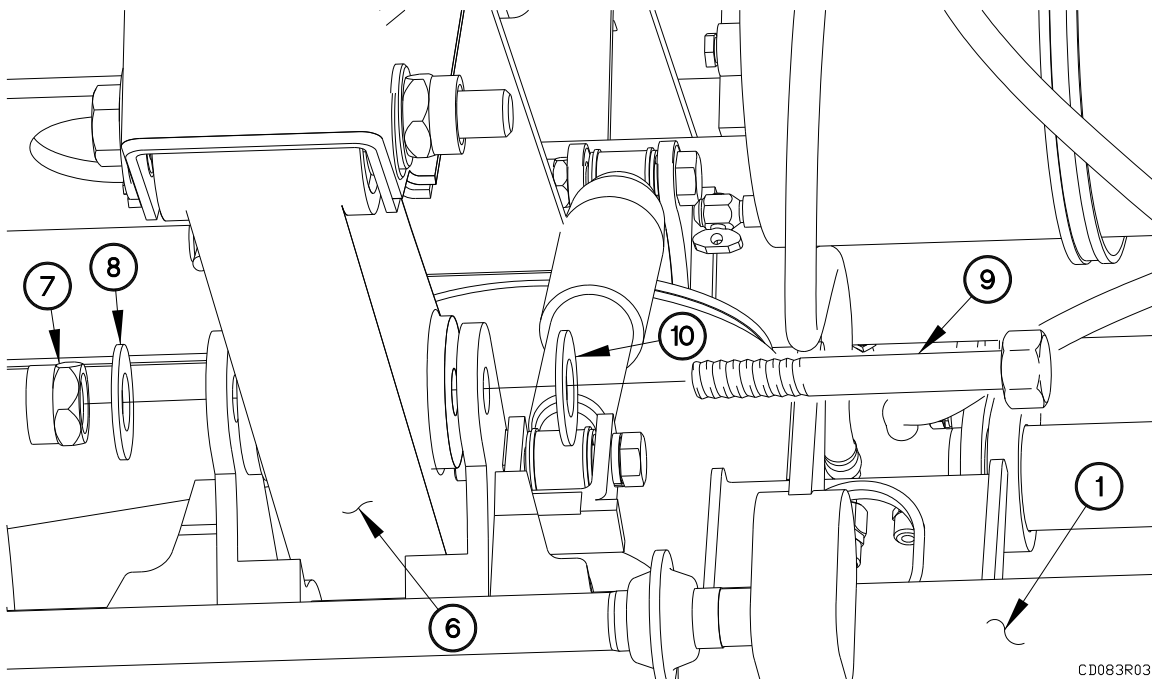
CD083R01

REMOVAL - Continued

3. Remove nut (3), lockwasher (4), and air bag base (5) from equalizing beam (6). Discard lockwasher.

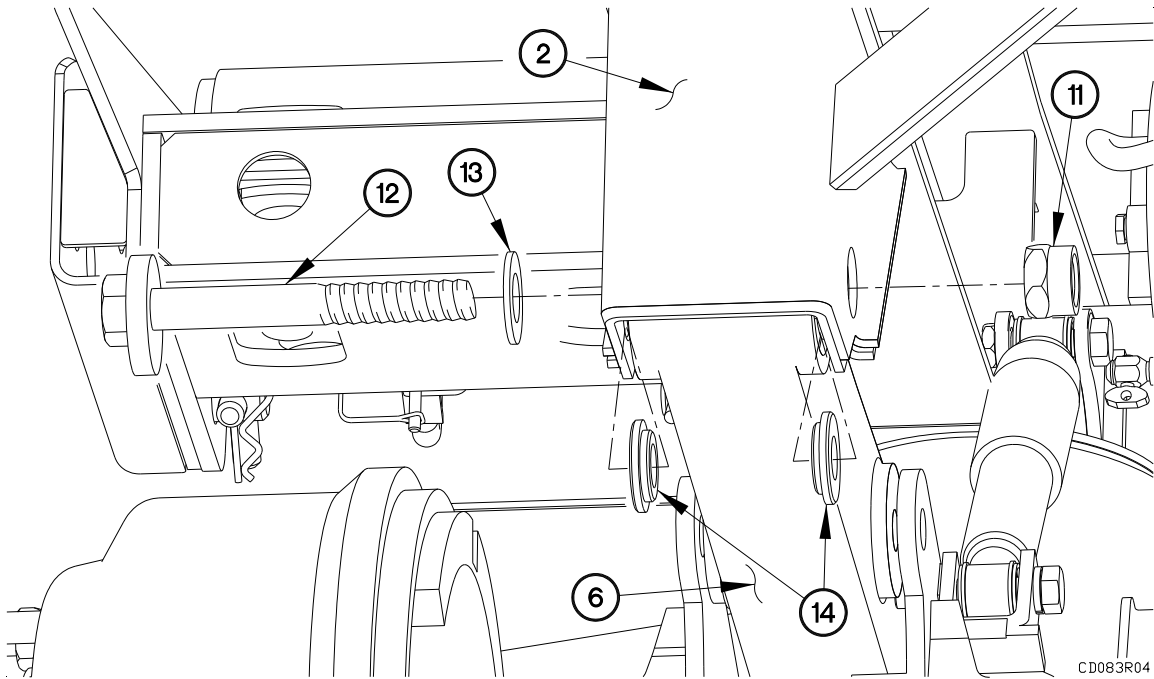


4. Remove two self-locking nuts (7), washers (8), bolts (9), washers (10), and equalizing beam (6) from axle assembly (1). Discard self-locking nuts.

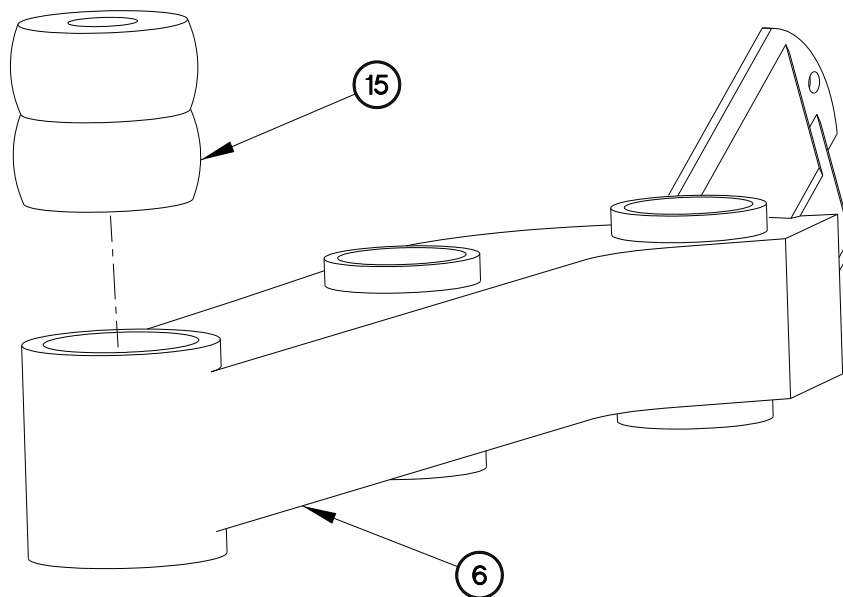


REMOVAL - Continued

- Remove self-locking nut (11), bolt (12), spacer (13), two washers (14) and equalizing beam (6) from frame rail (2). Discard self-locking nut.



- Remove three rubber bushings (15) from equalizing beam (6).

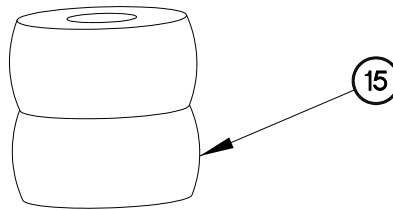


INSPECTION

NOTE

Replace a bushing if it fails any of the visual inspections.

1. Inspect three rubber bushings (15) for cracks, wear, or deformation.

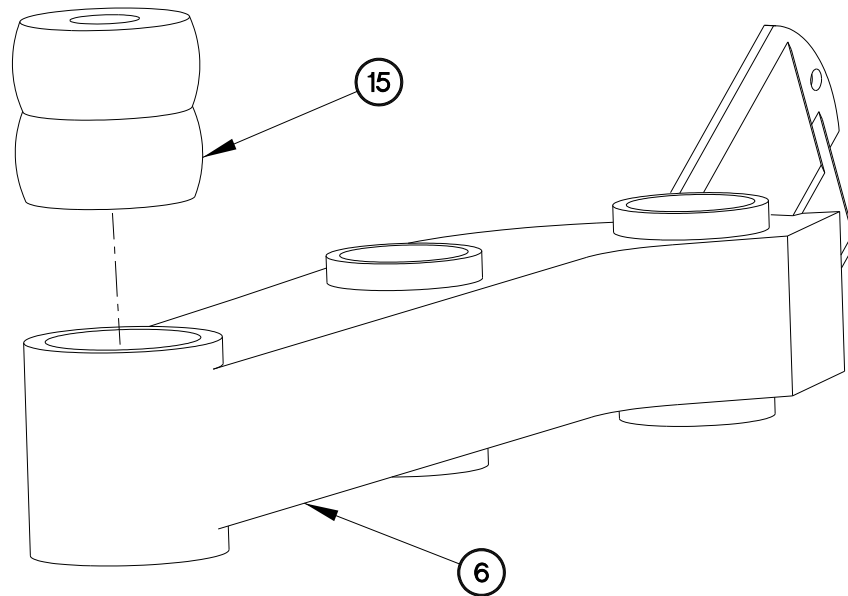


CD083n01

INSTALLATION**NOTE**

Front and rear suspension assemblies are installed the same way. Rear right suspension assembly shown.

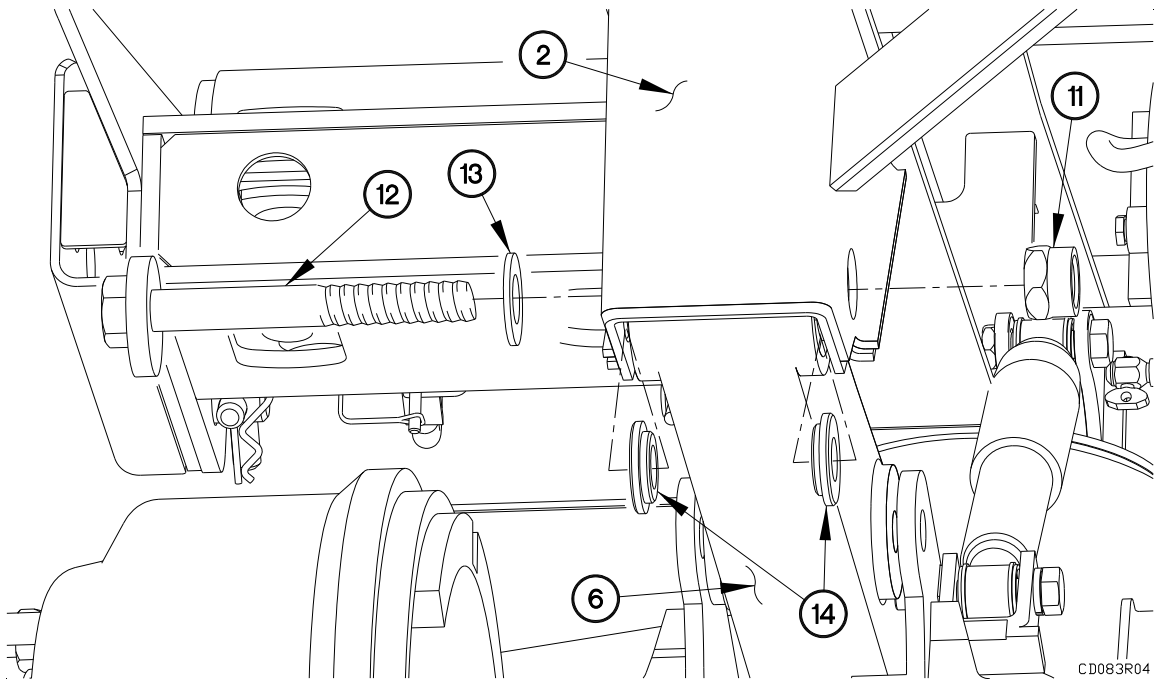
1. Install three rubber bushings (15) in equalizing beam (6).



CD083R05

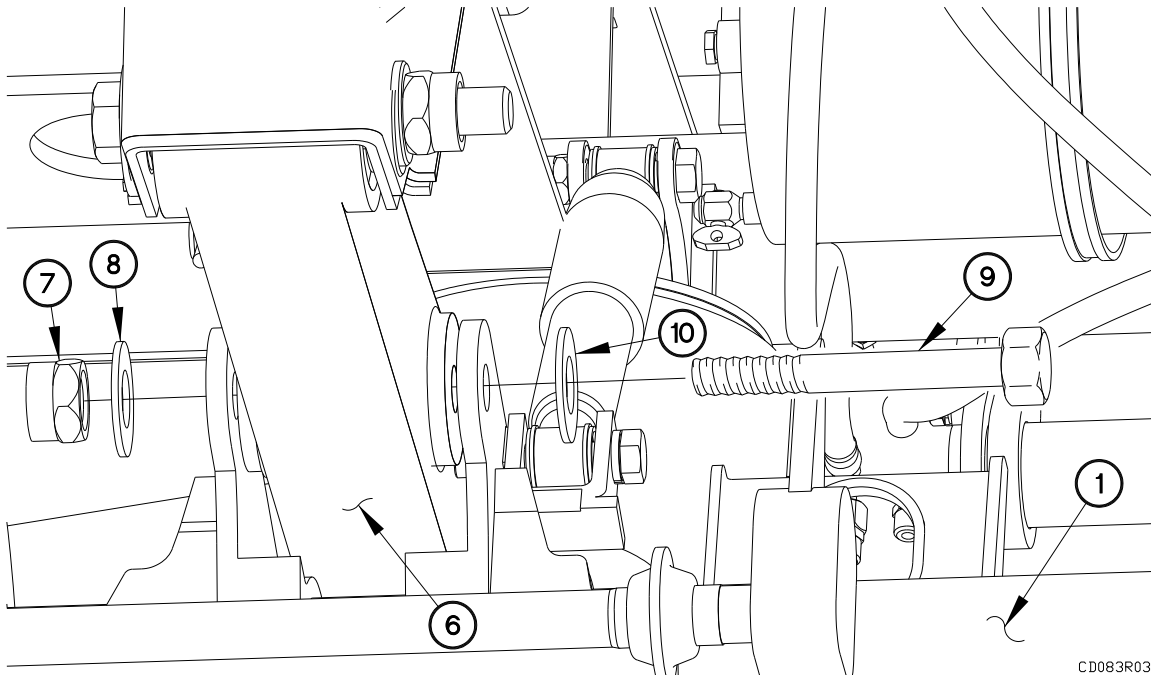
INSTALLATION - Continued

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).



INSTALLATION - Continued

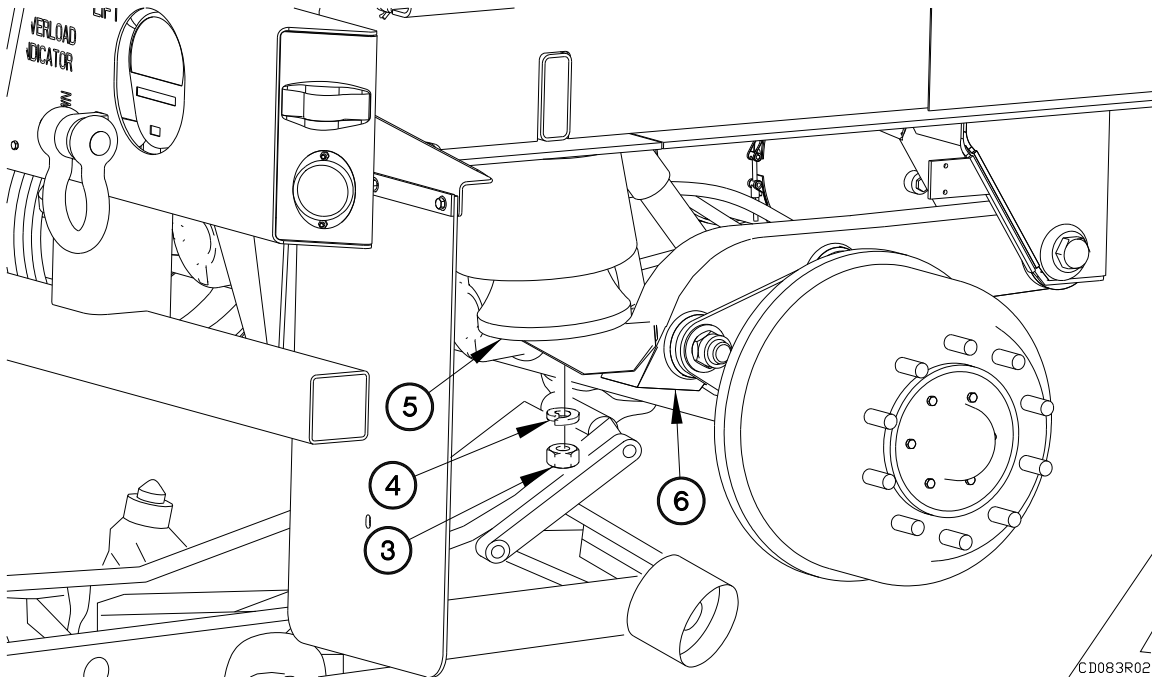
4. Position equalizing beam (6) on axle assembly (1) with two washers (10), bolts (9), washers (8), and self-locking nuts (7).
5. Tighten two self-locking nuts (7) to 760-840 lb-ft (1030-1139 N·m).



CD083R03

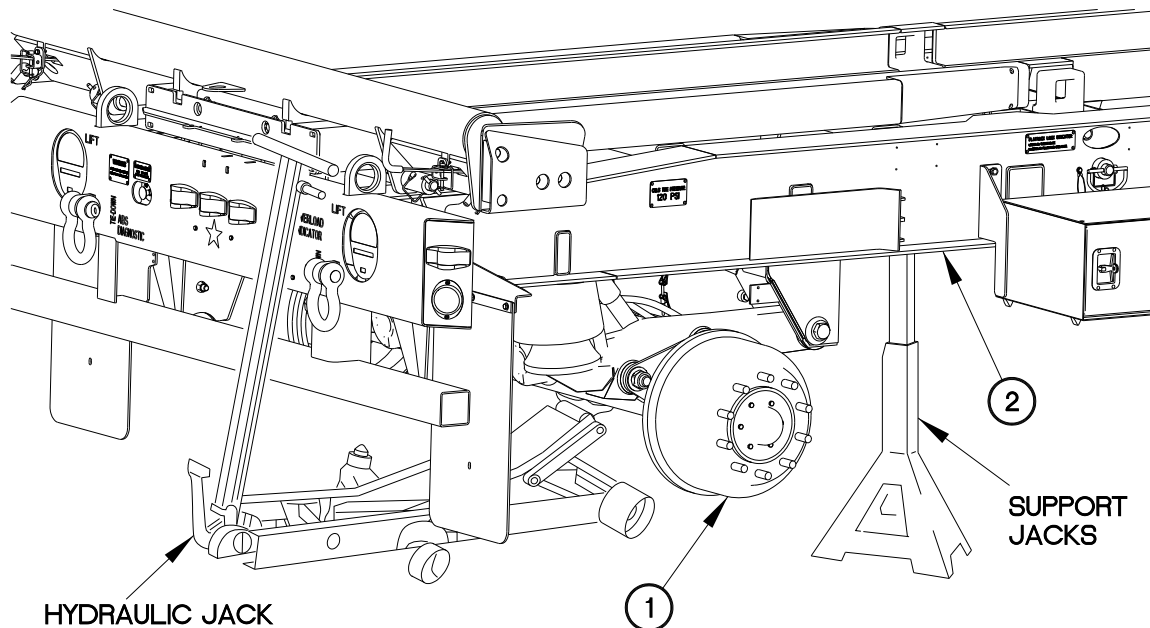
INSTALLATION - Continued

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.



CD083R01

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 **
ADJUSTMENT

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 24, WP 0167 00)
 Wrench, Torque, 0-200 lb-in. (Item 35,
 WP 0167 00)
 Tape Measure (Item 22, WP 0167 00)
 Straight Edge (Item 21, WP 0167 00)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
 (Item 6, WP 0165 00)

Materials/Parts (Cont.)

Sealing Compound (Item 14, WP 0165 00)
 Nut, Self-Locking (2) (Item 26, WP 0168 00)
 Nut, Self-Locking (2) (Item 34, WP 0168 00)
 Wooden Block 6.12 in. (15.5 cm) high

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

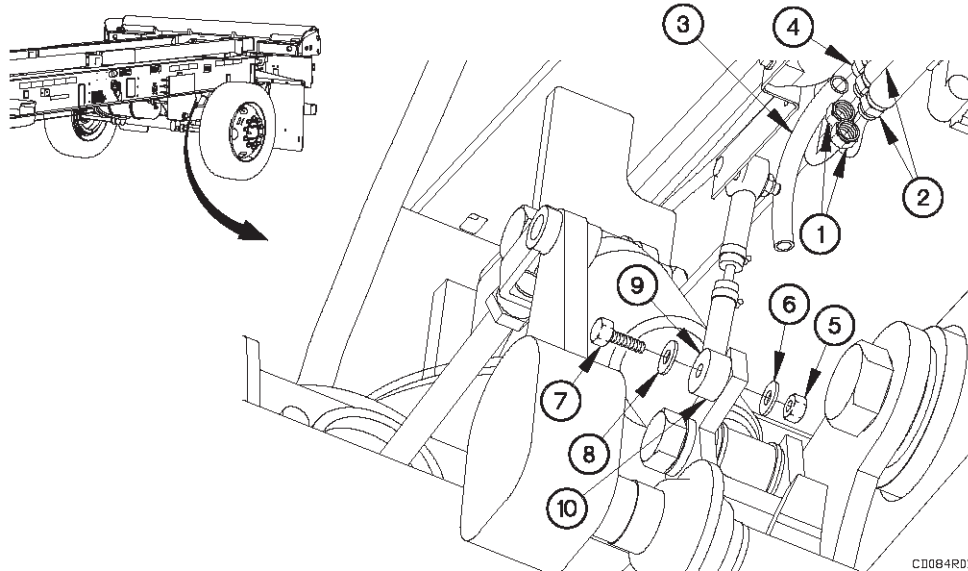
Tag air hoses and connection points prior to disconnecting.

**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
 \ADJUSTMENT - Continued**

0084 00

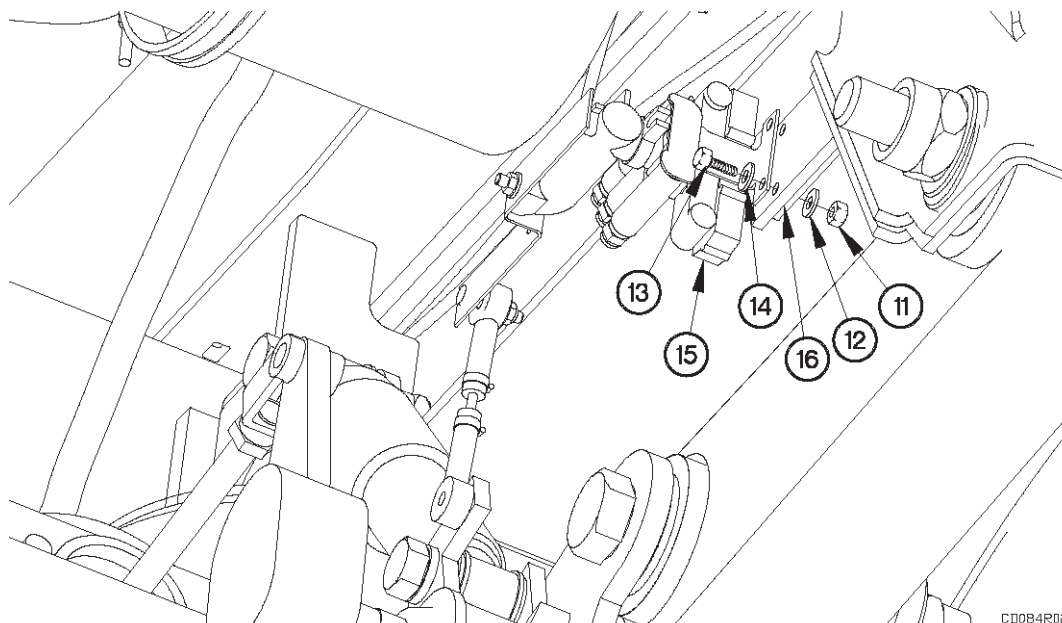
REMOVAL

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.



CD084R01

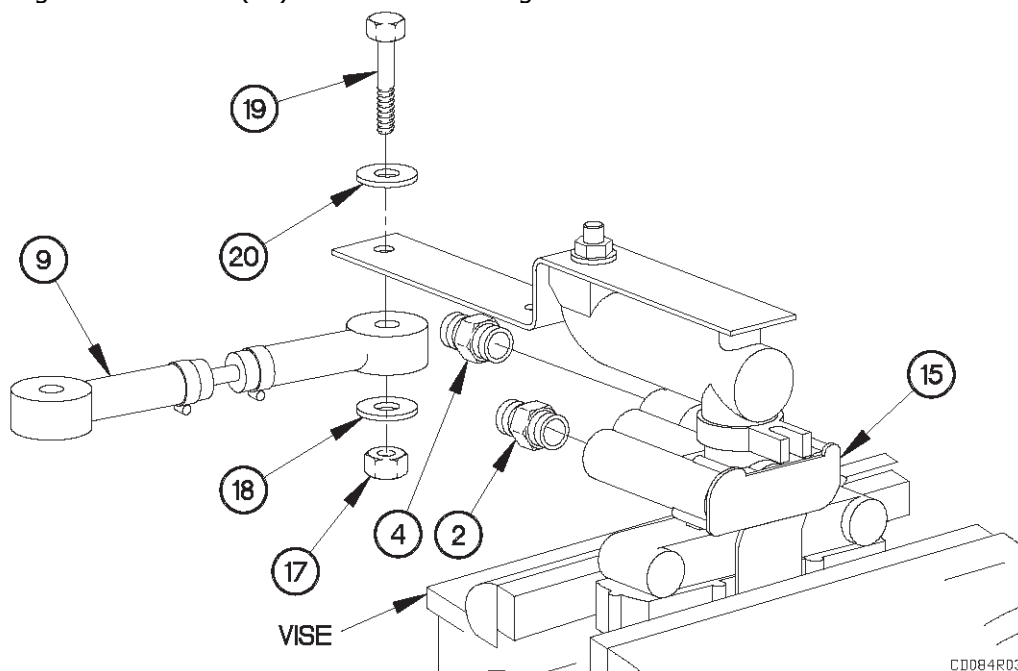
5. Remove two self-locking nuts (11), washers (12), screws (13), washers (14), and height control valve (15) from bracket (16). Discard self-locking nuts.



CD084R02

**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - 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.



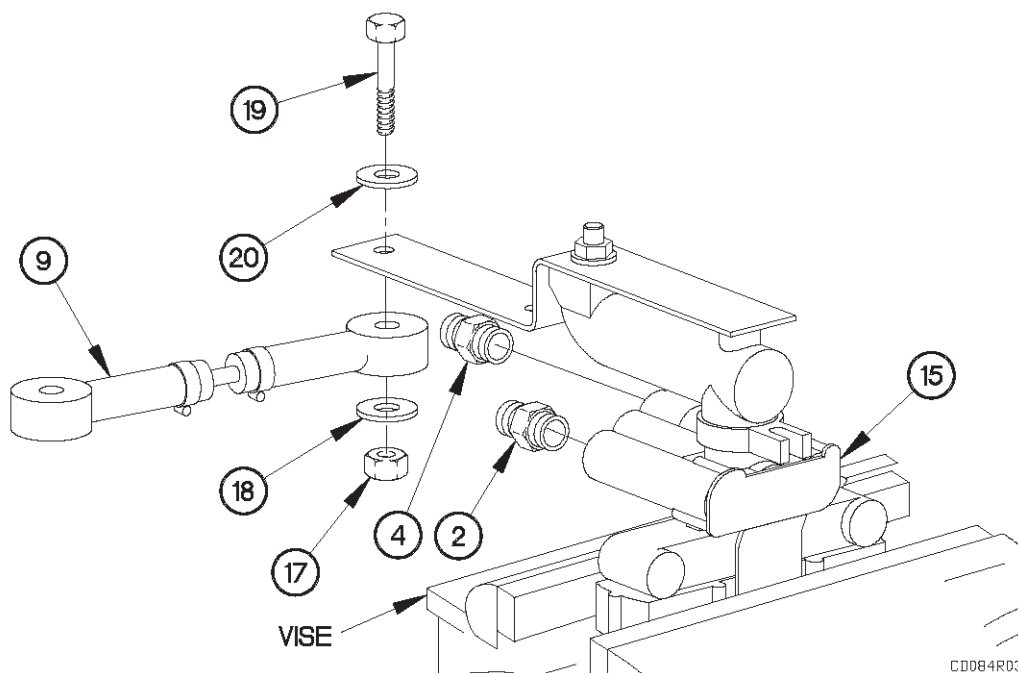
**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
\\ADJUSTMENT - Continued****0084 00****INSTALLATION**

1. Position height control linkage (9) on height control valve (15) with washer (20), bolt (19), washer (18), and self-locking nut (17).

WARNING

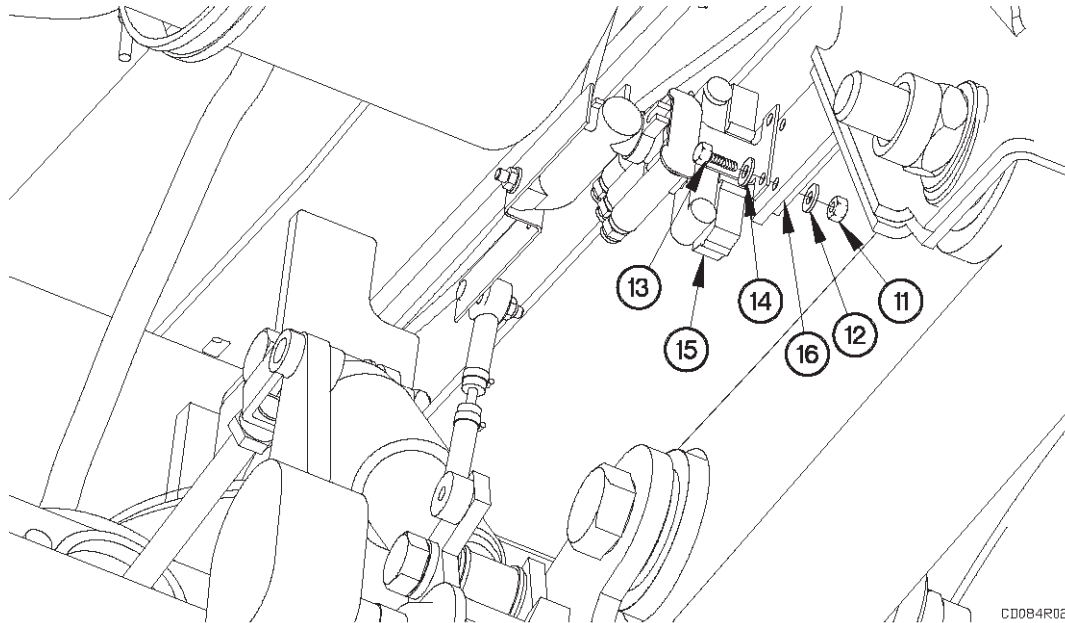
Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to 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).



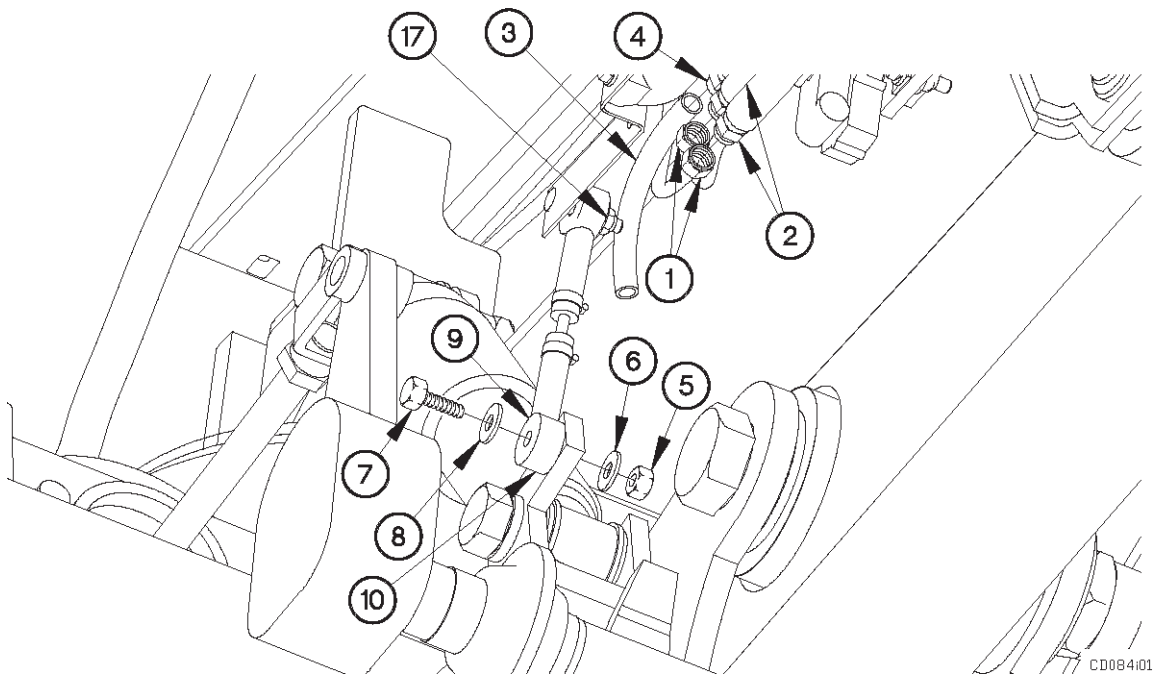
**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****INSTALLATION - Continued**

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
ADJUSTMENT - Continued****0084 00****INSTALLATION - Continued**

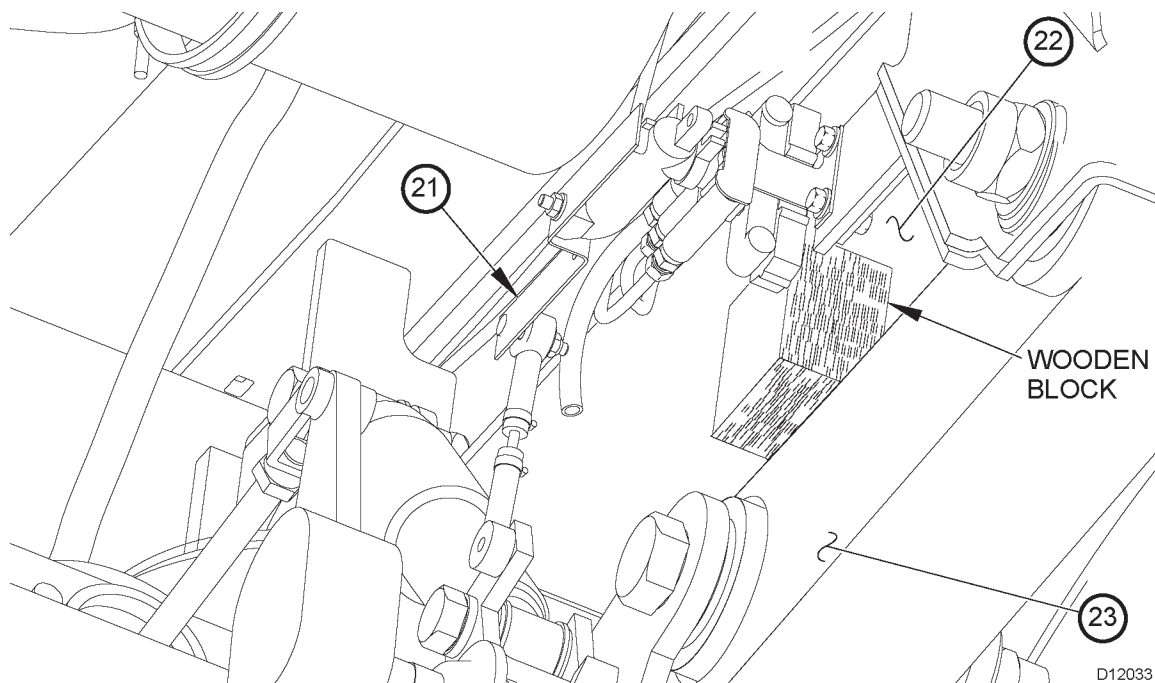
7. Position height control linkage (9) on lower shock bracket (10) with washer (8), bolt (7), washer (6), and self-locking nut (5).
8. Tighten self-locking nuts (5) and (17) to 24-48 lb-in. (3-5 N·m).
9. Connect hose (3) to nylon fitting (4).
10. Connect two hoses (1) to fittings (2).



CD084/01

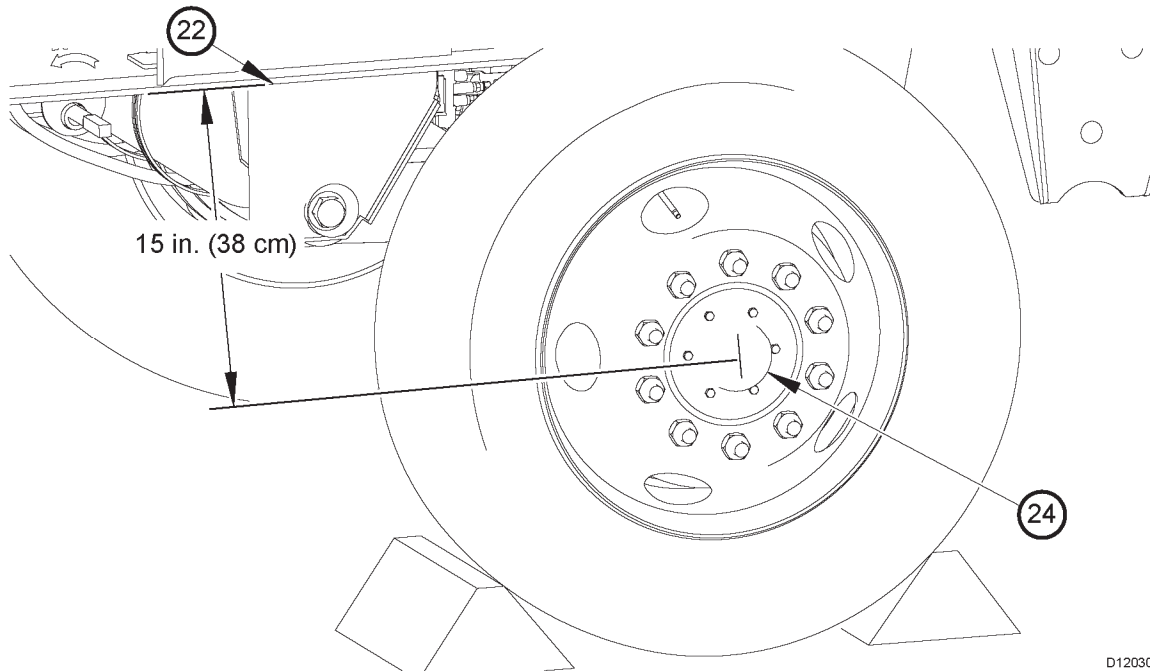
**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****ADJUSTMENT**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1).
2. Charge air system (WP 0043 23, TM 2320-292-10-1).
3. 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.
4. Raise control arm (21) upwards 90°.
5. Position wooden block 6.12 in. (15.5 cm) between frame rail (22) and suspension beam (23).
6. Lower control arm (21) downwards 45°.



**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****ADJUSTMENT - Continued**

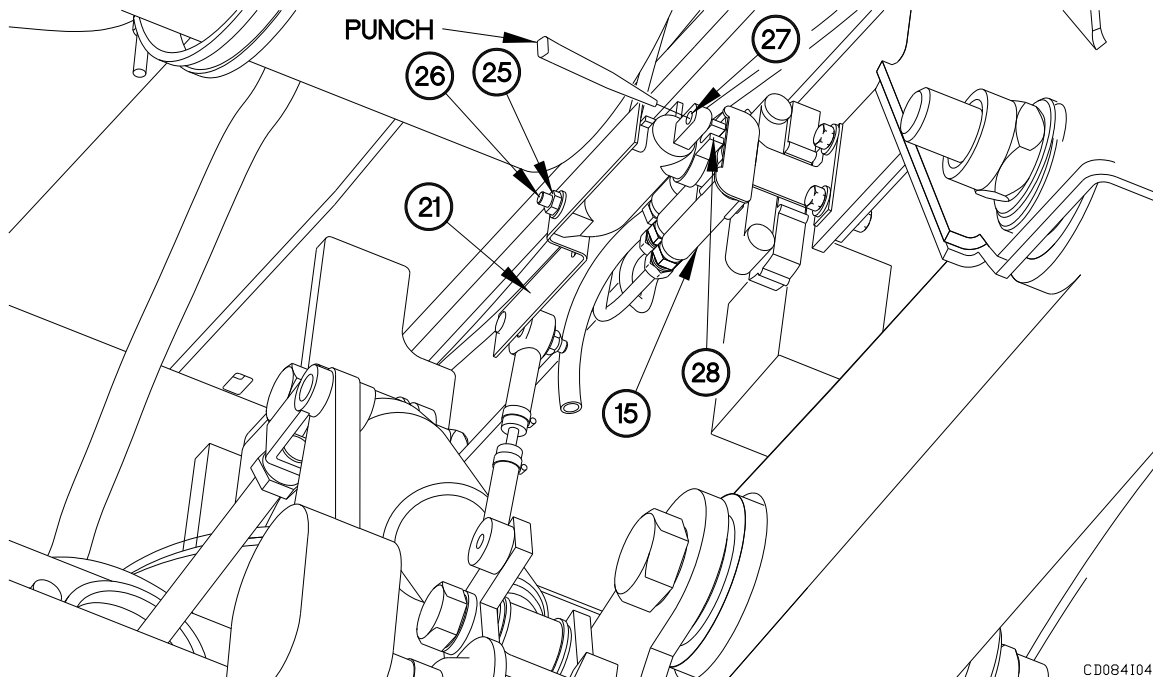
7. Measure from center of axle hub (24) to underneath frame rail using a tape measure and straight edge (22), should be 15 in. (38 cm).



D12030

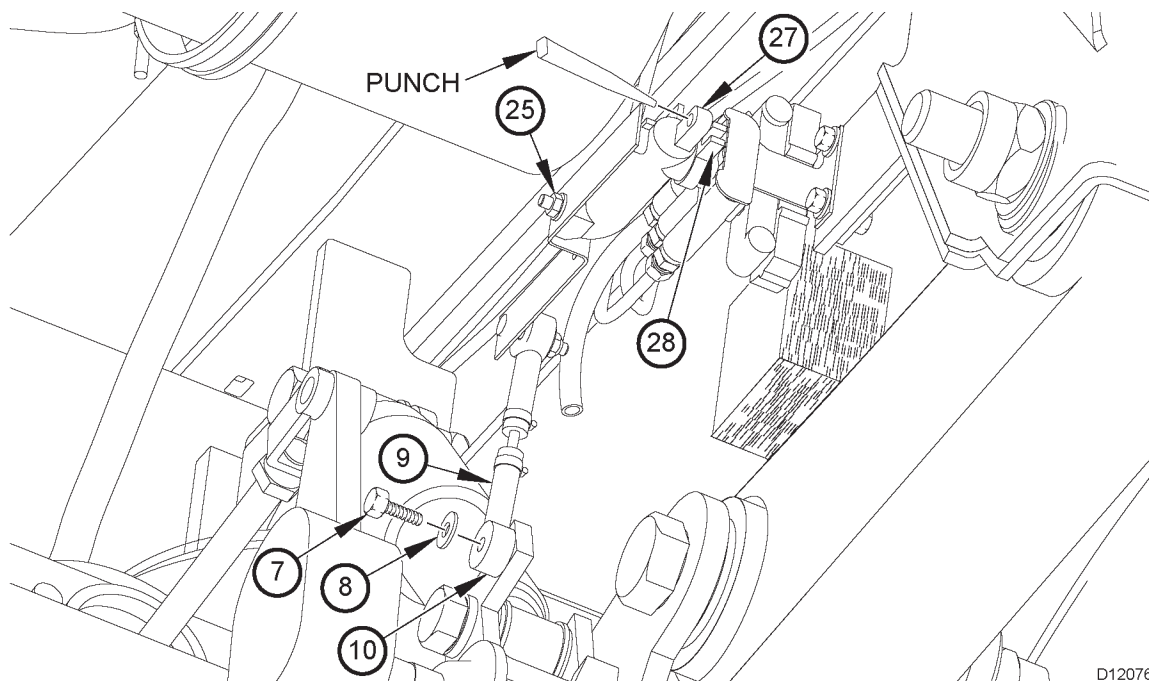
**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****ADJUSTMENT - Continued**

8. Loosen self-locking nut (25) on bolt (26).
9. Rotate control arm (21) until hole (27) on end aligns with hole (28) on height control valve (15).
10. Install punch in holes (27 and 28).



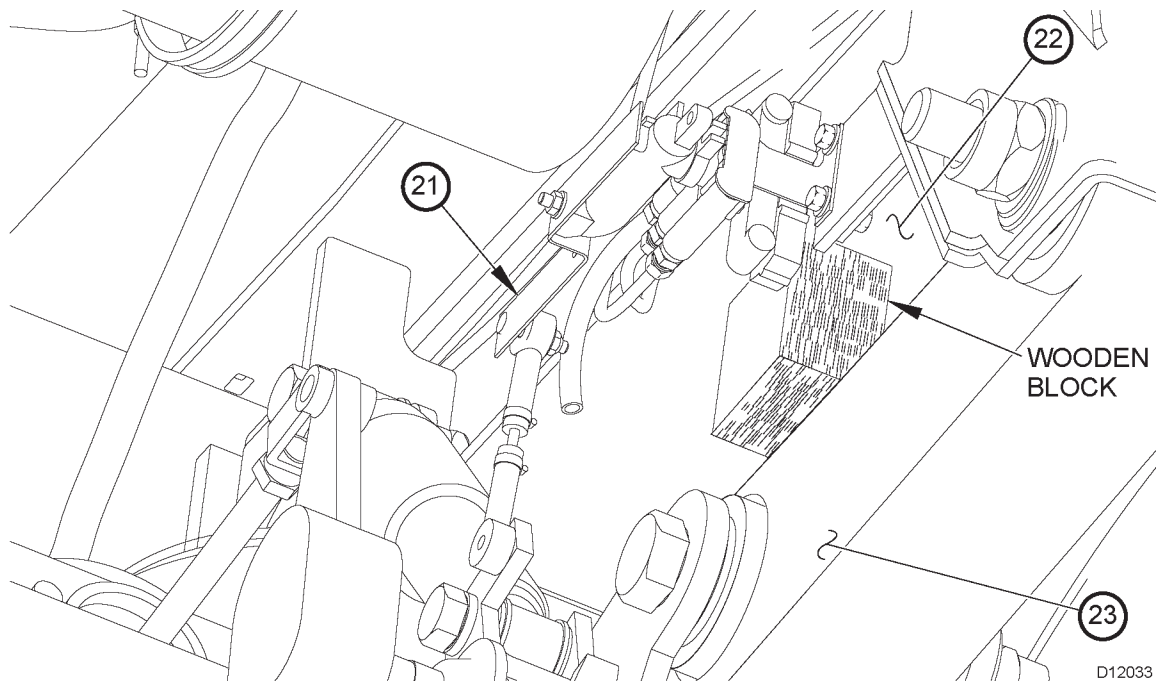
**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****ADJUSTMENT - Continued**

11. Position height control linkage (9) on lower shock bracket (10) with washer (8) and bolt (7).
12. Tighten self-locking nut (25) to 24-48 lb-in. (3-5 N·m).
13. Remove punch from holes (27 and 28).
14. Remove bolt (7), washer (8), and height control linkage (9) from lower shock bracket (10).



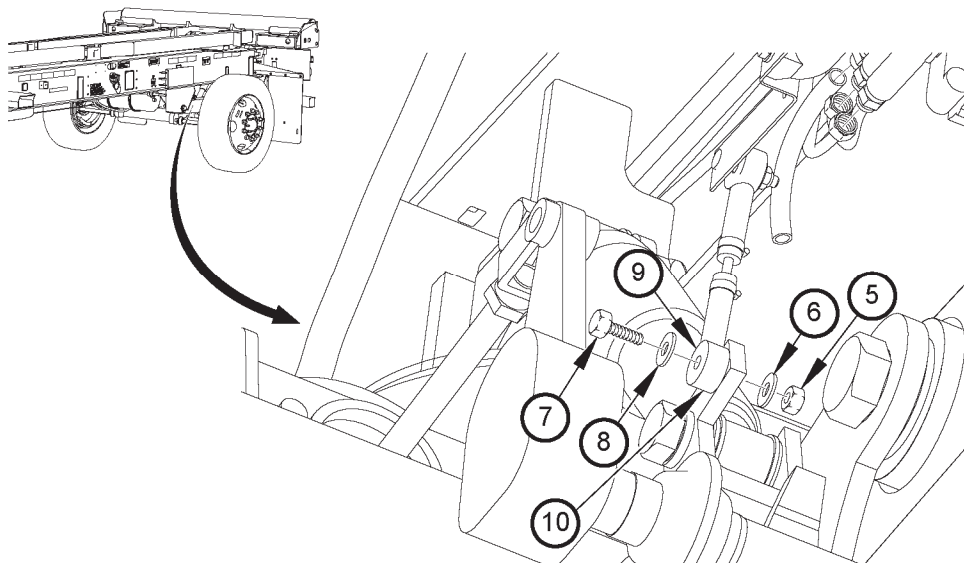
**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****ADJUSTMENT - Continued**

15. Raise control arm (21) upwards 90°.
16. Remove wooden block from between frame rail (22) and suspension beam (23).



**HEIGHT CONTROL VALVE AND LINKAGE REPLACEMENT
ADJUSTMENT - Continued****0084 00****ADJUSTMENT - Continued**

17. Position height control linkage (9) on lower shock bracket (10) with washer (8), bolt (7), washer (6), and self-locking nut (5).
18. Tighten self-locking nut (5) to 24-48 lb-in. (3-5 N·m).

**OPERATIONAL CHECKS**

1. Operate trailer and check for normal suspension operation (WP 0013 00).
2. 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 28, WP 0167 00)
Socket Set, Socket Wrench (Item 19, WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 36, WP 0167 00)

Materials/Parts

Grease, Automotive and Artillery (GAA) (Item 7, WP 0165 00)
Tape, Duct (Item 18, 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 17, WP 0165 00)
Rag, Wiping (Item 11, WP 0165 00)

Equipment Conditions

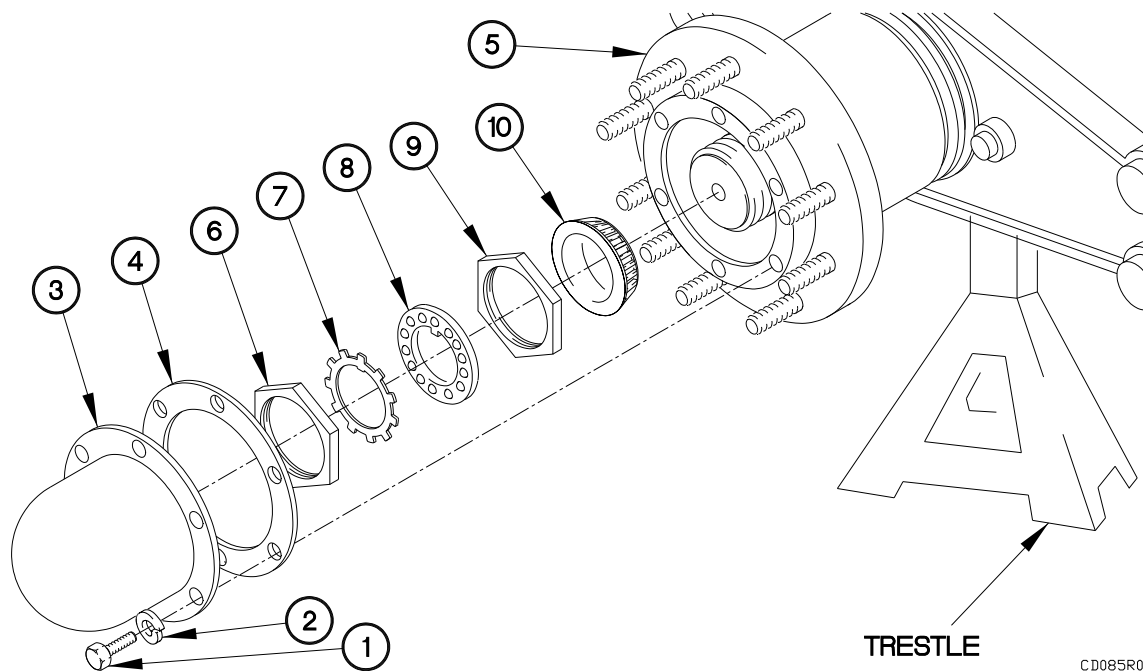
Brake shoes removed (WP 0069 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) wheel hub, bearing, and seal.

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).



CD085R01

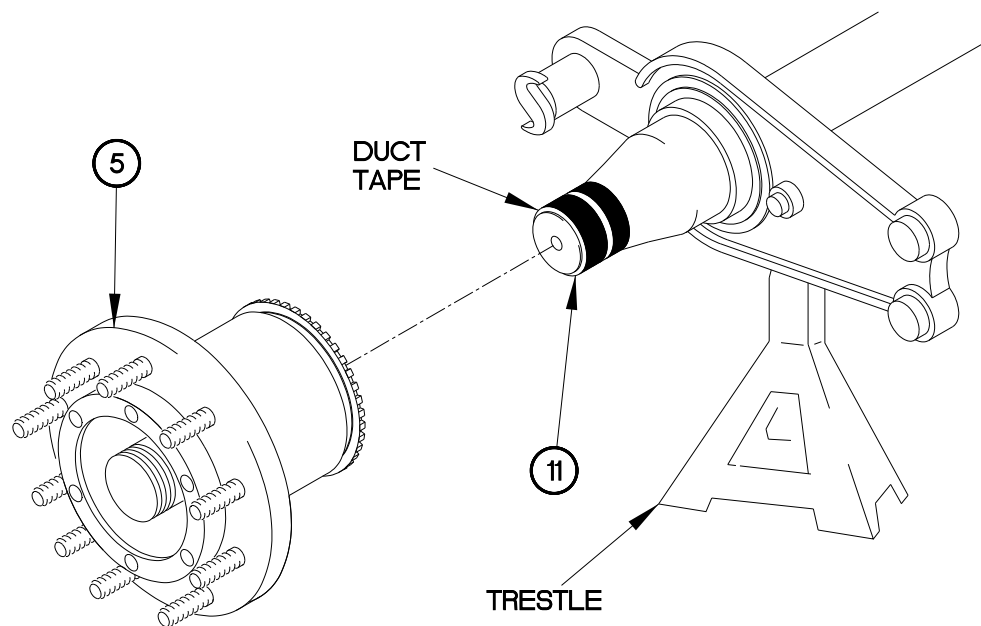
REMOVAL - Continued

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.

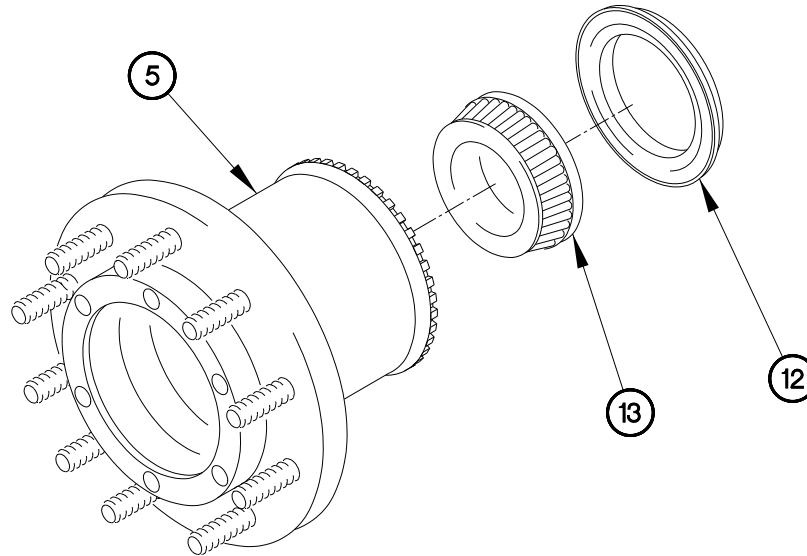
4. Remove wheel end hub (5) from spindle (11).



CD085101

REMOVAL – Continued

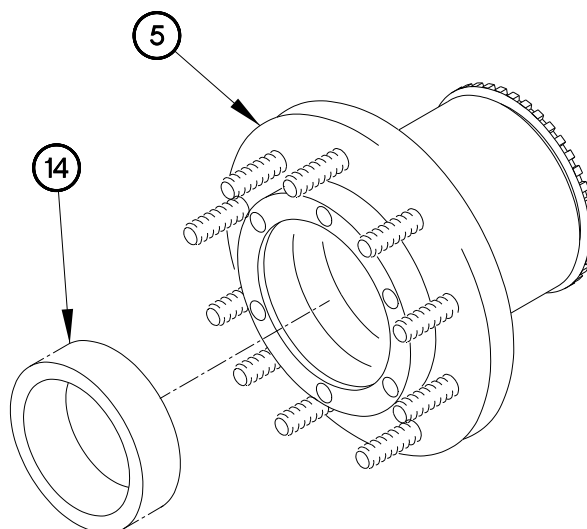
5. Remove hub seal (12) from wheel end hub (5). Discard hub seal.
6. Remove inner wheel bearing cone (13) from wheel end hub (5).



CD085R03

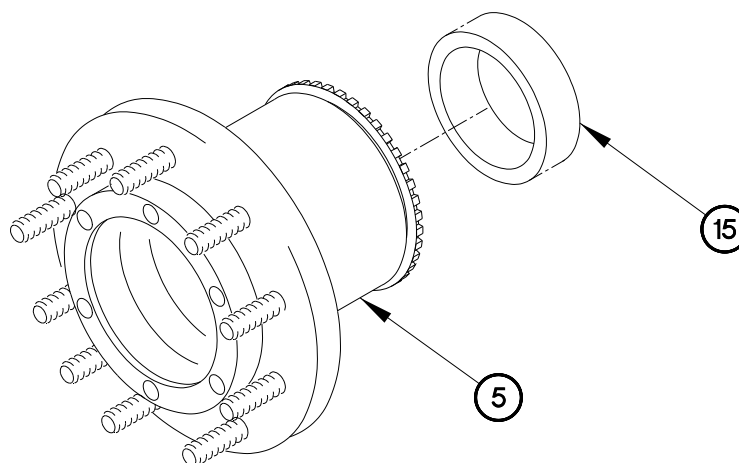
REMOVAL – Continued

7. Remove cup (14) from wheel end hub (5).



C.D085R04

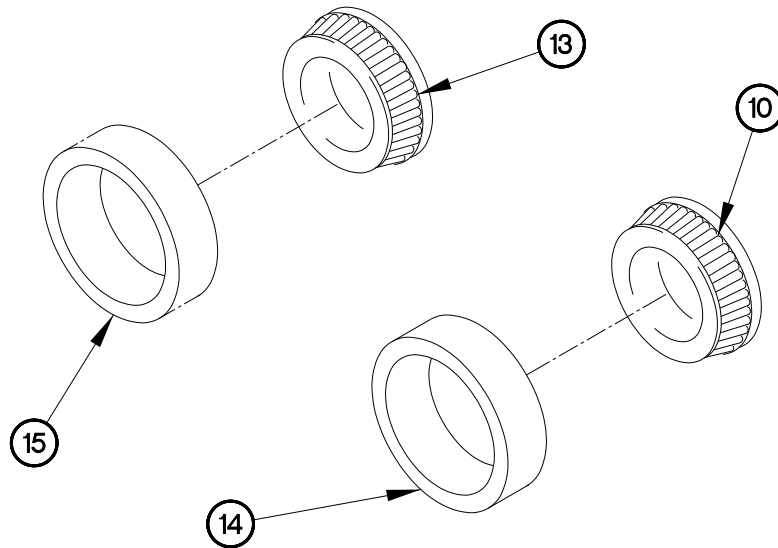
8. Remove cup (15) from wheel end hub (5).



C.D085R05

CLEANING/INSPECTION**WARNING**

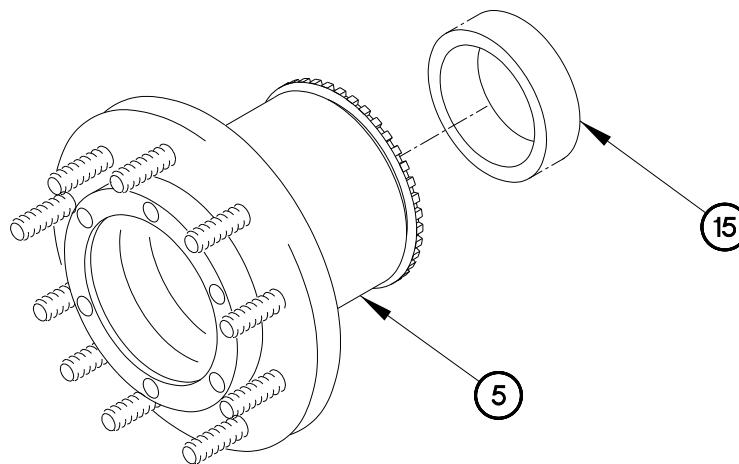
- **Solvent, Cleaning Compound (MIL-PRF-680) is TOXIC and flammable. Wear protective goggles and gloves; use only in well-ventilated area; avoid contact with skin, eyes, and clothes, and do not breath vapors. Keep away from heat or flame. Never smoke when using Cleaning Solvent; the flashpoint for Type I Cleaning Solvent is 100°F (38°C) and for Type II is 138°F (50°C). When not using MIL-PRF-680 solvents, ensure MIL-PRF-680 solvent container is sealed. Store, handle, and dispose of unused and spent solvents in accordance with local procedures and plans. 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

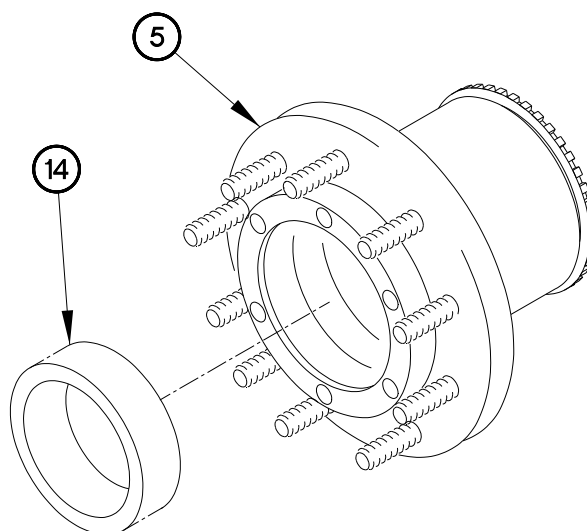
INSTALLATION

1. Install cup (15) in wheel end hub (5).



CD085R05

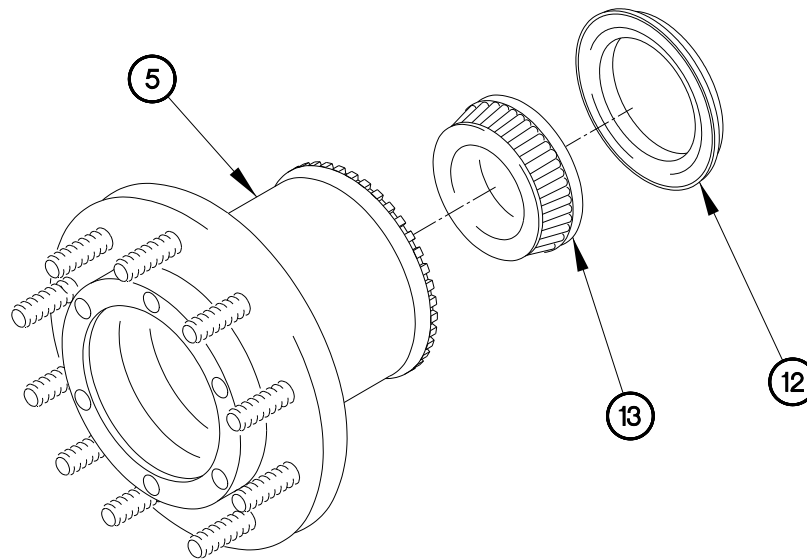
2. Install cup (14) in wheel end hub (5).



CD085R04

INSTALLATION - Continued

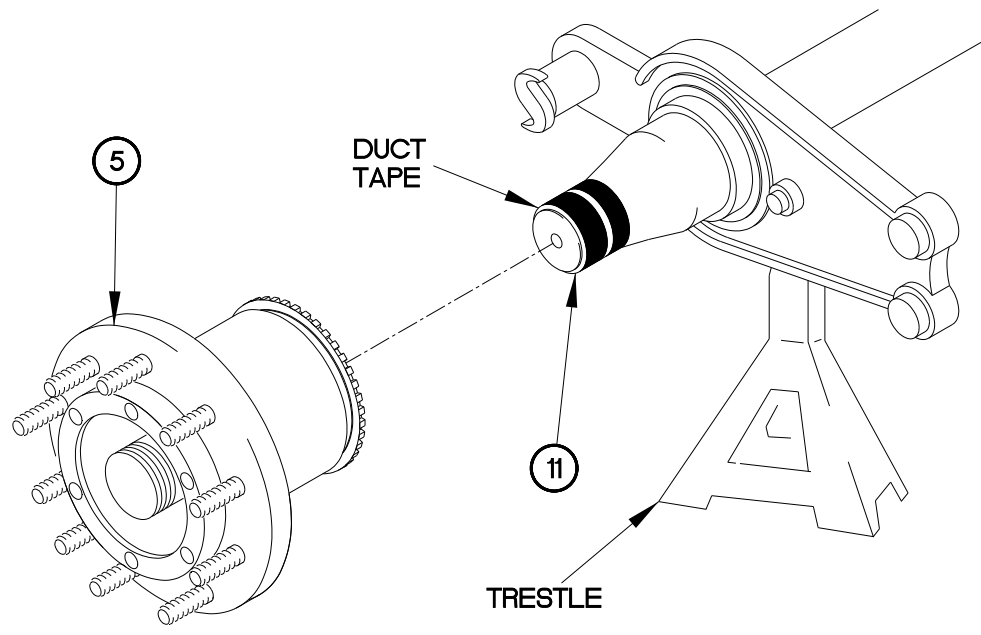
3. Pack inner wheel bearing cone (13) with grease.
4. Install inner wheel bearing cone (13) in wheel end hub (5).
5. Install hub seal (12) into wheel end hub (5).



CD085R03

INSTALLATION - Continued

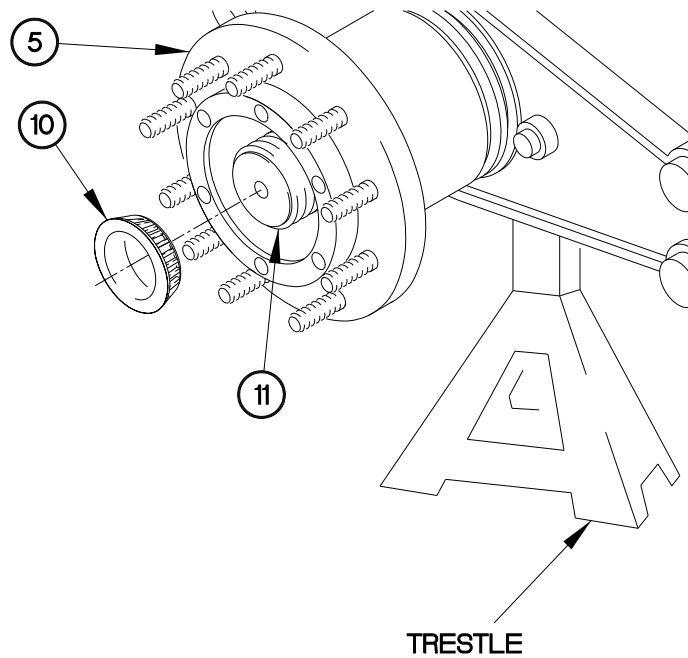
6. Install wheel end hub (5) on spindle (11).
7. Remove duct tape from spindle (11).



CD085101

INSTALLATION - Continued

8. Pack outer wheel bearing cone (10) with grease.
9. Install outer wheel bearing cone (10) in wheel end hub (5).



C0085102

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

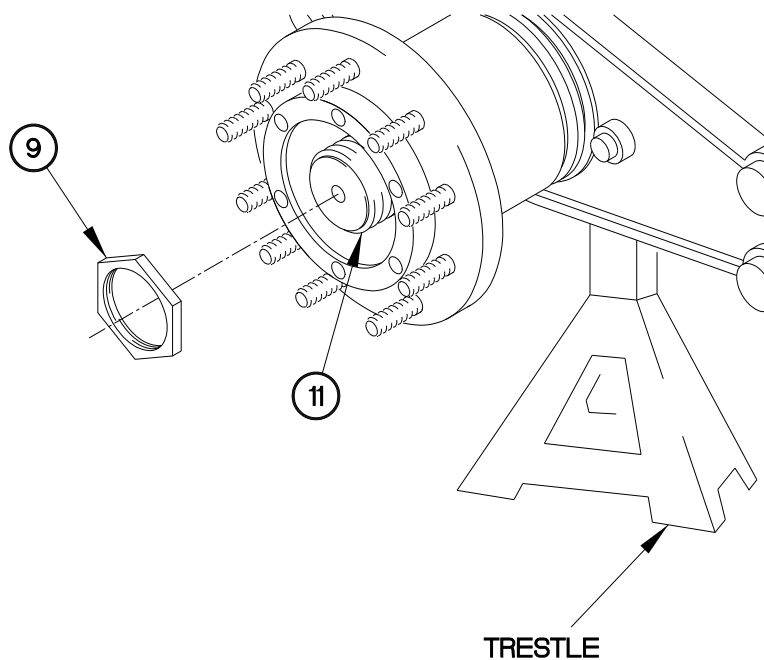
Rotate wheel end hub to the left and to the right while tightening wheel bearing nut. Failure to comply may result in damage to equipment.

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).



C0085103

INSTALLATION - Continued

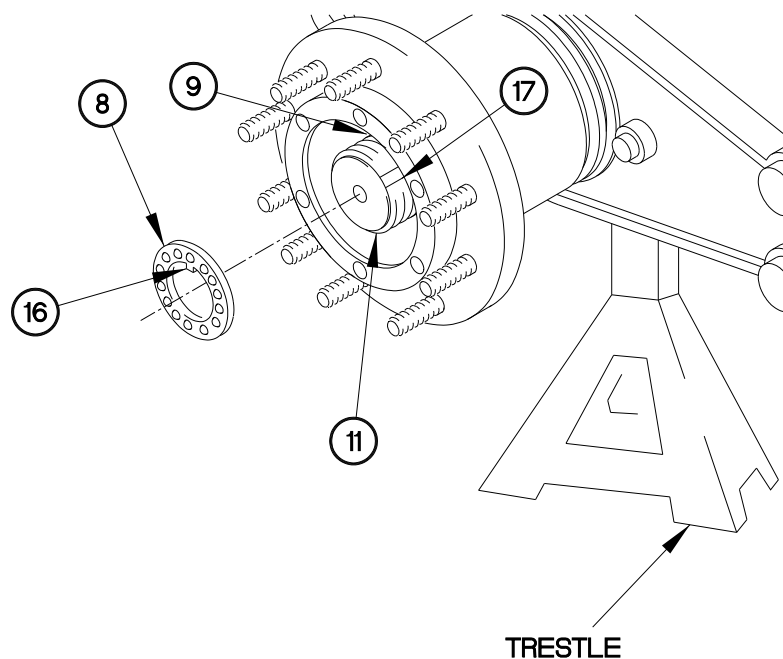
14. Position tab lockwasher (8) on spindle (12) with tab (16) inserted in spindle groove (17).

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).

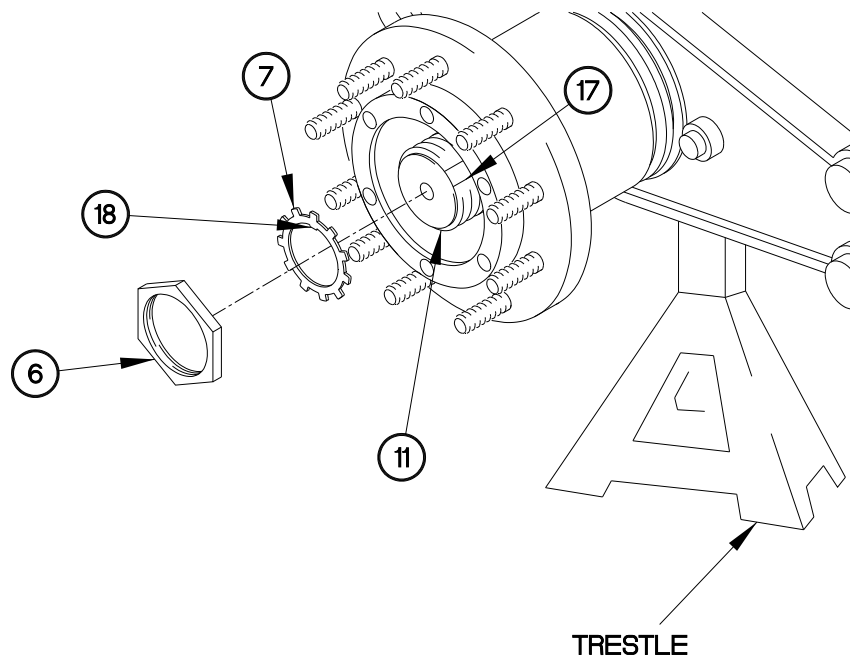
16. Install tab lockwasher (8) over nub on inner wheel bearing nut (9).



CD085104

INSTALLATION - Continued

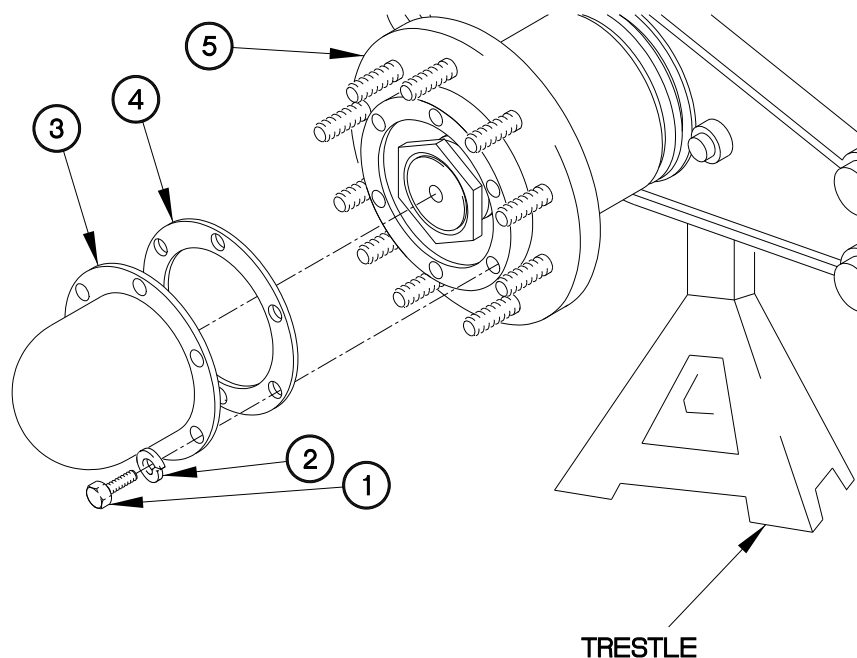
17. Position locking tang washer (7) on spindle (11) with tab (18) inserted in spindle groove (17).
18. Position outer wheel bearing nut (6) on spindle (12).
19. Tighten outer wheel bearing nut (6) to 250-300 lb-ft (339-407 N·m).
20. Bend three tabs on locking tang washer (7) over outer wheel bearing nut (6).



C0085105

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).



C0085106

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

Materials/Parts

Pin, Cotter (Item 47, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)

GENERAL

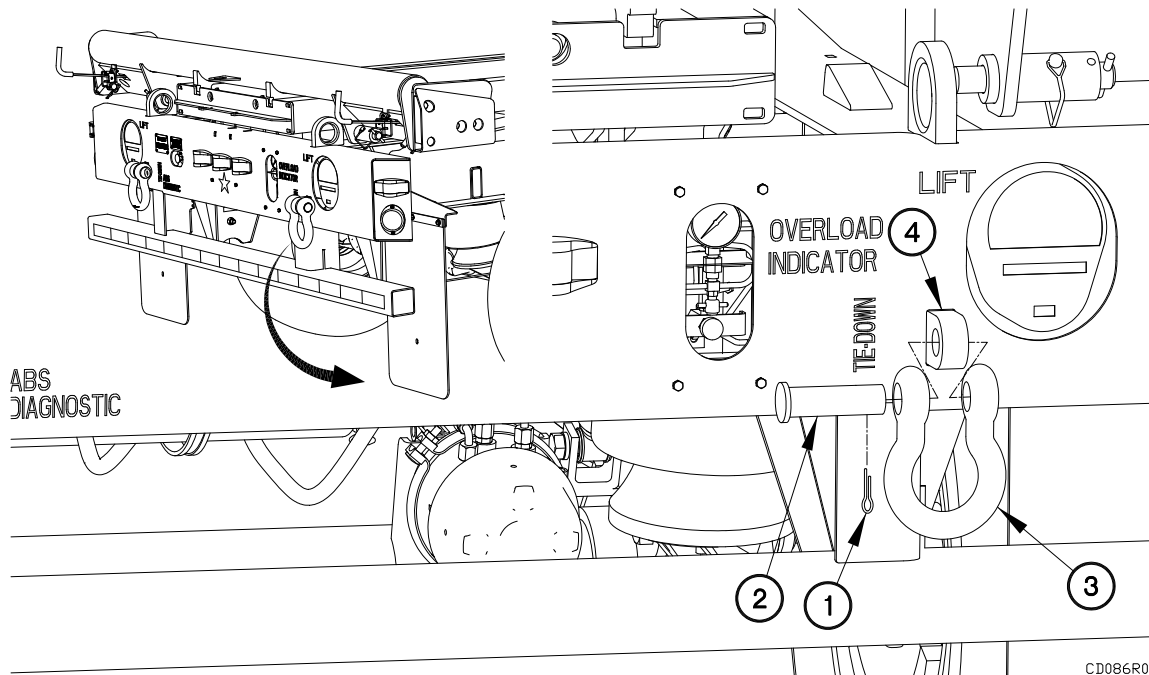
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) tiedown rings.

REMOVAL

NOTE

LH and RH rear tiedown rings are removed the same way. RH rear is shown.

1. Remove cotter pin (1), pin (2), and tiedown ring (3) from tiedown bracket (4). Discard cotter pin.



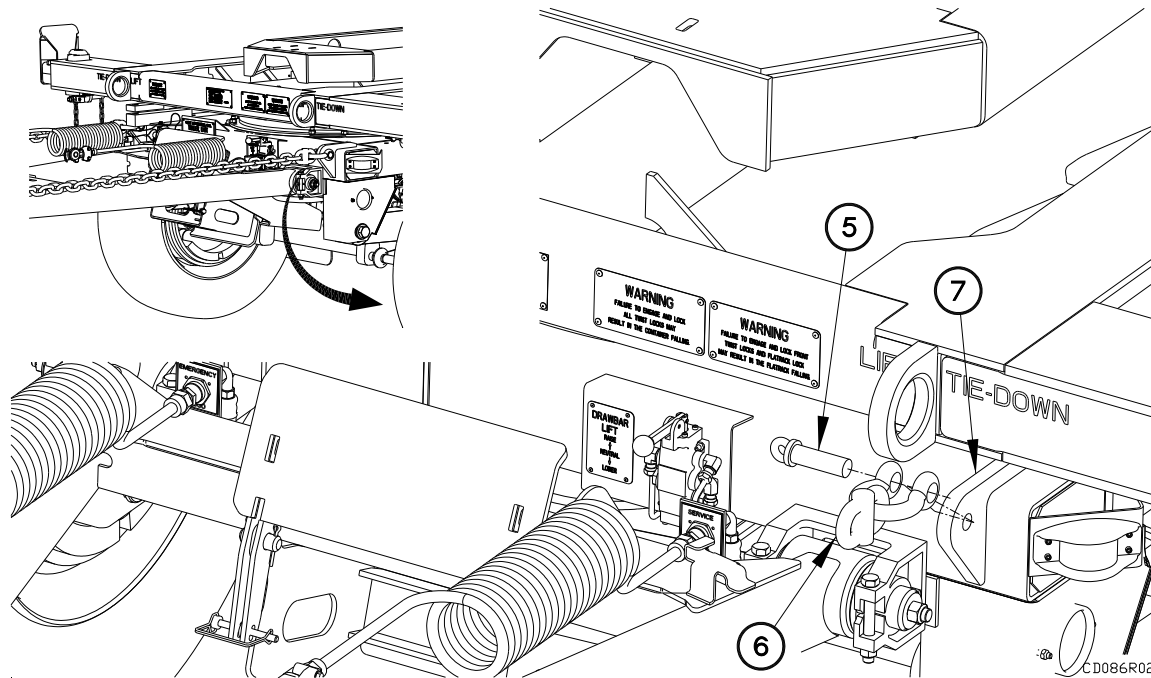
CD086R01

REMOVAL - Continued

NOTE

LH and RH front tiedowns are removed the same way. LH front tiedown is shown.

2. Remove pin (5) and tiedown ring (6) from bracket (7).

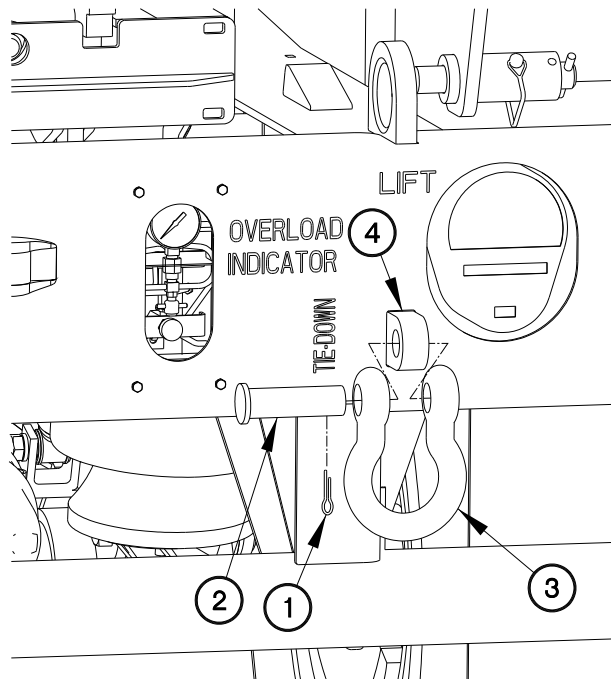


INSTALLATION

NOTE

LH and RH rear tiedown rings are installed the same way. RH rear is shown.

1. Install tiedown ring (3) on tiedown bracket (4) with pin (2).
2. Install cotter pin (1) in pin (2).

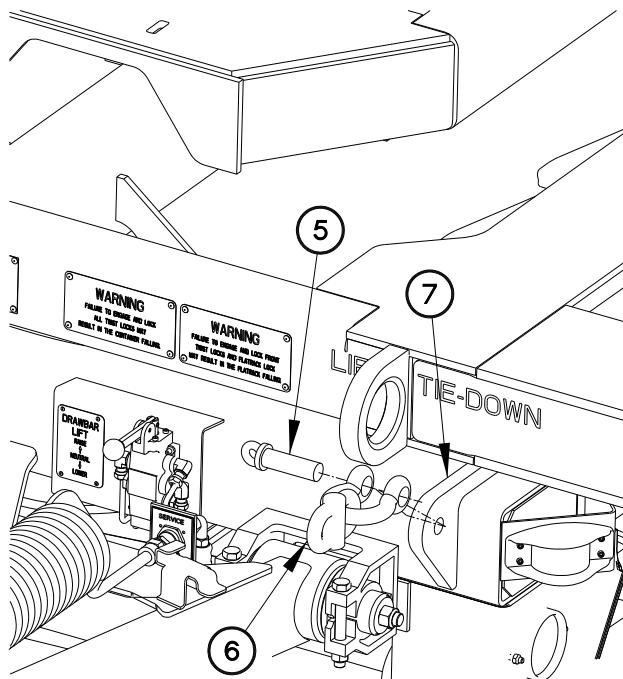


CD086-01

INSTALLATION - Continued**NOTE**

LH and RH front tiedown rings are installed the same way. LH front is shown.

3. Install tiedown ring (6) on bracket (7) with pin (5).



CD086-02

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 24, WP 0167 00)
 Sling, Multiple Leg (Item 17, WP 0167 00)
 Wrench, Torque, 0-175 lb-ft (Item 34, 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 28, 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

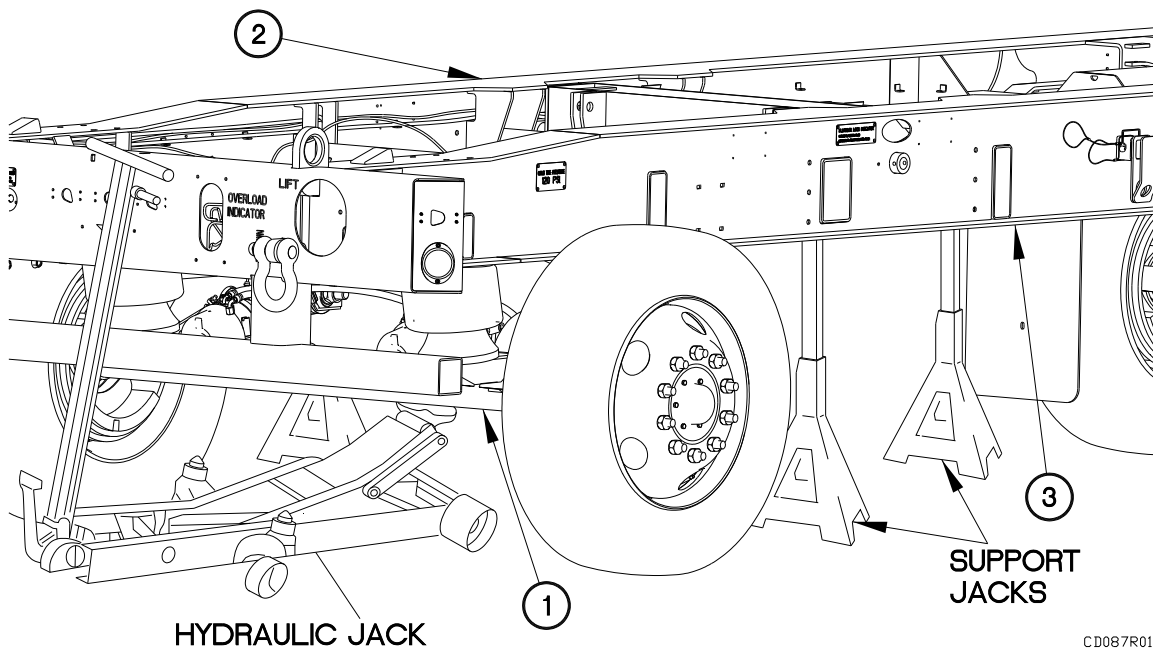
This work package contains information and instructions to frame rail on the Load Handling System Trailer (LHST).

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 is shown.

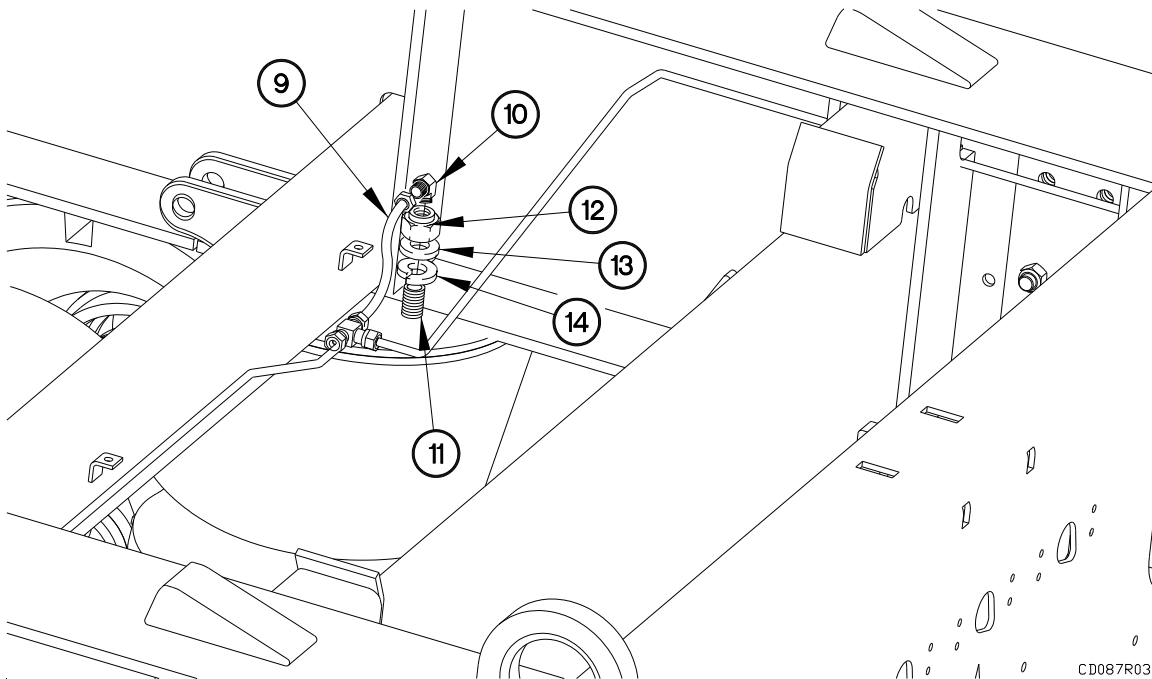
1. Position floor jack under rear axle (1).
2. Raise rear of trailer (2).
3. Position jack stand under frame rail (3).
4. Lower rear of trailer (2).
5. Perform previous four steps on RH side of trailer



CD087R01

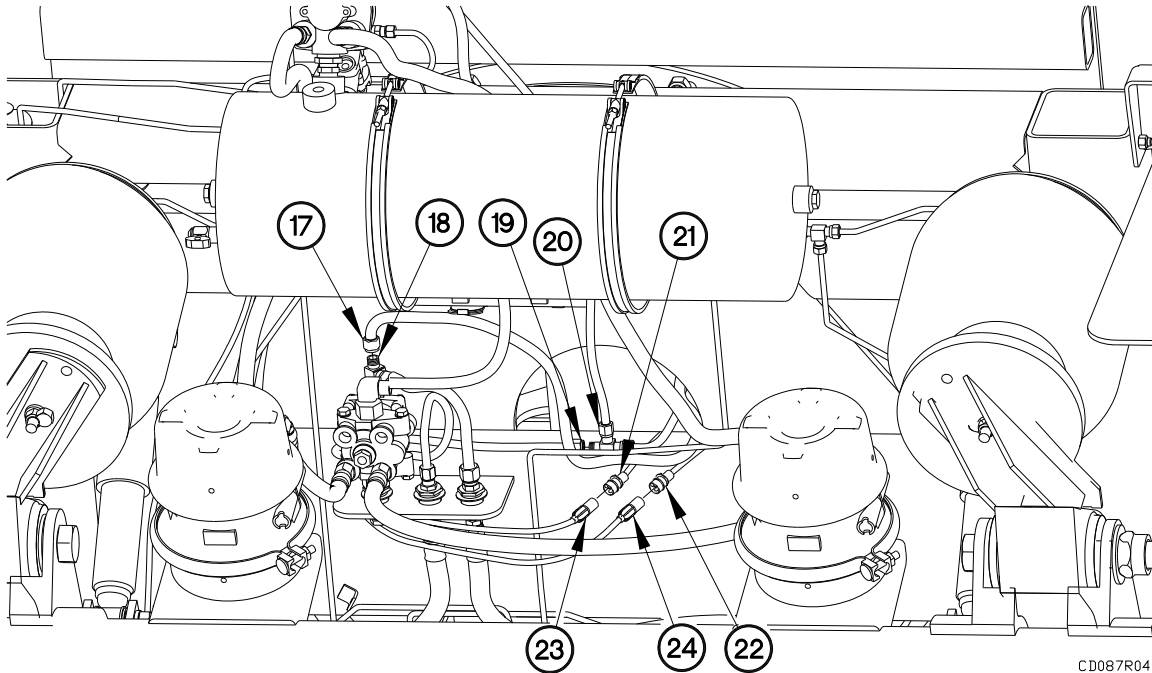
REMOVAL - Continued

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.



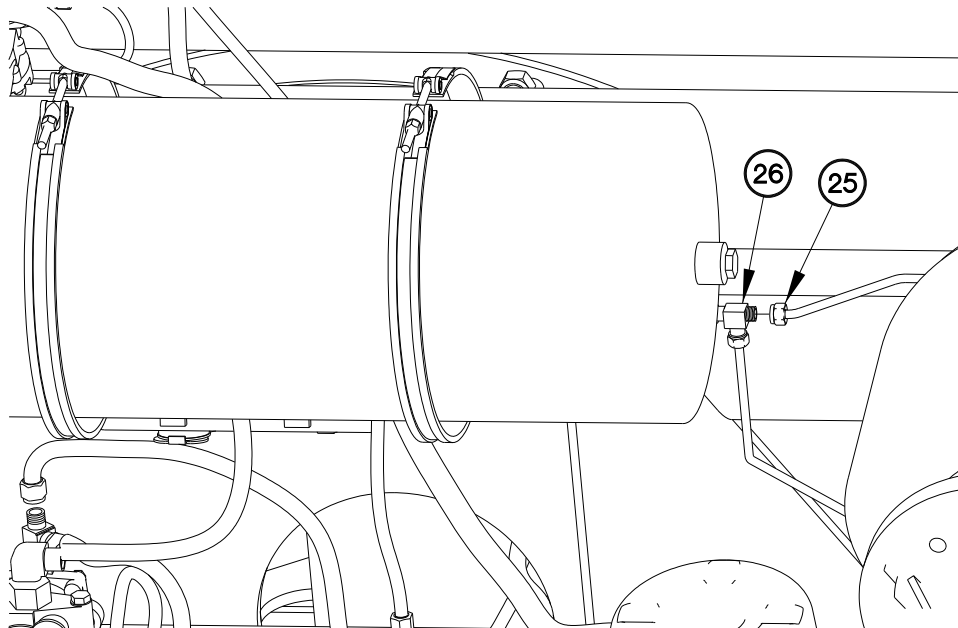
REMOVAL - Continued

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).



REMOVAL - Continued

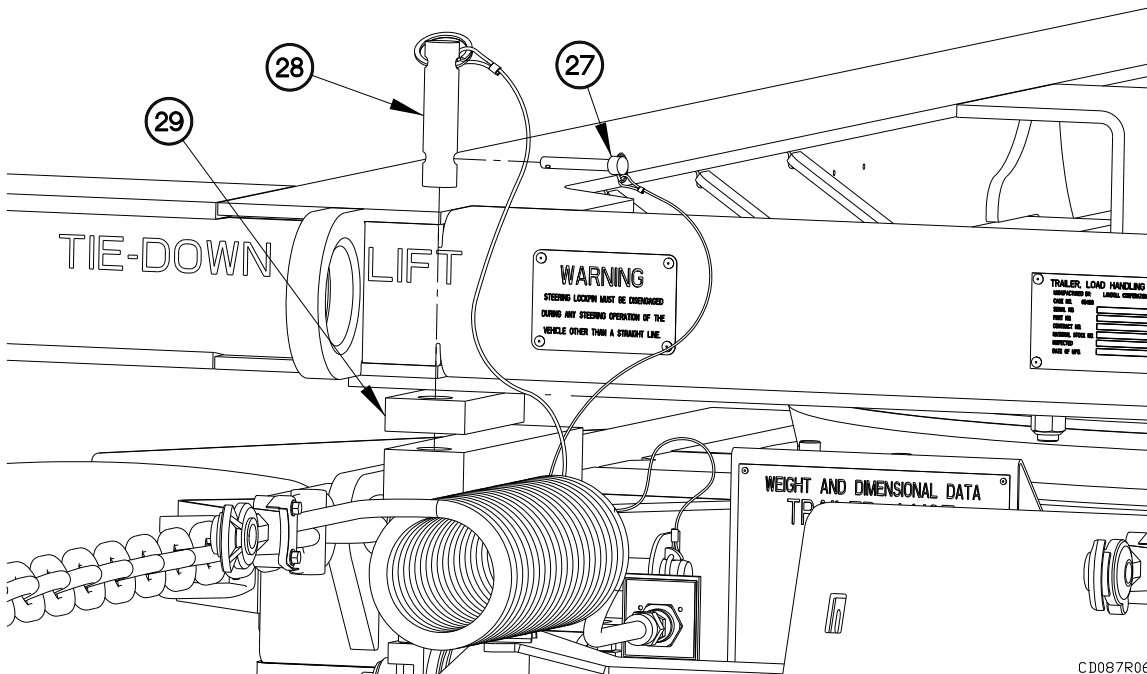
14. Disconnect hose (25) from tee fitting (26).



C.D087R05

15. Remove pin (27) from turntable pin (28).

16. Remove turntable pin (28) from turntable (29).



C.D087R06

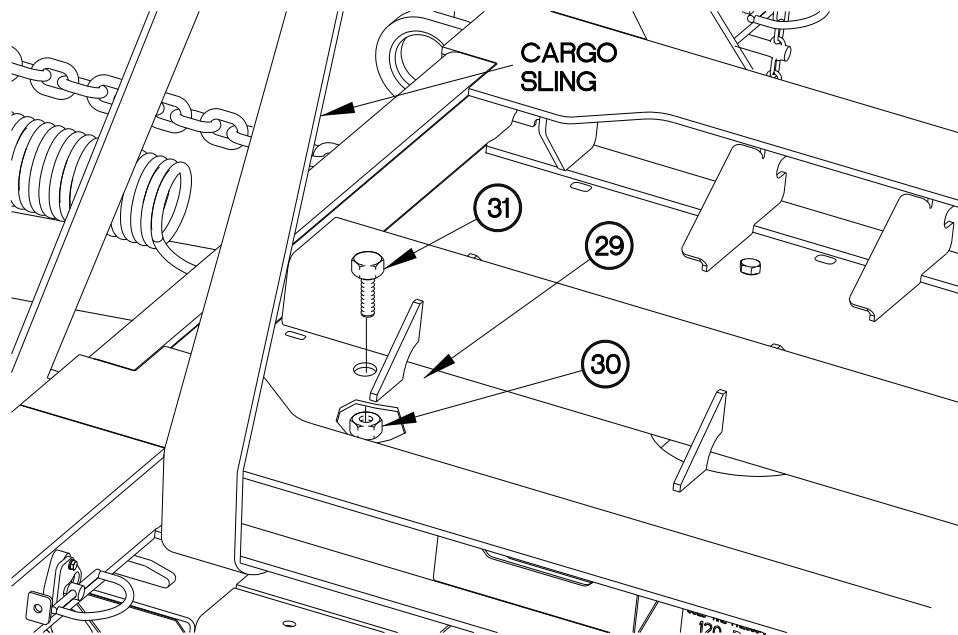
REMOVAL - Continued

17. Attach two cargo slings to trailer, 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.

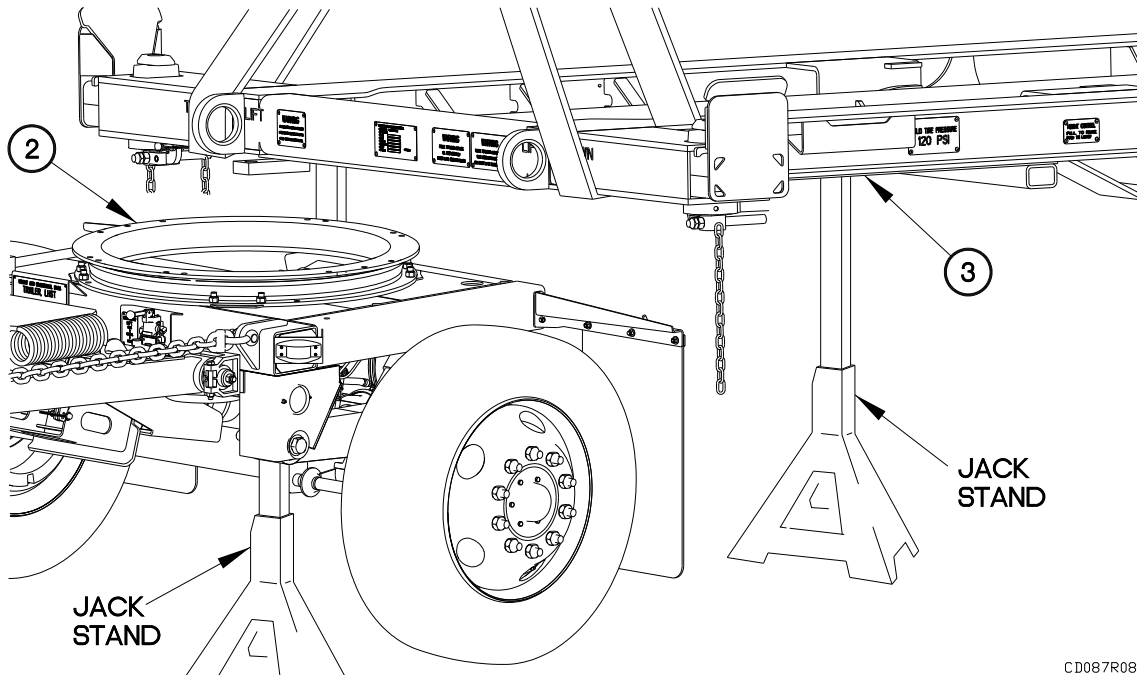


CD087R07

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.

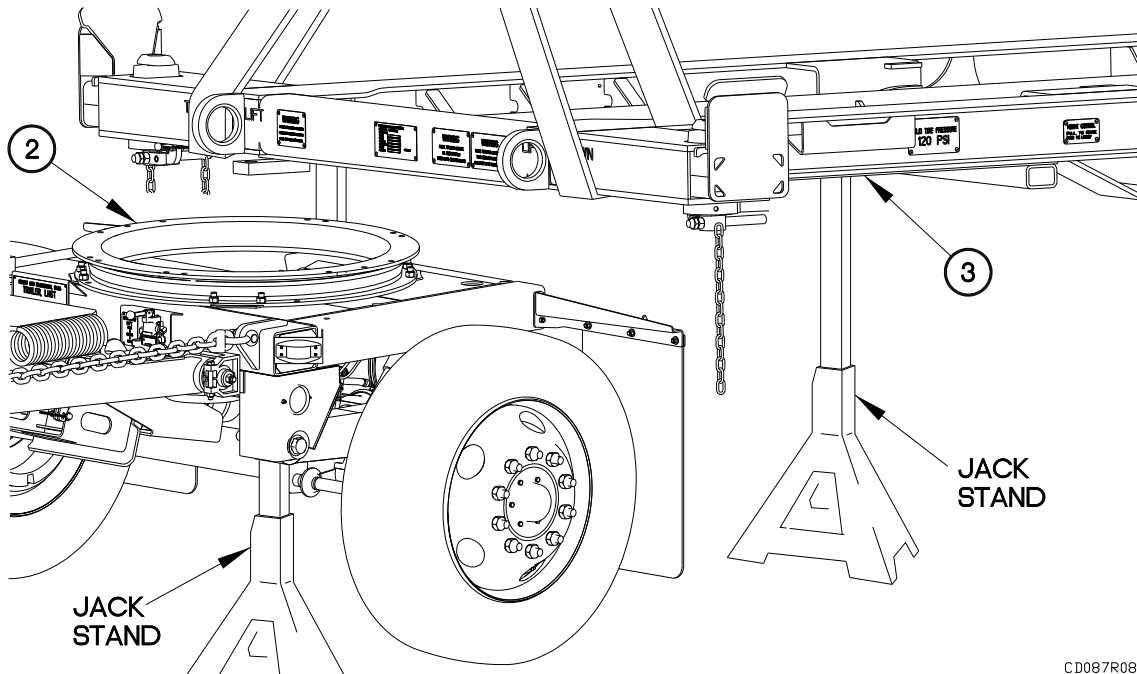


CD087R08

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.

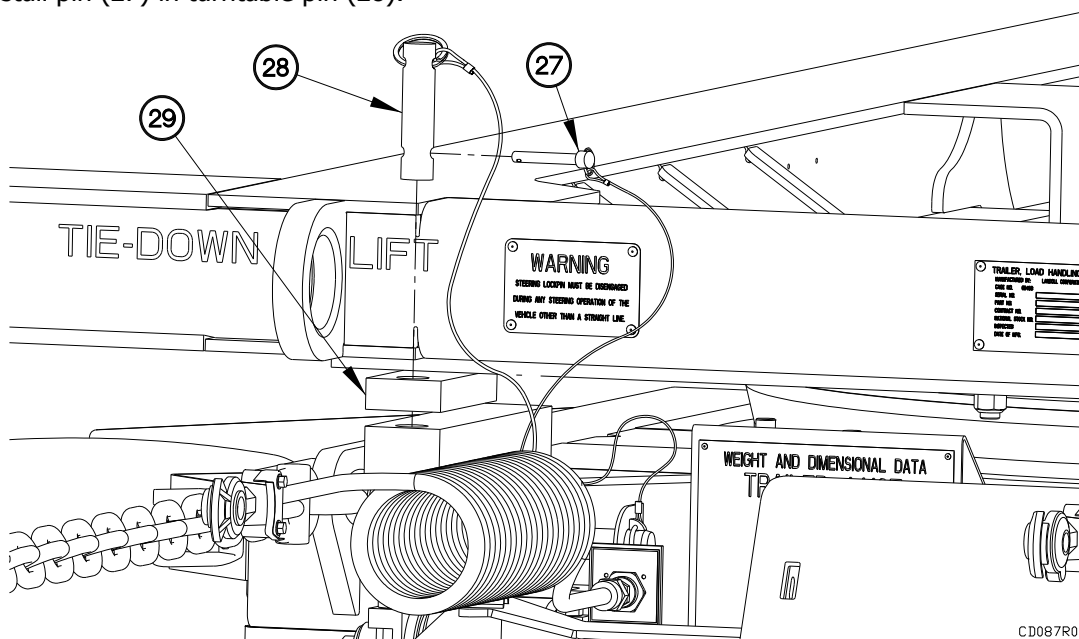
1. Position frame rail (3) on turntable (2) and jack stands.



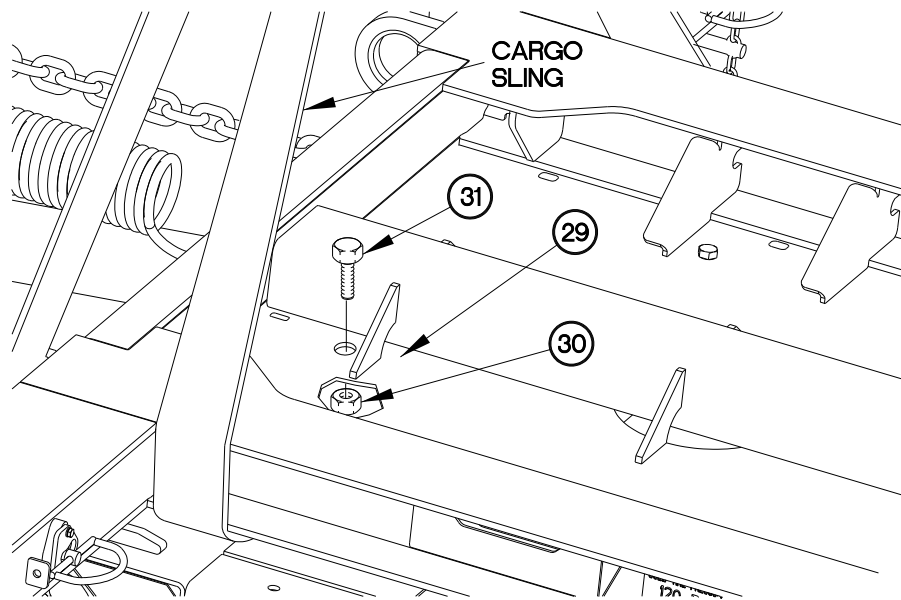
CD087R08

INSTALLATION - Continued

2. Install turntable pin (28) in turntable (29).
3. Install pin (27) in turntable pin (28).

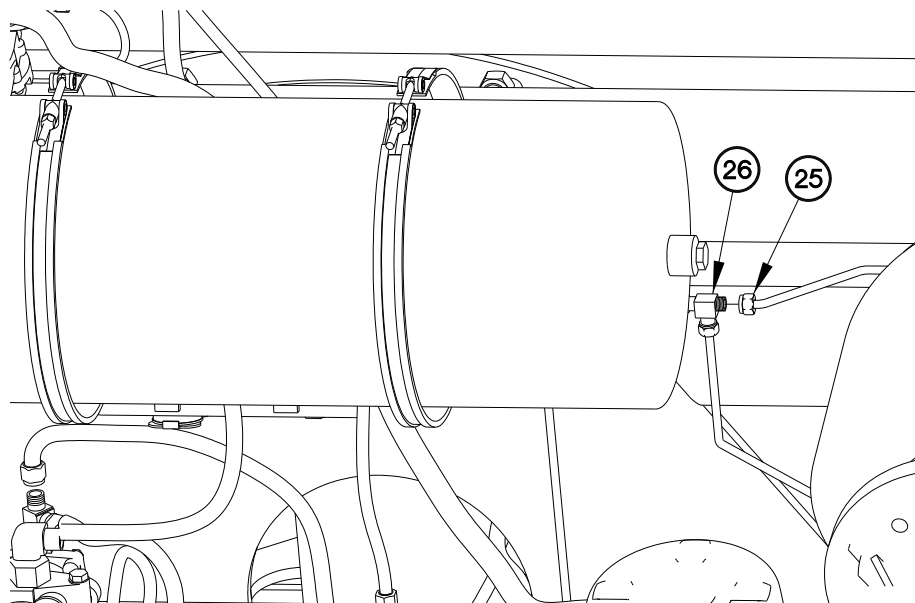


4. Position eight bolts (31) and self-locking nuts (30) in turntable (29).
5. Tighten eight self-locking nuts (30) to 155-185 lb-ft (210-251 N·m).



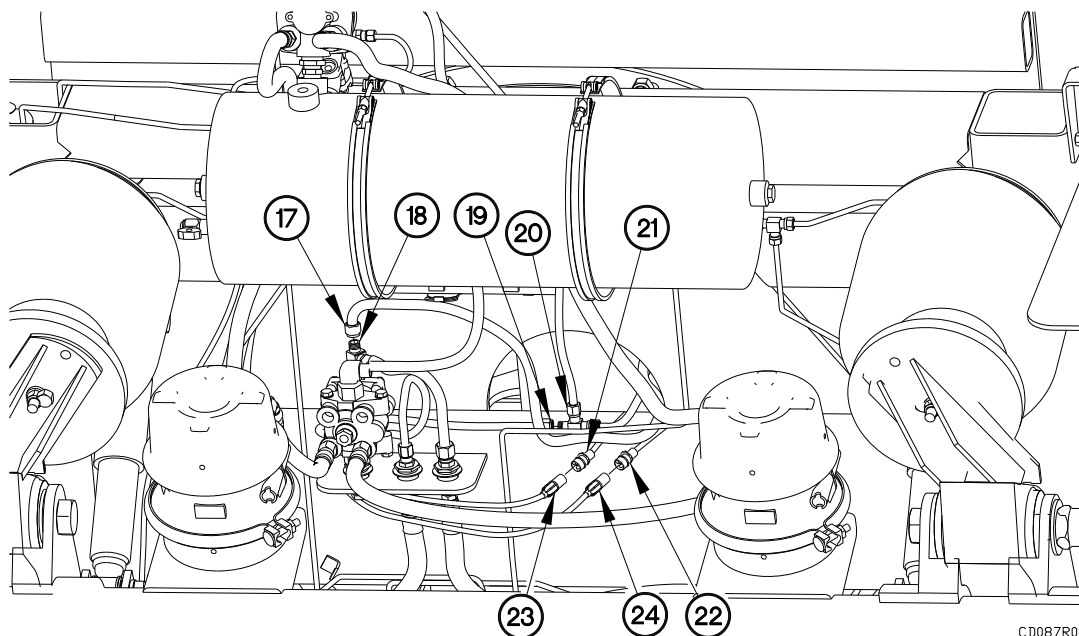
INSTALLATION - Continued

6. Connect hose (25) to tee fitting (26).



CD087R05

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).



CD087R04

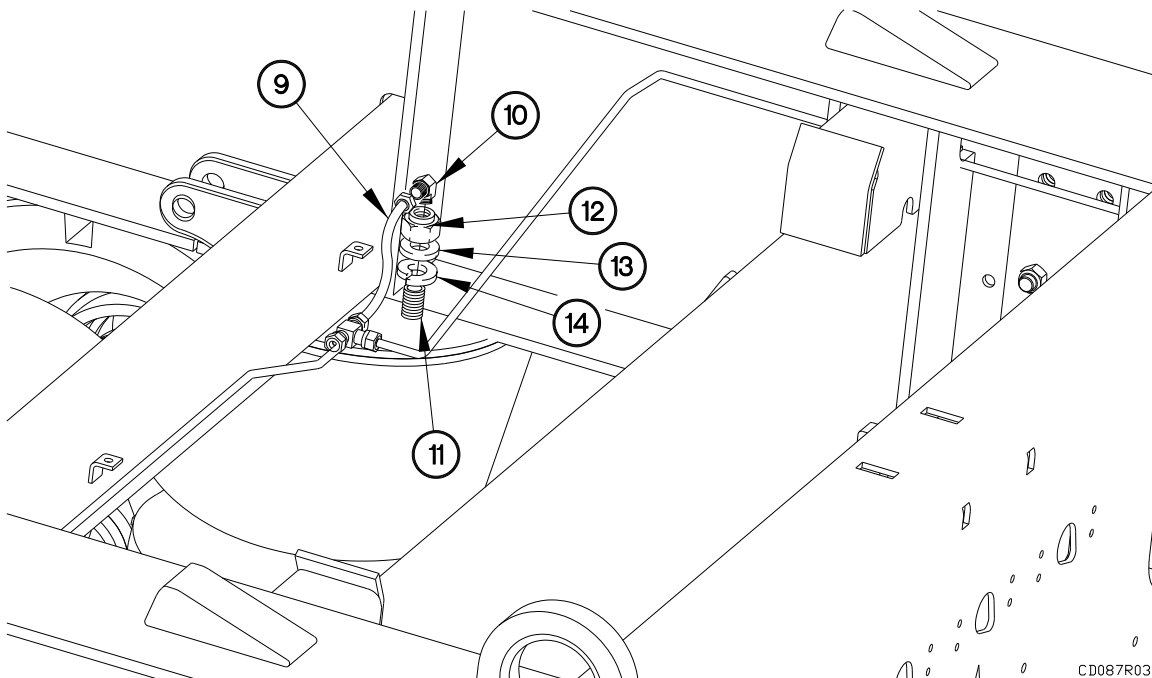
INSTALLATION – Continued**WARNING**

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

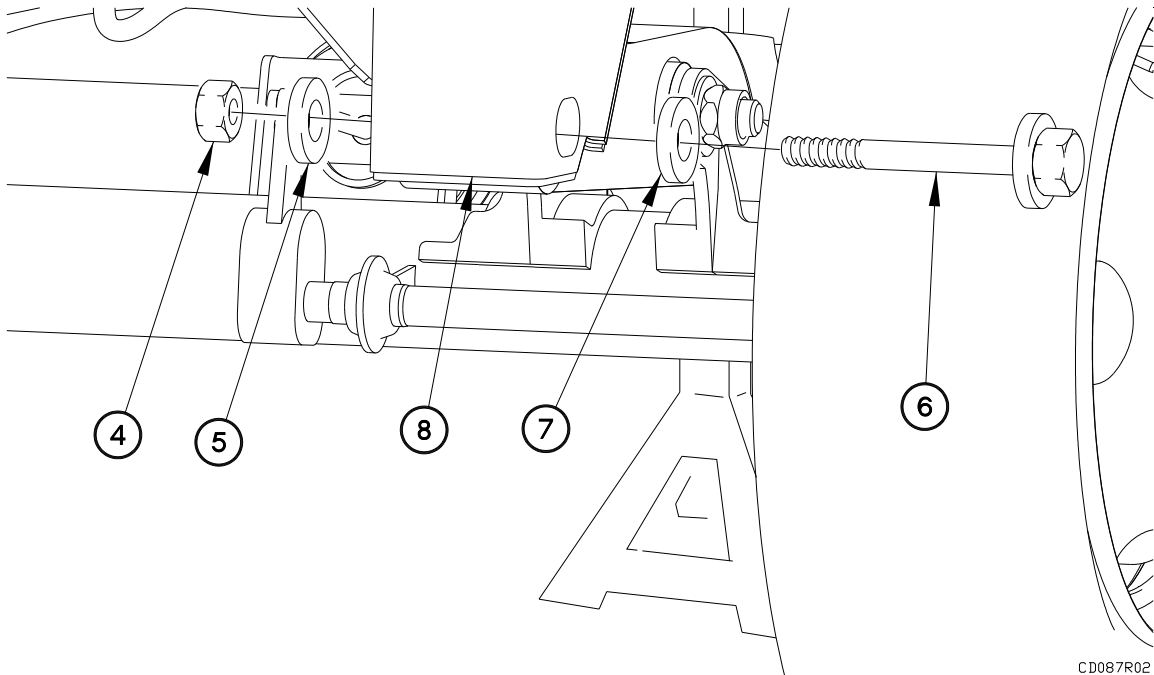
LH and RH sides of suspension is installed on axle the same way. LH side is shown.

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.

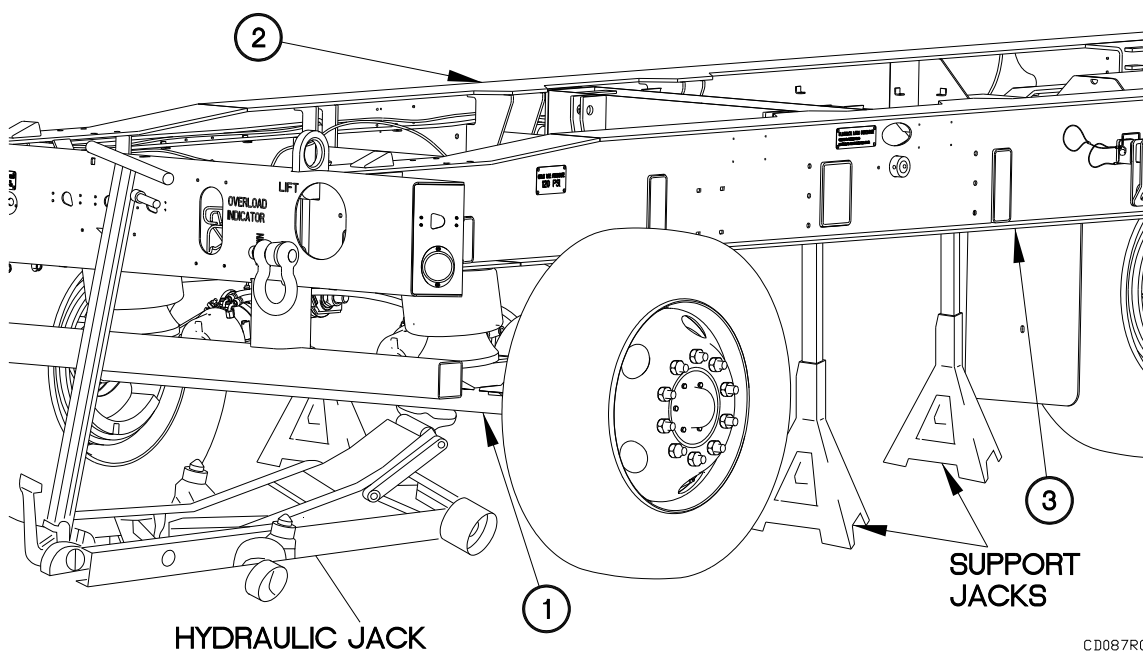


CD087R02

FRAME RAIL REPLACEMENT - Continued**0087 00****INSTALLATION – Continued****NOTE**

LH and RH side jack stands are removed the same way. LH side is 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



CD087R01

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

Materials/Parts

Nut, Self-locking (Item 37, WP 0168 00)

Nut, Self-locking (Item 39, WP 0168 00)

Tools and Special Tools

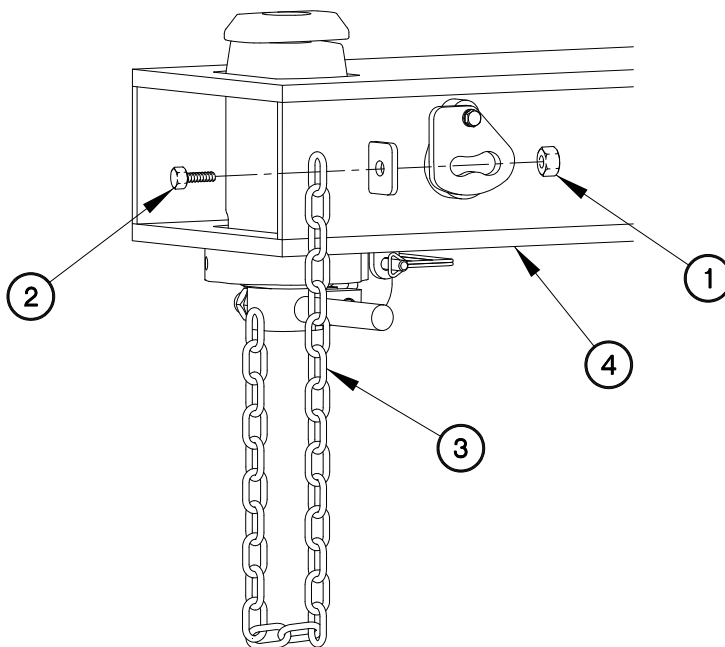
Tool Kit, Genl Mech (Item 24, WP0167 00)

Wrench, Torque, 0-175 lb-ft (Item 34,
WP0167 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

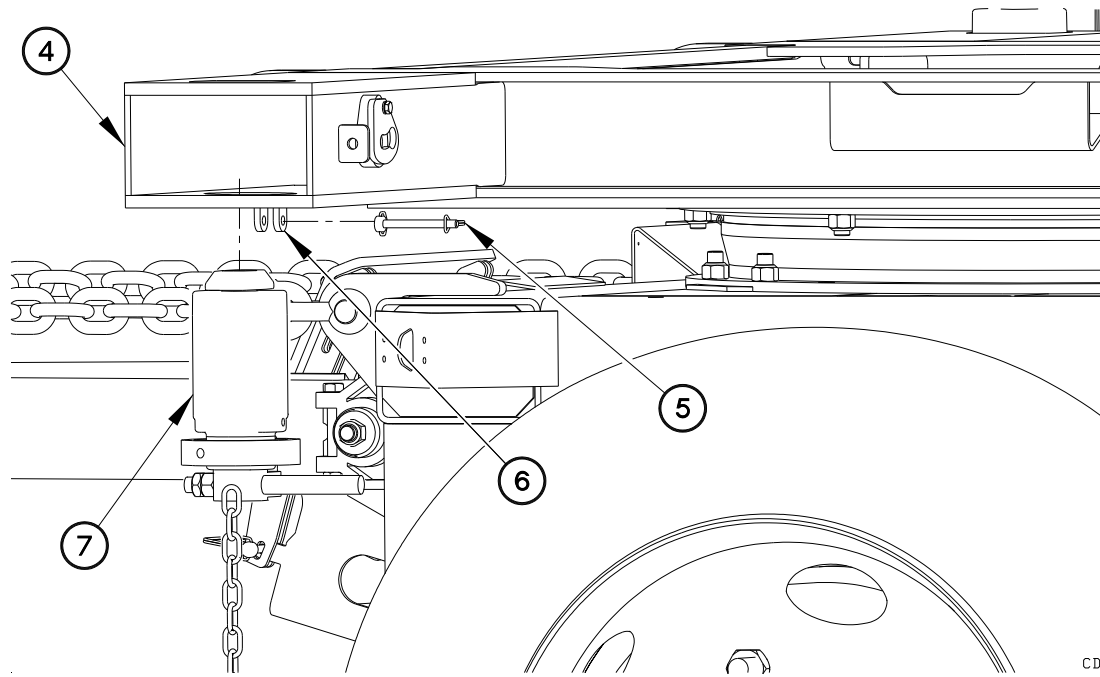
1. Remove nut (1) from bolt (2).
2. Remove bolt (2) from chain (3) and trailer crossmember (4).



CD088R01

REMOVAL – Continued

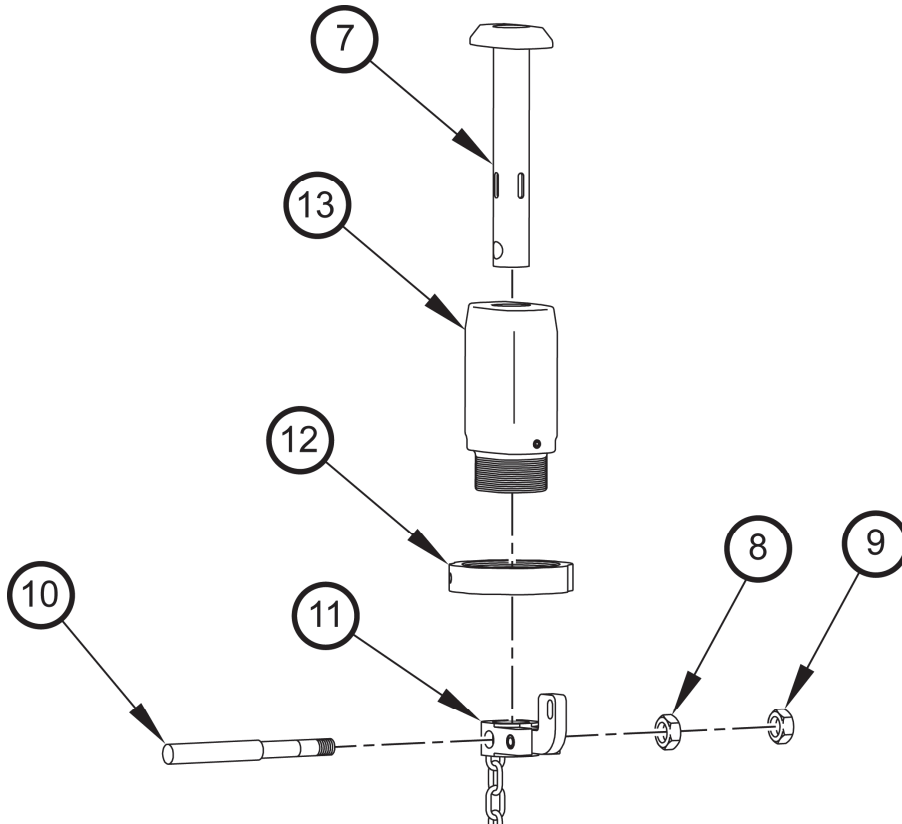
3. Remove retaining pin (5) from cap (6).
4. Rotate bottom of ISO lock (7) 90 degrees.
5. Remove ISO lock from trailer crossmember (4).



C0088R02

REMOVAL – Continued

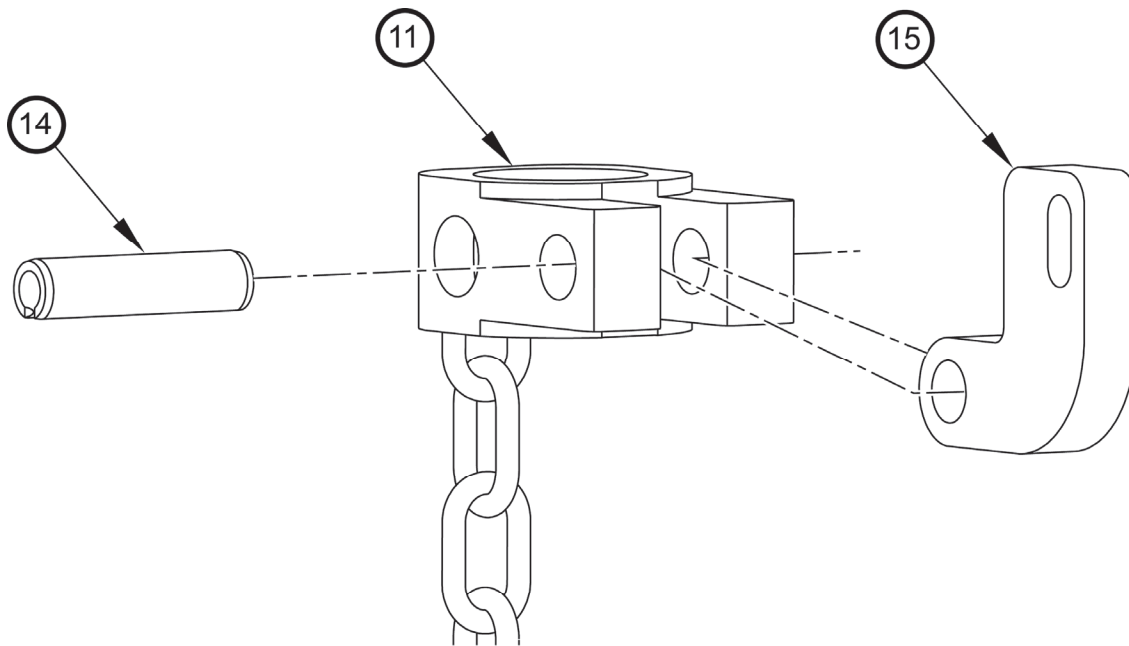
6. Remove nuts (8 and 9) from retaining pin (10).
7. Remove retaining pin (10) and lock handle (7) from cap (11).
8. Remove lock handle (7) from lock body (13).
9. Remove hand screw (12) from lock body (13).



DO52353

REMOVAL – Continued

10. Remove roll pin (14) and retaining bracket (15) from cap (11).

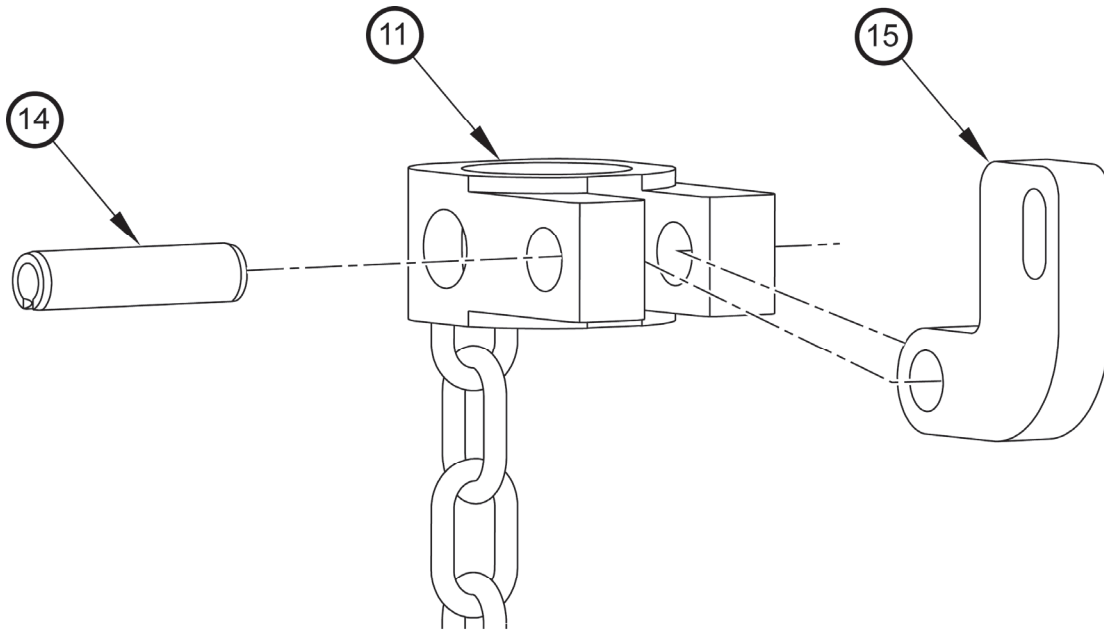


DO52354

END OF TASK

INSTALLATION

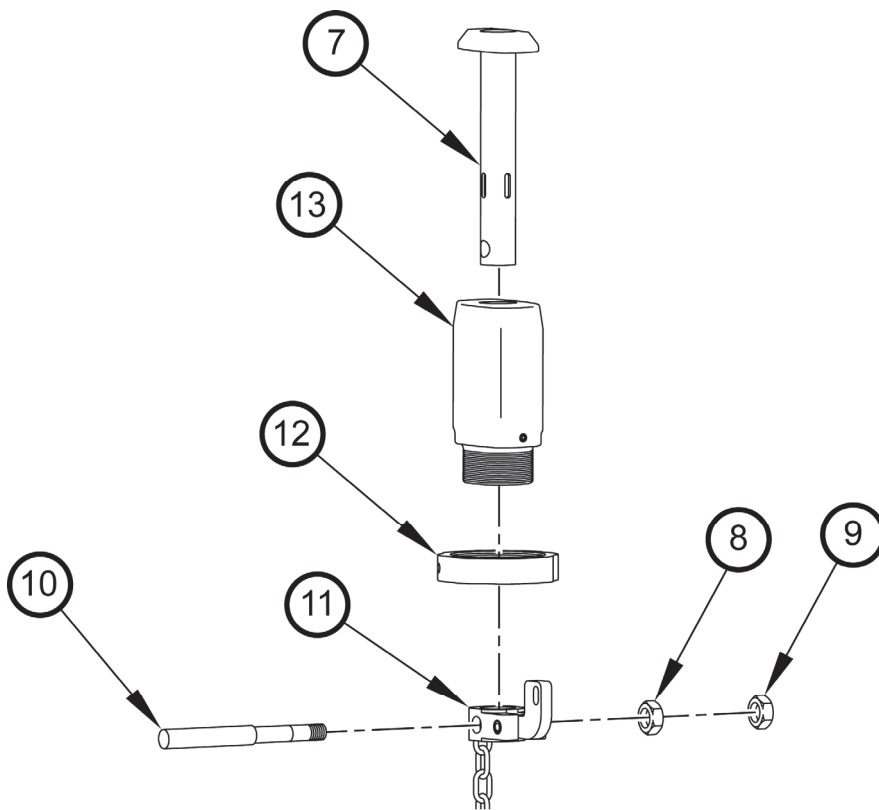
1. Install roll pin (14) in retaining pin (15) and cap (11).



DO52354

INSTALLATION – Continued

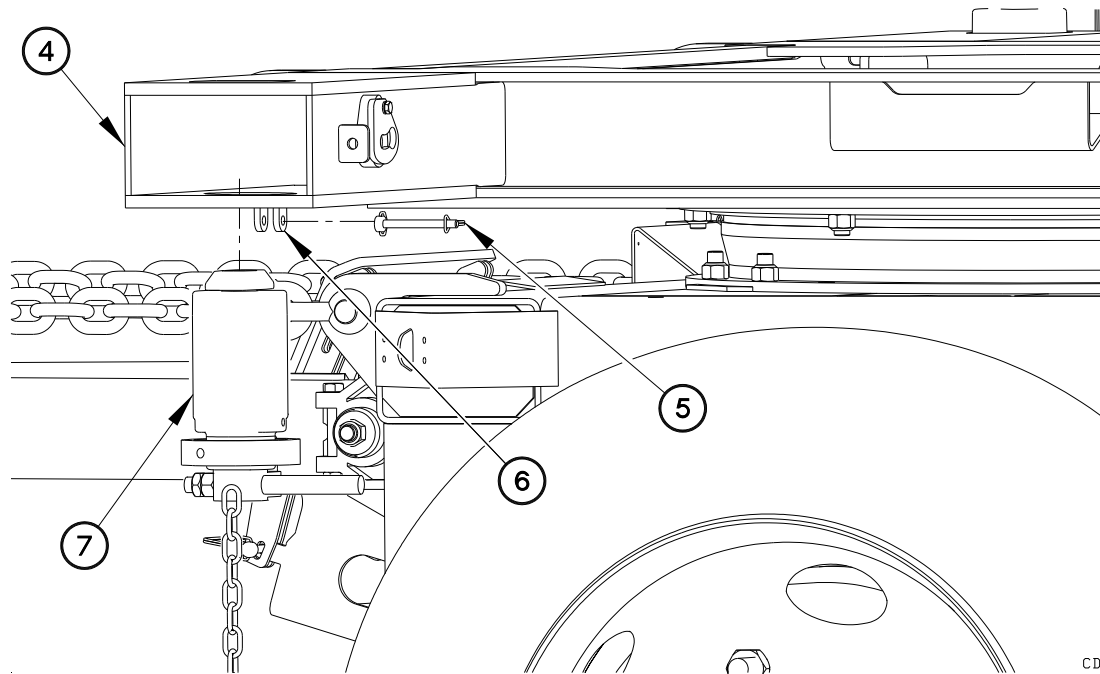
2. Install hand screw (12) to lock body (13).
3. Install lock handle (7) into lock body (13).
4. Install retaining pin (10) into lock handle (7).
5. Install nut (8) to retaining pin (10).
6. Hold nut (8) and tighten nut (9) to 105-115 lb ft (142-156 N·m).



DO52353

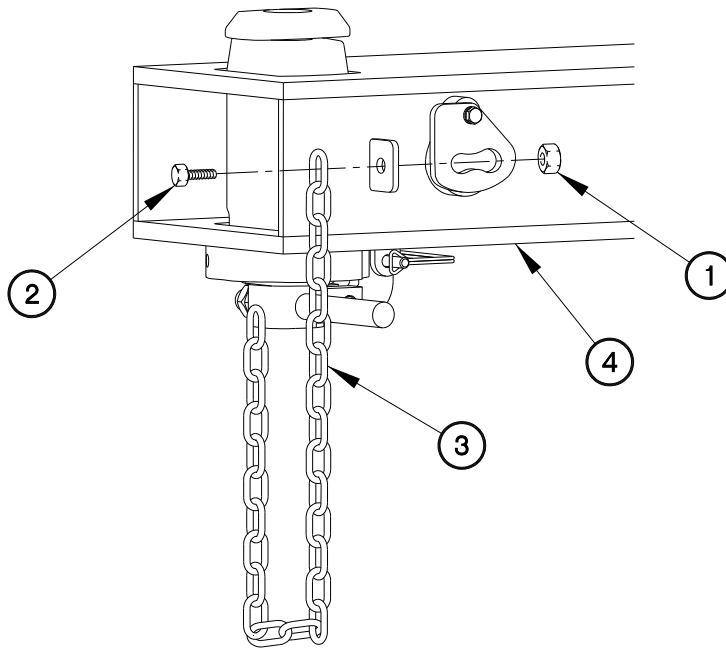
INSTALLATION – Continued

7. Insert lock handle (7) into LHST frame (4).
8. Rotate bottom of ISO lock 90 degrees.
9. Attach retaining pin (5) to cap (6).



INSTALLATION – Continued

10. Insert bolt (2) into chain (3) and trailer crossmember (4).
11. Attach nut (1) to bolt (2).
12. Tighten nut (1) to 40-46 lb-ft (54-62 N·m).



CD088R01

END OF TASK**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 24, WP 0167 00)
 Wrench, Torque 50-250 lb-ft (Item 33, 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

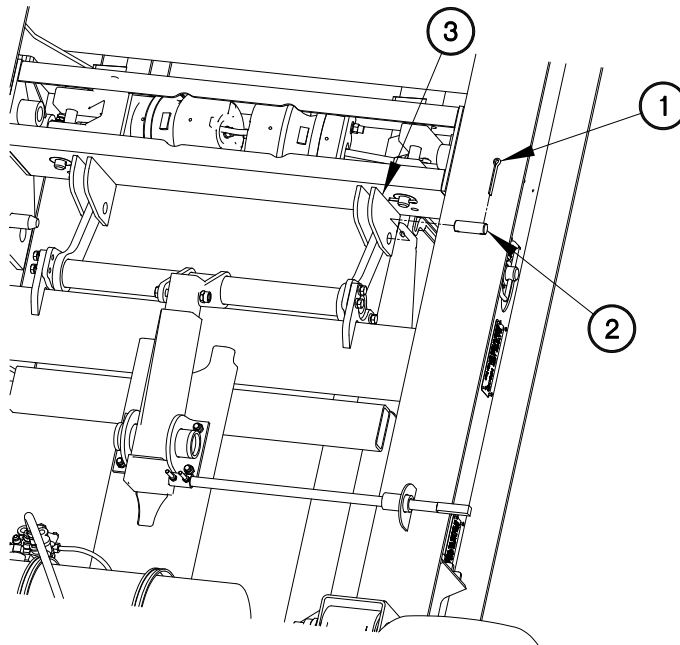
Shuttle removed (WP 0100 00)
 Flatrack Air Chambers and Locks removed (WP 0107 00)

REMOVAL

NOTE

All four retaining pins are removed the same way. One is 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.



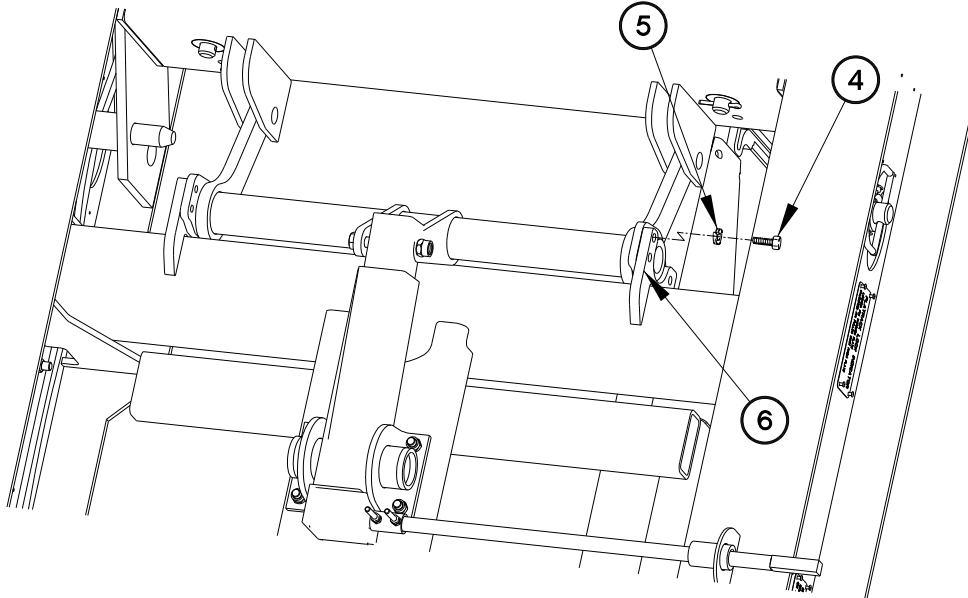
CD089R01

FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT

0089 00

REMOVAL - Continued

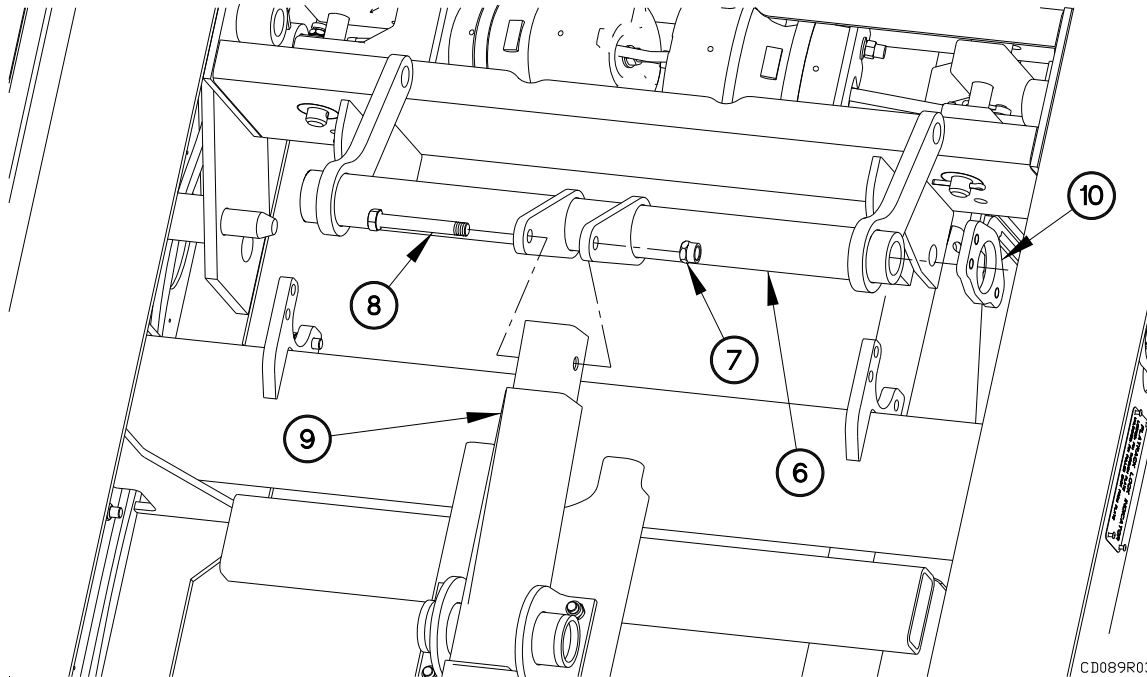
3. Remove six bolts (4) and lockwashers (5) from pivot bracket (6). Discard lockwashers.



C0089R02

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).

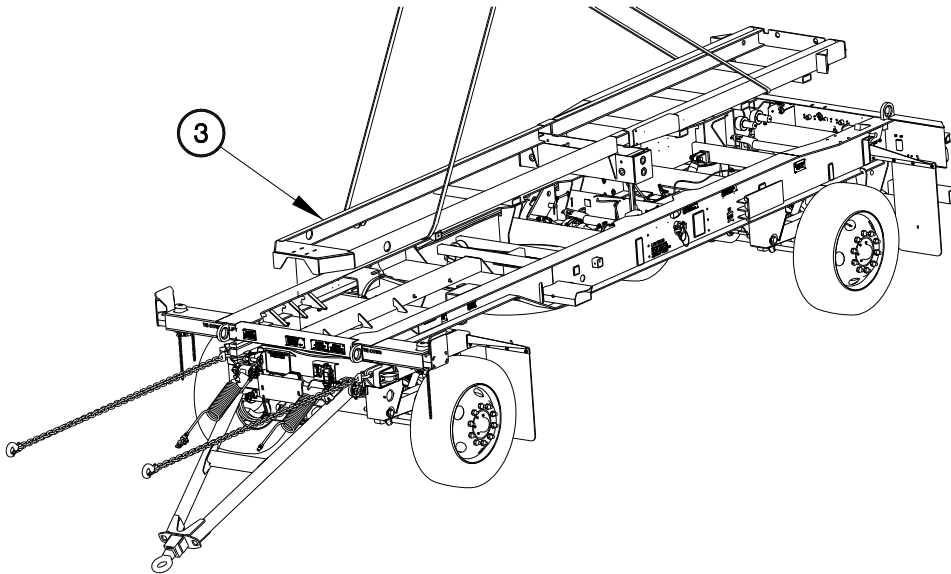


C0089R03

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.

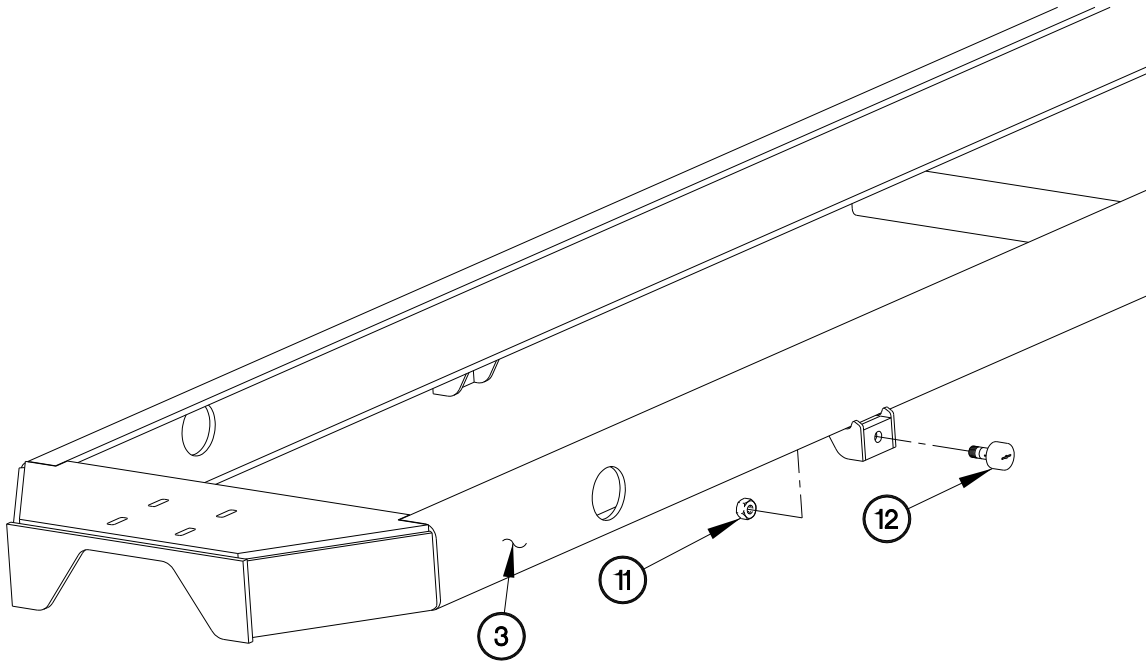
6. Remove flatrack rail (3) from vehicle.



CD089R04

REMOVAL - Continued

7. Remove two self-locking nuts (11) and cam followers (12) from flatrack rail (3). Discard self-locking nuts.

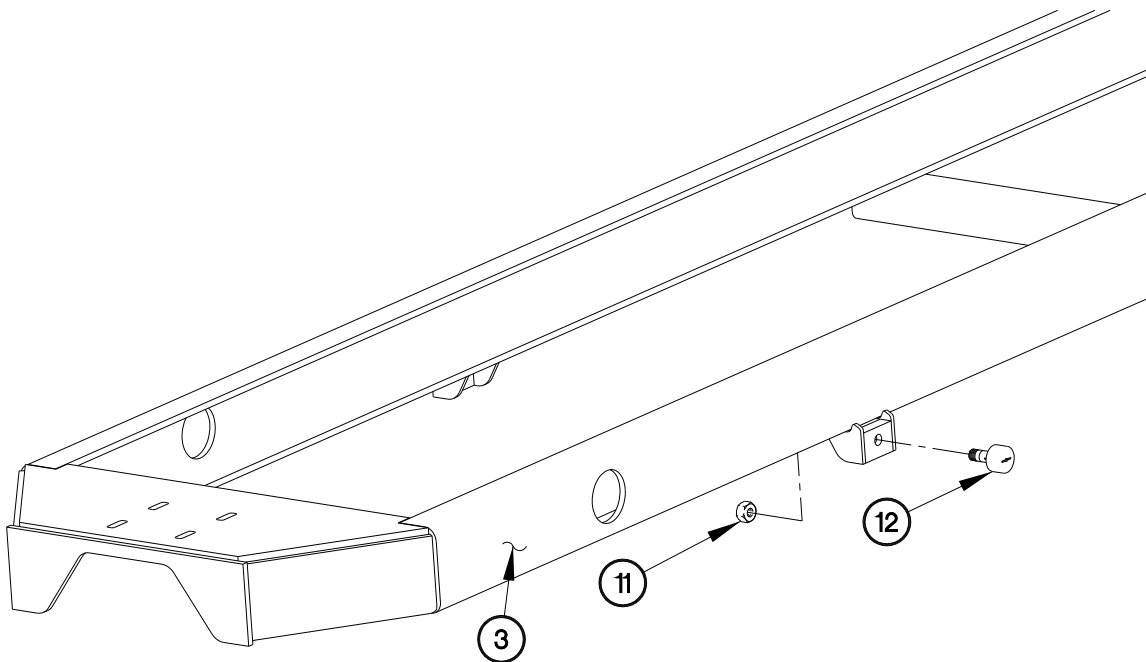


CD089R05

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 flattrack rail (3) with two self-locking nuts (11).
3. Tighten two self-locking nuts (11) to 29-35 lb-ft (39-47 N·m).

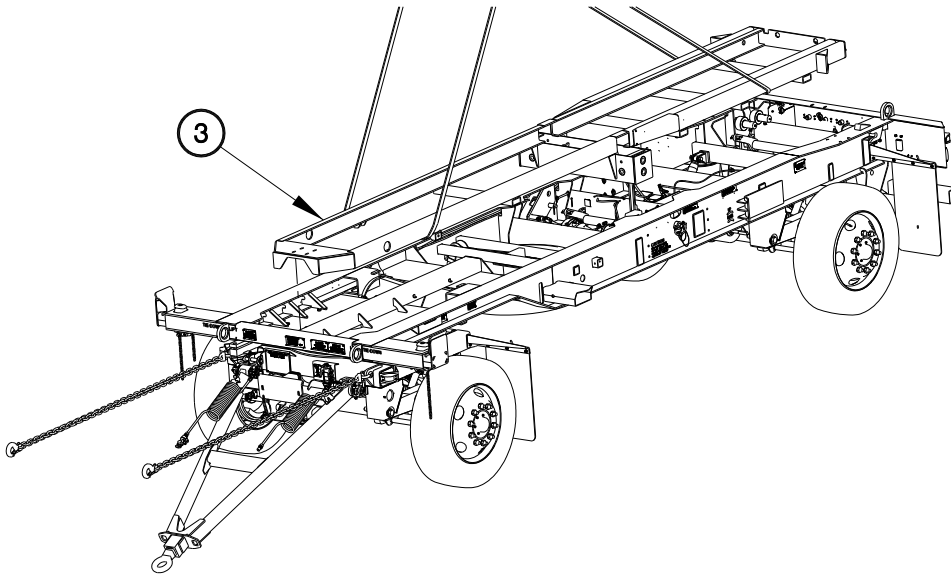


CD089R05

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.

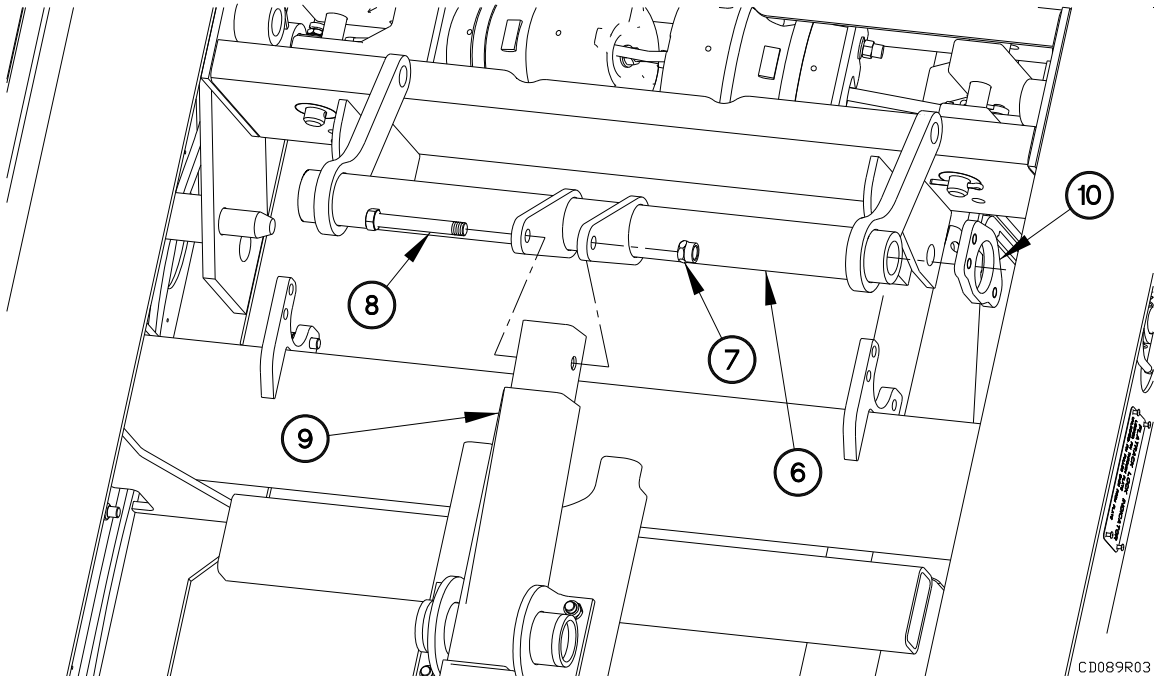
4. Position flatrack rail (3) on vehicle.



CD089R04

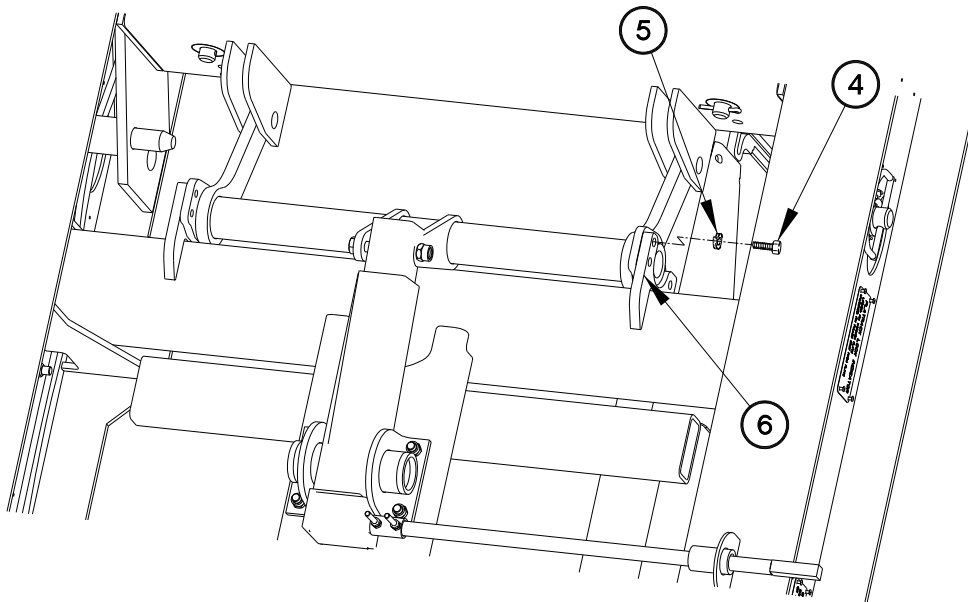
INSTALLATION - Continued

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).



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).

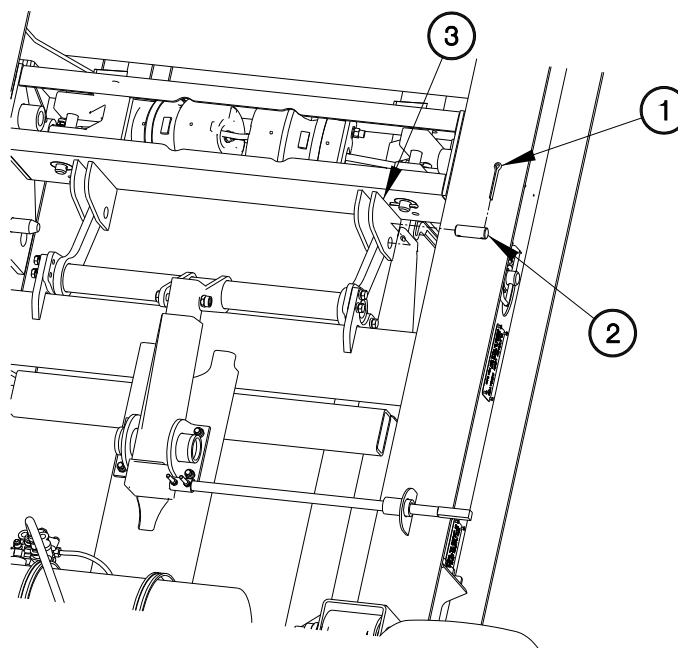


CD089R02

**FLATRACK RAIL AND PIVOT BRACKETS REPLACEMENT
- CONTINUED****0089 00****INSTALLATION - Continued****NOTE**

All four retaining pins are installed the same way. One is shown.

10. Install retaining pin (2) in flatrack rail (3) with two cotter pins (1).
11. Perform previous step on remaining retaining pins.



CD089R01

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 24, WP 0167 00)
 Wrench, Impact, Pneumatic (Item 32, WP 0167 00)
 Socket Set, Impact (Item 18, WP 0167 00)
 Wrench, Torque, 0-175 lb-ft (Item 34, 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 20, 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

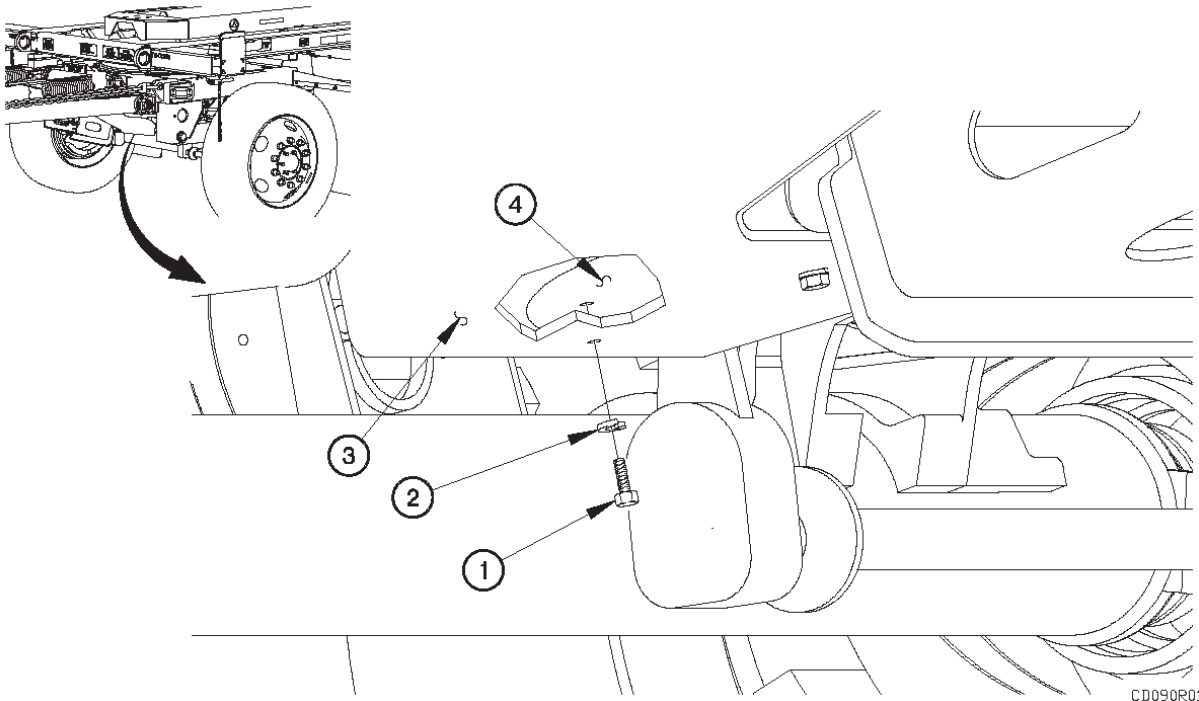
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) drawbar.

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**

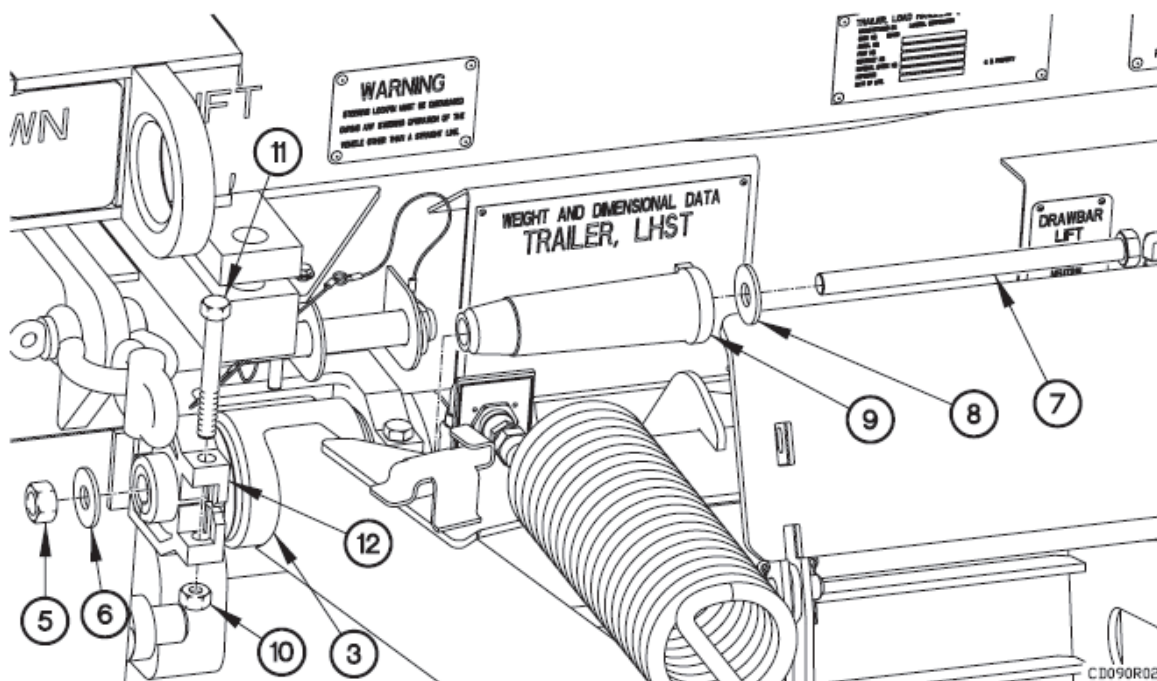
1. Drain air tanks.
2. Remove two bolts (1) and lockwashers (2) from drawbar (3) and air bladder (4). Discard lockwashers.



DRAWBAR REPLACEMENT - Continued**0090 00****REMOVAL - Continued****NOTE**

LH and RH drawbar hinges are removed the same way. RH drawbar hinge shown.

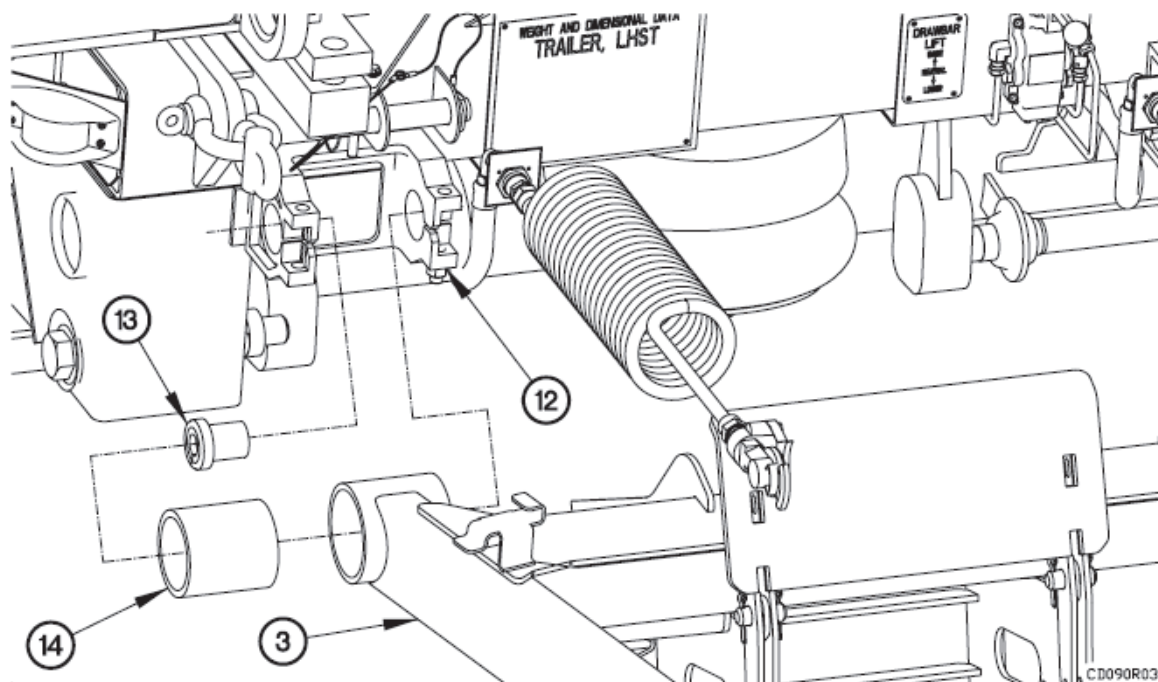
3. Remove self-locking nut (5), washer (6), bolt (7), and washer (8) from taper pin (9). Discard self-locking nut.
4. Remove two self-locking nuts (10) and bolts (11) from drawbar hinge bracket (12). Discard self-locking nuts.
5. Remove taper pin (9) from drawbar (3) and drawbar hinge bracket (12).
6. 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).



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

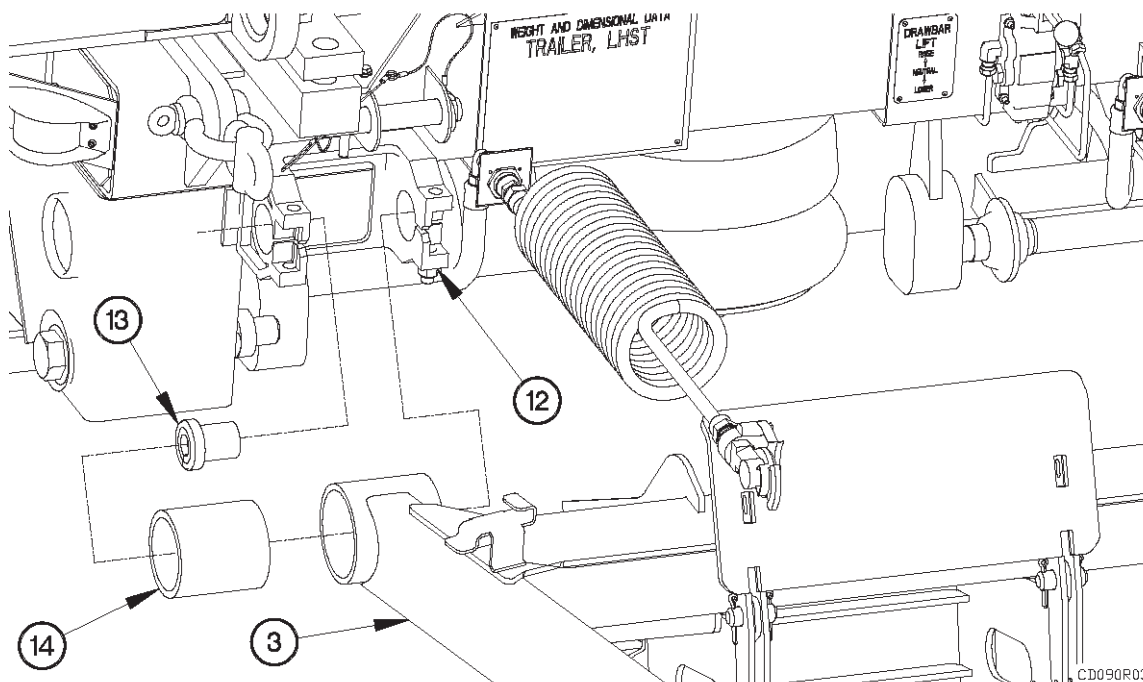
- Drawbar hinge bushing openings are tapered to fit taper pins. Be sure to install bushings with wider opening towards the inside of the drawbar. Failure to comply may result in damage to equipment.
- Line up slots on drawbar hinge flanges with slots on drawbar hinge brackets. Failure to comply may result 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

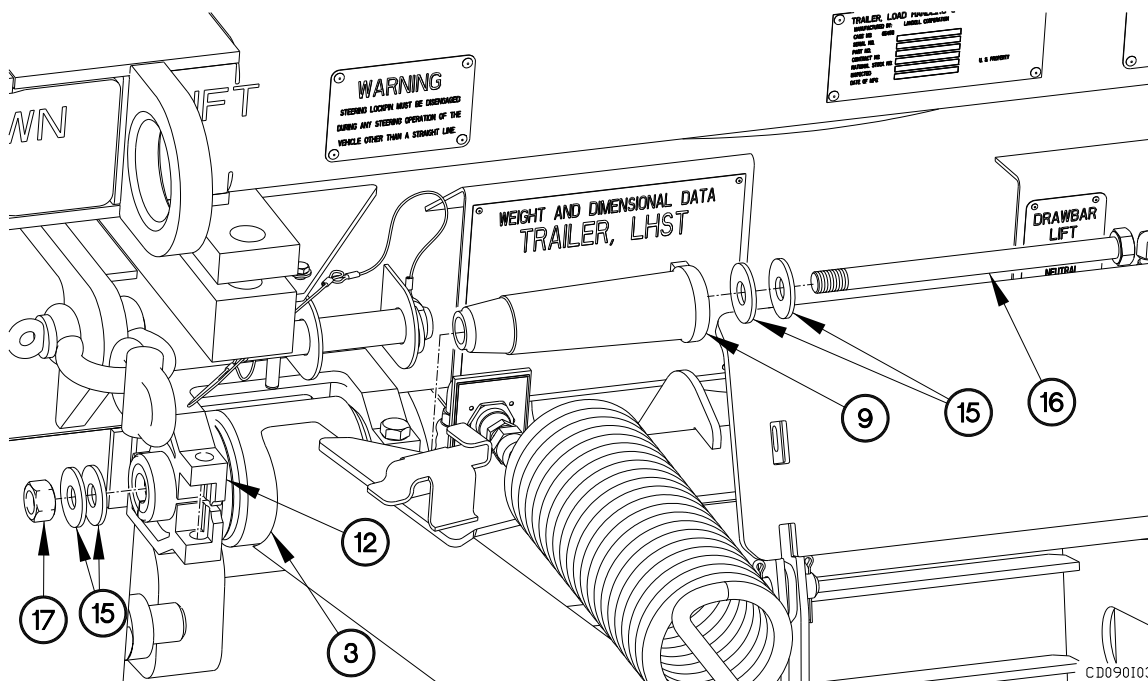
The following step requires the aid of an assistant.

3. Position drawbar (3) on two drawbar hinge brackets (12).



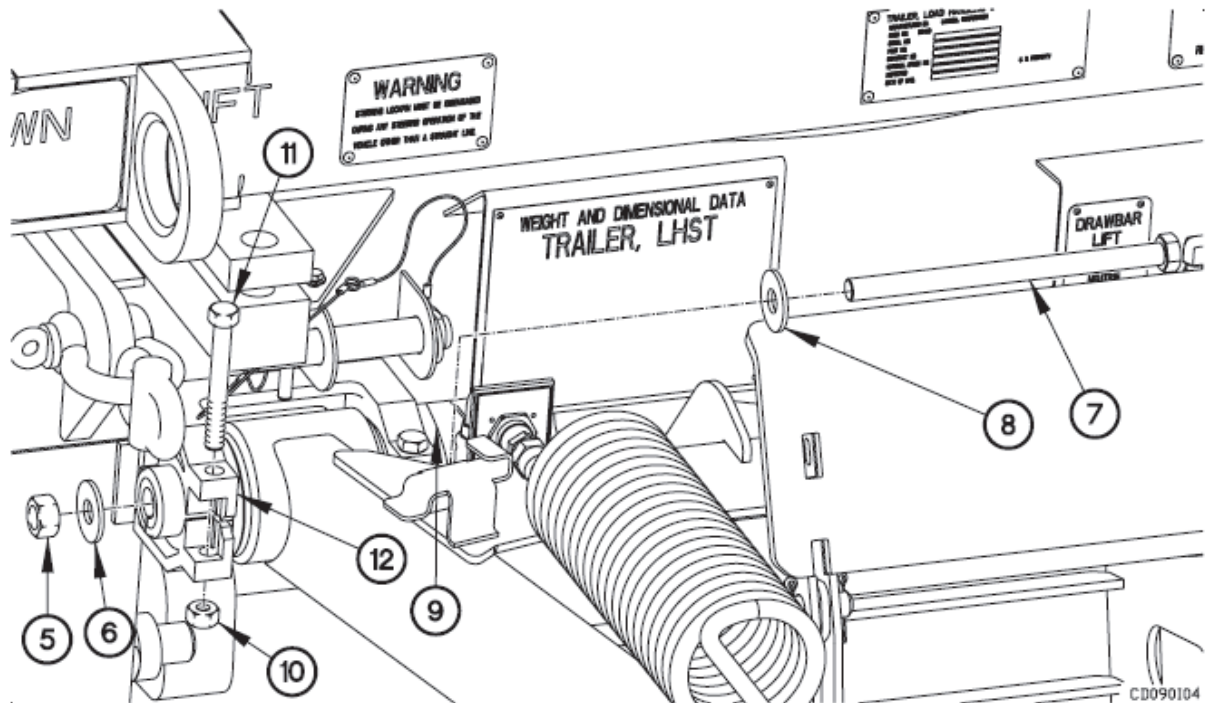
DRAWBAR REPLACEMENT - Continued**0090 00****INSTALLATION – Continued****NOTE**

- 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.



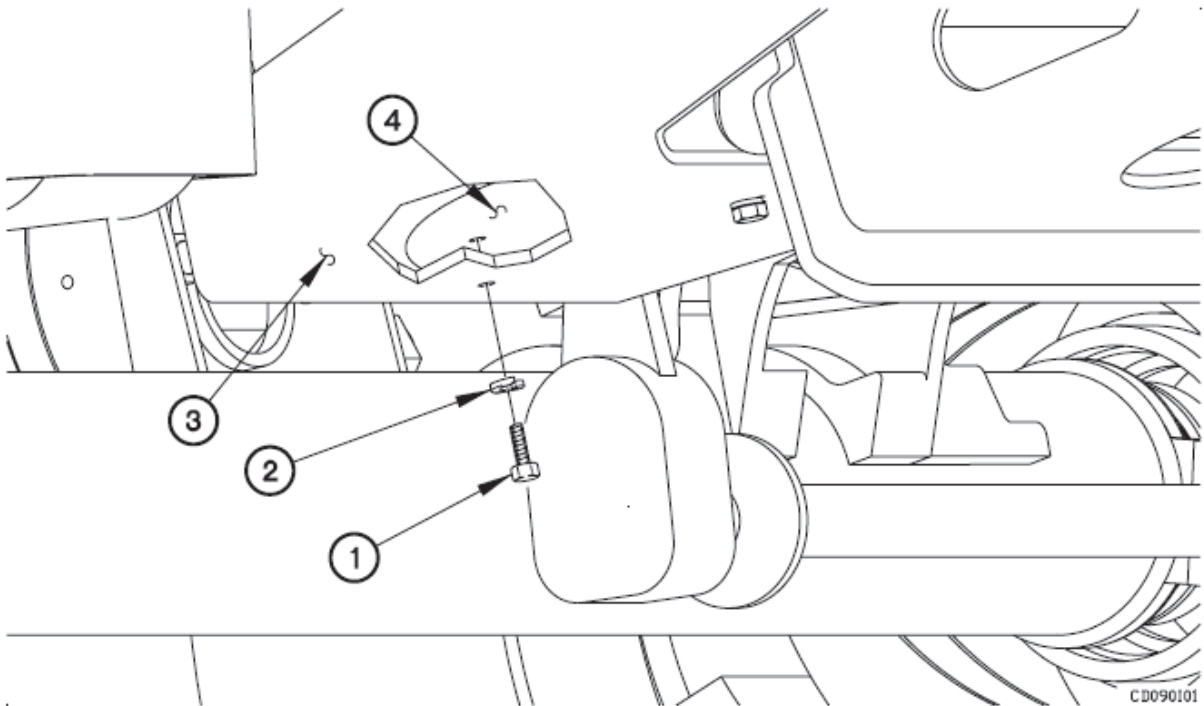
DRAWBAR REPLACEMENT - Continued**0090 00****INSTALLATION – Continued**

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**

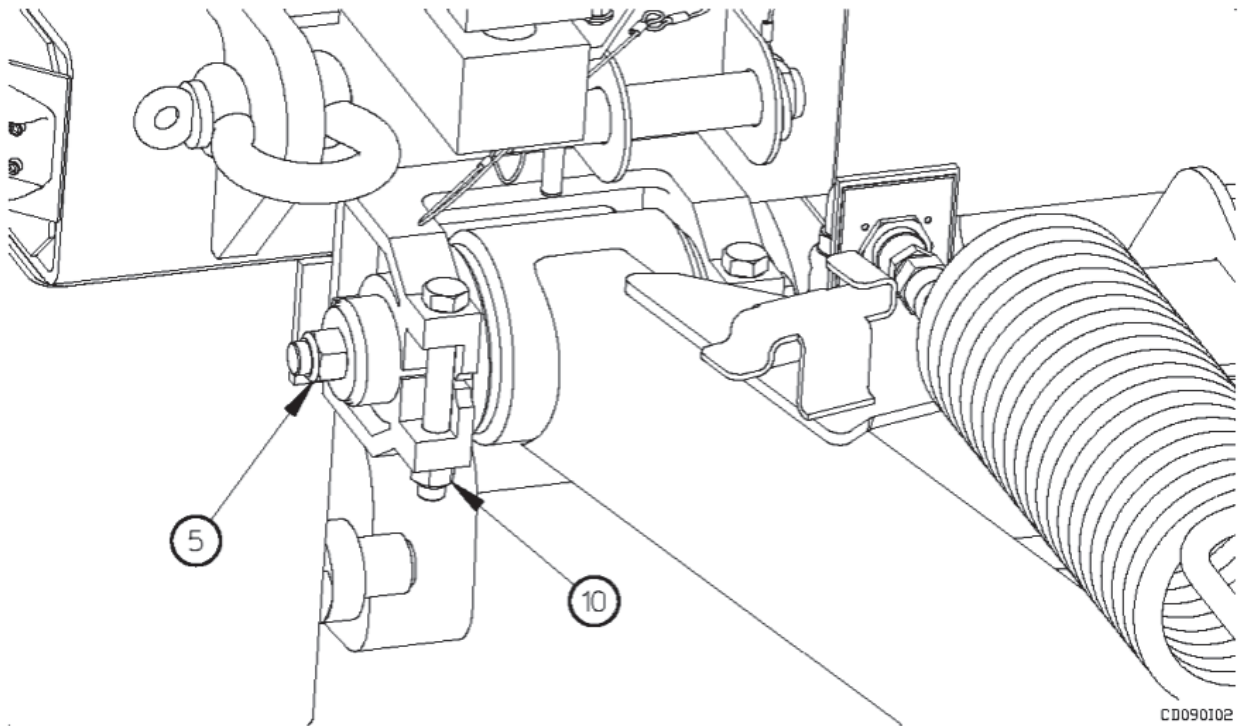
11. Position two lockwashers (2) and screws (1) in drawbar (3) and air bladder (4).
12. Tighten two screws (1) to 33-37 lb-ft (45-50 N·m).



DRAWBAR 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) to 60 lb-ft (81 N·m).
14. Tighten four self-locking nuts (10) to 107-117 lb-ft (145-158 N·m).



DRAWBAR REPLACEMENT - Continued

0090 00

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

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

GENERAL

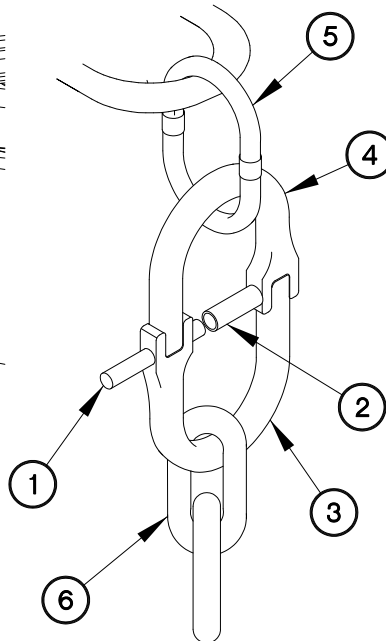
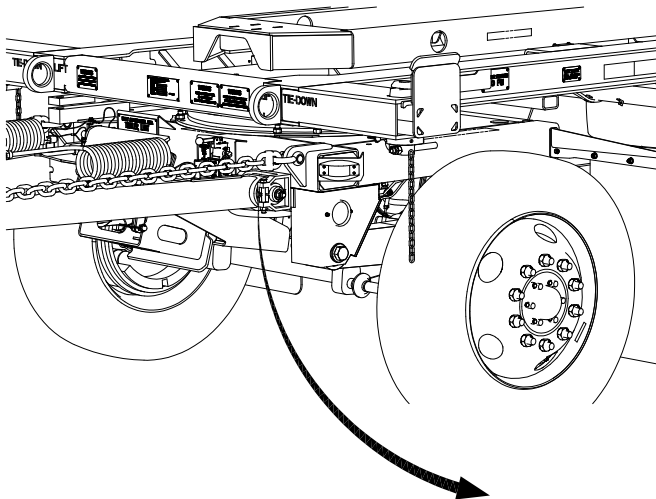
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) safety chain assembly.

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).

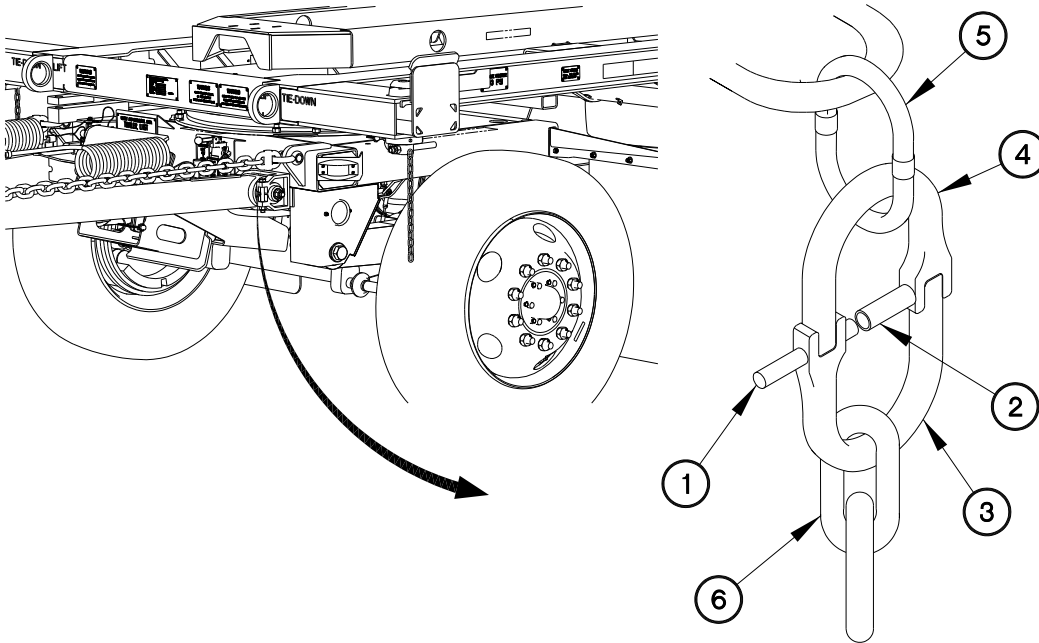


INSTALLATION

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).



CD091R01

END OF WORK PACKAGE

DRAWBAR EYE REPLACEMENT

0092 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Pin, Cotter (Item 48, WP 0168 00)
Grease, Automotive and Artillery (GAA)
(Item 7, WP 0165 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Multiplier, Torque Wrench (Item 13,
WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Bar, Wrecking (Item 2, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 36,
WP 0167 00)
Socket Set, Socket Wrench (Item 19,
WP 0167 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.

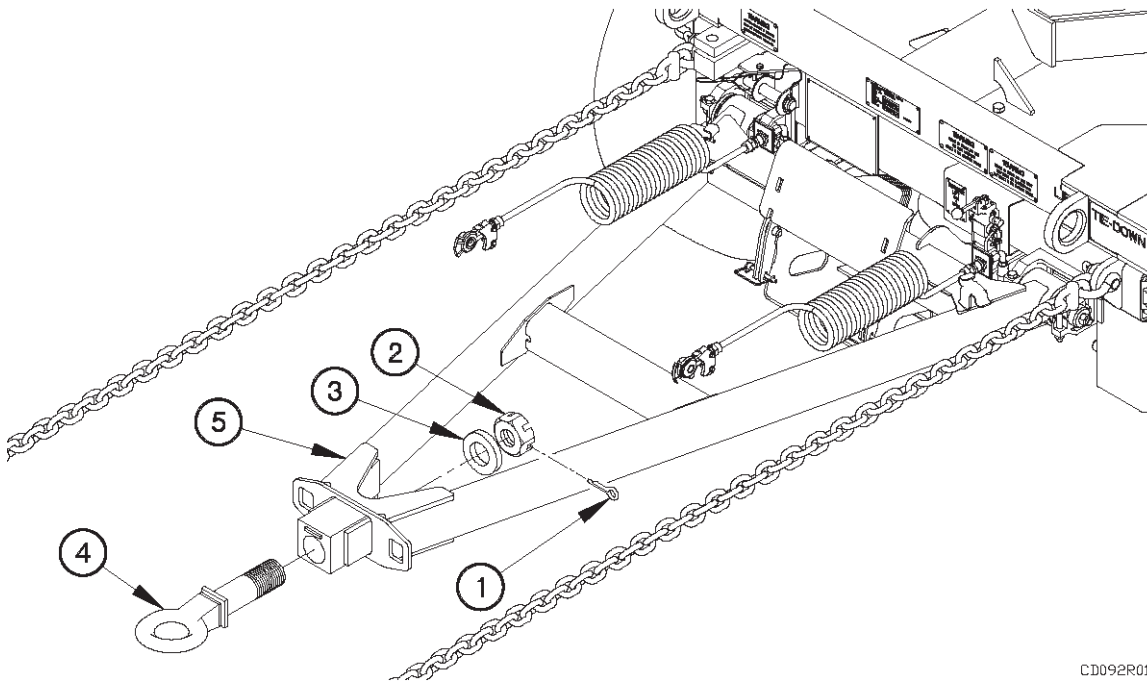
DRAWBAR EYE REPLACEMENT - Continued**0092 00****REMOVAL**

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).



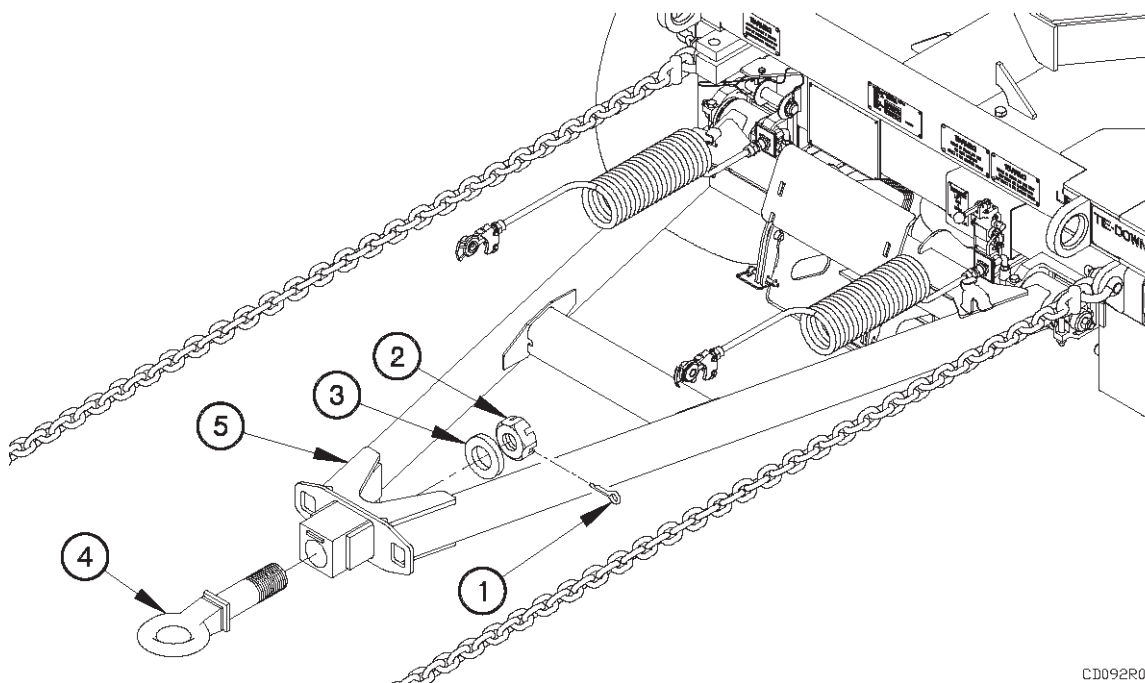
CD092R01

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).



CD092R01

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

Materials/Parts References

Nut, Self-Locking (4) (Item 30, WP 0168 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)
Wrench Set, Crowfoot, Ratcheting (Item 29, WP 0167 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)
Spare tire lowered (WP 0053 00)

GENERAL

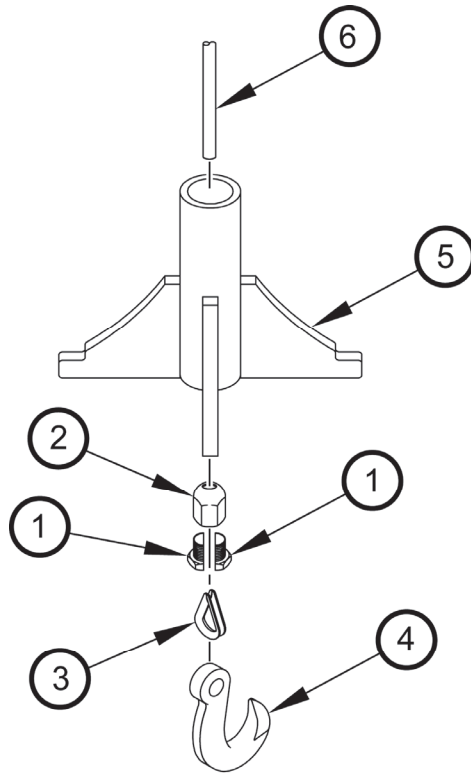
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) spare tire carrier.

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.

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).

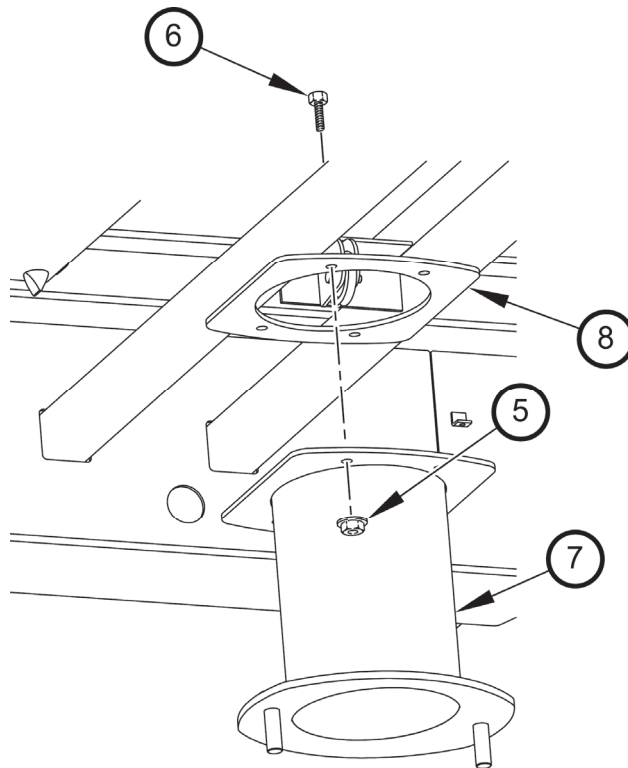


CD093R01

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.



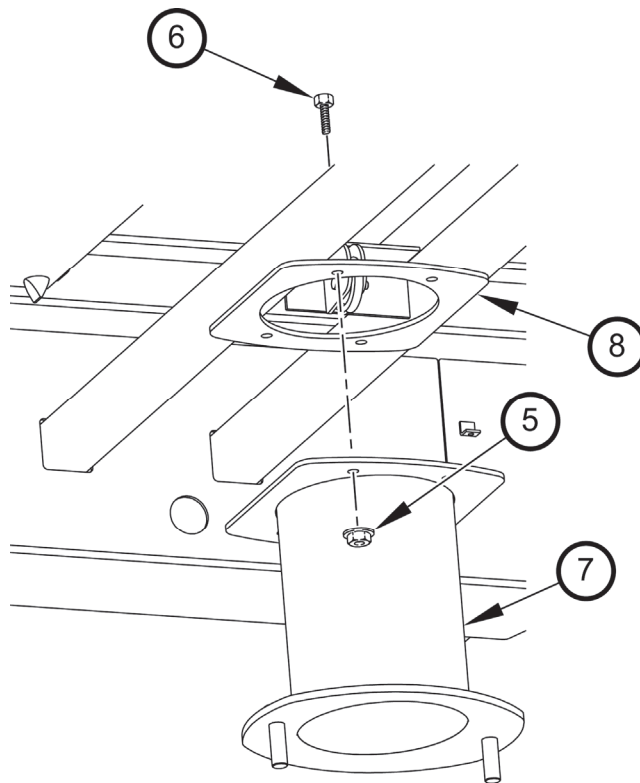
CD093R02

END OF TASK

INSTALLATION**NOTE**

The following step requires the aid of an assistant.

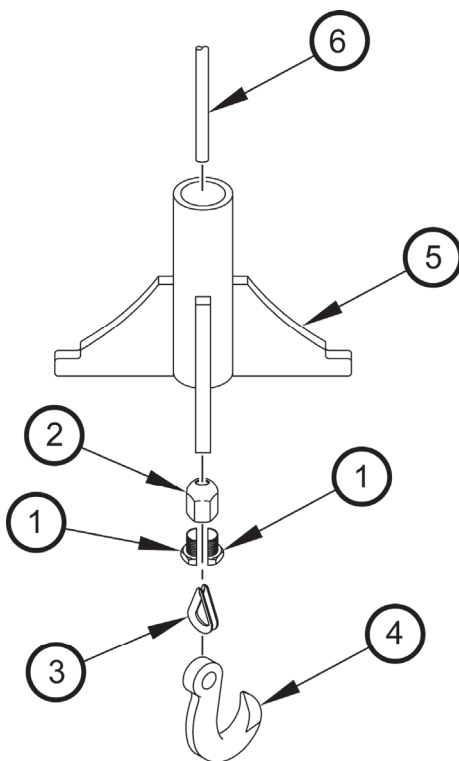
1. Position spare tire carrier (7) on carrier bracket (8) with four screws (6) and self-locking nuts (5).
2. Tighten four self-locking nuts (5) to 92-108 lb-ft (125-146 N·m).



CD093R02

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 92-108 lb-ft (125-146 N·m).



CD093R01

OPERATIONAL CHECKS

Raise spare tire (WP 0053 00).

END OF TASK**END OF WORK PACKAGE**

DRAWBAR LIFT VALVE REPLACEMENT

0094 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts - (Cont.)

Sealing Compound (Item 14, WP 0165 00)
Nut, Self-Locking (4) (Item 26, WP 0168 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 37,
WP 0167 00)
Vise, Machinist's (Item 27, WP 0167 00)

References

Towing Vehicle Operator's Manual
(WP 0043 16)

Materials/Parts

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) drawbar lift valve.

WARNING

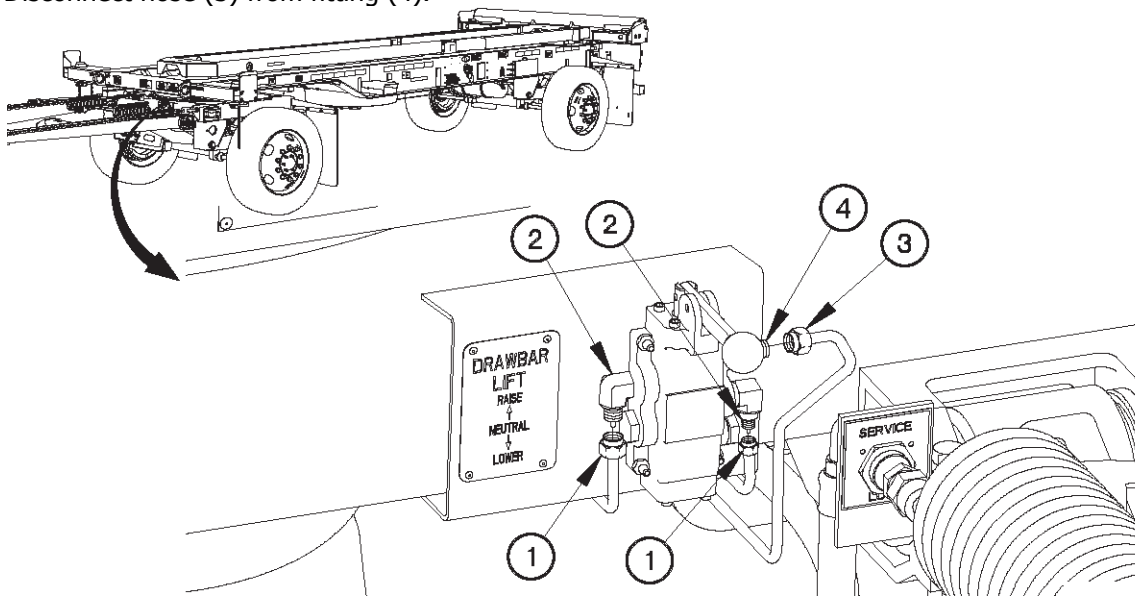
Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.

REMOVAL

NOTE

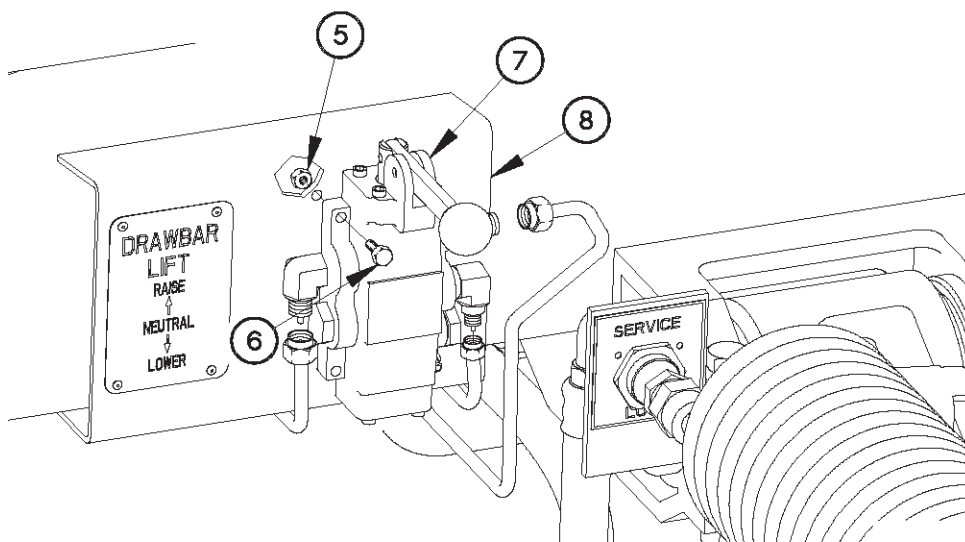
Tag air hoses and connection points prior to disconnecting.

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.

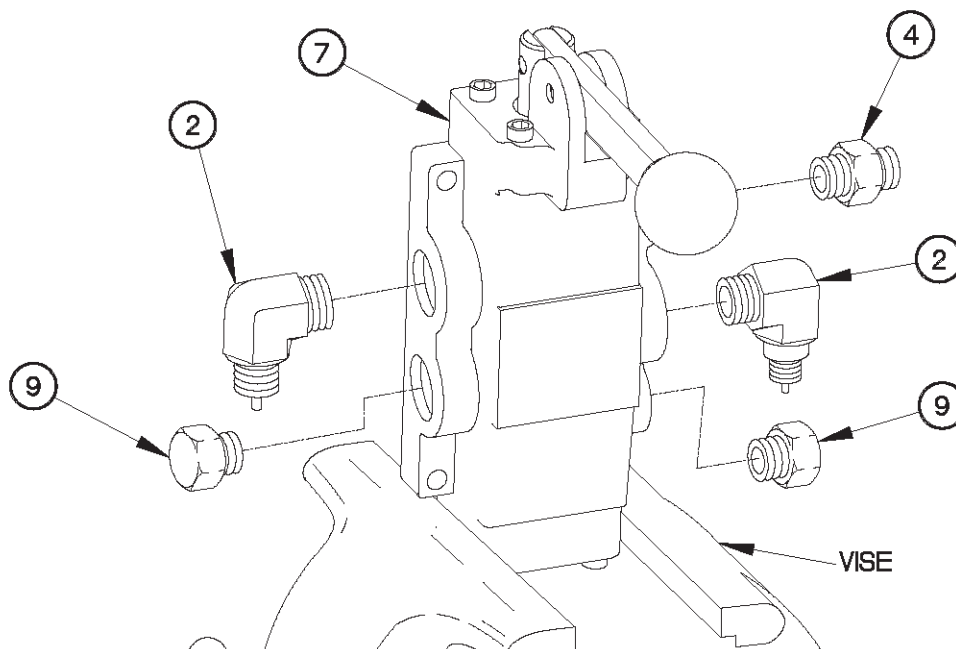


CD094R02

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).

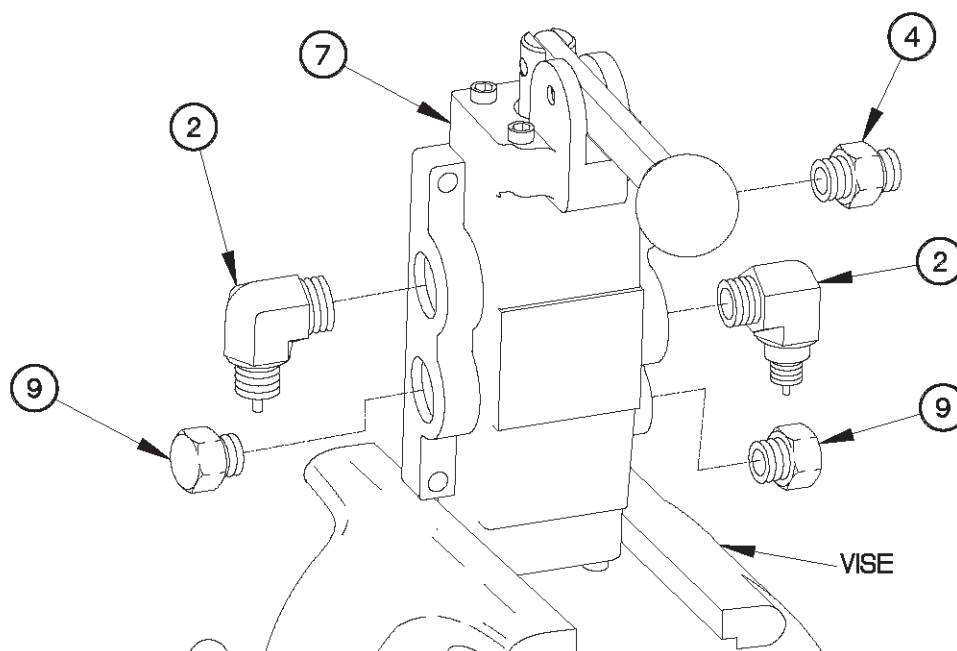


CD094R03

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.

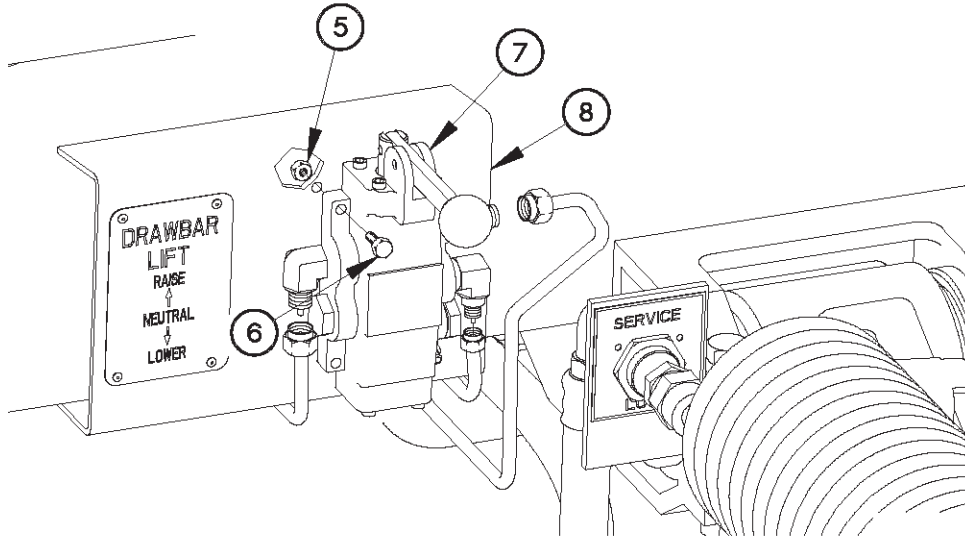
1. Apply sealing compound to threads of two plugs (9), fitting (4), and two 90-degree fittings (2).
2. Position drawbar lift valve (7) in vise.
3. Install two 90-degree fittings (2) on drawbar lift valve (7).
4. Install fitting (4) on drawbar lift valve (7).
5. Install two plugs (9) on drawbar lift valve (7).



CD094R03

INSTALLATION - Continued

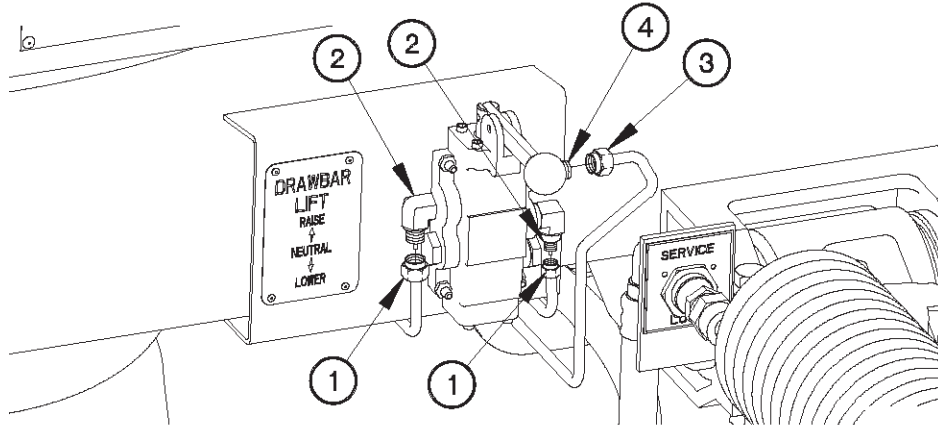
6. Position drawbar lift valve (7) on bracket (8) with four bolts (6) and self-locking nuts (5).
7. Tighten four self-locking nuts (5) to 24-36 lb-in. (3-4 N·m).



CD094R02

INSTALLATION – Continued

9. Connect hose (3) to fitting (4).
10. Connect two hoses (1) to 90-degree fittings (2).



CD094101

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 24, WP 0167 00)
Wrench, Impact, Pneumatic (Item 32,
WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34,
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.

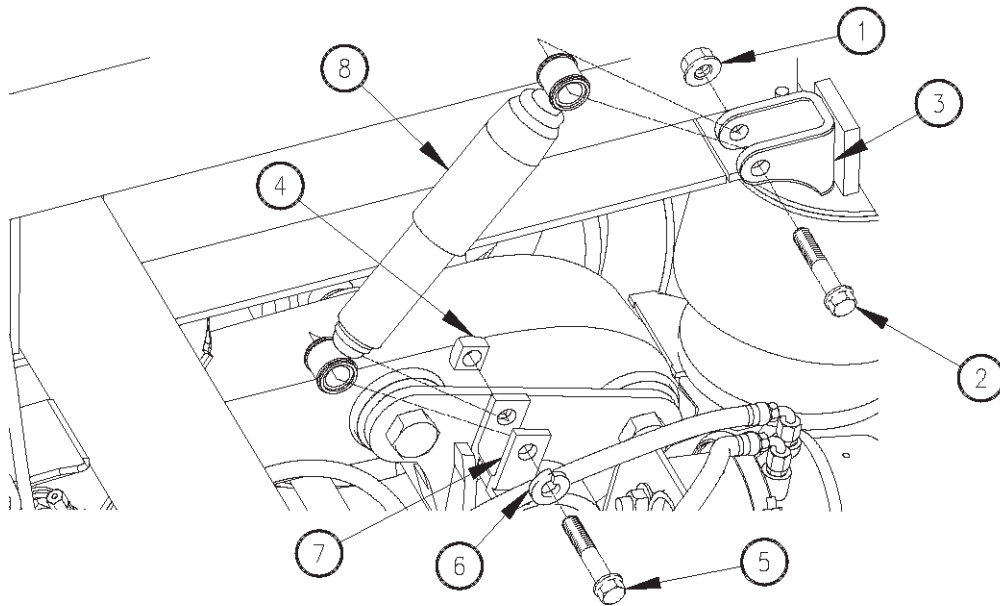
WARNING

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

REMOVAL**NOTE**

LH and RH rear and front shock absorbers are removed the same way. RH rear is 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).

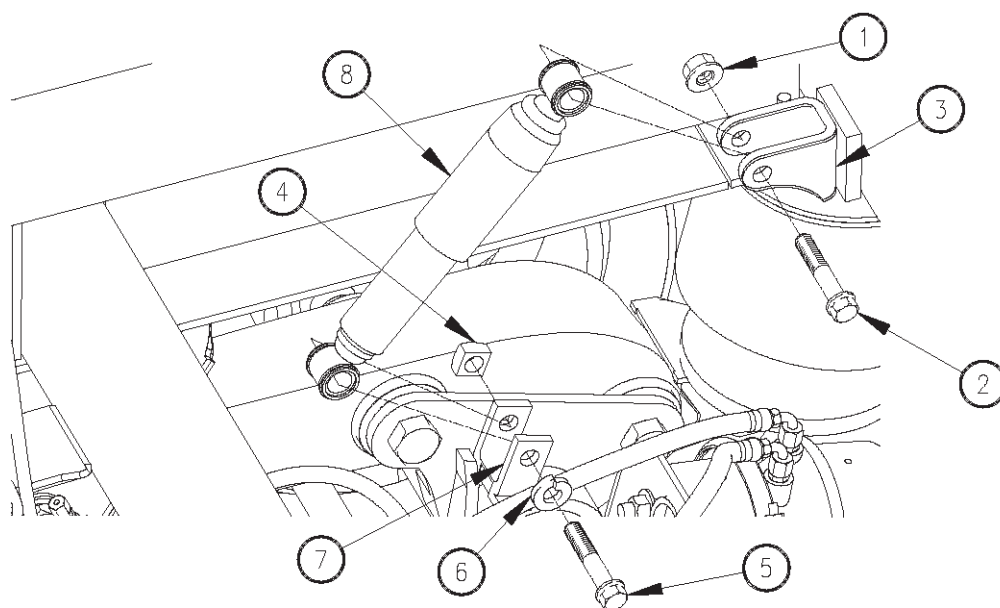


CD095R01

INSTALLATION**NOTE**

Left and right side shock absorbers are installed the same way. Right side is 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).



CD095R01

END OF WORK PACKAGE

AIR BLADDER REPLACEMENT

0096 00

THIS WORK PACKAGE COVERS:

Removal, Installation

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Sealing Compound (Item 2, WP 0165 00)

Washer, Lock (Item 4, WP 0168 00)

Washer, Lock (Item 5, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)

Jack, Dolly Type Hydraulic (Item 10, WP 0167 00)

Trestle, Motor Vehicle Maintenance (Item 26, WP 0167 00)

Equipment Conditions

Air system charged (WP 0043 23 TM 9-2330-392-10-1)

GENERAL

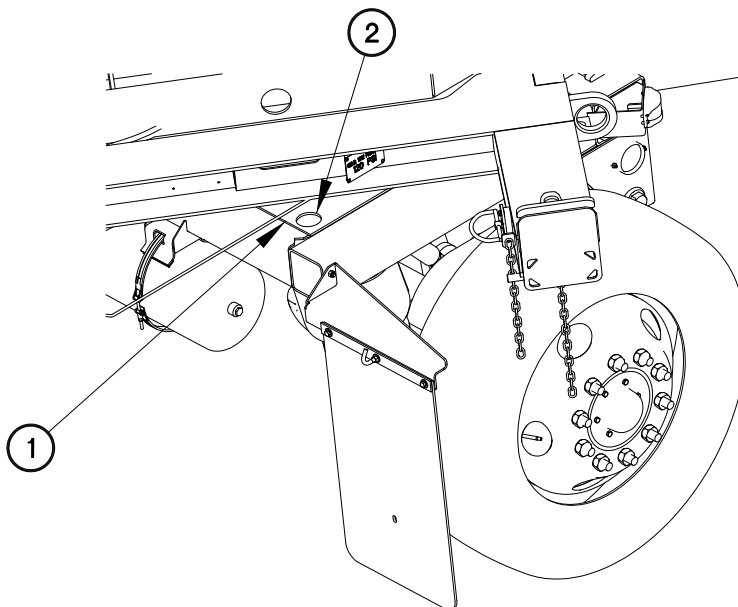
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) air bladder.

REMOVAL

NOTE

Perform the following step on front air bladders. RH side is shown.

1. Rotate turntable (1) for access to maintenance hole (2).

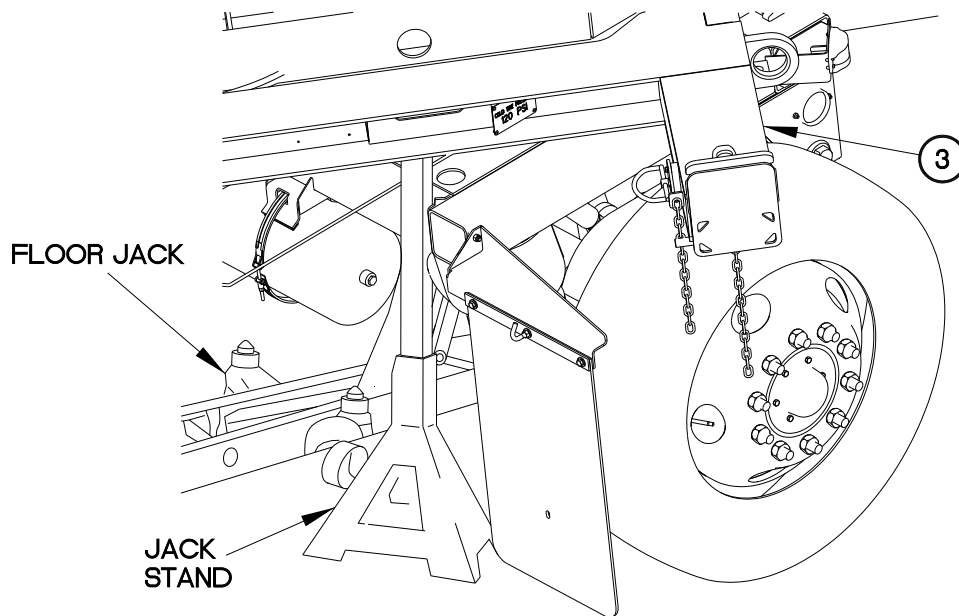


CD096R01

REMOVAL - Continued**NOTE**

LH and RH air bladders are removed the same way. Front RH side is shown.

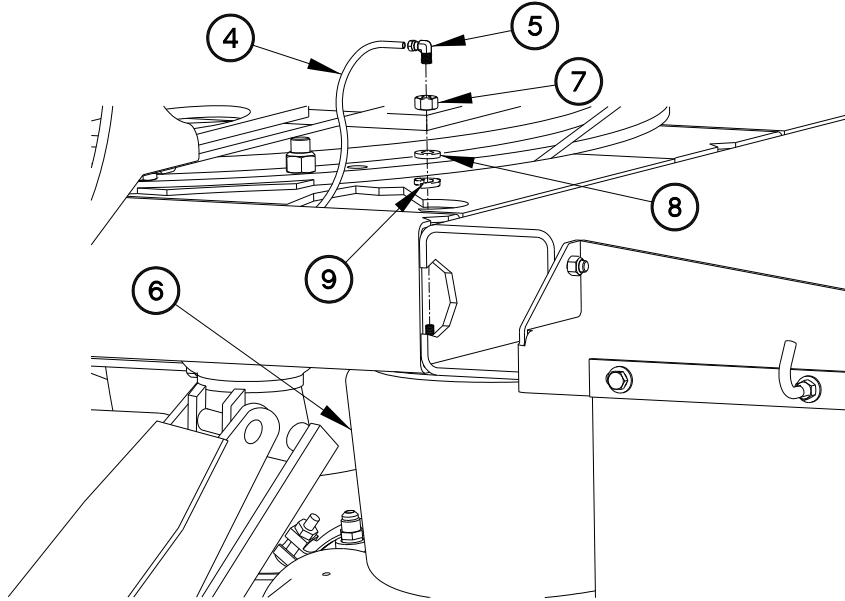
2. Position floor jack under frame (3).
3. Raise floor jack until frame (3) is off ground.
4. Position jack stand under frame (3).
5. Lower floor jack onto jack stand.
6. Drain air system (WP 0004 00).



CD096R02

REMOVAL - Continued

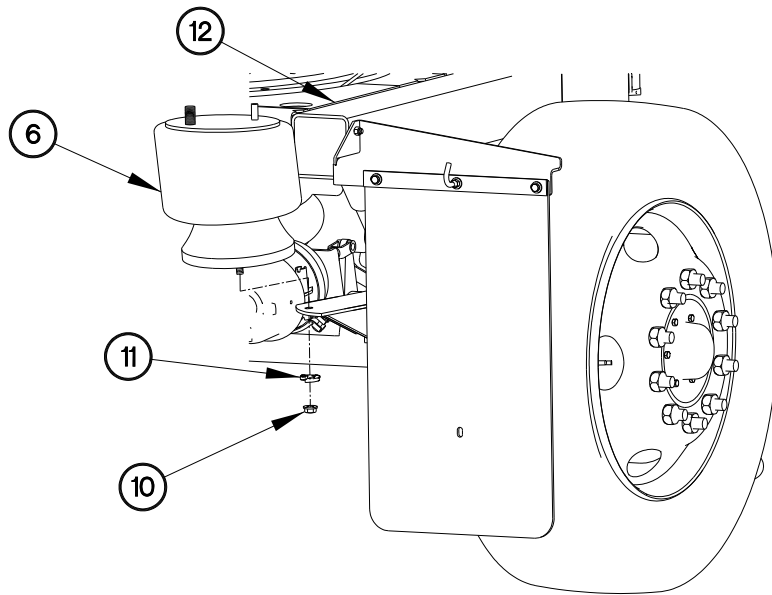
7. Disconnect air hose (4) from 90-degree fitting (5).
8. Remove 90-degree fitting (5) from air bladder (6).
9. Remove nut (7), washer (8), and lockwasher (9) from air bladder (6). Discard lockwasher.



CD096R03

REMOVAL - Continued

10. Remove nut (10) and lockwasher (11) from air bladder (6). Discard lockwasher.
11. Remove air bladder (6) from trailer (12).



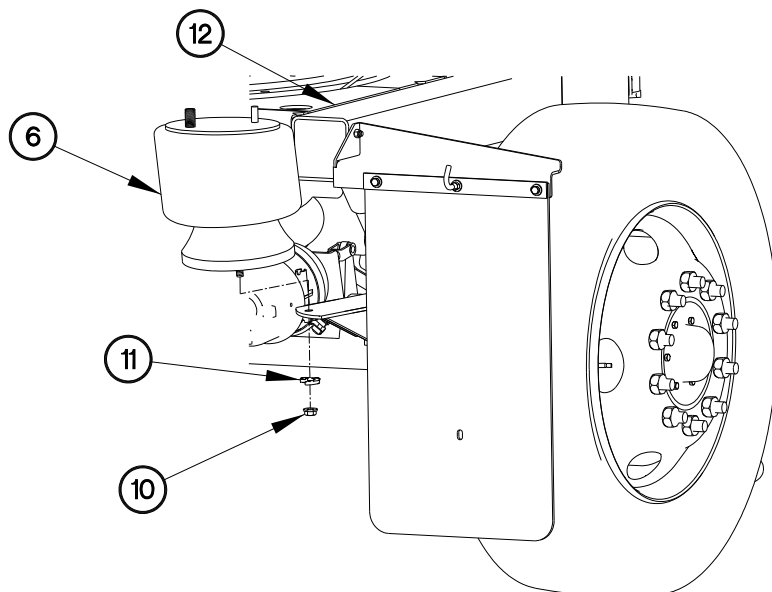
CD096R04

INSTALLATION

NOTE

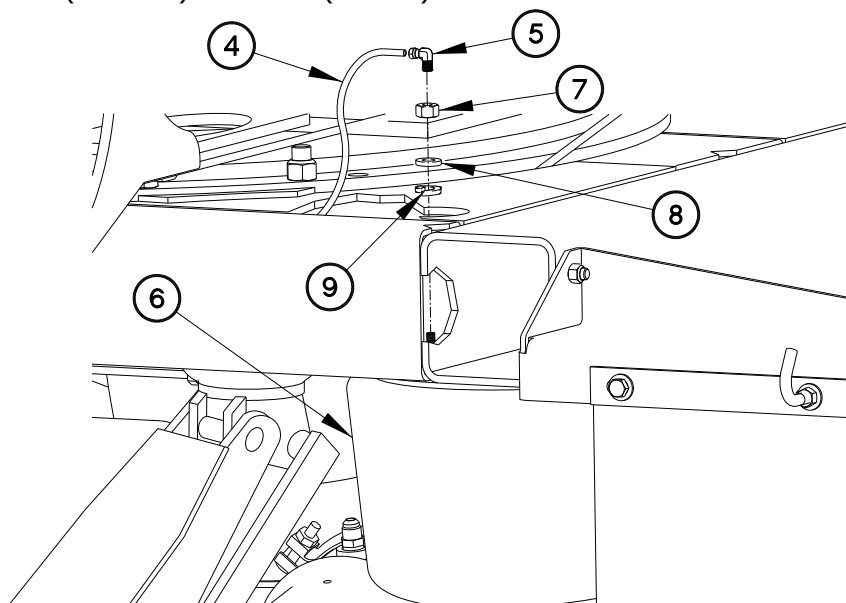
- LH and RH air bladders are installed the same way. Front RH side shown.
- Nipple on top of air bladder goes in hole in frame of trailer.

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).

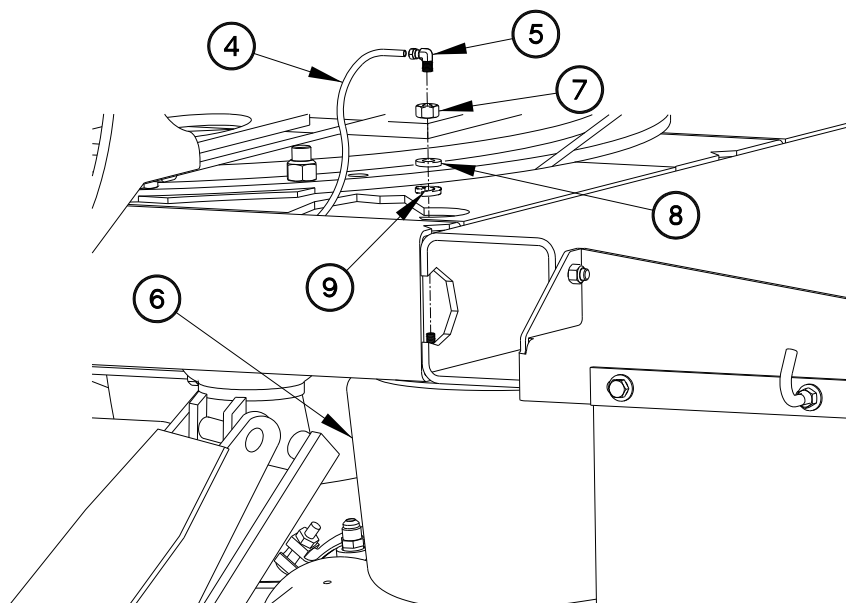


CD096R03

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.

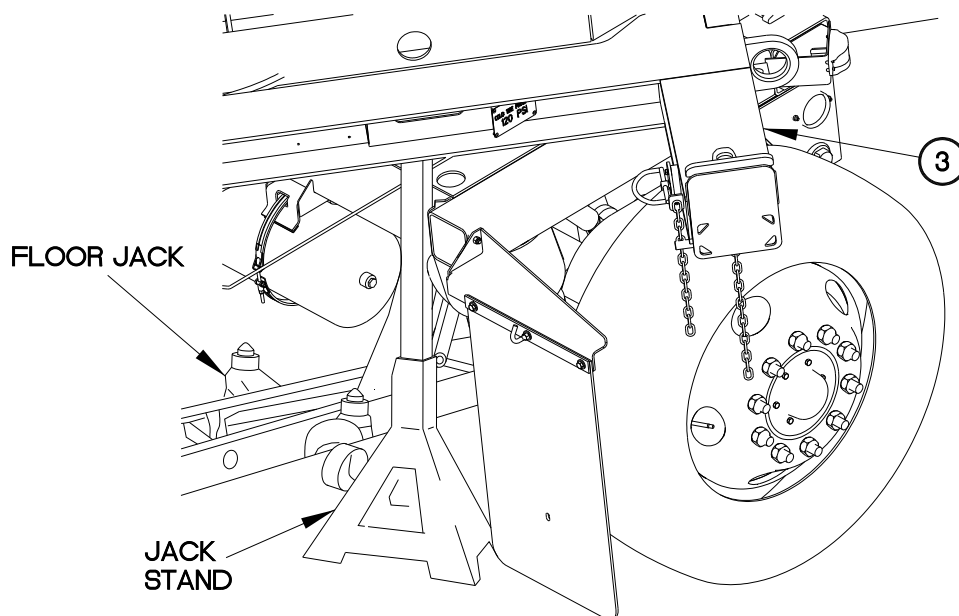
4. Apply sealing compound to threads of 90-degree fitting (5).
5. Install 90-degree fitting (5) in air bladder (6).
6. Connect air hose (4) to 90-degree fitting (5).



CD096R03

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).

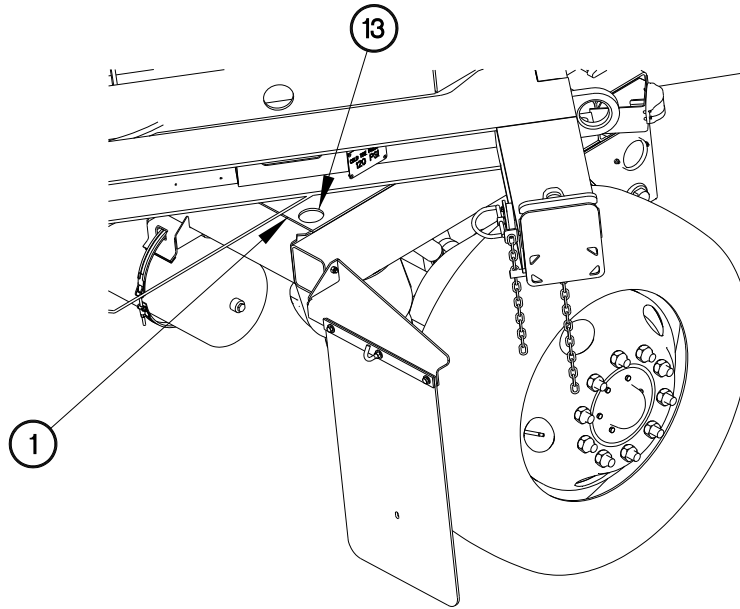


CD096R02

INSTALLATION - Continued**NOTE**

Perform the following step on front air bladders. RH side is shown.

12. Rotate turntable (1) until drawbar (13) faces forward.



CD096101

END OF WORK PACKAGE

SPLASHGUARD REPLACEMENT

0097 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Tools/Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34, 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

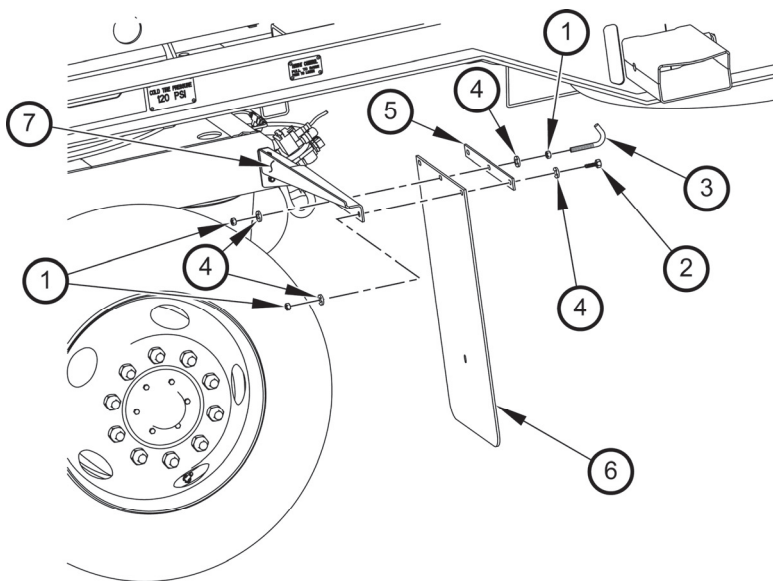
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) splash guards.

REMOVAL

NOTE

All splash guards are removed the same way. Front LH side is shown.

Remove four nuts (1), two screws (2), one hook screw (3), six washers (4), mounting plate (5), and splash guard (6) from bracket (7).



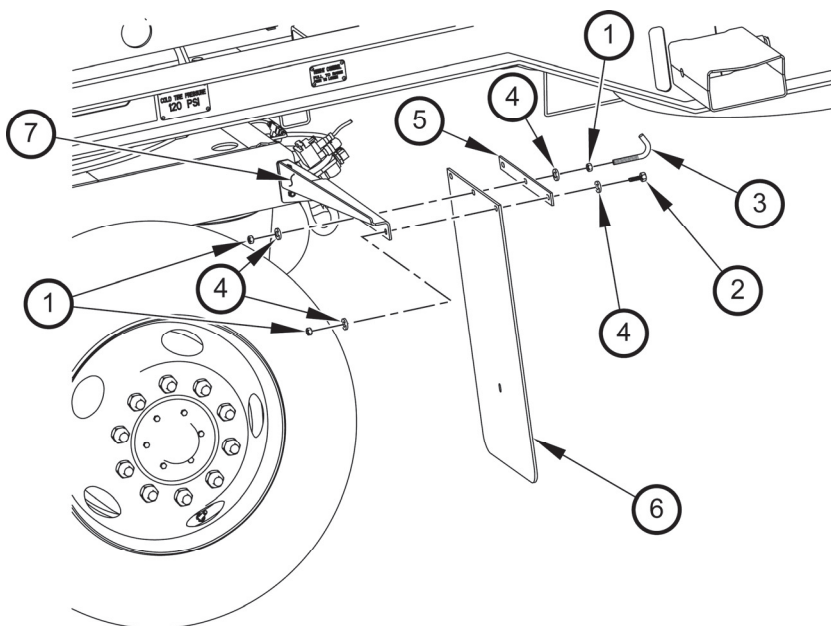
CD097R01

END OF TASK

SPLASHGUARD REPLACEMENT**0097 00****INSTALLATION****NOTE**

All splash guards are installed the same way. Front LH side is 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).
2. Tighten nuts (1) to 40-46 lb-ft (54-62 N·m).



CD097R01

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 TASK**END OF WORK PACKAGE**

TOOLBOX 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 24), (WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)

Tool Kit, Blind Rivet, (Item 23, WP 0167 00)

Drill, Portable, Electric, (Item 3, WP 016700)

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 in.) (Item 53, WP 0168 00)

Rivet, Blind (4) (Item 50, WP 0168 00)

Equipment Condition

Flatrack rail assembly raised (WP 0005)

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)

GENERAL

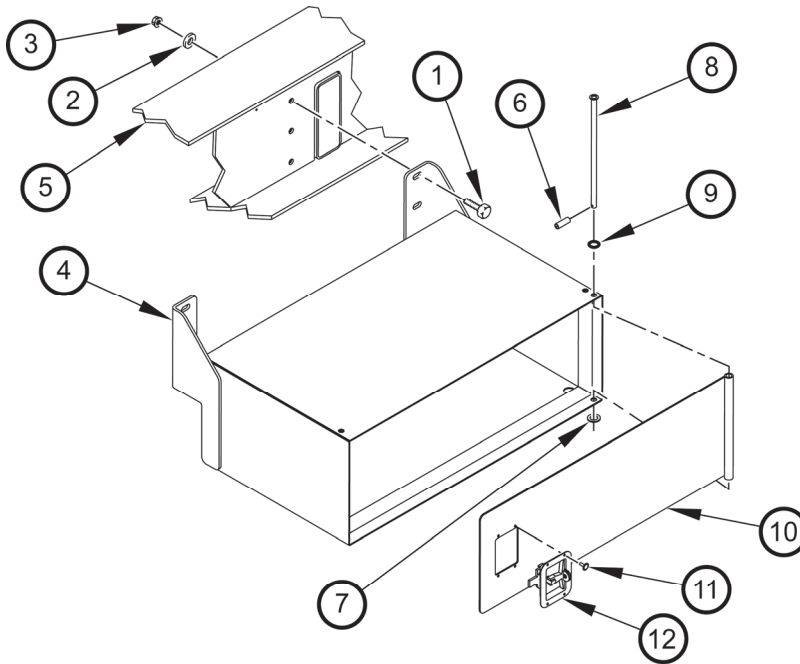
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) tool box assembly.

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.

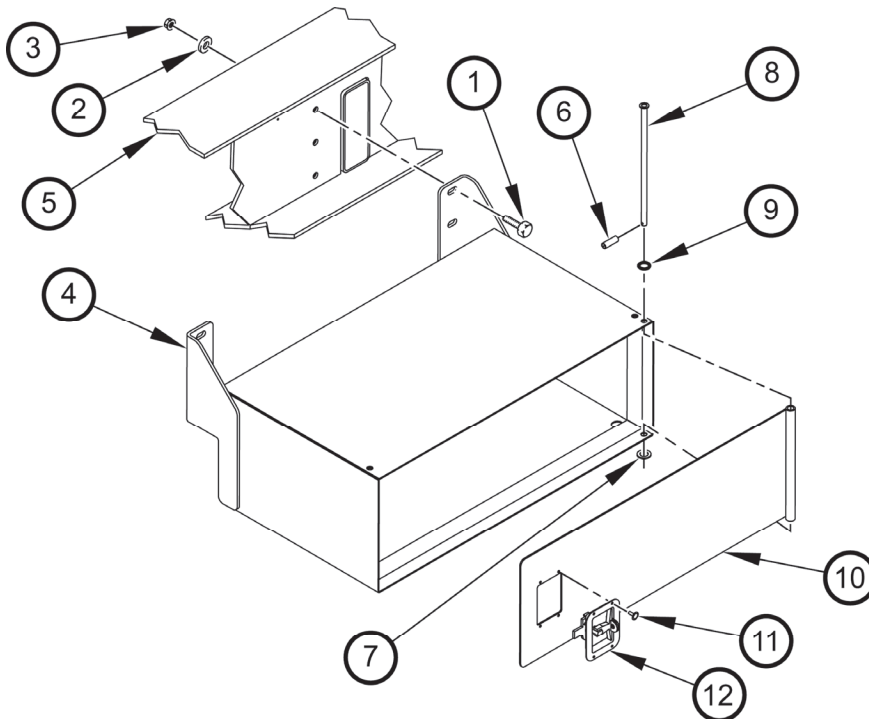
1. Remove six screws (1), washers (2), self-locking nuts (3), and tool box (4) from trailer chassis (5). Discard self-locking nuts.



CD098R01

REMOVAL - Continued

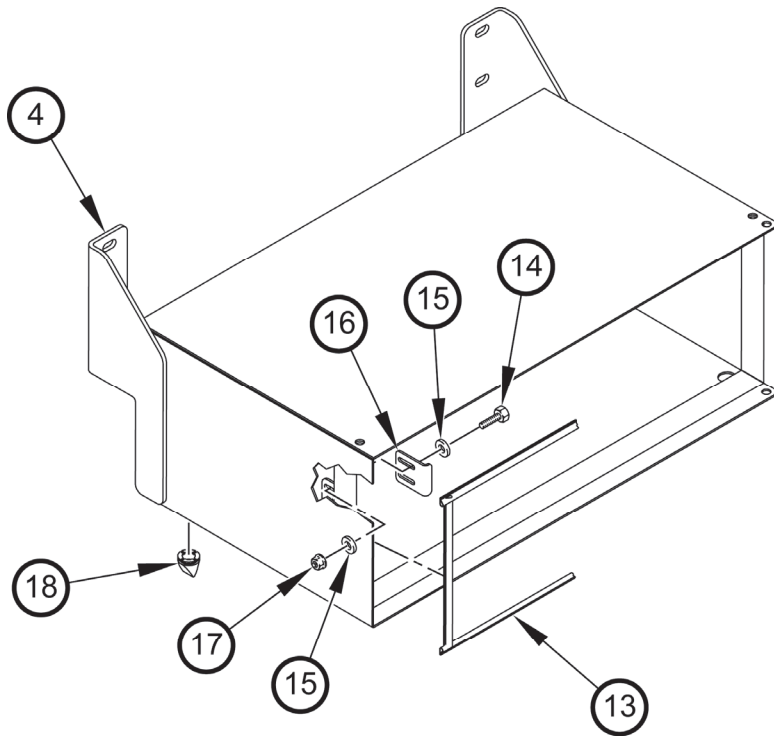
2. Remove roll pin (6), washer (7), rod (8), preformed packing (9), and tool box door (10) from tool box (4). Discard preformed packing.
3. Remove four rivets (11) and folding latch (12) from tool box door (10). Discard rivets.



CD098R01

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).

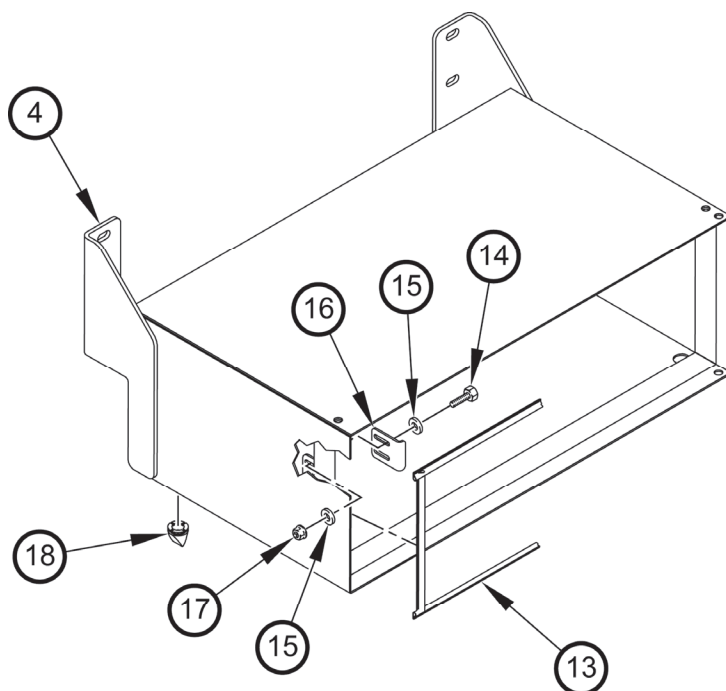


CD098R02

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.

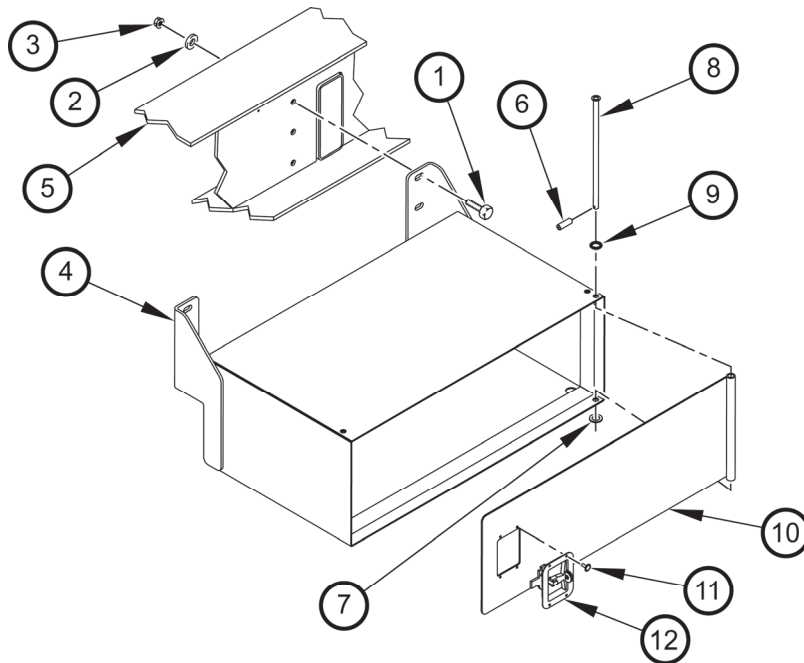
1. Install weather strip (13) on tool box (4).
2. Install striker (16) on tool box (4) with two washers (15), screw (14), and self locking nut (17).
3. Install four vacuator valves (18) on tool box (4).



CD098R02

INSTALLATION - Continued

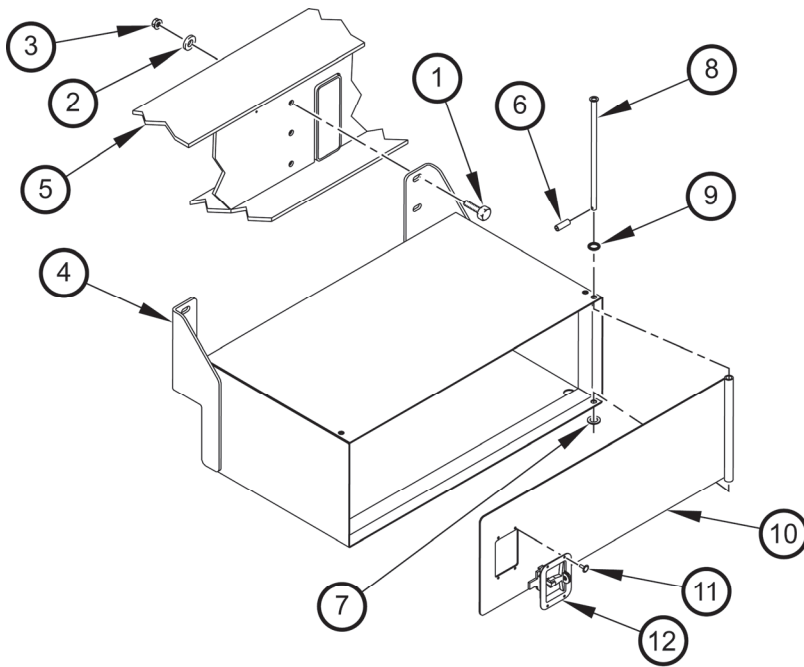
4. Install tool box door (10) on tool box (4) with preformed packing (9), rod (8), washer (7), and roll pin (6).
5. Install folding latch (12) on tool box door (10) with four rivets (11).



CD098R01

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 92-108 lb-ft (125-146 N·m).



CD098R01

TURNTABLE ASSEMBLY REPLACEMENT

0099 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Nut, Self-Locking (16) (Item 31, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, 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 33, WP 0167 00)

Equipment Conditions

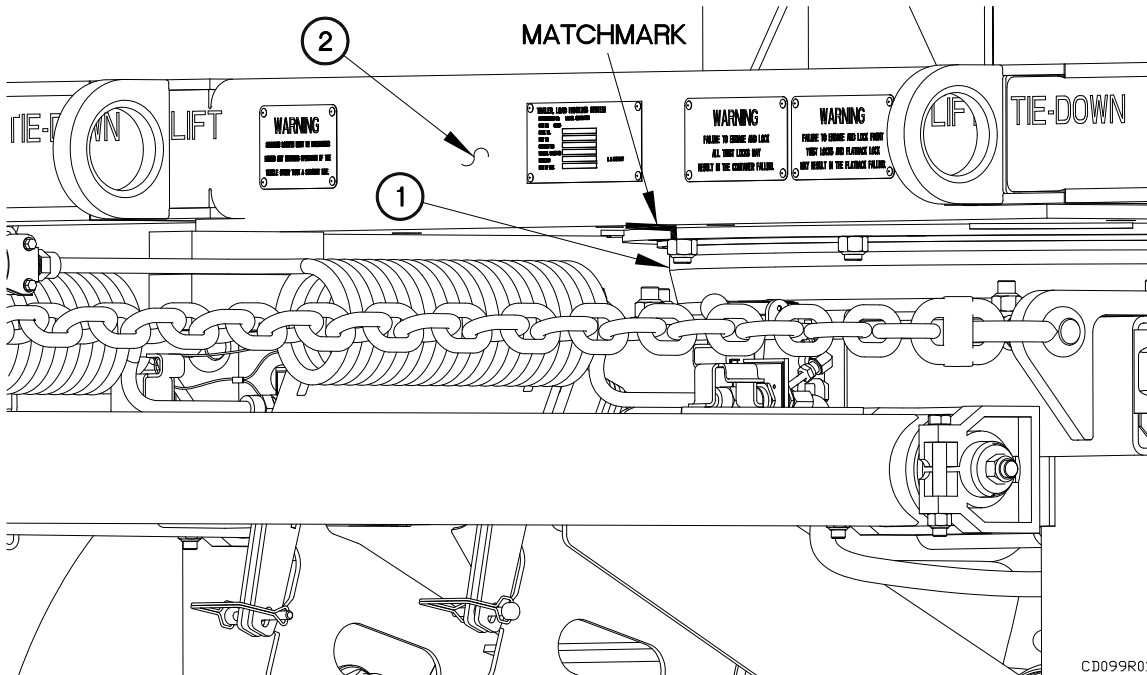
Trailer coupled to towing vehicle (WP 0043 23, TM 2320-392-10-1)
 Brakes caged (WP 0055 00)
 Emergency/Service gladhands disconnected (WP 0043 24)
 Main electrical harness removed (from turntable) (WP 0066 00)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) turntable.

REMOVAL

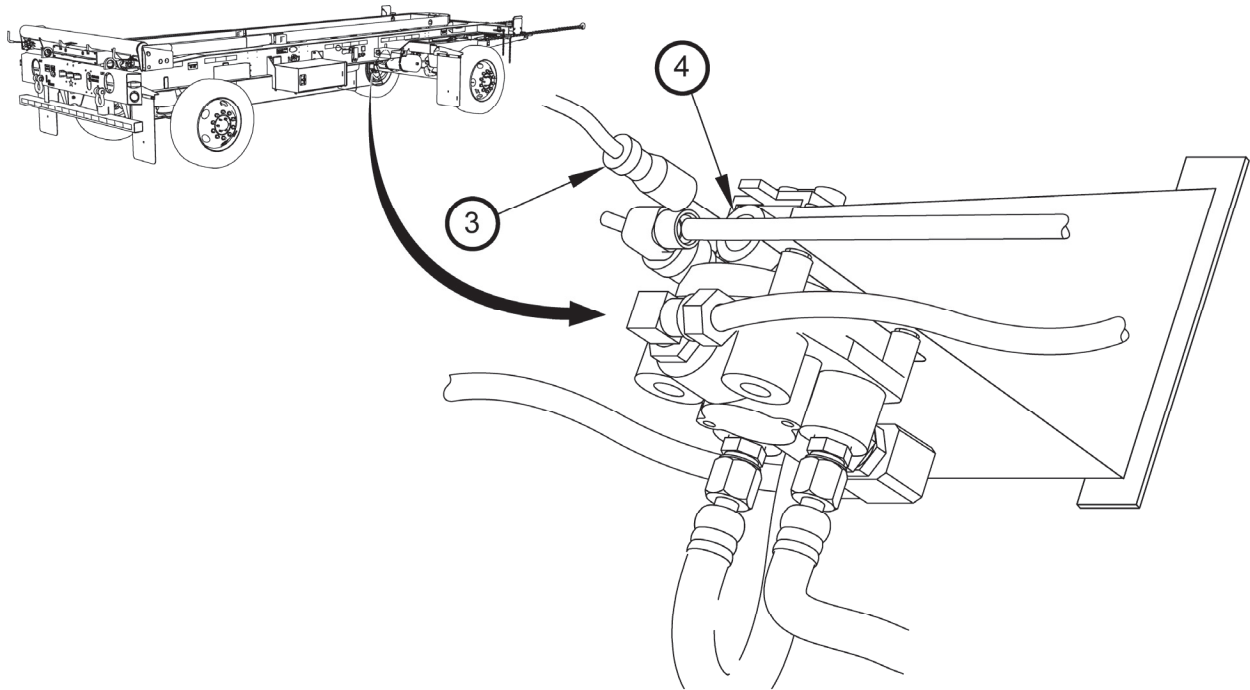
1. Match mark turntable (1) to frame (2).



CD099R01

REMOVAL - Continued

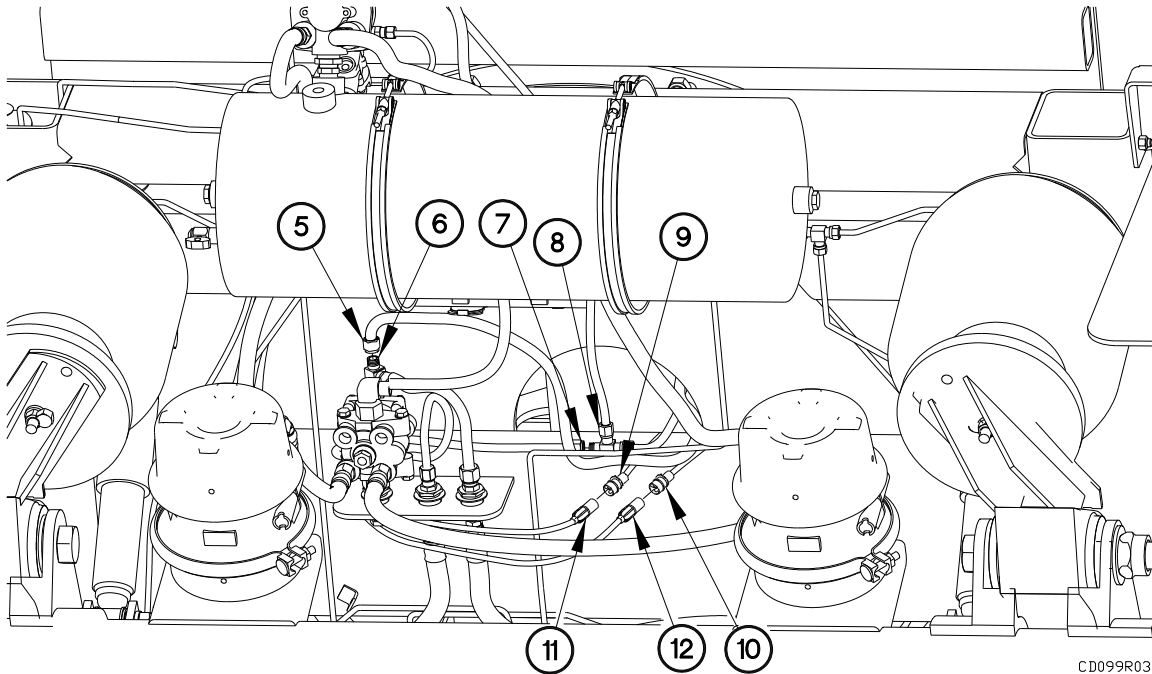
2. Drain air tanks.
3. Disconnect ABS relay sensor relay connector (3) from ABS relay sensor (4).



CD099R02

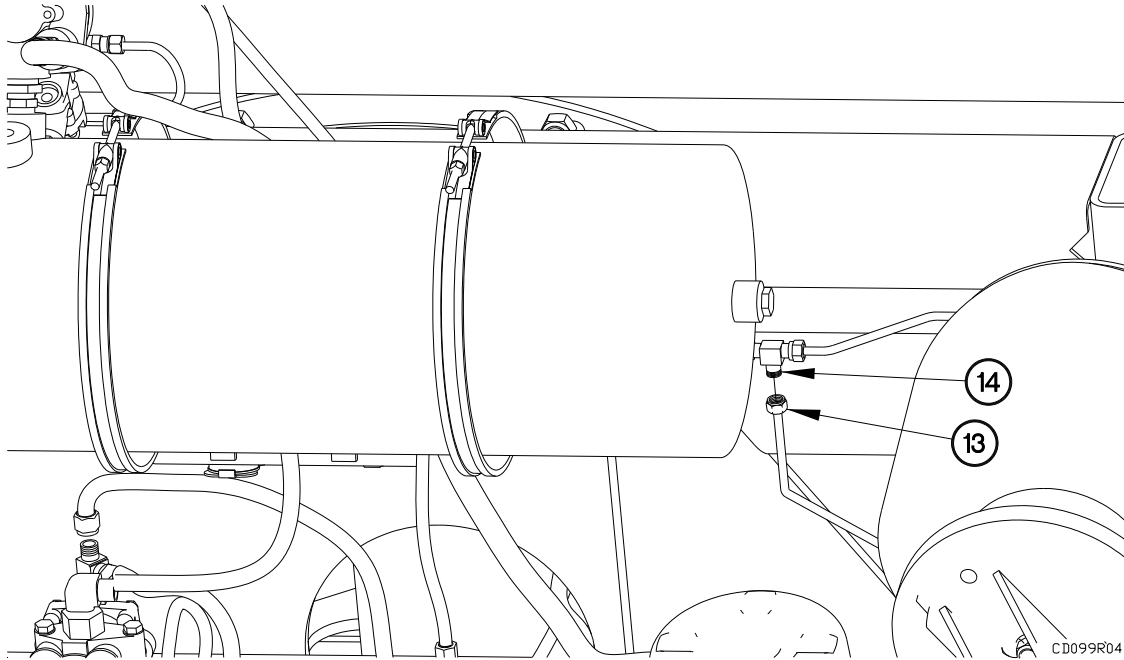
REMOVAL - Continued

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).

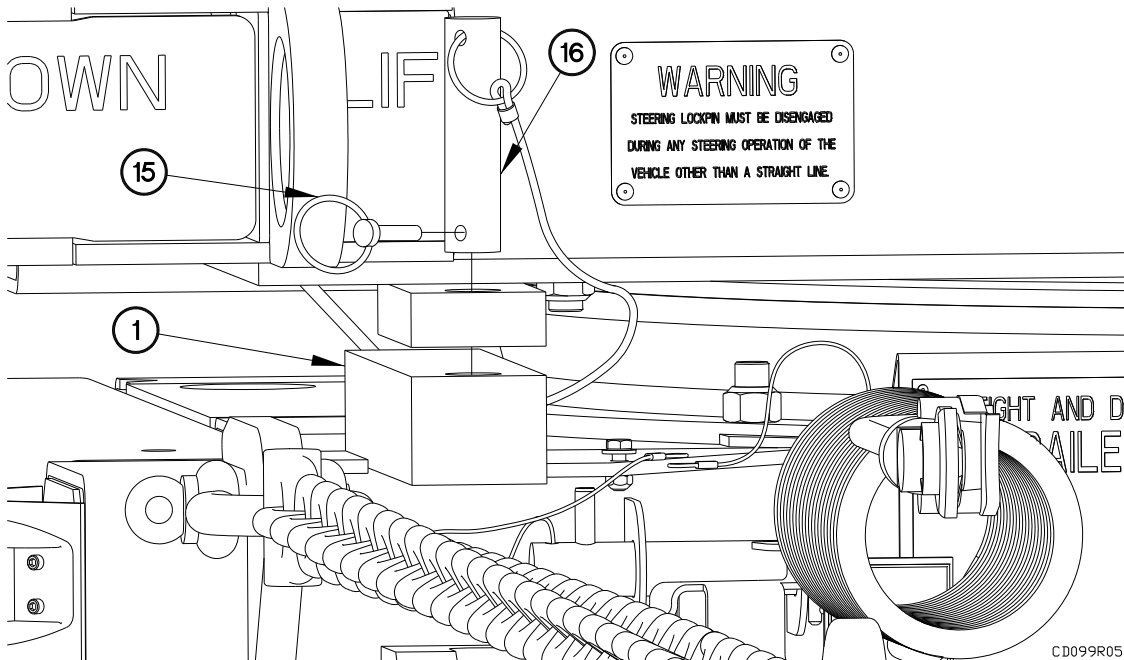


REMOVAL - Continued

7. Disconnect hose (13) from tee fitting (14).



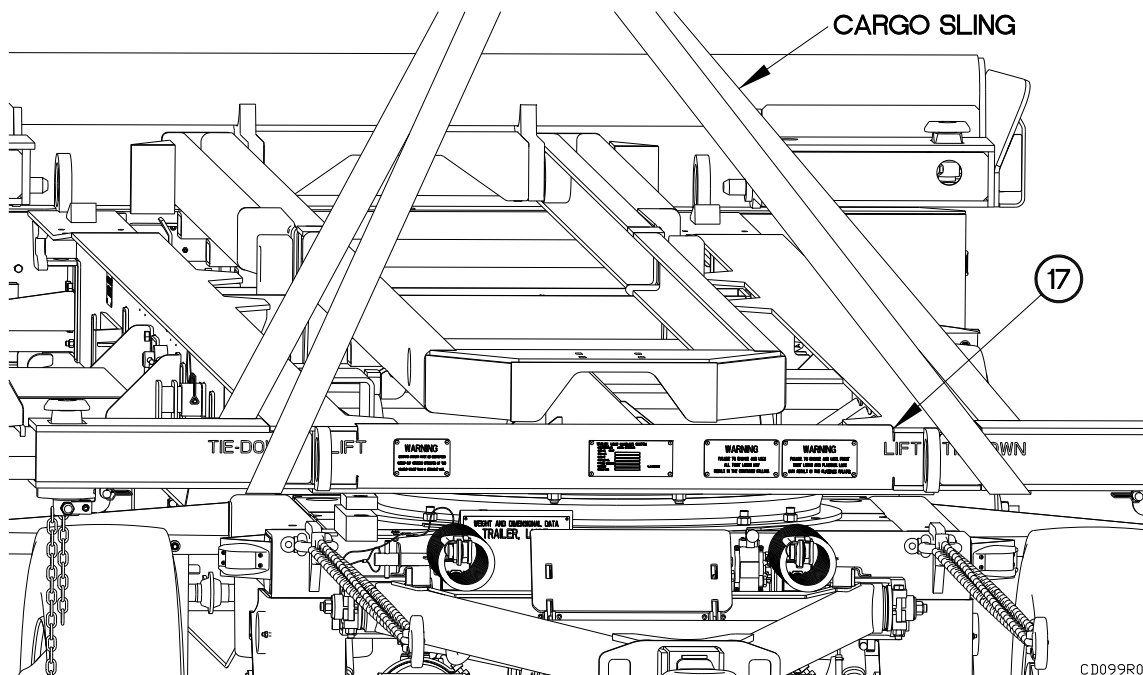
8. Remove pin (15) from turntable pin (16).
9. Remove turntable pin (16) from turntable (1).



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.

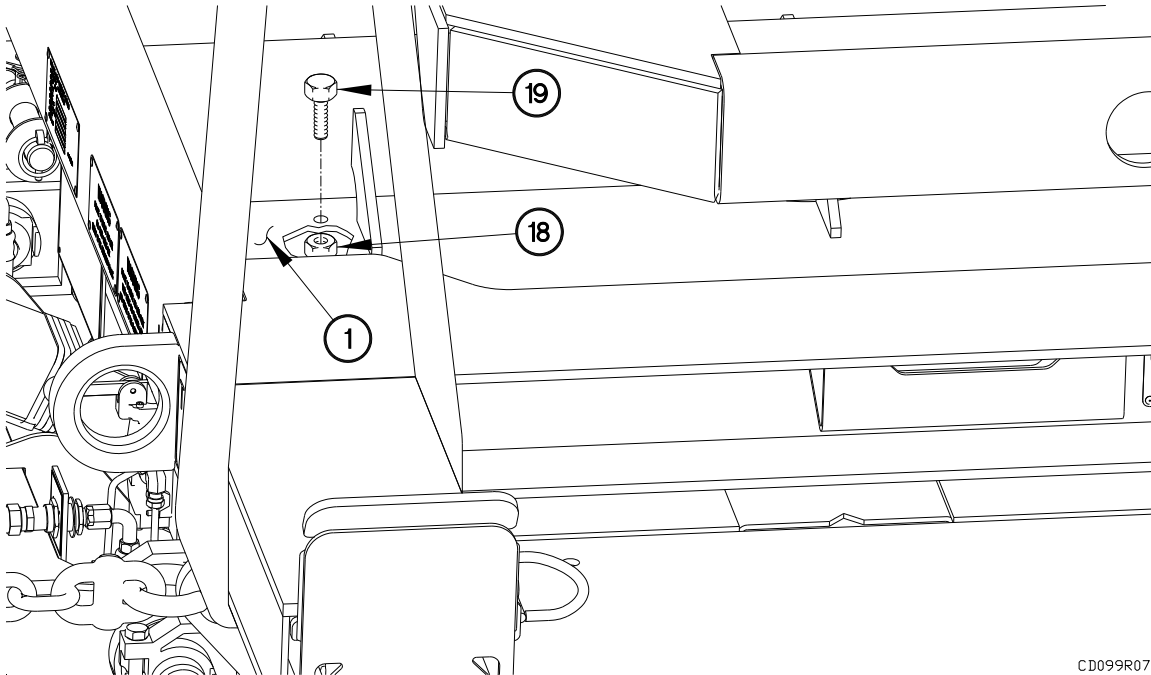


CD099R06

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.

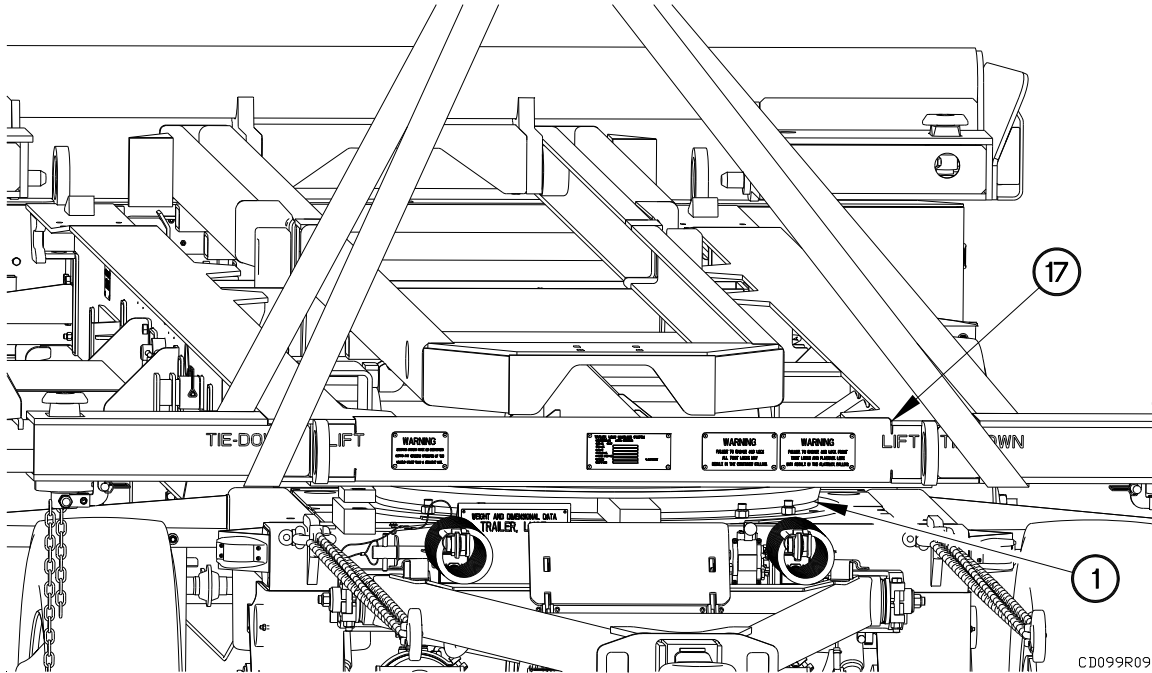
11. Remove eight self-locking nuts (18) and bolts (19) from turntable (1). Discard self-locking nuts.



CD099R07

REMOVAL - Continued

12. Remove trailer (17) from turntable (1).

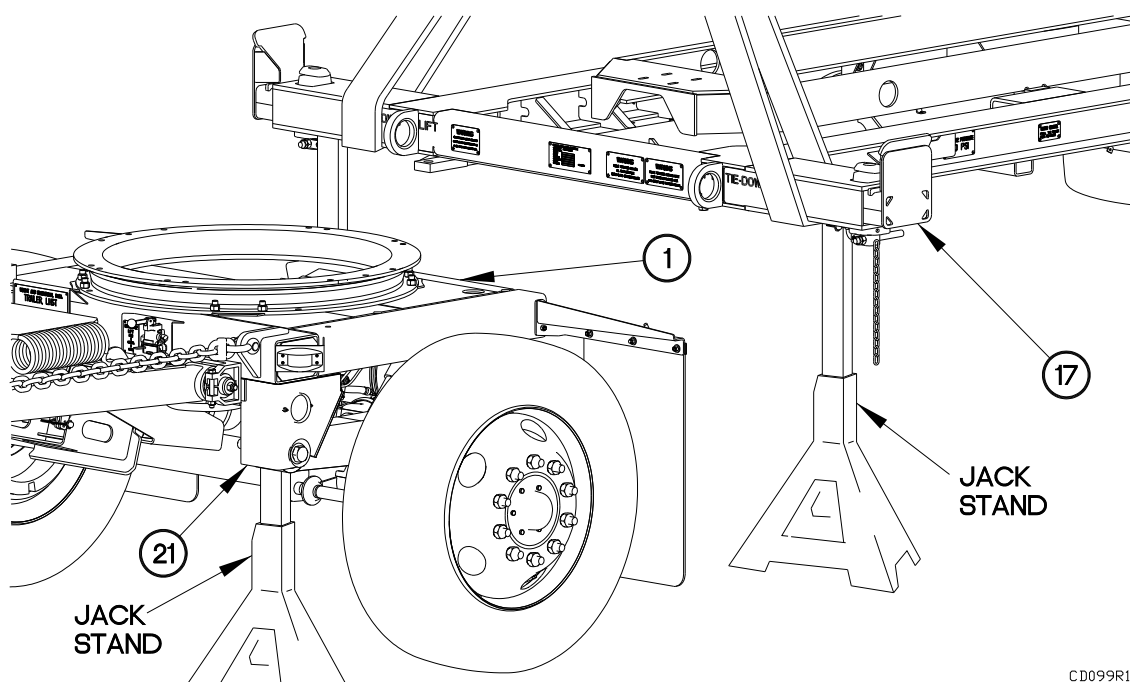


C.D099R09

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).

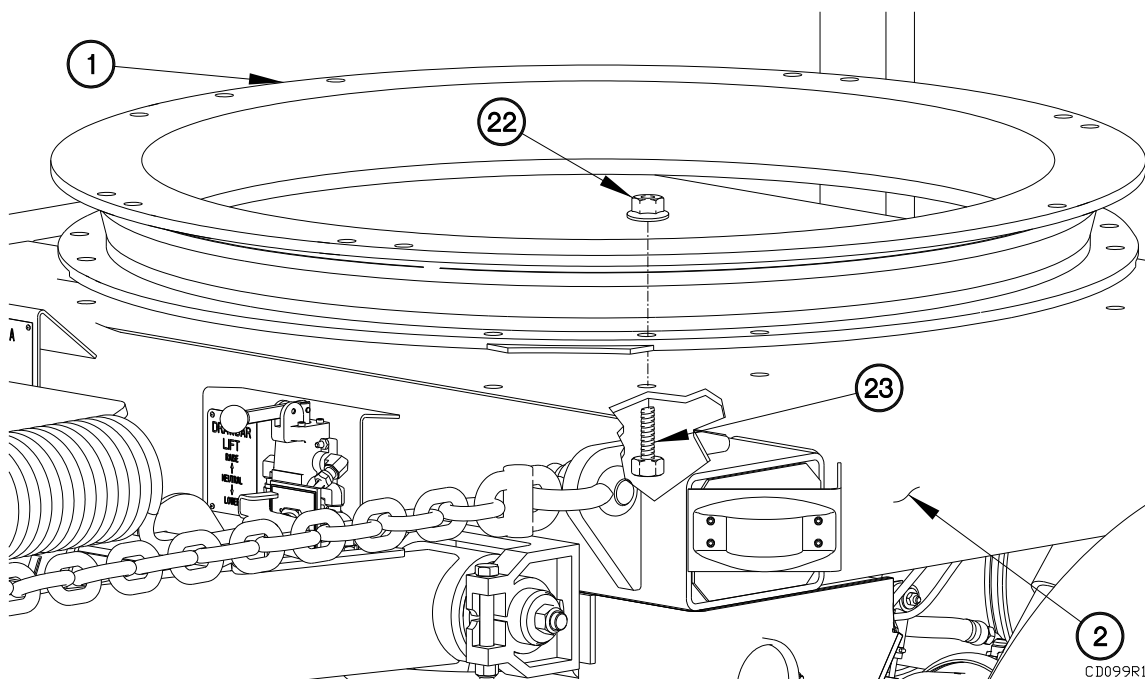


CD099R10

REMOVAL - Continued**WARNING**

Turtable 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 turtable (1) from frame (2). Discard self-locking nuts.

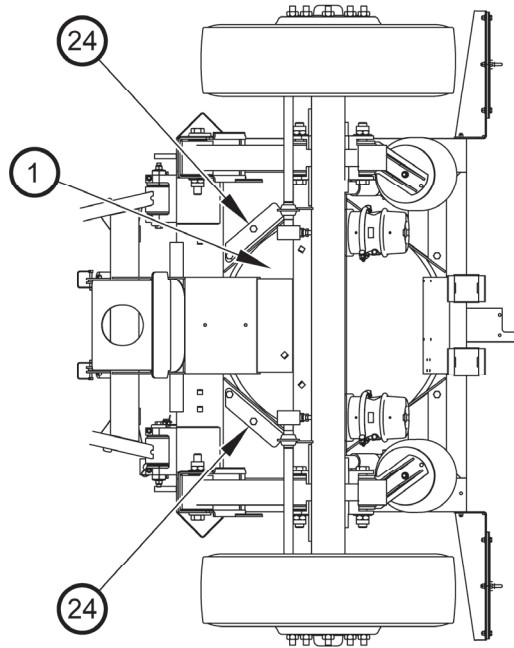
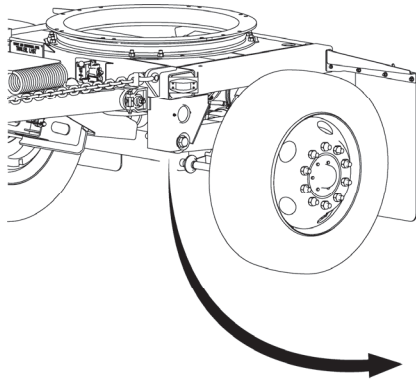
**END OF TASK**

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.

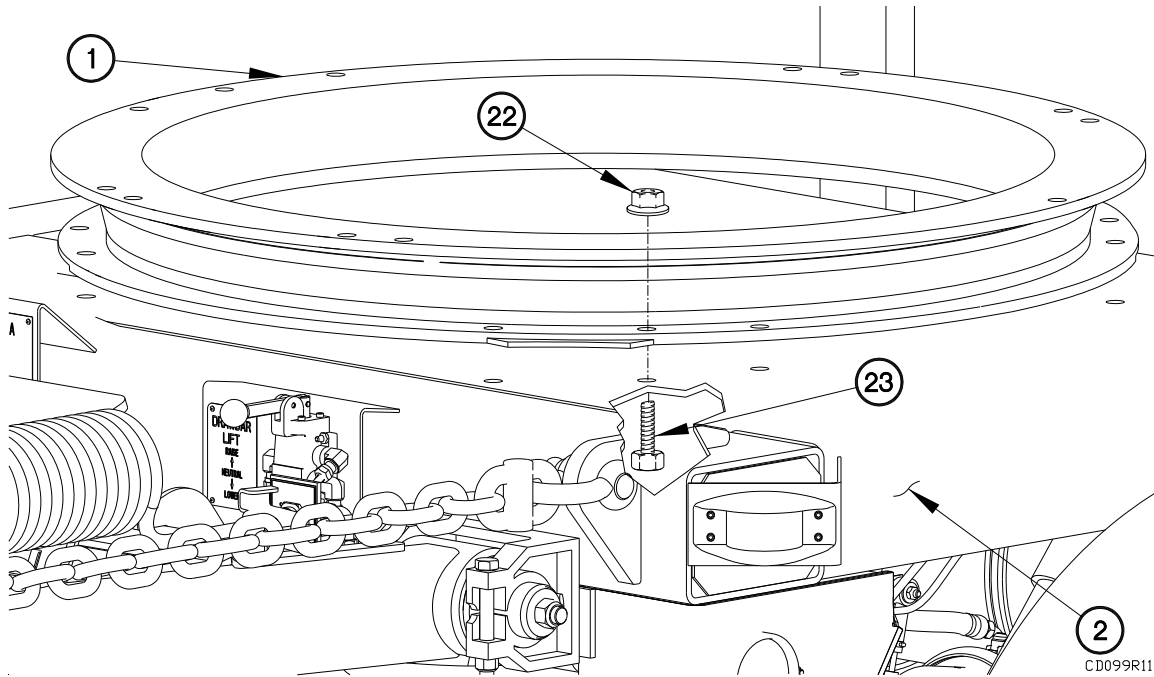
1. If not already installed, install doubler plates (24) under turntable (1) using existing hardware.



CD099R10A

INSTALLATION - Continued

2. Position turntable (1) on frame (2) with eight bolts (23) and self-locking nuts (22).
3. Tighten eight self-locking nuts (22) to 95-105 lb-ft (129-142 N·m).



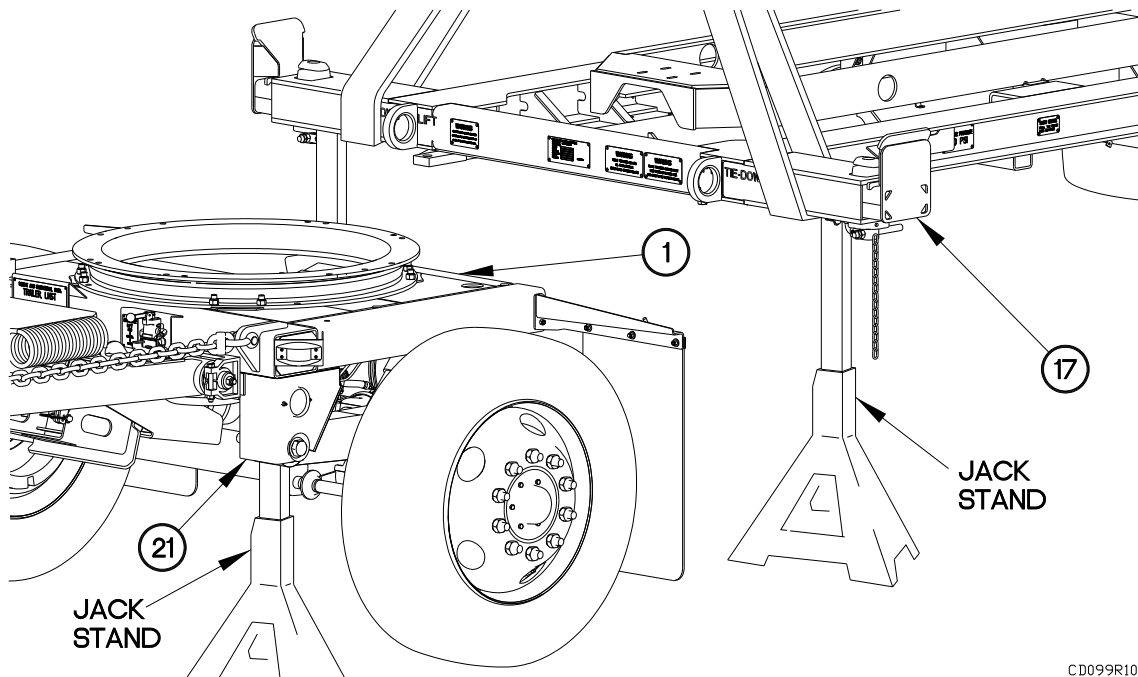
INSTALLATION - Continued

4. Remove two jack stands from underneath front axle (21).

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.

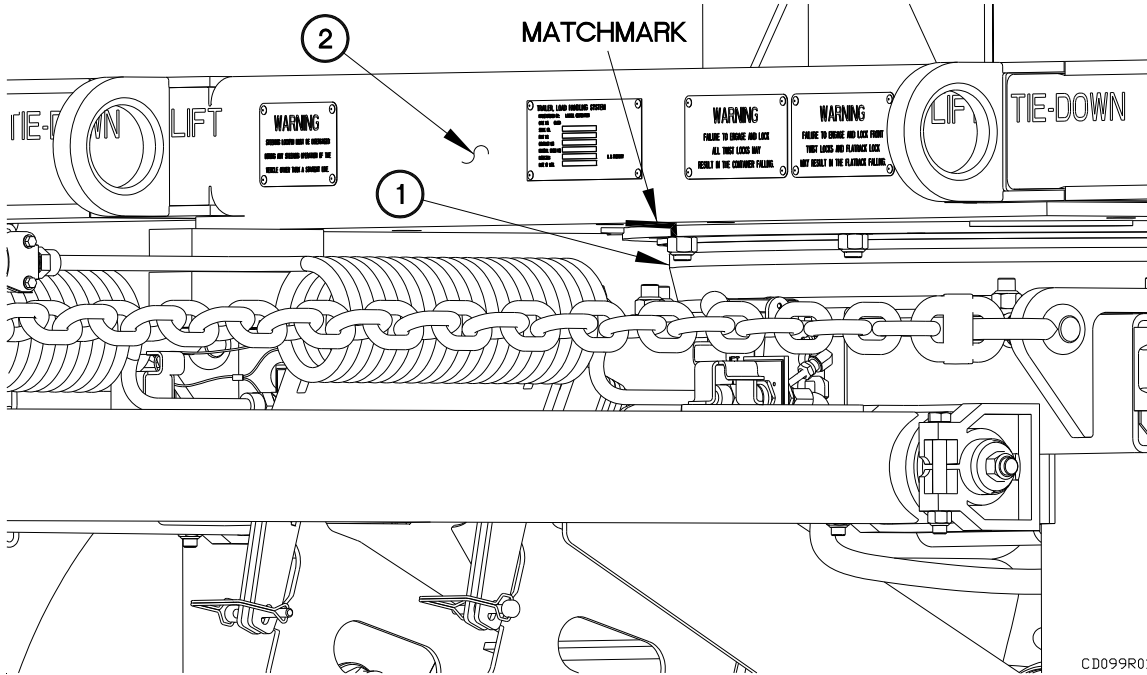
5. Raise trailer (17) from two jack stands.
6. Remove two jack stands from underneath trailer (17).
7. Start engine of coupled vehicle and push rearward (TM 9-2320-392-10-1, WP 0020 00).
8. Position turntable (1) underneath trailer (17).



CD099R10

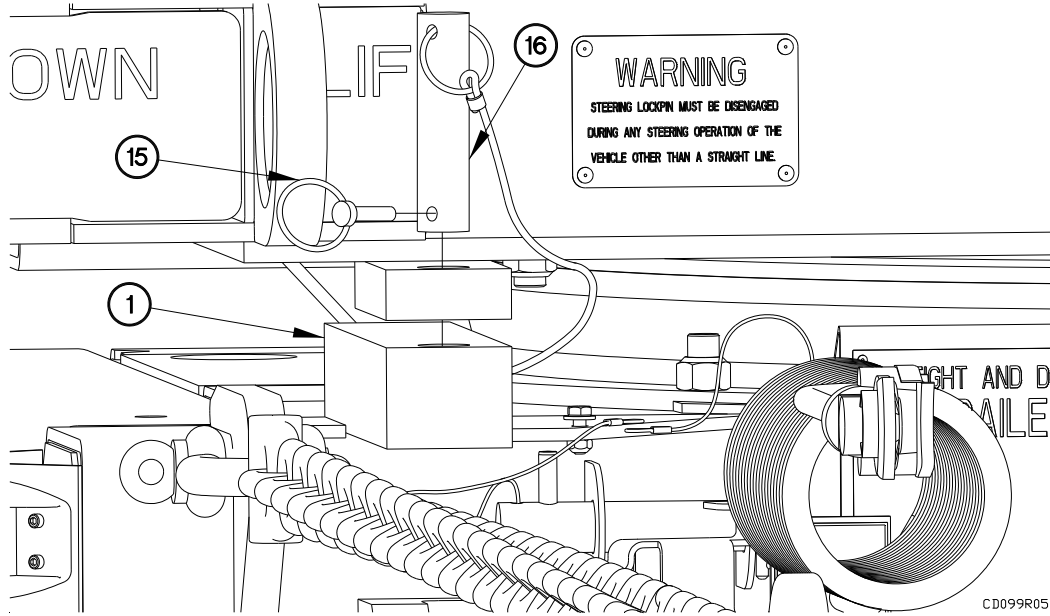
INSTALLATION – Continued

9. Align match-marks from turntable (1) to frame (2).
10. Lower frame (2) on turntable (1).

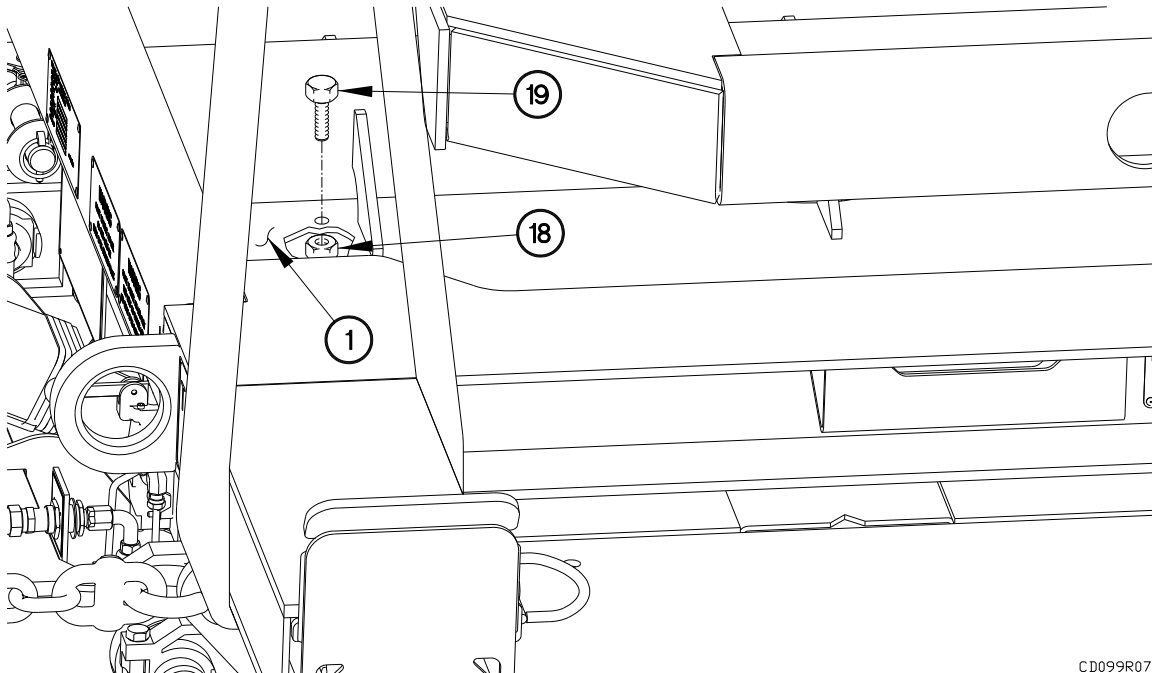


INSTALLATION – Continued

11. Install turntable pin (16) in turntable (1).
12. Install pin (15) in turntable pin (16).

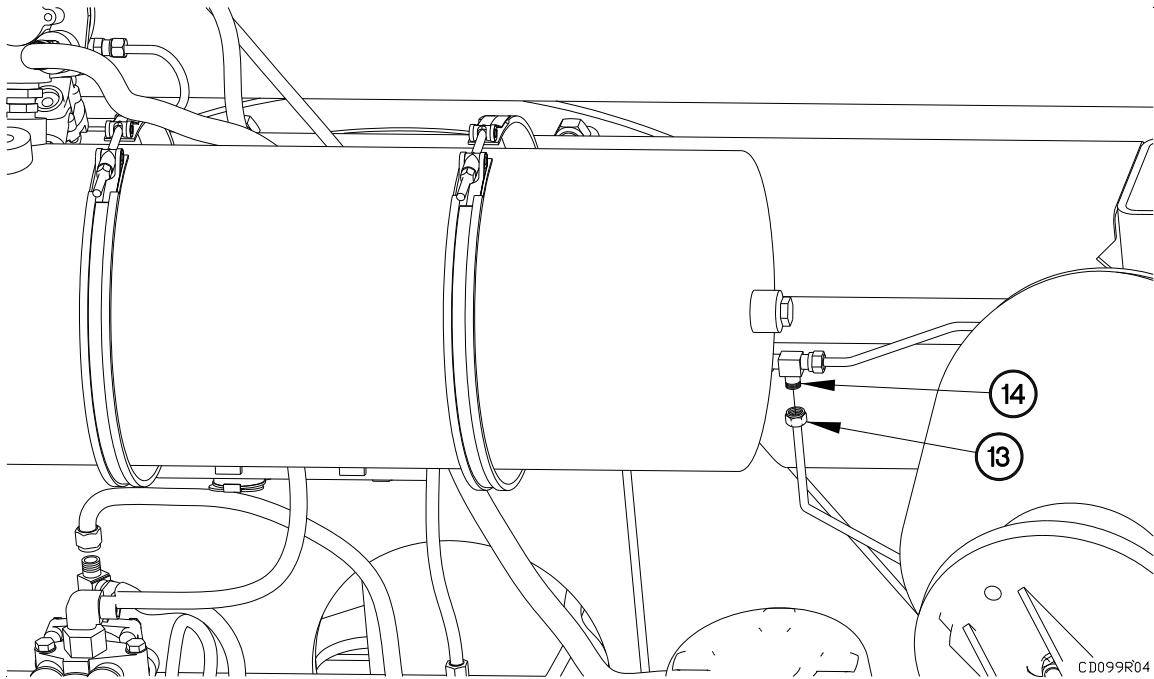


13. Position eight bolts (19) and self-locking nuts (18) in turntable (1).
14. Tighten eight self-locking nuts (18) to 155-185 lb-ft (210-251 N·m).



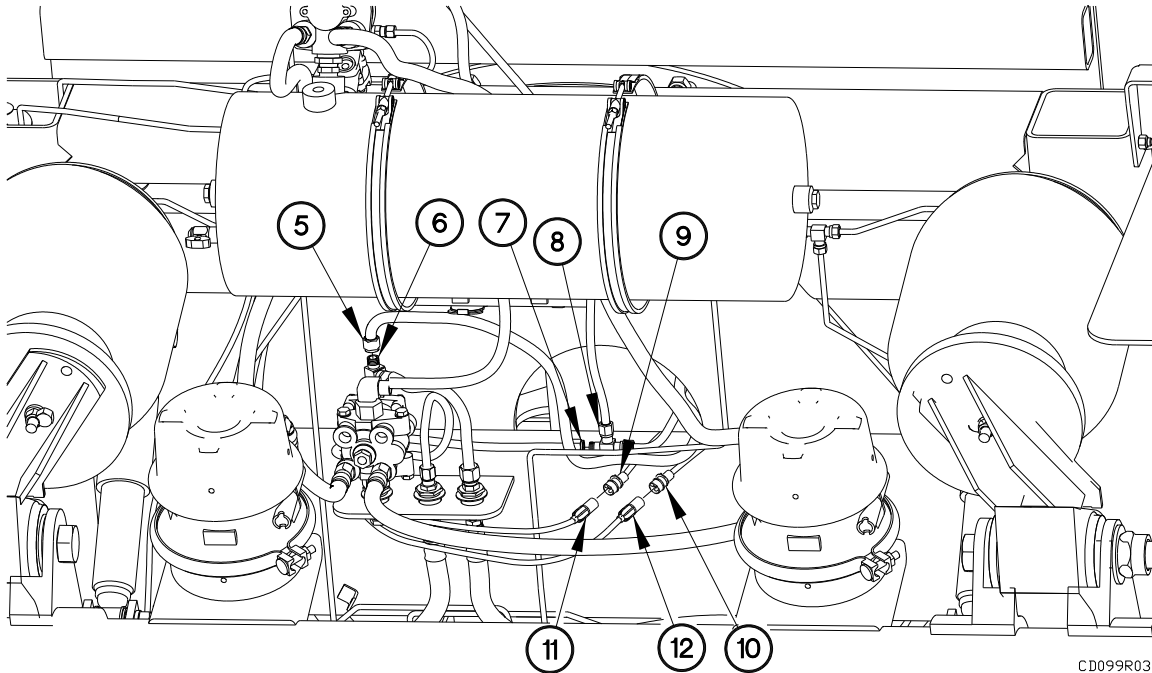
INSTALLATION – Continued

15. Connect hose (13) to tee fitting (14).



INSTALLATION – Continued

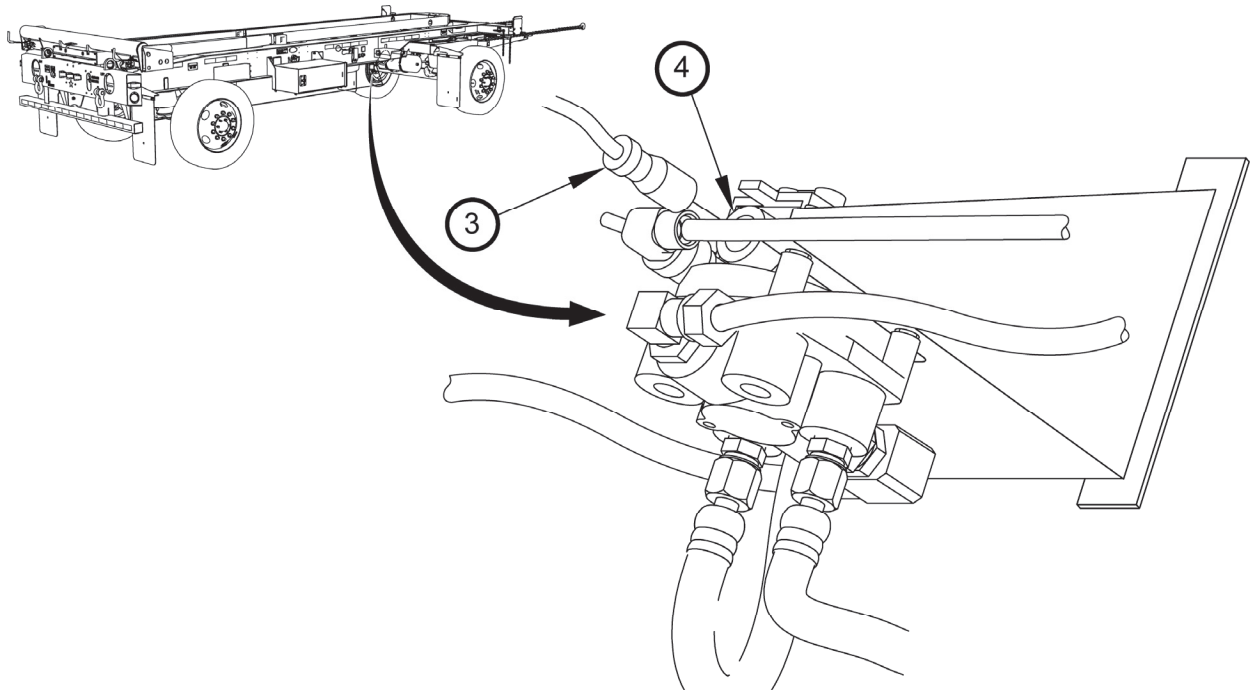
16. Connect ABS sensor connectors (9 and 10) to ABS sensor connectors (11 and 12).
17. Connect hose (7) to tee fitting (8).
18. Connect hose (5) to tee fitting (6).



CD099R03

INSTALLATION – Continued

19. Connect ABS relay sensor relay connector (3) to ABS relay sensor (4).



CD099R02

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 TASK**END OF WORK PACKAGE**

SHUTTLE AND GUIDE BRACKET REPLACEMENT

0100 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Check

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts

Washer, Lock (3) (Item 18, WP 0168 00)
 Nut, Self-Locking (2) (Item 32, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
 Wrench, Torque 50-250 lb-ft (Item 33, WP 0167 00)
 Wrench, Torque 0-600 lb-ft (Item 36, WP 0167 00)
 Sling, Cargo (Item 16, WP 0167 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

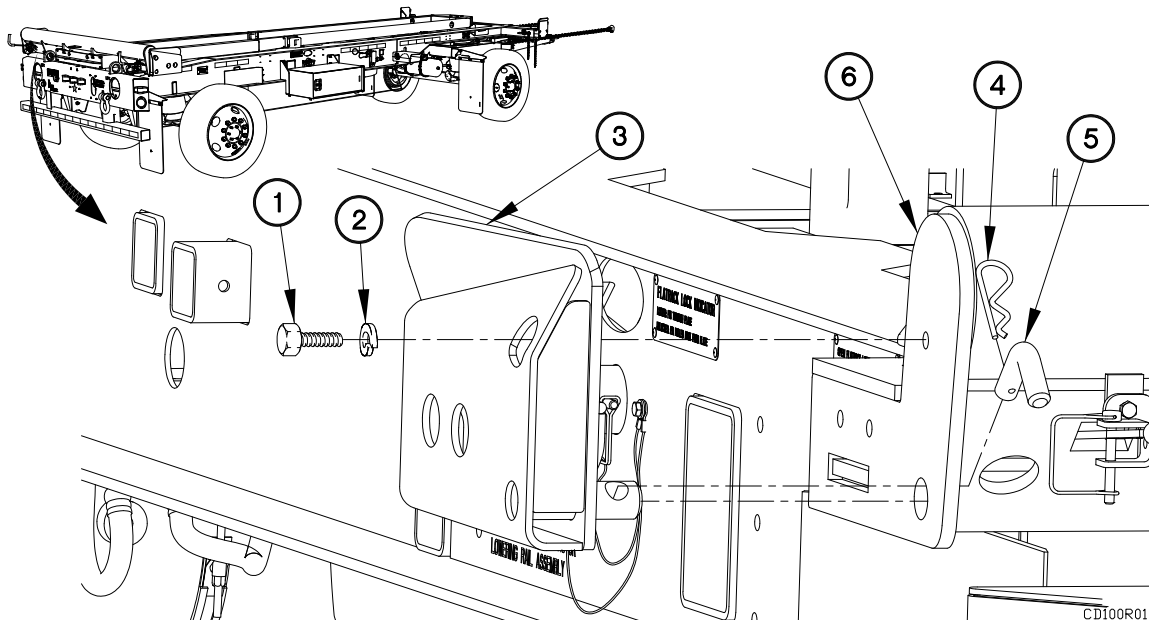
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) shuttle and guide brackets.

REMOVAL

NOTE

LH and RH shuttle guide brackets are removed the same way. LH side is 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).



0100 00-1

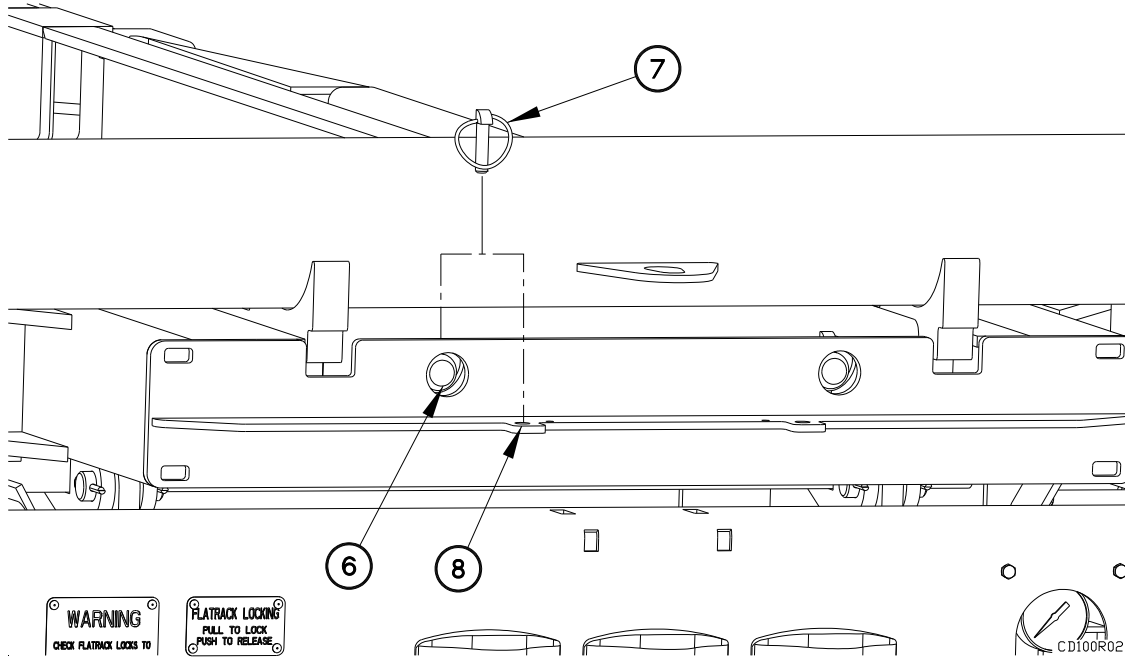
CD100R01

SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued

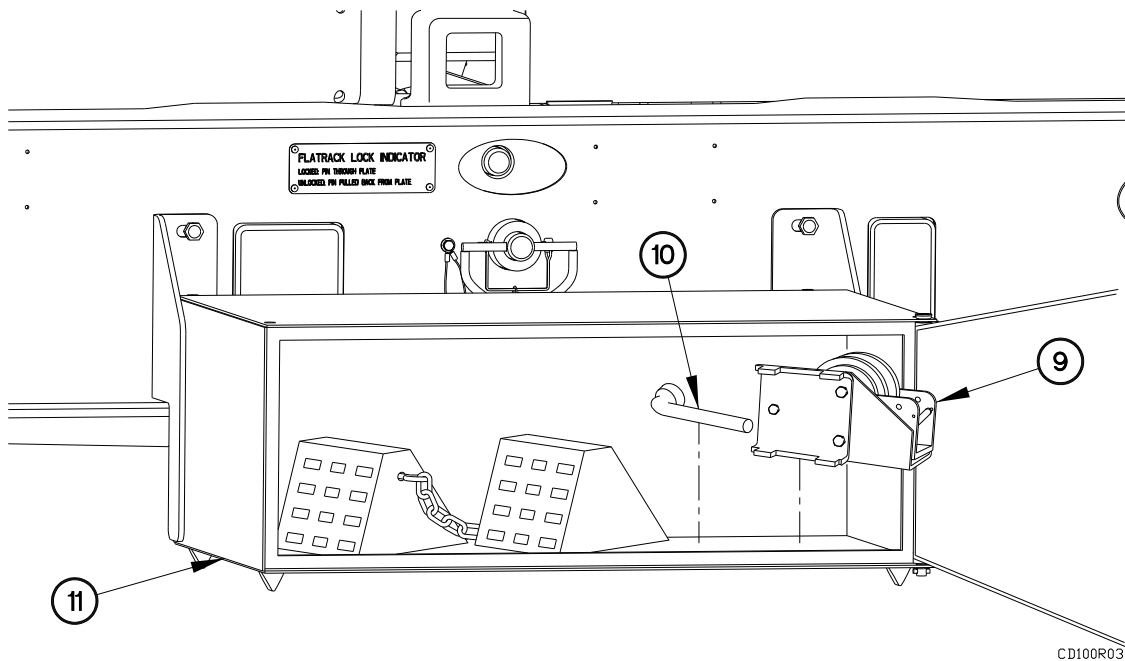
0100 00

REMOVAL - Continued

3. Remove two inner rear lock pins (7) from shuttle (6).
4. Install two inner rear lock pins (7) in trailer (8).

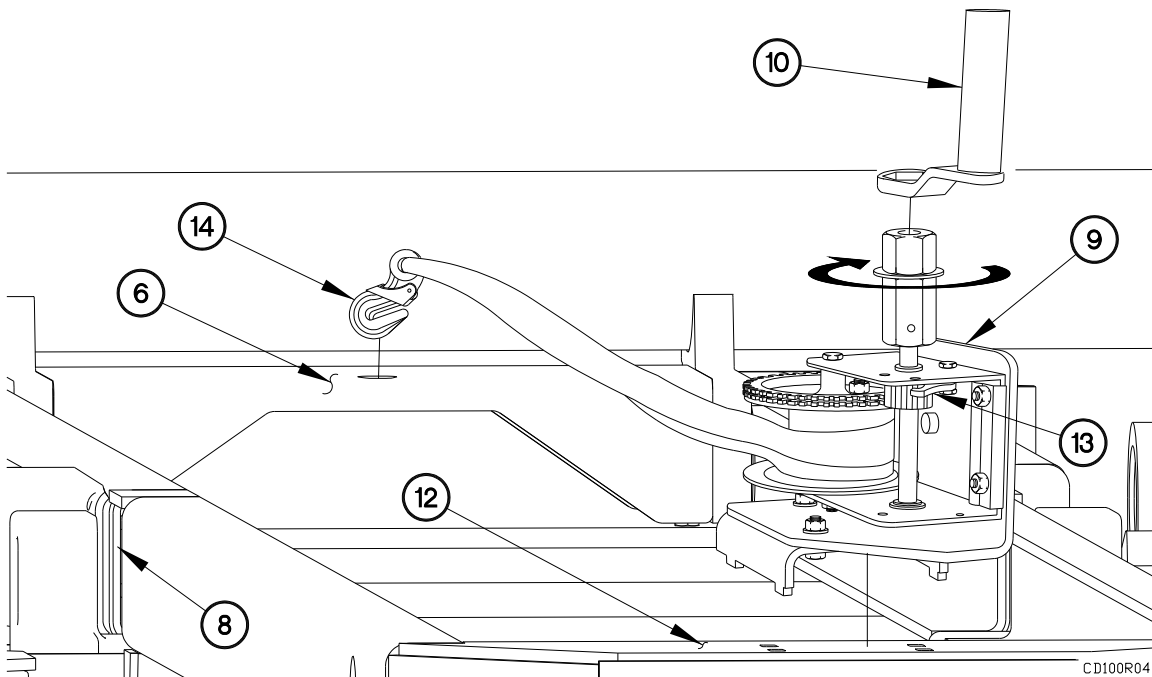


5. Remove winch (9) and crank handle (10) from tool box (11).



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).



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 is 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).

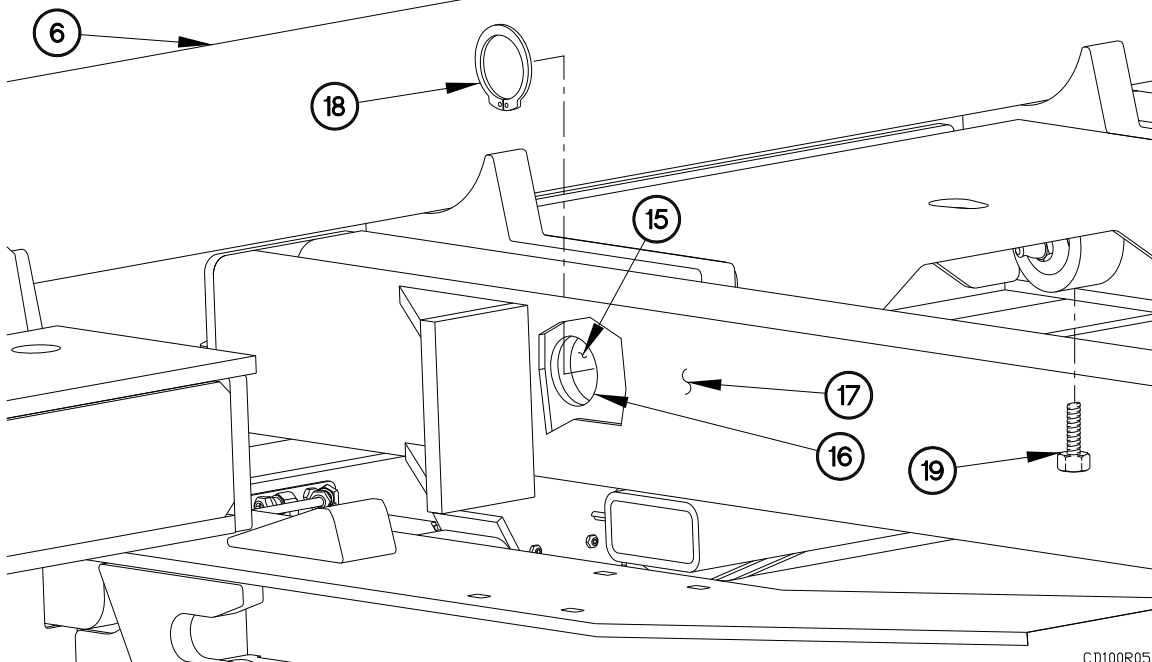
15. Perform previous two steps on remaining roller pins.

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).



CD100R05

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).

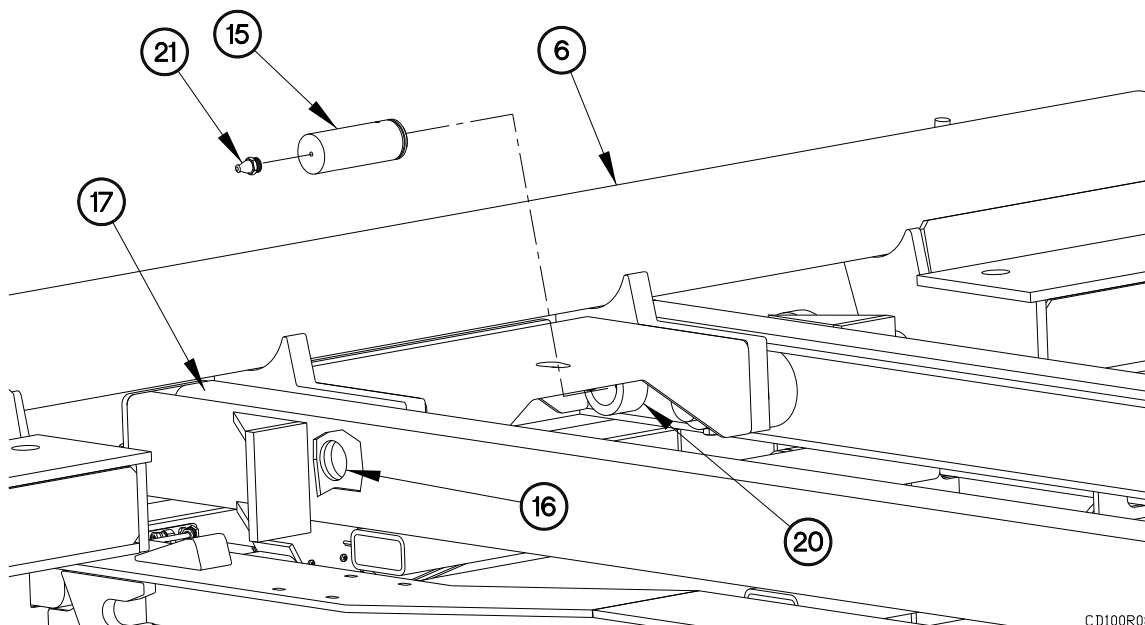
WARNING

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 is 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).

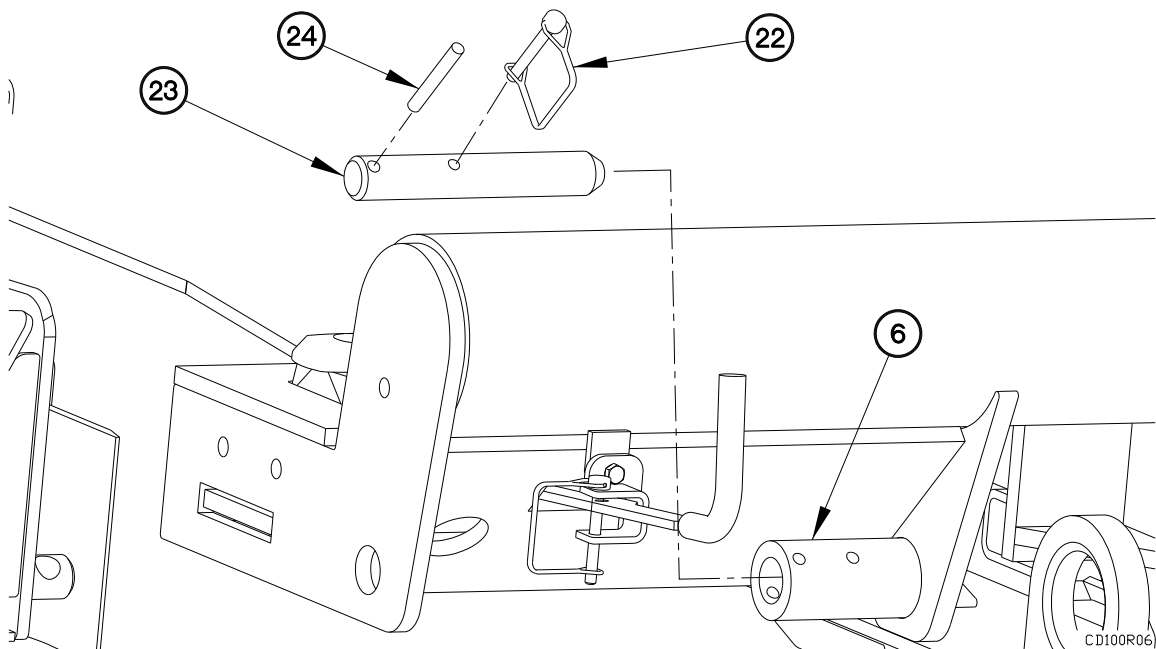


CD100R08

REMOVAL - Continued**NOTE**

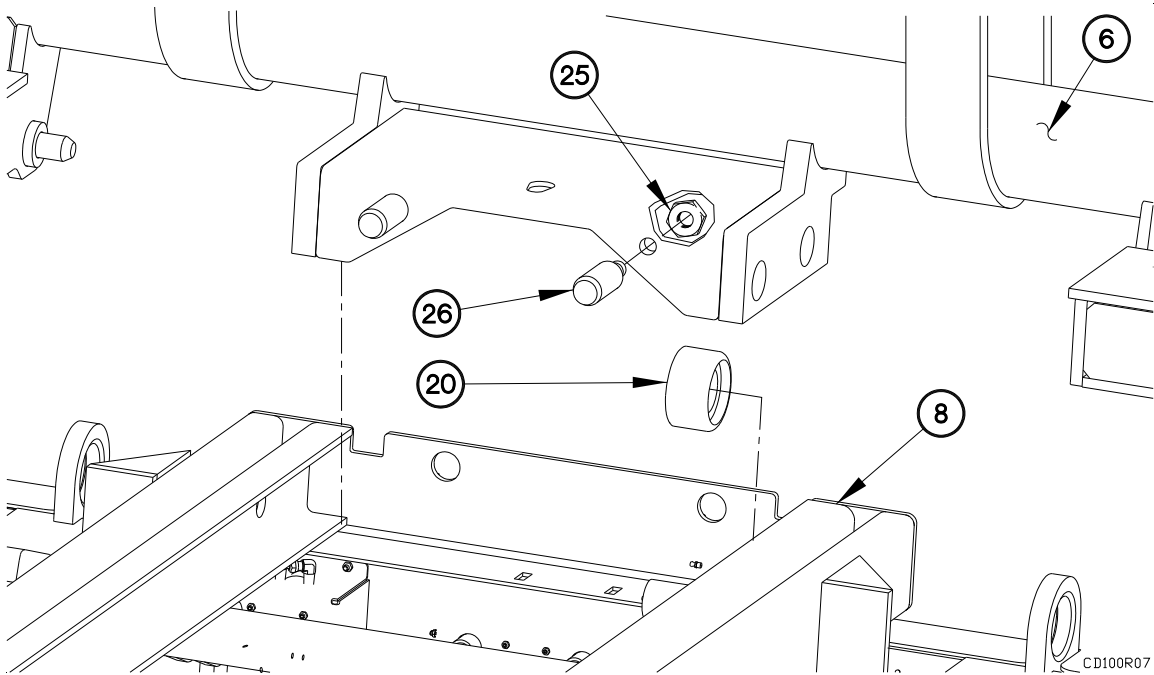
LH and RH shuttle locking pins are removed the same way. LH side is shown.

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**

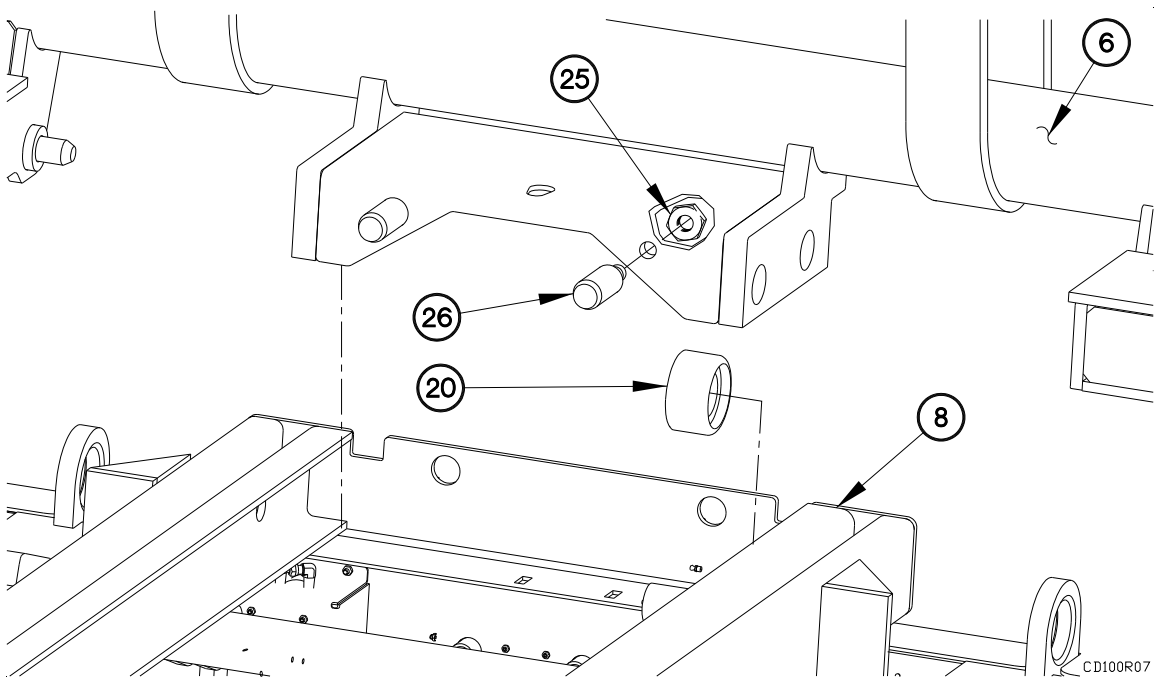
26. Remove two self-locking nuts (25) and alignment studs (26) from shuttle (6). Discard self-locking nuts.
27. Remove four rollers (20) from trailer (8).



INSTALLATION**NOTE**

Holes in alignment studs align vertically.

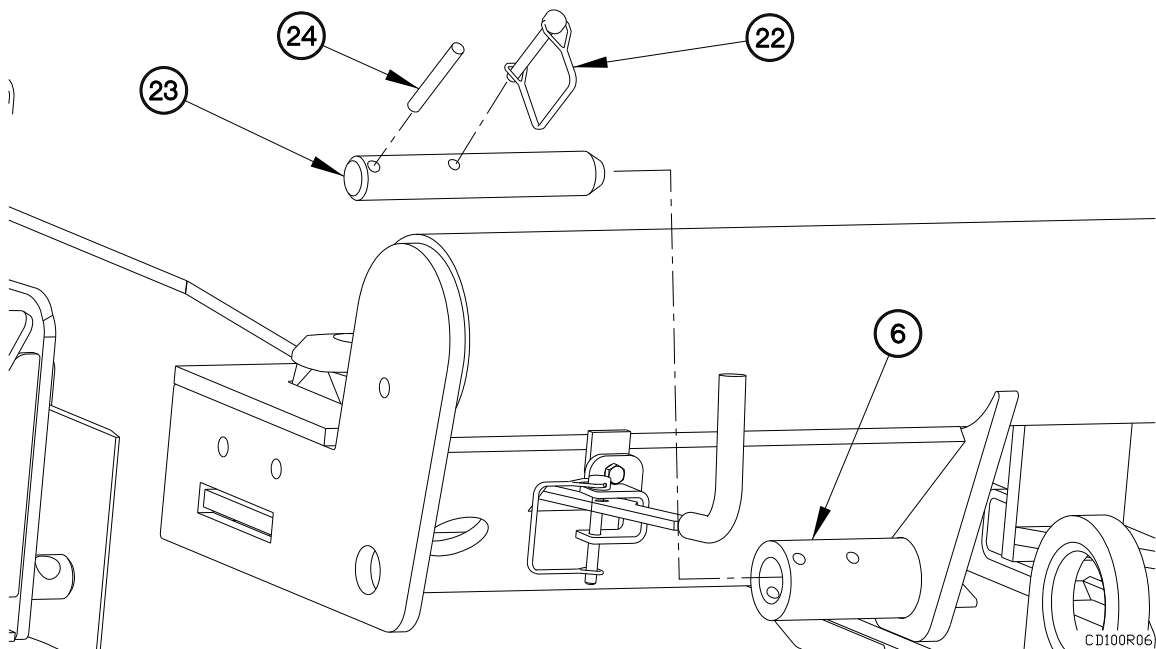
1. Position two alignment studs (26) in shuttle (6) with two self-locking nuts (25).
2. Tighten two self-locking nuts (25) to 225-275 lb-ft (305-373 N·m).
3. Position four rollers (20) on trailer (8).



INSTALLATION - Continued**NOTE**

LH and RH shuttle locking pins are installed the same way. LH side is 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**

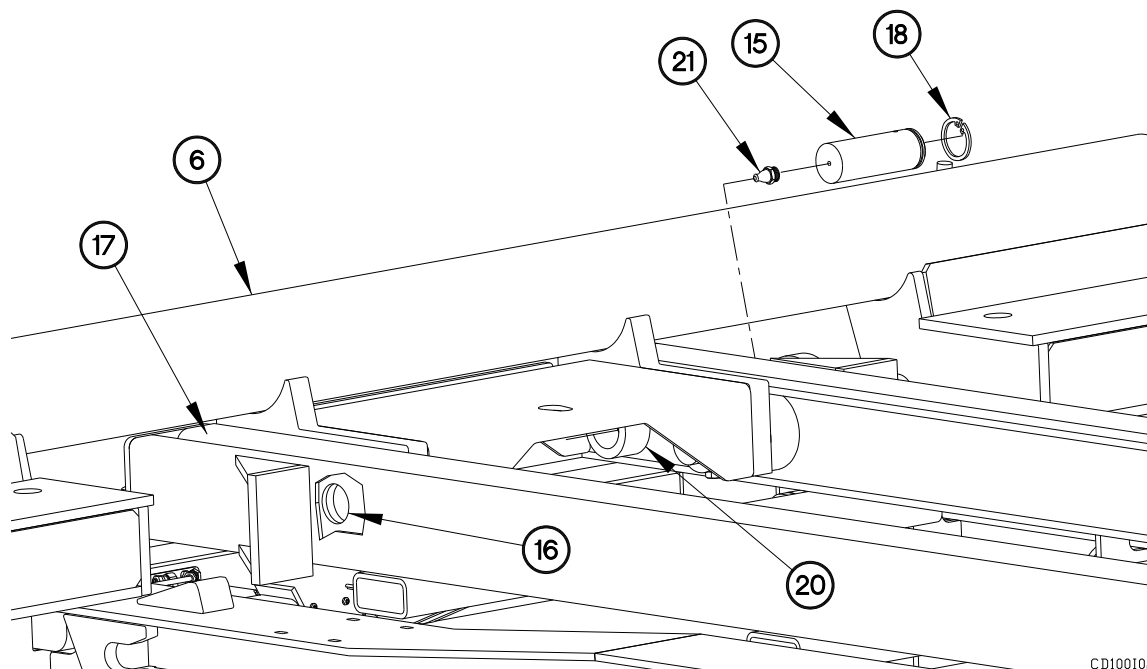
9. Install four retaining rings (18) on roller pins (15).
10. Align roller pin (15) with service hole (16) on rail (17).
11. Install four grease fittings (21) in roller pins (15).

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 is 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.



CD100102

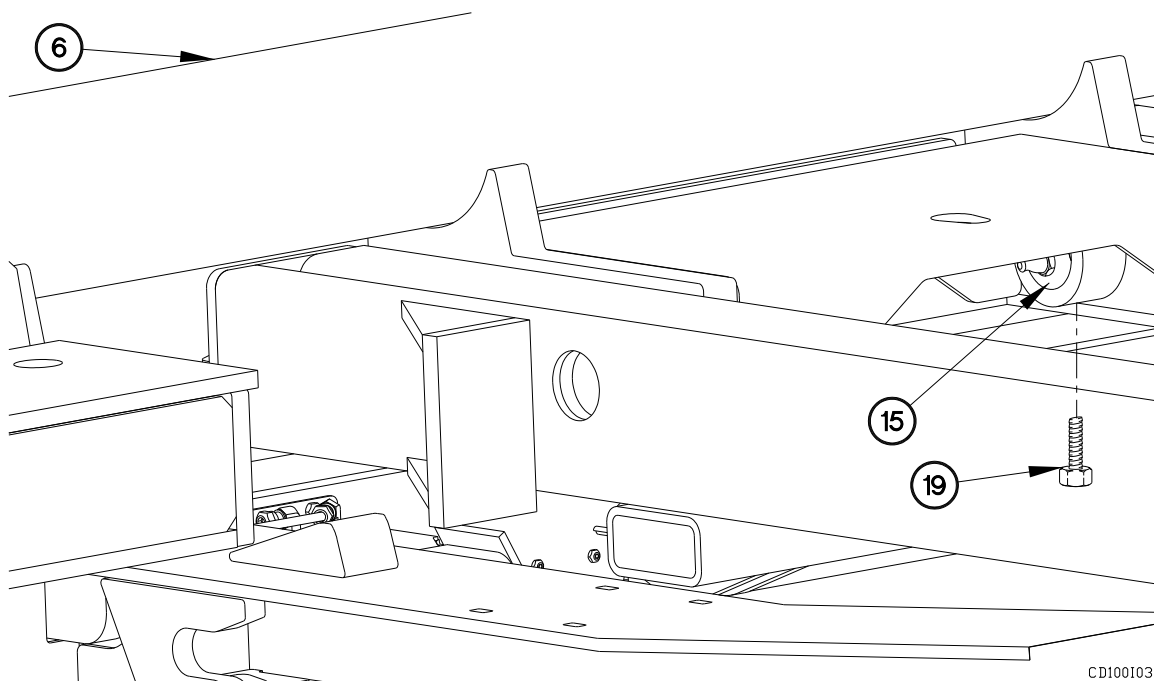
INSTALLATION - Continued**NOTE**

- 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).

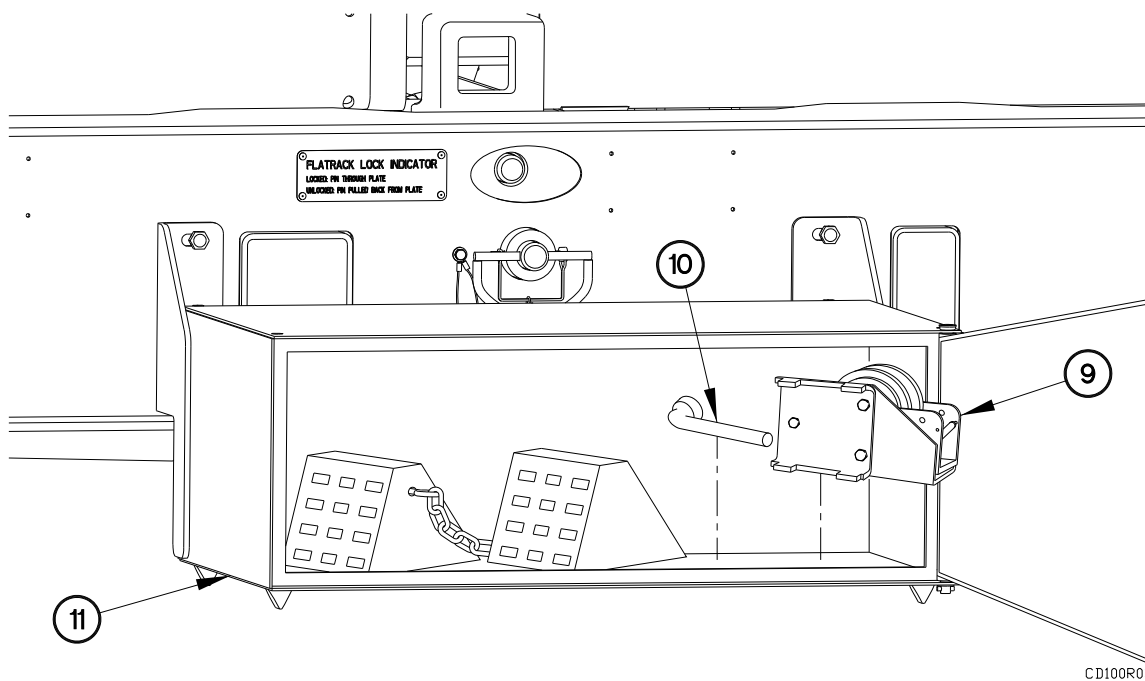
16. Install four bolts (19) in shuttle (6).



CD100103

INSTALLATION – Continued

17. Install winch (9) and crank handle (10) in tool box (11).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued

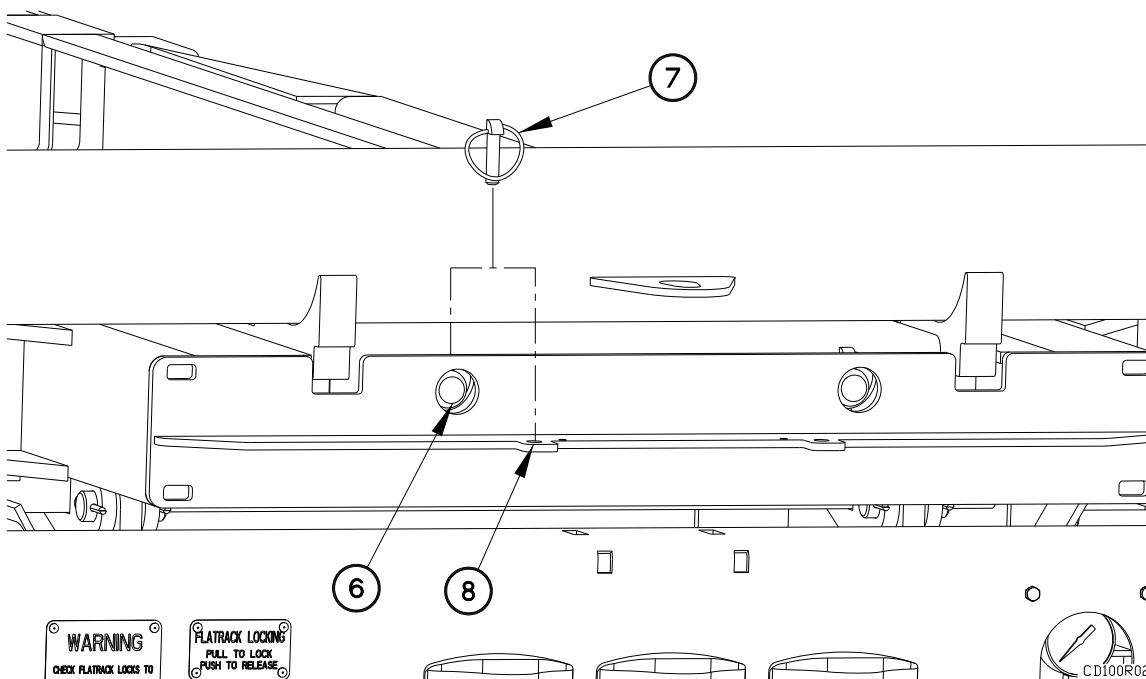
0100 00

INSTALLATION – Continued

NOTE

The following step requires the aid of an assistant.

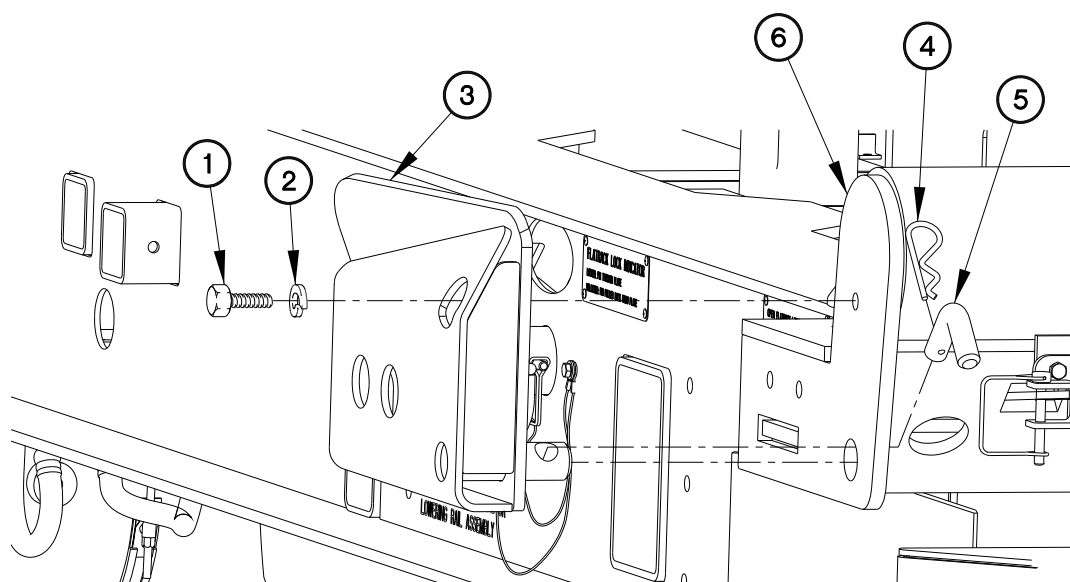
18. Push shuttle (6) to rear of trailer (8).
19. Remove two inner rear lock pins (7) from trailer (8).
20. Install two inner rear lock pins (7) in shuttle (6).



SHUTTLE AND GUIDE BRACKET REPLACEMENT - Continued**0100 00****INSTALLATION – Continued****NOTE**

LH and RH shuttle guide brackets are installed the same way. LH side is 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).



CD100101

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

Materials/Parts

Nut, Self-Locking (Item 31, WP 0168 00)
Pin, Cotter (Item 55, WP 0168 00)

Tools and Special Tools

Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque 50-250 lb-ft (Item 33, 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) shuttle twist lock.

SHUTTLE TWIST LOCK REPLACEMENT - CONTINUED**0101 00****REMOVAL****NOTE**

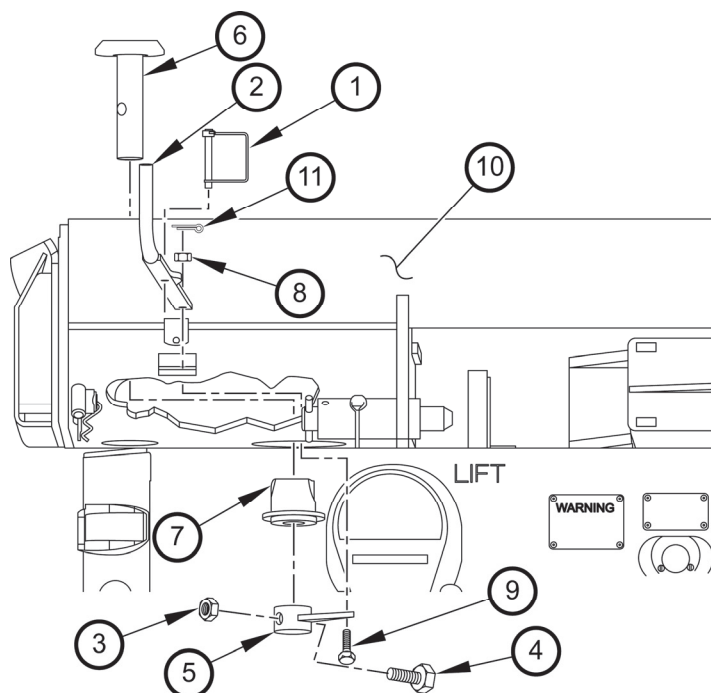
LH and RH twist locks are removed the same way. LH side is shown.

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 cotter pin (11), nut (8), bolt (9) and handle (2) from swivel arm (5). Discard cotter pin.
6. Remove swivel arm (5) and block (7) from shuttle (10).



D06968

END OF TASK

INSTALLATION

NOTE

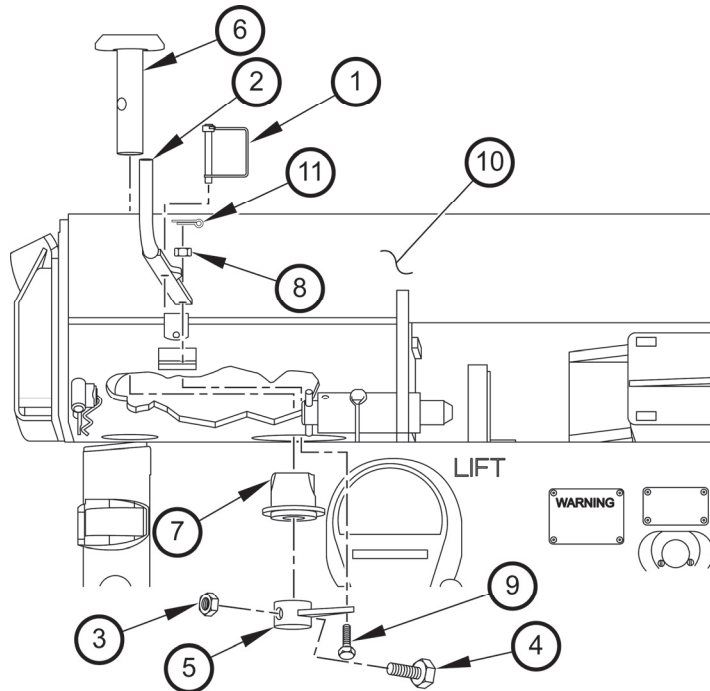
LH and RH twist locks are installed the same way. LH side is shown.

1. Position block (7) and swivel arm (5) in shuttle (10).

NOTE

Tighten nut and then loosen one half turn to allow joint to pivot and insert cotter pin.

2. Install handle (2) bolt (9), nut (8), and new cotter pin (11) on swivel arm (5).
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).



D06968

END OF TASK

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 24, WP 0167 00)
Wrench, Torque 0-175 lb-ft (Item 34, WP 0167 00)
Wrench, Torque, 0-600 lb-ft (Item 36, 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)
Pin, Cotter (Item 42, WP0168 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)

GENERAL

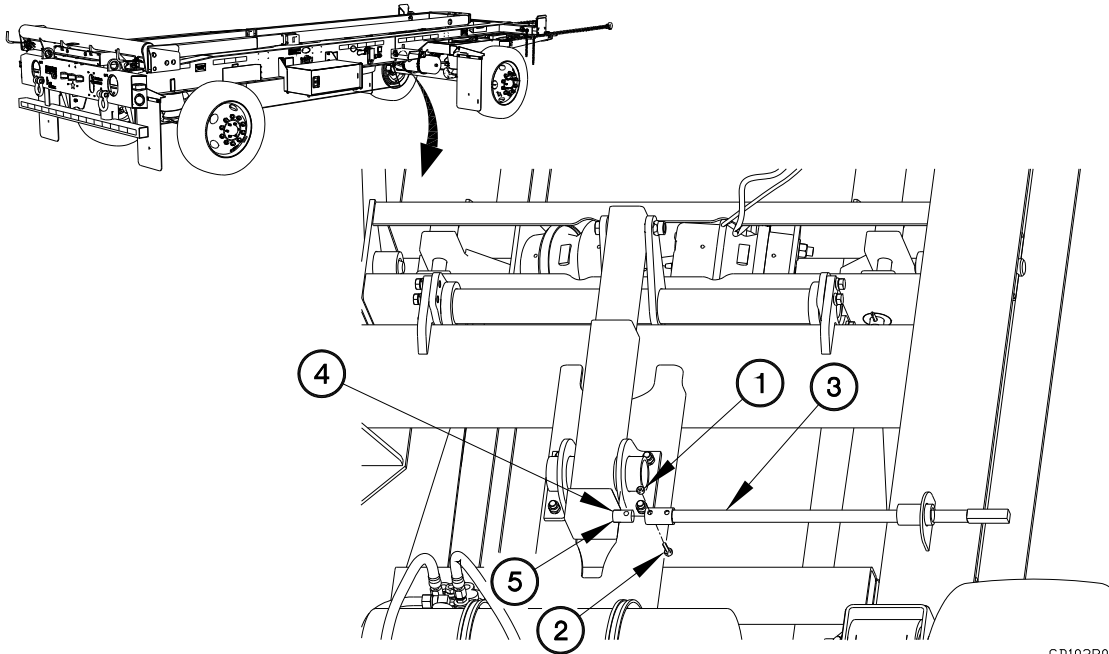
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) rail lift jack.

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), shaft (3), and cotter pin (4) from rail lift jack (5). Discard self-locking nut.



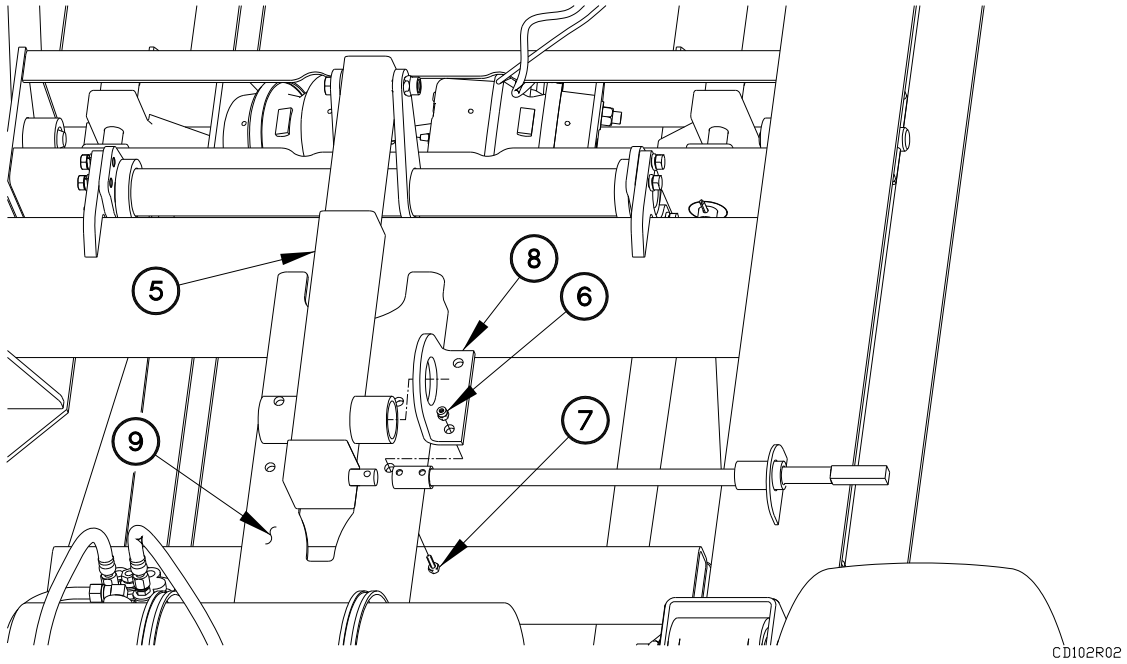
CD102R01

RAIL LIFT JACK REPLACEMENT - CONTINUED

0102 00

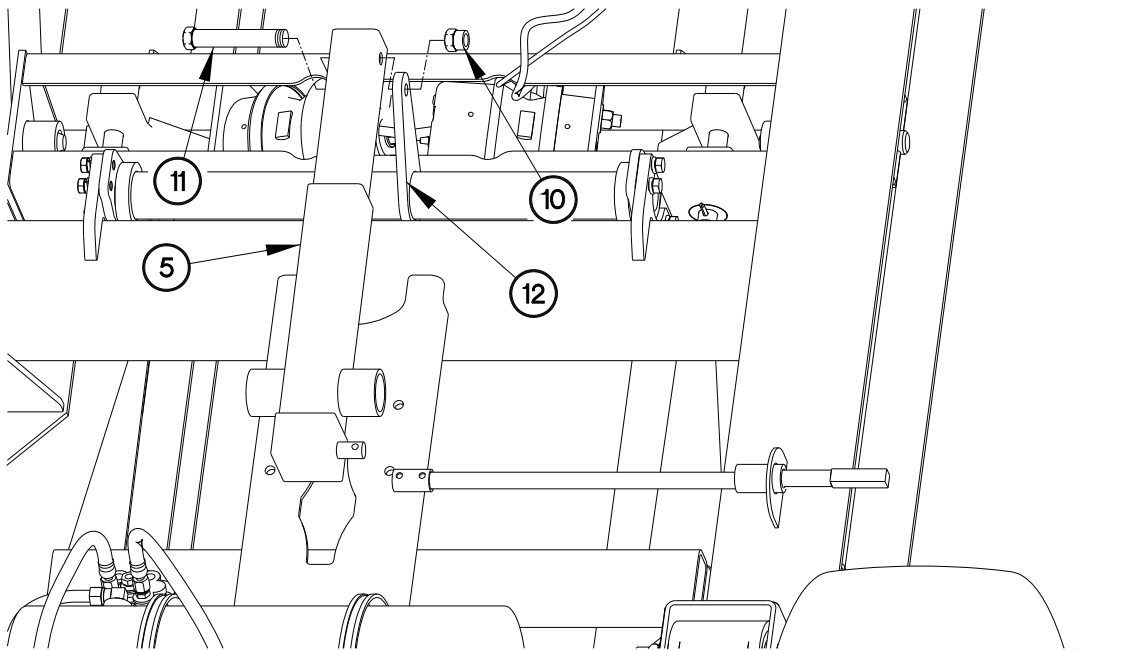
REMOVAL – Continued

2. Remove four self-locking nuts (6), bolts (7), two brackets (8), and rail lift jack (5) from mounting plate (9). Discard self-locking nuts.



CD102R02

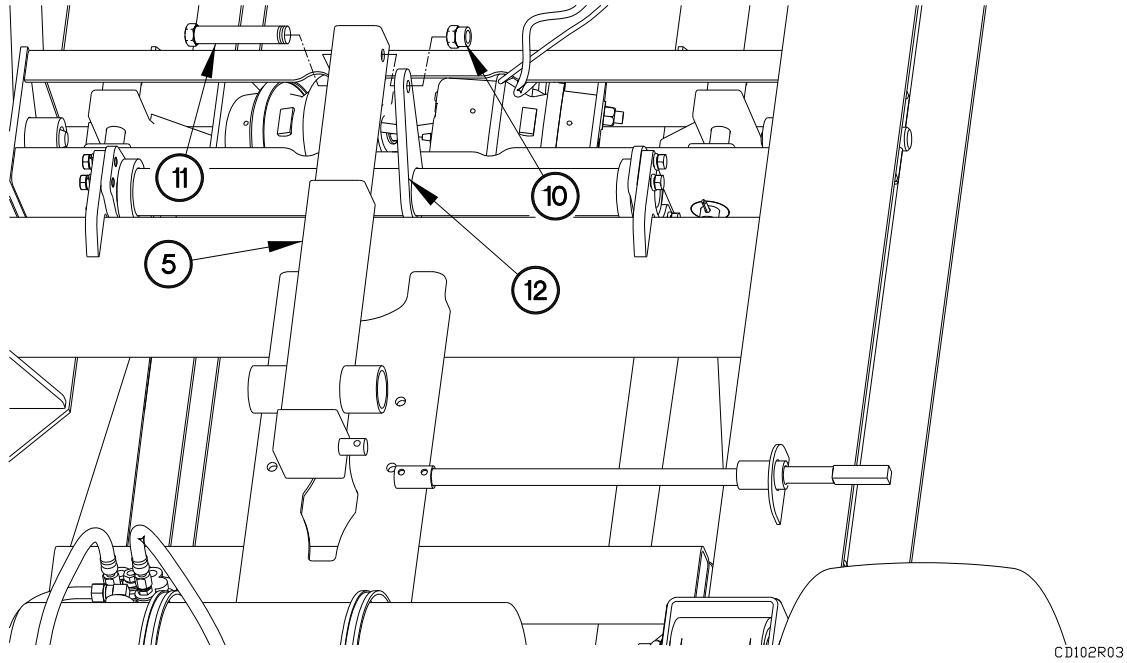
3. Remove self-locking nut (10), bolt (11), and rail lift jack (5) from rockshaft jack brackets (12). Discard self-locking nut.



CD102R03

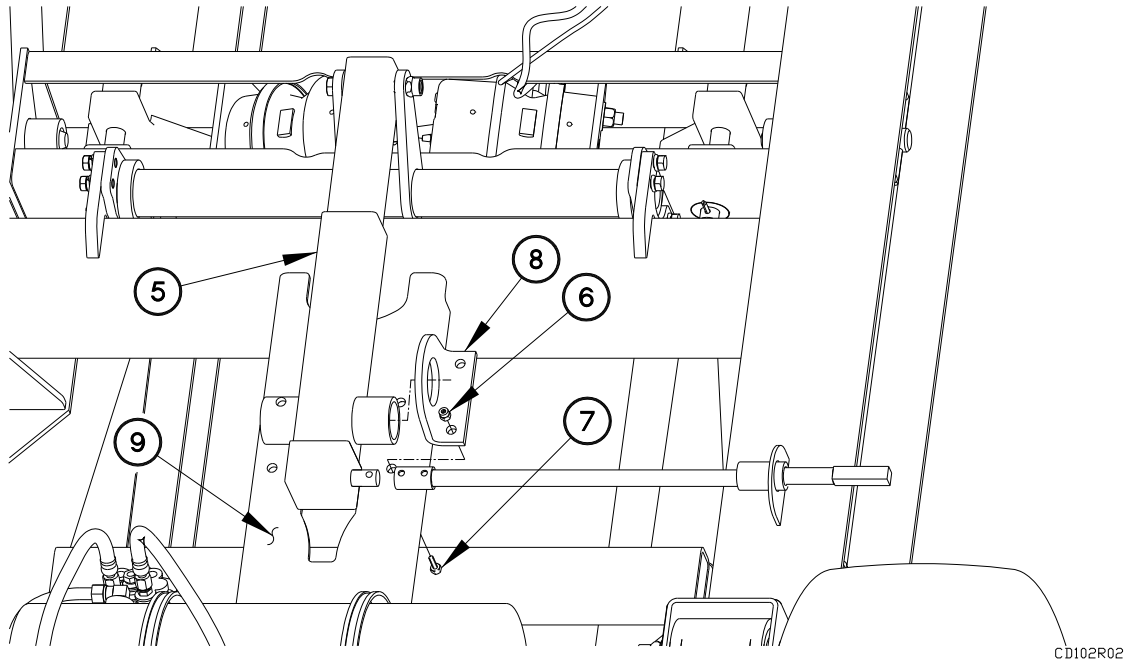
**RAIL LIFT JACK REPLACEMENT - CONTINUED
INSTALLATION****0102 00**

1. Position rail lift jack (5) on rockshaft jack brackets (12) with bolt (11) and self-locking nut (10).
2. Tighten self-locking nut (10) to 150-190 lb-ft (203-258 N·m).



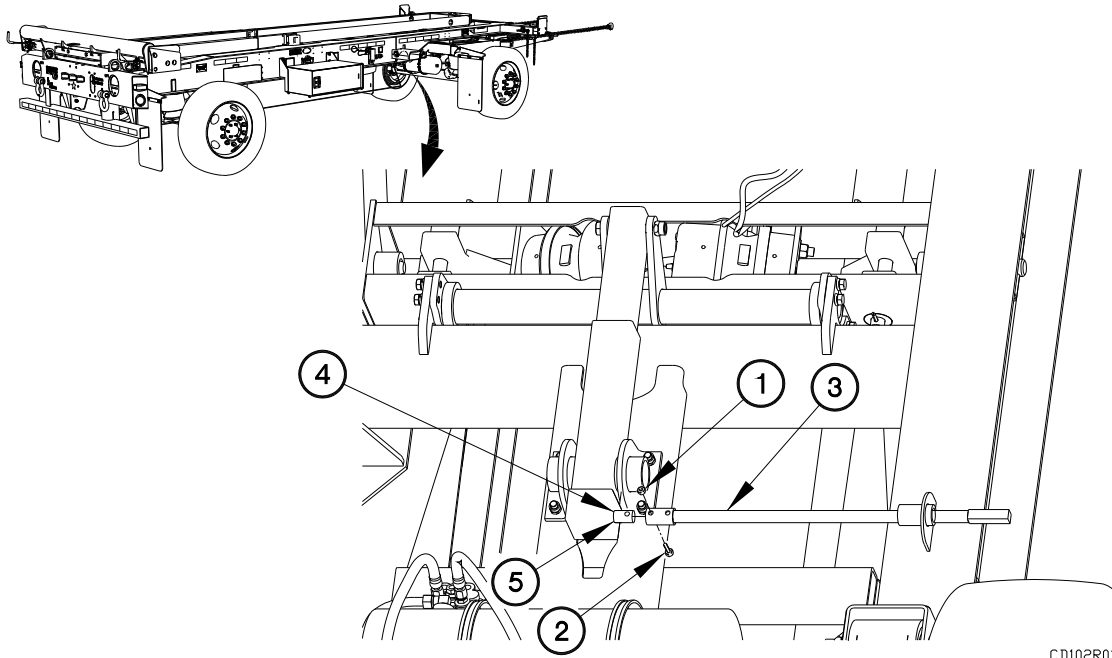
RAIL LIFT JACK REPLACEMENT - CONTINUED**0102 00****INSTALLATION - Continued**

3. Position two brackets (8) and rail lift jack (5) on mounting plate (9) with four bolts (7) and self-locking nuts (6).
4. Tighten four self-locking nuts (6) to 70-90 lb-ft (95-122 N·m).



RAIL LIFT JACK REPLACEMENT - CONTINUED**0102 00****INSTALLATION - Continued**

5. Install cotter pin (4) in rail lift jack (5).
6. Position shaft (3) on rail lift jack (5) with bolt (2) and self-locking nut (1).
7. Tighten self-locking nut (1) to 16-20 lb-ft (22-27 N·m).



CD102R01

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

Materials/Parts References

Nut, Self-Locking (4) (Item 30, WP 0168 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-175 lb-ft (Item 34, WP 0167 00)
Wrench Set, Crowfoot, Ratcheting (Item 29, WP 0167 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.

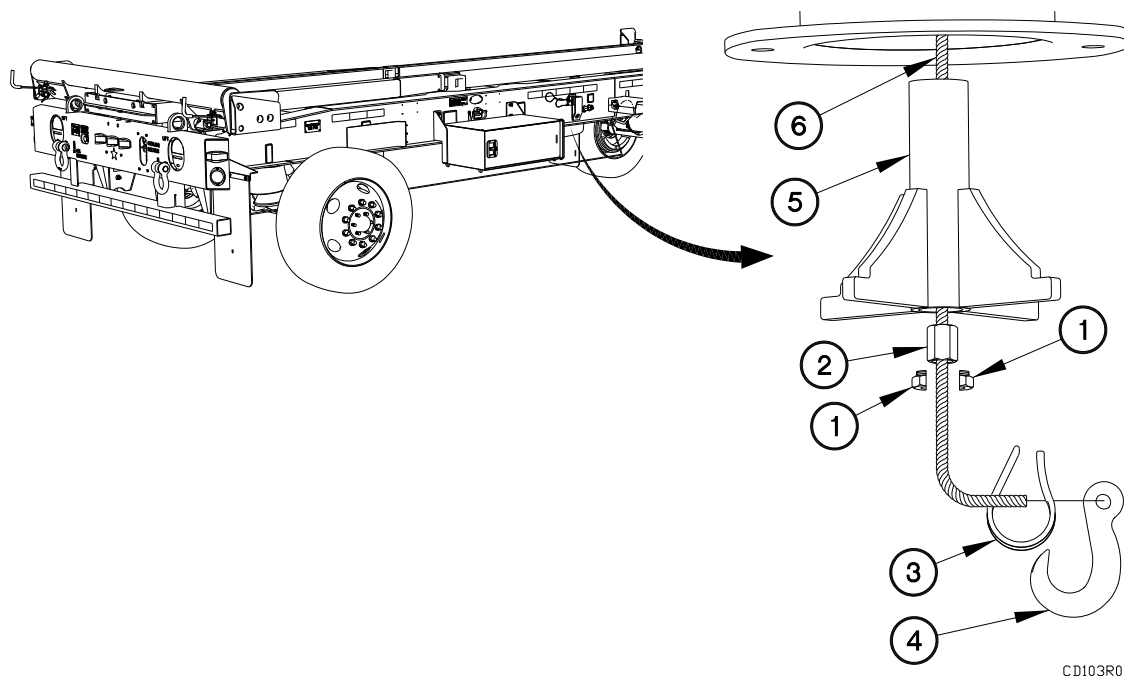
SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT**0103 00****- Continued****REMOVAL**

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.

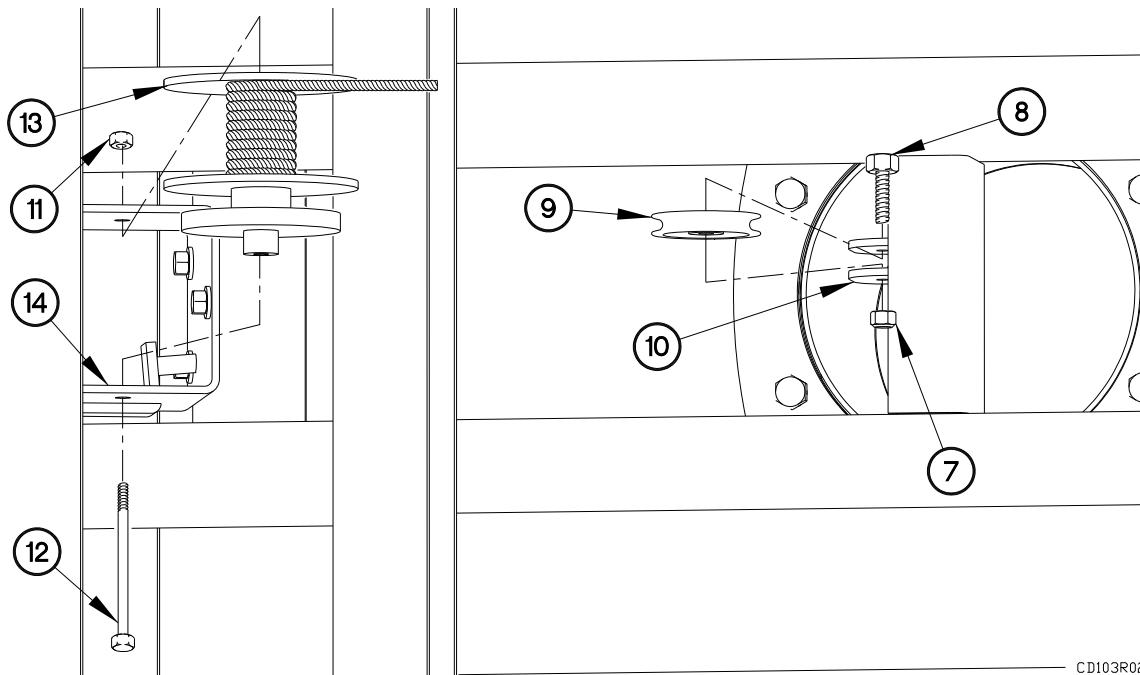
2. Reel in wire rope past pulley to reel.
3. Secure wire rope at reel.



CD103R01

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).



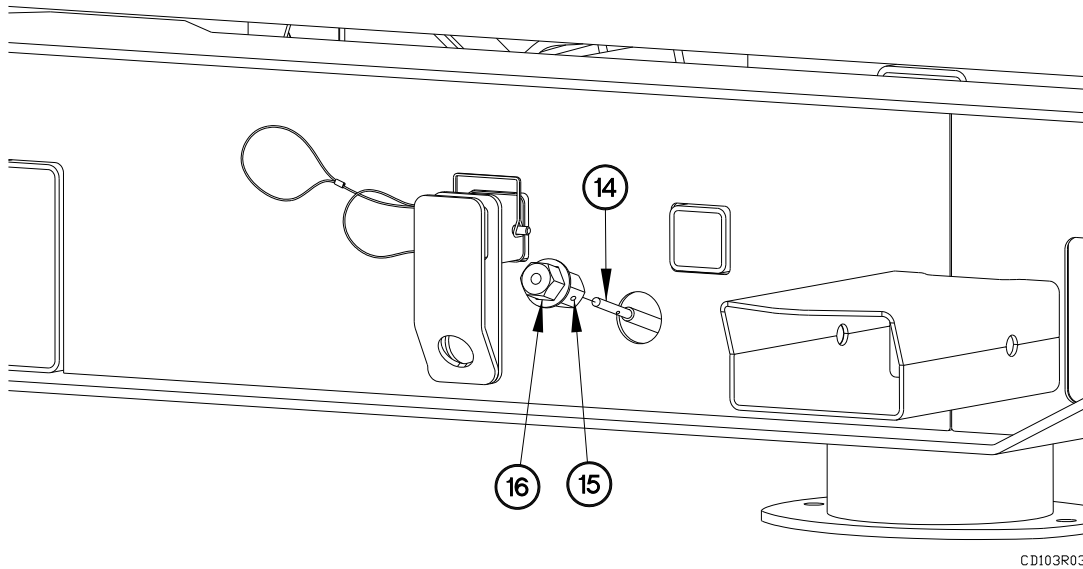
CD103R02

SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT
- Continued

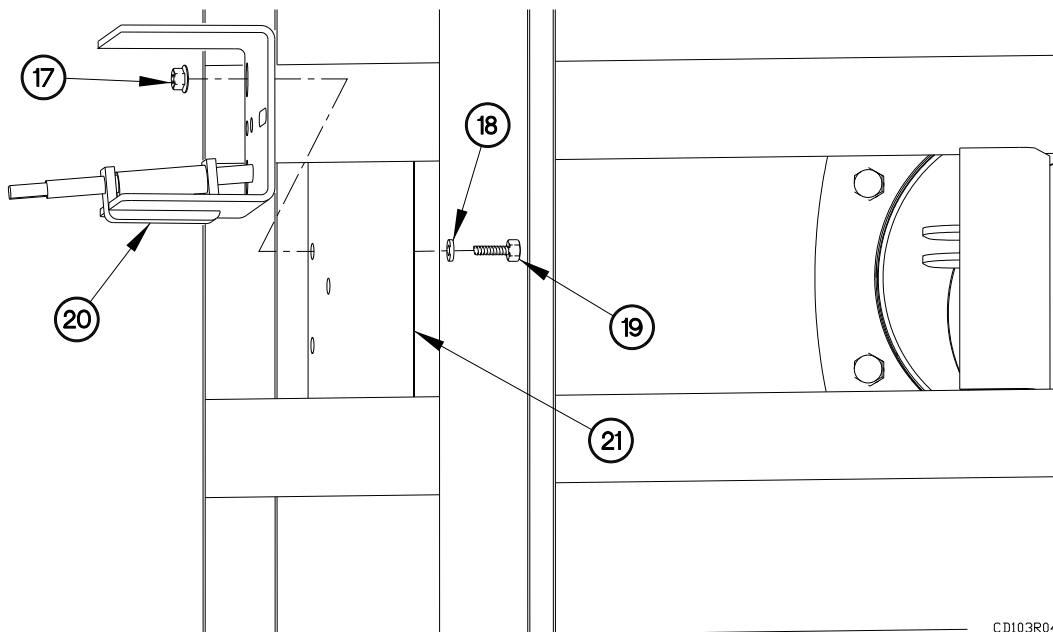
0103 00

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.

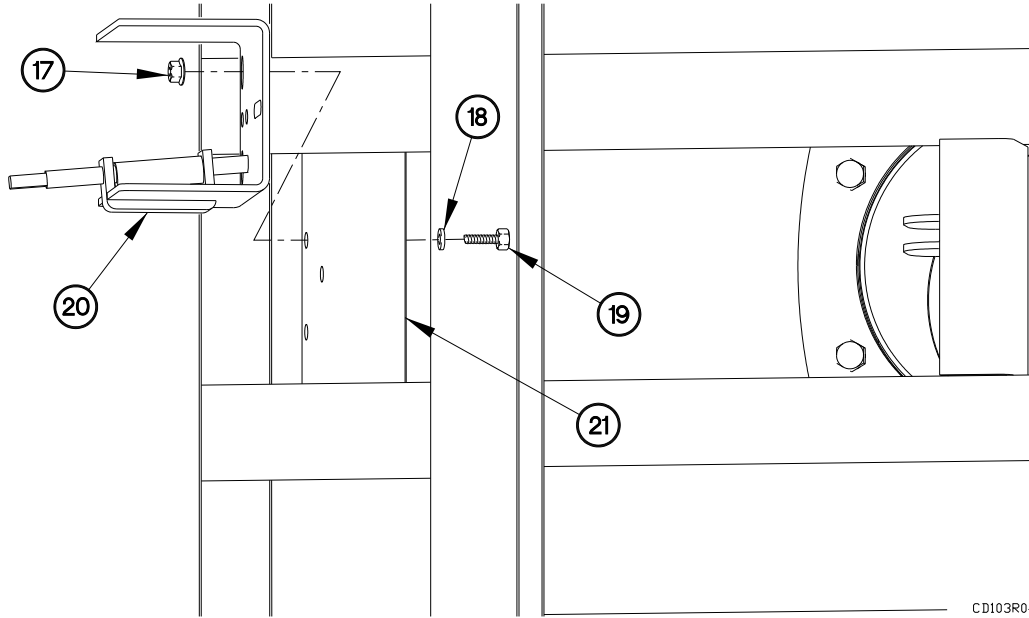


SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT
- Continued

0103 00

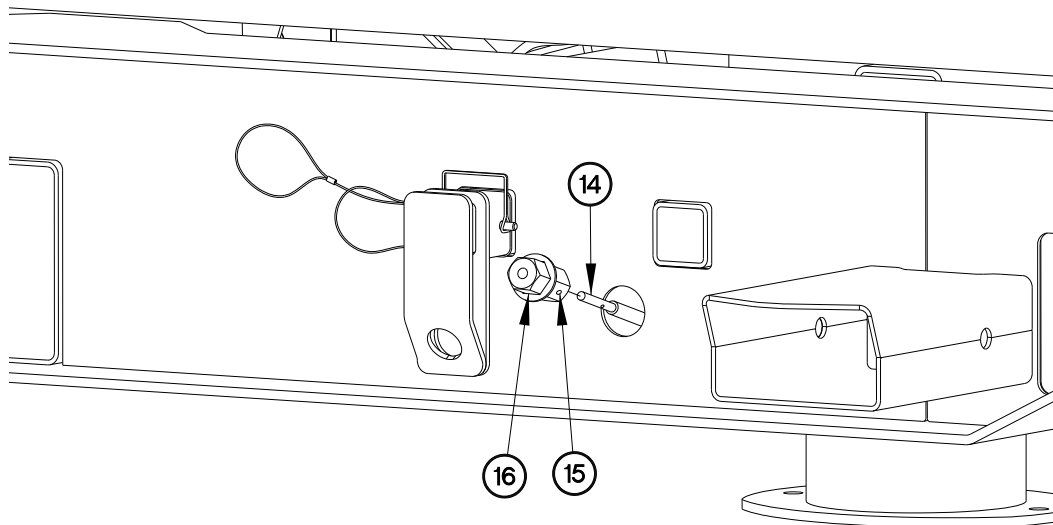
INSTALLATION

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 26-32 lb-ft (35-43 N·m).



CD103R04

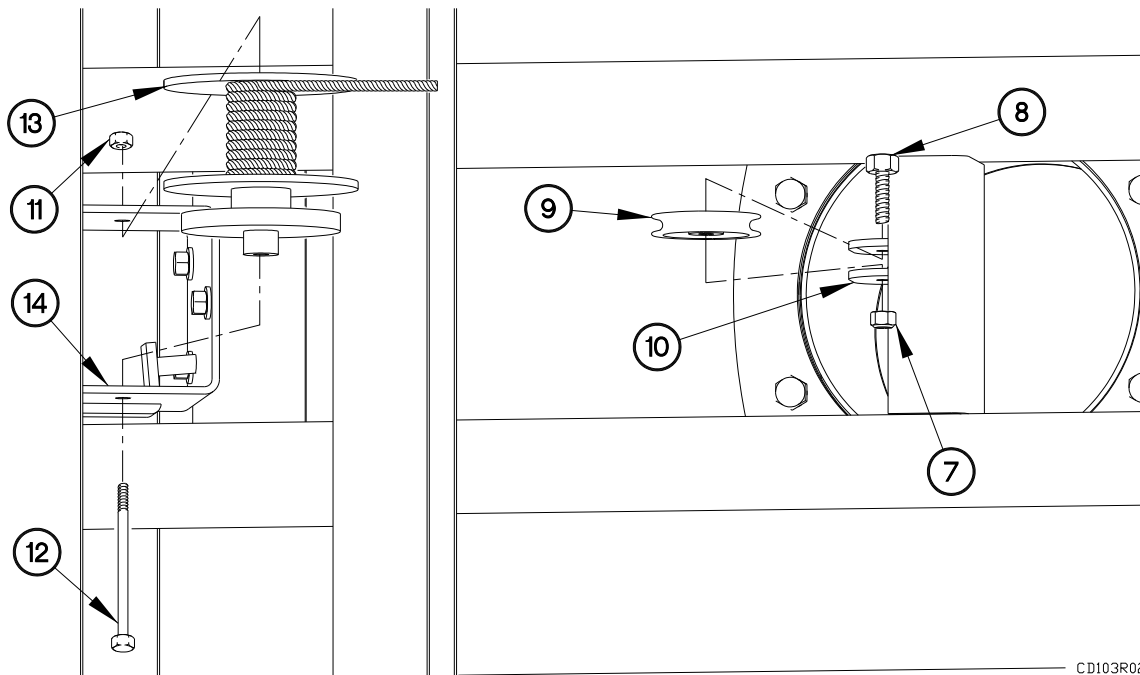
3. Install extension (16) on tire carrier winch frame (14).
4. Tighten set screw (15) to 8-10 lb-ft (11-14 N·m) on extension (16).



CD103R03

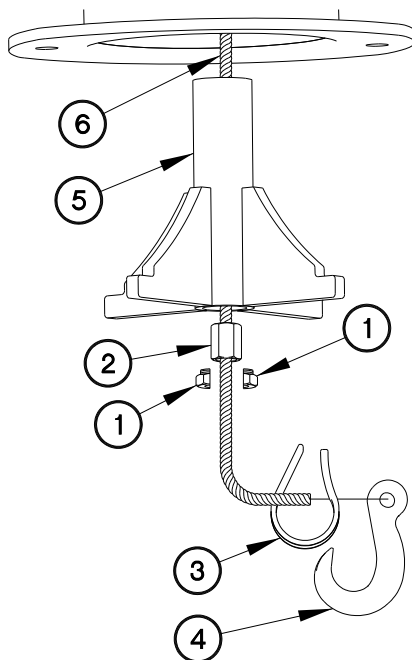
SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT
- Continued**0103 00****INSTALLATION – Continued**

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 26-32 lb-ft (35-43 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). Ensure there is at least 3 in. of wire rope protruding up through clamp socket.
10. Tighten clamp socket (2) to 92-108 lb ft (133-140 N·m).



CD10301

SPARE TIRE CARRIER WINCH ASSEMBLY REPLACEMENT
- Continued

0103 00

OPERATIONAL CHECKS

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 24, WP 0167 00)
Wrench, Torque 0-75 lb-in. (Item 37, WP
0167 00)

Materials/Parts

Washer, Lock (2) (Item 22, WP 0168 00)
Pin, Cotter (4) (Item 45, WP 0168 00)
Compound, Threadlocking (Item 56, WP
0168 00)

Equipment Conditions

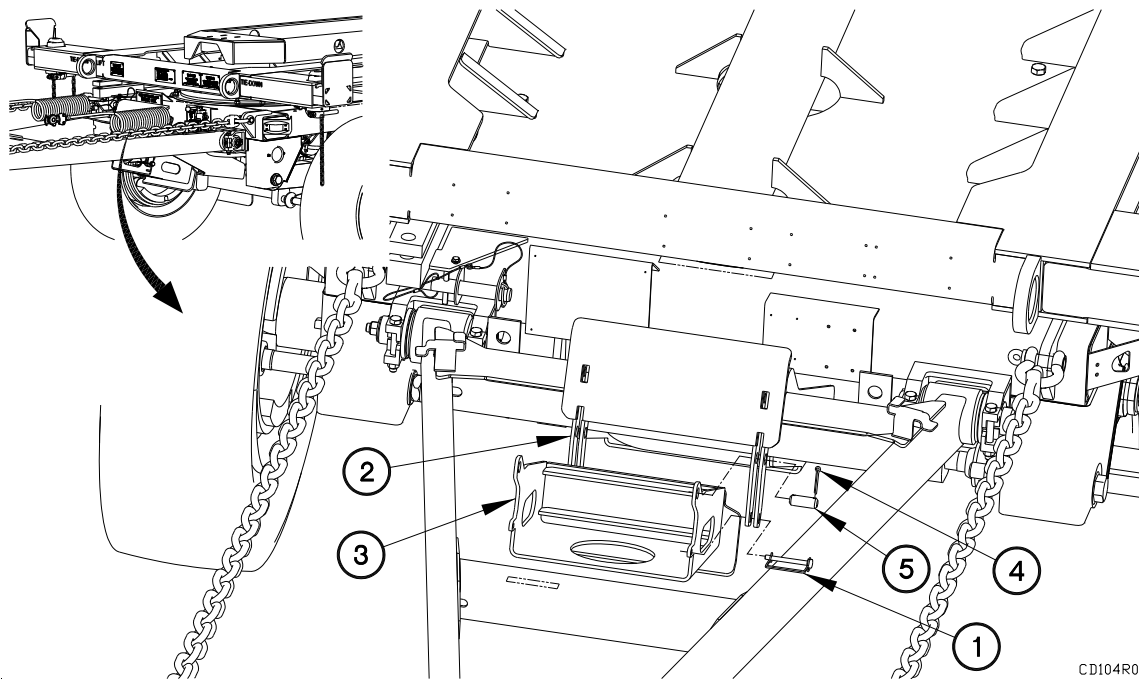
Trailer uncoupled (WP 0043 24,
TM 2320-392-10-1)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) bump stop and extension.

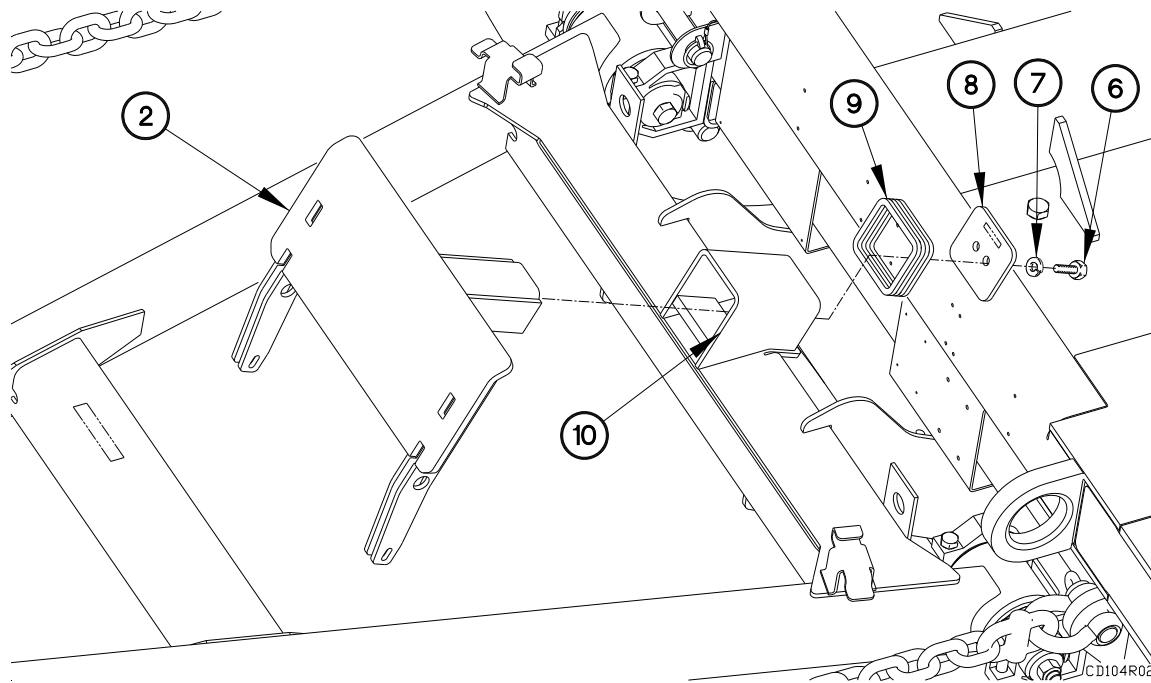
BUMP STOP AND EXTENSION REPLACEMENT - Continued**0104 00****REMOVAL**

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).

**END OF TASK**

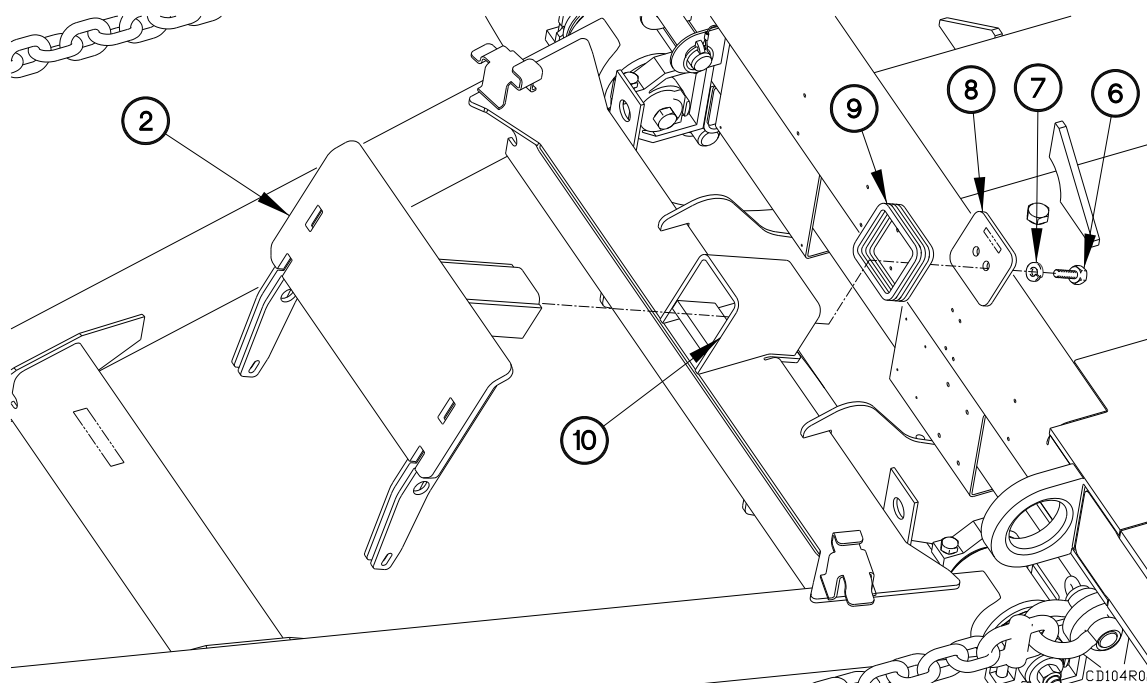
INSTALLATION

1. Position bump stop (2) on bump stop tube (10).

NOTE

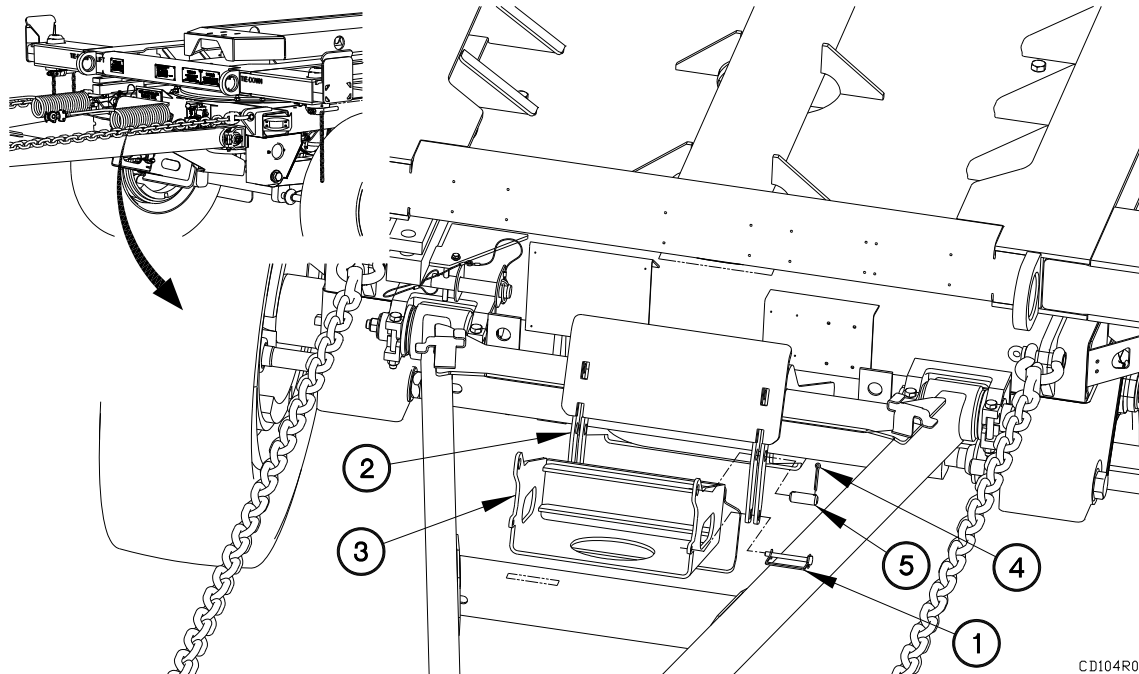
Apply threadlocking compound to threads of screws prior to installation.

2. Install four shims (9) and bump stop cap (8), on bump stop with two lockwashers (7) and screws (6).
3. Tighten two screws to 28-34 lb-in. (38-47 N·m).



BUMP STOP AND EXTENSION REPLACEMENT - Continued**0104 00****INSTALLATION - Continued**

4. Install bump stop extension (3) on bump stop (2) with two lock pins (1).
5. Install bump stop pins (5) on bump stop extension (3).
6. Install four cotter pins (4) on bump stop (2) and bump stop extension (3).

**END OF TASK****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 24, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35, 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)

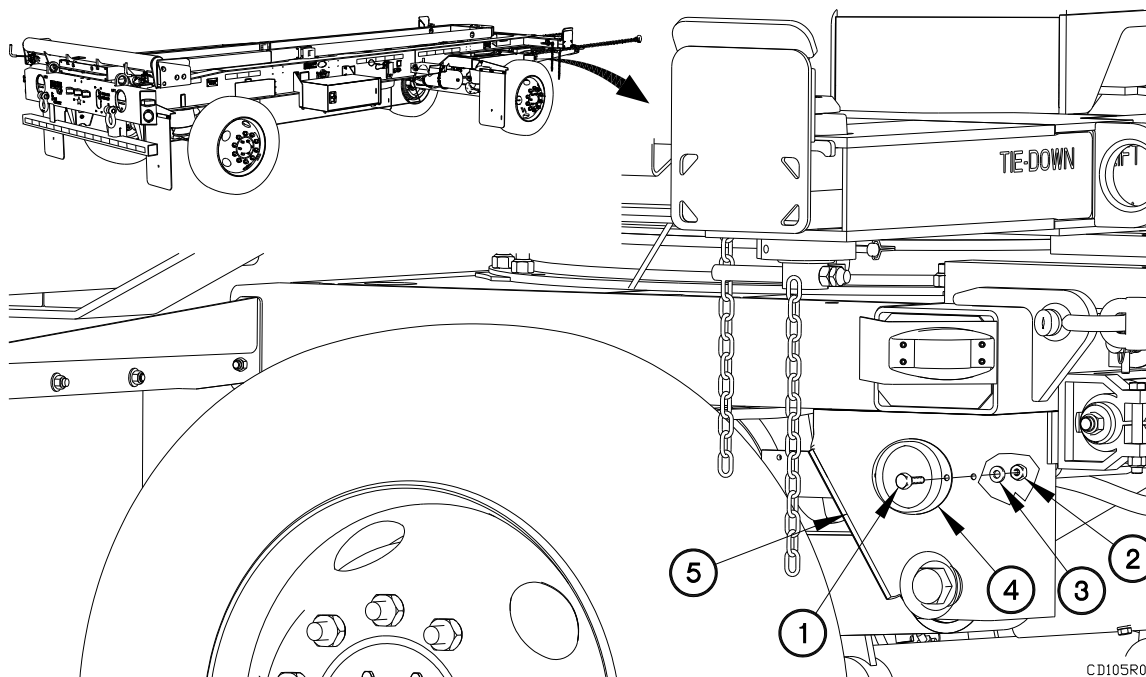
GENERAL

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 is shown.

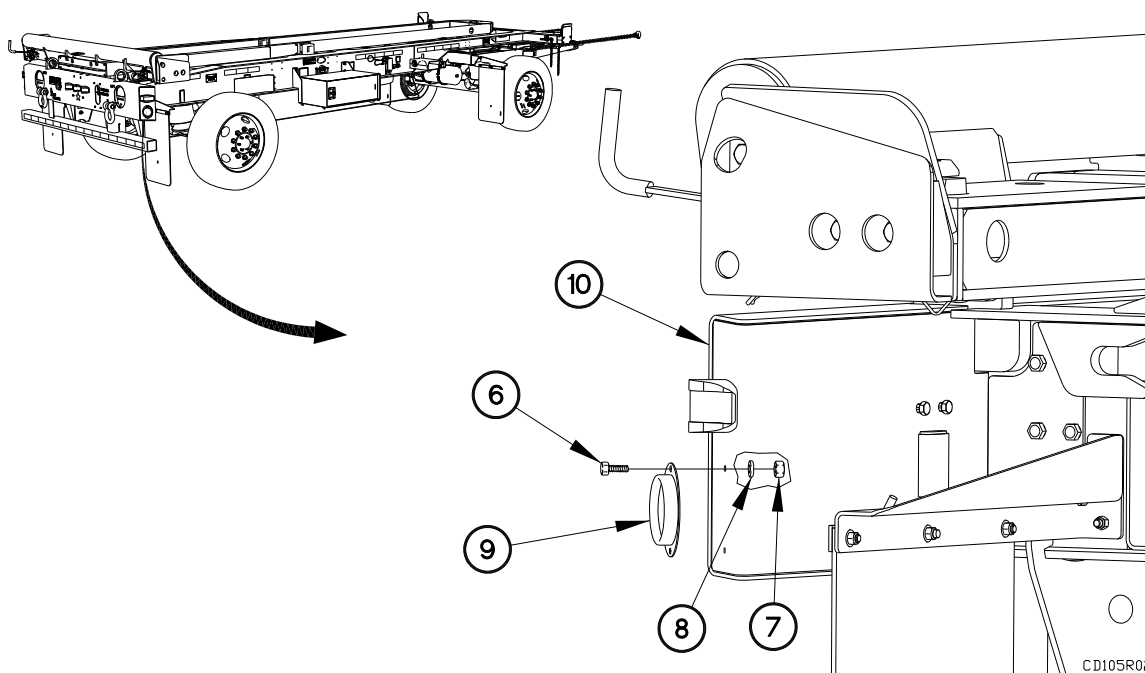
Remove two screws (1), self-locking nuts (2), washers (3), and reflector (4) from trailer (5). Discard self-locking nuts.



REFLECTORS REPLACEMENT - CONTINUED**0105 00****REAR REFLECTOR REMOVAL****NOTE**

Both rear reflectors are removed the same way. RH side rear reflector is shown.

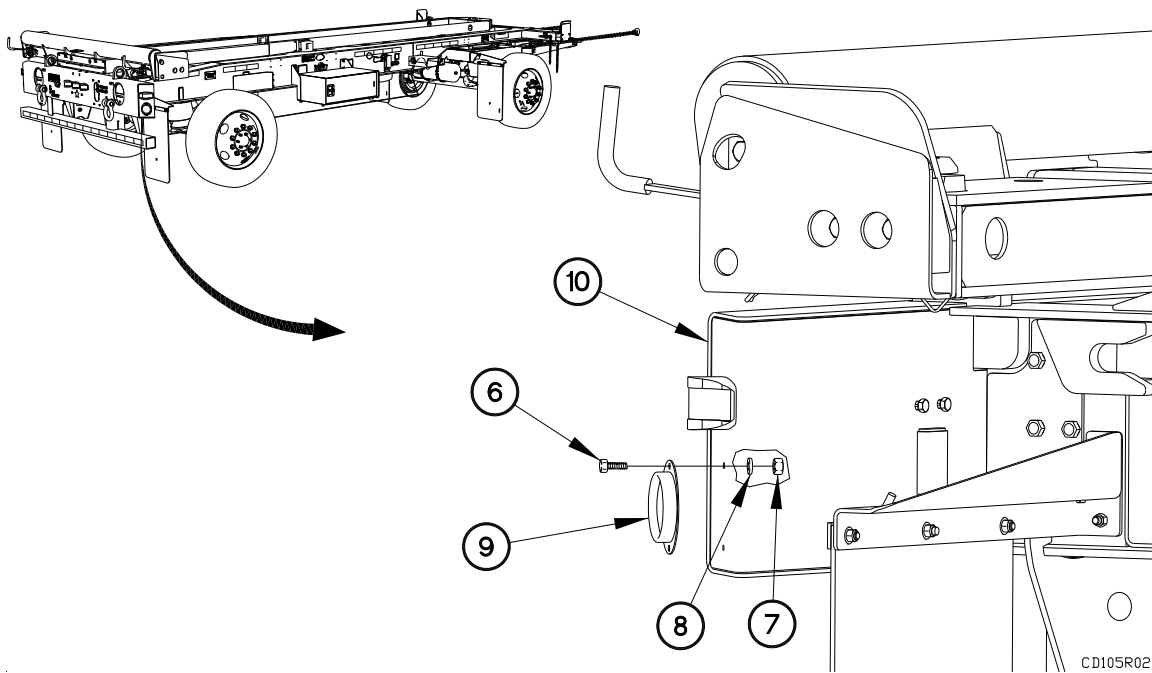
Remove two screws (6), self-locking nuts (7), washers (8), and reflector (9) on rear bumper (10). Discard self-locking nuts.



REAR REFLECTOR INSTALLATION**NOTE**

Both rear reflectors are installed the same way. RH side rear reflector is shown.

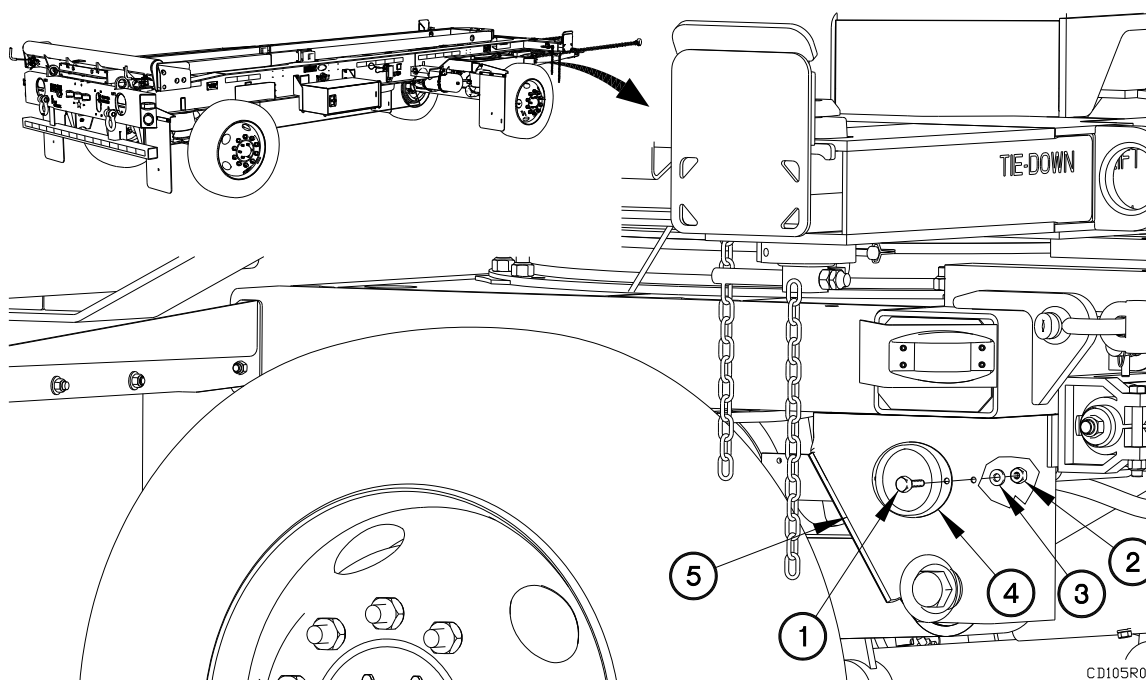
1. Position reflector (9) on rear bumper (10) with two screws (6), washers (8), and self-locking nuts (7).
2. Tighten two self-locking nuts (7) to 72-108 lb-in. (8-12 N·m).



REFLECTORS REPLACEMENT**0105 00****FRONT REFLECTOR INSTALLATION****NOTE**

Both front reflectors are installed the same way. RH side front reflector is 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 24, WP 0167 00)
Wrench, Torque, 0-200 lb-in. (Item 35,
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.

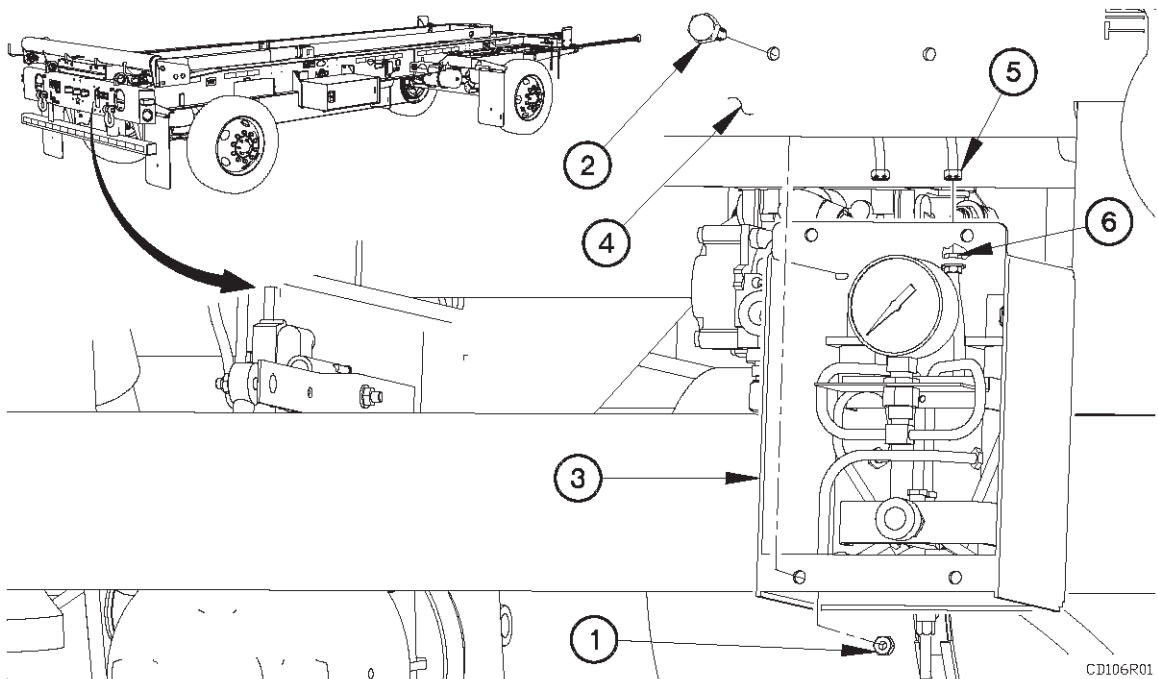
OVERLOAD INDICATOR ASSEMBLY REPLACEMENT**0106 00****REMOVAL**

1. Remove four self-locking nuts (1), bolts (2), and box (3) from rear panel assembly (4). Discard self-locking nuts.

NOTE

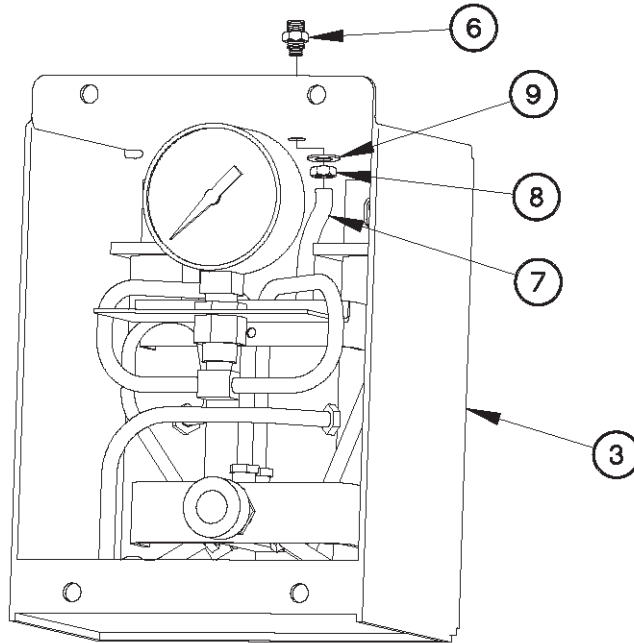
Tag hoses and fittings prior to removal.

2. Disconnect two hoses (5) from fittings (6).



REMOVAL - Continued

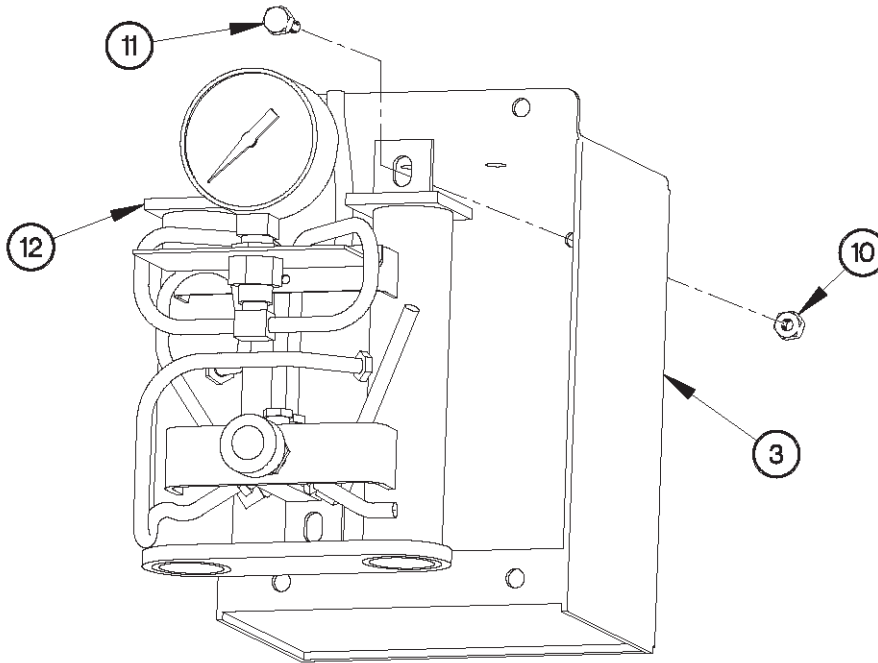
3. Remove two hoses (7) from fittings (6).
4. Remove two nuts (8), washers (9), and fittings (6) from box (3).



CD106R02

REMOVAL - Continued

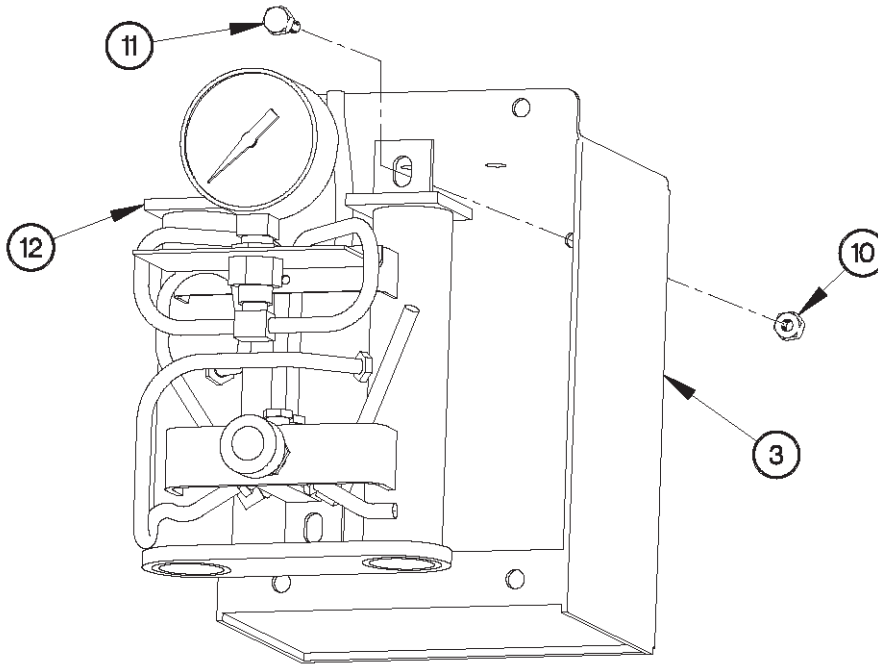
5. Remove three self-locking nuts (10), bolts (11), and overload indicator assembly (12) from box (3). Discard self-locking nuts.



CD106R03

INSTALLATION

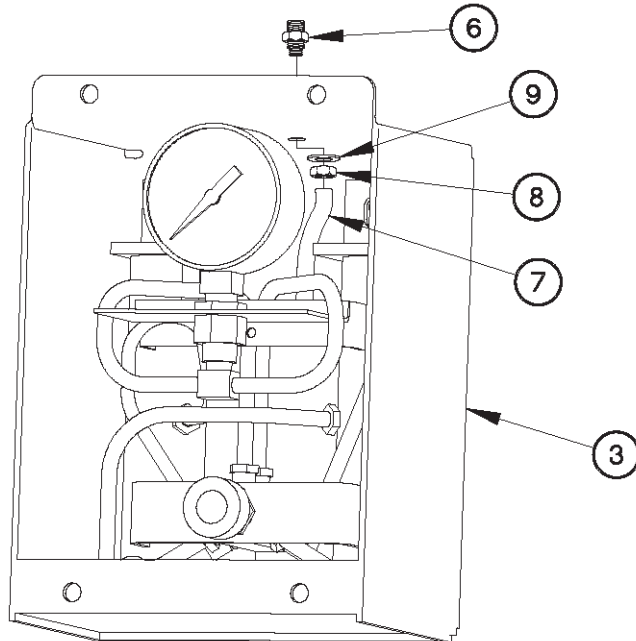
1. Install overload indicator assembly (12) on box (3) with three bolts (11) and self-locking nuts (10).



CD106R03

INSTALLATION - Continued

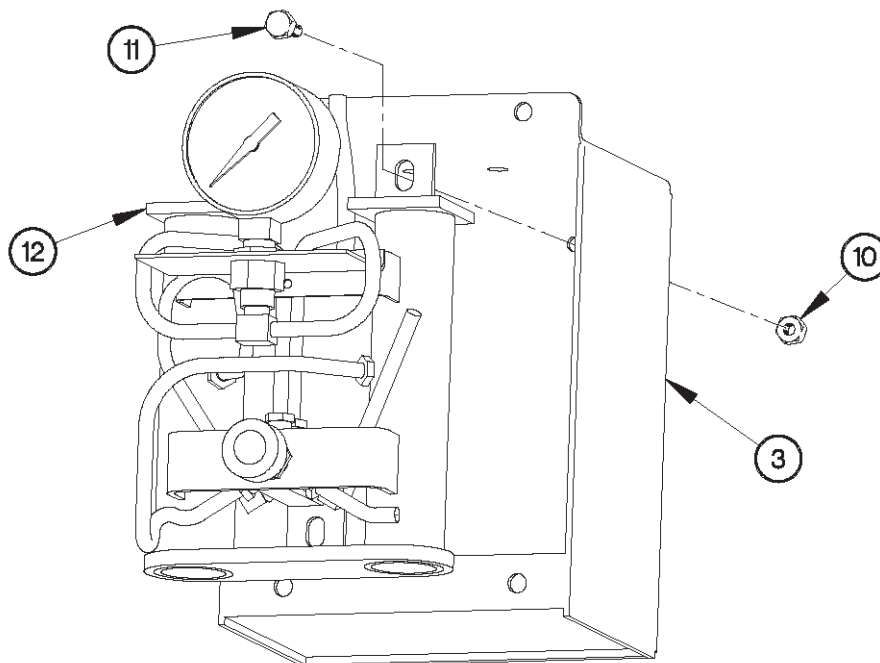
2. Install two fittings (6) on box (3) with two washers (9) and nuts (8).
3. Install two hoses (7) on fittings (6).



CD106R02

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).



CD106R03

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 42, WP 0168 00)

Materials/Parts (Cont)

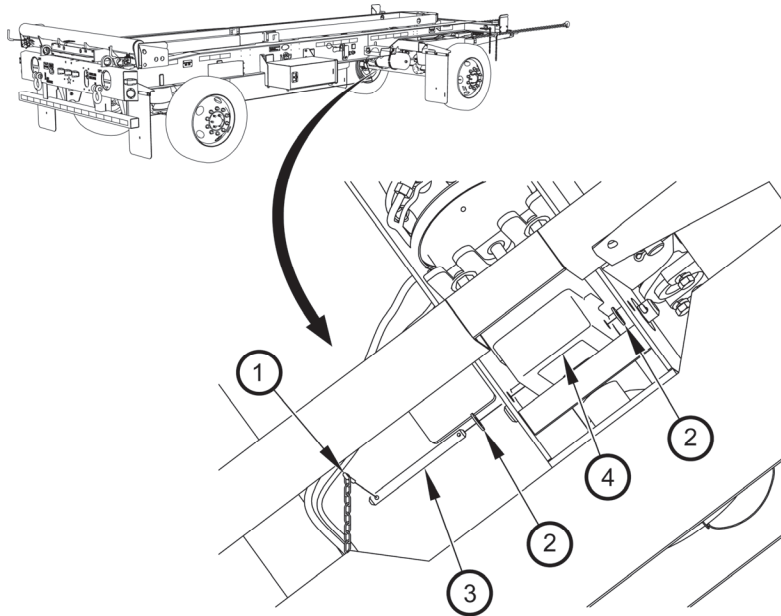
- Pin, Cotter, Hairpin (2) (Item 49, WP 0168 00)
- Washer, Lock (2) (Item 18, WP 0168 00)
- Nut, Self-Locking (Item 30, WP 0168 00)
- Pin, Cotter (Item 44, WP 0168 00)
- Sealing Compound (Item 13, WP 0165 00)

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

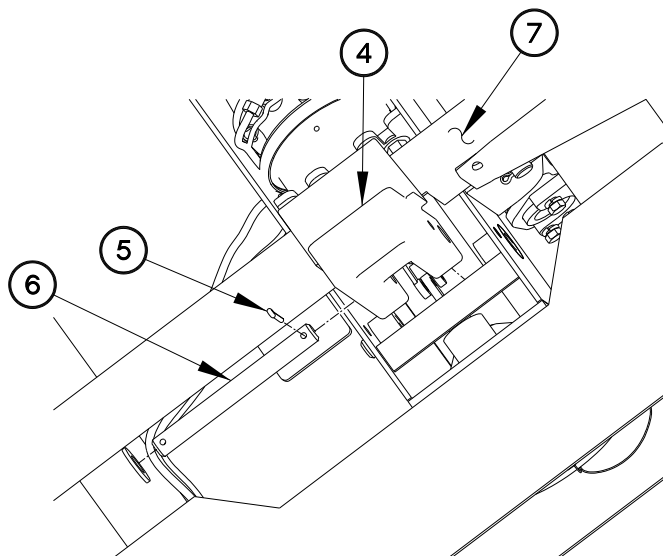
1. Remove two hairpin cotter pins (1) and washers (2) from retaining pin (3). Discard hairpin cotter pins.
2. Remove retaining pin (3) from flatrack lock (4).



CD107R01

REMOVAL - Continued

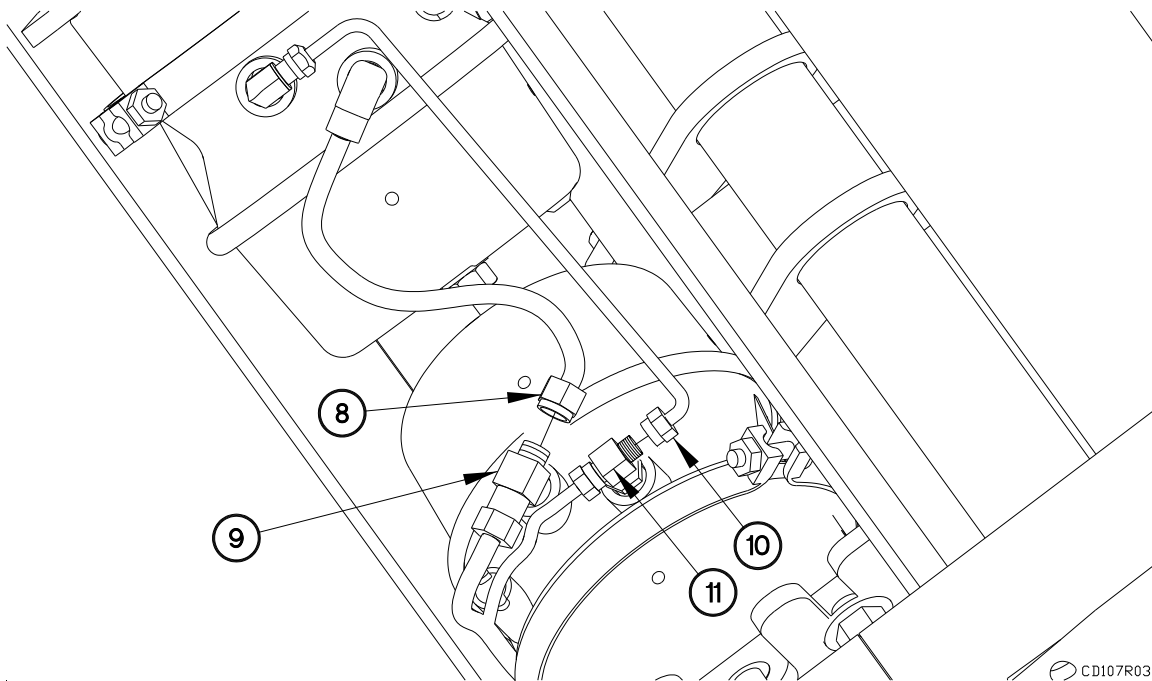
3. Remove cotter pin (5) from retaining pin (6). Discard cotter pin.
4. Remove retaining pin (6) from flatrack lock (4).
5. Remove flatrack lock (4) from trailer (7).



CD107R02

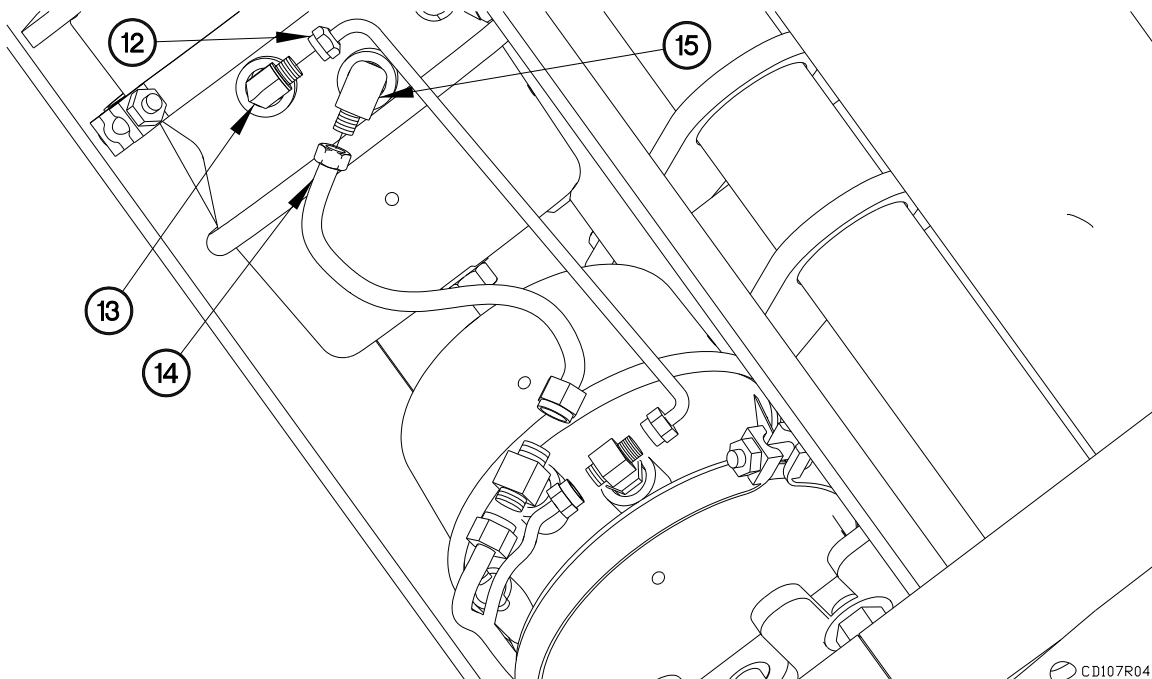
REMOVAL - Continued**NOTE**

- 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).



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).

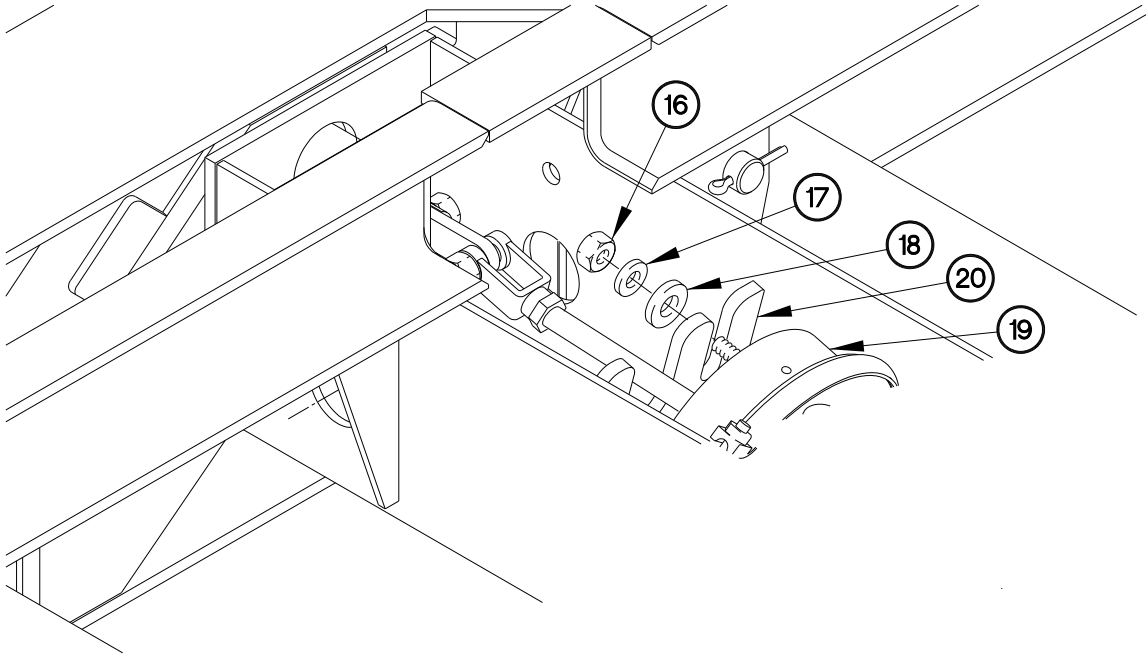


CD107R04

FLATRACK, AIR CHAMBER, and LOCK REPLACEMENT - CONTINUED 0107 00

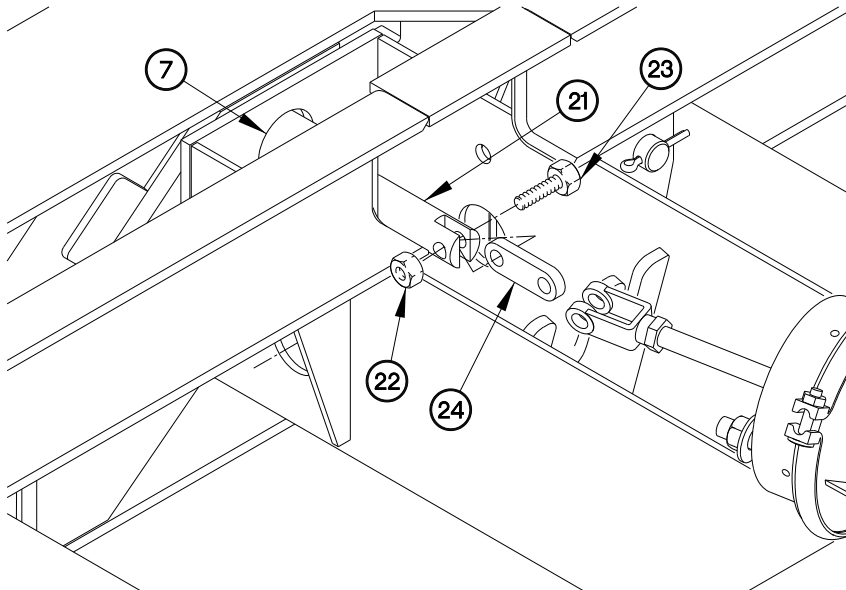
REMOVAL - Continued

10. Remove two nuts (16), lockwashers (17), spacer (18), and air chamber (19) from air chamber bracket (20). Discard lockwashers.



CD107R05

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.



CD107R06

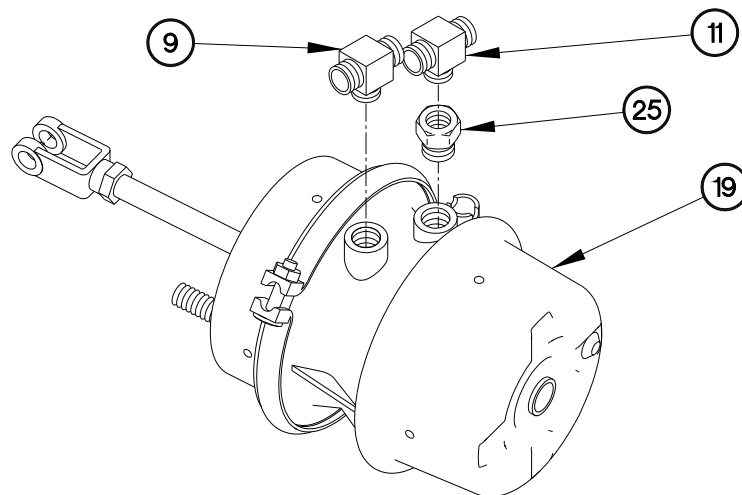
REMOVAL - Continued**NOTE**

- LH air chamber has tee fittings.
- RH air chamber has 90-degree fittings.
- LH air chamber is 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).

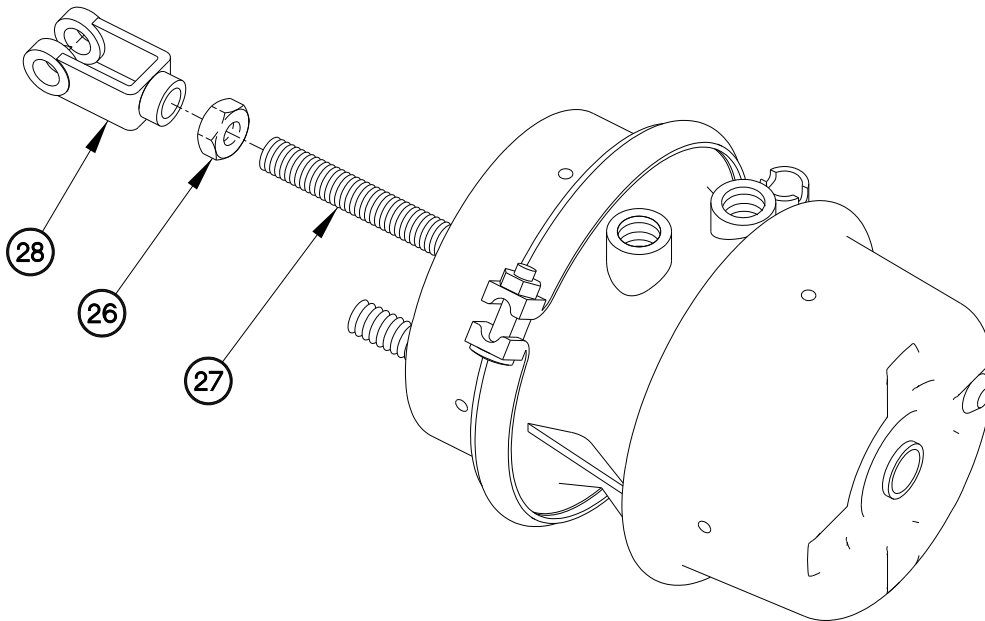


CD107R07

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).

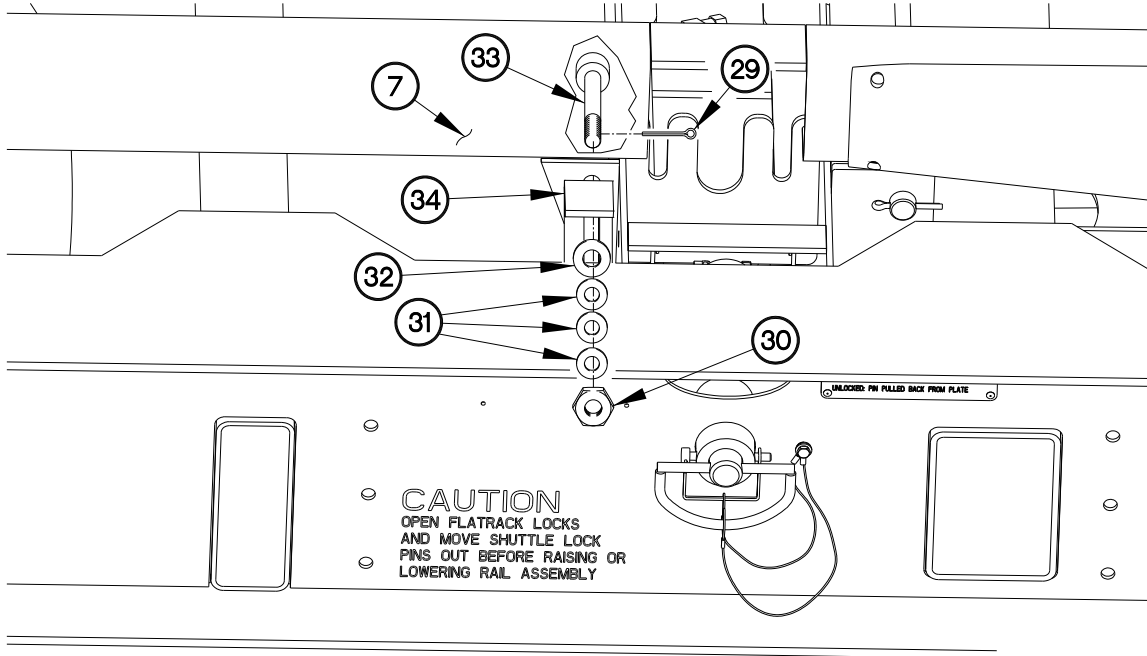


CD107R08

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.



CD107R09

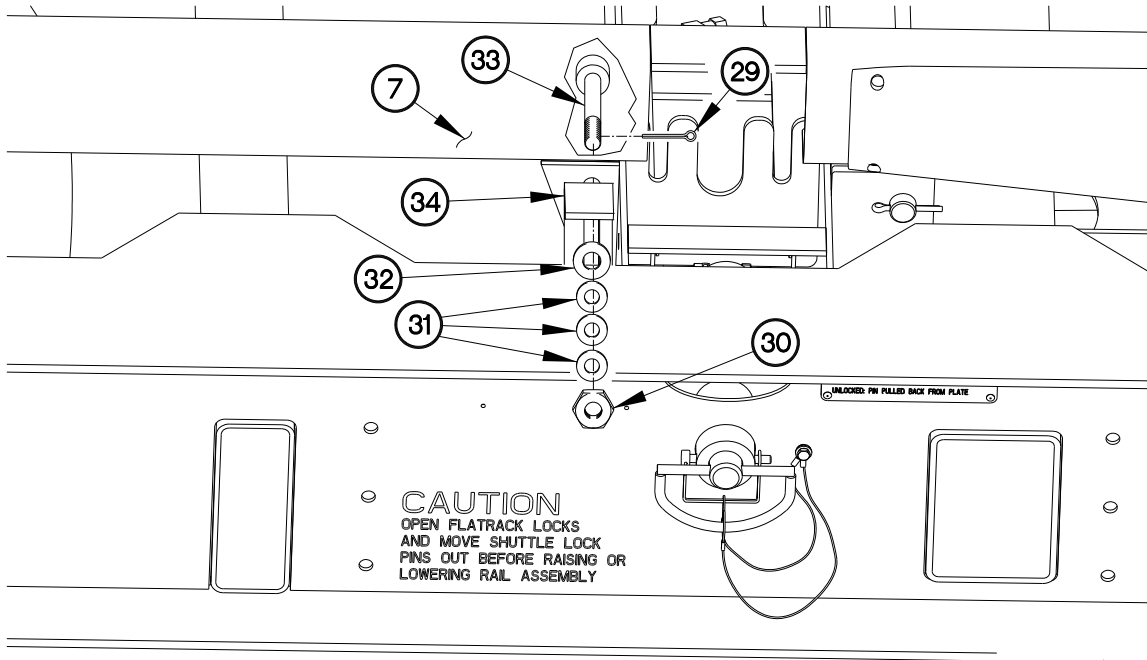
FLATRACK, AIR CHAMBER, and LOCK REPLACEMENT - CONTINUED 0107 00

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).



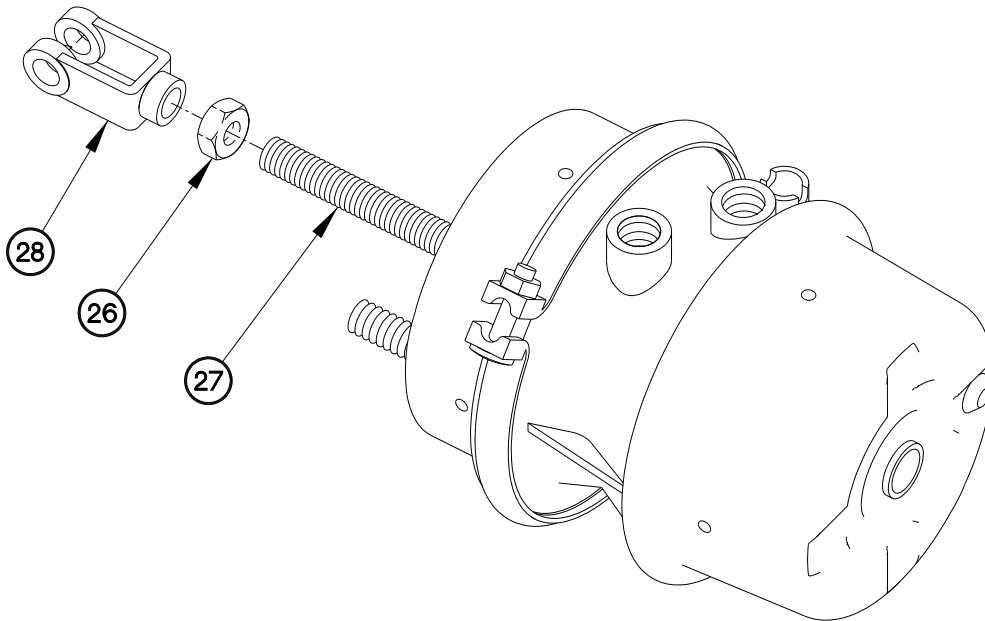
CD107R09

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).



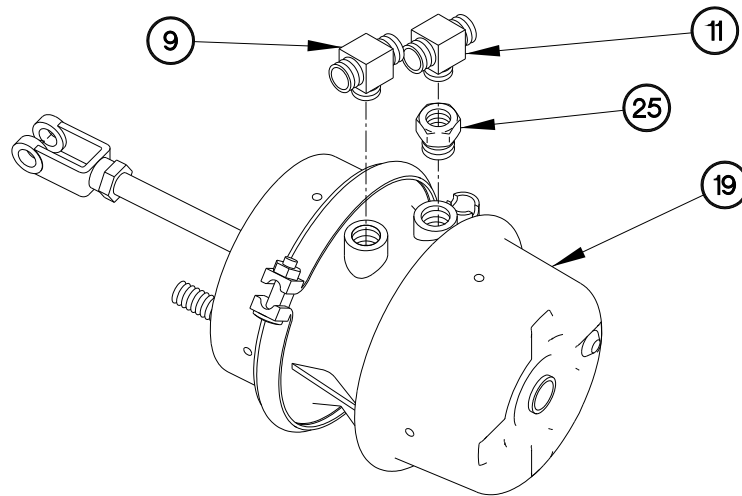
CD107R08

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 is 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).

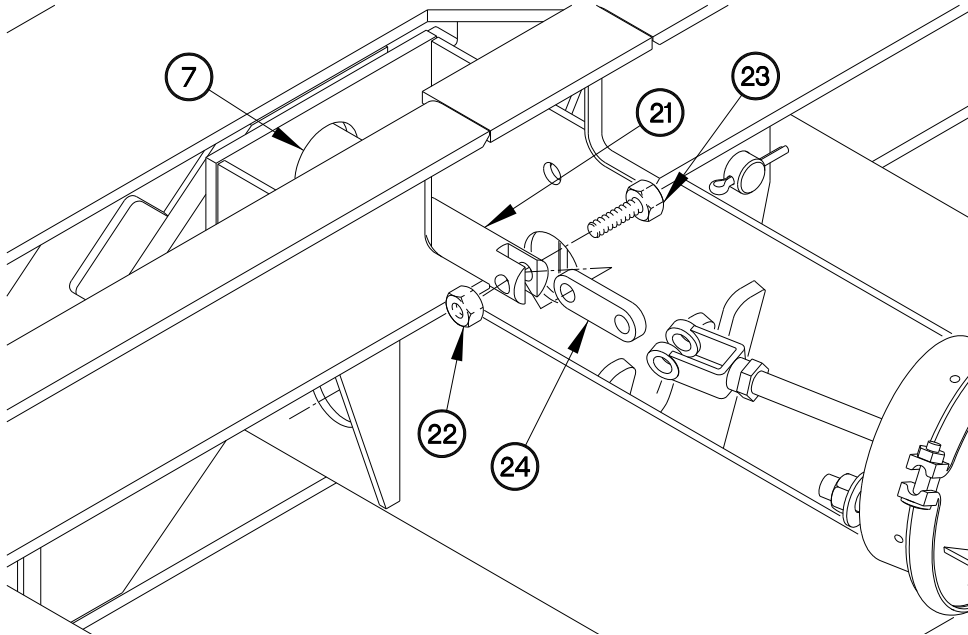


CD107R07

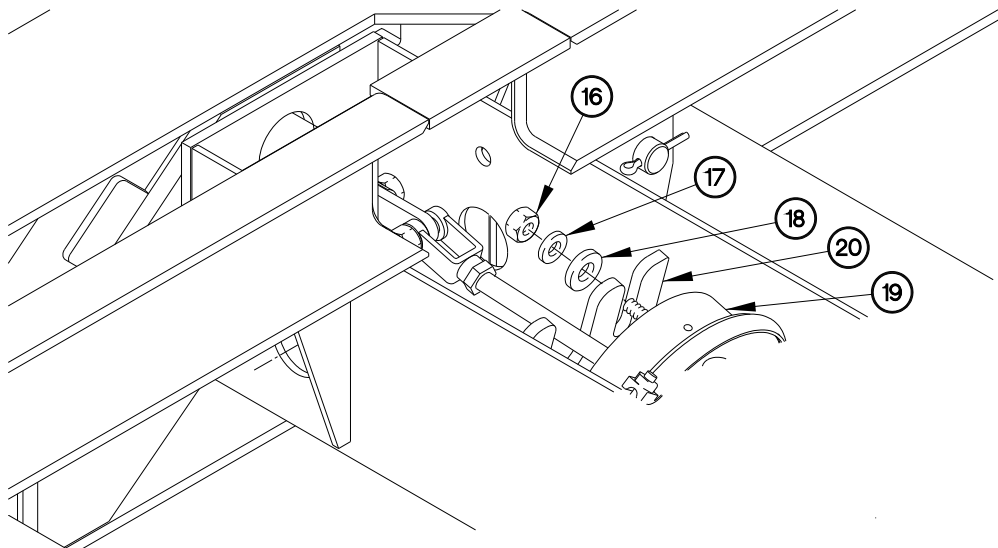
FLATRACK, AIR CHAMBER, and LOCK REPLACEMENT - CONTINUED 0107 00

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 85-105 lb-ft (115-142 N·m).

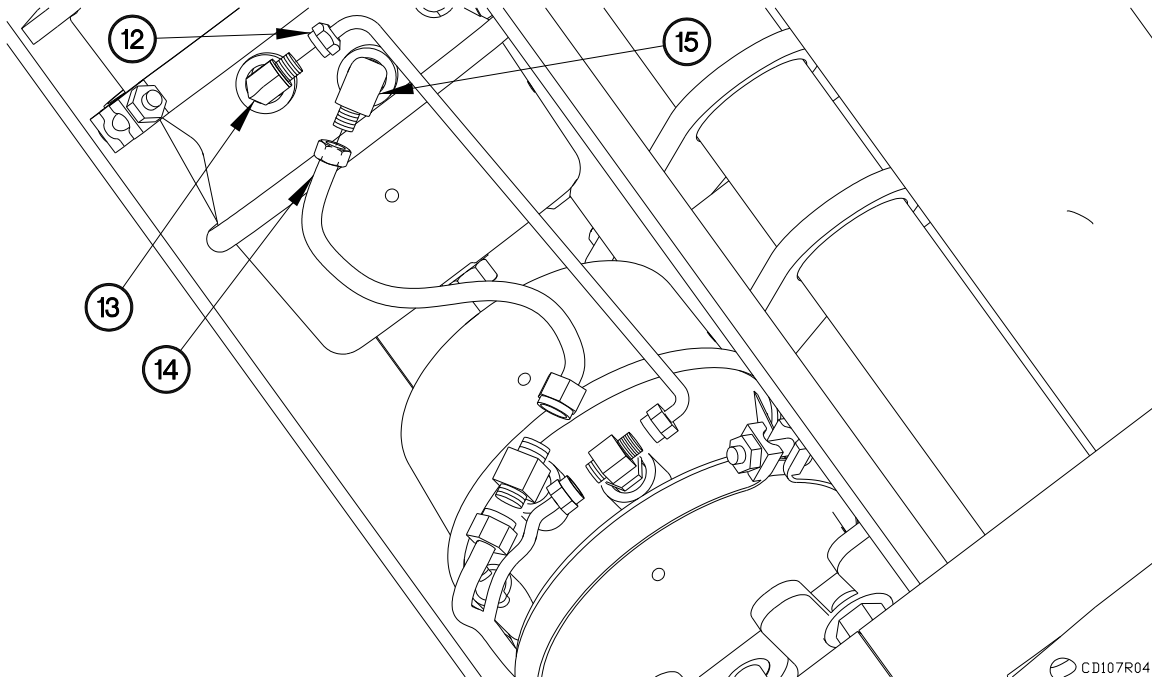


INSTALLATION - Continued

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).

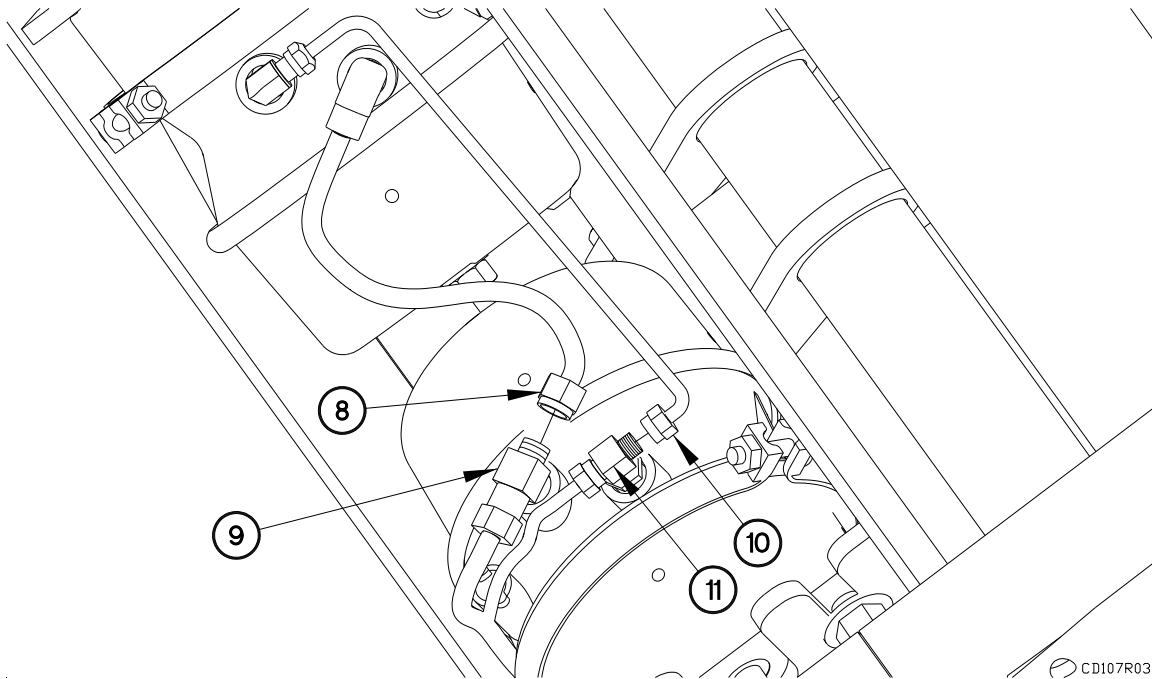


INSTALLATION - Continued

NOTE

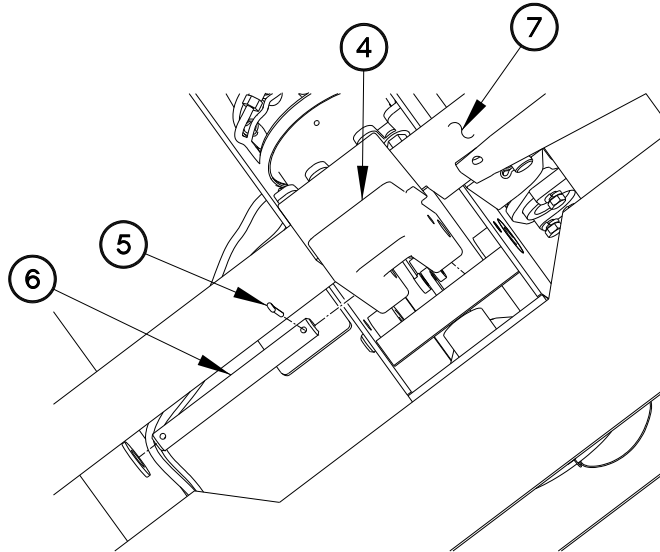
Perform the following two steps on LH air chamber.

13. Connect two hoses (10) to tee fitting (11).
14. Connect two hoses (8) to tee fitting (9).



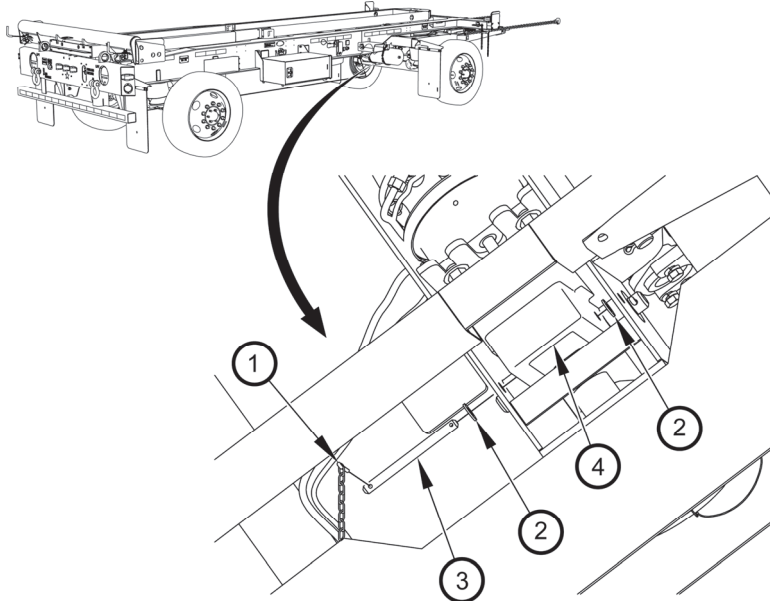
INSTALLATION - Continued

- 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 hairpin cotter pins (1) on retaining pin (3).



CD107R01

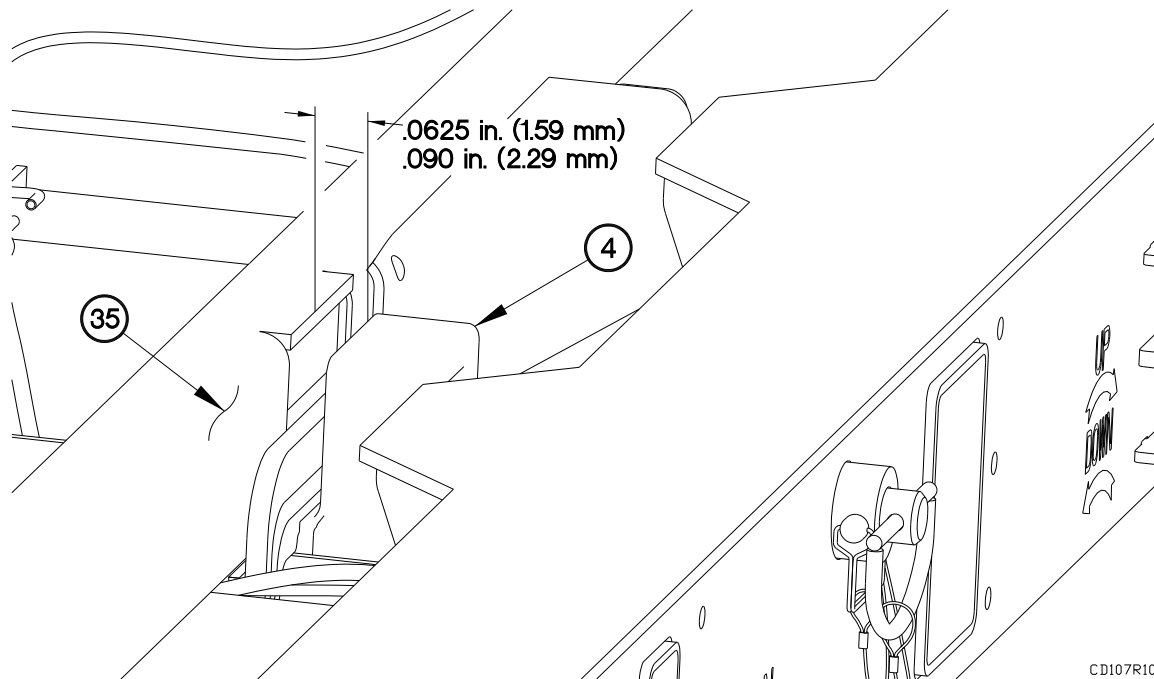
FLATRACK, AIR CHAMBER, and LOCK REPLACEMENT - CONTINUED 0107 00**ADJUSTMENT**

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.

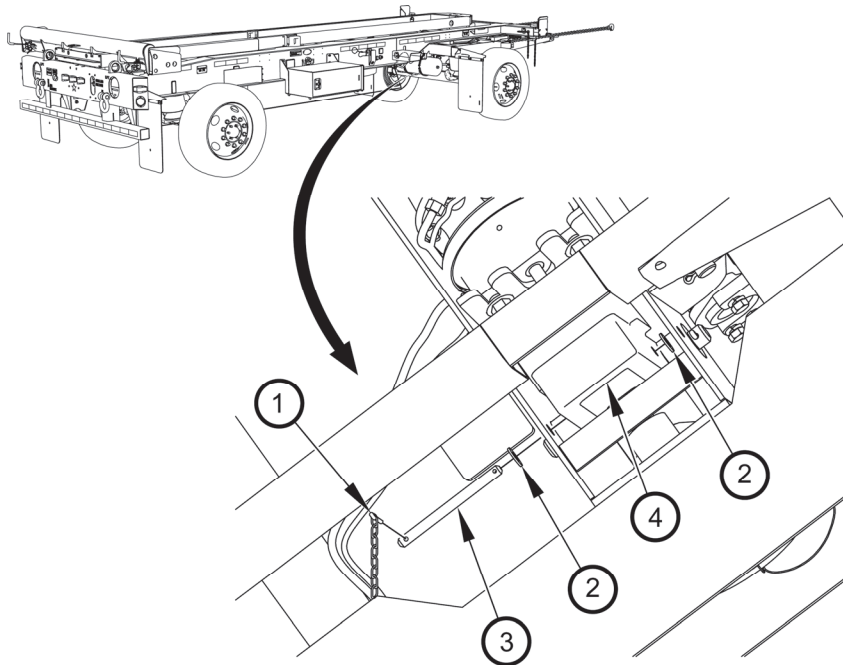
4. Measure distance between flatrack lock (4) and flatrack rail assembly (35).



ADJUSTMENT – Continued**NOTE**

Perform the following steps if distance between two measurements is less than .0625 in. or more than .090 in.

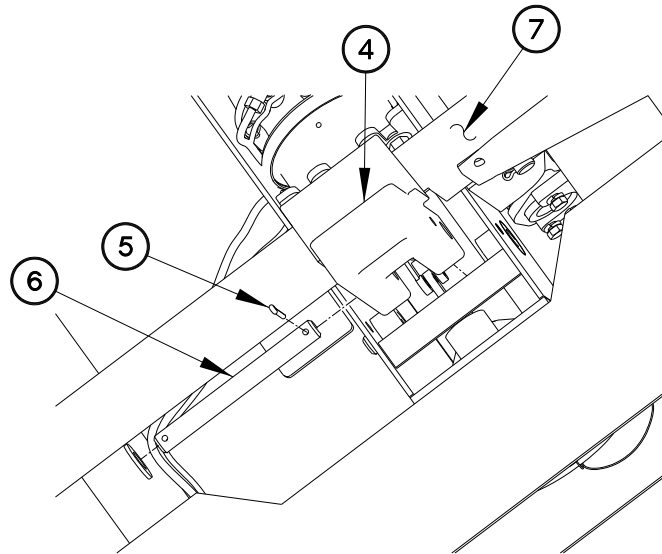
5. Remove two hairpin cotter pins (1) and washers (2) from retaining pin (3).
6. Remove retaining pin (3) from flatrack lock (4).



CD107R01

ADJUSTMENT – Continued

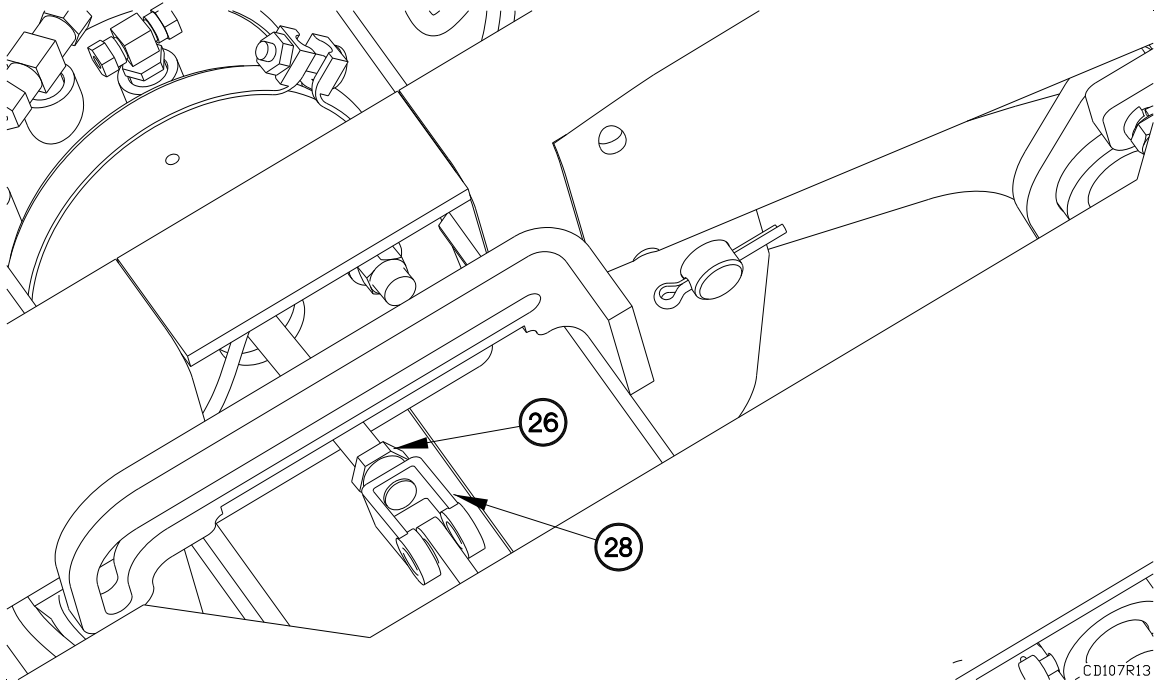
7. Remove cotter pin (5) from retaining pin (6).
8. Remove retaining pin (6) from flatrack lock (4).
9. Remove flatrack lock (4) from trailer (7).



CD107R02

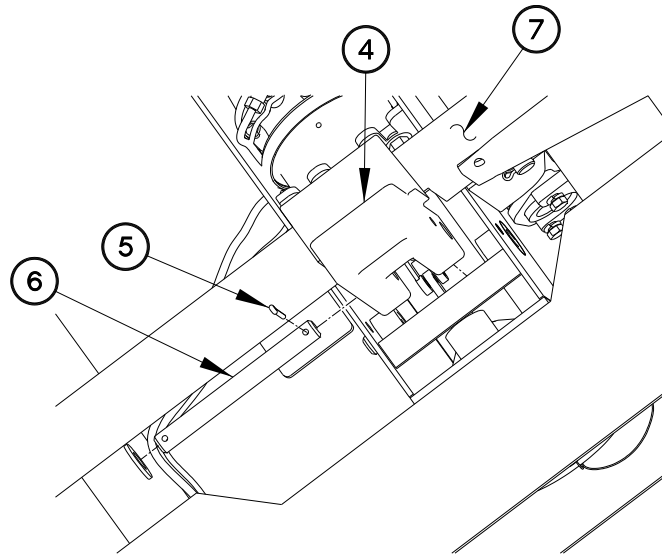
ADJUSTMENT – Continued

10. Loosen or tighten nut (26) and pin latch (28) as necessary.



ADJUSTMENT – Continued

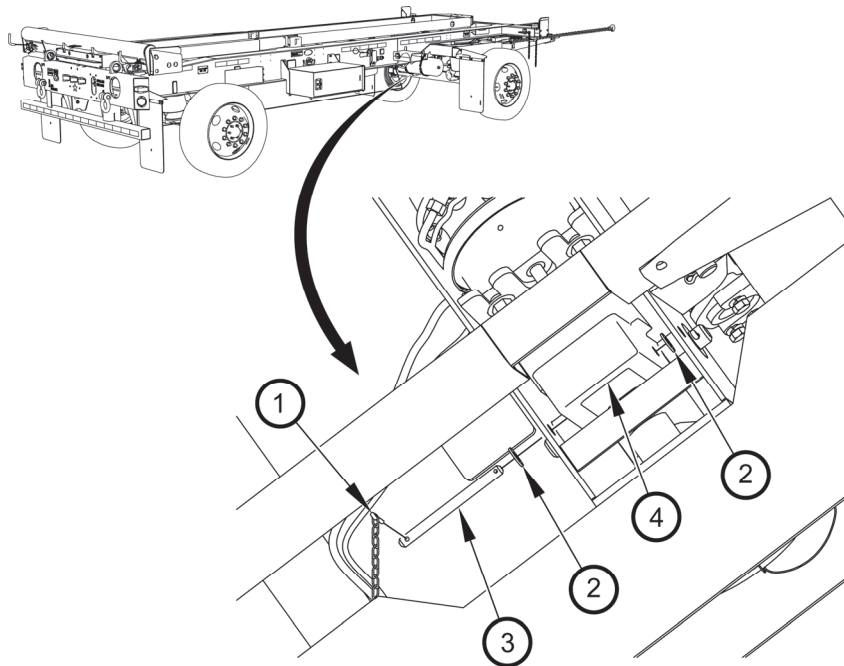
11. Install flatrack lock (4) in trailer (7).
12. Install retaining pin (6) in flatrack lock (4).
13. Install cotter pin (5) in retaining pin (6).



CD107R02

ADJUSTMENT – Continued

14. Install retaining pin (3) in flatrack lock (4).
15. Install two washers (2) and hairpin cotter pins (1) in 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.



CD107R01

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 24, 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

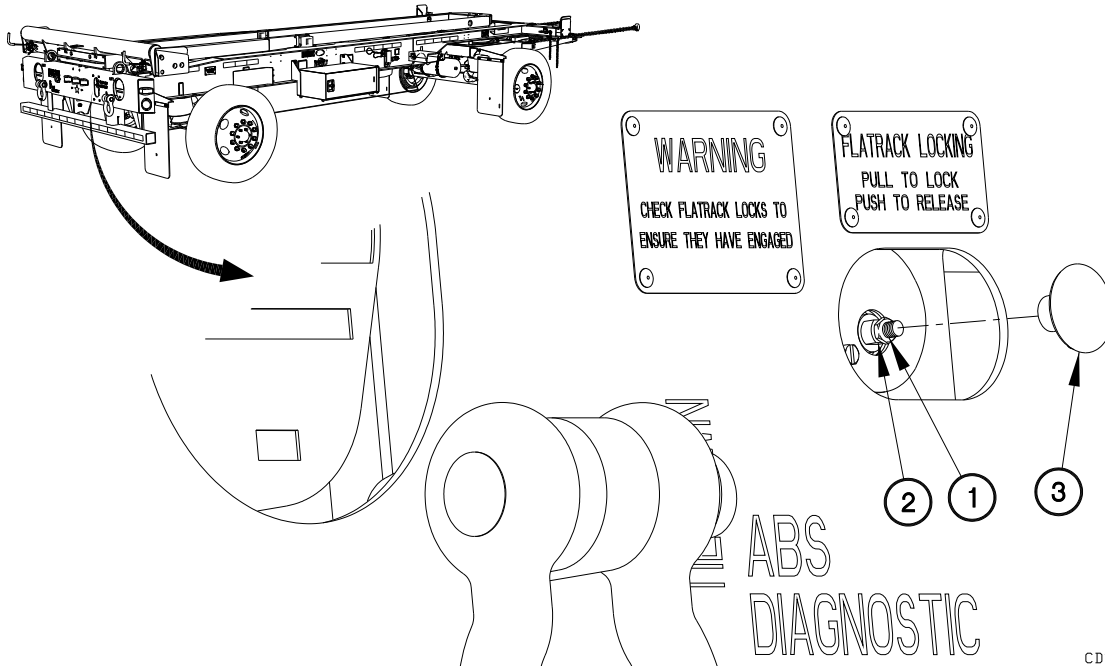
Trailer uncoupled (WP 0043 24, TM 2320-
392-10-1)

GENERAL

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) flatrack lock push/pull valve.

REMOVAL

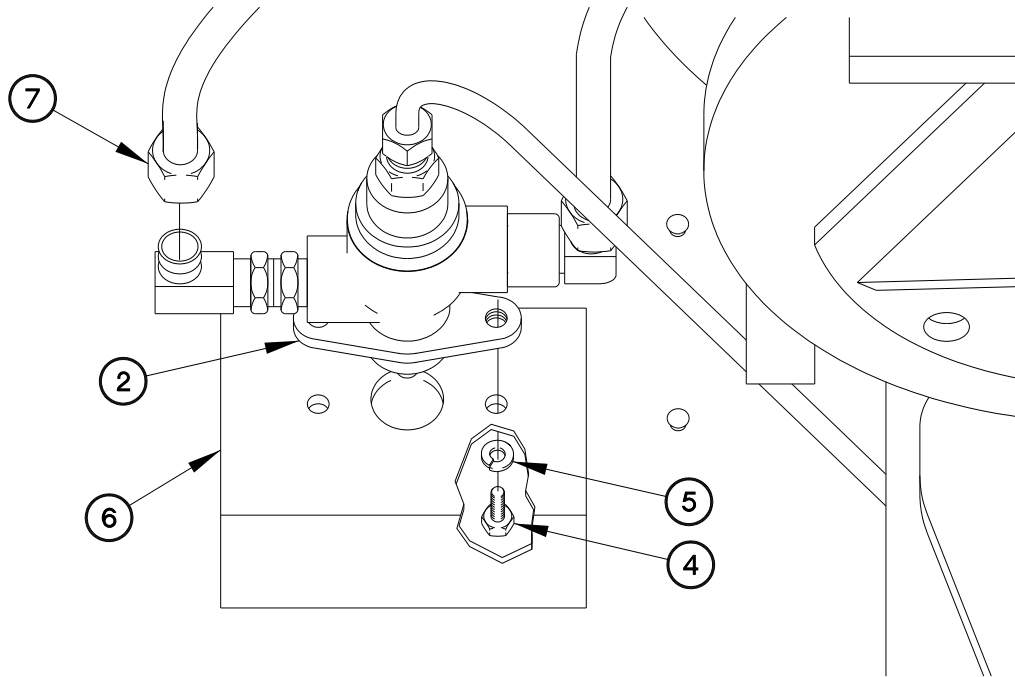
1. Drain air tanks.
2. Loosen nut (1) on flatrack lock push/pull valve (2).
3. Remove knob (3) from flatrack lock push/pull valve (2).



CD108R01

REMOVAL - Continued

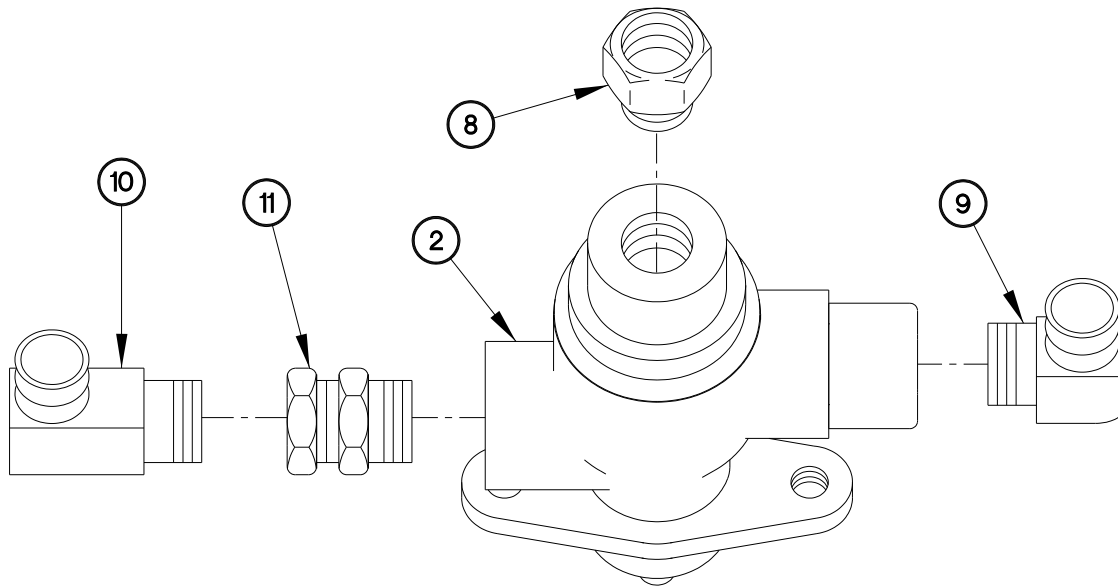
4. Remove two screws (4), lockwashers (5), and flatrack lock push/pull valve (2) from trailer (6). Discard lockwashers.
5. Disconnect three hoses (7) from flatrack lock push/pull valve (2).



CD108R02

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).

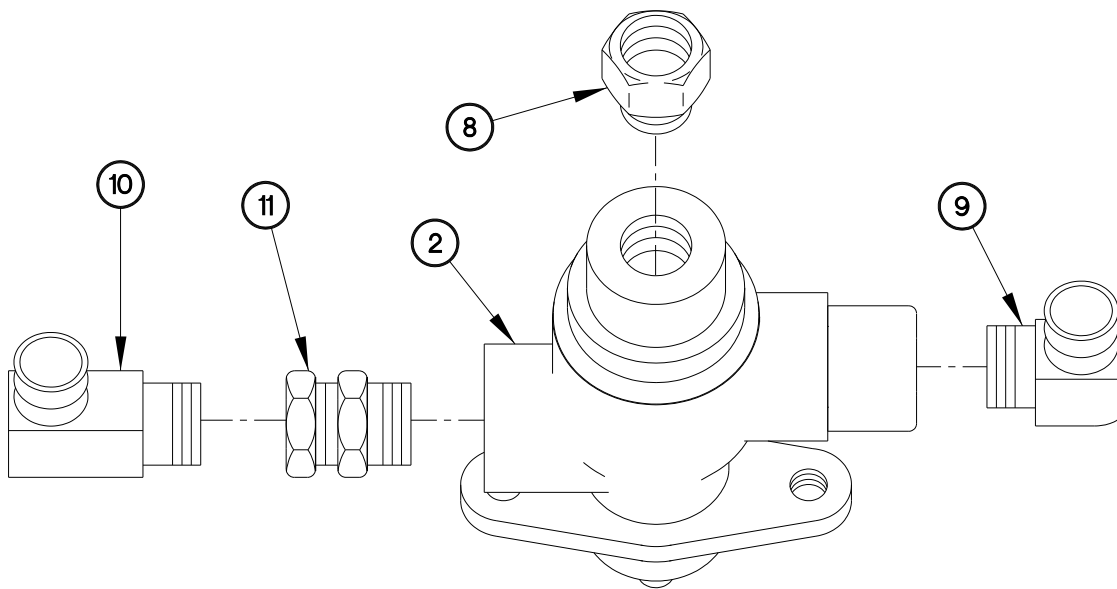


CD108R03

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.

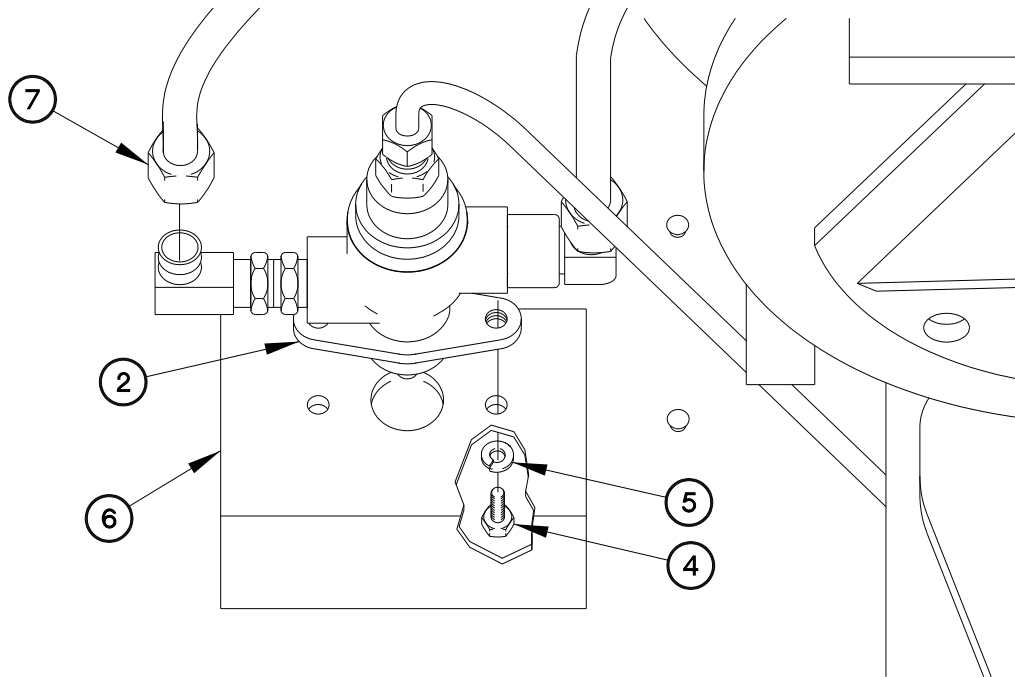
1. Apply sealing compound to threads of adapters (8 and 11) and 90-degree fittings (9 and 10).
2. Install adapter (11) and 90-degree fitting (10) in flatrack lock push/pull valve (2).
3. Install 90-degree fitting (9) and adapter (8) in flatrack lock push/pull valve (2).



CD108R03

INSTALLATION - Continued

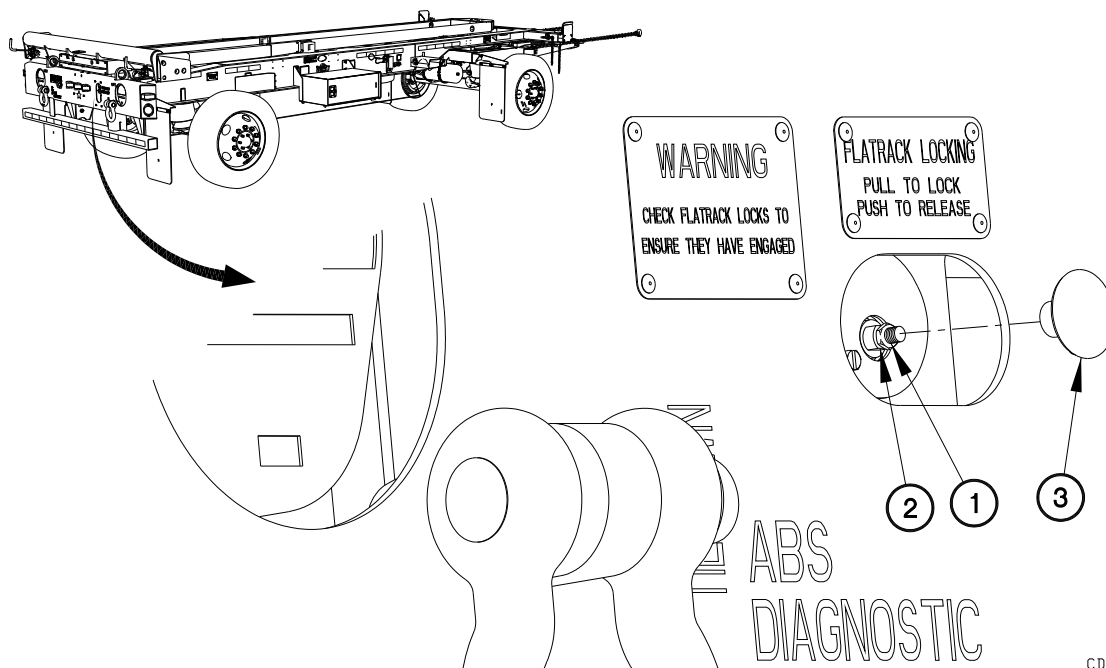
4. Connect three hoses (7) in flatrack lock push/pull valve (2).
5. Install flatrack lock push/pull valve (2) on trailer (6) with two lockwashers (5) and screws (4).



CD108R02

INSTALLATION - Continued

6. Install knob (3) on flatrack lock push/pull valve (2).
7. Tighten nut (1) on flatrack lock push/pull valve (2).



CD108R01

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

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape
(Item 6, WP 0165 00)

Sealing Compound (Item 14, WP 0165 00)

Washer, Lock (Item 10, WP 0168 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)

Tool Kit, Genl Mech (Item 24, WP 0167 00)

Vise, Machinist's (Item 27, WP 0167 00)

Wrench, Torque, 0-75 lb-in. (Item 37,
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) four port task valves.

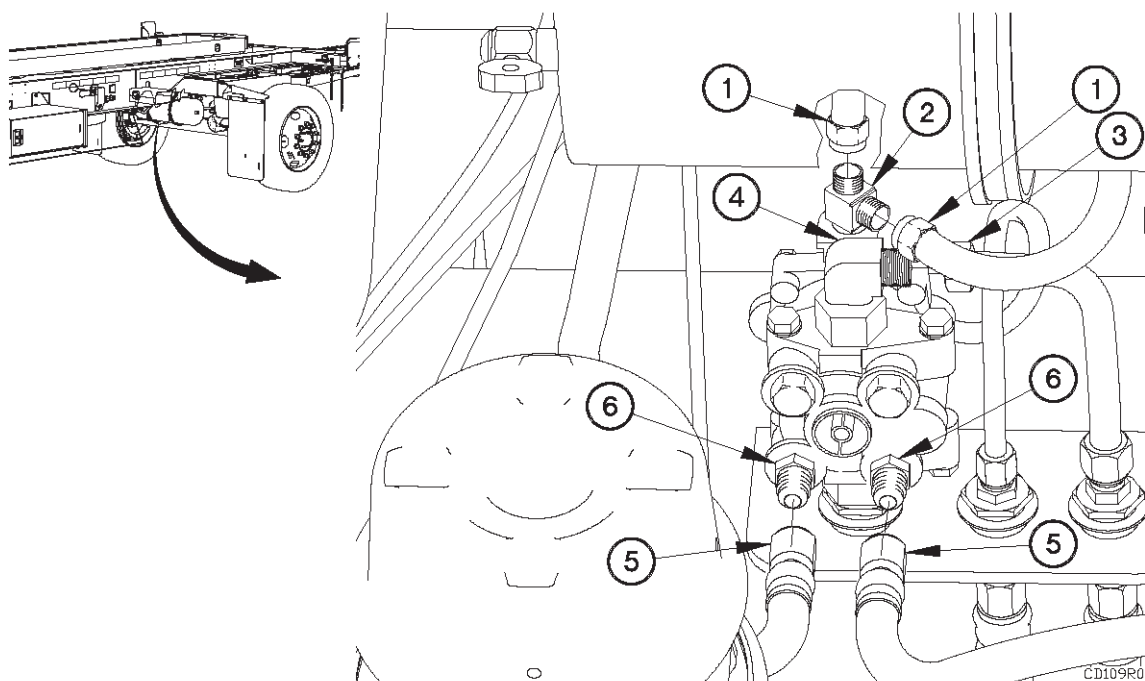
WARNING

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

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.

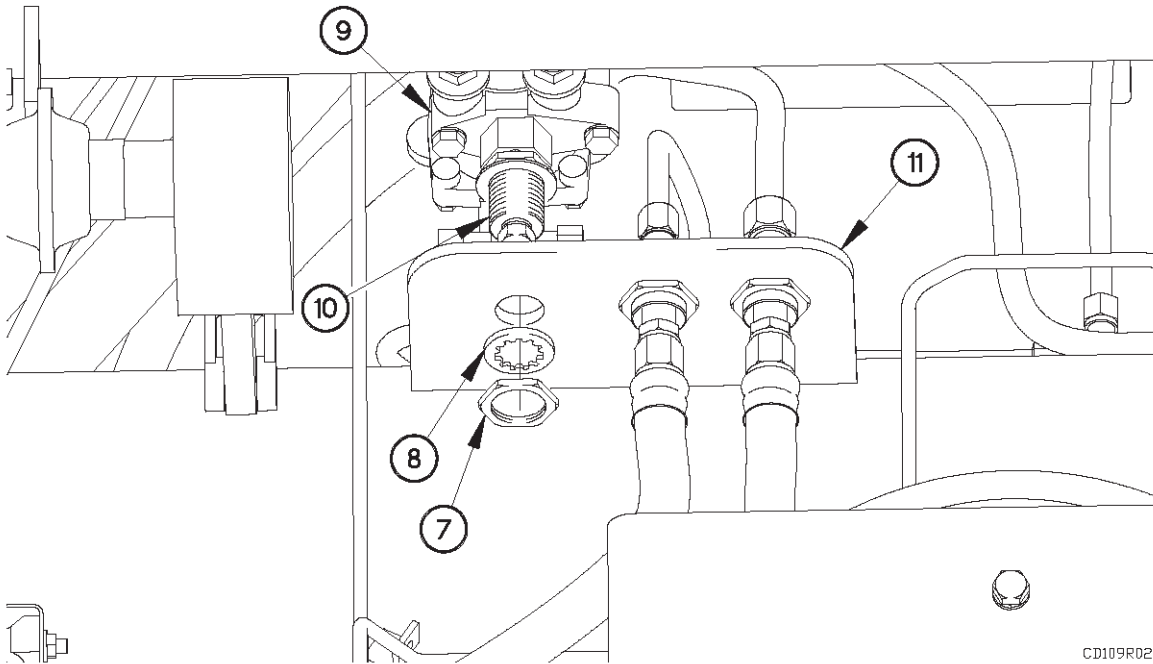
1. Drain air tanks.
2. Remove four hoses (1) from two tee-fittings (2).
3. Remove hose (3) from 90-degree fitting (4).
4. Remove two hoses (5) from fittings (6).



REMOVAL - Continued**NOTE**

Perform the following step on the front four port task valve.

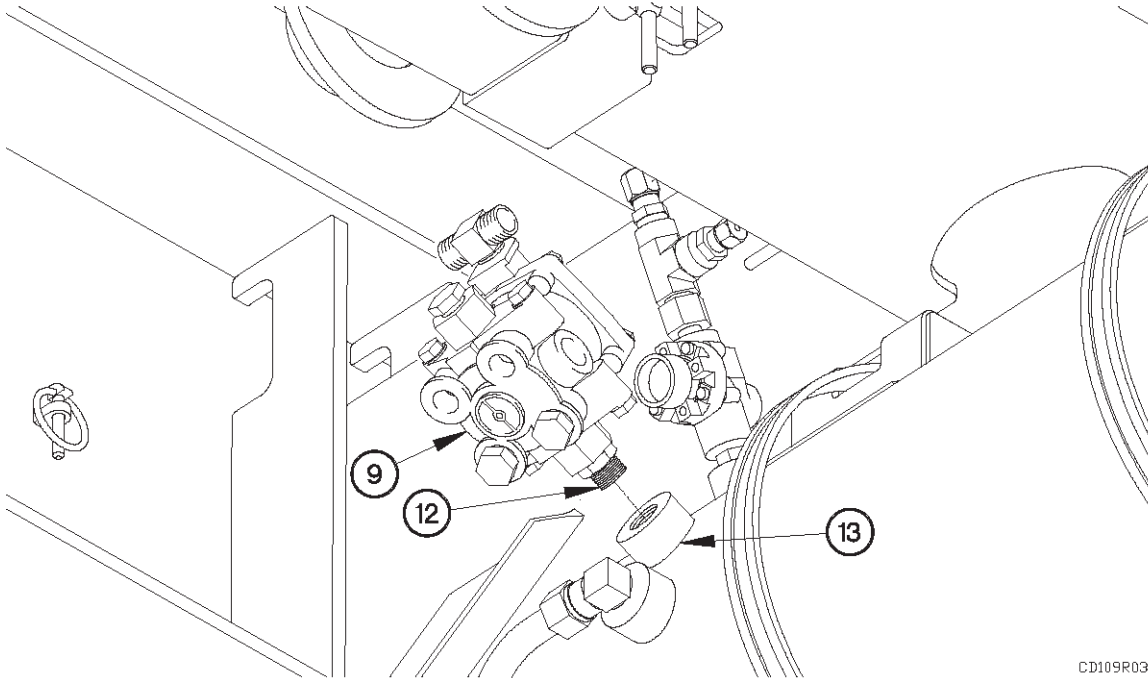
5. Remove nut (7), lockwasher (8), four port task valve (9), and bulkhead fitting (10) from brake valve bracket (11).



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).

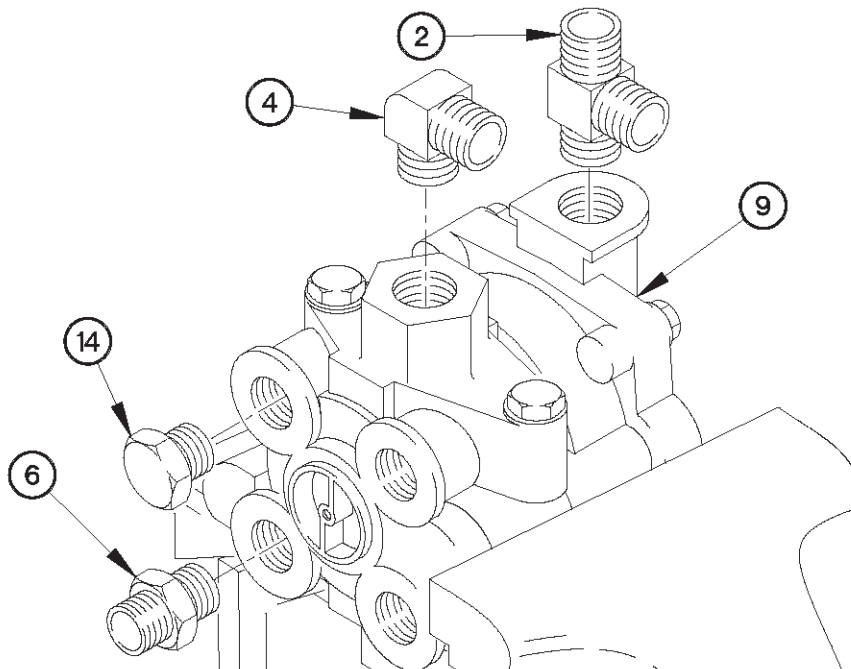


CD109R03

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).

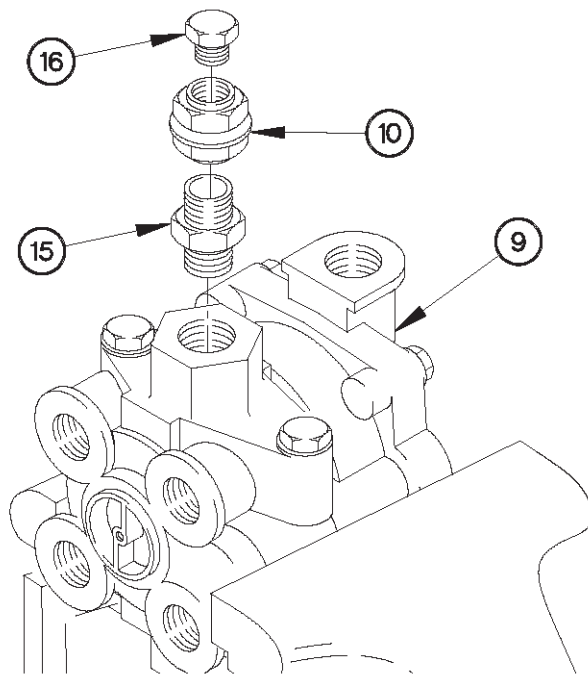


CD109R04

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).



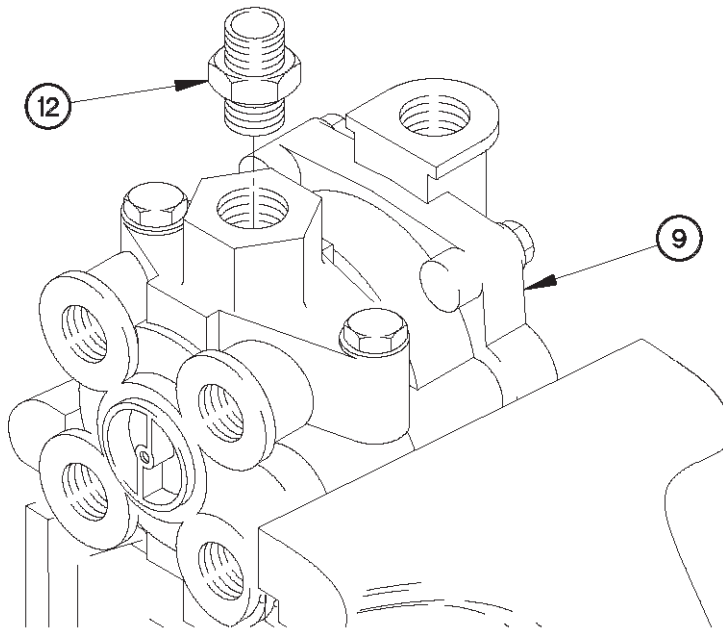
CD109R06

REMOVAL – Continued

NOTE

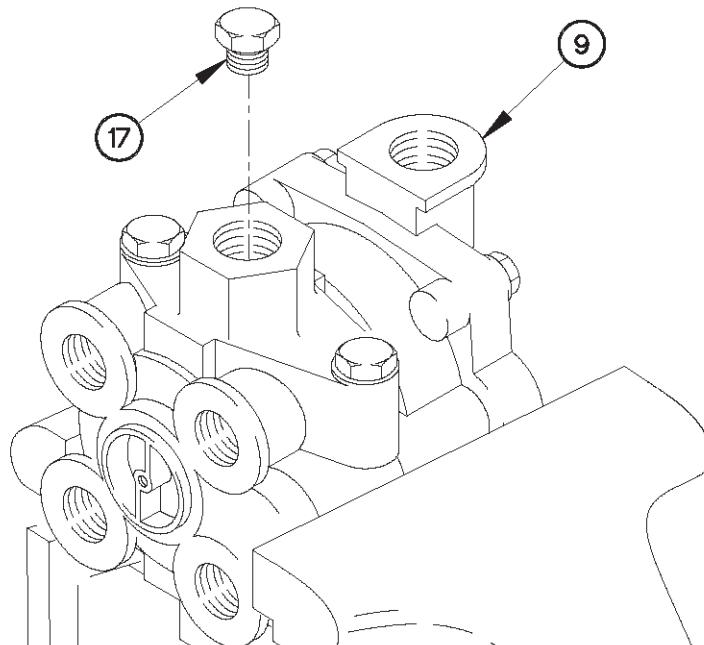
Perform the following two steps on the rear four port task valve.

15. Remove fitting (12) from four port task valve (9).



CD109R09

16. Remove plug (17) from four port task valve (9).



CD109R07

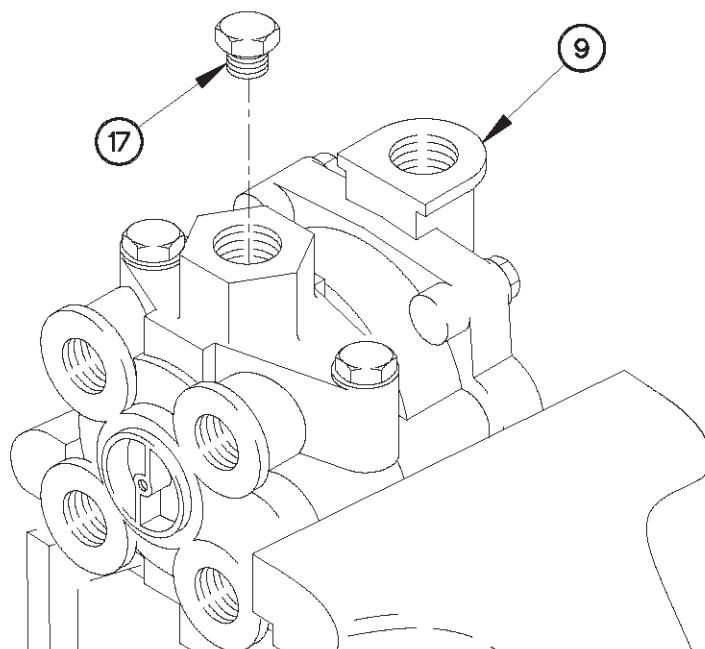
INSTALLATION**WARNING**

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).

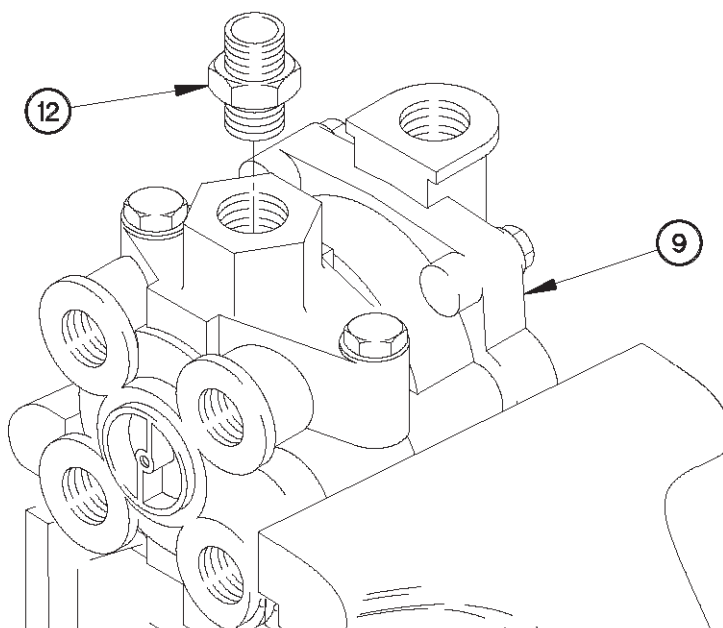


CD109R07

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).



CD109R09

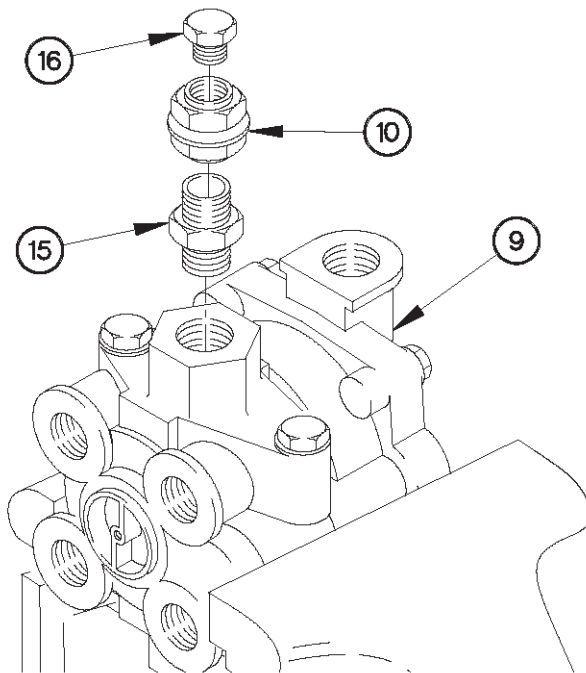
INSTALLATION - Continued**WARNING**

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).

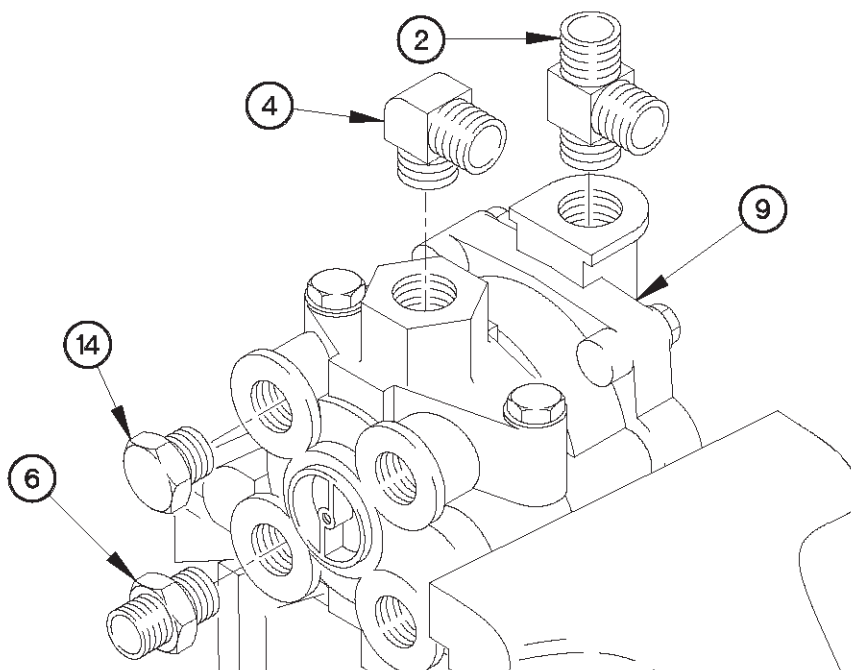


CD109R06

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).



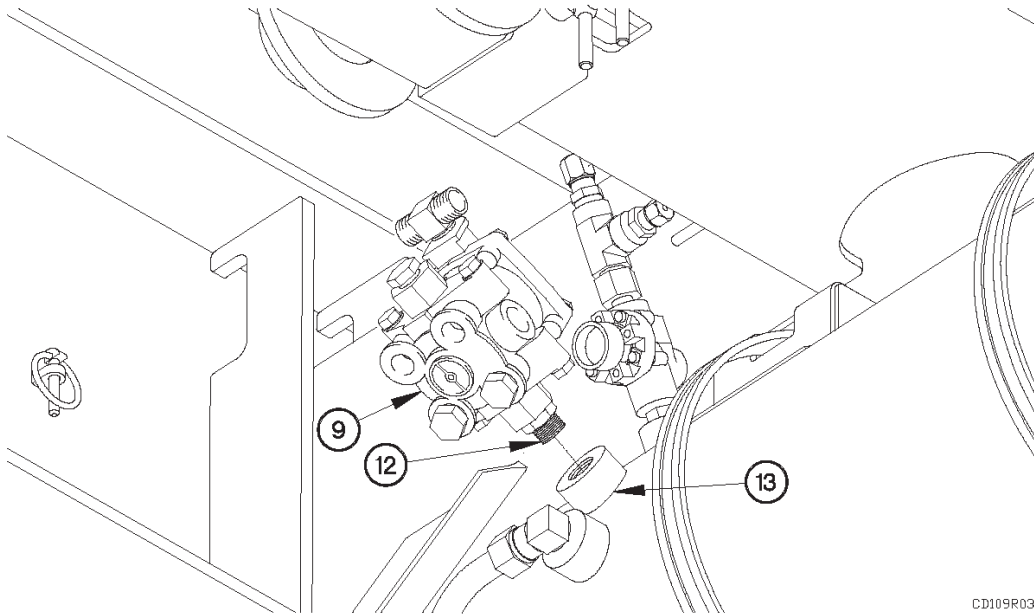
CD109R05

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).

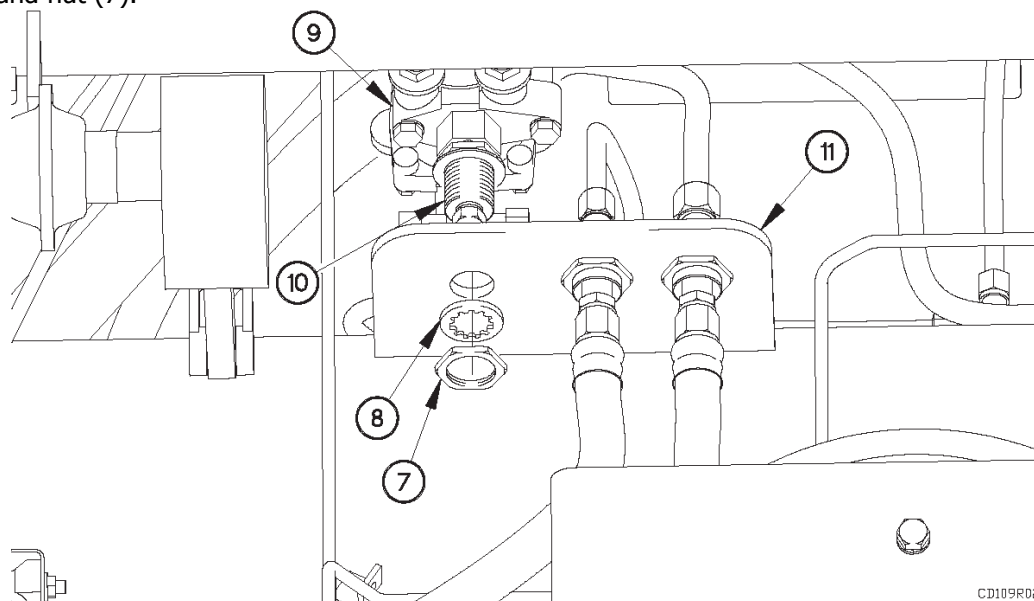


CD109R03

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).

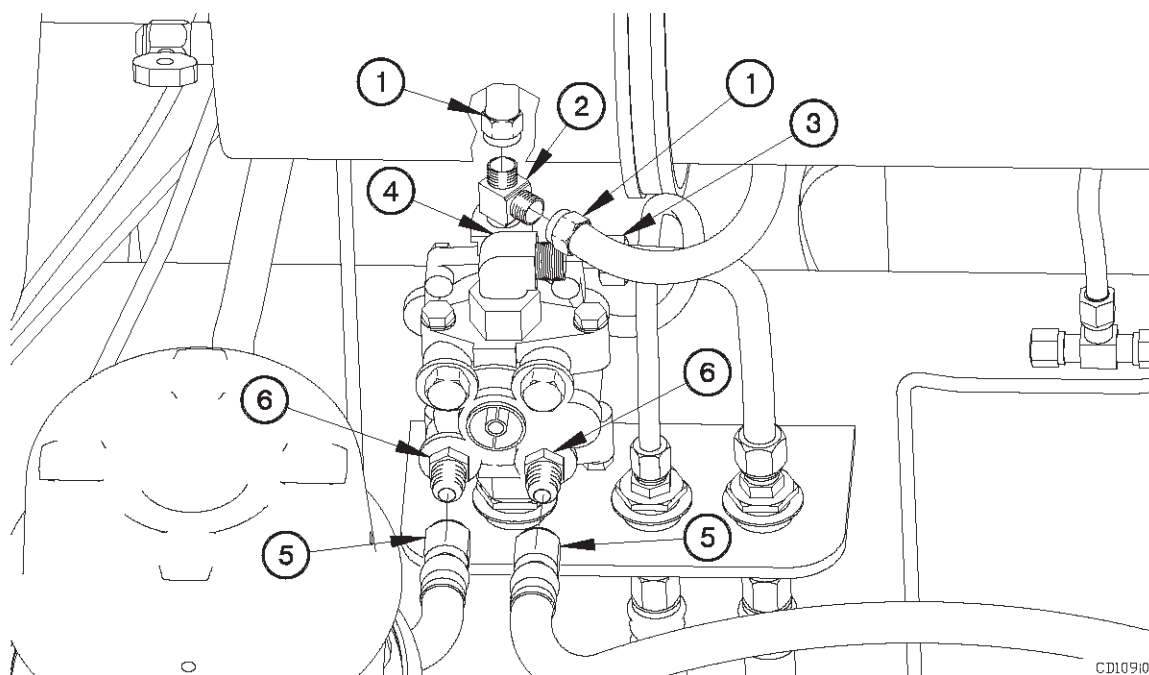


CD109R02

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).



CD109/01

END OF WORK PACKAGE

HEIGHT ACTUATION VALVE REPLACEMENT

0110 00

THIS WORK PACKAGE COVERS:

Removal, Installation, Operational Checks

INITIAL SETUP:

Maintenance Level

Field

Materials/Parts - Continued

Sealing Compound (Item 14, WP 0165 00)
Nut, Self-Locking (4) (Item 26, WP 0168 00)

Tools and Special Tools

Goggles, Industrial (Item 8, WP 0167 00)
Tool Kit, Genl Mech (Item 24, WP 0167 00)
Wrench, Torque, 0-75 lb-in. (Item 37, WP 0167 00)

Equipment Conditions

Trailer uncoupled (WP 0043 24, TM 2320-392-10-1)

Materials/Parts

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

GENERAL

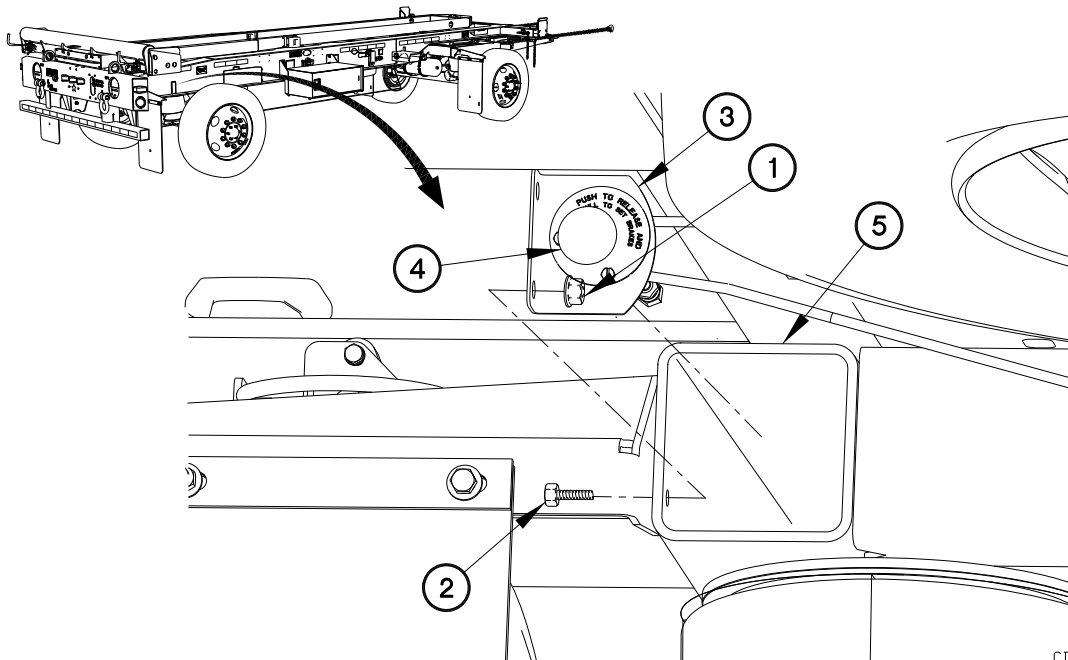
This work package contains information and instructions to replace the Load Handling System Trailer (LHST) height actuation valve.

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.**

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.



CD110R01

REMOVAL - Continued**NOTE**

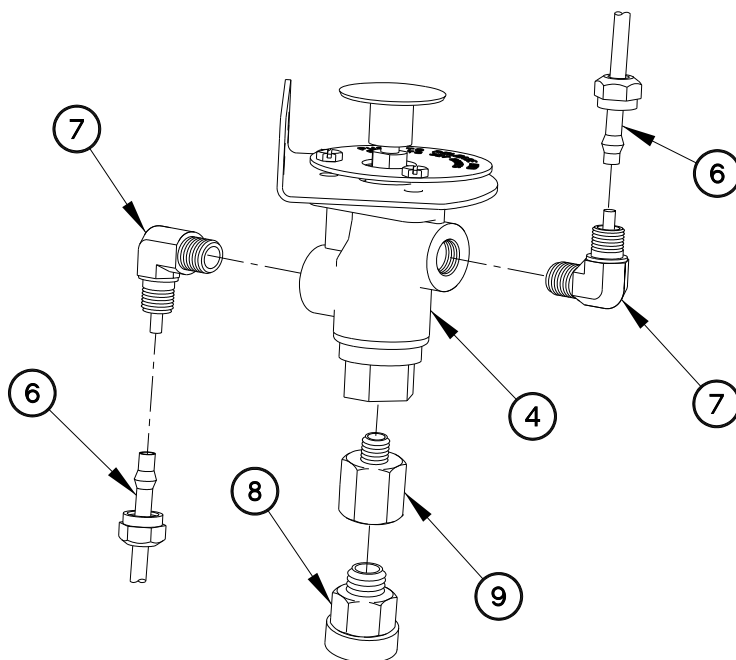
Tag air hoses and connection points prior to disconnecting.

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).

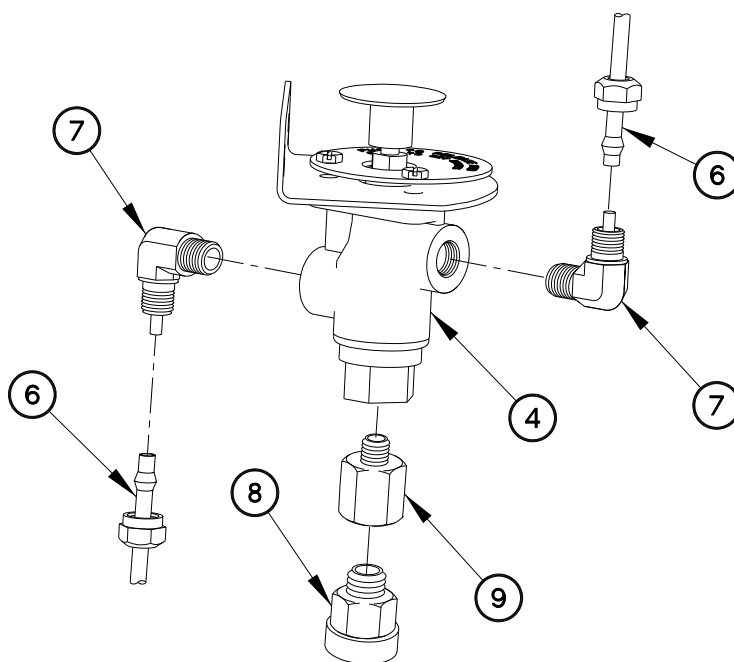


CD110R02

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.

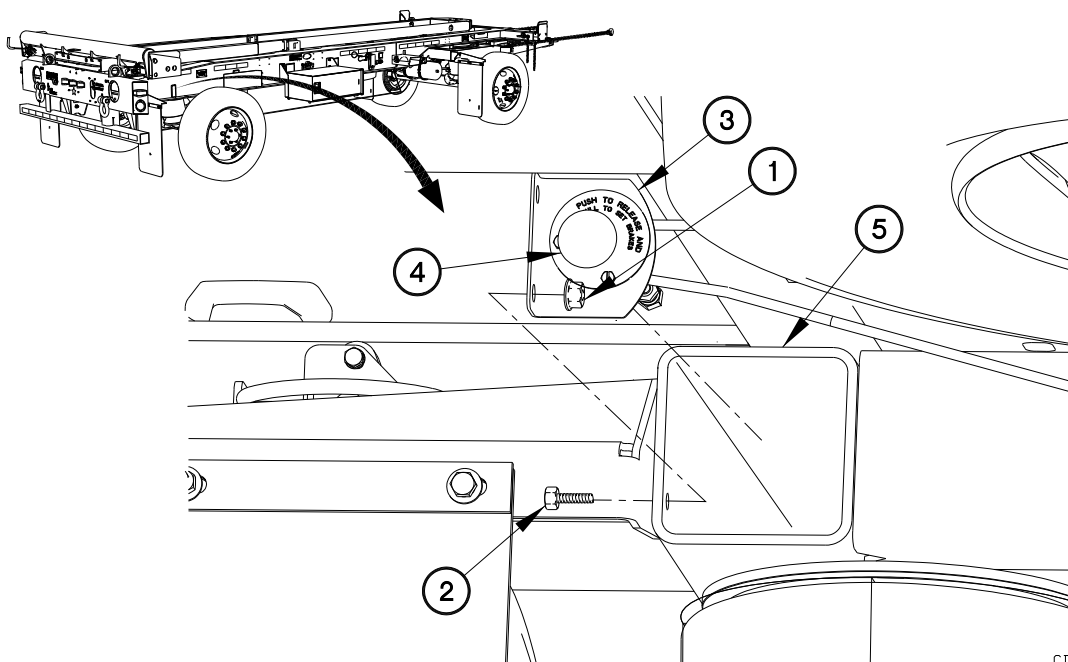
1. Apply sealing compound to threads of reducer (9), breather valve (8), and two 90-degree fittings (7).
2. Install reducer (9) on height actuation valve (4).
3. Install breather valve (8) on reducer (9).
4. Install two 90-degree fittings (7) on height actuation valve (4).
5. Connect two hoses (6) to 90-degree fittings (7).



CD110R02

HEIGHT ACTUATION VALVE REPLACEMENT - Continued**0110 00****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

TM 9-2330-334-13&P

CHAPTER 5
SUPPORTING INFORMATION

REFERENCES

0111 00

SCOPE

This work package lists all field manuals, forms, technical manuals, and miscellaneous publications referenced in this manual.

DA PAMPHLETS

- DA PAM 25-30 Consolidated Index of Army Publications and Blank Forms
- DA PAM 738-750..... The Army Maintenance Management System (TAMMS-A)

FIELD MANUALS

- FM 3-4 NBC Protection
- FM 3-5 NBC Decontamination
- FM 4-25.11..... First Aid
- FM 5-20 Camouflage Pattern Painting
- FM 5-725 Rigging
- FM 31-70 Basic Cold Weather Manual
- FM 31-71 Northern Operations
- FM 43-2 Metal Body Repair and Related Operations

FORMS

- DA Form 2028 Recommended Changes to DA Publications and Blank Forms
- DA Form 2404 Equipment Inspection and Maintenance Worksheet
- DA Form 2407 Maintenance Request
- DA Form 2408-9 Equipment Control Record
- DD Form 6 Processing and De-processing Record of Shipping, Storage, and Issues of Vehicles and Packaging Improvement Report
- SF 364 Report of Item Discrepancy (ROID)
- SF 368 Product Quality Deficiency Report

TECHNICAL BULLETINS

- TB ORD 1032 Description, Use, Bonding Techniques, and Properties of Adhesives
- TB 9-2300-422-20..... Security of Tactical Wheeled Vehicles
- TB 43-0209 Color, Marking, and Camouflage Painting of Military Vehicles
- TB 43-0001-39-1 Equipment Improvement Report and Maintenance Digest: TACOM Equipment
- TB 43-0213 Corrosion Prevention and Control Including Rustproofing for Tactical Vehicles and Trailers
- TB 43-0242 CARC Spot Painting
- TB 55-46-1..... Standard Characteristics (Dimensions, Weight, and Cube) for Transportability of Military Vehicles and Other Outsize/Overweight Equipment (in TOE Line Sequence)
- TB 700-4..... Decontamination Operations Facilities & Equipment

REFERENCES - CONTINUED

0111 00

TECHNICAL MANUALS

- TM 9-237 Welding Theory and Application
- TM 9-2320-392-10 Operator's Manual for M1083A1 Series, 5-Ton, 6x6, Medium Tactical Vehicle (MTV)
- TM 9-2610-200-14 Organizational Care, Maintenance, and Repair of Pneumatic Tires and Inner Tubes
- TM 9-4910-687-14&P Operators, Organizational, Direct Support and General Support Maintenance Manual
- TM 43-0139..... Painting Instructions for Field Use
- TM 43-0143..... Equipment Improvement Report and Maintenance Summary
- TM 750-244-6..... Procedures for Destruction of Tank-Automotive Equipment to Prevent Enemy Use (US Army Tank-Automotive and Armaments Command)

OTHER PUBLICATIONS

- MTMCTEA PAM 55-19..... Tiedown Handbook for Rail Movements
- MTMCTEA PAM 56-1 Marine Terminal Lifting Guidance
- MTMCTEA Ref 92-55-20 Tiedown Handbook for Truck Movements
- MTMCTEA Ref 95-55-22 Marine Lifting and Lashing Handbook
- MTMCTEA Ref 95-55-23 Containerization of Military Vehicles

END OF WORK PACKAGE

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:

<u>Source Code</u>	<u>Maintenance Code</u>	<u>Recoverability Code</u>
<u>XX</u>	<u>XX</u>	<u>X</u>
1 st two positions: How to get an Item.	3 rd position: Who can install, replace, or use the item.	4 th position: Who can do complete repair* on the item.
		5 th 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.

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	<u>Application/Explanation</u>
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	<u>Application/Explanation</u>
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.

INTRODUCTION - Continued**0112 00****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 - Repairable item. When uneconomically repairable, condemn and dispose of the item at the field level.
- F - Repairable item. When uneconomically repairable, condemn and dispose of the item at the Sustainment level.
- H - Repairable item. When uneconomically repairable, condemn and dispose of the item at the Sustainment level.
- D - Repairable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.
- L - Repairable item. Condemnation and disposal not authorized below Specialized Repair Activity (SRA).
- A - Item requires special handling or condemnation procedures because of specific reasons (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.

INTRODUCTION - Continued

0112 00

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.

INTRODUCTION - Continued**0112 00****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

<u>Abbreviation</u>	<u>Explanation</u>
ABS	Anti-Lock Brake 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 gaging 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 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 1	A,B
0613	Intervehicular Cable	Replace		0.50					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 (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		
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		.62				1,3	A,B
		Adjust		.50				1	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 Overload Indicator	Replace		0.10				1,3	A,B
4706		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

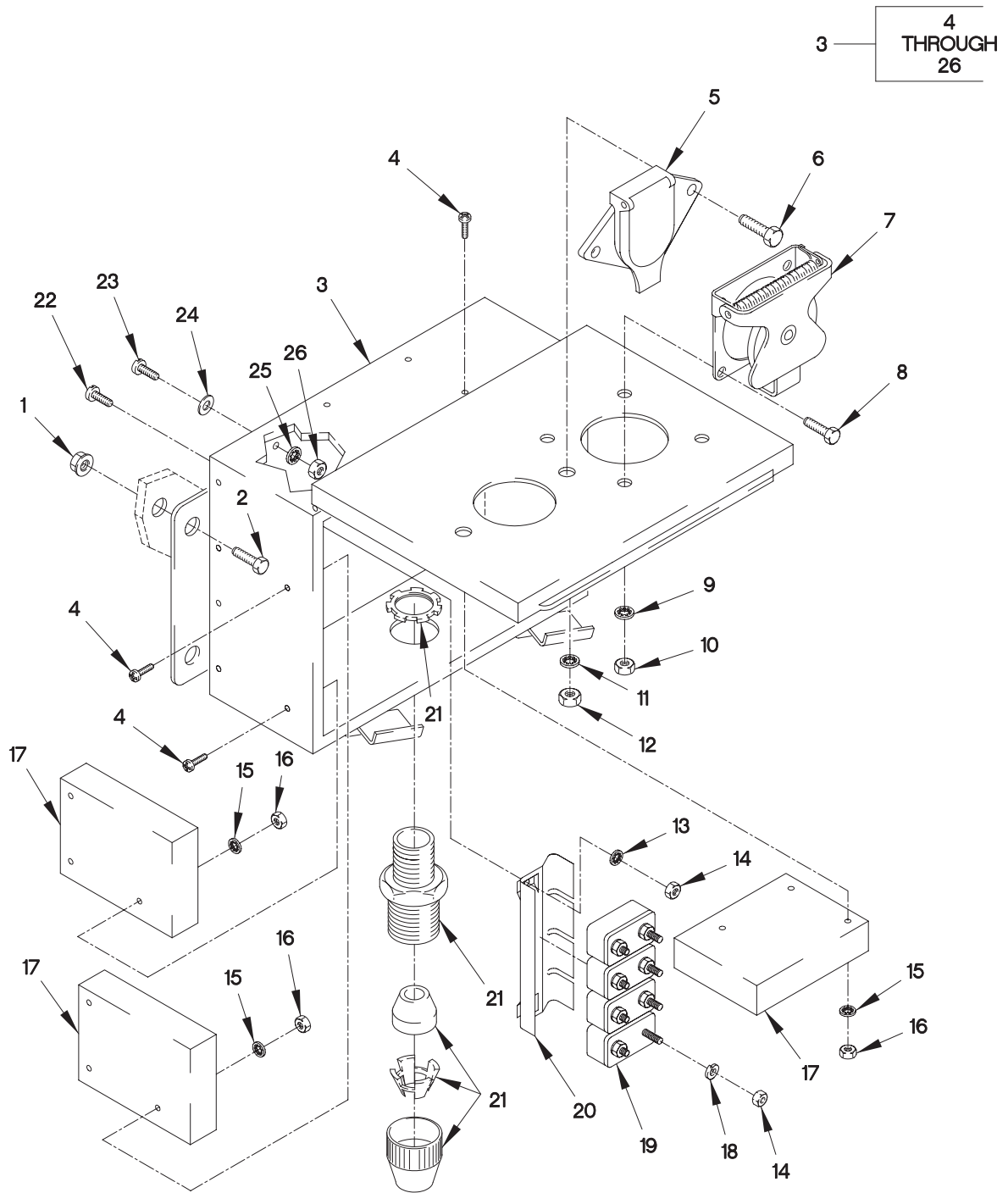
Table 3 Remarks for LHST Tool Sets

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

GROUP 0608 VOLTAGE CONVERTER

0114 00



0608LT03A

**Figure 1. Group 0608 VOLTAGE CONVERTER.
0114 00-1 Blank/2**

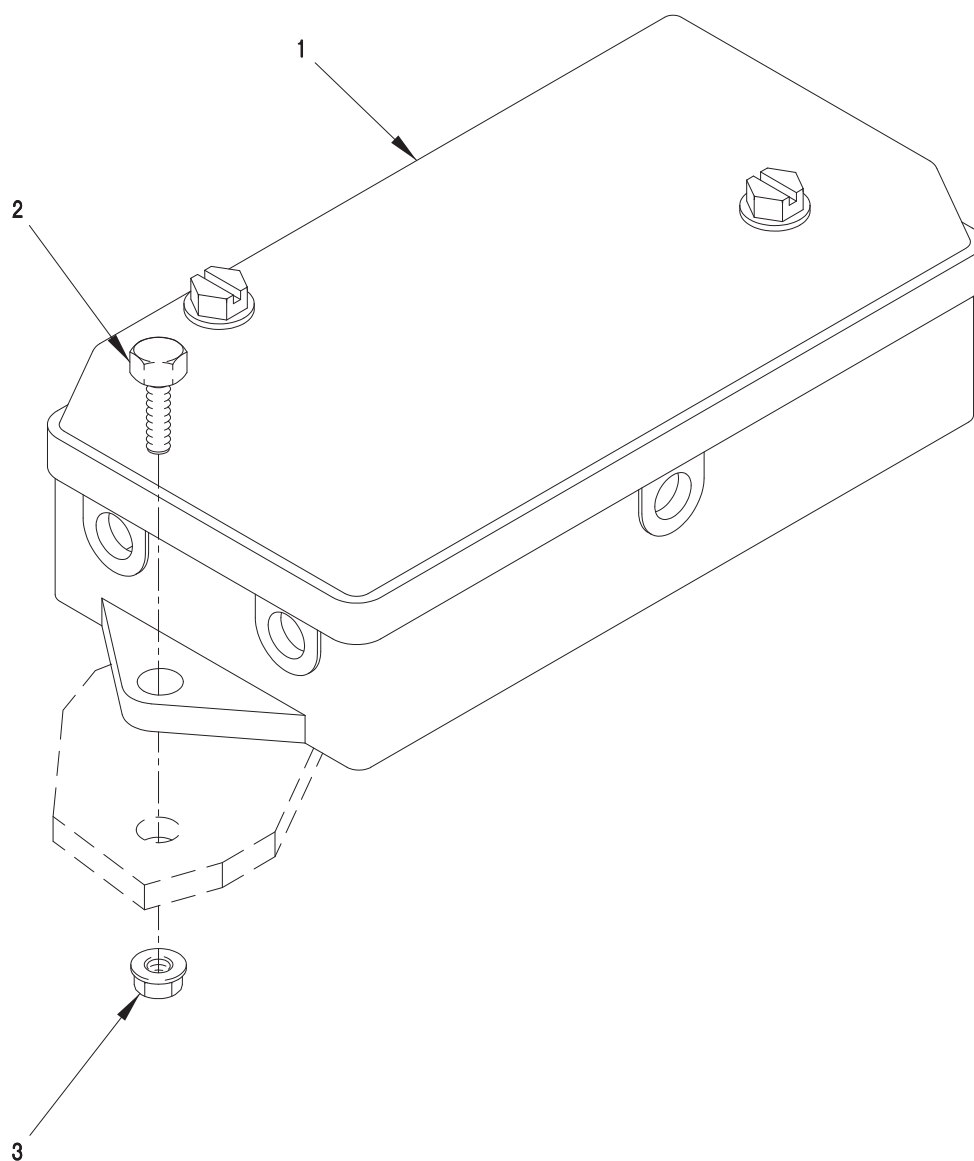
Change 1

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	5310-01-407-7177	19207	12412479-06	NUT,SELF-LOCKING,HE	6
2	PAOZZ	5305-01-540-1515	80204	S210NA38CAD14	SCREW,HEX,CAP	2
3	PAOOO		19207	DT324A	POWER SUPPLY	1
4	PAOZZ	5305-00-984-4980	96906	MS35206-223	.SCREW,MACHINE	15
5	PAOZZ	5935-00-856-3513	77326	11-700	.CONNECTOR,PLUG,ELEC	1
6	PAOZZ	5306-00-226-4825	80204	B1821BH031C075	.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
27	PAOZZ		96906	12504399	CLAMP, CONVERTER BOX	2
28	PAOZZ		96906	12504399-001	.CLAMP BRACKET	1
29	PAOZZ		96906	12504399-002	.SCREW	1

END OF FIGURE

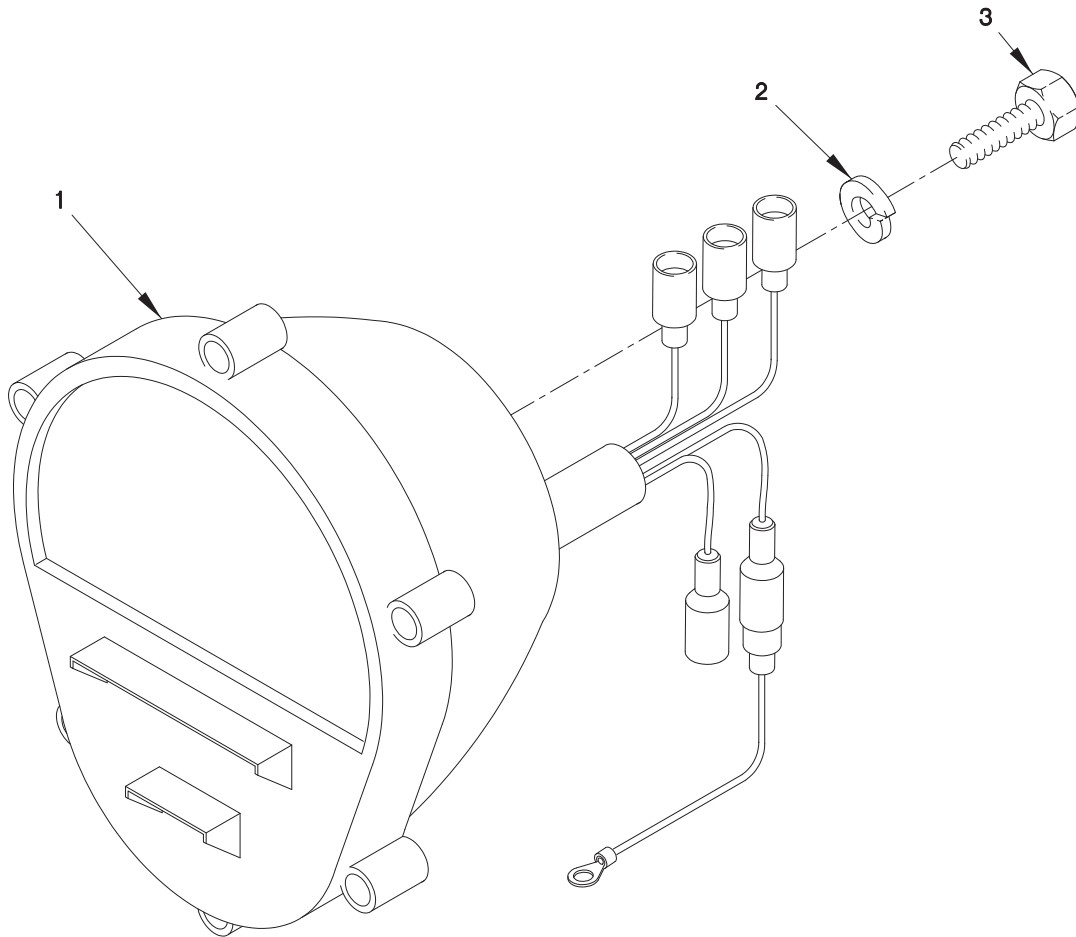


**Figure 2. Group 0608 JUNCTION BOX.
0115 00-1 Blank/2**

GROUP 0608 JUNCTION BOX – Continued

0115 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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						

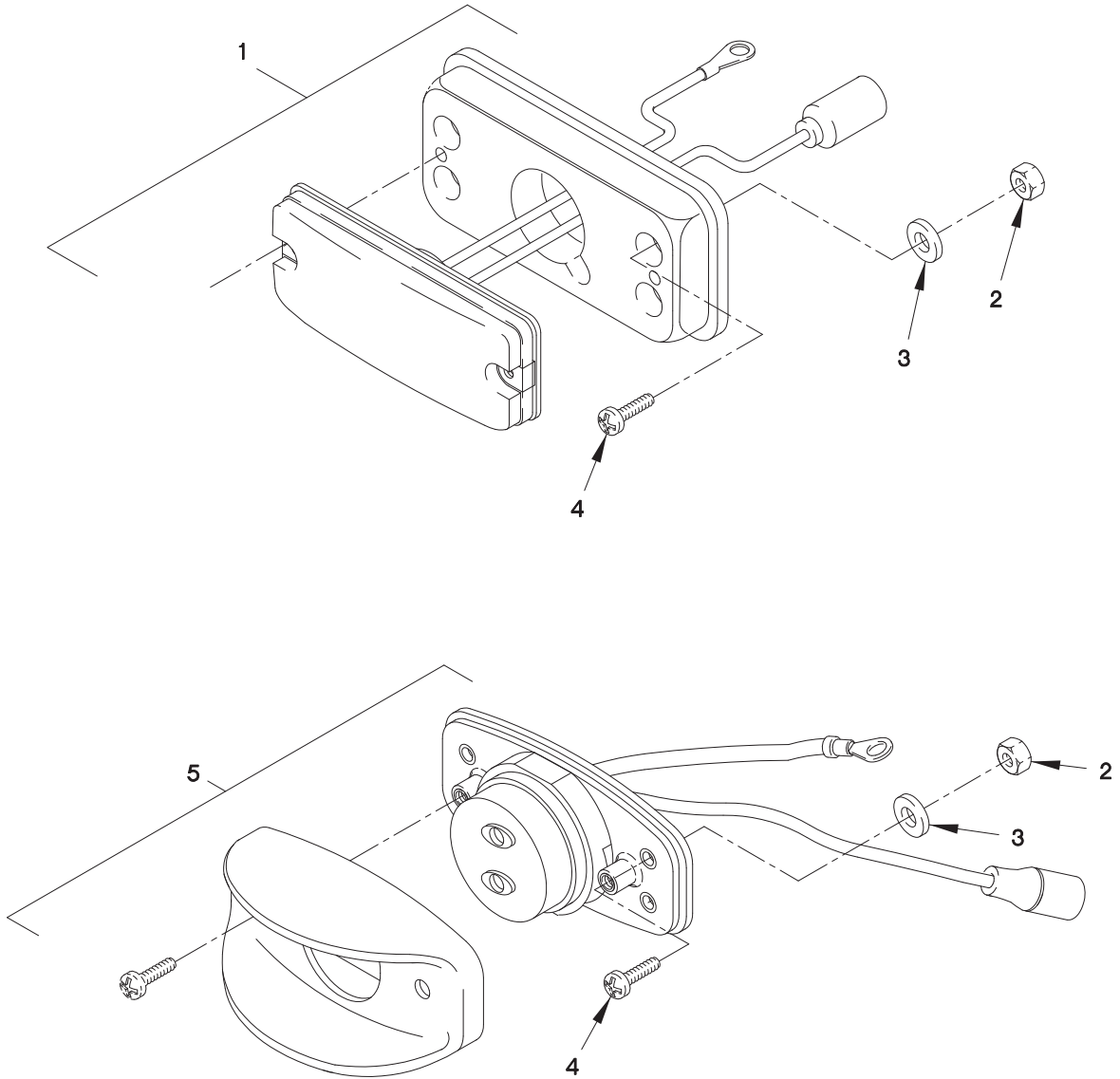


**Figure 3. Group 0609 COMPOSITE LIGHT.
0116 00-1 Blank/2**

GROUP 0609 COMPOSITE LIGHT - Continued

0116 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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						

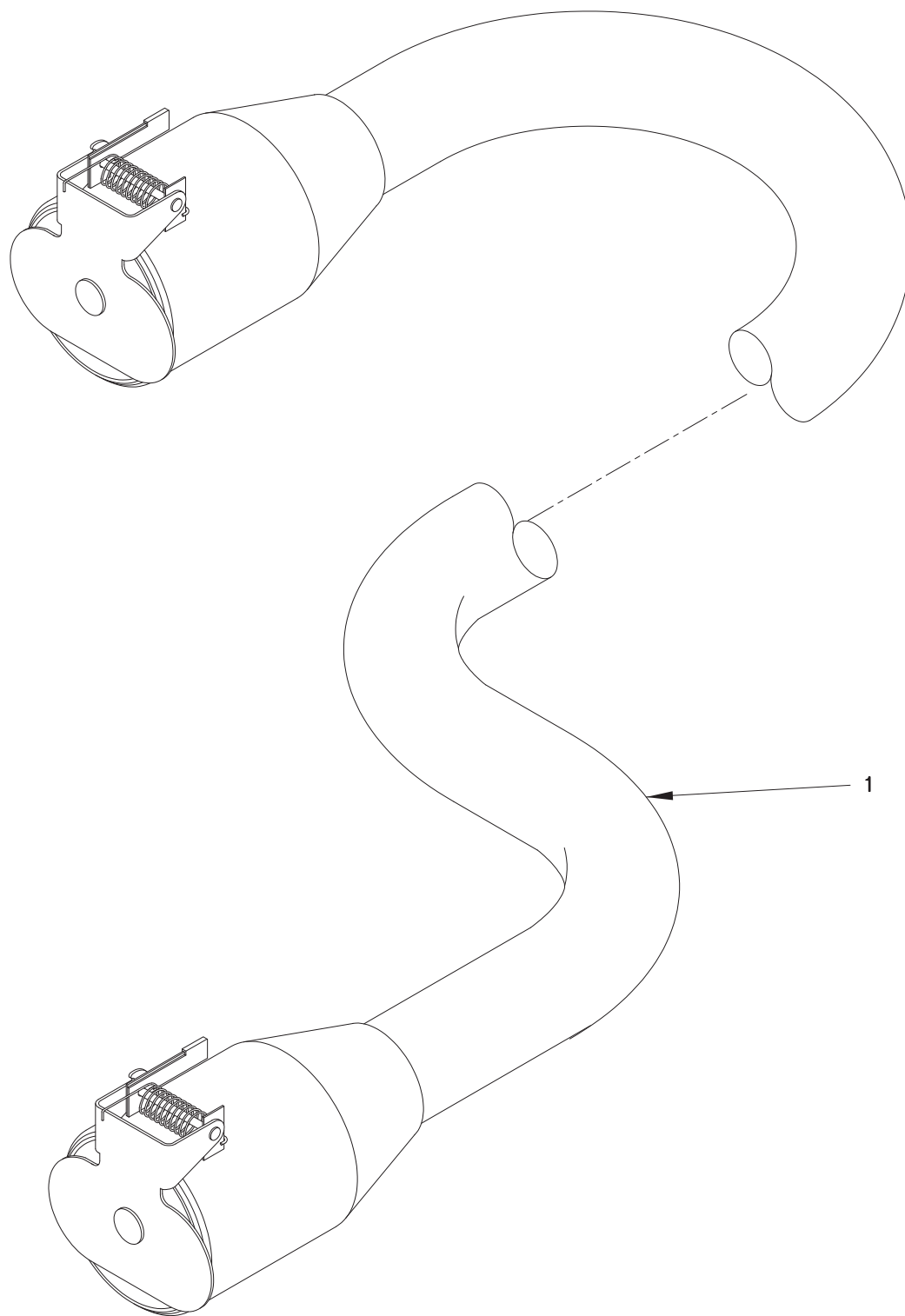


**Figure 4. Group 0609 LED MARKER LIGHT ASSEMBLY.
0117 00-1 Blank/2**

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						



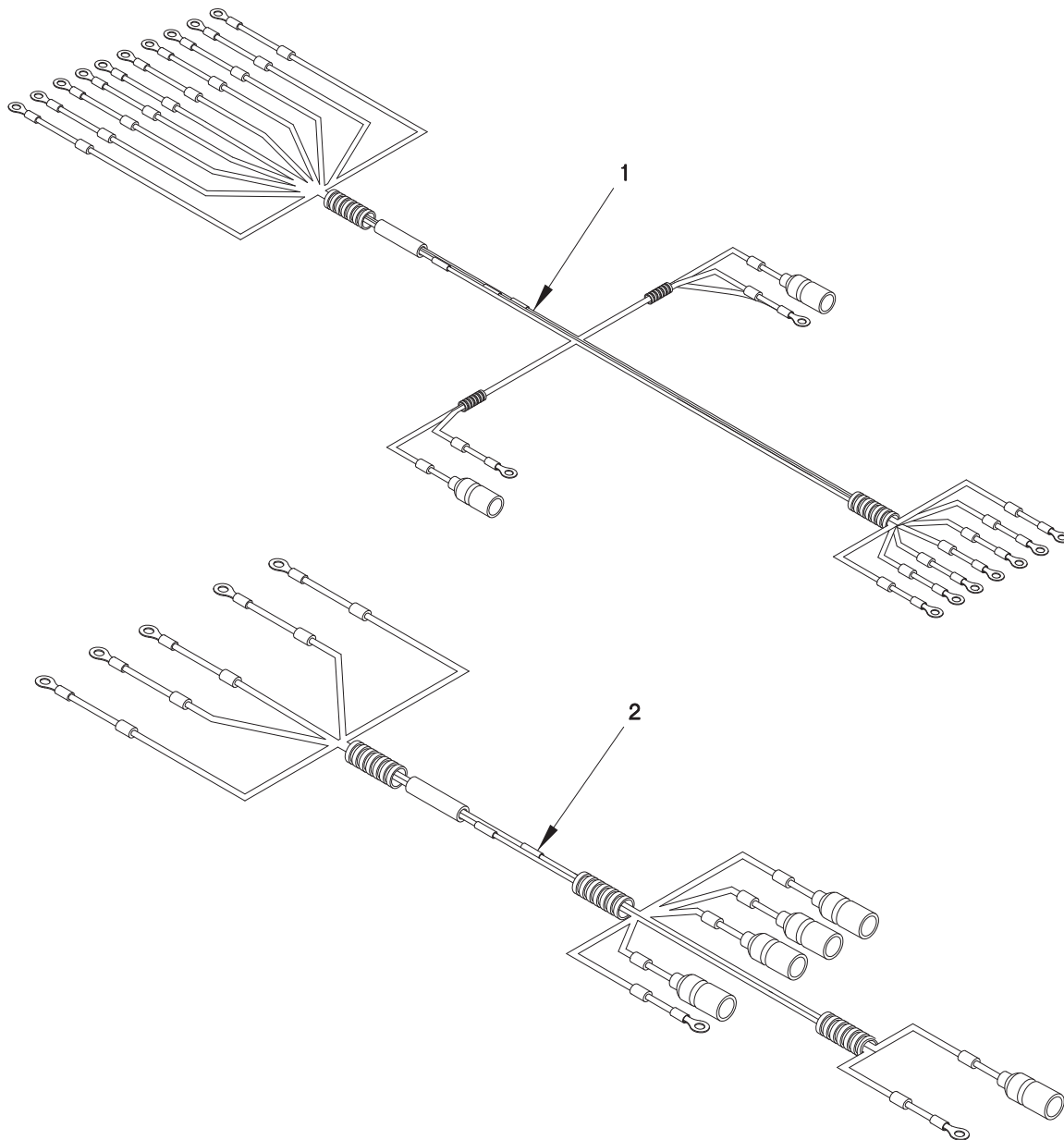
0613LT03A

**Figure 5. Group 0613 LED MARKER LIGHT ASSEMBLY.
0118 00-1 Blank/2**

**GROUP 0613 24VDC INTERVEHICULAR CABLE ASSEMBLY –
Continued**

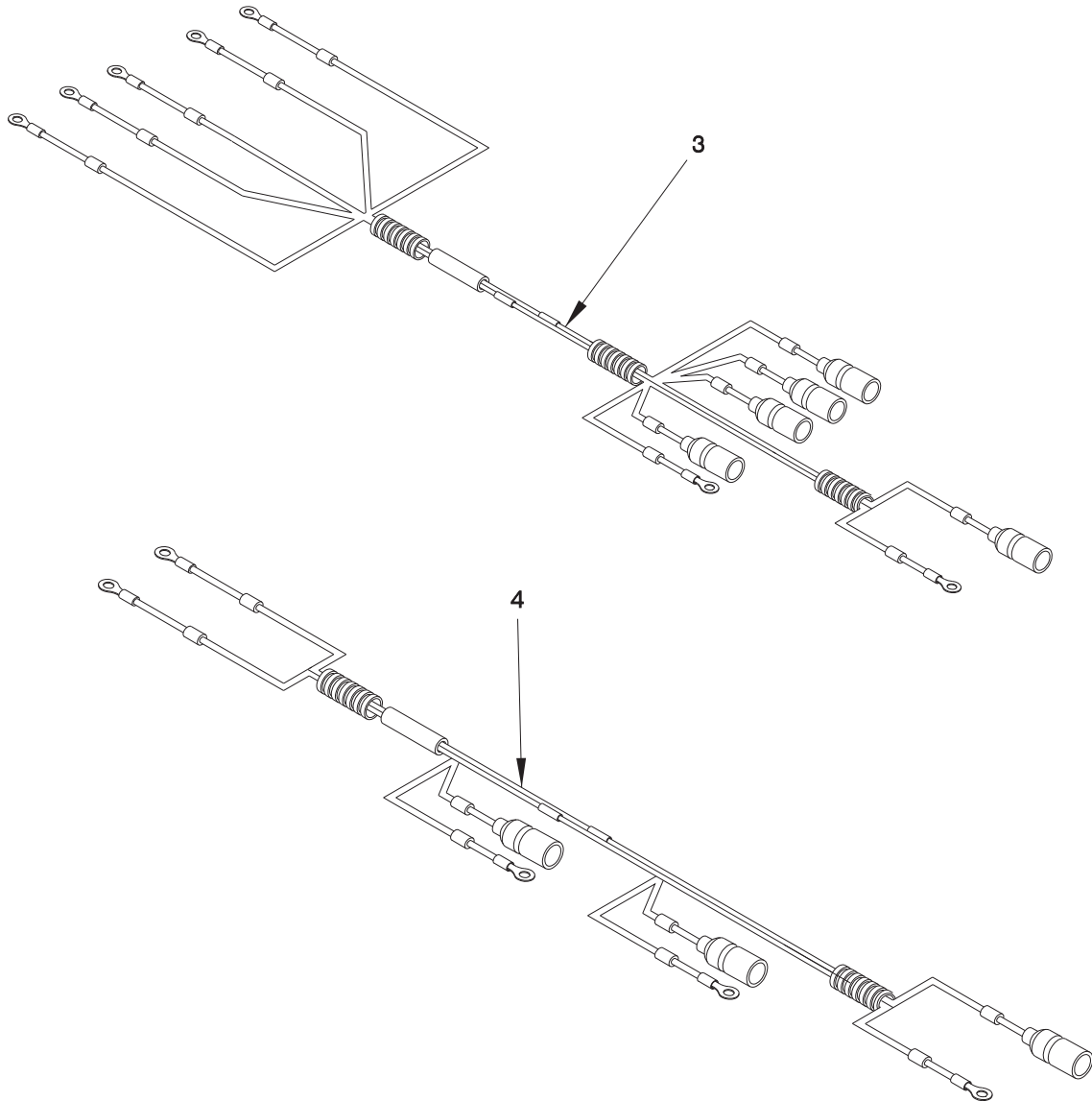
0118 00

(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						



0613LT02A

**Figure 6. Group 0613 CHASSIS ELECTRICAL HARNESSSES (Sheet 1 of 2).
0119 00-1**



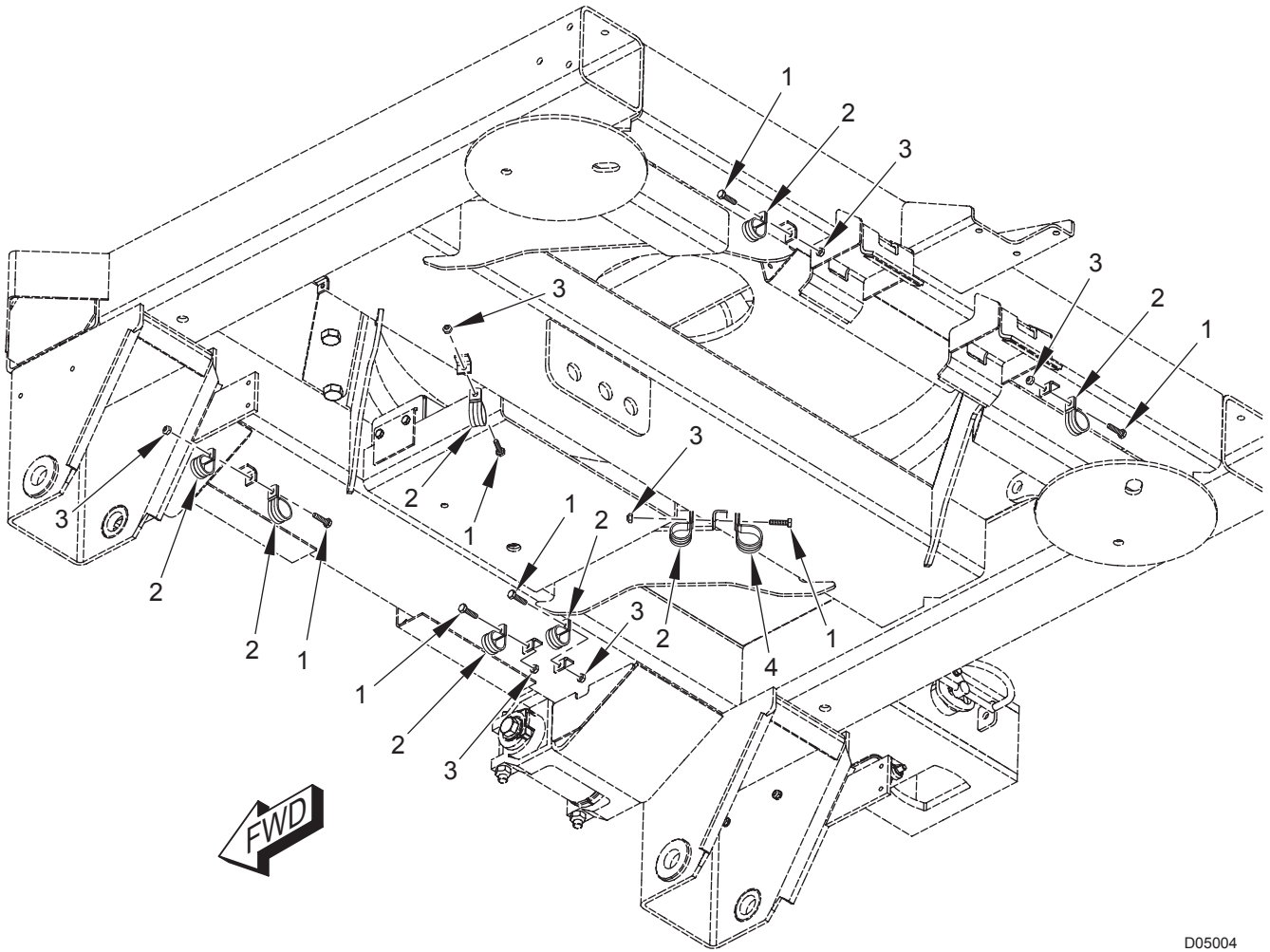
0613LT01A

**Figure 6. Group 0613 CHASSIS ELECTRICAL HARNESSSES (Sheet 2 of 2).
0119 00-2**

GROUP 0613 CHASSIS ELECTRICAL HARNESES – 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						

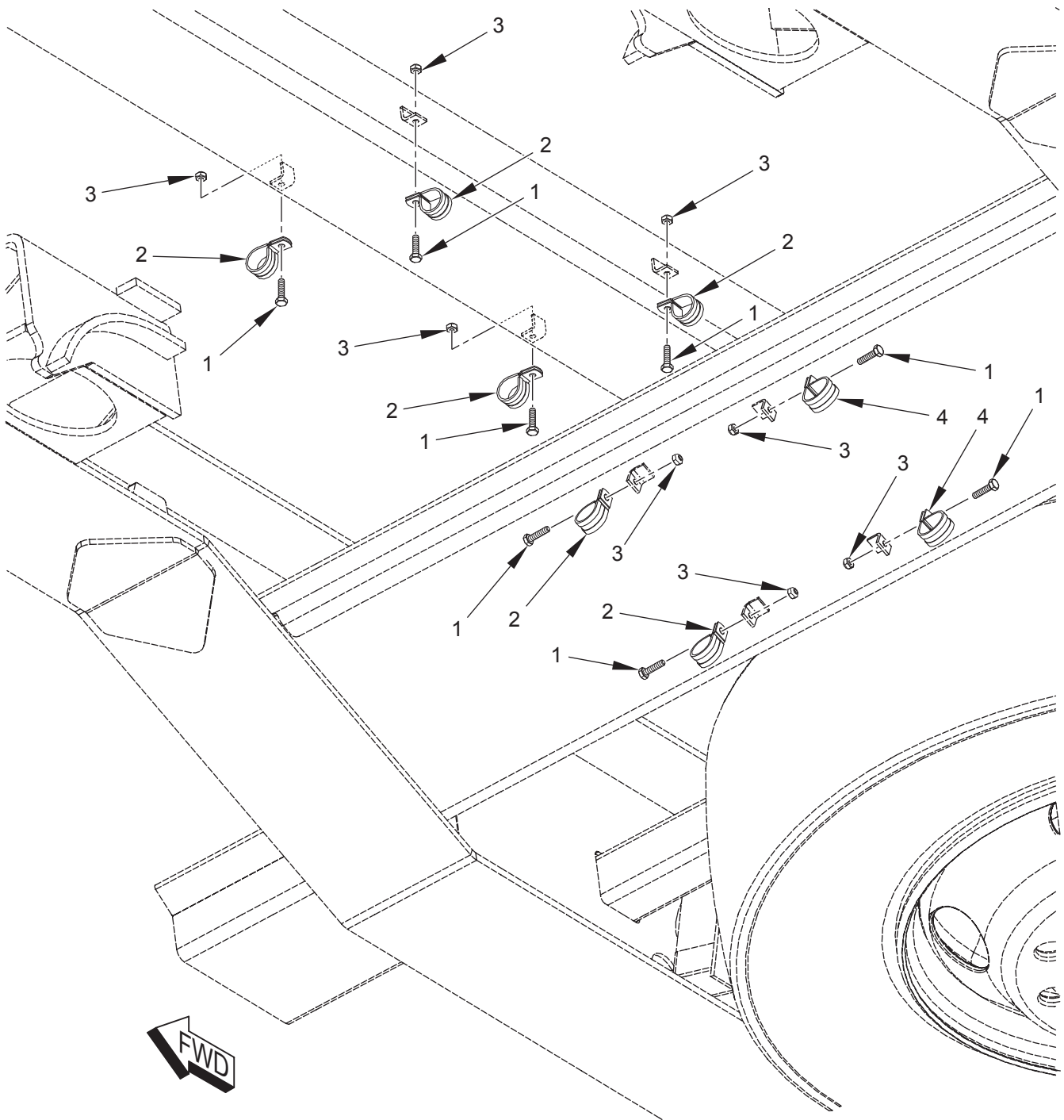


AS SHOWN FROM UNDERNEATH

D05004

**Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 1 of 4).
0120 00-1**

Change 1

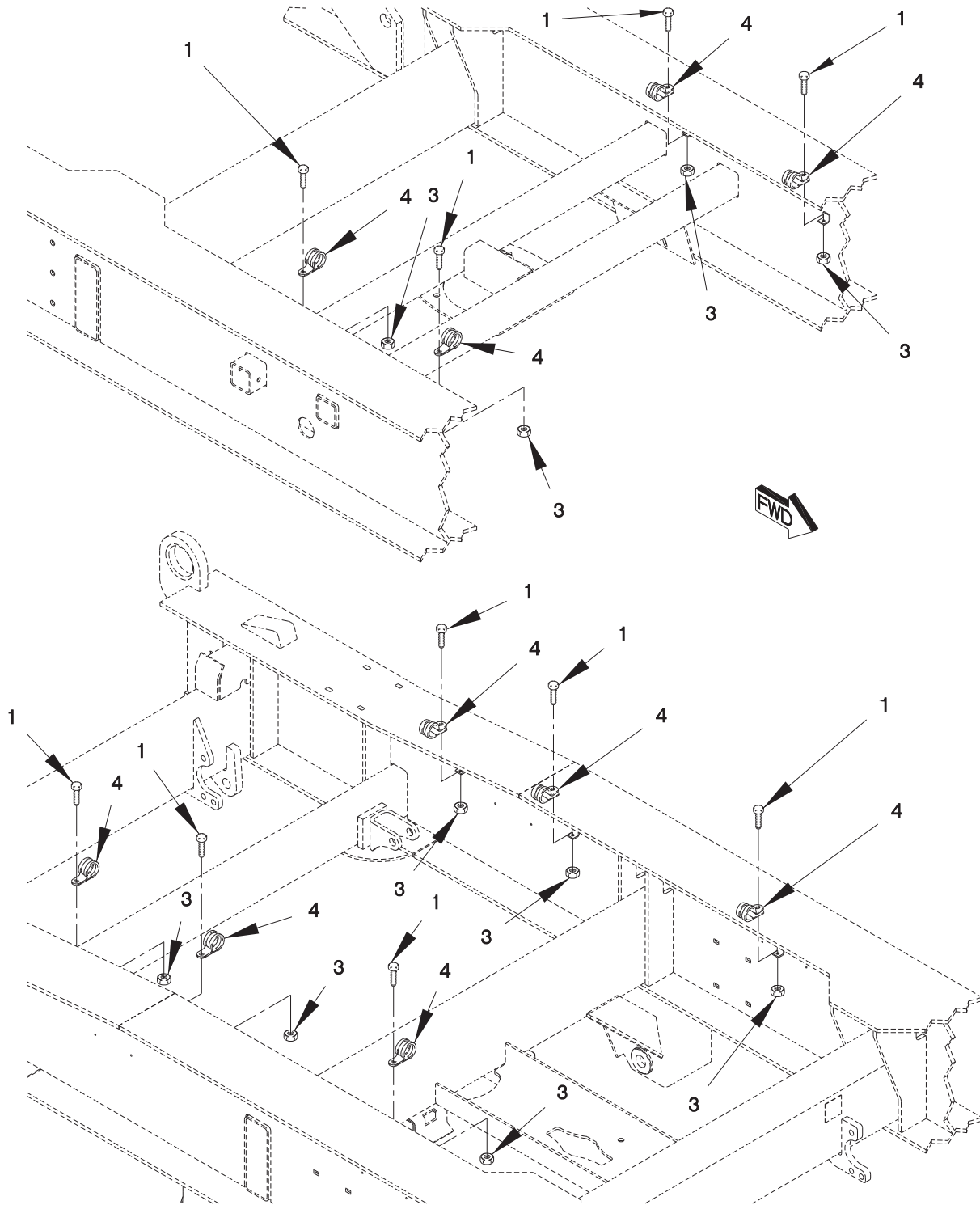


AS SHOWN FROM UNDERNEATH

D05005

**Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 2 of 4).
0120 00-2**

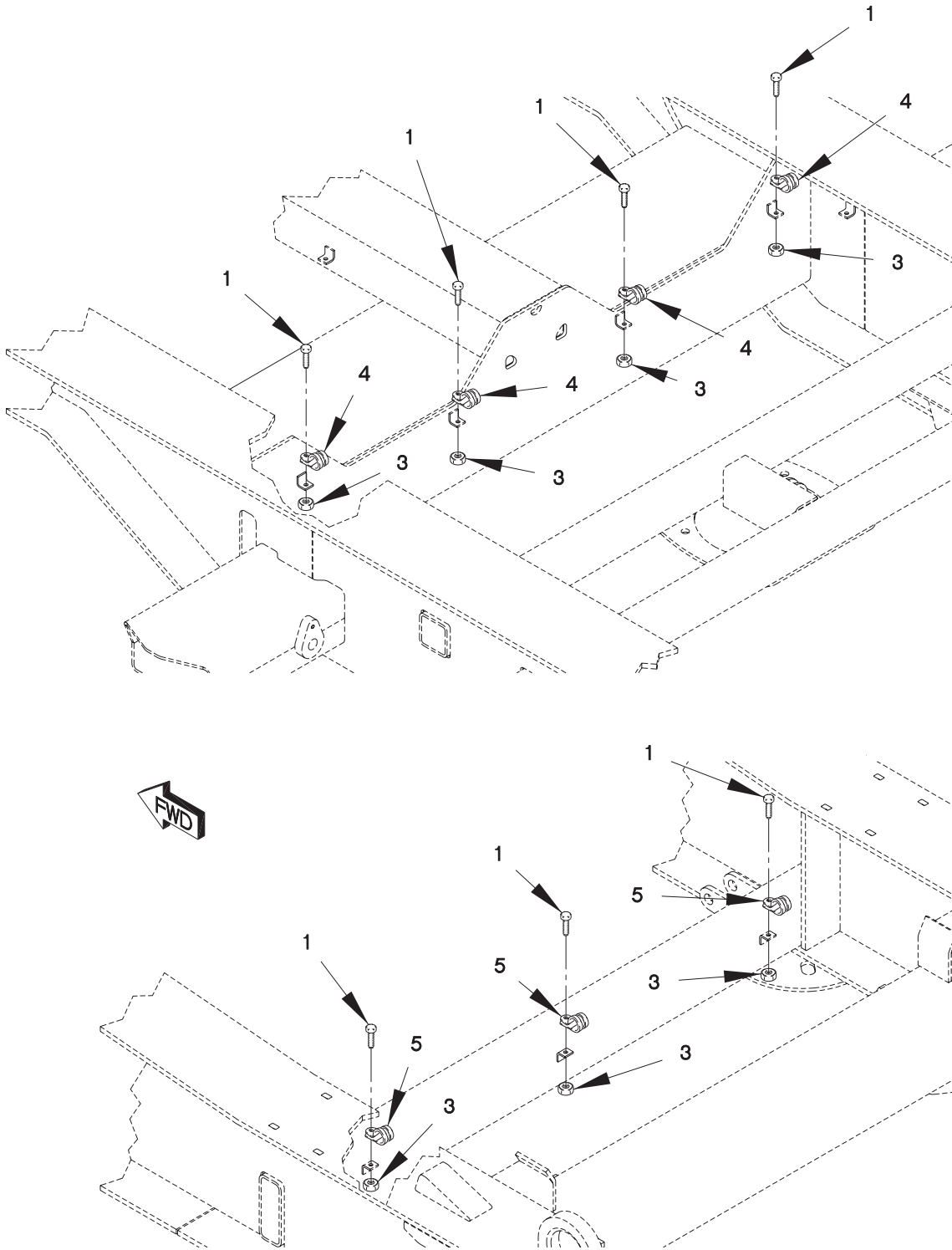
Change 1



0613LT05C

**Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 3 of 4).
0120 00-3**

Change 1



0613LT05D

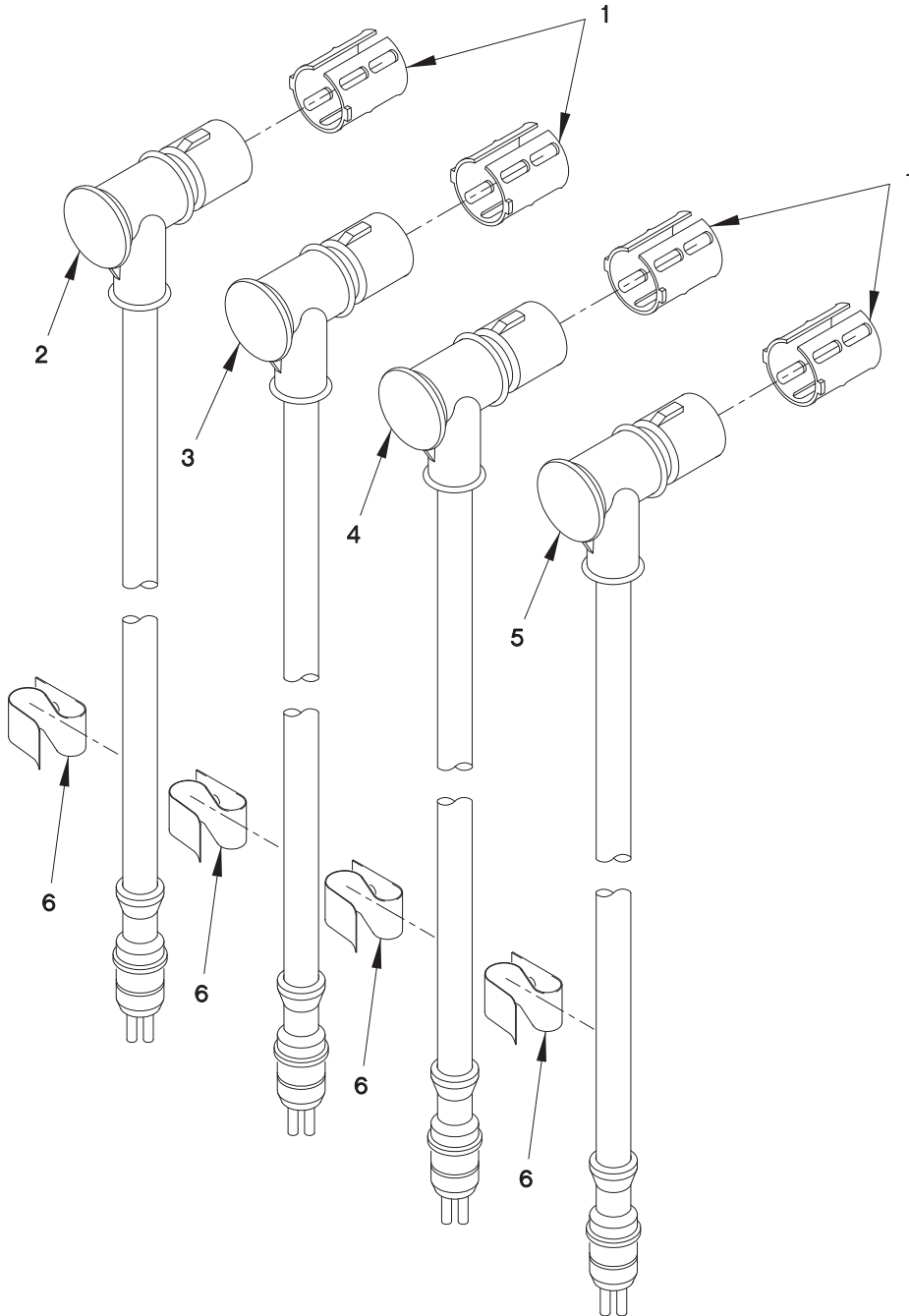
Figure 7. Group 0613 CABLE ROUTING CLAMPS (Sheet 4 of 4).
0120 00-4

Change 1

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	5305-00-225-3843	80204	B1821BH025C 100N	SCREW,CAP,HEXAGON H	32
2	PAOZZ	5340-01-390-2959	18076	S630H-16	CLAMP,LOOP	14
3	PAOZZ	5310-01-407-7177	19207	12412476-06	NUT,SELF-LOCKING,HE	32
4	PAOZZ	5340-01-423-0972	18076	S830H20	CLAMP,LOOP	17
5	PAOZZ	5340-01-445-3398	18076	12419079-001	CLAMP,LOOP	3
END OF FIGURE						

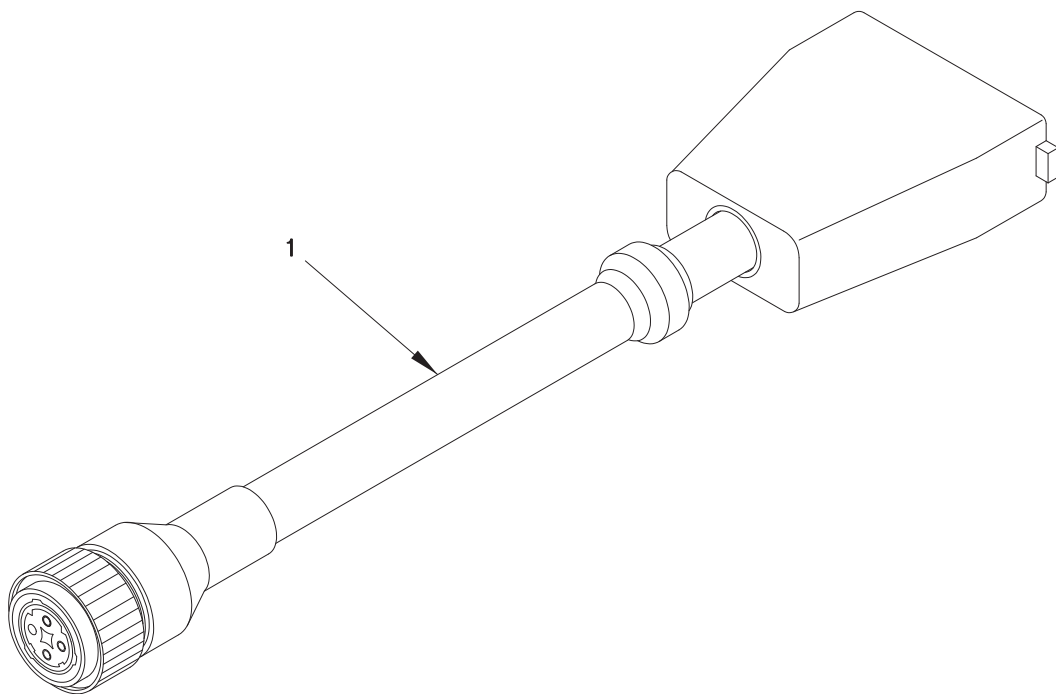


**Figure 8. Group 0613 SPEED SENSORS.
0121 00-1 Blank/2**

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						



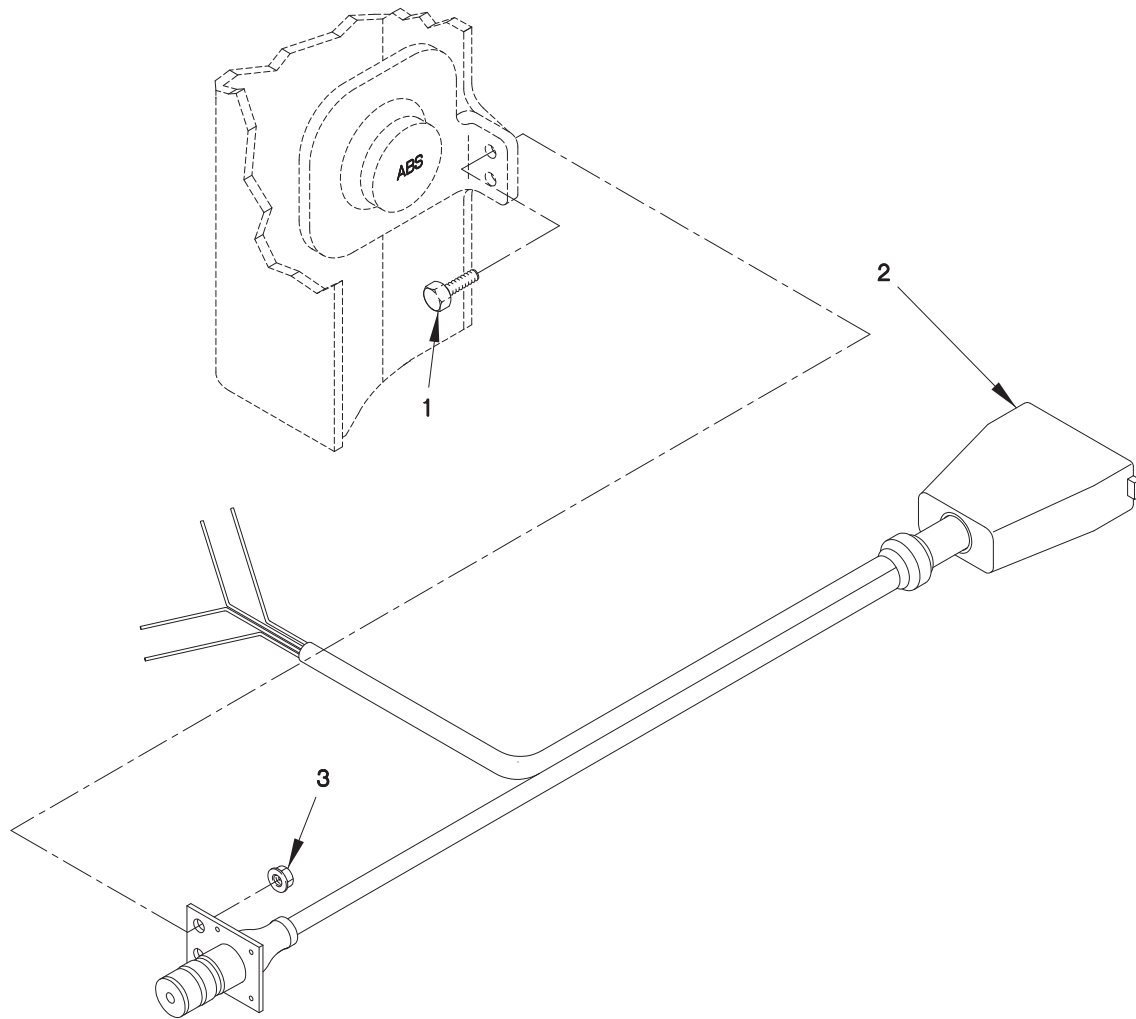
**Figure 9. Group 0613 ABS RELAY VALVE HARNESS.
0122 00-1 Blank/2**

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						

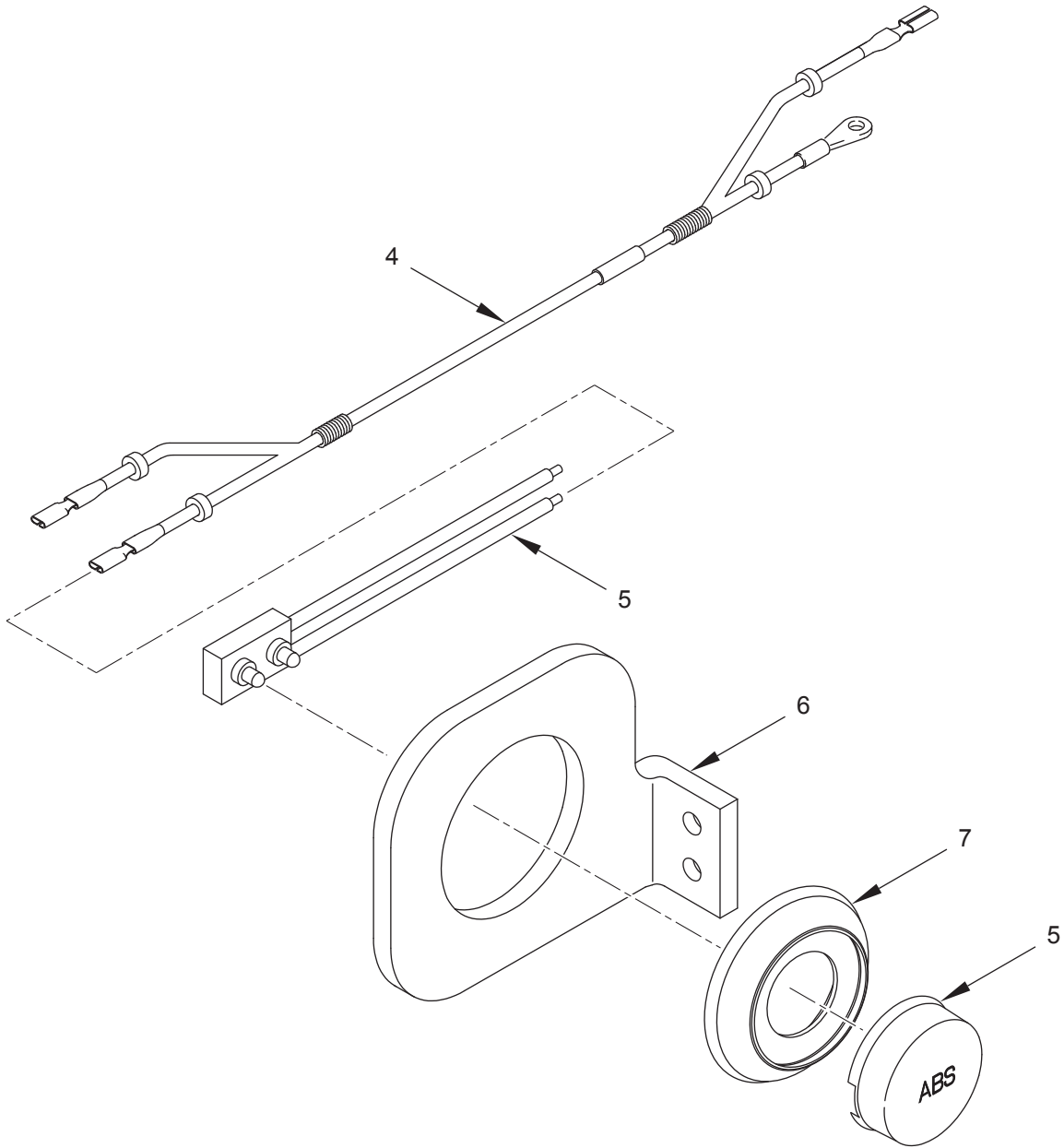
GROUP 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET 0123 00



0613LT07A

**Figure 10. Group 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET (Sheet 1 of 2).
0123 00-1 Change 1**

GROUP 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET – 0123 00
Continued



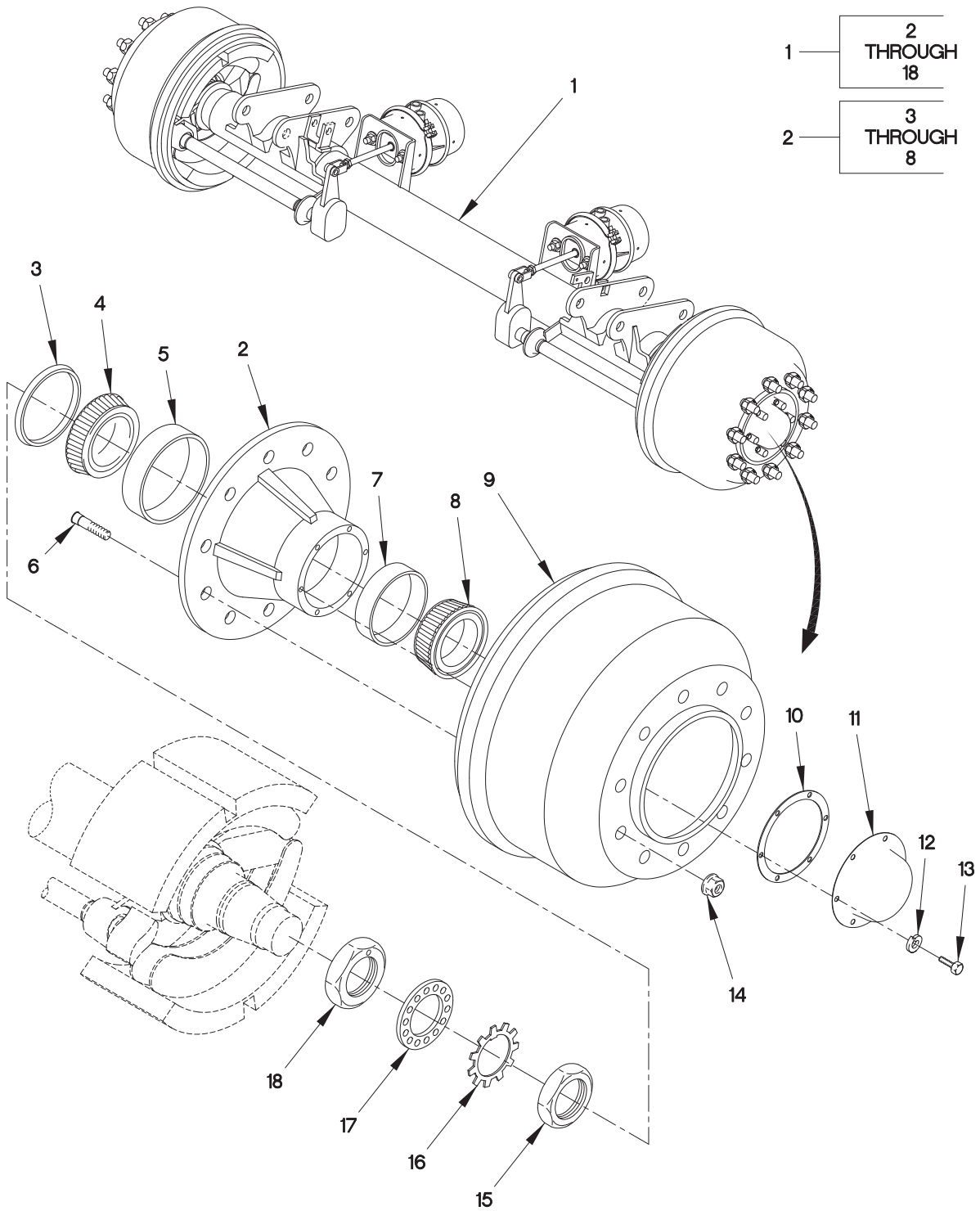
D05118

Figure 10. Group 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET (Sheet 2 of 2).
Change 1 **0123 00-2**

GROUP 0613 ABS POWER & DIAGNOSTIC CABLE ASSY W/BRACKET – 0123 00
Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
1	PAOZZ	5305-00-071-2509	80204	B1821BH025C15	SCREW,CAP,HEXAGON H	2
2	PAOZZ	6150-01-540-4563	19207	12443612-001	ASSEMBLY,SPECAIL PU	1
3	PAOZZ	5310-00-761-6882	96906	MS51967-2	NUT,PLAIN,HEXAGON	2
4	PAOZZ	6150-01-540-4563	19207	12486421	WIRING HARNESS	1
5	PAOZZ		19207	12486441	LIGHT,MARKER,CLEARA	1 ■
6	PAOZZ		19207	12486416	BRACKET,ABS WARNING	1
7	PAOZZ		19207	12485814	GROMMET,ABS WARNING	1 ■
END OF FIGURE						

GROUP 0613 TURNTABLE (FRONT) AXLE & WHEEL END ASSEMBLY 0124 00



1000LT01A

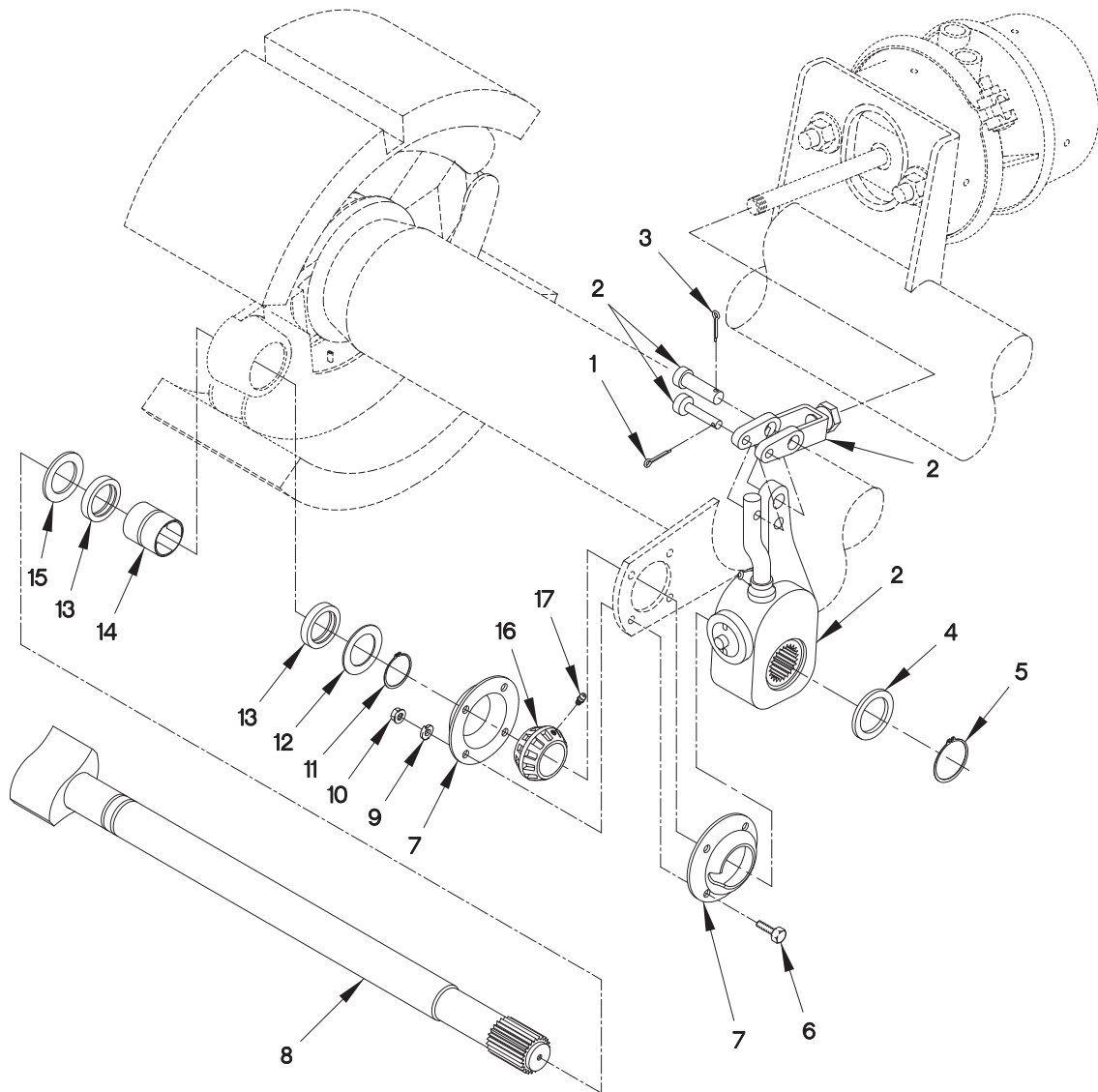
**Figure 11. Group 1000 TURNTABLE (FRONT) AXLE & WHEEL END ASSEMBLY.
0124 00-1 Blank/2**

GROUP 0613 TURNTABLE (FRONT) AXLE & WHEEL END ASSEMBLY – 0124 00
Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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



1000LT02A

**Figure 12. Group 1000 TURNTABLE (FRONT) AIR BRAKE ARM & SLACK ADJUSTER.
0125 00-1 Blank/2**

**GROUP 1000 TURNTABLE (FRONT) AIR BRAKE ARM & SLACK
ADJUSTER – Continued**

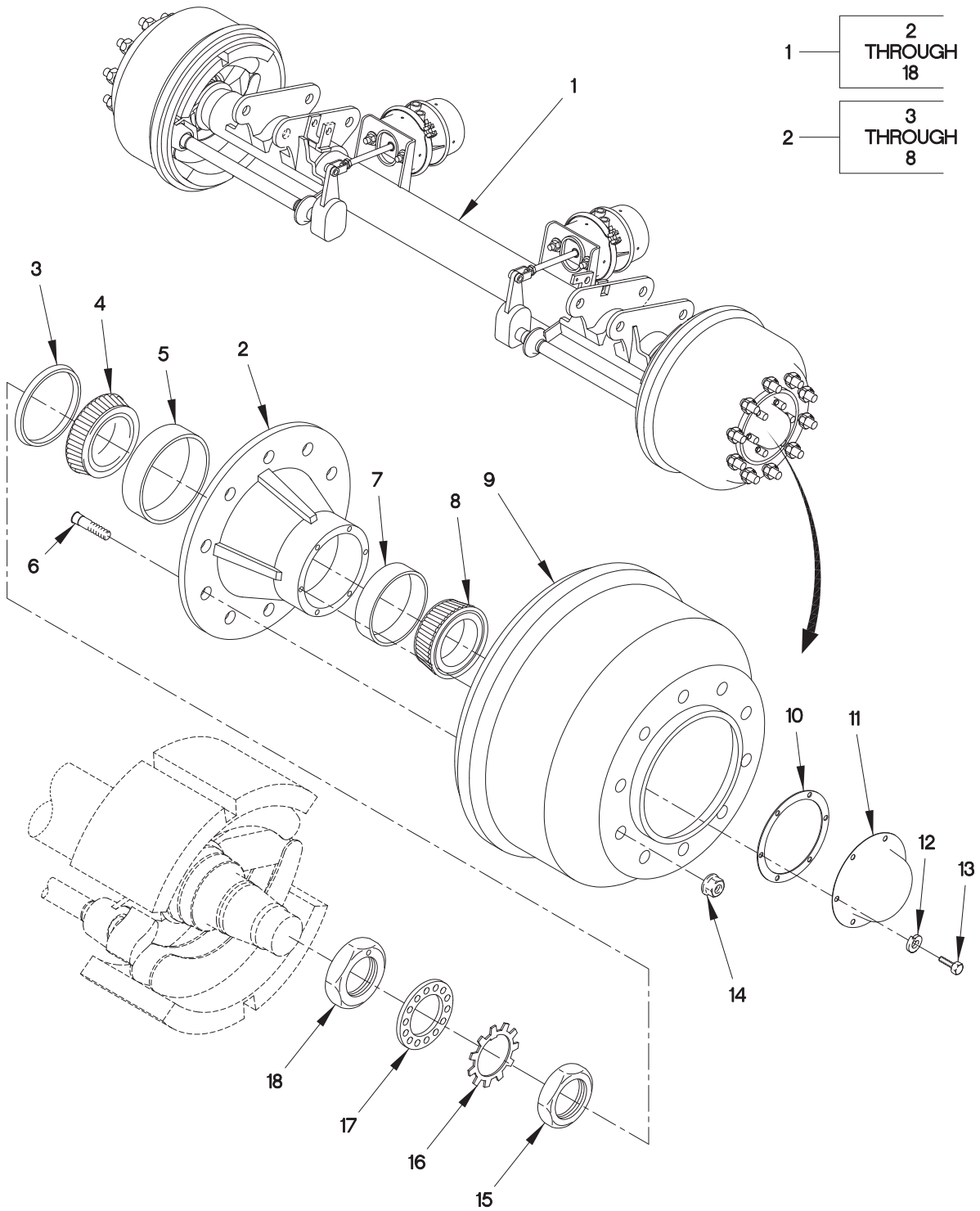
0125 00

(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

GROUP 1100 REAR AXLE & WHEEL END ASSEMBLY

0126 00



1100LT03A

**Figure 13. Group 1100 REAR AXLE & WHEEL END ASSEMBLY.
0126 00-1 Blank/2**

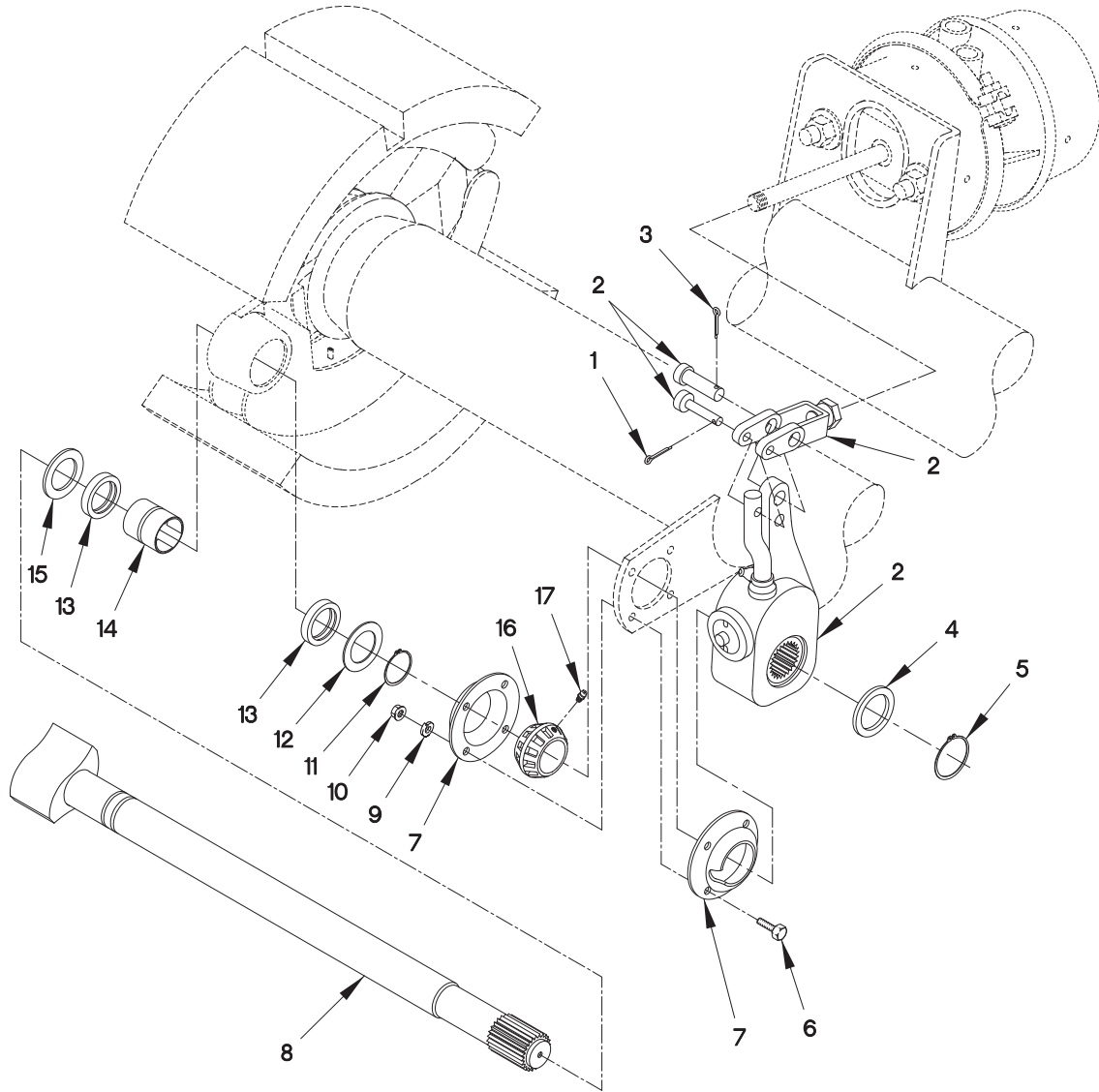
TM 9-2330-334-13&P

GROUP 1100 REAR AXLE & WHEEL END ASSEMBLY – Continued

0126 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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

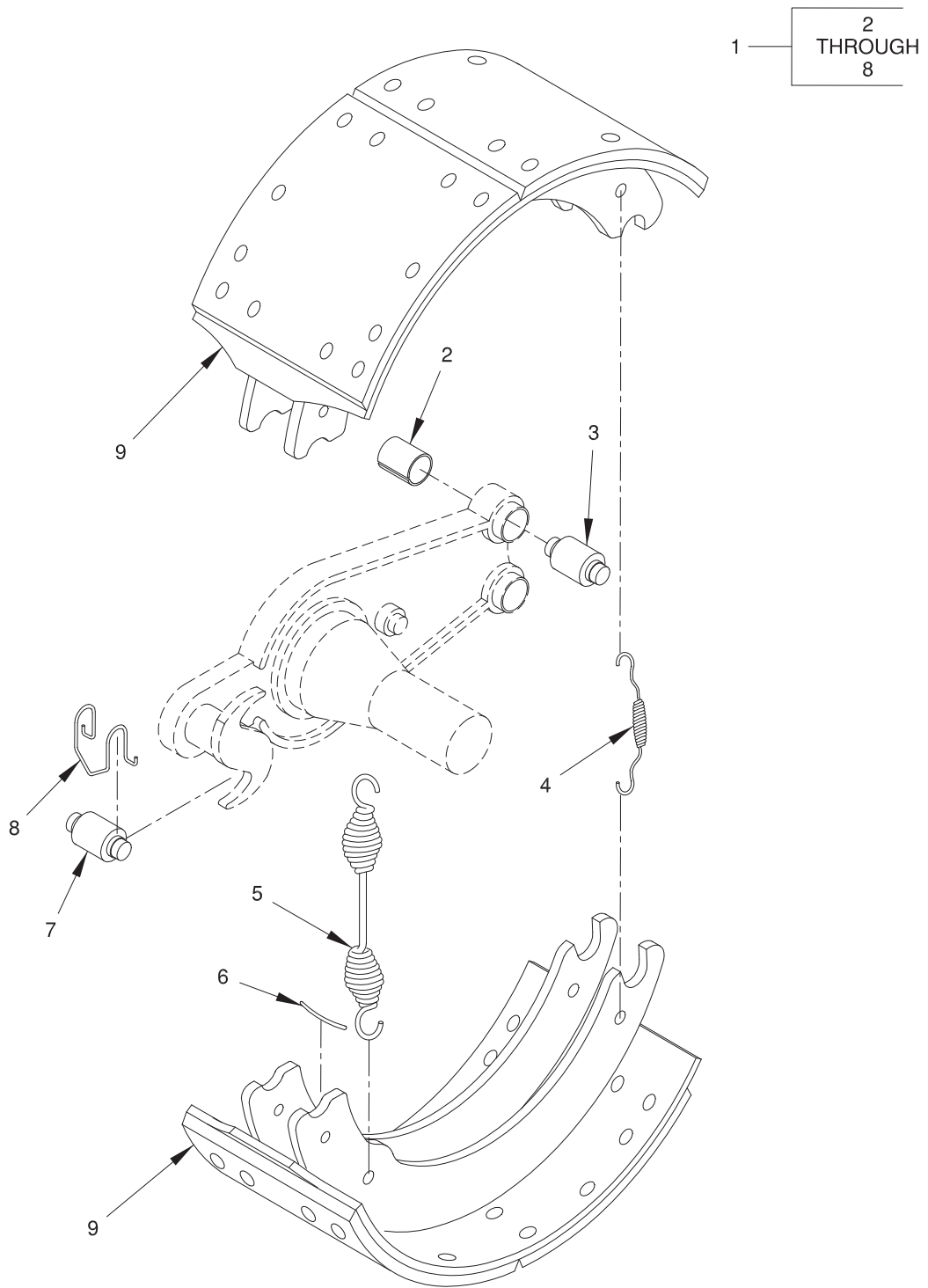


**Figure 14. Group 1100 REAR AIR BRAKE ARM & SLACK ADJUSTER.
0127 00-1 Blank/2**

TM 9-2330-334-13&P

GROUP 1100 REAR AIR BRAKE ARM & SLACK ADJUSTER – Continued 0127 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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						



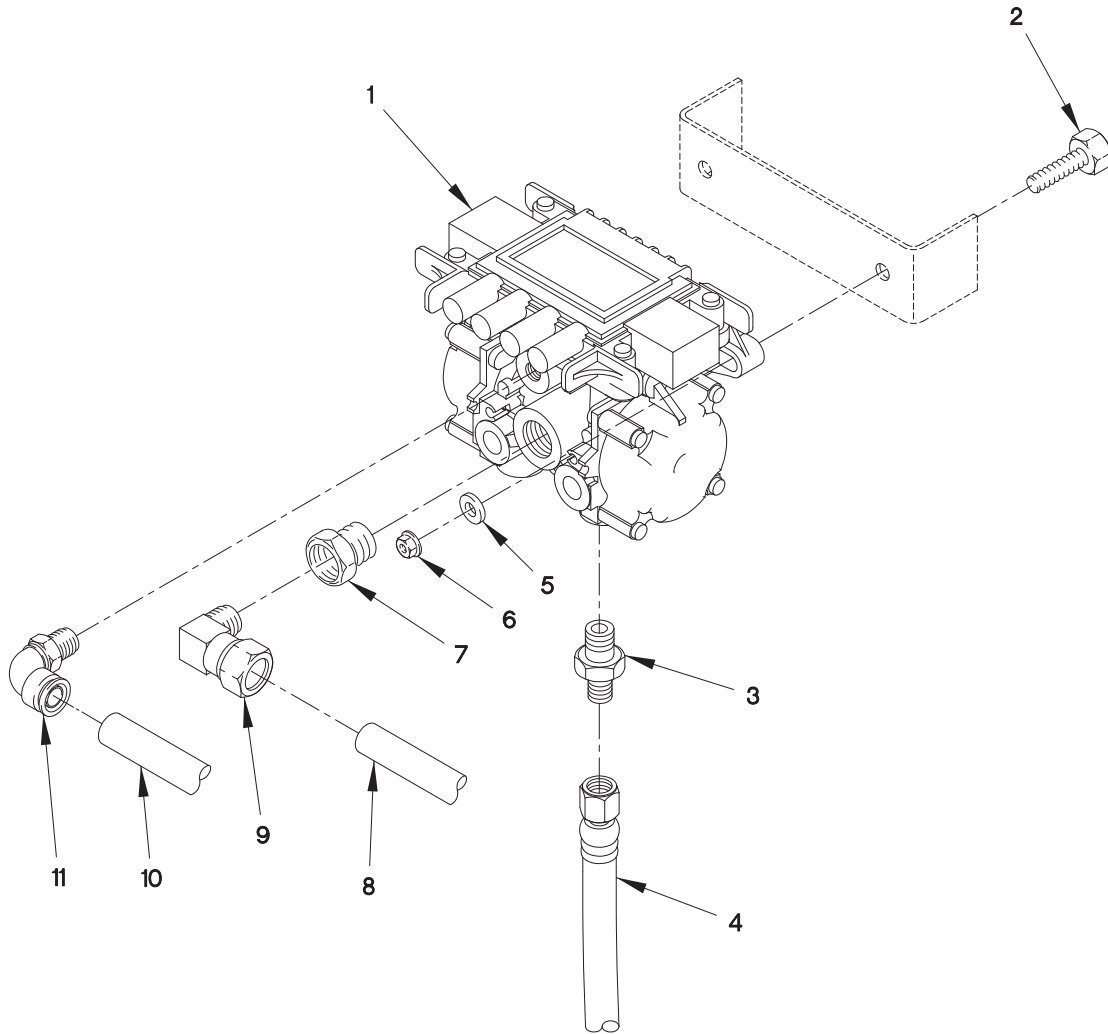
1202LT15A

**Figure 15. Group 1202 BRAKE PADS ASSEMBLY.
0128 00-1 Blank/2**

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						

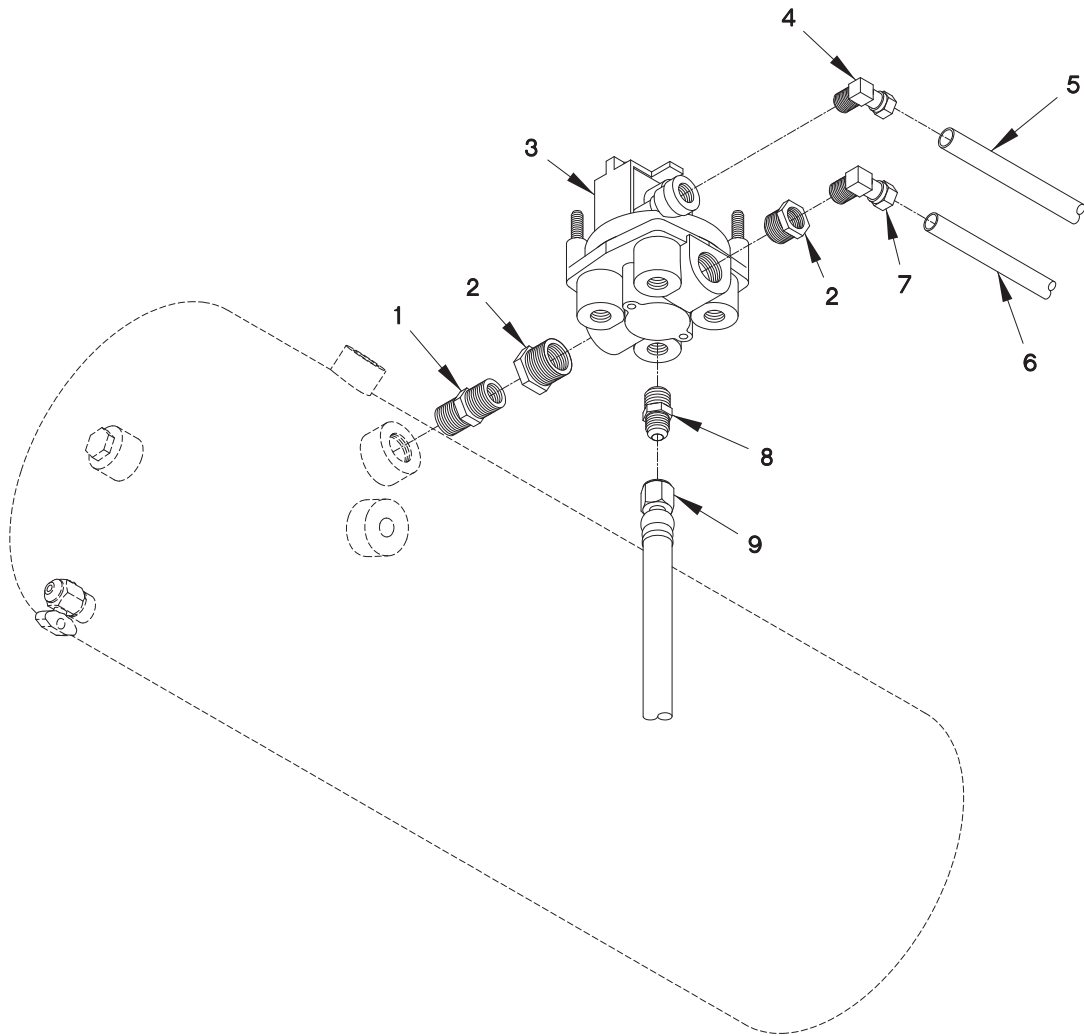


**Figure 16. Group 1208 ABS CONTROL UNIT, FITTINGS, HOSES & TUBING.
0129 00-1 Blank/2**

GROUP 1208 ABS CONTROL UNIT, FITTINGS, HOSES & TUBING – 0129 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	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

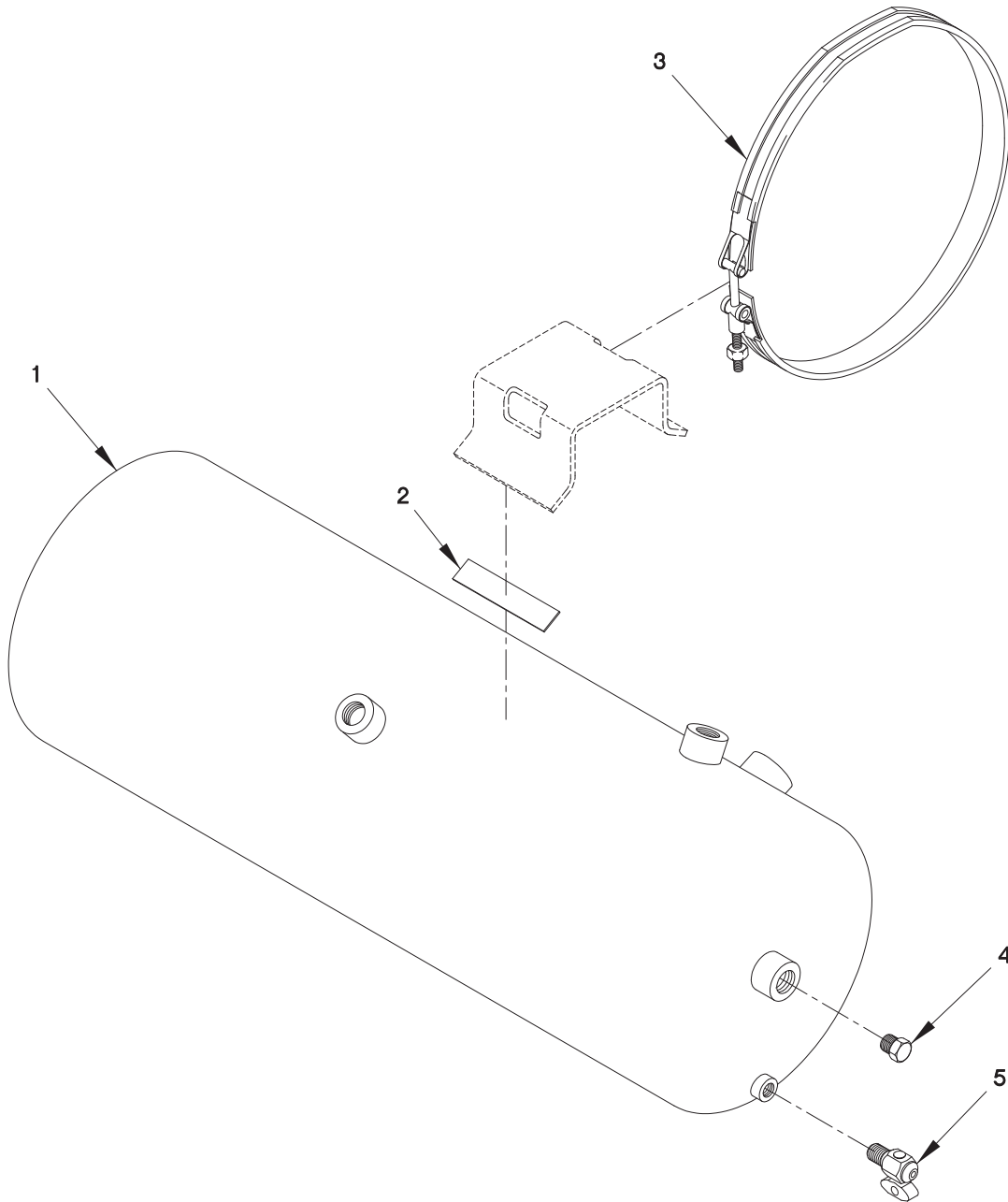


**Figure 17. Group 1208 ABS RELAY MODULATOR VALVE.
0130 00-1 Blank/2**

GROUP 1208 ABS RELAY MODULATOR VALVE – Continued

0130 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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						



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**Figure 18. Group 1208 AIR TANKS, DRAIN VALVE, CLAMPS & FITTINGS.
0131 00-1 Blank/2**

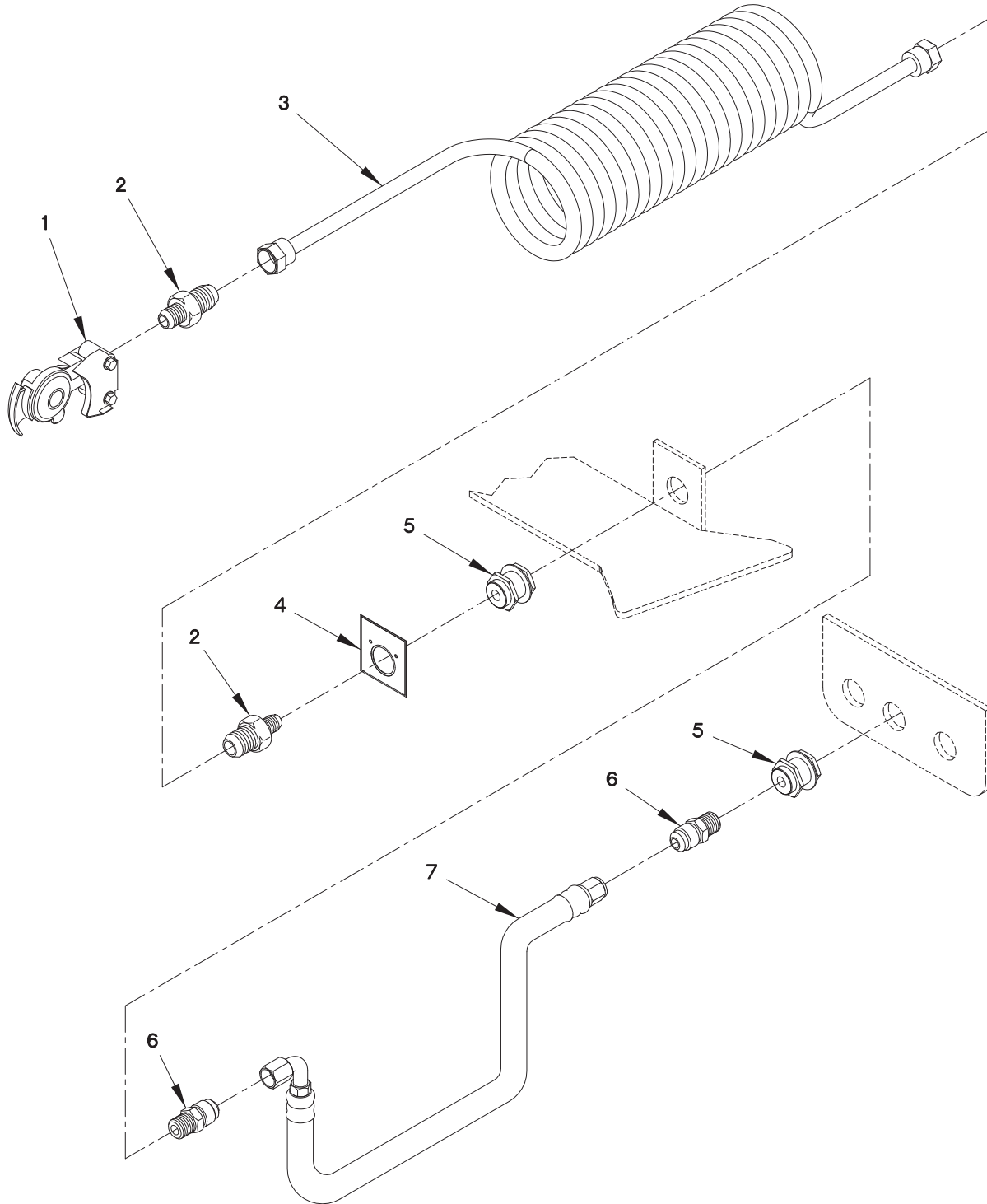
GROUP 1208 AIR TANKS, DRAIN VALVE, CLAMPS & FITTINGS –
Continued

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



1208LT02A

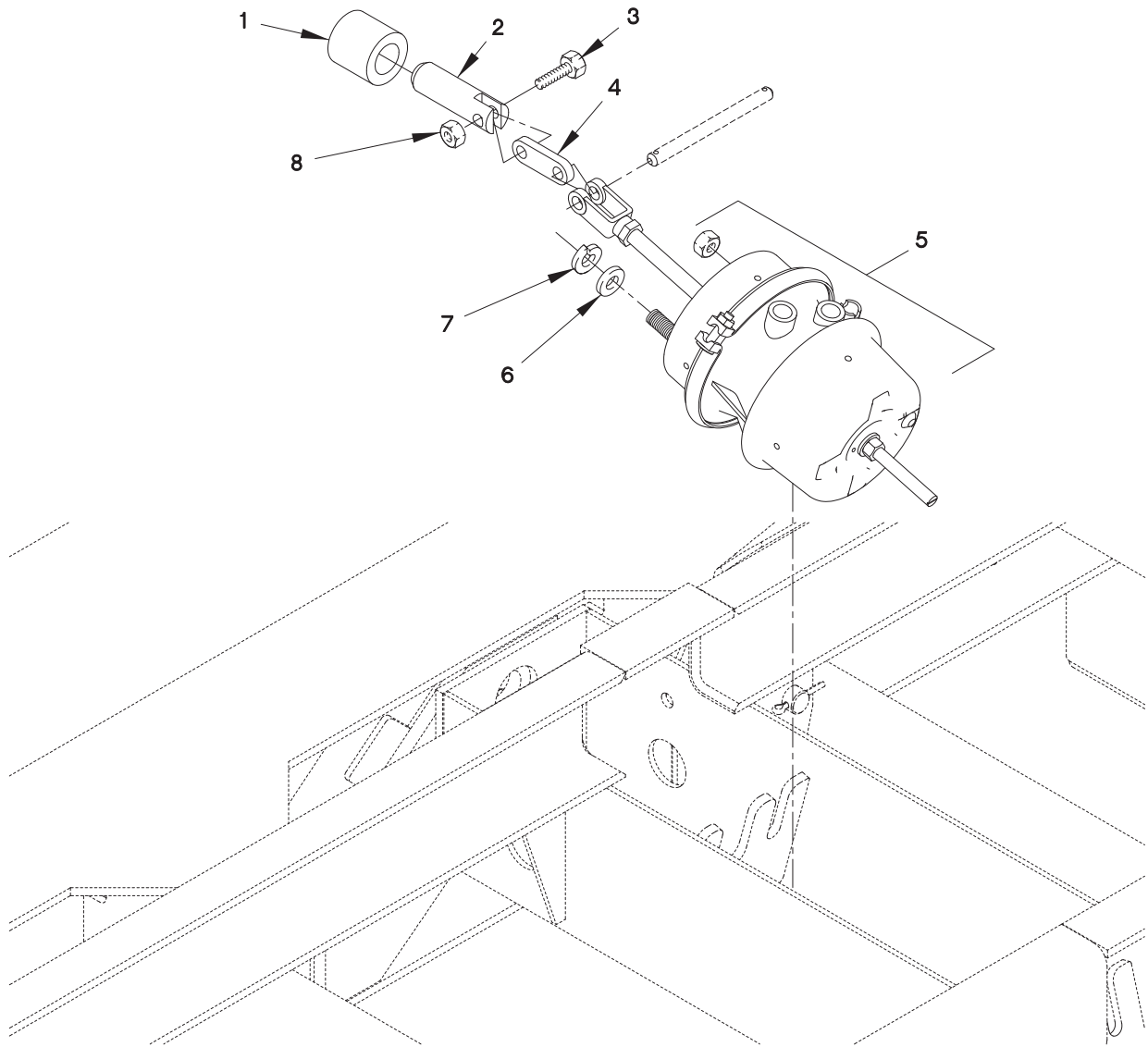
**Figure 19. Group 1208 EMERGENCY/SERVICE GLADHANDS, HOSES & FITTINGS.
0132 00-1 Blank/2**

GROUP 1208 EMERGENCY/SERVICE GLADHANDS, HOSES & FITTINGS – Continued

0132 00

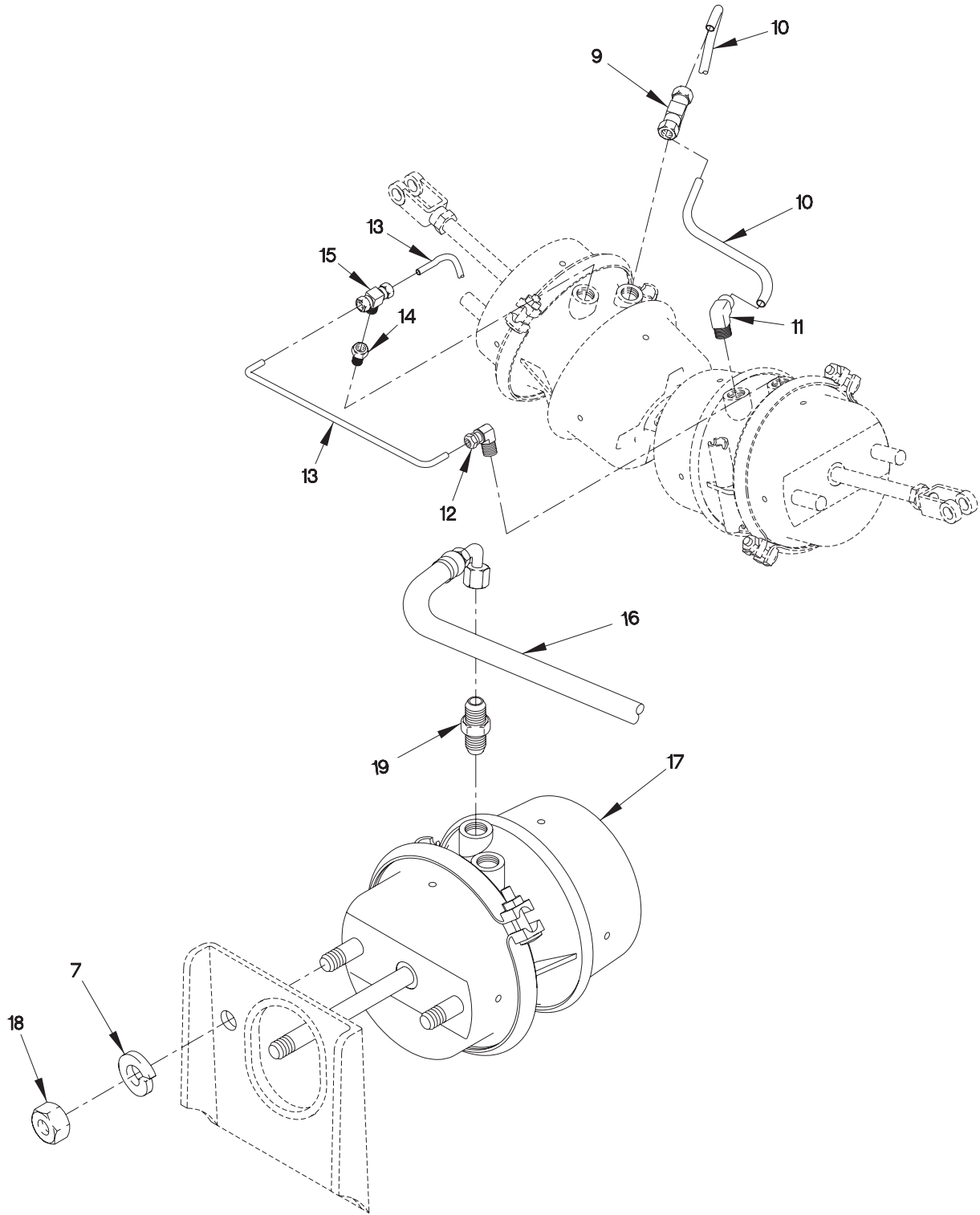
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
1	PAOZZ	3040-01-382-8736	19207	12414667-001	COUPLER,AIR BRAKE EMERGENCY	1
1	PAOZZ	4730-01-384-1441	19207	12414668-001	GLADHAND,SERVICE AS SERVICE	1
2	PAOZZ	4730-01-540-1489	81343	8-6 140137B	BUSHING,PIPE	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



1208LT04A

**Figure 20. Group 1208 AIR CHAMBERS & SPRING BRAKE (Sheet 1 of 2).
0133 00-1**



1208LT04B

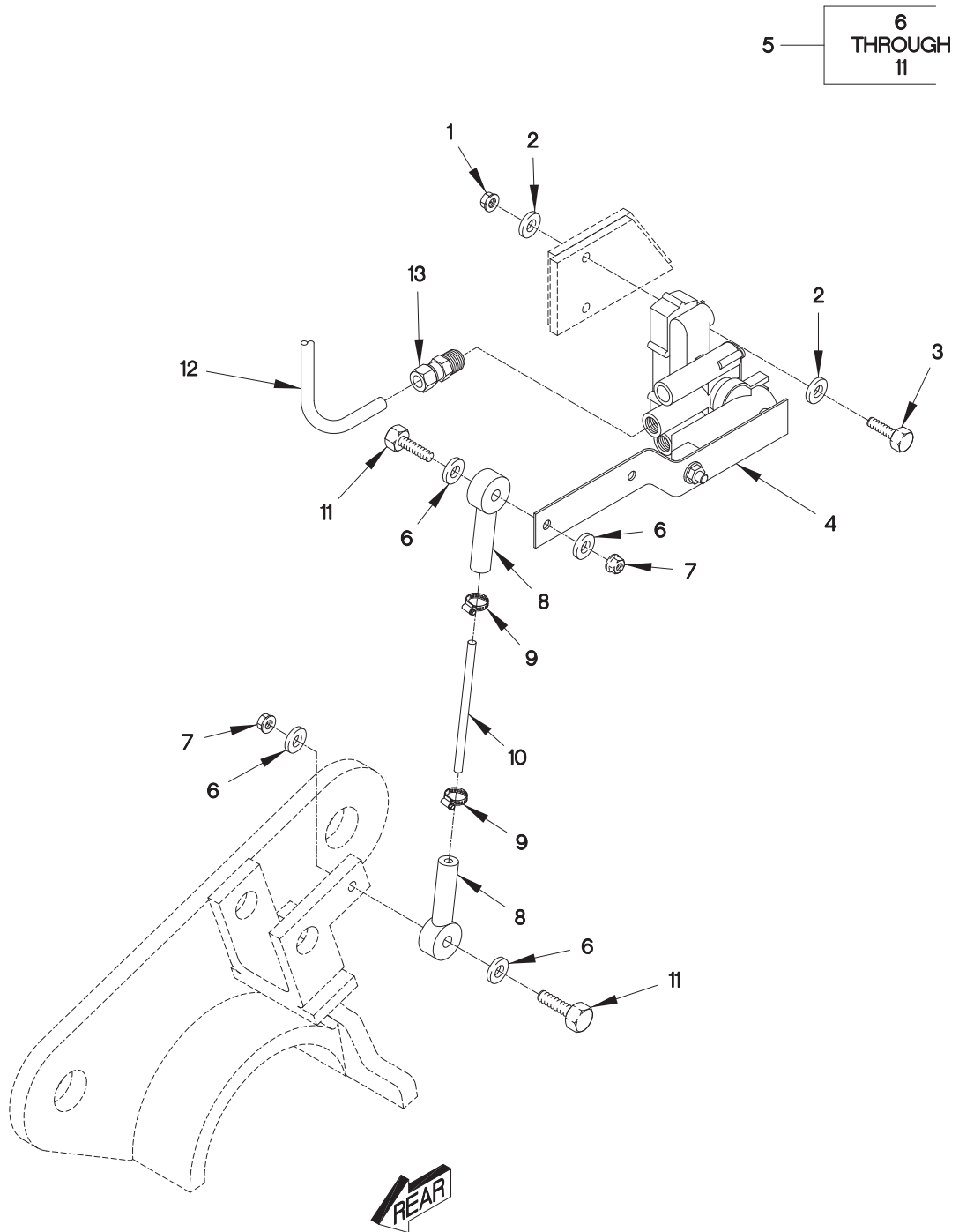
**Figure 20. Group 1208 AIR CHAMBERS & SPRING BRAKE (Sheet 2 of 2).
0133 00-2**

TM 9-2330-334-13&P

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	B1821BH050C20 0N	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						

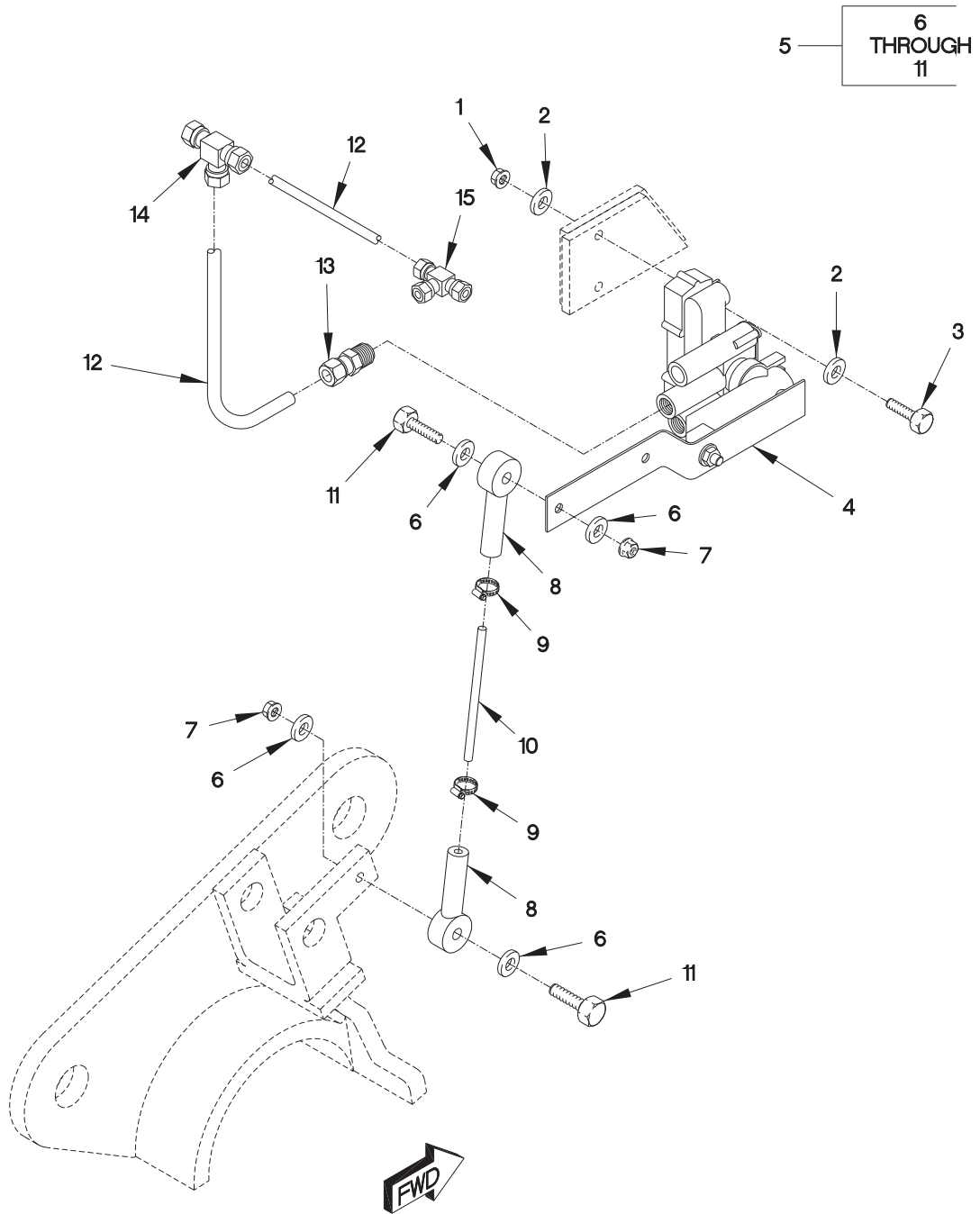


1208LT08A

**Figure 21. Group 1208 HEIGHT CONTROL VALVE, LINKAGE & FITTINGS (Sheet 1 of 2).
0134 00-1**

GROUP 1208 HEIGHT CONTROL VALVE, LINKAGE & FITTINGS –
Continued

0134 00



1208LT08B

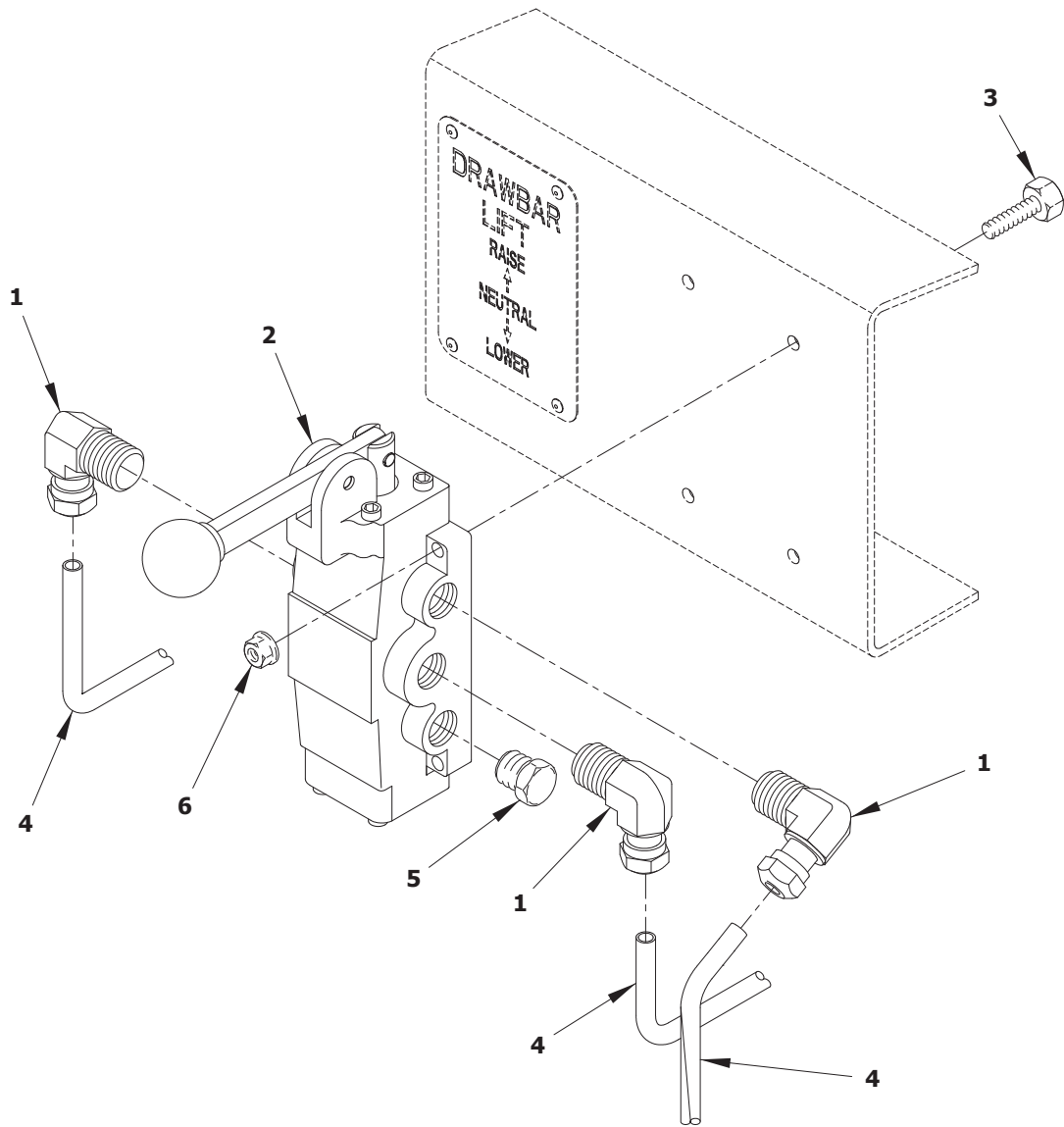
Figure 21. Group 1208 HEIGHT CONTROL VALVE, LINKAGE & FITTINGS (Sheet 2 of 2).
0134 00-2

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



1208LT07A

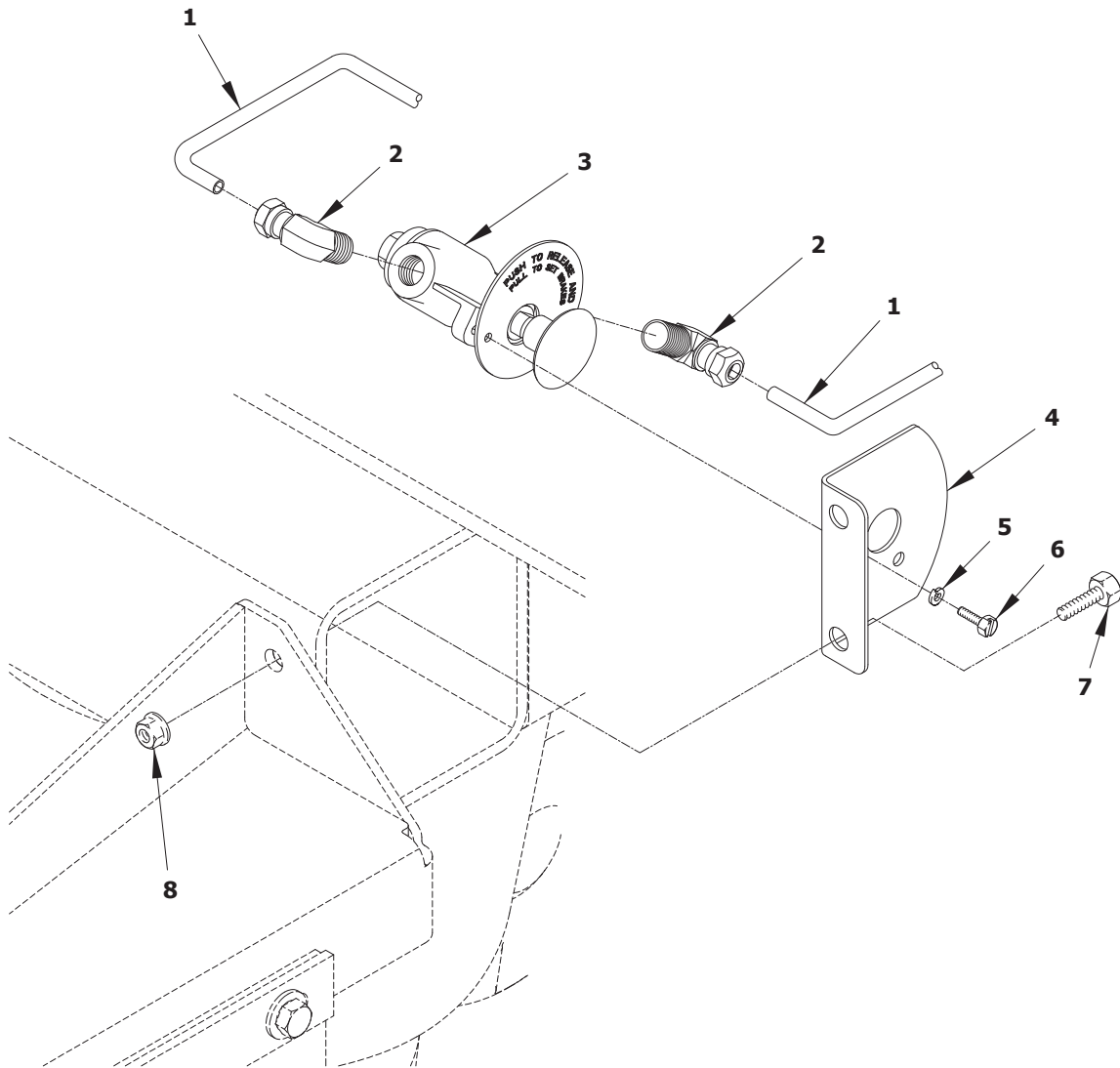
**Figure 22. Group 1208 DRAWBAR LIFT AIR VALVE.
0135 00-1 Blank/2**

TM 9-2330-334-13&P

GROUP 1208 DRAWBAR LIFT AIR VALVE – Continued

0135 00

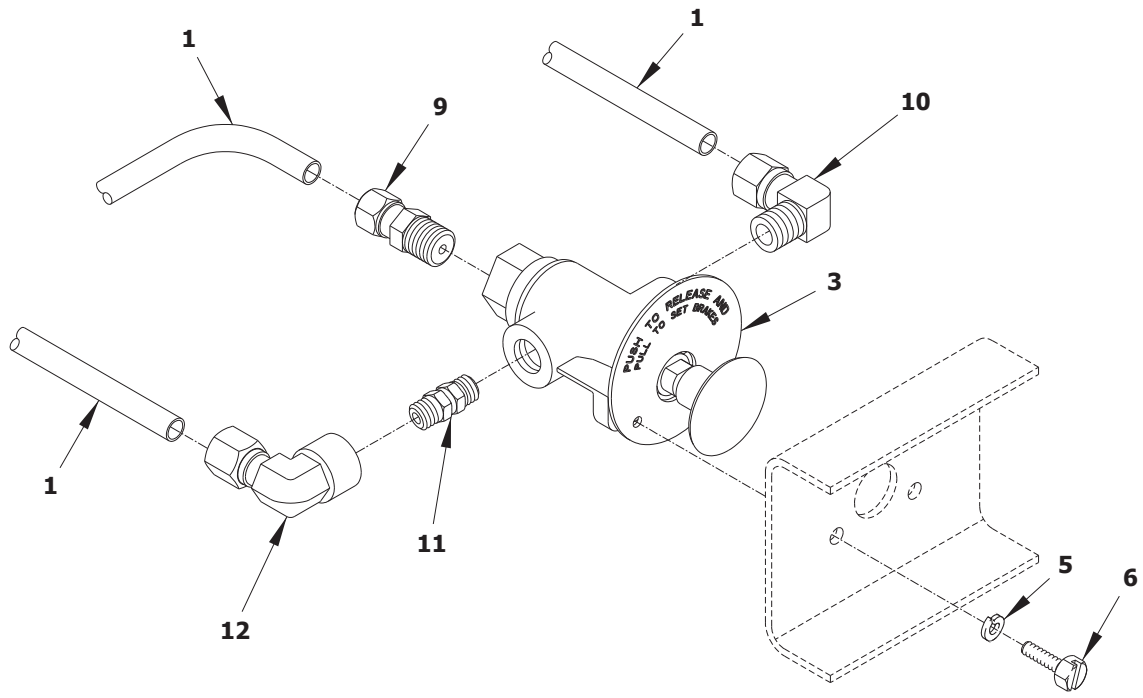
(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NUMBER	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
1	PAOZZ	4730-01-085-6577	81343	4-6 100202BA	ELBOW,PIPE TO TUBE	3
2	PAOOO	2510-01-540-1337	19207	12486447	AIR VALVE	1
3	PAOZZ	5305-00-984-6214	80205	MS35206-267	SCREW HEX 10-24 X 1	4
4	MOOZZ		0FW39	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						



1208LT09A

**Figure 23. Group 1208 PUSH/PULL VALVES, TUBING & FITTINGS (Sheet 1 of 2).
0136 00-1**

GROUP 1208 PUSH/PULL VALVES, TUBING & FITTINGS – Continued 0136 00



1208LT09B

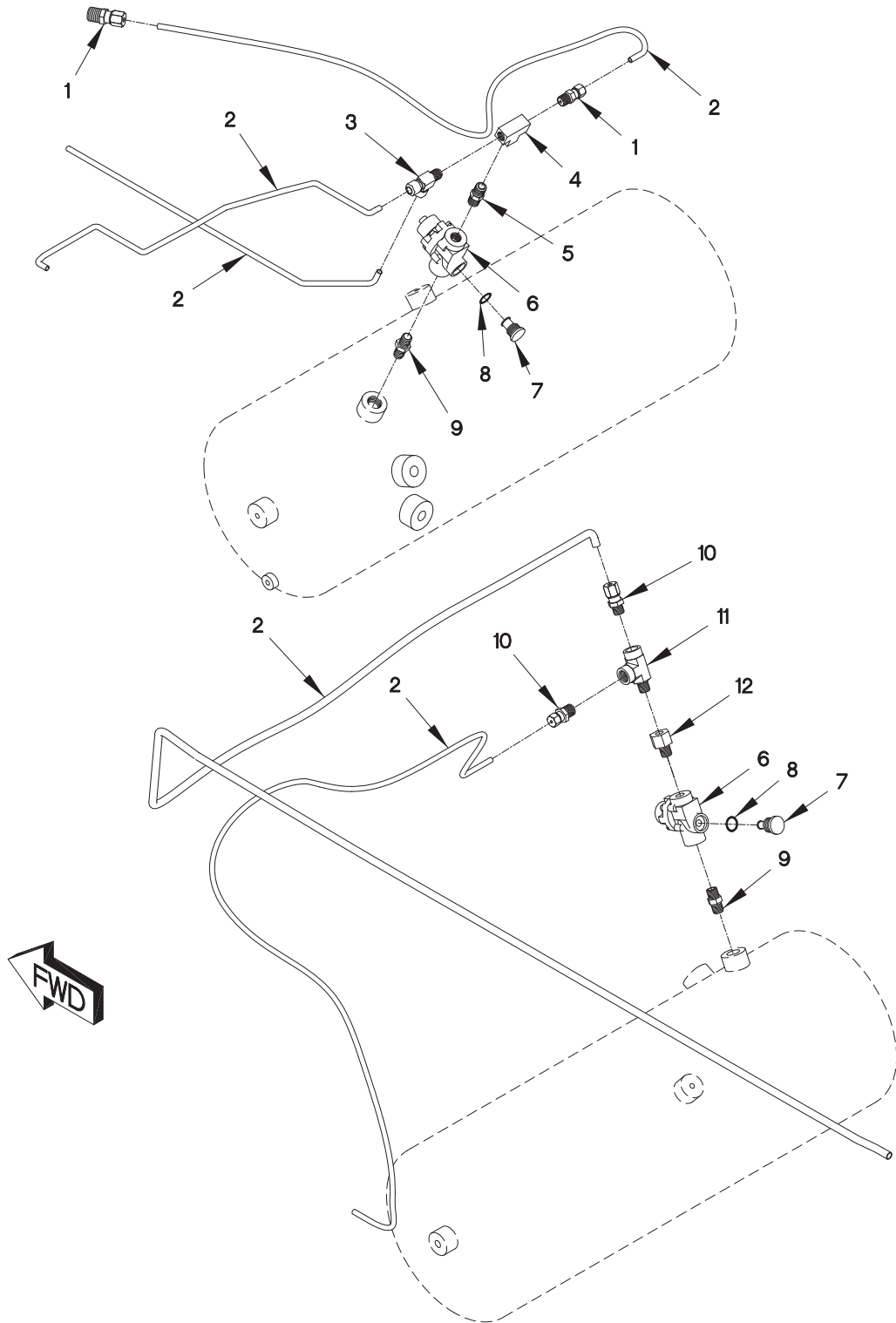
**Figure 23. Group 1208 PUSH/PULL VALVES, TUBING & FITTINGS (Sheet 2 of 2).
0136 00-2**

TM 9-2330-334-13&P

GROUP 1208 PUSH/PULL VALVES, TUBING & FITTINGS – Continued 0136 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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



1208LT11A

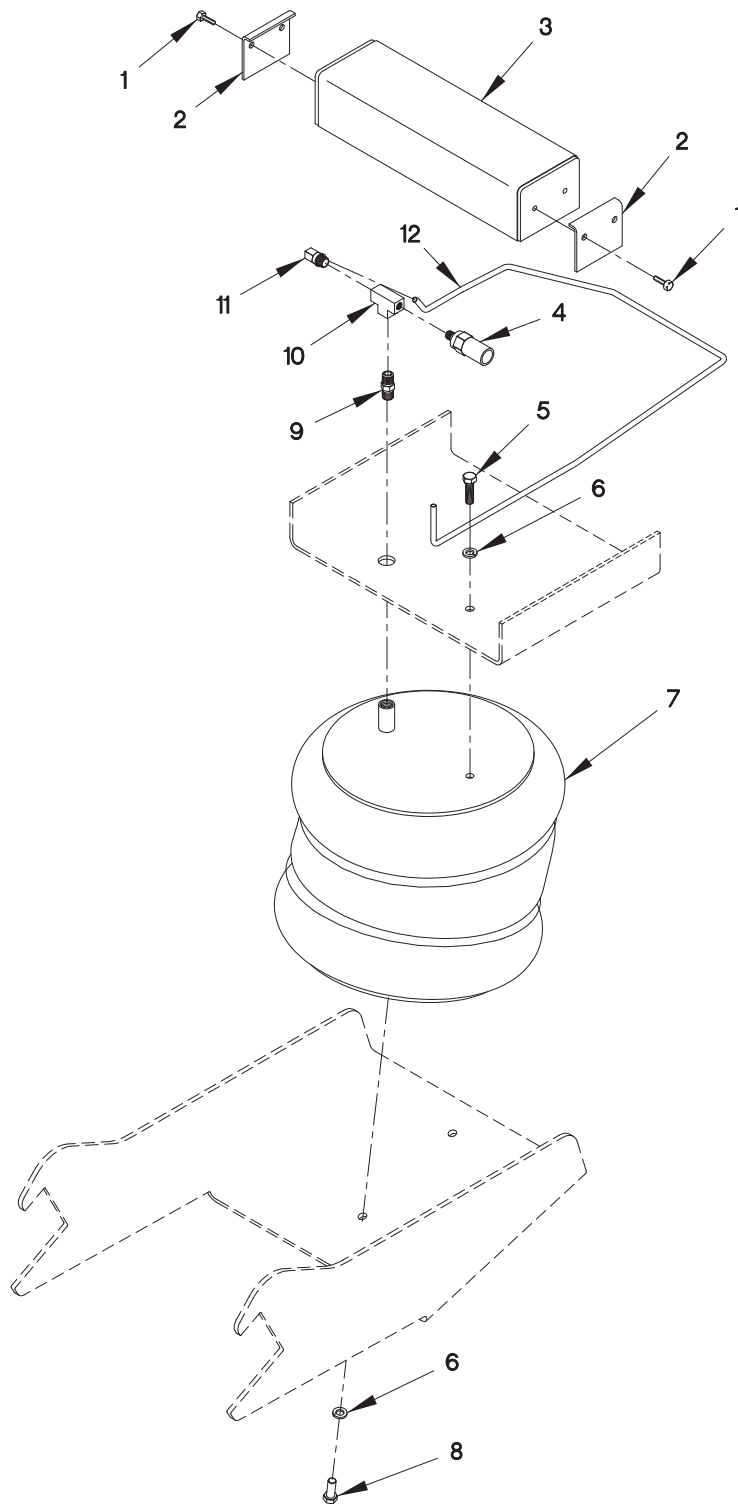
**Figure 24. Group 1208 BRAKE PROTECTION VALVE TUBES & FITTINGS.
0137 00-1 Blank/2**

GROUP 1208 BRAKE PROTECTION VALVE TUVES & FITTINGS - 0137 00
Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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	.O-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



1208LT13A

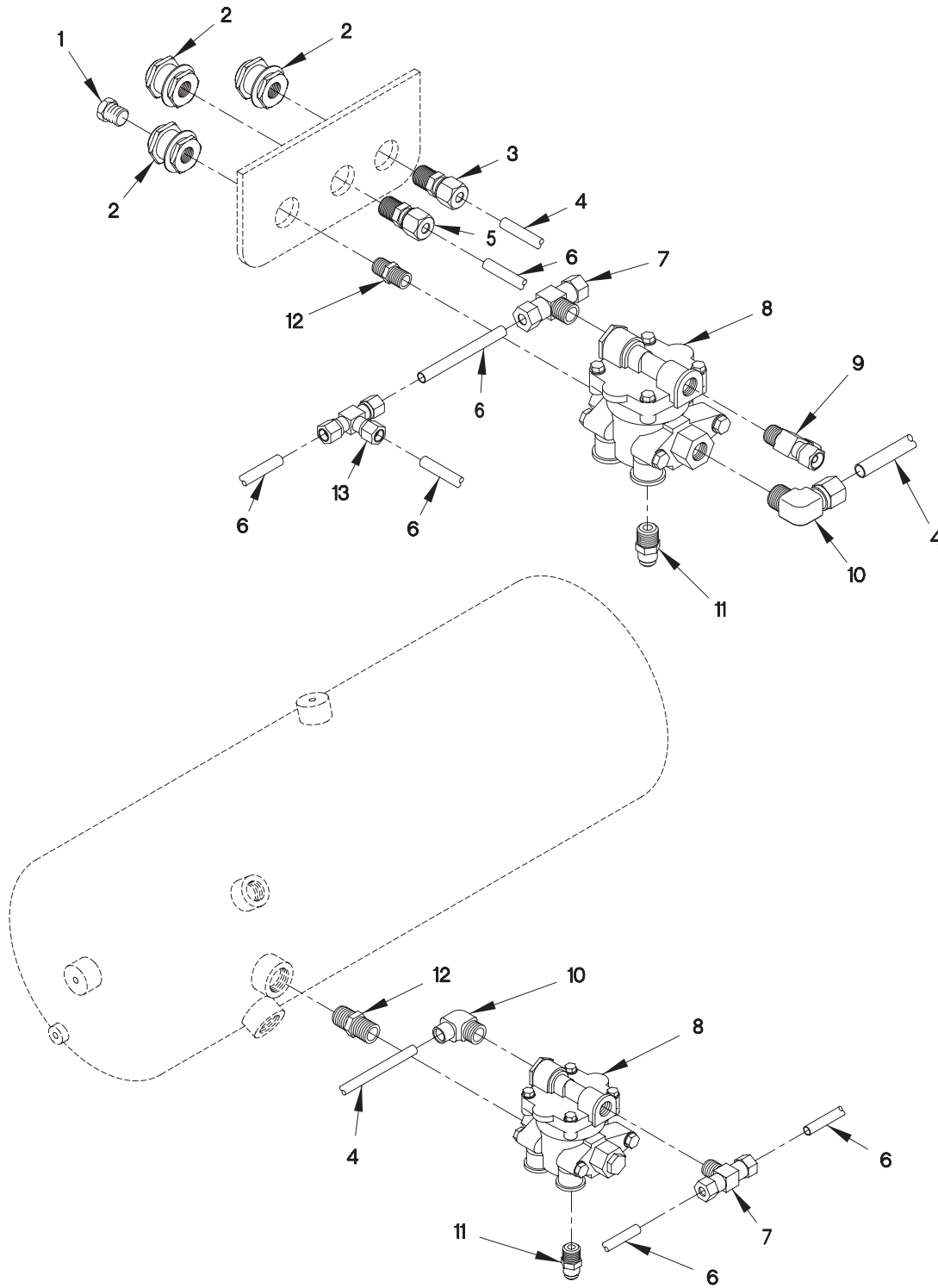
**Figure 25. Group 1208 AIR SPRING, PRESSURE-RELIEF VALVE, TUBES & FITTINGS.
0138 00-1 Blank/2**

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



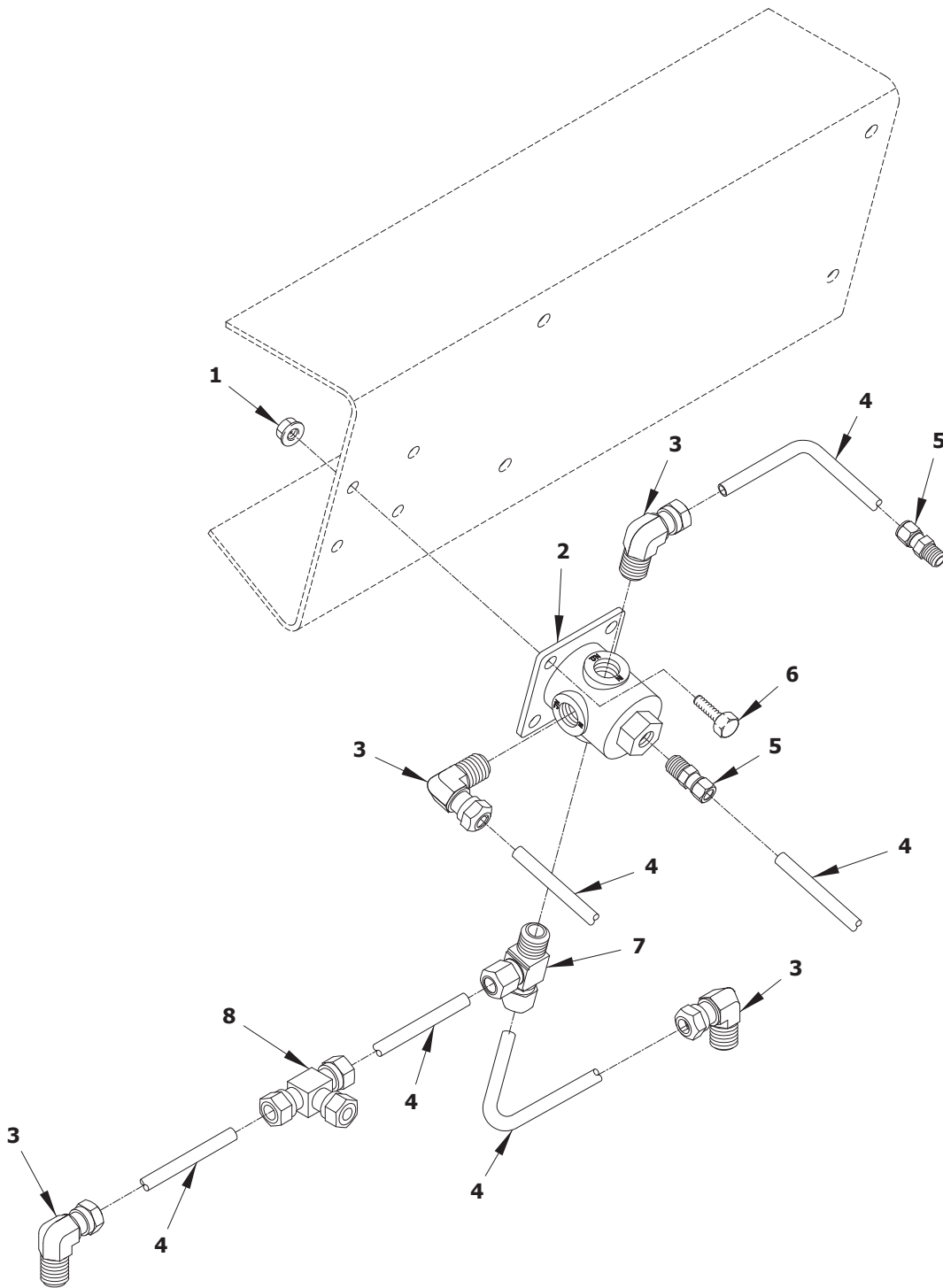
1208LT12A

**Figure 26. Group 1208 TASK VALVE, TUBES & FITTINGS.
0139 00-1 Blank/2**

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						



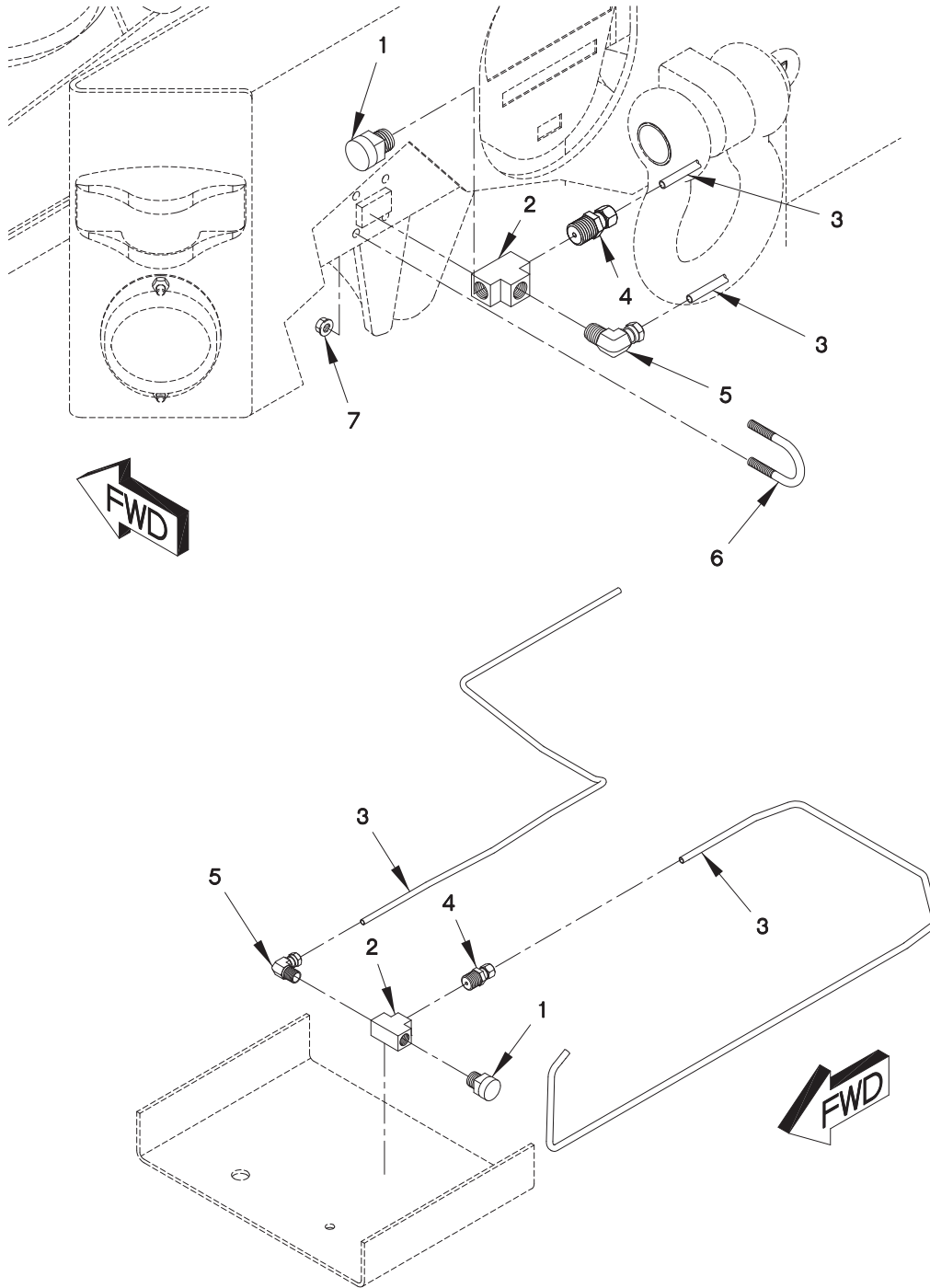
1208LT10A

**Figure 27. Group 1208 AIR RIDE CONTROL VALVE, TUBES & FITTINGS.
0140 00-1 Blank/2**

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						

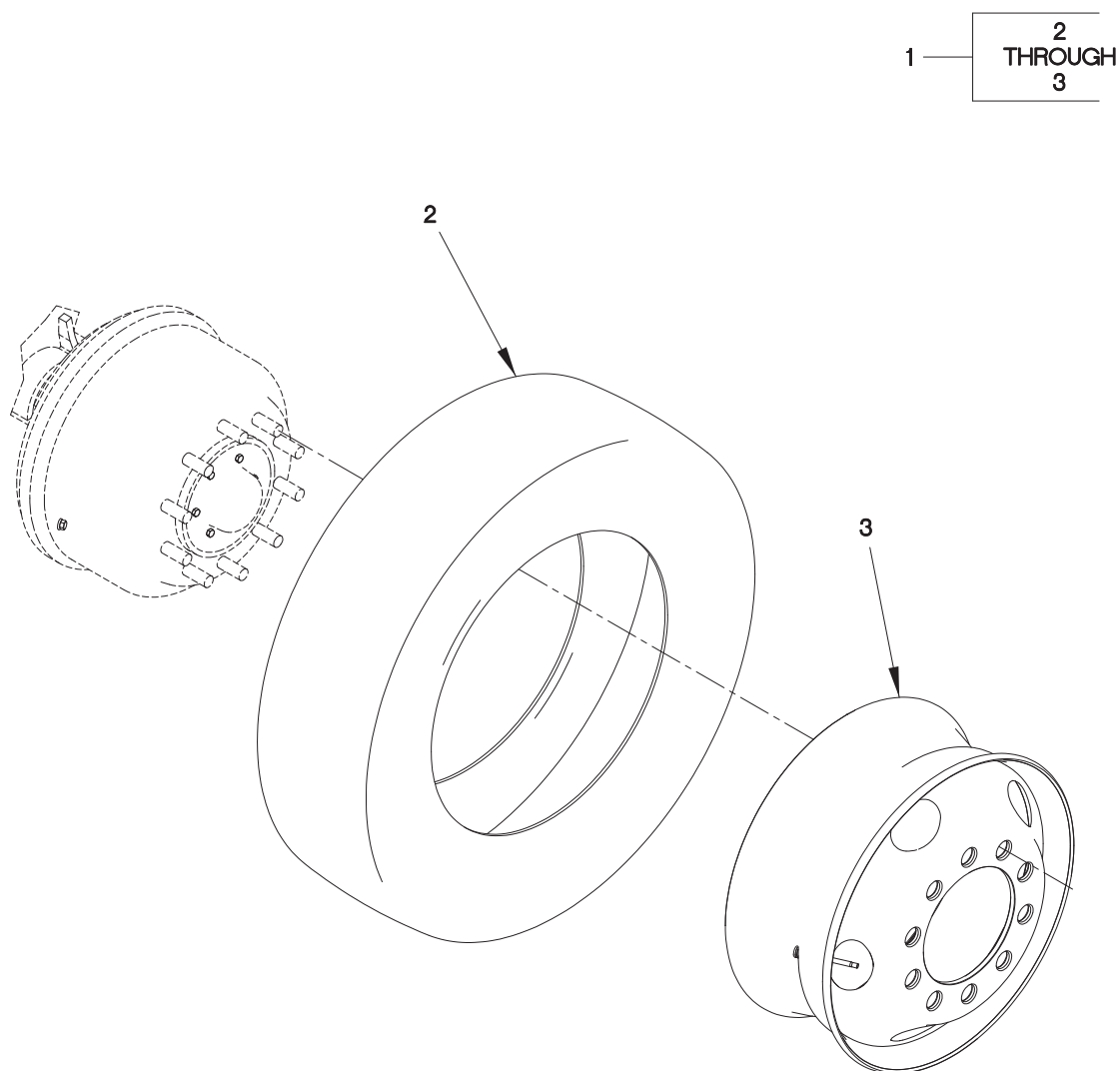


**Figure 28. Group 1208 BREATHER VALVES, TUBES & FITTINGS.
0141 00-1 Blank/2**

TM 9-2330-334-13&P

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						



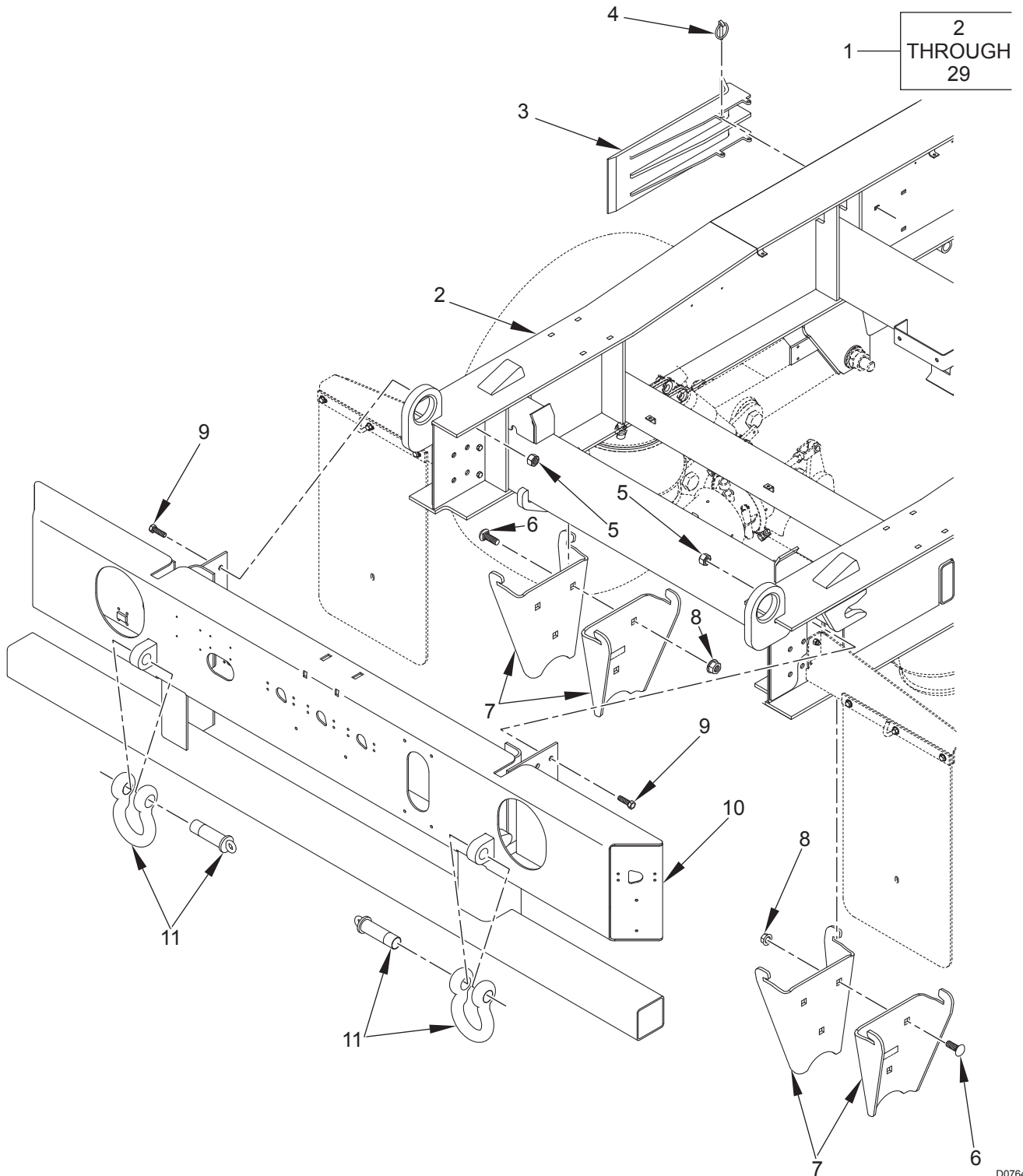
**Figure 29. Group 1311 TIRE & WHEEL ASSEMBLY.
0142 00-1 Blank/2**

TM 9-2330-334-13&P

GROUP 1311 TIRE & WHEEL ASSEMBLY – Continued

0142 00

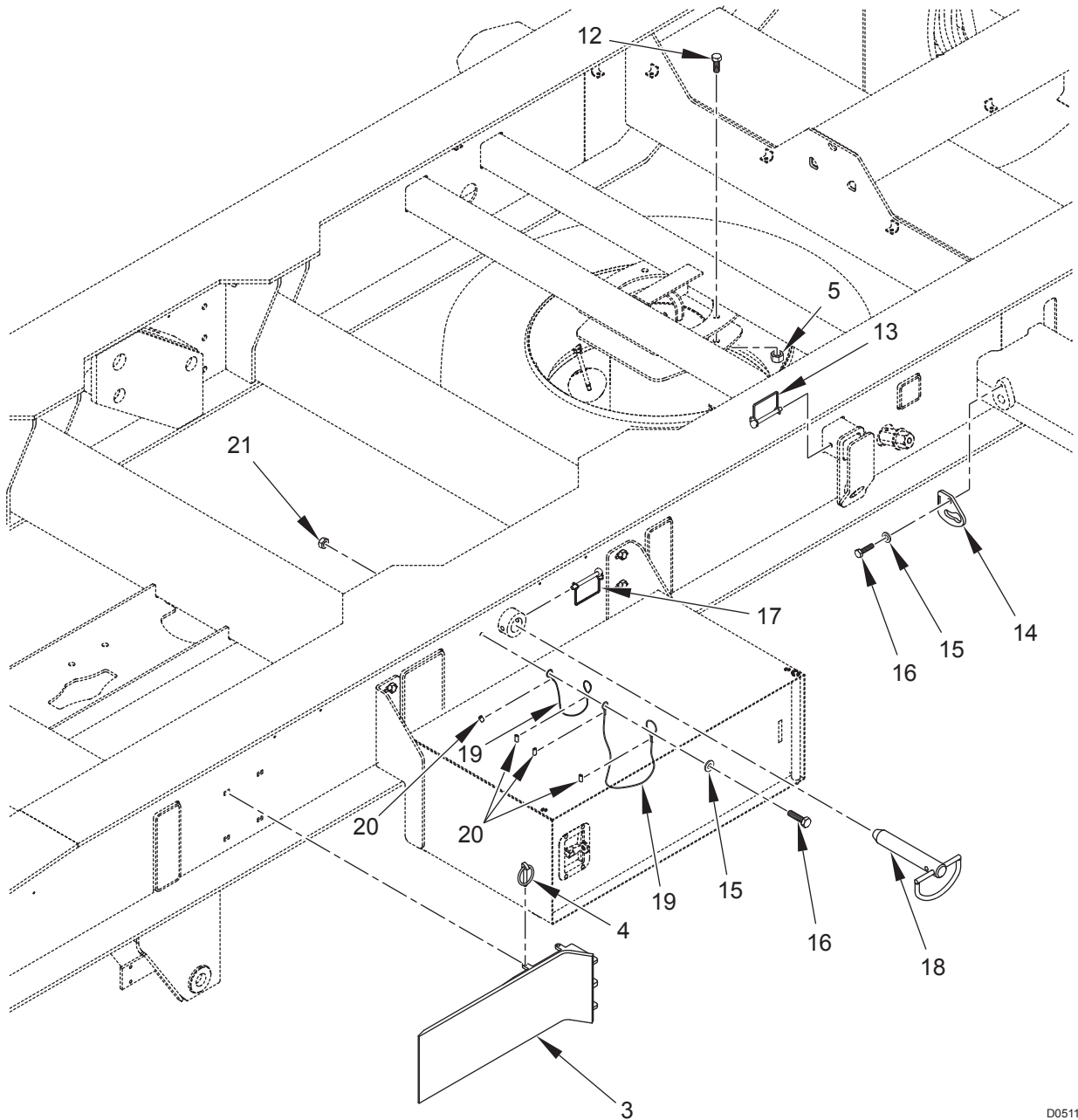
(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
1	PAOOO		19207	12486322	TIRE,ON-OFF HIGHWAY	5
2	PCFZZ	2610-01-518-5292	12195	42407	.TIRE OFF-ROAD	1
3	PAOZZ		19207	12486616	.WHEEL OFF-ROAD	5
END OF FIGURE						



D07647

**Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 1 of 4).
0143 00-1**

Change 1

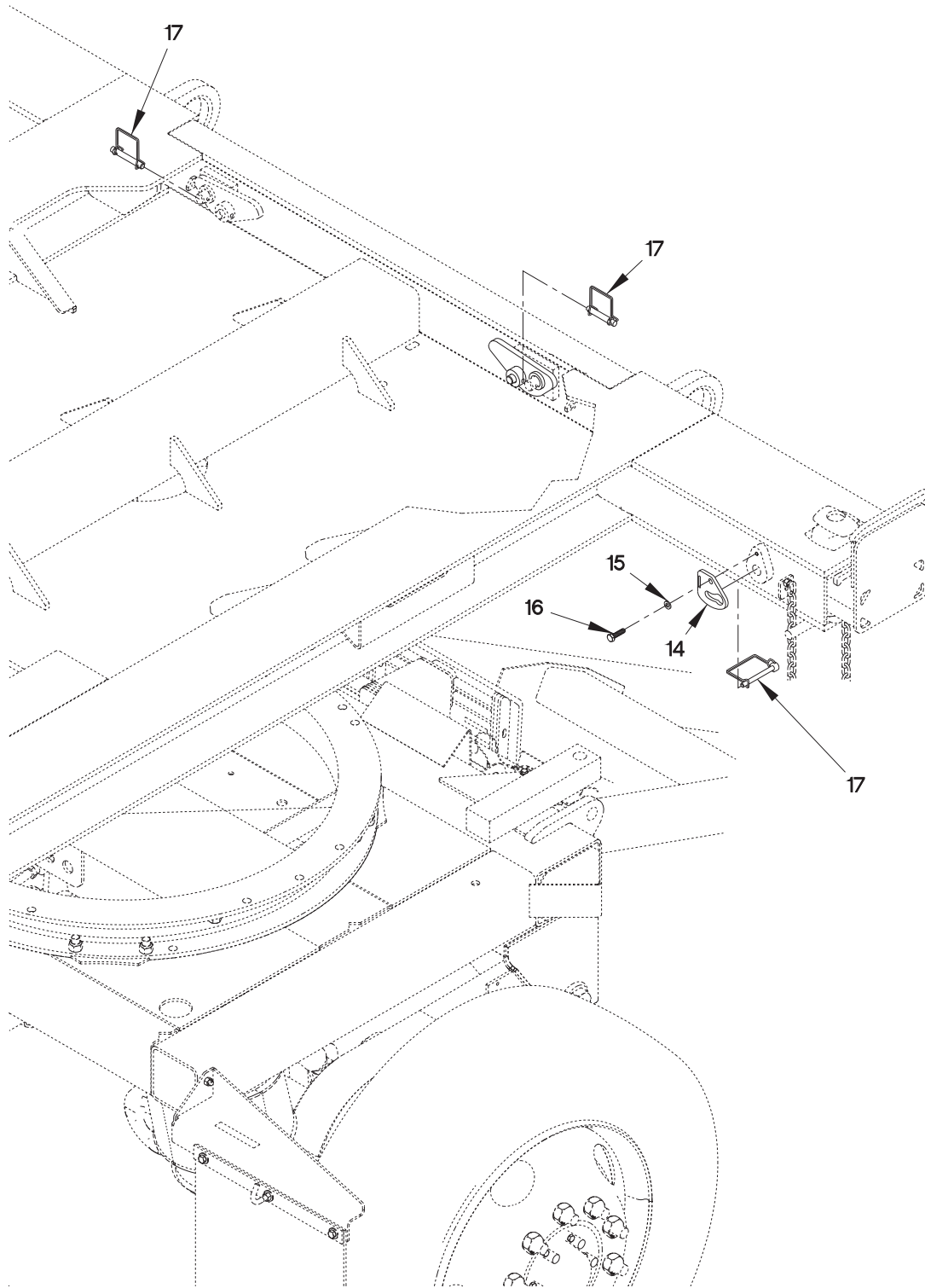


D05116

Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 2 of 4).

Change 1

0143 00-2

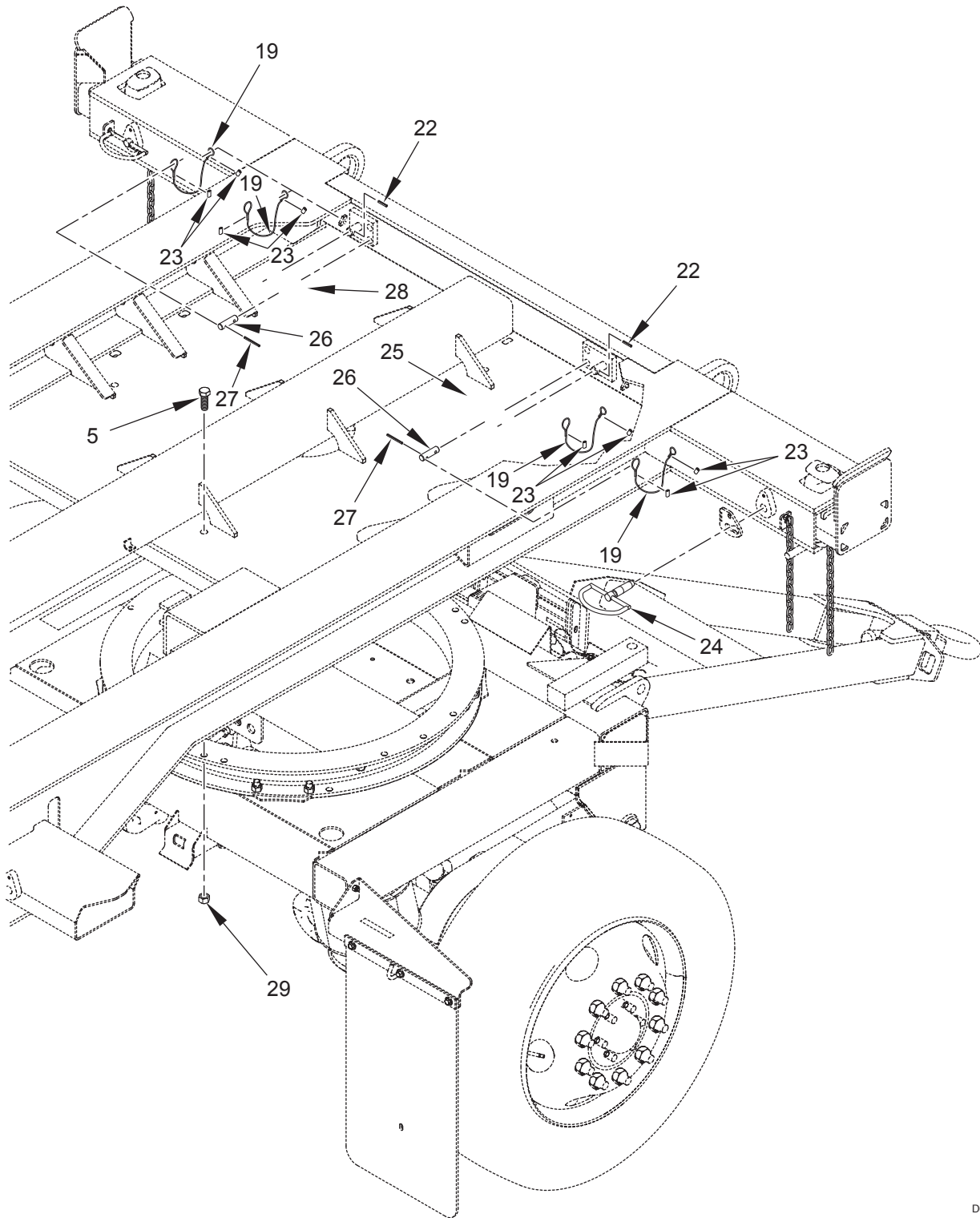


1501LT09C

Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 3 of 4).

0143 00-3

Change 1



D05117

Figure 30. Group 1501 CHASSIS & REAR PANEL ASSEMBLY (Sheet 4 of 4).

Change 1

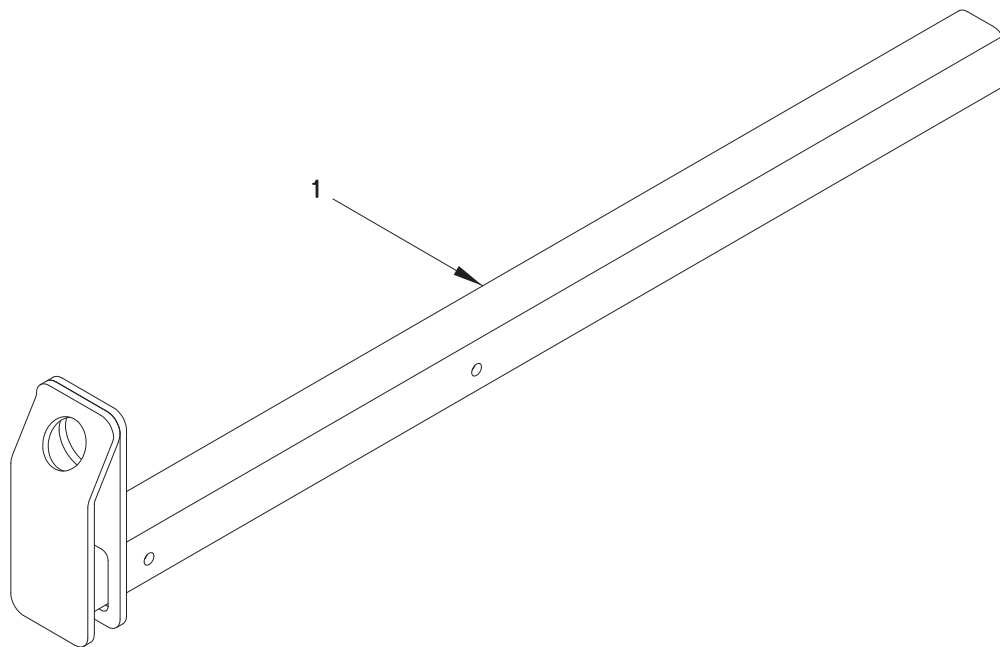
0143 00-4

GROUP 1501 CHASSIS & REAR PANEL ASSEMBLY – Continued

0143 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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	4
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	6
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	MOOZZ	4010-00-451-3533	81349	M83420/4-002	.ROPE,WIRE MAKE FROM PN M83420/4-002 (81349) CUT TO LENGTH	1
20	PAOZZ	4030-00-145-5721	96906	MS51844-63	.SWAGING SLEEVE,W	16
21	PAOZZ	5310-00-088-1251	81349	M45913/1- 4CG5C	.NUT,SELF-LOCKING,HE	2
22	PAOZZ		0FW39	1-647- 010004217	ROLL PIN,1/4 X 1.5	2
23	PAOZZ	4030-01-088-2952	96906	MS51844-62	.SWAGING SLEEVE,WIRE	8
24	PAOZZ	5315-01-539-8499	19207	12486720	.PIN ASSEMBLY,FRONT	2
25	PAOZZ		19207	12486435-002	.GUIDE PLATE,CROP RH	1
26	PAOZZ		19207	12486437	.PIN,LOCK,CROP GUIDE	2
27	PAOZZ		0FW39	118650	.PIN,ROLL,1/4 X 2.5 SLTD	2
28	PAOZZ		19207	12486435-001	.GUIDE PLATE,CROP LH	1
29	PAOZZ		81349	M45913/1- 10CG5C	.NUT,SELF-LOCKING HE	8

END OF FIGURE



1501LT01A

**Figure 31. Group 1501 OUTRIGGER.
0144 00-1 Blank/2**

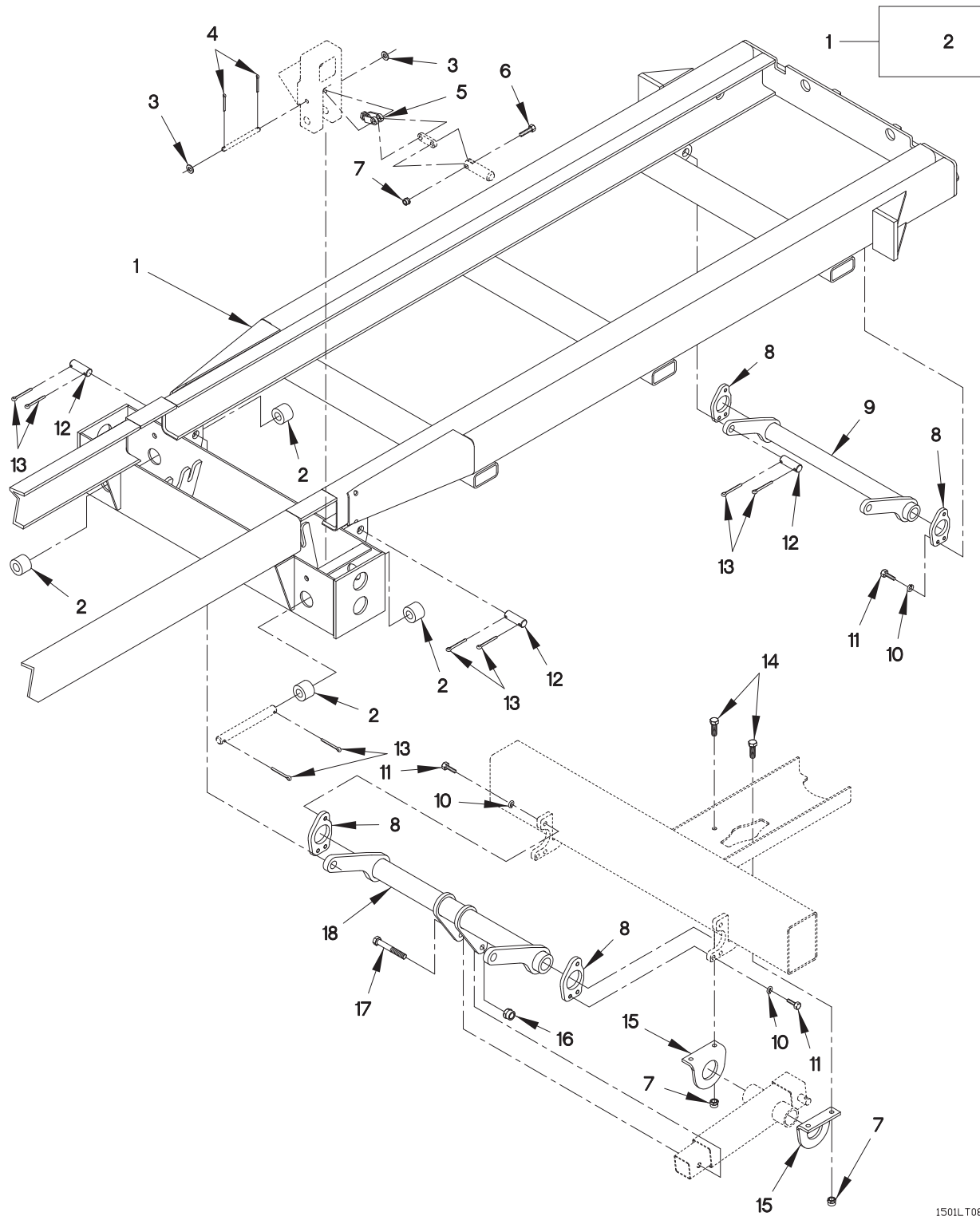
GROUP 1501 OUTRIGGER – Continued

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						

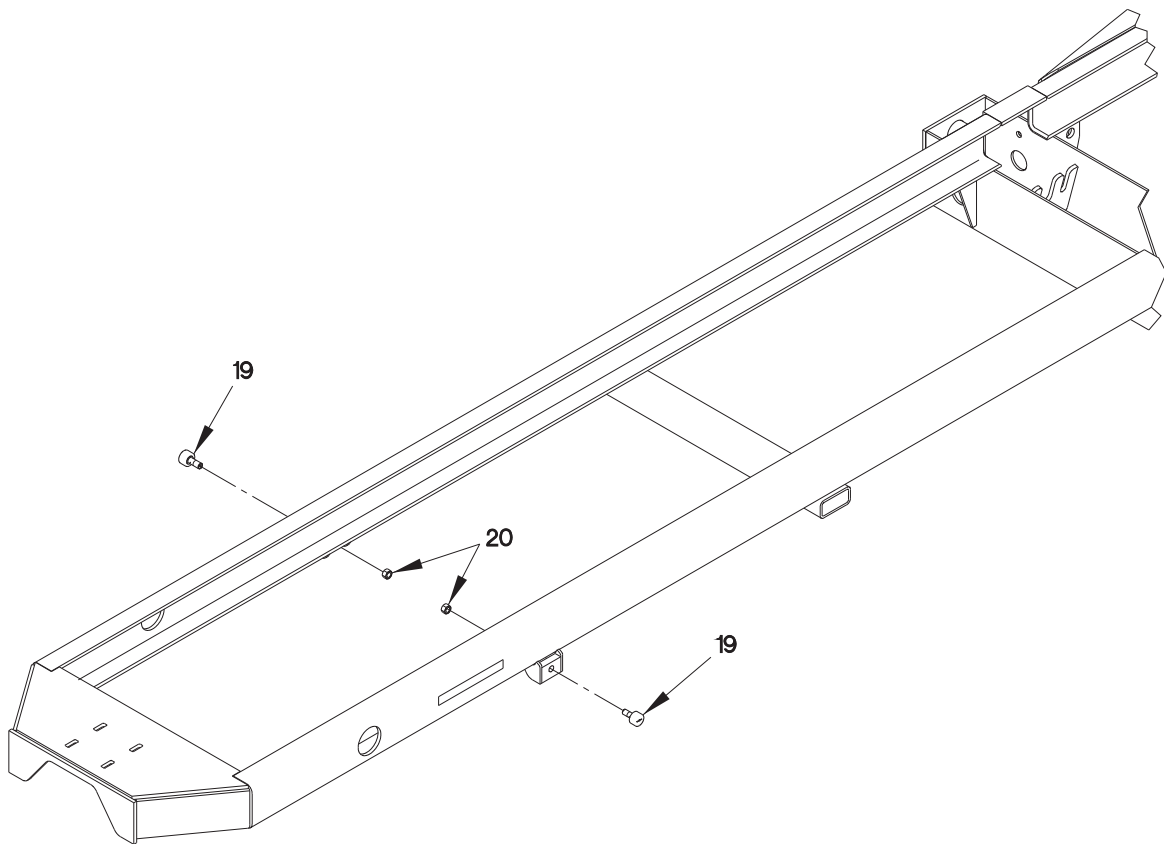
GROUP 1501 FLATRACK RAIL ASSEMBLY & BRACKETS

0145 00



1501LT08A

**Figure 32. Group 1501 FLATRACK RAIL ASSEMBLY & BRACKETS (Sheet 1 of 2).
0145 00-1**

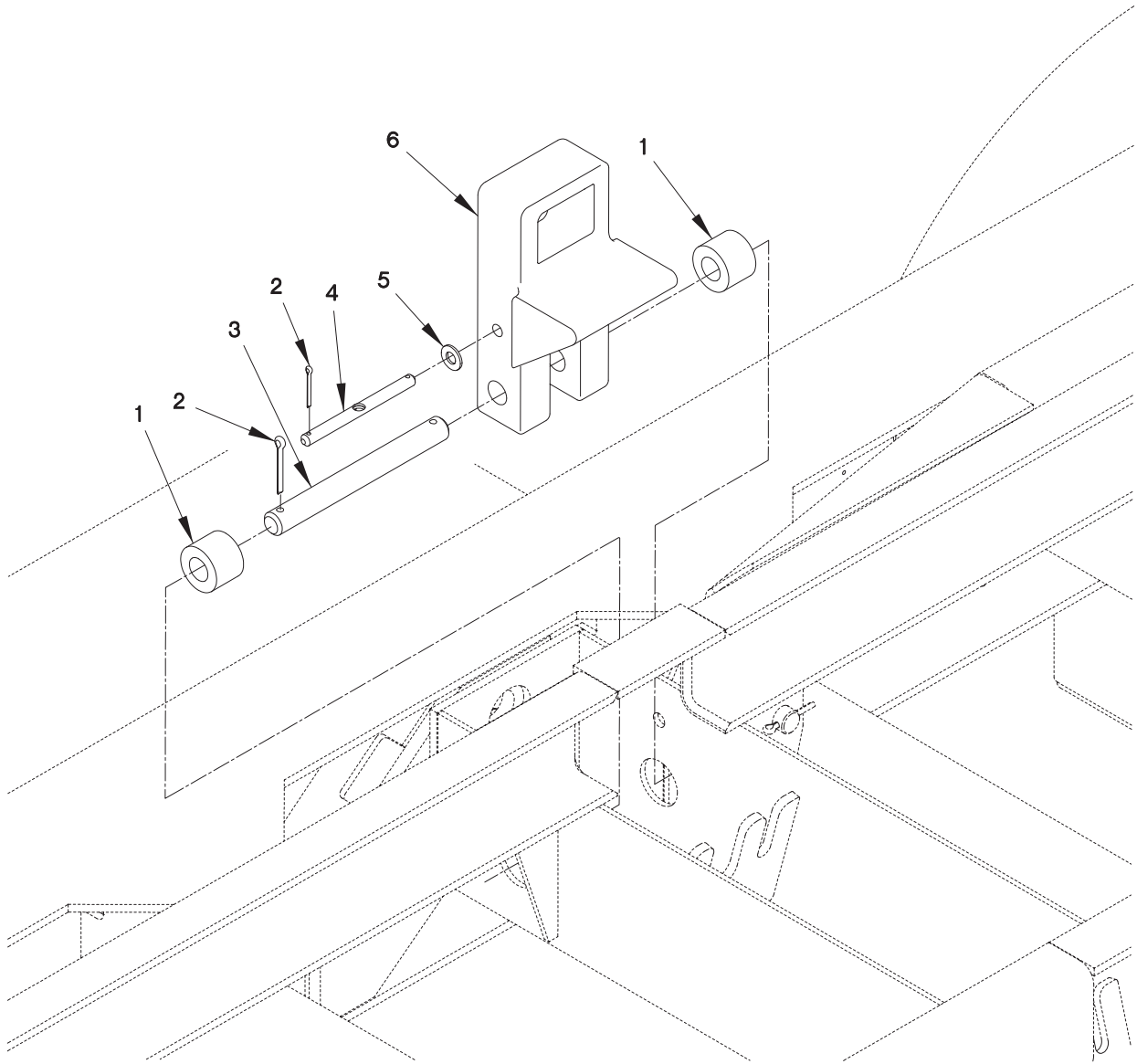


1501LT08B

**Figure 32. Group 1501 FLATRACK RAIL ASSEMBLY & BRACKETS (Sheet 2 of 2).
0145 00-2**

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	B1821BH050C20 0N	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	B1821BH050C12 5N	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	B1821BH050C15 0N	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	B1821BH063C50 0N	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						



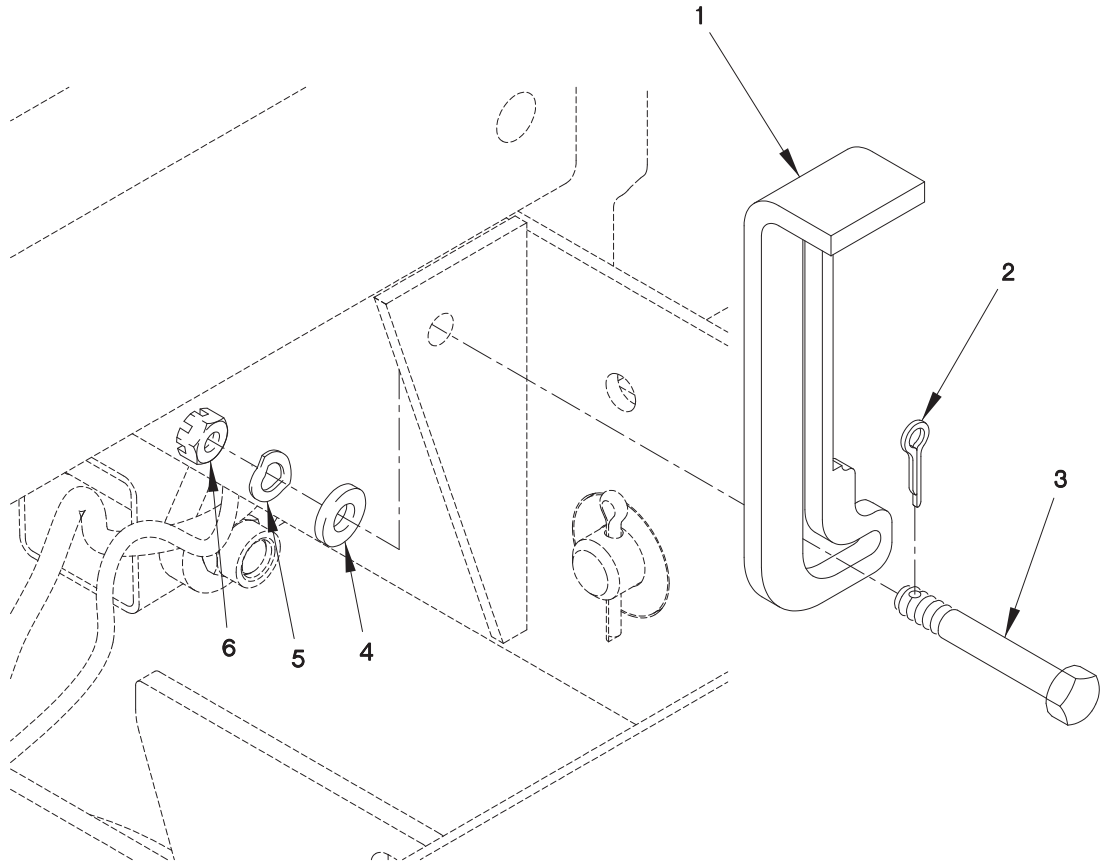
1501LT10A

**Figure 33. Group 1501 FLAT RACK LOCK.
0146 00-1 Blank/2**

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						



1501LT05A

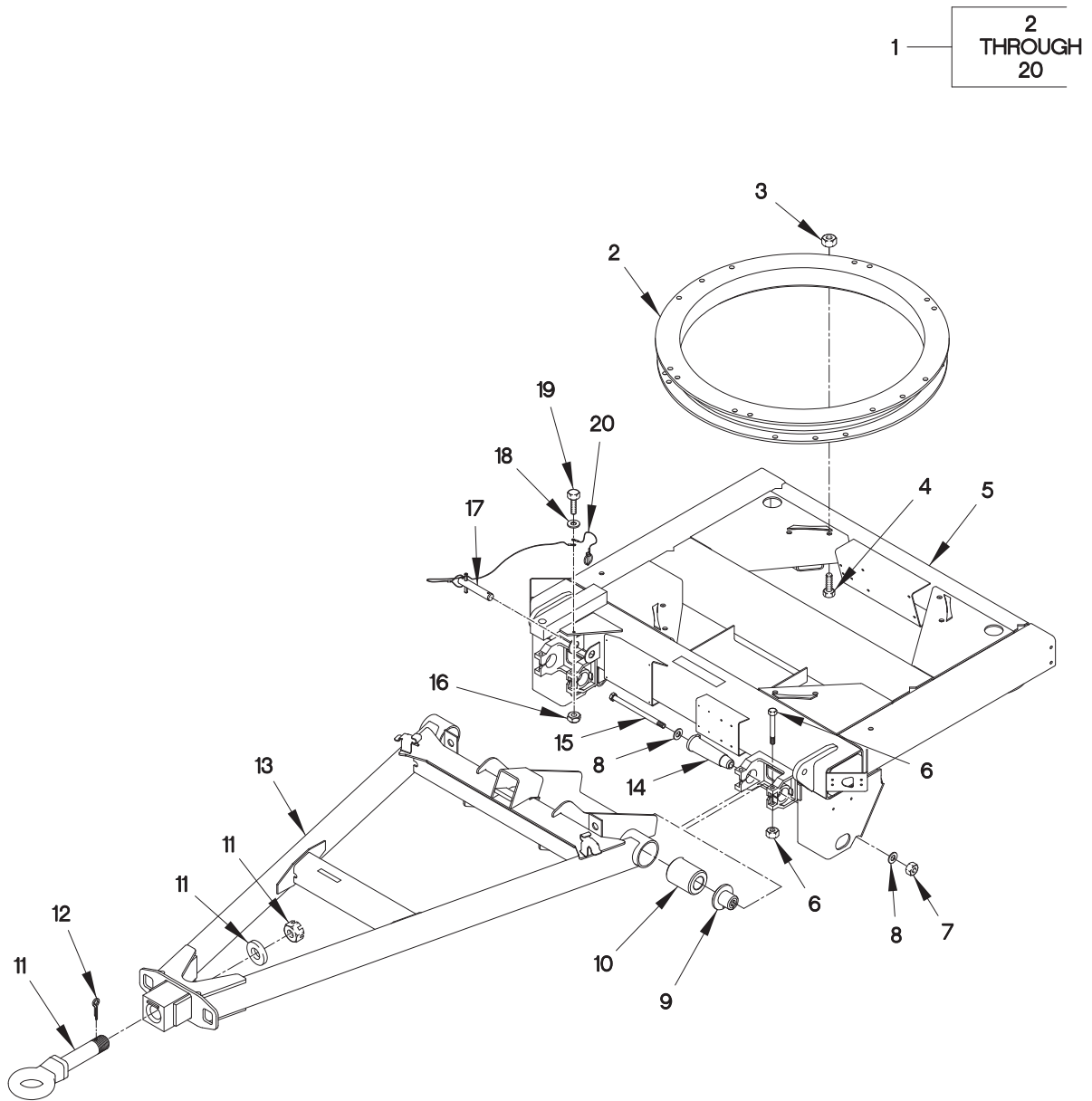
**Figure 34. Group 1501 FLAT RACK LOCK & RETAINER.
0147 00-1 Blank/2**

TM 9-2330-334-13&P

GROUP 1501 FLAT RACK LOCK & RETAINER – Continued

0147 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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		2
				NN436 BNQA1	WASHER,FLAT	
5	PAOZZ	5310-01-312-1057	81349	M12133/2-505	WASHER,SPRING TENS	2
6	PAOZZ		5047	N220N05FAMNN		2
				5630 2BCH1	NUT,HEX	
END OF FIGURE						



1501LT06A

**Figure 35. Group 1501 TURNTABLE & DRAWBAR ASSEMBLY.
0148 00-1 Blank/2**

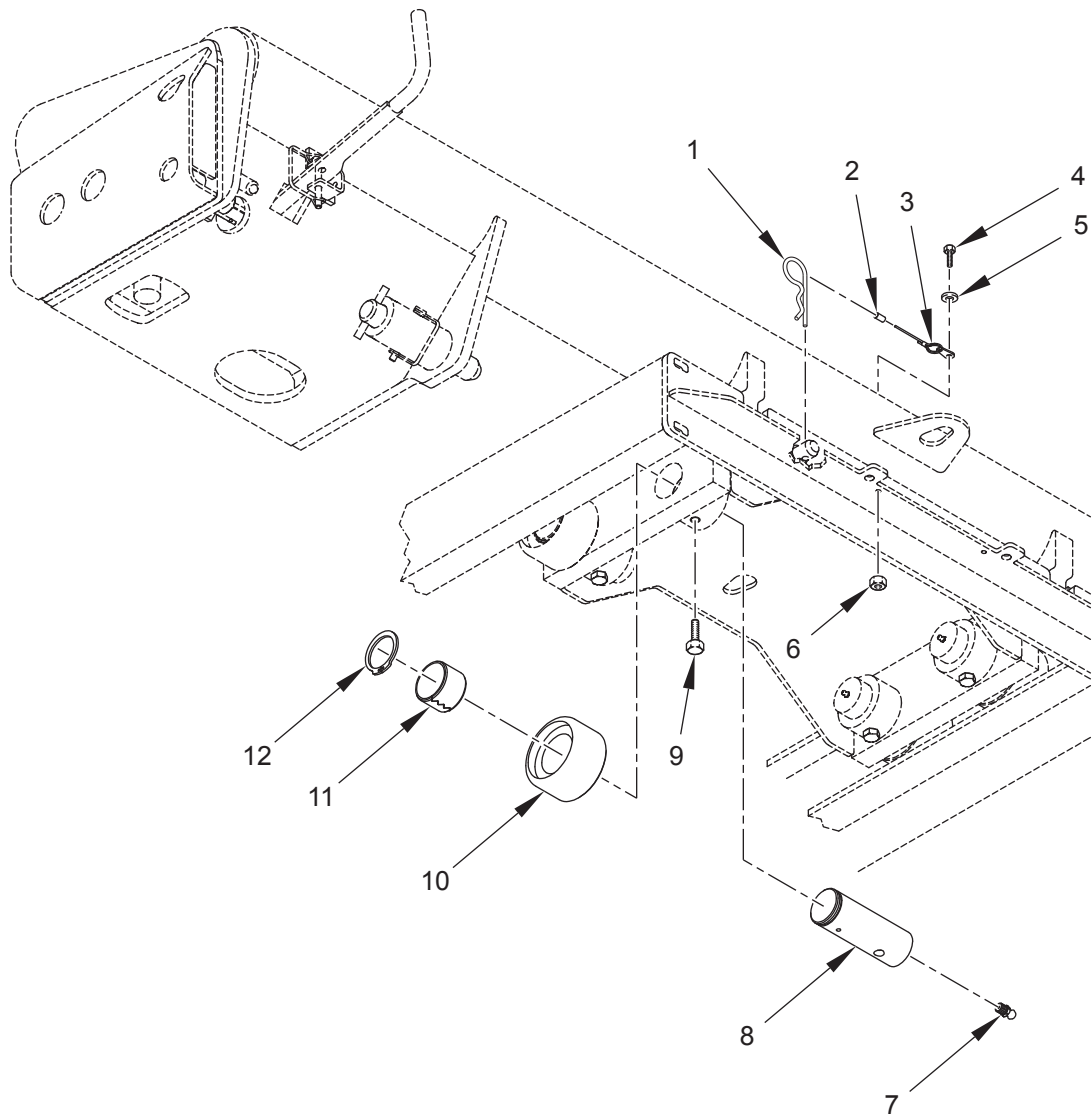
Change 1

GROUP 1501 TURNTABLE & DRAWBAR ASSEMBLY – Continued

0148 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
1	XCOOO		19207	12486589	TURNTABLE ASSEMBLY	1
2	PAOZZ		19207	DK90/12P-02.6 415.24.00	.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



D05102

**Figure 36. Group 1501 SHUTTLE GUIDE & BRACKET (Sheet 1 of 2).
0149 00-1**

Change 1

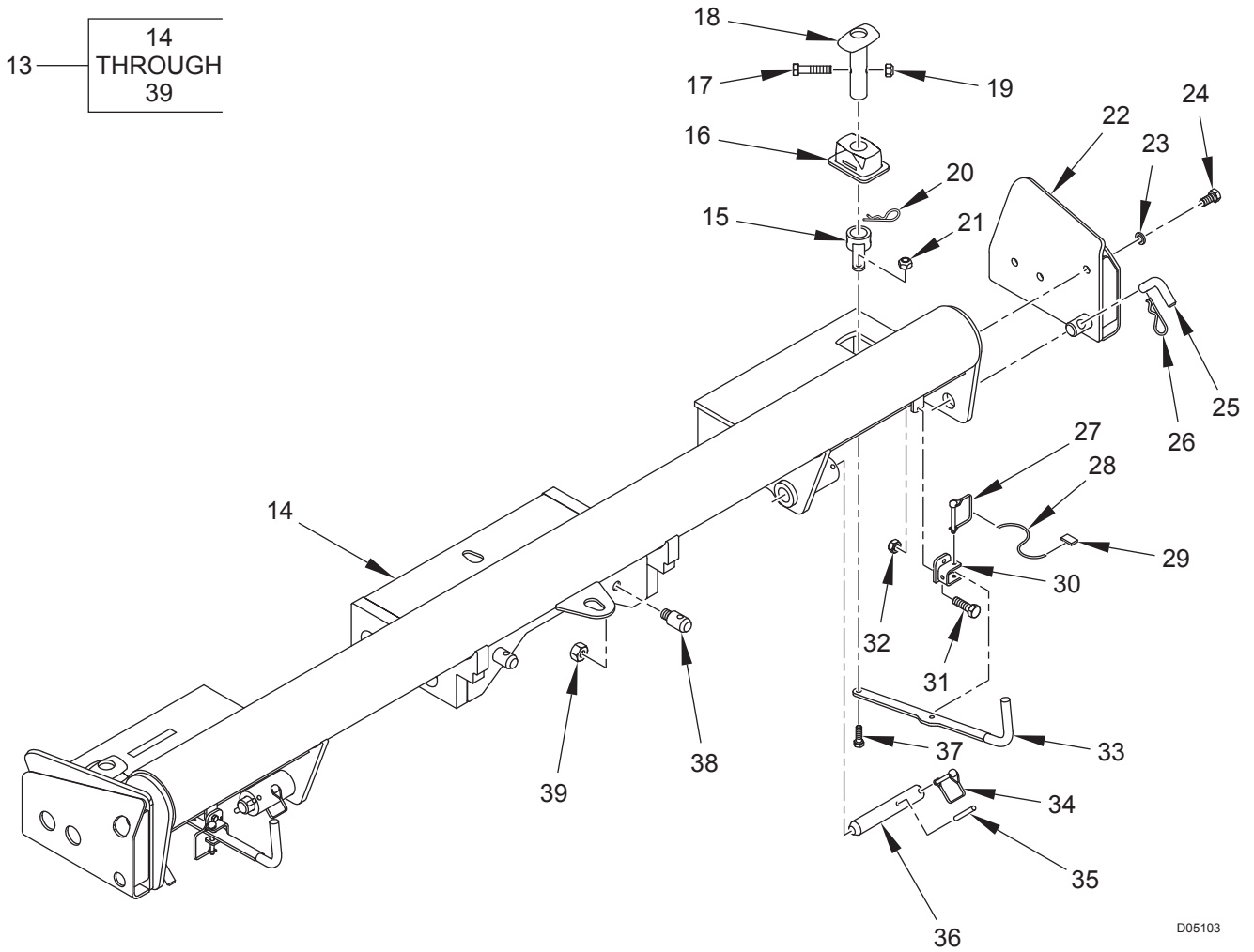


Figure 36. Group 1501 SHUTTLE GUIDE & BRACKET (Sheet 2 of 2).
0149 00-2

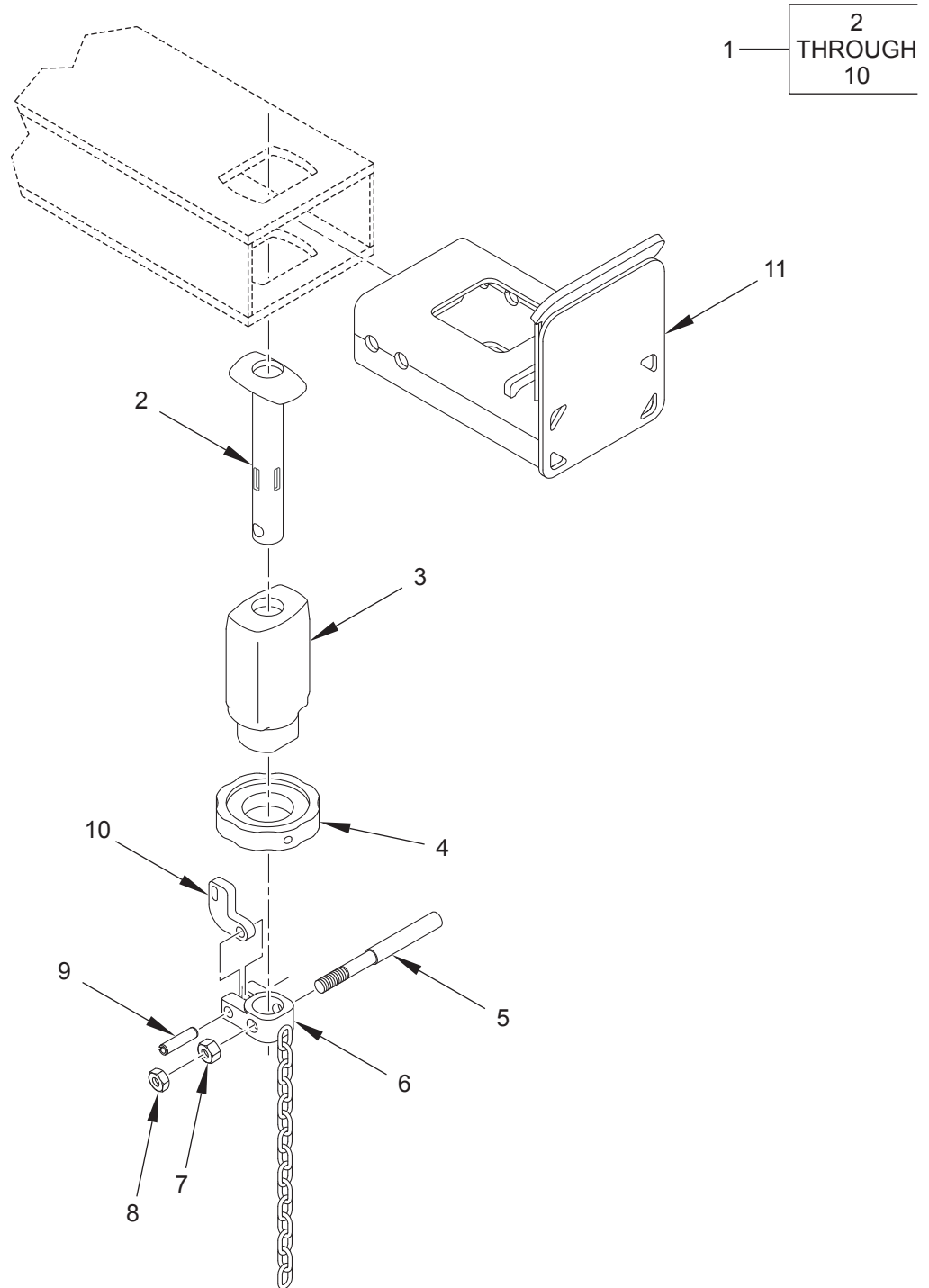
Change 1

GROUP 1501 SHUTTLE GUIDE & BRACKET – Continued

0149 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	QTY
1	PAOZZ		19207	12485420-014	PIN,HAIRPIN	2
2	PAOZZ	4030-01-142-0456	96906	MS51844-63	SWAGING SLEEVE,WIRE	4
3	MOOZZ	4010-00-451-3533	81349	M83420/4-002	ROPE,WIRE MAKE FROM M83420/4-002 (81349) CUT TO LENGTH	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		19207	12443617-014	.PIN, COTTER	2
21	PAOZZ	5310-00-850-6868	96906	MS35692-9	.NUT,PLAIN,SLOTTED,HEXAGON	2
22	PAOZZ	2590-01-539-8879	19207	12486658	.GUIDE,LH	1
22	PAOZZ		19207	12486659	.GUIDE,RH	1
23	PAOZZ	5310-00-820-6653	80205	MS35338-50	.WASHER,LOCK	6
24	PAOZZ	5305-00-044-5503	96906	MS90725-160	SCREW,CAP,HEXAGON	6
25	PAOZZ	5315-01-539-9357	19207	12486670	.PIN,L-SHAPE	2
26	PAOZZ	5315-01-540-1478	19207	12486647	.PIN,HAIR 3/16 DIA	2
27	PAOZZ	5315-01-183-4150	50620	516-22LP	.PIN,STRAIGHT,HEADED	2
28	MOOZZ	4010-00-451-3533	81349	M83420 4-002	.ROPE,WIRE MAKE FROM M83420/4-002 (81349) CUT TO LENGTH	2
29	PAOZZ	4030-01--142-0456	96906	MS51844-63	.SWAGING SLEEVE,WIRE	4
30	PAOZZ		19207	12486809	.BRACKET,HANDLE,RH	1
30	PAOZZ		19207	12486810	.BRACKET,HANDLE,LH	1
31	PAOZZ	5305-00-725-4092	80205	MS90726-158	.SCREW,CAP,HEXAGON	2
32	PAOZZ	5310-01-473-7114	19207	12412476-08	.NUT,SELF-LOCKING,HE	2
33	PAOZZ		19207	12486804-001	.ROD,PUSH RH	1
33	PAOZZ		19207	12486804-002	.ROD,PUSH LH	1
34	PAOZZ	5315-01-406-7423	19207	12412608	.PIN, LOCK	4
35	PAOZZ	5315-00-058-9834	80205	MS16562-271	.PIN,SPRING	2
36	PAOZZ	5315-01-540-3735	19207	12486384	.PIN,LOCK,SHUTTLE	2
37	PAOZZ		19207	12532056	.SCREW,DRILLED	2
38	PAOZZ	5315-01-539-9488	19207	12486761	.PIN,SHUTTLE HOLD	2
39	PAOZZ	5310-01-540-3022	19207	12412476-14	.NUT,SELF-LOCKING HX	2

END OF FIGURE



D05217

Figure 37. Group 1501 TWIST LOCK ASSEMBLY & FRONT GUIDE.
0150 00-1 Blank / 2

Change 1

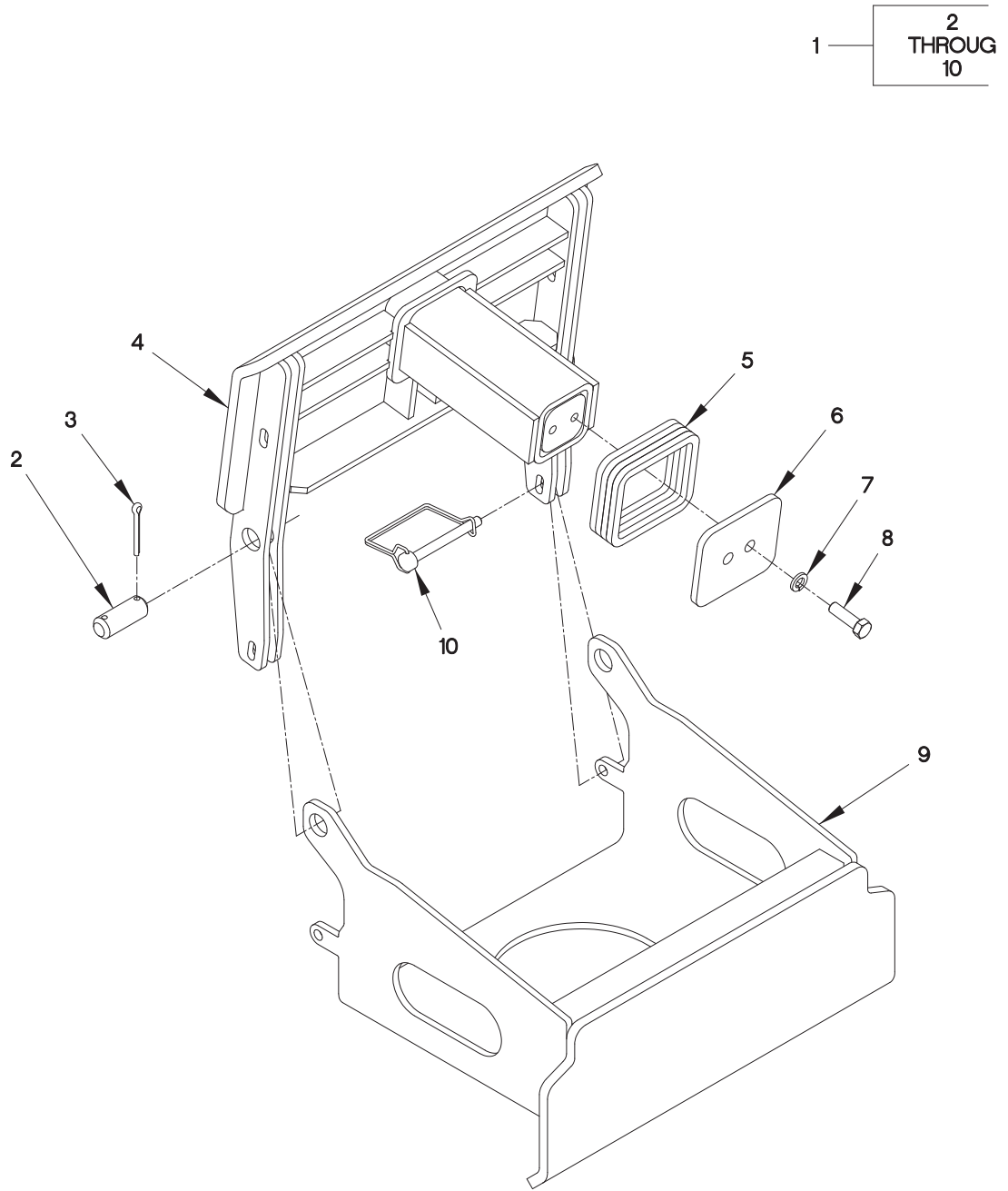
GROUP 1501 TWIST LOCK ASSEMBLY & FRONT GUIDE – Continued 0150 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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		19207	12486557-102	.HAND SCREW,TWIST LO	1
6	PAOZZ		19207	12486557-104	.HANDLE,MANUAL CONTR	1
7	PAOZZ	5340-01-540-0721	19207	12486812	.HANDLE BLOCK ASSY	1
8	PAOZZ		5047	N220N04CAPNN 5630 3NCH1	.NUT,LOCK	2
9	PAOZZ	5315-00-702-3529	80205	MS16562-280	.PIN,SPRING	1
10	PAOZZ	5340-01-540-1250	19207	12486557-103	.PLATE,LOCK,TWIST LO	1
11	PAOZZ	5340-01-540-1255	19207	12486714	GUIDE,FRONT	2

END OF FIGURE

GROUP 1501 BUMP STOP INSTALLATION

0151 00



1501LT04A

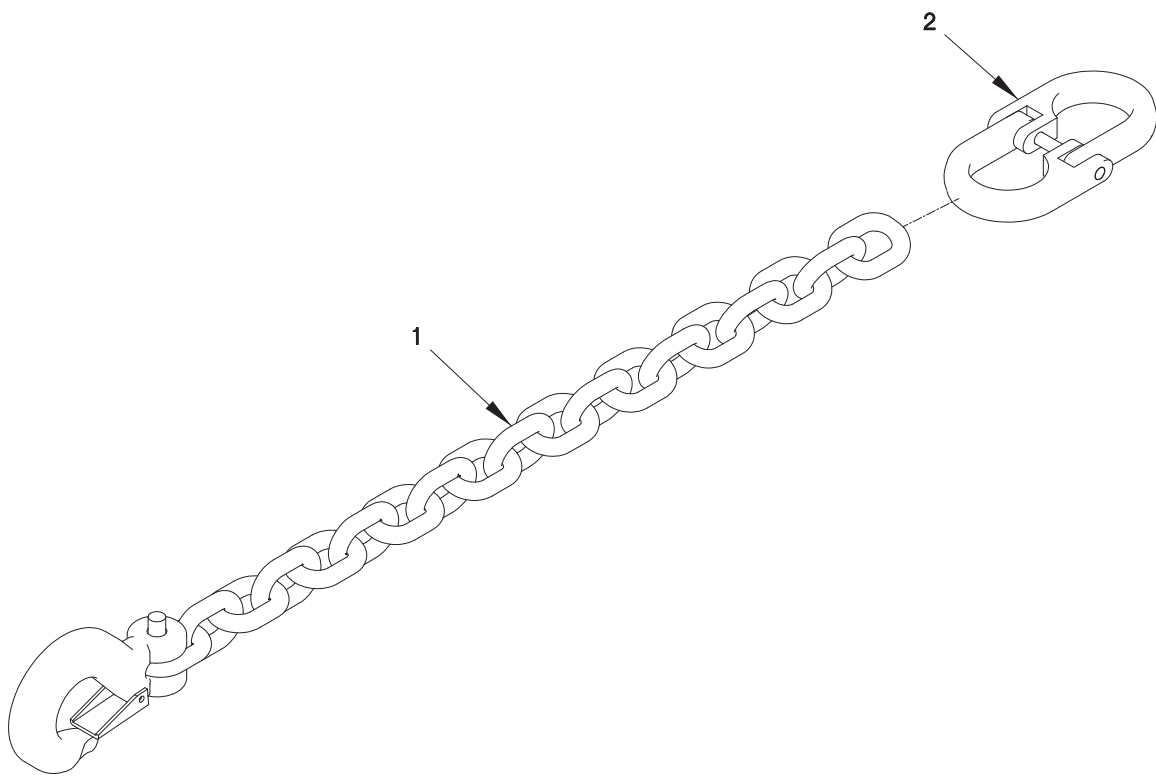
**Figure 38. Group 1501 BUMP STOP INSTALLATION.
0151 00-1 Blank/2**

TM 9-2330-334-13&P

GROUP 1501 BUMP STOP INSTALLATION – Continued

0151 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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		2
9	PAOZZ		19207	354 BNCH3	.SCREW,HEX HEAD	
				12486695	.EXTENSION,BUMP STOP	1
10	PAOZZ	5315-01-406-7423	19207	12412608	.PIN, LOCK	2
END OF FIGURE						



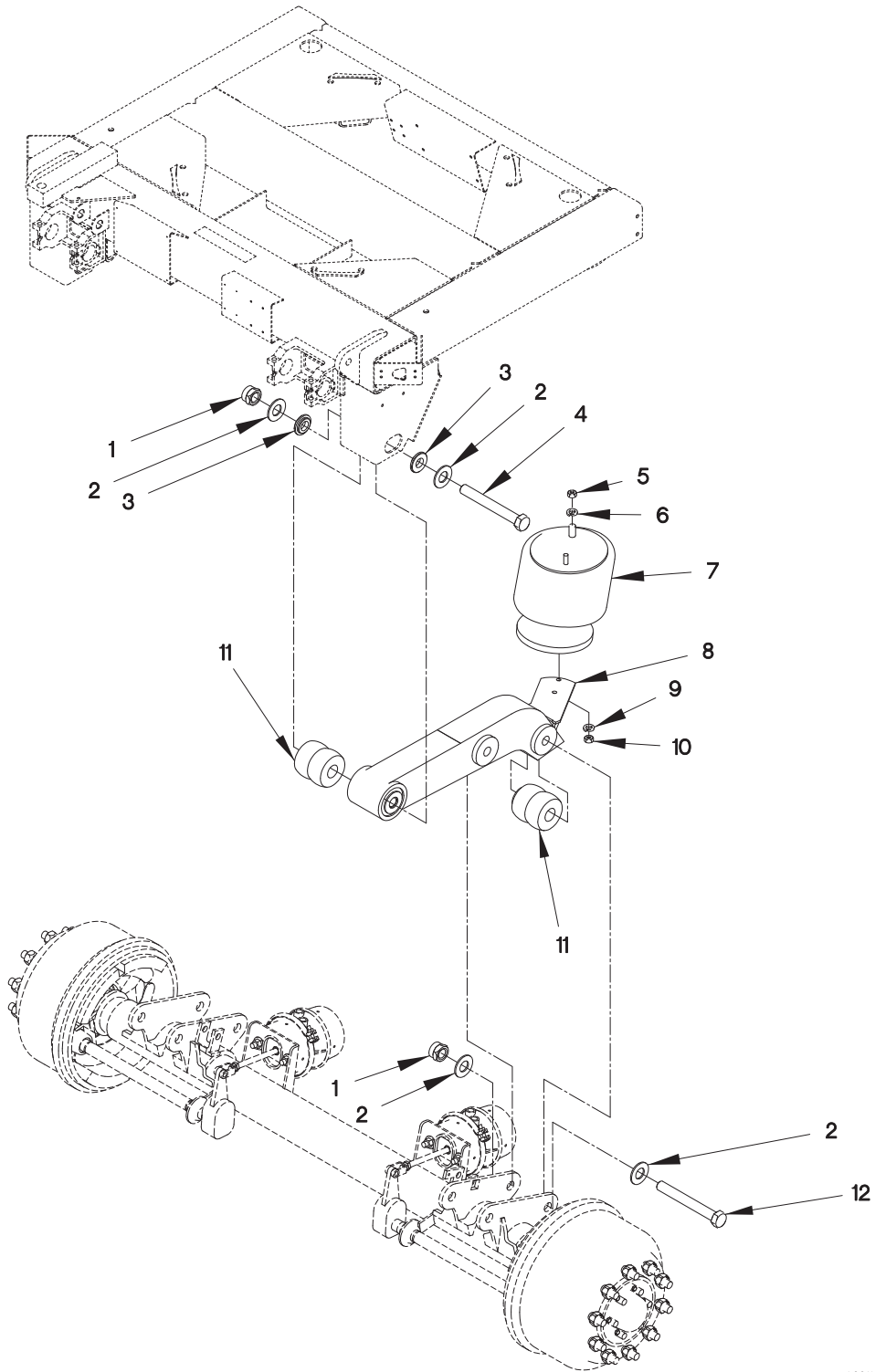
1503LT02A

**Figure 39. Group 1503 SAFETY CHAIN ASSEMBLY.
0152 00-1 Blank/2**

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						



1601LT02A

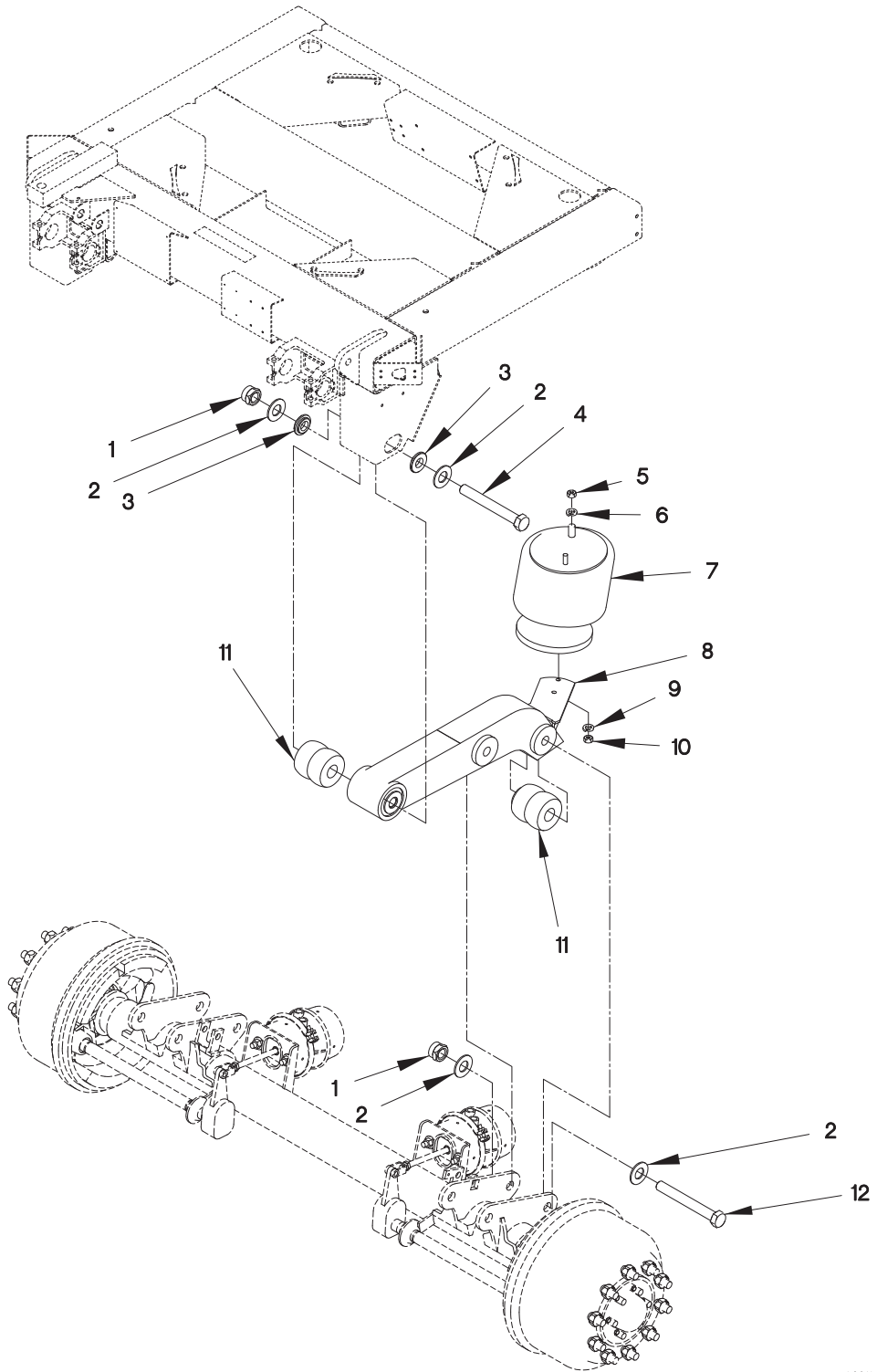
**Figure 40. Group 1601 TURNTABLE (FRONT) AXLE SUSPENSION.
0153 00-1 Blank/2**

TM 9-2330-334-13&P

GROUP 1601 TURNTABLE (FRONT) AXLE SUSPENSION – Continued 0153 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM NO	SMR CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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



1601LT02A

**Figure 41. Group 1601 REAR AXLE SUSPENSION.
0154 00-1 Blank/2**

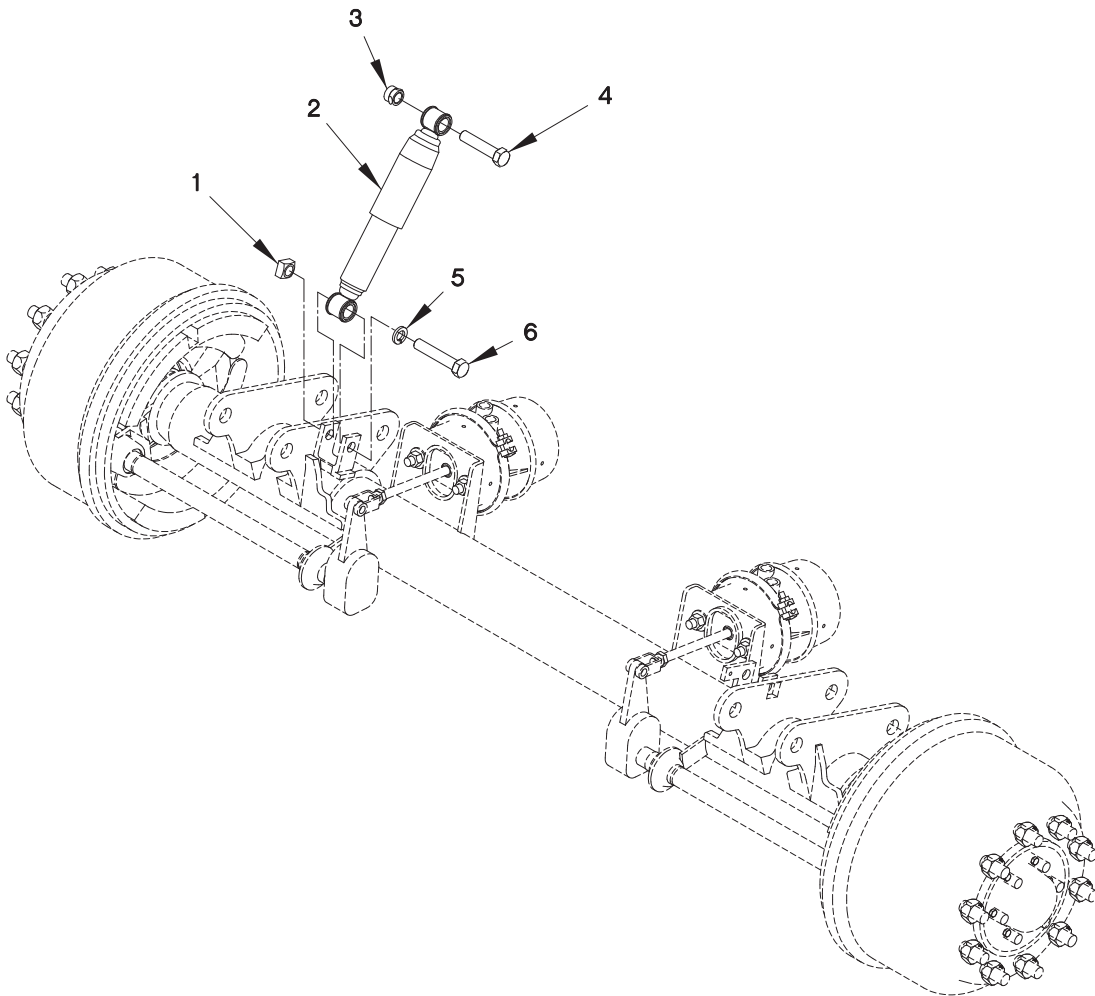
TM 9-2330-334-13&P

GROUP 1601 REAR AXLE SUSPENSION – Continued

0154 00

(1)	(2)	(3)	(4)	(5)	(6)	(7)
ITEM	SMR					
NO	CODE	NSN	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODE (UOC)	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



1604LT01A

Change 1

**Figure 42. Group 1604 SHOCK ABSORBERS.
0155 00-1 Blank/2**

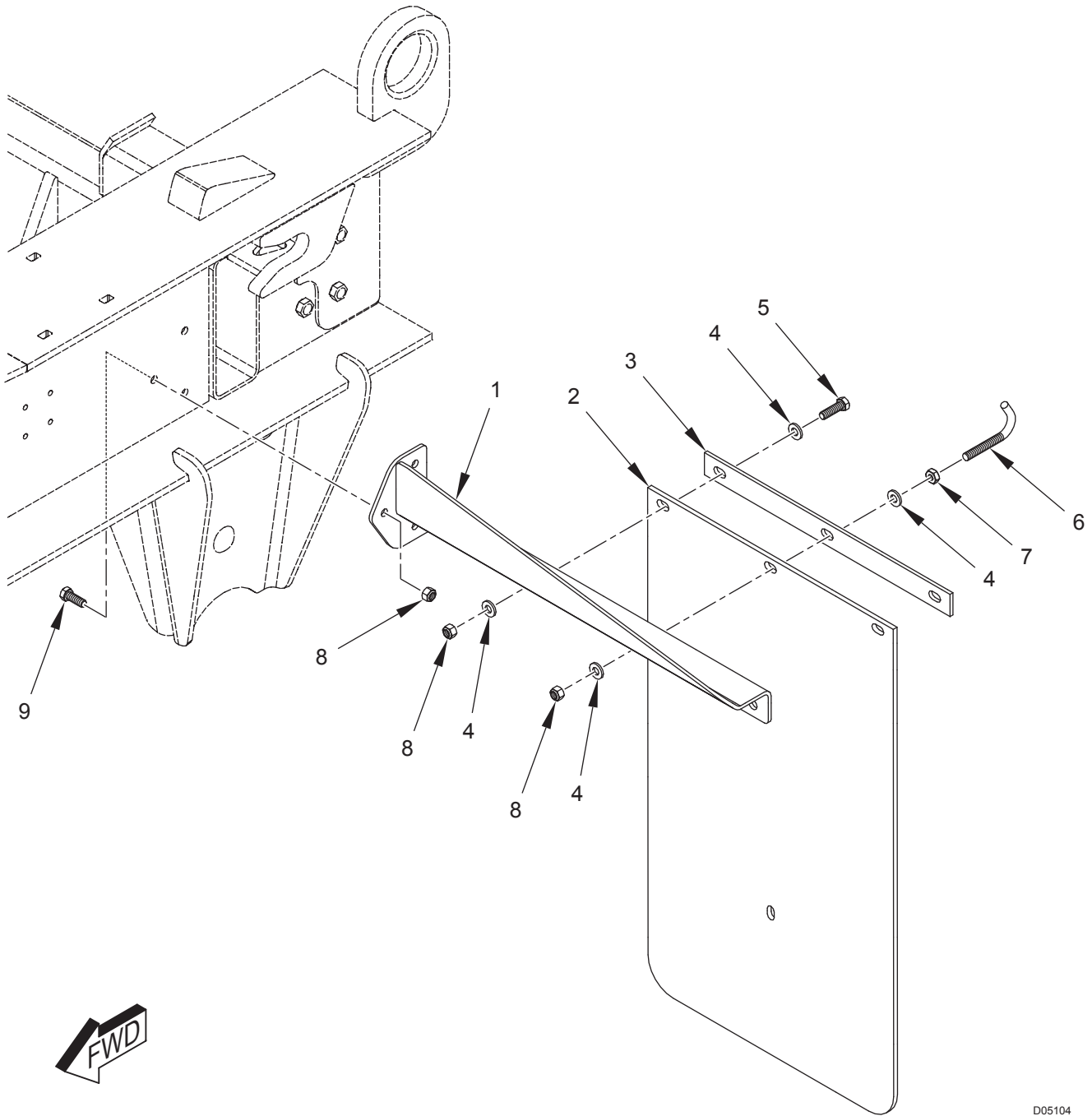
GROUP 1604 SHOCK ABSORBERS – Continued

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	PAFZZ	5310-01-383-9720	74410	93400367	NUT,SQUARE,3/4-10	4
2	PAFZZ	2510-01-586-5437	74410	90045338	SHOCK ABSORBER	4
3	PAFZZ	5310-01-540-5869	74410	93400492	NUT,HEX,SELF-LOCK	4
4	PAFZZ	5305-01-384-3474	19207	12486400-526	SCREW,HEX	4
5	PAFZZ	5310-01-540-5877	74410	93600077	WASHER,LOCK	4
6	PAFZZ	5305-01-540-4274	74410	93003609	SCREW,CAP,HEXAGON	4
END OF FIGURE						

GROUP 1802 TURNTABLE SPLASH GUARDS

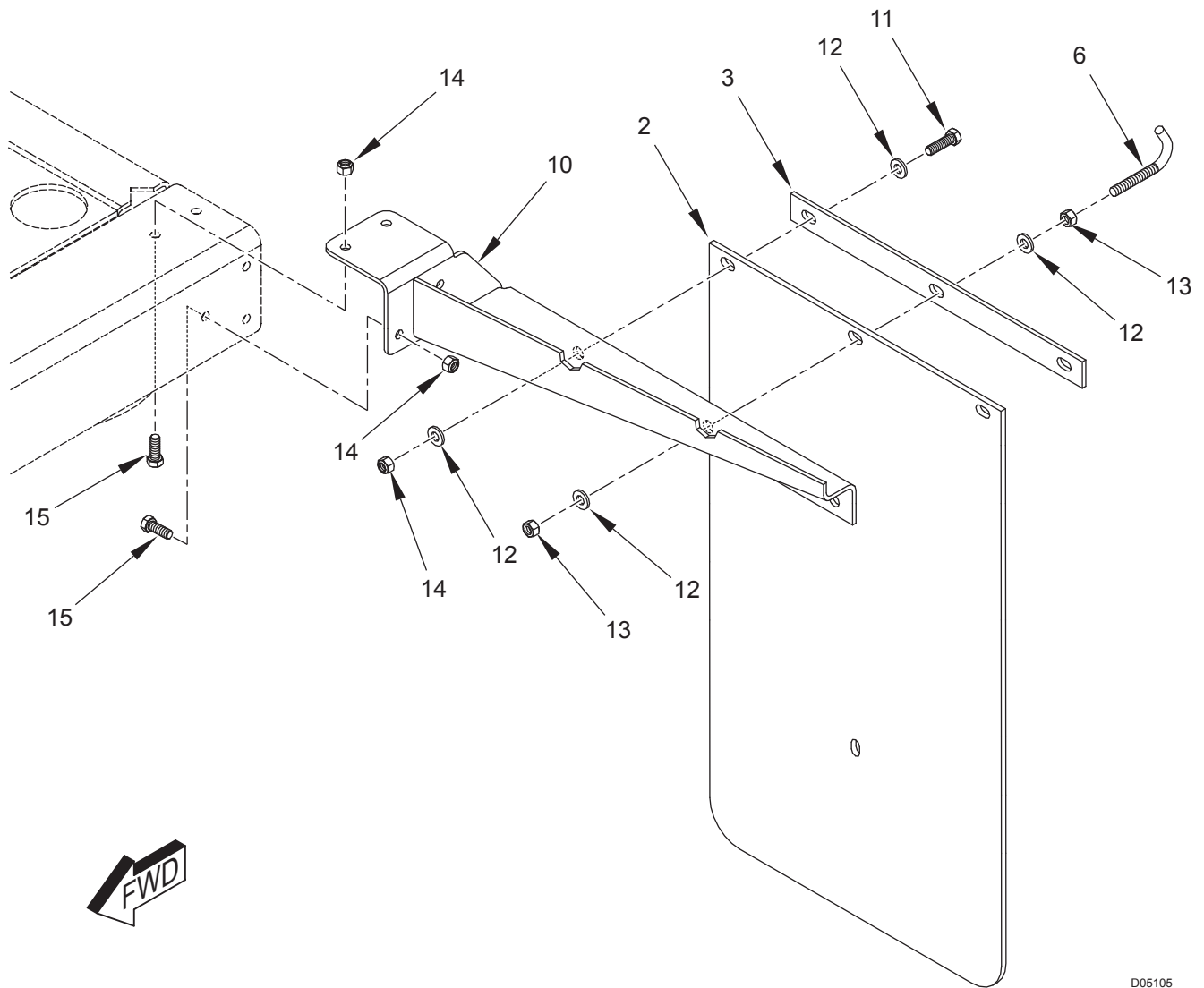
0156 00



D05104

**Figure 43. Group 1802 TURNTABLE SPLASH GUARDS (Sheet 1 of 2).
0156 00-1**

Change 1



D05105

Figure 43. Group 1802 TURNTABLE SPLASH GUARDS (Sheet 2 of 2).

Change 1

0156 00-2

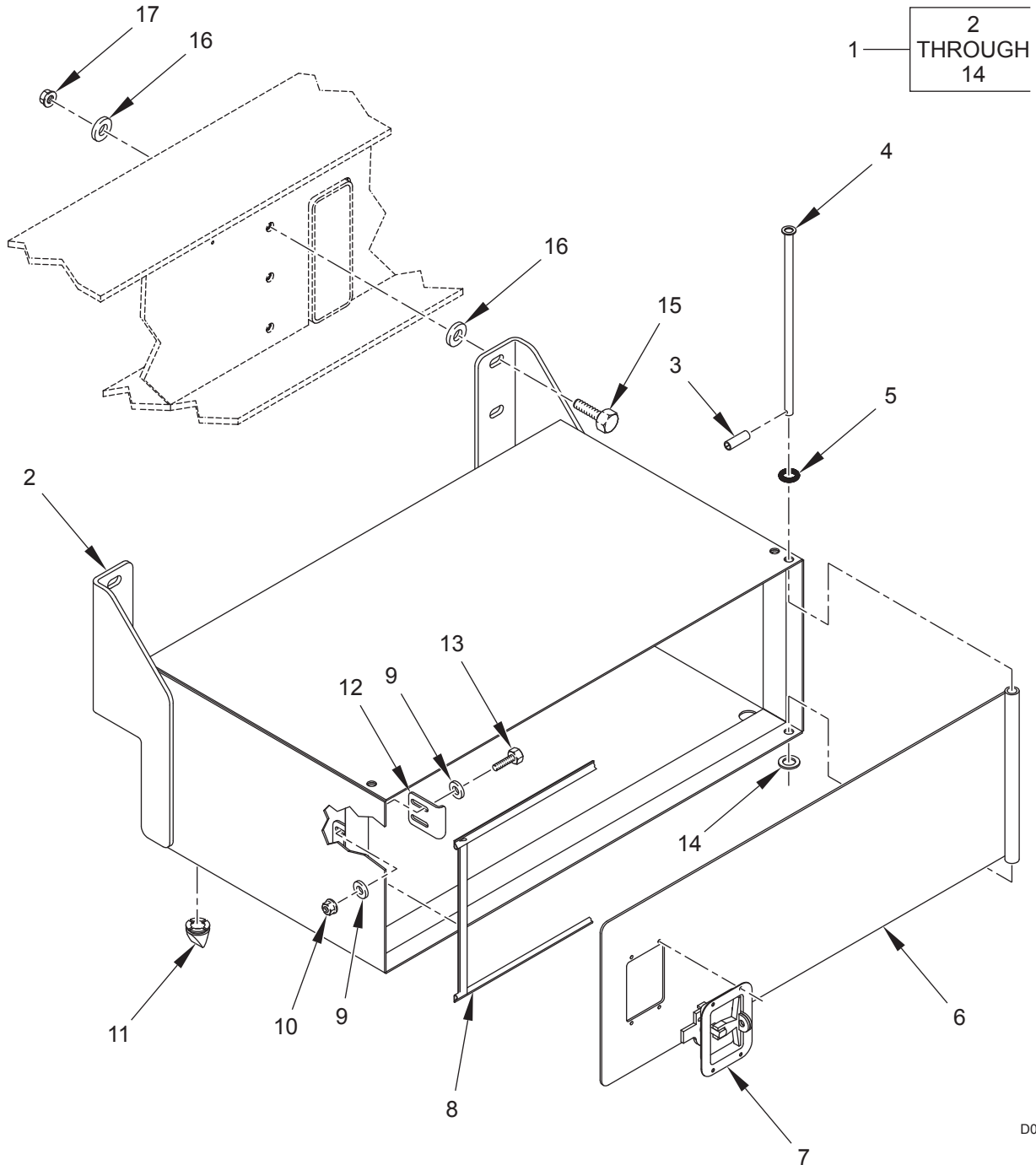
GROUP 1802 TURNTABLE SPLASH GUARDS – Continued

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	14
5	PAOZZ	5305-00-269-3213	80205	MS90725-62	SCREW,CAP HEXAGON H	4
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	12
9	PAOZZ	5305-01-540-1757	05047	AES01C375A00A W9AB1	SCREW,CAP,HEXAGON H	6
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	5305-00-068-0511	80204	B1821BH038C12 5N	SCREW,CAP,HEXAGON H	4
12	PAOZZ	5310-00-167-0804	80205	AN960C616	WASHER, FLAT	12
13	PAOZZ	5310-00-732-0558	96906	MS51967-8	NUT,PLAIN,HEXAGON	4
14	PAOZZ	5310-01-445-6346	81349	12412476-09	NUT,SELF-LOCKING,HE	12
15	PAOZZ	5305-01-540-1757	05047	AES01C375A00A W9AB1	SCREW,CAP,HEXAGON H	8
END OF FIGURE						

GROUP 1808 TOOL BOX ASSEMBLY

0157 00



D05115

Change 1

**Figure 44. Group 1808 TOOL BOX ASSEMBLY.
0157 00-1 Blank/2**

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	12
17	PAOZZ	5310-01-407-7178	19207	12412476-11	NUT,SELF-LOCKING,HE	6

END OF FIGURE

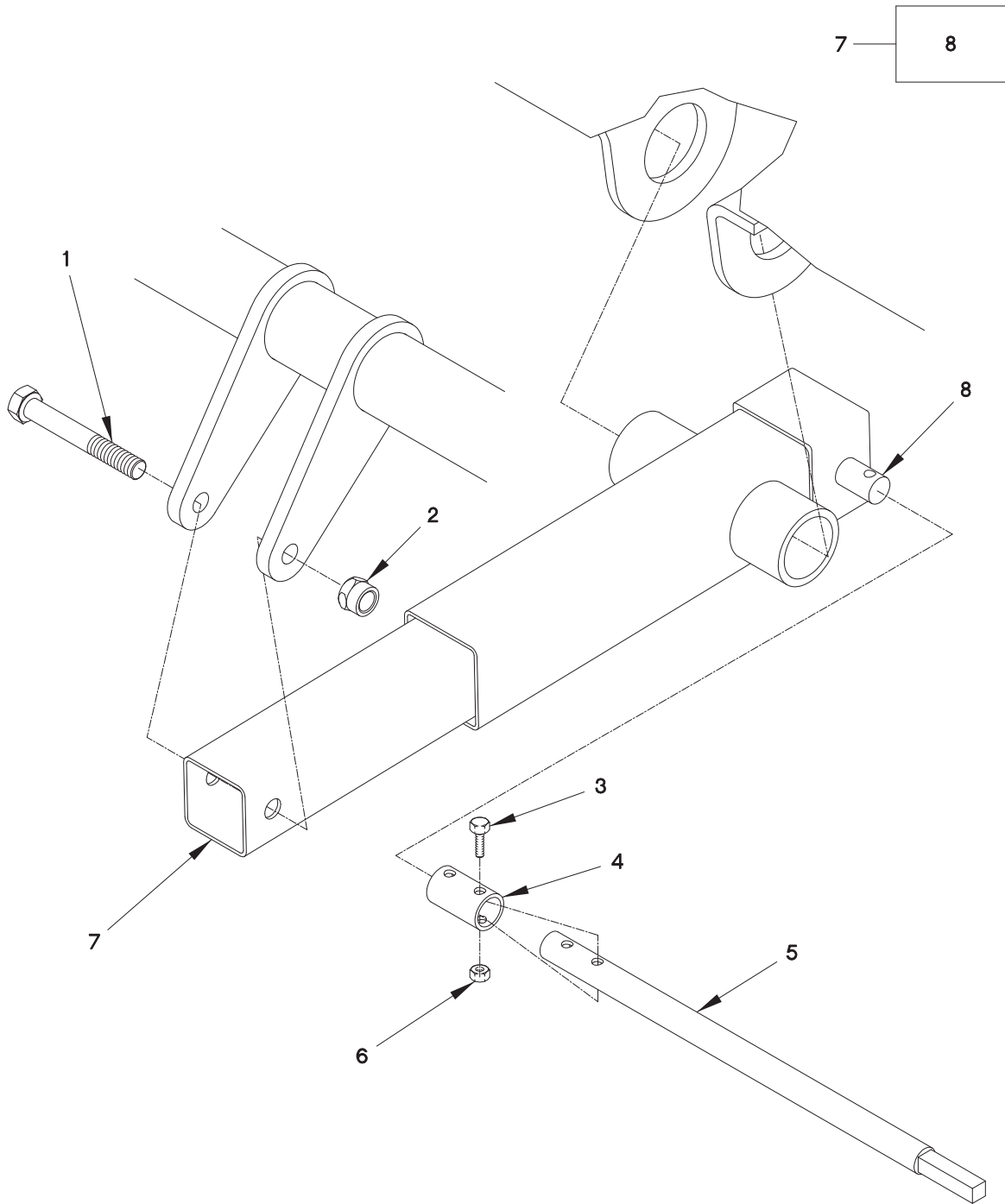


Figure 45. Group 2001 RAIL LIFT JACK.
0158 00-1 Blank/2

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	B1821BH063C50 0N	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	B1821BH063F17 5N	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						

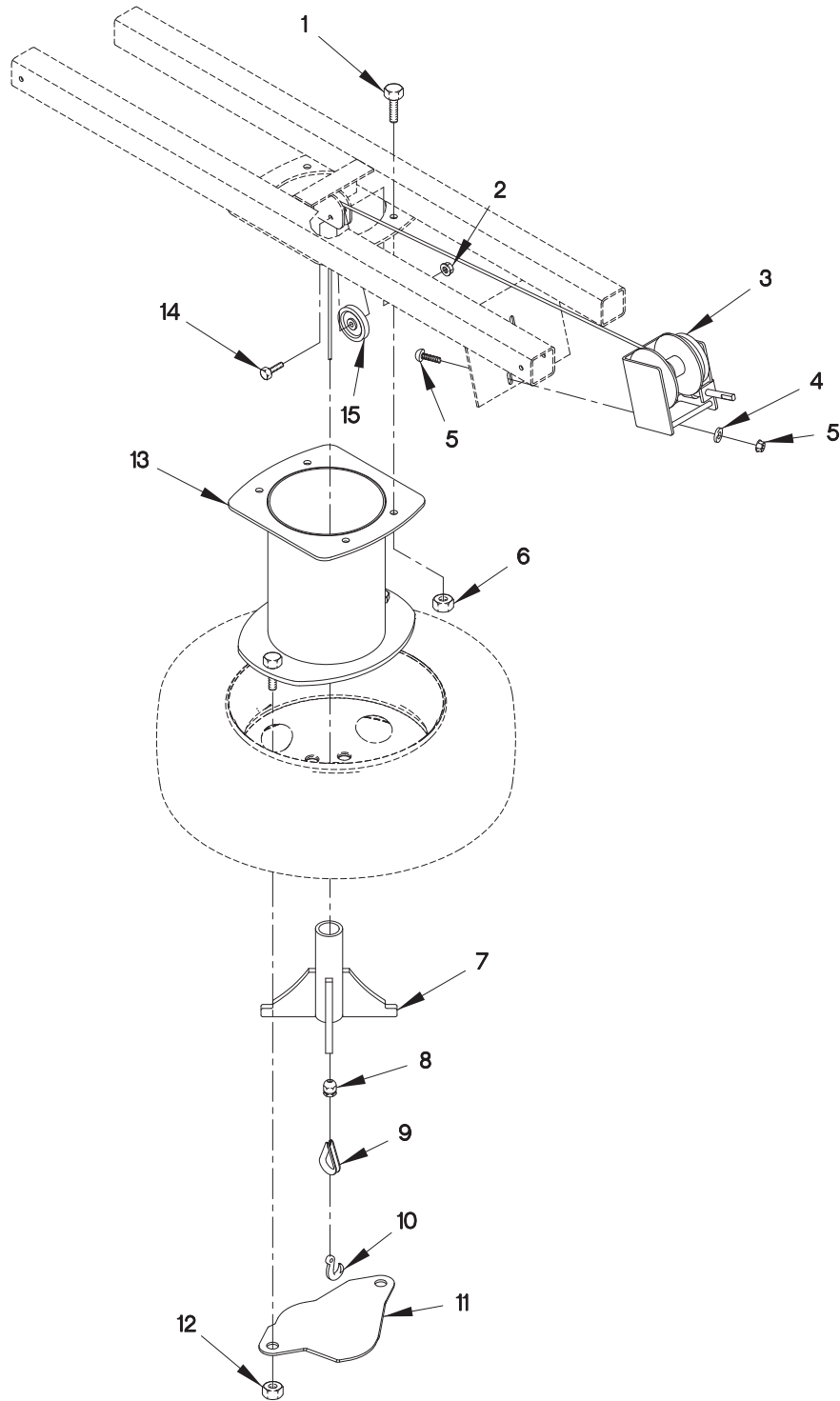


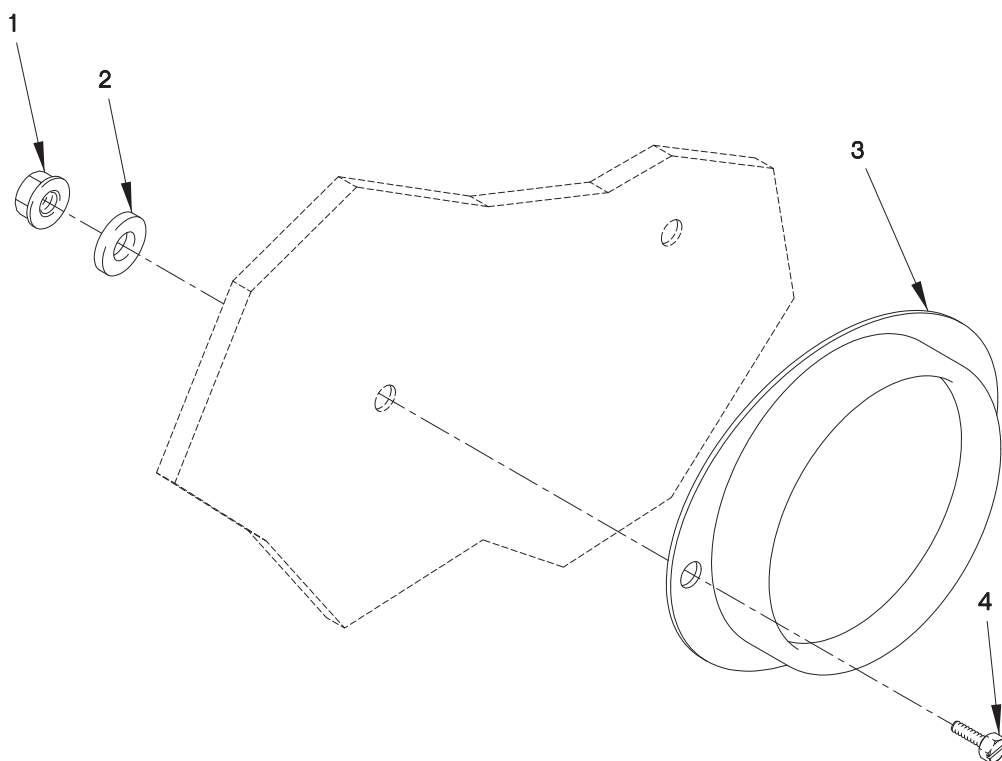
Figure 46. Group 2001 SPARE TIRE CARRIER & WINCH.
0159 00-1 Blank/2

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	B1821BH038C15		1
15	PAOZZ		19207	0N 12486529	SCREW,CAP,HEXAGON H PULLY,TIRE CARRIER	1

END OF FIGURE



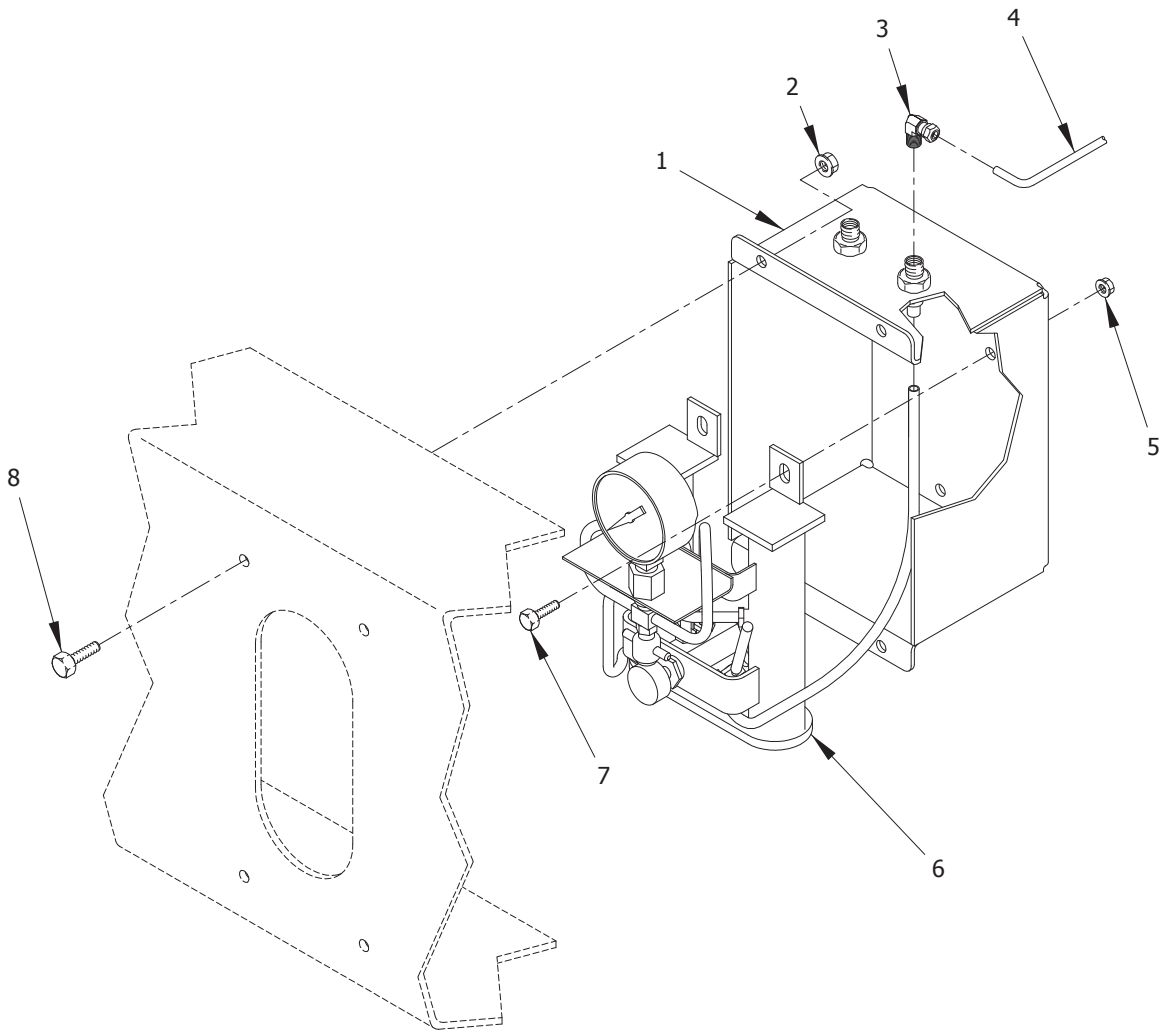
2202LT01A

**Figure 47. Group 2202 REFLECTORS.
0160 00-1 Blank/2**

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						



4706LT01A

**Figure 48. Group 4706 OVERLOAD INDICATOR & COVER.
0160 00-1 Blank/2**

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	S300NA44CAA17 574 NNCH1	SCREW,HEX	3
8	PAOZZ	5305-01-540-1515	80204	S210NA38CAD14 354 BNCH1	SCREW,HEX,CAP	4
END OF FIGURE						

**UNIT MAINTENANCE
NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG. ITEM		STOCK NUMBER	FIG. ITEM	
2040-01-442-4055	39	2	5305-00-071-2071	20	3
2440-01-360-7372	28	1	5305-00-225-3839	2	2
2530-01-483-3949	26	8	5305-00-269-3211	23	7
3040-01-382-8736	19	1	5305-00-269-3213	25	5
4010-00-451-3533	30	20	5305-00-489-0743	25	1
4030-00-145-5721	30	21	5305-00-724-5911	30	6
4030-01-088-2952	30	25	5305-00-724-6761	36	17
4720-01-479-7709	19	3	5305-00-724-7266	32	17
4720-01-479-7711	19	3	5305-00-725-2317	47	14
4730-00-050-4203	36	7	5305-00-725-4092	36	30
4730-00-069-1187	23	10	5305-00-984-4980	1	4
4730-00-200-0257	24	12	5305-00-984-6191	1	22
4730-00-202-6491	20	14	5305-00-984-6214	22	3
4730-00-439-1722	16	3	5305-00-995-3442	1	23
4730-01-085-6577	20	12	5305-01-325-8387	16	2
4730-01-086-4064	23	2	5305-01-325-8388	30	9
4730-01-091-8032	26	3	5305-01-357-8159	4	4
4730-01-091-9212	21	13	5305-01-357-8160	48	4
4730-01-095-3430	21	14	5305-01-367-1294	23	6
4730-01-095-7717	26	10	5305-01-485-6049	21	11
4730-01-096-9128	26	5	5306-00-150-9995	34	3
4730-01-096-9398	24	10	5306-00-226-4825	1	6
4730-01-102-4123	16	9	5306-00-226-4832	46	3
4730-01-115-6643	17	7	5306-01-269-8693	35	11
4730-01-123-2946	20	15	5310-00-045-3299	1	18
4730-01-134-3568	26	9	5310-00-087-4652	43	12
4730-01-134-3571	26	13	5310-00-088-1251	21	7
4730-01-134-6989	23	12	5310-00-167-0721	1	11
4730-01-213-7733	18	4	5310-00-167-0804	16	5
4730-01-268-2402	24	4	5310-00-193-7577	1	15
4730-01-274-1825	16	11	5310-00-225-6993	30	5
4730-01-283-1877	20	9	5310-00-477-6768	43	7
4730-01-311-0242	16	7	5310-00-516-5566	47	12
4730-01-372-6528	24	3	5310-00-550-1130	1	9
4730-01-384-1441	19	1	5310-00-576-5752	1	25
4820-01-363-2117	18	5	5310-00-637-9541	25	6
5305-00-044-5503	36	23	5310-00-761-6882	1	10
5305-00-068-0502	1	8	5310-00-763-8920	20	18
5305-00-068-0511	43	5	5310-00-809-8544	1	24
5305-00-071-2067	32	11	5310-00-820-6653	20	7
5305-00-071-2069	32	14	5310-00-823-8804	21	6

**UNIT MAINTENANCE
NATIONAL STOCK NUMBER INDEX**

STOCK NUMBER	FIG. ITEM	STOCK NUMBER	FIG. ITEM
5310-00-852-8593	1 26	6150-00-772-8814	5 1
5310-00-880-7744	1 12	6220-01-521-7648	4 1
5310-00-926-5877	38 7	9905-00-202-3639	48 3
5310-00-926-5880	32 10	9905-00-205-2795	48 3
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		

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM	PART NUMBER	FIG. ITEM
005-079-00	12 9	021-038-02	11 8
005-079-00	14 9	021-038-02	13 8
005-096-00	12 15	031-026-01	11 3
005-096-00	14 15	031-026-01	13 3
005-097-00	12 12	031-026-02	11 4
005-097-00	14 12	031-026-02	13 4
005-098-00	11 14	031-027-01	11 4
005-098-00	13 14	031-027-01	13 4
005-099-00	11 13	031-027-02	11 4
005-099-00	13 13	031-027-02	13 4
005-100-00	11 9	034-032-00	12 7
005-100-00	13 9	034-032-00	14 7
005-134-00	12 4	034-058-01	20 17
005-134-00	14 4	034-192-08	12 8
006-099-00	12 10	034-192-08	14 8
006-099-00	14 10	040-180-00	15 9
006-114-00	11 15	046-096-00	15 5
006-114-00	13 15	046-097-00	15 4
006-115-00	11 12	055-040-98	12 2
006-115-00	13 12	055-040-98	14 2
007-139-00	12 6	056-017-00	15 3
007-139-00	14 6	056-018-00	15 6
007-157-00	11 10	061-006-00	12 17
007-157-00	13 10	061-006-00	14 17
007-194-00	11 5	069-020-00	12 11
007-194-00	13 5	069-020-00	14 11
008-290-13	11 2	069-078-00	12 5
008-290-13	13 2	069-078-00	14 5
010-052-00	12 13	071-122-00	15 8
010-052-00	14 13	071-124-00	11 7
010-055-00	11 3	071-124-00	13 7
010-055-00	13 3	1-647-010004217	30 24
014-056-00	12 14	10-8 100202BA	16 9
014-056-00	14 14	118650	30 29
014-058-00	12 16	12-8 130140B	16 7
014-058-00	14 16	12-8 130140B	17 2
014-065-00	15 7	12378642-005	30 11
014-068-00	15 2	12378642-006	30 23

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM	PART NUMBER	FIG. ITEM
12378849	19 4	12419079-005	7 4
12378849-001	19 4	12419965-001	19 3
12412476-04	22 6	12419965-002	19 3
12412476-04	49 5	12420062-020	16 4
12412476-06	1 1	12420062-020	17 9
12412476-06	2 3	12420062-021	20 16
12412476-06	7 3	12420572-004X	20 13
12412476-06	21 1	12420572-004X	21 12
12412476-06	27 1	12420572-004X	22 4
12412476-06	35 16	12420572-004X	23 1
12412476-06	45 10	12420572-004X	24 2
12412476-06	49 2	12420572-004X	25 12
12412476-08	36 20	12420572-004X	27 4
12412476-08	46 6	12420572-004X	28 3
12412476-09	16 6	12420572-004X	49 4
12412476-09	23 8	12420572-006X	16 10
12412476-09	44 8	12420572-006X	17 5
12412476-11	20 8	12420572-006X	20 10
12412476-11	32 7	12420572-006X	26 6
12412476-11	45 17	12420572-008X	17 6
12412476-11	47 6	12420572-008X	26 4
12412476-13	32 16	12420572-010X	16 8
12412476-13	35 3	12421167-001	23 11
12412476-13	36 19	12421379-013	18 3
12412476-13	46 2	12422657-002	4 1
12412476-14	36 35	12422958	3 1
12412608	30 17	12422973-001	4 5
12412608	36 26	12422973-002	4 5
12412608	38 10	12422997	28 1
12414314-009	20 6	12423014-005	8 1
12414473-015	32 3	12423014-006	8 4
12414667-001	19 1	12423014-007	8 2
12414668-001	19 1	12423014-008	8 3
12417661-002	19 5	12441163-002	39 1
12417661-002	26 2	12442787	26 8
12419079-001	7 5	12442962-006	18 1
12419079-004	7 2	12442963	23 3

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM		PART NUMBER	FIG. ITEM	
12442971-001	1	3	12486365	9	1
12443057	39	2	12486366	36	10
12443610	16	1	12486369	17	3
12443612-001	10	1	12486370	11	1
12443617-027	32	4	12486390	47	9
12484560-001	28	6	12486397	18	2
12420062-022	19	7	12486400	41	1
12420062-023	19	7	12486370	13	1
12486319	35	5	12486373	46	4
12486320	35	13	12486375	36	11
12486321-102	11	11	12486384	36	33
12486321-102	13	11	12486400-001	41	2
12486321-103	11	11	12486400-002	41	2
12486321-103	13	11	12486400-504	42	1
12486321-104	11	6	12486400-510	40	2
12486321-104	13	6	12486400-510	41	4
12486322	29	1	12486400-511	40	8
12486329	35	17	12486400-511	41	11
12486330	6	1	12486400-512	40	8
12486338	6	2	12486400-512	41	11
12486339	6	3	12486400-513	40	7
12486340	6	4	12486400-513	41	10
12486342	30	18	12486400-514	42	2
12486350	32	5	12486400-515	40	12
12486351-001	44	1	12486400-515	41	15
12486351-002	44	1	12486400-516	40	1
12486359-501	35	15	12486400-516	41	3
12486359-502	35	7	12486400-517	40	4
12486359-503	35	8	12486400-517	41	6
12486359-504	35	10	12486400-518	42	6
12486359-506	35	6	12486400-519	40	3
12486359-507	35	14	12486400-519	41	5
12486359-508	35	9	12486400-520	40	9
12486361	25	2	12486400-520	41	12
12486362	21	4	12486400-521	40	10
12486363	27	2	12486400-521	41	13
12486364	36	8	12486400-522	40	6

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM	PART NUMBER	FIG. ITEM
12486400-522	41 9	12486514	32 1
12486400-522	42 5	12486514-116	32 2
12486400-523	40 5	12486514-116	33 1
12486400-523	41 8	12486514-117	20 1
12486400-524	42 3	12486515	33 6
12486400-525	40 11	12486520	45 7
12486400-525	41 14	12486522	47 3
12486400-526	42 4	12486528	31 1
12486410	49 6	12486529	47 15
12486411	21 5	12486533	30 13
12486412-001	34 1	12486534	35 20
12486412-002	34 1	12486541	44 2
12486416	10 5	12486542-001	44 10
12486417	20 2	12486542-002	44 10
12486418	33 3	12486547	37 5
12486419	33 4	12486548	37 3
12486420	20 4	12486550	37 2
12486421	10 3	12486556	37 6
12486426	32 8	12486557-001	37 1
12486430	32 18	12486557-002	37 1
12486431	32 9	12486557-102	37 7
12486432	10 4	12486557-103	37 12
12486433	32 15	12486557-104	37 8
12486435-001	30 30	12486559	45 8
12486435-002	30 27	12486571	20 5
12486437	30 28	12486573	45 11
12486444	46 5	12486588	30 1
12486447	22 2	12486589	35 1
12486474	45 2	12486602	30 4
12486483	45 6	12486602-001	36 1
12486485	45 1	12486603	25 7
12486487	45 4	12486605	45 12
12486506	47 10	12486614	29 2
12486507	47 7	12486615	35 2
12486510	47 13	12486616	29 3
12486511	30 2	12486617	46 7
12486512	30 10	12486621	32 12

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM	PART NUMBER	FIG. ITEM
12486623	32 19	139222	8 5
12486633	24 6	1468X6X6	26 5
12486644	36 13	1468X8	26 3
12486647	36 25	1469X4X4	23 2
12486652	36 14	1469X4X4	25 11
12486658	36 21	1469X4X4	27 3
12486659	36 21	1469X4X4	41 7
12486670	36 24	1469X4X4	49 3
12486694	38 4	1512-0-4	1 20
12486695	38 9	209P-6-4	20 14
12486696	38 2	264NTA-4	21 14
12486697	38 1	264NTA-4	27 8
12486700	36 16	2678	1 21
12486704	36 15	30056-10	1 19
12486705-001	36 18	300634AM	2 1
12486705-002	36 18	4 130137B	24 5
12486714	37 13	4 130137B	25 9
12486720	30 26	4-4-100102BA	21 13
12486721	44 3	4-4-100102BA	23 9
12486722	44 6	4-4-100102BA	24 1
12486730	23 4	4-4-100102BA	27 5
12486736	30 3	4-4-4 100424BA	24 3
12486749	47 11	4-4-4 100424BA	27 7
12486757	47 8	4-4-4 100425BA	20 15
12486760	25 4	4-4-4 140438B	24 4
12486761	36 34	4-4-4 140438B	25 10
12486771	49 1	4-6 100102BA	24 10
12486777	30 7	4-6 100102BA	28 4
12486786	38 6	4-6 100202BA	20 12
12486787	38 5	4-6 100202BA	22 1
12486804-001	36 31	4-6 100202BA	28 5
12486804-002	36 31	48X6X6	16 3
12486809	36 29	48X6X6	17 8
12486810	36 29	48X6X6	20 19
12486812	37 9	48X6X6	26 11
12486816	30 14	6 130109AB	18 4
12486817	25 3	6 130109AB	22 5
134947	46 8	6 130109AB	26 1

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM	PART NUMBER	FIG. ITEM
6-4 100202BA	23 10	B1821BH038C125N	44 5
6-4 100203BA	23 12	B1821BH038C150N	47 14
8-6-010102B	19 6	MS16562-271	36 32
8-6-8 100424BA	26 9	MS16562-280	37 11
8-8 100202BA	17 7	B1821BH050C125N	32 11
90006396	21 10	B1821BH050C150N	32 14
90054466	24 7	B1821BH050C200N	20 3
6-4 130139B	24 12	B1821BH050C200N	32 6
6-6 100202BA	16 11	B1821BH063C500N	32 17
6-6 100202BA	17 4	B1821BH063C500N	46 1
6-6 100202BA	20 11	DB-1249-49	35 11
6-6-6 100401BA	26 13	DT-VR(SS)	1 17
6-6-6 100425BA	20 9	K71-136-00	15 1
6-6-6 100425BA	26 7	M12133/2-505	34 5
6-6-6 140438B	28 2	M45913/1-10CG5C	30 31
6-6-6-140424B	24 11	M45913/1-4CG5C	21 7
7728814	5 1	M45913/1-4CG5C	30 22
8-4 130137B	24 9	M45913/1-6CG5C	44 12
8-6 100202BA	26 10	M45913/1-6CG5C	47 2
8-6 140137B	17 1	M45913/1-8CG5C	30 5
8-6 140137B	19 2	M83420/4-002	30 20
8-6 140137B	26 12	M83420/4-002	36 3
90054516	21 8	M83420/4-002	36 27
90054859	24 8	MS16562-236	45 3
93900198	21 9	MS17830-010C	4 2
A 13 DIN125-ST	33 5	MS17830-010C	28 7
A52427-L-0.750	47 12	MS17830-010C	36 6
AA52428-1	48 3	MS17830-C4	48 1
AA52428-2	48 3	MS24665-140	12 1
AN8-15	34 3	MS24665-140	14 1
AN960C616	16 5	MS24665-302	34 2
AN960C616	44 4	MS24665-359	12 3
AN960C616	44 11	MS24665-359	14 3
AN960C616	47 4	MS24665-513	38 3
AS15001-1	36 7	MS24665-625	32 13
B1821BH031C075N	1 6	MS24665-625	33 2
B1821BH031C175N	46 3	MS27183-7	1 24

UNIT MAINTENANCE PART NUMBER INDEX

PART NUMBER	FIG. ITEM	PART NUMBER	FIG. ITEM
MS27183-9	21 6	MS51967-2	1 10
MS28775-205	45 5	MS51967-2	10 2
MS3217-4200	36 12	MS51967-20	20 18
MS35206-223	1 4	MS51967-20	30 8
MS35206-243	1 22	MS51967-5	1 12
MS35206-267	22 3	MS51967-5	32 20
MS35207-268	1 23	MS75021-2	1 7
MS35333-36	1 15	MS90725-10	21 11
MS35333-38	1 13	MS90725-111	30 12
MS35333-39	1 25	MS90725-111	36 9
MS35333-40	1 9	MS90725-111	47 1
MS35333-41	1 11	MS90725-113	30 9
MS35338-138	23 5	MS90725-113	45 15
MS35338-141	3 2	MS90725-160	36 23
MS35338-160	38 7	MS90725-163	30 6
MS35338-162	32 10	MS90725-167	36 17
MS35338-42	1 18	MS90725-6	1 8
MS35338-46	25 6	MS90725-60	23 7
MS35338-50	20 7	MS90725-60	25 8
MS35338-50	36 22	MS90725-60	47 5
MS35649-103	1 26	MS90725-62	25 5
MS35649-2384	44 7	MS90725-64	16 2
MS35649-242	1 16	MS90725-8	2 2
MS35649-282	1 14	MS90725-8	21 3
MS51412-4	30 19	MS90725-8	30 16
MS51844-62	30 25	MS90726-158	36 30
MS51844-62	36 2	N-30256-C	18 5
MS51844-62	36 28	N220N04CAKNN56301BCH1	44 13
MS51844-64	30 21	N220N04CAPNN56303NCH1	37 10
MS51849-137C	3 3	N220N05FAMNN56302BCH1	34 6
MS51849-64C	23 6	NAS1149C0363R	4 3
MS51849-77C	4 4	NAS1149C0363R	21 2
MS51849-77C	36 4	NAS1149C0463R	30 15
MS51849-96	25 1	NAS1149C0463R	35 18
MS51849-96	27 6	NAS1149C0463R	36 5
MS51849-96	35 19	NAS1149C0463R	48 2
MS51849-96	45 13	NAS1149C0863R	45 16
MS51849-97C	48 4	NAS1149F0463B	45 9

**UNIT MAINTENANCE
PART NUMBER INDEX**

PART NUMBER	FIG. ITEM	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		

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.

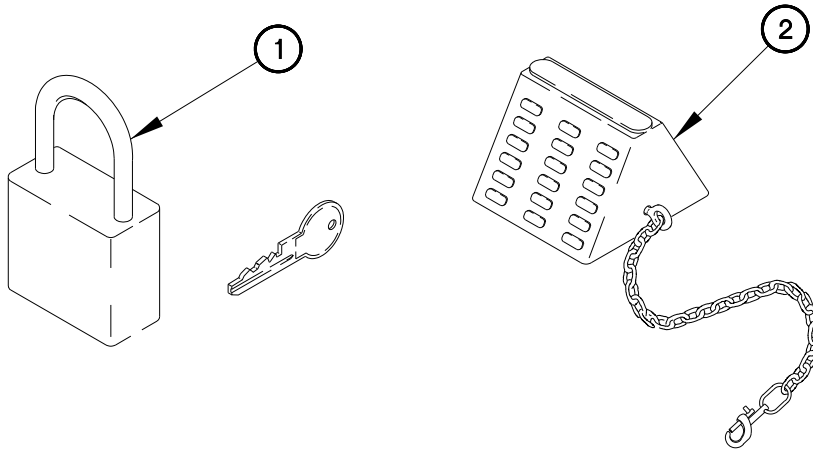
Column (4) – U/M (Unit of Measure). Indicates how the item is issued for the National Stock Number shown in column (2).

Column (5) – Qty REQD. Indicates the quantity required.

BASIC ISSUE ITEMS (BII) LIST

0164 00

SECTION II. BASIC ISSUE ITEMS (BII)



CD165B01

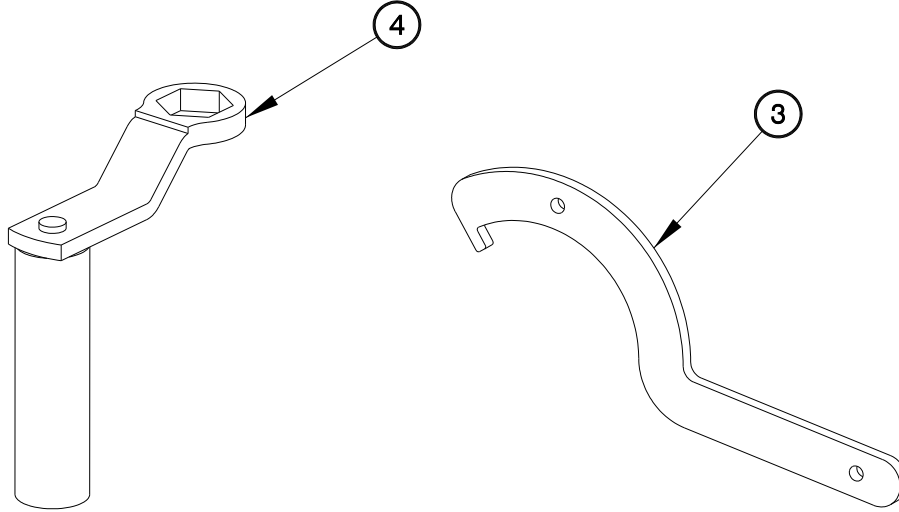
Table 1. Basic Issue Items List

(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

BASIC ISSUE ITEMS (BII) LIST

0164 00

SECTION II. BASIC ISSUE ITEMS (BII) - Continued



CD165B02

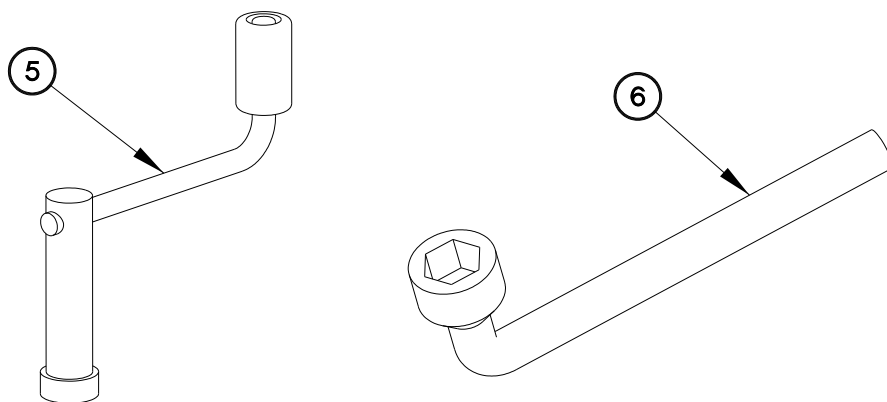
Table 1. Basic Issue Items List - Continued

(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

BASIC ISSUE ITEMS (BII) LIST

0164 00

SECTION II. BASIC ISSUE ITEMS (BII) - Continued



CD165803

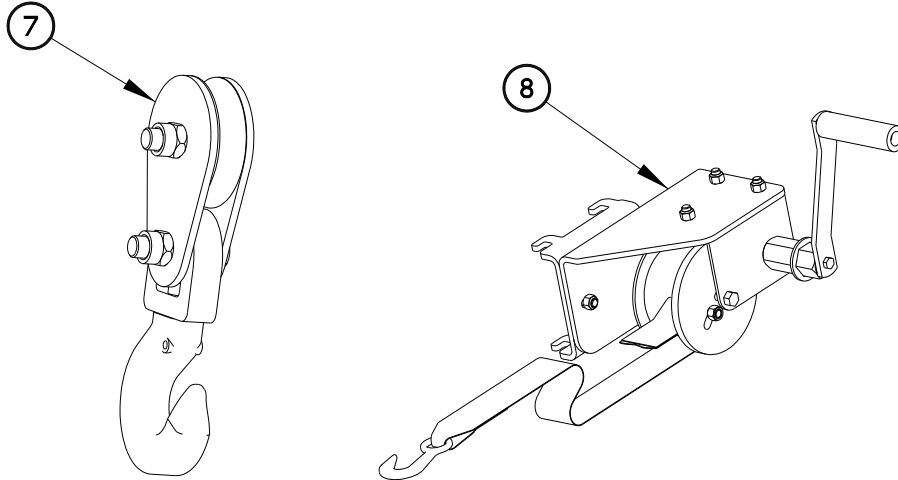
Table 1. Basic Issue Items List - Continued

(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

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		SNATCH BLOCK (19207) 12378672-004	EA	1
8		WINCH ASSEMBLY, SHUTTLE (19207) 12486356	EA	1

EXPENDABLE AND 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 and 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	8030-01-063-7510	Anaerobic Adhesive SAF-T-Lok T77 Type 1 Grade L (81346) AN0211 IAW ASTM-D-5363, 50 ml bottle	BT
2	O	8030-00-597-5367	Anti-seize 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

EXPENDABLE AND DURABLE ITEMS LIST - Continued**0165 00****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	5310-01-540-1433	Nut (12486359-502)	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	8030-00-204-9149	Sealing Compound (05972) (592-14)	TU
14	O	8030-01-218-0321	Sealing Compound (61603) 392030	TU
15	O	7930-00-634-3935	Soap, Laundry (81348) P-S-1792 200 lb drum	DR
16	O	3439-00-006-7764	Solder, Tin Alloy (81346) ASTM B32	SL
17	O		Solvent, Dry Cleaning SD (MIL-PRF-680)	
		6850-01-474-2319	1 gl can	CN
18	O	5640-00-103-2254	Tape, Duct (39428) 1791K70	EA
19	O	5975-01-379-4997	Ties, Cable, Plastic (06383) PLT 35-C-O	HD
20	O	5310-01-540-2063	Washer (12486359-503)	EA
21	O	6145-01-148-2263	Wire, Electrical (80009) 175-0825-00 50 ft	LG

END OF WORK PACKAGE

INTRODUCTION

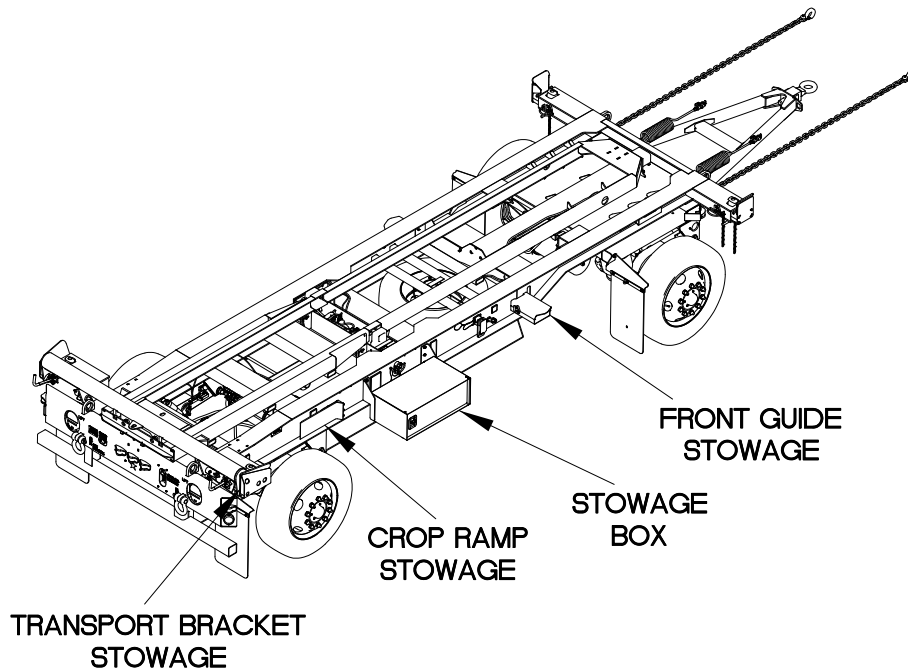
Scope

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

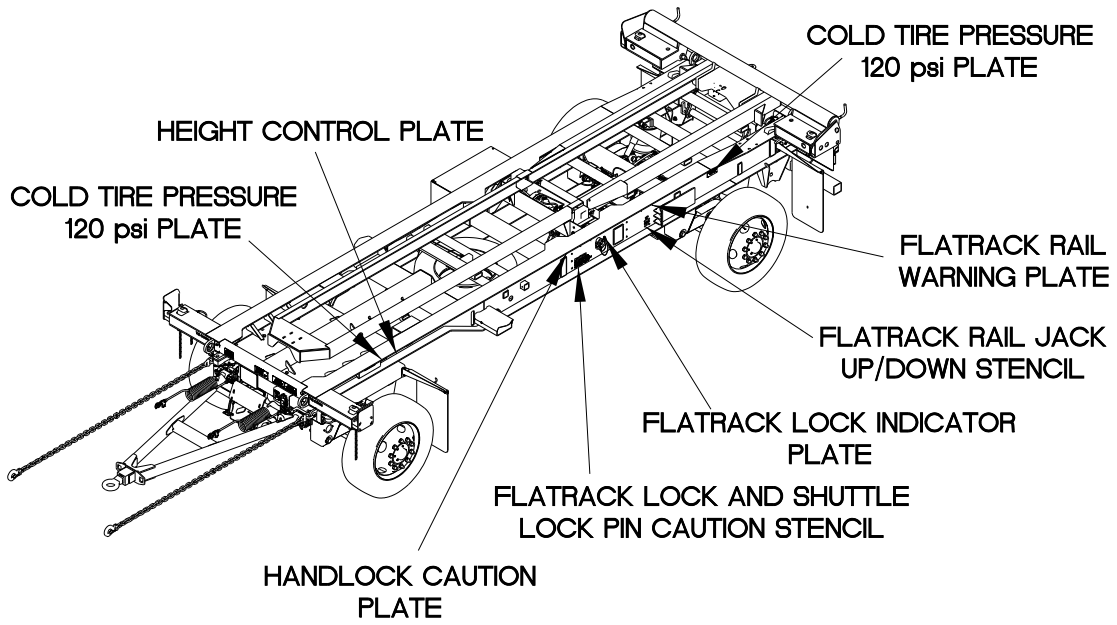
The equipment stowage locator is designed to help inventory items required for safe and efficient operation. The equipment locator is representative of COEI and applicable AAL stowage on the LHST.

STOWAGE LOCATIONS

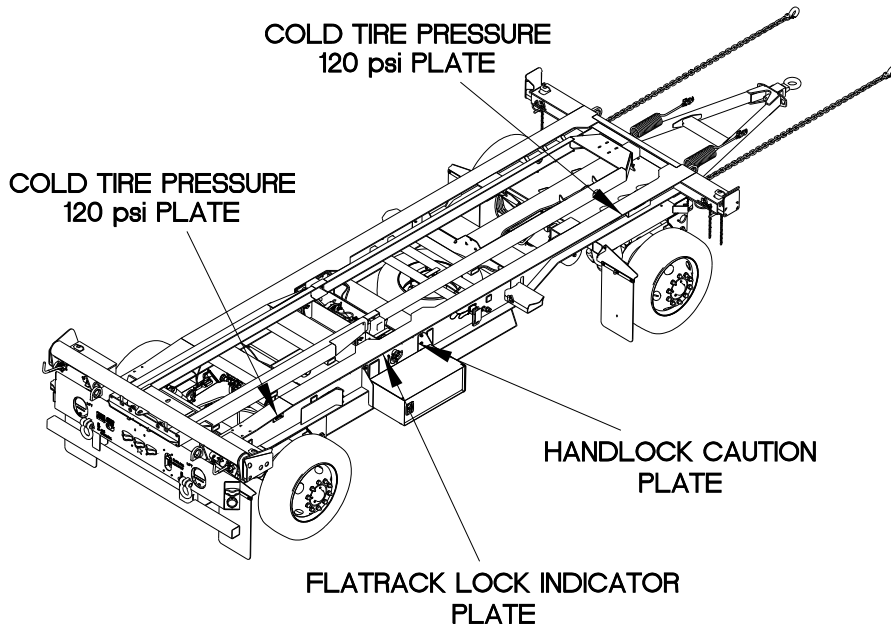


CD167B01

DECALS/STENCILS/DATA PLATES

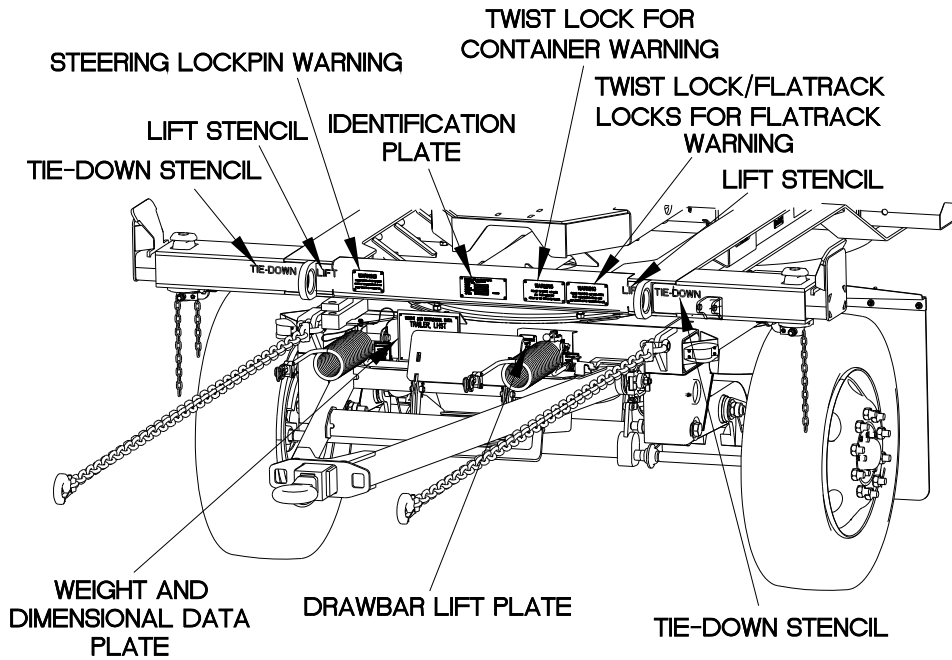


CD167B02

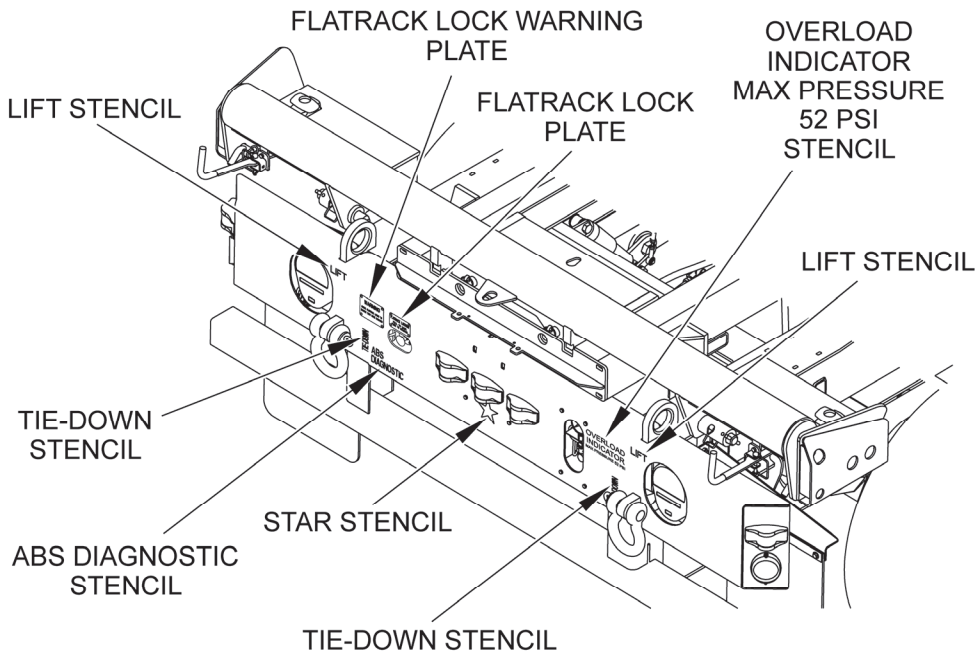


CD167B03

DECALS/STENCILS/DATA PLATES - CONTINUED



CD167B04



DO52357

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	111T1D05A0 1 (59018)	

TOOL IDENTIFICATION LIST-Continued**0167 00****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	Straight Edge	4920-00-442-1030	11-1480 (59501)	
22	Tape Measure	5210-01-604-4231	TPMA25 (55719)	

TOOL IDENTIFICATION LIST - Continued**0167 00****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
23	Tool Kit, Blind Rivet	5180-01-201-4978	D-100-MIL-1(64878)	SC 4910-95-CL-A72
24	Tool Kit, Genl Mech (2 Level Maintenance)	5180-01-454-3787	12B470000 (59678)	SC 9999-01-SKO
25	Tool Kit, Genl Mech (3 Level Maintenance)	5180-00-177-7033	SC 5180-90-CL-N26 (50980)	SC 9999-01-SKO
26	Trestle, Motor Vehicle Maintenance	4910-00-251-8013	306 (79805)	SC 4910-95-CL-A74
27	Vice, Machinist's	5120-00-293-1439	504M2 (79416)	SC 4910-95-CL-A74
28	Wrench Set, Socket	5120-00-148-3706	ANSI-B107.5	4940-95-B21
29	Wrench Set, Crowfoot Ratcheting	5120-00-293-0013	GGG-W-646 (80244)	
30	Wrench, Adjustable, 12 in	5120-00-264-3796	11655778-5 (19207)	
31	Wrench, Adjustable, 8 in	5120-00-240-5328	11655778-3 (19207)	
32	Wrench, Impact, Pneumatic	5130-01-334-7693	2906P1 (65853)	
33	Wrench, Torque, 50-250- lb-ft	5120-01-042-0982	B107.14M (05047)	SC 4910-95-CL-A74
34	Wrench, Torque, 0-175 lb-ft	5120-00-640-6364	1753LDF (08194)	SC 4910-95-CL-A74
35	Wrench, Torque, 0-200 lb-in	5120-00-853-4538	B10714M	SC 4910-95-CL-A72
36	Wrench, Torque, 0-600 lb-ft	5120-00-221-7983	SW130-301 (10001)	SC 4910-95-CL-A72
37	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	5305-01-540-2008	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	5310-01-487-4647	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

MANDATORY REPLACEMENT PARTS - Continued**0168 00****Table 1. Mandatory Replacement Parts List - Continued.**

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	NASMS35338- 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

MANDATORY REPLACEMENT PARTS - Continued**0168 00****Table 1. Mandatory Replacement Parts List - Continued.**

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	5310-01-540-3022	Nut, Self-Locking	As Indicated in Task
33	12486359-502	5310-01-540-1433	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

MANDATORY REPLACEMENT PARTS - Continued**0168 00****Table 1. Mandatory Replacement Parts List - Continued.**

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	NASMS24665-302 (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		5315-01-476-4740	Pin, Cotter, Hairpin	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)	5300-01-579-1366	Seal, Unitized	As Indicated in Task
53	12486559	2510-01-540-6130	Strip, Weather	As Indicated in Task

MANDATORY REPLACEMENT PARTS - Continued

0168 00

Table 1. Mandatory Replacement Parts List - Continued.

54	P00957 (OYJB5)	8030-00-148-9833	Compound, Sealing	As Indicated in Task
55	12443614-014		Pin, Cotter	As Indicated in Task
56	MIL-S-46163	8030-01-054-3968	Compound, Threadlocking	As Indicated in Task

END OF WORK PACKAGE

TORQUE LIMITS

0169 00

GENERAL TORQUE SPECIFICATIONS

THIS CHART PROVIDES TIGHTENING TORQUES FOR GENERAL PURPOSE APPLICATIONS WHEN SPECIAL TORQUES ARE NOT SPECIFIED ON PROCESS OR DRAWING.

ASSEMBLY TORQUES APPLIED TO PLATED NUTS AND CAPSCREWS ASSEMBLED WITHOUT SUPPLEMENTAL LUBRICATION (AS RECEIVED CONTIDION). 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 [158]	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]	1100 [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, and 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 [325]
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]			

INDEX

Subject

WP Sequence No.

24 VDC Intervehicular Cable Replacement.....0062 00

A

Air Bladder Replacement.....0096 00
 Air Brake Air Chamber Replacement0081 00
 Air Brake Arm Replacement0076 00
 Air Ride Control Valve Replacement0080 00
 Air System Loses Pressure During Operation/Slow Air Pressure Buildup.....0042 00
 Air Tank Replacement0078 00
 All Lights Do Not Illuminate.....0030 00
 Anti-Lock Brake System (ABS) Control Sensor Extension Cable Replacement0073 00
 Anti-Lock Brake System (ABS) Diagnostic Light Assembly Replacement.....0077 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Eleven Times0039 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fifteen Times0041 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Five Times0034 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Four Times0033 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Fourteen Times0040 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Nine Times0037 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Seven Times0036 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times.....0035 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Ten Times0038 00
 Anti-Lock Brake System (ABS) Diagnostic Light Blinks Three Times.....0032 00
 Anti-Lock Brake System (ABS) Diagnostic Light Does Not Operate0031 00
 Anti-Lock Brake System (ABS) ECU Valve Replacement0071 00
 Anti-Lock Brake System (ABS) Power and Diagnostic Cable and Bracket Replacement.....0074 00
 Anti-Lock Brake System (ABS) Relay Valve and Protection Valve Replacement.....0075 00
 Anti-Lock Brake System (ABS) Relay Valve Harness Replacement0072 00
 Anti-Lock Brake System (ABS) Wheel Speed Sensor Replacement.....0070 00
 Axle Assembly Replacement.....0067 00

B

Both Blackout Stoplights Do Not Illuminate.....0029 00
 Brakes Replacement/Adjustment0069 00
 Breather Valve Replacement 0082-00
 Bump Stop Replacement.....0104 00

C

Center Rear Marker Lights Do Not Illuminate.....0020 00
 Changing/Serviceing Tire.....0053 00
 Circuit Breaker, Module, and Connector Replacement.....0057 00
 Cleaning Trailer.....0054 00
 Components of End Item (COIE) and Basic Issue Item (BII) Lists.....0164 00
 Composite Taillight Assembly Replacement0060 00

INDEX - CONTINUED

<u>Subject</u>	<u>WP Sequence No.</u>
D	
Decal and Stencil Guide	0166 00
Drawbar Does Not Raise/Lower	0050 00
Drawbar Eye Replacement	0092 00
Drawbar Lift Valve Replacement	0094 00
Drawbar Replacement	0090 00
E	
Emergency/Service Gladhand and Hose Replacement	0079 00
Equipment Description and Data	0002 00
Expendable and Durable List	0165 00
F	
Flatrack Air Chamber and Lock Replacement	0107 00
Flatrack Lock Push/Pull Valve Replacement	0108 00
Flatrack Locks Do Not Release/Lock	0049 00
Flatrack Rail and Pivot Bracket Replacement	0089 00
Four Port Tank Valve Replacement	0109 00
Frame Rail Replacement	0087 00
Front Marker Lights Do Not Illuminate	0014 00
Front Suspension Does Not Raise/Lower	0047 00
G	
General Information/Warranty (BAE)	0001 00
General Information/Warranty (Oshkosh)	0001 01
H	
Height Actuation Valve Replacement	0110 00
Height Control Valve and Linkage Replacement/Adjustment	0084 00
J	
Junction Box Replacement	0059 00
L	
Left Blackout Stoplight Does Not Illuminate	0028 00
Left Blackout Taillight Does Not Illuminate	0027 00
Left Front Marker Light Does Not Illuminate	0016 00
Left Rear Electrical Harness Replacement	0064 00
Left Rear Marker Light Does Not Illuminate	0018 00
Left Stoplight Does Not Illuminate	0024 00
Left Taillight Does Not Illuminate	0023 00

INDEX - CONTINUED

<u>Subject</u>	<u>WP Sequence No.</u>
M	
Main Electrical Harness Replacement	0066 00
Maintenance Allocation Chart (MAC)	0113 00
Maintenance Allocation Chart (MAC) Introduction.....	0112 00
Mandatory Replacement Parts (MRP)	0168 00
Marker Light Assembly Replacement.....	0061 00
N	
National Stock Number (NSN) List	0162 00
O	
Operation in Dusty or Sandy Areas	0012 00
Operation in Extreme Cold	0006 00
Operation in Extreme Heat.....	0007 00
Operation in Mud	0011 00
Operation in Rainy or Humid Conditions	0008 00
Operation in Salt Water Areas	0009 00
Operation in Snow or Ice	0010 00
Operational Checkout and Troubleshooting Procedures.....	0013 00
Overload Indicator Assembly Replacement	0106 00
Overload Indicator Does Not Operate.....	0051 00
P	
Part Number (P/N) Index.....	0163 00
Pressure Relief Valve Replacement	0068 00
Preventive Maintenance Checks and Services (PMCS).....	0052 00
R	
Rail Assembly Does Not Raise/Lower	0048 00
Rail Assembly Operation	0005 00
Rail Lift Jack Replacement	0102 00
Rear Electrical Harness Replacement	0065 00
References	0111 00
Reflectors Replacement	0105 00
Right Blackout Stoplight Does Not Illuminate.....	0026 00
Right Blackout Taillight Does Not Illuminate	0025 00
Right Front Marker Light Does Not Illuminate	0015 00
Right Rear Electrical Harness Replacement.....	0063 00
Right Rear Marker Light Does Not Illuminate	0019 00
Right Stoplight Does Not Illuminate	0022 00
Right Taillight Does Not Illuminate.....	0021 00
S	
Safety Chain Assembly	0091 00
Service Brakes Do Not Apply	0043 00
Shock Absorber Replacement	0095 00

INDEX - CONTINUED

Subject

WP Sequence No.

S - Continued

Shuttle and Guide Bracket Replacement.....0100 00
Shuttle Twist Lock Replacement0101 00
Side Rear Marker Lights Do Not Illuminate0017 00
Spare Tire Carrier Replacement.....0093 00
Spare Tire Carrier Winch Assembly Replacement.....0103 00
Splashguard Replacement.....0097 00
Spring Brake Caging.....0055 00
Stacking Trailer/Preparation for Transport.....0056 00
Suspension Assembly Replacement.....0083 00
Suspension System Does Not Support Trailer Load.....0046 00
Suspension System Sits Uneven0045 00

T

Theory of Operation0003 00
Tiedown Ring Replacement.....0086 00
Tool Identification List.....0167 00
Toolbox Assembly Replacement/Repair0098 00
Torque Limits0169 00
Trailer Brakes Unevenly or Brakes Pull to One Side or Grab.....0044 00
Trailer Controls0004 00
Turntable Assembly Replacement0099 00
Twist Lock Assembly Replacement.....0088 00

V

Voltage Converter Box Replacement0058 00

W

Wheel Bearing/Hub Seal Replacement0085 00

END OF WORK PACKAGE

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS	Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE <i>Date you filled out this form.</i>
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For use of this form, see AR 25-30; the proponent agency is OAASA.

TO (Forward to proponent of publication or form) (Include ZIP Code) U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	FROM (Activity and location) (Include ZIP Code) <i>Your mailing address</i>
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PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER TM 9-2330-334-13&P	DATE 14 February 2007	TITLE Technical Manual, FMTV LHST
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ITEM	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON (Exact wording of recommended change must be given)
	0007-3					<i>Figure 2, Item 9 should show a lockwasher. Currently shows a flat washer.</i>
	0018-2					<i>Cleaning and inspection, Step 6, reference to governor support pin (14) is wrong reference. Reference should be change to (12).</i>
<h1>SAMPLE</h1>						

TYPED NAME, GRADE OR TITLE <i>Your Name</i>	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION <i>Your Phone Number</i>	SIGNATURE <i>Your Signature</i>
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TO (Forward direct to addressee listed in publication) U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000	FROM (Activity and location) (Include ZIP Code) <i>Your Address</i>	DATE <i>Date you filled out this form</i>
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PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION/FORM NUMBER TM 9-2330-334-13&P	DATE 14 February 2007	TITLE Technical Manual, FMTV LHST
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
<h1>SAMPLE</h1>								

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 <i>Your Name</i>	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION <i>Your Phone Number</i>	SIGNATURE <i>Your Signature</i>
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
For use of this form, see AR 25-30; the proponent agency is OAASA							
TO (Forward to proponent of publication or form) (Include ZIP Code) U.S. Army TACOM Life Cycle Management Command ATTN: AMSTA-LCL-MPP/TECH PUBS 6501 E. 11 Mile Road, Warren, MI 48397-5000						FROM (Activity and location) (Include ZIP Code)	
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	PAGE	PARA-GRAPH	LINE	FIGURE NO.	TABLE	RECOMMENDED CHANGES AND REASON	
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS (Any general remarks, or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)

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TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
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RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS						Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
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PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

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TYPED NAME, GRADE OR TITLE				TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION			SIGNATURE	

By Order of the Secretary of the Army:

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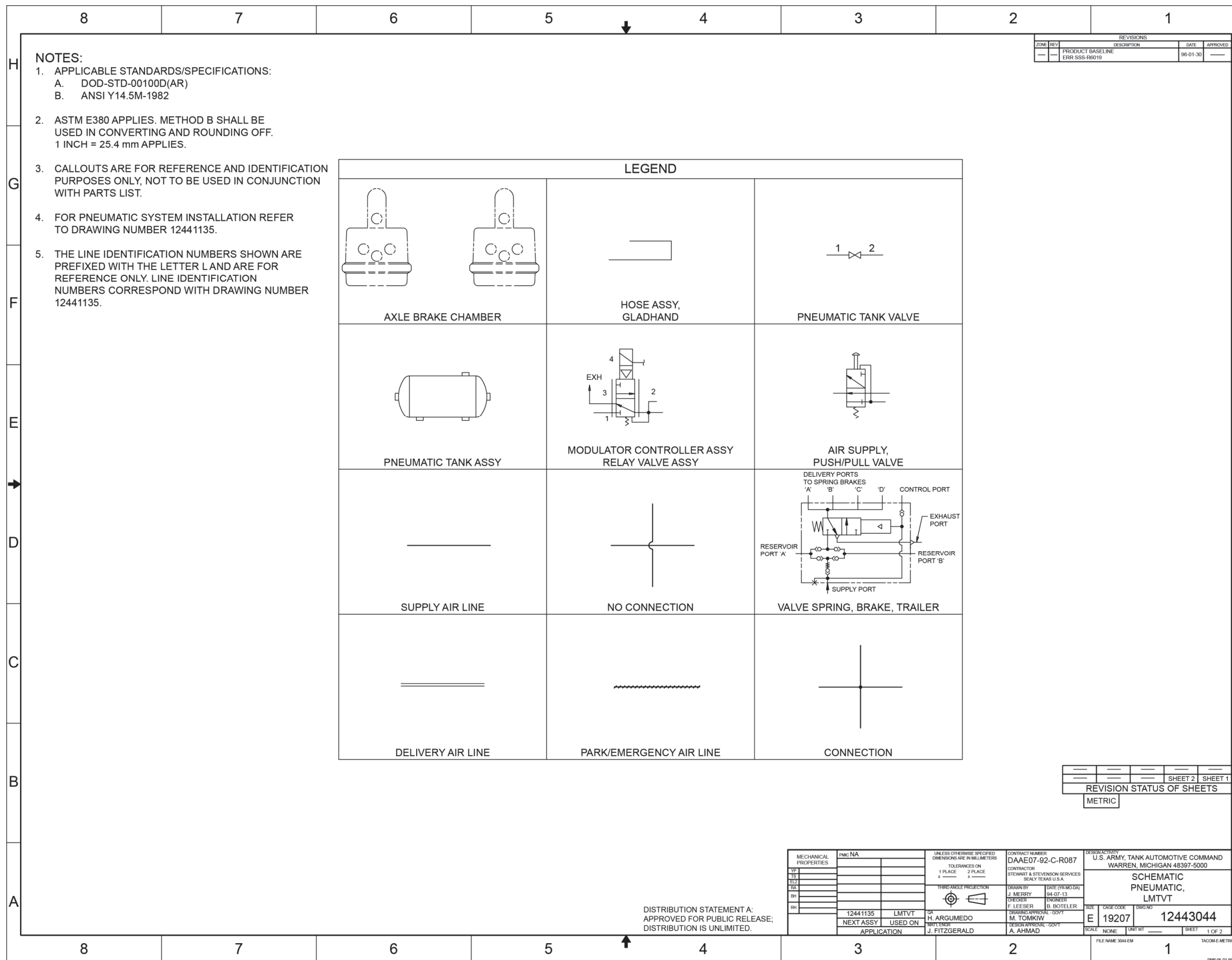
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*Administrative Assistant to the
Secretary of the Army*

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PETER J. SCHOOMAKER
*General, United States Army
Chief of Staff*

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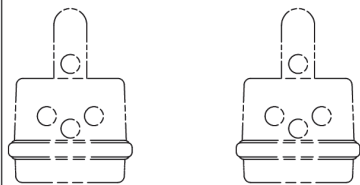

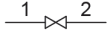

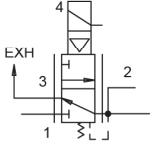
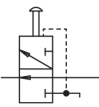

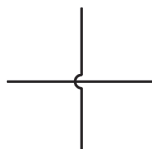
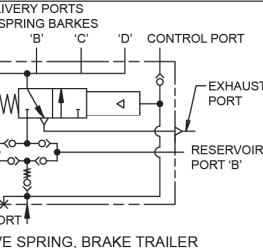


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requirements for Family of Medium Tactical Vehicles (FMTVA1) TM 9-2330-334-13&P.



NOTES:

1. APPLICABLE STANDARDS/SPECIFICATIONS:
 - A. DOD-STD-00100D(AR)
 - B. ANSI Y14.5M-1982
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 12441140.
5. THE LINE IDENTIFICATION NUMBERS SHOWN ARE PREFIXED WITH THE LETTER M AND ARE FOR REFERENCE ONLY. LINE IDENTIFICATION NUMBERS CORRESPOND WITH DRAWING NUMBER 12441140.

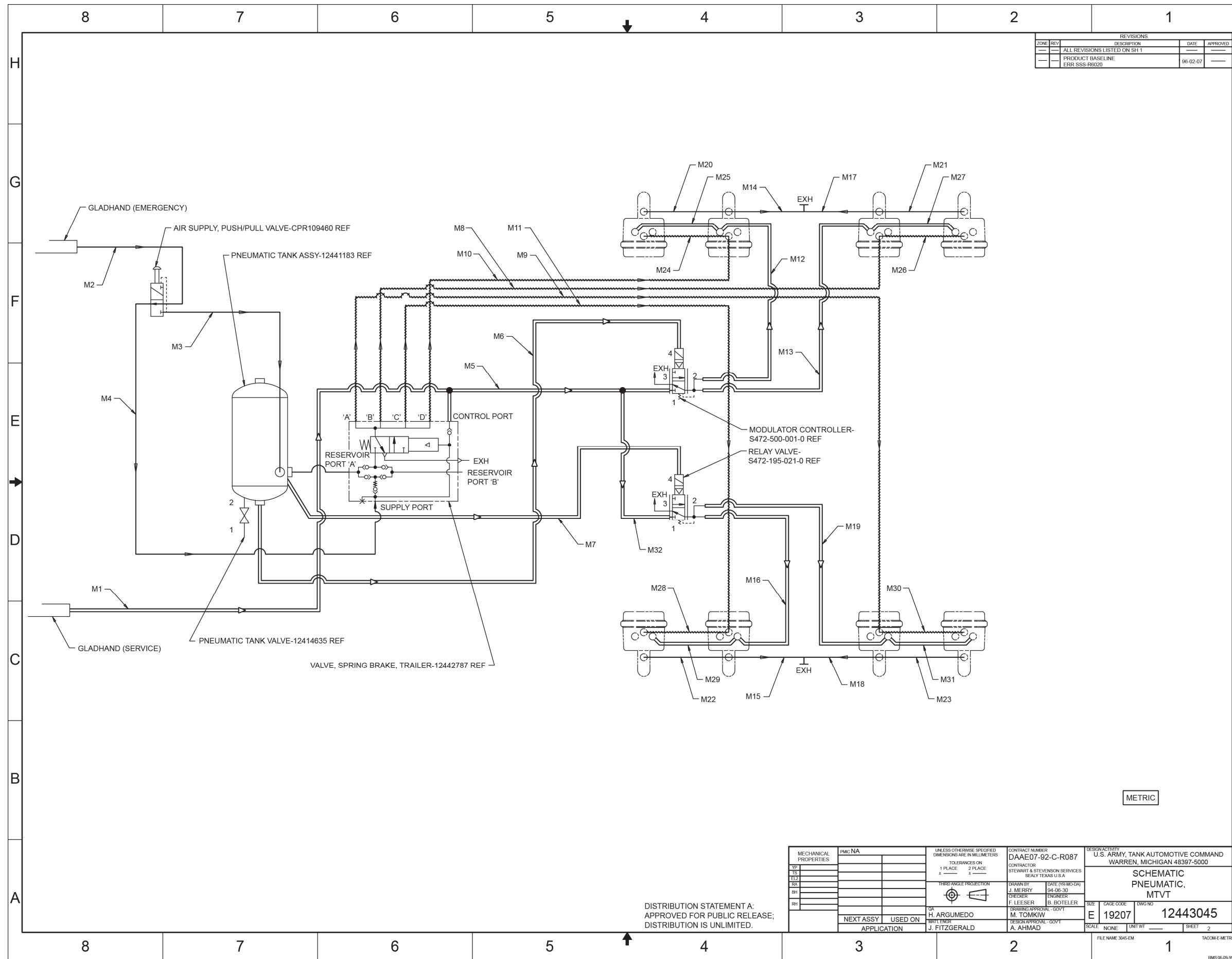
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ZONE	REV	DESCRIPTION	DATE
		PRODUCT BASELINE	96-02-07
		ERR SSS-R6020	

LEGEND		
		
AXLE BRAKE CHAMBER	HOSE ASSY, GLANDLAND	PNEUMATIC TANK VALVE
		
PNEUMATIC TANK ASSY	MODULATOR CONTROLLER ASSY RELAY VALVE ASSY	AIR SUPPLY, PUSH/PULL VALVE
		
SUPPLY AIR LINE	NO CONNECTION	CONNECTION
		
DELIVERY AIR LINE	PARK/EMERGENCY AIR LINE	

REVISION STATUS OF SHEETS	
SHEET 2	SHEET 1
METRIC	

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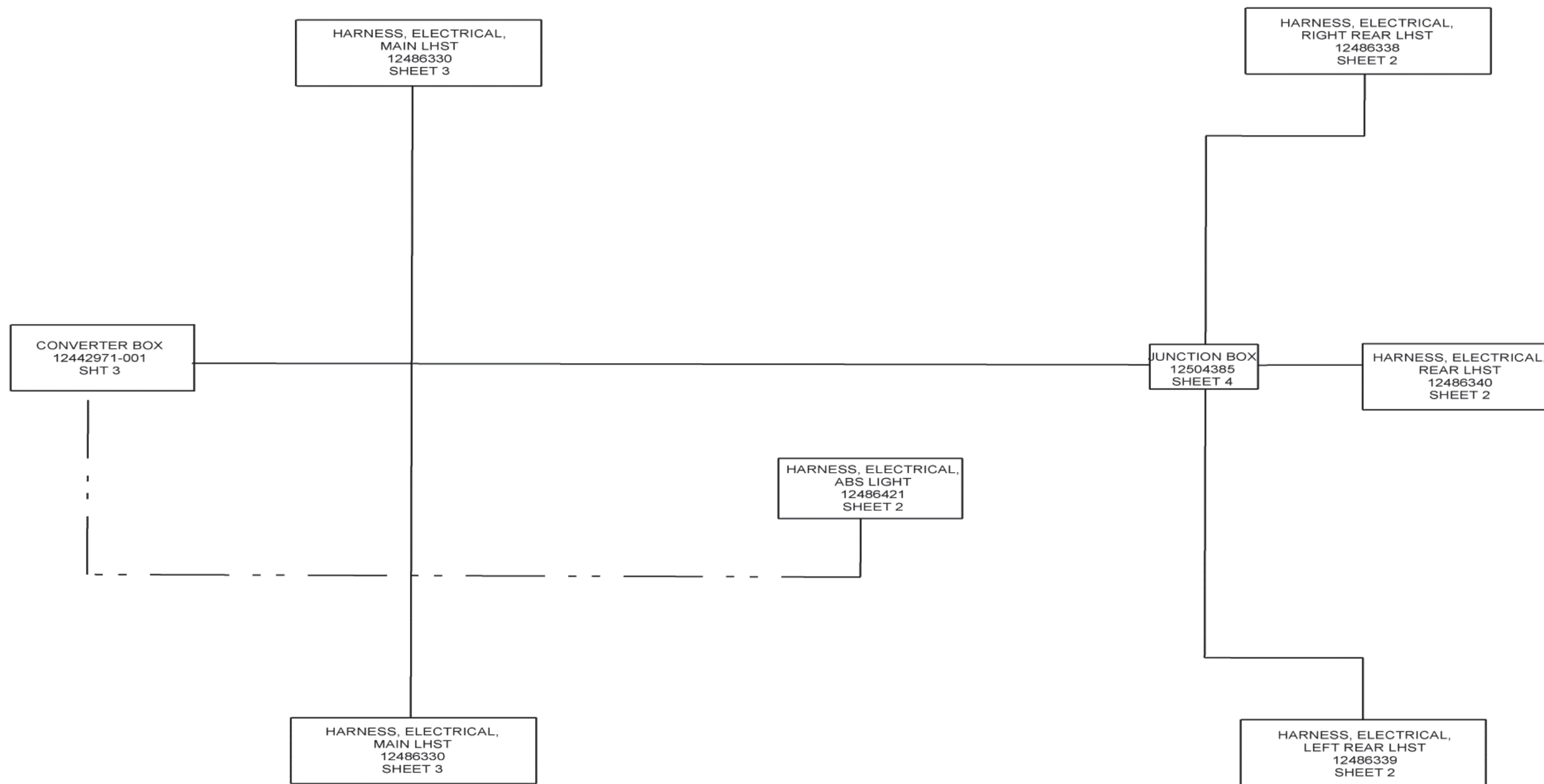
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TEMP		TOLERANCES ON	CONTRACTOR STEWART & STEVENSON SERVICES SEALY TEXAS U.S.A.	SCHEMATIC PNEUMATIC, MTVT
TS		1 PLACE	DRAWN BY J. MERRY	
EL		2 PLACE	DESIGNED BY F. LEESER	ENGINEER B. BOTTELER
RA			THIRD ANGLE PROJECTION	
RI				
IRI				
	12441140	MTVT	DRAWING APPROVAL - GOVT H. ARGUMEDO	SCALE E 19207
	NEXT ASSY	USED ON	DESIGN APPROVAL - GOVT J. FITZGERALD	UNIT WT
	APPLICATION			FILE NAME 3045-EM



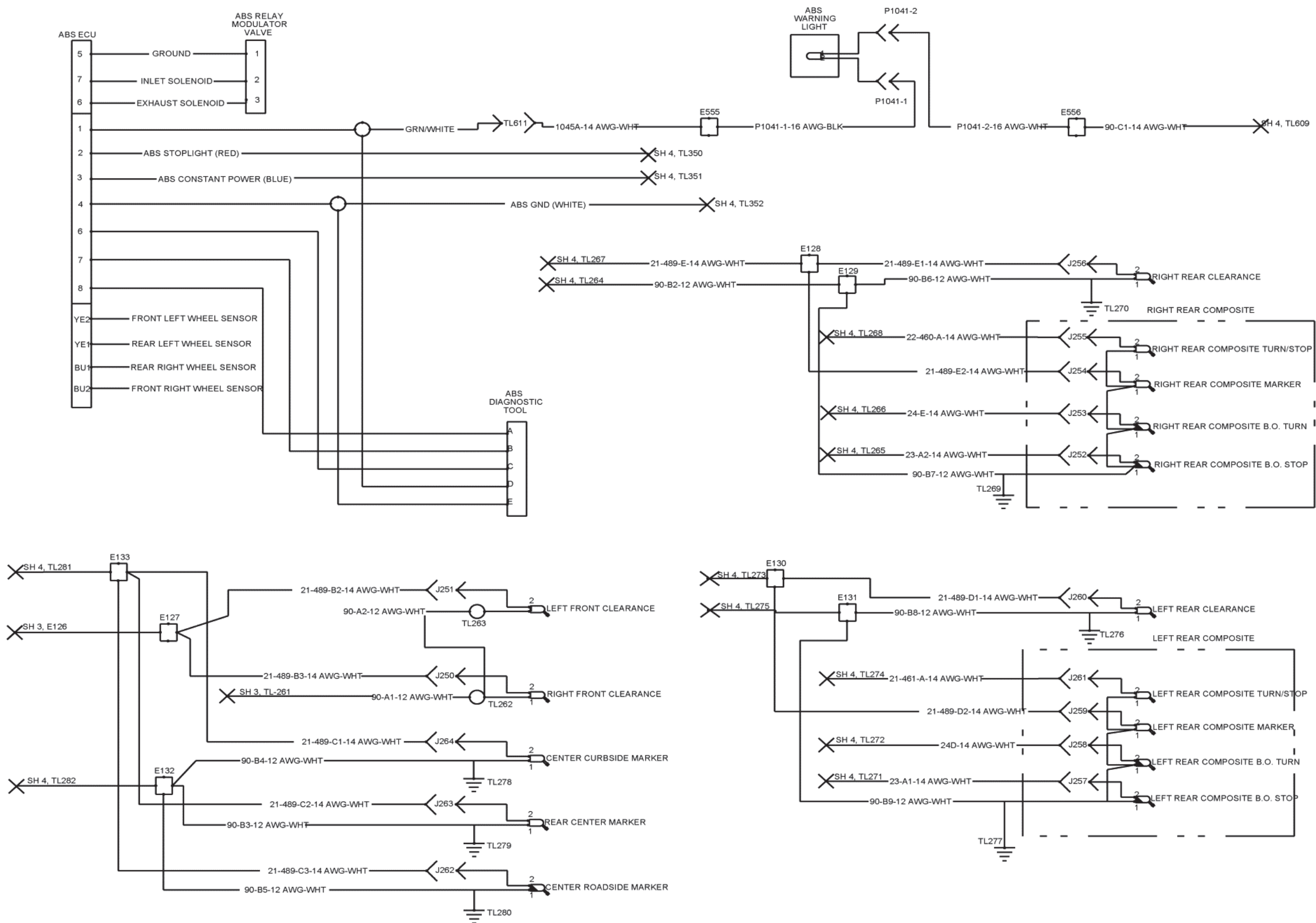
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
		ALL REVISIONS LISTED ON SH 1		
		PRODUCT BASELINE	96-02-07	
		ERR SSS-46020		

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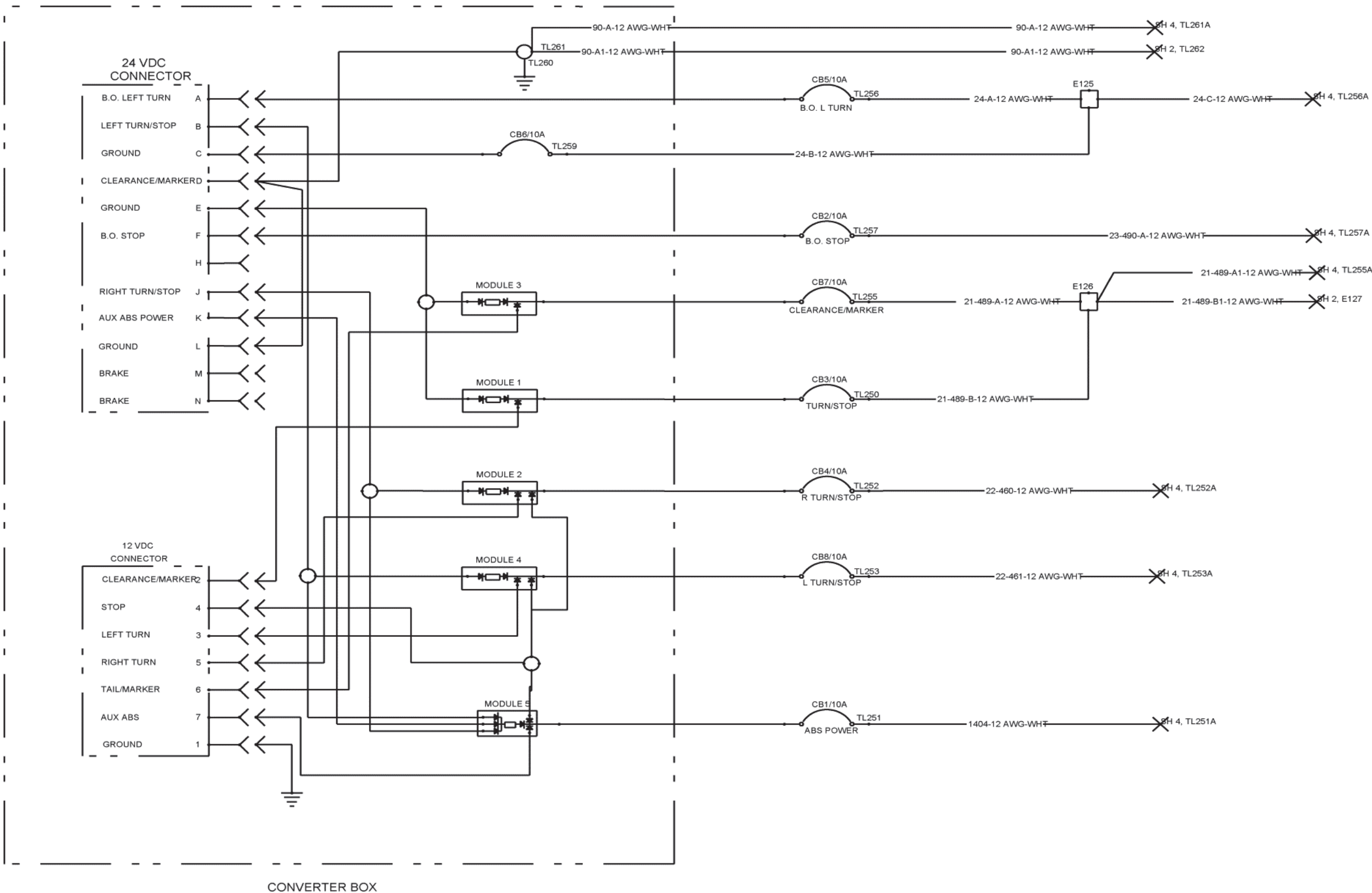
MECHANICAL PROPERTIES	PMC NA	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS	CONTRACT NUMBER DAAE07-92-C-R087	DESIGNACTIVITY U.S. ARMY, TANK AUTOMOTIVE COMMAND WARREN, MICHIGAN 48397-5000
REF		TOLERANCES ON 1 PLACE 2 PLACE ± ±	CONTRACTOR STEWART & STEVENSON SERVICES SEALY TEXAS U.S.A.	SCHEMATIC PNEUMATIC, MTVT
TS		THIRD ANGLE PROJECTION	DESIGNED BY J. MERRY	
REL			DATE (YR/MO/DA) 94-06-30	SIZE E
ISA			CHECKER F. LEE-SER	CAGE CODE 19207
SH			ENGINEER B. BOTTLER	DWG NO 12443045
RI			DESIGN APPROVAL A. AHMAD	SCALE NONE
RI				UNIT WT SHEET 2
	NEXT ASSY APPLICATION	USED ON	DATE	FILE NAME 3045-EM



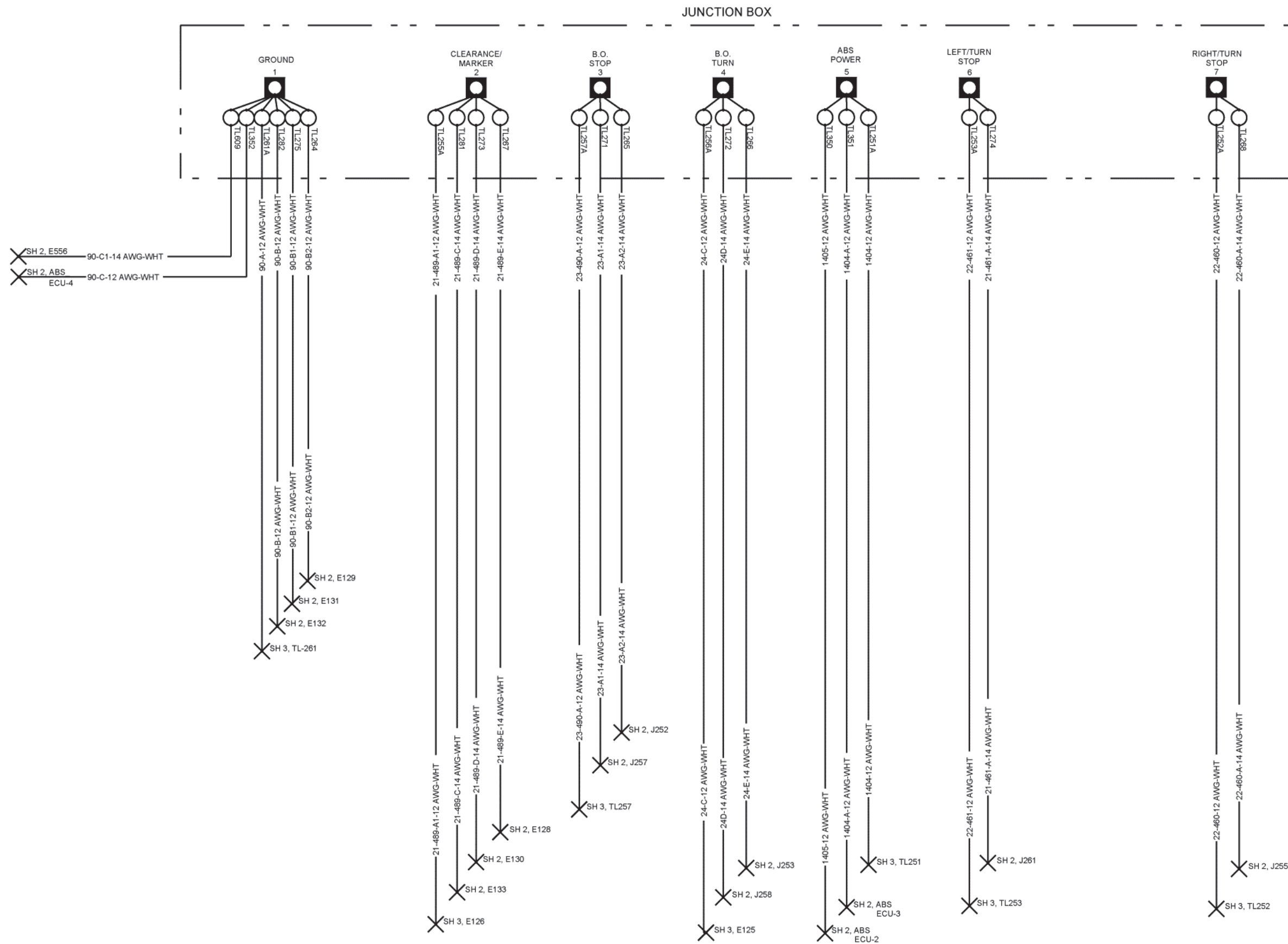
D06997



D06998



D06999



D07000

THE METRIC SYSTEM AND EQUIVALENTS

<p>Linear Measure</p> <p>1 Centimeter = 10 Millimeters = 0.01 Meters = 0.3937 Inches 1 Meter = 100 Centimeters = 1000 Millimeters = 39.37 Inches 1 Kilometer = 1000 Meters = 0.621 Miles</p> <p>Weights</p> <p>1 Gram = 0.001 Kilograms = 1000 Milligrams = 0.035 Ounces 1 Kilogram = 1000 Grams = 2.2 Pounds 1 Metric Ton = 1000 Kilograms = 1 Megagram = 1.1 Short Tons</p> <p>Liquid Measure</p> <p>1 Milliliter = 0.001 Liters = 0.0338 Fluid Ounces 1 Liter = 1000 Milliliters = 33.82 Fluid Ounces</p>	<p>Square Measure</p> <p>1 Sq Centimeter = 100 Sq Millimeters = 0.155 Sq Inches 1 Sq Meter = 10,000 Sq Centimeters = 10.76 Sq Feet 1 Sq Kilometer = 1,000,000 Sq Meters = 0.386 Sq Miles</p> <p>Cubic Measure</p> <p>1 Cu Centimeter = 1,000 Cu Millimeters = 0.06 Cu Inches 1 Cu Meter = 1,000,000 Cu Centimeters = 35.31 Cu Feet</p> <p>Temperature</p> <p>$9/5 C^{\circ} + 32 = F^{\circ}$ $5/9 (F^{\circ} - 32) = C^{\circ}$ 212° Fahrenheit is equivalent to 100° Celsius 90° Fahrenheit is equivalent to 32.2° Celsius 32° Fahrenheit is equivalent to 0° Celsius</p>
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APPROXIMATE CONVERSION FACTORS

To Change	To	Multiply By
Inches	Centimeters	2.540
Feet	Meters	0.305
Yards	Meters	0.914
Miles	Kilometers	1.609
Sq Inches	Sq Centimeters	6.451
Sq Feet	Sq Meters	0.093
Sq Yards	Sq Meters	0.836
Sq Miles	Sq Kilometers	2.590
Acres	Sq Hectometers	0.405
Cubic Feet	Cubic Meters	0.028
Cubic Yards	Cubic Meters	0.765
Fluid Ounces	Milliliters	29.573
Pints	Liters	0.473
Quarts	Liters	0.946
Gallons	Liters	3.785
Ounces	Grams	28.349
Pounds	Kilograms	0.454
Short Tons	Metric Tons	0.907
Pound-Feet	Newton-Meters	1.356
Pounds per Sq Inch	Kilopascals	6.895
Miles per Gallon	Kilometers per Liter	0.425
Miles per Hour	Kilometers per Hour	1.609

To Change	To	Multiply By
Centimeters	Inches	0.394
Meters	Feet	3.280
Meters	Yards	1.094
Kilometers	Miles	0.621
Sq Centimeters	Sq Inches	0.155
Sq Meters	Sq Feet	10.764
Sq Meters	Sq Yards	1.196
Sq Kilometers	Sq Miles	0.386
Sq Hectometers	Acres	2.471
Cubic Meters	Cubic Feet	35.315
Cubic Meters	Cubic Yards	1.308
Milliliters	Fluid Ounces	0.034
Liters	Pints	2.113
Liters	Quarts	1.057
Liters	Gallons	0.264
Grams	Ounces	0.035
Kilograms	Pounds	2.205
Metric Tons	Short Tons	1.102
Newton-Meters	Pound-Feet	0.738
Kilopascals	Pounds per Sq Inch	0.145
Kilometers per Liter	Miles per Gallon	2.354
Kilometers per Hour	Miles per Hour	0.621

PIN: 083675-000