

---

**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 22, WP 0167 00)  
Goggles, Industrial (Item 8, WP 0167 00)

**Materials/Parts**

Ties, Cable, Plastic (Item 20, WP 0165 00)  
Solder, Tin Alloy (Item 17, WP 0165 00)  
Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)

**Materials/Parts (Cont)**

Washer, Lock (3) (Item 11, WP 0168 00)  
Washer, Lock (4) (Item 12, WP 0168 00)  
Washer, Lock (2) (Item 13, WP 0168 00)  
Washer, Lock (3) (Item 16, WP 0168 00)

**Personnel Required**

Two

**Equipment Conditions**

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

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) circuit breakers and modules.

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

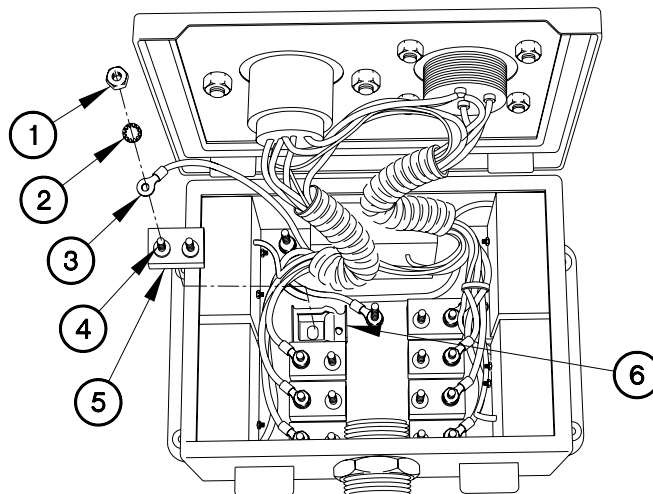
Perform the following step on circuit breakers 1, 2, 3, 5, 6, and 7.

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 shown.

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

**NOTE**

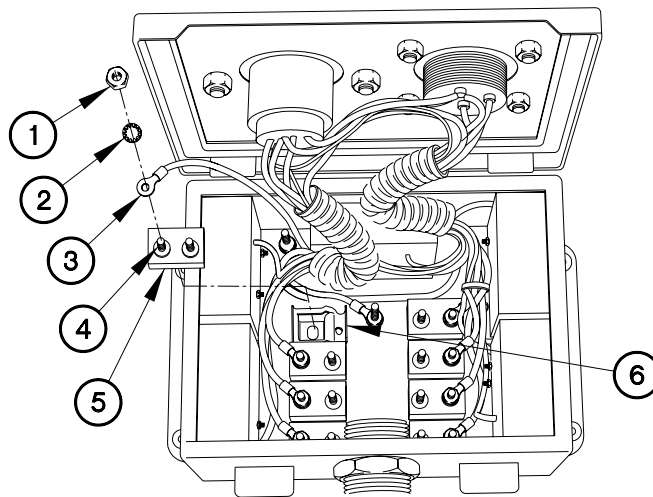
Perform the following step on circuit breakers 4 and 8.

2. Install two terminal lugs (3) on circuit breaker "BAT" terminal stud (4) with lockwasher (2) and nut (1).

**NOTE**

Perform the following step on circuit breakers 1, 2, 3, 5, 6, and 7.

3. Install terminal lug (3) on circuit breaker "BAT" terminal stud (4) with lockwasher (2) and nut (1).



CD057R01

# CIRCUIT BREAKER, MODULE, AND CONNECTOR REPLACEMENT - Continued

0057 00

## MODULE REMOVAL

### NOTE

This task shows locations of Voltage converter box module wiring connection points. Modules 1 through 5 are removed the same way, Module 3 shown. Refer to **Table 1: Voltage Converter Box Module Wiring Connections for details.**

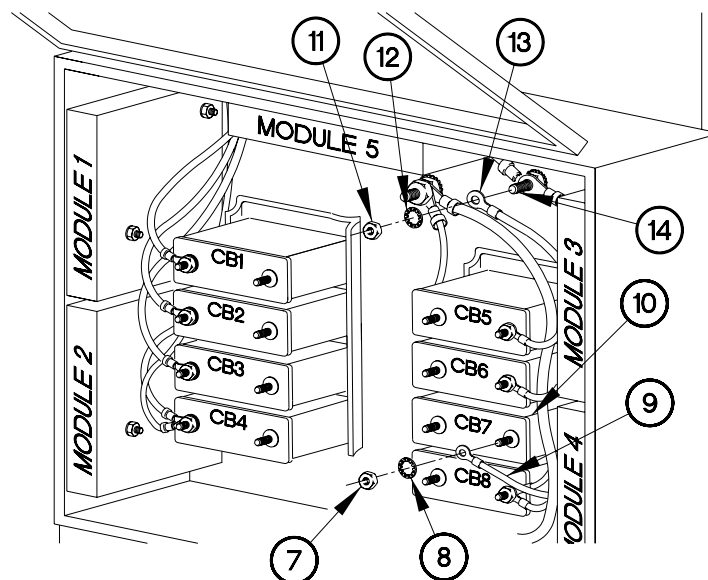
Tag wires and connection points prior to disconnecting.

Remove plastic cable ties and convoluted tubing as required.

1. Remove nut (7), lockwasher (8), and wire (9) from circuit breaker CB7 "BAT" terminal stud (10). Discard lockwasher.
2. Remove nut (11), lockwasher (12), and wire (13) from right ground stud (14). Discard lockwasher.

**Table 1: Voltage Converter Box Module Wiring Connections.**

MODULE	CONNECTION POINTS
1	CB3, left ground stud, Position 2BL-12 VDC connector, E-Pin-24 VDC connector
2	CB4, left ground stud, Positions 4RED/ 5GRN-12 VDC connector, J-Pin-24 VDC connector
3	CB7, right ground stud, Position 6BRN-12 VDC connector, E pin -24 VDC connector
4	CB8, right ground stud, Positions 3YEL/ 4RED-12 VDC connector, B-Pin-24 VDC connector
5	CB1, right ground stud, Positions 7BLU/ 4RED-12 VDC connector, B-/J-/K-Pins-24 VDC connector



CD057R02



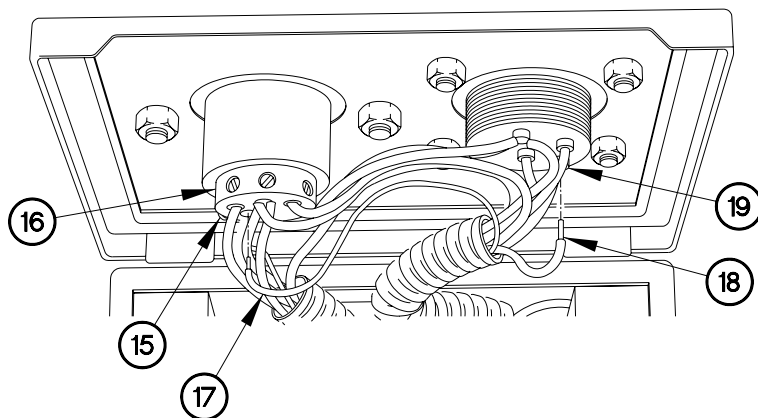
---

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

---

**0057 00****MODULE REMOVAL – Continued**

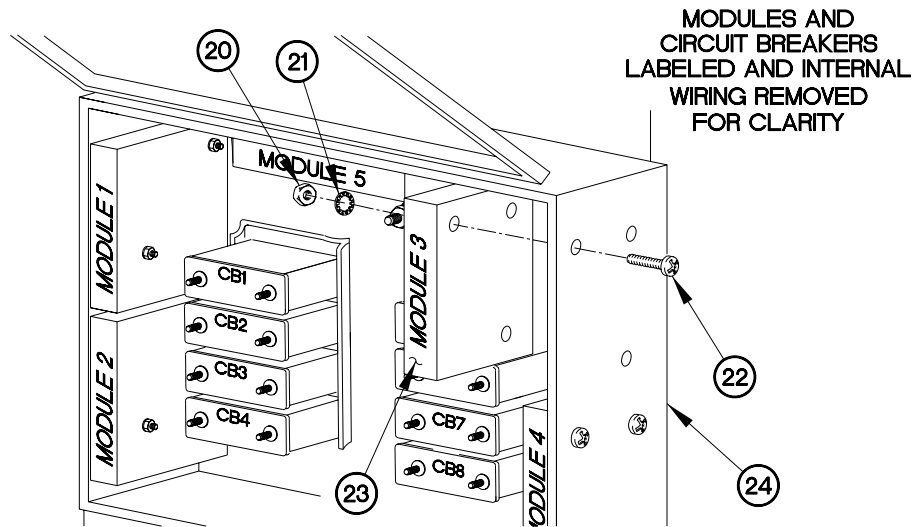
3. Loosen screw (15) at position 6BRN on 12 VDC connector (16).
4. Remove wire (17) from position 6BRN on 12 VDC connector (16).
5. Remove wire (18) from pin E on 24 VDC connector (19).



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 1. Voltage Converter Box Module Wiring Connections** for details.

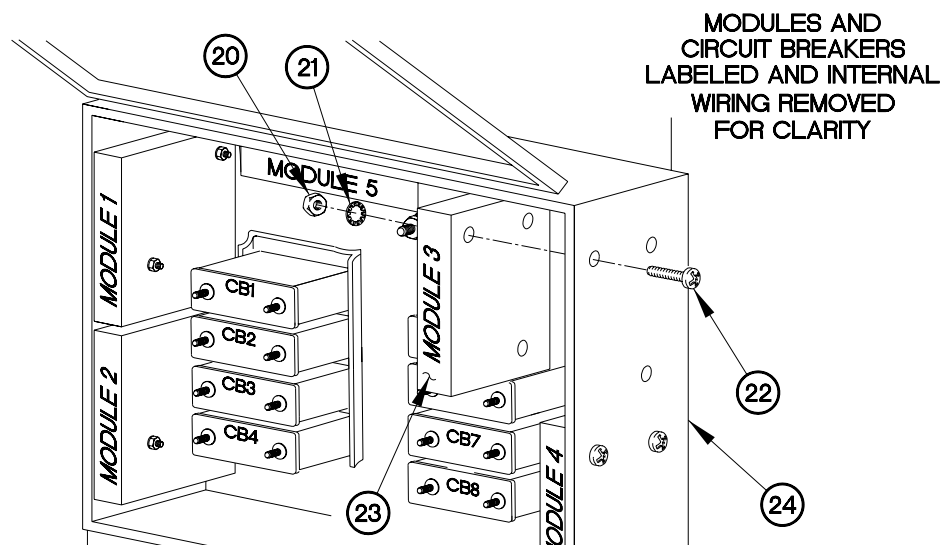
Modules 1 through 5 are installed the same way, Module 3 shown.

Install plastic cable ties and convoluted tubing as required.

**Table 1: Voltage Converter Box Module Wiring Connections.**

MODULE	CONNECTION POINTS
1	CB3, left ground stud, Position 2BL-12 VDC connector, E-Pin-24 VDC connector
2	CB4, left ground stud, Positions 4RED/ 5GRN-12 VDC connector, J-Pin-24 VDC connector
3	CB7, right ground stud, Position 6BRN-12 VDC connector, E pin -24 VDC connector
4	CB8, right ground stud, Positions 3YEL/ 4RED-12 VDC connector, B-Pin-24 VDC connector
5	CB1, right ground stud, Positions 7BLU/ 4RED-12 VDC connector, B-/J-/K-Pins-24 VDC connector

1. Install module (23) in voltage converter box (24) with three screws (22), lockwashers (21), and nuts (20).



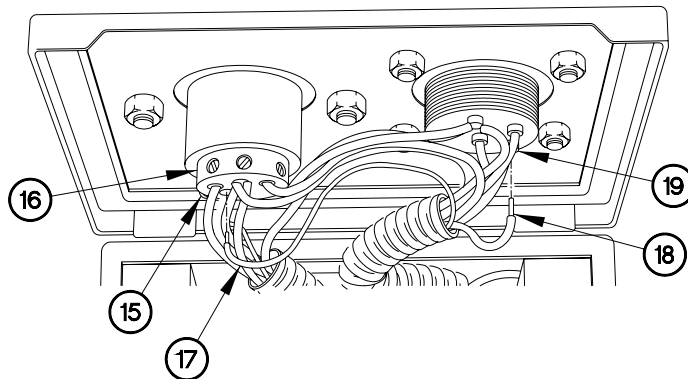
CD057R04

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

0057 00

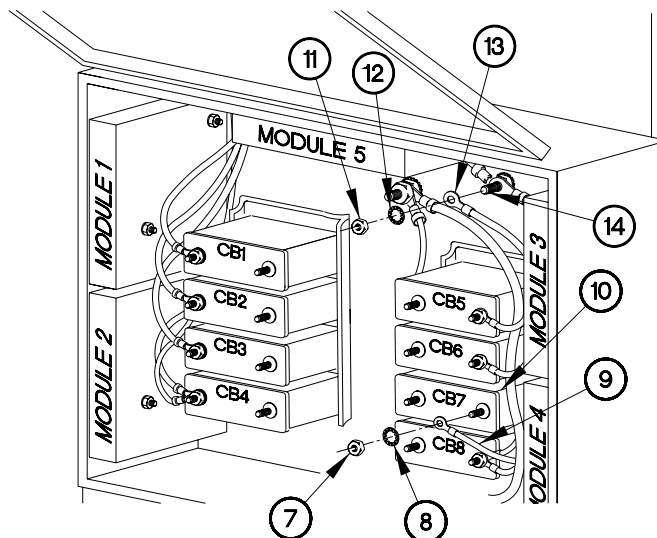
## **MODULE INSTALLATION - Continued**

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).



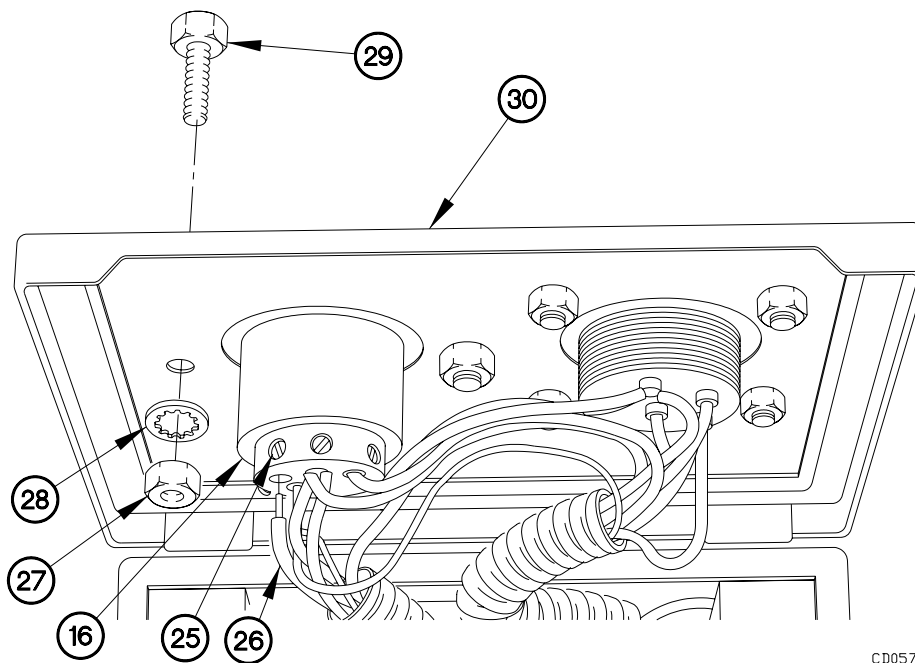
CD057R02

**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.

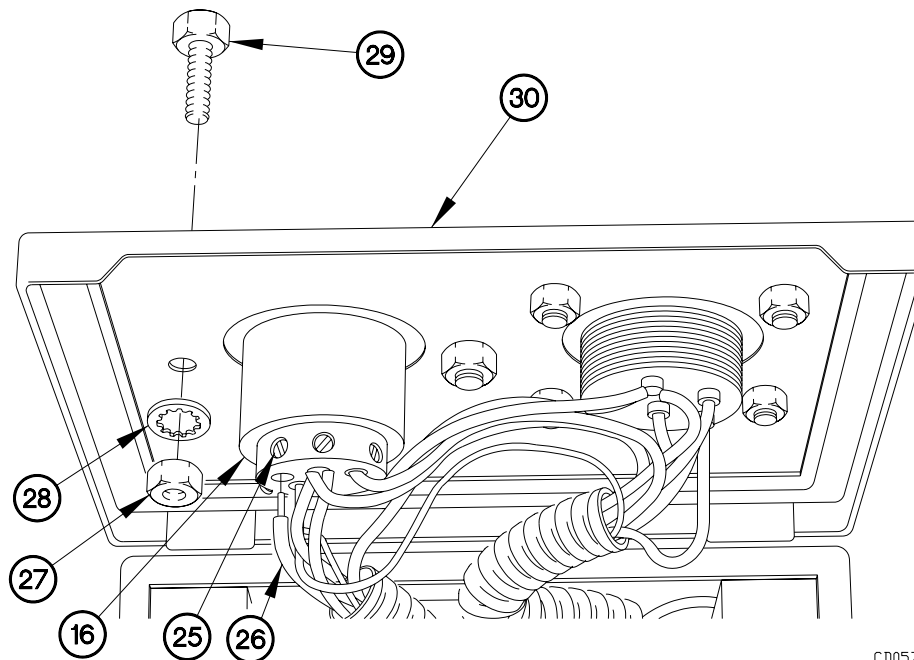


CD057R05

**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.



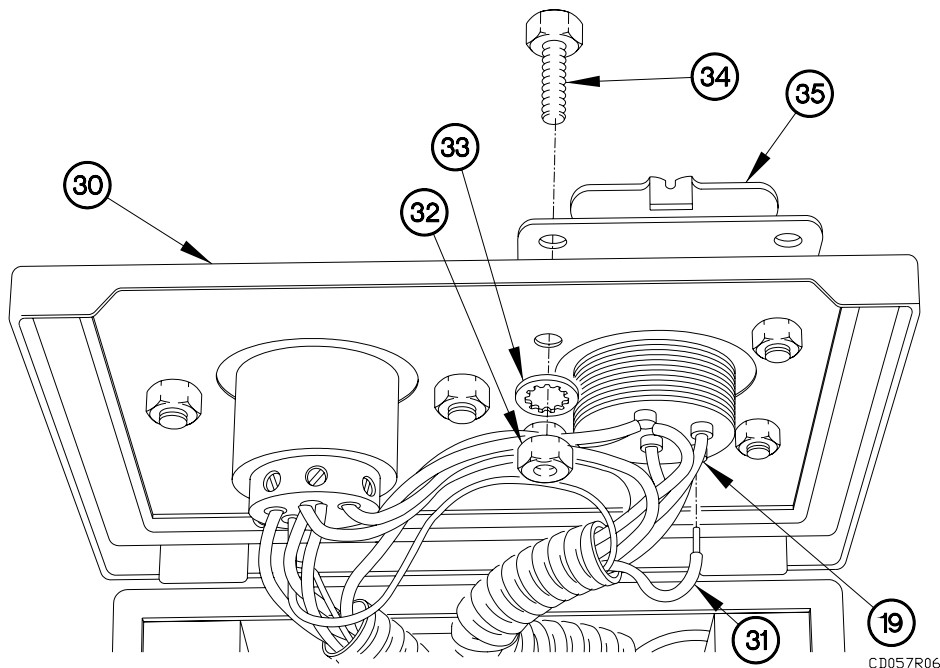
CD057R05

**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.

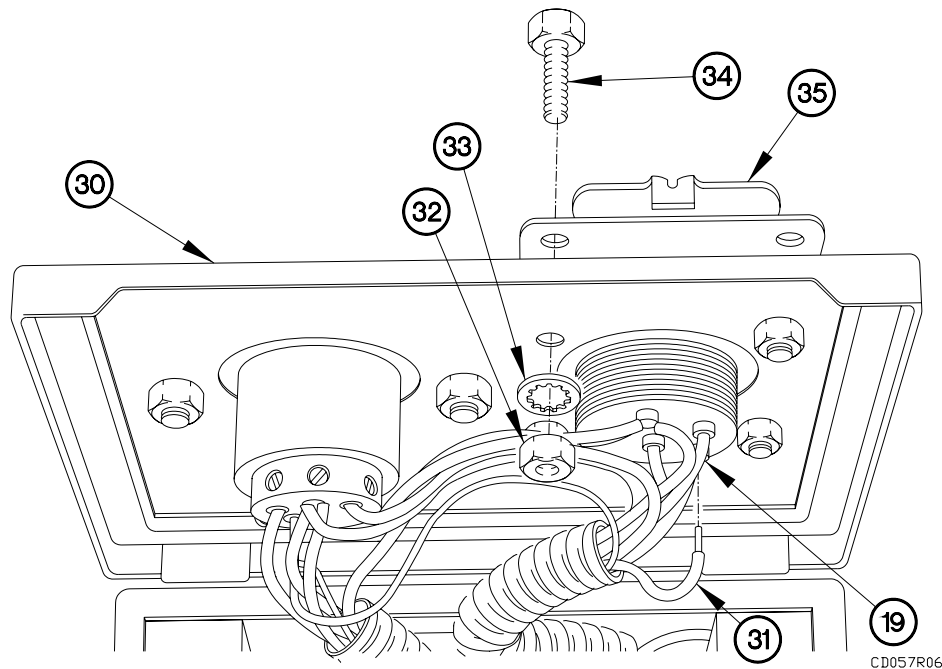
1. Remove wire (31) from ground pin on 24 VDC connector (19).
2. Perform the previous step on remaining wires.
3. Remove four nuts (32), lockwashers (33), screws (34), cover (35), and 24 VDC connector (19) from voltage converter box cover (30). Discard lockwashers.



**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 22, WP 0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

Wrench, Torque, 0-200 lb-in. (Item 33, 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 20, WP 0165 00)

---

**GENERAL**

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

---

**WARNING**

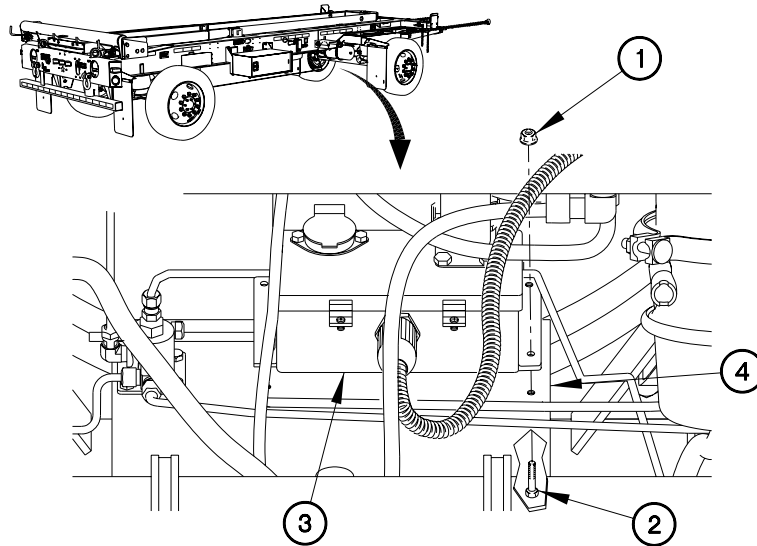
---

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

**VOLTAGE CONVERTER BOX REPLACEMENT - Continued****0058 00****REMOVAL****NOTE**

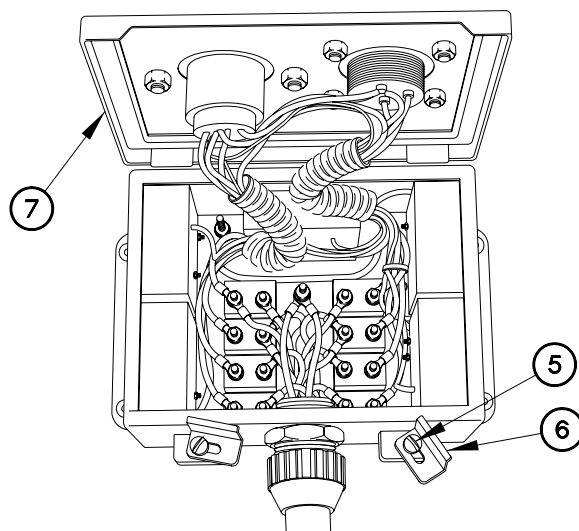
The following step requires the aid of an assistant.

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



CD058R01

2. Loosen two screws (5) on voltage converter box latches (6).
3. Remove latches (6) from voltage converter box cover (7).
4. Lift up voltage converter box cover (7).



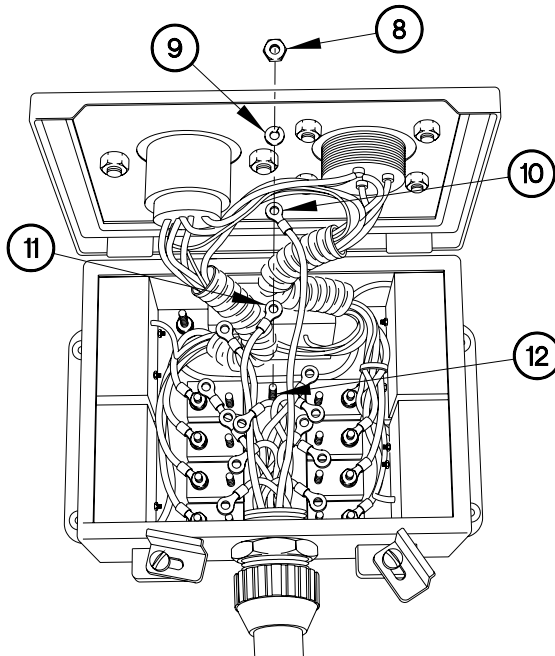
CD058R02

**REMOVAL – Continued****NOTE**

Tag connections and connection points prior to disconnecting.

Remove plastic cable ties as required.

5. Remove nut (8), lockwasher (9) and terminal lugs TL260 and TL261 (10 and 11) from ground stud B (12). Discard lockwasher.



CD058R04

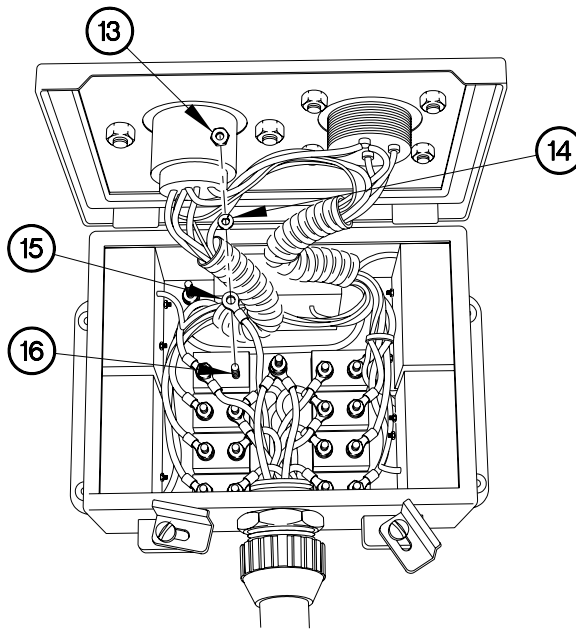
**VOLTAGE CONVERTER BOX REPLACEMENT - Continued****0058 00****REMOVAL – Continued****NOTE**

All converter box circuit breaker terminal lugs are removed the same way. Terminal lug 251 shown. Refer to **Table 1: Converter Box Circuit Breaker Main Electric Harness Terminal Lug Locations** for details.

6. Remove nut (13), lockwasher (14), and terminal lug (15) from circuit breaker CB1 "AUX" terminal stud (16). Discard lockwasher.
7. Perform the previous step on remaining circuit breakers.

**Table 1: Converter Box Circuit Breaker Main Electrical Harness Terminal Lug Locations**

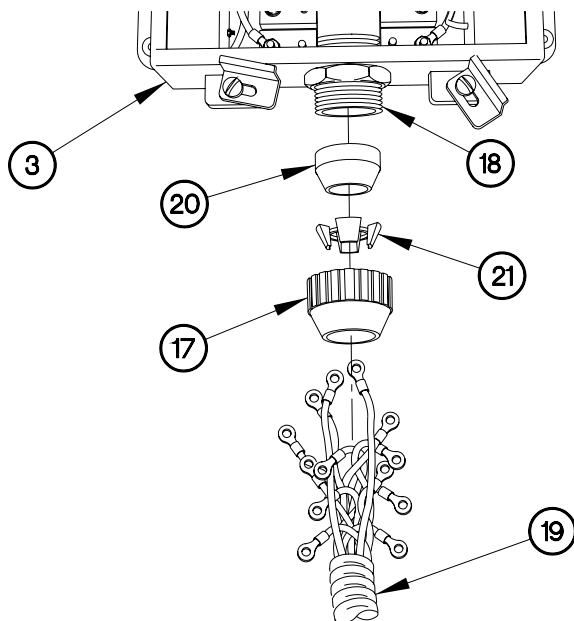
Circuit Breaker "AUX" Terminal Stud	Main Electrical Harness Wire Terminal Lug
CB1	TL251
CB2	TL257
CB3	TL250
CB4	TL252
CB5	TL256
CB6	TL259
CB7	TL255
CB8	TL253



CD058R03

**VOLTAGE CONVERTER BOX REPLACEMENT - Continued****0058 00****REMOVAL – Continued**

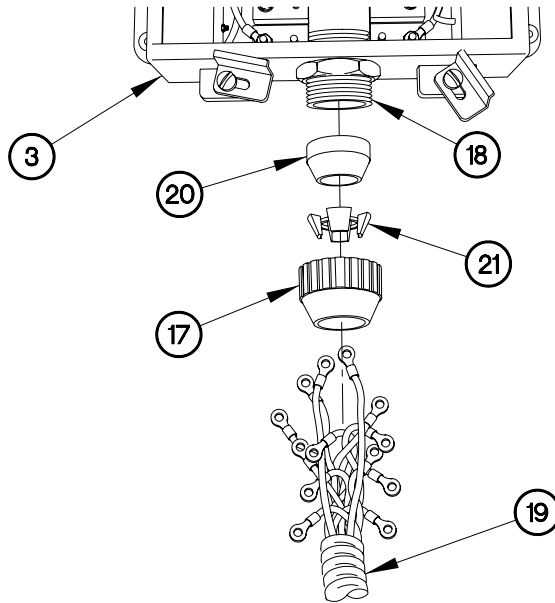
8. Remove fitting collar (17) from fitting (18).
9. Remove main electrical harness (19) from voltage converter box (3).
10. Remove protector (20) and swedge (21) from main electrical harness (19).



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

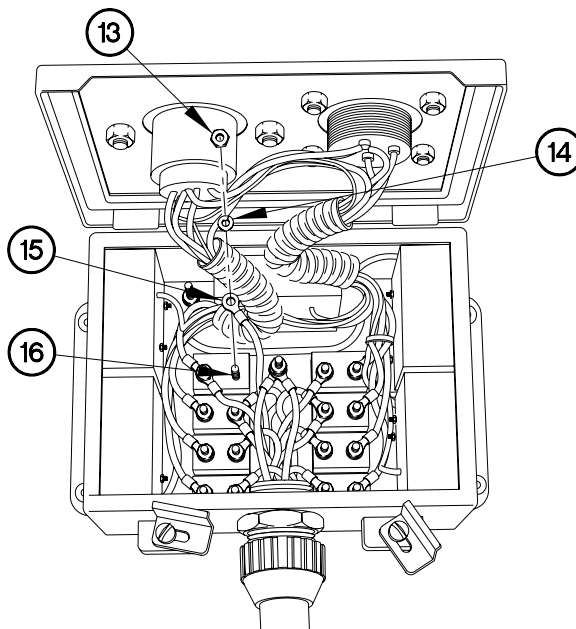


**INSTALLATION - Continued****NOTE**

Install plastic cable ties as required.

All converter box circuit breaker terminal lugs are installed the same way. Terminal lug 251 shown. Refer to **Table 1: Converter Box Circuit Breaker Main Electrical Harness Terminal Lug Locations** for details.

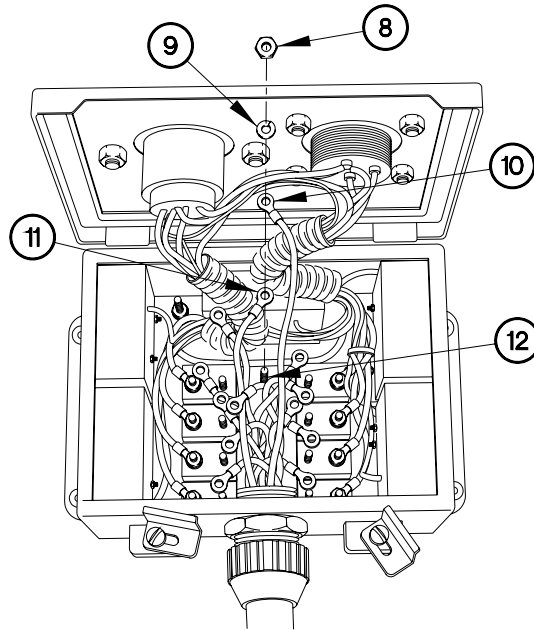
4. Install terminal lug (15) on circuit breaker CB1 "AUX" terminal stud (16) with lockwasher (14) and nut (13).
5. Perform the previous step on remaining circuit breakers.



CD058R03

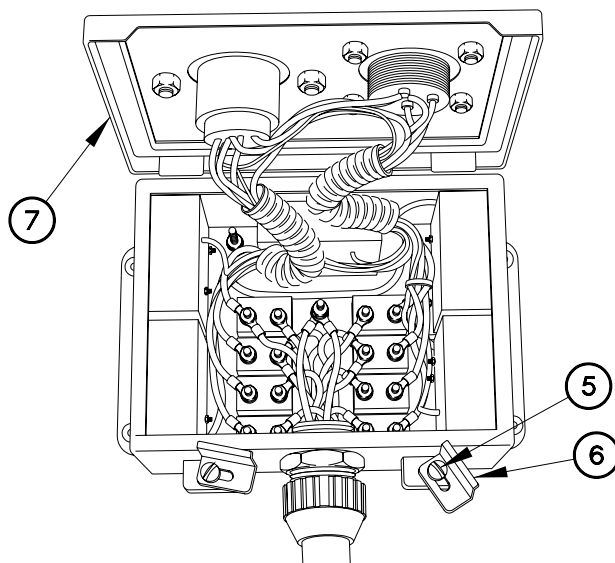
**INSTALLATION - Continued**

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).

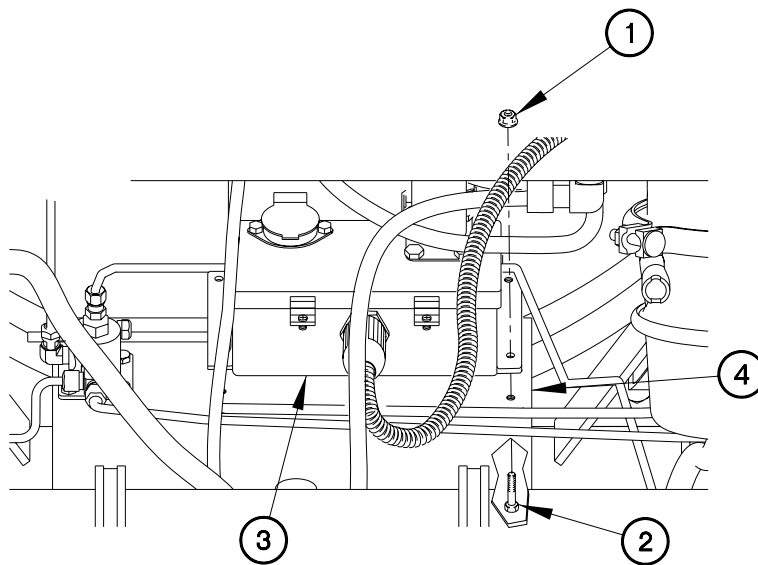


CD058R02

**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**

Took Kit, Genl Mech (Item 22, WP 0167 00)  
Goggles, Industrial (Item 8, WP 0167 00)  
Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

**Materials/Parts**

Ties, Cable, Plastic (Item 20, WP 0165 00)

**Materials/Parts (Cont)**

Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)  
Washer, Lock (9) (Item 9, WP 0168 00)  
Nut, Self-Locking (2) (Item 27, WP 0168 00)

**Equipment Conditions**

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

---

**GENERAL**

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

---

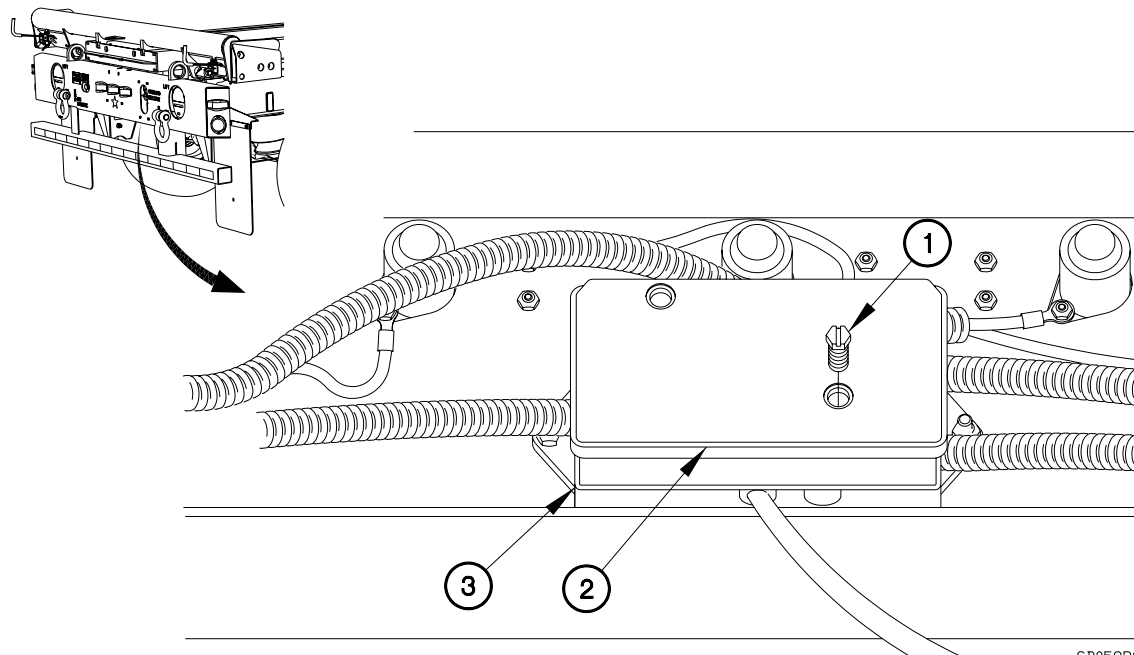
**WARNING**

---

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

**JUNCTION BOX REPLACEMENT - Continued****0059 00****REMOVAL**

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



CD059R01

**JUNCTION BOX REPLACEMENT - Continued****0059 00****REMOVAL – Continued****NOTE**

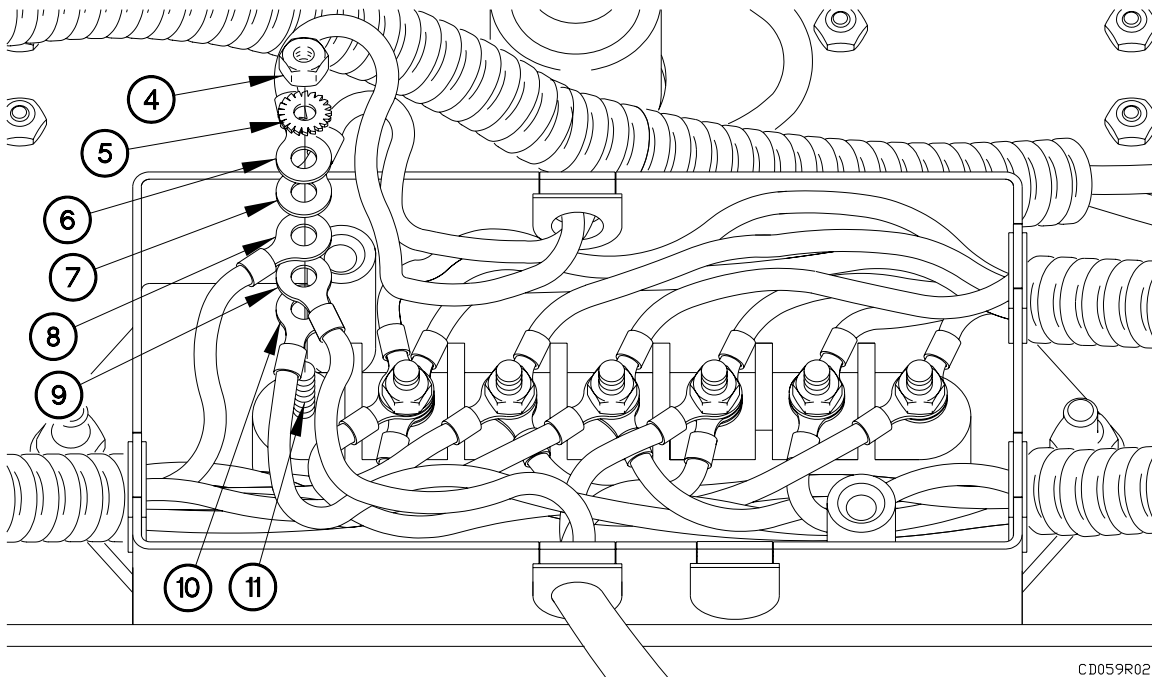
All junction box terminal lugs are removed the same way. Terminal lug 1 shown. Refer to **Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations** for details.

Tag terminal lugs and terminal studs prior to removal.

- 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.
- Perform the previous step on remaining junction box terminal studs.

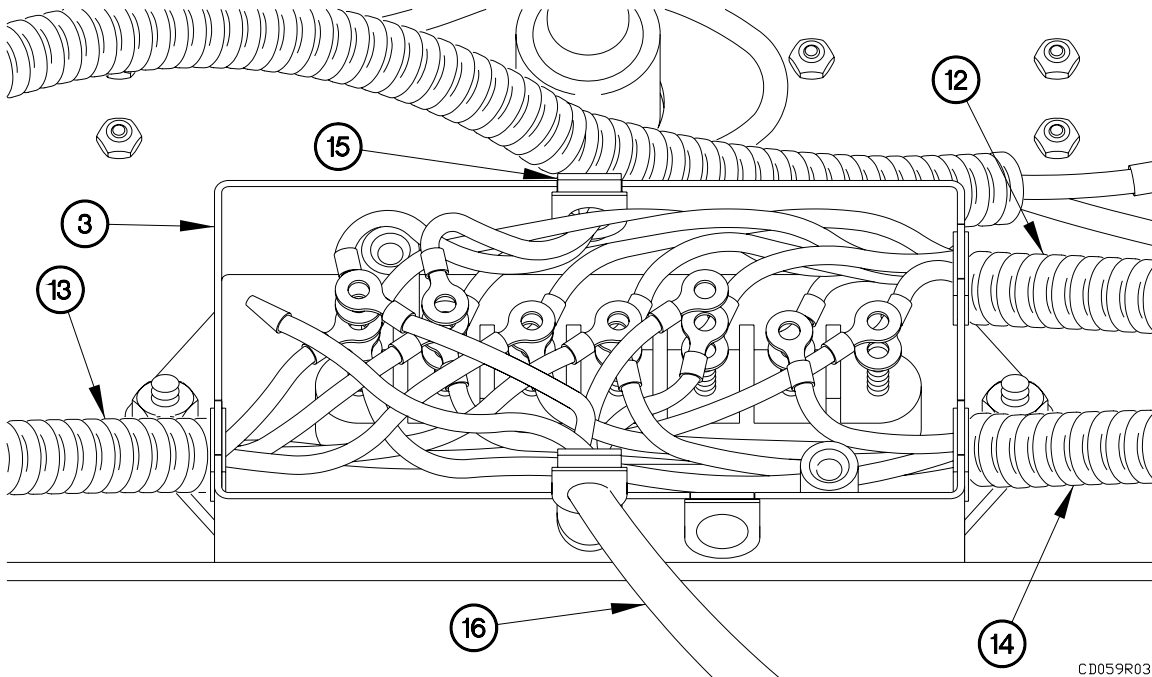
**Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations**

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

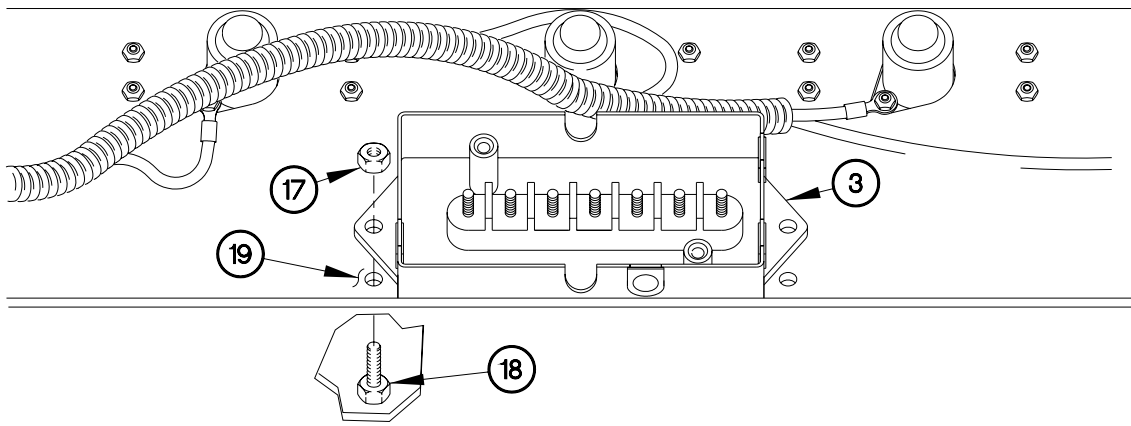


**JUNCTION BOX REPLACEMENT - Continued****0059 00****REMOVAL – Continued**

4. Remove main electrical harness (12), right rear electrical harness (13), left rear electrical harness (14), rear electrical harness (15), and ABS power and diagnostic harness (16) from junction box (3).



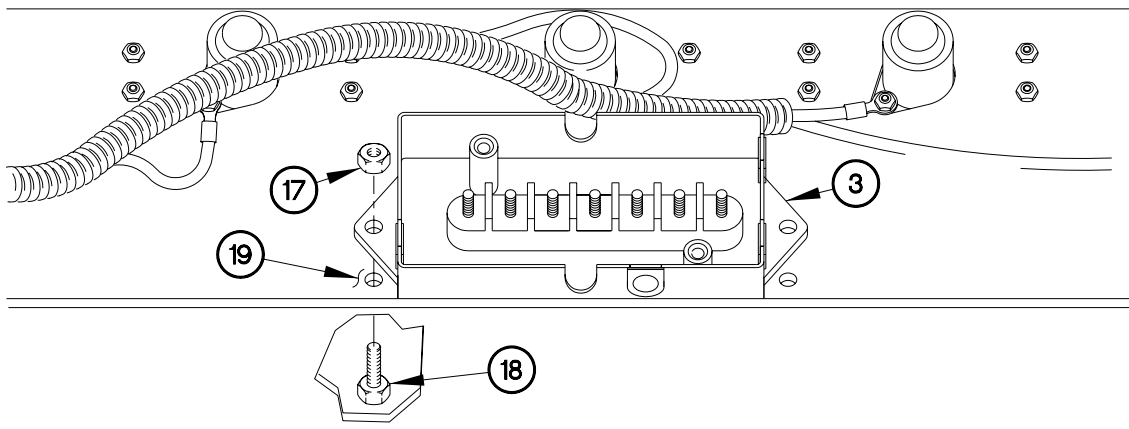
5. Remove two self-locking nuts (17), bolts (18), and junction box (3) from rear panel assembly (19). Discard self-locking nuts.





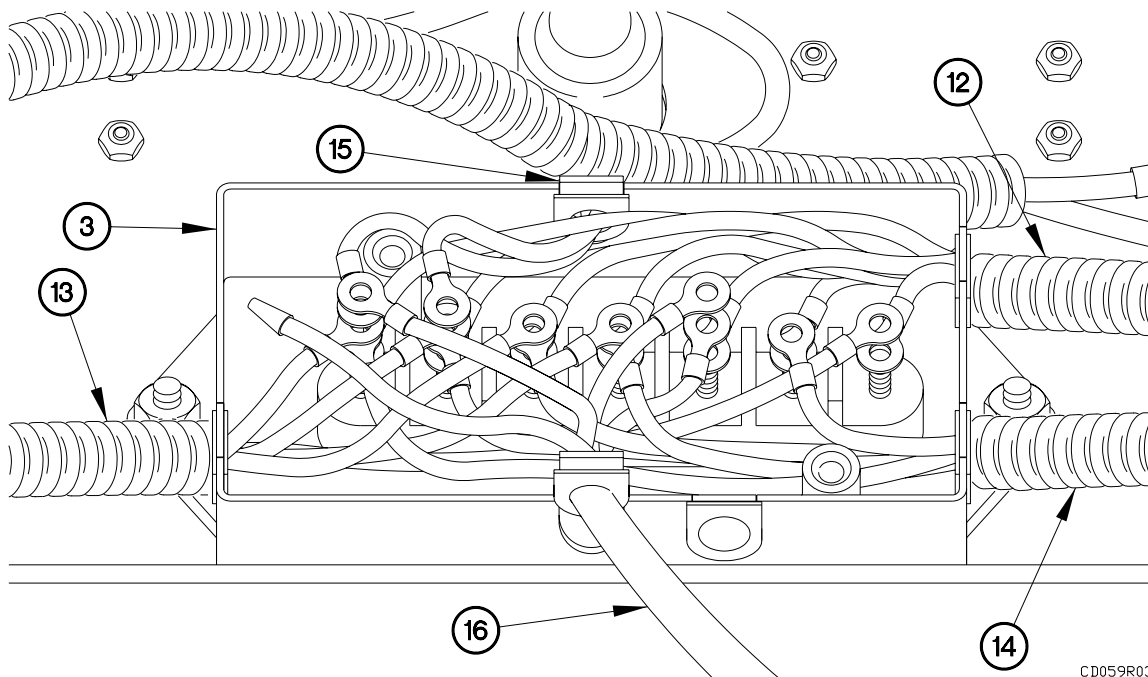
**JUNCTION BOX REPLACEMENT - Continued****0059 00****INSTALLATION**

1. Position junction box (3) on rear panel assembly (19) with two bolts (18) and self-locking nuts (17).
2. Tighten two self-locking nuts (17) to 96-120 lb-in. (11-14 N•m).



CD059R04

3. Position ABS power and diagnostic harness (16), rear electrical harness (15), left rear electrical harness (14), right rear electrical harness (13), and main electrical harness (12) in junction box (3).



CD059R03

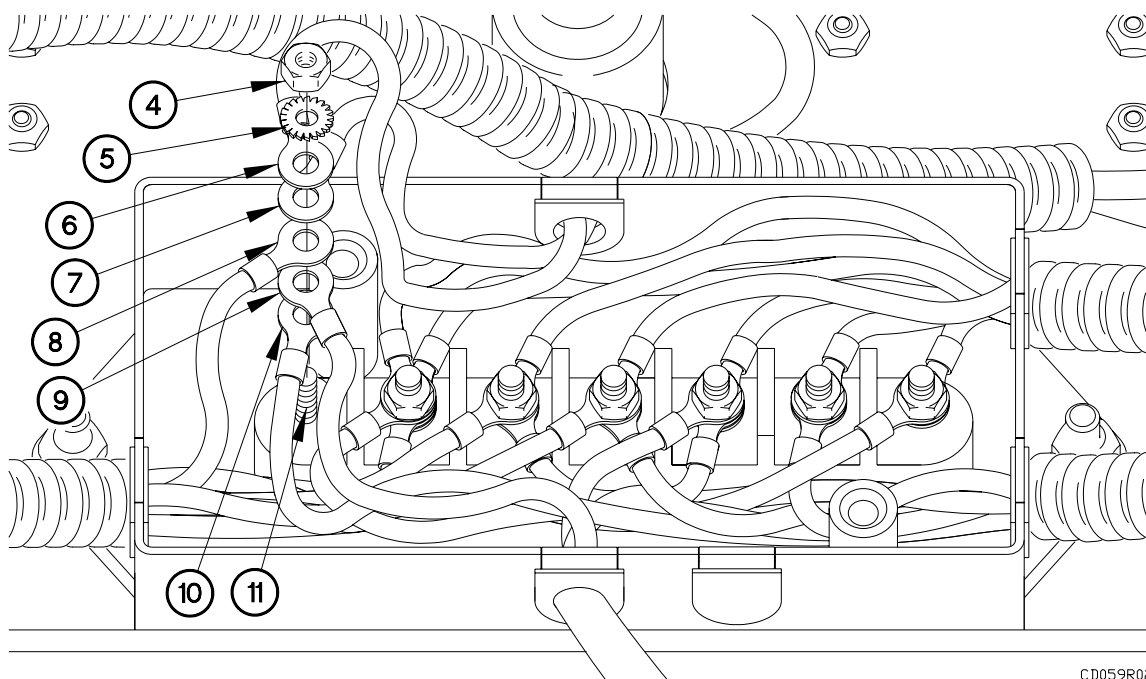
**JUNCTION BOX REPLACEMENT - Continued****0059 00****INSTALLATION - Continued****NOTE**

All junction box terminal lugs are installed the same way. Terminal lug 1 shown. Refer to **Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations** for details.

4. Install ABS ground terminal lug (10) and terminal lugs TL282 (9), TL275 (8), TL264 (7), and TL261A (6) on junction box terminal stud 1 (11) with lockwasher (5) and nut (4).
5. Perform the previous step on remaining junction box terminal studs.

**Table 1: Junction Box Terminal Stud and Wiring Harness Terminal Lug Locations**

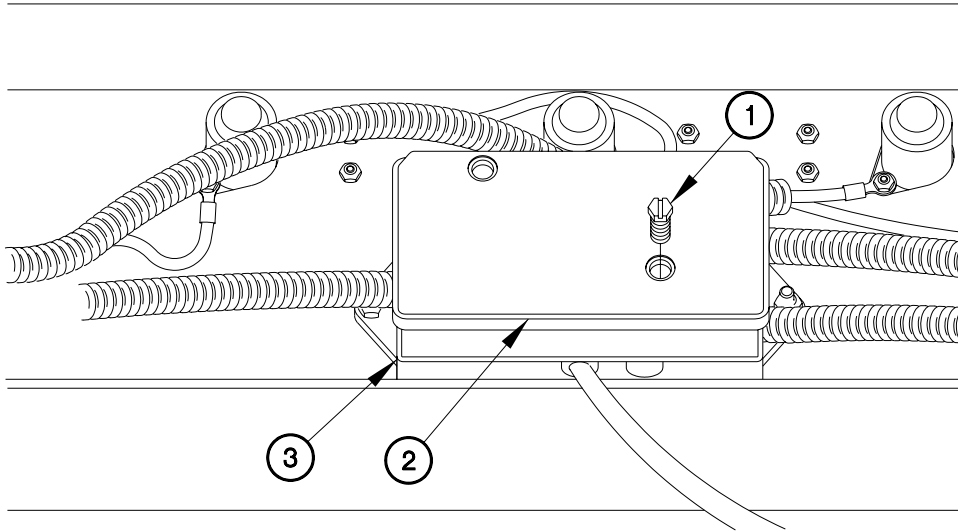
Junction Box Terminal Stud Position	Electrical Harness Terminal Lugs
Stud Position 1	TL261A, TL264, TL275, TL282, ABS Ground Terminal Lug
Stud Position 2	TL255A, TL267, TL273, TL281
Stud Position 3	TL257A, TL265, TL271
Stud Position 4	TL256A, TL266, TL272
Stud Position 5	TL251A, ABS Constant Power, ABS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



CD059R02

**JUNCTION BOX REPLACEMENT - Continued****0059 00****INSTALLATION - Continued**

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



CD059:01

**OPERATIONAL CHECKS**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check for proper operation of trailer lights (0052 00, Table 5 Preventive Maintenance Checks and Services (PMCS) – Before).
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**



---

**COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT**

---

**0060 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**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 22, WP 0167 00)

Wrench, Torque, 0-175 lb-ft (Item 32, WP  
0167 00)**Equipment Conditions**Trailer uncoupled (WP 0043 24, TM 2320-  
392-10-1).

---

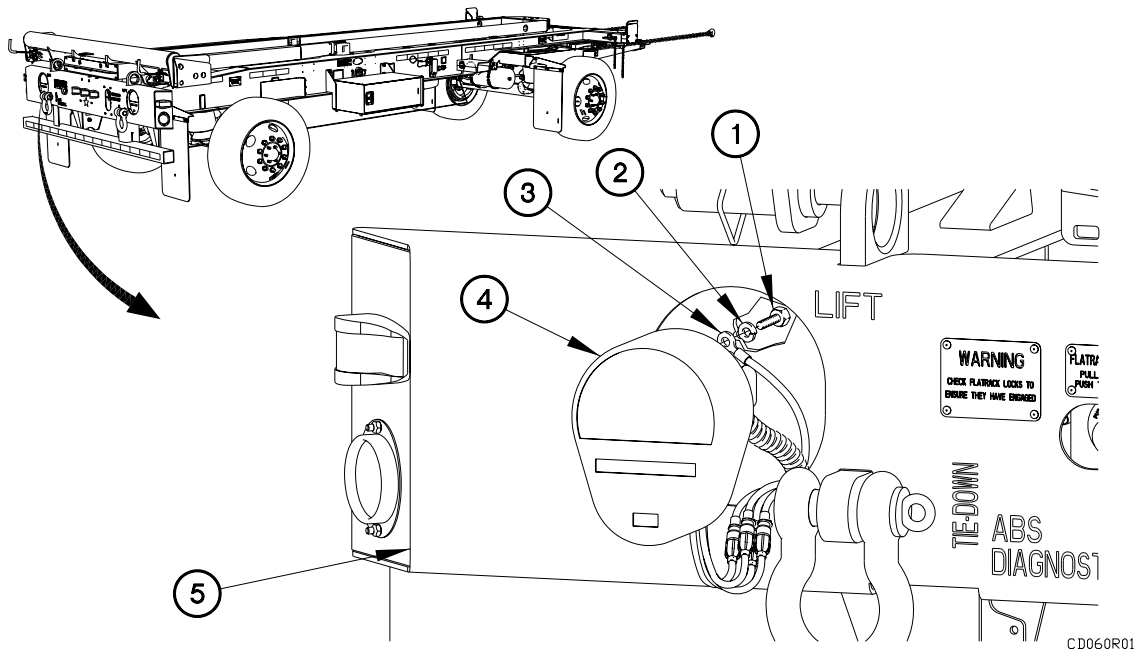
**GENERAL**

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 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.



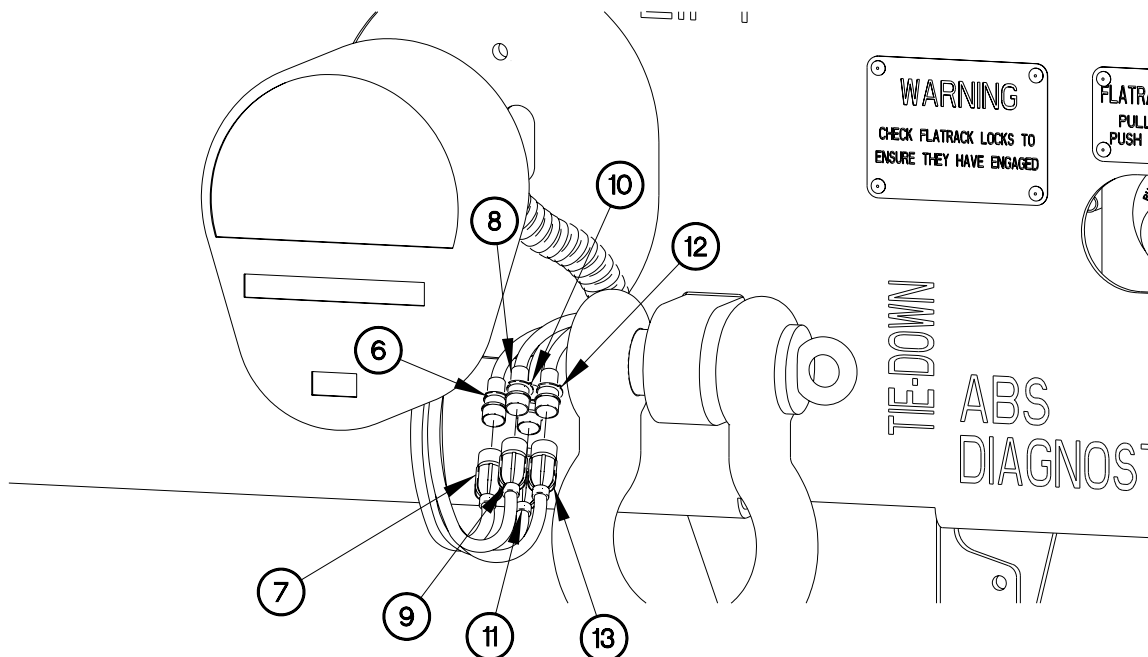
**COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued****0060 00****REMOVAL - Continued****NOTE**

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



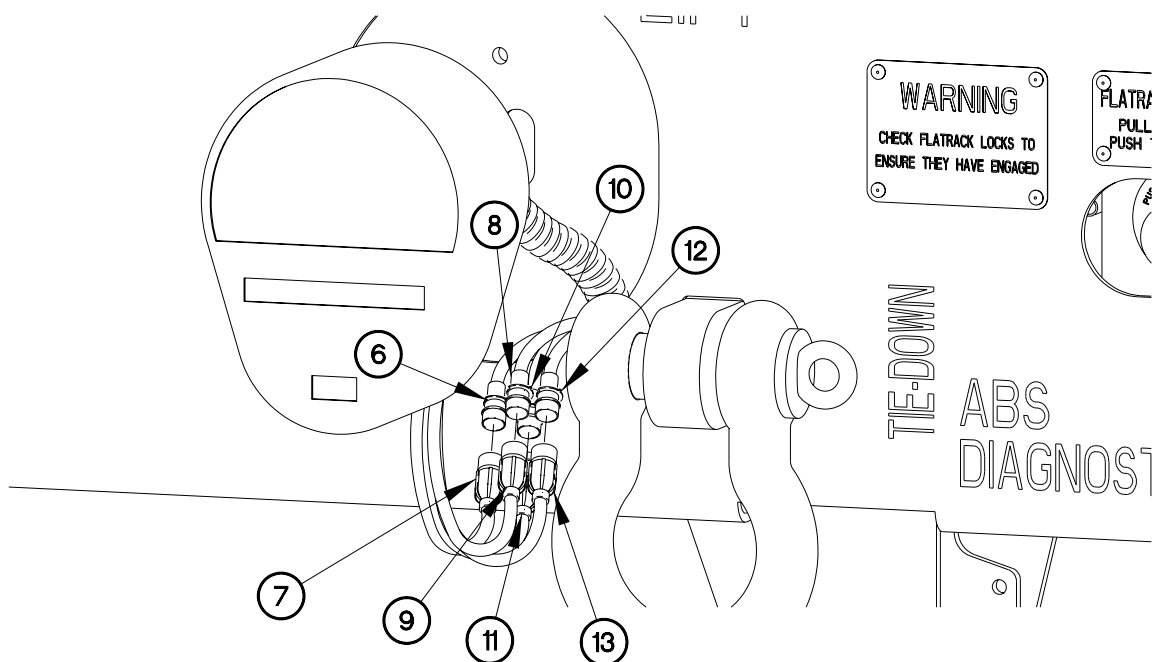
CD060R02

**COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued****0060 00****INSTALLATION****NOTE**

LH and RH composite taillight assemblies are installed the same way. LH composite taillight assembly shown.

Refer to **Table 1: Composite Taillight Assembly Connections and Connection Points** for info on RH composite taillight assembly.

1. Connect harness connector J261 (12) to composite taillight assembly connector 460, 461, 22 (13).
2. Connect harness connector J259 (10) to composite taillight assembly connector 21 (11).
3. Connect harness connector J258 (8) to composite taillight assembly connector 24 (9).
4. Connect harness connector J257 (6) to composite taillight assembly connector 23 (7).

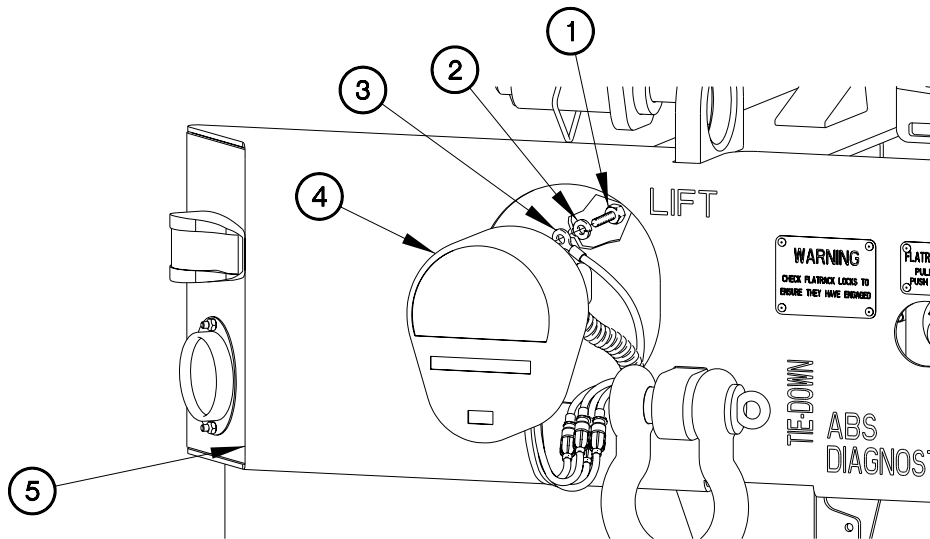


CD060R02



**COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued****0060 00****INSTALLATION - Continued**

5. Position ground terminal lug TL277 (3) and composite taillight assembly (4) on rear panel assembly (5) with two lockwashers (2) and bolts (1).
6. Tighten two bolts (1) to 18-23 lb-ft (24-31 N•m).



CD060:01

---

**COMPOSITE TAILLIGHT ASSEMBLY REPLACEMENT - Continued**

---

**0060 00**

**OPERATIONAL CHECKS**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check operation of taillights.
3. Check operation of brake lights.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**

---

**MARKER LIGHT ASSEMBLY REPLACEMENT**

---

**0061 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**Tools and Special Tools**

Tool Kit, Genl Mech (Item 22, WP 0167 00)  
Wrench, Torque, 0-75 lb-in. (Item 35, WP 0167 00)  
Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)

**Materials/Parts**

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

**Materials/Parts**

Washer, Lock (2) (RH or LH rear corner  
Marker Light assembly) (Item 21, WP 0168 00)  
Washer, Lock (Item 8, WP 0168 00)  
Nut, Self-Locking (4) (Item 36, WP 0168 00)

**Equipment Conditions**

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

---

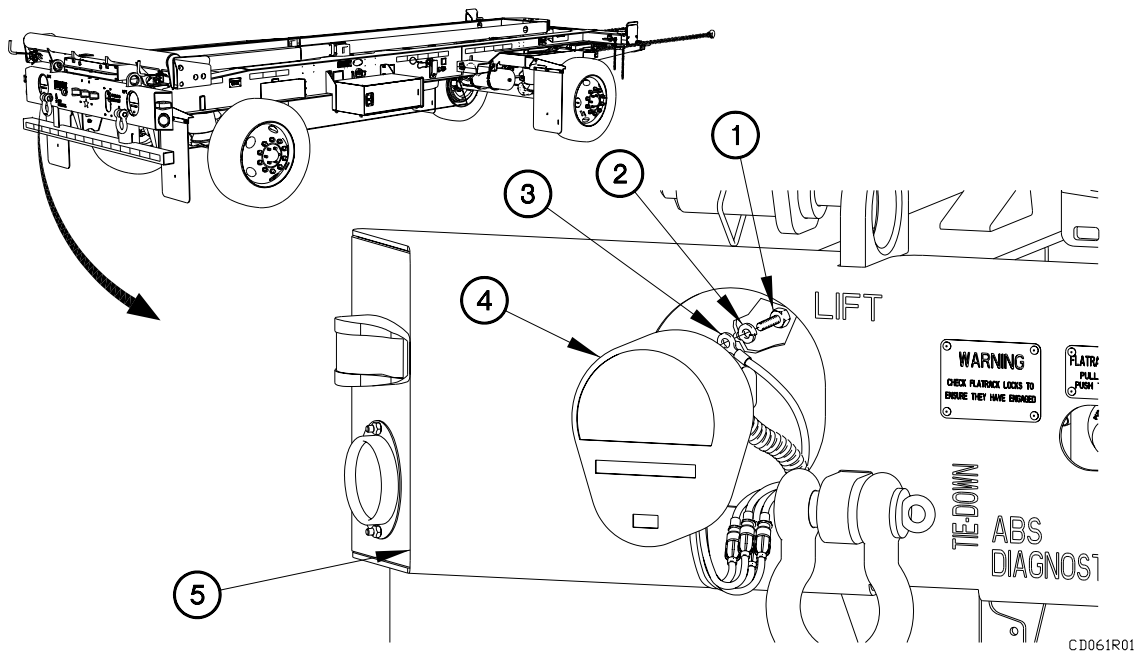
**GENERAL**

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

**MARKER LIGHT ASSEMBLY REPLACEMENT - Continued****0061 00****REMOVAL****NOTE**

Perform the following step on LH and RH rear corner marker light assemblies.

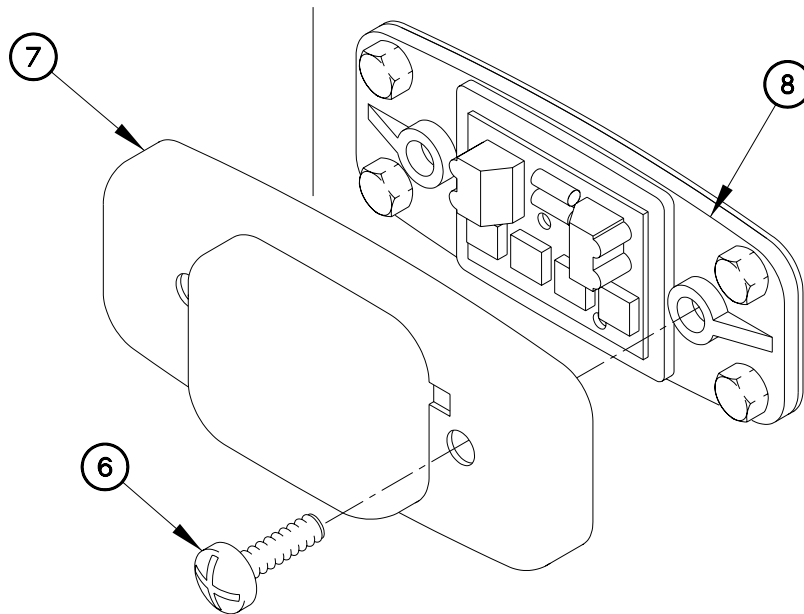
1. Remove two bolts (1), lockwashers (2), ground terminal lug TL277 (3), and composite taillight assembly (4) from trailer (5). Discard lockwashers.



**MARKER LIGHT ASSEMBLY REPLACEMENT - Continued****0061 00****REMOVAL - Continued****NOTE**

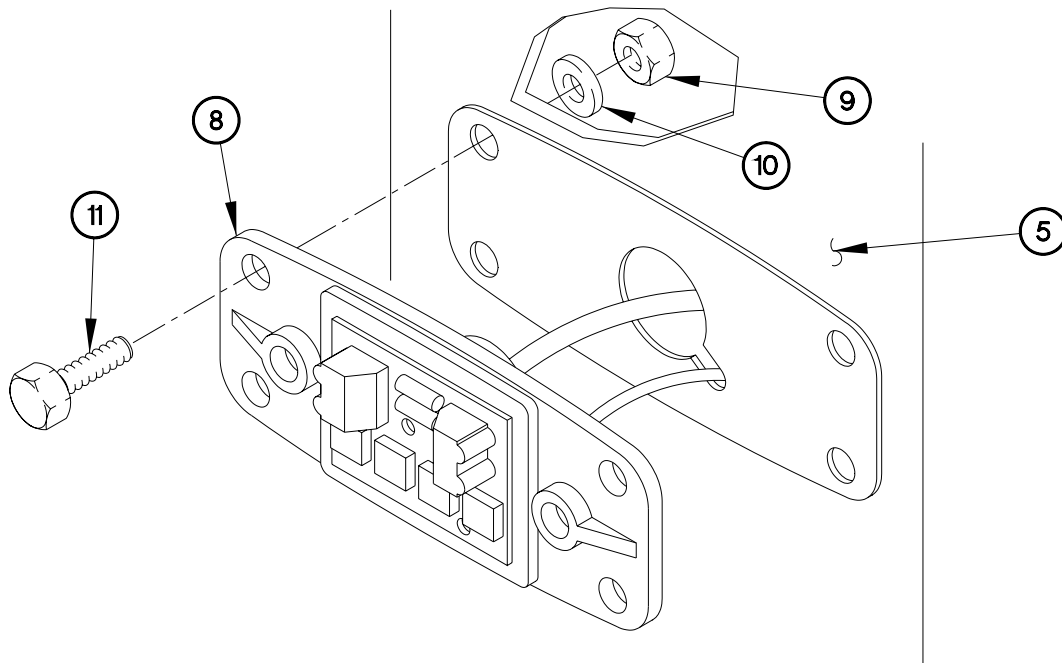
All marker light assemblies are removed the same way. LH rear corner marker light assembly shown.

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



CD061R02

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



CD061R03

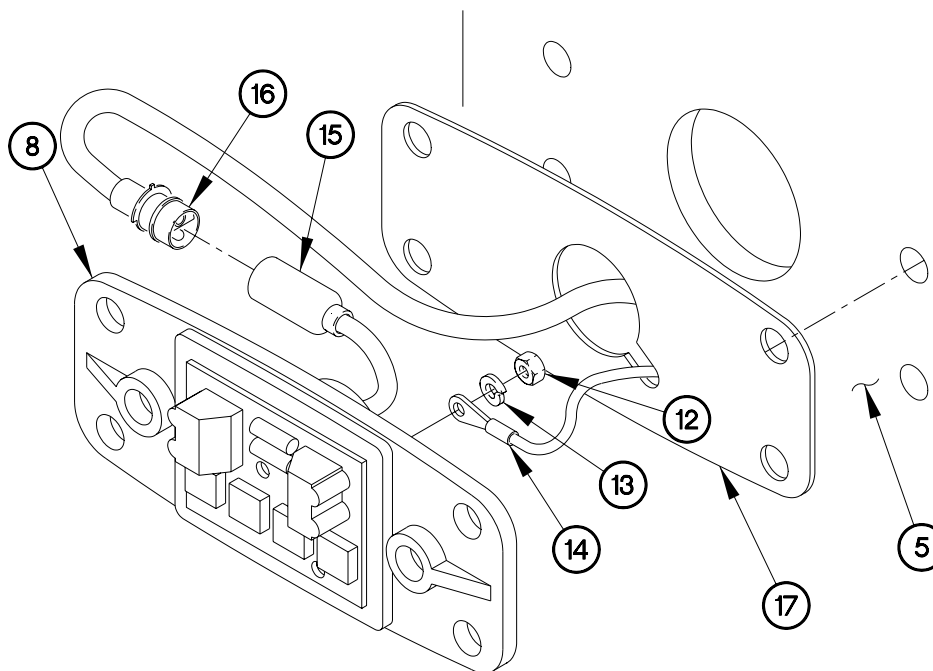
**MARKER LIGHT ASSEMBLY REPLACEMENT - Continued****0061 00****REMOVAL - Continued****NOTE**

Tag all terminal lugs, connectors, and connection points prior to removal. Refer to **Table 1: Marker Light Locations, Connectors, and Terminal Lugs** for details.

4. Remove nut (12), lockwasher (13), and terminal lug TL276 (14) from base (8). Discard lockwasher.
5. Disconnect marker light assembly connector (15) from connector J260 (16).
6. Remove gasket (17) from trailer (5).

**Table 1: Marker Light Locations, Connectors, and Terminal Lugs**

Location	Connector	Terminal Lug
LH Rear Corner	J260	TL276
RH Rear Corner	J256	TL270
RH Rear Center	J262	TL280
Center Rear Center	J263	TL279
LH Rear Center	J264	TL278
LH Front Corner	J251	TL263
RH Front Corner	J250	TL262

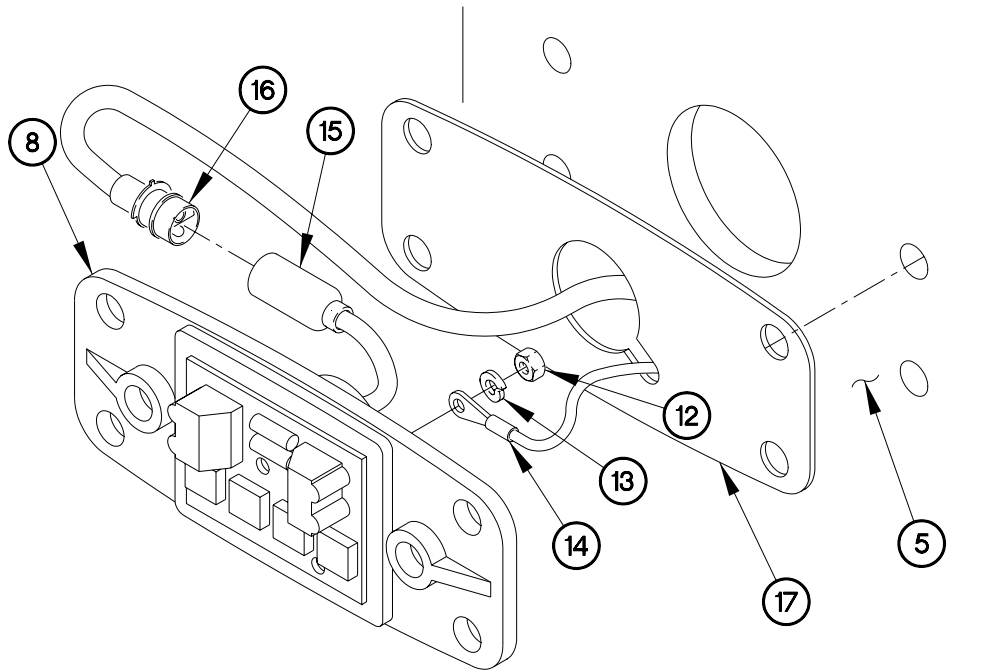


CD061R04

**INSTALLATION****NOTE**

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

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



CD061R04

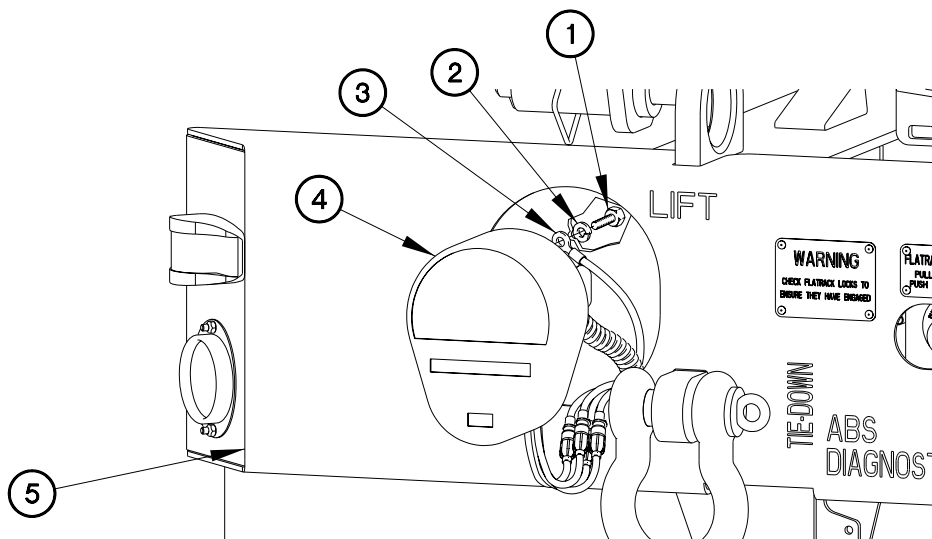




**MARKER LIGHT ASSEMBLY REPLACEMENT - Continued****0061 00****INSTALLATION - Continued****NOTE**

Perform the following step on LH and RH rear corner marker light assemblies. RH composite taillight terminal lug and is TL269.

8. Position ground terminal lug TL277 (3), and composite taillight assembly (4) on trailer (5) with two lockwashers (2) and bolts (1).
9. Tighten two bolts (1) to 18-23 lb-ft (24-31 N•m).



CD061101

---

**MARKER LIGHT ASSEMBLY REPLACEMENT - Continued**

---

**0061 00**

**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 22, WP 0167 00)  
Wrench, Torque 0-175 lb-ft (Item 32, 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**

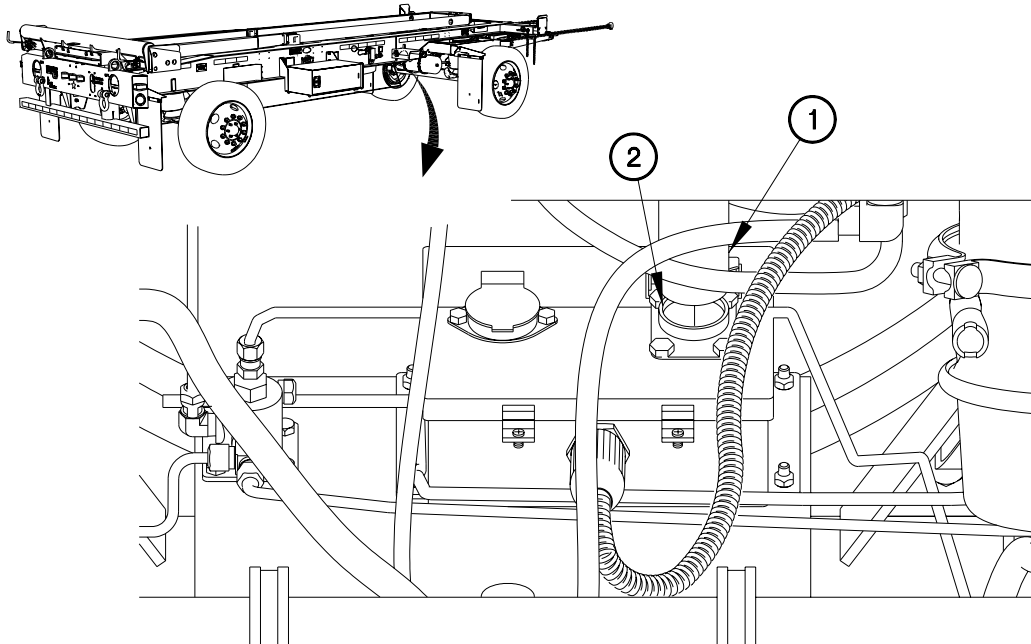
---

**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.**

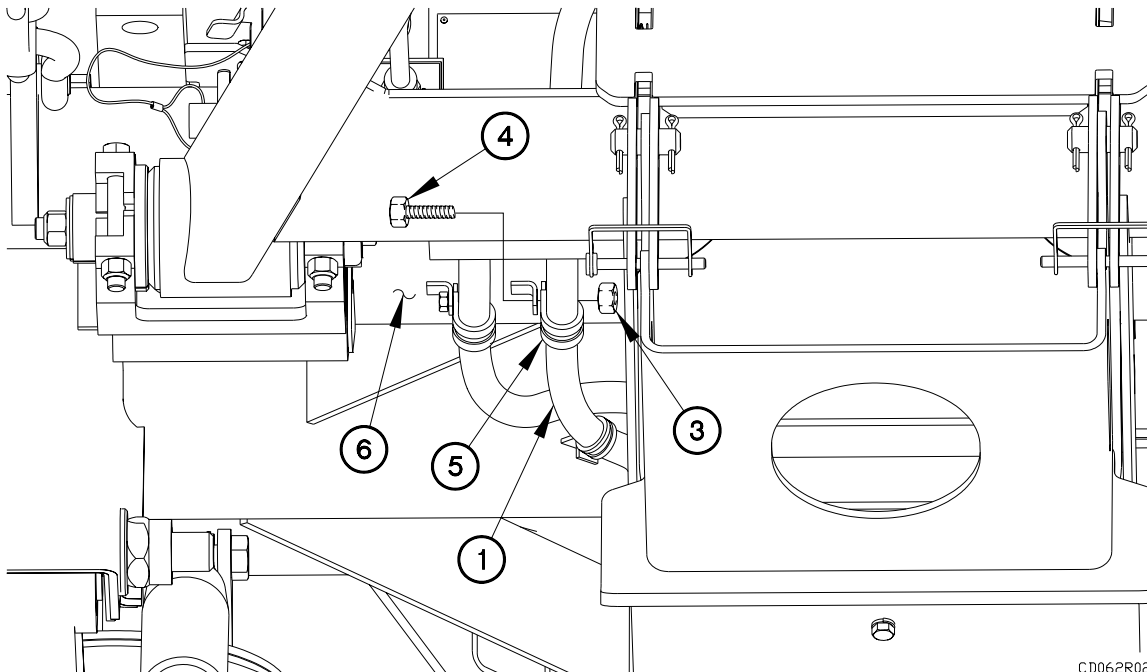
**24 VDC INTERVEHICULAR CABLE REPLACEMENT - Continued****0062 00****REMOVAL**

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



CD062R01

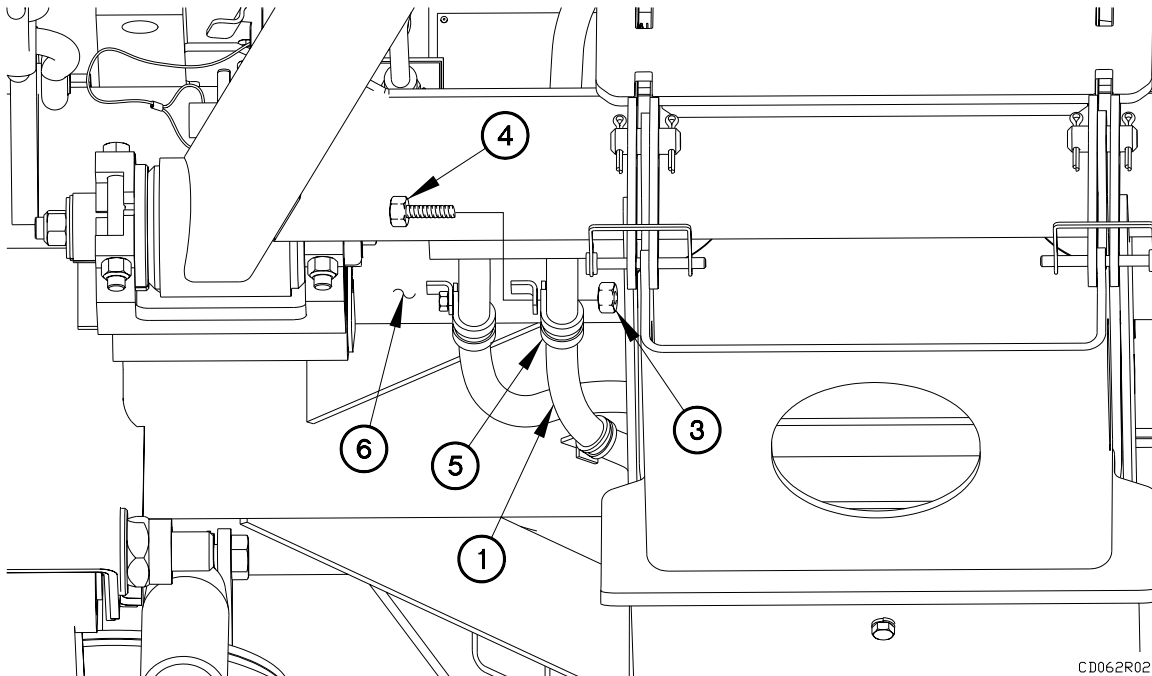
2. Remove two self-locking nuts (3), bolts (4), clamps (5), and 24 VDC intervehicular cable (1) from turntable (6). Discard self-locking nuts.
3. Remove 24 VDC intervehicular cable (1) from two clamps (5).



CD062R02

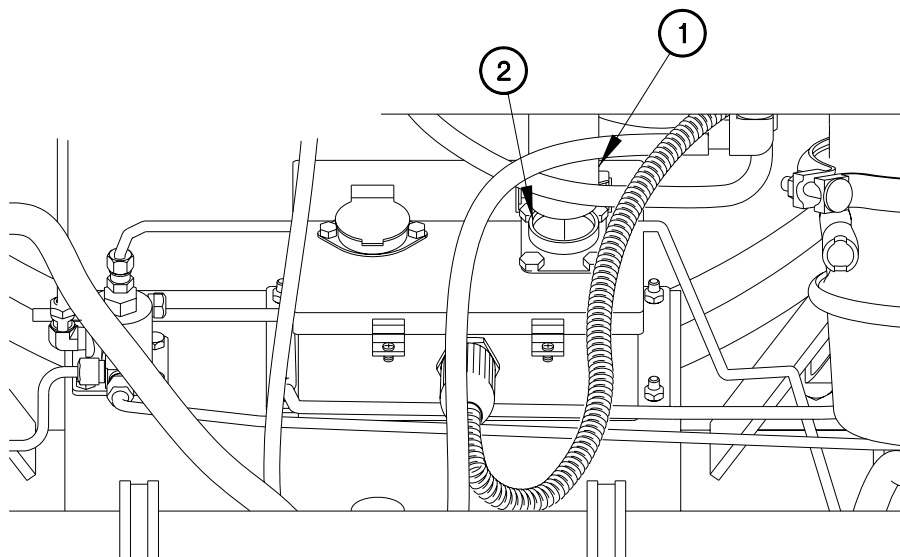
**24 VDC INTERVEHICULAR CABLE REPLACEMENT - Continued****0062 00****INSTALLATION**

1. Position 24 VD intervehicular cable (1) in two clamps (5).
2. Install intervehicular cable (1) on turntable (6) with two clamps (5), bolts (4), and self-locking nuts (3).
3. Tighten self locking nuts (3) to 8-10 ft-lbs (10-14 N•m).



**INSTALLATION - Continued**

4. 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

**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).

**Tools and Special Tools**

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

**Materials/Parts**

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

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

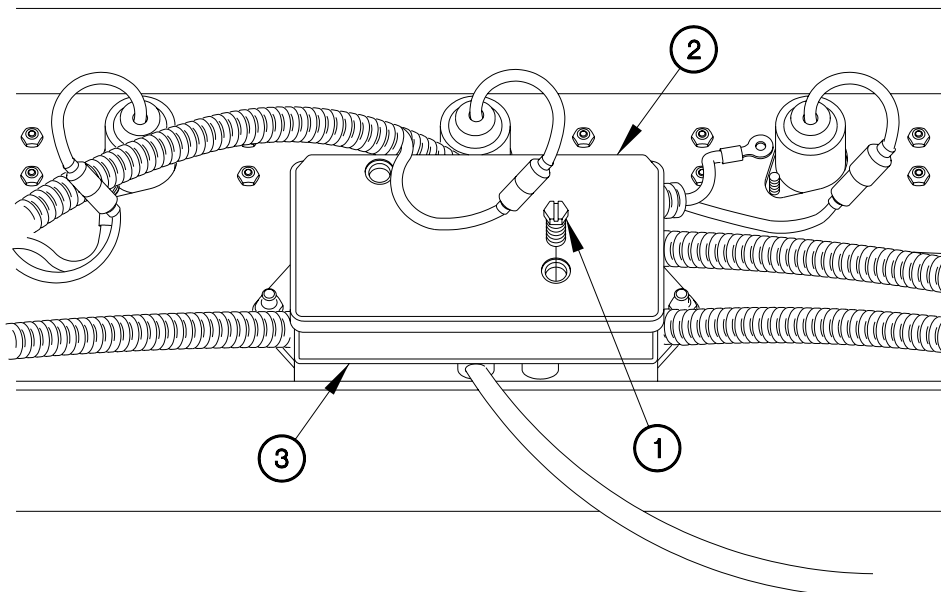
---

**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



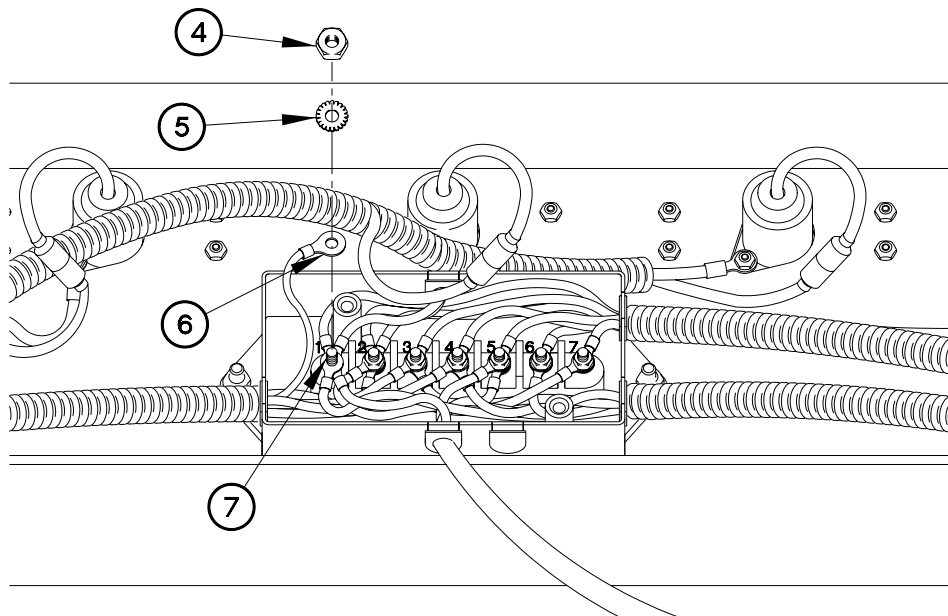
**RIGHT REAR ELECTRICAL HARNESS REPLACEMENT - Continued****0063 00****REMOVAL - Continued****NOTE**

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.

<b>Table 1 : Right Rear Electrical Harness To Junction Box Connection Points</b>	
Junction Box Terminal Stud	Right Rear Electrical Harness Terminal Lug
1	TL264
2	TL267
3	TL265
4	TL266
7	TL268

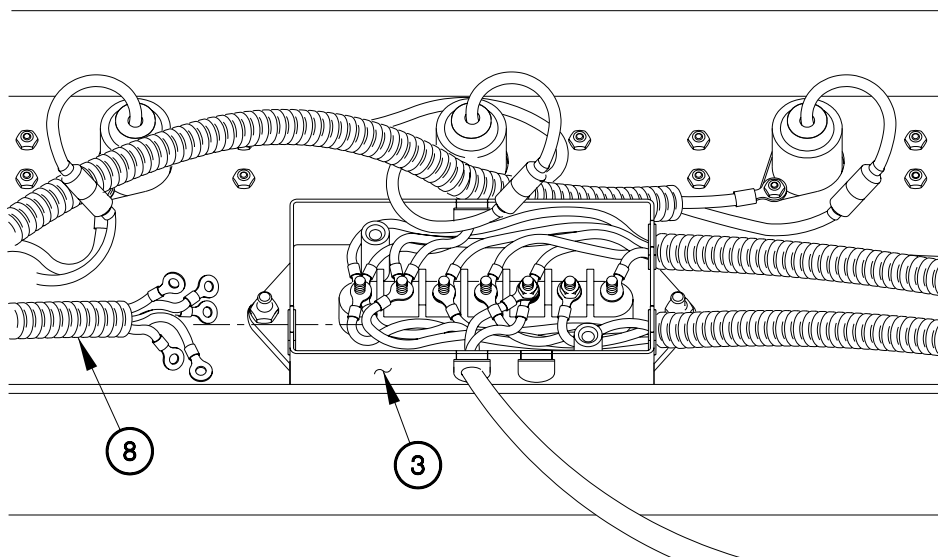
- Remove nut (4), lockwasher (5), and terminal lug TL264 (6) from junction box terminal stud 1 (GRD.) (7). Discard lockwasher.
- Perform the previous step on remaining right rear electrical harness to junction box terminal lugs.



CD063R02

**REMOVAL - Continued**

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

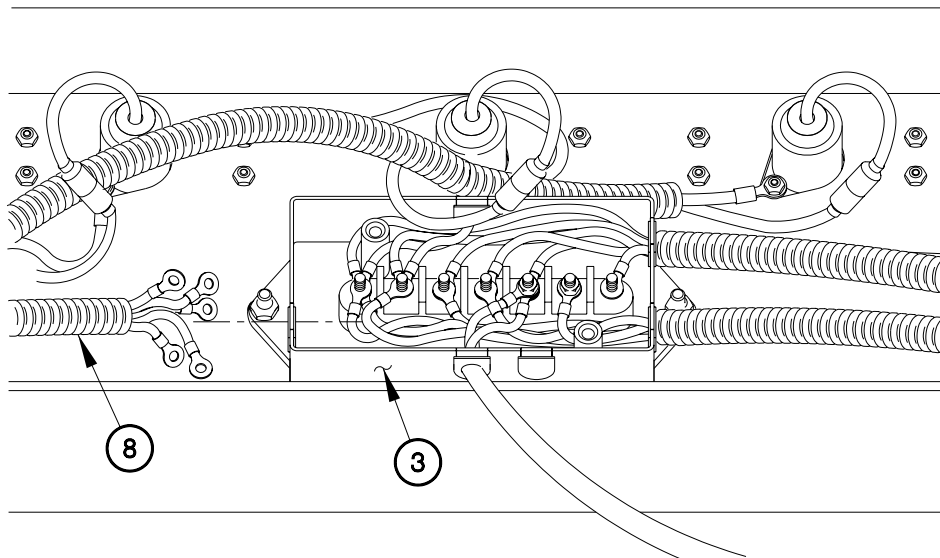


CD063R03

**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).



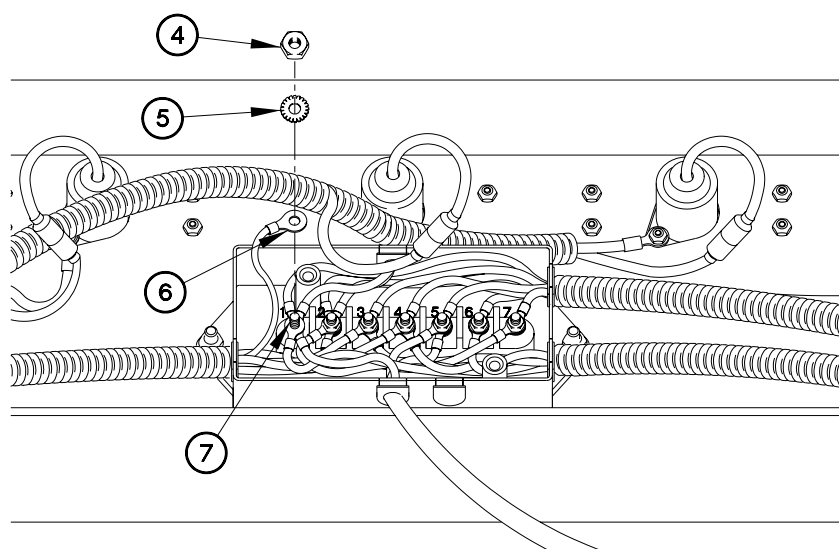
CD063R03

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

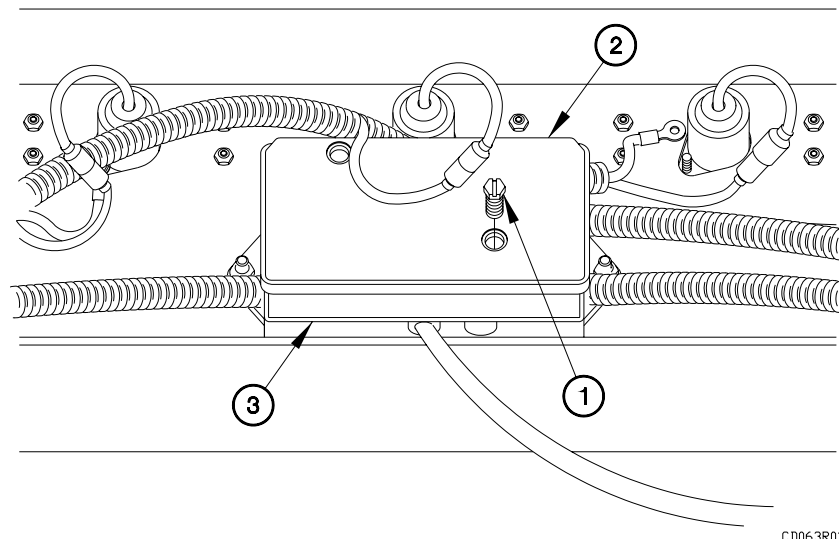
Other terminal lugs are present at these locations.

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

2. Install terminal lug TL264 (6) on junction box terminal stud 1 (GRD.) (7) with lockwasher (5) and nut (4).
3. Perform the previous step on remaining right rear electrical harness to junction box terminal studs.



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



**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).

Left rear composite taillight assembly removed (WP 0060 00).

Left rear marker light assembly removed (WP 0061 00).

**Tools and Special Tools**

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

**Materials/Parts**

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

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

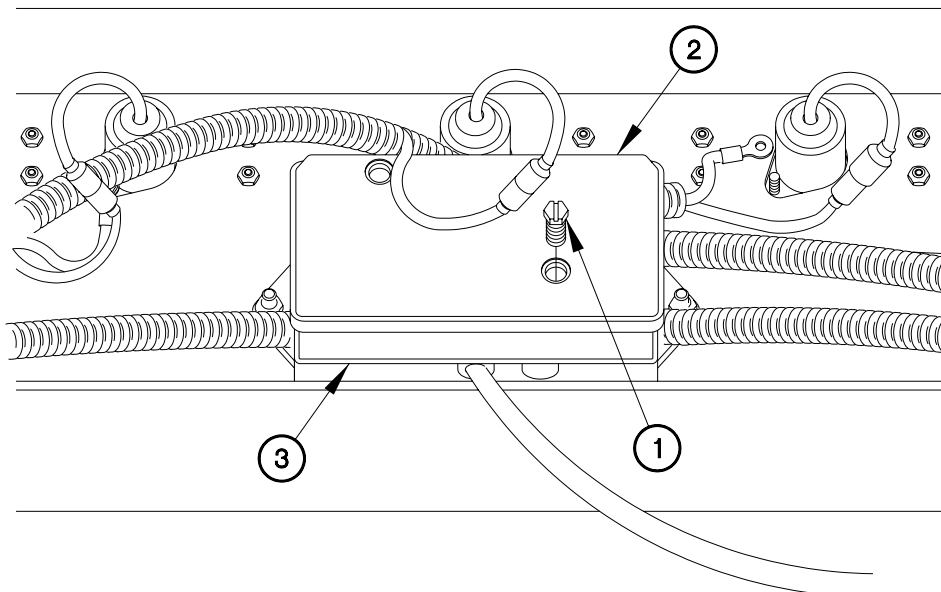
---

**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



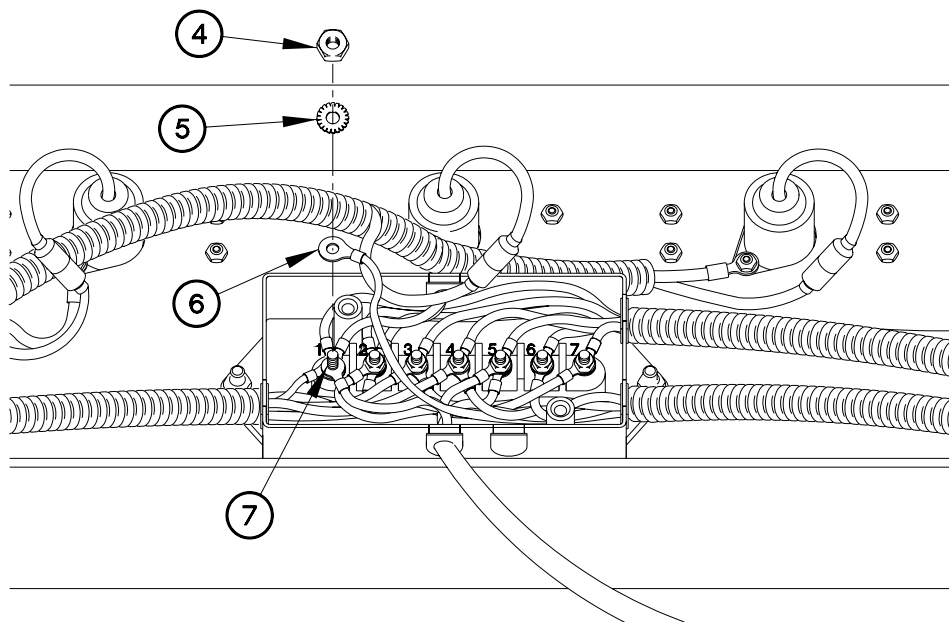
**LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued****0064 00****REMOVAL - Continued****NOTE**

Other terminal lugs are present at these locations. Tag terminal lugs and connection points prior to disconnecting.

All left rear electrical harness terminal lugs are removed the same way. Terminal lug for terminal stud 1 shown. Refer to **Table 1: Left Rear Electrical Harness To Junction Box Connection Points** for details.

<b>Table 1 : Left Rear Electrical Harness To Junction Box Connection Points</b>	
Junction Box Terminal Stud	Left Rear Electrical Harness Terminal Lug
1	TL275
2	TL273
3	TL271
4	TL272
6	TL274

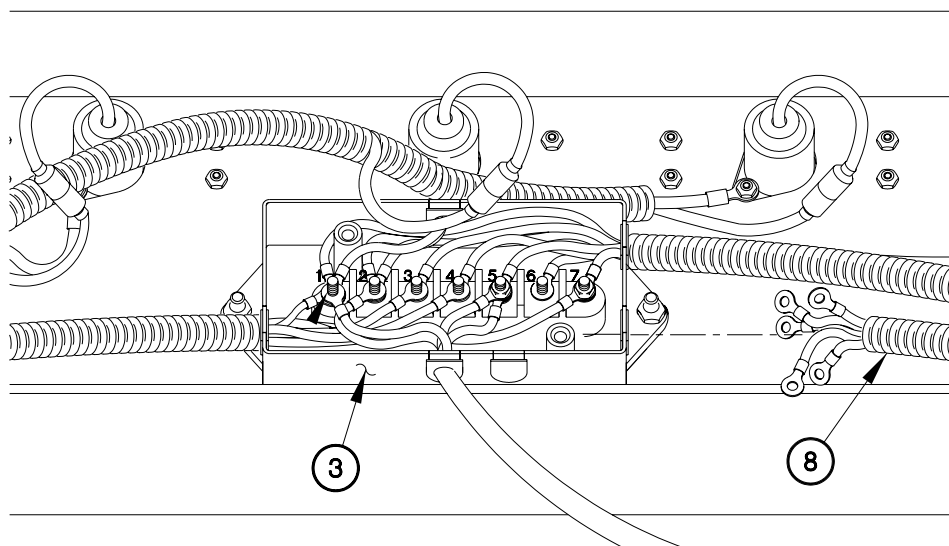
- Remove nut (4), lockwasher (5), and terminal lug TL275 (6) from junction box terminal stud 1 (GRD.) (7). Discard lockwasher.
- Perform the previous step on remaining left rear electrical harness to junction box terminal lugs.



CD064R02

**LEFT REAR ELECTRICAL HARNESS REPLACEMENT - Continued****0064 00****REMOVAL – Continued****LEFT REAR ELECTRICAL HARNESS REMOVAL**

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

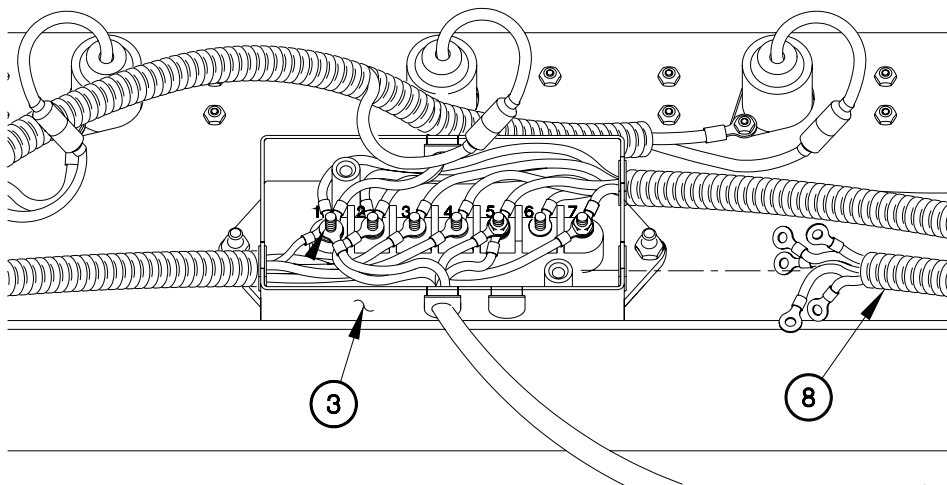


CD064R03

**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).



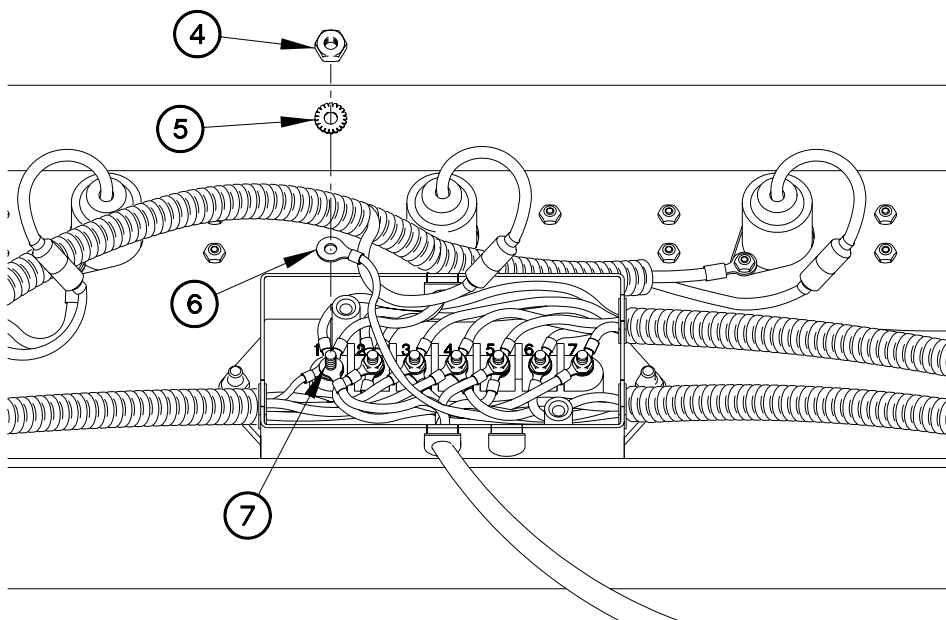
CD064R03

**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.

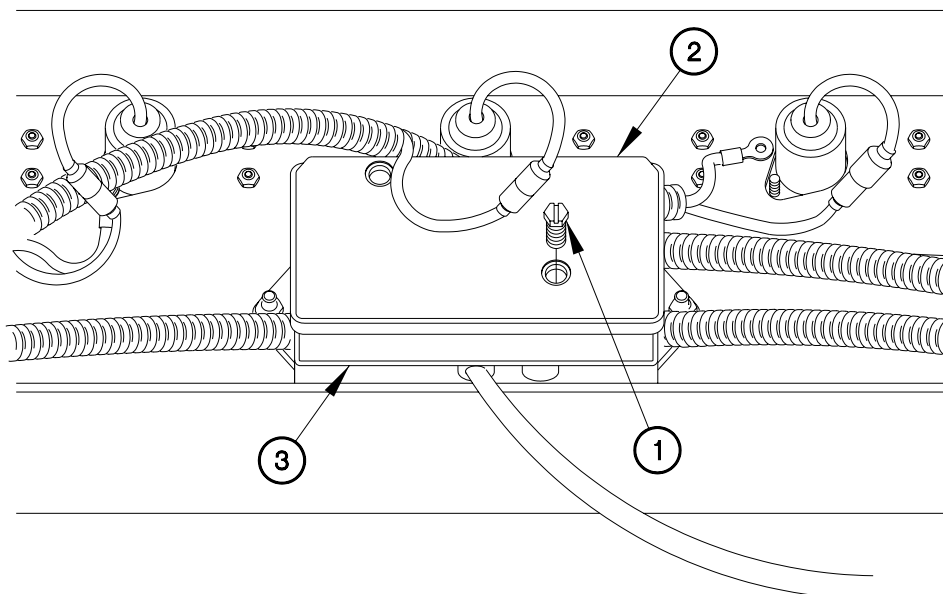
2. Install terminal lug TL275 (6) on junction box terminal stud 1 (GRD.) (7) with lockwasher (5) and nut (4).
3. Perform the previous step on remaining left rear electrical harness to junction box terminal studs.



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 22, 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**

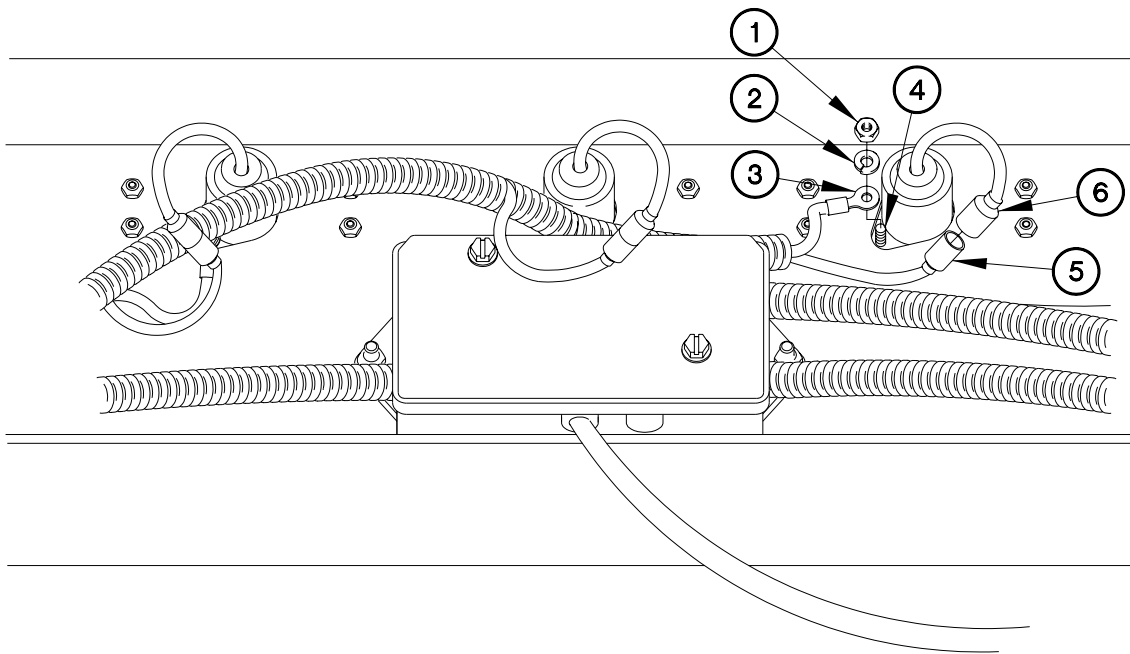
All three rear electrical harness connectors and terminal lugs are removed from the center rear marker lights the same way. Left center marker light connections shown.

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

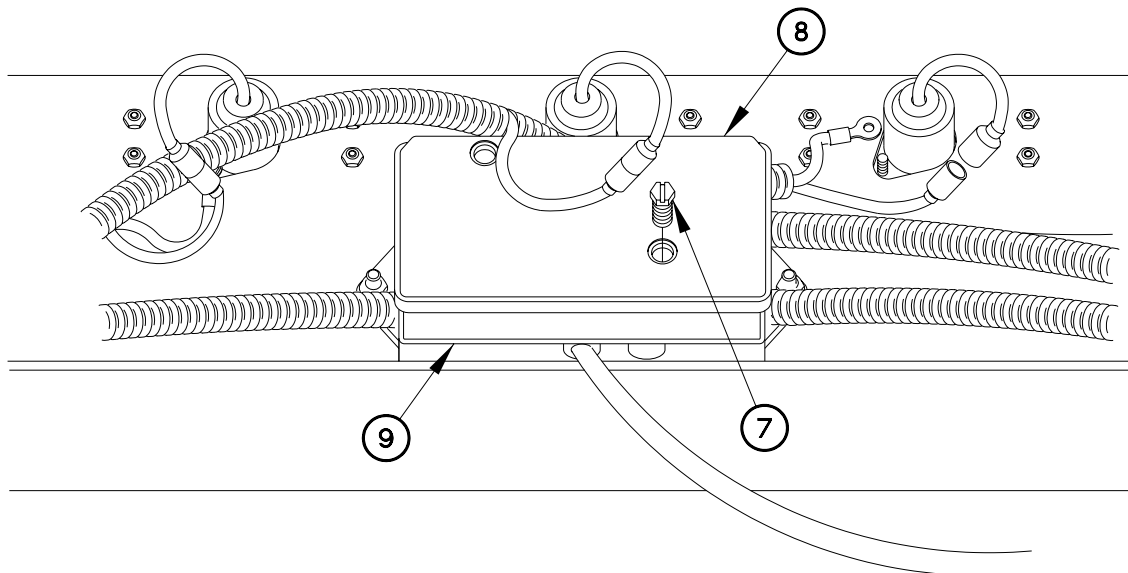


CD065R01



**REAR ELECTRICAL HARNESS REPLACEMENT - Continued****0065 00****REMOVAL - Continued**

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

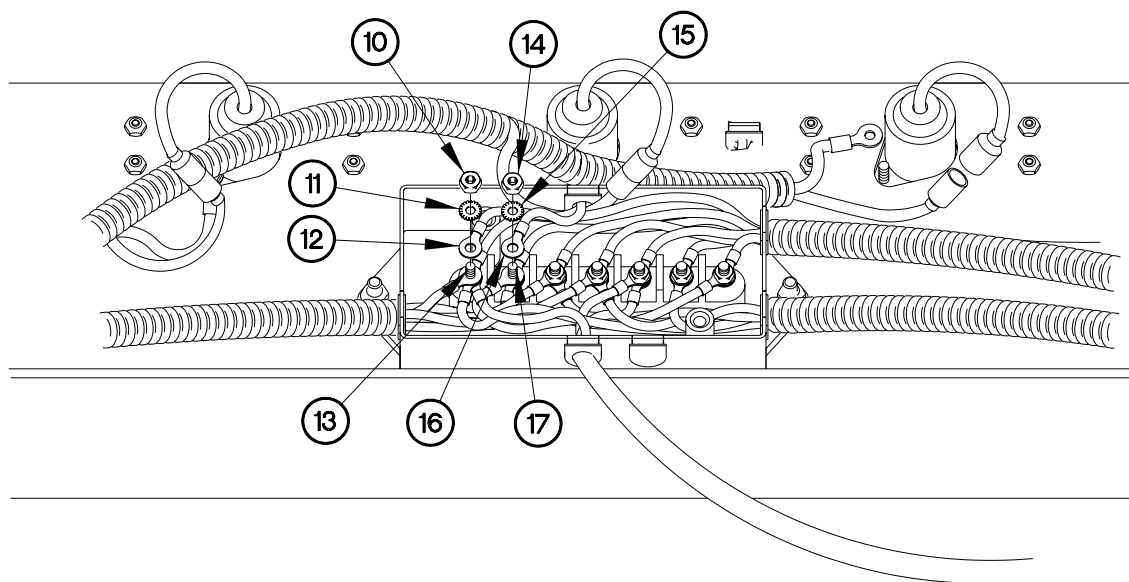


CD065R02

**NOTE**

Other terminal lugs are present at these locations.

5. Remove nut (10), lockwasher (11), and terminal lug TL282 (12) from junction box terminal stud 1 (GRD.) (13). Discard lockwasher.
6. Remove nut (14), lockwasher (15), and terminal lug TL281 (16) from junction box terminal stud 2 (CLEAR) (17). Discard lockwasher.

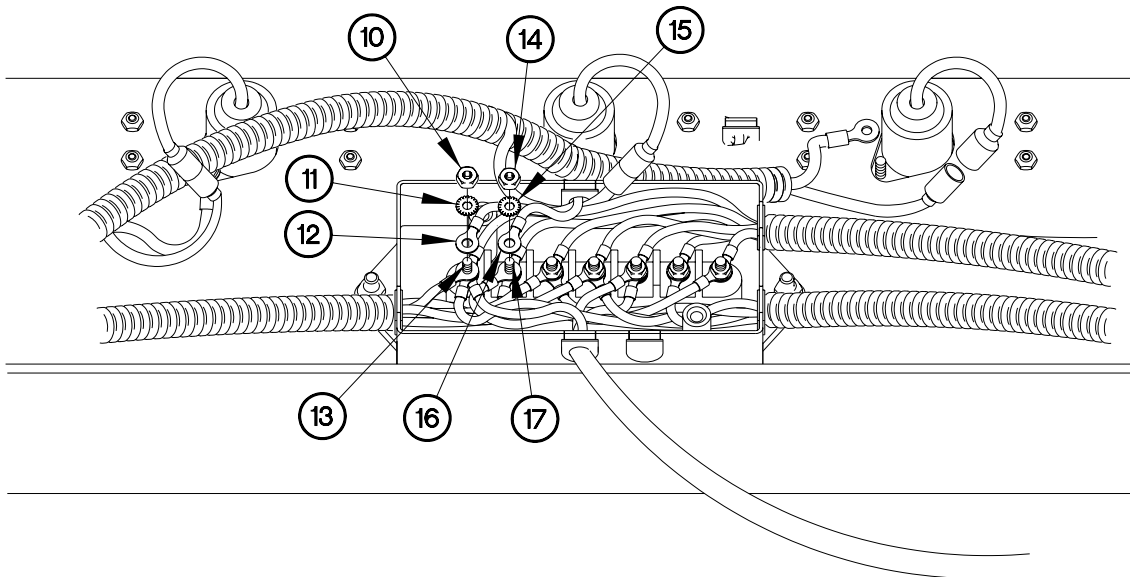


CD065R03

**REAR ELECTRICAL HARNESS REPLACEMENT - Continued****0065 00****INSTALLATION****NOTE**

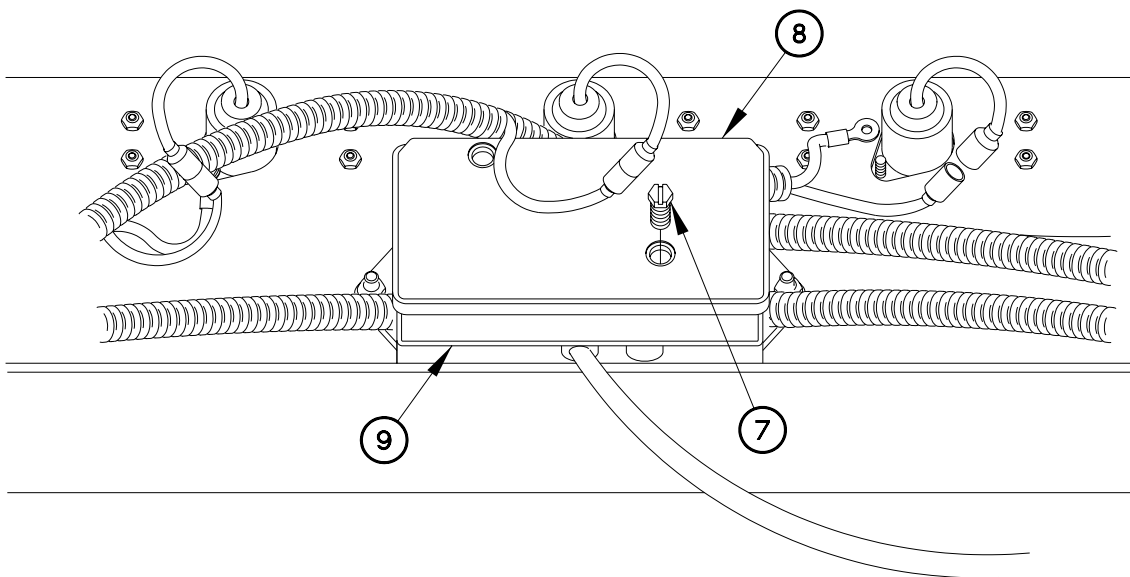
Other terminal lugs are present at these locations.

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).



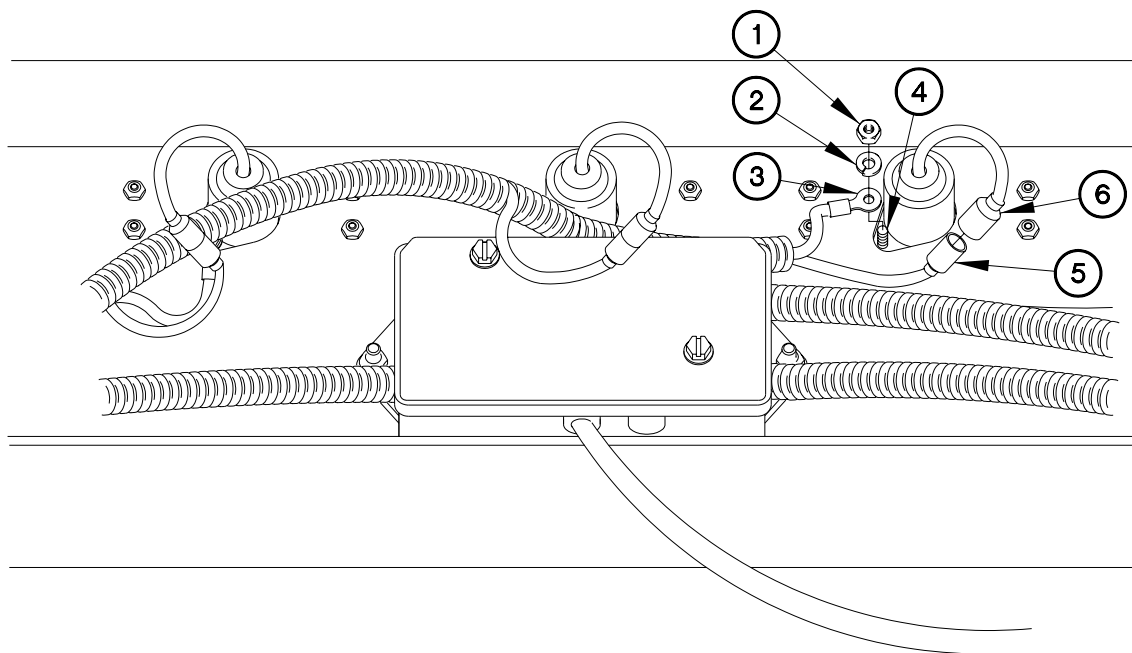
CD065R02

**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).



CD065R01

**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

**Materials/Parts (Cont)**

Washer, Lock (7) (Item 15, WP 0168 00)

Nut, Self-Locking (11) (Item 27, WP 0168 00)

**Tools and Special Tools**

Goggles, Industrial (Item 8, WP 0167 00)

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

Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

**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).

**Materials/Parts**

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

Ties, Cable, Plastic (Item 20, WP 0165 00)

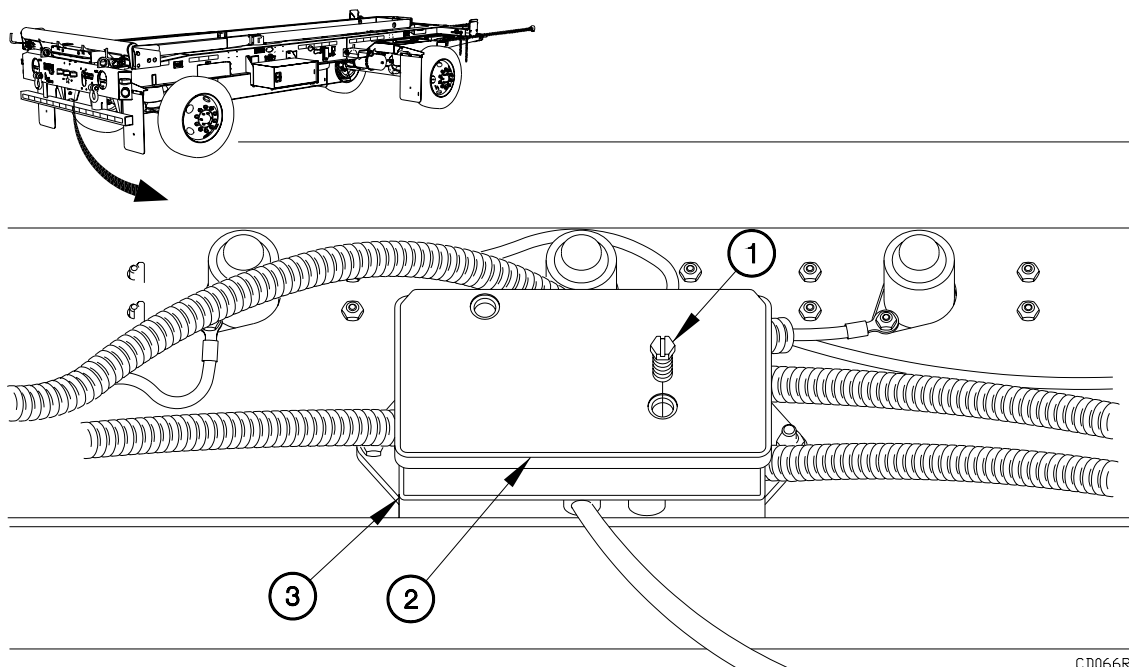
---

**GENERAL**

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

**MAIN ELECTRICAL HARNESS REPLACEMENT - Continued****0066 00****REMOVAL**

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



CD066R01

**MAIN ELECTRICAL HARNESS REPLACEMENT - Continued****0066 00****REMOVAL – Continued****NOTE**

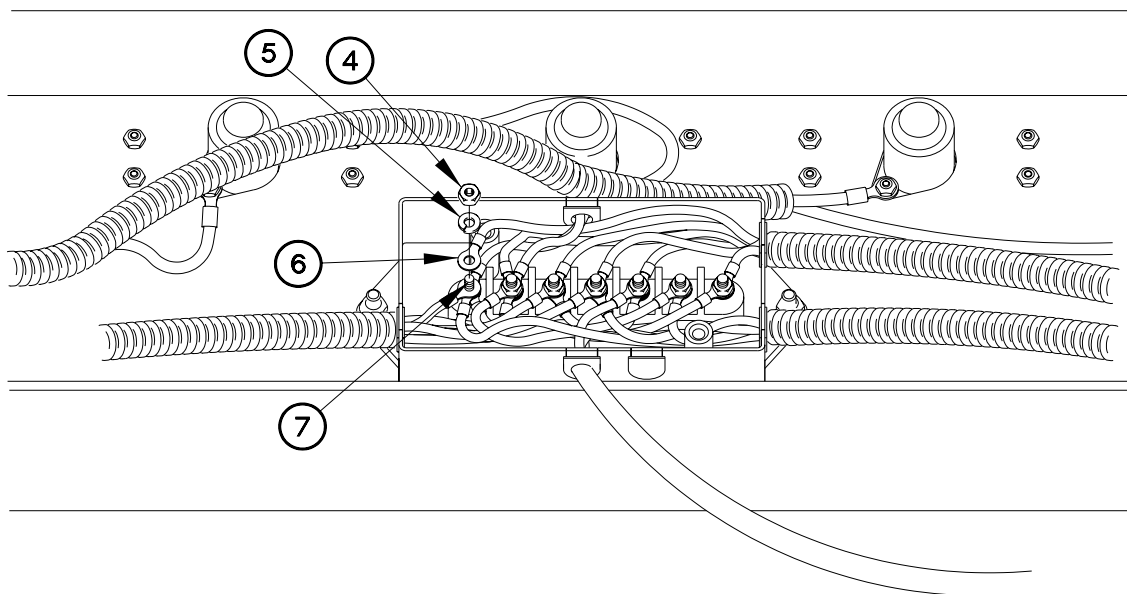
All main electrical harness terminal lugs are removed the same way. Junction box terminal lug 1 shown. Refer to **Table 1, Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations**, for details.

Tag all terminal lugs and terminal studs prior to removal.

2. Remove nut (4), lockwasher (5), and terminal lug TL261A (6), from junction box terminal stud 1 (7). Discard lockwasher.
3. Repeat the previous step on remaining main electrical harness terminal lugs.

**Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations**

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A



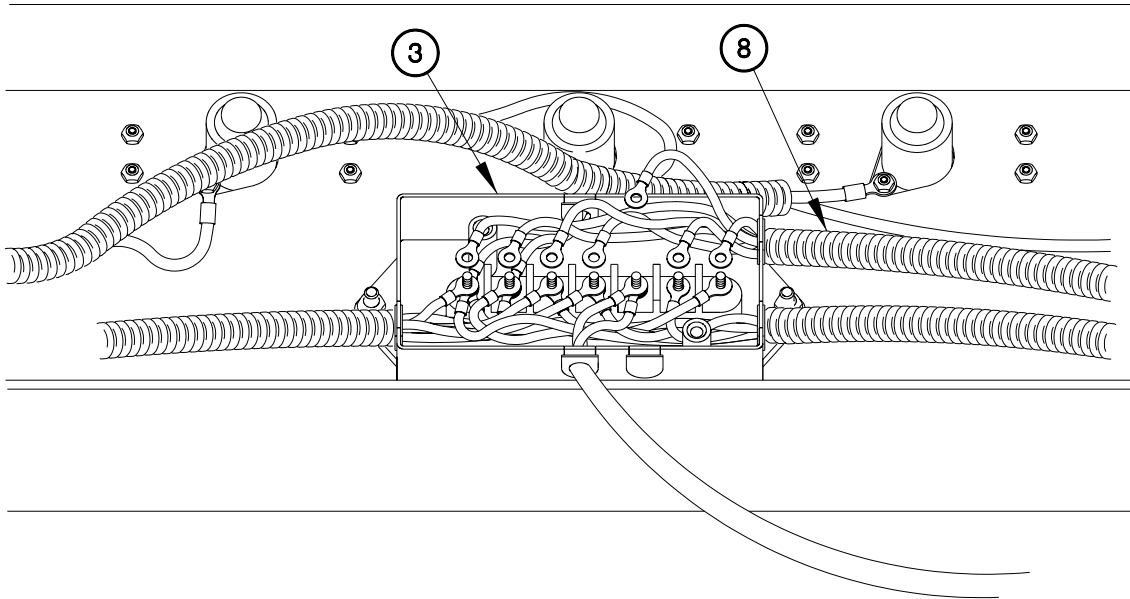
CD066R02

**MAIN ELECTRICAL HARNESS REPLACEMENT - Continued****0066 00****REMOVAL – Continued**

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

**Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations**

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A



CD066R03



**REMOVAL – Continued****NOTE**

All main electrical harness clamps are removed the same way. One shown.

Remove plastic cable ties as required.

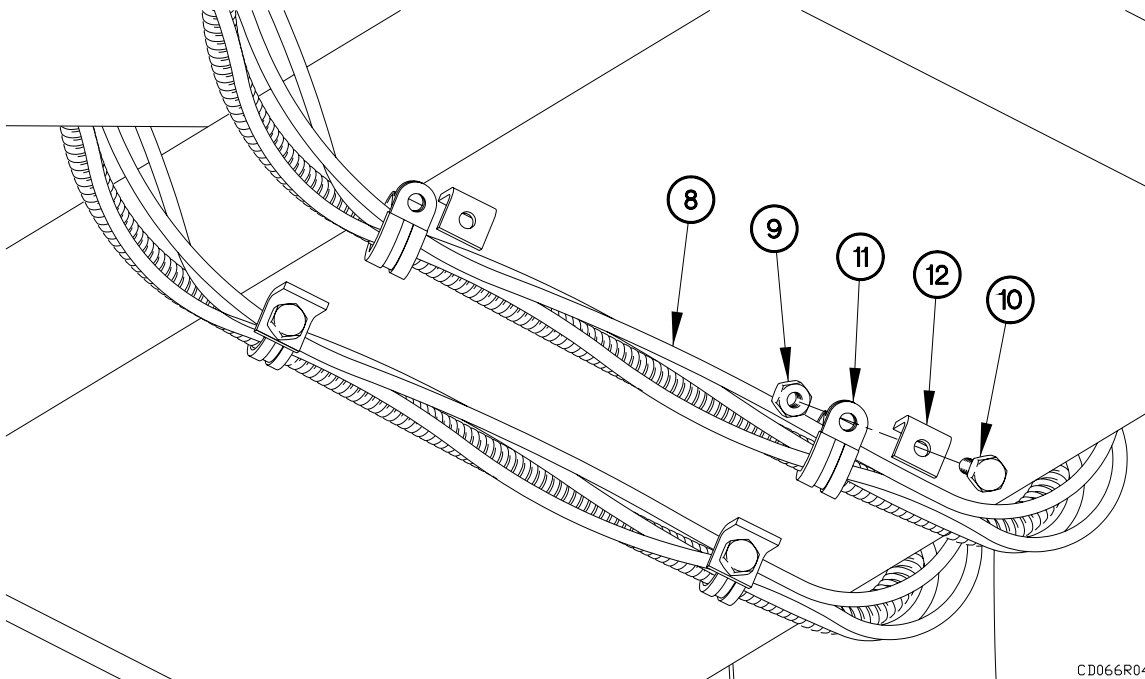
Remove convoluted tubing as required.

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.

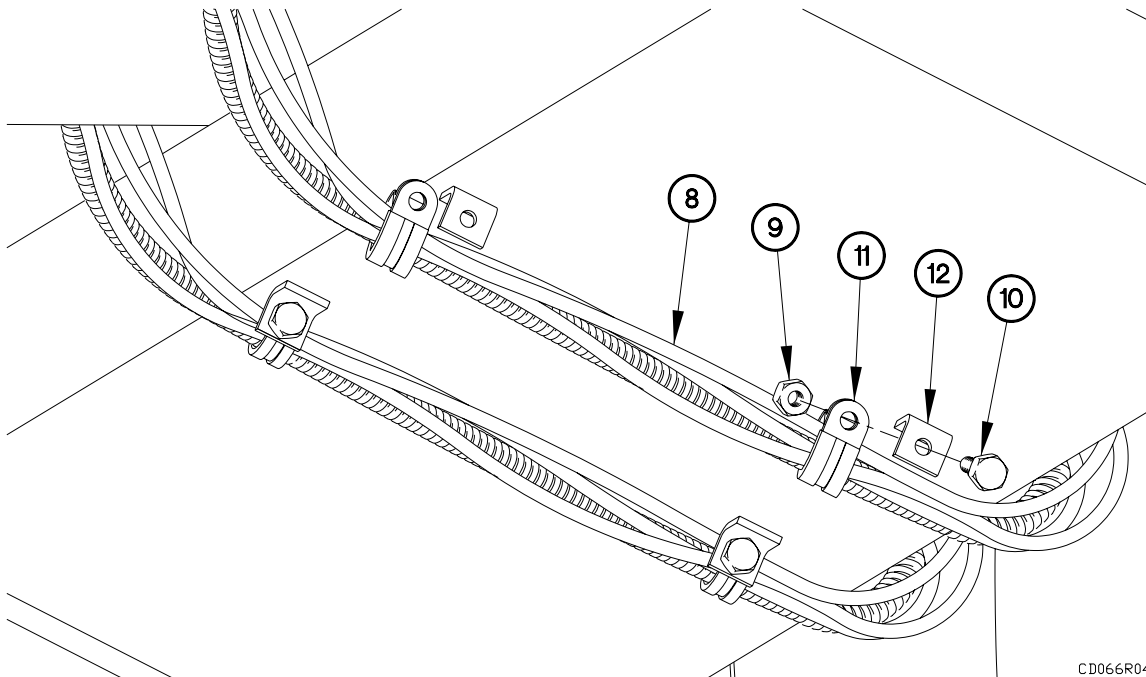
Install convoluted tubing as required.

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.



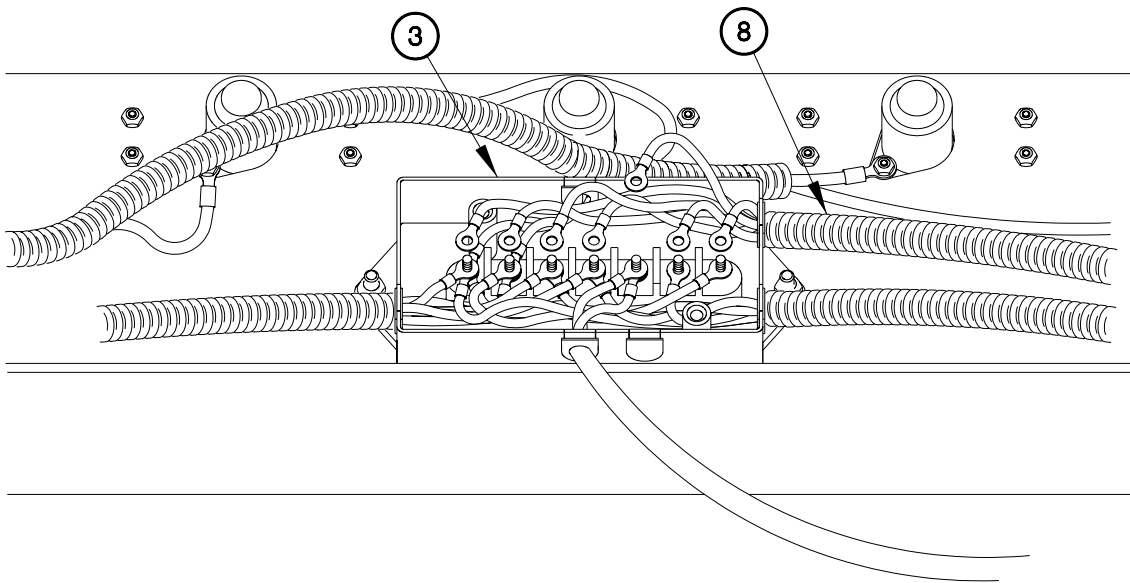
CD066R04

**MAIN ELECTRICAL HARNESS REPLACEMENT - Continued****0066 00****INSTALLATION - Continued**

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

**Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations**

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A



CD066R03

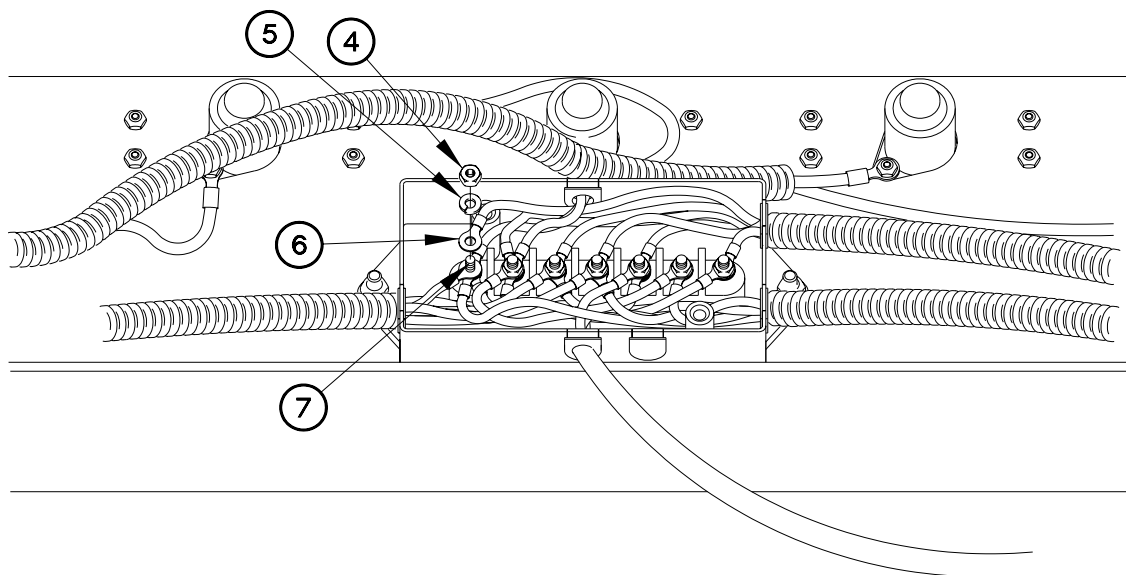
**MAIN ELECTRICAL HARNESS REPLACEMENT - Continued****0066 00****INSTALLATION - Continued****NOTE**

All main electrical harness terminal lugs are installed the same way. Junction box terminal lug 1 shown. Refer to **Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations** for details.

**Table 1 Junction Box Terminal Stud and Main Wiring Harness Terminal Lug Locations**

Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A
Stud Position 6	TL253A
Stud Position 7	TL252A

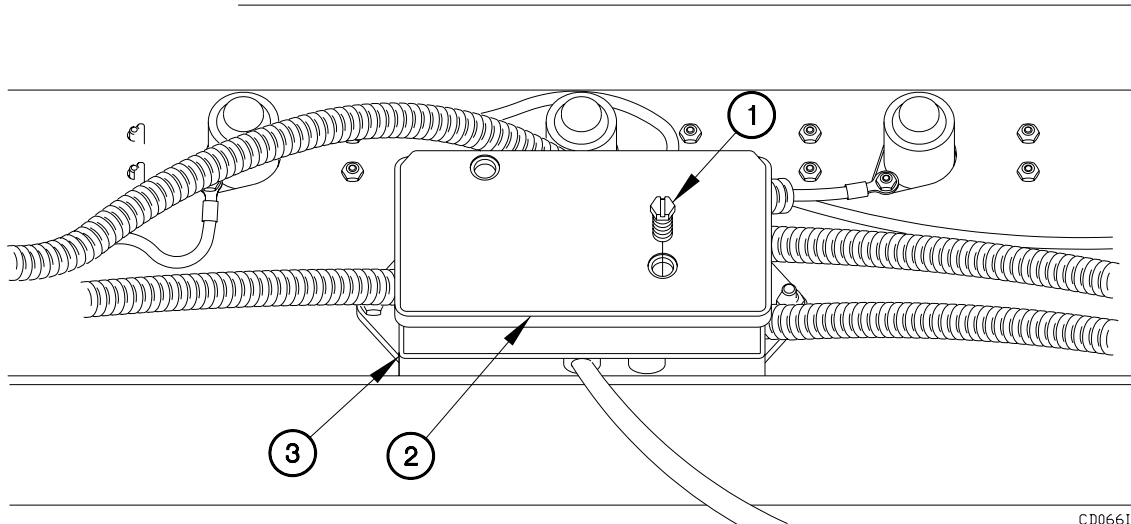
6. Install terminal lug TL261A (6) on junction box terminal stud 1 (7) with lockwasher (5) and nut (4).
7. Repeat the previous step on remaining main electrical harness terminal lugs.



CD066R02

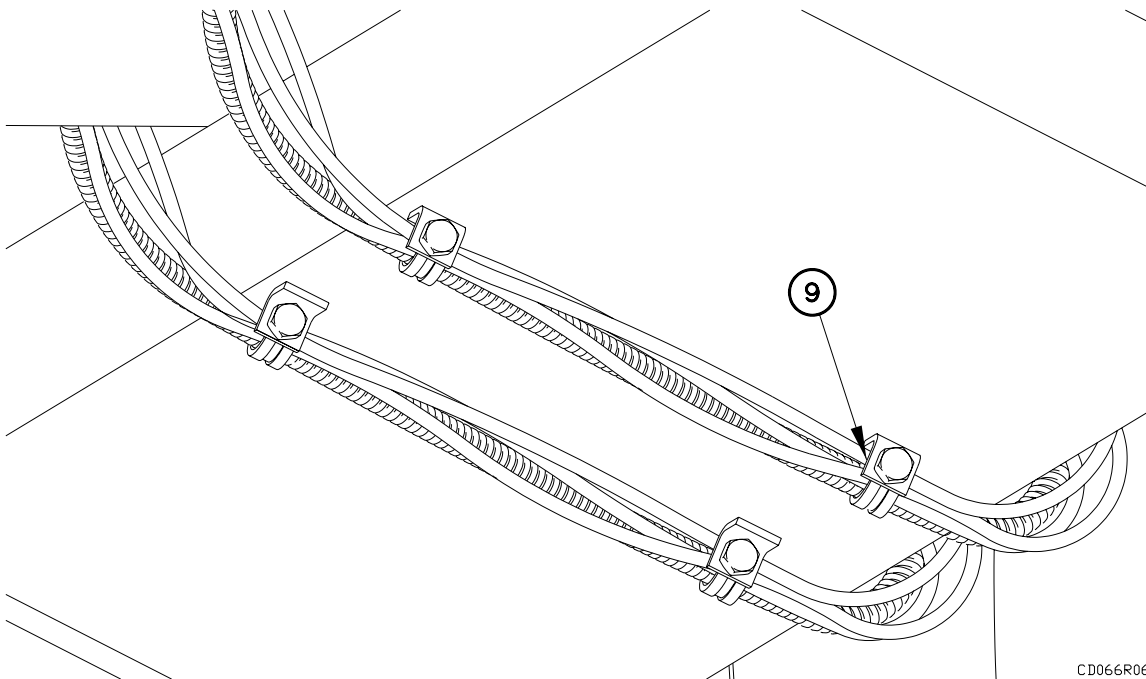
**INSTALLATION - Continued**

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 22, WP 0167 00)  
 Wrench, Torque, 0-175 lb-ft (Item 32, WP 0167 00)  
 Goggles, Industrial (Item 8, WP 0167 00)  
 Wrench, Torque, 0-600 lb-ft (Item 34, WP 0167 00)  
 Multiplier, Torque Wrench (Item 13, WP 0167 00)  
 Jack, Leveling Support (Item 11, WP 0167 00)  
 Jack, Dolly Type, Hydraulic (Item 10, WP 0167 00)  
 Wrench Set, Socket (Item 26, WP 0167 00)  
 Wrench Set, Crowfoot Ratcheting (Item 27, WP 0167 00)  
 Lift, Transmission and Differential (Item 12, WP 0167 00)  
 Trestle, Motor Vehicle Maintenance (2) (Item 24, WP 0167 00).

**Materials/Parts**

Washer, Lock (2) (Item 5, WP 0168 00)  
 Nut, Self-locking (6) (Item 25, WP 0168 00)  
 Dispenser, Pressure Sensitive Adhesive Tape (Item 6, WP 0165 00)  
 Ties, Cable, Plastic (Item 20, WP 0165 00)  
 Nut, Self-Locking (2) (Item 26, WP 0168 00)  
 Washer, Lock (2) (Item 4, WP 0168 00)

**Personnel Required**

Two

**Equipment Conditions**

Tires removed (on axle being replaced) (WP 0053 00).  
 Air tanks drained (WP 0004 00).  
 Air brake air chamber removed (WP 0081 00).

**GENERAL**

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

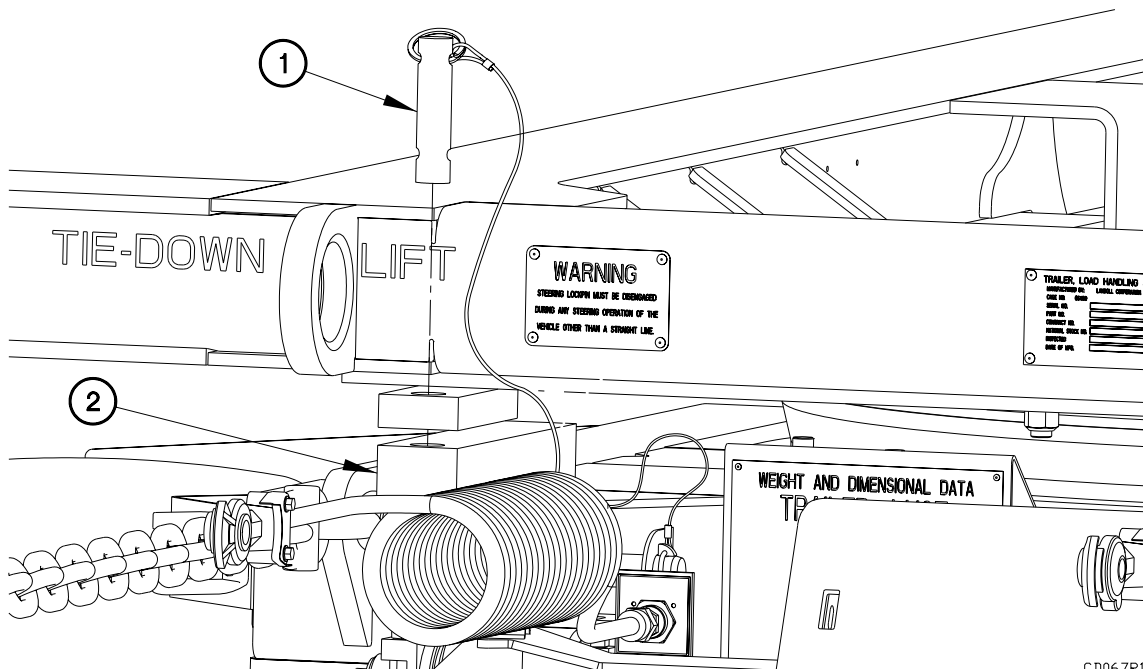
**WARNING**

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

**AXLE ASSEMBLY REPLACEMENT****0067 00****REMOVAL****NOTE**

Remove plastic cable ties as required.

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



CD067R10



**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****REMOVAL - Continued****NOTE**

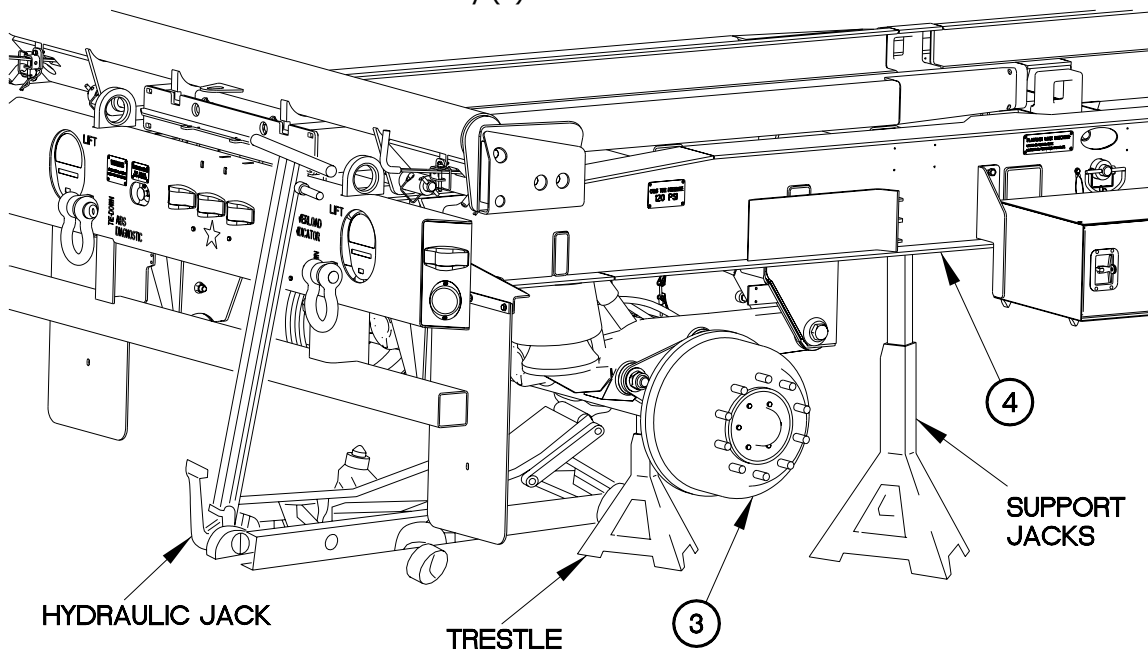
Both axles are removed the same way. Rear axle assembly shown.

2. Position hydraulic jack under axle assembly (3).

**CAUTION**

Raise trailer so that swing arm is fully extended before positioning vehicle leveling support jacks. Failure to comply may result in damage to equipment.

3. Position two leveling support jacks under frame (4).
4. Position two trestles under axle assembly (3).



CD067R01

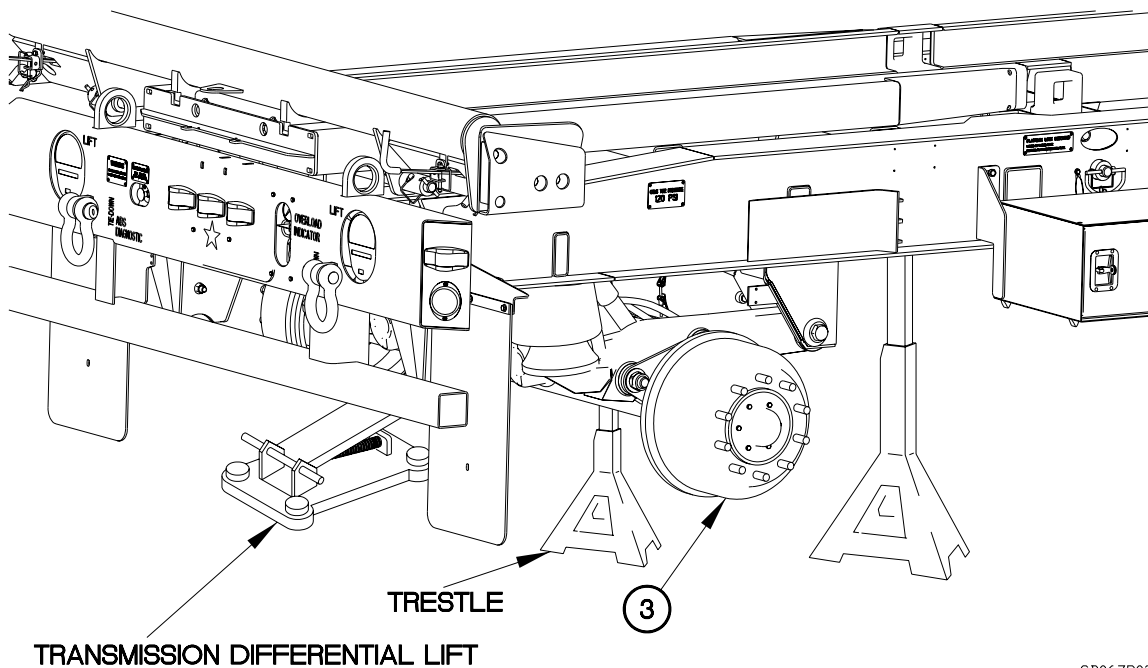
**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****REMOVAL - Continued**

5. Remove hydraulic jack.

**WARNING**

**Axle assembly weighs approximately 600 lbs (272 kgs). Axle assembly must be supported during removal. Failure to comply may result in injury to personnel or damage to equipment.**

6. Position transmission/differential lift under axle assembly (3).
7. Remove two trestles from under axle assembly (3).

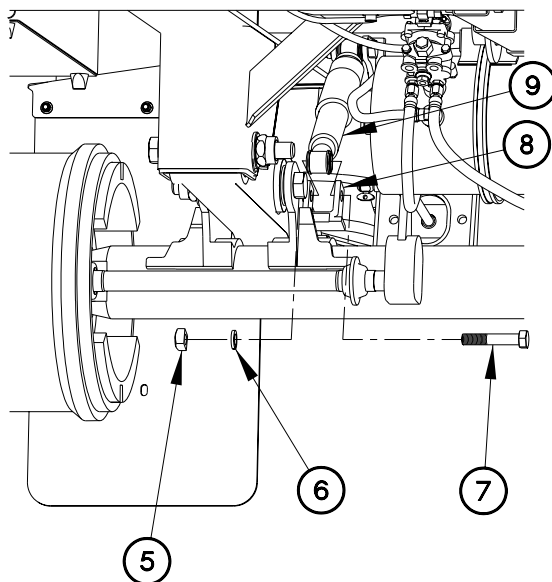


CD067R02

**REMOVAL - Continued****NOTE**

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

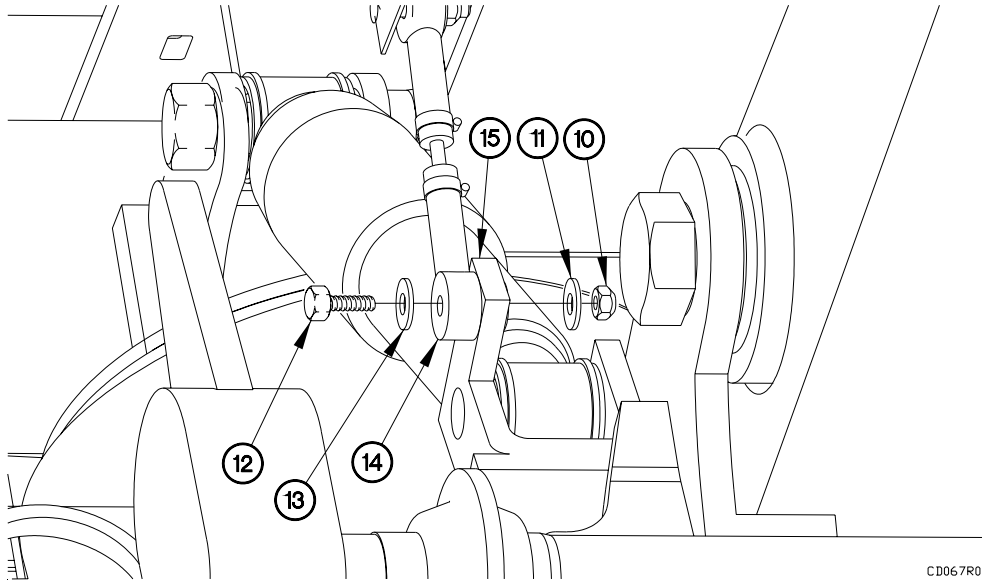
8. Remove nut (5), lockwasher (6), and bolt (7) from lower bracket (8). Discard lockwasher.
9. Position shock absorber (9) away from lower bracket (8).



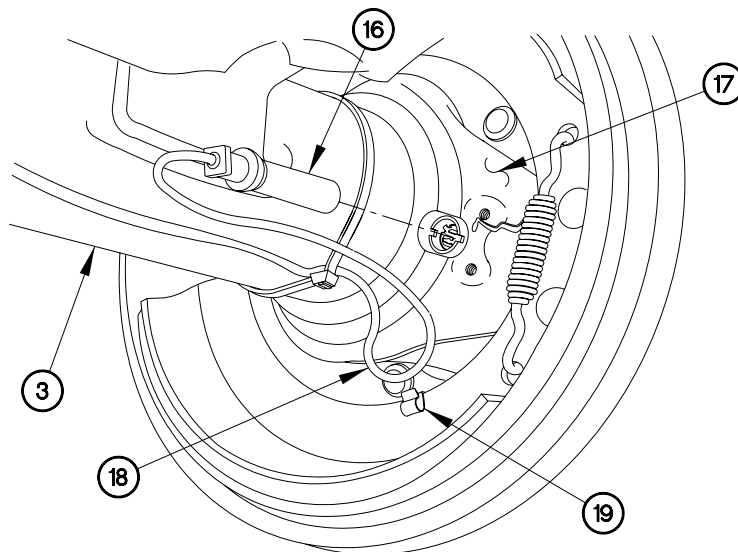
CD067R03

**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****REMOVAL - Continued**

10. Remove self-locking nut (10), washer (11), bolt (12), washer (13), and height control linkage (14) from lower shock bracket (15). Discard self-locking nut.

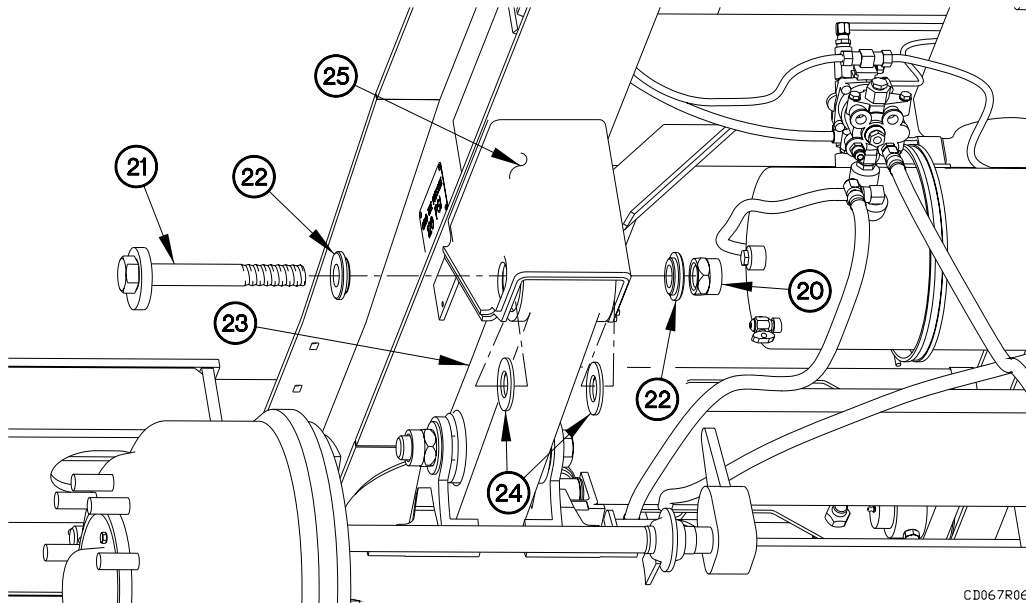


11. Remove ABS wheel speed sensor (16) from wheel hub (17).
12. Remove cable (18) from clamp (19).
13. Position ABS wheel speed sensor (16) and cable (18) away from axle assembly (3).



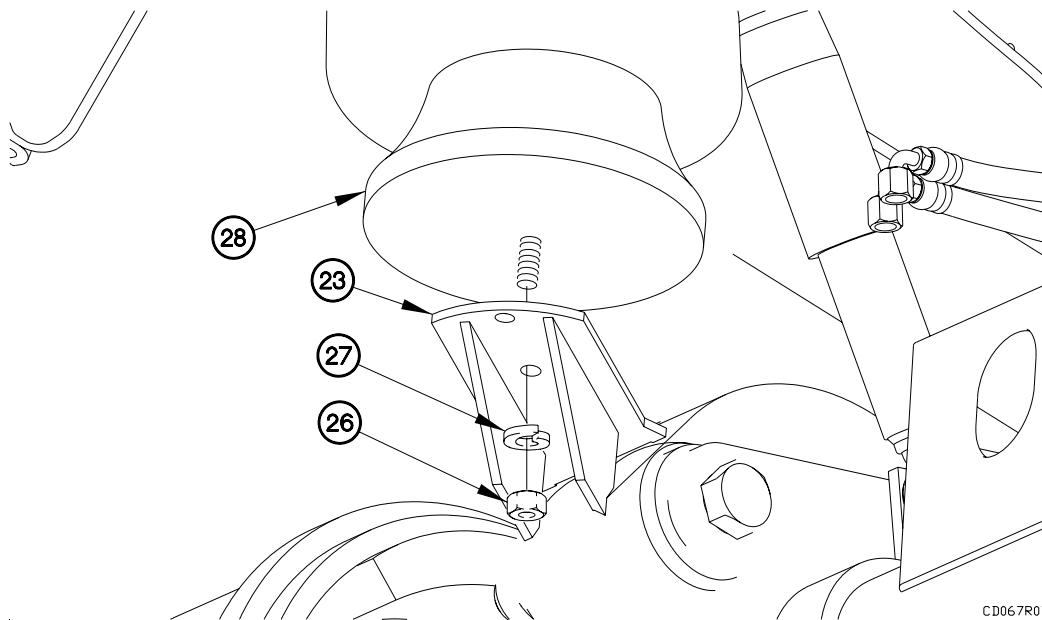
**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****REMOVAL - Continued**

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



15. Remove nut (26), lockwasher (27), and air bag base (28) from equalizing beam (23). Discard lockwasher.

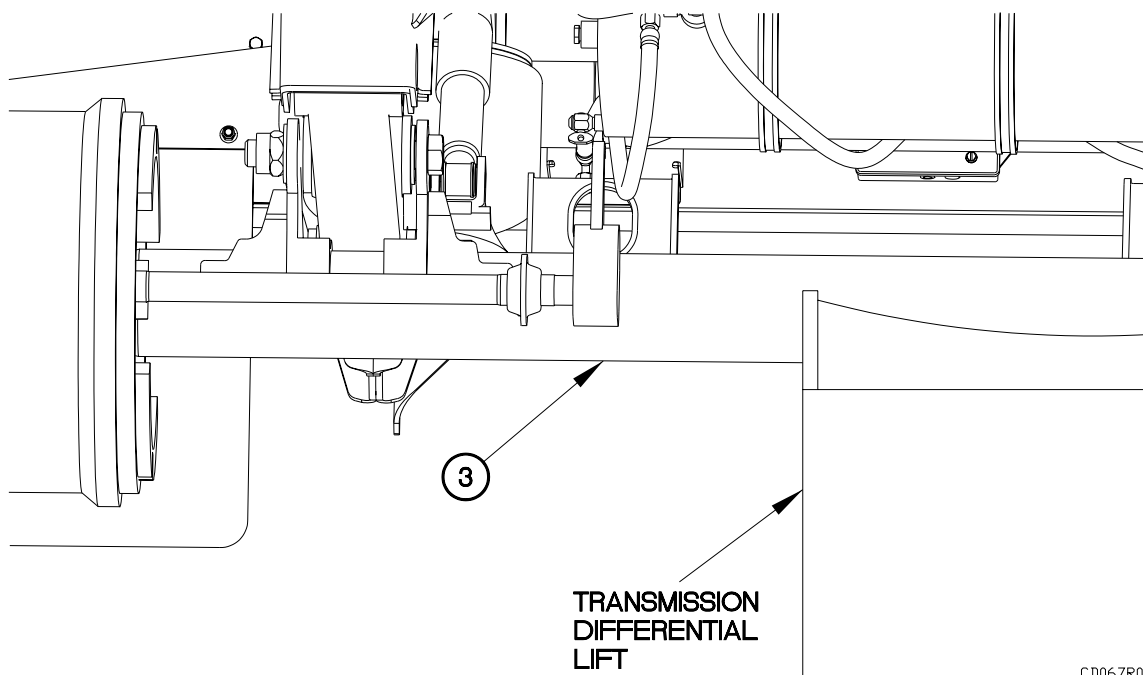
16. Perform the previous eight steps on RH side of axle assembly.



**REMOVAL - Continued****NOTE**

The following step requires the aid of two assistants.

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

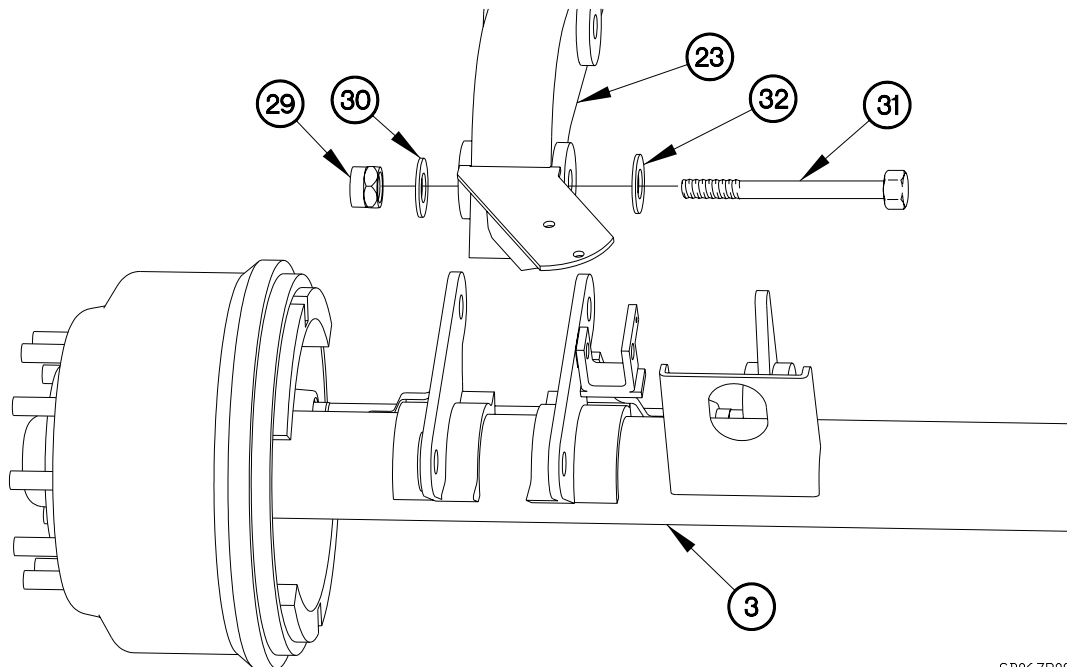


CD067R08

**REMOVAL - Continued****NOTE**

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

18. Remove two self-locking nuts (29), washers (30), bolts (31), washers (32), and equalizing beam (23) from axle assembly (3). Discard self-locking nuts.
19. Perform previous step on LH side equalizing beam.



CD067R09

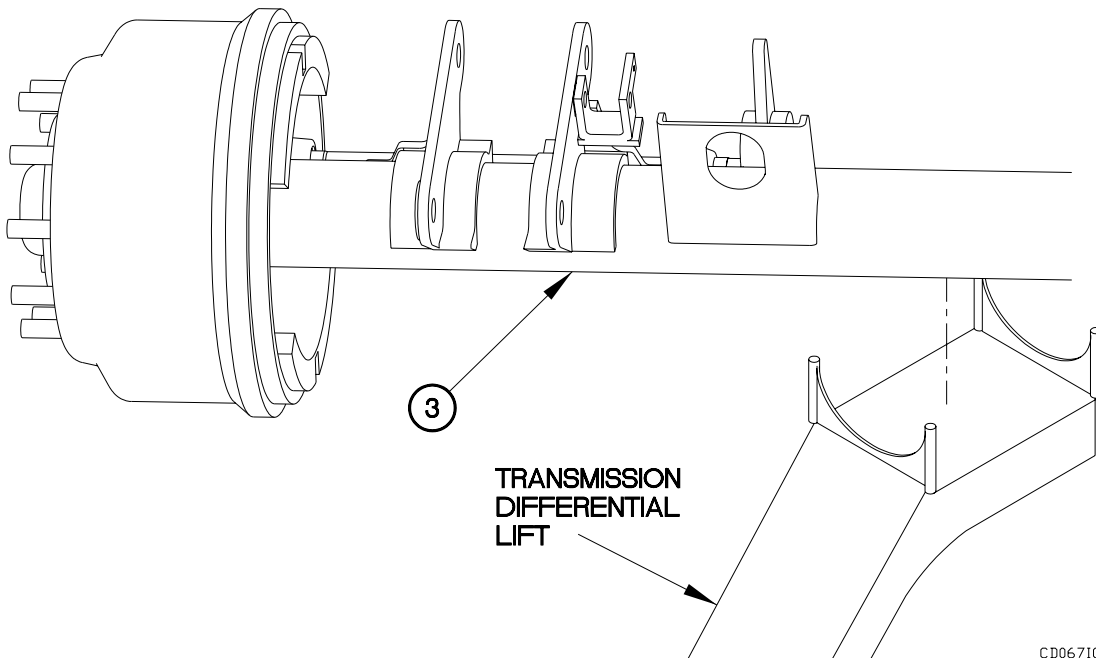
**INSTALLATION****WARNING**

**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



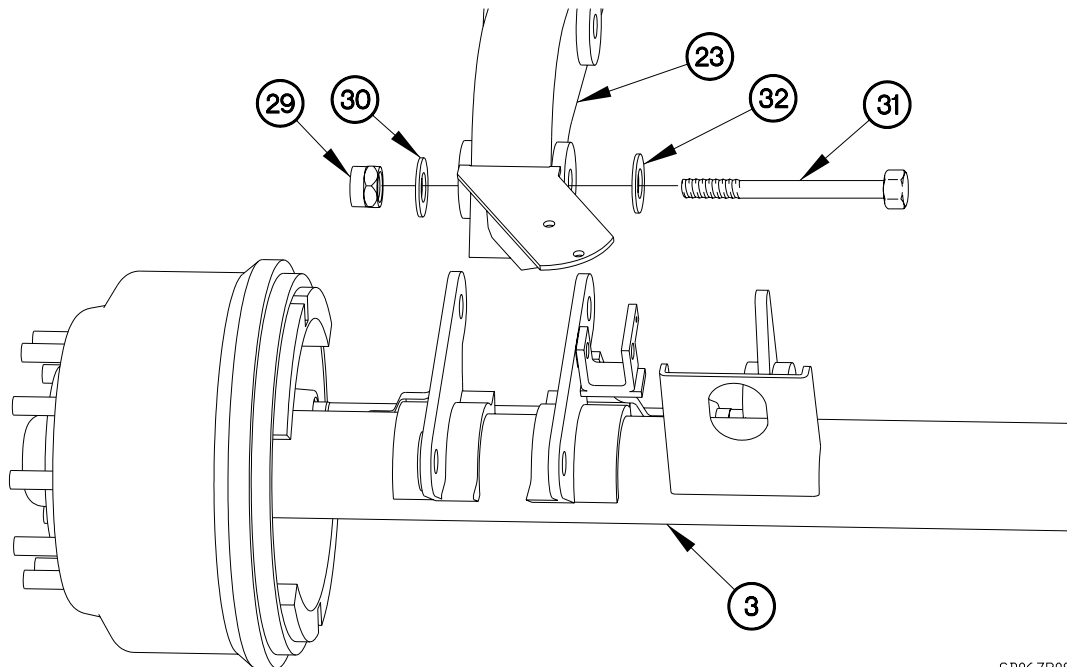
**INSTALLATION - Continued****NOTE**

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 shown.

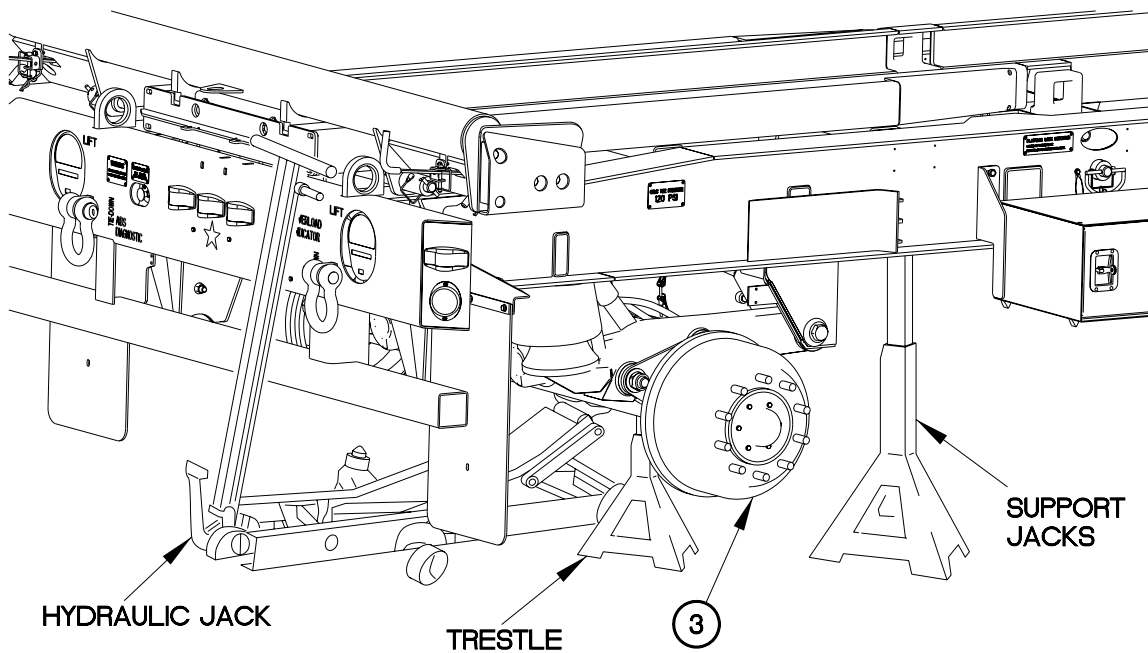
3. Position equalizing beam (23) on axle assembly (3) with two washers (32), bolts (31), washers (30), and self-locking nuts (29).
4. Tighten two self-locking nuts (29) to 760-840 lb-ft (1030-1139 N•m).
5. Perform previous two steps on LH side equalizing beam.



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).

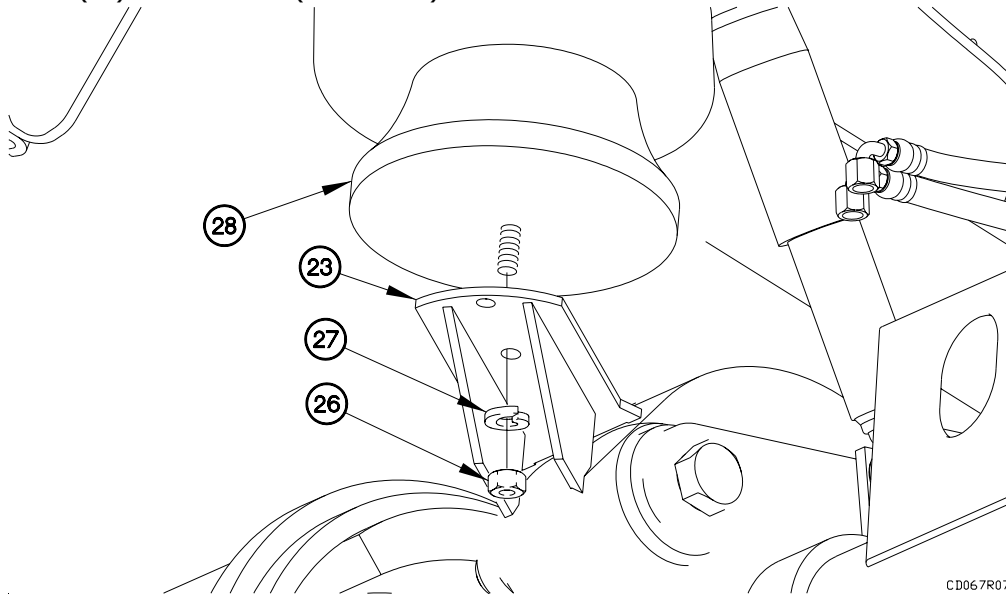


CD067103

**INSTALLATION - Continued****NOTE**

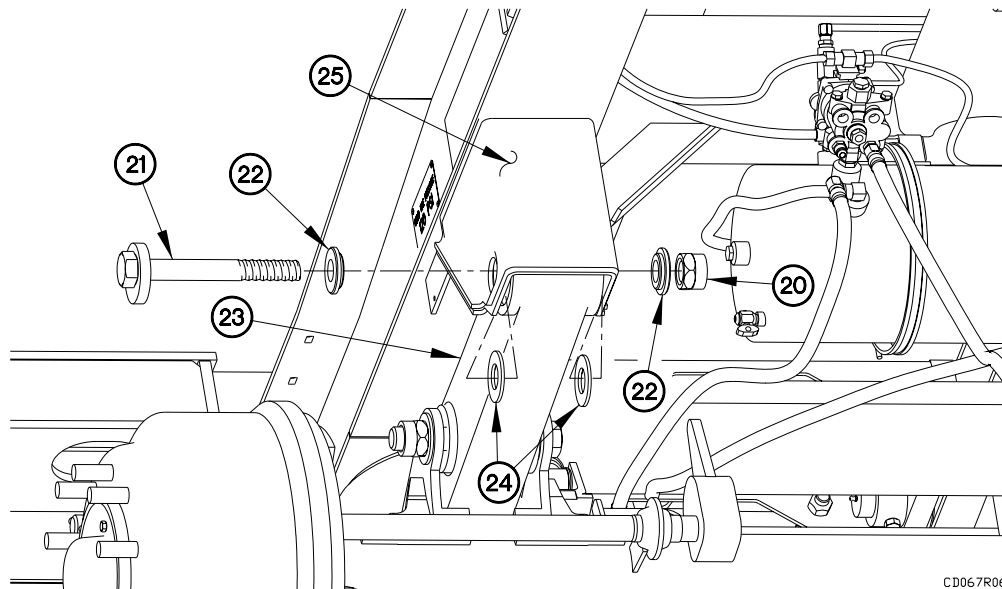
LH and RH side of axle assembly is installed the same way. LH side shown.

11. Position air bag base (28) on equalizing beam (23) with lockwasher (27) and nut (26).
12. Tighten nut (26) to 33-37 lb-ft (45-50 N•m).

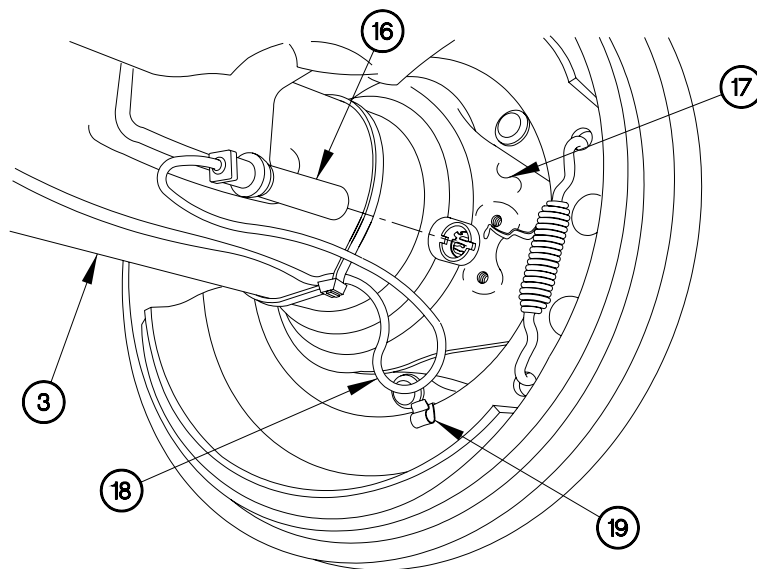


**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****INSTALLATION - Continued**

13. Position equalizing beam (23) on frame rail (25) with two washers (24), spacer (22), bolt (21) and self-locking nut (20).
14. Tighten self-locking nut (20) to 523-578 lb-ft (709-784 N•m).

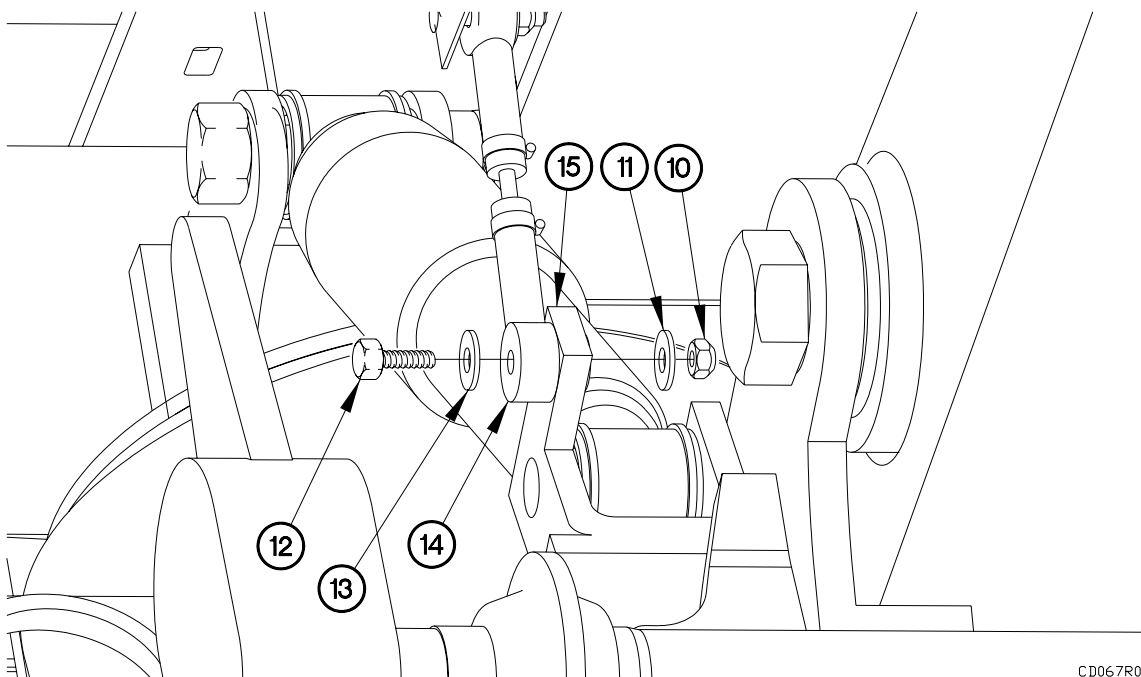


15. Position cable (18) and ABS wheel speed sensor (17) on axle assembly (3).
16. Install cable (18) in clamp (19).
17. Install ABS wheel speed sensor (16) in wheel hub (17).



**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****INSTALLATION - Continued**

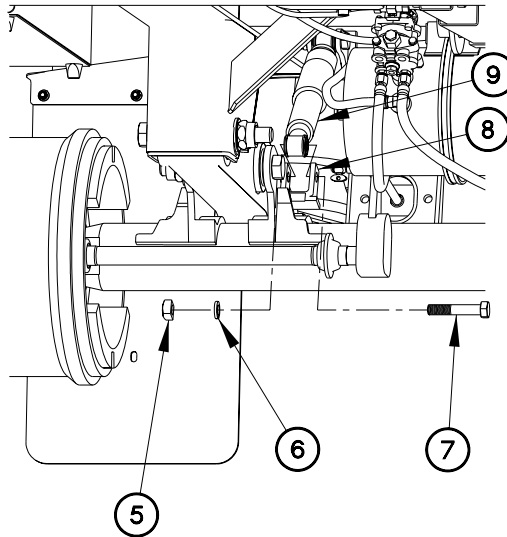
18. Position height control linkage (14) on lower shock bracket (15) with washer (13), bolt (12), washer (11), and self-locking nut (10).
19. Tighten self-locking nut (10) to 8-10 lb-ft (11-14 N•m).



CD067R05

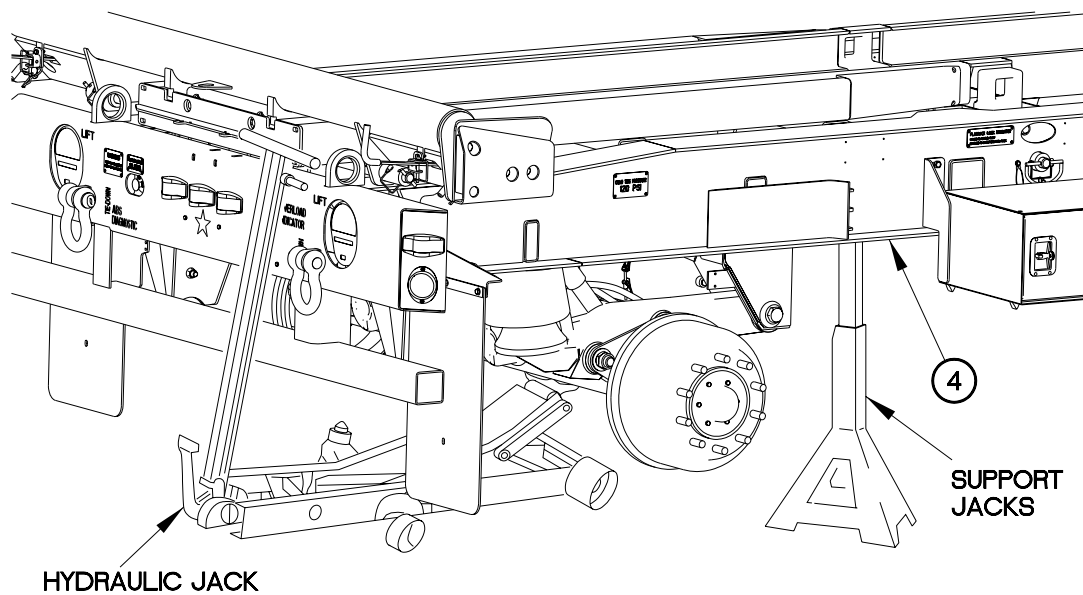
**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****INSTALLATION - Continued**

20. Position shock absorber (9) in lower bracket (8) with bolt (7), lockwasher (6), and nut (5).
21. Tighten nut (5) to 143-158 lb-ft (194-214 N•m).
22. Perform previous 11 steps on RH side of axle assembly.



CD067R03

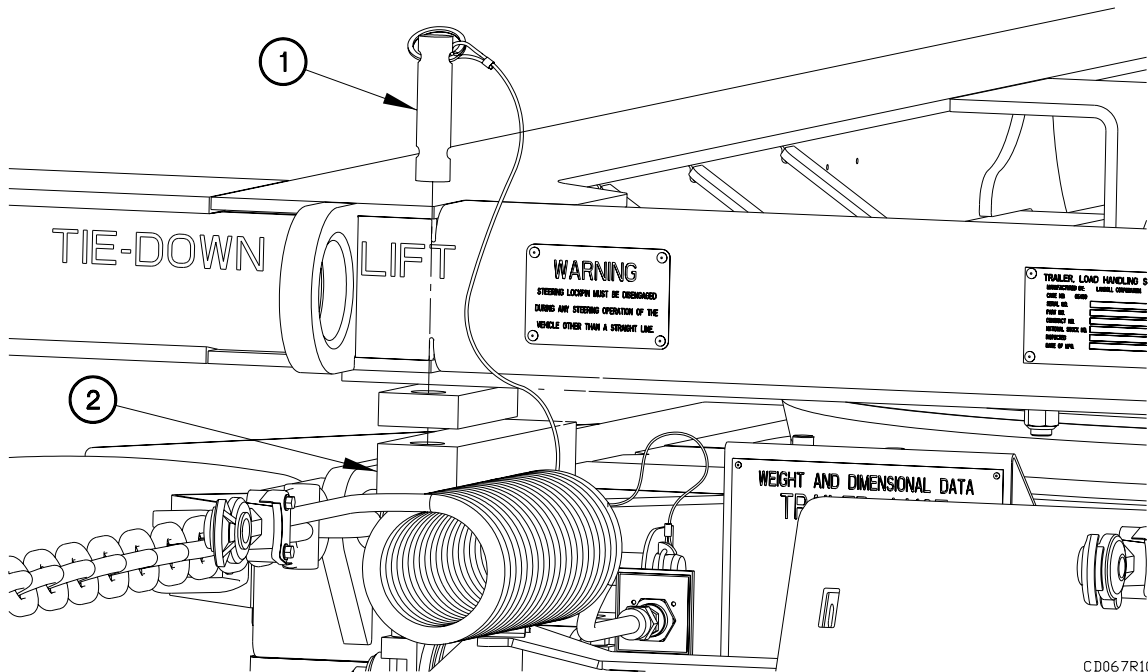
23. Remove two leveling support jacks from frame (4).



CD067104

**AXLE ASSEMBLY REPLACEMENT - Continued****0067 00****INSTALLATION - Continued**

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



CD067R10

**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 13, WP 0165 00)

**Tools and Special Tools**

Goggles, Industrial (Item 8, WP 0167 00)  
Tool Kit, Genl Mech (Item 22, WP 0167 00)  
Wrench, Torque, 0-200 lb-in. (Item 33,  
WP 0167 00)

**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**

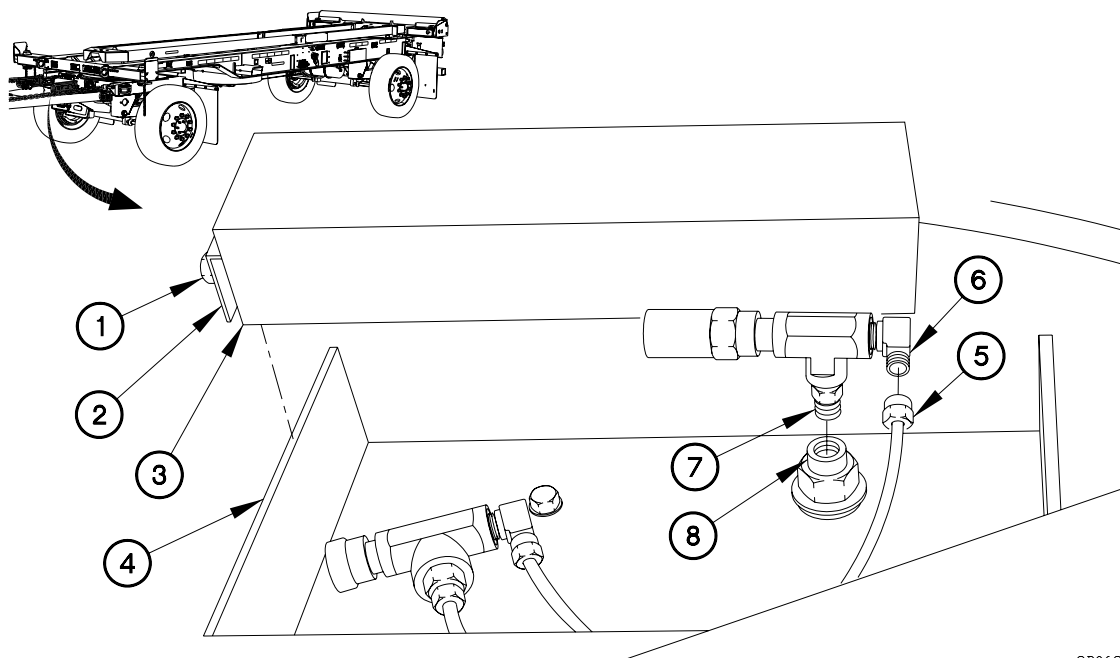
---

**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

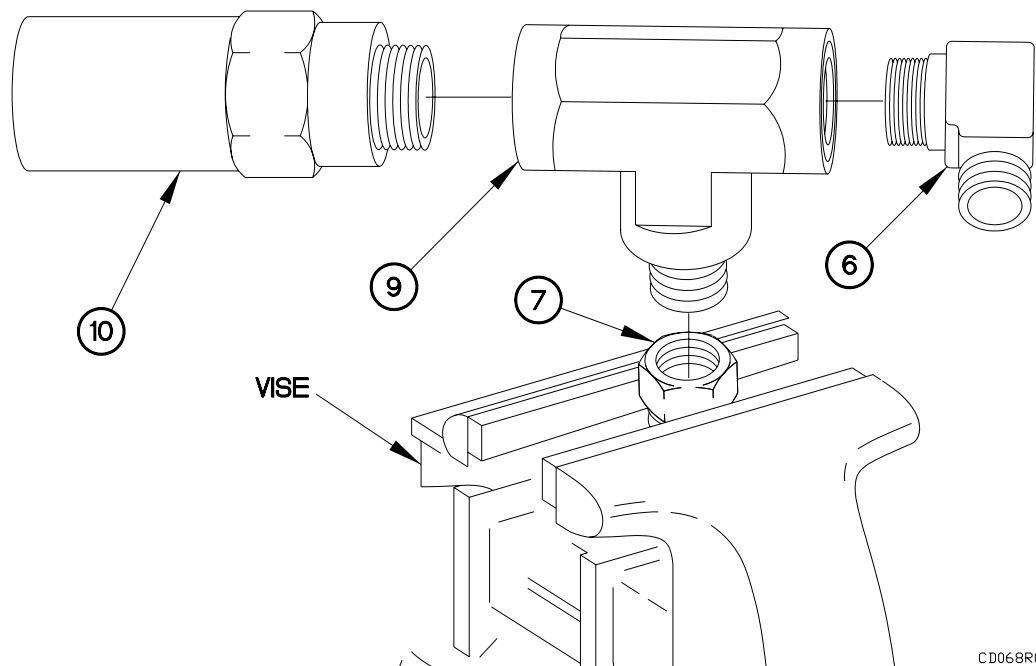
**PRESSURE RELIEF VALVE ASSEMBLY REPLACEMENT - Continued****0068 00****REMOVAL - Continued**

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).

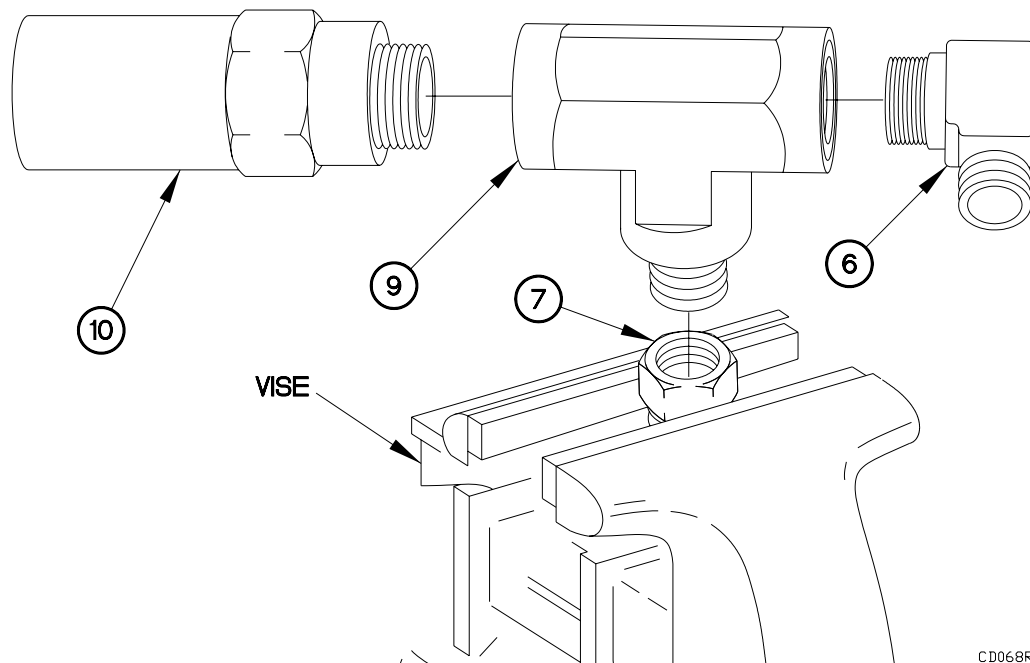


CD06BR02

**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.**

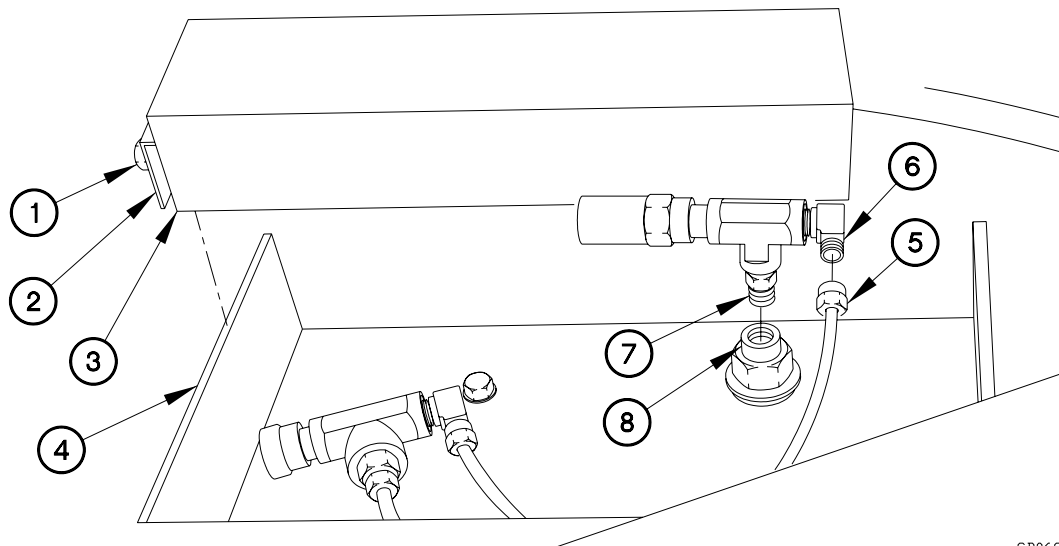
1. Apply sealing compound to threads of pressure relief valve (10), 90 degree fitting (6), and fitting (7).
2. Install pressure relief valve (10) on tee fitting (9).
3. Install fitting (7) on tee fitting (9).
4. Install 90 degree fitting (6) on tee fitting (9).



CD068R02

**INSTALLATION - Continued**

5. Install fitting (7) on air bladder (8).
6. Connect hose (5) to 90 degree fitting (6).
7. Position cover (3) and two clamps (2) on turntable (4) with four screws (1).
8. Tighten four screws (1) to 96-120 lb-in. (11-14 N•m).



CD068/01

**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 Tools**

Trestle, Motor Vehicle Maintenance (Item 24, WP 0167 00)

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

**Personnel Required**

Two

**References**

Towing vehicle Operator manual

**Materials/Parts**

Rag, Wiping (Item 11, WP 0165 00)

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

Tire removed (WP 0053 00).

Spring brakes caged (WP 0055 00).

---

**REMOVAL**

---

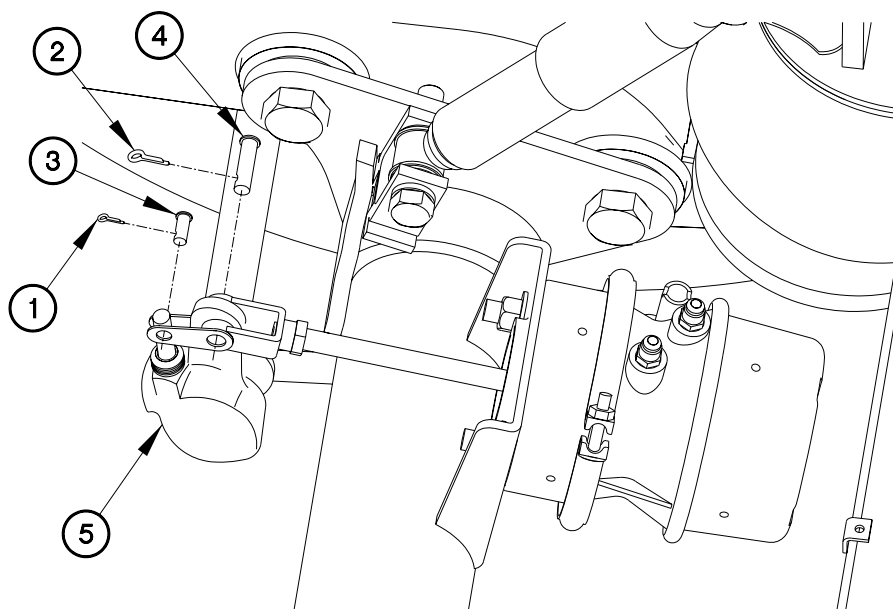
**WARNING**

---

**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.



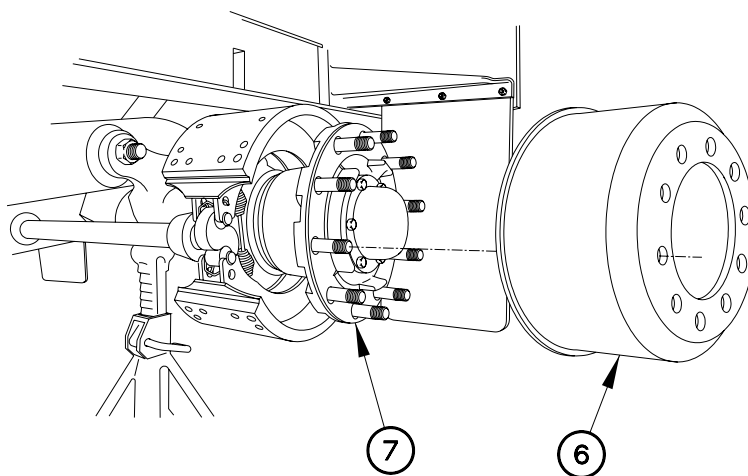
CD069R01



**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).



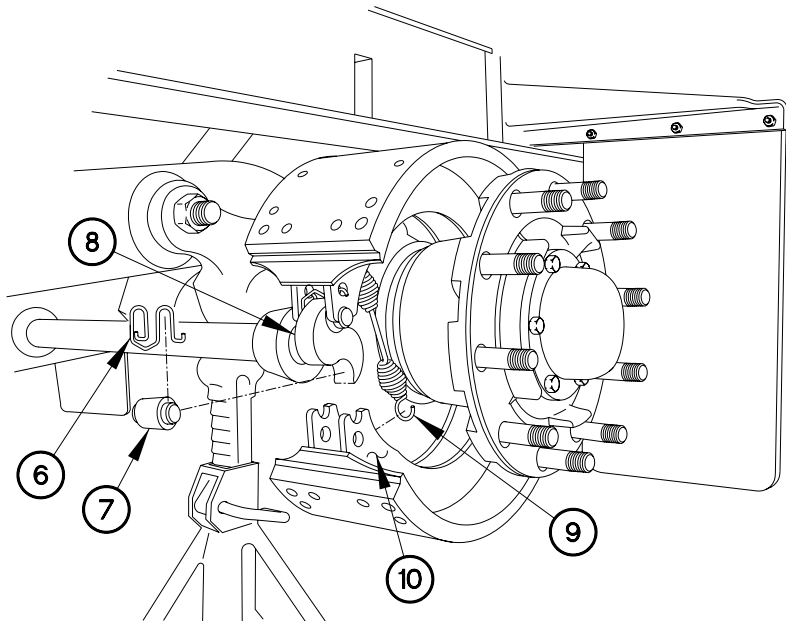
CD069R02

**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.

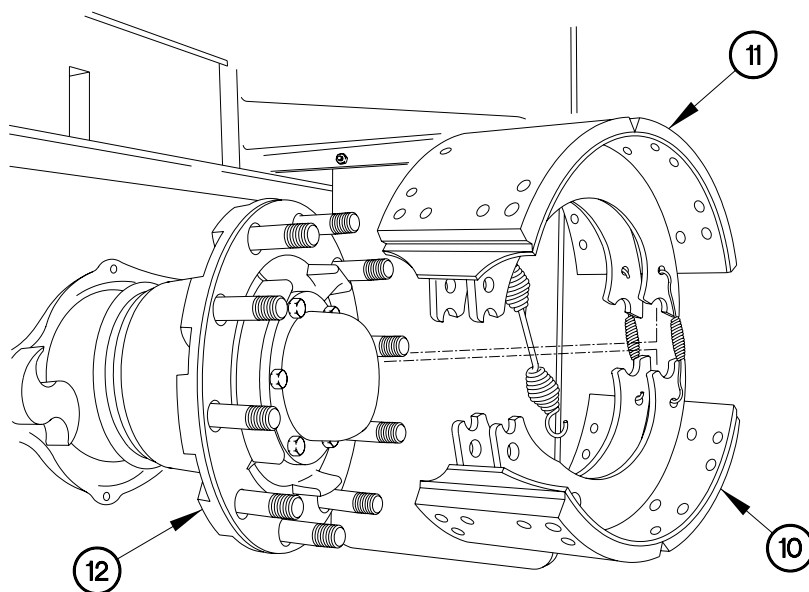
3. Unhook and remove two retaining rings (6) and rollers (7) from brake arm cam (8).
4. Remove spring (9) from lower brake shoe (10).



CD069R03

**REMOVAL - Continued**

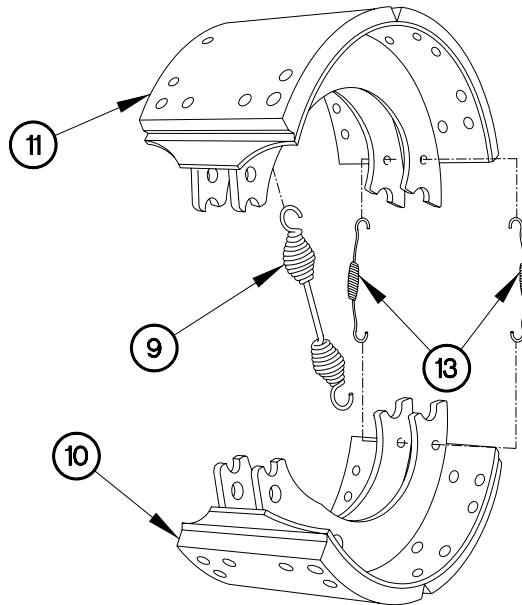
5. Remove brake shoes (10 and 11) from wheel end (12).



C D069R04

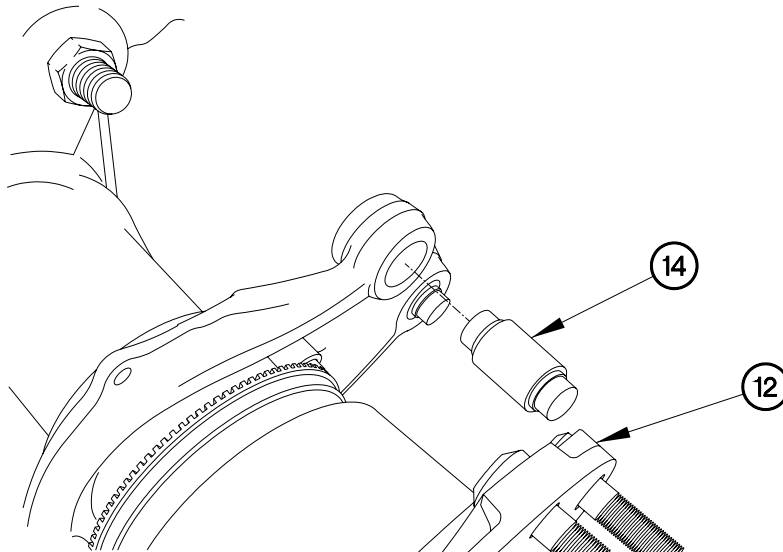
**REMOVAL - Continued**

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



CD069R05

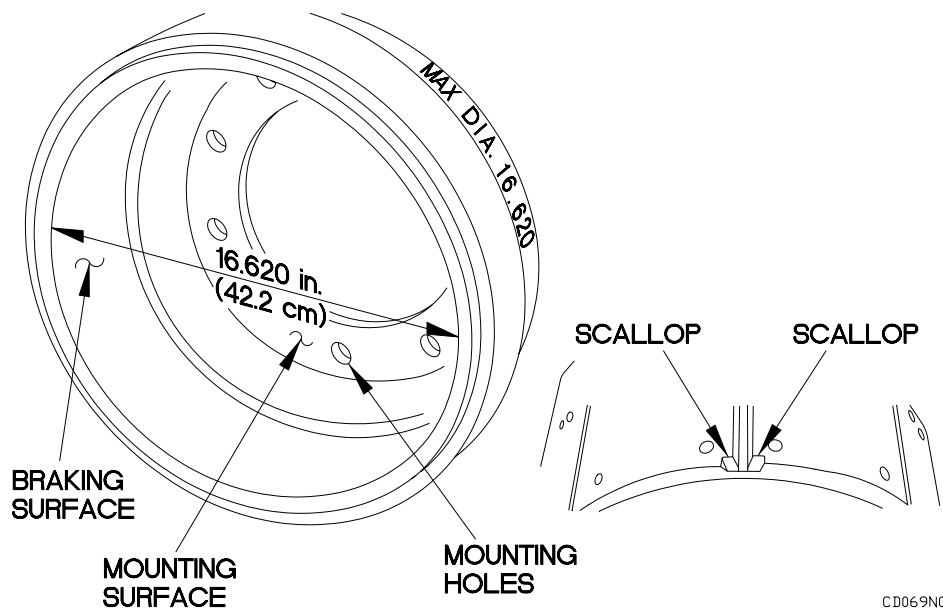
7. Remove two rollers (14) from wheel end (12).



CD069R06

**CLEANING/INSPECTION**

1. Clean wheel drums of all mud, sand, and debris.
2. Inspect wheel drums for the following:
  - a. Braking surface of wheel drums must be free of scoring and cracks.
  - b. Maximum inside diameter, which is stamped on wheel drum, does not exceed 16.620 in. (42.2 cm).
  - c. Wheel drum mounting holes must not be egg-shaped or have cracks around edges.
  - d. Wheel drum mounting surface must be flat.
3. Inspect brake shoes for presence of scallops at brake shoe lining four inner corners.



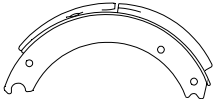
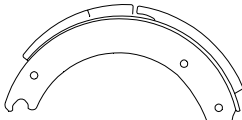
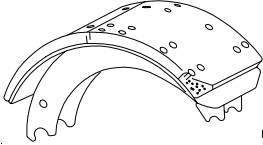
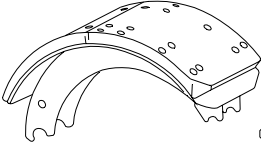
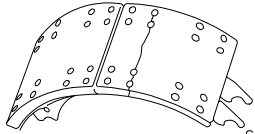
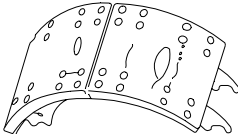
CD069N01

**BRAKES REPLACEMENT/ADJUSTMENT - Continued****0069 00****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.

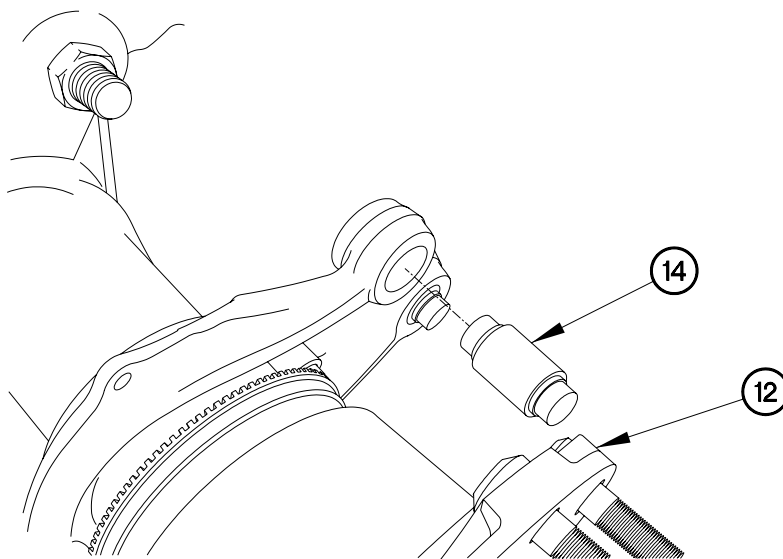
4. Inspect brake shoes for OUT-OF-SERVICE and IN-SERVICE criteria as shown in Table 1, Brake Shoe Service Criteria.

**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**

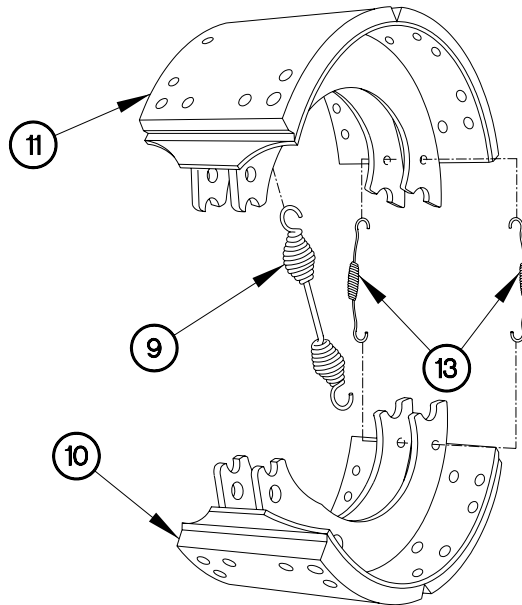
1. Position two rollers (14) in wheel end (12).



CD069R06

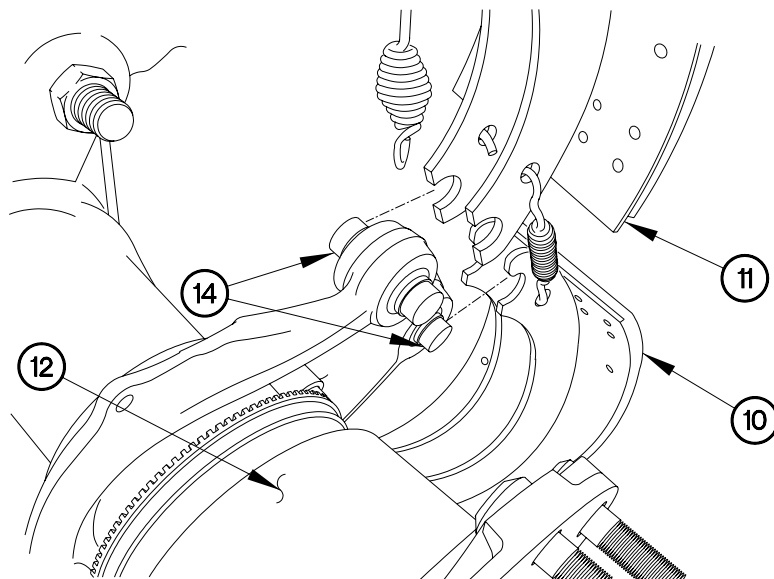
**INSTALLATION - Continued**

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



CD069R05

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



CD069I01



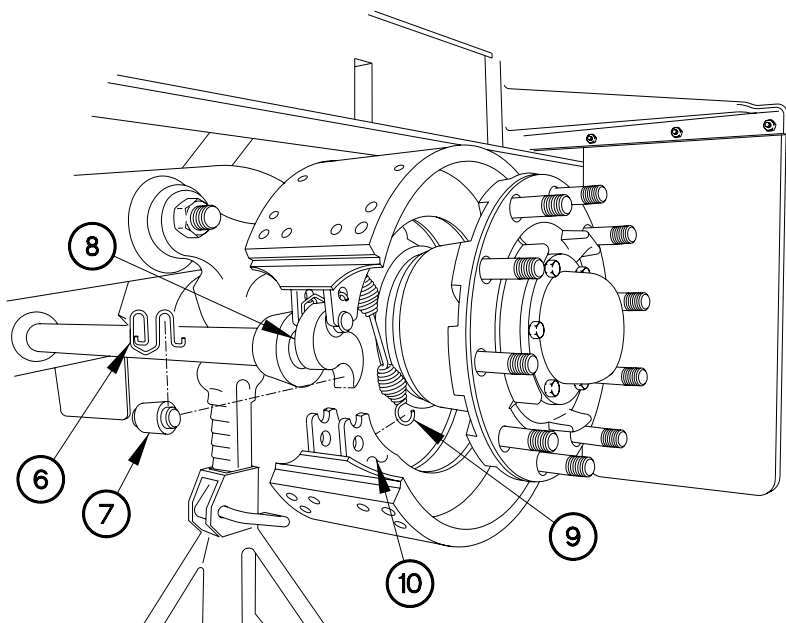
**INSTALLATION - Continued**

4. Install spring (9) on lower brake shoe (10).

**NOTE**

Position retaining rings as noted during removal.

5. Install two retaining rings (6) and rollers (7) in brake arm cam (8).

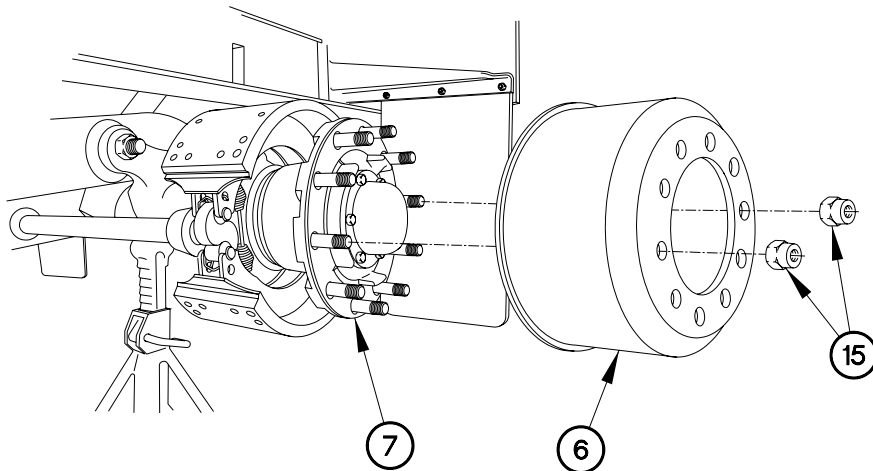


CD069R03

**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.**

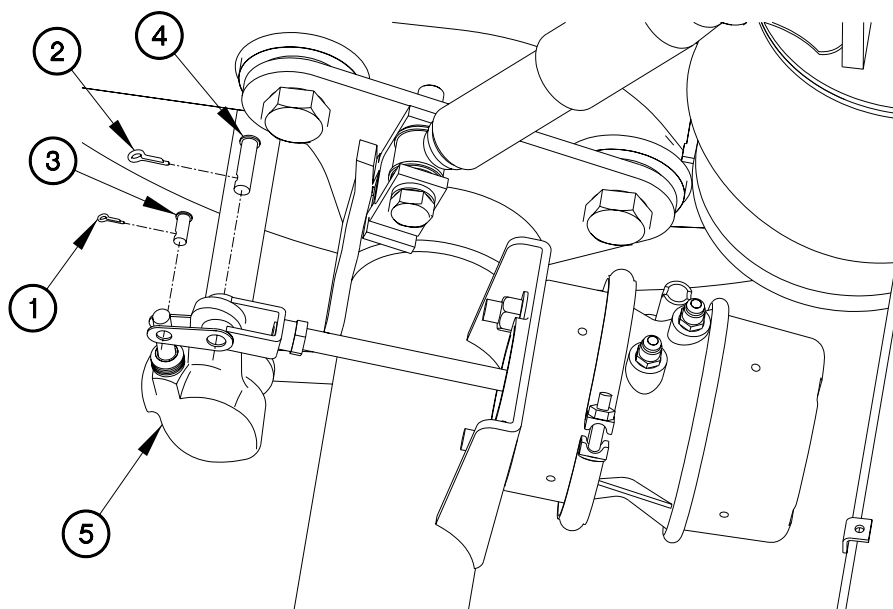
6. Install wheel drum (6) on wheel hub (7).
7. Install two lug nuts (15) on wheel hub (7).



CD069102

**INSTALLATION - Continued**

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



CD069R01

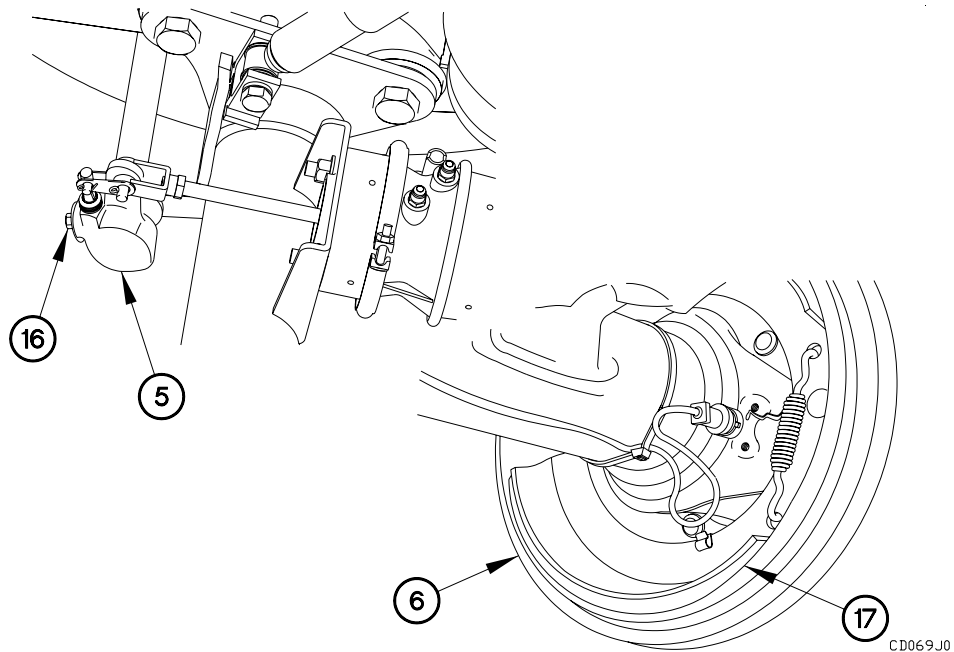
**ADJUSTMENT**

1. Uncage brakes (WP 0055 00).

**NOTE**

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

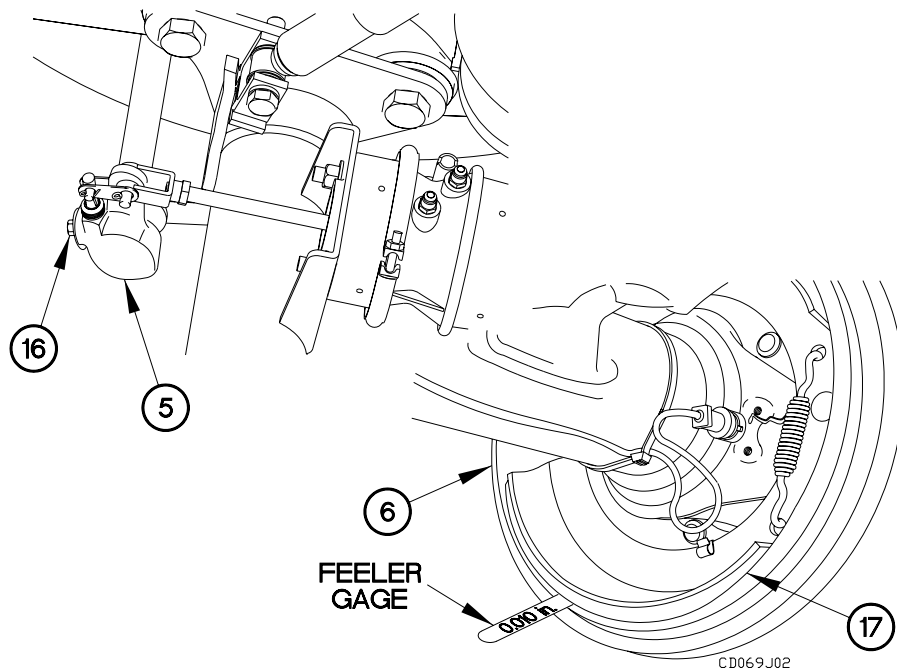
2. Turn adjustment nut (16) on slack adjuster (5) until brake lining (17) comes into contact with wheel drum (6).



**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.

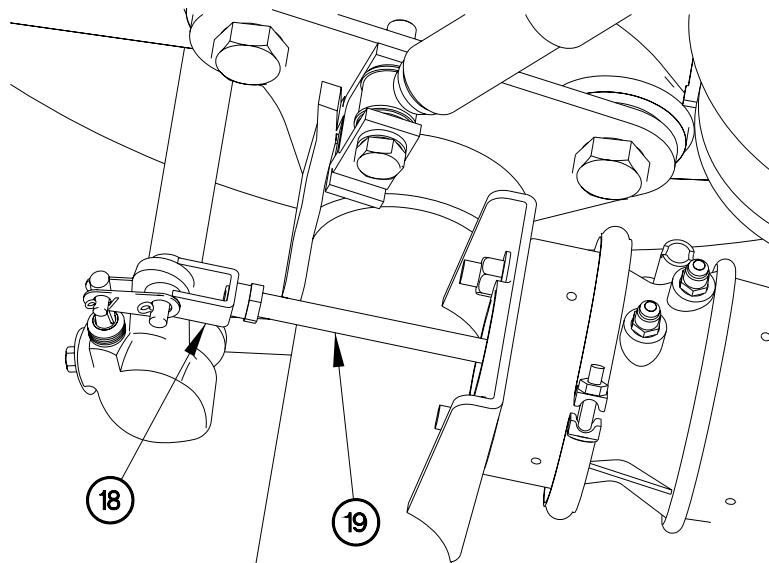
6. Apply brakes on towing vehicle (WP 0020 00, TM 9-2320-392-10-1).

**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).

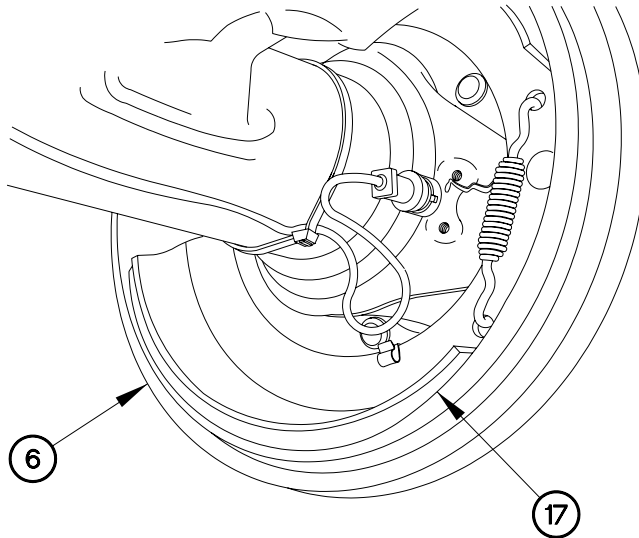


CD069J03

**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.



CD069 J04

---

**BRAKE SHOE REPLACEMENT/ADJUSTMENT - Continued**

---

**0069 00**

**OPERATIONAL CHECK**

1. Install tire (WP 0053 00, Tire Installation).
3. Couple trailer (WP 0043 23, TM 9-2320-392-10-1).
4. Operate trailer and check for normal brake operation (WP 0011 00, TM 9-2320-392-10-1).
5. Uncouple trailer (WP 0043 24, TM 9-2320-392-10-1).

**END OF WORK PACKAGE**



---

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

---

**0070 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**Materials/Parts**

Ties, Cable, Plastic (Item 20, WP 0165 00)

**Tools and Special Tools**

Goggles, Industrial (Item 8, WP 0167 00)

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

**Equipment Conditions**Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) wheel speed sensors.

---

**WARNING**

---

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

**NOTE**

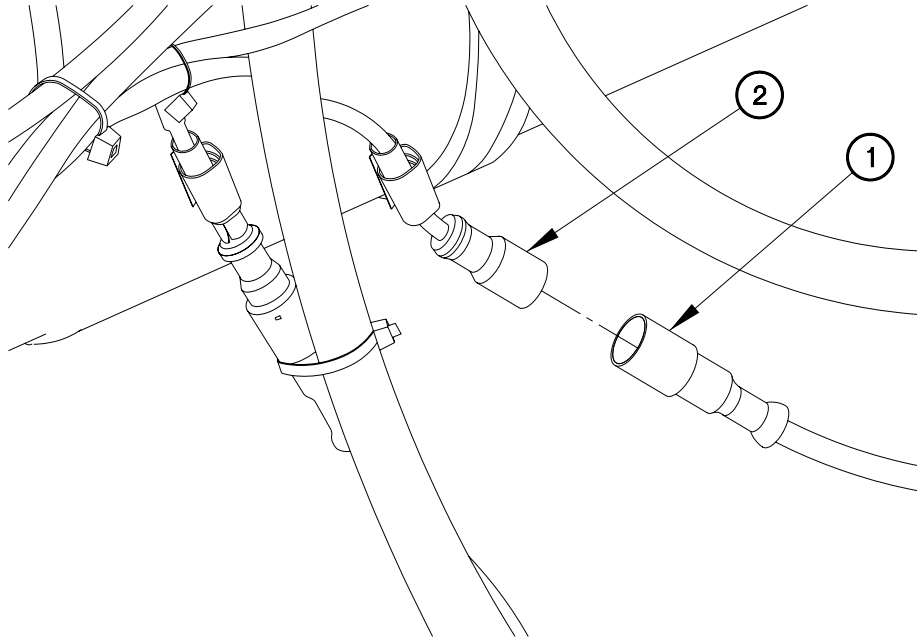
One ABS wheel speed sensor is located behind each wheel. All ABS wheel speed sensors are removed the same way. Front RH ABS wheel speed sensor shown.

Remove plastic cable ties as required.

Tag connectors and connection points prior to disconnecting.

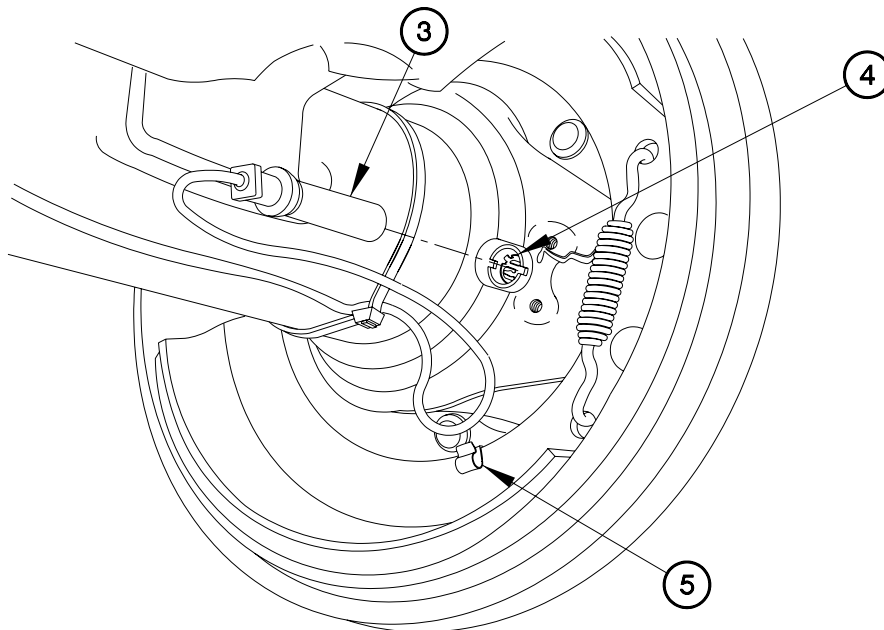
**ANTI-LOCK BRAKING SYSTEM (ABS) WHEEL SPEED SENSOR  
REPLACEMENT - Continued****0070 00****REMOVAL**

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



CD070R01

2. Remove ABS wheel speed sensor (3) from wheel hub (4).
3. Remove ABS wheel speed sensor (3) from clamp (5).



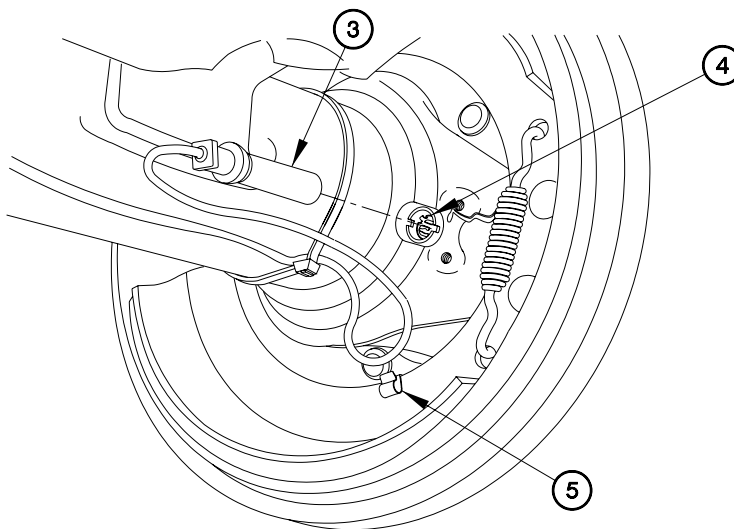
CD070R02

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

One ABS wheel speed sensor is located behind each wheel. All ABS wheel speed sensors are installed the same way. Right side shown.

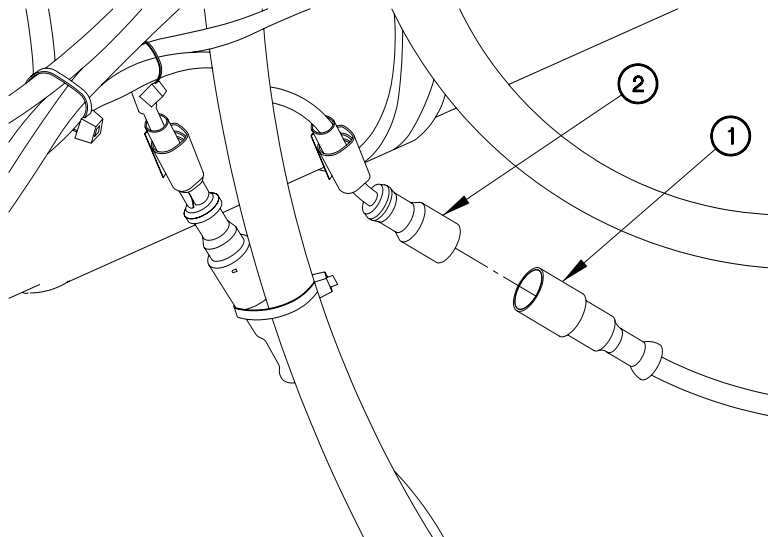
Install plastic cable ties as required.

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



CD070R02

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



CD070R01

---

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

---

**0070 00**

**OPERATIONAL CHECKS**

1. Install brake shoes (WP 0069 00, Brake Shoe Installation).
2. Install tire (WP 0053 00, Tire Installation).
3. Check the output voltage of the sensor while rotating the wheel at approximately one-half revolution per second. If minimum output is less than 0.5 volt AC, push the ABS wheel speed sensor toward the tooth wheel. Recheck sensor output.
4. Uncage spring brakes (WP 0055 00, Uncaging Spring Brakes).
5. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
6. Operate trailer and check for normal brake operation.
7. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**

---

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

---

**0071 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**Materials/Parts**Dispenser, Pressure Sensitive Adhesive Tape  
(Item 6, WP 0165 00)

Sealing Compound (Item 13, WP 0165 00)

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

Ties, Cable, Plastic (Item 20, WP 0165 00)

**Tools and Special Tools**

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

Wrench, Torque, 0-175 lb-ft (Item 32, WP  
0167 00)

Goggles, Industrial (Item 8, WP 0167 00)

Vise, Machinist's (Item 25, WP 0167 00)

**Equipment Conditions**Trailer uncoupled (WP 0043 24, TM 2320-  
392-10-1).

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) ECU valve.

---

**WARNING**

---

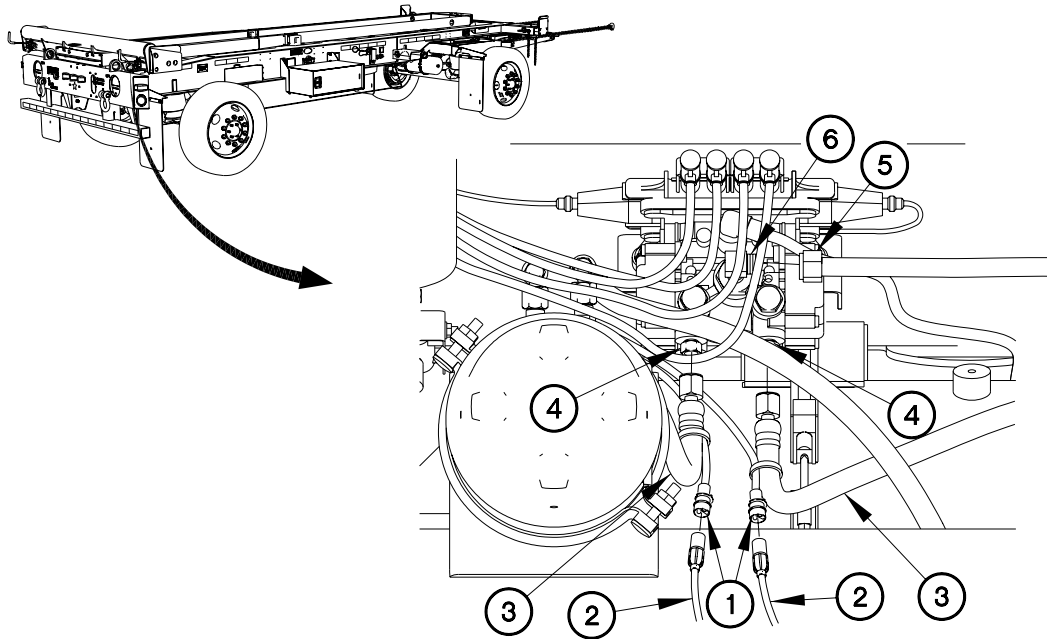
**Wear appropriate eye protection when working under trailer due to the possibility of falling debris. Failure to comply may result in injury to personnel.**

**Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrocution. Failure to comply may result in injury to personnel.**

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

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

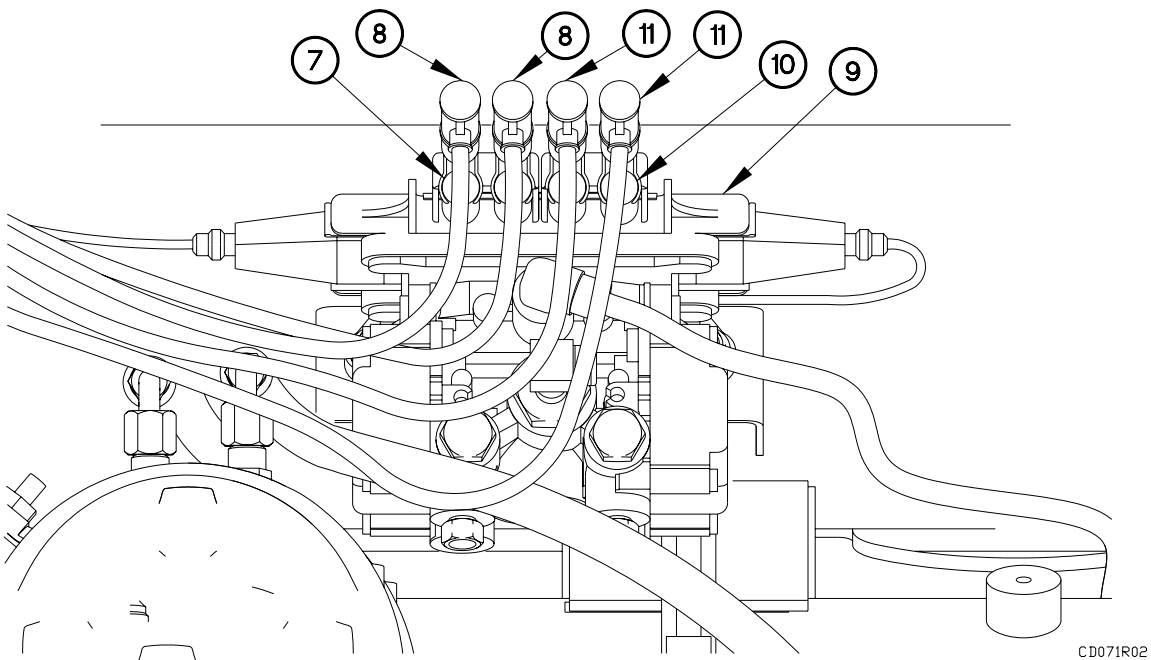
1. Drain air tanks.
2. Disconnect two electrical connectors (1) from electrical connectors (2).
3. Disconnect two hoses (3) from fittings (4).
4. Disconnect hose (5) from 90-degree fitting (6).



CD071R01

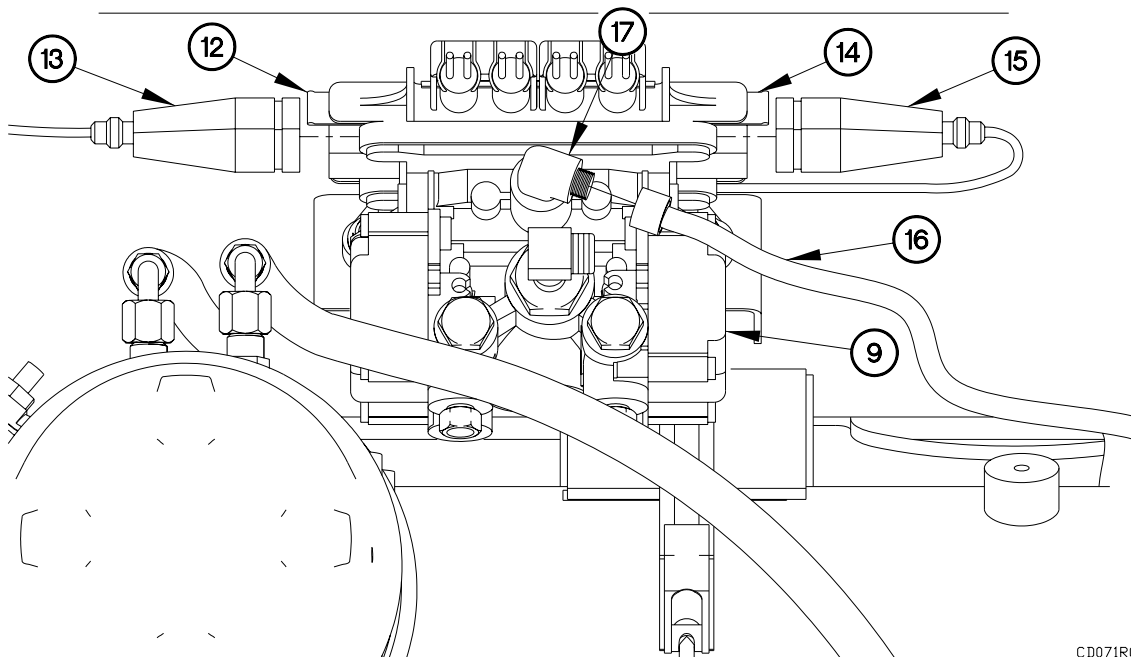
**ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE  
REPLACEMENT - Continued****0071 00****REMOVAL - Continued**

5. Disconnect clip (7) from two electrical connectors (8).
6. Disconnect two electrical connectors (8) from Anti-Lock Braking System (ABS) ECU valve (9).
7. Disconnect clip (10) from two electrical connectors (11).
8. Disconnect two electrical connectors (11) from ABS ECU valve (9).



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

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

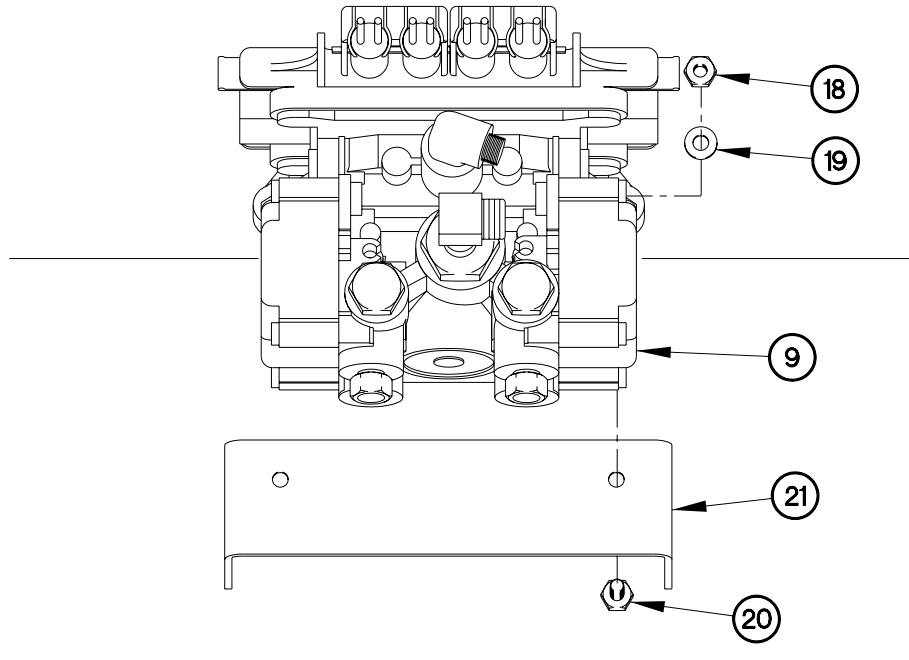


CD071R03



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

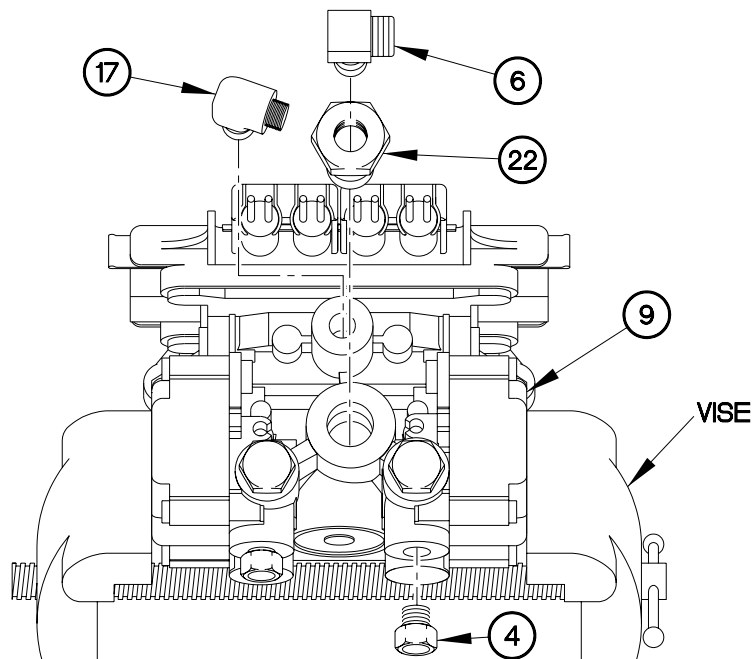
14. Remove two self-locking nuts (18), washers (19), bolts (20), and ABS ECU valve (9) from bracket (21). Discard self-locking nuts.



CD071R04

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

15. Position ABS ECU valve (9) in vise.
16. Remove two fittings (4) from ABS ECU valve (9).
17. Remove 90-degree fitting (17) from ABS ECU valve (9).
18. Remove 90-degree fitting (6) from bushing (22).
19. Remove bushing (22) from ABS ECU valve (9).

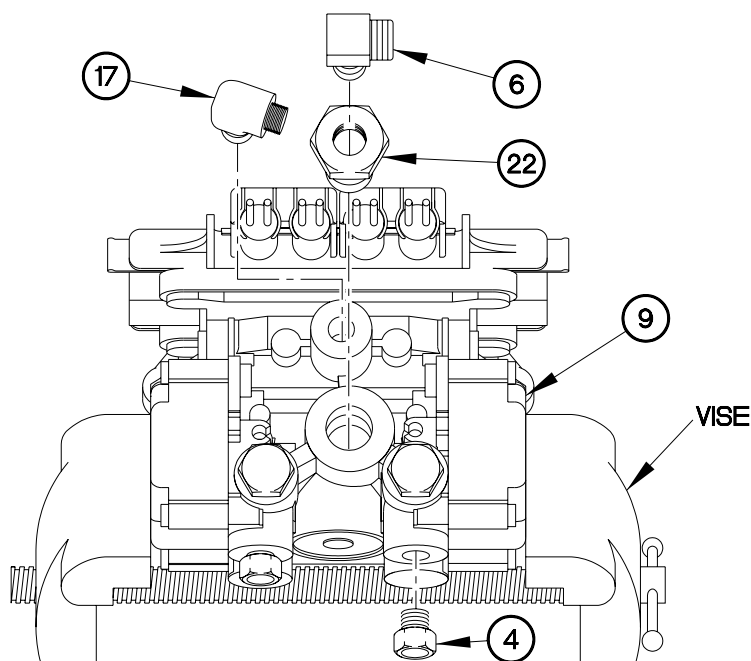


CD071R05

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

**Adhesives, solvents, and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use 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.**

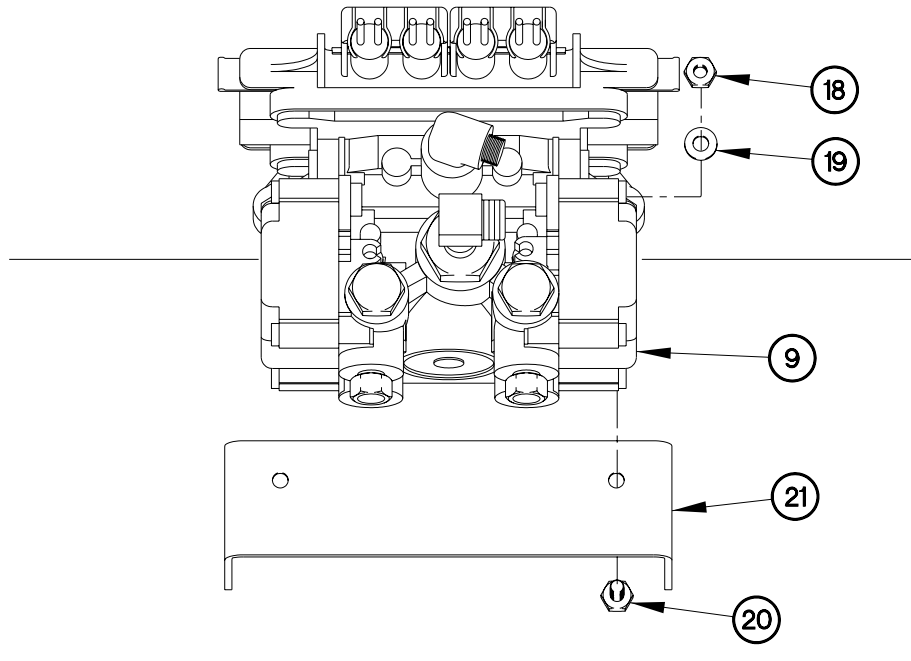
1. Apply sealing compound to threads of bushing (22), 90-degree fittings (6 and 17), and two fittings (4).
2. Position ABS ECU valve (9) in vise.
3. Install bushing (22) on Anti-lock Braking System (ABS) ECU valve (9).
4. Install 90-degree fitting (6) in bushing (22).
5. Install 90-degree fitting (17)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



CD071R05

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

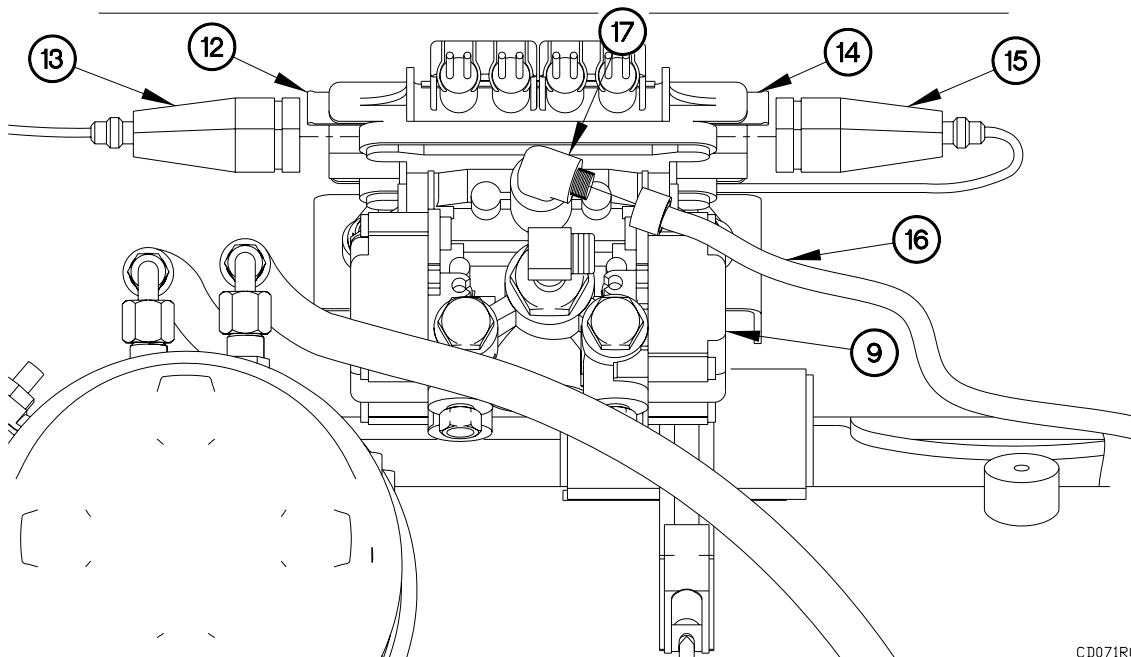
7. Position ABS ECU valve (9) on bracket (21) with two bolts (20), washers (19), and self-locking nuts (18).
8. Tighten self-locking nuts (18) to 33-37 lb-ft (45-50 N•m).



CD071R04

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

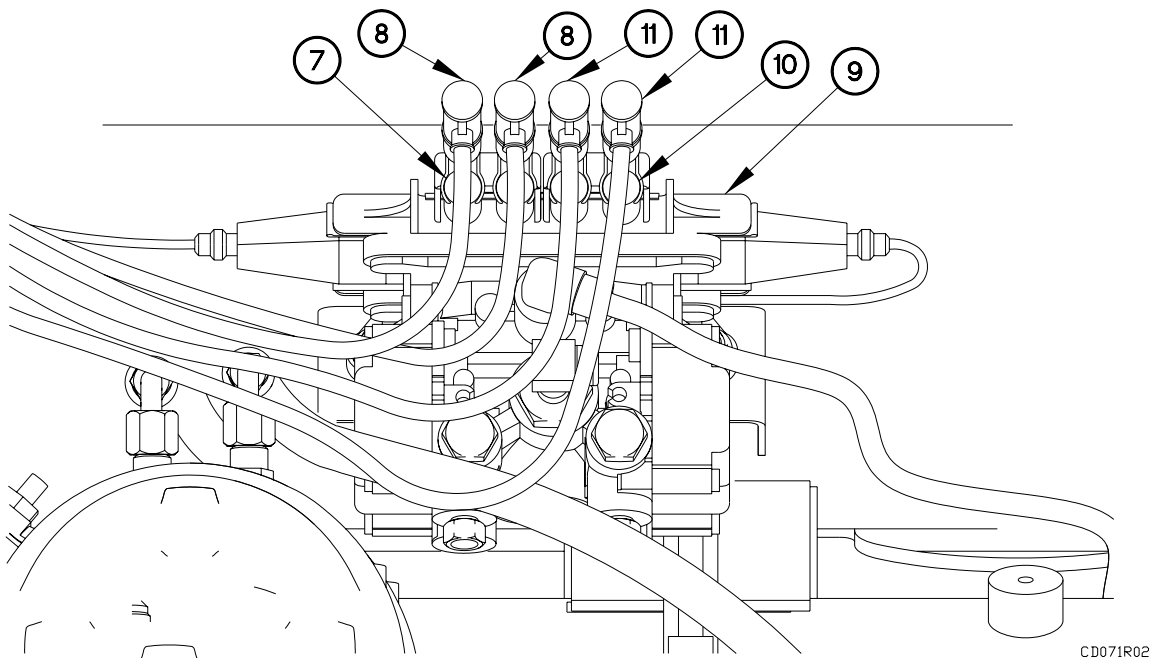
9. Connect hose (16) to 90-degree fitting (17).
10. Connect electrical connector (15) to ABS ECU valve (9).
11. Connect clip (14) on electrical connector (15).
12. Connect electrical connector (13) to ABS ECU valve (9).
13. Connect clip (12) on electrical connector (13).



CD071R03

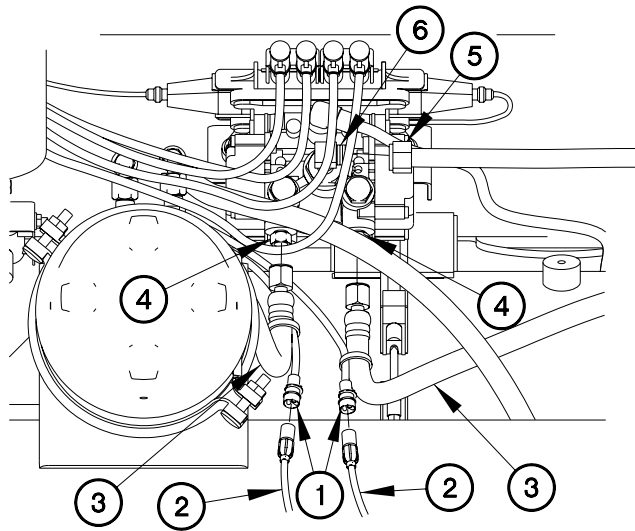
**ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE  
REPLACEMENT - Continued****0071 00****INSTALLATION - Continued**

14. Connect two electrical connectors (11) to ABS ECU valve (9).
15. Connect clip (10) on two electrical connectors (11).
16. Connect two electrical connectors (8) to ABS ECU valve (9).
17. Connect clip (7) on two electrical connectors (8).



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

18. Connect hose (5) to 90-degree fitting (6).
19. Connect two hoses (3) to fittings (4).
20. Connect two electrical connectors (1) to electrical connectors (2).



CD071:01

---

**ANTI-LOCK BRAKING SYSTEM (ABS) ECU VALVE  
REPLACEMENT - Continued**

---

**0071 00**

**OPERATIONAL CHECKS**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Start towing vehicle engine and allow time for air pressure to reach normal operating air pressure.
3. Check around ABS ECU valve and hoses for air leaks.
4. Road test trailer and check for proper brake operation.
5. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**



---

**ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE  
CABLE REPLACEMENT**

---

**0072 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**Materials/Parts**

Ties, Cable, Plastic (Item 20, WP 0165 00)

Nut, Self-Locking (10) (Item 27, WP 0168 00)

**Tools and Special Tools**

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

Goggles, Industrial (Item 8, WP 0167 00)

Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

**Equipment Conditions**Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) relay valve cable assembly.

---

**WARNING**

---

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

**Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrical shock. Failure to comply may result in serious injury or death to personnel.**

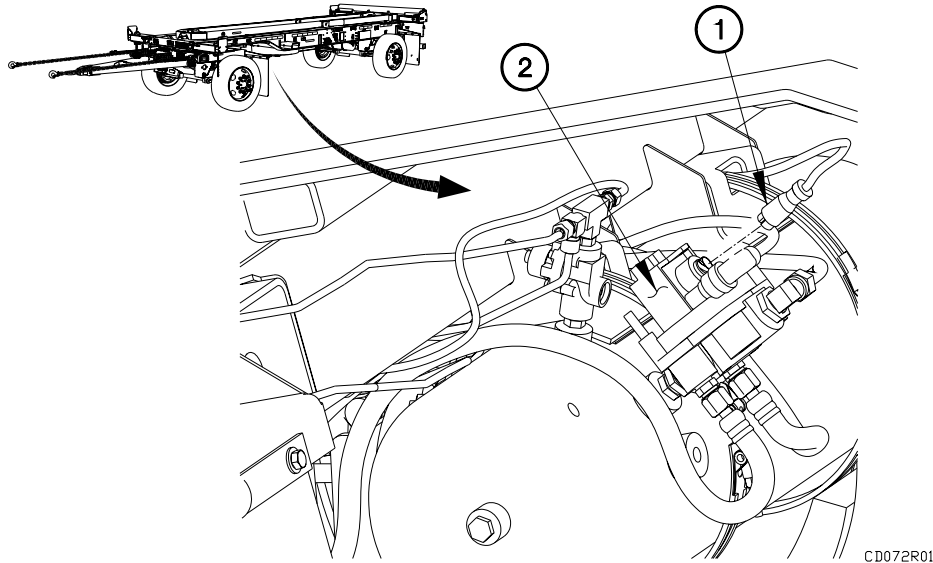
**NOTE**

Note routing of cable prior to removal.

Remove plastic cable ties as required.

**ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE  
CABLE REPLACEMENT - Continued****0072 00****REMOVAL**

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

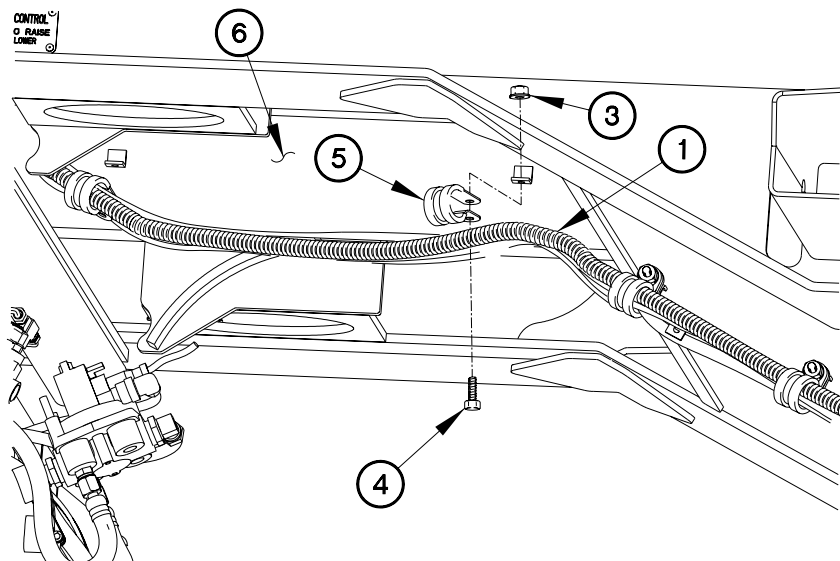


CD072R01

**NOTE**

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

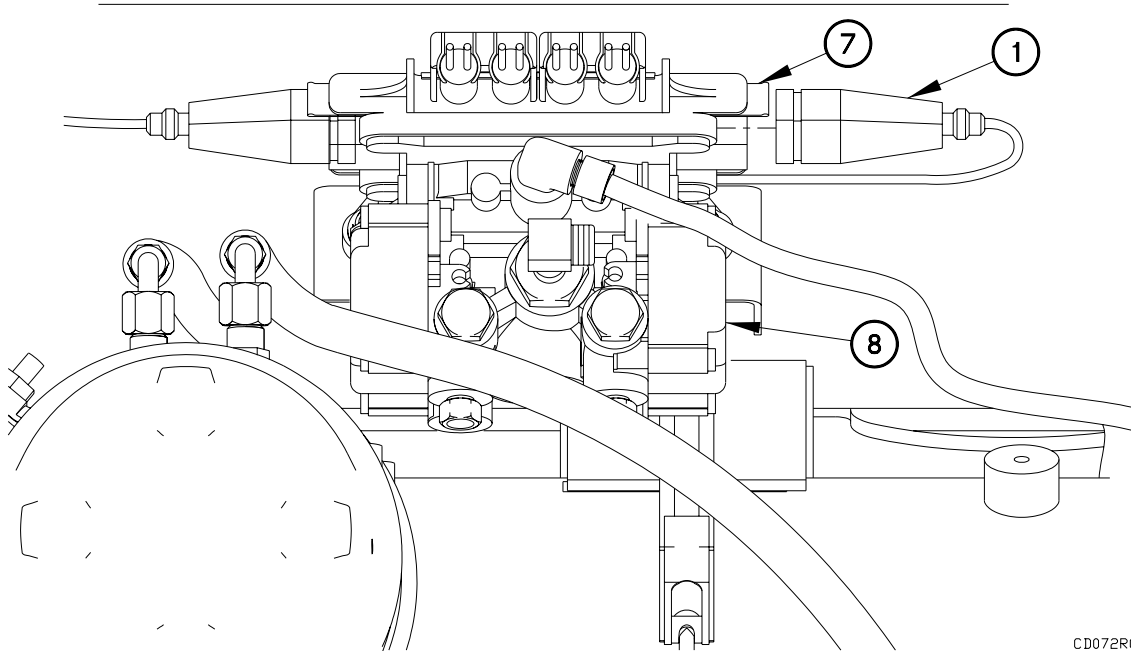
2. Remove self-locking nut (3), bolt (4), and clamp (5) from rail assembly (6). Discard self-locking nut.
3. Remove ABS relay valve cable (1) from clamp (5).
4. Perform the previous two steps on remaining clamps.



CD072R02

**ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE  
CABLE REPLACEMENT - Continued****0072 00****REMOVAL - Continued**

5. Push up on connector retainer clip (7).
6. Disconnect ABS relay valve cable (1) from ABS ECU (8).
7. Remove ABS relay valve cable (1) from trailer.

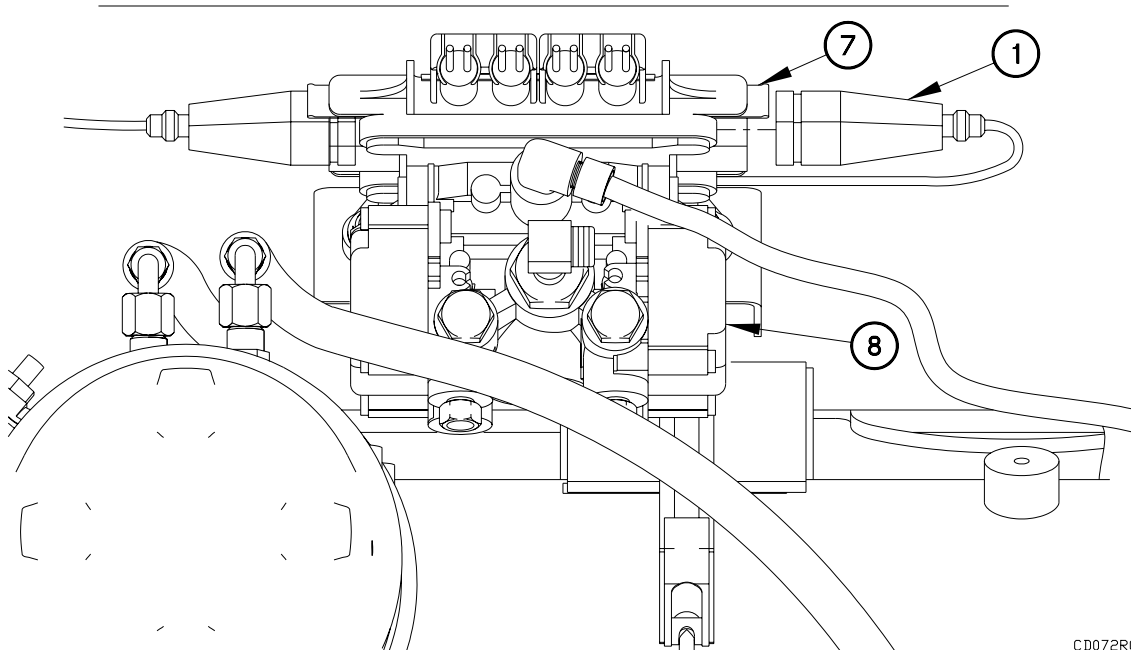


CD072R03

**ANTI-LOCK BRAKING SYSTEM (ABS) RELAY VALVE  
CABLE REPLACEMENT - Continued****0072 00****INSTALLATION****NOTE**

Install plastic cable ties as required.

1. Position ABS relay valve cable (1) on trailer.
2. Connect ABS relay valve cable (1) to ABS ECU valve (8).
3. Push down on connector retainer clip (7) to secure.

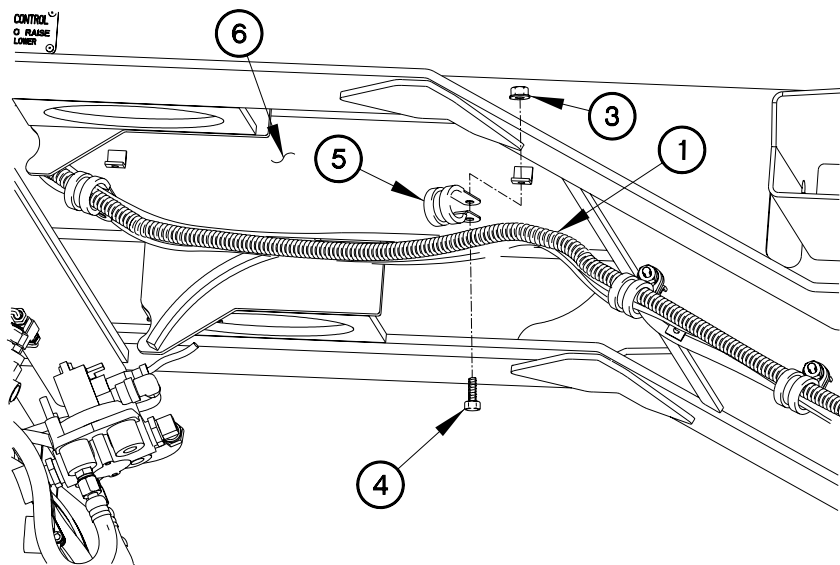


CD072R03

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

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

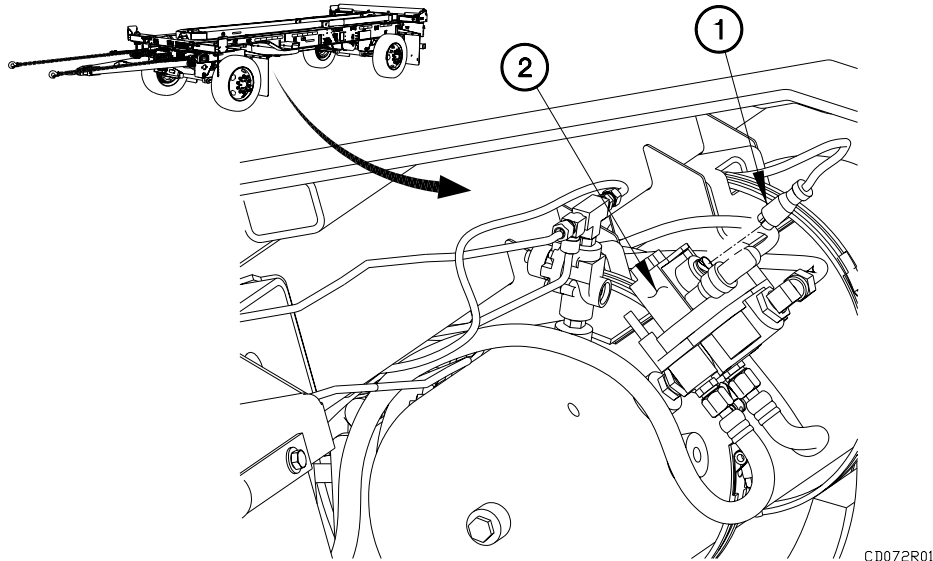
4. Position ABS relay valve cable (1) in clamp (5).
5. Position clamp (5) on rail assembly (6) with bolt (4) and self-locking nut (3).
6. Tighten self-locking nut (3) to 96-120 lb-in. (11-14 N•m).
7. Perform the previous three steps on remaining clamps.



CD072R02

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

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

**OPERATIONAL CHECKS**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Trailer Coupling).
2. Start towing vehicle engine.
3. Road test trailer and check for proper brake operation.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**

---

**ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR  
EXTENSION CABLE REPLACEMENT**

---

**0073 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**Materials/Parts**

Nut, Self-Locking (10) (Item 27, WP 0168 00)

Ties, Cable, Plastic (Item 20, WP 0165 00)

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

**Tools and Special Tools**

Goggles, Industrial (Item 8, WP 0167 00)

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

Wrench, Torque, 0-200 lb-in. (Item 33, WP 0167 00)

**Equipment Conditions**Trailer uncoupled (WP 0043 24, TM 2320-392-10-1).

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) control sensor extension cable.

---

**WARNING**

---

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

**NOTE**

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

**ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR  
EXTENSION CABLE REPLACEMENT - Continued****0073 00****REMOVAL****NOTE**

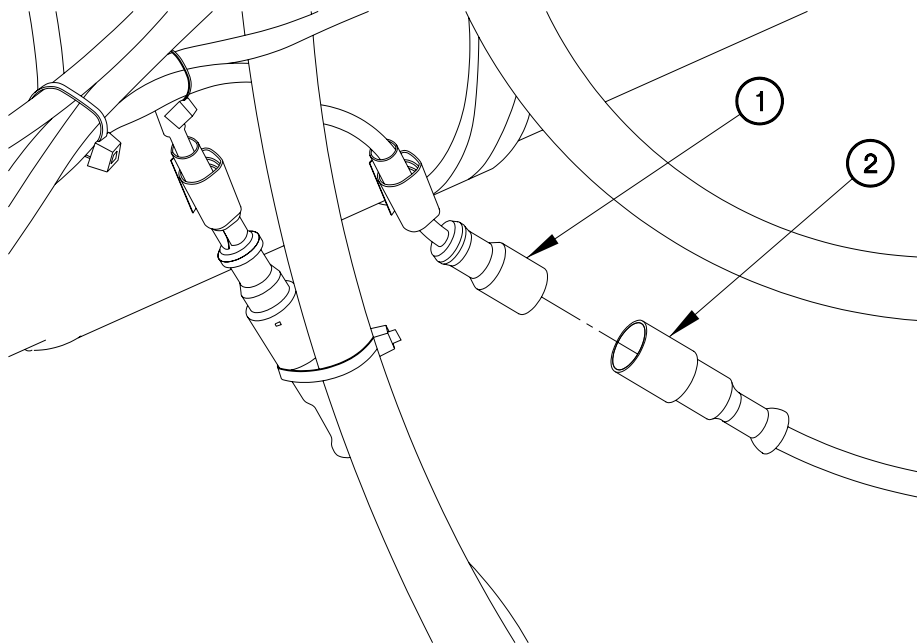
Note routing of ABS control sensor extension cable prior to removal.

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

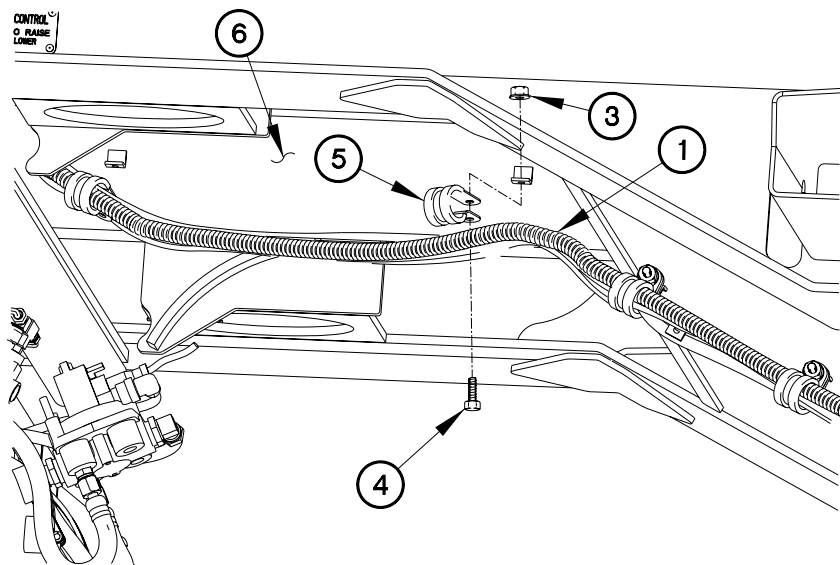


**ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR  
EXTENSION CABLE REPLACEMENT - Continued****0073 00****REMOVAL – Continued****NOTE**

Perform the following three steps for the front ABS control sensor extension cables only.

All ABS control sensor extension cable clamps are removed the same way. One shown.

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



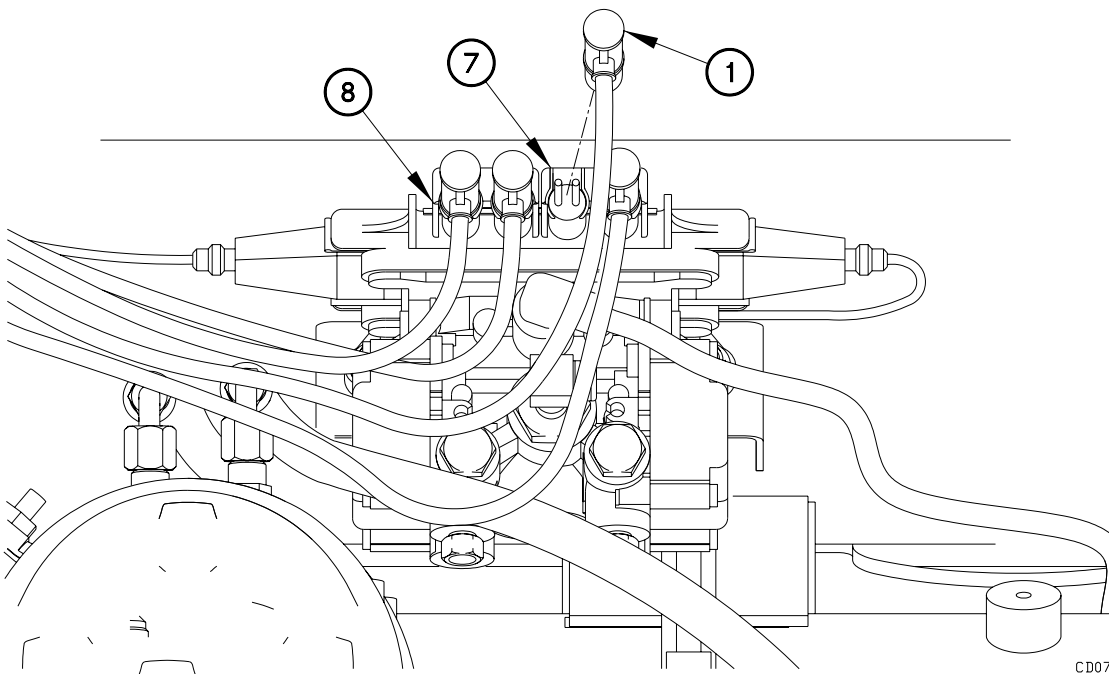
CD073R02

**ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR  
EXTENSION CABLE REPLACEMENT - Continued****0073 00****REMOVAL - Continued****NOTE**

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

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

5. Push up on connector retainer clip (7).
6. Disconnect ABS control sensor extension cable (1) from ABS ECU (8).
7. Remove ABS control sensor extension cable (1) from trailer.



CD073R03

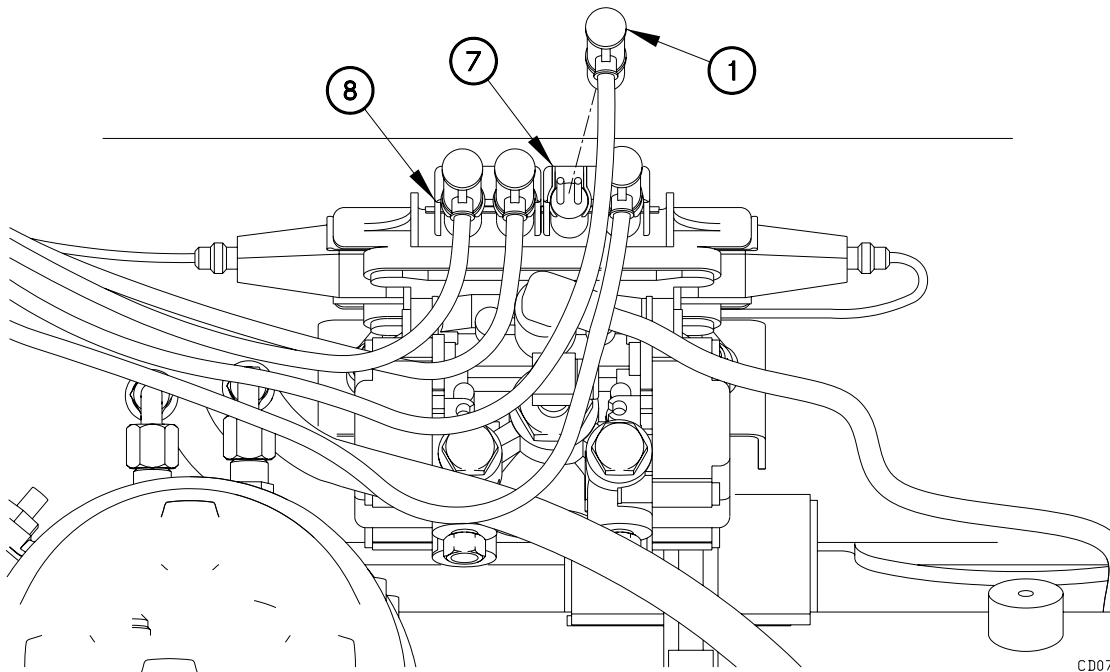
**ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR  
EXTENSION CABLE REPLACEMENT - Continued****0073 00****INSTALLATION****NOTE**

Install plastic cable ties as required.

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

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

1. Position ABS control sensor extension cable (1) on trailer.
2. Connect ABS control sensor extension cable (1) to ABS ECU (8).
3. Push down on connector retainer clip (7) to secure.



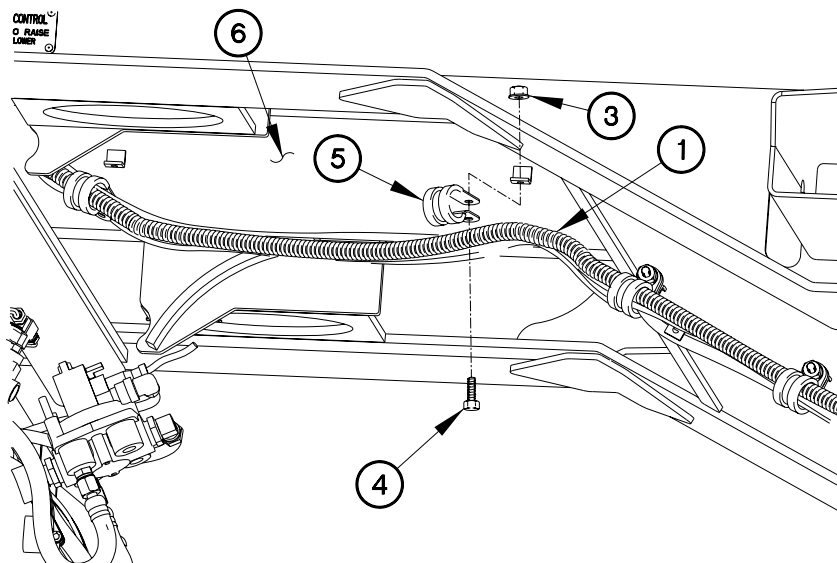
CD073R03

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

Perform the following three steps for the front ABS control sensor extension cables only.

All ABS control sensor extension cable clamps are installed the same way. One shown.

4. Install ABS control sensor extension cable (1) in clamp (5).
5. Position clamp (5) on rail assembly (6) with bolt (4) and self-locking nut (3).
6. Tighten self-locking nut (3) to 96-120 lb-in. (11-14 N•m).
7. Perform the previous two steps on remaining clamps.



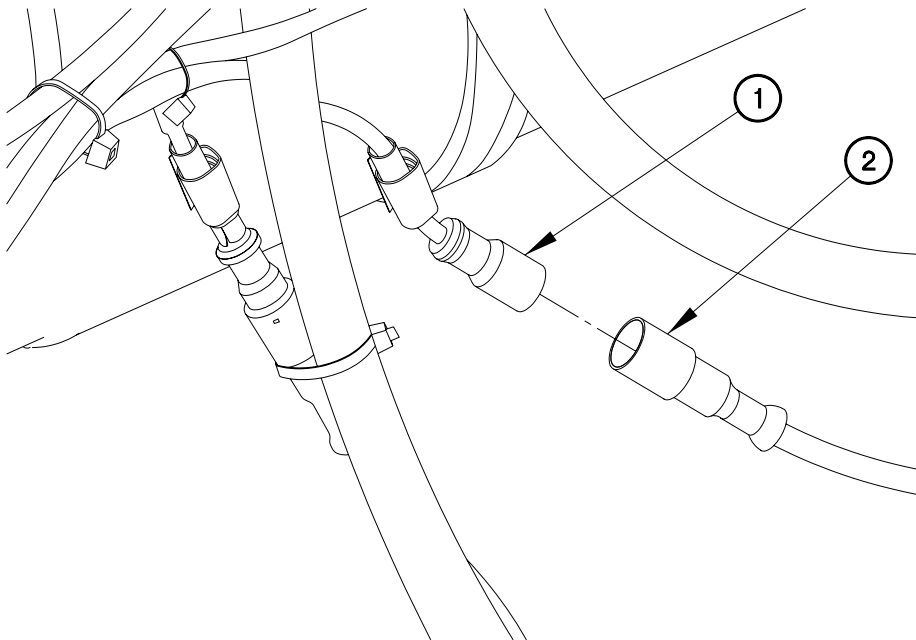
CD073R02

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

ABS control sensor extension cable connectors correspond to the following ABS wheel speed sensor lead connectors:

Left Front:	12423014-005
Right Front:	12423014-006
Left Rear:	12423014-007
Right Rear:	12423014-008

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



CD073R01

---

**ANTI-LOCK BRAKING SYSTEM (ABS) CONTROL SENSOR  
EXTENSION CABLE REPLACEMENT - Continued**

---

**0073 00**

**OPERATIONAL CHECKS**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Start towing vehicle engine.
3. Road test trailer and check for proper brake operation.
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**

---

**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT**

---

**0074 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level Personnel**

Field

**Tools and Special Tools**

Tool Kit, Genl Mech (Item 22, WP 0167 00)  
Goggles, Industrial (Item 8, WP 0167 00)  
Wrench, Torque, 0-200 lb-in. (Item 33, WP  
167)

**Materials/Parts**

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

**Materials/Parts (Cont)**

Ties, Cable, Plastic (Item 20, WP 0165 00)  
Nut, Self-Locking (4) (Item 27, WP 0168 00)  
Washer, Lock (7) (Item 15, WP 0168 00)

**Personnel Required**

Two

**Equipment Conditions**

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

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) power and diagnostic cable and bracket.

---

**WARNING**

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

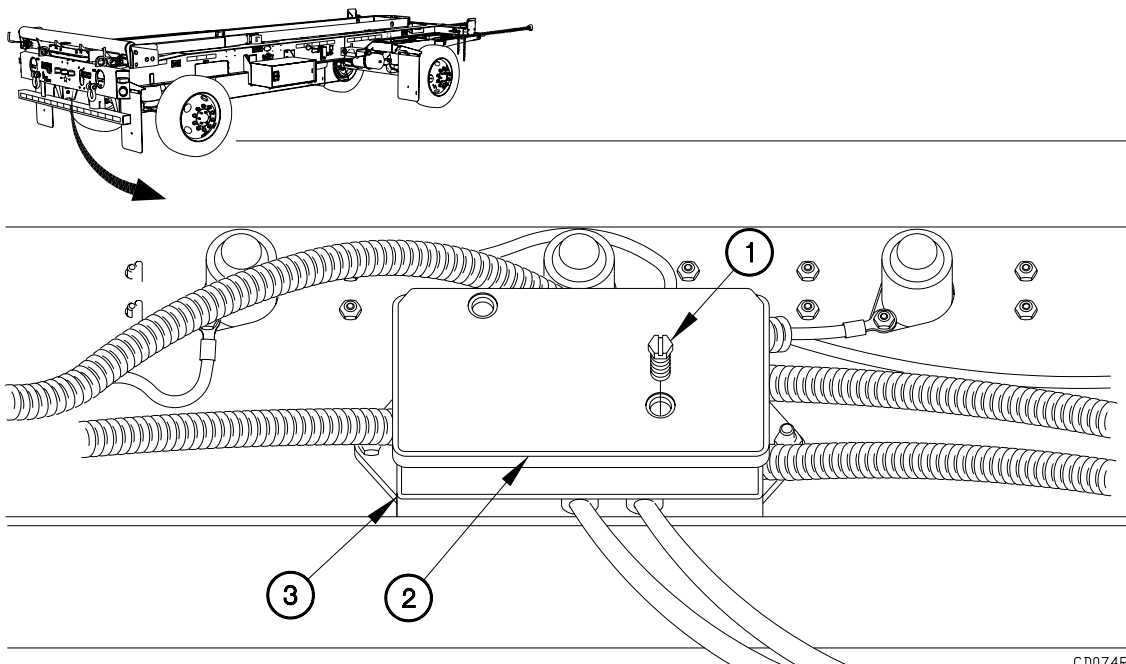
**Trailer must be uncoupled from towing vehicle prior to performing this task to avoid risk of electrocution. Failure to comply may result in injury to personnel.**

**NOTE**

Remove plastic cable ties as required.

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

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



CD074R01



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

0074 00

## REMOVAL

### NOTE

Junction box connections for main electrical harness and ABS power and diagnostic harness must be disconnected to remove ABS power and diagnostic cable from vehicle.

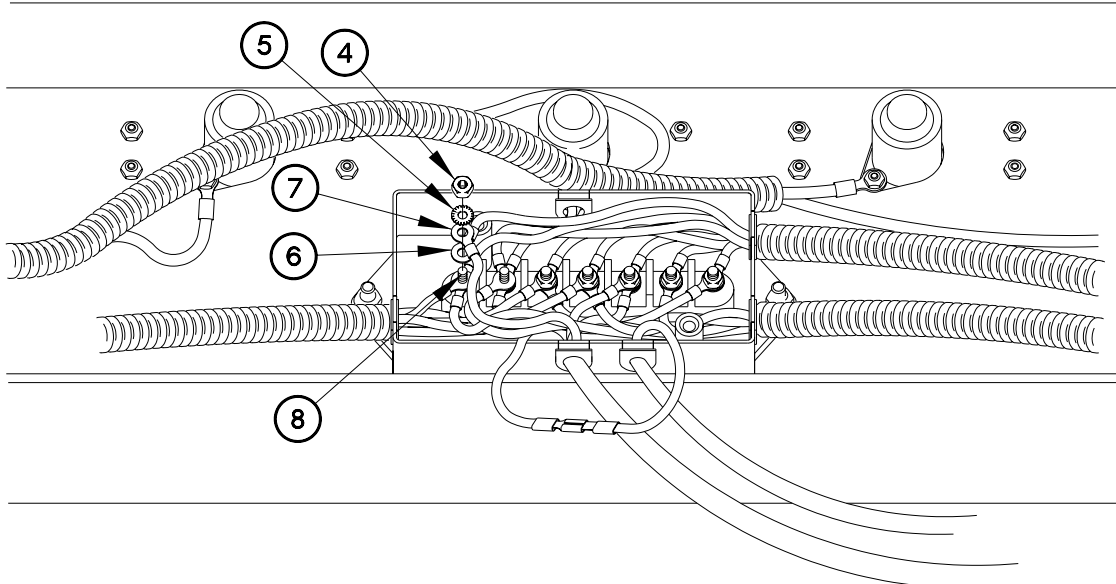
All main electrical harness and ABS power and diagnostic cable terminal lugs are removed the same way. Junction box terminal lug 1 shown. Refer to **Table 1, Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations** for details.

Tag all terminal lugs and terminal studs prior to removal.

- 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.
- Repeat the previous step on remaining main electrical harness and ABS power and diagnostic cable terminal lugs.

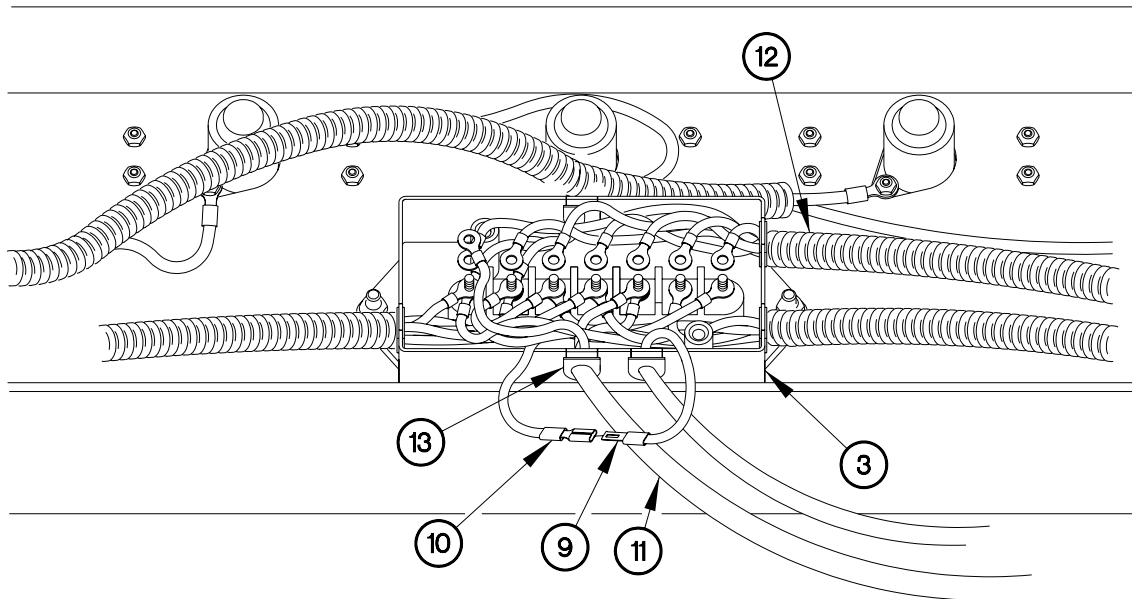
**Table 1 Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations**

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



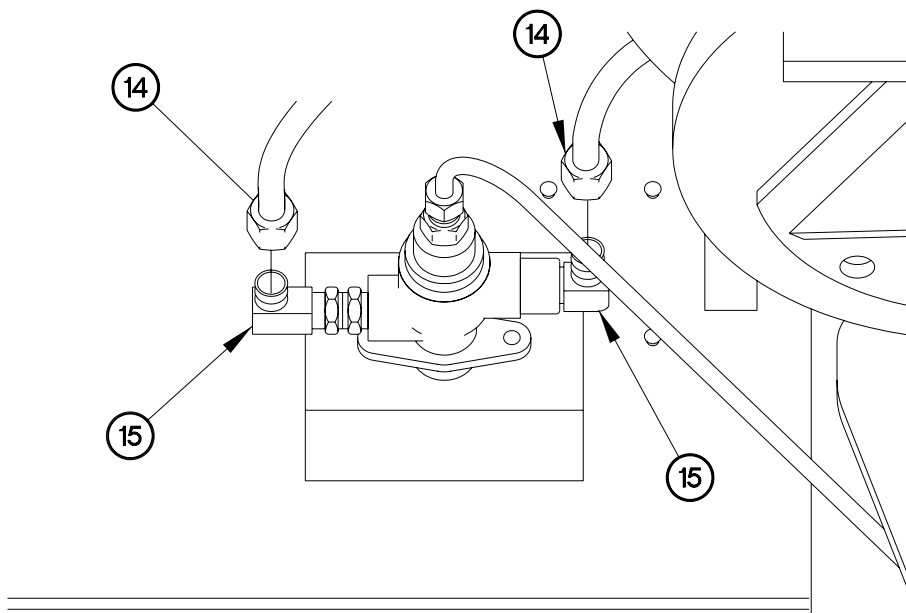
**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****REMOVAL – Continued**

4. Disconnect terminal lug TL611 (9) from green and white ABS warning light terminal tab (10).
5. Remove ABS power and diagnostic cable (11) and main electrical harness (12) from two grommets (13) on junction box (3).



CD074R15

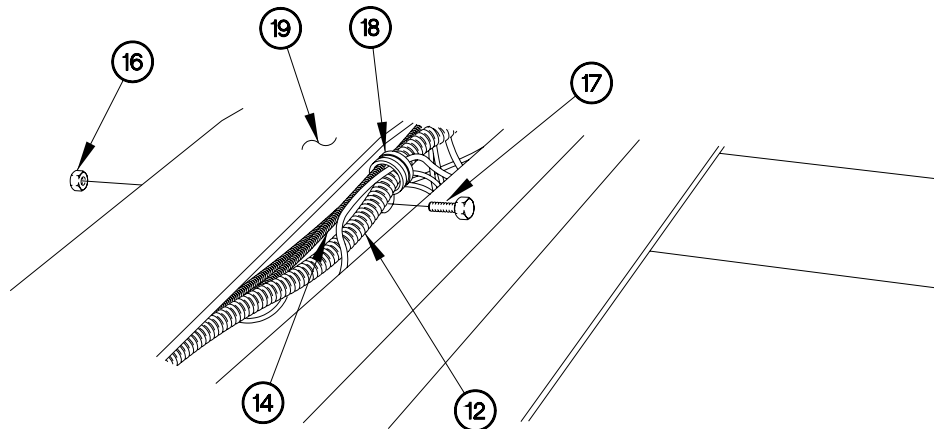
6. Disconnect two hoses (14) from 90-degree fittings (15).



CD074R06

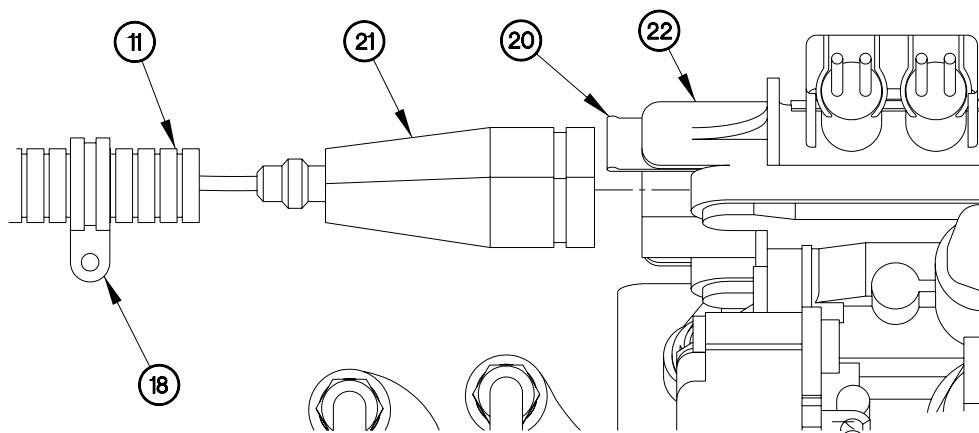
**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****REMOVAL – Continued**

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

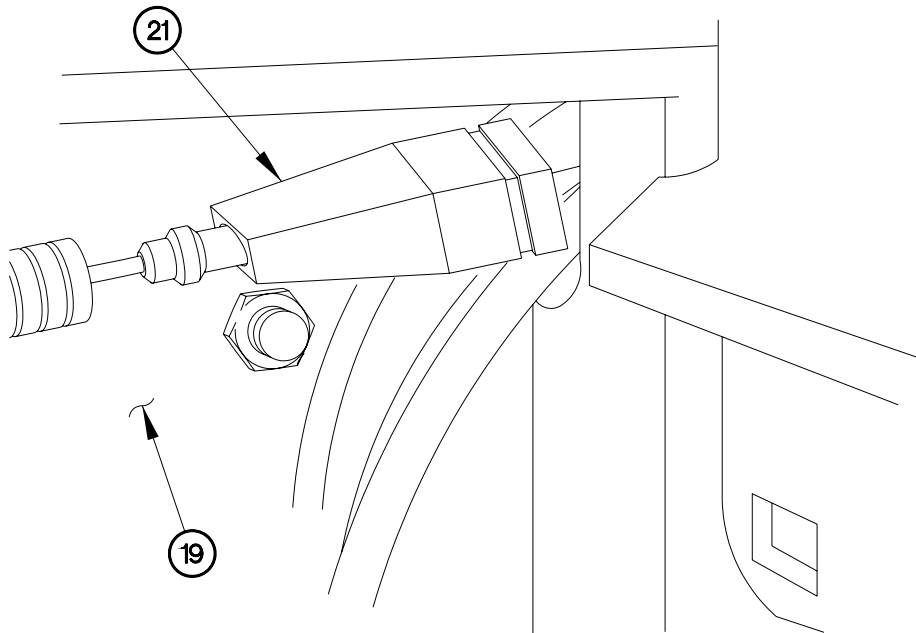
10. Push up connector retainer clip (20).
11. Disconnect connector (21) from ABS ECU valve (22).
12. Remove ABS power and diagnostic cable (11) from two clamps (18).



CD074R08

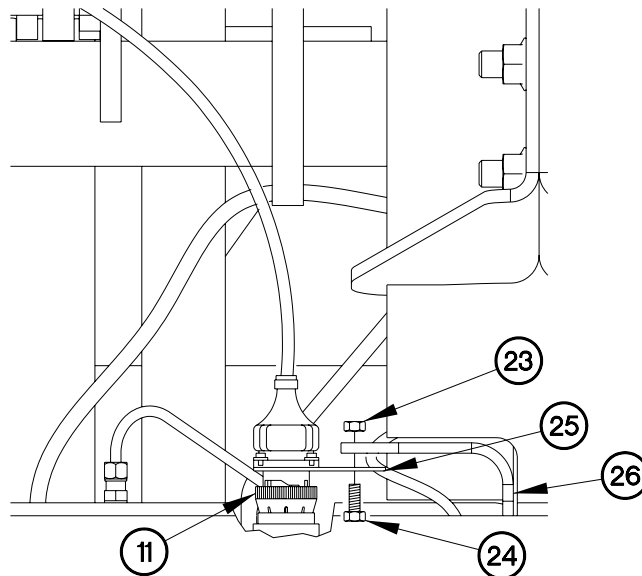
**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****REMOVAL – Continued**

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



CD074R09

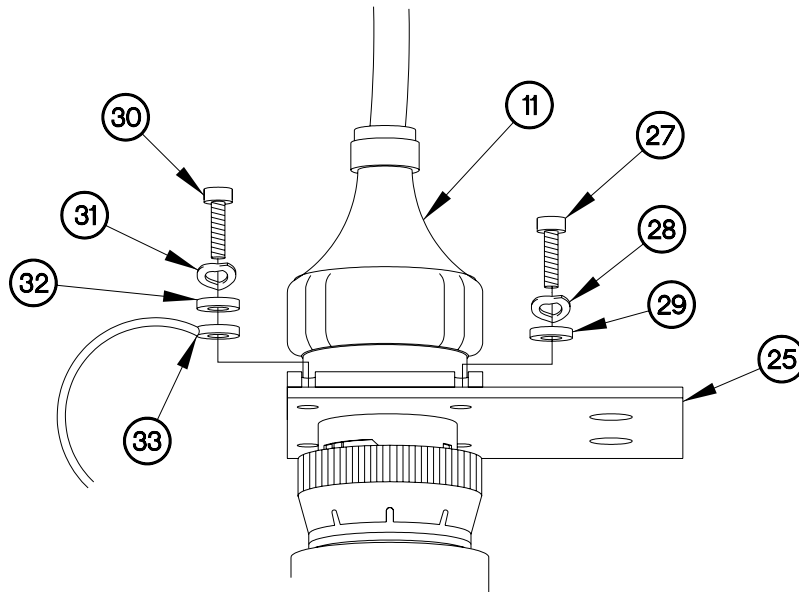
14. Remove two self-locking nuts (23), bolts (24), ABS power and diagnostic cable (11), and mounting bracket (25) from rear panel assembly (26). Discard self-locking nuts.



CD074R10

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

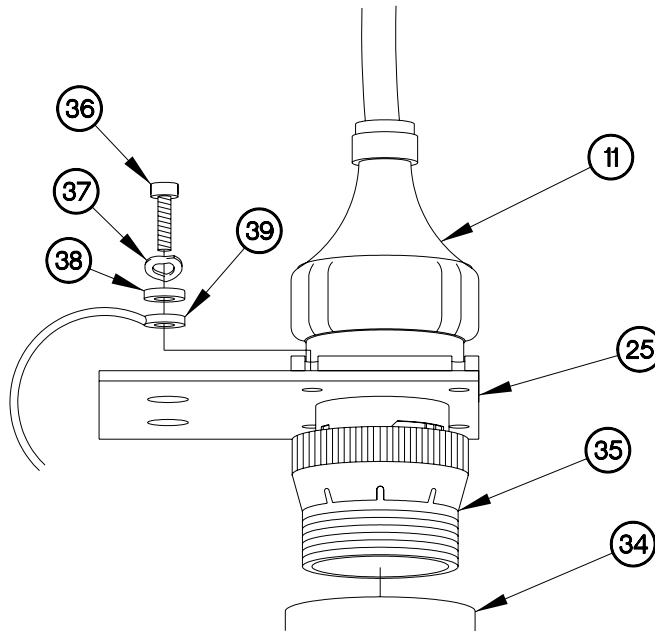
15. Remove two screws (27), lockwashers (28), and washers (29) from ABS power and diagnostic cable (11) and mounting bracket (25).
16. Remove screw (30), lockwasher (31), washer (32), and lanyard (33) from ABS power and diagnostic cable (11) and mounting bracket (25).



CD074R11

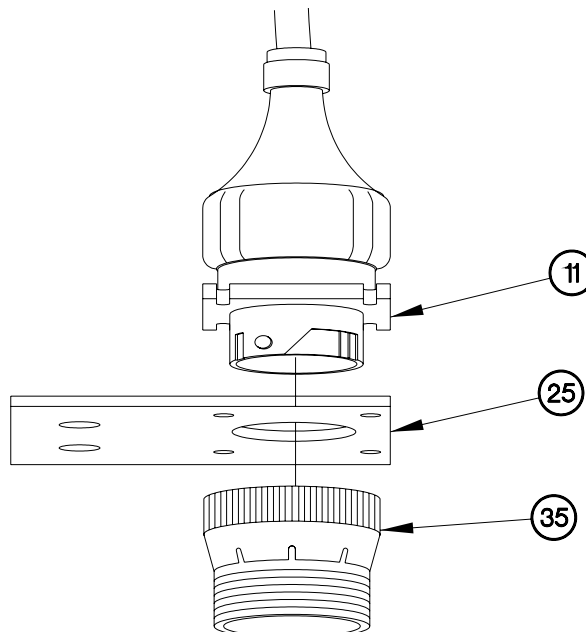
**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****REMOVAL – Continued**

17. Remove cover (34) from ABS diagnostic tool (35).
18. Remove screw (36), lockwasher (37), washer (38), and lanyard (39) from ABS power and diagnostic cable (11) and mounting bracket (25).



CD074R12

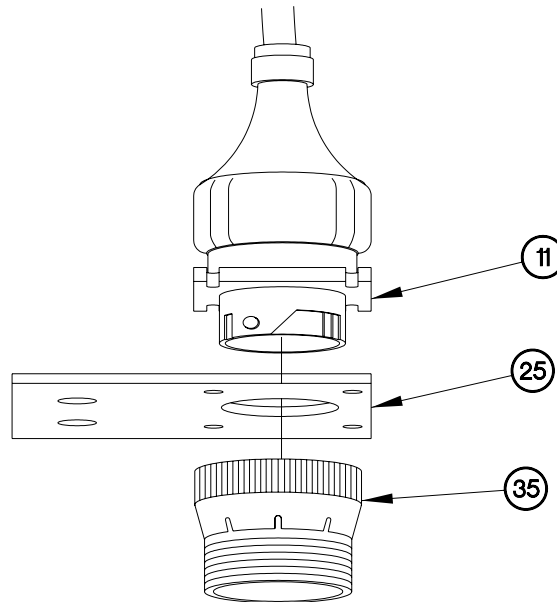
19. Disconnect ABS diagnostic tool (35) from ABS power and diagnostic cable (11).
20. Remove mounting bracket (25) from ABS power and diagnostic cable (11).



CD074R13

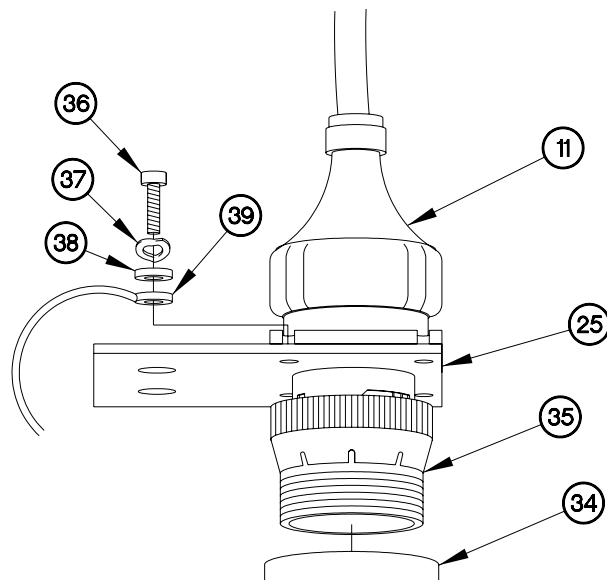
**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****INSTALLATION**

1. Install mounting bracket (25) on ABS power and diagnostic cable (11).
2. Connect ABS diagnostic tool (35) to ABS power and diagnostic cable (11).



CD074R13

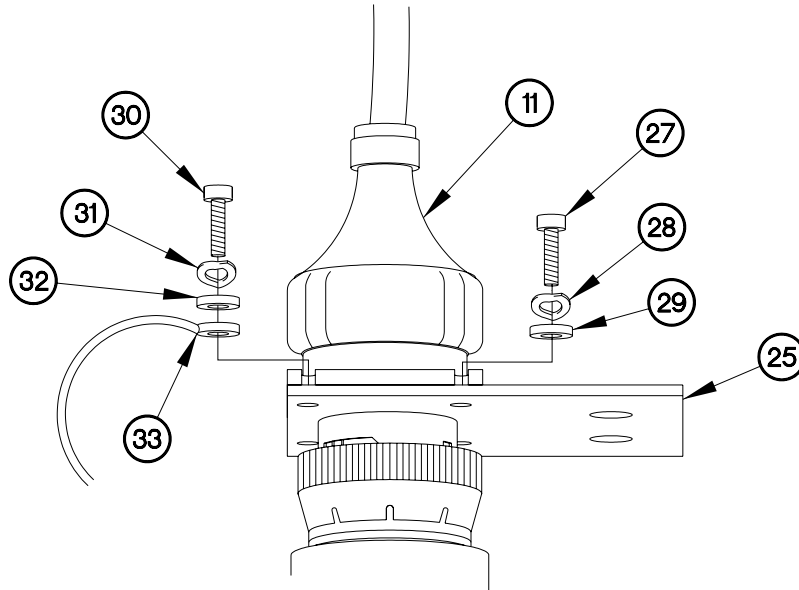
3. Install lanyard (39) on ABS power and diagnostic cable (11) and mounting bracket (25) with washer (38), lockwasher (37), and screw (36).
4. Install cover (34) on ABS diagnostic tool (35).



CD074R12

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

5. Install lanyard (33) on ABS power and diagnostic cable (11) and mounting bracket (25) with washer (32), lockwasher (31), and screw (30).
6. Install two washers (29), lockwashers (28), and screws (27) on ABS power and diagnostic cable (11) and mounting bracket (25).

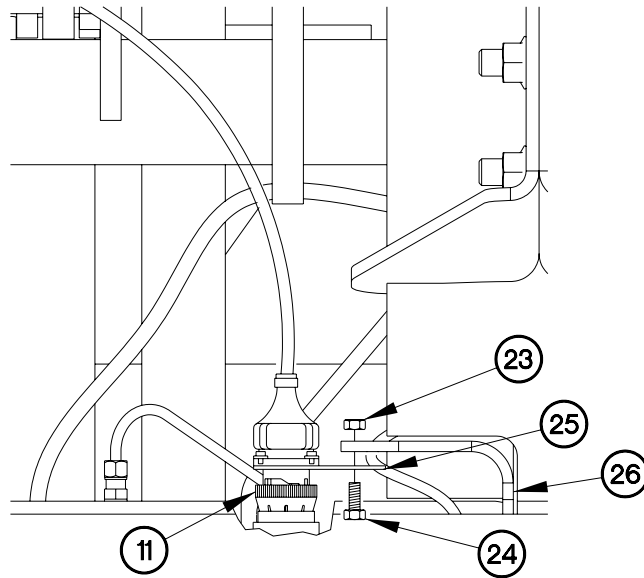


CD074R11

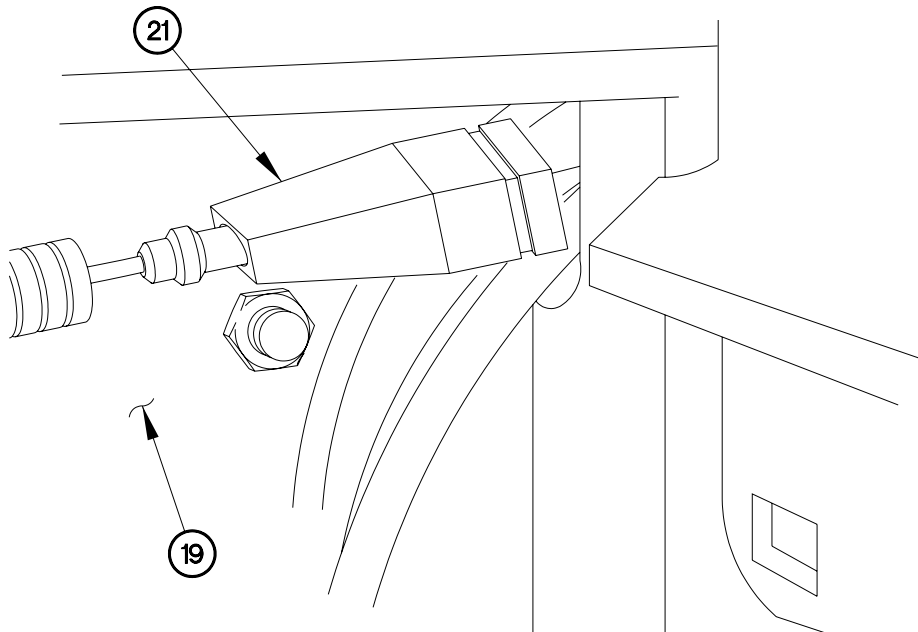


**ANTI-LOCK BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC  
CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued****0074 00****INSTALLATION – Continued**

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



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

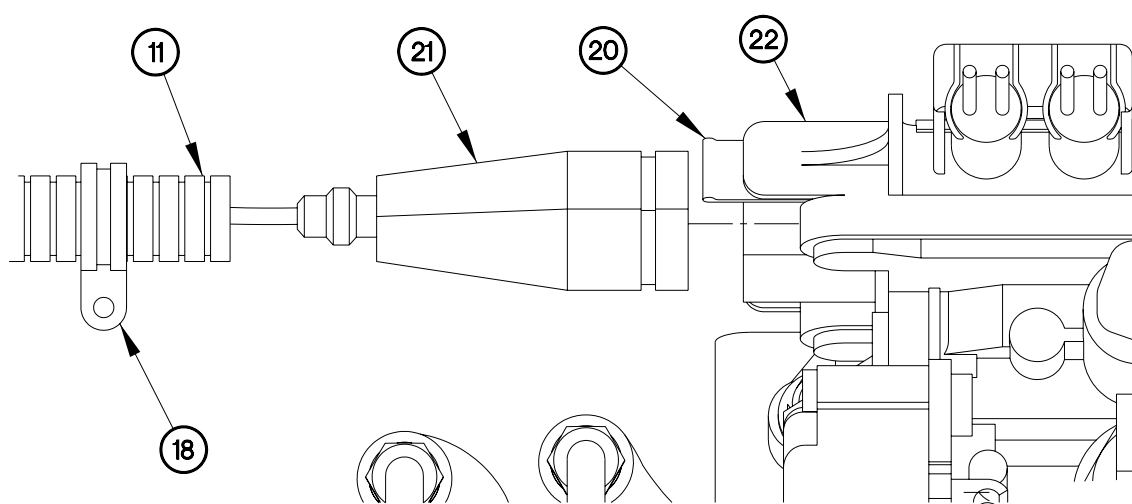


CD074R10

CD074R09

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

9. Position ABS power and diagnostic cable (11) in two clamps (18).
10. Connect connector (21) to ABS ECU valve (22).
11. Push down connector retainer clip (20).

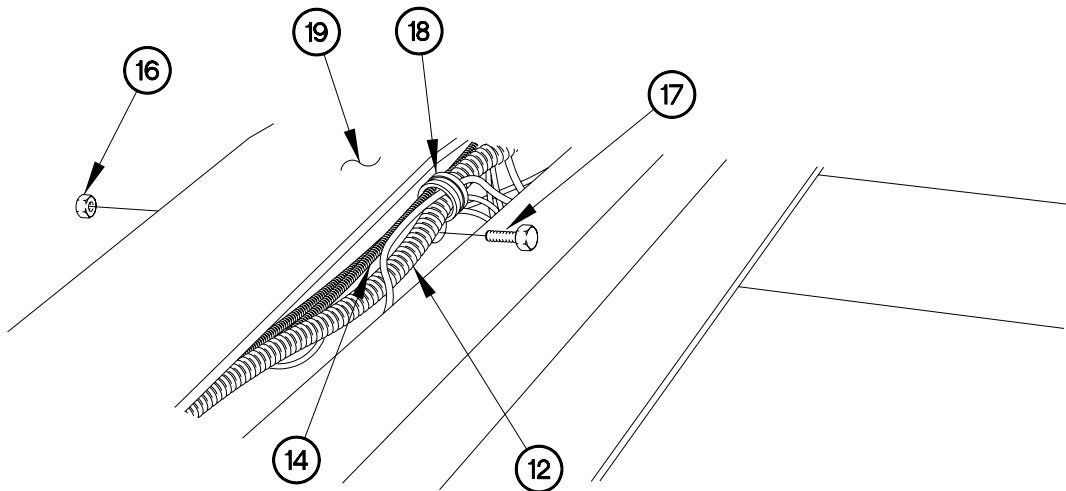


CD074R08

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

Install plastic cable ties as required.

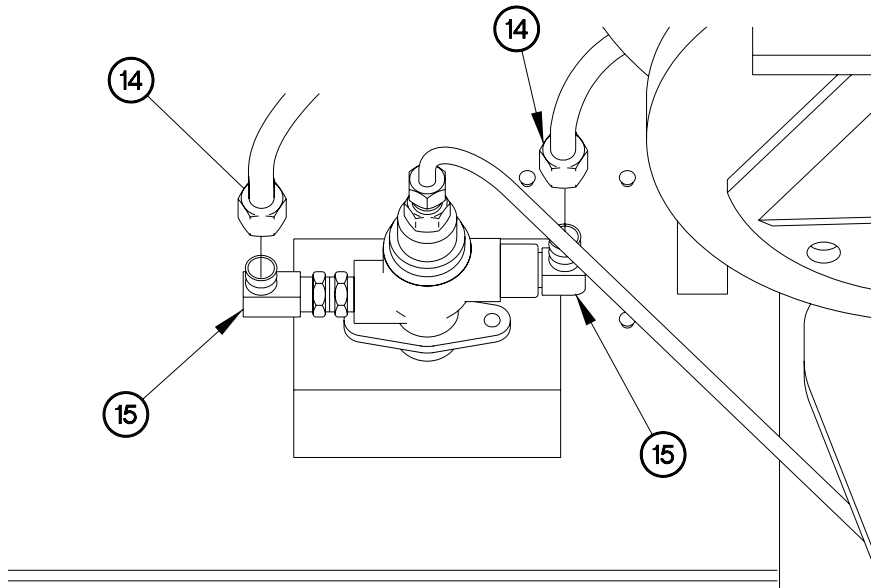
12. Route two hoses (14) and main electrical harness (12) through LH frame rail (19).
13. Position two hoses (14) and main electrical harness (12) in two clamps (18).
14. Position two clamps (18) on LH frame rail (19) with two bolts (17) and self-locking nuts (16).
15. Tighten two self-locking nuts (16) to 96-120 lb-in. (11-14 N•m).



CD074R07

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

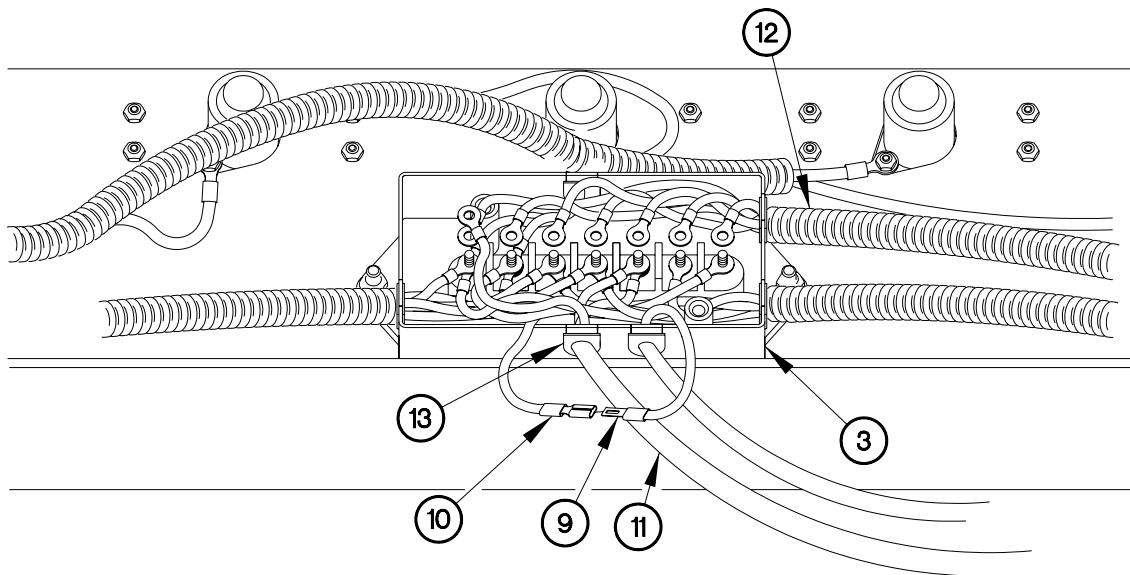
16. Connect two hoses (14) to 90-degree fittings (15).



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 BRAKING SYSTEM (ABS) POWER AND DIAGNOSTIC CABLE AND DIAGNOSTIC TOOL REPLACEMENT - Continued**

0074 00

## **INSTALLATION – Continued**

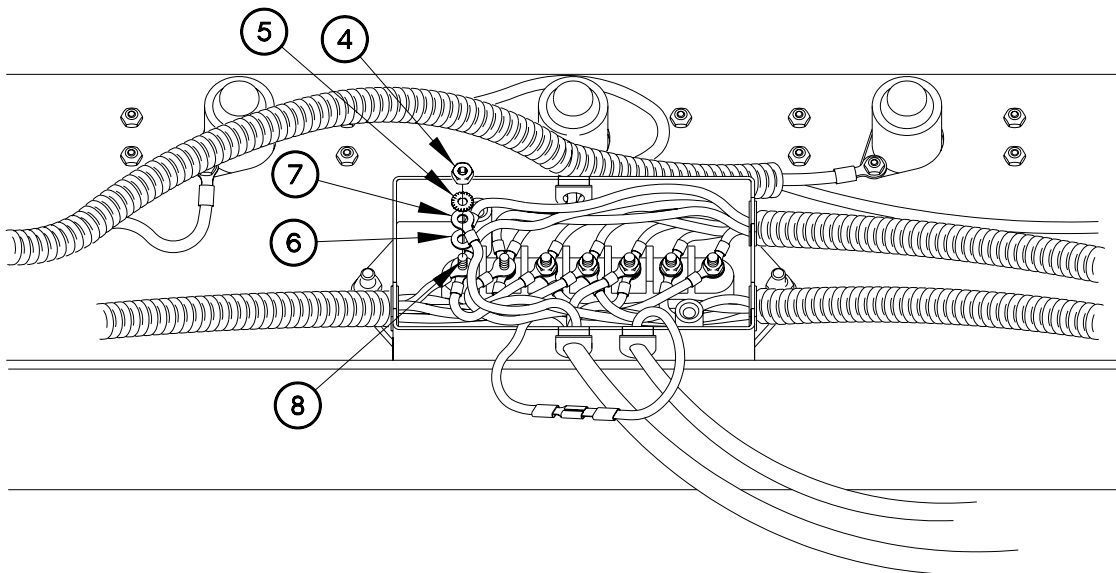
### **NOTE**

All main electrical harness and ABS power and diagnostic cable terminal lugs are installed the same way. Junction box terminal lug 1 shown. Refer to **Table 1, Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations** for details.

19. Install terminal lug TL261A (7) and TL609 (white ABS power and diagnostic cable ground terminal) (6) on junction box terminal stud 1 (8) with lockwasher (5) and nut (4).
20. Repeat the previous step on remaining main electrical harness and ABS power and diagnostic cable terminal lugs.

**Table 1 Junction Box Terminal Stud and Main Wiring Harness/ABS Power and Diagnostic Cable Terminal Lug Locations**

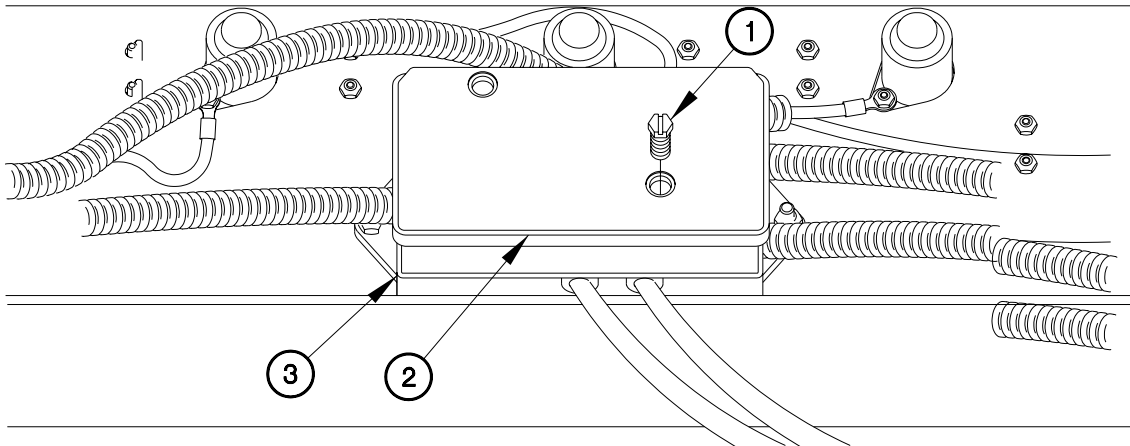
Junction Box Terminal Stud Position	Main Electrical Harness Terminal Lugs
Stud Position 1	TL609, TL261A
Stud Position 2	TL255A
Stud Position 3	TL257A
Stud Position 4	TL256A
Stud Position 5	TL251A, Red ABS Terminal Lug, Blue ABS Terminal Lug
Stud Position 6	TL253A
Stud Position 7	TL252A



CD074R02

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

21. Install cover (2) on junction box (3) with two screws (1).



CD074:01

**OPERATIONAL CHECKS**

1. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
2. Check for proper operation of ABS diagnostic tool (WP 0013 00).
3. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**

---

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT**

---

**0075 00****THIS WORK PACKAGE COVERS:**Removal, Installation, Operational Checks

---

**INITIAL SETUP:****Maintenance Level**

Field

**Tools and Special Tools**

Tool Kit, Genl Mech Item 22, WP 0167 00)

**Materials/Parts**

Antiseize Compound (Item 2, WP 0165 00)

Ties, Cable Plastic (Item 20, WP 0165 00)

**Materials/Parts (Cont)**Dispenser, Pressure Sensitive Adhesive Tape  
(Item 6, WP 0165 00)Kit, Pressure Protection Valve (Item 3, WP  
0168 00)**Equipment Conditions**Trailer uncoupled (WP 0043 24, TM 9-2320-  
392-10-1)Flatrack Rail Assembly raised (WP 0005 00)

---

**GENERAL**

This work package contains information and instructions to replace the Load Handling System Trailer (LHST) anti-lock braking system (ABS) relay valve and brake protection valve.

---

**WARNING**

---

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

**NOTE**

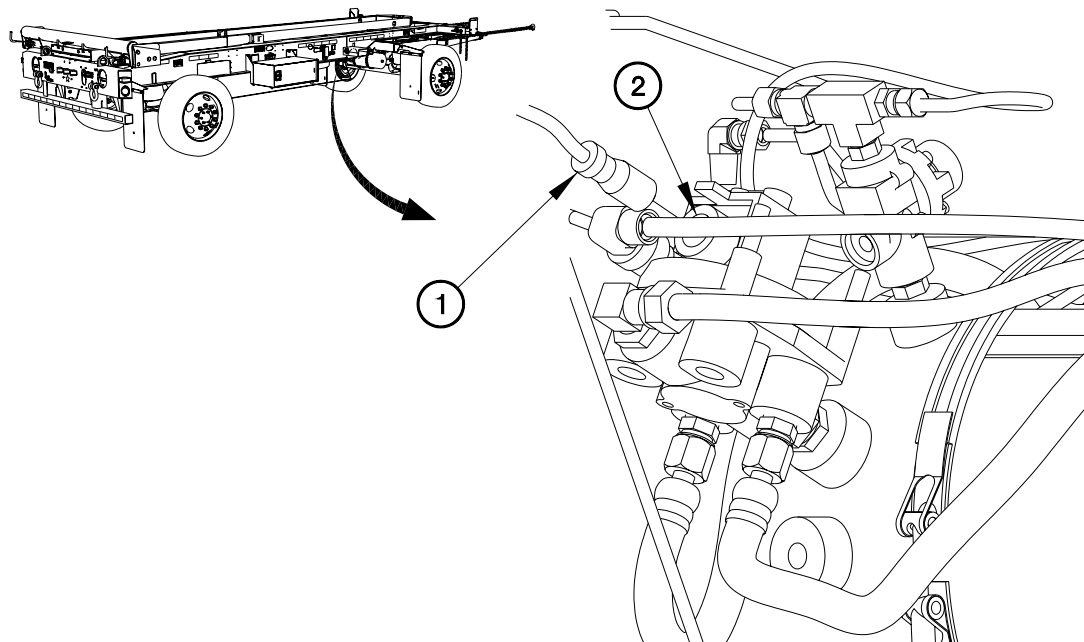
Tag air hoses, electrical cables and connection points prior to disconnecting.

Remove plastic cable ties as required.

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****REMOVAL****NOTE**

Note orientation of fittings prior to removal.

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

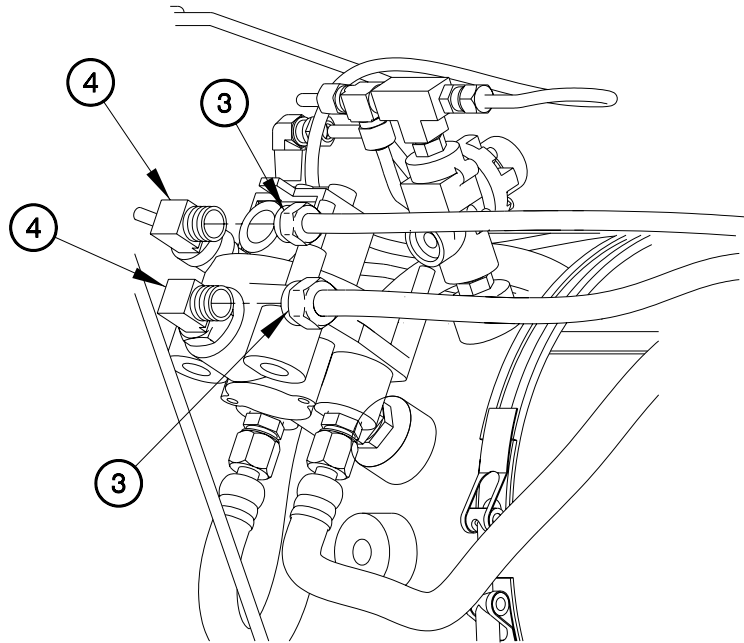


CD075R01



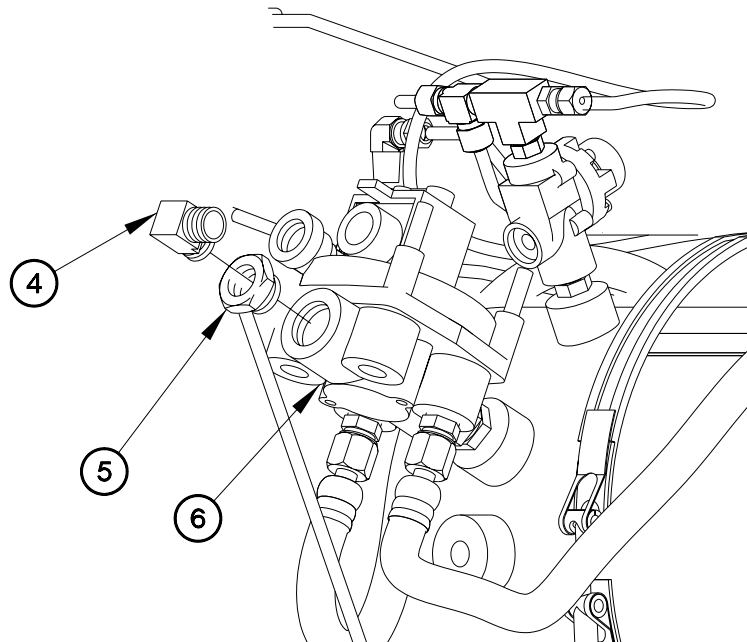
**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****REMOVAL - Continued**

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).



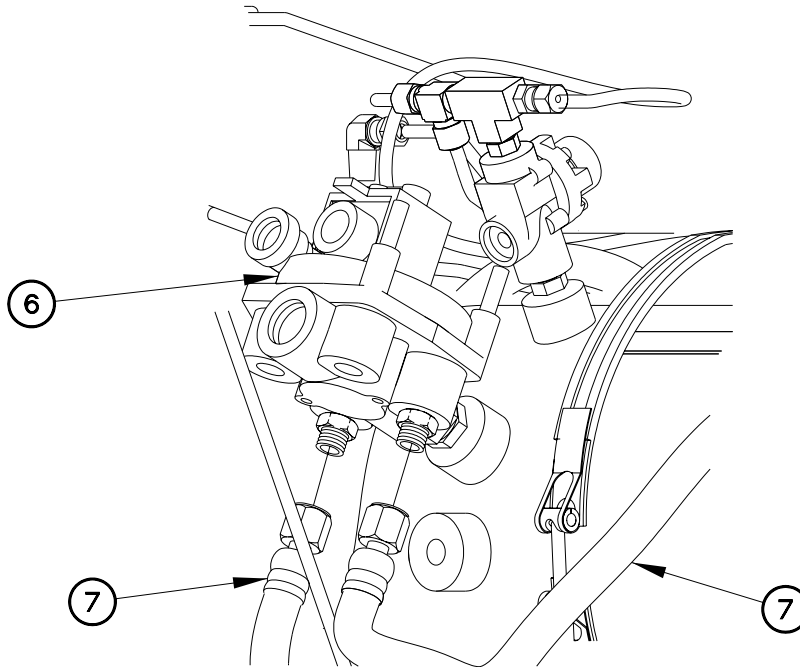
CD075R03

# **ABS RELAY VALVE AND BRAKE PROTECTION VALVE REPLACEMENT- Continued**

**0075 00**

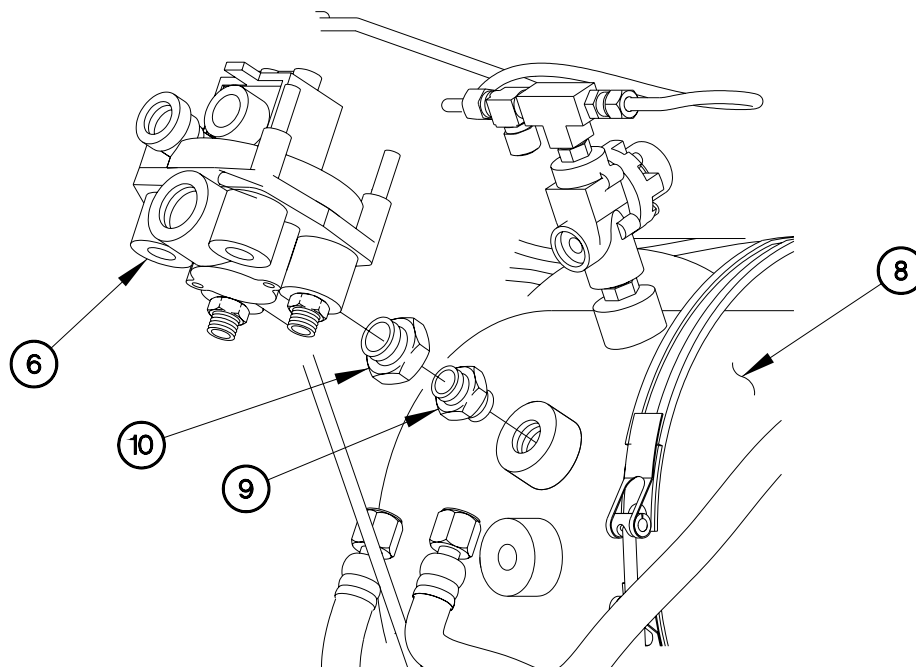
## **REMOVAL - Continued**

4. Disconnect two hoses (7) from ABS relay valve (6).



CD075R04

5. Remove ABS relay valve (6) from air tank (8).
6. Remove adapter (9) and fitting (10) from ABS relay valve (6).

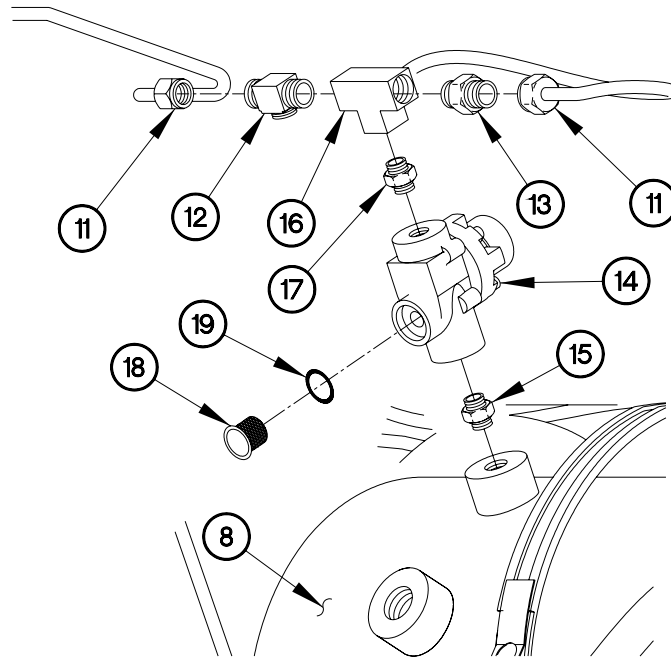


CD075R05

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****REMOVAL – Continued****NOTE**

Perform the following seven steps on front brake protection valve.

7. Disconnect two air hoses (11) from adapters (12 and 13).
8. Remove front brake protection valve (14) from air tank (8).
9. Remove adapter (15) from front brake protection valve (14).
10. Remove adapters (12 and 13) from tee fitting (16).
11. Remove tee fitting (16) from adapter (17).
12. Remove adapter (17) from front brake protection valve (14).
13. Remove air filter (18) and preformed packing (19) from front brake protection valve (14). Discard air filter and preformed packing.

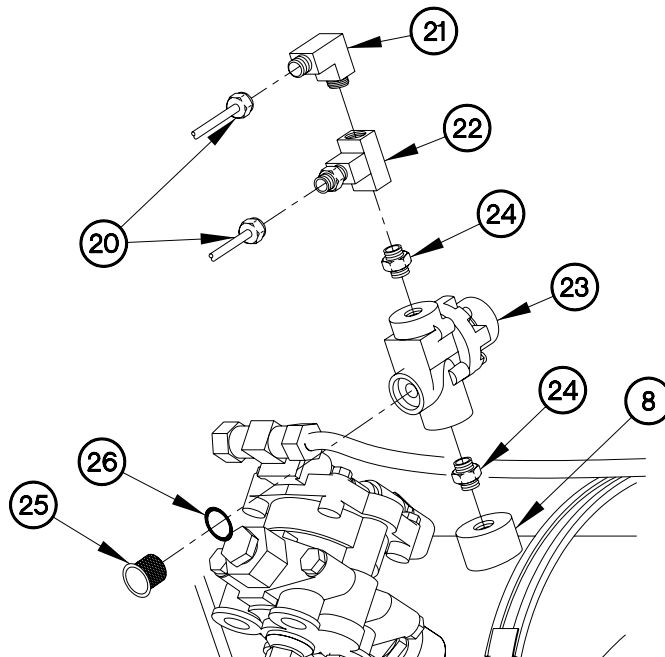


CD075R06

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****REMOVAL - Continued****NOTE**

Perform the following six steps on rear brake protection valve.

14. Disconnect two air hoses (20) from 90-degree fitting (21) and tee fitting (22).
15. Remove rear brake protection valve (23) from air tank (8).
16. Remove 90-degree fitting (21) from tee fitting (22)
17. Remove tee fitting (22) from adapter (24)
18. Remove two adapters (24) from rear brake protection valve (23).
19. Remove air filter (25) and preformed packing (26) from rear brake protection valve (23). Discard air filter and preformed packing.



CD075R07

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****INSTALLATION****WARNING**

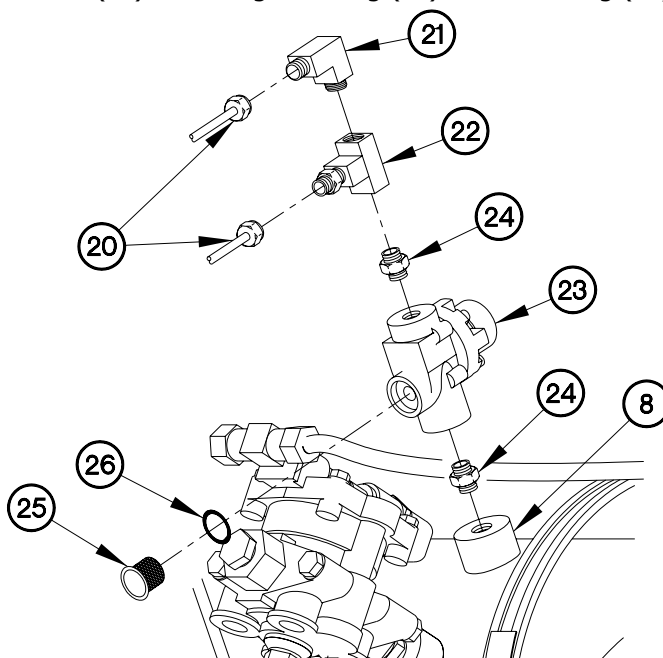
**Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.**

**NOTE**

Perform the following seven steps on rear brake protection valve.

Install plastic cable ties as required.

1. Apply sealing compound to threads of 90-degree fitting (21) and two adapters (24).
2. Install preformed packing (26) and air filter (25) in rear brake protection valve (23).
3. Install two adapters (24) in rear brake protection valve (23).
4. Install tee fitting (22) on adapter (24).
5. Install 90-degree fitting (21) on tee fitting (22).
6. Install rear brake protection valve (23) on air tank (8).
7. Connect two air hoses (20) to 90-degree fitting (21) and tee fitting (22).



CD075R07

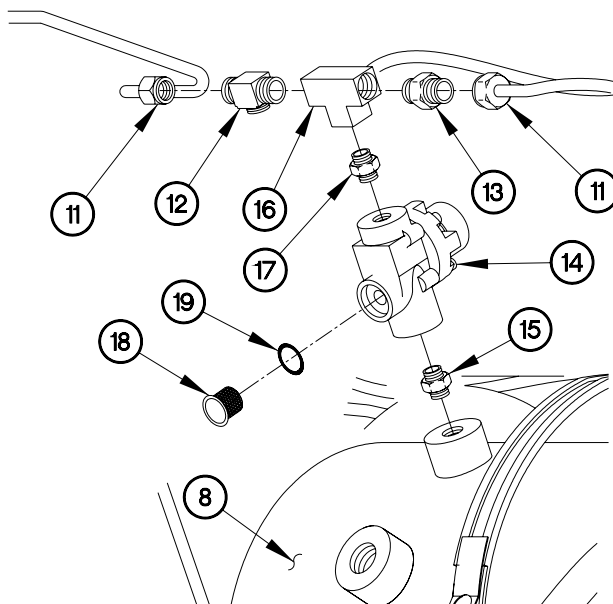
**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****INSTALLATION - Continued****WARNING**

**Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.**

**NOTE**

Perform the following eight steps on front brake protection valve.

8. Apply sealing compound to threads of adapters (12 and 13), adapter (15), and adapter (17).
9. Install preformed packing (19) and air filter (18) in front brake protection valve (14).
10. Install adapter (17) in front brake protection valve (14).
11. Install tee fitting (16) on adapter (17).
12. Install adapters (12 and 13) in tee fitting (16).
13. Install adapter (15) in front brake protection valve (14).
14. Install front brake protection valve (14) on air tank (8).
15. Connect two air hoses (11) to adapters (12 and 13).

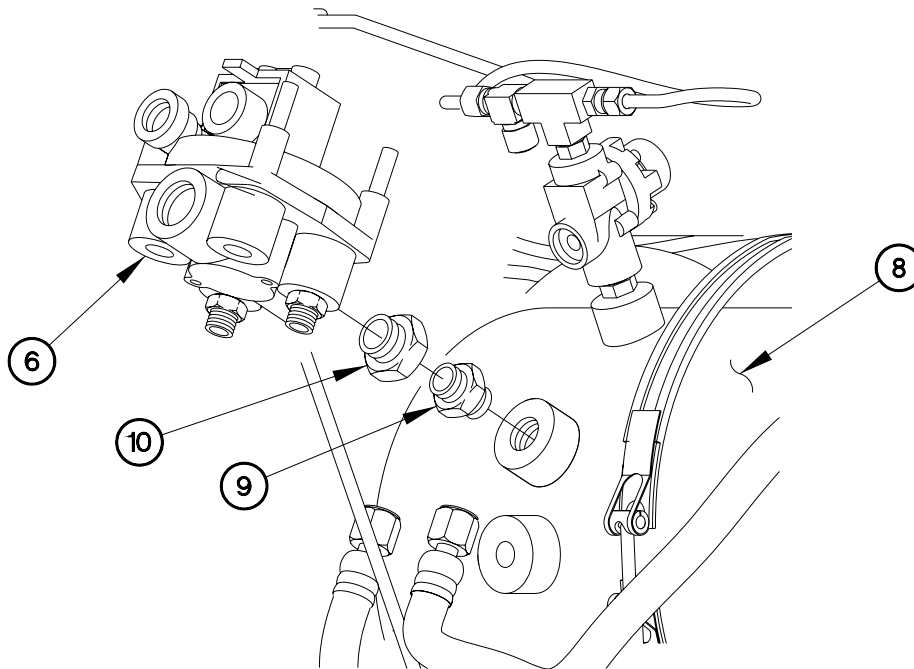


CD075R06

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****INSTALLATION - Continued****WARNING**

**Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.**

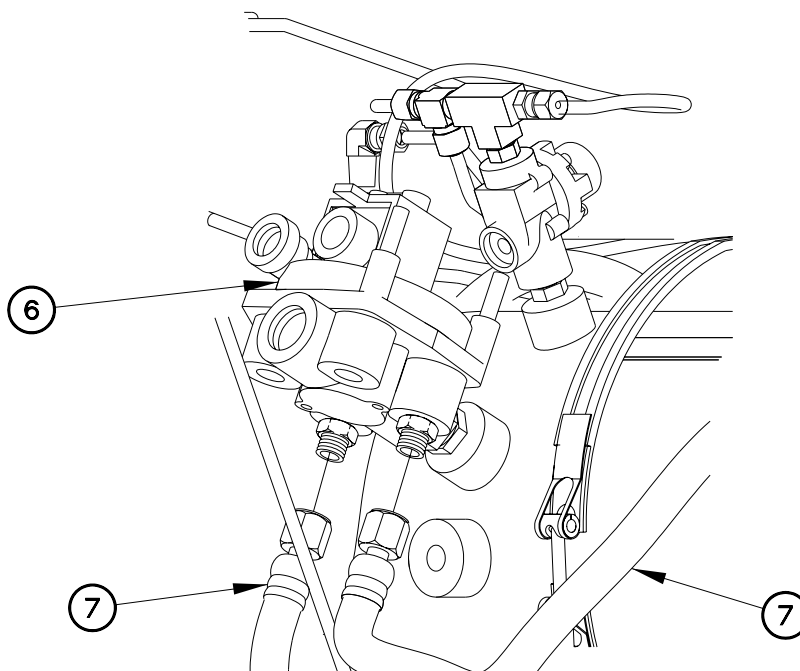
16. Apply sealing compound to threads of adapter (9) and fitting (10).
17. Install adapter (9) and fitting (10) on ABS relay valve (6).
18. Install ABS relay valve (6) on air tank (8).



CD075R05

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****INSTALLATION - Continued**

19. Connect two hoses (7) to ABS relay valve (6).



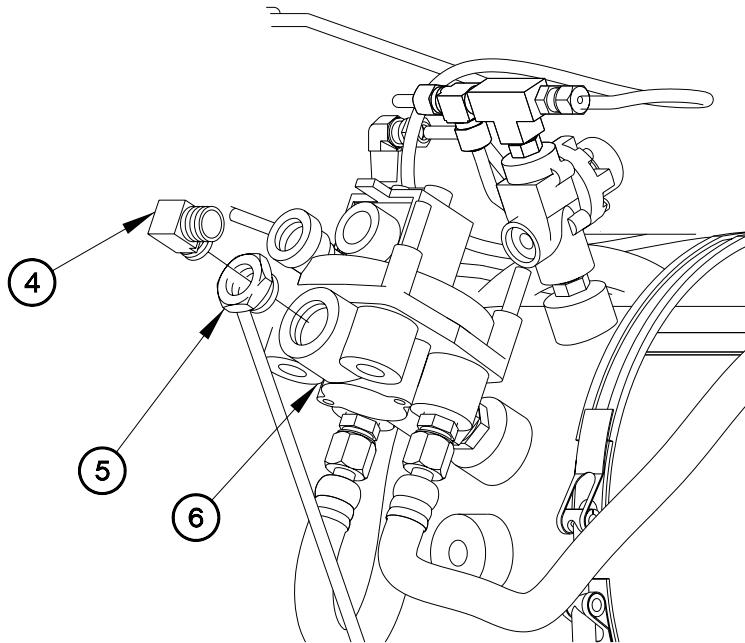
CD075R04



**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****INSTALLATION - Continued****WARNING**

**Adhesive, solvents and sealing compounds can burn easily, can give off harmful vapors, and are harmful to skin and clothing. Keep away from open fire and use in well-ventilated area. If adhesive, solvent, or sealing compound gets on skin or clothing, wash immediately with soap and water. Failure to comply may result in injury to personnel.**

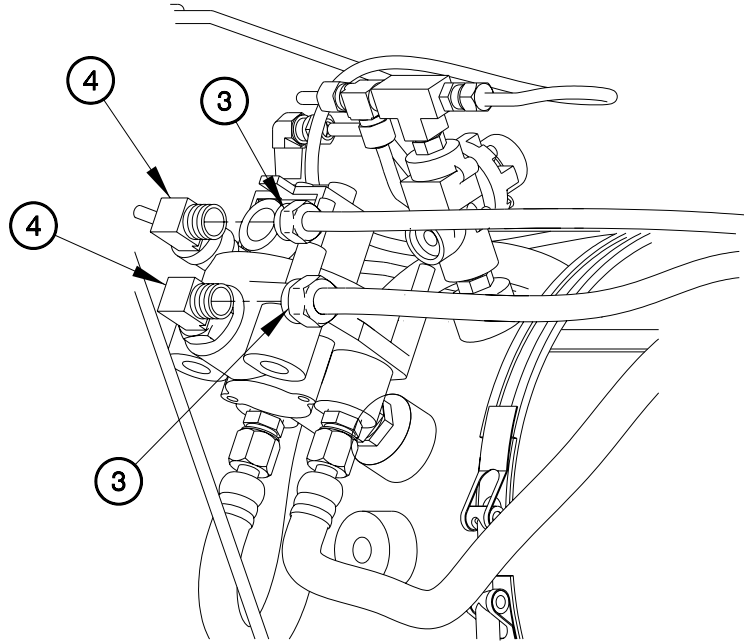
20. Apply sealing compound to threads of two adapters (5) and 90-degree fittings (4).
21. Install two adapters (5) and 90-degree fittings (4) on ABS relay valve (6).



CD075R03

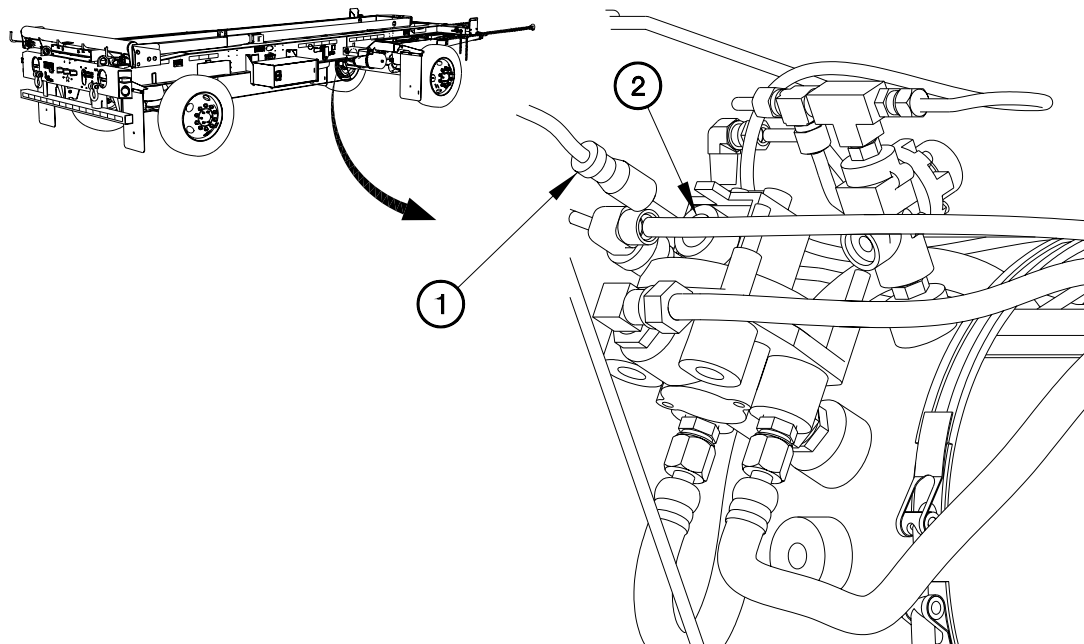
**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT- Continued****0075 00****INSTALLATION - Continued**

22. Connect two air hoses (3) to 90-degree fittings (4).



CD075R02

23. Connect ABC ECU connector (1) to relay valve cable connector (2).



CD075R01

---

**ABS RELAY VALVE AND BRAKE PROTECTION VALVE  
REPLACEMENT**

---

**0075 00**

**OPERATIONAL CHECKS**

1. Lower flatrack rail (WP 0005 00).
2. Couple trailer (WP 0043 23, TM 2320-392-10-1, Coupling Trailer).
3. Operate vehicle, checking for proper operation of ABS relay valve and brake protection valve (WP 0020 00, TM 9-2320-392-10-1).
4. Uncouple trailer (WP 0043 24, TM 2320-392-10-1, Uncoupling Trailer).

**END OF WORK PACKAGE**

