

TM 9-2330-334-13&P

CHAPTER 3
TROUBLESHOOTING PROCEDURES

OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURES 0013 00

THIS WORK PACKAGE COVERS:

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

INITIAL SETUP:

Maintenance Level

Operator

Equipment Conditions

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

PROCEDURE

WARNING

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

NOTE

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

OPERATIONAL CHECKOUT AND TROUBLESHOOTING PROCEDURES

-Continued

0013 00

OPERATIONAL CHECKOUT AND TROUBLESHOOTING - Continued

Table 1. Operational Checkout and Troubleshooting Procedures

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

END OF WORK PACKAGE

FRONT MARKER LIGHTS DO NOT ILLUMINATE

0014 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Towing vehicle main light switch set to off

(TM 9-2320-392-10-1).

Materials/Parts

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

Wire, Electrical 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

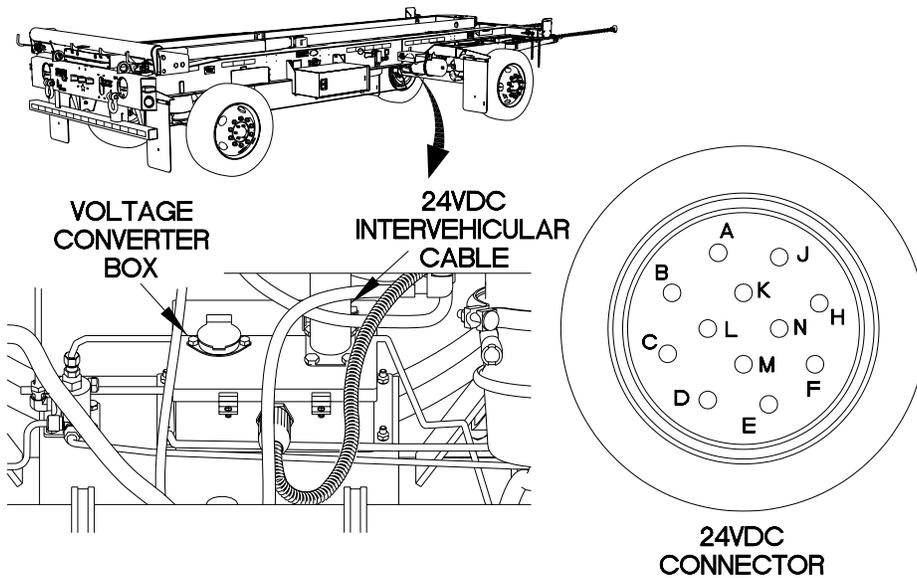
FRONT MARKER LIGHTS DO NOT ILLUMINATE-Continued

0014 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin E?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to SER DRIVE on towing vehicle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin E. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.

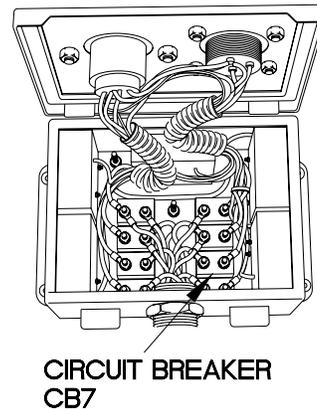
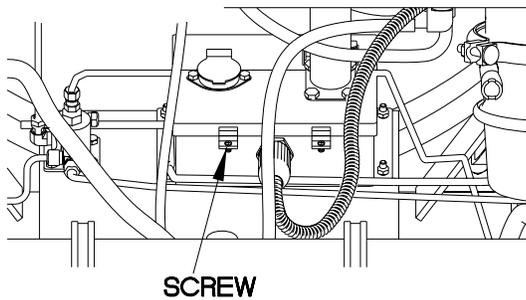


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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB7?	<p>No. Replace circuit breaker CB7 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Remove two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB7. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB7 and note reading on multimeter.

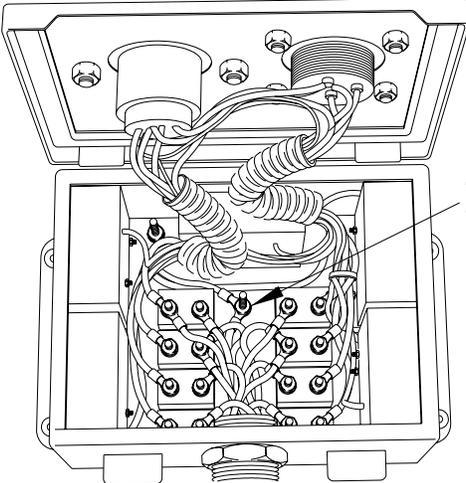


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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Front Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is continuity present from TL260 to a known good ground?	<p>No. Repair wire 105 or replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace main electrical harness (WP 0066 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Connect positive (+) probe of multimeter to TL260. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



TERMINAL LUG
TL260

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END OF WORK PACKAGE

RIGHT FRONT MARKER LIGHT DOES NOT ILLUMINATE

0015 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

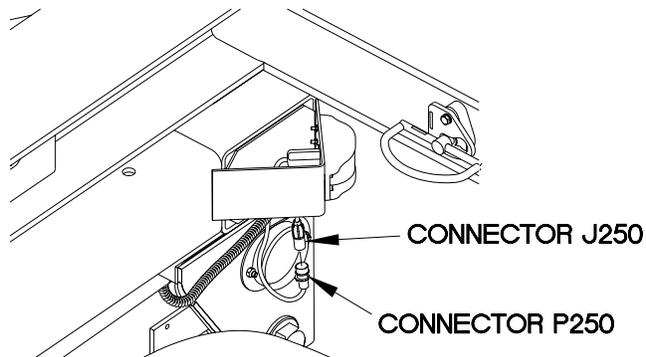
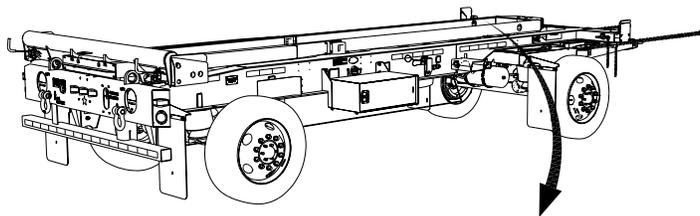
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT FRONT MARKER LIGHT DOES NOT ILLUMINATE-Continued 0015 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Front Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J250?	<p>No. Repair wire 107B (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace right front marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect connector J250 from right front marker light connector P250. 3. Position main light switch to SER DRIVE on towing vehicle. 4. Connect positive (+) probe of multimeter to connector J250. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



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END OF WORK PACKAGE

LEFT FRONT MARKER LIGHT DOES NOT ILLUMINATE

0016 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Towing vehicle main light switch set to off

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

Materials/Parts

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

Wire, Electrical 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

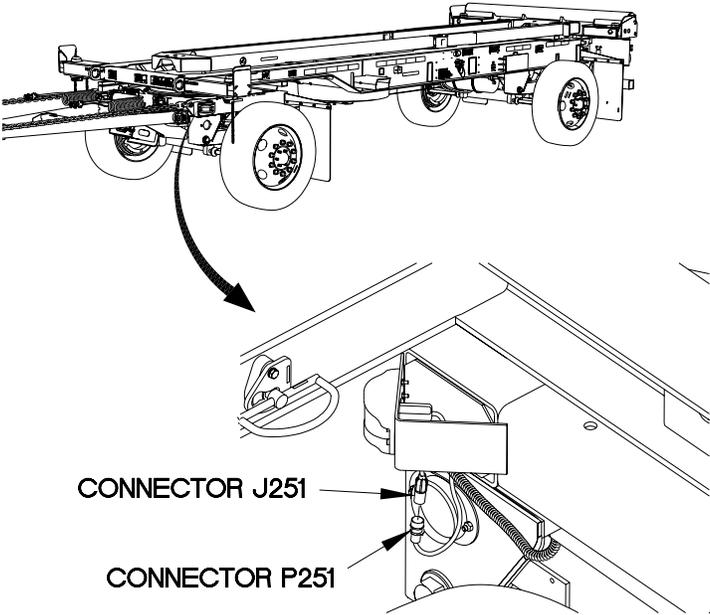
LEFT FRONT MARKER LIGHT DOES NOT ILLUMINATE-Continued

0016 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Front Marker Light Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at connector J251?	<p>No. Repair wire 107C (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace left front marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect connector J251 from left front marker light. 3. Position main light switch to SER DRIVE on towing vehicle. 4. Connect positive (+) probe of multimeter to connector J251. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



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END OF WORK PACKAGE

SIDE REAR MARKER LIGHTS DO NOT ILLUMINATE

0017 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

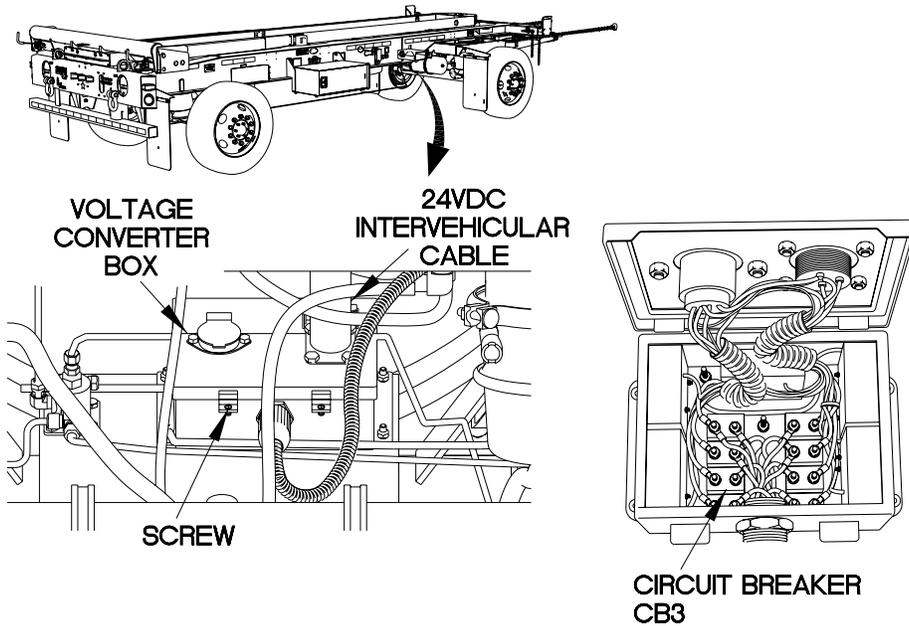
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

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

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Side Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is continuity present across circuit breaker CB3?	<p>No. Replace circuit breaker CB3 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect 24 VDC intervehicular cable connector from voltage converter box on trailer. 3. Remove two screws and raise lid on voltage converter box. 4. Connect positive (+) probe of multimeter to one terminal on CB3. 5. Connect negative (-) probe of multimeter to other terminal on CB3 and note reading on multimeter.

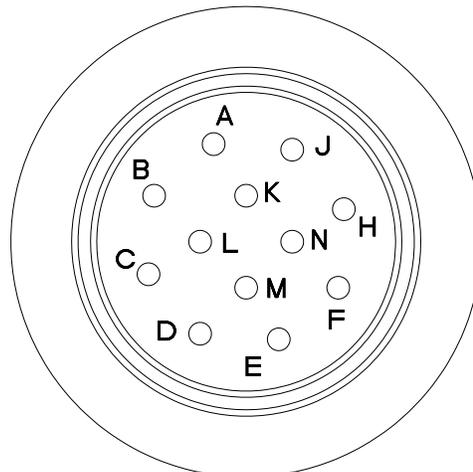


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ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Side Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 18-30 VDC present at 24 VDC intervehicular cable connector pin E?	<p>No. Replace 24 VDC intervehicular cable (WP 0062 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Connect positive (+) probe of button probe to 24 VDC intervehicular connector pin E. 3. Connect negative (-) probe of button probe to a known good ground. 4. Position master power switch to on (TM 9-2320-392-10). 5. Position main light switch to SER DRIVE and note reading on multimeter.



**24VDC
CONNECTOR**

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END OF WORK PACKAGE

LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE

0018 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued

0018 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Rear Marker Light Does Not Illuminate

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

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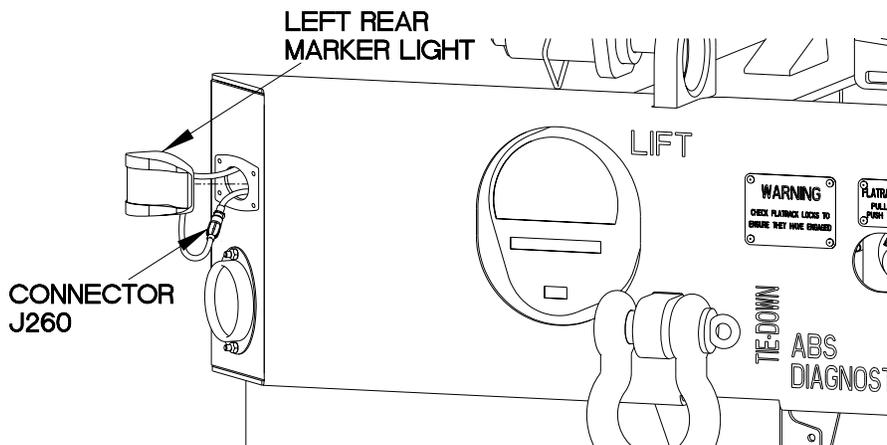
LEFT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued

0018 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Rear Marker Light Does Not Illuminate

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



CC018R02

END OF WORK PACKAGE

RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE

0019 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Towing vehicle main light switch set to off

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

Materials/Parts

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

Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

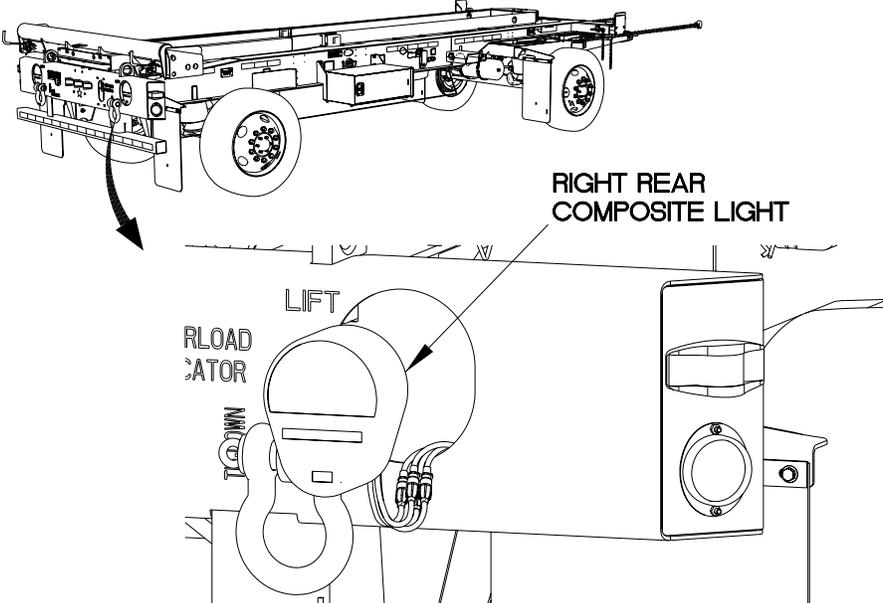
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0019 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Rear Marker Light Does Not Illuminate

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



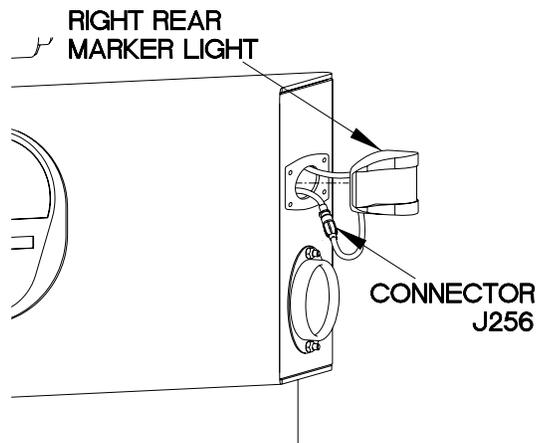
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RIGHT REAR MARKER LIGHT DOES NOT ILLUMINATE-Continued 0019 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Rear Marker Light Does Not Illuminate

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



CC019R02

END OF WORK PACKAGE

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE

0020 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

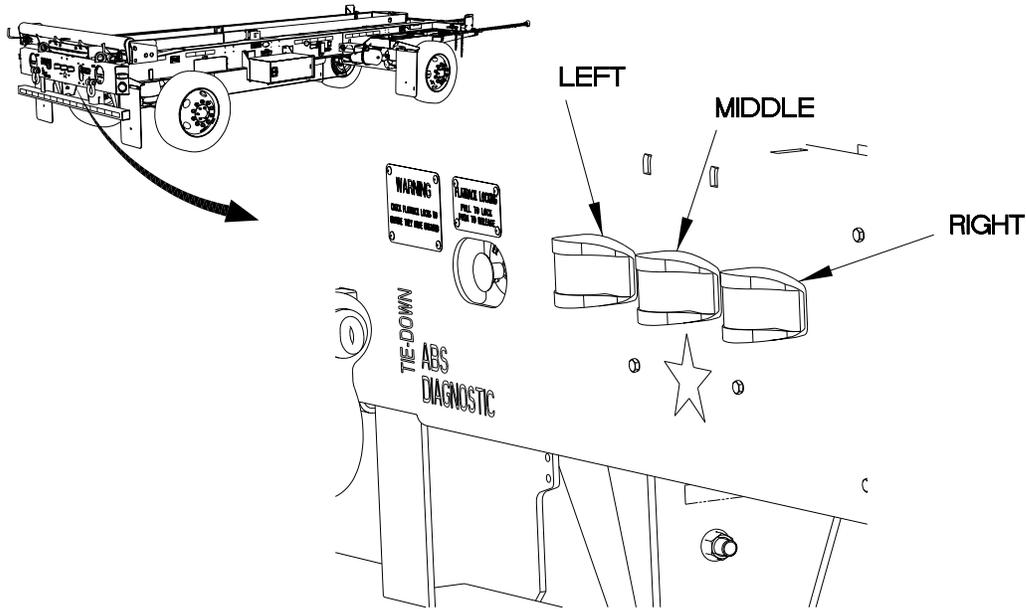
Refer to Electrical Schematic at the end of this chapter as required.

CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

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



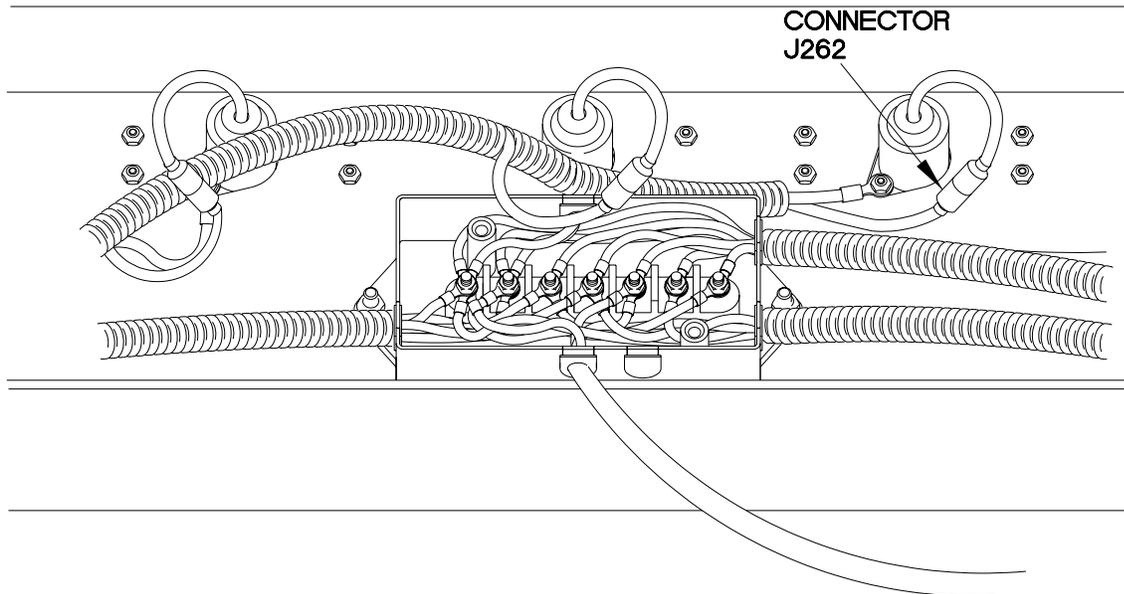
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CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 8-14 VDC present at connector J262?	<p>No. Repair wire 121 (EM 0195) or replace rear electrical harness (WP 0065 00).</p> <p>Yes. Replace center left marker light (WP 0061).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect connector J262 from center left marker light connector. 3. Connect positive (+) probe of multimeter to connector J262. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to SER DRIVE and note reading on multimeter.



CC020R02

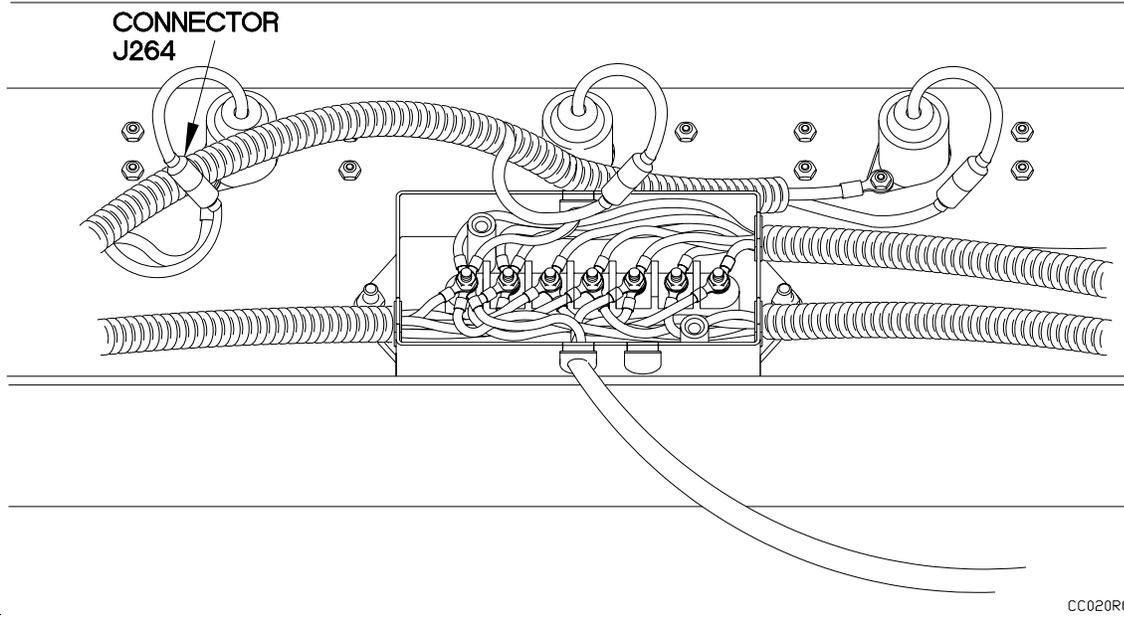
CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued

0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 8-14 VDC present at connector J264?</p>	<p>No. Repair wire 123 or replace rear electrical harness (WP 0065 00).</p> <p>Yes. Replace center right marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect connector J264 from center right marker light connector. 3. Connect positive (+) probe of multimeter to connector J264. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to SER DRIVE and note reading on multimeter.

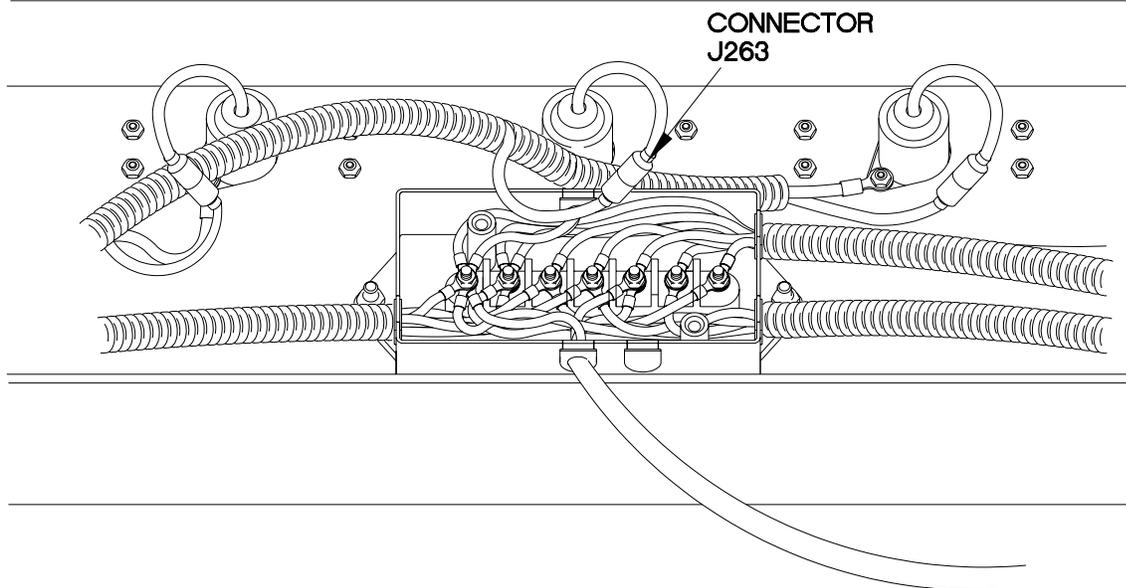


CENTER REAR MARKER LIGHTS DO NOT ILLUMINATE-Continued 0020 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Center Rear Marker Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Is 8-14 VDC present at connector J263?</p>	<p>No. Repair wire 122 or replace rear electrical harness (WP 0065 00).</p> <p>Yes. Replace center middle marker light (WP 0061 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect connector J263 from center middle marker light connector. 3. Connect positive (+) probe of multimeter to connector J263. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to SER DRIVE and note reading on multimeter.



CC020R04

END OF WORK PACKAGE

RIGHT TAILLIGHT DOES NOT ILLUMINATE

0021 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

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

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

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

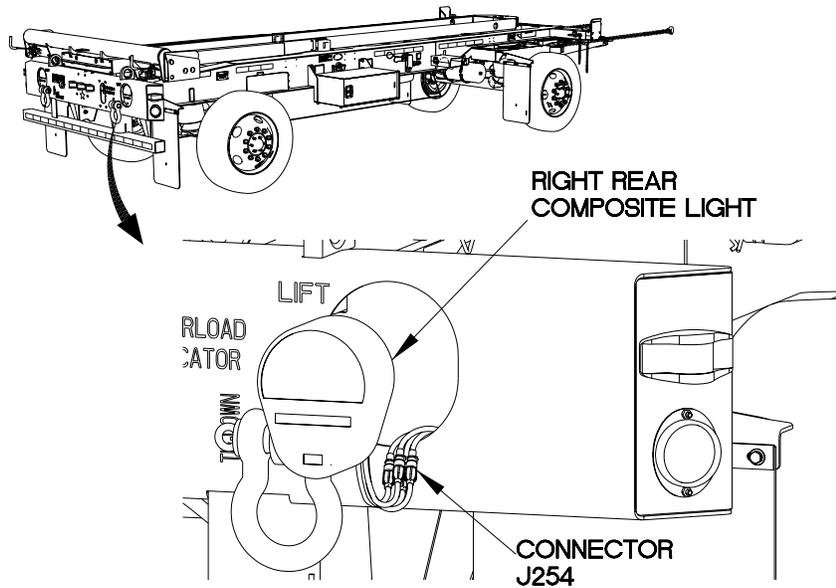
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT TAILLIGHT DOES NOT ILLUMINATE-Continued

0021 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>1. Is 8-16 VDC present at connector J254?</p>	<p>No. Repair wire 113B (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J254 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J254. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



CC021R01

END OF WORK PACKAGE

RIGHT STOPLIGHT DOES NOT ILLUMINATE

0022 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level
Field

Personnel Required
Two

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

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

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

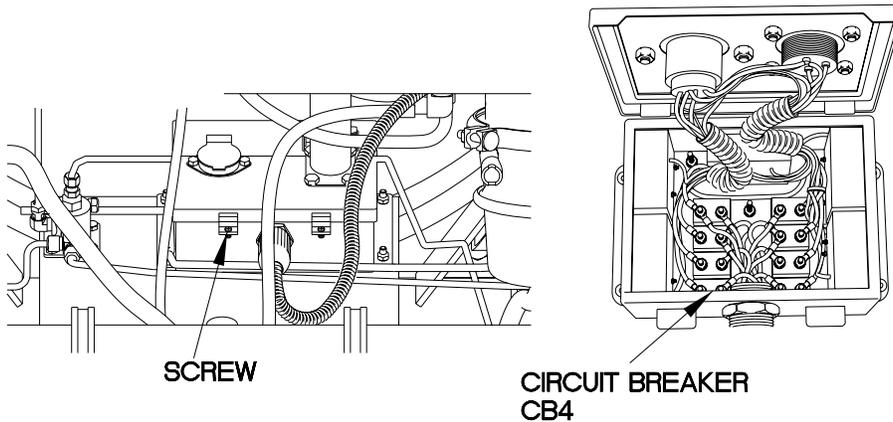
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin B?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake peddle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin B. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.
<p>The diagram illustrates the electrical components for the right stoplight system. It shows a side view of a vehicle chassis with a 'VOLTAGE CONVERTER BOX' and a '24VDC INTERVEHICULAR CABLE' connected to the rear. A detailed view of the '24VDC CONNECTOR' shows 12 pins labeled A through M in a circular arrangement: A, J, K, H, N, F, E, M, L, C, B.</p>		<ol style="list-style-type: none"> 6. Position main light switch to ALL OFF.

CC022R01

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

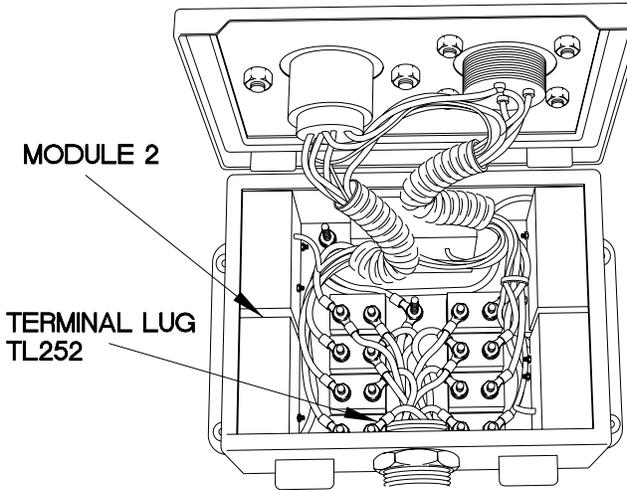
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB4?	<p>No. Replace circuit breaker CB4 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Loosen two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB4. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB4 and note reading on multimeter.



CC022R02

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

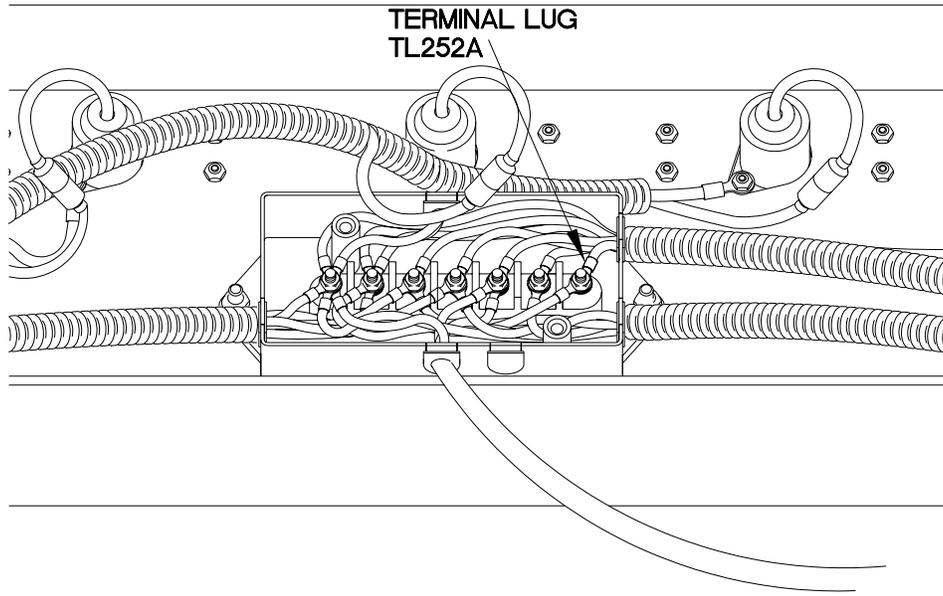
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 8-16 VDC present at TL252?</p>	<p>No. Replace module 2 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Connect intervehicular cable connector to voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake pedal. 4. Connect positive (+) probe of multimeter to TL252. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.
 <p>The diagram shows a top-down view of the right stoplight assembly. It features a rectangular housing with a lid. Inside, there is a complex arrangement of wires and components. A label 'MODULE 2' points to a specific component within the assembly. Another label 'TERMINAL LUG TL252' points to a specific terminal on a wire bundle. The assembly is mounted on a base with two mounting tabs at the bottom.</p>		<p>6. Position main light switch to ALL OFF.</p>

CC022R03

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Is 8-14 VDC present at terminal lug TL252A?</p>	<p>No. Repair wire 110 (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove two screws and cover from junction box. 3. Connect positive (+) probe of multimeter to terminal lug TL252A 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to STOP LIGHT. 6. Depress brake pedal and note reading on multimeter.



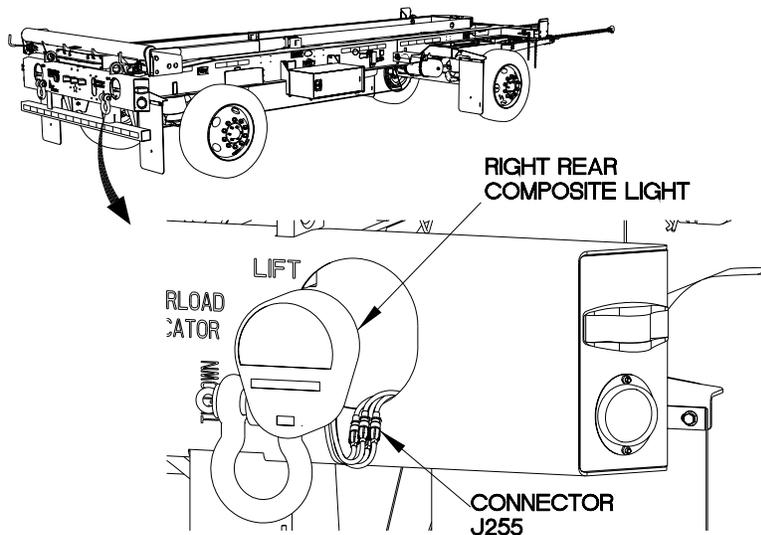
CC022R04

7. Position main light switch to ALL OFF.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>5. Is 8-16 VDC present at connector J255?</p>	<p>No. Repair wire 114 (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J255 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J255. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to STOP LIGHT on towing vehicle, depress brake pedal, and note reading on multimeter.

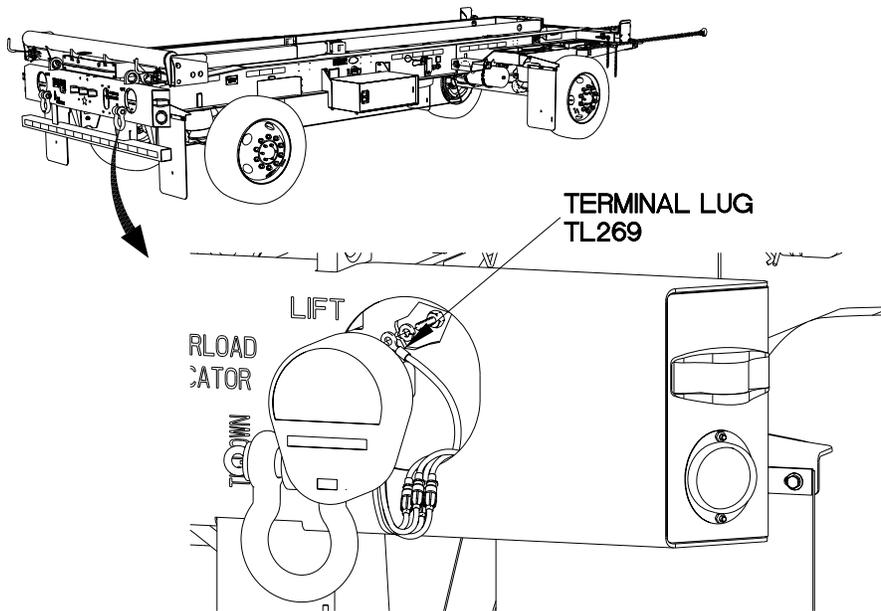


CC022R05

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Right Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Is continuity present from terminal lug TL269 to a known good ground?</p>	<p>No. Repair wire 115B (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Connect positive (+) probe of multimeter to terminal lug TL269. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



CC022R07

END OF WORK PACKAGE

LEFT TAILLIGHT DOES NOT ILLUMINATE

0023 00**THIS WORK PACKAGE COVERS:**Electrical System Troubleshooting

INITIAL SETUP:**Maintenance Level**

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Towing vehicle main light switch set to off
(TM 9-2320-392-10-1).**Materials/Parts**

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

Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE**WARNING**

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

CAUTION

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

NOTE

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

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

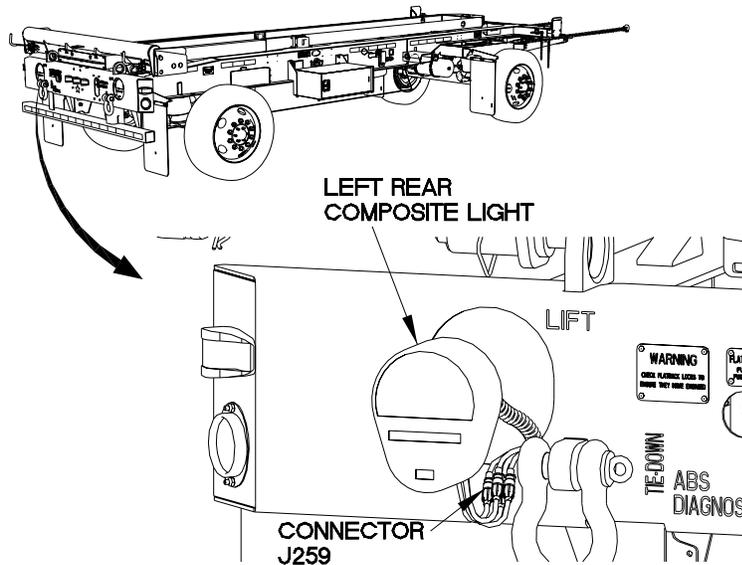
LEFT TAILLIGHT DOES NOT ILLUMINATE-Continued

0023 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

Table 1: Left Taillight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>1. Is 8-16 VDC present at connector J259?</p>	<p>No. Repair wire 118A (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove left rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J259 from left rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J259. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

LEFT STOPLIGHT DOES NOT ILLUMINATE

0024 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

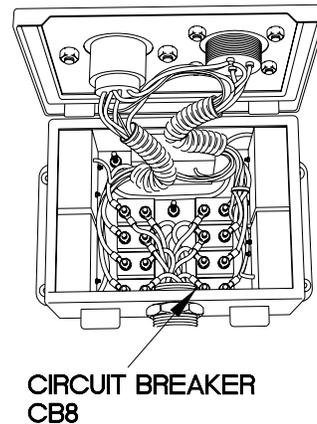
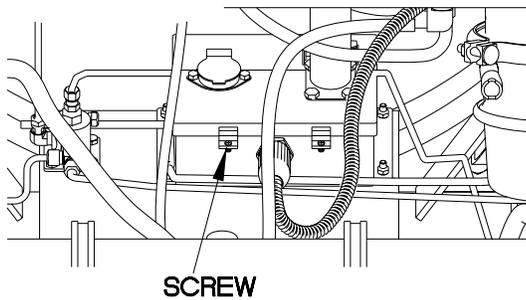
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin B?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to STOP LIGHT on towing vehicle and depress brake peddle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin B. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.
<p>The diagram illustrates the physical components involved in the troubleshooting process. The top part shows a side view of a vehicle chassis with an arrow pointing to the location of the voltage converter box and the 24VDC intervehicular cable. The bottom left shows a close-up of the voltage converter box and the cable connection. The bottom right shows a top-down view of the 24VDC connector, which is a circular multi-pin connector with pins labeled A through M.</p>		<ol style="list-style-type: none"> 6. Position main light switch to ALL OFF.

CC024R01

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB8?	<p>No. Replace circuit breaker CB8 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Remove two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB8. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB8 and note reading on multimeter.

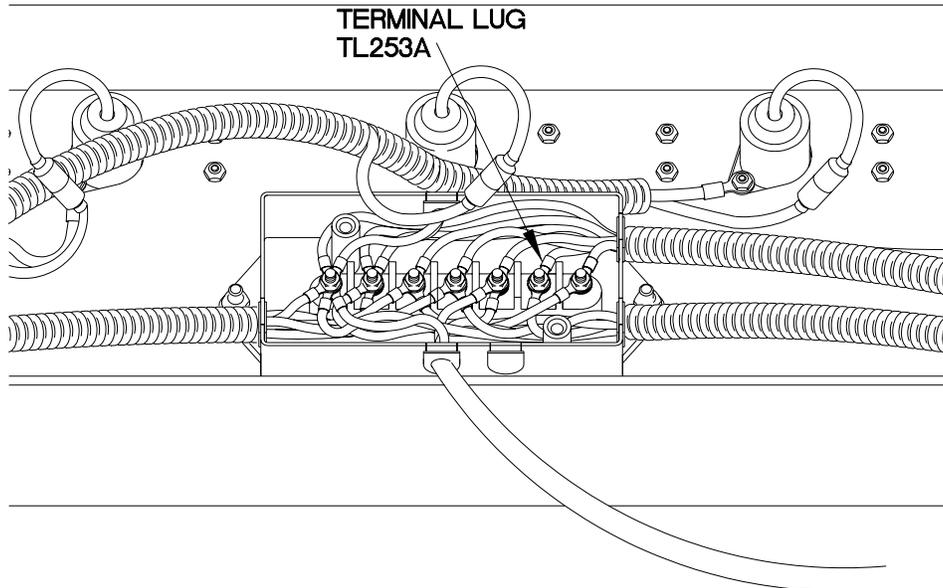


CC024R02

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is 8-14 VDC present at terminal lug TL253A?	<p>No. Repair wire 109 (EM 0195) or replace main electrical harness (WP 0066 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove cover of junction box (WP 0059 00). 3. Connect positive (+) probe of multimeter to terminal lug TL253A. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch on towing vehicle to STOP LIGHT. 6. Depress brake pedal and note reading on multimeter.



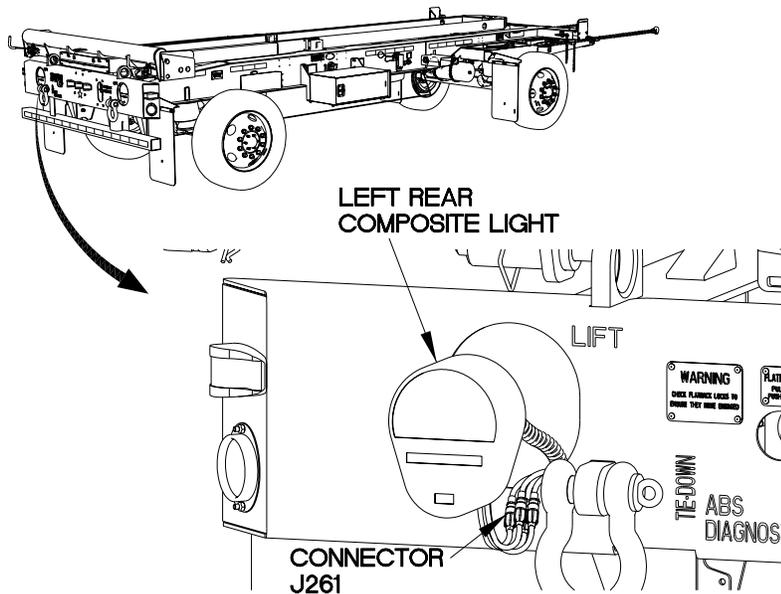
CC024R04

6. Position main light switch to ALL OFF.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

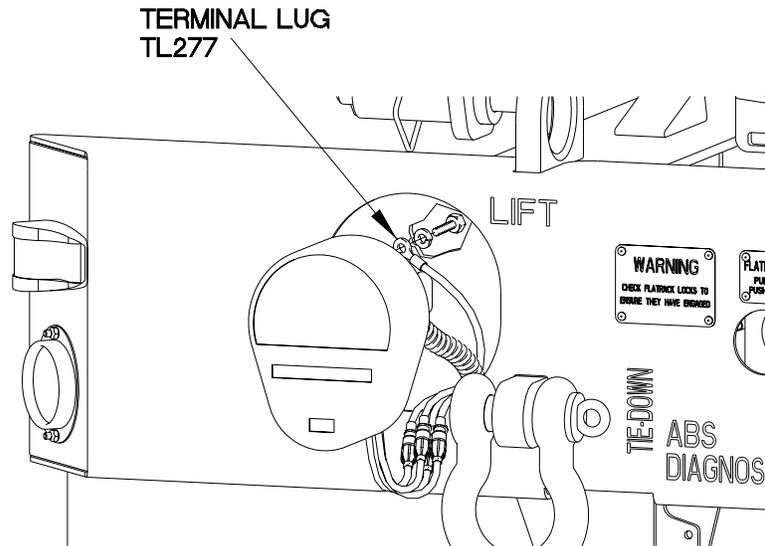
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>5. Is 8-16 VDC present at connector J261?</p>	<p>No. Repair wire 119 (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove left rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J261 from left rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J261. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to STOP LIGHT on towing vehicle, depress brake pedal, and note reading on multimeter.



ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Left Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Is continuity present from terminal lug TL277 to a known good ground?</p>	<p>No. Repair wire 120B (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Connect positive (+) probe of multimeter to terminal lug TL277. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



CC024R07

END OF WORK PACKAGE

RIGHT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE

0025 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

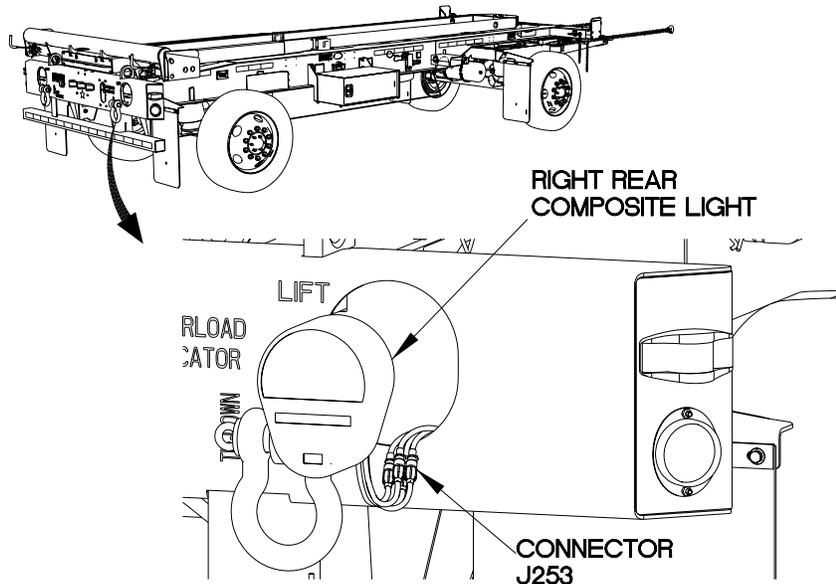
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE-Continued 0025 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

Table 1: Right Blackout Taillight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J253?	<p>No. Repair wire 112 (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J253 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J253. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to B.O. MARKER on towing vehicle and note reading on multimeter.



CC025R01

RIGHT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE

0026 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

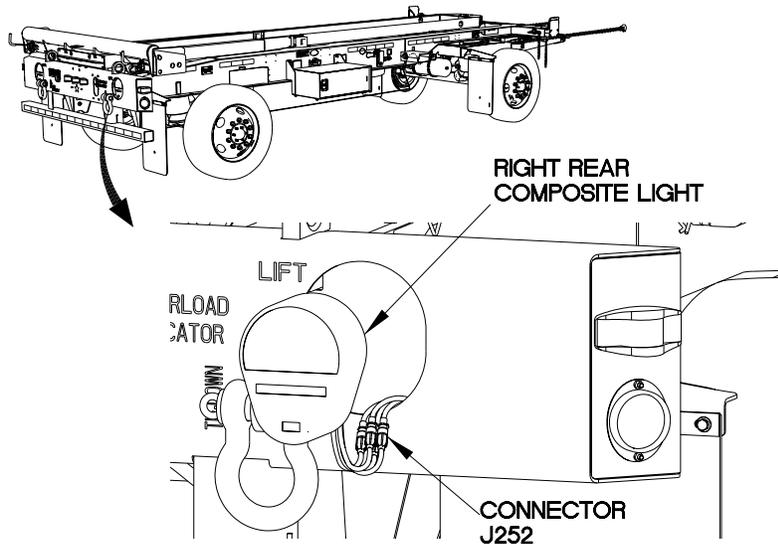
Refer to Electrical Schematic at the end of this chapter as required.

RIGHT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE-Continued 0026 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

Table 1: Right Blackout Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J252?	<p>No. Repair wire 111 (EM 0195) or replace right rear electrical harness (WP 0063 00).</p> <p>Yes. Replace right rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove right rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J252 from right rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J252. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to B.O. DRIVE on towing vehicle, depress brake pedal, and note reading on multimeter.



CC026R01

END OF WORK PACKAGE

LEFT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE

0027 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

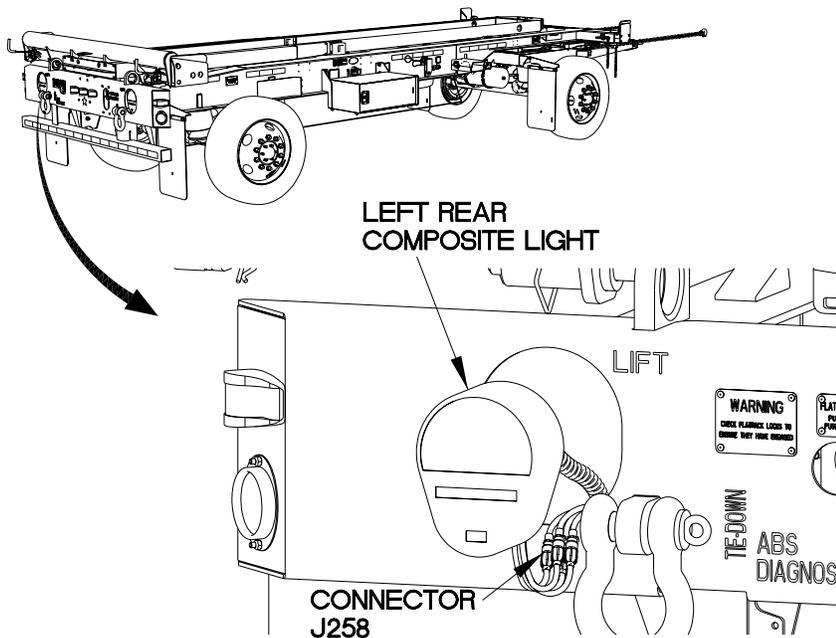
LEFT BLACKOUT TAILLIGHT DOES NOT ILLUMINATE-Continued

0027 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

Table 1: Left Blackout Taillight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J258?	<p>No. Repair wire 117 (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove left rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J258 from left rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J258. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to B.O. MARKER on towing vehicle and note reading on multimeter.



END OF WORK PACKAGE

LEFT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE

0028 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

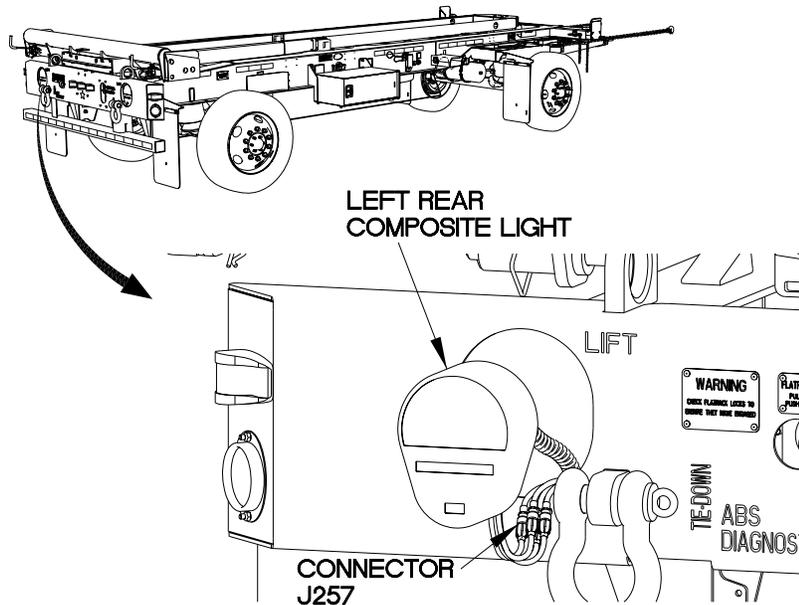
LEFT BLACKOUT STOPLIGHT DOES NOT ILLUMINATE-Continued

0028 00

THIS WORK PACKAGE COVERS:
Electrical System Troubleshooting

Table 1: Left Blackout Stoplight Does Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at connector J257?	<p>No. Repair wire 116 (EM 0195) or replace left rear electrical harness (WP 0064 00).</p> <p>Yes. Replace left rear composite taillight (WP 0060 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove left rear composite light from trailer for access (WP 0060 00). 3. Disconnect connector J257 from left rear composite taillight. 4. Connect positive (+) probe of multimeter to connector J257. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position main light switch to B.O. DRIVE on towing vehicle, depress brake pedal, and note reading on multimeter.



CC028R01

END OF WORK PACKAGE

BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE

0029 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

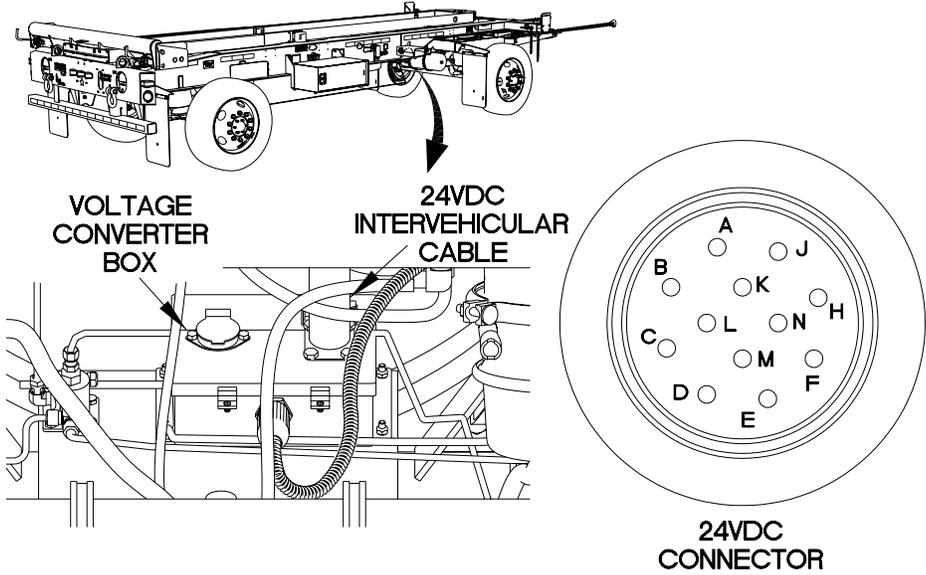
Return vehicle to mission capable condition and perform (Operational Checkout and Troubleshooting Procedures WP 0013 00) after a corrective action has been performed.

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

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoptlights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin F?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Position main light switch to B.O. DRIVE on towing vehicle and depress brake peddle. 4. Connect positive (+) probe of multimeter to intervehicular cable pin F. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



24VDC INTERVEHICULAR CABLE

24VDC CONNECTOR

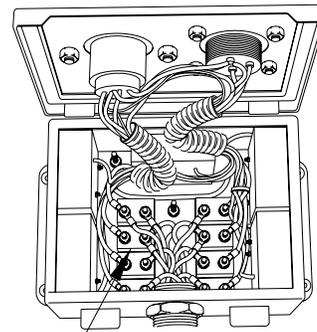
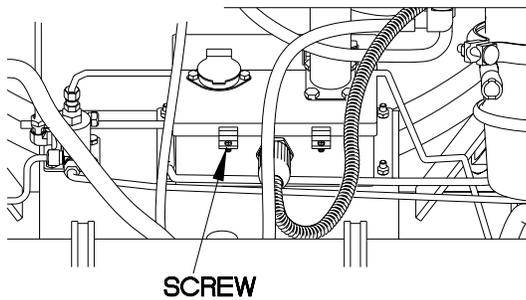
CC029R01

6. Position main light switch to ALL OFF.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present across circuit breaker CB2?	<p>No. Replace circuit breaker CB2 (WP 0057 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Remove two screws and open voltage converter box. 3. Connect positive (+) probe of multimeter to one terminal on circuit breaker CB2. 4. Connect negative (-) probe of multimeter to other terminal on circuit breaker CB2 and note reading on multimeter.



CIRCUIT BREAKER
CB2

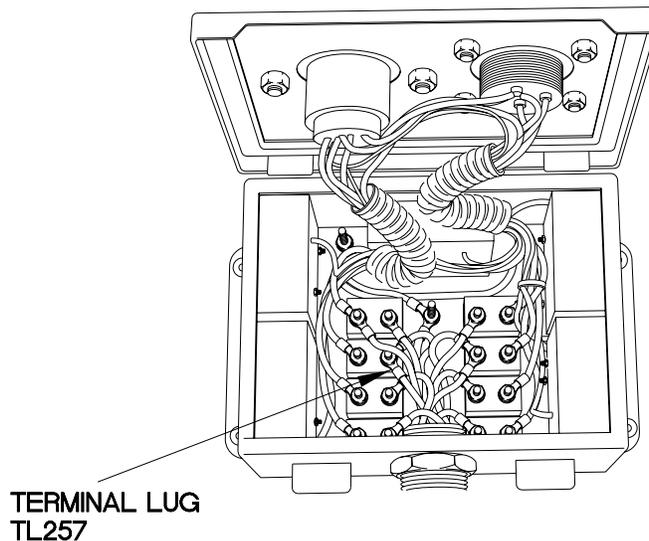
CC029R02

BOTH BLACKOUT STOPLIGHTS DO NOT ILLUMINATE-Continued 0029 00

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. Both Blackout Stoplights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 18-30 VDC present at TL257?</p>	<p>No. Repair wire or replace voltage converter box (WP 0058 00).</p> <p>Yes. Repair wire 104 (EM 0195) or replace main electrical harness (WP 0066 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Connect intervehicular cable connector to voltage converter box. 3. Position main light switch to B.O. DRIVE on towing vehicle and depress brake pedal. 4. Connect positive (+) probe of multimeter to TL257. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



CC029R03

END OF WORK PACKAGE

ALL LIGHTS DO NOT ILLUMINATE

0030 00

THIS WORK PACKAGE COVERS:

Electrical System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

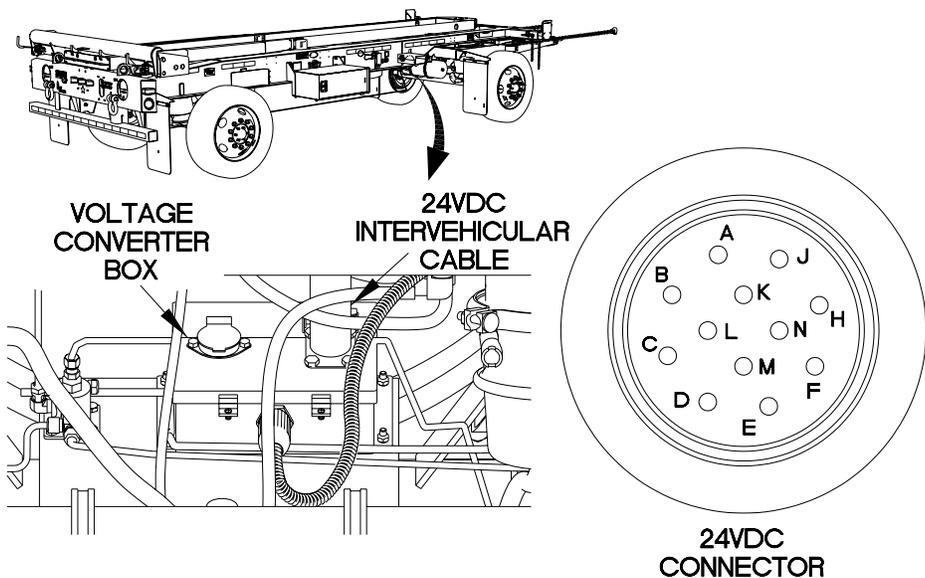
Refer to Electrical Schematic at the end of this chapter as required.

Remove plastic cable ties as required.

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1. All Lights Do Not Illuminate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 18-30 VDC present at intervehicular cable pin E?	<p>No. Replace intervehicular cable (WP 0062 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable connector from voltage converter box. 3. Connect positive (+) probe of multimeter to intervehicular cable pin E. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position main light switch to SER DRIVE on towing vehicle and note reading on multimeter.



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

CC030R01

END OF WORK PACKAGE

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

0031 00

THIS WORK PACKAGE COVERS:

Brakes System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

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

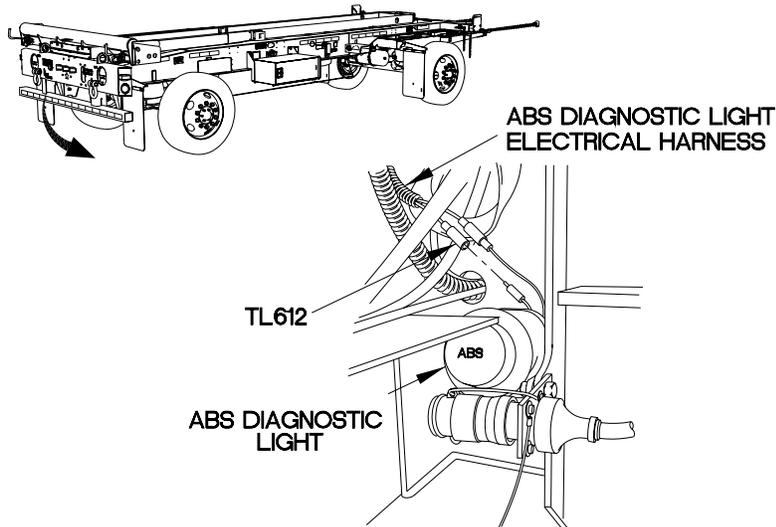
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-16 VDC present at terminal lug TL612 of ABS diagnostic light electrical harness?	<p>No. Go to (Indication/Condition 3).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect terminal lug TL612 from ABS diagnostic light lead. 3. Connect positive (+) probe of multimeter to terminal lug TL612. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position towing vehicle master power switch to on and note reading on multimeter.



CC031R11

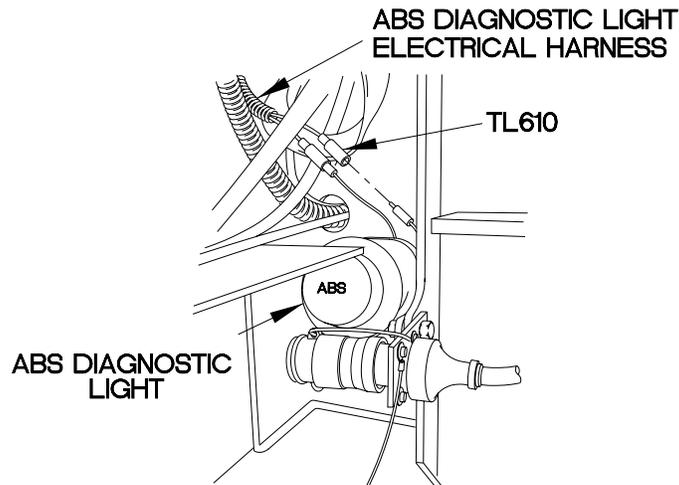
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present between terminal lug TL610 and a known good ground?	<p>No. Go to (Indication/Condition 4).</p> <p>Yes. Replace ABS diagnostic light (WP 0074 00).</p>	<ol style="list-style-type: none"> 1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Disconnect terminal lug TL610 from ABS diagnostic light lead. 4. Connect positive (+) probe of multimeter to terminal lug TL610. 5. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



CC031R12

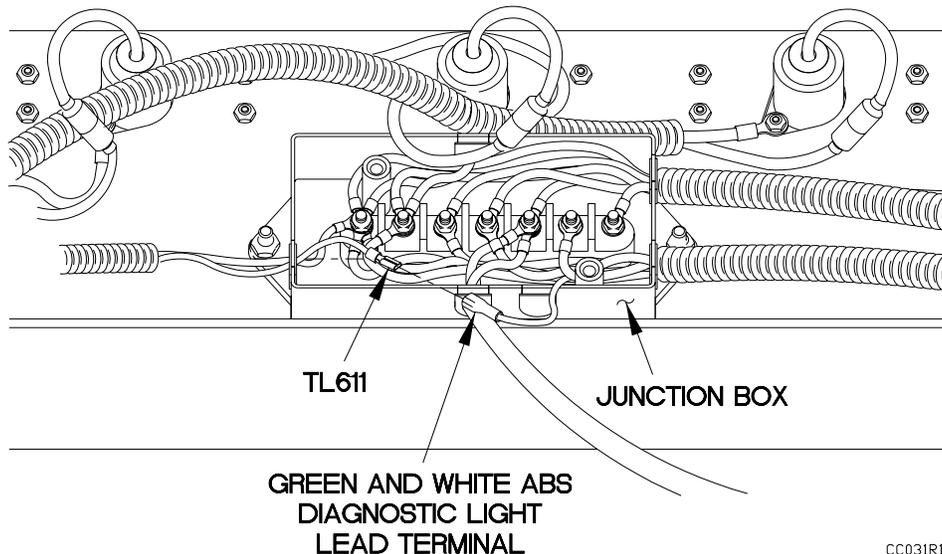
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is 8-16 VDC present at green and white ABS diagnostic light lead terminal lug?</p>	<p>No. Go to (Indication/Condition 5).</p> <p>Yes. Replace ABS diagnostic light harness (WP 0077 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Remove junction box cover for access (WP 0059 00). 3. Disconnect green and white ABS diagnostic light lead terminal lug from terminal lug TL611. 4. Connect positive (+) probe of multimeter to green and white ABS diagnostic light terminal lug. 5. Connect negative (-) probe of multimeter to a known good ground. 6. Position towing vehicle master power switch to on and note reading on multimeter.



CC031R13

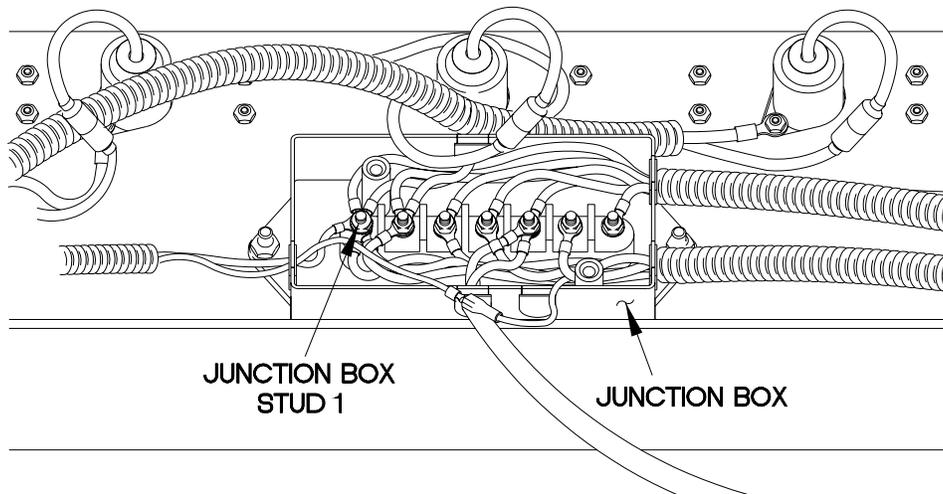
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present between junction box stud 1 and a known good ground?	<p>No. Replace junction box (WP 0059 00).</p> <p>Yes. Replace ABS diagnostic light harness (WP 0077 00).</p>	<ol style="list-style-type: none"> 1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Connect positive (+) probe of multimeter to junction box stud 1. 4. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



CC031R14

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

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is continuity present from ABS diagnostic tool connector pin A to ABS ECU Power/Diagnostic Cable Pin 8?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect ABS diagnostic tool connector from ABS diagnostic tool. 3. Lift up on connector clip on ABS ECU Power/Diagnostic cable connector.

ABS ECU POWER / DIAGNOSTIC CABLE

CONNECTOR CLIP

ABS ECU

ABS DIAGNOSTIC TOOL

ABS ECU POWER / DIAGNOSTIC CABLE

CC031R01

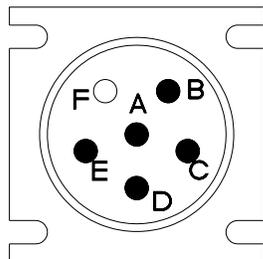
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

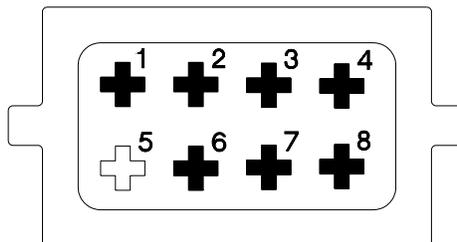
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R02

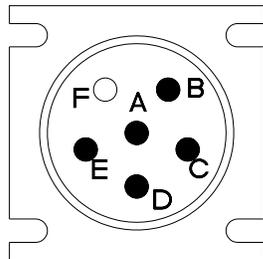
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

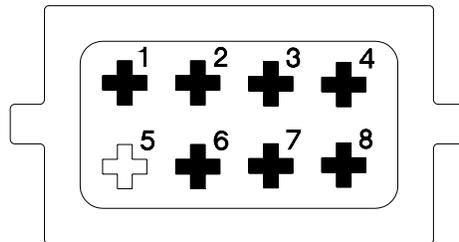
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is continuity present from ABS diagnostic tool connector pin B to ABS ECU Power/Diagnostic Cable Pin 7?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin B. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 7 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R03

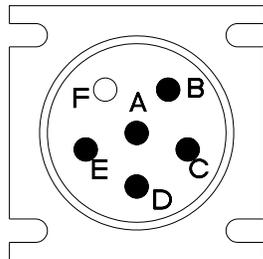
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

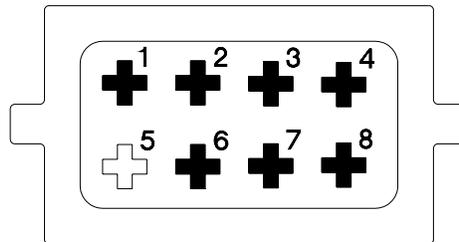
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is continuity present from ABS diagnostic tool connector pin C to ABS ECU Power/Diagnostic Cable Pin 6?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin C. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 6 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R04

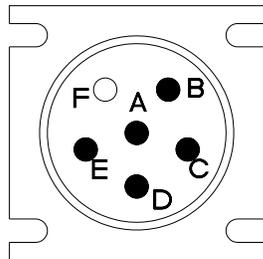
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

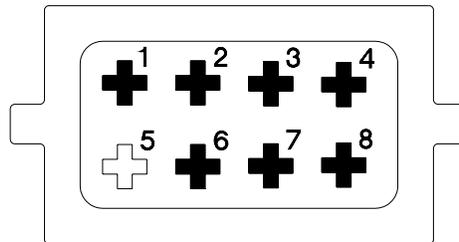
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is continuity present from ABS diagnostic tool connector pin D to ABS ECU Power/Diagnostic Cable Pin 1?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 9).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS Diagnostic Tool connector pin D. 2. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 1 and note reading on multimeter.



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R05

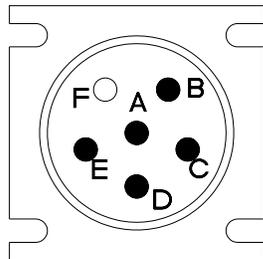
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

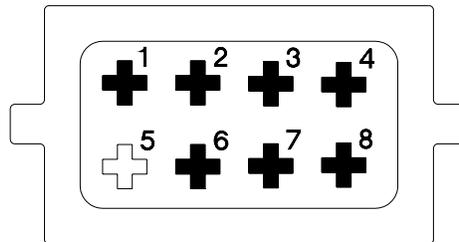
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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



ABS DIAGNOSTIC TOOL CONNECTOR



ABS ECU POWER CABLE CONNECTOR

CC031R06

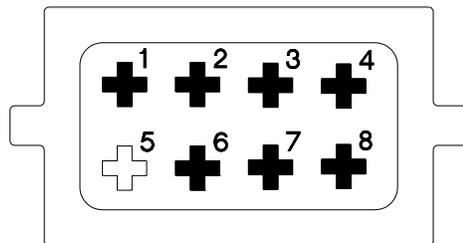
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

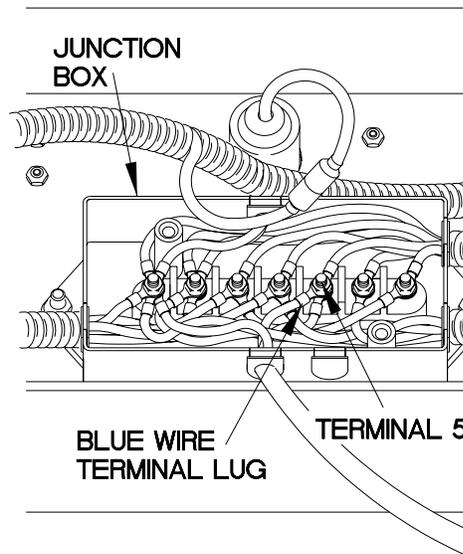
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is continuity present from ABS Power/Diagnostic cable blue wire to ABS ECU Power/Diagnostic Cable pin 3?	<p>No. Replace ABS ECU Power/Diagnostic Cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 11).</p>	<ol style="list-style-type: none"> 1. Remove cover on junction box for access (WP 0059 00). 2. Connect positive (+) probe of multimeter to ABS Power/Diagnostic cable blue wire terminal lug (located on terminal 5 of junction box). 3. Connect negative (-) probe of multimeter to ABS ECU Power/Diagnostic cable pin 3 and note reading on multimeter.



ABS ECU
POWER CABLE
CONNECTOR



CC031R07

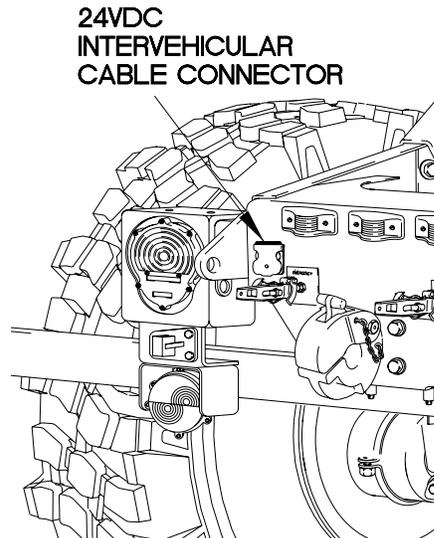
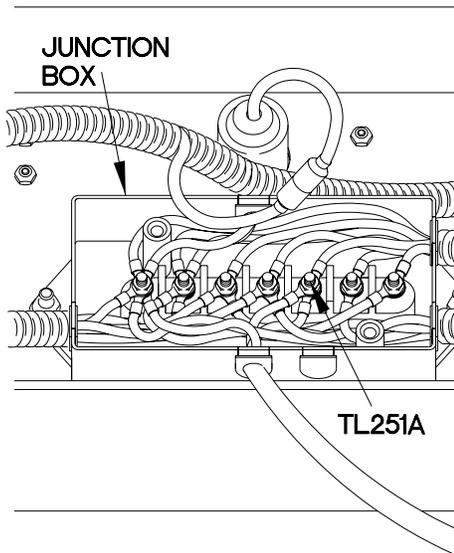
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Is 8-16 VDC present at terminal lug TL251A?	<p>No. Go to (Indication/Condition 12).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Connect positive (+) probe of multimeter to terminal lug TL 251A (located on terminal 5 in junction box). 3. Connect negative (-) probe of multimeter to a known good ground. 4. Position master power switch to on and note reading on multimeter.



CC031R08

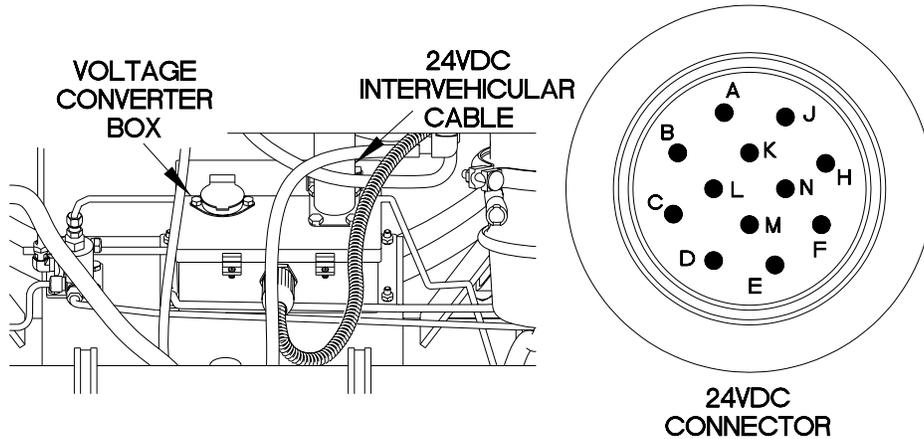
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
12. Is 18-30 VDC present at 24 VDC intervehicular cable pin K?	<p>No. Replace 24 VDC intervehicular cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 13).</p>	<ol style="list-style-type: none"> 1. Position towing vehicle master power switch to off. 2. Disconnect 24 VDC intervehicular cable from voltage converter box. 3. Connect positive (+) probe of multimeter to 24 VDC intervehicular cable pin K. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Position master power switch to on and note reading on multimeter.



CC031R09

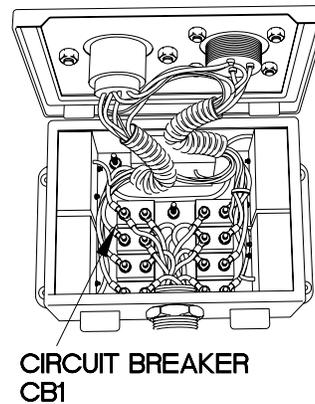
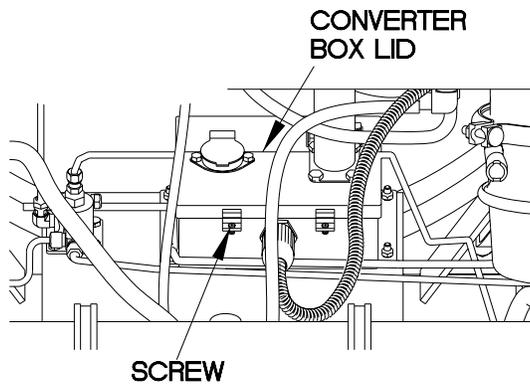
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT DOES NOT OPERATE-Continued

0031 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
13. Is continuity present across circuit breaker CB1?	<p>No. Replace circuit breaker CB1 (WP 0057 00).</p> <p>Yes. Replace module 5 (WP 0057 00).</p>	<ol style="list-style-type: none"> 1. Position towing vehicle master power switch to off. 2. Set multimeter to ohms. 3. Loosen two screws and open lid of voltage converter box. 4. Connect positive (+) probe of multimeter to one terminal of circuit breaker CB1. 5. Connect negative (-) probe of multimeter to other terminal of circuit breaker CB1 and note reading on multimeter.



CC031R10

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

0032 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

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

NOTE

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

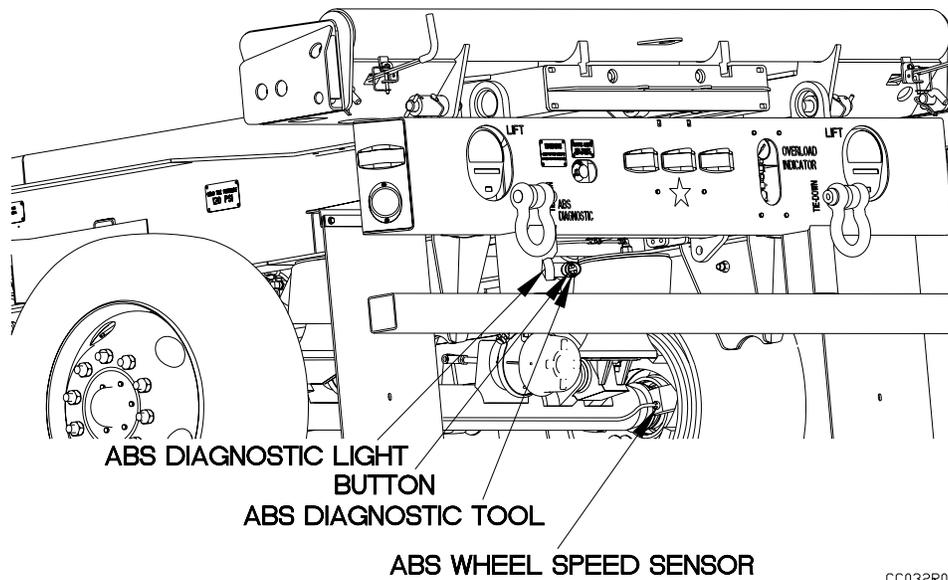
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS THREE TIMES-Continued

0032 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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



CC032R01

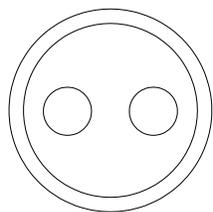
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS THREE TIMES-Continued**

0032 00

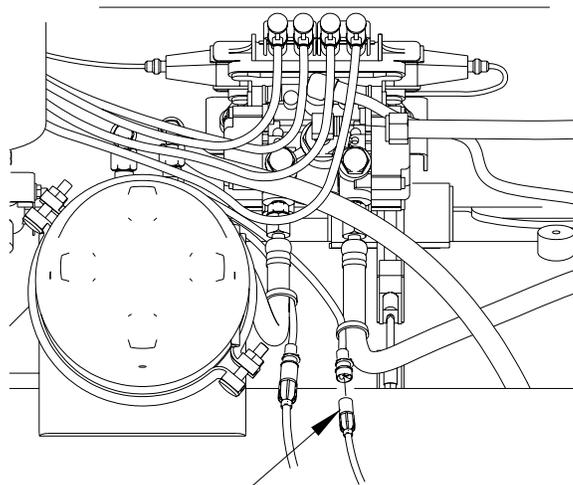
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Is 700-3000 ohms of resistance is present across right rear ABS wheel speed sensor.</p>	<p>No. Replace right rear ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect right rear ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR

CC032R02

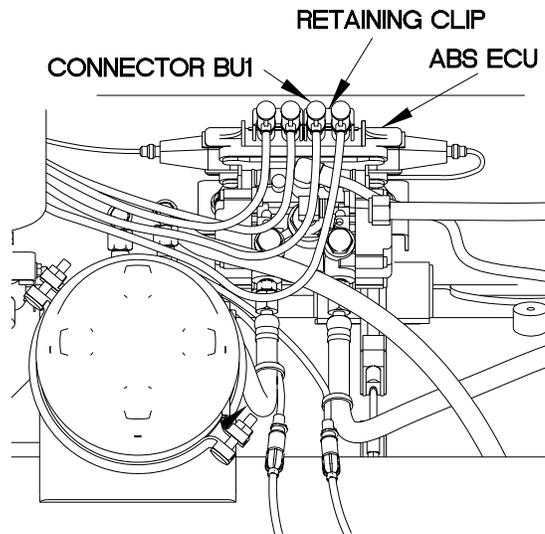
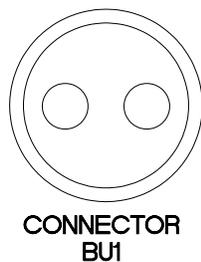
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS THREE TIMES-Continued**

0032 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across right rear ABS control sensor harness connector with jumper wire across connector BU1?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector BU1. 2. Disconnect connector BU1 from ABS ECU. 3. Install jumper wire across connector BU1. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.



CC032R03

END OF WORK PACKAGE

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

0033 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

Ties, Cable, Plastic (Item 22, WP 0165 00)

PROCEDURE

WARNING

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

CAUTION

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

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

NOTE

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

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

0033 00

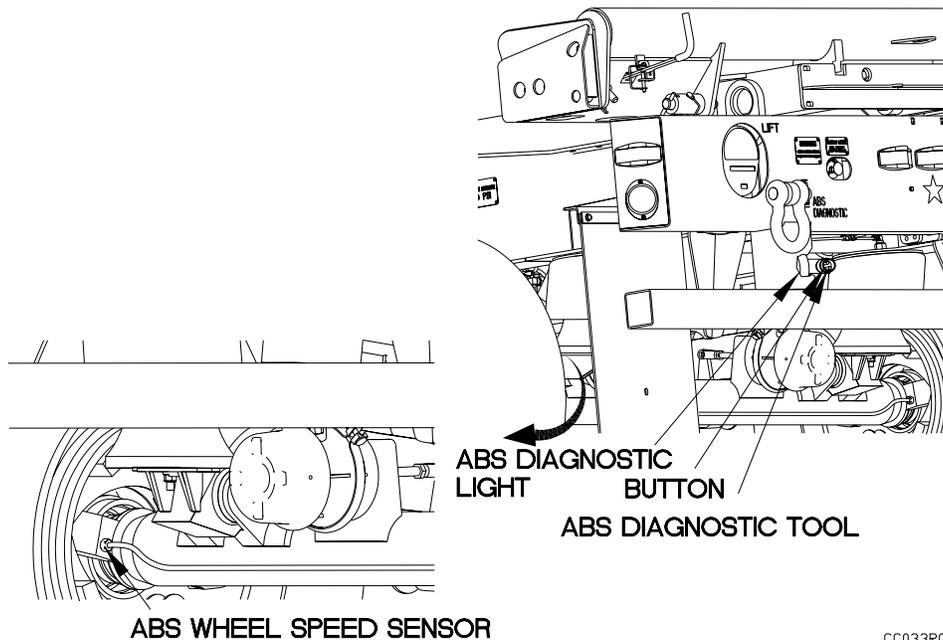
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is blink code still present after left rear ABS wheel speed sensor position is reset?	<p>No. Fault corrected.</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Push left rear ABS wheel speed sensor in until it contacts tooth wheel. 2. Start engine of towing vehicle. 3. Road test trailer. 4. Park towing vehicle. 5. Press button on ABS diagnostic tool for 1 second. 6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.

NOTE

Trailer must be operated more than 4 mph (6 km/h) during road test.



CC033R01

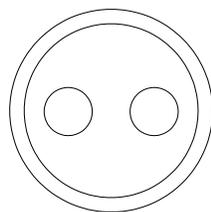
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued

0033 00

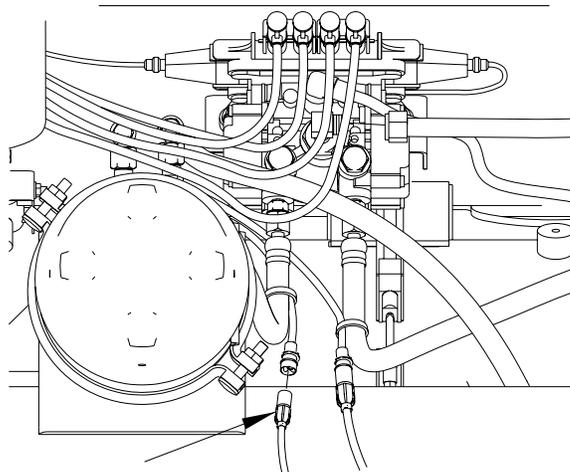
BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Is 700-3000 ohms of resistance is present across left rear ABS wheel speed sensor.</p>	<p>No. Replace left rear ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect left rear ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR



ABS WHEEL SPEED SENSOR HARNESS CONNECTOR

CC033R02

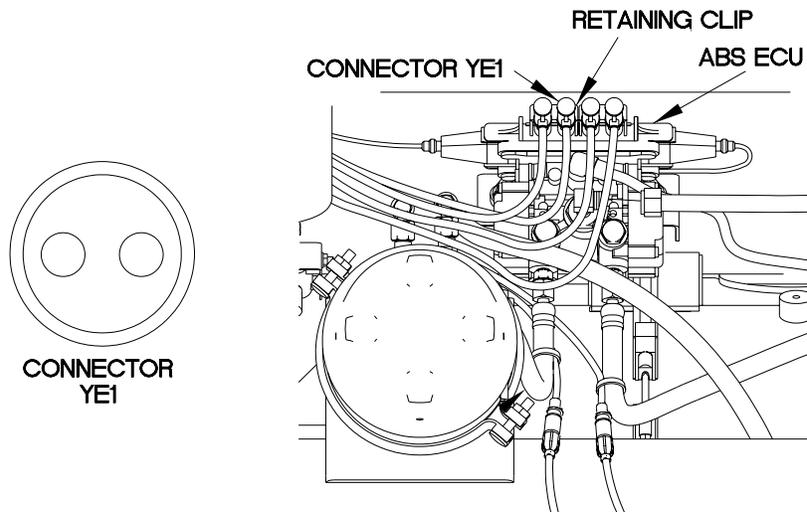
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOUR TIMES-Continued

0033 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across left rear ABS control sensor harness connector with jumper wire across connector YE1?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector YE1. 2. Disconnect connector YE1 from ABS ECU. 3. Install jumper wire across connector YE1. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.



CC033R03

END OF WORK PACKAGE

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

0034 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

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

NOTE

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

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

0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

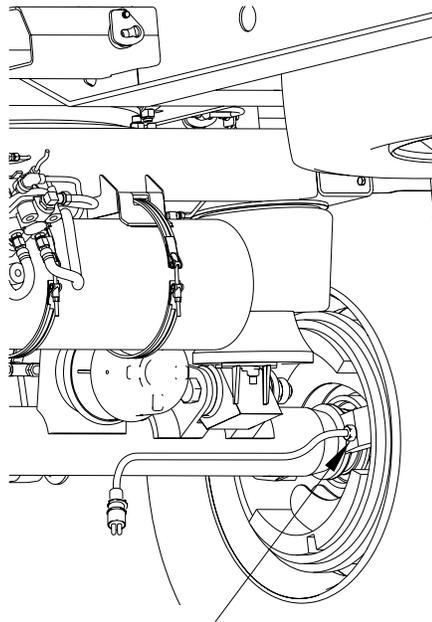
Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Five Times

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

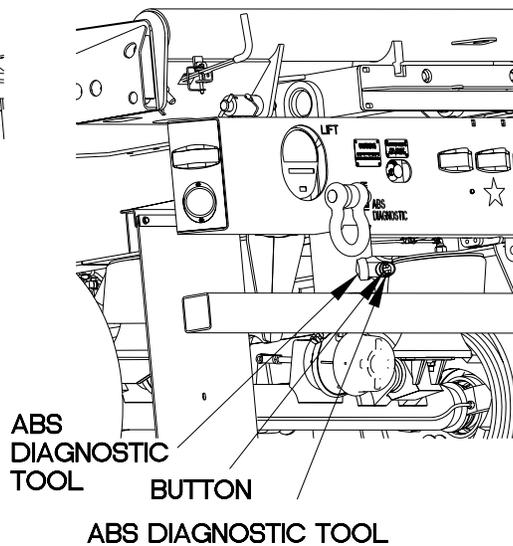
NOTE

Trailer must be operated more than 4 mph (6 km/h) during road test.

3. Road test trailer.
4. Park towing vehicle.
5. Press button on ABS diagnostic tool for 1 second.
6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.



ABS WHEEL SPEED SENSOR



CC034R01

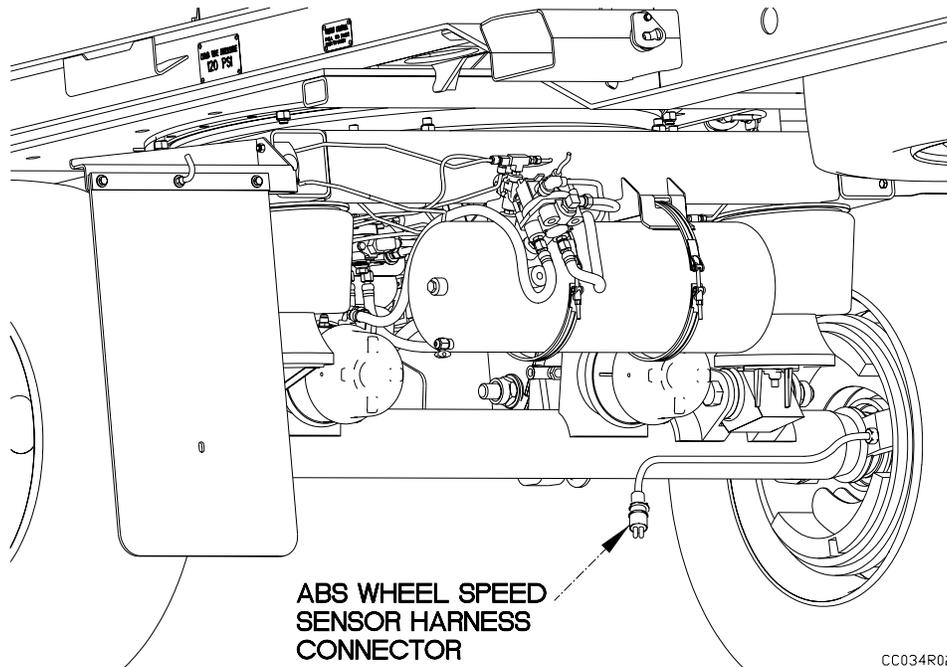
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued

0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Is 700-3000 ohms of resistance is present across right front ABS wheel speed sensor.</p>	<p>No. Replace right front ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect right front ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.



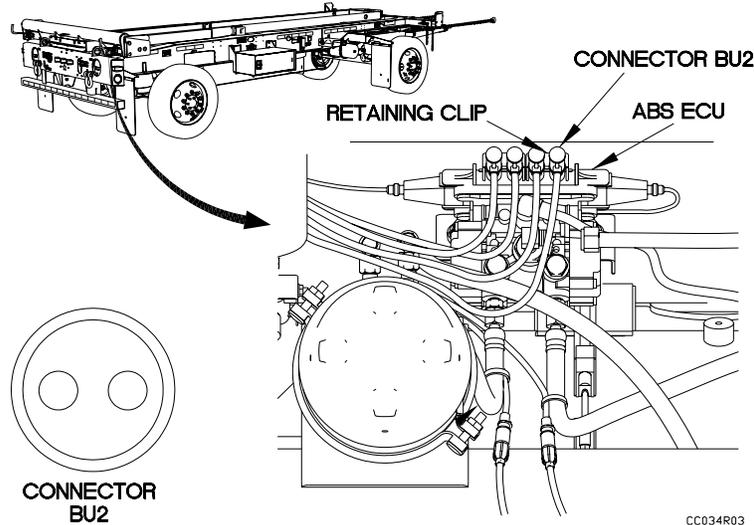
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIVE TIMES-Continued

0034 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across right front ABS control sensor harness connector with jumper wire across connector BU2?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector BU2. 2. Disconnect connector BU2 from ABS ECU. 3. Install jumper wire across connector BU2. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.



END OF WORK PACKAGE

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

0035 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

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

NOTE

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

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

0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

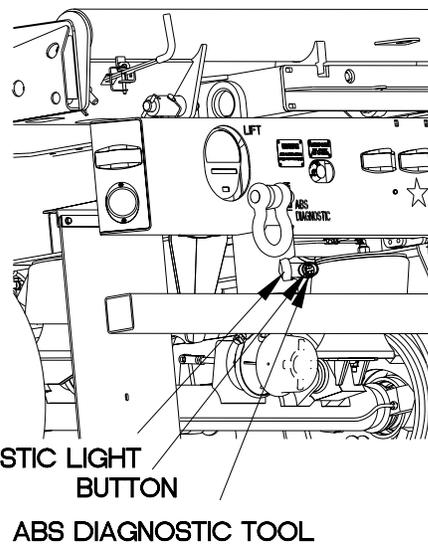
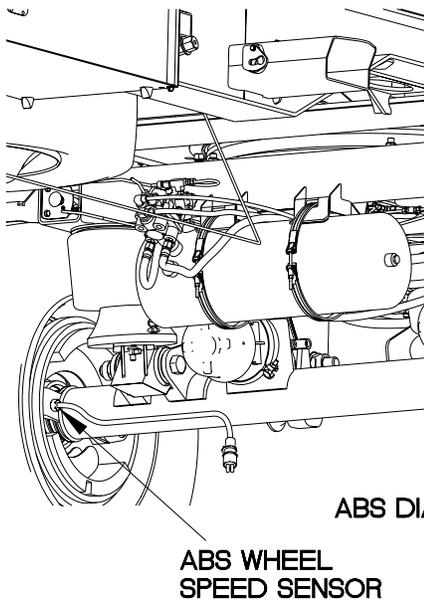
Table 1: Anti-Lock Brake System (ABS) Diagnostic Light Blinks Six Times

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

NOTE

Trailer must be operated more than 4 mph (6 km/h) during road test.

3. Road test trailer.
4. Park towing vehicle.
5. Press button on ABS diagnostic tool for 1 second.
6. Check to see if ABS diagnostic tool and ABS diagnostic light blink.



CC035R01

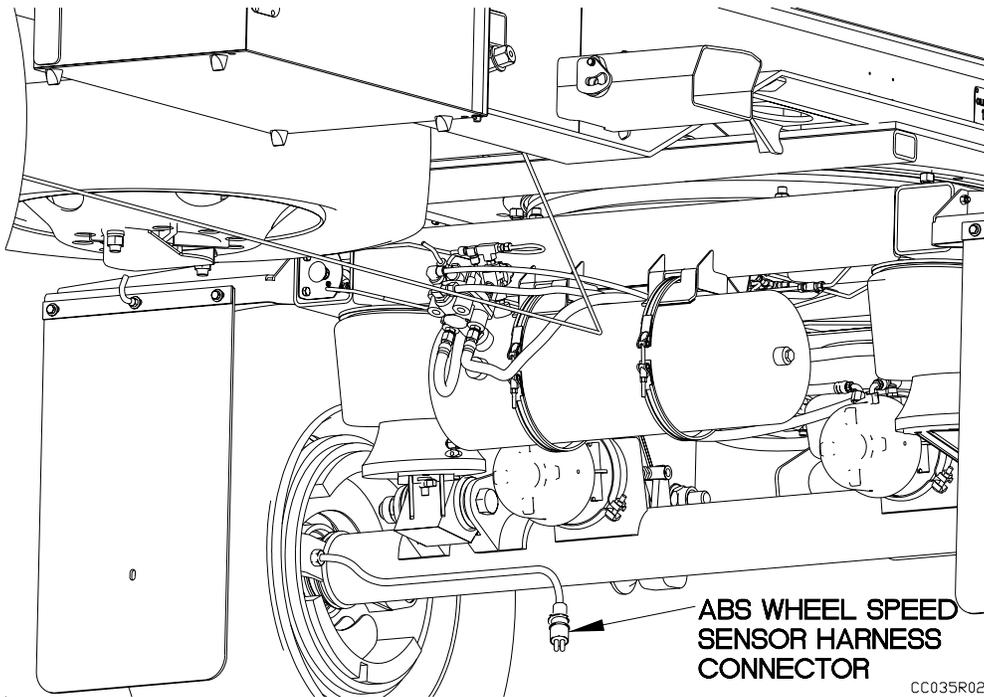
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued

0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Is 700-3000 ohms of resistance is present across left front ABS wheel speed sensor.</p>	<p>No. Replace left front ABS wheel speed sensor (WP 0070 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect left front ABS wheel speed sensor harness connector from ABS wheel speed sensor. 3. Connect positive (+) probe of multimeter to one socket of ABS wheel speed sensor connector. 4. Connect negative (-) probe of multimeter to other socket of ABS wheel speed sensor connector and note reading on multimeter.



CC035R02

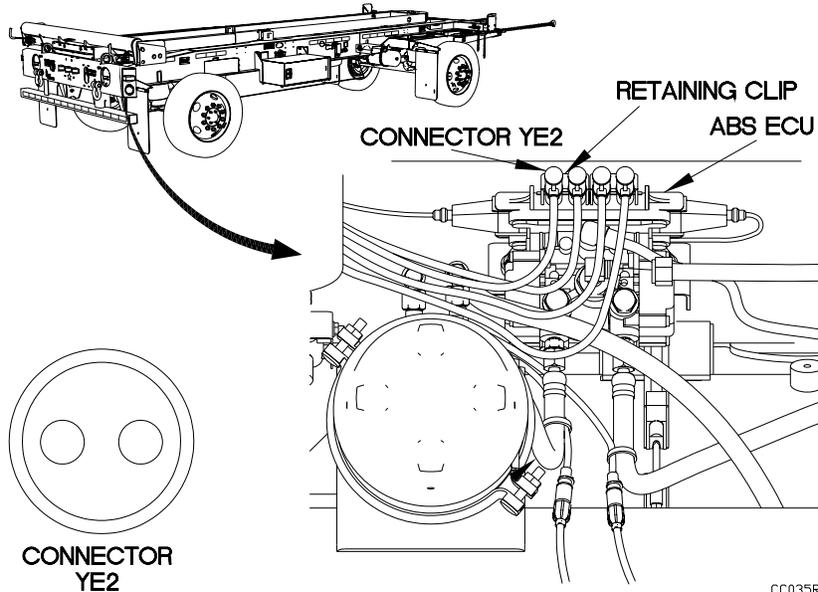
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SIX TIMES-Continued

0035 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present across left front ABS control sensor harness connector with jumper wire across connector YE2?</p>	<p>No. Replace ABS control sensor harness (WP 0073 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Loosen retaining clip on connector YE2. 2. Disconnect connector YE2 from ABS ECU. 3. Install jumper wire across connector YE2. 4. Connect positive (+) probe of multimeter to one pin of ABS control sensor harness connector. 5. Connect negative (-) probe of multimeter to other pin of ABS control sensor harness connector and note reading on multimeter.



CC035R03

END OF WORK PACKAGE

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

0036 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Wire, Elect, 50 ft (Item 22, WP 0165 00)

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

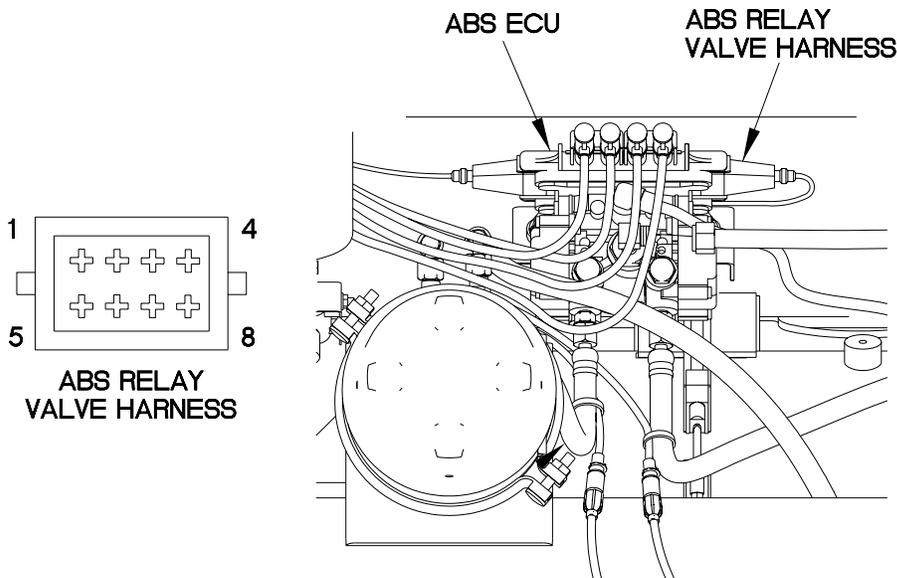
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS SEVEN TIMES-Continued**

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 4-8 ohms of resistance present across ABS relay valve harness pin 5 to pin 6?	<p>No. Replace ABS relay valve (WP 0075 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Disconnect ABS relay valve harness from ABS ECU valve. 3. Connect positive (+) probe of multimeter to ABS relay valve harness pin 5. 4. Connect negative (-) probe of multimeter to ABS relay valve harness pin 6 and note reading on multimeter.



CC036R01

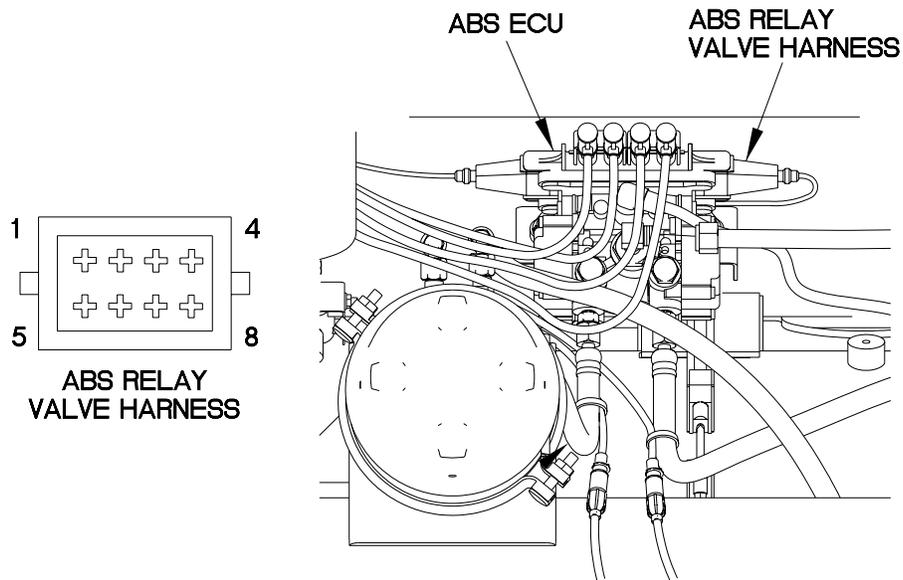
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS SEVEN TIMES-Continued**

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is 4-8 ohms of resistance present across ABS relay valve harness pin 5 to pin 7?	<p>No. Replace ABS relay valve (WP 0075 00).</p> <p>Yes. Go to (Indication/Condition 3).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS relay valve harness pin 5. 2. Connect negative (-) probe of multimeter to ABS relay valve harness pin 7 and note reading on multimeter.



CC036R02

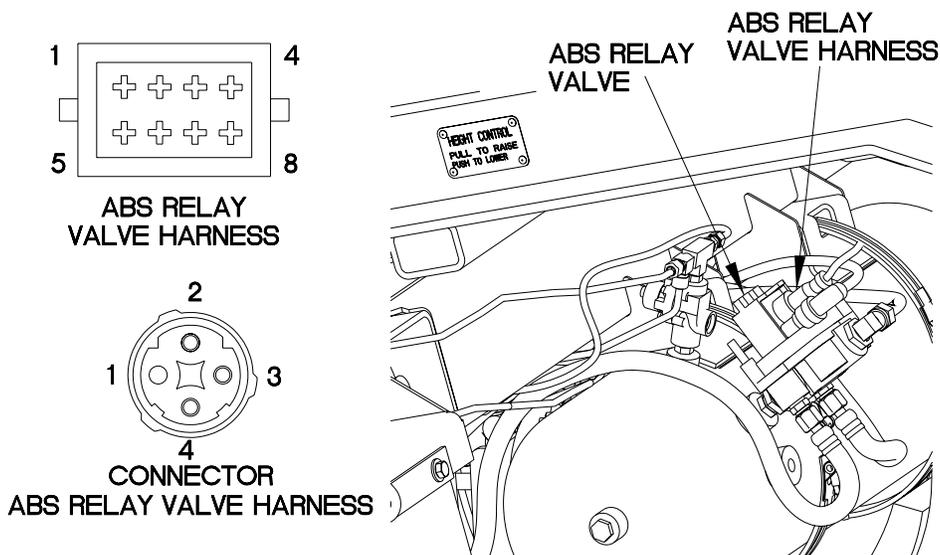
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS SEVEN TIMES-Continued

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

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



CC036R03

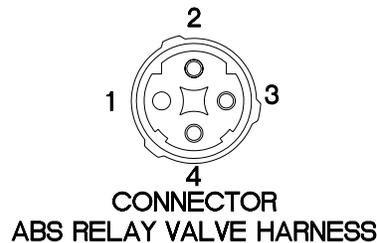
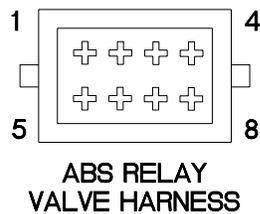
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS SEVEN TIMES-Continued**

0036 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present from ABS ECU cable connector pin 6 to ABS relay valve connector pin 4?	<p>No. Replace ABS relay valve harness (WP 0072 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS relay harness connector pin 4. 2. Connect negative (-) probe of multimeter to ABS ECU connector pin 6 and note reading on multimeter.
5. Is continuity present from ABS ECU cable connector pin 7 to ABS relay valve connector pin 3?	<p>No. Replace ABS relay valve harness (WP 0072 00).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Connect positive (+) probe of multimeter to ABS relay harness connector pin 3. 2. Connect negative (-) probe of multimeter to ABS ECU connector pin 7 and note reading on multimeter.



CC036R04

END OF WORK PACKAGE

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

0037 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

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

NOTE

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

Remove plastic cable ties as required.

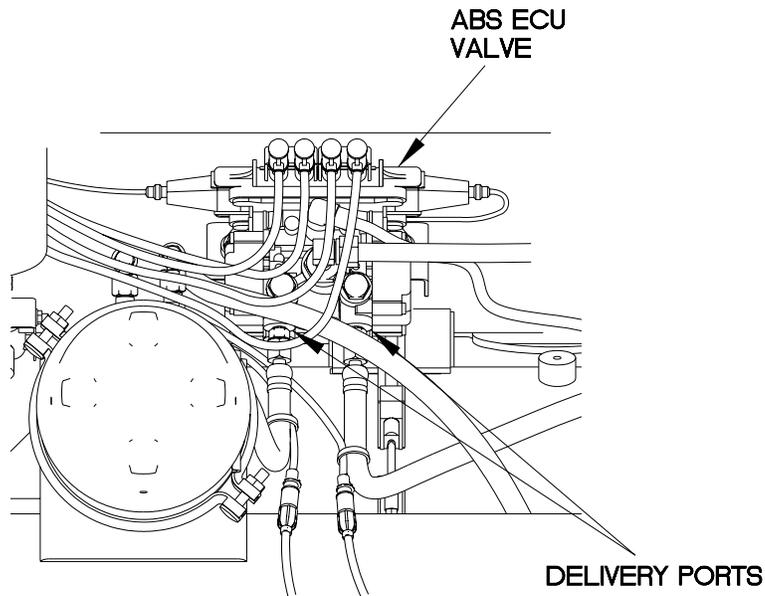
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS NINE TIMES-Continued

0037 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at two delivery ports on ABS ECU valve?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses of two delivery ports of ABS ECU. 2. Start towing vehicle engine. 3. Depress brakes. 4. Check for presence of air at two delivery ports of ABS ECU valve. 5. Shut off towing vehicle engine. 6. Tighten hoses to ABS ECU delivery ports.



CC037R01

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

0037 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does either delivery air hose have any kinks, leaks, or holes?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Replace air hoses from ABS ECU valve delivery ports.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hoses and fittings. 2. Check air hoses between ABS ECU valve and rear brake air chambers for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.

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

CC037R02

END OF WORK PACKAGE

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

0038 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

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

NOTE

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

Remove plastic cable ties as required.

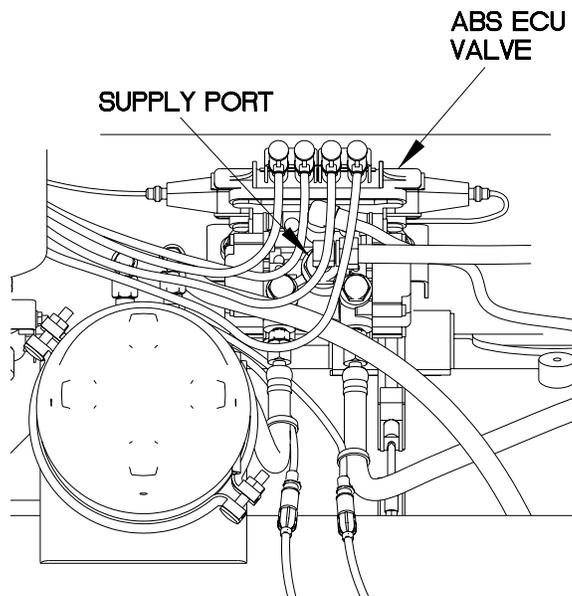
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES

0038 00

THIS WORK PACKAGE COVERS:
 Brake System Troubleshooting

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at supply port of ABS ECU valve?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Loosen air hose of supply port of ABS ECU. 2. Start towing vehicle engine. 3. Depress brakes. 4. Release brakes. 5. Check for presence of air at exhaust port of ABS ECU valve. 6. Shut off towing vehicle engine.



CC038R01

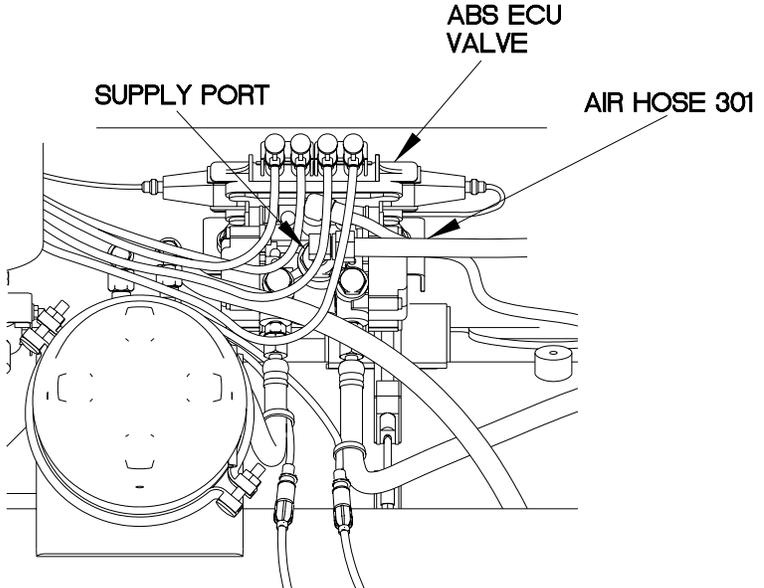
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS TEN TIMES

0038 00

THIS WORK PACKAGE COVERS:
 Brake System Troubleshooting

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does supply air hose 301 have any kinks, leaks, or holes?	<p>No. Replace ABS ECU valve (WP 0071 00).</p> <p>Yes. Replace air hose 301.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 301 and fittings of supply port. 2. Check air hoses between ABS ECU valve and air tank for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



The diagram shows a top-down view of the ABS ECU valve assembly. A horizontal supply port is connected to the valve. An air hose, labeled as AIR HOSE 301, is connected to the valve. The diagram is used to illustrate the inspection points for leaks or damage to the hose and fittings.

CC038R02

END OF WORK PACKAGE

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

0039 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

PROCEDURE

WARNING

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

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

NOTE

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

Remove plastic cable ties as required.

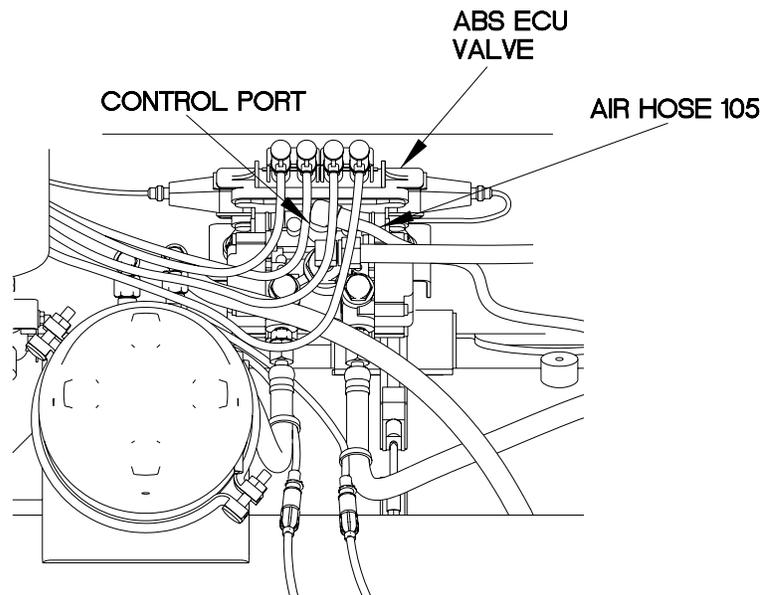
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS ELEVEN TIMES

0039 00

THIS WORK PACKAGE COVERS:
Brake System Troubleshooting

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at control port on ABS ECU valve?	<p>No. Go to (Indication/Condition 2).</p> <p>Yes. Replace ABS ECU valve (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Start towing vehicle engine. 2. Loosen connection of air hose 105 at control port of ABS ECU. 3. Depress brakes. 4. Check for presence of air at control port of ABS ECU valve. 5. Release brakes. 6. Shut off towing vehicle engine. 7. Tighten air hose 105 to ABS ECU valve control port.



CC039R01

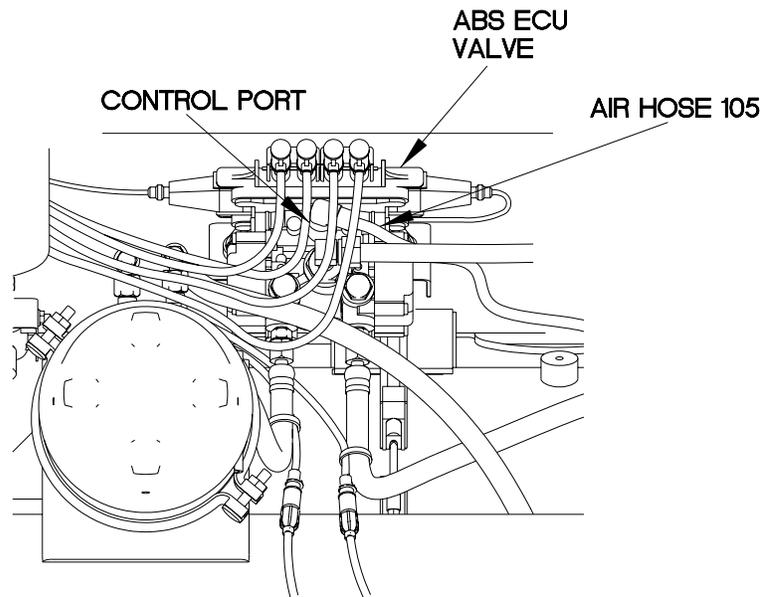
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS ELEVEN TIMES

0039 00

THIS WORK PACKAGE COVERS:
 Brake System Troubleshooting

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Does air hose 105 have any kinks, leaks or holes?	<p>No. Go to Air System Loses Pressure During Operation/Slow Air Pressure Buildup (WP 0042 00).</p> <p>Yes. Replace air hose 105.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 105 and fittings of control port. 2. Start towing vehicle engine. 3. Depress brakes. 4. Check air hose 105 between ABS ECU and rear four port task valve for bubbles indicating holes or leaks.



CC039R01

END OF WORK PACKAGE

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

0040 00

THIS WORK PACKAGE COVERS:

Brake System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

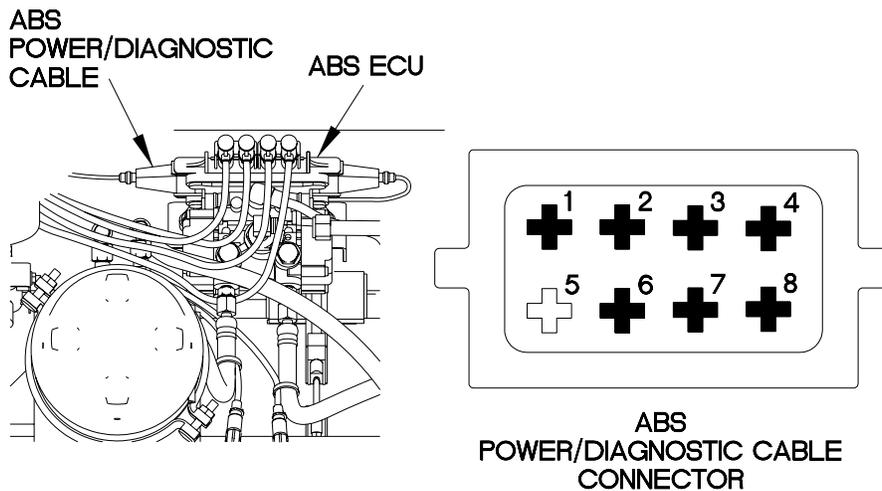
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is 8-14 VDC present at ABS ECU power/diagnostic connector pin 3?	<p>No. Go to (Indication/Condition 3).</p> <p>Yes. Go to (Indication/Condition 2).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect ABS ECU power/diagnostic cable connector from ABS ECU. 3. Connect positive (+) probe of multimeter to ABS ECU power/diagnostic cable connector pin 3. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Start engine on towing vehicle and note reading on multimeter.



CC040B01

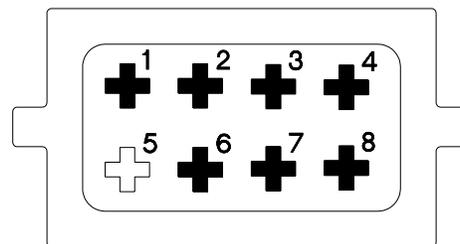
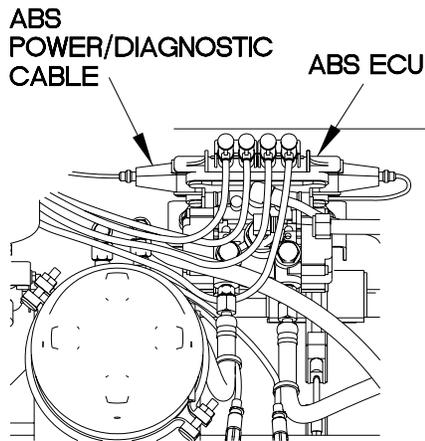
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
2. Is continuity present from ABS ECU Power/Diagnostic cable connector pin 4 to a known good ground?	<p>No. Go to (Indication/Condition 7).</p> <p>Yes. Replace ABS ECU (WP 0071 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Connect positive (+) probe of multimeter to ABS ECU Power/Diagnostic cable connector pin 4. 3. Connect negative (-) probe of multimeter to a known good ground and note reading on multimeter.



ABS POWER/DIAGNOSTIC CABLE CONNECTOR

CC040B01

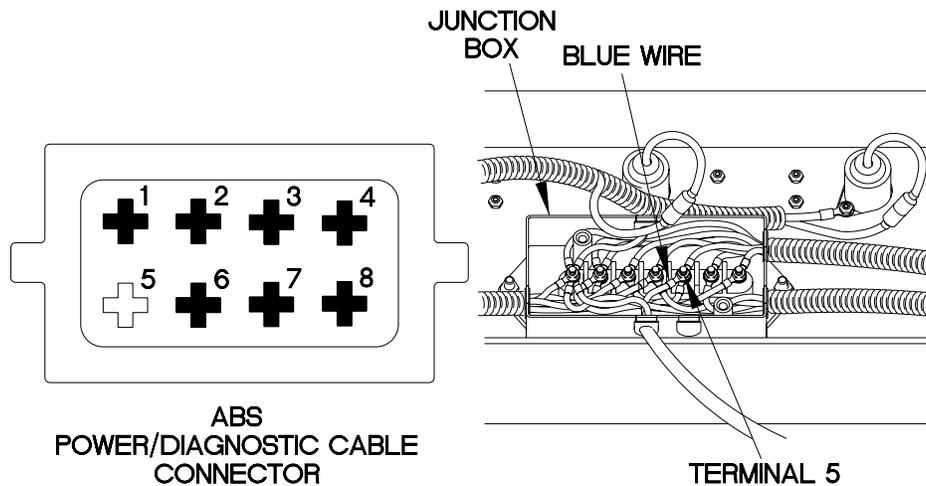
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Is continuity present from ABS Power/Diagnostic cable connector pin 3 to blue wire on terminal 5 of Junction box?</p>	<p>No. Replace ABS ECU Power/Diagnostic control harness (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Remove cover from junction box (WP 0059 00). 3. Connect positive (+) probe of multimeter to ABS Power/Diagnostic cable connector pin 3. 4. Connect negative (-) probe of multimeter to blue wire on terminal 5 of Junction box and note reading on multimeter.



CC040B02

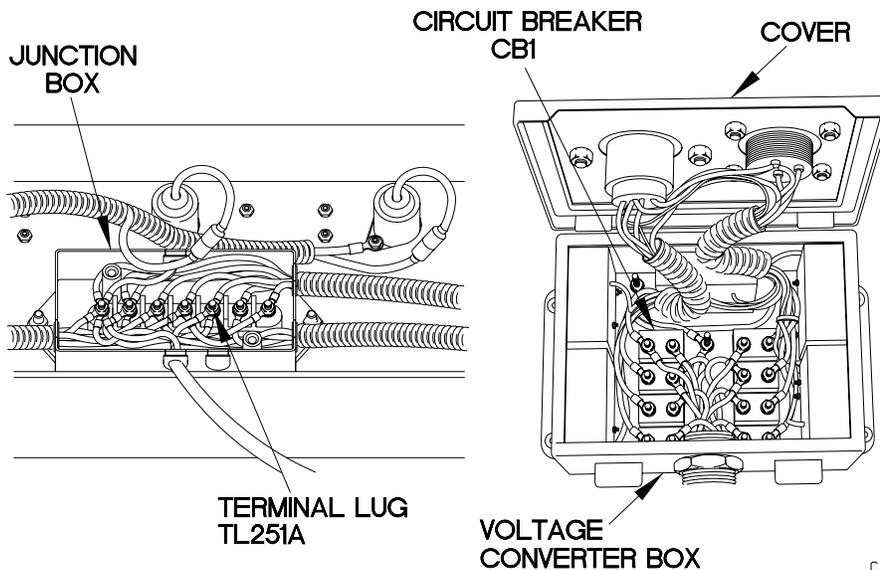
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS FOURTEEN TIMES-Continued**

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is continuity present from terminal lug TL251A to right side of circuit breaker CB1?	<p>No. Repair wire 108 or replace main electrical harness (WP 0066 00).</p> <p>Yes. Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Open cover on voltage converter box (WP 0058 00). 2. Connect positive (+) probe of multimeter to terminal lug TL251A. 3. Connect negative (-) probe of multimeter to right side of circuit breaker CB1 and note reading on multimeter.



CC040B03

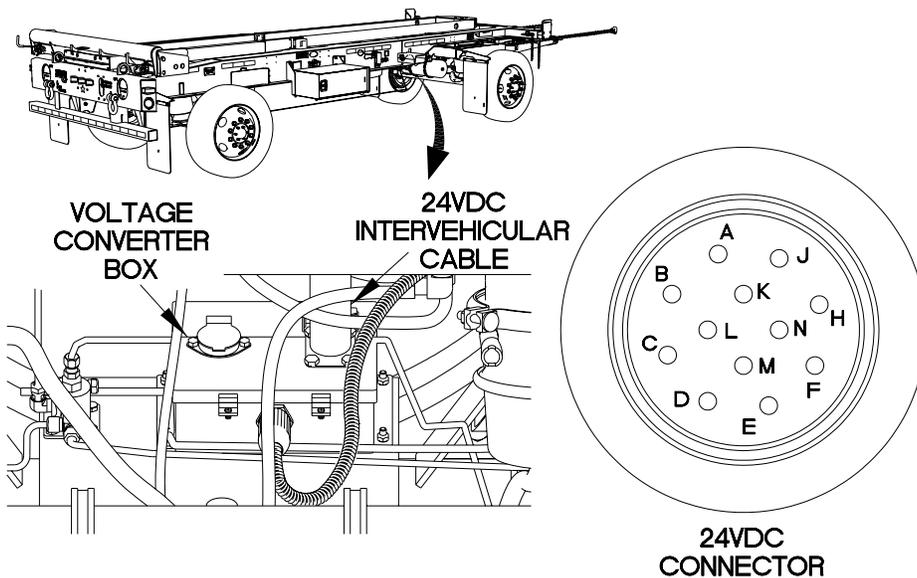
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is 18-30 VDC present at 24 VDC Intervehicular cable connector pin K?	<p>No. Replace 24 VDC Intervehicular Cable (WP 0062 00).</p> <p>Yes. Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Set multimeter to VDC. 2. Disconnect intervehicular cable from voltage converter box. 3. Connect positive (+) probe of multimeter to 24 VDC Intervehicular cable connector pin K. 4. Connect negative (-) probe of multimeter to a known good ground. 5. Start engine of towing vehicle and note reading on multimeter.



CC040B04

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

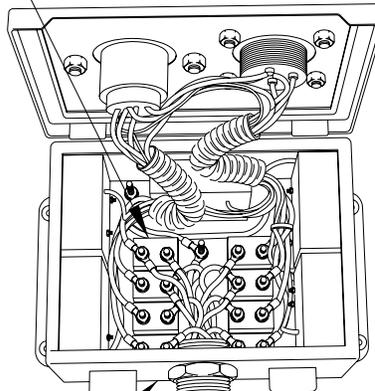
0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is continuity present across circuit breaker CB1?	<p>No. Replace circuit breaker CB1 (WP 0057 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 1. Set multimeter to ohms. 2. Connect positive (+) probe of multimeter to one terminal of circuit breaker CB1. 3. Connect negative (-) probe of multimeter to other terminal of circuit breaker CB1 and note reading on multimeter.

CIRCUIT BREAKER
CB1



VOLTAGE
CONVERTER BOX

CC040B05

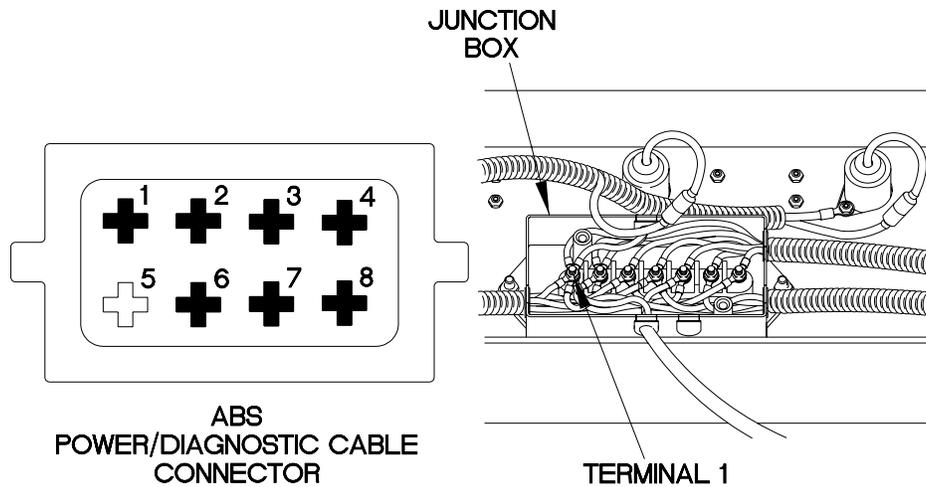
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FOURTEEN TIMES-Continued

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>7. Is continuity present from ABS Power connector pin 4 to ABS ground terminal lug (unmarked) on terminal 1 on Junction box?</p>	<p>No. Replace ABS Power/Diagnostic cable (WP 0074 00).</p> <p>Yes. Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Remove cover on junction box (WP 0059 00). 2. Connect positive (+) probe of multimeter to ABS power/diagnostic connector pin 4. 3. Connect negative (-) probe of multimeter to ABS ground terminal lug (unmarked) on terminal 1 of junction box and note reading on multimeter.



CC040B06

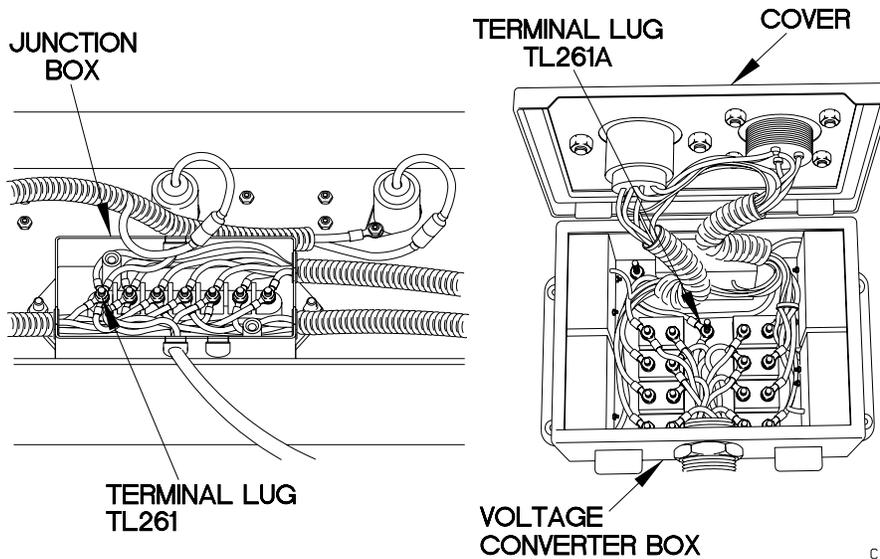
**ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC
LIGHT BLINKS FOURTEEN TIMES-Continued**

0040 00

BRAKE SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is continuity present from terminal lug TL261A to terminal lug TL261?	<p>No. Replace main electrical harness (WP 0066 00).</p> <p>Yes. Replace voltage converter box (WP 0058 00).</p>	<ol style="list-style-type: none"> 1. Open cover on voltage converter box (WP 0058 00). 2. Connect positive (+) probe of multimeter to terminal lug TL261A. 3. Connect negative (-) probe of multimeter to terminal lug TL261 and note reading on multimeter.



CC040B07

END OF WORK PACKAGE

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

0041 00

THIS WORK PACKAGE COVERS:

Brakes System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

PROCEDURE

WARNING

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

CAUTION

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

NOTE

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

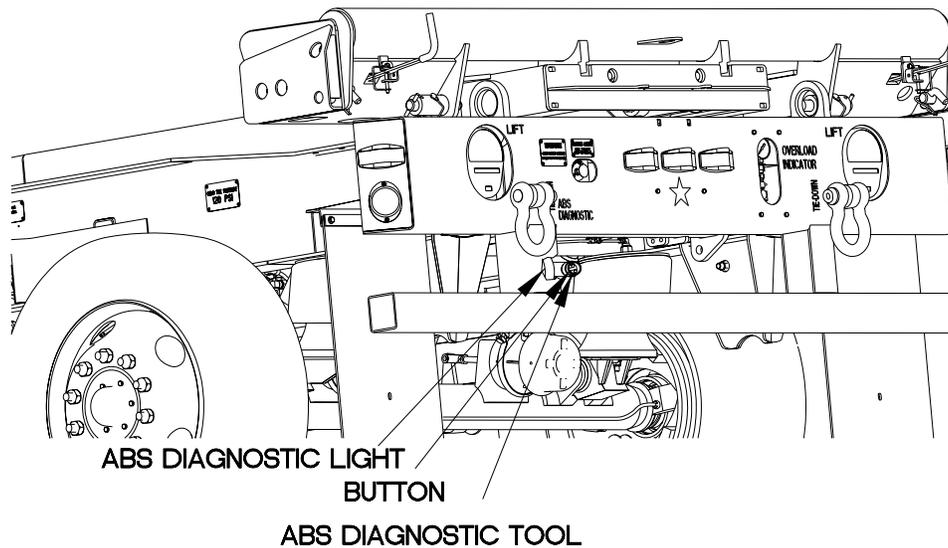
ANTI-LOCK BRAKE SYSTEM (ABS) DIAGNOSTIC LIGHT BLINKS FIFTEEN TIMES-Continued

0041 00

BRAKES SYSTEM TROUBLESHOOTING - Continued

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

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



CC041R01

END OF WORK PACKAGE

**AIR SYSTEM LOSES PRESSURE DURING
OPERATION/SLOW AIR PRESSURE BUILDUP**

0042 00

THIS WORK PACKAGE COVERS:

Air System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

References

Towing vehicle operators manual

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

Equipment Conditions

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

PROCEDURE

WARNING

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

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

NOTE

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

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

Reference pneumatic schematic at end of chapter as required.

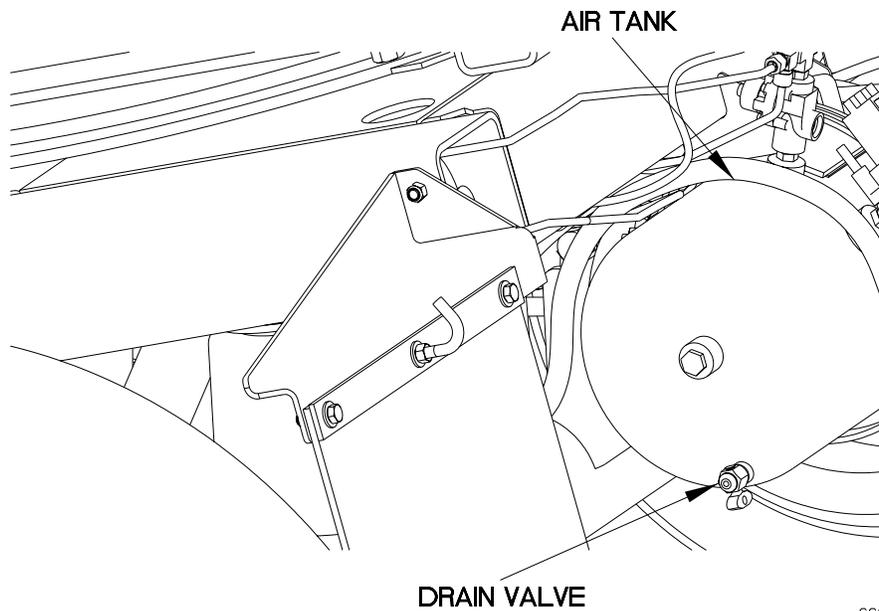
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

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



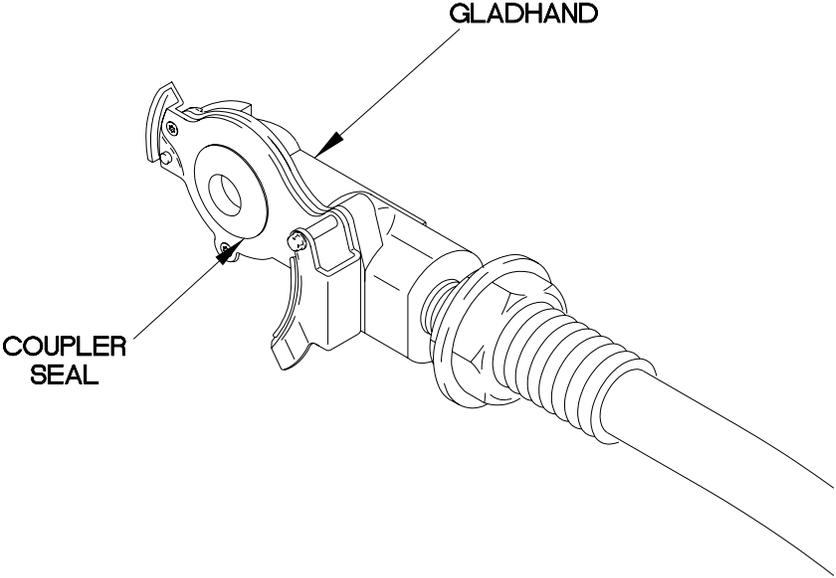
CC042R01

AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>2. Are coupler seals on gladhands damaged or missing?</p>	<p>No Go to (Indication/Condition 3).</p> <p>Yes Replace gladhand coupler seal (WP 0079 00).</p>	<p>1. Check for missing or damaged coupler seal on both service and emergency gladhands.</p>
 <p>The diagram shows a side view of a gladhand coupler assembly. A label 'GLADHAND' points to the main body of the coupler, and a label 'COUPLER SEAL' points to the seal on the mating end. The coupler is connected to a hose with a threaded end.</p> <p style="text-align: right; font-size: small;">CC042R02</p>		
<p>3. Do trailer service brakes operate properly?</p>	<p>No Proceed to Service Brakes Do Not Apply (WP 0043 00).</p> <p>Yes Go to (Indication/Condition 4).</p>	<p>1. Start towing vehicle engine.</p> <p>2. Depress brake pedal.</p> <p>3. Check to see if trailer brakes operate.</p> <p>4. Shut off towing vehicle engine.</p>

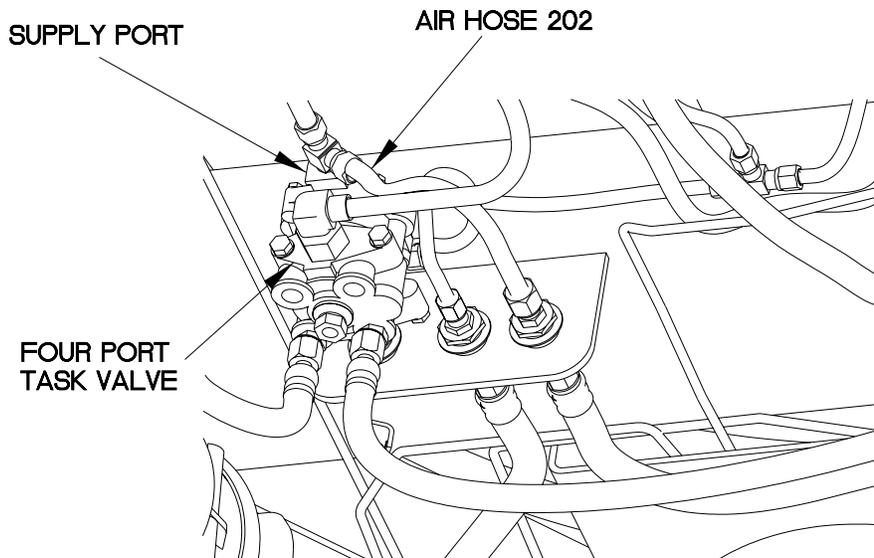
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at supply port of front four port task valve?	<p>No Replace air hose 202.</p> <p>Yes Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at front four port task valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to four port task valve supply port.



CC042R03

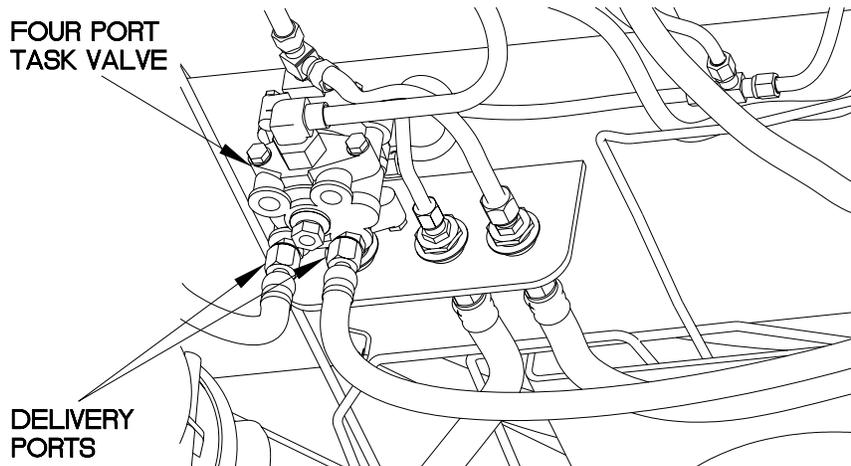
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at delivery ports of front four port task valve?	<p>No Replace front four port task valve (WP 0109 00).</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at front four port task valve delivery port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to front four port task valve supply port.



CC042R04

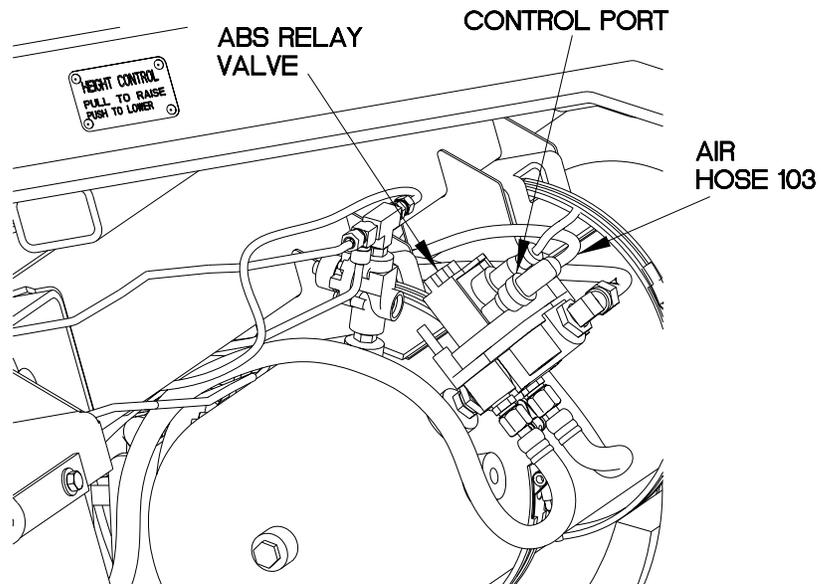
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at control port of ABS relay valve?	<p>No Replace air hose 103.</p> <p>Yes Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at ABS relay valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS relay valve control port.



CC042R05

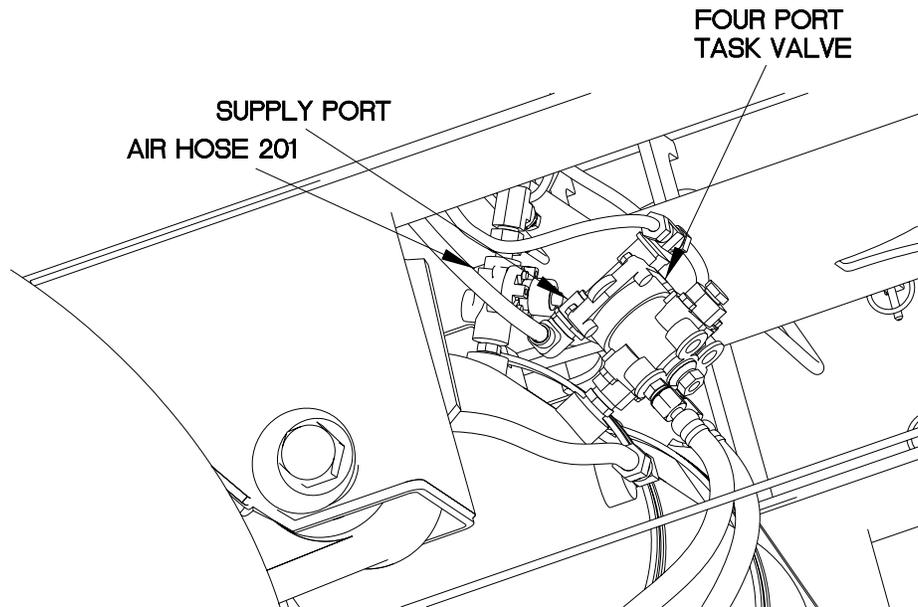
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at supply port of rear four port task valve?	<p>No Replace air hose 201.</p> <p>Yes Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at rear four port task valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to rear four port valve supply port.



CC042R06

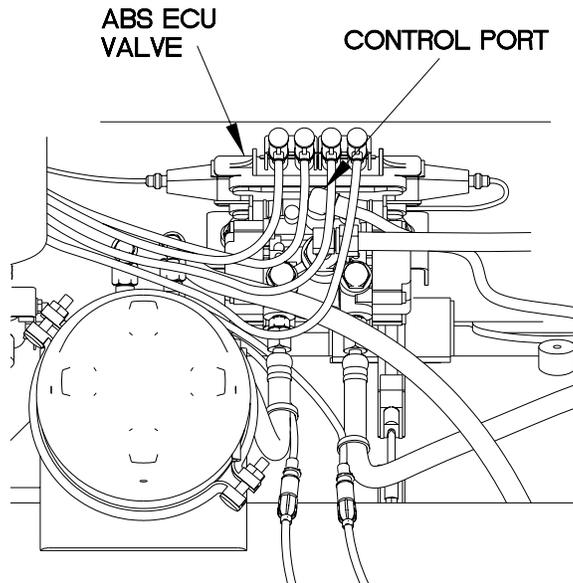
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at control port of ABS ECU?	<p>No Go to (Indication/Condition 9).</p> <p>Yes Go to (Indication/Condition 10).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at ABS ECU valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS ECU valve control port.



CC042R07

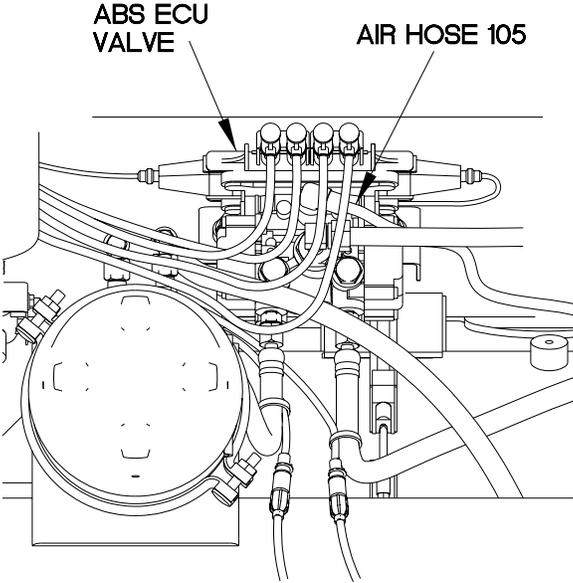
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 105 have any kinks, leaks or holes?	<p>No Replace rear four port task valve (WP 0109 00).</p> <p>Yes Replace air hose 105.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 105 and fittings. 2. Check air hose 105 between ABS ECU valve and four port task valve for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



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

CC042R08

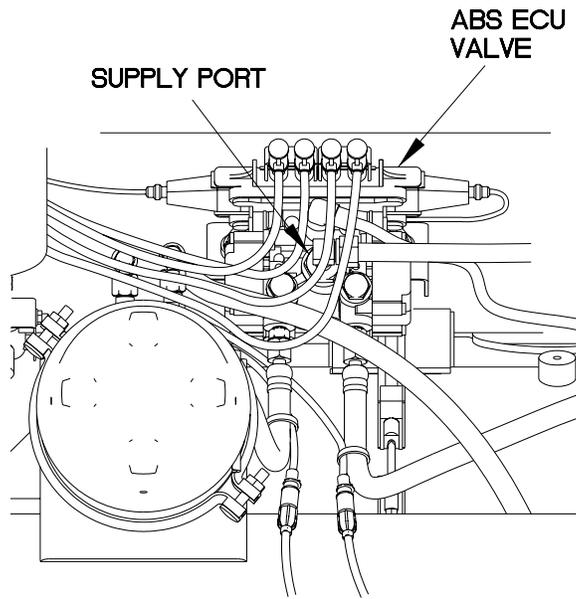
AIR SYSTEM LOSES PRESSURE DURING OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at supply port of ABS ECU valve?	<p>No Go to (Indication/Condition 11).</p> <p>Yes Replace air tank (WP 0078 00).</p>	<ol style="list-style-type: none"> 1. Loosen air hose at ABS ECU valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose to ABS ECU valve supply port.



CC042R09

AIR SYSTEM LOSES PRESSURE DURING

OPERATION/SLOW AIR PRESSURE BUILDUP

0042 00

AIR SYSTEM TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Does air hose 301 have any kinks, leaks or holes?	<p>No Replace ABS ECU valve (WP 0071 00).</p> <p>Yes Replace air hose 301.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 301 and fittings. 2. Check air hose 301 between ABS ECU valve and air tank for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.

The diagram is a technical line drawing of an air system. It shows a central ABS ECU valve with four ports at the top. A thick air hose, labeled 'AIR HOSE 301', runs from the valve to the right, where it connects to an 'AIR TANK'. Various other hoses and fittings are shown connected to the valve and the tank. Arrows from the text labels point to the specific parts in the drawing.

CC042R10

END OF WORK PACKAGE

SERVICE BRAKES DO NOT APPLY

0043 00

THIS WORK PACKAGE COVERS:

Brakes Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

References

Towing vehicle operators manual

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

Equipment Conditions

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

PROCEDURE

WARNING

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

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

NOTE

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

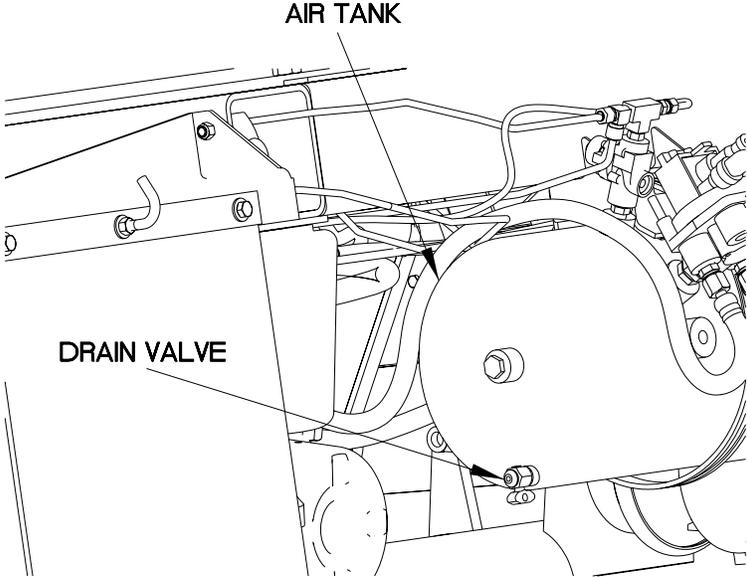
Remove plastic cable ties as required.

Reference pneumatic schematic at end of chapter as required.

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

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



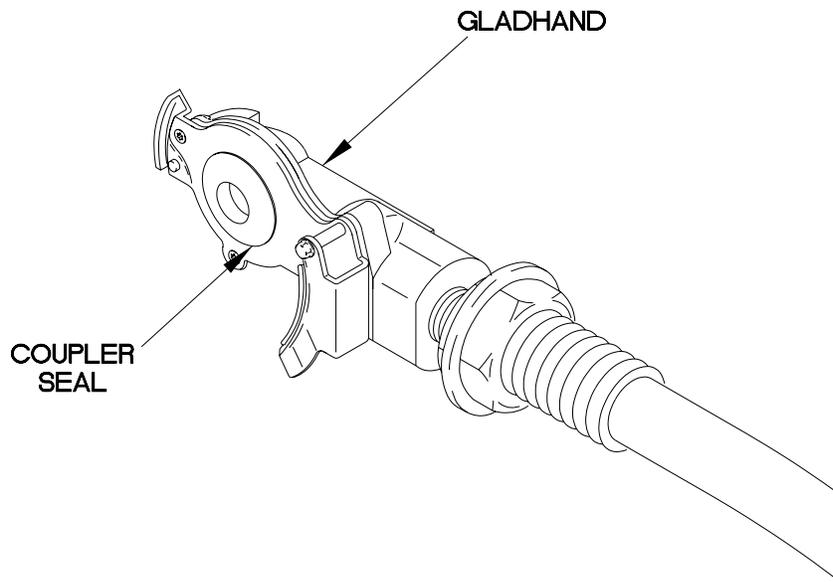
The diagram shows a side view of an air tank assembly. A label 'AIR TANK' points to the main cylindrical tank. Another label 'DRAIN VALVE' points to a small valve located at the bottom of the tank. Various pipes and fittings are shown connected to the tank.

CC043R01

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

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

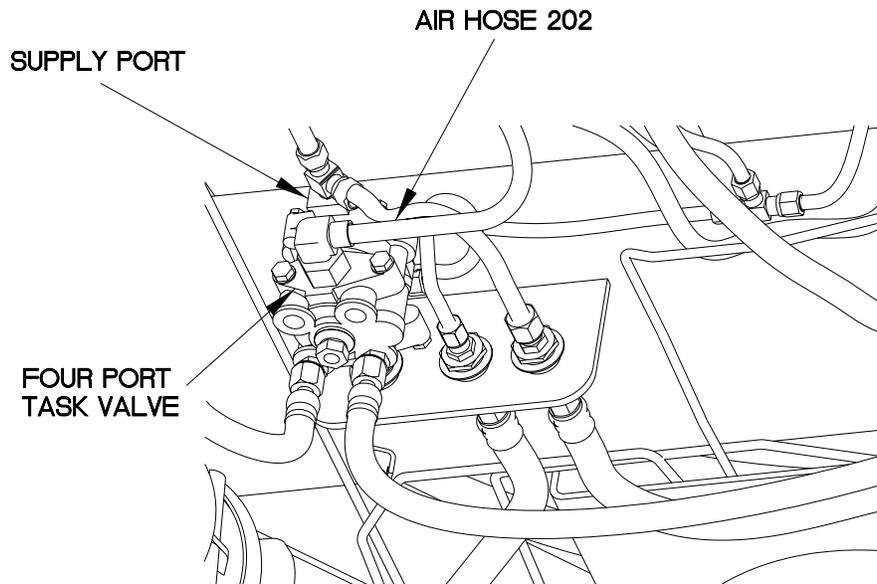


CC043R02

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is air present at supply port of front four port task valve?	<p>No Replace air hose 202.</p> <p>Yes Go to (Indication/Condition 4).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 202 from supply port on four port task valve. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 202 to four port task valve supply port.



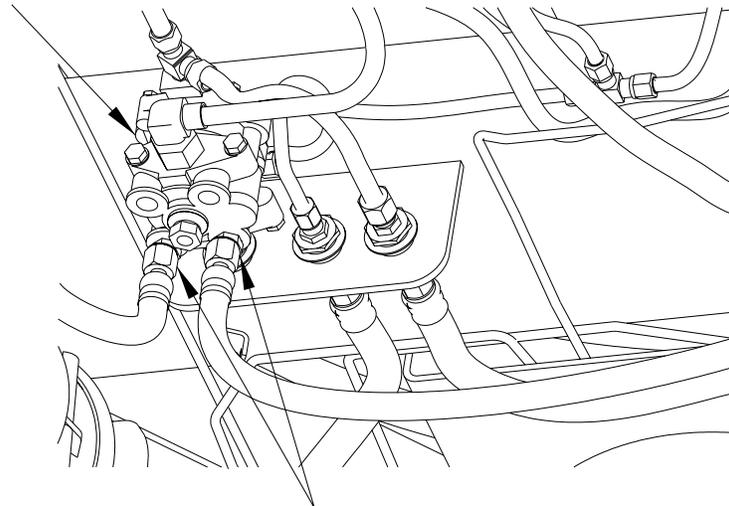
CC043R03

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at delivery ports of front four port task valve?	<p>No Replace front four port task valve (WP 0109 00).</p> <p>Yes Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at front four port task valve delivery ports. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to four port task valve delivery ports.

FOUR PORT TASK VALVE



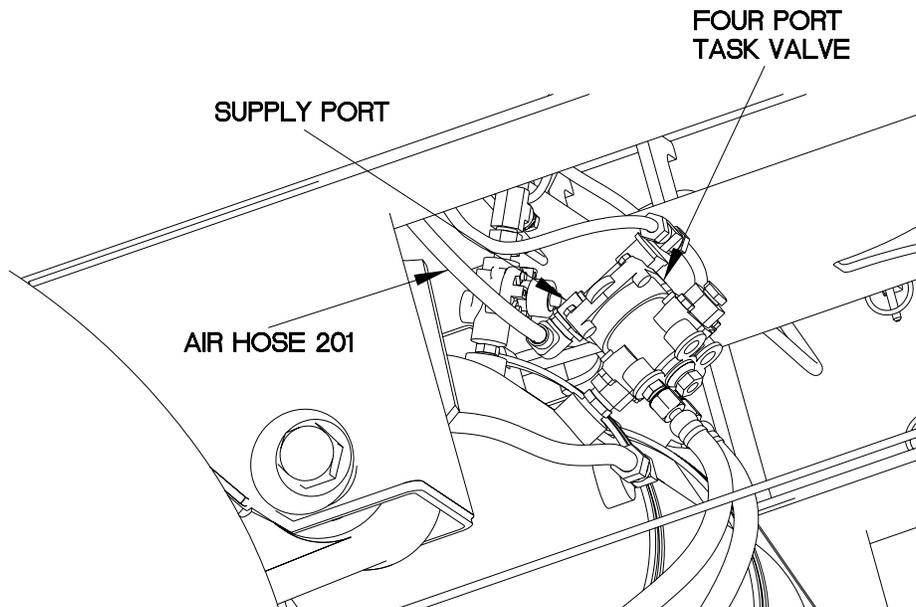
DELIVERY PORTS

CC043R04

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at supply port of rear four port task valve?	<p>No Replace air hose 201.</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 201 at rear four port task valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 201 to rear four port task valve supply port.

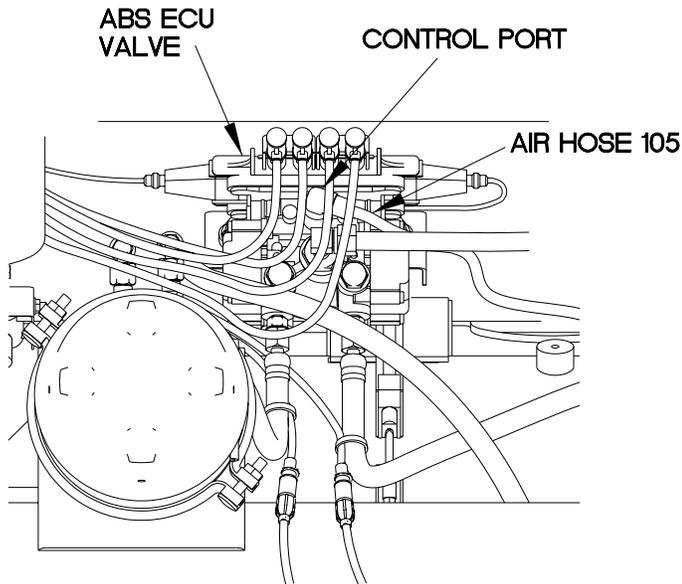


CC043R05

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at control port of ABS ECU?	<p>No Go to (Indication/Condition 7).</p> <p>Yes Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 105 at ABS ECU valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 105 to ABS ECU valve control port.

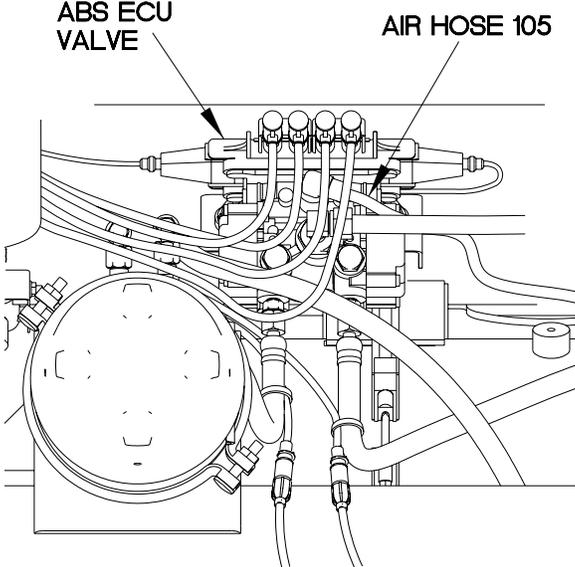


CC043R06

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>7. Does air hose 105 have any kinks, leaks, or holes?</p>	<p>No Replace rear four port task valve (WP 0109 00). Yes Replace air hose 105.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 105 and fittings. 2. Check air hose 105 between ABS ECU valve and rear four port task valve for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.



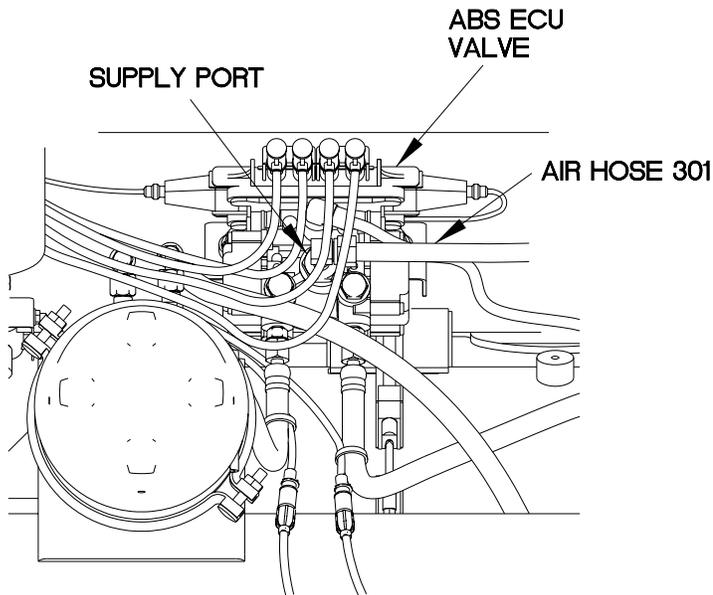
The diagram shows a top-down view of the ABS ECU valve assembly. On the left, a circular component is labeled 'ABS ECU VALVE'. On the right, a hose is labeled 'AIR HOSE 105'. The diagram illustrates the connection between the valve and the hose, with various fittings and lines visible.

CC043R07

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Is air present at supply port of ABS ECU?	<p>No Go to (Indication/Condition 9).</p> <p>Yes Go to (Indication/Condition 10).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 301 at ABS ECU valve supply port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 301 to ABS ECU valve supply port.



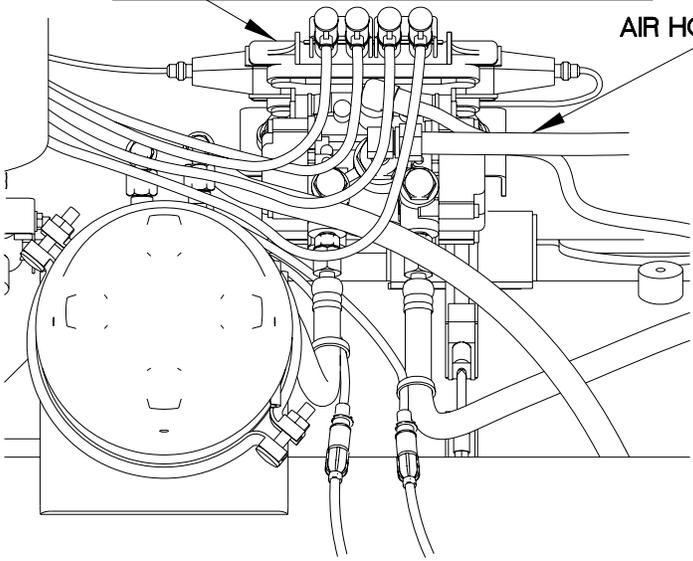
CC043R08

BRAKES TROUBLESHOOTING - Continued

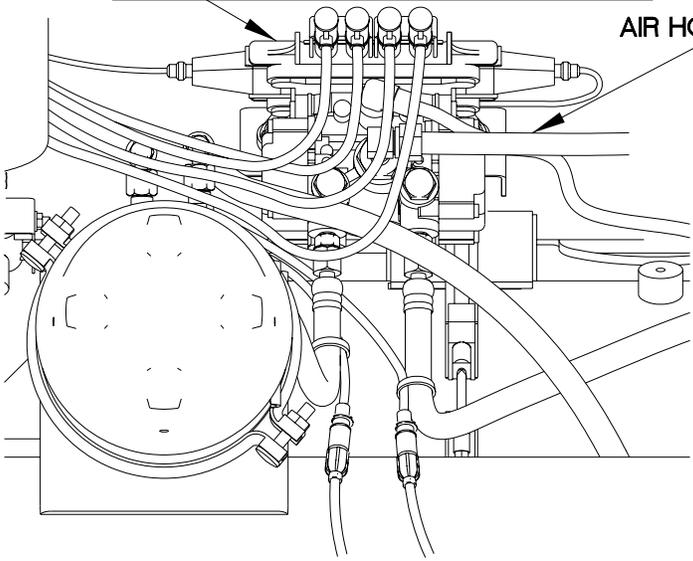
Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 301 have any kinks, leaks or holes?	<p>No Replace rear four port task valve (WP 0109 00).</p> <p>Yes Replace air hose 301.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 301 and fittings. 2. Check air hose 301 between ABS ECU valve and air tank for bubbles indicating holes or leaks. 3. Check fittings for bubbles indicating leaks.

ABS ECU VALVE



AIR HOSE 301

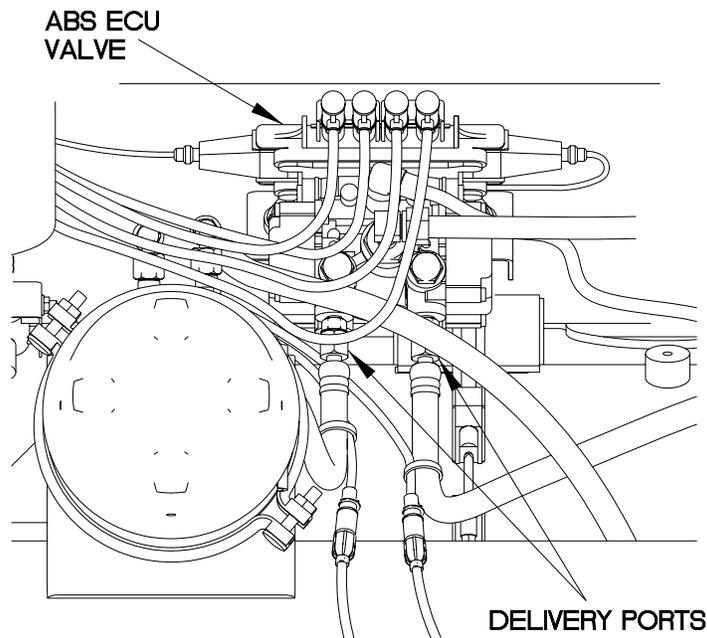


CC043R09

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at two delivery ports of ABS ECU valve?	<p>No Replace ABS ECU valve (WP 0071 00).</p> <p>Yes Go to (Indication/Condition 11).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at ABS ECU valve delivery ports. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS ECU valve delivery ports.

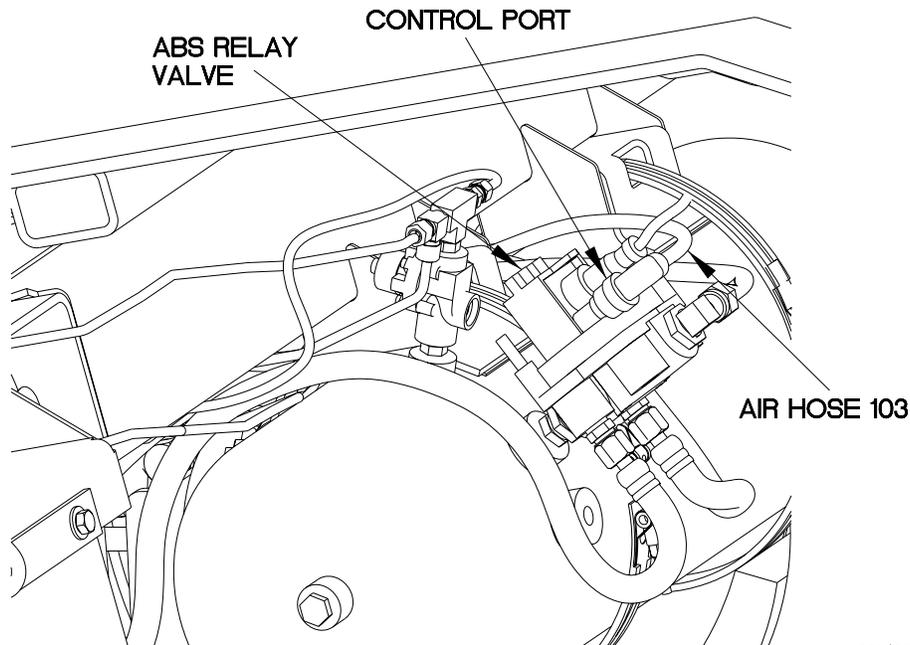


CC043R10

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
11. Is air present at control port of ABS relay valve?	<p>No Replace air hose 103.</p> <p>Yes Go to (Indication/Condition 12).</p>	<ol style="list-style-type: none"> 1. Loosen air hose 103 at ABS relay valve control port. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hose 103 to ABS relay valve control port.

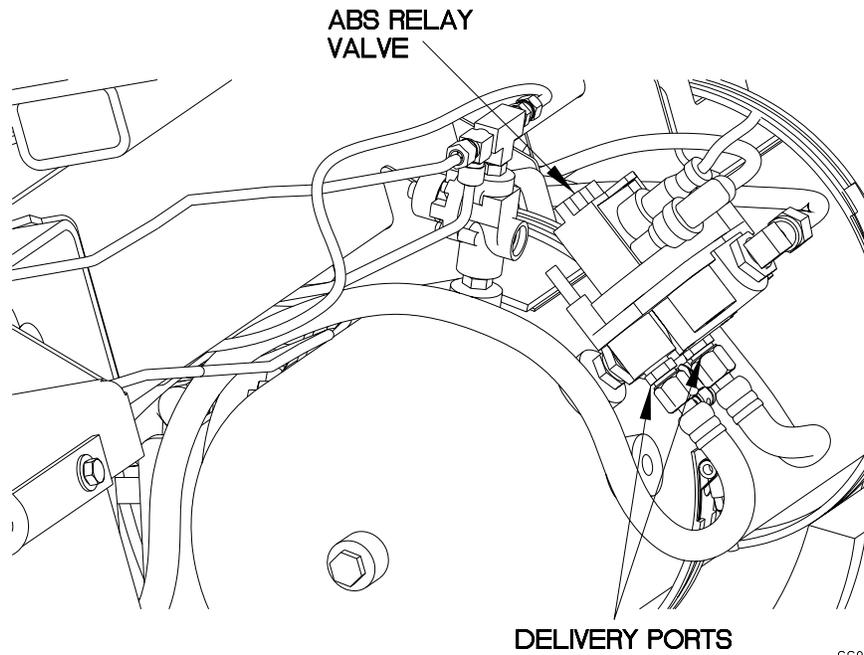


CC043R11

BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

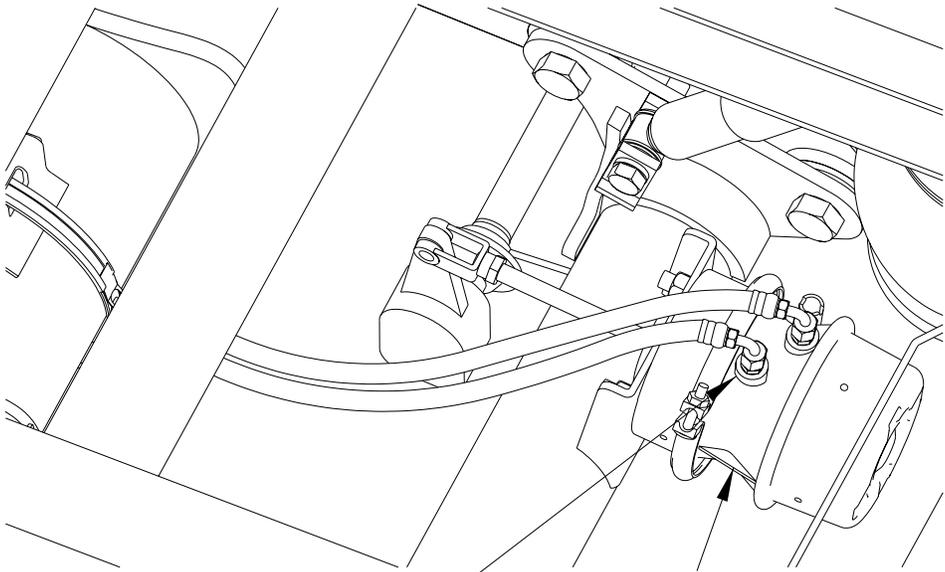
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
12. Is air present at two delivery port of ABS relay valve?	<p>No Replace ABS relay valve (WP 0075 00).</p> <p>Yes Go to (Indication/Condition 13).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at ABS relay valve delivery ports. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to ABS relay valve delivery ports.



BRAKES TROUBLESHOOTING - Continued

Table 1: Service Brakes Do Not Apply

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
13. Is air present at service port of brake air chambers?	<p>No Replace service brake air supply hoses.</p> <p>Yes Replace brake air chambers (WP 0081 00).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses at service ports of brake air chambers. 2. Start towing vehicle engine. 3. Depress towing vehicle brake pedal. 4. Check for presence of air. 5. Shut down towing vehicle engine. 6. Tighten air hoses to service ports of brake air chambers.



SERVICE PORT
BRAKE AIR CHAMBER

CC043R13

END OF WORK PACKAGE

TRAILER BRAKES UNEVENLY OR BRAKES

PULL TO ONE SIDE OR GRAB

0044 00

THIS WORK PACKAGE COVERS:

Brakes Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

References

Towing vehicle operators manual

Equipment Conditions

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

Materials/Parts

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

PROCEDURE

WARNING

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

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

NOTE

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

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

Reference pneumatic schematic at end of chapter as required.

TRAILER BRAKES UNEVENLY OR BRAKES

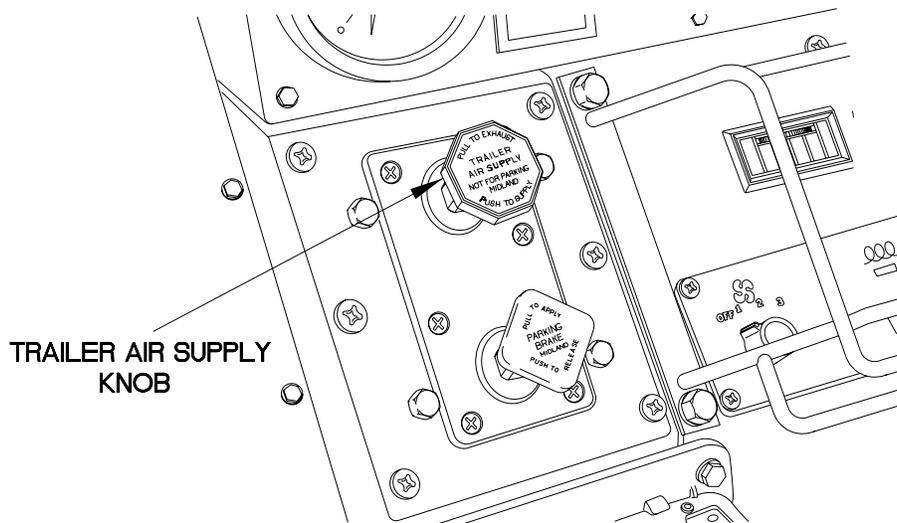
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

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



CC044B01

TRAILER BRAKES UNEVENLY OR BRAKES

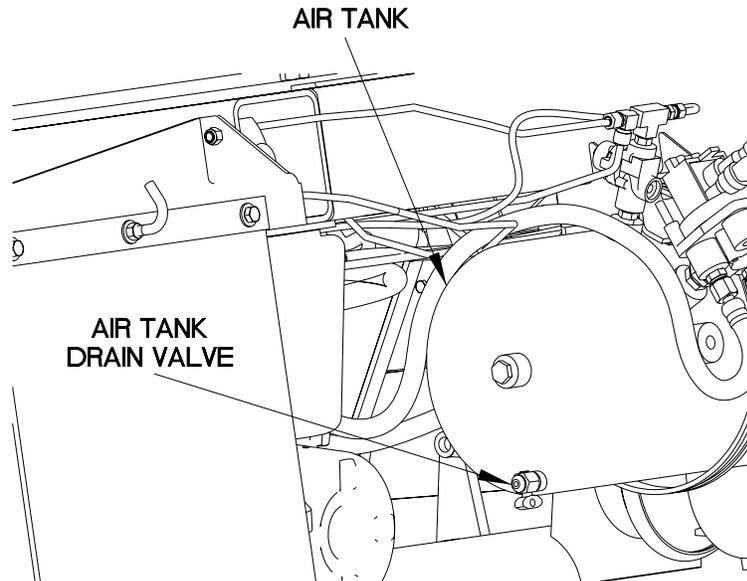
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

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



CC044B02

TRAILER BRAKES UNEVENLY OR BRAKES

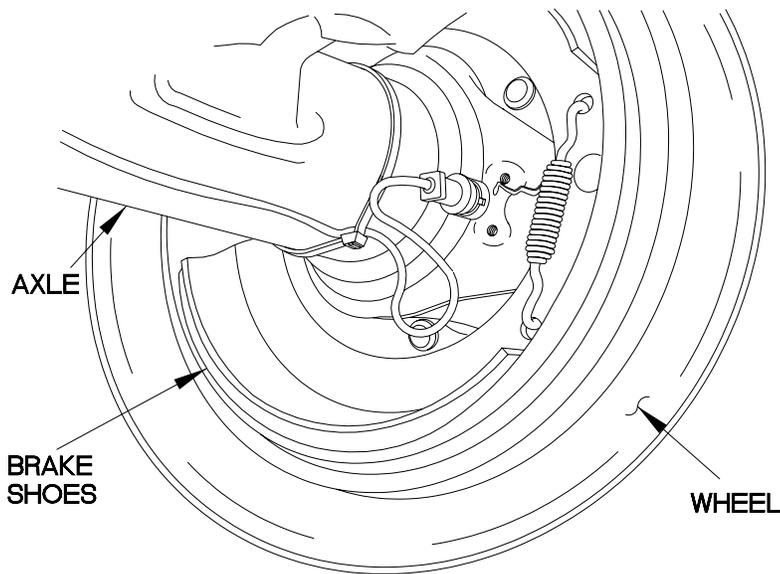
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

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



CC044B03

TRAILER BRAKES UNEVENLY OR BRAKES

PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Do individual wheels/brakes lockup or drag while applying brakes and manually spinning wheel?	<p>No Go to (Indication/Condition 5).</p> <p>Yes Adjust brake shoe clearance (WP 0069 00).</p>	<ol style="list-style-type: none"> 1. Start towing vehicle engine (EM 0195). 2. Allow brake air pressure to fully charge. 3. Depress brake pedal. 4. Have assistant spin wheels, one at a time. 5. Shut down towing vehicle engine.

WHEEL

CC044B04

TRAILER BRAKES UNEVENLY OR BRAKES

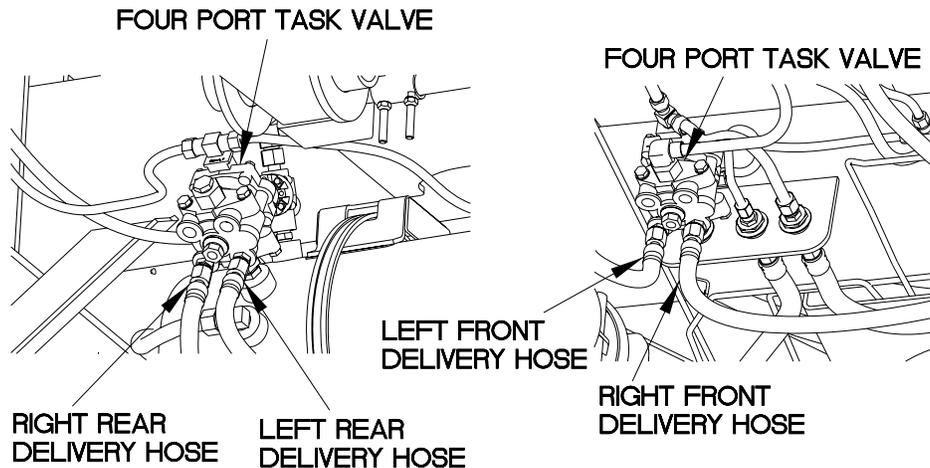
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Is air present at four port task valve delivery port to affected wheel(s)/brake(s) when brakes are applied?	<p>No Replace four port task valve (WP 0109 00).</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Remove trestles from axle assembly. 2. Lower jack to place trailer on ground. 3. Loosen air delivery hoses to spring brakes at delivery ports of four port task valve. 4. Start towing vehicle engine. 5. Allow brake air pressure to fully charge. 6. Depress brake pedal and have assistant check for presence of air escaping at delivery port of four port task valve and air hoses. 7. Shut down towing vehicle engine.



CC044B05

TRAILER BRAKES UNEVENLY OR BRAKES

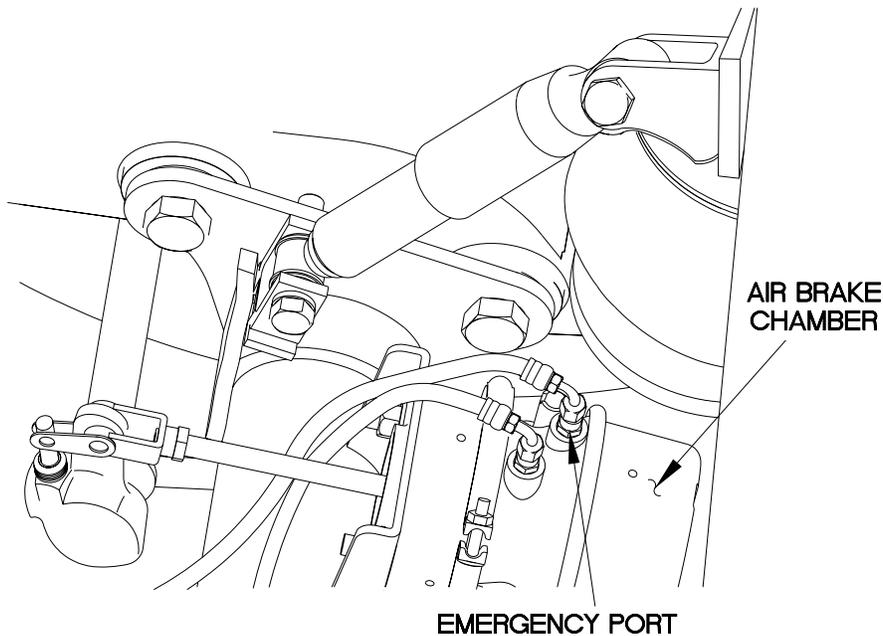
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
6. Is air present at emergency port of brake air chamber of affected wheel(s)/brake(s) when brakes are applied?	<p>No Replace damaged or blocked air hoses.</p> <p>Yes Go to (Indication/Condition 7).</p>	<ol style="list-style-type: none"> 1. Tighten hoses at delivery ports of four port task valve. 2. Loosen hoses at emergency port of brake air chamber of affected wheel(s)/brake(s). 3. Start towing vehicle engine. 4. Allow brake air pressure to fully charge. 5. Depress brake pedal and have assistant check for presence of air escaping at emergency port of air brake chambers and air hoses. 6. Shut down towing vehicle engine.



CC044B06

TRAILER BRAKES UNEVENLY OR BRAKES

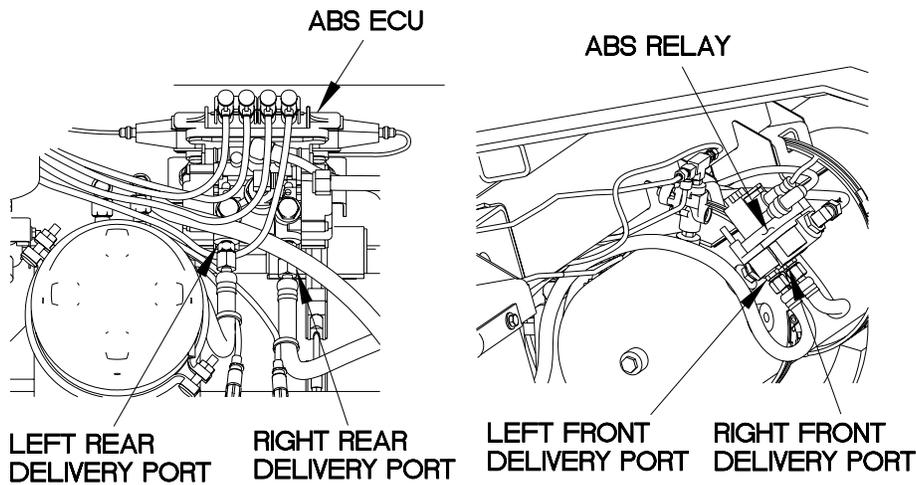
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at relay valve delivery port(s) (front) or ABS ECU valve port(s) (rear) to affected wheel(s)/brakes?	<p>No Replace ABS relay valve (front) (WP 0075 00) or ABS ECU valve (rear) (WP 0071 00).</p> <p>Yes Go to (Indication/Condition 8).</p>	<ol style="list-style-type: none"> 1. Tighten air hoses at emergency ports of brake air chambers. 2. Loosen air delivery hoses to spring brakes at delivery ports of ABS relay valve (front) or ABS ECU valve (rear). 3. Start towing vehicle engine. 4. Allow brake air pressure to fully charge. 5. Depress brake pedal and have assistant check for presence of air escaping at delivery port of ABS relay valve (front) or ABS ECU valve (rear) and air hoses. 6. Shut down towing vehicle engine.



CC044B07

TRAILER BRAKES UNEVENLY OR BRAKES

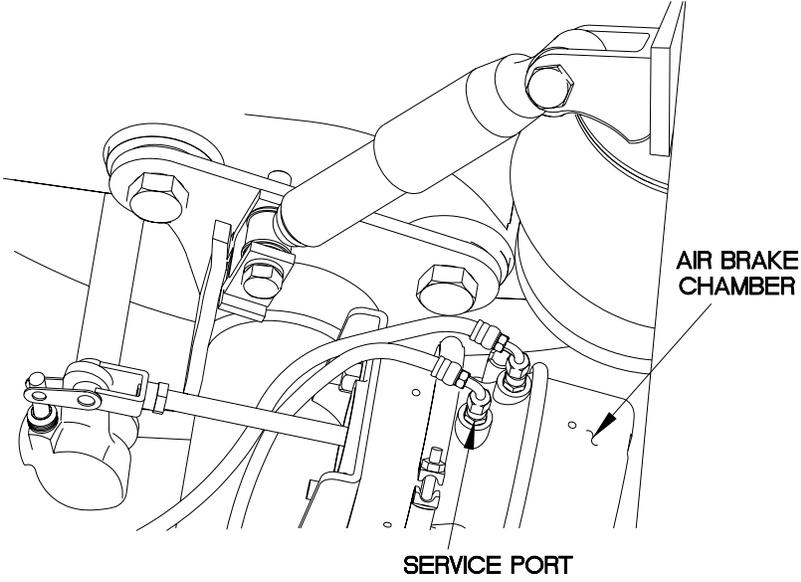
PULL TO ONE SIDE OR GRAB -Continued

0044 00

BRAKES TROUBLESHOOTING - Continued

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

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>8. Is air present at service port of brake air chamber of affected wheel(s)/brake(s) while brakes are applied?</p>	<p>No Replace damaged or blocked air hoses.</p> <p>Yes Replace spring brake chamber (WP 0081 00).</p>	<ol style="list-style-type: none"> 1. Tighten hoses at delivery ports of ABS relay valve (front) or ABS ECU valve (rear). 2. Loosen hoses at service port of brake air chamber of affected wheel(s)/brake(s). 3. Start towing vehicle engine. 4. Allow brake air pressure to fully charge. 5. Depress brake pedal and have assistant check for presence of air escaping at service port of air brake chambers and air hoses. 6. Shut down towing vehicle engine.



CC044B08

END OF WORK PACKAGE

SUSPENSION SYSTEM SITS UNEVEN

0045 00

THIS WORK PACKAGE COVERS:

Pneumatic System troubleshooting.

INITIAL SETUP:

Maintenance Level

Field

Tools/Special Tools

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

Materials/Parts

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

Personnel Required

Two

Equipment Conditions

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

PROCEDURE

WARNING

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

NOTE

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

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

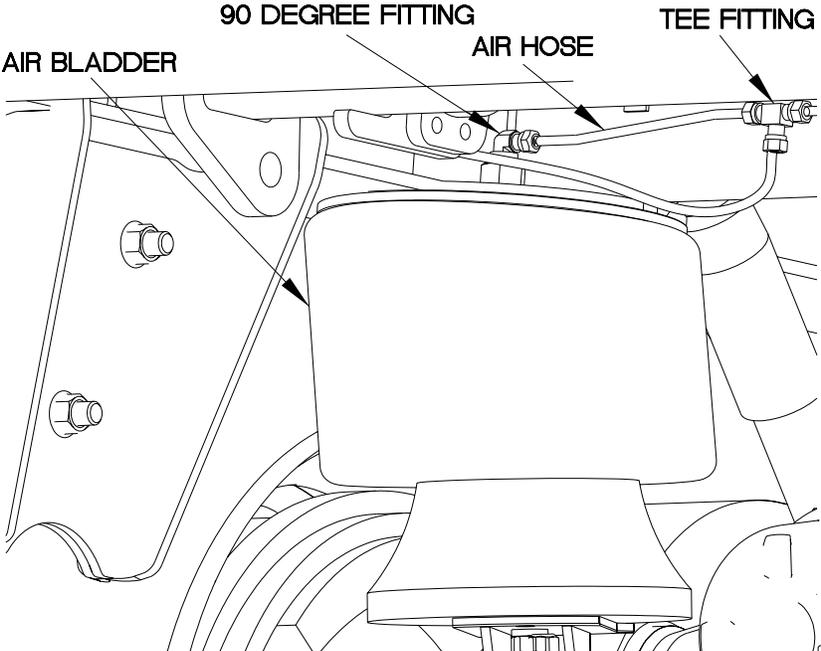
Select the appropriate fault to determine where troubleshooting continues:

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

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is air present at affected air spring?	<p>No. Replace air hose from air spring to tee fitting.</p> <p>Yes. Replace air bladder (WP 0096 00).</p>	<ol style="list-style-type: none"> 1. Drain air tanks (WP 0004 00) 2. Disconnect air hose from 90-degree fitting. 3. Charge air system (EM 0195). 4. Check for the presents of air from open air hose.



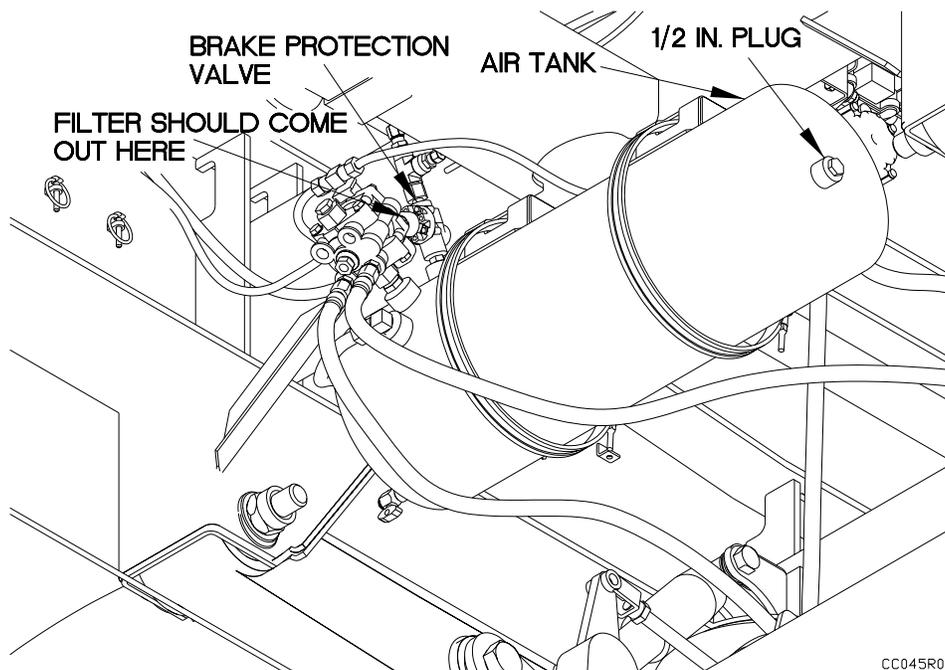
The diagram illustrates the pneumatic suspension system components. It shows a cross-section of the suspension assembly. Key components are labeled with arrows: 'AIR BLADDER' is the large rectangular air spring; 'AIR HOSE' is the flexible tube connecting the bladder to the rest of the system; '90 DEGREE FITTING' is a T-shaped connector; and 'TEE FITTING' is a straight connector. The diagram also shows the mounting brackets and bolts on the suspension frame.

CC045R01

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System

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



CC045R02

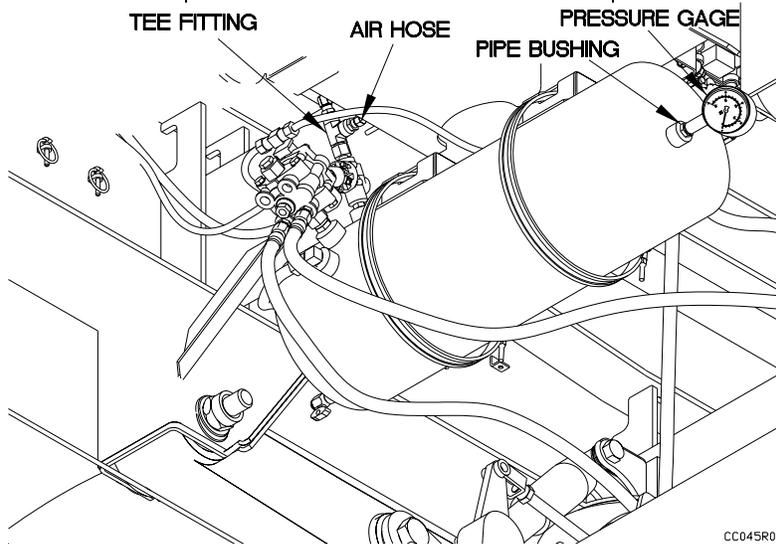
SUSPENSION SYSTEM SITS UNEVEN-Continued

0045 00

PNEUMATIC SYSTEM TROUBLESHOOTING - Continued

Table 1. Uneven Suspension System

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



CC045R03

END OF WORK PACKAGE

SUSPENSION SYSTEM DOES NOT SUPPORT TRAILER LOAD

0046 00

THIS WORK PACKAGE COVERS:

Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00).

PROCEDURE

WARNING

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

NOTE

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

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

END OF WORK PACKAGE

FRONT SUSPENSION DOES NOT RAISE/LOWER

0047 00

THIS WORK PACKAGE COVERS:

Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

PROCEDURE

WARNING

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

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

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

NOTE

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

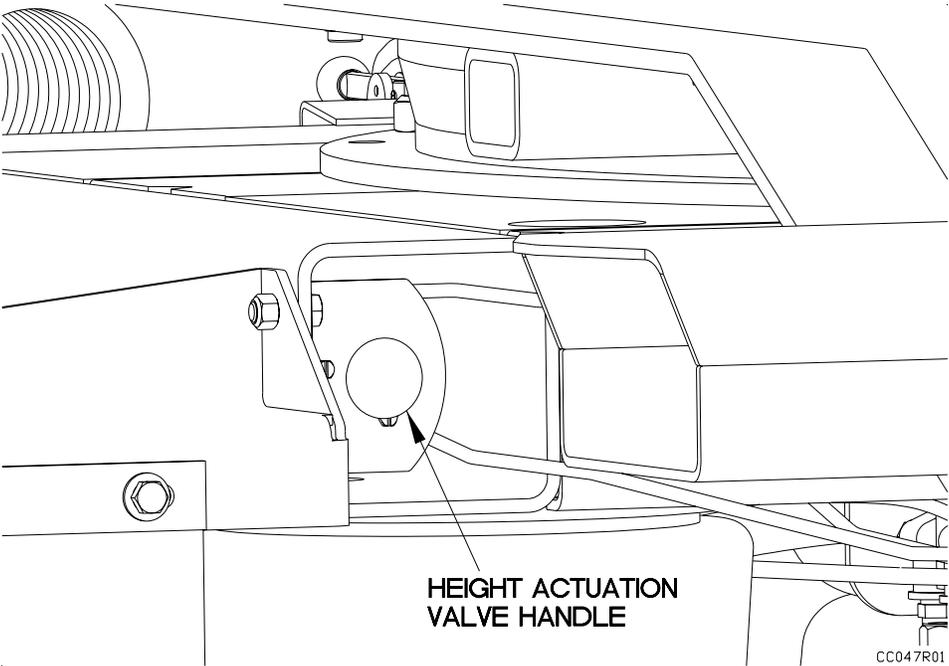
Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

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



HEIGHT ACTUATION VALVE HANDLE

CC047R01

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

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

CC047R02

FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Does air hose 010 have any kinks, leaks, or holes?</p>	<p>No Replace height actuation valve (WP 0110 00). Yes Replace hose 010.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 010 and fittings. 2. Push in handle on height actuation valve and check air hose 010 between brake protection valve and height actuation valve for bubbles indicating holes or leaks. 3. Check hose 010 for kinks.

BRAKE PROTECTION VALVE

HEIGHT ACTUATION VALVE HANDLE

HEIGHT ACTUATION VALVE

AIR HOSE 010

CC047R03

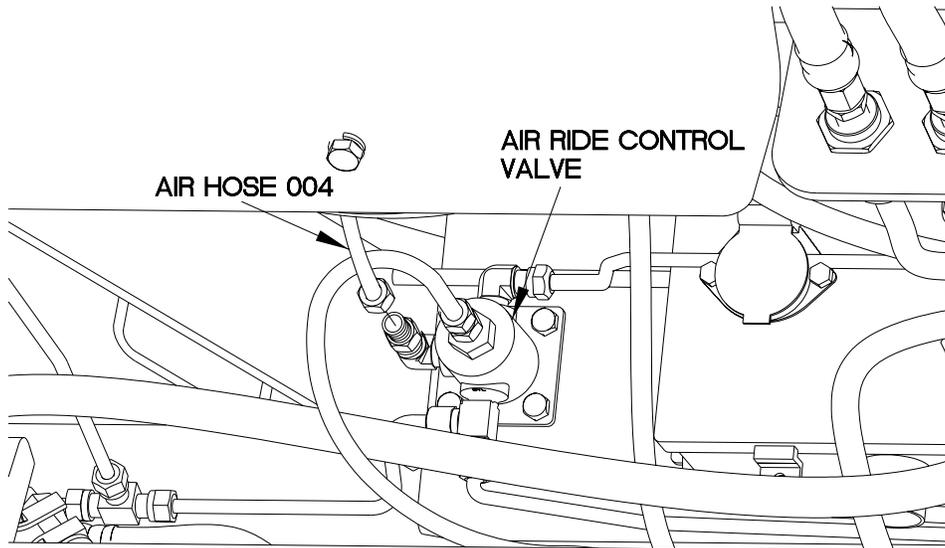
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air present at air ride control valve connection air hose 004?	<p>No Replace air ride control valve (WP 0080 00).</p> <p>Yes Go to (Indication/Condition 5).</p>	<ol style="list-style-type: none"> 1. Disconnect air hose 004 at connection point on air ride control valve. 2. Push height actuation valve handle in and feel for air escaping from connection point on air ride control valve.



CC047R04

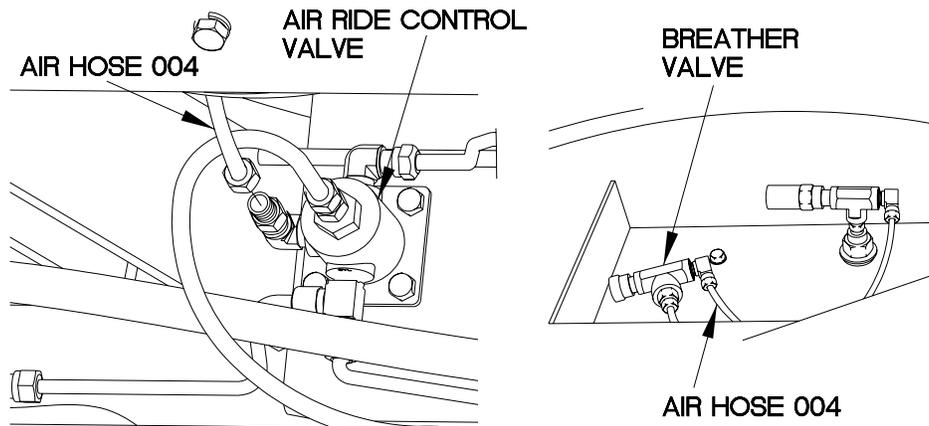
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Does air hose 004 have any kinks?	<p>No Replace breather valve (WP 0082 00).</p> <p>Yes Replace air hose 004.</p>	<ol style="list-style-type: none"> 1. Connect air hose 004 at connection point on air ride control valve. 2. Lift turntable from frame for access (WP 0099 00). 3. Follow path of air hose 004 from air ride control valve to breather valve to check for any kinks in air hose.



CC047R05

FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

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

CC047R06

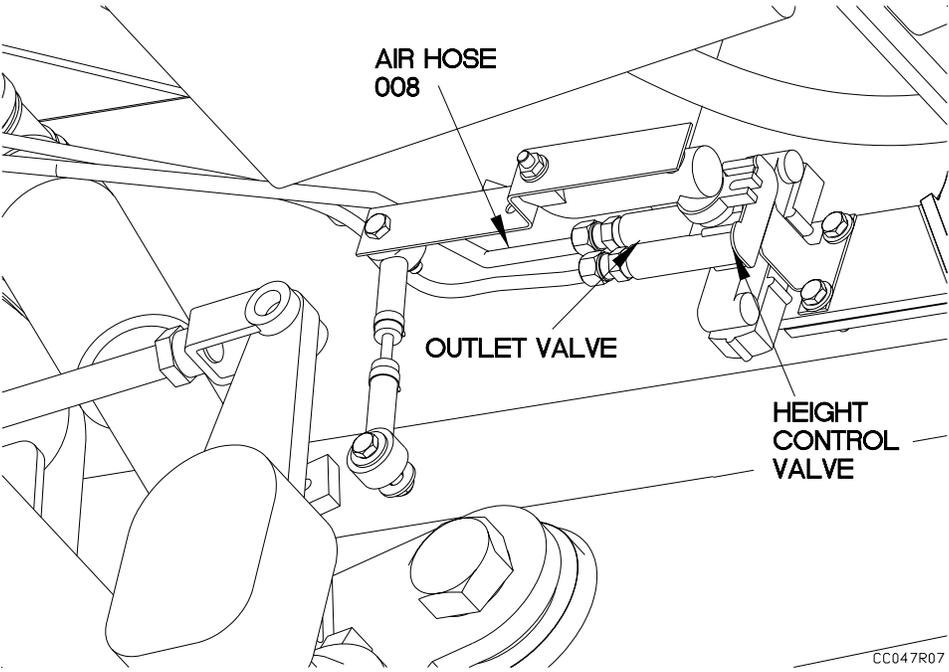
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air present at outlet port of height control valve?	<p>No Go to (Indication/Condition 8).</p> <p>Yes Go to (Indication/Condition 9).</p>	<ol style="list-style-type: none"> 1. Disconnect air hose 008 from outlet port of height control valve. 2. Attempt to charge air system (TM 9-2320-392-10). 3. Listen and feel for air discharging from outlet port on height control valve.



CC047R07

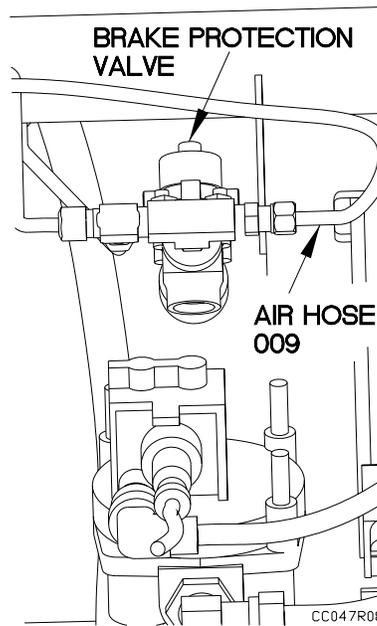
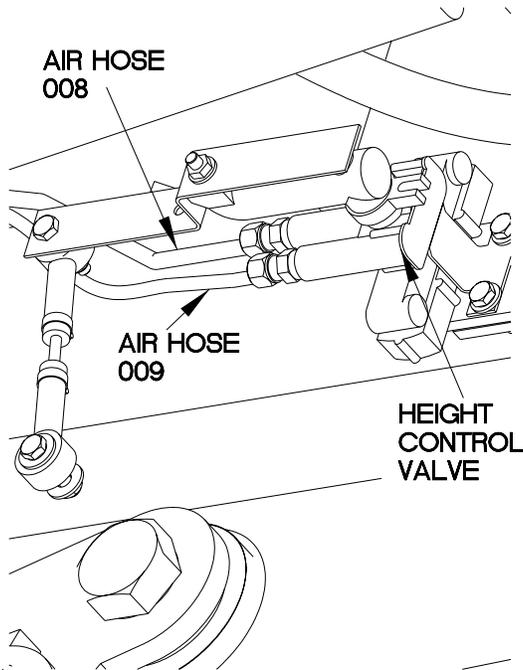
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Does air hose 009 have any kinks, leaks or holes?	<p>No Replace height control valve (WP 0084 00).</p> <p>Yes Replace air hose 009.</p>	<ol style="list-style-type: none"> 1. Connect air hose 008 to outlet port of height control valve. 2. Apply soapy water solution to air hose 009 and fittings. 3. Attempt to charge air system (TM 9-2320-392-10). 4. Check air hose 009 from height control valve to brake protection valve for any bubbles indicating leaks or holes.



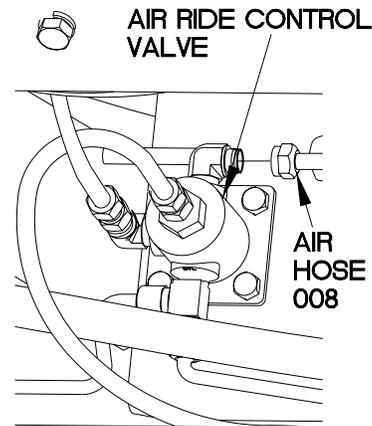
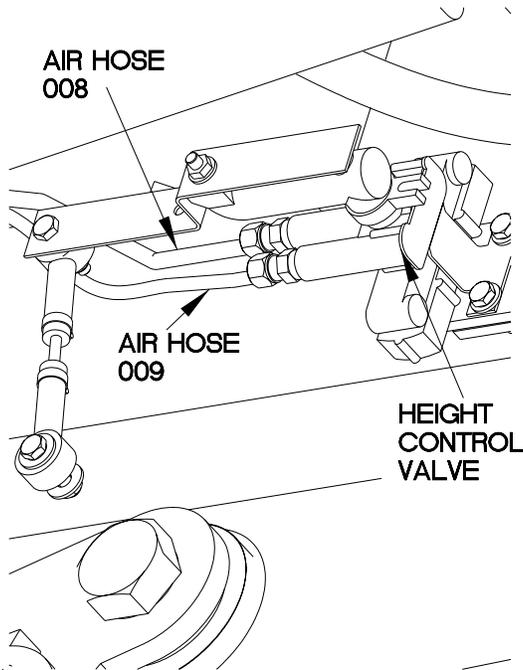
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>9. Does air hose 008 have any kinks, leaks or holes?</p>	<p>No Go to (Indication/Condition 10).</p> <p>Yes Replace air hose 008.</p>	<ol style="list-style-type: none"> 1. Connect air hose 008 to outlet port of height control valve. 2. Apply soapy water solution to air hose 008 and fittings. 3. Attempt to charge air system (TM 9-2320-392-10). 4. Check air hose 008 from height control valve to air ride control valve for any bubbles indicating leaks or holes.



CC047R09

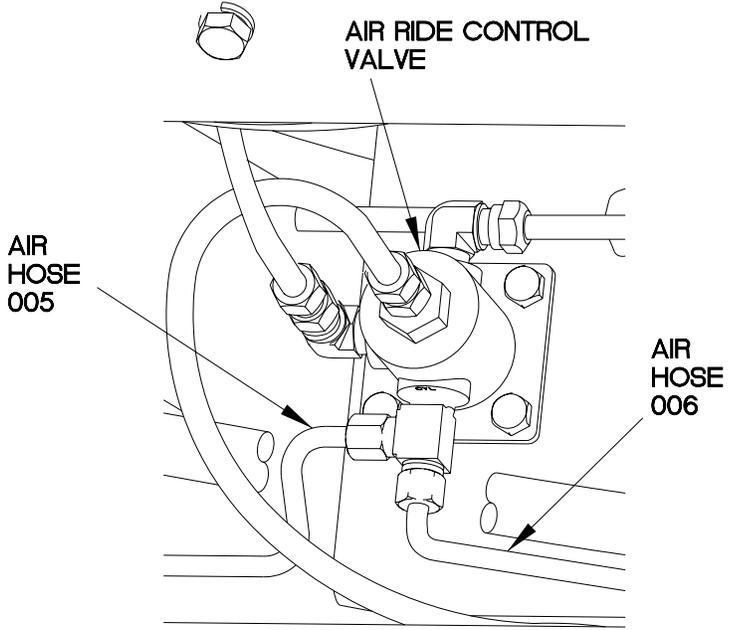
FRONT SUSPENSION DOES NOT RAISE/LOWER -Continued

0047 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Front Suspension Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air present at outlet port of air ride control valve?	<p>No Replace air ride control valve (WP 0080 00).</p> <p>Yes Replace air hose 005.</p>	<ol style="list-style-type: none"> 1. Disconnect air hose 005 and air hose 006 from outlet port on air ride control valve. 2. Attempt to charge air system (TM 9-2320-392-10). 3. Listen and feel for air discharging from outlet port on air ride control valve.



CC047R10

END OF WORK PACKAGE

RAIL ASSEMBLY DOES NOT RAISE/LOWER

0048 00

THIS WORK PACKAGE COVERS:

Rail Assembly Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

Rail lock pin removed (WP 0005 00)

Rail lift jack handle installed (WP 0005 00)

Materials/Parts

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

PROCEDURE

WARNING

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

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

CAUTION

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

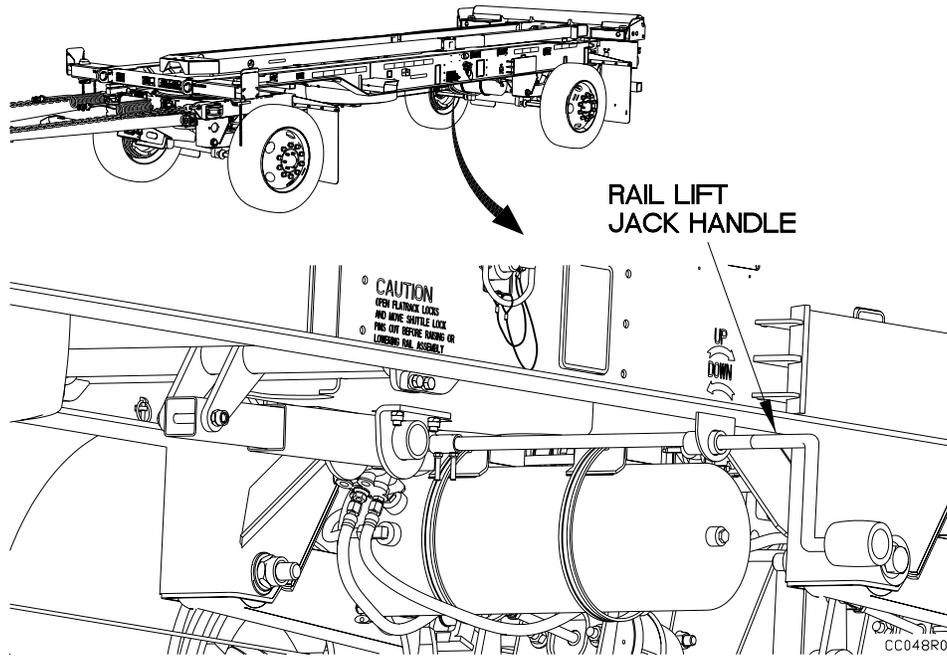
NOTE

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

RAIL ASSEMBLY TROUBLESHOOTING - Continued

Table 1: Rail Assembly Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
1. Is rail lift jack spinning freely?	<p>No. Replace rail assembly (WP 0089 00).</p> <p>Yes. Replace rail lift jack (WP 0102 00).</p>	<ol style="list-style-type: none"> 1. Remove shuttle lock pins. 2. Push knob of flatrack lock control to release flatrack locks. 3. Turn rail lift jack handle. 4. Check to see if handle will spin freely.



END OF WORK PACKAGE

FLATRACK LOCKS DO NOT RELEASE/LOCK

0049 00

THIS WORK PACKAGE COVERS:

Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

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

Rail assembly raised (WP 0005 00)

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

References

TM 9-2320-392-10

PROCEDURE

WARNING

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

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

NOTE

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

Tag hoses and connection points prior to disconnecting.

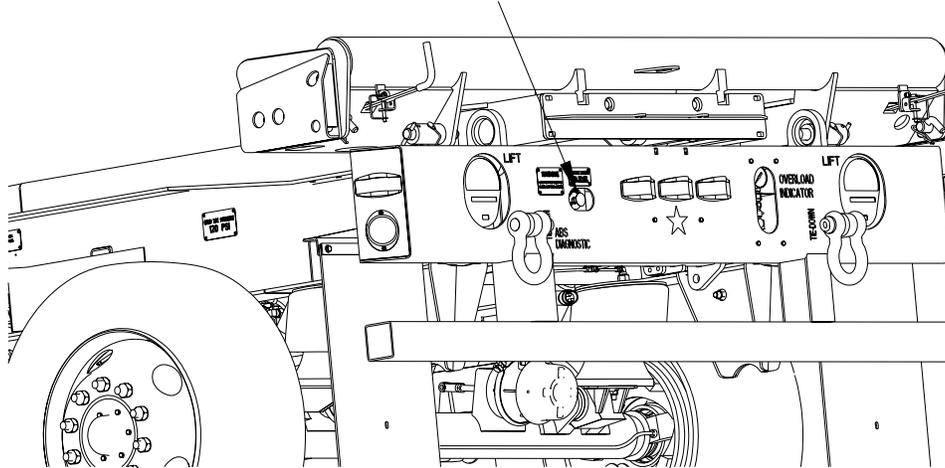
Remove plastic cable ties as required.

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

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

FLATRACK LOCK PUSH/PULL VALVE HANDLE

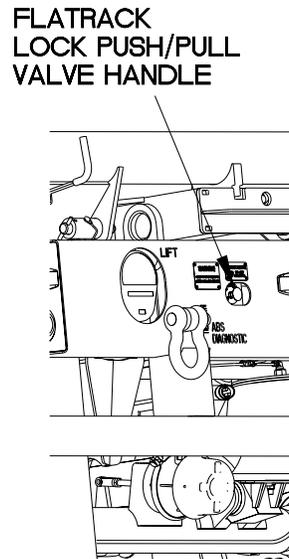
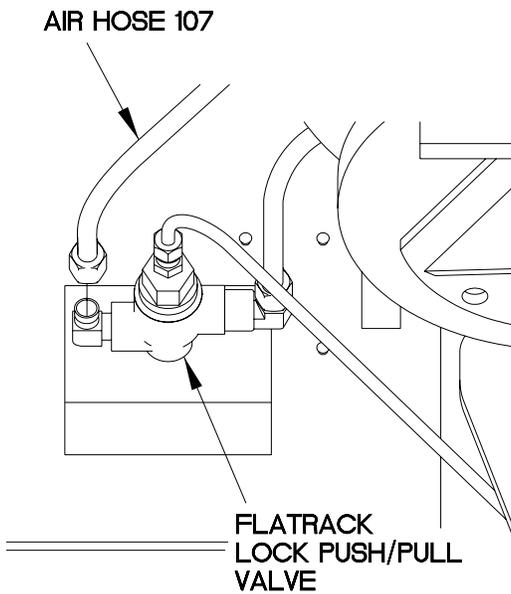


CC049R01

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

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



CC049R02

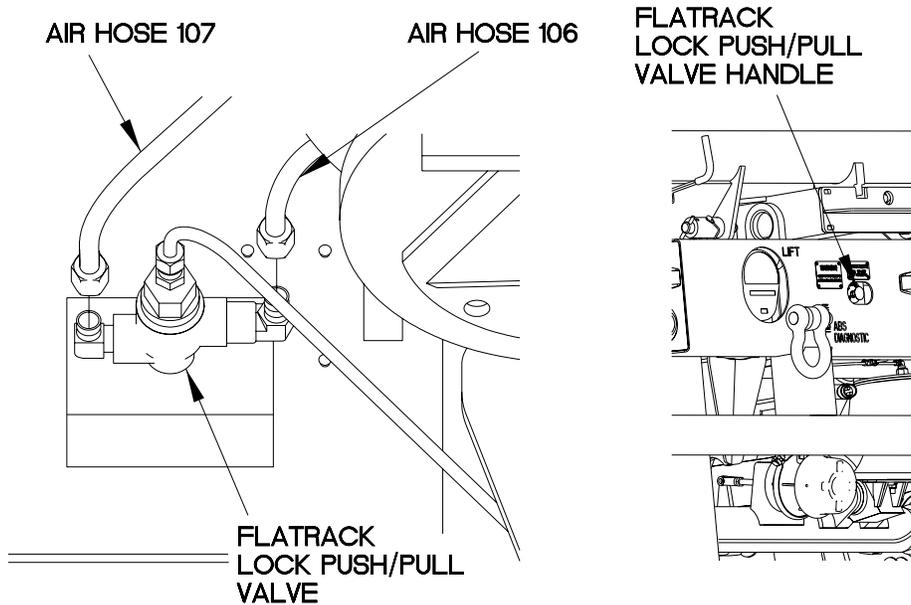
FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued

0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>3. Does air hose 106 have any kinks, leaks, or holes?</p>	<p>No. Replace flatrack lock push/pull valve (WP 0108 00).</p> <p>Yes. Replace air hose 106.</p>	<ol style="list-style-type: none"> 1. Connect air hose 107 to flatrack lock push/pull valve. 2. Apply soapy water to air hose 106 and connection points. 3. Pull handle of flatrack lock push/pull valve out. 4. Look for bubbles escaping from hose indicating leaks and examine hose for kinks.



CC049R03

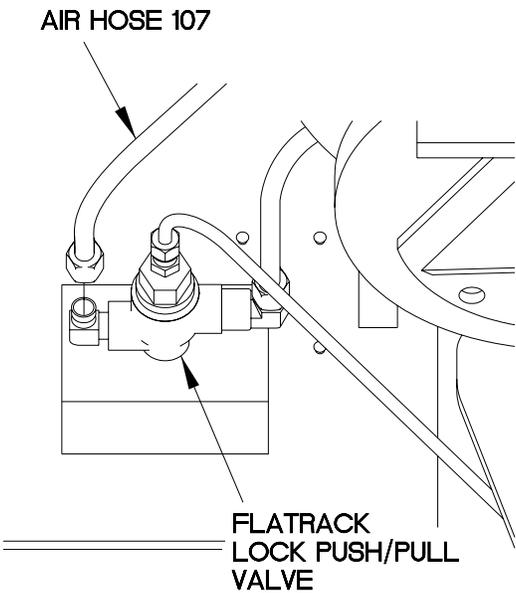
FLATRACK LOCKS DO NOT RELEASE/LOCK -Continued

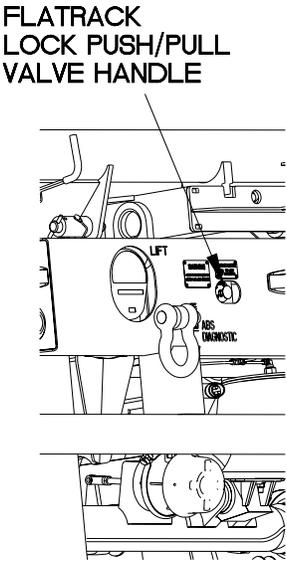
0049 00

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>4. Does air hose 107 have any kinks, leaks, or holes?</p>	<p>No. Replace flatrack air chamber (WP 0107 00). Yes. Replace air hose 107.</p>	<ol style="list-style-type: none"> 1. Connect air hose 107 to flatrack lock push/pull valve. 2. Apply soapy water to air hose 107 and connection points. 3. Pull handle of flatrack lock push/pull valve out. 4. Look for bubbles escaping from hose indicating leaks and examine hose for kinks.



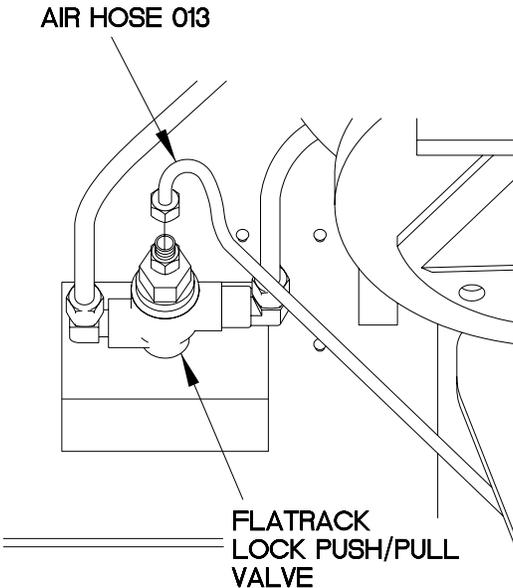


CC049R02

PNEUMATIC TROUBLESHOOTING - Continued

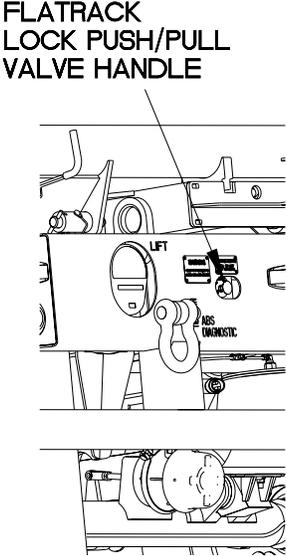
Table 1: Flatrack Locks Do Not Release/Engage

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



AIR HOSE 013

FLATRACK LOCK PUSH/PULL VALVE



FLATRACK LOCK PUSH/PULL VALVE HANDLE

CC049R04

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Does air hose 013 have any kinks, leaks, or holes?</p>	<p>No. Replace flatrack lock push/pull valve (WP 0108 00).</p> <p>Yes. Replace air hose 013.</p>	<ol style="list-style-type: none"> 1. Connect air hose 013 to flatrack lock push/pull valve. 2. Apply soapy water to air hose 013 and connection points. 3. Push handle of flatrack lock push/pull valve in and look for air bubbles indication leaks and check hose for kinks.

AIR HOSE 013

FLATRACK LOCK PUSH/PULL VALVE

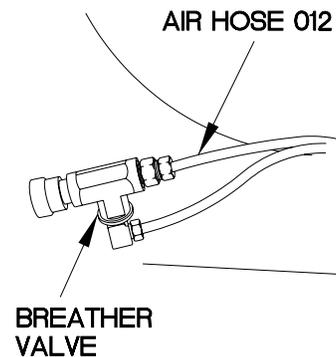
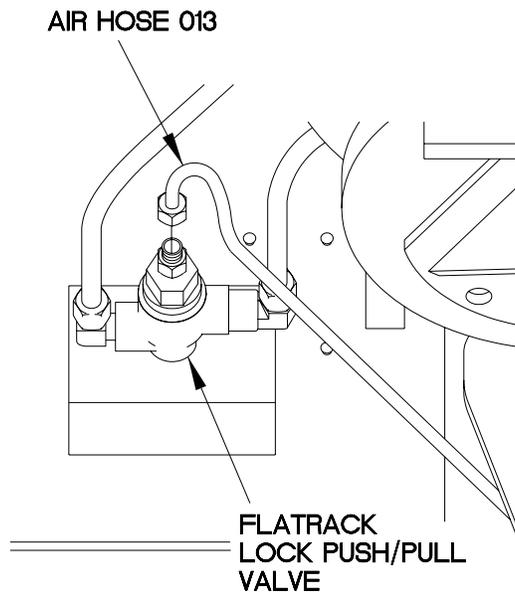
FLATRACK LOCK PUSH/PULL VALVE HANDLE

CC049R04

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>7. Is air pressure present at end of air hose 012 at connection on breather valve?</p>	<p>No. Go to (Indication/Condition 8).</p> <p>Yes. Replace breather valve (WP 0082 00).</p>	<ol style="list-style-type: none"> 1. Connect air hose 013 to flatrack lock push/pull valve. 2. Remove LH composite taillight for access to breather valve. 3. Disconnect air hose 012 from breather valve. 4. Push handle of flatrack lock push/pull valve in and feel for air escaping from air hose 012.

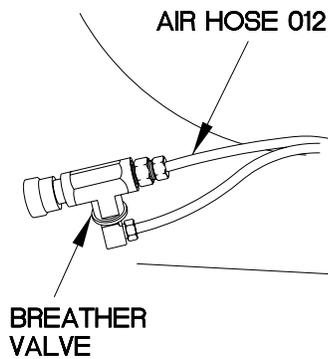


CC049R05

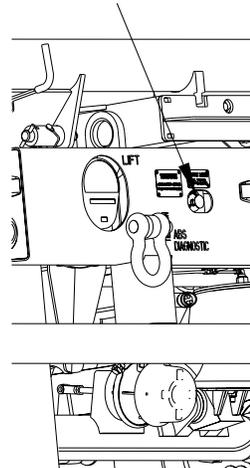
PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Flatrack Locks Do Not Release/Engage

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
8. Does air hose 012 have any kinks, leaks, or holes?	<p>No. Replace flatrack air chamber (WP 0107 00).</p> <p>Yes. Replace air hose 012.</p>	<ol style="list-style-type: none"> 1. Connect air hose 012 to breather valve. 2. Apply soapy water to air hose 012 and connection points. 3. Push handle of flatrack lock push/pull valve in. 4. Look for bubbles on air hose 012 indication air escaping from air hose 012.



FLATRACK LOCK PUSH/PULL VALVE HANDLE



CC049R06

END OF WORK PACKAGE

DRAWBAR DOES NOT RAISE/LOWER

0050 00

THIS WORK PACKAGE COVERS:

Pneumatic Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

References

TM 9-2320-392-10

PROCEDURE

WARNING

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

WARNING

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

NOTE

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

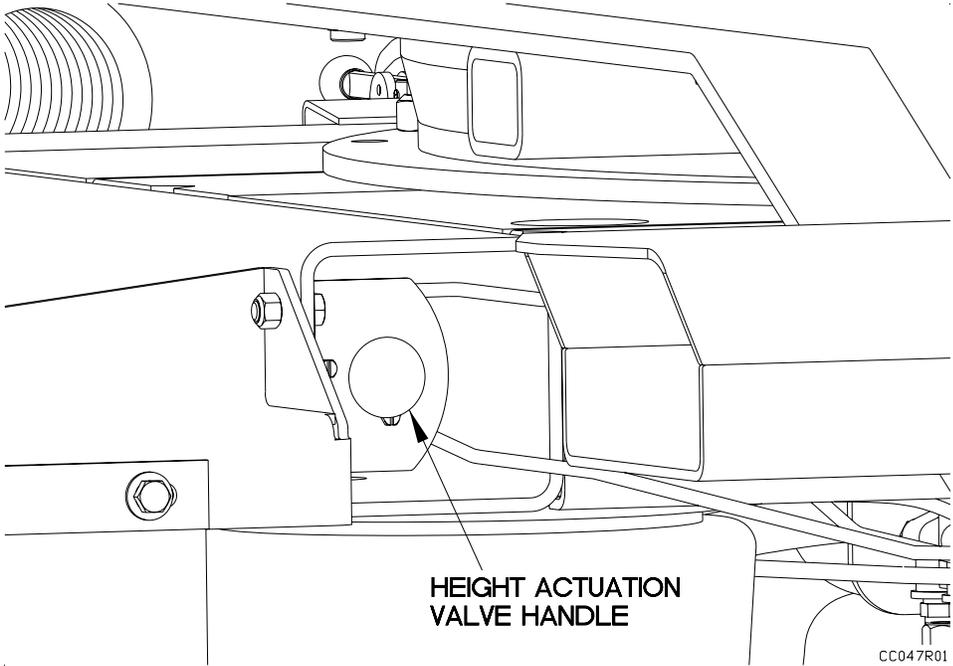
Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

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



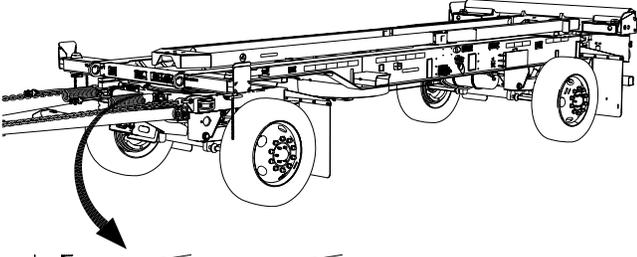
HEIGHT ACTUATION VALVE HANDLE

CC047R01

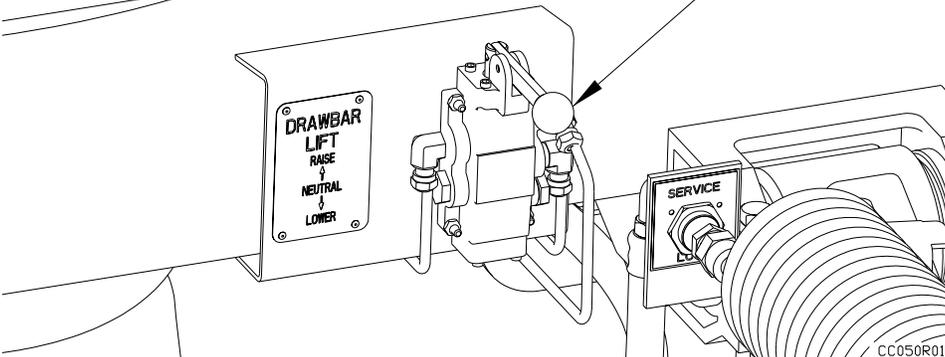
PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

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



DRAWBAR LIFT CONTROL HANDLE

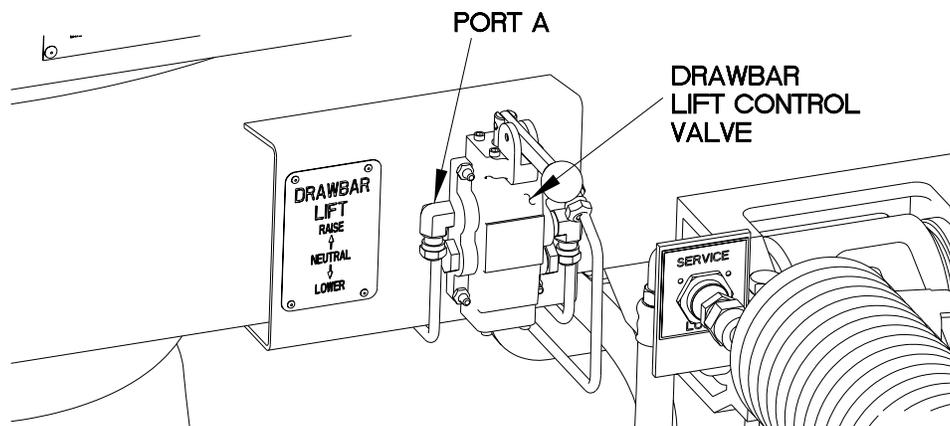


CC050R01

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
3. Is air pressure present at drawbar lift control port A?	<p>No Go to (Indication/Condition 5).</p> <p>Yes Go to (Indication/Condition 6).</p>	<ol style="list-style-type: none"> 1. Disconnect connector on port A from drawbar lift control valve. 2. Lift handle on drawbar lift control valve. 3. Listen and feel for air escaping from port A.

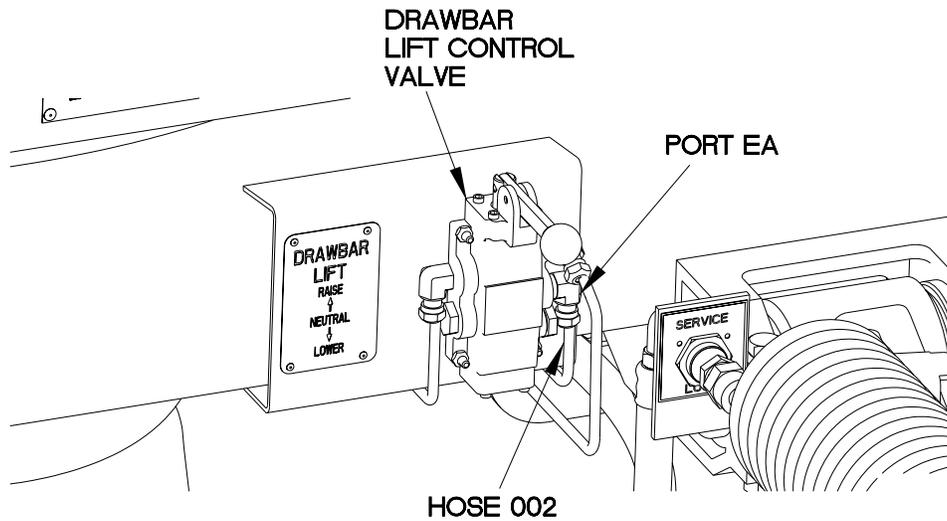


CC050R02

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
4. Is air pressure present at port EA of drawbar lift control valve?	<p>No Replace drawbar lift control valve (WP 0094 00).</p> <p>Yes Replace breather valve (WP 0082 00).</p>	<ol style="list-style-type: none"> 1. Disconnect hose 002 from port EA on drawbar lift control valve. 2. Lower handle on drawbar lift control valve. 3. Listen and feel for air escaping from port EA on drawbar lift control valve. 4. Release handle of drawbar lift control valve.

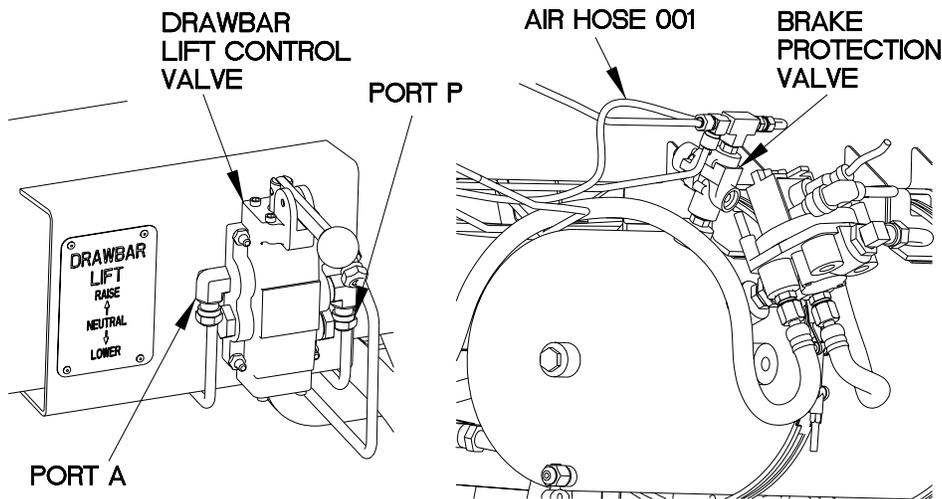


CC050R03

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
5. Does air hose 001 have any kinks, holes, leaks?	<p>No Replace brake protection valve (WP 0075 00).</p> <p>Yes Replace air hose 001.</p>	<ol style="list-style-type: none"> 1. Connect hose 003 to drawbar lift control valve port A. 2. Apply soapy water solution to air hose 001, fittings, and port P. 3. Check air hose 001 between drawbar lift control valve and brake protection valve for bubbles indicating holes or leaks. 4. Check fittings for bubbles indicating leaks.

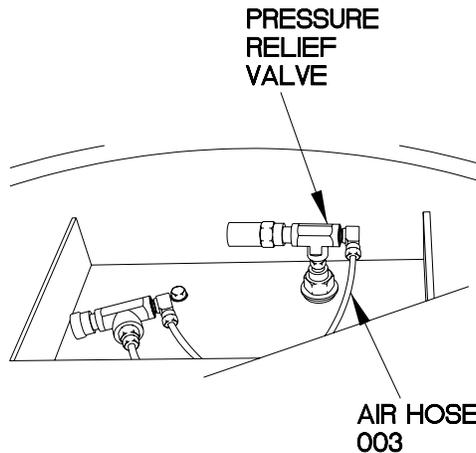
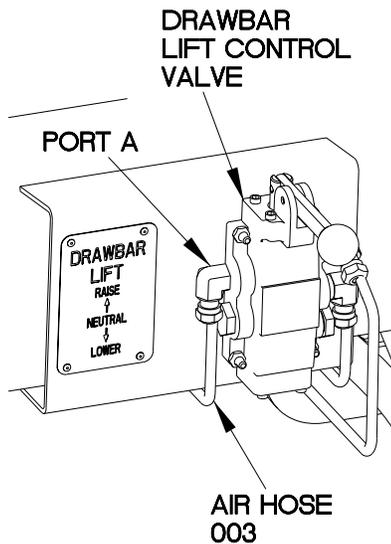


CC050R04

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>6. Does air hose 003 have any kinks, holes, leaks?</p>	<p>No Go to (Indication/Condition 7).</p> <p>Yes Replace air hose 003.</p>	<ol style="list-style-type: none"> 1. Connect air hose 003 to port A on drawbar lift control valve. 2. Lift turntable from frame for access (WP 0099 00). 3. Apply soapy water solution to air hose 003, fittings, and connector A on drawbar lift control valve. 4. Raise handle on drawbar lift control valve. 5. Check air hose 003 and fittings between drawbar lift control valve and pressure relief valve for bubbles indicating holes or leaks.

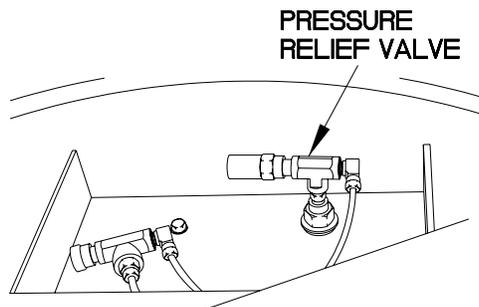
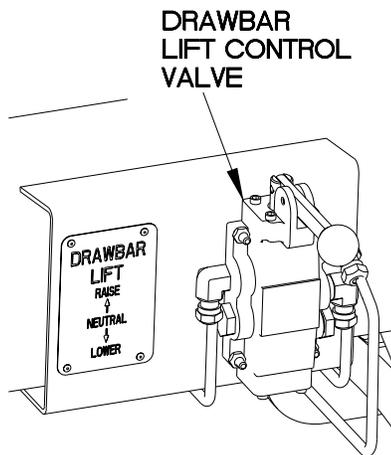


CC050R05

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
7. Is air escaping from pressure relief valve?	<p>No Go to (Indication/Condition 8).</p> <p>Yes Replace pressure relief valve (WP 0068 00).</p>	<ol style="list-style-type: none"> 1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle on drawbar lift control valve. 3. Listen and feel for air escaping from pressure relief valve. 4. Release drawbar lift control handle.

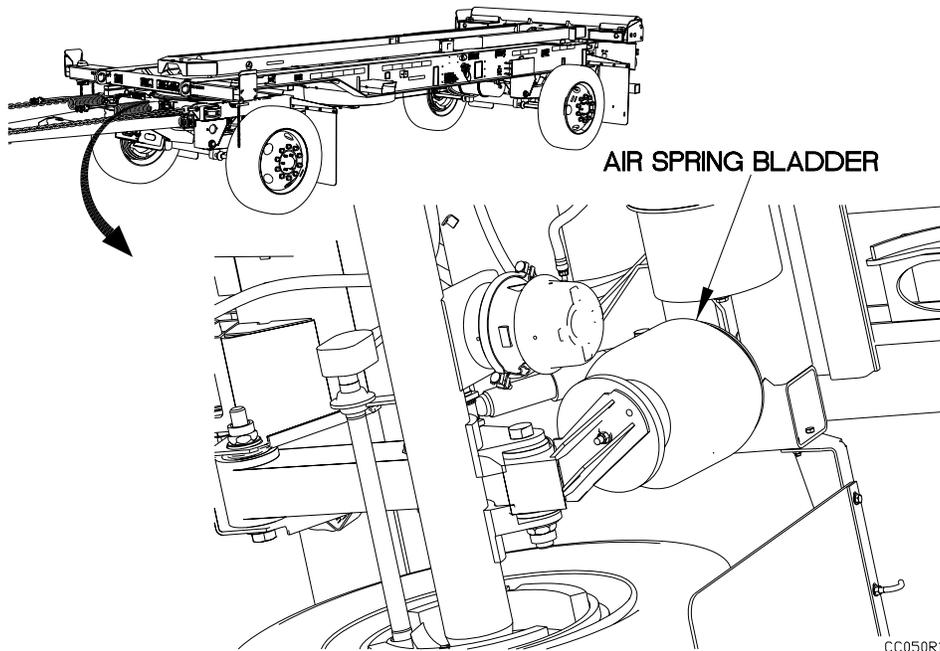


CC050R06

PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

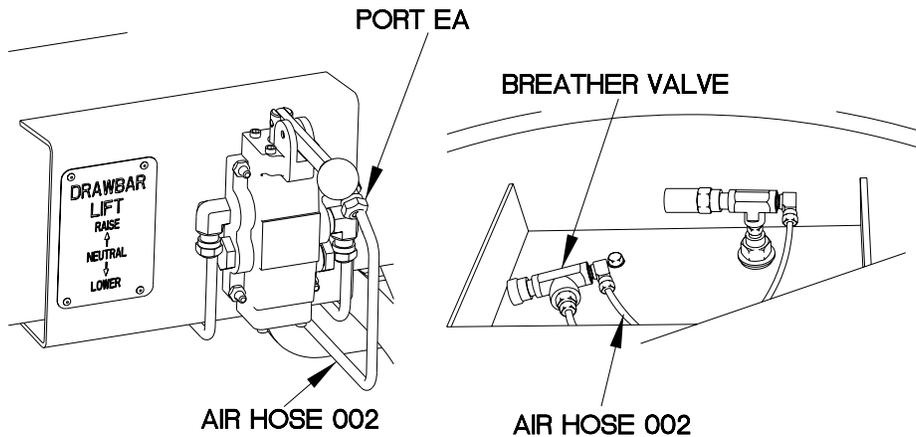
INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>8. Is air escaping from air spring bladder?</p>	<p>No Go to (Indication/Condition 9).</p> <p>Yes Replace air spring bladder (WP 0096 00).</p>	<ol style="list-style-type: none"> 1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle on drawbar lift control valve. 3. Apply soapy water solution to air spring bladder. 4. Look for bubbles to show air escaping from air spring bladder. 5. Release drawbar lift control handle.



PNEUMATIC TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
9. Does air hose 002 have any kinks, holes, or leaks?	<p>No Go to (Indication/Condition 10).</p> <p>Yes Replace air hose 002.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hose 002, fittings, and connector EA on drawbar lift control valve. 2. Raise drawbar lift control valve handle. 3. Check air hose 002 between drawbar lift control valve and breather valve for bubbles indicating holes or leaks. 4. Check fittings for bubbles indicating leaks. 5. Release handle on drawbar lift control valve.



CC050R07

ELECTRICAL SYSTEM TROUBLESHOOTING - Continued

Table 1: Drawbar Does Not Raise/Lower

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
10. Is air escaping from breather valve?	<p>No Replace drawbar lift control valve (WP 0094 00).</p> <p>Yes Replace breather valve (WP 0082 00).</p>	<ol style="list-style-type: none"> 1. Charge trailer air system (TM 9-2320-392-10). 2. Raise handle on drawbar lift control valve. 3. Listen and feel for air escaping from breather valve. 4. Release drawbar lift control handle.

CC050R08

END OF WORK PACKAGE

OVERLOAD INDICATOR DOES NOT OPERATE

0051 00

THIS WORK PACKAGE COVERS:

Pneumatic System Troubleshooting

INITIAL SETUP:

Maintenance Level

Field

Personnel Required

Two

Tools/Special Tools

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

Equipment Conditions

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

Materials/Parts

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

Soap, Laundry (Item 16, WP 0165 00)

References

TM 9-2320-392-10

PROCEDURE

WARNING

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

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

NOTE

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

Tag hoses and connection points prior to disconnecting.

Remove plastic cable ties as required.

OVERLOAD INDICATOR DOES NOT OPERATE-Continued

0051 00

THIS WORK PACKAGE COVERS:
Pneumatic System Troubleshooting

Table 1: Overload Indicator Does Not Operate

INDICATION/CONDITION	DECISION (NO/YES)	PROCEDURAL STEPS
<p>1. Is air present at connection points to gauge at air hoses 018 and 019?</p>	<p>No. Go to (Indication/Condition 2).</p> <p>Yes. Replace Overload Indicator (WP 0106 00).</p>	<ol style="list-style-type: none"> 1. Loosen air hoses 018 and 019 from overload indicator connection points. 2. Charge air system. 3. Check to see if air escapes at connection points of air hoses. 4. Tighten air hose connections at overload indicator.
<p style="text-align: right; font-size: small;">CC051R01</p>		
<p>2. Do air hoses 018 or 019 have any kinks, leaks or holes in them?</p>	<p>No. Proceed to Suspension System Sits Uneven (WP 0045 00).</p> <p>Yes. Replace air hoses 018 and/or 019.</p>	<ol style="list-style-type: none"> 1. Apply soapy water solution to air hoses 018 and 019 and fittings. 2. Check air hoses 018 and 019 between overload indicator for bubbles indicating holes or leaks. 3. Check hoses 018 and 019 for kinks.

END OF WORK PACKAGE