

# Side Guard Trailer Detection

## TSB-54-381-FTL

Creation Date: 2026-03-17

### Engine or Vehicle Affected:

► New Cascadia

Warranty applies to this described condition. See the warranty information at the end of this bulletin.

### Described Condition

New Cascadia vehicles built with Detroit Assurance 5.0 with Active Side Guard Assist were built without an installed trailer air pressure switch. This causes the Active Side Guard Assist system to always respond as if a trailer is present. The cluster a warning light may turn on when the vehicle is bobtail and the side guard is looking for a trailer.

New Cascadia is missing a pressure switch that allows the Single Signal Actuating Module (sSAM) to determine whether a trailer is connected or not.

Side Guard Assist (SGA) always assumes that the truck is connected to a trailer. When a truck is running bobtail, the radar does not adjust to End of Frame (EOF) detection. This leads to false warnings when running bobtail.

Before the repair is completed, a 'with trailer' gray indicator, as shown in Fig. 1, is active while bobtail. This indicates that the full trailer length of SGA is active. After the repair is completed, a 'without trailer' gray indicator, as shown in Fig. 2, is active while bobtail. This indicates that the system is correctly adapted to the absence a trailer.



Fig. 1, 'With Trailer' Gray Indicator



Fig. 2, 'Without Trailer' Gray Indicator

### Parts Table

Table 1, Parts Table

| Part Number   | Part Description | Quantity |
|---------------|------------------|----------|
| A66-16596-000 | HARNESS-FIFTH    | 1        |
| A66-23214-000 | HARNESS, JUMPER  | 1        |
| 12-31615-000  | PRESS, SWITCH    | 1        |
| 23-14416-001  | TEE-BR, PTC      | 1        |

Table 1, Parts Table

### Procedure

1. Park the vehicle on a level surface. Turn the keyswitch OFF, place the transmission in neutral, and set the park brake. Chock the tires.

**Note:** ELECTRICAL SHOCK

To avoid injury from electrical shock, use care when connecting battery cables.  
The magnetic switch studs are at battery voltage.

2. Disconnect any batteries connected to the dashboard center panel.

3.  Remove the center dashboard panel to access the sSAM. See Fig. 3. For information on removing dashboard covers, see the appropriate procedure:

o [harp://6961fed6d5471e51fcb57642/pr/ORIGINAL/Freightliner-0000211877%2054-381%20Side%20Guard%20Trailer%20Detection/0000072409.xml](http://6961fed6d5471e51fcb57642/pr/ORIGINAL/Freightliner-0000211877%2054-381%20Side%20Guard%20Trailer%20Detection/0000072409.xml) in the *New Cascadia Workshop Manual*

o [harp://6961fed6d5471e51fcb57642/pr/ORIGINAL/Freightliner-0000211877%2054-381%20Side%20Guard%20Trailer%20Detection/0000139177.xml](http://6961fed6d5471e51fcb57642/pr/ORIGINAL/Freightliner-0000211877%2054-381%20Side%20Guard%20Trailer%20Detection/0000139177.xml) in the *5th Gen Cascadia Workshop Manual*



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Fig. 3, Center Dashboard Panel Removed

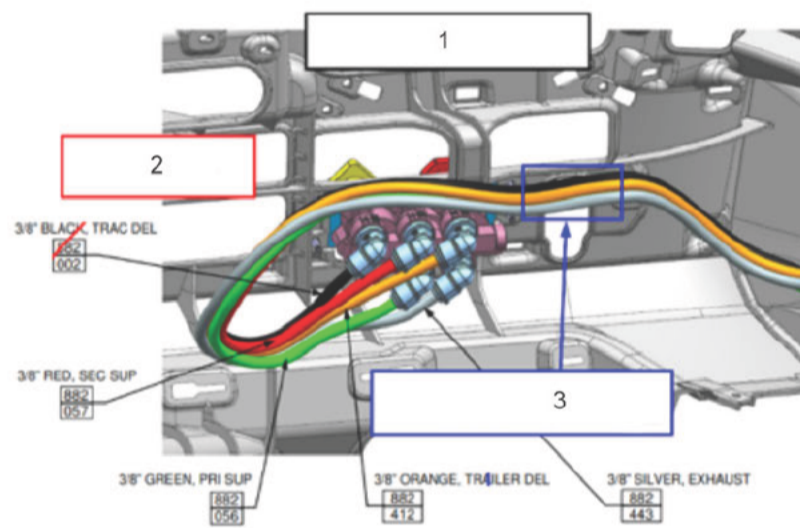
4.  Once the dashboard lower panel is removed, locate and splice the air T with a sensor into the orange trailer delivery line. See Fig. 4 and Fig. 5.



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Fig. 4, Orange Trailer Air Line and Splice Packs

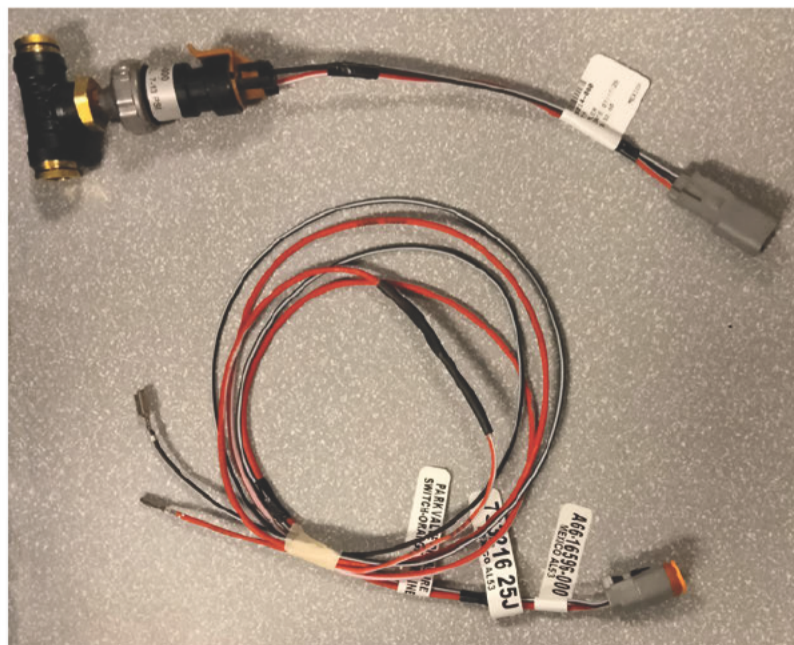


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- 1. VM1360 Lead Serial for Werner Fleet
  - 2. Module 882 Missing Pressure Switch
  - 3. Splice in 12-31615-000 and 23-14416-001 Into Orange Line
- Fig. 5, Installation Drawing

5.  Assemble the air fitting and pressure sensor along with the harness as shown in Fig. 6 and Fig. 7.



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Fig. 6, Air T with Sensor and Harness, Jumper Harness

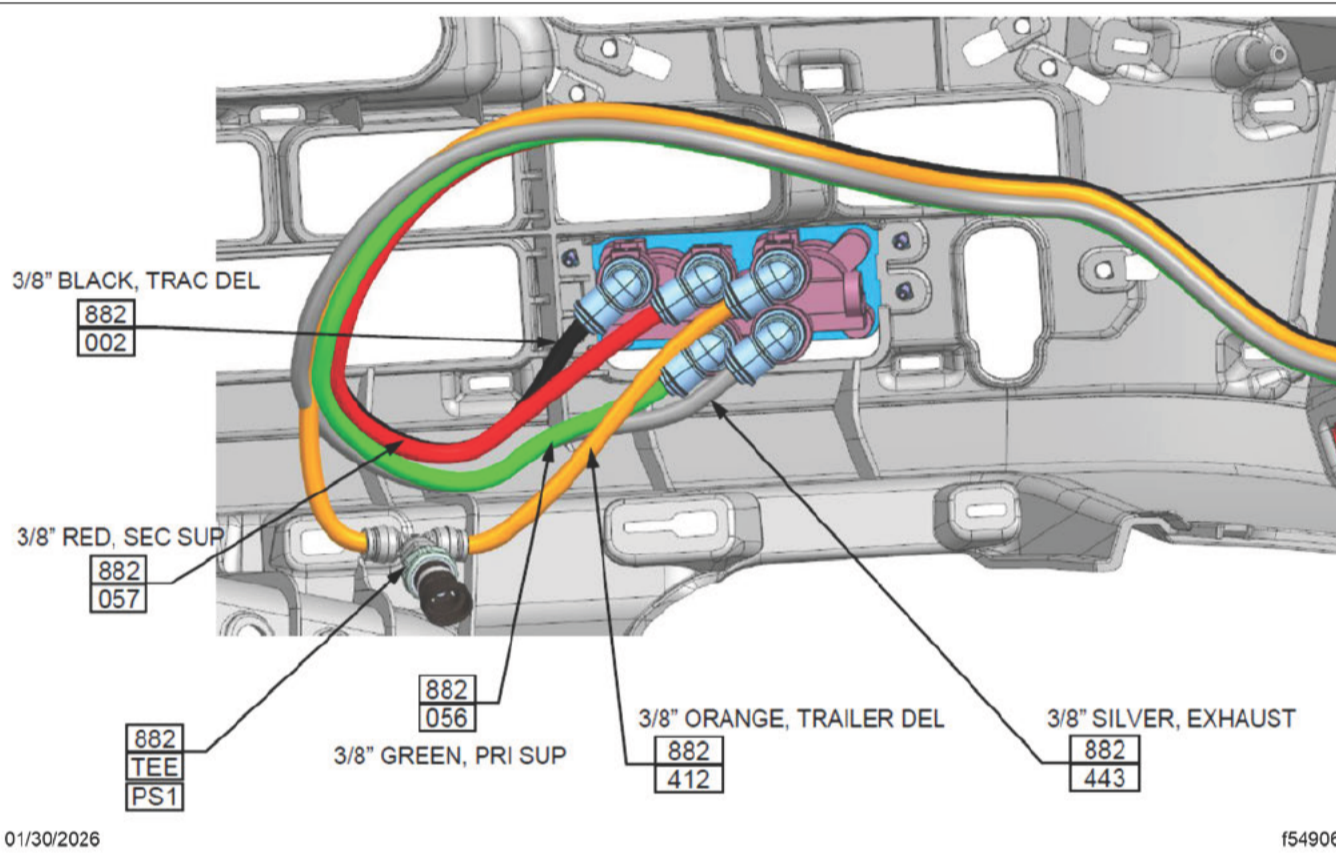


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Fig. 7, Sensor and T with Harness Installed

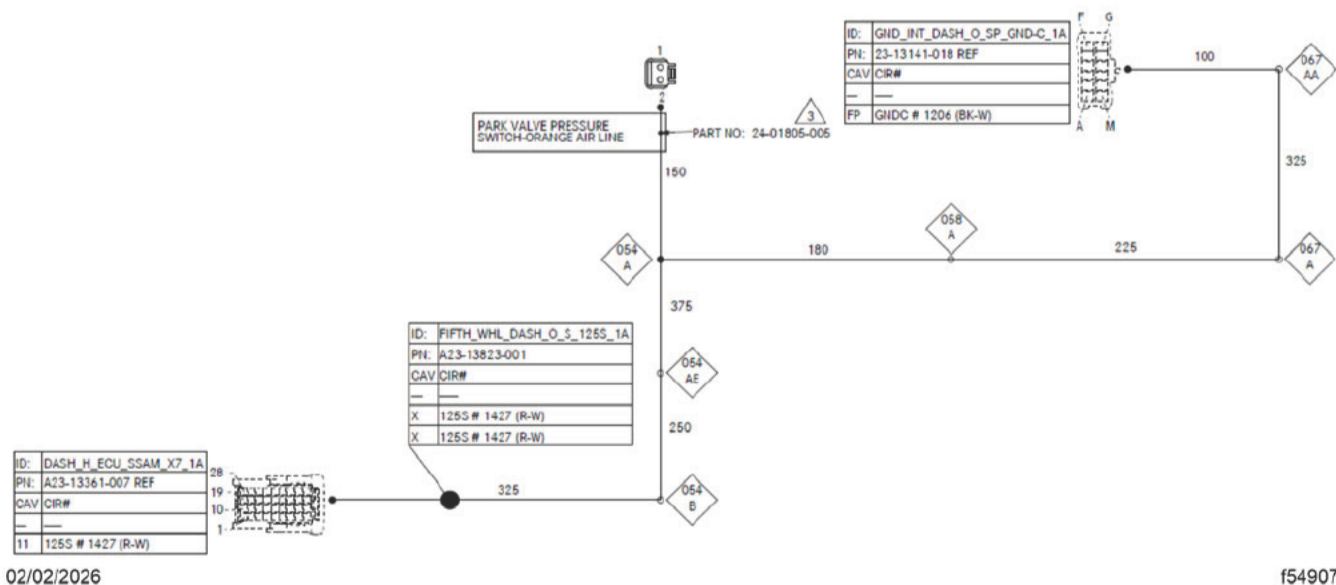
6.  Cut into the T. Splice the T to the orange trailer line. See Fig. 8 and Fig. 9.



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Fig. 8, Sensor Installation Drawing



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Fig. 9, Wiring Diagram with Pin Locations

7.  Route the red and white wire following the dashboard harness to the sSAM. See Fig. 10.



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Fig. 10, Routing the Red and White Wire

8.  Locate sSAM connector X7. See Fig. 11.

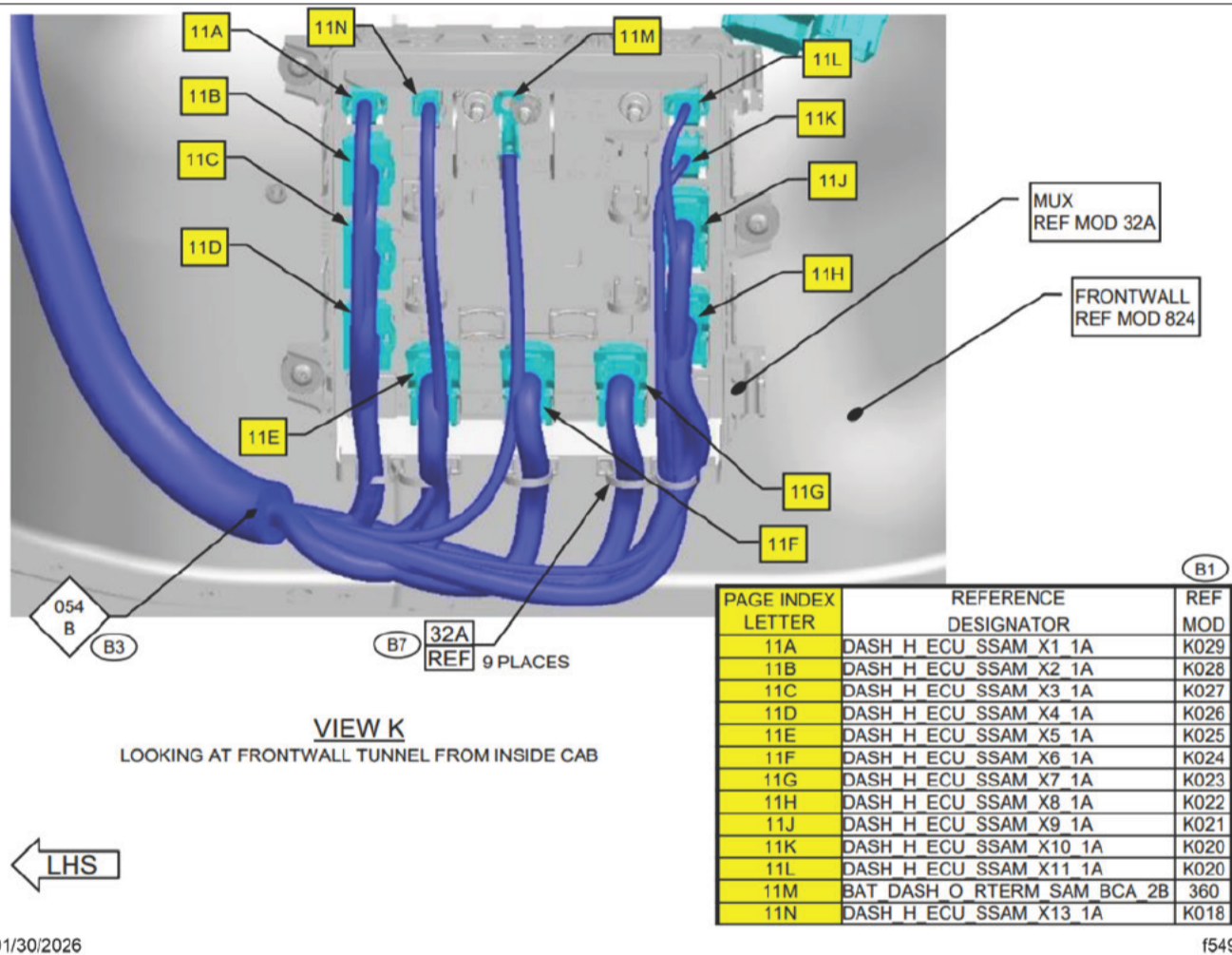
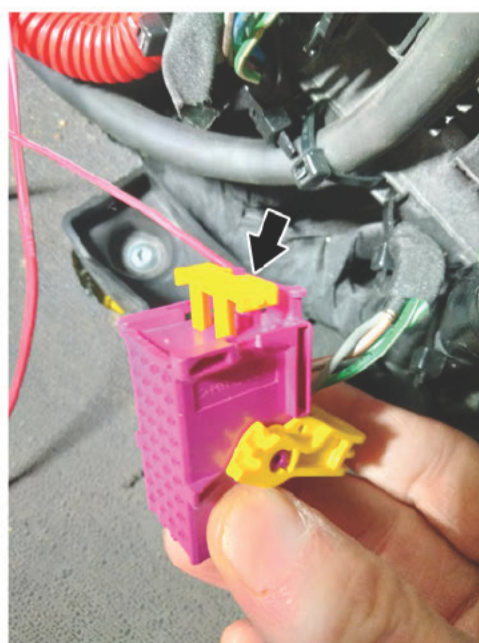


Fig. 11, sSAM Drawing Connector X7 (11G)

9.  Disconnect the X7 connector. Unlock the pin lock. See Fig. 12.



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Fig. 12, Pin Lock Released

10.  Insert the red and white wire into pin location 11. See Fig. 13.



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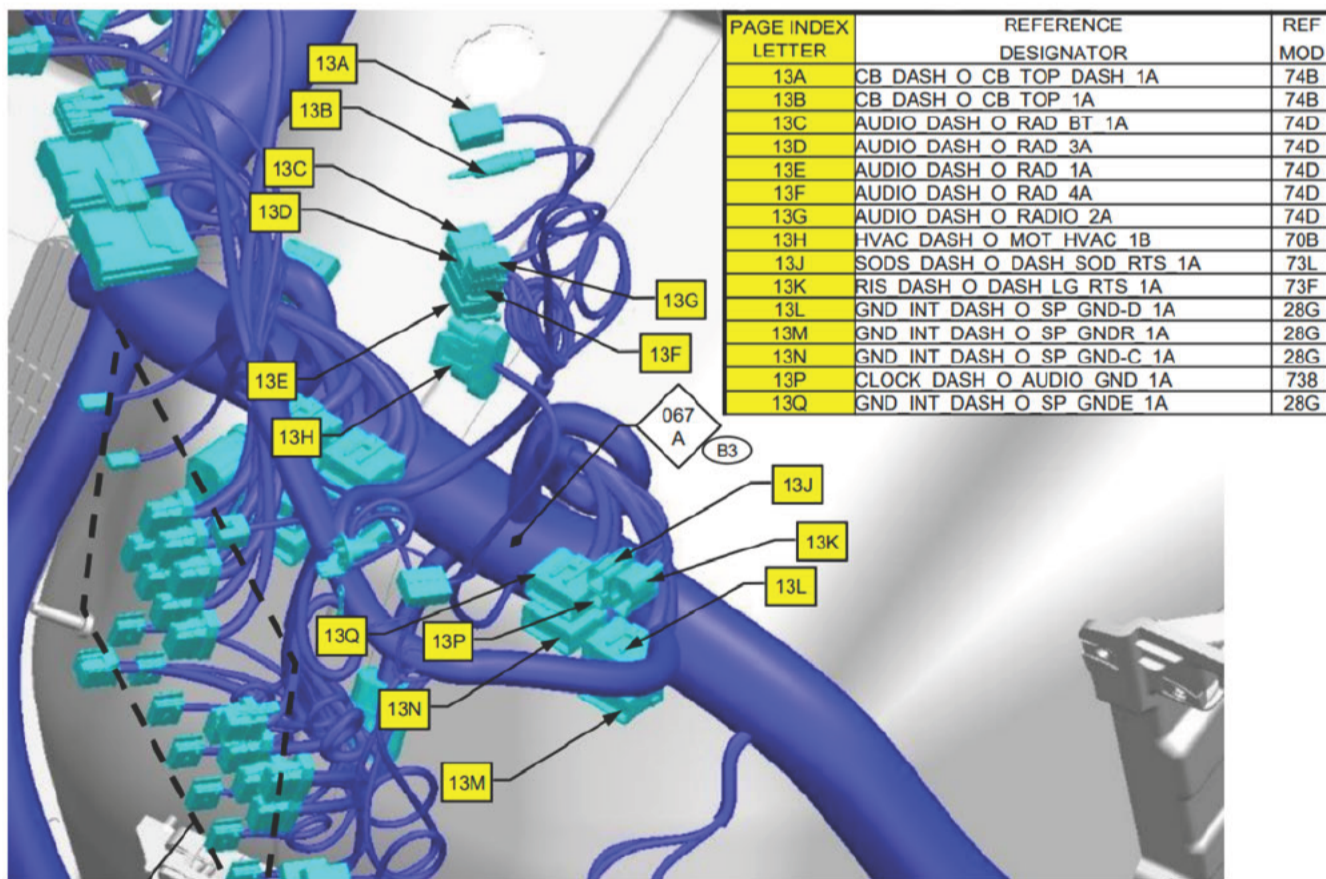
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Fig. 13, Pin Location 11

11.  Press the pin lock back into the locked position. Connect the connector to the sSAM.

**Note:** The ground splice may not be identified as 13N or GND-C on any of the connectors. To locate the correct ground splice, access the Vehicle Power Distribution Module (VPDM). See Fig. 15.

12.  Locate the 13N ground splice pack in the dashboard harness bundle. See Fig. 14.



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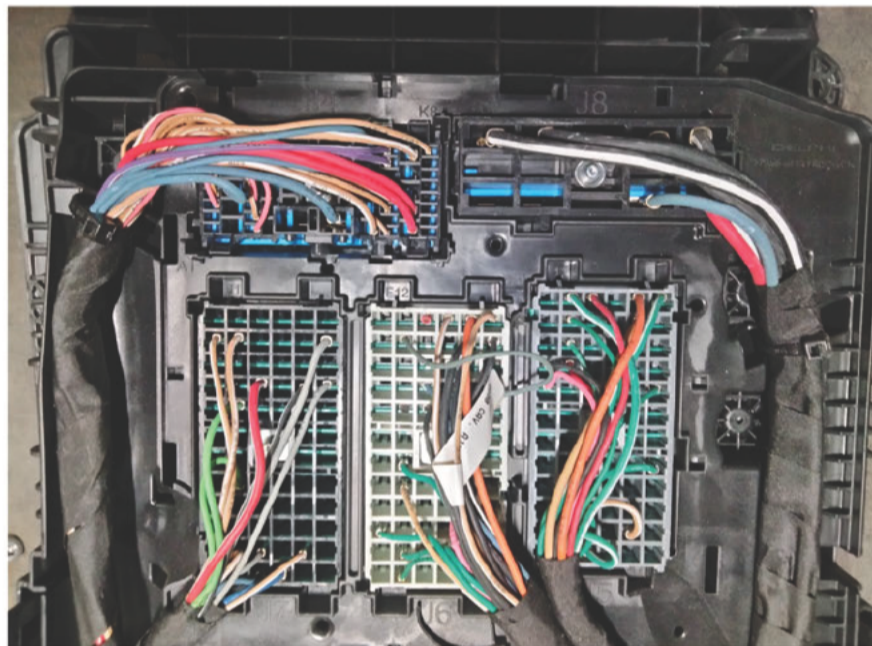
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Fig. 15, Splice Packs

13.  Remove the VPDM from the mounting support.

14.  Remove the VPDM back cover to access the J8 ground connector. See Fig. [16](#).



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Fig. 16, VPDM J8 Connector

15.  Remove the J8 connection from the back of the VPDM. Check the continuity on the J8 harness until J8-C2 rings out with the chosen splice pack. Check the continuity on the splice packs until 13N is located.

16.  Once the ground splice pack is located, remove the pin lock. See Fig. [17](#).



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Fig. 17, Splice Pack Unlocked

17.  Inset the black and white wire from the sensor harness into the splice pack.
18.  Install the lock.
19.  Install the removed J8 connector of the VPDM. Install the VPDM back cover.
20.  Install the VPDM on the dashboard support.
21.  Tie back and secure the ground splice packs.
22.  Install the dashboard panels as required.

**Warranty**

This procedure is warrantable only if the described condition exists and the repair is performed within the applicable base or extended coverage warranty period. If a failure is not found, this procedure is considered preventive and warranty does not apply.

See Table 2 for OWL VMRS codes and labor allowance information. Enter this service bulletin number in the Service Bulletin # field.

Table 2, OWL VMRS Codes and Labor Allowance

| Primary Failed Part | Component Code | Cause Code | Correction Code | SRT Code  | Description                                 | Hours |
|---------------------|----------------|------------|-----------------|-----------|---|-------|
| 12-31615-000        | 053-025-002    | 14         | 14              | 882-5010A | PRESSURE SWITCH, INSTALL, SIDE GUARD ASSIST | 0.5   |

Table 2, OWL VMRS Codes and Labor Allowance

**Note:**

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F35  
F36  
REPLACE

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