**Description of Revisions:** *This bulletin replaces the version dated February 2010. The notice in solution C has been updated to state that the additional circuit must not exceed 0.5 amps.*

# General Information

Body builders often need to access a 12 volt brake signal when adding components to the vehicle. Refer to **Table 1** to determine which method is best for the vehicle being modified, then follow the instructions in the appropriate procedure below.

| Solution Type by Vehicle Configuration | |
|---|---|
| **Vehicle Configuration** | **Solution** |
| Truck without a trailer power distribution module (PDM), and with air brakes | A |
| Truck or tractor with a trailer PDM and air brakes | B |
| Truck with hydraulic brakes | C |

**Table 1, Solution Type by Vehicle Configuration**

# Solution A: Adding a Separate Stop Lamp Switch to a Pneumatic System

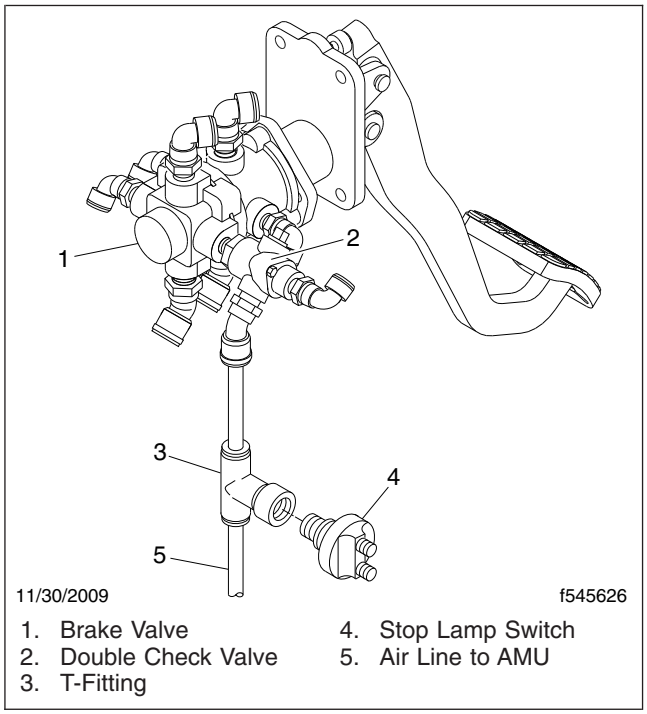
**Table 2** lists the required parts for adding a stop lamp switch.

| Required Parts for Solution A | |
|---|---|
| **Description** | **Part Number** |
| T-Fitting, Push-in, 1/4-inch and 1/4-inch NPT | SMC KV2TF07 35 |
| Stop Lamp Switch, Normally Open, Closes at 3-5 psi, 1/4-inch NPT mounting, 12 Volt, 30 amps maximum | TDA RBE13250 |

**Table 2, Required Parts for Solution A**

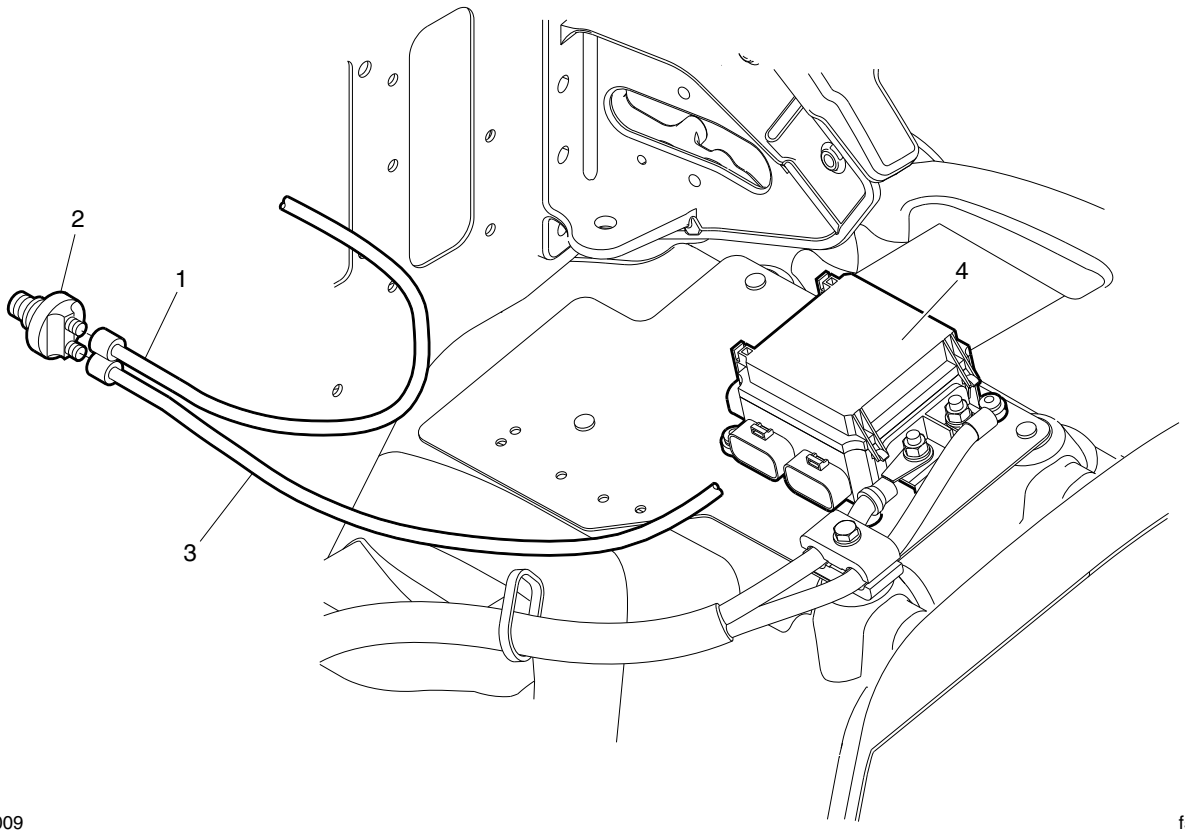
1. Shut down the engine and chock the tires.
2. Drain the air system.
3. Install the stop lamp switch in the tee fitting. See **Fig. 1**.
4. Cut the 1/4-inch air line that runs from the double check-valve between the primary and secondary service supply to the AMU in an easily accessible place under the hood.
5. Install the T-fitting and switch in the line.
6. Secure the switch so that it does not pinch the line, or move around excessively.
7. If a 12 volt brake signal is needed, continue with the following steps.

   Refer to **Fig. 2** for wiring installation, and **Fig. 3** for PDM fuse locations. See **Table 3** and **Table 4** for required parts for this procedure.



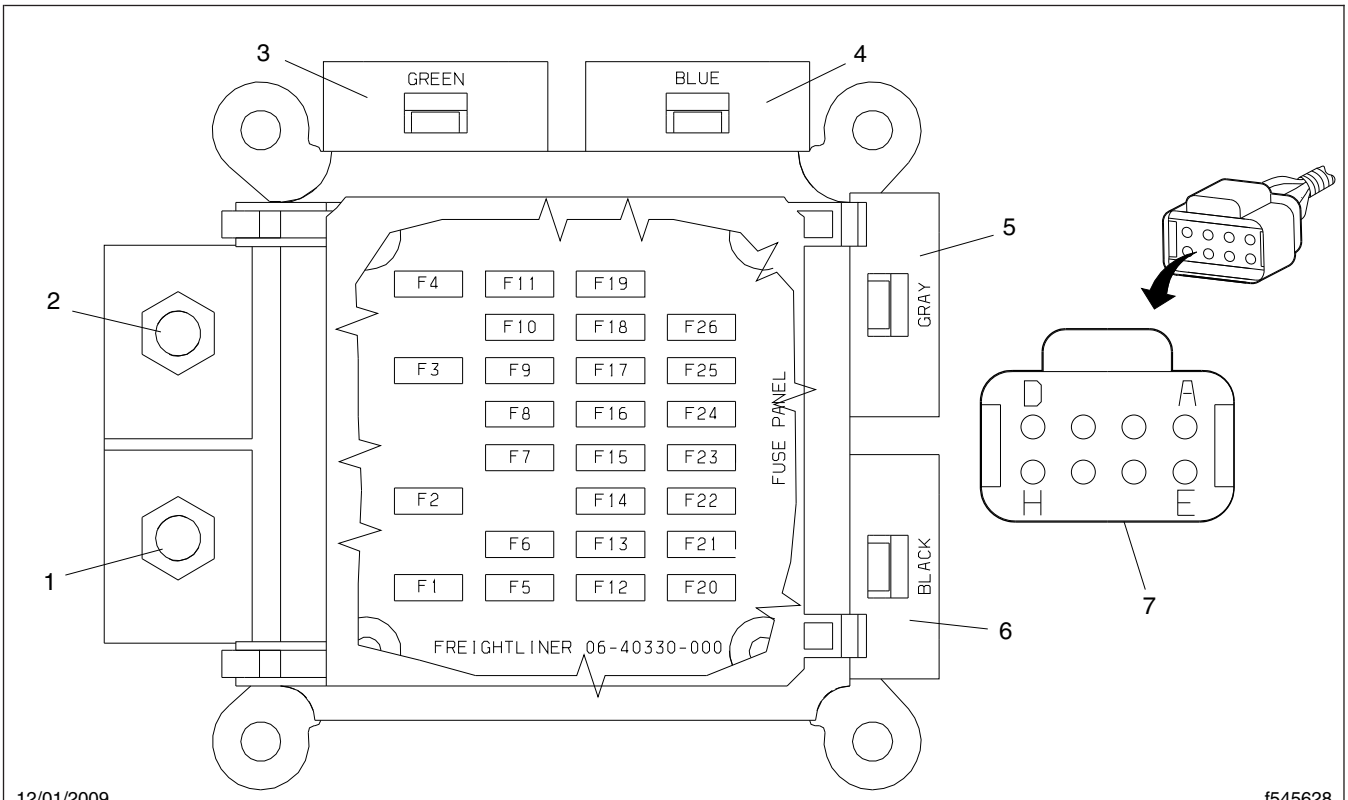

1. Brake Valve
2. Double Check Valve
3. T-Fitting
4. Stop Lamp Switch
5. Air Line to AMU

**Fig. 1, Stop Lamp Pressure Switch Installation**




1. Wire to Bulkhead Connector (Wire 1)
2. Stop Lamp Switch
3. Wire to PDM (Wire 2)
4. PDM

**Fig. 2, Wiring for Added Stop Lamp Switch**




1. Battery Power to 125 amp MEGA Fuse 2
2. Battery Power to 125 amp MEGA Fuse 1
3. Engine Harness Connector (green)
4. Forward Chassis Harness Connector (blue)
5. Forward Chassis Harness Connector (gray)
6. Frontwall Connector (black)
7. 8-Cavity Connector

**Fig. 3, PDM Connector and Fuse Locations**

| Required Parts for Wiring a Service Brake 12 Volt Signal | | |
|---|---|---|
| **Description** | **Part Number** | **Note** |
| **Wire 1: Bulkhead Connector Inside Cab** (use only if cab access is required) | | |
| Female Terminal for 18-20 GA Wire | F6DB 14487 CA | — |
| Female Terminal for 14-16 GA Wire | F6DB 14487 BA | — |
| Female Terminal for 10-12 GA Wire | F6DB 14487 AA | Must use the large cavities in the connector. |
| **Wire 1: Bulkhead Connector Outside Cab** | | |
| Male Terminal for 18-20 GA Wire | F6DB 14461 DA | — |
| Male Terminal for 14-16 GA Wire | F6DB 14461 CA | — |
| Male Terminal for 10-12 GA Wire | F6DB 14461 BA | Must use the large cavities in the connector. |
| **Wire 2: Under Hood Power Distribution Module (Main)** | | |
| Female Terminal for 16-18 GA Wire | PAC 12077411 | Wire seal required, P/N 23-12497-000 (Gray) |
| Female Terminal for 14 GA Wire | PAC 12129493 | Wire seal required, P/N 23-12497-001 (Blue) |

| Required Parts for Wiring a Service Brake 12 Volt Signal | | |
|---|---|---|
| **Description** | **Part Number** | **Note** |
| Female Terminal for 10-12 GA Wire | PAC 12077413 | Wire seal required, P/N 23-12497-001 (Blue) |

**Table 3, Required Parts for Wiring a Service Brake 12 Volt Signal**

| PDM Fuses | |
|---|---|
| **Description<br>Fuse-Size, (A=Amps), Color** | **Part Number** |
| Fuse-Mini, 5A, Tan | 23-12537-005 |
| Fuse-Mini, 10 A, Red | 23-12537-010 |
| Fuse-Mini, 15A, Blue | 23-12537-015 |
| Fuse-Mini, 20A, Yellow | 23-12537-020 |
| Fuse-Mini, 30A, Green | 23-12537-030 |

**Table 4, PDM Fuses**

8. Connect one wire (wire 2) to the stop lamp switch and to an appropriately sized unused fuse terminal location on the main PDM. See **Table 5** for spare fuse locations and corresponding PDM output pins.

| Spare Fuse Locations<br>(PDM fuses and the corresponding PDM output pins) | |
|---|---|
| **PDM Fuse** | **Output Connector and Terminal** |
| F10 | Blue G |
| | Green F |
| F11 | Blue H |
| F12 | Black H |
| F14 | Black B |
| F21 | Black F |
| F23 | Gray H |
| | Blue E |
| F25 | Gray C |
| F26 | Gray A |
| | Gray B |
| | Blue D |

**Table 5, Spare Fuse Locations**

9. Place a fuse in the location corresponding to the terminal and connector that will be used.
10. If the 12 volt stop lamp signal is needed inside the cab, continue with step 10, otherwise connect an appropriately sized wire to the other ring terminal on the switch and route it to the load.
11. Attach a ring terminal to an appropriately sized wire (wire 1) and install it to the unused terminal of the switch. Route the wire to the predetermined location of the bulkhead connector.
12. Insert the wire for the inside cab circuit into the corresponding location of the bulkhead connector.
13. Route this wire to the in-cab load.

## Solution B: Accessing Service Brake Signal at the Trailer PDM Connector

**NOTICE**

**Trailer wiring and service brake wiring can not exceed 30 amps total. Overloading the circuit can damage the wiring.**

Refer to **Fig. 4** for stop lamp signal access.

NOTE: The trailer PDM is located on the frame rail near the rear crossmember.

1. Shut down the engine and chock the tires.
2. Disconnect the gray connector from the trailer PDM.
3. Pull back the convoluted tubing and locate wire 36.
4. Splice in a connector for a new 12 volt service brake signal (stop lamp).

## Solution C: Access Service Brake Signal at the Stop Lamp Switch, Hydraulic Brakes

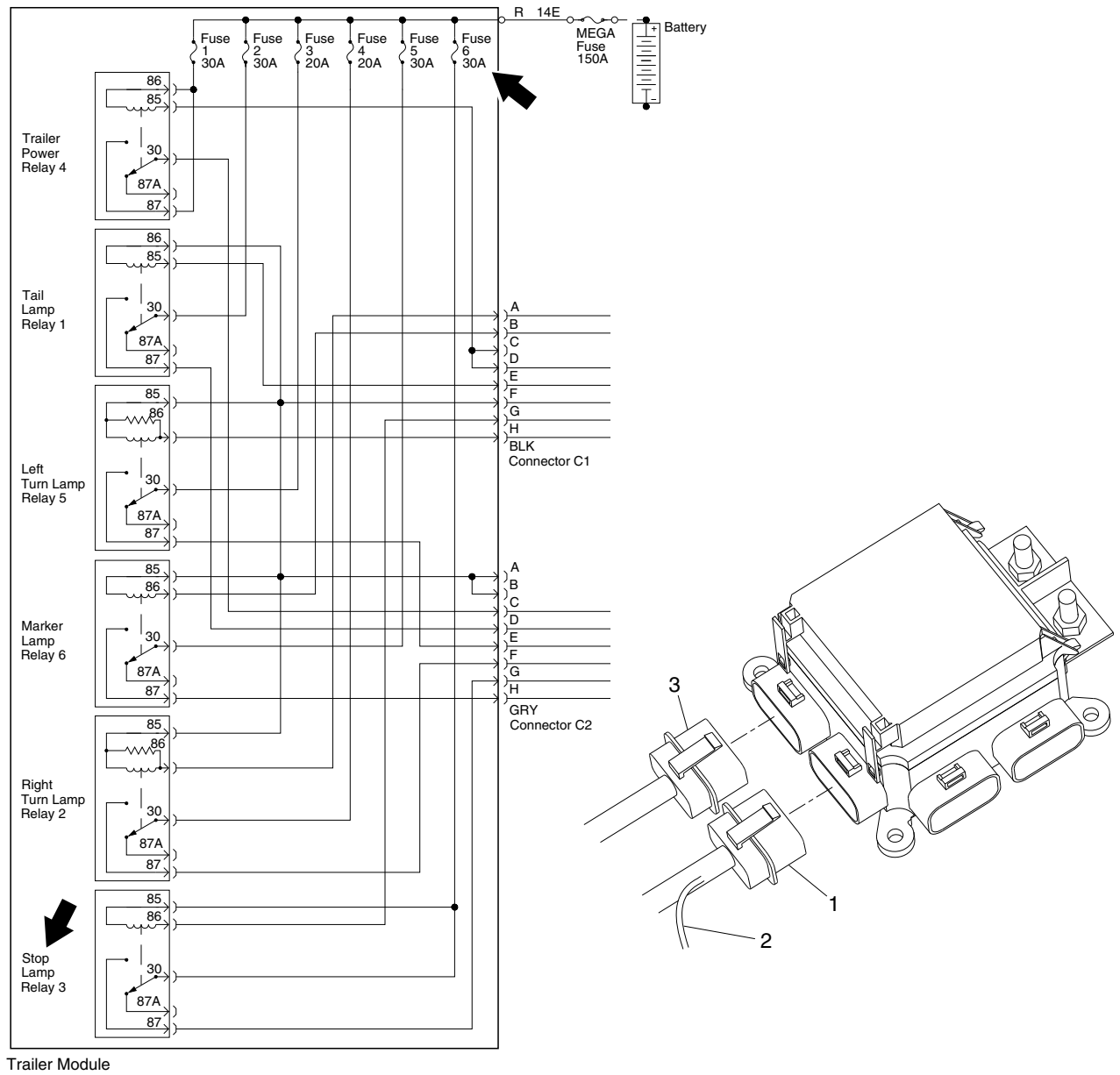
Refer to **Fig. 5** for stop lamp signal access.

1. Shut down the engine and chock the tires.
2. Disconnect the connector at the stop lamp switch near the brake pedal.
3. Pull back the convoluted tubing, and locate wire 388L.

**NOTICE**

**The additional circuit must not exceed 0.5 amps; the maximum carry current of the switch is 1 amp. A higher amperage circuit may overload the original circuit. If a higher amperage circuit is required, use this circuit to activate a relay.**

4. Splice a connector into wire 388L to allow for the additional circuit.

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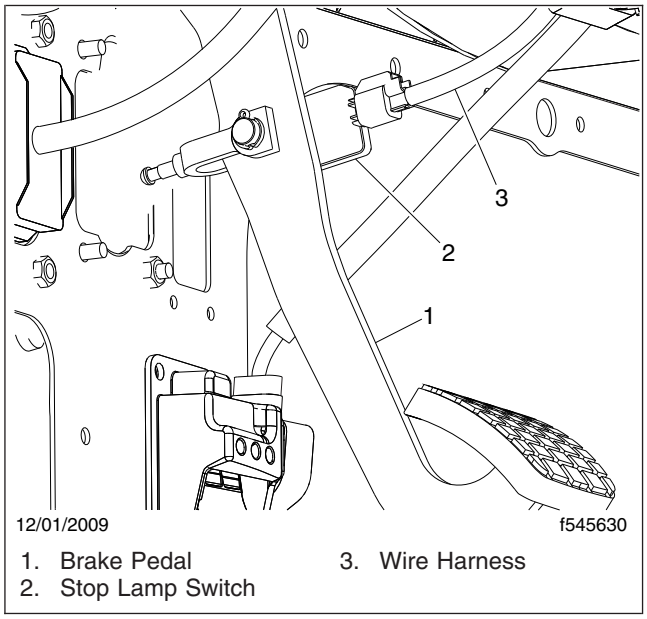
1. Gray Connector to Trailer
2. 12 Volt Service Spliced into Wire 36
3. Black Connector from Chassis Module

**Fig. 4, Stop Lamp Signal Access at the Trailer PDM**




1. Brake Pedal
2. Stop Lamp Switch
3. Wire Harness

**Fig. 5, Accessing Service Brake Signal**

## Parts

Parts are available through the parts distribution center (PDC).

## Warranty

This bulletin is informational only. Warranty does not apply.