

# UI BULLETIN # 66



**SUBJECT:** Brake Controller Wiring Requirements

**MODELS AFFECTED:** Medium Duty C

**MODEL YEAR(S):** 2003 to 2009

**DATE:** 7/28/03

**REVISION DATE:**

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**ADVISORY**

## Brake Controller Wiring Requirements

The bulletin provides a recommended practice to connect an Electric Trailer Brake Controller in the 2003 Medium Duty Family 2 vehicles. Trailer Brake Controllers are added inside the Cab within the reach of the driver. 1999 and beyond C/K vehicles provide for an in-cab electrical connection for electric brakes (see UI Bulletin # 57). No in-cab connections exist with the Topkick or Kodiak and the signals must be obtained from other sources. The bulletin will answer the following questions:

1. What signals are required?
2. Where is the Aux Brake Wire located?
3. Where do you get the other signals?
4. How do you get the wires into the Cab?

### 1. What signals are required?

Signals required for an electric trailer brake controller are listed in the chart below:  
The trailer brake jumper harness contains the following circuits:

PIN	Wire Color	Description
A	Brown:	Interior Park Lamp
B	Red:	Power
C	Dark Blue:	Trailer Brake – Module output to 7-way trailer connector
D	Light Blue:	Brake Switch – Input to Electric Brake Module
E	Not Used	
F	Black:	Ground

**Note:** The Brown Interior Park Lamp Signal is available on the C/K for control illumination but not on the Medium Duty vehicles

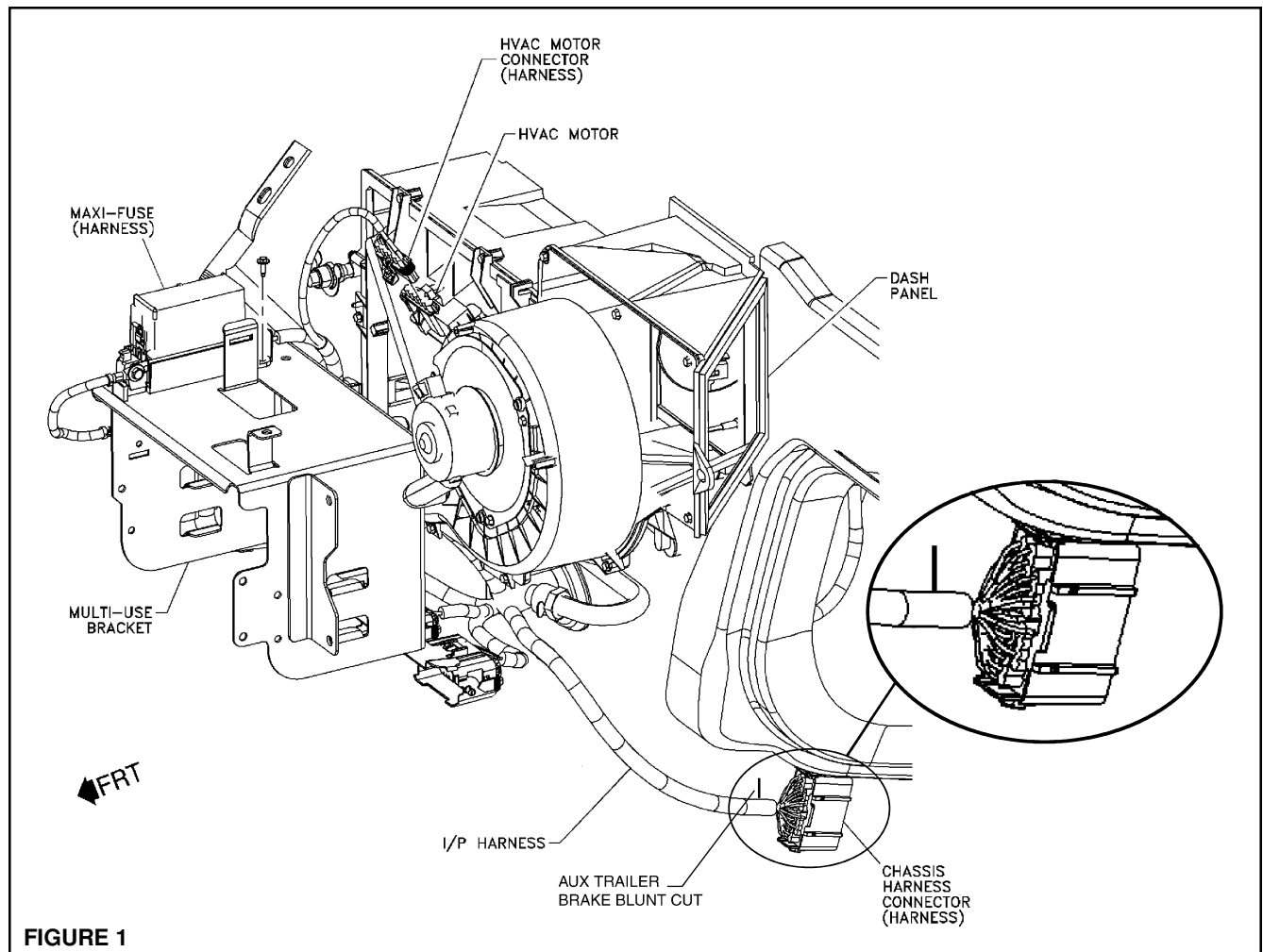
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## 2. Where is the Aux Brake Wire located?

The Dark Blue Aux Trailer Brake wire runs from the 7-way trailer connector and is terminated in a blunt cut located under hood. This wire sticks out of the IP harness conduit (approximately 2 inches) at the IP to Chassis Harness connector as shown in figure 1. This wire must be spliced with another wire to the brake controller. See “Splicing Guidelines” under the “Electrical System Design Guidelines” section in the Electrical Best Practices Manual available on the Upfitter Integration website.

An alternative location is close to the 12-way body builder connector shown in figure 2. Open the Chassis harness conduit at the cab and look for the dark Blue wire. Cut this wire and terminate in one of the spare cavities of the 12-way body builder connector.



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## 3. Where do you get the other signals?

Power, Ground and the Brake signal can be obtained from the 12-way body builder connector located on the chassis (see figure 2).

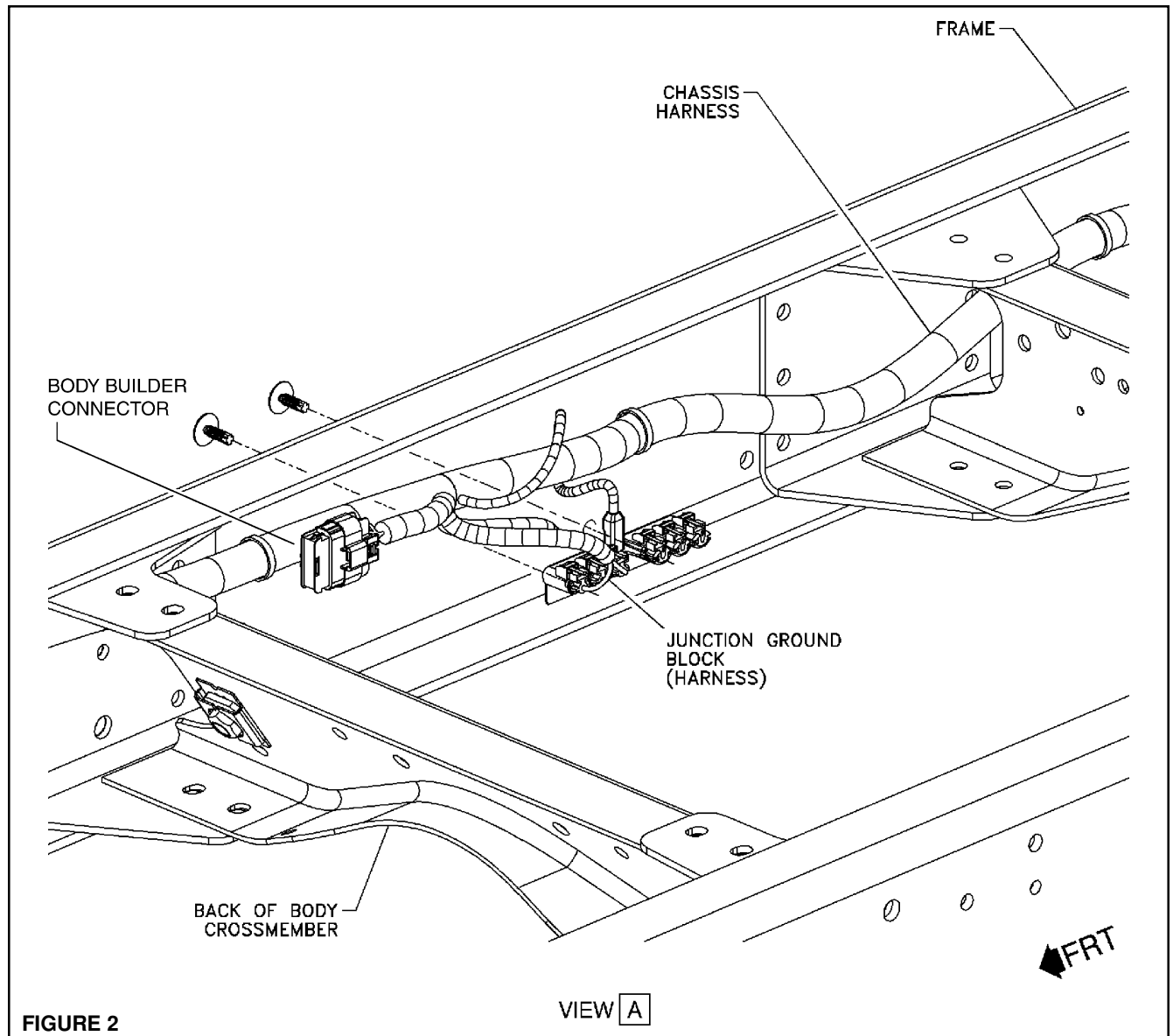


FIGURE 2

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The following circuits are required to complete electric trailer brakes:

PIN	Wire		Function
	Ckt #	Color	
E	1320	BLU LT	Stop
F	641	BRN	IGN 3
H	350	BLK	GND Zone 3B

Connector pin assignments, Circuit numbers, Wire Colors and Circuit functions are shown in figure 3. The mating connector is included with the vehicle. Terminals required for these 3 wires are indicated in figure 3.

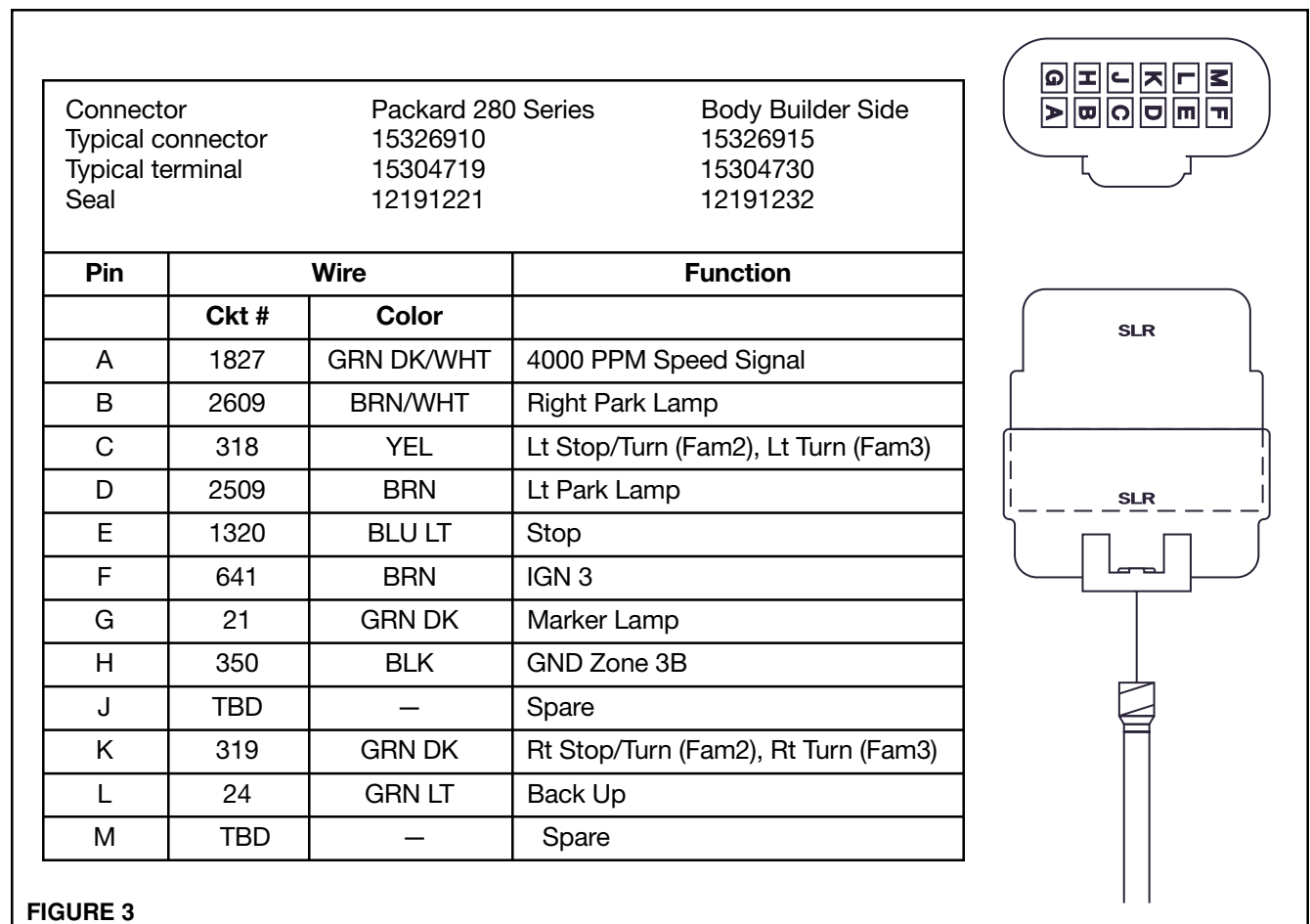


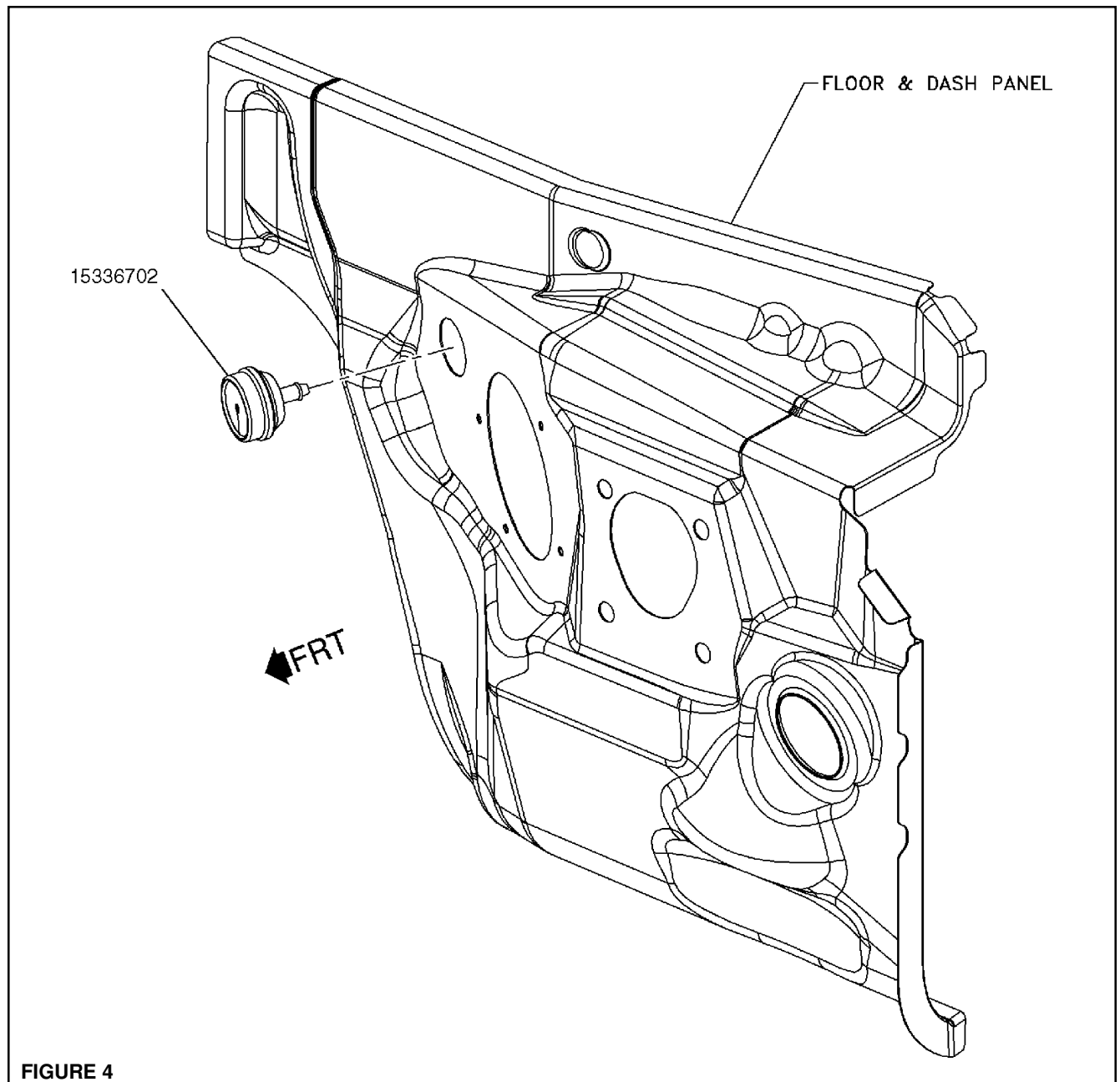
FIGURE 3

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## 4. How do you get the wires into the Cab?

The Topkick and Kodiak trucks have a pass through hole and grommet to protect additional wires as they pass from the engine compartment into the cab (see figure 4). The grommet is located under hood on the drivers' side close to the top of the dash panel, or inside the cab above the brake pedal.

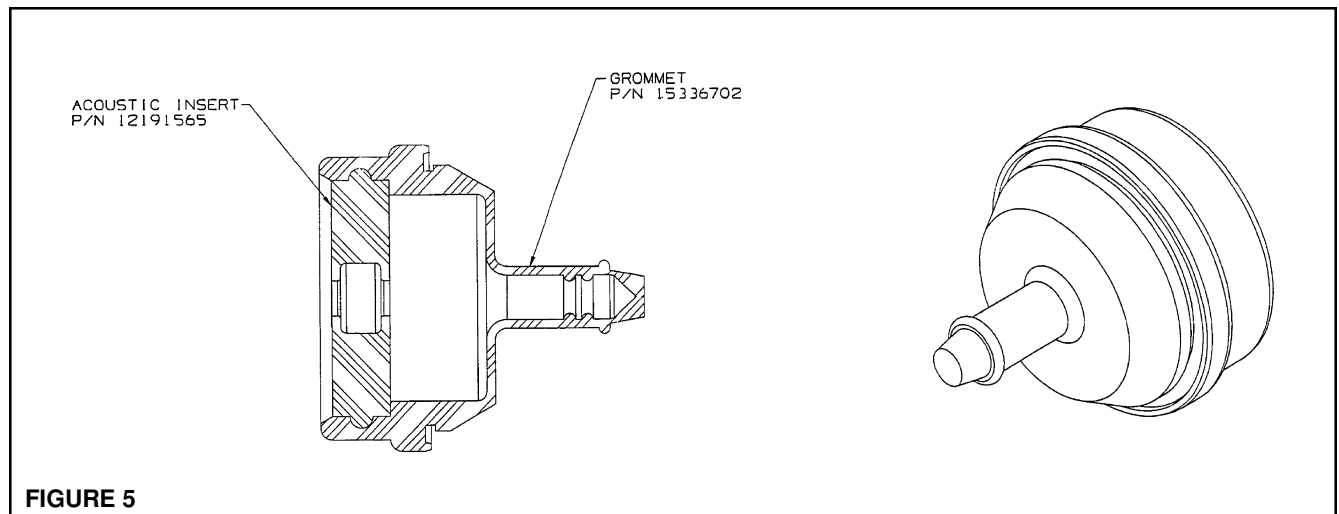


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To use the grommet (part# 15336702), the upfitter first removes the acoustic insert (see figure 5). Next the tape tab end of the grommet (in the passenger compartment) is sliced off. The grommet is then spread open to pass the wires into the passenger compartment. The acoustic insert is then placed around the wires and pushed back into the grommet to form a seal around the wires.



Wiring must be protected when being routed to the hole. See "Wire Routing Guidelines" under the "Electrical System Installation Guidelines" section in the Electrical Best Practices Manual available on the Upfitter Integration website.

The Upfitter is responsible to terminate the wires to the Brake Controller with the appropriate connector.

Note: Upfitter Integration website: [www.gmupfitter.com](http://www.gmupfitter.com)