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FIELD SERVICE BULLETIN

FS-2019-01: Procedure For Replacing Honeywell 4-lb Foot Brake Pressure Switch with Index 4-lb Foot Brake Pressure Switch

Date: February 15, 2019

Model: All

Model Years: 2016 - 2018

Because of the high failure rate of the Honeywell/Hobbs 4-lb foot brake pressure switch, we are replacing them with an Index foot brake pressure switch, which has been found to be much more robust.

The attached instructions should be used when replacing the switch.

Note that the instructions are slightly different between G-4 systems and G-3 systems.

Approved:

Robert L. Birdwell, Executive Director
Quality Control & Field Service

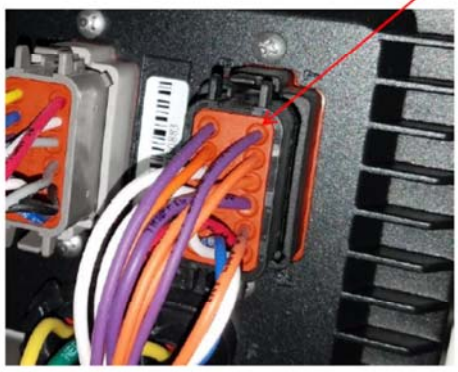
Foot Brake Pressure Switch Resistor Harness Installation w/G4

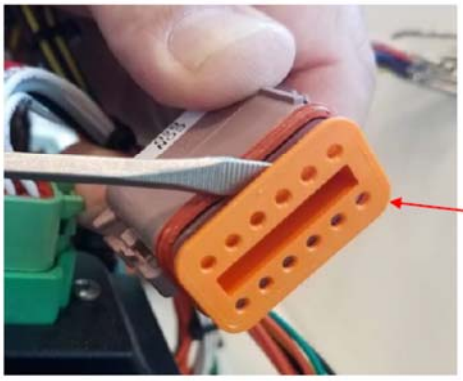
With the new Index foot brake pressure switch replacement, a resistor harness is needed to increase the input current required for the switch and multiplex system. This document will provide installation instructions for the resistor harness on the Front Electrical Panel B3 I/O module.
Always turn off the master battery disconnect switch before performing any electrical work on the bus.

This re-work requires removing the existing "FOOT BRAKE SW" brake switch input purple wire from the B3 I/O Module, inserting this wire into the provided Deutsch 2-way connector (attached to the Resistor Harness 50-69503-006), inserting the new harness Brake switch input wire in place of the removed wire and connecting the other end of the resistor wire to the Circuit Breaker ¼" push-on ground terminal.

The B3 module is the center module of the front I/O Panel. The existing Foot Brake Pressure switch input wire (purple) is located in silo 7 of Connector B3B (black). Remove the connector from the module and pry off the orange wedgelock from the face of the connector using a small flatblade screwdriver.

Foot Brake Pressure Switch Resistor Harness Installation w/G4

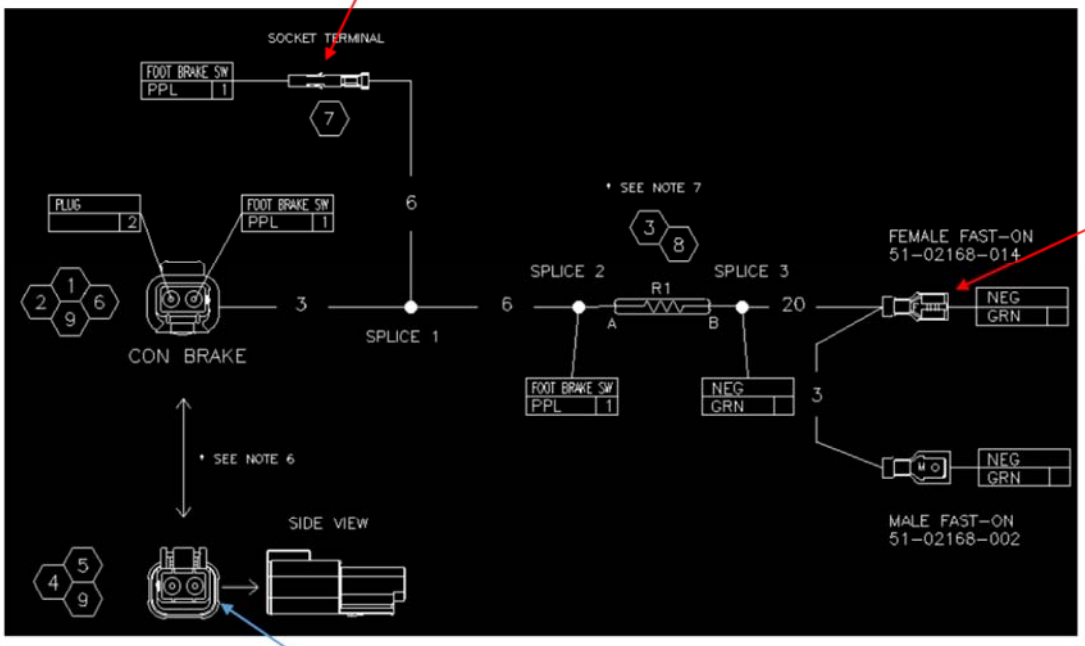




Using the small blade screwdriver, release the locking tab while pulling gently on the purple Brake switch wire to remove from back of connector.

Foot Brake Pressure Switch Resistor Harness Installation w/G4

Insert new brake switch circuit into B3 Module connector silo 7 and reinstall wedgelock and reconnect to B3 I/O module.



Connect Neg circuit to Circuit Breaker board ¼" push-on terminal

Insert existing foot brake press. switch circuit into loose 2-way receptacle silo 1 (after removing wedge lock from the face of the connector. Reattach wedge and connect receptacle back to resistor harness mating plug.

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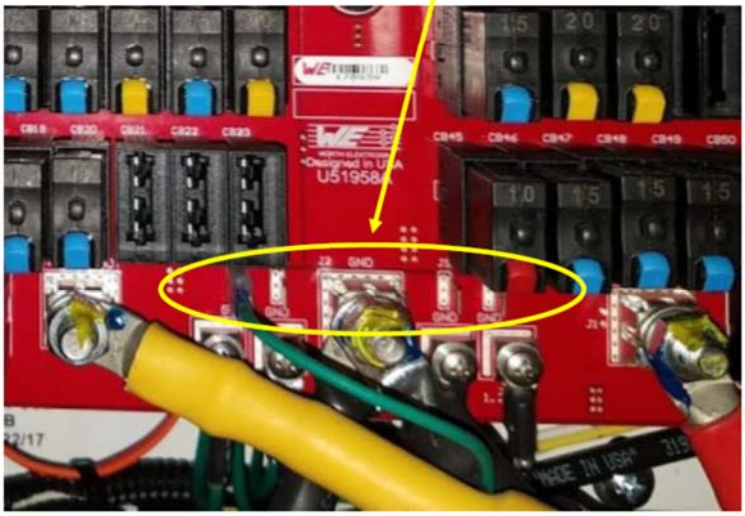
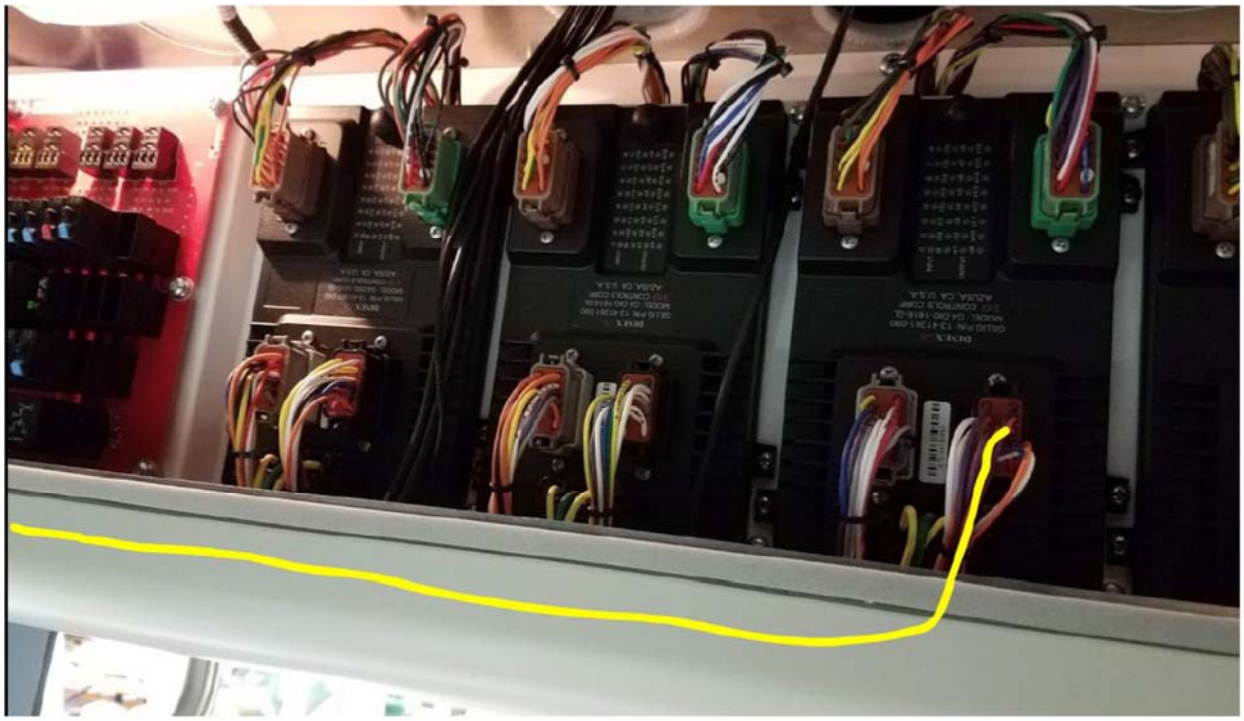
Foot Brake Pressure Switch Resistor Harness Installation w/G4

Connect Neg circuit to any available Circuit Breaker board ¼" push-on terminals.



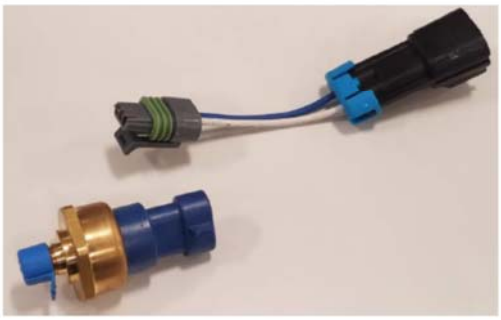
Foot Brake Pressure Switch Resistor Harness Installation w/G4

Route and secure new resistor harness along bottom of panel assembly and closeout to circuit board ground terminal.



Foot Brake Pressure Switch Installation w/G4

In addition to the resistor harness installation, the actual 4PSI Foot Brake Pressure switch will need to be replaced with the new Index 4PSI switch using a short conversion harness (P/N 50-79691-000). The photo to the right shows the new Index switch and conversion harness.

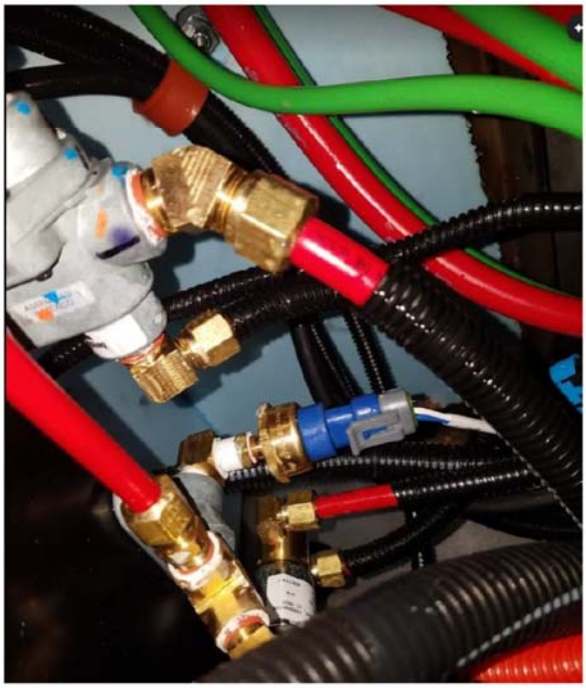


New Index switch and jumper harness

The existing 4PSI Foot Brake Pressure switch is located below the driver's platform forward of the battery box and behind the master disconnect battery switch. The lower skip pan closeout must be removed to provide access to the switch for replacement. Be sure to apply pipe thread sealer or Teflon tape to the pressure switch threads before installing.

Existing Honeywell/Hobbs switch

Foot Brake Pressure Switch Installation w/G3 or G4



This photo shows the new Index Foot Brake pressure switch (and wiring jumper) installed in place of the Honeywell/Hobbs switch on a retrofitted bus.

Brake Pressure Switch Replacement

1. Exhaust air pressure from the system.
2. Disconnect the wiring connector from the pressure switch connector housing.
3. Remove (unscrew) the pressure switch from the brake pressure manifold.
4. Reverse steps 1–3 to install the new switch. Apply pipe thread sealant to threads.

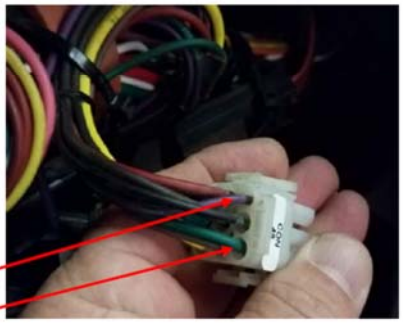
Foot Brake Pressure Switch Resistor Harness Installation w/G3

With the new Index foot brake pressure switch replacement, a resistor harness is needed to increase the input current required for the switch and multiplex system. This document will provide installation instructions for the resistor harness in the side console dash area closeout
Always turn off the master battery disconnect switch before performing any electrical work on the bus.

This re-work requires removing the forward side console closeout to access the dash and pressure switch harness interface connector 49. Removing the existing "BRK SW" brake switch input (purple wire) and "FARE-NEG" farebox ground circuit (green wire) from the dash side harness Connector 49 silos 1&7, inserting these wires into the provided Mate-N-Lok 2-way connector (attached to the Resistor Harness 50-69503-005), inserting the new harness Brake switch input and ground wires in place of the removed wires and re-connecting and securing the resistor harness assembly.

Foot Brake Pressure Switch Resistor Harness Installation w/G3

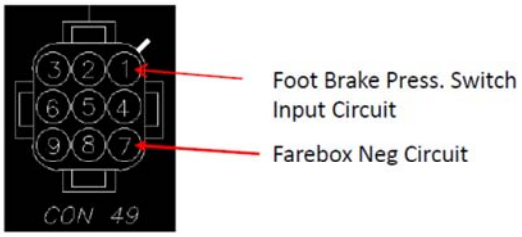
Adjust the driver's seat backward as far as possible and remove forward side console closeout cover to access the dash and brake pressure interlock switch harness connector 49. Remove tie straps as needed to access Con 49. Disconnect the dash and pressure switch connector 49. Using a pin removal tool punch out the brake and farebox ground circuits at silo 1 and 7 from the dash harness side (plug connector with socket terminals and no loom).



Foot Brake Switch Input Circuit

Farebox ground Circuit

Foot Brake Pressure Switch Resistor Harness Installation w/G3



Foot Brake Press. Switch Input Circuit

Farebox Neg Circuit

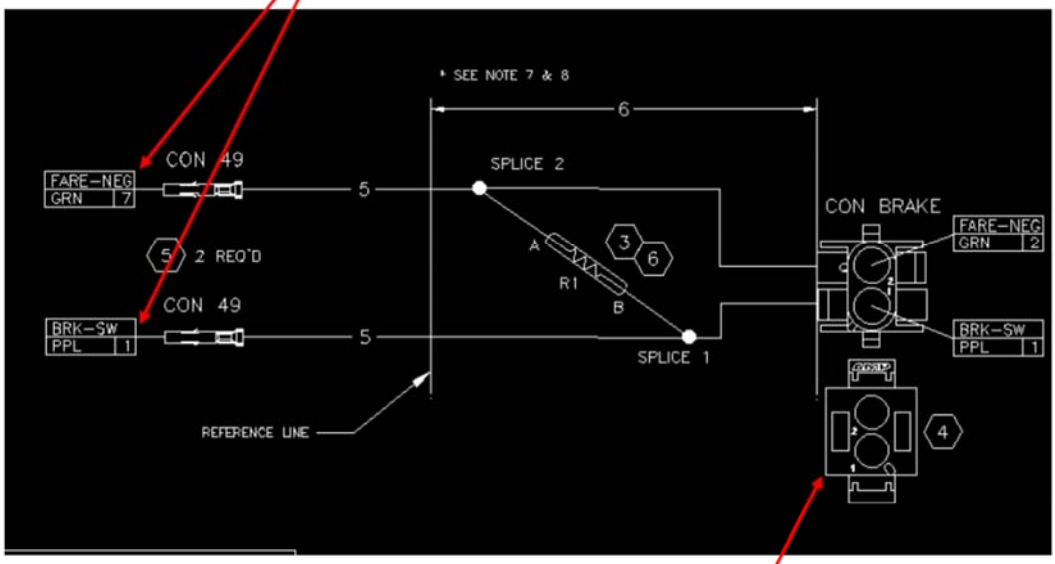
INTERLOCK BROWN 3	BAT–24V1 RED 2	BRK–SW PURPLE 1
FARE–NEG GREEN 6	HORN BROWN 5	BAT–SW BLACK 4
FAREBOX CB YEL 9	LOW–AIR BROWN 8	FARE–NEG GREEN 7

CON 49

Use a Mate-N-Lok pin extractor tool (Tyco 318851-1 or equivalent) to remove the purple BRK-SW and green FARE-NEG circuits from the dash side connector 49 (silos 1 and 7)

Foot Brake Pressure Switch Resistor Harness Installation w/G3

Insert new BRK-SW & FARE-NEG circuits from rework harness 50-69503-005 into the existing dash harness Connector 49 silos 1 & 7 respectively to match existing circuits (that were just removed).



Retrofit Harness
50-69503-005

Insert existing BRK-SW and FARE-NEG circuits (removed from dash harness Con 49) into loose 2-way receptacle silos 1 & 2 respectively. Reconnect to Con Brake after inserting existing wires. Reconnect Con 49 and secure rework harness and dash wiring as required. Replace side console closeout.

Foot Brake Pressure Switch Installation w/G3

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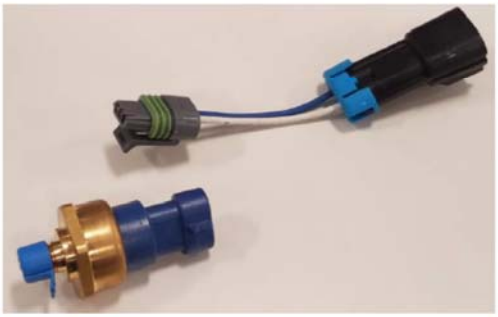

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