



PROTERRA



TECHNICAL SERVICE BULLETIN

ISSUE DATE:	9-9-2020
SERVICE BULLETIN SUBJECT:	Parking Brake Sealed Switch Retrofit
VINs or MODELS AFFECTED:	Service Specified Buses
COMPLETE BY:	Next Service Opportunity
SERVICE BULLETIN #:	SC-20-126
LABOR OPERATION CODE:	N/A

NOTICE! It is expected that this process will require 2 hours per bus. Please schedule appropriately to minimize vehicle downtime.

PARKING BRAKE SEALED SWITCH RETROFIT

Retrofit Description:

This procedure replaces the parking brake pressure switch with a sealed version to prevent unintended shifts to neutral.

Tools/Parts Required

Tools and Supplies Required:

- Flat Blade Screwdriver
- Side Cutting Pliers
- 3/4-Inch Combination Wrench
- 11/16-Inch Combination Wrench
- 1-1/8-Inch Combination Wrench
- Wire Strippers
- Deutsch Crimp Tool
- Crimp Tool for Butt Splice
- Heat Gun
- Loctite 567

Kit Parts Required:

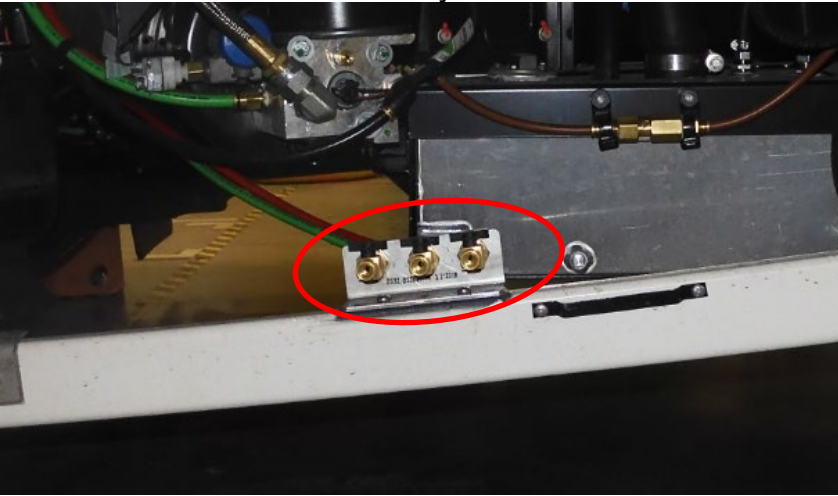
- 054785 KIT, RETROFIT, PARKING BRAKE SWITCH (Consisting of)
 - 052059 SWITCH, PRESSURE, AIR, 80PSI 1 EA
 - 001259 CONNECTOR, PLUG, 2 POSITION, DEUTSCH #DT06-2S 1 EA
 - 010050 TERMINAL, SOCKET, 20-16 AWG GOLD, DEUTSCH 2 EA
 - 012743 WIRE, 20 GXL WHT BC 60V 125C OD=2.16 1 FT
 - 010101 20 AWG WIRE, TYPE GXL, BLACK (BK) 1 FT
 - 002331 CONNECTOR, BUTT SPLICE, NON INSULATED, #18-22 AWG 2 EA
 - 008293 HEAT SHRINK, DOUBLE WALL, ADHESIVE, 1/8 4' STICK 6 IN
 - 001260 WEDGELOCK, 2 POSITION, FOR DT06-2S, DEUTSCH 1 EA

Required Parts Not Included in Kit:

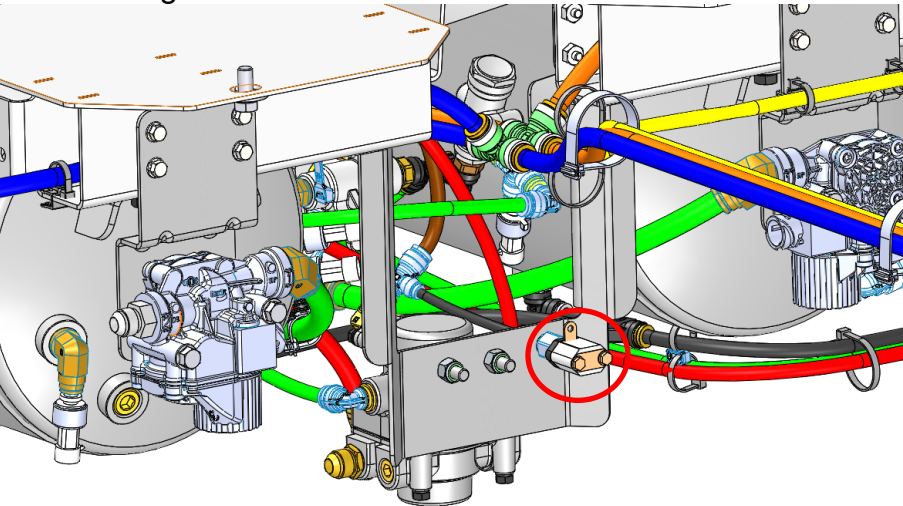
- 001912 CABLE TIE, 11.5 BLACK 292MM" 5 EA

Procedure:

1. Complete the Proterra approved Lockout/Tagout procedure to make the bus safe for work.
2. Working in the Streetside Rear Hatch, open the three valves shown circled in red below to allow the air to drain from the system. Allow the air to drain before continuing to the next step.



3. Working underneath the rear of the bus, locate the air pressure switch shown circled in red in the following illustration.



4. Using a Flat Blade Screwdriver, remove the ring terminals that connect the bus harness to the pressure sensor.
5. Using Side Cutting Pliers, cut the ring terminal off the harness flush with the ring terminal.
6. Using a 3/4-Inch Combination Wrench and an 11/16-Inch Combination Wrench, remove the pressure switch from the fitting.
7. Apply a small amount of Loctite 567 to the threads of the new Pressure Switch (052059).
8. Install the new Pressure Switch (052059) into the fitting where the old switch was removed. Tighten it finger tight.

9. Using a 1-1/8-Inch Combination Wrench and an 11/16-Inch Combination Wrench, **torque the Pressure Switch (052059) one and one half to three turns past finger tight.**
10. Evaluate the wiring that was disconnected from the old switch to determine if it is long enough to attach pins and a connector that will reach the new Switch (052059) or if it will need to be extended.
11. If the wires are not long enough to attach pins and a Deutsch connector, proceed to step 16.
12. If the wires are long enough, use wire strippers to strip each wire to accept a Socket (010050).
13. Using a Deutsch Crimp Tool, attach a Socket (010050) to each stripped wire.
14. Insert the pin with the white wire into Cavity 1 of the Deutsch Connector (001259).
15. Insert the pin with the black wire into Cavity 2 of the Deutsch Connector (001259).
16. Install the Wedgelock (001260) into the connector to secure the Sockets (010050).
17. If the wires are not long enough to attach pins and a connector to reach the Switch (052059), use wire strippers to strip each wire to accept a Butt Splice (002331).
18. Using a Crimp Tool, attach a Butt Splice (002331) to each stripped wire.
19. Using Wire Strippers, strip each end of the White (012743) and Black (010101) wires.
20. Extend each wire by crimping the same colored wire into each Butt Splice (002331).
21. Using a Heat Gun, seal each splice with Heat Shrink (008293).
22. Using a Deutsch Crimp Tool, attach a Socket (010050) to each extended wire.
23. Insert the pin with the white wire into Cavity 1 of the Deutsch Connector (001259).
24. Insert the pin with the black wire into Cavity 2 of the Deutsch Connector (001259).
25. Install the Wedgelock (001260) into the connector to secure the Sockets (010050).
26. Attach the newly installed Connector to the new Pressure Switch (052059).
27. Using Cable Ties (001912), neatly secure the updated wiring.
28. Close the three air drain valves that were opened earlier.
29. Remove the Lockout/Tagout devices and power on the bus.
30. Return the bus to service after verifying that no air leaks exist.