

**Subject: Positive Battery Load Disconnect Switch Back-of-Cab (BOC)
Installation**

Model: Freightliner New Cascadia vehicles built from August 2, 2021 through December 31, 2021

Our records indicate that you are the owner of certain vehicles, and DTNA has decided to share the following documentation with you.

Please see the attached work instructions. We hope you find this information helpful.

Subject: Positive Battery Load Disconnect Switch Back-of-Cab (BOC) Installation

Model: Freightliner New Cascadia vehicles built from August 2, 2021 through December 31, 2021

Overview:

These work instructions cover replacing the battery cable access (BCA), installing a battery load disconnect switch and bracket at the BOC, and installing a harness between the new BCA and battery load disconnect switch.

Parts:

Parts Needed		
Part Number	Description	Qty
A66-05335-043	HARN-BCA SOL CNTRL,FPT	1
A66-01882-002	MDL-BCA,HL NO/CB W/CNTR, P4	1
A66-02293-000	POSTIVE C/O SW W/LOCKOUT	1
A66-21246-000	BRKT-BAT,CUT OFF SW,BOC,P4	1
910105 008016	SCRW HEX FLNG,M8X1.25X30	2
910112 008000	NUT,HX FLNG MTRC,M8X1.25,CL	2
23-13759-725	SCREW-MACH,M8.0X1.25X25MM,S	4
24-01618-002	LABEL-NOTICE,BATTERY DRAW	1
24-01594-000	LABEL-CUTOFF SWITCH	1
	Fabric Abrasion Tape	As needed
	Zip/Cable Ties	As needed

Work Instructions:

1. Park the vehicle on a level surface, shut down the engine, set the parking brake. Chock the tires.
2. Disconnect the batteries.
3. Remove the three screws that attach the dash cover throttle to the dash and the accelerator pedal assembly and remove the panel as shown in **Fig. 1**.

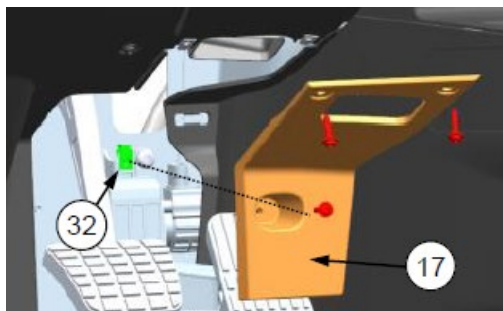


Fig. 1, Throttle Panel Removal

If needed, see **Group 60.06, Subject 100** in the *New Cascadia Workshop Manual* for instructions.

4. Remove the dash cover steering column kick panel as shown in **Fig. 2**. If needed, see **Group 46.01, Subject 110** in the *New Cascadia Workshop Manual* for instructions.

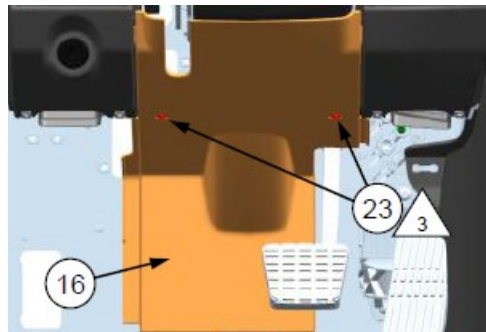


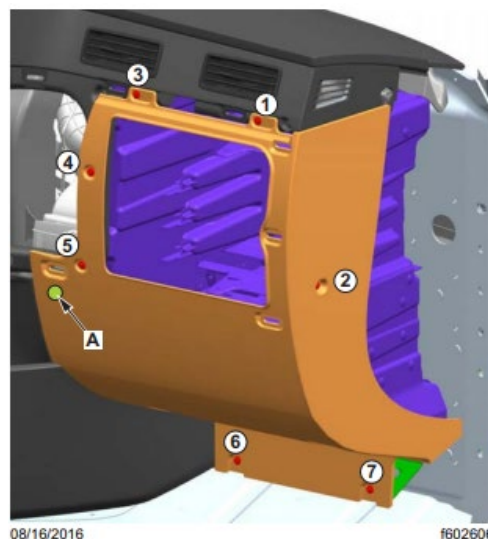
Fig. 2, Steering Column Kick Panel

5. Remove the electrical bay cover as shown in **Fig. 3**.



Fig.3, Electrical Bay Cover

6. Remove the seven screws that attach the cover to the dash as shown in **Fig. 4**, then pull the clips loose and remove the cover.



A. For installation, snap the locator clip in place here first, then install the screws in the sequence shown.

Fig. 4, Passenger Side Lower Dash Cover

7. Remove the existing BCA box. Refer to the **Group 54.08, Subject 110** and **Group 60.06, Subject 100** of the *New Cascadia Workshop Manual* for instructions.
8. Install the new BCA box. Refer to **Group 54.08, Subject 110** of the *New Cascadia Workshop Manual* for instructions.

NOTE: When installing the battery cables on the BCA battery studs, apply a drop of LOCTITE® Blue 242 to the area of the studs the tightened nuts will overlap. Install the washers and the nuts. Hold the end of each stud with vice grip pliers as shown in **Fig. 5** and tighten each nut with a 13 mm box end wrench to secure the cable to the BCA. Tighten the nuts 10 to 12 lbf-ft (14 to 16 N-m).



Fig. 5, Gripping the Stud to Tighten the Nut

9. Install the electrical harness.
 - 9.1. Wrap the length of the new harness (part number A66-01937-000) with fabric abrasion tape.
 - 9.2. Route the new harness alongside the main cab harness as shown in **Fig. 6**. Run the harness from the BCA box to the front wall grommet located above and to the left of the steering wheel, as shown in **Fig. 7**. Use cable ties to secure the new harness to the main cab harness as needed.

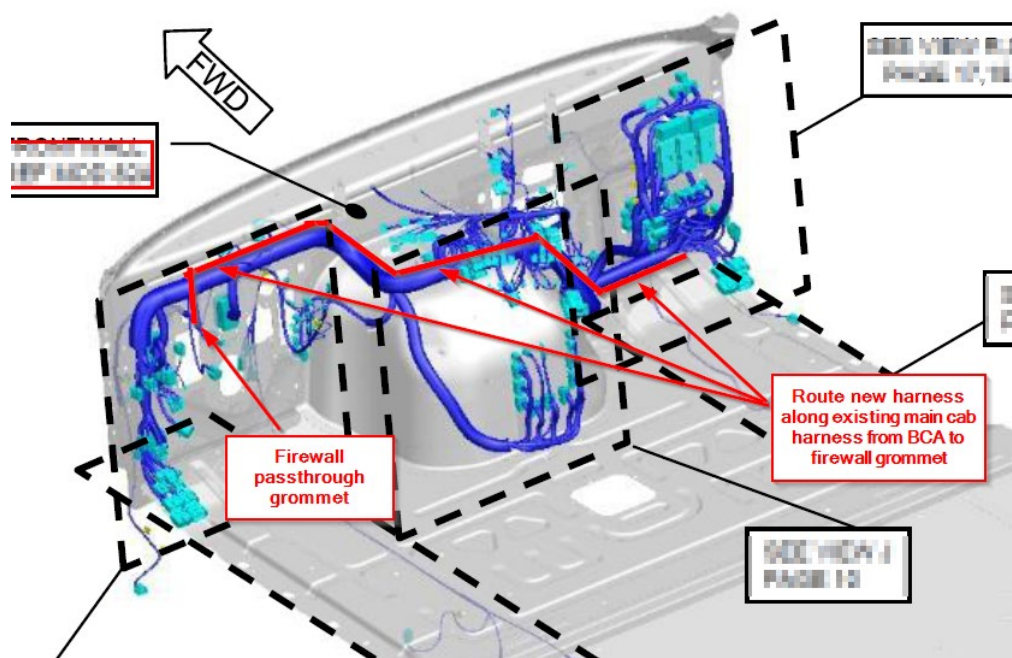


Fig. 6, New BCA Harness Routing

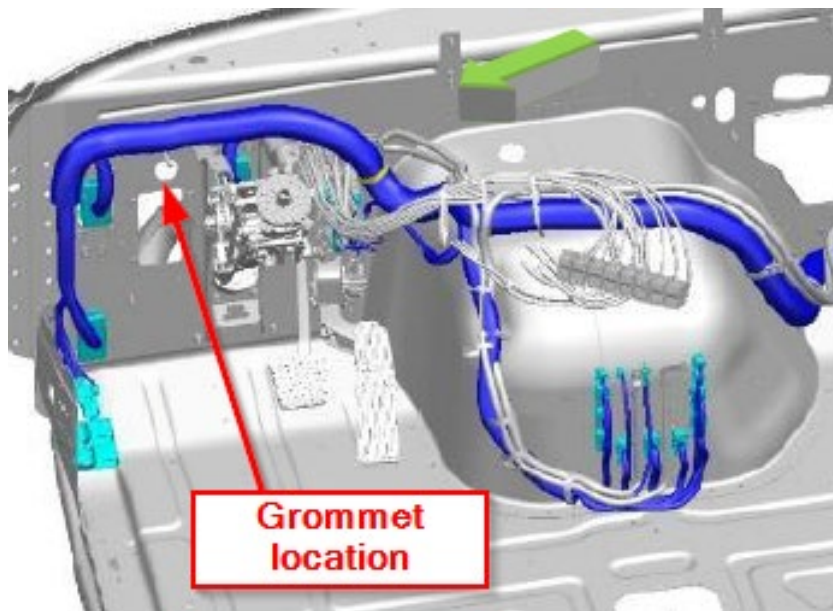


Fig. 7, Firewall Pass-Through Grommet Location

9.3. Connect the new harness to the BCA in the location shown in **Fig. 8**. For details on the connection, see **Fig. 9**.

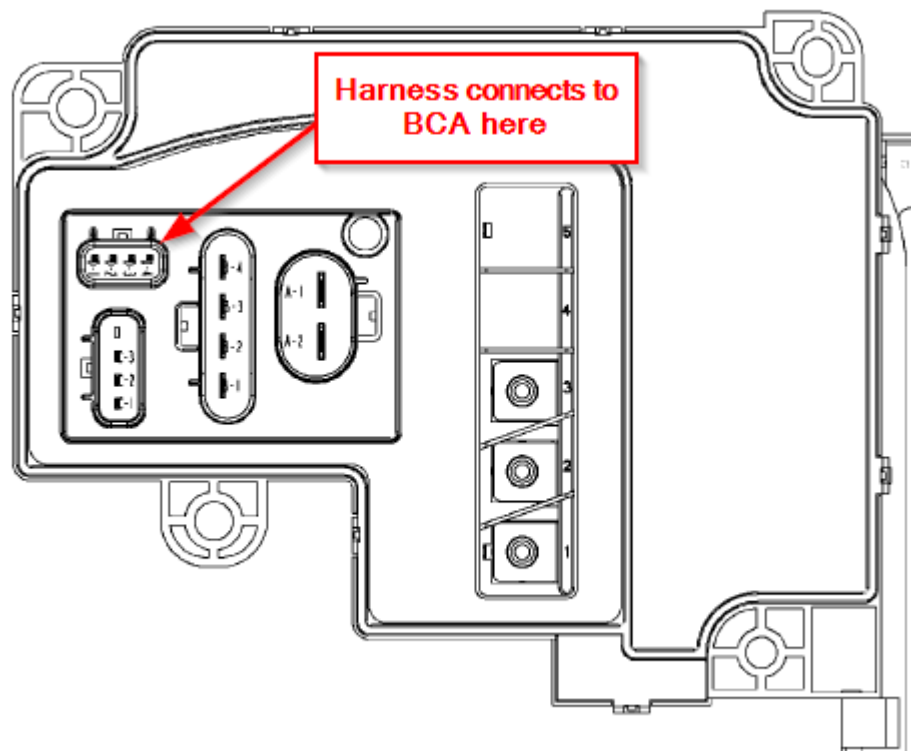


Fig. 8, BCA Harness Connection Location

ID:	BAT_DASH_O_BCA_D_1A
PN:	23-13153-401
	SEALED CONNECTOR
CAV	CIR#
—	—
1	425M # 1103 (T-W)
2	425N # 1103 (T-W)
3	425L # 1103 (T-W)
4	425P # 1103 (T-W)



Fig. 9, BCA Harness Connection Details

- 9.4. Temporarily remove the connector, shown in **Fig. 10**, from the battery load disconnect switch end of the new harness. Use tool DK10CHA17002-2 or a similar tool to remove the terminals from the connector, shown in **Fig. 11**. Make note of the cavity position of each wire removed for installation later.

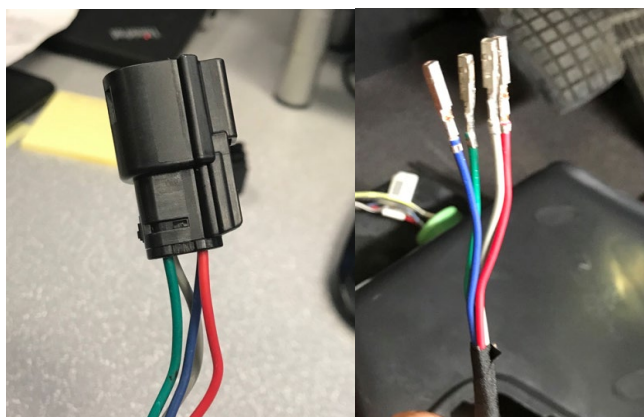


Fig. 10, Remove the Battery Load Disconnect Switch Connector

ID:	BAT_DASH_O_SW_BAT_DISC_1A
PN:	23-13662-401
	SEALED CONNECTOR
CAV	CIR#
—	—
1	425L # 1103 (T-W)
2	425M # 1103 (T-W)
3	425P # 1103 (T-W)
4	425N # 1103 (T-W)

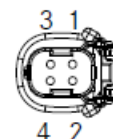


Fig. 11, Battery Load Disconnect Switch Connector Details

- 9.5. Locate the grommet passing through the firewall on the driver's side and remove the cable tie from the grommet on the engine side of the firewall as shown in **Fig. 12**.

NOTE: There may be a large section of tape on the cab side of the harness that will need to be removed in order to pass the new harness through.

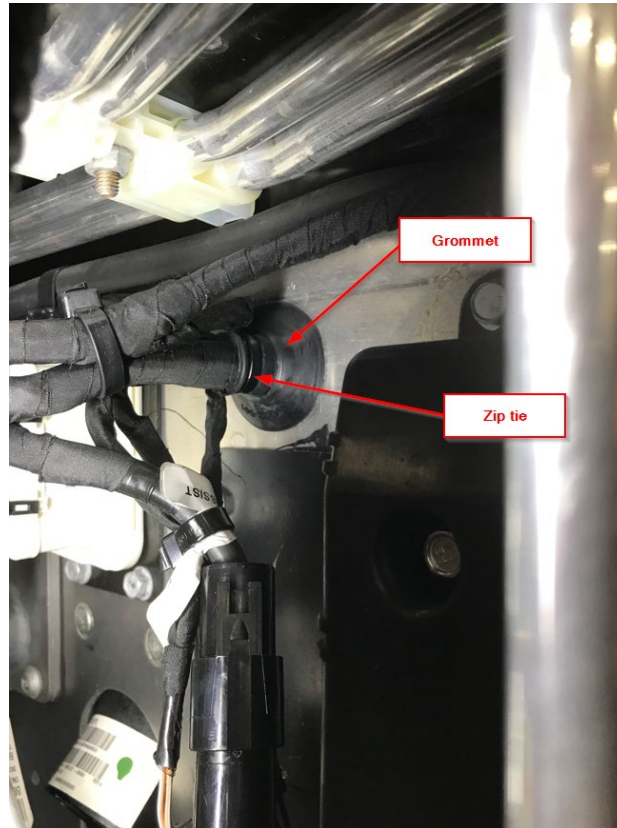


Fig. 12, Cable Tie on the Engine Side of the Pass-Through Grommet

- 9.6. Insert a large cable tie through the grommet from the engine side of the firewall into the cab. The cable tie will be used to pull the harness through the firewall.

NOTE: Lubricate the end of the cable tie with WD-40 or a similar lubricant to help it pass through the grommet. If the cable tie will not pass through, lubricate a screwdriver to help with the insertion of the cable tie as shown in **Fig. 13**. Be careful not to chaff or damage the wiring.



Fig. 13. Screwdriver Inserted Through Grommet

- 9.7. Tape the end of the harness to the cable tie under the dash as shown in **Fig. 14**.



Fig. 14, End of Harness Taped to Cable Tie Inserted Through Grommet

- 9.8. Apply a small amount of WD-40 or similar lubricant to the tape, then from the engine side, pull the cable tie to pull the end of the harness through the grommet as shown in **Fig. 15**.

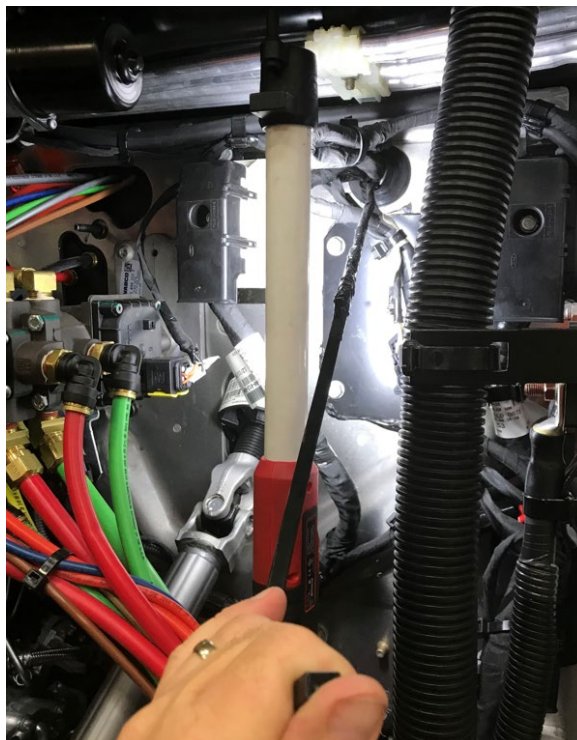


Fig. 15, Pulling the Harness through the Grommet

- 9.9. After pulling the harness through the firewall grommet, install the connector removed from the battery load disconnect switch end of the new harness in step 9.4.
Make sure each wire is installed in the correct cavity position. See **Fig. 11**.
- 9.10. If equipped, remove the detachable side fairing on the driver's side for under the cab access for harness routing.
- 9.11. Route the harness from the firewall grommet down the driver's side front wall as shown in **Fig. 16**, and then under the cab as shown in **Fig. 17**, to the new battery cutoff switch location on a bracket at the back of the cab. Secure the new harness with cable ties to the existing harnesses or airlines as needed.
- NOTE:** Refer to installation drawing D66-05723-000 for routing and clipping details.

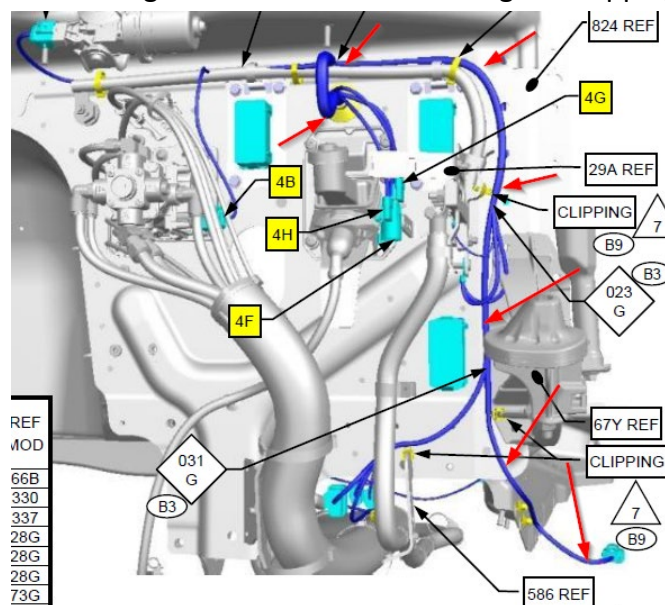


Fig. 16, Harness Routing from the Grommet Down Driver's Front Wall

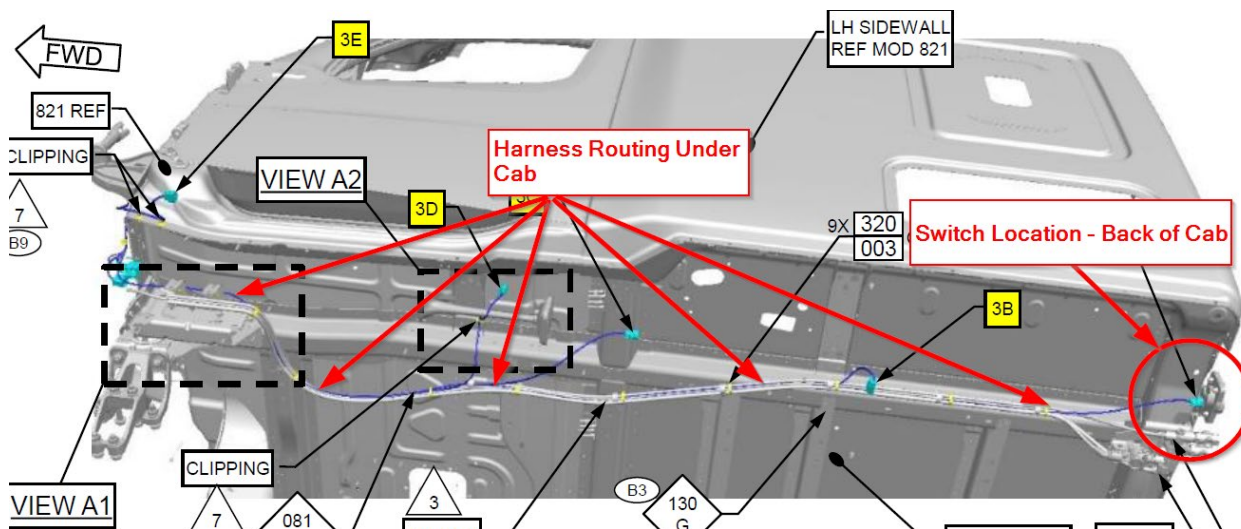


Fig. 17, Harness Routing Under the Cab to the Battery Load Disconnect Switch

NOTE: If a tractor protection valve is present, use the existing fastening hardware to install the switch bracket.

10. Install the switch bracket on the back of cab as shown in **Fig. 19** using the two hex screws and nuts.

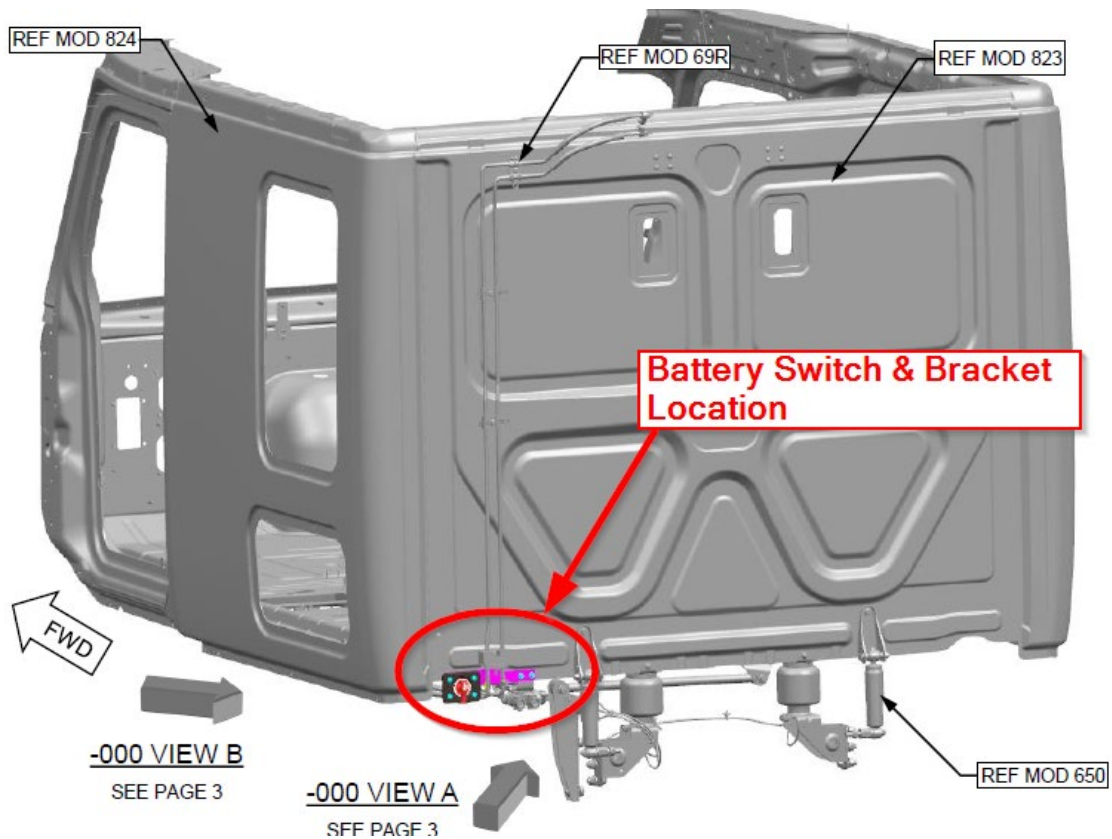


Fig. 19, Bracket and Battery Switch Location at Back of Cab

11. Install the battery cutoff switch on the bracket as shown in **Fig. 20** using four screws.

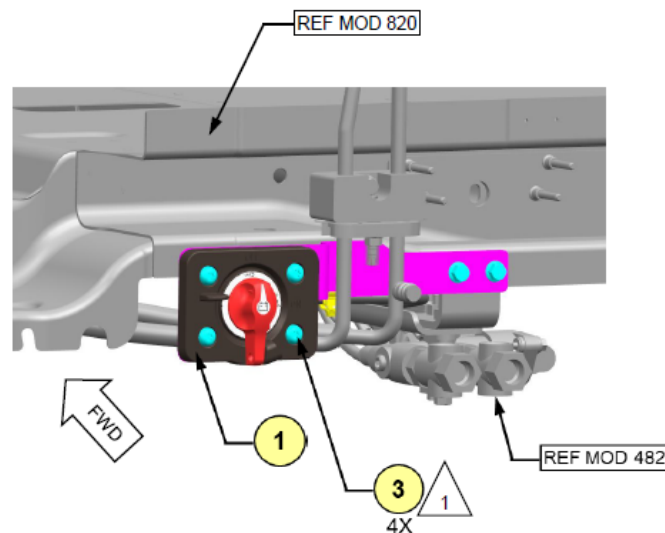


Fig. 20, Battery Cutoff Switch Installed on Bracket

12. Connect the harness to the backside of the switch as shown in **Fig. 21**.

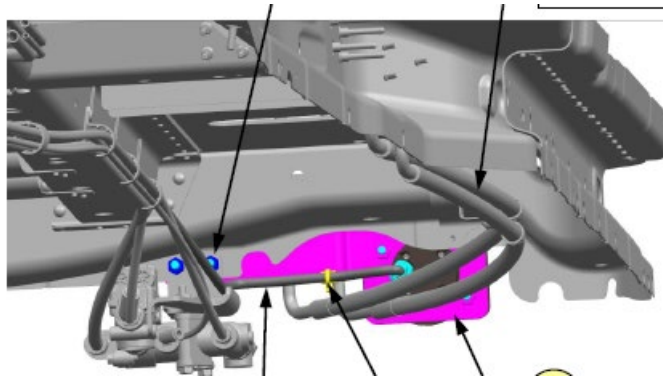


Fig. 21, Harness Connected to Battery Cutoff Switch

13. Install the warning label (part number 24-01618-002) on the door jamb as shown in **Fig. 22**.

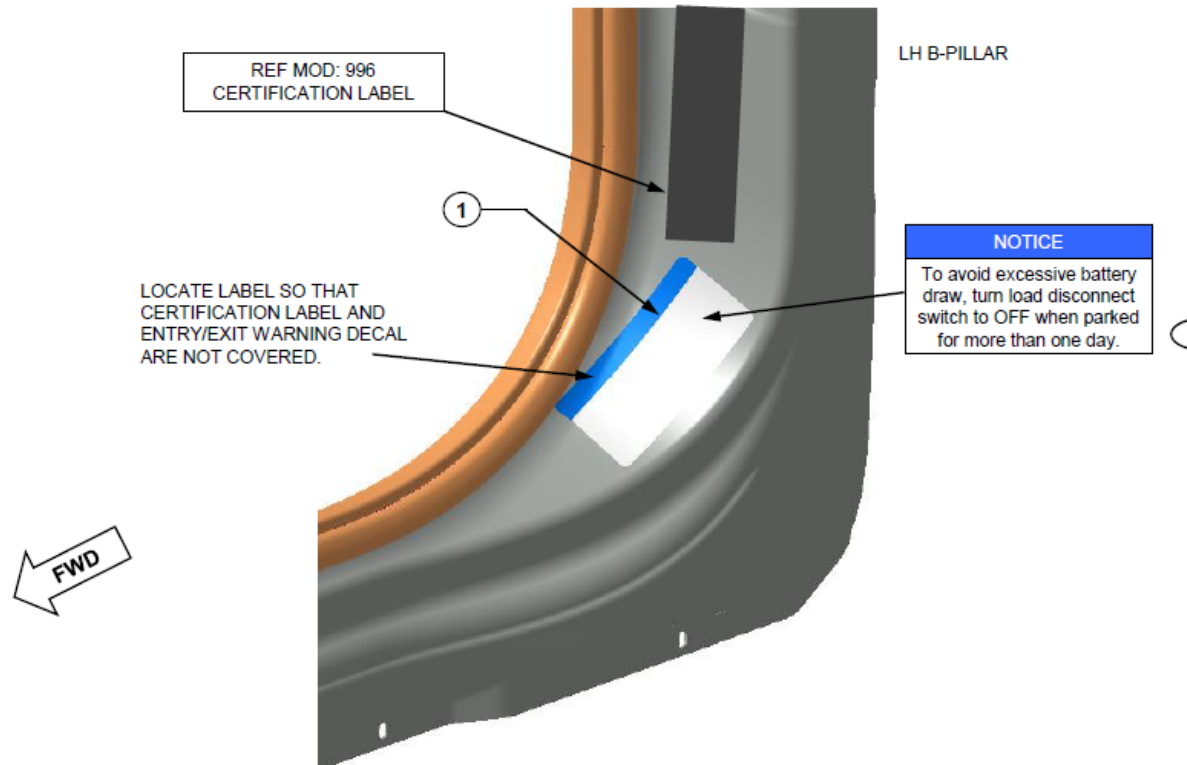


Fig. 22, Battery Load Disconnect Switch Label Installation

13. Install the warning label (part number 24-01594-000), shown in **Fig. 23**, on the outside centerline of the frame rail, in line with the starter power leads.

Note: Starters can be located on the right or left depending on the engine installed. The figure below depicts the starter on the left side of the vehicle.

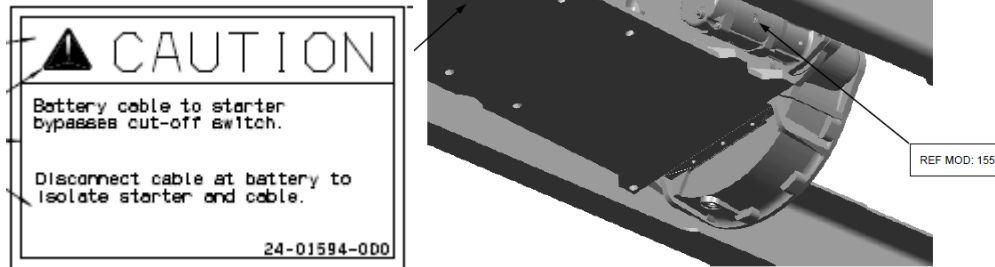


Fig. 23, Warning Label Installation

14. Install all dash panels previously removed.
15. Reconnect the battery negative cable.
16. If removed, install the detachable side fairing.
17. Verify that the battery cutoff switch operates correctly.