

**Subject: Battery Load Disconnect Switch 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: Battery Load Disconnect Switch Installation**  
**Model: Freightliner New Cascadia vehicles built**  
**from August 2, 2021 through December 31, 2021**

**Overview:**

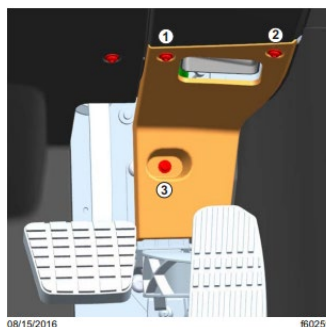
These work instructions cover replacing the battery cable access (BCA), installing a battery load disconnect switch, and installing a harness between the new BCA and battery load disconnect switch.

**Parts:**

Parts Needed		
Part Number	Description	Qty
A66-01937-000	Harness (BCA to cutoff switch)	1
Varies	Battery Cable Access (BCA)	1
A06-88420-000	Battery Cutoff Switch / Battery Load Disconnect Switch	1
23-12509-420	NUT-INSERT,M6X1.00,KNR	4
23-13488-040	SCR-MACH,RHWC,HDI,DGPT,M6X1.0X	4
24-01618-002	LABEL-NOTICE,BATTERY DRAW	1
24-01594-000	LABEL-CUTOFF SWITCH	1
	Fabric Abrasion Tape	As needed
	Cable Ties	As needed

**Work Instructions:**

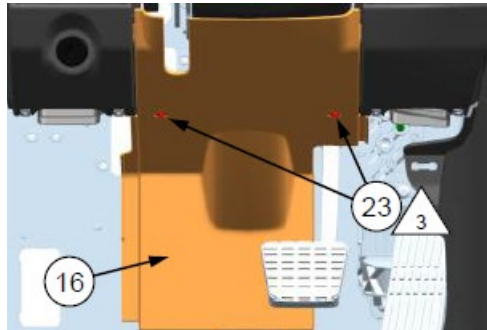
1. Park the vehicle on a level surface, shut down the engine, and set the parking brakes.
2. Disconnect the batteries.
3. Remove the three screws that attach the dash cover throttle to the dash and the accelerator pedal assembly and remove the panel as shown in **Fig. 1**.



**Fig. 1, Throttle Panel Removal**

If needed, see Group 60.06, Subject 100 in the *New Cascadia Workshop Manual* 60.06.100 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.



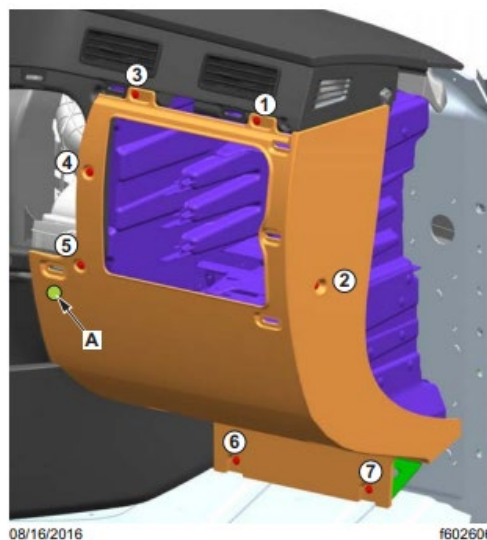
**Fig. 2, Steering Column Kick Panel**

5. Remove the electrical bay cover using the handhold at the lower left of the cover as shown in **Fig. 3**.



**Fig.3, Electrical Bay Cover Handhold**

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.



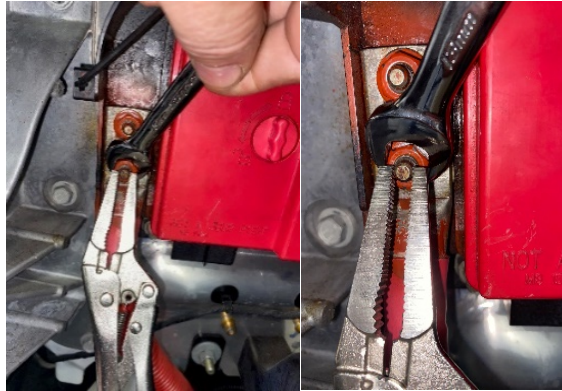
A. For installation, snap the locator clip in place here first, then install the screws in the sequence shown.

**Fig. 4, Passenger Side Lower Dash Cover**

7. Remove the existing battery cable access (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.

**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 10.3 to 11.8 lbf·ft (15±1 N·m).

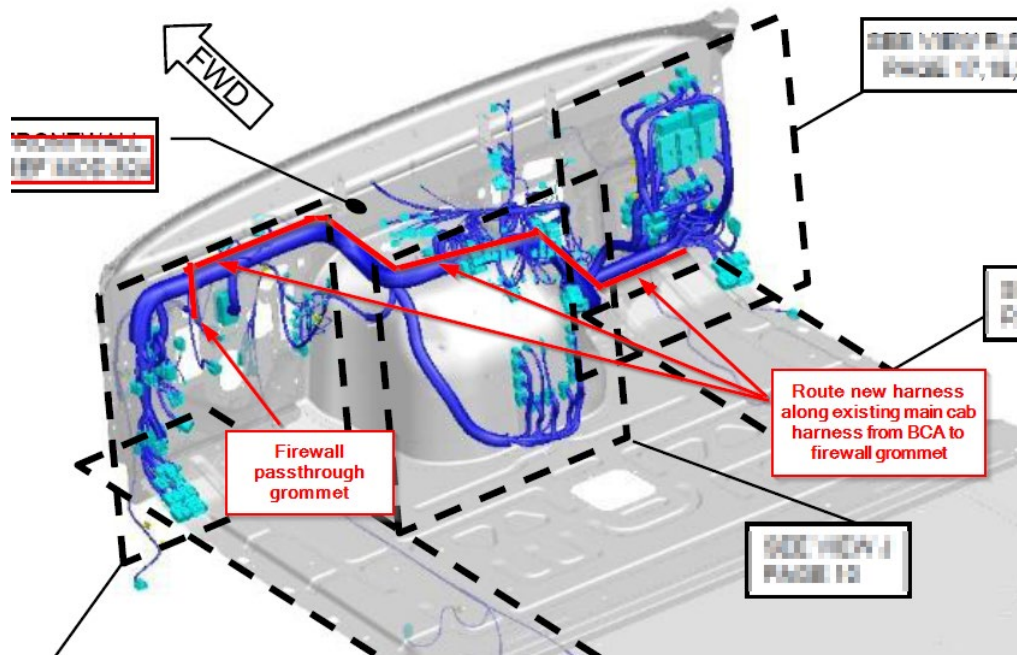


**Fig. 5, Gripping the Stud to Tighten the Nut**

9. Install the electrical harness.

9.1. Wrap the entire 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**

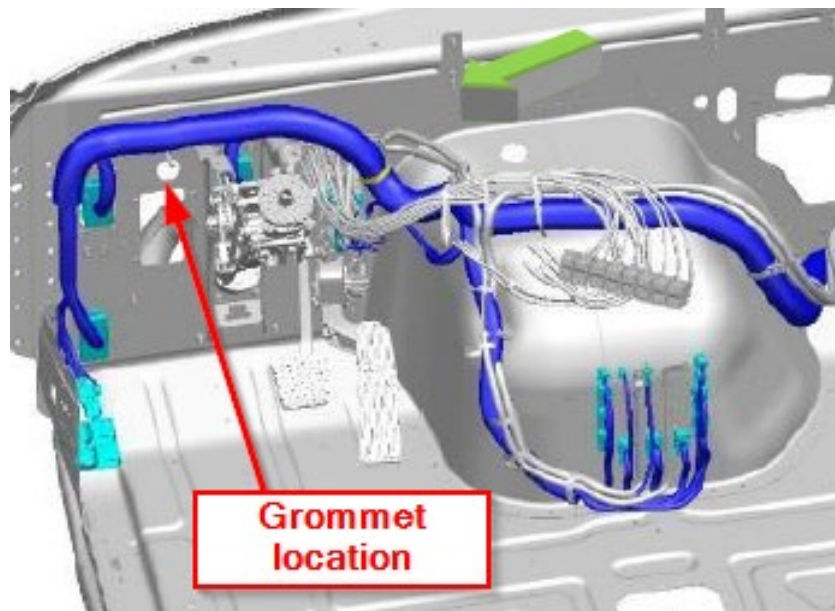


Fig. 7, Firewall Pass-Through Grommet Location

9.3. Connect the new harness to the BCA in the location shown in Fig. 8.

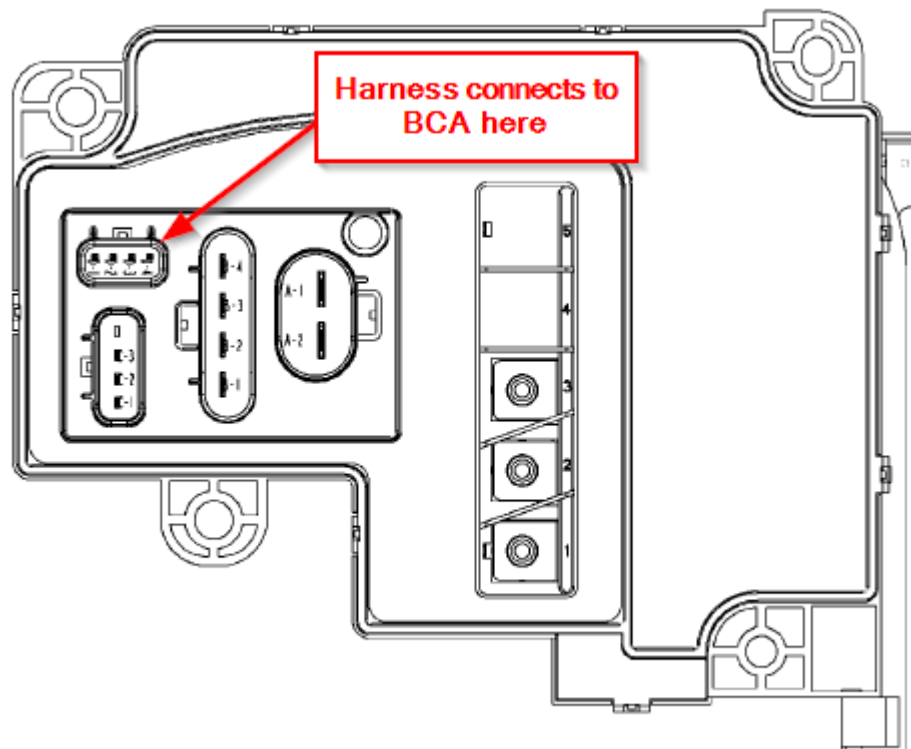


Fig. 8, BCA Harness Connection Location

For details on the connection, see Fig. 9.

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 similar to remove the terminals from the connector. Make note of the cavity position, shown in Fig. 11, for each wire for reinstallation later.

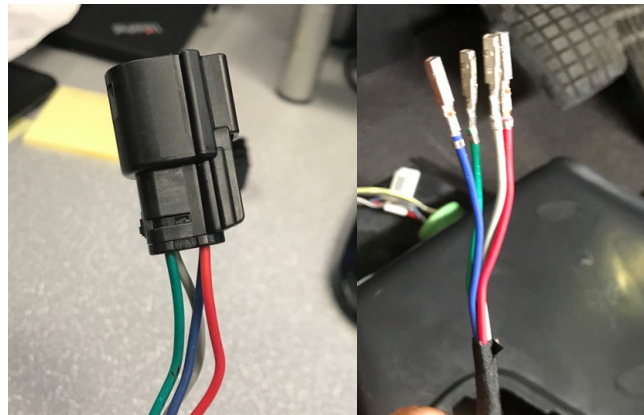


Fig. 10, Remove the Battery Load Disconnect Switch Connector

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)

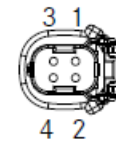
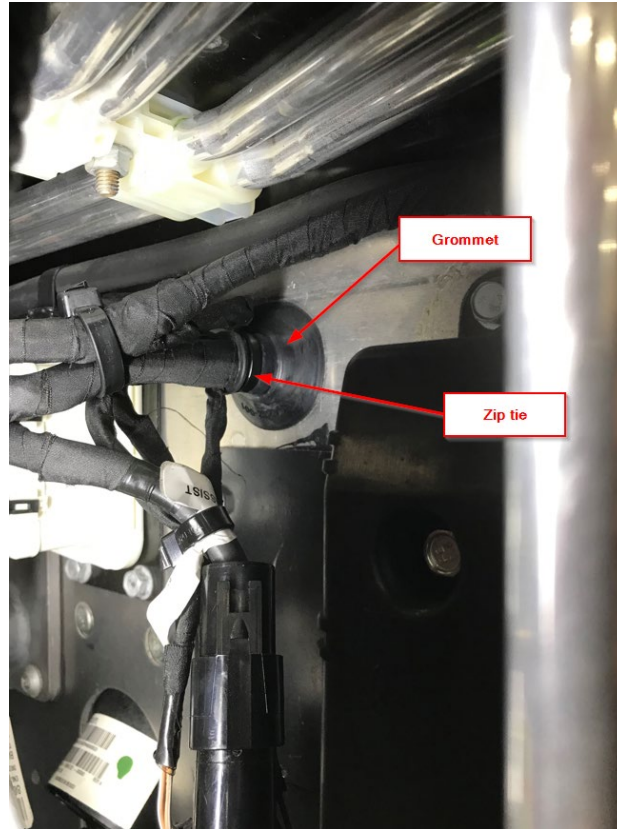


Fig. 11, Battery Load Disconnect Switch Connector Details

- 9.5. Locate the firewall pass-through grommet on the driver's side of the cab 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 fit through, lubricate a screwdriver and pass it through as shown in **Fig. 13** to help with insertion of the cable tie. Be careful not to 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**.



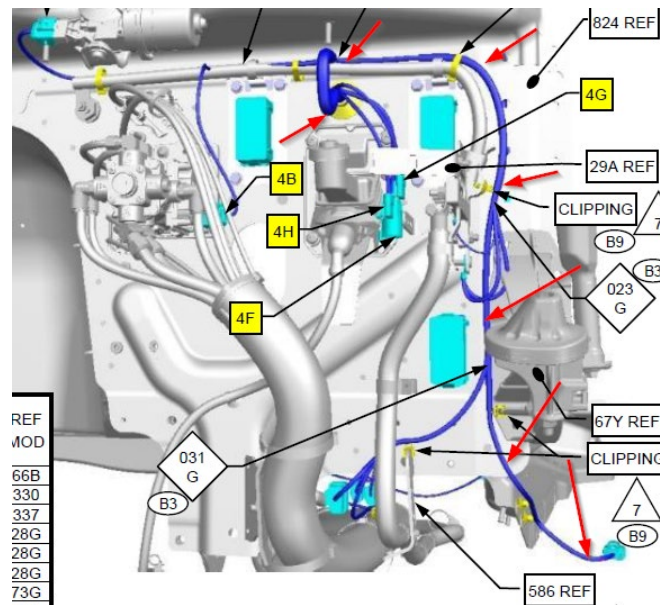
**Fig. 14, End of Harness Taped to Cable Tie Inserted Through Grommet**

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

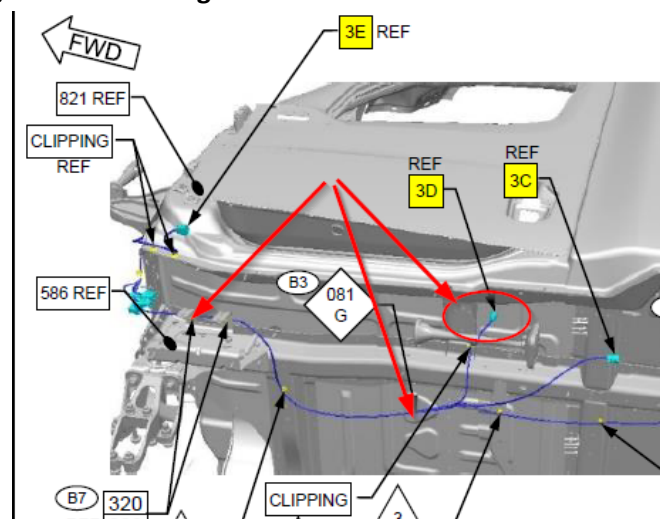


**Fig. 15, Pulling the Harness through the Grommet**

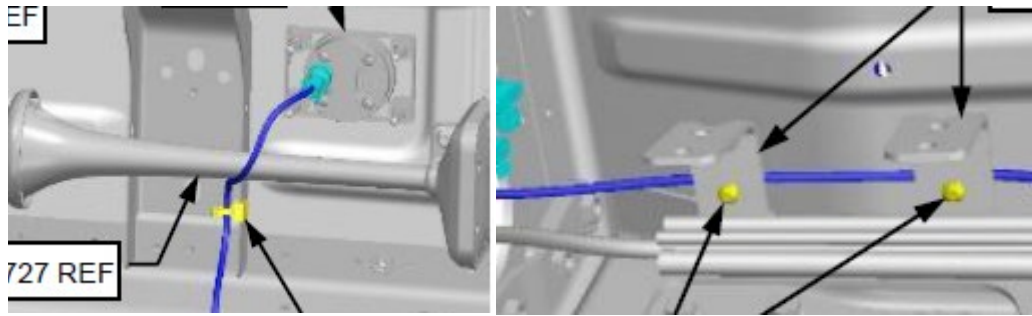
- 9.9. After pulling the harness through the firewall grommet, install the connector removed from the battery load disconnect switch end of the new harness in step 9.4.  
 Make sure each wire is installed in the correct cavity position. See **Fig. 11**.
- 9.10. If the vehicle is equipped with side fairings, remove the detachable side fairing on the driver's side for access under the cab to route the harness.
- 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**, and then to the battery load disconnect switch location as shown in **Fig. 18**. Secure the new harness with cable ties to the existing harnesses or airlines as needed.
- NOTE:** The battery load disconnect switch is typically located on the cab floor between the driver seat and the door sill plate near the rear of the door opening.



**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**



**Fig. 18, Harness Routing to Battery Load Disconnect Switch Location**

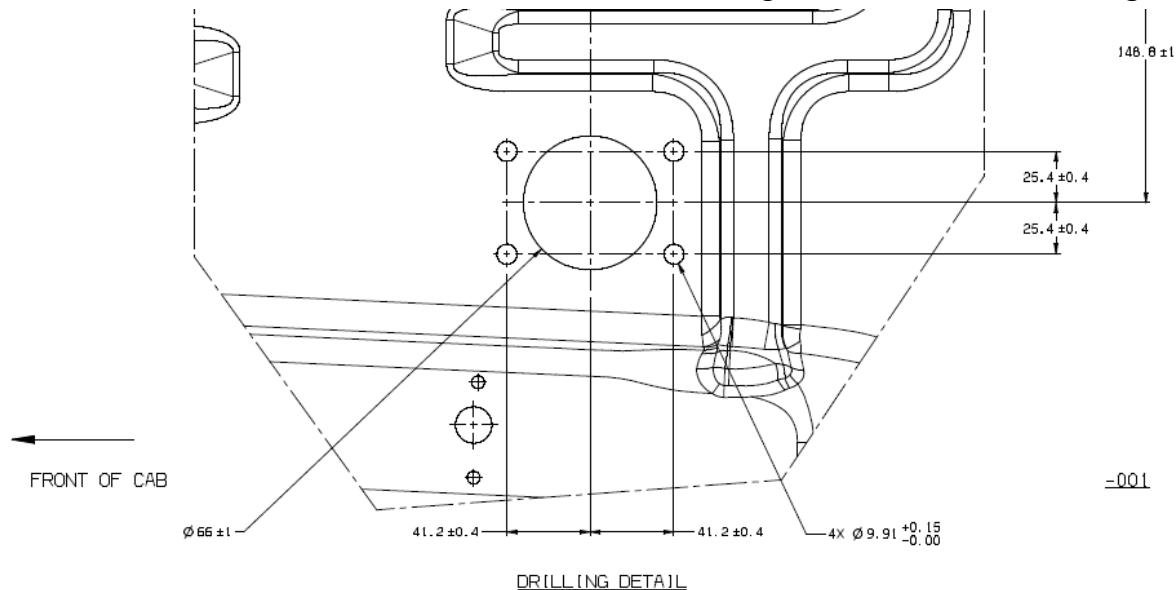
10. Install the battery load disconnect switch.

10.1. Remove the driver side B-pillar trim panel and the driver side door sill plate.

10.2. Lift up on the floor mat and find the floor panel indentations. These indentations mark where holes should be drilled for the battery load disconnect switch. For more information, refer to drawing D18-63416-001.

10.3. Drill holes for the battery load disconnect switch. See **Fig. 19** and **Fig. 20**:

- Drill five pilot holes. Drill four for the mounting fasteners and one in the center of what will be the large hole for the switch. Use care not to drill into the horn or remove the horn for additional clearance.
- Drill out the center hole with a 2.5 inch hole saw, then use a carbide burr on a die grinder to clean the hole edges to install the switch.
- Use a 25/64 inch drill bit and drill out the mounting fastener holes. Refer to **Fig. 19**.



**Fig. 19, Drilling Diagram for Battery Load Disconnect Switch**

**NOTE:** Loosen and reposition the driver's seat to gain better access to drill the holes for the switch.



**Fig. 20, Holes Drilled for Battery Load Disconnect Switch**

10.4. Install four nut inserts (part number 23-12509-420).

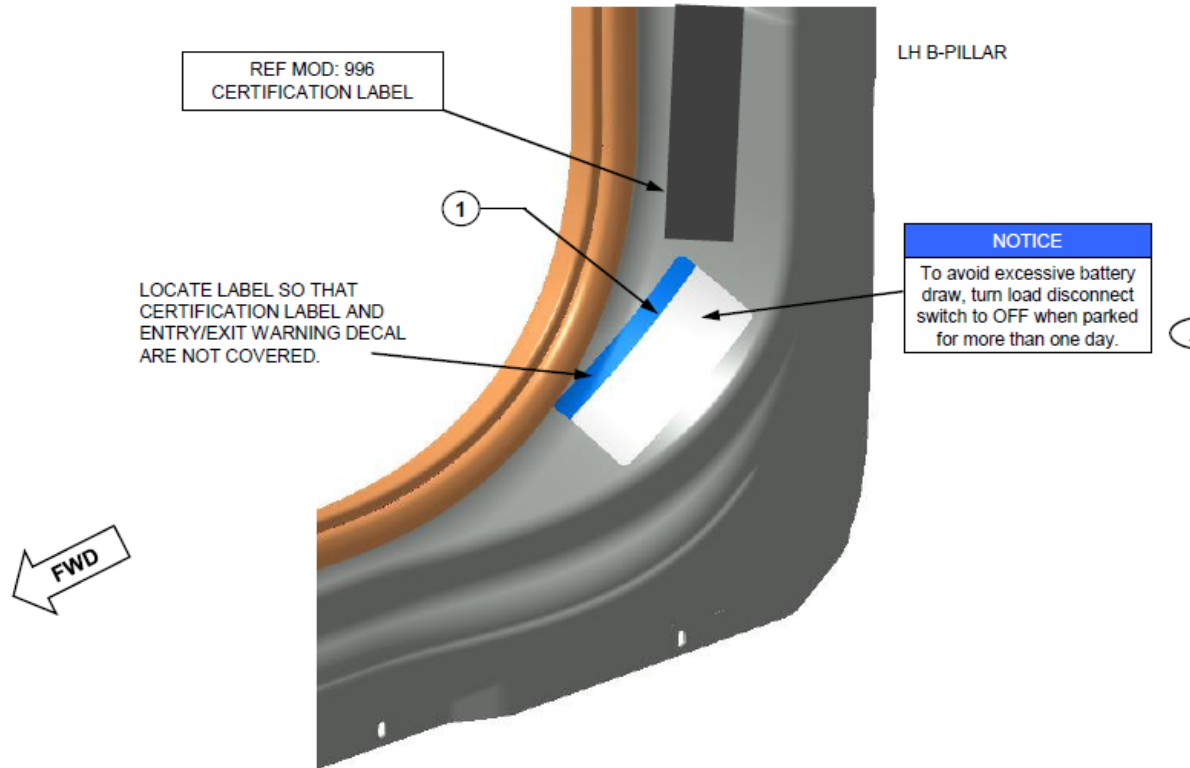
10.5. Trim the floor mat as shown in **Fig. 21** so it will be tucked under the installed switch.



**Fig. 21, Rectangle Trimmed from Cab Floor Mat**

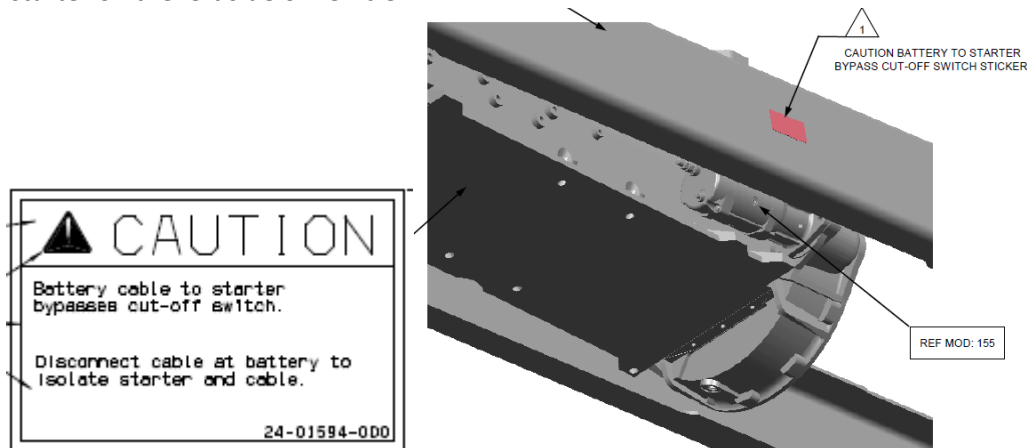
**NOTE:** One method is to use the four mounting holes in the floor to mark and back-drill the floor mat. Then, using a razor knife, cut a rectangle in the floor mat that is about 1/8 inch past the rectangle formed by the four holes.

- 10.6. Install the battery load disconnect switch (part number A06-88420-000) with the four screws (part number 23-13488-040).
- 10.7. Connect the harness to the underside of the battery load disconnect switch.
- 10.8. Install the B-pillar trim panel and the door sill plate.
- 10.9. 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**

- 11. 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 vehicle.



**Fig. 23, Warning Label Installation**

12. If removed, install the detachable side fairing.
13. Install the dash panels.
14. Connect the negative battery cable.
15. Verify the operation of the battery load disconnect switch.