Daimler Truck North America LLC

Field Service Campaign

SF710 A-D

Creation Date: **November 2024**

Subject: Freightliner High-Voltage Cable

Models Affected					
Make	**Model**	**Model Yr. Start**	**Model Yr. End**	**Prod. Start Date**	**Prod. End Date**
Freightliner	eM2 CL6	2024	2025	March 3, 2023	July 25, 2024
Freightliner	eM2 CL7	2024	2025	March 16, 2023	July 29, 2024
Freightliner	eCascadia 4X2	2023	2025	June 28, 2022	May 2, 2024
Freightliner	eCascadia 6X4	2023	2025	May 16, 2022	July 29, 2024

General Information

On behalf of the entity listed below, Daimler Truck North America LLC (DTNA), is initiating Field Service Campaign SF710 to modify the affected vehicles.

- Freightliner Trucks Division

PROBLEM:	E-vehicles with inverters having improperly torqued high-voltage (HV) cable connections may encounter issues including intermittent propulsion power or complete loss of power from one inverter.
SOLUTION:	A Daimler Truck North America authorized service facility will conduct a thorough inspection and check the torque levels of all HV cable connections on the inverter as well as the HV battery connections.

There are approximately 747 vehicles involved.

Additional Repairs

Dealers must complete all outstanding Recall and Field Service campaigns prior to the sale or delivery of a vehicle. A Dealer will be liable for any progressive damage that results from its failure to complete campaigns before sale or delivery of a vehicle.

Owners may be liable for any progressive damage that results from failure to complete campaigns within a reasonable time after receiving notification.

Please contact Warranty Campaigns for consideration of additional charges prior to performing the repair.

Work Instructions

Please refer to the attached work instructions. Prior to performing the campaign, check the vehicle for a completion sticker (Form WAR261).

Replacement Parts

If our records show your dealership has ordered any vehicle(s) involved in campaign number SF710, a list of the customers and vehicle identification numbers will be available on DTNA Portal.

No parts are required for this repair.

IMPORTANT - After Repair is Complete*:
Attach a red completion sticker (WAR261) to the base label (WAR259).

If the vehicle does not have a base label, clean a spot on the appropriate location, and attach a base label, prior to attaching the completion sticker.

If a campaign kit is not required, write the campaign number on a blank sticker and attach it to the base label.

(Failure to install a completion sticker may result in a chargeback of the campaign claim.)

* TBB is exempt from the completion sticker process

Removed Parts

- For U.S. and Canadian Dealers, use the part disposition to determine how to manage removed parts (return, scrap, etc.). Dispositions are available at the date of the repair.
- For Export Dealers, destroy removed parts unless otherwise advised.

Claim Reimbursement - Labor Allowance

IMPORTANT: OWL must be viewed prior to performing the Field Service to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

You will be reimbursed for your parts, labor, and handling (landed cost for Export Distributors) by submitting your claim through the Warranty system within 30 days of completing this campaign.

- In OWL, use the 'Retrieve' function and select the appropriate procedure. This will auto-populate the PFP, component code, replacement parts, cause, corrective action and SRT code.

Table 1 - Claim Reimbursement Table

Claim Type	Field Service Campaign
Campaign	SF710 A-D
VMRS Component Code	F99-999-005
Cause Code	A1 – Campaign
Primary Failed Part	25-SF710-000

Table 2 – Labor Allowance for SF710

Groups	Procedure	Time Allowed (hours)	SRT Codes	Corrective Action
A	Inspect and Torque EM2 CL6 HV Cable	1.4	996-F231A	06-Inspect
B	Inspect and Torque EM2 CL7 HV Cable	1.6	996-F231B	06-Inspect
C	Inspect and Torque EP4 4X2 HV Cable	1.0	996-F231C	06-Inspect
D	Inspect and Torque EP4 6X4 HV Cable	1.2	996-F231D	06-Inspect

Table 2 – Labor Allowance

Daimler Truck North America LLC

Field Service Campaign

SF710 A-D

Creation Date: **November 2024**

Claims for Credit

- Claim type is Field Service Campaign
- In the Campaign field, enter the campaign number and appropriate condition code (SF710-A, SF710-B, etc.).
- In the Primary Failed Part field, enter 25-SF710-000.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table. Administrative time will auto-populate if applicable using SRT 939-6010A, 0.3 hours.
- The VMRS Component Code is F99-999-005 and the Cause Code is A1 - Campaign.
- U.S. and Canada – Reimbursement for Prior Repairs. When a customer asks about reimbursement, please do the following:
  - Accept the documentation of the previous repair.
  - Make a brief check of the customer's paperwork to see if the repair may be eligible for reimbursement. (See the 'Copy of Owner Letter' section of this bulletin for reimbursement guidelines.)
  - Submit an OWL Recall Pre-Approval Request for a decision.
  - Include the approved amount on your OWL claim in the Other Charges section.
  - Attach the documentation to the pre-approval request.
  - If approved, submit a 'based on claim' for the pre-approval.
  - The Dealer is required to reimburse the customer the appropriate amount.

IMPORTANT: OWL must be viewed prior to performing the Field Service to ensure the vehicle is involved and the campaign has not been previously completed. Also, check for a completion sticker prior to beginning work.

U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNAPortal.com/WSC, if you have any questions or need additional information. Export distributors, submit a Web inquiry or contact your International Service Manager.

U.S. and Canadian Dealers: To return excess kit inventory related to this campaign, U.S. dealers must submit a Parts Authorization Return (PAR) to the Memphis PDC. Canadian dealers must submit a PAR to their facing PDC. All kits must be in resalable condition. PAR requests must include the original purchase invoice number. Export Distributors: Excess inventory is not returnable.

The letter notifying U.S. and Canadian vehicle owners is included for your reference.

Please note that the National Traffic and Motor Vehicle Safety Act, as amended (Title 49, United States Code, Chapter 301), requires the owner's vehicle(s) be corrected within a reasonable time after parts are available to you. The Act states that failure to repair a vehicle within 60 days after tender for repair shall be prima facie evidence of an unreasonable time. However, circumstances of a particular situation may reduce the 60-day period. Failure to repair a vehicle within a reasonable time can result in either the obligation to (a) replace the vehicle with an identical or reasonably equivalent vehicle, without charge, or (b) refund the purchase price in full, less a reasonable allowance for depreciation. The Act further prohibits dealers from selling a vehicle unless all outstanding recalls are performed. Any lessor is required to send a copy of the recall notification to the lessee within 10 days. Any subsequent stage manufacturer is required to forward this notice to its distributors and retail outlets within five working days.

Daimler Truck North America LLC

Field Service Campaign

SF710 A-D

Creation Date: **November 2024**

Copy of Notice to Owners

Subject: Freightliner High-Voltage Cable

Daimler Truck North America LLC (DTNA), on behalf of its Freightliner Trucks Division, is initiating Field Service Campaign SF710 to modify specific 2023-2025 Freightliner eM2, and eCascadia vehicles, manufactured May 16, 2022, through July 29, 2024.

E-vehicles with inverters having improperly torqued high-voltage (HV) cable connections may encounter issues including intermittent propulsion power or complete loss of power from one inverter.

A Daimler Truck North America authorized service facility will conduct a thorough inspection and check the torque levels of all HV cable connections on the inverter as well as the HV battery connections.

Please contact an authorized DTNA dealer to arrange to have the campaign performed. The campaign will take approximately one to two hours and will be performed **free of charge**. To locate an authorized dealer, search online at Daimler-TruckNorthAmerica.com/Contact-us. Scroll down to “Locate a Dealer” and select the appropriate brand.

This Field Service Campaign will **terminate on November 30, 2025.** Please make sure the campaign is completed prior to this date. Work completed after this date will be done at the customer’s expense.

As stated in the terms of your express limited warranty, Daimler Truck North America LLC will not pay for any damage caused by failure to properly maintain your vehicle. Daimler Truck North America LLC considers the work necessary under this campaign to be proper maintenance and will, therefore, not pay for any damage to your vehicle caused by your failure to have the repairs that are the subject of this campaign performed in a reasonable time.

Contact the Warranty Campaigns Department at (800) 547-0712, from 7 a.m. to 4 p.m. Pacific Time, Monday through Friday, e-mail address: dtna-war-campaigns@daimlertruck.com, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information.

WARRANTY CAMPAIGNS DEPARTMENT
Enclosure

Daimler Truck North America LLC

Field Service Campaign

SF710 A-D

Creation Date: **November 2024**

Work Instructions

Subject: Freightliner High-Voltage Cable

Models Affected					
Make	**Model**	**Model Yr. Start**	**Model Yr. End**	**Prod. Start Date**	**Prod. End Date**
Freightliner	eM2 CL6	2024	2025	March 3, 2023	July 25, 2024
Freightliner	eM2 CL7	2024	2025	March 16, 2023	July 29, 2024
Freightliner	eCascadia 4X2	2023	2025	June 28, 2022	May 2, 2024
Freightliner	eCascadia 6X4	2023	2025	May 16, 2022	July 29, 2024

SF710A, B – Inspecting the High-Voltage (HV) Cable Torque

IMPORTANT: Print a paper copy of the bulletin. For Tables 3, 4, and 5, manually record the requested values. Once completed, take a photo of each table, and attach all three photos with the claim submission.

1. Check the base label (Form WAR259) for a completion sticker for SF710 (Form WAR261), indicating this work has been done. The base label is usually located on the passenger-side door, about 12 inches (30 cm) below the door latch. If a completion sticker is present, no work is needed. If a completion sticker is not present, proceed to the next step.
2. Park the vehicle on a level surface, place the vehicle in neutral, shut down the vehicle, and set the parking brake. Chock the tires.
3. Remove the right- and left-hand side cab close out panels. See **Fig. 1**.

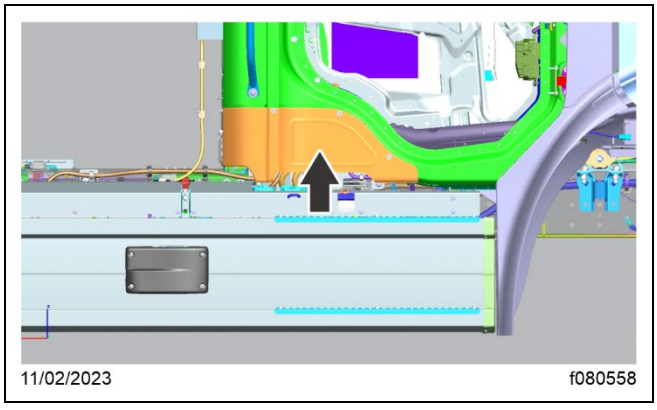


Fig. 1, Cab Close Out Panel

4. Remove the right-hand side battery covers. See **Fig. 2** and **Fig. 3**.

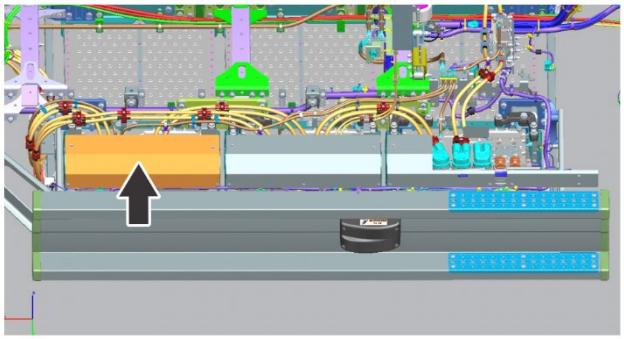


Fig. 2, Battery 3 Protective Plate

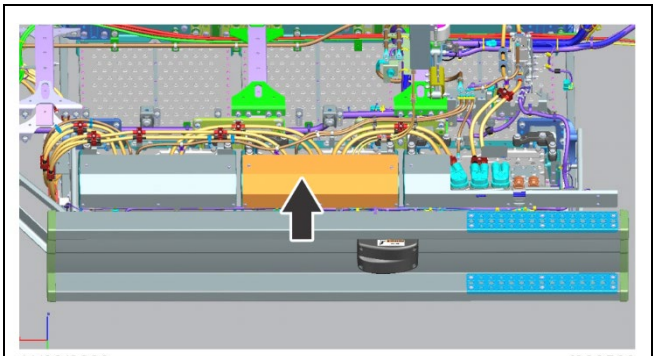
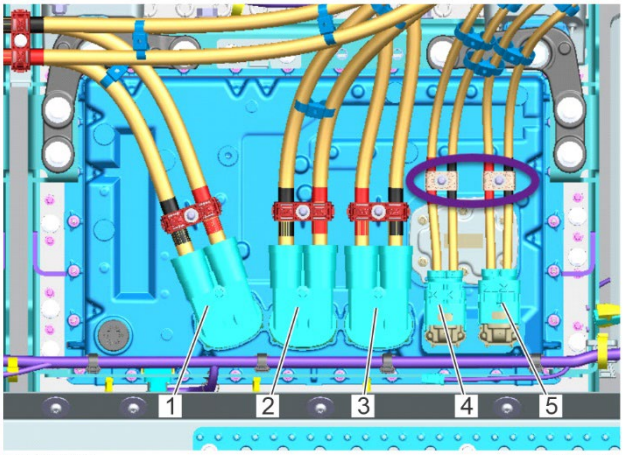


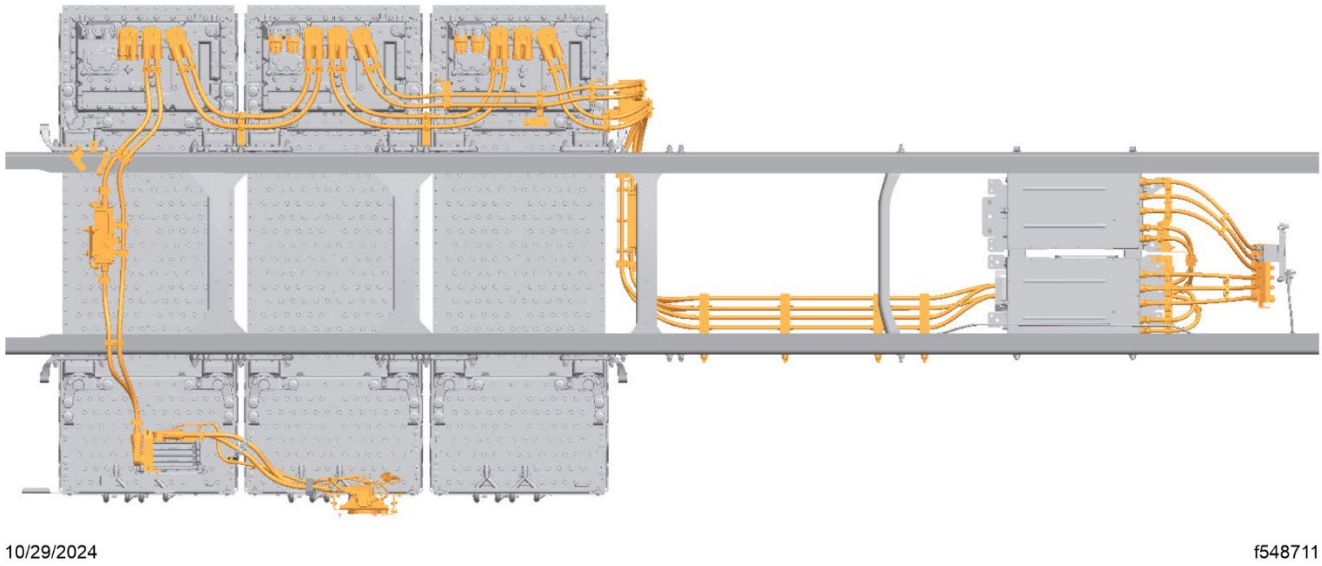
Fig. 3, Battery 2 Protective Plate

5. Inspect all the HVS420 connector fasteners, located on the HV battery EE boxes and DC boxes, for the correct torque of 17 lbf·ft (23 N·m) by tightening the fasteners. Fill out the torque values in **Table 3** and **Table 4**. See **Fig. 4**, **Fig. 5**, and **Fig. 6**.



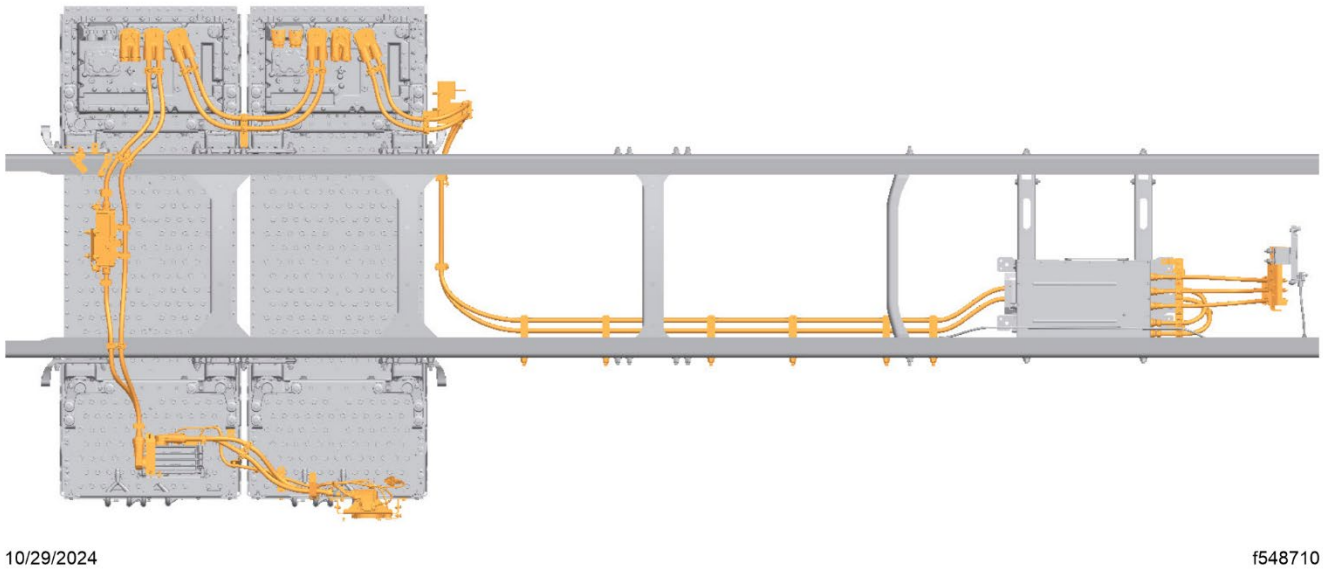
1. Connector 1 (C1)
2. Connector 2 (C2)
3. Connector 3 (C3)
4. Connector 4 (C4)
5. Connector 5 (C5)

Fig. 4, HV Battery Connectors



Some of these connections shown were disconnected during decommissioning.

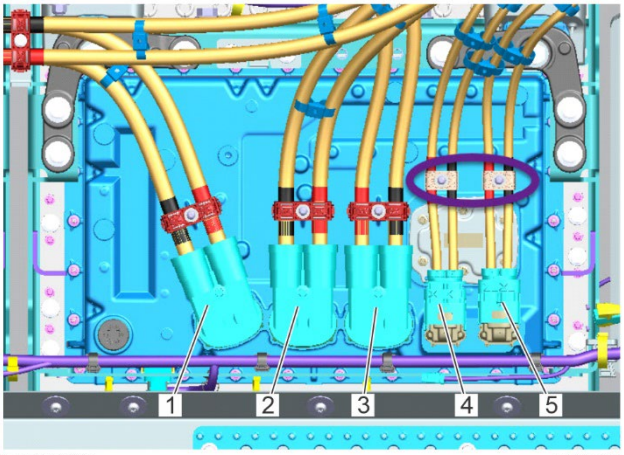
Fig. 5, CL7 Cable Layout



Some of these connections shown were disconnected during decommissioning.

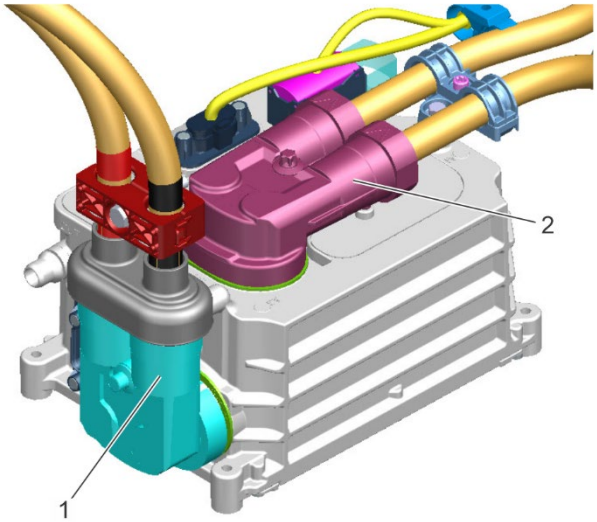
Fig. 6, CL6 Cable Layout

Table 3 – HVS420 Connector Fasteners Tightening Torque

Record if each connection reaches 17 lbf·ft (23 N·m) tightening torque without turning (Y/N)	 07/25/2023 f080501		
If the bolt turns, note how far before reaching the specified torque (1/4 turn, 1/2 turn, full turn)			
Connection	C1	C2	C3
HV Battery 1			
HV Battery 2			
HV Battery 3			

IMPORTANT: If any HV connections are found to be visibly backed-out, loose, or hand-tight, remove the connection and inspect the electrical contact surfaces for damage. If any signs of damage are found, replace the cable assembly and the mating component (inverter or HV battery).

Table 4 – DC Box Connector Fasteners Tightening Torque

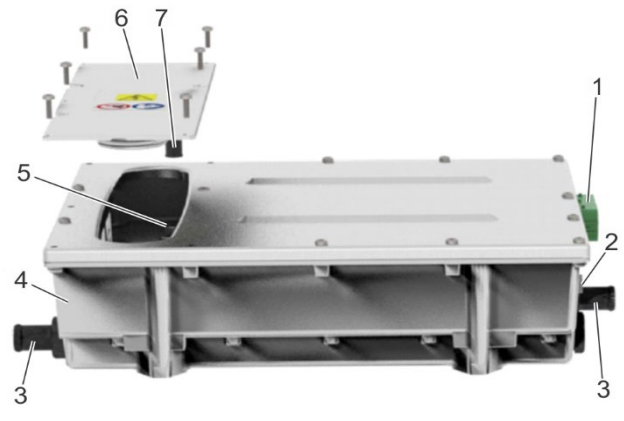
Record if each connection reaches 17 lbf·ft (23 N·m) tightening torque without turning (Y/N)	 10/29/2024 f548712
If the bolt turns, note how far before reaching the specified torque (1/4 turn, 1/2 turn, full turn)	

	1. Front Connector (C1)	2. Top Connector (C2)
Connection	C1	C2
DC Box 1		

DANGER:

Service and repair of the electric vehicle should only be performed by technicians who have completed HV2 or HV3 Daimler Safety Training. Decommissioning and commissioning of the HV system should only be performed by technicians who have completed HV3 Daimler Safety training. To prevent personal injury or death, or damage to the electric system, do not attempt repairs yourself.

6. Decommission the vehicle via the inverters. For instructions, see **Group 08: 1.2** in the *eM2 Workshop Manual*.
7. Remove the inverter access covers and the delayed access covers from all inverters. See **Fig. 7** and **Fig. 8**.



1. I/O Connection
2. Gore Vent
3. Coolant Connection
4. Heat Sink
5. Terminal
6. Inverter Access Cover
7. Hazardous Voltage Interlock (HVIL) Magnet

Fig. 7, Inverter Components

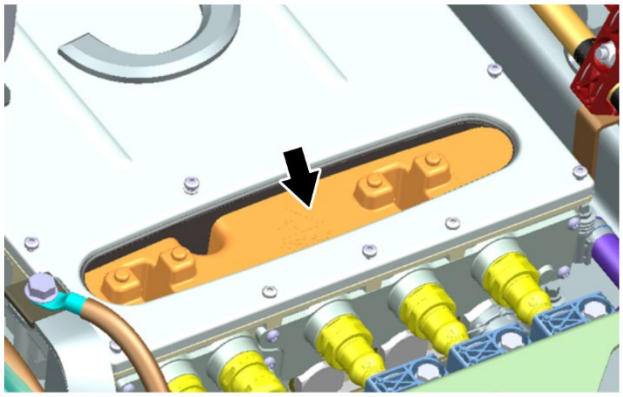
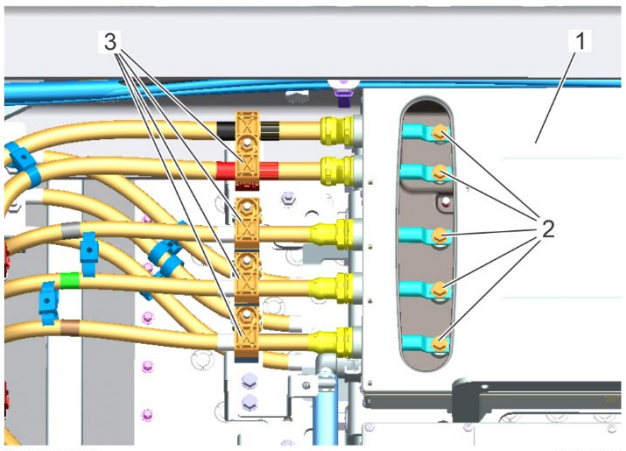


Fig. 8, Delayed Access Cover

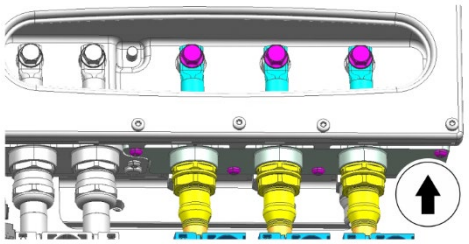
8. Inspect all the inverter lug fasteners for the correct torque of 17 lbf·ft (23 N·m) by tightening the fasteners. Fill out the torque values in **Table 5**. See **Fig. 9**.



1. Inverter
2. Lug Fastener
3. High-Voltage Clamps

Fig. 9, High-Voltage Cable Clamps

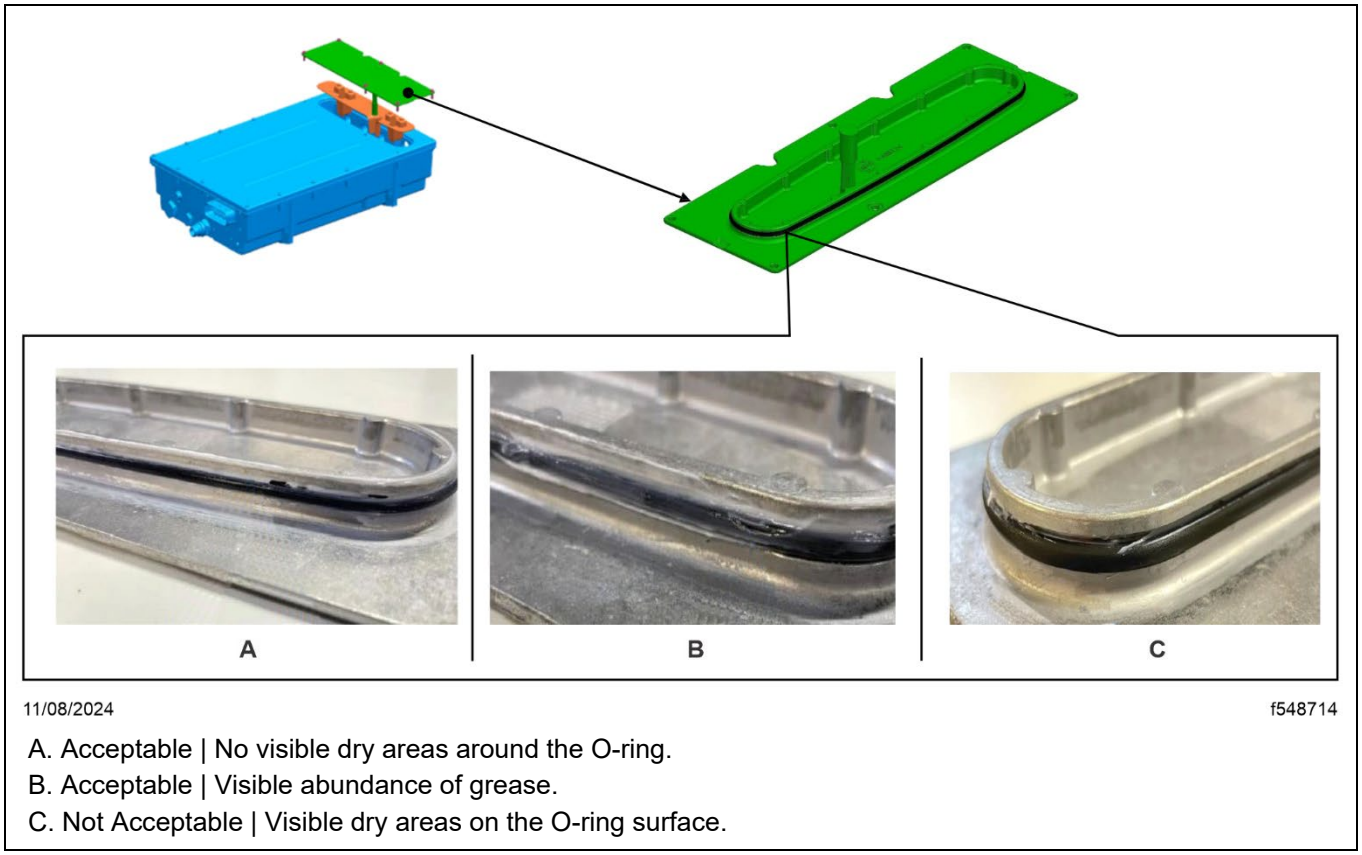
Table 5 – Inverter Lug Fasteners Tightening Torque

Record if each connection reaches 17 lbf·ft (23 N·m) tightening torque without turning (Y/N)					
If the bolt turns, note how far before reaching the specified torque (1/4 turn, 1/2 turn, full turn)					
Connection	1	2	3	4	5
Inverter 1					
Inverter 2					

IMPORTANT: If any HV connections are found to be visibly backed-out, loose, or hand-tight, remove the connection and inspect the electrical contact surfaces for damage. If any signs of damage are found, replace the cable assembly and the mating component (inverter or HV battery).

NOTE: Use McMaster-Carr's chemical-resistant seal and O-ring grease or equivalent on the O-rings.

9. Install the delayed access and the inverter access cover for the undercab inverter. Verify the O-ring is not damaged and is properly lubricated. Tighten the fasteners 44 lbf·in (497 N·cm). See **Fig. 10** and **Fig. 11**.



A. Acceptable | No visible dry areas around the O-ring.
B. Acceptable | Visible abundance of grease.
C. Not Acceptable | Visible dry areas on the O-ring surface.

Fig. 10, Inspecting the O-Ring

Fig. 11, Tightening Sequence for Inverter Access Cover

10. Commission the vehicle via the inverters. For instructions, see **Group 08: 1.1** in the *eM2 Workshop Manual*.
11. Install the right-hand side battery covers.
12. Install the right- and left-hand side cab close out panels.
13. Clean a spot on the base label (Form WAR259), and attach a campaign completion sticker for SF710 (Form WAR261), indicating this work has been completed.

SF710C, D – Inspecting the High-Voltage (HV) Cable Torque

IMPORTANT: Print a paper copy of the bulletin. For Tables 6, 7, and 8, manually record the requested values. Once completed, take a photo of each table, and attach all three photos with the claim submission.

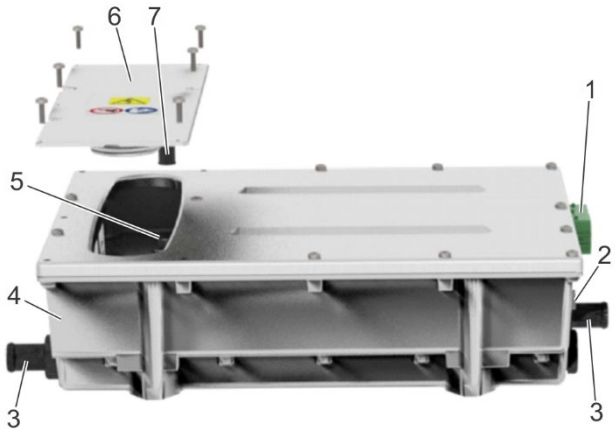
1. Check the base label (Form WAR259) for a completion sticker for SF710 (Form WAR261), indicating this work has been done. The base label is usually located on the passenger-side door, about 12 inches (30 cm) below the door latch. If a completion sticker is present, no work is needed. If a completion sticker is not present, proceed to the next step.
2. Park the vehicle on a level surface, place the vehicle in neutral, shut down the vehicle, and set the parking brake. Chock the tires.

DANGER:

Service and repair of the electric vehicle should only be performed by technicians who have completed HV2 or HV3 Daimler Safety Training. Decommissioning and commissioning of the HV system should only be performed by technicians who have completed HV3 Daimler Safety training. To prevent personal injury or death, or damage to the electric system, do not attempt repairs yourself.

3. Decommission the vehicle via the inverters. For instructions, see **Group 08: 8.2** in the *eCascadia Workshop Manual*.
4. *For 6x4 vehicles only:*
   To access the undercab inverter, remove the center deck plate closest to the rear of the cab.
5. Remove the right- and left-hand side forward battery covers.
6. Remove the right-hand side large battery cover.

7. Remove the inverter access covers and the delayed access covers from all inverters. See **Fig. 12** and **Fig. 13**.



1. I/O Connection
2. Gore Vent
3. Coolant Connection
4. Heat Sink
5. Terminal
6. Inverter Access Cover
7. Hazardous Voltage Interlock (HVIL) Magnet

Fig. 12, Inverter Components

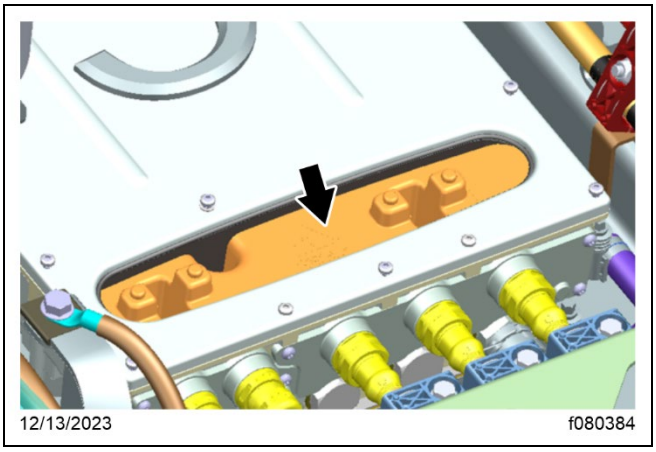
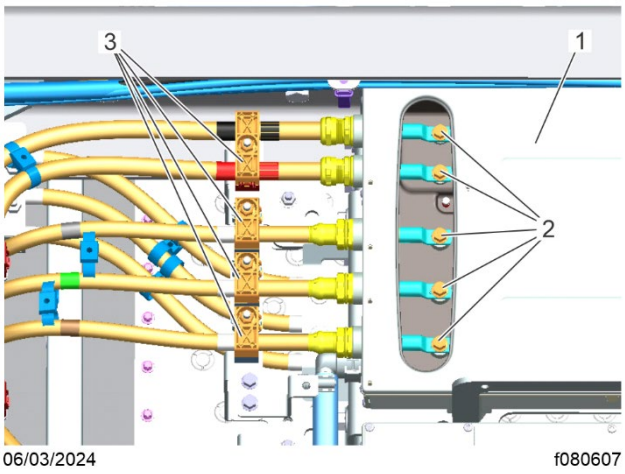


Fig. 13, Delayed Access Cover

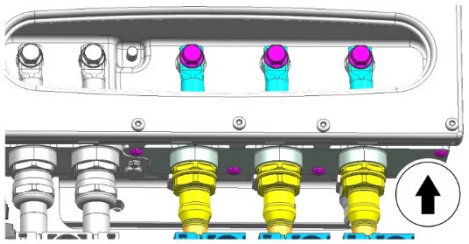
8. Inspect all the inverter lug fasteners for the correct torque of 17 lbf·ft (23 N·m) by tightening the fasteners. Fill out the torque values in **Table 6**. See **Fig. 14**.



1. Inverter
2. Lug Fastener
3. High-Voltage Clamps

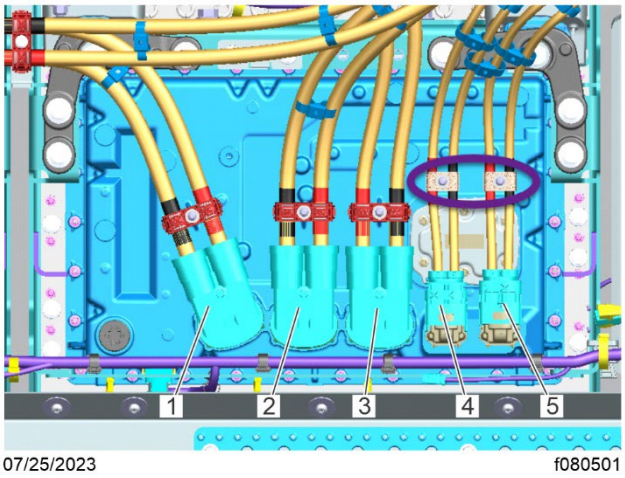
Fig. 14, High-Voltage Cable Clamps

Table 6 – Inverter Lug Fasteners Tightening Torque

Record if each connection reaches 17 lbf·ft (23 N·m) tightening torque without turning (Y/N) If the bolt turns, note how far before reaching the specified torque (1/4 turn, 1/2 turn, full turn)	 10/29/2024 f548713				
Connection	1	2	3	4	5
Inverter 1					
Inverter 2					
Inverter 3					

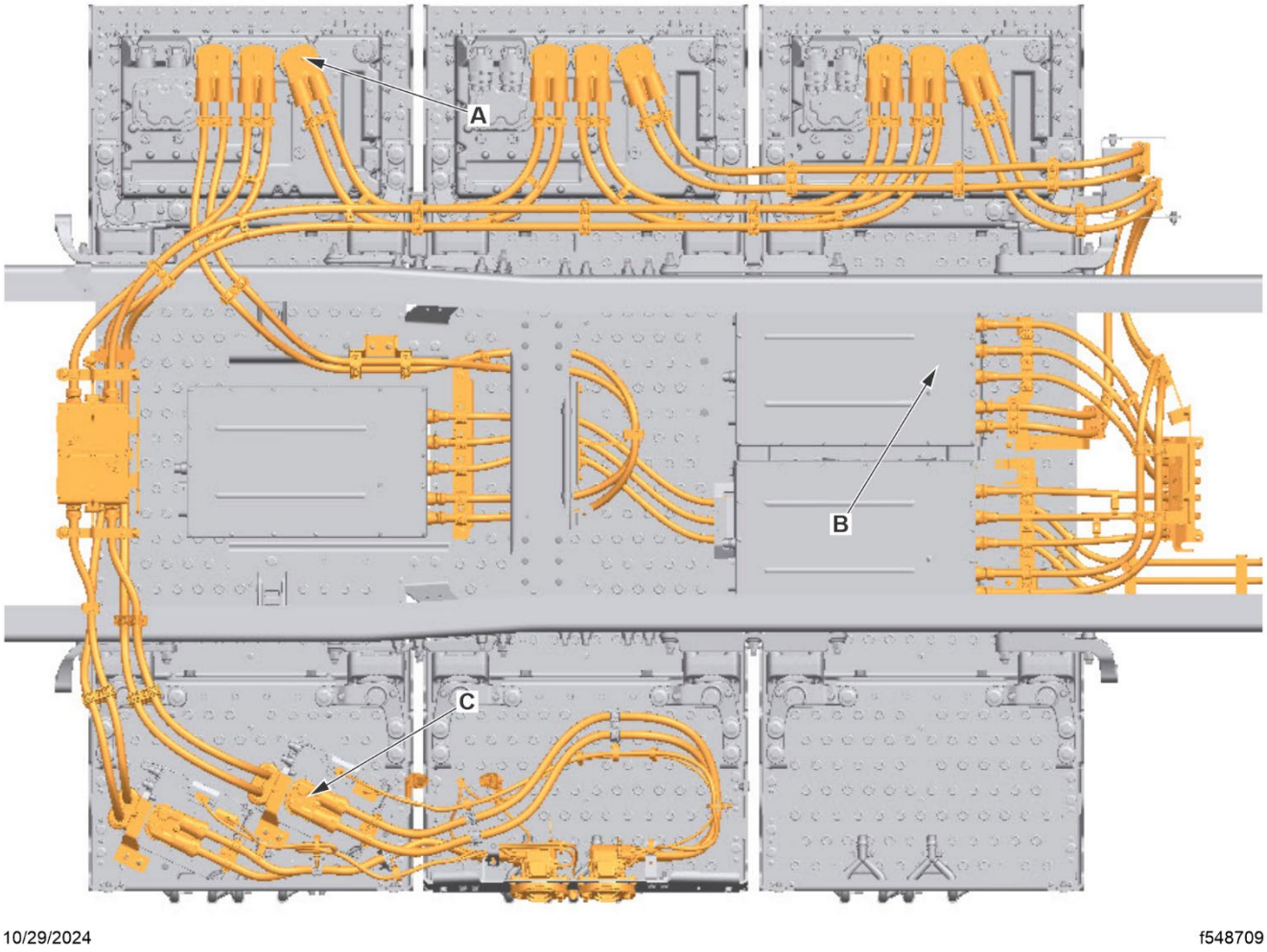
IMPORTANT: If any HV connections are found to be visibly backed-out, loose, or hand-tight, remove the connection and inspect the electrical contact surfaces for damage. If any signs of damage are found, replace the cable assembly and the mating component (inverter or HV battery).

9. Inspect all the HVS420 connector fasteners, located on the HV battery EE boxes and DC boxes, for the correct torque of 17 lbf·ft (23 N·m) by tightening the fasteners. Fill out the torque values in **Table 7** and **Table 8**. See **Fig. 15** and **Fig. 16**.



1. Connector 1 (C1)
2. Connector 2 (C2)
3. Connector 3 (C3)
4. Connector 4 (C4)
5. Connector 5 (C5)

Fig. 15, HV Battery Connectors



A 6x4 vehicle with dual-port charging is shown. 4x2 and/or single-port charging vehicles do not have some of the cables shown above.

A. Check the large HV connectors on the HV batteries.
B. Check the cable lug fasteners inside the inverter.
C. Check the HV connections on the DC boxes.

Fig. 16, 6x4 Cable Layout

Table 7 – HVS420 Connector Fasteners Tightening Torque

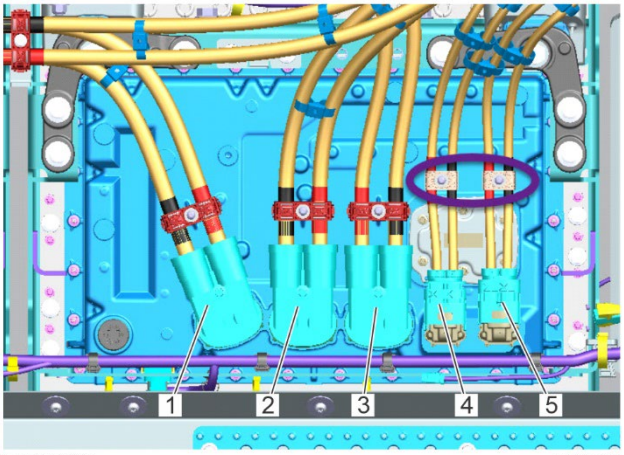
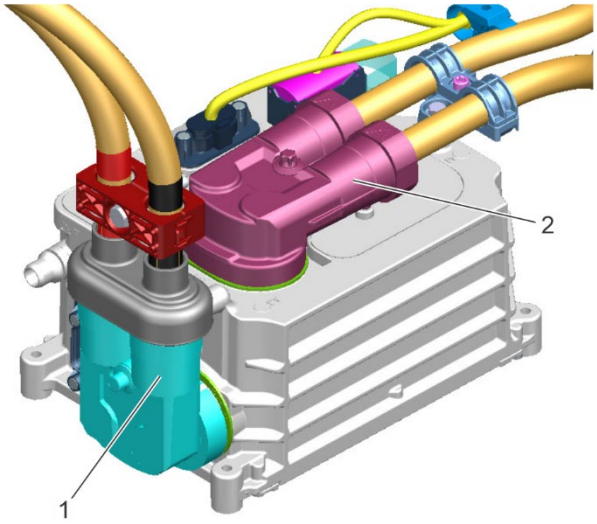
Record if each connection reaches 17 lbf·ft (23 N·m) tightening torque without turning (Y/N)			
If the bolt turns, note how far before reaching the specified torque (1/4 turn, 1/2 turn, full turn)			
Connection	C1	C2	C3
HV Battery 1			
HV Battery 2			
HV Battery 3			

Table 8 – DC Box Connector Fasteners Tightening Torque

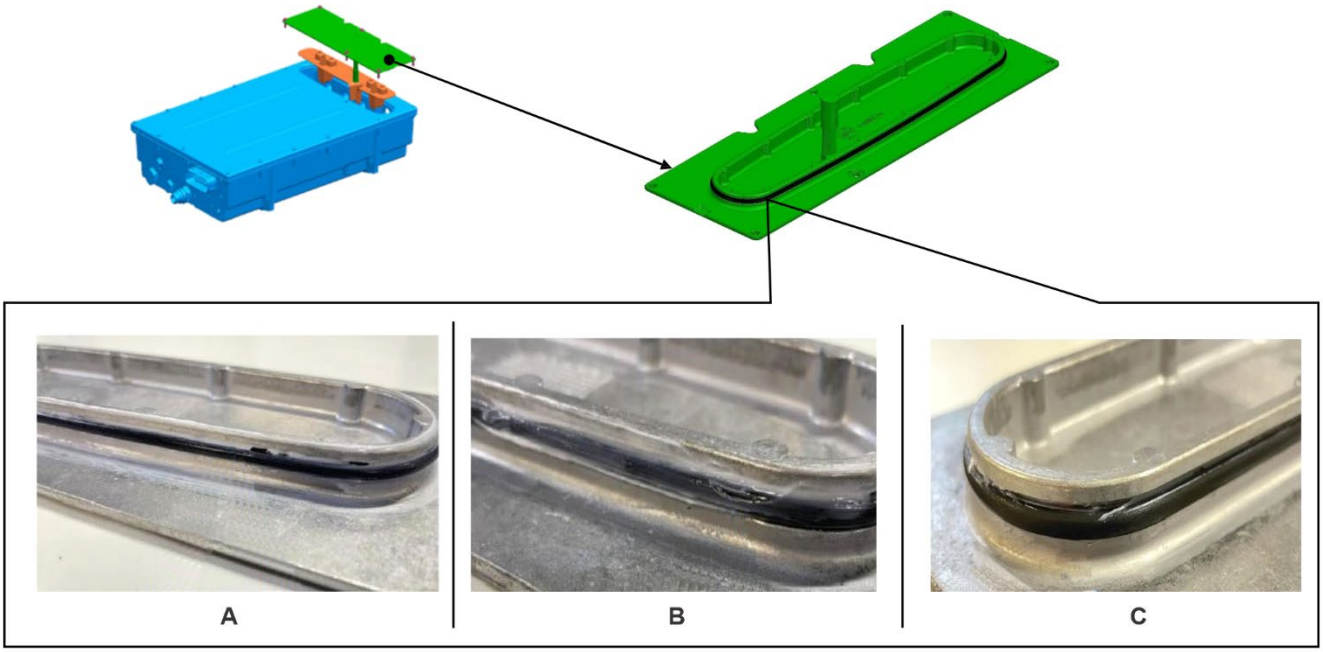
<table>
<tr><td>Record if each connection reaches 17 lbf·ft (23 N·m) tightening torque without turning
(Y/N)</td><td colspan="2" rowspan="2"> 

1. Front Connector (C1) 2. Top Connector (C2)</td></tr>
<tr><td>If the bolt turns, note how far before reaching the specified torque
(1/4 turn, 1/2 turn, full turn)</td></tr>
<tr><td>Connection</td><td>C1</td><td>C2</td></tr>
<tr><td>DC Box 1</td><td></td><td></td></tr>
<tr><td>DC Box 2</td><td></td><td></td></tr>
</table>

IMPORTANT: If any HV connections are found to be visibly backed-out, loose, or hand-tight, remove the connection and inspect the electrical contact surfaces for damage. If any signs of damage are found, replace the cable assembly and the mating component (inverter or HV battery).

NOTE: Use McMaster-Carr®'s chemical-resistant seal and O-ring grease or equivalent on the O-rings.

10. *For 6x4 vehicles only:*
    Install the delayed access and the inverter access cover for the undercab inverter. Verify the O-ring is not damaged and is properly lubricated. Tighten the fasteners 44 lbf·in (497 N·cm). See **Fig. 17** and **Fig. 18**.



A. Acceptable | No visible dry areas around the O-ring.
B. Acceptable | Visible abundance of grease.
C. Not Acceptable | Visible dry areas on the O-ring surface.

Fig. 17, Inspecting the O-Ring

Fig. 18, Tightening Sequence for Inverter Access Cover

11. Commission the vehicle via the inverters. For instructions, see **Group 08: 8.1** in the *eCascadia Workshop Manual*.
12. Install the right-hand side large battery cover.
13. Install the right- and left-hand side forward battery covers.
14. Install the center deck plates.
15. Clean a spot on the base label (Form WAR259), and attach a campaign completion sticker for SF710 (Form WAR261), indicating this work has been completed.