

April 2021
SF618A-E

Subject: Cascadia Cummins Acumen Edge Wiring

Models Affected: Specific Model Year 2021 Freightliner Cascadia vehicles manufactured February 10, 2020, through September 24, 2020, and equipped with a Cummins Acumen Edge module.

General Information

Daimler Trucks North America LLC (DTNA), on behalf of its Freightliner Trucks Division, is initiating Field Service Campaign SF618 to modify the vehicles mentioned above.

Certain vehicles equipped with a Cummins Acumen Edge module are not communicating and, therefore, are unable to benefit from over-the-air software updates and may not be able to connect to the Cummins digital apps.

The Cummins Acumen module harness will be inspected and re-pinned as needed, and the module may be replaced, and/or a GPS antenna and coaxial cable installed.

There are approximately 250 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

Replacement parts are now available and can be obtained by ordering the kit and/or part number(s) listed below from your facing Parts Distribution Center.

If our records show your dealership has ordered any vehicle(s) involved in campaign number SF618, a list of the customers and vehicle identification numbers will be available on DTNAConnect. Please refer to this list when ordering parts for this campaign.

Table 1 - Replacement Parts for SF618

Campaign Number	Part Description	Part Number	QTY
SF618B	DEVICE-ENG ECU,CUMMINS EDGE	66-16786-001	1 ea
	ANTENNA-GPS,INTERIOR MOUNT, VT	06-81702-000	1 ea
SF618B, D, E	CABLE-COAX,RG174,FAKRA 1300 MM	A23-14369-052	1 ea
	STRAP-TIE ANTI-VIB M6.3 PUSHON	23-13481-000	1 ea
SF618C	DEVICE-ENG ECU,CUMMINS EDGE	66-16786-000	1 ea
SF618D	CABLE-COAX,RG174,FAKRA 2225 MM	A23-14369-089	1 ea
SF618E	CABLE-COAX,RG174,FAKRA 2025 MM	A23-14369-081	1 ea
SF618A-E	BLANK COMPLETION STICKER	WAR260	1 ea

Table 1

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Removed Parts

U.S. and Canadian Dealers, please follow Warranty Failed Parts Tracking shipping instructions for the disposition of all removed parts. Export distributors, please destroy removed parts unless otherwise advised.

Labor Allowance

Table 2 - Labor Allowance

Campaign Number	Procedure	Time Allowed (hours)	SRT Codes	Corrective Action
SF618A	CUMMINS ACUMEN MODULE WIRING, INSPECTION ONLY	0.6	996-F092A	06-Inspect
SF618A	CUMMINS ACUMEN MODULE WIRING, INSPECTION AND RE-PIN CONNECTOR,	1.0	996-F092B	12-Repair Recall/Campaign
SF618B	CUMMINS ACUMEN MODULE WIRING, INSPECTION ONLY, AND INSTALL NEW ACUMEN MODULE AND GPS ANTENNA & COAX	1.1	996-F092C	12-Repair Recall/Campaign
SF618B	CUMMINS ACUMEN MODULE WIRING, INSPECTION, RE-PIN CONNECTOR, INSTALL NEW ACUMEN MODULE, AND ADD GPS ANTENNA & COAX	1.5	996-F092D	12-Repair Recall/Campaign
SF618C	CUMMINS ACUMEN MODULE WIRING, INSPECTION ONLY AND REPLACE ACUMEN MODULE,	0.7	996-F092E	12-Repair Recall/Campaign
SF618C	CUMMINS ACUMEN MODULE WIRING, INSPECTION, RE-PIN CONNECTOR, AND REPLACE ACUMEN MODULE,	1.1	996-F092F	12-Repair Recall/Campaign
SF618D	CUMMINS ACUMEN MODULE WIRING, INSPECTION ONLY AND ADD GPS ANTENNA COAX,	1.4	996-F092G	12-Repair Recall/Campaign
SF618D	CUMMINS ACUMEN MODULE WIRING, INSPECTION, RE-PIN CONNECTOR, AND ADD GPS ANTENNA COAX	1.8	996-F092H	12-Repair Recall/Campaign
SF618E	F092I CUMMINS ACUMEN MODULE WIRING, INSPECTION ONLY AND INSTALL GPS ANTENNA COAX	2.7	996-F092I	12-Repair Recall/Campaign
SF618E	CUMMINS ACUMEN MODULE WIRING, INSPECTION, RE-PIN CONNECTOR, AND INSTALL GPS ANTENNA COAX	3.1	996-F092J	12-Repair Recall/Campaign

Table 2

IMPORTANT: When the campaign has been completed, locate the base completion label in the appropriate location on the vehicle, and attach the gray completion sticker provided in the field service

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kit (Form WAR261). If the vehicle does not have a base completion label, clean a spot on the appropriate location of the vehicle and first attach the base completion label (Form WAR259). If a field service kit is not required or there is no completion sticker in the kit, write the campaign number on a blank sticker and attach it to the base completion label.

Claims for Credit

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. Please reference the following information in OWL:

- Claim type is **Field Service Campaign**.
- In the Campaign field, enter the campaign number and appropriate condition code (**SF618-A, SF618-B, etc.**).
- In the Primary Failed Part field, enter **25-SF618-000**.
- In the Parts section, enter the appropriate kit or part number(s) as shown in the Replacement Parts Table.
- In the Labor section, enter the appropriate SRT from the Labor Allowance Table. Administrative time will be included automatically as SRT 939-6010A for 0.3 hours for all vehicles.
- The VMRS Component Code is **F99-999-005** and the Cause Code is **A1 - Campaign**.
- This Field Service Campaign will **terminate on April 30, 2022**. Dealers will be notified of any changes to the termination date via Important Campaign Information Letter posted on DTNAConnect.com.

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

All claims must be submitted within 30 days of the repair and within 30 days of the termination date of the campaign. U.S. and Canadian Dealers: All excess inventory to be returned to the PDC following the conclusion of the campaign must be returned in resaleable condition to the Memphis PDC within 90 days from the termination date. Please submit a PAR to request return to the Memphis PDC. (Canadian dealers should return the kits to their facing PDC.). Export Distributors: Excess inventory is not returnable.

For questions, U.S. and Canadian dealers, contact the Warranty Campaigns Department via Web inquiry at DTNAConnect.com/WSC, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information. Export distributors submit a Web inquiry or contact your International Service Manager

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Copy of Notice to Owners

Subject: Cascadia Cummins Acumen Edge Wiring

Daimler Trucks North America LLC (DTNA), on behalf of its Freightliner trucks division, is initiating Field Service Campaign SF618 to modify specific Model Year 2021 Freightliner Cascadia vehicles manufactured February 10, 2020, through September 24, 2020, and equipped with a Cummins Acumen Edge module.

Certain vehicles equipped with a Cummins Acumen Edge module are not communicating and, therefore, are unable to benefit from over-the-air software updates and may not be able to connect to the Cummins digital apps.

The Cummins Acumen module harness will be inspected and re-pinned as needed, and the module may be replaced, and/or a GPS antenna and coaxial cable installed.

Please contact an authorized Daimler Trucks North America dealer to arrange to have the campaign performed and to ensure that parts are available at the dealership. To locate an authorized dealer, go to Daimler-TrucksNorthAmerica.com/Contact-Us/. Scroll down to "Locate a Dealer," and select the appropriate brand. The campaign will take approximately one and a half hours and will be performed at no charge to you.

This Field Service Campaign will **terminate on April 30, 2022**. 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 Trucks North America LLC will not pay for any damage caused by failure to properly maintain your vehicle. Daimler Trucks 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.Warranty.Campaigns@Daimler.com, or the Customer Assistance Center at (800) 385-4357, if you have any questions or need additional information.

WARRANTY CAMPAIGNS DEPARTMENT

Enclosure

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Work Instructions

Subject: Cascadia Cummins Acumen Edge Wiring

Models Affected: Specific Model Year 2021 Freightliner Cascadia vehicles manufactured February 10, 2020, through September 24, 2020, and equipped with a Cummins Acumen Edge module.

Wiring Inspection and Repair of Acumen Control harness connectors (Groups SF618A-E)

1. Inspect the base label (Form WAR259) for a campaign completion sticker for SF618 (Form WAR261). If a sticker is present for campaign SF618, no work is needed. If there is no sticker, proceed with the steps below.
2. Park the vehicle, shut down the engine, and apply the parking brakes. Chock the tires.
3. Disconnect negative battery cables at the batteries.
4. Remove the electronics bay cover at the right-hand (RH) side of the vehicle dash. Refer to **Section 60.06** of the *New Cascadia™ Workshop Manual* for instructions.
5. Remove the RH side lower dash cover. Refer to **Section 60.06** of the *New Cascadia™ Workshop Manual* for instructions.
6. Gently lower the vehicle power distribution module (VPDM) to the cab floor. Refer to **Section 54.08** of the *New Cascadia™ Workshop Manual* for instructions.
7. Open the hood

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8. Within the engine compartment, on the left side of the engine, locate the engine harness connector ENG_CTRL_O_ECU_CM2350_14WAY_1A. See [Fig. 1](#).

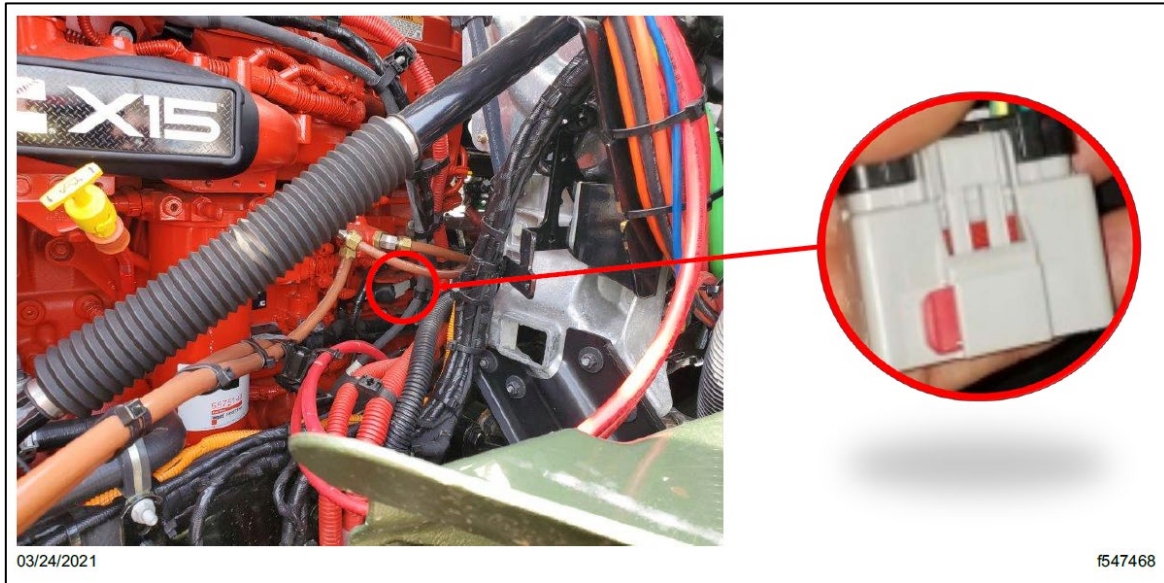


Fig.

1, ENG_CTRL_O_ECU_CM2350_14WAY_1A Connector Location

9. Inspect for correct pinning at cavities 10 and 3. See [Fig. 2](#).

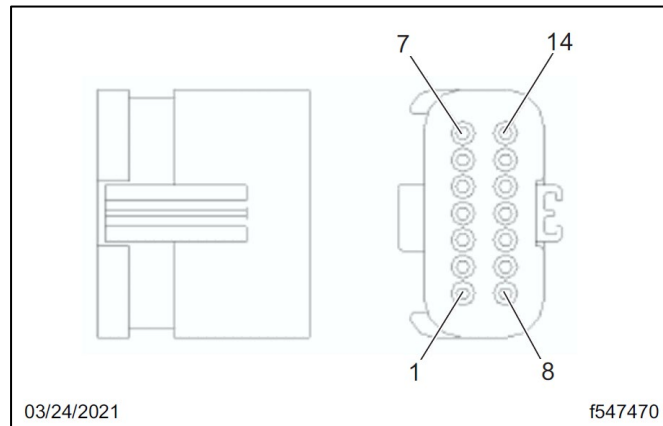


Fig. 2, ENG_CTRL_O_ECU_CM2350_14WAY_1A Pin Configuration

- 9.1 Pin 10 and pin 3 should be connected to wires 499X- and 499X+ respectively.

Are the wires pinned correctly?

YES: Connect the ENG_CTRL_O_ECU_CM2350_14WAY_1A connector, and go to **step 11**.

NO: Go to the next step.

10. Repair connector ENG_CTRL_O_ECU_CM2350_14WAY_1A as follows.

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- 10.1 To disconnect the connector, unlock the connector by sliding the red lock tab. Press the lock tab and gently pull the connector out. See [Fig. 3](#).

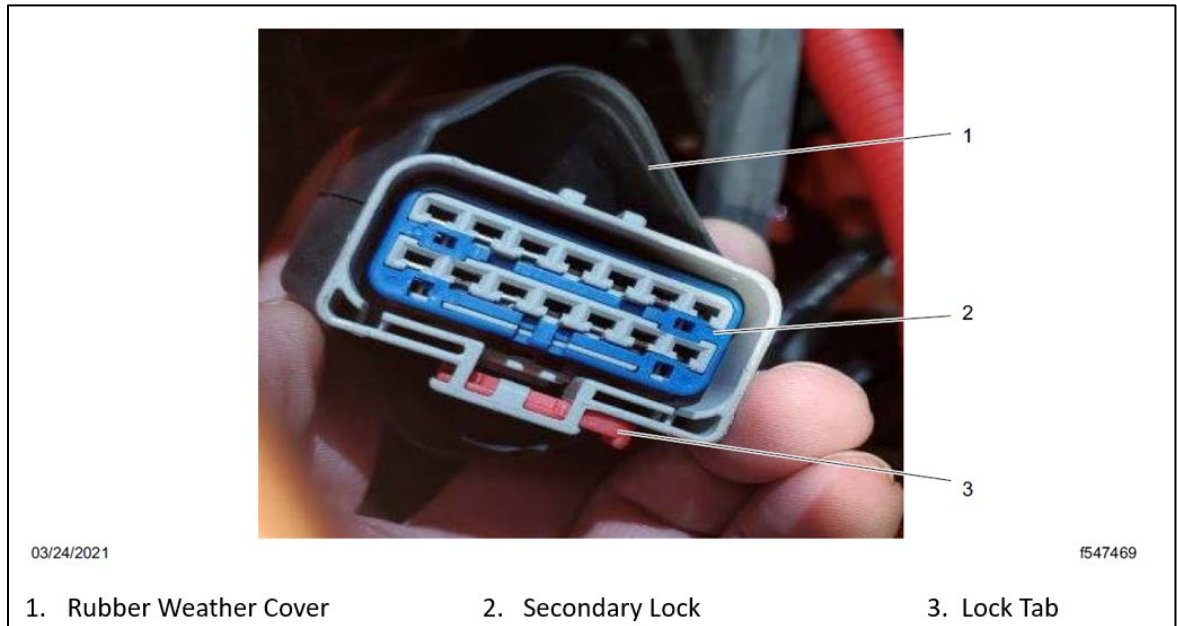


Fig. 3, ENG_CTRL_O_ECU_CM2350_14WAY_1A Connector

- 10.2 Pull back the rubber weather cover over the connector wires.
- 10.3 Using needle nose pliers, grab the blue secondary lock by the tab in the center, and pull it out from the connector. See [Fig. 3](#).
- 10.4 Using DKIOCHA17002-1 (Delphi pin tool 12094430), or similar, extract the terminals and move the wires to the correct cavities as below:
- 499X- (white wire) to cavity 10
 - 499X+ (blue wire) to cavity 3
- 10.5 Install the blue secondary lock, and the rubber weather cover. See [Fig. 3](#).
- 10.6 Connect the ENG_CTRL_O_ECU_CM2350_14WAY_1A connector, and slide the red lock tab to the lock position.

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11. Disconnect the Cummins Acumen module connector ENG_CTRL_D_ECU_CMNS_EDGE_1A located in the electronic bay, on the RH side of the dashboard. See [Fig. 4](#).

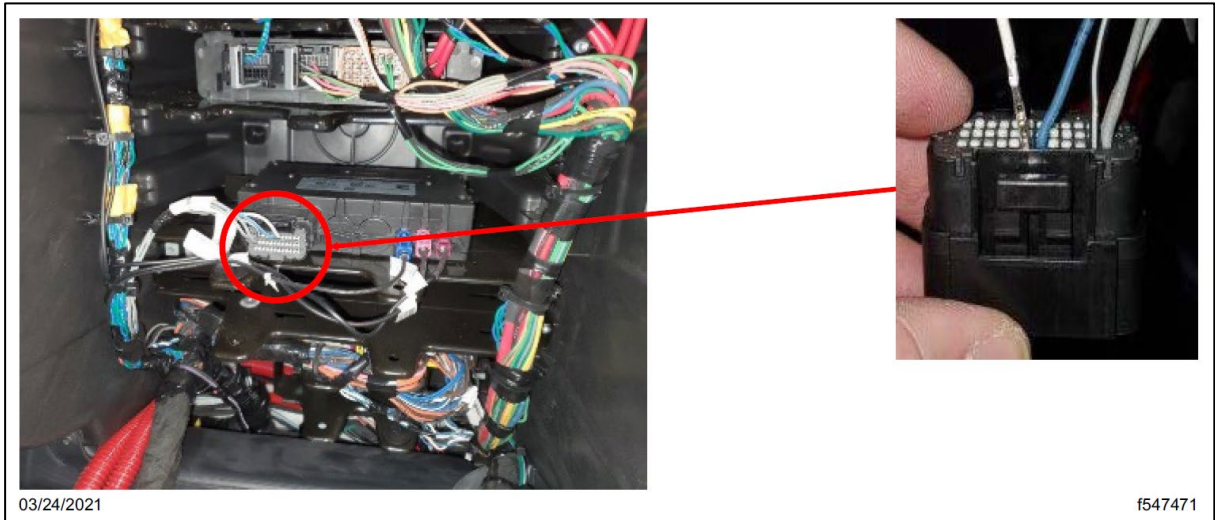


Fig. 4, ENG_CTRL_D_ECU_CMNS_EDGE_1A Connector Location

12. Inspect for correct pinning at cavities 6 and 7. See [Fig. 5](#).

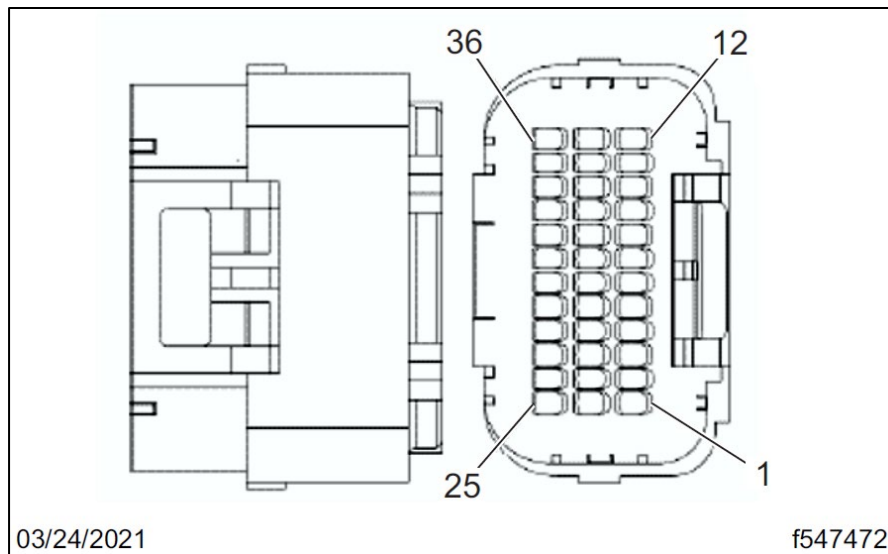


Fig. 5, ENG_CTRL_D_ECU_CMNS_EDGE_1A Connector Pin Configuration

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- 12.1 Pins 6 and 7 should be connected to wires 499X- and 499X+ respectively. See [Fig. 6](#) and See [Fig. 7](#) for incorrect and correct pinning respectively.

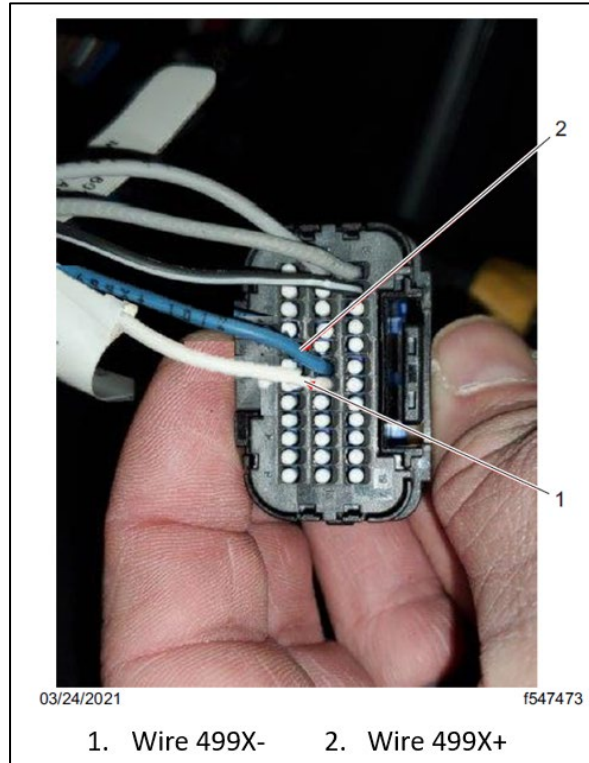


Fig. 6, Incorrect Pinning, ENG_CTRL_D_ECU_CMNS_EDGE_1A Connector

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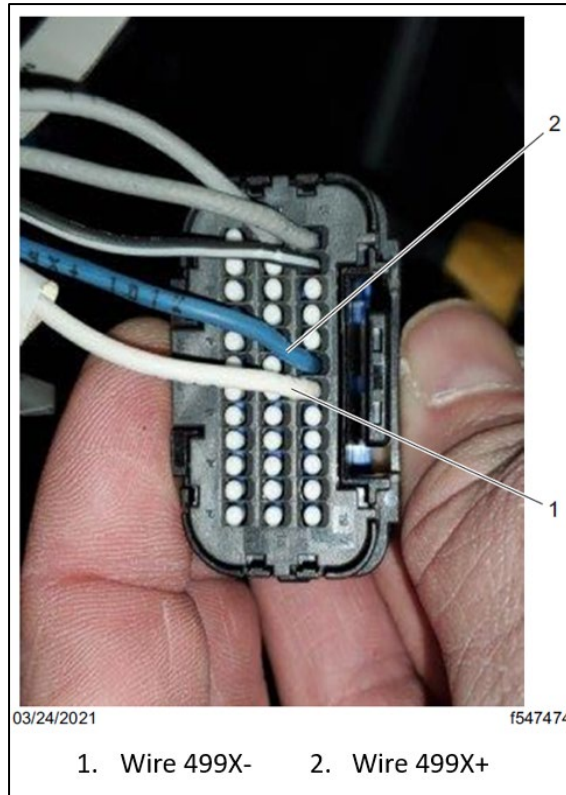


Fig. 7, Correct Pinning, ENG_CTRL_D_ECU_CMNS_EDGE_1A Connector

12.2. Are the wires connected correctly?

YES: Connect the ENG_CTRL_D_ECU_CMNS_EDGE_1A connector, and go to **step 14**.

NO: Go to the next step.

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13. Repair connector ENG_CTRL_D_ECU_CMNS_EDGE_1A as follows.

13.1 Using Delphi tool DKIOCHA17002-1, or a small screwdriver, or any similar tool, remove the orange secondary lock. See [Fig. 8](#).

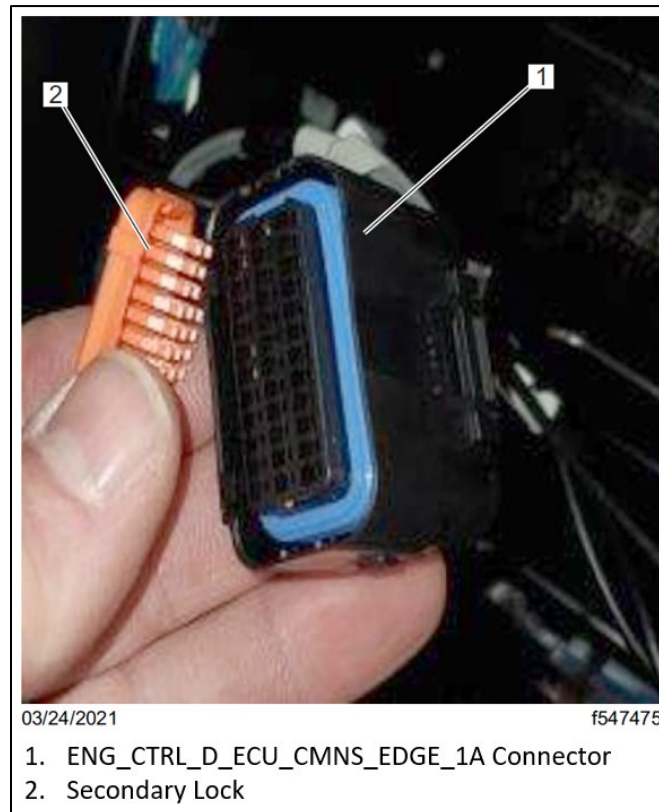


Fig. 8, ENG_CTRL_D_ECU_CMNS_EDGE_1A Connector

13.2 Using DKIOCHA17002-1 (Delphi pin tool 12094430), or similar, extract the terminals and move the wires to the correct cavities as below:

- 499X- (white wire) to cavity 6
- 499X+ (blue wire) to cavity 7

13.3 Install the orange secondary lock. See [Fig. 8](#).

13.4 Connect the ENG_CTRL_D_ECU_CMNS_EDGE_1A connector.

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14. Verify the campaign group that your vehicle belongs to, and using **Table 3** below, proceed to the correct procedure listed.

Campaign Group	Procedure	Page
SF618A	Validate Acumen Communication using Cummins INSITE™	Page 93
SF618B	Cummins Acumen Module Replacement, and GPS Co-Axial Cable Installation	Page 12
SF618C	Cummins Acumen Module Replacement	Page 14
SF618D	Cummins Acumen GPS Co-Axial Cables Installation, Day Cab (Shark Fin Antenna)	Page 16
SF618E	Installation of Cummins Acumen GPS Co-Axial Cables, New Cascadia Sleeper Cab (Thin Film Antenna)	Page 39

Table 3

Cummins Acumen Module Replacement and GPS Co-Axial Cable Installation (Group SF618B)

1. Locate the Cummins Acumen module in the electronics bay, and disconnect all the harnesses and co-axial connectors connected to it.
2. Remove the Cummins Acumen module from the electronics bay by applying light pressure at the front of the module in order to push it backwards, then lift it to release the front tabs. See **Fig. 9**.

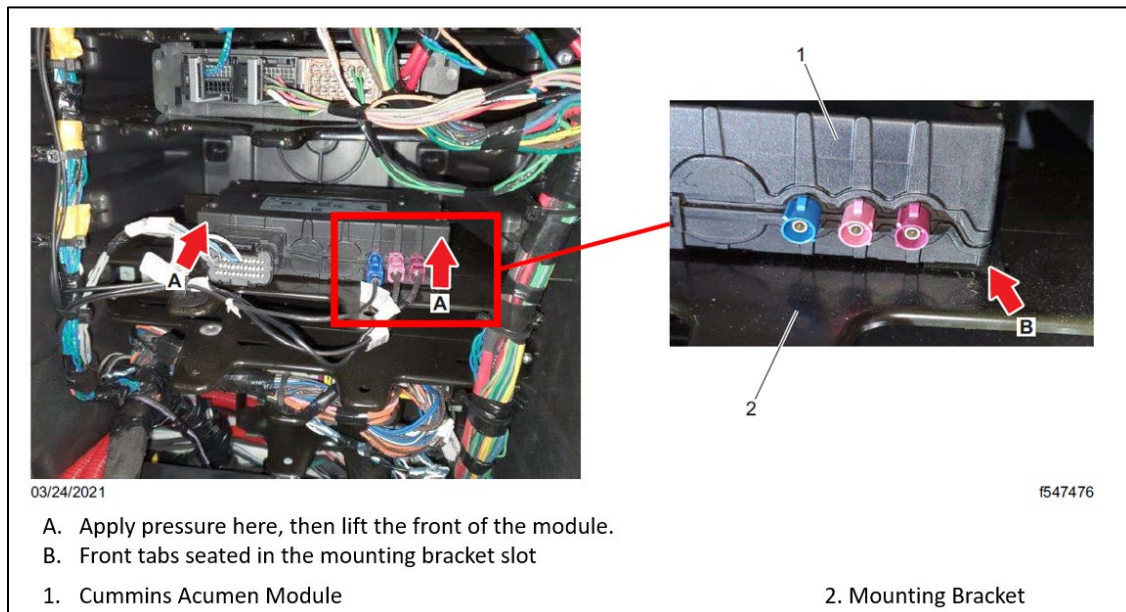


Fig. 9, Cummins Acumen Module Removal

3. Install a new Cummins Acumen module in the electronics bay by placing it on the mounting bracket, and then apply light pressure in front of the module to engage the lock tabs.

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4. Connect all the harnesses and co-axial connectors to the new Cummins Acumen module.
5. Lift the RH side of the dashboard top cover to make enough room to install a GPS antenna on top of the electronic bay. Refer to **Section 60.06** of the *New Cascadia™ Workshop Manual* for instructions.
6. Install a new GPS antenna on top of the electronics bay as follows.
 - 6.1. Check if the area forward to the common telematics platform (cTP) antenna, above the electronics bay, is available to mount the new GPS antenna. See [Fig. 10](#). If the area is occupied, mount the GPS antenna on the center, on top of the electronics bay.



Fig. 10, GPS Antenna Mounting Location

- 6.2. Using a clean cloth, wipe off dust and debris on the area where the new GPS antenna will be mounted.
- 6.3. Peel off the GPS antenna self-adhesive cover, and attach the antenna to the top of the electronics bay with the antenna co-axial cable exiting to the right side.
- 6.4. Connect a co-axial cable with blue connectors to the GPS antenna, and route it between the electronics bay and the RH side A-pillar towards the Cummins Acumen module, along with other co-axial cables that are connected to the Cummins Acumen module.
- 6.5. Secure the co-axial cable with tie straps.

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- 6.6. Connect the co-axial cable to the blue connector on the Cummins Acumen module. See [Fig. 11](#).

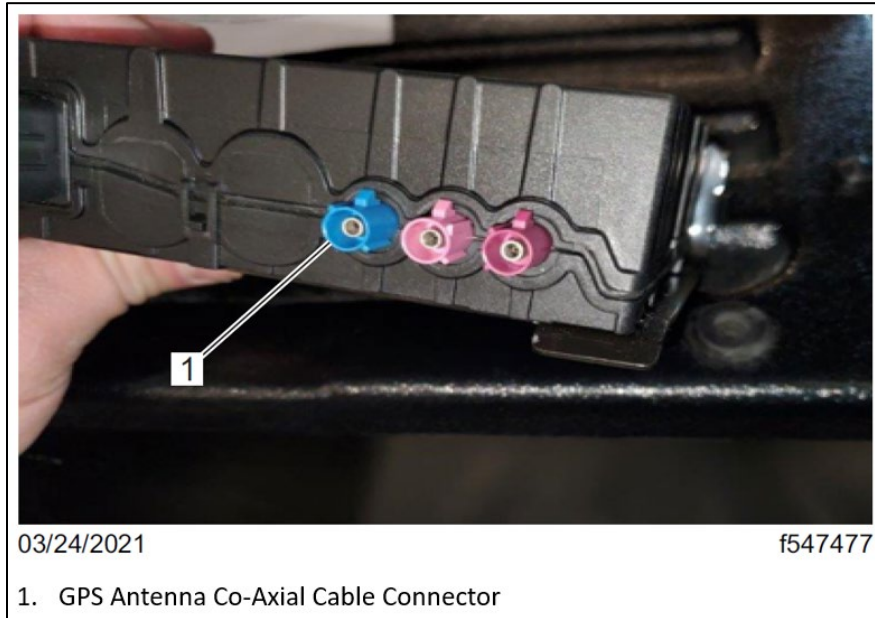


Fig. 11, GPS Antenna Co-Axial Cable Connector

7. Install the RH side of the vehicle dash top cover. Refer to **Section 60.06** of the *New Cascadia™ Workshop Manual* for instructions.
8. Go to the **Validate Acumen Communication using Cummins INSITE™** procedure below (page 93).

Cummins Acumen Module Replacement (Group SF618C)

1. Locate the Cummins Acumen module in the electronics bay, and disconnect all the harnesses and co-axial connectors connected to it.

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2. Remove the Cummins Acumen module from the electronics bay by applying light pressure at the front of the module in order to push it backwards, then lift it to release the front tabs. See [Fig. 12](#).

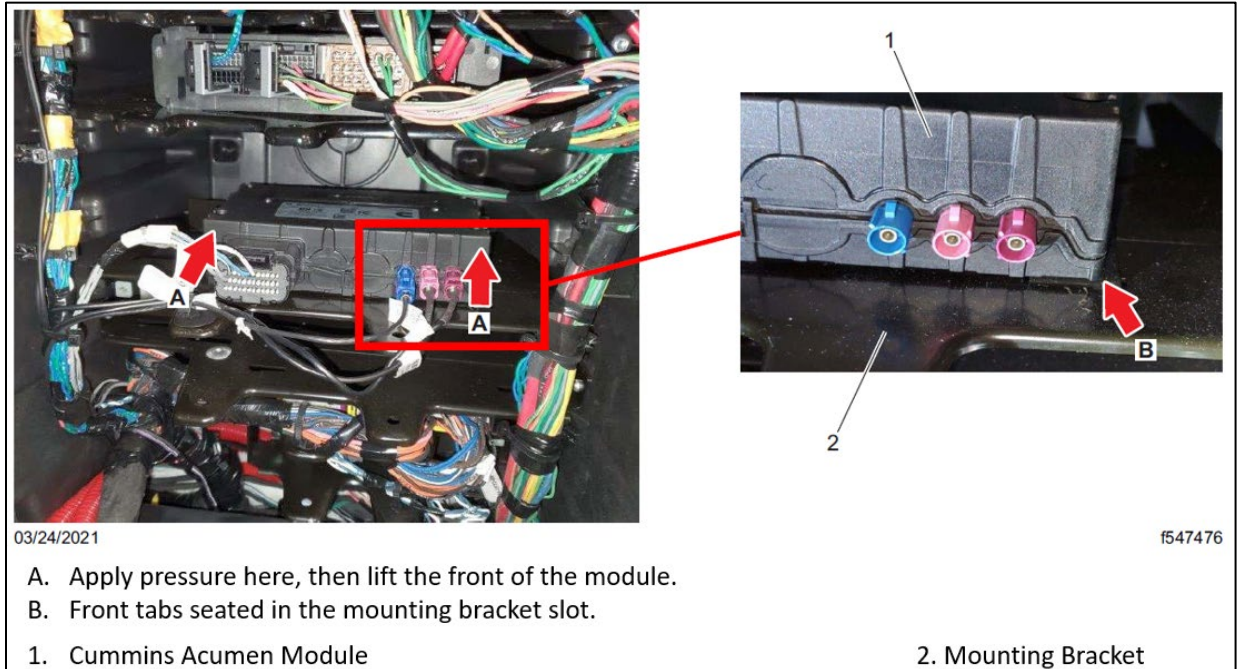


Fig. 12, Cummins Acumen Module Removal

3. Install a new Cummins Acumen module in the electronics bay by placing it on the mounting bracket, and then apply light pressure in front of the module to engage the lock tabs.
4. Connect all the harnesses and co-axial connectors to the new Cummins Acumen module.
5. Go to the **Validate Acumen Communication using Cummins INSITE™** procedure below (page 93).

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Cummins Acumen GPS Co-Axial Cables Installation, Day Cab (Shark Fin Antenna) (Group SF618D)

1. At the RH side A-pillar, remove the door sill cover, grab handle, and upper and lower covers. See [Fig. 13](#).

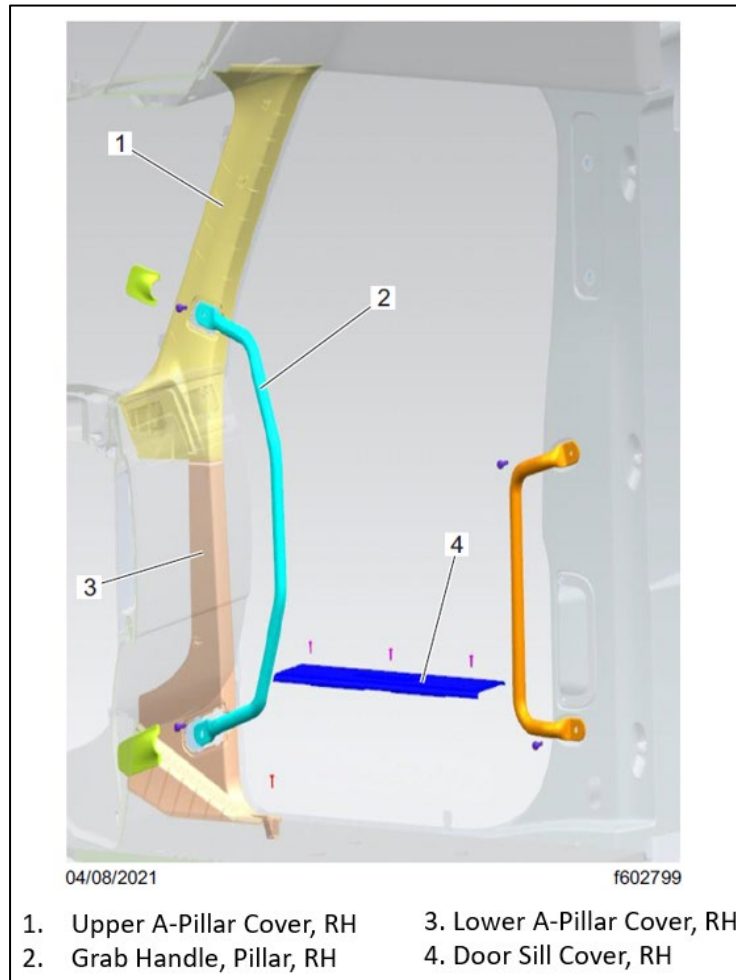


Fig. 13, A-Pillar Door Sill, Grab Handle, and Upper and Lower Cover Locations

2. Remove the center overhead storage bin as follows.

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- 2.1. Remove the fastener that attaches the reading lamp module to the center overhead storage bin, and then remove the reading lamp module from the vehicle. See [Fig. 14](#).



Fig. 14, Forward Reading Lamp Module

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- 2.2. Remove the five fasteners that attach the center bezel to the center storage bin, and then remove the center bezel from the vehicle. See [Fig. 15](#).

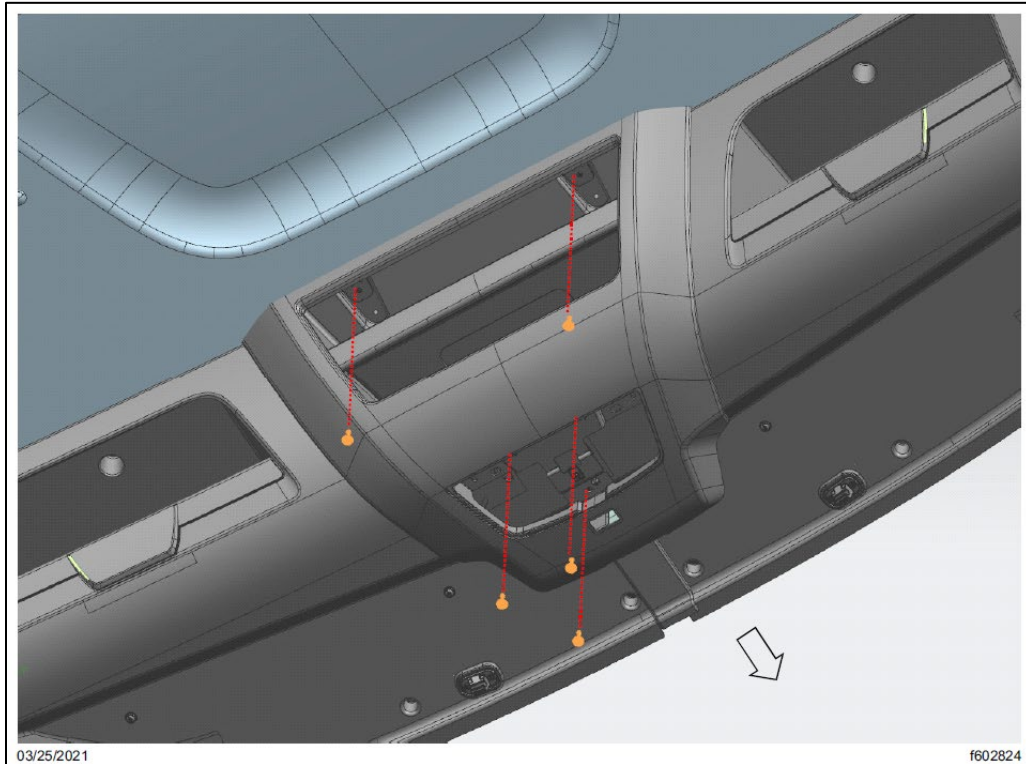


Fig. 15, Day Cab Center Bezel Removal

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- 2.3. Remove the two fasteners that attach the center shelf to the center storage bin, and then remove the center shelf from the vehicle. See [Fig. 16](#).

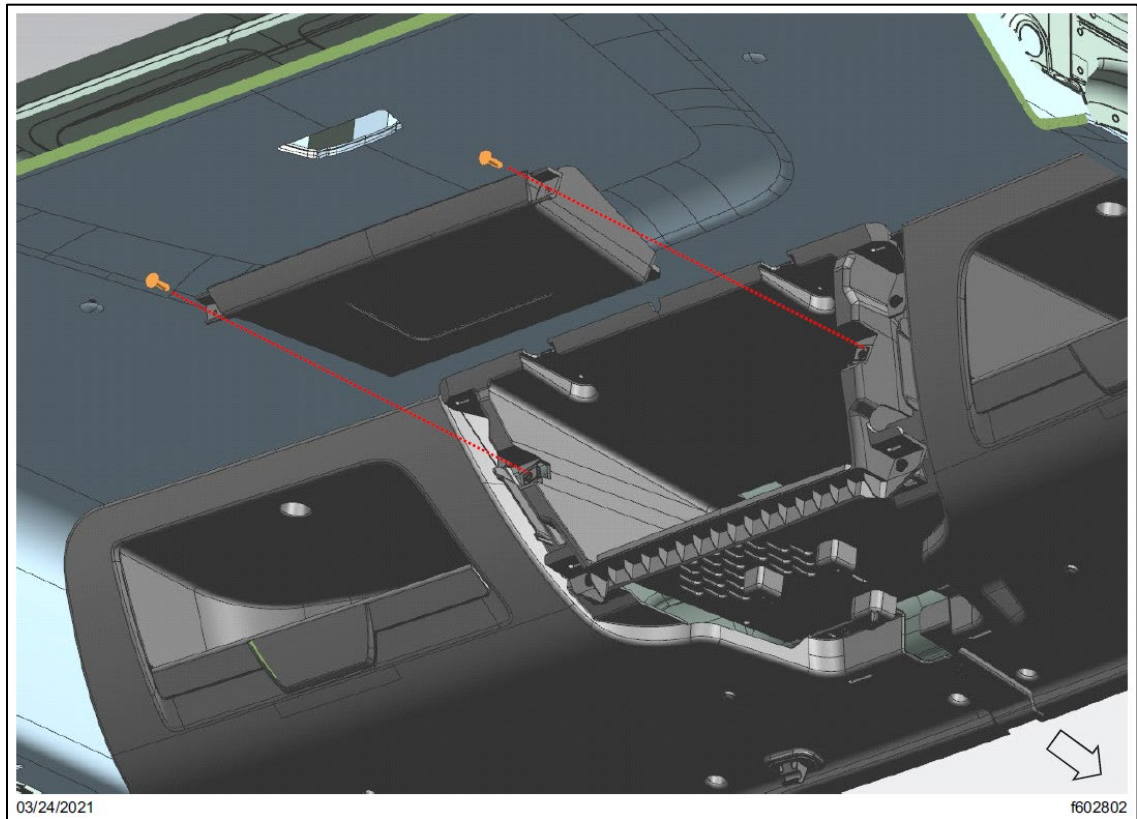


Fig. 16, Center Shelf Removal

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- 2.4. Remove the fasteners that attach the center storage bin and the RH side overhead storage assembly to the cab roof. See [Fig. 17](#).

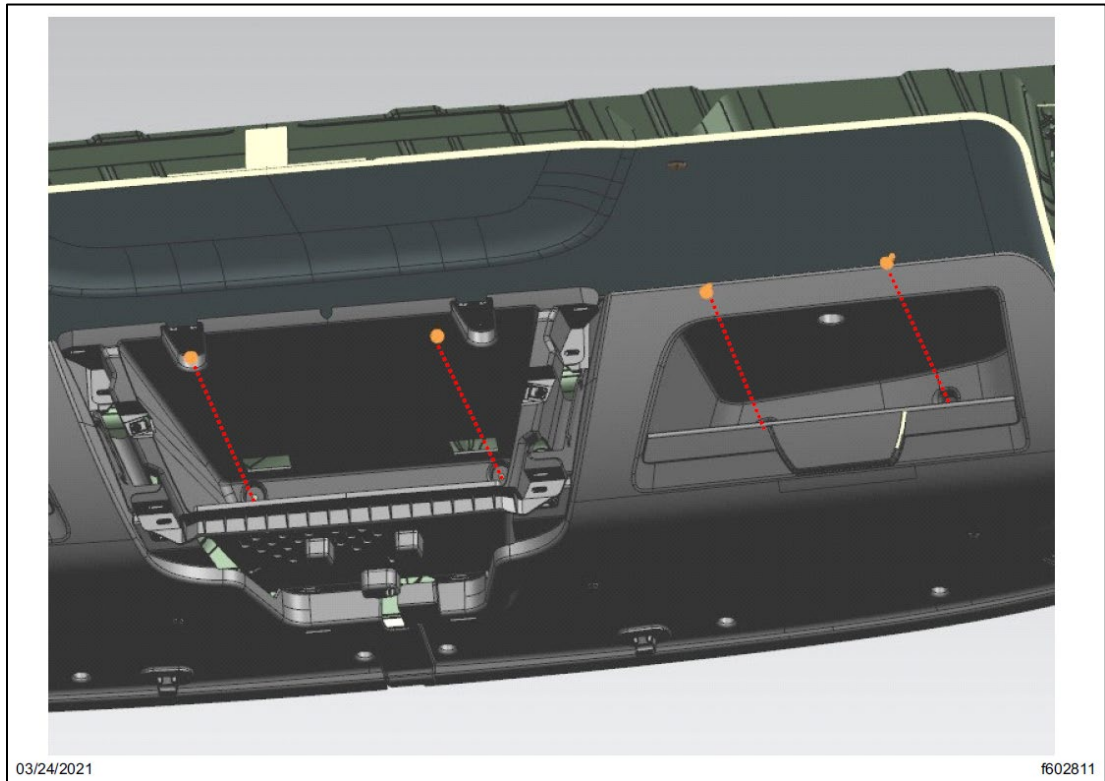


Fig. 17, Fasteners Attaching the Center Storage Bin and the RH Side Overhead Storage Assembly to the Cab Roof

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- 2.5. Remove the eight fasteners to detach the center storage bin from the vehicle as shown in [Fig. 18](#).

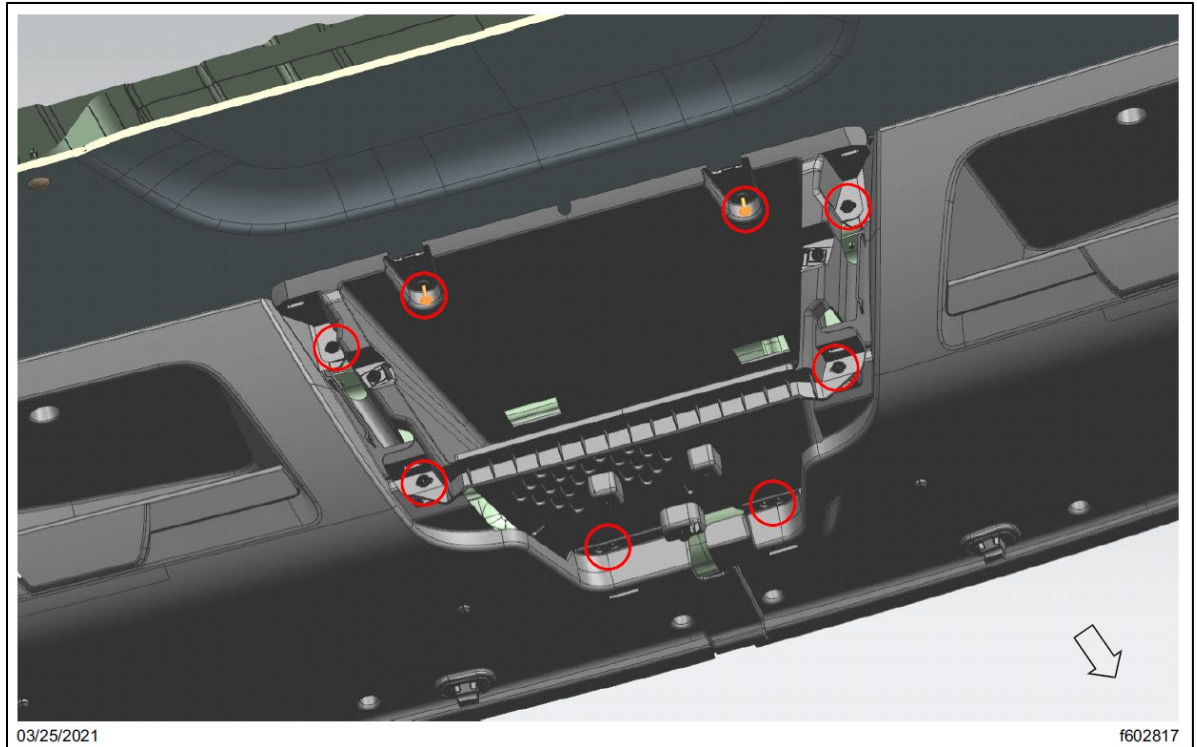


Fig. 18, Center Storage Bin Removal

3. Remove the RH side overhead storage cabinet as follows.

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- 3.1. Remove the two fasteners that attach the RH side overhead storage cabinet to the A-pillar.
See [Fig. 19](#).

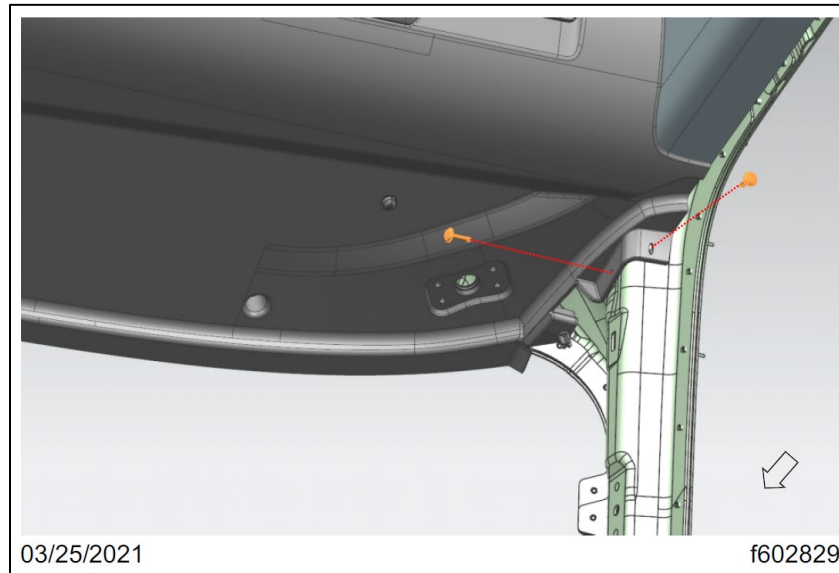


Fig. 19, Fasteners Attaching RH Side Overhead Storage Cabinet to the A-Pillar

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- 3.2. Remove the two fasteners that attach the RH side overhead storage cabinet to the cab roof, and then remove the RH Side overhead storage cabinet from the vehicle. See [Fig. 20](#).

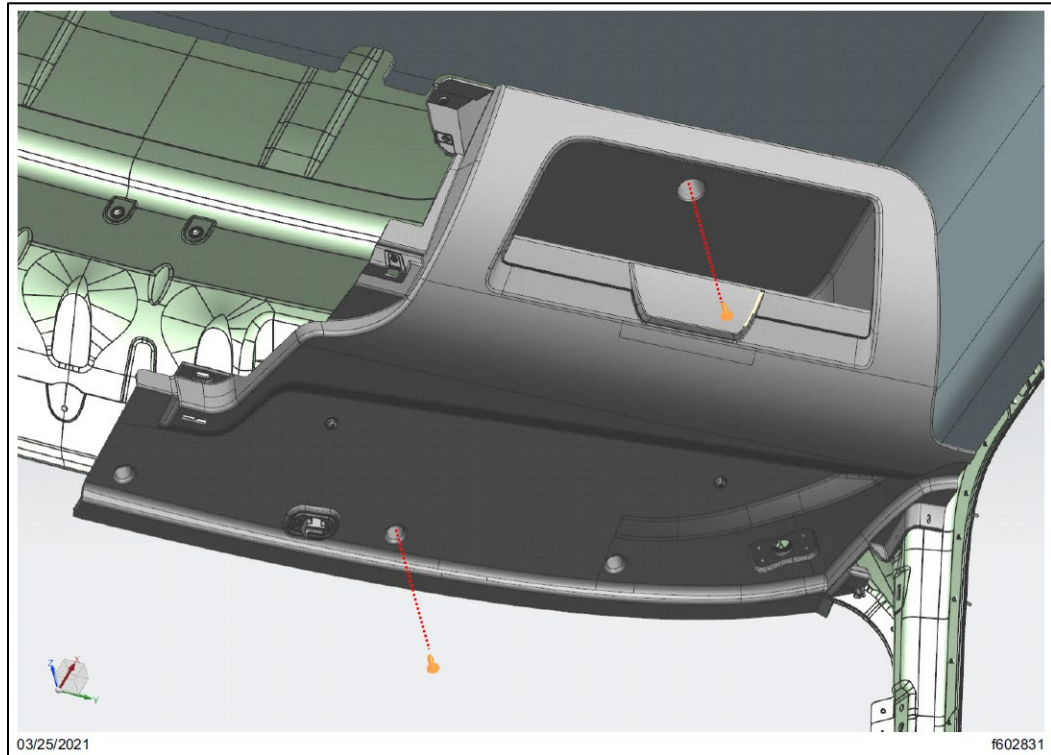


Fig. 20, Fasteners Attaching RH Side Overhead Storage Cabinet to the Cab Roof

NOTE: The GPS antenna installation requires two co-axial cables:

- A short co-axial cable which is to be routed from the Cummins Acumen module to right side of the electronics bay,
- A long co-axial cable, which is to be routed from the RH side of the electronics bay to the shark fin antenna connector on the cab roof.

The two co-axial cables will connect together at the right side of the electronics bay.

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4. Install the short co-axial cable by connecting one end to the Cummins Acumen module, and route it to the right side of the electronics bay. See [Fig. 21](#). Secure the cable to existing clipping points or tie straps.

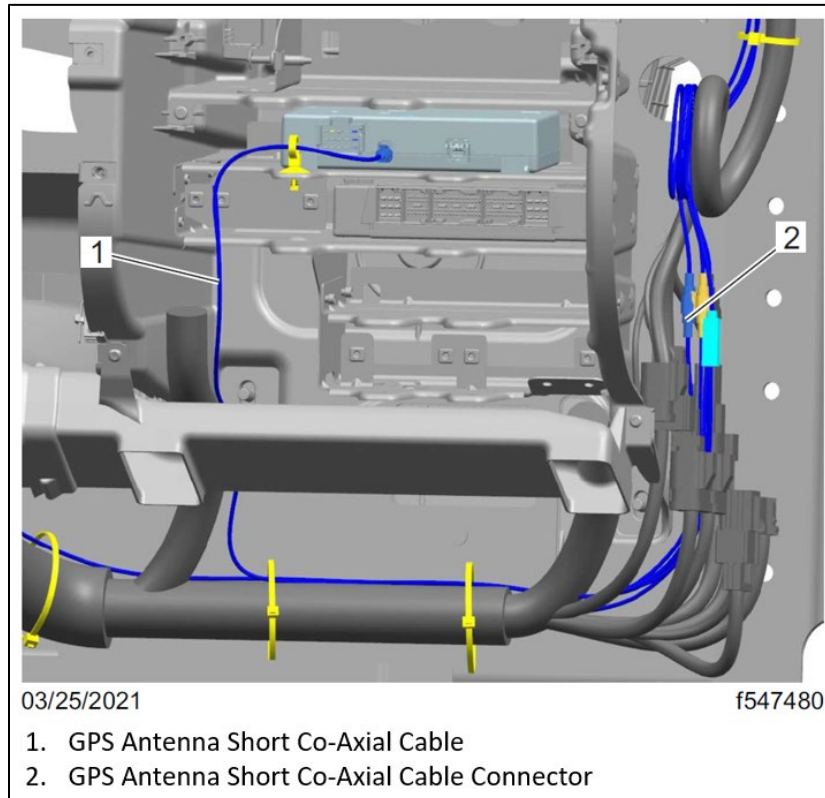


Fig. 21, Cummins Acumen GPS Antenna Short Co-Axial Cable Installation

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5. Route the long co-axial cable from the right side of the electronics bay, along the existing wire harness through the RH side A-pillar, into the cab roof, and then connect it to the shark fin antenna blue connector. See [Fig. 22](#). Secure the cable with tie straps.

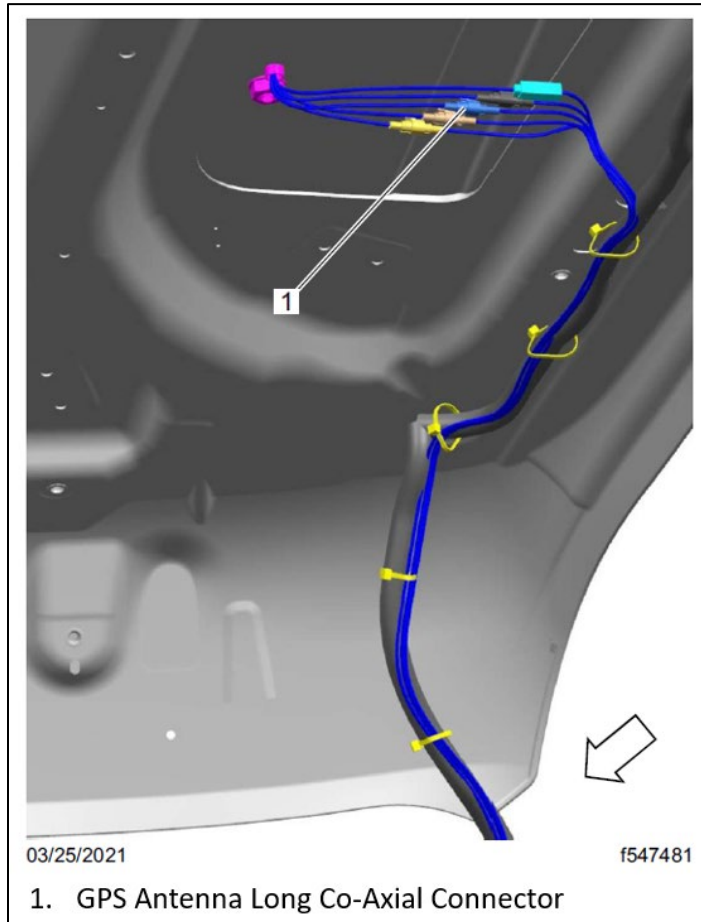


Fig. 22, Cummins Acumen GPS Antenna Long Co-Axial Cable Installation

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6. Install the RH side overhead storage cabinet as follows.
 - 6.1. Insert the clips on the RH side overhead storage cabinet into their respective slots on the cab roof as shown in **Fig. 23**.

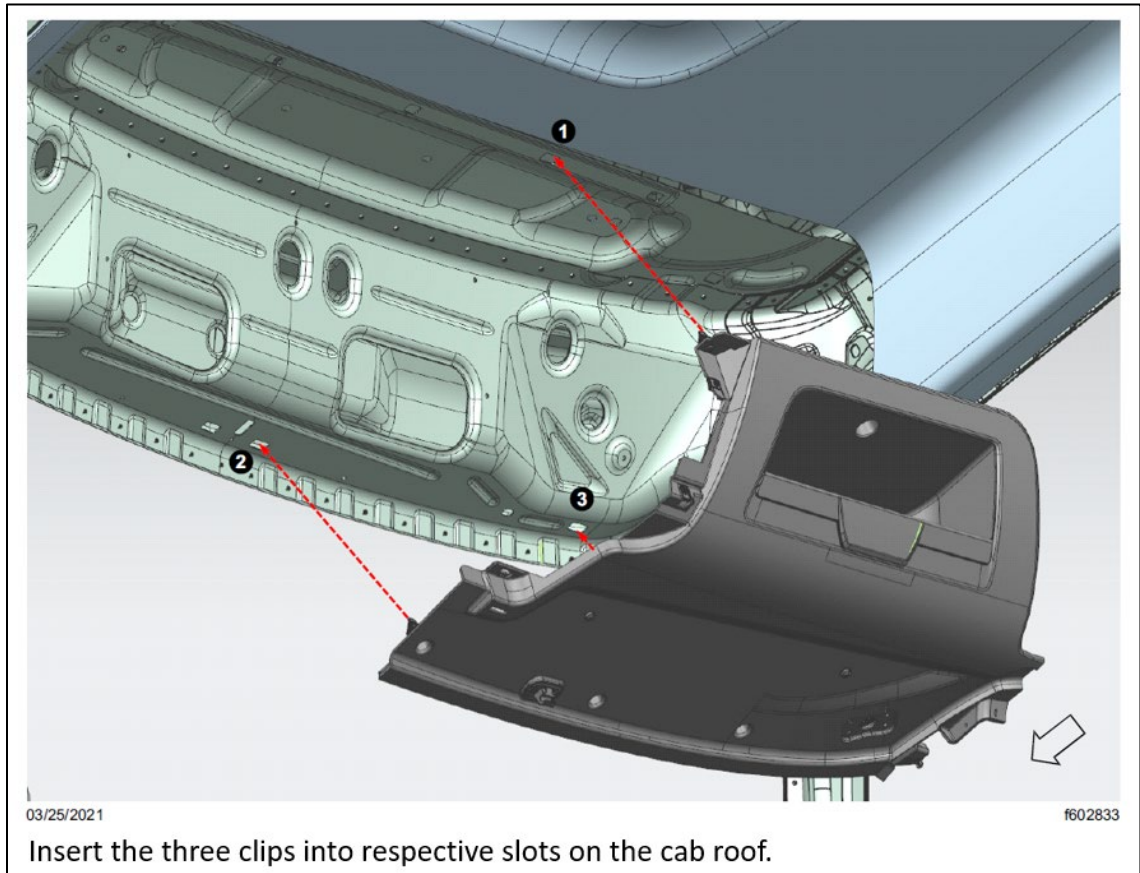


Fig. 23, Place the RH Side Overhead Storage Unit

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- 6.2. Apply pressure in the direction shown, and then install the two fasteners that attach the RH side overhead storage cabinet to the cab roof. Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m) as per the sequence shown in [Fig. 24](#).

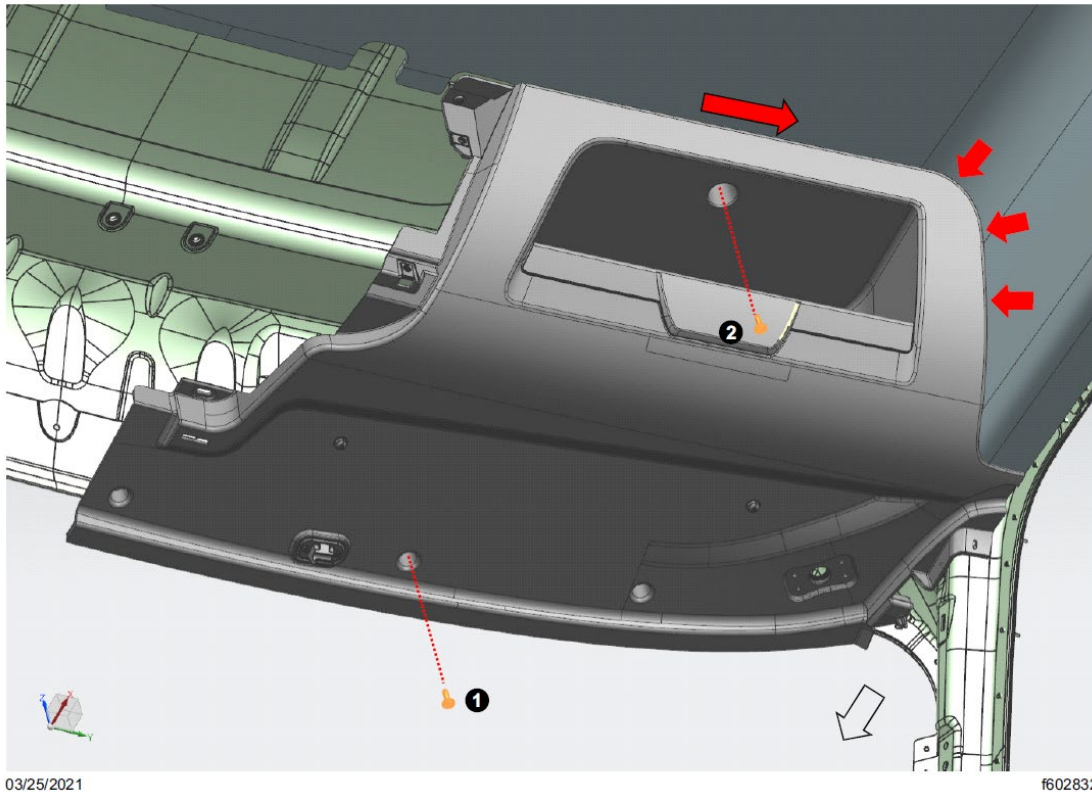


Fig. 24, Install Fasteners That Attach the RH Side Overhead Storage Cabinet to the Cab Roof

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- 6.3. Apply pressure upwards on the RH side overhead storage cabinet, install the two fasteners that attach the RH side overhead storage cabinet to the A-pillar. Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m) as per the sequence shown in [Fig. 25](#).

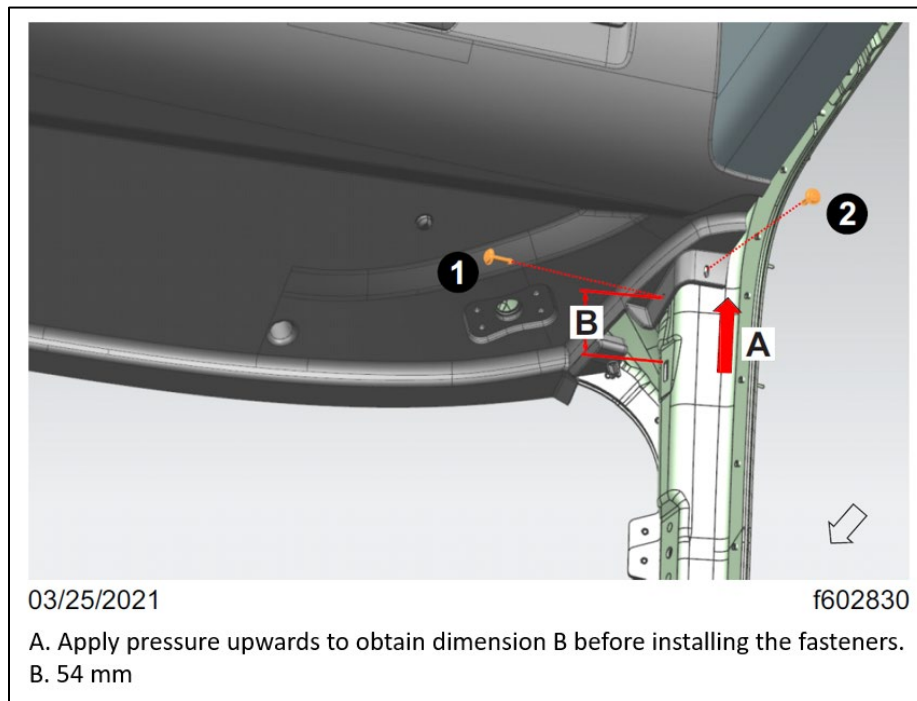


Fig. 25, Install Fasteners That Attach the RH Side Overhead Storage Cabinet to the A-Pillar

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7. Install the center overhead storage bin as follows.
 - 7.1. Snap the center storage bin into position between the left-hand (LH) side and RH side overhead storage assemblies. See [Fig. 26](#).

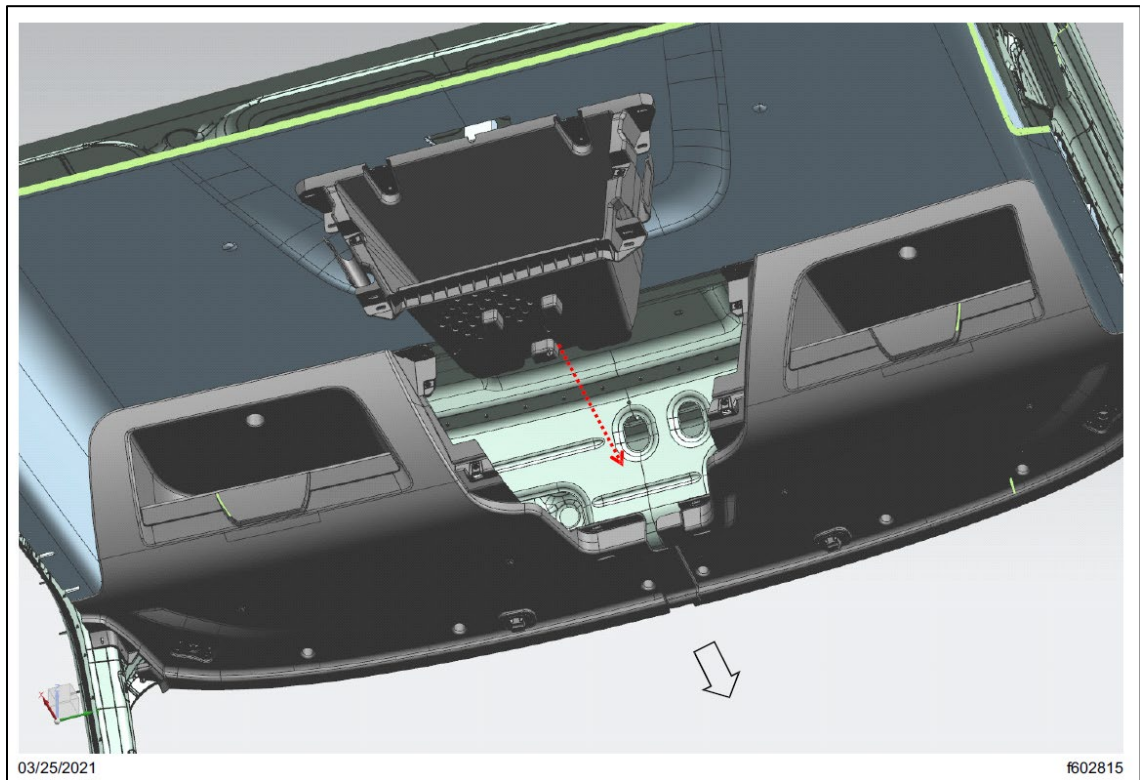


Fig. 26, Snap the Center Storage Bin into Position

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- 7.2. Install the six fasteners that attach the center overhead storage bin to the LH side and RH side overhead storage assemblies. Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m) as per the sequence shown in [Fig. 27](#).

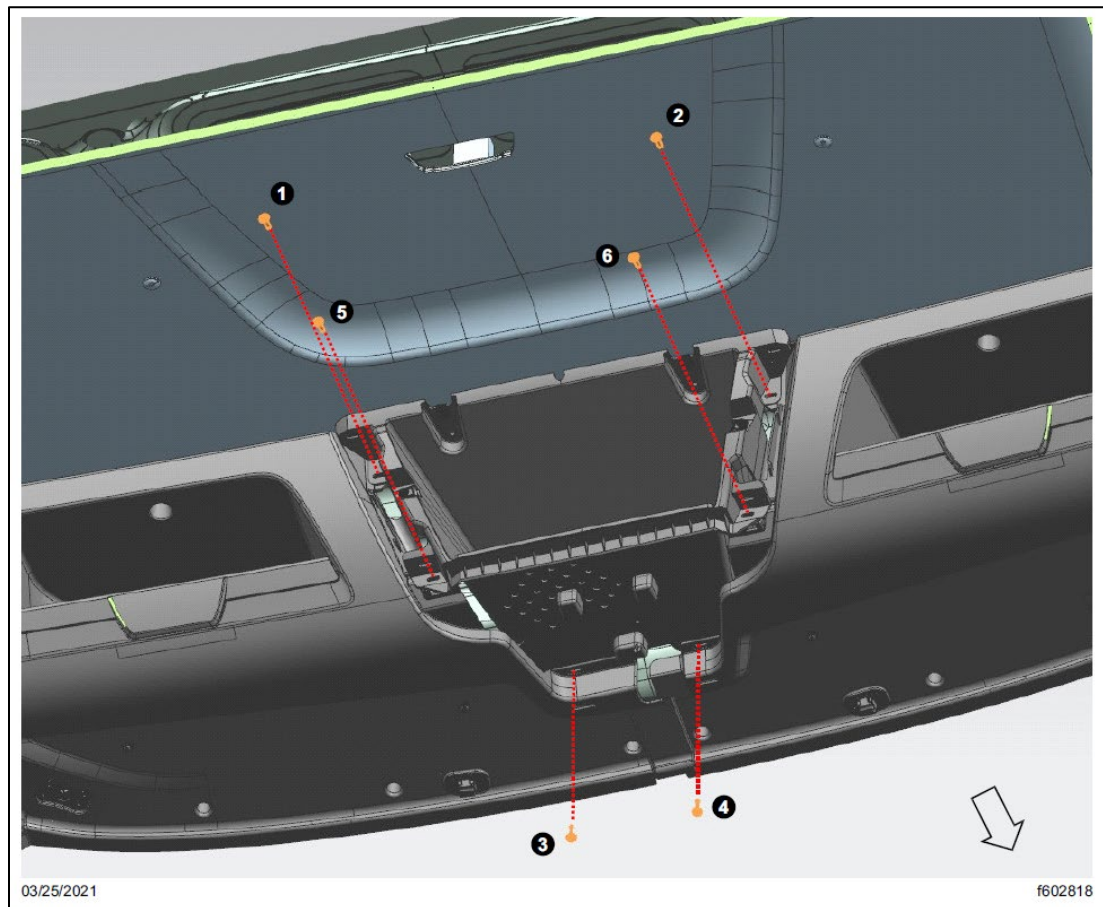


Fig. 27, Attach the Center Overhead Storage Bin to the LH and RH Side Storage Cabinets

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- 7.3. Install the two fasteners that attach the center overhead storage bin to the cab roof as shown in [Fig. 28](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).

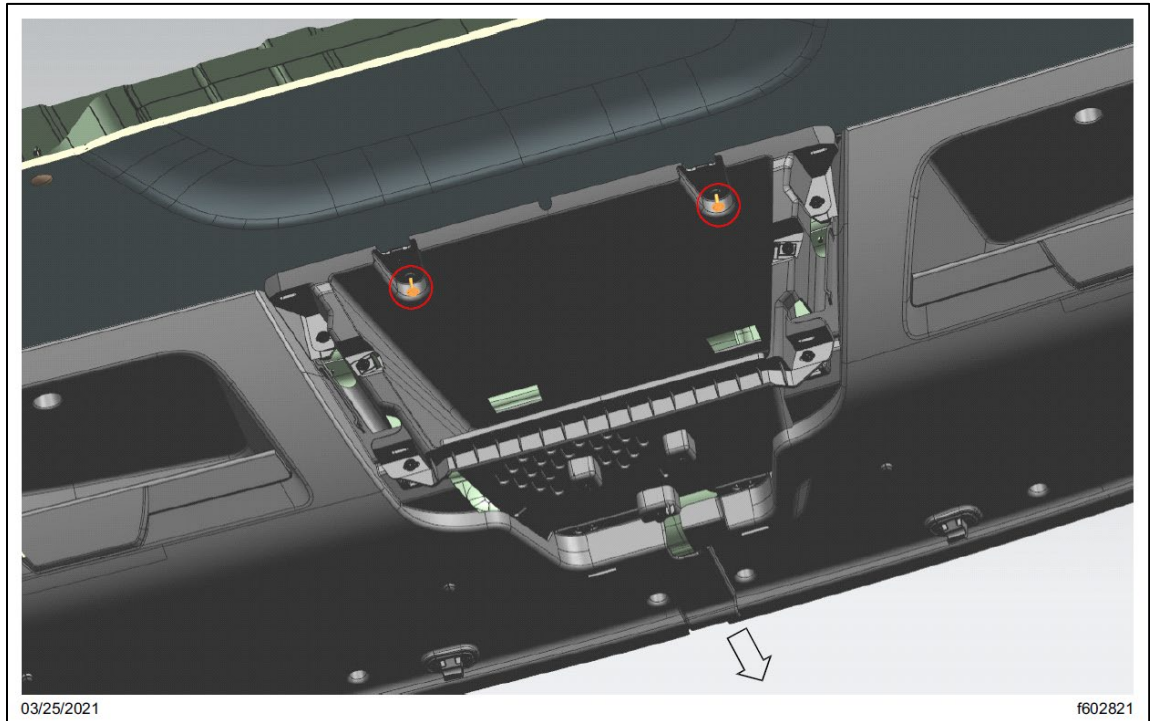


Fig. 28, Attach the Center Overhead Storage to the Cab Roof

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- 7.4. Install the fasteners that attach the center storage bin and the RH side overhead storage assembly to the cab roof. Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m) as per the sequence shown in [Fig. 29](#).

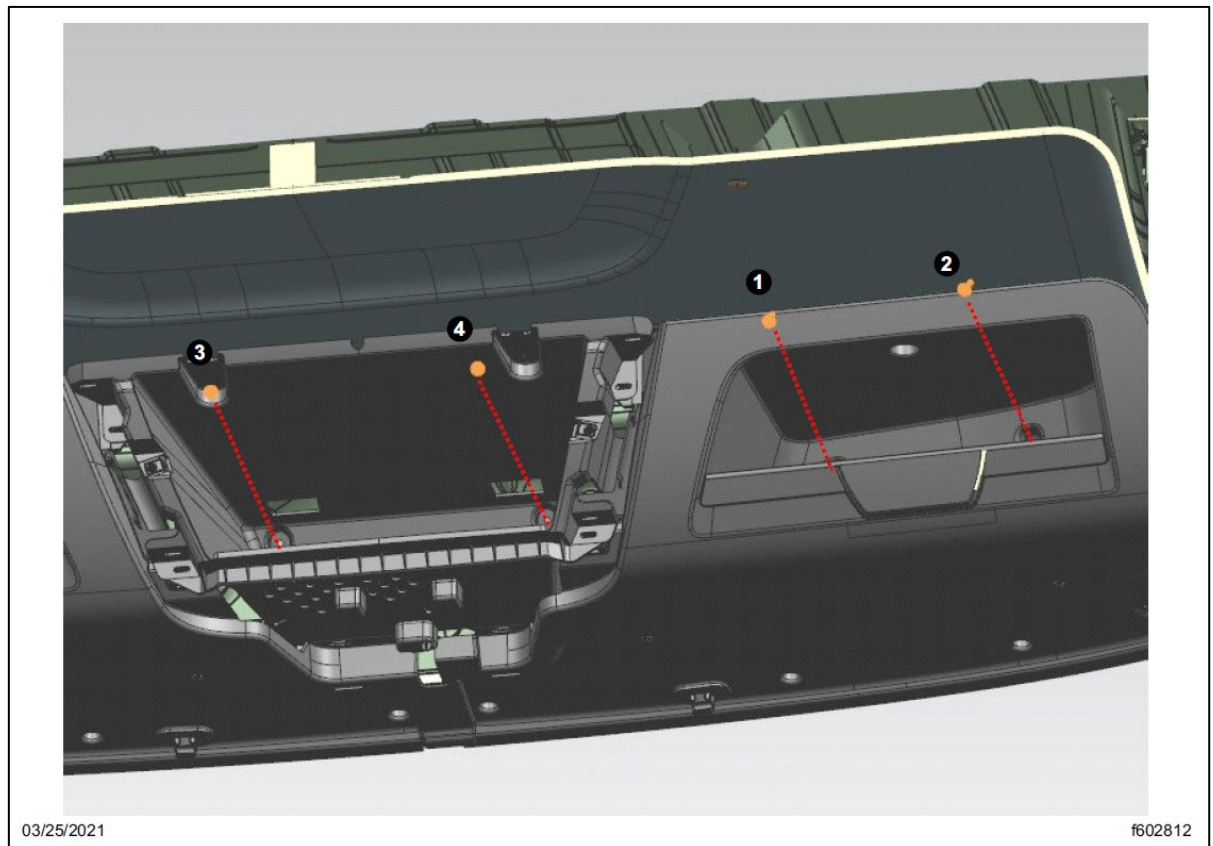


Fig. 29, Install Fasteners That Attach the Center Storage Bin and the RH Side Overhead Storage Assembly to the Cab Roof

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- 7.5. Place the center shelf into position by inserting the molded-in tabs into the slots on the center overhead storage bin. Install the two fasteners that attach the center shelf to the center overhead storage bin. See [Fig. 12](#) and [Fig. 30](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).

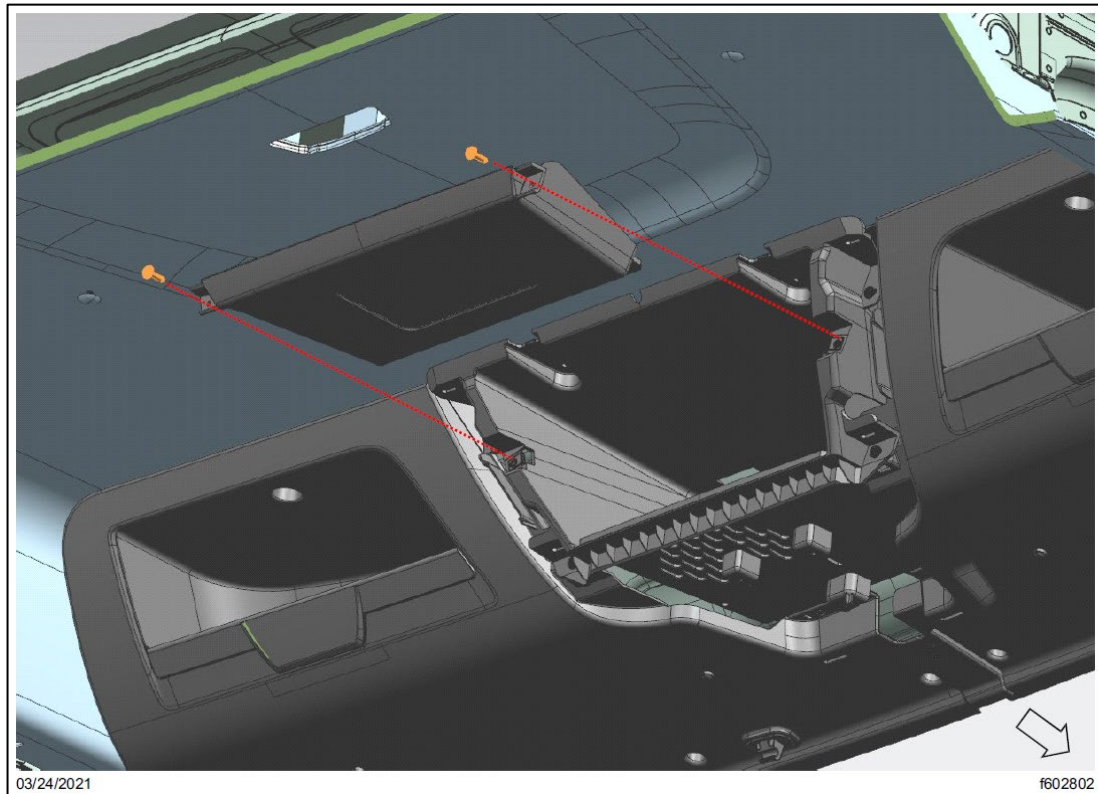


Fig. 12, Center Shelf Installation

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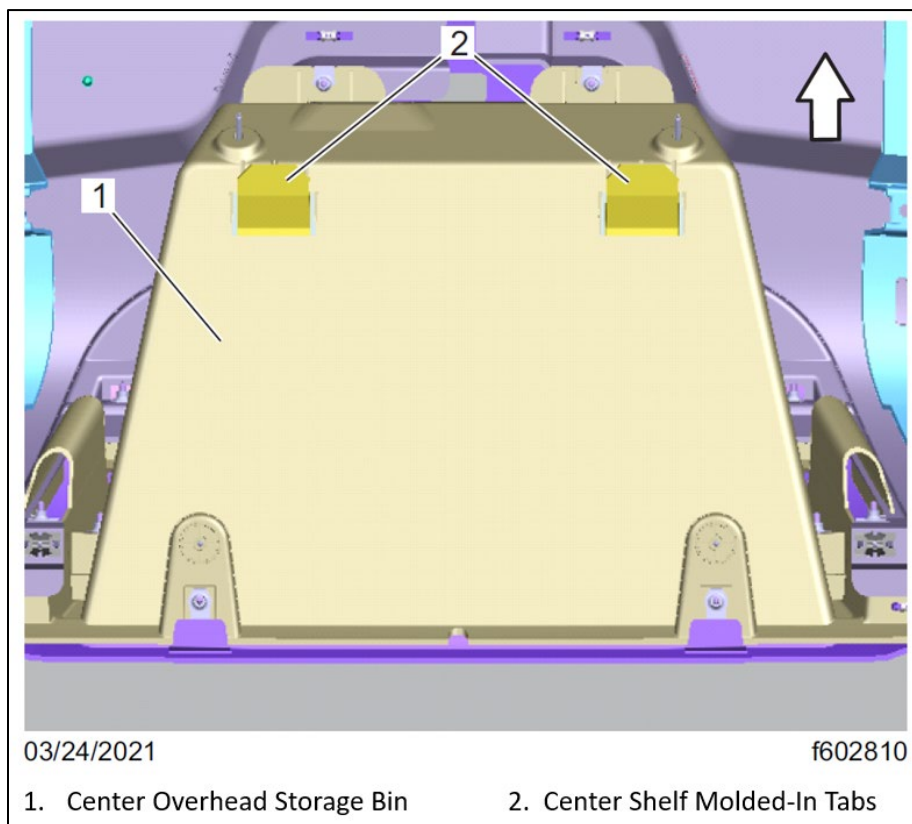


Fig. 30, Insert Center Shelf Molded-In Tabs

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- 7.6. Place the center bezel by inserting the pillar clips into the slots in the center overhead storage bin, and the LH and RH side overhead storage cabinets. See [Fig. 31](#).

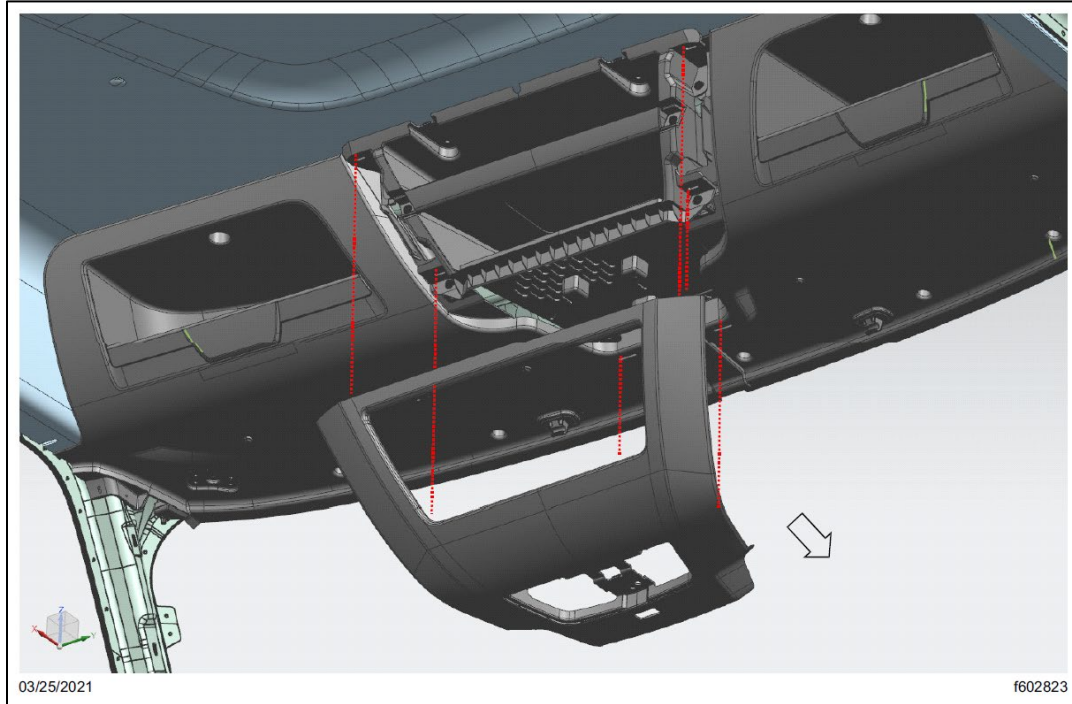


Fig. 31, Position and Attach Center Bezel

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- 7.7. Install the five fasteners that attach the center bezel to the center overhead storage bin. Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m) as per the sequence shown in [Fig. 32](#).

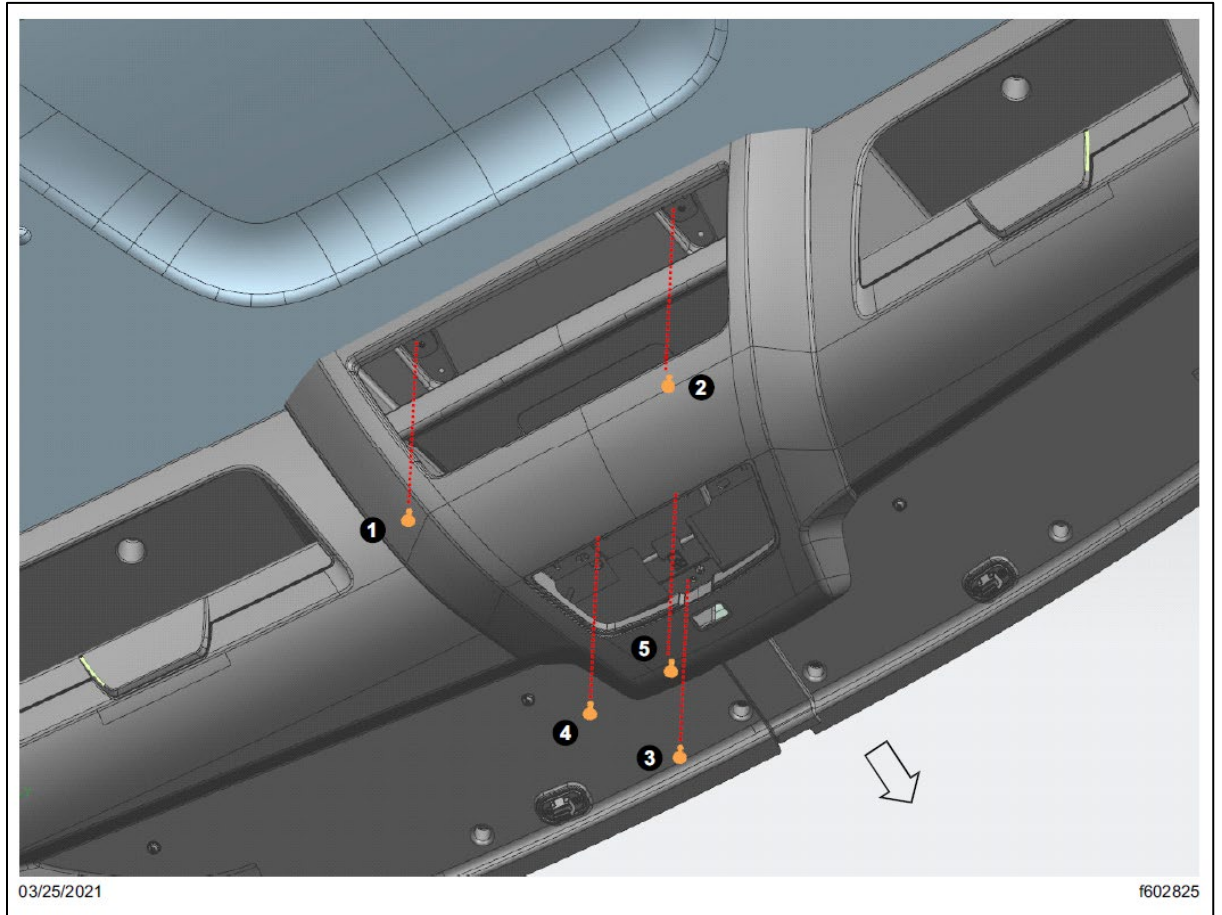


Fig. 32, Center Bezel Fasteners Installation

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- 7.8. Position the reading lamp module on the center overhead storage unit, then install the fastener that attaches it to the center overhead storage bin. See [Fig. 14](#). Tighten the fastener 5 to 7 lbf.ft (6 to 9 N.m).



Fig. 14, Forward Reading Lamp Module

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8. Install the RH side upper and lower A-pillar covers. See [Fig. 13](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).

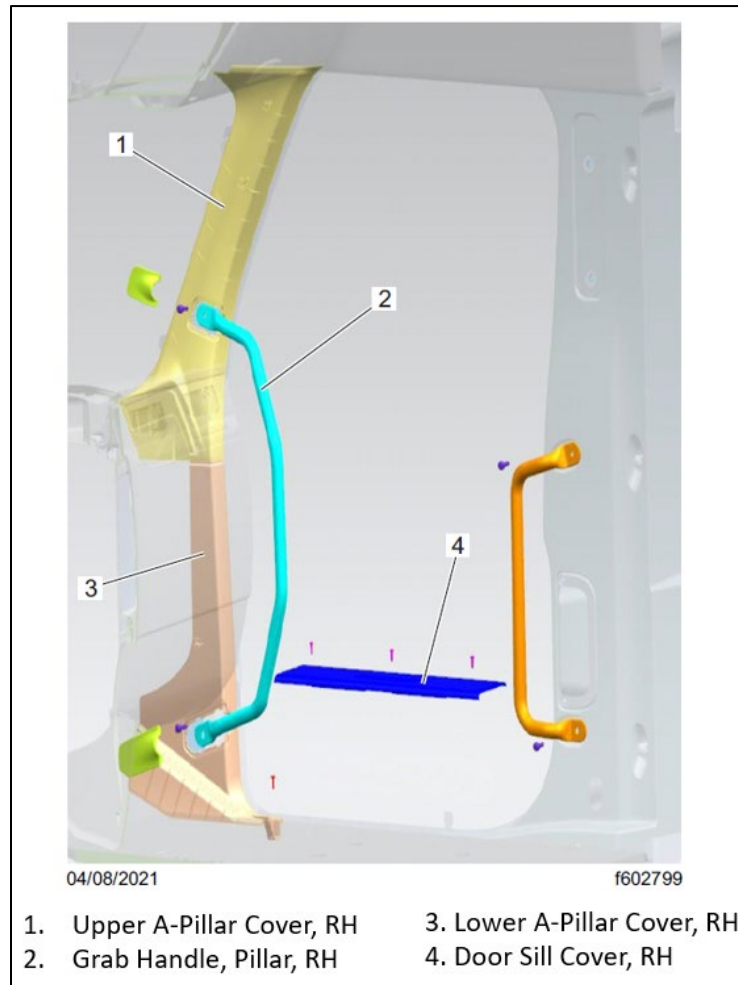


Fig. 13, A-Pillar Door Sill, Grab Handle, and Upper and Lower Cover Locations

9. Install the RH side pillar grab handle. See [Fig. 13](#). Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m).
10. Install the RH side door sill cover. See [Fig. 13](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).
11. Go to the **Validate Acumen Communication using Cummins INSITE™** procedure below (page 93).

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Installation of Cummins Acumen GPS Co-Axial Cables, New Cascadia Sleeper Cab (Thin Film Antenna) (Group SF618E)

1. At the RH side A-pillar, remove the door sill cover, grab handle, and upper and lower pillar covers. See [Fig. 33](#).

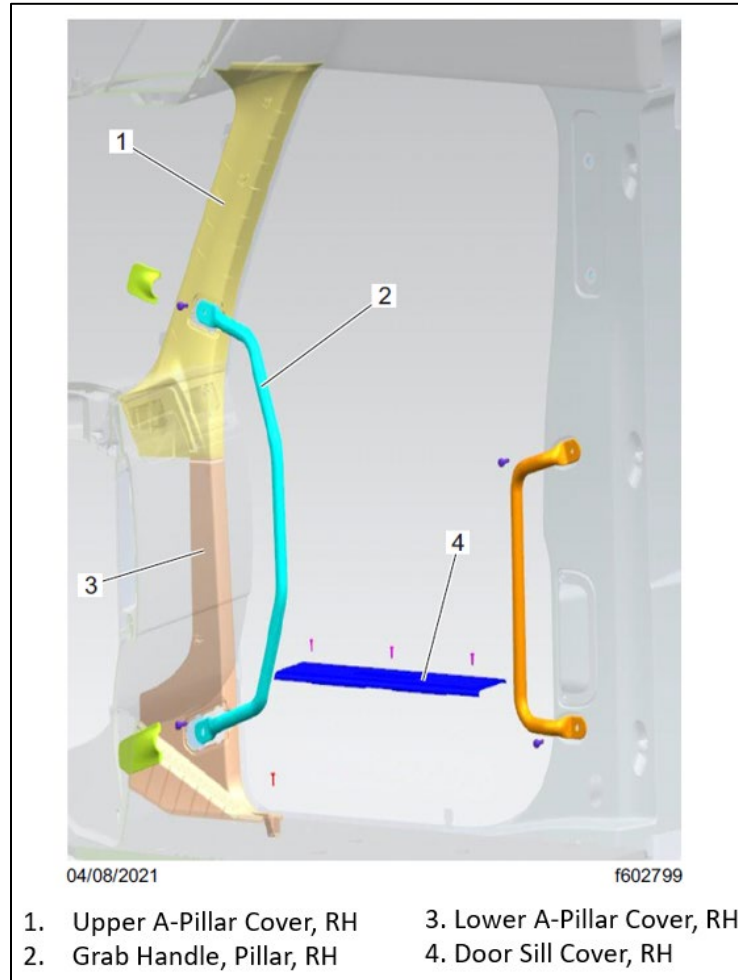


Fig. 33, A-Pillar Door Sill, Grab Handle, and Upper and Lower Cover Locations

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2. If equipped with a refrigerator, follow the steps below to remove the refrigerator, and the refrigerator cabinet to access the B pillar. See [Fig. 34](#).

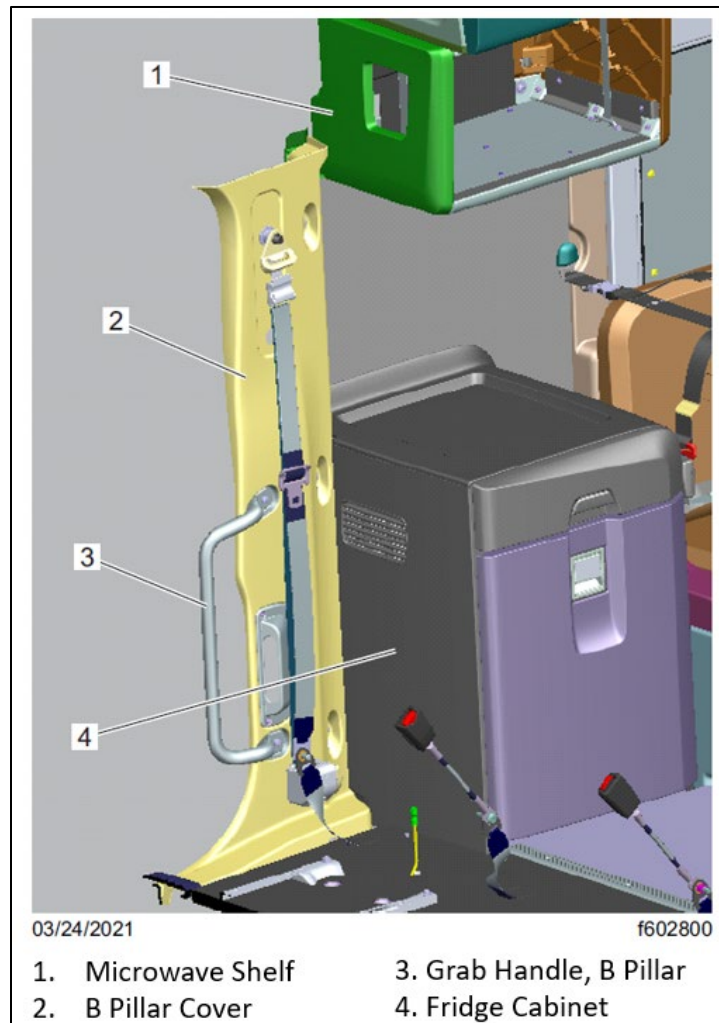


Fig. 34, B Pillar, Microwave Shelf, and Refrigerator Cabinet Location

- 2.1. If equipped, disconnect and remove the refrigerator from the refrigerator cabinet.

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2.2. Remove the refrigerator cabinet top cover. See [Fig. 35](#).

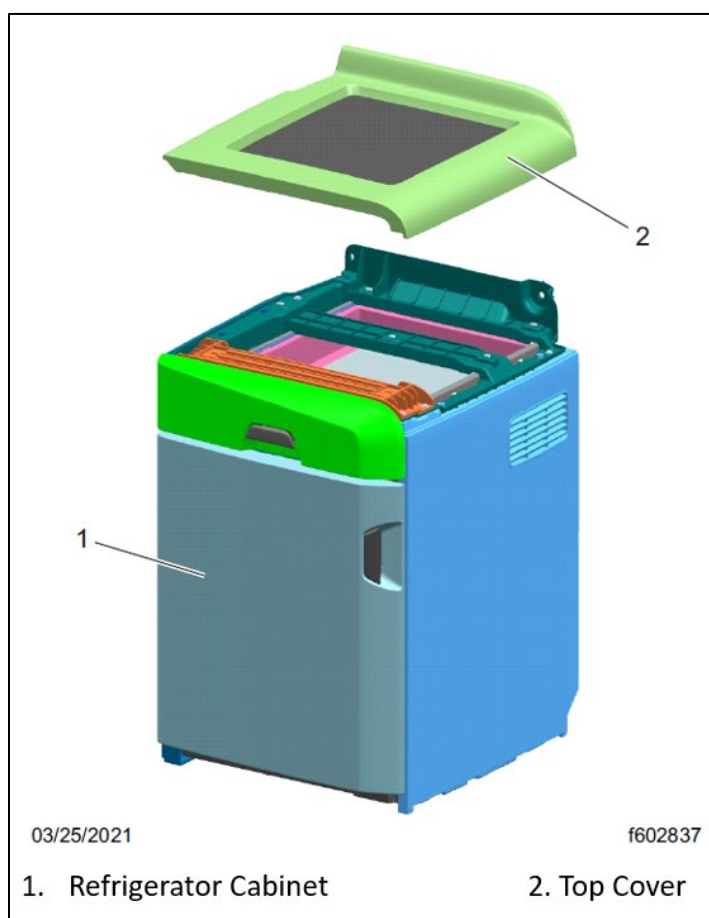


Fig. 35, Refrigerator Cabinet Top Cover

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- 2.3. Remove the eight screws that attach the refrigerator cabinet to the cab, and then remove the refrigerator cabinet from the vehicle. See [Fig. 36](#).

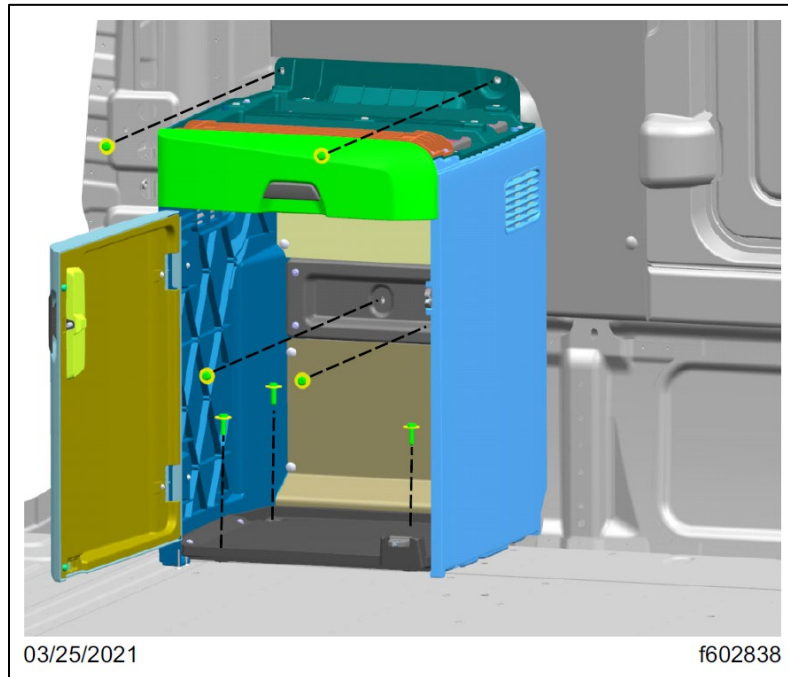


Fig. 36, Fasteners That Attach the Refrigerator Cabinet to the Cab

3. See [Fig. 34](#). At the RH side B pillar, remove the grab handle, seat belt mounting, and pillar covers. For instructions on removal of seat belt assembly, refer to **Section 91.01** of the *New Cascadia™ Workshop Manual*.

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4. Remove the center and RH side rear upper shelf carpet. See [Fig. 37](#).

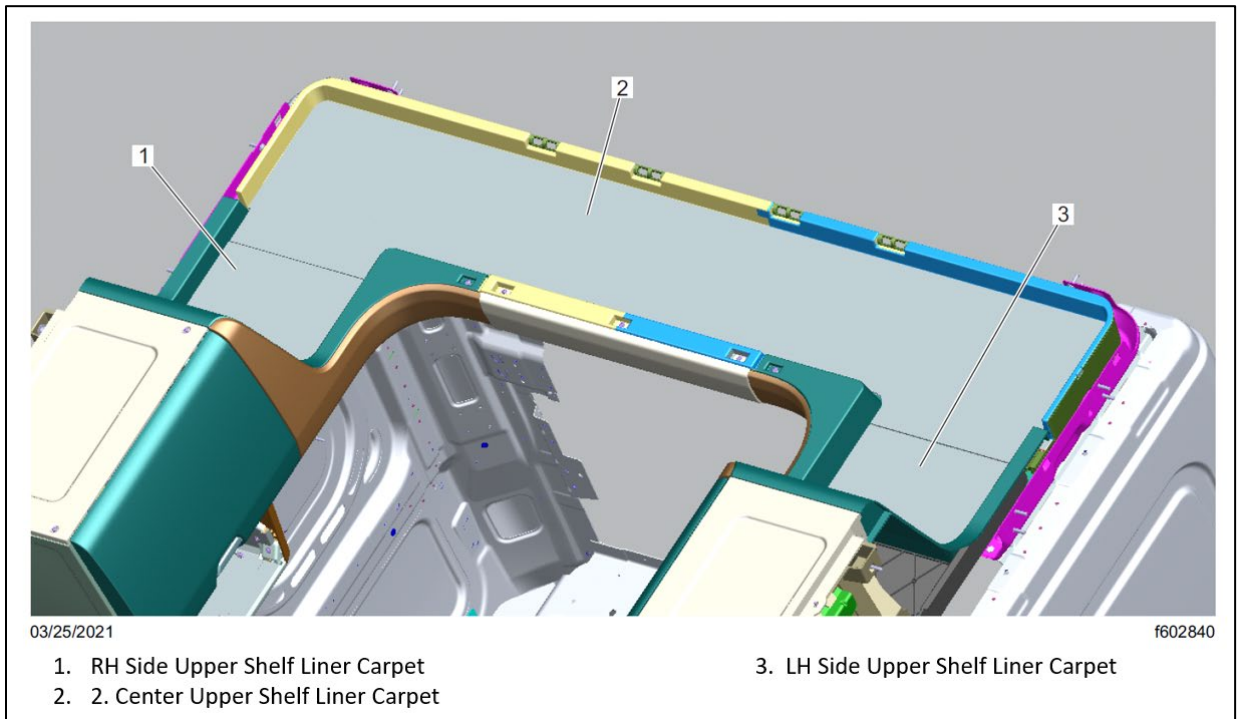


Fig. 37, Rear Upper Shelf Carpet

5. Remove the microwave cabinet as follows.
- 5.1. If equipped with a microwave, disconnect the lamp pigtail connector from the sleeper wiring harness, and remove the microwave from the vehicle.

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- 5.2. Remove the four fasteners that attach the microwave cabinet to the rear-right upper cabinet.
See [Fig. 38](#).

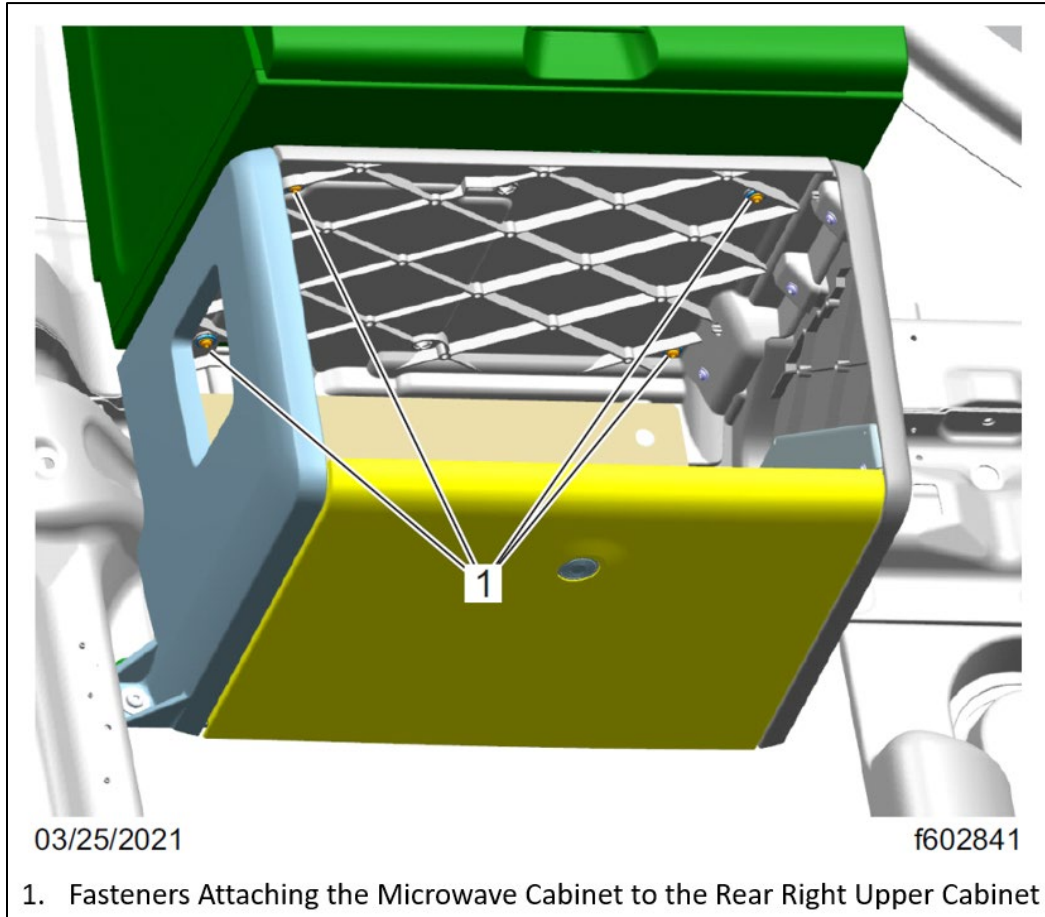


Fig. 38, Fasteners That Attach the Microwave Cabinet to the Rear Right Upper Cabinet

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5.3. Remove the four fasteners that attach the microwave cabinet to the cab wall. See [Fig. 39](#).

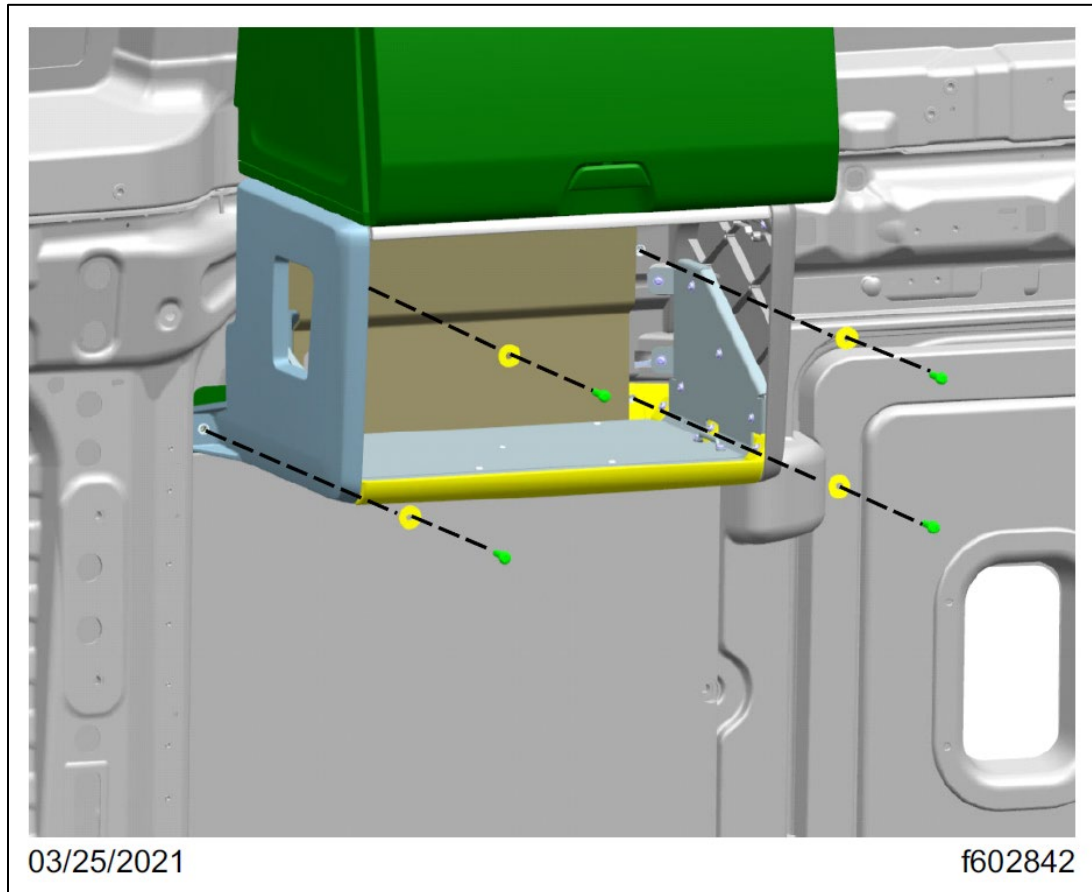


Fig. 39, Fasteners That Attach the Microwave Cabinet to the Sidewall

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- 5.4. Pull the microwave cabinet out so that the clips on the microwave cabinet disengage from the rear-right upper cabinet, and then remove the microwave cabinet from the vehicle. See [Fig. 40](#).

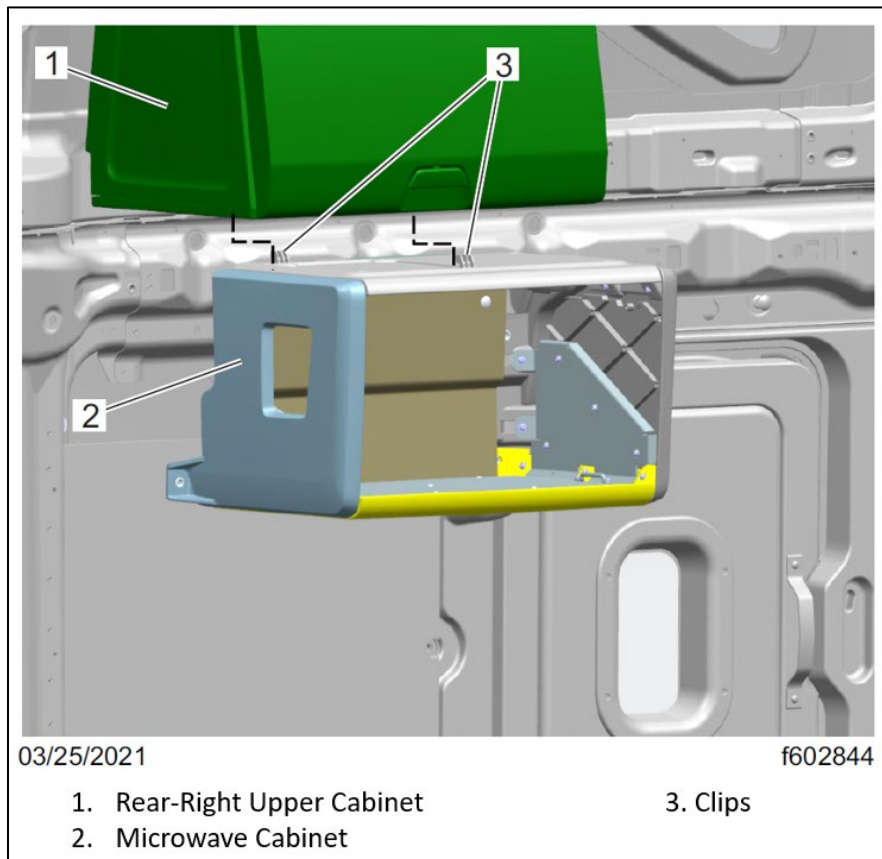


Fig. 40, Disengage Microwave Cabinet Clips

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6. Remove the upper-rear shelf as follows.
 - 6.1. Remove the six fasteners that attach the upper-rear shelf to the rear-right upper cabinet. See [Fig. 41](#).

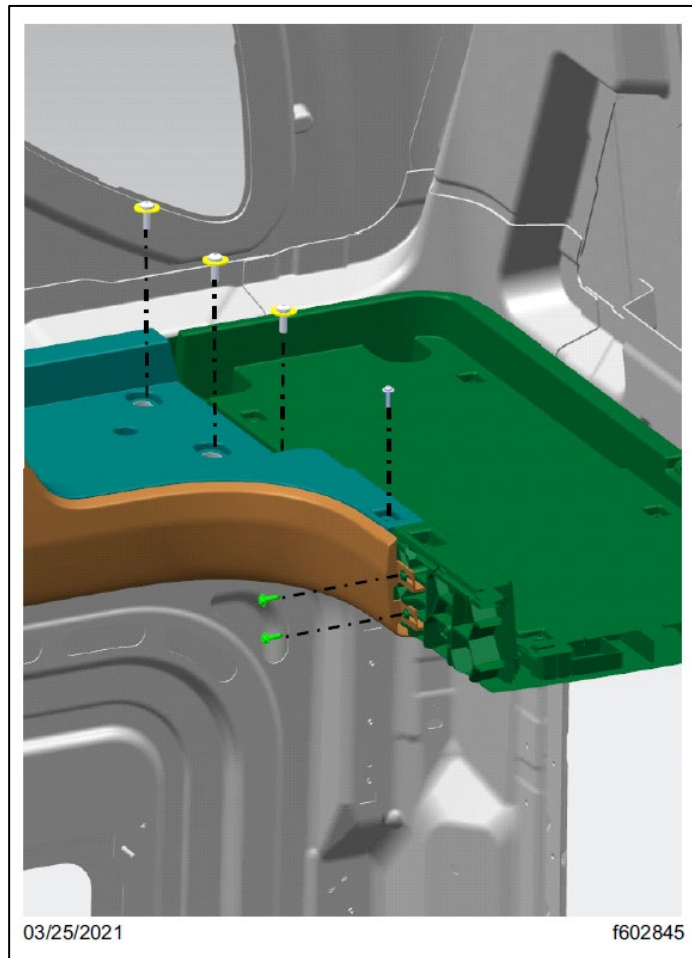


Fig. 41, Fasteners That Attach the Rear-Right Upper Cabinet to the Upper-Rear Shelf

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6.2. Remove the four fasteners that attach the upper-rear shelf to the mounting bracket. See Fig. [Fig. 42](#).

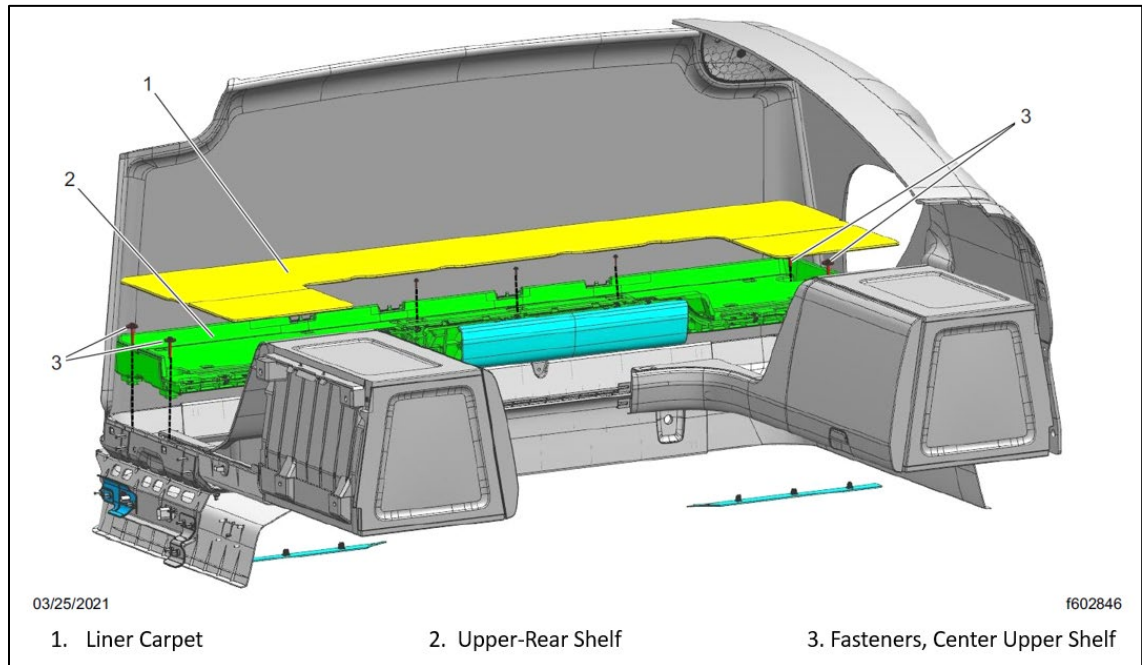


Fig. 42, Upper-Rear Shelf Assembly

6.3. Lift the rear edge of the upper-rear shelf, and remove it from the vehicle.

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7. Remove the rear-right upper cabinet as follows.
 - 7.1. Remove the four fasteners that attach the rear-right upper cabinet to the cabinet mounting bracket and the cab panel. See [Fig. 43](#).

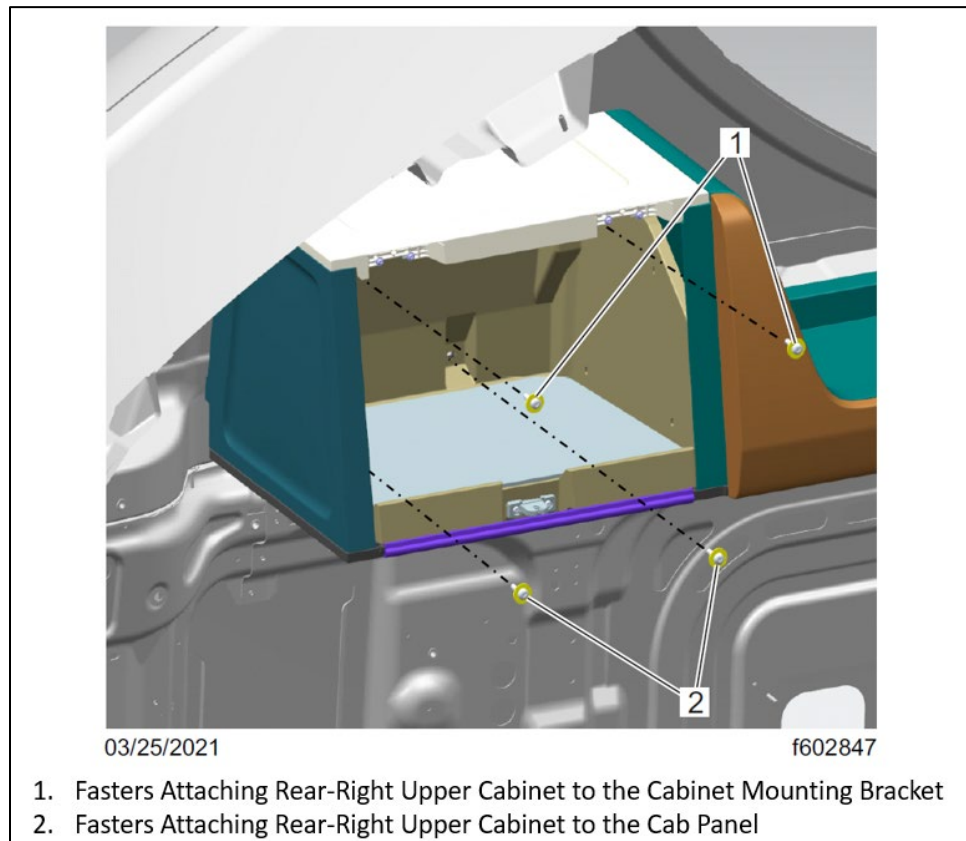


Fig. 43, Fasteners That Attach the Rear-Right Upper Cabinet to the Upper-Rear Shelf and Cab Panel

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- 7.2. Lift the rear-right upper cabinet until it releases from the cabinet mounting bracket, and then remove it from the vehicle. See [Fig. 44](#).

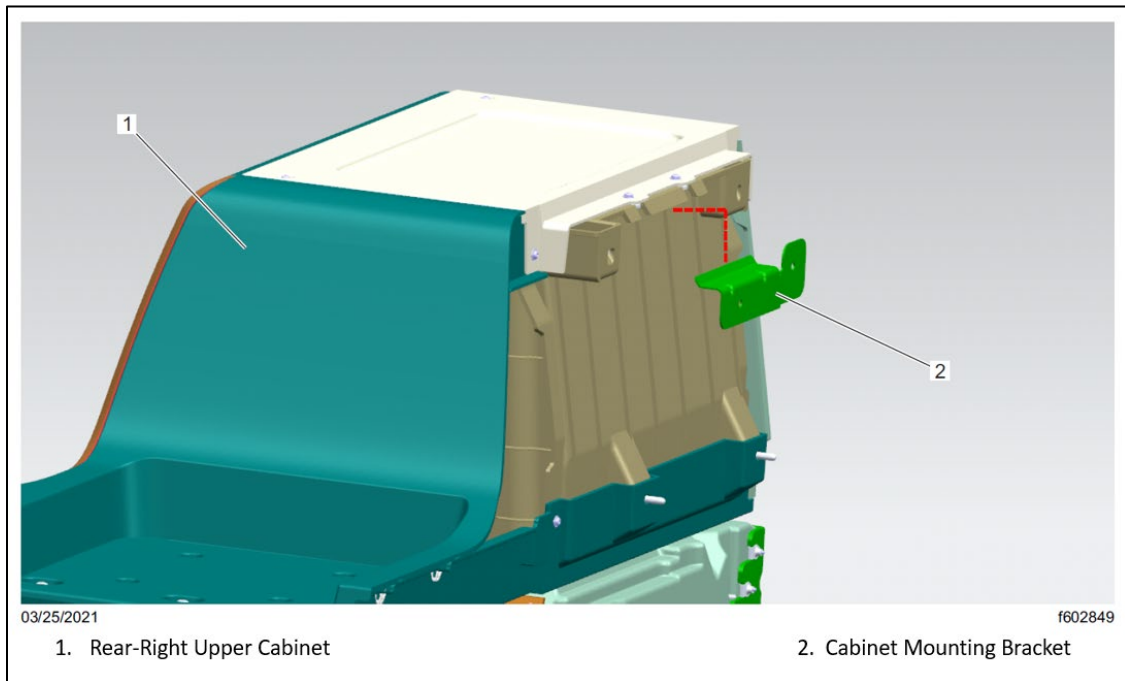


Fig.44, Unmounting the Rear-Right Upper Cabinet

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8. Remove the center overhead storage bin as follows.
 - 8.1. Remove the fastener that attaches the reading lamp module to the center overhead storage bin, and then remove the reading lamp module from the vehicle. See [Fig. 14](#).

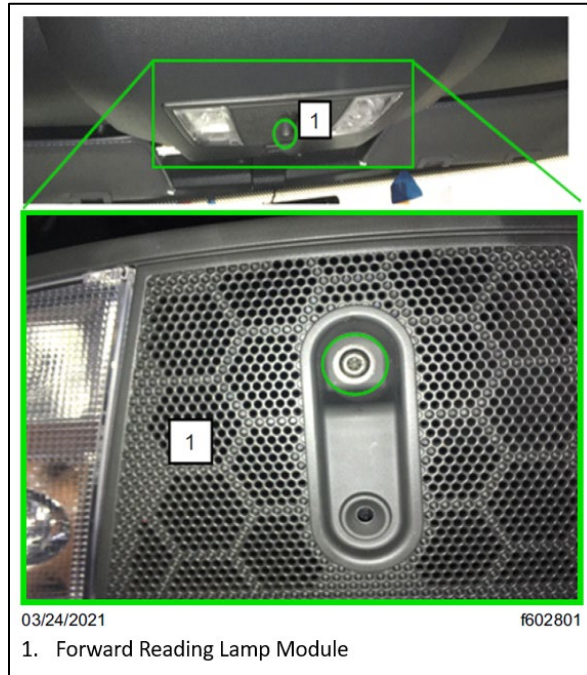


Fig.14, Forward Reading Lamp Module

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- 8.2. Remove the five fasteners that attach the center bezel to the center storage bin. Remove the center bezel from the vehicle. See [Fig. 45](#).

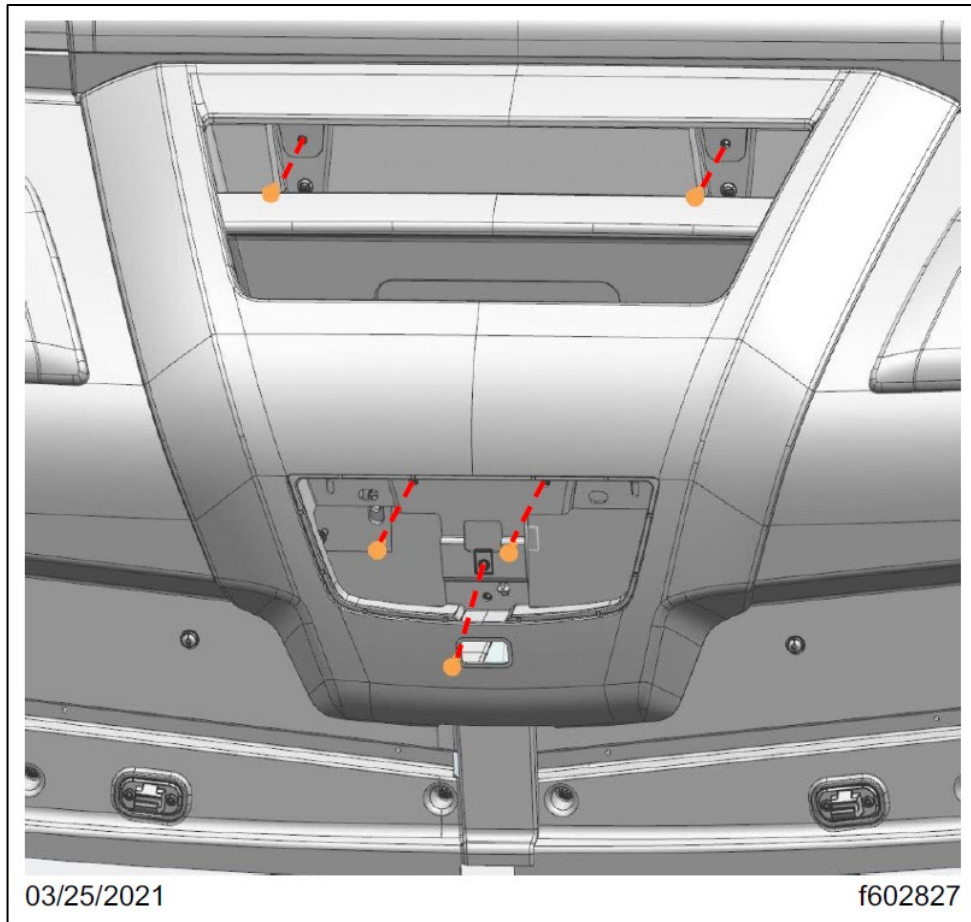


Fig. 45, Sleeper Cab Center Bezel Removal

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- 8.3. Remove the two fasteners that attach the center shelf to the center storage bin. Remove the center shelf. See [Fig. 46](#).

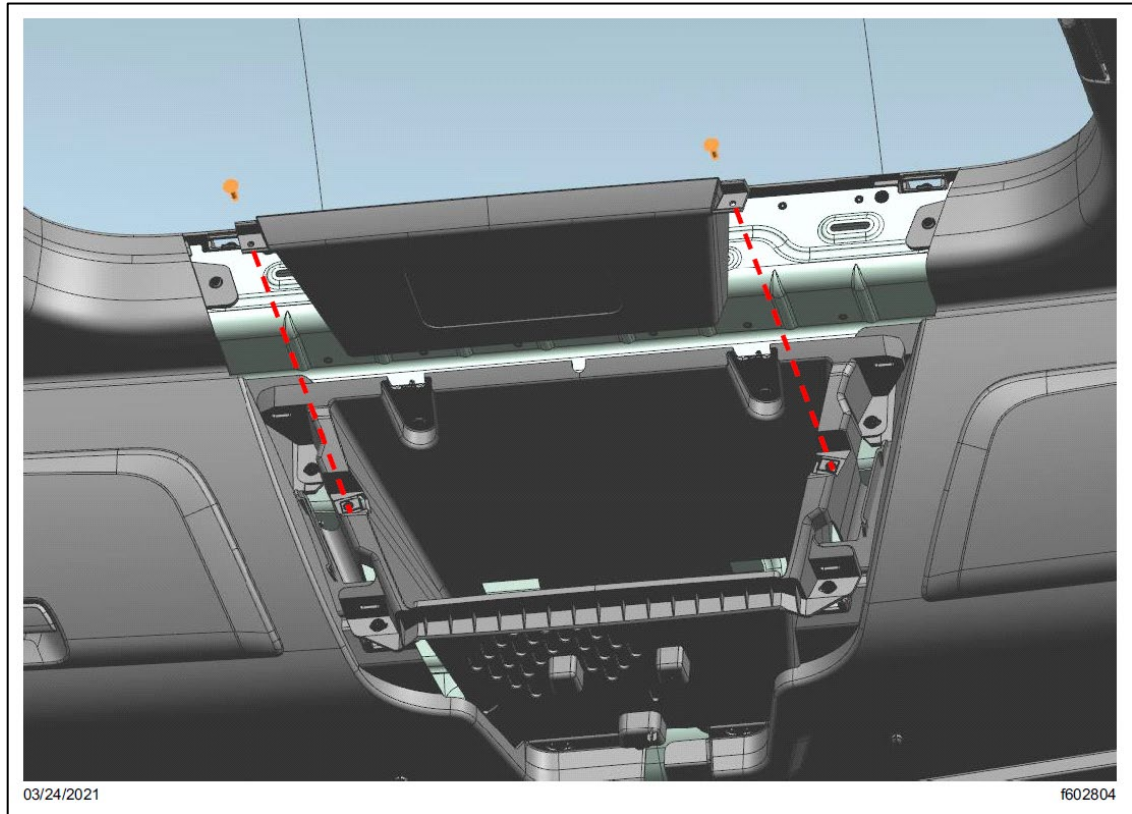


Fig. 46, Sleeper Cab Center Shelf Removal

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- 8.4. Remove three fasteners that attach the storage shelf bezel to the cab roof, and then remove the storage shelf bezel from the vehicle. See [Fig. 47](#).

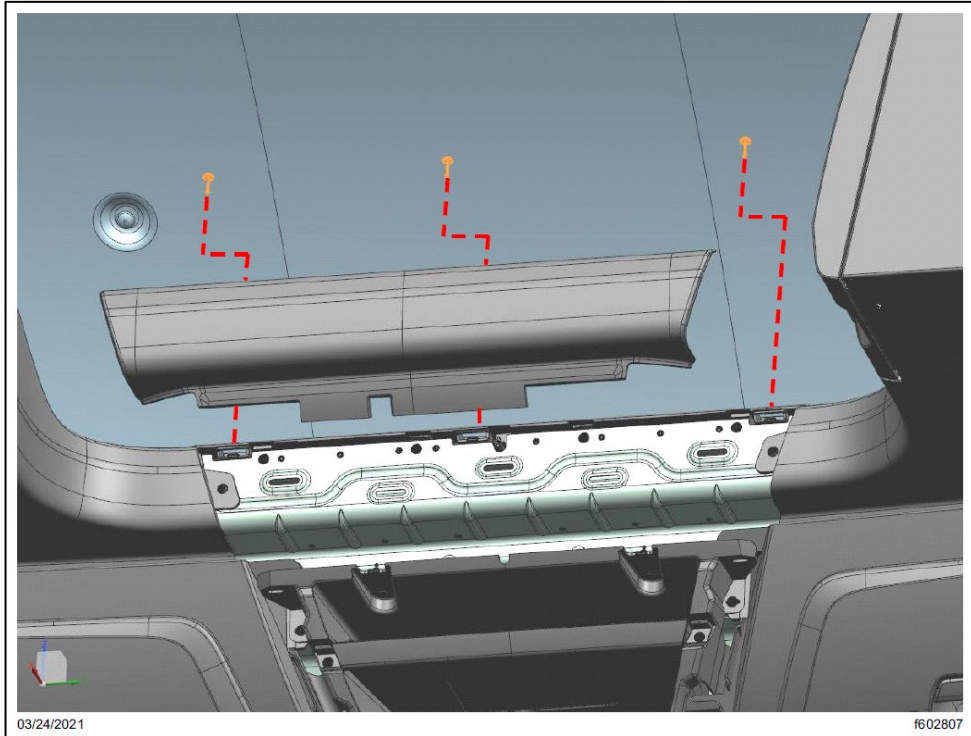


Fig. 47, Storage Shelf Bezel Removal

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- 8.5. Remove the eight fasteners that attach the center storage bin and the RH side overhead storage assembly to the cab roof. See [Fig. 48](#).

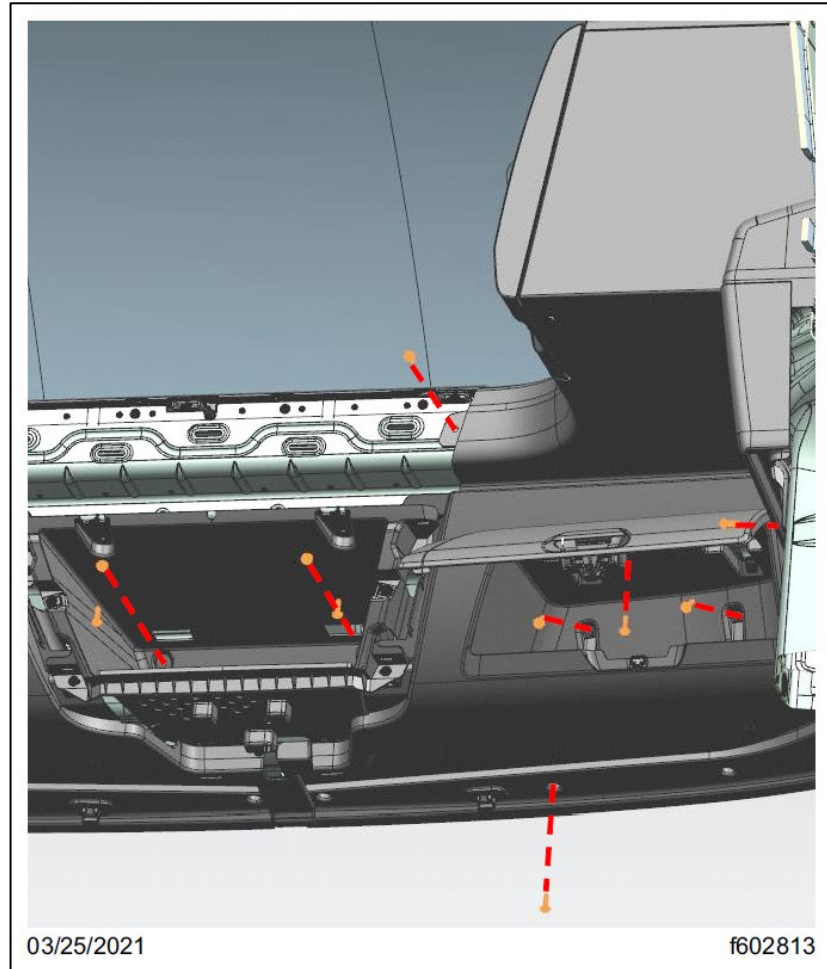


Fig. 48, Fasteners That Attach the Center Storage Bin and the RH Side Overhead Storage Assembly to the Cab Roof

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8.6. Remove the two fasteners that attach the center storage bin to the cab roof. See [Fig. 49](#).

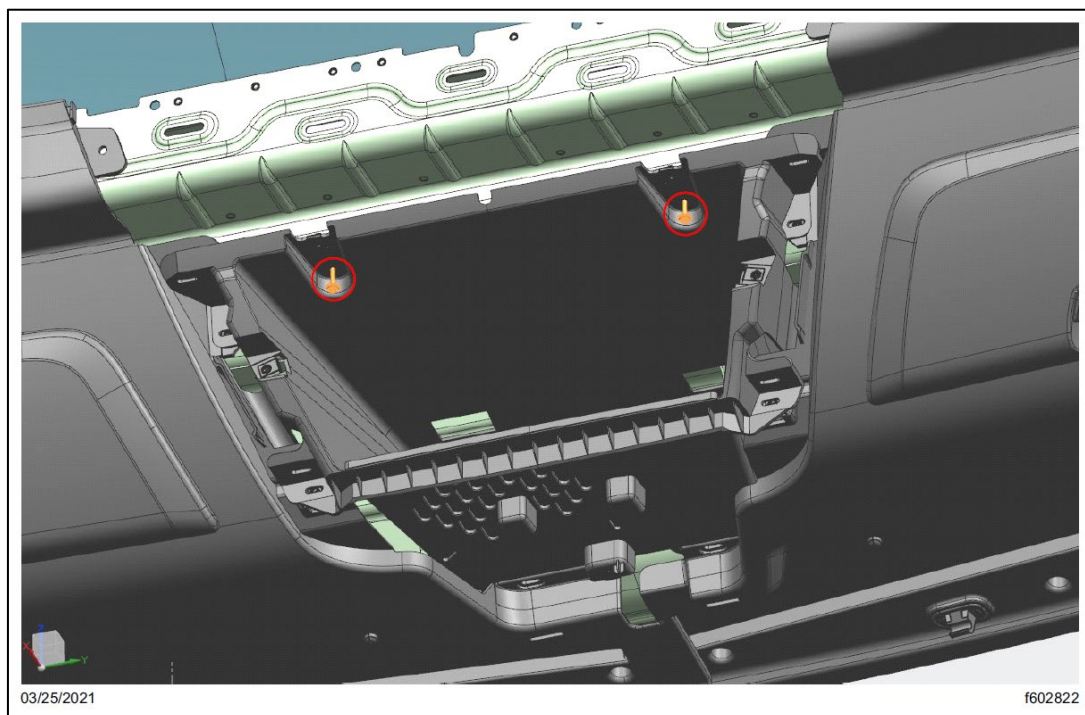


Fig. 49, Fasteners That Attach the Center Storage Bin to the Cab Roof

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- 8.7. Remove the six fasteners that attach the center storage bin to the LH and RH overhead storage assemblies. Remove the center storage bin from the vehicle. See [Fig. 50](#).

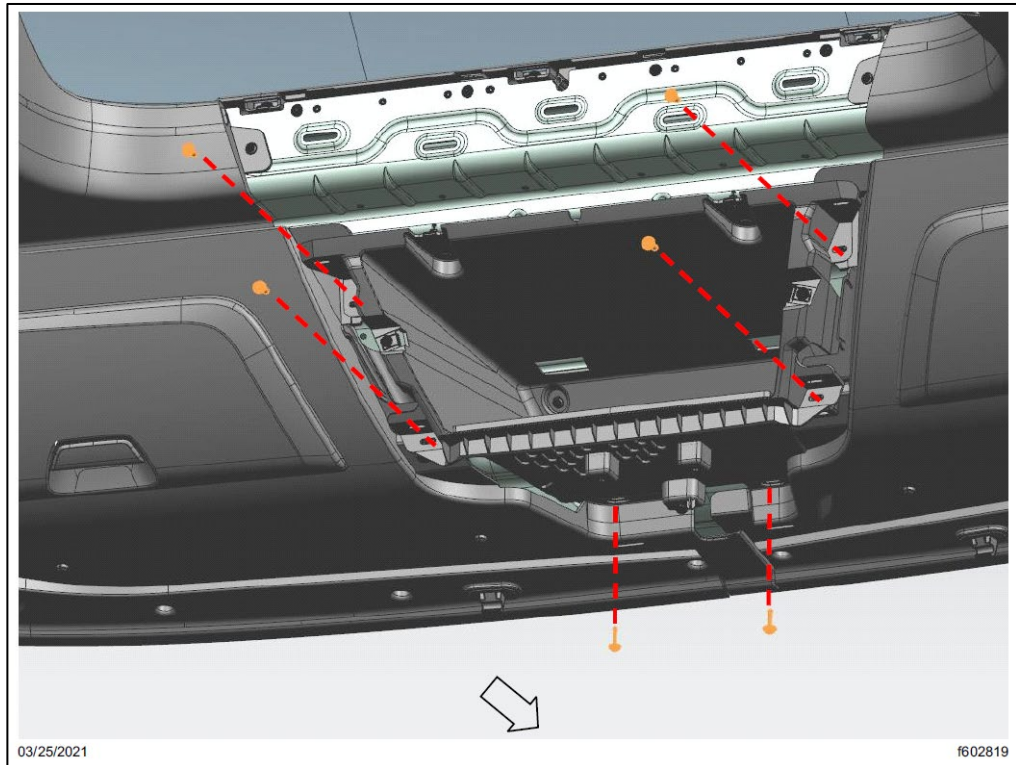


Fig. 50, Fasteners That Attach the Center Storage Bin to the LH and RH Overhead Storage Assemblies

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9. Remove the RH side overhead storage cabinet as follows.

9.1. Remove the fasteners that attach the privacy curtain rail to the RH side overhead storage assembly. See [Fig. 53](#).

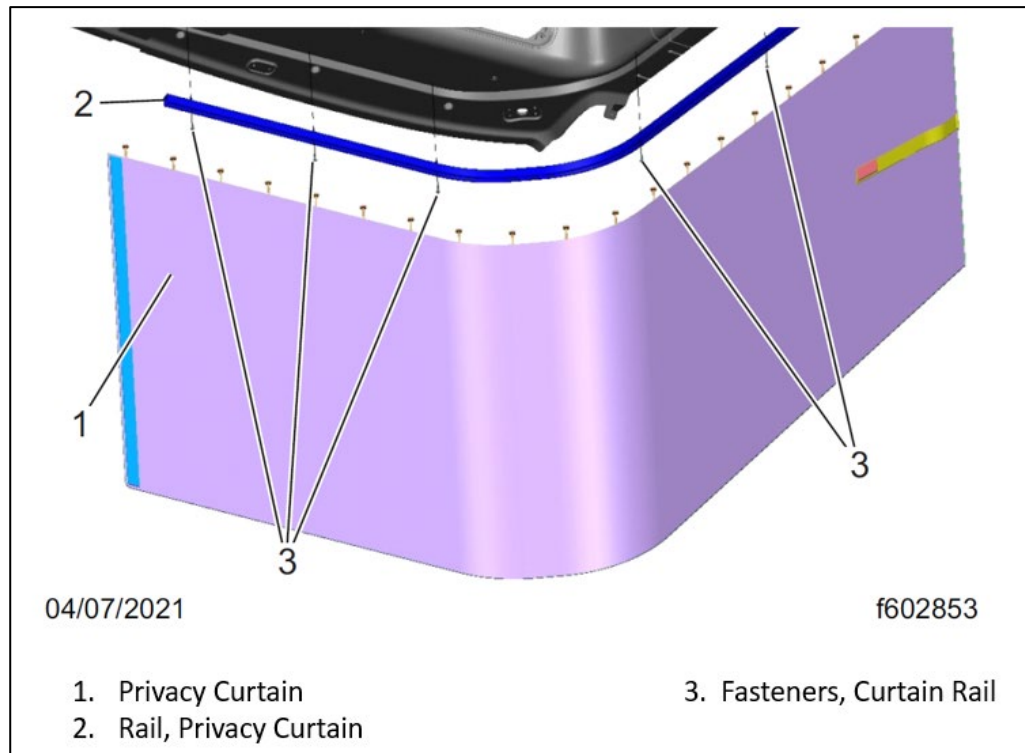


Fig. 53, Privacy Curtain Rail Assembly

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- 9.2. Remove the three fasteners that attach the RH overhead storage assembly to the storage shelf flanges. See [Fig. 51](#).

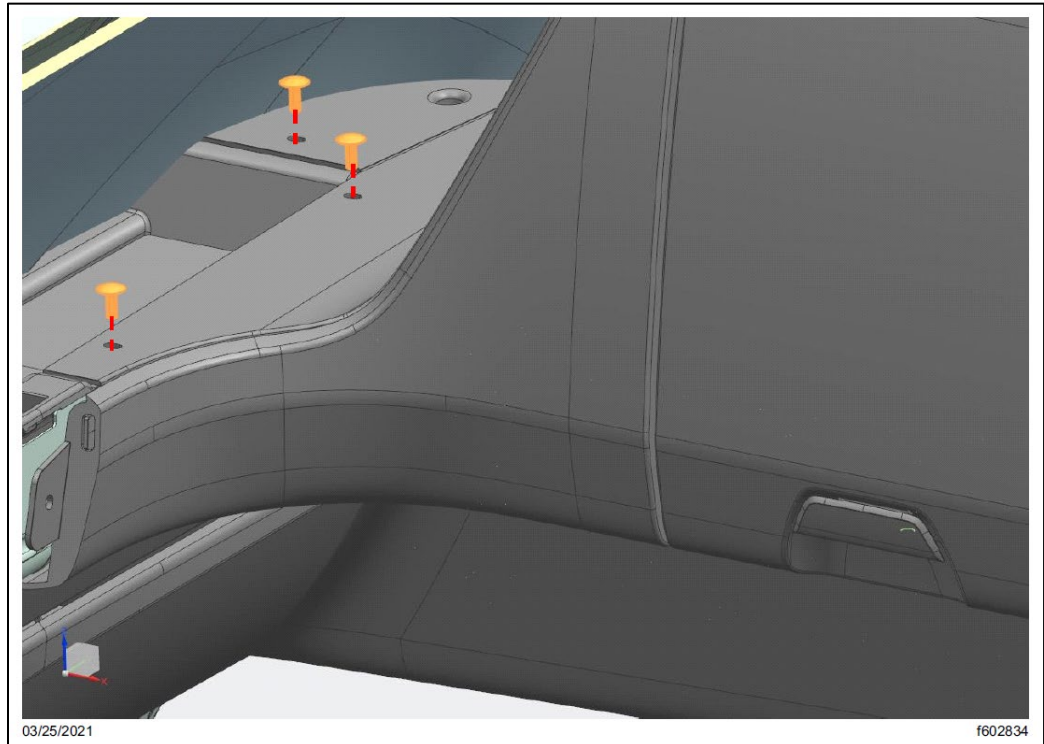


Fig. 51, Fasteners That Attach the RH Overhead Storage Assembly to the Storage Shelf Flanges

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- 9.3. Remove the two fasteners that attach the RH side overhead storage assembly to the A-pillar.
See [Fig. 52](#).

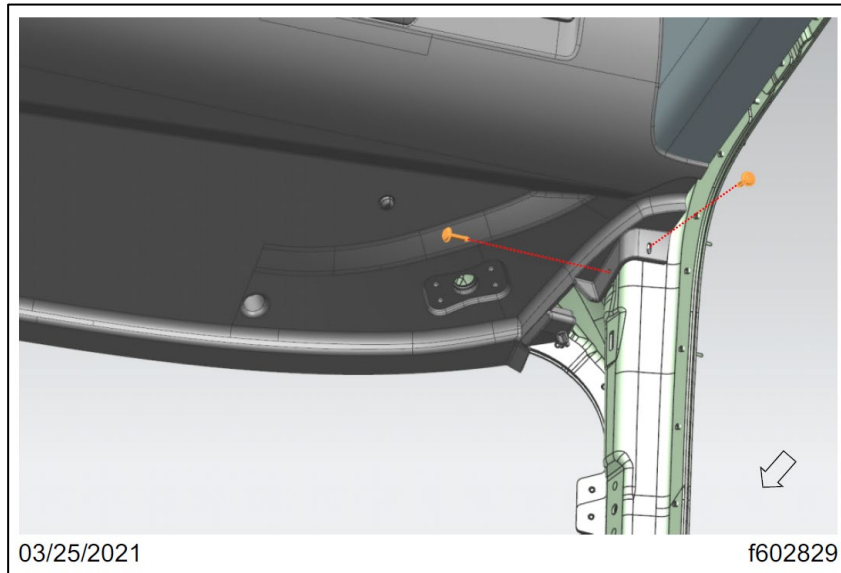


Fig. 52, Fasteners That Attach the RH Side Overhead Storage Assembly to the A-Pillar

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9.4. Remove the four fasteners that attach the RH side overhead storage assembly to the roof cap, and the sidewall bracket. See [Fig. 54](#).

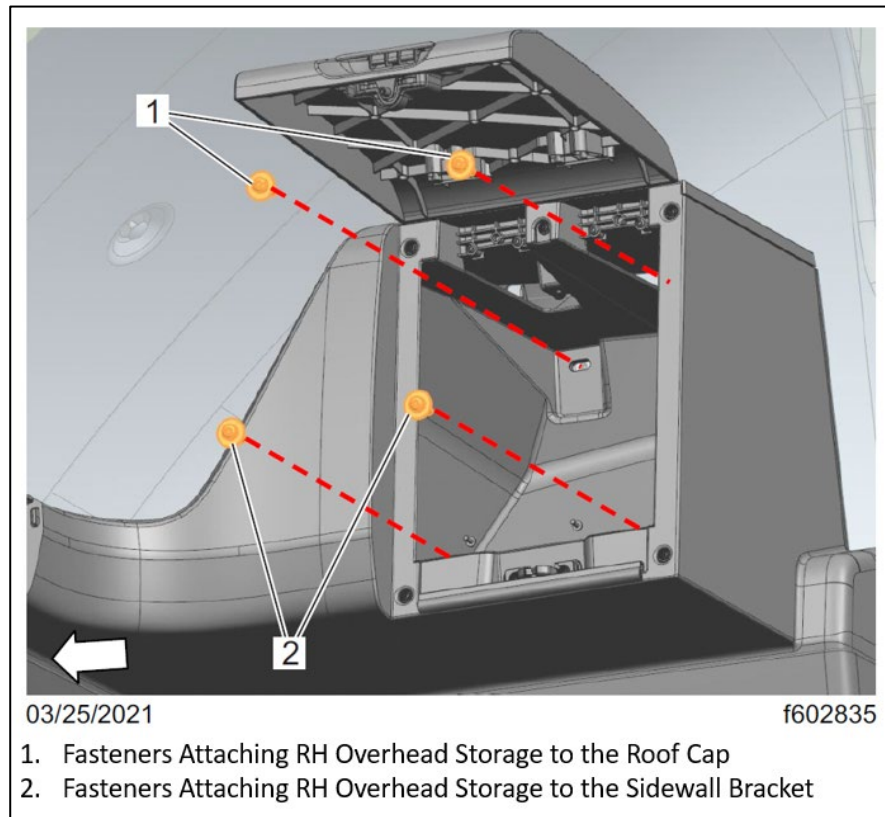


Fig. 54, Fasteners That Attach the RH Overhead Storage Assembly to the Roof Cap and the Sidewall Bracket

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9.5. Lift the RH side overhead storage assembly until it releases from the sidewall bracket, and remove it from the vehicle. See [Fig. 55](#).

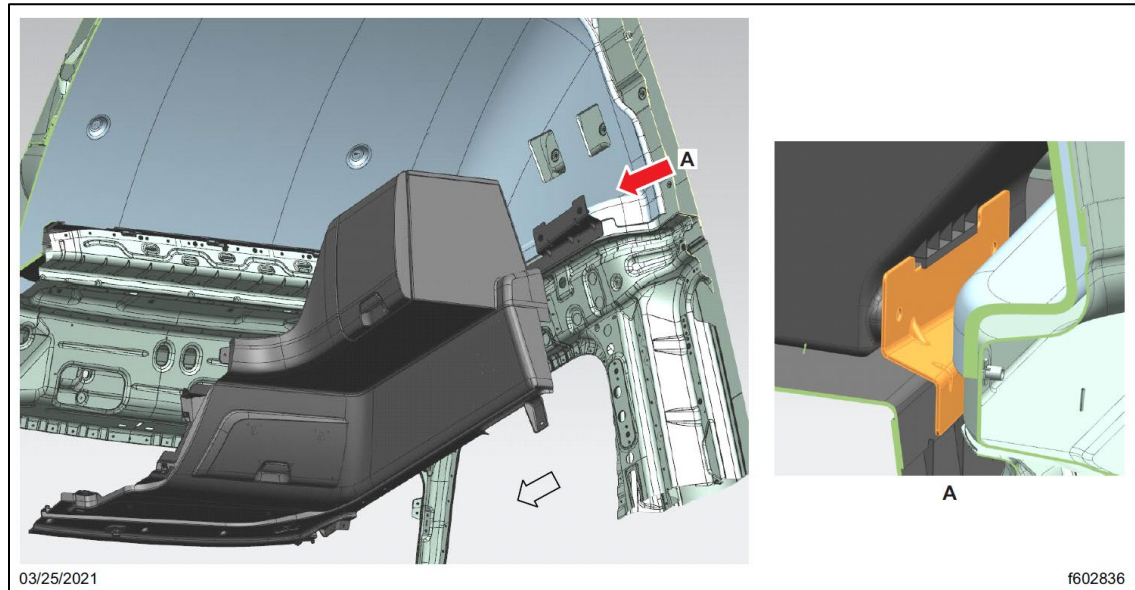


Fig. 55, RH Overhead Storage Assembly Hung on the Sidewall Bracket

NOTE: The GPS antenna installation requires two co-axial cables;

- A short co-axial cable, which is to be routed from the Cummins Acumen module to right side of the electronics bay.
- A long co-axial cable, which is to be routed from the RH side of the electronics bay to the thin film antenna connector on the cab roof.

The two co-axial cables will connect together at the right side of the electronics bay.

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10. Install the short co-axial cable by connecting one end to the Cummins Acumen module, and route it to the right side of the electronics bay. See [Fig. 56](#). Secure the cable to existing clipping points or tie straps.

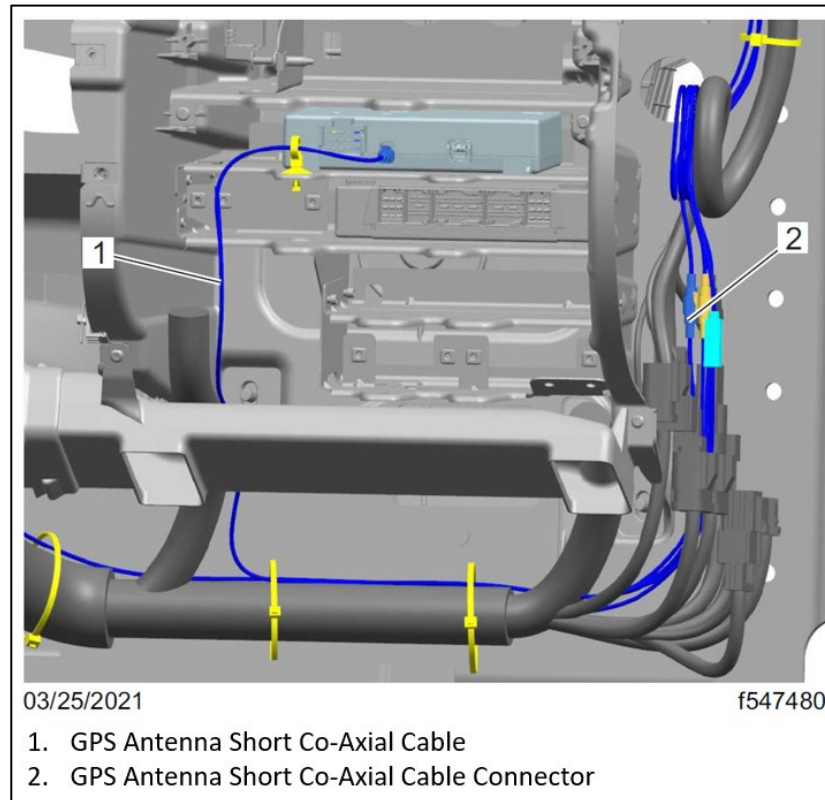


Fig. 56, Cummins Acumen GPS Antenna Short Co-Axial Cable Installation

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11. Route the long co-axial cable from the right side of the electronics bay, along the existing wire harness through the RH side A-pillar, into the cab roof, and then connect it to the thin film antenna blue connector. See [Fig. 57](#). Secure the cable with tie straps.

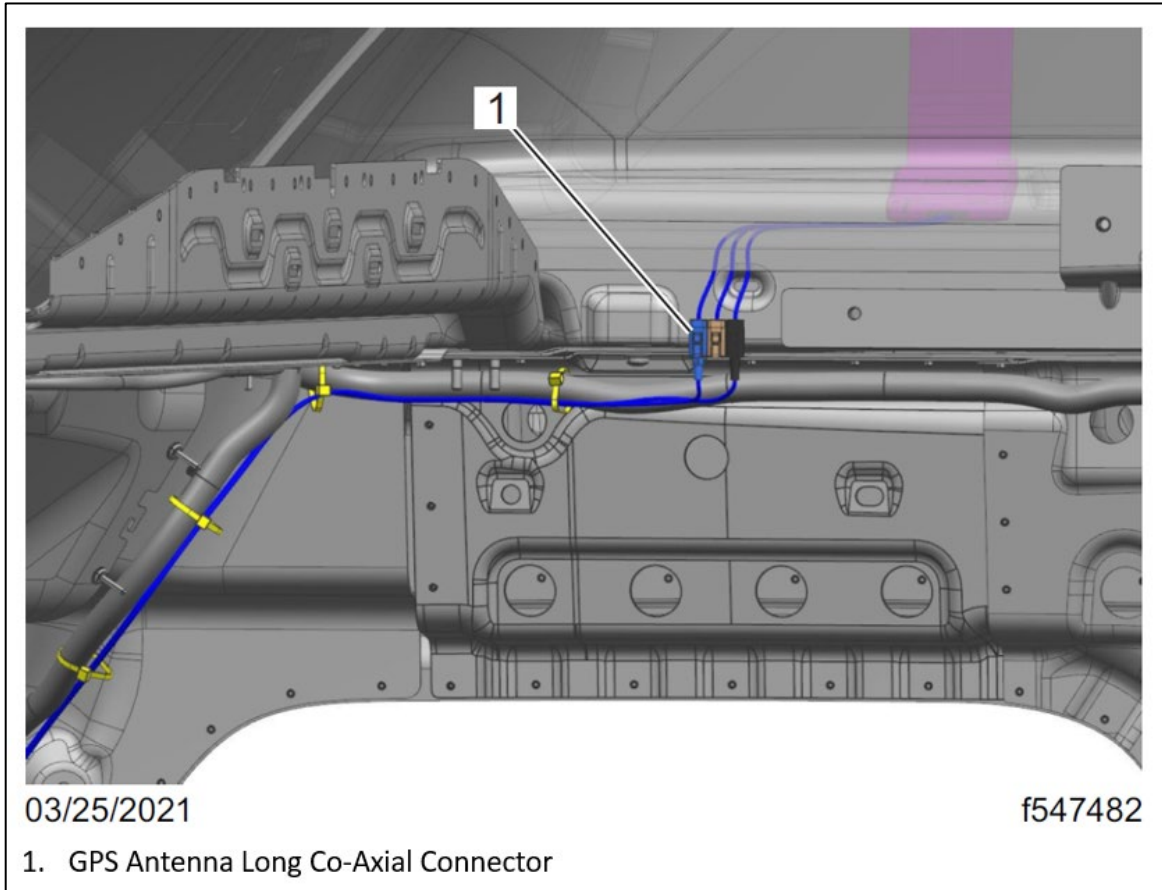


Fig. 57, Cummins Acumen GPS Antenna Long Co-Axial Cable Installation

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12. Install the RH side overhead storage cabinet as follows.

12.1. Position the cabinet closeout panel, in its installed position, over the storage shelf flanges.
See [Fig. 58](#).

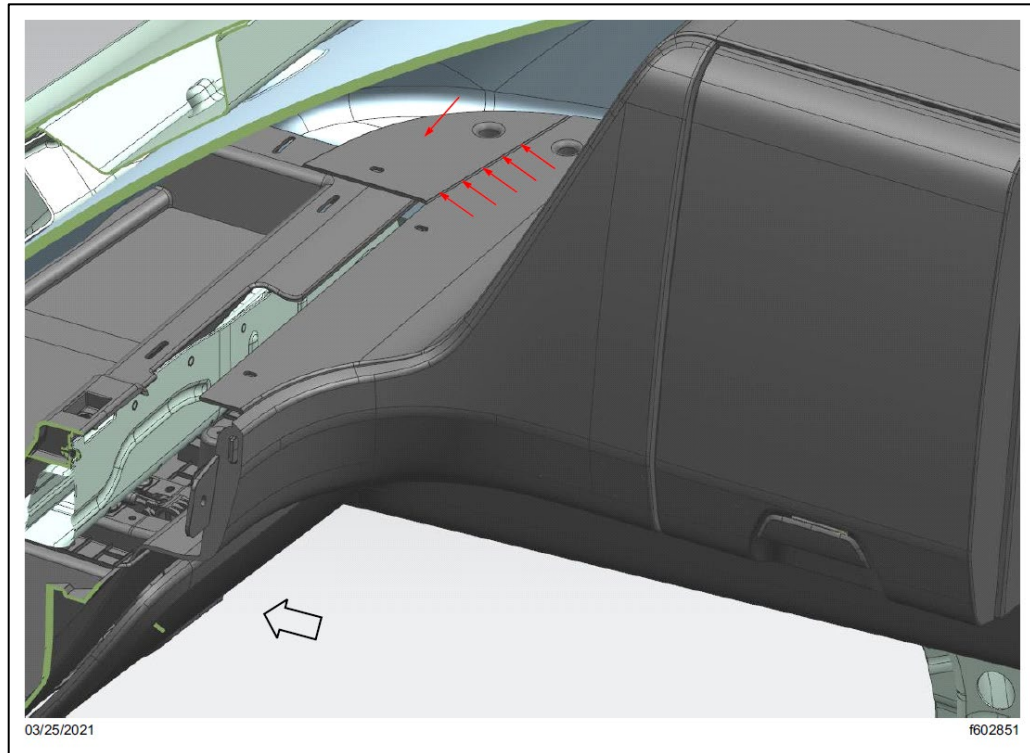


Fig. 58, Positioning the Closeout Panel

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12.2. Insert the clips on the RH side overhead storage assembly into their respective slots on the cab roof as shown in [Fig. 59](#).

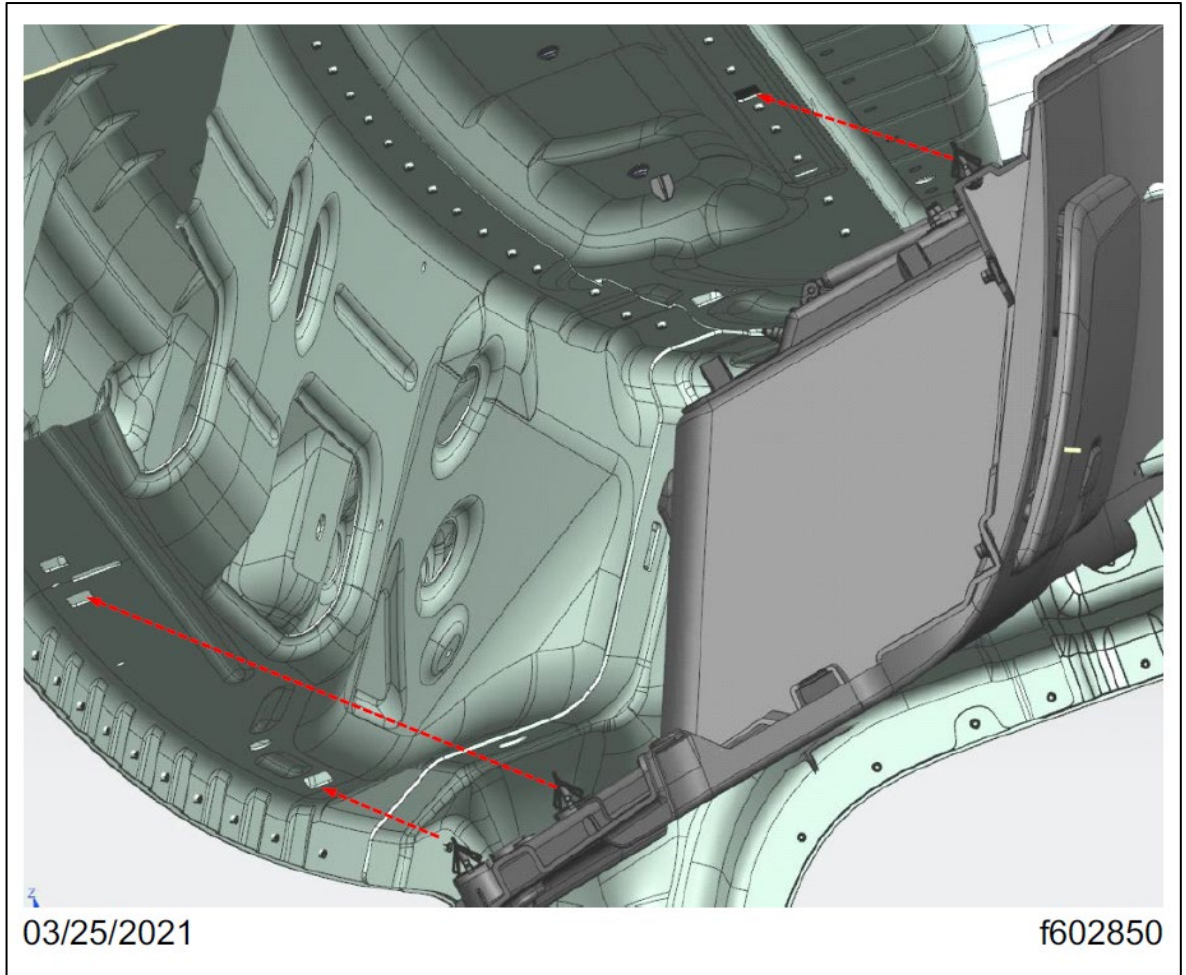


Fig. 59, Insert the RH Side Overhead Storage Unit Clips

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12.3. Hang the RH overhead storage assembly on the sidewall bracket as shown in [Fig. 55](#).

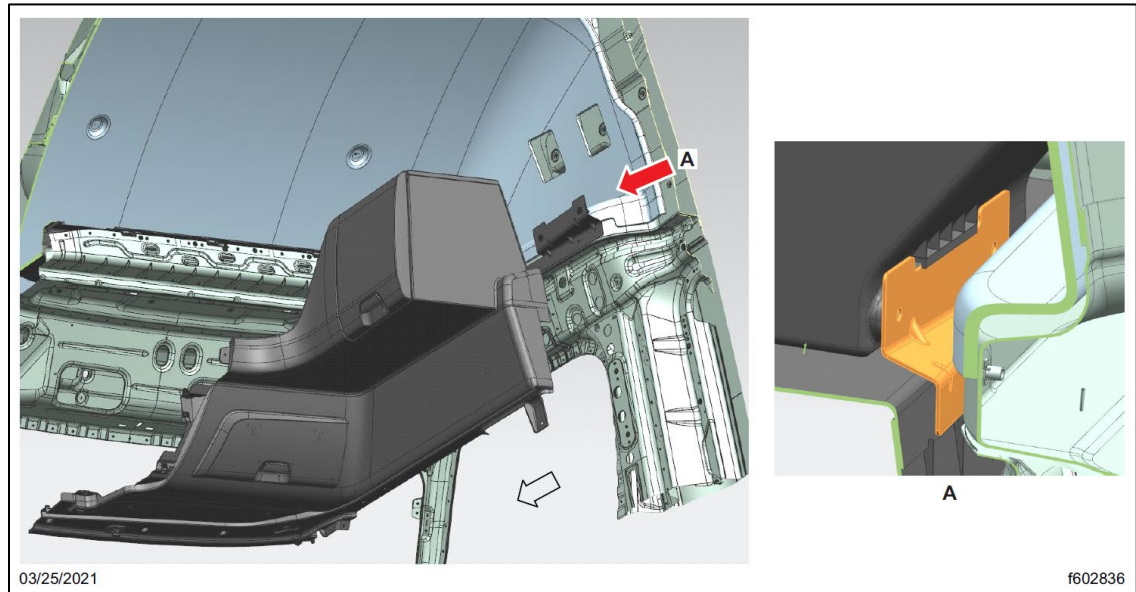


Fig. 55, RH Overhead Storage Assembly Hung on the Sidewall Bracket

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12.4. Install the four fasteners that attach the RH side overhead storage assembly to the roof cap, and the sidewall bracket. See [Fig. 54](#). Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m).

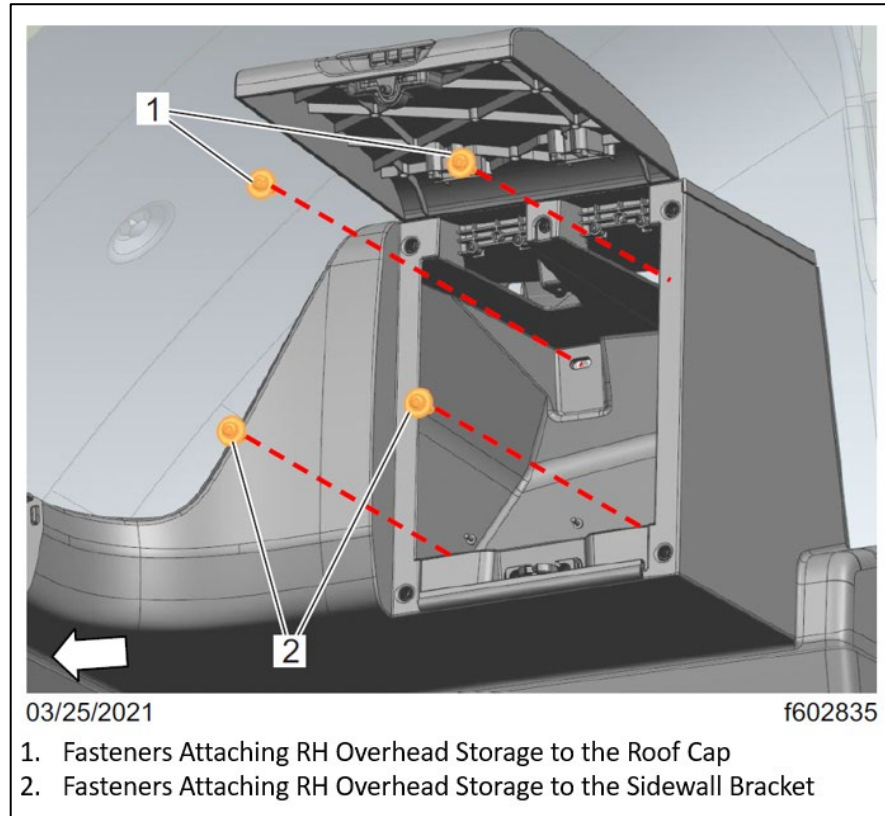


Fig. 54, Fasteners That Attach the RH Overhead Storage Assembly to the Roof Cap and the Sidewall Bracket

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- 12.5. Install the three fasteners that attach the RH overhead storage assembly to the storage shelf flanges. See [Fig. 51](#). Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m).

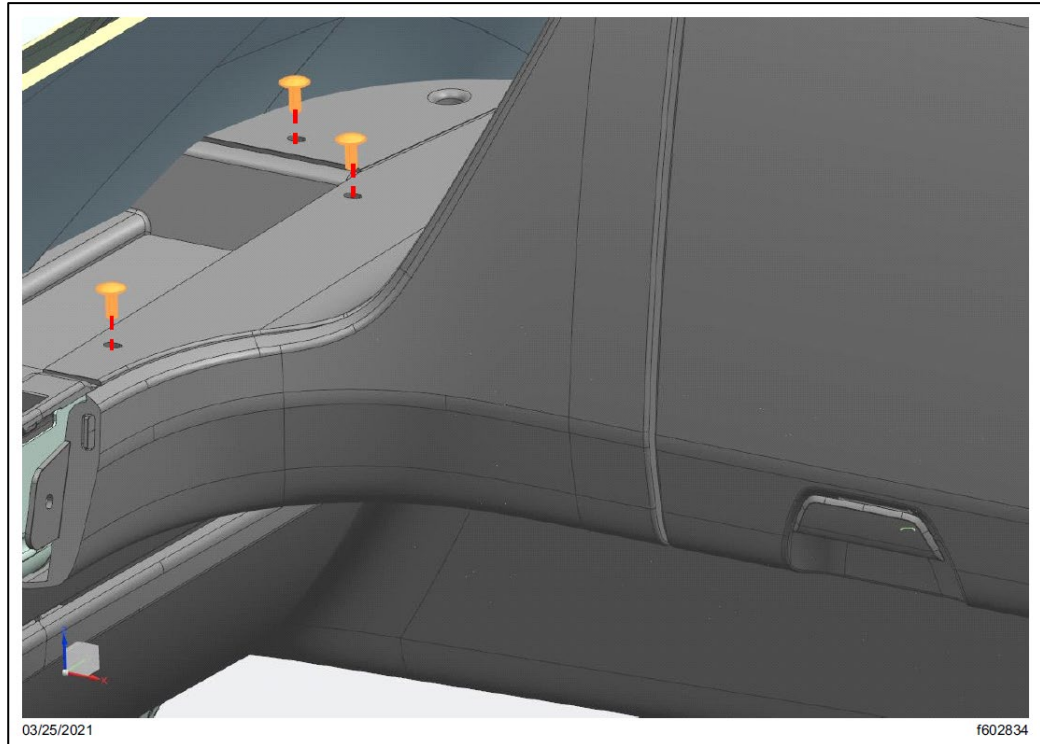


Fig. 51, Fasteners That Attach the RH Overhead Storage Assembly to the Storage Shelf Flanges

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- 12.6. See [Fig. 60](#). Applying pressure upwards on the RH side overhead storage cabinet, install the two fasteners that attach the RH side overhead storage cabinet to the A-pillar. Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m) as per the sequence shown in [Fig. 60](#).

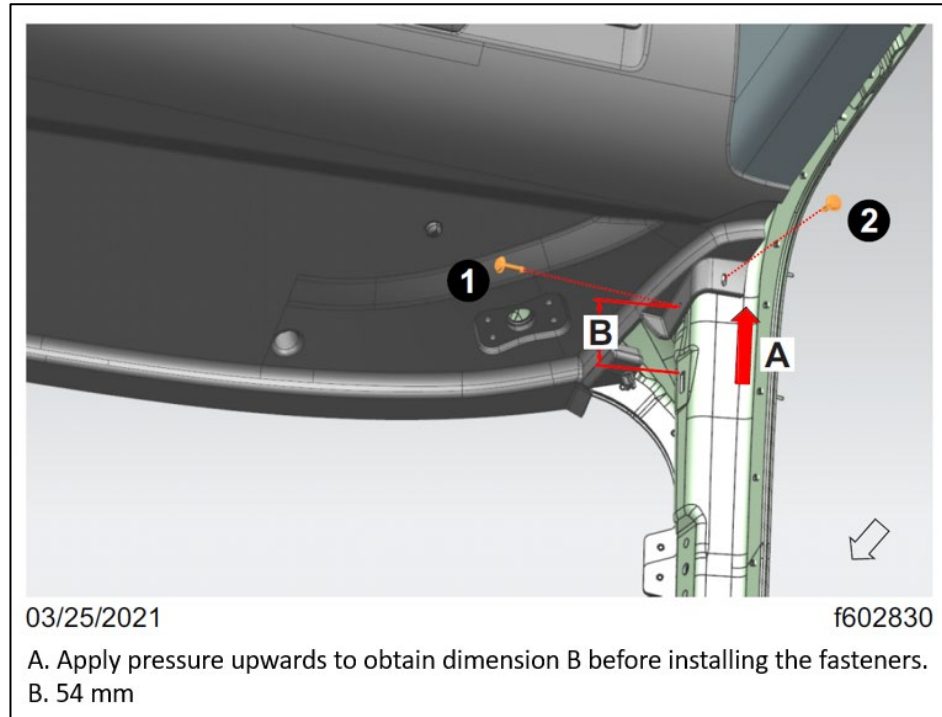


Fig. 60, Installing the Fasteners That Attach the RH Side Overhead Storage Cabinet to the A-Pillar

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13. Install the fasteners that attach the privacy curtain rail to the RH side overhead storage assembly. See [Fig. 61](#). Tighten the fasteners 2.2 lbf.ft (3 N.m)

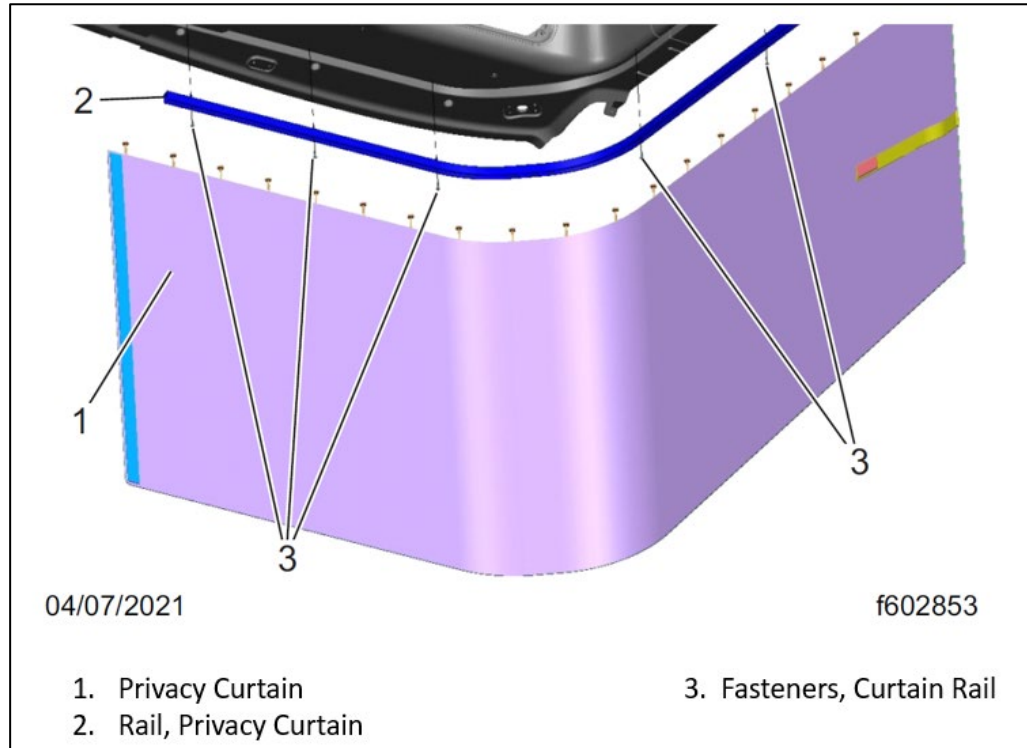


Fig. 61, Privacy Curtain Rail Assembly

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14. Install the center overhead storage bin as follows.
 - 14.1. Snap the center storage bin into position between the LH side and RH side overhead storage assemblies. See [Fig. 62](#).

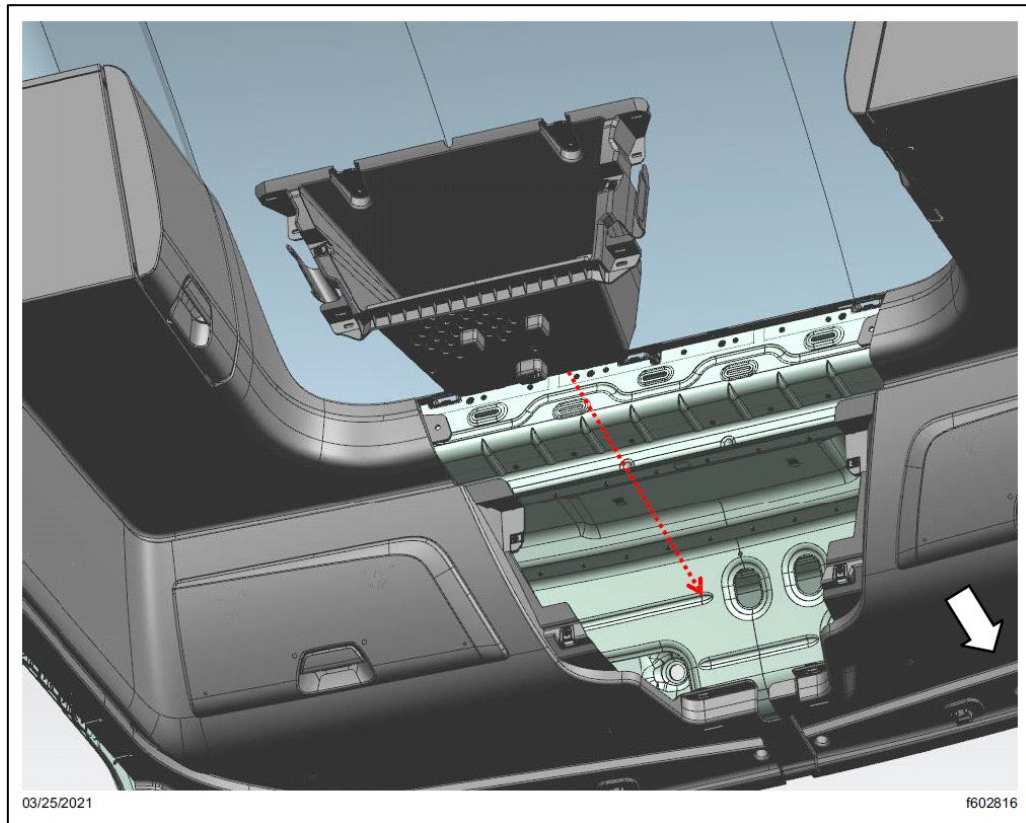


Fig. 62, Snap the Center Storage Bin into Position

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- 14.2. Install the six fasteners that attach the center overhead storage bin to the LH side and RH side overhead storage assemblies. Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m) as per the sequence shown in [Fig. 63](#).

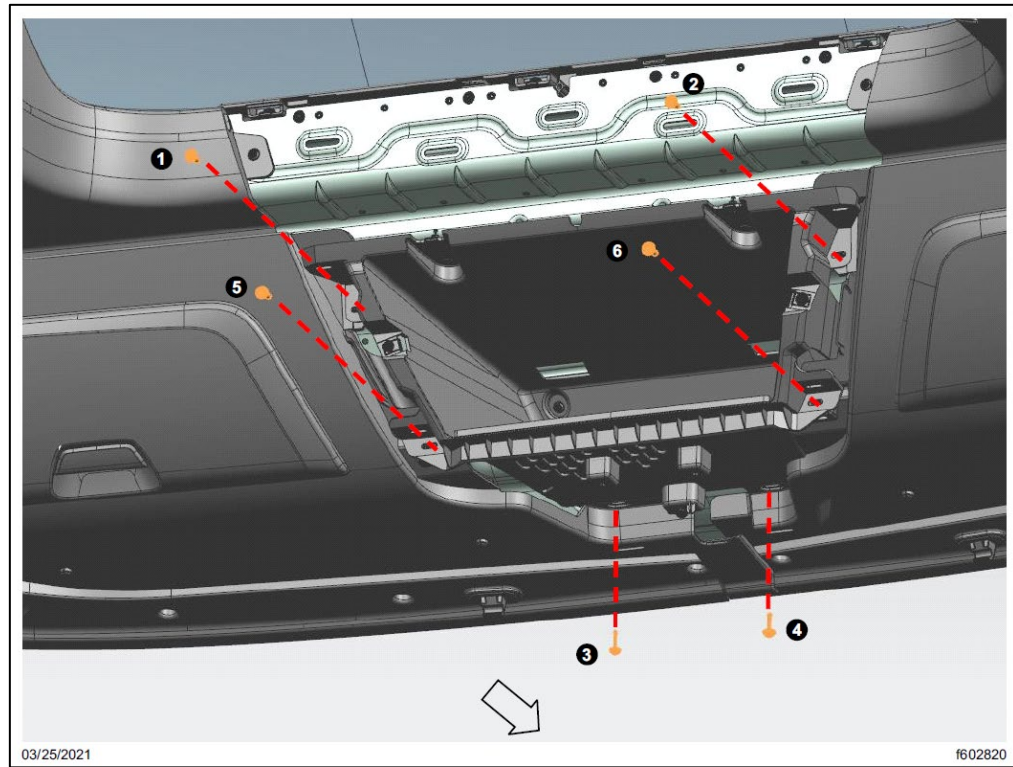


Fig. 63, Attach the Center Overhead Storage Bin to the LH and RH side Storage Cabinets

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14.3. Install the two fasteners that attach the center overhead storage bin to the cab roof as shown in [Fig. 49](#). Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m).

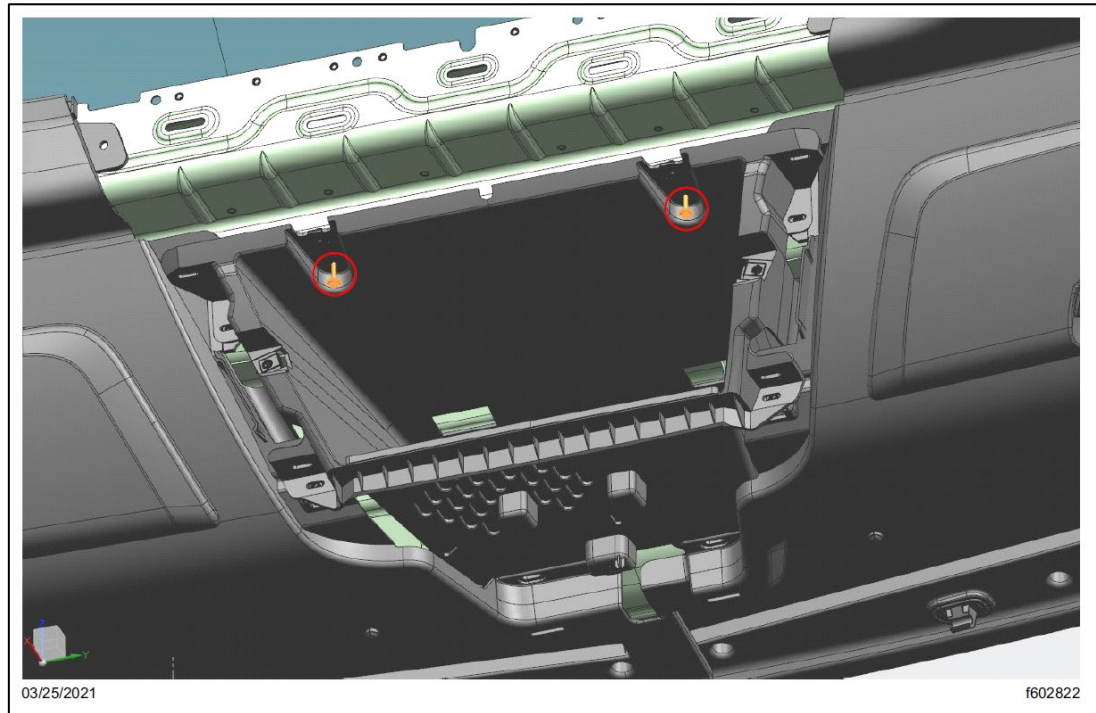


Fig. 49, Attach the Center Overhead Storage to the Cab Roof

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- 14.4. Install the fasteners that attach the center storage bin and the RH side overhead storage assembly to the cab roof. Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m) as per sequence shown in [Fig. 64](#).

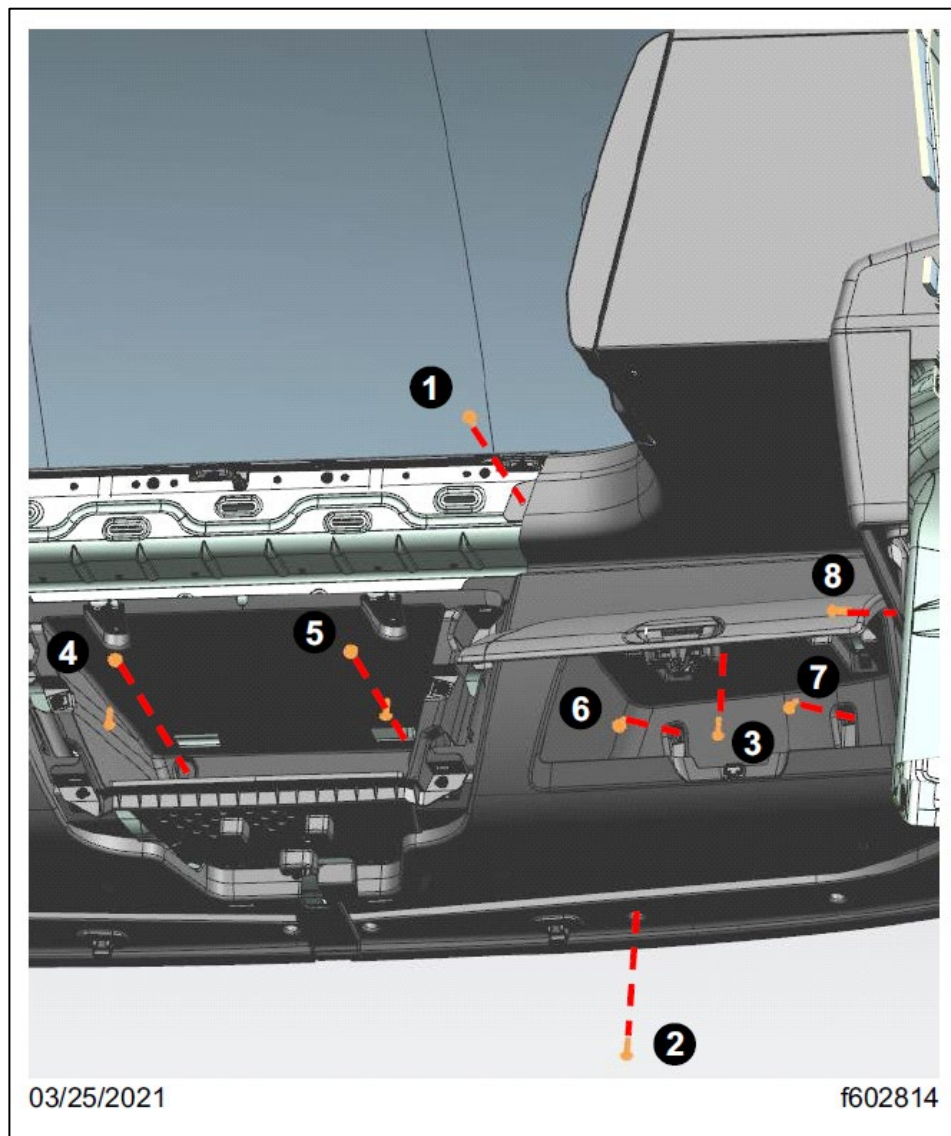


Fig. 64, Attach the Center Overhead Storage and the RH Side Overhead Storage Assembly to the Cab Roof

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- 14.5. Insert the clips on the storage shelf bezel into the slots on the front header, and then install the three fasteners that attach the storage shelf bezel to the front header. See

Fig. 65. Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).

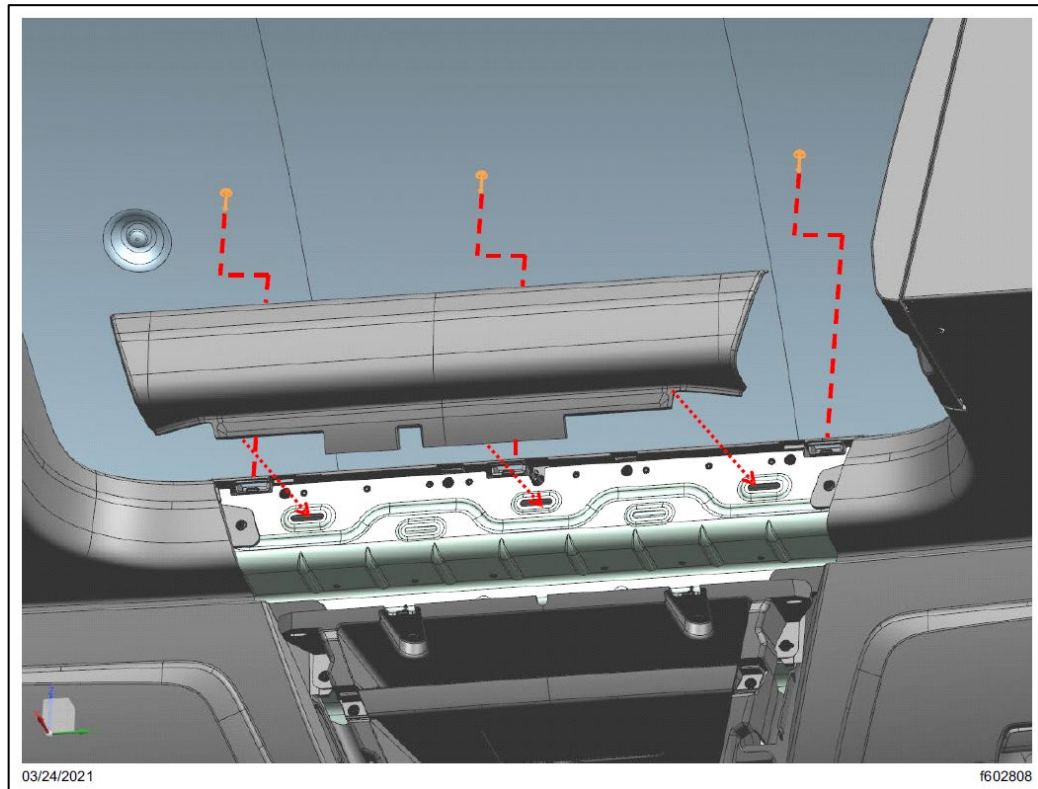


Fig. 65, Installing the Storage Shelf Bezel to the Front Header

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14.6. Place the center shelf into position by inserting the molded-in tabs into the slots on the center overhead storage bin. Install the two fasteners that attach the center shelf to the center overhead storage bin. See [Fig. 66](#) and [Fig. 67](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).

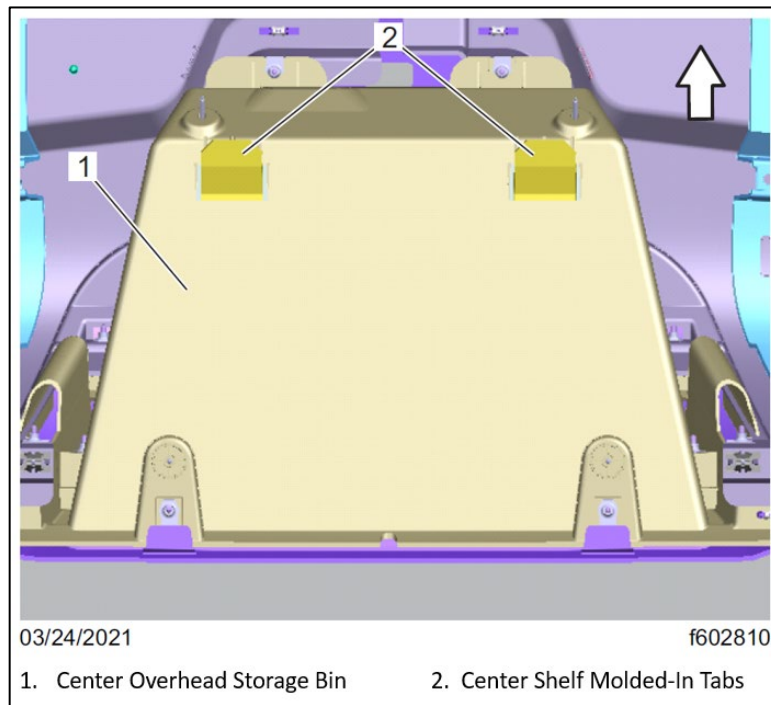


Fig. 66, Inserting Center Shelf Molded-In Tabs

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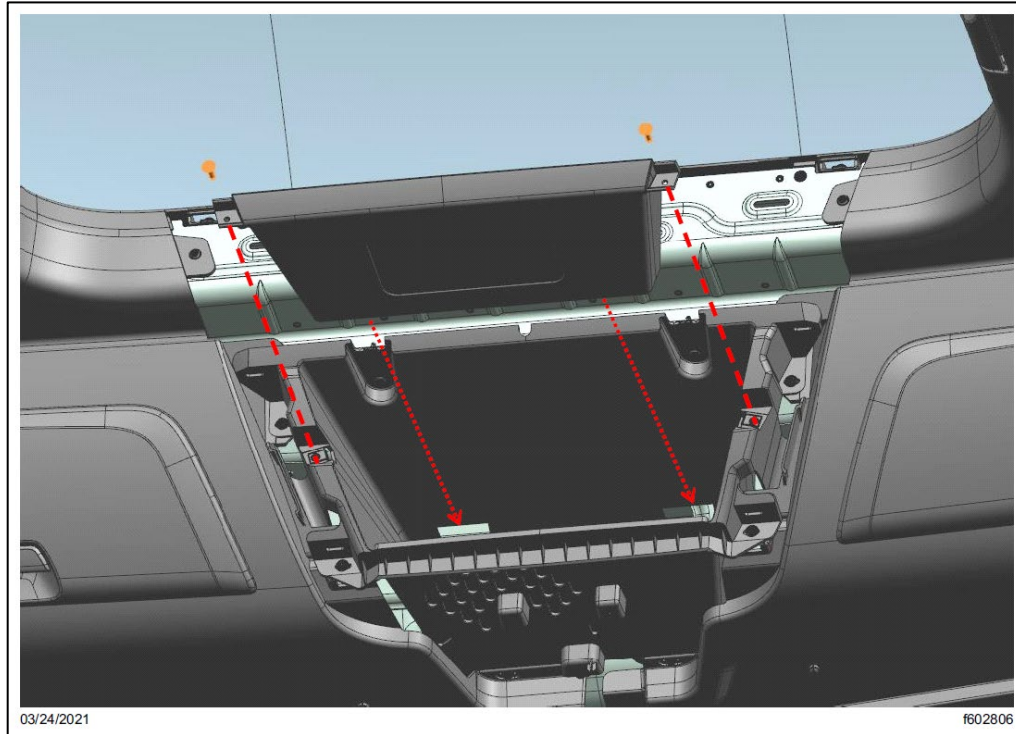


Fig. 67, Center Shelf Installation

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14.7. Place the center bezel by inserting the pillar clips into the slots in the center overhead storage bin, and LH and RH side overhead storage cabinets. See [Fig. 68](#).

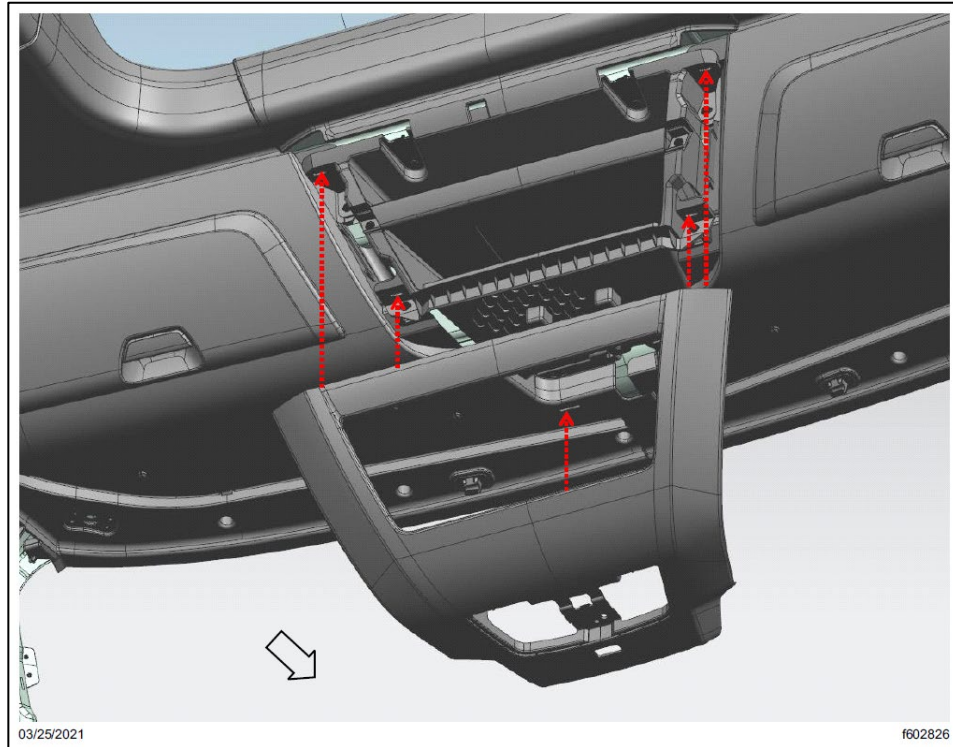


Fig. 68, Position and Attach the Center Bezel

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- 14.8. Install the five fasteners that attach the center bezel to the center overhead storage bin. Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m) as per the sequence shown in [Fig. 69](#).

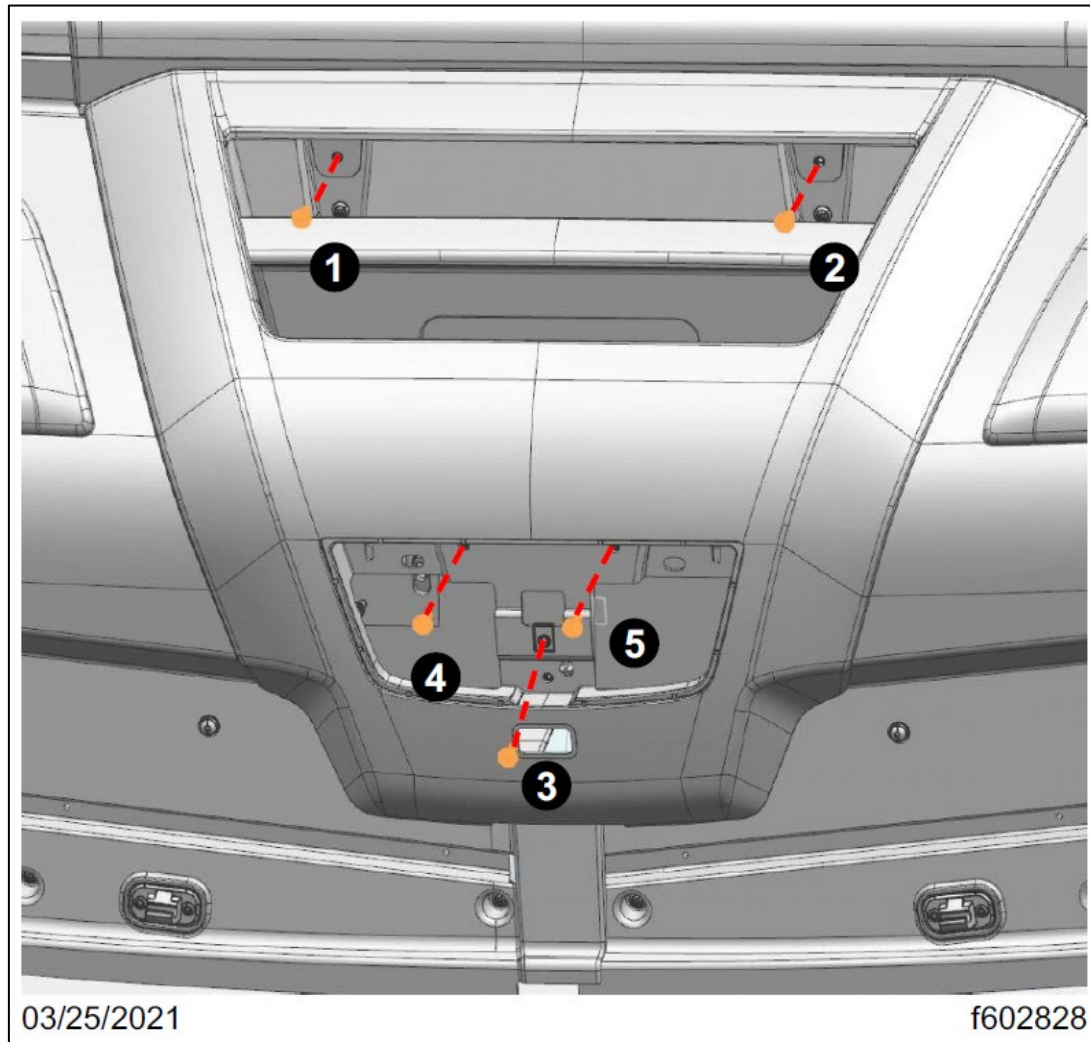


Fig. 69, Center Bezel Fasteners Installation Sequence

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- 14.9. Position the reading lamp module on the center overhead storage unit, then install the fastener that attaches it to the center overhead storage bin. See [Fig. 14](#). Tighten the fastener 5 to 7 lbf.ft (6 to 9 N.m).

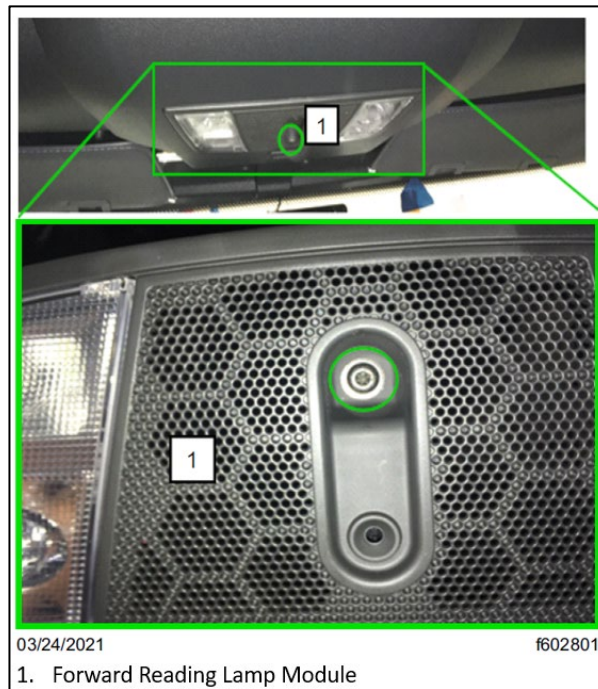


Fig. 14, Forward Reading Lamp Module

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15. Install the rear-right upper cabinet as follows.

15.1. Hang the rear-right upper cabinet on the cabinet mounting bracket. See [Fig. 44](#).

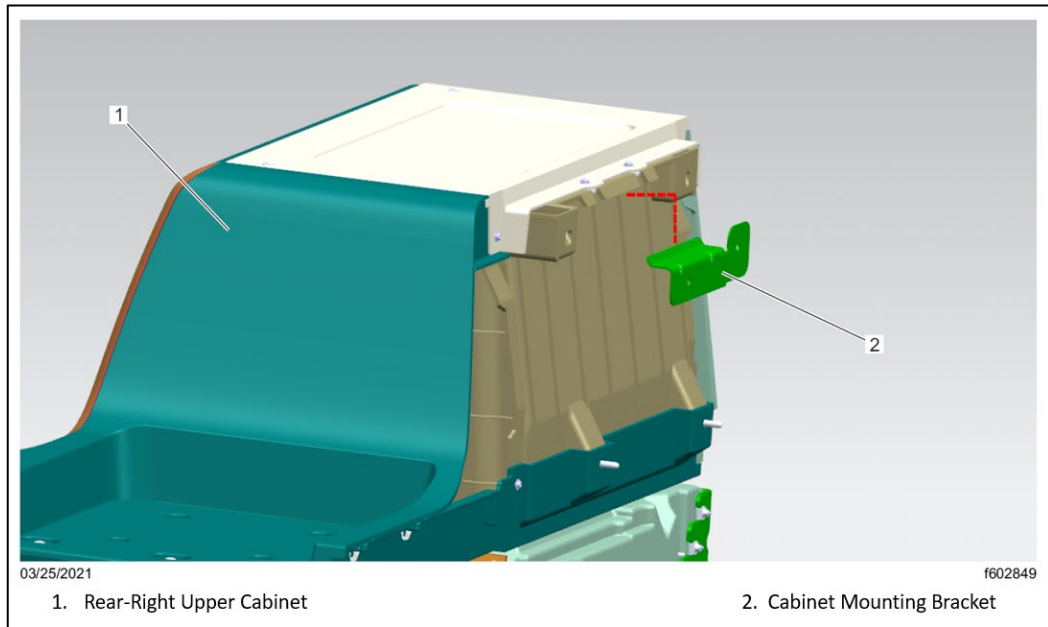


Fig. 44, Mounting Rear-Right Upper Cabinet

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- 15.2. Install the four fasteners that attach the rear-right upper cabinet to the cabinet mounting bracket and the cab panel. Tighten the fasteners 7 to 9 lbf.ft (9 to 12 N.m) as per the sequence shown in [Fig. 70](#).

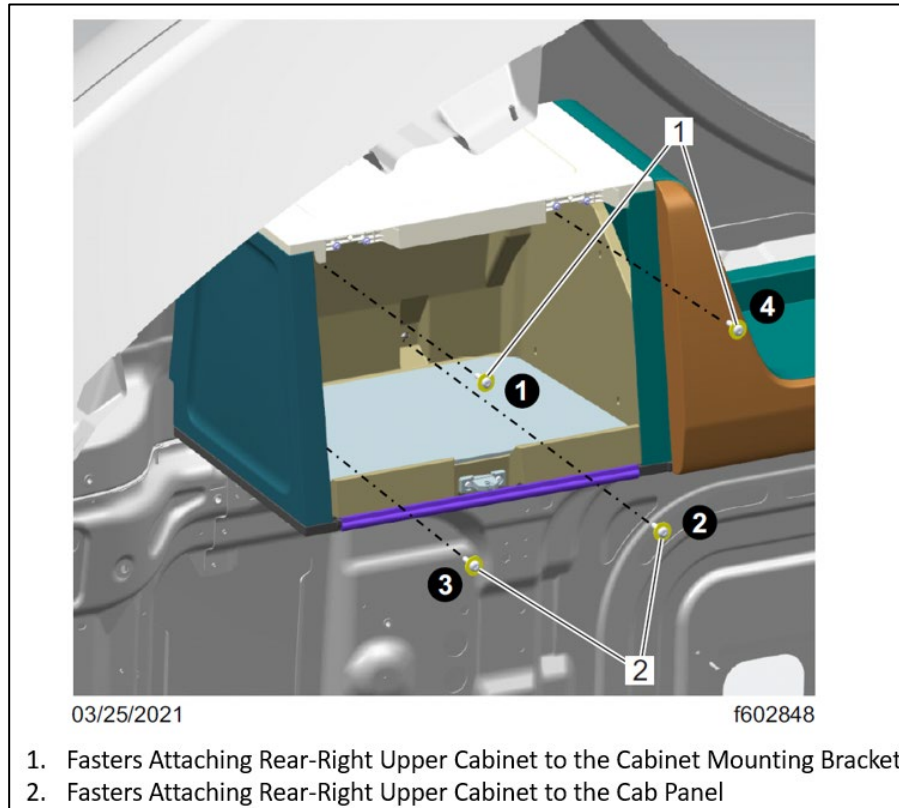


Fig. 70, Fasteners That Attach the Rear-Right Upper Cabinet to the Upper-Rear Shelf and the Cab Panel

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16. Install the upper-rear shelf as follows.

16.1. Place the upper-rear shelf on the mounting bracket. See [Fig. 42](#).

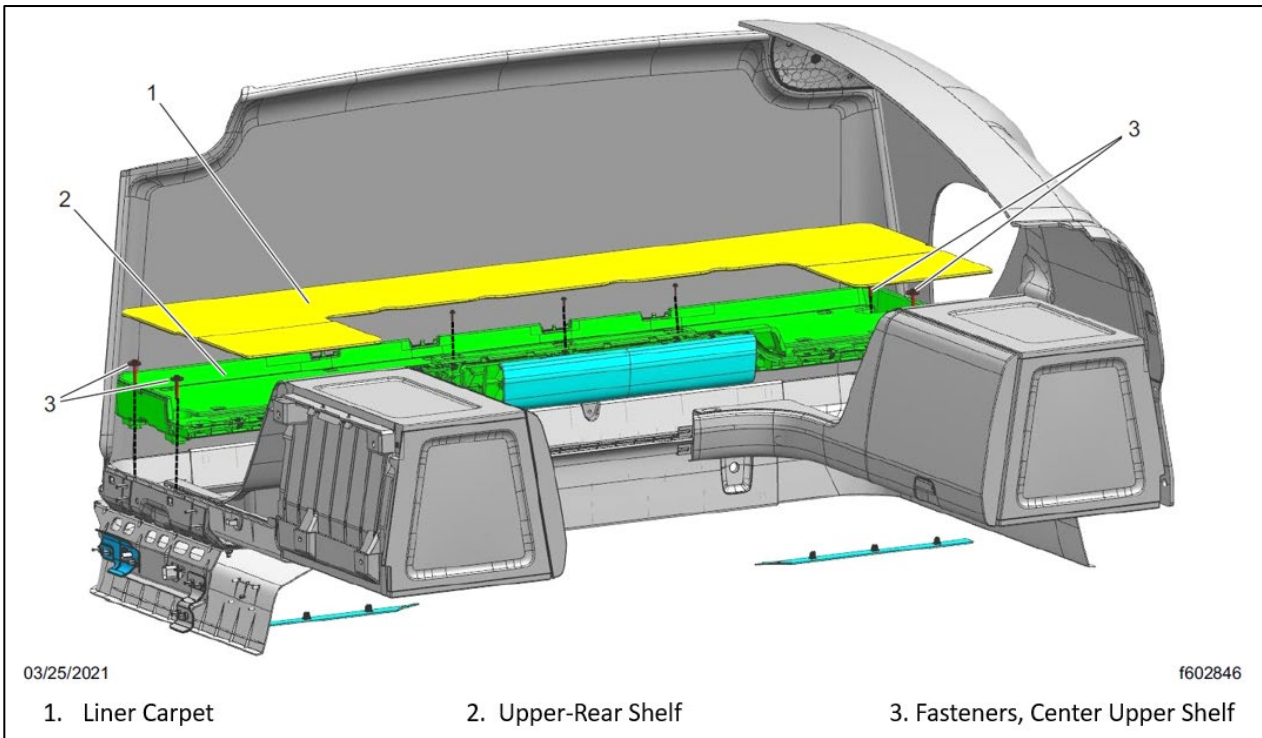


Fig. 42, Upper-Rear Shelf Assembly

16.2. Install the four fasteners that attach the upper-rear shelf to the mounting bracket. See [Fig. 42](#). Tighten the fasteners 7 to 9 lbf.ft (9 to 12 N.m).

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- 16.3. Install the six fasteners that attach the upper-rear shelf to the rear-right upper cabinet.
See [Fig. 41](#). Tighten the fasteners 7 to 9 lbf.ft (9 to 12 N.m).

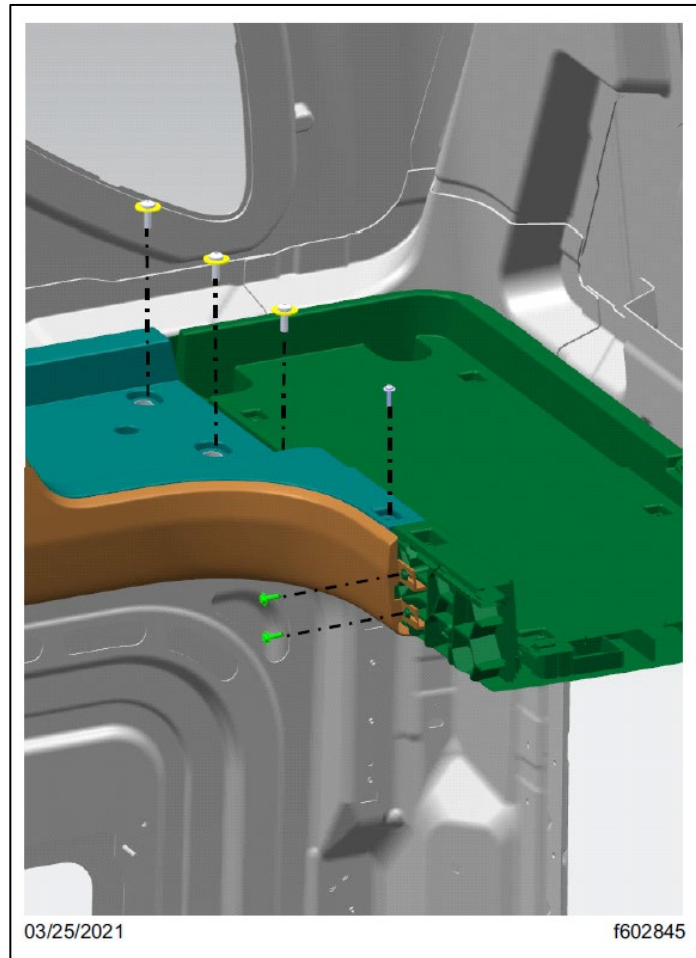


Fig. 41, Fasteners That Attach the Rear-Right Upper Cabinet to the Upper-Rear Shelf

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17. Install the microwave cabinet as follows.

17.1. Attach the microwave cabinet clips to the rear-right upper cabinet. See [Fig. 40](#).

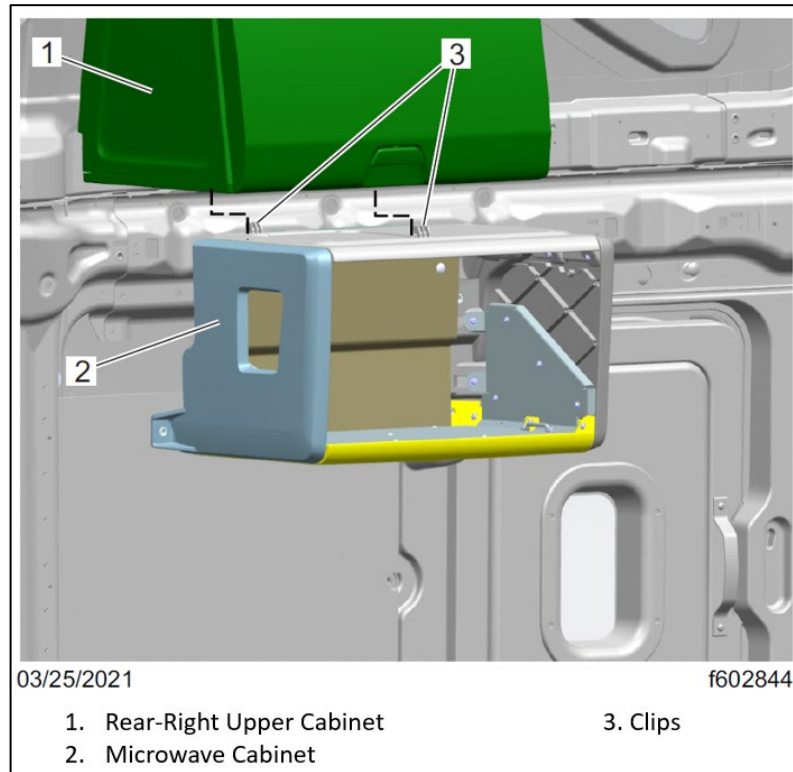


Fig. 40, Engage the Microwave Cabinet Clips

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17.2. Install the four fasteners that attach the microwave cabinet to the cab wall. Tighten the fasteners 7 to 9 lbf.ft (9 to 12 N.m) as per the sequence shown in [Fig. 70](#).

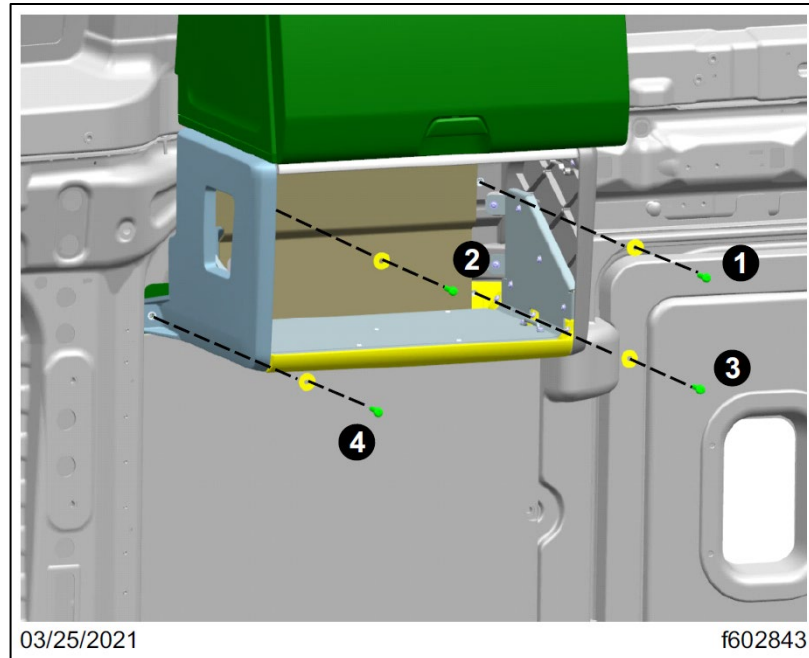


Fig.70, Fasteners That Attach the Microwave Cabinet to the Sidewall

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- 17.3. Install the four fasteners that attach the microwave cabinet to the rear right upper cabinet.
See [Fig. 38](#). Tighten the fasteners 7 to 9 lbf.ft (9 to 12 N.m).

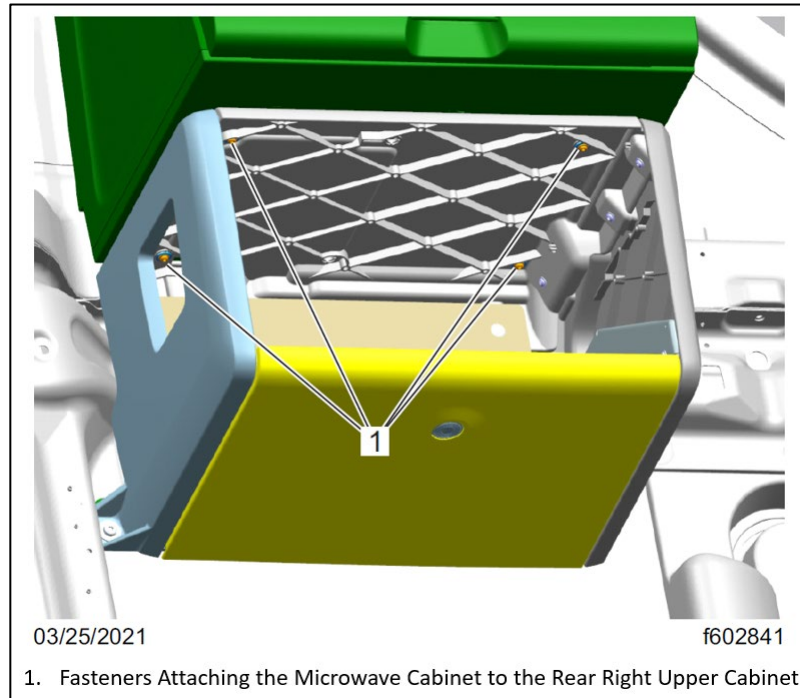


Fig. 38, Fasteners That Attach the Microwave Cabinet to the Rear Right Upper Cabinet

- 17.4. If equipped, install the microwave oven into the microwave cabinet. Connect the lamp pigtail connector from the sleeper wiring harness.

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18. Install the center and RH side rear upper shelf carpet. See [Fig. 37](#).

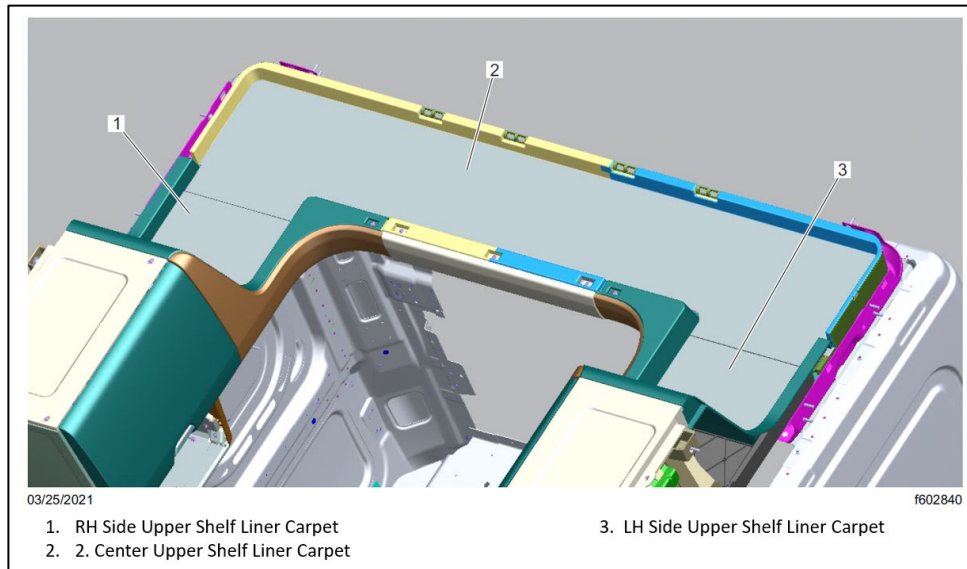


Fig. 37, Rear Upper Shelf Carpet

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19. See [Fig. 34](#). At the RH side B pillar, install the grab handle, seat belt mounting, and pillar covers. For instructions on removal of seat belt assembly, refer to **Section 91.01** of the *New Cascadia™ Workshop Manual*.

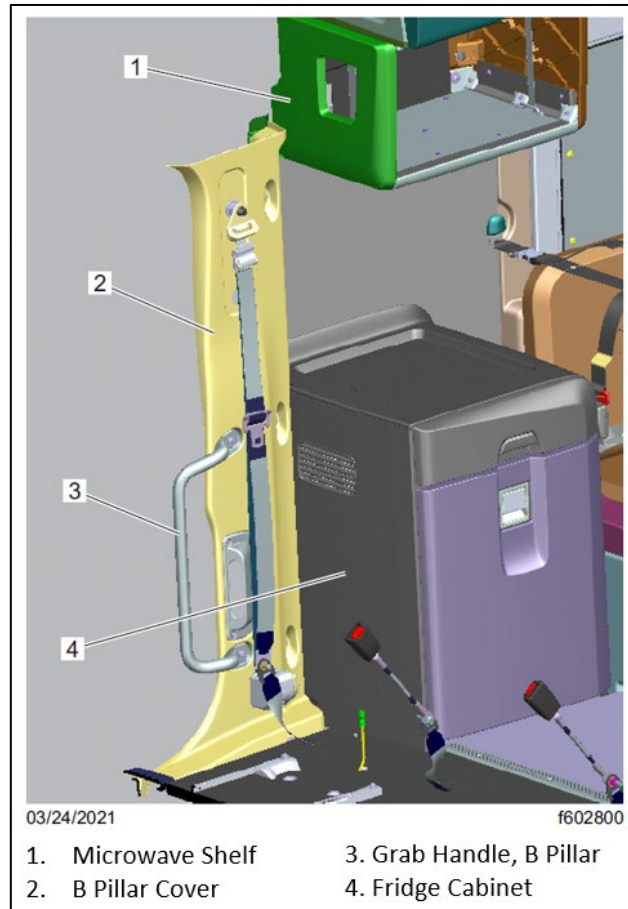


Fig. 34, B-Pillar, Microwave Shelf, and Refrigerator Cabinet Location

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20. If equipped, install the refrigerator cabinet. See [Fig. 71](#).

20.1. See [Fig. 71](#). Position the refrigerator cabinet, and install the eight screws that attach the refrigerator cabinet to the cab. Tighten the fasteners 7 to 9 lbf.ft (9 to 12 N.m) as per sequence shown in [Fig. 71](#).

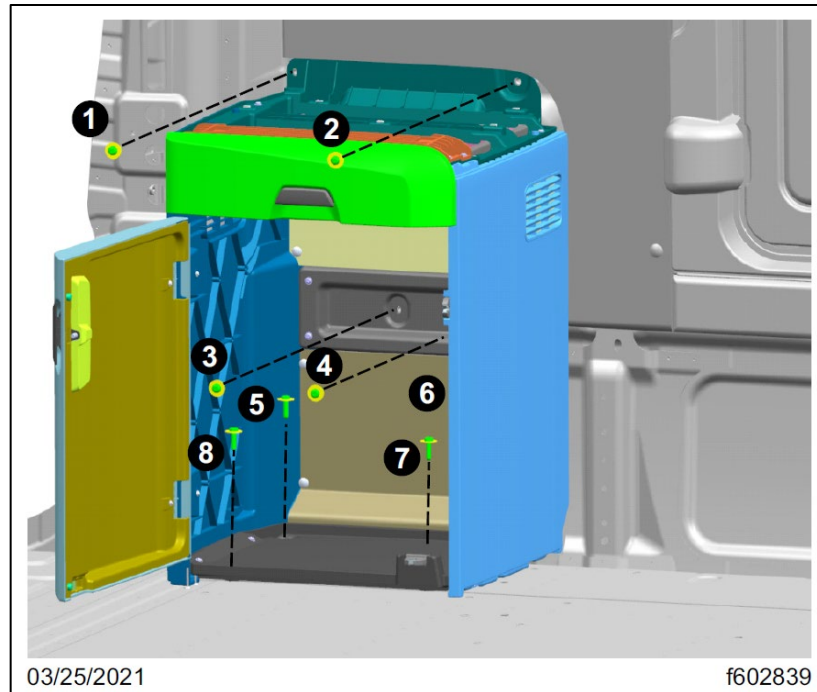


Fig. 71, Fasteners That Attach the Refrigerator Cabinet to the Cab with Tightening Sequence

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20.2. Install the refrigerator cabinet top cover. See [Fig. 35](#).

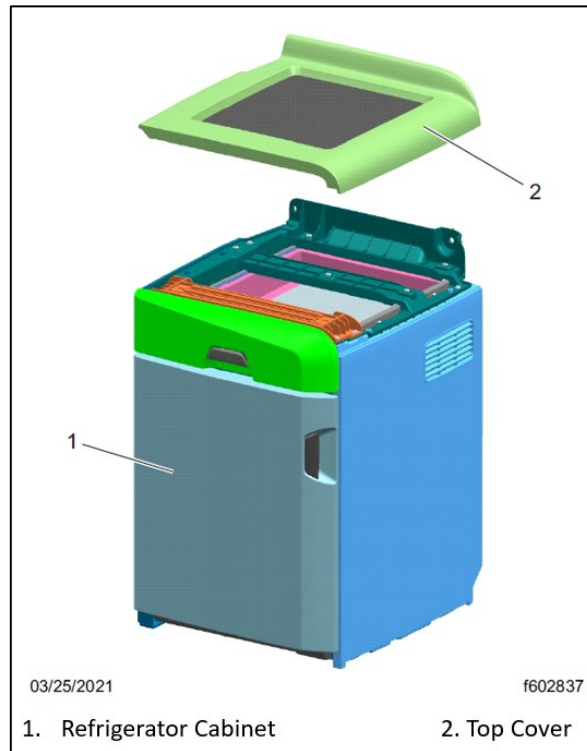


Fig. 35, Refrigerator Cabinet Top Cover

20.3. Install the refrigerator in the refrigerator cabin.

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21. Install the RH side upper and lower A-pillar covers. See [Fig. 33](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).

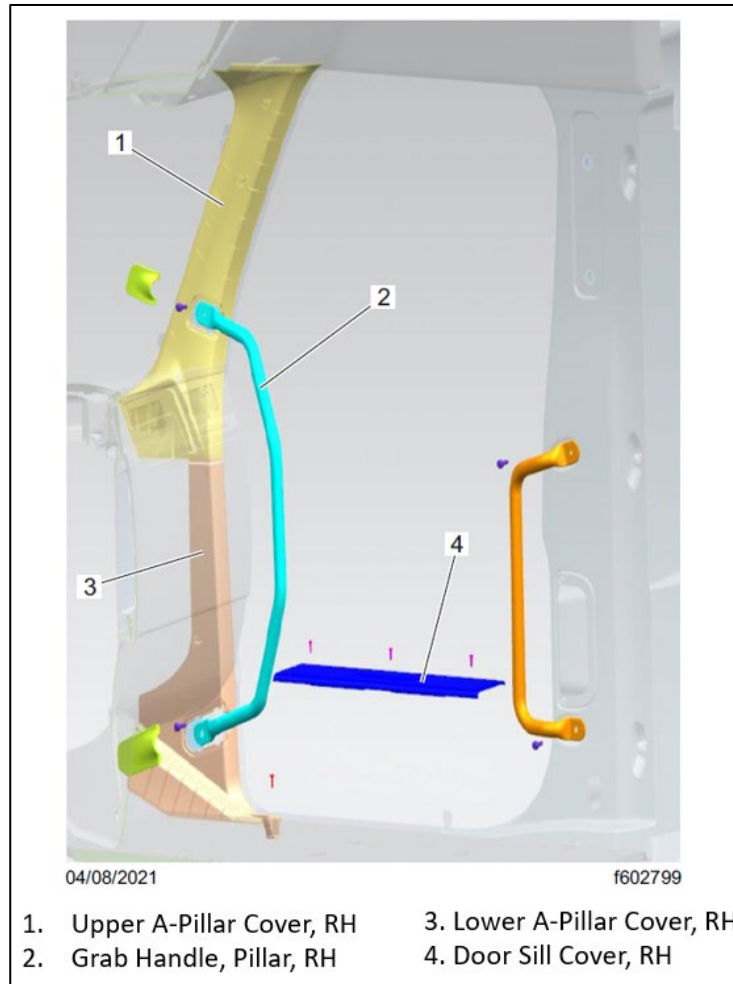


Fig. 33, A-Pillar Door Sill, Grab Handle, and Upper and Lower Cover Locations

22. Install the RH side pillar grab handle. See [Fig. 33](#). Tighten the fasteners 11 to 13 lbf.ft (14 to 18 N.m).
23. Install the RH side door sill cover. See [Fig. 33](#). Tighten the fasteners 5 to 7 lbf.ft (6 to 9 N.m).
24. Go to the **Validate Acumen Communication using Cummins INSITE™** procedure below.

Validate Acumen Communication using Cummins INSITE™ (Groups SF618A-E)

1. Verify the Cummins Acumen module harness connector, and all co-axial cable connectors are connected to the Cummins Acumen module located in the electronics bay.

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2. Connect the battery negative cable at the batteries.
3. Connect a computer to the vehicle, and open Cummins INSITE™. Turn the ignition ON, check and note any active fault codes.
4. After at least one minute of ignition in the ON position, carefully disconnect the Cummins Acumen module harness connector. Timeout fault code 8156 (SPN: 521209, FMI: 9) should be triggered within one minute of Cummins Acumen module harness connector being disconnected.
5. Connect the Cummins Acumen module harness connector. Timeout fault code 8156 (SPN: 521209, FMI: 9) should be inactive within one minute of connecting the Cummins Acumen module harness connector.
6. Does the timeout fault code 8156 trigger when Cummins Acumen module harness is disconnected, and turn inactive when the harness is connected again?
YES: Go to next step.
NO: Verify the battery negative cable is fully seated, and Acumen connector pinning is repaired as per procedure in heading **Wiring Inspection and Repair of Acumen Control harness connectors** above. Perform the above validation steps again to verify.
7. Install the VPDM. Refer to **Section 54.08** of the *New Cascadia™ Workshop Manual* for instructions.
8. Install the RH side lower dash cover. Refer to **Section 60.06** of the *New Cascadia™ Workshop Manual* for instructions.
9. Install the electrical bay cover at the right-hand (RH) side of the vehicle dash. Refer to **Section 60.06** of the *New Cascadia™ Workshop Manual* for instructions.
10. Close the hood.
11. Clean a spot on the base label (Form WAR259) and attach a campaign completion sticker for SF618 (Form WAR260), indicating this work has been completed.