



SAFETY RECALL

TELEMATICS HARNESS GROUND WIRE

RECALL NO: M0460

DATE: 2-8-2024

REFERENCE: RCB-002-24

SUBJECT VEHICLES:

2022 through 2024 model year Hino Conventional trucks that were assembled at the Mineral Wells, West Virginia, USA assembly plant

Note: Refer to the appropriate Vehicle Identification Number in the warranty system to determine vehicle eligibility.

NEW VEHICLES IN DEALERSHIP INVENTORY As required by Federal law (49 Code of Federal Regulations §577.13), dealerships are not to deliver any new vehicles in their inventory that are involved in a Safety Recall unless the vehicle has been remedied. Refer to the appropriate Vehicle Identification Number (VIN) list to determine vehicle eligibility.

OVERVIEW:

The subject vehicle may have a ground circuit of the telematics control unit that can become damaged because of improper design of the telematics harness if it is not properly connected to the battery. If a final-stage manufacturer or vehicle operator fails to properly connect or tighten the positive or negative battery cables, this may result in a ground loop causing unintended currents that may cause overheating or damage to the ground wire of the telematics harness. The following work procedure will provide guidance for inspecting and repairing the telematics ground circuit.



BEFORE YOU BEGIN:

- Read and understand all instructions and procedures before you begin the work.
- Read and follow all **NOTICES** and **WARNINGS** set forth in this publication. These alerts help to avoid damage to components, serious personal injury, or both.
- Park the vehicle on a level and solid surface and apply the parking brake firmly. Confirm parking brake activation.
- Confirm the engine is stopped, the starter switch is in the off (LOCK) position, and the key is removed.
- Always wear safety glasses to prevent eye injuries.
- Place wheel chocks in front of and behind all wheels to prevent the vehicle from moving.

PARTS:

PART NUMBER	PART DESCRIPTION	QUANTITY
HN001234325	Eyelet Terminal & Cover Kit Note: Kit contains 1 eyelet and 1 wire protector	1

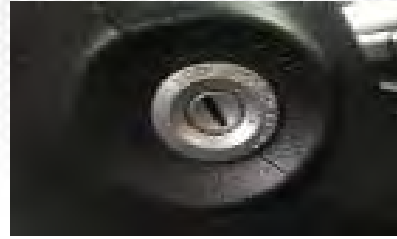
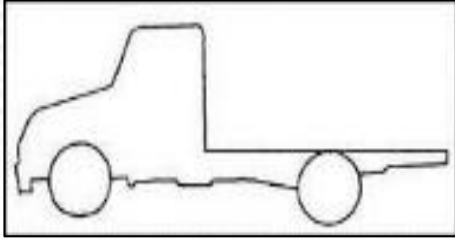
OPTIONAL PARTS:

PART NUMBER	PART DESCRIPTION	QUANTITY
Inspect P/N Tag on Cab Harness	Wire, Cowl	If Needed (1)
82233EA020	Telematics Harness	If Needed (1)



VEHICLE PREPARATION:

1. Park the vehicle on a level and solid surface. Confirm the engine is stopped, the starter switch is in the off (LOCK) position, and the key is removed.



2. Apply the parking brake. Chock all of the wheels.



TELEMATICS HARNESS INSPECTION:

1. Remove the fuse panel cover from the passenger side of the instrument panel by first pulling from the bottom to release the retaining clips and working upwards.

NOTICE: Care needs to be taken to prevent damaging the fuse panel cover or retaining clips during removal.



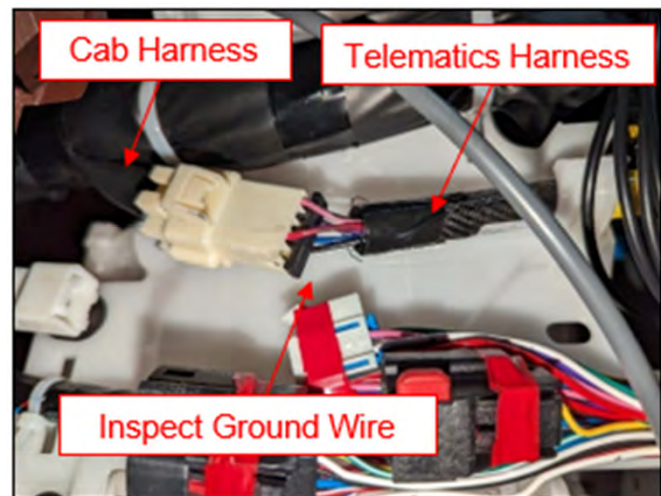
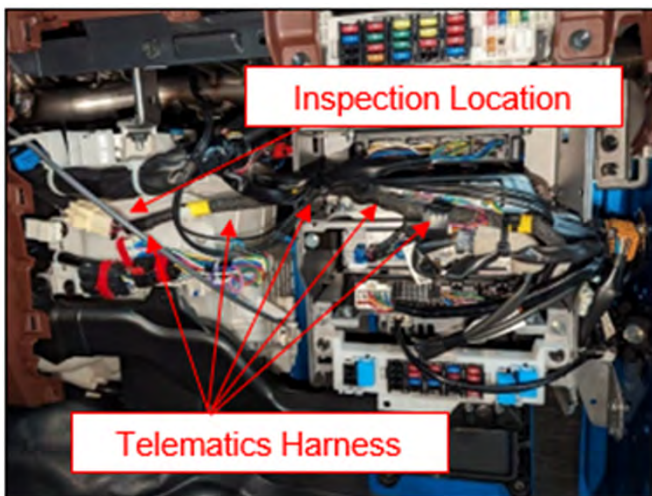
2. Locate the telematics harness. The telematics harness is wrapped in a cloth harness protector with yellow tape markings. Inspect the black ground wire in the telematics harness for melted insulation where the telematics harness connects to the main cab wire harness.

Is there any damage present in the telematics harness?

NO - Proceed to **TELEMATICS HARNESS REWORK PROCEDURE.**

YES - The 82131-XXXXX Wire, Cowl (Cab Harness) must be replaced along with the installation of a new 82233-EA020 telematics harness.

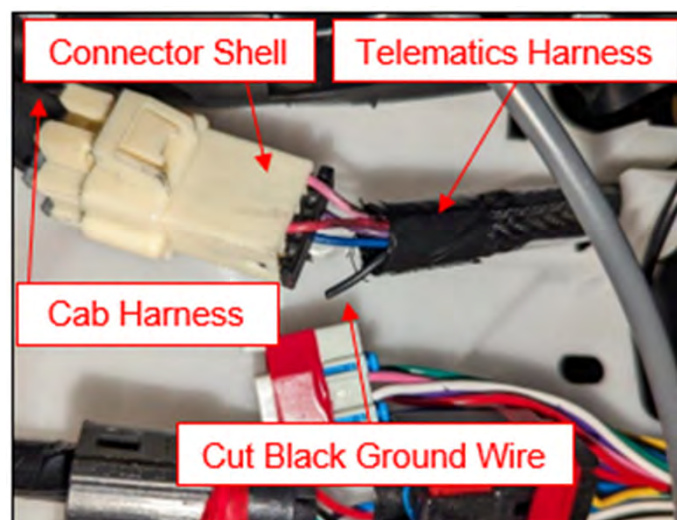
Proceed to **CAB HARNESS REPLACEMENT PROCEDURE.**



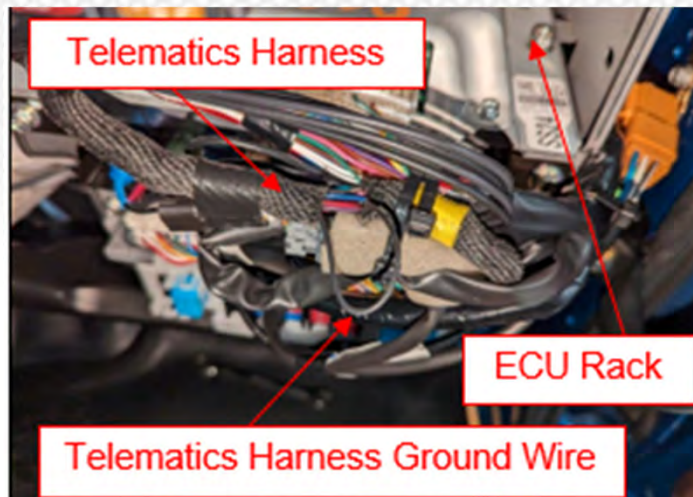
TELEMATICS HARNESS REWORK PROCEDURE:

1. Cut the black ground wire of the telematics harness.

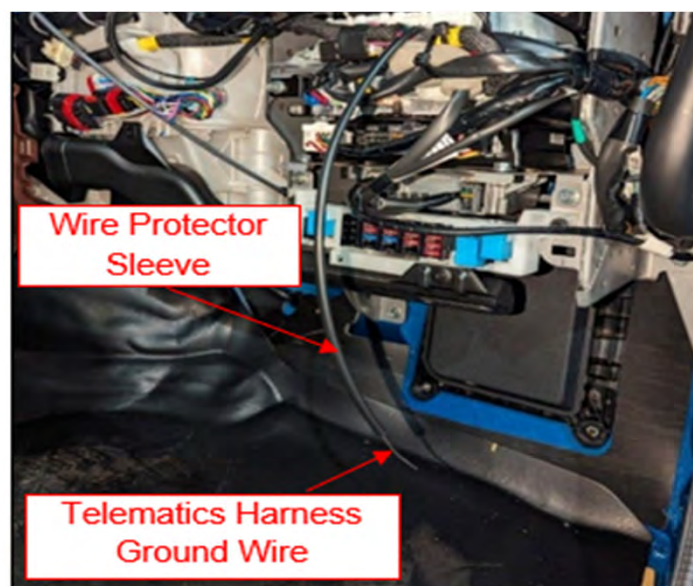
NOTICE: When cutting the ground wire of the telematics harness, cut as close to the connector shell as possible.



2. Pull the black ground wire out of the telematics harness. The ground wire can be accessed and pulled from the opening in the harness wrap. The opening of the telematics harness wrap is located in front of the ECU, rack as shown.



3. Slide the 300mm wire protector sleeve over the telematics harness ground wire.

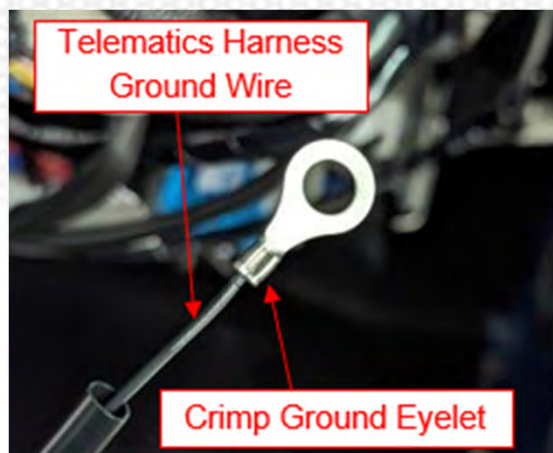


4. Using a 20-22AWG wire stripper, remove 7mm's of insulation from the end of the telematics harness ground wire, as shown in the photograph below.

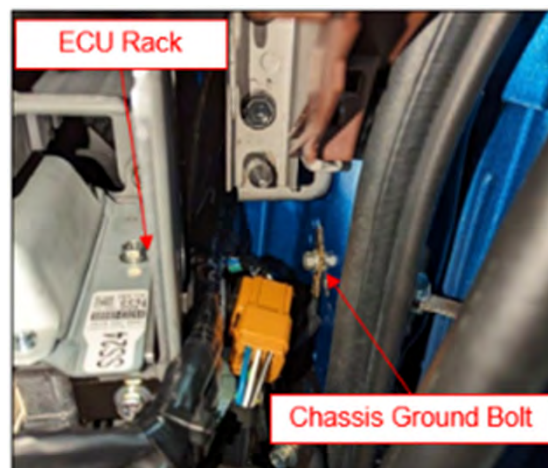


5. Using a non-insulated terminal crimping tool. Crimp the ground eyelet to the telematics harness ground wire.

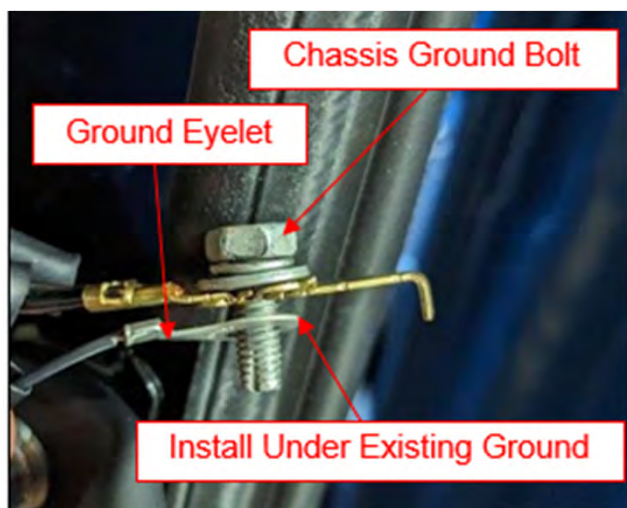
NOTICE: Make certain that the eyelet is securely crimped onto the ground wire.



6. Remove the chassis ground bolt from the base of the right A-pillar next to the ECU rack.



7. Place the new telematics harness ground eyelet UNDER the existing harness ground eyelet as shown.



8. Reinstall the chassis ground bolt ensuring both ground eyelets are in place. Tighten the chassis ground bolt to the specified torque.

Specified Torque: 74 lb-in (8.3 Nm)



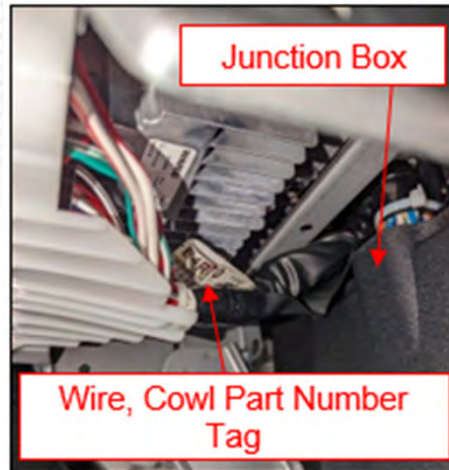
9. Reinstall the fuse panel cover.

Proceed to **FINAL INSPECTION.**

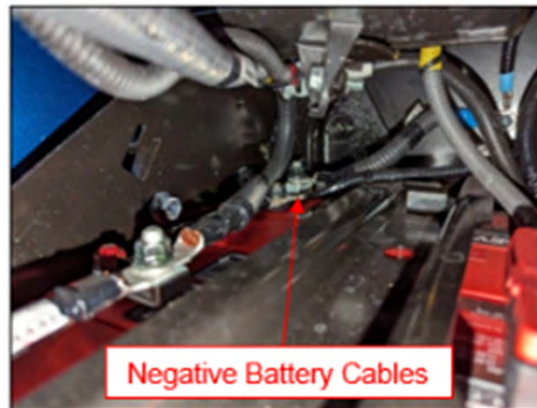


CAB HARNESS REPLACEMENT PROCEDURE:

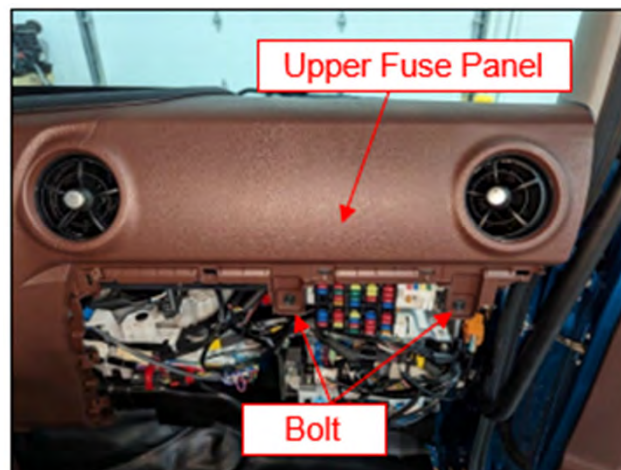
1. Verify the full part number of the 82131-XXXXX Wire, Cowl (Cab) harness from the tag near the junction box inside the passenger side footwell area as shown below. Obtain the correct replacement harness.



2. Remove the nuts securing the negative battery cables to the inner most battery. Disconnect all negative battery cables.



3. Remove the two bolts securing the upper fuse panel cover and pull the cover towards the rear of the vehicle to remove the panel.



4. Unscrew the park brake control knob (air brake vehicles only). Pull the shifter console upper trim panel towards the rear of the vehicle to remove.



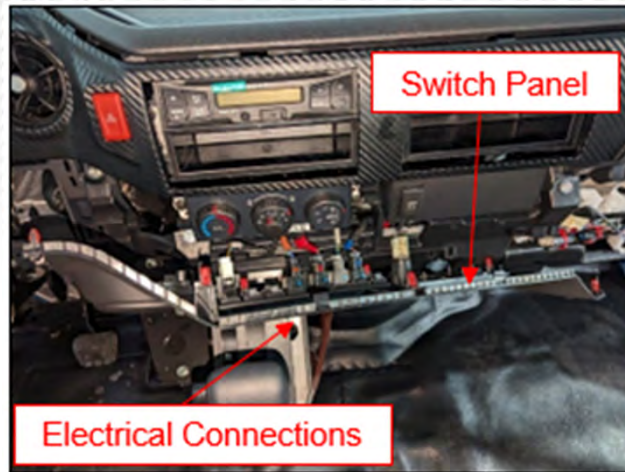
5. Pull the trim panel piece containing the passenger HVAC vent towards the rear of the vehicle to remove.



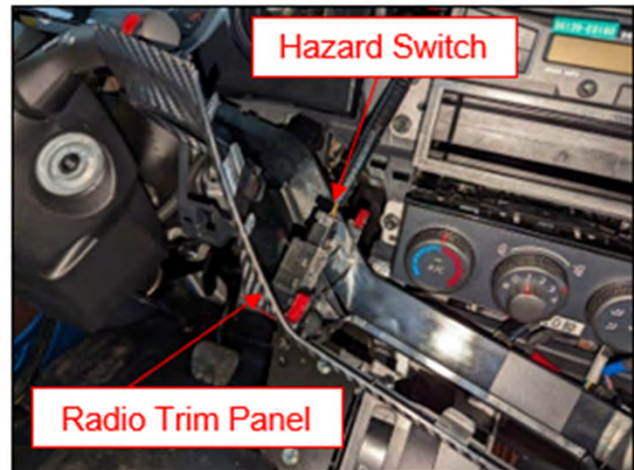
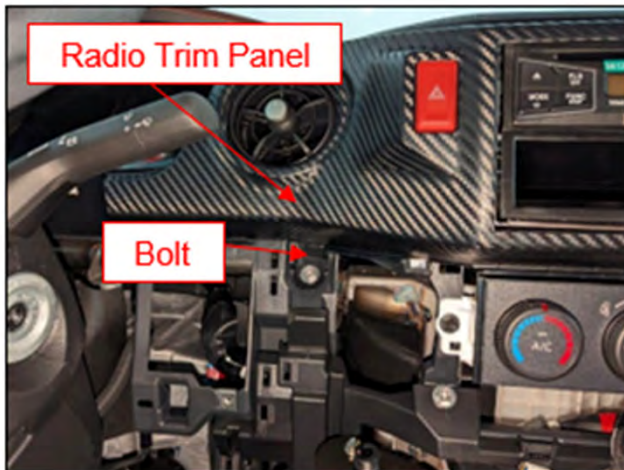
6. Carefully pull the trim panel piece surrounding the HVAC control panel towards the rear of the vehicle to release all retaining clips.



7. Disconnect all electrical connections from the switch panel contained in the HVAC trim panel. Quantity may vary depending on vehicle options. Remove HVAC trim panel.



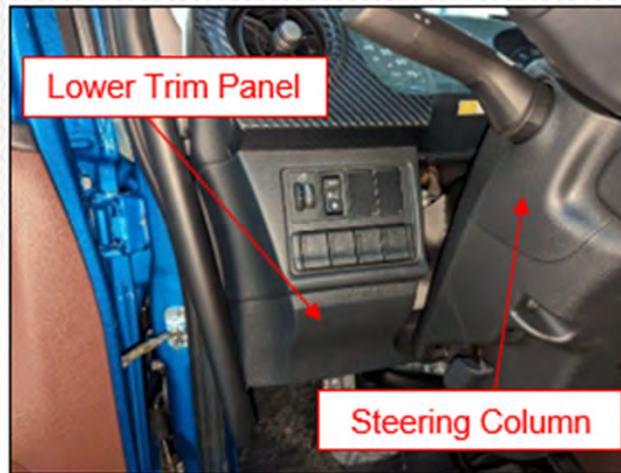
8. Remove the bolt securing the radio trim panel. Carefully pull the radio trim panel towards the rear of the vehicle to release. Disconnect the hazard switch electrical connector. Remove the radio trim panel.



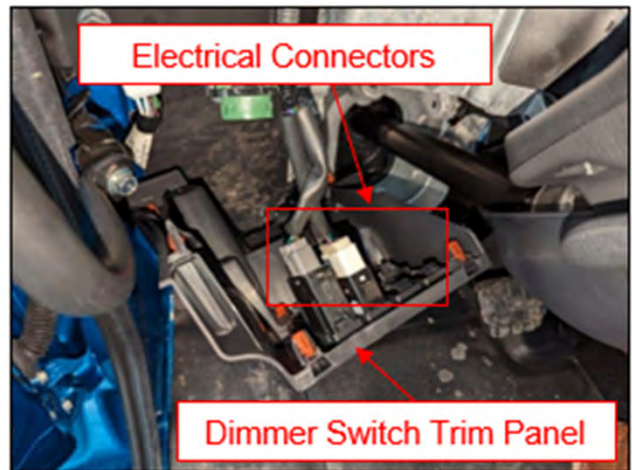
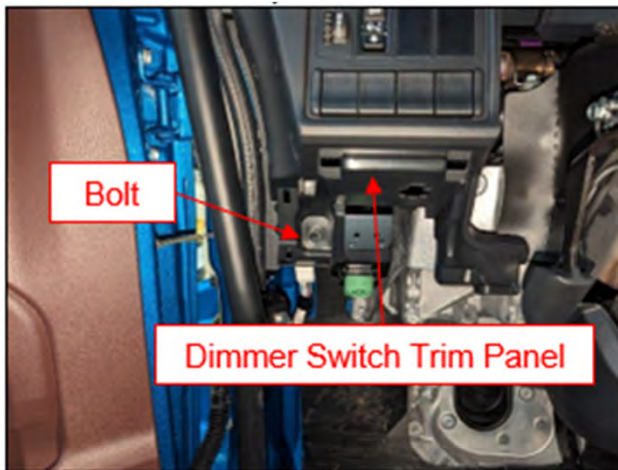
9. Lift upwards on the instrument cluster trim panel to remove.



10. Pull the lower trim panel to the left of the steering column towards the rear of the vehicle to remove.



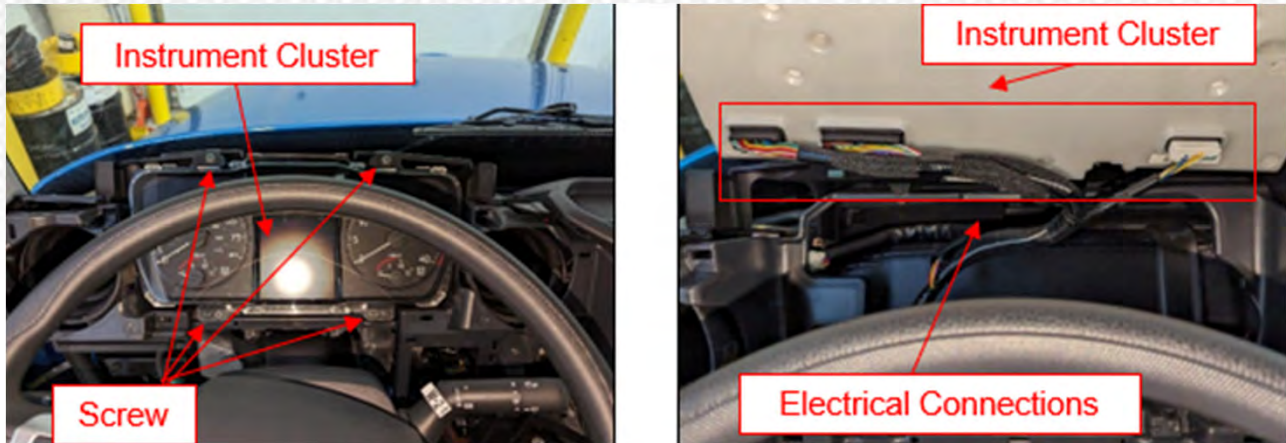
11. Remove the bolt securing the dimmer switch trim panel. Pull the dimmer switch trim panel towards the rear of the vehicle to release. Disconnect any electrical connectors. Remove the dimmer switch trim panel.



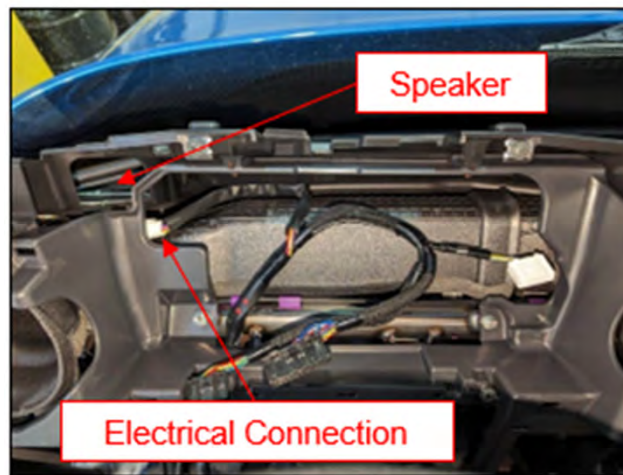
12. Pull the driver side HVAC vent trim panel towards the rear of the vehicle to remove.



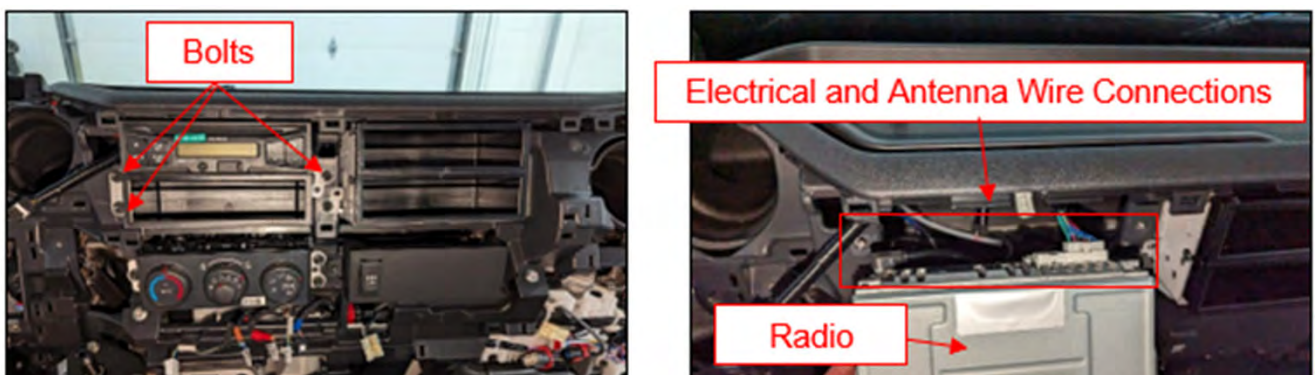
13. Remove the four screws securing the instrument cluster. Disconnect the instrument cluster electrical connections. Remove the instrument cluster.



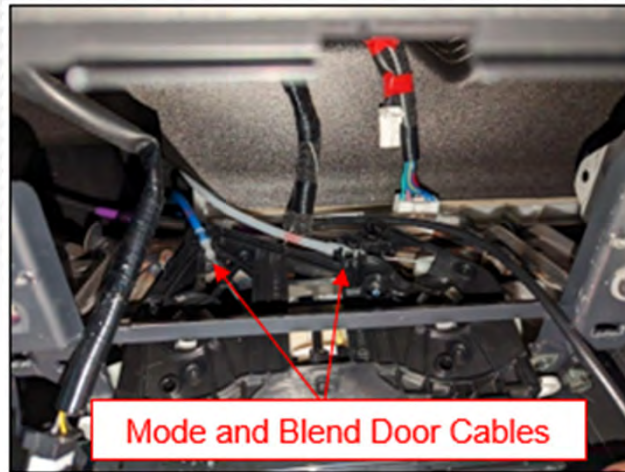
14. Disconnect the driver side speaker electrical connection.



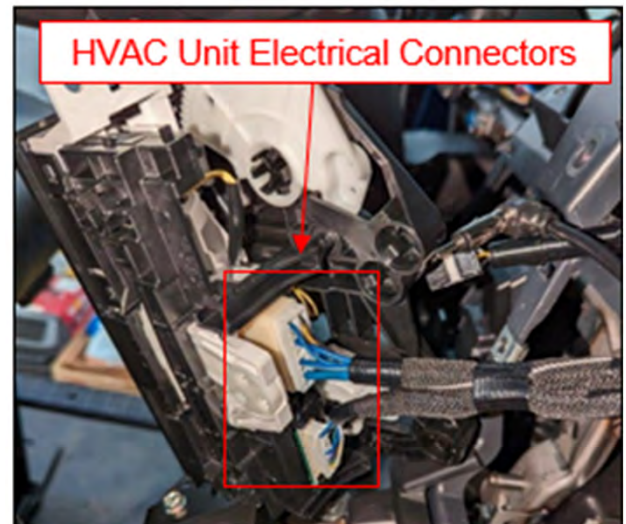
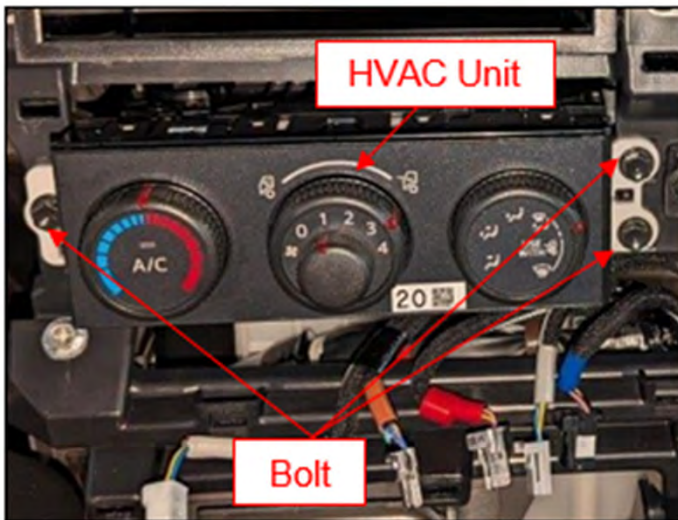
15. Remove the three bolts securing the radio. Disconnect the electrical connector and antenna wire. Remove the radio.



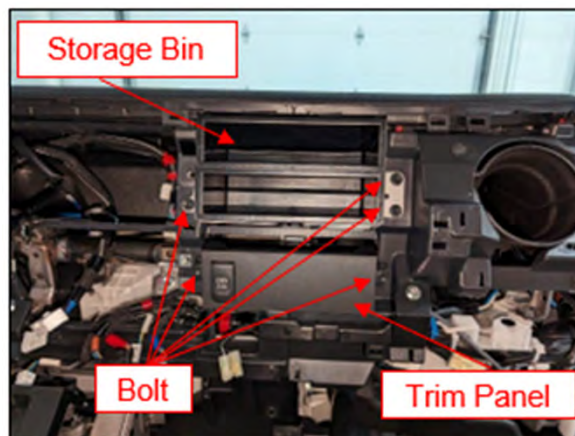
16. Use a pick and carefully release the locking tabs securing the mode and blend door cables from the HVAC unit.



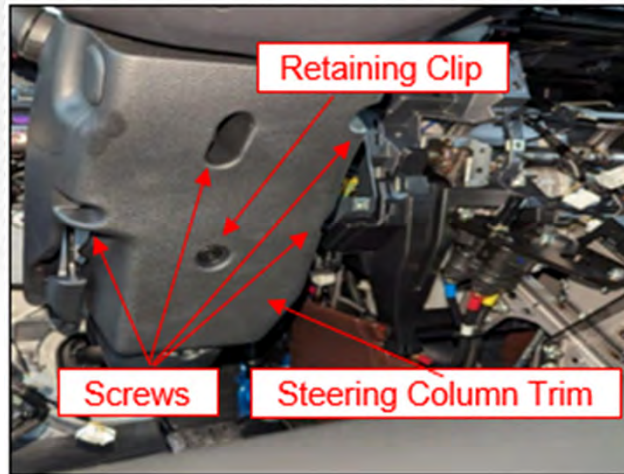
17. Remove the three bolts securing the HVAC unit. Pull the HVAC unit from the instrument panel. Release the fresh air cable and disconnect the electrical connectors. Remove the HVAC unit.



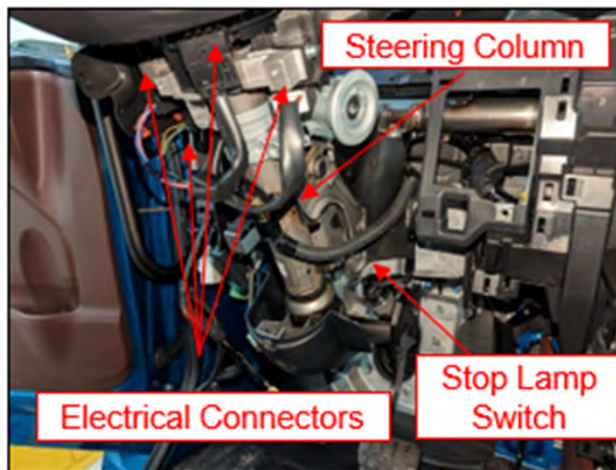
18. Remove the five bolts securing the storage bin and trim panel. Disconnect any electrical accessories (if equipped) and remove these components.



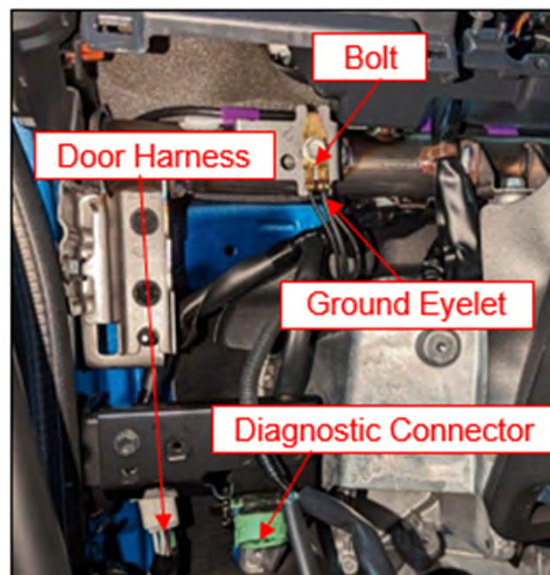
19. Remove the four screws and one retaining clip and remove the steering column trim.



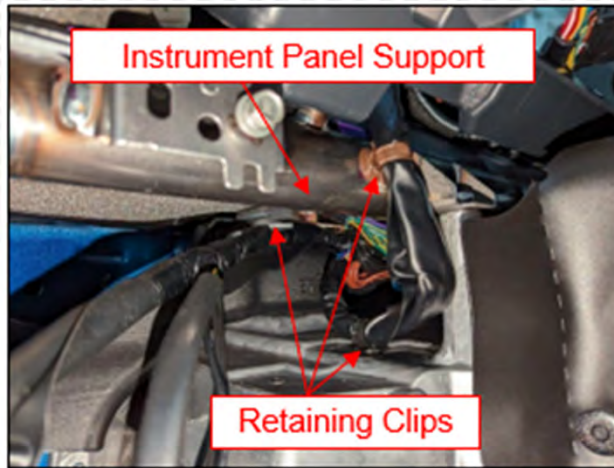
20. Disconnect the four steering column electrical connectors along with the stop lamp switch.



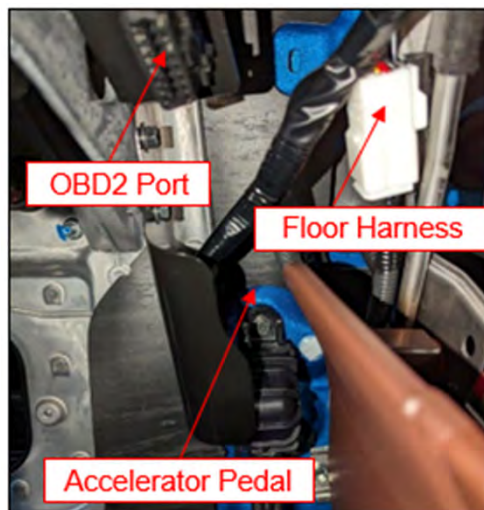
21. Remove the bolt securing the ground eyelet and disconnect the door harness connection. Remove the diagnostic connector from the mounting bracket.



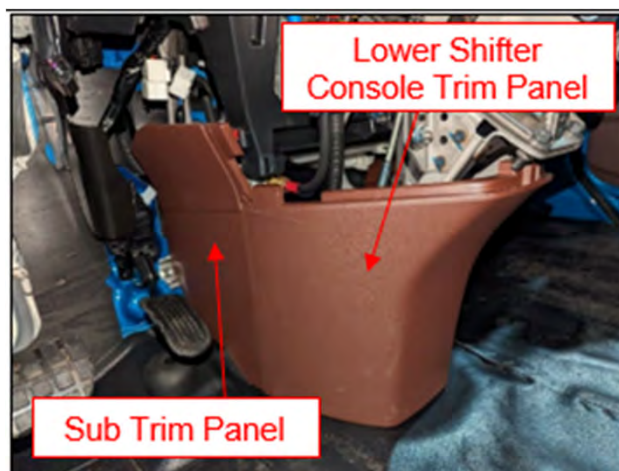
22. Detach the three wire harness retaining clips from the instrument panel support to the left of the steering column.



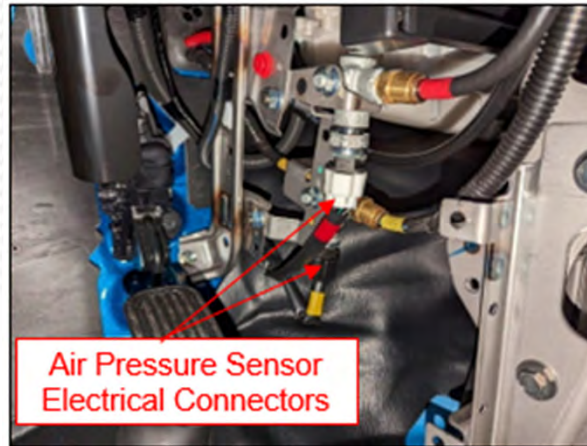
23. Remove the OBD2 port. Disconnect the accelerator pedal and floor harness connections.



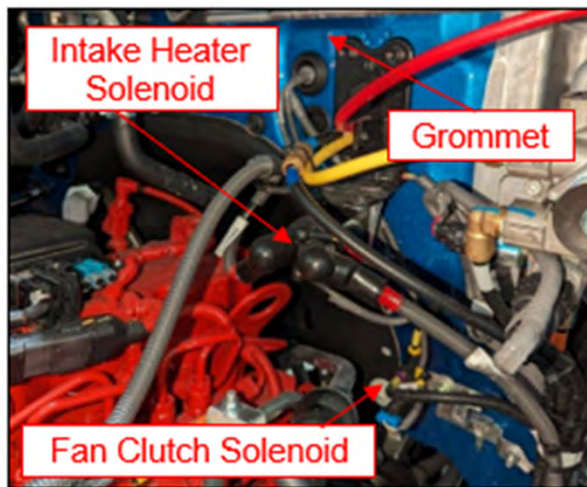
24. Carefully pull the lower shifter console trim panel towards the rear of the vehicle to remove. Pull the remaining sub-trim panel towards the accelerator pedal to remove.



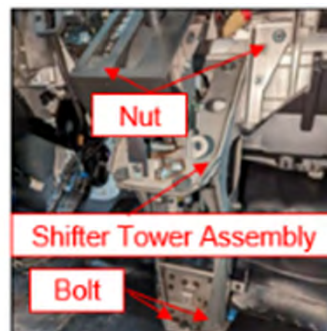
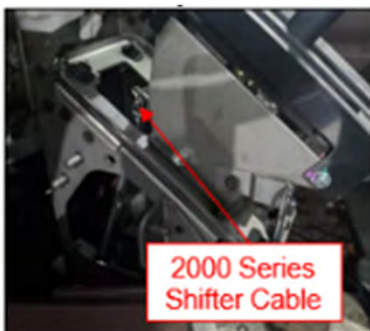
25. Disconnect the air pressure sensor electrical connectors (air brake vehicles only).



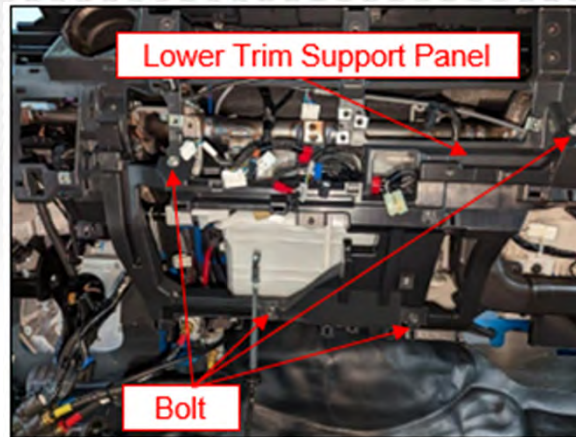
26. Working from under the hood on the driver's side of the vehicle. Disconnect the fan clutch solenoid and intake heater solenoid. Cut the tie strap from around the fan clutch solenoid and push the grommet and harness through the bulkhead.



27. Disconnect the shifter cable (2000 series transmission) or disconnect the shifter electrical connector (3000 series transmission). Remove the two nuts and two bolts securing the shifter tower assembly and remove the shifter tower assembly.



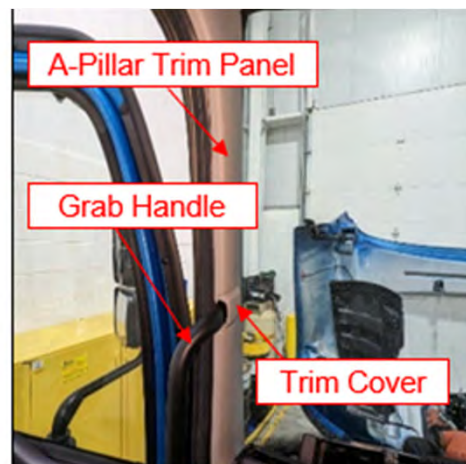
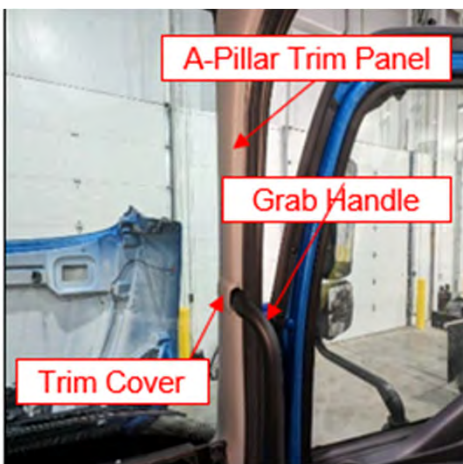
28. Remove the four bolts securing the lower trim support panel. Remove the lower trim support panel.



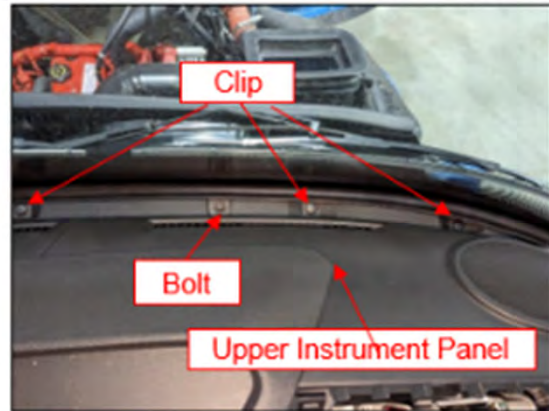
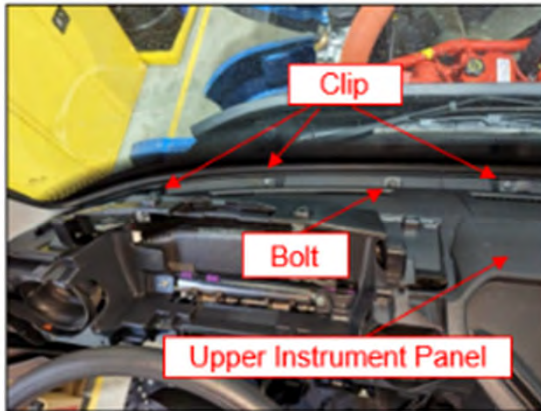
29. Lift the edge of the passenger side speaker grille to remove. Remove the two screws securing the speaker. Disconnect the passenger side speaker wire and remove the passenger side speaker.



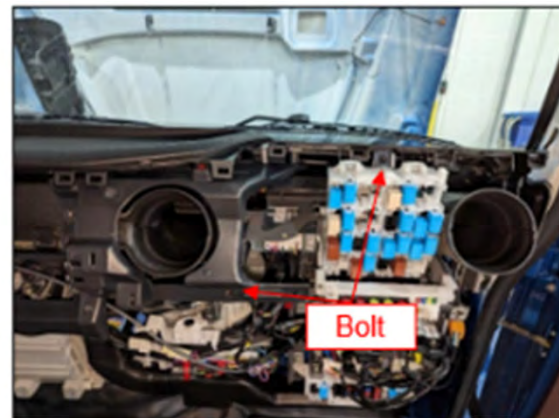
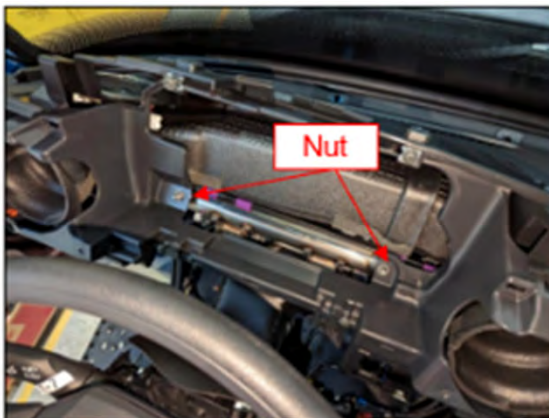
30. Remove the upper grab handle bolt trim cover from the passenger side grab handle. Remove the two bolts securing the grab handle. Remove the A-pillar trim panel by first pulling the upper portion inwards and then lifting. Repeat this process on the driver side of the vehicle.



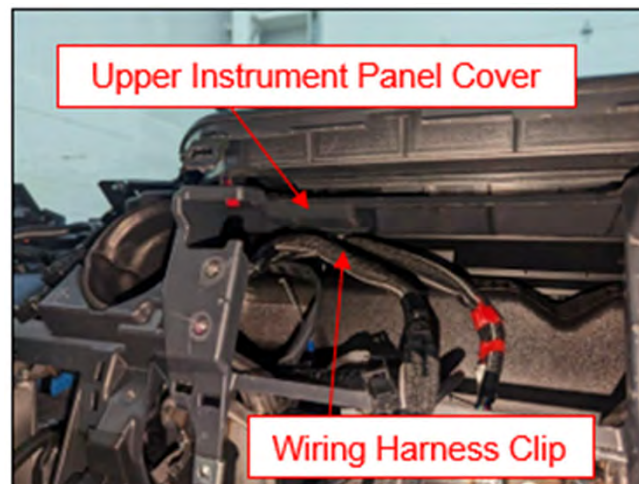
31. Remove the six clips and two retaining bolts securing the upper instrument panel to the cab at the base of the windshield.



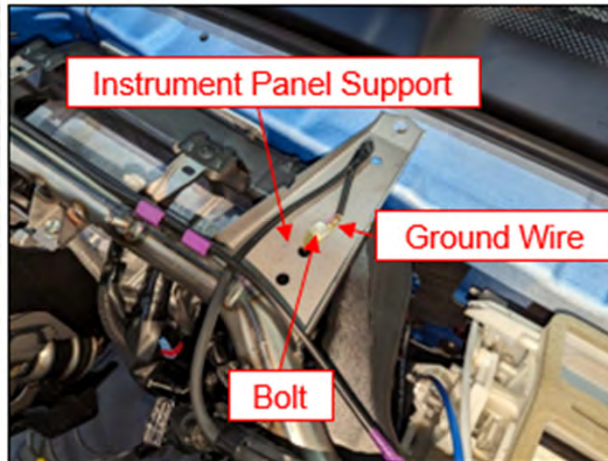
32. Remove the two bolts on the passenger side of the upper instrument panel cover and the two nuts on the driver side of the upper instrument panel cover.



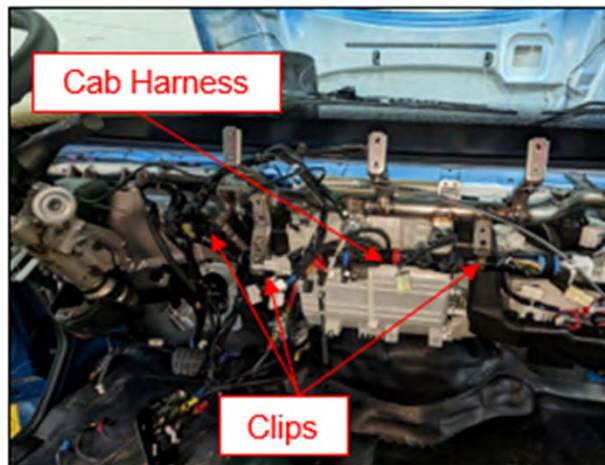
33. Remove the upper instrument panel cover from the vehicle. Detach the wire harness attachment clip on the underside of the radio opening while removing the upper instrument panel cover.



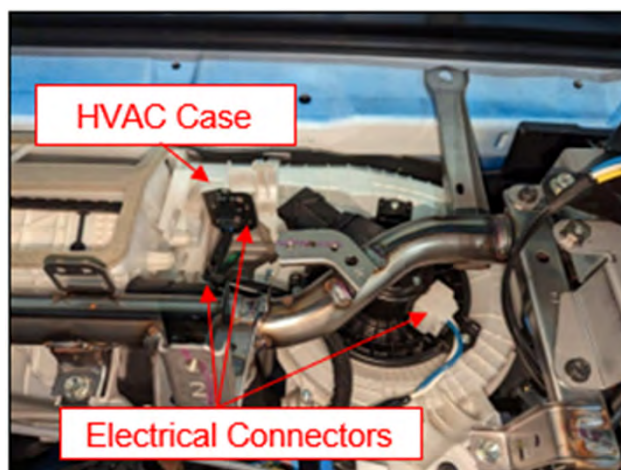
34. Remove the bolt securing the ground wire to the instrument panel support on the driver side of the vehicle.



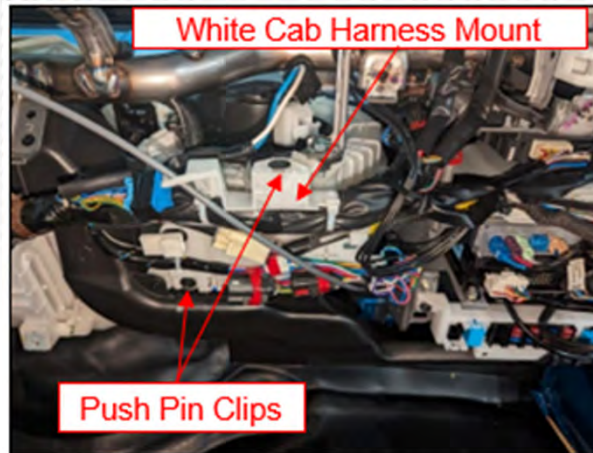
35. Detach the clips securing the cab harness to the instrument panel support across the HVAC case. Ensure the harness is free from the steering column and bulkhead area on the driver side of the vehicle. .



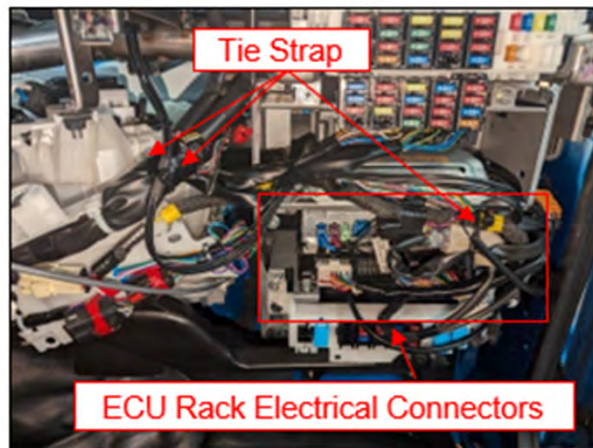
36. Disconnect the three electrical connectors on the HVAC case.



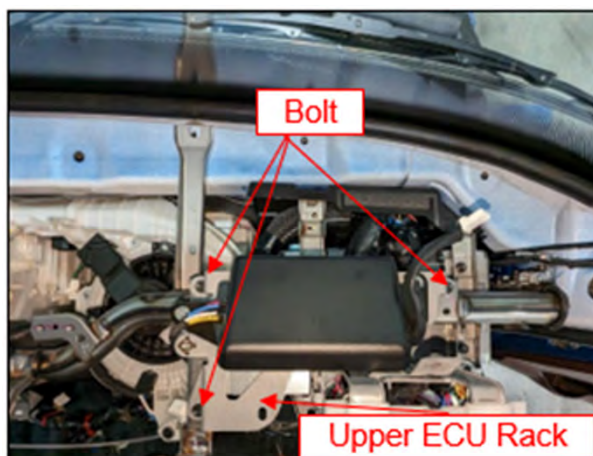
37. Remove the two push pin clips securing the white cab harness mount to the HVAC case. Unhook the fresh air cable from this harness mount.



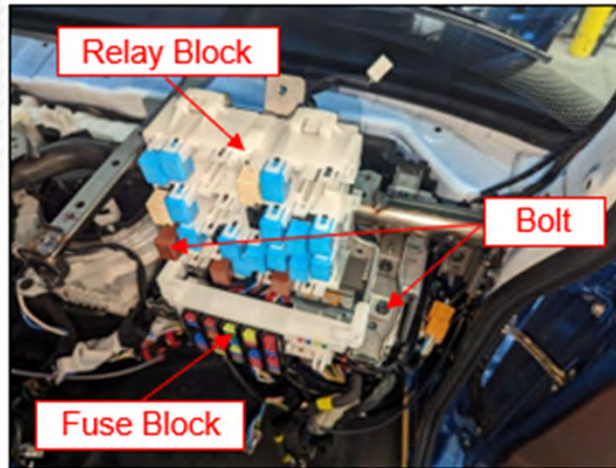
38. Cut the four tie straps from the harness bundle at the ECU rack. Disconnect all ECU rack electrical connectors.



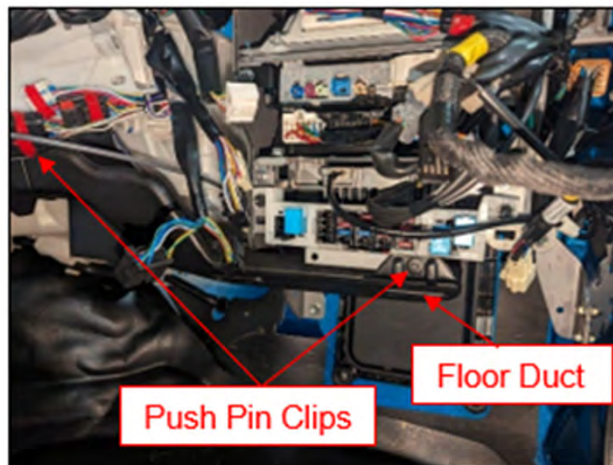
39. Remove the three bolts securing the upper ECU rack. Remove the upper ECU rack.



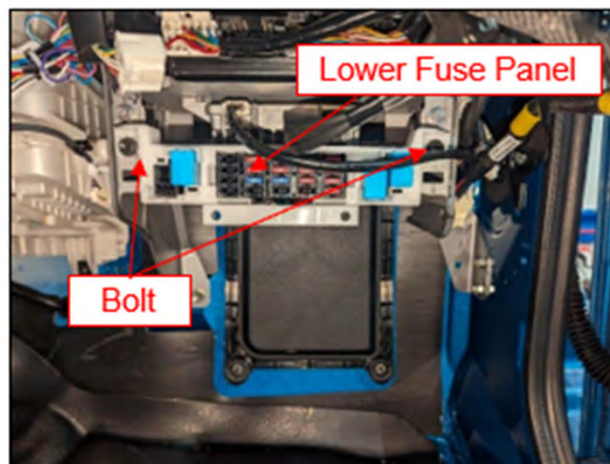
40. Remove the relay and fuse blocks from the mounting bracket by releasing the locking tabs and sliding towards the rear of the vehicle. Remove the two bolts securing the relay block bracket. Remove the relay block bracket.



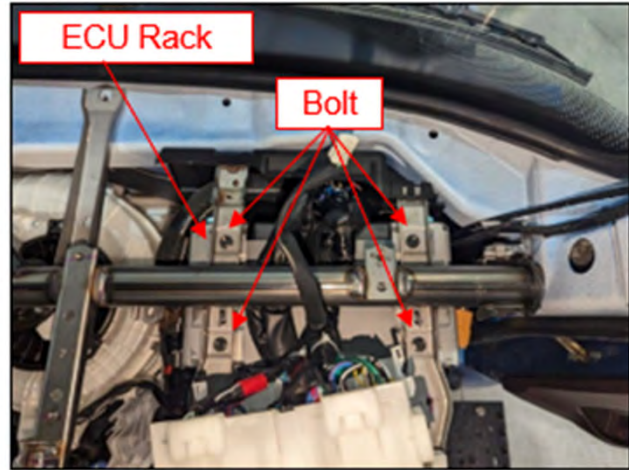
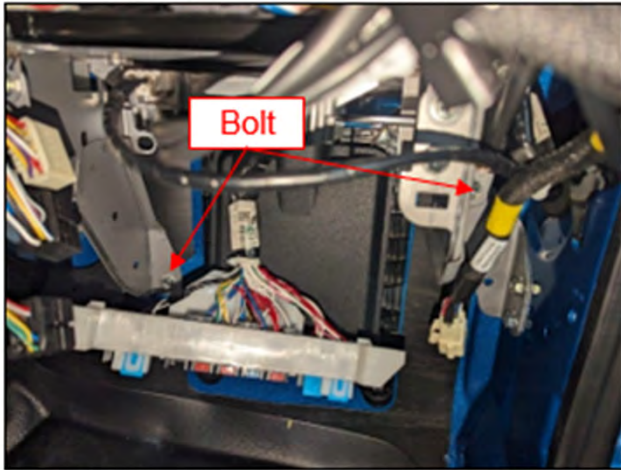
41. Remove the two push pin clips securing the passenger side floor duct unit. Remove the passenger side floor duct.



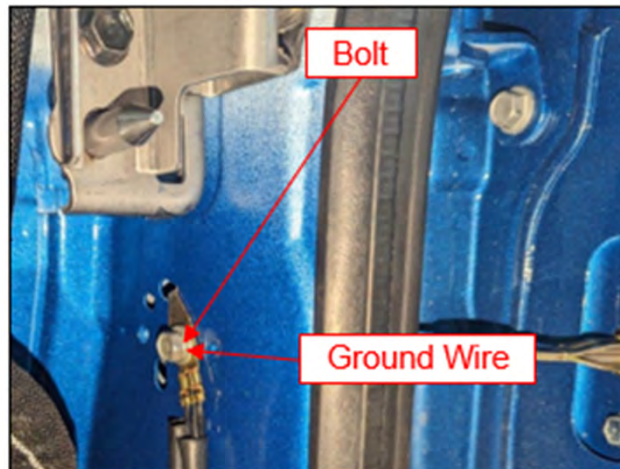
42. Remove the two bolts securing the lower fuse panel to the ECU rack.



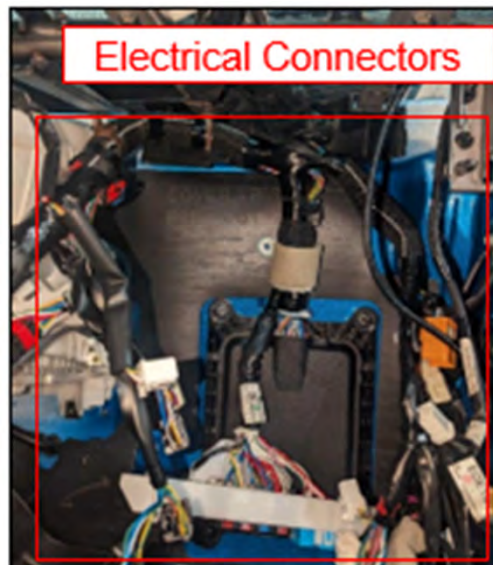
43. Double check that all electrical connectors and harness clips to the ECU rack are removed. Remove the two lower bolts and four upper bolts securing the ECU rack to the cab. Remove the ECU rack.



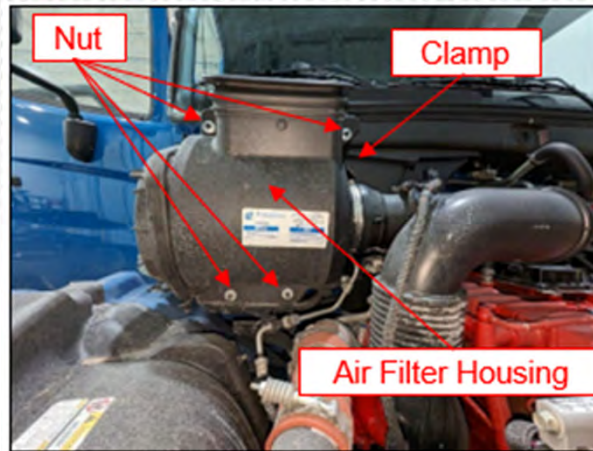
44. Remove the bolt securing the ground wire at the base of the right A-pillar.



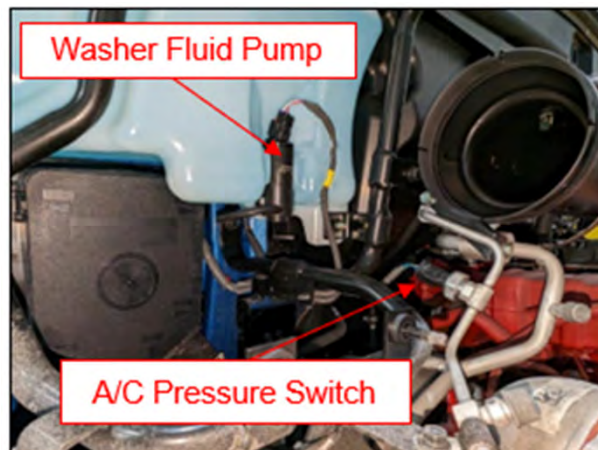
45. Verify all interior electrical connections are disconnected and harness clips are detached.



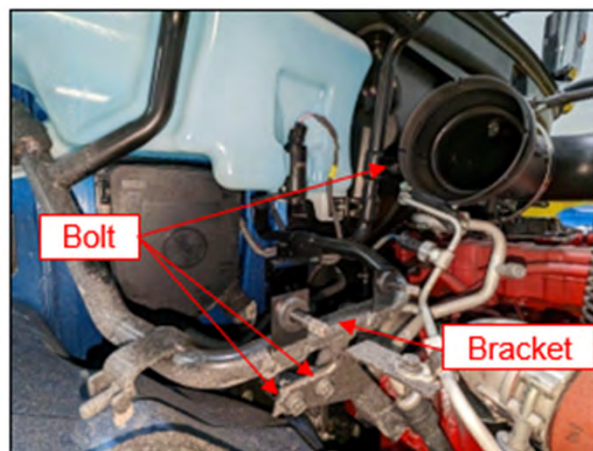
46. Working from under the hood on the passenger side of the vehicle. Remove the four nuts securing the air filter housing. Loosen the intake pipe hose clamp. Remove the air filter housing.



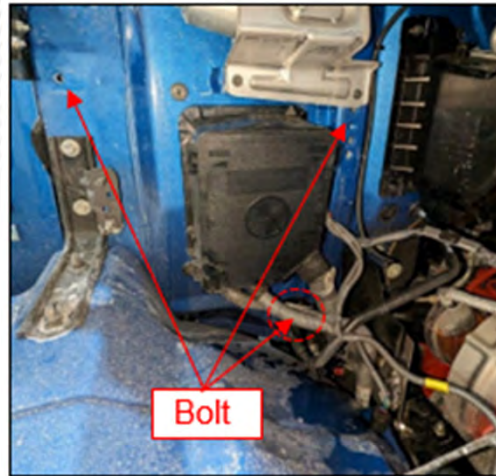
47. Disconnect the washer fluid pump and A/C pressure switch. Detach the harness clip. Disconnect the washer hose. Washer pump outlet may need plugged depending on fluid level.



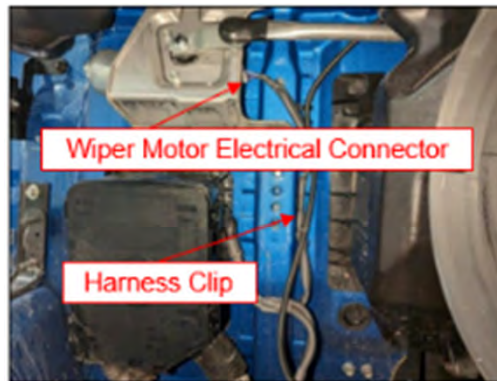
48. Remove the three bolts securing the two A/C line support brackets to the air filter and washer tank bracket.



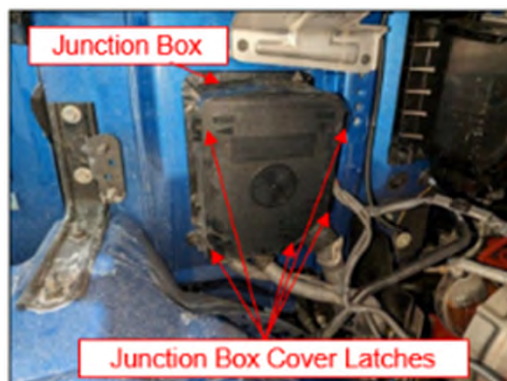
49. Place a towel over the fender to prevent scratches. Remove the three bolts securing the air filter and washer tank bracket to the cab. Remove the bracket with washer tank attached. Picture to the right shows bracket removed to highlight bolt location.



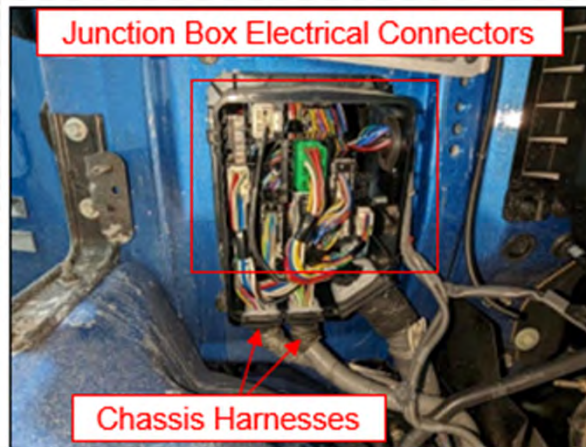
50. Disconnect the wiper motor electrical connector and detach the harness clip from the firewall.



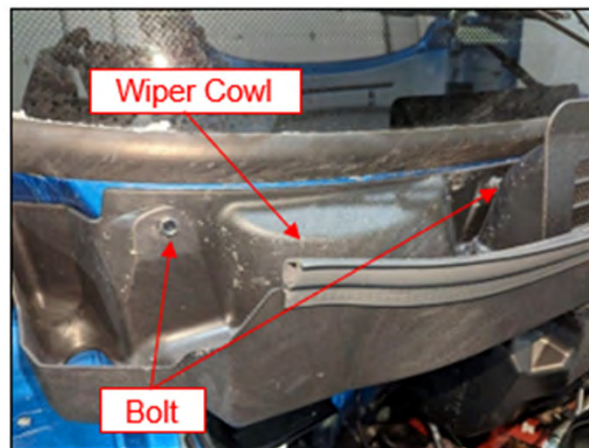
51. Release the five latches securing the junction box cover to the junction box. Remove the junction box cover.



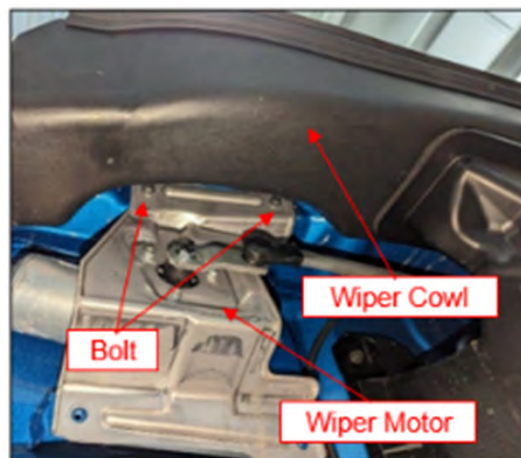
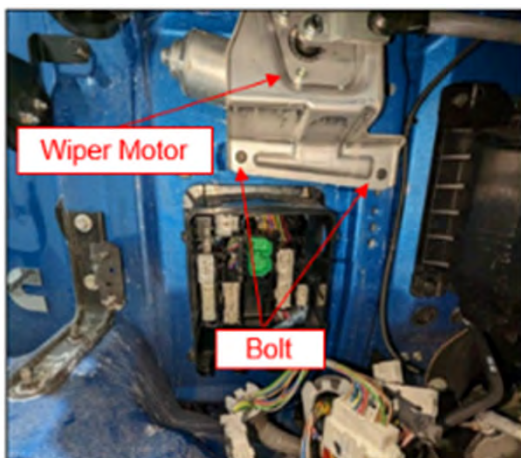
52. Disconnect all junction box electrical connectors. Release the locking tabs securing the chassis side harness grommets and remove the two chassis harnesses from the junction box.



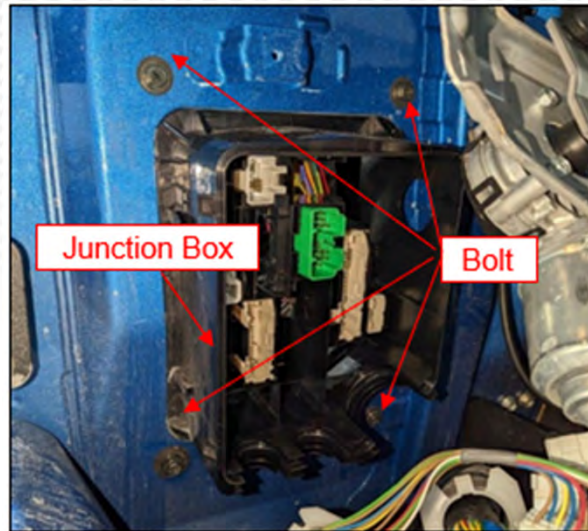
53. Remove the two wiper cowl bolts closest to the passenger side of the vehicle to allow access to the upper wiper motor bolts. Removal of the entire wiper cowl is not necessary.



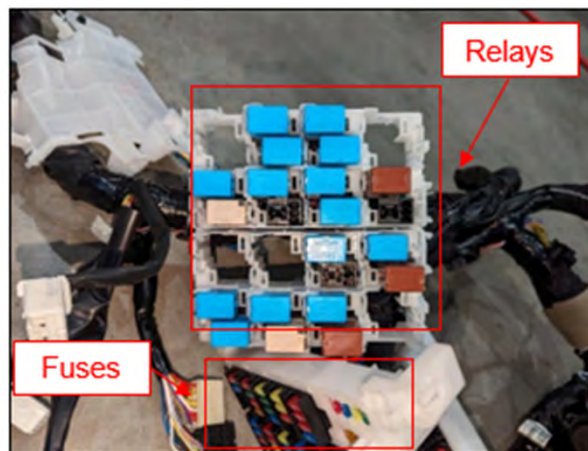
54. Remove the two lower wiper motor mounting bolts. Gently pull the end of the wiper cowl away from the cab, remove the two upper wiper motor mounting bolts.



55. Remove the four bolts securing the junction box to the bulkhead. Note the extra gasket on the outer lower bolt. Carefully remove the cab harness from the vehicle.

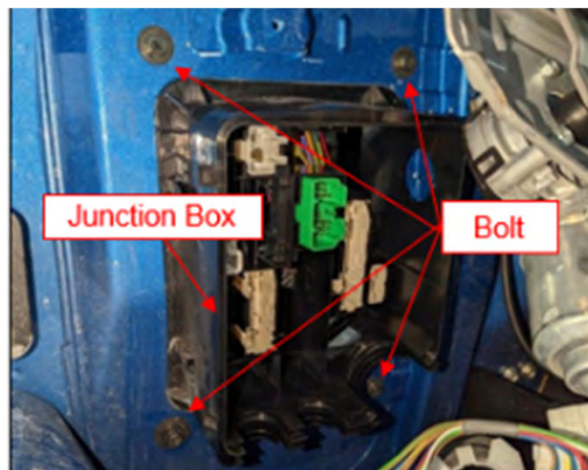


56. Verify the part number of the replacement cab harness when compared to the one removed from the vehicle. If correct, transfer relays and fuses one at a time from the old cab wire harness to the new cab wire harness.



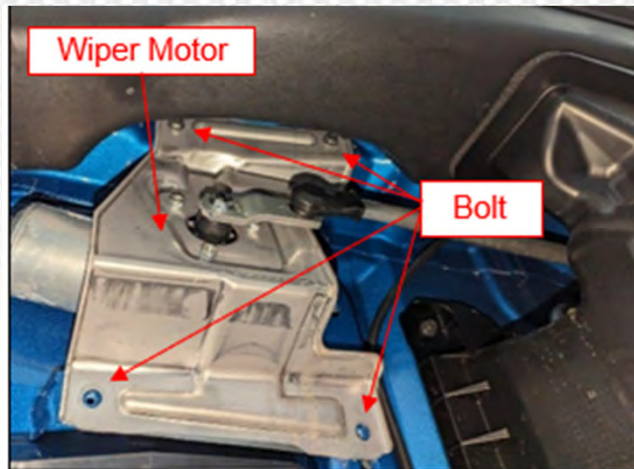
57. Place the new cab harness inside the vehicle and install the junction box into the bulkhead. Be sure to place the extra gasket over the lower outer bolt. Tighten the bolts to the specified torque.

Specified Torque:
59 lb-in (6.7 Nm)



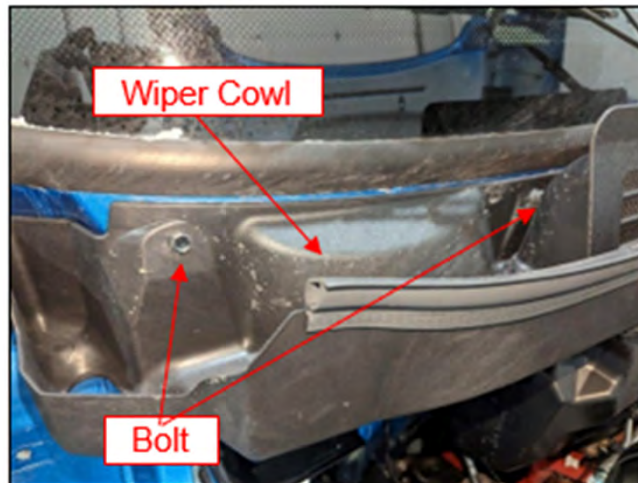
58. Install the wiper motor and tighten the four bolts to the specified torque.

Specified Torque:
49 lb-in (5.5 Nm)

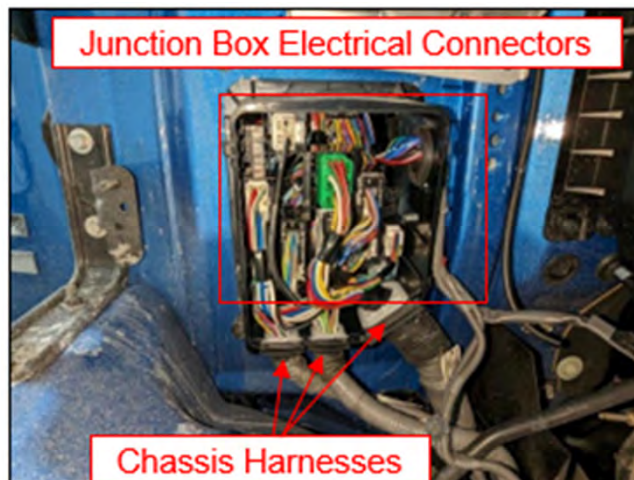


59. Install the two bolts in the wiper cowl and tighten to the specified torque.

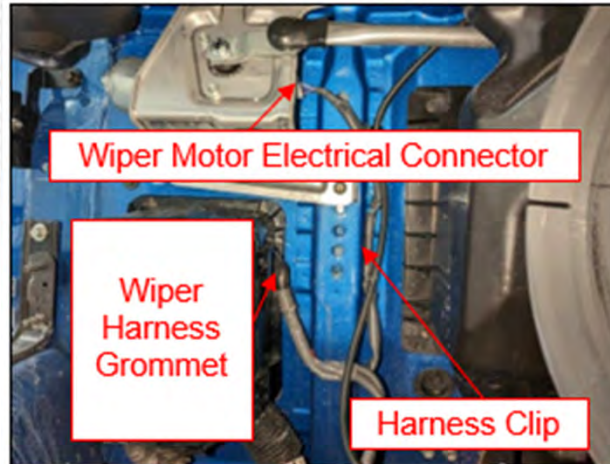
Specified Torque:
14 lb-ft (19 Nm)



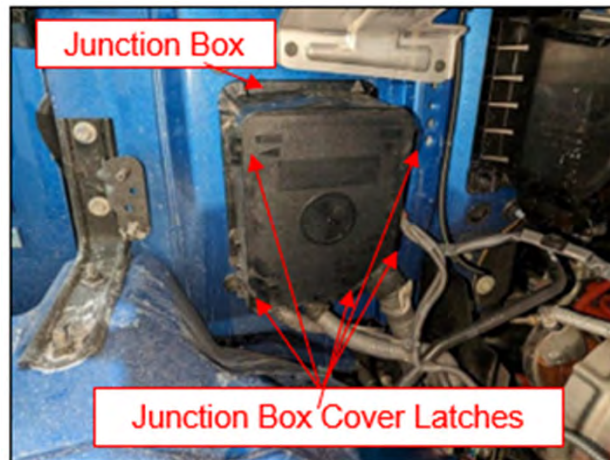
60. Apply a small amount of soapy water to the three chassis harness grommets. Insert them into the bottom of the junction box until locked into place. Connect all junction box connectors.



61. Feed the wiper harness through the opening in the junction box and seat the grommet fully. Connect the wiper motor electrical connector and lock the harness clip in place on the bulkhead.

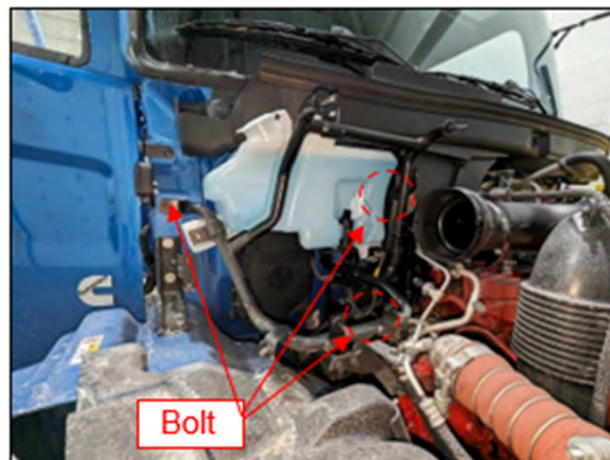


62. Install the junction box cover. Confirm all five latches are engaged.



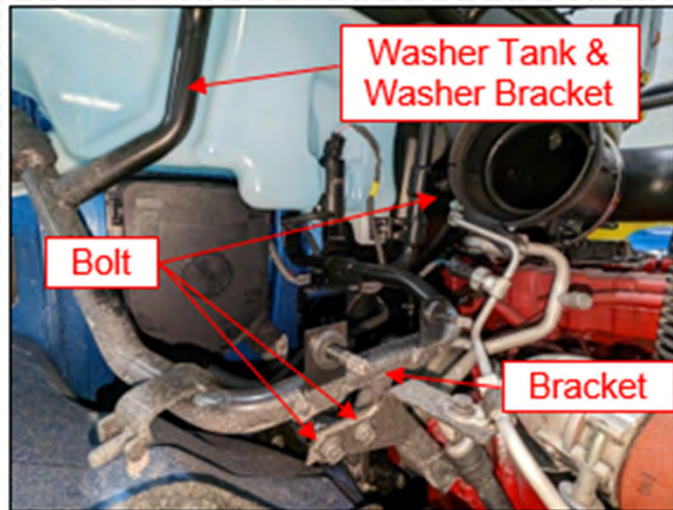
63. Place a towel over the fender to prevent scratches. Install the air filter and washer tank bracket. Tighten the three bolts to the specified torque.

Specified Torque:
38 lb-ft (51 Nm)

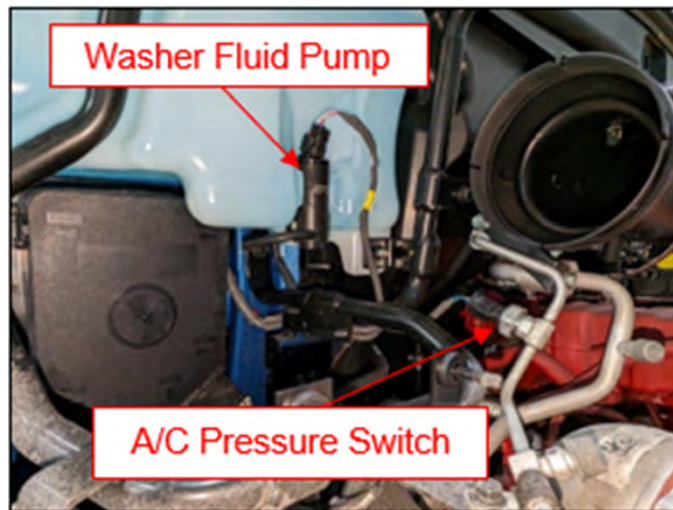


64. Install the three bolts securing the two A/C line support brackets to the air filter and washer tank bracket. Tighten to the specified torque.

Specified Torque:
71 lb-in (8 Nm)



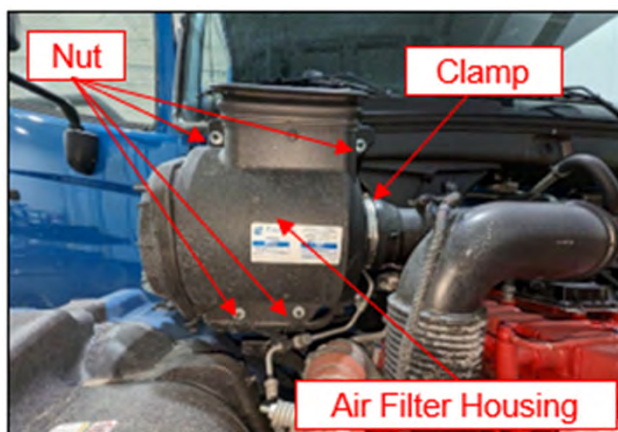
65. Connect the wire harness to the washer fluid pump and A/C pressure switch. Lock the harness attachment clip into the bracket and connect the washer fluid hose.



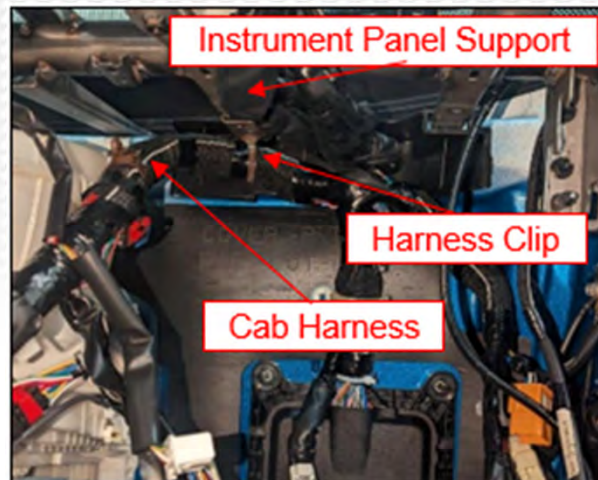
66. Install the air filter housing. Ensure all washers and sleeves are present on the mounting points. Connect the intake pipe. Tighten to the specified torque.

Specified Torque (Nut):
16 lb-ft (22 Nm)

Specified Torque (Clamp):
44 lb-in (5 Nm)



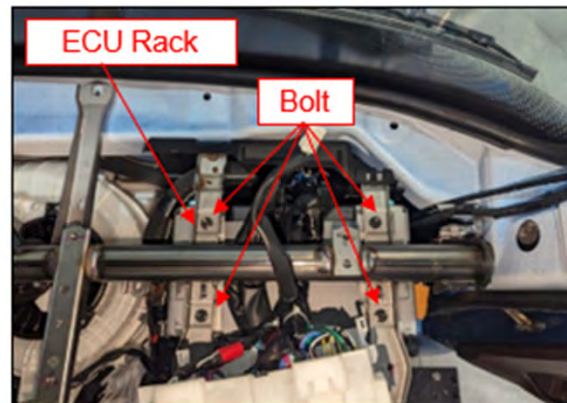
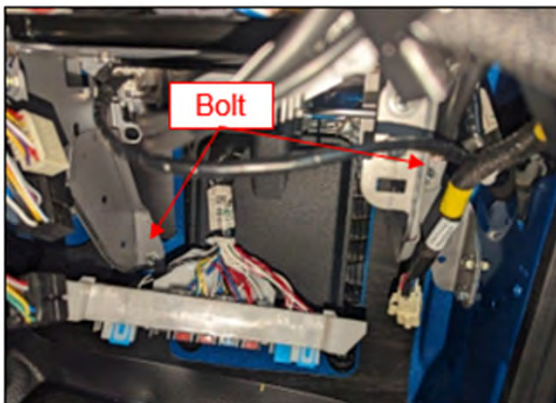
67. Ensure the cab harness is positioned correctly to clear the ECU rack. Secure the harness clip to the instrument panel support.



68. Ensuring the upper fuse and relay blocks are routed above the ECU rack, install the ECU rack. Tighten the bolts to the specified torque.

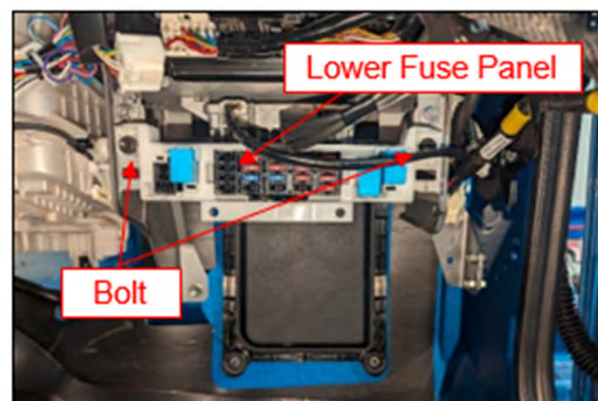
Specified Torque (10mm Head): 31 lb-in (3.5 Nm)

Specified Torque (12mm Head): 11 lb-ft (15 Nm)

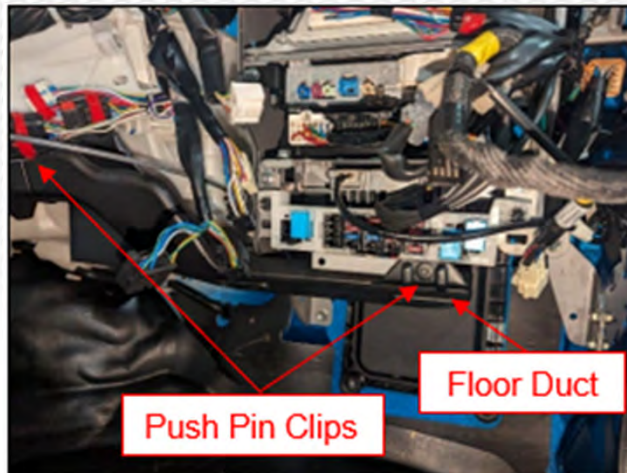


69. Secure the lower fuse panel to the ECU rack. Tighten the bolts to the specified torque.

Specified Torque:
31 lb-in (3.5 Nm)

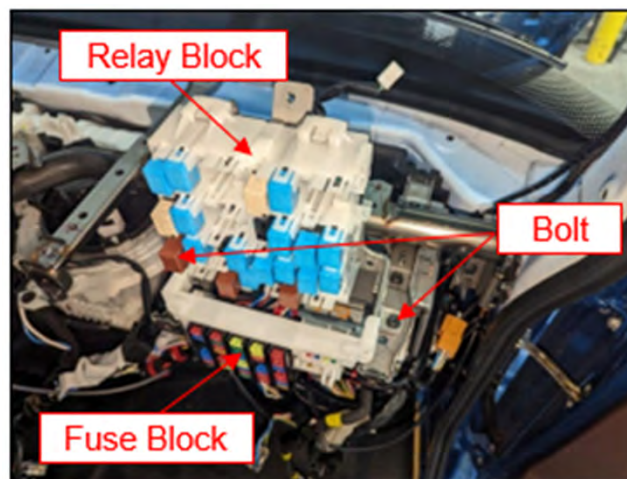


70. Install the lower passenger side floor duct with the two push pin clips.



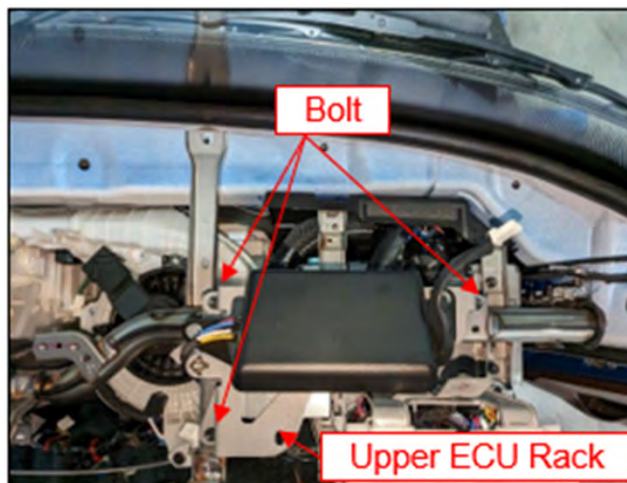
71. Attach the upper fuse and relay blocks to the bracket. Install the bracket to the top of the ECU rack. Tighten the two bolts to the specified torque.

Specified Torque:
31 lb-in (3.5 Nm)

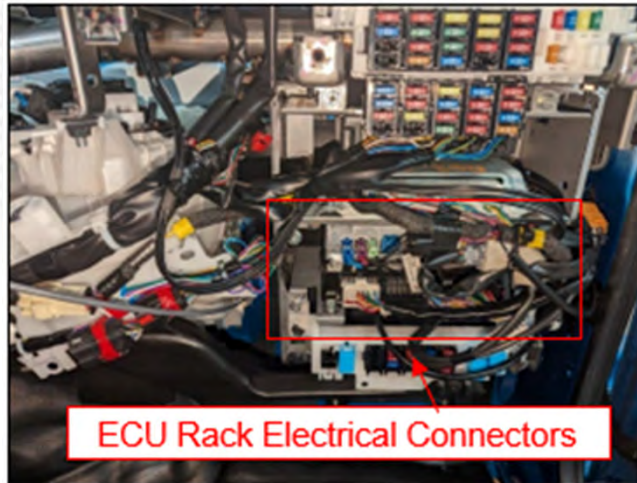


72. Install the upper ECU rack portion. Tighten the three bolts to the specified torque.

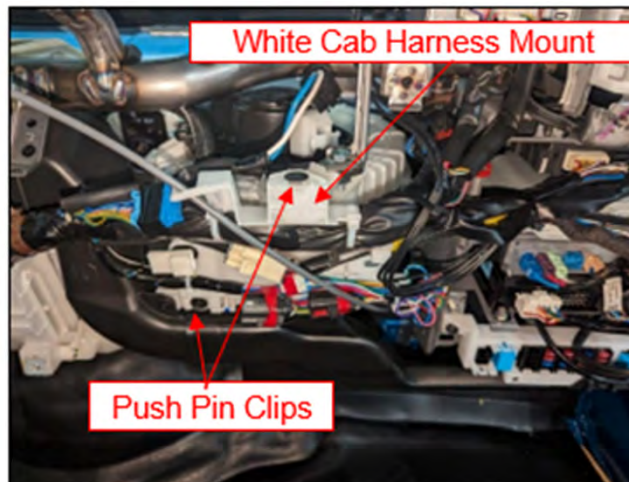
Specified Torque:
31 lb-in (3.5 Nm)



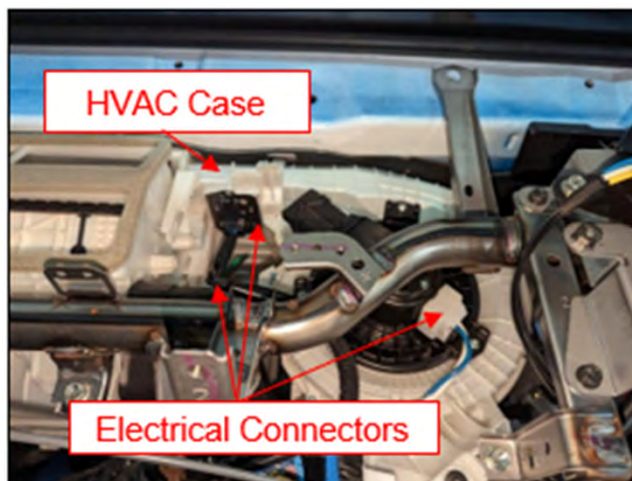
73. Connect all ECU rack electrical connectors. Be sure to include the door harness connection and attachment clips on the side of the ECU rack. Tie straps will be installed later.



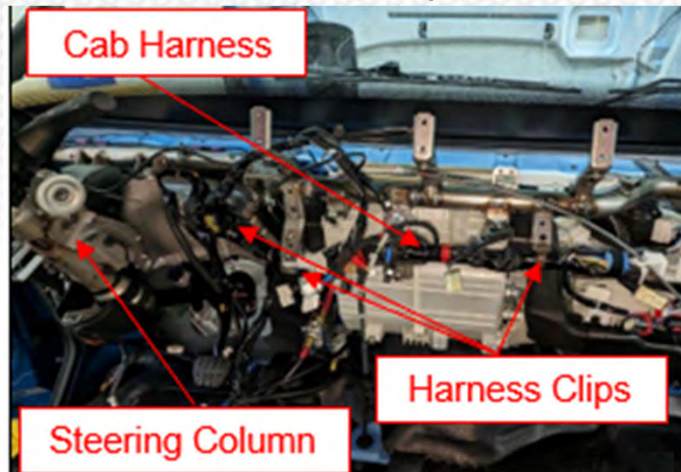
74. Install the white cab harness mount to the HVAC case with the two push pin clips. Route the fresh air cable through the hook.



75. Connect the three electrical connectors to the HVAC case. Ensure the blower motor connector cover is locked in place.

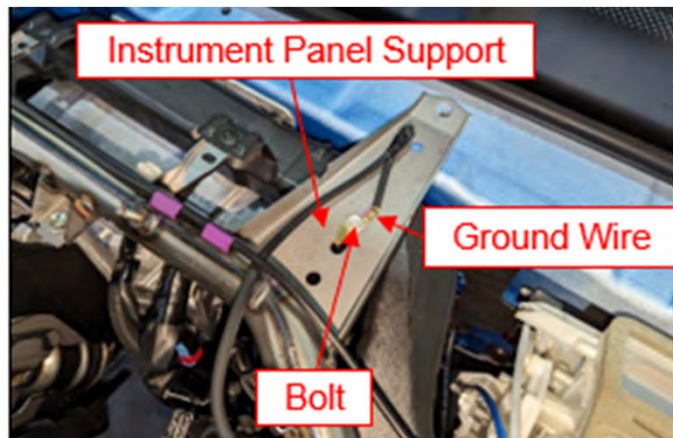


76. Route the harness across the center of the instrument panel. Attach the clips at the locations indicated. Feed the instrument cluster portion over the steering column and attach the harness clips.



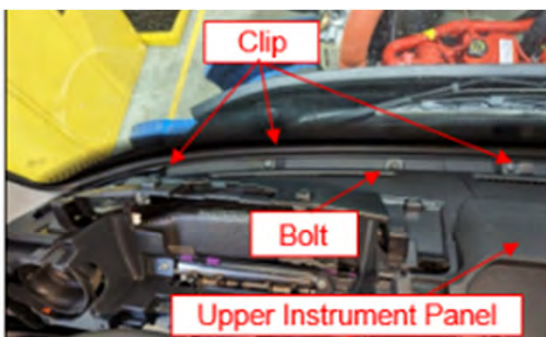
77. Attach the ground wire to the instrument panel support using the previously removed bolt. Tighten the bolt to the specified torque.

Specified Torque:
74 lb-in (8.3 Nm)



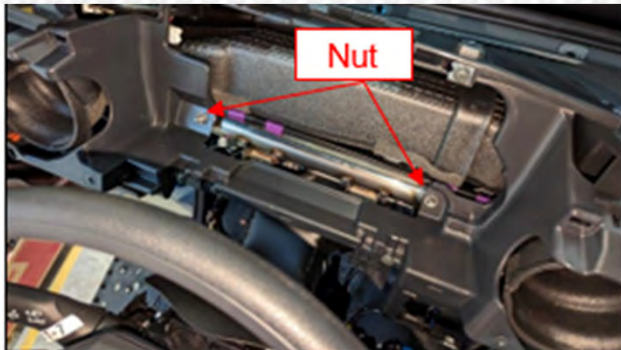
78. Ensure the speaker wire for the passenger side speaker is positioned correctly and place the upper instrument panel section back in the vehicle. Install the six retaining clips and two bolts. Tighten the bolts to the specified torque.

Specified Torque: 106 lb-in (12 Nm)

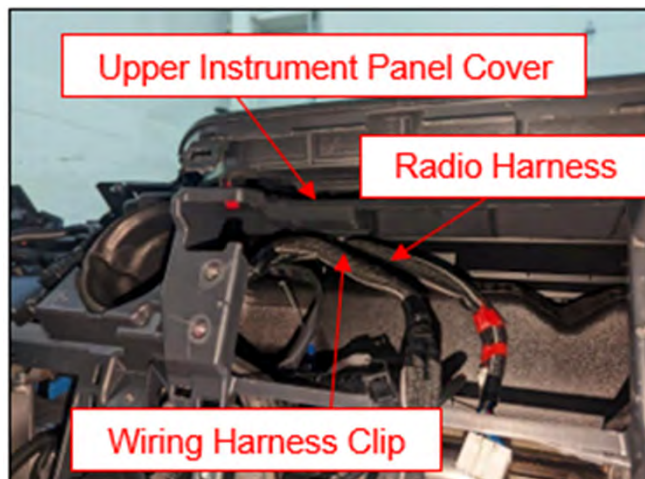


79. Install the two nuts and two bolts in the upper instrument panel. Tighten to the specified torque.

Specified Torque: 27 lb-in (3 Nm)

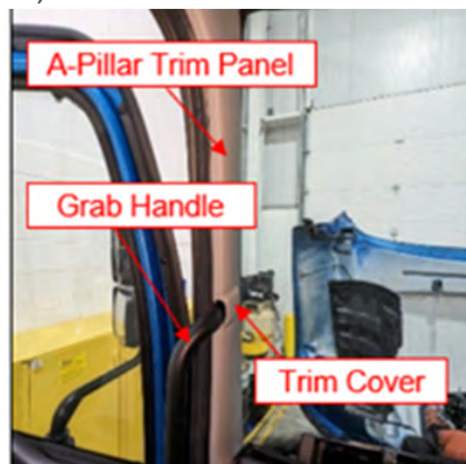


80. Attach the harness clip on the radio harness to the underside of the upper instrument panel.



81. Install the A-pillar trim panels followed by the grab handles. Tighten the grab handle bolts to the specified torque. Install the trim cover.

Specified Torque: 14 lb-ft (19.5 Nm)



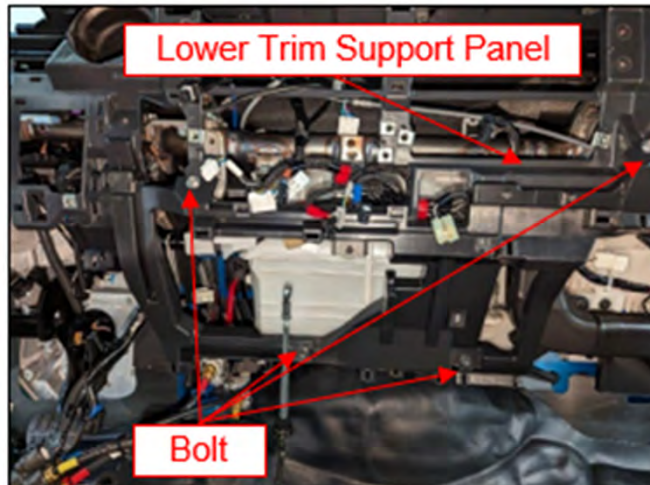
82. Connect the wire harness to the passenger side speaker. Install the speaker with the two screws. Tighten the screws to the specified torque and install the trim cover.

Specified Torque:
17 lb-in (2 Nm)



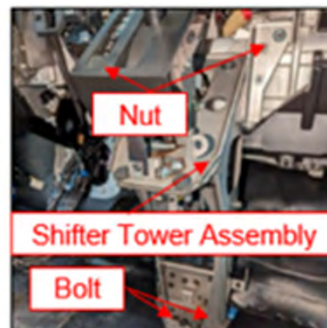
83. Install the lower trim support panel with the four bolts. Tighten the bolts to the specified torque. Confirm the wire harness connectors are positioned correctly.

Specified Torque:
27 lb-in (3 Nm)



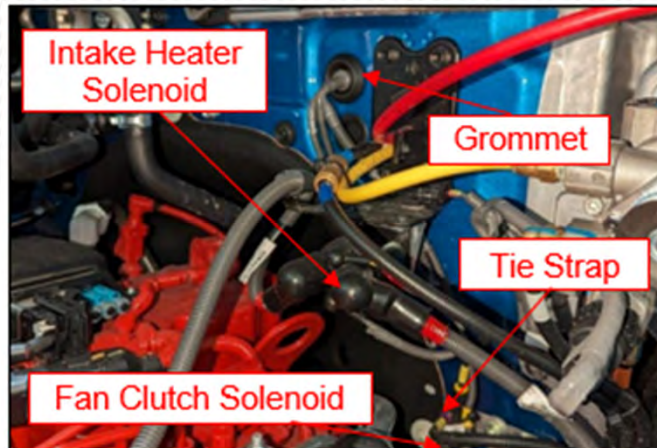
84. Install the shifter tower assembly. Tighten the two nuts and the two bolts to the specified torque. Attach the shifter cable (2000 series transmission) or the shifter electrical connector (3000 series transmission).

Specified Torque: 12 lb-ft (16 Nm)



85. Route the under-hood section of the harness around the rear of the instrument panel and through the bulkhead. Seat the bulkhead grommet carefully. Connect the fan clutch solenoid and intake heater solenoid. Tighten the intake heater solenoid terminals to the specified torque. Place a tie strap around the fan clutch solenoid at the yellow tape mark on the harness.

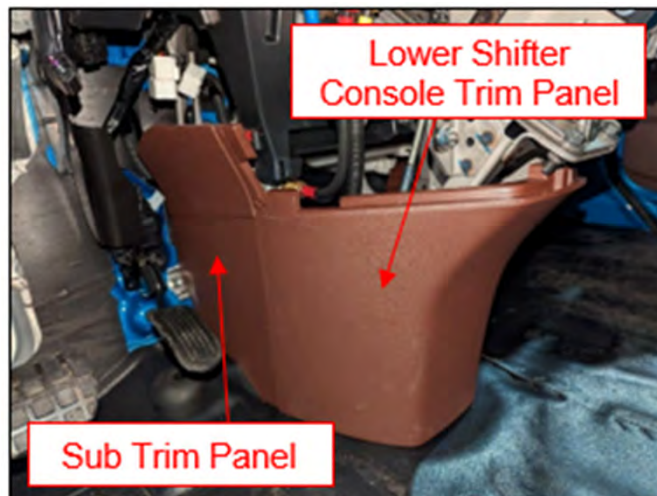
Specified Torque:
18 lb-in (2 Nm)



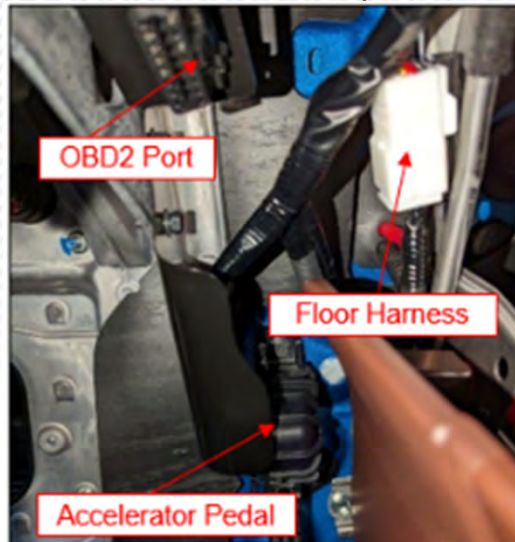
86. Connect the air pressure sensor electrical connectors (air brake vehicles only).



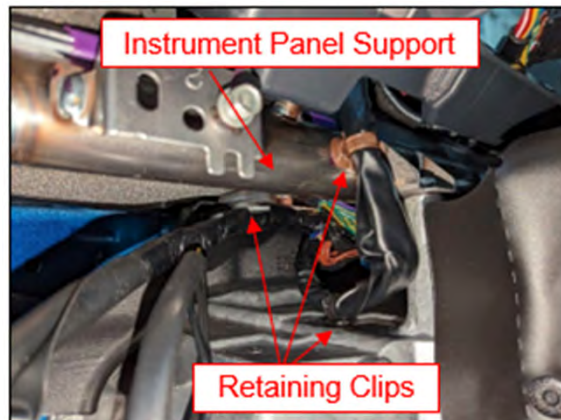
87. Install the sub trim panel first, then install the lower shifter console trim panel.



88. Connect the accelerator pedal and floor harness. Clip the floor harness into the instrument panel. Install the OBD2 port.

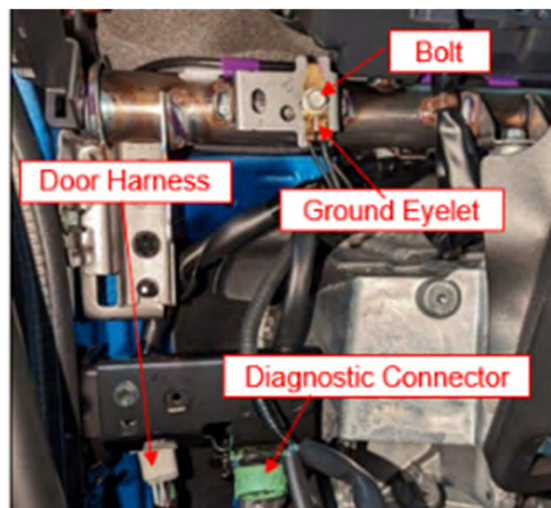


89. Attach the three wire harness retaining clips surrounding the steering column on the instrument panel support.

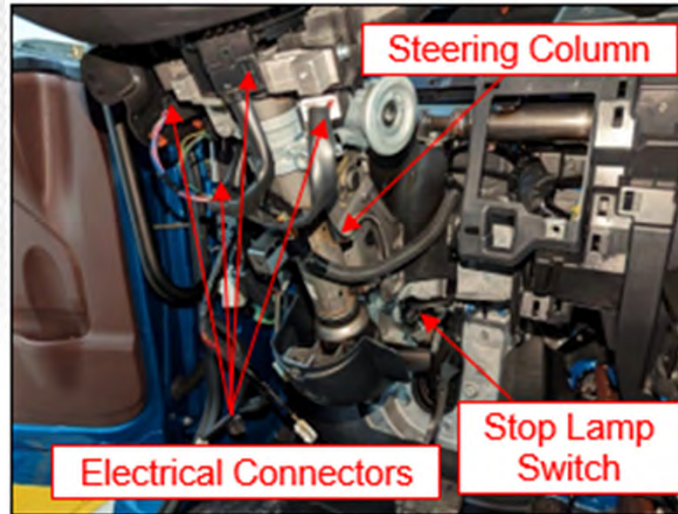


90. Connect the ground eyelet to the instrument panel support and tighten the bolt to the specified torque. Connect the door harness connection. Position the diagnostic connector into the mounting bracket.

Specified Torque:
74 lb-in (8.3 Nm)

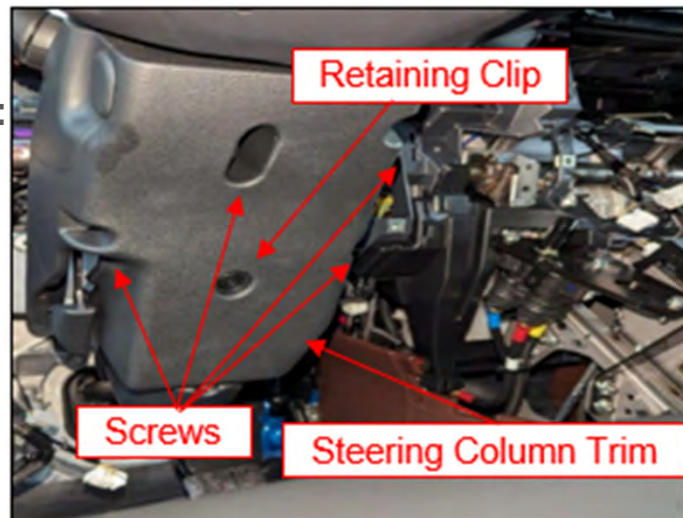


91. Connect the four steering column electrical connectors and attachment clips along with the stop lamp switch.



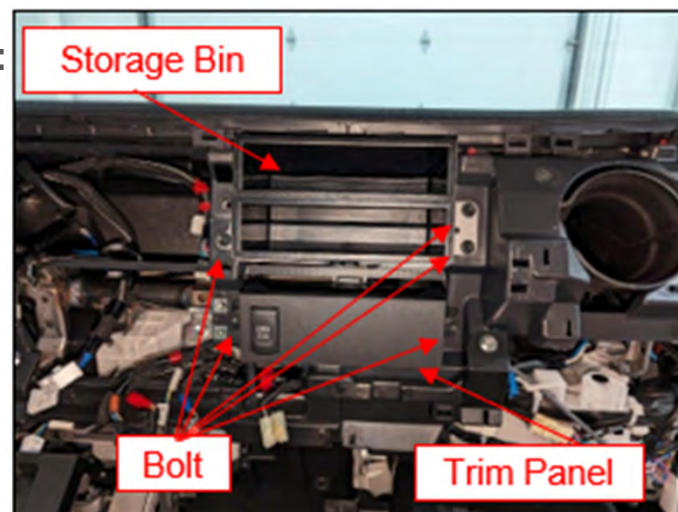
92. Install the steering column trim. Tighten the four screws to the specified torque.

Specified Torque:
18 lb-in (2 Nm)



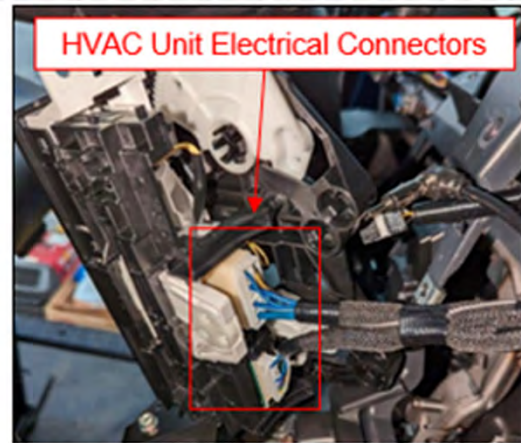
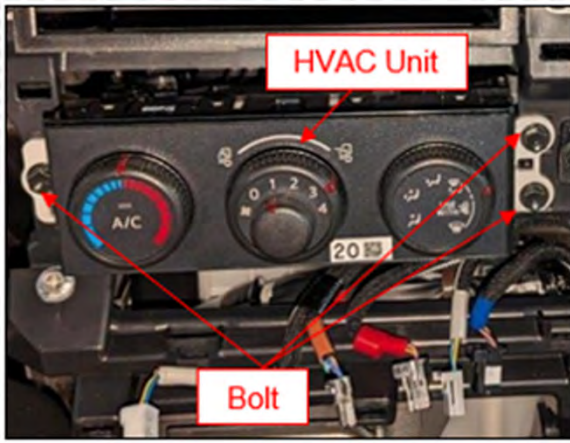
93. Connect any electrical accessories in the blank panel below the storage bin, if equipped. Install the trim panel and storage bin and tighten the five bolts to the specified torque.

Specified Torque:
27 lb-in (3 Nm)



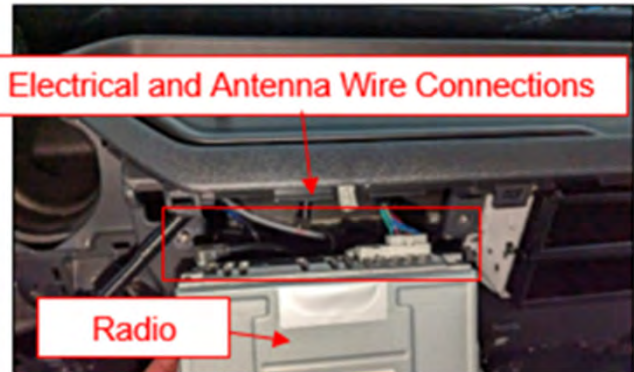
94. Connect the fresh air, blend, and mode door cables to the HVAC unit. Connect the two electrical connections. Install the HVAC unit with the three bolts. Tighten the bolts to the specified torque.

Specified Torque: 27 lb-in (3 Nm)

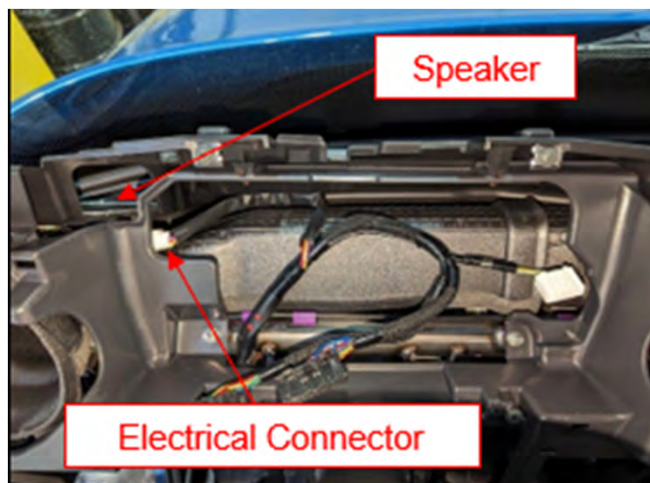


95. Connect the radio electrical connector and antenna wire. Install the radio with the three bolts. Tighten the bolts to the specified torque.

Specified Torque: 27 lb-in (3 Nm)

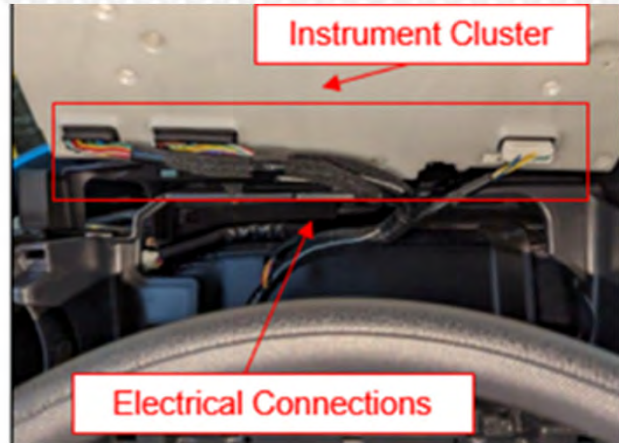


96. Connect the driver side speaker electrical connection.



97. Connect the instrument cluster electrical connectors. Install the instrument cluster with the four screws. Tighten the screws to the specified torque.

Specified Torque: 18 lb-in (2 Nm)

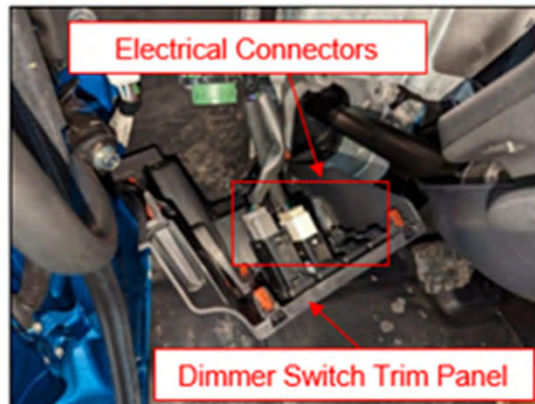
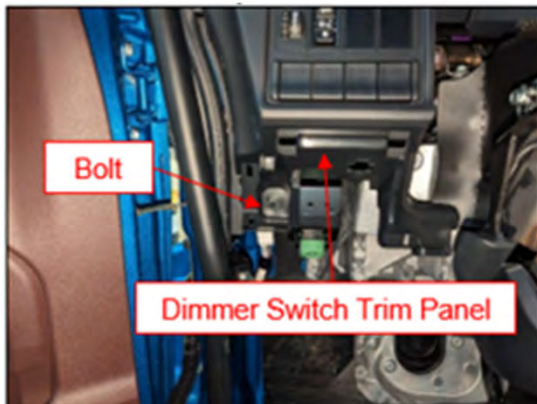


98. Install the driver side HVAC vent trim panel.

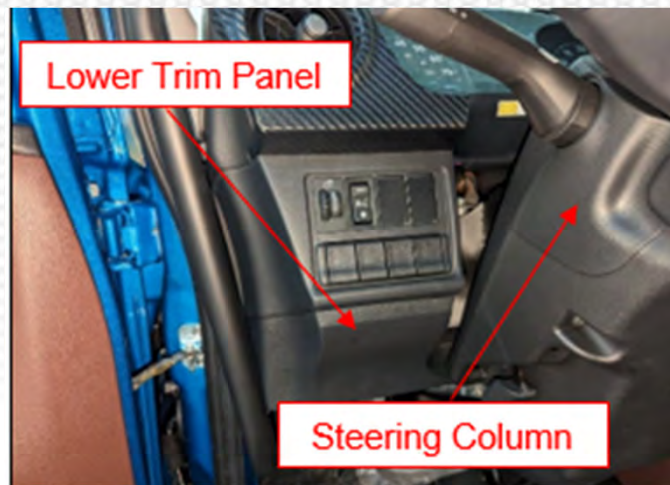


99. Connect all electrical connectors on the dimmer switch panel to the left of the steering column. Install the dimmer switch panel with the bolt. Tighten the bolt to the specified torque.

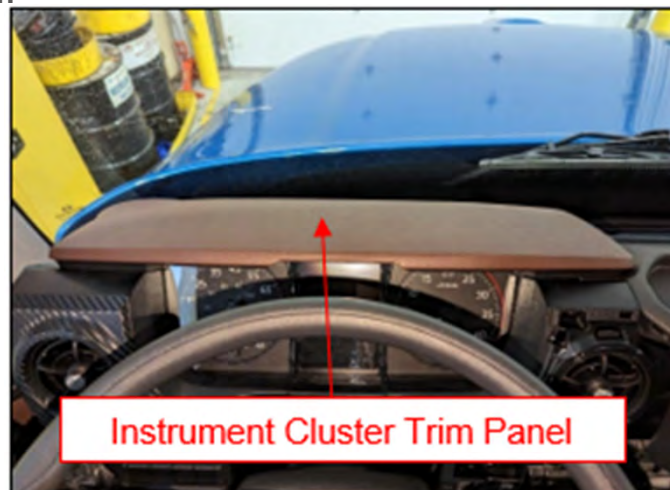
Specified Torque: 27 lb-in (3 Nm)



100. Push the lower trim panel to the left of the steering column into place.

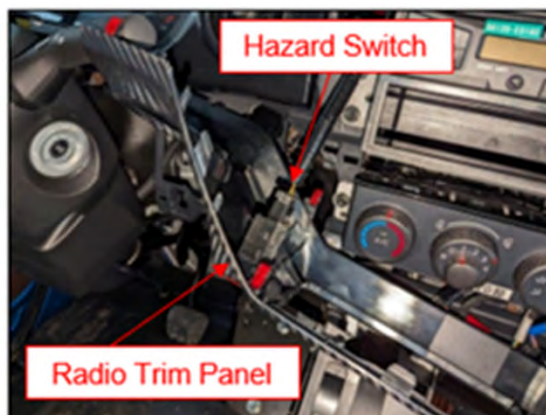
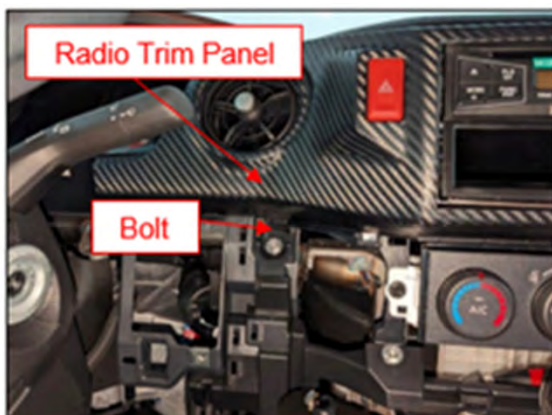


101. Carefully align the instrument cluster trim panel before pushing firmly downward to install.

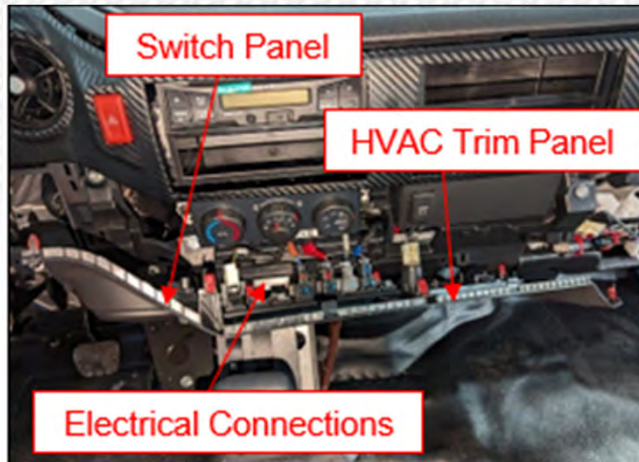


102. Connect the wire harness to the hazard switch and install the radio trim surround. Once the radio trim panel is seated in place install the bolt below the vent area and tighten to the specified torque.

Specified Torque: 27 lb-in (3 Nm)



103. Connect all electrical connectors in the switch panel contained in the HVAC trim panel. Quantity may vary depending on vehicle options. Install the HVAC trim panel by firmly pressing each clip into place.



104. Carefully align the clips on the passenger side trim panel and firmly press into place.

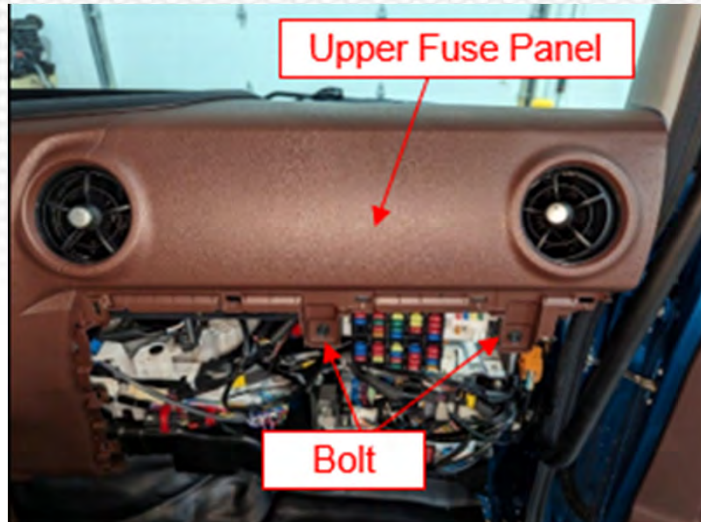


105. Fit the shifter console upper trim panel in place. Carefully and firmly press forwards to install. Thread the park brake control knob onto the park brake valve (air brake vehicles only).

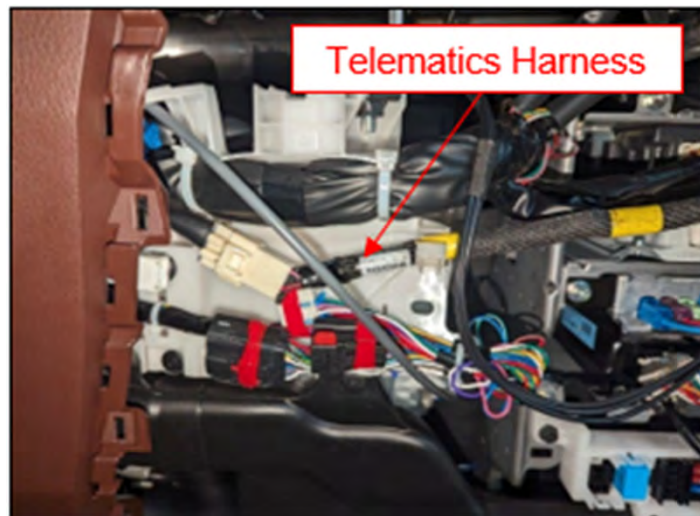


106. Push the upper fuse panel into place and install the two bolts. Tighten the bolts to the specified torque.

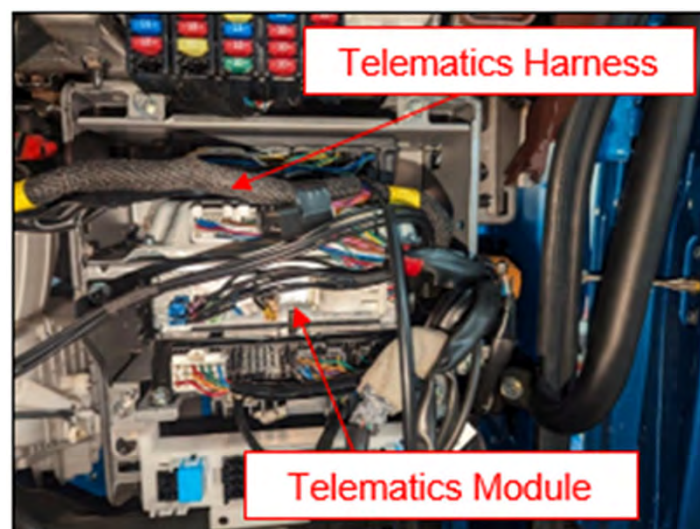
Specified Torque:
27 lb-in (3 Nm)



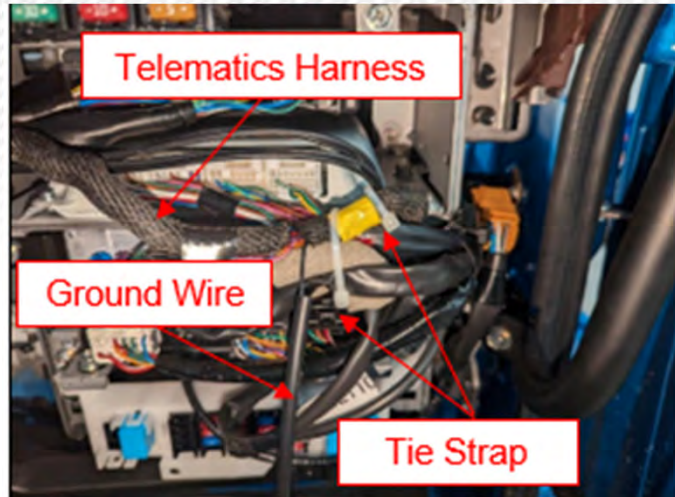
107. Connect the new 82233EA020 telematics harness to the cab harness and insert into the clip on the HVAC case at the yellow marking as shown.



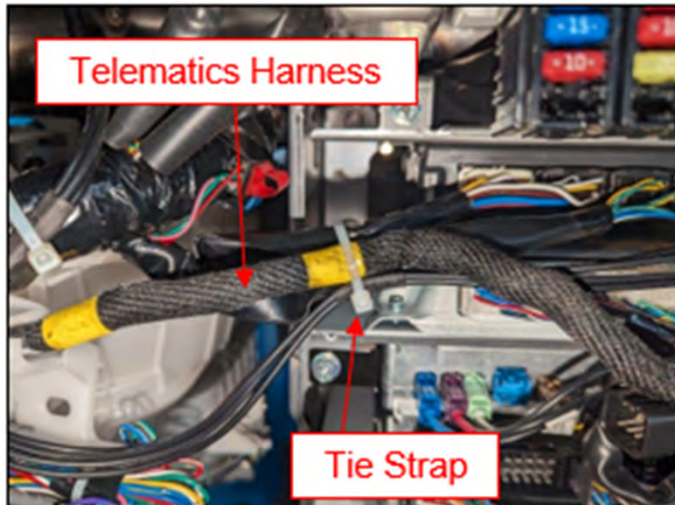
108. Route the telematics harness as shown and connect to the telematics module.



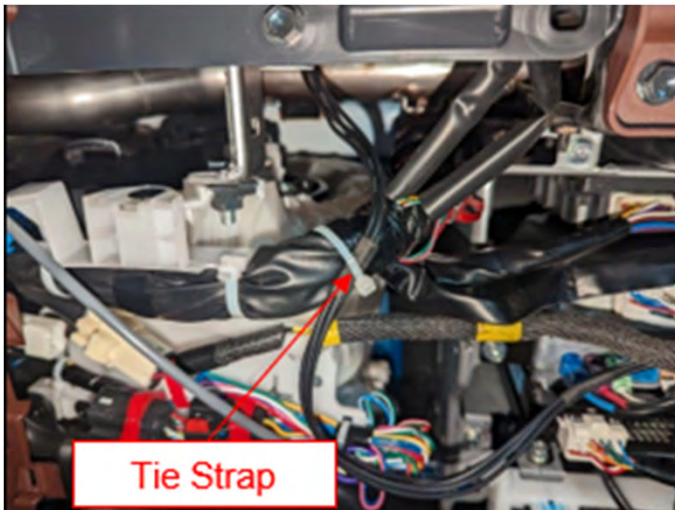
109. Install two tie straps, one securing the telematics wires together, the other securing the entire harness bundle. Leave the extra ground wire contained in the new telematics harness loose.



110. Install a tie strap securing the telematics wires to the cab harness at the tape markings.

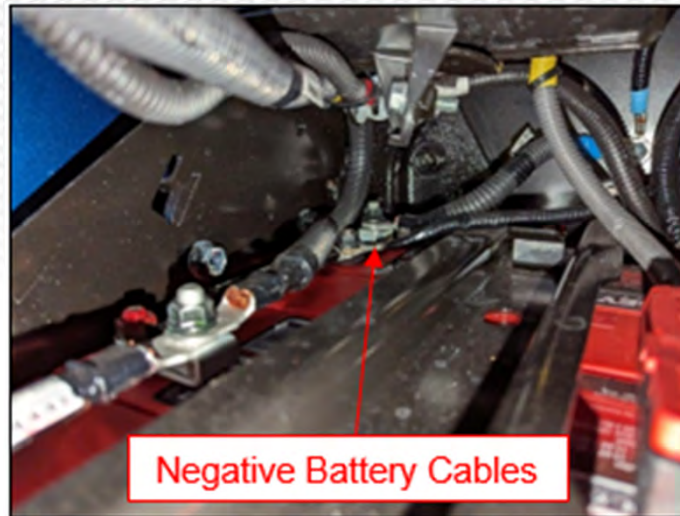


111. Install a tie strap securing the telematics wire to the cab harness at the tape marking.



112. Reconnect the negative battery cables to the negative terminal of the battery. Tighten the nuts to the specified torque.

Specified Torque:
8 lb-ft (11 Nm)



Proceed to: **TELEMATICS HARNESS REWORK PROCEDURE – Step 8** to complete this repair procedure.

FINAL INSPECTION:

1. To complete this procedure review and confirm the following:
 - The telematics harness ground wire has been routed to the cab ground.
 - The cab ground bolt has been properly tightened.
 - The cab wire harness and telematics harness have been replaced if damage was found during inspection.
 - All instrument panel electrical features are functional.
 - All fasteners have been tightened to the specified torque.

CLAIM APPLICATION

Reimbursable in accordance within the terms and policies of the Hino limited warranties.

Fuel Level Sender Replacement:

- a) Claim Type: CR
- b) Recall No: M0460
- c) Labor Charge:

Repair	Labor
Telematics Harness Rework Only: 84250AOT	0.6 Hr.
Cab Harness and Telematics Harness Replacement: 84550AOT	10.0 Hr.

