

VNRe Cabling and Cable Support Improvements**Service Category** Service**Section** Function Group 324**Technician Skill Level** A**Market** North**America Applicability****VOLVO**

Years	Models
2021-2022	VNRE

Introduction

Volvo Trucks has determined that certain VNRe Model Vehicle have power cables and supporting brackets that do not adhere to Volvo's quality standards. Improved components have been developed. Please follow the installation instructions within this document to ensure the identified vehicles meet Volvo's quality standards.

Production Change Information

This bulletin applies to vehicles built within the specified production changes below.

Brand	Engine	Emission Level	Starting Build Date	Ending Build Date
Volvo	BEV	EM-ZE	4-Decmeber-2020	24-November-2021

Warranty Information

This repair is covered by an authorized Service Program. Reimbursement is obtained through the normal claim handling process.		
Claim Type (used only when uploading from the Dealer Bus. Sys.)		B
Main Labor Code	Description	Hours
3100-09-01-04	Traction Voltage, Decommissioning	0.9
3100-09-01-03	Traction Voltage, Commissioning	1.2
1720-16-09-01	Campaign General 0.1x12	1.2
3718-03-02-02	Power Cable, EDM to EM replacement 3.0x4	12.0
Causal Part	23640210	
SCC Authorization Code	S3555	
Expiration Date	July 29, 2026	

VNE Cabling and Cable Support Improvements

Parts Information

Part Numbers	Part Names	Quantity
23977085	Power Cable, EMD2-Electric Motor 2	1
23977086	Power Cable, EMD1-Electric Motor 1	1
24186179	Cable HVJB1 TO HVJB3	1
24225585	Power Cable TVJB1 to DCDC2	1
24225586	Power Cable TVJB1 to DCDC1	1
24225588	Power Cable HVJB1to TVMU	1
24226284	Cable HVJB1 TO ACTVCL W/GANTRY	1
24226282	Power Cable TVJB1 to Compressor	1
24456334	Bracket, EMD Cable Clipping (Driver's)	1
24456336	Bracket, EMD Cable Clipping (Passenger's)	1
980464	Cable Tie	10
984726	Screw	4

Air Compressor Cable Information

Please inspect the air compressor drive motor before order the cable below, if the truck is fitted with an air-cooled air compressor drive motor the cable is NOT needed. If it is fitted with a water-cooled air compressor drive motor, you will need to order and replace the cable.

Part Numbers	Part Names	Quantity
24226282	Power Cable TVJB1 to Compressor	1

VNE Cabling and Cable Support Improvements



DANGER

Risk of electrical discharge.

Damaged traction voltage cables can cause electric shocks and arcs resulting in serious burns or death.

- ▶ Check that the traction voltage cables are in good condition before any operation is carried out.
- ▶ Report to the responsible person if any damaged traction voltage cables are found.



DANGER

Risk of electrical discharge.

Incorrect handling of the traction voltage system (>60 V DC) can cause electric shocks and arcs resulting in serious burns or death.

- ▶ Decommissioning and commissioning must only be carried out by personnel with adequate certification according to **Safety regulations, electric vehicles**, in function group 30.
- ▶ The steps described in the instruction are minimum requirements.
- ▶ Always comply with the local legislation or regulations with stricter safety requirements, including but not limited to, measuring tools and personal protective equipment to be used.



DANGER

Risk of electrical discharge.

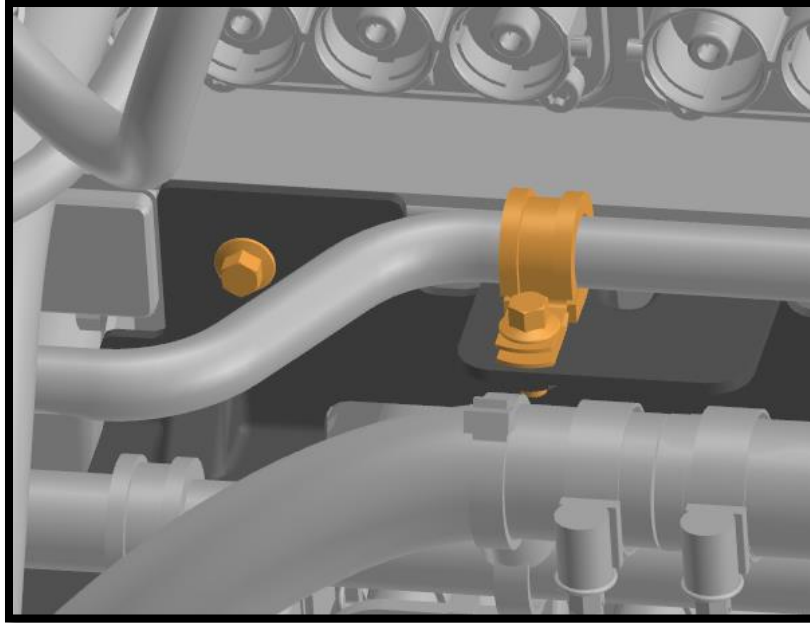
Defective gloves can result in electric shocks resulting in serious burns or death.

- ▶ Always use the gloves described in the instruction.
- ▶ Check gloves for leakage and damage before use, even if they are new.
- ▶ Ensure that gloves are completely dry before use.

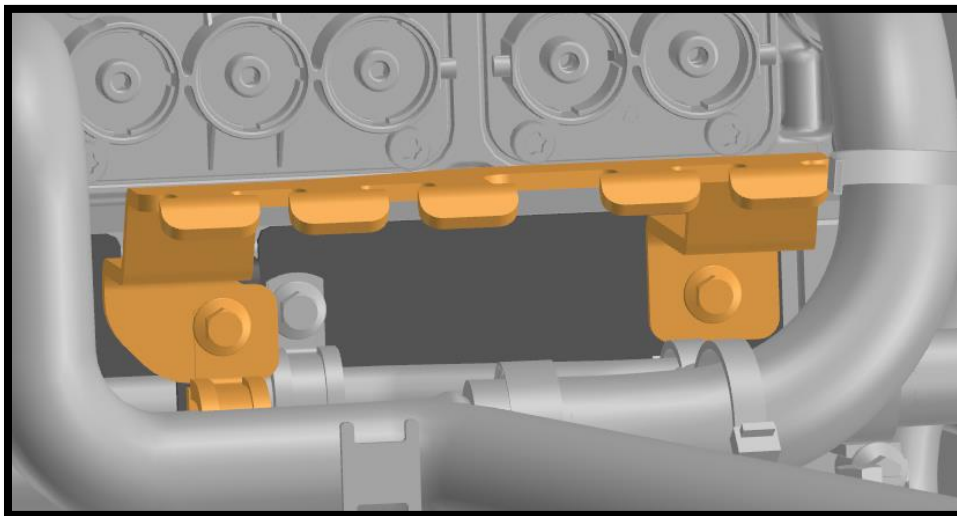
VNE Cabling and Cable Support Improvements

Repair Instructions

1. Follow steps 1 through 20 in Impact operation **3718-03-02-02 “Power Cable, Electric Motor Drive (EMD) to Electric Motor (EM), Replacement”** to decommission the traction voltage and remove the EMD to EM cables.
2. On the driver’s side of the EMD, remove the screws pictured and move aside pipes.

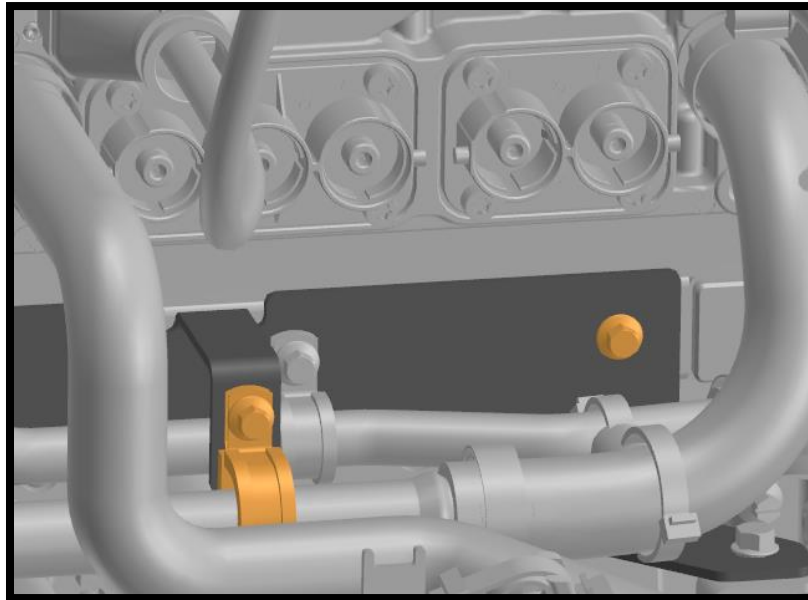


3. Install the EMD Cable support bracket **P/N 244563334** using 2 screws **P/N 984726**.

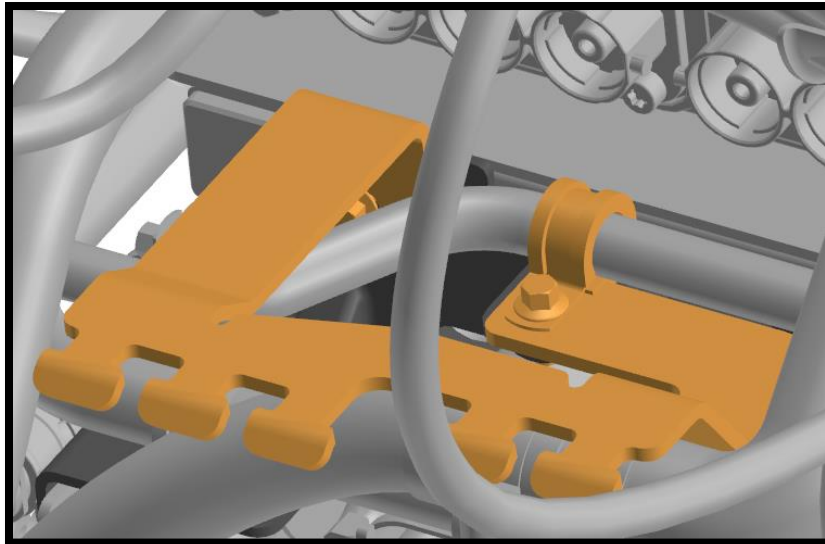


VNE Cabling and Cable Support Improvements

4. On the passenger's side on the EMD, remove the screws pictured and move pipes aside.



5. Install EMD cable support bracket **P/N 24456336** using 2 screws **P/N 984726**.

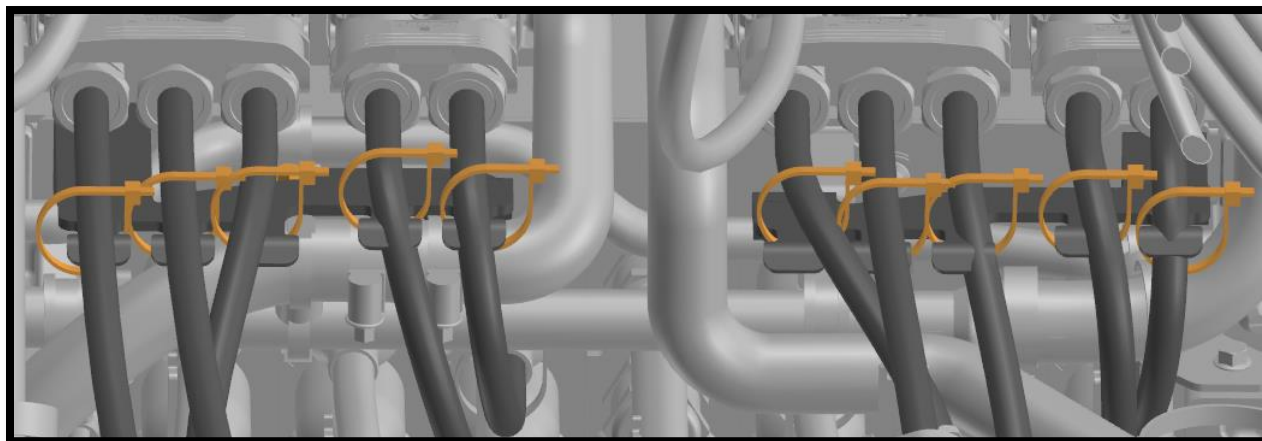


Important Note
Do NOT commission the traction Voltage at this step

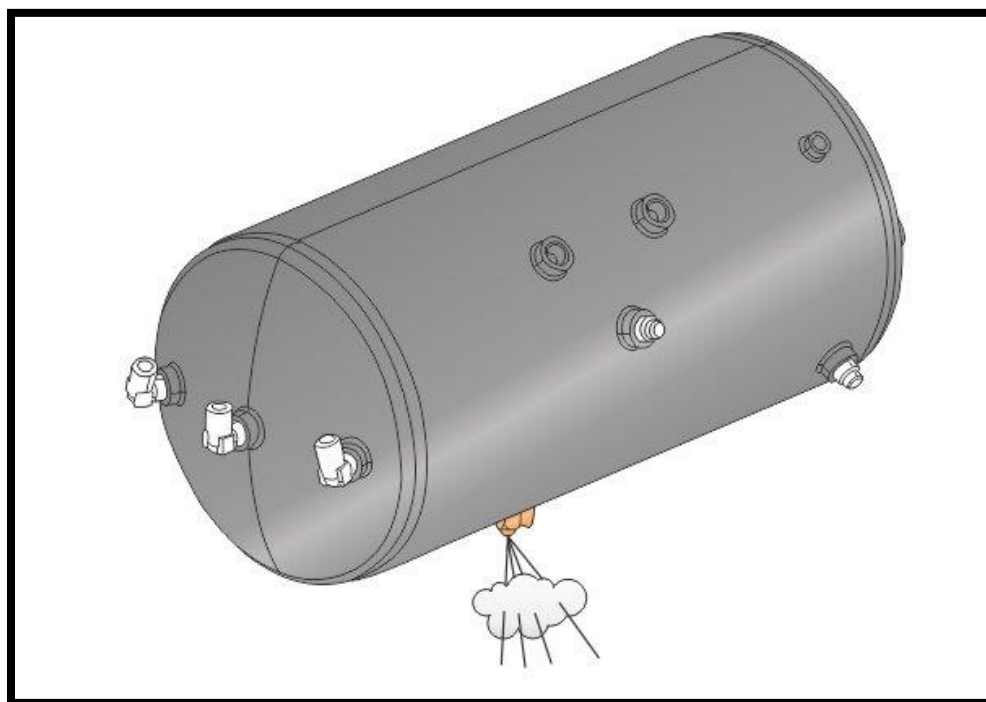
6. Follow steps 21 through 45 in Impact operation **3718-03-02-02 "Power Cable, Electric Motor Drive (EMD) to Electric Motor (EM), Replacement"** to install the new EMD to EM cables (Driver's side cable **P/N 23977086**, Passenger's side **P/N 23977085**).

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7. Install the cable ties. **P/N 980464 x 10.**

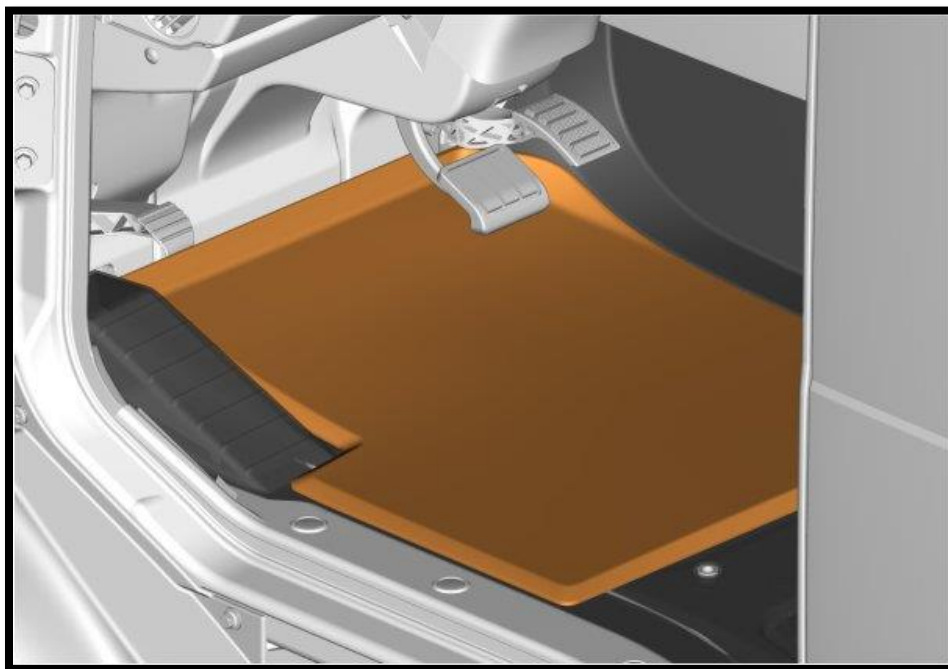


8. Drain the compressed air tank.

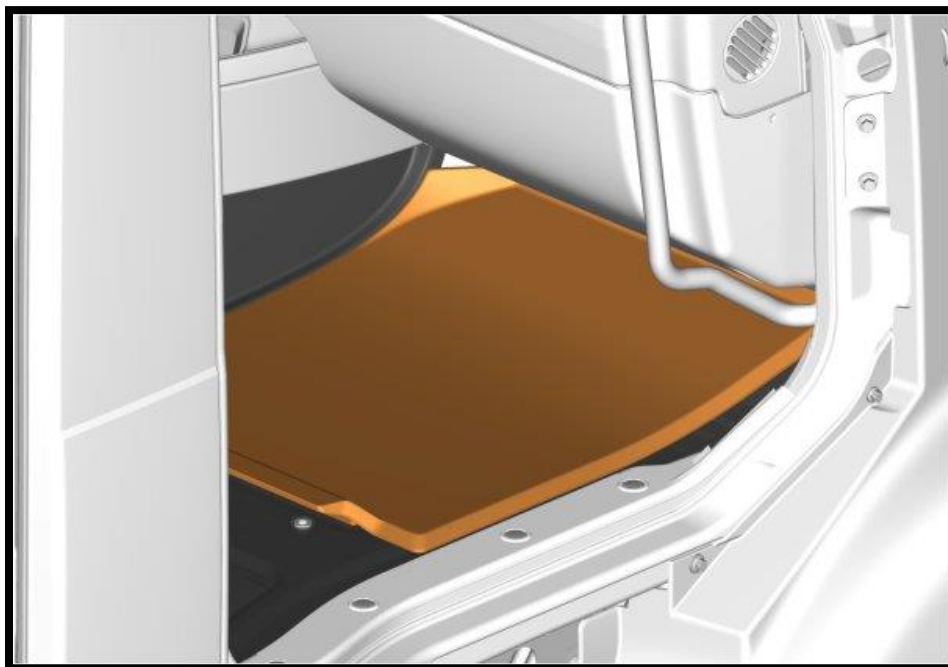


VNE Cabling and Cable Support Improvements

9. Remove driver floor mat.



10. Remove passenger the floor mat.

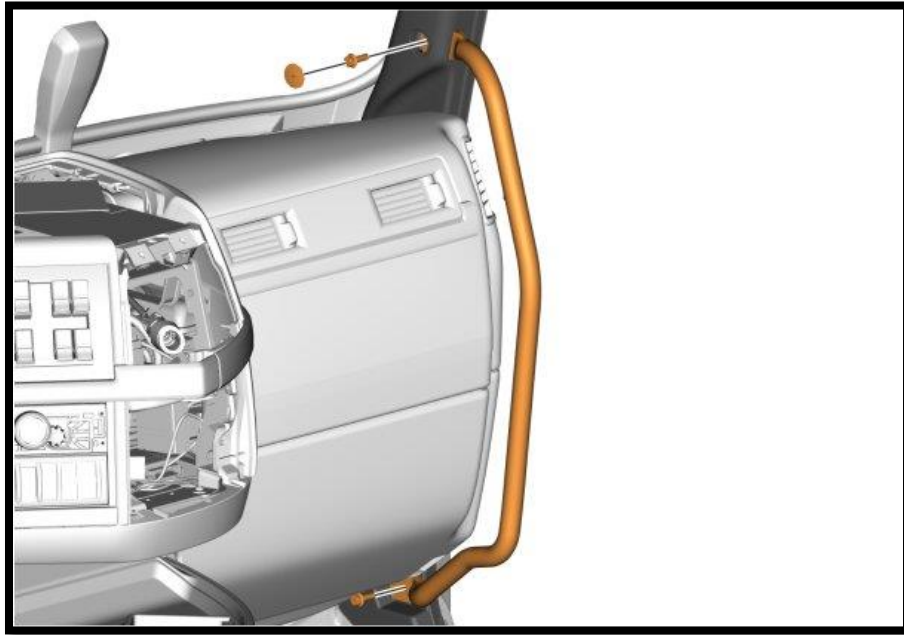


VNE Cabling and Cable Support Improvements

11. Remove the screw cover.

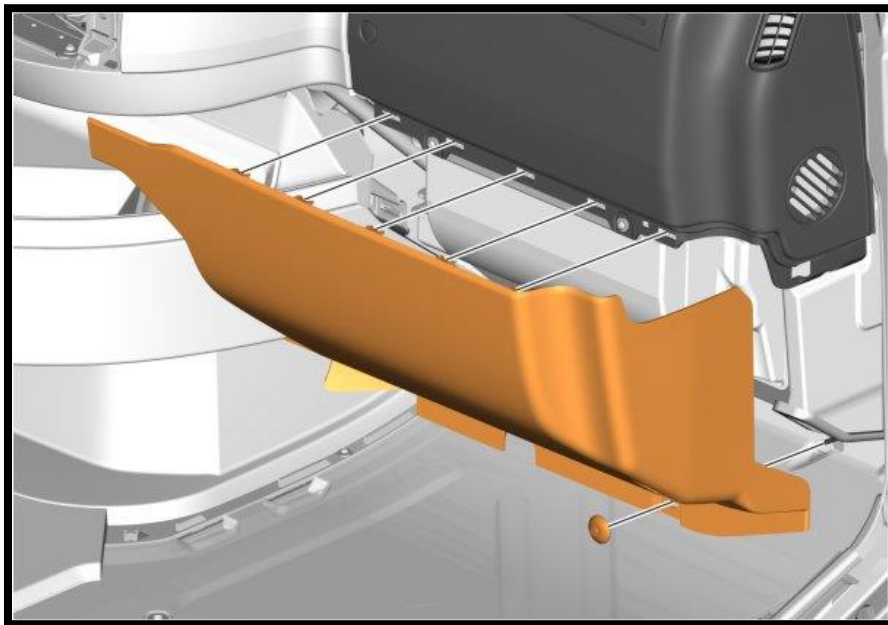
12. Remove the screws.

13. Remove the handle.



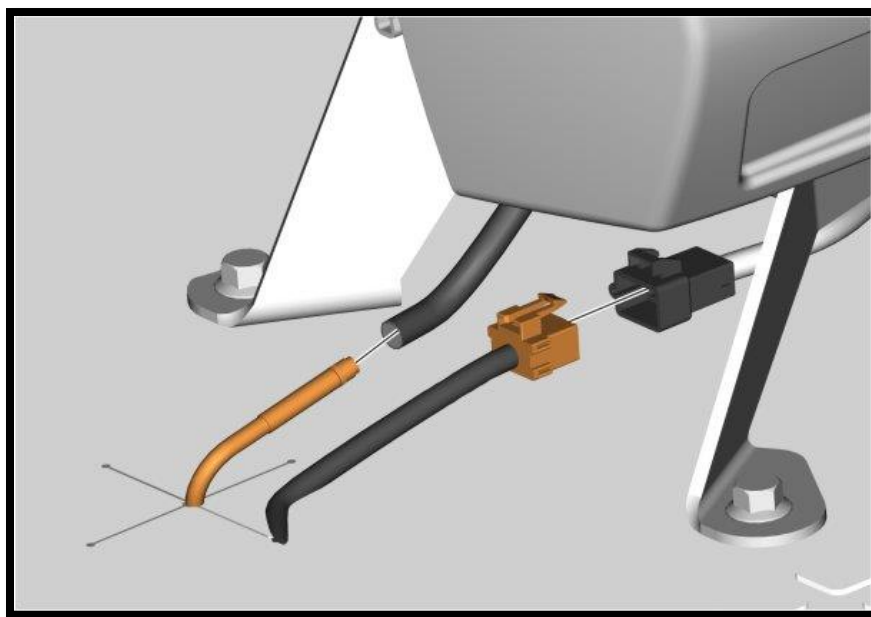
14. Remove the retainer.

15. Remove the passenger kick panel.



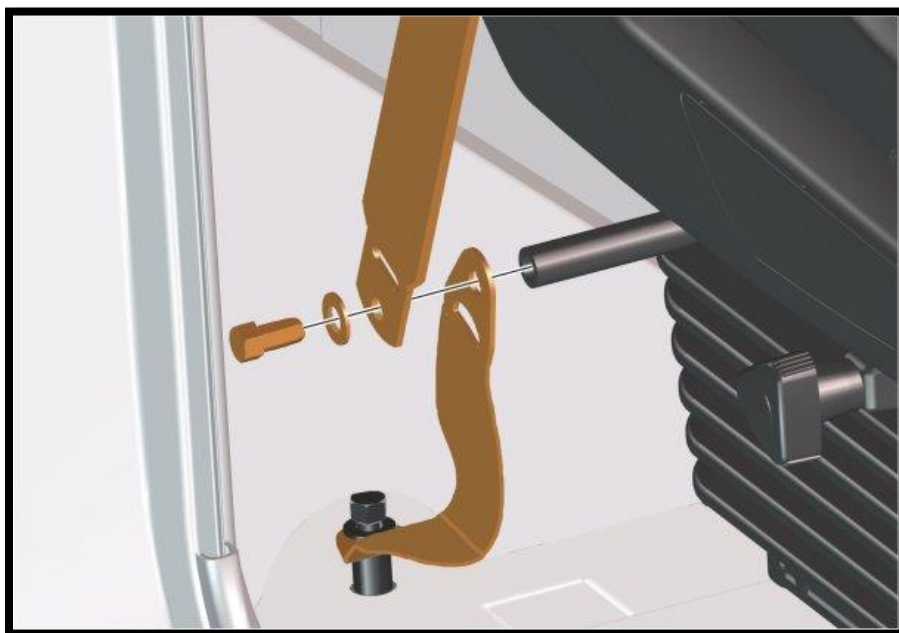
VNE Cabling and Cable Support Improvements

16. Remove air tube and disconnect the connector from the passenger's seat.



17. Remove the screw and washer.

18. Remove seat belt.



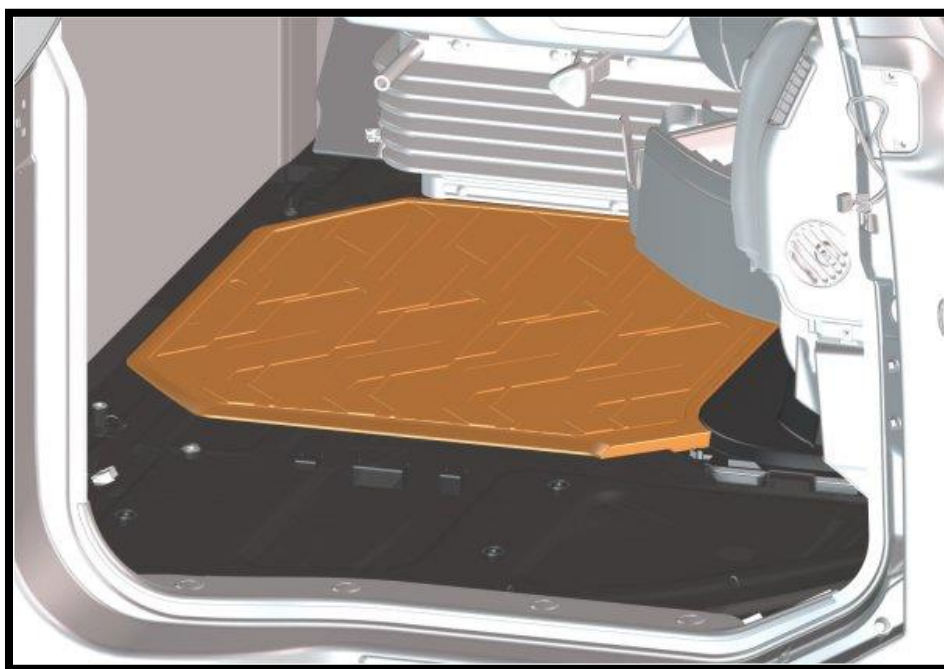
VNE Cabling and Cable Support Improvements

19. Remove the passenger seat mounting screws.

20. Remove seat from the cab.



21. Remove the floor mat.

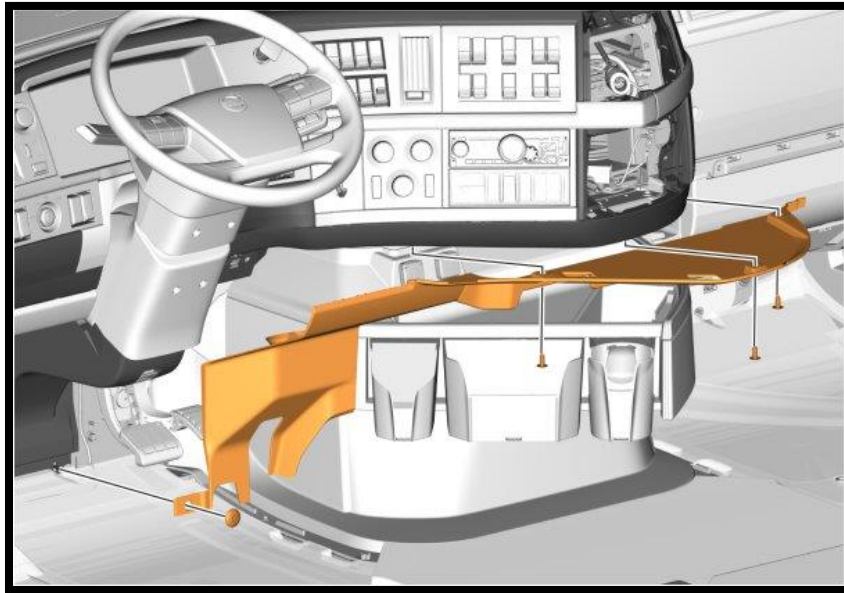


VNE Cabling and Cable Support Improvements

22. Remove the retainer.

23. Remove the plastic rivets.

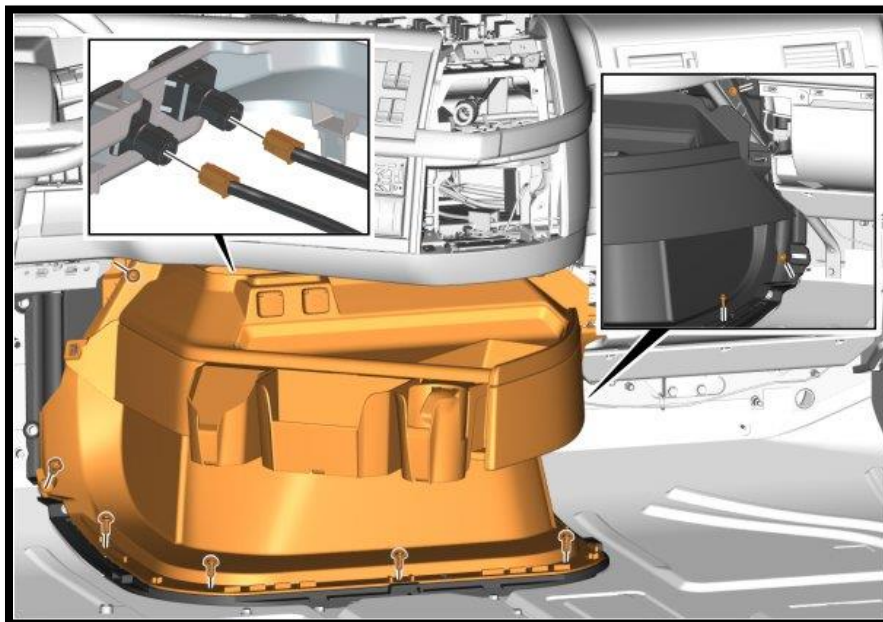
24. Remove the panel.



25. Remove the screws.

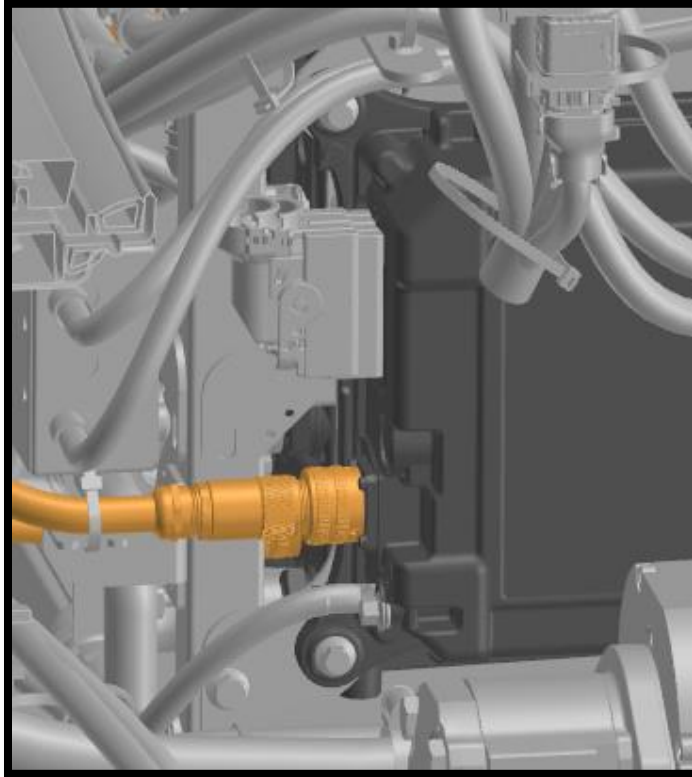
26. Remove the engine cover.

27. Disconnect the connectors.

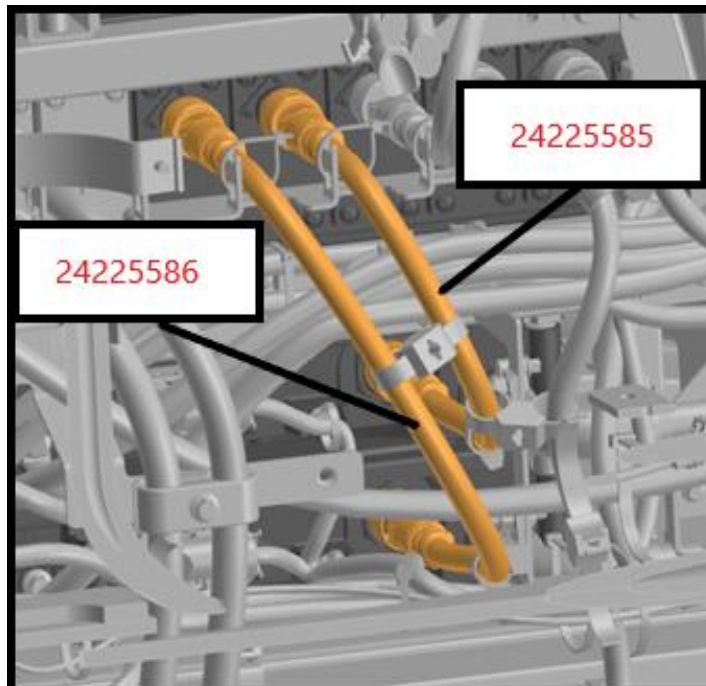


VNE Cabling and Cable Support Improvements

28. Remove and replace the low current cable to the TVMU with **P/N 24225588**.

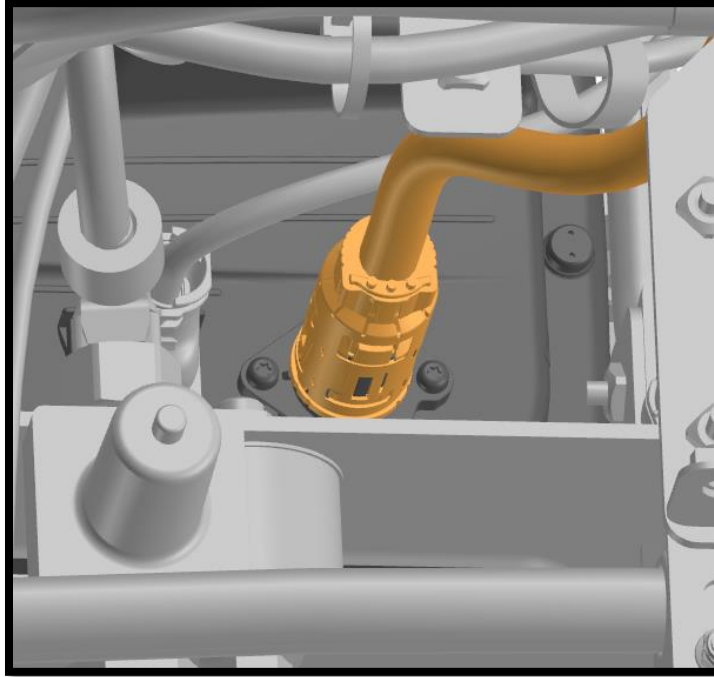


29. Remove and replace the low current cables to both DC/DC converters with the new cables (P/N **24225586** and **24225585**).

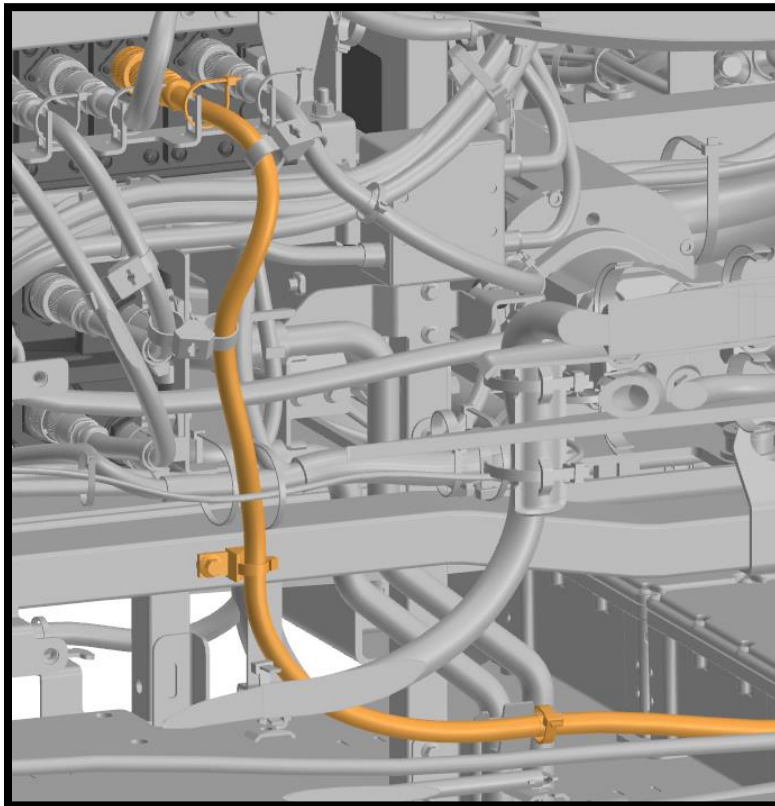


VNE Cabling and Cable Support Improvements

Important Note
Only replace the air compressor cable if the truck is fitted with a water-cooled compressor
30. Disconnect the high voltage connector to air compressor.

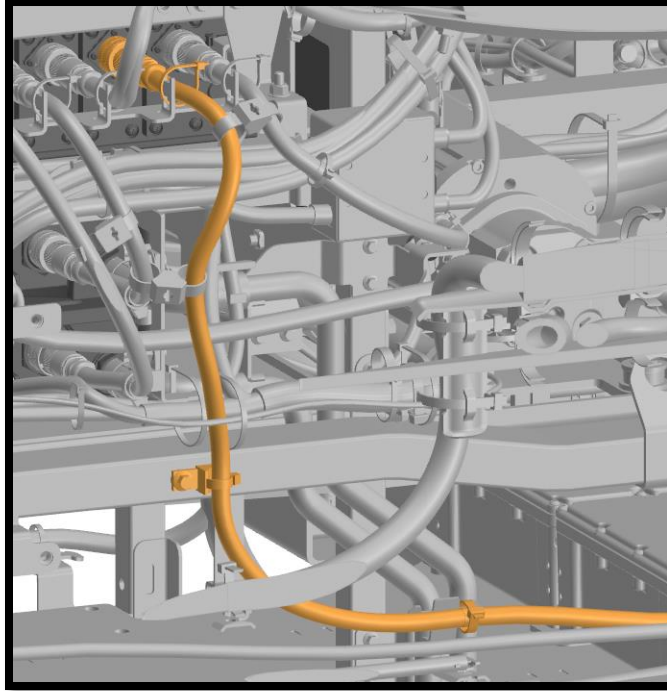


31. Disconnect the connector. Remove and discard the cable.

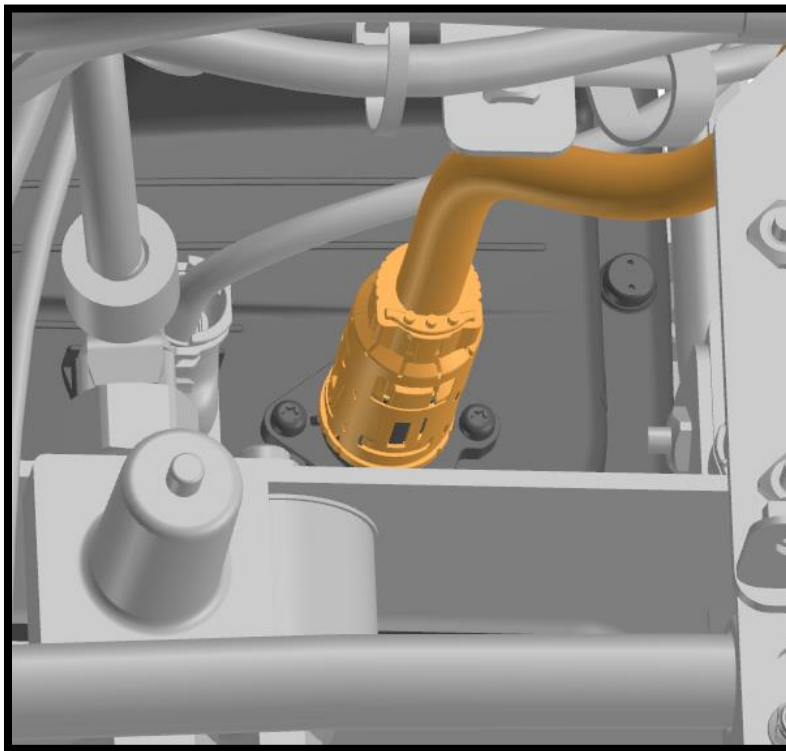


VNE Cabling and Cable Support Improvements

32. Install the new cable **P/N 24226282**. Route and clip in the same manner as removed cable.

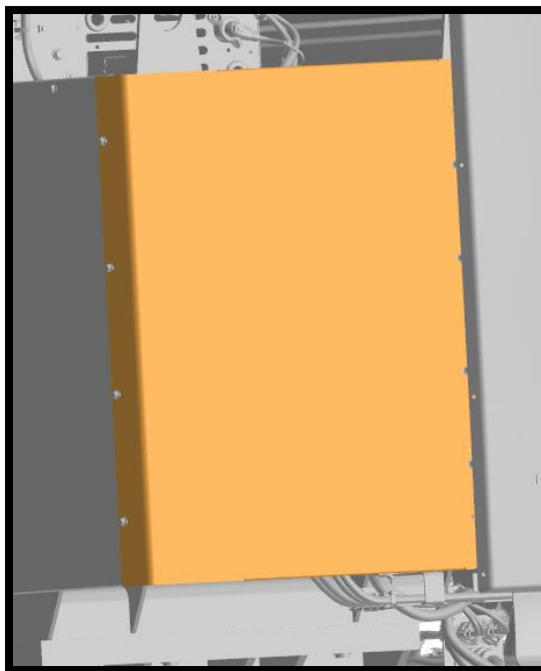


33. Connect the high voltage cable to the air compressor.

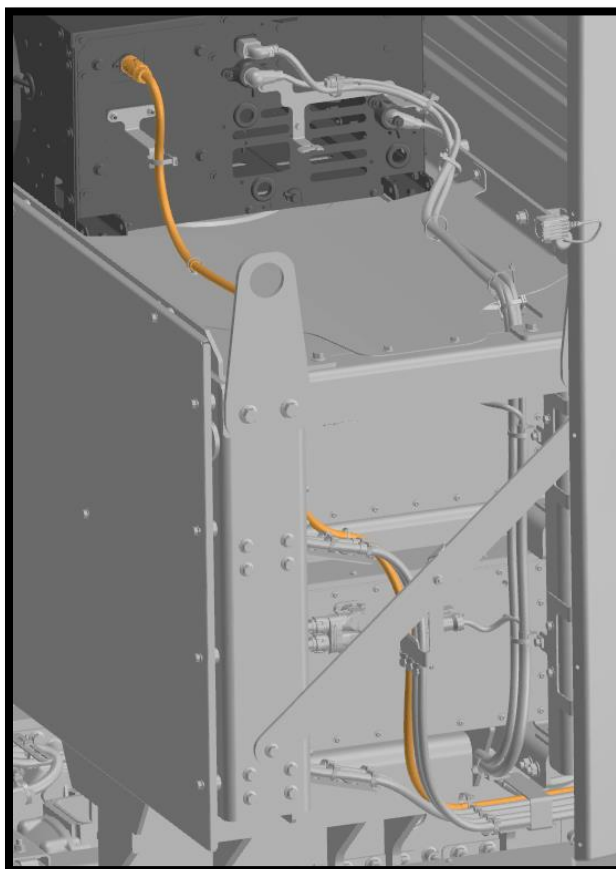


VNE Cabling and Cable Support Improvements

34. Remove gantry cover.

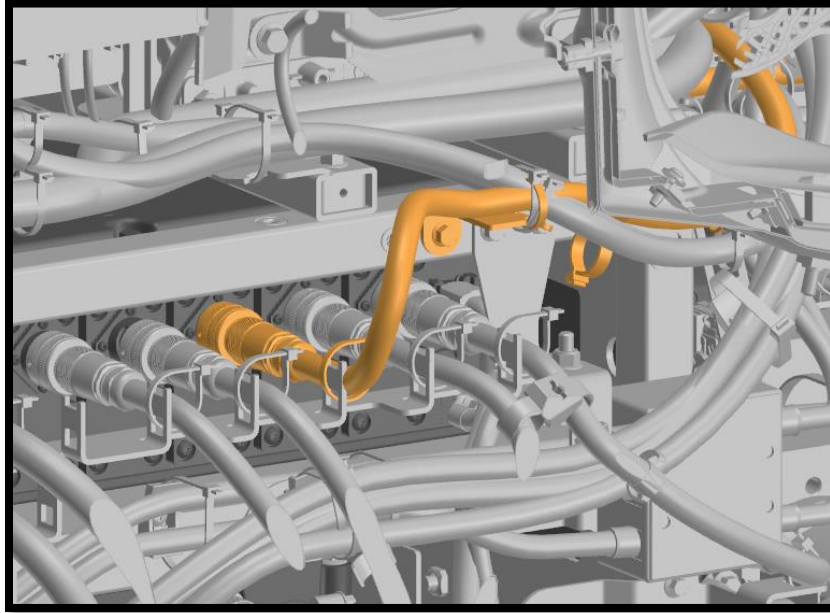


35. Disconnect the connector and remove the cable.

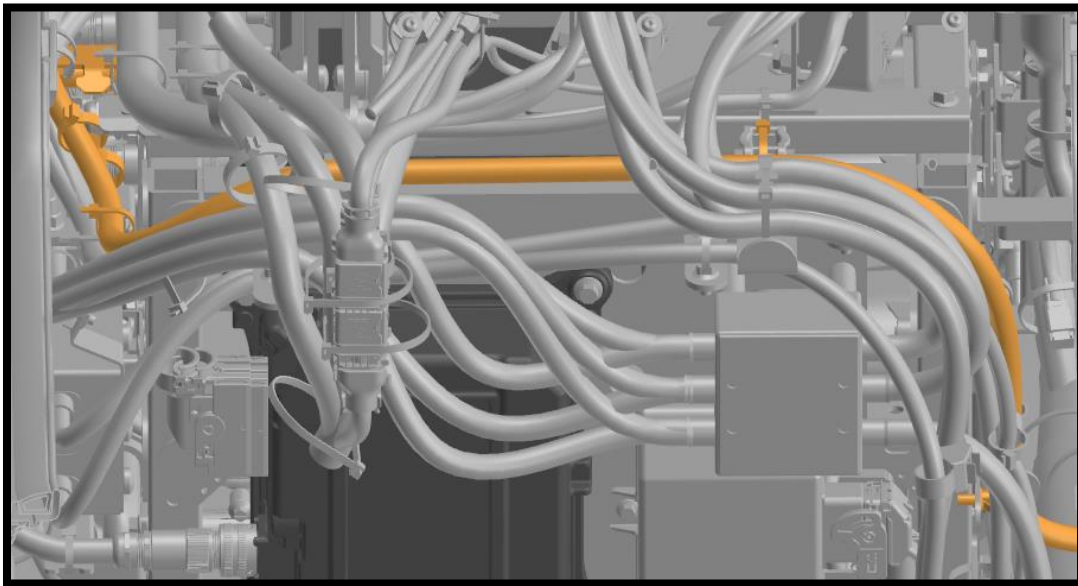


VNE Cabling and Cable Support Improvements

36. Disconnect the cable.

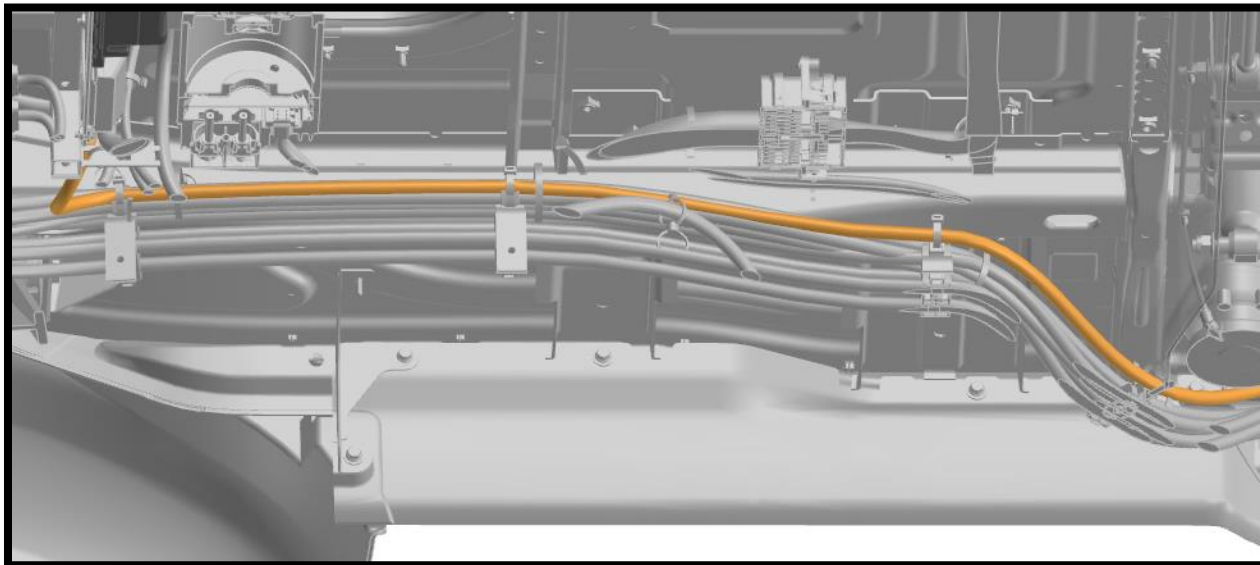


37. Remove the cable.

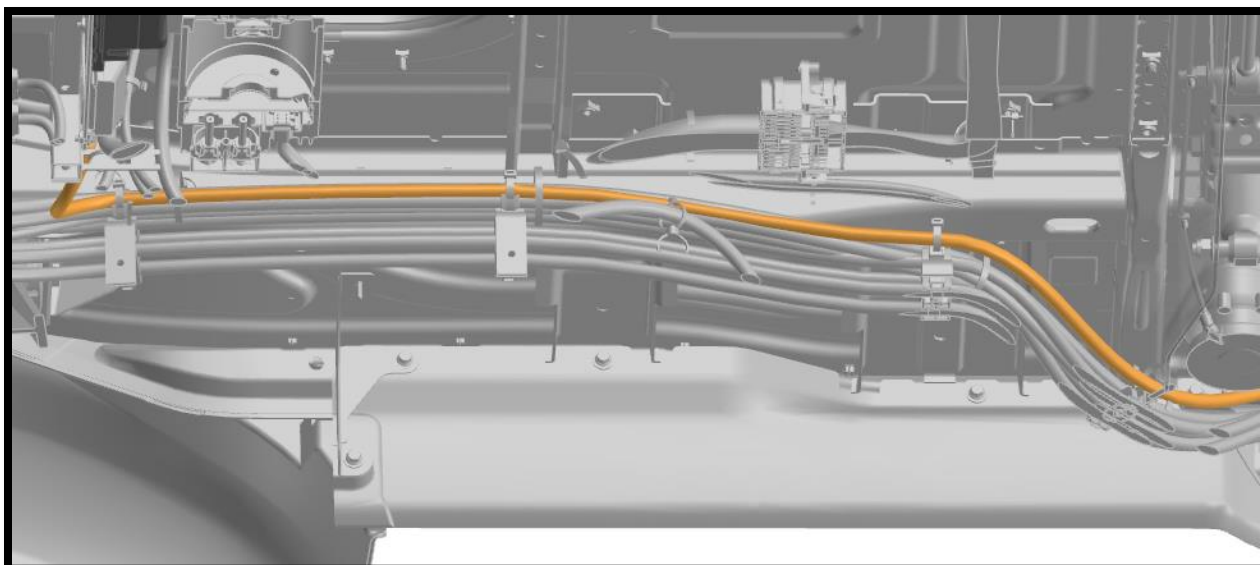


VNE Cabling and Cable Support Improvements

38. Remove the cable.

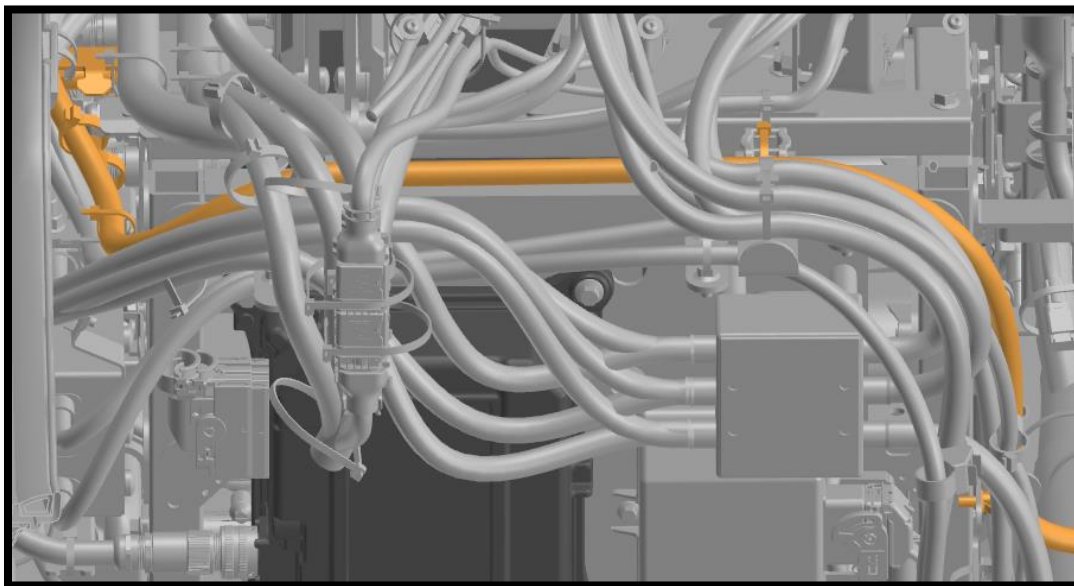


39. Install new cable **P/N 24226284**. Route and clip in the same manner as removed cable.

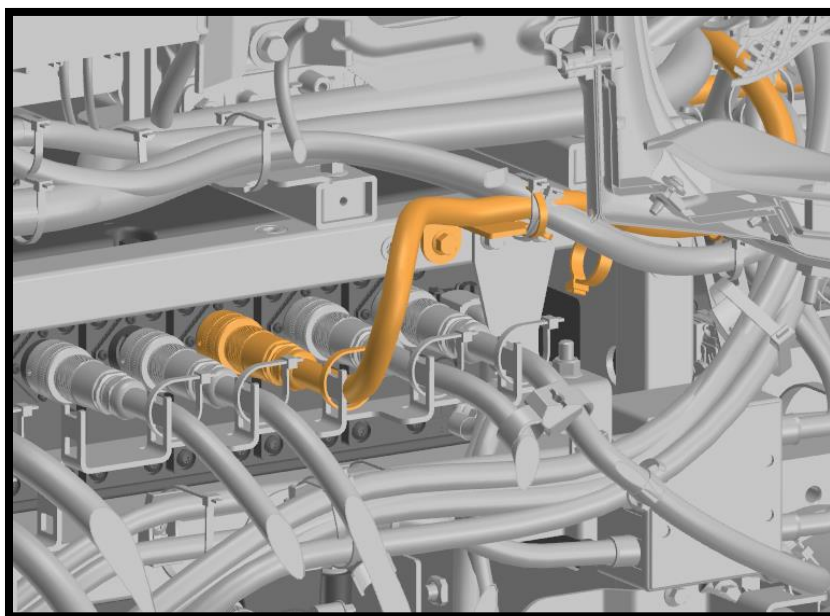


VNE Cabling and Cable Support Improvements

40. Install Cable.

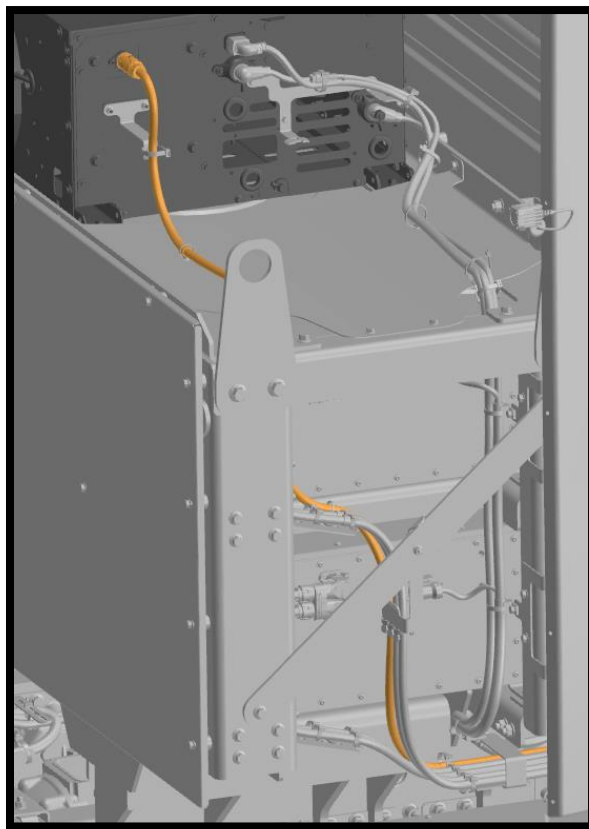


41. Connect the connector.

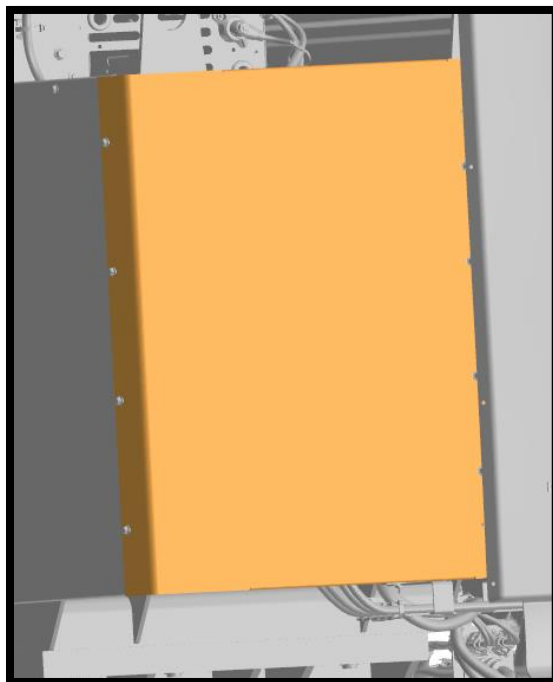


VNE Cabling and Cable Support Improvements

42. Install and connect the cable.

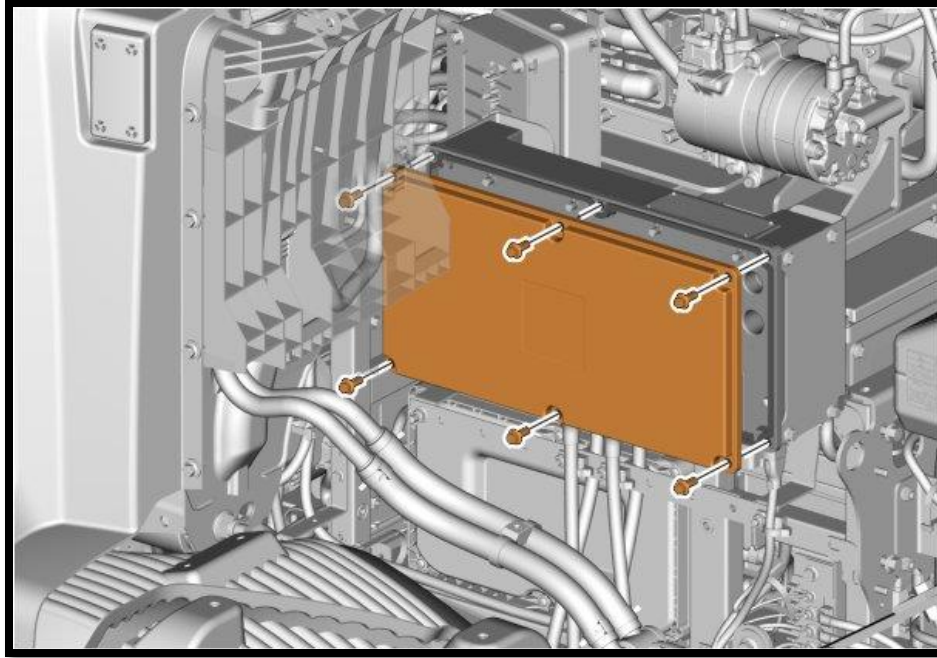


43. Install gantry cover.

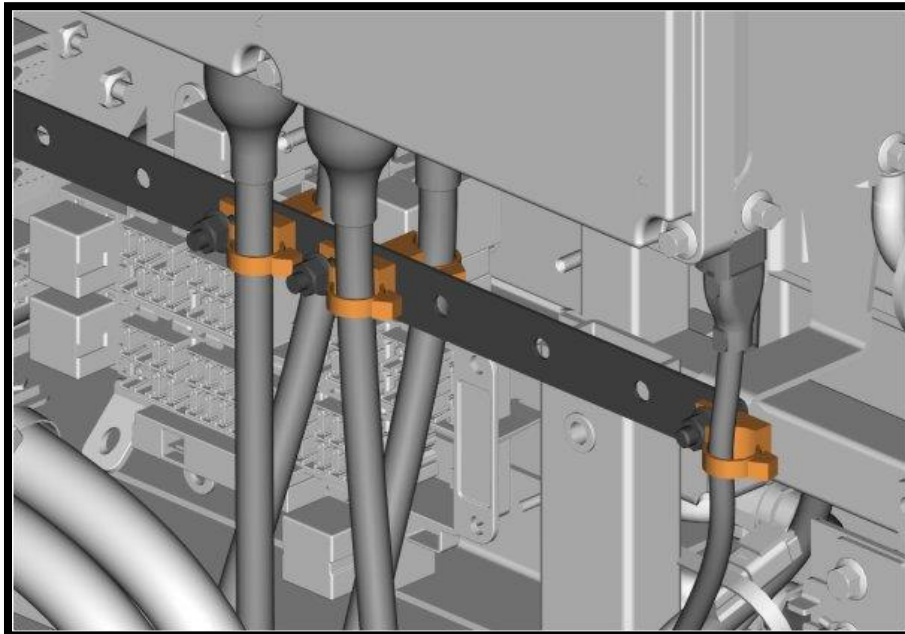


VNE Cabling and Cable Support Improvements

44. Remove cover.

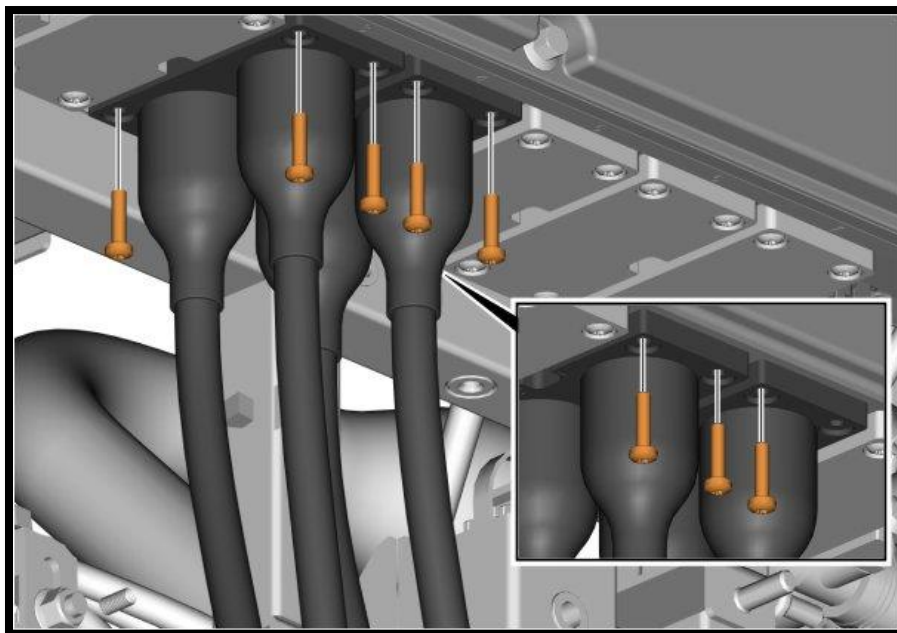


45. Remove cable ties.

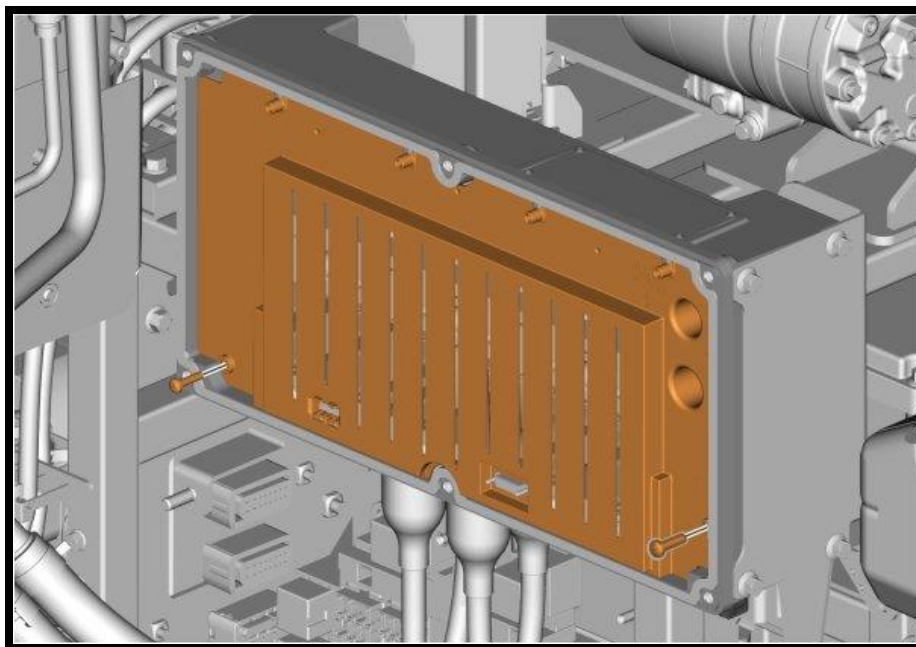


VNE Cabling and Cable Support Improvements

46. Remove screws.



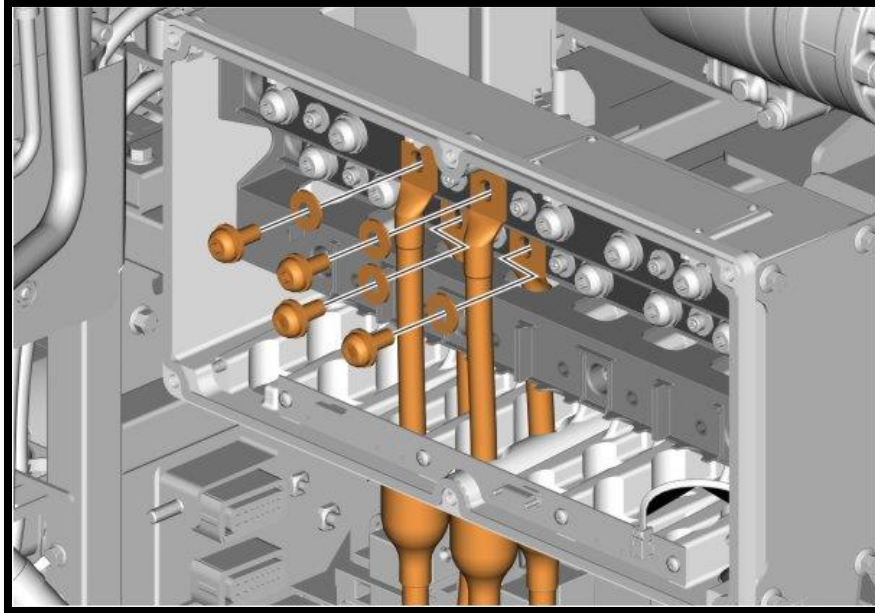
47. Remove screws and lid.



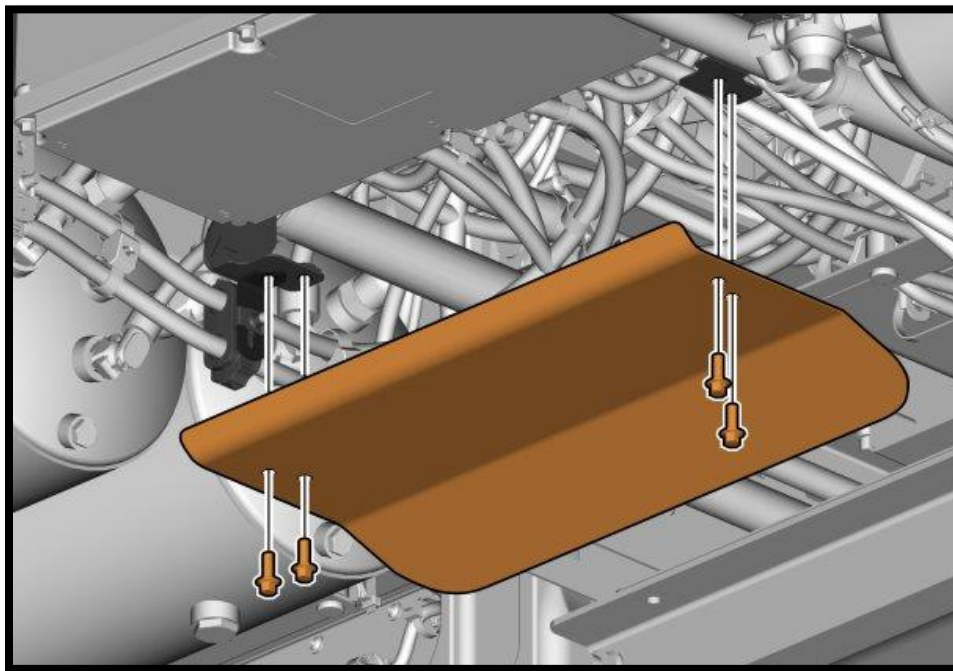
VNE Cabling and Cable Support Improvements

48. Remove the screws and washers.

49. Remove the cables.



50. Remove screws and plate.



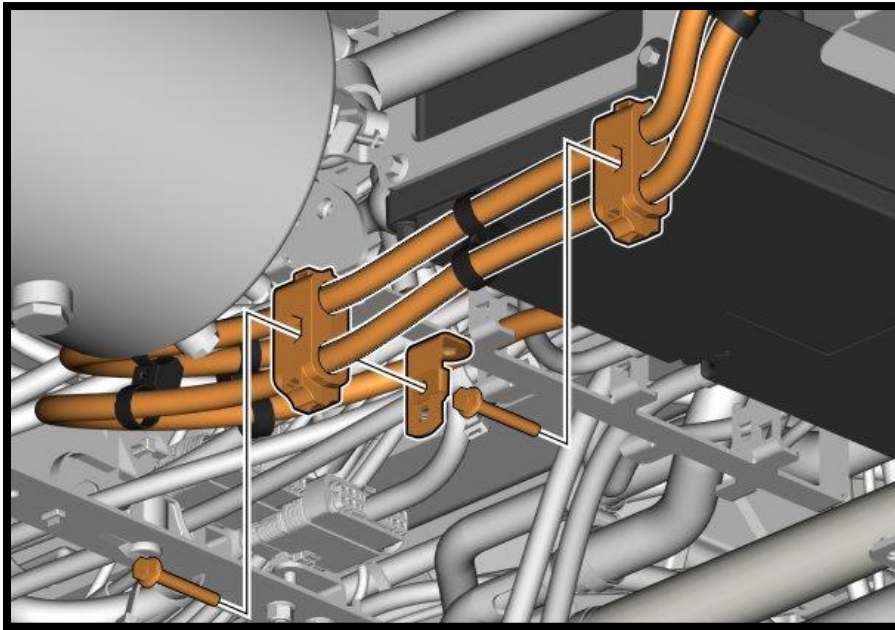
VNE Cabling and Cable Support Improvements

51. Remove screws.

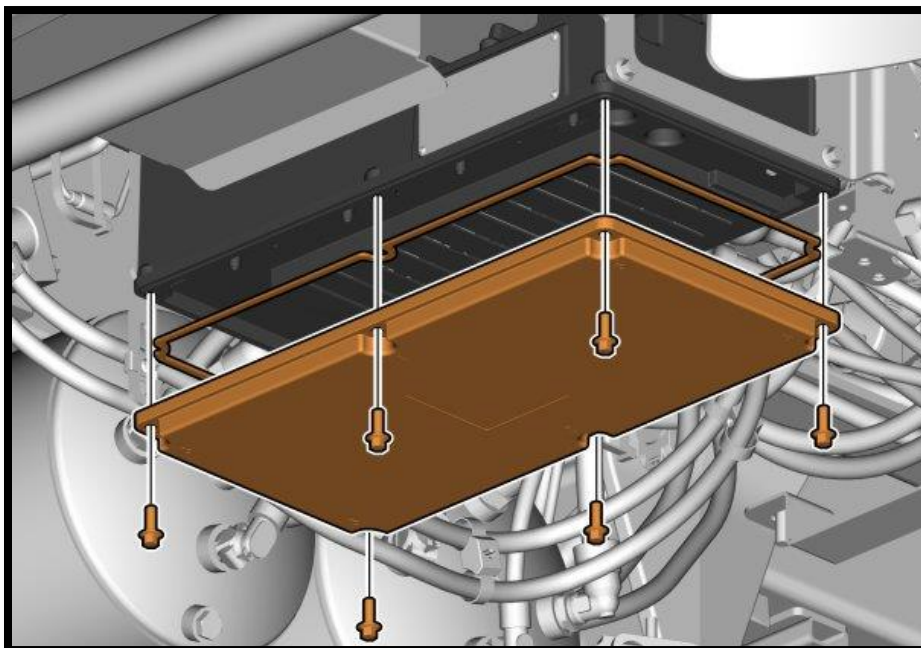
52. Remove the bracket.

53. Remove the clamps.

54. Move cables aside.

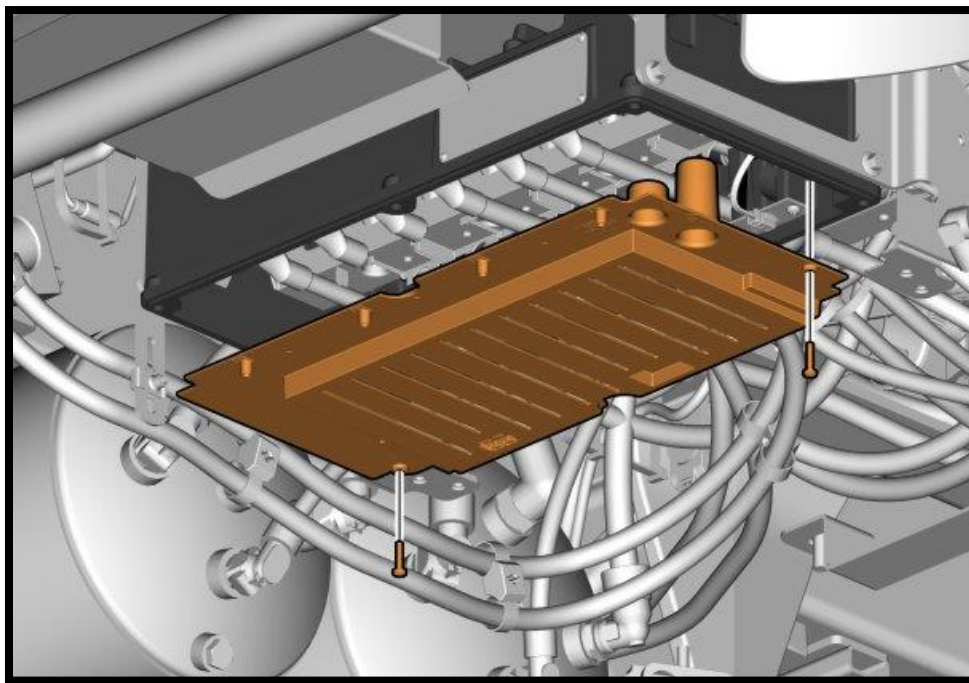


55. Remove screws, cover, and gasket.

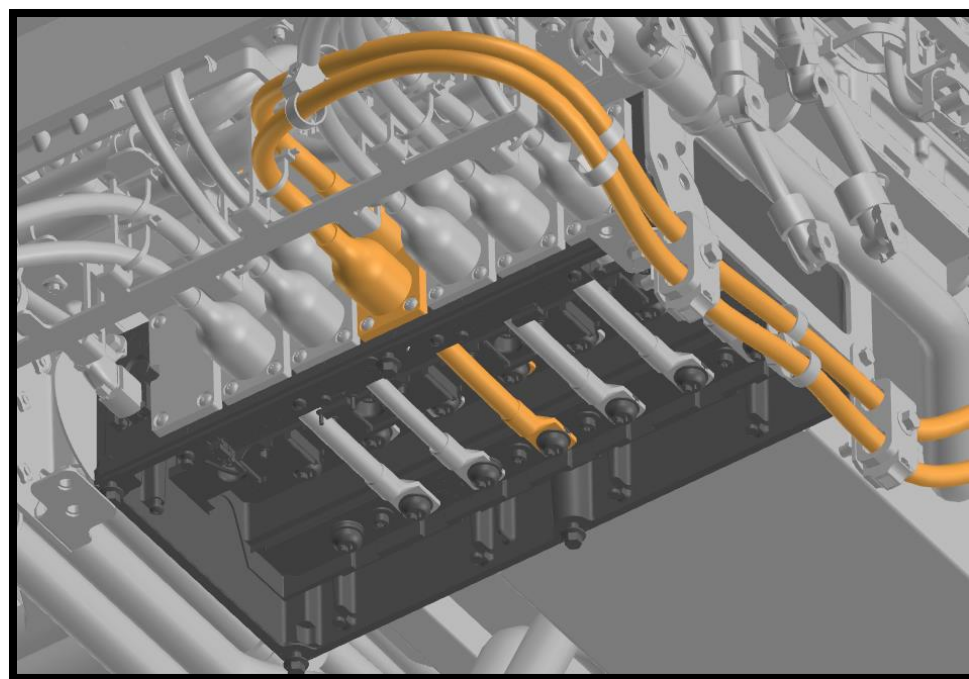


VNE Cabling and Cable Support Improvements

56. Remove screws and lid.



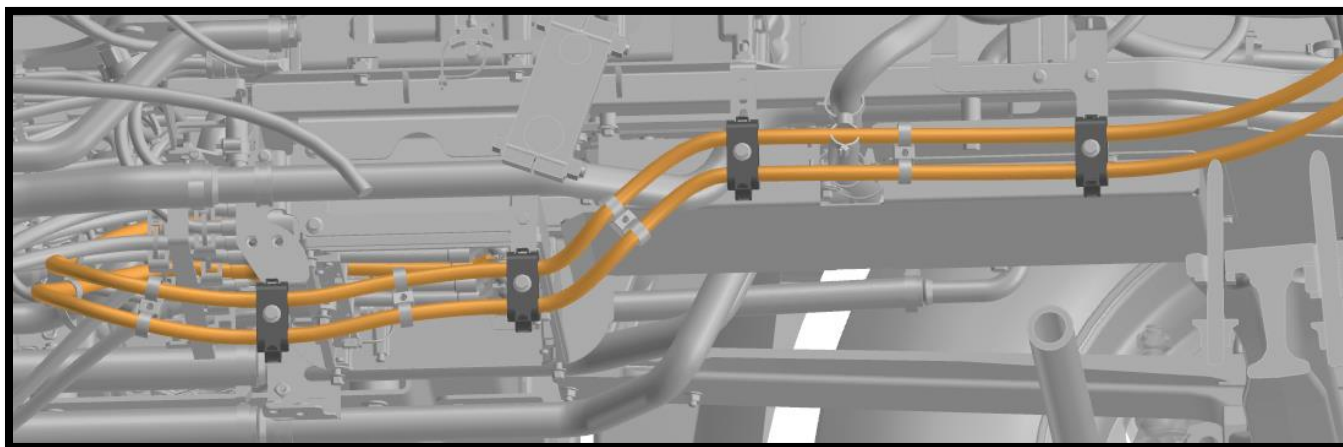
57. Remove the cables.



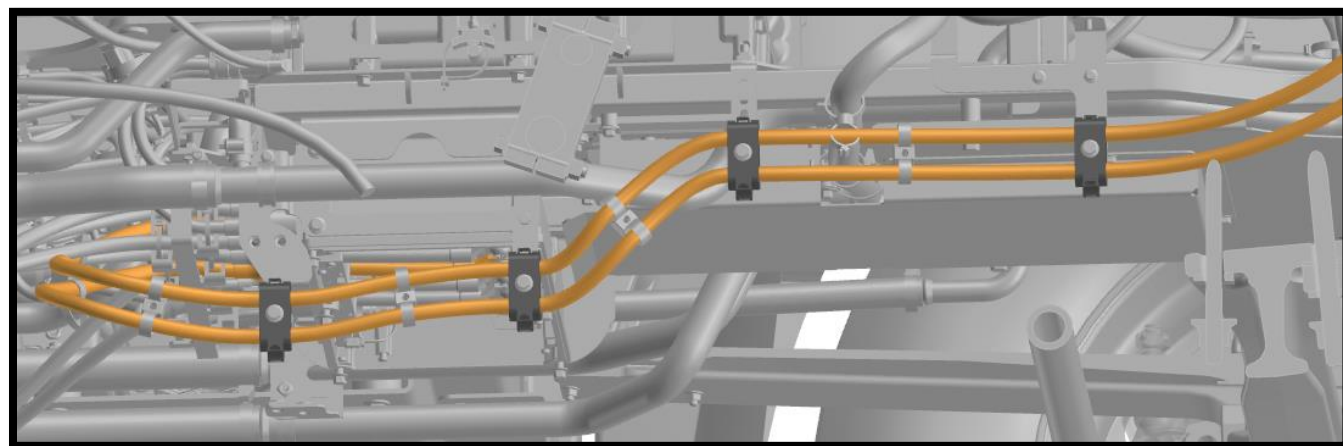
VNE Cabling and Cable Support Improvements

58. Remove the clamps.

59. Remove and discard the cables.



60. Install new cable **P/N 24186179**. Route and clip in the same manner as removed cable.



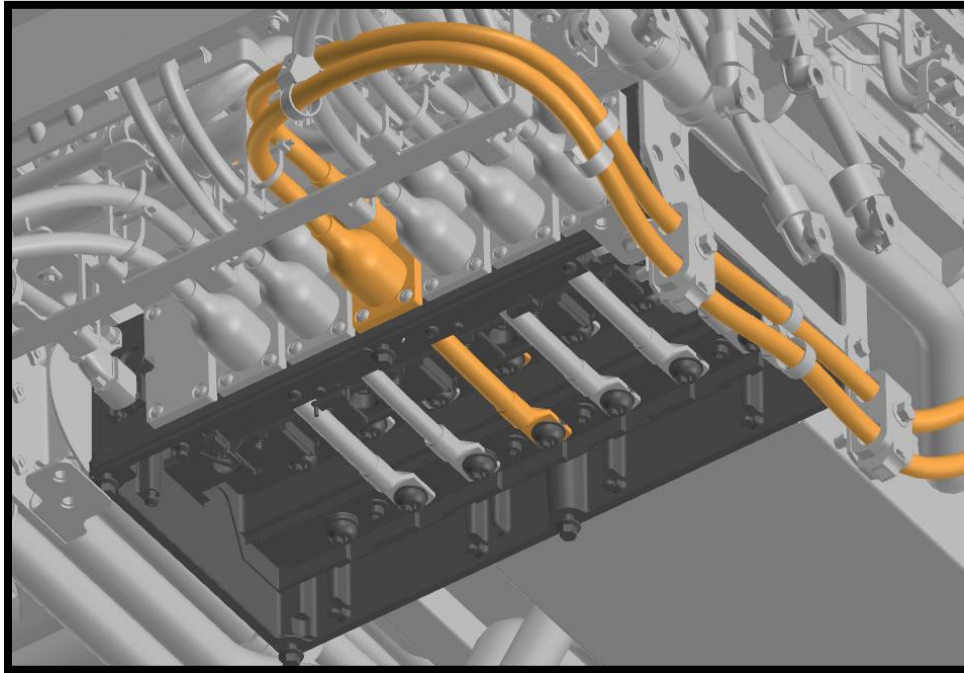
VNE Cabling and Cable Support Improvements

61. Install cables and screws.

Tightening torque

HCC (High-Current Connection) cable terminal, screw

40 ±6 Nm (30 ±4 lb_r·ft)

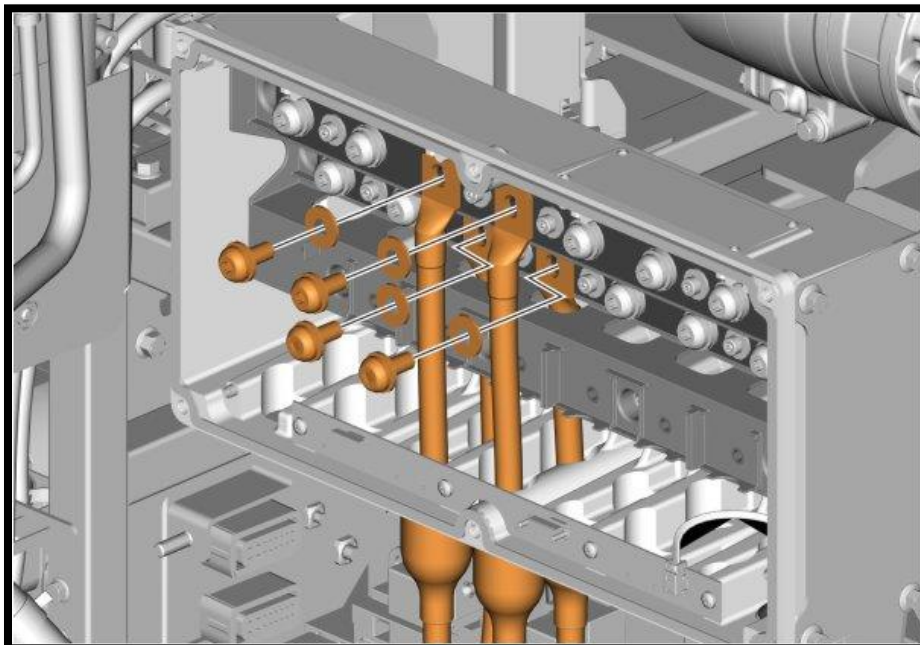


62. Install cables and screws.

Tightening torque

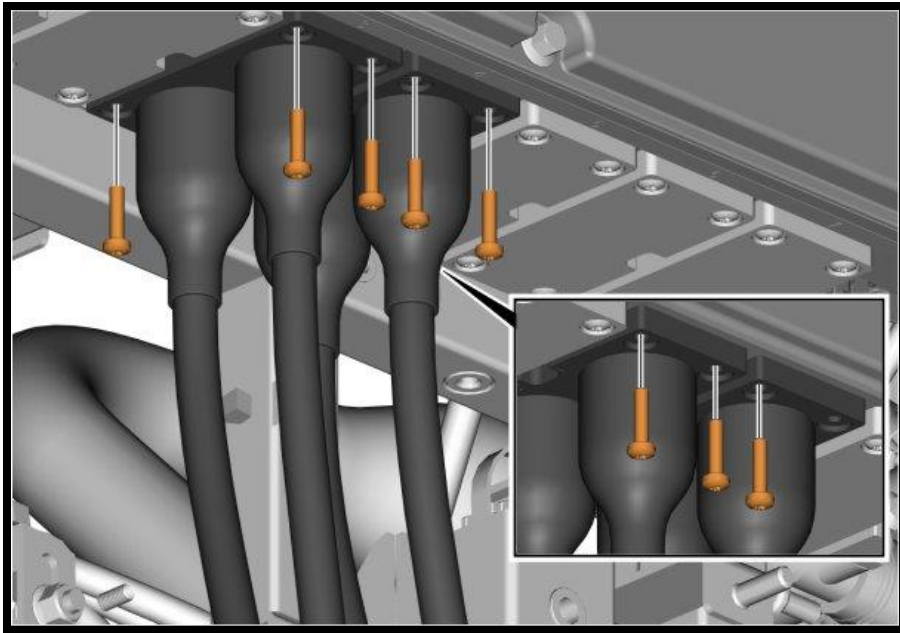
HCC (High-Current Connection) cable terminal, screw

40 ±6 Nm (30 ±4 lb_r·ft)

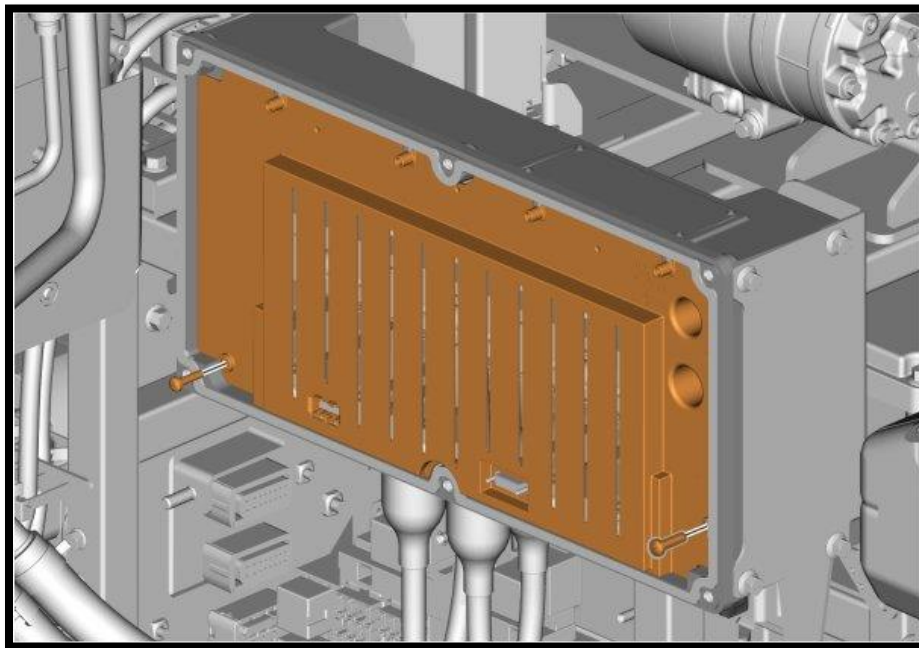


VNE Cabling and Cable Support Improvements

63. Install screws.



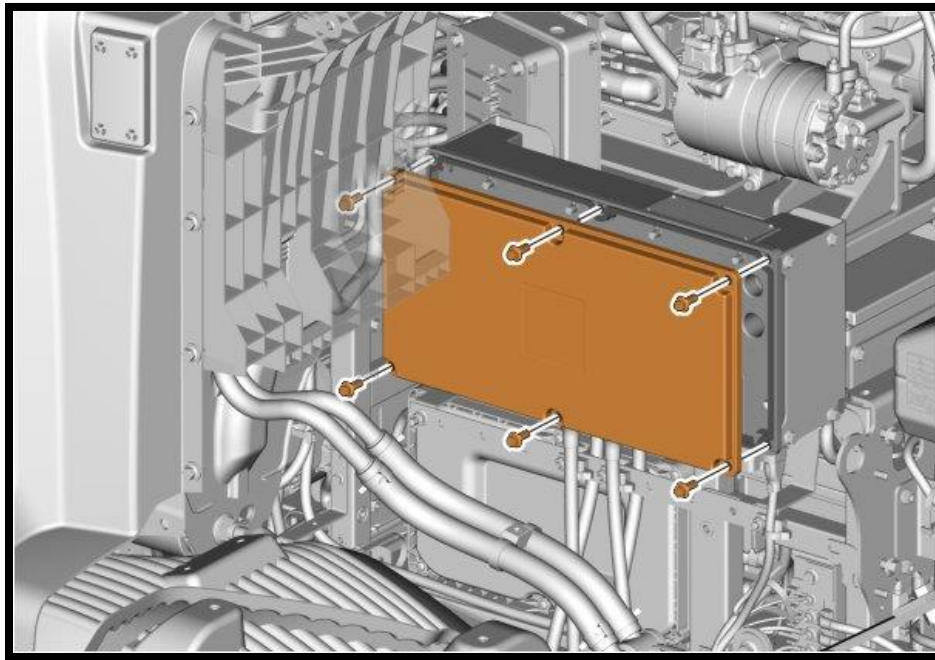
64. Install lid and screws.



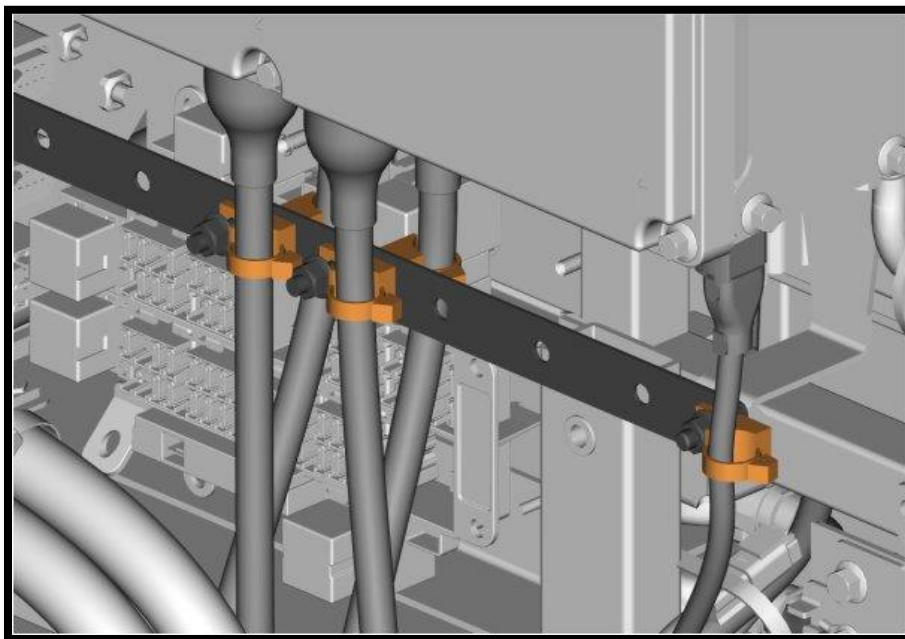
VNE Cabling and Cable Support Improvements

65. Install cover.

Tightening torque	
Junction box, cover, screw	Tightening sequence: 1–6
	24 ±4 Nm (18 ±3 lb _r ·ft)

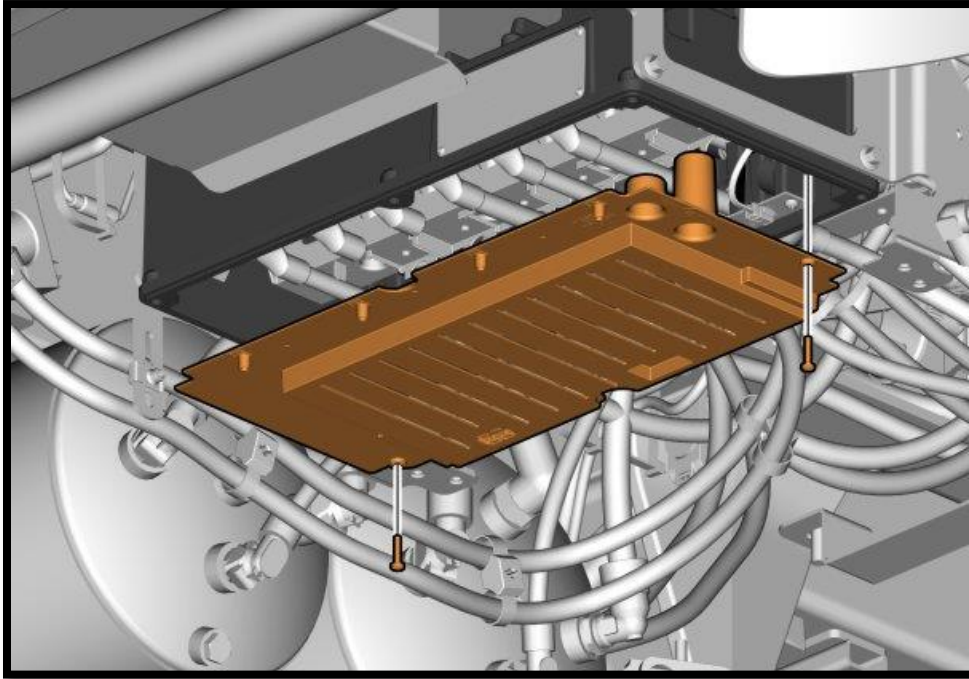


66. Install cable ties.



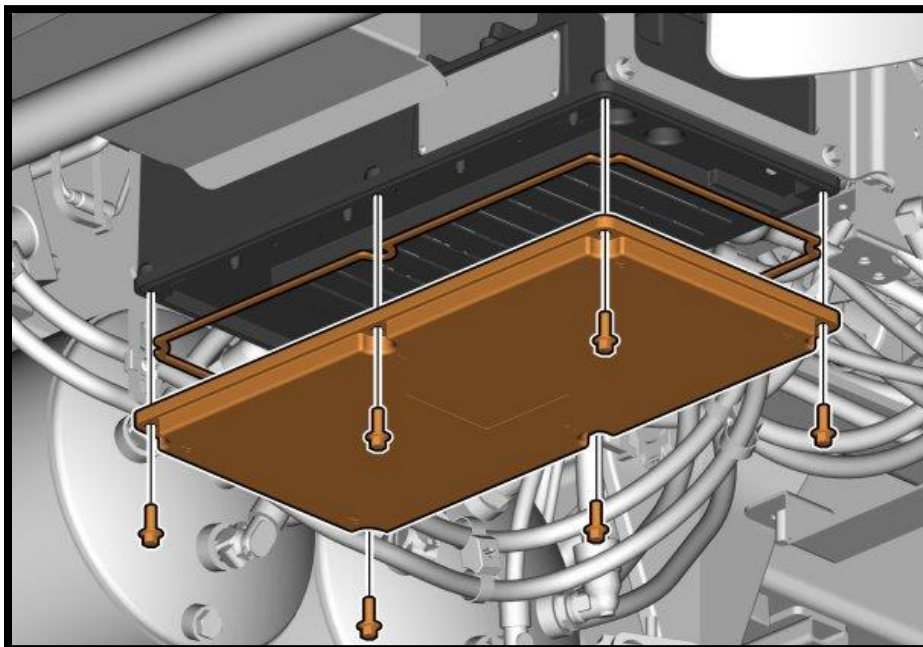
VNE Cabling and Cable Support Improvements

67. Install lid and screws.



68. Install cover, gasket, and screws.

Tightening torque	
Junction box, cover, screw	Tightening sequence: 1–6
	24 ±4 Nm (18 ±3 lb _r ·ft)



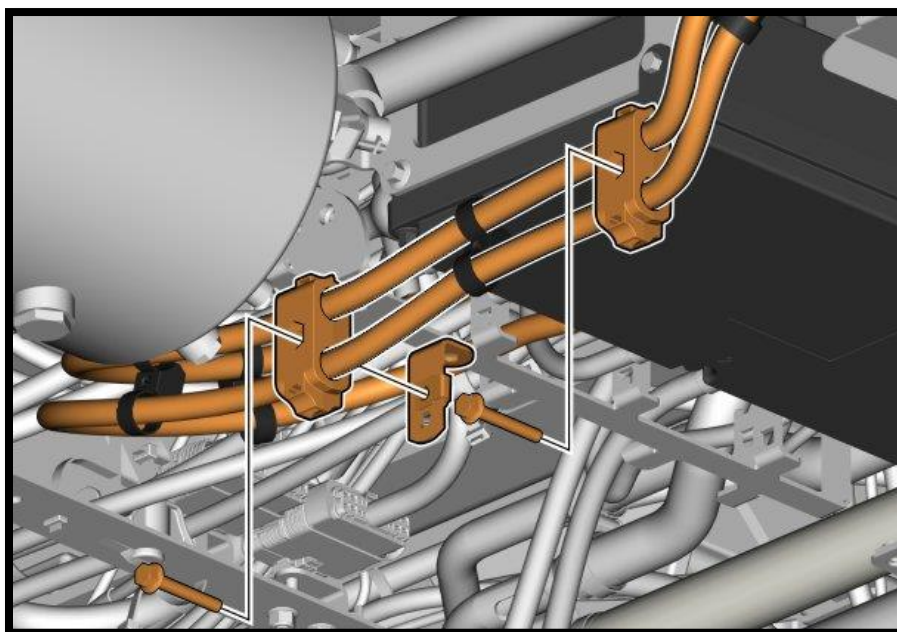
VNE Cabling and Cable Support Improvements

69. Position cables.

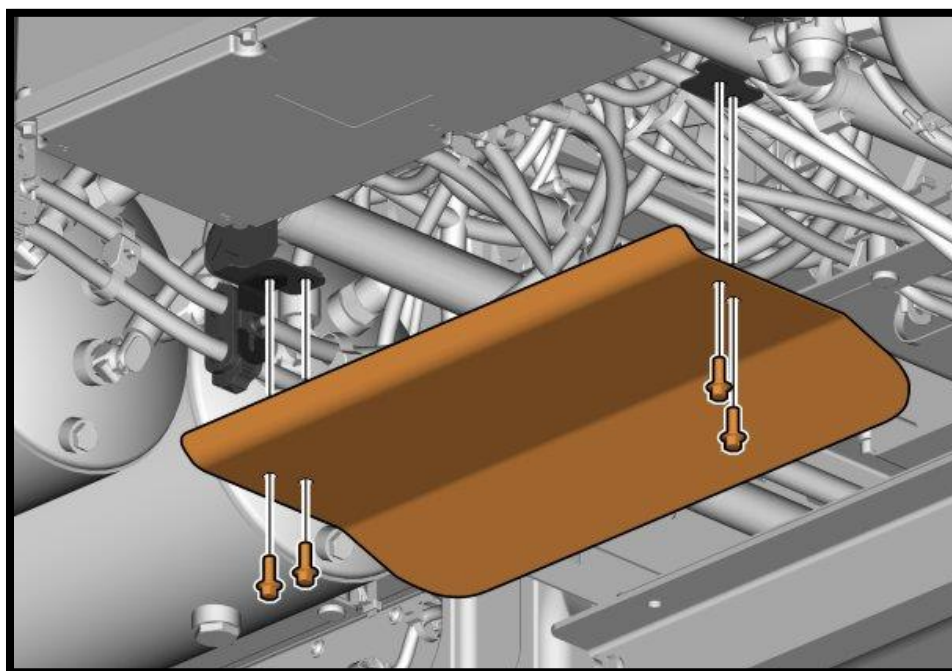
70. Install the bracket.

71. Install the clamps.

72. Install the screws.



73. Install plate and screws.

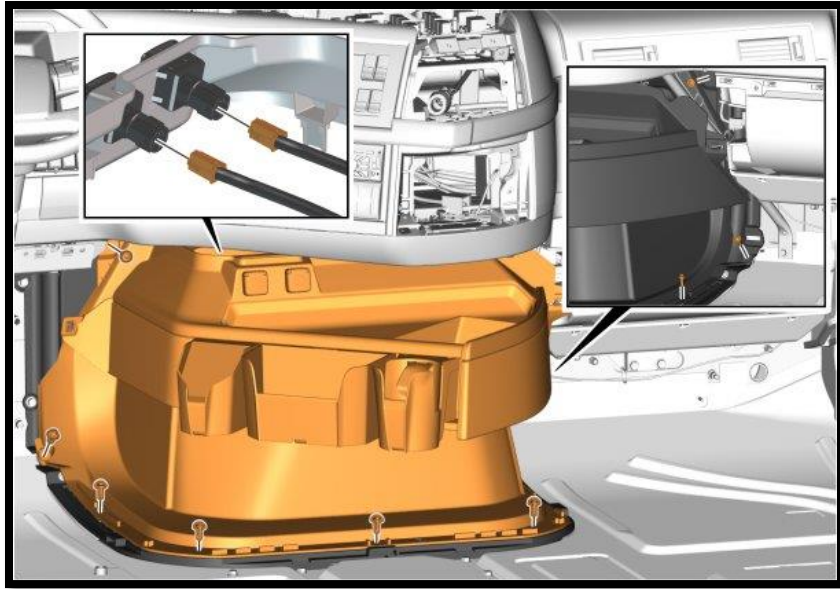


VNE Cabling and Cable Support Improvements

74. Connect the connectors.

75. Install the engine cover.

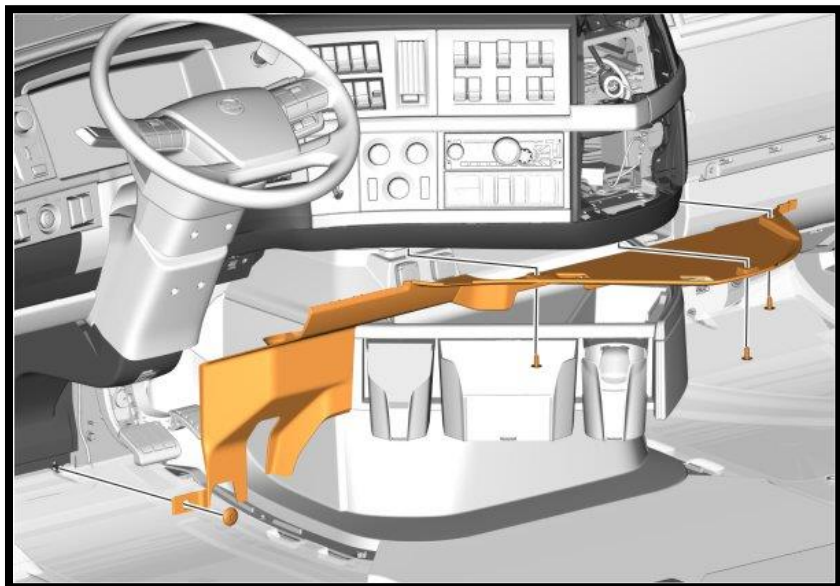
76. Install the screws.



77. Install the panel.

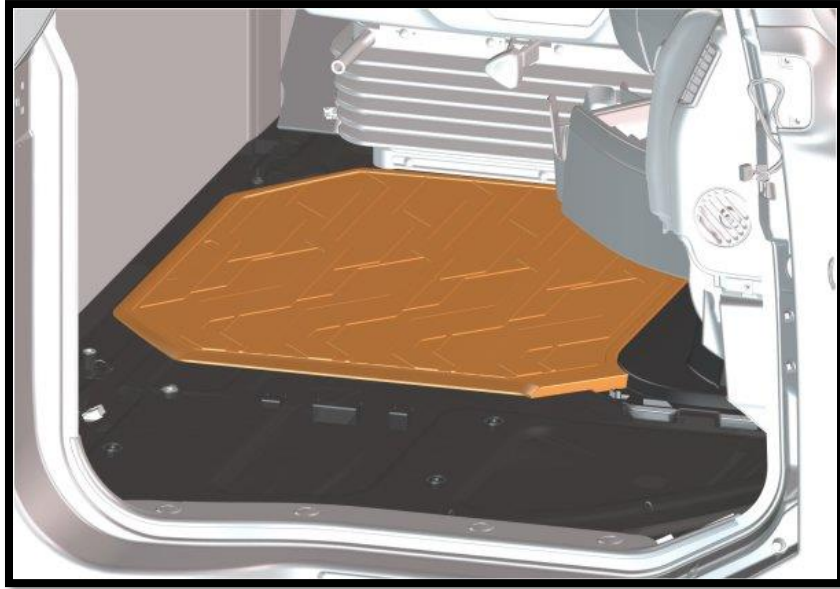
78. Install the plastic rivets.

79. Install the retainer.



VNE Cabling and Cable Support Improvements

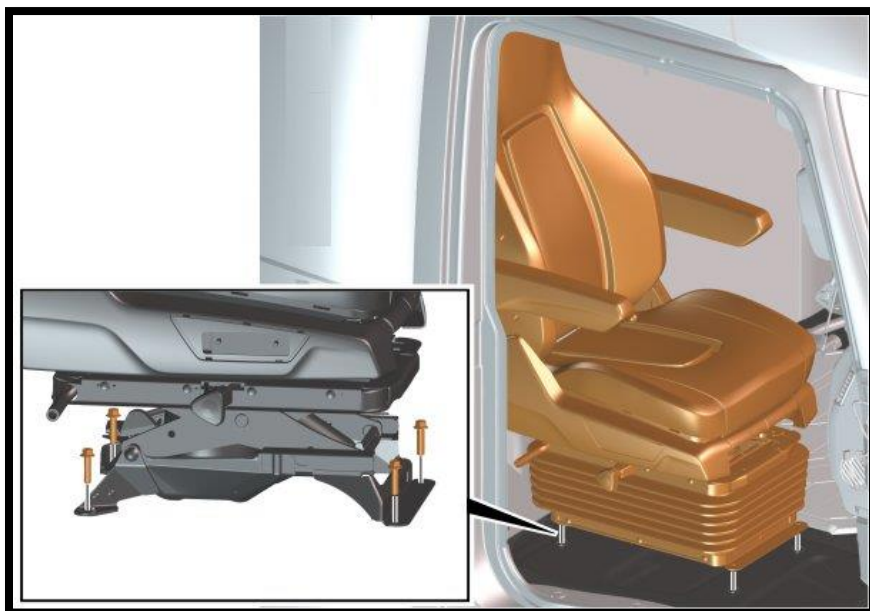
80. Install the floor mat.



81. Install the passenger seat.

82. Install and torque the screws.

Tightening torque	
Seat, screw	M10
	48 ±8 Nm (35 ±6 lbf·ft)



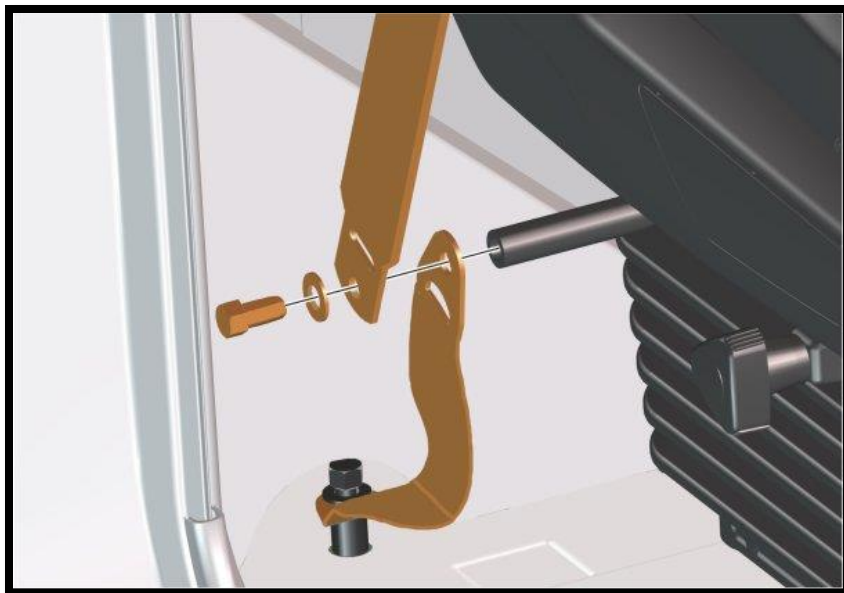
VNE Cabling and Cable Support Improvements

83. Install seat belts.

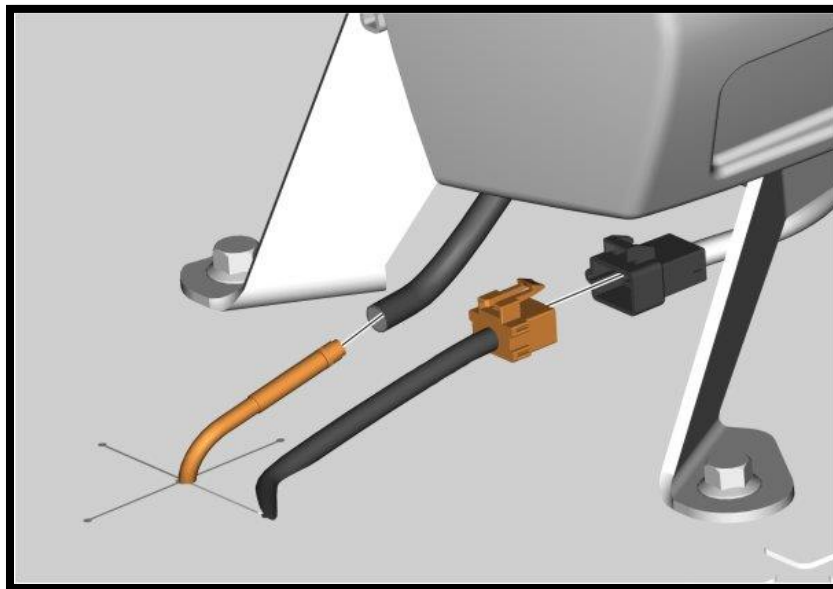
84. Install the washers and screw.

85. Torque the screw.

Tightening torque	
Seat belt, screw	M10
	64 ±3 Nm (47 ±2 lbf·ft)



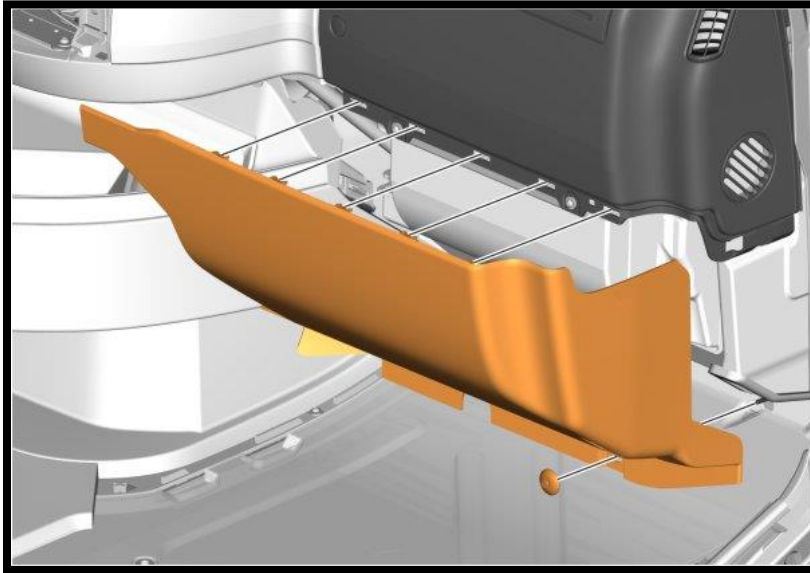
86. Connect the air pipe and connector.



VNE Cabling and Cable Support Improvements

87. Install the panel.

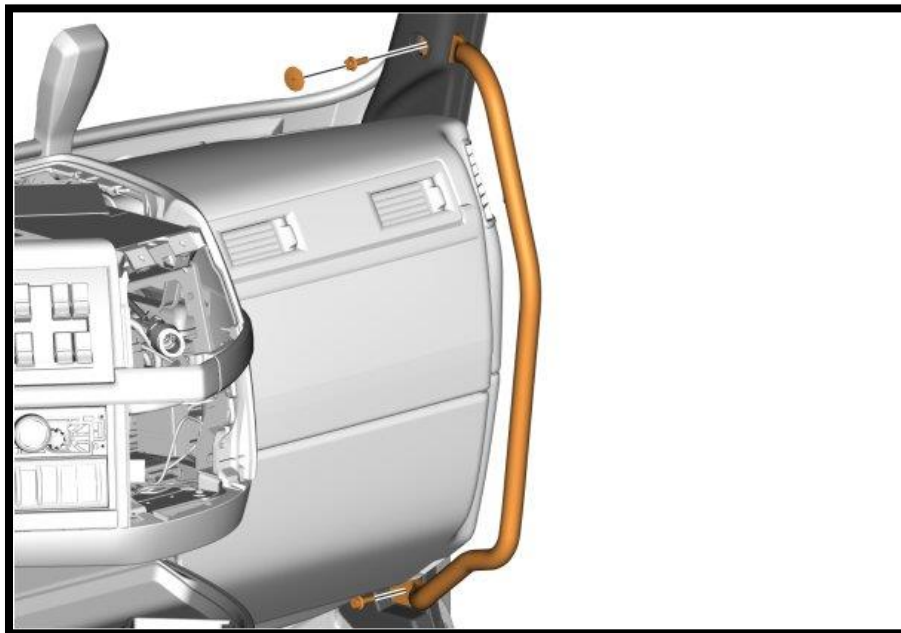
88. Install the retainer.



89. Install the handle.

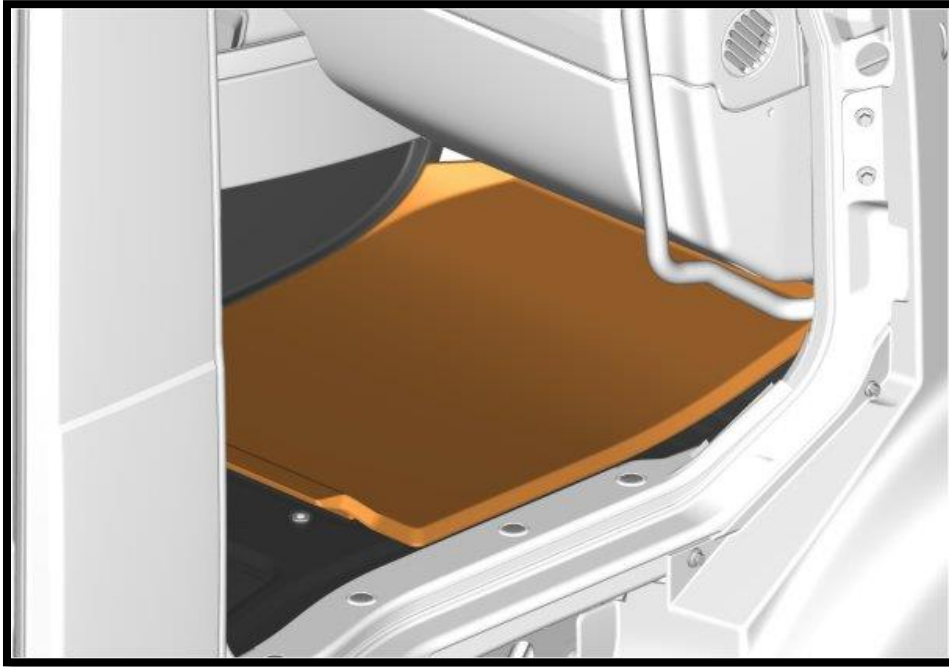
90. Install the screws and torque.

Tightening torque	
Screw	M8
	24 ±4 Nm (18 ±3 lb _f ·ft)

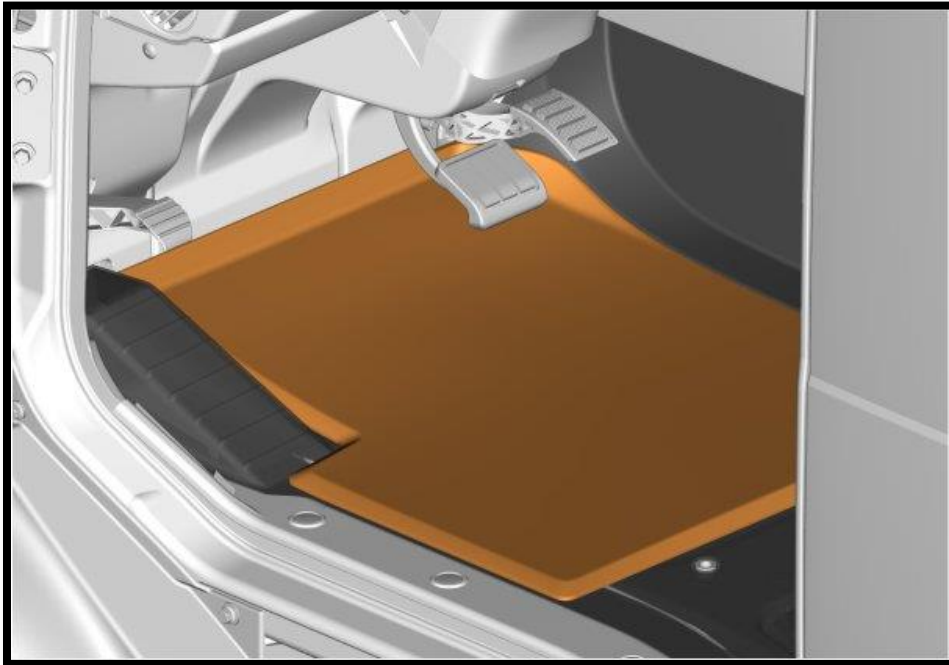


VNE Cabling and Cable Support Improvements

91. Install the passenger floor mat.



92. Install the driver floor mat.



93. Follow steps 45 through 49 in Impact operation **3718-03-02-02 "Power Cable, Electric Motor Drive (EMD) to Electric Motor (EM), Replacement"** to complete the truck reassembly and to commission the traction voltage system.

94. Return the truck to service.