

Aftertreatment Diesel Exhaust Fluid (DEF) Tank, Level Sensor, Replacement

V-258-002

(Aug 2023)

Valid for

All Cummins powered Volvo Trucks USA 2013 to USA 21 Using the 70-liter DEF tank

Case description

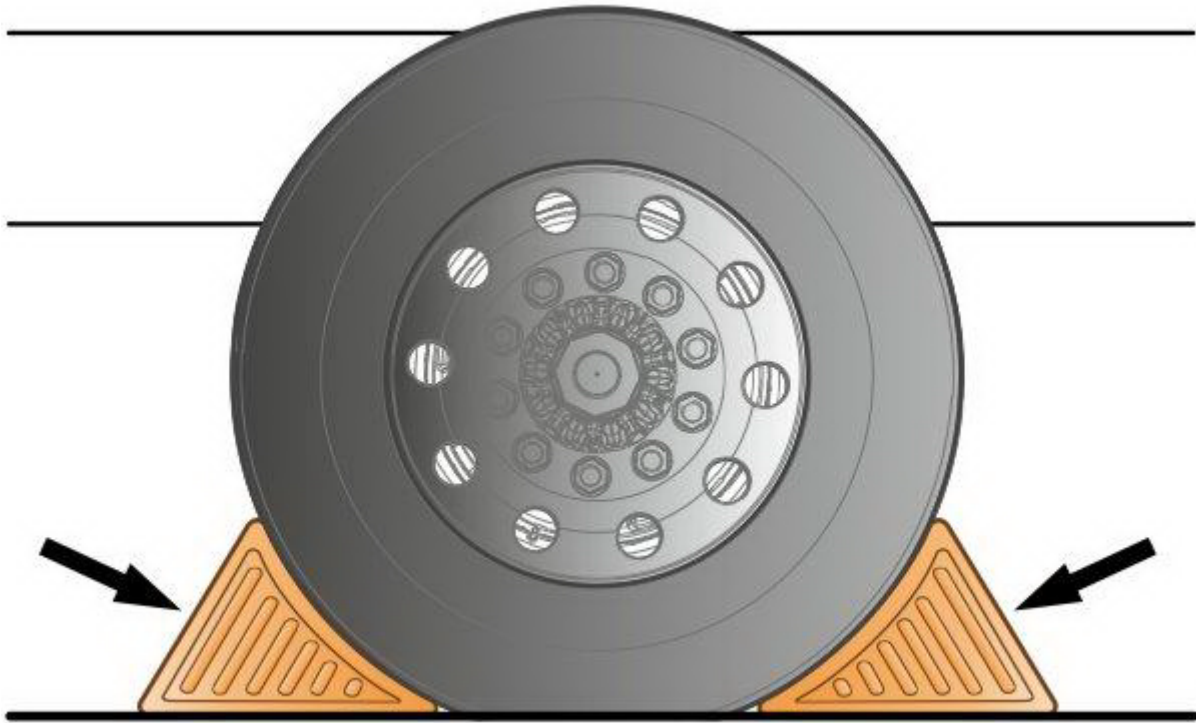
Volvo trucks now offer an updated UQLS to improve functionality and reliability. The new sensor will be a direct replace except for a jumper harness used to plug the new sensor to the existing chassis harness connector. Follow the instructions below to install the new UQLS and its jumper harness.

Parts

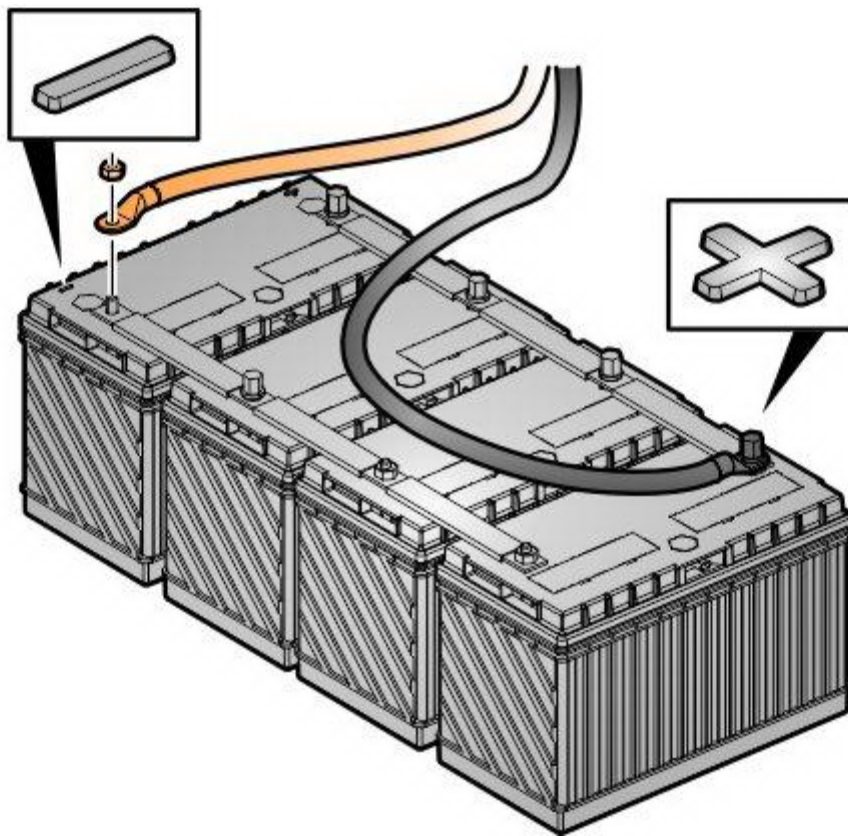
Part Number	Description	Quantity
24135997	UQLS Sensor	1
24399920	Jumper Harness	1
23933319	Bracket	1

Repair Procedure

1. Park the vehicle on a level surface.
2. Apply the parking brake.
3. Place the gear selector in neutral.
4. Install the wheel chocks.

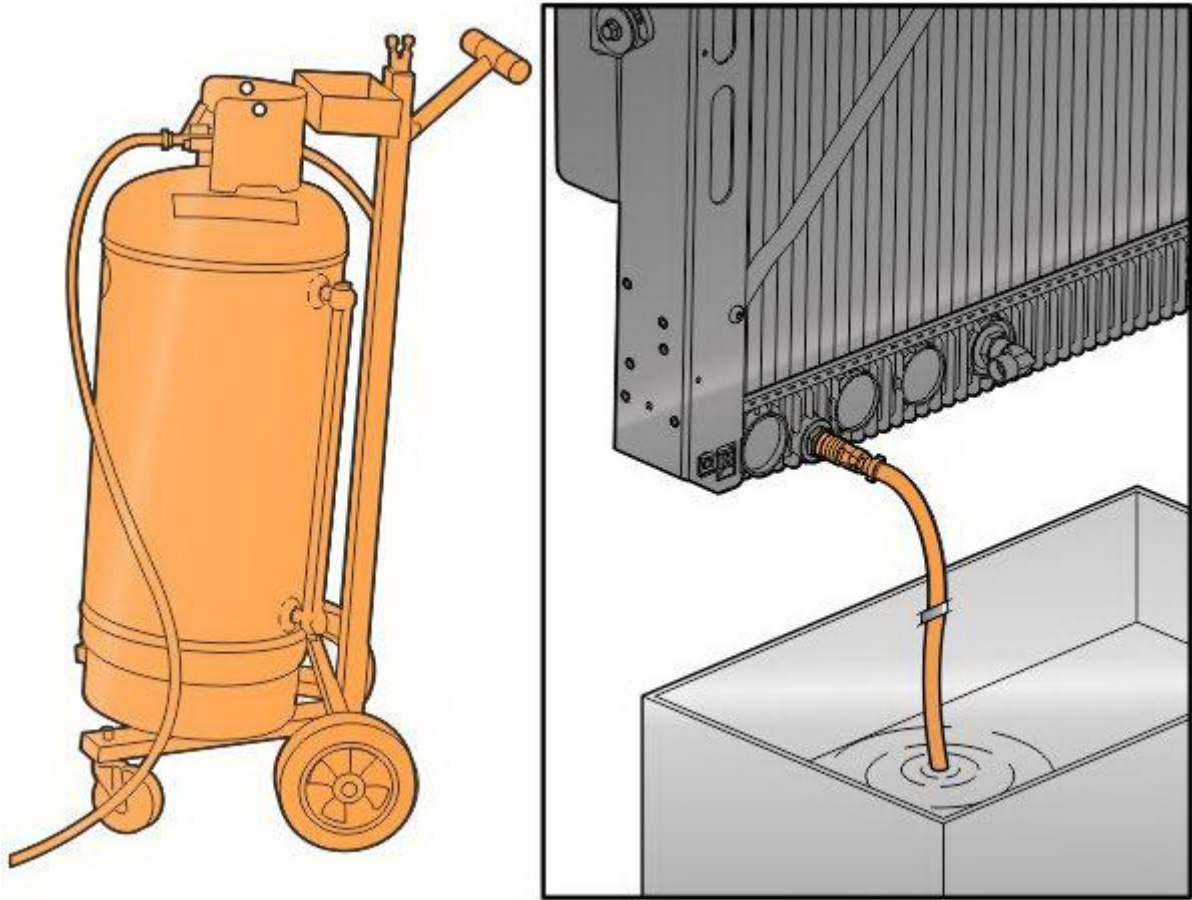


5. Disconnect the cable from the negative terminal.

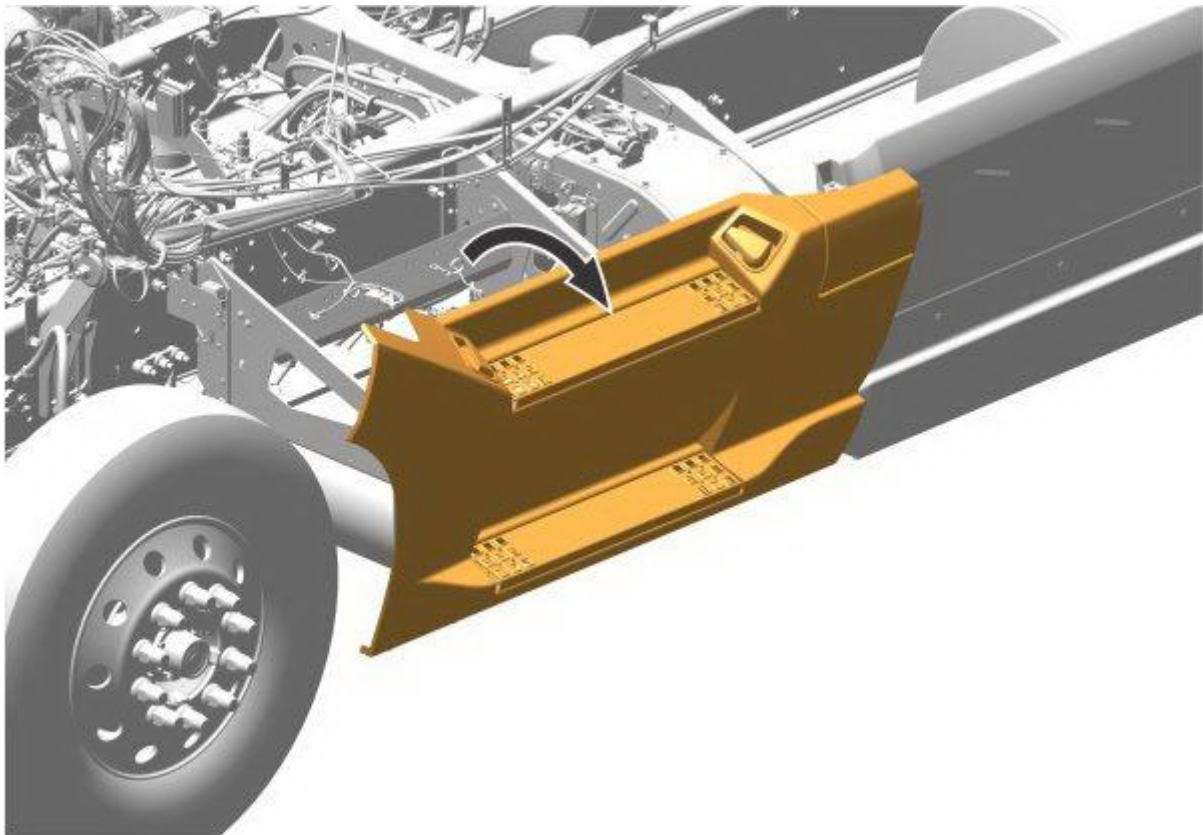


6. Unlatch and raise the hood.

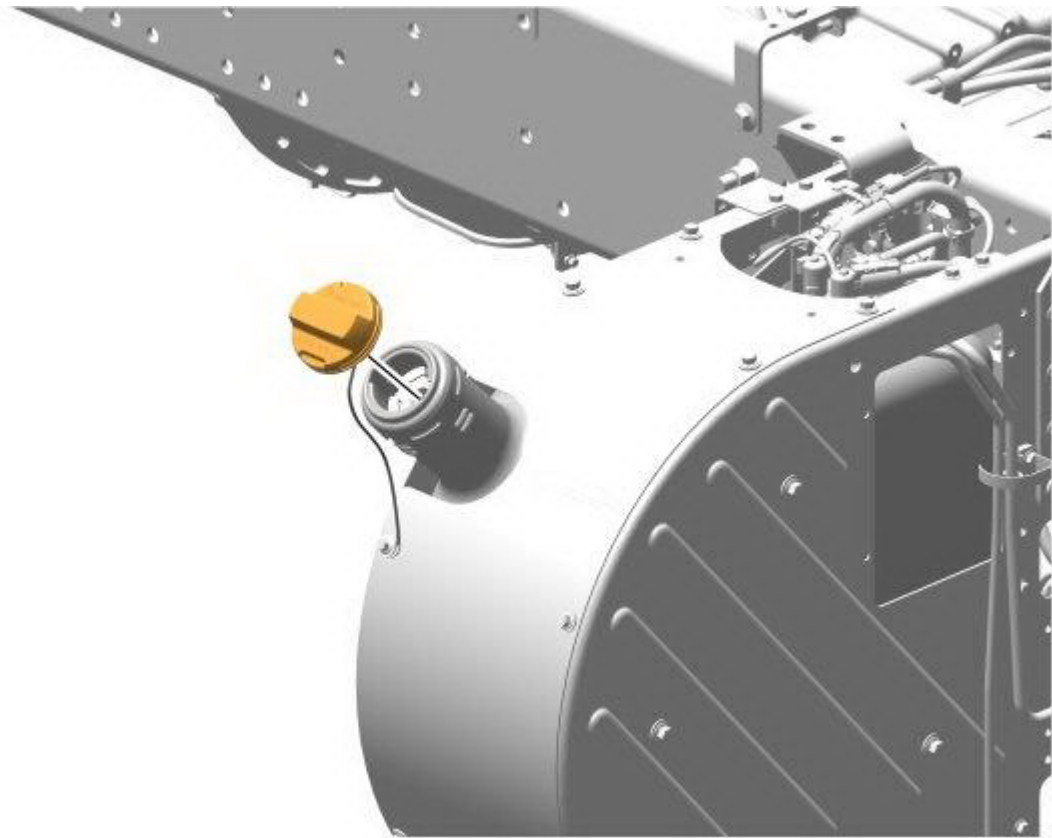
7. Drain the coolant.



8. Unlatch and remove the fairing.

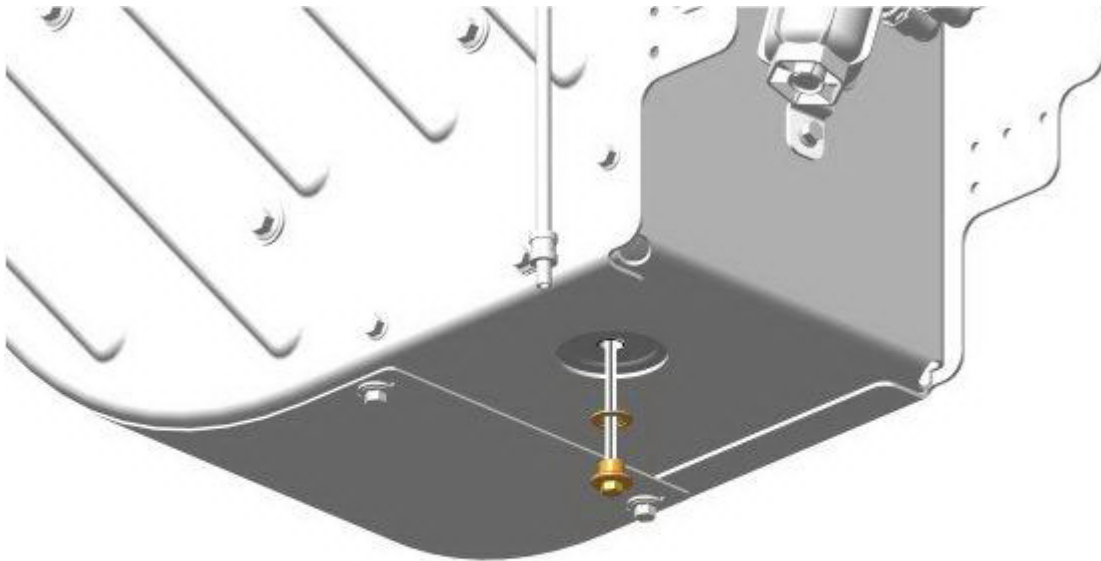


9. Remove the filler cap.



10. Remove the drain plug.

11. Drain the reagent (Diesel Exhaust Fluid).



12. Once the fluid is drained, replace the plug and torque to specifications.

Tightening torque

Tank, reagent (Diesel Exhaust Fluid), drain plug
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24 ± 4 Nm

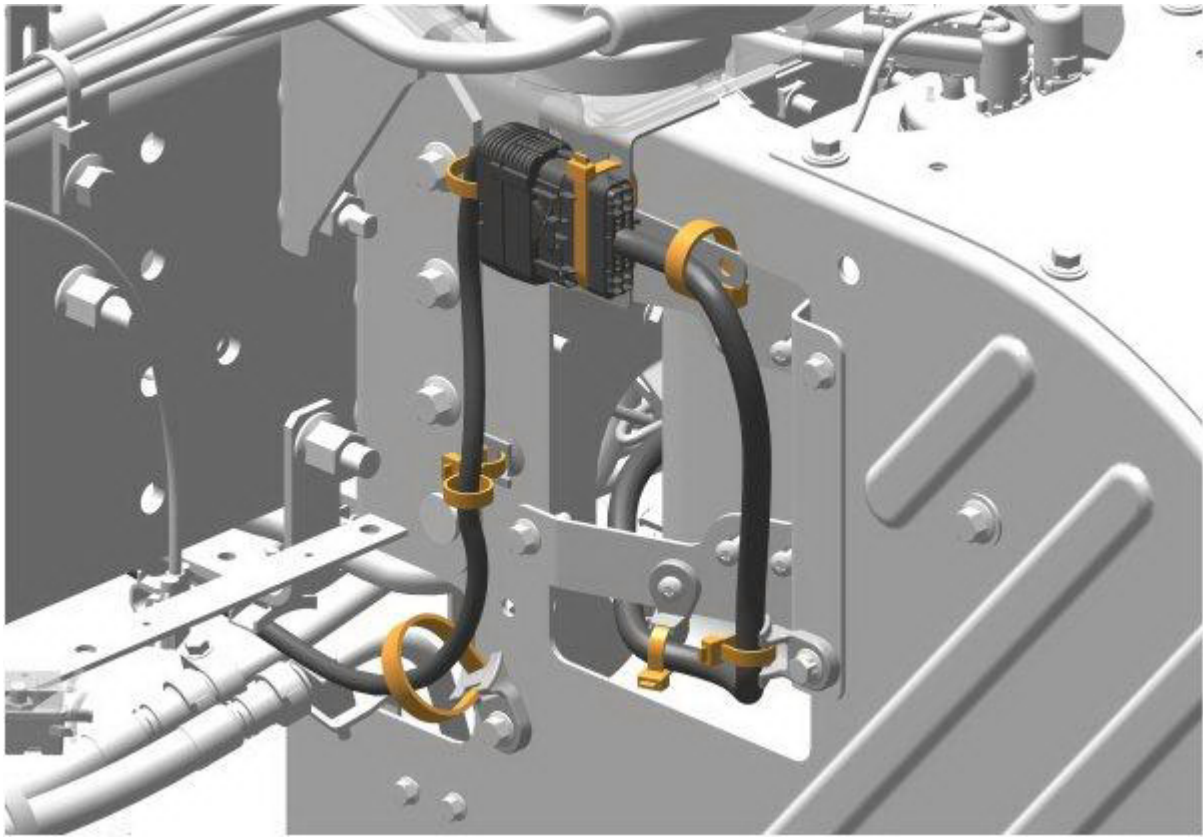
13. Install the filler cap.



14. Remove the cable ties.

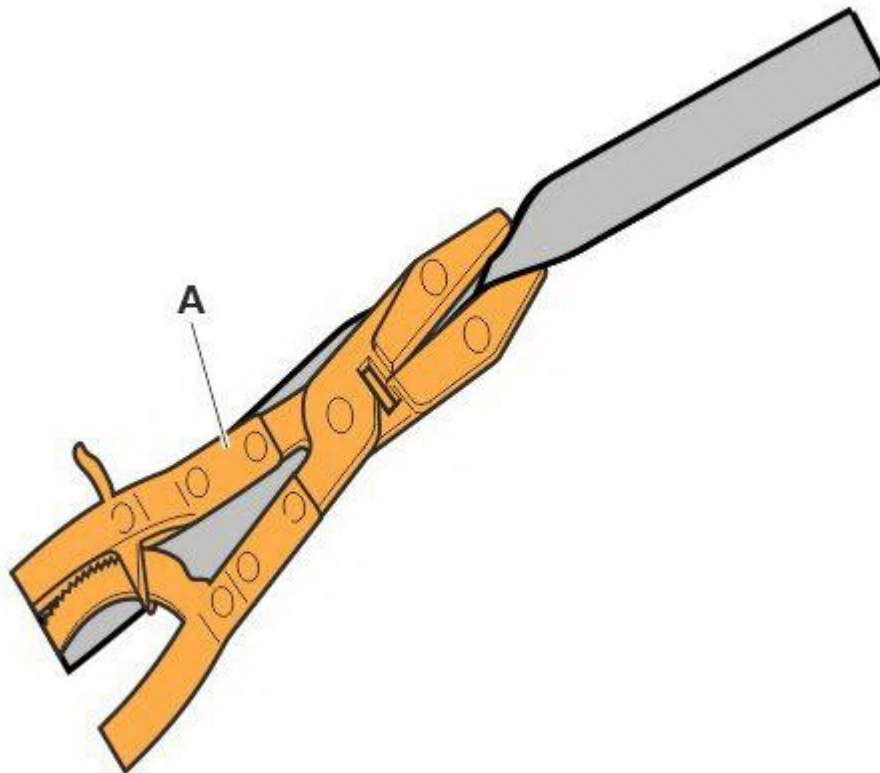
15. Disconnect the connectors.

16. Move aside the cable harness.

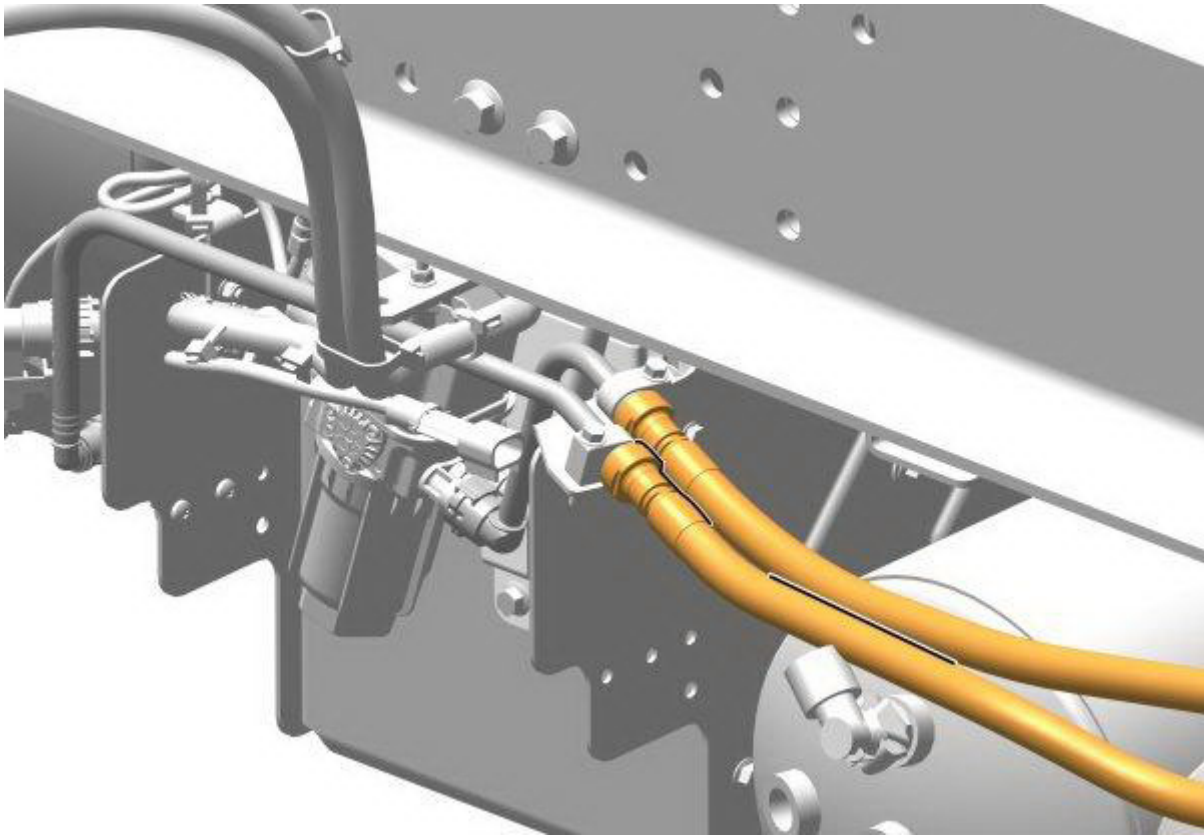


17. Install the tool (A) to each coolant hose.

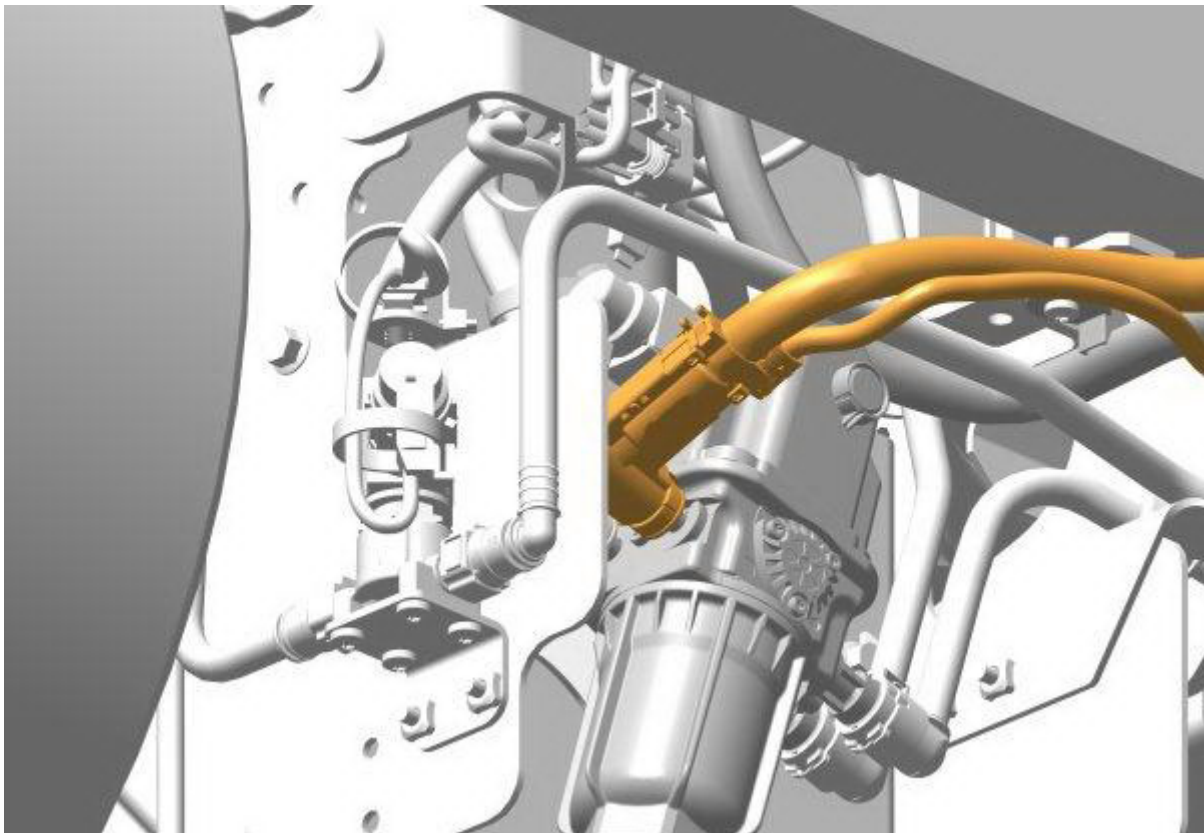
Required material		
Pliers	1158957	2 pcs



18. Disconnect the coolant hoses and move aside.

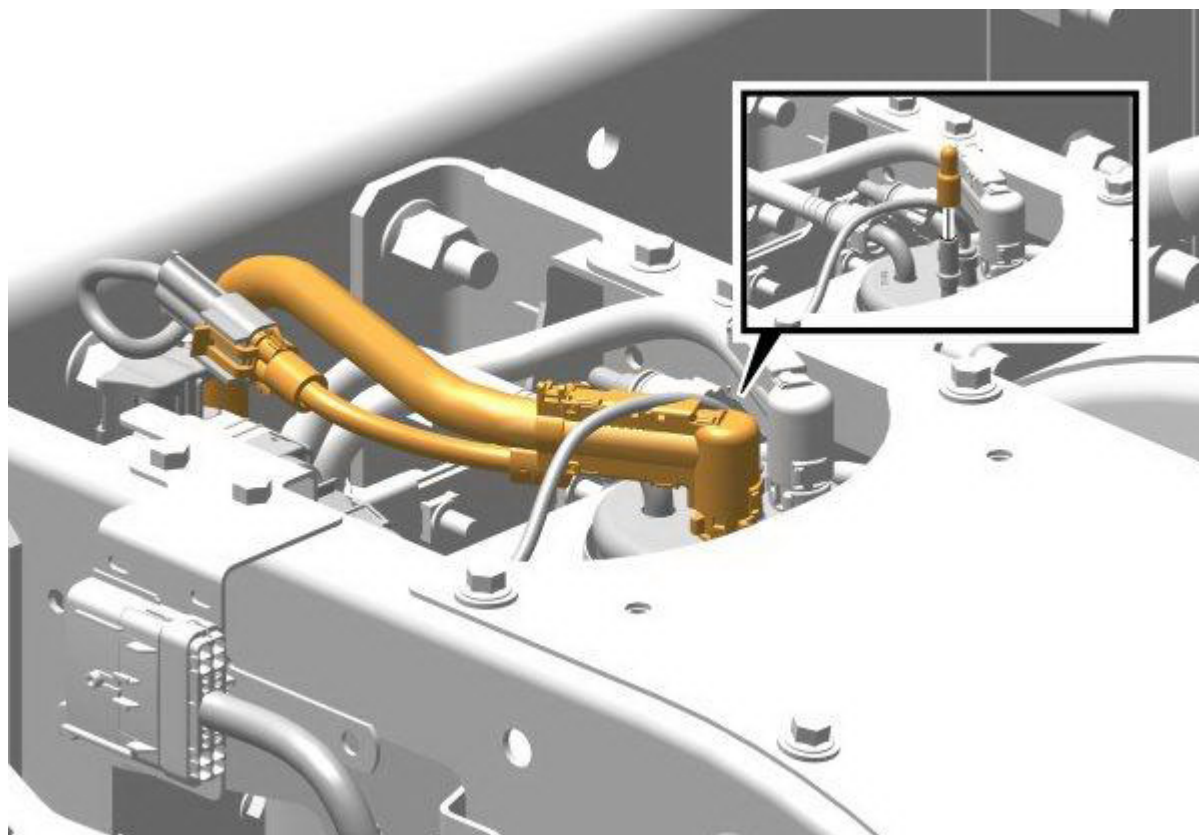


19. Protect the hoses with the plastic bags.
20. Remove the cable ties.
21. Disconnect the connector.
22. Move aside the hose.



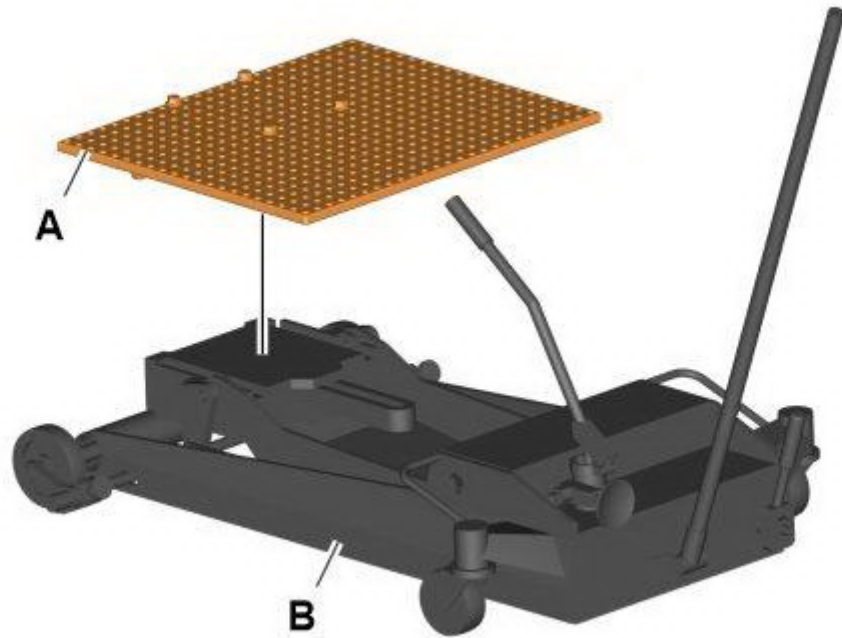
23. Protect the hose with a bag.

24. Remove the cable ties and disconnect the connector.

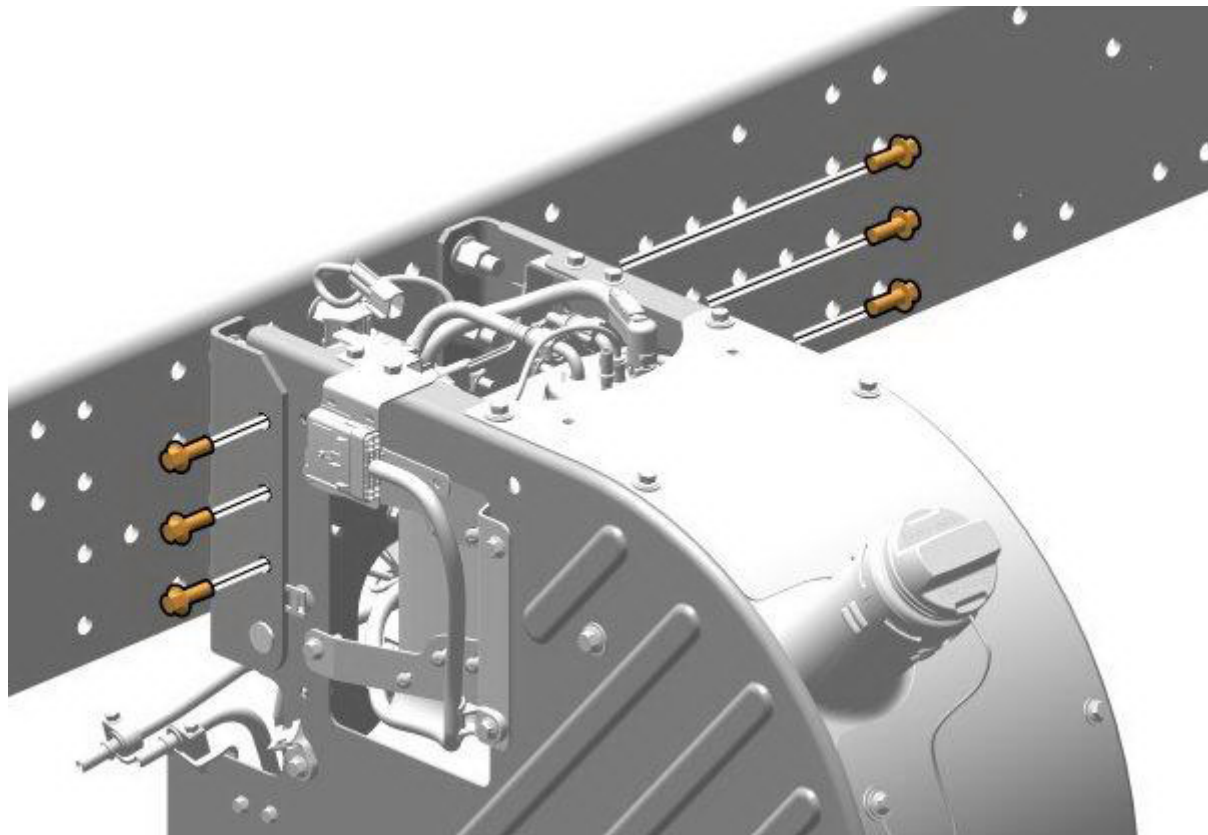


25. Install the plate **(A)** on the trolley jack **(B)**.

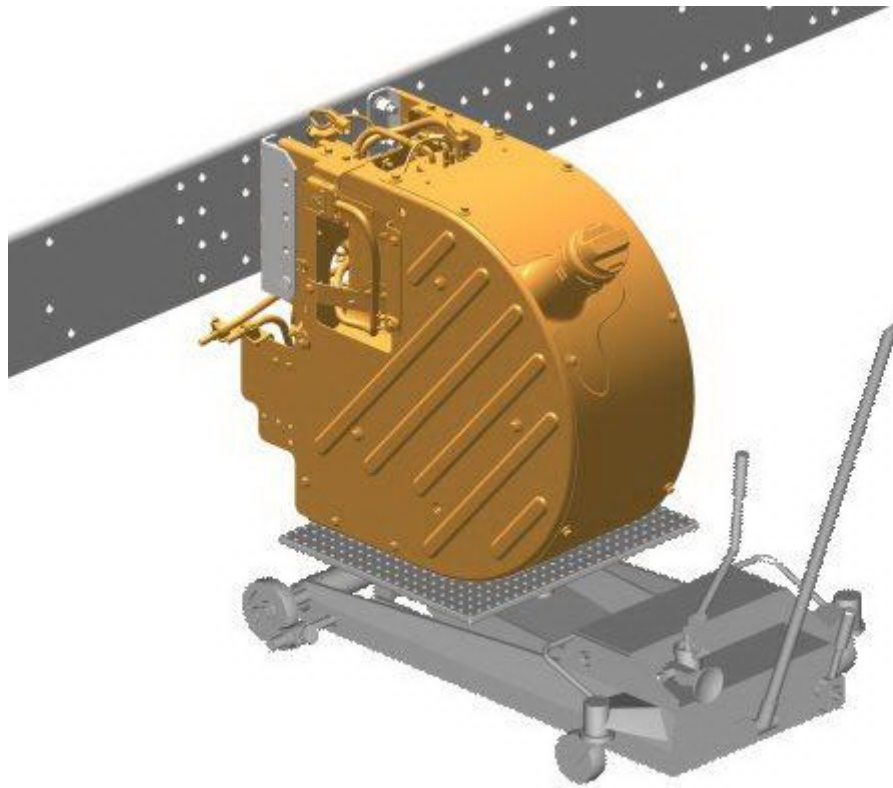
Required material		
A	PLATE	88800229
B	TROLLEY_JACK	9999954



26. Remove the screws.

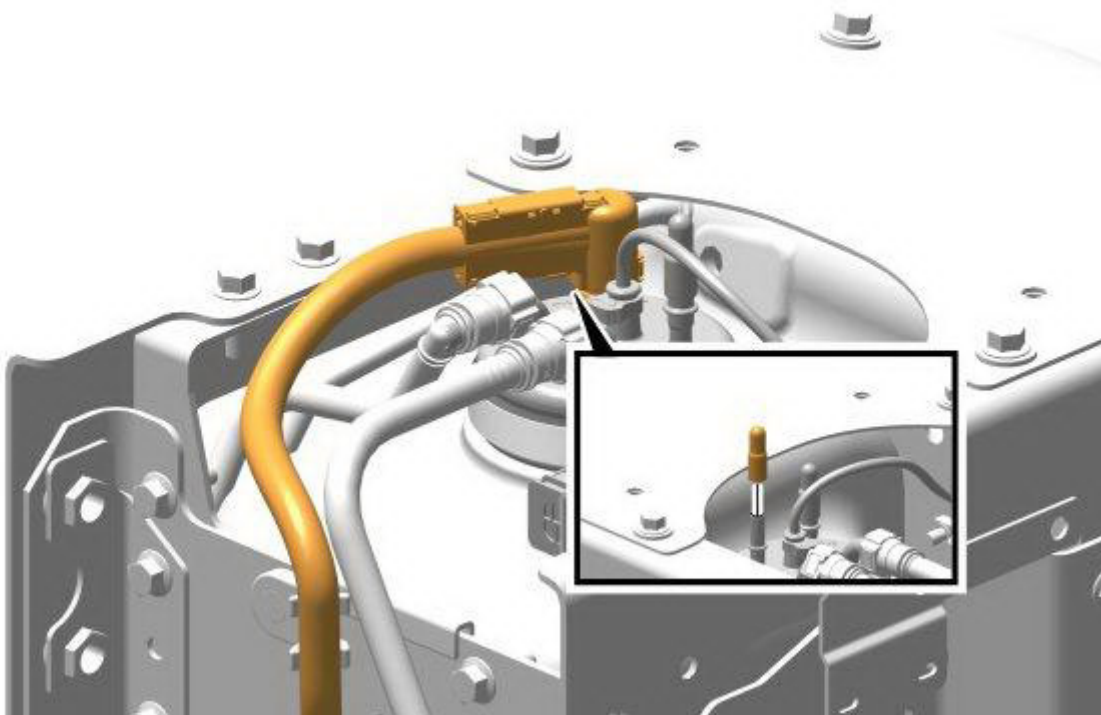


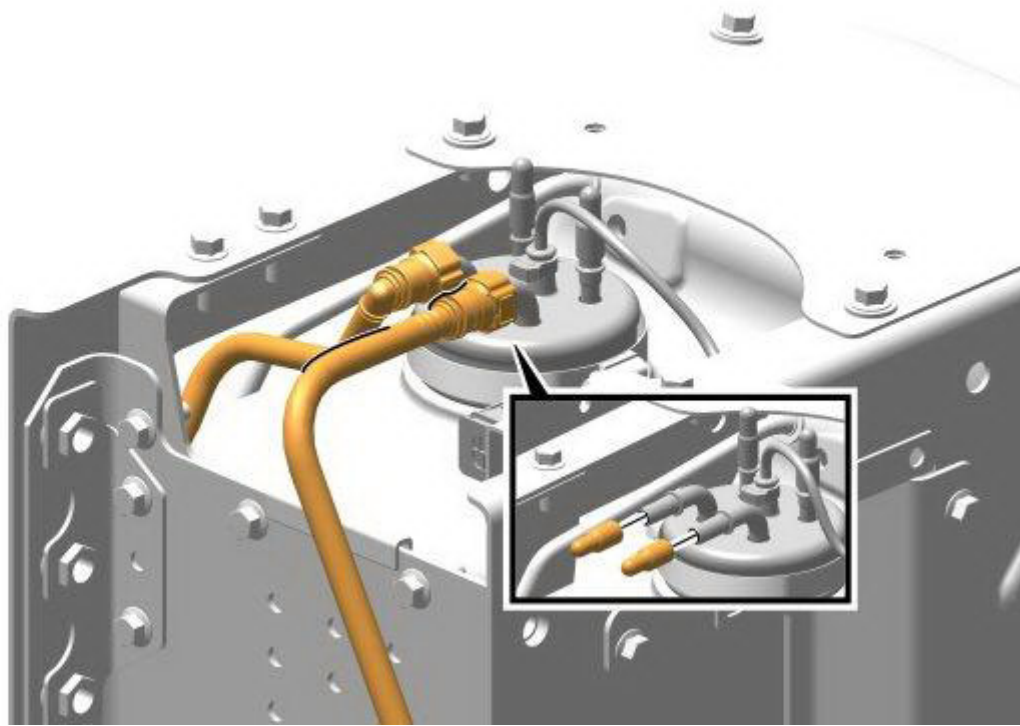
27. Remove the tank.



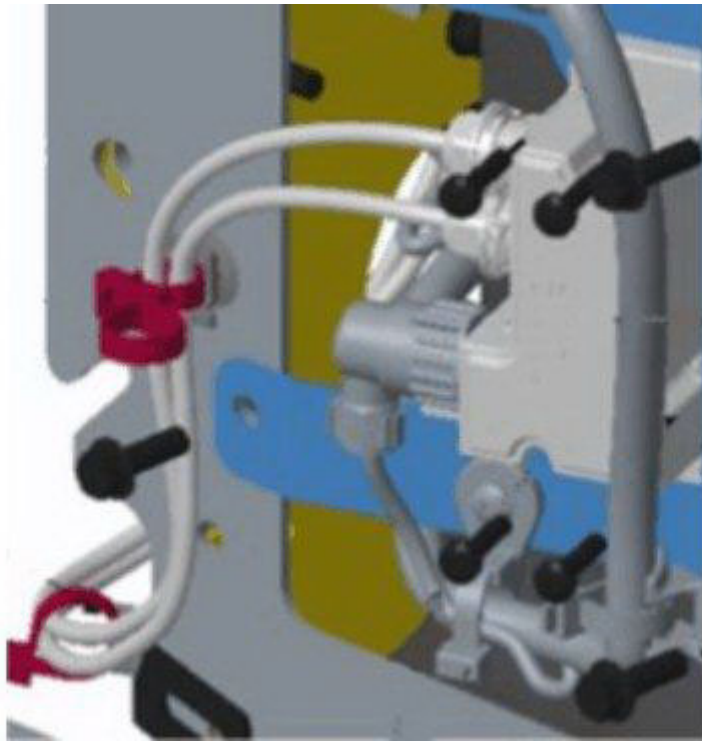
28. Disconnect the connectors.

29. Move aside and cover hoses with bags.





30. Remove the four bolts securing UQLS module.
31. Remove the ties securing the sensor tubes.



32. Loosen the clamp holding in the sensor.
33. Remove the level sensor.



34. Install the new sensor **24135997**.

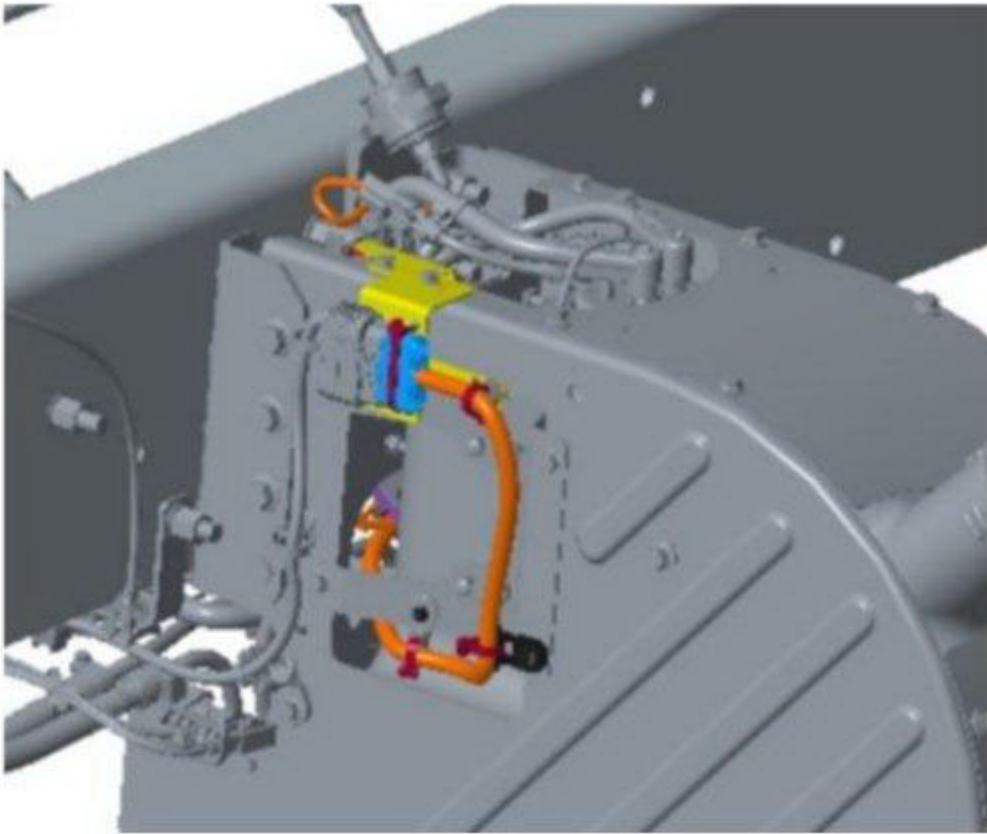
Note: The new UQLS sensor no longer uses the external module and requires a jumper harness.

35. Install the clamp.

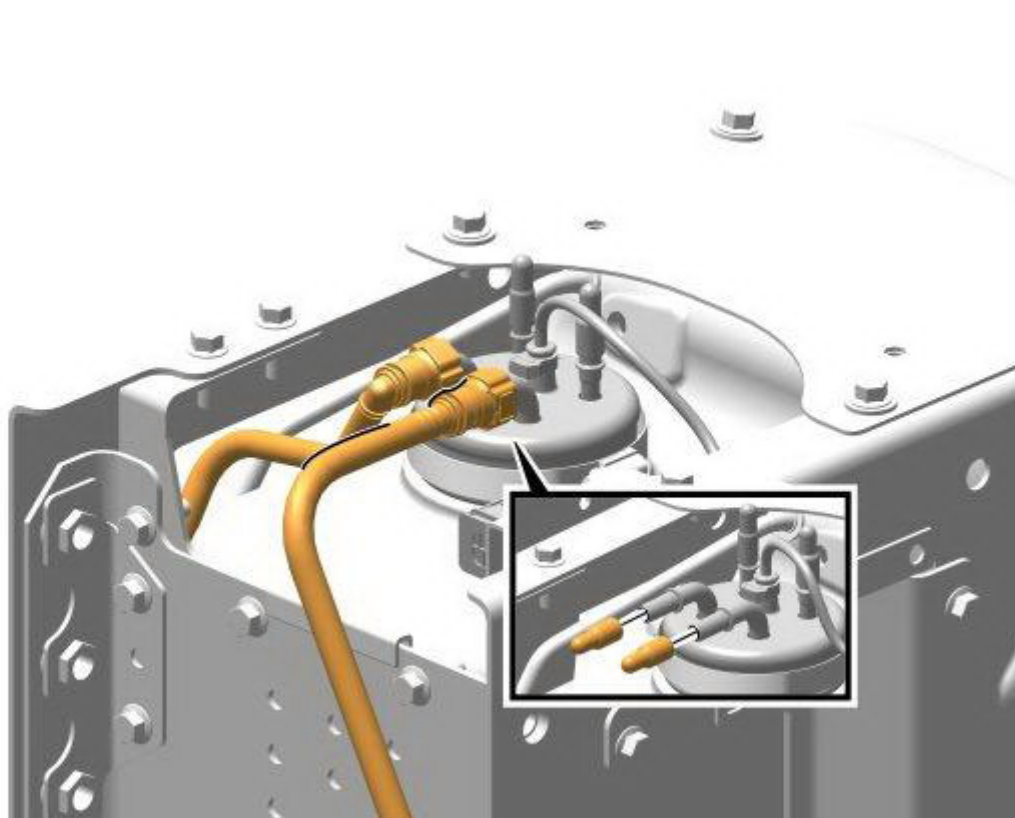
Tightening torque	
Tank, clamp	5 Nm

36. Remove the old bracket.

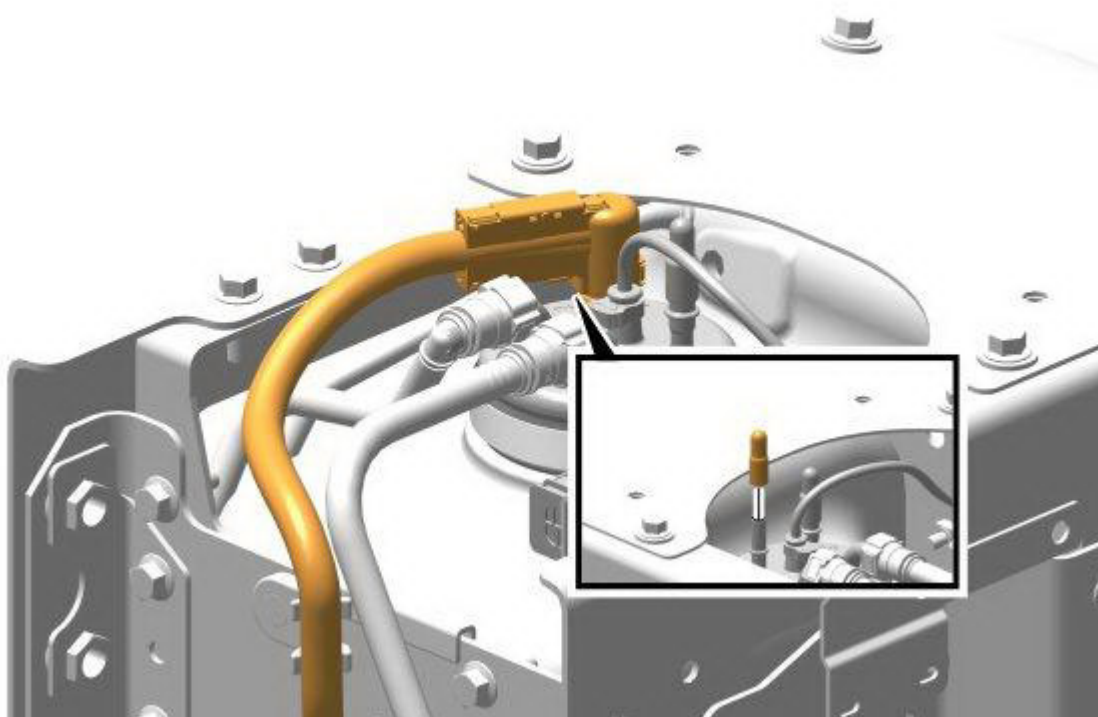
37. Install the new bracket **23933319** and secure using old hardware.



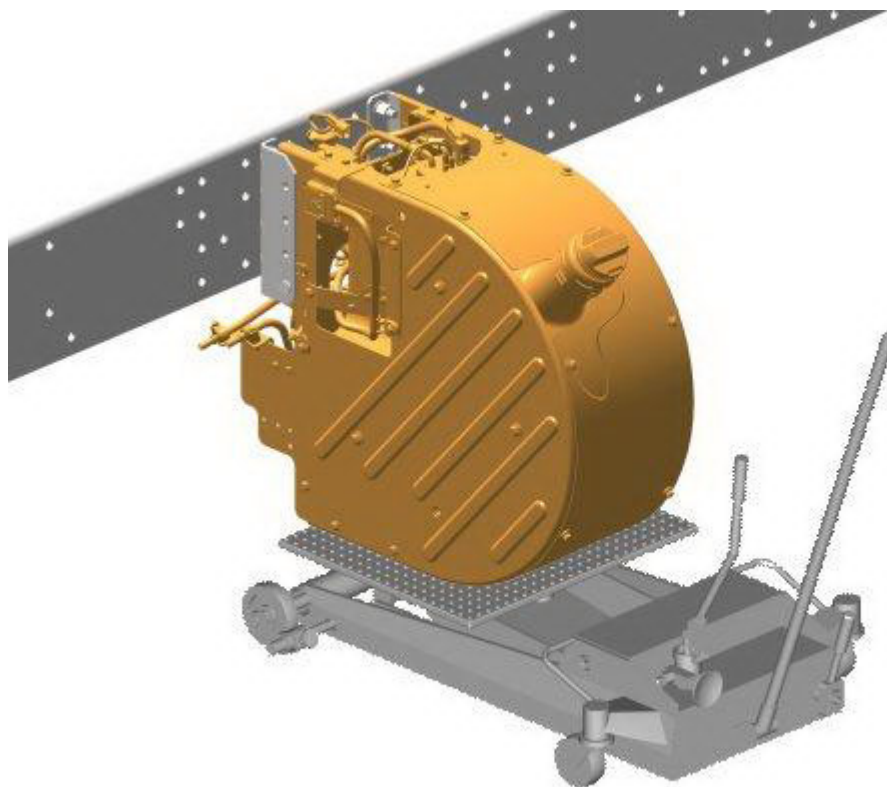
38. Remove the bags and connect the coolant lines.



39. Remove the bag and connect the DEF line.

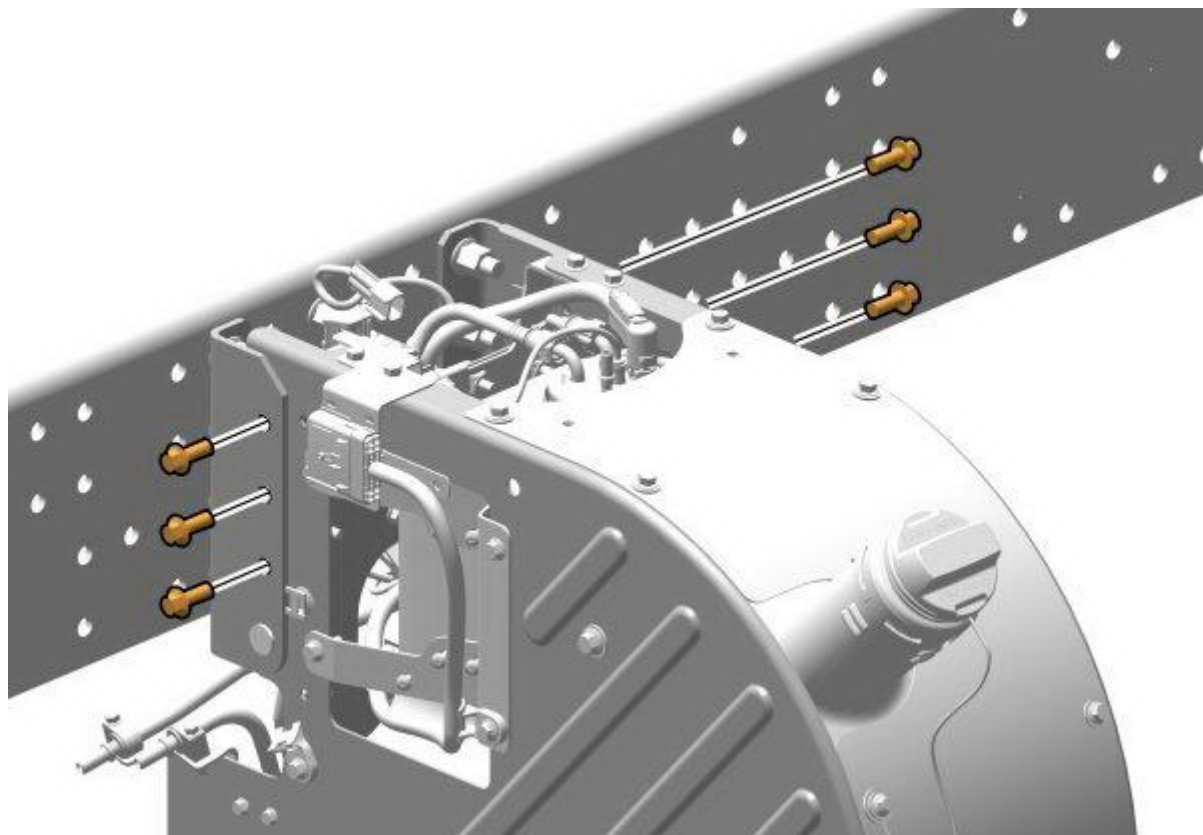


40. Install the tank.

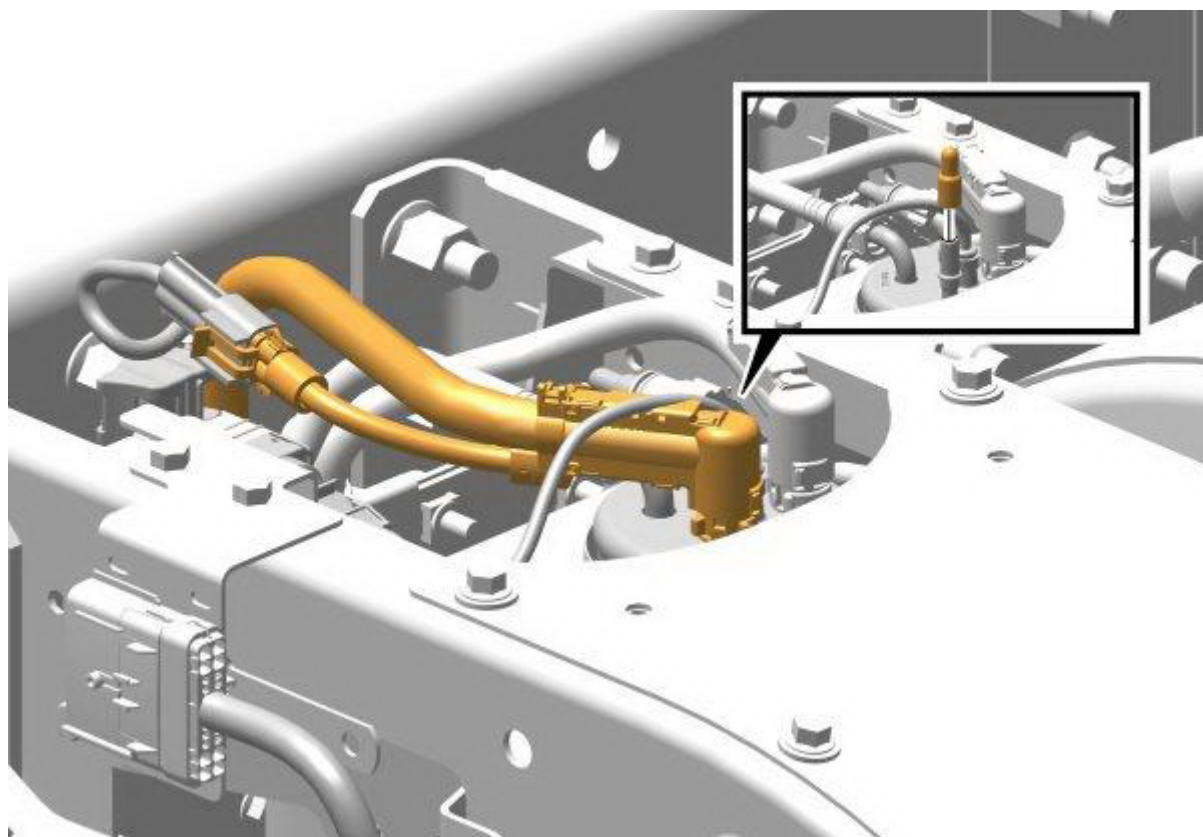


41. Install the screws.

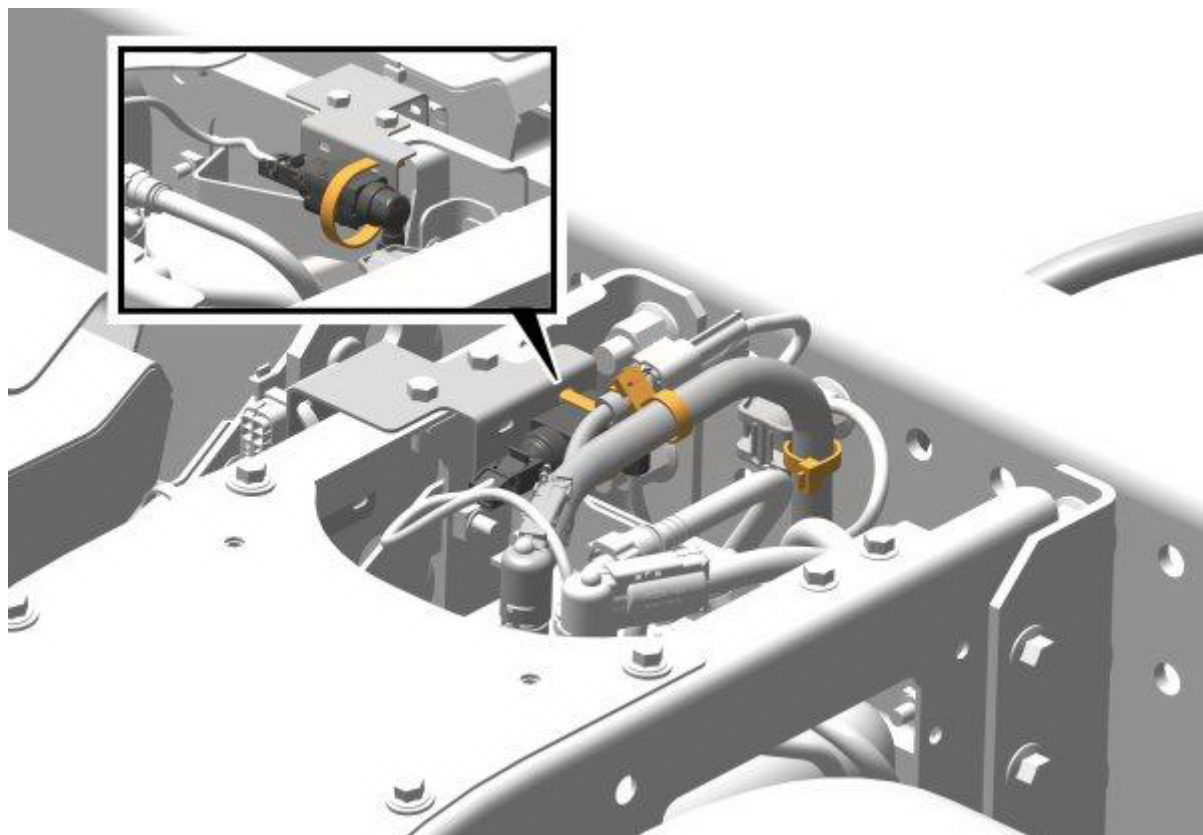
Tightening torque	
Tank, bracket, screw	125± 20 Nm



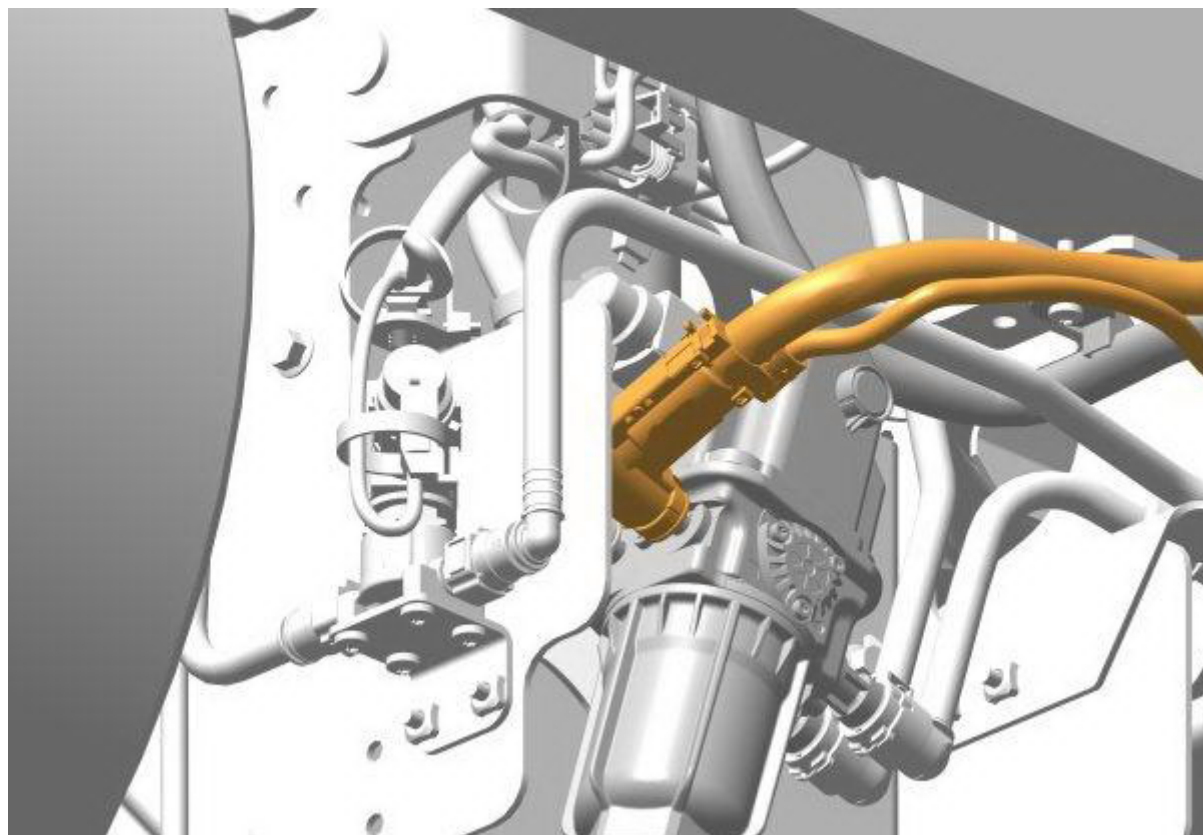
42. Remove the bag and connect the DEF line.



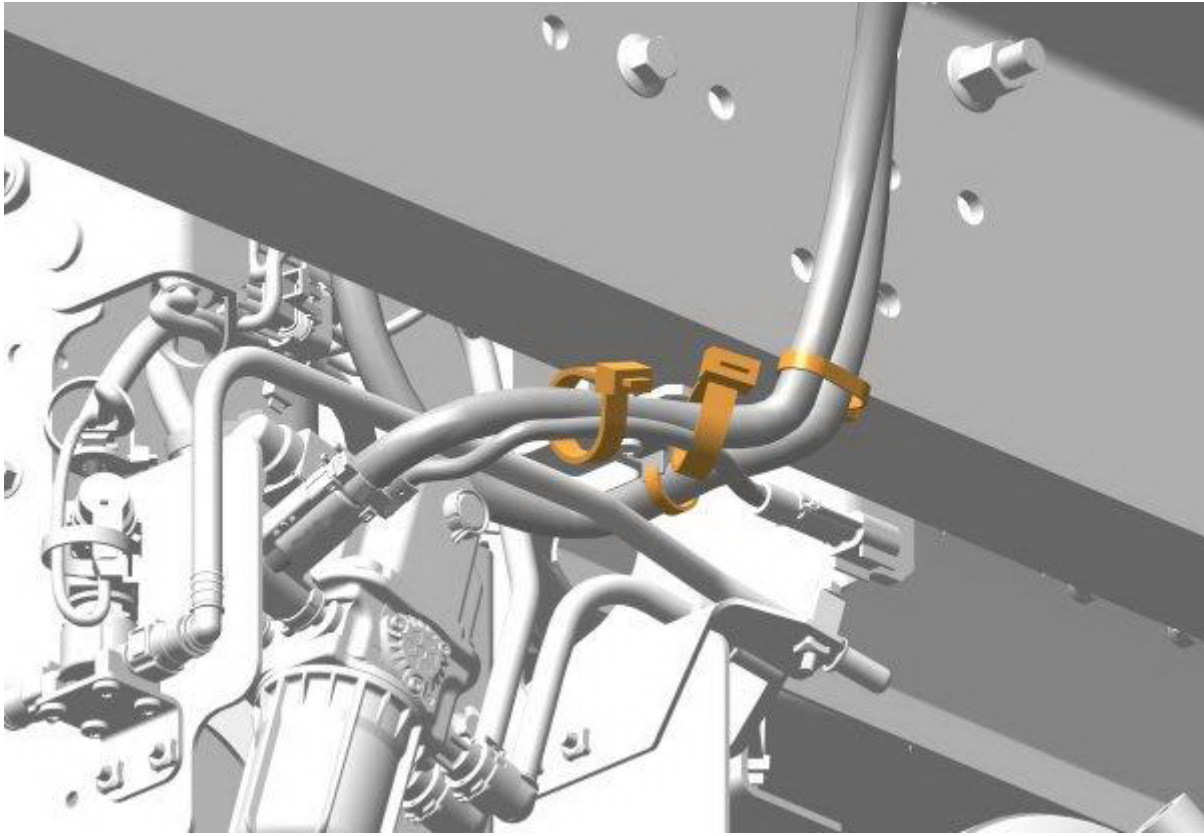
43. Secure the hose using cable ties.



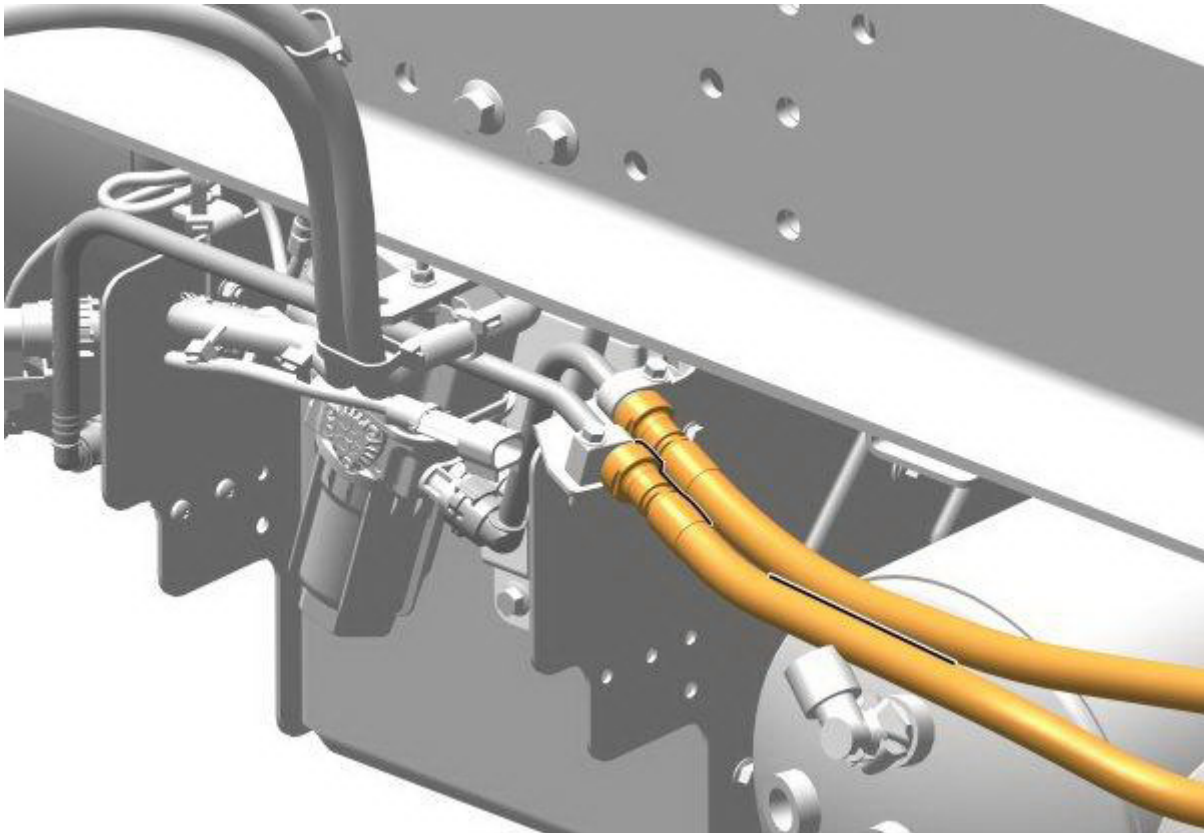
44. Remove the bag and connect the DEF line.



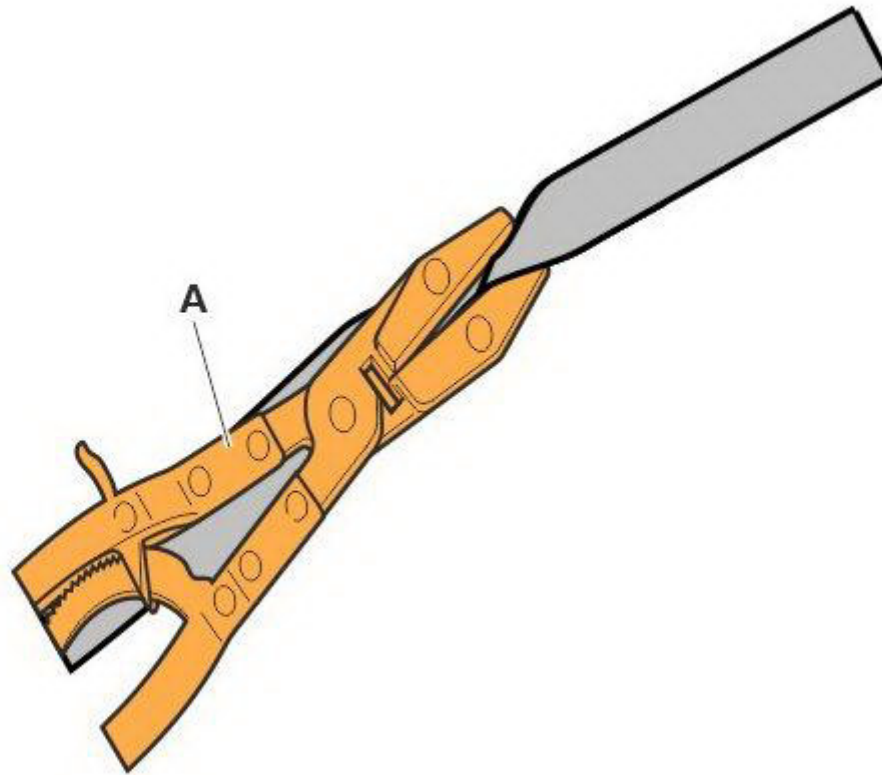
45. Secure the hose using cable ties.



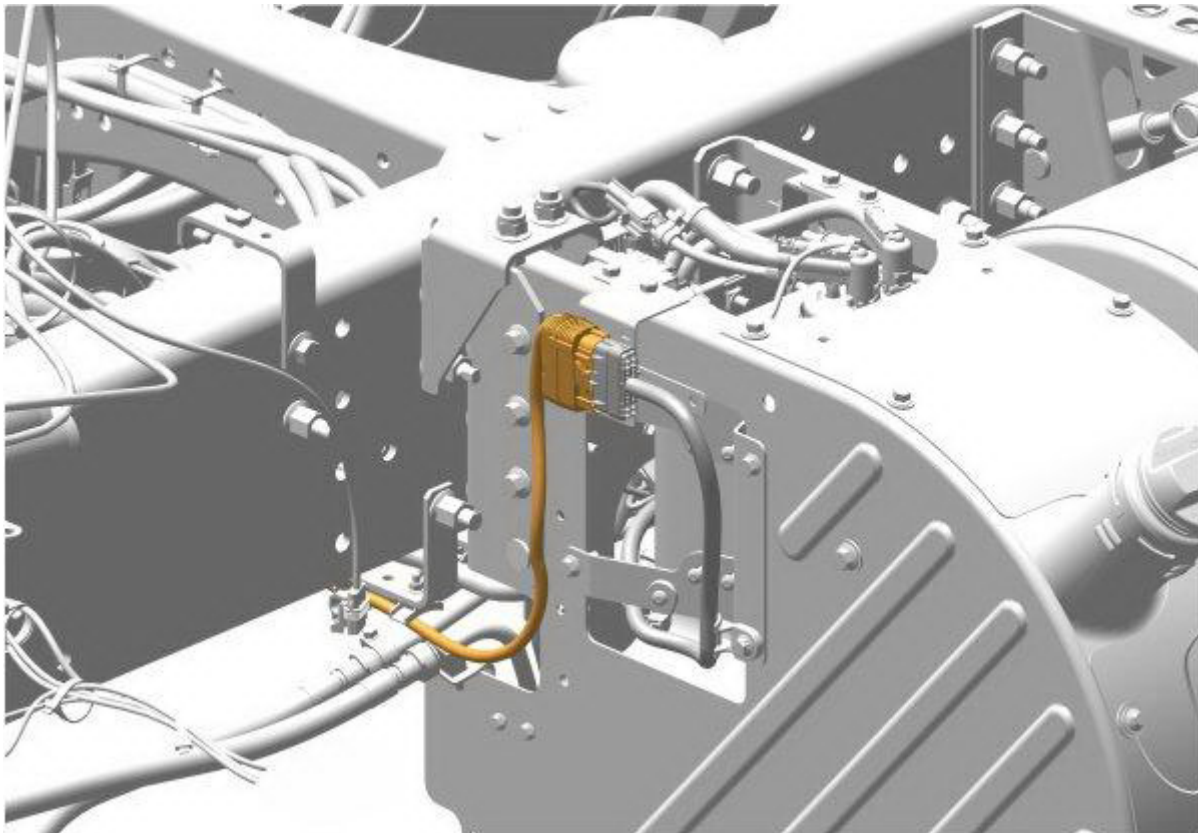
46. Remove the bag and connect the coolant lines.



47. Remove the tool (A).



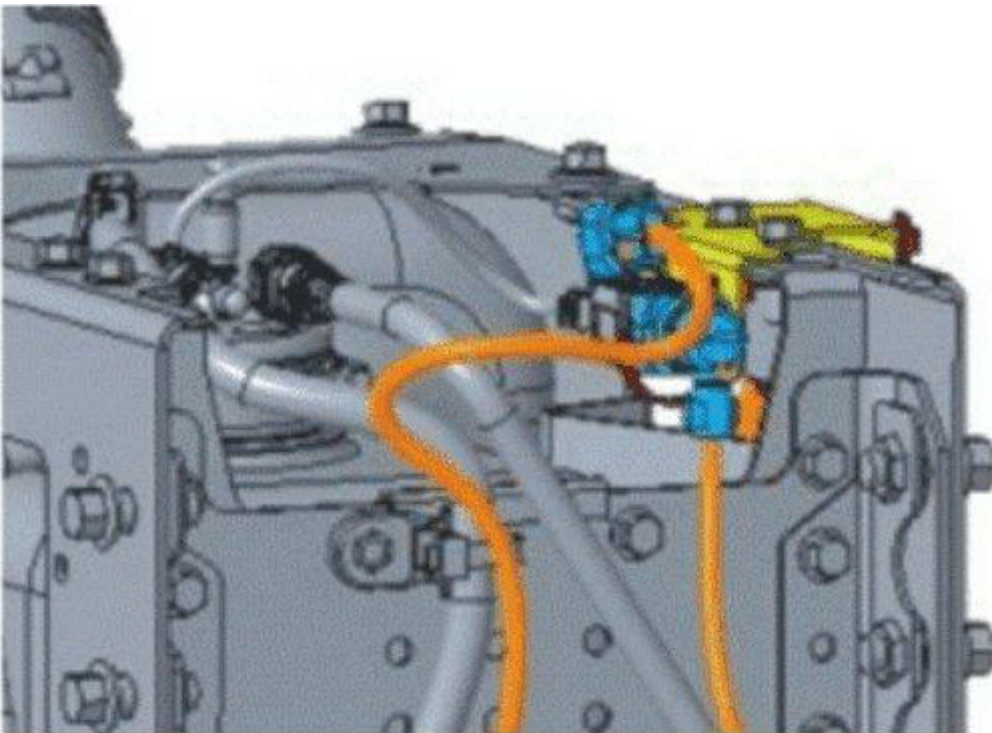
48. Connect the connector.



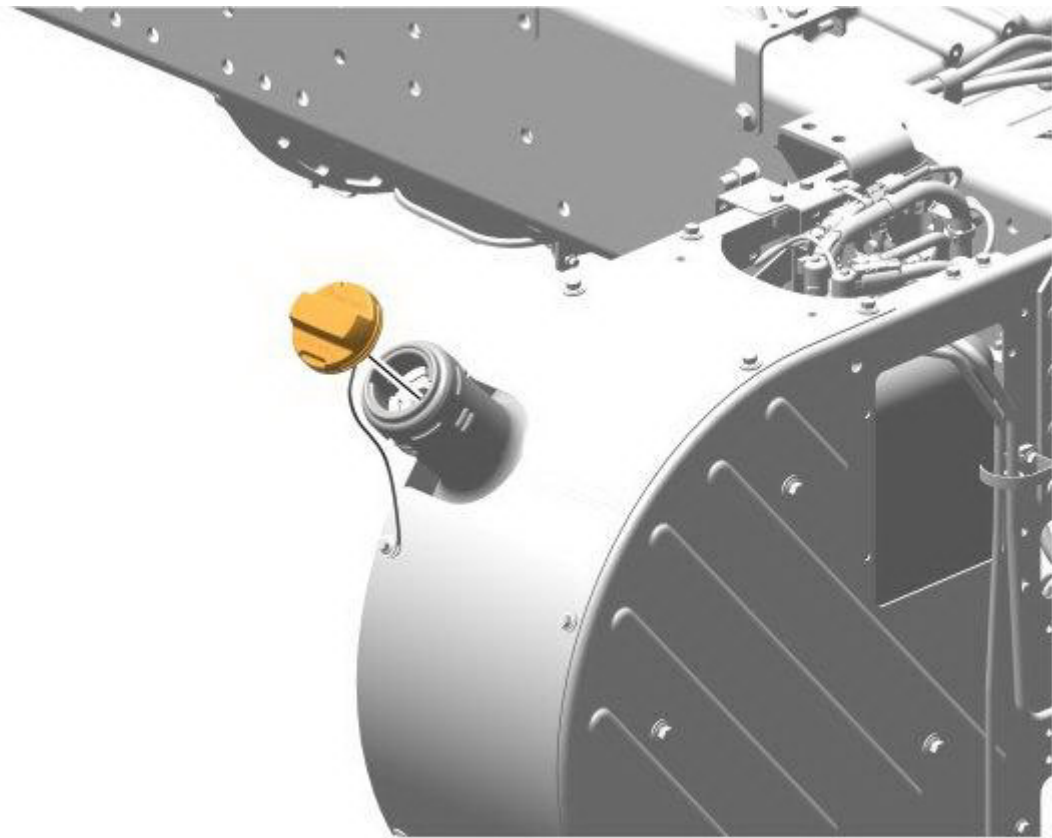
49. Connect the jumper harness **24399920** to the chassis harness and secure using cable ties.



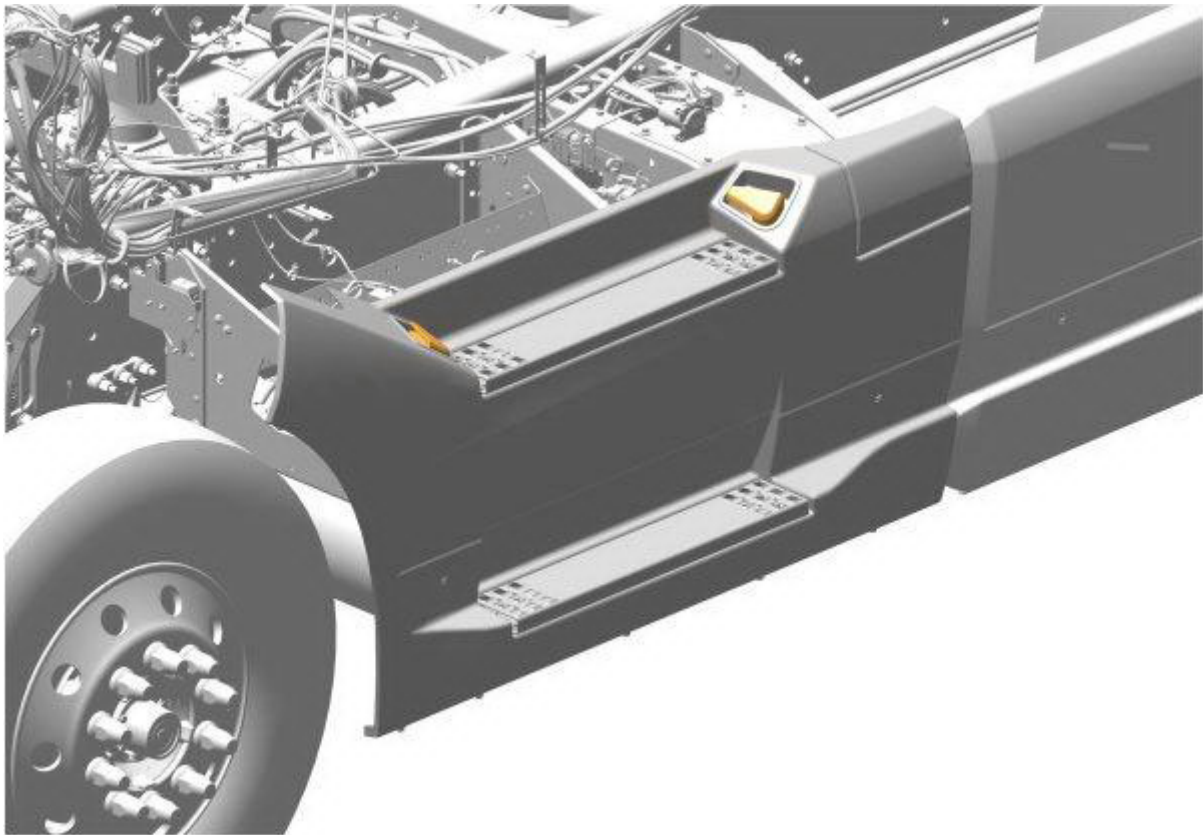
50. Connect the jumper harness **24399920** to the sensor and secure connector and jumper harness to the bracket using cable ties.



51. Open the filler cap and fill with (Diesel Exhaust Fluid).



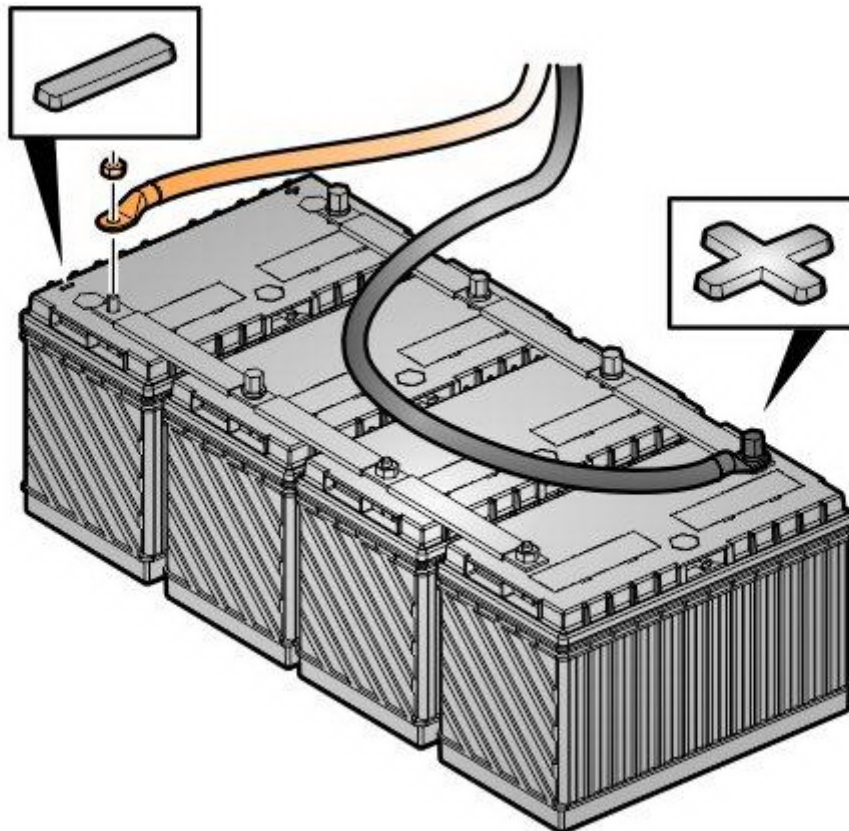
- 52. Install the fairing.
- 53. Install the tether.



- 54. Fill with coolant.

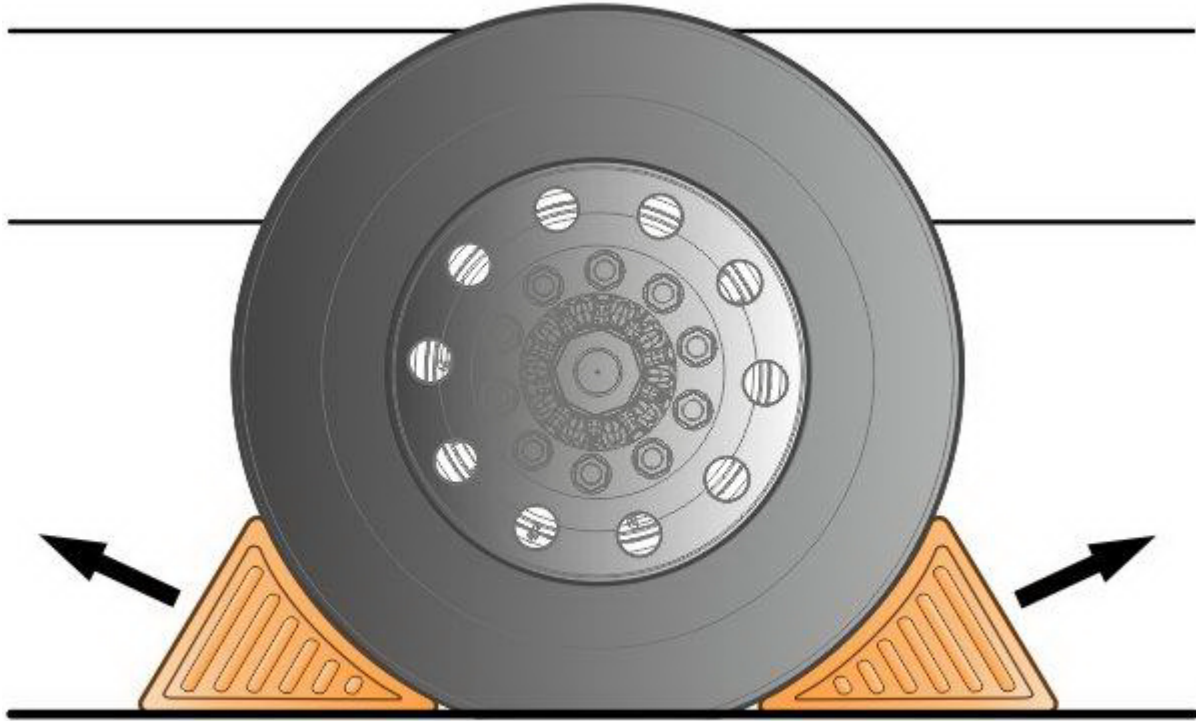


55. Connect the cable to the negative terminal.



- 56. Start the engine and check for any leaks.
- 57. Check the coolant level.
- 58. Verify the DEF level is reading in the cluster.
- 59. Clear any fault codes.

- 60. Lower the hood
- 61. Remove wheel chocks.



- 62. Release the truck to service.

Warranty information

Reimbursement

<p>This repair may be eligible for reimbursement if a product failure was experienced within time and mileage limits of the applicable Warranty coverage. Reimbursement is obtained via the normal claim handling process.</p>	<p>UCHP Reimbursement</p>
<p>Claim Type (used only when uploading from the Dealer Bus. Sys.)</p>	<p>W</p>
<p>Labour Code Aftertreatment Diesel Exhaust Fluid (DEF) Tank, Level Sensor, Replacement</p>	<p>2589-03-02-05</p>

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Technical Service