

2022 CHEVROLET CORVETTE SERVICE MANUAL

- SEARCH

1. Engine/Propulsion
2. Engine Heating and Cooling
3. Repair Instructions
- 4.

Cooling System Draining and Filling (Static)

Special Tools

GE-26568, Coolant and Battery Fluid Tester

Equivalent regional tools: Special Tools

Draining Procedure

Warning:

With a pressurized cooling system, the coolant temperature in the radiator can be considerably higher than the boiling point of the solution at atmospheric pressure. Removal of the surge tank cap, while the cooling system is hot and under high pressure, causes the solution to boil instantaneously with explosive force. This will cause the solution to spew out over the engine, the fenders, and the person removing the cap. Serious bodily injury may result.

Warning:

While engine is operating, the exhaust system will become extremely hot. To prevent burns avoid contacting a hot exhaust system.

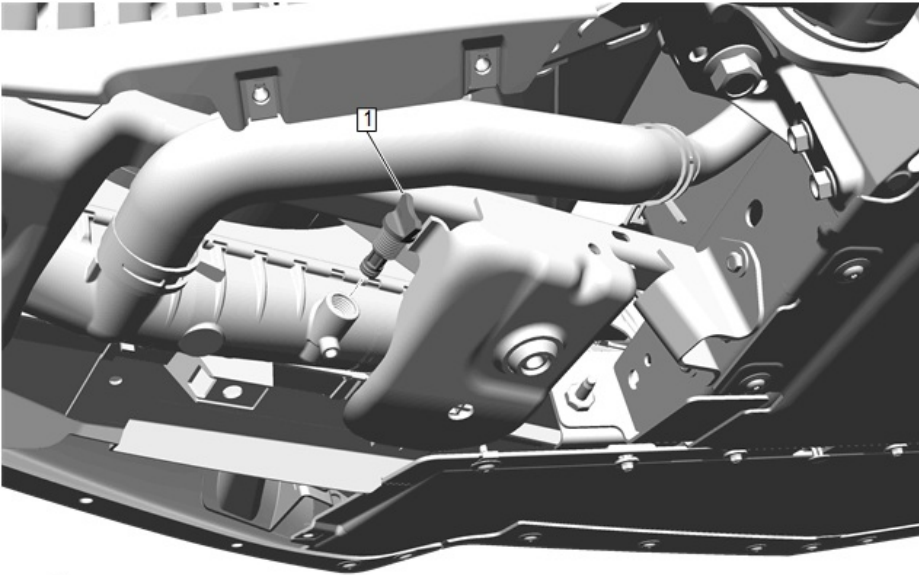
Caution:

The procedure below must be followed. Improper coolant level could result in a low or high coolant level condition, causing engine damage.

Note:

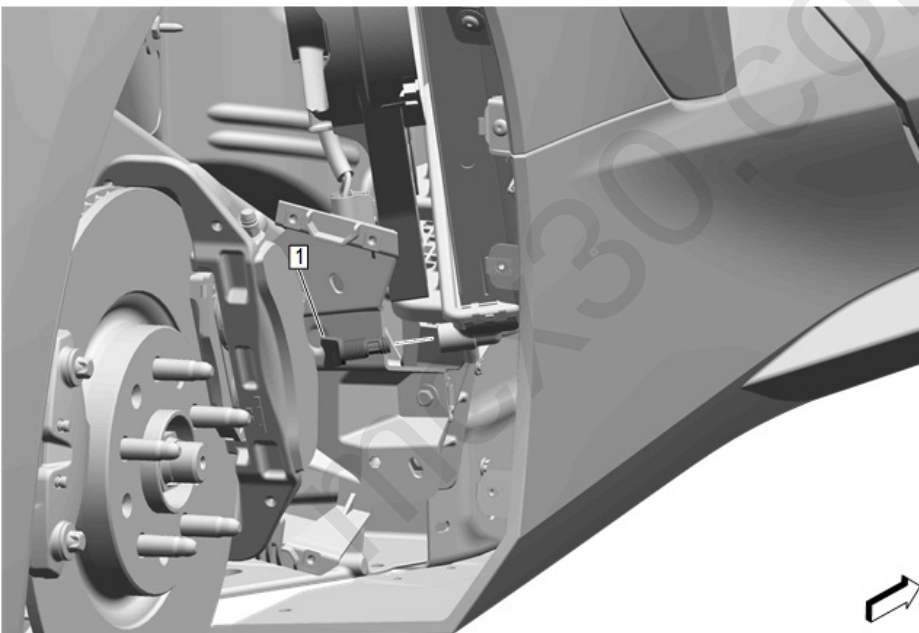
Use a mixture of 40% DEX-COOL antifreeze and 60% clean drinkable water.

1. Ensure the engine is cool.
2. Radiator Surge Tank Cap >> Remove
3. Raise and support the vehicle. Lifting and Jacking the Vehicle
4. Place a drain pan under the vehicle.



5.
[Click here for full size](#)

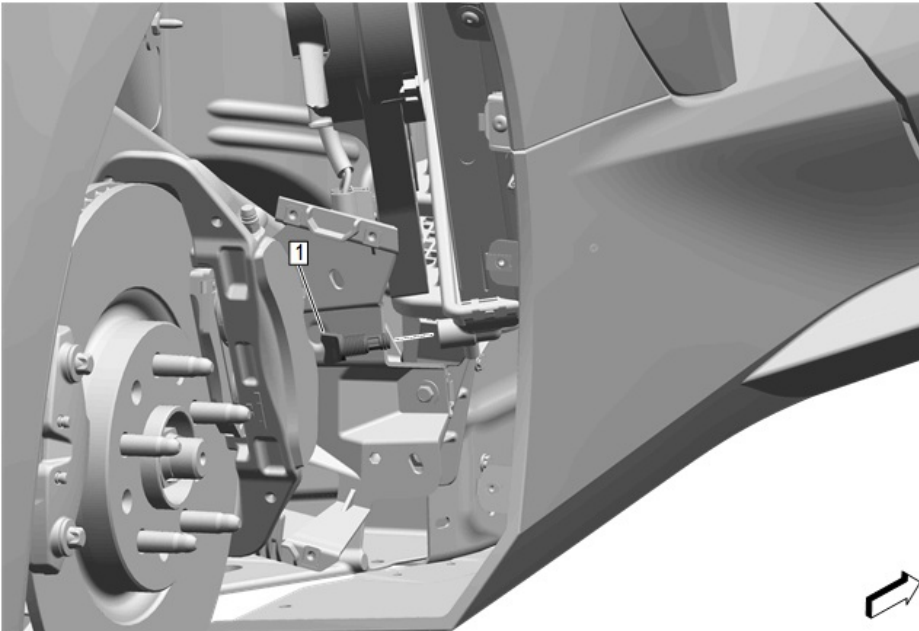
6. Open the 2 radiator drain cocks at the 2 engine radiators (1). Radiator Drain Cock Replacement



7.
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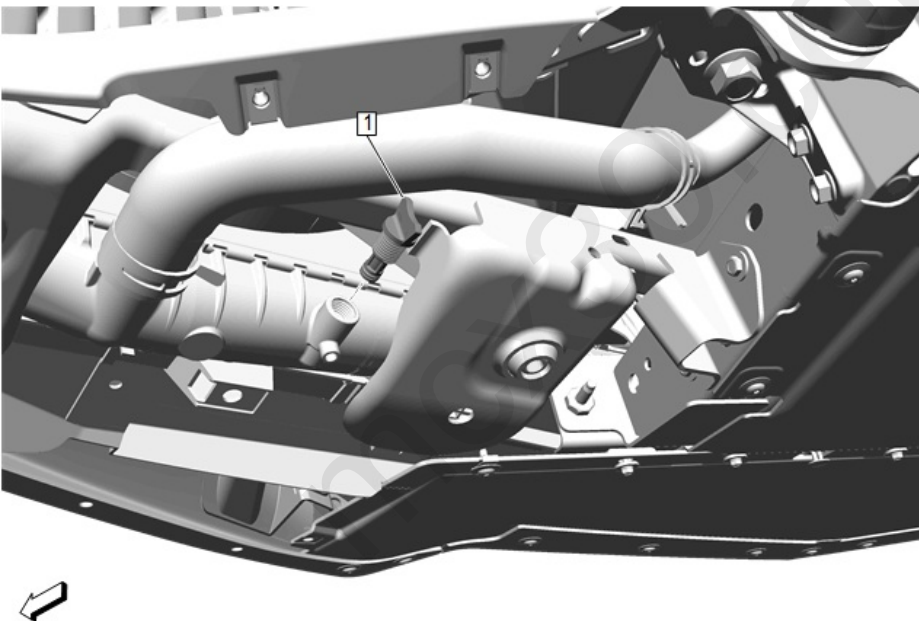
8. Open the 2 radiator drain cocks at the 2 engine auxiliary radiators (1), if equipped. Radiator Drain Cock Replacement - Auxiliary

9. Allow the coolant to drain completely.



10.
[Click here for full size](#)

11. Close the 2 radiator drain cocks at the 2 engine auxiliary radiators (1), if equipped. Radiator Drain Cock Replacement - Auxiliary



12.
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13. Close the 2 radiator drain cocks at the 2 engine radiators (1). Radiator Drain Cock Replacement

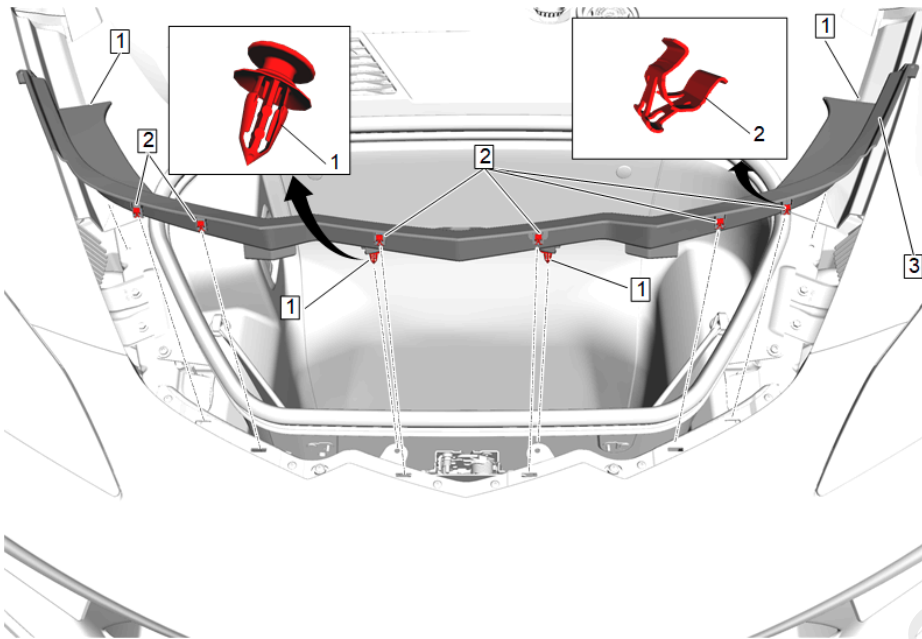
14. Lower the vehicle.

15. Inspect the coolant.

16. Follow the appropriate procedure based on the condition of the coolant.

- 17.
- Normal in appearance – Follow the filling procedure.
 - Discolored – Follow the flush procedure. Flushing

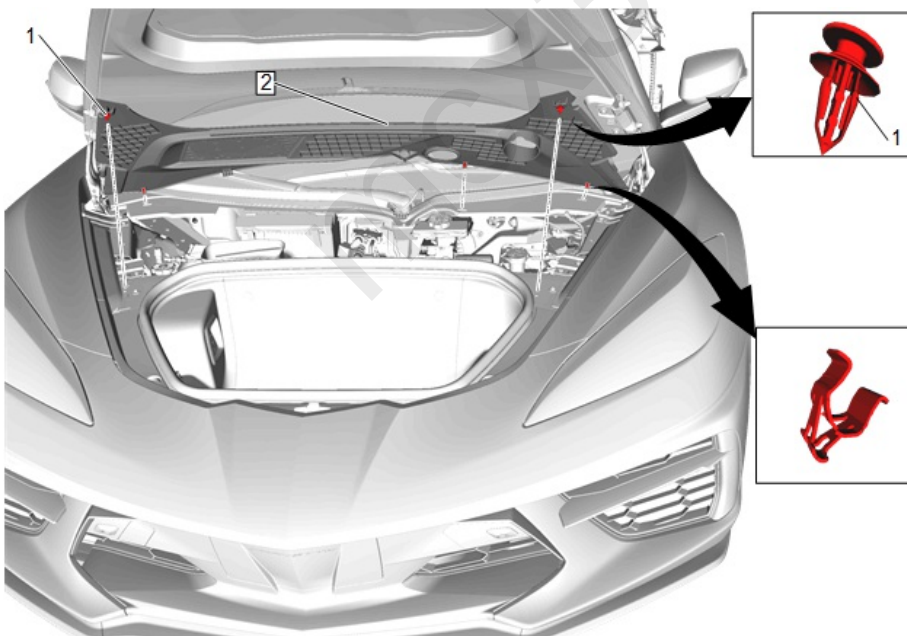
Filling Procedure



1. [Click here for full size](#)
2. Caution:

The procedure below must be followed. Improper coolant level could result in a low or high coolant level condition, causing engine damage.

3. Front Compartment Front Sight Shield (3) >>> Remove - Front Compartment Front Sight Shield Replacement



4. [Click here for full size](#)
5. Front Compartment Rear Access Cover (2) >>> Remove - Front Compartment Rear Access Cover Replacement

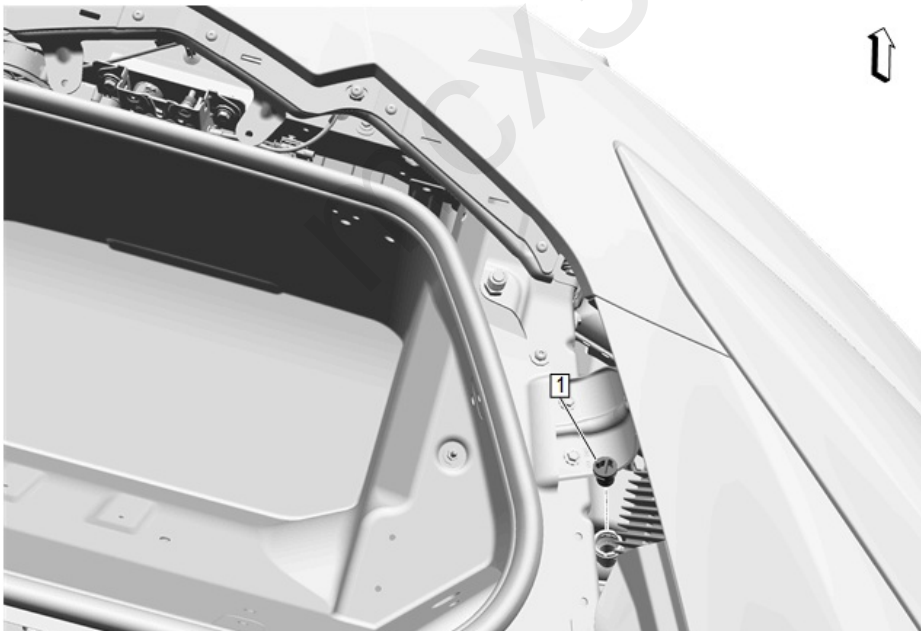


6. [Click here for full size](#)

7. Note:

Install absorbent rags around the auxiliary radiator inlet hose connector to absorb any coolant loss while opening the system.

8. Using needle nose pliers, slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) counter clockwise and carefully pull up to remove it from the auxiliary radiator inlet hose connector.
9. If coolant flows from auxiliary radiator inlet hose connector, using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.
10. If no coolant flows from the auxiliary radiator inlet hose connector leave the auxiliary heater inlet and outlet intermediate hose cap (1) off.



11. [Click here for full size](#)

12. Note:

Install absorbent rags around the auxiliary radiator inlet hose connector to absorb any coolant loss while opening the system.

13. Using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) counter clockwise and carefully pull up to remove it from the auxiliary radiator inlet hose connector.
14. If coolant flows from auxiliary radiator inlet hose connector, using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.

15. If no coolant flows from the auxiliary radiator inlet hose connector leave the auxiliary heater inlet and outlet intermediate hose cap (1) off.
16. Note:
While filling the surge tank, allow time for coolant drain back.
17. Note:
Use a mixture of 40% DEX-COOL antifreeze and 60% clean drinkable water.
18. Slowly fill the radiator surge tank with a 40/60 coolant mixture to the base of the filler neck while monitoring the auxiliary radiator inlet hose connectors.



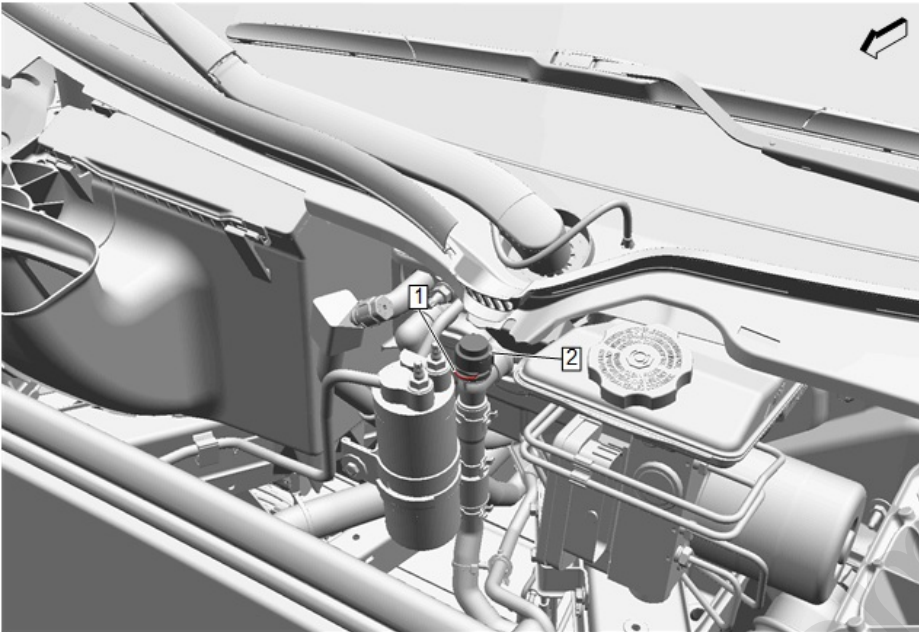
19.
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20. If coolant flows from auxiliary radiator inlet hose connector, using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.
21. If no coolant flows from the auxiliary radiator inlet hose connector leave the auxiliary heater inlet and outlet intermediate hose cap (1) off.



22.
[Click here for full size](#)
23. If coolant flows from auxiliary radiator inlet hose connector, using needle nose pliers slowly rotate the auxiliary heater inlet and outlet

intermediate hose cap (1) clockwise to install it.

24. If no coolant flows from the auxiliary radiator inlet hose connector leave the auxiliary heater inlet and outlet intermediate hose cap (1) off.
25. Slowly fill the radiator surge tank with a 40/60 coolant mixture to the base of the fill neck.



26. [Click here for full size](#)
27. Note:

Install absorbent rags around the radiator inlet hose connector to absorb any coolant loss while opening the system.

28. Disengage the radiator inlet hose retainer (1).
29. Remove the radiator inlet hose connector cover (2).
30. If coolant flows from the radiator inlet hose connector then install the radiator inlet hose connector cover (2).
31. Engage the radiator inlet hose retainer (1).
32. If no coolant flows from the auxiliary radiator inlet hose connector, pour coolant into the auxiliary radiator inlet hose connector while monitoring the 2 auxiliary radiator inlet hose connectors.



33. [Click here for full size](#)

34. If coolant flows from the auxiliary radiator inlet hose connector install the auxiliary heater inlet and outlet intermediate hose caps (1).
35. If no coolant flows from the auxiliary radiator inlet hose connector add coolant to the top of auxiliary radiator inlet hose connector and install the auxiliary heater inlet and outlet intermediate hose cap (1).



36. [Click here for full size](#)
37. If coolant flows from the 2 auxiliary radiator inlet hose connectors install the auxiliary heater inlet and outlet intermediate hose cap (1).
38. If no coolant flows from the auxiliary radiator inlet hose connector add coolant to the top of auxiliary radiator inlet hose connector and install the auxiliary heater inlet and outlet intermediate hose cap (1).
39. Slowly fill the radiator surge tank with a 40/60 coolant mixture to the base of the fill neck.
40. Radiator Surge Tank Cap >> Install
41. Start the engine.
42. With the air conditioning off allow the engine to idle for 10 minutes.
43. Shut the engine OFF.
44. Allow 10 minutes for the engine to cool down and repeat steps 3 - 27.
45. With the air conditioning off allow the engine to idle until one of the auxiliary radiator outlet hoses becomes warm near the auxiliary radiator inlet hose connector or the coolant temperature approaches 85°C (185°F).
46. If the auxiliary radiator outlet hose does not feel warm within 10 minutes or the coolant temperature does not approach 85°C (185°F), then shut the engine off and restart the procedure.
47. Once the auxiliary radiator outlet hose is confirmed hot, hold engine at 3000 RPM for 10 minutes. If the coolant temperature approaches 110°C (230°F), then shut engine off and restart the procedure.
48. Note:
Allowing additional cool down time will lower the coolant level in the radiator surge tank, allowing more coolant to be added to the system.
49. Shut engine off and allow it to cool for 1 hour. Use of a fan will help to cool the engine.
50. Warning:
With a pressurized cooling system, the coolant temperature in the radiator can be considerably higher than the boiling point of the solution at atmospheric pressure. Removal of the surge tank cap, while the cooling system is hot and under high pressure, causes the solution to boil instantaneously with explosive force. This will cause the solution to spew out over the engine, the fenders, and the person removing the cap. Serious bodily injury may result.
51. Radiator Surge Tank Cap >> Remove

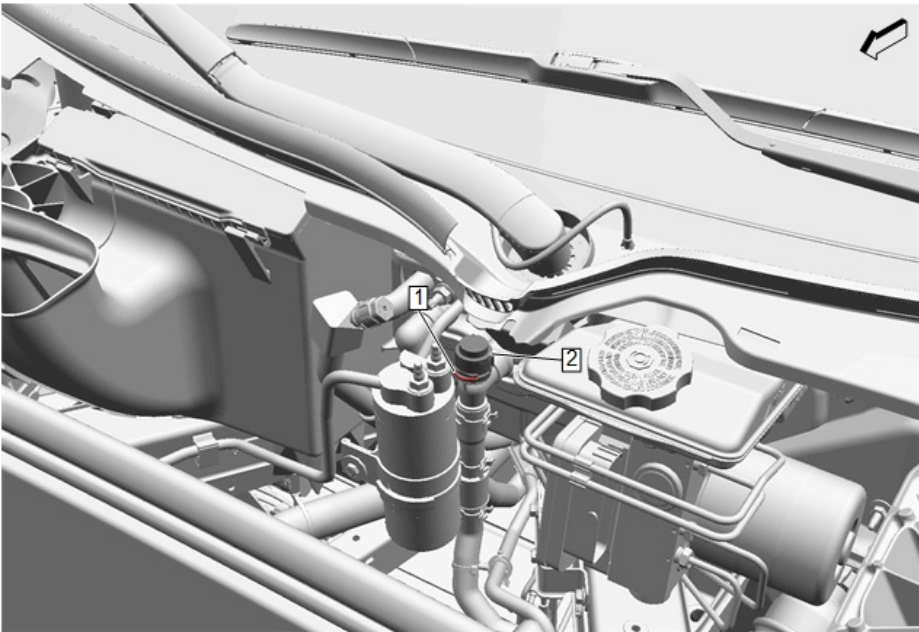


52. [Click here for full size](#)
53. Using needle nose pliers, slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) counter clockwise and carefully pull up to remove it from the auxiliary radiator inlet hose connector.
54. If coolant flows from auxiliary radiator inlet hose connector, using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.
55. If no coolant flows from the auxiliary radiator inlet hose connector leave the auxiliary heater inlet and outlet intermediate hose cap (1) off.

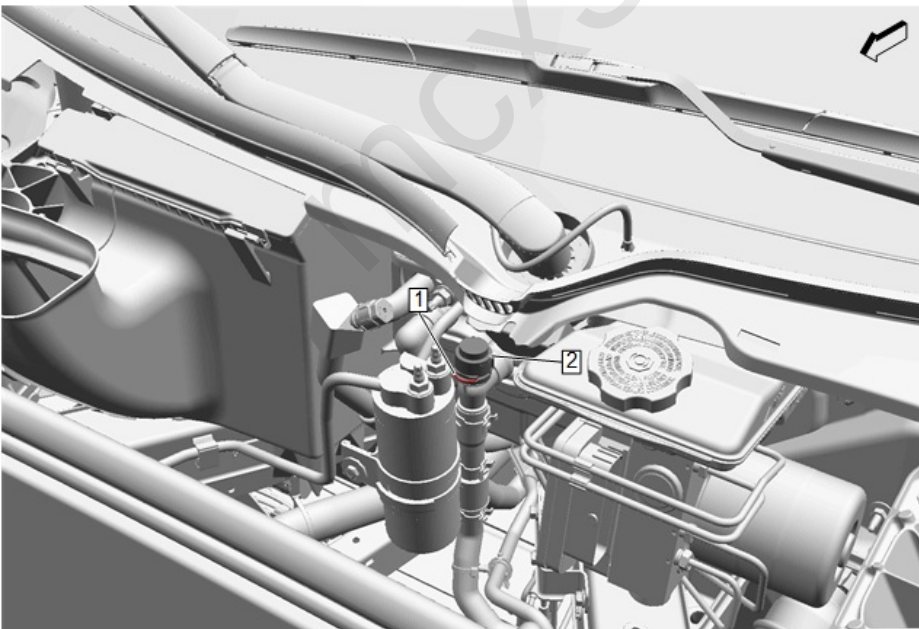


56. [Click here for full size](#)
57. Using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) counter clockwise and carefully pull up to remove it from the auxiliary radiator inlet hose connector.
58. If coolant flows from auxiliary radiator inlet hose connector, using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.
59. If no coolant flows from the auxiliary radiator inlet hose connector leave the auxiliary heater inlet and outlet intermediate hose cap (1) off.
60. Slowly fill the radiator surge tank with a 40/60 coolant mixture while monitoring 2 auxiliary radiator inlet hose connectors and radiator inlet hose connector.

61. Slowly fill the radiator surge tank with a 40/60 coolant mixture to the base of the fill neck.



62. [Click here for full size](#)
63. Disengage the radiator inlet hose retainer (1).
64. Remove the radiator inlet hose connector cover (2).
65. If coolant flows from the radiator inlet hose connector then install the radiator inlet hose connector cover (2).
66. Engage the radiator inlet hose retainer (1).
67. If no coolant flows from the auxiliary radiator inlet hose connector add coolant to the top of the auxiliary radiator inlet hose connector.



68. [Click here for full size](#)
69. Install the radiator inlet hose connector cover (2).
70. Engage the radiator inlet hose retainer (1).

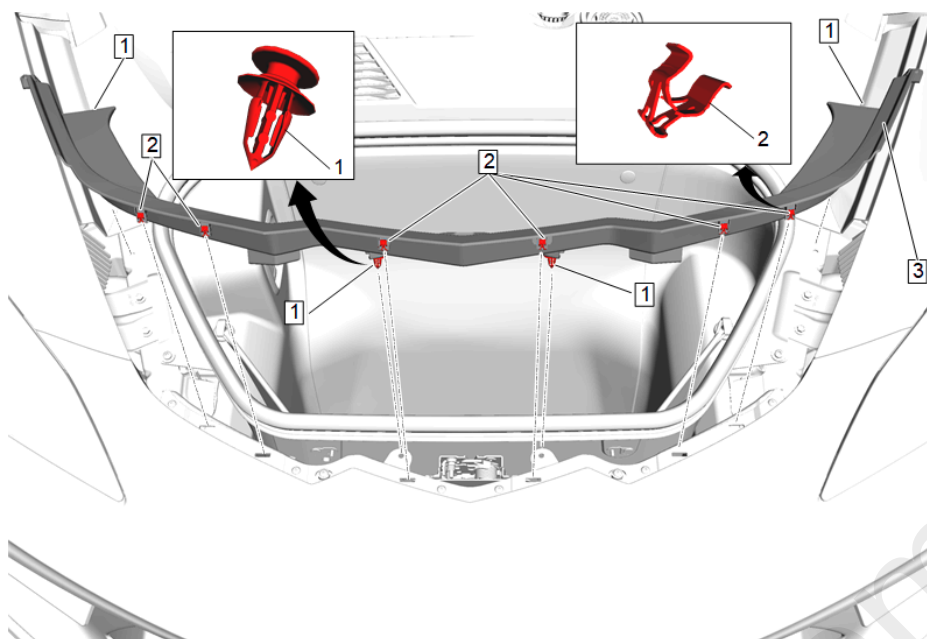


71. [Click here for full size](#)
72. If no coolant flows from the auxiliary radiator inlet hose connector add coolant to the top of the auxiliary radiator inlet hose connector.
73. Using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.



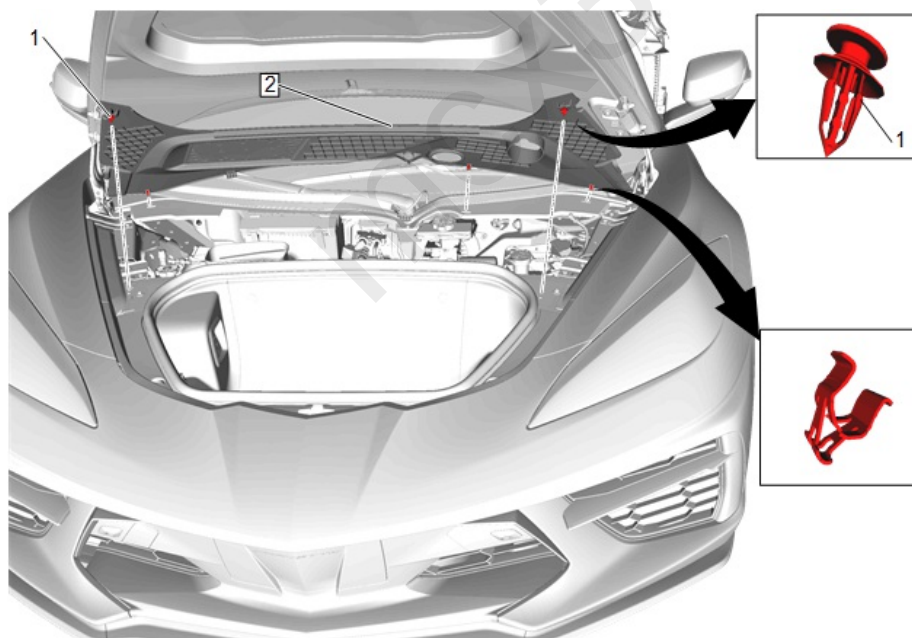
74. [Click here for full size](#)
75. If no coolant flows from the auxiliary radiator inlet hose connector add coolant to the top of the auxiliary radiator inlet hose connector.
76. Using needle nose pliers slowly rotate the auxiliary heater inlet and outlet intermediate hose cap (1) clockwise to install it.
77. Adjust coolant level to the fill line on the radiator surge tank.
78. Using the GE-26568Ã,Â Coolant and Battery Fluid Tester inspect the concentration of the engine coolant .
79. Remove the absorbent rags.
80. Rinse away any excess coolant.
81. Inspect the cooling system for leaks.
82. Radiator Surge Tank Cap >> Install

83. After the vehicle has been driven for a while it is recommended to check the coolant level in the surge tank and fill to the cold fill line on the radiator surge tank if necessary.



84. [Click here for full size](#)

85. Front Compartment Front Sight Shield (3) >> Install - Front Compartment Front Sight Shield Replacement



86. [Click here for full size](#)

87. Front Compartment Rear Access Cover (2) >> Install Install - Front Compartment Rear Access Cover Replacement