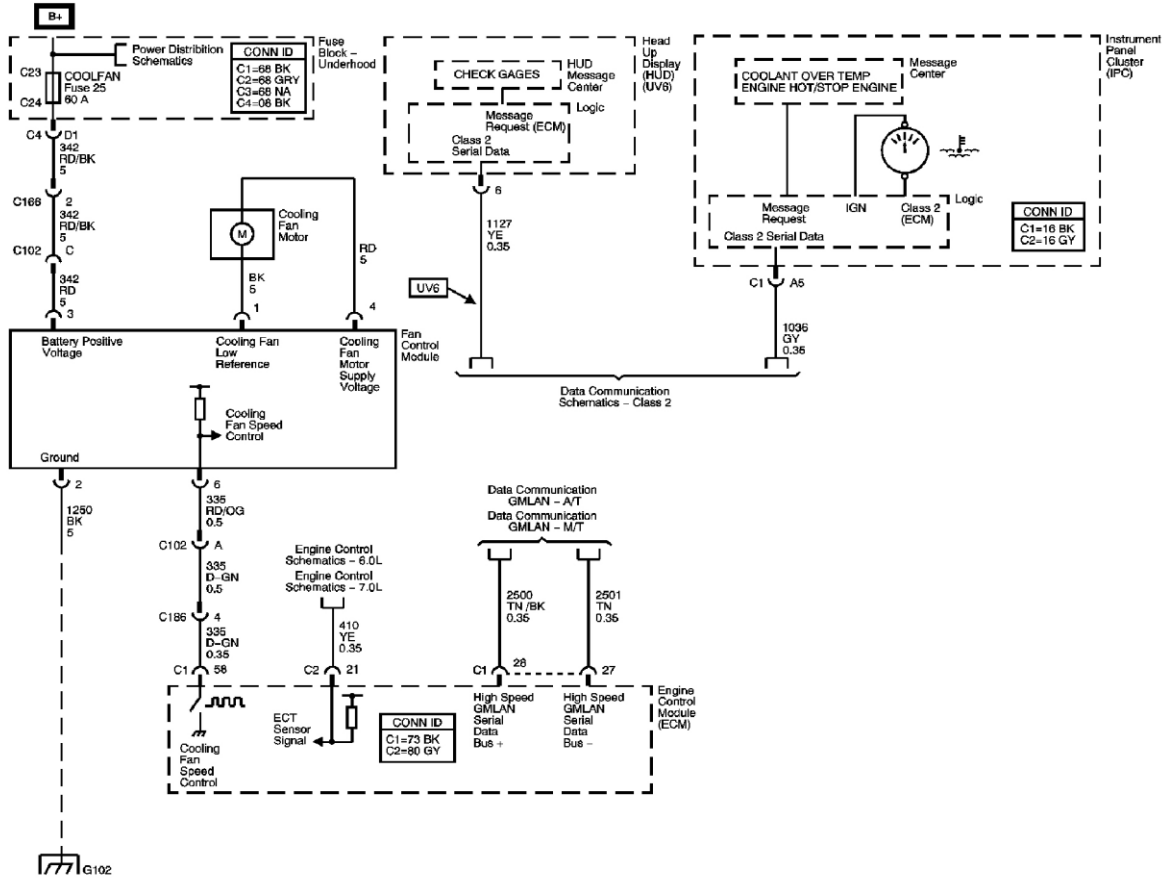


Engine Cooling – C6 Corvette



Engine Cooling Schematic

DRAINING AND FILLING COOLING SYSTEM (GE 47716)

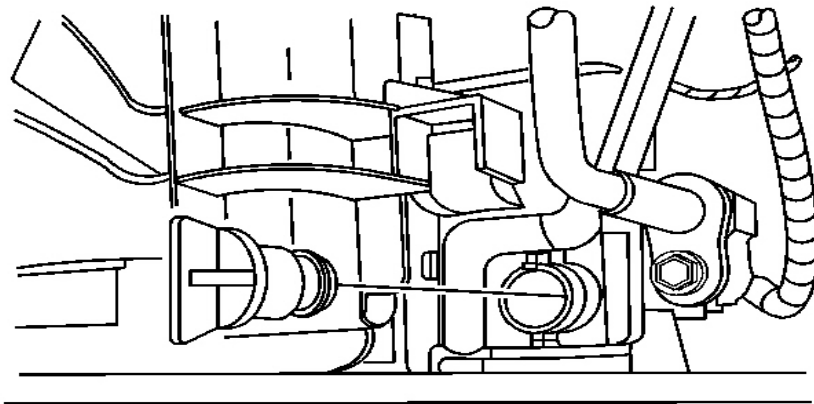
CAUTION:

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.

Only start the draining procedure when the engine has completely cooled down.

DRAINING COOLING SYSTEM

1. Remove the coolant reservoir (surge tank) pressure cap.
2. Raise and support the vehicle evenly from front to back.
3. Place a drain pan under the drain cock.
4. Remove the radiator drain cock (passenger side, lower radiator)



Identifying Radiator Drain Cock



5. Drain the cooling system. (Using a pressure tester on the surge tank will force more coolant from the system.)

6. Lower the vehicle.

7. Inspect the coolant.

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

Coolant Normal in appearance - Follow the filling procedure.

Coolant Discolored - Follow the flush procedure.

Filling Procedure (STATIC FILL)

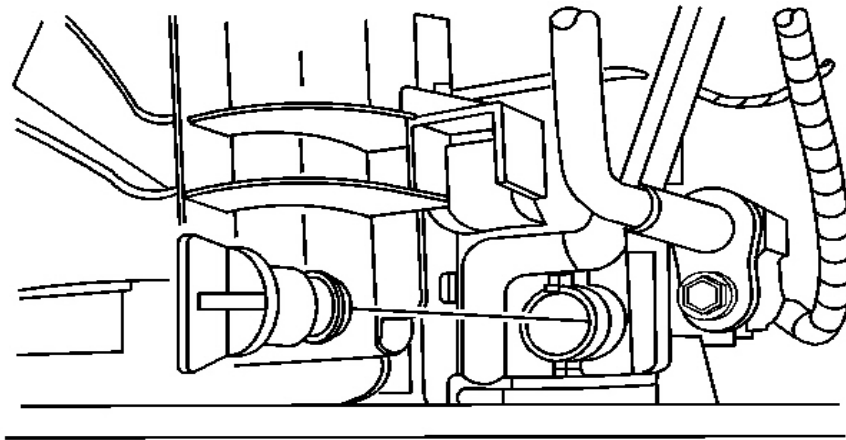
NOTE:

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

1. Raise and support the front of the vehicle.

IMPORTANT:

Inspect the drain cock O-ring for signs of cracks or damage. Replace if necessary.



Identifying Radiator Drain Cock



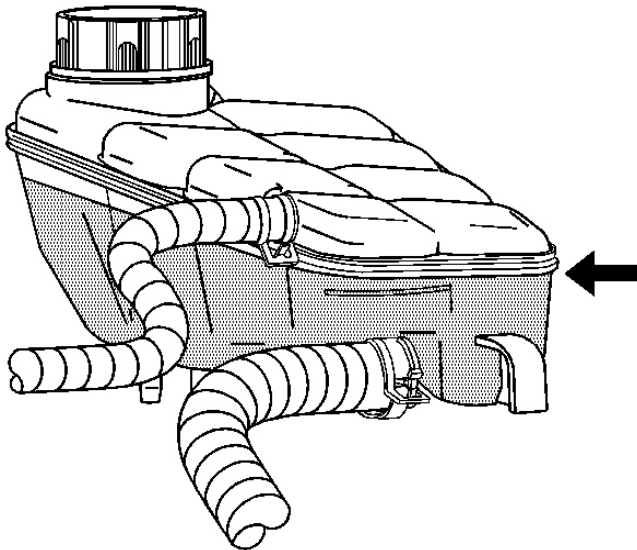
2. Lubricate the drain cock O-ring with clean coolant, and install the radiator drain cock, then tighten the radiator drain cock to 2 N.m (18 lb in)..

3. Lower the vehicle.

IMPORTANT:

Use a 50/50 mixture of DEX-COOL antifreeze and clean drinkable water. (Demineralized water is best for the mix, because it contains less minerals.)

4. Slowly fill the surge tank with a 50/50 coolant mixture until the coolant level reaches the base of the surge tank fill neck.



Monitoring Surge Tank Coolant Level

IMPORTANT:

Monitor the surge tank coolant level closely. The surge tank coolant level will begin to decrease once the engine is started.

5. Start the engine and allow to the engine to idle for approximately 4 minutes. As the engine idles, the level in the surge tank will start to drop as it is entering the system.

6. With the engine still idling, slowly refill the coolant mixture until the level stabilizes at the base of the surge tank fill neck.

7. With the surge tank full, run the engine between 2,000-2,500 RPM for approximately 2 minutes.
8. Allow engine to idle and add approximately 1 liter (1.1 quarts) of coolant to the surge tank.
9. Install the coolant pressure cap.
10. Shut the engine OFF.
11. Allow the engine to cool. Once the engine has cooled, check the surge tank level and add accordingly to the proper “Cold” Mark on the surge tank.
12. Rinse away any excess coolant from the engine and the engine compartment.
13. Inspect the cooling system for leaks.
14. Restart the engine, take it for a short drive at speed, then cool the engine and top off the coolant as necessary.

FLUSHING Cooling System

IMPORTANT: Do not use a chemical flush.

Store used coolant in the proper manner, such as in a used engine coolant holding tank. Do not pour used coolant down a drain. Ethylene glycol antifreeze is a very toxic chemical. Do not dispose of coolant into the sewer system or ground water. This is illegal and ecologically unsound.

Various methods and equipment can be used to flush the cooling system. If special equipment is used, such as a back flusher, follow the manufacturer's instruction. Always remove the thermostat before flushing the cooling system.

When the cooling system becomes contaminated, the cooling system should be flushed thoroughly to remove the contaminants before the engine is seriously damaged.

1. Drain the cooling system.

Refer to: Draining and Filling Cooling System (Static Fill).

2. Remove the surge tank. Refer to Surge Tank Replacement.

3. Clean and flush the surge tank with clean, drinkable water.

4. Install the surge tank. Refer to Surge Tank Replacement.

5. Follow the drain and fill procedure using only clean, drinkable water. Refer to Draining and Filling Cooling System (Static Fill).
6. Run the engine for 20 minutes.
7. Stop the engine.
8. Drain the cooling system. Refer to Draining and Filling Cooling System (Static Fill)
9. Repeat the procedure if necessary, until the fluid is nearly colorless.
10. Fill the cooling system. Refer to Draining and Filling Cooling System (Static Fill)