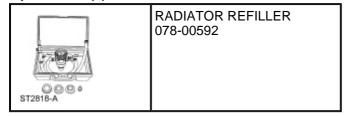
# Supercharger Cooling System Draining, Filling and Bleeding

## Special Tool(s)



#### Material

| Item   | Specification     |
|--|-------------------|
| Motorcraft® Premium Gold Engine<br>Coolant with Bittering Agent (bittered<br>in US only)<br>VC-7-B (US); CVC-7-A (Canada); or<br>equivalent (yellow color) | WSS-M97B51-<br>A1 |

#### **Draining**

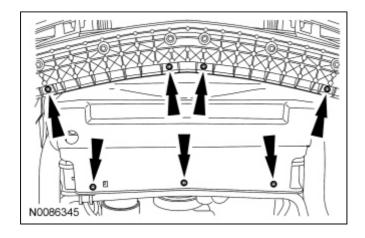
WARNING: Always allow the engine to cool before opening the cooling system. Do not unscrew the coolant pressure relief cap when the engine is operating or the cooling system is hot. The cooling system is under pressure; steam and hot liquid can come out forcefully when the cap is loosened slightly. Failure to follow these instructions may result in serious personal injury.

*NOTICE:* The coolant must be recovered in a suitable, clean container for reuse. If the coolant is contaminated, it must be recycled or disposed of correctly, using contaminated coolant may result in damage to the cooling system components.

*NOTICE:* The Supercharger (SC) cooling system is filled with Motorcraft Premium Gold Engine Coolant. Mixing coolant types degrades the corrosion protection of Motorcraft Premium Gold Engine Coolant.

**NOTE:** Dirty, rusty or contaminated coolant requires replacement.

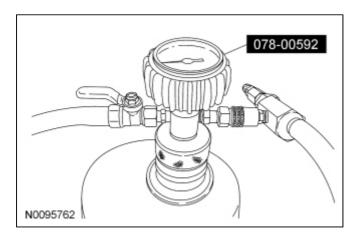
- 1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to Section 100-02.
- 2. Remove the 7 bolts and the lower splash shield.



- 3. Disconnect the radiator-to-Charge Air Cooler (CAC) hose from the radiator and allow the coolant to drain in a suitable container.
  - Connect the hose.
- 4. Install the lower splash shield and the 7 bolts.
  - Tighten the bolts to 5 Nm (44 lb-in).

#### Filling and Bleeding with RADIATOR REFILLER

1. Install the RADIATOR REFILLER and follow the manufacturer's instructions to fill and bleed the cooling system.



### Filling and Bleeding without RADIATOR REFILLER

*NOTICE:* Coolant provides freeze protection, boil protection, cooling efficiency and corrosion protection to the engine and cooling components. In order to obtain these protections, the engine coolant must be maintained at the correct concentration and fluid level in the degas bottle.

*NOTICE:* The Supercharger (SC) cooling system is filled with Motorcraft Premium Gold Engine Coolant. Mixing coolant types degrades the corrosion protection of Motorcraft Premium Gold Engine Coolant.

NOTE: When adding coolant, use a 50/50 mixture of coolant and clean, drinkable water.

- 1. To maintain the integrity of the coolant and the cooling system:
  - Add Motorcraft Premium Gold Engine Coolant or equivalent meeting Ford specification WSS-M97B51-A1 (yellow color). Use the same coolant that was drained from the cooling system. Do not mix coolant types.
  - Do not add/mix orange-colored Motorcraft Speciality Orange Engine Coolant or equivalent meeting Ford specification WSS-M97B44-D. Mixing coolants may degrade the coolant's corrosion protection.
  - 3. Do not add alcohol, methanol, brine or any coolants mixed with alcohol or methanol antifreeze. These can cause damage from overheating or freezing.
  - 4. Do not mix with recycled coolant. Use of such coolants can harm the cooling system components.
- 2. Fill the degas bottle.
- 3. Start the engine and allow to run until coolant circulation is observed in the degas bottle. Absence of circulation indicates air is trapped in the system.
  - Turn the engine off.
- 4. Add coolant as needed.
- 5. Repeat the above procedure to make sure all entrapped air is released.

