

Engine Cooling System Flushing

Flushing

 **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.

NOTE: To remove rust, sludge and other foreign material from the cooling system, use cooling system flush that is safe for use with aluminum radiators. This cleaning restores cooling system efficiency and helps prevent overheating. A pulsating or reversed direction of flushing water will loosen sediment more quickly than a steady flow in the normal coolant flow direction. In severe cases where cleaning solvents will not clean the cooling system efficiently, it will be necessary to use the pressure flushing method using cooling system flusher. Dispose of old coolant and flushing water contaminated with coolant and cleaning chemicals in accordance with local, state or federal laws.

1. Add Motorcraft® Premium Cooling System Flush to the cooling system and follow the directions on the bottle's label. Refer to: [Specifications](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), Specifications).
 2. Drain the cooling system.
Refer to: [Engine Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), General Procedures).
 3. Remove the radiator.
Refer to: [Radiator](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), Removal and Installation).
 4. **NOTICE: Radiator internal pressure must not exceed 138 kPa (20 psi). Damage to the radiator can result.**

Position the radiator upside down and with a high pressure hose in the lower radiator hose opening, backflush the radiator.
 5. Remove the thermostat.
Refer to: [Thermostat](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), Removal and Installation).
 6. Install the coolant inlet connection without the thermostat.
Torque : 89 lb.in (10 Nm)
 7. Backflush the engine. Position the high-pressure water hose into the engine through the upper radiator hose and backflush the engine.
 8. Install the thermostat.
Refer to: [Thermostat](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), Removal and Installation).
 9. Install the radiator.
Refer to: [Radiator](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), Removal and Installation).
 10. Fill and bleed the cooling system.
Refer to: [Engine Cooling System Draining, Vacuum Filling and Bleeding](#) (303-03C Engine Cooling - 3.5L EcoBoost (BM), General Procedures).
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