

## SECTION 6B

# COOLING AND RADIATOR

**CAUTION:** This vehicle is equipped with Supplemental Inflatable Restraint (SIR). Refer to **CAUTIONS** in SECTION 9J under "ON-VEHICLE SERVICE" and the SIR Component and Wiring Location View in Section 9J before performing service on or around SIR components or wiring. Failure to follow **CAUTIONS** could result in possible air bag deployment, personal injury, or otherwise unneeded SIR system repairs.

**NOTICE:** Always use the correct fastener in the proper location. When you replace a fastener, use **ONLY** the exact part number for that application. General Motors will call out those fasteners that require a replacement after removal. General Motors will also call out the fasteners that require thread lockers or thread sealant. **UNLESS OTHERWISE SPECIFIED**, do not use supplemental coatings (paints, greases, or other corrosion inhibitors) on threaded fasteners or fastener joint interfaces. Generally, such coatings adversely affect the fastener torque and the joint clamping force, and may damage the fastener. When you install fasteners, use the correct tightening sequence and specifications. Following these instructions can help you avoid damage to parts and systems.

### CONTENTS

General Description.....	6B-1	Diagnosis.....	6B-6
Radiator.....	6B-1	Thermostat Test.....	6B-6
Core.....	6B-1	Radiator Cap.....	6B-6
Tanks.....	6B-1	Cooling System Diagnostic Charts.....	6B-6
Drain Plug.....	6B-1	On-Vehicle Service.....	6B-7
Heater Core.....	6B-2	Draining and Refilling the Cooling System....	6B-7
Radiator Cap.....	6B-2	Cooling System Flushing.....	6B-8
Coolant Reservoir.....	6B-2	Thermostat.....	6B-9
Fan Clutch.....	6B-2	Generator/Coolant Pump Drive Belt.....	6B-9
Engine Coolant Temperature (ECT) Sensor.....	6B-3	Coolant Pump.....	6B-10
Thermostat.....	6B-3	Coolant Reservoir.....	6B-11
Coolant Pump.....	6B-3	Radiator.....	6B-11
Cylinder Block Plug.....	6B-3	Coolant Hoses and Pipes.....	6B-13
Maintenance Recommendations.....	6B-4	Cooling Fan and Fan Clutch.....	6B-16
Checking Engine Coolant Level (ECL).....	6B-4	Specifications.....	6B-17
Coolant Concentration Testers.....	6B-4	Fastener Torques.....	6B-17
Testing Coolant Concentration.....	6B-4	General Specifications.....	6B-17
Hoses and Clamps Inspection.....	6B-5	Special Tools.....	6B-18
Cleaning.....	6B-5		

### GENERAL DESCRIPTION

The engine cooling system consists of the radiator, radiator cap, coolant reservoir, coolant pipes/hoses, coolant pump, cooling fan, and thermostat (Figure 1). The radiator in this vehicle is a tube and fin type.

#### RADIATOR

##### Core

A lightweight tube and fin aluminum radiator is used in this vehicle. The air circulating between the tubes is directed by the fins to lower the engine coolant temperature (ECT) as it flows through the tubes.

#### Tanks

The radiator has upper and lower tanks. The upper tank is utilized to increase the capacity and ensure sufficient supply of coolant in the radiator to cool the engine as necessary. Transmission fluid cooler pipes run through the bottom tank of the radiator to cool the transmission fluid (automatic transmission equipped vehicles).

#### Drain Plug

The drain plug is located at the lower left of the radiator on the rear side. It is an open/close system which allows drainage of the engine coolant from the radiator.





































