

DESCRIPTION AND OPERATION (Continued)

When the coolant is cold, the thermostat is in the closed position and the coolant flow is restricted to the cylinder block, head, intake manifold and heater. As the temperature increases, the thermostat opens, allowing a portion of the coolant to pass into the radiator. The coolant flows through the radiator tubes and is cooled by air passing over the cooling fins and is cooled by the cooling fan. Coolant is then circulated from the radiator outlet tank through the water pump and into the cylinder block to complete the circuit.

The coolant expands as the temperature and pressure rise in the system. When the limiting system working pressure is reached, the pressure relief valve in the radiator filler cap is lifted from its seat and allows coolant to flow through the radiator filler neck and the overflow hose into the coolant recovery reservoir. The radiator filler cap has a rubber seal on the underside to prevent leakage.

When the system temperature and pressure drop, the coolant contracts in volume and the pressure in the radiator is reduced. The coolant in the reservoir bottle will then flow back into the radiator through the vacuum relief valve in the radiator filler cap.

The Constant Control Relay Module (CCRM) activates the cooling fan motor when the coolant reaches a specified temperature, or when the engine reaches a specified temperature. On vehicles equipped with air conditioning, the cooling fan motor is activated whenever the air conditioning clutch is engaged.

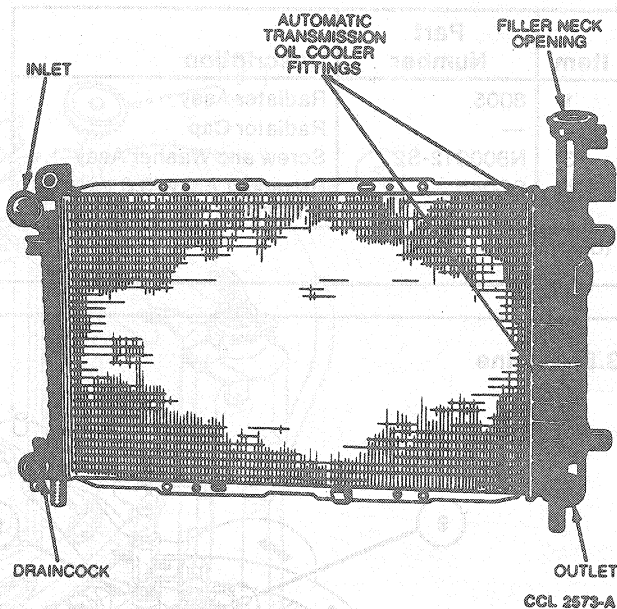
NOTE: Cooling fan motor will not cycle with the air conditioning clutch on.

NOTE: An exception to this is when vehicle speed is over 72 km/h (45 mph) and coolant temperature is below 104°C (220°F). The fan will then automatically shut off.

Radiators

The radiator is a brazed aluminum fin and tube-type design arranged for crossflow of the engine coolant. Nylon end tanks on each end of the core allow uniform distribution of engine coolant to the radiator tubes. The nylon end tanks are attached to the aluminum core by bending tabs on the core header over the foot (edge) of the nylon tank. A rubber O-ring gasket is placed between the nylon tank and the radiator core header to achieve a seal between the tank and the radiator core header. The nylon tanks are a moulded one-piece design with mounting brackets as a part of each tank.

DESCRIPTION AND OPERATION (Continued)



WARNING: NEVER REMOVE THE RADIATOR PRESSURE CAP UNDER ANY CONDITIONS WHILE THE ENGINE IS OPERATING. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE COOLING SYSTEM OR ENGINE AND/OR PERSONAL INJURY.

TO AVOID HAVING SCALDING HOT COOLANT OR STEAM BLOW OUT OF THE RADIATOR, USE EXTREME CARE WHEN REMOVING THE CAP FROM A HOT RADIATOR. WAIT UNTIL THE ENGINE HAS COOLED, THEN WRAP A THICK CLOTH AROUND THE RADIATOR PRESSURE CAP AND TURN IT SLOWLY TO THE FIRST STOP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE COOLING SYSTEM. WHEN CERTAIN ALL THE PRESSURE HAS BEEN RELEASED, PRESS DOWN ON CAP (STILL WITH A CLOTH), TURN AND REMOVE IT.

WARNING: THE ENGINE ELECTRIC COOLING FAN MAY COME ON AT ANYTIME WITHOUT WARNING EVEN IF THE ENGINE IS NOT RUNNING. DISCONNECT BATTERY GROUND CABLE BEFORE SERVICING.

Item	Number	Description
1	8200	Radiator Assy
2	8484S	Oil Cooler
3	8201	Water Pump and Front Cover
4	8210 (RH Bank)	Cylinder Block
5	—	Heater Outlet
6	—	Thermostat
7	—	Water Pump and Front Cover
8	—	Cylinder Head Gasket