

## Cooling System: Symptom Related Diagnostic Procedures

### Engine Overheating

Step	Action	Value	Yes	No
DEFINITION: Engine temperature lamp comes ON and stays ON, or the temperature gauge shows hot, or coolant overflows from the reservoir onto the ground while the engine is running.				
1	Check for a missing or damaged radiator upper baffle and/or center air deflector. Is the baffle or deflector missing or damaged?	—	Go to Step 8	Go to Step 2
2	Check for a loss of coolant. Is there a loss of coolant?	—	Go to Step 3	Go to Step 4
3	Fill the system to the specified level. Does the engine overheat?	—	Go to Step 4	System OK
4	Check for low coolant protection. Is the coolant to the correct concentration?	—	Go to Step 5	Go to Step 8
5	Check for a loss of system pressure. Is there a loss of system pressure?	—	Go to Step 8	Go to Step 6
6	Check for a faulty engine coolant temperature (ECT) sensor. Refer to <i>DTC P0117 Engine Coolant Temperature (ECT) Sensor Circuit Low Voltage</i> or <i>DTC P0118 Engine Coolant Temperature (ECT) Sensor Circuit High Voltage</i> or <i>DTC P0117 Engine Coolant Temperature (ECT) Sensor Circuit Low Voltage</i> or <i>DTC P0118 Engine Coolant Temperature (ECT) Sensor Circuit High Voltage</i> Is the sensor operating properly?	—	Go to Step 7	Go to Step 8
7	Check for a damaged coolant recovery reservoir or a leaking hose. Is the reservoir cracked or is the hose leaking?	—	Go to Step 8	Go to Step 3
8	Repair or install new parts as necessary, then retest. Does the engine overheat?	—	Go to Step 8	System OK
9	Check for incorrect drive belt tension. Refer to <i>Drive Belt</i> Is the belt to the correct tension?	—	Go to Step 10	Go to Step 8
10	Check for a damaged water pump driveshaft (5.7L Only). Is the water pump driveshaft damaged or is the seal leaking?	—	Go to Step 8	Go to Step 11
11	Check for obstructed radiator air flow or bent radiator fins. Is the radiator air flow obstructed?	—	Go to Step 8	Go to Step 12
12	Check for blocked cooling system passages. Are the cooling system passages blocked?	—	Go to Step 8	Go to Step 13
13	Check for an improper direction of inoperative cooling fans. Refer to <i>Cooling Fan</i> Are the cooling fans and motors operating correctly?	—	Go to Step 14	Go to Step 8
14	Check the thermostat. Refer to <i>Thermostat</i> Is the thermostat stuck in the closed position?	—	Go to Step 15	Go to Step 16
15	Replace the thermostat. Refer to <i>Thermostat</i> Does the engine overheat?	—	Go to Step 16	System OK
16	Check for a faulty water pump. Refer to <i>Water Pump</i> Are the impeller blades broken or eroded?	—	Go to Step 8	Go to Step 17

Step	Action	Value	Yes	No
17	Check the radiator cooling capacity. Is the proper sized radiator being used on the vehicle?	—	Go to Step 3	Go to Step 18
18	Consult the current parts catalog and replace the radiator. Refer to <i>Radiator Replacement</i> . Is the repair complete?	—	System OK	—