




Cooling System: Testing and Inspection Procedures

A: - Loss of Engine Coolant

TEST CONDITIONS	TEST DETAILS/RESULTS/ACTIONS
A1 CHECK THE ENGINE COOLANT LEVEL	
NOTE: Allow the engine to cool before checking the engine coolant level.	
	<p>2 Visually check the engine coolant level at the degas bottle.</p> <ul style="list-style-type: none">• Is the engine coolant level within specification? <p>→ Yes GO to A2.</p> <p>→ No REFILL the engine coolant as necessary. GO to A6.</p>
A2 CHECK THE PRESSURE RELIEF CAP	
	<p>1 Perform the pressure relief cap test.</p> <ul style="list-style-type: none">• Is pressure relief cap OK? <p>→ Yes GO to A3.</p> <p>→ No install a new pressure relief cap. TEST the system for normal operation.</p>

A1 - A2

TEST CONDITIONS	TEST DETAILS/RESULTS/ACTIONS
A3 CHECK THE ENGINE COOLANT FOR INTERNAL LEAK	
	<p>2 Inspect the engine coolant in degas bottle for signs of transmission fluid or engine oil.</p> <ul style="list-style-type: none"> <li>• Is oil or transmission fluid evident in coolant? <p>→ Yes If engine oil is evident, GO to Engine If transmission fluid is evident, REPLACE radiator.</p> <p>→ No GO to A4.</p>
A4 CHECK THE ENGINE AND THE TRANSMISSION FOR COOLANT	
	<p>1 Remove the oil level dipsticks from the engine and the transmission.</p> <ul style="list-style-type: none"> <li>• Is coolant evident in oil or transmission fluid? <p>→ Yes If coolant is in engine, GO to Engine If coolant is in transmission install a new radiator. GO to Automatic Transmission/ Transaxle to repair the automatic transmission.</p> <p>→ No GO to A5.</p>
A5 PRESSURE TEST THE ENGINE COOLING SYSTEM	
	<p>1 Pressure test the engine cooling system.</p> <ul style="list-style-type: none"> <li>• Does the engine cooling system leak? <p>→ Yes REPAIR or REPLACE leaking components. TEST the system for normal operation.</p> <p>→ No The cooling system is operational. RETURN to the Symptom Chart.</p>

TEST CONDITIONS	TEST DETAILS/RESULTS/ACTIONS
A6 CHECK THE COOLANT RECOVERY SYSTEM	<p>1  WARNING: Never remove the pressure relief cap under any conditions while the engine is operating. Failure to follow these instructions could result in damage to the cooling system or engine or personal injury. To avoid having scalding hot coolant or steam blow out of the cooling system, use extreme care when removing the pressure relief cap from a hot degas bottle. Wait until the engine has cooled, then wrap a thick cloth around the pressure relief cap and turn it slowly one turn (counterclockwise). Step back while the pressure is released from the cooling system. When certain all the pressure has been released, remove the pressure relief cap (still with a cloth). Allow the engine to cool.</p> <p>2 Remove the pressure relief cap.</p> <p>3 Inspect the pressure relief cap for foreign material between the sealing gasket and the diaphragm.</p> <ul style="list-style-type: none"> • Is the pressure relief cap OK? <p>→ Yes GO to A7.</p> <p>→ No CLEAN or install a new pressure relief cap. TEST the system for normal operation. GO to A1.</p>
A7 CHECK THE DEGAS BOTTLE	<p>1 NOTE: The engine must be cool when coolant is added to the degas bottle. Add coolant to the degas bottle until fluid is between the coolant fill level marks.</p> <ul style="list-style-type: none"> • Does the degas bottle leak? <p>→ Yes install a new degas bottle. TEST the system for normal operation.</p> <p>→ No PERFORM the cooling system pressure test; REPAIR as necessary. TEST the system for normal operation.</p>