

Engine Cooling Systems

COOLING SYSTEM TROUBLE SHOOTING

CONDITION & POSSIBLE CAUSE	CONDITION & POSSIBLE CAUSE
<p>Engine Overheats With No Coolant Loss</p> <ul style="list-style-type: none"> ● Low coolant level. ● Thermostat stuck closed. ● Faulty fan clutch. ● Faulty electric fan motor. ● Faulty thermal relay switches. ● Water distribution tube clogged. ● Radiator air flow passages blocked. ● Incorrect coolant concentration. ● Incorrect ignition timing. ● Faulty distributor vacuum advance unit. ● Exhaust system restricted. <p>Engine Overheats With External Coolant Loss</p> <ul style="list-style-type: none"> ● Broken or slipping fan belt. ● Thermostat stuck closed. ● Water pump shaft broken. ● Leaking freeze plug(s). ● Faulty fan clutch. ● Faulty electric fan motor. ● Faulty thermal relay switches. ● Faulty radiator pressure cap. ● Water distribution tube clogged. ● Radiator air flow passages blocked. ● Incorrect ignition timing. ● Faulty distributor vacuum advance unit. ● Exhaust system restricted. <p>Engine Overheats With Internal Coolant Leakage</p> <ul style="list-style-type: none"> ● Cracked or warped intake manifold. ● Blown cylinder head gasket. ● Warped cylinder head or block. ● Cracked cylinder head or block. <p>Engine Fails to Reach Normal Operating Temperature</p> <ul style="list-style-type: none"> ● Thermostat stuck in open position. ● Temperature gauge or light may be defective. ● Faulty temperature sending unit. ● Faulty thermal relay switches. ● Incorrect thermostat. ● Coolant level below add mark. 	<p>Poor Circulation of Coolant</p> <ul style="list-style-type: none"> ● Plugged or restricted radiator. ● Cylinder head or block water passages clogged or restricted. ● Collapsed lower radiator hose. ● Faulty water pump. <p>Excessive Foaming in Radiator</p> <ul style="list-style-type: none"> ● Incorrect coolant concentration (system must be flushed). <p>Coolant Loss</p> <ul style="list-style-type: none"> ● Radiator leaking. ● Coolant reservoir leaking. ● Heater core leaking. ● Water pump seal or gasket leaking. ● Cylinder head gasket leaking. ● Incorrect cylinder head bolt torque. ● Air in system. ● Faulty water control valve. <p>Coolant Recovery System Inoperative</p> <ul style="list-style-type: none"> ● Low coolant level. ● Leak in system. ● Radiator pressure cap loose or defective. ● Overflow tube clogged or leaking. ● Recovery bottle vent plugged. <p>No Coolant Flow Through Heater Core</p> <ul style="list-style-type: none"> ● Plugged return pipe in water pump. ● Heater hose collapsed or plugged. ● Plugged heater core. ● Plugged thermostat housing outlet. ● Heater bypass hole in cylinder head plugged. ● Faulty water valve. <p>Noise</p> <ul style="list-style-type: none"> ● Fan contacting shroud. ● Loose water pump impeller. ● Dry fan belt. ● Rough surface on drive pulley. ● Water pump bearing worn. ● Improper alignment of fan belts.