

# A L L Diagnostic Trouble Codes ( DTC ): P Code Charts

P1491

TEST	ACTION	APPLICABILITY
1	<p>Ignition on, engine not running.                      With the DRBIII®, read DTCs and record the related Freeze Frame data.                      With the DRBIII®, actuate the Radiator Fan Relay.                      Is the Radiator Fan operating?</p> <p>Yes → Refer to the INTERMITTENT CONDITION Symptom (Diagnostic Procedure).                      Perform POWERTRAIN VERIFICATION TEST VER - 2.</p> <p>No → Go To 2</p>	All
2	<p>Turn the ignition off.                      Remove the Cooling Fan Relay.                      Using a 12-volt test light connected to ground, probe the (C24) Fused B+ circuit of the Cooling Fan Relay connector.                      Is the voltage above 11.0 volts?</p> <p>Yes → Go To 3</p> <p>No → Repair the open or short to ground in the (C24) Fused B+ circuit.                      Inspect the related fuse and repair as necessary.                      Perform POWERTRAIN VERIFICATION TEST VER - 2.</p>	All
3	<p>Using a 12-volt test light connected to 12-volts, probe the (Z212) Ground circuit in the Cooling Fan Relay harness connector.                      Does the test light illuminate brightly?</p> <p>Yes → Go To 4</p> <p>No → Repair the open in the (Z212) Ground circuit.                      Perform POWERTRAIN VERIFICATION TEST VER - 2.</p>	All
4	<p>Disconnect the PCM harness connectors.                      Measure the resistance of the (K173) Cooling Fan Relay Control circuit between the Radiator Fan Relay connector and the PCM harness connector.                      Is the resistance below 5.0 ohms?</p> <p>Yes → Repair the open in the (K173) Radiator Fan Relay Control circuit.                      Perform POWERTRAIN VERIFICATION TEST VER - 2.</p> <p>No → Go To 5</p>	All

Test 1 - 4

TEST	ACTION	APPLICABILITY
5	<p>Measure the resistance between ground and the (K173) Radiator Fan Relay Control circuit at Relay connector.                      Is the resistance below 100 ohms?</p> <p>Yes → Go To 6</p> <p>No → Repair the short to ground in the (K173) Radiator Fan Relay control circuit.                      Perform POWERTRAIN VERIFICATION TEST VER - 2.</p>	All
6	<p><b>NOTE: Before continuing, check the PCM harness connector terminals for corrosion, damage, or terminal push out. Repair as necessary.</b>                      Using the schematics as a guide, inspect the wire harness and connectors. Pay particular attention to all Power and Ground circuits.                      If there are no possible causes remaining, view repair.</p> <p>Repair                      Replace and program the Powertrain Control Module per Service Information.                      Perform POWERTRAIN VERIFICATION TEST VER - 2.</p>	All

Test 5 - 6

P1491-COOLING FAN RELAY CONTROL CIRCUIT

**POSSIBLE CAUSES**

- Radiator fan relay operation
- (C24) fused B+ output circuit
- (Z212) ground circuit
- (K173) radiator fan relay control circuit open
- (K173) radiator fan relay control circuit shorted to ground
- PCM