

CHRYSLER · POWERTRAIN

P1491

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1491 · Chrysler

Radiator Fan Control Relay Circuit Open Or Shorted

P1491 on Chrysler vehicles means the powertrain control module (PCM) has detected an open or shorted circuit in the radiator fan control relay wiring. The PCM commands the relay to turn the cooling fan on, then monitors the control circuit for expected voltage; when the feedback does not match the command, it stores this code.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- The radiator cooling fan may not turn on at all, leading to overheating in traffic or at idle
- The fan may run continuously even with the engine cold and the key off, draining the battery
- The check engine light (malfunction indicator lamp) illuminates on the dashboard
- Engine temperature gauge may climb higher than normal when the vehicle is stationary
- Often no symptoms besides the warning light, especially if the fan still works on a default strategy
- Possible air conditioning performance loss because the PCM may disable the A/C compressor to protect the engine

Common causes, most likely first

- 1 Failed radiator fan control relay (open coil or welded contacts)
- 2 Corroded, loose, or damaged electrical connector at the relay or fan motor
- 3 Broken or chafed wire in the relay control circuit between the PCM and the relay
- 4 Blown fuse or fusible link in the fan relay power circuit
- 5 Failed radiator fan motor drawing excessive current and damaging the relay circuit
- 6 Faulty powertrain control module (PCM) driver for the fan relay, though this is less common



How to diagnose and fix it

- 1 Check all fuses and fusible links related to the radiator fan circuit and replace any that are blown
- 2 Inspect the relay, its socket, and the fan motor connector for corrosion, tightness, and burn marks
- 3 Swap the radiator fan relay with an identical known-good relay from another position and clear the code to see if it returns
- 4 Use a digital multimeter to check for battery voltage at the relay power terminals and to test the relay coil resistance
- 5 Back-probe the relay control wire at the PCM and command the fan on with a scan tool to verify the PCM driver is grounding the circuit
- 6 Check the fan motor by applying battery voltage directly; replace the motor if it does not run or draws excessive current
- 7 Repair any damaged wiring or connectors, clear the code, and verify the fan operates correctly through several drive cycles

Relay circuit checks that save time

- A relay that clicks does not guarantee good contacts; the internal switch can be burned open while the coil still operates, so always test continuity across the power terminals.
- Chrysler PCMs often set P1491 when the fan motor is failing and drawing too much current, which damages the relay over time; replacing only the relay leads to a repeat failure.
- Corrosion inside the underhood fuse box can create an open circuit that looks like a bad relay; inspect the relay socket terminals for green or white corrosion before condemning parts.
- The PCM may set this code intermittently if the control wire is chafed and only shorts when the engine moves under load; wiggle-test the harness while watching live data.
- Do not overlook the ground circuit for the fan motor; a poor ground can cause the relay to arc and eventually set an open-circuit code.

Can I keep driving with P1491?

You can drive short distances with the warning light on, but avoid heavy traffic, long idles, and hot weather until the fan is repaired because overheating can cause serious engine damage. If the temperature gauge rises above normal, pull over and shut the engine off immediately.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Relay puller or small flathead screwdriver
- Wire probe set and electrical tape
- Factory service information for wiring diagrams



Reading P1491

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 4** Auxiliary emission controls.
- 91** The exact fault within that area.

Often seen with

P1490 Vacuum Cut Valve Bypass Valve Circuit · **P1492** EVAP Canister Purge Control Solenoid Valve Circuit · **P1490** Low Speed Fan Control Relay Fault · **P1492** Battery Temperature Sensor High Voltage · **P1490** Low Speed Fan CTRL Relay Circuit Open Or Shorted · **P1492** Battery Temperature Sensor Voltage Too High · **P1490** Low Speed Fan CTRL Relay Circuit Open Or Shorted · **P1492** Battery Temperature Sensor Voltage Too High · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P0480** Cooling Fan 1 Control Circuit Malfunction · **P0481** Cooling Fan 2 Control Circuit Malfunction

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1491/>

