

GENERIC · POWERTRAIN

P0692

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0692

Fan 1 Control Circuit High

P0692 means the engine computer (PCM) has detected a high-voltage condition on the control circuit for Fan 1, which is the primary electric cooling fan on most vehicles. The PCM commands the fan on by grounding that circuit, so a high reading tells the computer the circuit is open, shorted to voltage, or not completing the path to the fan relay or module.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Computer and output circuits

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fan still runs on command during a key-on test
- Engine temperature gauge climbing above normal in traffic or at idle because the fan never engages
- Cooling fan running continuously at full speed even with the engine cold, depending on the failure mode
- Air conditioning performance dropping because the condenser fan is tied to the same control strategy
- A cooling fan relay that clicks repeatedly or stays silent when the engine reaches operating temperature
- Overheating warning message or reduced engine power if the PCM enters a protection strategy

Common causes, most likely first

- Open or broken wire in the fan control circuit between the PCM and the fan relay or fan control module
- Corroded, loose, or pushed-back terminal at the fan relay socket, fan module connector, or PCM connector
- Failed cooling fan relay with burned contacts or a coil that no longer pulls in
- Shorted fan control module or fan motor drawing abnormal current and damaging the control circuit
- PCM driver circuit for Fan 1 failed internally, holding the control line high
- Aftermarket alarm, remote starter, or fan override wiring spliced into the control circuit
- Rodent damage or chafing where the fan harness passes near hot or moving components



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0692, then clear the code and verify whether it returns immediately or only after a drive cycle
- 2 Inspect the fan harness and connectors for chafing, corrosion, pushed pins, and rodent damage, paying close attention to the relay box and fan module plugs
- 3 Command the fan on with a scan tool and watch the control circuit voltage at the relay or module to confirm whether the PCM is actually driving the circuit
- 4 Test the fan relay coil and contacts with a multimeter, and swap in a known-good relay of the same part number to rule out a failed relay
- 5 Measure resistance and voltage drop on the control wire from the PCM to the relay or module, repairing any open or high-resistance section
- 6 Check the fan motor and module for excessive current draw or a short that could damage the control circuit, replacing the fan assembly if it fails the current test
- 7 If the circuit and components test good but the PCM still reports a high control circuit, perform a pin-out and driver test at the PCM connector before condemning the computer

What a fan control high code really means

- A high control circuit code does not always mean the fan is dead; on many vehicles the PCM pulls the control line low to turn the fan on, so an open wire or unplugged fan leaves the line high and sets P0692 even though the fan itself is fine.
- Technicians often replace the fan motor when the real fault is a corroded relay socket or a chafed wire behind the fan shroud, so always load-test the control circuit before buying parts.
- Some vehicles use a pulse-width-modulated fan control module rather than a simple relay, and a failing module can hold the control line high intermittently, setting P0692 only on hot days or during long idle periods.
- A cooling fan that runs constantly after this code sets can drain the battery overnight, so check for a stuck relay or shorted control wire if the battery goes flat.
- P0692 can be set by a low battery or a poor ground at the fan module, because the PCM compares the control circuit voltage to expected values and a weak ground skews that reading.

Can I keep driving with P0692?

You can usually drive short distances at speed with the warning light on, but avoid heavy traffic, long idles, and towing until the fan is repaired because the engine can overheat quickly without a working cooling fan. If the temperature gauge climbs or the air conditioning stops cooling, pull over and shut the engine off.



Tools that help

- OBD-II scan tool with bidirectional fan control capability
- Digital multimeter with voltage and resistance functions
- Test light or fused jumper wire for circuit loading
- Relay puller and a known-good relay of the same type
- Wire repair kit with crimp connectors and heat shrink
- Factory service information or wiring diagram for the fan control circuit

Reading P0692

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
6	Computer and output circuits.
92	The exact fault within that area.

Often seen with

P0480 Cooling Fan 1 Control Circuit Malfunction · **P0481** Cooling Fan 2 Control Circuit Malfunction · **P0691** Fan 1 Control Circuit Low · **P0693** Fan 2 Control Circuit Low · **P0694** Fan 2 Control Circuit High

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0692/>

