

GENERIC · POWERTRAIN

P0694

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0694

Fan 2 Control Circuit High

P0694 means the engine computer commanded the second cooling fan relay or output to turn on, but the feedback circuit on that control wire stayed at a high voltage instead of switching as expected. The computer is not reporting a fan that failed to spin; it is reporting an electrical fault on the control side of Fan 2, such as an open circuit, a short to voltage, or a driver that cannot pull the line low.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Often no symptoms besides the warning light, because the primary fan may still cool the engine adequately.
- The second cooling fan never runs, even when coolant temperature rises or the air conditioning is switched on.
- Engine temperature climbs higher than normal in traffic or on hot days when the extra fan is needed.
- The air conditioning may blow warm at idle because the condenser lacks airflow from the second fan.
- A cooling fan may run continuously after shutdown or at times it should be off, depending on how the driver fails.
- In some vehicles the computer defaults to running the remaining fan at full speed, which is audible as loud fan noise.

Common causes, most likely first

- 1 Open circuit in the Fan 2 control wire between the computer and the fan relay or fan control module.
- 2 Short to battery voltage on the Fan 2 control circuit, often from chafed harness insulation near the fan shroud or radiator support.
- 3 Failed cooling fan relay or fan control module whose coil or driver no longer pulls the control line low.
- 4 Corroded or loose terminals at the fan relay socket, the fan connector, or the computer connector.
- 5 Internal driver failure inside the engine computer on the Fan 2 output circuit.
- 6 A fan motor that draws excessive current and damages the relay or control module over time.
- 7 Aftermarket alarm, remote start, or fan override wiring that backfeeds voltage onto the control circuit.



How to diagnose and fix it

- 1 Clear the code and verify it returns, then command Fan 2 on with a scan tool while watching the control circuit voltage at the relay.
- 2 Inspect the Fan 2 harness for chafing, pinched wires, and corrosion at the relay socket and fan connector.
- 3 Test the fan relay or fan control module by swapping it with a known-good identical relay where the layout allows.
- 4 Measure resistance and voltage drop on the control wire from the computer to the relay to confirm an open or short.
- 5 Check the fan motor current draw and spin the fan by hand to rule out a seized or high-draw motor.
- 6 If the control wire and relay test good but the computer cannot pull the line low, test the computer output with a loaded test light before condemning it.
- 7 Repair the harness or replace the failed relay, module, fan motor, or computer, then clear codes and confirm Fan 2 operates on command.

Fan 2 control faults that fool good technicians

- P0694 is a circuit code for the control side, so replacing the fan motor first is a common and expensive misdiagnosis when the relay coil or control wire is actually at fault.
- A short to voltage on the control wire can be intermittent and only set the code when the harness flexes, so wiggle-testing the harness while watching live data is essential.
- Some vehicles use a single fan control module that drives two fans, and a fault inside that module can set P0694 even though the fan motor and wiring are perfect.
- A fan relay that has welded closed can keep voltage on the control circuit and set this code, which is why the relay must be tested for both coil and contact operation.
- Aftermarket remote start or alarm wiring tapped into the fan circuit is a frequent cause on used vehicles and is easily overlooked during a factory-wiring-only inspection.

Can I keep driving with P0694?

You can usually drive short distances at moderate speed with the warning light on, but avoid heavy traffic, long idles, and towing because the remaining fan may not keep coolant temperature in check. Stop and let the engine cool if the temperature gauge climbs toward the red zone.

Tools that help

- OBD-II scan tool with bidirectional fan control capability
- Digital multimeter with voltage and resistance functions
- Test light with a high-current bulb for loading computer outputs
- Factory wiring diagram for the Fan 2 control circuit
- Relay puller and terminal pick set
- Infrared thermometer to verify actual coolant and fan operation



Reading P0694

- 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.
- 94** 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 · **P0692** Fan 1 Control Circuit High · **P0693** Fan 2 Control Circuit Low

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/p0694/>

