

GENERIC · POWERTRAIN

P00F2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00F2

Humidity Sensor Circuit/Open

P00F2 indicates that the powertrain control module (PCM) has detected an open circuit in the humidity sensor circuit, meaning the signal wire or ground path is broken or has excessive resistance. The sensor itself may be functional, but the PCM cannot receive a valid humidity reading, which can affect climate control and engine management strategies.

SYSTEM Powertrain	CODE TYPE Generic (all makes)	SEVERITY Low	FIX DIFFICULTY Intermediate	AREA Fuel and air metering and auxiliary emission controls
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Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) on the dashboard.
- Often no symptoms besides the warning light, as the vehicle may default to a calculated humidity value.
- Possible poor fuel economy or slightly rough running if the PCM alters air-fuel ratio based on missing humidity data.
- In some vehicles, the climate control system may not function optimally, such as inaccurate defogging or automatic mode issues.
- Intermittent warning light if the open circuit is caused by a loose connection or chafed wire.

Common causes, most likely first

- 1 Broken or disconnected signal wire between the humidity sensor and the PCM.
- 2 Corroded or damaged electrical connector at the humidity sensor or PCM.
- 3 Failed humidity sensor (internal open circuit).
- 4 Open circuit in the sensor ground wire.
- 5 Rodent damage or chafing of the wiring harness.
- 6 Water intrusion into the connector causing corrosion and an open circuit.



How to diagnose and fix it

- 1 Visually inspect the humidity sensor connector and wiring for damage, corrosion, or loose pins.
- 2 Disconnect the sensor and check for battery voltage on the power supply wire (if applicable) and continuity on the ground circuit.
- 3 Perform a continuity test on the signal wire between the sensor and PCM to confirm an open circuit.
- 4 Check for technical service bulletins (TSBs) or wiring diagrams specific to the vehicle to identify common failure points.
- 5 If the wiring and connectors are intact, test the humidity sensor according to the manufacturer's procedure; replace if faulty.
- 6 Clear the diagnostic trouble code and verify the repair by test-driving and monitoring live data for the humidity sensor signal.

Open Circuits Often Hide in Plain Sight

- A common oversight is replacing the humidity sensor when the real fault is a chafed wire in the harness, especially near sharp edges or where the harness flexes.
- The humidity sensor shares its reference voltage or ground with other sensors on some vehicles, so an open circuit elsewhere can set P00F2 as a secondary code.
- In many vehicles, the humidity sensor is integrated into the rain sensor or located behind the rearview mirror, making access and inspection tricky without removing trim.
- An open circuit can be intermittent, so a wiggle test of the harness while monitoring live data can reveal a broken wire that a static continuity test misses.
- Some aftermarket humidity sensors have different resistance values than the original, causing a new code to set even after replacement; always verify part compatibility.

Can I keep driving with P00F2?

The vehicle is generally safe to drive with this code because the PCM substitutes a default humidity value, but you should avoid extended driving in heavy rain or humid conditions until repaired, as climate control performance may be reduced. Have the circuit inspected soon to prevent potential secondary issues.

Tools that help

- Digital multimeter with continuity and voltage testing capabilities
- OBD-II scan tool with live data capability
- Wiring diagram for the specific vehicle
- Trim removal tools for accessing the sensor
- Electrical contact cleaner and dielectric grease



Reading P00F2

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- F2** The exact fault within that area.

Often seen with

P0071 Ambient Air Temperature Sensor Range/Performance · **P0072** Ambient Air Temperature Sensor Circuit Low · **P00F3** Humidity Sensor Circuit Range/Performance · **P00F4** Humidity Sensor Circuit Low · **P00F5** Humidity Sensor Circuit High

See it working

Watch the animated explainer [How a Boxer Engine Works: Flat Engine Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00f2/>

