

GENERIC · POWERTRAIN

P00F3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00F3

Humidity Sensor Circuit Range/Performance

P00F3 indicates that the powertrain control module (PCM) has detected a range or performance error in the humidity sensor circuit, meaning the sensor's output voltage or signal is outside the expected range for the current operating conditions. The PCM monitors the humidity sensor to adjust fuel injection and other parameters, and this code sets when the signal is erratic, stuck, or implausible.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp).
- Often no symptoms besides the warning light.
- Possible slight decrease in fuel economy.
- Occasional rough idle or hesitation under certain conditions.
- In rare cases, a default value may cause the engine to run richer or leaner than optimal.
- No noticeable drivability issues in most cases.

Common causes, most likely first

- 1 Faulty humidity sensor.
- 2 Damaged or corroded wiring or connector at the humidity sensor.
- 3 Open or short circuit in the humidity sensor signal circuit.
- 4 Poor electrical connection at the PCM.
- 5 Water intrusion or contamination in the sensor or connector.
- 6 Failed PCM (rare).



How to diagnose and fix it

- 1 Use an OBD-II scanner to verify the code and check for related codes.
- 2 Inspect the humidity sensor and its connector for physical damage, corrosion, or water intrusion.
- 3 Check the sensor's reference voltage and ground circuits with a multimeter.
- 4 Test the humidity sensor signal voltage and compare to specifications.
- 5 Repair any damaged wiring or connectors as needed.
- 6 Replace the humidity sensor if testing indicates it is faulty.
- 7 Clear the code and verify the repair with a test drive.

Humidity sensor faults often misdiagnosed

- A faulty humidity sensor can cause the PCM to alter fuel injection timing, leading to subtle performance issues that are often overlooked.
- The humidity sensor is sometimes integrated with the mass airflow sensor or ambient air temperature sensor, so a failure in one component can affect multiple readings.
- Corroded connectors are a common cause, especially in areas with high humidity or road salt exposure, and should be inspected before replacing the sensor.
- This code can be set by a temporary condition such as water intrusion that dries out, so clearing the code and seeing if it returns is a valid first step.
- Do not confuse this code with intake air temperature or mass airflow sensor codes, as the humidity sensor is a separate component on many vehicles.

Can I keep driving with P00F3?

The vehicle is generally safe to drive with this code, as it typically does not cause immediate drivability issues. However, avoid prolonged driving if you notice performance problems, and have the issue diagnosed soon to prevent potential fuel economy loss or emissions impact.

Tools that help

- OBD-II scanner
- Digital multimeter
- Wire repair kit
- Electrical contact cleaner
- Vehicle service manual for wiring diagrams



Reading P00F3

- 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.
- F3** The exact fault within that area.

Often seen with

P00F2 Humidity Sensor Circuit/Open · **P00F4** Humidity Sensor Circuit Low · **P0101** Mass/Volume Air Flow Circuit Range/Performance · **P0111** Intake Air Temperature Circuit Range/Performance · **P0171** System Too Lean (Bank 1)

See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00f3/>

