

GENERIC · POWERTRAIN

P0179

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0179

Fuel Composition Sensor Circuit High

P0179 means the powertrain control module (PCM) has detected a fuel composition sensor signal voltage that is higher than the expected range for the current operating conditions. The sensor, typically used on flex-fuel vehicles to report the ethanol percentage in the fuel, is sending a signal the PCM interprets as out-of-range high, so the computer sets this code and may default to a calculated fuel composition strategy.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling, especially after refueling with a different ethanol blend
- Hesitation or reduced power during acceleration
- Poor fuel economy or inconsistent fuel gauge readings
- Hard starting or extended cranking when the fuel composition is misreported
- Possible stalling at low speeds if the PCM cannot determine the correct fuel blend

Common causes, most likely first

- 1 Faulty fuel composition sensor sending an abnormally high voltage signal
- 2 Damaged or corroded wiring between the sensor and the PCM, including an open signal circuit
- 3 Contaminated or degraded fuel composition sensor element from poor fuel quality
- 4 Loose or damaged sensor connector allowing intermittent high-resistance contact
- 5 PCM internal fault or corrupted fuel composition learning values
- 6 Aftermarket fuel system modifications or incorrect sensor replacement
- 7 Water intrusion into the sensor connector or wiring harness



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P0179 is the only fuel composition-related code
- 2 Visually inspect the fuel composition sensor, connector, and wiring for damage, corrosion, or loose pins
- 3 Measure sensor reference voltage and signal voltage with a digital multimeter and compare to manufacturer specifications
- 4 Check the signal circuit for an open or high resistance between the sensor and the PCM
- 5 Test the sensor output with a scan tool live data stream while gently wiggling the harness to catch intermittent faults
- 6 Replace the fuel composition sensor if voltage readings remain out of range after wiring checks pass
- 7 Clear codes and perform a fuel composition relearn or adaptive reset as required, then verify the repair with a test drive

Fuel composition sensor high-voltage traps

- A high signal voltage often comes from an open signal circuit rather than a failed sensor, so always check wiring continuity before condemning the sensor.
- Flex-fuel vehicles can set P0179 after refueling with E85 if the sensor is slow to update, and the code may clear itself after a proper relearn drive cycle.
- Contaminated fuel or water in the fuel system can skew the sensor reading high without any sensor electrical fault, so fuel quality should be considered.
- Some technicians replace the fuel composition sensor only to find the PCM connector has corroded pins causing the same high-voltage signal.
- P0179 does not always mean the sensor is bad; a poor ground at the sensor body can also drive the signal voltage above the expected range.

Can I keep driving with P0179?

You can usually drive the vehicle with P0179, but avoid aggressive acceleration and refueling with unknown ethanol blends until the fault is repaired. If the engine runs rough or stalls, stop driving and have the vehicle diagnosed promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the fuel composition sensor circuit
- Basic hand tools for connector and sensor access
- Fuel pressure gauge
- Scan tool capable of fuel composition relearn



Reading P0179

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

Often seen with

P0171 System Too Lean (Bank 1) · **P0176** Fuel Composition Sensor Circuit · **P0177** Fuel Composition Sensor Circuit Range/Performance · **P0178** Fuel Composition Sensor Circuit Low · **P0180** Fuel Temperature Sensor A Circuit Malfunction

See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0179/>

