

GENERIC · POWERTRAIN

P03D4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03D4

Cylinder 7 Pressure Sensor Circuit High

P03D4 indicates that the powertrain control module (PCM) has detected an abnormally high voltage signal from the cylinder 7 pressure sensor circuit, which is used to monitor combustion pressure for misfire detection and engine balancing. The PCM expects the sensor signal to stay within a calibrated range, and a sustained high voltage tells the module that the circuit is shorted to voltage, the sensor has failed, or the reference voltage is being corrupted.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire-like shudder under light load
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy due to incorrect fuel delivery calculations
- Intermittent hesitation or stumble during acceleration
- Failed emissions test due to stored fault

Common causes, most likely first

- 1 Faulty cylinder 7 pressure sensor (internal short to voltage)
- 2 Damaged or chafed sensor wiring shorted to a power source
- 3 Corroded or loose electrical connector at the sensor or PCM
- 4 PCM internal fault biasing the signal circuit high
- 5 Contamination or mechanical damage to the sensor tip from combustion debris
- 6 High resistance in the sensor ground circuit causing a voltage offset



How to diagnose and fix it

- 1 Connect a scan tool and verify P03D4 is current; check freeze-frame data for sensor voltage at the time of fault
- 2 Visually inspect the cylinder 7 pressure sensor, its connector, and the wiring harness for damage, corrosion, or chafing
- 3 Measure reference voltage and ground at the sensor connector with the key on; compare to manufacturer specifications
- 4 Backprobe the signal wire at the PCM and compare voltage with the sensor disconnected to isolate a wiring short
- 5 Perform a resistance and continuity test on the sensor signal and ground circuits to rule out opens or shorts
- 6 If wiring and connectors are good, swap the cylinder 7 sensor with a known-good one from another cylinder and recheck the code
- 7 Replace the cylinder 7 pressure sensor if the fault follows the sensor, then clear codes and verify the repair with a road test

Pressure sensor faults that mimic misfires

- A high voltage on the cylinder 7 pressure sensor circuit often sets companion misfire codes for cylinder 7, leading technicians to replace ignition coils or injectors unnecessarily.
- The pressure sensor shares a reference voltage and ground with other sensors on many engines, so a short in an unrelated sensor can pull the entire reference circuit high and set this code.
- Combustion pressure sensors are sensitive to installation torque and thread condition; an over-torqued or cross-threaded sensor can produce erratic high-voltage signals.
- Some vehicles use the pressure sensor signal for closed-loop combustion control, so a high-voltage fault can cause the PCM to default to open-loop fueling and noticeably degrade driveability.
- A intermittent short to voltage in the harness may only appear when the engine is hot or vibrating, so a wiggle test of the harness while monitoring sensor voltage is essential before condemning the sensor.

Can I keep driving with P03D4?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the PCM may be running in a degraded fuel control mode. If the engine runs rough or enters limp mode, stop driving and have the vehicle towed to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with backprobe pins
- Wiring diagram for the specific vehicle
- Torque wrench for sensor installation
- Socket set and extensions



Reading P03D4

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 3** Ignition system and misfire.
- D4** The exact fault within that area.

Often seen with

P0172 System Too Rich (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0307** Cylinder 7 Misfire Detected · **P03D3** Cylinder 7 Pressure Sensor Circuit Low · **P03D5** Cylinder 7 Pressure Sensor Circuit Intermittent/Erratic

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03d4/>

