

GENERIC · POWERTRAIN

P03D2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03D2

Cylinder 7 Pressure Sensor Circuit Range/Performance

P03D2 indicates that the powertrain control module has detected an out-of-range or erratic signal from the cylinder 7 pressure sensor circuit, which is used on engines with in-cylinder pressure sensing for precise combustion monitoring. The computer compares the sensor voltage against expected values for the current operating conditions and flags the code when the signal falls outside the acceptable range or fails a rationality check.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	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 that may be intermittent
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy or increased emissions
- Difficulty starting or stalls when coming to a stop
- Audible pinging or knocking under load if the sensor affects timing control

Common causes, most likely first

- 1 Faulty cylinder 7 pressure sensor
- 2 Damaged or chafed wiring in the sensor circuit
- 3 Corroded or loose electrical connector at the sensor
- 4 Failed sensor ground or reference voltage circuit
- 5 Internal PCM driver or signal processing fault
- 6 Mechanical issue such as a leaking sensor seal or carbon buildup affecting sensor reading
- 7 Aftermarket sensor of incorrect specification installed previously



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 7 pressure sensor and its wiring for damage, corrosion, or loose connections
- 2 Use a scan tool to check live data for the cylinder 7 pressure sensor and compare it with other cylinders or expected values
- 3 Measure resistance and voltage on the sensor circuit according to the manufacturer's specifications to isolate a wiring or connector fault
- 4 Swap the cylinder 7 pressure sensor with a known-good sensor from another cylinder (if accessible) to see if the code follows the sensor
- 5 Check for technical service bulletins or known issues for the specific vehicle make and model related to this code
- 6 Replace the cylinder 7 pressure sensor if testing confirms it is faulty, using an OEM-quality part
- 7 Clear the code and verify the repair by test-driving the vehicle under conditions that would set the code

Cylinder pressure sensor code traps to avoid

- A P03D2 code can be set by a simple loose connector that intermittently loses contact, so always wiggle-test the harness while watching live data before condemning the sensor.
- On some engines, the cylinder pressure sensor is integrated into the glow plug or injector, and replacing just the sensor may not be possible without replacing the entire assembly.
- The code may appear after engine work that disturbed the sensor or its wiring, so check for recent repairs before assuming a component failure.
- A faulty sensor can cause the PCM to alter injection timing or quantity, leading to secondary codes like misfire or fuel trim codes that may distract from the root cause.
- Do not overlook the possibility of a PCM software update that addresses false setting of this code on certain vehicles.

Can I keep driving with P03D2?

If the check engine light is on but the engine runs smoothly, you can drive cautiously to a repair shop, but avoid heavy acceleration or towing. If the engine runs rough, misfires, or enters limp mode, stop driving and have the vehicle towed to prevent damage to the engine or emissions system.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools for sensor removal
- Oscilloscope (optional for advanced signal analysis)



Reading P03D2

- 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.
- D2** The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0307** Cylinder 7 Misfire Detected · **P03D1** Cylinder 7 Pressure Sensor Circuit · **P03D3** Cylinder 7 Pressure Sensor Circuit Low

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p03d2/>

