

GENERIC · POWERTRAIN

P048D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P048D

Exhaust Pressure Control Valve A Position Sensor/Switch Circuit Low

P048D indicates that the powertrain control module (PCM) has detected a low signal voltage from the exhaust pressure control valve position sensor, which is part of the exhaust pressure control valve assembly. The PCM expects the sensor to report the valve's position via a voltage that varies with valve travel, and a low voltage indicates the sensor circuit is shorted to ground or the sensor has failed.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) on the dashboard.
- Often no symptoms besides the warning light, especially if the valve remains in a default position.
- Reduced engine performance or power, particularly during regeneration events or under load.
- Increased exhaust backpressure, which may lead to poor fuel economy or sluggish acceleration.
- In some cases, the vehicle may enter limp mode or limit engine speed to protect the exhaust system.
- A noticeable increase in exhaust noise if the valve is stuck open or closed.

Common causes, most likely first

- 1 Faulty exhaust pressure control valve position sensor (internal short to ground).
- 2 Damaged or chafed wiring in the sensor circuit, causing a short to ground.
- 3 Corroded or loose electrical connector at the sensor or PCM.
- 4 Failed exhaust pressure control valve actuator, preventing proper sensor movement.
- 5 PCM internal fault causing incorrect signal interpretation (rare).
- 6 Exhaust system blockage or excessive backpressure damaging the sensor.
- 7 Water or debris intrusion into the sensor or connector, leading to corrosion.



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, connector, and wiring for damage, corrosion, or loose connections.
- 2 Use a scan tool to check for stored codes and freeze-frame data, and verify the sensor voltage reading with the key on, engine off.
- 3 Backprobe the sensor signal wire at the PCM and check for a short to ground using a digital multimeter.
- 4 Disconnect the sensor and measure resistance across its terminals to check for an internal short, comparing to manufacturer specifications.
- 5 Inspect the exhaust pressure control valve for mechanical binding or blockage that could prevent sensor movement.
- 6 If the sensor circuit tests good, check the PCM for proper reference voltage and ground, and repair or replace as needed.
- 7 Replace the exhaust pressure control valve position sensor or the entire valve assembly if the sensor is not serviceable separately, then clear codes and verify repair.

Common Misdiagnosis Traps for P048D

- A low signal voltage can be caused by a short to ground in the wiring harness where it rubs against the exhaust system or chassis, which is often overlooked when only the sensor is replaced.
- The exhaust pressure control valve position sensor may share a ground circuit with other sensors, so a fault in a common ground can set this code along with others, leading to unnecessary sensor replacement.
- On some vehicles, the exhaust pressure control valve is part of the turbocharger or exhaust brake system, and a mechanical failure of the valve can cause the sensor to read low even though the sensor itself is good.
- The PCM may set P048D if the sensor signal is low only during certain conditions, such as during a regeneration cycle, so intermittent faults may not be present during a static test.
- After repairs, a relearn or adaptation procedure may be required for the new sensor or valve to ensure proper operation and prevent the code from returning.

Can I keep driving with P048D?

It is generally safe to drive with P048D, but avoid heavy loads or aggressive driving that could increase exhaust backpressure and potentially damage the exhaust system. Have the vehicle diagnosed promptly to prevent further issues.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools (sockets, wrenches, screwdrivers)
- Backprobe pins or piercing probes
- Manufacturer service information for sensor specifications



Reading P048D

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- 8D** The exact fault within that area.

Often seen with

P0471 Exhaust Pressure Sensor Range/Performance · **P0472** Exhaust Pressure Sensor Low · **P0473** Exhaust Pressure Sensor High · **P048C** Exhaust Pressure Control Valve A Position Sensor/Switch Circ · **P048E** Exhaust Pressure Control Valve A Position Sensor/Switch Circ

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p048d/>

