

GENERIC · POWERTRAIN

P3476

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3476

Cylinder 10 Deactivation/Intake Valve Control Circuit High

P3476 is a generic powertrain code indicating that the engine control module has detected an abnormally high voltage on the control circuit for the cylinder 10 deactivation/intake valve, which is part of the variable displacement or cylinder deactivation system. The computer expects the circuit to pull to a specific voltage when commanded, and a high reading means the circuit is open, shorted to voltage, or the actuator is not responding as designed.

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, often with no other noticeable symptoms
- Rough running or vibration when the engine transitions into or out of cylinder deactivation mode
- Reduced fuel economy because the engine may stay in full-cylinder mode
- A slight hesitation or stumble during light-throttle cruising
- In rare cases, a misfire code for cylinder 10 may accompany the deactivation code

Common causes, most likely first

- 1 Open or damaged wiring in the cylinder 10 deactivation valve control circuit
- 2 Failed cylinder 10 deactivation solenoid or intake valve actuator
- 3 Corroded or loose electrical connector at the deactivation valve
- 4 Short to voltage on the control circuit from chafed wiring
- 5 Faulty engine control module driver for that circuit (less common)
- 6 Internal mechanical binding of the deactivation valve causing the actuator to draw abnormal current



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code is current and not history
- 2 Visually inspect the cylinder 10 deactivation valve connector and wiring for damage or corrosion
- 3 Measure resistance of the deactivation solenoid and compare to the manufacturer's specification
- 4 Back-probe the control circuit with a multimeter to check for an open or short to voltage while commanding the valve on and off with a scan tool
- 5 Check for mechanical binding by manually operating the valve or performing an actuator test if supported
- 6 Repair or replace the faulty wiring, connector, or solenoid as indicated by the tests
- 7 Clear codes and perform a road test to verify the repair and confirm the monitor runs to completion

What a high voltage reading really means

- A high voltage on a control circuit often indicates an open circuit rather than a short, because the driver in the module pulls the line up when no current flows.
- Technicians sometimes replace the deactivation solenoid only to find the real fault is a chafed wire in the harness near the valve cover, so always wiggle-test the harness while watching live data.
- This code can set intermittently due to heat or vibration, and a simple resistance check at room temperature may not reveal the fault; a load test or voltage drop test is more reliable.
- Cylinder deactivation systems often share power or ground circuits with other cylinders, so a fault in a common feed can set codes for multiple cylinders, not just cylinder 10.
- The engine may run perfectly fine with this code stored because the module defaults to keeping all cylinders active, masking the underlying issue until emissions or fuel economy suffer.

Can I keep driving with P3476?

You can generally continue driving with this code because the engine will default to full-cylinder operation, but avoid heavy towing or aggressive driving until the fault is repaired. Prolonged driving with a deactivation fault may reduce fuel economy and could lead to more serious valve or lifter damage if the actuator is mechanically binding.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter with back-probe pins
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and component access



Reading P3476

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

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P3400** Cylinder Deactivation System (Bank 1) · **P3475** Cylinder 10 Deactivation/Intake Valve Control Circuit Low · **P3477** Cylinder 10 Exhaust Valve Control Circuit/Open · **P3497** Cylinder Deactivation System (Bank 2)

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/p3476/>

