

GENERIC · POWERTRAIN

P3449

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3449

Cylinder 7 Deactivation/Intake Valve Control Circuit/Open

P3449 is a generic OBD-II code indicating an open circuit or electrical fault in the control circuit for the cylinder 7 deactivation/intake valve, which is part of a variable displacement or cylinder deactivation system. The engine control module (ECM) monitors the circuit and sets this code when it detects an unexpected open, such as a broken wire, disconnected connector, or failed solenoid, preventing the valve from actuating.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or misfire-like vibration, especially when the engine transitions between full and reduced displacement modes
- Reduced engine power or a stumble during light-throttle cruising
- Poor fuel economy if the cylinder remains deactivated or the system defaults to full displacement
- Audible ticking or tapping from the valve cover area if the solenoid is not functioning
- In rare cases, the engine may enter limp mode to protect the catalytic converter

Common causes, most likely first

- 1 Broken, chafed, or corroded wire in the cylinder 7 deactivation valve control circuit
- 2 Loose or disconnected electrical connector at the deactivation solenoid
- 3 Failed cylinder 7 deactivation solenoid (open coil or mechanical seizure)
- 4 Open circuit inside the valve cover harness or pass-through connector
- 5 Faulty engine control module (ECM) driver for that circuit, though uncommon
- 6 Oil sludge or debris blocking the solenoid screen, causing intermittent open circuit



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 7 deactivation solenoid connector and wiring for damage, corrosion, or looseness
- 3 Measure resistance of the solenoid with a multimeter and compare to manufacturer specification
- 4 Perform a voltage drop test on the control circuit while wiggling the harness to check for intermittent opens
- 5 Check for technical service bulletins (TSBs) or known wiring harness routing issues for the specific vehicle
- 6 Replace the faulty solenoid or repair the wiring as needed, then clear codes and verify the repair with a road test
- 7 If the circuit tests good, follow the diagnostic flow chart for ECM driver testing before condemning the module

Hidden causes of P3449 you should not overlook

- A loose ground connection at the engine block can cause intermittent open-circuit codes for multiple solenoids, so always check grounds before replacing parts.
- Oil sludge or varnish buildup on the solenoid screen can create an open circuit only when the engine is cold, leading to a code that clears after warm-up.
- The code can be set by a faulty valve cover gasket allowing oil into the connector, which corrodes the pins and creates resistance.
- Some vehicles use a single harness for multiple deactivation solenoids; a short in one circuit can affect others and set related codes like P3448 or P3450.
- After replacing a solenoid, always perform a cylinder deactivation relearn procedure if required; skipping it can cause the code to return immediately.

Can I keep driving with P3449?

You can generally drive the vehicle with P3449, but avoid heavy loads or aggressive acceleration because the engine may be running on all cylinders or misfiring, which can damage the catalytic converter over time. Have the fault diagnosed promptly to prevent secondary issues.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with resistance and voltage drop functions
- Wire piercing probes or back-probe kit
- Service information with wiring diagrams and diagnostic flow charts
- Basic hand tools for connector and solenoid access



Reading P3449

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

Often seen with

P0307 Cylinder 7 Misfire Detected · **P3400** Cylinder Deactivation System (Bank 1) · **P3448** Cylinder 6 Exhaust Valve Control Circuit High · **P3450** Cylinder 7 Deactivation/Intake Valve Control Performance · **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/p3449/>

