

GENERIC · POWERTRAIN

P3441

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3441

Cylinder 6 Deactivation/Intake Valve Control Circuit/Open

P3441 is a generic powertrain code indicating that the engine control module has detected an open circuit or abnormal condition in the control circuit for the cylinder 6 deactivation or intake valve. This circuit typically controls a solenoid or actuator that enables variable valve timing or cylinder deactivation, and the code sets when the commanded state does not match the feedback signal.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire-like shudder, especially when the engine transitions between activation modes
- Reduced engine power or a limp-home mode in some vehicles
- Poor fuel economy due to improper valve timing or cylinder deactivation
- Audible clicking or ticking from the valve cover area if the solenoid is stuck
- Intermittent driveability issues that worsen under light load or at steady cruising speeds

Common causes, most likely first

- 1 Faulty cylinder 6 deactivation or intake valve control solenoid
- 2 Damaged, chafed, or disconnected wiring in the control circuit
- 3 Corroded or loose electrical connector at the solenoid or engine control module
- 4 Open or shorted coil in the solenoid winding
- 5 Engine control module internal driver failure (rare but possible)
- 6 Mechanical binding or sludge buildup in the valve control mechanism
- 7 Low engine oil level or degraded oil affecting hydraulic actuation



How to diagnose and fix it

- 1 Inspect the solenoid connector and wiring for obvious damage, corrosion, or looseness
- 2 Check the solenoid resistance with a multimeter and compare to manufacturer specifications
- 3 Verify power and ground signals at the solenoid connector with a test light or multimeter while commanding the circuit on and off
- 4 Perform a wiggle test on the harness while monitoring the circuit to catch intermittent opens
- 5 If electrical checks pass, remove and inspect the solenoid for sludge or mechanical binding
- 6 Replace the solenoid if it fails electrical or mechanical testing, then clear the code and verify repair
- 7 If the circuit tests good but the code persists, diagnose the engine control module driver circuit or reprogram the module as needed

Don't overlook the simple electrical checks

- A loose or corroded connector at the solenoid is a frequent cause that is often missed when technicians jump straight to part replacement.
The code can set intermittently due to vibration or temperature changes, so a wiggle test of the harness while monitoring live data is essential.
- Low oil level or dirty oil can prevent proper hydraulic actuation of the valve control mechanism, triggering the code without any electrical fault.
- Some vehicles use the same circuit for both cylinder deactivation and intake valve timing, so a failure may affect multiple cylinders and set related codes.
After replacing the solenoid, the engine control module may require a relearn procedure to calibrate the new component and prevent repeat codes.

Can I keep driving with P3441?

You can usually drive the vehicle with this code, but avoid heavy acceleration and sustained high speeds because the engine may enter limp mode or suffer reduced performance. Have the fault diagnosed soon to prevent potential catalytic converter damage from unburned fuel.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Test light
- Basic hand tools (socket set, screwdrivers, pliers)
- Wiring diagram for the specific vehicle
- Manufacturer service information for circuit testing and relearn procedures



Reading P3441

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

Often seen with

P3400 Cylinder Deactivation System (Bank 1) · **P3440** Cylinder 5 Exhaust Valve Control Circuit High · **P3442** Cylinder 6 Deactivation/Intake Valve Control Performance · **P3443** Cylinder 6 Deactivation/Intake Valve Control Circuit Low · **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/p3441/>

