

GENERIC · POWERTRAIN

P3438

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3438

Cylinder 5 Exhaust Valve Control Performance

P3438 indicates that the powertrain control module (PCM) has detected a performance problem with the exhaust valve control system for cylinder 5, meaning the valve is not opening or closing as commanded. The PCM monitors the circuit and valve response, and when the actual valve behavior deviates from the expected profile, it stores this code and may illuminate the check engine light.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire sensation, especially when the engine is cold
- Reduced engine power or poor acceleration due to improper cylinder breathing
- Increased fuel consumption because the engine management strategy compensates for the faulty valve
- Audible ticking or tapping noise from the top of the engine if the valve control mechanism is stuck
- In some cases, the engine may enter limp mode to protect the exhaust system

Common causes, most likely first

- 1 Faulty exhaust valve control solenoid or actuator for cylinder 5
- 2 Wiring damage (open, short, or corrosion) in the circuit between the PCM and the valve control solenoid
- 3 Sticking or carbon-fouled exhaust valve or valve guide
- 4 Failed variable valve timing (VVT) component or oil control valve affecting cylinder 5 exhaust valve operation
- 5 Low engine oil pressure or sludge buildup preventing proper hydraulic actuation
- 6 PCM software issue or internal driver fault (less common)



How to diagnose and fix it

- 1 Perform a visual inspection of the cylinder 5 exhaust valve control solenoid and its wiring for damage or corrosion
- 2 Use a scan tool to command the exhaust valve actuator on and off and listen for a click or observe valve movement
- 3 Measure resistance and voltage at the solenoid connector to compare with manufacturer specifications
- 4 Check engine oil level and condition; perform an oil and filter change if sludge is suspected
- 5 Test the VVT oil control valve and clean or replace if contaminated
- 6 Inspect the exhaust valve and guide for carbon buildup or mechanical binding; perform a cylinder leak-down test if necessary
- 7 If all electrical and mechanical checks pass, reflash or replace the PCM as a last resort

Don't overlook oil quality and VVT screens

- A clogged oil control valve screen or degraded oil can cause this code without any electrical fault, so always verify oil maintenance history first.
- The code may set intermittently due to a sticking valve that only acts up when cold, so a cold-start test is essential before condemning parts.
- Exhaust valve control performance can be affected by exhaust backpressure; a restricted catalytic converter or muffler can mimic a valve control fault.
- Some vehicles use a single solenoid to control multiple cylinders, so a fault on cylinder 5 may actually be caused by a shared component.
- After repairs, the PCM may require a relearn procedure or several drive cycles before the code clears and monitors run.

Can I keep driving with P3438?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because prolonged operation with a faulty exhaust valve can lead to catalytic converter damage or engine misfire. If the check engine light flashes or the engine runs very poorly, stop driving and seek immediate service.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Oil pressure gauge
- Cylinder leak-down tester
- Basic hand tools (socket set, screwdrivers, pliers)



Reading P3438

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

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0305** Cylinder 5 Misfire Detected · **P3436** Cylinder 5 Deactivation/Intake Valve Control Circuit High · **P3437** Cylinder 5 Exhaust Valve Control Circuit/Open · **P3439** Cylinder 5 Exhaust Valve Control Circuit Low

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/p3438/>

