

GENERIC · POWERTRAIN

P3422

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3422

Cylinder 3 Exhaust Valve Control Performance

P3422 indicates that the powertrain control module (PCM) has detected a performance issue with the exhaust valve control system for cylinder 3, meaning the valve is not opening or closing as commanded. The PCM monitors the valve's response through electrical feedback or position sensors and sets this code when the actual behavior deviates from the expected profile.

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 sluggish acceleration due to impaired exhaust flow
- Increased fuel consumption from inefficient combustion
- Audible ticking or tapping from the valve cover area if the actuator is failing
- In rare cases, a no-start condition if the valve remains stuck closed

Common causes, most likely first

- 1 Faulty exhaust valve control solenoid or actuator
- 2 Wiring damage (open, short, or corrosion) in the circuit between the PCM and the valve actuator
- 3 Sticking or carbon-fouled exhaust valve mechanism
- 4 Failed valve position sensor or feedback circuit
- 5 Low engine oil pressure or sludge affecting hydraulic valve control
- 6 PCM software glitch or internal driver failure (less common)

How to diagnose and fix it

- 1 Perform a visual inspection of the valve actuator, connectors, and wiring for damage or corrosion
- 2 Check for related diagnostic trouble codes (DTCs) and freeze-frame data to confirm the fault conditions
- 3 Test the actuator with a bidirectional scan tool to command the valve and observe its operation
- 4 Measure resistance and voltage on the actuator circuit to rule out electrical faults
- 5 Inspect and clean the exhaust valve mechanism if accessible, removing carbon deposits
- 6 Replace the exhaust valve control solenoid or actuator if testing indicates failure
- 7 Reprogram or replace the PCM only after all other causes have been eliminated



Common misdiagnosis traps for P3422

- A misfire code for cylinder 3 is often stored alongside P3422, leading some technicians to replace ignition components when the root cause is actually the exhaust valve control.
- The exhaust valve control system may share wiring with other cylinder valve actuators, so a single damaged wire can set multiple codes and mimic a more widespread failure.
- Carbon buildup on the valve stem can cause intermittent sticking that only occurs under certain temperature or load conditions, making the code appear and disappear.
- Low oil pressure or degraded oil can impair hydraulic valve actuators, so always check oil condition and pressure before condemning electrical parts.
- After repairs, the PCM may require a relearn procedure or several drive cycles before the code clears and monitors run complete.

Can I keep driving with P3422?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the impaired exhaust valve can cause misfires and potential catalytic converter damage. If the engine runs very rough or loses significant power, stop driving and seek professional assistance.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools (sockets, wrenches, screwdrivers)
- Feeler gauges or valve adjustment tools if applicable

Reading P3422

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

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0300** Random/Multiple Cylinder Misfire Detected · **P0303** Cylinder 3 Misfire Detected · **P3421** Cylinder 3 Exhaust Valve Control Circuit/Open · **P3423** Cylinder 3 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/p3422/>

