

GENERIC · POWERTRAIN

P3448

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3448

# Cylinder 6 Exhaust Valve Control Circuit High

P3448 indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the electrical circuit that controls the exhaust valve for cylinder 6. This typically means the circuit is open, shorted to voltage, or the valve actuator solenoid has failed, preventing the PCM from properly managing exhaust valve timing or lift.

| 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 sensation, especially when the engine is cold
- Reduced engine performance and poor fuel economy due to incorrect valve operation
- Increased exhaust emissions, which may be detected during an emissions test
- Audible ticking or tapping noise from the valve cover area if the actuator is stuck

## Common causes, most likely first

- 1 Open or damaged wiring in the exhaust valve control circuit, such as a broken wire or corroded connector
- 2 Short to voltage on the control circuit, often caused by chafed insulation contacting a power source
- 3 Failed exhaust valve actuator solenoid or motor, causing an open circuit
- 4 Faulty powertrain control module (PCM) driver for that circuit, though rare
- 5 Poor electrical connection at the actuator or PCM, including loose pins or water intrusion
- 6 Internal mechanical binding of the exhaust valve mechanism, overloading the actuator and causing a high-voltage signal



## How to diagnose and fix it

- 1 Perform a visual inspection of the exhaust valve actuator and its wiring harness for damage, corrosion, or loose connectors
- 2 Use a scan tool to command the exhaust valve actuator on and off while monitoring live data to confirm the fault
- 3 Measure resistance of the actuator solenoid with a multimeter and compare to the manufacturer's specification
- 4 Check for voltage on the control circuit with the key on and engine off to identify a short to voltage
- 5 Perform a voltage drop test on the ground and power supply circuits to the actuator to rule out high resistance
- 6 If wiring and actuator test good, check for mechanical binding in the exhaust valve mechanism and repair as needed
- 7 Replace the faulty actuator or repair the wiring, clear the code, and verify the repair with a test drive

## Exhaust Valve Actuator Circuit Checks

- A high-voltage code often results from an open circuit rather than a short, so a broken wire or failed actuator is more common than a short to power.
- Mechanical binding in the exhaust valve mechanism can cause the actuator to draw excessive current, which the PCM may interpret as a high-voltage condition on some systems.
- The code can be set intermittently by a poor connection that only acts up under vibration or temperature changes, so wiggle-testing the harness is essential.
- Replacing the actuator without checking the circuit resistance and voltage drop can lead to a repeat failure if the underlying wiring issue is not addressed.
- On some vehicles, this code may be accompanied by other cylinder-specific valve codes, indicating a shared power or ground circuit problem rather than individual actuator failures.

## Can I keep driving with P3448?

Driving with P3448 is generally safe for short distances, but prolonged driving can lead to increased emissions, reduced fuel economy, and potential damage to the exhaust valve mechanism. Avoid heavy load or high-speed driving until the fault is repaired, and address the issue promptly to prevent catalytic converter damage.

## Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Wire repair kit with crimpers and heat shrink
- Test light
- Vehicle-specific service information for circuit specifications



## Reading P3448

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

## Often seen with

**P0306** Cylinder 6 Misfire Detected · **P3446** Cylinder 6 Exhaust Valve Control Performance · **P3447** Cylinder 6 Exhaust Valve Control Circuit Low · **P3449** Cylinder 7 Deactivation/Intake Valve Control Circuit/Open · **P3450** Cylinder 7 Deactivation/Intake Valve Control Performance

## 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/p3448/>

