

GENERIC · POWERTRAIN

P3459

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3459

Cylinder 8 Deactivation/Intake Valve Control Circuit Low

P3459 indicates that the powertrain control module has detected an abnormally low voltage on the control circuit for the cylinder 8 deactivation or intake valve control solenoid. This circuit is part of a variable valve timing or cylinder deactivation system that shuts down cylinders to save fuel, and a low voltage reading means the circuit is shorted to ground or the solenoid has failed.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or misfire when the engine tries to deactivate cylinder 8
- Reduced fuel economy because the cylinder deactivation system is disabled
- Slight hesitation or stumble during light-throttle cruising
- In some cases, the engine may run rough or stall when transitioning between modes

Common causes, most likely first

- 1 Faulty cylinder 8 deactivation solenoid or intake valve control solenoid
- 2 Damaged or chafed wiring in the control circuit, shorting to ground
- 3 Corroded or loose electrical connector at the solenoid
- 4 Failed powertrain control module driver for that circuit
- 5 Internal short in the solenoid coil
- 6 Oil sludge or debris blocking the solenoid, causing it to draw excessive current and set a low-voltage code

How to diagnose and fix it

- 1 Inspect the solenoid connector and wiring for damage, corrosion, or loose pins
- 2 Measure resistance of the solenoid coil and compare to specification
- 3 Check for a short to ground in the control circuit using a multimeter
- 4 Test the control circuit with a test light or oscilloscope to verify the PCM driver signal
- 5 Replace the faulty solenoid if resistance is out of range or the coil is shorted
- 6 Repair any damaged wiring or replace the connector as needed
- 7 Clear the code and perform a relearn or drive cycle to verify the repair



What the low-voltage code really means

- A low-voltage code on a solenoid circuit often points to a short to ground rather than an open circuit, so a visual inspection of the harness for chafing is critical before replacing parts.
- The solenoid may test fine when cold but fail when hot, so a resistance check should be repeated after warming the engine to operating temperature.
- Oil sludge or debris can cause the solenoid to stick and draw high current, which the PCM interprets as a low-voltage condition, so an oil change and inspection of the screen may be necessary.
- This code does not always mean the solenoid is bad; a faulty PCM driver or a poor ground connection can also set it, so circuit testing should precede parts replacement.
- Cylinder deactivation systems often share power or ground with other solenoids, so a short in a neighboring circuit can trigger this code without any fault in the cylinder 8 circuit itself.

Can I keep driving with P3459?

You can usually continue driving with this code, but the cylinder deactivation system will be disabled and fuel economy may suffer. Avoid heavy towing or aggressive driving until the fault is repaired, and address the issue promptly to prevent potential catalytic converter damage from unburned fuel.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Test light
- Oscilloscope (optional)
- Socket set and trim removal tools

Reading P3459

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

Often seen with

P0308 Cylinder 8 Misfire Detected · **P3400** Cylinder Deactivation System (Bank 1) · **P3458** Cylinder 8 Deactivation/Intake Valve Control Performance · **P3460** Cylinder 8 Deactivation/Intake Valve Control Circuit High · **P3498** Cylinder Deactivation Pressure Sensor Bank 1



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/p3459/>

