

GENERIC · POWERTRAIN

P3458

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3458

Cylinder 8 Deactivation/Intake Valve Control Performance

P3458 indicates that the powertrain control module has detected a performance fault in the cylinder 8 deactivation or intake valve control circuit, meaning the engine cannot properly switch that cylinder between active and deactivated states. The computer monitors valve lift or oil pressure response and sets this code when the expected change does not occur within the calibrated time window.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or vibration when the engine is cold or under light load
- Reduced fuel economy because the cylinder may remain active when it should deactivate
- A slight hesitation or stumble during light-throttle cruising
- Audible ticking or tapping from the valve cover area on the affected bank
- In rare cases, a misfire code for cylinder 8 may accompany this code

Common causes, most likely first

- 1 Faulty oil control solenoid or valve on the cylinder 8 deactivation lifter circuit
- 2 Sticking or collapsed switching lifter for cylinder 8
- 3 Low engine oil level or degraded oil causing insufficient oil pressure to actuate the lifter
- 4 Damaged or chafed wiring harness to the cylinder 8 solenoid
- 5 Clogged oil passage or screen feeding the deactivation circuit
- 6 Failed intake valve control actuator or its electrical connector
- 7 Powertrain control module software calibration issue or internal driver fault



How to diagnose and fix it

- 1 Check engine oil level and condition; top off or change oil if it is low or dirty
- 2 Inspect the wiring and connector at the cylinder 8 oil control solenoid for damage or corrosion
- 3 Use a scan tool to command the cylinder deactivation on and off while watching live data for response
- 4 Measure resistance of the oil control solenoid and compare to factory specification
- 5 Remove and inspect the cylinder 8 switching lifter and oil control solenoid for sludge or mechanical binding
- 6 Verify oil pressure at the deactivation circuit gallery with a mechanical gauge
- 7 Reprogram or replace the powertrain control module only after all mechanical and electrical checks pass

Oil quality and hidden passages matter most

- Many technicians replace the oil control solenoid only to find the real problem is a clogged oil screen or sludge in the lifter gallery, so always verify oil pressure and flow first.
- This code can set intermittently and clear itself after an oil change, leading owners to believe the fault is gone when the underlying wear remains.
- A weak battery or charging system voltage drop can cause the solenoid driver to log a performance fault even though the solenoid itself is good.
- The code does not always mean the lifter is mechanically failed; a simple electrical connector that is not fully seated can produce the same performance error.
- On engines with cylinder deactivation, using the wrong oil viscosity or extending oil change intervals is a common root cause that is overlooked during diagnosis.

Can I keep driving with P3458?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or sustained high-speed driving because the affected cylinder may remain active and cause overheating or further mechanical damage. If the check engine light begins flashing, stop driving immediately and have the vehicle towed.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Mechanical oil pressure gauge
- Factory service information for cylinder deactivation diagnostics
- Basic hand tools and torque wrench
- Oil fill funnel and drain pan



Reading P3458

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

Often seen with

P0308 Cylinder 8 Misfire Detected · **P0521** Engine Oil Pressure Sensor/Switch Circuit Range/Performance ·
P3400 Cylinder Deactivation System (Bank 1) · **P3457** Cylinder 8 Deactivation/Intake Valve Control Circuit/Open
 · **P3459** Cylinder 8 Deactivation/Intake 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/p3458/>

