

GENERIC · POWERTRAIN

P0284

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0284

Cylinder 8 Contribution/Balance

P0284 indicates that the powertrain control module has detected an abnormal contribution from cylinder 8 during the engine's power stroke, meaning that cylinder is not producing the same amount of power as the others. The computer typically monitors crankshaft speed fluctuations and flags this code when the acceleration pattern for cylinder 8 falls outside the expected range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering (injector circuits)

Symptoms you may notice

- Often no symptoms besides the warning light, especially during light-load cruising
- A noticeable engine misfire or shaking that may be more pronounced at idle or under acceleration
- Rough running with a loss of power and reduced fuel economy
- A flashing check engine light if the misfire is severe enough to risk catalytic converter damage
- Possible vibration felt through the steering wheel or seat, consistent with a dead cylinder

Common causes, most likely first

- 1 Worn or fouled spark plug in cylinder 8
- 2 Failed ignition coil or spark plug wire for cylinder 8
- 3 Faulty fuel injector for cylinder 8, such as a clogged nozzle or electrical failure
- 4 Mechanical issue in cylinder 8, including low compression from worn rings, a bad valve, or a failed head gasket
- 5 Vacuum leak or intake manifold gasket leak affecting cylinder 8 specifically
- 6 Wiring or connector problem in the ignition or injection circuit for cylinder 8
- 7 Exhaust gas recirculation valve sticking open and disproportionately affecting one cylinder



How to diagnose and fix it

- 1 Scan all stored codes and freeze-frame data, then check for related misfire codes on other cylinders to confirm the fault is isolated to cylinder 8
- 2 Inspect the spark plug, coil, and wire for cylinder 8, swapping known-good components from another cylinder to see if the misfire moves
- 3 Perform a compression test and, if needed, a cylinder leak-down test to rule out mechanical failure before replacing ignition or fuel parts
- 4 Test the fuel injector for cylinder 8 with a noid light or by listening for injector pulse, and check the injector resistance if specified
- 5 Check for vacuum leaks at the intake manifold and inspect the EGR valve for proper sealing
- 6 Verify the crankshaft position sensor and reluctor ring are clean and undamaged, as a faulty signal can mimic a single-cylinder contribution fault
- 7 After repairs, clear the codes and perform a drive cycle to confirm the misfire monitor runs and the code does not return

Cylinder 8 contribution faults that fool technicians

- A P0284 can be set by a faulty crankshaft position sensor or a damaged reluctor ring, causing the computer to misread the speed fluctuation for cylinder 8 even when the cylinder is mechanically sound.
- On engines with active fuel management or cylinder deactivation, a stuck lifter or collapsed valve can cause a contribution fault on the affected cylinder without any ignition or fuel problem.
- A clogged or restricted fuel injector for cylinder 8 often does not set a circuit code, so technicians who only check for injector electrical faults may miss a mechanical fuel delivery issue.
- An intake manifold gasket leak that affects only the runner for cylinder 8 can lean out that cylinder and trigger the code, and the leak may not be obvious during a visual inspection.
- The code can appear after a recent repair if a connector for cylinder 8 was not fully seated or a spark plug was cracked during installation, so always recheck recent work first.

Can I keep driving with P0284?

You can usually drive the vehicle to a repair shop if the check engine light is steady and the engine runs smoothly, but avoid heavy acceleration and towing. If the light flashes or the engine shakes violently, stop driving because a severe misfire can quickly overheat and damage the catalytic converter.



Tools that help

- OBD-II scan tool with live data and misfire counter capability
- Compression tester
- Spark tester or known-good ignition coil
- Noid light or fuel injector pulse tester
- Vacuum gauge
- Digital multimeter

Reading P0284

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
2	Fuel and air metering (injector circuits).
84	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0208** Injector Circuit/Open - Cylinder 8 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0308** Cylinder 8 Misfire Detected · **P0358** Ignition Coil 'H' Primary/Secondary Circuit

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0284/>

