

GENERIC · POWERTRAIN

P2E69

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E69

System Too Rich During Cylinder Deactivation Bank 1

P2E69 means the powertrain control module has detected an excessively rich air-fuel mixture on bank 1 while cylinder deactivation is active, typically during light-load cruising. The computer compares commanded fuel delivery against oxygen sensor feedback and flags the bank as rich when fuel trims go too negative or the sensor stays high for too long.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- A slight stumble or hesitation when the engine transitions in or out of cylinder deactivation mode
- Reduced fuel economy, especially on steady highway drives where deactivation is most active
- Black sooty exhaust or a strong fuel smell at the tailpipe
- Rough idle or misfire-like shudder that may clear when all cylinders are reactivated
- In some cases, the engine may refuse to enter cylinder deactivation mode at all

Common causes, most likely first

- 1 Leaking or dripping fuel injector on one of the deactivated cylinders
- 2 Faulty or contaminated oxygen sensor on bank 1 giving a false rich reading
- 3 Sticking or leaking purge valve allowing fuel vapor into the intake when it should be closed
- 4 High fuel pressure from a failing pressure regulator or restricted return line
- 5 Intake or exhaust leaks upstream of the oxygen sensor that skew mixture feedback
- 6 Worn spark plugs or ignition components causing incomplete combustion on the affected bank
- 7 Engine oil consumption or crankcase ventilation issues adding fuel-like hydrocarbons to the intake



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code sets only during cylinder deactivation
- 2 Inspect live fuel trim and oxygen sensor data on bank 1 while commanding deactivation on and off
- 3 Check for intake and exhaust leaks with a smoke test before condemning any sensor
- 4 Test the purge valve for sticking or leakage and verify it seals when commanded closed
- 5 Measure fuel pressure and compare against specification, looking for excessive pressure
- 6 Perform an injector balance or leak-down test on the cylinders that deactivate
- 7 Replace the confirmed faulty component and clear the code, then verify fuel trims return to normal

Cylinder deactivation rich codes misdiagnosed often

- A rich code that only appears during cylinder deactivation frequently points to an injector that leaks when its cylinder is cut off, not a failed oxygen sensor.
- Technicians often replace the upstream oxygen sensor first, but a contaminated sensor usually sets a heater or response code alongside the rich code.
- A sticking purge valve can deliver fuel vapor into the intake only at certain vacuum levels, mimicking a deactivation-specific rich condition.
- Oil consumption on engines with cylinder deactivation can foul plugs and skew mixture on the deactivated bank, so check oil level and plug condition.
- The code does not always mean the engine is running dangerously rich; a lazy oxygen sensor can report rich when the mixture is actually correct.

Can I keep driving with P2E69?

You can usually drive the vehicle to a repair shop, but avoid heavy loads and long highway trips that keep cylinder deactivation active. Continued driving with a genuinely rich mixture can foul spark plugs and damage the catalytic converter over time.

Tools that help

- OBD-II scan tool with live data and bidirectional controls
- Fuel pressure gauge
- Smoke machine for intake and exhaust leak testing
- Digital multimeter for sensor and wiring checks
- Injector balance tester or scan tool injector cut-off function



Reading P2E69

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- E** Hybrid propulsion.
- 69** The exact fault within that area.

Often seen with

P0172 System Too Rich (Bank 1) · **P0175** System Too Rich (Bank 2) · **P0300** Random/Multiple Cylinder Misfire Detected · **P2196** O2 Sensor Signal Stuck Rich (Bank 1 Sensor 1) · **P2E68** System Too Lean During Cylinder Deactivation Bank 1

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e69/>

