



P34A2

Cylinder 11 Deactivation/Intake Valve Performance

P34A2 indicates that the powertrain control module has detected a performance fault in the cylinder 11 deactivation or intake valve system, meaning the computer commanded the cylinder to switch between active and deactivated states and the expected change in engine behavior did not occur within the calibrated window. The code is set when the PCM monitors crankshaft speed fluctuations, manifold pressure, or valve lift feedback and finds that cylinder 11 is not responding as commanded, which points to a mechanical, hydraulic, or electrical problem in that cylinder's valve control hardware.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms besides the warning light
- Rough idle or a noticeable vibration that feels like a misfire, especially when the engine is cold or under light load
- Reduced engine power or a stumble during acceleration when the cylinder deactivation system attempts to switch modes
- A slight change in exhaust note or an intermittent shaking that comes and goes with driving conditions
- Poor fuel economy if the cylinder remains stuck in the deactivated state or the system defaults to a failsafe mode

Common causes, most likely first

- 1 Failed or sticking hydraulic lifter or solenoid that controls the deactivation of cylinder 11's intake valve
- 2 Wiring damage, corrosion, or a loose connector at the cylinder 11 deactivation solenoid or valve actuator
- 3 Low engine oil level or degraded oil that prevents the hydraulic lifter from building enough pressure to actuate the valve
- 4 Mechanical wear in the rocker arm, pushrod, or camshaft lobe that prevents the intake valve from following its commanded lift profile
- 5 Faulty oil control valve or a clogged oil passage feeding the cylinder deactivation circuit
- 6 A failing powertrain control module driver circuit for the cylinder 11 solenoid, though this is less common than mechanical or hydraulic faults



How to diagnose and fix it

- 1 Check the engine oil level and condition first, then verify that the oil is the correct viscosity and has been changed at the proper interval
- 2 Inspect the wiring harness and connector at the cylinder 11 deactivation solenoid for chafing, corrosion, or loose pins, and perform a wiggle test while watching live data
- 3 Use a scan tool to command the cylinder deactivation system on and off while monitoring misfire counters and manifold pressure to confirm whether cylinder 11 responds at all
- 4 Measure the resistance of the cylinder 11 deactivation solenoid and compare it to the manufacturer's specification, then check for power and ground at the connector with the key on
- 5 Remove the valve cover and inspect the rocker arm, pushrod, and lifter for cylinder 11 for excessive play, sludge buildup, or a collapsed lifter
- 6 Perform a cylinder compression test and a running compression test on cylinder 11 to rule out a mechanical valve or piston issue before replacing electrical parts
- 7 If the solenoid and wiring test good, replace the affected lifter or oil control valve as a set and clear the code, then verify the repair with a road test that includes steady-speed driving where deactivation normally occurs

Oil quality and hidden lifter failures

- A dirty or low oil supply is the most common root cause of this code on engines with cylinder deactivation, and many technicians replace solenoids only to have the code return because the oil passage was partially clogged.
- The code can set intermittently without a hard misfire because the PCM may only see a slow response from the lifter rather than a total failure, so a simple test drive may not reproduce the fault.
- A collapsed or sticking lifter on cylinder 11 can sometimes be freed by an oil flush and a fresh oil change, but if the lifter has mechanical wear the code will return within a few hundred miles.
- Wiring faults at the deactivation solenoid connector are often misdiagnosed as internal lifter failures because the connector is difficult to reach and the pins can look clean while still being loose.
- This code does not always mean the cylinder is dead; it can be stored when the system is commanded off and the PCM sees an unexpected change in crankshaft velocity that is actually caused by a worn spark plug or ignition coil on that cylinder.

Can I keep driving with P34A2?

You can usually drive the vehicle with P34A2 set, but avoid heavy acceleration and sustained high-speed driving until the fault is diagnosed, because a stuck deactivation system can cause misfires that damage the catalytic converter over time. If the check engine light begins flashing or you feel a strong misfire, pull over and have the vehicle towed to prevent further engine damage.



Tools that help

- OBD-II scan tool with live data and bidirectional control capability
- Digital multimeter for resistance and voltage checks at the solenoid connector
- Compression gauge for cylinder 11 mechanical testing
- Oil pressure gauge or mechanical oil pressure test kit
- Basic hand tools including a torque wrench and valve cover gasket set

Reading P34A2

P Powertrain: engine, transmission and emissions.

3 Generic (SAE) code: it means the same thing on every OBD-II vehicle.

4 Auxiliary emission controls.

A2 The exact fault within that area.

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **P3400** Cylinder Deactivation System (Bank 1) · **P3497** Cylinder Deactivation System (Bank 2)

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/p34a2/>

