

GENERIC · POWERTRAIN

P0518

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0518

Idle Air Control Circuit Intermittent

P0518 means the engine computer has detected an intermittent electrical fault in the idle air control (IAC) circuit, so the signal to the idle control valve is cutting in and out rather than staying steady. The computer monitors the IAC circuit for expected voltage or current and flags this code when the signal is present but unstable over time.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the intermittent fault has not yet affected idle quality.
- Unstable or fluctuating idle speed that may surge, dip, or hunt up and down at stops.
- Engine stalling when you come to a stop or when the throttle closes suddenly.
- Rough or erratic idle that improves as soon as you open the throttle.
- Occasional hard starting or a start that needs a little throttle input to keep running.
- Idle speed that hangs high for a moment before dropping after you release the accelerator.

Common causes, most likely first

- 1 Chafed, cracked, or internally broken wiring in the IAC circuit that makes contact only intermittently.
- 2 Corroded, loose, or backed-out terminals at the IAC valve connector or the engine computer connector.
- 3 A failing idle air control valve with a worn internal solenoid or sticking pintle that draws current erratically.
- 4 A poor ground connection shared by the IAC circuit or the engine computer, causing reference voltage to shift.
- 5 Water or oil intrusion into the IAC connector or harness, leading to intermittent shorting.
- 6 A failing engine computer driver for the IAC circuit, though this is far less common than wiring faults.



How to diagnose and fix it

- 1 Inspect the IAC valve connector and harness for corrosion, chafing, and loose pins, and wiggle-test the harness while watching idle behavior.
- 2 Check the IAC circuit for intermittent opens and shorts with a multimeter while flexing the harness, focusing on the section near the throttle body and any sharp bends.
- 3 Clean the IAC valve passage and throttle body of carbon buildup, since a sticking valve can mimic an electrical intermittent.
- 4 Measure IAC valve coil resistance and compare it to the manufacturer's specification to rule out an internally failing valve.
- 5 Verify the IAC circuit ground and reference voltage at the computer connector, repairing any high-resistance ground or damaged pin.
- 6 Replace the IAC valve only after electrical checks pass, then clear the code and confirm the idle control signal is stable during a road test.
- 7 If the fault persists after all circuit and valve checks, test the engine computer driver output with an oscilloscope before condemning the computer.

Why intermittent IAC faults fool good technicians

- A sticking or carbon-fouled IAC valve can set P0518 because the computer sees the valve not responding as expected, even though the wiring and driver are perfectly healthy.
- The fault often only appears when the engine is hot or after a cold start, so a scan tool freeze-frame of engine temperature and idle speed at the moment of failure is more useful than a static code read.
- Wiggle-testing the harness while watching live IAC command data on a scan tool catches many intermittent wiring faults that a simple resistance check misses.
- A vacuum leak or dirty throttle body can cause idle symptoms that lead owners to replace the IAC valve, but the real fault is unmetered air and the IAC code is a secondary effect.
- Some vehicles use the IAC circuit for other idle functions, so a fault in a shared ground or power feed can set P0518 alongside unrelated codes and send you chasing the wrong circuit.

Can I keep driving with P0518?

You can usually drive the vehicle, but expect an unstable or stalling idle at stops, so avoid heavy traffic and keep your foot ready on the brake and throttle. Have the circuit inspected soon, because a stalling engine in traffic or at an intersection is a safety risk.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Wiring diagram for the IAC circuit
- Contact cleaner and dielectric grease
- Basic hand tools for connector and throttle body access

Reading P0518

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 18** The exact fault within that area.

Often seen with

P0106 MAP/Barometric Pressure Circuit Range/Performance · **P0505** Idle Control System Malfunction · **P0506** Idle Control System RPM Lower Than Expected · **P0507** Idle Control System RPM Higher Than Expected · **P0519** Idle Air Control System Performance

See it working

Watch the animated explainer [How an Oxygen Sensor Works: Live 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0518/>

