



P1508 · Nissan

IAC Valve Circuit Failure

P1508 on Nissan vehicles indicates that the Engine Control Module (ECM) has detected an electrical fault in the Idle Air Control (IAC) valve circuit, which controls engine idle speed. The ECM monitors the circuit for abnormal voltage or current and sets this code when the signal is outside the expected range, often resulting in poor idle quality or stalling.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Nissan specific	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Check Engine Light illuminated on the dashboard
- Engine idle speed fluctuates or is erratic, sometimes surging
- Engine may stall when coming to a stop or when the throttle is released
- Rough or unstable idle, especially when the engine is cold
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty Idle Air Control (IAC) valve solenoid or stepper motor
- 2 Damaged or corroded wiring and connectors in the IAC valve circuit
- 3 Carbon buildup or mechanical binding inside the IAC valve or throttle body
- 4 Vacuum leaks or intake air leaks after the mass air flow sensor
- 5 Failed Engine Control Module (ECM) driver circuit (rare)

How to diagnose and fix it

- 1 Inspect the IAC valve connector and wiring for corrosion, damage, or loose pins; clean and repair as needed
- 2 Measure the resistance of the IAC valve windings with a multimeter and compare to the manufacturer's specification
- 3 Check for carbon buildup in the IAC valve and throttle body; clean with appropriate solvent and a soft brush
- 4 Perform a voltage drop test on the IAC circuit while commanding the valve with a scan tool to verify wiring integrity
- 5 Test the IAC valve operation by applying battery voltage or using a scan tool to command idle speed changes
- 6 If the valve fails electrical or mechanical tests, replace the IAC valve and clear the code
- 7 After repair, perform an idle relearn procedure as specified for the Nissan model to ensure proper idle speed



Don't replace the IAC valve before checking these

- A dirty throttle body or IAC valve passage can mimic a failed IAC valve, causing the same code and idle symptoms without any electrical fault.
- Wiring harness chafing near the intake manifold or throttle body is a common cause on older Nissan vehicles, often overlooked during diagnosis.
- The ECM may set P1508 if the IAC valve is mechanically stuck, even though the electrical circuit tests good, so always verify mechanical operation.
- A vacuum leak can cause the ECM to command an idle speed that the IAC valve cannot achieve, leading to a P1508 without any issue in the IAC circuit itself.
- After replacing the IAC valve, some Nissan models require a idle air volume learning procedure using a scan tool to prevent a recurrence of the code.

Can I keep driving with P1508?

You can usually drive the vehicle with P1508, but expect unstable idle and possible stalling when stopping, which can be a safety risk in traffic. Avoid prolonged idling and have the fault diagnosed promptly to prevent stalling incidents.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Socket set and screwdrivers
- Throttle body cleaner and soft brush
- Factory service information for Nissan idle relearn procedure

Reading P1508

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Nissan): its meaning depends on the make.
5	Vehicle speed, idle control and auxiliary inputs.
08	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0505** Idle Control System Malfunction · **P0506** Idle Control System RPM Lower Than Expected · **P0507** Idle Control System RPM Higher Than Expected



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/nissan-p1508/>

