

JAGUAR · POWERTRAIN

P1509

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1509 · Jaguar

Idle Air Control Circuit Shorted

P1509 on a Jaguar indicates that the engine control module (ECM) has detected a short circuit in the idle air control (IAC) circuit, which prevents the ECM from properly commanding the idle speed. The ECM monitors the IAC valve's electrical circuit and sets this code when the current flow is outside the expected range, typically indicating a short to ground or a short to power within the wiring or the valve itself.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Unstable or fluctuating idle speed, sometimes surging or dipping below normal
- Engine may stall when coming to a stop or when the throttle is released
- Difficulty maintaining a steady idle when the engine is cold or under electrical load
- Occasional rough running at idle, though performance at higher speeds may be normal

Common causes, most likely first

- 1 Faulty idle air control valve with an internal short in its solenoid winding
- 2 Damaged or chafed wiring in the IAC circuit, causing a short to ground or power
- 3 Corroded or loose electrical connector at the IAC valve or ECM
- 4 Short circuit inside the ECM driver for the IAC circuit (less common)
- 5 Aftermarket or incorrect IAC valve installed that does not match Jaguar specifications
- 6 Moisture intrusion into the IAC connector or wiring harness causing a short



How to diagnose and fix it

- 1 Perform a visual inspection of the IAC valve, its connector, and the wiring harness for obvious damage, corrosion, or loose pins
- 2 Disconnect the IAC valve connector and inspect the terminals for signs of arcing, corrosion, or moisture; clean or repair as needed
- 3 Measure the resistance of the IAC valve solenoid with a multimeter and compare to Jaguar specifications to check for an internal short
- 4 Check the IAC circuit wiring for continuity and shorts to ground or power using a multimeter and wiring diagram
- 5 If wiring and valve test good, substitute a known-good IAC valve to see if the code clears and idle normalizes
- 6 If the code persists after replacing the valve and verifying wiring, test the ECM driver circuit or consult a Jaguar specialist for ECM diagnosis
- 7 Clear the code and perform a idle relearn procedure if required, then verify the repair with a road test and scan tool

Don't overlook the wiring harness

- A shorted IAC valve is a common cause, but chafed wiring near the throttle body or exhaust manifold often mimics a failed valve and is missed during quick diagnostics.
- The code can set intermittently due to vibration or temperature changes, so a wiggle test of the harness while monitoring live data can reveal an intermittent short.
- Replacing the IAC valve without checking the circuit resistance and wiring can lead to a repeat failure if the underlying short is in the harness.
- Some Jaguar models use a PWM-controlled IAC valve, and a shorted driver in the ECM can set this code even when the valve and wiring test perfectly.
- A dirty or carbon-fouled IAC valve may cause idle problems but will not set P1509 unless the electrical circuit is actually shorted, so cleaning alone is not a fix for this code.

Can I keep driving with P1509?

You can usually drive the car with this code, but expect an erratic or high idle and possible stalling when you slow down, which can be dangerous in traffic. Avoid prolonged idling and have the fault diagnosed promptly to prevent stalling and further electrical damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Jaguar-specific wiring diagram
- Socket set and screwdrivers for accessing the IAC valve
- Contact cleaner and dielectric grease



Reading P1509

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

Often seen with

P1510 Idle Air Control Circuit Short To B+ · **P1508** Idle System Learned Value Upper Limit Attained · **P1510** Boost Pressure Control Circuit · **P1510** PCM Backup Power Supply Circuit Fault · **P1510** Idle Air Control Solenoid Signal 1 Circuit Low Input · **P1508** IAC Valve Circuit Failure · **P1508** Idle Air Control Circuit Open · **P1508** Idle Air Control Valve Closing Coil Voltage High · **P1510** Idle Air Control Valve Closing Coil High Voltage · **P1508** Idle Air Control Circuit Open · **P1508** IAC Valve Circuit Failure · **P1508** IAC System Low RPM · **P1510** Idle Signal Circuit Malfunction · **P1510** Back UP Power Supply · **P1508** IAC System Low RPM · **P1510** Idle Speed Control Valve Stuck · **P1508** Idle Speed Control Valve Opening Solenoid Control Open Circuit · **P0505** Idle Control System Malfunction · **P0507** Idle Control System RPM Higher Than Expected · **P0506** Idle Control System RPM Lower Than Expected

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/jaguar-p1509/>

