

BMW · POWERTRAIN

P1508

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1508 · BMW

Idle Speed Control Valve Opening Solenoid Control Open Circuit

P1508 on BMW vehicles indicates that the engine control module (DME) has detected an open circuit in the electrical path to the idle speed control valve's opening solenoid. The computer commands a specific idle speed, but the solenoid circuit shows no continuity, so the valve cannot adjust airflow as intended.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW 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
- Rough idle quality, especially when the engine is cold or under electrical load
- Inconsistent idle speed after the engine warms up, despite the DME attempting to compensate

Common causes, most likely first

- 1 Broken or chafed wire in the idle speed control valve solenoid circuit, often near the connector or where the harness bends
- 2 Corroded or loose electrical connector at the idle speed control valve
- 3 Failed opening solenoid inside the idle speed control valve assembly
- 4 Open circuit inside the valve due to internal winding failure from heat and age
- 5 Damaged or oxidized pins in the DME connector affecting the solenoid control circuit
- 6 Rodent damage to the wiring harness in the engine bay



How to diagnose and fix it

- 1 Perform a visual inspection of the idle speed control valve connector and the wiring harness for damage, corrosion, or loose pins
- 2 Disconnect the valve connector and measure resistance across the opening solenoid terminals; compare to BMW specifications for the engine
- 3 Check for continuity from the valve connector to the DME connector on both solenoid control wires to isolate an open circuit
- 4 Inspect the DME connector pins for corrosion or push-back, and repair any damaged terminals
- 5 If the circuit tests good, substitute a known-good idle speed control valve and clear the code to see if it returns
- 6 Repair or replace the faulty section of wiring harness, using proper crimp and seal techniques
- 7 After repair, clear the DME adaptations and perform an idle relearn procedure if applicable to the model

When the valve is not the culprit

- A chafed wire behind the intake manifold or near the throttle body is a frequent cause that gets missed when technicians replace the valve without testing the circuit first.
- The DME may set P1508 intermittently if the connector is only loose when the engine moves under torque, so wiggle-testing the harness while watching live data is essential.
- On some BMW engines, the idle speed control valve shares a ground circuit with other sensors, and a bad ground can mimic an open solenoid circuit.
- A failed valve can sometimes still show correct resistance when cold but open internally when hot, so testing should include a heat soak if the fault is intermittent.
- This code does not always mean the valve is dead; a simple unplugged connector after recent service is a common and easily overlooked cause.

Can I keep driving with P1508?

You can usually drive the car to a repair shop, but expect a rough or stalling idle that may worsen in traffic or when the engine is cold. Avoid prolonged idling and be prepared for the engine to stall when you lift off the throttle, especially at low speeds.

Tools that help

- Digital multimeter with resistance and continuity functions
- BMW-specific scan tool or OBD-II scanner capable of reading manufacturer codes and live data
- Wiring diagram for the specific BMW model and engine
- Torx and socket set for accessing the idle speed control valve and harness
- Electrical contact cleaner and dielectric grease
- Crimp tool and heat-shrink connectors for wire repair



Reading P1508

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

Often seen with

P1509 Idle Air Control Circuit Electrical Malfunction · **P1633** Accelerator Pedal Position Sensor 2 Signal Too Low · **P1633** ECM · **P1509** Idle Air Control Circuit Shorted · **P1633** Battery Overcharge Fault · **P1633** Battery Overcharge · **P1509** Idle Air Control Circuit Shorted · **P1509** IAC System High RPM · **P1633** Ignition Power Circuit Low Voltage · **P1509** IAC System High RPM · **P1509** Idle Speed Control Valve Opening Solenoid Control Circuit El · **P1633** Throttle Valve Adaptation Limp Home Position · **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/bmw-p1508/>

