

BMW · POWERTRAIN

P1542

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1542 · BMW

Pedal Position Sensor Electrical

P1542 on BMW vehicles indicates that the engine control module (ECM) has detected an electrical fault in the pedal position sensor circuit, which typically involves the accelerator pedal module and its two redundant sensors. The ECM monitors the sensor signals for rationality and range, and this code sets when the voltages fall outside expected limits or disagree with each other.

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

Symptoms you may notice

- The check engine light or electronic throttle control warning light illuminates on the dashboard.
- The engine may enter limp mode, limiting power and engine speed to a fast idle.
- The accelerator pedal may feel unresponsive or require excessive travel to accelerate.
- Inconsistent engine speed or surging may occur as the pedal is pressed.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- Faulty accelerator pedal position sensor (integrated into the pedal module).
- Worn or corroded electrical connector at the pedal sensor.
- Damaged wiring harness between the pedal sensor and the ECM (open, short, or chafed wires).
- Poor ground connection for the pedal sensor circuit.
- Internal ECM fault (rare but possible).
- Aftermarket or incorrectly installed pedal module or wiring modifications.

How to diagnose and fix it

- Read and record all fault codes and freeze-frame data using a BMW-compatible scan tool.
- Visually inspect the accelerator pedal sensor connector and wiring for damage, corrosion, or loose pins.
- Check the sensor reference voltage and ground at the pedal connector with a multimeter; compare to BMW specifications.
- Perform a live data check of both pedal sensor voltages while slowly pressing the pedal to verify smooth, proportional changes and correct correlation.
- If the sensor signals are erratic or out of range, replace the accelerator pedal module with a genuine BMW part.
- Clear the fault codes and perform a throttle adaptation reset if required, then test-drive to confirm the repair.

Common misdiagnosis traps for P1542

- Many technicians replace the accelerator pedal module without first checking the wiring harness, which often has chafed wires near the pedal assembly or under the dashboard.
- A weak or corroded ground connection can cause voltage drops that mimic a faulty sensor, so always verify ground integrity before condemning the pedal.
- The two sensors inside the pedal module are designed to have different voltage ranges (one roughly half the other); a scan tool that shows both signals is essential for accurate diagnosis.
- Intermittent P1542 codes can be caused by water intrusion into the connector or pedal assembly, especially on vehicles with clogged sunroof drains or cowl leaks.
- After replacing the pedal module, some BMW models require a relearn procedure or adaptation reset to avoid a repeat code.

Can I keep driving with P1542?

If the vehicle is in limp mode, driving is not recommended because power is severely limited and unpredictable. If the warning light is on but the car drives normally, you can drive cautiously to a repair shop, but avoid heavy acceleration and have the fault checked promptly.

Tools that help

- BMW-compatible OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific BMW model
- Socket set and trim removal tools
- Torx or hex bit set for pedal module removal

Reading P1542

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.
42	The exact fault within that area.

Often seen with

P1543 Throttle Actuation Potentiometer Signal Too Low · **P1544** Throttle Actuation Potentiometer Signal Too High · **P1545** Throttle Position Control Malfunction · **P1544** High Exhaust Temperature Detected · **P1543** A/C System Performance · **P1544** A/C Refrigerant Condition Very Low · **P1545** A/C Clutch Relay Control Circuit · **P1543** A/C System Performance · **P1544** A/C Refrigerant Condition Very Low · **P1545** A/C Clutch Relay Control Circuit · **P1543** Pedal Position Sensor · **P1544** Pedal Position Sensor · **P1545** Pedal Position Sensor · **P2122** Accelerator Pedal Position Sensor D Circuit Low · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1542/>

