

VOLKSWAGEN · POWERTRAIN

P1861

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1861 · Volkswagen

Throttle Position Sensor Error Message From ECM

P1861 on Volkswagen vehicles indicates that the engine control module (ECM) has detected an error in the throttle position sensor (TPS) signal circuit, typically a mismatch between the two redundant sensors inside the electronic throttle body. The ECM sets this code when the voltages from the two TPS tracks do not correlate as expected, which can be caused by a faulty throttle body, wiring issues, or adaptation problems.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode, limiting acceleration
- Hesitation or stumble during acceleration
- Unstable or fluctuating idle speed
- Poor fuel economy or increased emissions
- In some cases, the engine may stall or fail to start

Common causes, most likely first

- 1 Carbon buildup or wear inside the electronic throttle body causing sensor signal irregularity
- 2 Faulty throttle position sensor (integrated into the throttle body)
- 3 Damaged or corroded wiring in the TPS circuit (open, short, or high resistance)
- 4 Poor electrical connection at the throttle body or ECM connectors
- 5 Throttle body adaptation values lost or corrupted, requiring recalibration
- 6 ECM software issue or internal fault (less common)
- 7 Aftermarket or incorrect throttle body installation



How to diagnose and fix it

- 1 Perform a visual inspection of the throttle body, wiring, and connectors for damage or corrosion
- 2 Use a scan tool to check live TPS voltage readings and compare both sensor tracks for correlation
- 3 Clean the throttle body with approved cleaner and perform a throttle body adaptation reset
- 4 Check resistance and continuity of the TPS signal wires between the throttle body and ECM
- 5 If wiring is faulty, repair or replace the affected harness section
- 6 If the throttle body is confirmed faulty, replace it with a genuine or OEM-quality unit and perform adaptation
- 7 As a last resort, check for ECM software updates or replacement if all other causes are ruled out

Throttle body adaptation is often overlooked

- Many technicians replace the throttle body without performing the required adaptation, leading to a repeat of the P1861 code.
- A dirty throttle body can cause signal correlation errors even if the sensor itself is healthy, so cleaning should be the first step.
- Wiring harness chafing near the throttle body is a common hidden cause, especially on higher-mileage vehicles.
- The ECM may set P1861 due to a low battery or voltage spikes, so check charging system health before condemning parts.
- Aftermarket throttle bodies often have mismatched sensor characteristics, triggering this code even when new.

Can I keep driving with P1861?

If the vehicle is in limp mode, avoid highway driving and seek repair promptly. If only the check engine light is on with no drivability issues, you can drive cautiously to a workshop, but avoid aggressive acceleration.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Throttle body cleaner and soft brush
- Socket set and screwdrivers
- Wiring diagram for the specific model



Reading P1861

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 8** Transmission.
- 61** The exact fault within that area.

Often seen with

P1545 Throttle Position Control Malfunction · **P1545** A/C Clutch Relay Control Circuit · **P1545** A/C Clutch Relay Control Circuit · **P1545** Pedal Position Sensor · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0638** Throttle Actuator Control Range/Performance (Bank 1) · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1861/>

