

VOLKSWAGEN · POWERTRAIN

P1633

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1633 · Volkswagen

Accelerator Pedal Position Sensor 2 Signal Too Low

P1633 on a Volkswagen means the engine control module (ECM) has detected that the signal voltage from accelerator pedal position sensor 2 is lower than the expected range for the current pedal position. Sensor 2 is the redundant track inside the drive-by-wire pedal assembly, and the ECM compares it against sensor 1 to verify the driver's requested throttle; a persistently low signal on track 2 triggers this code and usually forces a reduced-power limp mode.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- The electronic throttle warning light or check engine light illuminates on the dashboard
- The engine enters limp mode with severely reduced power and a throttle that responds sluggishly or not at all
- The accelerator pedal may feel dead or have a delayed, uneven response when pressed
- A message such as 'Engine fault workshop' or 'EPC' appears in the instrument cluster display
- Often no symptoms besides the warning light if the fault is intermittent and sensor 1 still provides a plausible signal
- Occasional rough idle or stalling when the ECM cannot reconcile the two pedal signals

Common causes, most likely first

- 1 Worn or contaminated accelerator pedal position sensor 2 track inside the pedal assembly, the most common cause on higher-mileage Volkswagens
- 2 Corroded, backed-out, or chafed wiring in the pedal sensor harness connector or the loom between the pedal and the ECM
- 3 Water ingress into the pedal connector or footwell wiring from a leaking windscreen scuttle drain or blocked plenum
- 4 Poor ground or reference voltage supply shared by the pedal sensors, often due to a loose engine-bay ground strap
- 5 Failed or failing accelerator pedal assembly as a complete unit after internal sensor wear
- 6 Rarely, an internal fault in the ECM driver circuit for sensor 2 after a voltage spike or jump-start event



How to diagnose and fix it

- 1 Scan all modules with a Volkswagen-compatible scan tool and record the freeze-frame data and live accelerator pedal sensor 1 and sensor 2 voltages at rest and through the full pedal travel
- 2 Visually inspect the pedal connector and harness for corrosion, water intrusion, chafed insulation, and loose terminals, then clean and reseal the connector
- 3 Back-probe sensor 2 at the pedal connector and verify its signal voltage rises smoothly from roughly 0.4 to 4.5 volts as the pedal is pressed, comparing it against sensor 1
- 4 Check the sensor ground and 5-volt reference at the pedal connector with a multimeter under load to rule out a shared supply or ground fault
- 5 If the signal is missing or erratic at the pedal but the supply and ground are good, replace the accelerator pedal assembly and clear the code
- 6 If the pedal signal is correct at the connector but the ECM still logs P1633, perform a continuity and resistance test on the signal wire back to the ECM and repair any open or high-resistance section
- 7 After repair, clear the fault memory, perform a throttle adaptation or basic setting with the scan tool, and road-test through the full pedal range to confirm the code does not return

What P1633 hides about the pedal circuit

- Many technicians replace the accelerator pedal only to find the real fault is a corroded connector pin or a chafed wire behind the pedal, so always back-probe the signal before condemning the assembly.
- A weak or intermittent ground shared with other sensors can pull sensor 2 low without any pedal wear at all, and this is easily missed if only the pedal is tested in isolation.
- Water leaking from a blocked scuttle drain into the driver footwell is a known Volkswagen cause of pedal sensor corrosion, so check for damp carpet and green crust on the pins.
- P1633 can be stored intermittently by a low battery or a voltage spike during a jump-start, so clear the code and recheck before authorizing parts if the fault is not repeatable.
- On some Volkswagens the pedal sensor signal passes through an intermediate connector in the footwell or bulkhead, and a loose terminal there mimics a failed pedal perfectly.

Can I keep driving with P1633?

The car is usually drivable only in limp mode with severely reduced power, which makes merging and hill climbs unsafe, so limit driving to a short trip to a workshop. If the pedal response is dead or erratic, do not drive on public roads and arrange a tow instead.



Tools that help

- Volkswagen-compatible scan tool with live data and basic settings capability
- Digital multimeter with back-probe pins
- Wiring diagram for the accelerator pedal circuit
- Torx and trim removal tools for pedal and footwell access
- Contact cleaner and dielectric grease for connector repair

Reading P1633

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
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- 6** Computer and output circuits.
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- 33** The exact fault within that area.

Often seen with

P1545 Throttle Position Control Malfunction · **P1634** Accelerator Pedal Position Sensor 2 Signal Too High · **P1634** Generator Terminal B Circuit Open · **P1634** Alternator B Open 1.8L · **P1545** A/C Clutch Relay Control Circuit · **P1634** Ignition 1 Power Circuit Low Voltage · **P1634** Data Output Link Circuit Failure · **P1545** A/C Clutch Relay Control Circuit · **P1545** Pedal Position Sensor · **P1634** Throttle Valve Adaptation Spring Test Failed · **P2122** Accelerator Pedal Position Sensor D Circuit Low · **P2127** Accelerator Pedal Position Sensor E Circuit Low · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1633/>

