

KIA · POWERTRAIN

P1616

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1616 · Kia

Chassis Accelerator Sensor Signal Low Voltage

P1616 on a Kia means the chassis accelerator sensor circuit is reporting a signal voltage below the expected range to the engine control module. The computer has detected that the accelerator pedal position signal is lower than it should be during key-on or while the pedal is being pressed, which can affect throttle response and engine power delivery.

SYSTEM

Powertrain

CODE TYPE

Kia specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- The check engine light or electronic throttle control warning light is illuminated on the dashboard.
- The engine may enter limp mode or reduced power mode, limiting acceleration.
- The accelerator pedal may feel unresponsive or require more travel than normal to accelerate.
- The engine may idle erratically or stall when coming to a stop.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- The cruise control system may be disabled or fail to engage.

Common causes, most likely first

- 1 A faulty accelerator pedal position sensor (APS) or chassis accelerator sensor assembly.
- 2 Damaged, corroded, or loose wiring in the accelerator sensor circuit, particularly at the pedal connector.
- 3 A poor ground connection for the accelerator sensor or engine control module.
- 4 A short to ground or open circuit in the signal wire between the sensor and the ECM.
- 5 A failing engine control module (ECM) or a software issue requiring recalibration.
- 6 Contamination or physical damage to the accelerator pedal assembly, such as from spilled liquids.



How to diagnose and fix it

- 1 Use an OBD-II scanner to read the freeze-frame data and confirm the accelerator pedal position voltage is low at key-on and during pedal movement.
- 2 Visually inspect the accelerator pedal connector and wiring for corrosion, loose pins, or damage, and clean or repair as needed.
- 3 Check the sensor ground circuit for excessive resistance using a multimeter and repair any poor ground connections.
- 4 Backprobe the signal wire at the sensor and at the ECM to compare voltages and identify where the signal drops.
- 5 Perform a wiggle test on the wiring harness while monitoring live data to catch intermittent faults.
- 6 If the sensor is faulty, replace the accelerator pedal assembly and perform a throttle relearn or calibration procedure as required.
- 7 After repairs, clear the code and verify the accelerator pedal voltage reads within specification throughout its travel.

Before you replace the accelerator pedal

- A low voltage signal often comes from a bad ground rather than a failed sensor, so check the ground circuit before condemning the pedal assembly.
- Kia accelerator pedal sensors are dual-track units, and a low voltage on one track can set P1616 while the other track still reads correctly, making live data comparison essential.
- Spilled drinks or cleaning products can seep into the pedal assembly and cause intermittent low voltage signals that only appear in humid or cold conditions.
- The ECM may store P1616 as a pending code without turning on the warning light, so always check for pending codes during routine scans.
- A weak battery or charging system fault can cause voltage drops that mimic a sensor signal low voltage, so verify battery and charging system health first.

Can I keep driving with P1616?

You can usually drive the vehicle to a repair shop, but expect reduced engine power and avoid situations that require rapid acceleration or merging into fast traffic. If the vehicle enters limp mode or stalls repeatedly, stop driving and have it towed to prevent a safety hazard.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Backprobe pins or piercing probes
- Wiring diagram for the accelerator pedal circuit
- Basic hand tools for trim removal and connector access



Reading P1616

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

Often seen with

P1617 Glow Plug Heater Indicator Circuit Open Short To Ground · **P1617** Control Module Fault Or Control Module Not Coded · **P1617** Chassis Accelerator Sensor Signal High Voltage · **P1617** Engine Oil Level Switch Circuit · **P0121** Throttle Position Sensor A Circuit Range/Performance · **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 [How Drive-by-Wire Works: Electronic Throttle Body](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/kia-p1616/>

