

KIA · POWERTRAIN

P1307

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1307 · Kia

Chassis Acceleration Sensor Signal Malfunction

P1307 on Kia vehicles indicates that the chassis acceleration sensor, which measures vehicle body movement for systems like electronic stability control (ESC), has sent a signal outside the expected range or is not responding correctly. The engine control module (ECM) or stability control module detects this abnormal signal and stores the code, often disabling ESC and related functions.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Kia specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- The electronic stability control (ESC) warning light illuminates steadily on the dashboard.
- The ESC system may be disabled, reducing traction control intervention during slippery conditions.
- In some cases, the vehicle may exhibit reduced engine power or enter limp mode as a safety precaution.
- A noticeable decrease in handling stability during cornering or evasive maneuvers.
- Often no symptoms besides the warning light, with the vehicle driving normally in dry conditions.

Common causes, most likely first

- Faulty chassis acceleration sensor (also called yaw rate or G-sensor) due to internal failure or contamination.
- Damaged or corroded wiring harness or connector at the sensor, often from moisture intrusion or physical damage.
- Poor electrical connection at the sensor or module, such as loose pins or terminal corrosion.
- Failed stability control module (ESC module) not processing the sensor signal correctly.
- Sensor mounting bracket loose or damaged, causing misalignment and incorrect readings.
- Voltage supply or ground issue to the sensor, such as a blown fuse or bad ground connection.
- Aftermarket accessories or modifications interfering with the sensor signal or wiring.



How to diagnose and fix it

- 1 Use an OBD-II scanner to retrieve the code and check for related codes in the ESC and ECM systems.
- 2 Visually inspect the chassis acceleration sensor, its connector, and wiring for damage, corrosion, or loose mounting.
- 3 Measure the sensor's reference voltage and ground at the connector with a multimeter to verify power and ground integrity.
- 4 Check the sensor signal output with an oscilloscope or scan tool live data while driving to confirm erratic or missing signal.
- 5 Perform a wiggle test on the wiring harness and connectors while monitoring sensor data to identify intermittent faults.
- 6 If the sensor is faulty, replace it and perform any required calibration or relearn procedure with a scan tool.
- 7 If the sensor and wiring are good, diagnose the stability control module and its communication lines for faults.

Chassis Sensor Faults Often Misdiagnosed

- A loose or corroded ground connection for the chassis acceleration sensor is a common cause that is frequently overlooked, so always verify ground integrity before replacing parts.
- The chassis acceleration sensor on many Kia models is located under the center console or passenger seat, where spilled drinks or debris can cause contamination and failure.
- After replacing the sensor, a calibration or zero-point reset with a factory-level scan tool is often required; otherwise, the code may return immediately.
- This code can be set by a weak battery or charging system issue that causes voltage spikes, so check battery health and charging voltage first.
- Some Kia models use the same sensor for both ESC and hill-start assist, so a fault may also disable hill-start assist without a separate warning.

Can I keep driving with P1307?

You can usually continue driving if the only symptom is the warning light, but be aware that the electronic stability control system may be disabled, reducing safety in slippery conditions or emergency maneuvers. Avoid aggressive driving and have the fault diagnosed promptly to restore full stability control function.

Tools that help

- OBD-II scanner with live data and ESC system access
- Digital multimeter
- Oscilloscope (for signal analysis)
- Socket set and trim removal tools
- Factory service information for sensor location and calibration procedures



Reading P1307

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Kia): its meaning depends on the make.
- 3** Ignition system and misfire.
- 07** The exact fault within that area.

Often seen with

P1306 Cylinder 6 Misfire · **P1308** Chassis Acceleration Sensor Signal Low · **P1306** Cylinder 6 Misfire · **P1306** Kickdown Relay Pull In Circuit Fault · **P1308** A/C Clutch Circuit Fault · **U0122** Lost Communication With Vehicle Dynamics Control Module

See it working

Watch the animated explainer [Master the Four-Stroke Engine Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/kia-p1307/>

