

GENERIC · POWERTRAIN

P2135

OBD-II TROUBLE CODE

P2135

Throttle/Pedal Position Sensor A/B Voltage Correlation

P2135 indicates that the engine control module (ECM) has detected a mismatch between the voltage signals from two throttle position sensors (Sensor A and Sensor B) that are designed to track together. The ECM compares these redundant signals to verify the throttle plate's actual position, and when the correlation falls outside the expected range for a calibrated period, it sets this code and typically commands a reduced power mode.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light and often the electronic throttle control (ETC) warning light.
- Reduced engine power or limp mode, limiting vehicle speed and acceleration.
- A hesitation or stumble when pressing the accelerator pedal, especially from a stop.
- An erratic or surging idle speed that may fluctuate without driver input.
- The engine may stall unexpectedly when coming to a stop or during low-speed maneuvers.
- Often no symptoms besides the warning light, particularly if the correlation error is intermittent.

Common causes, most likely first

- 1 Carbon buildup or contamination on the throttle plate and bore, causing the plate to stick or move unevenly.
- 2 Wear or internal failure of the throttle position sensor (TPS) assembly, leading to inconsistent voltage output.
- 3 Damaged, corroded, or loose wiring in the sensor reference, signal, or ground circuits.
- 4 A faulty accelerator pedal position sensor that sends conflicting signals to the ECM.
- 5 Poor electrical connections at the throttle body or pedal sensor harness connectors.
- 6 A failing electronic throttle body motor or internal gears that affect plate movement and sensor correlation.
- 7 Rarely, a software glitch or calibration error in the ECM that requires a reflash or replacement.



How to diagnose and fix it

- 1 Use an OBD-II scanner to retrieve all stored and pending codes, and record freeze-frame data to understand the conditions when the fault set.
- 2 Visually inspect the throttle body for carbon deposits and clean it with approved throttle body cleaner and a soft brush, then perform a throttle relearn procedure.
- 3 Backprobe the TPS connectors and compare Sensor A and Sensor B voltage readings throughout the full range of throttle movement; look for dead spots or non-linear response.
- 4 Check the wiring harness for chafing, corrosion, or loose pins between the throttle body, pedal sensor, and ECM; repair as needed.
- 5 If voltage correlation is still off, swap the throttle body with a known-good unit and recheck live data to confirm the fault follows the part.
- 6 Perform a manufacturer-specific throttle position sensor calibration or idle relearn using a scan tool after any repair or cleaning.
- 7 If all else fails, consult service information for ECM software updates or diagnostic procedures specific to the vehicle before replacing the ECM.

Before you replace the throttle body

- A dirty throttle body is the most common cause of P2135 on high-mileage vehicles, and a thorough cleaning often resolves the code without any parts replacement.
- The code can be set by a weak battery or charging system issue that causes voltage spikes, so always verify battery health and ground connections before condemning sensors.
- Intermittent wiring faults at the throttle body connector are frequently missed because the harness flexes with engine movement; a wiggle test while monitoring live data can reveal the problem.
- Some vehicles require a relearn procedure after cleaning or replacing the throttle body, and skipping it will cause the code to return immediately even with good components.
- P2135 can be a secondary code triggered by a failing accelerator pedal sensor, so do not overlook the pedal assembly when diagnosing the throttle body.

Can I keep driving with P2135?

Do not continue driving with P2135 active because the vehicle may enter limp mode without warning, creating a safety hazard in traffic. If you must move the car, drive directly to a repair facility at low speed and avoid highways or heavy traffic.



Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with backprobe pins
- Throttle body cleaner and soft-bristle brush
- Socket set and screwdrivers for throttle body removal
- Wiring diagram and service information for the specific vehicle

Reading P2135

- P** Powertrain: engine, transmission and emissions.
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- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 1** Fuel and air metering.
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- 35** The exact fault within that area.

Often seen with

P0121 Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P0222** Throttle Position Sensor B Circuit Low Input · **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/p2135/>

