

GENERIC · POWERTRAIN

P2137

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2137

Throttle/Pedal Position Sensor/Switch 'B' / 'C' Voltage Correlation

P2137 indicates that the engine control module (ECM) has detected a disagreement between the voltage signals from throttle or pedal position sensor 'B' and sensor 'C'. These two sensors are designed to provide redundant, opposite-voltage readings so the computer can cross-check them; when the correlation falls outside the expected range, the ECM sets this code and typically limits engine power.

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

Symptoms you may notice

- Illumination of the check engine light, often with the electronic throttle control (ETC) warning light also on
- Reduced engine power or limp mode, where the vehicle may not accelerate beyond a low speed
- A hesitation or stumble when pressing the accelerator pedal
- An unexpected increase or decrease in engine speed without driver input
- The engine may stall or refuse to start in some cases
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Contaminated or worn throttle position sensor (TPS) or accelerator pedal position (APP) sensor tracks
- 2 Corroded, loose, or damaged wiring in the sensor circuits, including the shared reference voltage or ground
- 3 Failed throttle body assembly where the sensors are integrated and not serviceable separately
- 4 Failed accelerator pedal assembly with integrated sensors
- 5 Poor electrical connections at the ECM or intermediate connectors
- 6 Internal ECM fault, though this is less common



How to diagnose and fix it

- 1 Use an OBD-II scanner to read live data for both sensor 'B' and 'C' voltages and observe their correlation as the throttle is slowly opened and closed; look for dead spots or non-linear jumps.
- 2 Visually inspect the throttle body and accelerator pedal sensor connectors for corrosion, water intrusion, or loose pins, and check the wiring harness for chafing or breaks.
- 3 Measure the reference voltage (typically 5V) and ground integrity at each sensor connector with a digital multimeter; repair any wiring faults found.
- 4 Clean the throttle body and sensor contacts with appropriate electronic cleaner, then clear the code and test-drive to see if it returns.
- 5 If the throttle body is electronically controlled and the sensors are integrated, replace the throttle body assembly after confirming the fault is internal.
- 6 If the accelerator pedal assembly is the source, replace the pedal assembly as a unit.
- 7 After any repair, perform a throttle relearn or idle relearn procedure as required by the manufacturer, then verify the code does not reset.

Sensor correlation faults are rarely the sensor itself

- A common misdiagnosis is to replace the throttle body or pedal assembly immediately, but wiring and connector issues account for a large share of P2137 cases, so always perform voltage-drop and continuity tests first.
- The code can be set by a weak or failing battery or charging system, because low system voltage can cause erratic sensor readings that trigger correlation errors.
- On some vehicles, a dirty throttle body can cause the sensor voltages to fall outside the expected correlation range even though the sensors are healthy, so cleaning is a valid first step.
- P2137 often appears alongside other throttle-related codes such as P2135 or P2138, and the presence of multiple codes can point to a shared power or ground circuit problem rather than individual sensor failure.
- Intermittent P2137 faults that do not return after clearing may be caused by a loose connector that only loses contact during vibration or temperature changes, so a wiggle test of the harness while monitoring live data is valuable.

Can I keep driving with P2137?

Because P2137 can cause reduced engine power or unexpected acceleration changes, you should avoid driving the vehicle until the fault is diagnosed and repaired; if you must move it, drive at low speed and be prepared for sudden power loss.



Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Electronic contact cleaner
- Basic hand tools for connector and component access

Reading P2137

- 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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- 37** The exact fault within that area.

Often seen with

P0120 Throttle Position Sensor A Circuit Malfunction · **P0220** Throttle Position Sensor B Circuit Malfunction · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2137/>

