

GENERIC · POWERTRAIN

P2136

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2136

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

P2136 indicates that the engine control module (ECM) has detected a disagreement between the signals from throttle position sensor 'A' and throttle position sensor 'C' that exceeds the calibrated limit. The ECM compares the two independent voltage signals to verify throttle plate position, and when the correlation error persists, it sets this code and typically commands reduced power mode.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Intermediate

AREA

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
- Hesitation or stumble during acceleration, especially from a stop
- Unstable or surging idle speed
- Transmission may shift harshly or refuse to downshift due to torque limiting
- Often no symptoms besides the warning light if the fault is intermittent

Common causes, most likely first

- 1 Contaminated or failing throttle position sensor 'A' or 'C' (internal wear, carbon buildup, or electrical fault)
- 2 Damaged, corroded, or loose wiring in the throttle position sensor circuits, including chafed harnesses or poor connector pins
- 3 Poor electrical ground for the throttle body or ECM, causing voltage reference shifts
- 4 Carbon buildup on the throttle plate or bore, preventing consistent sensor correlation at closed throttle
- 5 Failed or failing electronic throttle body assembly (motor or internal sensors)
- 6 ECM software calibration issue or internal ECM fault (less common)



How to diagnose and fix it

- 1 Inspect the throttle body and intake tract for carbon buildup or debris; clean the throttle plate and bore with approved cleaner and perform a throttle relearn if required.
- 2 Visually inspect the throttle position sensor connectors and wiring for corrosion, chafing, or loose pins; repair or replace damaged sections.
- 3 Use a scan tool to monitor throttle position sensor 'A' and 'C' voltages through the full sweep of the accelerator pedal; look for dead spots, erratic jumps, or non-linear correlation.
- 4 Measure reference voltage and ground at the throttle position sensor connectors with a multimeter; verify 5V reference and good ground, repairing wiring as needed.
- 5 Perform a voltage drop test on the throttle body ground circuit and ECM ground to rule out high resistance.
- 6 If sensor correlation is inconsistent and wiring is good, replace the electronic throttle body assembly (which includes the sensors) and perform the required adaptation or relearn procedure.
- 7 Check for technical service bulletins (TSBs) or ECM software updates specific to the vehicle make and model that address throttle correlation faults.

What Most Techs Overlook on P2136

- A dirty throttle body is a frequent culprit that mimics sensor failure; cleaning the bore and plate often restores correlation without replacing parts.
- Intermittent wiring faults at the throttle body connector can set P2136 only under certain vibration or temperature conditions, so wiggle-testing the harness while monitoring live data is essential.
- The code can be set by a weak or failing battery or charging system, as low voltage can cause erratic sensor signals and false correlation errors.
- Replacing the throttle body without performing the required relearn or adaptation procedure will often result in a repeat code and poor driveability.
- P2136 does not always mean the throttle body itself is faulty; a poor ground or reference voltage drop can skew both sensor signals and trigger the correlation error.

Can I keep driving with P2136?

Driving with P2136 is not recommended because the vehicle may enter reduced power mode without warning, limiting speed and acceleration and increasing crash risk. If you must drive to a repair facility, avoid highways and heavy traffic, and be prepared for sudden loss of power.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with back-probing pins
- Throttle body cleaner and shop rags
- Basic hand tools (screwdrivers, socket set, pliers)
- Wiring diagram or service information for the specific vehicle



Reading P2136

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- 36** 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 · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2136/>

