

GENERIC · POWERTRAIN

P2139

OBD-II TROUBLE CODE

P2139

Throttle/Pedal Position Sensor/Switch 'D' / 'F' Voltage Correlation

P2139 is set when the engine computer compares the voltage signals from throttle or pedal position sensors 'D' and 'F' and finds they do not agree within the expected margin for a calibrated period of time. The computer has detected a correlation error between two redundant sensor circuits that should track each other closely, indicating a wiring, sensor, or mechanical fault in the throttle body or accelerator pedal assembly.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode, where the throttle responds sluggishly or not at all
- Unstable or surging idle, or the engine may stall when coming to a stop
- Poor acceleration or a hesitation when pressing the accelerator pedal
- A stored code in the powertrain control module (PCM) with possible freeze-frame data showing the voltage mismatch
- On some vehicles, the electronic throttle control (ETC) system may default to a fixed idle speed

Common causes, most likely first

- 1 Faulty throttle position sensor (TPS) or accelerator pedal position (APP) sensor 'D' or 'F'
- 2 Corroded, damaged, or loose wiring or connectors in the sensor 'D' or 'F' circuit
- 3 Mechanical binding or carbon buildup in the throttle body causing sensor signal mismatch
- 4 A short or open in the sensor reference voltage or ground circuit shared by sensors 'D' and 'F'
- 5 Failed or failing PCM, though this is rare and should be diagnosed last
- 6 Aftermarket electronic throttle controllers or pedal tuners interfering with sensor signals
- 7 Water intrusion or contamination inside the sensor or connector housing



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to see when the fault occurred
- 2 Visually inspect the throttle body and accelerator pedal sensor connectors for corrosion, loose pins, or damaged wires
- 3 Check the sensor reference voltage and ground circuits with a digital multimeter (DMM) to ensure they are within specification
- 4 Back-probe the 'D' and 'F' sensor signal wires and compare their voltages while slowly moving the throttle or pedal through its range
- 5 Clean the throttle body and perform a throttle relearn or calibration procedure if the vehicle requires it
- 6 Replace the faulty sensor or sensor assembly if voltage correlation tests confirm an internal failure
- 7 Clear codes and perform a road test to verify the repair and ensure the code does not return

What a voltage correlation code really means

- P2139 is often set by a mechanical issue in the throttle body, such as carbon buildup or a sticking plate, rather than a failed sensor, so cleaning and recalibration can resolve it without parts replacement.
- The code compares two redundant sensors that should mirror each other; a single sensor can drift slightly without setting a code until the mismatch exceeds a calibrated threshold over time.
- Aftermarket throttle controllers or pedal tuners that modify sensor signals are a common cause of correlation codes and should be removed before diagnosis.
- A weak battery or poor charging system can cause erratic sensor voltages and set correlation codes, so always verify battery and charging system health first.
- The PCM may not illuminate the check engine light immediately; the code can be stored pending and only mature to a confirmed code after multiple drive cycles.

Can I keep driving with P2139?

If the vehicle is in limp mode or the throttle response is unpredictable, avoid driving and have it towed to a repair shop. If the only symptom is a warning light and the car drives normally, you can drive cautiously to a workshop, but avoid heavy acceleration or high speeds until the fault is repaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Basic hand tools for connector and sensor removal
- Throttle body cleaner and shop rags
- Factory service information for voltage specifications and relearn procedures



Reading P2139

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

Often seen with

P2135 Throttle/Pedal Position Sensor A/B Voltage Correlation · **P2136** Throttle/Pedal Position Sensor/Switch 'A' / 'C' Voltage Corr · **P2137** Throttle/Pedal Position Sensor/Switch 'B' / 'C' Voltage Corr · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation · **P2140** Throttle/Pedal Position Sensor/Switch 'E' / 'F' Voltage Corr

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2139/>

