

GENERIC · POWERTRAIN

P2163

OBD-II TROUBLE CODE

P2163

Throttle/Pedal Position Sensor 'A' Maximum Stop Performance

P2163 indicates that the engine control module (ECM) has detected a performance problem with the maximum stop of throttle or pedal position sensor 'A'. The ECM expects the sensor's signal to reach a specific maximum value when the throttle is fully depressed, but the signal does not meet that expectation during the self-test or during normal operation.

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 when the accelerator pedal is pressed firmly
- Hesitation or lack of response when accelerating from a stop
- Inconsistent idle speed or stalling when coming to a stop
- A stored trouble code in the ECM with freeze frame data showing the fault occurred during a full throttle event

Common causes, most likely first

- 1 Contaminated or sticking throttle body due to carbon buildup, preventing the throttle plate from reaching its full stop
- 2 Worn or misadjusted accelerator pedal position sensor or its mechanical linkage
- 3 Damaged or corroded wiring harness or connector at the throttle body or pedal sensor
- 4 Failed throttle position sensor or accelerator pedal position sensor
- 5 Faulty throttle actuator control motor or its circuit
- 6 ECM software calibration issue requiring an update
- 7 Mechanical binding in the accelerator pedal assembly or throttle cable (on older vehicles)



How to diagnose and fix it

- 1 Connect a scan tool and record freeze frame data to see the sensor voltages at the time of the fault
- 2 Visually inspect the throttle body for carbon buildup and clean it with approved throttle body cleaner
- 3 Check the accelerator pedal for full travel and ensure no floor mats or obstructions prevent full depression
- 4 Inspect the wiring and connectors at the throttle position sensor and accelerator pedal position sensor for damage or corrosion
- 5 Use a multimeter to verify sensor reference voltage and signal voltage through the full range of pedal travel
- 6 Perform a throttle body relearn or idle relearn procedure with a scan tool after cleaning or replacement
- 7 If the fault persists, replace the faulty sensor or throttle body assembly and recheck for codes

Common Misdiagnosis Traps for P2163

- A dirty throttle body is the most frequent cause of this code, yet many technicians replace the accelerator pedal sensor first without checking for carbon buildup on the throttle plate.
- The code can be set by a driver who never fully depresses the accelerator pedal during normal driving, so the ECM may not see the expected maximum stop value during a self-test.
- After cleaning or replacing the throttle body, a relearn procedure is often required; skipping it can cause the code to return immediately.
- Wiring harness chafing near the throttle body or pedal assembly can intermittently short or open the sensor signal, mimicking a failed sensor.
- On some vehicles, a weak battery or poor ground can cause erratic sensor readings that trigger P2163 without any actual sensor fault.

Can I keep driving with P2163?

The vehicle may enter limp mode and limit power, which can be unsafe in traffic, so avoid full-throttle acceleration and plan to have the fault diagnosed soon. If the check engine light is flashing or the vehicle barely accelerates, stop driving and seek professional assistance.

Tools that help

- OBD-II scan tool with live data and freeze frame capability
- Digital multimeter
- Throttle body cleaner and soft brush
- Basic hand tools (screwdrivers, socket set)
- Wiring diagram for the throttle position sensor circuit



Reading P2163

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

Often seen with

P0121 Throttle Position Sensor A Circuit Range/Performance · **P0221** Throttle Position Sensor B Circuit Range/Performance · **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 Jet Engine Works: Two-Spool Turbofan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2163/>

