

GENERIC · POWERTRAIN

P2621

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2621

Throttle Position Output Circuit Low

P2621 indicates that the powertrain control module (PCM) has detected an abnormally low voltage on the throttle position output circuit, which is the signal the PCM uses to command the electronic throttle actuator. The PCM compares the commanded throttle position with the actual throttle position sensor feedback, and when the output circuit voltage stays below the expected threshold, it sets this code and typically forces the engine into a reduced-power limp mode.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	High	Intermediate	Computer and output circuits

Symptoms you may notice

- Illuminated check engine light, often accompanied by the electronic throttle control (ETC) warning light
- Reduced engine power or limp mode with a maximum speed or RPM limit
- Poor or delayed acceleration when pressing the accelerator pedal
- Engine may idle erratically or stall immediately after startup
- Cruise control may become inoperative or disengage unexpectedly
- Often no symptoms besides the warning light if the fault is intermittent

Common causes, most likely first

- 1 Damaged, chafed, or corroded wiring in the throttle position output circuit between the PCM and the electronic throttle body
- 2 Loose or contaminated electrical connector at the throttle body or PCM
- 3 Failed electronic throttle body actuator or internal position sensor
- 4 Short to ground on the throttle position output signal wire
- 5 Faulty powertrain control module (PCM) driver circuit, though this is less common
- 6 Water intrusion or corrosion inside the throttle body connector causing low signal voltage



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear codes and test-drive to see if P2621 returns immediately or only under specific conditions
- 2 Visually inspect the throttle body connector and the PCM connector for corrosion, bent pins, or loose terminals, and repair as needed
- 3 Back-probe the throttle position output circuit at the throttle body and measure voltage with the key on and engine off, comparing to the manufacturer's specification
- 4 Perform a wiggle test on the harness while monitoring throttle position output voltage on the scan tool to reveal intermittent wiring faults
- 5 Check for continuity and short-to-ground on the signal wire between the throttle body and PCM using a digital multimeter
- 6 If wiring and connectors are good, substitute a known-good throttle body and recheck for the code before condemning the PCM
- 7 After repairs, clear codes, perform a throttle body relearn or idle relearn procedure if required, and verify the repair with a road test

What the throttle output circuit really does

- P2621 is often set by a dirty or worn throttle body rather than a failed PCM, so cleaning the throttle plate and performing a relearn can resolve the code on high-mileage vehicles.
- A low voltage on the output circuit can be caused by a short to ground in a harness that rubs against the engine block, which a visual inspection alone may miss without a wiggle test.
- This code does not always mean the throttle body is defective; a weak battery or poor ground connection can cause the PCM to misread the output signal and set P2621.
- Some vehicles require a throttle position sensor relearn after any throttle body service, and skipping that step will cause the code to return immediately even with good parts.
- Intermittent P2621 codes that appear only in cold or wet weather often point to water intrusion in the throttle body connector rather than an internal component failure.

Can I keep driving with P2621?

Do not continue driving with an active P2621 because the vehicle may enter limp mode without warning, leaving you with severely reduced power in traffic. If the code is pending or intermittent and the car drives normally, limit driving to a short trip to a repair shop and avoid highways or heavy traffic.



Tools that help

- OBD-II scan tool with live data and bidirectional control capability
- Digital multimeter with back-probe pins
- Wiring diagram for the throttle position circuit
- Torx or hex socket set for throttle body removal
- Contact cleaner and dielectric grease for connector repair

Reading P2621

- 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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- 6** Computer and output circuits.
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- 21** 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 · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation · **P2622** Throttle Position Output Circuit High

See it working

Watch the animated explainer [How a Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2621/>

