

GENERIC · POWERTRAIN

P0222

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0222

Throttle Position Sensor B Circuit Low Input

P0222 means the engine computer has detected a low-voltage signal on the Throttle Position Sensor B circuit, which is the second throttle position signal used for redundancy. The computer expects this signal to rise and fall within a specific voltage range as the throttle moves, but it is seeing a value that is lower than the minimum acceptable threshold.

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

Symptoms you may notice

- The check engine light or electronic throttle control warning light is illuminated on the dashboard.
- The engine may enter limp mode, limiting power and restricting vehicle speed.
- Poor or delayed throttle response, with the engine feeling sluggish or unresponsive when accelerating.
- The engine may idle erratically or stall unexpectedly when coming to a stop.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Transmission may shift harshly or refuse to shift normally due to reduced engine torque signal.

Common causes, most likely first

- A faulty throttle position sensor B, worn internally or suffering from a bad spot in its resistive track.
- Damaged, corroded, or loose wiring or connector pins in the sensor B circuit, including the signal, ground, or reference voltage wires.
- A short to ground on the signal wire between the sensor and the engine computer.
- Contamination or mechanical binding inside the throttle body preventing the sensor from sweeping its full range.
- A failing engine computer, though this is rare and should only be suspected after all other possibilities are ruled out.
- Poor electrical connections at the throttle body harness, often caused by vibration or heat cycling.
- Aftermarket or incorrectly installed electronic throttle components that do not match the factory calibration.



How to diagnose and fix it

- 1 Connect a scan tool and read the freeze-frame data and live throttle position sensor B voltage to confirm the low input condition.
- 2 Visually inspect the throttle body, sensor B connector, and wiring harness for corrosion, chafing, or loose pins.
- 3 Back-probe the sensor B signal wire at the connector and compare its voltage to the sensor A signal while slowly opening the throttle; a correct sensor B should track smoothly and inversely to sensor A.
- 4 Check the sensor B ground circuit for excessive resistance and the reference voltage circuit for the correct 5-volt supply.
- 5 Perform a wiggle test on the harness and connectors while watching live data to expose intermittent faults.
- 6 If wiring and connectors are good, replace the throttle position sensor or the throttle body assembly as required by the manufacturer's design.
- 7 Clear the codes and perform a throttle body relearn or idle relearn procedure if the vehicle requires it, then verify the repair with a road test.

Why sensor B fails before sensor A

- Throttle position sensor B is often the second wiper track inside the same housing, and it can wear out first because it sits in a different position or receives less lubrication over time.
- A low input code can be set by a simple loose ground connection at the throttle body, which many technicians overlook while replacing the sensor itself.
- On some vehicles, a weak battery or poor charging system voltage can cause the computer to misread the sensor B signal and set P0222 without any sensor fault.
- The code does not always mean the sensor is dead; a shorted signal wire rubbing against a metal bracket can pull the voltage low only when the engine moves under load.
- After replacing a throttle body, failing to perform the required relearn procedure can cause P0222 to return immediately even though the new part is functioning correctly.

Can I keep driving with P0222?

You can usually drive the vehicle to a repair shop, but expect reduced engine power and possible limp mode that limits speed. Avoid heavy acceleration, towing, or highway driving until the fault is repaired, because an unexpected loss of throttle response can be dangerous.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with back-probe pins
- Wiring diagram for the throttle position sensor circuit
- Basic hand tools for removing the throttle body or sensor
- Contact cleaner and dielectric grease for connector repair



Reading P0222

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 2** Fuel and air metering (injector circuits).
- 22** The exact fault within that area.

Often seen with

P0122 Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P0223** Throttle Position Sensor B Circuit High Input · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0222/>

