

FORD · POWERTRAIN

P1124

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1124 · Ford

Throttle Position Sensor Out of Self-Test Range

P1124 on a Ford means the throttle position sensor (TPS) voltage fell outside the range the powertrain control module (PCM) expects during its key-on self-test, so the PCM cannot confirm the throttle plate is resting at the correct closed position. The computer compares the TPS signal against a calibrated window at ignition-on and flags the code when the reading is too high or too low for that moment.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Ford specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slightly higher or lower than normal idle speed after startup
- Hesitation or a brief stumble when accelerating from a stop
- Poor throttle response or a lag when pressing the accelerator pedal
- In some cases, the engine may enter limp mode with reduced power
- Occasional stalling when coming to a stop or during low-speed maneuvers

Common causes, most likely first

- 1 Throttle position sensor (TPS) internally worn or faulty, producing an out-of-range voltage at rest
- 2 Loose, corroded, or damaged electrical connector at the TPS
- 3 Chafed, shorted, or open wiring in the TPS circuit between the sensor and the PCM
- 4 Throttle plate not fully closing due to carbon buildup on the throttle body bore
- 5 Improperly adjusted or sticking throttle linkage or cruise control cable holding the plate slightly open
- 6 PCM calibration issue or faulty PCM (rare, but possible after other causes are ruled out)



How to diagnose and fix it

- 1 Connect a scan tool and read TPS voltage with the key on and engine off to confirm it is outside the self-test window
- 2 Visually inspect the TPS connector and wiring for corrosion, looseness, or damage, and repair as needed
- 3 Clean the throttle body bore and plate to remove carbon deposits that prevent full closure
- 4 Check throttle linkage and cruise control cable for binding or incorrect adjustment, and correct as necessary
- 5 Backprobe the TPS signal, reference, and ground wires to verify voltages and check for opens or shorts
- 6 Replace the TPS if voltage is erratic or out of specification after wiring and mechanical checks
- 7 Clear the code and perform a key-on self-test to verify the repair, then road test to confirm no recurrence

Why a clean throttle body often fixes P1124

- Carbon buildup on the throttle plate is a frequent cause of P1124 because it holds the plate slightly open, pushing the TPS voltage above the self-test limit even though the sensor itself is healthy.
- A TPS that tests fine with a multimeter can still set P1124 if the PCM's self-test window is narrow and the sensor's closed-throttle voltage has drifted due to normal wear.
- Technicians sometimes replace the TPS only to find the code returns because the throttle cable or cruise control linkage was holding the plate open; always check mechanical closure first.
- P1124 can be set by a low battery or voltage drop during cranking, so verify battery condition and charging system before condemning the sensor.
- On some Ford models, the TPS is integrated into the throttle body assembly, making cleaning and wiring checks even more important before considering replacement.

Can I keep driving with P1124?

You can usually drive the vehicle short distances to a repair shop, but avoid aggressive acceleration or heavy loads because the PCM may be using a default throttle strategy that affects performance and emissions. If the engine idles poorly or stalls, have it checked promptly.

Tools that help

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



Reading P1124

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
- 1** Fuel and air metering.
- 24** The exact fault within that area.

Often seen with

P0120 Throttle Position Sensor A Circuit Malfunction · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P0505** Idle Control System Malfunction

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1124/>

