

CHRYSLER · POWERTRAIN

P1524

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1524 · Chrysler

TP Sensor Learned CI Throttle Angle Out Of Range

P1524 on Chrysler vehicles means the powertrain control module (PCM) has detected that the learned closed-throttle angle from the throttle position (TP) sensor is outside the acceptable range stored during the last adaptive learning cycle. The PCM compares the current TP sensor voltage at closed throttle to the learned minimum and flags the code when the difference exceeds a calibrated threshold, indicating the throttle plate rest position or sensor signal has drifted.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly higher or erratic idle speed as the PCM struggles to control the throttle
- Momentary hesitation or stumble when accelerating from a stop
- Poor fuel economy due to incorrect throttle angle interpretation
- In rare cases, a limp-home mode with reduced power if the PCM cannot trust the TP signal
- Intermittent stalling when coming to a stop if the learned angle is far off

Common causes, most likely first

- 1 Carbon buildup on the throttle plate and bore, preventing the plate from returning to the same closed position
- 2 A worn or dirty throttle position sensor (TPS) that produces a shifted voltage at closed throttle
- 3 A loose or corroded TPS electrical connector causing intermittent signal variation
- 4 A sticking or misadjusted throttle cable or cruise control linkage holding the plate slightly open
- 5 A PCM that has lost its learned adaptive values due to a battery disconnect or software glitch
- 6 A damaged or misrouted wiring harness to the TPS, introducing resistance or intermittent opens
- 7 An aftermarket air intake or throttle body spacer that alters the closed-throttle airflow and learning



How to diagnose and fix it

- 1 Inspect the throttle body bore and plate for carbon deposits and clean them with throttle-body cleaner and a soft brush
- 2 Check the TPS connector for corrosion, tightness, and damaged pins, then verify the closed-throttle voltage with a scan tool
- 3 Perform a throttle relearn or idle air control reset using a factory-level scan tool after cleaning or repairs
- 4 Check the throttle cable and cruise control linkage for binding or incorrect adjustment that holds the plate open
- 5 Backprobe the TPS signal wire and ground while slowly opening the throttle to look for dead spots or erratic voltage
- 6 If the TPS voltage is out of specification at closed throttle, replace the TPS and repeat the relearn procedure
- 7 Verify the PCM has the latest calibration and reflash if a known software issue exists for the vehicle

Why cleaning the throttle body often fixes P1524

- Carbon buildup on the throttle plate is the most common cause of P1524 on Chrysler engines, because even a thin film changes the closed-throttle angle enough to exceed the learned limit.
- Many technicians replace the TPS first, but the code often returns because the real problem is a dirty throttle body that was never cleaned and relearned.
- A battery replacement or disconnect can erase the PCM's learned throttle values, causing P1524 to set until a proper relearn drive cycle is completed.
- An aftermarket air intake or a throttle body spacer can change the closed-throttle airflow and cause the learned angle to fall out of range even when all components are functioning correctly.
- The code does not always mean the TPS is failing; a sticking throttle cable or cruise control servo can hold the plate slightly open and trigger the same learned-angle error.

Can I keep driving with P1524?

You can usually drive the vehicle with P1524, but avoid aggressive acceleration and expect a slightly erratic idle until the fault is repaired. If the engine stalls or enters limp-home mode, have the vehicle checked promptly to avoid a safety risk in traffic.

Tools that help

- OBD-II scan tool with Chrysler-specific software for live data and throttle relearn
- Throttle body cleaner and a soft-bristle brush
- Digital multimeter for backprobing the TPS signal
- Basic hand tools for removing the air intake duct and throttle body
- Feeler gauge or feeler wires for checking throttle cable adjustment



Reading P1524

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 24** 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 · **P0123** Throttle Position Sensor A Circuit High Input · **P0507** Idle Control System RPM Higher Than Expected · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How a Catalytic Converter Works: 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1524/>

