

GM · POWERTRAIN

P1526

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1526 · GM

TP Sensor Learn Not Complete

P1526 on a GM vehicle means the powertrain control module (PCM) has not successfully completed the throttle position (TP) sensor learn procedure, so it cannot trust the TP sensor's voltage range. The PCM sets this code when the ignition is cycled or the battery is disconnected and the required learn routine does not finish, often because the TP sensor signal is out of expected range or the learn conditions are not met.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The check engine light or reduced power message appears on the dash.
- The engine may idle poorly or at an unexpected speed after battery service or throttle body cleaning.
- Acceleration may feel flat or delayed because the PCM is limiting throttle response.
- The transmission may shift harshly or late while the PCM lacks a learned TP value.
- Often no symptoms besides the warning light if the sensor is healthy and only the learn was interrupted.

Common causes, most likely first

- Battery disconnected or PCM power interrupted before the TP learn procedure completed.
- Throttle position sensor signal voltage out of range due to a worn sensor or incorrect installation.
- Throttle body or TP sensor replaced without running the required learn procedure.
- Dirty or sticking throttle plate preventing the PCM from seeing expected closed and open throttle positions.
- Wiring fault in the TP sensor reference, signal, or ground circuit causing an unstable signal.
- PCM not meeting learn enable conditions such as engine coolant temperature or battery voltage.
- Aftermarket throttle body or sensor with a voltage curve the PCM cannot learn.



How to diagnose and fix it

- 1 Connect a scan tool and check for other TP sensor or throttle actuator codes before assuming P1526 is the only fault.
- 2 Verify battery voltage and clear the code, then run the GM TP sensor learn procedure exactly as the scan tool instructs.
- 3 Inspect the TP sensor connector and wiring for corrosion, chafing, or loose pins, and repair any damage found.
- 4 Clean the throttle body and confirm the throttle plate moves freely from closed to wide open without binding.
- 5 Backprobe the TP sensor signal and reference circuits and compare voltages to the GM specification through the full throttle range.
- 6 Replace the TP sensor or throttle body only if the signal is out of specification or the learn repeatedly fails on a known-good unit.
- 7 After repair, clear codes and complete the learn procedure, then verify P1526 does not return during a road test.

Why the TP learn keeps failing

- Many P1526 codes are set simply because the battery was disconnected and the technician did not run the TP learn procedure afterward, not because any part failed.
- A dirty throttle body can prevent the PCM from seeing the closed-throttle voltage it expects, so cleaning the throttle body often resolves a learn failure without replacing the sensor.
- Aftermarket throttle bodies sometimes have a different voltage curve that the PCM cannot learn, so the code persists even though the part is new.
- The PCM may refuse to run the TP learn if engine coolant temperature or battery voltage is outside the enable conditions, so check those basics before condemning the sensor.
- P1526 can be stored alongside throttle actuator control codes, and chasing only the TP sensor while ignoring a sticking throttle plate leads to repeat failures.

Can I keep driving with P1526?

You can usually drive the vehicle to a shop, but expect reduced power or poor throttle response because the PCM is limiting operation without a learned TP value. Avoid heavy acceleration and towing until the learn procedure is completed and the code stays cleared.

Tools that help

- Scan tool with GM TP sensor learn capability
- Digital multimeter
- Basic hand tools
- Throttle body cleaner
- Wiring diagram for the TP sensor circuit



Reading P1526

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (GM): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 26** The exact fault within that area.

Often seen with

P1516 Intake Manifold Changeover Valve Circuit Open · **P1516** Idle Air Control Solenoid Signal 4 Circuit Low Input · **P1516** Gear Change Neutral Drive Fault · **P1516** Gear Change Neutral Drive Fault · **P1516** Throttle Actuator Control (TAC) Module Throttle Actuator Pos · **P1516** Intake Manifold Runner Control Input Error · **P1516** Throttle Actuator Control (TAC) Module Throttle Actuator Pos · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How a Boxer Engine Works: Flat Engine Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1526/>

