

CHRYSLER · POWERTRAIN

P1220

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1220 · Chrysler

Throttle Position (TP) Sensor 2 Circuit

P1220 on Chrysler vehicles indicates that the powertrain control module (PCM) has detected an electrical fault in the circuit for throttle position (TP) sensor 2, the second of two redundant throttle position sensors used to monitor accelerator pedal input. The PCM compares the two sensor signals for plausibility and sets this code when sensor 2's voltage falls outside the expected range or does not correlate with sensor 1.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering (injector
circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp-home mode with limited throttle response
- Hesitation or stumble during acceleration
- Erratic or surging idle
- Poor fuel economy or increased emissions
- In some cases, the engine may stall or refuse to start

Common causes, most likely first

- 1 Faulty throttle position sensor 2 (internal failure or wear)
- 2 Damaged or corroded wiring in the TP sensor 2 circuit (open, short, or high resistance)
- 3 Loose or corroded electrical connector at the throttle body or PCM
- 4 Contaminated or sticking throttle body (carbon buildup affecting sensor movement)
- 5 PCM internal fault (rare but possible)
- 6 Aftermarket or incorrect throttle body assembly causing signal mismatch



How to diagnose and fix it

- 1 Use an OBD-II scanner to retrieve all stored codes and freeze-frame data, then clear codes and test-drive to see if P1220 returns.
- 2 Visually inspect the throttle body, TP sensor 2 connector, and wiring for damage, corrosion, or loose pins; repair as needed.
- 3 Backprobe the TP sensor 2 signal wire at the sensor and PCM with a multimeter to check for an open or short, and compare voltage with sensor 1.
- 4 Check the TP sensor 2 reference voltage and ground circuits for proper voltage drops; repair any excessive resistance.
- 5 Remove and clean the throttle body to eliminate carbon buildup that can cause binding and false sensor readings.
- 6 If wiring and connectors are good, replace the throttle position sensor 2 or the entire throttle body assembly if the sensor is not serviceable separately.
- 7 After repairs, perform a throttle body relearn or PCM adaptive reset as required, then verify the code does not return.

Don't overlook the throttle body itself

- A dirty or carbon-fouled throttle body often causes TP sensor 2 to set P1220 even when the sensor itself is electrically sound, because the buildup restricts movement and creates a signal mismatch.
- Chrysler's electronic throttle control (ETC) system uses two TP sensors with opposite voltage sweeps; a code for sensor 2 does not automatically mean sensor 2 is bad, as a short in sensor 1's circuit can pull sensor 2's signal out of range.
- Intermittent P1220 codes are frequently traced to a chafed wire harness near the throttle body or a poor ground connection, so wiggle-test the harness while watching live data.
- Replacing the throttle body without checking for a PCM software update or performing a relearn can lead to repeat codes and poor driveability.
- This code can be set by a weak battery or charging system issue that causes low voltage to the PCM, so always verify battery and charging system health first.

Can I keep driving with P1220?

You can usually drive the vehicle with P1220, but expect reduced power and possible limp-home mode; avoid heavy acceleration and have the fault diagnosed promptly to prevent stalling or further damage.



Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Wire piercing probes or backprobe pins
- Throttle body cleaner and soft brush
- Basic hand tools (screwdrivers, socket set)
- Factory service information or wiring diagrams

Reading P1220

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Chrysler): its meaning depends on the make.

2 Fuel and air metering (injector circuits).

20 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 · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1220/>

