

CHRYSLER · POWERTRAIN

P1120

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1120 · Chrysler

Throttle Position (TP) Sensor 1 Circuit

P1120 on Chrysler vehicles indicates that the powertrain control module (PCM) has detected an out-of-range or implausible signal from Throttle Position (TP) Sensor 1, which is the primary sensor used to determine throttle blade angle. The PCM compares this signal against expected values from the throttle pedal and other sensors, and when the voltage or rationality check fails, it stores this code and typically illuminates the check engine light.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Reduced engine power or limp mode, where the throttle responds sluggishly or not at all
- Erratic or surging idle, or stalling when coming to a stop
- Poor acceleration or hesitation during acceleration
- Transmission may shift harshly or refuse to shift due to incorrect throttle input
- Cruise control may be inoperative or disengage unexpectedly

Common causes, most likely first

- 1 Faulty Throttle Position Sensor 1 (worn tracks or internal failure)
- 2 Corroded, loose, or damaged electrical connector at the TP sensor
- 3 Chafed or broken wires in the TP sensor circuit (signal, ground, or reference voltage)
- 4 Contaminated or sticking throttle body causing the sensor to read out of range
- 5 PCM software issue or internal fault (rare, but possible on some Chrysler models)
- 6 Poor ground connection at the throttle body or engine block



How to diagnose and fix it

- 1 Use a scan tool to read live TP sensor 1 voltage and compare it to TP sensor 2 (if equipped) throughout the throttle range; look for dead spots or irrational readings
- 2 Visually inspect the TP sensor connector and wiring for corrosion, loose pins, or chafing, and repair as needed
- 3 Check reference voltage (typically 5V) and ground at the sensor connector with a multimeter; repair any wiring faults
- 4 Clean the throttle body and perform a throttle relearn procedure if contamination is found
- 5 Replace the Throttle Position Sensor 1 if voltage tests confirm it is faulty
- 6 If the sensor and wiring test good, check for PCM software updates or a faulty PCM
- 7 Clear the code and perform a road test to verify the repair and ensure the code does not return

Common Misdiagnosis Traps for P1120

- A dirty throttle body can cause the TP sensor to read outside its expected range at closed throttle, setting P1120 even though the sensor itself is fine; cleaning and relearning often resolves the code.
On many Chrysler vehicles, TP sensor 1 and 2 are redundant and oppose each other; a failure in one sensor can set P1120 while the other sensor still provides a usable signal, so comparing both is critical.
- Wiring harness damage near the throttle body is common due to heat and vibration, and a visual inspection alone may miss internal wire breaks; a wiggle test with a multimeter is often needed.
- After replacing the TP sensor or throttle body, a throttle relearn procedure with a capable scan tool is required on many Chrysler models to prevent the code from returning.
P1120 can be set by a low battery or charging system issue that causes voltage spikes, so always check battery health and grounds before condemning the sensor.

Can I keep driving with P1120?

You can usually drive the vehicle to a repair shop, but expect reduced power and possible limp mode; avoid heavy acceleration and highway driving until the fault is repaired, as the vehicle may enter limp mode unexpectedly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Basic hand tools (screwdrivers, socket set)
- Throttle body cleaner
- Wiring diagram for the specific Chrysler model



Reading P1120

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

Often seen with

P1121 Oxygen Sensor Heater Circuit Bank 2 Sensor 2 Short To Ground · **P1121** Accelerator Pedal Position Sensor Range Performance Problem · **P1121** Neutral Position Switch Circuit Low Input AT Vehicles · **P1121** Throttle Position Lower Than Expected · **P1121** Throttle Position Sensor Signal Not Consistent With Mass Air · **P1121** Pedal Position Sensor A Circuit Range Performance · **P1121** Throttle Position Lower Than Expected · **P1121** Throttle Position Sensor Out of Range · **P1121** Throttle Position Sensor Inconsistent with Mass Air Flow Sen · **P1121** TP Sensor Circuit Intermittent High Voltage · **P1121** Pedal Position Sensor 1 Range Performance Problem · **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 Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1120/>

