

CHRYSLER · POWERTRAIN

P1277

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1277 · Chrysler

Accelerator Pedal Position Sensor 1 Circuit Low Voltage

P1277 on Chrysler vehicles means the powertrain control module (PCM) has detected a low-voltage condition on the signal circuit of accelerator pedal position sensor 1. The pedal sensor normally outputs a voltage that rises as the pedal is pressed, and the PCM flags this code when that signal stays below the expected minimum for the current pedal position.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Chrysler specific	Medium	Intermediate	Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the electronic throttle control (ETC) warning light or check engine light
- Reduced engine power or limp-home mode with the throttle responding sluggishly
- The accelerator pedal feeling unresponsive or requiring excessive travel to accelerate
- Rough or erratic idle quality because the PCM cannot trust the pedal signal
- Often no symptoms besides the warning light when the fault is intermittent
- A stored freeze-frame showing the fault occurred at low pedal angles or during a key-on self-test

Common causes, most likely first

- 1 A worn or internally failing accelerator pedal position sensor 1 assembly
- 2 Corroded, backed-out, or damaged terminals at the pedal sensor connector
- 3 An open or high-resistance fault in the sensor 1 signal wire between the pedal and the PCM
- 4 A poor ground or reference voltage supply shared by the pedal sensor circuit
- 5 Water intrusion or debris contamination inside the pedal sensor connector
- 6 A PCM internal driver fault on the sensor 1 input circuit (less common)



How to diagnose and fix it

- 1 Connect a scan tool and record the P1277 freeze-frame plus live accelerator pedal position sensor 1 voltage while slowly sweeping the pedal through its full travel.
- 2 Visually inspect the pedal sensor connector and harness for corrosion, chafing, water intrusion, or loose terminals, and repair any damage found.
- 3 Back-probe the sensor 1 signal circuit at the pedal and at the PCM to check for an open circuit or excessive resistance, comparing readings end to end.
- 4 Verify the sensor's 5-volt reference and ground circuits are within specification at the pedal connector with the key on.
- 5 If wiring and supplies check out, substitute a known-good accelerator pedal assembly and confirm sensor 1 voltage tracks smoothly through the full range.
- 6 Clear the code and perform a relearn or throttle adaptation procedure if the vehicle requires it, then road-test to confirm the code does not return.

Why P1277 is often a wiring fault

- A large share of P1277 cases on Chrysler vehicles trace to a corroded or loose terminal at the pedal connector rather than a failed pedal assembly, so inspect the pins before condemning the sensor.
- The code can set intermittently from a harness that rubs near the pedal bracket or under the dash, and the fault may only appear when the pedal is moved through a specific arc.
- P1277 refers specifically to sensor 1; Chrysler pedal assemblies use redundant sensors, so a faulty sensor 2 will typically set a different code and comparing both signals is a fast diagnostic shortcut.
- A weak or shared 5-volt reference or ground can pull sensor 1 voltage low and mimic a bad pedal, so always verify reference and ground at the connector before replacing parts.
- After repairs, some Chrysler models require a pedal relearn or ETC adaptation, and skipping it can leave the vehicle in reduced power even though the wiring is fixed.

Can I keep driving with P1277?

The vehicle may enter reduced power mode and accelerate poorly, so limit driving to a short trip to a repair shop and avoid highways or heavy traffic until the fault is repaired.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Wiring diagram for the accelerator pedal and PCM circuits
- Terminal pick and electrical contact cleaner
- Basic hand tools for pedal assembly removal



Reading P1277

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

Often seen with

P1275 Accelerator Pedal Position Sensor Circuit · **P1276** Accelerator Pedal Positioning Sensor 1 Circuit · **P1278** Accelerator Pedal Position Sensor 1 Circuit High Voltage · **P1275** Cylinder 5 High To Low Side Open · **P1276** Cylinder 6 High To Low Side Open · **P1278** Cylinder 8 High To Low Side Open · **P1275** Accelerator Pedal Position (APP) Sensor 1 Circuit · **P1276** Accelerator Pedal Position (APP) Sensor 1 Performance · **P1278** Accelerator Pedal Position Sensor 1 Circuit High Voltage · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1277/>

