

GM · POWERTRAIN

P1295

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1295 · GM

Loss Of 5 Volts To TP Sensor

P1295 on a GM vehicle means the powertrain control module (PCM) has detected a loss of the 5-volt reference voltage supplied to the throttle position (TP) sensor circuit. The PCM monitors this reference line and sets the code when the voltage drops below a calibrated threshold, which prevents it from accurately reading throttle position.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Fuel and air
metering (injector
circuits)**

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode, limiting acceleration
- Hesitation or stumble when pressing the accelerator
- Erratic or surging engine speed at idle
- Poor fuel economy or increased emissions
- In some cases, the engine may stall or refuse to start

Common causes, most likely first

- 1 Open or high-resistance wire in the 5-volt reference circuit to the TP sensor
- 2 Short to ground on the 5-volt reference wire
- 3 Faulty throttle position sensor internally shorting the reference voltage
- 4 Corroded or loose electrical connector at the TP sensor or PCM
- 5 Failed PCM voltage regulator or internal driver for the 5-volt reference
- 6 Chafed or damaged wiring harness causing intermittent loss of voltage



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data to confirm the code and check for other stored codes
- 2 Inspect the TP sensor connector and wiring for corrosion, loose pins, or obvious damage
- 3 Measure the 5-volt reference voltage at the TP sensor connector with the key on, engine off
- 4 If voltage is low, disconnect the TP sensor and recheck the reference voltage at the connector to isolate the sensor from the circuit
- 5 Check for continuity and resistance in the reference wire between the TP sensor and PCM, looking for opens or shorts to ground
- 6 If the circuit tests good, substitute a known-good TP sensor and clear the code to see if it returns
- 7 If the reference voltage remains low with the sensor disconnected and wiring intact, diagnose the PCM and repair or replace as needed

What a 5-volt reference loss really means

- The 5-volt reference is shared by multiple sensors on many GM engines, so a shorted sensor on the same circuit can cause P1295 even if the TP sensor itself is fine.
- A common misdiagnosis is replacing the throttle position sensor when the actual fault is a rubbed-through wire in the harness near the throttle body or intake manifold.
- Intermittent P1295 codes often appear after engine work where the harness was disturbed, so always inspect for stretched or pinched wires before condemning parts.
- The PCM may set P1295 along with other sensor codes if the shared reference voltage is pulled down, so check all related codes before assuming a single sensor failure.
- A failing PCM is rare but possible; confirm power and ground integrity to the PCM before replacing it, as poor grounds can mimic a reference voltage fault.

Can I keep driving with P1295?

You can drive the vehicle to a repair shop if the engine runs normally and the check engine light is the only symptom, but avoid heavy acceleration or towing. If the engine enters limp mode or stalls, stop driving and have the vehicle towed to prevent unsafe conditions.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Wiring diagram for the specific GM vehicle
- Test light or jumper wires for circuit testing
- Terminal pick and electrical contact cleaner



Reading P1295

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (GM): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 95** 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 · **P0221** Throttle Position Sensor B Circuit Range/Performance · **P0222** Throttle Position Sensor B Circuit Low Input

See it working

Watch the animated explainer [How the EVAP System Works: Fuel Vapour and Leak Test](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1295/>

