

GM · POWERTRAIN

P1192

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1192 · GM

Inlet Air Temp Circuit Low

P1192 on a GM vehicle means the engine control module has detected a voltage signal from the inlet air temperature sensor that is lower than the expected range for the current conditions. The inlet air temperature sensor is a thermistor that changes resistance with temperature, and a low signal voltage typically indicates a short to ground or an abnormally cold reading. The computer sets this code when the signal stays below the calibrated minimum for a set period, which can affect fuel delivery and spark timing calculations.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or stumbling when the engine is cold
- Poor fuel economy or rich-running condition
- Hesitation or reduced power during acceleration
- Hard starting or extended cranking in cold weather
- In rare cases, a no-start condition if the signal is shorted to ground

Common causes, most likely first

- 1 Faulty inlet air temperature sensor internally shorted to ground
- 2 Damaged or chafed wiring between the sensor and the engine control module, shorting the signal circuit to ground
- 3 Corroded or loose electrical connector at the inlet air temperature sensor
- 4 Moisture intrusion into the sensor or connector causing a low-resistance path
- 5 Failed engine control module driver circuit for the inlet air temperature sensor
- 6 Aftermarket air intake system that routes the sensor improperly or exposes it to extreme cold
- 7 Pinched or melted harness near hot engine components causing a short to ground



How to diagnose and fix it

- 1 Connect a scan tool and record the inlet air temperature sensor voltage and temperature readings with the key on and engine off, then compare to ambient temperature to confirm the low signal
- 2 Visually inspect the sensor, connector, and wiring harness for corrosion, chafing, moisture, or signs of overheating, and repair any obvious damage
- 3 Disconnect the sensor and measure resistance across its terminals, then compare to the manufacturer's temperature-resistance chart to determine if the sensor is internally shorted
- 4 With the sensor disconnected and key on, measure voltage on the signal circuit at the connector to check for a short to ground in the harness; repair the wire if voltage is near zero
- 5 Check the sensor ground circuit for excessive resistance and verify the reference voltage at the connector is within specification
- 6 If the harness and sensor test good, substitute a known-good sensor and clear the code to see if it returns, confirming whether the sensor or the module is at fault
- 7 After repairs, clear the diagnostic trouble codes and verify the inlet air temperature reading matches ambient temperature on a cold start, then road test to confirm the code does not reset

Why a cold reading is not always a bad sensor

- A common misdiagnosis is replacing the inlet air temperature sensor when the real problem is a chafed signal wire shorting to ground behind the engine block, so always ohm-check the harness before condemning the sensor.
- On many GM vehicles the inlet air temperature sensor is integrated into the mass airflow sensor housing, so a low signal can be caused by a failed mass airflow sensor assembly rather than a separate sensor.
- Moisture inside the connector after engine washing or heavy rain can temporarily short the signal circuit and set P1192, and the code may not return once the connector dries out.
- An aftermarket cold air intake that places the sensor near a cold-air source or exposes it to road splash can cause low inlet air temperature readings that trigger this code even though the sensor is healthy.
- P1192 does not always mean the sensor circuit is faulty; a low signal can also be set by a poor ground connection at the engine control module that offsets the sensor return voltage.

Can I keep driving with P1192?

The vehicle remains safe to drive with P1192 because the engine control module substitutes a default inlet air temperature value, but fuel economy and cold-start driveability may suffer. Avoid heavy acceleration and towing until the fault is repaired, and address the code promptly if you notice rough running or hard starting.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with resistance and voltage measurement
- Temperature-resistance chart for the specific GM inlet air temperature sensor
- Wire terminal pick and electrical contact cleaner
- Factory service information or wiring diagram for the vehicle

Reading P1192

P Powertrain: engine, transmission and emissions.

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

1 Fuel and air metering.

92 The exact fault within that area.

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0102** Mass/Volume Air Flow Circuit Low Input ·
P0111 Intake Air Temperature Circuit Range/Performance · **P0112** Intake Air Temperature Circuit Low Input ·
P0113 Intake Air Temperature Circuit High Input

See it working

Watch the animated explainer [How Drive-by-Wire Works: Electronic Throttle Body](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1192/>

