

CHRYSLER · POWERTRAIN

P1111

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1111 · Chrysler

Intake Air Temperature (IAT) Sensor Circuit Intermittent High Voltage

P1111 on a Chrysler vehicle means the powertrain control module (PCM) has detected an intermittent high-voltage signal from the intake air temperature (IAT) sensor circuit. The PCM expects the IAT signal voltage to stay within a normal range, and an intermittent spike above that range indicates a momentary open circuit or excessive resistance in the sensor or its wiring.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the intermittent fault is brief.
- A momentary stumble or rough idle when the fault occurs, because the PCM momentarily receives an incorrect intake air temperature reading.
- Poor fuel economy or slightly erratic shifting if the intermittent signal disrupts the PCM's air-density calculation.
- A stored P1111 code with no pending or active fault present during a test drive.
- In rare cases, a brief hesitation on acceleration when the IAT signal spikes high.
- The malfunction indicator lamp (MIL) may turn on and off if the fault is truly intermittent.

Common causes, most likely first

- 1 A loose, corroded, or partially unseated electrical connector at the IAT sensor.
- 2 An intermittent open in the signal wire between the IAT sensor and the PCM, often from chafing or a broken strand inside the insulation.
- 3 A failing IAT sensor that internally opens when hot or vibrates, producing a momentary high-voltage signal.
- 4 Corrosion or water intrusion in the sensor connector or in a splice pack along the harness.
- 5 A poor ground connection at the sensor return circuit, causing the PCM to see a higher-than-normal voltage.
- 6 Damaged pins in the PCM connector that make intermittent contact.
- 7 Aftermarket wiring repairs or accessories that have disturbed the IAT circuit.



How to diagnose and fix it

- 1 Inspect the IAT sensor connector for looseness, corrosion, or pushed-out pins, and reseal or clean it as needed.
- 2 Wiggle-test the IAT sensor harness while watching live IAT data on a scan tool to reproduce the intermittent high-voltage event.
- 3 Measure resistance across the IAT sensor at room temperature and compare to the Chrysler specification; also heat and cool the sensor to check for an internal open.
- 4 Check the signal wire from the IAT sensor to the PCM for continuity and for intermittent opens by flexing the harness; repair any chafed or broken wire.
- 5 Verify the sensor ground circuit has low resistance to the PCM ground; clean or repair any corroded ground points.
- 6 If the sensor and wiring test good, substitute a known-good IAT sensor and recheck live data during a test drive.
- 7 Clear the code and perform a readiness drive cycle to confirm the P1111 does not return.

Why an intermittent IAT code fools many techs

- A P1111 is stored only when the PCM sees a high-voltage IAT signal for a very short window, so the fault often disappears before a technician can test it; a scan tool with data logging is more useful than a static meter check.
- The IAT sensor on many Chrysler engines is integrated into the mass airflow (MAF) sensor housing, so a faulty MAF assembly can set P1111 even though the IAT element itself is not serviceable separately.
- A high-voltage IAT signal can be caused by a poor ground on the sensor return circuit, not just by an open signal wire, and techs who only check the signal side miss this.
- This code does not always mean the IAT sensor is bad; a loose connector or a harness rubbed through by engine vibration is a more common cause on higher-mileage Chrysler vehicles.
- Because the PCM uses IAT for air-density calculations, an intermittent high reading can cause a brief rich condition that may set a fuel trim code later, so fixing P1111 promptly prevents secondary codes.

Can I keep driving with P1111?

You can usually keep driving with a P1111 because the fault is intermittent and the PCM substitutes a default intake air temperature, but avoid long trips or heavy towing until the circuit is repaired. If the engine begins to stumble or the warning light starts flashing, stop driving and have it diagnosed immediately.



Tools that help

- OBD-II scan tool with live data and data-logging capability
- Digital multimeter with min/max recording
- Back-probe kit or breakout leads
- Wiring diagram for the specific Chrysler model
- Heat gun and freeze spray for thermal testing of the sensor

Reading P1111

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

Often seen with

P0111 Intake Air Temperature Circuit Range/Performance · **P0112** Intake Air Temperature Circuit Low Input · **P0113** Intake Air Temperature Circuit High Input · **P0116** Engine Coolant Temperature Circuit Range/Performance · **P0125** Insufficient Coolant Temperature for Closed Loop Fuel Control

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1111/>

