

CHRYSLER · POWERTRAIN

P1483

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1483 · Chrysler

Catalyst Temperature Sensor Circuit Shorted High

P1483 on Chrysler vehicles means the powertrain control module (PCM) has detected a short to voltage on the catalyst temperature sensor signal circuit. The sensor is a thermocouple or resistance-based element mounted in or near the catalytic converter, and the PCM expects its signal voltage to stay within a specific low range; a sustained high voltage reading tells the PCM the circuit is shorted to power or the sensor has failed internally.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly reduced fuel economy if the PCM enters a default catalyst protection strategy
- In rare cases, a rough idle or hesitation when the PCM misreads catalyst temperature and alters fuel trim
- A stored pending code or freeze-frame data showing the fault occurred during normal driving
- No drivability complaints at all in many cases because the sensor is primarily an emissions monitor

Common causes, most likely first

- 1 Catalyst temperature sensor signal wire chafed and shorted to a nearby power wire or battery voltage source
- 2 Failed catalyst temperature sensor with an internal short to its supply voltage
- 3 Corroded or pushed-back terminal in the sensor connector causing an intermittent high-voltage reading
- 4 Damaged PCM connector pins or internal PCM driver fault holding the signal circuit high
- 5 Aftermarket sensor or pigtail with incorrect resistance characteristics installed during a previous repair
- 6 Heat damage to the sensor wiring harness near the exhaust, melting insulation and exposing the signal wire to voltage



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1483, then clear the code and test-drive to confirm it returns under the same conditions
- 2 Visually inspect the catalyst temperature sensor, its connector, and the harness routing for chafing, melted insulation, or contact with the exhaust
- 3 Backprobe the sensor signal circuit at the PCM connector with the key on and engine off to measure voltage; a reading near battery voltage confirms a short to power
- 4 Disconnect the sensor and recheck signal circuit voltage at the PCM; if voltage drops to the expected low reference level, the sensor is internally shorted and must be replaced
- 5 If voltage remains high with the sensor disconnected, isolate the signal wire by disconnecting both ends and check for continuity to battery positive or other powered circuits
- 6 Repair any chafed or shorted wire with proper solder and heat-shrink, then recheck circuit voltage and clear codes
- 7 If the circuit tests good but the code persists, substitute a known-good PCM only after confirming all powers, grounds, and sensor inputs are correct

Why a high-voltage reading is not always the sensor

- A short to voltage on the signal wire can be caused by a nearby injector or ignition coil harness that has rubbed through, so inspect the entire loom and not just the sensor pigtail
- The catalyst temperature sensor on many Chrysler models shares a reference voltage or ground with other sensors, and a fault in that shared circuit can mimic a sensor short
- Aftermarket catalytic converters sometimes lack the correct sensor bung depth, causing the sensor tip to overheat and fail internally with a short, which sets P1483 without any wiring fault
- A loose or corroded battery ground can create a voltage offset that the PCM interprets as a shorted-high signal, so always verify ground quality before condemning the sensor
- P1483 can set intermittently from water intrusion into the sensor connector after steam cleaning or deep water fording, leaving no hard fault when the vehicle is dry

Can I keep driving with P1483?

You can usually continue driving with P1483 because the fault mainly affects emissions monitoring, but avoid heavy loads or extended idling that could overheat the catalyst while the sensor reading is unreliable. Have the circuit inspected soon, since a shorted sensor or wiring can eventually damage the PCM driver circuit.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with backprobe pins
- Wiring diagram for the specific Chrysler model and engine
- Heat-resistant wire repair kit with solder and heat-shrink tubing
- Socket set and trim removal tools for accessing the sensor and PCM connectors

Reading P1483

- 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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- 4** Auxiliary emission controls.
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- 83** The exact fault within that area.

Often seen with

P1482 Preglow Control Module N142 · **P1482** Catalyst Temperature Sensor Circuit Shorted Low · **P1484** Catalytic Converter Overheat Detected · **P1482** SCP (Standard Corporate Protocol) Communication Bus Malfunction · **P1484** Variable Load Control Module Pin 1 Open · **P1482** Catalyst Temperature Sensor Circuit Shorted Low · **P1484** Catalytic Converter Overheat Detected · **P0135** O2 Sensor Heater Circuit Malfunction (Bank 1 Sensor 1) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2)

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1483/>

