

GENERIC · POWERTRAIN

P043D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P043D

Catalyst Temperature Sensor Circuit High Bank 2 Sensor 2

P043D means the engine computer has detected an abnormally high voltage signal from the catalyst temperature sensor located after the bank 2 catalytic converter, which is the side of the engine that does not contain cylinder number one. The computer expects this sensor to report a temperature within a specific range, and a high voltage reading tells the computer that the sensor circuit is seeing more voltage than it should, either because the sensor is reporting an unrealistically high temperature or because the wiring is feeding extra voltage into the signal circuit.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A slight decrease in fuel economy as the computer may alter fuel trim to protect the catalyst
- In rare cases, a rough running engine or hesitation if the computer enters a protective limp mode
- Failure of an emissions inspection because the catalyst monitor will not complete
- No drivability complaints at all in many cases, with the code being the only evidence of a problem

Common causes, most likely first

- 1 A failed catalyst temperature sensor that is internally shorted and sending a high voltage signal
- 2 Corrosion or water intrusion in the sensor connector causing a short to voltage on the signal circuit
- 3 A chafed or damaged wire in the sensor harness that is shorting to a power wire or to the battery positive circuit
- 4 A poor ground connection for the sensor or the engine computer, causing a reference voltage offset
- 5 A fault inside the engine computer itself, such as a shorted internal circuit on the sensor input
- 6 An exhaust system restriction or overheating catalyst that genuinely raises the temperature beyond normal limits, though this is less common



How to diagnose and fix it

- 1 Use a scan tool to read the live data for the bank 2 sensor 2 catalyst temperature sensor and compare it to ambient temperature after a cold soak to see if the reading is plausible
- 2 Visually inspect the sensor connector and the wiring harness for corrosion, chafing, or signs of water intrusion, and repair any damaged terminals or wires
- 3 Check the sensor ground circuit for excessive resistance using a multimeter and repair any poor ground connections
- 4 Measure the sensor signal voltage with a multimeter at the sensor connector and compare it to the scan tool reading to determine if the sensor or the wiring is at fault
- 5 If the wiring and grounds are good, replace the catalyst temperature sensor with a quality direct-fit part
- 6 Clear the code and perform a drive cycle to verify the repair, monitoring the sensor voltage to ensure it stays within the normal range
- 7 If the code returns after sensor replacement and wiring checks, diagnose the engine computer for an internal fault before condemning it

What a high catalyst temperature reading really means

- A high voltage signal from a catalyst temperature sensor does not automatically mean the catalyst is overheating; a shorted sensor or a wiring fault can produce the same high reading without any real temperature problem.
- Technicians often replace the sensor first and then find the real fault is a chafed wire behind the engine block that only shorts when the engine moves under load, so a wiggle test of the harness is essential.
- A poor ground for the sensor circuit can elevate the signal voltage because the computer measures the sensor signal relative to ground, and any ground offset will be interpreted as a higher temperature.
- This code can set intermittently due to water intrusion into the connector after a car wash or heavy rain, so checking for green corrosion inside the connector is a quick and often overlooked step.
- The bank 2 sensor 2 catalyst temperature sensor is often the same part number as the bank 1 sensor 2 sensor on many vehicles, so a known-good sensor from the other bank can be swapped temporarily to confirm the diagnosis before buying a new part.

Can I keep driving with P043D?

The vehicle is generally safe to drive with this code because it does not affect engine operation or safety systems, but you should avoid heavy towing or sustained high-speed driving until the fault is repaired to prevent any risk of catalyst damage. Have the code diagnosed soon to ensure the emissions system is working correctly and to avoid failing an emissions test.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire repair kit with crimp connectors and heat shrink
- Socket set and ratchet for sensor removal
- Jack and jack stands or ramps for access under the vehicle

Reading P043D

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
3D	The exact fault within that area.

Often seen with

P0420 Catalyst System Efficiency Below Threshold (Bank 1) · **P042D** Catalyst Temperature Sensor Circuit High Bank 1 Sensor 2 · **P0430** Catalyst System Efficiency Below Threshold (Bank 2) · **P043C** Catalyst Temperature Sensor Circuit Low Bank 2 Sensor 2 · **P043E** EVAP System Leak Detection Reference Orifice Low Flow

See it working

Watch the animated explainer [How Variable Valve Timing Works: Cam Phaser and VVT Solenoid](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p043d/>

