

GENERIC · POWERTRAIN

P043B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P043B

Catalyst Temperature Sensor Circuit Range/Performance Bank 2 Sensor 2

P043B indicates that the powertrain control module has detected an out-of-range or erratic signal from the catalyst temperature sensor located after the bank 2 catalytic converter, which is sensor 2 on that bank. The computer compares the sensor's voltage or resistance behavior against expected values for the current operating conditions and flags a fault when the signal falls outside the calibrated range or does not respond as expected.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

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
- A slight decrease in fuel economy as the computer may default to a richer fuel mixture
- Intermittent or permanent failure of the catalyst monitor to complete, which can prevent an emissions test from passing
- Rough running or hesitation in some cases if the faulty sensor signal affects fuel control strategies
- A stored freeze-frame showing the fault occurred during a specific temperature and load condition

Common causes, most likely first

- 1 Faulty catalyst temperature sensor (bank 2 sensor 2) due to internal failure or contamination
- 2 Damaged or corroded wiring harness or connector at the sensor, including chafed wires near the exhaust
- 3 Exhaust leaks upstream of the sensor that allow outside air to skew temperature readings
- 4 A failing catalytic converter on bank 2 that causes abnormal temperature behavior the sensor correctly reports
- 5 Poor electrical ground or reference voltage issue at the sensor circuit
- 6 Engine misfire or rich running condition that overheats the converter and stresses the sensor
- 7 Aftermarket or incorrect sensor installed previously that does not meet the OEM calibration



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data and any related codes to understand the conditions when P043B set
- 2 Visually inspect the bank 2 sensor 2 wiring, connector, and sensor mounting for damage, corrosion, or looseness
- 3 Check for exhaust leaks around the bank 2 catalytic converter and downstream piping using a smoke test or visual inspection
- 4 Measure the sensor's resistance and voltage output with a multimeter and compare to the manufacturer's specification
- 5 Verify the sensor circuit integrity by checking continuity and reference voltage at the connector with the key on
- 6 If the sensor and wiring test good, evaluate catalytic converter efficiency on bank 2 using scan tool data or a backpressure test
- 7 Replace the faulty sensor or repair the wiring as needed, clear codes, and complete a drive cycle to confirm the repair

What the catalyst temperature sensor really does

- A P043B can set from a sensor that is slow to respond rather than completely dead, so a simple resistance check at room temperature may not reveal the fault.
- Technicians often replace the catalytic converter when the real problem is a contaminated or aging temperature sensor that is reporting skewed data.
- Exhaust leaks between the converter and the sensor are a commonly missed cause because they introduce oxygen that changes the sensor's temperature reading.
- The bank 2 sensor 2 circuit is sometimes shared with other sensors or grounded through the exhaust manifold, so a bad ground elsewhere can trigger this code.
- This code does not always mean the converter is failing; the sensor can be reporting a real overtemperature condition caused by a misfire or rich mixture that needs to be fixed first.

Can I keep driving with P043B?

The vehicle is generally safe to drive with P043B because the fault mainly affects emissions monitoring and fuel control is only mildly impacted. Avoid heavy loads or sustained high-speed driving until the fault is diagnosed, since an uncorrected rich condition or misfire could damage the catalytic converter over time.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with temperature probe
- Infrared thermometer
- Smoke machine for exhaust leak testing
- Basic hand tools including socket set and wire probe kit



Reading P043B

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

Often seen with

P0136 O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0137** O2 Sensor Circuit Low Voltage (Bank 1 Sensor 2) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1) · **P0430** Catalyst System Efficiency Below Threshold (Bank 2) · **P043E** EVAP System Leak Detection Reference Orifice Low Flow

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p043b/>

