

GENERIC · POWERTRAIN

P0423

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0423

Heated Catalyst Efficiency Below Threshold (Bank 1)

P0423 means the powertrain control module (PCM) has determined that the heated catalytic converter on bank 1 is not cleaning exhaust gases efficiently enough, based on oxygen sensor readings before and after the converter. The PCM monitors the converter's oxygen-storage capacity during specific drive cycles and sets this code when the downstream sensor activity indicates the catalyst has degraded below the required threshold.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	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 PCM may adjust fuel trim to compensate
- Occasional rough idle or hesitation during acceleration if the converter is partially restricted
- A sulfur or rotten-egg smell from the exhaust when the converter is overheating or contaminated
- Failed emissions inspection due to increased hydrocarbon (HC) and carbon monoxide (CO) output

Common causes, most likely first

- 1 Aged or degraded heated catalytic converter on bank 1 that has lost oxygen-storage capacity
- 2 Misfiring engine or rich fuel mixture that has overheated and damaged the converter substrate
- 3 Oil or coolant consumption entering the exhaust stream and contaminating the catalyst
- 4 A faulty heated oxygen sensor (HO2S) downstream of the converter sending inaccurate readings
- 5 Exhaust leaks before or after the converter that skew sensor readings
- 6 A weak or failed catalytic converter heating element circuit (where applicable) preventing light-off
- 7 Engine mechanical issues such as worn piston rings or valve seals allowing oil into the exhaust



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and check freeze-frame data to confirm the conditions when P0423 set
- 2 Inspect the exhaust system for leaks, loose clamps, and damaged gaskets that could affect sensor readings
- 3 Test the downstream heated oxygen sensor (HO2S) response and compare its waveform to the upstream sensor
- 4 Check for engine misfires, fuel trim deviations, and oil or coolant consumption that could damage the converter
- 5 Verify the catalytic converter's heating element circuit (if equipped) for power, ground, and resistance
- 6 Perform a backpressure test to rule out a restricted converter before condemning it
- 7 Replace the heated catalytic converter on bank 1 only after confirming all upstream issues are resolved

Before you replace the catalytic converter

- A P0423 code often sets because the downstream oxygen sensor is lazy or contaminated, not because the converter itself has failed, so always test the sensor before condemning the catalyst.
- Exhaust leaks upstream of the downstream sensor can dilute the sample and mimic a failed converter, so a thorough leak check is essential before any parts are replaced.
- Engine misfires or a rich fuel mixture can overheat and destroy a new converter in a short time, so any underlying driveability faults must be repaired first.
- On some vehicles, the heated catalyst monitor only runs under specific conditions such as a cold start and a steady cruise, so the code may not reset immediately after repair.
- A converter that is physically damaged from impact or contaminated by coolant or oil will not be fixed by sensor replacement, and a backpressure test can reveal a plugged substrate.

Can I keep driving with P0423?

You can usually continue driving with P0423, but avoid aggressive acceleration and heavy loads because a failing converter can overheat and cause further exhaust damage. Have the vehicle diagnosed promptly to prevent increased emissions and potential damage to other components.

Tools that help

- OBD-II scan tool with live data and graphing capability
- Infrared thermometer
- Vacuum gauge or exhaust backpressure gauge
- Digital multimeter
- Oxygen sensor socket
- Exhaust leak detector or smoke machine



Reading P0423

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

Often seen with

P0171 System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **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 Wideband Air-Fuel Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0423/>

