

GENERIC · POWERTRAIN

P2083

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2083

Exhaust Gas Temperature Sensor Circuit Intermittent (Bank 2 Sensor 1)

P2083 indicates that the powertrain control module (PCM) has detected an intermittent fault in the exhaust gas temperature (EGT) sensor circuit for bank 2 sensor 1, which monitors the temperature of the exhaust entering the catalytic converter on the bank of cylinders that does not contain cylinder 1. The PCM sets this code when the sensor signal voltage or resistance momentarily falls outside the expected range or behaves erratically, rather than failing completely.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Intermittent loss of power or hesitation during acceleration, especially under load.
- Reduced fuel economy due to the PCM altering fuel delivery based on faulty temperature readings.
- Rough idle or unstable engine operation if the intermittent signal disrupts closed-loop fueling.
- In some vehicles, the cooling fan may run constantly or the engine may enter limp mode as a protective measure.
- A stored pending or history code for the same sensor, indicating the fault is not constant.

Common causes, most likely first

- 1 Damaged or chafed wiring in the EGT sensor circuit, often where it routes near hot exhaust components or sharp edges.
- 2 Corroded, loose, or water-intruded electrical connector at the sensor or PCM.
- 3 Failing EGT sensor that intermittently drops its signal due to internal element degradation.
- 4 Exhaust leaks upstream of the sensor allowing outside air to cause erratic temperature readings.
- 5 Thermal fatigue or mechanical damage to the sensor probe from vibration or debris.
- 6 PCM software glitch or internal driver fault, though this is less common than wiring or sensor issues.



How to diagnose and fix it

- 1 Inspect the EGT sensor wiring and connector for obvious damage, corrosion, or loose pins, and repair as needed.
- 2 Clear the code and test-drive the vehicle while monitoring live EGT sensor data with a scan tool to see if the signal drops out.
- 3 Perform a resistance or voltage check on the sensor according to the manufacturer's specifications, wiggle-testing the harness to catch intermittent faults.
- 4 Check for exhaust leaks near the sensor and repair any leaks that could skew temperature readings.
- 5 If the sensor fails the electrical test or shows erratic behavior, replace the EGT sensor with a quality part.
- 6 After repair, clear codes and verify the monitor runs to completion without the code returning.

Intermittent EGT faults often misdiagnosed

- A common trap is replacing the EGT sensor immediately, but the intermittent nature often points to a wiring issue that a new sensor will not fix.
- The code can be set by a momentary glitch that leaves no stored freeze-frame data, so a thorough wiggle test of the harness is essential.
- Exhaust leaks upstream of the sensor can cause rapid temperature fluctuations that mimic a sensor fault, so always inspect the exhaust system first.
- On some vehicles, a weak battery or charging system can cause voltage spikes that disrupt sensor signals and set intermittent codes.
- The PCM may not illuminate the check engine light immediately for an intermittent fault; it may take multiple drive cycles before the code matures.

Can I keep driving with P2083?

You can generally continue driving with this code, but avoid heavy loads or aggressive acceleration until it is diagnosed, as prolonged driving with a faulty EGT signal can lead to increased emissions or catalytic converter damage. If the check engine light starts flashing or you notice severe power loss, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Heat gun or infrared thermometer (for verifying sensor response)
- Basic hand tools for connector and sensor access



Reading P2083

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 83** The exact fault within that area.

Often seen with

P2082 Exhaust Gas Temperature Sensor Circuit Range/Performance (Bank 1) · **P2084** Exhaust Gas Temperature Sensor Circuit Range/Performance (Bank 2) · **P2085** Exhaust Gas Temperature Sensor Circuit Intermittent (Bank 1) · **P2086** Exhaust Gas Temperature Sensor Circuit Range/Performance (Bank 2) · **P2087** Exhaust Gas Temperature Sensor Circuit Intermittent (Bank 2)

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2083/>

