

GENERIC · POWERTRAIN

P20E5

OBD-II TROUBLE CODE

## P20E5

# Exhaust Gas Temperature Sensor 1/2 Correlation (Bank 2)

P20E5 indicates that the powertrain control module (PCM) has detected an implausible relationship between the readings from exhaust gas temperature (EGT) sensor 1 and sensor 2 on bank 2. The PCM expects these two sensors to track each other within a calibrated range under specific operating conditions, and a deviation beyond that range triggers the code.

| SYSTEM     | CODE TYPE           | SEVERITY | FIX DIFFICULTY | AREA                                                  |
|------------|---------------------|----------|----------------|-------------------------------------------------------|
| Powertrain | Generic (all makes) | Medium   | Intermediate   | Fuel and air metering and auxiliary emission controls |

## Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Reduced engine power or limp mode in some vehicles as a protective measure.
- Poor fuel economy or altered regeneration behavior in diesel engines.
- Intermittent rough running or hesitation under load.
- Possible black smoke or excessive exhaust odor from incomplete regeneration.
- In rare cases, overheating or damage to exhaust components if the fault is ignored.

## Common causes, most likely first

- 1 Faulty EGT sensor 1 or sensor 2 on bank 2, providing inaccurate readings.
- 2 Damaged, corroded, or shorted wiring or connectors in the sensor circuits.
- 3 Exhaust leaks upstream of the sensors, causing temperature discrepancies.
- 4 Restricted exhaust flow, such as a clogged diesel particulate filter (DPF), affecting sensor correlation.
- 5 PCM software calibration issues or internal PCM faults.
- 6 Aftermarket or incorrect sensors installed previously.
- 7 Extreme operating conditions or sensor heat soak causing temporary implausibility.

## How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related pending or history codes.
- 2 Inspect the EGT sensors and their wiring for physical damage, corrosion, or loose connections.
- 3 Compare live EGT sensor 1 and sensor 2 readings during a test drive to confirm the correlation fault.
- 4 Check for exhaust leaks or restrictions before the sensors, including the DPF and catalytic converter.
- 5 Test the resistance and signal output of each EGT sensor according to the manufacturer's specifications.
- 6 Repair or replace faulty sensors or wiring as needed, then clear the code and verify the repair.
- 7 If the fault persists, check for PCM software updates or consult a dealer for advanced diagnostics.

## When sensor correlation faults mislead

- A correlation code often results from one sensor drifting slowly rather than failing completely, so both sensors may still appear to work.
- Exhaust leaks between the two sensors are a commonly overlooked cause because they alter the temperature relationship without setting a leak code.
- Replacing both sensors without testing the circuit can be an expensive mistake when the real issue is a rubbed wire or corroded connector.
- On diesel vehicles, a failing DPF regeneration can skew EGT readings and trigger this code even when the sensors are healthy.
- The PCM may use EGT data for other functions like turbo protection or regeneration, so a correlation fault can affect performance beyond emissions.

## Can I keep driving with P20E5?

You can generally drive with this code, but avoid heavy loads and long trips until it is diagnosed, as continued driving may lead to reduced performance or exhaust system damage. If the engine enters limp mode or you notice severe power loss, seek service promptly.

## Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Wiring diagram and service information
- Basic hand tools for sensor and connector access



## Reading P20E5

- 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.
- E5** The exact fault within that area.

## Often seen with

**P20E4** Exhaust Gas Temperature Sensor 2/3 Correlation (Bank 1) · **P20E6** Reductant Injection Air Pressure Too Low · **P20E7** Reductant Injection Air Pressure Too High · **P20E8** Reductant Pressure Too Low · **P20E9** Reductant Pressure Too High

## See it working

Watch the animated explainer [Four-Stroke Engine Notebook: The Otto Cycle Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p20e5/>

