

GENERIC · POWERTRAIN

P00E7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00E7

Intake Air Temperature Measurement System - Multiple Sensor Correlation Bank 2

P00E7 indicates that the engine control module has detected an implausible relationship among the intake air temperature sensors on bank 2, meaning the readings from multiple sensors disagree beyond a calibrated threshold. The computer compares these signals during key-on and running conditions to verify that all bank 2 intake air temperature measurements correlate within an expected range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

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
- Rough idle or hesitation during acceleration if the faulty sensor causes an excessively rich or lean condition
- Poor fuel economy due to incorrect air density calculations
- Intermittent stalling or hard starting in extreme temperatures
- A slight decrease in engine performance, especially under heavy load

Common causes, most likely first

- 1 Faulty intake air temperature sensor on bank 2
- 2 Damaged or corroded wiring or connector at the bank 2 intake air temperature sensor
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Failed mass airflow sensor that incorporates the intake air temperature sensor on bank 2
- 5 Engine control module software calibration issue or internal fault
- 6 Intake air leaks or restrictions affecting only bank 2



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data and all intake air temperature sensor readings to confirm the discrepancy
- 2 Visually inspect the bank 2 intake air temperature sensor and its connector for damage, corrosion, or loose pins
- 3 Measure resistance across the sensor terminals and compare with the manufacturer's temperature-resistance chart
- 4 Check the sensor signal and ground circuits for opens, shorts, or excessive resistance using a multimeter
- 5 Verify that the mass airflow sensor and other shared sensors are functioning correctly, as they can influence the correlation
- 6 If all electrical checks pass, reflash or replace the engine control module only after confirming no other faults exist

When bank 2 sensors disagree

- A common oversight is replacing the intake air temperature sensor when the real problem is a failing mass airflow sensor that houses the bank 2 sensor, so always test the entire assembly.
- The code can set intermittently due to a poor connection that only acts up under vibration or temperature changes, so wiggle-test the harness while watching live data.
- Some vehicles use a modeled intake air temperature value derived from other sensors, and a fault in those sensors can trigger P00E7 even if the physical sensor is good.
- After repairs, the code may not clear immediately because the monitor requires a specific drive cycle with a cold soak, so follow the manufacturer's readiness procedure.
- A dirty or restricted air filter or intake tract on bank 2 can cause temperature stratification that leads to correlation errors, so inspect the intake system before condemning sensors.

Can I keep driving with P00E7?

The vehicle is generally safe to drive with P00E7 because the fault typically affects fuel economy and emissions rather than immediate safety, but avoid heavy acceleration or towing until diagnosed. Prolonged driving with a faulty sensor can lead to catalytic converter damage over time, so schedule repairs promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Wire terminal test kit
- Vehicle-specific service information for resistance charts



Reading P00E7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- E7** The exact fault within that area.

Often seen with

P00E5 Intake Air Temperature/Fuel Temperature Correlation · **P00E6** Intake Air Pressure Measurement System - Multiple Sensor Cor · **P0111** Intake Air Temperature Circuit Range/Performance · **P0112** Intake Air Temperature Circuit Low Input · **P0113** Intake Air Temperature Circuit High Input

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00e7/>

