

GENERIC · POWERTRAIN

P00A8

OBD-II TROUBLE CODE

P00A8

Intake Air Temperature Sensor 2 Circuit High Bank 2

P00A8 indicates that the powertrain control module has detected an abnormally high voltage signal on the intake air temperature sensor 2 circuit for bank 2. This sensor measures the temperature of the air entering the engine on the bank 2 side, and a high voltage typically means the circuit is open, the sensor is unplugged, or the signal wire is shorted to voltage.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	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.
- Rough idle or poor driveability if the faulty sensor causes the computer to miscalculate fuel delivery.
- Reduced fuel economy due to incorrect air density calculations.
- Hesitation or stumble during acceleration in some cases.
- In rare instances, the engine may enter a limp mode or exhibit hard starting.

Common causes, most likely first

- 1 Intake air temperature sensor 2 is unplugged or has a poor electrical connection.
- 2 Open circuit in the signal wire between the sensor and the powertrain control module.
- 3 Short to voltage on the signal wire, often due to chafed insulation or contact with a hot component.
- 4 Failed intake air temperature sensor 2, reading out of range high.
- 5 Corroded or damaged pins in the sensor connector or PCM connector.
- 6 A faulty powertrain control module, though this is rare and should be diagnosed last.



How to diagnose and fix it

- 1 Verify the sensor is plugged in and the connector is fully seated; check for loose or damaged pins.
- 2 Inspect the wiring harness for obvious damage, chafing, or contact with hot or moving parts.
- 3 Use a scan tool to read the intake air temperature 2 value and compare it to ambient temperature after a cold soak.
- 4 Measure resistance across the sensor terminals and compare to the manufacturer's temperature-resistance chart.
- 5 Check for reference voltage (typically 5 volts) at the sensor connector with the key on and the sensor disconnected.
- 6 Perform a voltage drop test on the ground circuit and check for continuity on the signal wire back to the PCM.
- 7 If all wiring and connections are good, replace the intake air temperature sensor 2 and clear the code.

What a high IAT2 reading really means

- A high voltage on the IAT2 circuit almost always indicates an open circuit or a sensor that has been left unplugged, not a sensor that is reading hot air.
- On many vehicles, the intake air temperature sensor 2 is integrated into the mass airflow sensor or the manifold absolute pressure sensor, so replacing the entire assembly may be necessary.
- The PCM may substitute a default intake air temperature value when the circuit fails, allowing the engine to run almost normally and masking the fault.
- A short to voltage on the signal wire can be caused by a wire rubbing against a metal bracket or a nearby ignition component, which is easy to overlook.
- Do not condemn the PCM until you have verified the sensor resistance and the integrity of both the signal and ground circuits.

Can I keep driving with P00A8?

The vehicle is generally safe to drive with this code because the engine management system will use a default temperature value, but you may experience slightly reduced fuel economy or minor driveability issues. Avoid towing heavy loads or aggressive driving until the fault is repaired, and have the circuit inspected at your earliest convenience.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Temperature-resistance chart for the sensor
- Wire piercing probes or back-probe kit
- Basic hand tools for connector and sensor access



Reading P00A8

- 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.
- A8** The exact fault within that area.

Often seen with

P0096 Intake Air Temperature Sensor 2 Circuit Range/Performance · **P00A7** Intake Air Temperature Sensor 2 Circuit Low Bank 2 · **P00A9** Intake Air Temperature Sensor 2 Circuit Intermittent/Erratic · **P0112** Intake Air Temperature Circuit Low Input · **P0113** Intake Air Temperature Circuit High Input

See it working

Watch the animated explainer [How a Six-Speed Manual Gearbox Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00a8/>

