

GENERIC · POWERTRAIN

# P00A0

OBD-II TROUBLE CODE

## P00A0

### Charge Air Cooler Temperature Sensor Circuit Bank 2

P00A0 indicates that the powertrain control module (PCM) has detected an abnormal signal from the charge air cooler temperature sensor on bank 2, which monitors the temperature of the air after it leaves the intercooler. The PCM compares this signal to expected values and sets the code when the circuit is out of range, either too high or too low, or when the sensor's voltage does not change as expected during key-on or running conditions.

|            |                     |          |                |                                                       |
|------------|---------------------|----------|----------------|-------------------------------------------------------|
| 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 due to the PCM limiting boost to protect the engine
- Poor fuel economy or sluggish acceleration because the PCM may default to a rich fuel mixture
- Rough idle or hesitation during acceleration if the faulty sensor causes incorrect fueling
- In rare cases, the engine may overheat or exhibit detonation if the PCM misjudges intake air temperature

### Common causes, most likely first

- 1 Faulty charge air cooler temperature sensor on bank 2
- 2 Damaged or corroded wiring harness or connector at the sensor
- 3 Open or short circuit in the sensor signal or ground circuit
- 4 Failed charge air cooler (intercooler) causing abnormal temperature readings
- 5 PCM software issue or internal fault in the temperature sensing circuit
- 6 Intake air leaks or restrictions affecting the charge air cooler efficiency



## How to diagnose and fix it

- 1 Use an OBD-II scanner to verify the code and check freeze-frame data for the sensor reading
- 2 Visually inspect the sensor, connector, and wiring for damage, corrosion, or loose connections
- 3 Measure the sensor's resistance and compare it to the manufacturer's specification for the current temperature
- 4 Check the signal voltage at the PCM connector to rule out wiring faults between the sensor and PCM
- 5 Test the charge air cooler for restrictions or leaks that could cause abnormal temperature readings
- 6 Replace the charge air cooler temperature sensor if it fails electrical testing
- 7 Clear the code and perform a road test to confirm the repair and ensure the code does not return

## What most technicians overlook on P00A0

- A charge air cooler temperature sensor that reads plausibly but is slightly off can set this code without any driveability complaint, so always compare its live data to ambient and intake air temperature sensors after a cold soak.  
Corroded pins in the sensor connector are a frequent cause on vehicles exposed to road salt, and the corrosion often hides behind the weather seal where a quick visual inspection misses it.
- The PCM may set P00A0 as a result of a faulty charge air cooler bypass valve or a stuck thermostat in the intercooler circuit, so testing the sensor alone can lead to a misdiagnosis.
- On some applications, the bank 2 sensor is located in a difficult-to-reach area, and technicians sometimes replace the sensor without checking the reference voltage at the PCM, which can be skewed by a shared ground fault.
- This code can be triggered by a low battery or a voltage drop during cranking, so always check battery health and charging system operation before condemning the sensor.

## Can I keep driving with P00A0?

You can generally drive the vehicle with this code, but avoid heavy acceleration or towing until it is repaired because the PCM may limit boost and reduce engine power. Prolonged driving with a faulty sensor can lead to poor fuel economy and increased emissions, so schedule a diagnosis soon.

## Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Temperature probe or infrared thermometer
- Wiring diagram for the specific vehicle
- Basic hand tools for sensor removal



### Reading P00A0

- 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.
- A0** The exact fault within that area.

### Often seen with

**P007B** Charge Air Cooler Temperature Sensor Circuit Range/Performan · **P007C** Charge Air Cooler Temperature Sensor Circuit Low Bank 1 · **P00A1** Charge Air Cooler Temperature Sensor Circuit Range/Performan · **P00A2** Charge Air Cooler Temperature Sensor Circuit Low Bank 2 · **P00A3** Charge Air Cooler Temperature Sensor Circuit High Bank 2

### See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00a0/>

