

GENERIC · POWERTRAIN

P0BCC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BCC

Generator Inverter Temperature Sensor A Circuit

P0BCC indicates that the generator inverter's temperature sensor A circuit has reported a value outside the expected range to the powertrain control module. The computer detects this when the sensor signal voltage stays too high or too low for a calibrated period, meaning it cannot reliably monitor inverter temperature.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other noticeable symptoms.
- Reduced or disabled generator output, leading to a battery warning light and eventual electrical system drain.
- The vehicle may enter a fail-safe mode that limits engine power or shuts down non-essential electrical loads.
- Inconsistent charging voltage observed on a volt gauge or through the instrument cluster.
- In rare cases, the inverter may overheat and trigger a separate over-temperature warning or derate.

Common causes, most likely first

- 1 Faulty generator inverter temperature sensor A, such as an open or shorted thermistor element.
- 2 Damaged or corroded wiring harness between the sensor and the inverter control module.
- 3 Loose or contaminated connector pins at the sensor or module, causing intermittent signal loss.
- 4 Internal failure of the generator inverter assembly affecting the sensor circuit or its reference voltage.
- 5 Software calibration issue in the inverter control module that misinterprets a valid sensor signal.
- 6 Extreme environmental conditions or debris blocking cooling passages, causing the sensor to read outside its normal range.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear codes and verify whether P0BCC returns immediately.
- 2 Inspect the generator inverter temperature sensor A and its wiring for physical damage, corrosion, or loose connections.
- 3 Measure the sensor resistance or voltage at the sensor connector and compare with the manufacturer's specification for the current temperature.
- 4 Back-probe the sensor signal circuit at the inverter control module to check for continuity and correct reference voltage.
- 5 If the sensor is faulty, replace the generator inverter temperature sensor A according to service information.
- 6 If wiring or connectors are defective, repair or replace the affected harness section and retest.
- 7 After repairs, clear codes and perform a road test with the scan tool monitoring inverter temperature data to confirm the fix.

Inverter sensor faults that mimic other codes

- A failing 12-volt battery or poor ground connection can cause erratic sensor readings that set P0BCC without any fault in the sensor itself.
- Technicians often replace the entire inverter assembly when only the temperature sensor or its pigtail is defective, leading to unnecessary expense.
- The code can be set by a momentary signal glitch during engine start or a low-voltage event, so always check for related low-voltage codes before condemning parts.
- On some vehicles, the inverter temperature sensor shares a reference voltage with other sensors, so a short in a different circuit can pull down the signal and set P0BCC.
- Clearing the code without verifying live temperature data may allow the fault to return during a regeneration or high-load event, so always monitor sensor values under load.

Can I keep driving with P0BCC?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy electrical loads and long trips because the generator may stop charging and the battery could drain. If the battery warning light is on or charging voltage is abnormal, limit driving to reach a safe location.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with temperature or resistance measurement
- Back-probe kit and wiring diagram for the generator inverter circuit
- Socket and ratchet set for sensor or harness access
- Manufacturer service information for sensor specifications and torque values



Reading P0BCC

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- B** Hybrid propulsion.
- CC** The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0BCD** Generator Inverter Temperature Sensor A Circuit Range/Perfor · **P0BCE** Generator Inverter Temperature Sensor A Circuit Low · **P0BCF** Generator Inverter Temperature Sensor A Circuit High

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0bcc/>

