

GENERIC · POWERTRAIN

P0BC3

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BC3

Hybrid/EV Battery Temperature Sensor E Circuit Range/Performance

P0BC3 indicates that the hybrid or electric vehicle battery pack's temperature sensor E is reporting a signal that falls outside the expected range or is not performing as designed. The battery energy control module monitors this sensor to protect the high-voltage battery from overheating or overcooling, and it sets the code when the sensor's voltage or resistance does not correlate with other temperature sensors or expected values.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced electric-only driving range or forced engine operation in a hybrid
- A message on the dash indicating battery temperature or hybrid system fault
- Possible reduction in charging rate for plug-in hybrids or EVs
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty battery temperature sensor E itself, due to an internal short or open circuit
- 2 Damaged or corroded wiring or connector at sensor E or along its circuit
- 3 Poor electrical connection at the battery energy control module harness
- 4 High-voltage battery pack overheating from a cooling system fault or excessive load
- 5 Software glitch or outdated calibration in the battery energy control module
- 6 Physical damage to the sensor or its wiring from debris or previous service work



How to diagnose and fix it

- 1 Use a scan tool to read the freeze-frame data and verify the sensor E reading compared to other battery temperature sensors
- 2 Visually inspect the sensor E wiring and connector for chafing, corrosion, or loose pins, and repair as needed
- 3 Perform a resistance or voltage check on sensor E according to the manufacturer's specification to confirm its condition
- 4 Check the high-voltage battery cooling system for proper operation, including coolant level and fan operation if applicable
- 5 If the sensor is faulty, replace it following the manufacturer's procedure for high-voltage battery service
- 6 Clear the diagnostic trouble codes and perform a road test to verify the repair and ensure the code does not return
- 7 If the code persists, check for technical service bulletins or software updates for the battery energy control module

Battery temperature sensor E pitfalls

- A common misdiagnosis is replacing the battery temperature sensor when the real problem is a corroded connector or chafed wire in the harness, so always perform a thorough circuit test before condemning the sensor.
- The code can be set by a temporary overheating event caused by a cooling system fault, so clearing the code without checking the cooling system may lead to a repeat failure.
- On some vehicles, the battery temperature sensors are wired in a series or multiplexed circuit, and a fault in one sensor can affect the readings of others, so compare all sensor values with a scan tool.
- A weak or failing 12-volt auxiliary battery can cause erratic behavior in the hybrid control modules and set false temperature sensor codes, so always check the 12-volt system first.
- After replacing a battery temperature sensor, some manufacturers require a calibration or learn procedure for the battery energy control module, which if skipped can cause the code to return.

Can I keep driving with P0BC3?

It is generally safe to drive with this code if the vehicle is operating normally, but avoid aggressive driving or heavy electrical loads that could stress the battery. If the hybrid system warning light is flashing or the vehicle enters limp mode, stop driving and seek professional service immediately.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter
- Manufacturer service information for wiring diagrams and sensor specifications
- Insulation resistance tester (megohmmeter) for high-voltage circuit checks
- Basic hand tools for connector and sensor access



Reading P0BC3

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- B** Hybrid propulsion.
- C3** The exact fault within that area.

Often seen with

P0A9C Hybrid/EV Battery Temperature Sensor A Circuit Range/Perform · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0BC2** Hybrid/EV Battery Temperature Sensor E Circuit · **P0BC4** Hybrid/EV Battery Temperature Sensor E Circuit Low · **P0BC5** Hybrid/EV Battery Temperature Sensor E Circuit High

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/p0bc3/>

