



P0BEC

Drive Motor A Phase V Current Sensor Circuit High

P0BEC means the computer that oversees the hybrid or electric drive system has detected an abnormally high voltage signal from the current sensor that monitors one phase of the three-phase wiring feeding drive motor A. The sensor is reporting current flow that is higher than the circuit can physically deliver under the operating conditions, so the controller flags the circuit as faulty rather than trusting the reading.

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

Symptoms you may notice

- Illumination of the check engine light or a dedicated hybrid system warning lamp, often with no other noticeable change in how the vehicle drives.
- The vehicle may enter a reduced-power or limp mode that limits acceleration and top speed.
- A sudden loss of propulsion or refusal to start in electric or hybrid drive modes.
- Intermittent stalling or shuddering during acceleration if the faulty signal causes the controller to cut torque.
- A message on the dash instructing the driver to pull over or service the hybrid system immediately.

Common causes, most likely first

- 1 A failed or degraded phase current sensor on the drive motor A circuit, which is the most common root cause.
- 2 Damaged, chafed, or corroded wiring between the current sensor and the motor control module.
- 3 A loose or contaminated connector at the sensor or at the control module, allowing voltage to spike.
- 4 Internal fault in the motor control module or inverter that biases the sensor signal high.
- 5 Electrical interference or a poor ground shared with the sensor circuit, skewing the voltage reading.
- 6 A short to voltage on the sensor signal wire, often from harness rubbing against a metal component.



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P0BEC before clearing anything.
- 2 Inspect the sensor harness and connectors for chafing, corrosion, pushed pins, and loose terminals, repairing as needed.
- 3 Back-probe the sensor signal and reference voltage circuits with a multimeter and compare readings to the manufacturer's specification.
- 4 Check the sensor ground circuit for excessive resistance and verify the control module ground is clean and tight.
- 5 If the wiring and grounds pass, substitute a known-good current sensor and recheck live data to confirm the signal normalizes.
- 6 When the sensor is ruled out, test the motor control module outputs and inspect for internal faults before condemning the module.
- 7 After any repair, clear codes and perform a road test with live data monitoring to confirm the high-current condition does not return.

What the phase current sensor really reports

- A high signal does not automatically mean the motor is drawing excessive current; the sensor or its wiring is often the culprit, and technicians who replace the motor first waste significant money.
- The phase current sensor is frequently integrated into the motor or inverter assembly on some platforms, so a sensor fault can be misread as a failed drive motor.
- Intermittent harness chafing near the motor mount or inverter can set P0BEC only during certain driving conditions, making a static meter check misleading.
- A weak or corroded ground shared with the sensor circuit can push the signal voltage high without any fault in the sensor itself.
- Related codes for the same phase or for the motor control module often store together, so reading all codes before diagnosing prevents chasing the wrong circuit.

Can I keep driving with P0BEC?

Do not continue driving normally when P0BEC is active, because the controller may cut propulsion without warning and leave you stranded or in a dangerous position. Limit driving to moving the vehicle to a safe location or a repair shop, and avoid high-speed or high-load operation until the fault is diagnosed.



Tools that help

- OBD-II scan tool with hybrid and manufacturer-specific live data capability
- Digital multimeter with back-probe pins
- Wiring diagram and connector pinout for the drive motor A current sensor circuit
- Insulation resistance tester for checking motor and harness integrity
- Hand tools for connector and harness inspection

Reading P0BEC

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

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0A78** Drive Motor A Inverter Performance · **P0BE8** Drive Motor A Phase U Current Sensor Circuit High · **P0BEB** Drive Motor A Phase V Current Sensor Circuit Low · **P0BED** Drive Motor A Phase W Current Sensor Circuit

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/p0bec/>

