



P0BE7

Drive Motor A Phase U Current Sensor Circuit Low

P0BE7 indicates that the inverter controller for drive motor A has detected a low current signal from the phase U current sensor circuit, which monitors the electrical current flowing through one of the motor's three phases. The computer compares the sensor's output voltage against expected values and sets this code when the signal stays below the calibrated minimum for a set period, meaning it cannot reliably measure phase current.

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 service vehicle soon message, often with no other noticeable symptoms
- Reduced power or limp-home mode as the controller limits motor output to protect the inverter and motor
- Rough running, hesitation, or shuddering during acceleration because phase current feedback is inaccurate
- The vehicle may refuse to start or move if the fault is severe enough to disable the drive system
- In some cases, a warning message on the dash indicating a hybrid or electric system fault

Common causes, most likely first

- 1 Faulty phase U current sensor inside the inverter or motor assembly
- 2 Damaged or chafed wiring in the sensor circuit, including open circuits or shorts to ground
- 3 Corroded or loose connector pins at the sensor or inverter harness
- 4 Internal failure of the inverter controller affecting the sensor reference voltage or signal processing
- 5 Poor electrical ground connection for the inverter or motor electronics
- 6 Moisture intrusion or contamination in the sensor or connector causing signal degradation



How to diagnose and fix it

- 1 Inspect the phase U current sensor wiring and connectors for visible damage, corrosion, or loose pins, and repair as needed
- 2 Check the sensor circuit for continuity and shorts to ground using a digital multimeter, comparing readings to manufacturer specifications
- 3 Verify the sensor reference voltage and signal voltage at the connector with a multimeter or oscilloscope to confirm the sensor's output behavior
- 4 Test the ground circuit for the inverter and motor electronics to ensure a clean, low-resistance connection
- 5 If the sensor is accessible and tests out of range, replace the phase U current sensor according to service procedures
- 6 If the sensor and wiring are good, diagnose the inverter controller for internal faults, which may require replacement or reprogramming
- 7 Clear the diagnostic trouble codes and perform a road test to verify the repair and ensure the code does not return

Current Sensor Faults Often Misdiagnosed

- A low current sensor signal can be caused by a simple loose connector that intermittently loses contact, so always perform a wiggle test on the harness while monitoring live data
- The code does not automatically mean the sensor is bad; a short to ground in the wiring or a failed inverter reference voltage can produce the same low signal reading
- Some vehicles require a relearn or calibration procedure after replacing the current sensor or inverter, and skipping it can cause the code to reset immediately
- Technicians sometimes overlook a weak 12-volt battery or charging system issue that causes low reference voltage to the inverter, mimicking a sensor fault
- The phase U current sensor is often integrated into the inverter assembly on many hybrid and electric vehicles, making replacement more involved than a stand-alone sensor

Can I keep driving with P0BE7?

Because this fault can cause the vehicle to enter limp-home mode or shut down the drive system unexpectedly, you should avoid driving until the fault is diagnosed and repaired. Continuing to drive may risk a sudden loss of power and further damage to the inverter or motor.

Tools that help

- Digital multimeter with min/max and duty cycle capabilities
- Oscilloscope for viewing sensor signal waveforms
- Manufacturer-specific scan tool capable of reading live data and clearing hybrid/EV codes
- Insulated hand tools and safety gloves for high-voltage system safety
- Wiring diagram and service information for the specific vehicle



Reading P0BE7

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- B** Hybrid propulsion.
- E7** The exact fault within that area.

Often seen with

P0BE6 Drive Motor A Phase U Current Sensor Circuit Range/Performan · **P0BE8** Drive Motor A Phase U Current Sensor Circuit High · **P0BE9** Drive Motor A Phase V Current Sensor Circuit · **P0BEA** Drive Motor A Phase V Current Sensor Circuit Range/Performan · **P0BEB** Drive Motor A Phase V Current Sensor Circuit Low

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/p0be7/>

