

GENERIC · POWERTRAIN

P0BEE

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BEE

Drive Motor A Phase W Current Sensor Circuit Range/Performance

P0BEE indicates that the powertrain control module has detected an out-of-range or erratic signal from the current sensor that monitors phase W of the drive motor A three-phase circuit. The sensor's output does not match the expected current profile during key-on or running conditions, so the controller flags a range or performance fault.

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

- Illumination of the check engine light or service vehicle soon message, often with no other symptoms
- Reduced power or limp-home mode as the controller limits motor torque to protect the inverter
- Intermittent hesitation or shudder during acceleration or regenerative braking
- A stored fault in the hybrid or electric vehicle control module that may disable the motor entirely
- Possible abnormal noise or vibration from the drive motor under load in severe cases

Common causes, most likely first

- 1 Faulty phase W current sensor or its internal electronics
- 2 Damaged or corroded wiring harness between the current sensor and the motor control module
- 3 Loose or contaminated connector pins at the sensor or controller
- 4 Failed motor control module or inverter assembly affecting sensor reference voltage
- 5 Mechanical damage to the motor phase winding or bus bar causing abnormal current signatures
- 6 Software calibration issue in the motor control module requiring reprogramming



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear codes and verify whether P0BEE returns immediately
- 2 Inspect the phase W current sensor connector and harness for corrosion, chafing, or loose pins, and repair as needed
- 3 Measure reference voltage and ground at the sensor connector with a multimeter and compare to manufacturer specifications
- 4 Perform a resistance and continuity test on the sensor signal circuit from the sensor to the motor control module
- 5 If wiring and connectors are good, substitute a known-good current sensor and recheck for the fault
- 6 Check for any applicable software updates or calibration bulletins for the motor control module
- 7 If the fault persists after sensor replacement, diagnose the motor control module or inverter assembly per service information

Current sensor faults that mimic motor failure

- A phase W current sensor can fail intermittently when hot, so the code may only set after the vehicle has been driven for a while and may not reappear during a short test drive.
- Corroded connector pins at the sensor are a common cause that technicians overlook because the harness looks intact from the outside; always back-probe and wiggle-test the connector.
- The motor control module may set P0BEE as a reaction to a failing inverter or gate driver circuit rather than a faulty sensor, so replacing the sensor blindly can be a costly misdiagnosis.
- Some vehicles require a relearn or calibration procedure after current sensor replacement, and skipping it can cause the code to reset even with a good part.
- A weak 12-volt battery or poor chassis ground can cause reference voltage instability that triggers this code, so check the basics before condemning the sensor.

Can I keep driving with P0BEE?

Because this fault can cause the motor to enter a reduced-power or shutdown mode without warning, avoid long trips and high-load driving until it is diagnosed. If the vehicle enters limp mode or the warning light flashes, stop driving and arrange for professional service.

Tools that help

- OBD-II scan tool with hybrid/EV capability
- Digital multimeter with back-probe pins
- Oscilloscope for signal waveform analysis
- Manufacturer service information and wiring diagrams
- Insulated hand tools and connector release tools



Reading P0BEE

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

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0BED** Drive Motor A Phase W Current Sensor Circuit · **P0BEF** Drive Motor A Phase W Current Sensor Circuit Low · **P0BF0** Drive Motor A Phase W Current Sensor Circuit High · **P0C00** Drive Motor A Current 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/p0bee/>

