

GENERIC · POWERTRAIN

P0BEB

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BEB

Drive Motor A Phase V Current Sensor Circuit Low

P0BEB indicates that the powertrain control module has detected an abnormally low voltage signal from the phase V current sensor circuit of drive motor A, which is used to monitor current flow in one of the motor's three phases. The computer expects a signal within a specific voltage range, and a low reading means the sensor is reporting less current than actually flowing or the circuit has excessive resistance to ground.

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

Symptoms you may notice

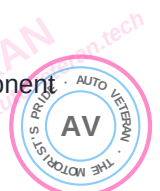
- Illumination of the check engine light or service vehicle soon message
- Reduced power or limp mode, as the inverter may limit motor output to protect the system
- Possible shuddering or rough operation of the hybrid or electric drive system
- Often no symptoms besides the warning light, especially if the fault is intermittent
- In some cases, the vehicle may refuse to start or shift into gear due to safety interlocks

Common causes, most likely first

- 1 Faulty phase V current sensor within the drive motor assembly
- 2 Damaged or corroded wiring harness or connector at the motor or inverter
- 3 Poor ground connection for the current sensor circuit
- 4 Internal short or open in the sensor circuit inside the motor or inverter
- 5 Failed inverter assembly affecting sensor reference voltage
- 6 Water intrusion or contamination in the motor connector
- 7 Loose or backed-out terminal pins in the sensor connector

How to diagnose and fix it

- 1 Perform a visual inspection of the motor and inverter connectors for corrosion, water intrusion, or loose pins
- 2 Check the sensor circuit wiring for continuity and resistance to ground using a multimeter
- 3 Verify the sensor reference voltage and signal voltage at the connector with a scan tool and multimeter
- 4 Compare live current sensor data from all three phases to identify the faulty circuit
- 5 Inspect and clean ground connections for the motor and inverter assemblies
- 6 If wiring and connectors are good, replace the phase V current sensor or the affected motor component
- 7 Clear the code and perform a road test to confirm the repair



What the phase V current sensor really does

- A low signal code often results from a poor ground rather than a failed sensor, so check grounds before condemning parts.
- The current sensor is part of the motor's feedback loop, and a low reading can cause the inverter to command incorrect phase currents, leading to overheating or torque ripple.
- Intermittent codes can be caused by vibration loosening connector pins, so wiggle-test the harness while monitoring live data.
- Some vehicles use a shared reference voltage for all three phase sensors, so a fault in one sensor can affect the others; always check all phases.
- Replacing the motor or inverter without confirming the sensor circuit integrity can lead to repeat failures and unnecessary expense.

Can I keep driving with P0BEB?

Driving with this code is not recommended because the fault can cause the inverter to misjudge current flow, potentially leading to overheating or sudden loss of power. If you must move the vehicle, drive directly to a service location at low speed and avoid heavy acceleration or long trips.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with min/max recording
- Wiring diagram for the specific vehicle
- Terminal pick and connector removal tools
- Insulation resistance tester (megohmmeter)

Reading P0BEB

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

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0BEA** Drive Motor A Phase V Current Sensor Circuit Range/Performan · **P0BEC** Drive Motor A Phase V Current Sensor Circuit High · **P0BED** Drive Motor A Phase W Current Sensor Circuit · **P0BF0** Drive Motor A Phase W Current Sensor 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/p0beb/>

