

GENERIC · POWERTRAIN

P0BFE

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BFE

Drive Motor B Phase U-V-W Current Sensor Correlation

P0BFE indicates that the inverter controller for drive motor B has detected a correlation error between the phase U, V, and W current sensors, meaning the sum of the three phase currents does not match the expected zero or the commanded current within tolerance. The computer compares the individual sensor readings and flags the code when their combined signal is inconsistent with the motor's operating state.

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 hybrid/EV system warning lamp, often with no other noticeable symptoms.
- Reduced power output or a limp-home mode that limits vehicle speed and acceleration.
- The vehicle may refuse to start or shift into gear if the fault is severe.
- Intermittent hesitation or shuddering during acceleration, especially under load.
- Possible sudden loss of drive power while driving, requiring the vehicle to be towed.

Common causes, most likely first

- 1 A faulty current sensor on one of the motor phases, most commonly due to internal sensor drift or damage.
- 2 Damaged or corroded wiring or connector pins between the current sensors and the inverter controller.
- 3 A failing inverter controller or motor control unit that misinterprets sensor signals.
- 4 A short or open circuit in the motor phase windings or cables that affects current balance.
- 5 Electrical interference or a poor ground connection causing noisy sensor readings.
- 6 A software glitch in the inverter control module that requires a recalibration or update.

How to diagnose and fix it

- 1 Inspect the motor phase cables and sensor connectors for physical damage, corrosion, or loose pins.
- 2 Measure the resistance of each phase winding and compare to specifications to rule out motor faults.
- 3 Use a scan tool to monitor live current sensor data for all three phases and check for erratic or inconsistent readings.
- 4 Perform a continuity and voltage drop test on the sensor wiring harness from the sensors to the inverter controller.
- 5 Swap or replace the suspect current sensor with a known-good unit and recheck for the code.
- 6 If sensor and wiring are good, test the inverter controller outputs and consider replacement or reprogramming.
- 7 Clear the code and perform a road test to verify the repair and ensure the code does not return.

What the current correlation code really means

- A correlation error does not always mean a sensor has failed; a weak or unbalanced phase winding can produce the same mismatch.
Technicians often overlook a poor chassis ground for the inverter, which can cause all three current sensors to read slightly off and trigger the code.
 - The code can be set by a low 12-volt battery or charging system issue that causes the controller to boot with incorrect sensor offsets.
 - After replacing a current sensor, a calibration or learn procedure is often required; skipping it will set the code again immediately.
- In some vehicles, this code is stored as history only and does not command a warning lamp until the fault occurs on multiple drive cycles.

Can I keep driving with P0BFE?

If the vehicle is in a reduced-power mode or the warning lamp is flashing, do not continue driving because a sudden loss of power is possible. If the light is steady and the car drives normally, you may drive cautiously to a repair shop, but avoid heavy acceleration and high speeds.

Tools that help

- OBD-II scan tool with live data and hybrid/EV capability
- Digital multimeter with min/max recording
- Oscilloscope for waveform analysis of current sensors
- Insulation resistance tester (megohmmeter)
- Manufacturer service information for wiring diagrams and calibration procedures



Reading P0BFE

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

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0A94** DC/DC Converter A Performance · **P0BFD** Drive Motor A Phase U-V-W Current Sensor Correlation · **P0BFF** Drive Motor A Current · **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/p0bfe/>

