

GENERIC · POWERTRAIN

P0BFA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BFA

Drive Motor B Phase W Current Sensor Circuit Range/Performance

P0BFA indicates that the hybrid or electric vehicle's control module has detected an out-of-range or performance fault in the current sensor circuit for phase W of drive motor B. The computer compares the sensor's reported current against expected values and flags the code when the signal is implausible, erratic, or outside the normal operating window.

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

Symptoms you may notice

- Illumination of the hybrid system warning light or service vehicle soon message
- Reduced power or limp-home mode with limited motor output
- Inability to start or engage the drive system in some cases
- Intermittent hesitation or shudder during acceleration
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty phase W current sensor or its internal electronics
- 2 Damaged or corroded wiring harness or connector at the sensor or motor
- 3 Poor electrical connection due to loose pins or water intrusion
- 4 Failed motor control module or inverter assembly
- 5 Software calibration issue in the motor control module
- 6 Mechanical damage to the motor causing abnormal current signatures

How to diagnose and fix it

- 1 Perform a visual inspection of the phase W current sensor, wiring, and connectors for damage or corrosion
- 2 Check for technical service bulletins (TSBs) or software updates for the motor control module
- 3 Measure sensor reference voltage and signal output with a multimeter and compare to specifications
- 4 Perform a wiggle test on the harness while monitoring sensor data to detect intermittent faults
- 5 Substitute a known-good sensor or harness section to isolate the fault
- 6 Repair or replace damaged wiring, connectors, or the current sensor as needed
- 7 Clear codes and verify the repair with a test drive and live data review



What the current sensor code hides

- A loose or corroded ground connection at the motor or chassis can cause the current sensor to report erratic values, mimicking a sensor failure.
- The code can be set by a low 12-volt battery or charging system issue that disrupts the control module's reference voltage, so always check battery health first.
- After replacing the current sensor, some vehicles require a calibration or learn procedure for the new sensor to be recognized correctly.
- Intermittent faults often occur only under specific conditions such as high load or temperature extremes, so a simple key-on test may not reveal the problem.
- The motor control module may store this code as a history code even after the fault is repaired, requiring a full clear and drive cycle to confirm.

Can I keep driving with P0BFA?

It is not recommended to continue driving with this code active, as the vehicle may enter a reduced-power mode or shut down unexpectedly. Have the fault diagnosed promptly to avoid potential safety risks and further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope for signal analysis
- Wiring diagram and service information
- Insulation resistance tester

Reading P0BFA

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

Often seen with

P0BF9 Drive Motor B Phase W Current Sensor Circuit · **P0BFB** Drive Motor B Phase W Current Sensor Circuit Low · **P0BFC** Drive Motor B Phase W Current Sensor Circuit High · **P0BFD** Drive Motor A Phase U-V-W Current Sensor Correlation



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/p0bfa/>

