



P0BE2

Drive Motor Inverter Temperature Sensor F Circuit Low

P0BE2 indicates that the inverter responsible for converting DC power to AC for the drive motor has reported an abnormally low signal from its temperature sensor F circuit. The computer detects a voltage or resistance reading that falls below the expected range, suggesting a short to ground, an open circuit, or a faulty sensor.

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 output or limp mode to protect the inverter from overheating
- Inconsistent or erratic temperature gauge readings for the hybrid system
- Possible shutdown of the electric drive system while driving
- Often no symptoms besides the warning light, especially in early stages

Common causes, most likely first

- 1 Faulty inverter temperature sensor F
- 2 Damaged or corroded wiring harness to the sensor
- 3 Short to ground in the sensor circuit
- 4 Open circuit in the sensor signal or ground wire
- 5 Poor electrical connection at the sensor or control module
- 6 Failed inverter control module or internal circuit fault

How to diagnose and fix it

- 1 Perform a visual inspection of the sensor and its wiring for obvious damage or corrosion
- 2 Check the sensor resistance and compare to manufacturer specifications
- 3 Measure voltage and continuity on the sensor circuit to detect shorts or opens
- 4 Inspect and clean the connector terminals, then apply dielectric grease
- 5 Replace the temperature sensor if it fails electrical testing
- 6 Repair or replace damaged sections of the wiring harness
- 7 Clear the code and verify the repair with a test drive and live data monitoring



Inverter sensor faults often misdiagnosed

- A low signal code frequently results from a chafed wire shorting to ground rather than a failed sensor, so always trace the harness before replacing parts.
- The inverter temperature sensor is sometimes integrated into the inverter assembly, making replacement more involved than a standalone sensor.
- Intermittent connections can set this code without permanent failure, so wiggle tests and live data review are essential.
- This code can be triggered by a low 12-volt battery or poor grounds, which affect reference voltages to the sensor.
- Do not confuse this with motor temperature sensor codes; the inverter sensor monitors power electronics, not the motor itself.

Can I keep driving with P0BE2?

Driving with this code is not recommended because the inverter may overheat and cause a sudden loss of power. Avoid long trips and high-load driving until the fault is repaired.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Insulation resistance tester (megohmmeter)

Reading P0BE2

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
E2	The exact fault within that area.

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0A94** DC/DC Converter A Performance · **P0BE1** Drive Motor Inverter Temperature Sensor F Circuit Range/Perf · **P0BE3** Drive Motor Inverter Temperature Sensor F Circuit High · **P0BE4** Drive Motor Inverter Temperature Sensor F Circuit Intermitte



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/p0be2/>

