

GENERIC · POWERTRAIN

P0E96

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0E96

Drive Motor B Inverter Voltage Sensor B Circuit Low

P0E96 means the voltage signal from sensor B on the inverter for drive motor B has dropped below the range the control module considers valid. The computer compares this signal against expected values and flags the circuit as low when the voltage stays under the calibrated threshold for a set time.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message, often with no other symptoms
- Reduced power or limp mode because the inverter limits motor output to protect the hardware
- The vehicle may refuse to start or shift into drive if the fault is active at key-on
- Intermittent hesitation or shudder during acceleration as the inverter struggles to regulate voltage
- A stored fault in the hybrid or electric vehicle control module that may disable certain drive modes

Common causes, most likely first

- 1 A damaged or chafed wire in the sensor B signal circuit, often where the harness passes near hot or moving components
- 2 Corrosion or poor pin tension at the inverter connector or the control module connector
- 3 A failed voltage sensor B inside the inverter assembly, which can drift low as it ages
- 4 A short to ground on the signal wire, sometimes caused by moisture intrusion into the connector
- 5 Low auxiliary battery voltage or a weak ground connection that skews the sensor reference voltage
- 6 An internal fault in the inverter control board that pulls the sensor signal low



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0E96 before clearing anything, because the fault may be intermittent
- 2 Inspect the inverter harness and connectors for chafing, corrosion, or pushed-out pins, and repair any damage found
- 3 Measure resistance and voltage drop on the sensor B signal and ground circuits to confirm the wiring is sound
- 4 Check the auxiliary battery and chassis grounds, as low reference voltage can mimic a sensor fault
- 5 Back-probe the sensor B signal at the inverter while wiggling the harness to catch an intermittent low reading
- 6 If the wiring and grounds pass, replace the inverter voltage sensor or the inverter assembly as required by the manufacturer's service procedure
- 7 Clear codes and perform a road test with live data to confirm the signal stays within range under load

Why this code often misleads

- A low sensor reading is frequently caused by a bad ground or a weak auxiliary battery rather than a failed inverter, so check system voltage first.
- The code can set intermittently from harness movement over bumps, which means a static meter check may pass while the fault is still present.
- Some vehicles store P0E96 alongside communication codes when the inverter drops offline, so do not assume the sensor itself is at fault.
- Replacing the inverter without confirming the signal circuit is intact often leads to a repeat failure and an unnecessary repair bill.
- The sensor B circuit may share a reference voltage with other sensors, so a short elsewhere can pull this signal low and set the code.

Can I keep driving with P0E96?

Limit driving to a short trip to a repair shop, because a low inverter voltage signal can cause a sudden loss of drive power or put the vehicle into limp mode. Avoid high-load acceleration and towing until the fault is repaired.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Manufacturer service information for wiring diagrams and pinouts
- Insulated hand tools and terminal pick set
- Battery load tester or conductance tester



Reading P0E96

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

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0A94** DC/DC Converter A Performance · **P0E95** Drive Motor B Inverter Voltage Sensor B Circuit Range/Perfor · **P0E97** Drive Motor B Inverter Voltage Sensor B Circuit High · **U0111** Lost Communication With Battery Energy Control Module 'A'

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/p0e96/>

