



P0D2E

Drive Motor A Inverter Voltage Sensor A Circuit Range/Performance

P0D2E indicates that the inverter for drive motor A has detected an out-of-range or performance fault in its voltage sensor A circuit, which monitors the high-voltage bus supplied to the motor. The computer compares the sensor signal against expected values and flags the code when the reading is implausible, erratic, or outside the normal operating window.

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 a dedicated hybrid/EV warning lamp
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or a limp-home mode that limits motor output
- The vehicle may refuse to start or shift into drive if the inverter disables the motor
- In rare cases, a sudden loss of propulsion while driving if the sensor signal drops out completely

Common causes, most likely first

- 1 A faulty voltage sensor inside the inverter assembly, such as a failed internal sensing element or cracked solder joint
- 2 Damaged or chafed wiring in the sensor circuit, often near connectors or where the harness passes through the inverter housing
- 3 Corroded or loose connector pins at the inverter or harness interface, causing intermittent signal loss
- 4 A weak or failing 12-volt auxiliary battery that causes low reference voltage to the inverter electronics
- 5 Internal inverter faults, such as a failing control board or capacitor, that corrupt the sensor reference voltage
- 6 High-voltage cable or busbar connection issues that create voltage spikes the sensor interprets as out of range
- 7 Software or calibration errors in the inverter control module that misread a healthy sensor signal



How to diagnose and fix it

- 1 Perform a thorough visual inspection of the inverter harness, connectors, and ground points for chafing, corrosion, or loose pins
- 2 Check the 12-volt battery condition and charging system, as low system voltage can set false sensor codes
- 3 Use a scan tool to read live data from the inverter voltage sensor A circuit and compare it with a known-good reference or multimeter reading at the sensor connector
- 4 Back-probe the sensor signal and reference voltage wires at the inverter connector to verify the circuit integrity and look for voltage drops
- 5 If the circuit tests good, follow the manufacturer's diagnostic flow for the inverter assembly, which may require a high-voltage insulation test or internal component check
- 6 Repair or replace damaged wiring and connectors as needed, then clear the code and verify the repair with a test drive
- 7 If the sensor is internal to the inverter and not serviceable separately, replace the inverter assembly per the service manual and perform any required calibration or learning procedures

Before you condemn the inverter assembly

- A weak 12-volt battery is a surprisingly common cause of this code because the inverter's voltage sensor reference can sag below its expected range, triggering a false performance fault.
- Intermittent connector fretting at the inverter harness is frequently overlooked; the pins may look clean but lose contact only under vibration or temperature swings.
- The code does not always mean the inverter is failing; a simple chafed wire against the chassis can produce the same out-of-range signal, so circuit integrity must be proven before parts are replaced.
- High-voltage cable routing or shield grounding problems can induce noise on the sensor circuit, causing the inverter to flag a range/performance error even when the sensor itself is healthy.
- Some vehicles require a specific drive cycle or inverter calibration after a repair, and skipping that step can leave the code stored as pending or cause it to return immediately.

Can I keep driving with P0D2E?

Because this fault can cause a sudden loss of propulsion or a limp-home mode, avoid driving the vehicle until the cause is diagnosed; if you must move it, keep speeds low and be prepared for a possible shutdown.

Tools that help

- OBD-II scan tool with live data and hybrid/EV capability
- Digital multimeter with back-probe pins
- High-voltage insulation tester (megohmmeter)
- Manufacturer service information and wiring diagrams
- Basic hand tools for connector and harness inspection



Reading P0D2E

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
D	Hybrid propulsion.
2E	The exact fault within that area.

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0AFA** Hybrid/EV Battery System Voltage Low · **P0C00** Drive Motor A Current Low · **P0D2D** Drive Motor A Inverter Voltage Sensor A Circuit · **P0D2F** Drive Motor A Inverter Voltage Sensor A Circuit 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/p0d2e/>

