

GENERIC · POWERTRAIN

P0DA4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0DA4

Drive Motor B Inverter Voltage Sensor A Circuit Range/Performance

P0DA4 means the computer has detected an out-of-range or erratic signal from the voltage sensor circuit that monitors the inverter for drive motor B, which is the electric motor used for propulsion or regeneration. The inverter converts direct current (DC) battery voltage into alternating current (AC) for the motor, and the voltage sensor feedback is critical for safe torque control. The fault is set when the sensor's reported voltage falls outside the expected range or does not correlate with other voltage measurements under specific operating conditions.

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, often with no other noticeable symptoms
- Reduced power or a limp-home mode that limits motor output
- The vehicle may refuse to start or shift into gear if the hybrid or electric system detects a critical fault
- Intermittent stalling or sudden loss of propulsion while driving
- A warning message on the dash such as 'Hybrid System Fault' or 'Electric Drive Fault'

Common causes, most likely first

- 1 A faulty inverter voltage sensor or its internal circuitry
- 2 Damaged, corroded, or loose wiring or connectors in the sensor circuit
- 3 A poor ground connection for the inverter or sensor
- 4 A failing inverter assembly, including internal circuit board faults
- 5 Software or calibration issues in the inverter control module
- 6 Extreme environmental factors such as moisture intrusion or overheating affecting the sensor



How to diagnose and fix it

- 1 Perform a visual inspection of the inverter wiring harness and connectors for damage, corrosion, or loose pins
- 2 Check for technical service bulletins (TSBs) or software updates for the inverter control module
- 3 Measure the sensor reference voltage and signal voltage with a digital multimeter and compare to manufacturer specifications
- 4 Perform a voltage drop test on the ground circuits for the inverter and sensor
- 5 If the sensor is integrated into the inverter, follow the manufacturer's diagnostic flow to test the inverter assembly
- 6 Replace the faulty sensor or inverter assembly as required, then clear codes and verify the repair with a test drive

When the inverter sensor lies to the computer

- A common misdiagnosis is replacing the entire inverter when the actual fault is a chafed wire in the harness near a sharp bracket or heat source.
- The code can be set by a momentary voltage spike during aggressive driving or regenerative braking, which may not reappear during a short test drive.
- Low 12-volt battery voltage or a weak auxiliary battery can cause erratic sensor readings and set this code without any fault in the high-voltage system.
- Some vehicles require a specific drive cycle to re-enable the inverter after a fault; simply clearing the code may not restore normal operation until the cycle is completed.
- Aftermarket accessories wired into the hybrid system can introduce electrical noise that mimics a sensor failure, so always check for non-factory wiring.

Can I keep driving with P0DA4?

If the vehicle is in a reduced-power mode or shows a hybrid system warning, avoid driving at high speeds or under heavy load and seek service immediately. Continuing to drive with an active inverter voltage fault can lead to a sudden loss of propulsion or further damage to the inverter, so it is safest to have the vehicle towed if drivability is affected.

Tools that help

- OBD-II scan tool with manufacturer-specific software
- Digital multimeter (DMM) with high-voltage safety rating
- Oscilloscope for signal analysis
- Insulation resistance tester (megohmmeter)
- High-voltage safety gloves and insulated tools



Reading P0DA4

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- A4** The exact fault within that area.

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0A94** DC/DC Converter A Performance · **P0DA3** Drive Motor B Inverter Voltage Sensor A Circuit · **P0DA5** Drive Motor B 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/p0da4/>

