

GENERIC · POWERTRAIN

P0DA5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0DA5

Drive Motor B Inverter Voltage Sensor A Circuit Low

P0DA5 indicates that the computer has detected an abnormally low voltage signal from the 'A' circuit of the voltage sensor associated with drive motor B's inverter. This sensor monitors the high-voltage bus that feeds the inverter, and a low signal suggests a short to ground, a faulty sensor, or a wiring problem, which can prevent the hybrid or electric drive system from operating correctly.

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 hybrid system warning light
- Often no symptoms besides the warning light, especially if the fault is intermittent
- Reduced power or a 'limp home' mode as the vehicle limits motor output
- The vehicle may refuse to start or shift into gear if the inverter is disabled
- Possible stalling or sudden loss of propulsion while driving
- Other warning messages related to the high-voltage system or regenerative braking

Common causes, most likely first

- 1 Faulty inverter voltage sensor A (internal failure or degraded accuracy)
- 2 Damaged or corroded wiring in the sensor circuit, such as a short to ground or an open circuit
- 3 Loose or contaminated connector pins at the sensor or inverter harness
- 4 Failed inverter assembly (internal circuit board or power module fault affecting sensor reference voltage)
- 5 Low auxiliary battery voltage or poor grounds causing erratic sensor readings
- 6 Software or calibration issue in the inverter control module (less common)



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the inverter or hybrid control system
- 2 Inspect the sensor wiring and connectors for chafing, corrosion, or loose pins, and repair as needed
- 3 Measure the sensor reference voltage and signal voltage with a multimeter and compare to manufacturer specifications
- 4 Check the auxiliary battery voltage and ensure all ground connections are clean and tight
- 5 Perform a resistance test on the sensor circuit to identify opens or shorts
- 6 If the sensor is faulty, replace the inverter voltage sensor (or the entire inverter assembly if the sensor is not serviceable separately)
- 7 Clear the codes and perform a road test to confirm the repair, then recheck for pending codes

Before you replace the inverter assembly

- A low voltage signal from the inverter voltage sensor often results from a simple wiring short to ground rather than a failed sensor, so always perform a thorough visual and continuity check first.
The code can be set by a weak auxiliary battery or a poor ground connection, which causes the sensor's reference voltage to drop and mimic a sensor failure.
- On many vehicles, the inverter voltage sensor is integrated into the inverter assembly and cannot be replaced separately, but aftermarket rebuild services or used units may be a cost-effective alternative to a new assembly.
- Intermittent faults may only appear under certain conditions such as high load or temperature extremes, so a wiggle test of the harness while monitoring live data can reveal the issue.
- Do not overlook the possibility of a software calibration issue; some manufacturers have released updated inverter control module software to correct false low-voltage sensor codes.

Can I keep driving with P0DA5?

If the vehicle is in a reduced-power mode or refuses to start, do not attempt to drive it; have it towed to a qualified repair facility. If the only symptom is a warning light and the vehicle drives normally, you may drive it cautiously to a workshop, but avoid heavy acceleration or long trips until the fault is diagnosed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Wiring diagram and service information for the specific vehicle
- Insulated hand tools and test leads
- Battery load tester or charging system tester



Reading P0DA5

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- A5** The exact fault within that area.

Often seen with

P0A0A High Voltage System Interlock Circuit A · **P0A94** DC/DC Converter A Performance · **P0DA4** Drive Motor B Inverter Voltage Sensor A Circuit Range/Perfor · **P0DA6** Drive Motor B Inverter Voltage Sensor A Circuit High · **P0DA7** Drive Motor B Inverter Voltage Sensor A Circuit Intermittent

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/p0da5/>

