

GENERIC · POWERTRAIN

P0BD9

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BD9

Drive Motor Inverter Temperature Sensor D Circuit High

P0BD9 indicates that the inverter's temperature sensor D circuit, which monitors the drive motor inverter in hybrid and electric vehicles, is reporting an abnormally high signal voltage to the control module. The computer detects this when the sensor circuit voltage exceeds the expected range for the given operating conditions, suggesting a fault in the sensor, its wiring, or the inverter itself.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

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
- Possible overheating warning in the instrument cluster
- Inconsistent or erratic temperature gauge readings for the hybrid system
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Faulty temperature sensor D inside the inverter assembly
- 2 Damaged or corroded wiring harness or connector at the inverter
- 3 Open or short circuit in the sensor signal circuit
- 4 Poor electrical connection at the control module
- 5 Internal failure in the inverter causing incorrect sensor readings
- 6 Extreme environmental conditions causing temporary sensor malfunction

How to diagnose and fix it

- 1 Use a scan tool to verify the code and check live data for the inverter temperature sensor D voltage
- 2 Inspect the sensor wiring and connectors for damage, corrosion, or loose pins
- 3 Perform a resistance test on the sensor circuit to check for opens or shorts
- 4 Compare sensor readings with actual inverter temperature using an infrared thermometer
- 5 Replace the temperature sensor if it is faulty
- 6 Repair or replace damaged wiring or connectors as needed
- 7 Clear the code and test-drive the vehicle to confirm the repair



Diagnosing Inverter Temperature Sensor D High Voltage

- A high voltage code often indicates an open circuit or a sensor that has failed with high resistance, not necessarily an actual overheating condition.
- Inverter temperature sensors are sometimes integrated into the inverter assembly and may require replacement of the entire unit, which can be costly.
- Intermittent faults can be caused by vibration or thermal expansion affecting connector pins, so wiggle tests during live data monitoring are valuable.
- The code may set due to a faulty control module that misinterprets sensor signals, so module software updates or replacement should be considered after other checks.
- Always verify the sensor's reference voltage and ground circuits before condemning the sensor, as a bad ground can cause high signal voltage.

Can I keep driving with P0BD9?

If the vehicle is in limp mode or showing overheating warnings, avoid driving and seek immediate service to prevent inverter damage. If only the warning light is on with no performance issues, you can drive cautiously to a repair shop, but monitor for any additional symptoms.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Wiring diagram for the specific vehicle
- Basic hand tools for connector inspection

Reading P0BD9

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
B	Hybrid propulsion.
D9	The exact fault within that area.

Often seen with

P0A3F Drive Motor A Position Sensor Circuit · **P0A78** Drive Motor A Inverter Performance · **P0BD8** Drive Motor Inverter Temperature Sensor D Circuit Low · **P0BDA** Drive Motor Inverter Temperature Sensor D Circuit Intermitte · **P0BDB** Drive Motor Inverter Temperature Sensor E Circuit



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/p0bd9/>

