

GENERIC · POWERTRAIN

P0BD8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0BD8

Drive Motor Inverter Temperature Sensor D Circuit Low

P0BD8 indicates that the inverter temperature sensor D circuit for the drive motor has reported a voltage below the expected range, meaning the sensor signal is lower than normal. The computer detects this when the sensor return voltage stays under the calibrated minimum for a set time, often indicating a short to ground or an open circuit in the sensor wiring.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light
- Reduced power or limp mode if the inverter overheats
- Inconsistent or erratic temperature readings on a scan tool
- Possible shutdown of the electric drive system in severe cases

Common causes, most likely first

- 1 Faulty inverter temperature sensor D
- 2 Short to ground in the sensor signal circuit
- 3 Open or high-resistance connection in the sensor wiring or connector
- 4 Damaged or corroded sensor connector pins
- 5 Internal fault in the inverter assembly affecting sensor reference voltage
- 6 Poor ground connection for the sensor circuit



How to diagnose and fix it

- 1 Connect a scan tool and record the freeze-frame data and sensor voltage reading to confirm the low signal
- 2 Visually inspect the sensor connector and wiring for damage, corrosion, or loose pins
- 3 Disconnect the sensor and measure resistance across the sensor terminals to check for an open or shorted sensor
- 4 Check the sensor signal circuit for a short to ground using a multimeter with the ignition on
- 5 Verify the sensor reference voltage and ground circuit integrity at the connector
- 6 If wiring and sensor test good, suspect an internal inverter fault and perform manufacturer-specific diagnostics
- 7 Replace the faulty sensor or repair the wiring as needed, then clear codes and verify the repair with a test drive

Inverter sensor D low-circuit pitfalls

- A low voltage code often results from a short to ground in the signal wire rather than a failed sensor, so inspect the harness for chafing near hot or moving components.
The sensor may share a reference voltage or ground with other sensors; a fault in a shared circuit can set multiple temperature sensor codes simultaneously.
- Inverter temperature sensors are sometimes integrated into the inverter assembly and not serviceable separately, requiring replacement of the entire unit.
- Intermittent low-voltage codes can be caused by water intrusion into connectors, especially in vehicles driven in wet or humid conditions.
Clearing the code without repairing the underlying circuit may lead to repeated failures and potential inverter overheating damage.

Can I keep driving with P0BD8?

It is generally safe to drive with this code if the vehicle is not in limp mode and no overheating warnings are present, but avoid heavy acceleration or prolonged high-load driving until the fault is repaired. If the vehicle enters reduced power mode or shows overheating alerts, stop driving and seek professional diagnosis.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Contact cleaner and dielectric grease



Reading P0BD8

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- B** Hybrid propulsion.
- D8** The exact fault within that area.

Often seen with

P0BD7 Drive Motor Inverter Temperature Sensor D Circuit Range/Perf · **P0BD9** Drive Motor Inverter Temperature Sensor D Circuit High · **P0BDA** Drive Motor Inverter Temperature Sensor D Circuit Intermittent · **P0BDB** Drive Motor Inverter Temperature Sensor E Circuit · **P0BDC** Drive Motor Inverter Temperature Sensor E Circuit Range/Perf

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/p0bd8/>

