

GENERIC · POWERTRAIN

P0DF5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0DF5

Generator Inverter Temperature Sensor B Circuit Low

P0DF5 indicates that the generator inverter temperature sensor B circuit is reporting a voltage lower than the manufacturer's expected range, which the control module interprets as an excessively hot or shorted sensor signal. The computer has detected a low-voltage condition on the sensor's signal circuit, often setting the code when the ignition is on and the sensor output stays below a calibrated threshold.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light, especially if the inverter is not actively powering loads
- Reduced or intermittent charging output from the generator inverter
- A warning message indicating a charging system fault or high inverter temperature
- Possible electrical smell or heat near the inverter assembly in severe cases
- The vehicle may enter a reduced-power or limp mode to protect the inverter

Common causes, most likely first

- 1 A short to ground in the sensor B signal wire or its connector
- 2 A failed generator inverter temperature sensor B, reading low resistance or shorted
- 3 Corrosion, water intrusion, or loose pins in the sensor or inverter connector
- 4 A faulty generator inverter control module misinterpreting a valid sensor signal
- 5 Damaged wiring harness rubbed through against chassis or engine components
- 6 An open in the sensor ground circuit causing a biased low reading



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P0DF5 to see the sensor voltage at fault
- 2 Visually inspect the inverter temperature sensor B connector and harness for corrosion, water, or chafing
- 3 Measure sensor B resistance and compare to the manufacturer's temperature-resistance chart while monitoring live data
- 4 Backprobe the signal circuit at the control module to check for a short to ground with the sensor disconnected
- 5 Perform a voltage drop test on the sensor ground circuit to rule out a high-resistance ground
- 6 Repair or replace the damaged section of wiring or the sensor as indicated by the tests
- 7 Clear codes and verify the sensor B voltage reads within normal range during a road test with the inverter under load

What the low-voltage reading really means

- A low signal voltage does not automatically mean the sensor is bad; a shorted signal wire or a poor ground will produce the same code and is often the real culprit.
- Water intrusion into the inverter connector is a common cause on vehicles that see road spray or pressure washing, and it can mimic a failed sensor.
- The inverter temperature sensor B may share a reference or ground circuit with other sensors, so a fault in a neighbouring circuit can pull the B signal low.
- Some vehicles set P0DF5 only after a specific key-on delay, so a sensor that tests fine cold can still be intermittent when the inverter warms up.
- Replacing the inverter assembly without first checking the sensor circuit is an expensive misdiagnosis trap that technicians frequently encounter.

Can I keep driving with P0DF5?

You can usually drive the vehicle to a service location if the only symptom is the warning light, but avoid heavy electrical loads and long trips until the fault is repaired. If the charging system warning is active or the vehicle enters reduced power, stop driving and arrange a tow to prevent a no-start or inverter damage.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with backprobe pins
- Manufacturer service information for sensor resistance charts and wiring diagrams
- Socket and trim tool set for accessing the inverter connector
- Contact cleaner and dielectric grease for connector repair



Reading P0DF5

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- D** Hybrid propulsion.
- F5** The exact fault within that area.

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0C00** Drive Motor A Current Low · **P0DF4** Generator Inverter Temperature Sensor B Circuit Range/Perfor · **P0DF6** Generator Inverter Temperature Sensor B Circuit High · **P0DF7** Generator Inverter Temperature Sensor C Circuit Range/Perfor

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0df5/>

