

GENERIC · POWERTRAIN

P0C3D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C3D

DC/DC Converter Temperature Sensor B Circuit

P0C3D indicates that the powertrain control module has detected an abnormal condition in the temperature sensor circuit for DC/DC converter B, which is a device that steps voltage up or down for high-voltage accessories. The computer monitors the sensor's signal voltage and flags this code when the reading falls outside the expected range for the converter's operating temperature.

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 with no other noticeable symptoms
- Reduced power or limited operation of high-voltage accessories such as the cabin heater or air conditioning
- A warning message on the dash indicating a hybrid or electric system fault
- In rare cases, the vehicle may enter a fail-safe mode that limits speed or shuts down the converter
- Intermittent operation of the DC/DC converter, leading to a low 12-volt battery charge or dimming lights

Common causes, most likely first

- 1 Faulty temperature sensor B inside the DC/DC converter, such as an open or shorted thermistor
- 2 Damaged or corroded wiring harness or connector at the converter, including chafed wires or pushed pins
- 3 Poor electrical connection at the converter ground or power supply, causing voltage drops that affect sensor readings
- 4 Internal failure of the DC/DC converter module, such as a failed circuit board or overheating damage
- 5 Software or calibration issue in the powertrain control module that misinterprets the sensor signal
- 6 Coolant or oil contamination reaching the sensor, altering its resistance and causing implausible readings



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes and freeze-frame data, then clear the code and test-drive to see if it returns
- 2 Visually inspect the DC/DC converter, its connectors, and the wiring harness for damage, corrosion, or loose pins
- 3 Measure the resistance of the temperature sensor B circuit at the converter connector and compare it to the manufacturer's specification for the current ambient temperature
- 4 Back-probe the sensor signal and ground wires at the powertrain control module to check for voltage drops or open circuits while wiggling the harness
- 5 If the sensor is serviceable separately, replace it; if it is integrated into the converter, replace the converter assembly
- 6 After repair, clear the codes and perform a road test with the scan tool monitoring the sensor data to confirm the reading is plausible and the code does not reset
- 7 If the code persists after all electrical checks, check for technical service bulletins or software updates for the powertrain control module

What the converter temperature sensor really does

- The temperature sensor in a DC/DC converter is often a negative temperature coefficient thermistor, so a reading that is stuck at one extreme can be caused by a short to ground or an open circuit rather than a failed converter.
- Many technicians replace the entire converter when the fault is simply a corroded connector pin or a chafed wire near the converter mounting bracket, so always perform a thorough visual and resistance check first.
- A low or weak 12-volt battery can cause erratic sensor readings and set this code indirectly, so load-test the battery and check charging system voltage before condemning the converter.
- On some vehicles, the DC/DC converter temperature sensor shares a ground with other sensors, and a bad ground can set multiple codes including this one, so look for companion codes that point to a common circuit.
- The code can be set by a temporary overheating event caused by a blocked cooling fan or a failed coolant pump for the converter, so check the converter's cooling system if the sensor circuit tests good.

Can I keep driving with P0C3D?

You can usually continue driving short distances to a repair shop, but avoid heavy electrical loads and long trips because a failing converter can stop charging the 12-volt battery and leave you stranded. If the vehicle enters a reduced-power mode or the battery warning light comes on, stop driving and seek service immediately.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter with resistance and voltage measurement
- Back-probe kit or breakout box for connector testing
- Vehicle-specific wiring diagram and service information
- Insulated hand tools and a torque wrench for converter replacement

Reading P0C3D

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
3D	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0A0D** High Voltage System Interlock Circuit A High · **P0A94** DC/DC Converter A Performance · **P0C3C** DC/DC Converter Temperature Sensor A Intermittent/Erratic · **P0C3E** DC/DC Converter Temperature Sensor B Range/Performance

See it working

Watch the animated explainer [How a Car Clutch Works: Diaphragm Clutch Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0c3d/>

