

GENERIC · POWERTRAIN

P0C40

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C40

DC/DC Converter Temperature Sensor B High

P0C40 indicates that the vehicle's control module has detected an abnormally high temperature reading from the DC/DC converter temperature sensor B, which monitors the heat of the DC-to-DC voltage converter. The computer sets this code when the sensor signal voltage exceeds the expected range for the converter's operating conditions, signaling a potential overheating condition or a circuit fault.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	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 the DC/DC converter, which may affect charging of the auxiliary battery
- A warning message on the dashboard indicating a hybrid or electric system fault
- Possible shutdown of the DC/DC converter, leading to a drained 12-volt battery and electrical accessories not working
- In rare cases, a burning smell or visible overheating from the converter area

Common causes, most likely first

- 1 Faulty DC/DC converter temperature sensor B, reading higher than actual temperature
- 2 Damaged or corroded wiring or connector at the sensor or converter, causing a high-resistance signal
- 3 Poor electrical ground connection for the sensor circuit
- 4 Actual overheating of the DC/DC converter due to a cooling system blockage or fan failure
- 5 Internal fault in the DC/DC converter causing excessive heat generation
- 6 Malfunctioning control module that misinterprets the sensor signal



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check live data for the converter temperature sensor B reading, comparing it to actual temperature with an infrared thermometer
- 2 Inspect the sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed
- 3 Check the sensor's resistance or voltage output according to the manufacturer's specifications and replace the sensor if out of range
- 4 Verify the converter's cooling system operation, including coolant level, fan operation, and airflow, and repair any blockages or failures
- 5 Test the converter's ground circuit and ensure a clean, tight connection
- 6 If all external checks pass, perform a pinpoint test for the control module and converter internal faults, following the service manual
- 7 Clear the code and perform a road test to confirm the repair, monitoring live data for normal temperature readings

Don't overlook the converter cooling system

- A common mistake is replacing the temperature sensor when the real problem is a clogged cooling duct or a failed cooling fan that causes genuine overheating of the DC/DC converter.
- The code can be set by a poor ground connection at the converter, which raises the sensor signal voltage without any actual overheating, so always check grounds before condemning parts.
- On some vehicles, the DC/DC converter temperature sensor is integrated into the converter assembly and cannot be replaced separately, requiring converter replacement if faulty.
- Intermittent wiring faults can set this code only under certain conditions, such as vibration or temperature changes, so wiggle-test the harness while monitoring live data.
- A weak 12-volt battery can cause erratic converter operation and false temperature readings, so always verify battery health and charging system performance first.

Can I keep driving with P0C40?

It is generally safe to drive with this code if the vehicle operates normally, but avoid heavy electrical loads and long trips until diagnosed, as a genuine overheating converter could fail and leave you with a dead battery. If the vehicle enters limp mode or shows a red warning, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Infrared thermometer
- Service manual or wiring diagram for the specific vehicle
- Basic hand tools for connector and sensor access



Reading P0C40

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

Often seen with

P0A0D High Voltage System Interlock Circuit A High · **P0A94** DC/DC Converter A Performance · **P0C3F** DC/DC Converter Temperature Sensor B Low · **P0C41** DC/DC Converter Temperature Sensor B Intermittent/Erratic · **P0C42** Hybrid/EV Battery Pack Coolant Temperature Sensor A Circuit

See it working

Watch the animated explainer [How a Refrigerator Works: The Cooling Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0c40/>

