

GENERIC · POWERTRAIN

P0C41

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0C41

DC/DC Converter Temperature Sensor B Intermittent/Erratic

P0C41 indicates that the vehicle's control module has detected an intermittent or erratic signal from the temperature sensor that monitors the DC/DC converter, which is the component that steps high-voltage battery power down to charge the 12-volt system. The computer is not seeing a steady, plausible temperature reading from sensor B, so it flags the circuit as unreliable rather than completely open or shorted.

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 with no other noticeable change in driving behavior.
- Intermittent charging system warning light if the converter derates or shuts down due to an unreliable temperature reading.
- Reduced or fluctuating 12-volt accessory performance, such as dimming lights or slow-cranking on restart, when the converter limits output.
- A stored history of the same code returning after clearing, often with no drivability complaint between occurrences.
- Possible reduced electric-only range or hybrid system power derate in vehicles that rely heavily on the DC/DC converter.
- Often no symptoms besides the warning light, especially when the erratic signal is brief and the converter continues to operate normally.

Common causes, most likely first

- 1 A failing temperature sensor B inside or mounted on the DC/DC converter, causing resistance to jump erratically with heat or vibration.
- 2 Damaged or chafed wiring between the sensor and the control module, often at a harness bend or near a heat source.
- 3 Corroded, loose, or intermittently connected electrical terminals at the sensor connector or control module pins.
- 4 Thermal cycling that causes a marginal solder joint or internal sensor connection to open only at certain temperatures.
- 5 Electrical interference or a poor ground shared with the converter circuit, producing noisy sensor voltage readings.
- 6 A control module with an intermittent internal fault in the sensor input circuit, though this is less common than wiring or sensor issues.

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0C41, then clear the code and test-drive while monitoring the sensor B temperature parameter for dropouts or spikes.
- 2 Inspect the sensor B connector and the control module connector for corrosion, loose pins, or pushed-back terminals, and repair as needed.
- 3 Perform a wiggle test on the harness while watching live sensor data to expose an intermittent open or short in the wiring.
- 4 Measure sensor resistance or voltage at the sensor and compare it with the manufacturer's specification across a range of temperatures, using a heat gun or cold spray to provoke the fault.
- 5 Check the converter's ground circuit and mounting points for corrosion or looseness that could introduce electrical noise into the sensor signal.
- 6 If the sensor is serviceable separately, replace it and retest; if it is integrated into the converter, follow the manufacturer's procedure for converter replacement only after wiring and connectors are ruled out.
- 7 After repair, clear codes and run a complete drive cycle to confirm the temperature reading remains stable and P0C41 does not return.

Intermittent sensor faults that fool good technicians

- A sensor that tests perfectly at room temperature can still set P0C41 because the erratic signal often appears only after the converter reaches operating temperature, so cold static tests prove very little.
- Technicians who replace the DC/DC converter first frequently find the code returns because the real fault was a chafed wire or a corroded ground that disturbed the sensor signal only under vibration.
- P0C41 does not mean the converter has failed; it means the temperature information is unreliable, and the converter may continue to charge the 12-volt system normally while the code is stored.
- A weak or failing 12-volt battery can cause module voltage instability that mimics an erratic sensor signal, so battery condition and charging system health should be verified before condemning the sensor.
- On some vehicles the temperature sensor B is part of a multi-sensor harness shared with other converter monitoring circuits, so a single damaged wire can set companion codes that point away from the true fault location.

Can I keep driving with P0C41?

You can generally drive the vehicle with P0C41 stored, but avoid long trips or heavy electrical loads until the fault is diagnosed because an unreliable temperature reading can cause the converter to derate or shut down and leave the 12-volt system unsupported. If the charging warning light appears or the vehicle begins to lose accessory power, stop driving and arrange service.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with temperature or resistance measurement
- Heat gun and cold spray for thermal fault provocation
- Back-probe kit or breakout leads for connector testing
- Manufacturer service information for sensor specifications and wiring diagrams

Reading P0C41

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
41	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 · **P0C40** DC/DC Converter Temperature Sensor B High · **P0C42** Hybrid/EV Battery Pack Coolant Temperature Sensor A Circuit

See it working

Watch the animated explainer [How an Oxygen Sensor Works: Live 3D Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0c41/>

