

GENERIC · POWERTRAIN

P2C8D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C8D

DC/DC Converter Temperature Sensor D Circuit Range/Performance

P2C8D indicates that the powertrain control module (PCM) has detected an out-of-range or performance fault in the temperature sensor circuit for the DC/DC converter, specifically the 'D' circuit. The PCM compares the sensor's voltage or signal against expected values and flags the code when the reading falls outside the normal operating window or behaves erratically.

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
- Reduced or disabled DC/DC converter output, leading to a low 12-volt system voltage
- Dimming lights or electrical accessories behaving erratically
- Possible charging system warning light or battery discharge
- In some vehicles, a forced limp mode or reduced power

Common causes, most likely first

- 1 Faulty temperature sensor integrated into the DC/DC converter
- 2 Damaged, chafed, or corroded wiring in the sensor 'D' circuit
- 3 Loose or corroded connector pins at the sensor or PCM
- 4 Internal failure within the DC/DC converter affecting the sensor
- 5 PCM software calibration issue or internal PCM fault
- 6 Aftermarket accessories or improper repairs disturbing the circuit
- 7 Extreme environmental conditions causing temporary out-of-range readings



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other modules
- 2 Inspect the sensor wiring and connectors for damage, corrosion, or looseness
- 3 Measure the sensor resistance or voltage and compare to manufacturer specifications
- 4 Check the DC/DC converter for proper operation and look for technical service bulletins
- 5 If the sensor is integral to the converter, follow the manufacturer's diagnostic flow for converter replacement
- 6 Repair any wiring faults and clear the code, then perform a road test to confirm the repair
- 7 If the code persists, reprogram the PCM or replace it only after all other steps are exhausted

When the sensor is not the culprit

- A common misdiagnosis is replacing the DC/DC converter when the real fault is a chafed wire in the sensor circuit, so always perform a thorough visual and continuity check first.
- The 'D' circuit designation often refers to a specific sensor return or signal line that may be shared with other sensors, so a fault in a shared ground can set this code.
- In some hybrids and electric vehicles, the DC/DC converter temperature sensor is part of a larger assembly, and the code may be triggered by a cooling system issue rather than an electrical fault.
- Extreme cold or heat can cause temporary out-of-range readings that set the code without a permanent failure, so check for a history of the code before condemning parts.
- The PCM may set this code if the sensor signal is plausible but stuck within a narrow range, which can be caused by a failing sensor that hasn't completely failed yet.

Can I keep driving with P2C8D?

If the vehicle drives normally and the only symptom is the warning light, you can drive short distances to a repair shop, but avoid heavy electrical loads and long trips. If the charging system warning is also on or the battery is draining, stop driving and seek immediate service to prevent a breakdown.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram and service information
- Back probe kit
- Insulation resistance tester



Reading P2C8D

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- C** Hybrid propulsion.
- 8D** The exact fault within that area.

Often seen with

P0A94 DC/DC Converter A Performance · **P0AFA** Hybrid/EV Battery System Voltage Low · **P2C8C** DC/DC Converter Temperature Sensor D Circuit · **P2C8E** DC/DC Converter Temperature Sensor D Circuit Low · **U0111** Lost Communication With Battery Energy Control Module 'A'

See it working

Watch the animated explainer [How the PCV System Works: Crankcase Ventilation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2c8d/>

