

GENERIC · POWERTRAIN

P0C38

OBD-II TROUBLE CODE

P0C38

DC/DC Converter Temperature Sensor A Circuit

P0C38 indicates that the powertrain control module has detected an abnormal condition in the temperature sensor circuit for the DC/DC converter, which is the component that steps high-voltage battery power down to charge the 12-volt system. The computer monitors the sensor's signal for expected voltage or resistance behavior and sets this code when the reading falls outside the calibrated range or the circuit fails a rationality check.

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 symptoms
- Reduced or disabled DC/DC converter output, leading to a low 12-volt battery and dimming lights
- The vehicle may enter a reduced-power or limp mode to protect the converter from overheating
- A warning message on the dash indicating a charging system or high-voltage system fault
- In rare cases, the converter may shut down completely, causing the 12-volt system to run only on the battery until it drains

Common causes, most likely first

- 1 Faulty DC/DC converter temperature sensor, either open circuit, short circuit, or skewed resistance
- 2 Damaged or corroded wiring harness or connector at the sensor or converter assembly
- 3 Poor electrical connection at the converter, such as loose ground or pin fit issues
- 4 Failed DC/DC converter internal electronics affecting the sensor signal
- 5 Powertrain control module software error or internal fault in the temperature sensing circuit
- 6 Overheating of the converter due to a separate cooling system fault, which can damage the sensor



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the high-voltage and charging systems
- 2 Inspect the sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed
- 3 Measure the resistance of the temperature sensor at ambient temperature and compare to the manufacturer's specification
- 4 Backprobe the sensor signal circuit at the control module and compare the voltage to the expected range for the current temperature
- 5 Check the converter's cooling system and ensure there are no restrictions or coolant flow issues causing overheating
- 6 If the sensor is faulty, replace it according to service information, which may require removing the converter assembly
- 7 Clear the code and perform a road test to confirm the repair, monitoring the sensor data to ensure it reads correctly

What the DC/DC temperature sensor code hides

- A common oversight is replacing the DC/DC converter when only the temperature sensor is faulty, so always test the sensor and its circuit before condemning the converter.
- The code can be set by a momentary glitch in the signal, so check for intermittent wiring issues by wiggle-testing the harness while watching live data.
- On many hybrids and electric vehicles, the DC/DC converter temperature sensor shares a circuit with other sensors, so a fault in a related sensor can trigger this code.
- A low 12-volt battery can cause the converter to work harder and overheat, so always check the 12-volt battery condition and charging system as part of the diagnosis.
- Some vehicles require a software update to the control module to correct overly sensitive temperature sensor rationality thresholds.

Can I keep driving with P0C38?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy electrical loads and long trips because a failing converter can drain the 12-volt battery and leave you stranded. If the vehicle enters limp mode or the battery warning light illuminates, stop driving and seek professional assistance.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or breakout box
- Service information for wiring diagrams and sensor specifications
- Insulated hand tools for high-voltage safety



Reading P0C38

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

Often seen with

P0562 System Voltage Low · **P0A94** DC/DC Converter A Performance · **P0C39** DC/DC Converter Temperature Sensor A Range/Performance · **P0C3A** DC/DC Converter Temperature Sensor A Low · **P0C3B** DC/DC Converter Temperature Sensor A High

See it working

Watch the animated explainer [Disc Brake Trainer: How Car Brakes Stop a Wheel](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0c38/>

