

GENERIC · POWERTRAIN

P0D72

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0D72

A/C Compressor Control Module Internal Temperature Sensor A Circuit High

P0D72 indicates that the air conditioning (A/C) compressor control module has detected an abnormally high voltage signal from its internal temperature sensor A circuit. The module interprets this high voltage as an excessively high temperature reading, which may cause it to disable the compressor to prevent damage. This code is specific to vehicles with a separately housed compressor control module that monitors its own internal temperature.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- The A/C system may stop cooling entirely or blow only warm air.
- The climate control panel may show a flashing or steady A/C warning light.
- The compressor clutch may fail to engage, even when A/C is requested.
- In some cases, the only sign is an illuminated check engine light with no noticeable performance change.
- The A/C may work intermittently, cutting out after brief operation.
- The blower fan may continue to run normally, but the air is not chilled.

Common causes, most likely first

- 1 A faulty internal temperature sensor inside the A/C compressor control module.
- 2 Damaged or corroded wiring between the sensor and the control module, causing an open circuit or high resistance.
- 3 A poor electrical connection at the control module harness connector, leading to a high voltage drop.
- 4 A short to voltage on the sensor signal circuit, which can falsely raise the voltage reading.
- 5 A failed A/C compressor control module, even if the sensor itself is good.
- 6 Extreme underhood temperatures or a missing heat shield that overheats the module and skews the sensor signal.
- 7 Water intrusion into the control module connector, causing corrosion and high resistance.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related A/C system codes before proceeding.
- 2 Inspect the A/C compressor control module harness and connector for corrosion, loose pins, or damaged wires.
- 3 Measure the sensor signal voltage at the control module connector and compare it to the manufacturer's specification.
- 4 Test the internal temperature sensor resistance (if accessible) and compare it to a known-good value or temperature chart.
- 5 Check for a short to voltage on the sensor signal circuit by disconnecting the module and measuring voltage with the key on.
- 6 If the sensor is faulty and serviceable, replace it; otherwise, replace the A/C compressor control module and perform any required programming.
- 7 Clear the code and verify the A/C system operates correctly through several drive cycles.

When the sensor is not the real culprit

- A high voltage reading on the sensor circuit often comes from a poor ground connection at the control module rather than a failed sensor, so always check grounds before condemning parts.
- The internal temperature sensor is sometimes integrated into the control module and cannot be replaced separately, making module replacement the only fix if the sensor fails.
- A short to voltage on the signal wire can be caused by chafed wiring near hot exhaust components, which is easy to overlook during a visual inspection.
- This code can set intermittently due to heat soak after the engine is shut off, so a road test with the A/C on may be needed to reproduce the fault.
- Some vehicles use the same sensor signal for multiple functions, so a high reading may also affect compressor clutch engagement logic and cause unrelated A/C performance complaints.

Can I keep driving with P0D72?

You can typically continue driving with this code because it mainly affects A/C performance and does not compromise engine safety. Avoid using the A/C until the fault is repaired, as continued operation with a faulty temperature reading may lead to compressor damage or unnecessary wear on the A/C system.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the A/C compressor control module circuit
- Socket set and trim removal tools
- Manufacturer-specific service information for sensor resistance values



Reading P0D72

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

Often seen with

P0532 A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0533** A/C Refrigerant Pressure Sensor 'A' Circuit High
 · **P0D73** A/C Compressor Control Module Internal Temperature Sensor A · **P0D74** A/C Compressor Control Module Internal Temperature Sensor A · **P0D75** A/C Compressor Control Module Output Driver Temperature Sens

See it working

Watch the animated explainer [How Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0d72/>

