

GENERIC · POWERTRAIN

P0537

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0537

A/C Evaporator Temperature Sensor Circuit Low

P0537 means the air conditioning (A/C) control module has detected a voltage signal from the evaporator temperature sensor that is lower than the expected range for the current conditions. The sensor is a thermistor whose resistance changes with temperature, and the module interprets an abnormally low signal voltage as a sensor circuit short to ground or an internal sensor failure.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The A/C may blow warm air or fail to cool the cabin because the module defaults to a protection strategy.
- The A/C compressor clutch may not engage at all, leaving only outside air from the vents.
- The blower motor may run only on certain speeds or stop working if the module disables the climate system.
- An A/C or climate control warning light may illuminate on the dashboard.
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- The A/C may cycle rapidly or intermittently cool and then stop.

Common causes, most likely first

- 1 Evaporator temperature sensor internally shorted, often due to moisture intrusion or age-related failure.
- 2 Sensor wiring chafed or pinched against a metal bracket, creating a short to ground.
- 3 Corroded or loose electrical connector at the sensor or at the A/C control module.
- 4 A/C control module internal fault causing it to misread the sensor signal.
- 5 Aftermarket or incorrect sensor installed that does not match the vehicle's resistance curve.
- 6 Water intrusion into the sensor connector or module from a clogged evaporator drain.



How to diagnose and fix it

- 1 Scan all modules for codes and record freeze-frame data to confirm P0537 is current and not history.
- 2 Inspect the evaporator temperature sensor connector and wiring for corrosion, chafing, or pinched sections.
- 3 Measure sensor resistance with a multimeter and compare to the manufacturer's temperature-resistance chart.
- 4 Backprobe the sensor signal wire at the module and check voltage with the key on; a low reading confirms a short.
- 5 Disconnect the sensor and see if the code changes to a high-voltage code, which isolates the fault to the sensor or its wiring.
- 6 Check for water intrusion or a blocked evaporator drain that could be shorting the sensor or connector.
- 7 Replace the sensor only after wiring and connector tests pass, then clear codes and verify the A/C operates normally.

Before you replace the A/C module

- A shorted sensor is far more common than a failed A/C control module, so test the sensor and its wiring before condemning the module.
- Water from a clogged evaporator drain can pool around the sensor connector and cause a low-voltage signal that mimics a failed sensor.
- Some vehicles use the evaporator temperature sensor for compressor clutch cycling, so a low signal can cause the compressor to stay off entirely.
- A poor ground at the A/C module or sensor can pull the signal voltage low and set P0537 even when the sensor itself is good.
- Aftermarket sensors with the wrong resistance curve can set this code immediately after installation, so compare the new part to the original.

Can I keep driving with P0537?

You can drive the vehicle with P0537 because the fault affects only the air conditioning and does not impair engine operation or safety. Avoid long trips in hot weather if the A/C is not cooling, and have the circuit tested soon to prevent unnecessary compressor wear from repeated cycling.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Backprobe pins or piercing probes
- Manufacturer's wiring diagram and sensor resistance chart
- Trim removal tools for accessing the evaporator sensor



Reading P0537

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 37** The exact fault within that area.

Often seen with

P0532 A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0535** A/C Evaporator Temperature Sensor Circuit · **P0536** A/C Evaporator Temperature Sensor Circuit Range/Performance · **P0538** A/C Evaporator Temperature Sensor Circuit High · **P0645** A/C Clutch Relay Control Circuit

See it working

Watch the animated explainer [How an EGR Valve Works: Exhaust Gas Recirculation](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0537/>

