

GM · POWERTRAIN

P1537

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1537 · GM

A/C Request Circuit Voltage Low

P1537 on a GM vehicle means the powertrain control module (PCM) has detected that the air conditioning (A/C) request circuit is seeing voltage lower than expected, which usually indicates a short to ground or an open circuit in the request signal path. The PCM uses this signal to know when the driver or climate control head is asking for A/C compressor operation, so a low voltage condition prevents the PCM from engaging the compressor or may cause it to disengage unexpectedly.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Low	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The A/C compressor may not engage at all, resulting in no cold air from the vents.
- The A/C compressor may engage intermittently or cycle rapidly even when cooling is requested.
- The check engine light (malfunction indicator lamp) illuminates on the dashboard.
- The climate control panel may show normal settings but the system fails to cool the cabin.
- Often no symptoms besides the warning light, especially if the ambient temperature is low or A/C demand is not active.
- In some cases, the engine cooling fans may run continuously or behave erratically because the PCM misinterprets the A/C request.

Common causes, most likely first

- A short to ground in the A/C request signal wire between the climate control head and the PCM.
- An open circuit or broken wire in the A/C request circuit, including damaged insulation or a corroded connector.
- A faulty A/C request switch or climate control head that is not sending the correct voltage signal.
- Corrosion or water intrusion at the PCM connector or the climate control head connector, causing high resistance or a short.
- A failed PCM driver or internal fault on the A/C request input circuit, though this is less common.
- Aftermarket accessories or alarm systems improperly tapped into the A/C request wire, causing a voltage drop.
- A poor ground connection at the climate control head or PCM, leading to reference voltage issues.



How to diagnose and fix it

- 1 Check for any stored diagnostic trouble codes (DTCs) in the climate control module and PCM, and record freeze-frame data to understand when the fault occurred.
- 2 Inspect the A/C request circuit wiring and connectors for obvious damage, corrosion, or loose pins, starting at the climate control head and working toward the PCM.
- 3 Measure the voltage on the A/C request signal wire at the PCM connector with the A/C requested and not requested, comparing to the manufacturer's specification.
- 4 Disconnect the climate control head and check for a short to ground or open circuit on the request wire using a digital multimeter (DMM) and wiring diagram.
- 5 Test the A/C request switch or climate control head operation by monitoring the signal voltage while pressing the A/C button, and replace the head if it does not toggle correctly.
- 6 If the circuit and switch test good, check the PCM ground and power feeds, and consider PCM replacement only after confirming all other possibilities.
- 7 Clear the code and perform a road test with the A/C on to verify the repair and ensure the code does not return.

Don't Replace the PCM Before Checking This

- A common mistake is replacing the A/C compressor or PCM when the actual fault is a chafed wire behind the glovebox or near the blower motor, where the harness often rubs.
- The A/C request circuit on many GM vehicles uses a five-volt reference signal from the PCM, so a short to ground will pull the voltage low and set P1537, but a short to voltage will set a different code.
- A weak or failing battery or charging system can cause erratic voltage signals that mimic a faulty A/C request circuit, so always verify battery and ground integrity first.
- Aftermarket remote starters or alarm systems that tap into the A/C request wire are a frequent cause of unexplained low-voltage codes on this circuit.
- P1537 can be set by a climate control head that is failing intermittently, so wiggle-test the connectors and harness while monitoring the signal voltage to catch an intermittent fault.

Can I keep driving with P1537?

You can safely drive the vehicle with P1537 because the fault primarily affects A/C operation and does not compromise engine performance or safety. Avoid using the A/C until the fault is repaired, and address the issue promptly to prevent compressor damage from short cycling or unnecessary wear.



Tools that help

- Digital multimeter (DMM) with voltage and resistance measurement
- GM service information wiring diagrams for the specific vehicle
- Scan tool capable of reading GM manufacturer-specific codes and live data
- Trim removal tools for accessing climate control head and harness
- Test light or jumper wires for circuit testing

Reading P1537

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (GM): its meaning depends on the make.

5 Vehicle speed, idle control and auxiliary inputs.

37 The exact fault within that area.

Often seen with

P1545 Throttle Position Control Malfunction · **P1546** Boost Pressure Control Valve Short To B+ · **P1545** A/C Clutch Relay Control Circuit · **P1546** Air Conditioning (A/C) Clutch Feedback Circuit Low Voltage · **P1545** A/C Clutch Relay Control Circuit · **P1546** Air Conditioning (A/C) Clutch Feedback Circuit Low Voltage · **P1545** Pedal Position Sensor · **P1546** Pedal Position Sensor · **P0532** A/C Refrigerant Pressure Sensor 'A' Circuit Low · **P0533** A/C Refrigerant Pressure Sensor 'A' Circuit High · **P0645** A/C Clutch Relay Control Circuit

See it working

Watch the animated explainer [EV Powertrain Trainer: How an Electric Car Drives](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1537/>

