

CHRYSLER · POWERTRAIN

P1536

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1536 · Chrysler

A/C System ECT Overtemperature

P1536 on Chrysler vehicles indicates the powertrain control module (PCM) has detected an overtemperature condition in the air conditioning (A/C) system's engine coolant temperature (ECT) circuit, meaning the A/C compressor may be overheating or the ECT sensor is reporting an abnormally high coolant temperature that affects A/C operation. The PCM monitors the ECT signal and disables the A/C compressor clutch to protect the system when the coolant temperature exceeds a calibrated threshold.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The air conditioning may stop blowing cold air intermittently or completely
- The A/C compressor clutch may not engage when the engine is hot
- The check engine light (malfunction indicator lamp) is illuminated
- Engine temperature gauge may read higher than normal or fluctuate
- Often no symptoms besides the warning light, especially in cooler ambient temperatures
- Possible reduced engine performance or cooling fan running constantly

Common causes, most likely first

- 1 Faulty engine coolant temperature (ECT) sensor sending an incorrect high-temperature signal
- 2 Low engine coolant level or trapped air in the cooling system causing localized overheating
- 3 A failing thermostat that restricts coolant flow and raises ECT readings
- 4 Wiring damage or corrosion in the ECT sensor circuit (open, short, or high resistance)
- 5 A/C system overcharge or restriction causing the compressor to overheat and raise underhood temperatures
- 6 Radiator fan(s) not operating correctly, leading to inadequate airflow and elevated coolant temperature
- 7 PCM calibration issue or internal fault in the A/C overtemperature protection logic



How to diagnose and fix it

- 1 Verify coolant level and condition; top off or bleed the cooling system if low or air is present
- 2 Use a scan tool to read live ECT sensor data and compare it to actual coolant temperature with an infrared thermometer
- 3 Inspect the ECT sensor and its connector for corrosion, loose pins, or damaged wiring; repair as needed
- 4 Test the thermostat for proper opening temperature and replace if it sticks closed or opens late
- 5 Check radiator fan operation by commanding the fans on with the scan tool and observing operation
- 6 Perform an A/C system performance test to check for overcharge or restriction; recover, evacuate, and recharge if necessary
- 7 If all else checks out, reflash or replace the PCM only after confirming the overtemperature condition is real and not a false signal

Don't overlook the cooling system basics

- A marginal coolant level or a small air pocket can cause localized hot spots that trigger P1536 without the temperature gauge showing an obvious overheat.
- The ECT sensor on Chrysler engines often shares a ground with other sensors; a poor ground can skew the ECT reading and set this code even when actual coolant temperature is normal.
- A sticking thermostat may not set a thermostat-specific code but can cause P1536 by raising coolant temperature just enough to trigger the A/C overtemperature protection.
- Aftermarket A/C refrigerant that is overcharged can raise compressor head pressure and underhood temperature, leading to P1536 without any electrical fault.
- The PCM may disable the A/C compressor as a protective measure, so a complaint of 'A/C not working' can be the first sign of P1536 even before the check engine light comes on.

Can I keep driving with P1536?

You can usually drive the vehicle with P1536, but avoid using the A/C and monitor the engine temperature gauge closely; if the gauge climbs above normal or you notice coolant loss, stop and address the cooling system before continuing.

Tools that help

- OBD-II scan tool with live data capability
- Infrared thermometer
- Digital multimeter
- Cooling system pressure tester
- A/C manifold gauge set



Reading P1536

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 36** The exact fault within that area.

Often seen with

P0117 Engine Coolant Temperature Circuit Low Input · **P0118** Engine Coolant Temperature Circuit High Input · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P0480** Cooling Fan 1 Control Circuit Malfunction · **P0532** A/C Refrigerant Pressure Sensor 'A' Circuit Low

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1536/>

