



P2CFE

A/C Clutch Control Circuit High

P2CFE indicates that the powertrain control module (PCM) has detected a high-voltage condition on the air conditioning (A/C) clutch control circuit, meaning the control wire is seeing voltage above the expected threshold when the clutch should be off or when the circuit is commanded on. The PCM monitors the circuit for shorts to power, open grounds, or a faulty clutch coil that causes the feedback voltage to exceed limits.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Hybrid propulsion

Symptoms you may notice

- The A/C compressor clutch may fail to engage, resulting in no cold air from the vents.
- The climate control panel may show a flashing or solid A/C indicator light, or the system may default to vent or defrost mode.
- The engine cooling fan may run continuously or at high speed due to the PCM's fail-safe strategy.
- A stored P2CFE code is set, often accompanied by an illuminated check engine light (CEL).
- In some vehicles, the A/C clutch may engage and disengage rapidly (cycling) when the system is turned on.
- Often no symptoms besides the warning light, especially if the fault is intermittent or only affects the feedback circuit.

Common causes, most likely first

- 1 A short to power in the A/C clutch control wire, often due to chafed insulation or a pinched harness.
- 2 A faulty A/C compressor clutch coil that has an internal short or excessive resistance, causing abnormal voltage feedback.
- 3 A poor ground connection at the clutch coil or at the PCM, leading to a high-voltage reference on the control circuit.
- 4 A defective A/C clutch relay that is stuck closed or has high resistance, feeding voltage back to the control circuit.
- 5 A malfunctioning PCM driver for the A/C clutch circuit, though this is less common and should be confirmed last.
- 6 Corrosion or water intrusion in the clutch connector or PCM connector, creating a high-resistance path that skews voltage.
- 7 Aftermarket accessories or improper wiring repairs that tap into the A/C clutch circuit and introduce a voltage source.



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in the climate control or body control modules before proceeding.
- 2 Inspect the A/C clutch control circuit wiring for visible damage, chafing, or loose connectors, and repair as needed.
- 3 Measure resistance across the A/C clutch coil and compare to the manufacturer's specification to rule out a shorted or open coil.
- 4 Check the A/C clutch relay by swapping it with a known-good relay of the same part number and clearing the code to see if it returns.
- 5 Perform a voltage drop test on the ground circuit for the clutch coil and the PCM to ensure a clean, low-resistance ground path.
- 6 Back-probe the control circuit at the PCM and observe voltage with the A/C commanded off and on; a high voltage with the command off indicates a short to power.
- 7 If all external circuits and components test good, substitute a known-good PCM or use a breakout box to confirm the PCM driver is faulty before replacement.

Before you replace the A/C compressor

- A shorted A/C clutch coil can set P2CFE without blowing a fuse, so resistance testing of the coil is essential even if the clutch still engages.
- The PCM may set this code intermittently due to a poor ground at the clutch coil mounting bracket, which is often overlooked during visual inspection.
- A stuck-closed A/C clutch relay can feed voltage back into the control circuit and mimic a short to power, so always test the relay before condemning wiring.
- Some vehicles use a pulse-width modulated (PWM) signal for the A/C clutch, and a high-voltage code can be set by a failing clutch diode or suppression capacitor.
- P2CFE can be triggered by a faulty PCM ground, so checking engine and chassis ground straps is a worthwhile step before replacing expensive modules.

Can I keep driving with P2CFE?

You can generally drive the vehicle with P2CFE, but the A/C may not function and the engine cooling fan may run constantly, which can strain the electrical system. Avoid long trips in hot weather until repaired, and do not ignore the code if the clutch is cycling rapidly, as that can damage the compressor.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM) with voltage and resistance measurement
- Test light or fused jumper wire
- Relay puller and known-good relay
- Wire piercing probes or back-probe kit
- Manufacturer's service information for circuit specifications

Reading P2CFE

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
C	Hybrid propulsion.
FE	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
 · **P0645** A/C Clutch Relay Control Circuit · **P2CFD** A/C Clutch Control Circuit Low · **P2CFF** A/C Clutch Control Circuit Driver Current/Temperature Too Hi

See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2cfe/>

