

GENERIC · POWERTRAIN

P2C37

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2C37

Cold Start Engine Coolant Pump Performance

P2C37 indicates that the engine control module has detected a performance fault in the auxiliary coolant pump circuit that is used specifically during cold-start conditions to help warm the engine or cabin quickly. The computer monitors the pump's electrical current and feedback signal, and it sets this code when the pump does not respond as expected or the circuit shows an abnormal current draw during the cold-start phase.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Prolonged engine warm-up time or cabin heater taking longer to produce heat
- Possible reduced heater performance during the first few minutes after a cold start
- In some cases, the coolant temperature gauge may rise more slowly than usual
- A faint humming or whirring noise from the engine bay may be absent when the pump should run
- Rarely, the engine may enter a reduced-power mode if the fault affects other cooling functions

Common causes, most likely first

- 1 Failed auxiliary coolant pump motor or internal wear
- 2 Open or shorted wiring in the pump circuit, including damaged connectors or chafed harness
- 3 Blown fuse or faulty relay supplying power to the pump
- 4 Corroded or loose electrical connections at the pump or control module
- 5 Faulty engine coolant temperature sensor providing incorrect cold-start information
- 6 Software or calibration issue in the engine control module affecting pump operation
- 7 Restricted coolant flow due to debris or a stuck thermostat affecting pump performance



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to understand when the fault occurs
- 2 Visually inspect the auxiliary coolant pump, its connector, and the wiring harness for damage, corrosion, or loose pins
- 3 Check the fuse and relay associated with the auxiliary coolant pump circuit and replace if faulty
- 4 Measure resistance and supply voltage at the pump connector to verify power and ground integrity
- 5 Command the pump on with a scan tool and listen for operation, and compare actual current draw to specifications
- 6 Test the engine coolant temperature sensor signal for accuracy against a known good value or infrared thermometer
- 7 If all electrical checks pass, replace the auxiliary coolant pump and clear codes to verify the repair

Cold-start pump faults that fool technicians

- A weak battery or low charging voltage can cause the auxiliary pump to draw excessive current during cold starts, setting this code even though the pump itself is healthy.
- The pump may only run for a short period after a cold start, so a fault can be intermittent and not present during a warm-engine inspection.
- Aftermarket coolant or sealant additives can clog the pump impeller, leading to a performance fault that mimics an electrical failure.
- Some vehicles use the same pump for both heater circulation and battery cooling, so a fault may also affect hybrid or electric auxiliary systems.
- The engine control module may set this code if the coolant temperature sensor is slow to respond, even when the pump operates correctly, so always verify sensor rationality first.

Can I keep driving with P2C37?

You can usually continue driving with this code because the auxiliary pump mainly affects cold-start warm-up and heater performance, but avoid extended idling in cold weather and monitor for overheating. Have the fault diagnosed soon to prevent potential cooling system stress or reduced heater function.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Fuse puller and test light
- Socket set and trim removal tools
- Infrared thermometer



Reading P2C37

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

Often seen with

P00B7 Engine Coolant Flow Low/Performance · **P0128** Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P2181** Cooling System Performance · **P2C36** Crankcase Pressure Sensor B Circuit Intermittent/Erratic · **P2C38** Cylinder Head Temperature Sensor B Circuit

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2c37/>

