

GENERIC · POWERTRAIN

P2E62

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2E62

Engine Coolant Bypass Valve E Control Circuit/Open

P2E62 indicates that the powertrain control module (PCM) has detected an open circuit on the control circuit for the engine coolant bypass valve 'E'. This valve manages coolant flow to help the engine reach operating temperature quickly and maintain optimal thermal conditions, and an open circuit means the PCM cannot command the valve to move.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Hybrid propulsion

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp) with no other noticeable symptoms
- Prolonged engine warm-up time or the engine never reaching normal operating temperature
- Poor heater performance, especially at idle, due to insufficient coolant flow through the heater core
- Slightly reduced fuel economy or increased emissions during cold starts
- In rare cases, the engine may run hotter than normal if the bypass valve fails in a position that restricts coolant flow

Common causes, most likely first

- 1 Broken, corroded, or disconnected wire in the control circuit between the PCM and the bypass valve
- 2 Failed coolant bypass valve solenoid or actuator (open internal coil)
- 3 Corroded or loose electrical connector at the bypass valve
- 4 Faulty PCM driver for the control circuit (less common)
- 5 Damage to the wiring harness from heat, vibration, or rodent activity



How to diagnose and fix it

- 1 Use a scan tool to confirm the code and check for any related pending or history codes
- 2 Visually inspect the bypass valve connector and wiring for damage, corrosion, or looseness
- 3 Disconnect the valve connector and measure the resistance of the valve solenoid to check for an open coil
- 4 Check for battery voltage and ground at the valve connector with the key on, engine off, to verify power and ground circuits
- 5 Perform a continuity test on the control wire between the PCM and the valve connector to rule out an open circuit
- 6 If the circuit is intact, test the PCM output with a bidirectional scan tool or oscilloscope to confirm the driver is functioning
- 7 Replace the faulty bypass valve or repair the wiring as needed, then clear the code and verify the repair with a test drive

Don't overlook the wiring harness

- A common oversight is replacing the bypass valve without first checking the control circuit for an open, which often lies in a hidden section of the harness near hot exhaust components.
- The code can be set by a poor connection at the PCM connector, so always inspect and clean both ends of the circuit before condemning the valve.
- On some vehicles, the coolant bypass valve is part of a larger coolant control module, and a failure in that module can set this code even if the individual valve tests good.
- An open circuit in the control wire may be intermittent, so wiggle-test the harness while monitoring live data to catch a broken wire that only acts up under vibration.
- This code does not always mean the valve is stuck; it specifically indicates an electrical open, so mechanical sticking would typically set a different code.

Can I keep driving with P2E62?

You can usually continue driving with this code, but avoid extended idling and monitor the engine temperature gauge; if the engine overheats or the heater stops working entirely, stop and have the vehicle inspected promptly.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wire repair kit (splices, heat shrink, electrical tape)
- Socket and ratchet set
- Test light



Reading P2E62

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

Often seen with

P0128 Coolant Thermostat (Coolant Temperature Below Thermostat Reg · **P0597** Thermostat Heater Control Circuit/Open · **P2E60** Cylinder 8 Alternative Fuel Misfire Detected · **P2E61** Alternative Fuel Misfire Detected With Low Fuel · **P2E63** Engine Coolant Bypass Valve E Control Circuit Low

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2e62/>

