

GENERIC · POWERTRAIN

P04AC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P04AC

EVAP System Purge Control Valve B Circuit Low

P04AC means the powertrain control module (PCM) has detected a low-voltage condition on the electrical circuit for the EVAP system's purge control valve B, which is the valve that meters fuel vapor from the charcoal canister into the intake. The PCM monitors the valve's control circuit and sets this code when the signal voltage stays below the expected threshold, indicating a short to ground, an open circuit, or a faulty valve.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illuminated check engine light, often with no other symptoms
- A faint fuel or gasoline odor around the vehicle, especially after refueling
- Slightly rough idle or a stumble when the purge valve is commanded open
- Failed emissions inspection due to the check engine light
- In rare cases, a noticeable drop in fuel economy if the valve sticks open
- No drivability change at all in many instances

Common causes, most likely first

- 1 Damaged or disconnected wiring harness to the purge control valve B
- 2 Corroded or loose electrical connector at the valve
- 3 Failed purge control valve B solenoid (open or shorted coil)
- 4 Short to ground in the control circuit between the PCM and the valve
- 5 Faulty powertrain control module driver circuit (less common)
- 6 Blown fuse or poor ground connection shared with the EVAP circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code and check for related EVAP codes
- 2 Inspect the purge valve B connector and wiring for corrosion, chafing, or loose pins
- 3 Measure resistance across the valve solenoid and compare to the manufacturer's specification
- 4 Check for battery voltage at the valve connector with the key on and verify the ground circuit
- 5 Test the control circuit for a short to ground or open using a wiring diagram and multimeter
- 6 Replace the purge control valve B if electrically faulty, then clear codes and verify the repair
- 7 If the circuit tests good but the code persists, diagnose the PCM driver circuit before replacing the PCM

What a low purge valve circuit really means

- A low-voltage code on a purge valve circuit is most often a wiring or connector problem rather than a failed valve, so inspect the harness before condemning the part.
- The PCM may set P04AC intermittently if the valve coil resistance drifts with temperature, so a cold resistance check can pass while a hot engine triggers the code.
- A stuck-open purge valve can cause a rough idle and fuel smell that mimics a vacuum leak, yet the code points to an electrical low, not a mechanical failure.
- Some vehicles use a shared ground for multiple EVAP components, so a single corroded ground point can set P04AC along with other purge or vent codes.
- Clearing the code without repairing the circuit will usually result in the code returning after one or two drive cycles once the monitor runs.

Can I keep driving with P04AC?

The vehicle is generally safe to drive with P04AC because the fault affects emissions control rather than engine operation, but avoid ignoring a persistent fuel smell and get the circuit inspected soon to prevent a failed emissions test.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Electrical contact cleaner and dielectric grease



Reading P04AC

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
4	Auxiliary emission controls.
AC	The exact fault within that area.

Often seen with

P0443 EVAP Purge Control Valve Circuit Malfunction · **P0444** EVAP Purge Control Valve Circuit Open · **P0445** EVAP Purge Control Valve Circuit Shorted · **P0455** EVAP System Leak Detected (Large) · **P0498** Evaporative Emission System Vent Valve 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/p04ac/>

