

VOLKSWAGEN · POWERTRAIN

P1284

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1284 · Volkswagen

Fuel Injection Air Control Valve Circuit Open

P1284 on Volkswagen vehicles indicates that the engine control module (ECM) has detected an open circuit in the wiring for the fuel injection air control valve, which is part of the secondary air injection system. The ECM commands the valve to open during cold starts to reduce emissions, but the circuit's electrical resistance is outside the expected range, so the valve cannot function.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering (injector circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or stumbling during cold starts due to improper air injection.
- Slightly increased emissions during warm-up, which may be noticed during an emissions test.
- In rare cases, a whistling or hissing noise from the secondary air injection system if the valve is stuck open.
- Possible hesitation or reduced power under light acceleration when the engine is cold.

Common causes, most likely first

- 1 Broken, chafed, or disconnected wiring in the circuit between the ECM and the fuel injection air control valve.
- 2 Corroded or loose electrical connector at the valve or at the ECM.
- 3 Failed fuel injection air control valve solenoid (open internal coil).
- 4 Blown fuse that supplies power to the secondary air injection system.
- 5 Faulty secondary air injection pump or relay causing a secondary open circuit that affects the valve circuit.
- 6 Damaged ECM driver for the valve circuit, though this is less common.



How to diagnose and fix it

- 1 Check the fuse for the secondary air injection system and replace if blown.
- 2 Inspect the wiring harness and connector at the fuel injection air control valve for damage, corrosion, or looseness; repair as needed.
- 3 Disconnect the valve connector and measure resistance across the valve solenoid; compare to specification (typically 10–30 ohms) and replace the valve if open or shorted.
- 4 Check for power and ground signals at the valve connector with the key on and during a commanded activation using a scan tool; repair wiring if signals are missing.
- 5 If the valve and wiring are good, test the secondary air injection pump and relay, as a failed pump can cause the ECM to set related codes.
- 6 Clear the fault memory and perform a road test with cold starts to verify the repair; if the code returns, perform a voltage drop test on the circuit.

Don't overlook the secondary air pump

- A failed secondary air injection pump often causes P1284 because the ECM detects an open circuit when the pump does not draw current, leading to misdiagnosis of the valve itself.
- Volkswagen's secondary air injection system only operates during cold starts, so a faulty valve may not cause drivability issues once the engine is warm, making the code easy to ignore.
- Corrosion inside the valve connector is a common cause on older Volkswagens, especially in regions with road salt, and can mimic a failed valve.
- The ECM may set P1284 if the valve coil is open, but a sticking valve can also trigger the code indirectly by causing unexpected current draw; always test the valve mechanically and electrically.
- Related codes such as P0411 (secondary air injection system incorrect flow) often accompany P1284, indicating a system-wide issue rather than just the valve circuit.

Can I keep driving with P1284?

You can generally continue driving with P1284 because the fault mainly affects emissions during cold starts and does not compromise engine safety. However, avoid long-term neglect, as a failed secondary air system can lead to increased emissions and may cause other components to wear prematurely.

Tools that help

- OBD-II scan tool with Volkswagen-specific software
- Digital multimeter
- Wire repair kit (soldering iron, heat shrink, electrical tape)
- Socket set and screwdrivers
- Vacuum pump or hand-held vacuum gauge (for testing valve operation)



Reading P1284

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Volkswagen): its meaning depends on the make.
- 2** Fuel and air metering (injector circuits).
- 84** The exact fault within that area.

Often seen with

P0411 Secondary Air Injection System Incorrect Flow · **P0413** Secondary Air Injection System Switching Valve 'A' Circuit O · **P0414** Secondary Air Injection System Switching Valve 'A' Circuit S · **P0418** Secondary Air Injection System Control 'A' Circuit · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

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/volkswagen-p1284/>

