

VOLKSWAGEN · POWERTRAIN

P1423

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1423 · Volkswagen

Secondary Air Injection System Bank 1 Flow Too Low

P1423 on Volkswagen vehicles means the engine computer commanded the secondary air injection (SAI) pump to run during a cold start and the oxygen sensor feedback showed the extra air never reached Bank 1. The system is monitored by watching the front oxygen sensor respond when the air pump is activated, and this code sets when that expected lean shift does not occur within the test window.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Often no symptoms besides the check engine light, because the fault only affects cold-start emissions
- A slightly rough or stumbling idle for the first 30 to 90 seconds after a cold start
- A brief hissing or rushing noise from the engine bay on cold start that is louder or different than normal
- A faint exhaust smell during warm-up as the catalytic converter takes longer to light off
- In some cases a stored pending code that reappears after every cold start cycle

Common causes, most likely first

- 1 A split, disconnected or melted secondary air injection hose between the pump, combi valve and cylinder head
- 2 A failed secondary air injection pump that does not spin or produces too little pressure
- 3 A stuck-closed or carbon-fouled combi valve (secondary air injection valve) that blocks flow into the exhaust port
- 4 A blown fuse or corroded relay in the secondary air pump circuit, often caused by water ingress in the pump housing
- 5 A faulty or slow front oxygen sensor that cannot register the lean shift during the test
- 6 Carbon blockage in the cylinder head air passage, common on higher-mileage engines with oil consumption
- 7 A wiring fault or poor ground at the pump connector that prevents the pump from running when commanded



How to diagnose and fix it

- 1 Check the secondary air pump fuse and relay first, then command the pump on with a scan tool and listen for it running
- 2 Inspect every secondary air hose and clamp from the pump to the combi valve for cracks, melting or loose connections
- 3 Measure pump output pressure with a gauge at the combi valve inlet; a healthy pump should build several psi quickly
- 4 Remove the combi valve and check that it opens and seals correctly, and that the cylinder head passage is not carboned shut
- 5 Verify the front oxygen sensor switches quickly when the pump is commanded on; replace it only if the response is lazy
- 6 Repair any corroded wiring, ground or connector at the pump, then clear the code and run a cold-start monitor to confirm the repair
- 7 If the pump runs but flow is still low, check for a restricted air filter box inlet or a collapsed internal pump diaphragm

Why this code often is not the pump

- A large share of P1423 cases on Volkswagen engines are caused by a cracked or disconnected plastic air hose rather than the pump itself, so inspect the plumbing before condemning the pump.
- The combi valve can stick closed from carbon without setting any other code, and it will block flow even when the pump is working perfectly.
- Water entering the pump housing through a degraded seal is a common Volkswagen failure that blows the fuse and corrodes the motor, so check for moisture when the fuse is blown.
- A lazy front oxygen sensor can make a healthy secondary air system look faulty because the computer never sees the lean shift it expects during the cold-start test.
- This code only runs on a cold start, so a technician must let the engine sit overnight or use a scan tool to force the monitor; clearing the code and driving warm will not verify the repair.

Can I keep driving with P1423?

The car is safe to drive because the fault only affects cold-start emissions and does not change engine performance once warm. Avoid long periods of idling from cold and get it repaired before the next emissions inspection, since the check engine light will cause a failure.



Tools that help

- OBD-II scan tool with Volkswagen manufacturer-specific capability and bidirectional control
- Hand vacuum pump or pressure gauge for testing the combi valve and pump output
- Basic socket and wrench set for removing the pump and combi valve
- Digital multimeter for checking fuses, relay operation and wiring continuity
- Flashlight or inspection mirror for tracing hoses behind the engine

Reading P1423

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Volkswagen): its meaning depends on the make.

4 Auxiliary emission controls.

23 The exact fault within that area.

Often seen with

P1424 Secondary Air Injection System Bank 1 Leak Detected · **P1425** Tank Ventilation Valve Short To Ground · **P1425** EVAP Purge Control Solenoid Circuit Low Voltage · **P0411** Secondary Air Injection System Incorrect Flow · **P0491** Secondary Air Injection System Insufficient Flow (Bank 1) · **P0492** Secondary Air Injection System Insufficient Flow (Bank 2)

See it working

Watch the animated explainer [How a Fuel Injector Works: Pulse Width and Spray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1423/>

