

VOLKSWAGEN · POWERTRAIN

P1414

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1414 · Volkswagen

Secondary Air Injection System Bank 2 Leak Detected

P1414 on Volkswagen vehicles indicates that the engine control module has detected a leak in the secondary air injection system on bank 2, which is the side of the engine that does not contain cylinder number one. The computer monitors the secondary air system during cold starts and recognizes that the expected pressure or flow change is not occurring, pointing to a leak in the bank 2 air passages or plumbing.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- A faint hissing or rushing air sound from the engine bay during the first minute after a cold start.
- Slightly rough idle or a brief stumble immediately after starting when the secondary air pump runs.
- Increased tailpipe emissions during the cold-start warm-up phase, which may be noticed during an emissions inspection.
- In rare cases, a whistling noise that changes with engine temperature as the secondary air system activates and deactivates.

Common causes, most likely first

- 1 Cracked or disconnected secondary air injection hose or tubing on bank 2.
- 2 Failed secondary air injection combi valve (also called a diverter valve) on bank 2, stuck open or leaking.
- 3 Leaking secondary air injection passage inside the cylinder head on bank 2, often due to carbon buildup or a cracked port.
- 4 Damaged or deteriorated gasket between the combi valve and the cylinder head on bank 2.
- 5 Corroded or loose electrical connector at the bank 2 combi valve, causing the valve to not seal properly.
- 6 Faulty secondary air injection pump that delivers insufficient pressure, though this more often sets a different code.
- 7 Engine vacuum leak or exhaust leak near the bank 2 secondary air components that mimics a secondary air leak.



How to diagnose and fix it

- 1 Visually inspect all secondary air injection hoses and tubes on bank 2 for cracks, loose clamps, or disconnections, and repair or replace as needed.
- 2 Check the bank 2 combi valve for proper operation by applying vacuum or using a scan tool to activate it, and replace the valve if it does not hold vacuum or seal correctly.
- 3 Perform a smoke test on the secondary air injection system on bank 2 to pinpoint leaks that are not visible during a visual inspection.
- 4 Remove the bank 2 combi valve and inspect the mounting surface and gasket for damage or carbon tracking, replacing the gasket if necessary.
- 5 Check the secondary air injection pump output pressure with a pressure gauge and compare to specification, replacing the pump if it is weak.
- 6 Inspect the bank 2 secondary air passages in the cylinder head for cracks or carbon blockages using a borescope, and clean or repair as required.
- 7 Clear the fault codes and perform a cold-start drive cycle to verify that the repair has resolved the issue and that P1414 does not return.

Before you replace the secondary air pump

- A leaking bank 2 combi valve is the most common cause of P1414, yet many technicians replace the secondary air pump first because it is easier to access, only to find the code returns.
- The secondary air injection system only runs for a short period after a cold start, so a leak may not be audible or detectable once the engine is warm, making a cold-start smoke test essential.
- A cracked secondary air passage inside the cylinder head can set P1414 without any external leak, and this condition often requires cylinder head removal to repair correctly.
- P1414 is often accompanied by a lean fuel trim code on bank 2 because a leaking combi valve can allow exhaust gas to enter the secondary air system and affect oxygen sensor readings.
- Volkswagen's secondary air system monitoring is sensitive to small leaks, so a minor crack in a rubber hose that would not affect driveability can still trigger P1414.

Can I keep driving with P1414?

You can generally continue driving with P1414 because the secondary air system only operates during cold starts and does not affect engine power or safety. However, prolonged driving with a leak can lead to increased emissions and may eventually damage the catalytic converter, so schedule a diagnosis soon and avoid ignoring the warning light for extended periods.



Tools that help

- OBD-II scan tool with Volkswagen-specific software
- Hand vacuum pump
- Smoke machine
- Pressure gauge for secondary air pump testing
- Borescope or inspection camera
- Basic hand tools (screwdrivers, wrenches, socket set)

Reading P1414

P Powertrain: engine, transmission and emissions.

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

4 Auxiliary emission controls.

14 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 · **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 Airbags Work: A 50 km/h Crash in Slow Motion](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1414/>

