

GENERIC · POWERTRAIN

P0492

OBD-II TROUBLE CODE

P0492

Secondary Air Injection System Insufficient Flow (Bank 2)

P0492 means the engine computer detected insufficient airflow from the secondary air injection system on bank 2, which is the side of the engine that does not contain cylinder number one. The computer commands the air pump on during cold starts and watches the oxygen sensor response, and when the expected lean shift does not occur, it sets this code.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- A slight rough idle or stumble during the first minute after a cold start
- A brief hissing or rushing air noise from the engine bay on cold start that may be louder or absent
- Slightly higher tailpipe emissions during warm-up, which may be noticed at inspection time
- In rare cases, a noticeable delay in catalytic converter light-off causing a rotten egg smell briefly after startup

Common causes, most likely first

- 1 A cracked, disconnected, or melted secondary air injection hose or tube on bank 2
- 2 A failed secondary air injection combi valve or check valve that is stuck closed or leaking
- 3 A weak or seized secondary air injection pump that cannot deliver enough volume
- 4 A blown fuse or corroded relay in the secondary air pump circuit
- 5 A clogged secondary air injection passage inside the cylinder head or exhaust manifold on bank 2
- 6 A faulty oxygen sensor on bank 2 that responds slowly and mimics low air flow
- 7 A vacuum line or solenoid that controls the bank 2 combi valve and has failed or is leaking



How to diagnose and fix it

- 1 Inspect all secondary air injection hoses and tubes on bank 2 for cracks, breaks, melting, or loose clamps and repair or replace as needed
- 2 Check the secondary air pump fuse and relay, then command the pump on with a scan tool and listen for it to run
- 3 Measure voltage and current at the secondary air pump connector during a commanded cold-start test to confirm the pump is receiving power and drawing normal current
- 4 Remove the bank 2 combi valve and inspect it for carbon buildup, a stuck diaphragm, or a leaking check valve, replacing it if it does not hold vacuum or seal properly
- 5 Use a scan tool to command the secondary air system on and watch bank 2 oxygen sensor response; a lazy sensor that does not switch quickly can falsely set this code
- 6 Check for vacuum supply to the bank 2 combi valve solenoid and test the solenoid for proper operation and resistance
- 7 If all external components pass, inspect and clean the secondary air injection passage in the cylinder head or exhaust manifold for carbon blockage

Before you replace the secondary air pump

- A leaking or stuck-closed combi valve is far more common than a failed air pump, so test the valve before condemning the pump.
- The code can be set by a lazy bank 2 oxygen sensor that does not react to the air injection test, even when the air system is working perfectly.
- Carbon blockage inside the cylinder head air passage is often overlooked and cannot be fixed by replacing external parts.
- A cold-start air pump that runs for only a few seconds may sound normal but still deliver insufficient volume, so current draw testing is more reliable than listening.
- This code does not always mean the catalytic converter is failing, and replacing the converter without fixing the air system will not solve the problem.

Can I keep driving with P0492?

The vehicle is safe to drive with P0492 because the fault only affects cold-start emissions and does not impair engine performance or safety. Avoid long periods of idling from a cold start and have the system inspected soon to prevent excess emissions and possible catalytic converter damage over time.



Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Hand vacuum pump
- Basic socket and wrench set
- Flashlight or inspection mirror

Reading P0492

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

Often seen with

P0410 Secondary Air Injection System Malfunction · **P0411** Secondary Air Injection System Incorrect Flow · **P0412** Secondary Air Injection System Switching Valve 'A' Circuit · **P0413** Secondary Air Injection System Switching Valve 'A' Circuit O · **P0491** Secondary Air Injection System Insufficient Flow (Bank 1)

See it working

Watch the animated explainer [How a CVT Works: Belt and Pulley Transmission](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0492/>

