

VOLKSWAGEN · POWERTRAIN

P1174

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1174 · Volkswagen

Fuel Trim Bank 1 Different Injection Times

P1174 on Volkswagen vehicles indicates that the engine control module has detected a discrepancy in the fuel trim correction between the two injection time maps used for bank 1, meaning the calculated injection duration for one operating mode does not match the other as closely as expected. The computer compares the short-term and long-term fuel trim values derived from different injection timing strategies and flags this code when the deviation exceeds a calibrated threshold, typically pointing to a mechanical or sensor issue that affects fuel delivery consistency.

SYSTEM

Powertrain

CODE TYPE

**Volkswagen
specific**

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Fuel and air
metering**

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Slight hesitation or stumble during light acceleration
- Rough idle quality, especially when the engine is cold
- Intermittent loss of power under load
- Poor fuel economy compared to normal
- Occasional surging at steady cruising speeds

Common causes, most likely first

- 1 Vacuum leaks from cracked or disconnected intake hoses and seals
- 2 Faulty mass air flow sensor providing inaccurate air quantity readings
- 3 Clogged or leaking fuel injectors causing uneven fuel delivery
- 4 Worn spark plugs or ignition coils leading to incomplete combustion
- 5 Exhaust leaks upstream of the oxygen sensor affecting trim feedback
- 6 Contaminated or aging oxygen sensors slowing trim response
- 7 Mechanical issues such as low compression or valve timing problems



How to diagnose and fix it

- 1 Perform a visual inspection of all intake and vacuum lines for cracks, loose clamps, or disconnected hoses and repair as needed
- 2 Use a scan tool to check live fuel trim data and compare short-term and long-term trims at idle and under load to confirm the imbalance
- 3 Clean the mass air flow sensor with a dedicated cleaner and verify its readings against expected values
- 4 Test fuel injectors for flow, spray pattern, and resistance, and replace any that are out of specification
- 5 Inspect spark plugs and ignition coils for wear or failure, replacing them as a set if necessary
- 6 Check for exhaust leaks before the oxygen sensor and repair any leaks found
- 7 Replace the oxygen sensor if its switching response is sluggish or biased, then clear the code and verify the repair with a road test

What most technicians overlook on P1174

- A dirty mass air flow sensor often causes this code without setting a mass air flow sensor code, because the deviation stays within the sensor's own self-test limits but exceeds the injection time comparison threshold.
- Small vacuum leaks that only appear when the engine is cold can trigger P1174 intermittently, so a smoke test performed on a cold engine is more revealing than one done at operating temperature.
- The code can be set by a lazy oxygen sensor that still switches but responds too slowly, which many technicians miss because the sensor does not fail completely.
- Fuel pressure that is slightly below specification, such as from a weak pump or a leaking fuel pressure regulator, can cause the injection time maps to diverge without any hard starting complaint.
- After repairing the underlying fault, the fuel trim adaptations must be cleared with a scan tool before the code will stay off, as the learned values can keep the deviation alive.

Can I keep driving with P1174?

You can usually continue driving to a workshop, but avoid heavy acceleration and sustained high-speed driving until the fault is repaired, as prolonged driving with incorrect fuel trim can damage the catalytic converter and worsen fuel economy.

Tools that help

- OBD-II scan tool with live data capability
- Smoke machine for intake leak detection
- Digital multimeter for sensor and injector testing
- Fuel pressure gauge
- Hand tools for intake and ignition component removal



Reading P1174

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

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0133** O2 Sensor Circuit Slow Response (Bank 1 Sensor 1) · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1174/>

