

VOLKSWAGEN · POWERTRAIN

P1142

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1142 · Volkswagen

Load Calculation Cross Check Lower Limit Exceeded

P1142 on Volkswagen vehicles means the engine control module (ECM) has detected that the calculated engine load is lower than the expected minimum threshold during its cross-check of sensor inputs. The ECM compares the load signal derived from the mass air flow (MAF) sensor against the load calculated from the manifold absolute pressure (MAP) sensor and throttle position, and when the MAF-based load falls below the lower limit, this code is stored.

SYSTEM

Powertrain

CODE TYPE

Volkswagen specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slight hesitation or stumble during light acceleration
- Reduced engine power or sluggish response when climbing hills
- Occasional rough idle or fluctuating idle speed
- Poor fuel economy in some cases
- In rare instances, the engine may enter limp mode

Common causes, most likely first

- 1 Contaminated or failing mass air flow (MAF) sensor
- 2 Vacuum leak in the intake tract after the MAF sensor
- 3 Dirty or faulty manifold absolute pressure (MAP) sensor
- 4 Restricted air intake or clogged air filter
- 5 Wiring or connector issues at the MAF or MAP sensor
- 6 Leaking or stuck open purge valve or other unmetered air entry
- 7 Engine control module (ECM) software issue or internal fault (less common)



How to diagnose and fix it

- 1 Inspect the air intake system for leaks, loose clamps, or disconnected hoses and repair as needed
- 2 Clean the MAF sensor with dedicated MAF cleaner and verify its output with a scan tool
- 3 Check the MAP sensor reading against expected values and clean or replace if faulty
- 4 Perform a smoke test to locate vacuum leaks that are not visible
- 5 Verify wiring and connectors at the MAF and MAP sensors for corrosion or damage
- 6 Compare live data for MAF, MAP, and throttle position to ensure they correlate correctly
- 7 If all sensors and wiring check out, have the ECM software updated or inspected by a dealer

What the load cross-check really monitors

- A dirty MAF sensor often causes this code without setting a MAF-specific fault, so cleaning it first can save unnecessary part swaps.
- Small vacuum leaks that are invisible to the eye can trigger P1142, so a smoke test is more reliable than a visual inspection alone.
- The code can be set by a failing MAP sensor even when the MAF sensor is working perfectly, because the ECM cross-checks both signals.
- On some Volkswagen models, a software update for the ECM is required to correct overly sensitive load monitoring thresholds.
- P1142 can appear after a poorly performed air filter replacement if the intake hose is not seated properly, creating an unmetered air path.

Can I keep driving with P1142?

You can usually continue driving to a workshop, but avoid heavy acceleration and sustained high-speed driving until the fault is diagnosed, as the engine may enter limp mode or suffer reduced performance.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Smoke machine for vacuum leak detection
- MAF sensor cleaner
- Basic hand tools for intake inspection



Reading P1142

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

Often seen with

P0101 Mass/Volume Air Flow Circuit Range/Performance · **P0102** Mass/Volume Air Flow Circuit Low Input · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0171** System Too Lean (Bank 1) · **P2187** System Too Lean at Idle (Bank 1)

See it working

Watch the animated explainer [How a Boxer Engine Works: Flat Engine Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/volkswagen-p1142/>

