

VOLKSWAGEN · POWERTRAIN

P1156

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1156 · Volkswagen

Manifold Absolute Pressure Sensor Circuit Open/Short To Ground

P1156 on Volkswagen vehicles means the engine control module has detected an open circuit or a short to ground in the manifold absolute pressure sensor circuit, so the sensor signal is outside the expected voltage range. The manifold absolute pressure sensor measures intake manifold pressure and is used to calculate load and fuel delivery, so the computer flags this code when the signal wire is broken or shorted to ground.

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
- Rough idle or unstable engine speed, especially when cold
- Hesitation or stumble during acceleration
- Poor fuel economy or rich-running exhaust smell
- Occasional stalling when coming to a stop
- Reduced power or limp-home mode in some driving conditions

Common causes, most likely first

- 1 Broken or chafed signal wire between the manifold absolute pressure sensor and the engine control module
- 2 Corroded or loose electrical connector at the manifold absolute pressure sensor
- 3 Manifold absolute pressure sensor internally shorted to ground
- 4 Short to ground in the sensor wiring harness, often where it rubs against the engine or body
- 5 Contaminated or failed sensor due to oil or carbon buildup in the intake manifold
- 6 Engine control module internal fault on the sensor input circuit, though this is rare



How to diagnose and fix it

- 1 Scan all modules for stored codes and record freeze-frame data to confirm P1156 is active and not a ghost code
- 2 Visually inspect the manifold absolute pressure sensor connector and wiring for corrosion, chafing, or loose pins
- 3 Measure sensor reference voltage and ground at the connector with a multimeter, then check the signal wire for continuity to the engine control module
- 4 Disconnect the sensor and check for a short to ground on the signal wire with the key on and engine off
- 5 Test the manifold absolute pressure sensor with a vacuum pump and multimeter to verify it responds correctly to pressure changes
- 6 Repair or replace damaged wiring and connectors, then clear codes and road test to confirm the repair
- 7 If wiring and sensor test good, check the engine control module input circuit for a short to ground before condemning the module

What a P1156 often really means

- A short to ground in the manifold absolute pressure sensor signal wire is more common than a failed sensor on older Volkswagen models, so always check the harness before replacing parts.
- Oil contamination from a failed turbocharger seal or excessive crankcase vapors can coat the sensor element and cause an intermittent short that only sets the code when the engine is hot.
- The manifold absolute pressure sensor shares its reference voltage and ground with other sensors on some Volkswagen engines, so a fault in a shared circuit can set P1156 along with other sensor codes.
- A loose or cracked intake manifold can cause pressure readings that mimic a sensor circuit fault, so inspect for vacuum leaks before condemning the electrical circuit.
- Clearing the code without repairing the underlying wiring fault often leads to the code returning within a few drive cycles, especially over bumps or during engine movement.

Can I keep driving with P1156?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long trips because the engine may run rich or enter limp mode. If the engine stalls or runs very poorly, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Hand vacuum pump with gauge
- Wiring diagram for the specific Volkswagen model
- Basic socket and screwdriver set



Reading P1156

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

Often seen with

P1155 Manifold Absolute Pressure Sensor Circuit Short To B+ · **P1157** Manifold Absolute Pressure Sensor Circuit Power Supply Malfunction · **P1155** Air/Fuel Sensor Heater Circuit Bank 1 Sensor 2 · **P1157** Lack Of HO2S22 Switches Sensor Indicates Lean · **P1155** HO2S Lean Average Bank 2 Sensor 1 · **P1157** HO2S Bank 2 Sensor 2 Lean System Or Low Voltage · **P1155** Alternative Fuel Controller · **P1157** Lack of Downstream Heated Oxygen Sensor Switch Sensor Indica · **P1155** HO2S Lean Average Bank 2 Sensor 1 · **P1157** HO2S Bank 2 Sensor 2 Lean System Or Low Voltage · **P1155** O2 Sensor Heater Circuit Intermittent Bank 2 Sensor 2 · **P1157** O2 Sensor Heater Circuit High Voltage Bank 2 Sensor 2 · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input

See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes 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-p1156/>

