

GENERIC · POWERTRAIN

P051F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P051F

PCV Filter Restriction

P051F indicates that the powertrain control module has detected a restriction in the positive crankcase ventilation (PCV) filter circuit or the filter itself. The computer monitors the pressure difference across the filter and sets this code when the restriction exceeds a calibrated threshold, meaning the filter is clogged or the sensing system is faulty.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- A slight decrease in fuel economy due to increased crankcase pressure.
- Oil leaks from seals or gaskets caused by elevated crankcase pressure.
- Rough idle or misfire if the restriction is severe enough to affect crankcase ventilation.
- Oil consumption may increase as pressure forces oil past rings or seals.

Common causes, most likely first

- 1 Clogged or saturated PCV filter element, the most common cause.
- 2 Restricted PCV filter housing or passage due to sludge or carbon buildup.
- 3 Faulty PCV filter differential pressure sensor or its wiring.
- 4 Kinked, collapsed, or blocked PCV filter hose.
- 5 Corroded or loose electrical connector at the PCV filter sensor.
- 6 Software calibration issue in the PCM causing false detection (rare).

How to diagnose and fix it

- 1 Inspect the PCV filter and housing for visible debris or sludge; replace the filter if it is dirty or saturated.
- 2 Check the PCV filter hoses for kinks, cracks, or blockages and repair or replace as needed.
- 3 Test the PCV filter differential pressure sensor with a scan tool to verify it reads correctly; replace if faulty.
- 4 Inspect the sensor wiring and connector for corrosion or damage; clean or repair the circuit.
- 5 Clear the code and perform a road test to confirm the repair; if the code returns, perform a smoke test to check for leaks.
- 6 If all mechanical and electrical checks pass, check for PCM software updates or consult a dealer for calibration issues.



Don't overlook the PCV filter sensor circuit

- A dirty PCV filter is often the culprit, but technicians frequently replace the filter without checking the differential pressure sensor, which can also set P051F.
- The code can be triggered by a loose or corroded connector at the PCV filter sensor, so always perform a wiggle test and inspect the pins before condemning the filter.
- On some vehicles, a restricted PCV filter may not cause any drivability symptoms, leading owners to ignore the light until oil leaks develop.
- A kinked PCV filter hose can mimic a clogged filter, so inspect the entire hose routing carefully, especially after recent engine work.
- P051F is sometimes stored alongside misfire codes if crankcase pressure affects ring sealing, so address the restriction before chasing other codes.

Can I keep driving with P051F?

It is generally safe to continue driving with P051F, but avoid ignoring it for long periods because prolonged restriction can lead to oil leaks and increased emissions. Have the system inspected at your earliest convenience to prevent secondary damage.

Tools that help

- OBD-II scan tool with live data capability
- Hand tools for hose clamp and filter removal
- Vacuum/pressure gauge or differential pressure tester
- Smoke machine for leak detection
- Digital multimeter for sensor circuit testing

Reading P051F

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Vehicle speed, idle control and auxiliary inputs.
1F	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0442** EVAP System Leak Detected (Small) · **P051E** Crankcase Pressure Sensor A Circuit Intermittent/Erratic · **P052E** PCV Regulator Valve Performance



See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p051f/>

