

GENERIC · POWERTRAIN

P051A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P051A

Crankcase Pressure Sensor A Circuit

P051A indicates that the powertrain control module (PCM) has detected an electrical fault in the circuit for Crankcase Pressure Sensor A, which monitors pressure inside the engine crankcase. The PCM compares the sensor signal to expected values and sets this code when the voltage or signal is out of range, indicating an open, short, or performance issue.

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

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp).
- Often no symptoms besides the warning light, especially if the fault is intermittent.
- Rough idle or engine misfire due to incorrect crankcase pressure affecting air-fuel mixture.
- Oil leaks or excessive oil consumption from increased crankcase pressure.
- Poor fuel economy or reduced engine performance.
- Possible stalling or hesitation during acceleration.

Common causes, most likely first

- 1 Faulty crankcase pressure sensor.
- 2 Damaged or disconnected wiring or connector at the sensor.
- 3 Corroded or loose electrical terminals in the sensor circuit.
- 4 Failed PCV (positive crankcase ventilation) valve or clogged PCV hose causing abnormal pressure.
- 5 Engine vacuum leak or intake manifold leak affecting crankcase pressure.
- 6 PCM software issue or internal fault (rare).

How to diagnose and fix it

- 1 Perform a visual inspection of the crankcase pressure sensor, its connector, and wiring for damage or disconnection.
- 2 Check for technical service bulletins (TSBs) or known issues for the specific vehicle make and model.
- 3 Use a scan tool to read live data from the crankcase pressure sensor and compare to expected values.
- 4 Test the sensor circuit with a multimeter to check for opens, shorts, or excessive resistance.
- 5 Inspect the PCV system for clogs or leaks and repair as needed.
- 6 Replace the crankcase pressure sensor if testing indicates it is faulty.
- 7 Clear the diagnostic trouble codes and verify the repair with a test drive.



Crankcase Pressure Sensor Circuit Pitfalls

- A clogged PCV valve or hose can cause crankcase pressure to exceed normal ranges, triggering P051A even when the sensor and wiring are healthy.
- Intermittent faults often stem from chafed wiring near hot or moving components, so wiggle-testing the harness while monitoring live data is crucial.
- Some vehicles use the crankcase pressure sensor for other functions like oil life monitoring, so a failure may also affect maintenance reminders.
- Replacing the sensor without addressing underlying oil sludge or PCV issues can lead to repeat failures.
- The PCM may set P051A alongside other codes like P0171 or P0507 if crankcase pressure affects air-fuel ratio or idle speed.

Can I keep driving with P051A?

It is generally safe to drive with P051A if the engine runs smoothly and there are no other symptoms, but avoid prolonged driving and schedule a diagnosis soon. If you notice rough running, oil leaks, or stalling, stop driving and seek immediate repair to prevent engine damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Hand tools (screwdrivers, pliers, socket set)
- Vacuum/pressure gauge
- Wiring diagram for the specific vehicle

Reading P051A

- 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.
- 1A** The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0507** Idle Control System RPM Higher Than Expected · **P051B** Crankcase Pressure Sensor A Circuit Range/Performance · **P051C** Crankcase Pressure Sensor A Circuit Low · **P0521** Engine Oil Pressure Sensor/Switch Circuit Range/Performance



See it working

Watch the animated explainer [How Crank and Cam Position Sensors Work](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p051a/>

