

GENERIC · POWERTRAIN

P051E

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P051E

Crankcase Pressure Sensor A Circuit Intermittent/Erratic

P051E means the powertrain control module (PCM) has detected an intermittent or erratic signal from the crankcase pressure sensor on circuit A. The PCM expects a steady, plausible voltage from this sensor, and it has seen the signal drop out, spike, or jump around outside normal limits for long enough to set the code.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or intermittent stalling when the crankcase pressure signal drops out
- Oil leaks or excessive crankcase pressure if the sensor reading is skewed
- Poor fuel economy or slightly rough running as the PCM adjusts fuel and airflow
- A pending P051E that comes and goes with temperature or vibration
- Unrelated driveability complaints if the erratic signal affects PCV or turbo control

Common causes, most likely first

- 1 Frayed, chafed, or intermittently shorted wiring in the crankcase pressure sensor circuit
- 2 Loose or corroded connector pins at the sensor or PCM
- 3 Failing crankcase pressure sensor with an internal intermittent fault
- 4 Clogged or restricted PCV system causing pressure fluctuations the sensor reports as erratic
- 5 Oil sludge or contamination on the sensor element causing unstable readings
- 6 PCM software or internal circuit issue (less common, but possible)

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to see when the intermittent fault occurs
- 2 Inspect the crankcase pressure sensor connector and wiring for chafing, corrosion, or loose pins
- 3 Perform a wiggle test on the harness while watching live sensor voltage on a scan tool
- 4 Check the PCV system for clogs or restrictions that could cause pressure swings
- 5 Compare sensor voltage to a known-good value or use a gauge to verify actual crankcase pressure
- 6 Replace the crankcase pressure sensor if wiring and PCV checks pass but the signal remains erratic
- 7 Clear the code and road-test to confirm the repair, rechecking for pending codes



What a wiggle test reveals about P051E

- A crankcase pressure sensor that reads erratically only when the engine is cold often points to a failing sensor element rather than wiring.
- Many technicians replace the sensor first, but a chafed wire near the oil filter housing or exhaust heat shield is a frequent hidden cause.
- A clogged PCV valve can create pressure pulses that the sensor reports as an erratic signal, setting P051E without any sensor fault.
- This code can be set by a loose oil filler cap or dipstick that allows unmetered air and pressure changes, so check the simple things first.
- Intermittent codes often leave no freeze-frame data, so a road test with a scan tool recording live data is more useful than static testing.

Can I keep driving with P051E?

You can usually drive with P051E, but avoid heavy acceleration or towing until it is diagnosed because an erratic crankcase pressure signal can affect PCV and turbo control. If the engine runs rough or stalls, stop driving and have it inspected promptly.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probing pins
- Hand vacuum/pressure pump and gauge
- Wiring diagram for the crankcase pressure sensor circuit
- Basic hand tools for connector and sensor access

Reading P051E

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.
1E	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P051C** Crankcase Pressure Sensor A Circuit Low · **P051D** Crankcase Pressure Sensor A Circuit High · **P051F** PCV Filter Restriction · **P0520** Engine Oil Pressure Sensor/Switch Circuit Malfunction



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/p051e/>

