

GENERIC · POWERTRAIN

P030B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P030B

Ignition A Control Signal Circuit Low

P030B indicates that the powertrain control module (PCM) has detected an abnormally low voltage on the ignition coil A control circuit, which is the primary trigger signal for the ignition coil. The PCM commands the coil to fire by pulling this circuit to ground, and a low signal means the circuit is shorted to ground or the coil's internal driver has failed.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Engine misfire, rough idle, or hesitation under acceleration if the fault affects ignition
- Reduced engine power or a limp-home mode in some vehicles
- Difficulty starting or an engine that cranks but does not fire
- Intermittent stalling or a sudden loss of power while driving

Common causes, most likely first

- 1 Faulty ignition coil with an internally shorted primary winding or driver circuit
- 2 Short to ground in the ignition coil control wire between the PCM and the coil
- 3 Damaged or corroded ignition coil connector pins or harness
- 4 PCM driver circuit failure for the ignition coil control channel
- 5 Aftermarket alarm or remote start wiring that has tapped into the ignition circuit
- 6 Engine wiring harness chafing against a metal bracket or heat source

How to diagnose and fix it

- 1 Inspect the ignition coil connector and harness for corrosion, loose pins, or chafed wires
- 2 Disconnect the coil and measure resistance from the control wire to ground to check for a short
- 3 Swap the ignition coil with a known-good coil from another cylinder to see if the code moves
- 4 Check for continuity and voltage drop on the control circuit between the PCM and coil
- 5 Test the PCM control signal with a noid light or oscilloscope to confirm the driver is functioning
- 6 Repair any shorted wiring or replace the faulty ignition coil as needed
- 7 Clear the code and verify the repair with a road test and live data monitoring



What the low signal really means

- A low control signal does not always mean the coil is bad; a shorted wire or a failed PCM driver can produce the same code.
- Many technicians replace the ignition coil only to find the code returns because the control wire is shorted to ground inside the harness.
- Aftermarket accessories such as alarm systems or remote starters often tap into the ignition coil control circuit and create intermittent shorts.
- The PCM may set P030B even when the engine runs perfectly if the fault is intermittent and only occurs under specific conditions like heat or vibration.
- Always check for related codes like P0351 or P0300, which can provide additional clues about whether the issue is isolated to one coil or affects multiple cylinders.

Can I keep driving with P030B?

If the check engine light is on but the engine runs smoothly, you can drive cautiously to a repair shop, but avoid heavy acceleration or long trips. If the engine misfires, runs rough, or stalls, stop driving and have the vehicle towed to prevent damage to the catalytic converter or other components.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Noid light or oscilloscope
- Wire piercing probes and jumper wires
- Factory service information for wiring diagrams

Reading P030B

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
3	Ignition system and misfire.
0B	The exact fault within that area.

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction · **P0352** Ignition Coil B Primary/Secondary Circuit Malfunction · **P0353** Ignition Coil C Primary/Secondary Circuit Malfunction



See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p030b/>

