

GENERIC · POWERTRAIN

P030F

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P030F

Ignition B Control Signal Circuit High

P030F is a generic OBD-II code that indicates the powertrain control module (PCM) has detected an abnormally high voltage on the ignition control circuit for coil B, which is one of the individual ignition coil circuits on a distributorless ignition system. The PCM commands a ground pulse to fire the coil, and when the feedback circuit shows voltage staying high instead of pulsing low, the PCM sets this code because it cannot properly control that coil.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Engine misfire that may be intermittent or consistent, depending on the fault
- Rough idle or shaking that worsens under load
- Reduced engine power or limp mode in some vehicles
- Poor fuel economy due to incomplete combustion
- Possible flashing check engine light if the misfire is severe enough to damage the catalytic converter

Common causes, most likely first

- 1 Open or high-resistance wiring in the ignition coil B control circuit, such as a broken wire or corroded connector
- 2 Failed ignition coil B with an internal open circuit in its primary winding
- 3 Faulty powertrain control module (PCM) driver for that coil circuit
- 4 Short to voltage on the control circuit between the PCM and the coil
- 5 Poor ground connection for the ignition coil or engine block
- 6 Damaged or loose electrical connector at the coil or PCM



How to diagnose and fix it

- 1 Inspect the ignition coil B connector and wiring for corrosion, looseness, or physical damage, and repair as needed
- 2 Check for a short to voltage on the control circuit using a digital multimeter with the key on and the PCM disconnected
- 3 Measure the resistance of the ignition coil B primary and secondary windings and compare to the manufacturer's specification
- 4 Test the control circuit for continuity and resistance from the PCM connector to the coil connector
- 5 Swap the suspect ignition coil with a known-good coil from another cylinder to see if the misfire follows the coil
- 6 Verify the PCM driver by back-probing the control circuit with a lab scope or noid light while cranking the engine
- 7 If all wiring and coils test good, diagnose or replace the PCM as the last step

What P030F really tells you about coil control

- A high voltage on the control circuit often means the coil primary winding is open, so the PCM sees no path to ground and the circuit stays at battery voltage.
- Technicians sometimes replace the coil when the real problem is a rubbed-through wire harness shorting to voltage, so always inspect the loom before condemning parts.
- This code can be set by a faulty PCM driver that fails to pull the circuit low, but PCM failure is rare and should only be suspected after all other tests pass.
- On some vehicles, a weak or missing engine ground can cause the coil control circuit to read high, so check ground straps and battery terminals before chasing the coil.
- P030F is often stored alongside misfire codes for the same cylinder, but the presence of P030F specifically points to the control circuit rather than a spark plug or fuel issue.

Can I keep driving with P030F?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration and long trips because a persistent misfire can overheat and damage the catalytic converter. If the check engine light is flashing, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Lab scope or noid light
- Basic hand tools and socket set
- Wiring diagram for the specific vehicle



Reading P030F

- 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.
- 0F** The exact fault within that area.

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction · **P0352** Ignition Coil B 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/p030f/>

