

GENERIC · POWERTRAIN

P038B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P038B

Ignition I Control Signal Circuit Low

P038B means the powertrain control module (PCM) has detected an abnormally low voltage on the ignition control circuit for ignition coil or cylinder 'I' during engine operation. The PCM commands a dwell signal to fire the coil, but the feedback or circuit voltage stays below the expected threshold, indicating a short to ground, an open circuit, or a failed coil driver.

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

Symptoms you may notice

- Engine misfire, rough idle, or noticeable loss of power under load
- Illuminated check engine light, often flashing if the misfire is severe
- Hard starting or a no-start condition when the affected ignition circuit is completely dead
- Increased fuel consumption and a strong raw fuel smell from the exhaust
- Often no symptoms besides the warning light if the fault is intermittent or only affects one coil at light load

Common causes, most likely first

- Faulty ignition coil or coil-on-plug assembly with an internally shorted primary winding
- Damaged wiring harness between the PCM and the ignition coil, such as a rubbed-through insulation or a broken conductor
- Corroded, loose, or pushed-back terminal at the coil connector or PCM connector
- Failed ignition coil driver inside the PCM (less common but possible after a coil short)
- Aftermarket alarm or remote start wiring improperly spliced into the ignition control circuit
- Engine oil or coolant contamination degrading the coil connector or harness insulation



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P038B, then inspect the ignition coil connector and harness for corrosion, looseness, or chafing
- 2 Measure resistance of the ignition coil primary and secondary windings and compare with the manufacturer's specification
- 3 Back-probe the ignition control circuit at the coil and at the PCM to check for a short to ground or an open circuit while wiggling the harness
- 4 Swap the suspect ignition coil with a known-good coil from another cylinder and see if the code follows the coil or stays with the original cylinder
- 5 Check for continuity and voltage drop on both the power and ground sides of the coil circuit, repairing any high-resistance connections
- 6 If the circuit and coil test good, use an oscilloscope to verify the PCM driver signal is present and correctly shaped before condemning the PCM
- 7 Clear the code and perform a road test with live misfire data to confirm the repair, then verify no pending codes return

What a low ignition signal really means

- A low signal code often sets because the coil primary winding has shorted to ground internally, which pulls the entire control circuit low and can damage the PCM driver if the coil is not replaced promptly.
- Technicians sometimes replace the PCM when the actual fault is a chafed harness behind the engine that only shorts when the engine moves under torque, so always wiggle-test the harness under load.
- P038B can be set by a loose or corroded ground strap between the engine and chassis, which raises the reference voltage on the ignition circuit and makes the PCM see a false low signal.
- Aftermarket remote start or alarm installers frequently tap into ignition coil control wires for tach signals, and a poor splice there can set this code without any factory component being faulty.
- The code does not always mean the coil is dead; an intermittent open in the control wire can set P038B only during certain driving conditions, so a simple resistance check at idle may pass.

Can I keep driving with P038B?

You can drive cautiously to a repair shop if the engine runs smoothly and the check engine light is steady, but avoid heavy acceleration and long trips. If the light is flashing or the engine misfires badly, stop driving because unburned fuel can overheat and destroy the catalytic converter.



Tools that help

- OBD-II scan tool with live misfire and freeze-frame data
- Digital multimeter with back-probe pins
- Oscilloscope for verifying the ignition control signal
- Hand tools for coil and harness access
- Wiring diagram for the specific vehicle

Reading P038B

- P** Powertrain: engine, transmission and emissions.
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- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 3** Ignition system and misfire.
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- 8B** 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 · **P038A** Ignition I Control Signal Circuit/Open

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/p038b/>

