

GENERIC · POWERTRAIN

P03FF

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03FF

Ignition L Control Signal Circuit High

P03FF means the engine control module (ECM) has detected a high-voltage condition on the ignition coil control circuit for a coil the manufacturer labels 'L'. The ECM commands the coil to fire by pulling that circuit low, and it monitors the circuit for an unexpected high voltage that indicates an open circuit, a short to voltage, or a failed coil driver.

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
- Rough idle or a noticeable misfire under load
- Reduced engine power or a limp-home mode on some vehicles
- Slight hesitation or stumble during acceleration
- Poor fuel economy if the affected cylinder is misfiring
- In rare cases, a no-start condition if multiple ignition circuits are affected

Common causes, most likely first

- 1 Open or damaged wire in the ignition coil control circuit between the ECM and the coil
- 2 Shorted ignition coil primary winding or internal coil driver
- 3 Corroded, loose, or backed-out terminal at the coil or ECM connector
- 4 Short to voltage on the control circuit from chafed wiring or water intrusion
- 5 Failed ignition coil driver inside the ECM (less common but possible)
- 6 Aftermarket alarm or remote start wiring tapped into the ignition circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm when the high-voltage condition was set
- 2 Inspect the ignition coil connector and the ECM connector for corrosion, loose pins, or pushed-out terminals
- 3 Measure resistance of the ignition coil primary and secondary windings and compare with the manufacturer's specification
- 4 Back-probe the control circuit at the coil and check for a short to voltage with the key on and the ECM disconnected
- 5 Perform a wiggle test on the harness while watching a multimeter or oscilloscope on the control circuit
- 6 If the circuit and coil test good, substitute a known-good coil and clear the code to see if it returns
- 7 If the code persists with a verified-good circuit and coil, diagnose the ECM driver circuit or replace the ECM as a last resort

What the high-voltage reading really means

- A high-voltage code on an ignition control circuit often means the circuit is open, not that the coil is receiving too much voltage, so a simple coil swap can miss a broken wire.
- The ECM monitors the control circuit with the key on and the engine off, so a code can set before the engine ever cranks and may not produce a drivability symptom.
- Water intrusion into the coil-on-plug valley or a cracked coil boot can corrode the control terminal and set this code without any visible misfire.
- Aftermarket remote start or alarm installers sometimes tap the ignition coil control wire, creating a high-resistance or shorted connection that sets P03FF intermittently.
- A failed ECM driver for one coil is rare, but it is the correct diagnosis only after the harness and coil have been proven good under load and vibration.

Can I keep driving with P03FF?

You can usually drive the vehicle to a repair shop if the only symptom is the warning light, but avoid heavy acceleration and long trips because a misfiring cylinder can overheat the catalytic converter. If the engine is running rough or lacks power, keep driving to a minimum and have it diagnosed promptly.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Oscilloscope (optional but helpful for viewing the control signal)
- Wire-piercing probes or back-probe kit
- Factory service information for connector pinouts and coil specifications



Reading P03FF

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.
FF	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/p03ff/>

