

GM · POWERTRAIN

P1315

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1315 · GM

Ignition Coil 4 Primary Feedback Circuit

P1315 is a manufacturer-specific code stored by GM powertrain control modules when the ignition coil primary feedback circuit for cylinder 4 reports an unexpected voltage or current signature during coil charging and firing. The computer monitors the coil's primary winding control line and flags the circuit when the feedback does not match the commanded dwell and firing event.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Engine misfire felt as a shake or stumble, often most noticeable at idle or under light acceleration
- Illuminated check engine light, sometimes flashing if the misfire is severe enough to risk catalyst damage
- Rough running or a noticeable loss of power, especially when the engine is under load
- A slight hesitation or surge during acceleration as the affected cylinder drops out intermittently
- Often no symptoms besides the warning light when the feedback fault is intermittent and the coil still fires normally
- Possible poor fuel economy if the misfire causes the computer to enrich the mixture

Common causes, most likely first

- Faulty ignition coil for cylinder 4 with a degraded primary winding or internal feedback circuit
- Damaged or corroded connector terminals at the cylinder 4 coil, including backed-out pins or water intrusion
- Chafed, broken, or shorted wire in the coil primary feedback circuit between the coil and the powertrain control module
- Poor ground connection for the ignition coil circuit, causing a voltage drop that distorts the feedback signal
- Failed ignition control module or coil driver inside the powertrain control module, though this is less common
- Aftermarket coil with incorrect internal resistance or feedback characteristics that the module cannot interpret
- Secondary ignition problem such as a worn spark plug or plug boot that stresses the coil and corrupts the primary feedback



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1315, then inspect the cylinder 4 coil connector and wiring for corrosion, looseness, or chafing
- 2 Swap the cylinder 4 ignition coil with a known-good coil from another cylinder and clear the code to see whether the fault follows the coil or stays on cylinder 4
- 3 Measure resistance of the cylinder 4 coil primary and secondary windings and compare with the manufacturer's specification for that engine
- 4 Back-probe the coil primary feedback circuit at the powertrain control module and check for voltage spikes or a missing signal while cranking and running
- 5 Perform a wiggle test on the coil harness and connector while watching live misfire counters or the feedback parameter on a scan tool
- 6 Check the coil ground circuit for excessive resistance and repair any corroded or loose ground connections
- 7 If the circuit and coil test good, diagnose the powertrain control module driver for cylinder 4 before condemning the module

Why cylinder 4 coil feedback codes mislead

- A P1315 can set from a marginal spark plug or plug boot that forces the coil to fire at a higher voltage, corrupting the primary feedback signal even though the coil itself is healthy.
- Technicians often replace the cylinder 4 coil immediately, but a backed-out terminal in the coil connector or a chafed wire near the intake manifold is just as common and much cheaper to fix.
- The feedback circuit is sensitive to ground quality, so a corroded engine ground strap can set this code on an otherwise good coil and send diagnosis in the wrong direction.
- An aftermarket coil that physically fits but has different internal resistance can trigger P1315 because the module expects a specific feedback signature from the original coil design.
- This code does not always mean the coil is failing; an intermittent feedback fault can set while the coil still fires normally, which is why the misfire counter and live data matter more than the code alone.

Can I keep driving with P1315?

You can usually drive short distances to a repair shop if the engine runs smoothly and the check engine light is steady, but avoid heavy acceleration and towing. If the light flashes or the engine misfires badly, stop driving because raw fuel can overheat and destroy the catalytic converter.

Tools that help

- OBD-II scan tool with live misfire and coil feedback data
- Digital multimeter with back-probe pins
- Spark tester
- Socket set and extension for coil removal
- Wiring diagram for the ignition coil circuit



Reading P1315

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (GM): its meaning depends on the make.
- 3** Ignition system and misfire.
- 15** The exact fault within that area.

Often seen with

P1316 Spark Plug Voltage Detection Circuit Malfunction Front Bank · **P1313** Misfire Rate Catalyst Damage Fault Bank 1 · **P1314** Misfire Rate Catalyst Damage Fault Bank 2 · **P1316** Misfire Rate Exceeds Emissions · **P1316** Spark Plug Voltage Detection Circuit Malfunction Front Bank · **P1316** Injector Circuit IDM Codes Detected · **P1313** A Camshaft Position Plausibility · **P0304** Cylinder 4 Misfire Detected · **P0354** Ignition Coil D 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/gm-p1315/>

