

GM · POWERTRAIN

P1310

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1310 · GM

Ignition Coil 3 Primary Feedback Circuit

P1310 on a GM vehicle means the powertrain control module (PCM) is not receiving the expected primary feedback signal from ignition coil 3, so it cannot confirm that coil is firing correctly. The PCM monitors the coil's primary circuit and sets this code when the feedback voltage stays outside the expected range during engine operation.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system
and misfire

Symptoms you may notice

- Check engine light or service engine soon light illuminated, often with no other symptoms
- Rough idle or misfire felt as a shake or stumble, especially noticeable at idle or light throttle
- Loss of power or hesitation during acceleration because one cylinder is not contributing fully
- Increased fuel consumption as the PCM adjusts fuel delivery to compensate for the misfire
- A flashing check engine light in severe cases, indicating a misfire that can damage the catalytic converter
- Often no symptoms besides the warning light when the feedback circuit fails but the coil still fires normally

Common causes, most likely first

- 1 Faulty ignition coil 3, where the internal feedback circuit has failed even though the coil may still spark
- 2 Damaged or corroded wiring or connector at ignition coil 3, including a backed-out terminal or broken lock tab
- 3 Open or shorted feedback circuit between coil 3 and the PCM, often from chafed harness insulation or a pinched wire
- 4 Failed PCM driver or feedback input for coil 3, which is less common but possible after a voltage spike or water intrusion
- 5 Poor ground connection for the coil circuit, causing the feedback signal to float outside the expected range
- 6 Aftermarket or incorrect coil installed previously that does not provide the correct feedback signal to the PCM



How to diagnose and fix it

- 1 Inspect ignition coil 3 and its connector for corrosion, loose terminals, or a cracked coil housing, and reseal the connector firmly
- 2 Check the coil 3 feedback circuit for continuity and short-to-ground or short-to-power using a wiring diagram and a digital multimeter
- 3 Swap ignition coil 3 with a known-good coil from another cylinder and see whether the code follows the coil or stays with cylinder 3
- 4 Verify the ground and power feeds at the coil 3 connector with the key on and during cranking, comparing to a known-good cylinder
- 5 If the circuit and coil test good, check the PCM connector for corrosion or pushed pins on the coil 3 feedback terminal
- 6 Replace ignition coil 3 only after confirming the feedback circuit is intact and the fault follows the coil during a swap
- 7 Clear the code and perform a drive cycle that includes idle and light-load operation to confirm the repair

Why coil 3 feedback fails without a misfire

- A coil can still produce a strong spark while its primary feedback circuit is dead, so the engine may run perfectly and the only clue is the stored code.
- Technicians often replace the coil first and find the code returns because the real problem is a chafed feedback wire in the harness near the coil bracket.
- A weak or failing ignition coil on another cylinder can sometimes set a feedback code for cylinder 3 if the PCM misinterprets shared circuit noise, so check all coils before condemning the PCM.
- Water intrusion into the coil connector or PCM connector after engine washing or a coolant leak is a common hidden cause of feedback circuit codes on GM engines.
- This code does not always mean the coil is misfiring; it means the PCM cannot verify coil 3 operation, so diagnose the feedback circuit before condemning the coil.

Can I keep driving with P1310?

You can usually drive short distances at moderate speed with P1310 stored, but avoid heavy acceleration and towing until the fault is repaired because a persistent misfire can overheat the catalytic converter. If the check engine light is flashing, stop driving and have the vehicle towed or repaired immediately.



Tools that help

- OBD-II scan tool with live misfire and coil feedback data
- Digital multimeter with back-probe pins
- Wiring diagram for the specific GM engine and coil circuit
- Socket set and Torx or hex drivers for coil removal
- Known-good ignition coil for swap testing
- Contact cleaner and dielectric grease for connector service

Reading P1310

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

Often seen with

P1312 Exhaust Temperature Sensor Malfunction · **P1312** Injection Pump Timing Actuator Circuit · **P0300** Random/Multiple Cylinder Misfire Detected · **P0303** Cylinder 3 Misfire Detected · **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/gm-p1310/>

