

GM · POWERTRAIN

P1381

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1381 · GM

Misfire Detected No Communication with Brake Control Module

P1381 on a GM vehicle means the powertrain control module (PCM) has detected engine misfire and also lost communication with the brake control module (BCM) over the controller area network (CAN) or serial data bus. The PCM stores this code when it cannot confirm misfire data from the brake system, often because the BCM is offline or the data bus is faulted.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Ignition system and misfire

Symptoms you may notice

- Malfunction indicator lamp (MIL) illuminated, often with no other noticeable symptoms
- Rough idle or engine stumble under acceleration if the misfire is real and active
- Anti-lock brake (ABS) warning light or traction control light also on
- Reduced engine power or limp mode in some cases
- Intermittent electrical glitches such as flickering dash lights or radio cutouts

Common causes, most likely first

- 1 Faulty or disconnected brake control module (BCM) power or ground circuit
- 2 Damaged or chafed wiring in the CAN bus or serial data line between PCM and BCM
- 3 Failed brake control module (internal communication fault)
- 4 Corroded or loose connectors at the BCM or PCM
- 5 Low battery voltage or poor charging system causing modules to drop offline
- 6 Ignition switch or body control module (BCM) power supply issue affecting module wake-up

How to diagnose and fix it

- 1 Perform a battery and charging system test to rule out low voltage as the root cause
- 2 Use a scan tool to check for communication codes in all modules and verify BCM presence on the bus
- 3 Inspect and wiggle-test the wiring harness and connectors at the BCM and PCM for corrosion or damage
- 4 Check powers and grounds at the BCM with a multimeter under load
- 5 Measure CAN bus resistance (should be about 60 ohms) and check for shorts or opens
- 6 If wiring and power are good, substitute a known-good BCM or perform module reprogramming per GM service information
- 7 Clear codes and road-test to confirm the misfire and communication fault are resolved



Why a brake module sets a misfire code

- P1381 is often set by a failing BCM or its power supply rather than by an actual engine misfire, so chasing spark plugs first wastes time.
- A weak battery or bad ground can cause the BCM to drop off the bus intermittently, setting P1381 without any hard fault in the module.
- The PCM may use brake system data for torque management and misfire detection, so a communication loss can trigger a misfire code even when the engine runs smoothly.
- Corrosion inside a connector can create enough resistance to disrupt CAN communication without visibly damaging the wire.
- After replacing a BCM, programming or relearning is often required on GM vehicles, or the code may return immediately.

Can I keep driving with P1381?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because the misfire may be real and the ABS/traction control may be disabled. If the engine runs poorly or multiple warning lights are on, stop driving and have it towed.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter (DMM)
- CAN bus test breakout box or backprobe kit
- Wiring diagram for the specific GM model
- Battery load tester

Reading P1381

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

Often seen with

P1380 Misfire Detected Rough Road Data Not Available · **P1380** VCT Solenoid Valve Circuit Short or Open · **P1380** Misfire Detected Rough Road Data Not Available · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control



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-p1381/>

