

GM · POWERTRAIN

P1353

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1353 · GM

IC Output High Pulse Detected When Grounded Cyl 3

P1353 on GM vehicles means the ignition control (IC) circuit for cylinder 3 is being commanded high by the powertrain control module (PCM) but the circuit is detected as grounded, indicating a short to ground or a failed ignition coil/module driver. The PCM monitors the IC output and sets this code when the expected high pulse is not present because the line is pulled low.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Check engine light (malfunction indicator lamp) illuminated, often with no other noticeable symptoms
- Engine misfire or rough running, especially under load or at idle
- Reduced engine power or limp mode in some GM models
- Poor fuel economy and increased emissions
- Possible backfiring or hesitation during acceleration
- In rare cases, the engine may stall or be hard to start

Common causes, most likely first

- 1 Faulty ignition coil for cylinder 3 with an internal short to ground
- 2 Chafed or damaged IC circuit wire (short to ground) between the PCM and ignition coil
- 3 Failed ignition control module (ICM) driver for cylinder 3 (on distributorless systems)
- 4 Corroded or loose electrical connector at the ignition coil or PCM
- 5 PCM internal driver failure (less common)
- 6 Aftermarket alarm or remote start wiring tapped into the IC circuit

How to diagnose and fix it

- 1 Inspect the ignition coil connector and IC circuit wiring for chafing, corrosion, or loose pins
- 2 Swap the cylinder 3 ignition coil with a known-good coil from another cylinder and see if the code moves
- 3 Use a digital multimeter to check the IC circuit for a short to ground with the PCM disconnected
- 4 Check for continuity and resistance on the IC circuit between the PCM and coil; repair any open or shorted wire
- 5 If the coil and wiring test good, test the ignition control module (if separate) and replace if faulty
- 6 If all external components pass, suspect the PCM and perform a driver test or replace/ reprogram the PCM

Before you replace the ignition coil

- A shorted fuel injector or injector harness can back-feed the IC circuit and set P1353, so always check injector wiring if the coil tests good.
- On some GM engines, a failing crankshaft position sensor or reluctor wheel can cause erratic IC pulses that mimic a grounded circuit, so review freeze-frame data for RPM anomalies.
- The code may set intermittently due to heat or vibration; a wiggle test of the harness while monitoring IC pulse with a lab scope often reveals the fault.
- Aftermarket spark plugs with incorrect gap or resistance can stress the coil and cause a secondary short that damages the IC driver, so verify plug specification.
- P1353 is often stored alongside misfire codes for cylinder 3 (P0303) and other ignition codes; diagnosing the root cause prevents repeat coil failures.

Can I keep driving with P1353?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration or towing because a misfiring cylinder can overheat the catalytic converter. If the engine is running very rough or stalling, stop driving and arrange a tow to prevent further damage.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter (DMM) with continuity and resistance tests
- Oscilloscope or lab scope for monitoring IC pulses
- Wire piercing probes and jumper wires
- Factory service information for wiring diagrams and pinouts

Reading P1353

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



Often seen with

P1354 Modulation Piston Displacement Sensor Circuit Malfunction · **P1354** VVT System Malfunction Bank 2 · **P1351** VVT Sensor Range Performance Problem Bank 2 · **P1351** Injection Sensor Circuit · **P1352** Needle Lift Sensor · **P1354** Ignition Coil C Primary Circuit · **P1351** Ignition Diagnostic Monitor Signal Lost To PCM Or Out Of Ran · **P1352** Ignition Coil A Primary Circuit · **P1354** IC Output High Pulse Detected When Grounded Cyl 4 · **P1351** Ignition Control Circuit Voltage High · **P1352** IC Output High Pulse Detected When Grounded Cyl 2 · **P1352** Ignition Coil A Primary Circuit Fault · **P1354** Ignition Coil C Primary Circuit Fault · **P1351** Ignition Diagnostic Monitor Circuit Input Fault · **P1352** IC Output High Pulse Detected When Grounded Cyl 2 · **P1354** IC Output High Pulse Detected When Grounded Cyl 4 · **P1351** IC Circuit High Voltage · **P1354** Misfire During Start Cylinder 7 · **P1352** Misfire During Start Cylinder 6 · **P1351** Misfire Cylinder 5 With Fuel Cut-off · **P0303** Cylinder 3 Misfire Detected · **P0353** Ignition Coil C Primary/Secondary Circuit Malfunction

See it working

Watch the animated explainer [How a Boxer Engine Works: Flat Engine Cutaway](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1353/>

