

GM · POWERTRAIN

P1356

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1356 · GM

IC Output High Pulse Detected When Grounded Cyl 6

P1356 is a GM-specific ignition control code that sets when the engine control module (ECM) commands the cylinder 6 ignition coil control circuit low but detects a high voltage pulse on that same circuit, indicating an unexpected short to voltage or an open circuit. The ECM monitors the ignition control (IC) output for each cylinder and flags this code when the feedback signal does not match the commanded ground state.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Engine misfire, often felt as a stumble or rough idle, especially noticeable at low speeds
- Illuminated check engine light or flashing check engine light if the misfire is severe
- Reduced engine power or poor acceleration due to the misfire on cylinder 6
- Increased fuel consumption as the ECM may add fuel to compensate for the misfire
- Often no symptoms besides the warning light if the fault is intermittent and the misfire is not severe enough to be felt
- Possible rough running or vibration that worsens under load

Common causes, most likely first

- 1 Faulty ignition coil on cylinder 6 (internal short or open in the primary winding)
- 2 Damaged or chafed wiring in the cylinder 6 ignition control circuit, causing a short to voltage or an open circuit
- 3 Loose, corroded, or damaged connector at the cylinder 6 ignition coil or at the ECM
- 4 Failed engine control module (ECM) driver for the cylinder 6 ignition control output
- 5 Aftermarket or incorrect ignition coil installed on cylinder 6 that does not meet GM specifications
- 6 Intake manifold or component interference that has damaged the cylinder 6 coil harness
- 7 Poor ground connection for the ignition coil or engine block, causing erratic voltage feedback



How to diagnose and fix it

- 1 Inspect the cylinder 6 ignition coil connector and wiring for damage, corrosion, or loose pins; repair or replace as needed
- 2 Swap the cylinder 6 ignition coil with a known-good coil from another cylinder and see if the misfire moves; replace the coil if the fault follows it
- 3 Use a digital multimeter to check for battery voltage on the ignition control circuit with the key on and engine off; if voltage is present when it should be grounded, trace and repair the short to voltage
- 4 Check the resistance of the cylinder 6 ignition coil primary and secondary windings against GM specifications; replace the coil if out of range
- 5 Perform a wiggle test on the harness while monitoring misfire counters or the IC circuit with a lab scope to identify intermittent wiring faults
- 6 If all wiring and coils test good, use a lab scope to verify the IC signal from the ECM; if the signal is incorrect, diagnose the ECM and replace if necessary
- 7 Clear the codes and perform a road test to verify the repair; confirm that no misfire or pending codes return

Don't overlook the coil driver circuit

- A common misdiagnosis is replacing the spark plug or coil without checking the IC circuit for a short to voltage, which often originates from a chafed wire near the intake manifold.
- The code can set intermittently due to a loose ground at the engine block, causing voltage spikes that mimic a faulty coil; always verify grounds before condemning parts.
- On some GM engines, the ignition control module (ICM) or the wiring between the ICM and ECM can cause this code even when the coil tests good, so inspect the entire circuit.
- A failing ECM driver for cylinder 6 is rare but possible; do not replace the ECM until all wiring and coil tests are conclusive, as misdiagnosis is costly.
- This code is often stored alongside misfire codes like P0306, so addressing the root cause of the misfire will usually resolve both.

Can I keep driving with P1356?

You can drive the vehicle with this code if the engine is running smoothly and the check engine light is steady, but avoid heavy acceleration or towing. If the check engine light is flashing or you feel a noticeable misfire, stop driving and have the vehicle towed to prevent catalytic converter damage.



Tools that help

- OBD-II scan tool with live data and misfire counter capability
- Digital multimeter (DMM)
- Lab scope (oscilloscope) for signal analysis
- Basic hand tools (socket set, screwdrivers, pliers)
- Wiring diagram for the specific GM vehicle
- Test light or noid light for circuit testing

Reading P1356

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

Often seen with

P1355 Cylinder 1 Ignition Circuit Open · **P1357** Cylinder 1 Ignition Circuit Short To Ground · **P1355** IC Output High Pulse Detected When Grounded Cyl 5 · **P1357** IC Output High Pulse Detected When Grounded Cyl 7 · **P1355** Ignition Coil D Primary Circuit Fault · **P1357** Ignition Diagnostic Monitor Pulsewidth Not Defined · **P1355** IC Output High Pulse Detected When Grounded Cyl 5 · **P1357** IC Output High Pulse Detected When Grounded Cyl 7 · **P1355** Misfire Cylinder 7 With Fuel Cut-off · **P1357** Misfire Cylinder 8 With Fuel Cut-off · **P0300** Random/Multiple Cylinder Misfire Detected · **P0306** Cylinder 6 Misfire Detected · **P0356** Ignition Coil 'F' Primary/Secondary Circuit

See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1356/>

