

GM · POWERTRAIN

P1355

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1355 · GM

IC Output High Pulse Detected When Grounded Cyl 5

P1355 on a GM vehicle means the ignition control module (ICM) reported a high-voltage pulse on the cylinder 5 ignition control circuit at a moment when the PCM expected that circuit to be grounded. In plain terms, the computer commanded the coil to charge by pulling the control line low, but the line stayed high, so the PCM flagged an abnormal output state for cylinder 5.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illuminated check engine light, often with no other symptoms besides the warning light
- Noticeable engine misfire or rough running, especially under load or at idle
- Reduced engine power or a limp-home mode in some GM applications
- Shaking or vibration felt through the steering wheel and floorboard
- Worse fuel economy and a strong raw-fuel smell from the exhaust
- Intermittent misfire that comes and goes with heat or vibration

Common causes, most likely first

- 1 Faulty ignition control module (ICM) output driver for the cylinder 5 circuit
- 2 Open or chafed wire in the cylinder 5 ignition control circuit between the ICM and PCM
- 3 Corroded or loose connector terminal at the ICM or PCM harness
- 4 Short to voltage on the cylinder 5 control wire from harness damage or water intrusion
- 5 Failed ignition coil for cylinder 5 drawing abnormal current and disturbing the control signal
- 6 PCM driver fault on the cylinder 5 control output (less common but possible)
- 7 Poor ground connection at the ICM or engine block causing erratic output behavior



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P1355 plus any companion misfire codes before touching anything
- 2 Inspect the ICM and PCM connectors for corrosion, pushed pins, or water intrusion, then clean and reseal them
- 3 Check the cylinder 5 ignition control wire for continuity, shorts to voltage, and shorts to ground with a multimeter
- 4 Swap the cylinder 5 coil with a known-good coil from another cylinder and see whether the misfire follows the coil
- 5 Back-probe the cylinder 5 control circuit with a lab scope or LED test light to confirm the PCM command and ICM response
- 6 Verify ICM ground and power feeds under load, repairing any high-resistance ground or supply connection
- 7 Replace the ignition control module only after wiring and coil tests pass, then clear codes and road-test to confirm the repair

What the cylinder 5 control circuit is telling you

- A high pulse when grounded often points to a wiring short to voltage rather than a failed ICM, so inspect the harness near hot exhaust components before condemning the module.
- Technicians frequently replace the ICM when the real fault is a chafed control wire inside the loom, so always ohm and load-test the circuit end to end.
- A weak or failing ignition coil on cylinder 5 can back-feed the control circuit and set P1355 without any visible damage to the coil body.
- Poor engine ground straps on older GM vehicles cause the ICM to report false high-pulse events, and cleaning the grounds often clears the code.
- P1355 can appear alongside misfire codes for other cylinders when the fault is a shared ground or supply issue at the ICM rather than a cylinder-specific problem.

Can I keep driving with P1355?

You can drive short distances to a repair shop, but avoid heavy acceleration, towing, and long highway trips because the misfire can overheat the catalytic converter and waste fuel. If the check engine light starts flashing, stop driving and have the vehicle towed.



Tools that help

- OBD-II scan tool with GM enhanced data and freeze-frame capability
- Digital multimeter with continuity and voltage scales
- Lab scope or LED test light for observing ignition control pulses
- Wiring diagram for the specific GM platform and engine
- Basic hand tools for connector and coil access
- Electrical contact cleaner and dielectric grease

Reading P1355

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

Often seen with

P1351 VVT Sensor Range Performance Problem Bank 2 · **P1351** Injection Sensor Circuit · **P1352** Needle Lift Sensor · **P1351** Ignition Diagnostic Monitor Signal Lost To PCM Or Out Of Ran · **P1352** Ignition Coil A Primary Circuit · **P1351** Ignition Control Circuit Voltage High · **P1352** IC Output High Pulse Detected When Grounded Cyl 2 · **P1351** Ignition Diagnostic Monitor Circuit Input Fault · **P1352** Ignition Coil A Primary Circuit Fault · **P1351** IC Circuit High Voltage · **P1352** IC Output High Pulse Detected When Grounded Cyl 2 · **P1351** Misfire Cylinder 5 With Fuel Cut-off · **P1352** Misfire During Start Cylinder 6 · **P0305** Cylinder 5 Misfire Detected · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction · **P0355** Ignition Coil 'E' Primary/Secondary Circuit

See it working

Watch the animated explainer [V6 Engine Explained: 60° Bank and Firing Order](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1355/>

