

GM · POWERTRAIN

P1361

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1361 · GM

IC Circuit Low Voltage

P1361 on a GM vehicle indicates that the ignition control (IC) circuit has been detected at a voltage lower than expected by the engine control module (ECM). The ECM monitors this circuit to ensure proper communication with the ignition control module (ICM) or ignition coil, and a low voltage condition signals a fault that can disrupt spark timing and engine operation.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Engine may crank but not start or may stall intermittently
- Rough idle or misfire under load
- Reduced engine power or limp mode
- Check engine light (malfunction indicator lamp) illuminated
- Often no symptoms besides the warning light, especially if the fault is intermittent

Common causes, most likely first

- 1 Damaged or corroded wiring or connector at the ignition control module or coil
- 2 Faulty ignition control module (ICM) internal short to ground
- 3 Poor ground connection for the ICM or engine block
- 4 Open or shorted IC signal wire between the ECM and ICM
- 5 Failed engine control module (ECM) driver circuit
- 6 Aftermarket alarm or remote start wiring interfering with the IC circuit



How to diagnose and fix it

- 1 Inspect the IC circuit wiring and connectors for chafing, corrosion, or loose pins, especially near the ignition coil and ICM.
- 2 Check and clean all ground connections for the ICM and engine block, verifying low resistance to battery negative.
- 3 Measure resistance and voltage on the IC signal wire from the ECM to the ICM; compare to factory specifications.
- 4 Test the ignition control module with a known-good unit or follow the manufacturer's diagnostic flow chart to rule out internal failure.
- 5 Verify the ECM is providing the correct reference voltage and ground to the IC circuit; repair or replace the ECM if defective.
- 6 Clear the code and perform a road test to confirm the repair, monitoring live data for the IC circuit voltage.

IC Circuit Low Voltage Diagnostic Traps

- A common oversight is assuming the ignition control module is always at fault, but a simple chafed wire near the exhaust manifold often causes this code.
- The IC circuit is sensitive to ground quality; a corroded engine ground strap can set P1361 without any visible damage to the module or wiring.
- Aftermarket remote starters or alarm systems spliced into the ignition circuit frequently introduce low-voltage faults that mimic a failed module.
- Intermittent P1361 codes may not illuminate the check engine light immediately; always check for pending codes if drivability issues are present.
- The ECM may store P1361 even when the IC circuit is functioning normally if battery voltage was low during cranking, so verify battery and charging system health first.

Can I keep driving with P1361?

If the engine runs normally and only the warning light is on, you can drive cautiously to a repair shop, but avoid heavy acceleration or long trips. If the engine stalls, misfires, or fails to start, stop driving and have the vehicle towed to prevent safety risks.

Tools that help

- Digital multimeter (DMM)
- OBD-II scan tool with live data capability
- Wiring diagram for the specific GM vehicle
- Test light or logic probe
- Socket set and wire terminal removal tools



Reading P1361

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

Often seen with

P1362 Cylinder 3 Ignition Circuit Short To B+ · **P1350** Ignition Coil Power Output Stage 3 Open · **P1350** VVT Sensor Circuit Malfunction Bank 2 · **P1362** TDC1 Sensor No Signal · **P1350** Injection Sensor Solenoid · **P1362** Ignition Coil C Secondary Circuit · **P1362** Ignition Coil Cylinder 2 No Activation · **P1362** TDC1 Sensor No Signal · **P1350** Ignition Control System · **P1362** IC Cylinder 2 Not Toggling After Enable · **P1362** Ignition Coil C Secondary Circuit Malfunction · **P1350** Ignition Control System · **P1362** IC Cylinder 2 Not Toggling After Enable · **P1362** Misfire During Start Cylinder 11 · **P1350** Misfire During Start Cylinder 5 · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0352** Ignition Coil B Primary/Secondary Circuit Malfunction · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction

See it working

Watch the animated explainer [How a CVT Works: Belt and Pulley Transmission](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1361/>

