

GM · POWERTRAIN

P1351

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1351 · GM

Ignition Control Circuit Voltage High

P1351 on a GM vehicle means the ignition control module or powertrain control module has detected an abnormally high voltage on the ignition control circuit, which is the signal line that triggers the ignition coil to fire. The computer expects this circuit to switch between low and high voltage at precise moments, and a sustained high reading tells it the coil driver or the wiring is not pulling the line down as commanded.

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

Symptoms you may notice

- Engine misfire or rough running, especially under load or at higher rpm
- Hard starting or a no-start condition when the ignition control signal is lost
- Illuminated check engine light, often with a flashing light if the misfire is severe
- Reduced engine power or limp mode as the computer limits spark advance
- Often no symptoms besides the warning light if the high voltage is intermittent
- Poor fuel economy or a strong raw-fuel smell from unburned gasoline

Common causes, most likely first

- 1 Faulty ignition control module (ICM) internal driver stuck high or failing to ground the control circuit
- 2 Open or high-resistance wire in the ignition control circuit between the ICM and PCM
- 3 Corroded, loose, or backed-out terminal at the ICM or PCM connector
- 4 Failed ignition coil with a shorted primary winding that back-feeds voltage onto the control line
- 5 PCM driver circuit fault, though this is less common than module or wiring issues
- 6 Aftermarket ignition components or a poor splice in the harness introducing excessive resistance



How to diagnose and fix it

- 1 Connect a scan tool and record freeze-frame data to confirm when the high voltage was set and whether misfire counters are active
- 2 Inspect the ignition control circuit wiring for chafing, corrosion, and loose pins at both the ICM and PCM connectors
- 3 Measure resistance end-to-end on the control wire and check for a short to voltage with the key on and engine off
- 4 Swap a known-good ignition control module or coil from a donor vehicle to see if the code follows the part
- 5 Back-probe the control circuit with a lab scope to watch the square wave and confirm whether the PCM command or the module response is abnormal
- 6 Repair or replace the faulty harness section, terminal, ignition coil, or ignition control module as indicated by the tests
- 7 Clear the code and perform a road test with the scan tool monitoring misfire data to verify the repair

What the high voltage reading really means

- A high voltage on the control circuit often points to a coil primary that has shorted to its feed circuit, which back-feeds voltage onto the signal line and fools a simple resistance check.
- Technicians frequently replace the ignition control module when the actual fault is a corroded ground strap at the engine block, which raises reference voltage and sets P1351 without any module failure.
- This code can be set by a loose battery cable or a failing alternator that spikes system voltage, so always check charging system ripple before condemning ignition parts.
- On some GM engines the ignition control circuit shares a harness run with the crankshaft position sensor, and a rubbed-through wire there can set P1351 alongside a crank code.
- P1351 does not always mean the engine will stall; an intermittent high voltage can cause a single-cylinder misfire that the driver barely notices until the light comes on.

Can I keep driving with P1351?

You can usually drive a short distance to a shop if the engine runs smoothly and the light is steady, but avoid heavy acceleration or towing because a misfire under load can overheat the catalytic converter. If the engine is misfiring badly, stalling, or the check engine light is flashing, stop driving and have the vehicle towed.

Tools that help

- OBD-II scan tool with live data and misfire counters
- Digital multimeter with back-probe pins
- Lab scope for viewing the ignition control square wave
- Wiring diagram for the specific GM engine and model
- Terminal pick and electrical contact cleaner



Reading P1351

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

Often seen with

P1350 Ignition Coil Power Output Stage 3 Open · **P1350** VVT Sensor Circuit Malfunction Bank 2 · **P1350** Injection Sensor Solenoid · **P1350** Ignition Control System · **P1350** Ignition Control System · **P1350** Misfire During Start Cylinder 5 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction · **P0352** Ignition Coil B Primary/Secondary Circuit Malfunction

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-p1351/>

