

CHRYSLER · POWERTRAIN

P1370

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1370 · Chrysler

IC Module 4X Reference Circuit Too Many Pulses

P1370 on Chrysler vehicles means the engine computer has counted too many pulses on the 4X reference signal coming from the ignition coil (IC) module, which is the module that generates the crankshaft position reference signal. The computer expects a precise number of pulses per revolution, and an excessive pulse count tells it the signal is noisy, distorted, or mechanically misaligned.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Professional

AREA

Ignition system and misfire

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Intermittent engine stumble or misfire at idle or under light load
- Hard starting or a crank-no-start condition when the signal drops out
- Rough running or surging that comes and goes with temperature or vibration
- Tachometer needle jumping or reading erratically
- Stalling at stops or during deceleration

Common causes, most likely first

- 1 Faulty ignition coil (IC) module producing a distorted 4X reference signal
- 2 Damaged or chafed wiring in the 4X reference circuit between the IC module and the powertrain control module (PCM)
- 3 Poor ground connection at the IC module or engine block, causing electrical noise
- 4 Excessive air gap or misalignment between the crankshaft sensor and the tone ring or reluctor
- 5 Worn or damaged crankshaft tone ring or reluctor with cracked or missing teeth
- 6 Electrical interference from a failing alternator, ignition component, or aftermarket accessory
- 7 Loose or corroded connector pins at the IC module or PCM



How to diagnose and fix it

- 1 Inspect the IC module connector and the 4X reference circuit wiring for chafing, corrosion, or loose pins
- 2 Check and clean the IC module ground and engine block ground connections
- 3 Measure the air gap between the crankshaft sensor and tone ring and compare to specification
- 4 Use an oscilloscope to capture the 4X reference signal and look for extra pulses, noise spikes, or dropouts
- 5 Inspect the crankshaft tone ring or reluctor for cracks, missing teeth, or debris
- 6 Substitute a known-good IC module and recheck the pulse count with a scan tool
- 7 If the signal is clean at the module but corrupted at the PCM, repair or replace the harness section

What the 4X pulse count really tells you

- A too-many-pulses code often comes from electrical noise rather than a failed module, so a failing alternator or a bad ground can set P1370 without any fault in the IC module itself.
- The 4X reference signal is generated by the ignition coil module on many Chrysler engines, not by a separate crankshaft sensor, so technicians who replace the crank sensor first often miss the real source.
- A cracked or dirty tone ring can produce extra pulses at certain engine speeds, which means the code may only set during a specific RPM range and not appear during a parking-lot test drive.
- Aftermarket ignition components and unshielded wiring routed too close to the reference circuit can induce the extra pulses that trigger this code, so check for recent repairs before condemning the module.
- P1370 can be stored alongside misfire codes, and replacing the IC module without scoping the signal first often leads to a repeat repair when the real problem is a chafed harness.

Can I keep driving with P1370?

You can usually drive the vehicle to a repair shop if the engine runs smoothly and the light is steady, but avoid heavy acceleration and long trips. If the engine stumbles, stalls, or the light flashes, stop driving and have it towed because the signal fault can leave you stranded.

Tools that help

- OBD-II scan tool with live data and pulse-count capability
- Oscilloscope with a high-frequency probe
- Digital multimeter
- Feeler gauges for air gap measurement
- Wiring diagram for the IC module and PCM circuits
- Basic hand tools and electrical contact cleaner



Reading P1370

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

Often seen with

P1391 CMP Sensor Bank 2 Short To Ground · **P1391** Intermittent Loss Of CMP Or CKP Sensor Signals · **P1391** Wheel Speed Sensor 1 G-Sensor Circuit Performance · **P1391** Glow Plug Circuit Low Input Bank 1 · **P1391** Intermittent Loss of CMP Or CKP · **P0300** Random/Multiple Cylinder Misfire Detected · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0336** Crankshaft Position Sensor A Circuit Range/Performance · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction

See it working

Watch the animated explainer [How a Radiator Fan Relay Circuit Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1370/>

