

CHRYSLER · POWERTRAIN

P1353

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1353 · Chrysler

IC Output High Pulse Detected When Grounded Cyl 3

P1353 on Chrysler vehicles means the engine controller detected an unexpected high voltage pulse on the ignition coil output circuit for cylinder 3 when that circuit was commanded to ground. The computer tried to fire the coil by pulling the control wire low, but the circuit stayed high or pulsed high when it should not have, so the cylinder may not have fired correctly.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Rough idle or misfire sensation, especially when the engine is cold or under light load
- Hesitation or stumble during acceleration from a stop
- Slightly reduced fuel economy if the misfire is frequent
- In some cases, a flashing check engine light if the misfire is severe enough to damage the catalytic converter

Common causes, most likely first

- 1 Faulty ignition coil for cylinder 3 with an internal short or open in the primary winding
- 2 Damaged or chafed wiring in the coil control circuit between the powertrain control module and the coil
- 3 Corroded or loose connector terminals at the cylinder 3 ignition coil
- 4 Failed ignition coil driver inside the powertrain control module
- 5 Spark plug fouled or worn, causing abnormal coil feedback
- 6 Aftermarket alarm or remote start wiring tapped into the coil circuit



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code is current and not history
- 2 Inspect the cylinder 3 ignition coil connector and wiring for corrosion, chafing, or loose pins
- 3 Swap the cylinder 3 ignition coil with another cylinder and see if the code follows the coil
- 4 Measure resistance of the cylinder 3 coil primary and secondary windings and compare to specification
- 5 Back-probe the coil control wire with a lab scope to check for a clean ground pulse from the powertrain control module
- 6 Check for continuity and short-to-voltage on the coil control circuit between the powertrain control module and the coil
- 7 If the circuit and coil test good, diagnose the powertrain control module driver or replace the module as needed

What the coil control pulse really tells you

- A code P1353 can set intermittently from a coil that only breaks down when hot, so a cold resistance check may pass and mislead you.
- The powertrain control module expects to see the control wire pulled low during the dwell period, and any voltage above its threshold triggers this code even if the coil still fires.
- Aftermarket remote start or alarm installers sometimes tap the coil control wire for a tach signal, and that added load can cause a high pulse code.
- A worn spark plug with an excessive gap can raise the coil's firing voltage and feed back into the primary circuit, setting this code without a bad coil.
- Do not replace the powertrain control module until you have scoped the control wire at the coil, because a chafed harness shorting to voltage mimics a failed driver.

Can I keep driving with P1353?

You can usually drive the vehicle short distances if the only symptom is a steady check engine light, but avoid heavy acceleration and towing until the misfire is repaired. If the check engine light flashes, stop driving and repair the fault immediately to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Lab scope with a low-current probe or back-probe kit
- Spark tester
- Basic hand tools and terminal pick set



Reading P1353

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Chrysler): its meaning depends on the make.
- 3** Ignition system and misfire.
- 53** 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 · **P0300** Random/Multiple Cylinder Misfire Detected · **P0303** Cylinder 3 Misfire Detected · **P0353** Ignition Coil C Primary/Secondary Circuit Malfunction

See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/chrysler-p1353/>

