



P1353 · Ford

Ignition Coil B Primary Circuit Fault

P1353 on a Ford means the powertrain control module (PCM) has detected an electrical fault in the primary circuit of ignition coil B, which is the low-voltage side that the PCM uses to trigger the coil. The PCM monitors the coil driver circuit for abnormal voltage or current behavior and sets this code when the signal does not match expected values during engine operation.

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

Symptoms you may notice

- Often no symptoms besides the warning light, especially if the fault is intermittent
- Engine misfire or rough running, particularly under load or acceleration
- Noticeable loss of power and reduced fuel economy
- Shaking or vibration from the engine bay that worsens with engine speed
- In some cases, the engine may enter limp mode or flash the check engine light if misfiring is severe

Common causes, most likely first

- 1 Faulty ignition coil B itself, such as an open or shorted primary winding
- 2 Damaged or corroded wiring and connectors between the PCM and coil B
- 3 Failed PCM driver circuit for coil B (less common but possible)
- 4 Poor ground connection for the coil or engine block
- 5 Aftermarket or incorrect coil installed that does not meet Ford specifications
- 6 Moisture intrusion into the coil connector or spark plug well causing corrosion

How to diagnose and fix it

- 1 Inspect the coil B connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 2 Swap coil B with a known-good coil from another cylinder (if accessible) to see if the code moves, confirming a coil fault
- 3 Measure the primary resistance of coil B with a multimeter and compare to Ford specifications
- 4 Check for battery voltage at the coil B connector with the key on, and check the ground circuit for continuity
- 5 Perform a wiggle test on the harness while monitoring coil B data to catch intermittent wiring faults
- 6 If wiring and coil check out, test the PCM driver circuit with a noid light or oscilloscope to verify the trigger signal
- 7 Replace the faulty coil or repair the PCM driver as needed, then clear the code and verify the repair with a road test



What Ford technicians check before replacing coil B

- A P1353 can be set by a faulty spark plug or spark plug boot that causes the coil to fire erratically, so always inspect the secondary ignition components first.
- On many Ford engines, coil B is not necessarily the second coil in firing order; always consult the specific engine's coil identification diagram to avoid replacing the wrong coil.
- Intermittent P1353 codes often trace back to a chafed wire in the harness near the coil mounting bracket, which is easy to miss during a visual inspection.
- A weak battery or charging system fault can cause low voltage at the coil primary circuit and trigger this code, so verify battery and alternator health before condemning the coil.
- Aftermarket coils with incorrect primary resistance are a common cause of repeat P1353 codes, and using an OEM-quality replacement is critical for a lasting repair.

Can I keep driving with P1353?

You can usually drive with P1353 if the engine runs smoothly, but avoid heavy acceleration or towing until it is repaired. If the check engine light flashes or the engine misfires severely, stop driving to prevent damage to the catalytic converter.

Tools that help

- OBD-II scanner with live data and misfire monitoring
- Digital multimeter
- Test light or noid light
- Socket set and extensions
- Oscilloscope (optional for advanced diagnosis)

Reading P1353

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Ford): 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 · **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/ford-p1353/>

