



P1351 · Ford

Ignition Diagnostic Monitor Circuit Input Fault

P1351 on a Ford means the powertrain control module (PCM) is not receiving a valid signal on the Ignition Diagnostic Monitor (IDM) circuit, which is the feedback line from the ignition control module or coil driver. The PCM uses this input to confirm that each ignition event actually occurred, so when the signal is missing, erratic, or out of expected range, it stores this fault and may default to a limp ignition strategy.

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

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Engine misfire or rough running, especially under load or at higher rpm
- Hard starting or a crank-no-start condition in more severe cases
- Reduced engine power or limp mode triggered by the PCM
- Poor fuel economy or increased emissions due to incomplete combustion
- Intermittent stalling that may clear after the engine warms up

Common causes, most likely first

- 1 Damaged, chafed, or corroded wiring in the IDM circuit between the ignition module and PCM
- 2 Failed ignition control module or coil driver not producing the IDM feedback signal
- 3 Loose or corroded ground connection at the ignition module or engine block
- 4 Faulty crankshaft position sensor or camshaft position sensor disrupting ignition timing reference
- 5 PCM internal fault on the IDM input circuit, often after water intrusion or voltage spikes
- 6 Aftermarket ignition components or poor-quality coils that do not generate a clean IDM signal
- 7 Connector pins backed out or spread at the ignition module or PCM harness



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1351 is the only ignition-related fault
- 2 Inspect the IDM circuit wiring and connectors for chafing, corrosion, or loose pins, repairing as needed
- 3 Check and clean the ignition module and engine block ground connections, then retest
- 4 Measure the IDM signal with an oscilloscope or logic probe at the PCM while cranking to verify presence and shape
- 5 Test or swap the ignition control module or coil driver with a known-good unit to isolate the fault
- 6 Verify crankshaft and camshaft sensor signals are clean and in sync, replacing if erratic
- 7 If all external circuits and components test good, diagnose the PCM IDM input circuit or replace the PCM as a last step

What the IDM circuit really tells the PCM

- A missing IDM signal does not always mean the ignition module is dead; a bad ground or a chafed wire in the harness is just as common and far cheaper to fix.
Aftermarket coils and ignition modules frequently produce an IDM waveform the PCM rejects, so this code can appear right after a tune-up or performance ignition install.
- The IDM circuit is a feedback line, not a control line, so the engine may still run and start normally while the code is stored, which leads many drivers to ignore it until a misfire develops.
- Water intrusion into the PCM connector or ignition module housing can corrode the IDM pin and set this code without any visible driveability problem.
A failing crankshaft position sensor can disrupt the ignition event timing enough that the PCM flags the IDM input as invalid, even though the sensor itself has not yet set its own code.

Can I keep driving with P1351?

You can usually drive short distances to a repair shop if the engine runs smoothly and the light is steady, but avoid heavy throttle, towing, or long trips until the fault is diagnosed. If the engine misfires, stalls, or enters limp mode, stop driving and arrange a tow to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with manufacturer-specific Ford software
- Digital multimeter with back-probe pins
- Oscilloscope or logic probe for waveform analysis
- Wiring diagram and connector pinout for the specific Ford model
- Socket and ratchet set for ground and module access
- Contact cleaner and dielectric grease for connector service



Reading P1351

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

Often seen with

P1352 Needle Lift Sensor · **P1352** Ignition Coil A Primary Circuit · **P1352** IC Output High Pulse Detected When Grounded Cyl 2 · **P1352** Ignition Coil A Primary Circuit Fault · **P1352** IC Output High Pulse Detected When Grounded Cyl 2 · **P1352** Misfire During Start Cylinder 6 · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **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-p1351/>

