

GENERIC · POWERTRAIN

P2302

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2302

Ignition Coil 'A' Secondary Circuit

P2302 indicates that the powertrain control module (PCM) has detected a fault in the secondary circuit of ignition coil 'A', which is the high-voltage side that fires the spark plug. The PCM monitors the coil's secondary circuit for expected electrical behavior and sets this code when the signal is out of range, often due to an open or shorted coil, a bad plug, or wiring issues.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Engine misfire, especially under load or acceleration
- Rough idle or shaking felt through the steering wheel and seat
- Reduced engine power and poor fuel economy
- Difficulty starting or a stalled engine in severe 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 'A' (secondary winding open or shorted)
- 2 Worn or fouled spark plug on the affected cylinder
- 3 Damaged or corroded ignition coil connector or wiring
- 4 Open or shorted secondary circuit wiring between coil and PCM
- 5 PCM internal fault (rare but possible)
- 6 Moisture or oil contamination in the spark plug well causing secondary voltage leak
- 7 Aftermarket or incorrect spark plugs causing secondary circuit resistance issues



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data to identify the affected cylinder.
- 2 Inspect the ignition coil 'A' connector and wiring for corrosion, loose pins, or damage; repair as needed.
- 3 Remove and inspect the spark plug for the affected cylinder; replace if worn, fouled, or of the wrong type.
- 4 Swap ignition coil 'A' with a known-good coil from another cylinder (if accessible) and see if the code moves; replace coil if the misfire follows it.
- 5 Perform a secondary ignition scope test or measure coil resistance (primary and secondary) according to manufacturer specifications.
- 6 Check the secondary circuit wiring for continuity and shorts to ground or power; repair any faults.
- 7 If all else checks out, consult factory service information for PCM testing or reprogramming; replace PCM only as a last resort.

Don't overlook the spark plug and boot

- A worn spark plug or a cracked coil boot can cause a secondary circuit fault without the coil itself being defective, so always inspect these first.
- Oil or moisture in the spark plug well from a leaking valve cover gasket or washed engine can create a secondary voltage leak that mimics a bad coil.
- Aftermarket coils and spark plugs with incorrect resistance are a common cause of repeat P2302 codes, so use OEM-quality parts.
- The code may set intermittently due to heat or vibration, so a wiggle test of the coil connector and harness while monitoring misfire counters can reveal a bad connection.
- P2302 can be stored alongside misfire codes like P0300 or P0301, but the presence of P2302 does not guarantee the coil is at fault; the secondary circuit includes the plug, boot, and wiring.

Can I keep driving with P2302?

If the check engine light is steady and the engine runs smoothly, you can drive cautiously to a repair shop, but avoid heavy acceleration or towing. If the light is flashing or the engine misfires severely, stop driving and have the vehicle towed to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with live data and misfire counters
- Digital multimeter
- Spark tester or ignition scope
- Socket set and spark plug socket
- Wiring diagram for the specific vehicle



Reading P2302

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 3** Ignition system and misfire.
- 02** The exact fault within that area.

Often seen with

P0300 Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0351** Ignition Coil A Primary/Secondary Circuit Malfunction · **P2300** Ignition Coil 'A' Primary Control Circuit Low · **P2301** Ignition Coil 'A' Primary Control Circuit High

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/p2302/>

