

BMW · POWERTRAIN

P1343

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1343 · BMW

Misfire Cylinder 1 With Fuel Cut-off

P1343 on BMW vehicles means the engine computer has detected a misfire on cylinder 1 severe enough that it has deliberately cut fuel delivery to that cylinder to protect the catalytic converter from raw fuel. The misfire is confirmed by crankshaft speed fluctuations, and the fuel cut-off is an active protection strategy rather than a separate fault.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	BMW specific	High	Intermediate	Ignition system and misfire

Symptoms you may notice

- Rough idle and noticeable shaking, especially when the engine is cold or under light load
- A flashing or steady check engine light, sometimes accompanied by reduced engine power
- A distinct fuel smell from the exhaust if the cut-off has not fully prevented unburned fuel from reaching the converter
- Audible popping or stumbling from the exhaust during acceleration
- Often no symptoms besides the warning light if the misfire is intermittent and the fuel cut-off is brief
- Poor fuel economy and sluggish throttle response as the engine runs on fewer effective cylinders

Common causes, most likely first

- 1 Failed ignition coil on cylinder 1, a very common BMW fault that causes a hard misfire
- 2 Worn or fouled spark plug on cylinder 1, especially on turbocharged engines with direct injection
- 3 Leaking or clogged fuel injector on cylinder 1, causing an incorrect air-fuel mixture
- 4 Vacuum leak at the intake manifold runner or injector seal for cylinder 1, leaning out that cylinder
- 5 Mechanical fault such as low compression from worn rings, a burned valve, or a failed hydraulic lifter on cylinder 1
- 6 Faulty crankshaft position sensor or damaged reluctor wheel causing the computer to misidentify the misfiring cylinder
- 7 Engine wiring harness damage or corroded connector at the cylinder 1 coil or injector



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data to confirm the misfire count on cylinder 1
- 2 Perform a visual inspection of the cylinder 1 ignition coil, spark plug, and injector connector for damage or corrosion
- 3 Swap the cylinder 1 ignition coil with a known-good coil from another cylinder and see if the misfire moves, a quick and cheap test
- 4 Remove and inspect the cylinder 1 spark plug for wear, fouling, or incorrect gap, and replace it if needed
- 5 Run a compression test and a cylinder leak-down test on cylinder 1 to rule out mechanical faults
- 6 Check fuel injector operation with a noid light or oscilloscope, and test for intake vacuum leaks around cylinder 1
- 7 If electrical and fuel checks pass, perform a crank sensor relearn or inspect the reluctor wheel for damage before replacing expensive components

Why cylinder 1 misfires are often misdiagnosed

- A P1343 code does not always mean the ignition coil is bad; on BMW engines a leaking injector or a vacuum leak at the intake runner can cause the same fuel cut-off strategy to activate.
- The fuel cut-off itself can mask a mechanical fault, because once fuel is cut the misfire may stop and the engine may seem to run better, leading some technicians to replace electrical parts unnecessarily.
- BMW's misfire detection is sensitive to crankshaft speed variations, so a failing crankshaft position sensor or a damaged reluctor wheel can set P1343 even when cylinder 1 is mechanically healthy.
- On direct-injection turbocharged BMW engines, carbon buildup on the intake valves of cylinder 1 can cause a persistent misfire that does not respond to new coils or plugs.
- A P1343 code is often accompanied by a lean or rich fuel trim code on the same bank, which points to a fuel delivery or vacuum issue rather than an ignition fault.

Can I keep driving with P1343?

Do not continue driving with an active P1343 code because the fuel cut-off and raw fuel can quickly overheat and destroy the catalytic converter, leading to a much larger repair bill. If the check engine light is flashing, stop driving as soon as it is safe and have the vehicle towed to a workshop.

Tools that help

- OBD-II scan tool with BMW-specific software or a capable generic scanner
- Digital multimeter for checking coil and injector circuits
- Compression tester and cylinder leak-down tester
- Noid light or oscilloscope for injector pulse testing
- Spark plug socket and torque wrench
- Mechanic's stethoscope for locating vacuum leaks and injector noise



Reading P1343

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

Often seen with

P1345 Ignition Coil Output Stage 3 Short To Ground · **P1347** Bank 2 Crankshaft Camshaft Position Sensor Signal Out Of Seq · **P1345** VVT Sensor Circuit Malfunction Bank 1 · **P1345** No CMP or SGC Signal · **P1345** No SGC Signal 1.6L · **P1345** Camshaft to Crankshaft Position Correlation Fault · **P1345** CKP/CMP Correlation · **P1345** Misfire Cylinder 2 With Fuel Cut-off · **P1347** Misfire Cylinder 3 With Fuel Cut-off · **P0171** System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected

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/bmw-p1343/>

