

JAGUAR · POWERTRAIN

P1316

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1316 · Jaguar

Misfire Rate Exceeds Emissions

P1316 on a Jaguar indicates that the engine control module (ECM) has detected a misfire rate that exceeds the emissions threshold, meaning one or more cylinders are not combusting efficiently enough to keep exhaust emissions within legal limits. The ECM monitors crankshaft speed fluctuations to identify which cylinder is misfiring and logs this code when the misfire count surpasses the manufacturer's calibrated limit.

SYSTEM

Powertrain

CODE TYPE

Jaguar specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illuminated check engine light, often flashing if the misfire is severe
- Noticeable engine vibration or rough idle, especially when cold
- Reduced engine power or hesitation during acceleration
- Poor fuel economy due to unburned fuel being expelled
- A sulfur or rotten egg smell from the exhaust in severe cases
- Often no symptoms besides the warning light when the misfire is intermittent

Common causes, most likely first

- 1 Worn or fouled spark plugs (most common on Jaguar AJ-V6 and AJ-V8 engines)
- 2 Failed ignition coil or coil-on-plug boot
- 3 Vacuum leak from a cracked intake hose or worn gasket
- 4 Faulty fuel injector with clogged nozzle or electrical fault
- 5 Low fuel pressure from a weak pump or clogged filter
- 6 Mechanical issue such as low compression from worn rings or valve problems
- 7 Contaminated fuel or incorrect octane causing poor combustion

How to diagnose and fix it

- 1 Scan all stored codes and freeze-frame data to identify which cylinder(s) are misfiring
- 2 Inspect spark plugs for wear, fouling, or incorrect gap and replace as needed
- 3 Swap ignition coils between cylinders to see if the misfire moves, confirming a coil fault
- 4 Perform a smoke test to check for vacuum leaks in the intake system
- 5 Test fuel injectors for resistance and spray pattern, and check fuel pressure
- 6 Run a compression test or cylinder leak-down test to rule out mechanical faults
- 7 After repairs, clear codes and perform a drive cycle to verify the misfire monitor passes



Misfire Codes Aren't Always Ignition

- A vacuum leak at the intake manifold gasket can cause a lean misfire that mimics a bad coil, so always smoke-test before replacing ignition parts.
- Jaguar's misfire monitor is sensitive to crankshaft position sensor signal quality; a failing sensor or reluctor ring can set P1316 without any actual combustion problem.
- On supercharged models, a slipping or worn belt can cause intermittent misfires under load that do not appear at idle.
- A clogged EGR valve or carbon buildup on intake valves can create misfire conditions that only occur at certain RPM ranges, often missed during a simple idle test.
- P1316 can be set by a single misfire event during a cold start if the battery voltage drops, so check for a weak battery before chasing ignition faults.

Can I keep driving with P1316?

You can drive cautiously to a repair shop if the check engine light is steady and the engine runs smoothly, but avoid hard acceleration and heavy loads. If the light is flashing or the engine shakes violently, stop driving immediately to prevent catalytic converter damage.

Tools that help

- OBD-II scan tool with live data and misfire counter capability
- Spark plug socket and torque wrench
- Ignition coil puller or boot removal tool
- Vacuum smoke machine
- Fuel pressure gauge
- Compression tester

Reading P1316

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

Often seen with

P0171 System Too Lean (Bank 1) · **P0300** Random/Multiple Cylinder Misfire Detected · **P0301** Cylinder 1 Misfire Detected · **P0302** Cylinder 2 Misfire Detected · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)



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/jaguar-p1316/>

