

GENERIC · POWERTRAIN

P219A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P219A

Bank 1 Air-Fuel Ratio Imbalance

P219A means the engine computer has detected an air-fuel ratio imbalance on bank 1, where one or more cylinders are not contributing the same amount of power as the others. The powertrain control module monitors crankshaft speed variations and oxygen sensor feedback to flag a cylinder that is running leaner or richer than the rest of that bank.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A rough or shaky idle, especially when the engine is cold or under light load
- Hesitation or a stumble during acceleration from a stop
- A noticeable decrease in fuel economy over time
- Occasional misfire-like shuddering that may not set a separate misfire code
- A faint fuel or exhaust odor if the imbalance is rich

Common causes, most likely first

- 1 A leaking or clogged fuel injector on one cylinder of bank 1
- 2 A vacuum leak at the intake manifold runner or injector O-ring specific to one cylinder
- 3 Worn or fouled spark plugs or ignition coils causing incomplete combustion on one cylinder
- 4 A mechanical issue such as low compression from a valve or piston ring problem on one cylinder
- 5 A faulty or slow-responding oxygen sensor on bank 1
- 6 An exhaust leak before the oxygen sensor on bank 1
- 7 A contaminated mass air flow sensor or a dirty throttle body affecting bank 1 more than bank 2

How to diagnose and fix it

- 1 Scan all stored and pending codes and freeze-frame data to confirm P219A is the primary fault and not a side effect of another code
- 2 Inspect the intake system for vacuum leaks, cracked hoses, and loose intake manifold bolts on bank 1
- 3 Check spark plugs and ignition coils on bank 1 for wear, fouling, or misfire history
- 4 Perform a fuel injector balance test or swap injectors between cylinders to see if the imbalance moves
- 5 Run a compression test and a cylinder leak-down test on bank 1 to rule out mechanical faults
- 6 Monitor oxygen sensor voltage and fuel trim data on bank 1 to identify a lazy or biased sensor
- 7 Smoke-test the exhaust system for leaks upstream of the bank 1 oxygen sensor



Why P219A Is Often a Single-Cylinder Fault

- P219A is frequently set by a problem that affects only one cylinder, such as a partially clogged injector, rather than a bank-wide issue like a failed catalytic converter.
- A dirty mass air flow sensor can skew fuel trims enough to trigger P219A on bank 1 without setting a mass air flow code, so clean it before replacing expensive parts.
- A small exhaust leak before the bank 1 oxygen sensor can pull in outside air and make the sensor report a false lean condition, mimicking a true air-fuel imbalance.
- Technicians often overlook worn spark plug wires or a failing ignition coil that causes a subtle misfire not severe enough to set a dedicated misfire code.
- After repairing the root cause, the code may remain stored until the vehicle completes several drive cycles, so do not assume the fix failed if the light stays on briefly.

Can I keep driving with P219A?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy acceleration, towing, or long highway trips until the fault is diagnosed. Continuing to drive with a significant imbalance can damage the catalytic converter and increase repair costs.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Vacuum gauge and smoke machine for intake leak detection
- Fuel injector balance tester or scan tool with injector balance function
- Compression tester and cylinder leak-down tester
- Digital multimeter and oscilloscope for oxygen sensor and ignition analysis

Reading P219A

P	Powertrain: engine, transmission and emissions.
2	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
1	Fuel and air metering.
9A	The exact fault within that area.

Often seen with

P0171 System Too Lean (Bank 1) · **P0301** Cylinder 1 Misfire Detected · **P219B** Bank 2 Air-Fuel Ratio Imbalance · **P219C** Cylinder 1 Air-Fuel Ratio Imbalance · **P219D** Cylinder 2 Air-Fuel Ratio Imbalance



See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p219a/>

