

GENERIC · POWERTRAIN

P0216

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0216

Injector/Injection Timing Control Circuit

P0216 indicates that the engine computer has detected a fault in the circuit that controls injection timing, typically the timing solenoid or actuator on a mechanically injected diesel pump. The computer monitors the circuit for expected electrical behavior and sets this code when the signal is out of range, indicating the timing command cannot be carried out reliably.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Fuel and air metering (injector circuits)

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or engine misfire, especially when cold
- Reduced engine power or limp mode
- Hard starting or extended cranking
- Excessive gray or black smoke from the exhaust
- Poor fuel economy or increased fuel consumption

Common causes, most likely first

- 1 Faulty injection timing control solenoid or actuator
- 2 Damaged or corroded wiring harness or connector at the injection pump
- 3 Failed engine control module (ECM) driver circuit for the timing solenoid
- 4 Mechanical wear or sticking inside the injection pump timing mechanism
- 5 Poor electrical ground connection for the timing control circuit
- 6 Contaminated or low engine oil affecting the timing actuator on some systems

How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm when the code sets
- 2 Inspect the timing solenoid connector and harness for corrosion, chafing, or loose pins
- 3 Measure resistance and voltage at the timing solenoid and compare to manufacturer specifications
- 4 Check the engine oil level and condition if the timing actuator is oil-driven
- 5 Perform a bidirectional actuator test with a scan tool to command timing advance and retard
- 6 Repair or replace damaged wiring or connectors as needed
- 7 Replace the injection timing solenoid or injection pump if electrical and mechanical checks confirm failure

What the P0216 code does not always mean

- A P0216 code often results from a simple wiring fault or corroded connector rather than a failed injection pump, so always inspect the harness before condemning expensive components.
- On some diesel engines, low oil pressure or degraded oil can prevent the timing actuator from moving freely, setting this code without any electrical defect.
- The code can be set by a sticking timing piston inside the injection pump, which may respond to a fuel system cleaner before any parts are replaced.
- Technicians sometimes replace the injection pump only to find the new pump sets the same code because the original fault was in the engine control module driver circuit.
- A weak battery or charging system fault can cause intermittent voltage drops that trigger P0216, so check battery and ground connections first.

Can I keep driving with P0216?

Driving with P0216 is not recommended because injection timing faults can cause poor combustion, increased emissions, and potential engine damage over time. If the vehicle enters limp mode or runs very poorly, stop driving and have it towed to a repair facility.

Tools that help

- OBD-II scan tool with bidirectional control and live data
- Digital multimeter
- Wiring diagram and service information for the specific vehicle
- Socket and ratchet set
- Fuel system pressure gauge

Reading P0216

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

Often seen with

P0217 Engine Over-Temperature Condition · **P0218** Transmission Over-Temperature Condition · **P0219** Engine Overspeed Condition · **P0251** Injection Pump Fuel Metering Control 'A' (Cam/Rotor/Injector) · **P0252** Injection Pump Fuel Metering Control 'A' Range/Performance (



See it working

Watch the animated explainer [Readiness Monitors and the OBD-II Drive Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0216/>

