

FORD · POWERTRAIN

P1212

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1212 · Ford

Injector Control Pressure Not Detected During Crank

P1212 on Ford vehicles means the powertrain control module (PCM) commanded the fuel injectors during cranking but did not see the expected injector control pressure (ICP) signal from the oil rail. The engine computer knows the engine is turning over but cannot confirm that high-pressure oil is being generated to fire the injectors, so it sets this code and typically prevents or limits fuel delivery.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Fuel and air metering (injector circuits)

Symptoms you may notice

- Engine cranks but will not start, often with no other warning besides the check engine light
- Long cranking times before the engine catches, or a start followed by immediate stall
- Rough running or misfire immediately after startup if the engine does start
- Reduced engine power or limp mode once the engine is running
- White or blue smoke from the exhaust during cranking attempts
- Often no symptoms besides the warning light if the fault is intermittent

Common causes, most likely first

- 1 Low engine oil level or incorrect oil viscosity preventing the high-pressure oil pump from building pressure
- 2 Faulty injector control pressure (ICP) sensor or a disconnected/damaged ICP sensor connector
- 3 Wiring harness damage or chafing between the ICP sensor and the powertrain control module (PCM)
- 4 Sticking or failed injection pressure regulator (IPR) valve on the high-pressure oil pump
- 5 Weak or failing high-pressure oil pump unable to generate cranking pressure
- 6 Clogged oil filter or restricted oil pickup screen starving the high-pressure pump
- 7 Air intrusion in the high-pressure oil system after recent repairs or low oil events



How to diagnose and fix it

- 1 Check engine oil level and condition first; top off or change oil and filter if the level is low or the oil is wrong viscosity
- 2 Inspect the ICP sensor and its connector for oil intrusion, corrosion, or loose pins, and verify the sensor is fully seated
- 3 Use a scan tool to read live ICP and IPR data during cranking; compare commanded versus actual pressure to isolate sensor versus pump/regulator
- 4 Perform a visual and continuity check of the ICP sensor wiring back to the PCM, looking for chafed or broken wires
- 5 Test the IPR valve for sticking or electrical failure and replace it if it does not respond to commanded duty cycle
- 6 If pressure remains low with good sensor and regulator readings, perform a high-pressure oil system leak test and inspect the high-pressure pump
- 7 Clear the code and verify the repair by confirming ICP rises to the expected cranking threshold and the engine starts reliably

What Ford Techs Check Before Replacing the ICP Sensor

- A low oil level or the wrong oil viscosity is one of the most common causes of P1212 on Ford diesel engines, and many ICP sensors are replaced unnecessarily when a simple oil top-off or change fixes the fault.
- The ICP sensor can read plausibly on a scan tool while still being skewed at cranking pressures, so comparing commanded IPR duty cycle to actual ICP during a crank is more reliable than a static sensor reading.
- Air trapped in the high-pressure oil rail after a filter change or low-oil event can set P1212 temporarily; the system often needs several crank cycles to purge before pressure builds normally.
- A failing IPR valve can mimic a bad high-pressure oil pump, and replacing the pump without testing the regulator first is an expensive misdiagnosis trap on Ford 6.0L and 7.3L engines.
- P1212 can be stored alongside injector circuit codes when a wiring harness fault affects both the ICP sensor and nearby injector wiring, so always inspect the full harness run rather than only the sensor connector.

Can I keep driving with P1212?

Do not continue driving when P1212 is active because the engine may stall or fail to restart, and continued cranking with low oil pressure can damage the high-pressure oil pump and injectors. Have the vehicle towed or diagnosed before attempting further operation.



Tools that help

- OBD-II scan tool with live data and Ford-specific PID support
- Digital multimeter for wiring and sensor continuity checks
- Oil pressure gauge or high-pressure oil test kit
- Basic hand tools for sensor and connector access
- Flashlight and mirror for harness inspection

Reading P1212

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (Ford): its meaning depends on the make.
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- 2** Fuel and air metering (injector circuits).
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- 12** The exact fault within that area.

Often seen with

P1210 Intake Valves For Cylinder Shut-Off Short To B+ · **P1211** Intake Valves For Cylinder Shut-Off Open Circuit · **P1210** Traction Control System Signal Fault · **P1211** ABS TCS Control Unit · **P1211** Mass Airflow Circuit Intermittent High · **P1210** Injector Control Pressure Above Expected Level · **P1211** Injector Control Pressure Sensor Above Below Desired · **P1211** Mass Air Flow Circuit Intermittent High · **P0087** Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0230** Fuel Pump Primary Circuit Malfunction

See it working

Watch the animated explainer [How Misfire Detection Works: Crankshaft Speed](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1212/>

