



P1144 · Jaguar

Air Assisted Injector Control Valve Circuit

P1144 on a Jaguar indicates that the engine control module (ECM) has detected an electrical fault in the circuit for the air assisted injector control valve, which is used on certain Jaguar engines to improve fuel atomization during cold starts. The ECM monitors the valve's circuit for expected voltage or current and sets this code when the signal is out of range, indicating an open, short, or component failure.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Jaguar specific	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or stumbling immediately after a cold start, especially in low ambient temperatures.
- Hesitation or flat spot during acceleration when the engine is cold.
- Increased fuel consumption during warm-up phases.
- In rare cases, a no-start condition if the valve circuit failure severely affects cold-start fueling.

Common causes, most likely first

- 1 Faulty air assisted injector control valve (solenoid or diaphragm failure).
- 2 Damaged or disconnected electrical connector at the control valve.
- 3 Corroded or broken wires in the valve circuit, often near the intake or exhaust manifolds.
- 4 Failed engine control module (ECM) driver for the valve circuit, though this is less common.
- 5 Vacuum hose leaks or blockages affecting the air assist system, which can indirectly trigger the code.
- 6 Carbon buildup or mechanical sticking of the valve internals.



How to diagnose and fix it

- 1 Verify the code with a Jaguar-specific scan tool and check for any related codes in the engine and transmission systems.
- 2 Inspect the electrical connector and wiring harness at the air assisted injector control valve for damage, corrosion, or loose pins.
- 3 Measure the resistance of the control valve solenoid and compare it to the manufacturer's specification to check for an open or shorted coil.
- 4 Test the valve's mechanical operation by applying vacuum or actuating it with a scan tool to confirm it opens and closes freely.
- 5 Check the vacuum supply hoses to the valve for leaks, cracks, or blockages that could affect its operation.
- 6 If the valve fails electrical or mechanical tests, replace it and clear the code, then verify the repair with a road test.
- 7 If the circuit tests good but the code persists, diagnose the ECM driver circuit and consider ECM replacement as a last resort.

When the valve tests good but the code returns

- A common oversight is assuming the valve itself is always at fault; the wiring harness often chafes against the intake manifold, causing an intermittent short that only appears when the engine is cold.
- The air assisted injector control valve only operates during cold starts, so a failed valve may not produce any driveability symptoms once the engine is warm, leading owners to ignore the code until emissions testing fails.
- On some Jaguar models, a weak battery or poor ground connection can cause the ECM to misreport the valve circuit, so always check charging system health before condemning the valve.
- Vacuum leaks elsewhere in the intake system can alter the air assist function and set P1144 even when the valve and its wiring are perfectly functional.
- After replacing the valve, the ECM may need a relearn procedure or several drive cycles before the code clears permanently, so do not assume a repeat code means the new part is defective.

Can I keep driving with P1144?

You can generally continue driving with P1144, but expect rough running and higher emissions during cold starts, and avoid heavy acceleration until the engine is fully warmed. Have the fault diagnosed soon to prevent potential catalytic converter damage from prolonged rich running.

Tools that help

- Jaguar-specific OBD-II scan tool
- Digital multimeter
- Hand vacuum pump
- Wire probe set
- Service manual with wiring diagrams



Reading P1144

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

Often seen with

P1143 Load Calculation Cross Check Upper Limit Exceeded · **P1145** Mass Or Volume Air Flow Circuit Short To B+ · **P1143** Pressure Sensor Circuit Low Input · **P1145** Intake Valve Timing Control Position Sensor Bank 2 · **P1143** HO2S Bank 1 Sensor 3 Signal Below 0.45v AF Ratio Too Lean · **P1143** Air Assisted Injector Control Valve Range Performance · **P1143** HO2S Bank 1 Sensor 3 Lean Or Low Voltage · **P1145** HO2S Cross Counts Bank 1 Sensor 3 · **P1143** HO2S Bank 1 Sensor 3 Lean Or Low Voltage · **P1145** HO2S Cross Counts Bank 1 Sensor 3 · **P1145** Solenoid Valve Running Losses Control Circuit Electrical · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1) · **P0300** Random/Multiple Cylinder 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/jaguar-p1144/>

