

JAGUAR · POWERTRAIN

P1641

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1641 · Jaguar

Fuel Pump Primary Circuit

P1641 on a Jaguar means the engine control module (ECM) has detected a fault in the primary electrical circuit that powers the fuel pump, which is the main low-pressure pump in the tank. The ECM monitors this circuit for opens, shorts, or excessive current draw and sets the code when the expected voltage or current is outside the programmed range.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Jaguar specific	High	Intermediate	Computer and output circuits

Symptoms you may notice

- Engine cranks but will not start, or starts then stalls immediately
- Intermittent loss of power or stalling while driving, especially under load
- Fuel pump does not prime when the ignition is switched on
- Rough running or lean misfire if the pump still runs but the circuit is marginal
- Often no symptoms besides the warning light if the fault is intermittent or stored only

Common causes, most likely first

- Failed fuel pump motor drawing excessive current or open-circuiting
- Corroded or loose electrical connector at the fuel pump module or inertia switch
- Damaged wiring harness between the ECM, fuel pump relay, and fuel pump
- Blown fuel pump fuse or faulty fuel pump relay
- Faulty fuel pump driver module or control module on models with variable pump speed
- Poor ground connection for the fuel pump circuit
- ECM internal driver fault (rare but possible after other causes are ruled out)

How to diagnose and fix it

- Check the fuel pump fuse and relay first, swapping the relay with a known-good one of the same type
- Inspect and clean the fuel pump connector and inertia switch connector for corrosion or looseness
- Measure voltage and current at the fuel pump connector during priming and running
- Perform a voltage drop test on the ground side of the fuel pump circuit
- Check the wiring harness for chafing, heat damage, or pinched sections between the relay and pump
- Test the fuel pump driver module if fitted, using a scan tool to command pump speed and monitor feedback
- Replace the fuel pump assembly only after confirming the circuit and control module are sound



What P1641 does not always mean

- A P1641 does not automatically condemn the fuel pump; a corroded connector or chafed wire often causes the same circuit fault for a fraction of the cost.
- On Jaguars with a fuel pump driver module, the module can fail and set P1641 even though the pump itself is healthy, so test the module before replacing the pump.
- Intermittent P1641 codes that appear only on hot days or after long drives often point to a failing pump motor that draws high current when hot, not to a wiring fault.
- A weak battery or poor charging system can cause the ECM to misread fuel pump circuit voltage, so verify battery and ground integrity before chasing the pump circuit.
- Some Jaguar models set P1641 when the inertia switch has tripped or its connector is loose, which is a quick check that is often overlooked.

Can I keep driving with P1641?

Do not drive the car if it is stalling or will not start, because a failing fuel pump circuit can leave you stranded without warning. If the light is on but the engine runs normally, drive only to a safe location or workshop and avoid heavy load or high-speed driving until the circuit is tested.

Tools that help

- OBD-II scan tool with Jaguar-specific software
- Digital multimeter with current clamp
- Fuel pressure gauge
- Test light or power probe
- Wiring diagram for the specific Jaguar model

Reading P1641

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Jaguar): its meaning depends on the make.
6	Computer and output circuits.
41	The exact fault within that area.

Often seen with

P0087 Fuel Rail/System Pressure - Too Low · **P0191** Fuel Rail Pressure Sensor Circuit Range/Performance · **P0230** Fuel Pump Primary Circuit Malfunction · **P0231** Fuel Pump Secondary Circuit Low · **P0232** Fuel Pump Secondary Circuit High



See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/jaguar-p1641/>

