

JAGUAR · POWERTRAIN

P1253

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1253 · Jaguar

VSV Stuck On VR

P1253 on a Jaguar indicates the engine control module (ECM) has detected that the Variable Valve Timing (VVT) Solenoid Valve, also called the VSV, is stuck in the energized or 'on' position when it should be off. The ECM commands the solenoid to de-energize and expects the camshaft timing to return to its base position, but the camshaft phaser does not move as expected, so the ECM flags the solenoid as stuck on.

SYSTEM

Powertrain

CODE TYPE

Jaguar specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air
metering (injector
circuits)

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or unstable engine speed, especially when the engine is cold.
- Reduced engine performance or sluggish acceleration at low RPM.
- Poor fuel economy due to incorrect camshaft timing.
- In some cases, the engine may stall or hesitate when coming to a stop.
- A noticeable ticking or clicking noise from the VVT solenoid area when the engine is running.

Common causes, most likely first

- 1 Faulty VVT solenoid (VSV) that is mechanically stuck in the open position due to internal wear or debris.
- 2 Contaminated engine oil or sludge blocking the solenoid valve, preventing it from closing properly.
- 3 Wiring harness damage or a short to power in the VSV control circuit, keeping the solenoid energized.
- 4 A stuck-open VVT solenoid relay or a faulty ECM driver, though these are less common.
- 5 Restricted oil passage or low oil pressure to the camshaft phaser, causing the phaser to stay advanced even when the solenoid is commanded off.
- 6 Aftermarket or incorrect oil filter causing oil pressure fluctuations that affect VVT operation.



How to diagnose and fix it

- 1 Check the engine oil level and condition; if the oil is dirty or sludged, perform an oil and filter change with the correct specification.
- 2 Inspect the VVT solenoid connector and wiring for corrosion, chafing, or a short to power; repair as needed.
- 3 Using a scan tool, command the VVT solenoid on and off while monitoring camshaft timing to confirm the fault.
- 4 Measure the resistance of the VVT solenoid and compare to specification; replace if out of range or stuck.
- 5 Remove the VVT solenoid and inspect for debris or sludge; clean or replace the solenoid as necessary.
- 6 Check oil pressure to the VVT system with a mechanical gauge; if low, diagnose the oil pump or oil passages.
- 7 After repairs, clear the code and perform a road test to verify the camshaft timing responds correctly to solenoid commands.

Why a Stuck VVT Solenoid Isn't Always the Solenoid

- A short to power in the VSV control wire can keep the solenoid energized even when the ECM commands it off, mimicking a stuck solenoid; always check the circuit before replacing the solenoid.
Sludge from extended oil change intervals is a leading cause of VSV sticking on Jaguar engines, so a thorough oil flush may be required after replacing the solenoid.
- The ECM may set P1253 if the camshaft phaser itself is mechanically stuck advanced due to debris, even though the solenoid is functioning correctly.
- On some Jaguar models, a failing variable valve timing oil control valve filter screen can restrict oil flow and cause the VSV to appear stuck on; this screen is often overlooked.
P1253 can be intermittent and may only appear after the engine is fully warmed and idling for extended periods, so a simple key-on engine-off test may not reveal the fault.

Can I keep driving with P1253?

You can generally drive the vehicle with P1253, but avoid aggressive acceleration and high engine speeds because incorrect camshaft timing can reduce performance and fuel economy. Have the fault diagnosed soon to prevent potential damage to the VVT system or catalytic converter from prolonged rich or lean operation.

Tools that help

- OBD-II scan tool with live data and bidirectional control capabilities
- Digital multimeter for circuit and resistance testing
- Mechanical oil pressure gauge
- Basic hand tools (socket set, wrenches, screwdrivers)
- Service information for Jaguar VVT system specifications



Reading P1253

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

Often seen with

P1254 Fuel Consumption Signal Short To B+ · **P1255** Engine Coolant Temperature Circuit Short To Ground · **P1254** Pedal Correlation PDS2 and LPDS High · **P1255** Pedal Correlation PDS2 and LPDS Low · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0012** 'A' Camshaft Position - Timing Over-Retarded (Bank 1) · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A)

See it working

Watch the animated explainer [Excavator Simulator: Hydraulics You Can Operate](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/jaguar-p1253/>

