

Reference	SSM75724
Models	Defender / L663 Discovery / L462 Discovery Sport / L550 New Range Rover Evoque / L551 Range Rover / L405 Range Rover Sport / L494 Range Rover Velar / L560
Title	INGENIUM I4 2.0L PETROL – Misfire or rough running
Category	Engine
Last modified	07-Apr-2022 00:00:00
Symptom	499000 Basic Engine
Attachments	SSM Attachment1.pdf (SSM Attachment1.pdf)

Content

Issue: JLR is investigating INGENIUM I4 2.0L PETROL vehicles misfiring/rough running and logging some of the following DTC's in the Powertrain Control Module (PCM):

- P1315 - Persistent Misfire - No sub type information
- P0316 - Engine Misfire Detected On Start-up (First 1000 Revolutions) - No sub type information
- P0300 - Random/Multiple Cylinder Misfire Detected - No sub type information
- P0301 - Cylinder 1 Misfire Detected - No sub type information
- P0302 - Cylinder 2 Misfire Detected - No sub type information
- P0303 - Cylinder 3 Misfire Detected - No sub type information
- P0304 - Cylinder 4 Misfire Detected - No sub type information

After primary and secondary diagnosis, it's concluded Continuous Variable Valve Lift (CVVL) system is at fault.

Cause: Under investigation

Action: If you see these conditions present on a vehicle, please perform following actions prior to replacing the Continuous Variable Valve Lift (CVVL) system:

1. Confirm if any of the DTC's above are logged within the Powertrain Control Module (PCM) using TOPIx Cloud Diagnostics and then clear all DTC's
2. With vehicle stationary, run an engine speed sweep from to idle to 2500rpm in approximately 500rpm steps to identify speed where misfire is most prominent
3. Recheck for any misfire DTC's using TOPIx Cloud Diagnostics
4. If after following TOPIx 303-01: Engine - INGENIUM I4 2.0L Petrol diagnosis the conclusion is to replace the Continuous Variable Valve Lift (CVVL) unit, please also replace the engine oil, oil filter element and take a 100ml sample of engine oil in a clean container and store with the replaced part
5. Carefully package the removed Continuous Variable Valve Lift (CVVL) unit ensuring it is secure within its box, paying particular attention to protecting the solenoid connectors which are very vulnerable to damage in transit – see attached photo
6. Raise an EPQR detailing the diagnosis steps taken and confirm the old Continuous Variable Valve Lift (CVVL) unit and oil sample are available for PRR

Thank you in advance for your assistance with this matter

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