

# TECHNICAL TOPICS

## POWERTRAIN



### Rough Running and/or Check Engine MIL

Range Rover, RR Sport, Discovery, LR4, RR Velar, RR Evoque, Discovery Sport, F PACE, F TYPE, XE, XF, XJ, E PACE equipped with AJ126, AJ133, or GTDi Engines

#### Customer Voice:

- The engine is running rough.
- There is a hesitation.
- The Check Engine MIL goes on and off.
- There is a noise on startup.

#### Technical Description:

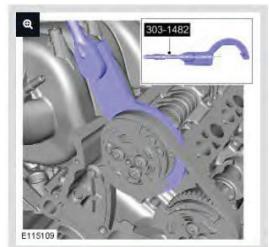
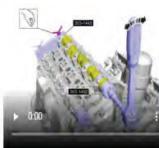
- Repairs were previously performed where the timing of the engine was set.

#### Status:

- Any time previous timing repairs were performed and a vehicle complaint that can be related is received, confirm the base mechanical timing of the engine.
- It is possible that the TOPIx Workshop Manual instructions were not followed exactly and it has resulted in the timing being off.
- It is possible for the timing to be off enough to affect the engine running quality, but not enough to trigger a DTC for camshaft/crankshaft correlation.
- Whenever any work is performed on a vehicle relating to the base timing of the engine, it is imperative that the TOPIx Workshop Manual instructions are always followed EXACTLY as listed!

#### CAUTIONS:

- Do not overtorque the camshafts.
- Tighten the wing nuts finger tight. Failure to follow this instruction may result in damage to the components.



Install the torque wrench to the special tool.  
Torque: 35Nm

Install the special tool. If the special tool cannot be installed, remove both timing chains and components and repeat the process from step 3 of the installation until the special tool 303-1445 is installed correctly.  
Special Tool: 303-1445