

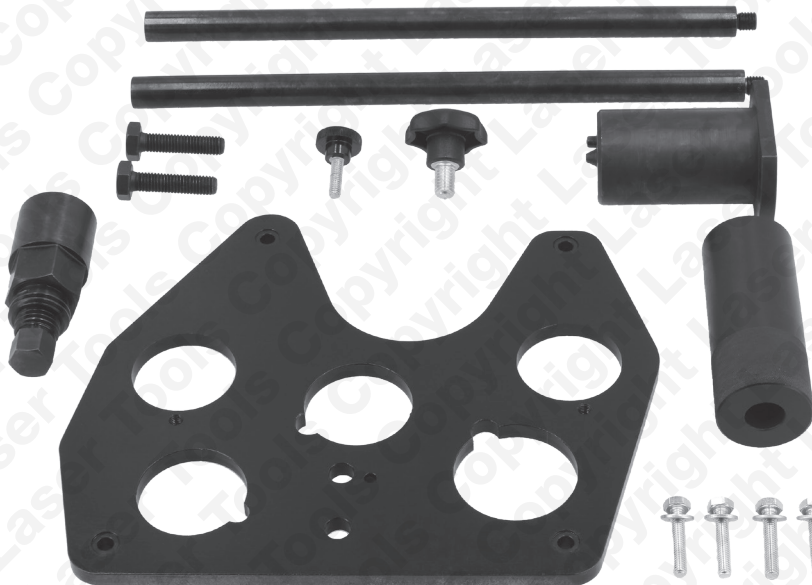
LASER[®]

Part No. 8271

Balance Shaft Removal & Installation Kit

JLR 2.0L Diesel

Instructions



www.lasertools.co.uk

Introduction

Designed to allow the safe removal, fitting and timing of the gear driven balance shafts found on the Jaguar Land Rover AJ200 2.0L Diesel engines.

NOTE: For camshaft timing Laser recommend the use of 7430 kit - sold separately.

- For removal, refitting and setting of the AJ200 diesel balance shafts.
- Applications include: Jaguar E-Pace (from 2017), F-Pace (2016 - 2020), XE (2015 - 2020), XF (2015 - 2020). Land Rover Discovery (from 2017), Discovery Sport (2015 - 2019), Range Rover Evoque (2015 - 2019), Range Rover Sport (2016 - 2018), Range Rover Velar (from 2017).
- Engine codes include: 2.0L Diesel, AJ20/204DT, AJ20/204DTA, AJ-200D/204DT, AJ-200D, AJ-200D/204DTA, 204DTA, AJ-200/204DTD.
- Equivalent to OEM JLR-303-1662, JLR-303-1663-1, JLR-303-1663-2, JLR-303-1663-3, JLR-303-1664, JLR-303-1665.
- Use in accordance with OEM instructions.

Components



Ref.	Comp. Code	OEM Ref.	Description
A	C983	JLR-303-1662	TDC Alignment Plate
B	C984	JLR-303-1663-2	Separator Body (Balance Shaft Gear)
C	C985	JLR-303-1663-1	Separator Force Screw (Balance Shaft Gear)
D	C986	JLR-303-1663-3	Separator Guide (Balance Shaft Gear)
E	C987	JLR-303-1665	Remove/Installer Guide Rod
F	C988	JLR-303-1664	Aligner - (Balance Shaft and Screw)
G	N/A	N/A	M6 Bolts for "A" (x4)
H	N/A	N/A	M10 Bolts for "A" (x2)

Applications

Make, Model, Year			Engine Codes
Land Rover	Discovery	From 2017	2.0L
	Discovery Sport	2015 - 2019	AJ20/204DT
	Range Rover Evoque	2015 - 2019	AJ20/204DTA
	Range Rover Sport	2016 - 2018	AJ-200/204DT AJ-200D
	Range Rover Velar	From 2017	AJ-200D/204DTA
Jaguar	E-Pace	From 2017	204DTA
	F-Pace	2016 - 2020	AJ200/204DTD AJ200/204DTA
	XE	2015 - 2020	AJ200D/204DTA
	XF	2015 - 2020	AJ200D/204DTD

Always refer to the website for most up to date applications:
www.lasertools.co.uk/product/8271

Instructions

The following instructions are for guidance only. Please refer to OEM derived data such as the vehicles manufacturers own data or Autodata.

The use of this tool is purely down to the user's discretion and The Tool Connection Ltd. cannot be held responsible for any damage caused what so ever.



- Always refer to manufacturer engine specific data and instructions.
- The balance shafts are held in position at the back (timing chain end) of the engine. For extraction the shafts are pushed forward out of the front of the engine.
- The balance shafts are gear driven. The gears must stay in place while the shafts are pushed out. For this reason Laser recommend you remove and refit one shaft at a time to allow the shaft gear to be held in place by component B.
- Removal of the balance shafts requires engine removal and removal of the transmission.
- For engine camshaft timing, please see Laser 7430.

Instructions

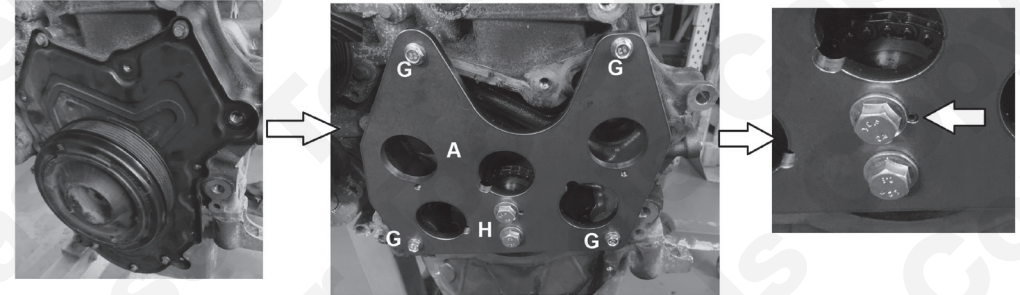
Balance shaft removal:

Component A – Crankshaft TDC Alignment Plate

Align the engine timing marks as per OEM instructions.

Working from the front of the engine with crankshaft pulley and front engine cover removed (see figure 1), fit the crankshaft TDC alignment plate (A). Ensure the pin in the crankshaft is aligned with hole in the plate so that the 2 crankshaft mounting bolts (H) can be fitted as shown. Fit bolts (H) to lock the plate and crankshaft in place.

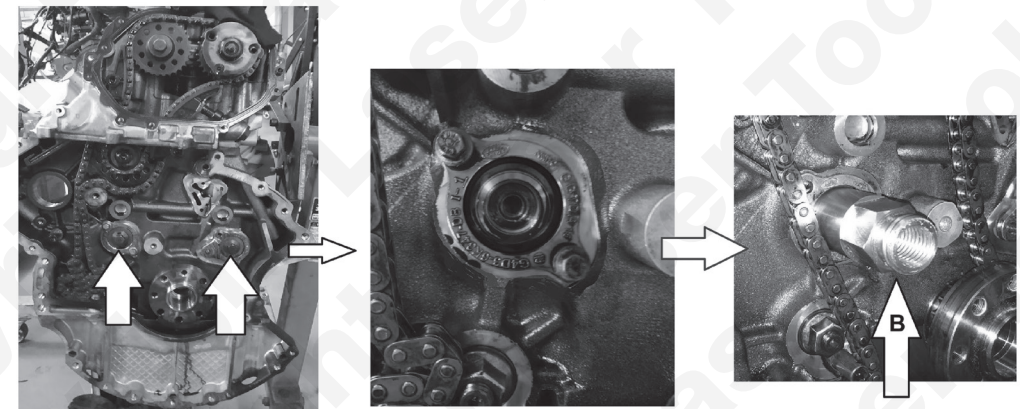
FIG:1



Component B – Separator Body (Balance Shaft Gear)

Working from the rear of the engine (timing chain end), with the flywheel and timing chain covers removed, remove the balance shaft gear fixing bolts and screw component "B" into the gear as shown in figure 2.

FIG:2

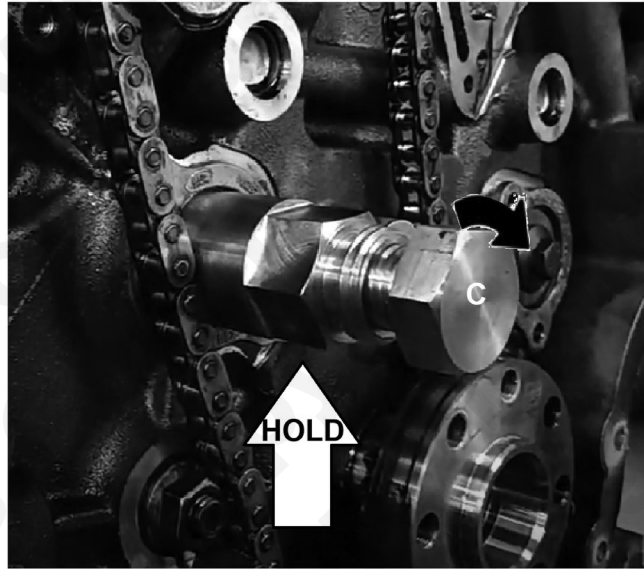


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Component C – Separator Force Screw (Balance Shaft Gear)

Holding component “B” with a suitable spanner, screw component “C” to 30Nm then tap with a copper mallet to release the taper in the gear. Continue turning “C” until the balance shaft has been pushed out of the gear as shown in figure 3. Remove the force screw (C) leaving component “B” in place.

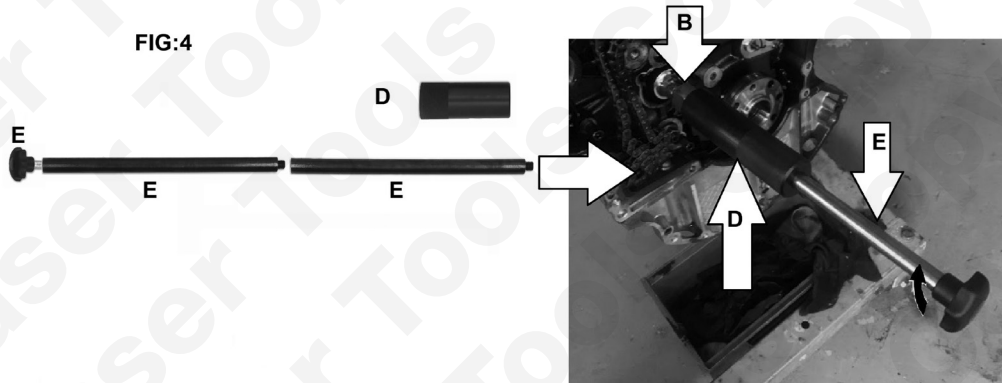
FIG:3



Components D & E- Separator Guide & Remover/Installer Guide Rod

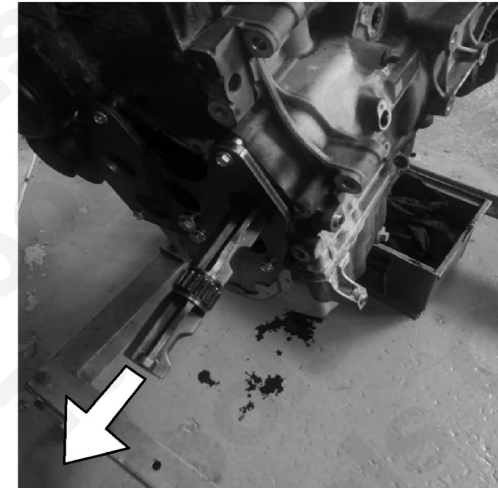
Screw component “D” on to component “B”. Assemble the guide rod (E) and insert the assembly through the guide (D) and screw it into the end of the balance shaft. Using the guide rod assembly (E) push the balance shaft out of the front of the engine. Remove the shaft. See figures 4 & 5.

FIG:4



Instructions

FIG:5



Balance shaft fitting:

With the guide rod assembly (E) still in place, attach the replacement balance shaft to the rod at the front of the engine and pull the balance shaft in to the engine and in to the balance shaft gear at the back of the engine.

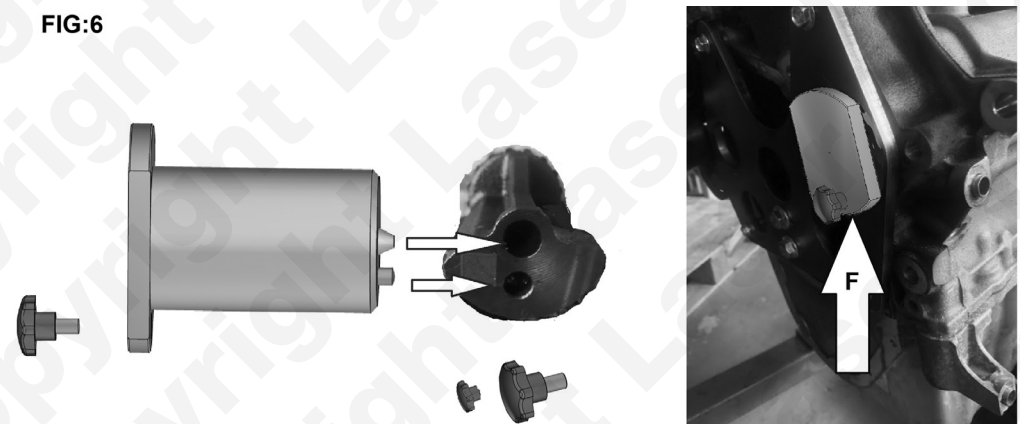
Working from the front of the engine fit component “F” as detailed below.

Component F – Balance Shaft Aligner

With the new balance shaft loosely held in place by the guide rod (E) push the balance shaft aligner (F) through the TDC alignment plate (A) so the pin in “F” aligns the balance shaft. Fit the holding screw for “F” as shown in figure 6.

Working from the back of the engine remove components “E, D, C & B”. Fit and tighten the balance shaft gear holding bolt and torque to the manufacturer’s specification.

FIG:6



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If applicable, the applications database and any instructional information provided has been designed to offer general guidance for a particular tool's use and while all attention is given to the accuracy of the data no project should be attempted without referring first to the manufacturer's technical documentation (workshop or instruction manual) or the use of a recognised authority such as Autodata.

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When you have finished with this product please recycle it

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Guarantee



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