# LASER<sup>®</sup>

# Instructions



Camshaft Locking blocks PEU REGISTERED DESIGN

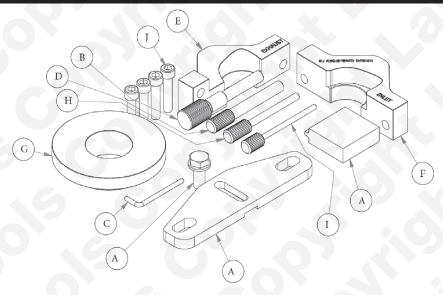


# Introduction

Developed to lock the engines of the vehicles listed in their "timed" position so that the cambelt can be safely removed and replaced. Whilst being equivalent to the OEM tools required for the engines listed, the cam-locking blocks have been specially designed to be quicker and much simpler to use than the OEM tooling.

Please note: for 1.1L engines, please use Laser Part No. 7828.

# **Components**



Ref.	Code	OEM Ref.	Description	
Α	C701	303-1602	Flywheel Holding Tool	
В	C702	303-1604	Crankshaft Timing Pin	
С	C282	303-1054 Tensioner Pulley Locking Pin		
D	C101	303-732 Crankshaft Pulley Alignment Pin		
E	C703*	Equivalent to 303-1605/2 Camshaft Setting Block Exhaus		
F	C704*	Equivalent to 303-1605/1	Camshaft Setting Block Inlet	
G	C705	303-1603 Oil Seal Installer		
Н	C089		Tensioner Pin (EcoSport only) 8mm Pin	
I	C488		Tensioner Pin (Except EcoSport) 4mm Pin	
J			Bolts for E & F	

\*C703 & C704 in 6952 for 1.0L EcoBoost only.

# **Applications**

Make, Mode	l, Year	Engine Codes				
Ford	B-MAX	2012 - 2018	1.0 EcoBoost	M1JU	SFJB	YYJF
	C-MAX / Grand C-MAX	2012 - on	M1CA	M2DA	SFJC	YYJG
	EcoSport	2013 - on	M1CB	M2DB	SFJD	
	Fiesta / Fiesta Active	2013 - on	M1DA	M2DC	SFJE	
	Focus / Focus Active	2012 - on	M1DC	M2GA	SFJH	
	Mondeo	2015 - 2018	M1DD	M2GB	SFJJ	
	Tourneo Connect	2014 - on	M1DH	QOJA	SFJK	
	Grand Tourneo Connect	2013 - 2018	M1JA	QOJC	SFJL	
	Transit Connect	2014 - on	M1JC	SFCA	SFJN	
	Transit Courier	2014 - 2019	— M1JE	SFCB	SFJP	
	Trailer Course	2011 2010	M1JH	SFCC	YYJA	
			M1JJ	SFCD	YYJB	
			M1JL	SFDA	YYJC	
			M1JM	SFDB	YYJD	
			M1JP	SFJA	YYJE	

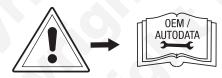
Always refer to the website for most up to date applications: www.lasertools.co.uk/product/6952

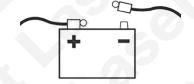
# **Precautions**

- Always refer to manufacturer specific data and instructions.
- The camshaft drive belt on the EcoBoost 1.0L engine is "oil bathed". The front engine casing must be removed to gain access.
- Turn engine to TDC number one before disassembly of engine.
- Remove starter motor and use component A to hold the flywheel when undoing the crankshaft pulley bolt.

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

The use of this engine timing tool kit is purely down to the user's discretion and The Tool Connection Ltd. cannot be held responsible for any damage caused whatsoever.



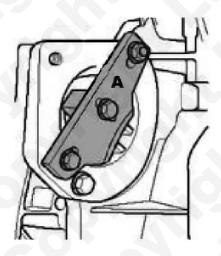


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# **Instructions**

#### **Component A**

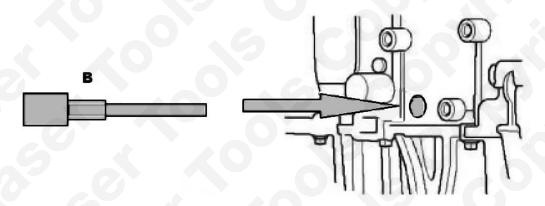
Used to lock the flywheel when loosening and tightening the crankshaft pulley bolt. Remove the starter motor, assemble component **A** as shown and fit in the starter aperture so that its tooth locks the flywheel.



#### **Component B**

Used to set the crankshaft position.

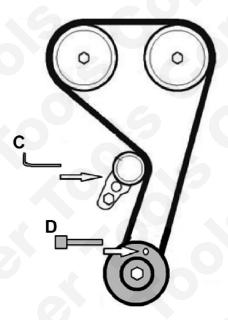
Remove the blanking plug in the side of the engine block as shown and fit component **B**. Turn the crankshaft slowly clockwise until the crankshaft web contacts the end of component **B**.



# **Instructions**

#### **Component C**

Used to lock the belt tensioner in its fully retracted position as shown.



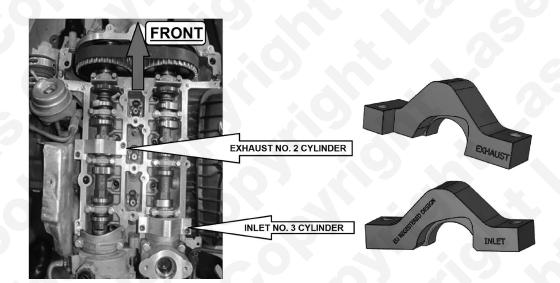
# **Component D**

Used to initially set the position of the crankshaft via a hole in the front crankshaft pulley as shown above.

#### Instructions

#### Component E & F

Used to lock the camshafts in their timed position independently of their pulleys. With component **B** already fitted and the engine at TDC No.1 cylinder. Fit the components **E** and **F** ensuring they seat on the surface of the cylinder head. Fit fixing bolts hand tighten (use the cam cover bolts for this purpose).

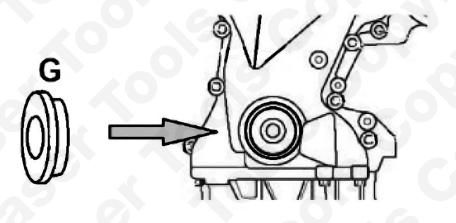


N.B. On engines equipped with VCT, if the VCT pulleys require removal or loosening ensure their initial position is marked with chalk or paint. Additional tooling will be required to set the position of the VCT pulleys, see Laser Part No. 6291.

#### **Instructions**

#### **Component G**

Used to fit the new front crankshaft oil seal into the front cover after the front cover has been fitted to the engine.



N.B. Observe manufacturers tightening sequence and torques for the front cover bolts.

# **Additional Tools Used in Conjunction with This Kit**

	Part No.	Description
I	6291	VCT Setting Kit - for Ford 1.0 GTDi VCT
	7317	Torque Multiplier Adaptor Kit - for Ford
	7318	Torque Multiplier Set 1500Nm

#### Safety Warnings - please read

- If the engine has been identified as an Interference engine, damage to the engine will occur if the timing belt has been damaged. A compression check of all the cylinders should be taken before the cylinder head (s) are removed.
- Do not turn crankshaft or camshaft when the timing belt/chain has been removed.
- To make turning the engine easier, remove the spark plugs/glow plugs or injectors.
- Observe all tightening torques.
- Do not turn the engine using the camshaft or any other sprocket.
- Disconnect the battery earth lead (check Radio code is available).

- Do not use cleaning fluids on belts, sprockets or rollers.
- Some toothed timing belts are not interchangeable. Check the replacement belt has the correct tooth profile.
- Always mark the belt with the direction of running before removal.
- Do not lever or force the belt onto its sprockets.
- Do not use timing pins to lock the engine when slackening or tightening the crankshaft pulley bolts.
- ALWAYS REFER TO A REPUTABLE MANUFACTURERS WORKSHOP MANUAL.



# Safety First. Be Protected.

Our products are designed to be used correctly and with care for the purpose for which they are intended. No liability is accepted by the Tool Connection for incorrect use of any of our products, and the Tool Connection cannot be held responsible for any damage to personnel, property or equipment when using the tools. Incorrect use will also invalidate the warranty.

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.

It is our policy to continually improve our products and thus we reserve the right to alter specifications and components without prior notice. It is the responsibility of the user to ensure the suitability of the tools and information prior to their use.





ONNECTION

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