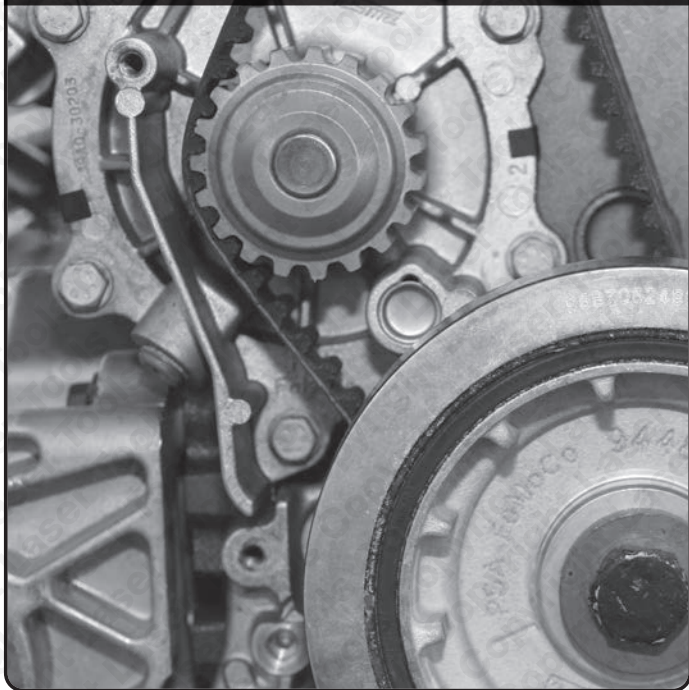


LASER®

Timing Tool Set

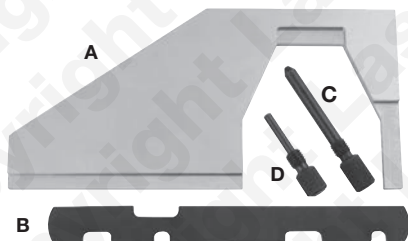


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Components



Ref.	Code	OEM Ref.	Description
A	C586	303-1061, 49 UN30 310610	Camshaft Locking Plate
B	C312	303-367B, 49 UN30 3376, 49 JE01 054	Alignment Plate
C	C036	303-574, 49 N010 101	Crankshaft Timing Pin
D	C035	303-507, 49 JE01 061	Crankshaft Timing Pin

Applications

Make, Model, Year				Engine Codes	
Ford	Mondeo	('00)	2003 - 2007	1,8 Sci CFBA	
Mazda	3	(BK)(BL)	2003 - 2014	1,8 L8	2,3 L3
	5	(CR)(CW)	2005 - 2015	L8 (MZR)	L3 (MZR)
	6	(GG/GY)(GH)	2002 - 2013	2,0 LF	L3 Turbo MPS
	CX-7	(ER)	2007 - 2013	LF (MZR)	2,5 L5
	MPV	(LW)	2002 - 2005		
	MX-5	(NC)	2005 - 2015		
	Tribute	(EP)	2004 - 2006		

Always refer to the website for most up to date applications:
www.lasertools.co.uk/product/5741

Instructions

Developed to lock the cam and crankshaft in position and allow the removal and replacement of the timing chain fitted to the twin Cam engines list below.

N.B The information given below is for reference only. The Tool Connection recommends the use of Manufacturer data or Autodata.

Preparation and precautions:

Removal of the timing chain will require the removal of the sump.

- Ensure the engine is at TDC cylinder number 1.
- Ensure the chain tensioner is fully retracted and held in the retracted position using a suitable pin.
- Remove the crankshaft pulley using an appropriate pulley holding tool
- Always replace the crankshaft pulley friction washers with new washers.

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.



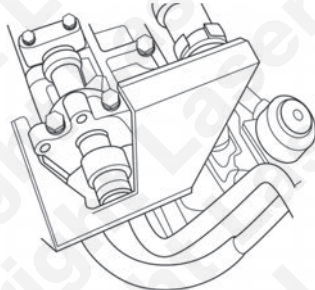
Warning – Incorrect or out of phase engine timing can result in damage to the valves. It is always recommended to turn the engine slowly, by hand, and to re-check the camshaft and crankshaft timing positions.

Instructions

A: Camshaft Locking Plate

Component A is used to lock both the camshafts in their timed position as shown in Fig. 1. Remove the cam cover and fit Component A as shown below (engine at TDC with Component D fitted)

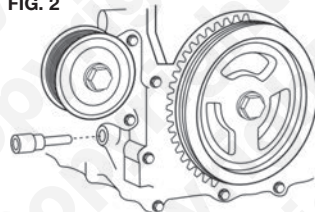
FIG. 1



D: Crankshaft Locking Tool

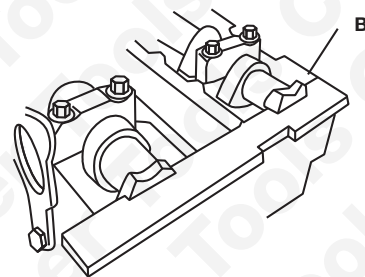
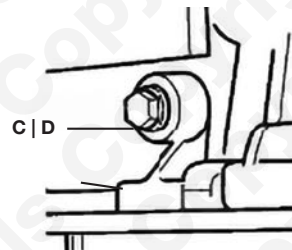
Component D is used to lock crankshaft in its timed position (TDC number 1 cylinder). Locate and remove the blanking plug from the engine block. Rotate the crankshaft in a clockwise direction and stop just before TDC number 1 cylinder. Fit the Component D in place of the blanking plug. Continue turning the crankshaft in a clockwise direction until it stops against component D. See Fig. 2.

FIG. 2



Instructions

1. Camshaft Setting / Locking Plate is used to accurately align a datum slot, located in the end of the camshafts. The various slots cut into the edge of the plate permit clearance around adjacent parts.
2. Follow the service manual instructions to remove the camshaft cover and timing belt cover.
3. Turn engine in the normal direction of rotation until the camshaft setting/locking plate can be inserted into the machined slot in the end of the camshaft.
4. Crankshaft TDC Location Pin is designed to screw into the cylinder block and provide a stop for the crankshaft to be positioned against to set the TDC position.
5. Turn the engine in the normal direction of rotation until the timing mark on the injection pump sprocket lines up with the cast lug on the timing cover.
6. Remove the plug from the cylinder block access hole and screw in the TDC location pin.
7. Slowly turn the crankshaft clockwise until the web makes contact with the end of the pin. Number 1 cylinder is now set at TDC on ignition stroke.



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.

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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.

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.



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Distributed by The Tool Connection Ltd
Kineton Road, Southern, Warwickshire CV47 0DR
T +44 (0) 1926 815000 F +44 (0) 1926 815888
info@toolconnection.co.uk www.toolconnection.co.uk

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