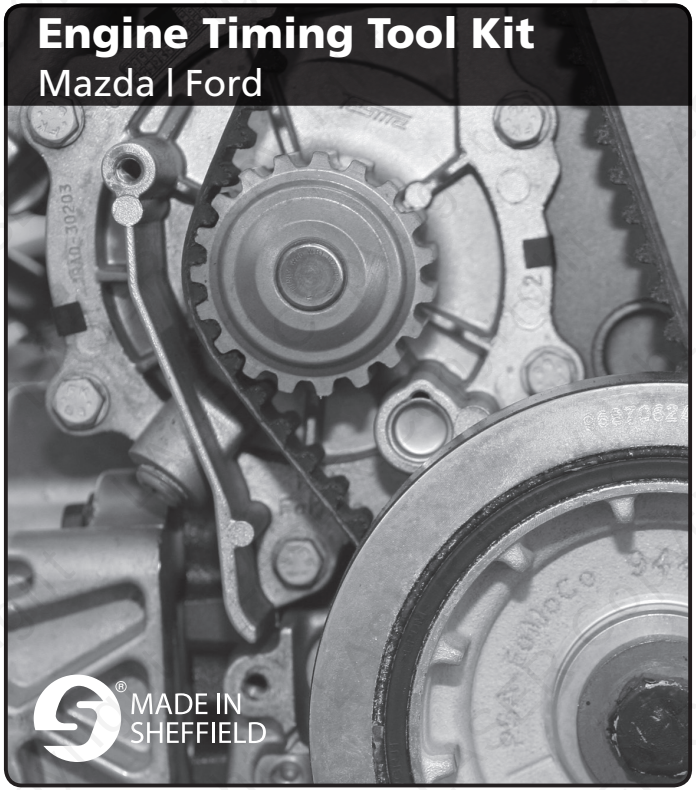
LASER®

Part No. 5741

Engine Timing Tool Kit

Mazda | Ford



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Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186.** Normal wear and tear are excluded as are consumable items and abuse.

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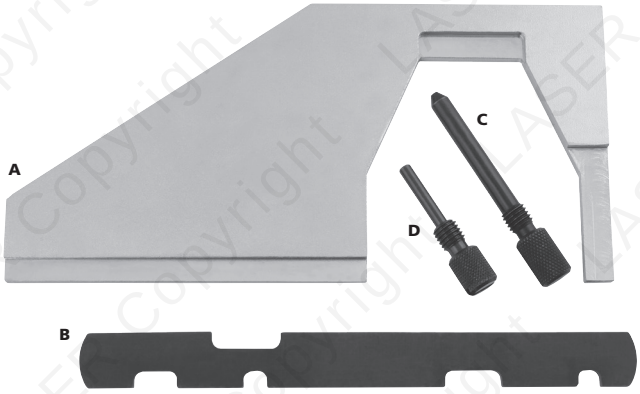
Plan Layout



Ref	OEM Ref	Description
A C586	49 UN30 310610/303-1061	Camshaft Locking Plate
B C034	999 7151/303 376/49JE01 054/303 367/49UN30 3376/21 162/21 162b	Locking Strap
C C036	49N010 101/MOT 1430/303 620/999 7201/21-163	Crankshaft Timing Pin
D C035	999 7152/49JEO1 061/303 507/21-210	Timing Pin

Safety Precautions

Incorrect or out of phase engine timing can result in damage to the valves. The Tool Connection cannot be held responsible for any damage caused by using these tools in anyway.

Safety Precautions – Please read

- Disconnect the battery earth leads (check radio code is available)
- Remove spark or glow plugs to make the engine turn easier
- Do not use cleaning fluids on belts, sprockets or rollers
- Always make a note of the route of the auxiliary drive belt before removal
- Turn the engine in the normal direction (clockwise unless stated otherwise)
- Do not turn the camshaft, crankshaft or diesel injection pump once the timing chain has been removed (unless specifically stated)
- Do not use the timing chain to lock the engine when slackening or tightening crankshaft pulley bolts
- Do not turn the crankshaft or camshaft when the timing belt/chain has been removed
- Mark the direction of the chain before removing
- It is always recommended to turn the engine slowly, by hand and to re-check the camshaft and crankshaft timing positions.
- Crankshafts and Camshafts may only be turned with the chain drive mechanism fully installed.
- Do not turn crankshaft via camshaft or other gears
- Check the diesel injection pump timing after replacing the chain
- Observe all tightening torques
- Always refer to the vehicle manufacturer's service manual or a suitable proprietary instruction book
- Incorrect or out of phase engine timing can result in damage to the valves

Applications

The application list for this product has been compiled cross referencing the OEM Tool Code with the Component Code.

In most cases the tools are specific to this type of engine and are necessary for Cam belt or chain maintenance.

If the engine has been identified as an interference engine valve to piston damage will occur if the engine is run with a broken Cam belt.

A compression check of all cylinders should be performed before removing the cylinder head.

Always consult a suitable work shop manual before attempting to change the Cam belt or Chain.

The use of these engine timing tools is purely down to the user's discretion and Eldon Tool and Engineering Ltd cannot be held responsible for any damage caused what so ever.

ALWAYS USE A REPUTABLE WORKSHOP MANUAL

• Full applications list on website

Manufacturer	Model	CC	Note	Fuel	Engine	Year
Ford	Mondeo	1.8	SCi	P	CFBA	2003 - 2007
Mazda	3	2.3	MPS	P	L3 Turbo	2006 - 2009
	3	2.3	MPS	P	L3 Turbo	2006 - 2009
	3	2.0	DISI i-stop	P	LF (MZR DISI)	2009 - 2013
	3	2.3	MPS	P	L3 Turbo	2009 - 2013
	5	2.0	DISI	P	MZR 2.0 (LF)	2010 - 2013
	6	2.3	MPS	P	L3 Turbo	2005 - 2007
	6	2.0	DISI	P	LF (MZR DISI)	2010 - 2013
	CX-7	2.3		P	L3 Turbo	2007 - 2012
	CX-7	2.3		P	L3 Turbo	2007 - 2012

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.

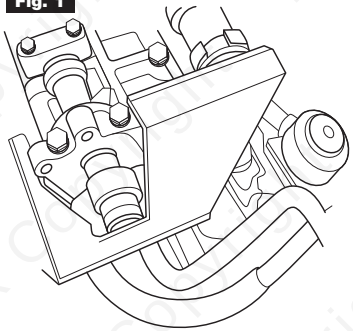
Preparation and precautions:

- 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.

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 **B** fitted)

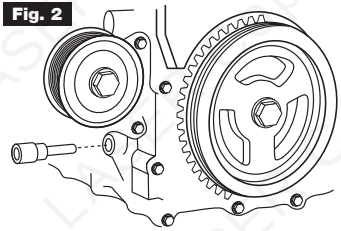
Fig. 1



B: Crankshaft Locking Tool

Component **B** 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 **B** in place of the blanking plug. Continue turning the crankshaft in a clockwise direction until it stops against component **B** 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.