

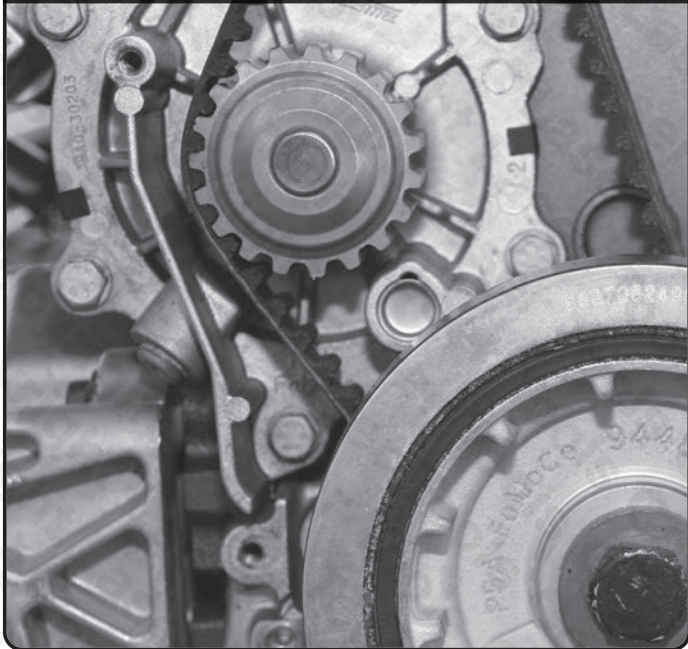
Part No. 3113

LASER[®]

Instructions

Engine Timing Tool Kit

BMW M50 & M52 Petrol



Please refer to www.lasertools.co.uk/toolpoint
to check the most up to date product applications.

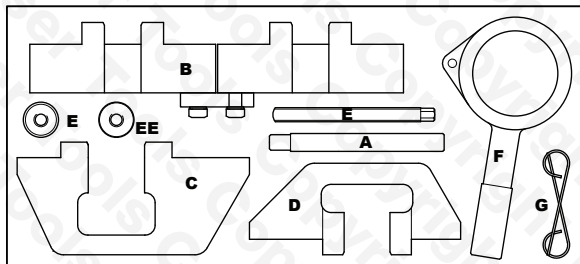
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Introduction

This comprehensive set of tools enables the correct timing positions to be achieved on both camshaft and crankshaft whilst replacing the timing belt on both petrol and diesel engines. Note that the 2,5 litre diesel engine is also used in some Range Rover and Vauxhall / Opel Omega models.

- This kit includes a special wrench for controlled turning of the exhaust camshaft sprocket when removing and installing the VANOS unit.
- Also included is a primary timing chain pre-load tool for tensioning the timing chain on M50, M52, M42 & M60 engines.
- Specifically designed for M42, M43, M50, M52 and M60 petrol engines
- Can also be used on M51 diesel engine.

Components



Ref.	Code	OEM Ref.	Description
A	C020	11 2 300	Crankshaft Locking Pin
B	C021	11 2 240	Camshaft Clamp Assembly
C	C022	11 3 190	Camshaft Timing Tool
D	C023	11 3 320	Camshaft Timing Tool
E	C024	11 4 220 11 3 390	Primary Timing Chain Pre-load Tool
F	C025	11 5 490	VANOS Unit Engagement Wrench
G	C026	11 3 290	Tensioner Holding Pin (2)

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 cambelt.

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

Always consult a suitable workshop manual before attempting to change the cambelt or chain.

The use of these engine timing tools 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 USE A REPUTABLE WORKSHOP MANUAL.

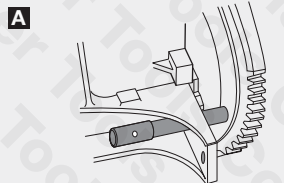


Marque	Model	Range	Year	Engine Codes
BMW	3 Series	320i, 323i, 325i, 328i	(E36)	1991 - 2001
	5 Series	520i, 525i	(E34)	1989 - 1996
	5 Series	520i, 523i, 528i	(E39)	1996 - 2000
	7 Series	728i	(E38)	1994 - 2002
	Z3	2.8	(E36)	1997 - 1999
				2.0
				20 6S 1 (M50 B20) TU 20 6S 2 (M50 B20) TU 20 6S 3 (M52 B20)
				2.5
				25 6S 1 (M50 B25) TU 25 6S 2 (M50 B25) TU 25 6S 3 (M52 B25)
				2.8
				28 6S 1 (M52 B28)

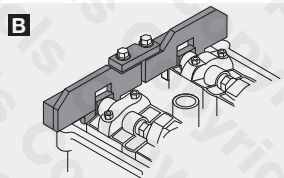
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The Crankshaft Locking Pin is fitted after the crankshaft has been turned to TDC (Top Dead Centre) on No.1 cylinder (A).

Note: Check for corrosion on the steel engine block, normally found on the straight 4 cylinder engine as this may cause the Pin to be a tight fit.



The Twin-Cam Locking Plates are positioned to align the camshafts at the correct timing position. The fork on each plate locates on the square form of each camshaft. The two plates are fastened together by means of a latch strap. (B)

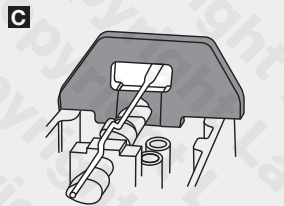


The appropriate Locking Plate for Single Overhead Camshaft locking should be selected first.

The M40 petrol engine has a timing belt, and the Locking Plate is used during both removal and installation sequences.

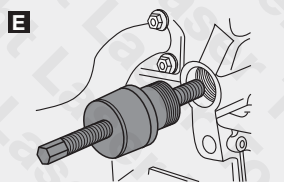
The M43 engine has chain drive.

The M51 diesel engine also has chain drive, and the Locking Plate is also suitable when servicing Range Rover and Vauxhall / Opel Omega models with this engine.



The Pre-Load tool is used during the sequence of engine timing and is applied to the primary timing chain. The Small Bush threaded M22 is suitable for M42 & M60 engines.

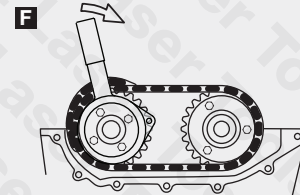
The Large Bush threaded M26 is suitable for M50 & M52 engines.



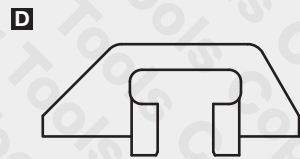
Instructions

The VANOS Wrench enables controlled clockwise turning of the exhaust cam sprocket and secondary chain when removing or installing the VANOS Adjustment Unit with plate springs.

On versions without plate springs, the VANOS Adjustment Unit can be removed without the need of this special tool.



Camshaft Locking Tool for M21 engines as fitted in models 324 d/td (E30) and 524 d/td (E28/E34) as produced between 1985 – 91.



Warning

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.

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.



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