

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 belt/chain has been removed (unless specifically stated)
- Do not use the timing chain to lock the engine when slackening or tightening crankshaft pulley bolts
- 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

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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Guarantee



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If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 816186**. Normal wear and tear are excluded as are consumable items and abuse.

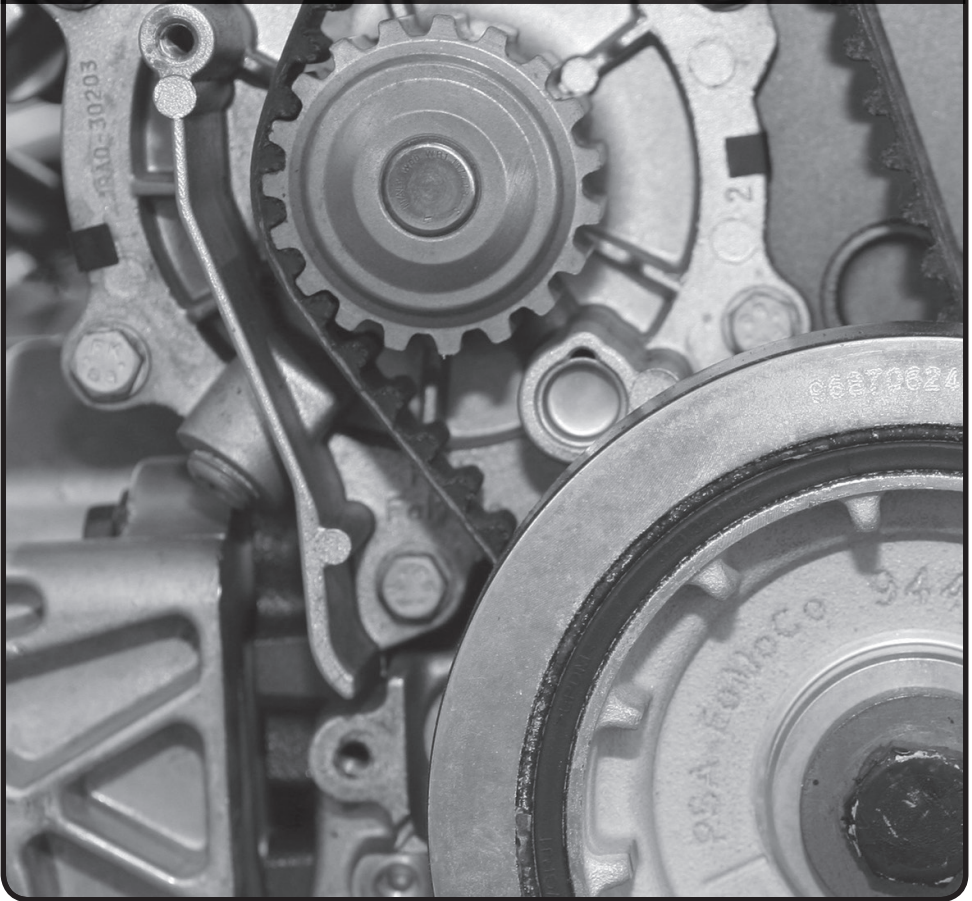
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LASER[®]

Part No. 7390

Engine Timing Tool Kit

BMW, Mini N13, N18 Chain
Driven Engines



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Introduction

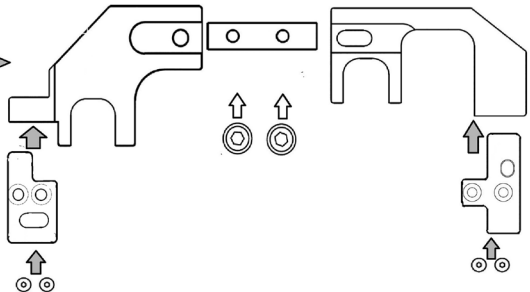
An engine timing kit designed to allow the timing to be set and checked on the 1.6 BMW engines found in the BMW, Mini ranges. Engine codes covered include N13 and N18 for BMW, Mini.

Instructions

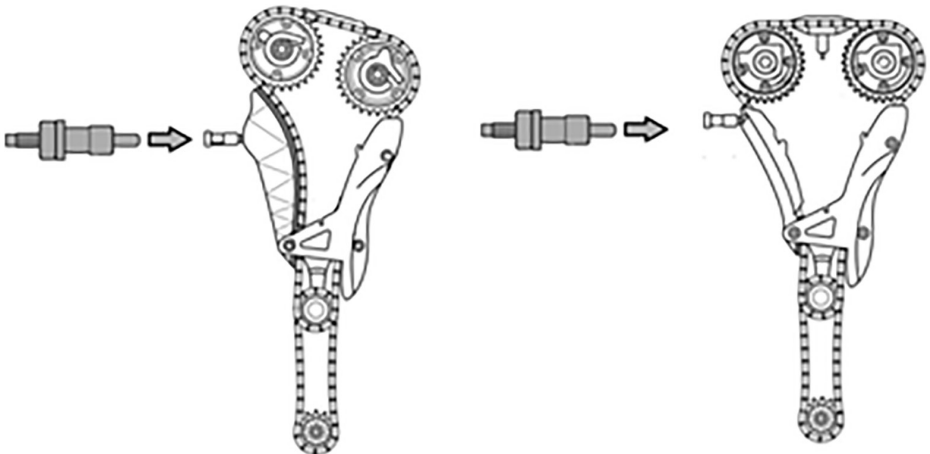
- Assemble the camshaft locking tools as shown below
- Lock both camshafts

NB: Mount the camshaft locking components with the link bar (E) facing the gearbox end of the engine.

BMW N13/N18 = A+B+C+D+E+F+G
OEM = 11 7 440



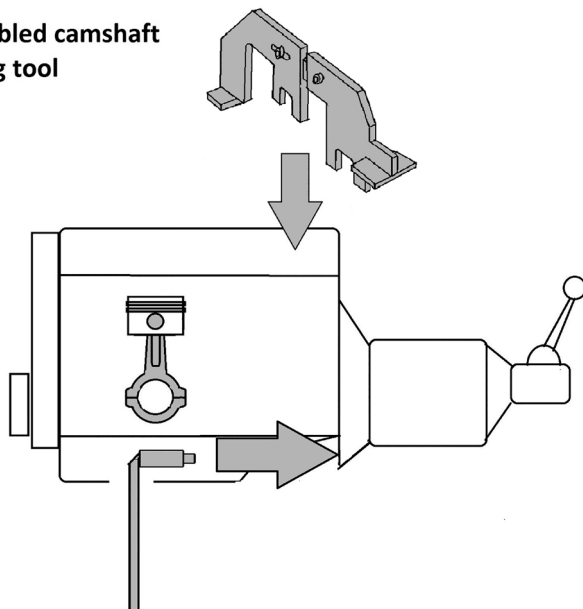
Use component (H) dummy timing chain tensioner tool to pre-load the timing chain when setting the timing. Tighten the pre-tensioner to OEM specification.



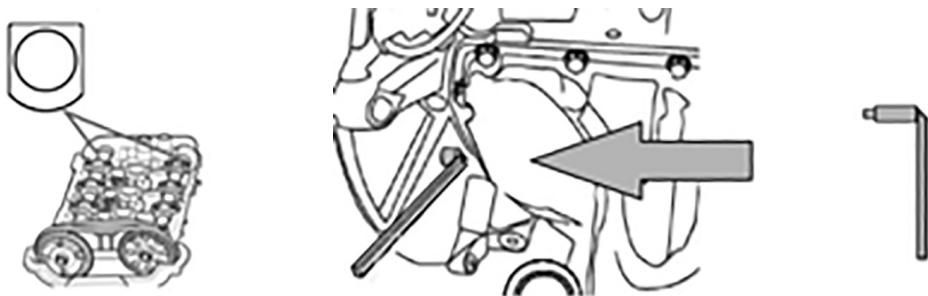
Instructions

Basic Component Use

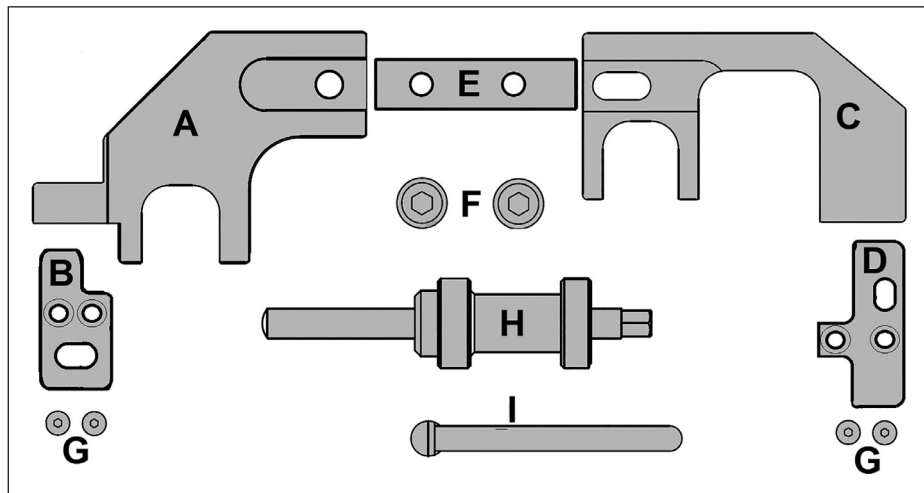
**Assembled camshaft
locking tool**



- Lock the engine with all pistons at equal heights, use a suitable rod or measurement tool to ensure piston 3 and 4 are level. Insert the flywheel timing pin (I).
- Ensure the camshafts are correctly aligned with their alignment flats positioned as shown.



Plan Layout



Ref.	Comp. Code	OEM Ref. BMW	Description
A	C789	11 7 440	Exhaust Camshaft Alignment Tool
B			Exhaust Camshaft Alignment Tool Foot
C	C792		Inlet Camshaft Alignment Tool
D			Inlet Camshaft Alignment Tool Foot
E	N/A		Link Bar
F	N/A		M10 x 15 Cap Head Screws x 2 use with E
G	N/A		M5 x 10mm Countersunk Screws x 4
H	C786	11 9 340	Dummy Timing Chain Tensioner
I	C785	2 299 362	Flywheel Timing Pin

Applications

Manufacturer	Model	Capacity	Year	Engine Code
BMW	1 Series (F20/21)	1.6	2011-2016	N13 B16A, N18 B16A,
	3 Series (F30/31)		2012-2015	N18 B16A/M0,
Mini	Clubman (R55)		2010-2014	N18 B16C,
	Countryman (R60)		2010-2017	N18 B16A/MO,
	Coupe (R58)		2011-2015	N18,
	Mini (R56/57)		2010-2015	N18 B16M0,
	Paceman (R61)		2013-2017	N18 B16C/TO,
	Roadster (R59)		2012-2015	

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 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.

