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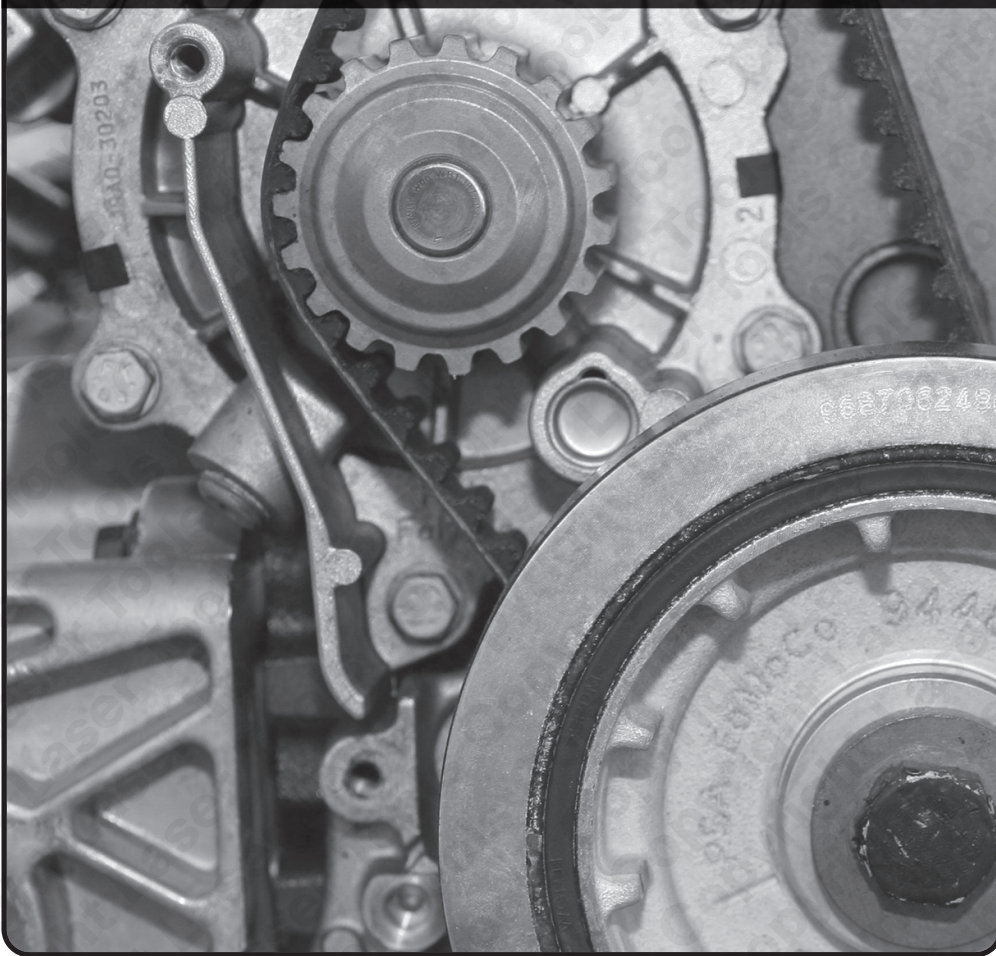
Part No. 7242

Instructions

Timing Chain Kit

BMW MINI

1.2L, 1.5L, 2.0L, 3.0L Petrol



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Introduction

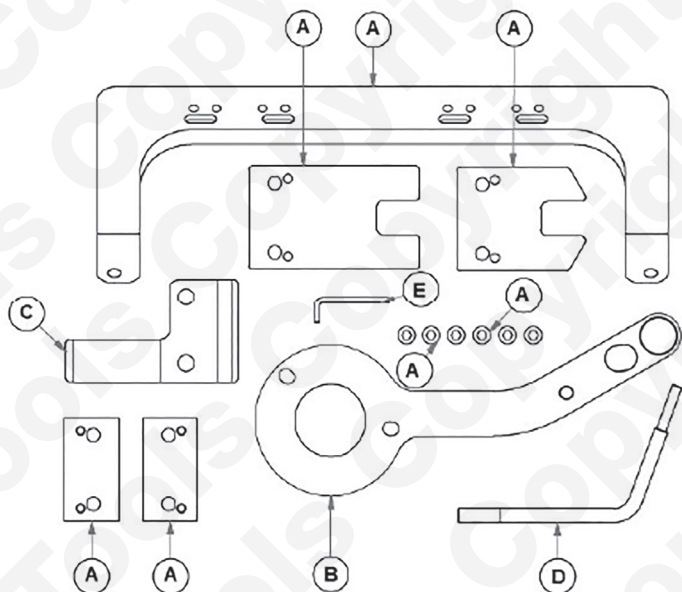
This comprehensive kit has been manufactured for the latest B38 and B48 engined MINI and B38, B48 and B58 BMW engines.

This kit consists of the camshaft and crankshaft holding tools as well as the flywheel alignment tool for manual and automatic vehicles. Please note Laser Timing Chain Pre-Tensioner Tool (Part No. 5153) may also be required. An additional kit may be required if work is being carried out on the balance shafts - use Laser Part No. 7253 (B38 engines) or Part No. 6840 (B48 engines).

- Engine Applications: B38, (1.2L and 1.5L) B48, (2.0L), B58 (3.0L).
- Equivalent to OEM tools: 2 358 122, 2 456 372, 2 357 904, 2 365 488, 2 288 380 & 11 4 120.

Designed to be used in accordance with OEM instructions.

Components



Ref.	Code	OEM Ref.	Description
A	C853	2 358 122	Camshaft Alignment Tool
B	C819	2 357 904	Crankshaft Holding Tool Assembly
C	C820	2 365 488	Flywheel/Drive Plate Adaptor
D	C821	2 288 380	Flywheel/Drive Plate Timing Pin
E	C852	11 4 120	Tensioner Locking Pin

Applications

Manufacturer	Model	Type	Year	Engine Codes
BMW	1 Series	116i, 118i, 120i, 125i, M140i, xDrive	2015 - 19	1.5L B38 A15A B38 A15F B38 A15P B38 B15A B38 K15A
		116i, 118i, 120i, 128ti, M135i, xDrive	2019 - on	
	2 Series	216i, 218i, 220i, 225i, 225xe, 230i, M240i, xDrive	2014 - 22	1.6L B48 B16A
		218i, 225e, 230e, xDrive	2019 - on	
	3 Series	318i, 320i, 330e, 330i, 340i, xDrive, M3	2015 - 19	2.0L B46 A20B B46 B20A B46 B20B B48 A20A B48 A20B B48 A20E B48 B20A B48 B20B B48 B20C
		320i, 325i, 330e, 330i, M340i, xDrive	2019 - on	
	4 Series	418i, 420i, 430i, 440i, xDrive	2015 - 21	
		420i, 430i, M440i mhev, xDrive	2020 - on	
	5 Series	520i, 530i, 540i, 530e mhev, xDrive	2017 - on	
	6 Series	630i mhev, 640i, xDrive	2017 - on	3.0L B58 B30A B58 B30B B58 B30C B58 B30D
	7 Series	730i, 740e iPerformance, 740i, 745e PHEV, xDrive	2015 - 22	
	8 Series	840i, xDrive	2018 - on	
	i8		2014 - 20	
	X1	18i, 20i, 25e, 25i, sDrive, xDrive	2015 - 22	
	X2	18i, 20i, 25e, M35i, sDrive, xDrive	2018 - on	
	X3	20i, 30i, 30e, 30i, M35i, mhev, M40i, sDrive, xDrive	2017 - on	
	X4	20i, 30i, M40i, xDrive	2018 - on	
	X5	40i, 45e, xDrive	2018 - on	
	X6	40i, xDrive	2019 - on	
	X7		2018 - 21	
	Z4	20i, 30i, sDrive	2019 - on	
MINI	Clubman	Cooper, Cooper S, JCW, One	2015 - on	1.2L B38 A12A
	Convertible		2016 - on	1.5L B36 A15A B38 A15A
	Countryman	Cooper, Cooper S, JCW, One, SE	2017 - on	2.0L B46 B20A B48 A20A B48 A20B B48 A20E B48 A20F
	Mini Hatch	Cooper, Cooper S, JCW, One	2014 - on	
Toyota	GR Supra		2019 - on	2.0L B48 B20B 3.0L B58 B30C

Always refer to the website for most up to date applications: www.lasertools.co.uk/product/7242

Safety Warnings - Please Read

- Personal protection and safety equipment must be used at all times.
 - Eye protection and protective gloves must be worn when using these tools.
 - Misuse of tools is unsafe and can cause engine damage.
 - Remove damaged tools from use.
 - Store in a dry place when not in use.
- N.B. Always turn the engine in normal direction of rotation.
Do not use timing tools to torque or loosen fixings against unless otherwise stated.

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

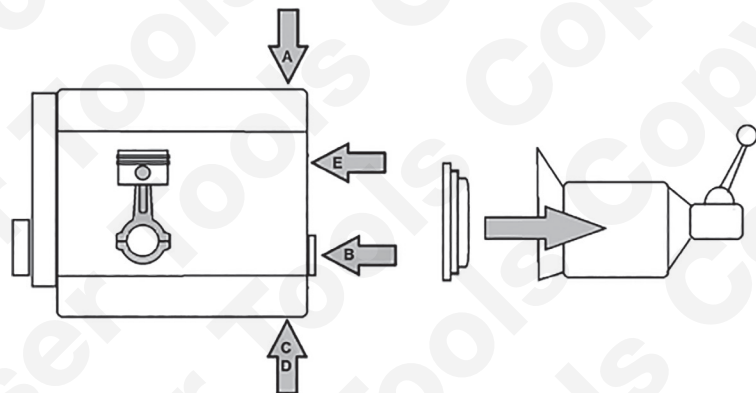
The use of this timing chain tool kit is purely down to the user's discretion and The Tool Connection Ltd. cannot be held responsible for any damage caused whatsoever.



Warning: Hybrid drive vehicles (including PHEV & MHEV):

Where the vehicle is a hybrid electric vehicle there may be a risk of injury due to electric shock. Please ensure all manufacturers' safety recommendations are followed at all times including any relevant HV disconnection processes and the use of appropriate PPE as specified by the vehicle manufacturer. No liability is accepted by the Tool Connection for injury or shock to personnel, property or equipment, however caused.

Where used



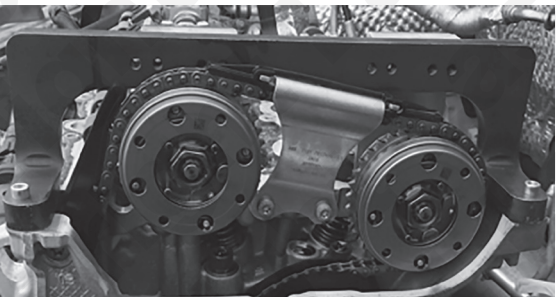
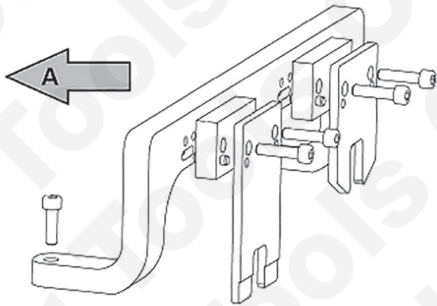
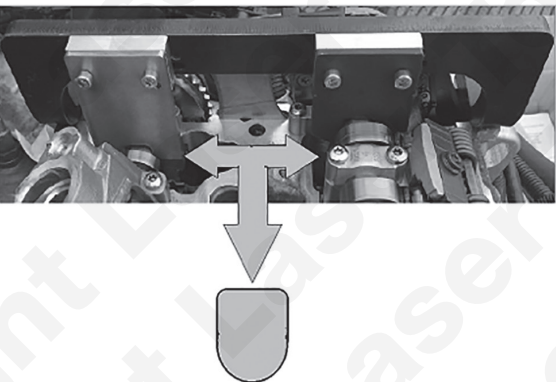
Preparation

- For removal and installation of timing chains, that are located at the rear of the engine:
- Engine/transmission removal
 - Cylinder head removal
 - Flywheel/drive plate removal
 - Sump removal
 - Timing chain cover removal
 - Oil pump chain removal

Instructions

Component A

Assemble component A but do not fully secure the forks in their position until the camshaft alignment tool is fitted to the cylinder head. When fitting the camshaft alignment tool make sure the middle one of the three flat sections on both camshafts must be pointing upwards.

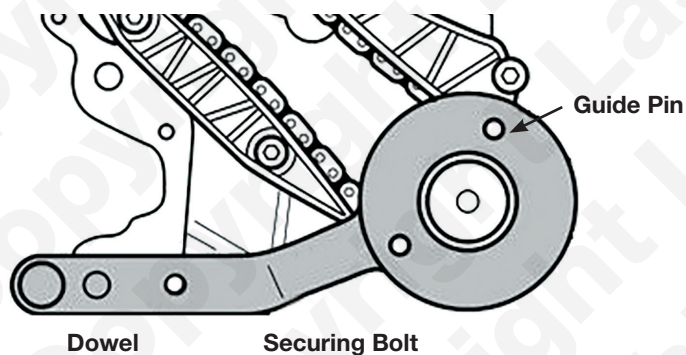


Camshaft Alignment tool fitted in position, and both forks can now be secured.

Instructions

Component B

The crankshaft holding tool must be secured in order to loosen the central securing bolt of the crankshaft. Position the holding tool on the crankshaft and located on the guide pin, make sure that the securing bolt and dowel on crankcase are aligned, the securing bolt can now be tightened.



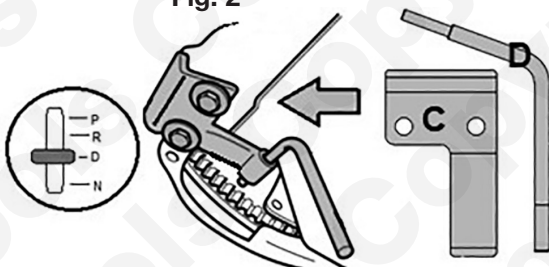
Component C/D

Align engine at TDC on No 1 cylinder and insert the stepped timing pin Fig 1. If vehicle is an automatic, component C will have to be used when fitting the stepped timing pin Fig 2. Check camshaft lobes positions as shown in Fig 3.

Fig. 1



Fig. 2



Instructions

Camshaft Lobes

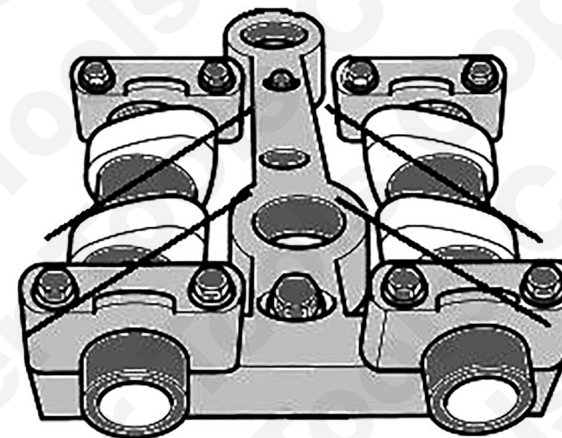
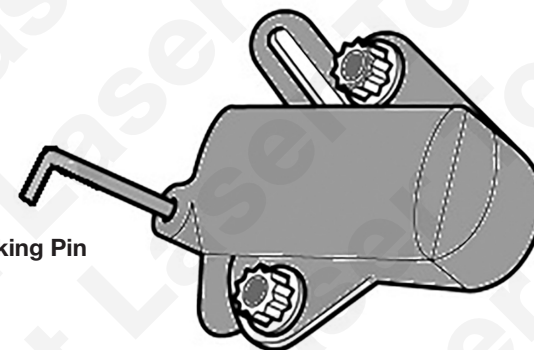


Fig. 3

Component E

Using a suitable tool, compress the tensioner piston to its fully retracted position and secure with locking pin.

Tensioner Locking Pin



Safety Warnings - 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 manufacturers' 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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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.



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

www.lasertools.co.uk