

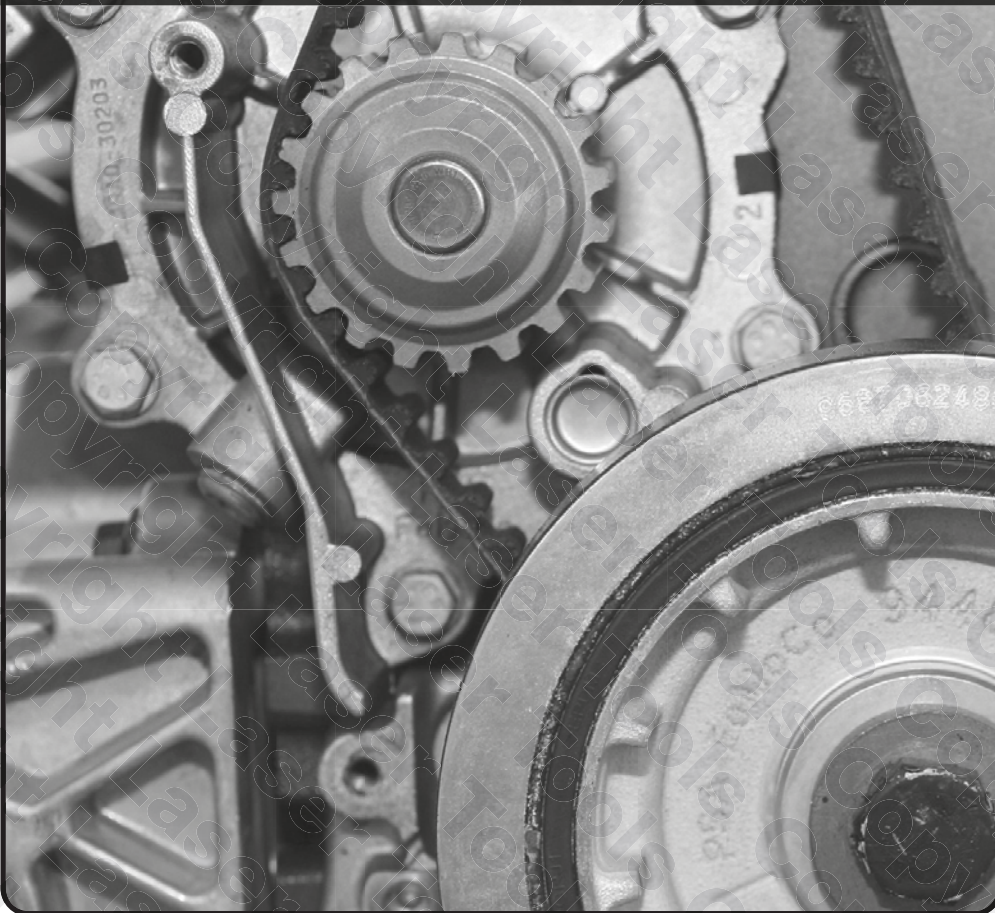
LASER[®]

Part No. 7242

Instructions

Engine Timing Tool Kit

Timing Chain Kit - BMW-Mini 1.2,
1.5, 2.0, 3.0 Petrol



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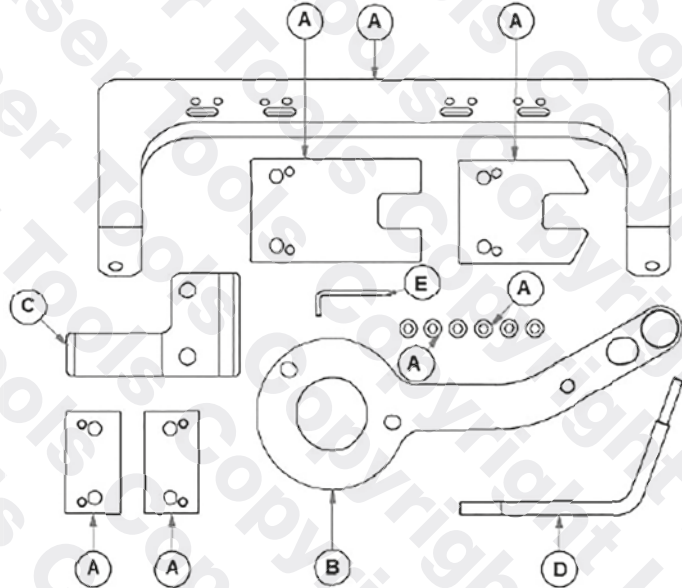
Introduction

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

This kit consists of camshaft, crankshaft holding tools and flywheel alignment tool for manual and automatic vehicles. Please note Laser 5153 Timing chain pre-tensioner tool may also be required. An additional kit may be required if work is being carried out on the Balance shafts Laser 6840 (B48).

- Engine Applications: B38, (1.2L and 1.5L) B48, (2.0L), B58 (3.0L).
- Equivalent to OEM tools: 2 358 122, 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	Description
A	C853	2 358 122	Camshaft Alignment Tool
B	C819	2 357 904	Crankshaft Holding Tool Assy
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

Make, Model, Variant, Year

BMW	1 Series	116i, 118i, 120i, 125i, M140i/xDrive	(F20/21)	2015 - 2019
	2 Series	216i, 218i, 220i, 225i, 225xe, 230i, M240i/xDrive	(F22/F23/F45/F46)	From 2014
	3 Series	318i, 320i, 330e, 330i, 340i/xDrive, M3	(F30/31/F80)	2015 - 2019
	3 Series Gran Turismo	318i, 320i, 330e, 330i, 340i/xDrive, M3	(F34)	From 2016
	3 Series	320i, 325i, 330e, 330i/xDrive	(G20/21)	From 2019
	4 Series	418i, 420i, 430i, 440i/xDrive	(F32/F33/F36)	From 2015
	5 Series	520i, 530i, 540i/xDrive	(G30/31)	From 2017
	6 Series Gran Turismo	630i, 640i/xDrive	(G32)	From 2017
	7 Series	730i, 740e iPerformance, 740i/xDrive	(G11/12)	From 2015
	i8		(I12)	From 2014
	X1	sDrive 18i, sDrive 20i, xDrive 20i, xDrive 25i	(F48)	From 2015
	X2	sDrive 18i, sDrive 20i, xDrive 20i, M35i	(F39)	From 2018
	X3	sDrive 20i, xDrive 20i, xDrive 30i, M40i	(G01)	From 2017
	X4	xDrive 20i, xDrive 30i, M40i	(G02)	From 2018
	Z4	sDrive 20i, sDrive 30i	(G29)	From 2019
	Mini	Clubman	Cooper, Cooper S, JCW, One	(F54)
Convertible		Cooper, Cooper S, JCW, One	(F54)	From 2016
Countryman		Cooper, Cooper S, JCW, One, SE	(F60)	From 2016
Mini Hatch		Cooper, Cooper S, JCW	(F55/56)	From 2014

Engine Codes

1.2	B38 A12A
1.5	B38 A15A, B38 B15A, B38 K15A
1.6	B48 B16A
2.0	B48 A20A, B48 A20B, B48 A20E, B48 B20A, B48 B20B
3.0	B58 B30A

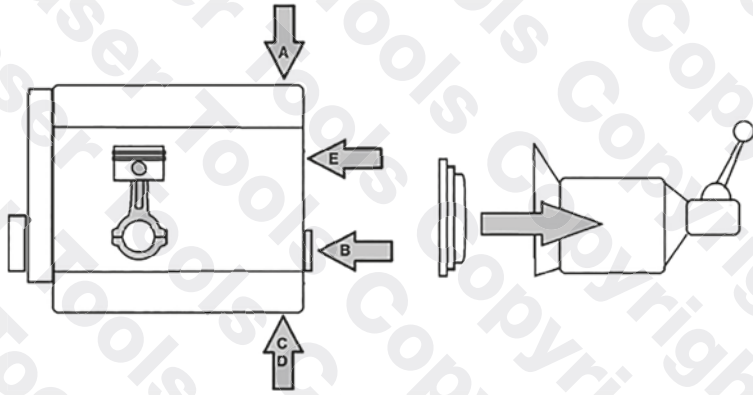
Safety Warning - Please Read

- 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.

Where used



Preparation

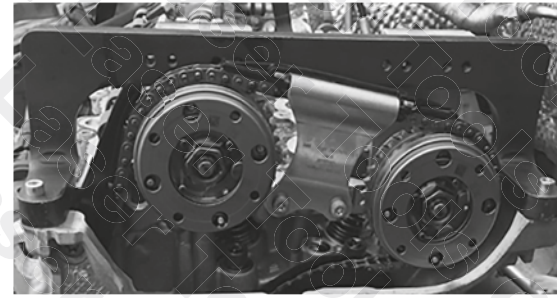
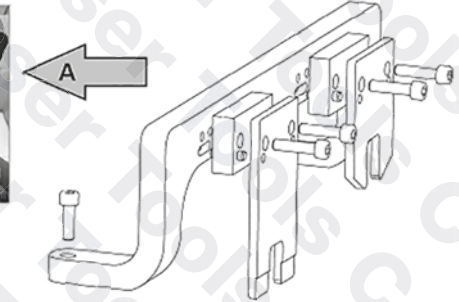
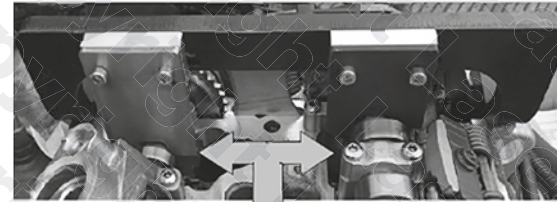
For removal and installation of timing chains, that are located at the rear of the engine

- Engine/Transmission removal
- Cylinder head removal
- Flywheel/drive plate removal
- Sump removal
- Timing chain cover removal
- Oil pump chain Removal

Instructions

Component A

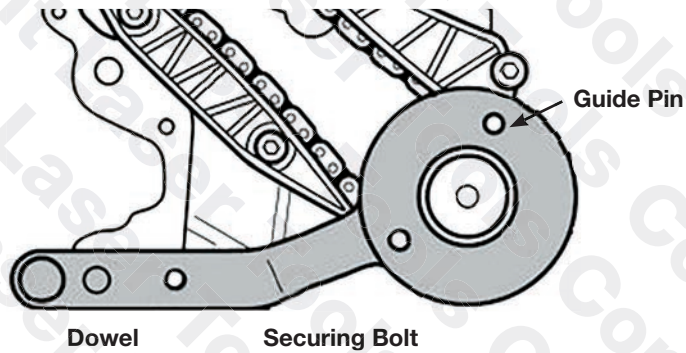
Assemble component A but do not fully secure the forks in their position until the camshaft alignment tool is fitted to the cylinder head. When fitting the camshaft alignment tool make sure the middle one of the three flat sections on both camshafts must be pointing upwards.



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

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.



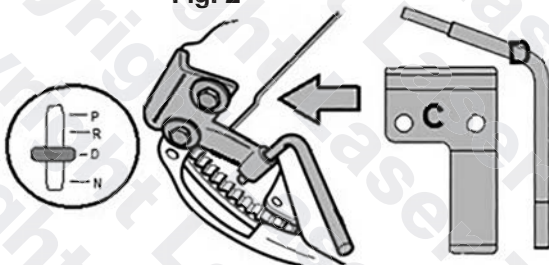
Component C/D

Align engine at TDC on No 1 cylinder and insert the stepped timing pin Fig1. 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



Camshaft Lobes

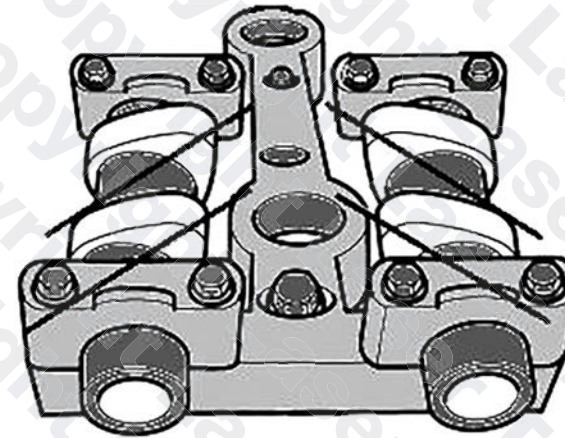
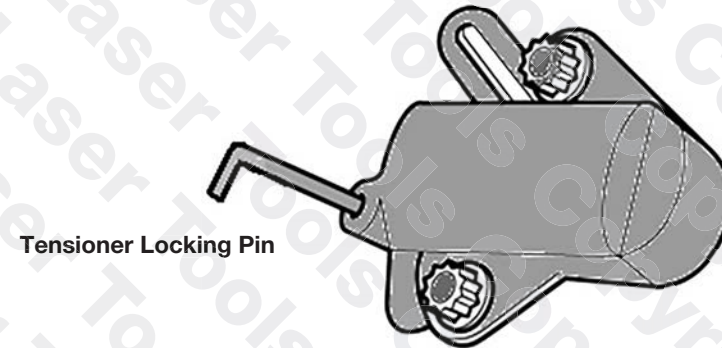


Fig.3

Component E

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

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Guarantee



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