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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.

7313_Instructions_V1

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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LASER[®]

7313

Engine Timing Tool Set BMW M3 (S65)



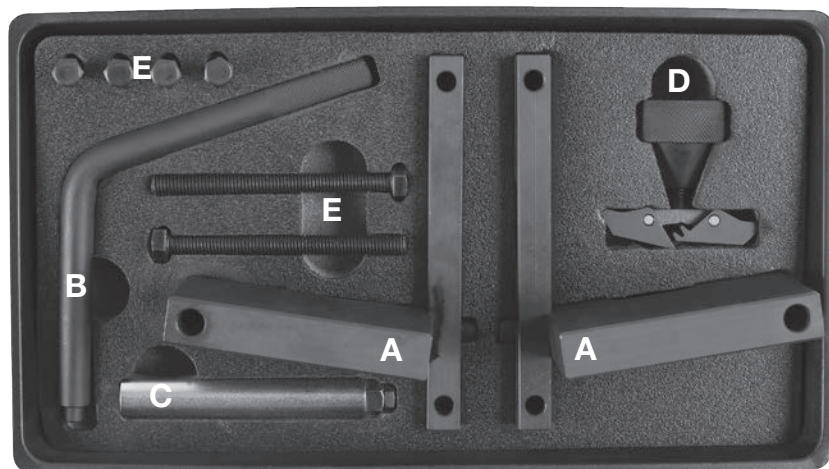
- Engine codes: S65 B40A (4.0L).
- Equivalent to OEM tools 11 9 970 (camshaft alignment tools), 11 5 320 (crankshaft timing pin), 11 5 290 (Tensioner rail tools made up of 11 5 291 & 292), 11 5 370 (split camshaft setting tool).
- Use in accordance with OEM instructions.
- Caution: always use an appropriate pulley holding tool to loosen and tighten the engine vibration damper against.

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Components

This engine timing tool set is designed to set the engine timing on the BMW M3 S65 engine found in the M3 from 2007 to 2013.



Ref	Code	OEM	Description
A	C885	11 9 970	Camshaft Alignment Tools
B	C529	11 5 320	Crankshaft Alignment Tool
C	C886	11 5 291 & 11 5 292	Tensioner Guide removal tool
D	C887	11 5 370	Split Camshaft Gear Setting tool
E			Fixing Bolts For A

Applications

Make	Model	Years	Type
BMW	3 Series	2007-2013	M3

Engine Code	
4.0	S65 B40A

The following instructions are for guidance only. Please refer to OEM derived data such as the vehicles manufactures own data or Autodata. The use of this kit is purely down to the user's discretion and the Tool Connection Ltd cannot be held responsible for any damage caused what so ever.



Preparation

N.B. Always turn the engine in normal direction of rotation.

Removal of the timing chains on the S65 engine requires:

- Removal of the sump
- Removal of the oil pump

WARNING: These instructions are given as a guide only, Please refer to OEM instructions before proceeding.

Instructions

Component A

Camshaft Alignment Tools:

Used to check and set the position of the camshafts. Fit both the camshaft alignment tools as shown in Fig.1.

When checking the LH cylinder bank ensure the camshaft part numbers (A2 & E2) are facing upwards with the crankshaft at TDC Cylinder number 1 on compression stroke.

When checking the RH cylinder bank ensure the camshaft part numbers (E1 & A1) are facing downwards with the crankshaft at TDC Cylinder number 1 on Exhaust stroke.

When checking the timing a maximum of 1mm clearance between the cylinder head surface and components (A) is allowed. For adjusting timing refer to OEM instructions.

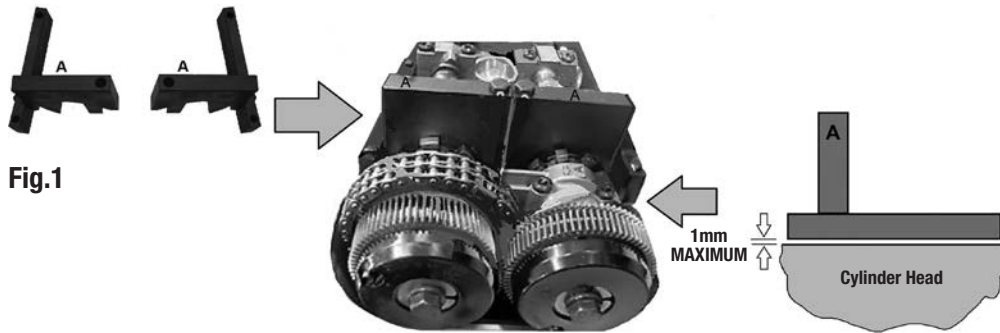


Fig.1

Component B

Crankshaft Alignment Tool

Used to set the crankshaft in it's timed position.

There are 2 slots in the front crankshaft pulley. One slot (X) is TDC number 1 cylinder and the second slot (Y) is 10 degrees before TDC number one cylinder.

When checking the timing on the LH and RH Banks ensure the crankshaft pin (B) engages with the TDC slot (X). When adjusting timing use slot the 10 degree BTDC slot (Y).

See Fig.2.

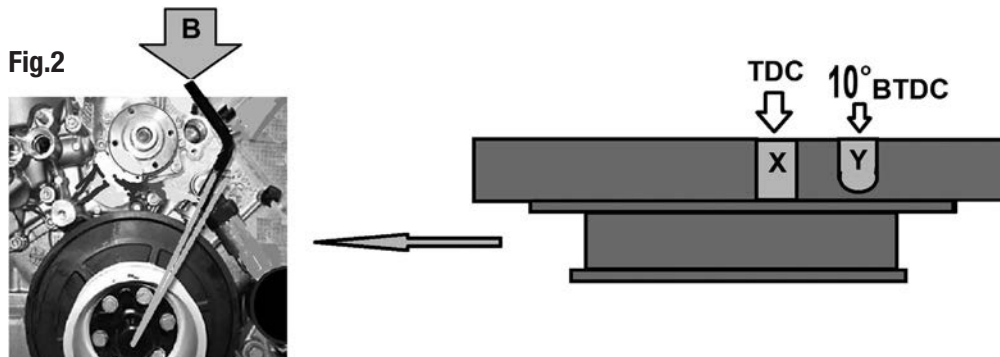


Fig.2

Component C

Tensioner Guide Removal Tools

Used to extract the chain tensioner rail mounting pins to allow the removal of the chain guides. See Fig.3.

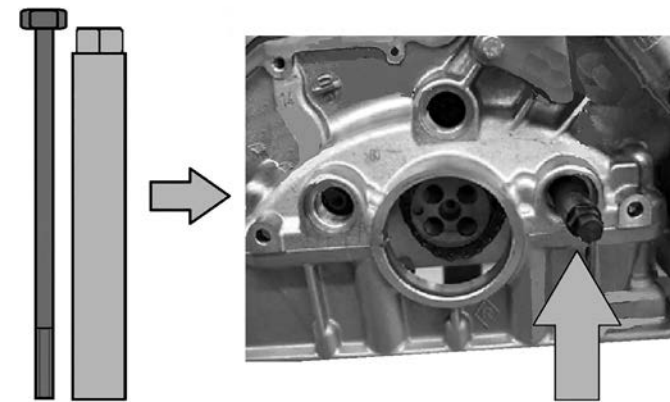


Fig.3

Component D

Split Gear Setting Tool

Used as shown in Fig.4 to maintain the tension on the 2 halves of the split camshaft gears. Ensure the holes (X) are kept aligned.

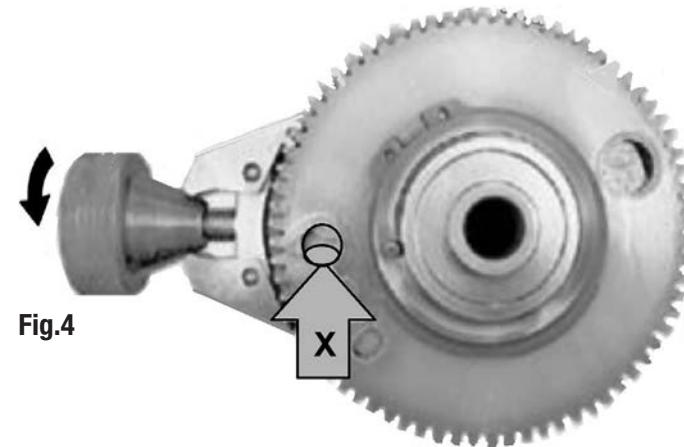


Fig.4