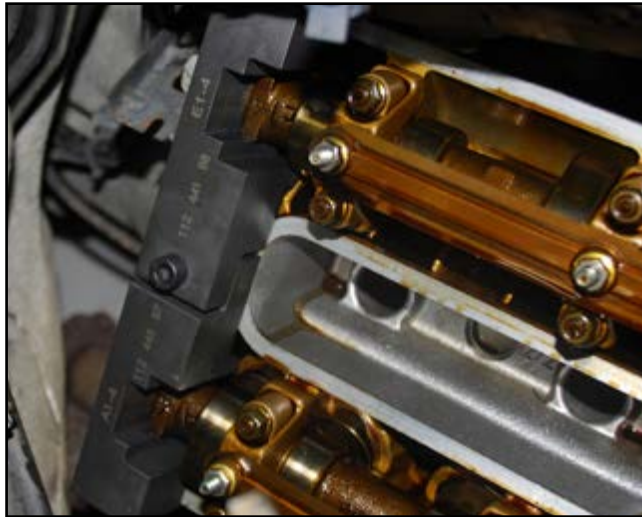




BMW M60/M62 Camshaft Alignment Tool



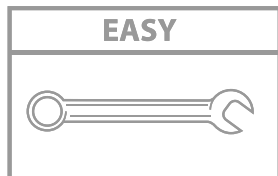
Proper service and repair procedures are vital to the safe, reliable operation of all motor vehicles as well as the personal safety of those performing the repairs. Standard safety procedures and precautions (including use of safety goggles and proper tools and equipment) should be followed at all times to eliminate the possibility of personal injury or improper service which could damage the vehicle or compromise its safety.

INTRODUCTION

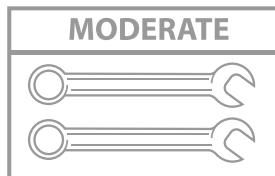
Schwaben Camshaft Alignment Tool Set ES#2778095

The Schwaben Camshaft Alignment Tool Set includes the following:

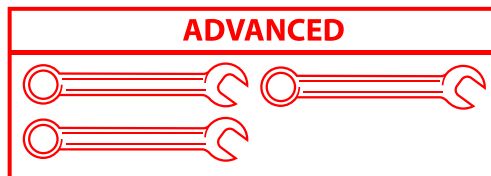
- LH and RH camshaft alignment blocks
- Timing chain tensioning pin
- Crankshaft locking pin
- Blow-molded case for easy storage



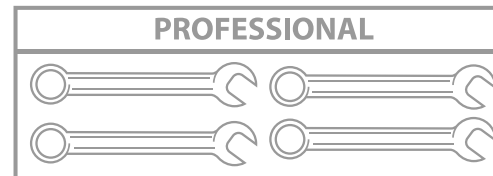
**BASIC SKILLS
REQUIRED**



**SOME EXPERIENCE
RECOMMENDED**



**ADVANCED SKILLS &
EXPERIENCE REQUIRED**



**PROFESSIONAL SKILLS &
SPECIALTY TOOLS REQUIRED**

Timing chain and guide replacement and VANOS service is all too familiar for BMW owners that have the M60/M62 engine. The most important part of the job is proper chain alignment. No matter the extent of the repair, our Schwaben Camshaft Alignment tools will make sure your engine is timed perfectly and will make easy work of the entire job. This brief introduction to our tool set offers you a glimpse of the simplicity in which they can be used. Thank you for purchasing our Schwaben Camshaft Alignment Tool Set. We appreciate your business!

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NOTE

These instructions are intended as a general overview of our alignment tool installation. If you are not familiar with this engine or timing chain repair in general, please refer to the proper service information for your vehicle.

CAMSHAFT ALIGNMENT TOOL SET CONTENTS



Timing Chain Tensioning Pin



Crankshaft Locking Pin



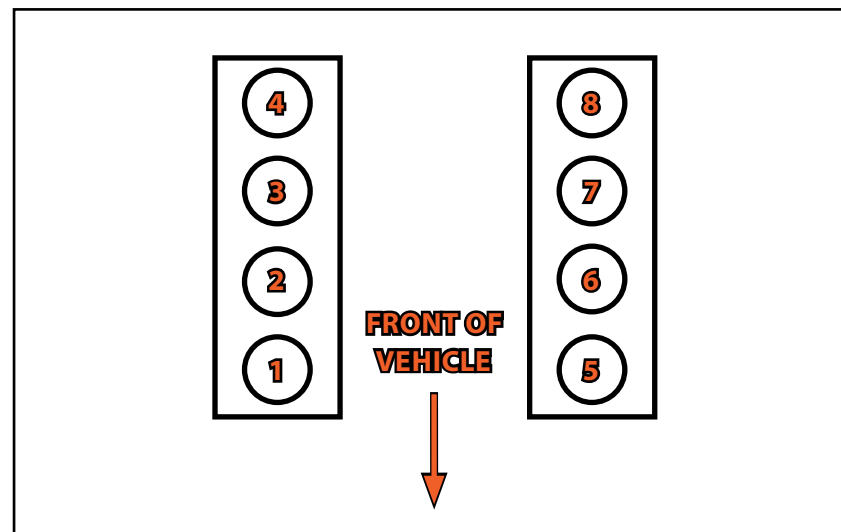
LH Bank Camshaft Alignment Block



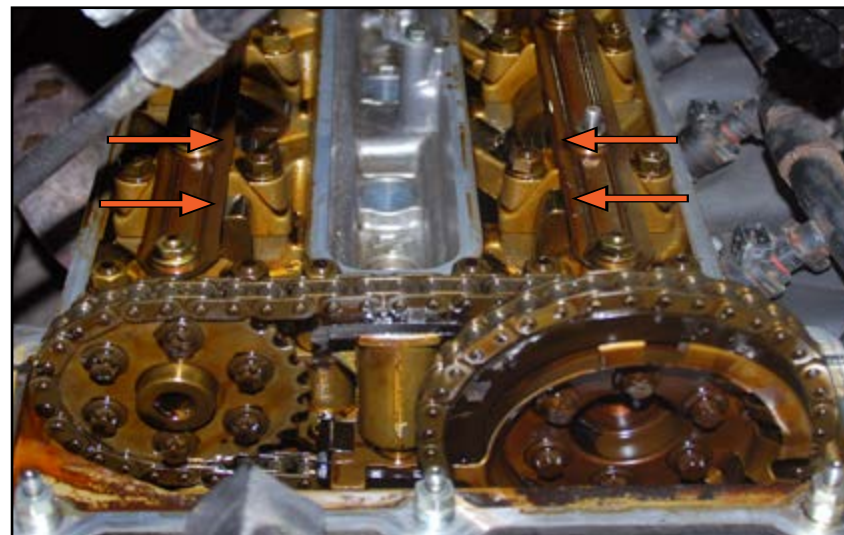
RH Bank Camshaft Alignment Block

M60/M62 ENGINE TIMING

The RH (Passenger Side) is bank one, cylinder one is at the front as shown in the illustration.



Rotate the engine clockwise until the cam lobes on cylinder one are pointing at each other, this is TDC, cylinder #1.



INSTALLING THE CRANKSHAFT LOCKING PIN

Position the engine at TDC Cylinder#1.

Turn the steering wheel completely in one direction (this will cause the center link to swing towards the front), allowing room to insert the Crankshaft Locking Pin.

In the rear of the oil pan casting, locate the hole for the Crankshaft Locking Pin.

Insert the Crankshaft Locking Pin into the hole.

Rotate the engine slightly as necessary until the hole in the flywheel/flexplate lines up and the pin slides into place.

If necessary, remove the rubber plug and look through the inspection hole to help line up the holes.



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INSTALLING THE CAMSHAFT ALIGNMENT BLOCKS

Position the engine at TDC Cylinder #1, install the crankshaft locking pin.

Loosen the bolts on the camshaft sprocket.

Select the correct side, then slightly loosen the hex bolt on the Camshaft Alignment Block.

Slide the Alignment Block in place over the end of the camshafts.

Tighten the hex bolt.



LH (Driver Side)



RH (Passenger Side)

NOTE

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INSTALLING THE TIMING CHAIN TENSIONING PIN

Position the engine at TDC Cylinder #1, install the crankshaft locking pin.

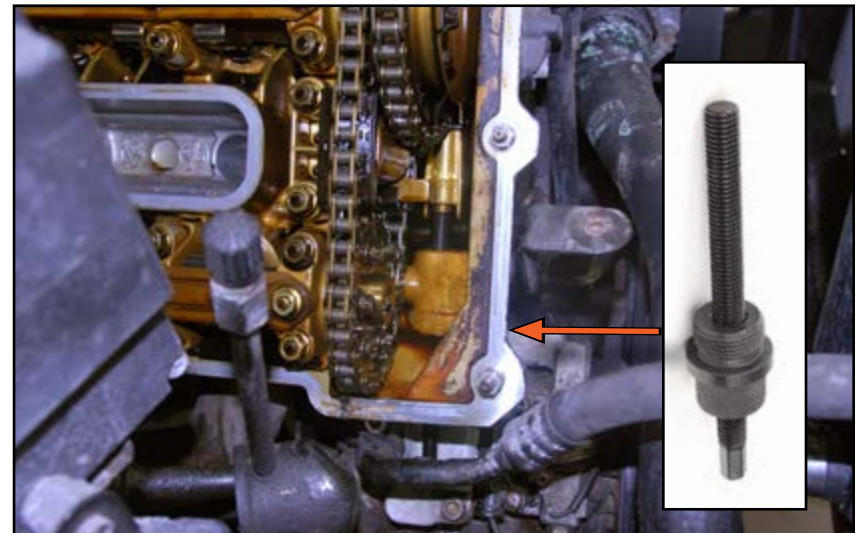
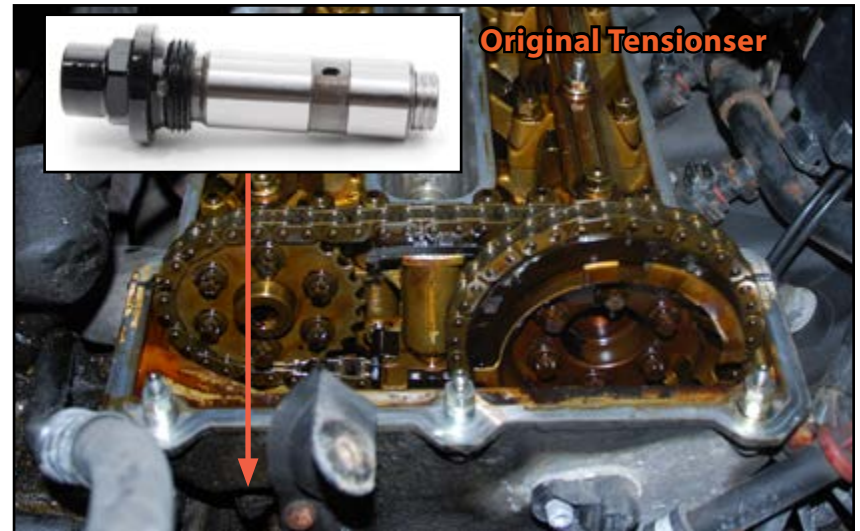
Install the Camshaft Alignment Blocks.

Remove the original timing chain tensioner (located in the RH front timing cover).

Install the Tensioning Pin and guide into the hole for the tensioner.

Tighten the pin guide until it is fully seated.

Properly torque the tensioning pin, based on the procedure being performed.



NOTE

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M60/M62 Camshaft Alignment Tool



These instructions are provided as a courtesy by ECS Tuning.

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