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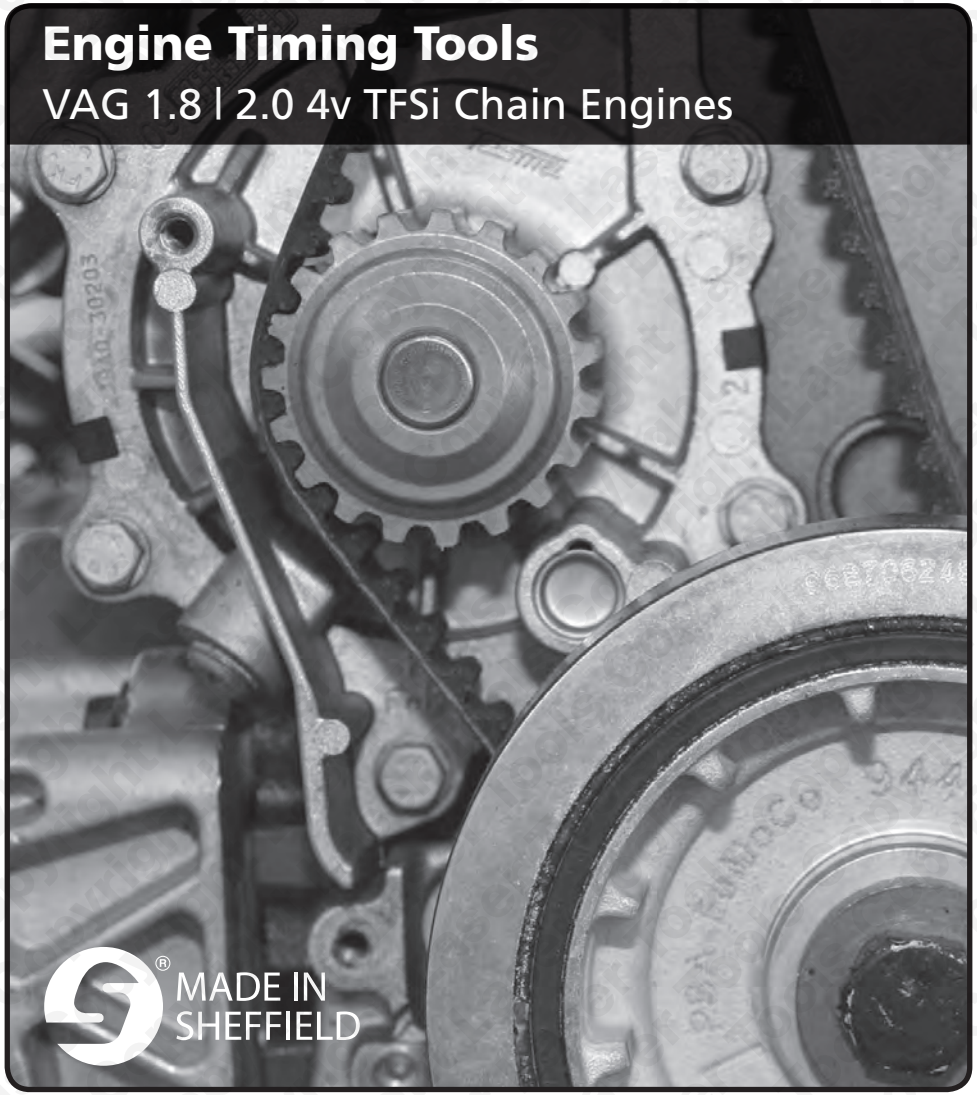
LASER®

Part No. 5981

Engine Timing Tools

VAG 1.8 l 2.0 4v TFSi Chain Engines



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Introduction

Designed to allow removal and replacement of the timing chain and camshaft sprockets on the 1.8/2.0 TFSi and TSi petrol engines commonly found in the Volkswagen Audi Group of vehicles.

The Kit includes the special camshaft pulley locking blocks required for the later generation 3 TFSi/TSi engines.

Description: The Kit consists of 8 main components which include the tools recommended by the manufacturer to set No1 cyl. at TDC. It is important that the correct process is followed when setting up these engines.

NOTE: Due to the complexity of these engines and variations between engine codes the following instructions for use are for reference only and therefore Tool Connection recommend the use of manufacturer data.

Warning

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 chain/belt has been removed (unless specifically stated)
- Do not use the timing chain/belt to lock the engine when slackening or tightening crankshaft pulley bolts
- Mark the direction of the chain/belt 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
- Remove spark or glow plugs to make the engine turn easier
- Check the diesel injection pump timing after replacing the chain
- Observe all tightening torques

Instruction

Component D = Chain Tensioner Locking Pin

Component **D** is the tensioner locking pin for the oil pump drive chain tensioner on the Generation 3 engines. It is required to lock the tensioner in its fully retracted position when removing the oil pump drive chain.

Component E/F

Both components **E** and **F** are tensioner locking tools for the main cam chain tensioner. The tensioner type dictates which locking device is used. Both tensioners can be locked prior to removal of the lower chain cover via an access window in the chain cover as shown in Fig. 4 and 5.

Type A shown below use **E**, for type A use a small screwdriver inserted in to the tensioner in the direction shown to release the plunger and push the tensioner plunger fully back, insert **E** to lock the plunger as shown in Fig. 4.

Type B shown in Fig. 5 uses locking tool **F**. Release the tensioner retaining clip and push the plunger back to its fully retracted position. Insert component **F** as shown to lock the tensioner.

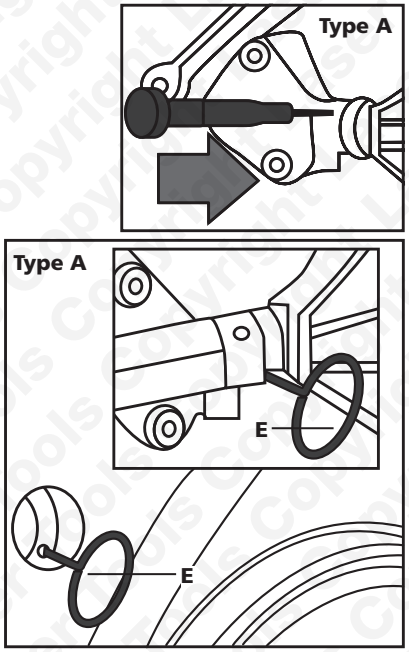


Fig. 4

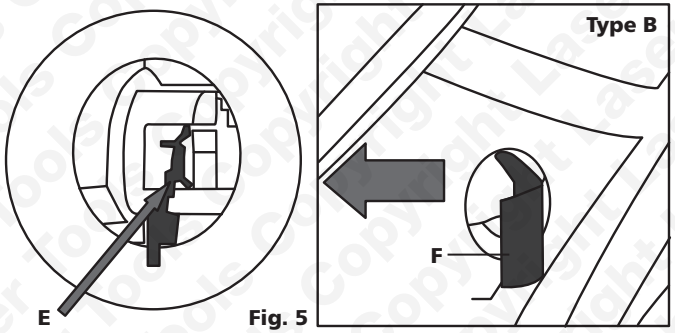
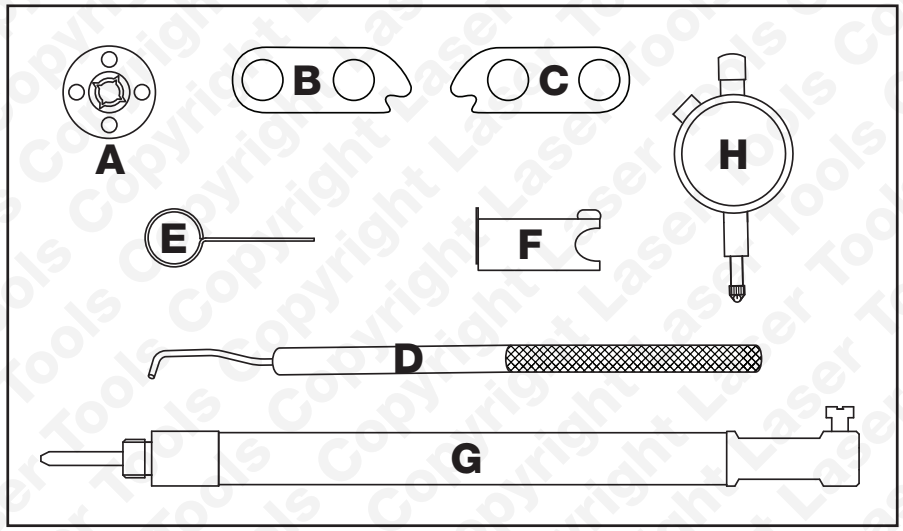


Fig. 5

Plan Layout



Ref	Code	Oem Code	Description
A	C591	T10352	Camshaft Control Valve Removal Tool
B	C603	T40271-1	Camshaft Clamp (Exhaust)
C	C604	T40271-2	Camshaft Clamp (Inlet)
D	C605	T40265	Oil Pump Tensioner Locking Pin
E	C284	T40011	Tensioner Locking Pin 1.4mm
F	C606	T40267	Timing Chain Tensioner
G	C226	T10170	TDC Indicator
H	C127	VAS6079	DTI Gauge

Applications

The application list for this product has been compiled cross referencing the OEM Tool Code with the Component Code.

In most cases the tools are specific to this type of engine and are necessary for Cam belt or chain maintenance.

If the engine has been identified as an interference engine valve to piston damage will occur if the engine is run with a broken Cam belt.

A compression check of all cylinders should be performed before removing the cylinder head.

Always consult a suitable work shop manual before attempting to change the Cam belt or Chain.

The use of these engine timing tools is purely down to the user's discretion and Tool Connection cannot be held responsible for any damage caused what so ever.

ALWAYS USE A REPUTABLE WORKSHOP MANUAL

Manufacturer	Model	Sizes	Engine Code	Years
Audi	A4 quattro	1.8	CDHB	2008
	A4 quattro	2.0	CDNC	2008
	A4 quattro	2.0	CFKA	2009
	A5 Coupe/ Cabriolet	1.8	CDHB	2009
	A5 Coupe/ Cabriolet	2.0	CDNB	2008
	A5 Coupe/ Cabriolet	2.0	CDNC	2008
	A5 Sportback	1.8	CDHB	2009
	A5 Sportback	2.0	CDNB	2009
	A5 Sportback	2.0	CDNC	2009
	A6	2.0	CDNB	2012
	Q3	2.0	CCZC	2011
	Q3	2.0	CPSA	2011
	Q5	2.0	CDNB	2009
	Q5	2.0	CDNC	2008
	TT	1.8	CDAA	2008
	TT	2.0	CCZA	2008
	TT	2.0	CESA	2010
	TT	2.0	CETA	2010
	A4	1.8	CJEB	2012
	A4 quattro	1.8	CJEB	2012
	A5 Coupe/ Cabriolet	1.8	CJEB	2011
	A5 Sportback	1.8	CJEB	2011
Seat	Alhambra	2.0	CCZA	2010
	Altea/ Altea XL	1.8	CDAA	2009
	Altea/ Altea XL	2.0	CCZB	2009
	Exeo	1.8	CDHA	2010
	Exeo	1.8	CDHB	2010
	Exeo	2.0	CDND	2010
	Leon	1.8	CDAA	2009
	Leon	1.8	CDAA	2011
	Leon	2.0	CCZB	2009
	Toledo	1.8	CDAA	2009
	Toledo	2.0	CCZB	2009

Manufacturer	Model	Sizes	Engine Code	Years
Skoda	Octavia II	1.8	CDAA	2008
	Octavia II	1.8	CDAB	2009
	Octavia II	2.0	CCZA	2008
	Superb II	1.8	CDAA	2008
	Superb II	1.8	CDAB	2009
	Superb II	2.0	CCZA	2009
	Yeti	1.8	CDAA	2009
	Yeti	1.8	CDAB	2009
Volkswagen	Eos	2.0	CCZA	2009
	Golf VI	1.8	CDAA	2009
	Golf VI	2.0	CCZB	2009
	Golf VI Estate	2.0	CCZA	2009
	Passat	1.8	CDAA	2011
	Passat	1.8	CDAB	2011
	Passat	2.0	CCZB	2011
	Passat	1.8	CGYA	2008
	Passat CC	1.8	CGYA	2008
	Sharan	2.0	CCZA	2011
	Beetle	2.0	CCZA	2011
	CC	1.8	CDAA	2012
	CC	2.0	CCZB	2012
	Eos	2.0	CCZB	2009
	Passat	1.8	CDAA	2009
	Passat	1.8	CDAB	2009
	Passat	2.0	CCZA	2009
	Passat Alltrack	1.8	CDAA	2012
	Passat Alltrack	2.0	CCZB	2012
	Passat CC	1.8	CDAA	2009
	Passat CC	1.8	CDAB	2009
	Scirocco	2.0	CCZB	2009
	Tiguan	2.0	CCZA	2009
	Tiguan	2.0	CCZB	2011
	Tiguan	2.0	CCZC	2009
	Tiguan	2.0	CCZD	2011

Instruction

Preparation and precautions:

- Raise the front of the vehicle and remove the front wheels and inner wheel arches as required.
- Remove the engine under shield, top cover, air intake, auxiliary drive belt(s).
- Ensure the engine is at TDC No1 cyl.
- Ensure the chain tensioner is fully retracted and held in the retracted position using the pin provided.

Component Descriptions:

Component A = Camshaft Control Valve Removal Tool

This tool is double sided and therefore 2 tools in one unit.

Component **A** enables the removal and refitting of the Camshaft Control Valve prior to timing chain removal or engine disassembly.

After removal of the electrical connections from the Cam Control Valve solenoid remove the timing cover and using the appropriate face of the tool on a suitable wrench unscrew the Control Valve in a clockwise direction as shown in Fig. 1.

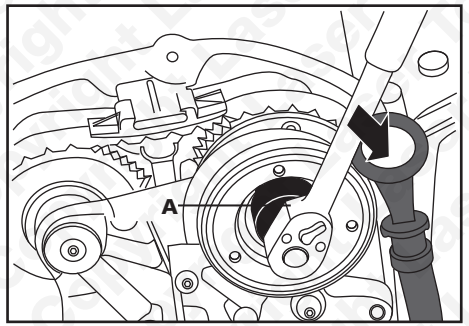


Fig. 1

Component B/C

Components **B** and **C** are designed primarily for use on the later Generation 3 engines and are designed to lock the camshaft pulleys in position as shown in Fig. 2 and Fig. 3.

Once the engine is set at TDC No1 and the cam pulley marks are aligned fit the exhaust clamp first.

Use a open ended wrench to gently turn the camshaft to allow the clamp to fully engage with the sprocket teeth. Fitting of the inlet camshaft clamp is as shown in Fig. 3.

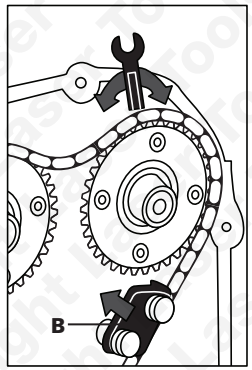


Fig. 2

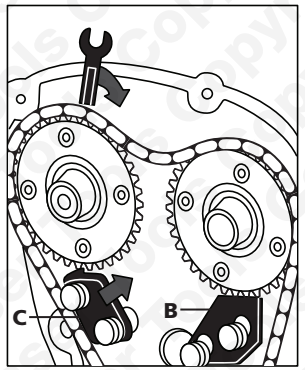


Fig. 3