

Kamasa-TOOLS®

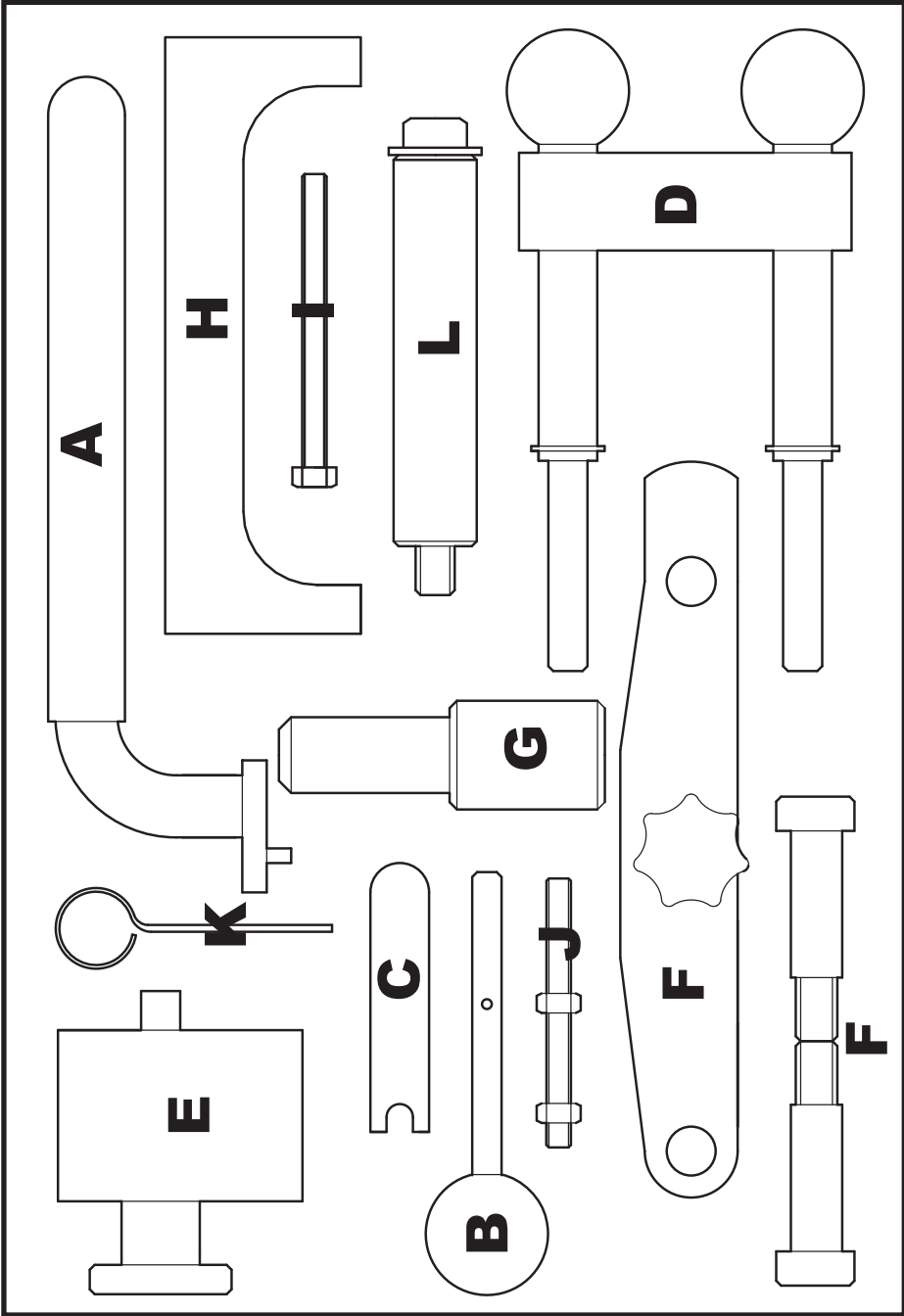
Engine
timing tools

Volkswagen
Audi Group

K 10529

www.kamasatools.com

Pack Layout



Component identity

Part No.	OEM Ref	Description
A 23044-01	3387 V.159 T 10020 U-30009	Tension Wrench
B 23069-11	3359 T20102 U-40074	Injection Pump Pulley Timing Pin
C 23069-12	T10008 310-084 (23-058)	Tensioner Locking Tool
D 23069-14	T10016	Camshaft Locking Tool
E 23161-03	T10050 310-085 (23-059)	Camshaft Locking Tool
F 23161-B	3418 T20038	Camshaft Setting Bracket
G 23061-01	2064 U-20003	Injection Pump Pulley Timing Pin
H 23062-B	2065A U-40021	Camshaft Setting Bracket
I 23161-04		Setscrew M5 x 55mm
J 23161-05	T20046	Stud and Nut
K 23161-06	T20046	Tensioner Pin
L 23161-07	3369	Support Guides

Applications

This comprehensive timing tool kit has been compiled to cover a large number of engines and often suitable for different manufactures.

The CD has been supplied giving guidance on the many manufactures vehicles this kit covers.

More specific kits are available where manufacturers' have introduced modified engines.

The data on the CD has been supplied under licence from Autodata Limited.

Supplied in Excel format the data can easily be filtered to select the exact model you require. (Data-Filter-AutoFilter)



Engine Timing Tools

Essential tools for VAG petrol and diesel engines, from 1996 onwards. The kit also includes tools suitable for older models with 1.9 diesel engines.

Set includes Crankshaft Pulley Locking Tools for round (T10050) sprockets at 12 o' Clock position

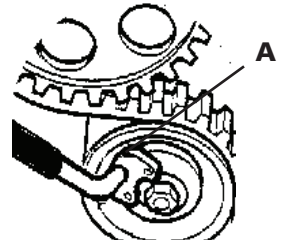
Safety Precautions

- If the engine has been identified as an Interference engine, damage to the engine will occur if the timing belt has been damaged. A compression check of all the cylinders should be taken before the cylinder head (s) are removed.
- Do not turn crankshaft or camshaft when the timing belt has been removed
- To make turning the engine easier, remove the spark plugs
- Observe all tightening torques
- Do not turn the engine using the camshaft or any other sprocket
- Disconnect the battery earth lead (Check Radio code is available)
- Do not use cleaning fluids on belts, sprockets or rollers
- Some toothed timing belts are not interchangeable. Check the replacement belt has the correct tooth profile
- Always mark the belt with the direction of running before removal
- Do not lever or force the belt onto its sprockets
- Check the ignition timing after the belt has been replaced.
- Do not use timing pins to lock the engine when slackening or tightening the crankshaft pulley bolts
- **ALWAYS REFER TO A REPUTABLE MANUFACTURERS WORKSHOP MANUAL**
Warning Incorrect or out of phase engine timing can result in damage to the valves. It is always recommended to turn the engine slowly, by hand, and to re-check the camshaft and crankshaft timing positions.

Component Application

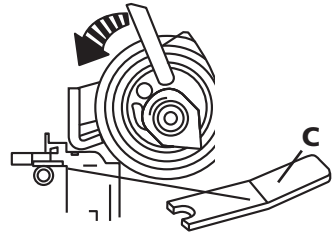
Tension Wrench

This wrench is used when fitting timing belts, and is necessary for holding and positioning the belt tensioner pulley in alignment whilst the centre nut is tightened.



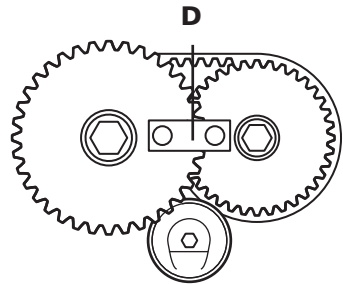
Injection Pump Pulley Locking Pin

is used to lock the timing position of the camshaft to the injection pump and is for two-part sprockets which are retained by three bolts. The pin is specially hollowed to prevent fuel pushing the pin back out.



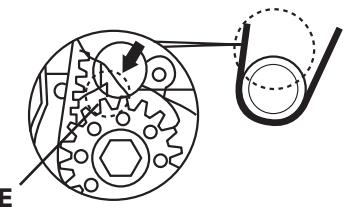
Tensioner Locking Tool

is inserted into the automatic tensioner unit after the tension has been released but before the timing belt is removed. This tool is left in place until the tension has been re-set after fitting the new belt.



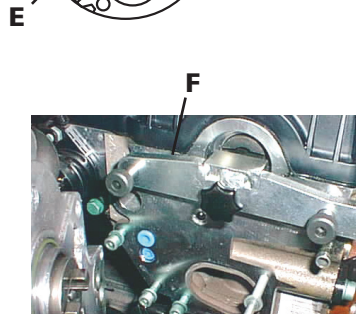
Camshaft Locking Tool

is fitted through the two camshaft sprockets and located in the cylinder head to set the correct timing before the timing belt and /or exhaust camshaft belt is removed.



Crankshaft Locking Tool

is used to set the crankshaft timing position during both removal and replacement of the timing belt. The crankshaft is first turned to TDC on NO.1 cylinder, checking the timing marks on the camshaft sprocket hubs are aligned. Slide the crankshaft locking tool into position ensuring that the triangular mark/ arrow on the tool (positioned on the left behind the handle) aligns with the timing mark on the crankshaft sprocket.

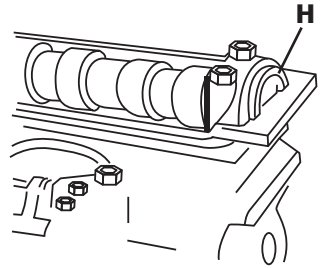


Camshaft Setting Bracket

Enables the correct engine timing to be conducted following the simple removal of the vacuum pump and saves time and expense because it is not necessary to remove the camshaft cover and gasket. When the timing belt has broken or has been removed this tool can be used with an open-ended spanner to turn the camshaft to the correct timing position. Then the two Dowel Screws are attached to enable correct alignment.

Camshaft Setting Bracket

is used to set the correct timing position of the camshaft. The centre part of the bracket fits into the slotted end of the camshaft. The ends of the bracket locate on the cylinder head. The correct alignment is achieved by placing equal thickness of shim/feeler gauge between both ends of the bracket and the cylinder head.



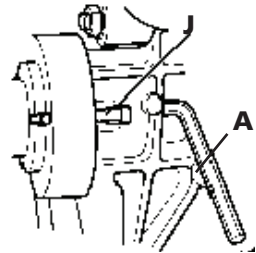
M5 x 55mm. Stud and Nut

Is used to apply pressure to the tensioner plunger to release the tension from the timing belt.



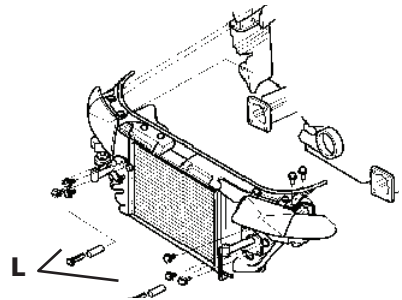
Tensioner Pin

This is used in conjunction with the above Stud and Nut and locks the tensioner adjuster in the retracted position to permit the old timing belt to be removed and the new timing belt to be fitted.



M5 x 60mm. Setscrew

is used to lock the viscous fan coupling whilst it is being un-screwed, using a suitable hexagon key.



Support Guides

Some cars require the front panel to be moved forward to enable access to the engine.



www.kamasatools.com