

***Kamasa-TOOLS***®

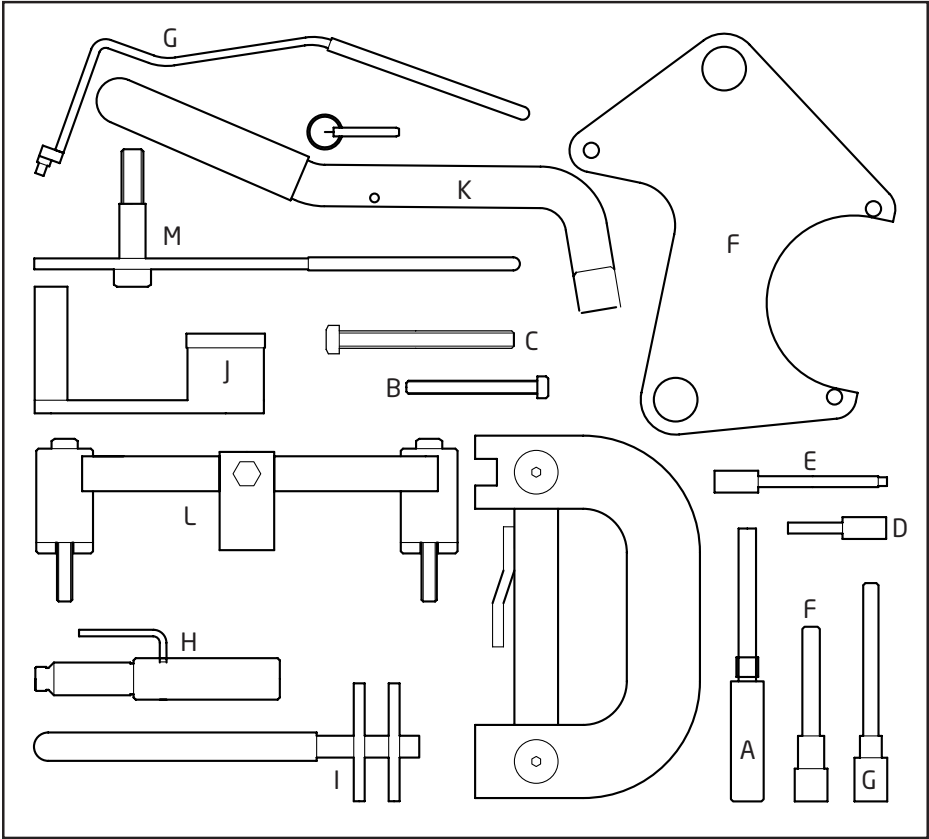


**PART NO. K311**







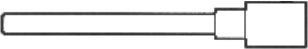



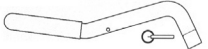
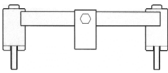


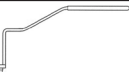

## **Engine Timing Tools**

Renault 3.0 V6 24V

Plan Layout



## Component Identification

Part No	OEM Ref	Description	Identification
<b>A</b> 23054-04	Mot. 1489	Crankshaft timing pin	
<b>B</b> 23061-08		Locking screw M6 x 30 mm	
<b>C</b> 23061-09		Locking screw M8 x 70 mm	
<b>D</b> 23069-21	Mot. 910	Flywheel locking pin	
<b>E</b> 23069-22	Mot. 910	Injection Pump Setting Pin.	
<b>F</b> 23069-23	Mot. 861 / 863	Flywheel locking pin	
<b>G</b> 23069-24	Mot. 1318	Flywheel locking pin	
<b>H</b> 23069-41	Mot. 1340	Flywheel locking pin	
<b>I</b> 23069-42	Mot. 1135- 01	Tension Wrench	
<b>J</b> 23069-43	Mot. 1386	Tensioner adjuster	
<b>K</b> 23069-45	Mot. 1348	Tensioner adjuster	
<b>L</b> 23069-47	Mot. 1337	Camshaft Locking Tool	
<b>M</b> 23069-48	Mot. 1312	Tensioner adjuster	
<b>N</b> 23069-52	Mot. 1496	Camshaft Locking Tool	
<b>O</b> 23069-56	Mot. 1384	Tensioner adjuster	
<b>P</b> 23069-58	Mot. 1490- 01	Camshaft Sprocket Alignment Tool.	

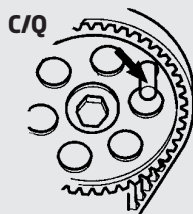
## **Engine Timing Tools**

This set of tools enables the correct valve timing to be made when servicing the 1,6 Ti-VCT petrol and 1,8 TDdi / TDCi and 2,0 TDCi diesel engines. Special tools required for both belt and chain driven engines are included in this set.

## Component Applications

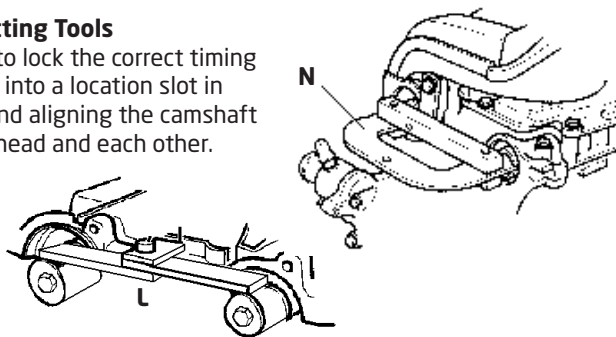
### Camshaft & Injection Pump Pulley Timing Pin

These are generally used to lock the correct timing position by being inserted through the camshaft sprocket into a matching hole in the cylinder head.



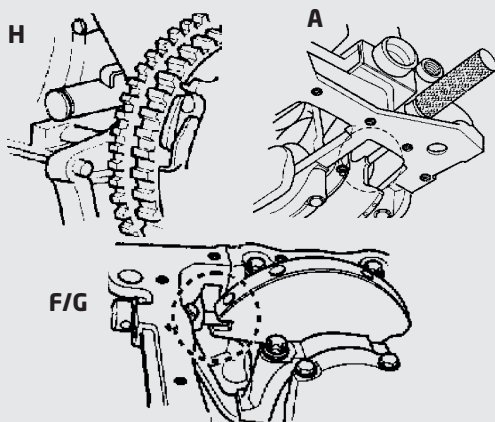
### Camshaft Alignment Setting Tools

These are generally used to lock the correct timing position by being inserted into a location slot in the end of the camshaft and aligning the camshaft in relation to the cylinder head and each other.



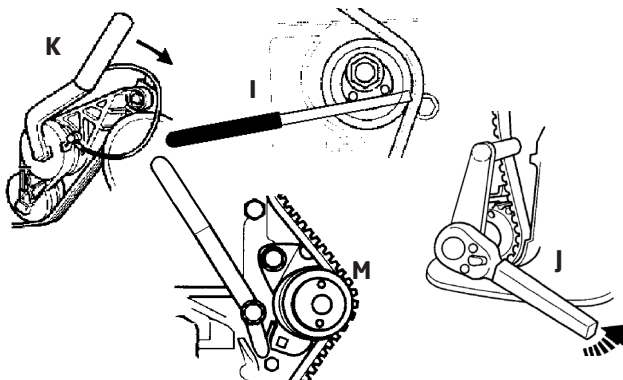
### Crankshaft Timing Pins

There are four different pieces included in this set. As with the camshaft timing pin, they are inserted through the engine block and used to position the crankshaft to achieve the correct timing position of the first cylinder. It is important that these pieces are used to set the timing position, but are not to be used to lock the flywheel.



### Tensioning Tools

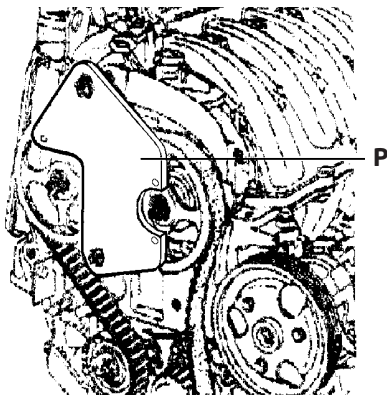
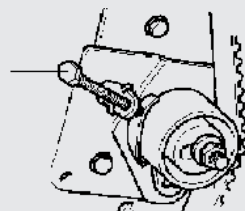
There are five types included in this set, which enable the correct tension to be applied to the timing belt.



## Tensioning Adjustment Screws

There are two types included in this set, which enable the correct tension to be applied to the timing belt.

B/C



## Miscellaneous Tools

The Camshaft Pulley Alignment Tool (**P**) is used to lock the camshaft pulleys. This removes the need to loosen a pulley and split the joint. The original fixing screws are used to retain this tool.

images courtesy of Autodata™  
Further information can be found at  
[www.autodata.ltd.uk](http://www.autodata.ltd.uk)

## 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.**



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