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Distributed by The Tool Connection Ltd

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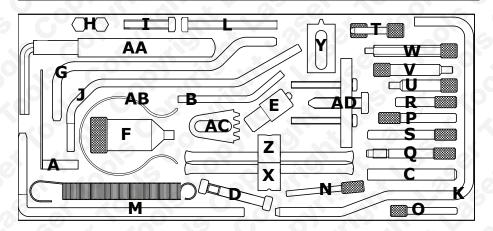
### Guarantee

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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## **Plan Layout**



Ref	Code	OEM Code	Description
Α	C208	4507-TJ, 9767.89, 0188Q1, 0132X1Z, 0188Q1, 0132X1Z, 0132X	Tensioning Tool
В	C038	4507-TA, 0132Z, 0132QZ	Crankshaft Timing Pin 6mm
C	C039	0153ZY, M10X70mm, 4507-TB, 0153AB, 9041-TZ, 0132R, 9767.27	Camshaft/Crankshaft Timing Pins (2)
D	C040	7014-TM	Camshaft Timing Pins (2)
E	C041	4507-TL	Flywheel Timing Pin
F	C042	0189C	Flywheel Locking Pin
G	C062	0188D, 7004TG, 9767-34, 0153G, 7014- TJ. 1 860 863 000, 0153N, 8mm,	Cranked Setting Pin 8mm
Н	C063	M8 x 35mm	M8 x 35mm Locking Screw
	C064	M8 x 40mm	M8 x 40mm Locking Screw
J	C065	7017-TR	Flywheel Timing Pin 7mm
K	C066	1 860 863 000, OUT0000127, 0153N, 0288D, 7099-TM, 0188Y, 0188D	Flywheel Timing Pin 8mm
L	C068	M8 x 70mm	M8 x 70mm Setscrew
М	C069	0188X, 0189X	Flywheel Setting Pin with Spring
N	C089	18G 1580, 11 9 790, 5711-TD, 21-260, 07744-1110400, 303-732, 4527-T. S2, 07744-00104-00, 1 860 617 000, 0132AB, 999 7169, 0178D	Camshaft Locking Pin

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## **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 has been removed (unless specifically stated)
- Do not use the timing chain to lock the engine when slackening or tightening crankshaft pulley bolts
- Do not turn the crankshaft or camshaft when the timing belt/chain has been removed
- Mark the direction of the chain 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
- Check the diesel injection pump timing after replacing the chain
- · Observe all tightening torques
- Always refer to the vehicle manufacturer's service manual or a suitable proprietary instruction book
- 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

# **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.

#### **Autodata**

Our applications data is supplied by Autodata and we are able to supply this data to you in a PDF format.

If this is a specific kit for a group of engine codes the application list has been supplied showing the main vehicles this kit is designed for and does not list every model each pin fits.

If this is a master kit then all vehicles are included.

The data is the copyright of Tool Connection and should not be reproduced.

If the application data is extensive we have included a CD with the application list in .pdf format.

#### Languages

We have also included where possible translations for the instructions in the following languages:

- French
- Spanish
- German
- Portuguese
- Italian
- Dutch

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

## **Plan Layout**

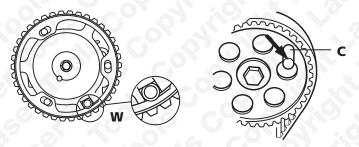
Ref	Code	OEM Code	Description
0	C091	0188H	Timing Pump Locking Pin
P	C101	0188M, 0187B, 0194B, 303-1277, MOT 1430, 0189B, 303-735, 49JE01 061, 21-263,	Camshaft/Crankshaft Timing Pin
Q	C103	4527-T.S1	Injection Pump Timing Pin
R	C104	4533-TAC1, 0132AJ1	Camshaft Timing Pin (CA1)
S	C105	0132AJ2, 2 000 023 000, 0188M, 4533-TAC2	Camshaft Timing Pin (CA2)
Т	C106	9041-TZ, 5711-TC	Camshaft Timing Pins (2)
U	C107	0189A, 1 871 008 100	Camshaft Timing Pin
v	C108	0189AZ	Camshaft Timing Pin
W	C109	0189L	Inlet Camshaft Timing Pin (VTC)
X	C113	5711-TE, 0178E, 0188J/J1	Tensioning Lever
Y	C115	0188F, 0134Q, 1 870 765 001, 1 870 827 000, 0134AF, 9044-T, 1 871 000 400	Flywheel Locking Tool
z	C118	0188J2	Tensioning Lever Hdi
AA	C119	7017-TW	Tension Wrench 8mm Hex
АВ	C121	0189K, MOT1436, 4533-TAX, 0188K, 0187J, 0132AK, 0153AK, 1 870 00 100,	Timing Belt Retaining Clip
AC	C144	Facom D86, 1 867 030 000, 0153A, 9765.54, 6012T, 1 860 161 000	Flywheel Locking Tool
AD	C125	0174, 0188P, 018892, 7015-T	Flywheel Pulley Puller

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## Instruction

## **Camshaft and Injection Pump Pulley Timing Pins**

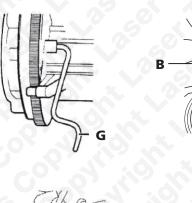
There are over ten different sized pins included in this set. These are generally used to lock the correct timing position by being inserted through the camshaft sprocket into a matching hole in the cylinder head.

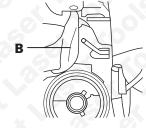


### **Crankshaft Timing Pins**

There are five 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 when loosening the pulley fasteners.







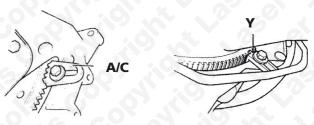


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# Instruction

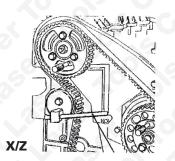
## **Flywheel Locking Tools**

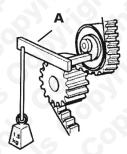
There are four different pieces included in this set, and are used to lock the crankshaft whilst unfastening and re-tightening the flywheel pulley bolt.



### **Tensioning Tools**

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

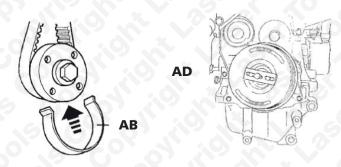




#### **Miscellaneous Tools**

The Belt Retaining Clip is used when the fitting sequence starts at the bottom pulley and prevents the belt slipping off.

The Crankshaft Pulley Remover is essential on HDi engines.



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