

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

- 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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When you have finished with this toolset please recycle it

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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.

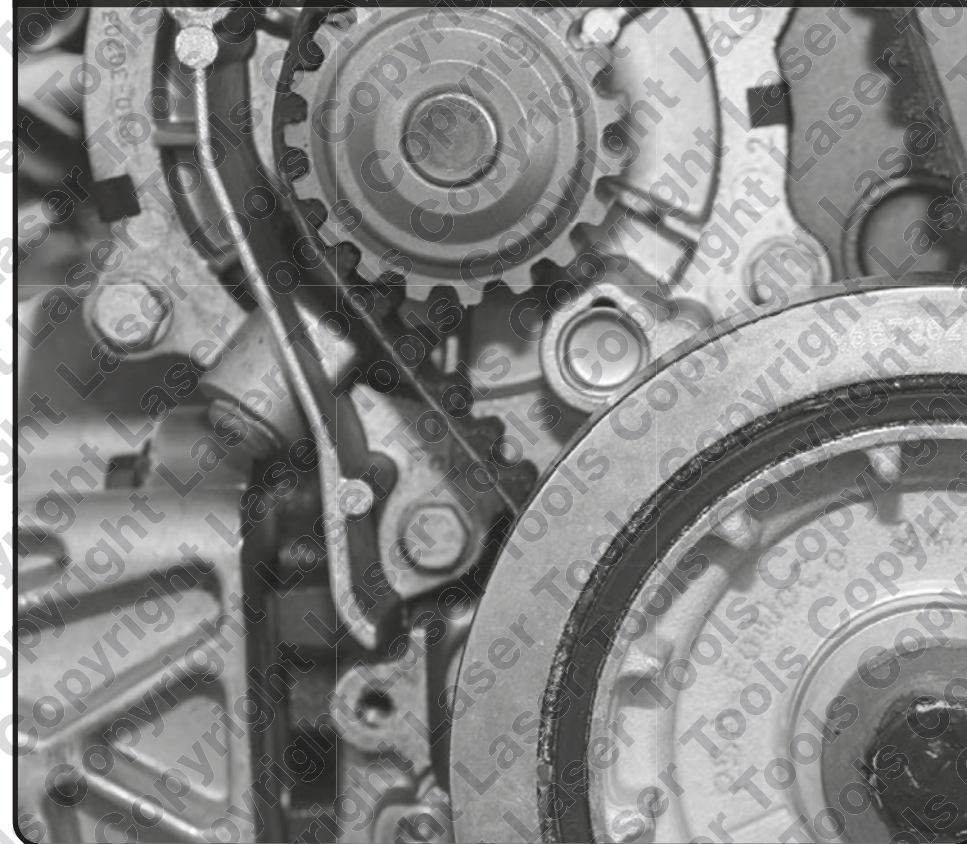
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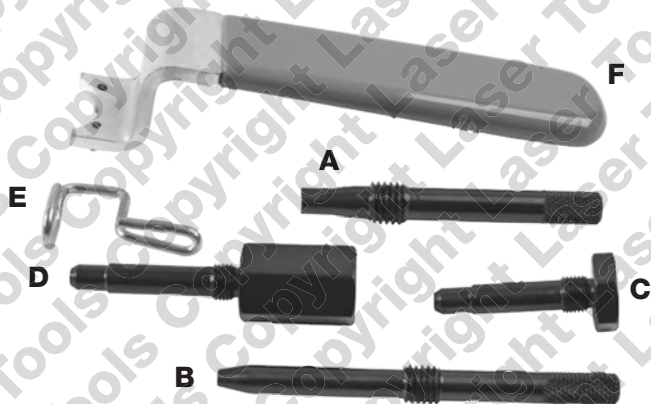
Engine Timing Tool Kit

Chrysler | LDV 2.5 | 2.8



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Plan Layout



Ref	Code	OEM Ref	Description
A	C533	VM 1068 LDV196	Flywheel Locking Pin
B	C534	VM 1089 LDV196	Flywheel Locking Pin
C	C535	VM 1053 LDV193	Camshaft Locking Pin - Exhaust
D	C536	VM 1052 LDV192	Camshaft Locking Pin - Inlet
E	C537	VM 1074	Cam belt Holding Tool
F	C203	VM 9660 H2587	Belt Tensioner Wrench

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	Type	Engine Code	Year
Chrysler	Voyager	2.5 2.8 CRD VM Engine	R2516C R2816C5.05A	01-2008
	Grand Voyager	2.5 2.8 CRD VM Engine	R2516C R2816C5.05A	01-2008
LDV	Maxus	2.5 2.8 CRD VM Engine	R2516L VM39/40B	05-2009

Instructions

Developed for the Chrysler DOHC common rail diesel engine found in the Voyager, Grand Voyager and the LDV Maxus van.

This kit enables the replacement of the timing belt whilst maintaining the correct timed position of the Camshafts and Crankshaft.

N.B The information given below is for reference only. The Tool Connection Ltd recommends the use of the manufacturers' data or Autodata.

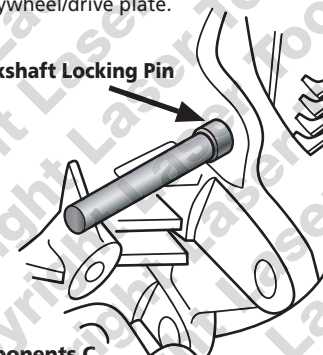
Preparation

- The valve timing on these engines is at 90° after TDC on No1 cyl
- Remove the following components
 - Right hand engine mount
 - Auxiliary drive belts, tensioners and PAS pulley
 - Alternator and mounting
 - Starter motor

Component Descriptions Component A and B

Crankshaft Locking Pins – select pin according to fitment. The aperture for the fitment of the crankshaft locking pin is located behind the starter motor. Turn the engine by hand till number one piston is a 90° after TDC and ensure the pin is fully inserted into the back of the flywheel/drive plate.

Crankshaft Locking Pin



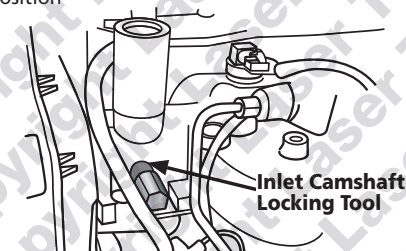
Components C

Exhaust camshaft locking tool – this tool fits in place of the blanking plug on the rear of the cam cover.

NB: When slackening the Camshaft pulley fixings please ensure an adequate pulley holding tool is used. The Camshaft holding pins are designed to hold the camshafts in their timed position and not withstand the torque of slackening/tightening the pulley fixings.

Components D

- Inlet camshaft locking tool – this tool fits into the front face of the cam cover just behind the cam belt area, below the oil filler neck.
- Remove the blanking plug from the cam cover to allow fitment of component.
- Ensure the engine is set at 90° after top dead centre and component A/B is already in position



Components E

Cam belt Holding Tool – the cam belt holding tool is designed to hold the new belt in place on the crankshaft whilst fitting the belt onto the other pulleys.

Due to the number of pulleys that the belt must go round if component E is not used the belt may fall off the crank pulley before the belt can be held in position.

E fits on to the crankshaft pulley flange using one of the pulley bolts and holds the belt against the bottom of the crankshaft cam belt pulley.

Components F

Belt Tensioner wrench – designed to lever the tensioner back for belt removal and pre-load the tensioner for belt set-up.

Note: The manufacturer does not provide a High Pressure pump locking facility. The high pressure fuel pump pulley is aligned by lining up the marks on the pulley and back cover. If there are no marks mark the pulley and back cover with paint. This should be done prior to belt removal.