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If applicable, the applications database and any instructional information provided has been designed to offer general guidance for a particular tool's use and while all attention is given to the accuracy of the data no project should be attempted without referring first to the manufacturer's technical documentation (workshop or instruction manual) or the use of a recognised authority such as Autodata.

It is our policy to continually improve our products and thus we reserve the right to alter specifications and components without prior notice. It is the responsibility of the user to ensure the suitability of the tools and information prior to their use.



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LASER[®]

Part No. 6299

Engine Timing Chain Kit

Jeep



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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.



Introduction

The kit has been designed for the Jeep 3.0 litre V6 diesel engine found in the late model (2011 on) Jeep Grand Cherokee. The 6299 provides all the cam and crankshaft locking tools required for chain replacement.

The information given below is for reference only.

The Tool Connection recommends the use of Manufacturer data or Autodata.

Applications

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

ALWAYS USE A REPUTABLE WORKSHOP MANUAL

Make	Model	Engine Code	Year
Jeep	Grand Cherokee CRD 3 Litre	EXF VM23D	2011-2015
Jeep	Grand Cherokee Multijet 3 Litre	EXF VM44D	2011-2015

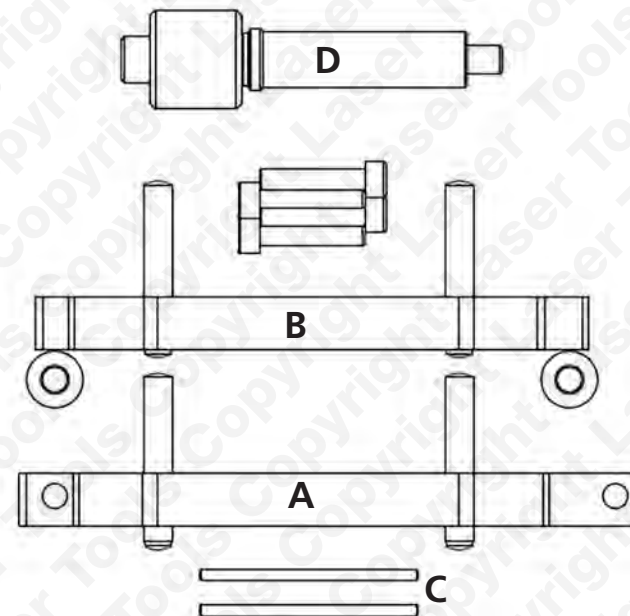
Warning

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

Plan Layout



Ref	Code	OEM Number Jeep	Description
A	C697	VM10338-1	Camshaft Locking Tool RH Bank and Screws
B	C698	VM10338-2	Camshaft Locking Tool LH Bank and Screws
C	C696	VM10359a	Tensioner Locking Pins
D	C699	VM10339	Crankshaft Timing Pin

Instructions

Preparation

- Always refer to manufacturer specific data and instructions
- Engine timing is set at 30° ATDC (After Top Dead Centre) with the crankshaft pulley marks in the 12 o'clock position.
- Check both sets of marks on both cam gears are aligned.

Component Descriptions:

Components A, B: Used to lock the camshafts in the right hand and left hand cylinder heads in their timed position see Fig 1.

Ensure all camshaft gear marks are aligned and the tool pins fit into the back of the gears as shown.

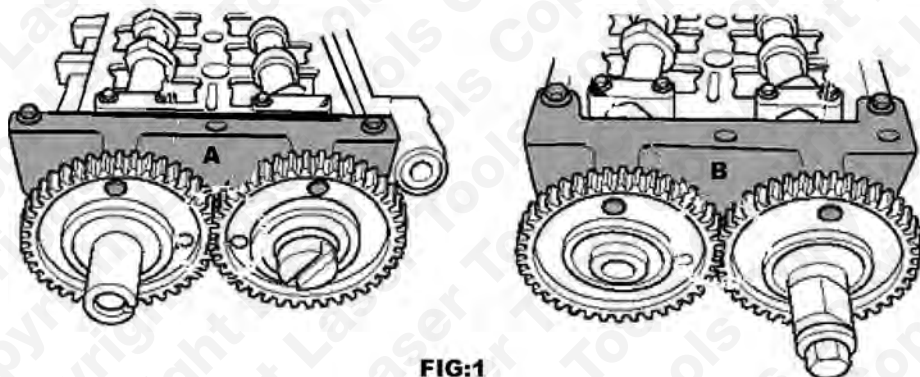


FIG:1

Component C: used to lock the both chain tensioner in their fully retracted position. Fit after locking the camshaft and crankshaft. Push both tensioner back and slide in the pins.

See Fig 2.

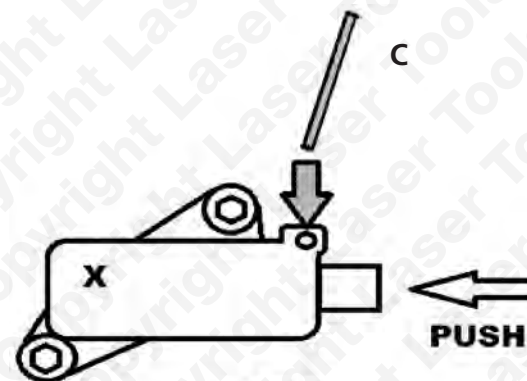


FIG:2

Component D: used to lock the crankshaft in its timed position.

Install component E in to the engine block as shown in Fig 3.

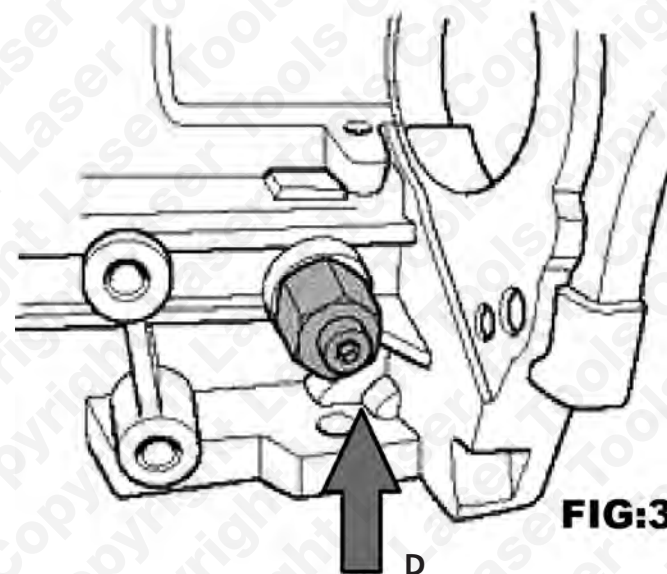


FIG:3