LASER®

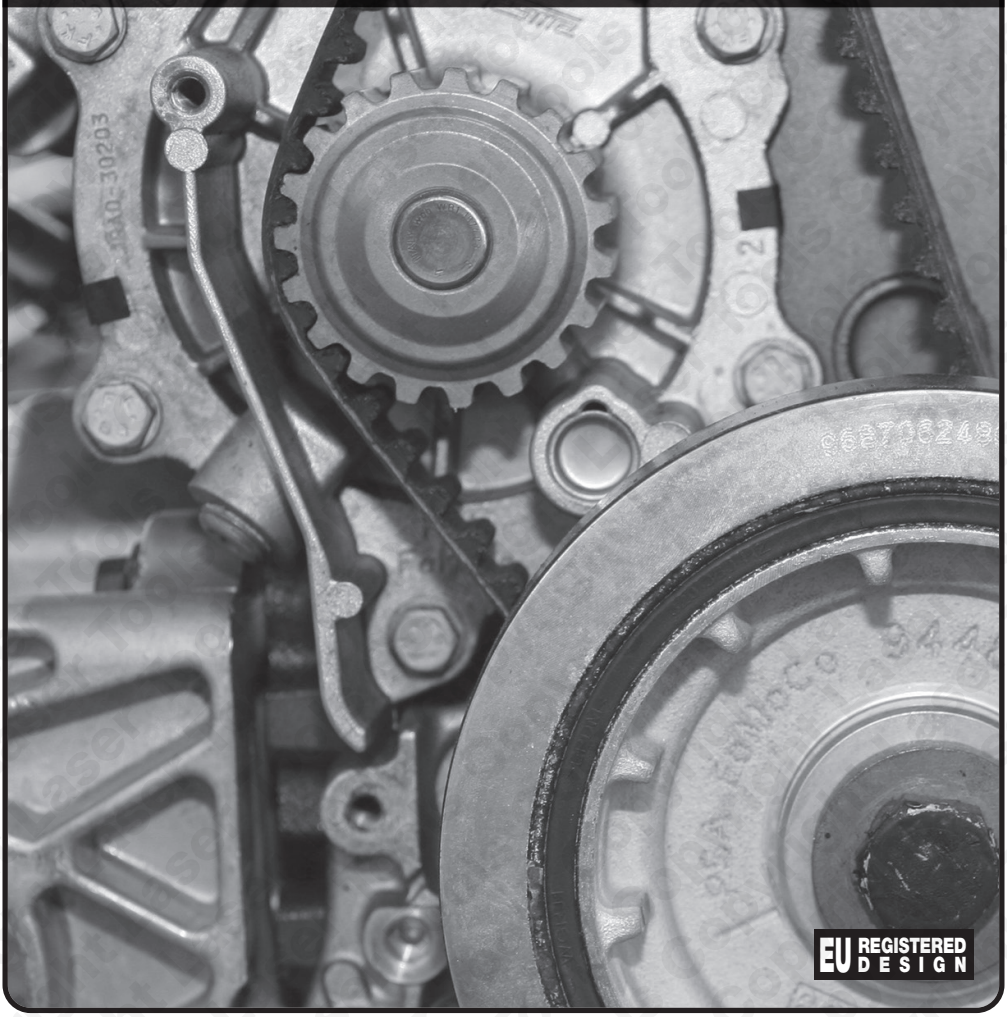
Part No. 7317

**Instructions**

# Engine Timing Tool Kit

Torque Multiplier Adaptor Kit - for Ford

MADE IN SHEFFIELD



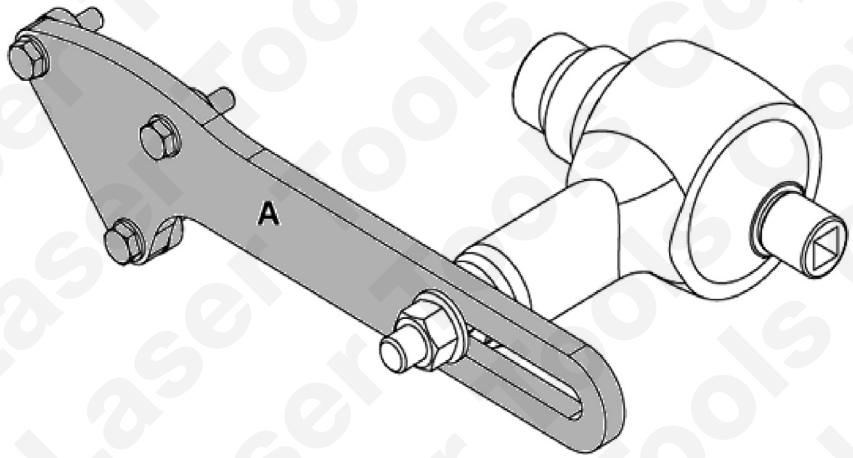

**www.lasertools.co.uk**

## Introduction

The Torque Multiplier Adaptor Kit enables the Laser 7318 Torque Multiplier (available separately) to be mounted in the correct position to allow the correct tightening sequence to be applied to the crankshaft pulley bolts.

For engine timing please see Laser 6952 (or Laser 8239) and Laser 6291.

## Components




| Ref. | Code | OEM | Description |
|---|---|---|---|
| A | C902 | 303-1611-01, 303-1611-02 | Torque Multiplier Adaptor Kit |

## Applications

| Make, Model, Year | | | Engine Codes | | |
|---|---|---|---|---|---|
| Ford | B-MAX | 2012 - 2018 | 1.0 EcoBoost | | 1.1 EcoBoost |
| | C-MAX / Grand C-MAX | 2012 - on | M1CA | SFCB | XPJA |
| | EcoSport | 2013 - on | M1CB | SFCC | XPJB |
| | Fiesta / Fiesta Active | 2013 - on | M1DA | SFCD | XPJC |
| | Focus / Focus Active | 2012 - on | M1DC | SFDA | XPJD |
| | Mondeo | 2015 - 2018 | M1DD | SFDB | XYJA |
| | Tourneo Connect | 2014 - on | M1DH | SFJA | XYJB |
| | Grand Tourneo Connect | 2013 - 2018 | M1JA | SFJB | XYJC |
| | Transit Connect | 2014 - on | M1JC | SFJC | XYJD |
| | Transit Courier | 2014 - 2019 | M1JE | SFJD | XYJE |
| | | | M1JH | SFJE | |
| | | | M1JJ | SFJH | |
| | | | M1JL | SFJJ | |
| | | | M1JM | SFJK | |
| | | | M1JP | SFJL | |
| | | | M1JU | SFJN | |
| | | | M2DA | SFJP | |
| | | | M2DB | XMJA | |
| | | | M2DC | XMJB | |
| | | | M2GA | XMJC | |
| | | | M2GB | XMJD | |
| | | | P4JA | YYJA | |
| | | | P4JB | YYJB | |
| | | | P4JC | YYJC | |
| | | | P4JD | YYJD | |
| | | | QOJA | YYJE | |
| | | | QOJC | YYJF | |
| | | | SFCA | YYJG | |



The following instructions are for guidance only. Please refer to OEM derived data such as the vehicle manufacturers' own data or Autodata.

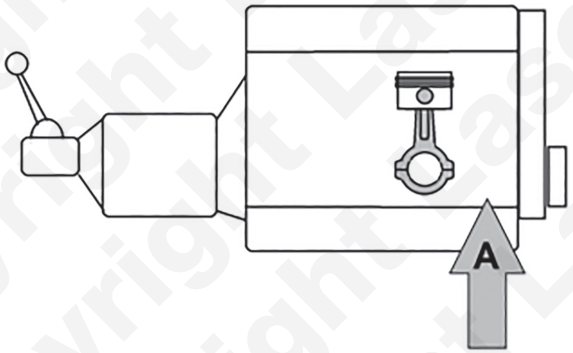
The use of this engine timing tool kit is purely down to the user's discretion and The Tool Connection Ltd. cannot be held responsible for any damage caused whatsoever.


## Safety Warning - Please Read

- Personal protection and safety equipment must be used at all times
- Eye protection and protective gloves must be worn when using these tools
- Misuse of tools is unsafe,and can cause engine damage,
- Remove damaged tools from use
- Store in a dry place when not in use

N.B. Always turn the engine in normal direction of rotation.
Do not use timing tools to torque or loosen fixings against unless otherwise stated.

## Instructions

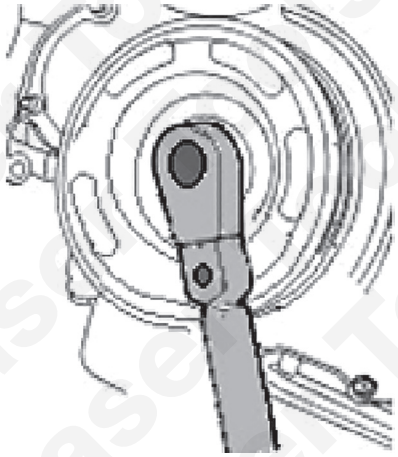



Remove the two nuts that hold the bearing clamp on the offside drive shaft, and then remove the three mounting bolts holding the bracket to the engine. Remove the bracket and install the torque multiplier adaptor bracket and multiplier into their correct position.
Please Note:

- Due to the difference in gear ratio from the OEM Torque Multiplier, the torque procedure when using the Laser 7317 and 7318 is different.
- Please ensure that the flywheel is locked with an appropriate tool.
- Ford recommend new crankshaft bolt and washer to be fitted.

**Stage 1 – 2 With Torque Wrench Only**
Tightening the crankshaft bolt in two stages as follows, directly with a torque wrench: Fig. 1.

**Fig. 1**

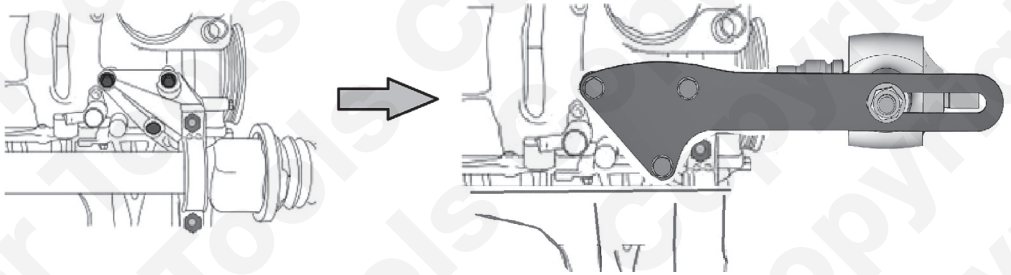


**Stage 1: 25Nm**
**Stage 2: 70Nm**



**Assembly of 7317 with 7318 Torque Multiplier: Fig. 2.**

**Fig. 2**



**Please Note: the gear ratio of Laser 7318 is 1:9 which is different to the OEM ratio.**

**STAGE 3** With Torque Multiplier & Torqure Wrench
**Stage 3a/** Using the Laser 7317 and 7318 in combination with a suitable torque wrench apply a starting torque of 33NM.

**Stage 3b/** Using the 7317 and 7318 combination with suitable knuckle bar tighten the crankshaft fixing bolt by turning the input wrench 8 times by 90 degrees followed by a final 25 degrees as shown in Fig 3.

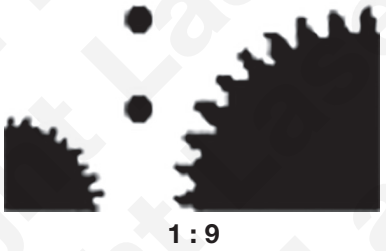
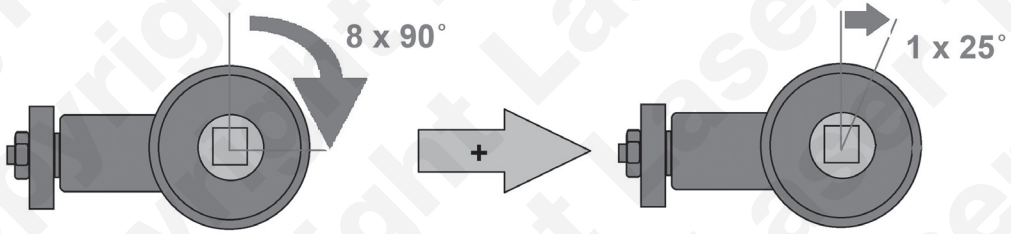



**Fig. 3**



# Safety Warnings - 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 manufacturers' service manual or a suitable proprietary instruction book
- Incorrect or out of phase engine timing can result in damage to the valves

Our products are designed to be used correctly and with care for the purpose for which they are intended. No liability is accepted by the Tool Connection for incorrect use of any of our products, and the Tool Connection cannot be held responsible for any damage to personnel, property or equipment when using the tools. Incorrect use will also invalidate the warranty.

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.

5 018341 073176

7317_Instructions_V8

recycle
When you have finished with this leaflet please recycle it

**www.lasertools.co.uk**

TOOL CONNECTION
The Complete Connection

**Distributed by The Tool Connection Ltd**
Kineton Road, Southam, Warwickshire CV47 0DR
**T** +44 (0) 1926 815000 **F** +44 (0) 1926 815888
info@toolconnection.co.uk **www.toolconnection.co.uk**

## 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.