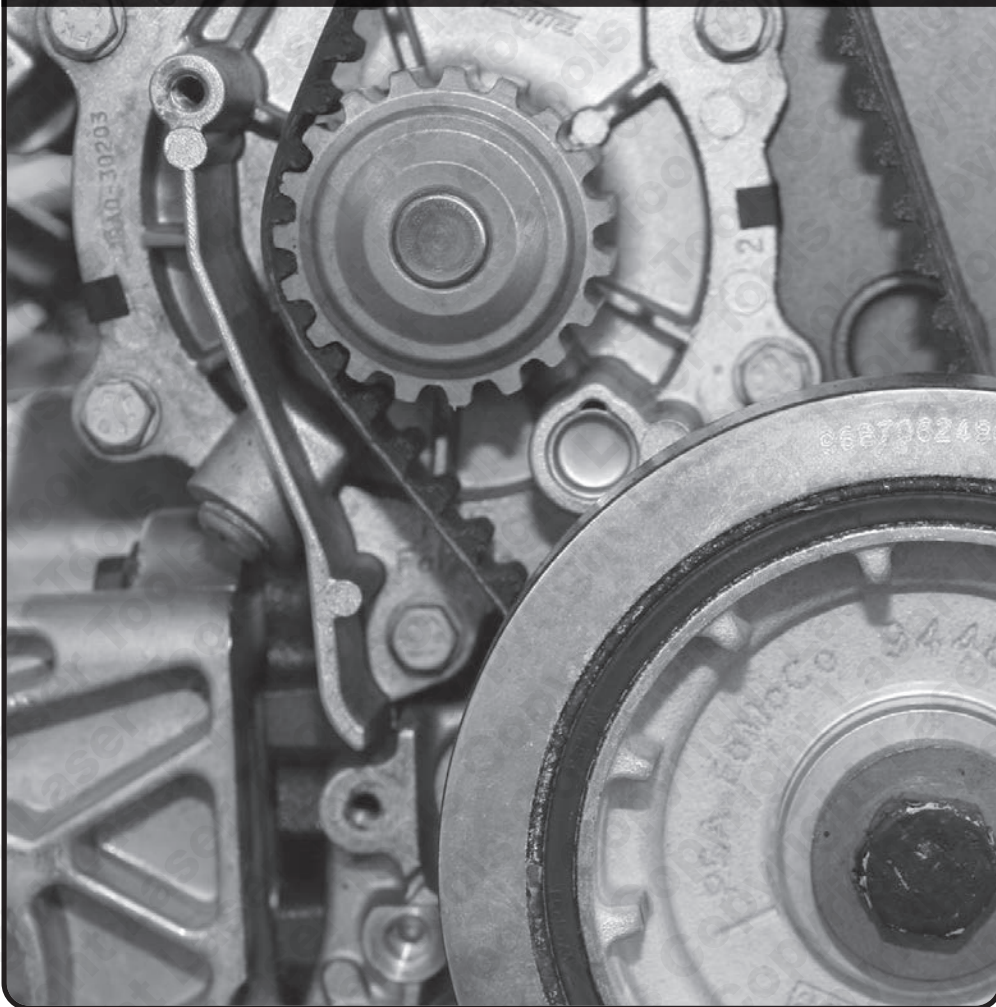


# LASER<sup>®</sup>

Part No. 4066

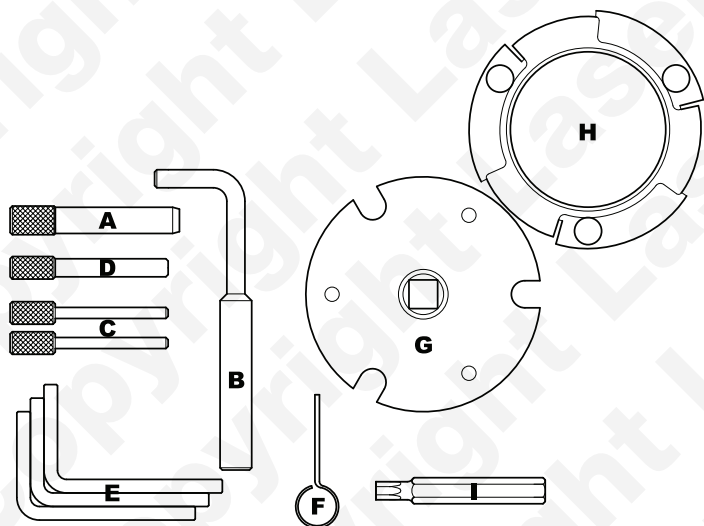
## Instructions

### Engine Timing Tool Kit for Ford



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## Components



Ref.	Code	OEM Ref	Description
A	C057	303-734	Flywheel Locking Pin
B	C847	303-675 303-698	Flywheel Locking Pin (double ended)
C	C089	303-732	Crankshaft/Fuel Pump Alignment Pin x2
D	C101	303-735	Camshaft Sprocket Locking Pin
E	C271		Camshaft Sprocket Alignment Pin x3
F	C272		Chain Tensioner Locking Pin
G	C274	303-679A	Fuel Pump Cover Remover
H	C273	303-1151	Fuel Pump Alignment Tool
I	C301	310-083A	Torx® T45 Key

## 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 cambelt 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 cambelt.

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 cambelt 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

Make	Model	Year	Engine Code			
Ford	Focus	2004 - 2005	2,0 Di	2,0 TDDi	2,2 TDCi	2,4 TDCi
	Mondeo	2000 - 2007	ABFA	D5BA	QJBA (BG)	H9FA
	Transit	2000 - 2012	D3FA	D6BA	QJBB	H9FB
Jaguar	X-Type	2005 - 2010	F3FA	FIFA	QJBC	H9FD
				FMBA	QJBD	PHFA
				FMBB	2,4 Di	PHFC
				HJBA	D2FA	
				HJBB	D2FB	
				HJBC	D4FA	
				N7BA	F4FA	
				N7BB	FXFA	

Always refer to the website for most up to date applications:  
[www.lasertools.co.uk/product/4066](http://www.lasertools.co.uk/product/4066)

## Instructions

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.



This kit was developed to remove and replace the timing chain found on the Ford 2.0/2.4 (Duratorq) range of engines. In addition to the engine timing tools the kit also includes the special tools required to enable the high pressure diesel pump to be removed without disturbing the timing chain.

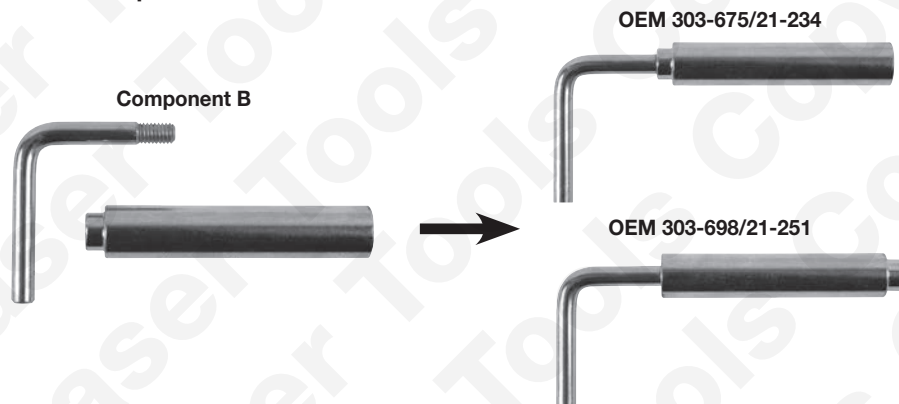
N.B The information given below is for reference only. The Tool Connection recommends the use of instructions from the Manufacturer or Autodata.

### Preparation

To gain access to the Duratorq engines it may be necessary to remove the following components:

- Disconnect the Battery
- Remove air intake and air filter components
- Top and bottom engine covers (remember to reinstall the oil filler cap after removing the top engine cover).
- Turn the engine only in the normal direction of rotation when required to align the timing marks
- For pump removal clean the area before disconnecting any pipes to help reduce the ingress of dirt.
- For pump removal remove all pipes, the fuel metering valves and temperature sensor.

### OEM Set Up:



## Instructions

Pin (A) is used to align the two sprockets and the fuel pump.

The camshaft sprocket setting pin (C) enables the camshaft to be aligned prior to servicing the engine.

The fuel pump alignment pin (B) is inserted through the fuel pump sprocket.

Flywheel alignment pins enable the crankshaft to be locked in the correct timing position.

Setting pin (B) locks the timing position of both the crankshaft and the fuel pump.

See notes for OEM set up.

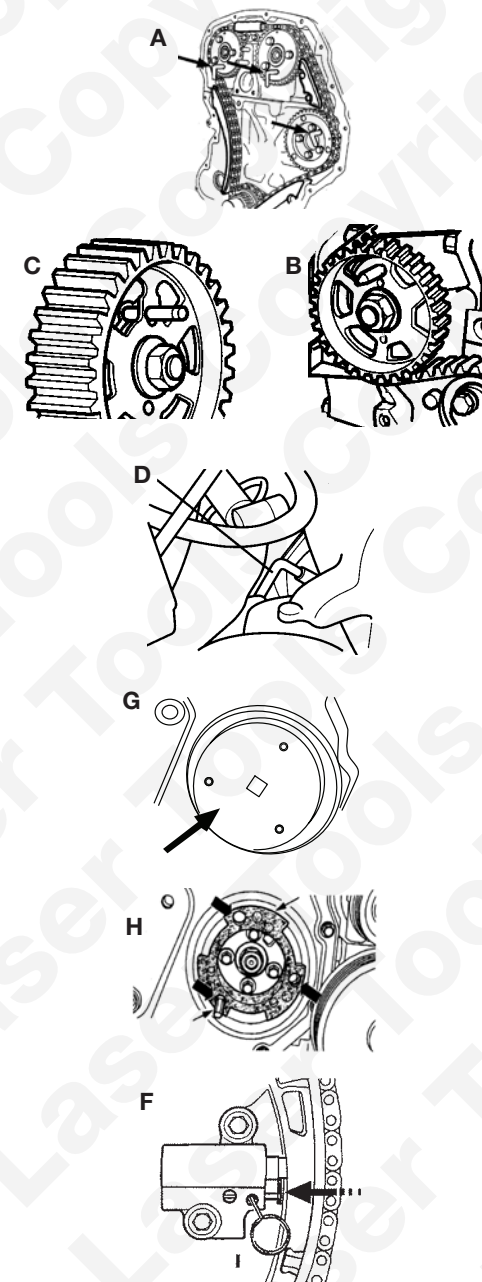
Remove the crankshaft position sensor before fitting the flywheel locking tool (D)

To remove and replace the fuel pump access cover use tool (G) with a 1/2" sq. drive wrench. The three pins are located into the appropriate cover holes.

The injection pump sprocket locking tool (H) is required to retain the pump timing position and is fitted in a clockwise direction with the three bayonet slots locating on the aperture lugs.

The holes enable access to the three pump securing bolts using T45 Key (I)

The Tensioner contact is first pushed back whilst releasing the pawl to enable the Locking Pin (F) to be inserted to lock back / deactivate the chain tensioner prior to its removal.



## Safety Warnings - please read

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.
- 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.



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.



4066\_Instructions\_V8



When you have finished with  
this tool please recycle it

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