### 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 compresion 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





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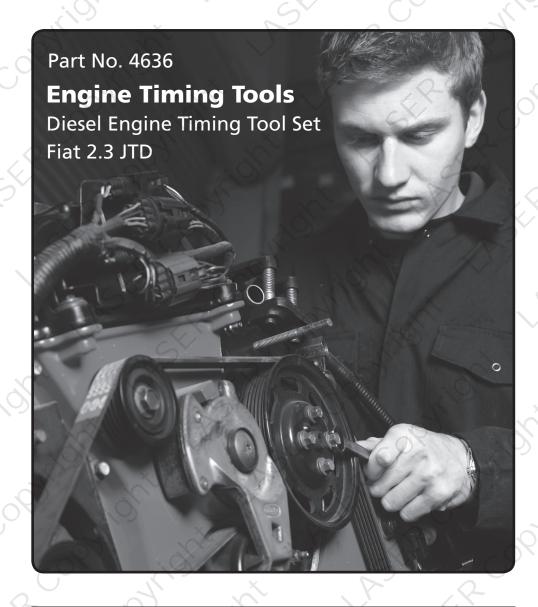
Kineton Road, Southam, Warwickshire CV47 0DR T +44 (0) 1926 815000 F +44 (0) 1926 815888 info@toolconnection.co.uk www.toolconnection.co.uk

#### 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.

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# **Plan Layout**



Re	ef	Code	OEM Ref	Description
1	4	C375	99360614	Camshaft Timing Pins (2)
E	3	C376	99360615	Crankshaft Timing Pins (2005)
		C089	1 860 617 000	Camshaft Sprocket Alignment Pin
[	)	C191	2 000 018 200	Crankshaft Timing Pin (2006-)

## **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.

Manufacturer	Model	Туре	Engine Code	Year
Fiat	Ducato	2.3 JTD Multijet 120	F1AE0481C   F1AE0481D F1AE0481N	2002-06
	Ducato	2.3 JTD Multijet 120	F1AE0481C   F1AE0481D F1AE0481N	2002-08
D.	Ducato	3.0 JTD Multijet 160	F1AE0481D	2006

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### **Diesel Engine Timing Tool Set - Fiat 2.3 JTD**

An engine timing locking tool set for Fiat Ducato 2.3 JTD This kit includes the latest Crankshaft Timing Pin required on engines produced from 2006-2008.

The 2.3 JTD twin camshaft Common Rail diesel engine is belt driven between crankshaft and inlet camshaft but utilises a chain to connect both camshafts.

The high pressure fuel pump does not require timing. Follow all the manufacturers' specified procedures in preparation to remove the worn or damaged timing belt.

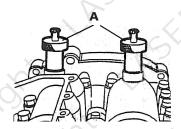
Engine codes F1AE0481C | F1AE0481D | F1AE0481N 2002 - 2008

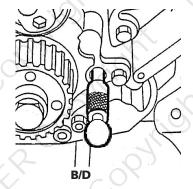
### Instructions

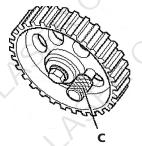
- Rotate the engine to position just before TDC (Top Dead Centre) and insert the correct Crankshaft Timing Pin B or D, the crankshaft is then rotated clockwise until contact with the pin.
- Remove two studs located above cylinder No 4 and insert the two Camshaft Timing Pin assemblies A until correctly located.
- 3. Remove the tension pulley.
- 4. Remove the timing belt.
- During installation of the new timing belt align the camshaft sprocket at 3 o'clock using timing pin C.
  This action also correctly aligns the camshaft position sensor.
- 6. Follow the manufacturers' instruction to fit and tension the new timing belt.

NOTE: It is recommended that after removing all the timing tools, the engine is rotated eight times in the normal direction of rotation to re-check the alignment. It should be possible to re-fit all of the timing tools to when performing this check.

 The 3.0 JTD engine is chain driven and requires the same timing locking tools. Follow the engine manufacturer's instructions.







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