

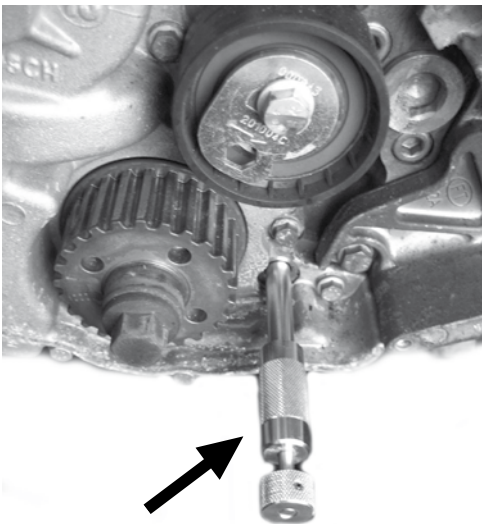
# Product Information

## 9431080

### Diesel Engine Setting/Locking Tool Set



**IMPORTANT:** Always refer to the vehicle manufacturer's service instructions, or proprietary manual, to establish the current procedures and data. Product Information Sets detail applications and use of the tools with any general instructions provided as a guide only.



### Applications:

FIAT & IVECO 2.3JTD Diesel engine in

FIAT

Ducato

IVECO

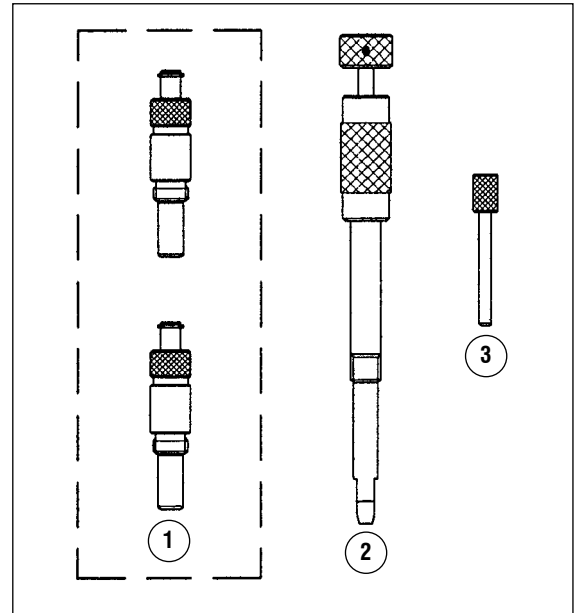
Daily

F1AE0481C

**NOTE:** These timing tools also cover 3.0JTD engines -F1CE0481D

### Additional Tools required:

43012860 Sprocket Holding Tool with inter-changeable Pins



### Set contents/spares

| Item | Part Number | Description                  |
|------|-------------|------------------------------|
| 1    | 4926        | Camshaft Setting Pins (Pair) |
| 2    | 4927        | Crankshaft Locking Pin       |
| 3    | 4360C4      | Sensor Position Locking Pin  |

## 9431080 Diesel Engine Setting/Locking Tool Set Comprises: 4926 Camshaft Setting Pins (Pr) 4927 Crankshaft Locking Pin 4360C4 Sensor Position Locking Pin

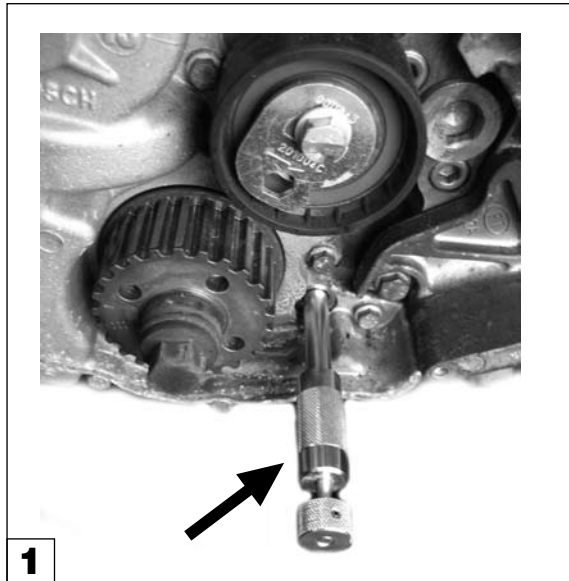
The Fiat 2.3JTD common rail diesel engine has twin camshafts connected at the rear by a chain, within the cylinder head. The timing belt connects the crankshaft to the inlet camshaft.

The Fiat 3.0JTD engine, although CHAIN DRIVE, utilises the same 'locking tools' as the 2.3JTD for engine timing applications

### Timing Belt replacement

It will be necessary to drain the cooling system, remove the R-H front wheel, engine undershield as well as the auxiliary belt and tensioner.

Remove the crankshaft pulley and timing belt covers. In addition remove the PAS reservoir/bracket and inter-cooler-manifold hoses. On later models the R-H headlight, screen washer reservoir, coolant expansion tank and R-H engine mounting will also need to be removed.



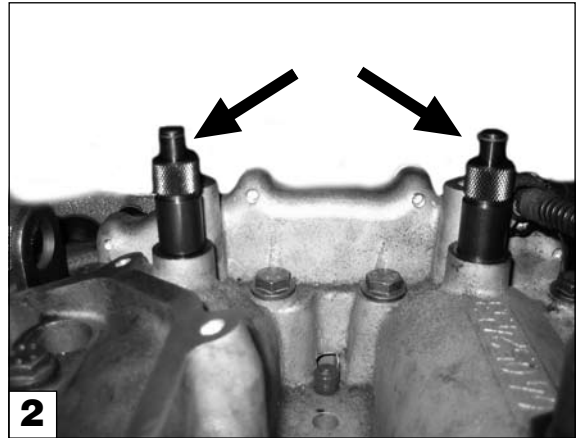
### 4927 Crankshaft Locking Pin

Remove the blanking plug, for the 4927 Crankshaft Locking Pin, situated in the front crankcase near the crankshaft gear.

The Locking Pin is screwed into the crankcase and its plunger locates into the gear situated behind the front casing. This gear has holes for engine speed pick-up.

Slowly turn the crankshaft to TDC No.1 cylinder pushing the plunger of the Pin into the 'timing hole' in the gear.

**IMPORTANT:** The 'flats' on the end of the Crankshaft Pin plunger must be in a **VERTICAL** plane in order to enter the 'timing hole' in the gear. The vertical plane is confirmed by the roll pin in the knob of the plunger being positioned on top (uppermost).



### 4926 Camshaft Setting Pins (Pair)

The 4926 Camshaft Setting Pins screw into the camshaft housing and locate into holes in the camshafts.

Remove the glow plug control module and bracket.

Remove the studs on the camshaft housing and visually check that the holes in the camshafts are in position.

Screw in both Camshaft Setting Pins and ensure that the plungers are fully inserted into the holes in the camshaft.

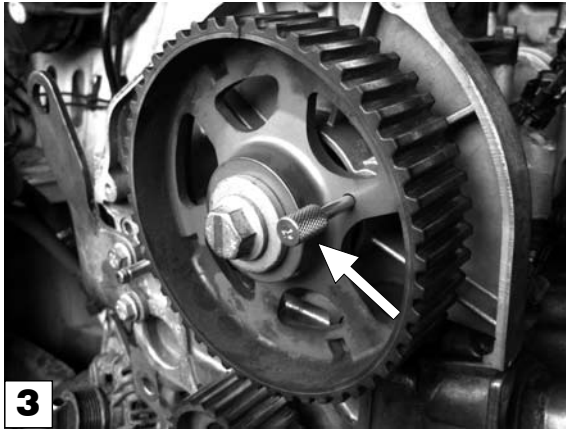
Release the belt tensioner bolt and allow the tensioner pulley to move away from the belt.

### Fitting new timing belt.

With the 4927 Crankshaft Locking Pin and 4926 Camshaft Setting Pins installed, counter-hold the camshaft sprocket with 43012860 Holding Tool and slacken the sprocket bolt.

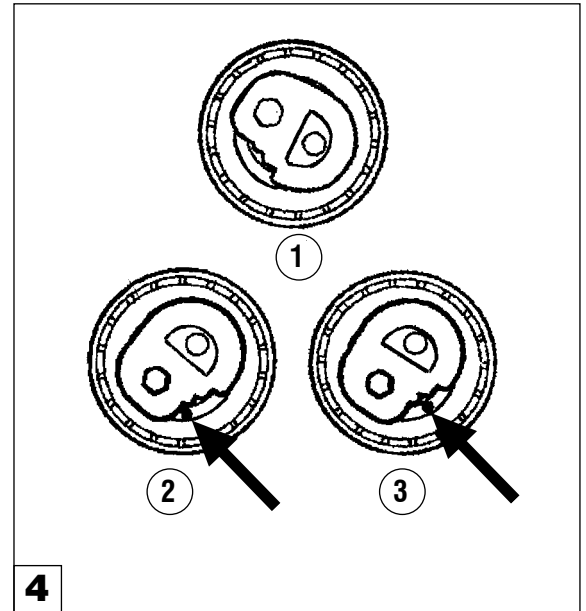
**WARNING: DO NOT use the Camshaft Setting Pins as a means of counter-holding the camshaft whilst releasing or tightening the sprocket bolt.**

Using a suitable remover pull the camshaft sprocket off its taper so it is 'free to turn' but does not tilt.



### 4360C4 Sensor Position Locking Pin

Insert 4360C4 Locking Pin through the camshaft sprocket to fix the sprocket/timing sensor slots in correct position (pin enters at approx. 3-0-clock position).



Turn the tensioner pulley to **Position 1**, to facilitate fitting the new belt.

Fit the belt ensuring it is taut on the non-tensioned side.

Remove the 4360C4 Locking Pin.

Counter-hold the camshaft sprocket with 9431080 Holding Tool and tighten the sprocket bolt.

Turn the tensioner pulley **anti-clockwise** to achieve **Position 2**, and tighten the tensioner bolt.

Remove the Crankshaft and Camshaft Locking Pins and rotate the crankshaft 8 revolutions in normal direction of engine rotation.

Slacken the tensioner bolt and carefully move the tensioner to **Position 3**, and tighten tensioner bolt.

Rotate the crankshaft 2 more times returning to TDC.

Insert the 4927 Crankshaft Locking Pin, remembering to keep the plunger 'flats' vertical, and check that the Camshaft Setting Pins can be inserted correctly into the camshafts.

Check that the belt tensioner has remained correctly in **Position 3**.