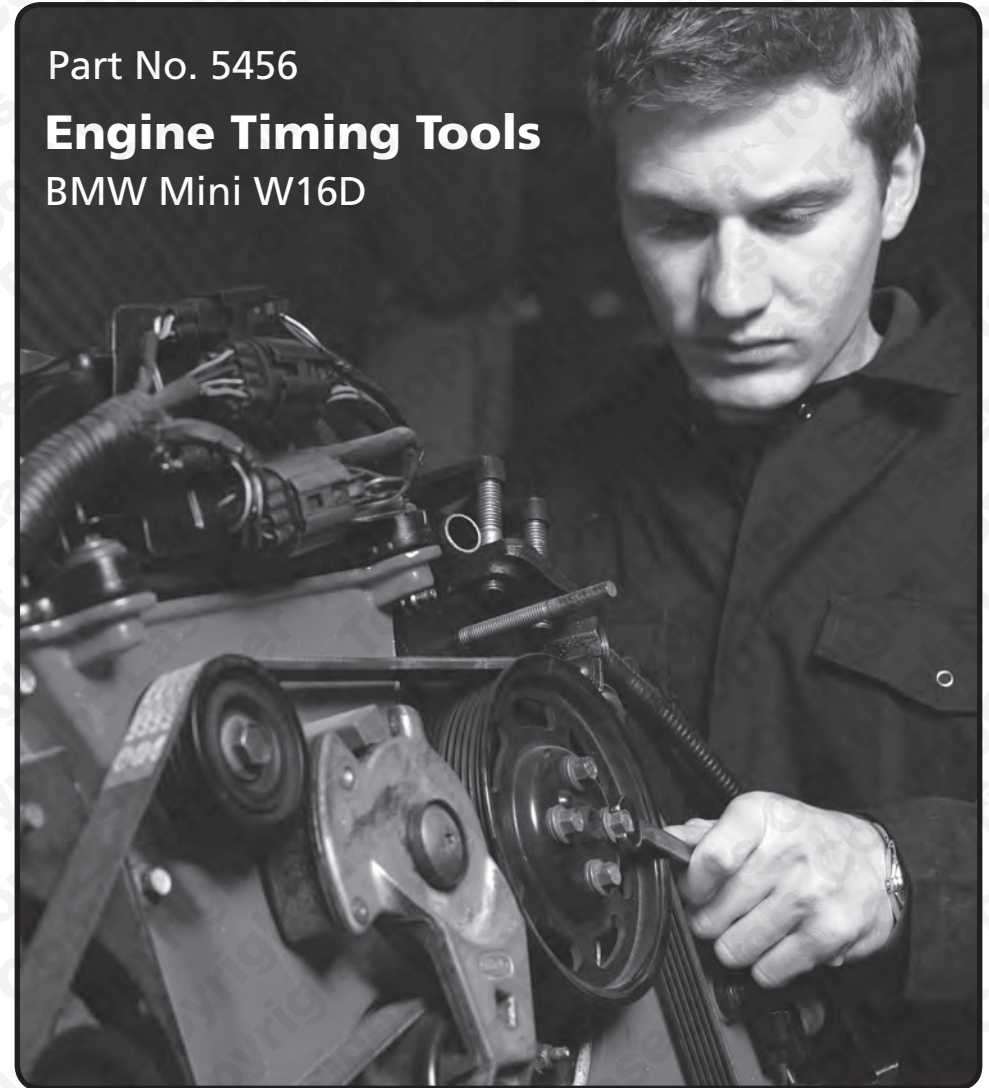


# LASER®

Part No. 5456

## Engine Timing Tools

BMW Mini W16D



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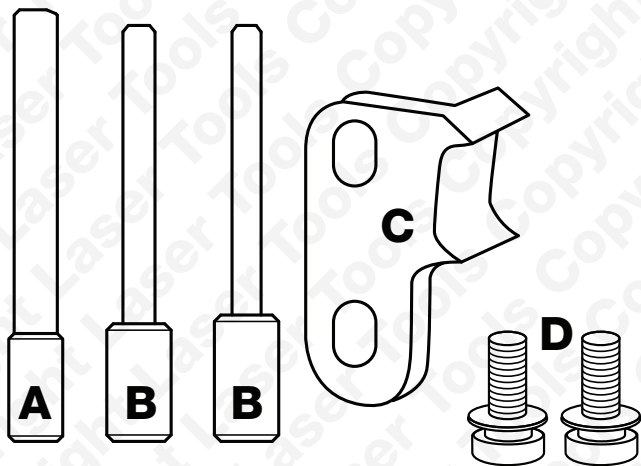
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Plan Layout



Ref	Code	PSA OEM Ref	BMW OEM Ref	Description
A	C089	0194A	11 9 790	Crankshaft Timing Pin
B	C101	0194B		Camshaft/High Pressure Fuel Pump Timing Pin (2)
C	C556		11 9 851 (Part 1 of 11 9 850)	Flywheel Holding Tool
D	C557		11 9 852 (Part 2 of 11 9 850)	Fixing Bolts for Flywheel Holding Tool

## 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 compression 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

## 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.

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.

Manufacturer	Model	Type	Engine Code	Year
BMW Mini	Mini I Mini Clubman	1.6 diesels	W16D16(9HZ)   W16D16UO chassis R55   56   57	2007-2010
Citroën	C2	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2007-2010
	C3	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2005-2010
	Xsara Picasso	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2005-2010
	C4	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2004-2011
	C5 MkII	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2004-2008
	C4 Picasso	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2006-2010
	Grand Picasso	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2006-2010
	C5 Mk III	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2007-2011
	Berlingo Mk III	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2008-2012
Peugeot	C3 Picasso	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2009-2010
	206	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2004-2007
	206cc	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2005-2007
	207	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2006-2010
	1007	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2006-2010
	307	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2004-2008
	207cc	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2007-2010
	308	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2007-2010
	308cc	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2009-2010
	3008	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2009-2011
	5008	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2009-2010
	Partner MK3	1.6 diesels	9HZ/9HX/9HY (DV6TED4	2008-2012

## Engine Timing Tool - BMW Mini | PSA 1.6 16v Diesel '07 onwards

BMW Mini and Peugeot (PSA) developed a series of engines as part of an ongoing collaboration. The W16D diesel engine was developed as part of this collaboration to incorporate the latest technologies giving the best performance, economy and emissions possible.

This kit has been designed to allow the user to replace the timing belt on these engines. The W16D engine is a twin camshaft 16v engine but only one of the camshafts is driven by the belt, the other shaft is driven by a transfer chain situated in the head.

This kit has been developed to time the engine for belt replacement only.

**N.B** The information given below is for reference only. The Tool Connection recommend the use of Manufacturer data or Autodata.

### Preparation

To gain access to the W16D engines in the Mini series of vehicles it will be necessary to remove the following components:

- Engine cover, the right hand head lamp, front bumper and engine under tray.
- Vehicle front Panel (this need to be supported if coolant hoses are not removed). The front panel need only be moved forward by about 100mm.
- Right hand engine mount (support the engine with a suitable support or jack)

## Instructions

### Component Descriptions

#### Components A

Crankshaft locking pin – this pin is used to lock the crankshaft in its timed position. It fits through a hole in the front pulley belt guide plate as shown in Fig. 1.

**N.B. – Never use this pin to hold the crank for loosening and tightening of the front pulley always use C or other suitable holding device.**

#### Components B (2)

Camshaft and HP fuel pump locking pins – these pins are designed to lock the camshaft pulley and High Pressure Diesel pump pulley in their timed position as shown in Fig. 2.

#### Components C

Flywheel Holding Tool – specifically designed to fit the Mini series of engines component (C) allows the flywheel to be held solid whilst undoing and tightening the front pulley fixings. See Fig 3.

### Instructions – Removal/fitting

1. Remove the flywheel cover and fit component (C) as shown in Fig. 3
2. Remove crankshaft pulley bolt, pulley and belt covers as required.
3. Remove component (C) and turn the crankshaft to TDC No1 cylinder
4. Ensure that camshaft pulley, HP pump pulley and crankshaft pulleys line up.
5. Fit components (A) and (B) as shown in Fig. 1 and 2.
6. Continue dismantling the belt drive.
7. Fitting the belt is the reverse of the above.
8. Always refer to manufacturers data for the correct torque settings and tensioner set-up procedure.

Fig. 1

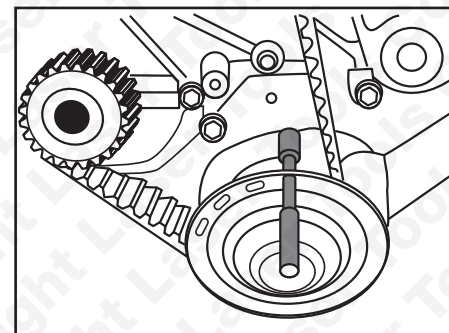


Fig. 2

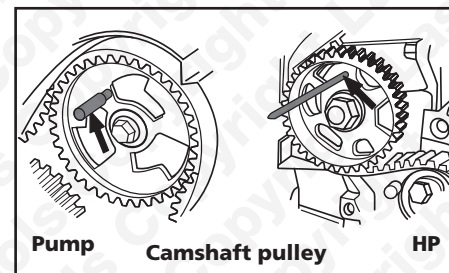


Fig. 3

