

**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
- 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 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



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#### **Guarantee**

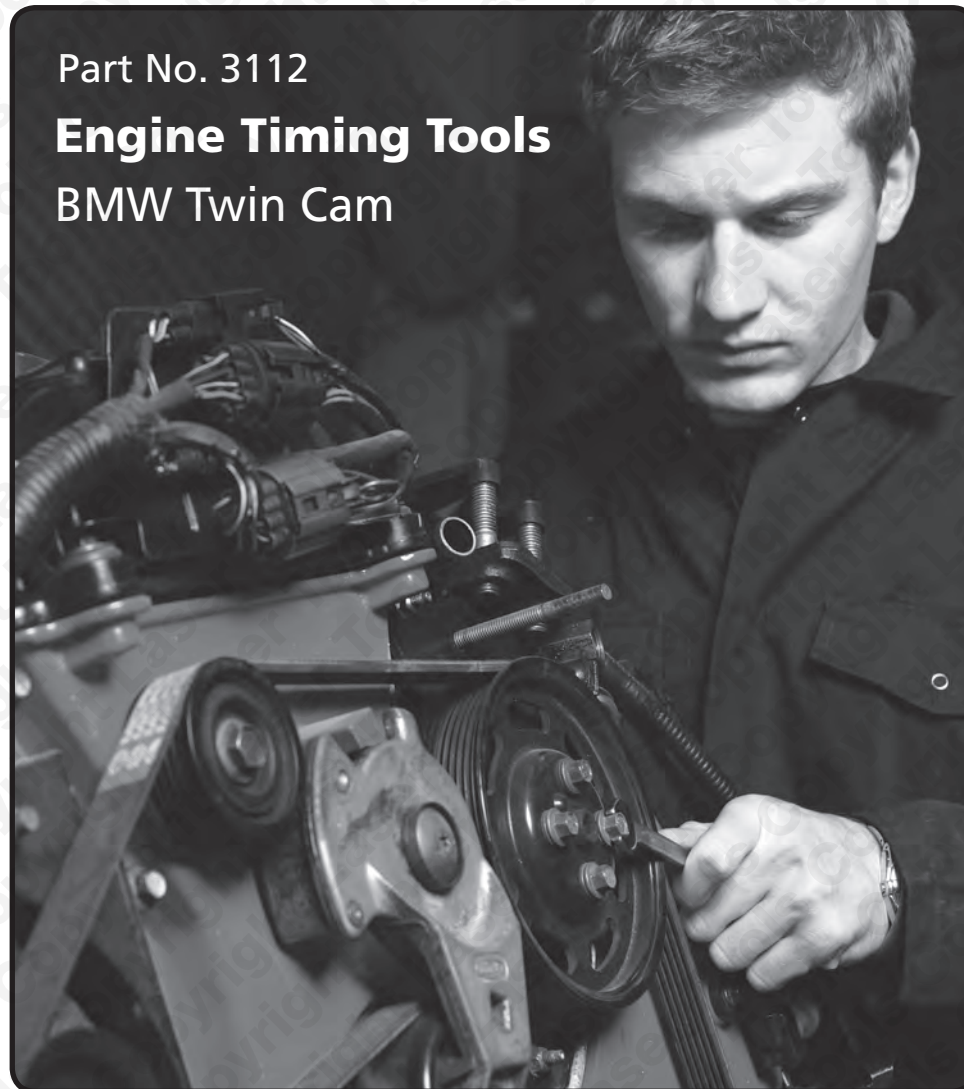
If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186**. Normal wear and tear are excluded as are consumable items and abuse.

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# **LASER®**

Part No. 3112

## **Engine Timing Tools BMW Twin Cam**



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## CAMSHAFT & CRANKSHAFT LOCKING TOOL SET

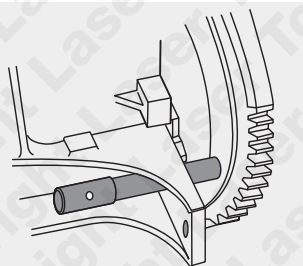
For use on Twin Cam engines where both camshafts have to be locked in place whilst servicing the camshaft and replacement of the chain or belt.

Note: The straight 6 cylinder engine is aluminium and the straight 4 is steel. Occasionally corrosion on the steel casing can make the Crankshaft Locking Pin tight.

The Crankshaft Locking Pin is fitted after the crankshaft has been turned to TDC (Top Dead Centre) on No.1 cylinder (A)

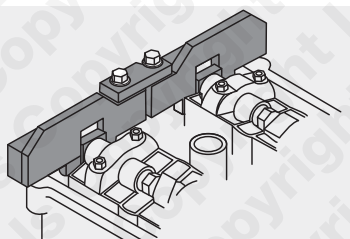
Note: Check for corrosion on the steel engine block, normally found on the straight 4 cylinder engine as this may cause the Pin to be a tight fit.

**A**



The Twin-Cam Locking Plates are positioned to align the cam shafts at the correct timing position. The fork on each plate locates on the square form of each camshaft. The two plates are fastened together by means of a latch strap. (B)

**B**



Ref	Code	Oem Code	Description
A	C020	11 2 300	Crankshaft Locking Pin
B	C021	11 2 240	Camshaft Clamp Assembly.

## 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.

ALWAYS USE A REPUTABLE WORKSHOP MANUAL

Manufacturer	Model	Engine Code
BMW	316i	M40   M43 Engines
	318i	M40   M43 Engines
	318i S16v (S30)	
	318i S   Coupe (E36)	M44 Engine
	318Ti Compact (E36)	M44 Engine
	320i 24v (E36)	M52 Engine
	323i Compact (E36)	
	325i 24v (E36)	
	328i (E36)	M52 Engine
	518i with	M40 / M43 Engines
	520i 24v (E34   E39)	
	523i	M52 Engine
	525i 24v (E34   E39)	
	528i (E39)	M52 Engine
	728i (E38)	M52 Engine
	Z3 1.9i   2.8i	M44   M52 Engine