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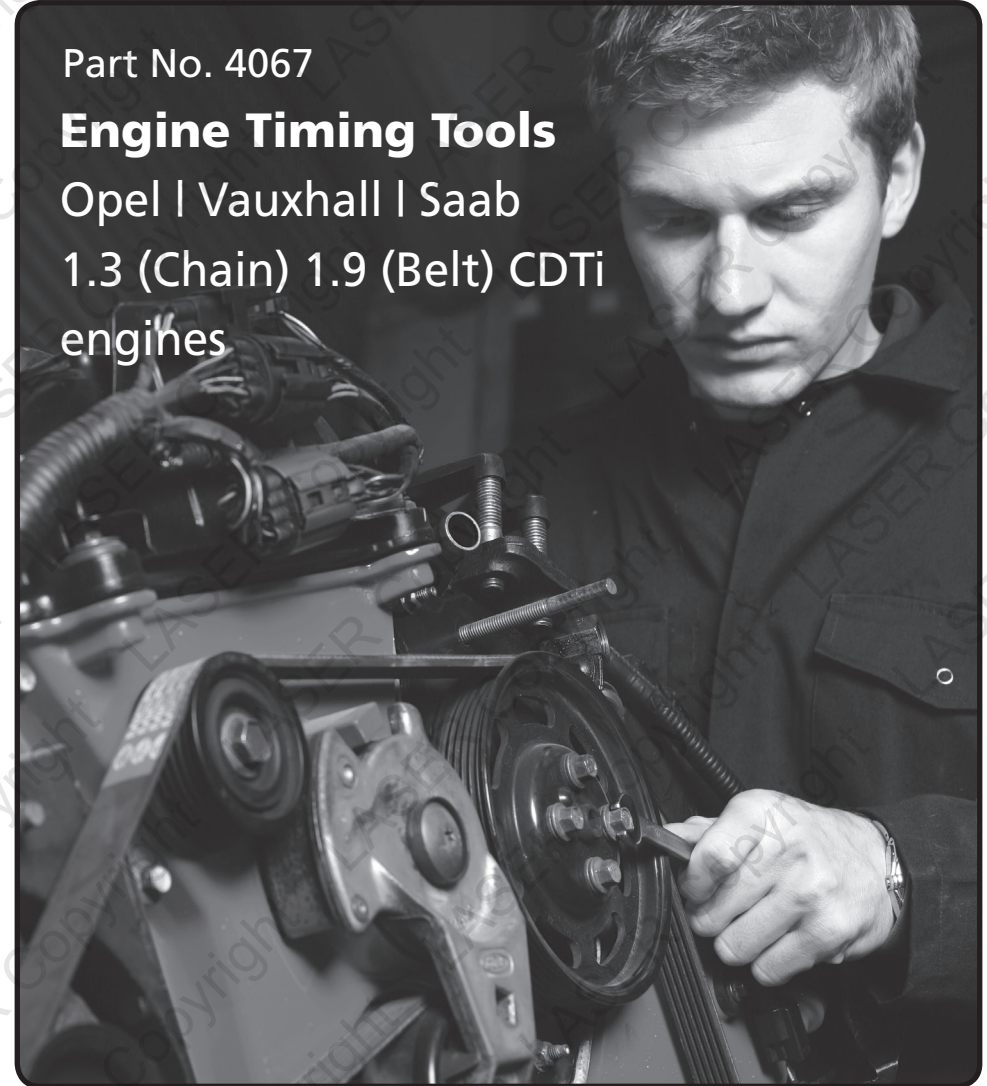


Part No. 4067

Engine Timing Tools

Opel | Vauxhall | Saab

1.3 (Chain) 1.9 (Belt) CDTi
engines



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Guarantee



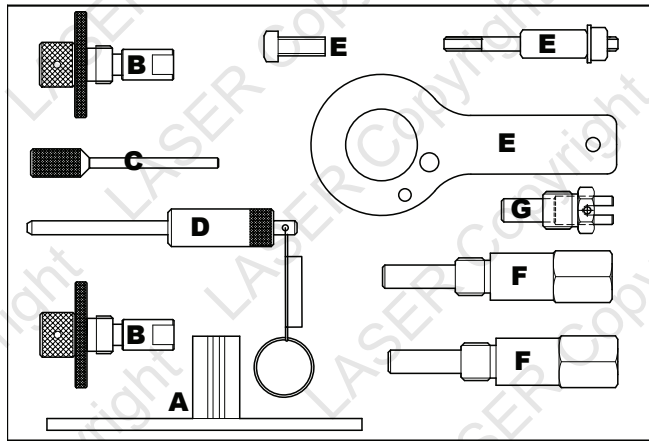
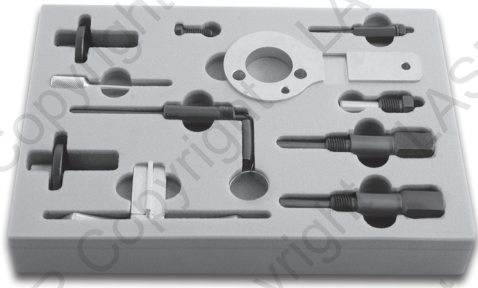
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If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186**. Normal wear and tear are excluded as are consumable items and abuse.

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Plan Layout



Ref	Code	Oem Code	Description
A	C148	1 860 898 000	Flywheel Locking Tool
B	C255	EN-46781	Camshaft Alignment Tool (2)
C	C275	KM 6130 KM 6349	Auxilliary drive belt tensioner holding pin
D	C276	EN-46785	Crankshaft Alignment Pin c/w Retention Spring
E	C277	EN-46788 1 860 905 000	Crankshaft Alignment Tool
F	C278	EN-46789	Camshaft Alignment Tool (2)
G	C279	EN-46789-100	Camshaft Alignment Screw for use when high pressure pump remains fitted

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

- 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

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.

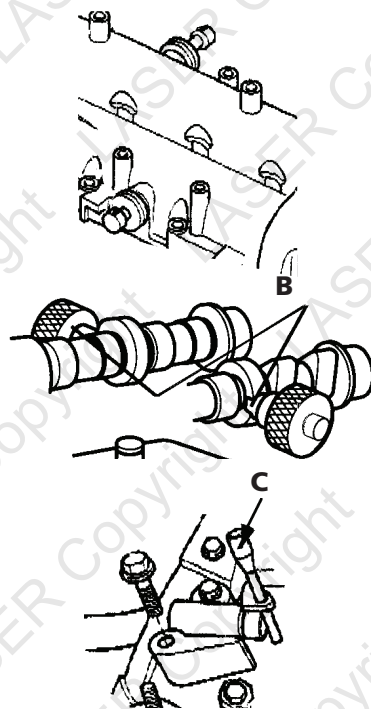
ALWAYS USE A REPUTABLE WORKSHOP MANUAL

Manufacturer	Model	Style	Engine Code
Opel Vauxhall Chain	Agila	1.3 CDTi D	Z13DT
	Astra-H	1.3 CDTi D	Z13 DTH
	Combo-C	1.3 CDTi D	Z13DT Z13DTJ
	Corsa-C	1.3 CDTi D	Z13DT
	Meriva	1.3 CDTi D	Z13DT Z13DTJ
	Tigra-B	1.3 CDTi D	Z13DT
Opel Vauxhall Belt	Astra	1.9 CDTi D	Z19DT Z19DTH
	Astra-H	1.9 CDTi D	Z19DTH Z19DTJ
	Signum	1.9 CDTi D	Z19DTH
	Vectra-C	1.9 CDTi D	Z19DTH
	Zafira-B	1.9 CDTi D	Z19DTH
Saab Belt	9-3	1.9 TiD	Z19DTH Z19DTR
	9-3	1.9 TTiD	Z19DTH Z19DTR
	9-5	1.9 TiD	Z19DTH Z19DTR

Instruction

Instruction for 1.3 Litre Chain driven engine

- Remove the blanking plugs from the camshaft housing and install the alignment tools **B** with the parallel flats engaging into the camshaft grooves horizontally. Tighten the large Handle to secure in position.
- Install the crankshaft Locking Pin **D** in the bell housing hole.
- Install the tensioner Locking Pin **C** before carrying out engine repairs.



Instruction

Instruction for the 1.9 Litre engine Belt driven engines

- This engine is identified as an Interference engine in which the possibility of valve-to-piston damage is likely to occur in the event of timing belt failure. It is advised to conduct a compression test before removing the cylinder head.
- Correctly support the engine.
- Turn auxiliary drive belt tensioner clockwise to release tension on belt. Use a suitable spanner.
- Check the Tensioner Sprocket for smooth rotation and Lock the auxiliary drive belt tensioner with Tensioner Pin **C**. Turn the Crankshaft to TDC on Nr.1 cylinder.
- Fit the Inlet and Exhaust Camshaft Locking Tools **B**, when a High Pressure Fuel Pump remains fitted the Inlet Camshaft Locking Tool **B** is obstructed and can be substituted with the compact Tool **G**.
- Fit the Crankshaft Alignment Tool **E** in position over the peg and use the stud to position and retain using the M8 bolt provided.
- Fit the new timing belt in a clockwise direction starting at the Crankshaft Sprocket.
- Lever the Tensioner Sprocket Bracket until the Pointer and Mark are aligned, then tighten the Tensioner Sprocket.
- The flywheel should be held in position using Flywheel Locking Tool **A** when tightening the Crankshaft Pulley Bolts.
- Always remove all tools after use.

