

Timing & Engine Locking Tool Kit



ADK85501

Alfa Romeo | FIAT | Ford | Lancia | Subaru | Suzuki | Opel / Vauxhall
For use with timing chain kit **ADK873500**



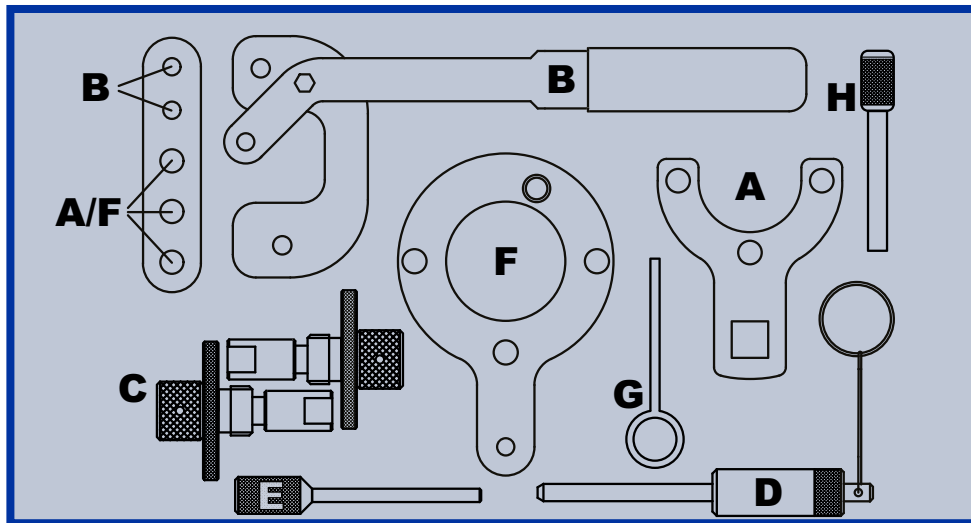
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Safety Precautions - Please Read

- Disconnect the battery earth leads (check radio code is available)
- Remove the glow plugs to make the engine turn easier
- Turn the engine in the normal direction (clockwise unless stated otherwise)
- Do not turn the camshaft, or crankshaft after 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
- If you are re-using the timing chain then mark its direction of rotation 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 the crankshaft using the camshaft or other gears
- 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 valvetrain

Plan Layout



Code	Description	FIAT Group**	Ford	Suzuki	Opel / Vauxhall
A	Crankshaft Pulley Flange Holding Wrench	1 871 000 200	303-1469		KM 662-C
B	Timing Chain Tensioner	1 870 900 400			
C	Camshaft Alignment Tool (2)	1 871 000 900 1 860 985 000	303-1472	09917-68610	EN 46781
D	6mm Flywheel Alignment Pin with Spring			09912-38300	EN 46785 KM 955
E	4mm Tensioner Retaining Pin				KM 6130
F	Crankshaft Timing Positioning Tool	1 870 900 300	303-1468		
G	2mm Chain Tensioner Retaining Pin				
H	8mm Flywheel Alignment Pin				

**FIAT Group includes FIAT, Alfa Romeo and Lancia

Safety Precautions - Please Read

The application list for this product has been compiled cross referencing the OEM Tool Code with the Component Code.

This tool kit is specific to the 1.3JTD Multijet engine and is necessary for timing chain maintenance and repairs.

The 1.3JTD Multijet has been identified as an interference engine where valve to piston damage is likely to occur if the engine is run with a broken timing chain.

A compression check of all cylinders should be performed before removing the cylinder head.

The information in this literature is offered as a guide only.

It is strongly recommended that you refer to a relevant workshop manual or suitable reference material before undertaking any work on your vehicle.

Blue Print cannot be held responsible for damage to any engine by using these tools.

Make	Model	Variant	Engine Code	From Date	To Date
Alfa Romeo	MiTo	1.3 JTD	199A3.000/199B1.000/199B4.000	2008>	
FIAT	500	1.3 JTD	169A1.000	2007>	
FIAT	Doblo	1.3 JTD	188A9.000	2004>	
FIAT	Fiorino	1.3 JTD	199A2.000	2007>	
FIAT	Grande Punto	1.3 JTD	188A9.000	2005>	2009
FIAT	Idea	1.3 JTD	188A9.000/199A3.000/199B1.000	2004>	2012
FIAT	Linea	1.3 JTD	199A3.000	2007>	
FIAT	Panda	1.3 JTD	169A1.000/169A5.000/188A8.000/ 188A9.000	2004>	2011
FIAT	Punto	1.3 JTD	188A9.000	2003>	2005
FIAT	Punto Evo	1.3 JTD	199A2.000/199A3.000/ 199A9.000/199B1.000/199B2.000/ 199B4.000/223.A9.000	2010>	2011
FIAT	Qubo	1.3 JTD	199A2.000/199B1.000	2007>	
FIAT	Strada	1.3 JTD	199B1.000/223A9.000	2005>	
Ford	Ka	1.3 TDCi	169A1.000 / BAAA/B	2008>	
Lancia	Musa	1.3 JTD	188A9.000/199A3.000/199B1.000	2004>	2012
Lancia	Ypsilon	1.3 JTD	188A9.000/199A2.000/199A3.000/ 199A9.000/843A2.000	2003>	2011
Opel / Vauxhall	Agila	1.3 CDTi	Z13DT	2003>	2008
Opel / Vauxhall	Astra H	1.3 CDTi	Z13DTH	2005>	2010
Opel / Vauxhall	Corsa C/D	1.3 CDTi	Z13DT*	2003>	
Opel / Vauxhall	Meriva	1.3 CDTi	Z13DT*	2005>	
Opel / Vauxhall	Tigra	1.3 CDTi	Z13DT	2004>	2010
Opel / Vauxhall	Agila	1.3 CDTi	Z13DT/D13A	2008>	
Opel / Vauxhall	Combo	1.3 CDTi	Z13DT	2004>	2012
Subaru	G3X - Justy	1.3 DDiS	Z13DT	2003>	2007
Suzuki	Ignis	1.3 DDiS	Z13DT	2003>	2012
Suzuki	Splash	1.3 DDiS	Z13DTJ/D13A	2008>	
Suzuki	Swift	1.3 DDiS	Z13DT*/D13A	2005>	
Suzuki	Wagon R	1.3 DDiS	Z13DT	2004>	2008

Instructions

Support engine and remove the side engine mounting to gain access to the engine service hatches.

Component A

Use this tool to hold the Crankshaft Pulley Flange still whilst releasing the pulley flange centre bolt (note left hand thread). In order to gain access to the pulley flange the pulley must first be removed by removing the 4 outer pulley fixings. NB: **Do not** release the pulley flange centre bolt until the cam and crank timing pins are in place.

Do not attempt to loosen or tighten the pulley centre bolt without holding the flange with the flange tool or the crankshaft and camshaft tools will be damaged.

Component B

The Timing Chain tensioning tool is used to clamp the timing chain when replacing the gasket on the one-piece cylinder head. The tool is attached in alignment with the inspection opening on the engine control cover so that the pin acts upon the ribs of the chain slider. Retract the chain tensioner piston so that it moves back to its locked position using the lever.

Ensure the tensioner has fully extended before attempting to retract it.

Components C

These camshaft alignment tools are used to locate the camshafts in position. Access must first be gained to the blanking plugs that are positioned one on the front of the cam cover and one on the rear of the cam cover. Lift the high pressure fuel rail and engine wiring harness to gain access.

Remove the blanking plugs and screw the alignment tools into place with the flats on the inner section of the tool's horizontal. The tools are correctly fitted when the inner section of the tools can be easily pushed in with finger pressure. NB: These tools are for setting the position of the camshafts. **Do not** attempt to loosen or tighten any fixings on the camshaft using these tools to lock the camshaft as damage may result.

Components D and H

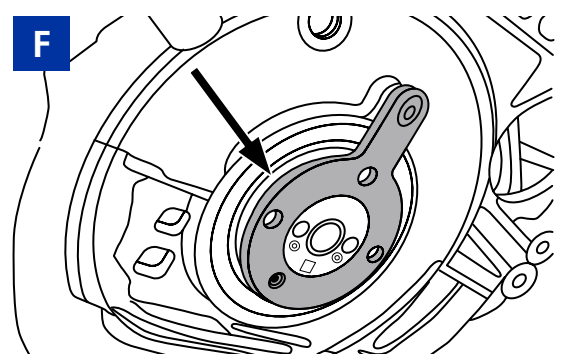
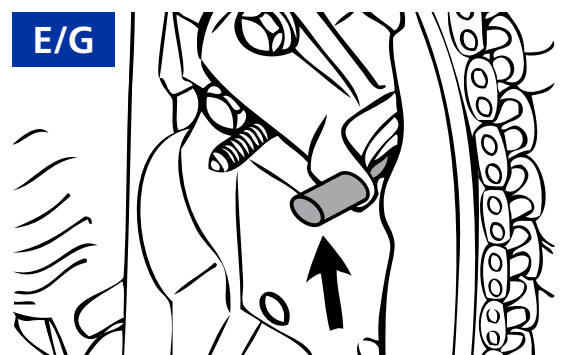
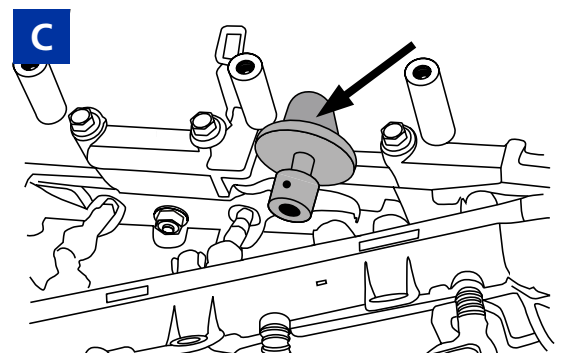
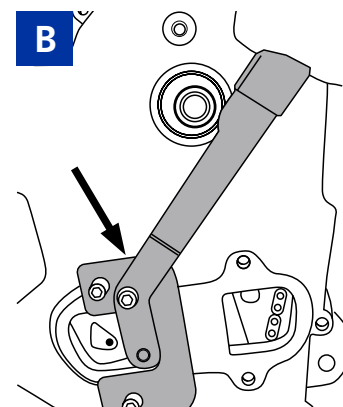
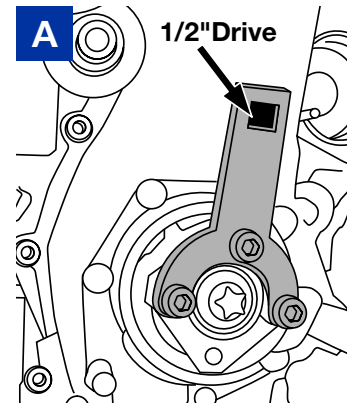
The flywheel alignment pins are used to locate the position of the flywheel to ensure the crankshaft is in the correct timed position to match the camshafts. NB: These tools are for setting the position of the crankshaft. **Do not** attempt to loosen or tighten any fixings on the crankshaft using these tools to lock the crank as damage may result.

Components E and G

The chain tensioner locking pins are used to hold the tensioner in its retracted position once compressed.

Component F

This tool is used to set the control position of the crankshaft (flywheel end) with engine removed when a complete engine rebuild is required. The tool is attached to the crankshaft using the three bolts (from Item A) in place of the flywheel.



ALWAYS FOLLOW THE VEHICLE MANUFACTURERS' INSTRUCTIONS.