

***Kamasa-TOOLS***®

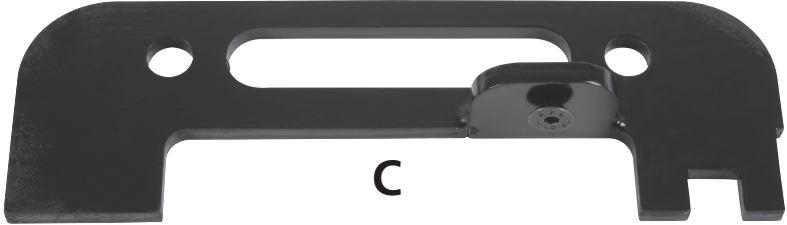
Engine  
timing tools

Renault Twin  
Cam 16v

K 10528

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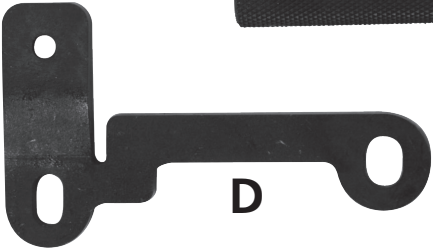
Pack Layout



C



A



D



B

# Component identity

Part No.	OEM Ref	Description
A 23054-04	Mot 1489	Crankshaft Timing Pin
B 23069-23	Mot 1054	Crankshaft Timing Pin
C 23069-52	Mot 1496	Camshaft Setting Bar
D 23069-52G	Mot 1750	Mounting Bracket

# Applications

Manufacturer	Model	Type	Year
Clio   Clio III	1.4   1.6	K4J 712   713   750 K4M 700   701   720   724   748	2003
Mégane   Scenic	1.6	K4J 712   713   750 K4M 700   701   720   724   748	1998
Laguna	1.6	K4J 712   713   750 K4M 700   701   720   724   748	1998
Clio Sport	2.0	F4P   760   F4R   700   701   730   740   741   780	1998
Mégane   Scenic	2.0	F4P   760   F4R   700   701   730   740   741   780	1998
Laguna	1.8   2.0	F4P   760   F4R   700   701   730   740   741   780	1998
Espace	2.0	F4P   760   F4R   700   701   730   740   741   780	1998

# Engine Timing Tools

This kit enables the correct engine timing to be performed on Renault K4J, K4M & F4P, F4R.

The set includes crankshaft timing pin, TDC timing pin and camshaft setting bar plus the new bracket specifically for the Clio III with K4M 813 engine from 2003 onwards.

## Instruction 1.4 | 1.6 16v

### Removal

1. Raise and safely support the front of the car.
2. Remove the engine top cover, right hand splash guard and auxilliary drive belt.
3. Safely support the engine.
4. Remove the right hand side engine mounting, blanking plugs from rear of camshafts, blanking plug from cylinder block.
5. Lock flywheel and slacken the crankshaft pulley bolt.
6. Rotate crankshaft clockwise to the setting position ensuring that the grooves in the camshaft align. The grooves are positioned below the upper face of the cylinder head. (Fig 1.)
7. Insert the Crankshaft Timing Pin (A) to locate against the crankshaft web. (Fig 2.)
8. Fit the Camshaft Setting Bar (C) to rear of the camshafts. (Fig 3)
9. Remove the crankshaft pulley bolt, crankshaft pulley and timing belt covers.
10. Slacken the tensioner nut.
11. Move the tensioner pulley away from the timing belt.

### Installation

1. Check that the Crankshaft Timing Pin is still correctly fitted and contacting the crankshaft web.
2. Check that the Camshaft Setting Bar is still correctly fitted and the grooves in the camshaft are aligned
3. Fit guide pulley and tighten to 45Nm.
4. Fit the tensioner pulley and finger tighten, ensuring that the lug on rear of the pulley is located in the groove in the cylinder head.
5. Remove and de-grease the crankshaft sprocket and the mating end of the crankshaft. Note: Double check crank position by ensuring the crankshaft key is at 12 O Clock
6. Fit the new timing belt in an anti-clockwise direction, starting at the crankshaft sprocket. Check that the belt is taut on the non-tensioned side.
7. Refit the crankshaft pulley using a new bolt, leaving 2-3 mm. Clearance between bolt face and pulley.
8. Slacken the tensioner nut and using a 6 mm. Hexagon key, turn the tensioner pulley clockwise until the pointer is at the right hand stop. The moveable pointer should be 7-8 mm. Past the fixed pointer.
9. Lightly tighten the tensioner nut to 7 Nm.
10. Lock the flywheel and increase the tensioner nut tightness to 20 Nm,

Fig. 1

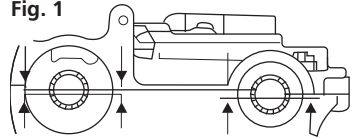


Fig. 2

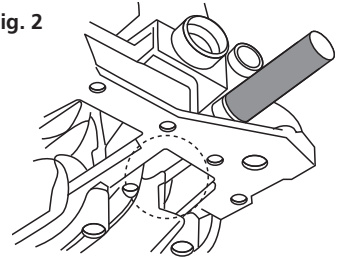


Fig. 3

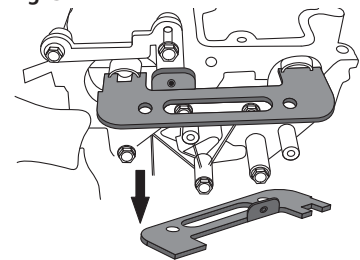
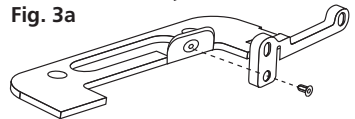


Fig. 3a



11. Remove both timing tools.
12. With the flywheel locked tighten the crankshaft pulley bolt by 120-150°. Use Angular Torque Gauge 2245.
13. Rotate the crankshaft two full turns clockwise back to the setting position.
14. Re fit the Crankshaft Timing Pin to correctly contact the crankshaft web and check that the Camshaft Setting Bar can be easily fitted.
15. Hold the tensioner pulley using the 6 mm. hexagon key and slacken the tensioner nut.
16. Turn the tensioner pulley anti-clockwise until the pointers align and tighten the tensioner nut to 27 Nm.
17. Remove both timing tools and refit the blanking plug.
18. Fit new blanking plugs to the rear of the camshafts.
19. Reinstall the remaining parts in reverse order of removal.

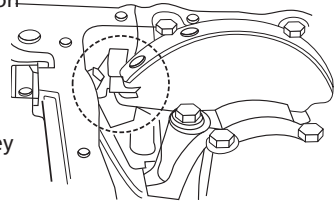
### Instruction 1.8 | 2.0 16v

The procedures for removing and installing timing belts on these engines is similar to those detailed above, but the Crankshaft Timing Pin is different. Use part (B) This Pin must be fitted into the slot in the crankshaft web. (Fig. 4)

This Pin must NOT be fitted into the balance hole.

Double check crank position by ensuring the crankshaft key way is aligned centrally between the casting lugs on the front of the engine. (Approximately 1 0 Clock position)

Fig. 4



images courtesy of Autodata™  
Further information can be found at [www.autodata.ltd.uk](http://www.autodata.ltd.uk)

### Safety Precautions

- 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

**Warning 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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