

Product Information

9431100

Diesel Engine

Setting/Locking Tool Set



IMPORTANT: Always refer to the vehicle manufacturer's service instructions, or proprietary manual, to establish the current procedures and data. Product Information Sets detail applications and use of the tools with any general instructions provided as a guide only.

Applications:

RENAULT 1.5dCi Common Rail Diesel engines in

RENAULT

Clio II/III Modus Megane II
Scenic/Grand Scenic II Kangoo Logan

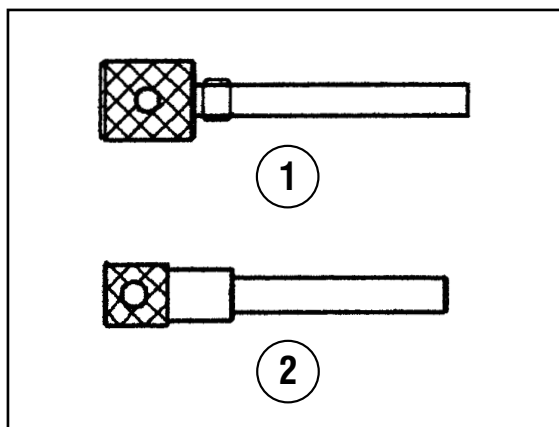
DACIA

Logan Sandero

NISSAN

Micra Note Almera
Qashqai Kurbistar

K9K 1.5dCi diesel engines



Set contents/spares

Item	Part Number	Description
1	4562A	Crankshaft Locking Pin
2	4360R1	Camshaft Locking Pin

9431100 Diesel Engine Setting/Locking Tool Set Comprises: 4562A Crankshaft Locking Pin 4360R1 Camshaft Locking Pin

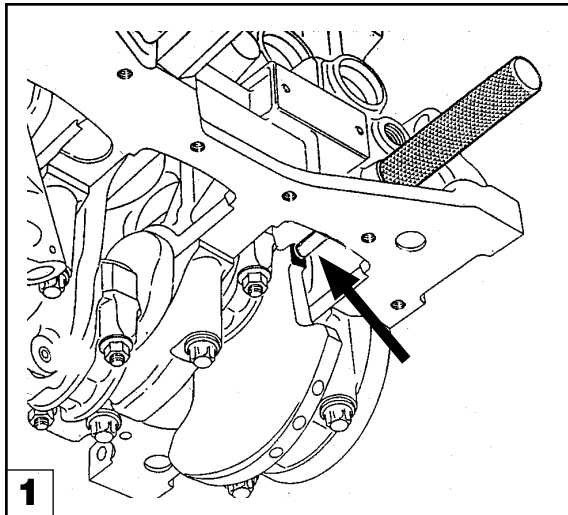
The popular RENAULT K9K 1.5dCi Common Rail diesel engine was introduced in 2001 and is now widely fitted in the Clio, Megane, Scenic, Modus and Kangoo model line-up. Additionally this engine is now also used by NISSAN and DACIA to power some of their models. The 9431100 Engine Setting/Locking Tool Set covers engine timing and belt replacement applications on the complete range of K9K engines.

Engine Setting & Locking - Timing Belt Replacement

Remove the right hand front wheel, splash guard, engine undershield and auxiliary belt.

It will be necessary to support the engine and remove the right-hand engine mounting.

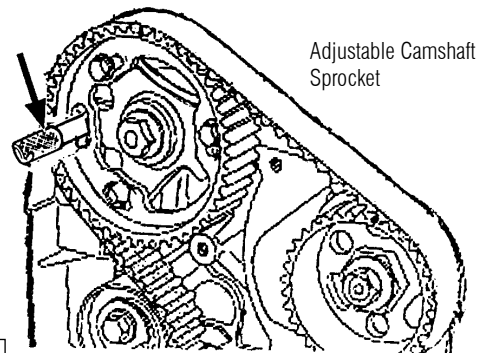
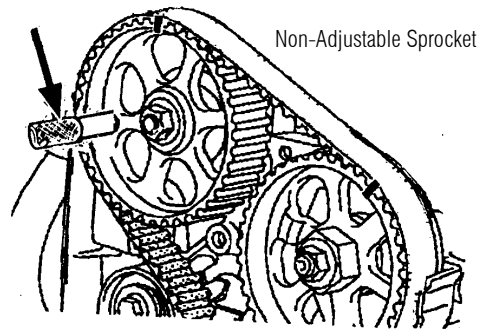
NOTE: Mark the position of the engine mounting BEFORE removal.



4562A Crankshaft Locking Pin

Remove the blanking plug for the crankshaft locking pin from the cylinder block and turn the crankshaft in a **clockwise** direction so that the camshaft sprocket locking pin timing hole is **just before** its alignment position with the datum hole in the cylinder head. This will provide the correct crankshaft position for inserting the 4562A Crankshaft Locking Pin.

Screw in 4562A Locking Pin and turn the crankshaft slightly until the "flat" on web of the crankshaft is pressing against the end of the pin.



4360R1 Camshaft Locking Pin

Insert 4360R1 Pin through the timing hole in the camshaft sprocket and into the datum hole in the cylinder head.

NOTE: Some 1.5 K9K engine variants have an adjustable camshaft sprocket (identified by 3 x sprocket retaining bolts to a camshaft carrier plate and elongated timing slots in the sprocket.)

Remove the Locking Pins.

Lock the flywheel and slacken the crankshaft pulley bolt. Remove the bolt and crankshaft pulley.

Slacken the belt tensioner and remove the tensioner and the old timing belt.

NOTE: Once a belt has been removed, a new belt and tensioning rollers must be fitted.

Remove and degrease the crankshaft gear and the end of the crankshaft.

Install the crankshaft gear, fit a new tensioner pulley ensuring the locking tab locates correctly in the cylinder head.

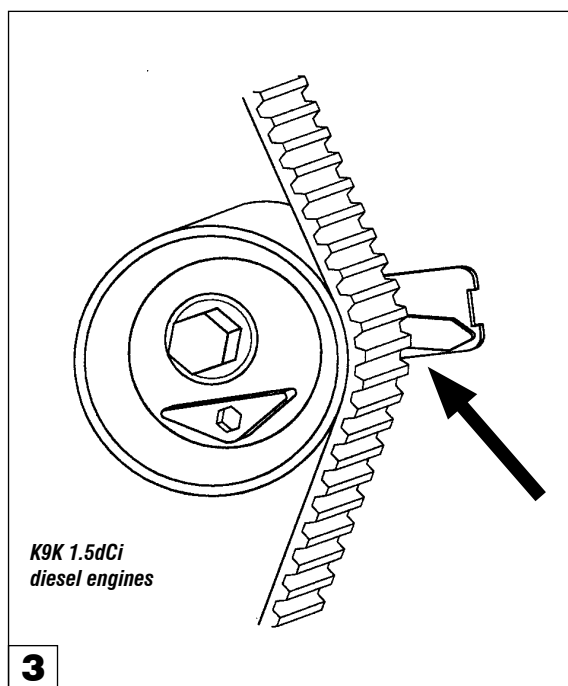
Insert the Crankshaft and Camshaft Locking Pins.

Check the positions of timing marks - the camshaft sprocket (positioned by Pin), the crankshaft (keyway vertically upwards) and the fuel pump (approx 1-o'clock position aligned with bolt head directly behind sprocket. i.e. one tooth to right of vertical axis).

NOTE: If the engine variant has an adjustable camshaft sprocket, remove one bolt and slacken the other two by one turn.

Fit the new timing belt, commencing at the crankshaft gear. Ensure that the marks on the belt are aligned with the timing marks on the camshaft, HP pump and crankshaft sprockets. There should be **19** tooth spaces between camshaft and HP pump timing marks and **51** tooth spaces between crankshaft and HP pump marks.

Belt Tensioner Positions



Apply initial belt tension by turning the tensioner **anti-clockwise** so the "pointer" is positioned **below** the "notch" – see diagram above.

NOTE: If adjustable camshaft sprocket fitted, check that the remaining two sprocket bolts are not at the end of their elongated slots. Re-fit the 3rd bolt and tighten all 3 x sprocket retaining bolts.

Remove 4562A and 4360R1 Locking Pins.

Lock the flywheel and re-fit the crankshaft pulley USING A NEW BOLT. Tighten to specified torque –

M12 – 60Nm + 100 degrees +/- 10 degrees.

M14 – 120Nm + 120 degrees +/- 15 degrees

Rotate the crankshaft two turns and return to a position where the crankshaft and camshaft locking pins can be inserted to check timing is correct, **then remove the pins.**

For final tensioner position, slaken tensioner bolt (1 turn only) and adjust tensioner **clockwise** until the "pointer" **aligns** with the "notch".

More Timing Kits for RENAULT Petrol

Twin Cam Engine Setting/Locking Tool Kit
K4J/K4M/F4P/F4R(t) 16v. – see **43070500/4964**

Petrol & Diesel Engine Setting/Locking
Tool Kit - Renault – see **4390**

Petrol Twin Cam Engine Setting/Locking
Tool Kit N7Q/N7U 2.0 16v./2.5 20v. – see **9431060**

'RAM System' Injection Pump Timing Set – see **4389**

V6 Petrol Engine Setting/Locking
Tool Kit - L7X – see **4580**

DCi Diesel Engine Setting/Locking Tool Kit –
1.5/1.9/2.2/2.5 – see **6038870**