

60387800

Petrol Engine Twin Camshaft Setting/Locking Tool Kit

Associated Tool: 4490

Auxiliary Belt Tensioner
Set

Applications:

**VAUXHALL/OPEL 1.0, 1.2 & 1.4 Twin Cam
Petrol engines (Chain Drive) in**

VAUXHALL/OPEL

Corsa-B+C+D
Meriva

Agila
Combo-C

Astra-G+H
Tigra-B

X10XE, Z10XE, Z10XEP 1.0 12v.

X12XE, Z12XE, Z12XEP 1.2 16v.

Z14XEP 1.4 16v

EcoTec/Twinport engines

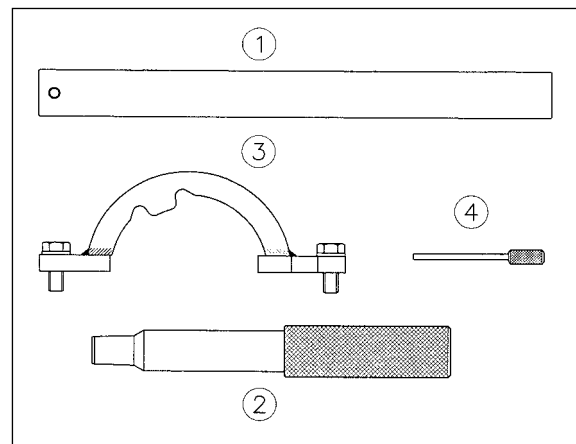
Also these engines in SUZUKI Wagon R+

Additional Tools required: 4490

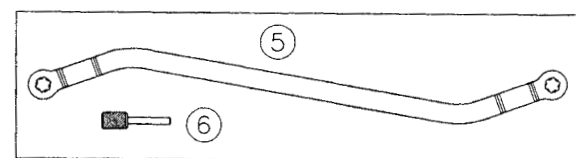
Auxiliary Belt Tensioner Set



Associated Tool
4490

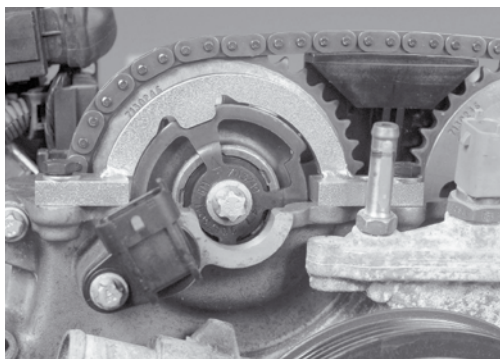


60387800



4490

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.

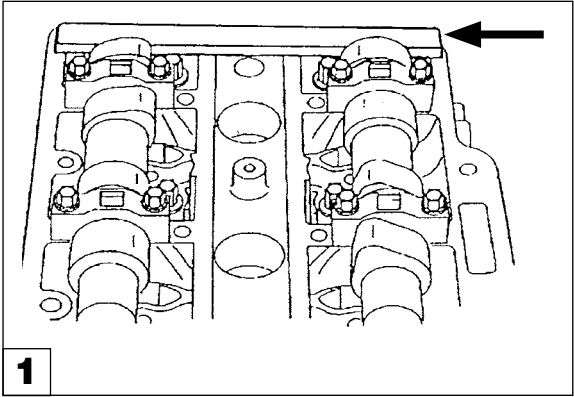


Timing Disc Position Gauge

Kit contents/spares

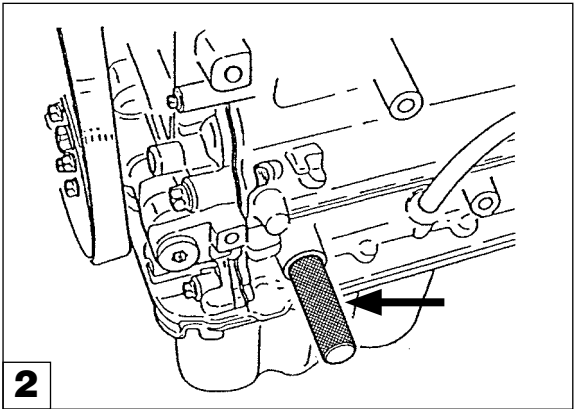
Item	Part Number	Description
60387800 Kit		
1	4486	Camshaft Setting Plate
2	4487	Crankshaft Locking Pin
3	4488	Timing Disc Position Gauge
4	4489	Chain Tensioner Retaining Pin
-		Case and Insert
4490 Set		
5	4490-1	Tensioner Wrench
6	4490-2	Retaining Pin

WARNING: These timing tools must NOT be used to counterhold the crank or camshaft for removing/releasing pulleys or sprockets. They are for retention of engine timing position only. Use appropriate Holding Tool.



4486 Camshaft Setting Plate

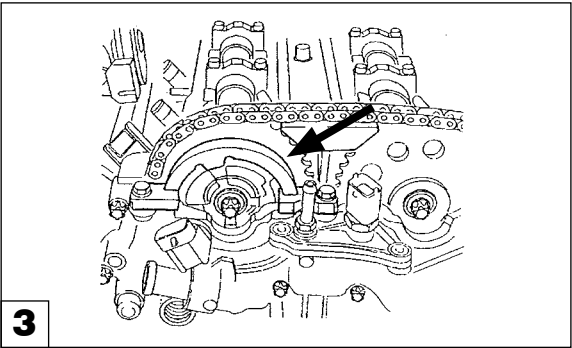
4486 is used to 'set' the pair of camshafts in their timed position by locating into the horizontal slots machined at the back of each camshaft.



4487 Crankshaft Locking Pin

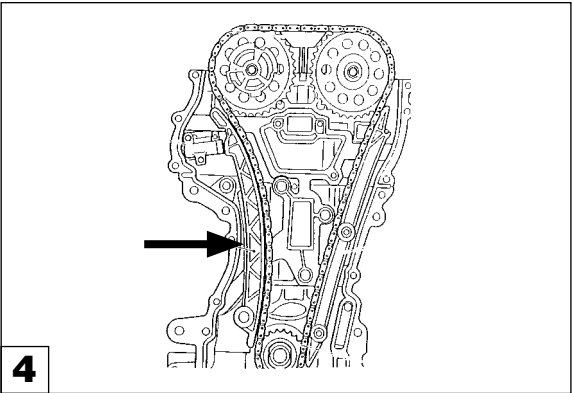
4487 is used to position the crankshaft at TDC. It is inserted through the cylinder block and engages in a 'slot' provided on the first crank web of the crankshaft.

4487 is used for all work involving the timing of the valve train and crank TDC position.



4488 Timing Disc Position Gauge

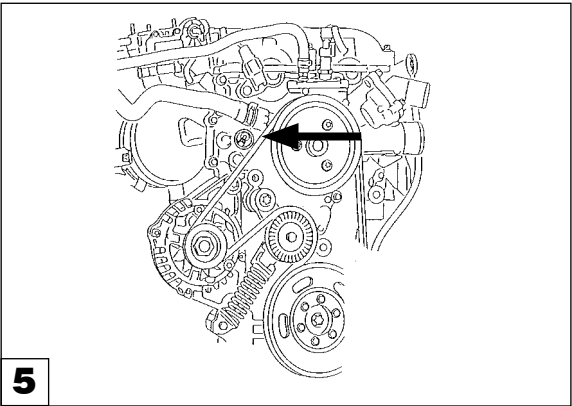
The timing disc is attached to the inlet camshaft sprocket. The position of the disc can only be adjusted using 4488.



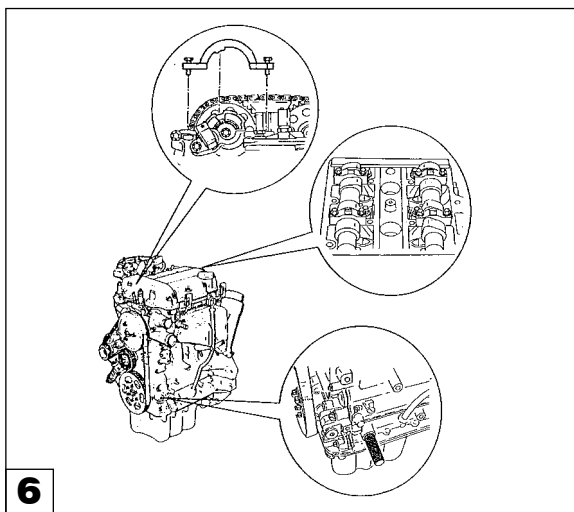
4489 Tensioner Retaining Pin - Timing Chain

The simplex timing chain has a tensioning rail applied by a hydraulic tensioner.

For all work involving engine timing adjustment, cylinder head removal etc., the tensioner/rail must be carefully levered back with a screwdriver and retained by Pin 4489. A service hole is provided in the timing cover to allow access for the pin.



IMPORTANT: For 'Timing Adjustment' procedures the tensioner rail must be retracted to avoid damage to the rail.



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IMPORTANT: For engine timing to be correct, it must be possible to install all the above timing tools in their positions, on the engine - if any or all cannot be fitted - refer to Timing Adjustment.

Timing Adjustment

If the crankshaft and camshafts can be 'locked' in TDC position using 4486 Plate and 4487 Pin, but 4488 Timing Disc Position Gauge cannot be installed, first retract and retain the tension rail away from the chain using 4489 Pin.

Release the inlet camshaft sprocket bolt counter-holding the camshaft with a spanner on the hex. provided on the camshafts. **DO NOT** use the timing tools to counter-hold camshafts or crankshaft.

Fit a new sprocket bolt and tighten only sufficiently to allow the timing disc to turn.

Remove the Tensioner Locking Pin.

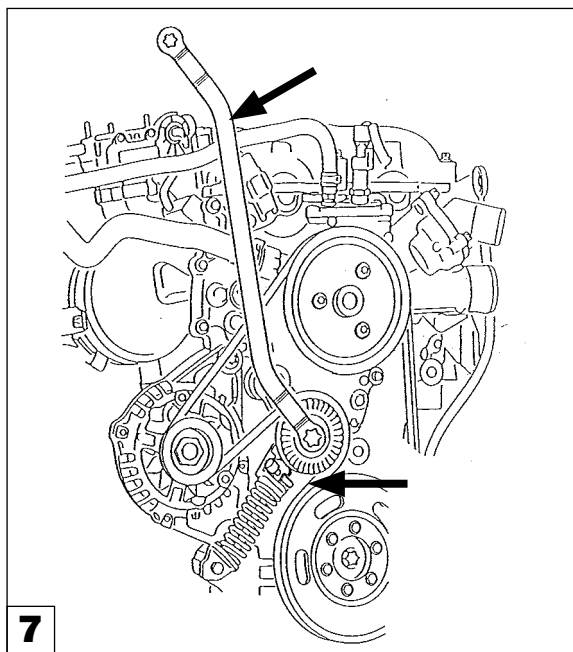
Position the sensor disc to allow Gauge 4488 to be installed and bolt 4488 onto the timing cover.

Tighten the sprocket bolt to correct torque whilst counter-holding the camshaft.

Remove all timing tools.

Rotate engine twice in normal direction returning to TDC.

FINAL ENGINE TIMING CHECK: Having adhered to the vehicle manufacturer's procedures to set the engine timing, it is essential to make a final check by carefully positioning the engine at TDC and refitting all the timing tools to establish that they locate correctly and confirm the engine timing position.



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4490 Auxiliary Belt Tensioner Set Associated Tool not included in Kit:

Comprises: 4490-1 Special Tensioner Wrench
4490-2 Tensioner Retaining Pin

The auxiliary drive belt is tensioned by a tension roller and large spring.

To release the auxiliary belt tension the tensioner is retracted from the belt using Special Wrench 4490-1. It is retained in the retracted position with Pin 4490-2.

More Timing Kits for Vauxhall/Opel

1.6/1.7 Diesel Engine Setting/Locking Tool Kit – see **4350G**

2.0/2.2 Diesel Engine Setting/Locking Tool Kit – see **4480**

V6 Petrol Engine Setting/Locking Tool Kit – see **4145**

EcoTec Twin Cam Petrol Engine Setting/Locking Tools – see **4620**

2.2 16v. Petrol Engine Setting/Locking Tool Kit – see **4766**

1.3 CDTi Diesel Engine Setting/Locking Tool Kit – see **4770**

1.9 CDTi Diesel Engine Setting/Locking Tool Kit – see **60388600**

1.9/2.2/2.5 dCi – Diesel Engine Setting/Locking Tool Kit – see **4760A**