



## INSTRUCTIONS FOR: HONDA TWIN & SINGLE CAM TIMING KIT MODEL NO: VS4656

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.



**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.

### 1. SAFETY INSTRUCTIONS

- WARNING!** Ensure Health and Safety, local authority and general workshop practice regulations are adhered to when using tools.
- DO NOT** use tools if damaged.
- ✓ Maintain tools in good and clean condition for best and safest performance.
- ✓ Ensure that a vehicle which has been jacked up is adequately supported with axle stands.
- ✓ Wear approved eye protection. A full range of personal safety equipment is available from your Sealey dealer.
- ✓ Wear suitable clothing to avoid snagging. Do not wear jewellery and tie back long hair.
- DO NOT** attempt to start engine or move vehicle whilst in gear with locking devices fitted.
- ✓ Always display warning notification on steering wheel when locking engine components.
- ✓ Account for all tools, locking bolts, pins and parts being used and do not leave them in or near the engine.
- WARNING!** Incorrect or out of phase camshaft timing can result in contact between valve head and piston crown causing damage to the engine.

**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.



### 2. INTRODUCTION & APPLICATIONS

#### 2.1 Introduction

VS4656 Engine Setting/Locking Tool Kit provides the special tools called for when replacing timing belts on Honda models. The kit includes Tensioner Tools and Locking Pins.

#### 2.2 Applications:

**HONDA Petrol Engines, including twin camshaft engines in HONDA and ROVER Models - B, D, F and H Series engines**

#### HONDA MODELS

##### Civic 1.6Vti/VTEC, Integra Type R

(90-01) B16A/B18C6 TWIN CAM  
(use VS3032.02)

##### Accord 1.8/2.0/2.2, Prelude 2.0

(90-96) F18A/F20A/F22A  
(use VS3032.10)

##### Accord 1.8/2.0/2.2VTEC, Accord Coupe 2.0/2.2, Accord Aerodeck 2.0/2.2

(93) F18A3/F18B2/F20B3/F20B6/F20Z1/F20Z2/F20Z3/F22B5/F22B6/F22Z2  
(use VS4360T3 & VS3032.10)

##### Accord 2.0 16v., Prelude 2.0 16v.

(87-92) B20A5/B20A7 TWIN CAM  
(use VS3032.02)

##### Accord Coupe 2.0, Prelude 2.0

(97-) F20A4/F20B5  
(use VS4360T3 & VS3032.10)

##### Accord 2.3i, Prelude 2.3i

(92-96) H23A2/H23A3 TWIN CAM  
(use VS4360T3 & VS3032.10)

##### Accord Type R, Prelude 2.2VTEC(93-)

H22A2/H22A5/H22A7 TWIN CAM  
(use VS4571 & VS3032.10)

##### Shuttle 2.2i/2.3i

(95-01) F22B8/F23A7  
(use VS4360T3 & VS3032.10)

#### ROVER MODELS

##### 216GTi, 416GTi

(-95) D16A8/D16A9 TWIN CAM  
(use VS3032.02)

##### 618, 620, 623

(93-99) F18A3/F20Z1/H23A3  
(use VS4360T3 & VS3032.10)

**NOTE:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

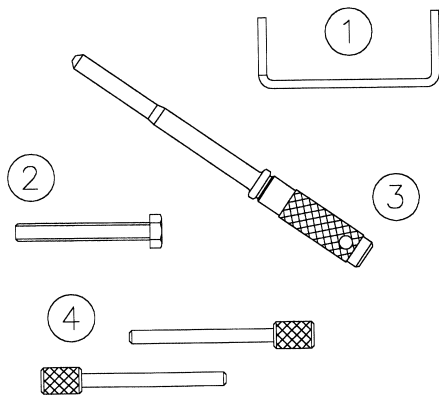
**IMPORTANT:** No liability is accepted for incorrect use of this product.

**WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim.

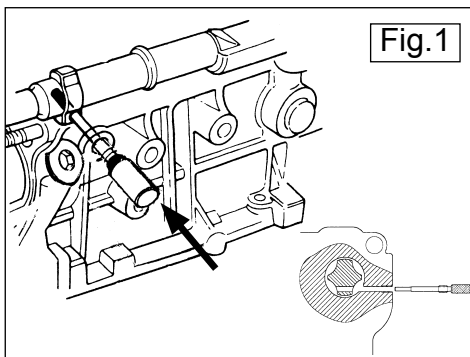
**INFORMATION:** For a copy of our latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.

### 3. CONTENTS/PARTS LIST

1	VS4571	Tensioner Retaining Clamp
2	VS4360T3	Tensioner Adjusting Bolt
3	VS3032.10	Balancer Shaft Locking Pin
4	VS3032.02	Camshaft Locking Pins (Pair)
-	VS4656.84	Case + Insert



### 4. INSTRUCTIONS



4.1 VS3032.0 Balancer Shaft Locking Pin (Fig.1)

Many Honda sohc and twin cam engines, including those fitted in Rover 600 Series models, have balancer shafts connected to the crankshaft pulley by a balancer shaft belt. During removal and refitting of the timing belt the balancer shaft belt is removed.

**NOTE:** It is necessary to remove the balancer shaft belt before the timing belt can be removed.

For balancer shaft belt replacement, align both crankshaft and camshaft timing marks.

Remove crank pulley and lock the tensioner arm.

Push the tensioner away from the belt and remove the belt.

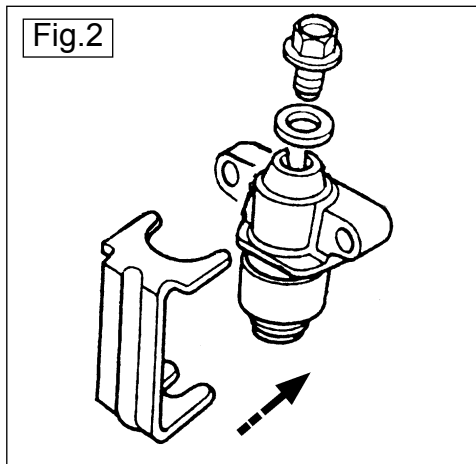
Check both crankshaft timing marks and balancer shaft sprocket timing marks align.

Align the front balancer shaft sprocket groove with the

pointer on oil pump housing.  
Remove cylinder block plug and insert VS3032.10 Locking Pin.

**Carefully** rotate the rear balancer shaft until VS3032.10 locates in to the shaft.

**IMPORTANT:** VS3032.10 should enter the hole to a depth of approx. 75mm. Fit balancer shaft belt and remove the Locking Pin. Tension the balancer shaft belt.



4.2 VS4571 Tensioner Retaining Clamp (Fig.2)

Timing belt replacement on 2.2 VTEC H22 engines requires the removal of the automatic tensioner. In order to re-install the tensioner in its retracted condition it is essential to use VS4571 Clamp.

To retract the tensioner plunger carefully clamp the tensioner upright in a vice (maintenance bolt pointing up) and remove the bolt.

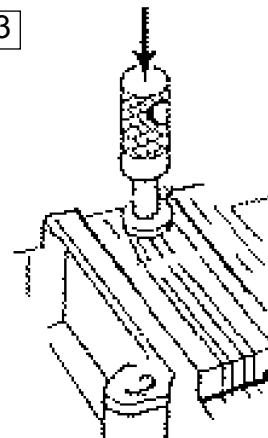
**IMPORTANT:** Ensure no oil has spilled out of the tensioner. If oil has leaked out, drain the unit completely and re-fill with engine oil (0.22 fl.oz.).

Insert a screwdriver into the top of tensioner and turn **clockwise** to compress the tensioner. Retain in the retracted position by fitting VS4571 Clamp and install the maintenance bolt.

Ensure the crankshaft and camshaft timing marks are aligned and fit the new belt making sure it is taut on the non-tensioned side.

Install the automatic tensioner and remove VS4571 Clamp to allow plunger to operate.

Fig.3

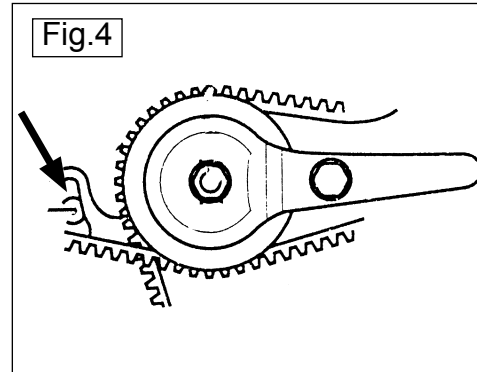


4.3 VS3032.02 Camshaft Locking Pins.(Fig.3)

On Honda B16/18/20 twin cams, and engines in Rover 216Gti/416Gti models, the camshafts are locked in position, on their timing marks, by the use of two locking pins.

This method of locking is achieved by inserting VS3032.02 Locking Pins through assigned holes in the camshaft housing, engaging and locking the camshafts in position.

Fig.4



VS4360T3 Tensioner Adjusting Bolt (Fig.4)

VS4360T3 is used to 'lock' the tensioner away from the belt during the timing belt replacement applications on those engines detailed in Applications.



Sole UK Distributor  
Sealey Group,  
Bury St. Edmunds, Suffolk.

