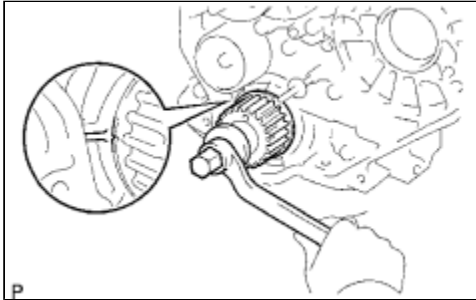


Last Modified: 9-29-2009	5.6 A	From: 200501
Model Year: 2006	Model: Hiace	Doc ID: RM00000123A000X
Title: 5L-E ENGINE MECHANICAL: CAMSHAFT: INSTALLATION (2006-2010 Hiace)		

## INSTALLATION

### 1. INSTALL CAMSHAFT



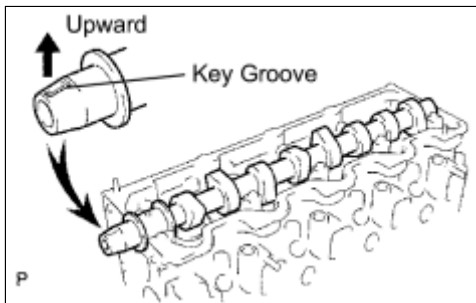
(a) Set the No.1 cylinder to 90° BTDC/compression.

#### **HINT:**

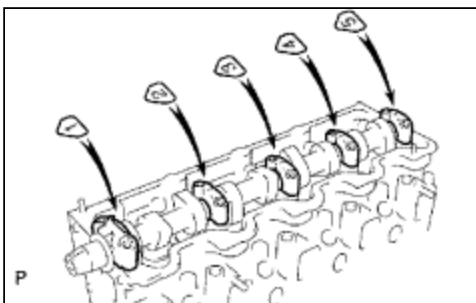
**Set the No.1 cylinder to 90° BTDC/compression to avoid interference with the piston top and valve head.**

(1) Using the crankshaft pulley bolt, turn the crankshaft, and align the timing mark of the crankshaft timing pulley with the protrusion of the timing gear case.

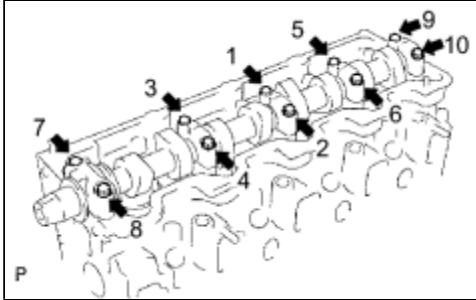
(b) Install the camshaft.



(1) Place the camshaft on the cylinder head with the key groove facing upward.



(2) Install the 5 bearing caps in their proper locations.

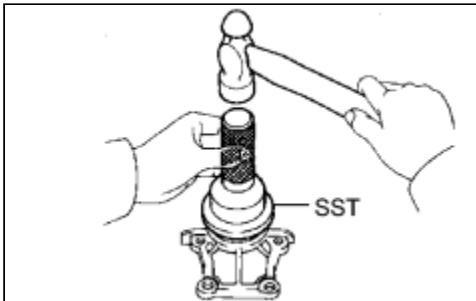


- (3) Apply a light coat of engine oil to the threads and under the heads of the bearing cap bolts.

- (4) Install and uniformly tighten the 10 bearing cap bolts, in several steps, in the sequence shown.

**Torque: 25 N·m (255 kgf·cm, 18ft·lbf)**

## 2. INSTALL OIL SEAL RETAINER, NO.2 OIL SEAL



- (a) Using SST and a hammer, tap in a new oil seal until its surface is flush with the oil seal retainer edge.

**SST: 09960-10010**

09962-01000

09963-01000

- (b) Apply MP grease to the oil seal lip.

## 3. INSTALL CAMSHAFT OIL SEAL RETAINER

- (a) Install a new gasket and the retainer with the 4 bolts.

**Torque: 18 N·m (185 kgf·cm, 13ft·lbf)**

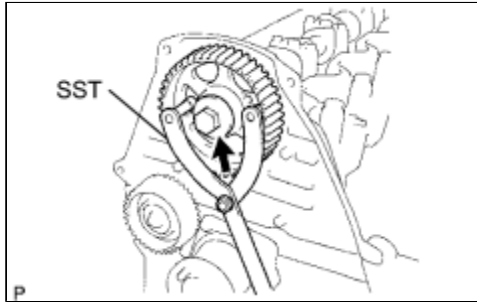
## 4. INSTALL TIMING BELT COVER NO.2

- (a) Install the timing belt cover with the 4 bolts.

**Torque: 18 N·m (185 kgf·cm, 13ft·lbf)**

## 5. INSTALL CAMSHAFT TIMING PULLEY

- (a) Install the woodruff key to the key groove of the camshaft.



(b) Align the pulley set key with the timing mark outward.

(c) Using SST, install the pulley with the bolt.

**Torque: 98 N·m (1,000 kgf·cm, 72ft·lbf)**

**6. INSPECT VALVE CLEARANCE** [INFO](#)

**7. ADJUST VALVE CLEARANCE** [INFO](#)

**8. INSTALL CYLINDER HEAD COVER SUB-ASSEMBLY** [INFO](#)

**9. INSTALL INTAKE AIR CONNECTOR SUB-ASSEMBLY** [INFO](#)

**10. CONNECT AIR CLEANER HOSE NO.2** [INFO](#)

**11. INSTALL TIMING BELT**

[INFO](#)

