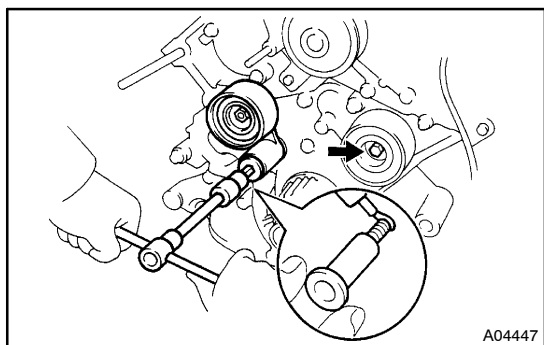


## INSTALLATION

### 1. INSTALL CRANKSHAFT TIMING PULLEY

- (a) Align the timing pulley set key with the key groove of the pulley.
- (b) Using SST and a hammer, tap in the timing pulley, facing the flange side inward.

SST 09223 –46011



### 2. INSTALL NO. 1 IDLER PULLEY AND NO.2 IDLER PULLEY

- (a) Apply adhesive 2 or 3 threads of the pivot bolt.

**Adhesive:**

**Part No. 08833 –00080, THREE BOND 1344, LOCTITE 242 or equivalent**

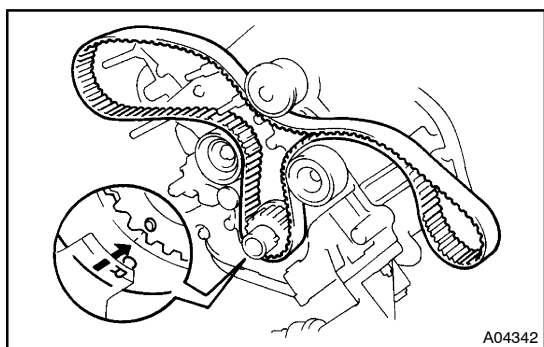
- (b) Using a 10 mm hexagon wrench, install the plate washer and No. 1 idler pulley with the pivot bolt.

**Torque: 34.5 N·m (350 kgf·cm, 25 ft·lbf)**

- (c) Install the No.2 idler pulley with the bolt.

**Torque: 34.5 N·m (350 kgf·cm, 25 ft·lbf)**

- (d) Check that the No. 1 and No.2 idler pulley moves smoothly.



### 3. TEMPORARILY INSTALL TIMING BELT

**NOTICE:**

**The engine should be cold.**

- (a) Remove any oil or water on the crankshaft pulley, oil pump pulley, water pump pulley, No. 1 idler pulley and No.2 idler pulley, and keep them clean.

**NOTICE:**

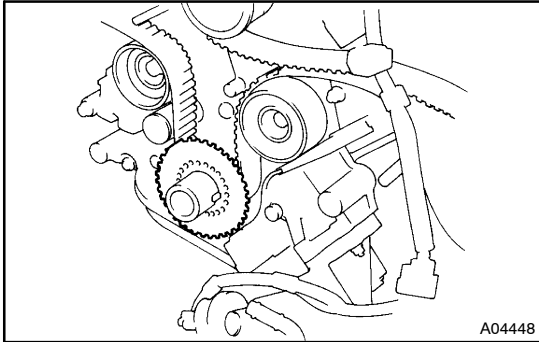
**Only wipe the pulleys; do not use any cleansing agent.**

- (b) Align the installation mark on the timing belt with the timing mark of the crankshaft timing pulley.

- (c) Install the timing belt on the crankshaft timing pulley, No. 1 idler pulley and No.2 idler pulley.

### 4. INSTALL TIMING BELT COVER SPACER

- (a) Install the gasket to the cover spacer.
- (b) Install the cover spacer.

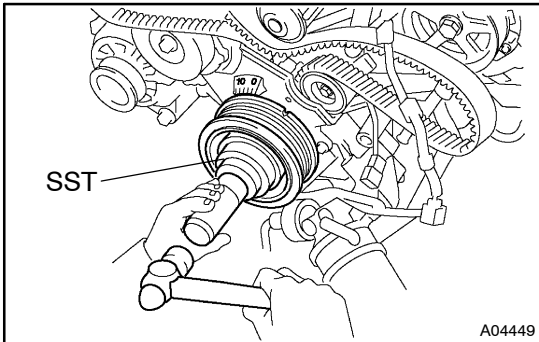


### 5. INSTALL TIMING BELT GUIDE

Install the belt guide, facing the cup side outward.

### 6. INSTALL NO. 1 TIMING BELT COVER

Install the timing belt cover with the 4 bolts.



### 7. INSTALL CRANKSHAFT PULLEY

- (a) Align the pulley set key with the key groove of the crankshaft pulley.
- (b) Using SST and a hammer, tap in the crankshaft pulley.  
SST 09223 –46011

### 8. INSTALL DRIVE BELT TENSIONER

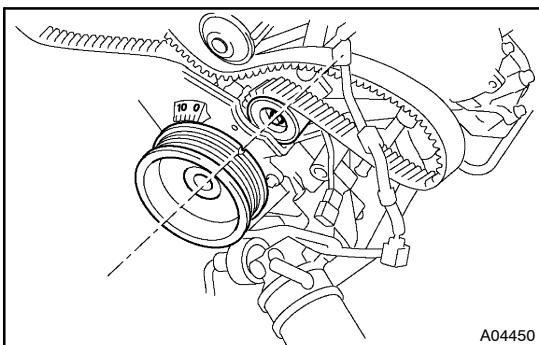
Install the belt tensioner with the bolt and 2 nuts.

**Torque: 16 N·m ( 160 kgf·cm, 12 ft·lbf)**

**HINT:**

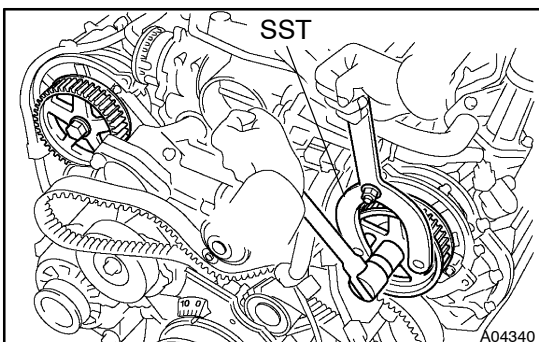
Use a bolt 106 mm (4. 18 in.) in length.

### 9. INSTALL ALTERNATOR



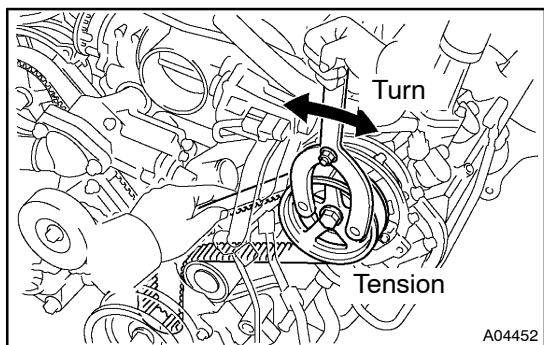
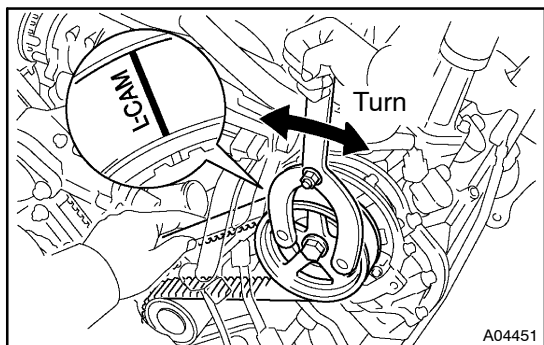
### 10. CHECK CRANKSHAFT PULLEY POSITION

Check that the timing mark of the crankshaft pulley is aligned with the centers of the crankshaft pulley and the idler pulley bolt.



### 11. INSTALL RH, LH CAMSHAFT TIMING PULLEYS

- (a) Align the camshaft knock pin with the knock pin groove of the timing pulley, and slide on the timing pulley.
- (b) Using SST, install the pulley bolt.  
SST 09960 –10010 (09962 –01000, 09963 –01000)  
**Torque: 108 N·m ( 1,100 kgf·cm, 80 ft·lbf)**



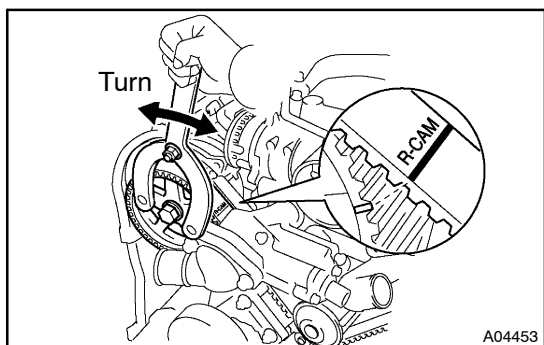
## 12. CONNECT TIMING BELT TO LH CAMSHAFT TIMING PULLEY

- Remove any oil or water on the LH camshaft timing pulley, and keep it clean.

### NOTICE:

**Only wipe the pulleys; do not use any cleansing agent.**

- Turn the LH camshaft timing pulley. Align the installation mark on the timing belt with the timing mark of the camshaft timing pulley, and hang the timing belt on the LH camshaft timing pulley.
- Turn the LH camshaft timing pulley counterclockwise until there is tension between the crankshaft timing pulley and LH camshaft timing pulley.



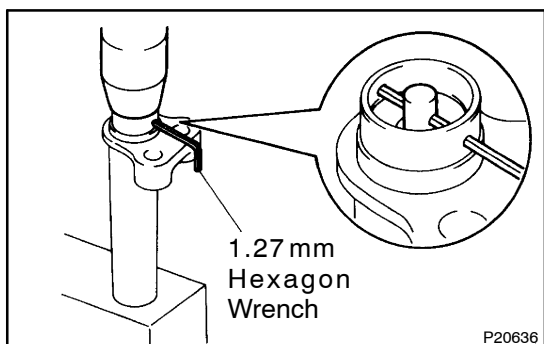
## 13. CONNECT TIMING BELT TO RH CAMSHAFT TIMING PULLEY

- Remove any oil or water on the RH camshaft timing pulley and water pump pulley, and keep them clean.

### NOTICE:

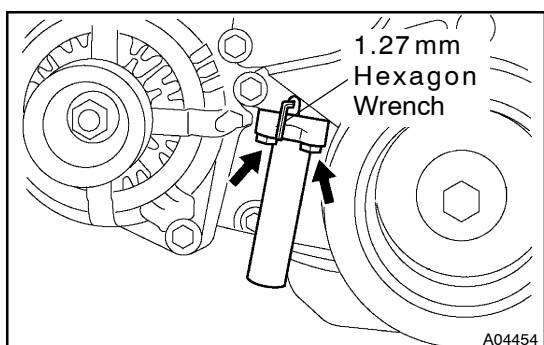
**Only wipe the pulleys; do not use any cleansing agent.**

- Turn the RH camshaft timing pulley. Align the installation mark on the timing belt with the timing mark of the camshaft timing pulley, and hang the timing belt on the RH camshaft timing pulley.



## 14. SET TIMING BELT TENSIONER

- Using a press, slowly press in the push rod using 98 1 – 9,807 N ( 100 – 1,000 kgf, 220 – 2,205 lbf) of pressure.
- Align the holes of the push rod and housing, pass a 1.27 mm hexagon wrench through the holes to keep the setting position of the push rod.
- Release the press.
- Install the dust boot to the belt tensioner.

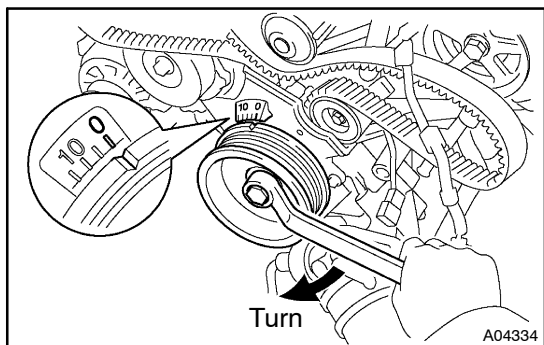


## 15. INSTALL TIMING BELT TENSIONER

- Temporarily install the belt tensioner with the 2 bolts.
- Alternately tighten the 2 bolts.

**Torque: 26 N·m (270 kgf·cm, 19 ft·lbf)**

- Using pliers, remove the 1.27 mm hexagon wrench from the belt tensioner.

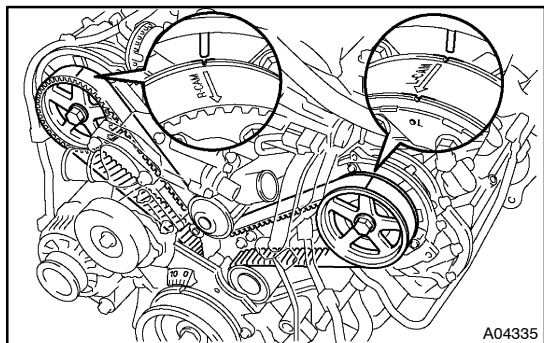


## 16. CHECK VALVE TIMING

- Temporarily install the crankshaft pulley bolt.
- Slowly turn the crankshaft pulley 2 revolutions from TDC to TDC.

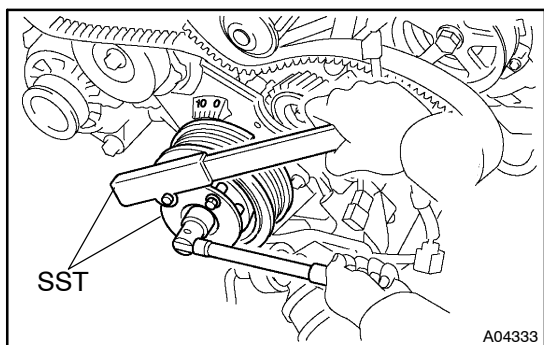
### NOTICE:

**Always turn the crankshaft pulley clockwise.**



- Check that each pulley aligns with the timing marks as shown in the illustration.

If the timing marks do not align, remove the timing belt and reinstall it.

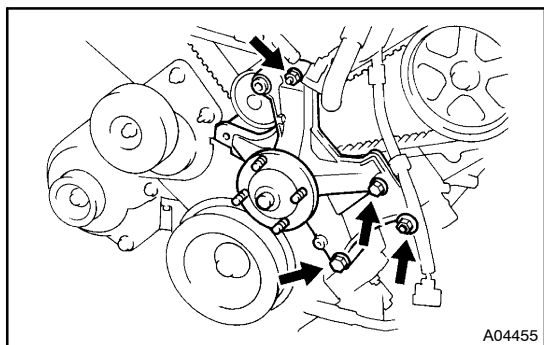


## 17. TIGHTEN CRANKSHAFT PULLEY BOLT

Using SST, install the pulley bolt.

SST 092 13-70010,  
09330-00021

**Torque: 245 N·m (2,500 kgf·cm, 181 ft·lbf)**



## 18. INSTALL FAN BRACKET

Install the fan bracket with the 2 bolts and 2 nuts.

### Torque:

**12 mm head**

**16 N·m (160 kgf·cm, 12 ft·lbf)**

**14 mm head**

**32 N·m (330 kgf·cm, 24 ft·lbf)**

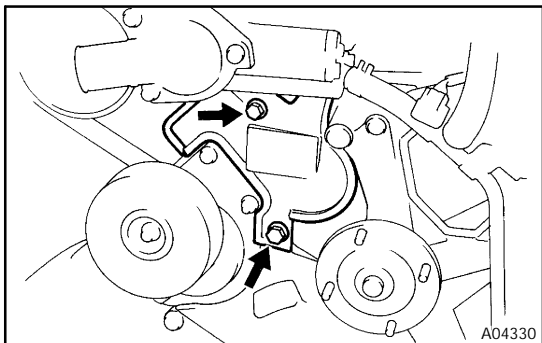
### HINT:

Each bolt length is indicated in the illustration.

**Bolt Length:**

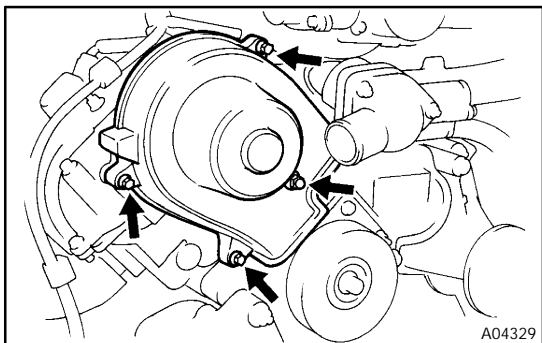
106 mm (4.17 in.) for 12 mm head (A)

114 mm (4.49 in.) for 14 mm head (B)

**19. INSTALL NO.2 TIMING BELT COVER**

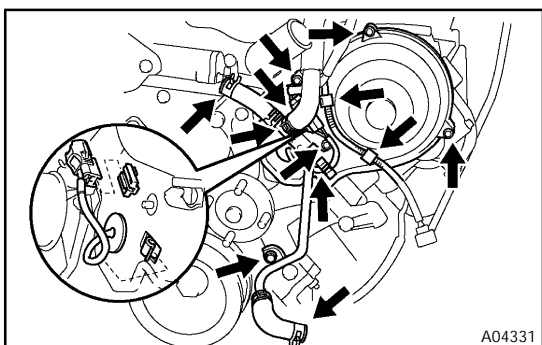
Install the No.2 timing belt cover with the 2 bolts.

**Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)**

**20. INSTALL RH NO.3 TIMING BELT COVER**

- (a) Fit the RH No.3 timing belt cover, matching it with the fan bracket.
- (b) Install the RH No.3 timing belt cover with the 3 bolts and nut.

**Torque: 7.5 N·m (80 kgf·cm, 66 in·lbf)**

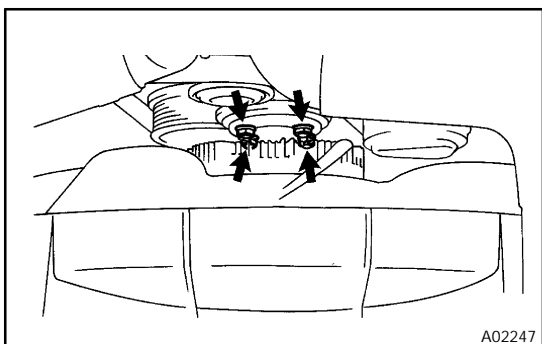
**21. INSTALL LH NO.3 TIMING BELT COVER**

- (a) Install the oil cooler pipe and bolt.
  - (b) Run the camshaft position sensor wire through the LH No.3 timing belt cover hole.
  - (c) Fit the LH No.3 timing belt cover, matching it with the fan bracket.
  - (d) Install the LH No.3 timing belt cover with the 4 bolts and nut.
- Torque: 7.5 N·m (80 kgf·cm, 66 in·lbf)**
- (e) Install the wire grommet to the LH No.3 timing belt cover.
  - (f) Install the sensor connector to the connector bracket.
  - (g) Connect the sensor connector.
  - (h) Install the sensor wire to the wire clamp on the LH No.3 timing belt cover.
  - (i) Install the engine wire to the 2 wire clamps on the LH No.3 timing belt cover.

**22. INSTALL DRIVE BELT IDLER PULLEY**

Install the idler pulley and cover plate with the bolt.

**Torque: 37 N·m (380 kgf·cm, 27 ft·lbf)**

**23. INSTALL FAN PULLEY, FAN, FLUID COUPLING AND DRIVE BELT**

- (a) Temporarily install the fan pulley, the fan, fluid coupling assembly with the 4 nuts.
- (b) Install the alternator drive belt.
- (c) Tighten the 4 nuts holding the fluid coupling to the fan bracket.

**Torque: 21 N·m (215 kgf·cm, 16 ft·lbf)**

24. FILL WITH ENGINE COOLANT
25. START ENGINE AND CHECK FOR LEAKS
26. RECHECK ENGINE COOLANT LEVEL
27. INSTALL BATTERY CLAMP COVER