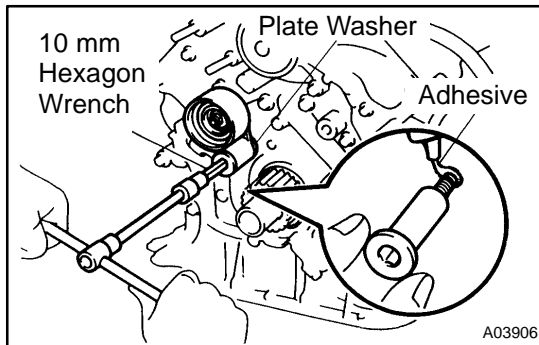


INSTALLATION

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 09223-4601 1



2. INSTALL NO.1 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 idler pulley with the pivot bolt.

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

- (c) Check that the pulley bracket moves smoothly.

3. INSTALL NO.2 IDLER PULLEY

- (a) Install the idler pulley with the bolt.

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

- (b) Check that the idler pulley moves smoothly.

4. TEMPORARILY INSTALL TIMING BELT

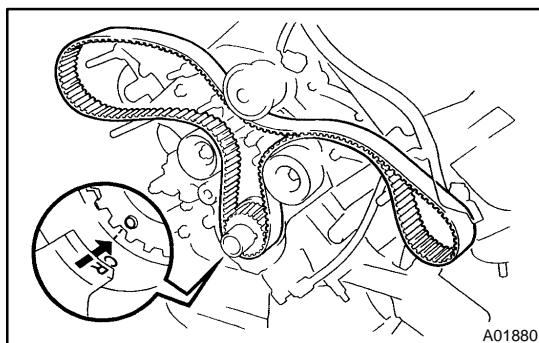
NOTICE:

The engine should be cold.

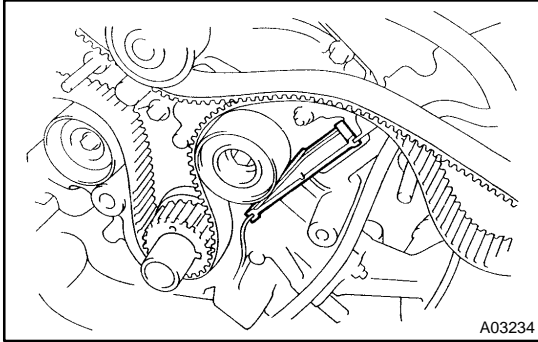
- (a) Remove any oil or water on the crankshaft pulley, oil pump pulley, water pump pulley, No.1 idler pulley and No.2 idler pulley, and keep them clean.

NOTICE:

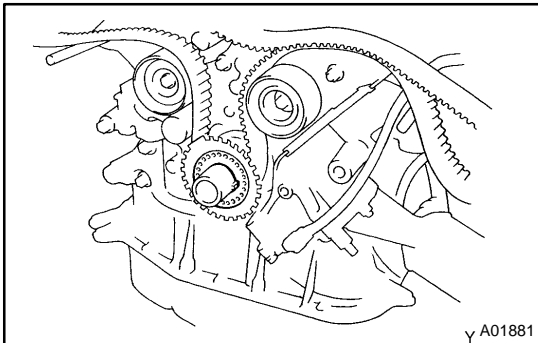
Only wipe the pulleys; do not use any cleansing agent.



- (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.

**5. INSTALL TIMING BELT COVER SPACER**

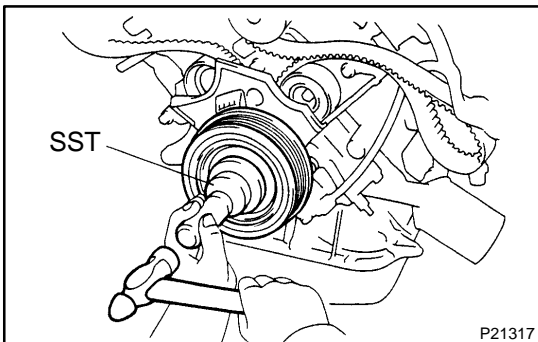
- (a) Install the gasket to the cover spacer.
- (b) Install the cover spacer.

**6. INSTALL TIMING BELT GUIDE**

Install the belt guide, facing the cup side outward.

7. INSTALL NO.1 TIMING BELT COVER

Install the timing belt cover with the 4 bolts.

**8. 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 09223-4601 1

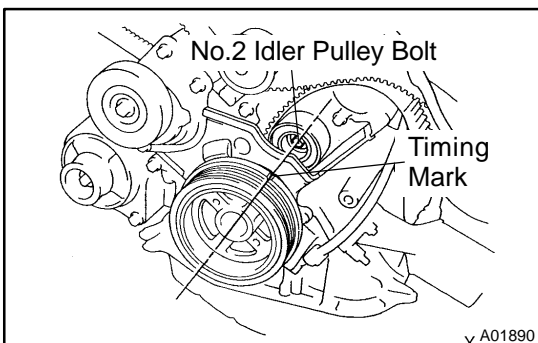
9. INSTALL DRIVE BELT TENSIONER

Install the belt tensioner with the bolt and 2 nuts.

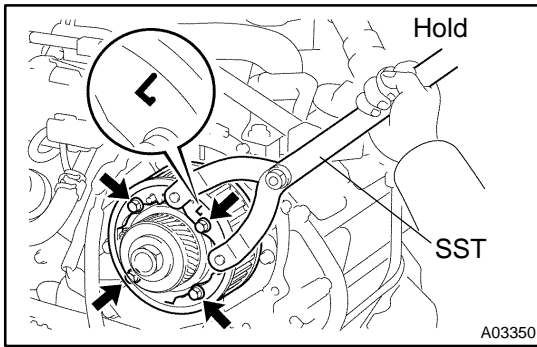
Torque: 16 N·m (160 kgf·cm, 12 ft·lbf)

HINT:

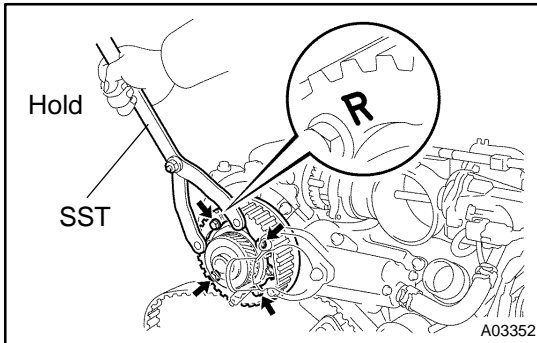
Use a bolt 106 mm (4.18 in.) in length.

10. INSTALL GENERATOR (See page [CH-18](#))**11. CHECK CRANKSHAFT PULLEY POSITION**

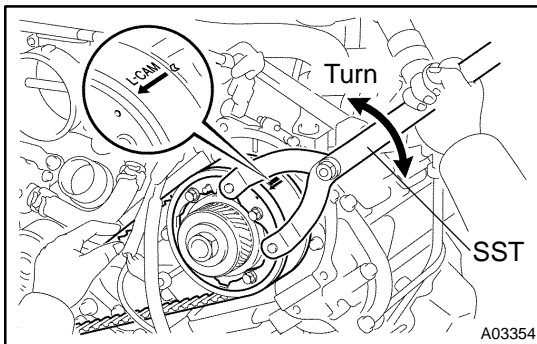
Check that the timing mark of the crankshaft pulley is aligned with the centers of the crankshaft pulley and the idler pulley bolt.

**12. INSTALL LH CAMSHAFT TIMING PULLEY**

- (a) Align the camshaft timing tube knock pin with the knock pin groove of the timing pulley.
- (b) Attach the timing pulley to the camshaft timing tube, facing the "L" mark forward.
- (c) Using SST, install the 4 pulley bolts.
SST 09960-10010 (09962-01000, 09963-00350)
Torque: 7.5 N·m (80 kgf·cm, 66 ft·lbf)

**13. INSTALL RH CAMSHAFT TIMING PULLEY**

- (a) Align the camshaft timing tube knock pin with the knock pin groove of the timing pulley.
- (b) Attach the timing pulley to the camshaft timing tube, facing the "R" mark forward.
- (c) Using SST, install the 4 pulley bolts.
SST 09960-10010 (09962-01000, 09963-00350)
Torque: 7.5 N·m (80 kgf·cm, 66 ft·lbf)

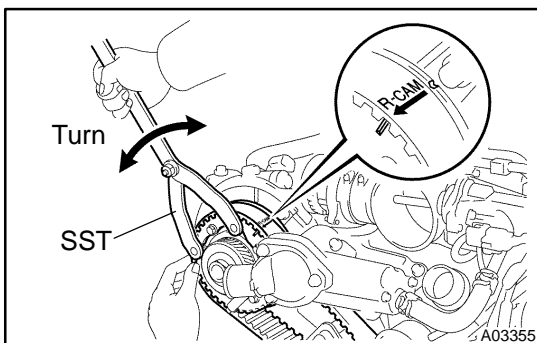
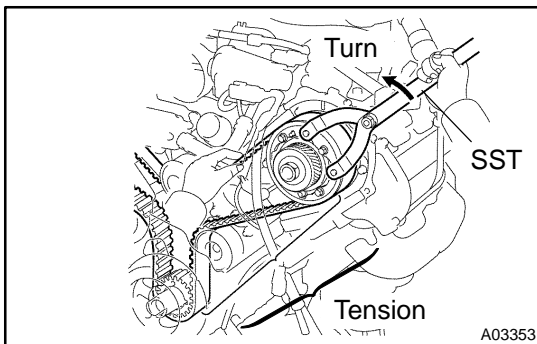
**14. CONNECT TIMING BELT TO LH CAMSHAFT TIMING PULLEY**

- (a) 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.

- (b) Using SST, turn the timing pulley. Align the installation mark on the timing belt with the timing mark of the timing pulley, and hang the timing belt on the timing pulley.
SST 09960-10010 (09962-01000, 09963-00350)
- (c) Using SST, turn the LH camshaft timing pulley counter-clockwise until there is tension between the crankshaft timing pulley and LH camshaft timing pulley.
SST 09960-10010 (09962-01000, 09963-00350)

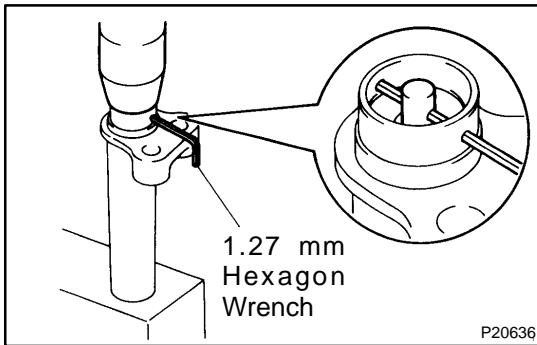
**15. CONNECT TIMING BELT TO RH CAMSHAFT TIMING PULLEY**

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

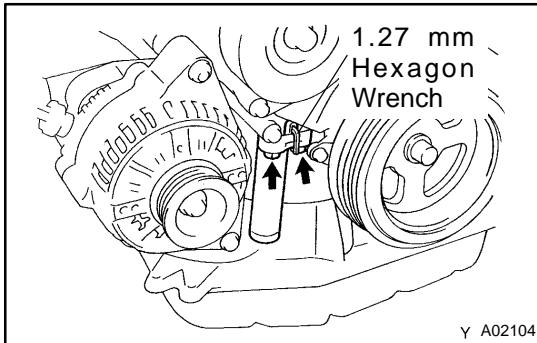
NOTICE:

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

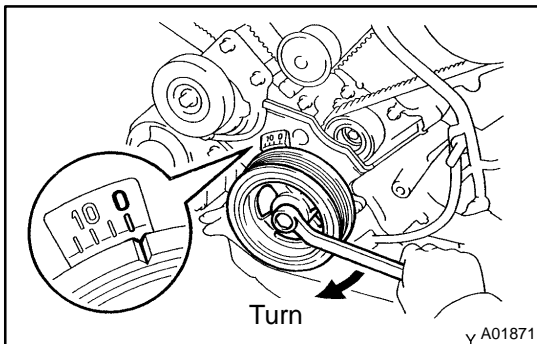
- (b) Using SST, turn the timing pulley. Align the installation mark on the timing belt with the timing mark of the timing pulley, and hang the timing belt on the timing pulley.
SST 09960-10010 (09962-01000, 09963-00350)

**16. SET TIMING BELT TENSIONER**

- Using a press, slowly press in the push rod using 981 - 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.

**17. INSTALL TIMING BELT TENSIONER**

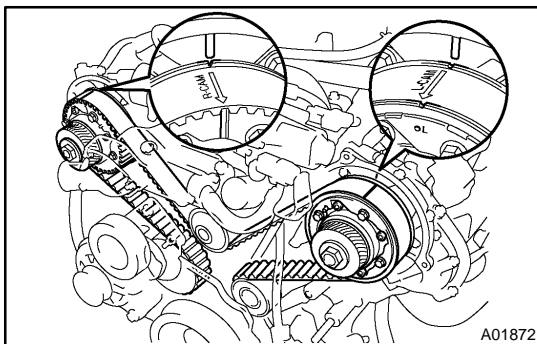
- Temporarily install the belt tensioner with the 2 bolts.
- Alternately tighten the 2 bolts.
Torque: 26 N·m (270 kgf·cm, 19 ft·lbf)
- Using pliers, remove the 1.27 mm hexagon wrench from the belt tensioner.

**18. CHECK VALVE TIMING**

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

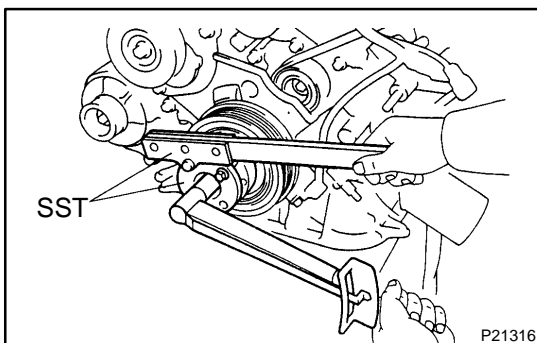
NOTICE:

Always turn the crankshaft pulley clockwise.



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

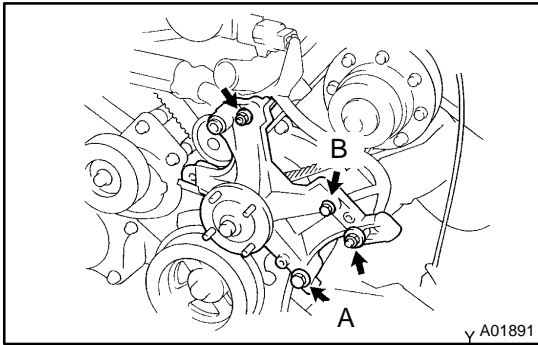
If the timing marks do not align, remove the timing belt and reinstall it.

**19. TIGHTEN CRANKSHAFT PULLEY BOLT**

Using SST, install the pulley bolt.

SST 09213-54015 (90119-08216),
09330-00021

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

**20. 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:

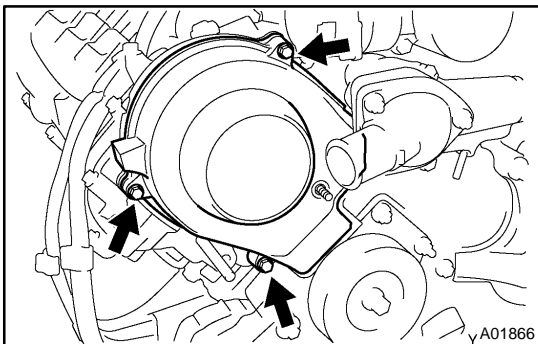
106 mm (4.17 in.) for 12 mm head (A)

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

21. INSTALL A/C COMPRESSOR (See page EM-82)**22. 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)

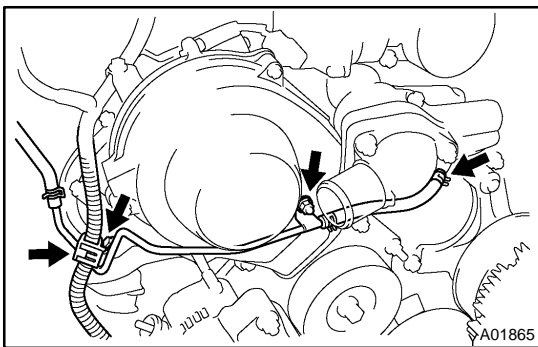
**23. INSTALL RH NO.3 TIMING BELT COVER**

(a) Install the gasket to the timing belt cover.

(b) Fit the timing belt cover, matching it with the fan bracket.

(c) Install the timing belt cover with the 3 bolts.

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



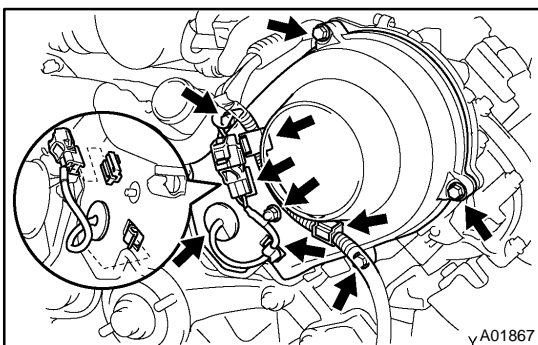
(d) Install the radiator reservoir outlet pipe to the RH cylinder head and timing belt cover with the bolt and nut.

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

(e) Connect the outlet hose to the water inlet housing.

(f) Connect the wire clamp.

(g) Connect the PS air hose to the clamp of the timing belt cover.

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

(a) Install the gasket to the timing belt cover.

(b) Run the camshaft position sensor wire through the timing belt cover hole.

(c) Fit the timing belt cover, matching it with the fan bracket.

(d) Install the 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 timing belt cover.

(f) Install the sensor connector to the connector bracket.

(g) Connect the sensor connector.

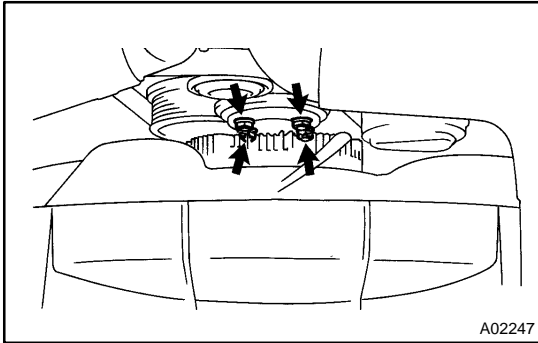
- (h) Install the sensor wire to the wire clamp on the timing belt cover.
- (i) Install the engine wire to the 2 wire clamps on the timing belt cover.

25. 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)

26. INSTALL RADIATOR ASSEMBLY (See page [CO-27](#))



27. 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 generator drive belt. (See page [CH-18](#))
- (c) Tighten the 4 nuts holding the fluid coupling to the fan bracket.

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

28. INSTALL AIR CLEANER AND INTAKE AIR CONNECTOR ASSEMBLY

29. INSTALL V-BANK COVER

30. FILL WITH ENGINE COOLANT

31. START ENGINE AND CHECK FOR LEAKS

32. RECHECK ENGINE COOLANT LEVEL

33. INSTALL AIR CLEANER INLET

34. INSTALL BATTERY CLAMP COVER

35. INSTALL ENGINE UNDER COVER

36. INSTALL OIL PAN PROTECTOR