

REMOVAL

1. **REMOVE ENGINE UNDER COVERS**
2. **DRAIN ENGINE COOLANT**
3. **REMOVE V-BANK COVER**

Remove the 2 bolts, 2 cap nuts and V-bank cover.

4. **REMOVE INTAKE AIR CONNECTOR**
5. **REMOVE DRIVE BELT**

(See page CH-7)

6. **REMOVE RADIATOR ASSEMBLY**

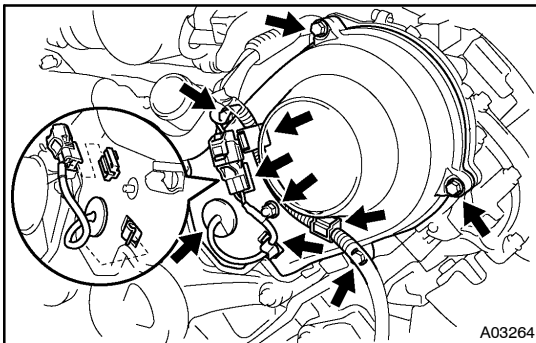
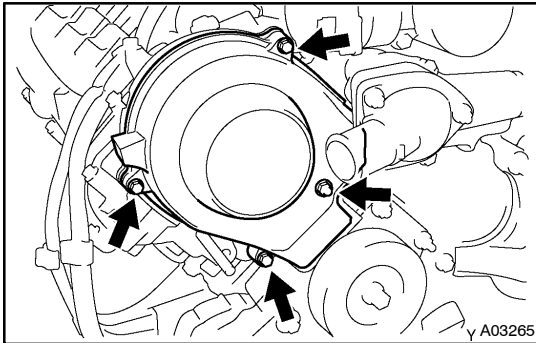
(See page CO-19)

7. **REMOVE DRIVE BELT IDLER PULLEY**

Remove the pulley bolt, cover plate and idler pulley.

8. **REMOVE RH NO.3 TIMING BELT COVER**

Remove the 3 bolts, cap nut, timing belt cover and gasket.



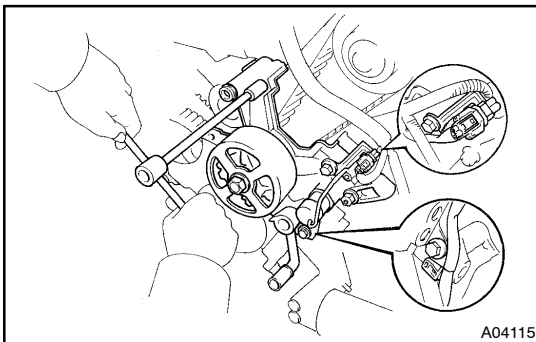
9. **REMOVE LH NO.3 TIMING BELT COVER**

- (a) Disconnect the engine wire from the 2 wire clamps.
- (b) Remove the 4 bolts and cap nut.
- (c) Disconnect the camshaft position sensor wire from the wire clamp on the timing belt cover.
- (d) Disconnect the sensor connector from the connector bracket.
- (e) Disconnect the sensor connector.
- (f) Remove the wire grommet from the timing belt cover.
- (g) Remove the timing belt cover and gasket.

10. **REMOVE NO.2 TIMING BELT COVER**

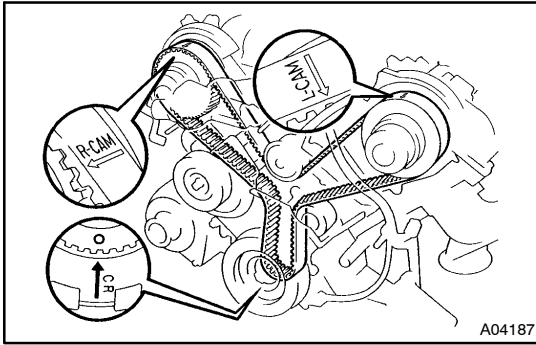
Remove the 2 bolts and No.2 timing belt cover.

11. **DISCONNECT A/C COMPRESSOR FROM ENGINE**
(See page EM-73)



12. **REMOVE HYDRAULIC PUMP**

- (a) Disconnect the solenoid valve connector.
- (b) Remove the 2 bolts and 2 nuts.
- (c) Disconnect the crankshaft position sensor wire clamp.
- (d) Remove the hydraulic pump.

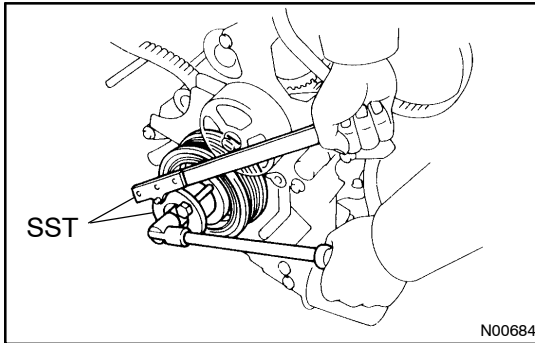


13. IF RE-USING TIMING BELT, CHECK INSTALLATION MARKS ON TIMING BELT

Check that there are 3 installation marks on the timing belt by turning the crankshaft pulley as shown in the illustration.

HINT:

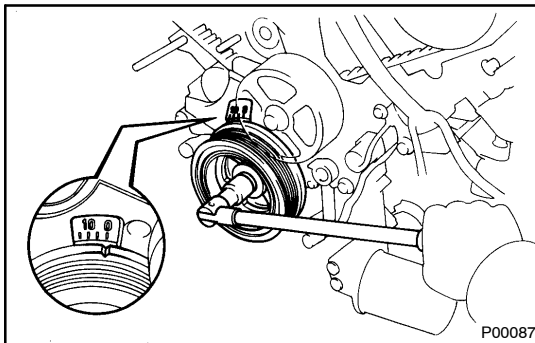
If the installation marks have disappeared, place a new installation mark on the timing belt before removing each part.



14. LOOSEN CRANKSHAFT PULLEY BOLT

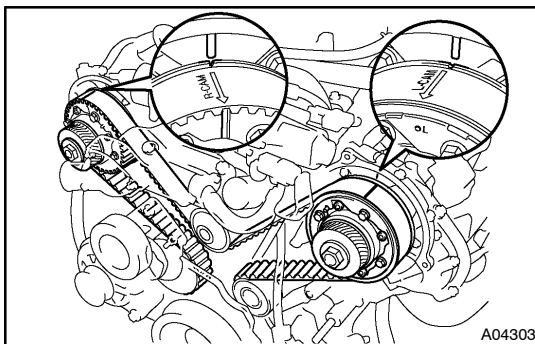
Using SST, loosen the pulley bolt.

SST 09213-70010 (90105-08076),
09330-00021

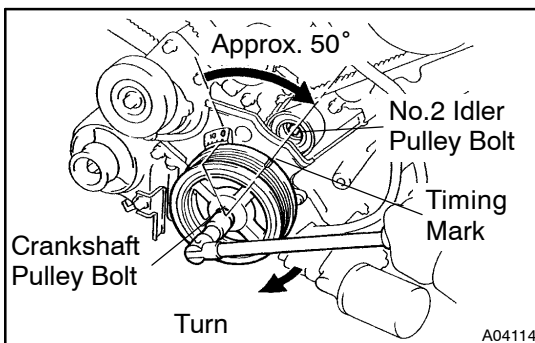


15. SET NO.1 CYLINDER TO APPROX. 50° ATDC/COMPRESSION

- (a) Turn the crankshaft pulley and align its groove with timing mark "0" of the No.1 timing belt cover.



- (b) Check that the timing marks of the camshaft timing pulleys and timing belt rear plates aligned.
If not, turn the crankshaft 1 revolution (360°).



- (c) Turn the crankshaft pulley approx. 50° clockwise, and put the timing mark of the crankshaft pulley in line with the centers of the crankshaft pulley bolt and the idler pulley bolt.

NOTICE:

If the timing belt is disengaged, having the crankshaft pulley at the wrong angle can cause the piston head and valve head to come into contact with each other when you remove the camshaft timing pulley (step 19), causing damage. So always set the crankshaft pulley at the correct angle.

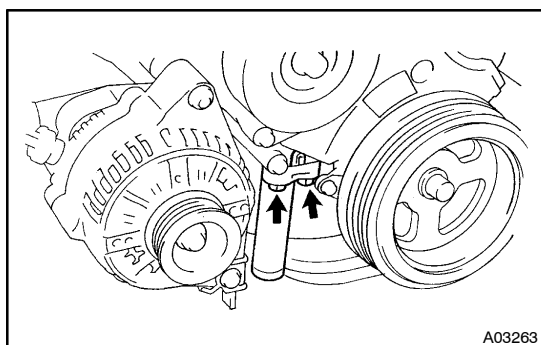
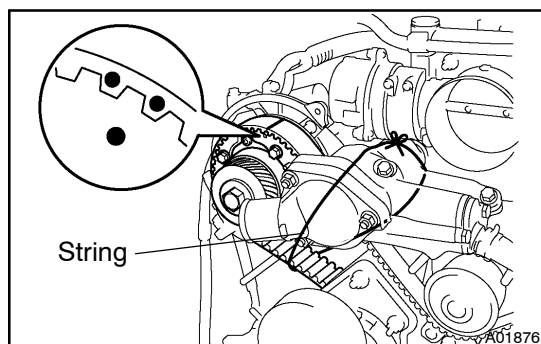
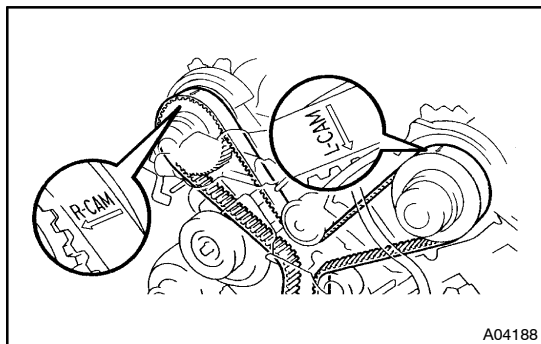
(d) Remove the crankshaft pulley bolt.

NOTICE:

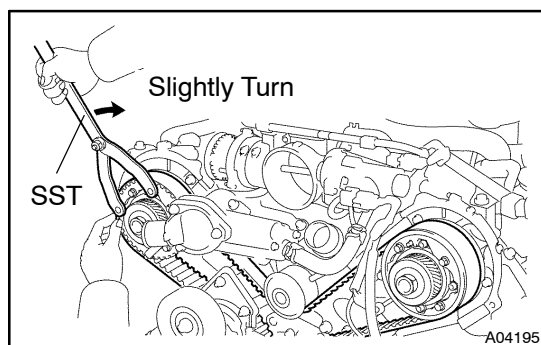
Do not turn the crankshaft pulley.

16. REMOVE TIMING BELT TENSIONER**HINT:**

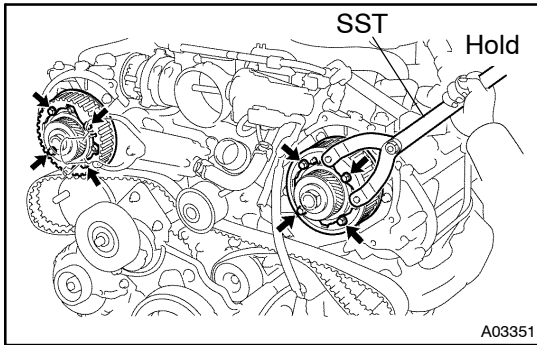
- When re-using timing belt:
If the installation marks have disappeared, before remove the timing belt, place 2 new installation marks on the timing belt to match the timing marks of the camshaft timing pulleys.
- When replacing timing belt tensioner only:
To avoid meshing of the timing pulley and timing belt, secure one of them with string. And place matchmarks on the timing belt and RH camshaft timing pulley.



Alternately loosen the 2 bolts, and remove them, the belt tensioner and dust boot.

**17. DISCONNECT TIMING BELT FROM CAMSHAFT TIMING PULLEYS**

- Using SST, loosen the tension spring between the LH and RH camshaft timing pulleys by slightly turning the RH camshaft timing pulley clockwise.
SST 09960-10010 (09962-01000, 09963-00350)
- Disconnect the timing belt from the camshaft timing pulleys.

**18. REMOVE CAMSHAFT TIMING PULLEYS**

Using SST, remove the 4 bolts and timing pulley. Remove the 2 timing pulleys.

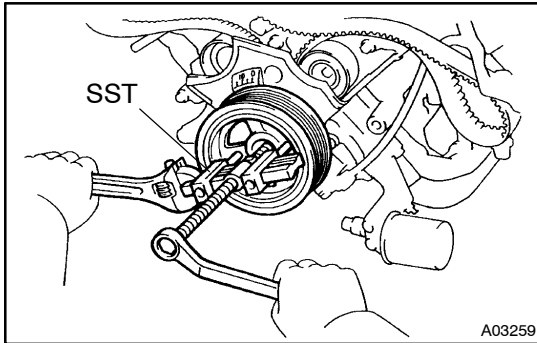
SST 09960-10010 (09962-01000, 09963-00350)

19. REMOVE GENERATOR

(See page CH-7)

20. REMOVE DRIVE BELT TENSIONER

Remove the bolt, 2 nuts and belt tensioner.

**21. REMOVE CRANKSHAFT PULLEY**

Using SST, remove the crankshaft pulley.

SST 09950-50010 (09951-05010, 09952-05010, 09953-05010, 09953-05020, 09954-05020)

NOTICE:

Do not turn the crankshaft pulley.

22. REMOVE NO.1 TIMING BELT COVER

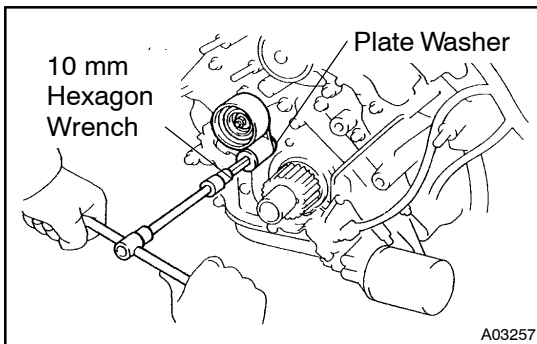
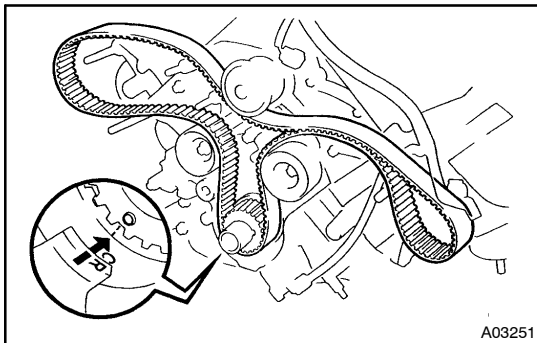
Remove the 4 bolts, timing belt cover.

23. REMOVE TIMING BELT GUIDE**24. REMOVE TIMING BELT COVER SPACER****25. REMOVE TIMING BELT****HINT:**

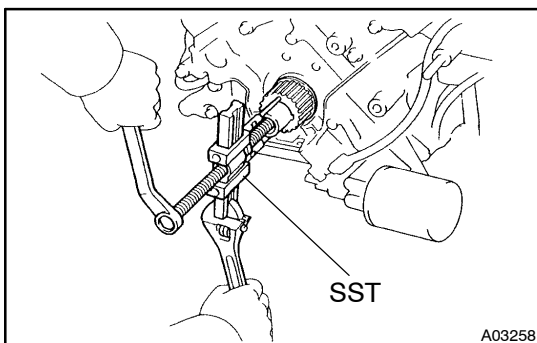
If re-using the belt and the installation mark has disappeared from it, place a new installation mark on the timing belt to the match the dot mark of the crankshaft timing pulley.

26. REMOVE NO.2 IDLER PULLEY

Remove the bolt and idler pulley.

**27. REMOVE NO.1 IDLER PULLEY**

Using a 10 mm hexagon wrench, remove the bolt, idler pulley and plate washer.

**28. REMOVE CRANKSHAFT TIMING PULLEY**

Using SST, remove the timing pulley.

SST 09950-50010 (09951-05010, 09952-05010, 09953-05010, 09953-05020, 09954-05010)

NOTICE:

Do not turn the timing pulley.