EM119-01

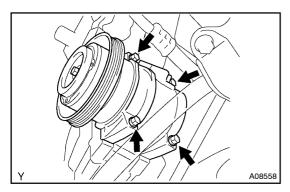
REMOVAL

- 1. REMOVE NO.1 ENGINE UNDER COVER
- 2. DRAIN ENGINE COOLANT
- 3. REMOVE AIR CLEANER INLET
- 4. REMOVE AIR CLEANER ASSEMBLY
- 5. REMOVE NO.2 CYLINDER HEAD COVER
- 6. REMOVE IGNITION COILS (See page IG-6)
- 7. REMOVE SPARK PLUGS (See page IG-1)
- 8. REMOVE RADIATOR ASSEMBLY (See page CO-16)
- 9. REMOVE DRIVE BELT FOR A/C COMPRESSOR (See page AC-17)
- 10. REMOVE DRIVE BELT FOR ALTERNATOR (See page CH-6)

HINT:

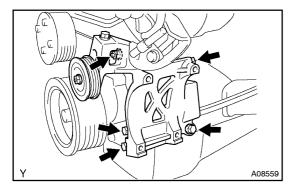
Before removing the drive belt, loosen the 4 fan pulley nuts.

- REMOVE DRIVE BELT FOR PS VANE PUMP (See page SR-27)
- 12. REMOVE FAN SPACER AND PULLEY



13. REMOVE A/C COMPRESSOR WITHOUT DISCONNECTING HOSES

- (a) Disconnect the A/C compressor connector.
- (b) Remove the 4 bolts, and disconnect the A/C compressor.

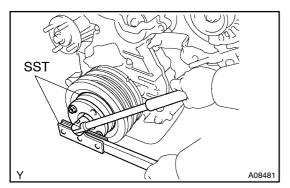


14. REMOVE A/C COMPRESSOR BRACKET

Remove the 4 bolts, nut and compressor bracket.

15. REMOVE NO.2 TIMING BELT COVER

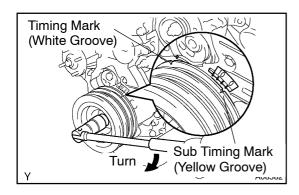
Remove the 4 bolts, timing belt cover and gasket.



16. LOOSEN CRANKSHAFT PULLEY BOLT

Using SST, loosen the pulley bolt.

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

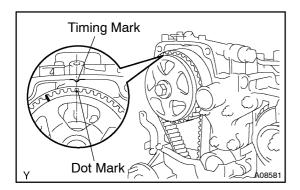


17. SET NO.1 CYLINDER TO APPROX. 60° BTDC/COM-PRESSION

(a) Turn the crankshaft pulley, and align the sub timing mark (yellow groove – 60° mark BTDC) with the timing mark "0" of the No.1 timing belt cover.

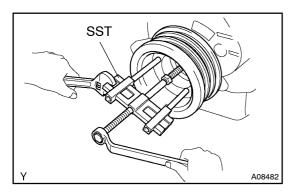
NOTICE:

- Always turn the crankshaft clockwise.
- 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. Thus results in damage when you remove the camshaft timing pulley (step 22). So, always set the crankshaft pulley at the correct angle.



(b) Check that the dot mark (60° mark BTDC) of the camshaft timing pulley is aligned with the timing mark of the No.1 bearing cap.

If not, revolve the crankshaft 1 (360°).



18. REMOVE CRANKSHAFT PULLEY

(a) Remove the crankshaft pulley bolt.

NOTICE:

Do not turn the crankshaft pulley.

(b) Using SST, remove the crankshaft pulley. SST 09950-50012 (09951-05010, 09952-05010, 09953-05010, 09953-05020, 09954-05030)

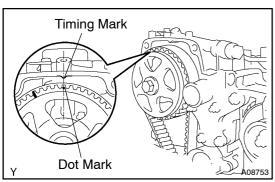
19. REMOVE NO.1 TIMING BELT COVER

Remove the 4 bolts, timing belt cover and gasket.

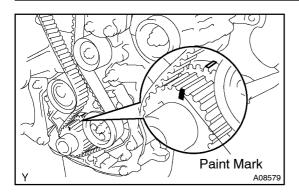
20. REMOVE TIMING BELT GUIDE

21. REMOVE TIMING BELT

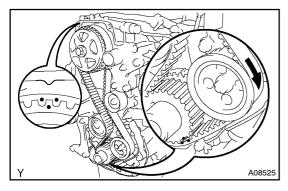
(a) Check that the dot mark (60° mark BTDC) of the camshaft timing pulley is aligned with the timing mark of the No.1 bearing cap.



LEXUS IS200 (RM684E)



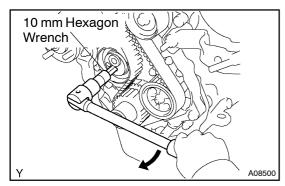
(b) Align the gear of the crankshaft timing pulley with the protrusion of the timing belt case and mark it with paint as shown in the illustration.



HINT:

When re-using timing belt:

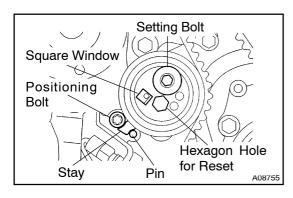
Draw an arrow on the timing belt in the direction of engine revolution, and place the matching marks on the timing belt and the camshaft timing pulley, and the timing belt and the crankshaft timing pulley.



(c) Using a 10 mm hexagon wrench, insert the auto tensioner rod inside of the No.1 idler pulley to the hexagon hole for reset in the No.1 idler pulley.

NOTICE:

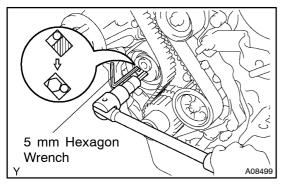
Must not apply torque with more than 39 N·m (400 kgf·cm, 29 ft·lbf).



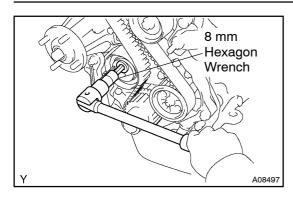
(d) After confirming the movement of the pin inside the square window, insert a 5 mm hexagon wrench.

HINT:

Be sure to insert the wrench only after you feel the knocking while inserting the auto tensioner.



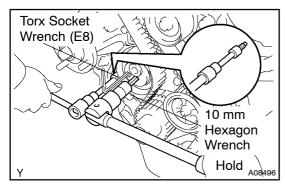
LEXUS IS200 (RM684E)



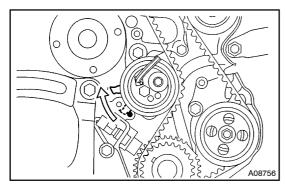
(e) Using a 8 mm hexagon wrench, loosen the bolt of the No.1 idler pulley (timing belt tensioner).

NOTICE:

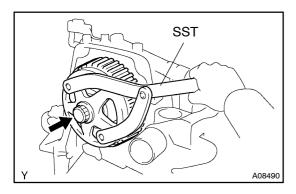
Least necessary losing is required only to move the No.1 idler pulley.



(f) Using a 10 mm hexagon wrench, keep holding the No.1 idler pulley lightly toward the direction of tensing and take out the positioning bolt using a torx socket wrench (E8).

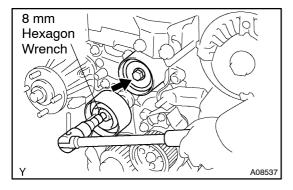


- (g) Move the No.1 idler pulley by hand toward the direction of loosening the timing belt.
- (h) Remove the timing belt.



22. REMOVE CAMSHAFT TIMING PULLEY

- (a) Using SST, loosen the cam-pulley set bolt. SST 09960-10010 (09962-01000, 09963-01000)
- (b) Remove the bolt and timing pulley.



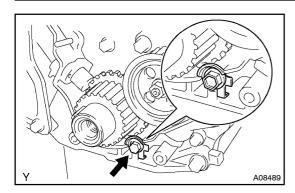
23. REMOVE NO.2 IDLER PULLEY

Remove the bolt and pulley.

24. REMOVE NO.1 IDLER PULLEY (TIMING BELT TENSIONER)

Using a 8 mm hexagon wrench, remove the pulley (tensioner).

LEXUS IS200 (RM684E)

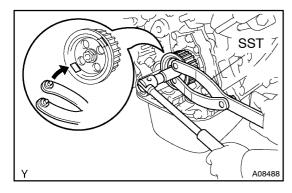


25. REMOVE CRANKSHAFT TIMING PULLEY

- (a) Remove the bolt and timing belt plate.
- (b) Remove the timing pulley.

NOTICE:

Do not scratch the angle sensor of the timing pulley.



26. REMOVE OIL PUMP PULLEY

- (a) Using SST, loosen the pulley nut. SST 09960-10010 (09962-01000, 09963-00600)
- (b) Remove the nut and pulley.