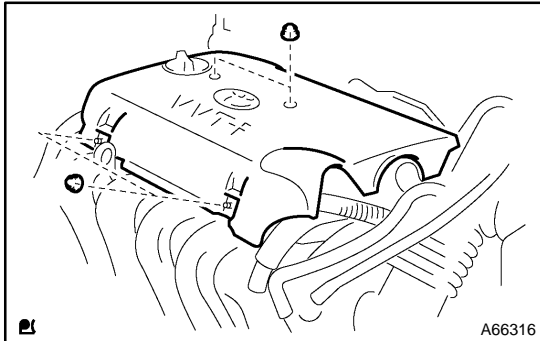


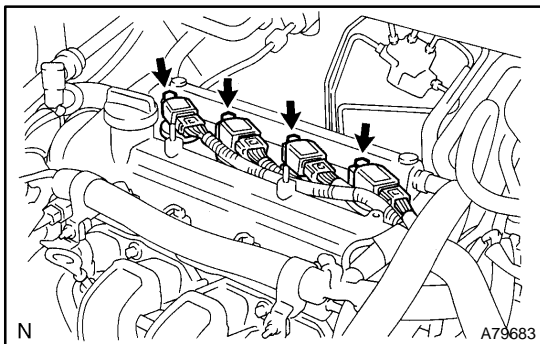
## REPLACEMENT

### 1. REMOVE FRONT WHEEL RH



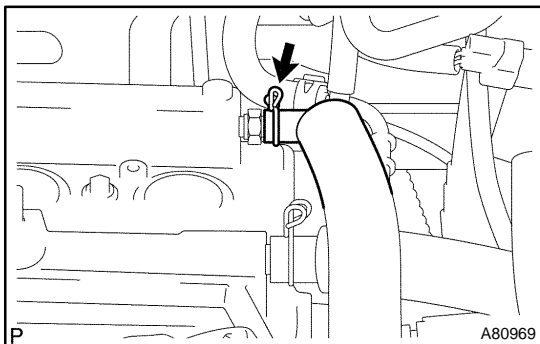
### 2. REMOVE CYLINDER HEAD COVER NO.2

- (a) Remove the 4 nuts and cylinder head cover No. 2.



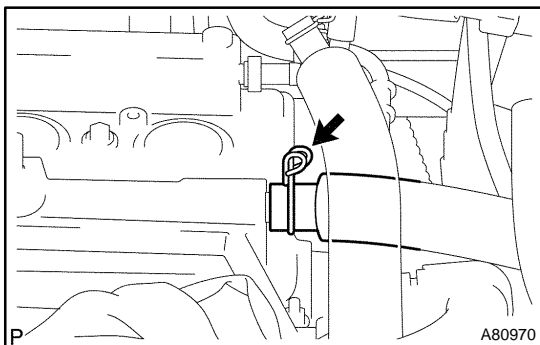
### 3. REMOVE IGNITION COIL NO.1

- (a) Remove the 4 bolts and pull out the 4 ignition coils.



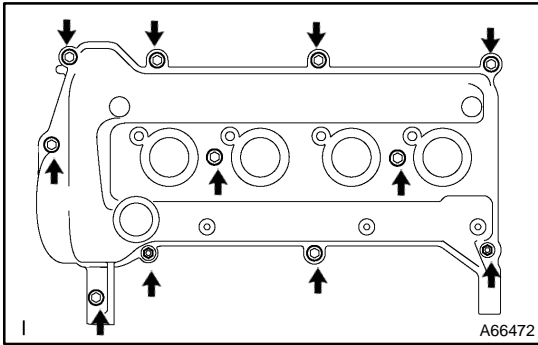
### 4. DISCONNECT VENTILATION HOSE

- (a) Disconnect the ventilation hose from the cylinder head cover.



### 5. DISCONNECT VENTILATION HOSE NO.2

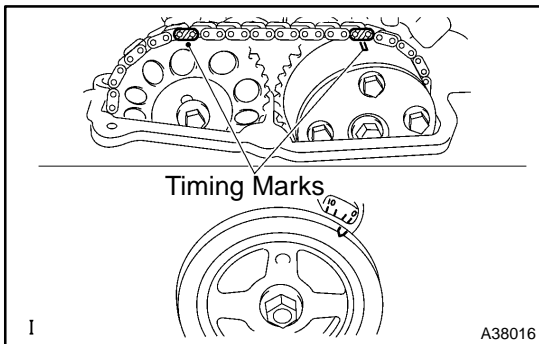
- (a) Disconnect the ventilation hose No. 2 from the cylinder head cover.



## 6. REMOVE CYLINDER HEAD COVER SUB-ASSY

- (a) Remove the 9 bolts and 2 nuts, and then remove the cylinder head cover.

7. REMOVE FAN AND GENERATOR V BELT (See page 14-5)
8. REMOVE GENERATOR ASSY (See page 19-15)
9. REMOVE ENGINE UNDER COVER RH (See page 19-3)
10. DRAIN ENGINE OIL
11. DRAIN ENGINE COOLANT (See page 16-7)
12. REMOVE VANE PUMP V BELT (See page 14-5)
13. REMOVE WATER PUMP PULLEY (See page 16-10)
14. REMOVE WATER PUMP ASSY (See page 16-10)



## 15. REMOVE CRANKSHAFT DAMPER SUB-ASSY

- (a) Set the No. 1 cylinder to the TDC/compression.
- (1) Turn the crankshaft damper, and align its timing notch with the timing mark "0" of the chain cover.
  - (2) Check that both timing marks on the camshaft timing sprocket and camshaft timing gear are facing upward as shown in the illustration.

### HINT:

If not, turn the crankshaft 1 complete revolution (360°) and align the marks as above.

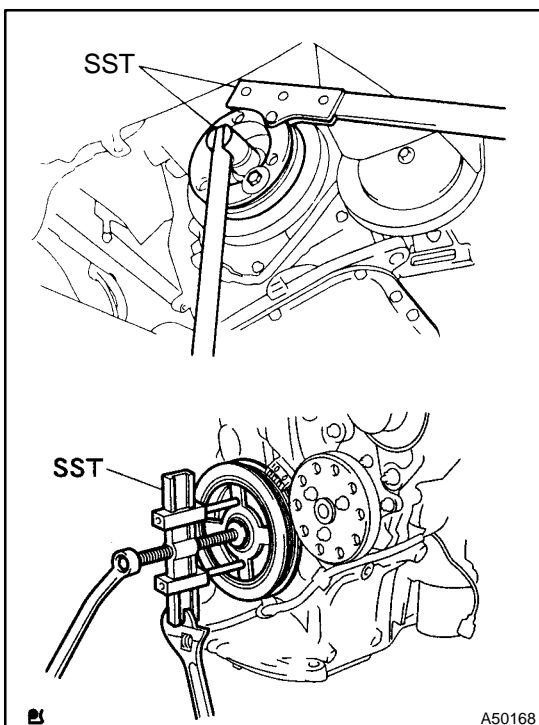
- (b) Using SST, remove the pulley bolt.

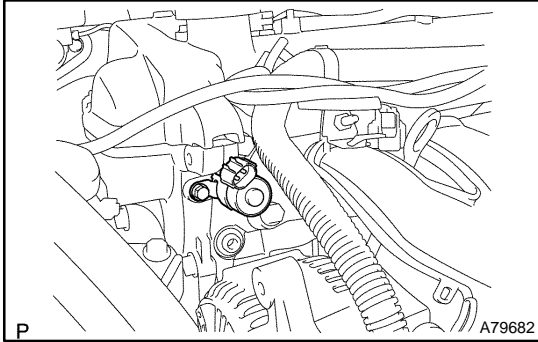
SST 09213-58012 (91111-50845), 09330-00021

### HINT:

If necessary, remove the damper with SST.

SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05021)

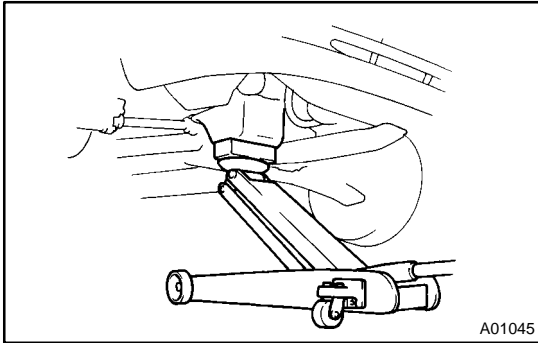




**16. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSY**

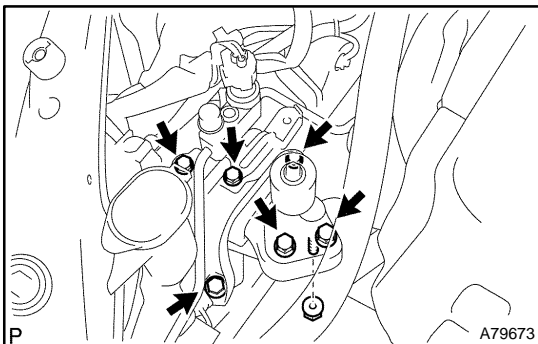
- (a) Disconnect the oil control valve connector.
- (b) Remove the bolt, oil control valve and O-ring

**17. REMOVE CRANKSHAFT POSITION SENSOR (See page 18-6)**

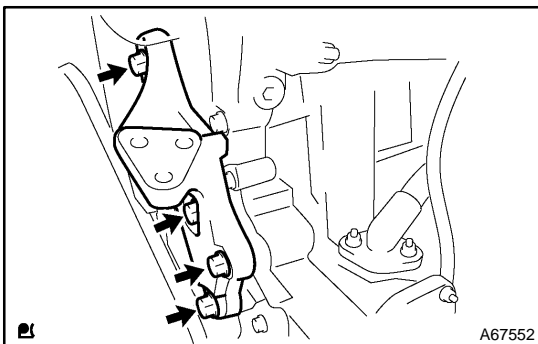


**18. REMOVE ENGINE MOUNTING INSULATOR SUB-ASSY RH**

- (a) Place a wooden block on a jack underneath the engine.



- (b) Remove the bolt which is used to fix the liquid tube to the engine mounting insulator RH.
- (c) Remove the 5 bolts nut, and then remove the engine mounting insulator RH.



**19. REMOVE TRANSVERSE ENGINE ENGINE MOUNTING BRACKET**

- (a) Remove the 4 bolts and engine mounting bracket RH.

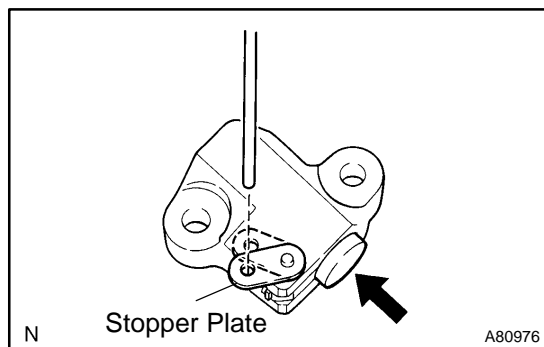
**20. REMOVE OIL PUMP ASSY (See page 17-5)**

**21. REMOVE OIL PUMP SEAL (See page 17-5)**

**22. REMOVE CHAIN TENSIONER ASSY NO.1**

**NOTICE:**

- Do not rotate the crankshaft with the chain tensioner removed.
- When rotating the camshaft with the timing chain removed, rotate the crankshaft counterclockwise 40° from the TDC first.



- (a) Rotate the stopper plate of the chain tensioner upward as shown in the illustration, push in the plunger of the tensioner.
- (b) Rotate the stopper plate of the tensioner downward, insert a 2.5 mm (0.098 in.) diameter bar into the holes of the stopper plate and tensioner to hold the stopper plate.

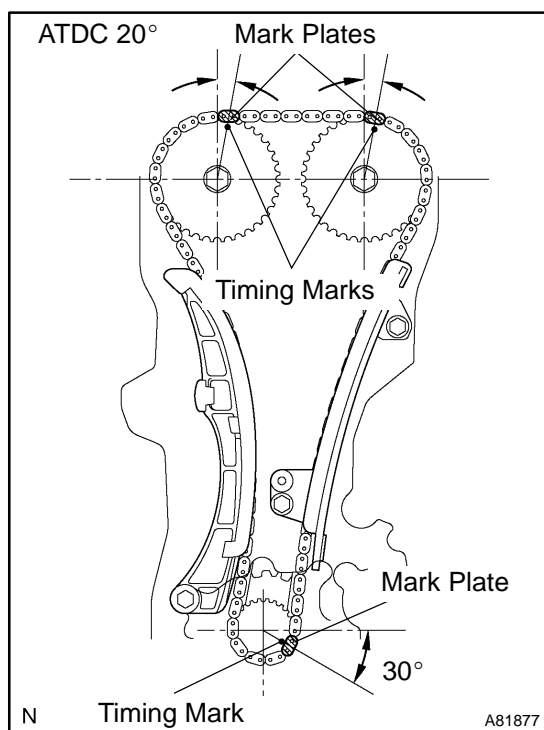
### 23. REMOVE CHAIN TENSIONER SLIPPER

- (a) Remove the bolt and chain tensioner slipper.

### 24. REMOVE CHAIN VIBRATION DAMPER NO.1

- (a) Remove the 2 bolts and chain vibration damper.

### 25. REMOVE CHAIN SUB-ASSY



### 26. INSTALL CHAIN SUB-ASSY

- (a) After setting the crankshaft at ATDC 40 to 140°, set cams of intake and exhaust timing sprockets at ATDC 20° and then reset the crankshaft at ATDC 20°.
- (b) Install the chain vibration damper with the 2 bolts.  
**Torque: 9.0 N·m (92 kgf·cm, 80 in.-lbf)**
- (c) Align the matchmarks of the camshaft timing sprocket, camshaft timing gear and crankshaft timing sprocket with each mark plate (colored in yellow) of the timing chain.

#### HINT:

To prevent the exhaust camshaft from springing back, turn it using a wrench and set it at the mark on the chain.

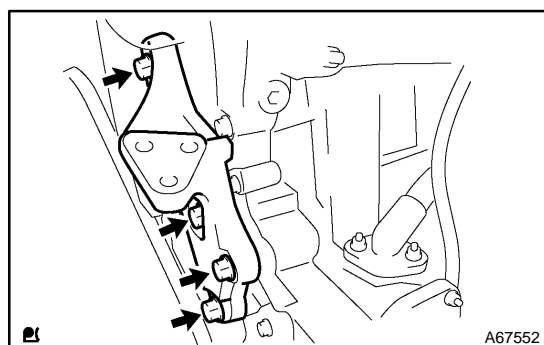
- (d) Install the chain tensioner slipper with the bolt.  
**Torque: 9.0 N·m (92 kgf·cm, 80 in.-lbf)**
- (e) Install the chain tensioner with the 2 bolts.  
**Torque: 9.0 N·m (92 kgf·cm, 80 in.-lbf)**
- (f) Remove the bar from the chain tensioner.
- (g) Check the tension between the intake and exhaust camshaft timing sprockets.

### 27. INSTALL OIL PUMP SEAL (See page 17-5)

SST 09950-60010 (09951-00250, 09951-00380, 09952-06010), 09950-70010 (09951-07100)

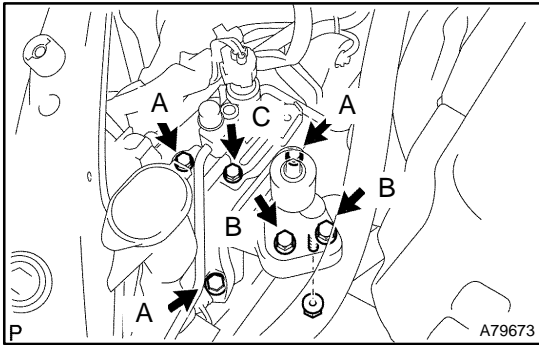
### 28. INSTALL OIL PUMP ASSY (See page 17-5)

### 29. INSTALL WATER PUMP ASSY (See page 16-10)



### 30. INSTALL TRANSVERSE ENGINE ENGINE MOUNTING BRACKET

- (a) Install the engine mounting bracket RH with the 4 bolts.  
**Torque: 55 N·m (561 kgf·cm, 41 ft.-lbf)**



**31. INSTALL ENGINE MOUNTING INSULATOR SUB-ASSY RH**

- (a) Install the RH engine mounting insulator with the 5 bolts and nut.

**Torque:**

**Bolt A 45 N·m (459 kgf·cm, 33 ft·lbf)**

**Bolt B 52 N·m (530 kgf·cm, 38 ft·lbf)**

**Nut 52 N·m (530 kgf·cm, 38 ft·lbf)**

- (b) Install the liquid tube with the bolt.

**Torque:**

**Bolt C 9.8 N·m (100 kgf·cm, 7.2 ft·lbf)**

**32. INSTALL CAMSHAFT TIMING OIL CONTROL VALVE ASSY**

- (a) Apply a light coat of engine oil to a new O-ring, and install it to the camshaft timing oil control valve.
- (b) Install the camshaft timing oil control valve with the bolt.

**Torque: 7.5 N·m (76 kgf·cm, 66 in·lbf)**

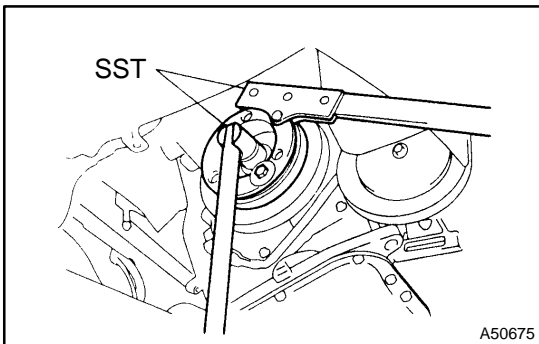
**NOTICE:**

**Be careful not to twist an O-ring.**

**33. INSTALL CRANKSHAFT POSITION SENSOR (See page 18-6)**

**34. INSTALL WATER PUMP PULLEY (See page 16-10)**

SST 09960-10010 (09962-01000, 09963-00600)

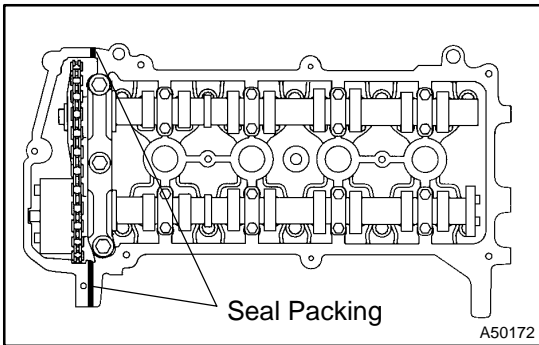


**35. INSTALL CRANKSHAFT DAMPER SUB-ASSY**

- (a) Align pin hole of the crankshaft damper with the pin position and install the crankshaft damper.
- (b) Using SST, install the pulley bolt.

SST 09330-00021, 09213-58012 (91111-50845)

**Torque: 128 N·m (1,305 kgf·cm, 95 ft·lbf)**



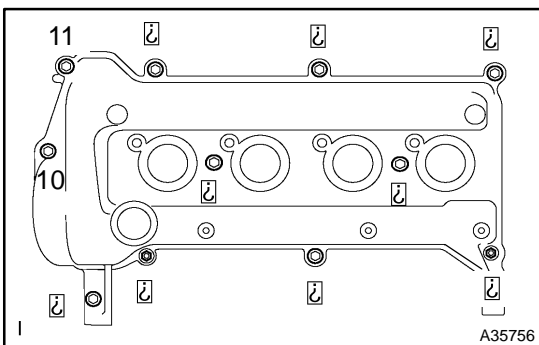
**36. INSTALL CYLINDER HEAD COVER SUB-ASSY**

- (a) Apply the seal packing to the 2 locations shown in the illustration.

**Seal packing: Part No. 08826 - 00080 or equivalent**

**NOTICE:**

- **Remove any oil from the contact surface.**
- **Install the cylinder head cover within 3 minutes after applying the seal packing.**
- **Do not start the engine within 2 hours of installation.**



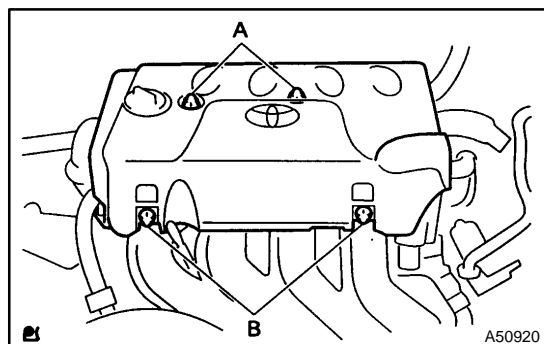
- (b) Install the cylinder head cover with the 9 bolts, 2 seal washers and 2 nuts.

- (c) Using several steps, tighten the bolts and nuts uniformly in the sequence shown in the illustration.

**Torque: 10 N·m (102 kgf·cm, 7.4 ft·lbf)**

**37. INSTALL IGNITION COIL NO.1**

**Torque: 9.0 N·m (92 kgf·cm, 80 in·lbf)**

**38. INSTALL CYLINDER HEAD COVER NO.2**

- (a) First tighten nut A, then tighten bolt B.

**Torque: 7.0 N·m (71 kgf·cm, 62 in·lbf)****39. INSTALL GENERATOR ASSY (See page 19-15)****40. INSTALL VANE PUMP V BELT**

- (a) Temporarily install the V-ribbed belt on each pulley.

**41. INSTALL FAN AND GENERATOR V BELT**

- (a) Temporarily install the V-ribbed belt on each pulley.

**42. ADJUST VANE PUMP V BELT (See page 14-5)****43. ADJUST FAN AND GENERATOR V BELT (See page 14-5)****44. INSPECT DRIVE BELT DEFLECTION AND TENSION (See page 14-1)****45. INSTALL OIL PAN DRAIN PLUG**

- (a) Install the drain plug with a new gasket.

**Torque: 38 N·m (382 kgf·cm, 28 ft·lbf)****46. INSTALL ENGINE UNDER COVER RH****Torque:****5.0 N·m (51 kgf·cm, 44 in·lbf) for Bolt****5.0 N·m (51 kgf·cm, 44 in·lbf) for Nut****47. ADD ENGINE OIL****48. CHECK FOR ENGINE OIL LEAKS****49. ADD ENGINE COOLANT (See page 16-7)****50. CHECK FOR ENGINE COOLANT LEAKS (See page 16-7)**