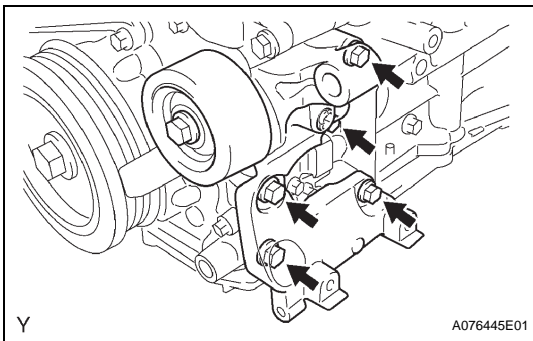
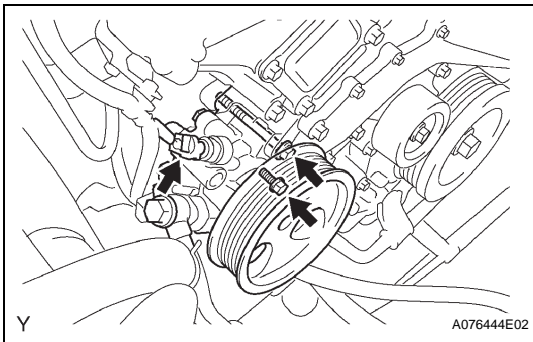


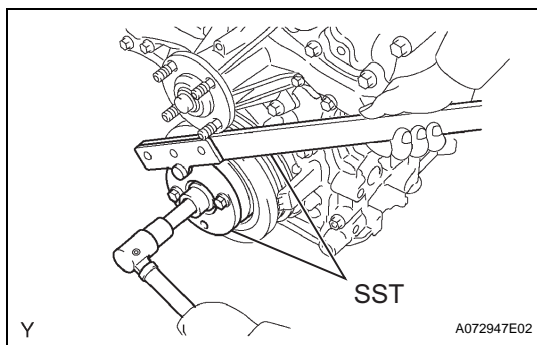
## REMOVAL

1. REMOVE BATTERY
2. DRAIN ENGINE COOLANT (See page [CO-3](#))
3. DRAIN ENGINE OIL (See page [LU-5](#))
4. REMOVE POWER STEERING LINK ASSEMBLY (See page [PS-53](#))
5. REMOVE FRONT DIFFERENTIAL CARRIER ASSEMBLY (for 4WD) (See page [DF-19](#))
6. REMOVE V-BANK COVER (See page [ES-414](#))
7. REMOVE RADIATOR SUPPORT TO FRAME SEAL LH (See page [CO-15](#))
8. REMOVE FAN SHROUD (See page [CO-15](#))
9. REMOVE AIR CLEANER ASSEMBLY (See page [ES-415](#))
10. REMOVE OIL LEVEL GAGE GUIDE
  - (a) Remove the oil level gauge.
  - (b) Remove the bolt and pull out the oil level gauge guide.
  - (c) Remove the O-ring from the oil level gauge guide.
11. REMOVE WATER INLET (See page [CO-9](#))
12. SEPARATE VANE PUMP ASSEMBLY
  - (a) Disconnect the power steering pressure switch connector.
  - (b) Remove the 2 bolts, then separate the vane pump.

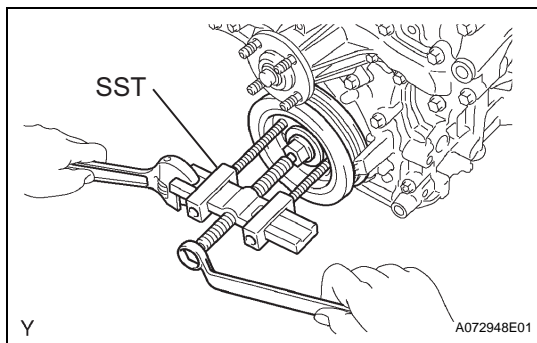
**NOTICE:**  
Do not hit the pulley with other parts when separating the vane pump.

**HINT:**  
The vane pump is suspended securely.
13. REMOVE GENERATOR ASSEMBLY (See page [CH-7](#))
14. SEPARATE COOLER COMPRESSOR ASSEMBLY (See page [ES-409](#))
15. REMOVE V-RIBBED BELT TENSIONER ASSEMBLY
  - (a) Remove the 5 bolts, then remove the V-ribbed belt tensioner.
16. REMOVE NO.2 IDLER PULLEY SUB-ASSEMBLY
  - (a) Remove the 2 bolts, then remove the idler pulley No. 2.
17. REMOVE NO.1 IDLER PULLEY SUB-ASSEMBLY
  - (a) Remove the bolt, then remove the idler pulley No. 1.

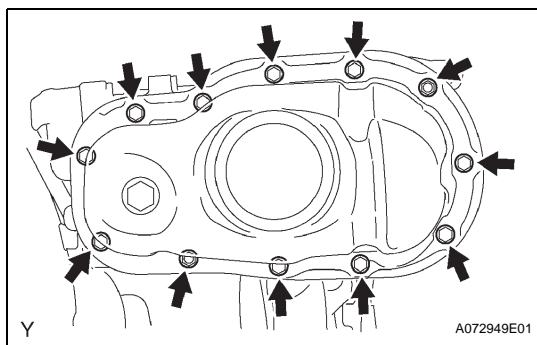


**18. REMOVE CRANKSHAFT PULLEY**

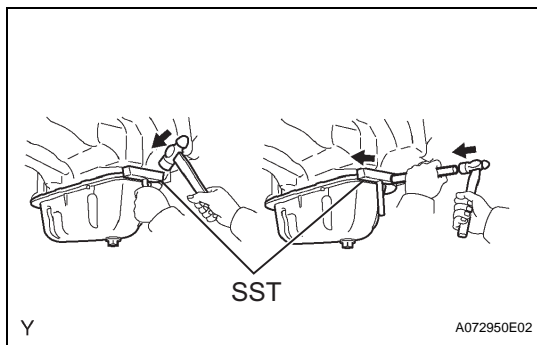
- (a) Using SST, hold the crankshaft pulley and loosen the pulley set bolt.  
**SST 09213-54015 (91651-60855), 09330-00021**



- (b) Using the pulley set bolt and SST, remove the crankshaft pulley.  
**SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05030)**

**19. REMOVE NO.2 OIL PAN SUB-ASSEMBLY**

- (a) Remove the 10 bolts and 2 nuts.

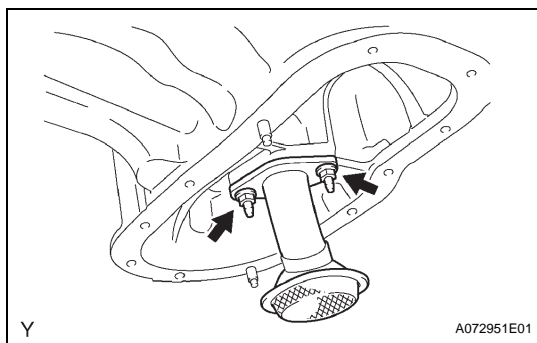


- (b) Insert the blade of SST between the oil pan and oil pan No. 2, cut off applied sealer and remove the oil pan No. 2.

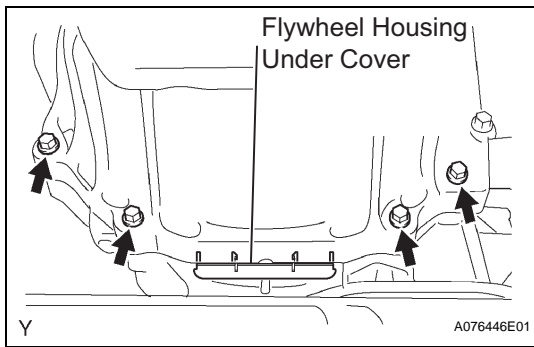
**SST 09032-00100**

**NOTICE:**

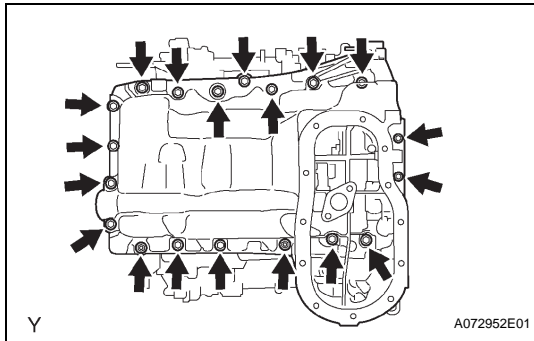
- Be careful not to damage the contact surfaces of the oil pan and oil pan No. 2.
- Be careful not to damage the oil pan No. 2 flange.

**20. REMOVE OIL STRAINER SUB-ASSEMBLY**

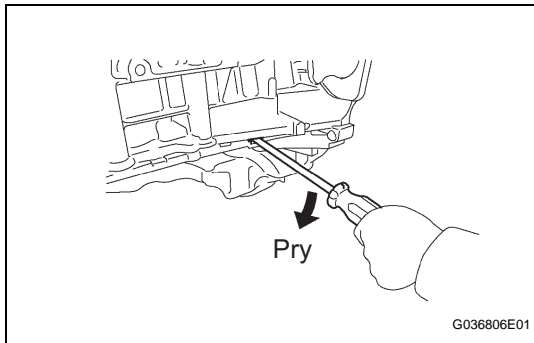
- (a) Remove the 2 nuts, then remove the oil strainer and gasket.

**21. REMOVE OIL PAN SUB-ASSEMBLY**

- (a) Remove the 4 housing bolts.
- (b) Remove the flywheel housing under cover.



- (c) Remove the 17 bolts and 2 nuts.



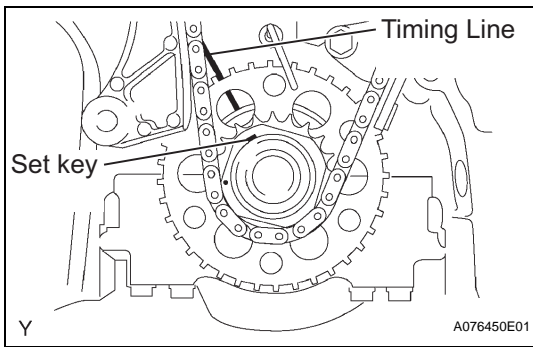
- (d) Using a screwdriver, remove the oil pan by prying between the oil pan and cylinder block.

**NOTICE:**

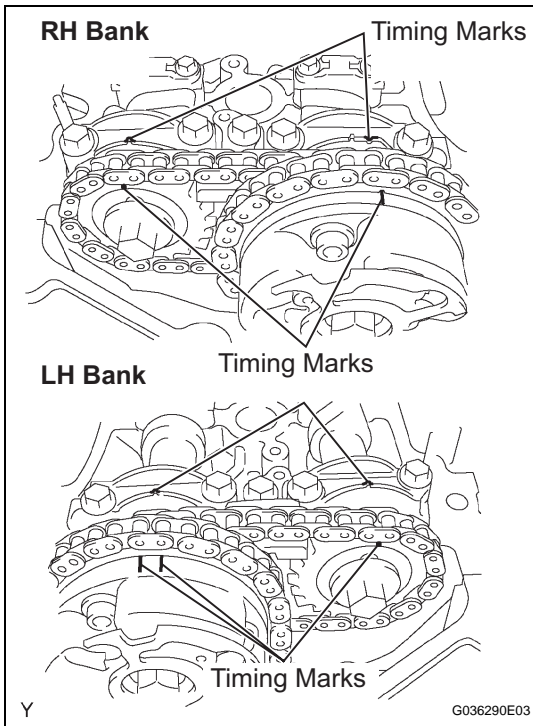
**Be careful not to damage the contact surfaces of the cylinder block and oil pan.**

- (e) Remove the O-ring from the oil pump.

**22. REMOVE INTAKE AIR SURGE TANK (See page [EM-57](#))****23. REMOVE IGNITION COIL ASSEMBLY (See page [IG-7](#))****24. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY (See page [EM-59](#))****25. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY LH (See page [EM-59](#))****26. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY (See page [ES-407](#))****27. REMOVE VVT SENSOR (See page [IG-8](#))****28. REMOVE TIMING CHAIN OR BELT COVER SUB-ASSEMBLY (See page [LU-17](#))****29. REMOVE TIMING GEAR CASE OR TIMING CHAIN CASE OIL SEAL (See page [EM-236](#))**

**30. SET NO.1 COMPRESSION TO TDC/COMPRESSION**

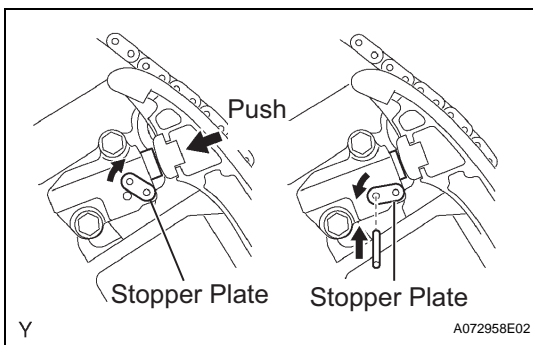
- (a) Using the crankshaft pulley set bolt, turn the crankshaft to align the crankshaft set key with the timing line of the cylinder block.



- (b) Check that the timing marks of the camshaft timing gears are aligned with the timing marks of the bearing cap as shown in the illustration. If not, turn the crankshaft 1 complete revolution (360°) and align the timing marks as above.

**31. REMOVE NO.1 CHAIN TENSIONER ASSEMBLY****NOTICE:**

- Never 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) While turning the stopper plate of the tensioner upward, push in the plunger of the chain tensioner as shown in the illustration.
- (b) While turning the stopper plate of the tensioner down ward, insert a bar of  $\phi$  3.5 mm (0.138) into the holes in the stopper plate and tensioner to fix the stopper plate.
- (c) Remove the 2 bolts, then remove the chain tensioner.

**32. REMOVE CHAIN TENSIONER SLIPPER****33. REMOVE IDLE SPROCKET ASSEMBLY**

- (a) Using a 10 mm hexagon wrench, remove the idle gear shaft No. 2, idle gear No. 1 and idle gear shaft No. 1.

**34. REMOVE NO.2 CHAIN VIBRATION DAMPER**

- (a) Remove the 2 chain vibration dampers No. 2.

**35. REMOVE CHAIN SUB-ASSEMBLY**