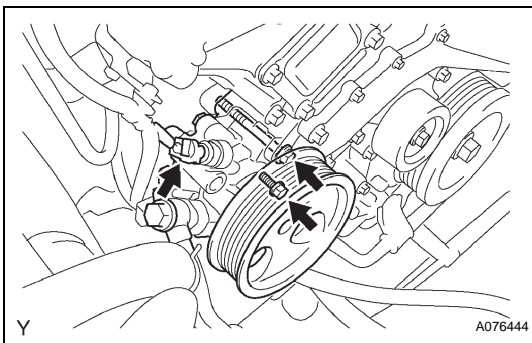
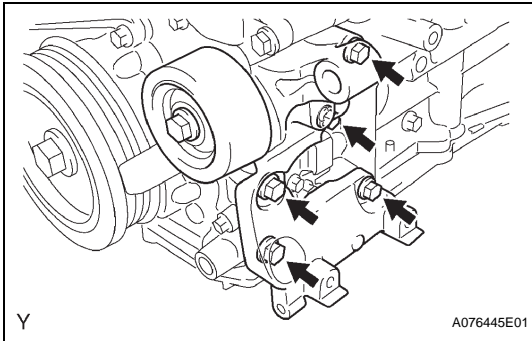
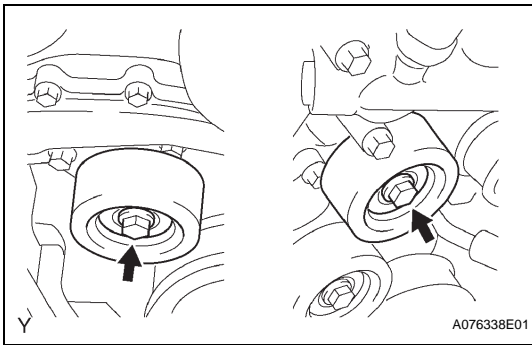


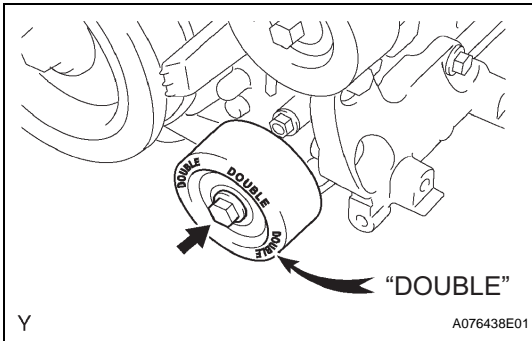
REMOVAL

1. **REMOVE BATTERY**
2. **DRAIN ENGINE COOLANT** (See page [CO-3](#))
3. **DRAIN ENGINE OIL** (See page [LU-4](#))
4. **REMOVE POWER STEERING LINK ASSEMBLY (for 2WD)**
Refer to the procedures up to "REMOVE POWER STEERING LINK ASSEMBLY" (See page [PS-18](#)).
5. **REMOVE POWER STEERING LINK ASSEMBLY (for 4WD)**
Refer to the procedures up to "REMOVE POWER STEERING LINK ASSEMBLY" (See page [PS-37](#)).
6. **REMOVE FRONT DIFFERENTIAL CARRIER ASSEMBLY (for 4WD)**
Refer to the procedures up to "REMOVE FRONT DIFFERENTIAL CARRIER ASSEMBLY" (See page [DF-20](#)).
7. **REMOVE FAN**
Refer to the procedures up to "REMOVE FAN PULLEY" (See page [CO-17](#)).
8. **REMOVE GENERATOR ASSEMBLY**
Refer to the procedures up to "REMOVE GENERATOR ASSEMBLY" (See page [CH-9](#))
9. **SEPARATE COOLER COMPRESSOR ASSEMBLY (See page [ES-420](#))**
10. **REMOVE V-RIBBED BELT TENSIONER ASSEMBLY**
 - (a) Remove the 5 bolts, then remove the V-ribbed belt tensioner.
11. **REMOVE OIL LEVEL GAUGE 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.
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.

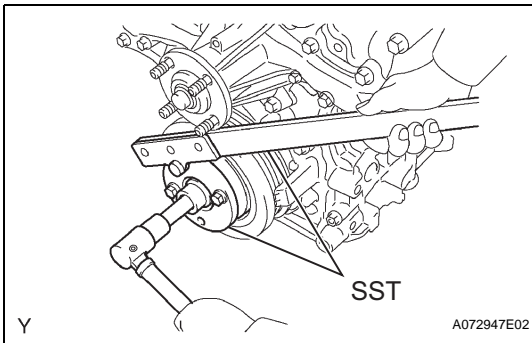


**13. REMOVE NO. 2 IDLER PULLEY SUB-ASSEMBLY**

- (a) Remove the 2 bolts, then remove the No. 2 idler pulleys.

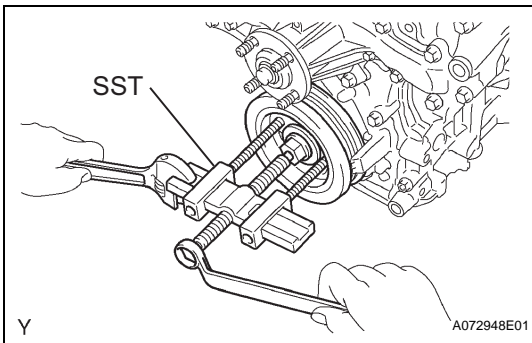
**14. REMOVE NO. 1 IDLER PULLEY SUB-ASSEMBLY**

- (a) Remove the bolt, then remove the No. 1 idler pulley.

**15. REMOVE CRANKSHAFT PULLEY**

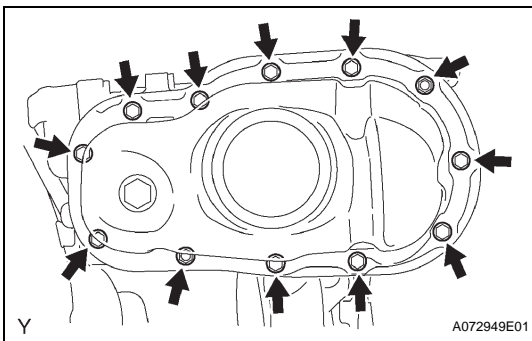
- (a) Using SST, hold the crankshaft pulley and loosen the pulley set bolt.

SST 09213-54015 (91651-60855), 09330-00021

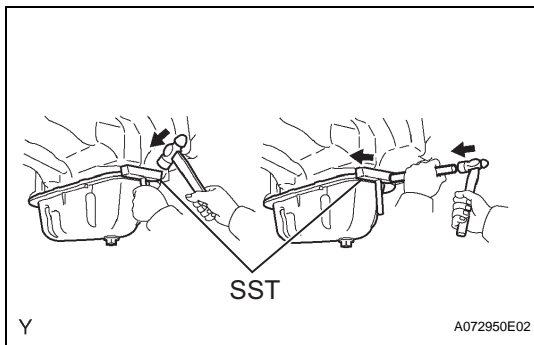


- (b) Using the pulley set bolt and SST, remove the crankshaft pulley.

SST 09950-50013 (09951-05010, 09952-05010, 09953-05020, 09954-05030)

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

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

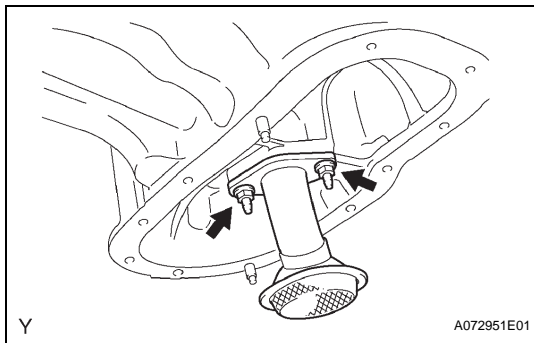


- (b) Insert the blade of SST between the oil pan and No. 2 oil pan, cut off applied sealer and remove the No. 2 oil pan.

SST 09032-00100

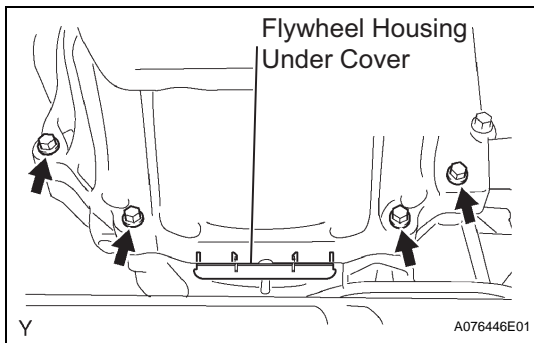
NOTICE:

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



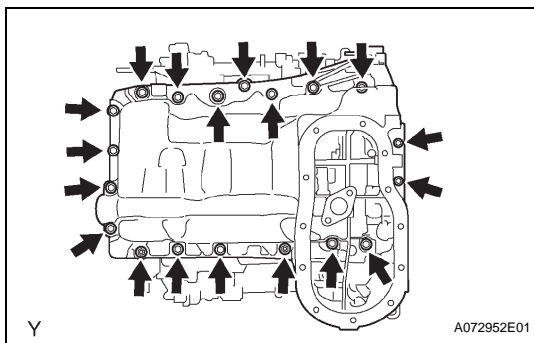
17. REMOVE OIL STRAINER SUB-ASSEMBLY

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

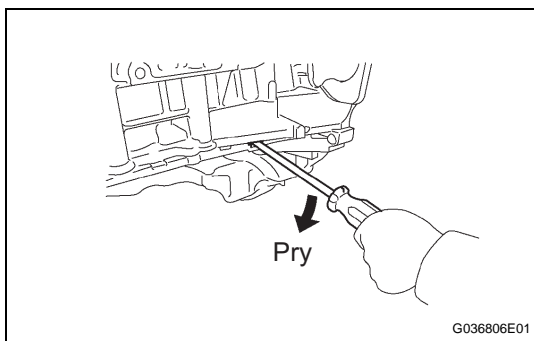


18. REMOVE OIL PAN SUB-ASSEMBLY

- (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:

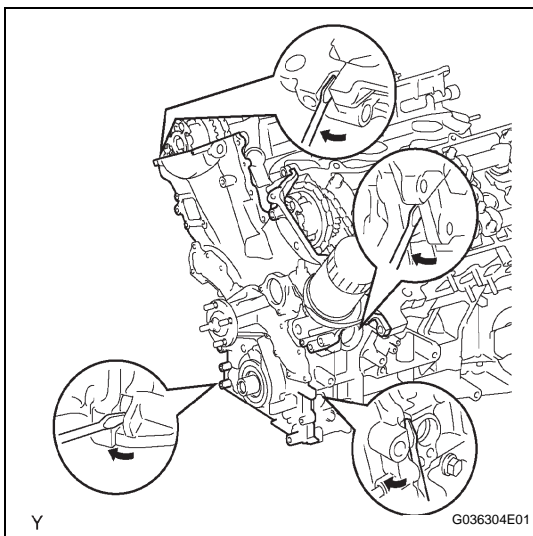
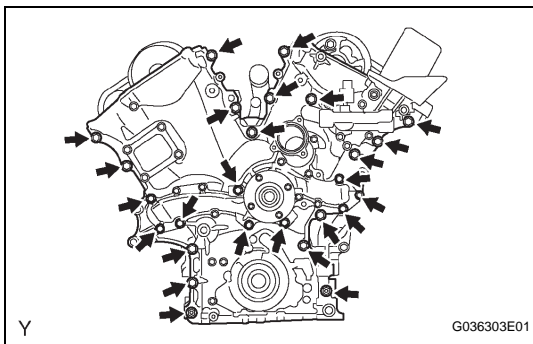
Be careful not to damage the contact surfaces of the cylinder block and oil pan.

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

19. REMOVE AIR CLEANER ASSEMBLY (See page ES-429)

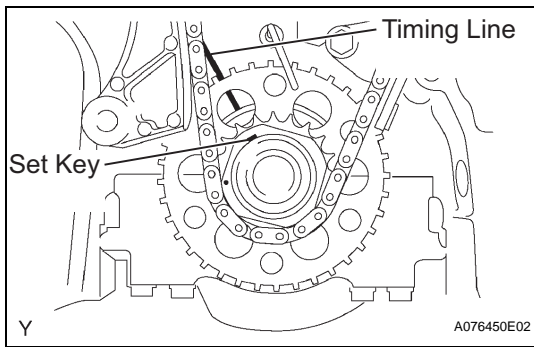
20. REMOVE THROTTLE BODY BRACKET (See page FU-11)

21. REMOVE OIL BAFFLE PLATE (See page [FU-11](#))
22. REMOVE NO. 1 SURGE TANK STAY (See page [FU-11](#))
23. REMOVE NO. 2 SURGE TANK STAY (See page [FU-12](#))
24. REMOVE INTAKE AIR SURGE TANK (See page [FU-12](#))
25. REMOVE IGNITION COIL ASSEMBLY (See page [IG-8](#))
26. REMOVE CAMSHAFT TIMING OIL CONTROL VALVE ASSEMBLY (See page [ES-414](#))
27. REMOVE VVT SENSOR (See page [ES-417](#))
28. REMOVE WATER INLET (See page [CO-8](#))
29. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY (See page [EM-40](#))
30. REMOVE CYLINDER HEAD COVER SUB-ASSEMBLY LH (See page [EM-40](#))
31. REMOVE TIMING CHAIN OR BELT COVER SUB-ASSEMBLY
 - (a) Remove the 24 bolts and 2 nuts.

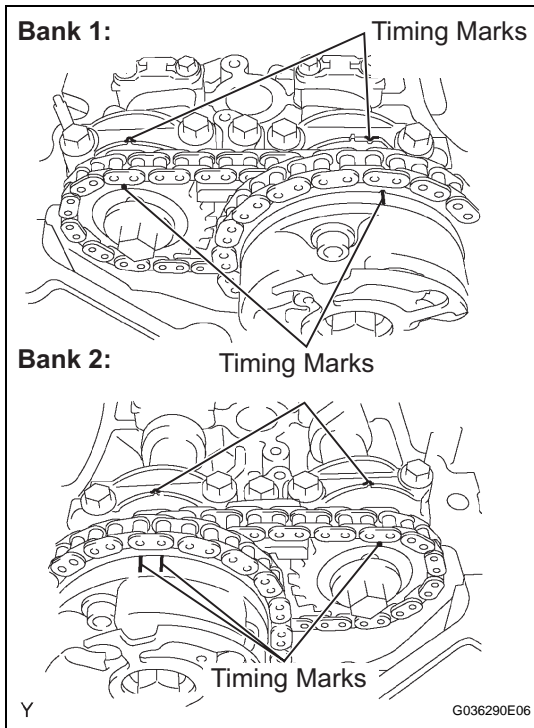


- (b) Remove the timing chain cover by prying between the timing chain cover, cylinder head or cylinder block with a screwdriver.

NOTICE:
Be careful not to damage the contact surfaces of the timing chain cover, cylinder block and cylinder head.
 - (c) Remove the O-ring from the LH cylinder head.
32. REMOVE TIMING GEAR CASE OR TIMING CHAIN CASE OIL SEAL (See page [EM-163](#))

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

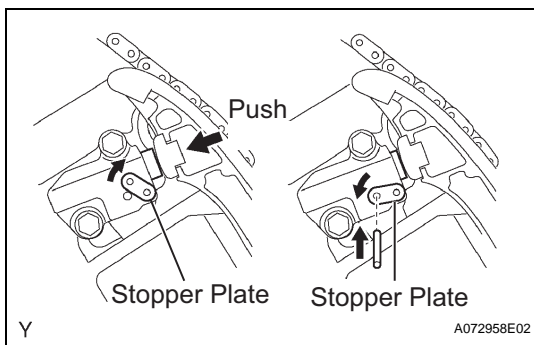
- (a) Using the crankshaft pulley set bolt, turn the crankshaft to align the crankshaft set key with the timing line of the cylinder block.



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

34. 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 downward, insert a bar of ϕ 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.

35. REMOVE CHAIN TENSIONER SLIPPER**36. REMOVE IDLE SPROCKET ASSEMBLY**

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

37. REMOVE NO. 2 CHAIN VIBRATION DAMPER

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

38. REMOVE CHAIN SUB-ASSEMBLY