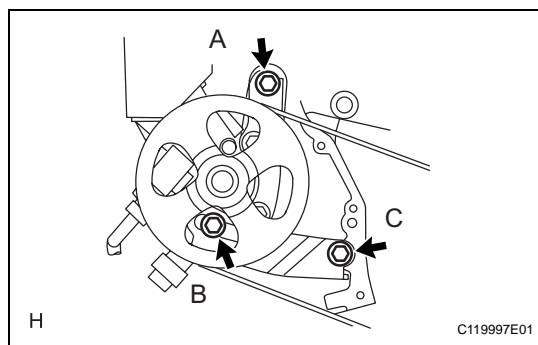
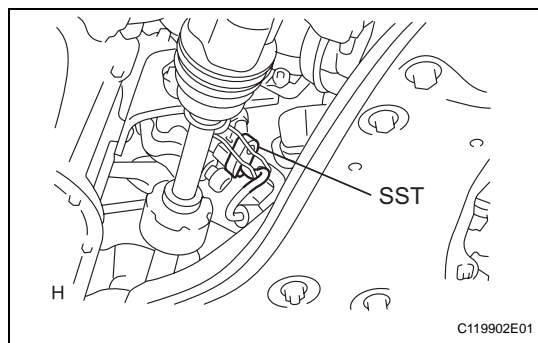
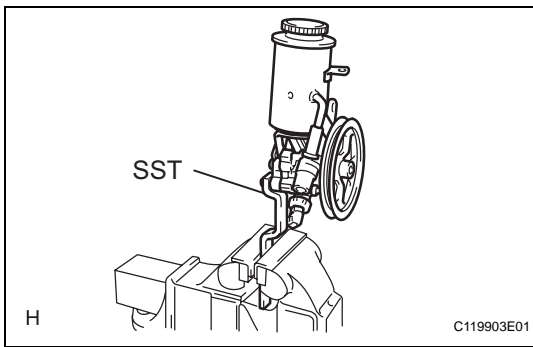


REMOVAL

1. REMOVE FRONT WIPER ARM AND BLADE ASSEMBLY RH
2. REMOVE FRONT WIPER ARM AND BLADE ASSEMBLY LH
3. REMOVE HOOD TO COWL TOP SEAL (See page [WW-8](#))
4. REMOVE COWL TOP VENTILATOR LOUVER RH (See page [WW-8](#))
5. REMOVE COWL TOP VENTILATOR LOUVER LH (See page [WW-8](#))
6. REMOVE WINDSHIELD WIPER LINK ASSEMBLY (See page [WW-9](#))
7. REMOVE COWL PANEL SUB-ASSEMBLY
8. REMOVE VANE PUMP OIL RESERVOIR COVER
9. DRAIN POWER STEERING FLUID
10. REMOVE FRONT WHEEL RH
11. REMOVE ENGINE UNDER COVER RH
12. DISCONNECT PRESSURE FEED TUBE ASSEMBLY
 - (a) Using SST, disconnect the pressure feed tube from the vane pump.
SST 09023-12701
 - (b) Slide the clip and disconnect the return hose.
NOTICE:
Take care not to spill fluid on the V belt.
 - (c) Disconnect the oil pressure sensor connector.
13. REMOVE REAR VANE PUMP STAY
 - (a) Remove the bolt, stay and heat insulator.
14. REMOVE VANE PUMP ASSEMBLY
 - (a) Remove bolts B and C, and the adjusting strut.
 - (b) Loosen bolt A sufficiently so that the vane pump can be removed.
HINT:
Bolt A cannot be removed.





DISASSEMBLY

1. FIX VANE PUMP ASSEMBLY

- (a) Using SST, secure the vane pump in a vise.
SST 09630-00014 (09631-00132)

2. REMOVE VANE PUMP OIL RESERVOIR CAP SUB-ASSEMBLY

3. REMOVE VANE PUMP OIL RESERVOIR ASSEMBLY

- (a) Remove the 3 bolts and oil reservoir.
- (b) Remove the O-ring from the oil reservoir.

4. REMOVE FRONT PUMP BRACKET

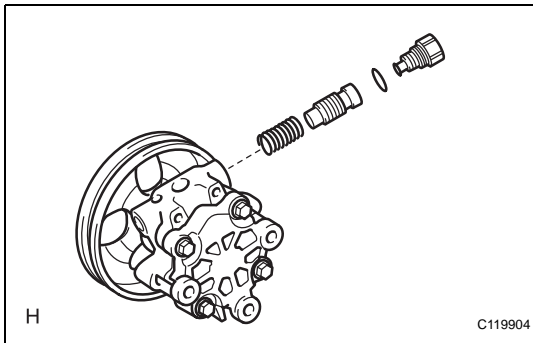
- (a) Remove the 2 bolts, front bracket and rear bracket.

5. REMOVE FLOW CONTROL VALVE

- (a) Remove the pressure port union.
- (b) Remove the O-ring from the pressure port union.
- (c) Remove the flow control valve and compression spring.

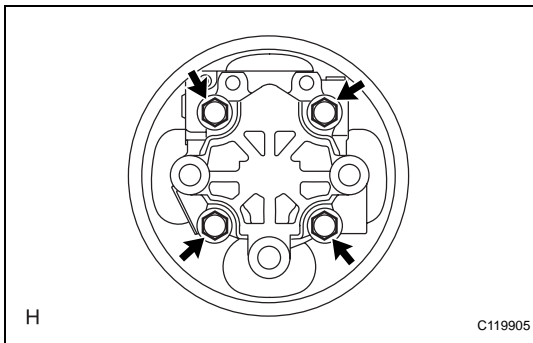
6. REMOVE POWER STEERING OIL PRESSURE SENSOR

- (a) Remove the oil pressure sensor from the front housing.



7. REMOVE REAR VANE PUMP HOUSING

- (a) Remove the 4 bolts and rear housing from the front housing.
- (b) Remove the O-ring from the rear housing.



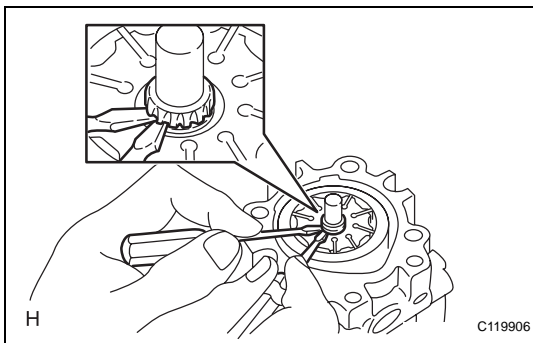
8. REMOVE SHAFT SUB-ASSEMBLY WITH PULLEY

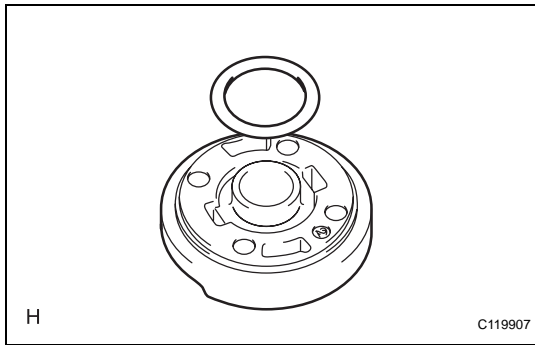
- (a) Using 2 screwdrivers, remove the snap ring from the shaft.
- (b) Remove the shaft.

9. REMOVE VANE PUMP ROTOR

- (a) Remove the 10 vane pump plates.
- (b) Remove the vane pump rotor.

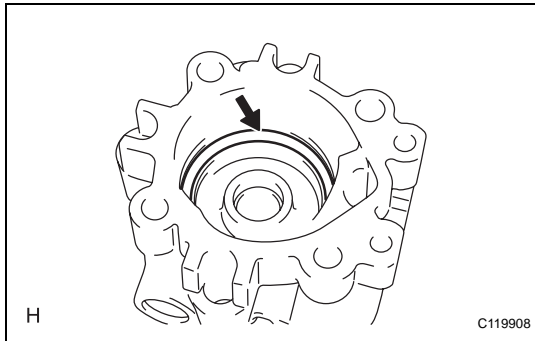
10. REMOVE VANE PUMP CAM RING



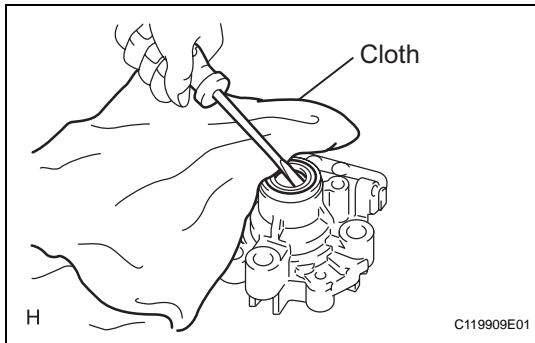


11. REMOVE FRONT VANE PUMP SIDE PLATE

- (a) Remove the side plate from the front housing.
- (b) Remove the O-ring from the side plate.



- (c) Remove the O-ring from the front housing.

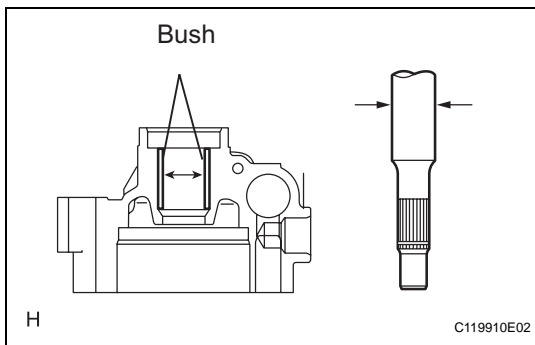


12. REMOVE VANE PUMP HOUSING OIL SEAL

- (a) Using a screwdriver and cloth, remove the housing oil seal.

NOTICE:

Be careful not to damage the housing front.



INSPECTION

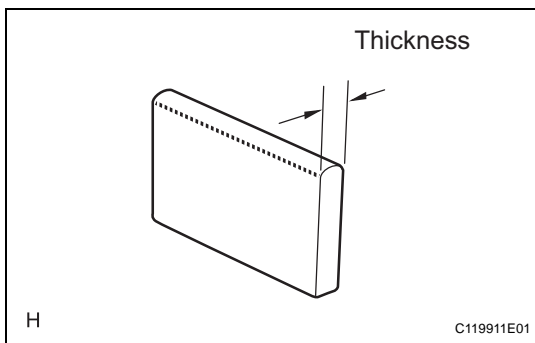
1. INSPECT FRONT VANE PUMP SHAFT AND BUSH IN HOUSING

- (a) Using a micrometer and caliper gauge, measure the oil clearance.

Maximum clearance:

0.07 mm (0.0028 in.) or less

If the clearance is greater than the maximum, replace the vane pump.

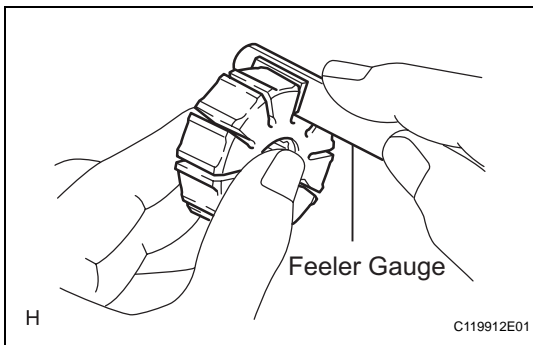


2. INSPECT VANE PUMP ROTOR AND VANE PUMP PLATES

- (a) Using a micrometer, measure the thickness of the vane pump plates.

Standard thickness:

1.405 to 1.411 mm (0.05531 to 0.05555 in.)

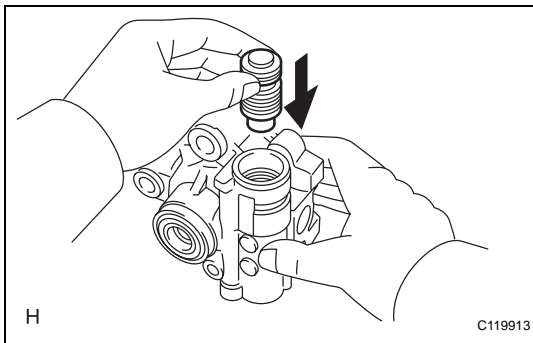


- (b) Using a feeler gauge, measure the clearance between a side face of the vane pump rotor groove and the vane plates.

Maximum clearance:

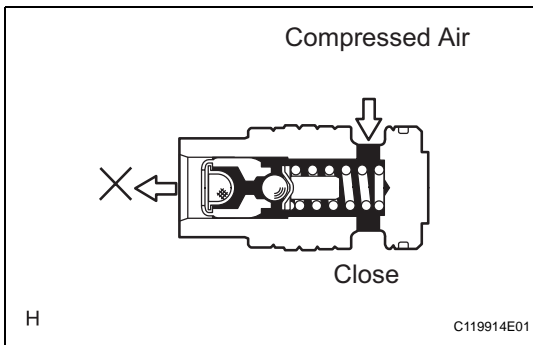
0.03 mm (0.0012 in.)

If the clearance exceeds the maximum, replace the vane pump.

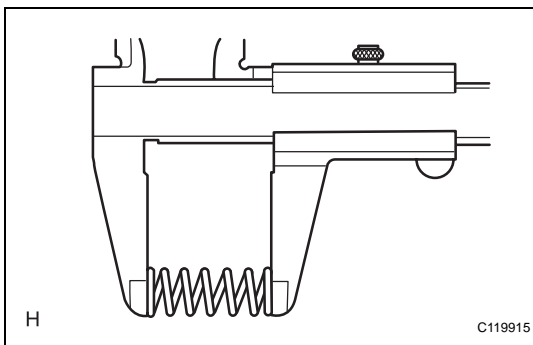


3. INSPECT FLOW CONTROL VALVE

- (a) Coat the flow control valve with power steering fluid and check that it falls smoothly into the flow control valve hole under its own weight. If necessary, replace the vane pump.



- (b) Check the flow control valve for leakage. Close one of the holes and apply compressed air of 392 to 490 kPa (4 to 5kgf/cm², 57 to 71 psi) into the opposite side hole, and confirm that air does not come out from the end holes. If necessary, replace the vane pump.



4. INSPECT FLOW CONTROL VALVE COMPRESSION SPRING

- (a) Using a vernier caliper, measure the free length of the compression spring.

Minimum free length:

29.2 mm (1.150 in.)

If the length is less than the minimum, replace the vane pump.

5. INSPECT PRESSURE PORT UNION

If the union seat in the pressure port union is severely damaged, it may cause fluid leakage. In that case, replace the vane pump assembly.