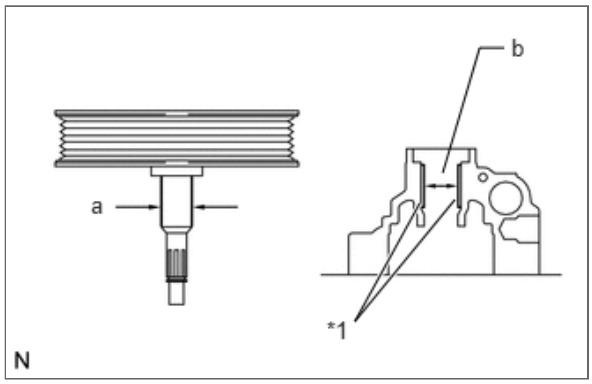
PROCEDURE

1.INSPECT VANE PUMP SHAFT AND BUSH IN VANE PUMP FRONT HOUSING

a.



*1	Vane Pump Front Housing Bush

Using a micrometer, measure the outer diameter [a] of the vane pump shaft with pulley.

b. Using a vernier caliper, measure the inner diameter [b] of the vane pump front housing bush.

c. Calculate the oil clearance.
Oil clearance = b - a

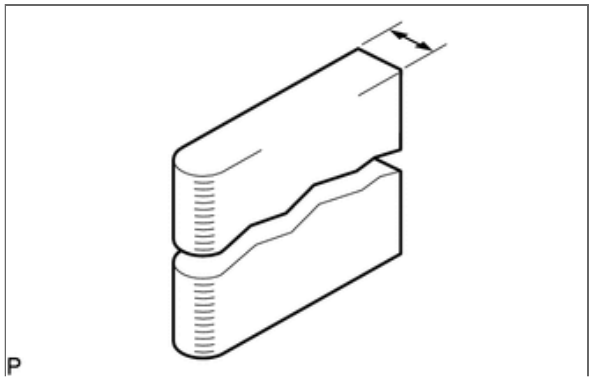
Maximum oil clearance:
0.07 mm (0.00276 in.)

If the oil clearance is more than the maximum, replace the vane pump assembly.

d. Check that there is no damage or excessive wear to the vane pump shaft with pulley or bush in the vane pump front housing.
When there is a problem with the vane pump shaft with pulley or vane pump side front plate, replace the vane pump assembly with a new one.

2.INSPECT VANE PUMP ROTOR AND VANE PUMP PLATE

a.

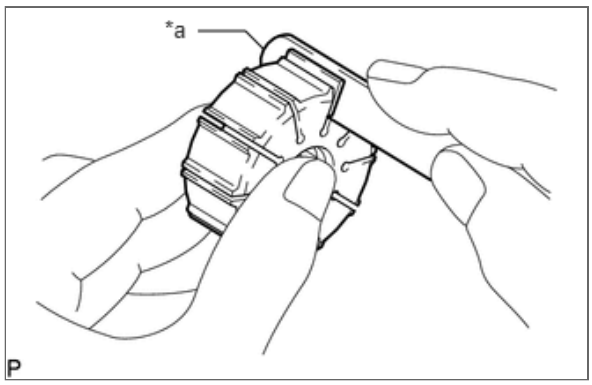


Using a micrometer, measure the thickness of the vane pump plates.

Standard thickness:
1.405 to 1.411 mm (0.0554 to 0.0555 in.)

If the thickness is not as specified, replace the vane pump assembly.

b.



*a	Feeler Gauge

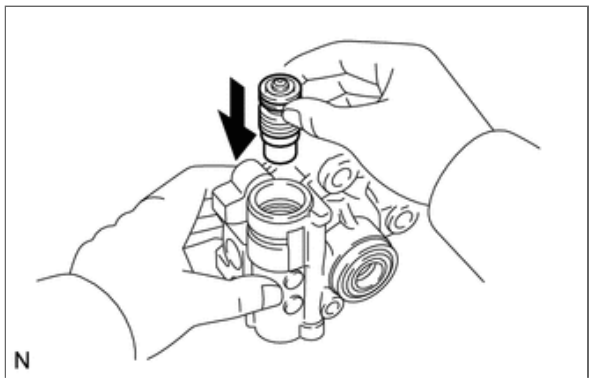
Using a feeler gauge, measure the clearance between the side of the vane pump rotor groove and the vane pump plate.

Maximum clearance:
0.03 mm (0.00118 in.)

If the clearance is more than the maximum, replace the vane pump assembly.

3.INSPECT FLOW CONTROL VALVE ASSEMBLY

a.



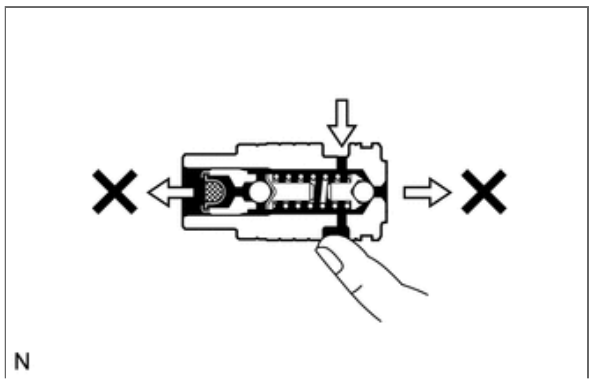
Coat the flow control valve assembly with power steering fluid.

b. Check that it falls smoothly into the flow control valve assembly hole by its own weight

NOTICE:
Do not damage the flow control valve or hole of the vane pump front housing.

If the flow control valve assembly does not fall into the hole smoothly, replace the vane pump assembly.

c.

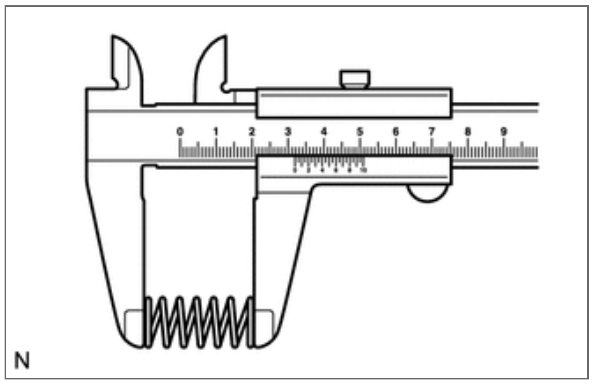


Check the flow control valve assembly for leakage.

i. Close one of the holes and apply compressed air of 392 to 490 kPa (4.0 to 4.9 kgf/cm^2, 57 to 71 psi) into the hole on the opposite side, and confirm that air does not come out from the end holes.
If air leaks, replace the vane pump assembly.

4.INSPECT FLOW CONTROL VALVE COMPRESSION SPRING

a.



Using a vernier caliper, measure the free length of the flow control valve compression spring.

Minimum free length:
31.95 mm (1.26 in.)

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

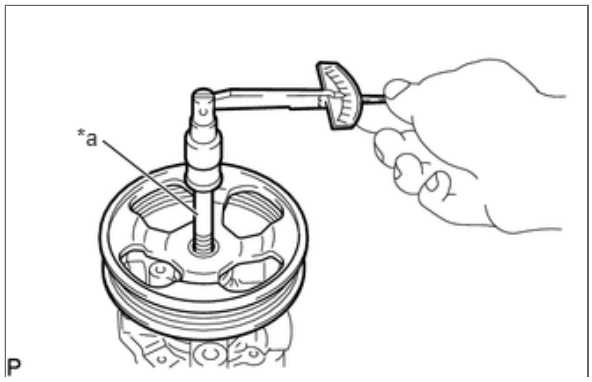
5.INSPECT PRESSURE PORT UNION

a. Visually check the pressure port union for fluid leaks.
If there is a leak, replace the vane pump assembly.

6.INSPECT TOTAL PRELOAD

a. Check that the vane pump rotates smoothly without abnormal noise.

b.



*a	Service Bolt

Temporarily install a service bolt.

Recommended service bolt:
Thread diameter:
10 mm (0.394 in.)
Thread pitch:
1.25 mm (0.0492 in.)
Bolt length:
50 mm (1.97 in.)

c. Using a torque wrench, measure the vane pump rotating torque.

Standard rotating torque:
0.3 N*m (3 kgf*cm, 2 in.*lbf) or less

If the rotating torque is not as specified, check the vane pump housing oil seal.