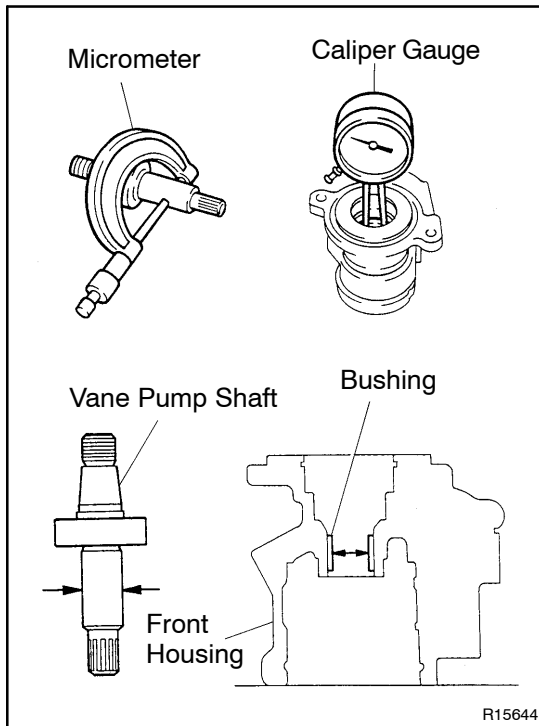




INSPECTION

1. CHECK OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING

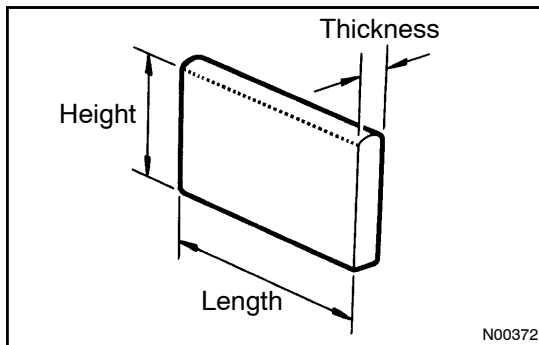
Using a micrometer and caliper gauge, measure the oil clearance.

Standard clearance:

0.03 – 0.05 mm (0.0012 – 0.0020 in.)

Maximum clearance: 0.07 mm (0.0028 in.)

If it is more than maximum, replace the front housing and vane pump shaft.



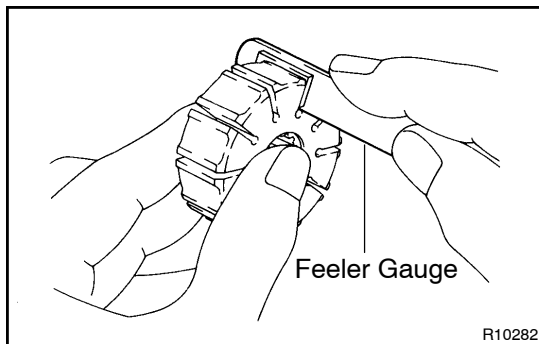
2. INSPECT VANE PUMP ROTOR AND 10 VANE PLATES

(a) Using a micrometer, measure the height, thickness and length of the plate.

Minimum height: 8.6 mm (0.339 in.)

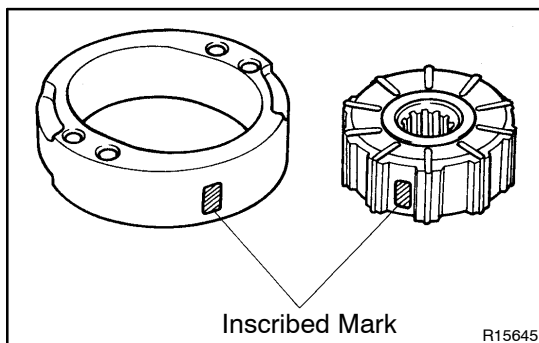
Minimum thickness: 1.397 mm (0.0550 in.)

Minimum length: 14.991 mm (0.5902 in.)



(b) Using a feeler gauge, measure the clearance between the rotor groove and plate.

Maximum clearance: 0.033 mm (0.0013 in.)



If more than maximum, replace the plate and/or rotor with one having the mark equivalent to the mark stamped on the cam ring.

Inscribed mark

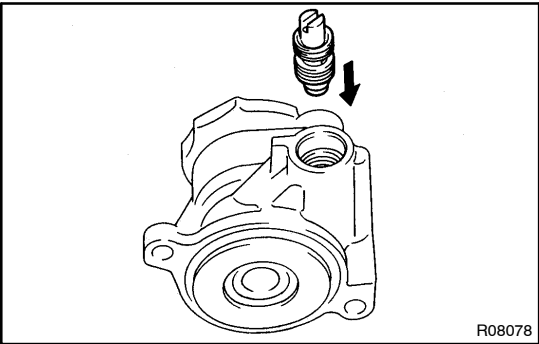
Vane pump rotor: 1, 2, or None

Cam ring: 2, 3, or 4

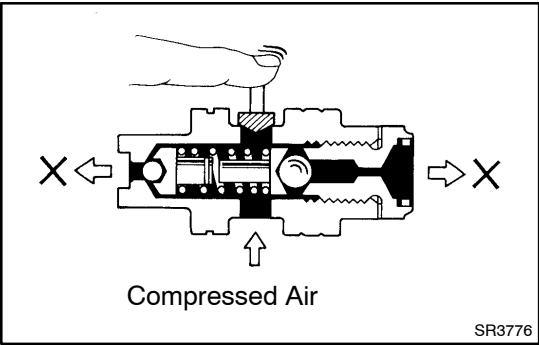
HINT:
There are 3 vane plate lengths for the following rotor and cam ring marks.

Rotor mark	Cam ring mark	Vane plate part number	Vane plate length mm (in.)
None	2	44345-60030	14.995 – 14.997 (0.59035 – 0.59043)
1	3	44345-60040	14.993 – 14.995 (0.59027 – 0.59035)
2	4	44345-60050	14.991 – 14.993 (0.59020 – 0.59027)

V08067

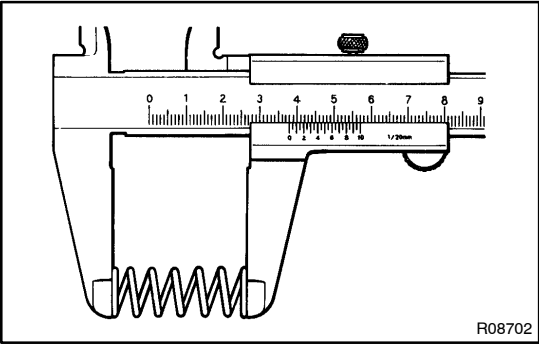


- 3. INSPECT FLOW CONTROL VALVE**
- (a) Coat the valve with power steering fluid and check that it falls smoothly into the valve hole by its own weight.

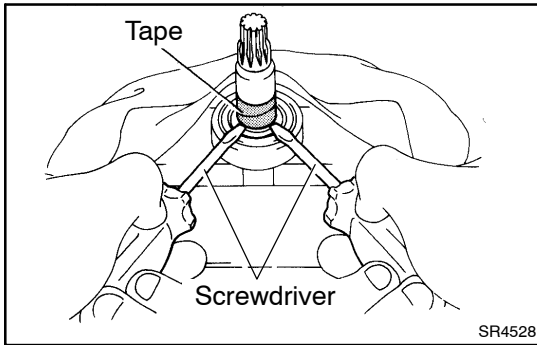


- (b) Check the valve for leakage. Close one of the holes and apply 392 – 490 kPa (4 – 5 kgf/cm², 57 – 71 psi) of compressed air into the opposite side, and confirm that air does not come out from the end holes.

Inscribed mark:
A, B, C, D, E or F



- 4. INSPECT SPRING**
- Using calipers, measure the free length of the spring.
- Minimum free length: 35 – 37 mm (1.38 – 1.46 in.)**
- If it is not within the specification, replace the spring.

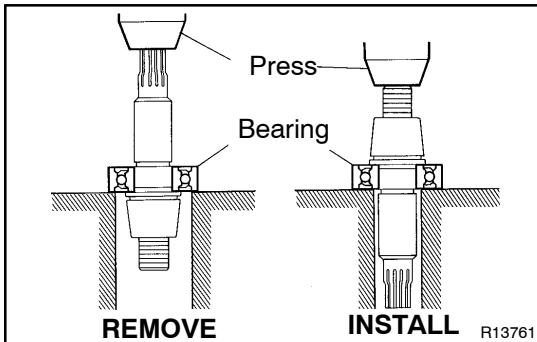


5. IF NECESSARY, REPLACE BEARING

- (a) Using 2 screwdrivers, remove the snap ring from the vane pump shaft.

NOTICE:

To prevent vane pump shaft damage, wind tape on the shaft.

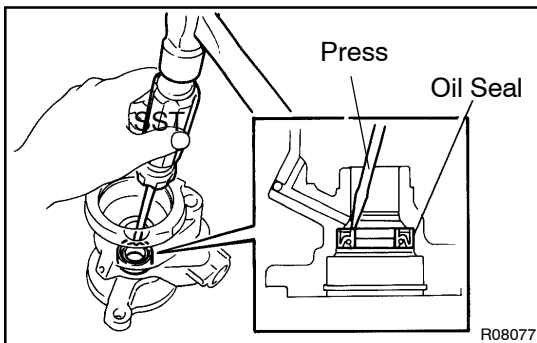


- (b) Using a press, press out the bearing.
 (c) Coat a new bearing with power steering fluid.
 (d) Using a press, press in the bearing.

NOTICE:

Be careful not to damage the shaft.

- (e) Install a new snap ring to the shaft.

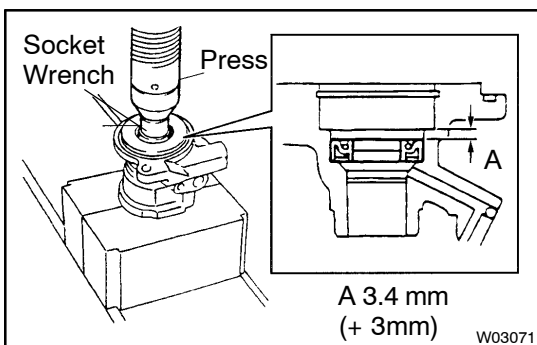


6. IF NECESSARY, REPLACE OIL SEAL

- (a) Using a screwdriver and hammer, tap out the oil seal from the front housing.

NOTICE:

Be careful not to damage the housing.



- (b) Coat a new oil seal lip with power steering fluid.
 (c) Using a socket wrench (23 mm), press in the oil seal as shown in the illustration.

NOTICE:

- **Make sure you install the oil seal facing the correct direction.**
- **Be careful not to damage the front housing.**