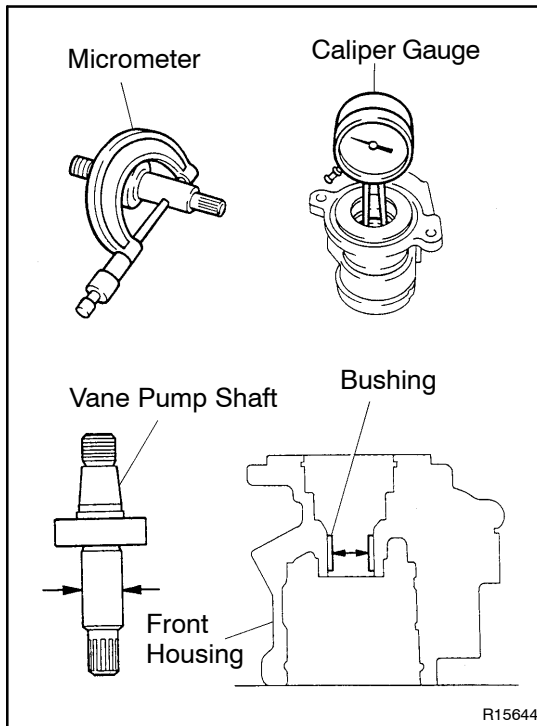




INSPECTION

1. CHECK OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING

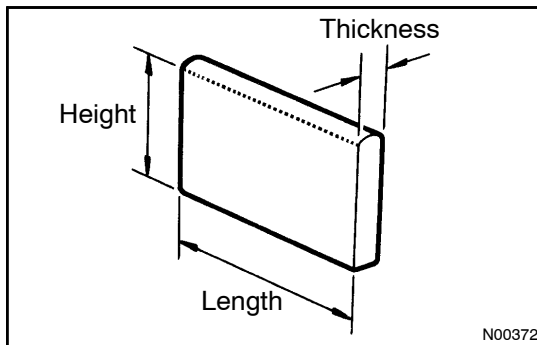
Using a micrometer and caliper gauge, measure the oil clearance.

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.



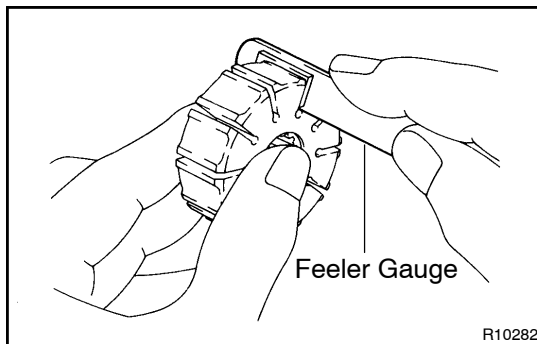
2. INSPECT VANE PUMP ROTOR AND 10 VANE PLATES

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

Minimum height: 8.6 mm (0.339 in.)

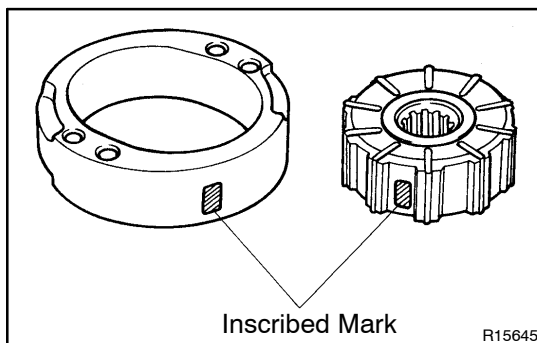
Minimum thickness: 1.397 mm (0.0550 in.)

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

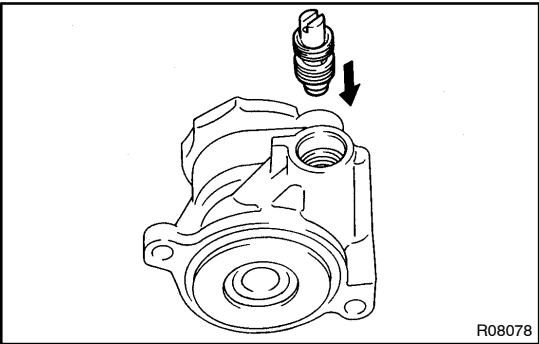
Vane pump rotor: 1, 2, or None

Cam ring: 2, 3, or 4

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

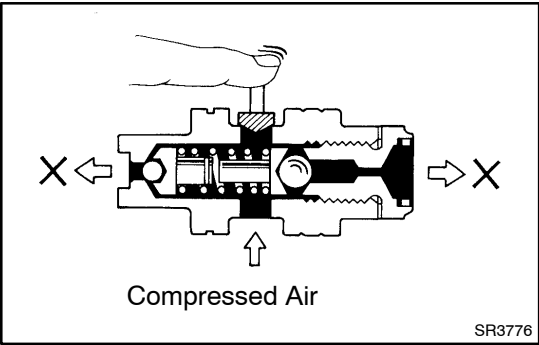
Rotor mark	Cam ring mark	Vane plate part number	Vane plate length mm (in.)
None	2	44345-60030	14.995 – 14.997 (0.59035 – 0.59043)
1	3	44345-60040	14.993 – 14.995 (0.59027 – 0.59035)
2	4	44345-60050	14.991 – 14.993 (0.59020 – 0.59027)

V08067

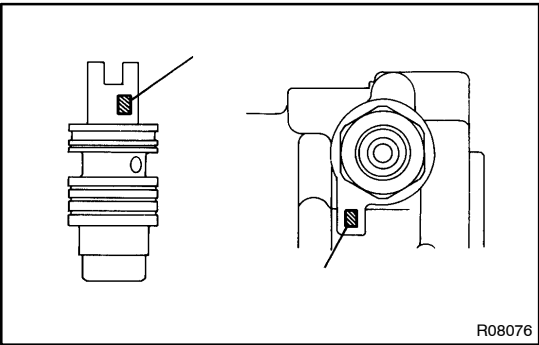


3. INSPECT FLOW CONTROL VALVE

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



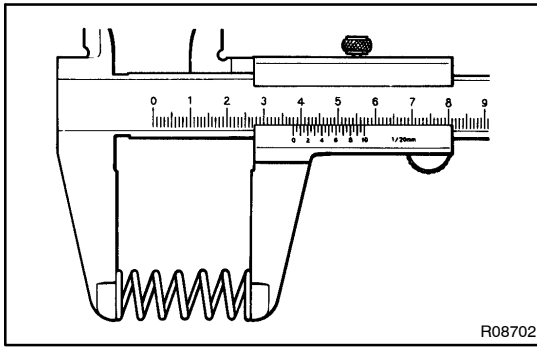
- (b) Check the valve for leakage. Close one of the holes and apply 392–490 kPa (4–5 kgf/cm², 57–71 psi) of compressed air into the opposite side, and confirm that air does not come out from the end holes.



If necessary, replace the valve with one having the same letter as inscribed in the front housing.

Inscribed mark:

A, B, C, D, E or F

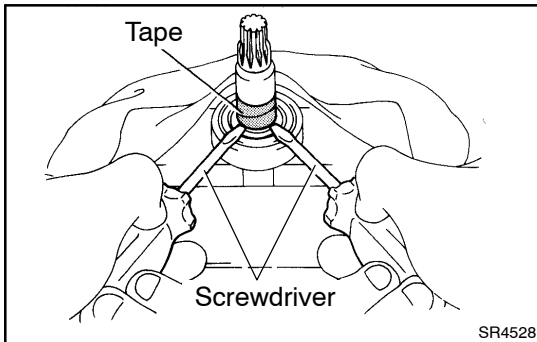


4. INSPECT SPRING

Using calipers, measure the free length of the spring.

Minimum free length: 33.2 mm (1.307 in.)

If it is not within the specification, replace the spring.

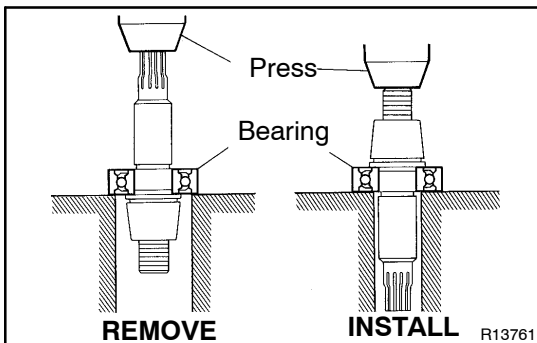


5. IF NECESSARY, REPLACE BEARING

- (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.

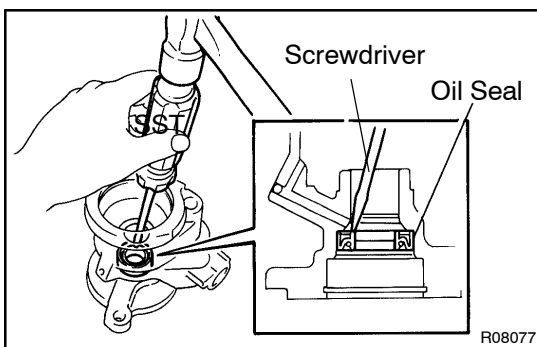
- (c) Coat a new bearing with power steering fluid.

- (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.

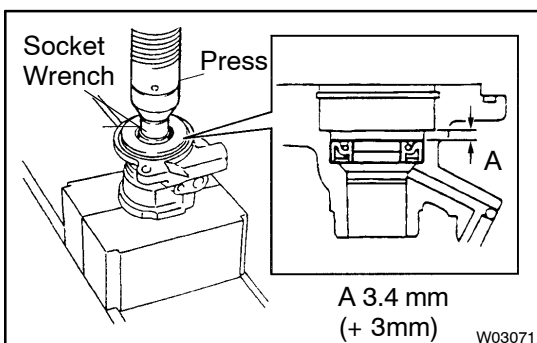


6. IF NECESSARY, REPLACE OIL SEAL

- (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.**