

## INSPECTION

### NOTICE:

When using a vise, do not overtighten it.

#### 1. CHECK OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND REAR HOUSING

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

**Standard clearance:**

**0.020 – 0.087 mm (0.00079 – 0.00343 in.)**

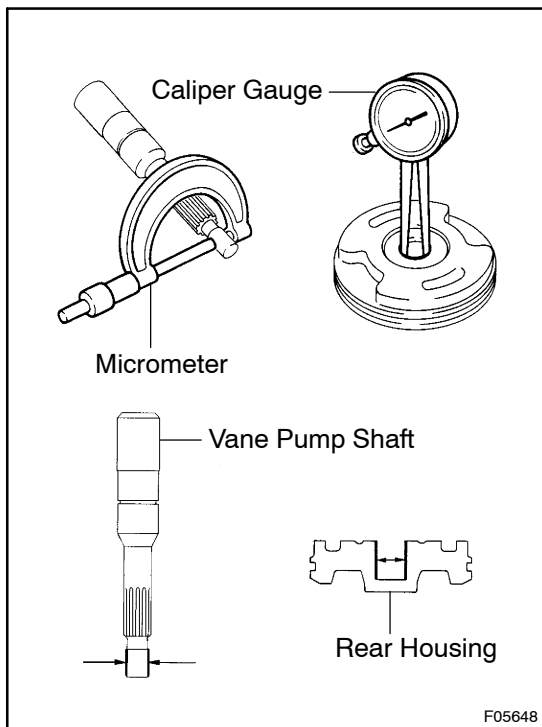
**Maximum clearance: 0.087 mm (0.00343 in.)**

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

#### 2. INSPECT CAM RING

Check the cam ring for wear or scratches.

If necessary, replace the cam ring with the vane pump rotor and vane plates.



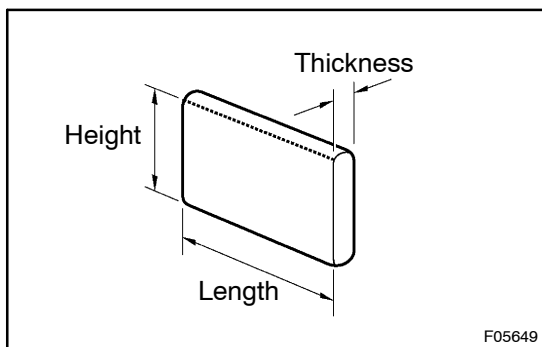
#### 3. INSPECT VANE PUMP ROTOR AND VANE PLATES

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

**Minimum height: 9.2 mm (0.362 in.)**

**Minimum thickness: 1.965 mm (0.07736 in.)**

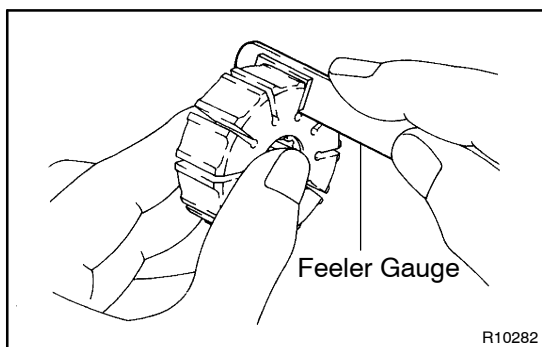
**Minimum length: 15.953 mm (0.62807 in.)**



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

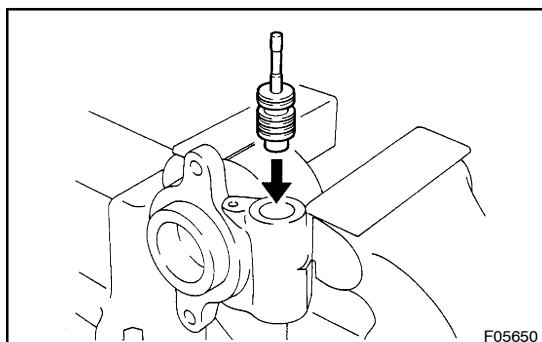
**Maximum clearance: 0.03 mm (0.0012 in.)**

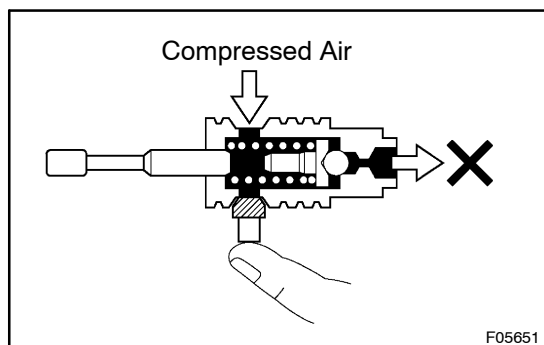
If they are not within the specifications, replace the rotor and vane plates with the cam ring.



#### 4. INSPECT FLOW CONTROL VALVE

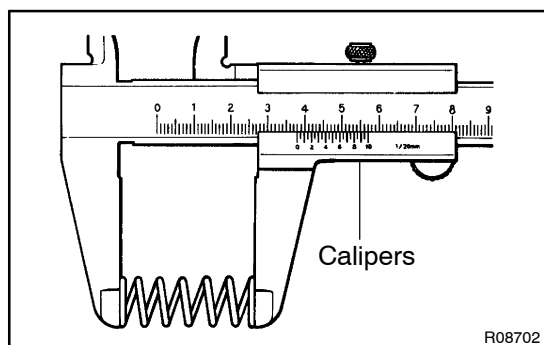
- (a) Coat the valve with power steering fluid and check that it falls smoothly into the valve hole by its own weight.





- (b) Check the valve for leakage. Close one of the holes and apply compressed air 392 – 490 kPa (4 – 5 kgf/cm<sup>2</sup>, 57 – 71 psi) into the opposite side hole, and confirm that air does not come out from the end hole.

If necessary, replace the valve with the front housing.

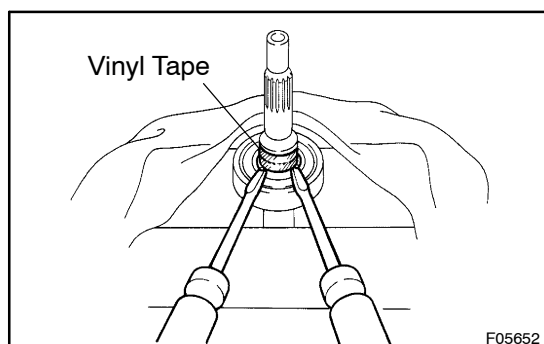


## 5. INSPECT SPRING

Using a calipers, measure the free length of the spring.

**Minimum free length: 33.4 mm (1.315 in.)**

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

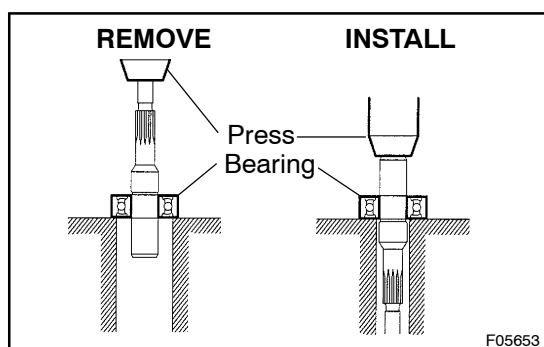


## 6. IF NECESSARY, REPLACE BEARING

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

### NOTICE:

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

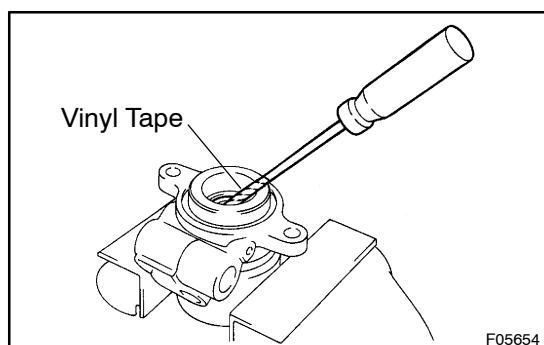


- (b) Press out the bearing.  
(c) Coat a new bearing with power steering fluid and press in it.

### NOTICE:

**Be careful not to damage the shaft.**

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



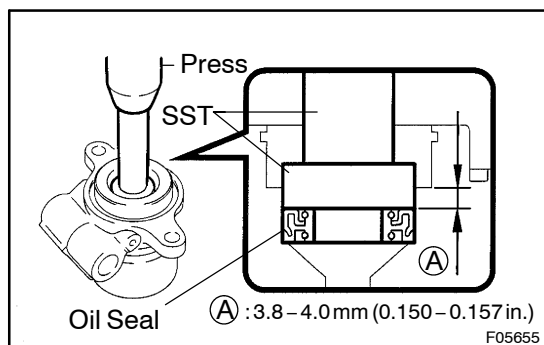
## 7. IF NECESSARY, REPLACE OIL SEAL

- (a) Using a screwdriver with vinyl tape wound around its tip, remove the oil seal from the front housing.

### NOTICE:

**Be careful not to damage the front housing.**

- (b) Coat a new oil seal lip with power steering fluid.



(c) Using SST, press in the oil seal as shown in the illustration.

SST 09950-60010 (09951-00300),  
09950-70010 (09951-07100)

**NOTICE:**

**Make sure to install the oil seal facing the correct direction.**