

## INSPECTION

### 1. MEASURE OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING

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

**Standard clearance:**

**Front housing and shaft**

**0.021 – 0.043 mm (0.00079 – 0.00169 in.)**

**Rear housing and shaft**

**0.020 – 0.077 mm (0.00079 – 0.00303 in.)**

**Maximum clearance:**

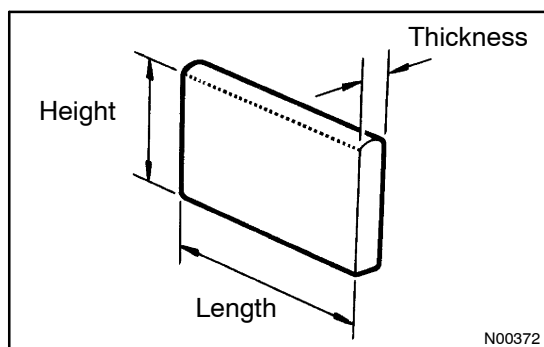
**Front housing and shaft**

**0.070 mm (0.00276 in.)**

**Rear housing and shaft**

**0.080 mm (0.00315 in.)**

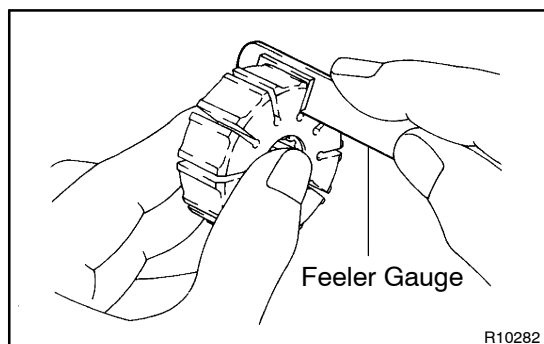
If it is more than the maximum, replace a new vane pump assembly.



### 2. INSPECT VANE PUMP ROTOR AND 10 VANE PLATES

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

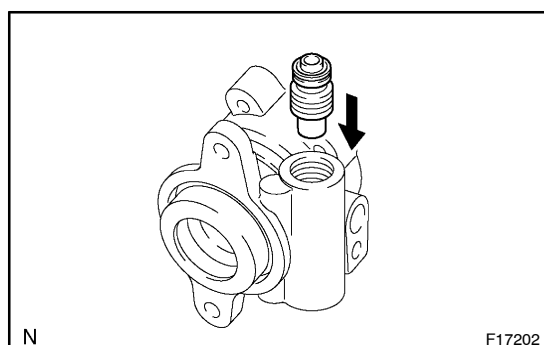
**Minimum thickness: 1.405 mm (0.05531 in.)**



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

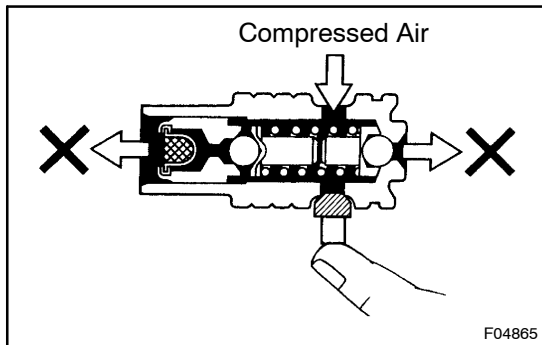
**Maximum clearance: 0.033 mm (0.00130 in.)**

If it is more than the maximum, replace a new vane pump assembly.



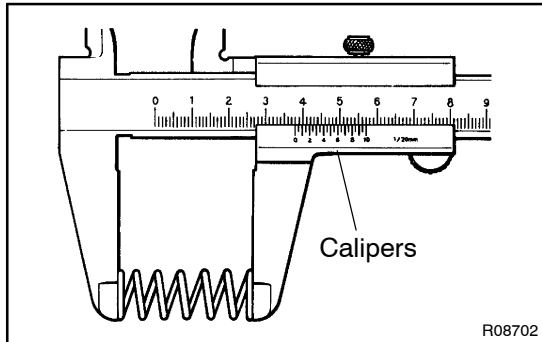
### 3. INSPECT FLOW CONTROL VALVE

- (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 flow control 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 holes.

If necessary, replace a new vane pump assembly.

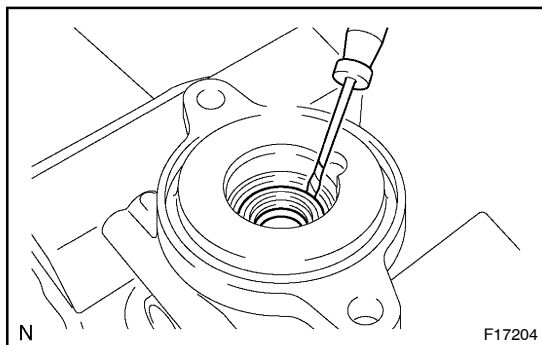


#### 4. INSPECT SPRING

Using calipers, measure the free length of the spring.

**Minimum free length: 31.3 mm (1.2323 in.)**

If it is not within the specification, replace a new vane pump assembly.

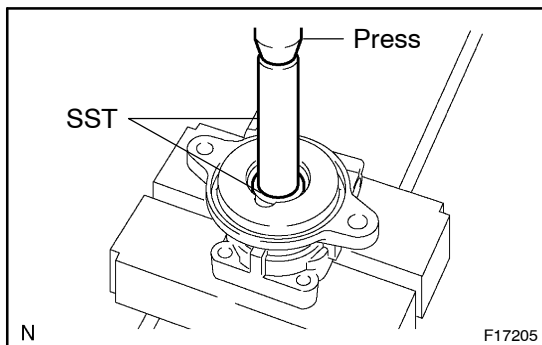


#### 5. IF NECESSARY, REPLACE OIL SEAL

- (a) Using a screwdriver with vinyl tape wound around its tip 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 SST, press in the oil seal as shown in the illustration.

SST 09950-60010 (09951-00320),  
09950-70010 (09951-07100)

##### NOTICE:

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