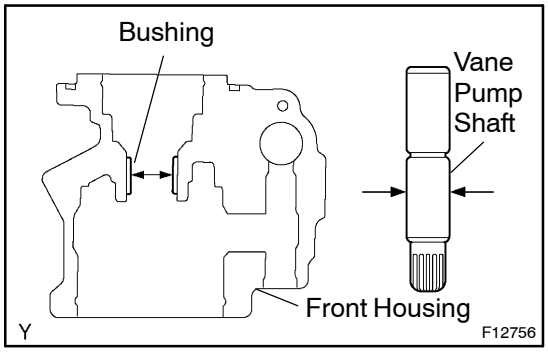
SR1CW–01

# INSPECTION

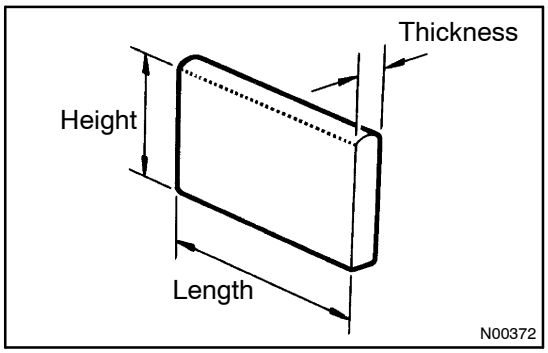



**1. MEASURE OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING**

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

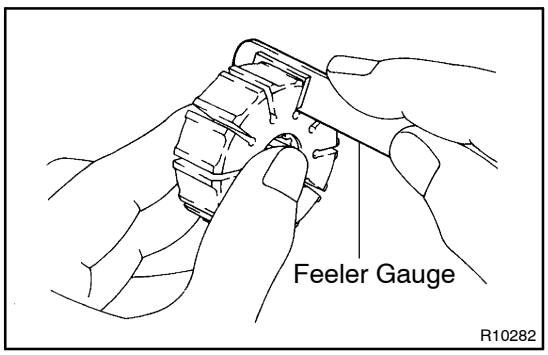
**Standard clearance:**
**0.03 – 0.05 mm (0.0012 – 0.0020 in.)**
**Maximum clearance:**
**0.07 mm (0.0028 in.)**

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

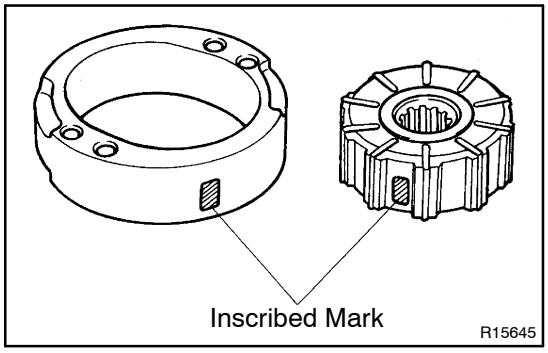



**2. INSPECT VANE PUMP ROTOR AND 10 VANE PLATES**

(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: 0.035 mm (0.0014 in.)**



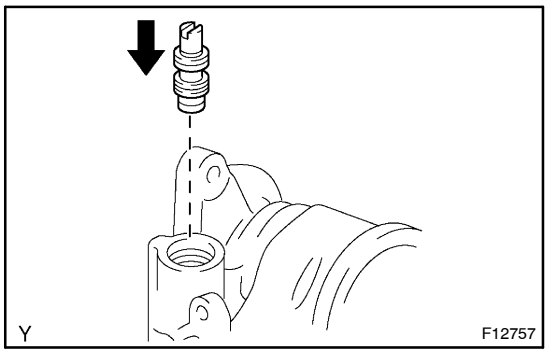

If it is more than the maximum, replace the plate and/or rotor with one having the same mark stamped on the cam ring.

**Inscribed mark: 1, 2, 3, 4 or None**

HINT:

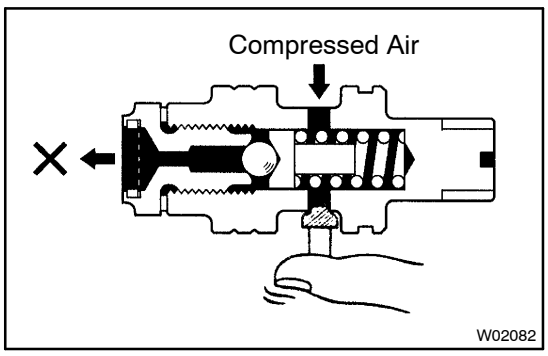
There are 5 vane plate lengths with the following rotor and cam ring marks:

| Rotor and cam ring mark | Vane plate part number | Vane plate length mm (in.) |
|---|---|---|
| None | 44345–60010 | 14.999–15.001 (0.59051–0.59059) |
| 1 | 44345–60020 | 14.997–14.999 (0.59043–0.59051) |
| 2 | 44345–60030 | 14.995–14.997 (0.59035–0.59043) |
| 3 | 44345–60040 | 14.993–14.995 (0.59027–0.59035) |
| 4 | 44345–60050 | 14.991–14.993 (0.59020–0.59027) |

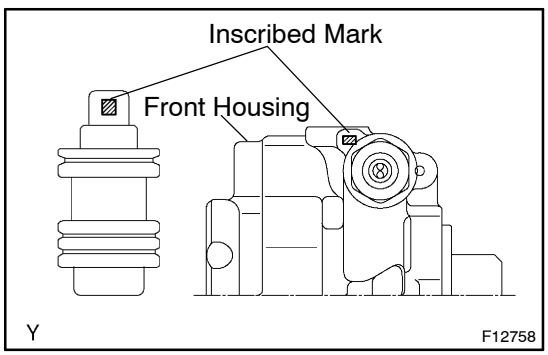



**3. INSPECT FLOW CONTROL VALVE**

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

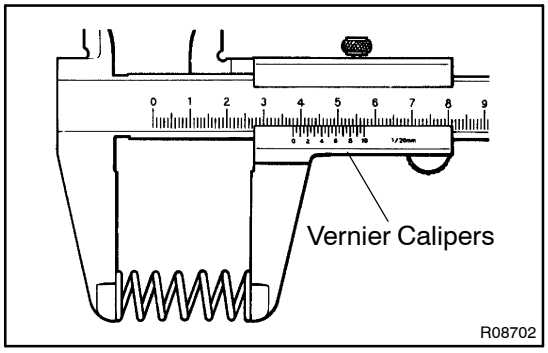



(b) Check the flow control valve for leakage.
Close one of the holes and apply compressed air 392 – 490 kPa (4 – 5 kgf/cm$^2$, 57 – 71 psi) into the opposite side, and confirm that air does not come out from the end hole.




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

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

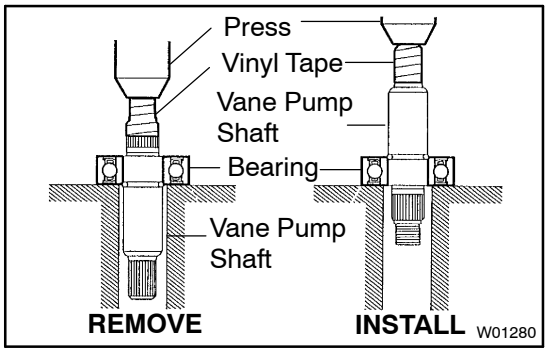



**4. INSPECT SPRING**

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

**Minimum free length: 36.9 mm (1.453 in.)**

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




**5. IF NECESSARY, REPLACE BEARING**

(a) Using a press, remove the bearing from the vane pump shaft.

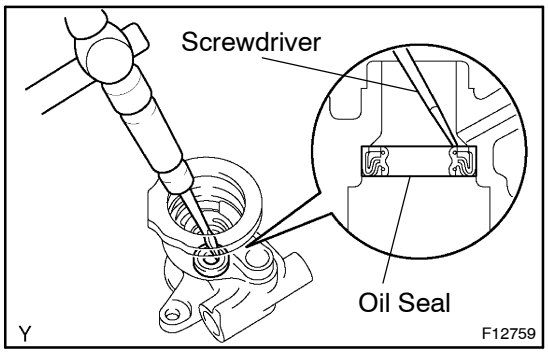
(b) Using a snap ring expander, replace the snap ring with a new one.

**NOTICE:**

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

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

(d) Using a press, install the bearing to the vane pump shaft.

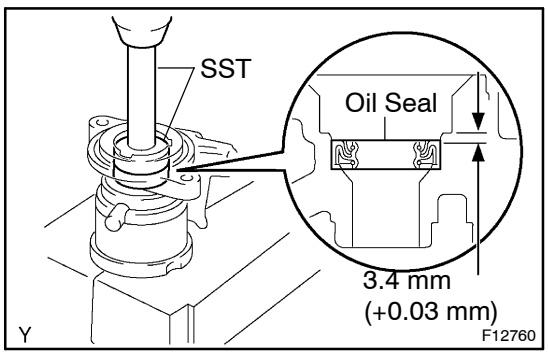



**6. IF NECESSARY, REPLACE OIL SEAL**

(a) Using a screwdriver and a hammer, tap out 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 and a press, install the oil seal.

SST 09950–60010 (09951–00230), 09950–70010 (09951–07100)

**NOTICE:**

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