

INSPECTION

NOTICE:

When using a vise, do not overtighten it.

1. MEASURE OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING

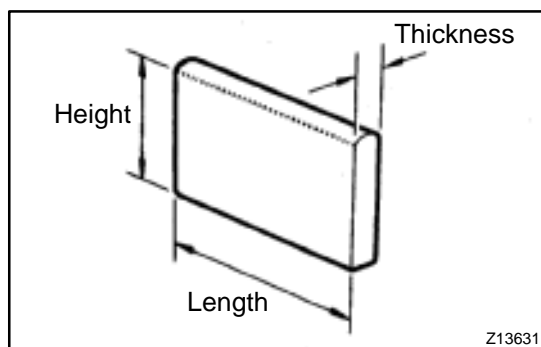
Using a micrometer and a caliper gauge, measure the oil clearance.

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 the maximum, replace the front housing and vane pump shaft.



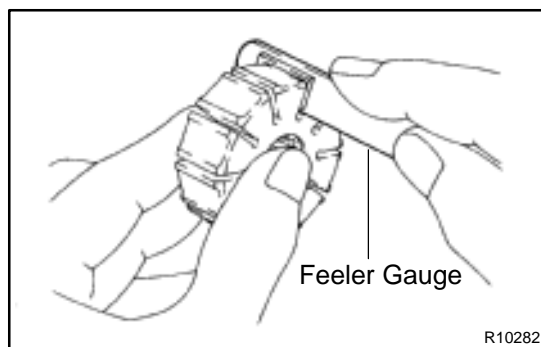
2. INSPECT VANE PUMP ROTOR AND VANE PLATES

- (a) Using a micrometer, measure the height, thickness and length of the 10 plates.

Minimum height: 8.6 mm (0.339 in.)

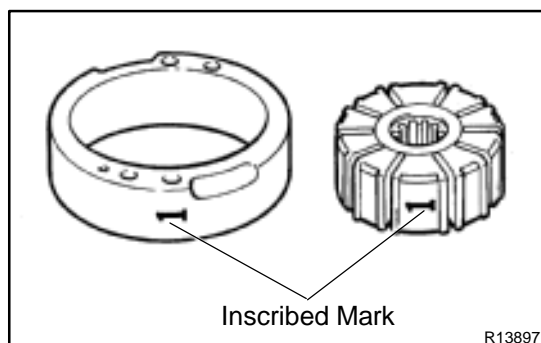
Minimum thickness: 1.397 mm (0.05500 in.)

Minimum length: 14.991 mm (0.59020 in.)



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

Maximum clearance: 0.035 mm (0.00138 in.)



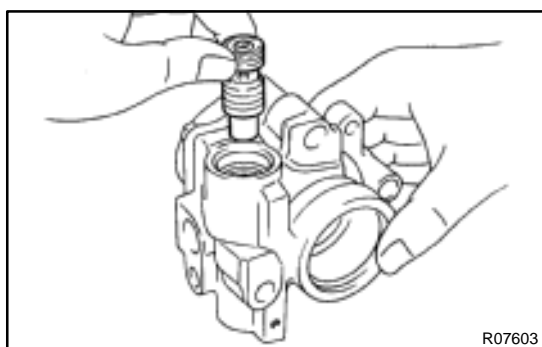
If it is more than the maximum, replace the plate and/or rotor with the one having the same mark stamped on the cam ring.

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

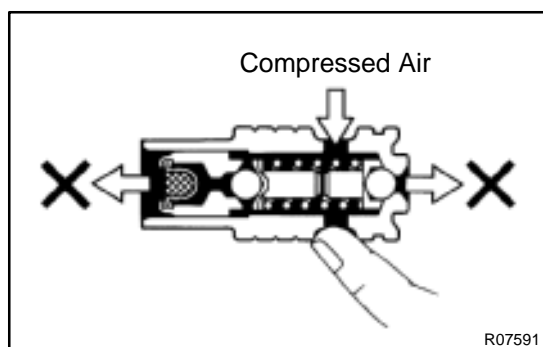
HINT:

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

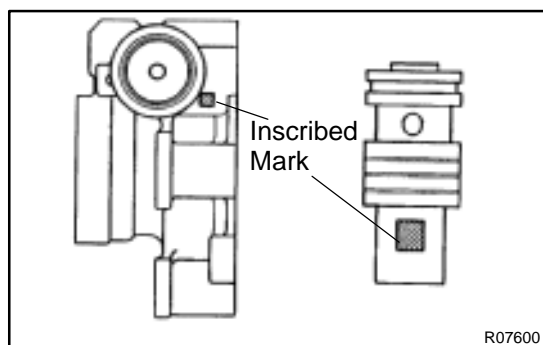
| Rotor and cam ring mark | Vane plate part number | Vane plate length mm (in.) |
|-------------------------|------------------------|--|
| None | 44345-26010 | 14.999 – 15.001 (0.59051 – 0.59059) |
| 1 | 44345-26020 | 14.997 – 14.999 (0.59043 – 0.59051) |
| 2 | 44345-26030 | 14.995 – 14.997 (0.59035 – 0.59043) |
| 3 | 44345-26040 | 14.993 – 14.995 (0.59027 – 0.59035) |
| 4 | 44345-26050 | 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.

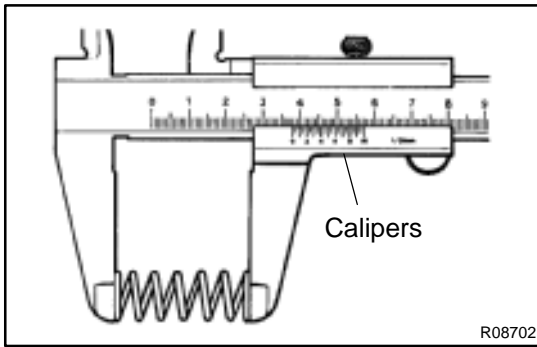


- (b) Check the flow control valve for leakage. Close one of the holes and apply 392 – 490 kPa (4 – 5 kgf/cm², 57 – 71 psi) of compressed air into the opposite side hole, and confirm that air does not come out from the end holes.



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

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

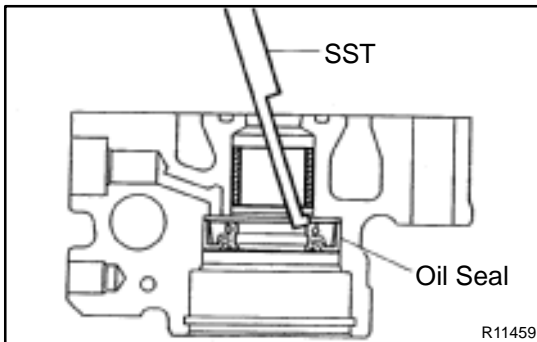


4. INSPECT COMPRESSION SPRING

Using calipers, measure the free length of the spring.

Minimum length: 33 mm (1.30 in.)

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



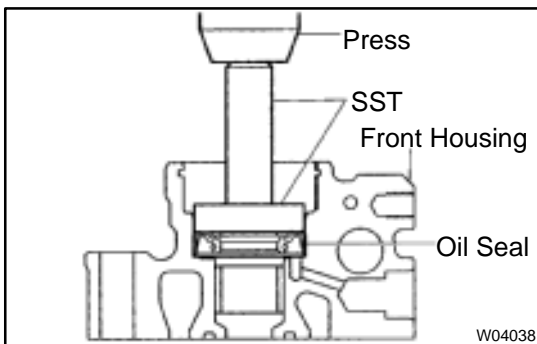
5. IF NECESSARY, REPLACE OIL SEAL

(a) Using SST, tap out the oil seal from the front housing.

SST 09631-10030

NOTICE:

Be careful not to damage the bushing of the front housing.



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

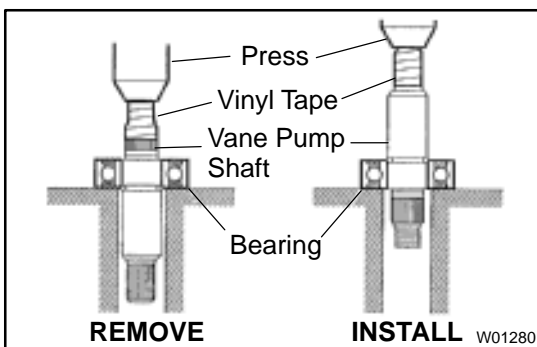
(c) Using SST, press in the oil seal.

SST 09950-60010 (09951-00330),

09950-70010 (09951-07100)

NOTICE:

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



6. IF NECESSARY, REPLACE BEARING

(a) Wind vinyl tape on the serrated part of the vane pump shaft.

(b) Using a press, press out the bearing.

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

NOTICE:

Be careful not to damage the shaft.

(d) Coat a new bearing with power steering fluid, and press the shaft into the bearing.