

INSPECTION

1. MEASURE OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING

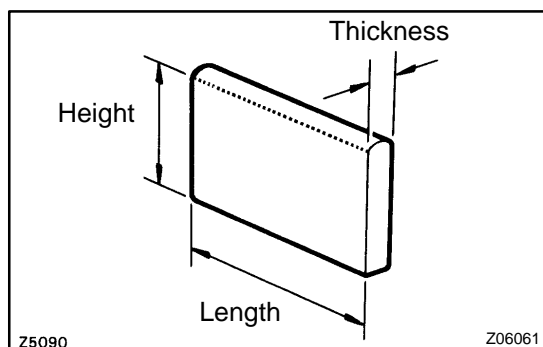
Using a micrometer and caliper gauge, measure the oil clearance.

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



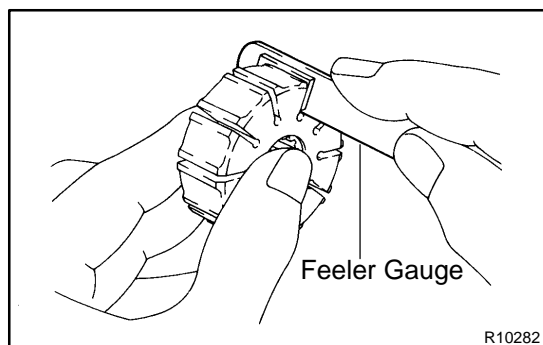
2. INSPECT VANE PUMP ROTOR AND VANE PLATES

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

Minimum height: 8.6 mm (0.339 in.)

Minimum thickness: 1.40 mm (0.0551 in.)

Minimum length: 14.99 mm (0.5902 in.)

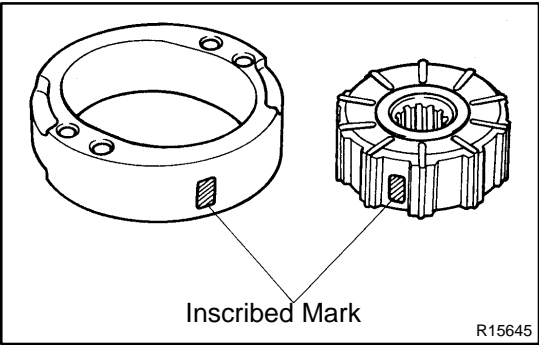


- (b) Using a feeler gauge, measure the clearance between the rotor groove and vane plate.

Maximum clearance: 0.04 mm (0.0016 in.)

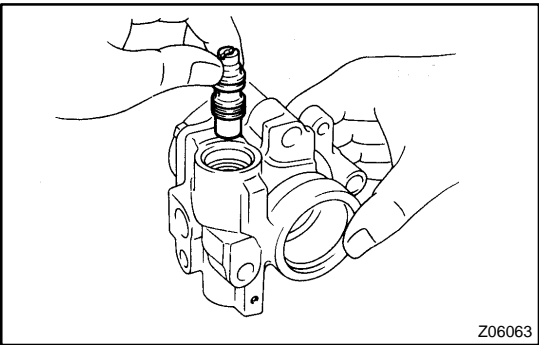
If it is more than the maximum, replace the vane plate and/or rotor with the one having the same mark stamped on the cam ring.

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



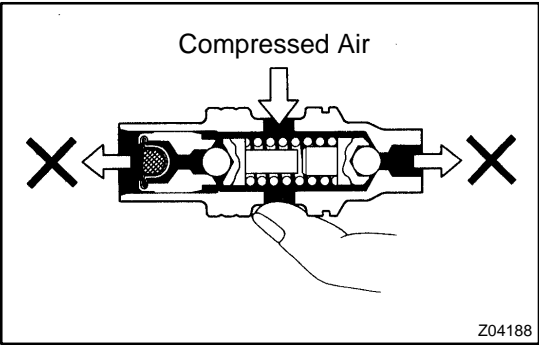
HINT:
There are 5 vane plate lengths with the following rotor and cam ring marks:

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)

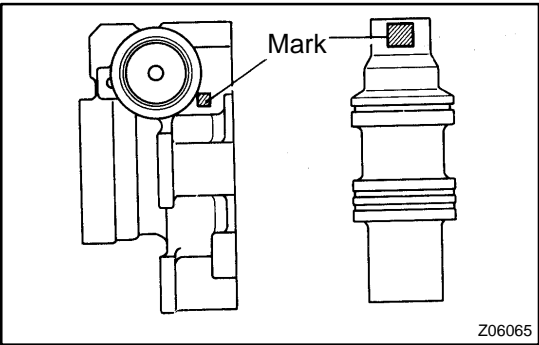


3. INSPECT FLOW CONTROL VALVE

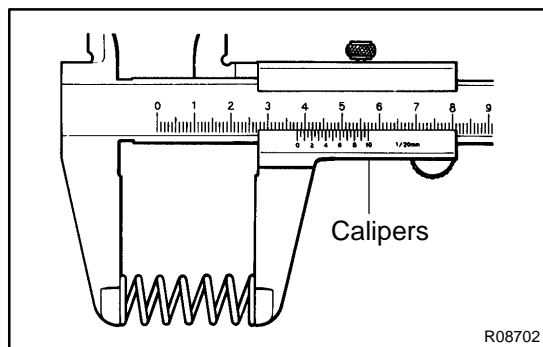
(a) Coat the valve with power steering fluid and check that it falls smoothly into the valve hole by its own weight.



(b) Check the 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

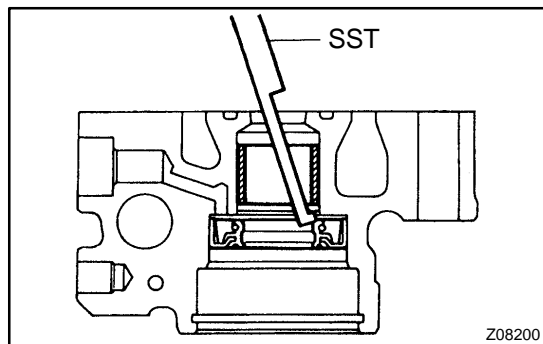


4. INSPECT SPRING

Using calipers, measure the free length of the spring.

Minimum free length: 33.0 mm (1.299 in.)

If it is not within specification, replace the spring.



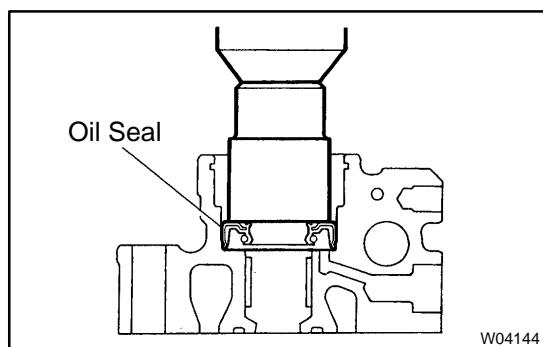
5. IF NECESSARY, REPLACE OIL SEAL

(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.

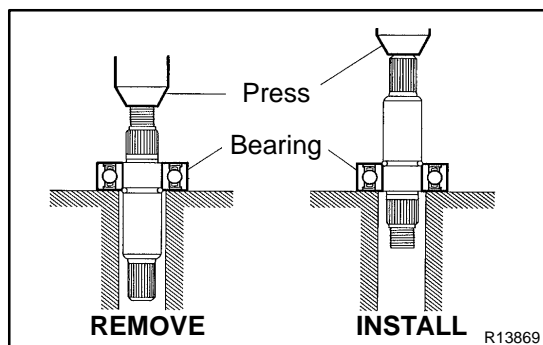


(b) Coat a new oil seal lip with power steering fluid.

(c) Using a socket wrench (24 mm), press in the oil seal.

NOTICE:

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



6. IF NECESSARY, REPLACE BEARING

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

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

NOTICE:

Be careful not to damage the shaft.

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

(d) Using a press, press in the bearing.