SR0PM–01

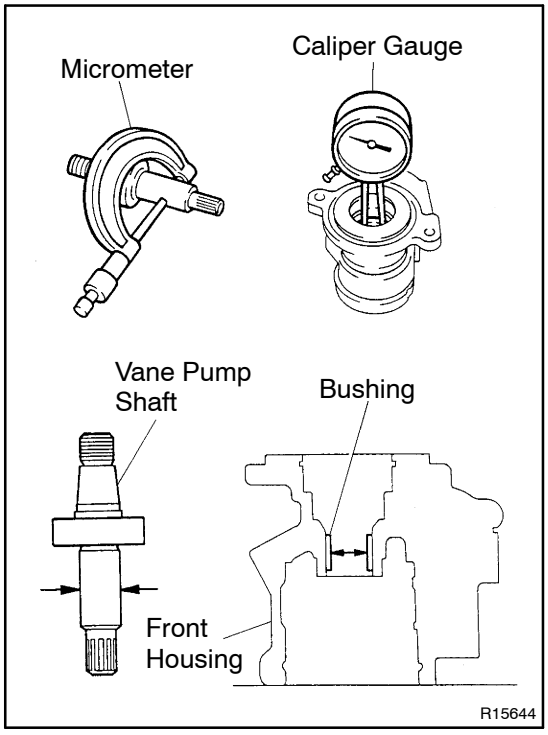
INSPECTION

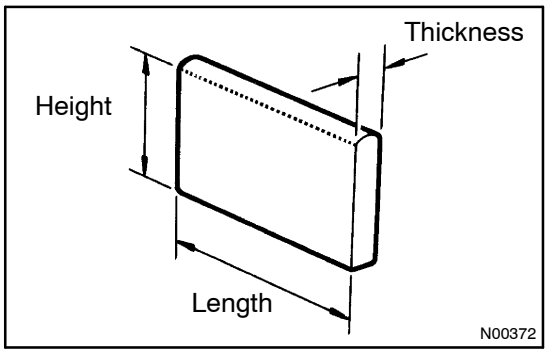
1. MEASURE OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING

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

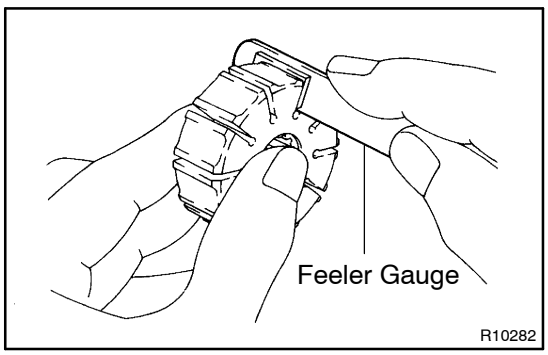




2. INSPECT VANE PUMP ROTOR AND 10 VANE PLATES

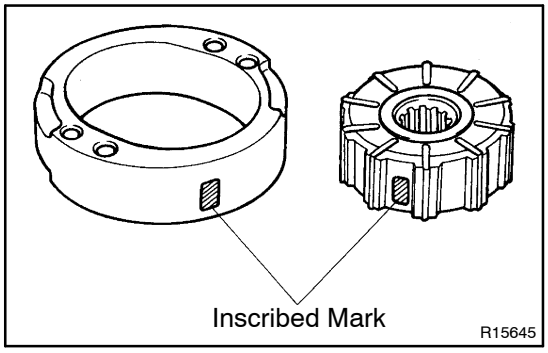
(a) Using a micrometer, measure the height, thickness and length of the plate.

Minimum height: 8.6 mm (0.339 in.)
Minimum thickness: 1.397 mm (0.05500 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: 0.033 mm (0.00130 in.)



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

Inscribed mark:
(Rigid Front Suspension)
Vane pump rotor: 2, 3 or 4
Cam ring: None, 1 or 2
(Independent Front Suspension)
Vane pump rotor: 1, 2, 3 or 4
Cam ring: None, 1, 2 or 3

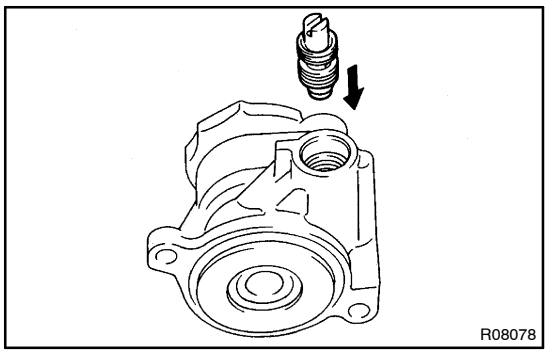
HINT:
There are any vane plate lengths for the following rotor and cam ring marks.

Rigid Front Suspension:

Rotor mark (Cam ring mark)	Vane plate part number	Vane plate length mm (in.)
2 (None)	44345–60030	14.995 – 14.997 (0.59035 – 0.59043)
3 (1)	44345–60040	14.993 – 14.995 (0.59027 – 0.59035)
4 (2)	44345–60050	14.991 – 14.993 (0.59020 – 0.59027)

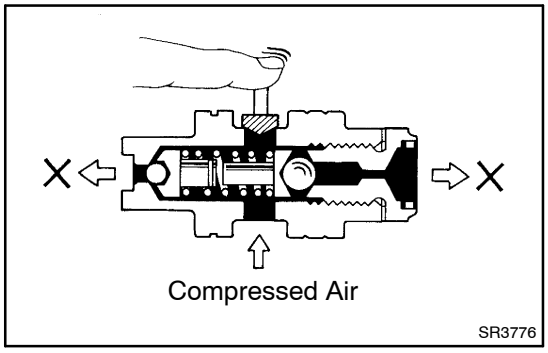
Independent Front Suspension:

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

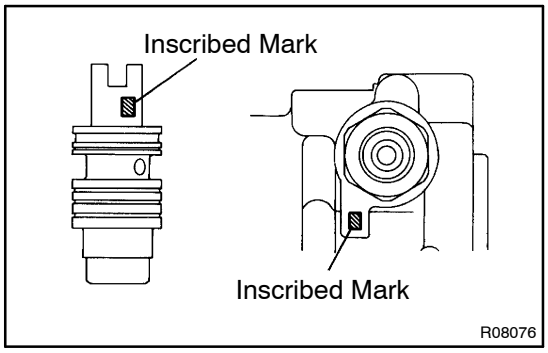


3. INSPECT FLOW CONTROL VALVE

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

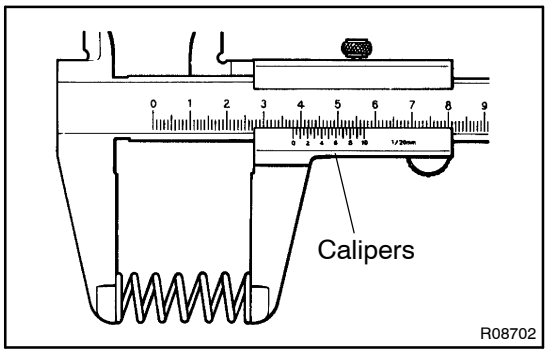


(b) Check the flow control valve for leakage. Close one of the holes and apply compressed air 392 – 490 kPa (4 – 5 kgf/cm^2, 57 – 71 psi) into the opposite side hole, and confirm that air does not come out from the end holes.



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

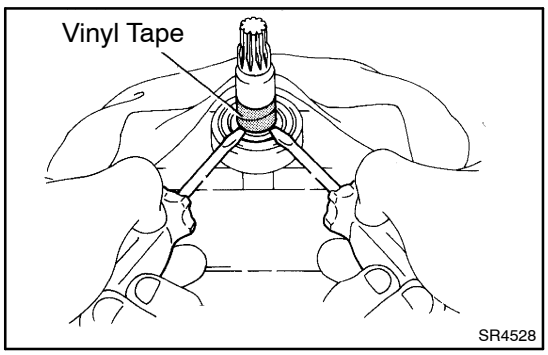
Inscribed mark: A, B, C, D, E or F



4. INSPECT SPRING

Using calipers, measure the free length of the spring.

Standard free length: 35 – 37 mm (1.38 – 1.46 in.)

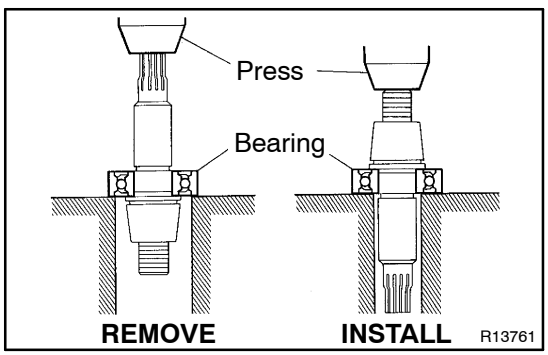


5. IF NECESSARY, REPLACE BEARING

(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.

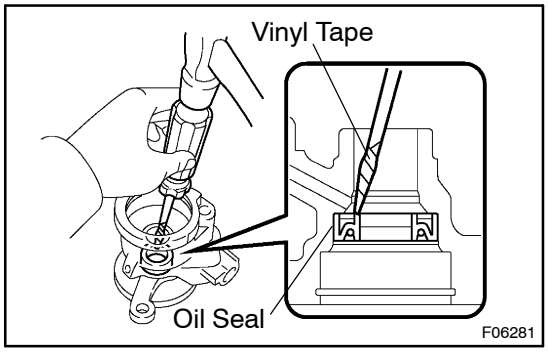


(b) Press out the bearing.
(c) Coat a new bearing with power steering fluid.
(d) Press in the bearing.

NOTICE:

Be careful not to damage the shaft.

(e) Install a new snap ring to the shaft.

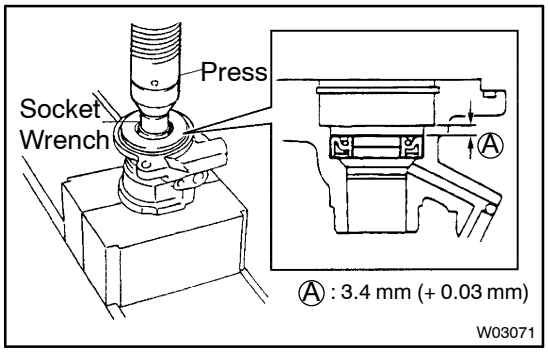


6. IF NECESSARY, REPLACE OIL SEAL

(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 a socket wrench (23 mm), press in the oil seal as shown in the illustration.

NOTICE:

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