Vane Pump Shaft

Front Housing   Bushing

P   F16384

SR1HW–01

INSPECTION
NOTICE:
When using a vise, do not overtighten it.
1. **CHECK OIL CLEARANCE BETWEEN VANE PUMP SHAFT AND BUSHING**
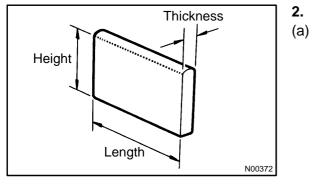Using a micrometer and caliper gauge, measure the oil clearance.
   Standard clearance:
   0.03 – 0.05 mm (0.0012 – 0.0020 in.)
   Maximum clearance: 0.07 mm (0.0028 in.)
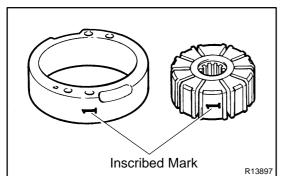If it is more than the maximum, replace the front housing and vane pump shaft.

Thickness

Height

Length

N00372

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 (0.0550 in.)
   Minimum length: 14.991 mm (0.5902 in.)

Feeler Gauge

R10282

(b) Using a feeler gauge, measure the clearance between the rotor groove and plate.
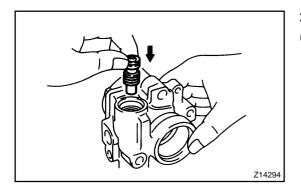   **Maximum clearance: 0.035 mm (0.0014 in.)**

Inscribed Mark

R13897

If it is more than the maximum, replace the plate and/or rotor with one having the same mark stamped on the cam ring.
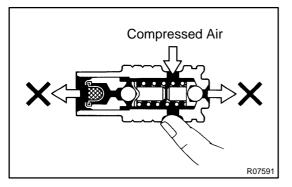
Inscribed mark: 1, 2, 3, 4 or None

HINT:

There are 5 vane plate lengths with the following rotor and cam ring marks:
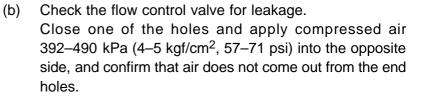
Rotor and cam ring mark	Vane plate part number	Vane plate length mm (in.)
None	44345–04010	14.999–15.001 (0.59051–0.59059)
1	44345–04020	14.997–14.999 (0.59043–0.59051)
2	44345–04030	14.995–14.997 (0.59035–0.59043)
3	44345–04040	14.993–14.995 (0.59027–0.59035)
4	44345–04050	14.991–14.993 (0.59020–0.59027)

Z14294

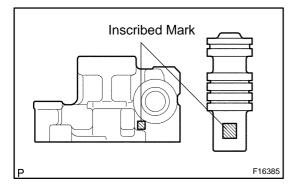**3. INSPECT FLOW CONTROL VALVE**

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

Compressed Air

R07591

(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 holes.

Inscribed Mark

P

F16385

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

NOTICE:

Install a new valve with the same inscribed mark as the old one.

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

Calipers

R08702

4. INSPECT SPRING
Using vernier calipers, measure the free length of the spring.
Minimum free length: 33.2 mm (1.307 in.)
If it is not within specification, replace the spring.