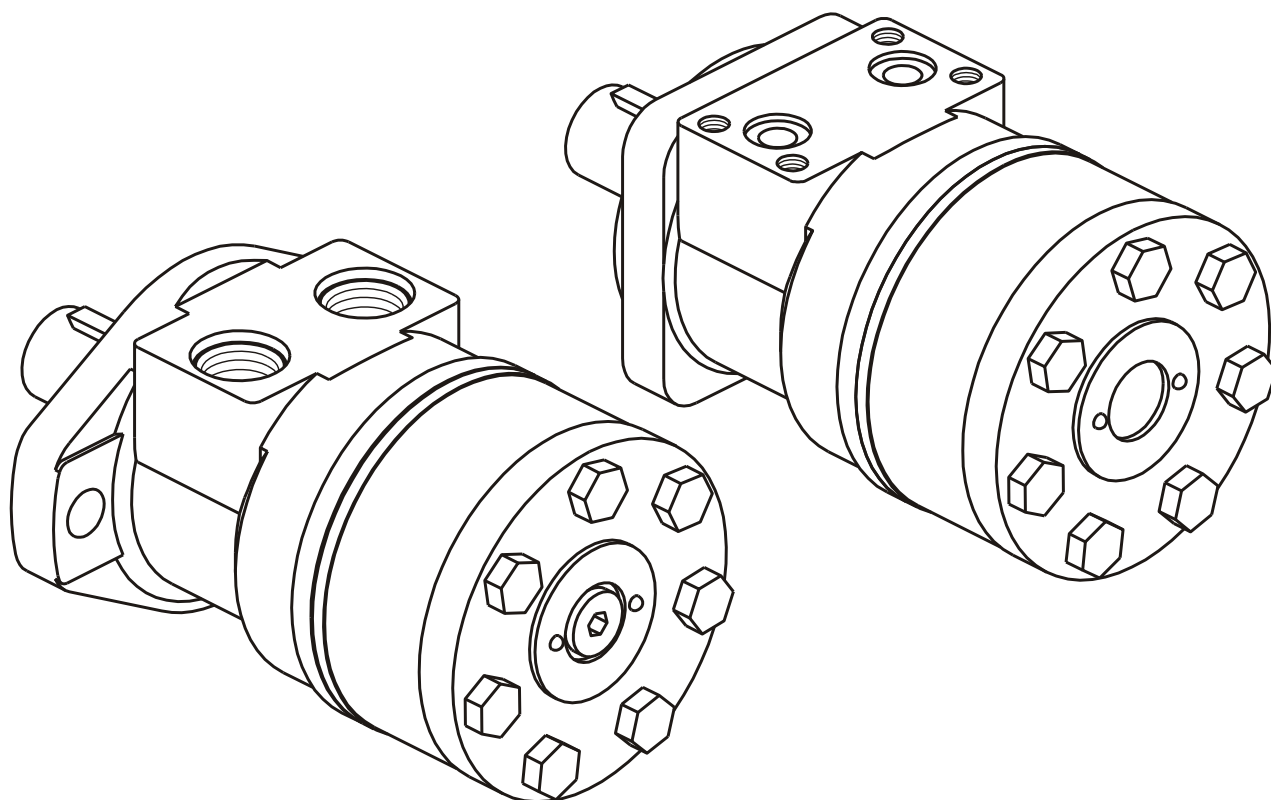
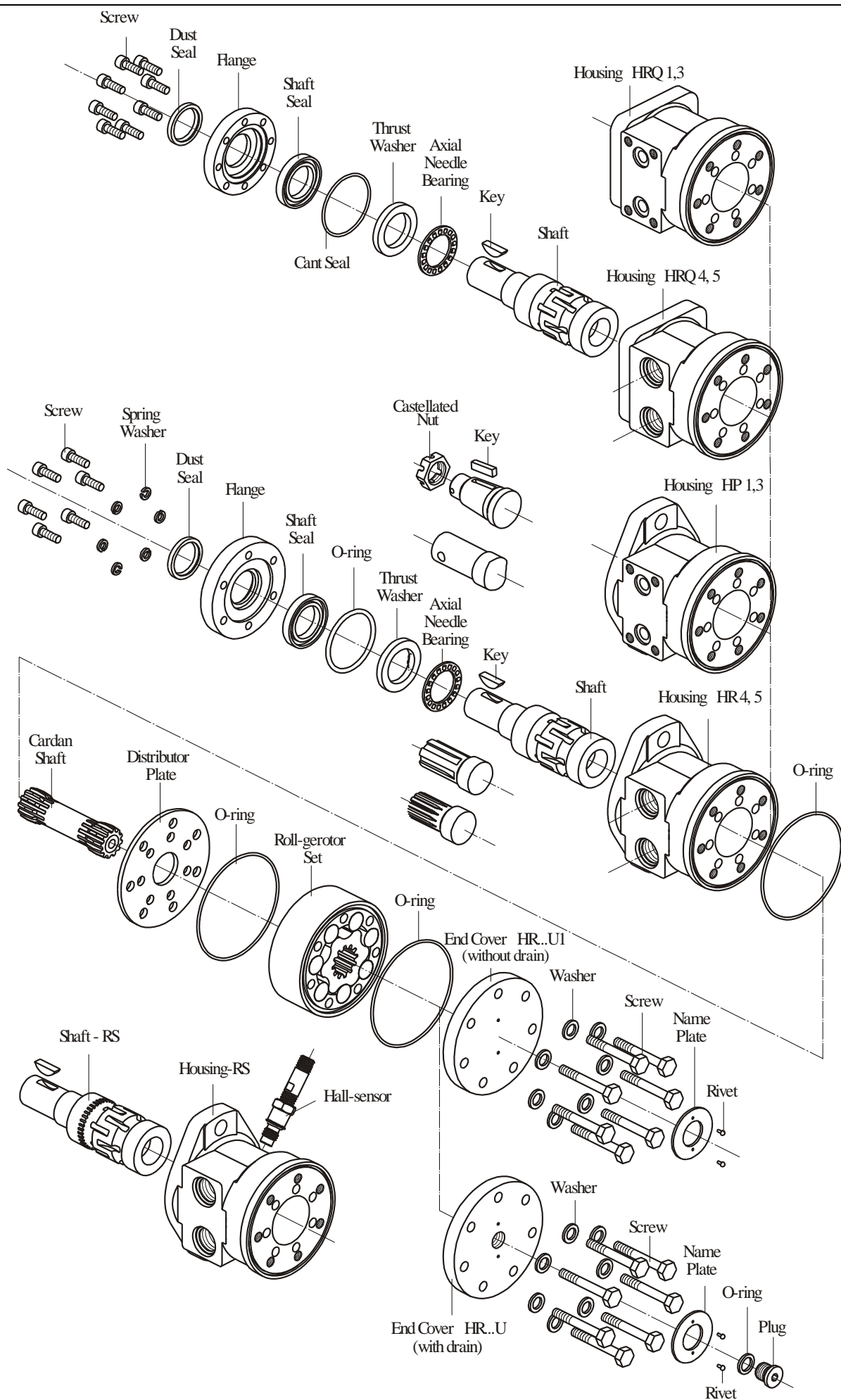


SERVICE MANUAL

Hydraulic Motors type HR...C





Instructions in this manual are for HR...C motors.

Cleanliness is extremely important when repairing these motors. Work in clean area!

Before disassembly, drain oil from motor.

Remove castellated nut and key when used. If included unscrew drain plug and remove O-ring.

Although not all drawings show the motor in disassembly devise (vise), we recommend that you keep motor clamped during disassembly.

1. Place the motor in disassembly devise with output shaft down.

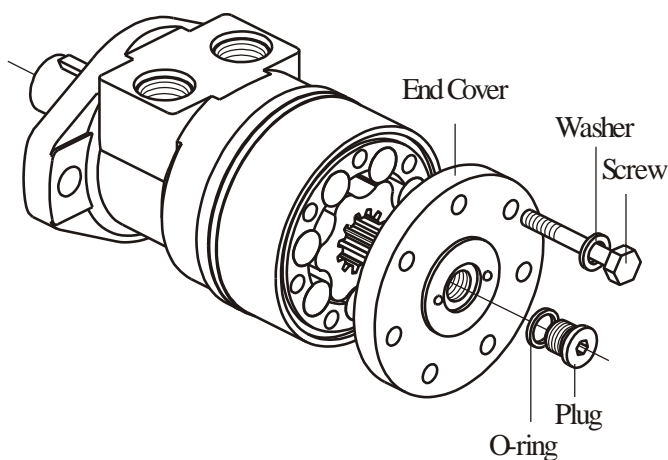


Fig.1

2. Unscrew screws using S13 torque wrench. Remove washers (see Figure 1).

3. Remove end cover.

4. Remove the roll-gerotor set carefully to prevent dropping of rollers and rotor from stator. Do not dismount!

Remove O-rings from roll-gerotor set grooves (see Figure 2).

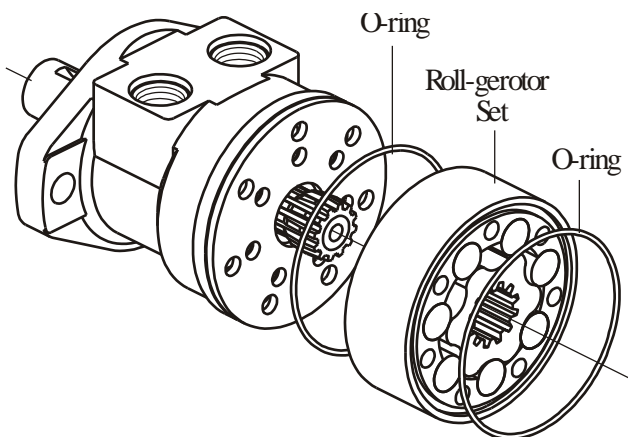


Fig.2

5. Remove cardan shaft (see Figure 3).

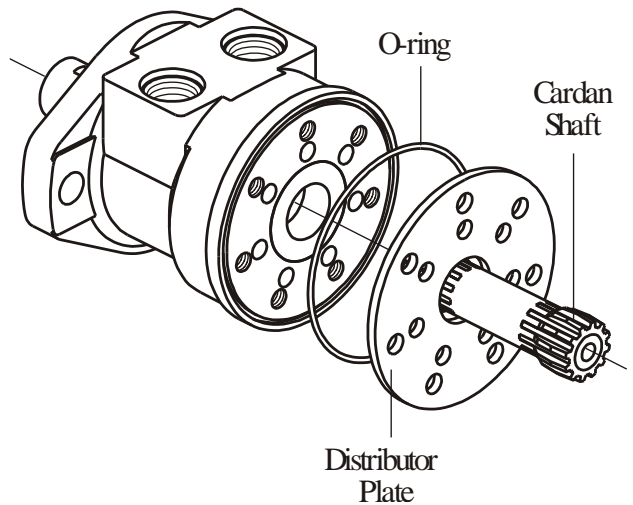


Fig.3

6. Remove distributor plate.

7. Remove O-ring from housing.

Reposition motor in disassembly devise with shaft upwards.

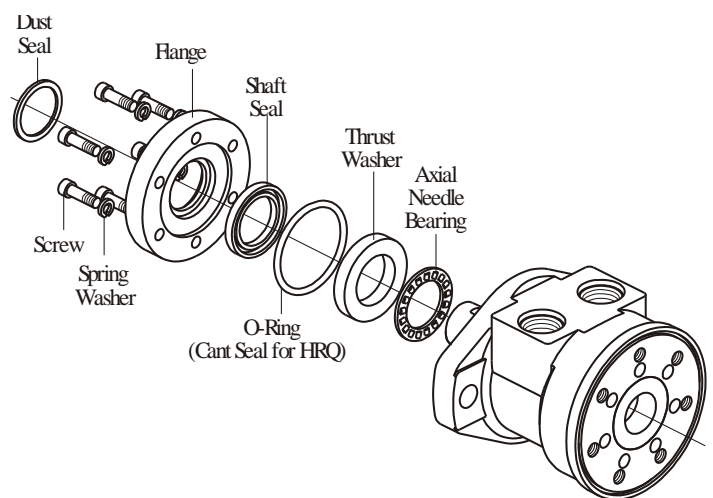


Fig.4

8. Unscrew screws using S6(5) Allen wrench (see Figure 4).

For "Q"-flange only: The screws are 8 pcs. and are assembled with Loctite to hold them in place. A higher torque is required to break screws loose.

9. Remove flange from housing. Dust seal and Shaft seal will come off with flange.

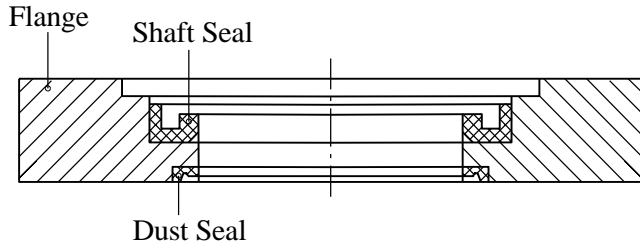


Fig.5

10. Remove with screwdriver Dust seal and Shaft seal from flange (see Figure 5). Work from outer side for both seals.

11. Remove shaft from housing.

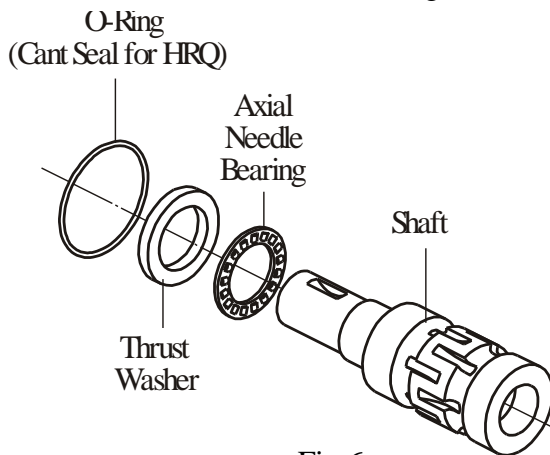


Fig.6

12. Remove thrust washer and needle bearing from shaft (see Fig.6).

13. Remove O-ring from outer diameter of thrust washer.

1. CLEANING:

Wash all parts (except seals) in a weak solvent on carbon base and then degrease.

2. MEASURING AND REPLACEMENT:

Measure all parts and compare actual dimensions with the nominal ones given in the technical documentation. Replace any parts with scratches or burrs that could cause leakage or damage with new ones. Use new seals when reassembling motor.

3. LUBRICATION:

Lubricate all seal parts which should be reassembled with light film of petroleum jelly.

Seal Kits:

SK41 5136 0001 for HR...U...C

SK41 5136 0006 for HRQ...U...C

1. Lubricate output shaft with hydraulic oil.

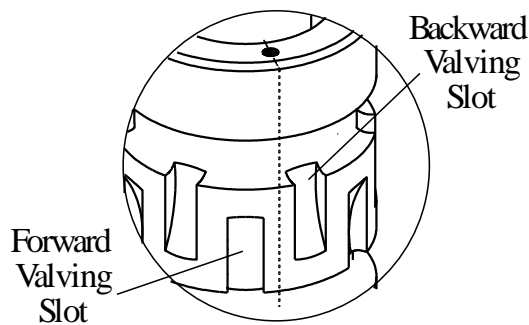


Fig.7

2. On the bottom of the shaft mark a Timing dot placed between forward and backward valving slots as shown on Figure 7.

3. Mount shaft in housing.

4. Place the motor in reassembly device with output shaft up.

5. Install needle bearing, then thrust washer on the shaft.

6. Place lubricated O-ring 48x2 round thrust washer (Cant seal 47,35x1,68x1,68 for "Q"-flange).

7. Place shaft seal in Flange and firmly push with Seal driver (see Fig.9).

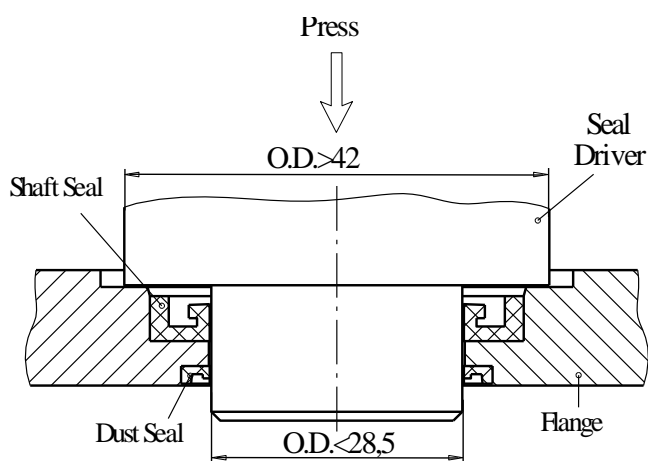


Fig.8

8. Install dust seal in flange. Carefully press dust seal into place.

Important: Lubricate shaft seal and dust seal with light film of clean petroleum jelly.

9. Install the spigot flange incl. assembled seals on shaft. Prevent the seals against damages.

10. Install in the flange 6 screws with washers and alternately torque them to 10÷12 Nm.

For HRQ only: Before mounting the screws (8 pcs.) apply 2 or 3 drops of **LOCTITE** 638 at top of thread of each of holes in housing.

11. Reposition motor in reassembly devise with shaft down.

12. Lubricate and install O-ring in housing seal groove (see Fig.3).

13. Install cardan shaft into splines of output shaft. Mark one cardan shaft tooth and align this tooth with timing dot on shaft.

Timing Procedure

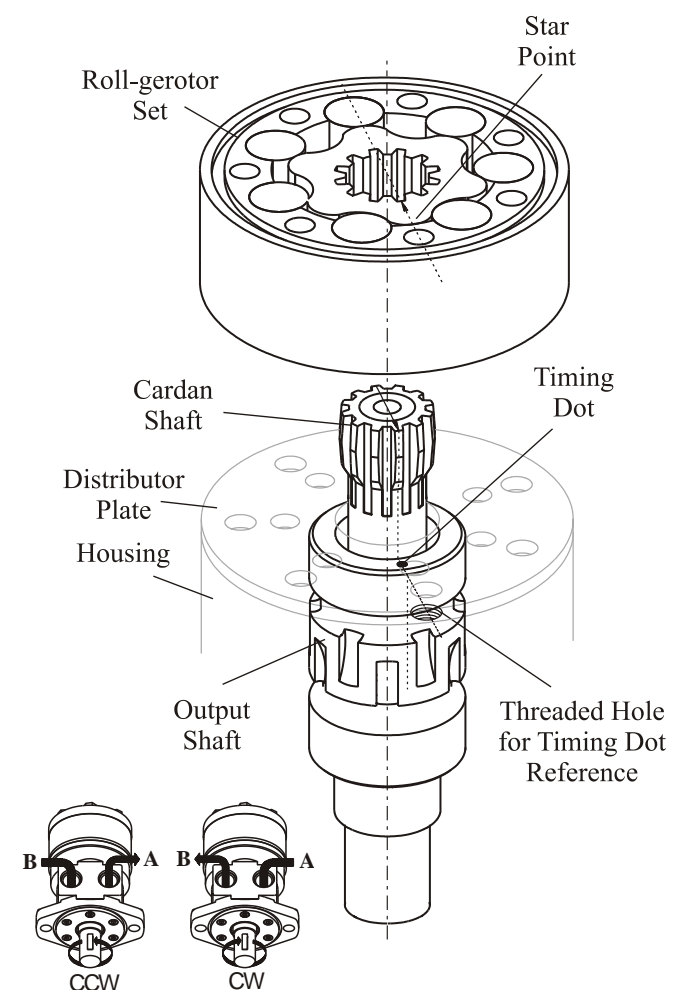


Fig.9

14. Align shaft timing dot with any housing bolt hole.

15. Install distributor plate on housing. Remember which bolt hole was aligned with the shaft timing dot.

16. Lubricate O-rings (2 pcs.) and place them in seal grooves of both stator sides.

17. Place roll-gerotor set on distributor plate positioning any star point over the bolt hole aligned with the timing dot. Stepped bolt holes are facing with smallest diameter to the distributor plate (see Fig.9)

18. Rotate roll-gerotor set to line up with bolt holes.

19. Carefully place end cover on roll-gerotor set.

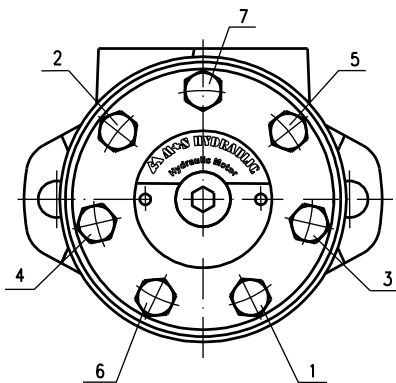


Fig.10

20. Install screws and washers in end cover. Tighten screws with $4 \div 4,2$ daNm torque using a S13 torque wrench in sequence as shown in Fig.10.

21. For HR...U: Install O-ring on drain plug. Tighten plug with S6 Allen wrench with torque $2,0 \div 2,5$ daNm

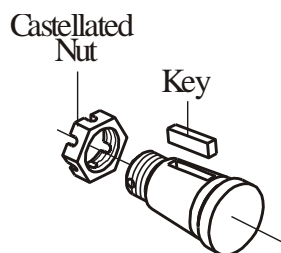


Fig.11

22. Install key in shaft key groove. For cone shafts screw castellated nut. (see Fig.11).