After proper design on seals and the mechanism, it may not perform as it is without proper handling.

1. Install Preparation

①Carefully check that there is no foreign materials (ex. Dusts) on the seal. Wipe it off if there is anything on the seal with resolvent (ex, alcohols). Do not use any of petrol during seal cleaning (Rubber products will be damaged significantly by petrol).

②Carefully check there is no scratches, cracks and dents on the seal. The seal with gutter spring must be checked that gutter spring is correctly attached on the seal. Carefully handle the seal and avoid any damage.

③The shaft surface and inside of seal housing must be cleaned out of any foreign materials (ex anti-corrosion oil, dust, etc.).

④Make sure that there are no burrs, scratches, bents, cracks which may damage the seal on the seal housing, chamfered corner, or shaft surface. These may cause oil leak, therefore use oil stone or emery paper to get rid of any of them (Drawing 3-2)

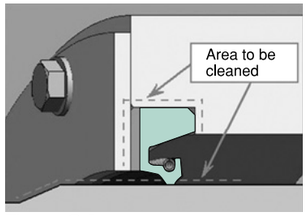


Figure 3-1

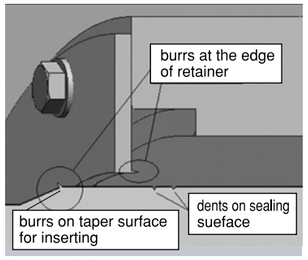
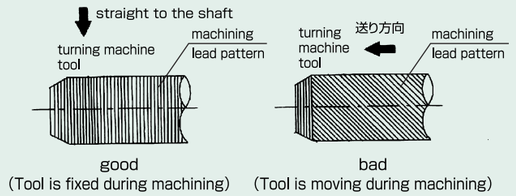


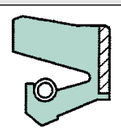
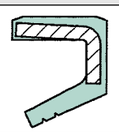
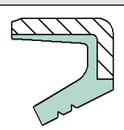
Figure 3-2

※The machining work on shaft should be corrective to prevent oil leak, make machining lead pattern vertical to shaft axis rather than helical as shown.



2. Installation

Seal structure is generally distinguished into two kinds, “Prop ring” and “Metal ring” (both Flat & L metal ring).

	Prop ring type	Metal plate type	L shape metal inner ring type	L shape metal outer ring type
Seal shape				
Installation	Enable with hand.	Enable with hand	Requires hammer or press fitting machine	Requires hammer or press fitting machine
Man-hour for installation	◎	○	△	△

3. Installation process

Read Drawing for installation and carefully check the correct seal installation direction and structure.

■(1) Prop ring type and Metal plate type installation.

Prop ring and metal plate type of seals could be easily installed with hands onto the housing without making any damage on both seal and housing, therefore it is possible to reuse the seals (Only check the seal carefully to make sure it is reusable).

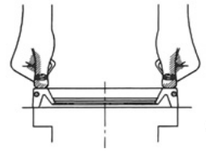


Figure 3-3

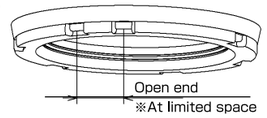


Figure 3-4

(Installation process)

Put the seal horizontally onto the housing and press it with fingers. (Figure 3-3)
Press the seal from one cut open end. (Figure 3-4)

■(2) Installation process of L Shape Metal Ring type of seal

(Installation process)

①Be careful of the initial grease quantity applied to the housing, sometimes seal rotating with shaft happened because bonding force from housing is too weak to the seal.

②Push the seal uniformly into housing via press tool (ex. hammer or press fitting machine), make sure the seal is not leaned or it may be damaged. If tool is not available, put steel ring disk on the seal and hammer it uniformly until seal has been inserted correctly.

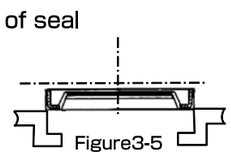


Figure3-5

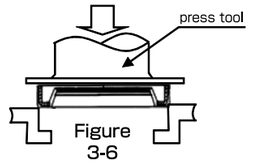


Figure 3-6

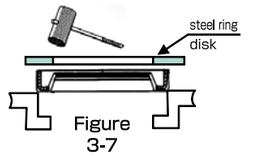


Figure 3-7

4. Seal installation into the shaft.

①Make sure the shaft has been cleaned then apply grease lightly on through the surface till chamfered corner which is important to prevent lip reversing during installation.

②Set the center of seal aligned to that of shaft and carefully install the seal onto.
A, The corner on shaft end should be chamfered.
B, If it is impossible to chamfer the shaft corner, tools are required for the installation.

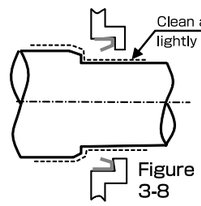


Figure 3-8

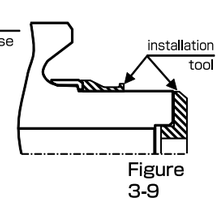
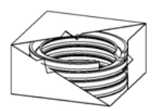


Figure 3-9

5. Storage procedure

Appropriate storage until seal finished installing is necessary, seal has better to be packed straightly for preventing over stress on the seal lip which may cause deformation on it.


GOOD


BAD

Figure 3-10

6. Storage place

A, Keep away from sunlight with which ultraviolet ways will accelerate rubber aging and cause crack on the seal. Especially NBR material seal must be kept in the cool storage room.

B, Do not stack the seal pack.

C, The moisture should be controlled for those kinds of seals with metal ring exposed, apply lightly grease on the seal to prevent rusting after unpacking and also keep it from rust, scale, foreign material, etc.