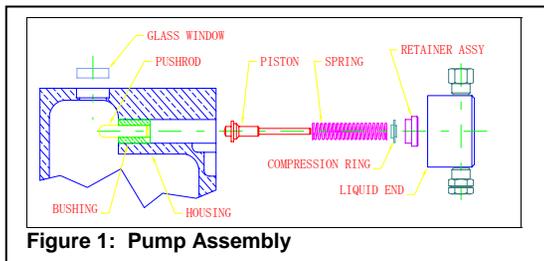


Instructions

Piston Seal Replacement for 1/4" Diameter Piston Pumps

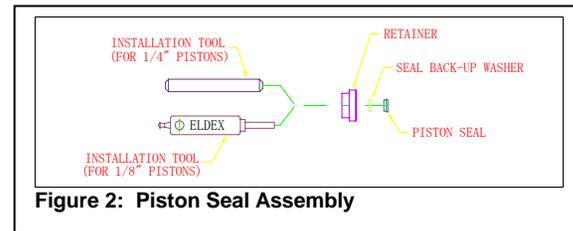
1. Use tools supplied with Eldex Part Nos. 1024, 1301, 1408, 1430 or 5724 (1/4" diameter dowel pin and 5/32 hex key).
2. Turn the piston stroke setting device so it is set to full stroke.
3. Remove liquid end from pump as follows: Unscrew the two socket head bolts while holding the liquid end against the pump housing. Pull the liquid end straight out from the pump housing, in line with the axis of the piston. If you cock or tilt the liquid end, you may break the piston. See Figure 1 (1/4" piston pumps do not use a compression ring).



4. Remove the retainer from the liquid end, and insert the 1/4" dowel pin into the liquid end through the old backup washer (if present) and piston seal. Remove and discard both the washer and seal by gently rocking the 1/4" dowel pin. Do not scratch the walls of the piston seal gland in the liquid cylinder with the dowel pin.

5. Inspect the piston. If the piston has scratches on the sapphire, or significant corrosion on the stainless steel piston holder, it should be replaced. If there is minor corrosion on the piston holder, clean the piston holder. Also inspect for evidence of deposits on the sapphire. If deposits are present (discoloration of, or particulates on, the sapphire), clean the sapphire. If the sapphire does not clean up, the piston should be replaced.
6. Inspect the retainer. Clean the retainer if necessary. If there is evidence of wear, or if the piston does not fit snugly in the retainer, or if the retainer grips the piston too tightly, the retainer should be replaced.
7. Remove the piston push rod by tilting the pump forward. Inspect for wear or corrosion damage and clean or replace if necessary. Coat the push rod with a light film of 30 weight oil.
8. Inspect the liquid cylinder, paying special attention to the gland for the piston seal. Any scratches or irregularities will require replacement of the liquid end.
9. Clean all parts with a liquid detergent, followed by a rinse. Clean any fluid in the mechanical end of the pump.
10. Insert the 1/4" dowel pin into the retainer and then into the new seal backup washer (not used in 1301, 1408 or 1409; two used in 1430) and new piston seal. When inserting the dowel pin through the new piston seal, the piston seal should lay flat on a hard surface with the spring side down (the seal will generally "snap" onto the dowel pin). Position the parts on the dowel pin as shown in Figure 2. Insert the dowel pin into the liquid end bore as shown in Figure 3. **CAUTION:** the open side of the seal (side revealing the spring) should face the closed (fluid side) end of the liquid end.

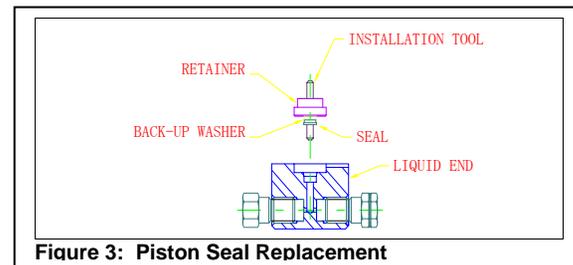
11. Keeping the dowel pin perpendicular with the face of the liquid end, push the piston seal and washer into the liquid end gland, by pressing down gently and evenly on the edge of the retainer with both thumbs.



12. Withdraw the dowel pin, while holding the retainer and liquid end firmly in place.
13. Reinstall the liquid end on the pump. See Figure 1.

PRECAUTIONS:

1. Do not re-use the old piston seal or backup washer (if present).
2. Cleanliness is very important for optimal seal and check valve operation.
3. We have found, especially with metal-free seals, that "breaking-in" the seals with IPA or methanol for an hour or so, under conditions similar to your expected operating conditions enhances seal life.



P/N	Description
<i>Piston seal assembly kits</i>	
1024	Piston seal assembly kit. Includes Fluoroloy G® seal, backup seal, aligning rod and hex key.
1301	Piston seal assembly kit. Includes Fluoroloy G® seal, aligning rod and hex key.
1408	Piston seal assembly kit. Includes Fluoroloy G® metal-free seal, backup seal, aligning rod and hex key.
5724	Piston seal assembly kit. Includes Fluoroloy K® seal, backup seal, aligning rod and hex key.
<i>Seal replacement kits</i>	
1187	Seal replacement kit for 1/4" pumps. Includes three Fluoroloy G® seals and backup seals.
1409	Seal replacement kit for 1/4" metal-free pumps. Includes three Fluoroloy G® metal-free seals and backup seals.

NOTE: If you retain the tools supplied with Eldex Part Nos. 1024, 1301, or 1408 you can purchase just the seal replacement kits and re-use the tools.

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If there is anything we can do to help you with these instructions, or, if you have comments or suggestions, please contact us at:

(800) 969-3533