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Instructions

Piston Seal Replacment for 1/8" Diameter Piston Pumps

1. Use tools supplied with Eldex Part Nos. 1022, 1272, 1362, or 1476 (installation tool 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.

4. Remove the retainer from the liquid end, and insert the 1/8" installation tool into the liquid end through the old backup washer (if present) and piston seal using the hooked end of the tool. Remove and discard both the washer and seal. Do not scratch the walls of the piston seal gland in the liquid cylinder with the tool.

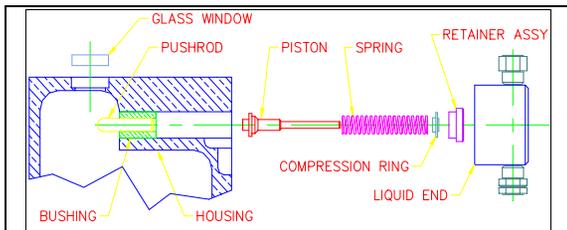


Figure 1: Pump Assembly

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.

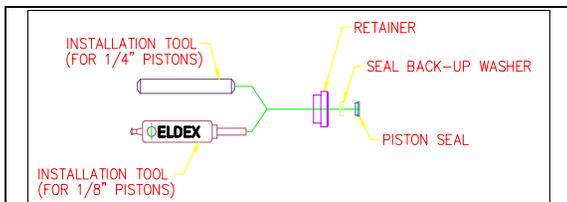


Figure 2: Piston Seal Assembly

10. Insert the installation tool into the retainer and then into the new seal backup washer (not used in 1362, 1363, 1364, 1476, 1477, or 1478) and new piston seal. When

inserting the tool 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 tool). Position the parts on the tool as shown in Figure 2. Insert the tool 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 tool 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.

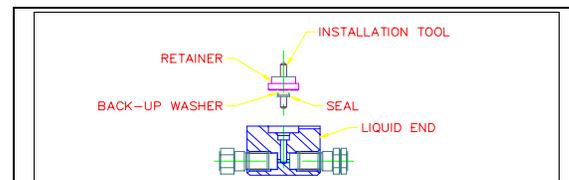


Figure 3: Piston Seal Replacement

12. Withdraw the tool, 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.

Piston Wash System

The use of buffers or solutions which crystalize when exposed to air can lead to abrasion of the piston seal. By installing the piston wash system on your pump, you can significantly extend the life of the piston seal. The piston wash system part number is: 5575. Contact us for details at:

(800)969-3533

P/N Description

Piston seal assembly kits

1022	Piston seal assembly kit. Includes Fluoroloy G® piston seal, backup seal, installation tool and hex key.
1272	Piston seal assembly kit. Includes Fluoroloy G® metal-free piston seal, backup seal, installation tool and hex key (for PEEK pumps without groove in cylinder).
1362	Piston seal assembly kit. Includes GF PTFE piston seal, installation tool and hex key.
1476	Piston seal assembly kit. Includes Fluoroloy G metal-free piston seal, backup seal, installation tool and hex key (for PEEK pumps with groove in cylinder).

Seal replacement kits

1180	Includes two Fluoroloy G® piston seals and backup washers.
1181	Includes five Fluoroloy G® piston seals and backup washers.
1273	Includes two Fluoroloy G® metal-free seals and two backup washers (for PEEK pumps without groove in cylinder).
1274	Includes five Fluoroloy G® metal-free seals and five backup washers (for PEEK pumps without groove in cylinder).
1363	Includes two GF PTFE piston seals (no backup washers are used).
1364	Includes five GF PTFE seals (no backup washers are used).
1477	Includes two Fluoroloy G metal-free seals and two backup washers (for PEEK pumps with groove in cylinder).
1478	Includes five Fluoroloy G metal-free seals and five backup washers (for PEEK pumps with groove in cylinder).

NOTE: If you retain the tools supplied with Eldex Part Nos. 1022, 1272, 1362 or 1476 you can purchase just the seals and re-use the tools.

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.

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