Flushing and cleaning

After use, the pump may be flushed and cleaned. It may also be autoclaved.

Never use abrasives to clean any portion of the pump. To clean the exterior of the pump, use a cloth dampened with a mild solution of detergent and water. After cleaning, allow the pump to dry in air away from direct sunlight, heat, grease and other potential contaminants.

To Clean: 1) Use the pump as usual but with an appropriate cleaning fluid. **2)** Alternatively, wearing gloves, remove all tubes from pump and turn the pump upside down. Open the tap, and run water or other neutralizing fluid through the center of the pump. Fluid will come out of the tap.

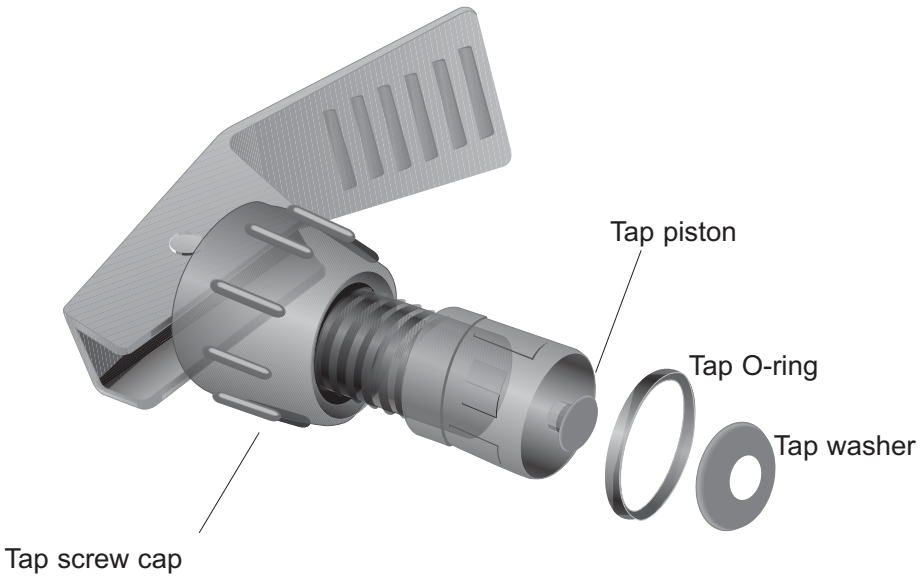
CAUTION: Do not burn discarded seals or other pump components. Check local health, safety and environmental codes and follow proper disposal procedures. Always dispose of hazardous waste or contaminated liquids in a proper fashion.

Maintenance inspections

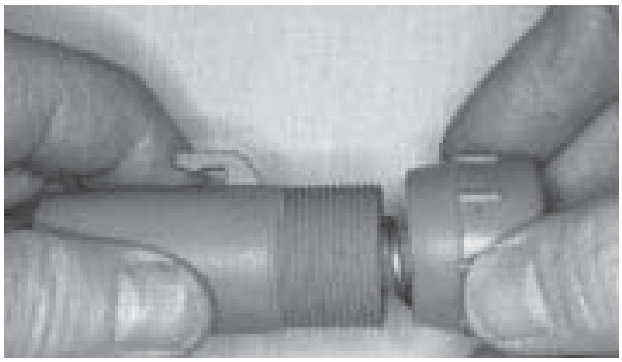
The pump should be inspected at least every 2-3 months to ensure safe and efficient operation (see page 4-5). If unused for more than 3 months, the pump must be visually inspected and the O-rings lubricated with Molykote® 111 compound.

Replacing tap washers and O-rings

Periodically check tap washer and O-rings (both at the tap and at the pressure release valve) for wear, and replace if necessary. A replacement kit containing both O-rings and a tap washer is available from your dealer. After installing a new O-ring, smear a small amount of Molykote 111 lubricant around the ring and the adjacent area.

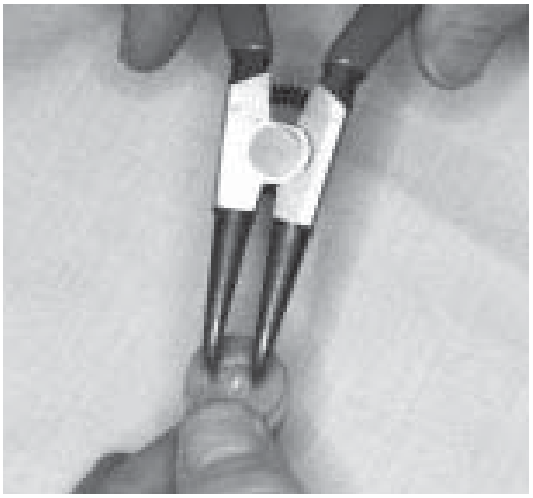


Replacing tap washers and O-rings, continued



1 Unscrew tap valve screw cap.

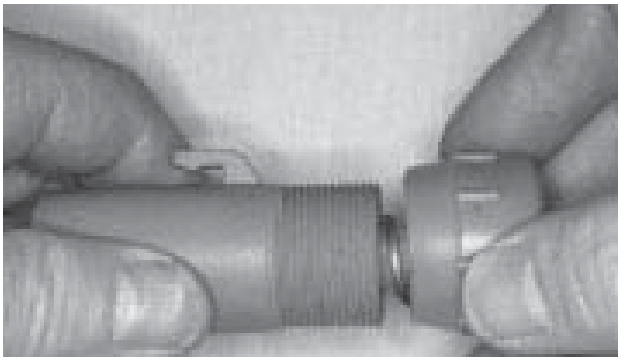
2 Remove tap washer and/or o-ring with small, flat-headed screwdriver.



3 Pre-heat the rubber washer in boiling water to reduce the risk of damage. Fit the washer to the tap piston by finger manipulation or tools. Take care not to split the rubber washer. If the rubber is split, remove and replace with a serviceable one.

4 Fit the valve piston o-ring to the valve piston. Place a very light smear of silicone grease on the o-ring. Do not use grease for clean room operations.

5 Slip the valve piston assembly back into the tap body. Ensure that the o-ring is not pinched when assembling. Rotate the piston until the guides are engaged. Push the piston until it is fully seated in the bore. Screw the cap home, being careful not to cross-thread the cap and the tap body. Do not overtighten the cap.

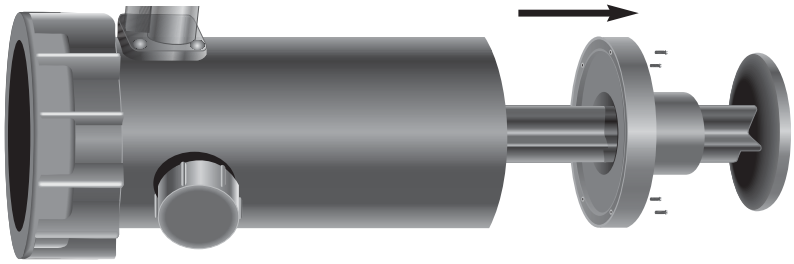


6 Operate the tap to ensure free movement of the tap piston.

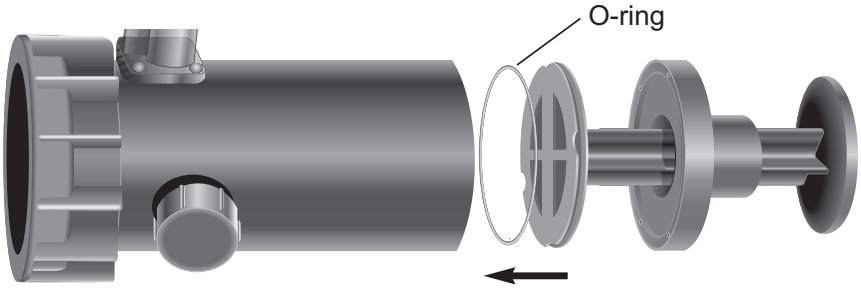
Replacing piston O-rings

Periodically check the piston O-ring for wear, and replace if necessary. Replacement O-rings are available from your dealer.

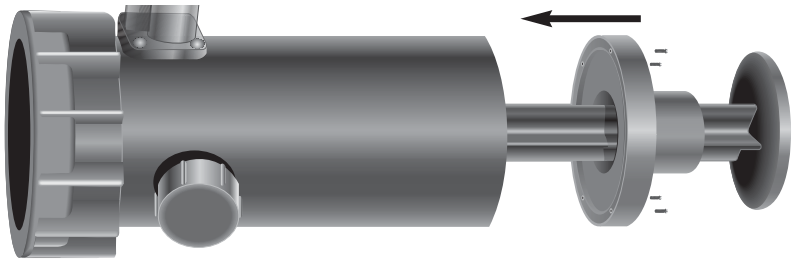
1 Remove 4 screws, then remove cap and piston from pump



2 Use flat head screwdriver to pry O-ring from piston. Lubricate inside body barrel with small amount of Molykote111 compound. and fit replacement o-ring it to piston, making sure it is seated properly in the groove.



3 Replace piston. Align tab on underside of cap with hole on pump body noting line-up dowl, then replace and tighten screws.



Replacing drum seals

Drum seals are color-coded. For safe operation, drum seals must match the color coding of the pump.

Red drum seal	Nitrile; use only with **red** pumps (oils and petroleum-based liquids)
Blue drum seal	Ethylene propylene (EPDM); use only with **blue** pumps (general purpose chemicals)
Green drum seal	Viton; use only with **green** pumps (aggressive chemicals and solvents)
Black drum seal	Santoprene®; for special applications only (see Compatibility Guide)

Drum seal sizes

Small seal.....1.8″ (44.4 mm) Medium seal .....2.0 (52.5 mm)
Large seal.....2.25″ (56.5 mm)

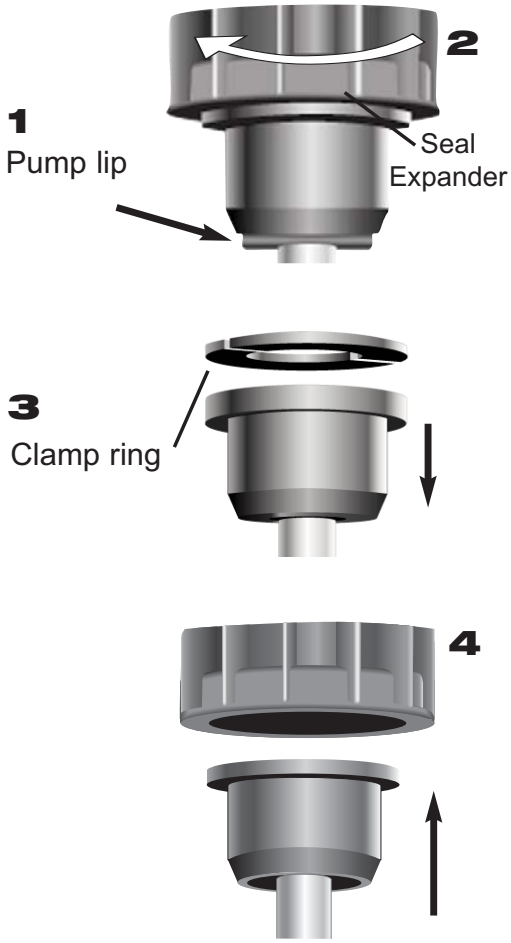
WARNING: Drum seals must match pump color coding. Replacing a seal with the wrong type may contaminate some types of chemicals or damage the pump which could cause risk of personal injury resulting from exposure to potentially hazardous substances.

1 To remove old drum seal, ease leading inner edge of drum seal out and over the lip on base of pump body using small flat head screwdriver.

2 Screw seal expander clockwise as far as possible which pushes drum seal down and off pump. For small drum seal, soak bottom of pump with drum seal in hottest water available for 2 - 5 minutes to facilitate removal.

3 Re-tighten seal expander to expose clamp ring. Push drum seal off of pump with clamp ring.

4 Soak replacment drum seal in hottest water available for 2 - 5 minutes. Press new drum seal into position. The seal should fit snugly on the lip.

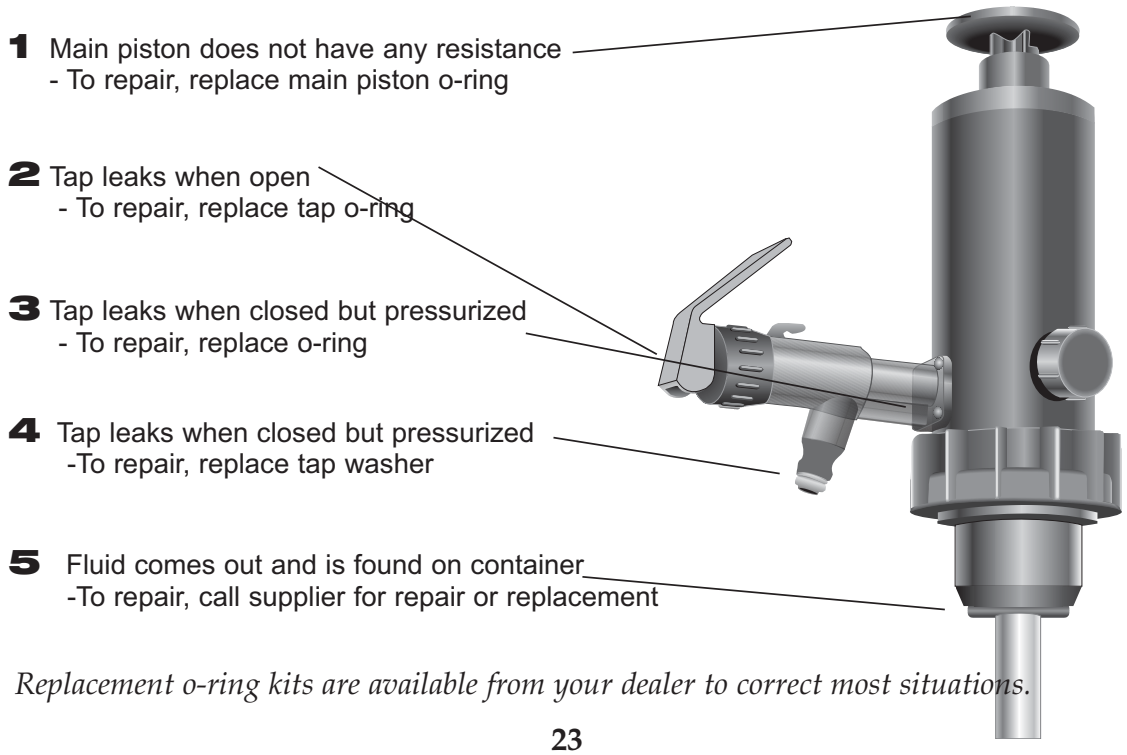


Troubleshooting guide for new pump installation

PROBLEM	DIAGNOSTIC CHECK	SEE PAGE
No fluid is coming out of the tap.	Is the drum seal put firmly on pump body? If the drum seal is not correctly installed, no pressure will build up and therefore, no fluid can be dispensed. Are you using the correct fitting for the bung with sufficient teflon tape to prevent air leaks? Air leaks at any point in the system will prevent it from working. Is siphon tube installed correctly and attached to the pump body? If the siphon tube has become disconnected from the pump body, no fluid can be dispensed. If using a very thick fluid in excess of 2000 SSU (thicker than 10W30 oil), you may experience a very slow flow.	8 6,7 9
A small amount of fluid comes out and then it stops.	Is the foot piece installed at the bottom end of the siphon tube? If not, the fluid cannot flow freely up through the tube.	9
The fluid spits	If the fluid viscous or oily, use a seamless siphon tube. Air can enter the fluid stream at connection points with a standard siphon tube set-up and cause spitting.	17
My container bulges	Containers need to be able to withstand up to 10 PSI or need to be put in a systems with external support. Purchase external low pressure release. Use less pressure.	3
The pump leaks from the tap when I dispense fluids.	Check compatibility between the pump and the fluid to ensure they will work correctly together. If you are using the wrong pump, this failure will take place in 2 - 4 weeks. See website for latest compatibility information.	3
The pump leaks from the tap when I am not dispensing fluids.	Check compatibility between the pump and the fluid to ensure they will work correctly together. If you are using the wrong pump, this failure will take place in 2 - 4 weeks. See website for latest compatibility information.	3

Troubleshooting guide for existing installation

PROBLEM	DIAGNOSTIC CHECK	SEE PAGE
No fluid is coming out of the tap.	Raise main body piston and let it go. If it drops without pushing, replace the main body piston o-ring.	17, 20
	Conduct a pressure test to see if there is resistance in the non-return valve (check valve). If there is no resistance, the non-return valve has failed. Replace the main pump body/manifold.	5
	Is siphon tube installed correctly and attached to the pump body? If the siphon tube has become disconnected from the pump body, no fluid can be dispensed.	9
The pump leaks from the tap when I dispense fluids.	Purchase replacement o-ring/tap washer kit and replace tap o-ring. See below for more diagnostics.	17-19
The pump leaks from the tap when I am not dispensing fluids.	Purchase replacement o-ring/tap washer kit and replace tap washer. See below for more diagnostics.	17-19



Replacement o-ring kits are available from your dealer to correct most situations.

Pump components

1 Piston screw cap

2 Body cap screws (4)

3 Body cap

4 Main body piston

5 Piston o-ring

6 Manifold screws (4)

7 Pump body

8 Pressure release valve o-ring

9 Pressure release knob

10 Non-return valve (check valve)

11 Safety release spring

12 Safety release plug

13 Sub-assembly o-ring

14 Manifold o-ring

15 Pump manifold

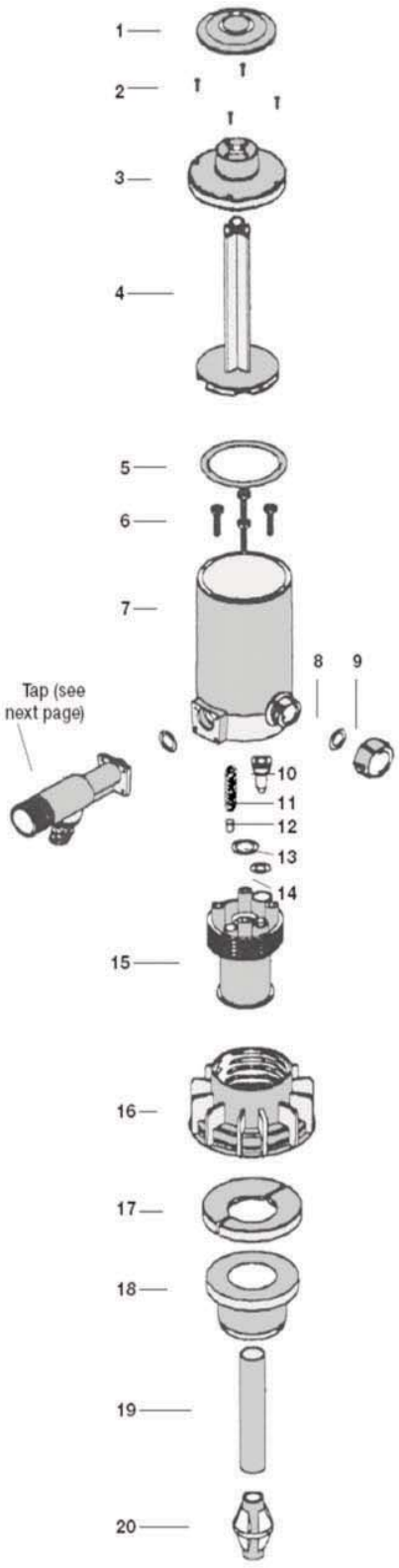
16 Drum seal expander

17 Drum seal retaining ring

18 Drum seals (3 sizes)
Small.....1.81" (44.4mm)
Medium .....2.00" (52.5mm)
Large.....2.25" (56.5mm)

19 Siphon tube (4)

20 Siphon tube connector



Tap components

21 Tap handle

22 Retaining pin

23 Tap valve screw cap

24 Tap valve spring

25 Tap piton o-ring

26 Tap piston

27 Tap washer

28 Tap assembly screws (4)

29 Outlet connector o-ring

30 Tap body

31 Tap body o-ring