

Water**SOLV** CURATIVE Pump Rebuild Kit

Pump Priming

HCT, LLC (ver. 7/2024.2)

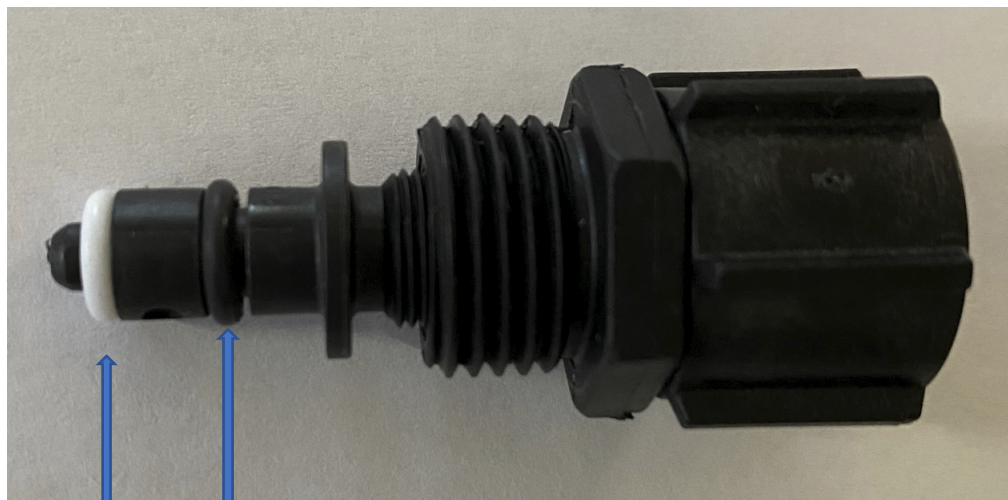
Online Video: <https://youtu.be/vOFudi0LX38>

Internet path: HCTLLC.com > Chemigation > Pump Head Int...

Priming Valve & O-ring Configuration

This is the bypass valve on the Curative & Fertilizer pump. It is screwed into the side of the pump head by the main nut, then screwed on by the ridged tab to close. When priming the pump, the valve may be opened to release pressure, by turning the ridged tab counter clockwise. This operates similar to the three-way valve and can be use in pace of the three-way valve for supporting the priming of the pump head.

The white PVDF O-ring, if not attached, should be placed on the end of the assembly as illustrated.

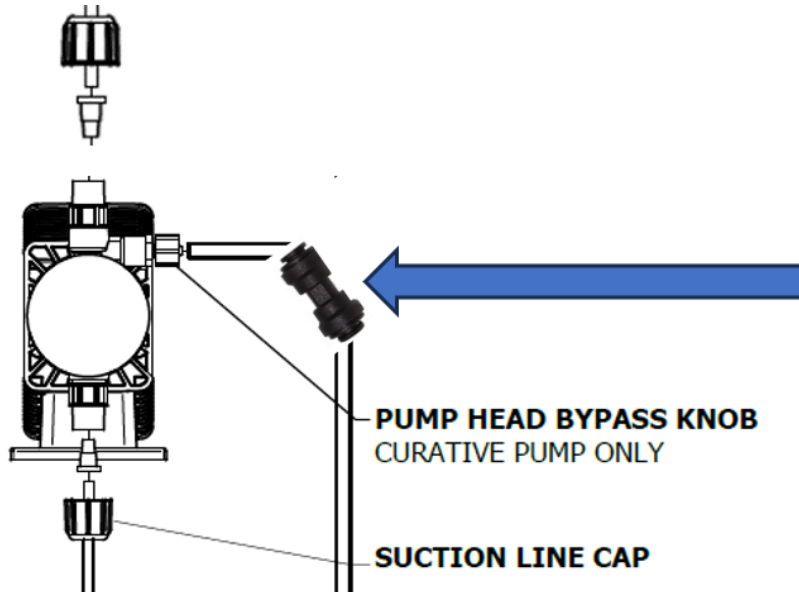


Black Viton O-ring

White PVDF O-ring

Look inside the pump head, to be sure you do not put two white o-rings in the head.

Priming Valve Tubing & Line Connector



New tubing connector provided – 3/8 vinyl to 1/4 snap connector (black). Connect 3/8 vinyl tubing to 1/4 inch PVDF tubing. Run the 1/4 in. tubing to the product container.

Removing and replacing Liquifram Plunger

See online Video: <https://youtu.be/vOFudi0LX38>



Plunger, screw off, screw on - inside discharge head.

1. Remove 4 screws (4 mm hex)
2. Pull head off
3. Unscrew plunger
 - a. Pull plunger head out if stuck in the head
 - b. Unscrew metal/plunger from shaft of motor plunger
4. Remove spacer plate and assure rubber seal behind it is in place.

5. Place plug into the bottom of the Spacer plate



6. Place spacer plate in position

- a. Without disturbing rubber seal behind it
- b. Plugged hole on the bottom

7. Screw plunger onto pump motor shaft - hand tighten as firm as possible,
NO TOOLS

8. Re-attached head

9. Tighten head screws evenly in a crisscross manner

10. CHECK tubing connections, make sure they are all tight

11. Open bleed valve

12. Hold Start/Stop Button down 3 seconds to initiate 60 second
manual pumping operation

- a. Repeat as needed until liquid flows from the Priming Valve.
- b. Close Priming Valve
- c. Observe discharge line pulsating

13. CHECK Liquid level of container each day thereafter to validate
chemical is being distributed

14. Calendar a new Plunger for this time next year

How is your tubing?

Opaque tubing fails in about one year exposed to UV and 2 years unexposed.

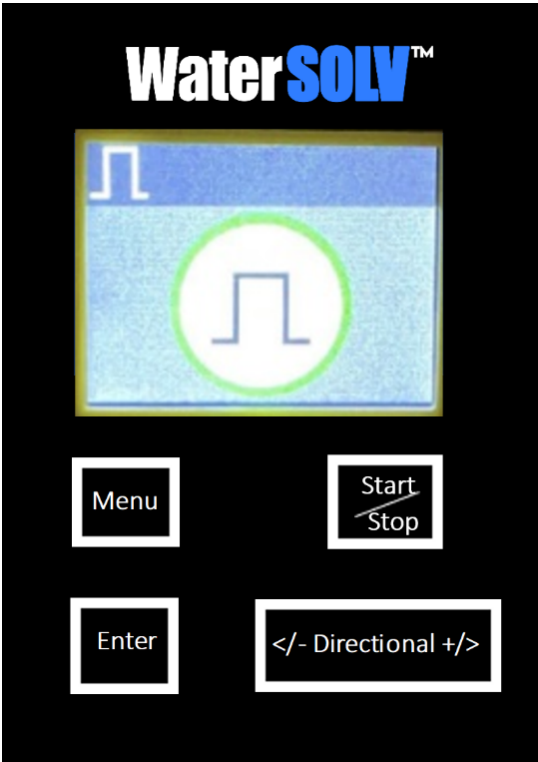
NEW - Extended Life tubing - $\frac{1}{4}$ x 40 ft. black -

<https://www.hctllc.com/product-page/extended-life-tubing-x-40-ft-black>



Pump Labels

Words versus Icons



Replacement Head Screws and Lock Washers (4)



Curative and BC LMI Pump Priming

Basic Pump Overviews

1. Pumps are good at pumping, they are BAD at suction, so we refer to them as pumps.
2. Is the suction line is too far away, too too high, you will likely experience problems. Please refer to the installation guidelines if this is a new installation, versus re-priming a previously working installation.
3. The pumps have three basic functions
 - a. A plunger disc will create a pull/suction, and a push/discharge.
4. Suction is the bottom port of the pump head.
5. Discharge is different between both pumps
 - a. Curative, the discharge is the top port
 - b. BC, discharge is the port on the back end of the pump head
6. Both pumps have a pressure relief system to provide function.
 - a. Curative has a pressure relief, priming valve on the side of the pump head. By turning the ribbed knob, not the hex head up against the pump head itself, it opens the valve, thereby relieving discharge pressure for easier priming. Once fluid come out of this line, then it needs to screwed back in and you should see the discharge line pulsating.
 - i. By holding down the Start/Stop button (top right) 3 seconds, you will activate the pump on to generate pumping. It will stop in 60 seconds. You can do this again until you see fluid from the bleed line, and when closed, the discharge line pulsation
 - b. BC has a "degassing" line, coming out the top of the pump head. On the face of the pump, it has bubbles, indicating the degassing function"s", are on. Based on the degassing screen setting, the pump will come one a given frequency and duration. The degassing cartridge in the top of the pump head remains open when gasses pass by, and when liquid comes by it then closes. This is to assure more precise delivery of the fluid, by removing the gasses it creates.
7. Suction and Discharge is done by a plunger in the head. It is activated with a rod from the motor. To replace the plunger, you remove the head

and screw it off, by hand. To put a plunger on, you screw it on by hand, as tight as you can.

Re-cap:

Curative - Suction, Discharge, Bleed / Prime lines
BC - Suction, Discharge, Degassing lines

Trouble Shooting

If you have a three-way valve in the discharge line, remove it. Do not use it.

When handling BC, wear protective rubber gloves

When handling Curative, mitigate the aggressive fumes you experience, along the way, as you go, by rinsing the area with water.

Curative:

1. Pump is less than 1 year old - plunger is likely then in good shape.
If over one year old, consider replacement (annually).
2. Configuration of the Curative lines
 - a. Top port, line goes to discharge the chemistry into the discharge side of the water line
 - b. Bottom port / line is the suction of chemistry into the pump head
 - c. Side line from the pump head, is run back into the container.
3. Configuration of the BC lines
 - a. End of the pump head port, line goes to discharge the chemistry into the suction side of the water line or water well, or wet well.
 - b. Bottom port / line is the suction of chemistry into the pump head
 - c. Top line from the pump head, is run back into the container.
4. Suction fitting at the pump head is tight.
5. Suction line in the container has to be upright, no more angle than 45 degrees. (This has a ball and check valve in it. It must be upright for the line to hold chemistry in it when the suction draws chemistry into the line. Similar to stepping up a ladder, each suction, gets the fluid to the top.
6. The suction line should be as short as possible, although allow for easy chemical replenishment.
7. The discharge line fittings are tight. PLEASE BE CAREFUL WHEN TIGHTENING LINE CAPS, YOU DON'T BREAK THE HOUSINGS THEY ARE SCREWING ONTO. FITTINGS INTO THE PUMP HEAD CAN BE LIGHTLY WRENCHED ON. LINE CAPS SHOULD ONLY BE AS TIGHT AS YOU CAN BY HAND. BE SURE TO SECURE THE FITTINGS YOU'RE TIGHTENING THEM ONTO SO THAT THEY DON'T BREAK.
8. Open the bleed ribbed knob > press the Start/Stop button 3 seconds, wait for chemistry to come out, tighten the knob > the discharge line should pulse.
 - a. The bleed line should not leak any liquid when the pump is pumping. If it does, the two o-rings of the part may need to

be replaced. ASSURE you remove "TWO o-rings, and then replace them both. MAKE sure one o-ring is not stuck in the pump head (white Teflon o-ring)

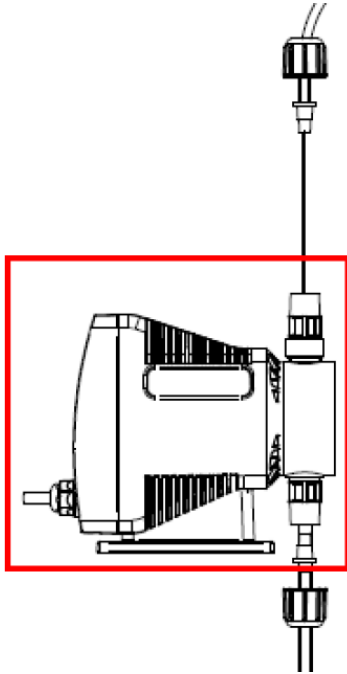
- b. Periodically tighten the pump head screws (4 mm Allen wrench)
- 9. If all this fails, it is likely a plunger issue - even if it primes, but does not pulsate the discharge line. Inspect the plunger, replace it if needed, and utilize new head bolts and locking washers

BC:

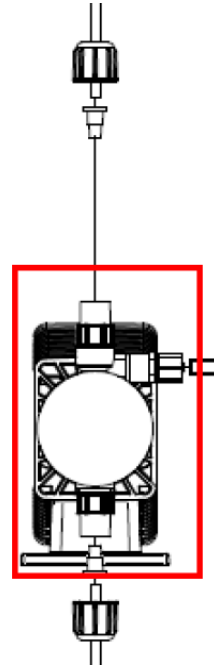
1. This plunger is quite bullet proof. It should be replaced every 2-3 years.
2. Assure the suction line is upright, no more than 45-degree angle
3. Assure the caps are tight where it connects to the pump on the bottom of the head.
4. DO NOT EXPECT FLUID TO COME OUT THE DEGASSING TUBE (TOP OF PUMP). That line release gas, NOT fluid.
5. If still not priming, consider removing the discharge line off the pump head (from the end of the pump head), and try to prime. If fluid pulses out. Relace the line on the head, start the pump, and look for the line to pulse.
6. If the line does not pulse, remove the degassing cap > pour water into the fitting still attached to the head > re-attach the line, start the pump, look for the line to pulse.
7. If the pump does not operate, contact HCT.
8. Please make sure BC is placed avoiding sunlight. This is a chemical reaction / bubbling, gaseous and safety situation, not a product degradation problem.

Pump & Head Return Items (do not include lines, just pump motor, head and all associated fittings)

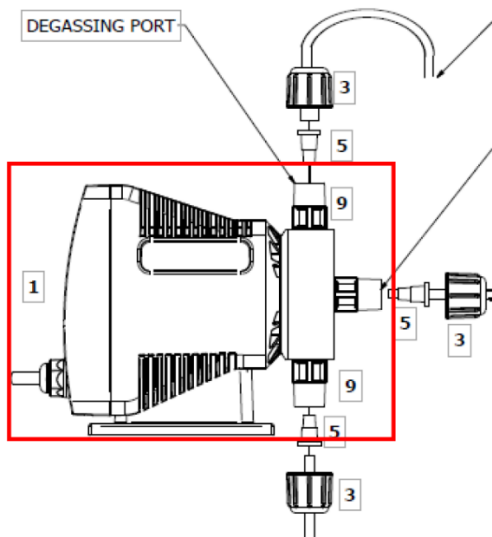
Curative Side View



Curative End View



BC Side View



Warranty / Repair Return Address

Rudy Leija / Robert Bass

J.L. Wingert Co

(909) 284-8476 Work

(714) 642-6120 Mobile

RLeija@jllwingert.com

rbass@jllwingert.com

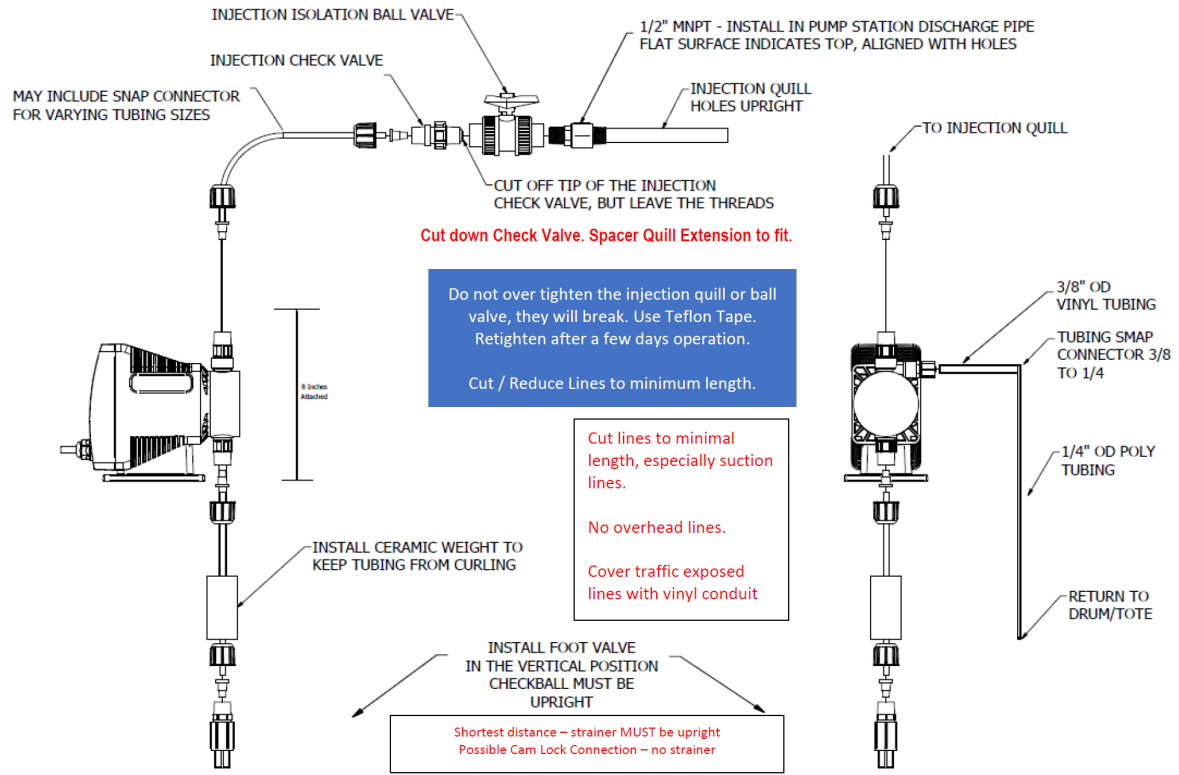
1298 North Blue Gum St.

Anaheim, Ca 92806

www.aquaphoenixsci.com

Pump Line Configurations

Pump, Fittings & Diagrams – Curative Pump



Pump, Fittings & Diagrams – BC Pump

(Note Fittings differences. These are unique, they are unique compression fittings)

Keep fittings tight. Periodically, 2-3 times a year, assure pump head screws (4) are maintained tight.

