



INOCULATION TANKS
15 GALLON #79230745
30 GALLON #79894651





MENU



This is an interactive PDF. Click on an icon tile and navigate to a chapter of interest.



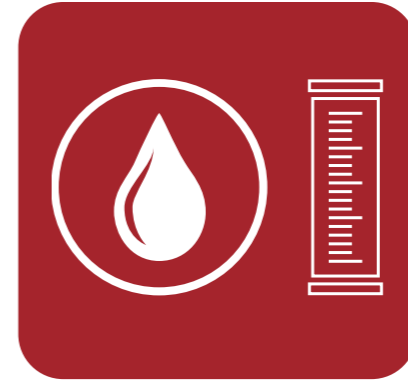
Legal & Safety



System Diagram



Installation



Calibration



Maintenance



Pictograms

Users can advance or go back single pages by using quick navigation links shown below, right.

Users can navigate to the Menu by clicking on the Menu icon shown below, left.





LEGAL & SAFETY

This manual contains technical information regarding Bayer SeedGrowth™ Equipment. Please read and understand these instructions completely before proceeding to install and operate the equipment. Bayer reserves the right to change specifications, models, components, or materials at any time without notice. For additional equipment information contact us at 1.800.634.6738. Please have this manual available when contacting Bayer.

Always use caution and common sense when working with any chemical. Read the product label and SDS carefully and follow their instructions exactly as described.

Optimal operating conditions for this piece of equipment requires an ambient temperature 32° F to +104° F (0° C to +40° C), relative humidity less than 90% (minimum condensation). Make necessary provisions to protect this piece of equipment against excessive dust, particles containing iron, moisture and against corrosive and explosive gases.

Our technical information is based on extensive testing and is, to the best of our current knowledge, true and accurate but given without warranty as the conditions of use and storage are beyond our control. Variables, such as humidity, temperature, change in seed size or variety and viscosity of chemical products can all affect the accuracy of the chemical application and seed coverage. To ensure the desired application rate and optimum seed coverage, check the calibration periodically throughout the day, and make adjustments as needed.

Any person who is involved in the installation or periodic maintenance of this equipment should be suitably skilled or instructed and supervised using a safe system of work. Isolate the treater before removing guards for maintenance.





EXPOSURE CONTROL

Always use caution and common sense when working with chemicals. Read the product label and SDS carefully and follow their instructions exactly as described. The following Personal Protective Equipment (PPE) recommendations and best practices help promote safe use in seed treatment.



Note: Exposure Control signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.



Wear protective clothing

Wear disposable or reusable coveralls with long sleeves.



Hand protection required

Wear chemical-resistant gloves.



Wear rubber boots

Wear chemical resistant rubber boots.



Labels

Label recommendations and directions for handling must be followed, including treatment procedure (use of sticker) as well as the safety requirements.



Treatment products

Keep products in a locked room that has been approved for crop protection products.



Wear a mask

Wear respiratory protection.



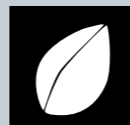
Eye protection required

Wear protective eyewear.



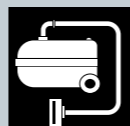
Calibration

Seed treatment equipment must be checked and calibrated regularly to ensure accurate and safe application.



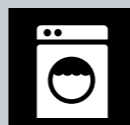
Clean seed

Use well cleaned seed to avoid creation of polluted dust that will contaminate the machine, treating facility, workers, farmers and the environment during sowing.



Cleaning

Use a vacuum to clean machines. Avoid using compressed air for cleaning.



Laundry

Wash soiled reusable clothing separately. Workers must take a shower after each shift.



Empty containers

Non-returnable empty containers must be triple rinsed before they can be disposed. For others the recommendation of the producer must be followed.



Spillage

Spillage must be avoided; it must be thoroughly cleaned up to avoid contaminating the environment and waterways.



Maintenance

Keep machinery clean between treating sessions.





REFERENCE SYMBOLS

Symbols and signal words are used to identify the level of hazard and help avoid personal injury.



Note: Safety signs and labels conform to the requirements of ANSI Z535.4 or ISO 3864.



Shock Hazard

Alerts that dangerous voltage may be present.



Warning

Alerts that a hazard may cause serious injury or death.



Caution

Alerts that a hazard may cause minor or moderate injury.



Hand crush - moving parts

Alerts crushing is possible.



Pinch point

Keep hands away from pinch points.



Rotating shaft

Do not wear loose clothing around turning parts.



Disconnect

Disconnect to de-energize before opening.



Use guards

Keep guards in place. Do not remove during operation.



Lifting

Requires two people to safely lift an item.



Lift points

Requires the use of proper rigging and lifting techniques based on the lift plan.



Center of gravity

Indicates the center of gravity of the machine to help assist when rigging and lifting.



Tools

Required tools for installation and maintenance.



Parts

Required parts for installation and maintenance.



Tip

Calls attention to special information.



Note

Emphasizes general information worthy of attention.



Example

Provides a problem or exercise that illustrates a method or principle.

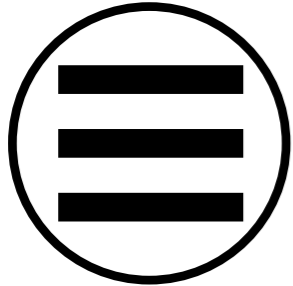




PICTOGRAMS

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Each Signifier displayed here is specific to this User Manual.



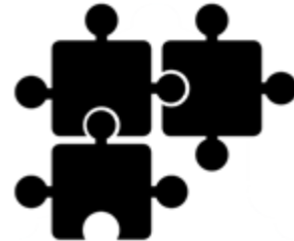
Menu



Previous



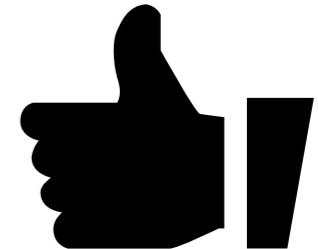
Advance



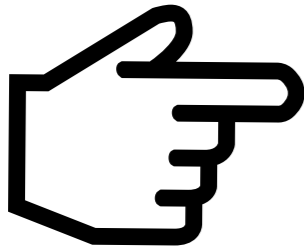
System



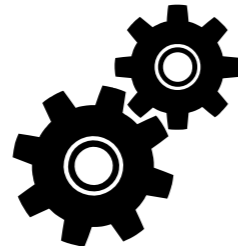
Installation



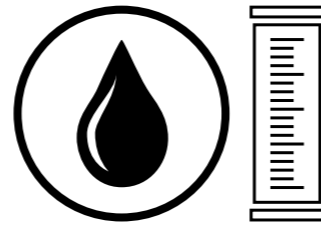
Like



Cursor Hand



Maintenance



Calibration





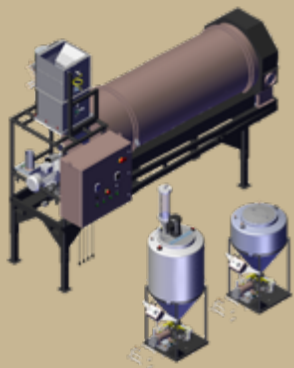
SYSTEM DIAGRAM

15 GAL POLY INOCULANT TANK, REF.

Dry Weight:
70 LBS

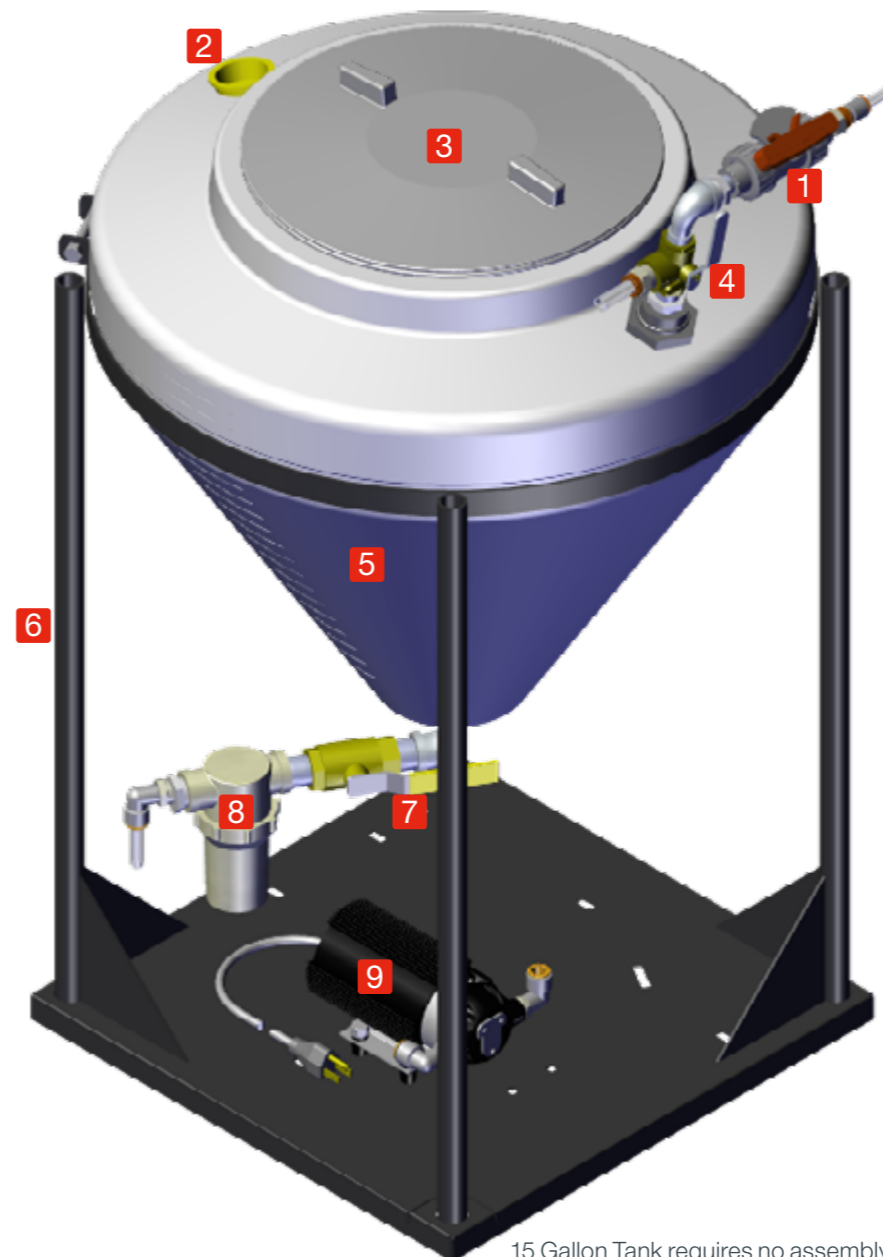
Sedvice Required:
115V, 1ph, 60Hz, .7A.

Capacity:
up to 15 Gallons



Designed to be used
with an RH seed treat-
ing system.

- 1 Flow Control Valve
- 2 1-3/4" Plastic Plug
- 3 Plastic Lid
- 4 Recirculation Valve
- 5 15 Gallon poly Tank (graduated)
- 6 Cold Rolled Steel (CRS) Frame
- 7 Shutt-off Valve
- 8 In-line Filter
- 9 Diaphragm Pump



15 Gallon Tank requires no assembly.



30 GAL POLY INOCULANT TANK, REF.

Dry Weight:
90 LBS
Service Required:
115V, 1ph, 60Hz, 2.0A.
Capacity:
up to 30 Gallons



- 1 Plastic Lid
- 2 Bulk Head Fitting
- 3 Press Lock Fitting: 1/2"NPT
- 4 30 Gallon poly Tank (graduated)
- 5 Cold Rolled Steel (CRS) Frame
- 6 LS Pump Control
- 7 Shut-off Valve
- 8 Rinse Valve
- 9 In-line Filter
- 10 LS Pump



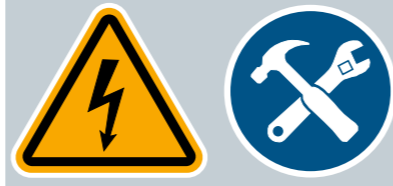


INSTALLATION



Required assembly tools

- 7/16" Wrench (1)



15 Gallon Tank

Diaphragm Pump Connection

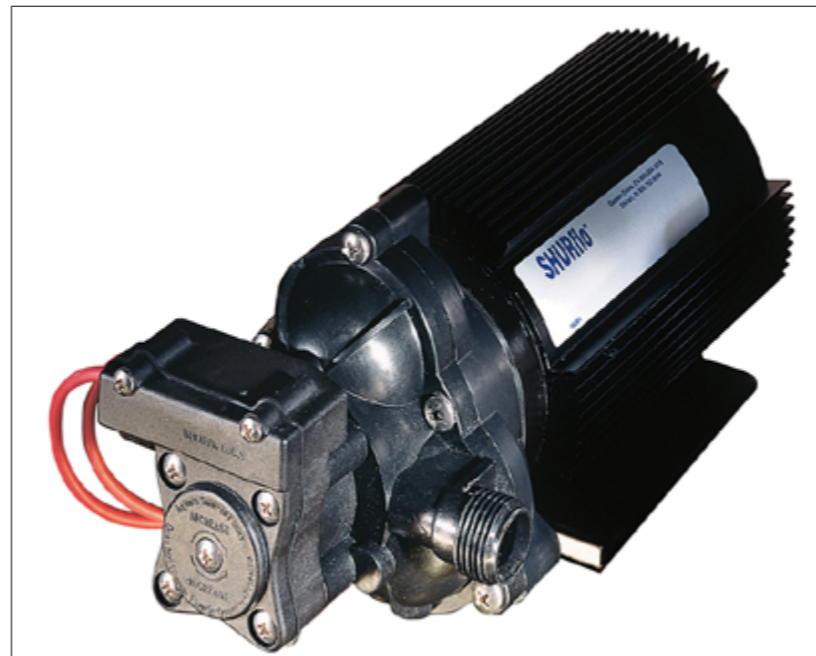
RH Basic Control

Step 1: Connect the Diaphragm Pump 115V AC power cord to the corresponding 115V AC pig tail power cord receptacle underneath the RH 4-Pump Control marked PUMP 1-4 (select one).

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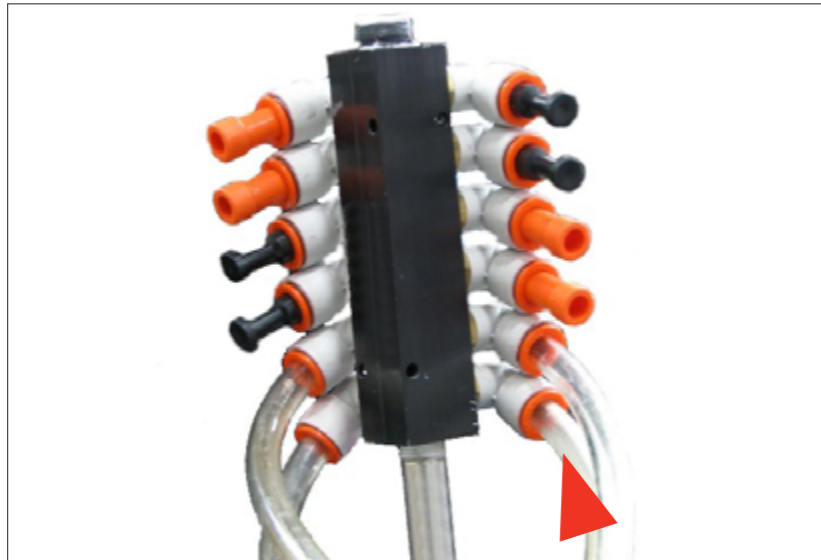
Spill Containment

Spill containment is recommended around chemical supply tanks inside a building or structure.





Step 2: Insert one end of Tubing into the Metering Valve Outlet Press Lock fitting on top of the Metering Valve Assembly.



Step 3: Start at the bottom and insert the other end of the Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.



Step 4: Remove Tank Cover Lid and pour in inoculant product. Replace Lid when done.





30 Gallon Tank
LS Pump Control
RH Basic Control

Step 1: Locate the LS Control Mount Plate in position.



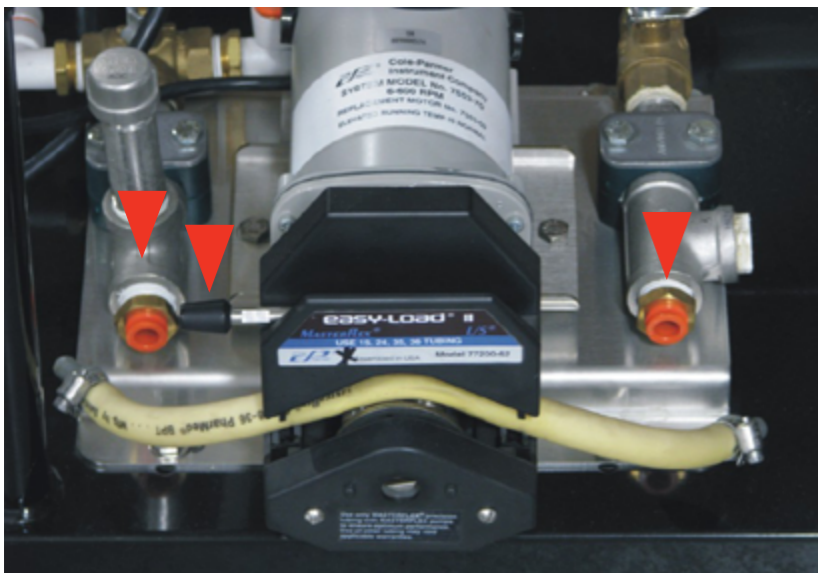
Step 2: Insert the U-bolt from behind the Tank Stand Frame and push through the Mount Plate. Use a 7/16" wrench and fasten in place in the following order: U-bolt+[Frame+Mount Plate]+lock washer+nut. Securely tighten. Repeat on other side of Mount Plate.



Step 3: Connect the Pump to the backside of the LS Controller. Set the LS Control on the Mount Plate. Connect 115VAC Control Power Cord to Treater Control Panel.

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LS Pump Element Connection

Step 1: Use the Pump Head handle to open the Pump Head. Set the pump element on the roller heads. Insert element ends into each orange fitting on both sides of the Pump.



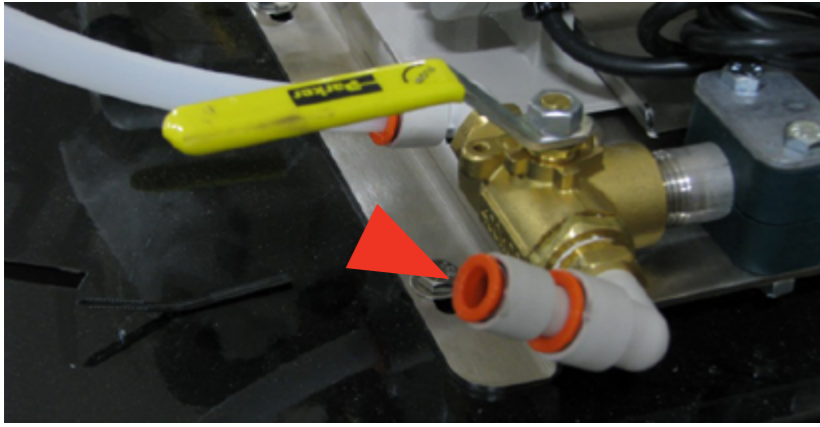
Step 2: Ensure the Pump Element lays on the roller and behind the clips on the Head.



Step 3: Use the Pump Head handle to close the Pump Head.

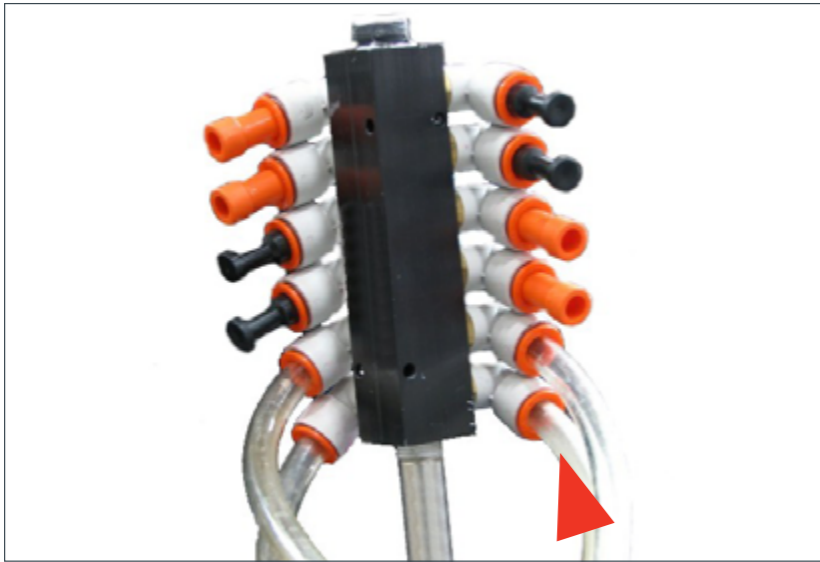
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Treatment Line Connection

Step 1: Insert one end of the Tubing into the Pump Valve Outlet Press Lock fitting on the side of the Pump Assembly.



Step 2: Start at the bottom and insert the other end of Tubing into the Treater Chemical Inlet Assembly Press Lock Fitting.



Step 3: Remove Tank Cover Lid and pour in inoculant product. Replace Lid when done.



CALIBRATION

Required calibration tools

- Graduated Beaker



Warning! Exercise extreme caution when working with chemicals! Wear proper PPE >>



15 Gallon Tank

Diaphragm Pump

RH Basic 4- Pump Control

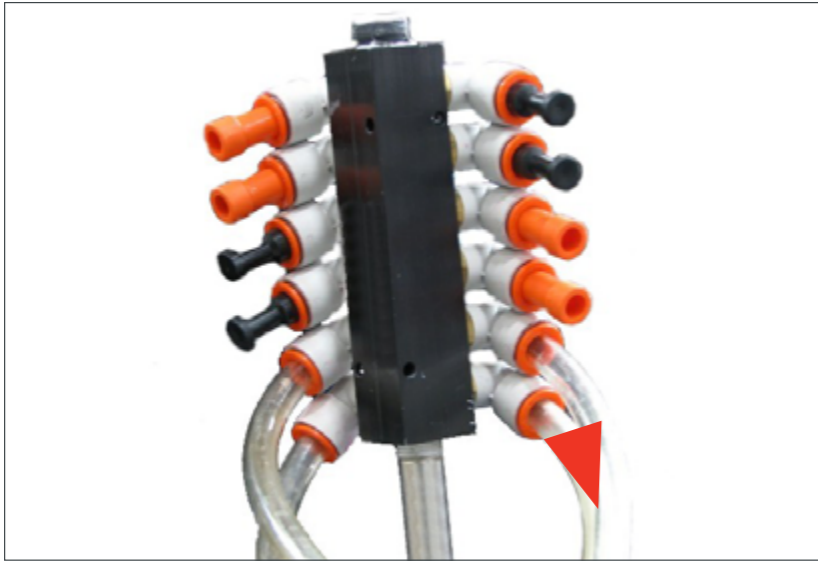
Step 2: Open the Tank Main Shut-off valve.



Step 2: Ensure the Recirculation Valve is in the TREAT mode.

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Step 3: Disconnect the treatment line from the Chemical Inlet on the treating head.



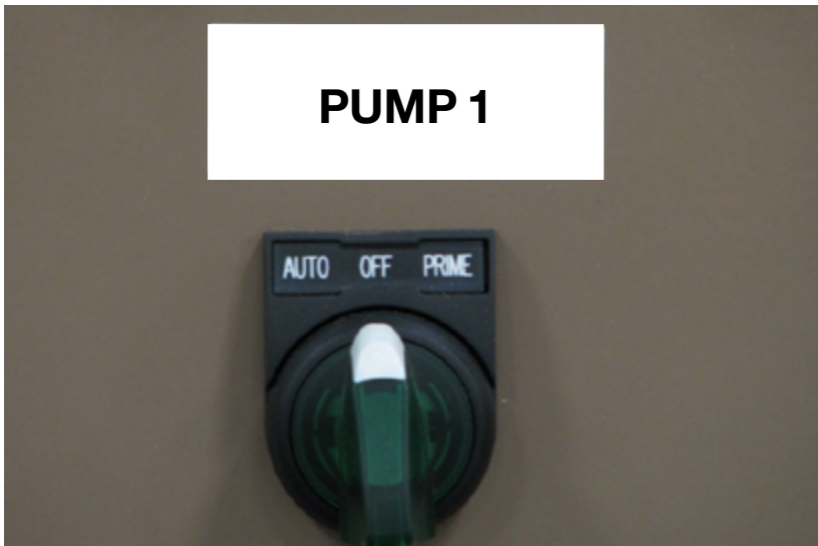
Step 4: Hold the treatment in the graduated Beaker.



Step 5: Turn Pump #1 Switch to PRIME for one minute.

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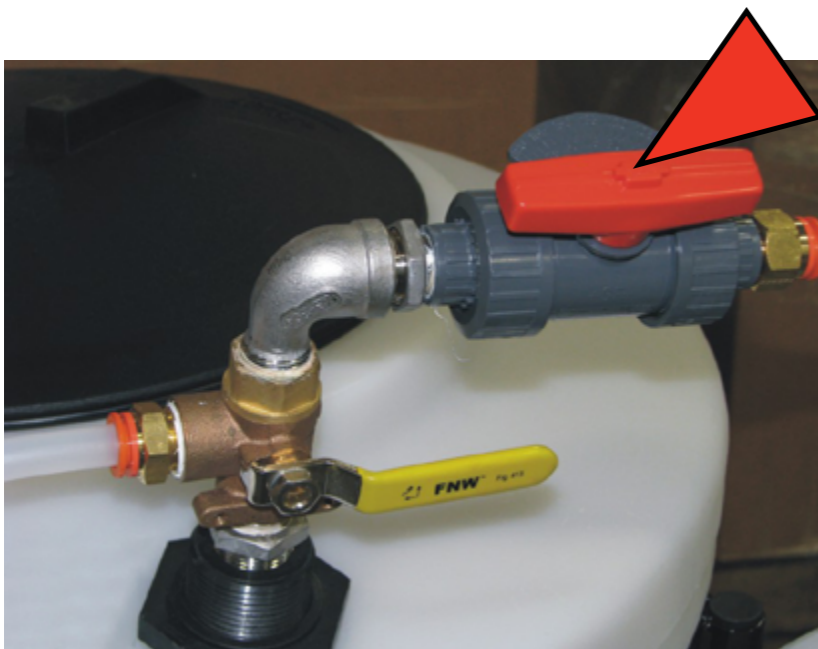


Step 6: Turn Pump #1 Switch to OFF position.



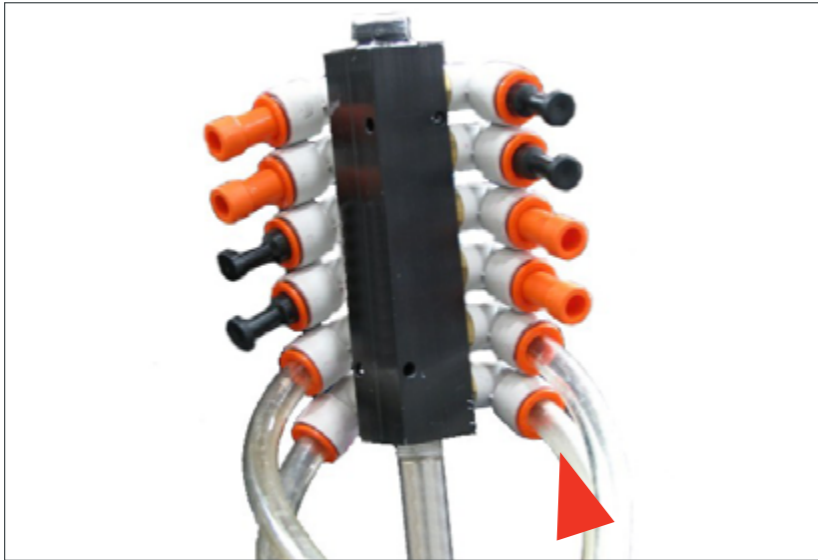
Note: Make note of the amount (ounces) of chemical pumped into the beaker in one minute. Compare that amount to the chemical product label requirement.

Step 7: Adjust chemical flow up or down on the Metering Ball Valve. Repeat calibration until desired output is achieved..

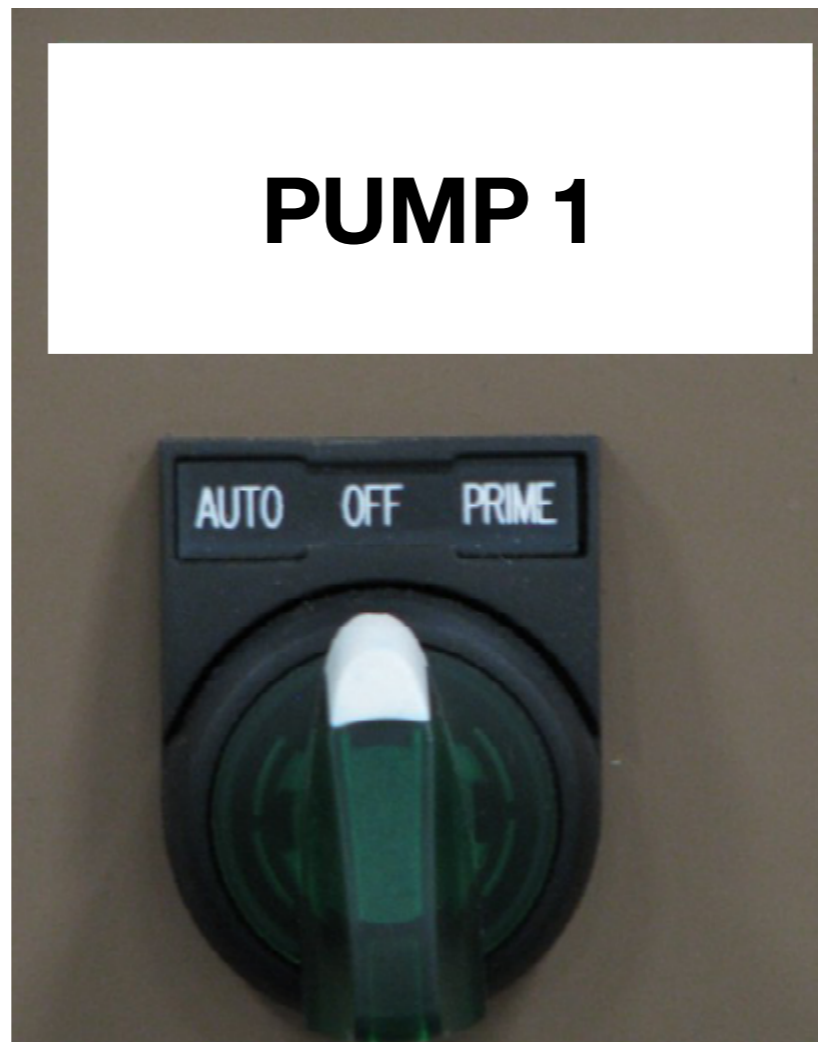


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Step 8: Connect the treatment line into the chemical inlet assembly on the treater.



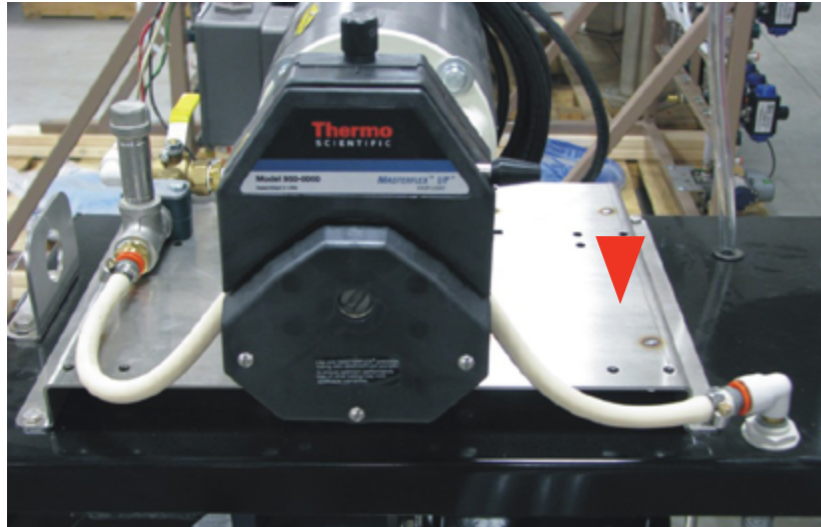
Step 9: Turn Pump #1 switch to the PRIME position. The pump will run, sending chemical to the chemical inlet assembly on the treater. Turn the Pump #1 switch to the OFF position.

Continued ➞



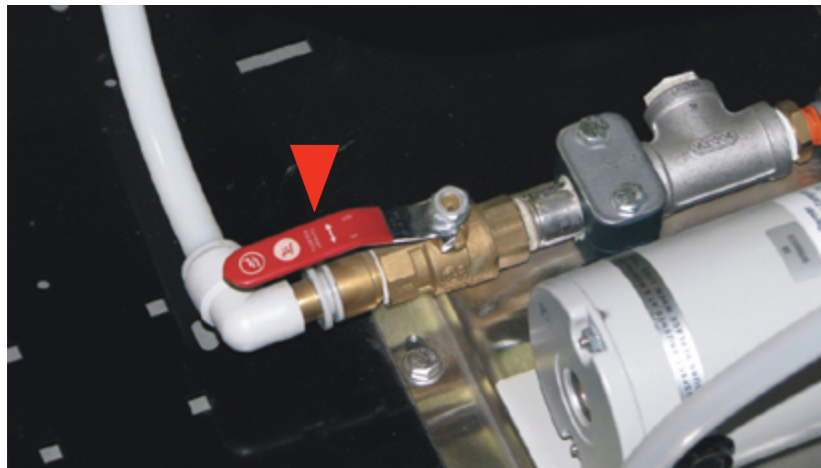
Note: Check pump calibration on each lot of seed. If extremely high or low temperatures exist, the viscosity and flow of certain treatment products may be affected. A typical example would be treating early in the morning at colder temperatures compared to treating in the afternoon when the temperature has increased.



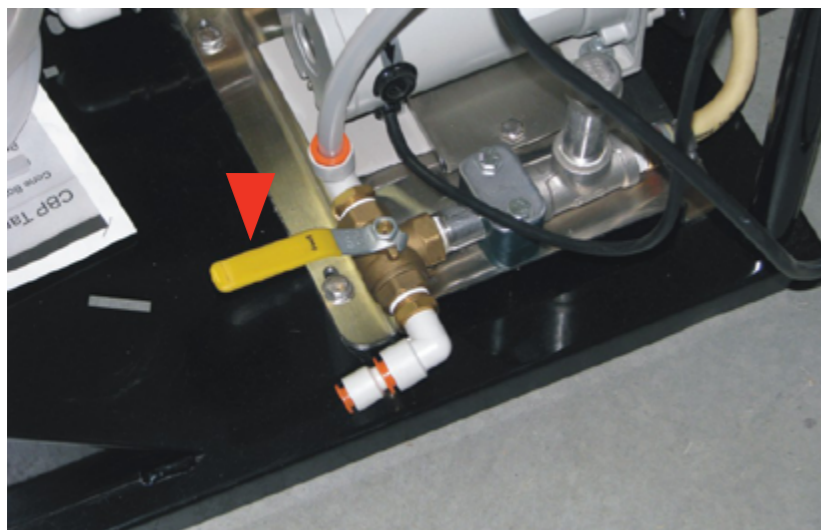


30 Gallon Tank
LS Pump
RH Basic 4- Pump Control

Step 1: Ensure the pump head is clamped **DOWN** on the pump element.



Step 2: Ensure the pump main flow valve is in the **TREAT** mode.



Step 3: Ensure the pump recirculation valve is in the **RECIRCULATION** mode..

Continued ➡





Step 4: Ensure the tank valves are in the **TREAT** mode.



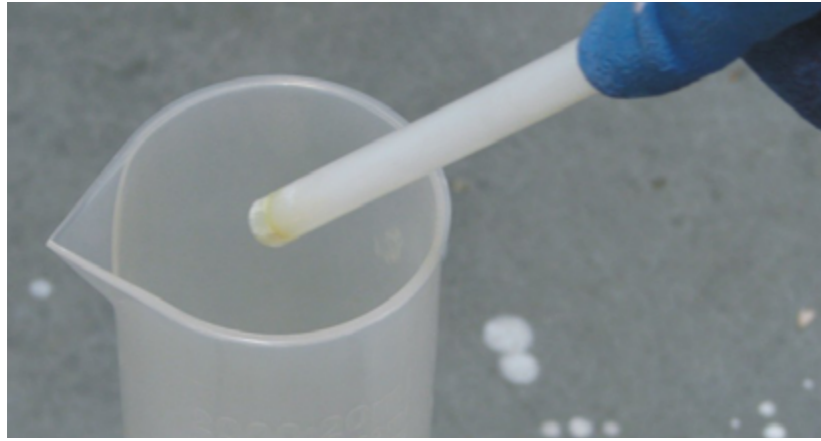
Step 5: Turn the LS Control Pump Switch to **FORWARD**.



Step 6: Disconnect the treatment line from the Chemical Inlet on the treating head..

Continued ➡





Step 7: Hold the treatment in the graduated Beaker.



Note: Make note of the amount (ounces) of chemical pumped into the beaker in one minute. Compare that amount to the chemical product label requirement.



Step 8: Turn Pump #1 Switch to **PRIME** for one minute.



Note: Speed Indicator sets the speed of the pump. The higher the number, the faster the speed of the pump... turn dial right or left.

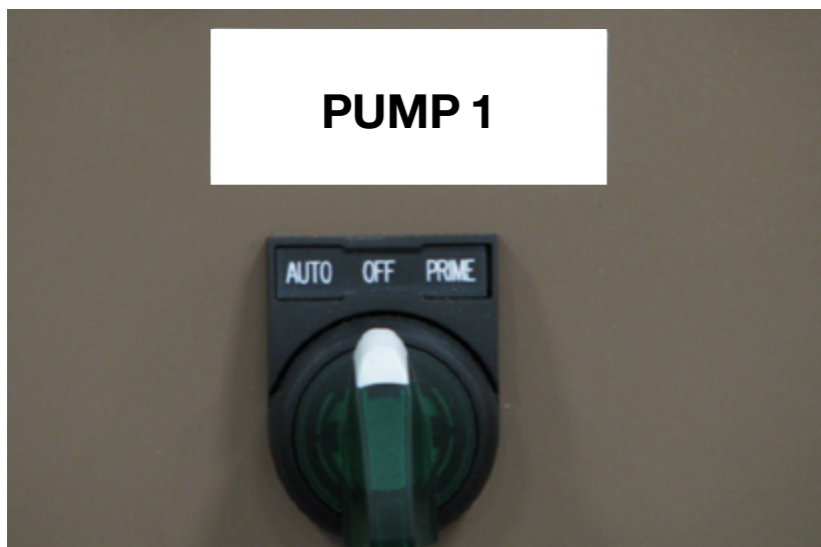
$$296\text{ml} \div 100\text{cwt} = 2.96\text{ml} \times 60\text{lbs} = 177.6$$



Multiple calibration runs may need to be made by adjusting the LS pump speed, until the desired amount of chemical pumped reaches the target amount.

The calibration process will need to be repeated whenever a new seed type or seed size is introduced into the treating process.

Changes beyond the control of the operator or the functionality of the machine, such as temperature, humidity and winds peed throughout the day, can affect the calibration.



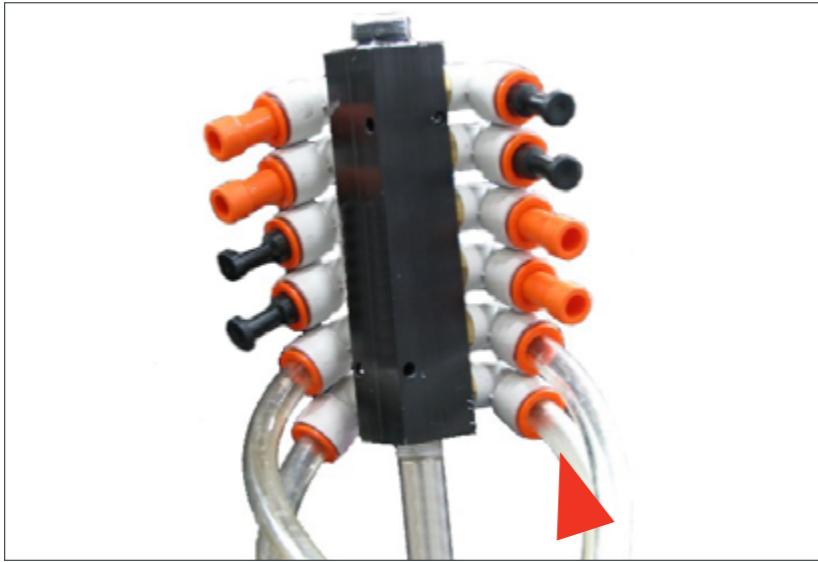
Step 9: Turn Pump #1 Switch to **OFF** position.

Continued ➡



Tip: It is highly recommended that calibration checks be made periodically throughout the day, to help ensure proper application rates are achieved.





Step 10: Connect the treatment line into the chemical inlet assembly on the treater.



Step 11: Turn Pump #1 switch to the PRIME position. The pump will run, sending chemical to the chemical inlet assembly on the treater. Turn the Pump #1 switch to the OFF position.



Note: Check pump calibration on each lot of seed. If extremely high or low temperatures exist, the viscosity and flow of certain treatment products may be affected. A typical example would be treating early in the morning at colder temperatures compared to treating in the afternoon when the temperature has increased.





MAINTENANCE

Required maintenance tools

- Graduated Beaker
- Drip Pan
- Channel Locks
- 15/16" Allen Wrench



Warning! Exercise extreme caution when working with chemicals! Wear proper PPE >>



15 Gallon Tank Valve



30 Gallon Tank Valves

15 & 30 Gallon Tank In-line Filter

Step 1: Turn the supply tank valves to the **RINSE** mode.

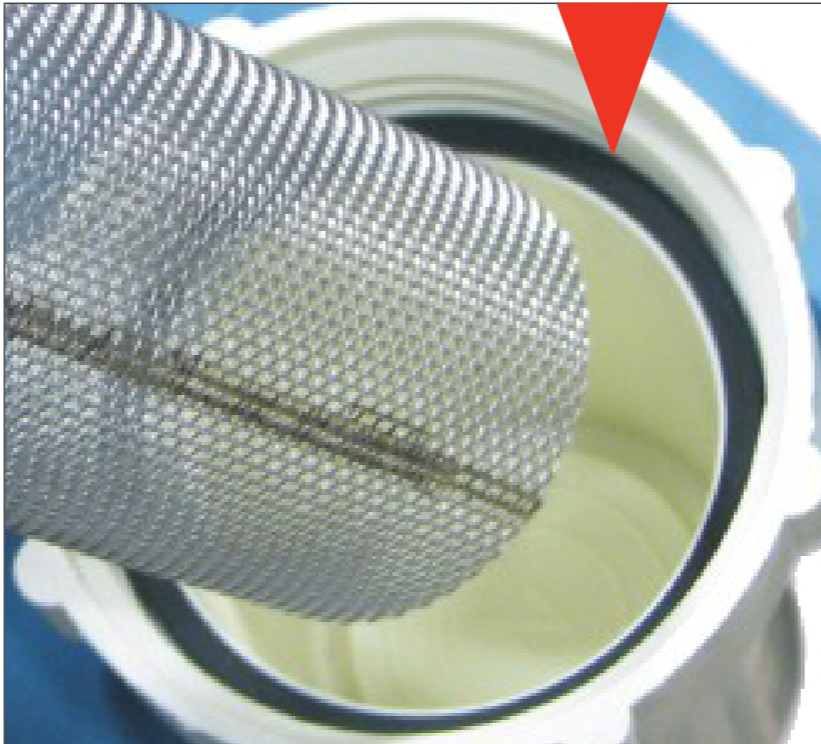


Step 2: Place a drip pan or bucket underneath the filter assembly. Unscrew (left twist) the filter bottom from the filter top. May need to use a channel locks to loosen the threads.

Continued ➡



Step 3: Remove the filter screen from the filter bottom and check it for clogging and material build-up. Clean it thoroughly.



Step 4: Ensure the gasket is seated correctly below the threads. Replace the filter screen in the filter bottom. Carefully thread (right twist) the filter bottom back onto the filter top.

Hand tighten only!

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15 Gallon Tank Valve



30 Gallon Tank Valves

15 & 30 Gallon Tank In-line Filter

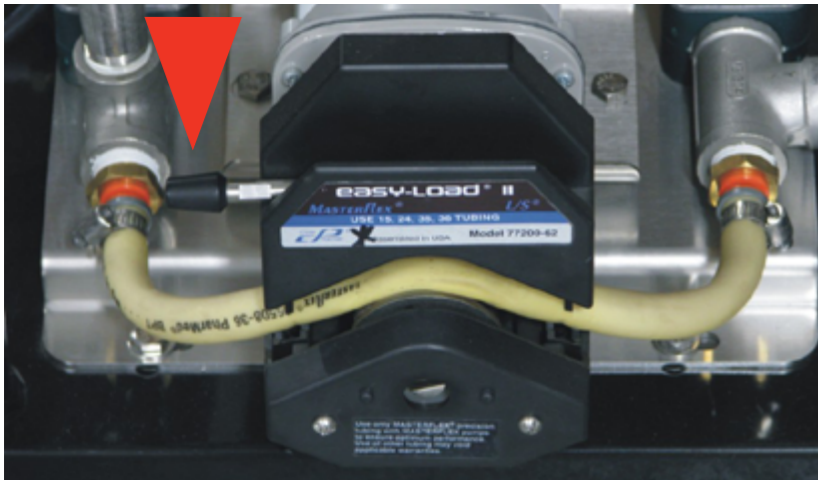
Step 1: Turn the supply tank valves to the **RINSE** mode.

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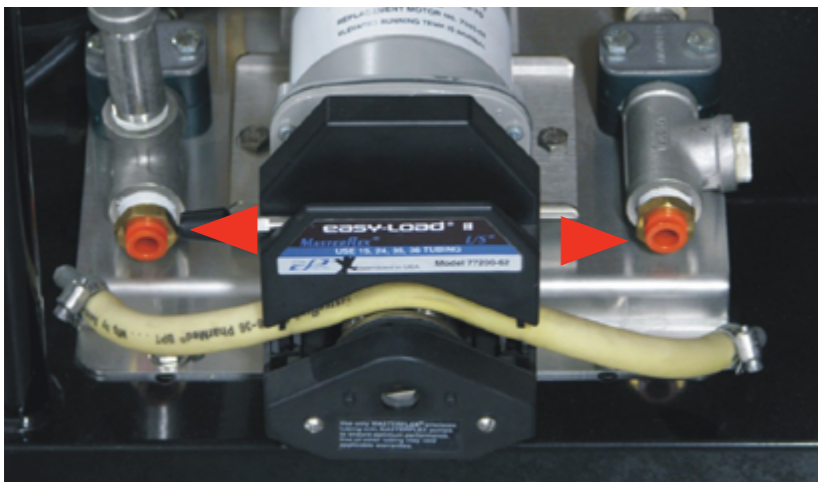




Step 2: Close the pump main flow valve.



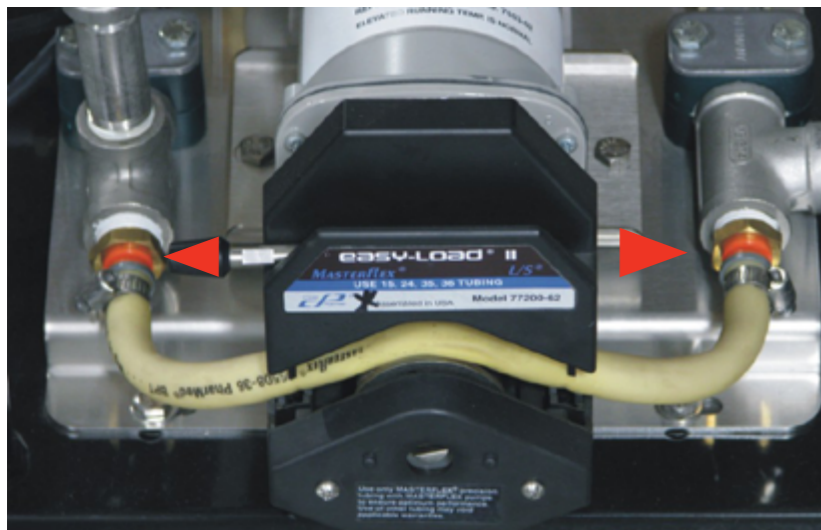
Step 3: Use the pump head handle to **OPEN** the pump head.



Step 4: Push each orange press lock fitting to release and remove the element from the pump head.

Continued ➔





Step 5: Insert a new element fittings into each of the orange pump fittings.



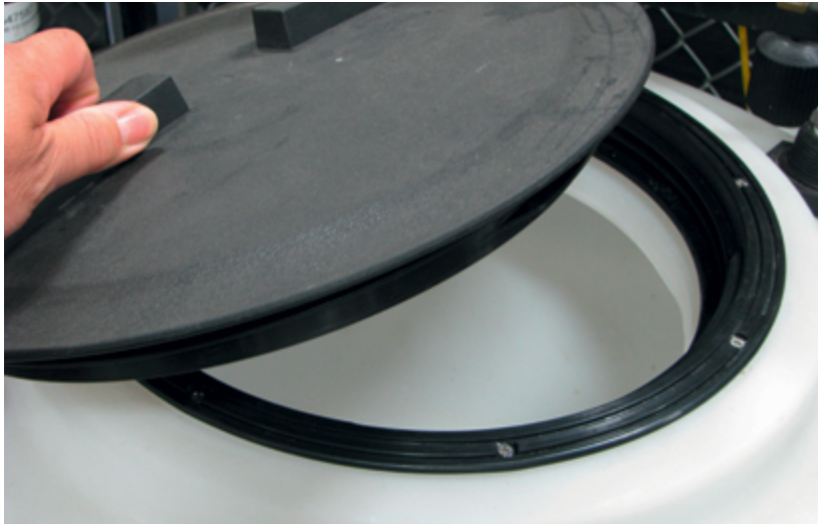
Step 6: Ensure the Pump Element fits properly onto the Pump Rollers and under each Clip. Failure to properly align the Element may cause Pump failure!



Step 7: Use the pump head handle to **CLOSE** the pump head.

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Tank Rinse

Step 1: Remove Tank Cover Lid and pour in clean water. Replace Lid when done.

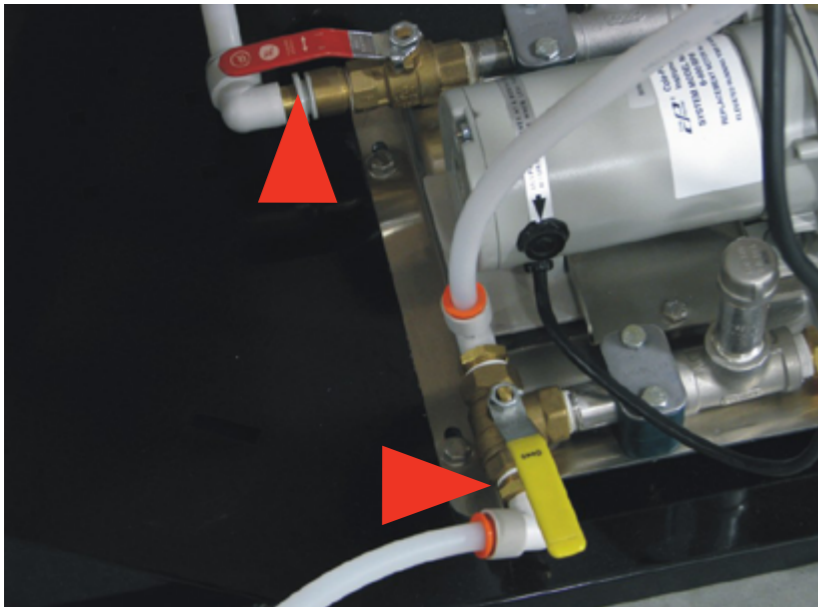


15 Gallon Tank Valve



30 Gallon Tank Valves

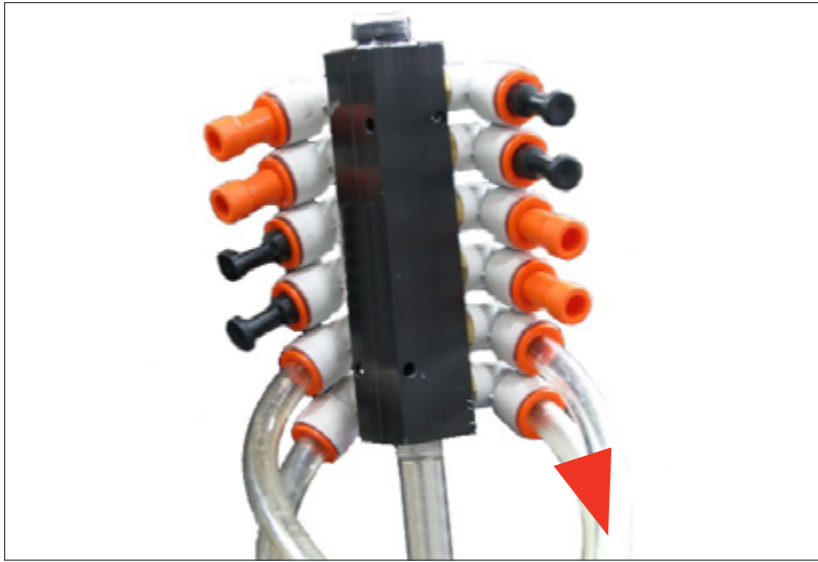
Step 2: Ensure the tank valves are in the **TREAT** mode.



Step 3: Turn the pump main flow valve and recirculation Valves in the **TREAT** mode.

Continued ➔





Step 4: Push the orange fitting and disconnect the treatment line from the Chemical Inlet Assembly on the Treating Head Assembly.



Step 5: Hold the Treatment Line in a 5 gallon pail.

Continued ➡





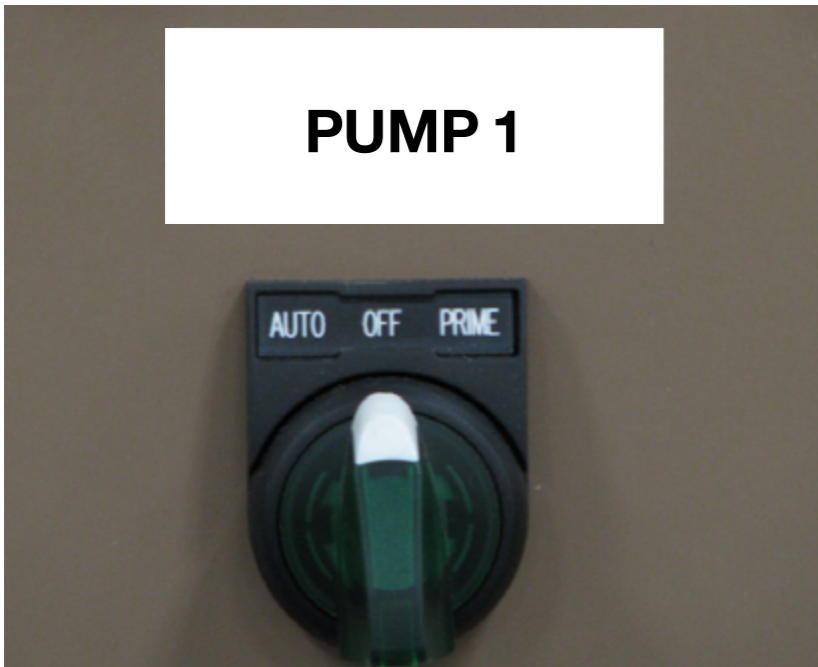
Step 6: Ensure the RH Basic Main Power Switch is in the **ON** position (**UP**) Power light will also indicate that the power is **ON** when lit.



Step 7: Turn the RH Basic PUMP #1 Switch to the **AUTO** position. Allow the Pump to run and completely empty the CBP Tank, Pump Element, Treatment Line.

Continued ➡





Step 8: Turn the RH Basic PUMP #1 Switch to **OFF** position.



Step 9: Fill the CBP Tank with clean water mixed with ammonia or a mild detergent or a cleaning solution recommended by the manufacturer of the treatment product. Turn PUMP #1 Switch to the **AUTO** position. Allow the Pump to run and completely empty the CBP Tank, Pump Element, Treatment Line.

Continued ➞



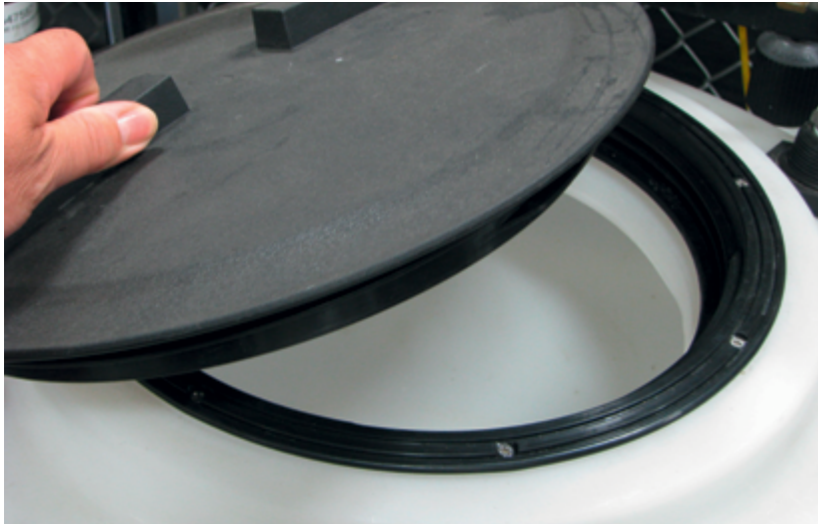
PUMP 1



Step 10: Then turn PUMP #1 Switch to **OFF** position. Repeat this rinse process for each Pump used (1-4).

Continued ➞





End of Season Shut-down

Step 1: Remove Tank Cover Lid and fill the CBP Tank with clean water mixed with ammonia or a mild detergent or a cleaning solution recommended by the manufacturer of the treatment product. Replace Lid when done.

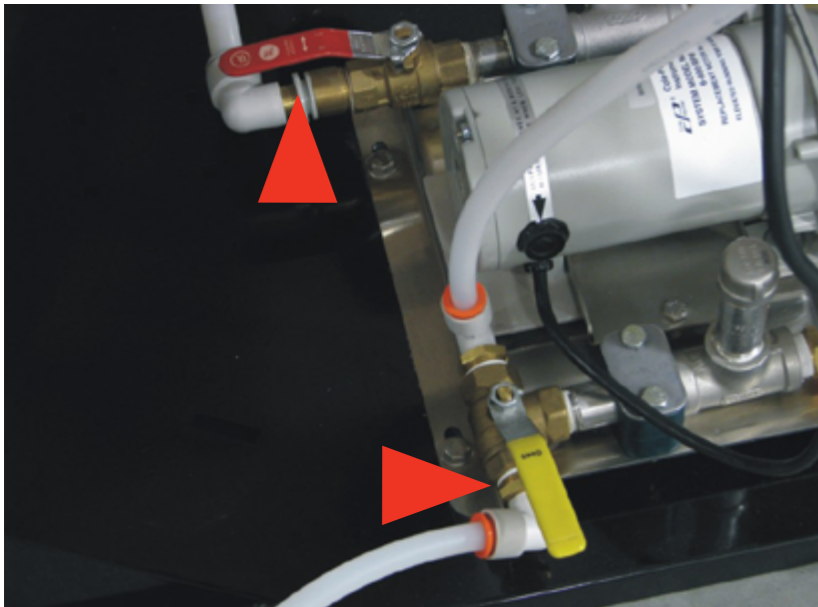


15 Gallon Tank Valve



30 Gallon Tank Valves

Step 2: Ensure the tank valves are in the **TREAT** mode.



Step 3: Turn the pump main flow valve and recirculation Valves in the **TREAT** mode.

Continued ➔





Step 4: Remove the Chemical Inlet Assembly from the Treater (use 15/16 Allen Wrench).



Step 5: Place the Chemical Inlet Assembly in a 5 gallon pail.



Step 6: Turn PUMP #1 Switch to the **AUTO** position. Allow the Pump to run and completely empty the CBP Tank, Pump Element, Treatment Line.

Continued ➞



PUMP 1



Step 8: Then turn PUMP #1 Switch to **OFF** position. Repeat this rinse process for each Pump used (1-4).



Note:

Rinse water (gray water) may be saved and used with the next slurry mix or dispose of properly, according to state and local regulations.

If the tank is going to be stored in subfreezing temperatures, flush with products to prevent freezing such as RV Anti-freeze or dilute windshield washer fluid, to prevent freezing which will cause pump damage.

Failure to clean the tank properly, or failure to completely drain all liquid from the pump and lines after use, may damage the equipment and void any warranties expressed or implied.

It will not damage the pump to run it dry or with the valves in the closed position.





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