



CBT LW MAINTENANCE GUIDE 25, 50, 100 & 200





MENU

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



Legal & Safety



Weigh Scale



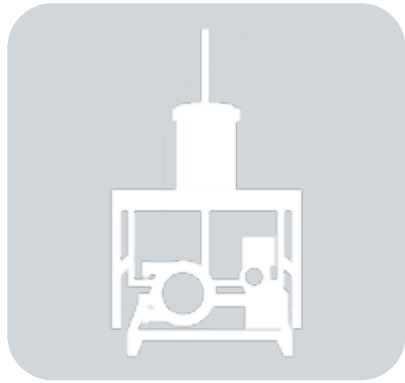
Powder Feeder



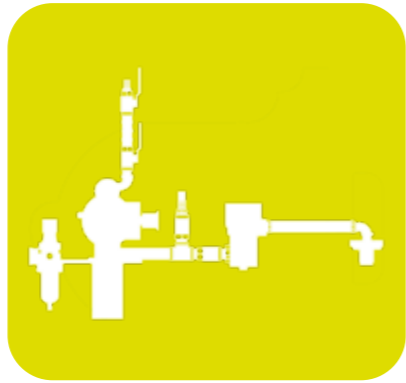
Mixing Bowl



Control Panel



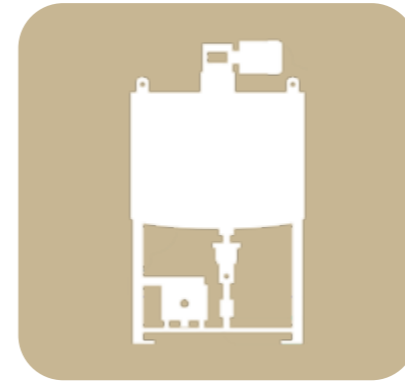
Pump Station



Bulk Transfer



CBP Tanks



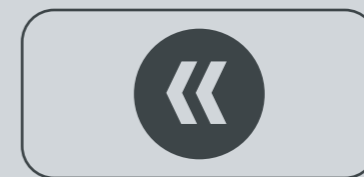
PSD Tanks



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.



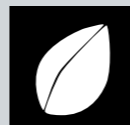
Eye protection required

Wear protective eyewear.



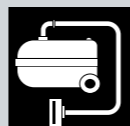
Calibration

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



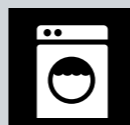
Clean seed

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.

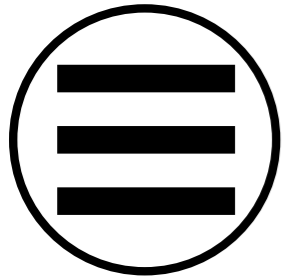




PICTOGRAMS

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Each Signifier displayed here is specific to this User Manual.



Menu



Previous



Advance



Pump Station



Bulk Transfer



CBP Tanks



Weigh Scale



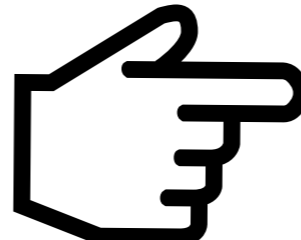
Powder Feeder



Mixing Bowl



Control Panel



Cursor Hand



PSD Tanks





WEIGH SCALE



Required tools

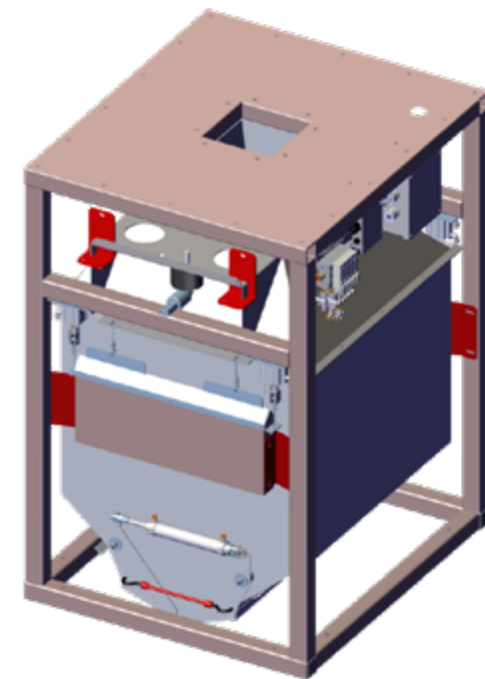
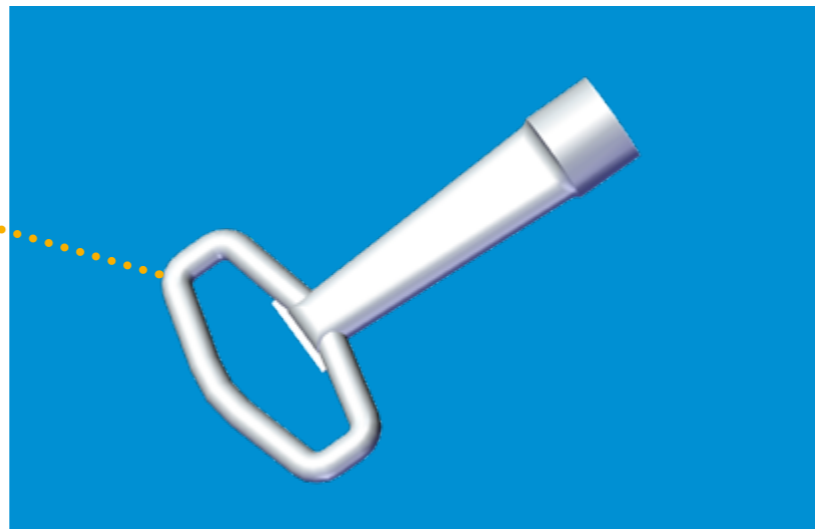
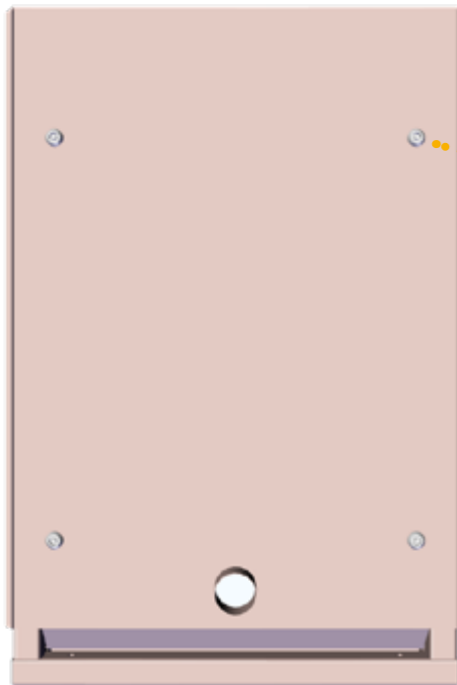
- Quarter Turn Key
- Vacuum
- Putty knife



Weigh Scale & Frame Assembly

Step 1: Use the quarter turn key to remove all four guard panels from the Weigh Scale & Frame Assembly, as shown below.

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CBT Weigh Scale PM Checklist

- Clean seed weigh scale of dust/chaff - Weekly



Step 2: Use a vacuum and putty knife to clean seed, dust and chaff from inside the weigh hopper.

Step 3: Replace scale guard panels.

- Use the quarter turn key to lock each guard panel latch.



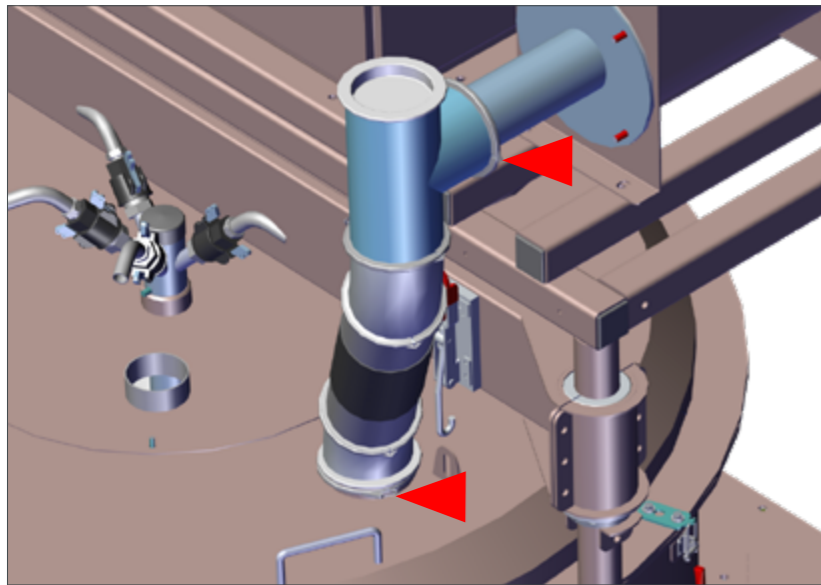


POWDER FEEDER



Required tools

- Vacuum
- 1/2" Wrench
- Putty knife



Step 1: At the end of each treating session or whenever the operator needs to change powder product, run all of the powder out of the powder hopper.

- Since powder absorbs ambient air moisture and solidifies if left over time, cleaning helps prevent “caking up”.
- Release the powder tube assembly clamps to remove it from the powder feeder and the mixing bowl cover.
- Always use a vacuum (not compressed air) to safely clean the machine.

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Powder Feeder PM Checklist

- Clean powder feeder - Weekly

Step 2: Use 1/2" wrench to remove the four nuts that hold the auger tube and gasket onto the backside of the powder base.

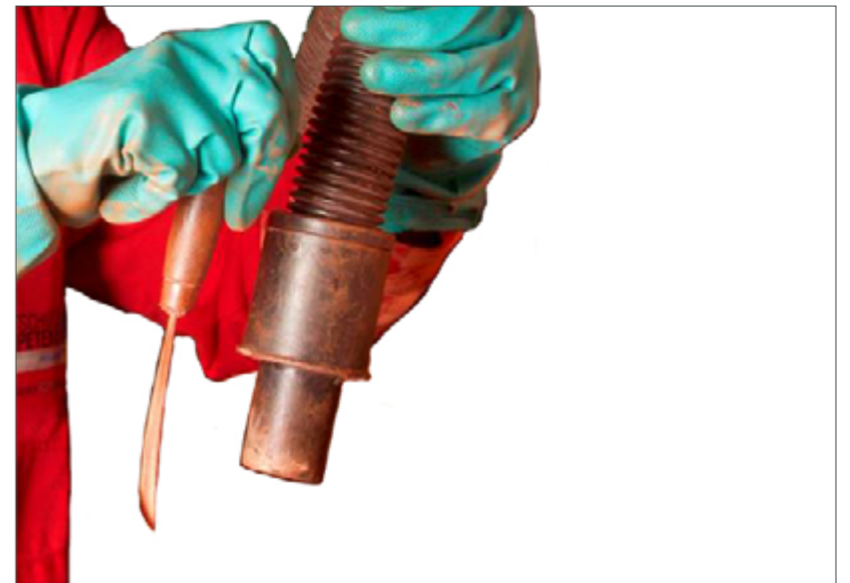
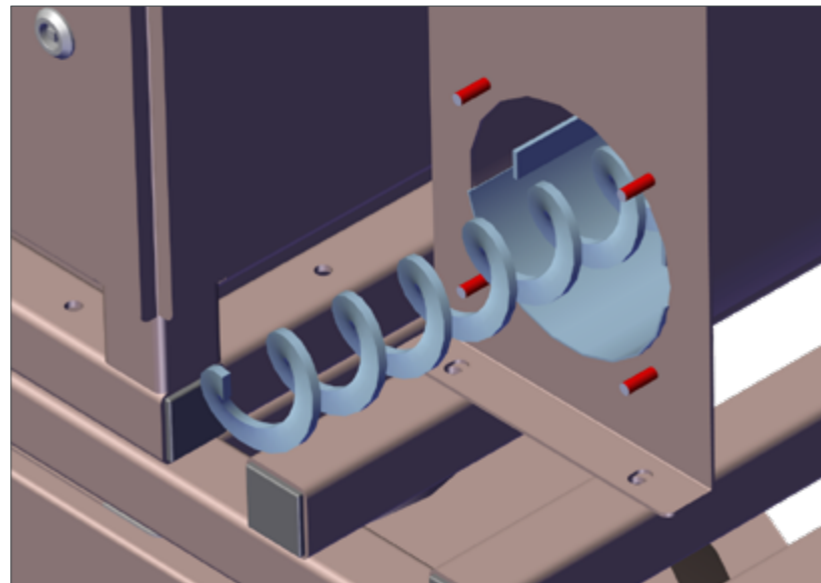
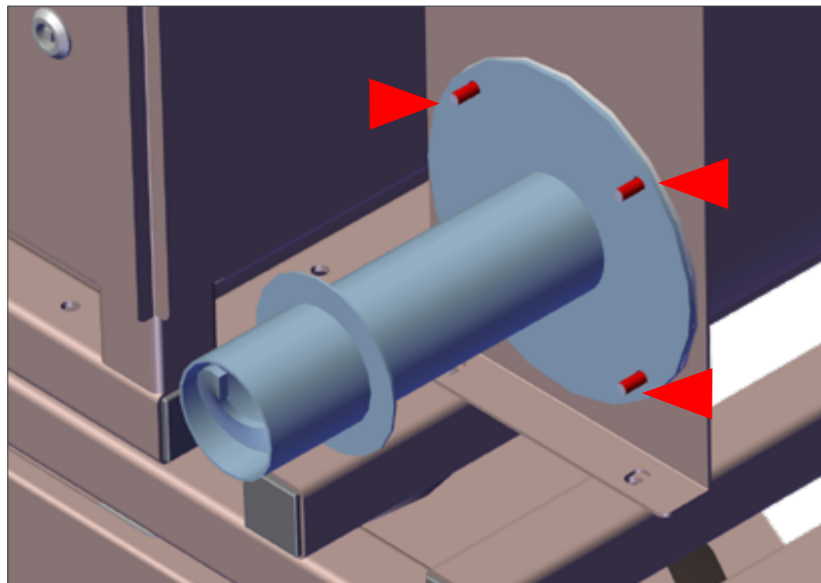
- Slide the auger tube and gasket from the powder body.

Step 3: Always use a vacuum (not compressed air) to safely clean the machine.

Step 4: Thoroughly clean the auger assembly and the powder body interior of dry product.

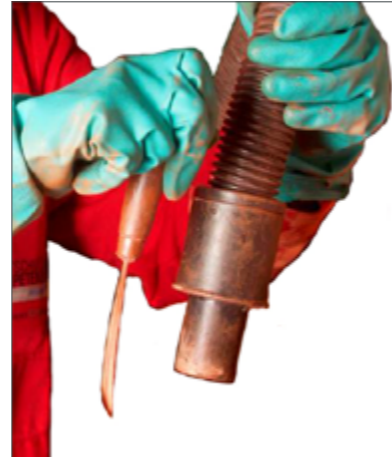
- Always use a vacuum (not compressed air) to safely clean the machine.

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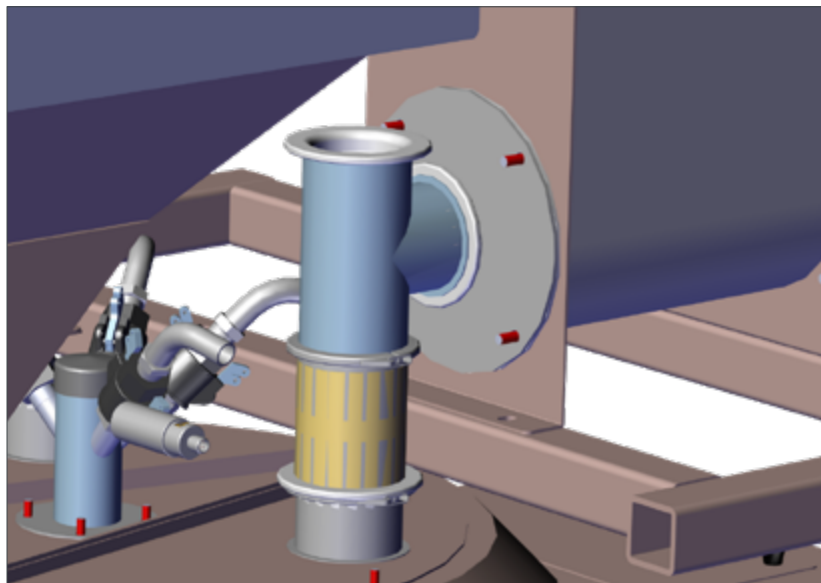


Note: for complete gear motor service instructions, refer to manufacturer's manual shipped with the powder feeder.

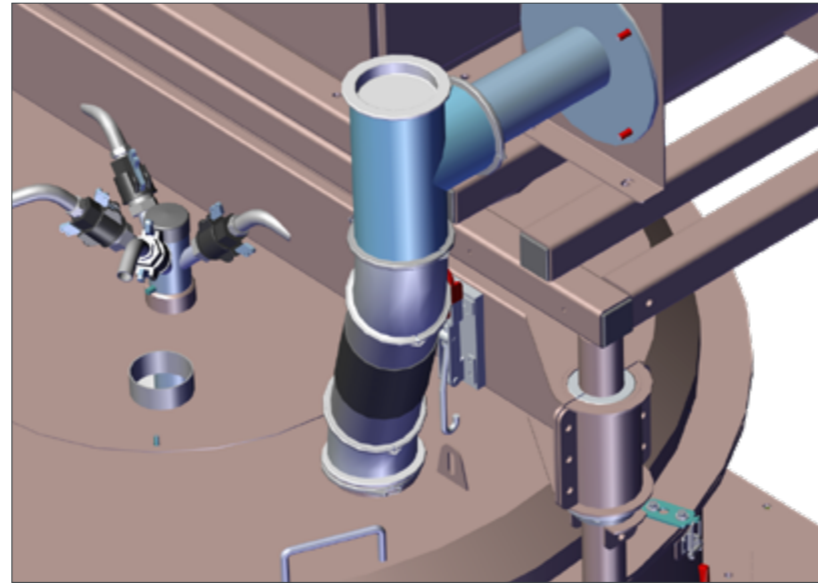


Step 5: Open the hopper lid and clean the interior of dry product.

- Always use a vacuum (not compressed air) to safely clean the machine.



CBT25, 50 & 100



CBT200 only

Step 6: When ready to use, replace the auger tube and gasket.

- Tighten hardware securely.
- Connect the powder tube assembly to the auger tube and the mixing bowl cover.



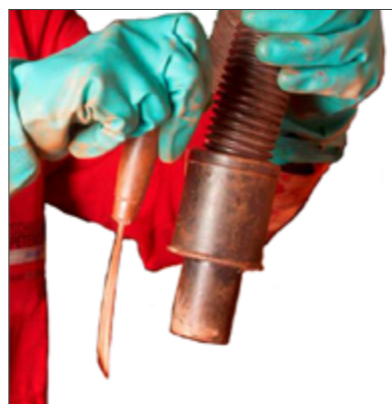
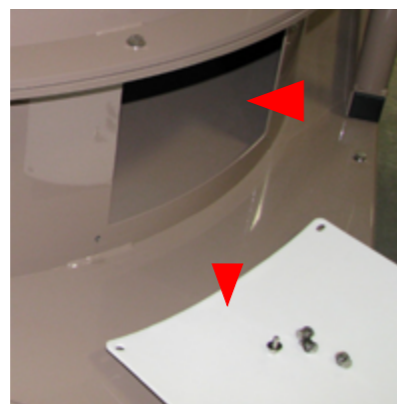


MIXING BOWL



Required tools

- Vacuum
- 10mm Socket
- 7/16" Socket
- Putty knife
- Crescent Wrench



Bowl Access Panels

Use a 10mm socket head wrench to remove four (4) 6mm bolts, washers & lock washers.

- Remove both (R-L) bowl access panel doors from the lower body wrap.
- Use a vacuum to clean seed and dust from underneath the mixing bowl.
- Check door gaskets for wear, replace if needed.
- Replace both access panel doors on the lower body wrap.

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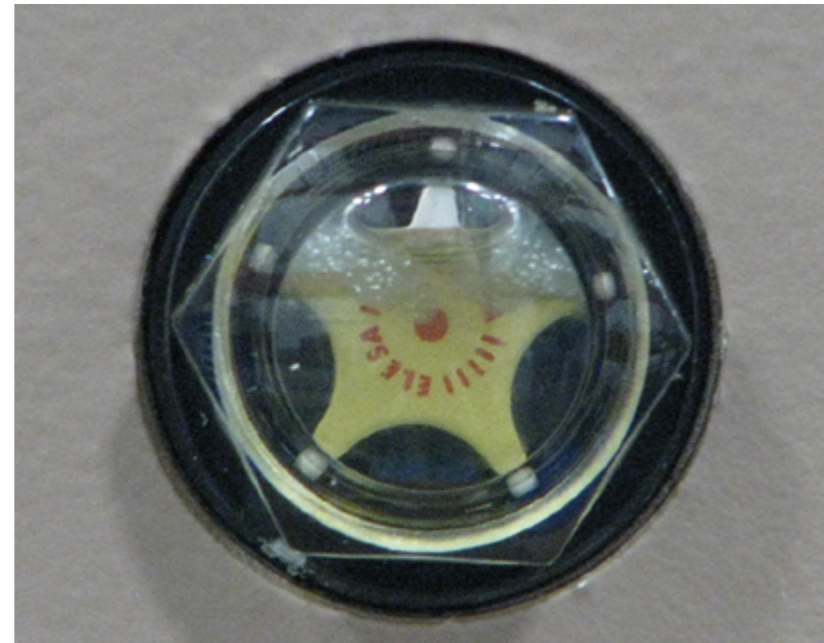
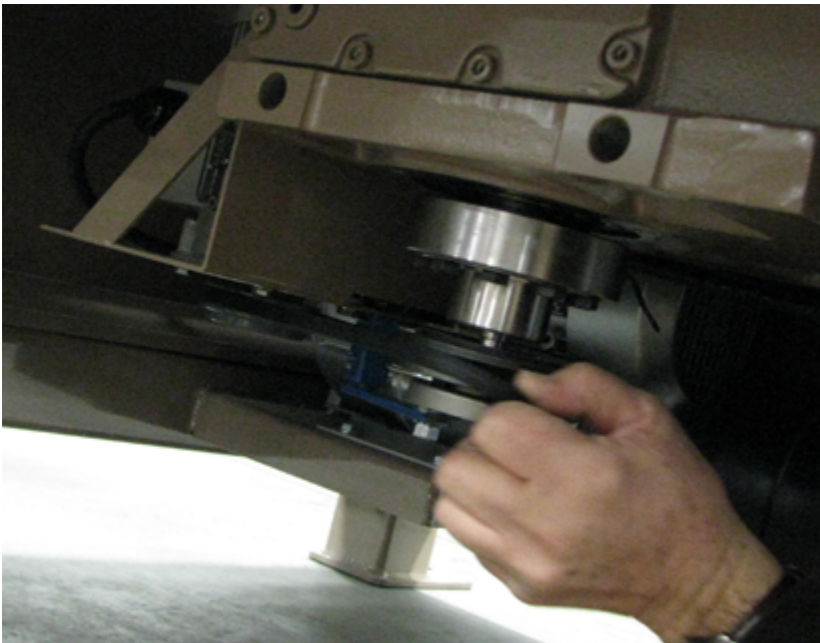


Note: for complete drive shaft or bowl replacement instructions, Visit us online: [equipment manuals](#) for those specific manuals. For complete bowl & blower motor service instructions, refer to manufacturer's manuals shipped with the CBT.



Bowl Motor V-Belt

Step 1: Use the quarter turn key to unlock and remove all panel doors from the bowl support frame.



Step 2: Check the V-belt for wear and replace if needed.

- Check the bowl gear motor for leaks and oil level.

Continued ➞

Check V-belt

New style - check oil level





Step 3: Loosen the tensioner and slip the V-belt off the sheaves.

- Replace the V-belt on both sheaves.
- Tighten the tensioner.



Filter Regulator

Check the water level and drain quarterly.



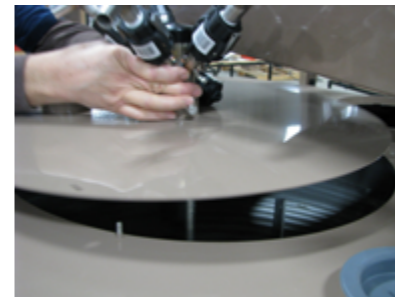
Remove Panel A



Remove Panel B



Remove Chemical Inlet Plate



CBT200 bowl cover only -
Remove Chemical Inlet Plate

Bowl Cover

Step 1: Remove the CBT25, 50 & 100 Chemical Plate...

- Remove lid clean out panel A
- Remove lid clean out panel B
- Remove chemical inlet plate

> Remove the CBT200 Chemical Plate...

- Loosen and remove (4) wing nuts on chemical inlet plate.
- Remove plate from cover.

Continued ➡





Step 2: Loosen and remove the seed inlet collar from the bottom of the transition.



Step 3: Disconnect each hold down clamp on the bowl cover.



Step 4: Push each tab in to lower both scale clamps.

Continued ➞





Step 5: Hook each scale clamp into the bowl cover.

- Lift both clamps up to lift up the bowl cover.



Step 6: Carefully move the swing arm and bowl cover away from the mixing bowl.



Atomizer

Use 7/16 socket head to remove the ¼ bolt, washer and lock washer that connects the atomizer to the drive shaft.

- Remove the atomizer and clean residual chemical.
- Wipe down the bowl and inside the bowl cover.
- Replace the atomizer on the drive shaft and securely tighten in place.
- Move the bowl cover / Swing arm over the mixing bowl and latch each hold down clamp securely.
- Replace the chemical inlet plate on the mixing bowl cover.
- Tighten the four (4) wing nuts on the chemical inlet plate.

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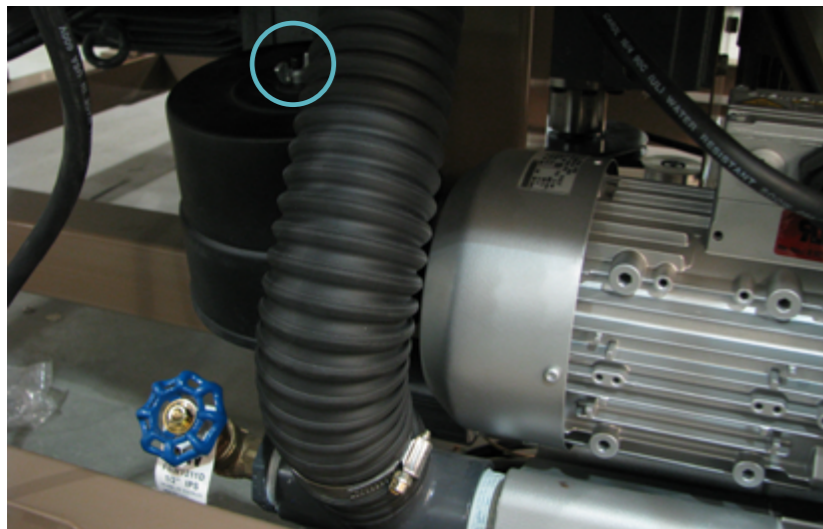


CBT Bowl & Frame PM Checklist

- Check/drain filter/regulator - Quarterly
- Clean area under bowl - Weekly
- Inspect atomizer belt - Weekly
- Inspect bowl gearbox for oil leaks - Weekly
- Inspect bowl gearbox oil level - Quarterly
- Replace bowl gearbox oil - 25,000 hrs
- Clean bowl / wrap gap - Weekly
- Clean inside of bowl /wrap / lid - per Shift
- Inspect air filter for under bowl blower - Monthly

Blower Filter

- Loosen and remove the wing nut holding the filter housing.
- Check the filter element and replace if needed.
- Replace the filter housing and tighten the wing nut in place.
- Replace the panel doors on the bowl support frame and lock them in place with the quarter turn key.





CONTROL PANEL



Filters

Periodically remove, inspect and clean out air filters.

- Grasp the top of the filter frame and pull away from the panel.
- Remove the filter and clean with a vacuum cleaner or replace the filter.





20L PUMP STATION



Required tools

- Cleaning Rags
- Screwdriver (flat)

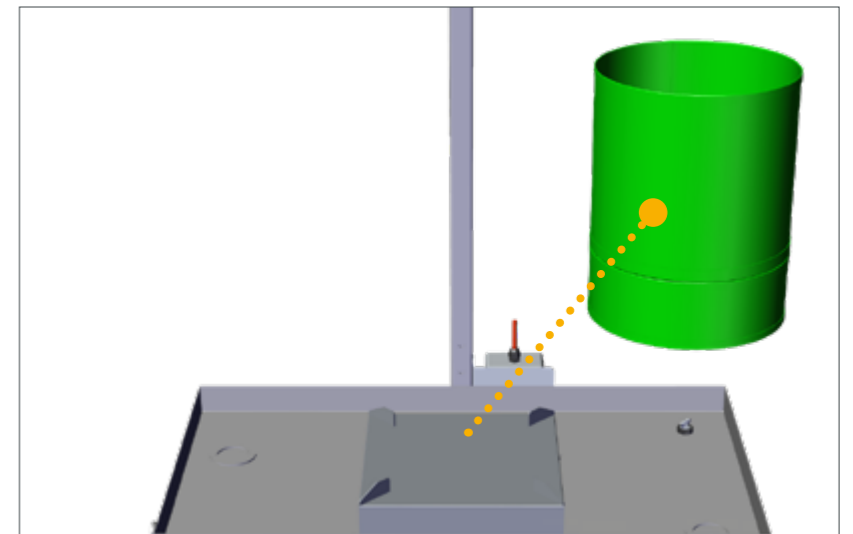
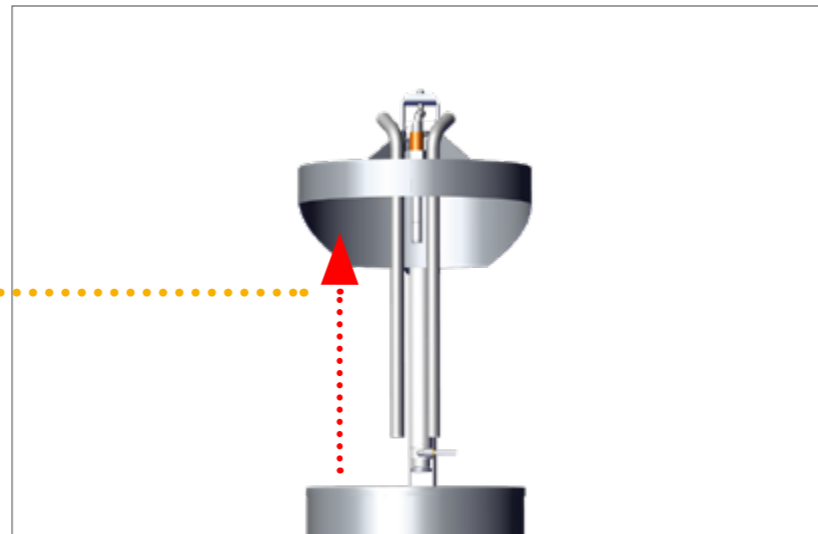
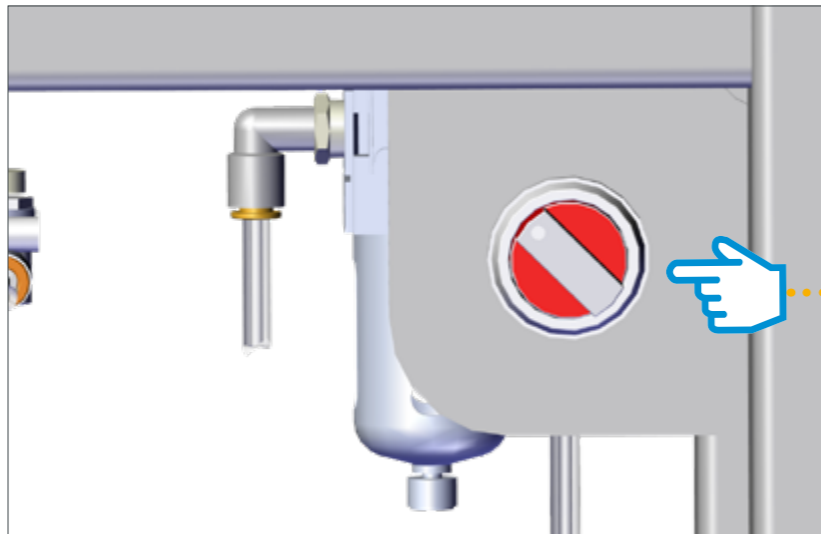


20L Pump Stations

Step 1: Turn the operation switch (located on the front of the scale frame) UP to raise the cover off of the 20L supply tank.

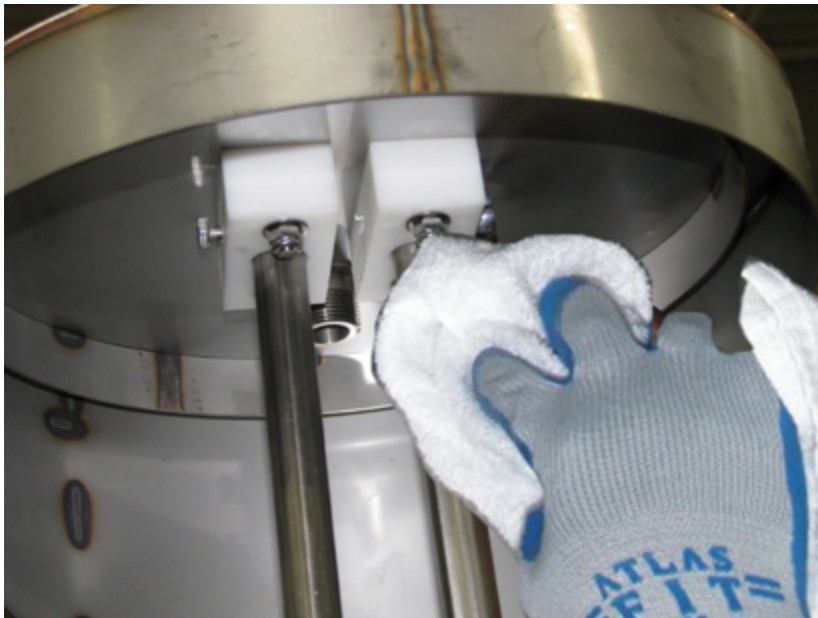
Step 2: Remove the supply tank from the scale cover.

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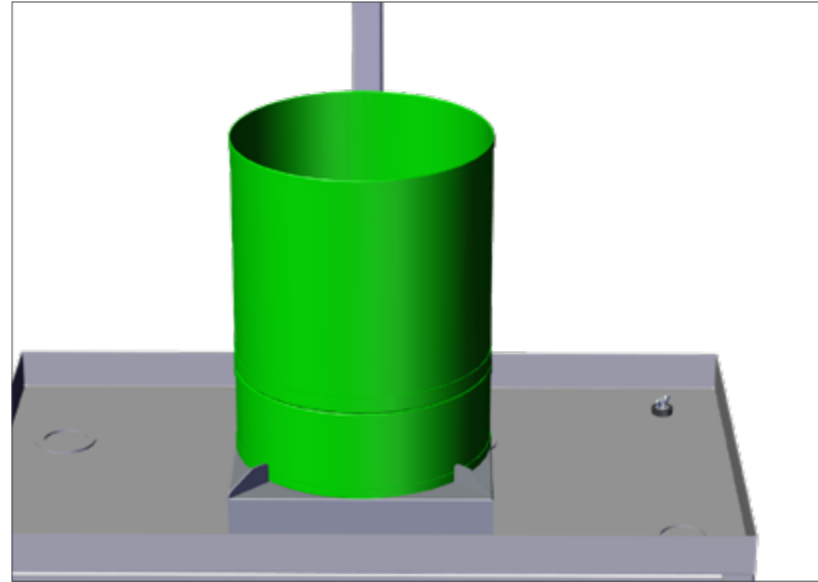
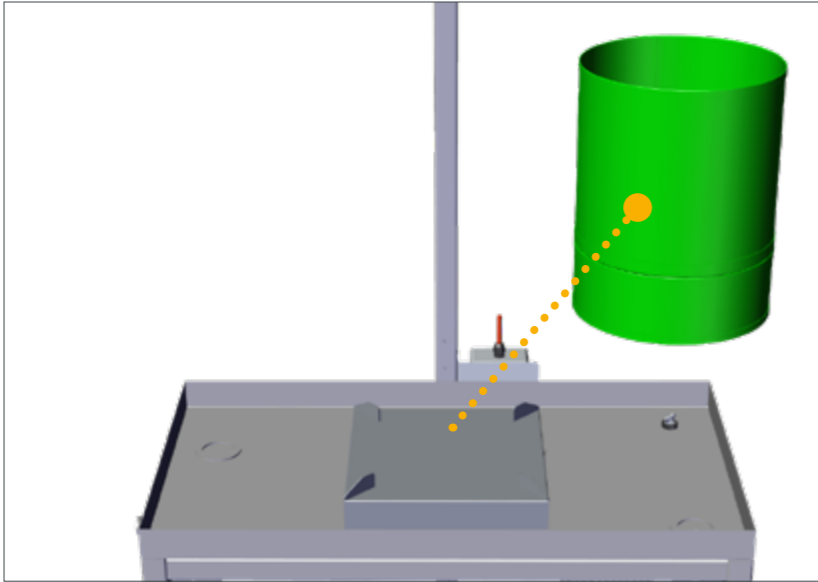
Step 3: Clean the 20L supply tank.



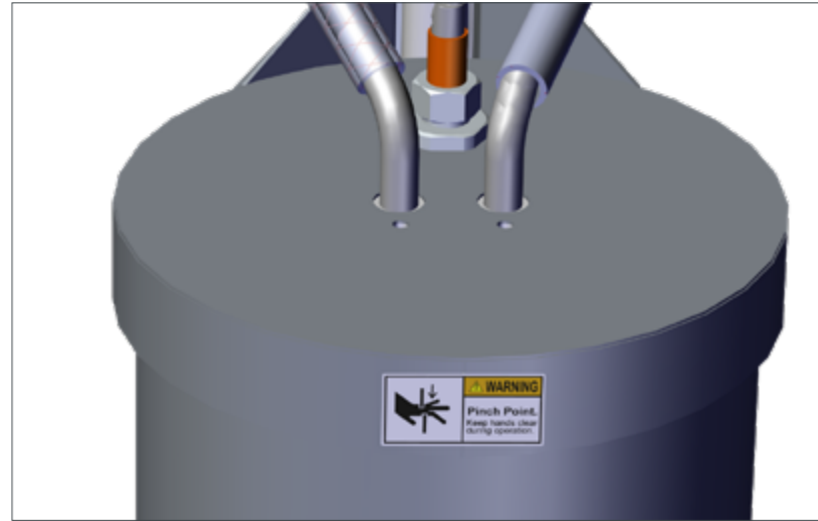
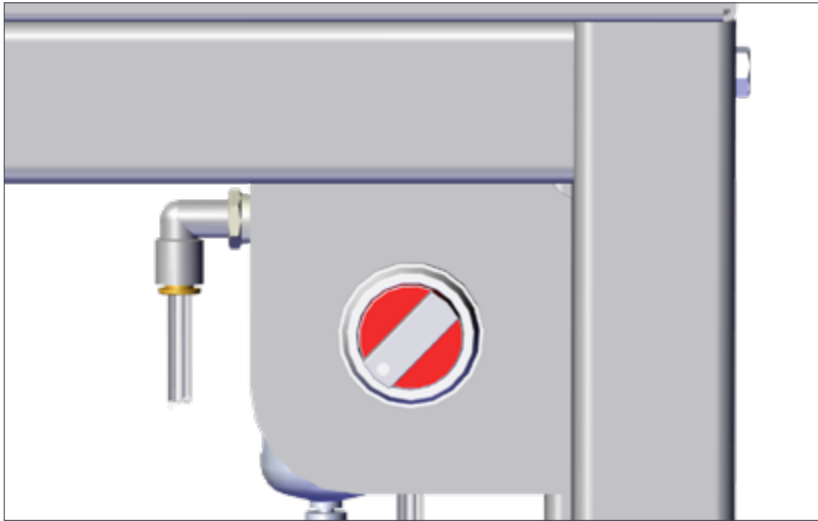
Step 4: Clean the cover suction tubes. Dispose of contaminated rags and seed treatment wastes according to local and state regulations. **DO NOT RUN CONTENTS INTO A SEWER DRAIN!**

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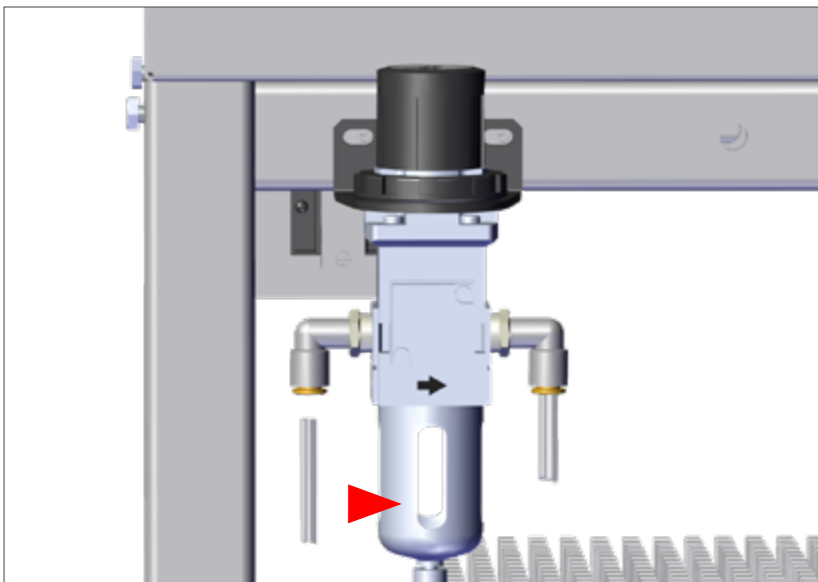


Step 5: Replace the supply tank on the scale cover.



Step 6: Turn the operation switch DOWN to lower the cover onto the 20L supply tank.

- Heed the warning label - pinch point, watch your hands!



Filter Regulator

Check the water level and drain quarterly.

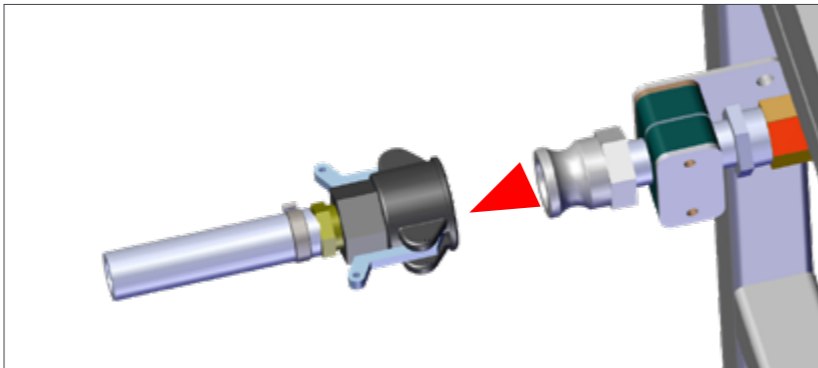
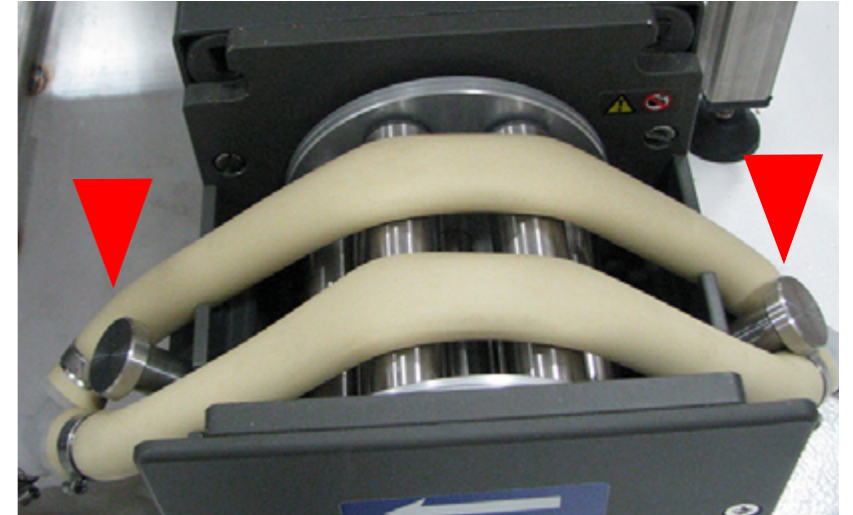
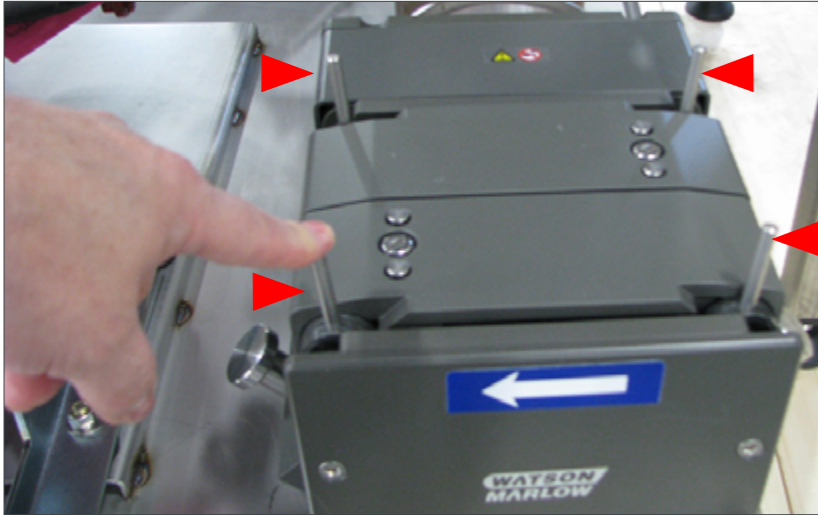
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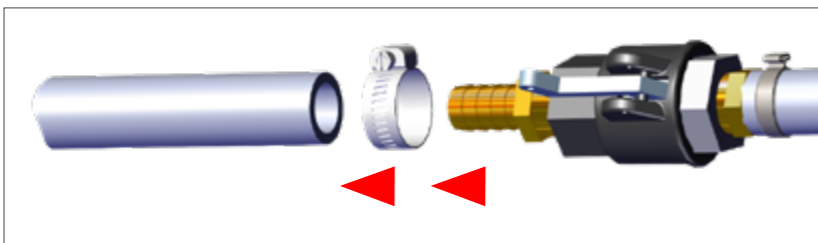
Change Pump Element

Step 1: Lift the four (4) levers to open the discharge pump head and remove the cover.

- Place the Pump Element Assembly on the internal rollers and over the two pins on each side, as shown below.



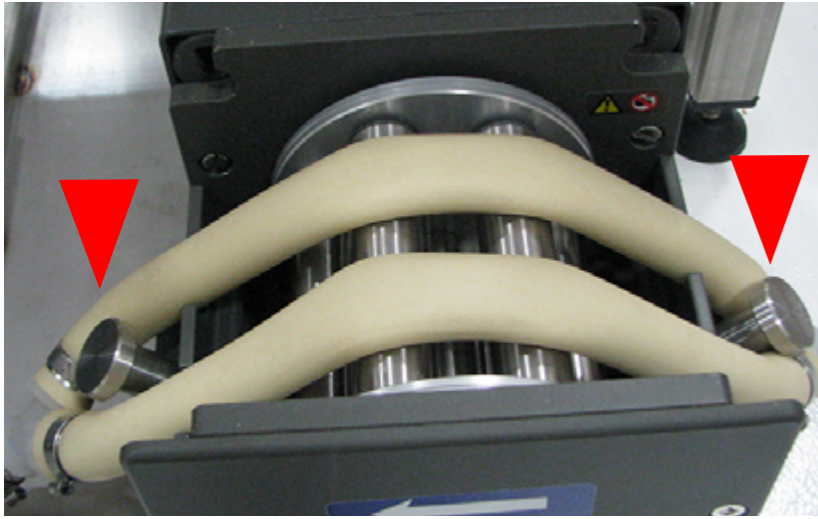
Step 2: Disconnect the Pump Element Assembly INLET END FEMALE COUPLER from the flow equalizer male coupler on the backside of pump station.



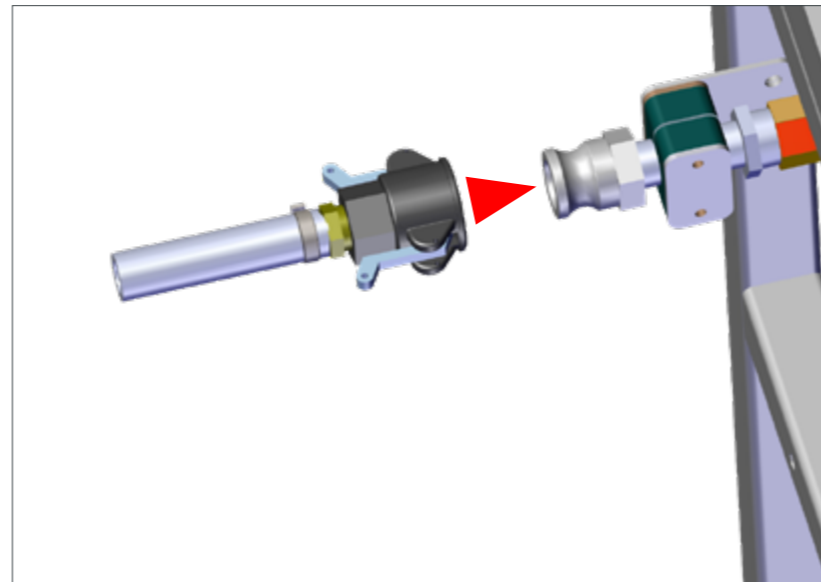
Step 3: Use a screwdriver to disconnect the #8 hose clamp and remove the 3/4" vinyl tubing from the Pump Element Assembly OUTLET END 3/4" brass hose barb.

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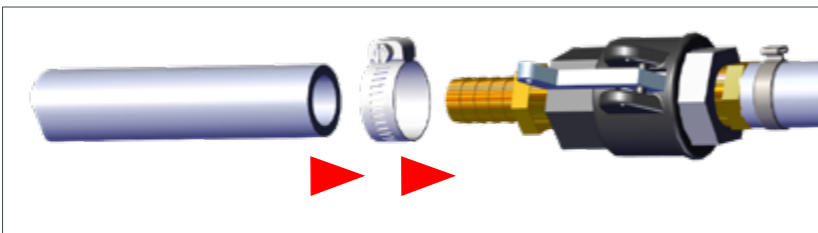
Step 4: Place the new Pump Element Assembly on the internal rollers and over the two pins on each side.



Step 5: Replace the pump head cover.

- Push the four (4) levers down to close the pump head on the Pump Element Assembly.

Step 6: Connect the Pump Element Assembly **INLET END FEMALE COUPLER** to the flow equalizer male coupler on the backside of pump station.



Step 7: Connect one end of 3/4" vinyl tubing with a #8 hose clamp to the Pump Element Assembly **OUTLET END** 3/4" brass hose barb.

- Tighten hose clamp in place with a screwdriver.

Continued ➞





20L Pump Station PM Checklist

- Check/drain filter/regulator - Quarterly
- Inspect/clean pump rollers for build-up (625 Pump) - Weekly
- Inspect plumbing for leakage - Weekly
- Inspect lubrication level in Bredel SPX25 Pump (element/hose) - Weekly
- Replace Bredel SPX25 pump element/hose - 5000 Hrs
- Replace Bredel SPX25 lubricant (around element) - 5000 Hrs
- Replace Bredel SPX25 gear lube (gear reducer) - 20,000 Hrs
- Replace Watson marlow 625 pump elements - Start of Season
- Rinse tank and lines - End of Season



Note: for complete pump service instructions, refer to manufacturer's manuals shipped with the pump station.



Warning! Leaving the pump element in the pump head in the closed position over a duration of time will permanently leave a flat spot on the pump element.



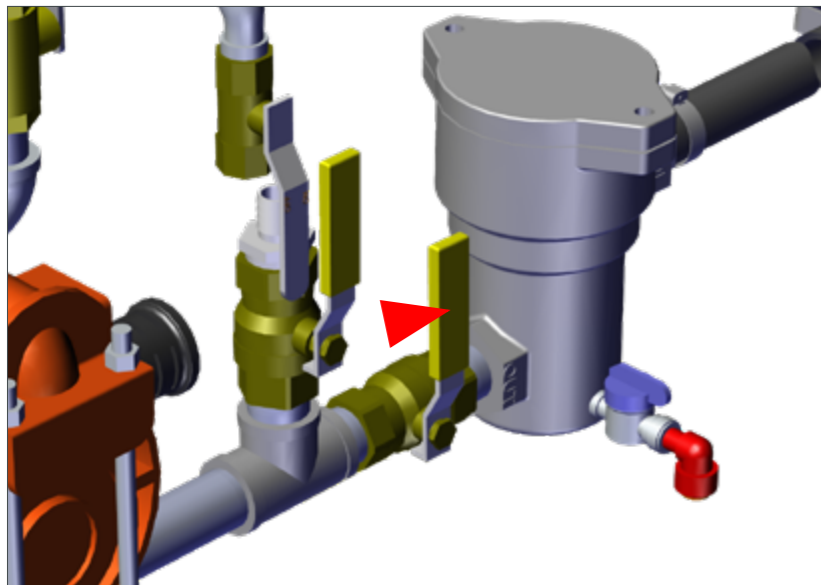


BULK TRANSFER PUMP



Required tools

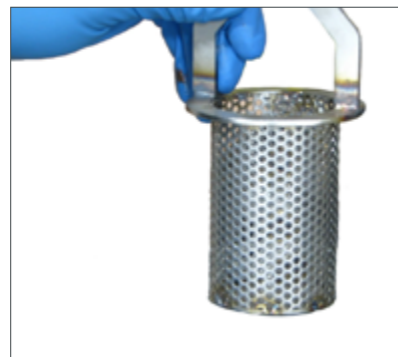
- 9/16" Wrench (box end)



In-Line Filter

Check filter quarterly

Step 1: CLOSE the supply tank valve before the Filter (turn handle UP).

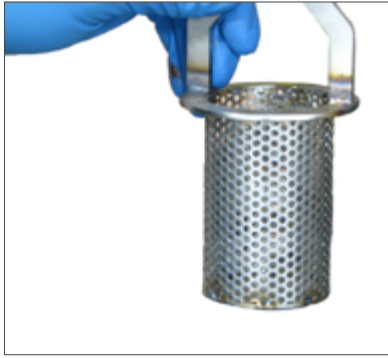


Step 2: Use a 9/16" wrench to remove the filter cap and hardware from the filter body.

- Remove the filter basket and clean thoroughly.

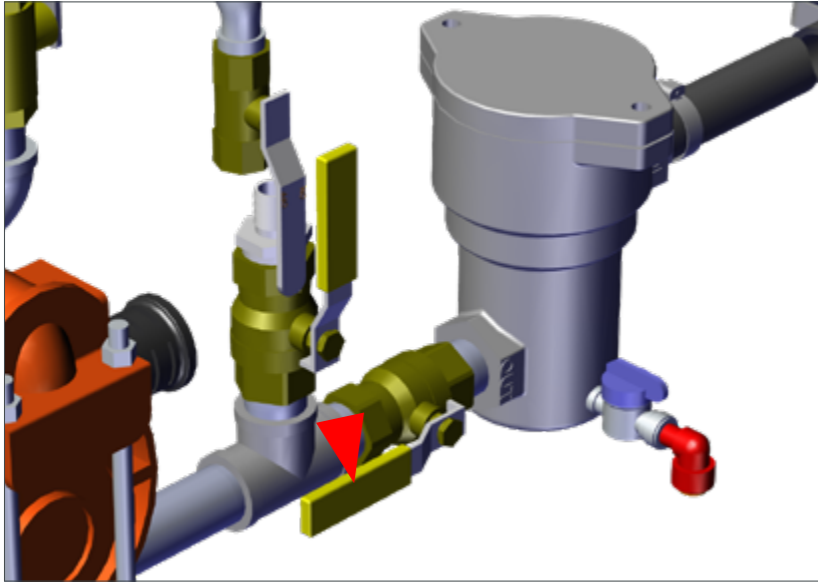
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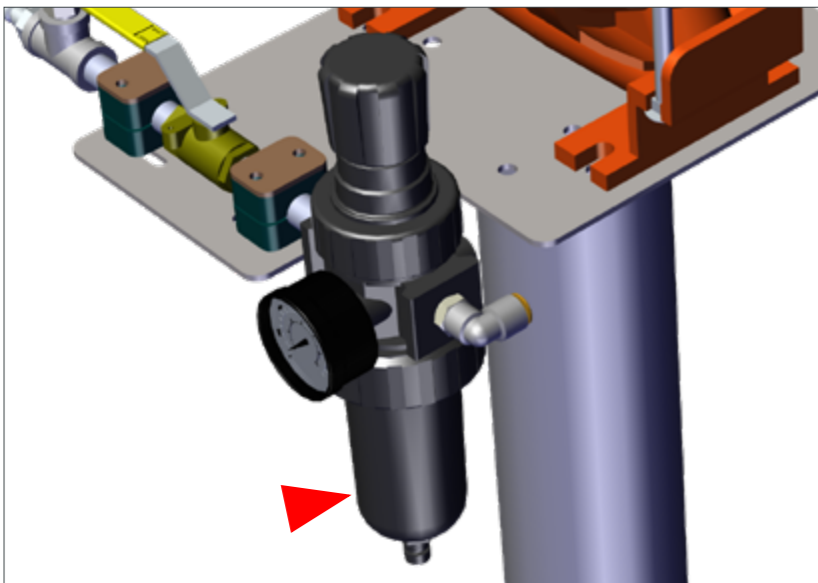


Step 3: Replace the clean filter basket in the filter body.

- Replace the filter cap on the filter body.
- Use a 9/16" wrench to tighten the hardware.



Step 4: **OPEN** the tank valve to ensure it is in the **TREAT** mode (handle **DOWN**).



Filter Regulator

Check the water level and drain quarterly.

Continued ➞





Bulk Transfer Pump PM Checklist

- Inspect pump & plumbing for leakage - Weekly
- Inspect/clean filter basket - Quarterly
- Rinse pump & plumbing - End of Season
- Check/drain filter/regulator - Quarterly



Note: for complete pump service instructions, refer to manufacturer's manuals shipped with the pump.





CBP TANKS



Required tools

- 9/16" Wrench (box end)
- Drip Pan
- Channel Locks



Standard In-line Chemical Filter

Step 1: Turn both supply tank valves to the **RINSE** mode, as shown left.

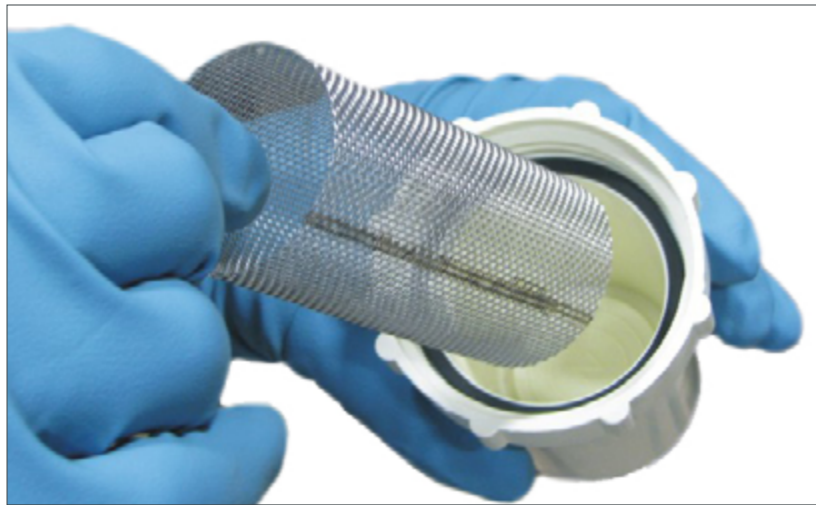


Step 2: Place a drip pan or bucket underneath the filter assembly.

- Unscrew (left twist; clockwise) the filter bottom from the filter top.
- May need to use a channel locks to loosen the threads.

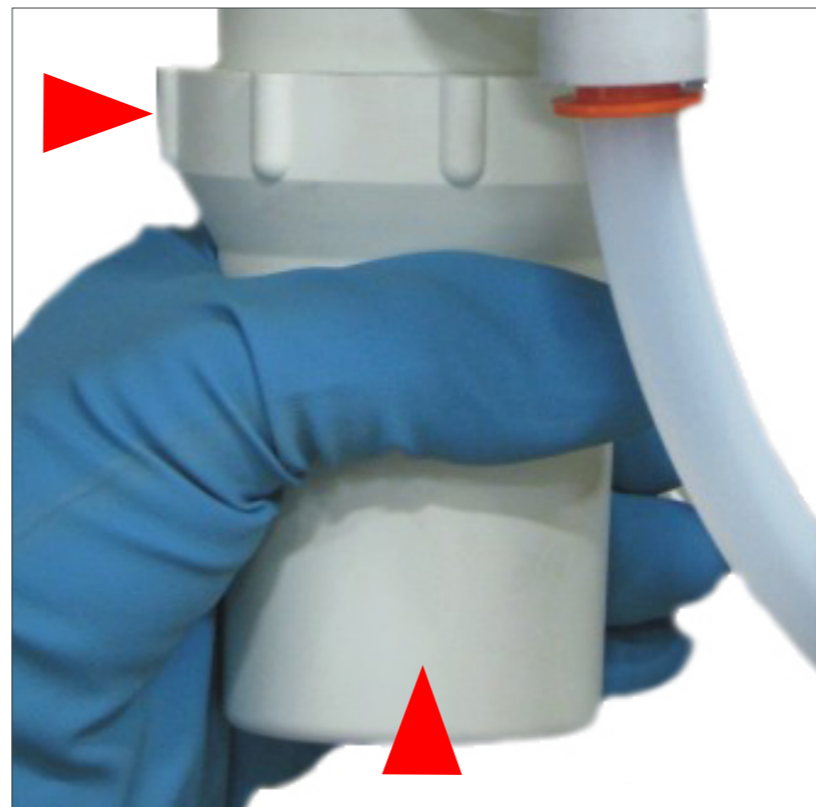
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Step 3: Remove the filter screen from the filter bottom and check it for clogging and material build-up.

- 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: counter clockwise) the filter bottom back onto the filter top.
- **HAND TIGHTEN ONLY!**

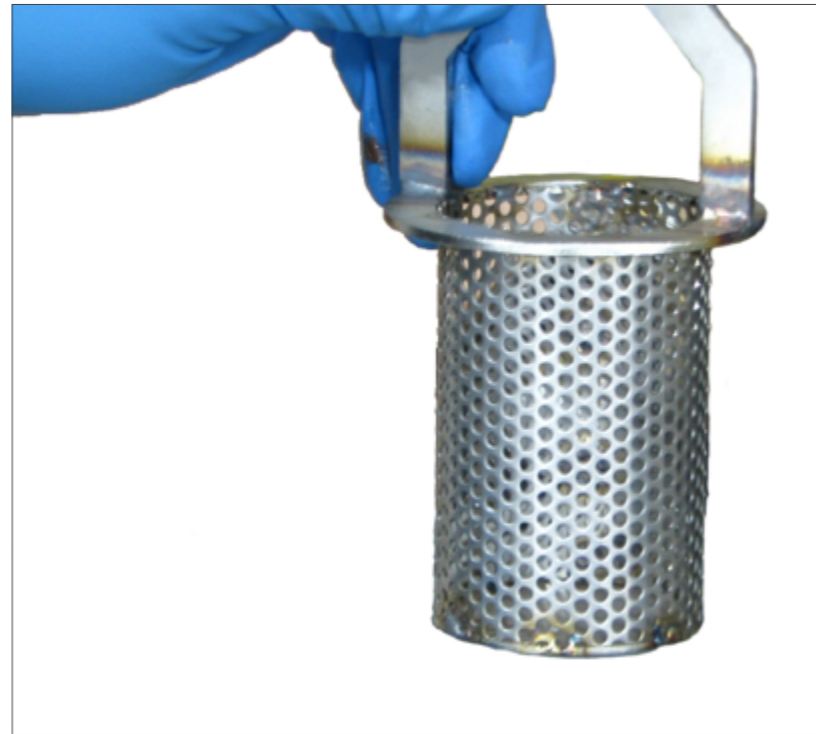
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Premium In-line Chemical Filter

Step 1: Turn both supply tank valves to the **RINSE** mode, as shown left.



Step 2: Use a 9/16" wrench to remove the filter cap and hardware from the filter body.

- Remove the filter basket and clean thoroughly.

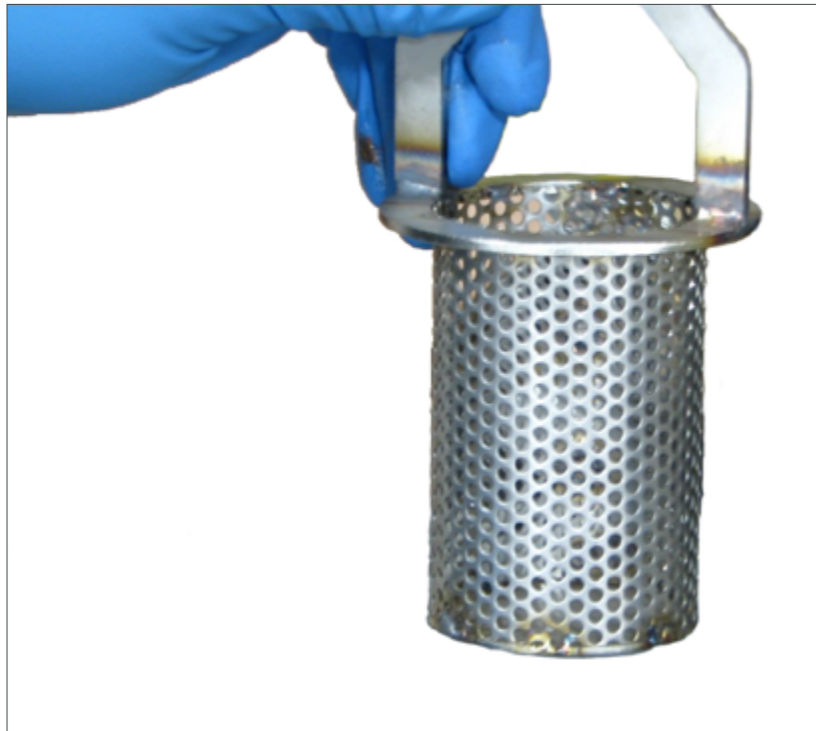
Continued ➞





CBP Tank PM Checklist

- Inspect plumbing for leakage - Weekly
- Inspect/clean filter basket - Quarterly
- Rinse inside of CBP tank & plumbing - End of Season



Step 3: Replace the clean filter basket in the filter body.

- Replace the filter cap on the filter body.
- Use a 9/16" wrench to tighten the hardware.



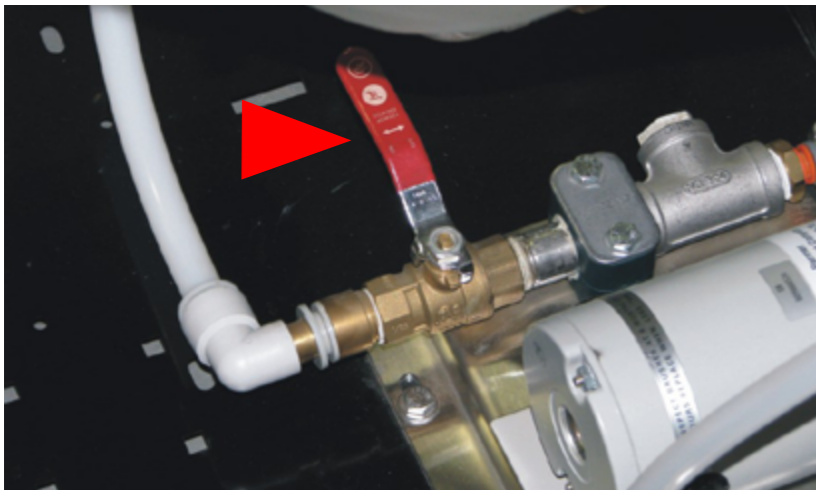


Warning! Leaving the pump element in the pump head in the closed position over a duration of time will permanently leave a flat spot on the pump element.



Changing the Pump Element

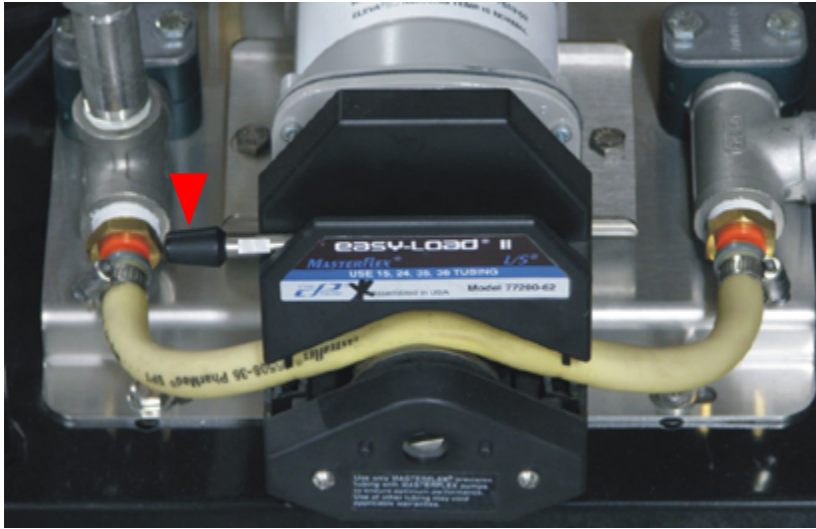
Step 1: Turn the Tank Valve in **RINSE** mode.



Step 2: **CLOSE** the Pump Flow Valve.

Continued ➞

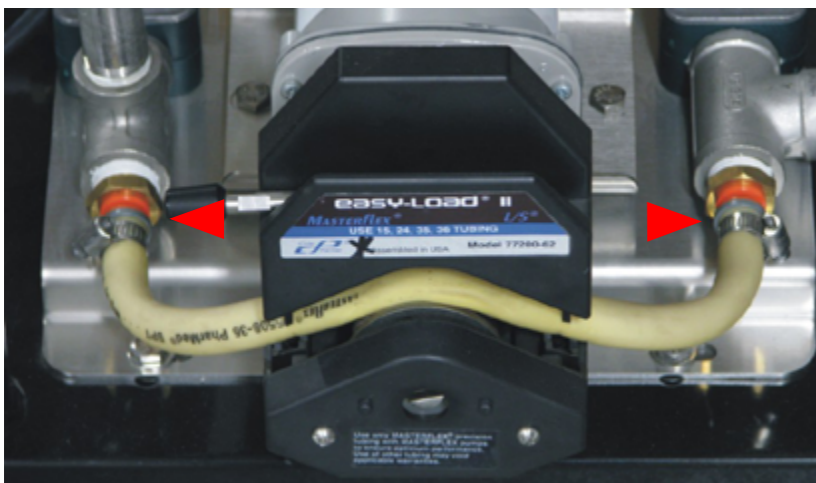




Step 3: Use the handle to **OPEN** the pump head.



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



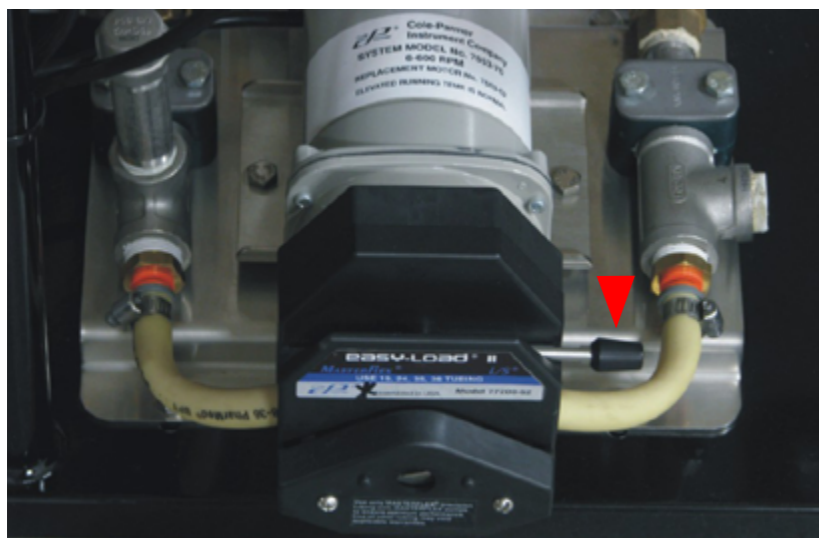
Step 5: Insert the new element assembly into each of the orange pump fittings.

Continued ➞





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



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



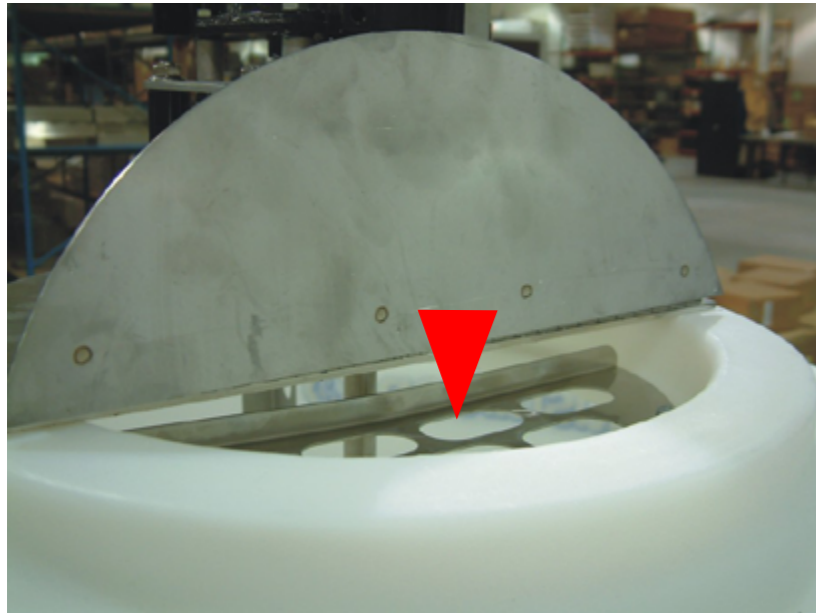
I/P Pump Only

Set the Pump Head Tension Adjustment Knob to #3.





Note: for complete agitation motor and pump service instructions, refer to manufacturer's manuals shipped with the CBP tank.



Tank Rinse

Step 1: Fill the Tank with clean water.



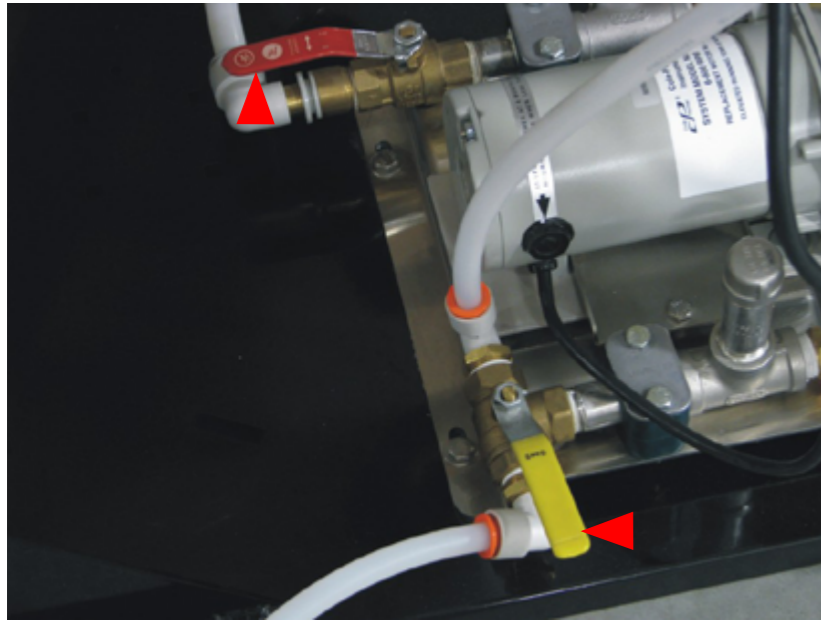
Step 2: Ensure Tank valves are in the **TREAT** mode position.

Continued ➔

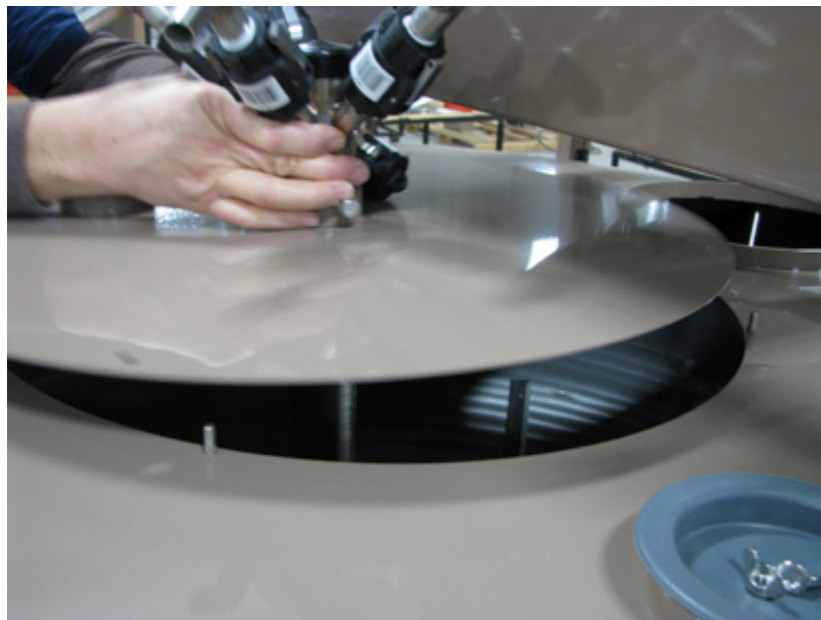




Note: rinse water (gray water) may be saved and used with the next slurry mix or dispose of properly, according to state and local regulations. **DO NOT RUN CONTENTS INTO A SEWER DRAIN!**



Step 3: Ensure the Pump Flow and Recirculation Valves are in the **TREAT** mode position.



Step 4: Remove the four (4) wing nuts and remove the chemical inlet assembly off from the mixing bowl cover.

- Set it in a container.

Step 5: Plug in to turn **ON** the tank agitation motor.

- Water will flush out the treatment lines and the chemical inlet assembly.
- Replace the chemical inlet assembly on the bowl cover and tighten in place.



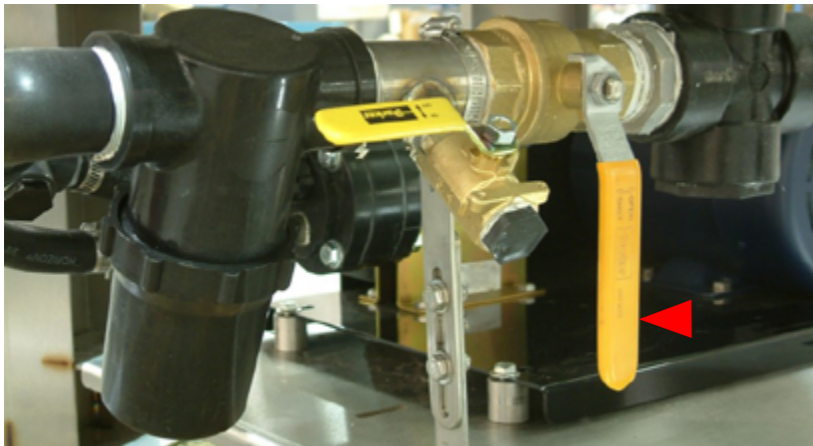


PSD TANKS



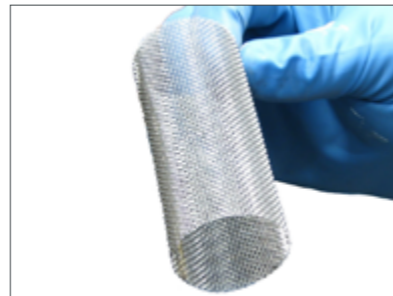
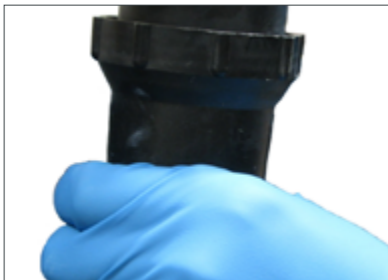
Required tools

- 9/16" Wrench (box end)
- 7/16" Wrench
- Drip Pan
- Cleaning Rags
- Putty Knife
- Crescent Wrench



Standard In-line Chemical Filter with D-10 PUMP

Step 1: Close the main supply ball valve (located underneath the tank), as shown.



Step 2: Place a drip pan or bucket beneath the filter and unscrew the basket from the cap.

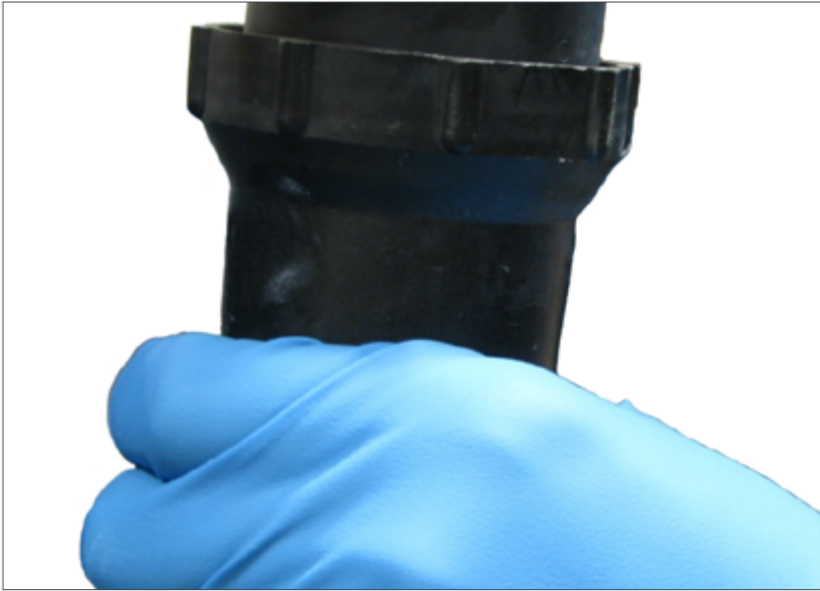
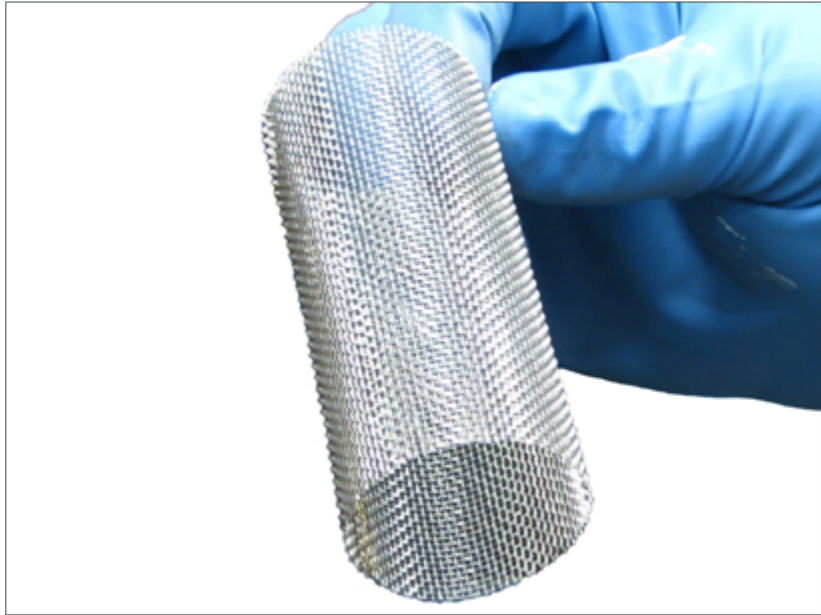
- Remove the filter from the basket.
- Clean both thoroughly.

Continued ➞



Step 3: Ensure the O-ring is in place for proper seal.

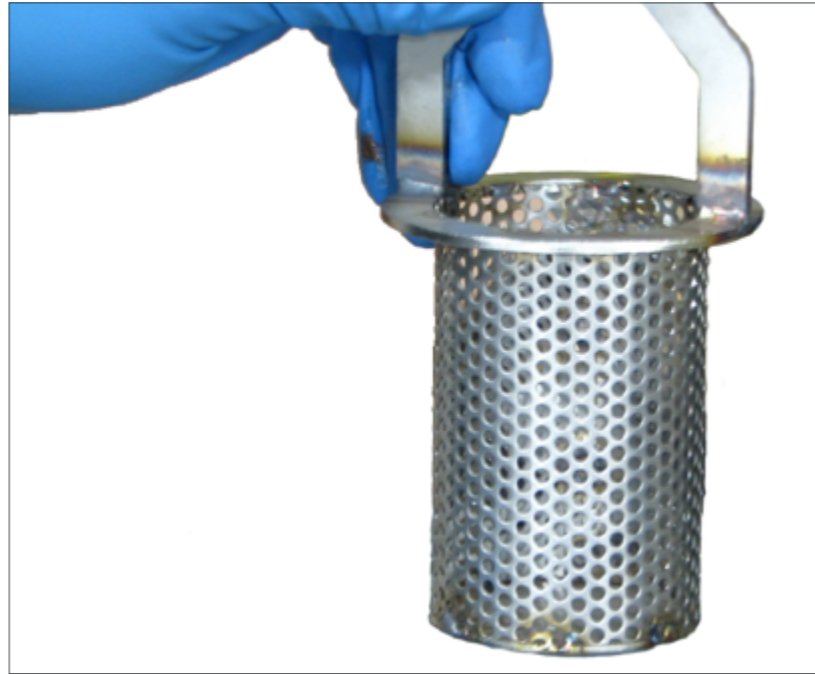
- Replace the filter inside the filter basket and **HAND TIGHTEN** the Basket back onto the In-line Filter.



Premium In-line Chemical Filter with D-10 PUMP

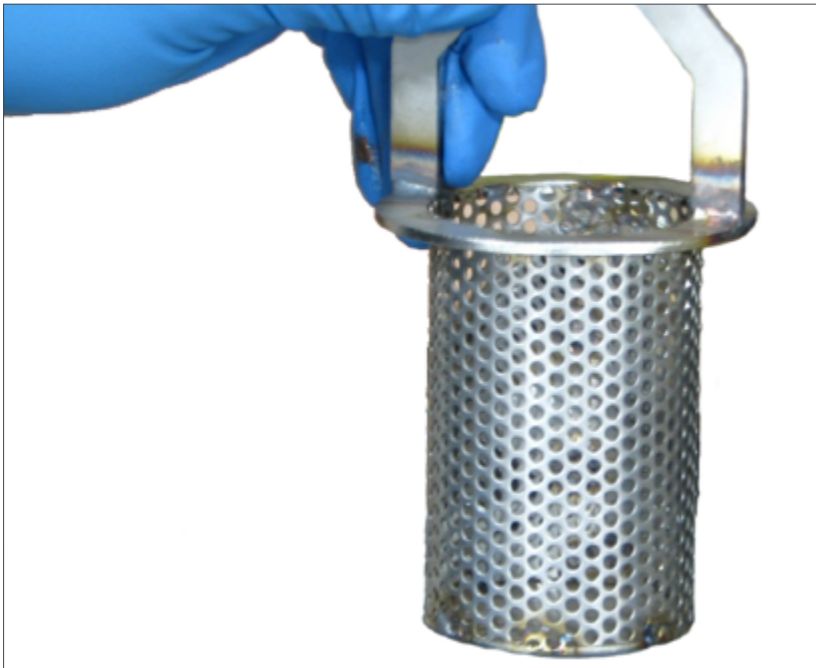
Step 1: Close the main supply ball valve (located underneath the tank), as shown.





Step 2: Use a 9/16” wrench to remove the filter cap and hardware from the filter body.

- Remove the filter basket and clean thoroughly.



Step 3: Replace the clean filter basket in the filter body.

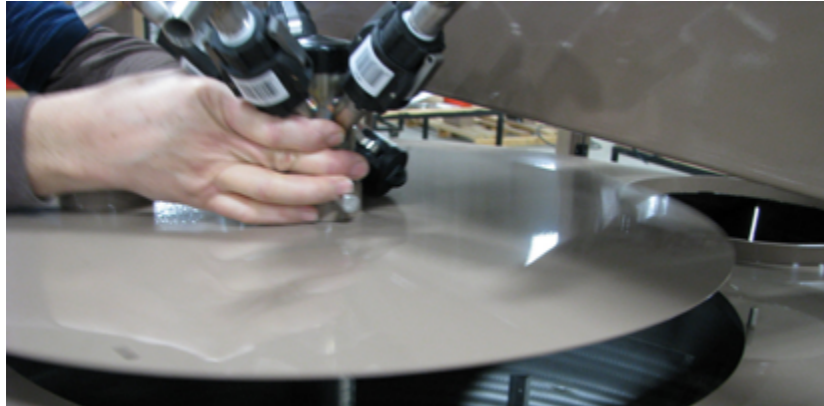
- Replace the filter cap on the filter body.
- Use a 9/16” wrench to tighten the hardware.

Continued ➞





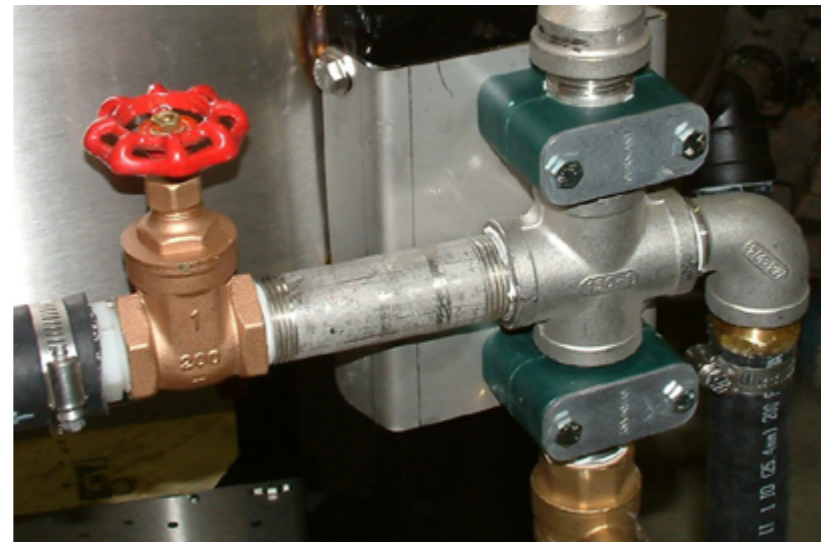
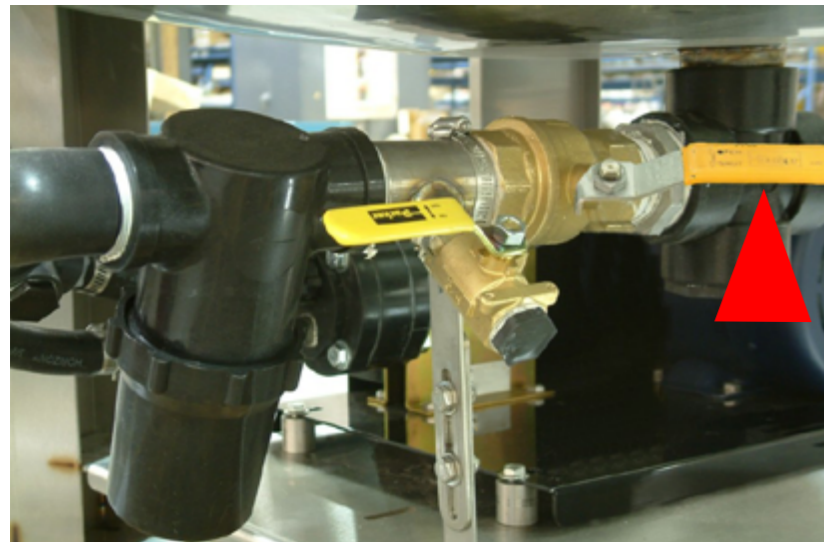
Note: rinse water (gray water) may be saved and used with the next slurry mix or disposed of properly, according to state and local regulations. **DO NOT RUN CONTENTS INTO A SEWER DRAIN!**



End of Season Shut-down

Step 1: Remove the four (4) wing nuts and remove the chemical inlet assembly off from the mixing bowl cover.

- Set it in a container (container must be sufficiently large enough to contain the remaining contents of the tank: up to 50,100, 200 or 500 gallons).

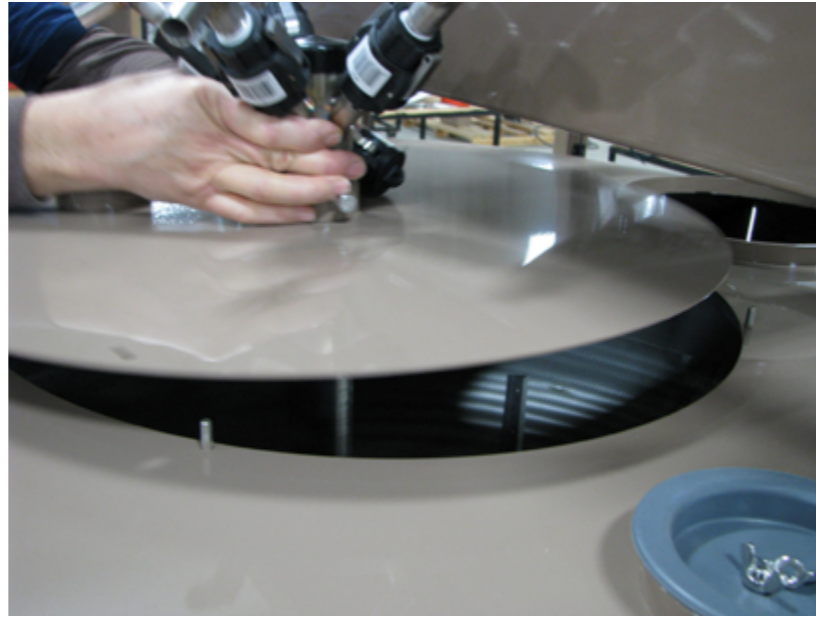


Step 2: Open the main supply ball valve (located underneath the tank).

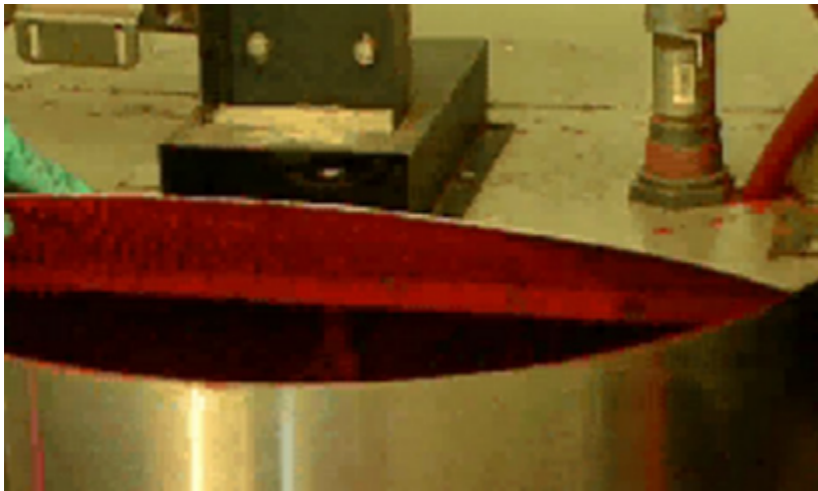
Step 3: Open the tank bypass gate valve.

Continued ➞





- Step 4:** Plug in to turn ON the tank agitation motor.
- Open the lid and fill the supply tank with **CLEAN** water.
 - Water will flush out the treatment lines and the chemical inlet assembly.
 - Unplug to turn **OFF** the pump and tank agitation motor when done.
 - Replace the chemical inlet assembly on the bowl cover and tighten in place.



- Step 5:** If needed, use a putty knife to scrape chemical residue build-up inside the Tank.
- Use the tank brush provided to thoroughly scrub and clean the tank of any residual chemical.
 - Wipe down all surfaces when finished.
 - Dispose of rags responsibly.
 - Prevent this type of extreme build-up (as shown left) by cleaning the tank regularly after each treatment session.
 - Flush all liquid treatment pumping systems daily to prevent buildup or corrosion.

Continued ➡



Drain the Supply Tank

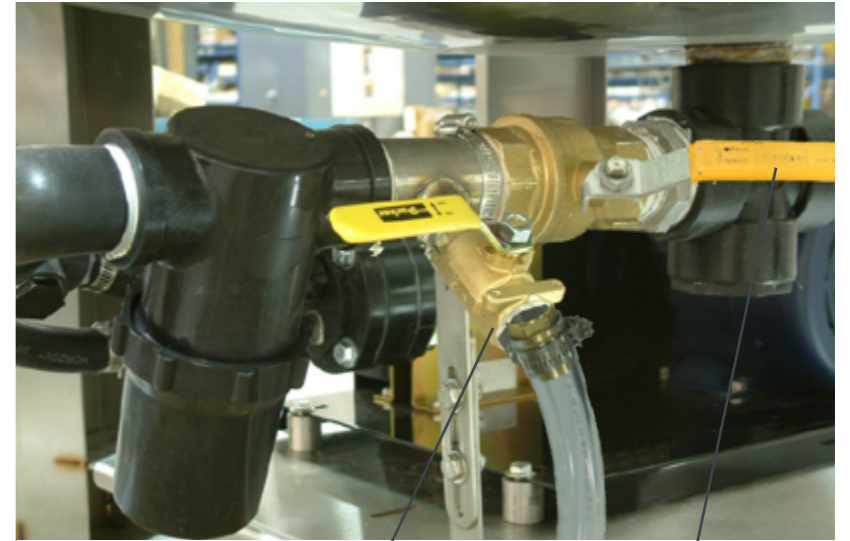
Step 1: Close the main supply valve under the tank.

- Close the drain valve.
- Use a crescent wrench to remove the 3/4" pipe plug under the drain valve.
- Connect a hose with 3/4" male fitting to the drain valve (customer supplied).
- Collection container must be sufficiently large enough to contain the remaining contents of the tank: up to 50, 100, 200 or 500 gallons (the same size as the PSD tank used).
- Open the main supply and drain valves.

Continued ➞



drain valve remove pipe plug main supply valve



connected drain hose main supply valve

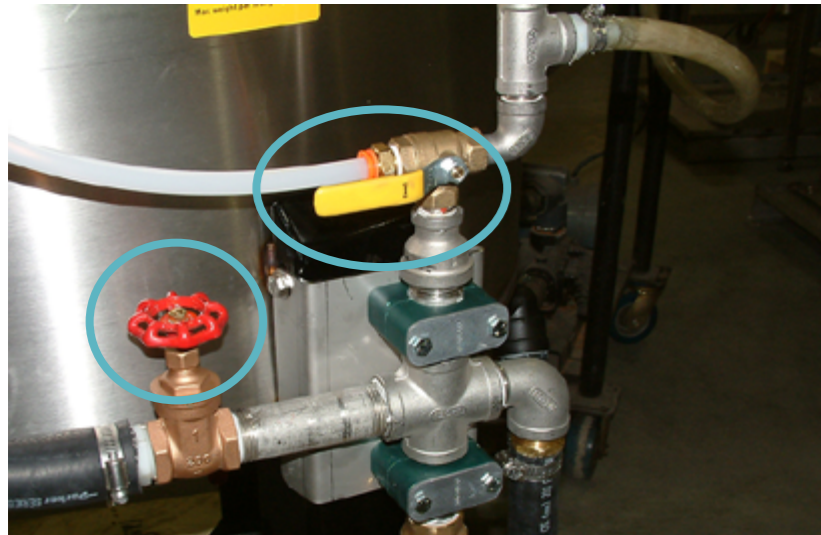




Note: rinse water (gray water) may be saved and used with the next slurry mix or disposed properly, according to state and local regulations.

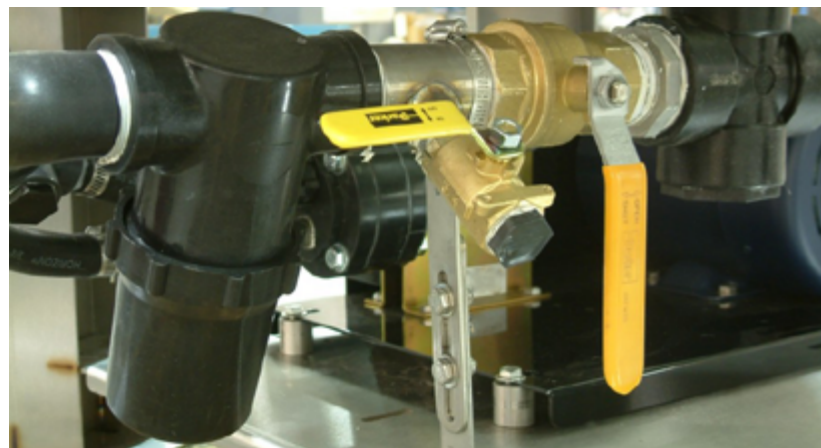
DO NOT RUN CONTENTS INTO A SEWER DRAIN!

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.



Step 2: Close the flow control valve on the supply tank (shown open).

- Ensure the bypass gate valve is OPEN.
- Plug in to turn ON the supply tank pump.
- Fill the tank with clean water mixed with ammonia or a mild detergent or a cleaning solution recommended by the manufacturer of the treatment product.
- Run and drain the supply tank until thoroughly empty.
- Turn OFF or unplug the supply tank agitation motor and pump when finished



Step 3: Remove the hose with 3/4" male fitting from the drain valve.

- Replace the 3/4" pipe plug on the drain valve.
- Use a crescent wrench to tighten in place.

Continued ➞





Note: the gear reducer has been tested and adjusted at the factory. Dismantling or replacement of components must be done by Bayer or authorized representative, in order to maintain the warranty expressed or implied.



Note: for complete agitation motor service instructions, refer to manufacturer's manual shipped with the PSD tank.

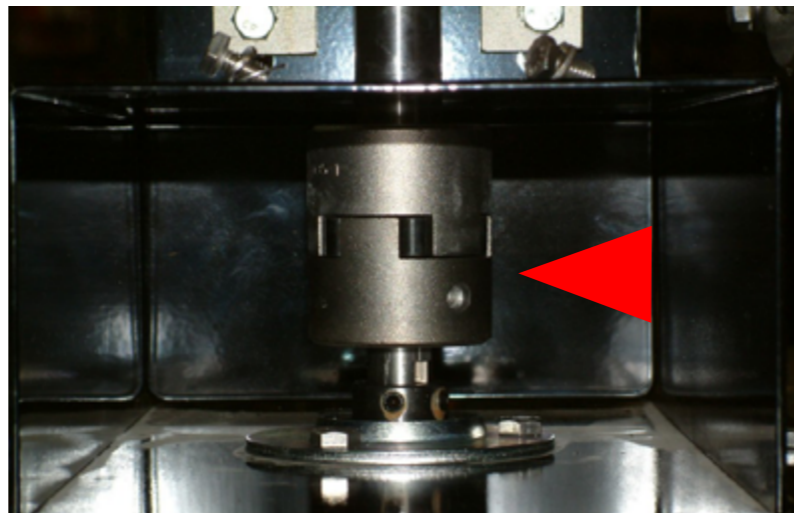
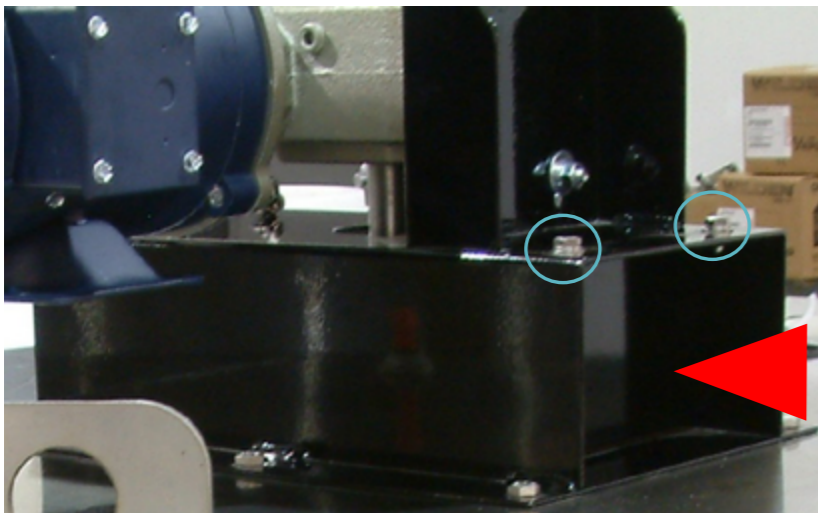


PSD Tank PM Checklist

- Inspect plumbing for leakage - Weekly
- Inspect/Clean Filter Basket - Quarterly
- Rinse inside of Tank & Plumbing - End of Season



Note: For complete D3 pump service instructions Visit us online: [equipment manuals](#)



Agitation Drive Shaft Coupler Inspection

Use a 7/16" wrench to remove two 1/4-20 bolts, washer and nuts from the gear reducer mount guard.

- Remove the reducer mount guard (front panel) and check the three-piece drive shaft coupler for wear.





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