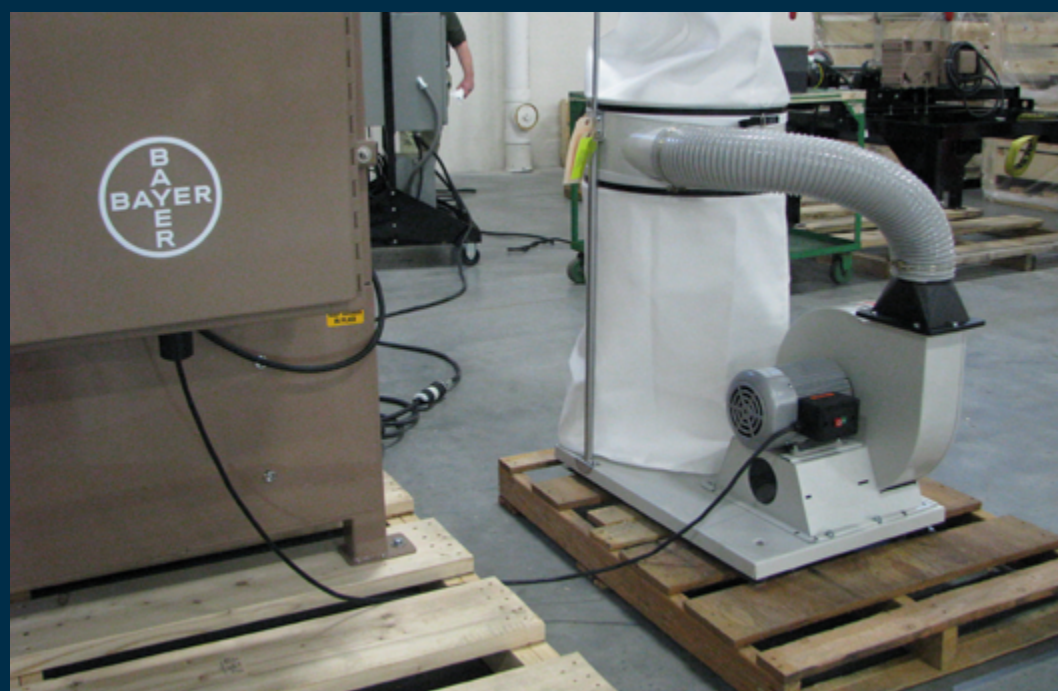




## CBT UNITIZED MAINTENANCE GUIDE 25, 50, 100 & 200





# MENU



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



Dust Evac



LP300 Tank



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.

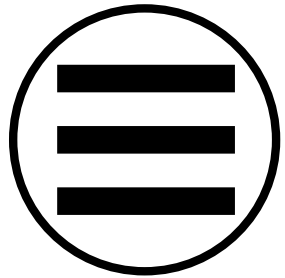




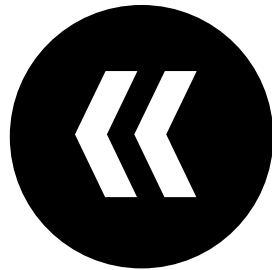
# PICTOGRAMS

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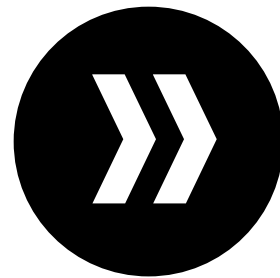
Each Signifier displayed here is specific to this User Manual.



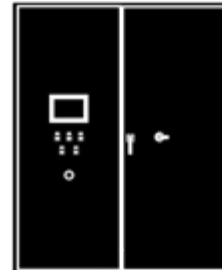
Menu



Previous



Advance



Control Panel



Surge Hopper



LP300 Tank



Dust Evac



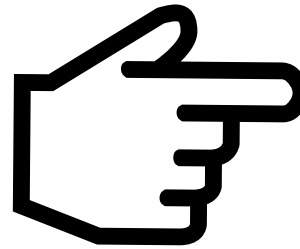
Weigh Scale



Powder Feeder



Mixing Bowl



Cursor Hand



Like





# WEIGH SCALE



## Required tools

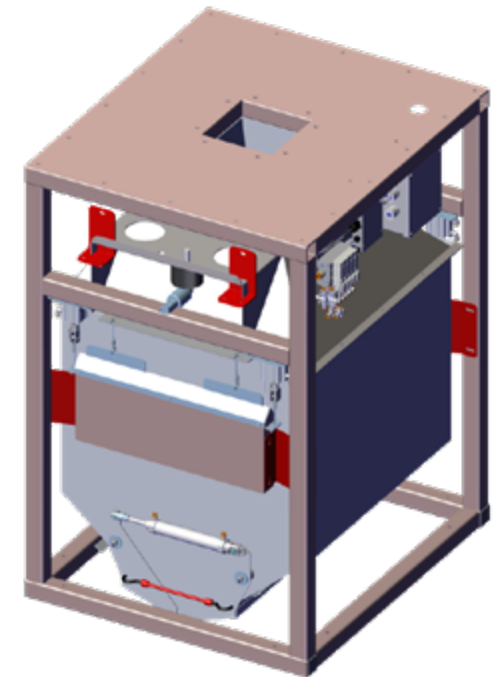
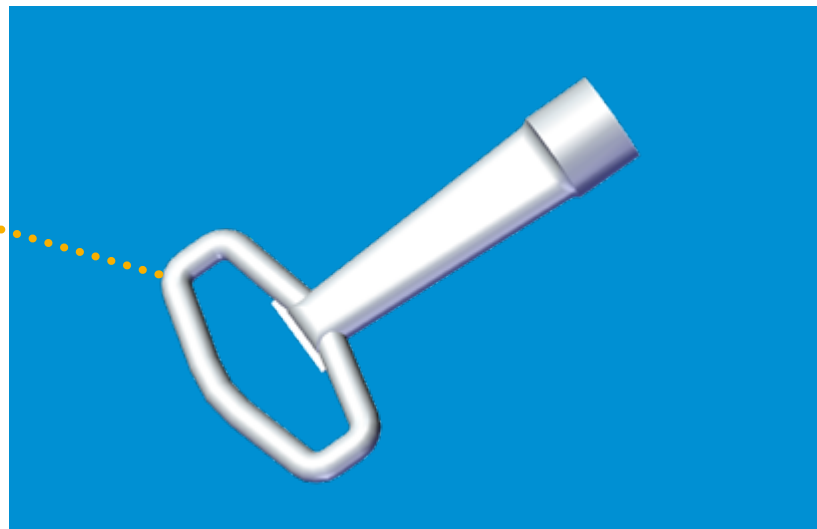
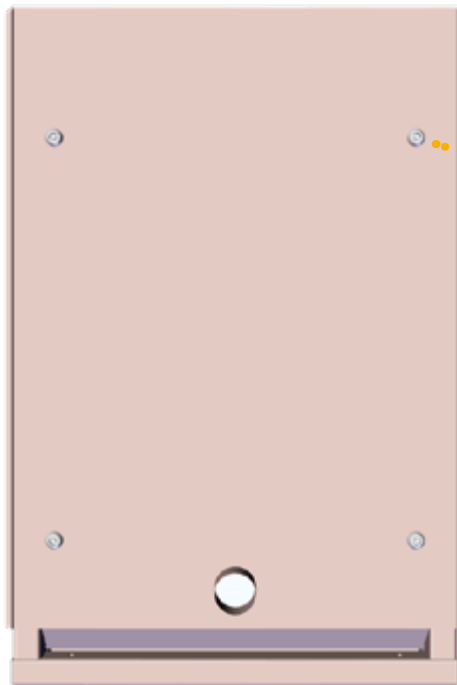
- Quarter Turn Key
- Vacuum
- Putty knife



## 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.

Continued ➔





## 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.





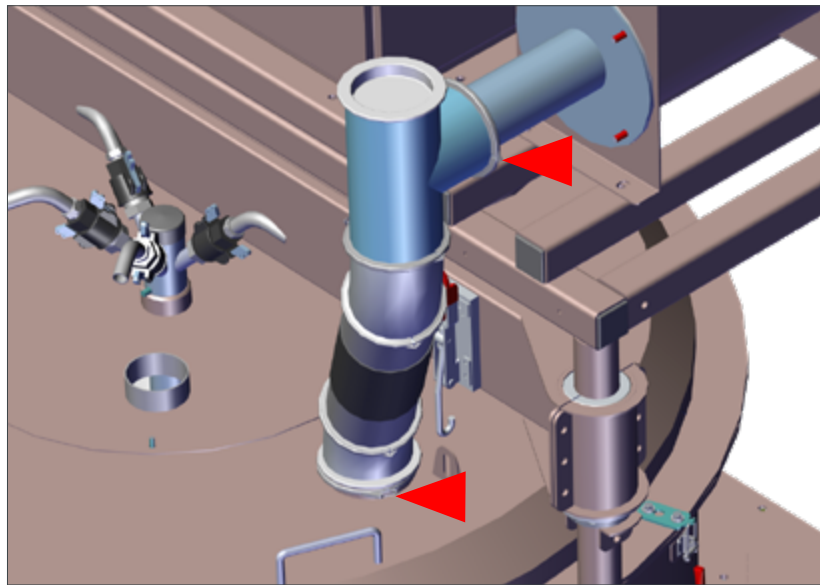


# POWDER FEEDER



## 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.

Continued ➞





## 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.

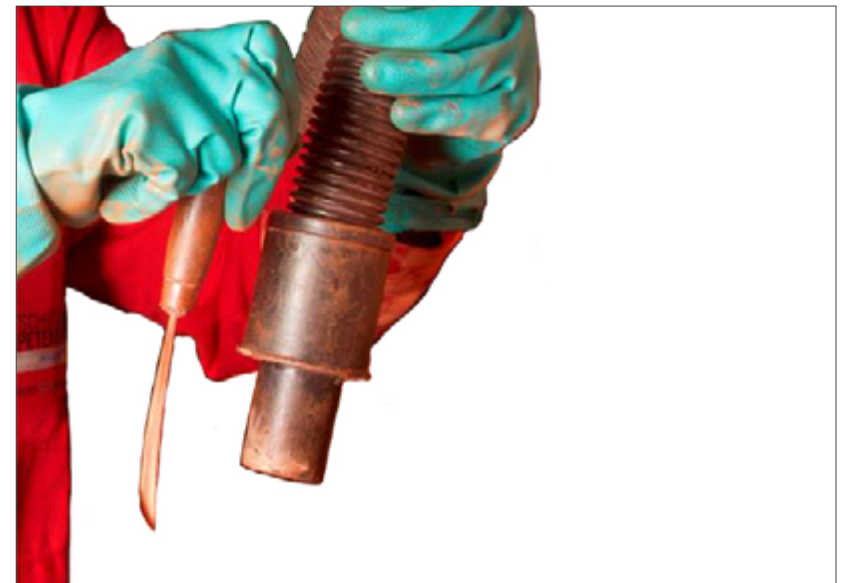
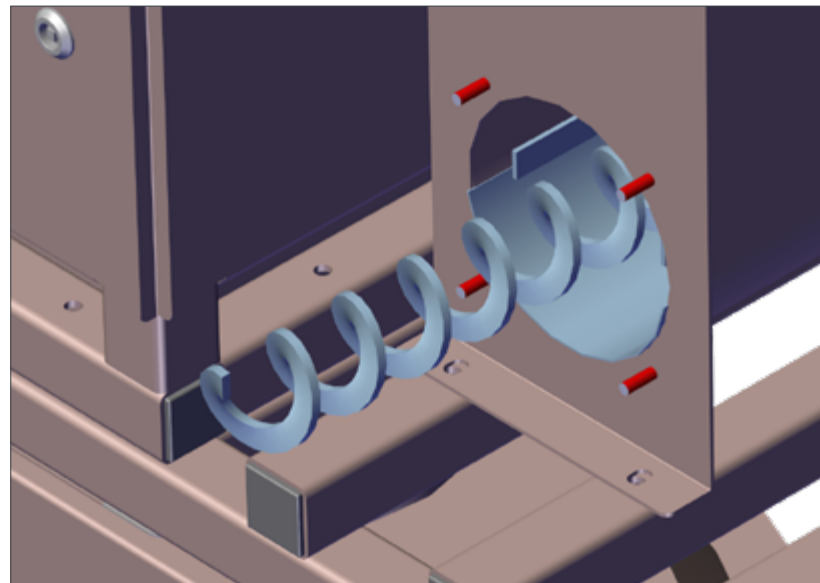
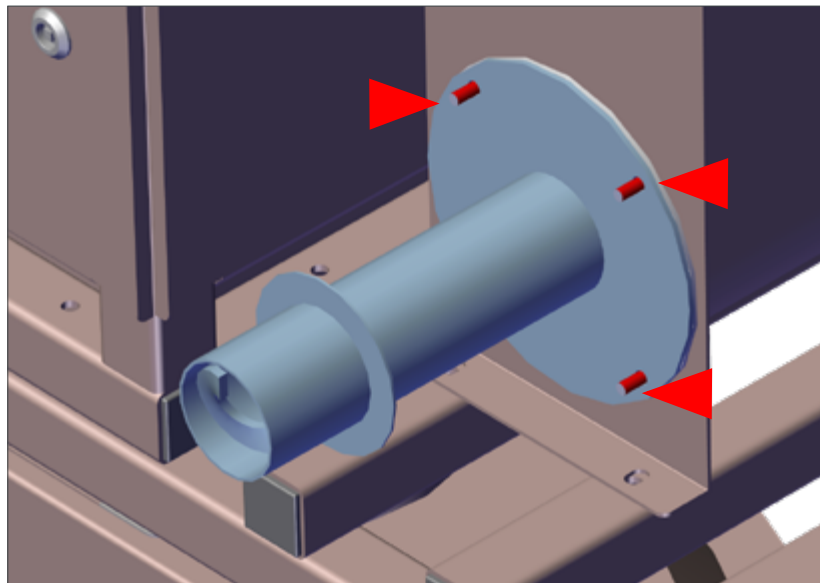
- Slide the auger tube and gasket from the powder body.

**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.

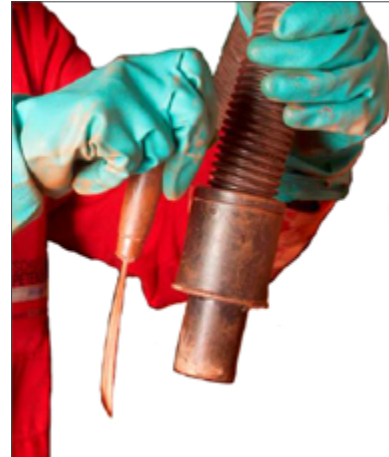
- Always use a vacuum (not compressed air) to safely clean the machine.

Continued ➞



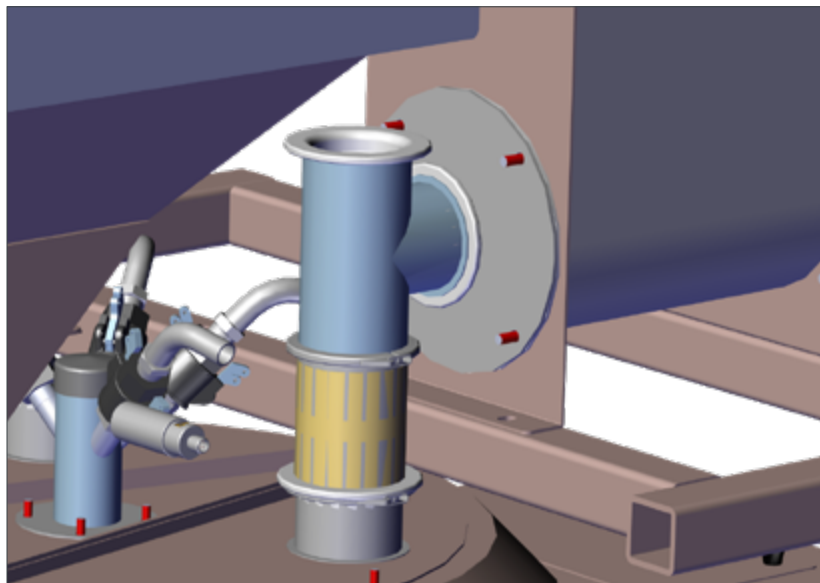


Note: for complete gear motor service instructions, refer to manufacturer's manual shipped with the powder feeder.

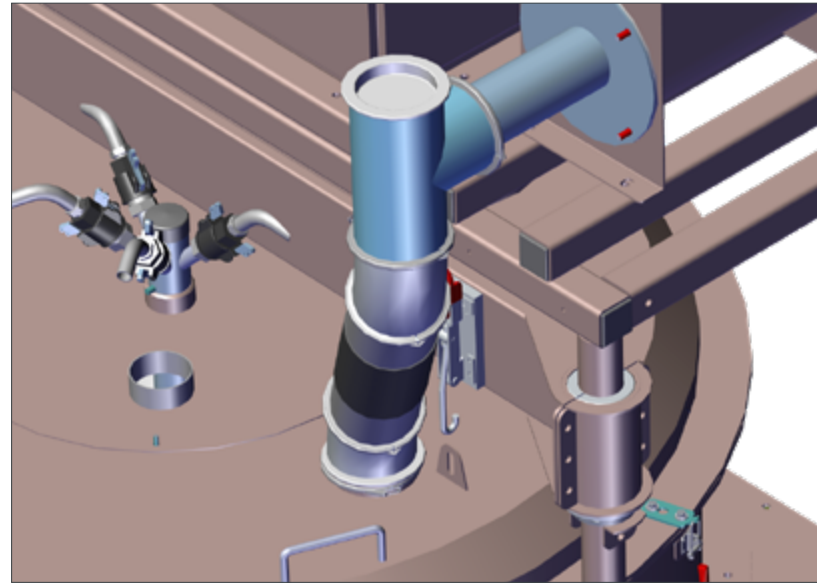


**Step 5:** Open the hopper lid and clean the interior of dry product.

- 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.



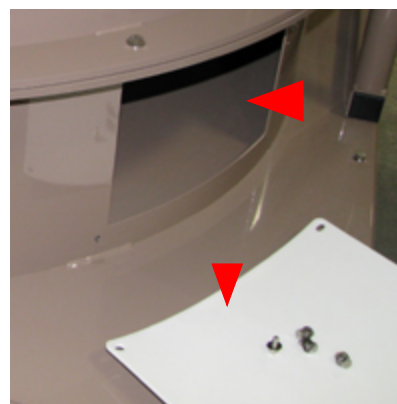


# MIXING BOWL



## 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.

Continued ➞





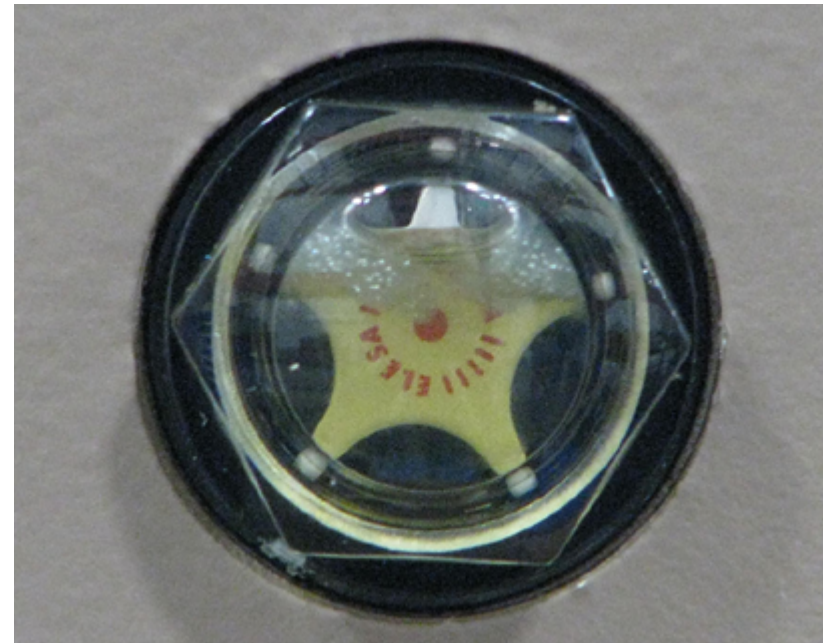
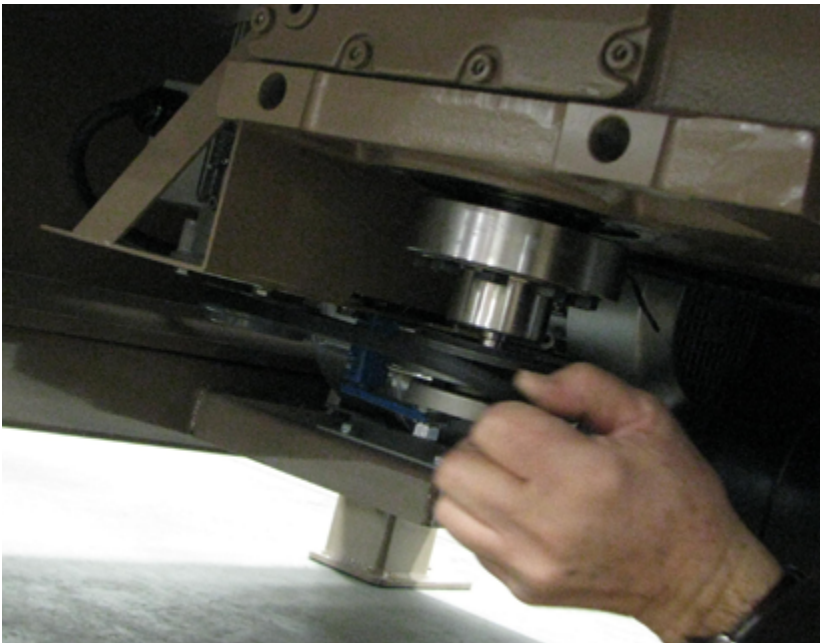


Note: for complete drive shaft or bowl replacement instructions, Visit us online: [equipment manuals](#) for those specific manuals. For complete bowl & blower motor service instructions, refer to manufacturer's manuals shipped with the CBT.



### 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

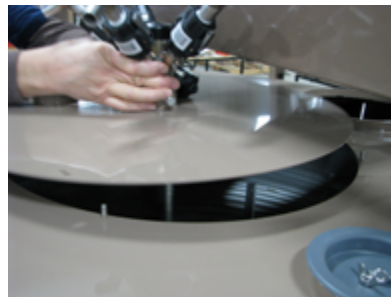
Check the water level and drain quarterly.



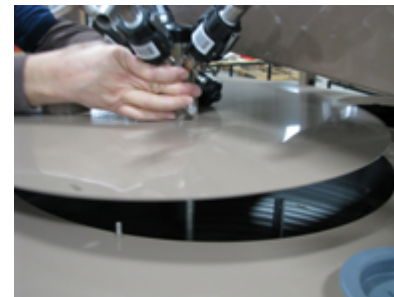
Remove Panel A



Remove Panel B



Remove Chemical Inlet Plate



CBT200 bowl cover only -  
Remove Chemical Inlet Plate

### Chemical Plate Assembly

**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 1/4 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.

Continued ➞





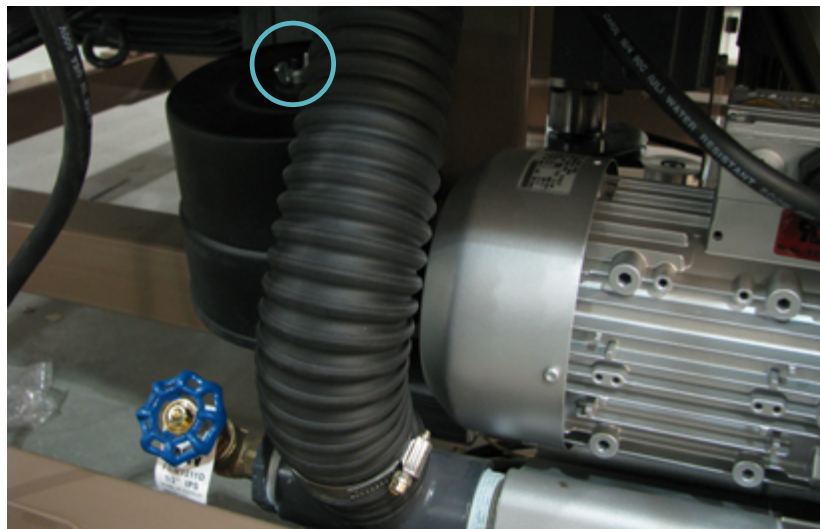


### CBT Bowl & Frame PM Checklist

- 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.

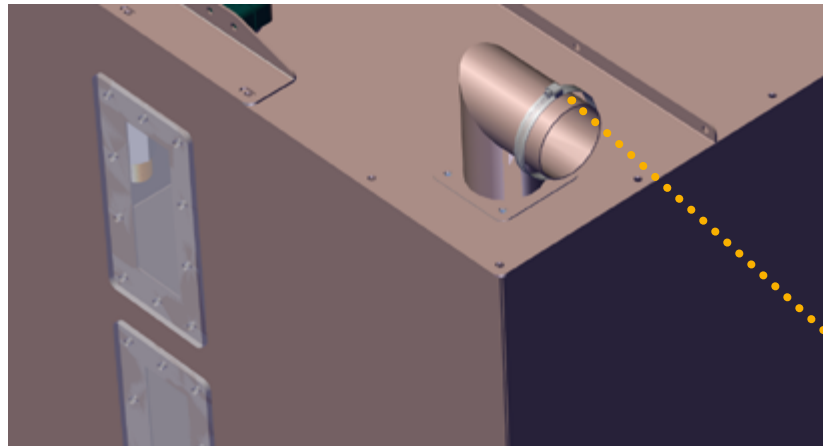




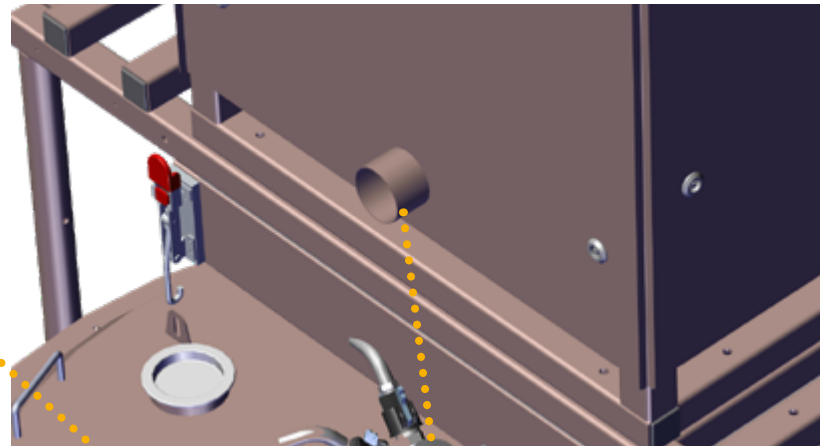
# DUST EVAC

Use a slot screwdriver to loosen hose clamps and remove hoses from the Dust Evac Assembly and the Dust Evac System.

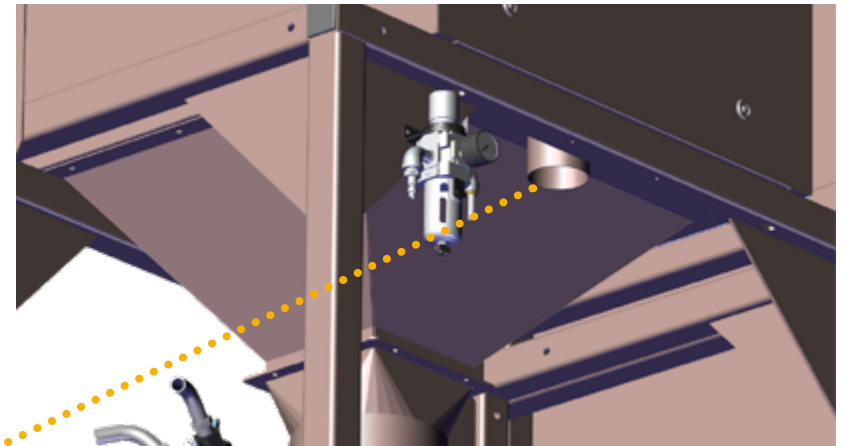
- Use a vacuum to clean seed and dust from all of the ports as well as tubing.
- Reconnect all tubing to ports and use a slot screwdriver to securely tighten hose clamps in place.



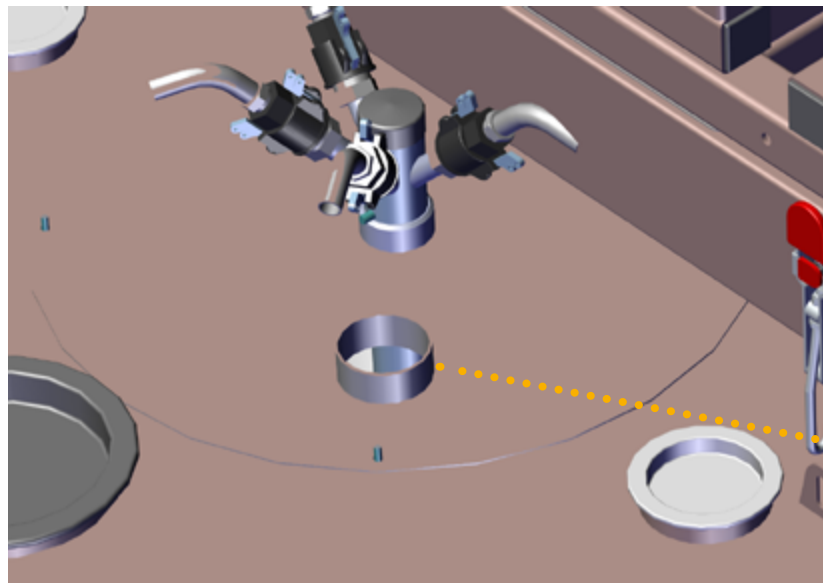
Surge Hopper Dust Port (3.0")



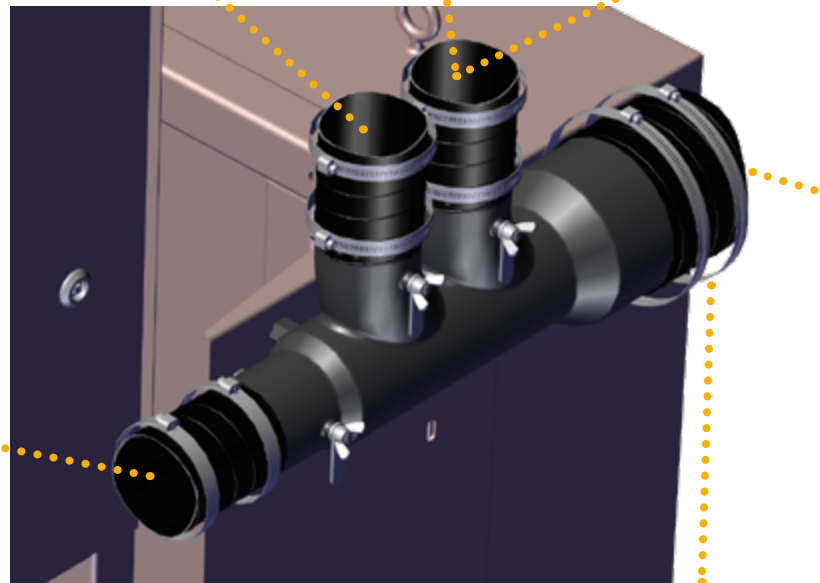
CBT200 Weigh Scale Dust Port (3.0")



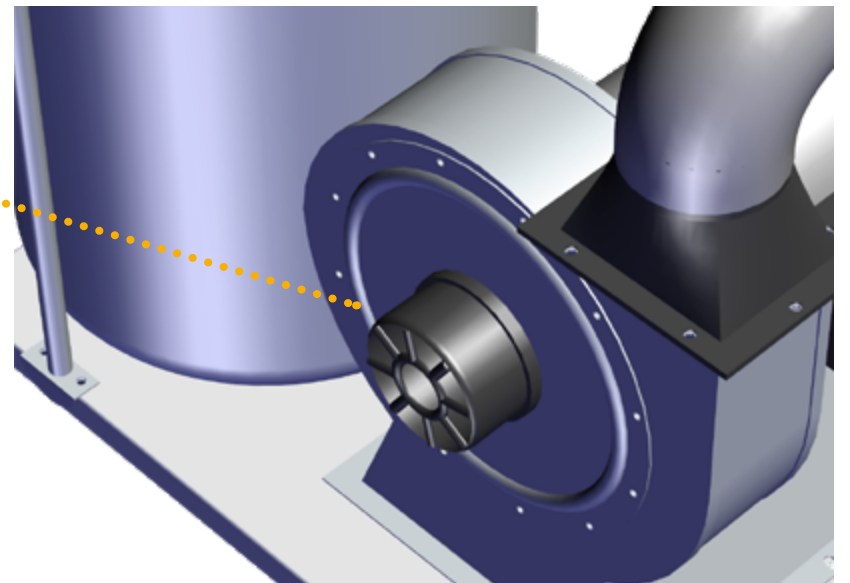
CBT25, 50 & 100 Scale Transition Dust Port (3.0")



Bowl Cover Dust Port (3.0")



Dust Evac Assembly (mounted) - Outlet Port (5.0")



Dust Evac System Inlet Port (5.0")





# LP300 TANK



## Required tools

- 7/16" Wrench

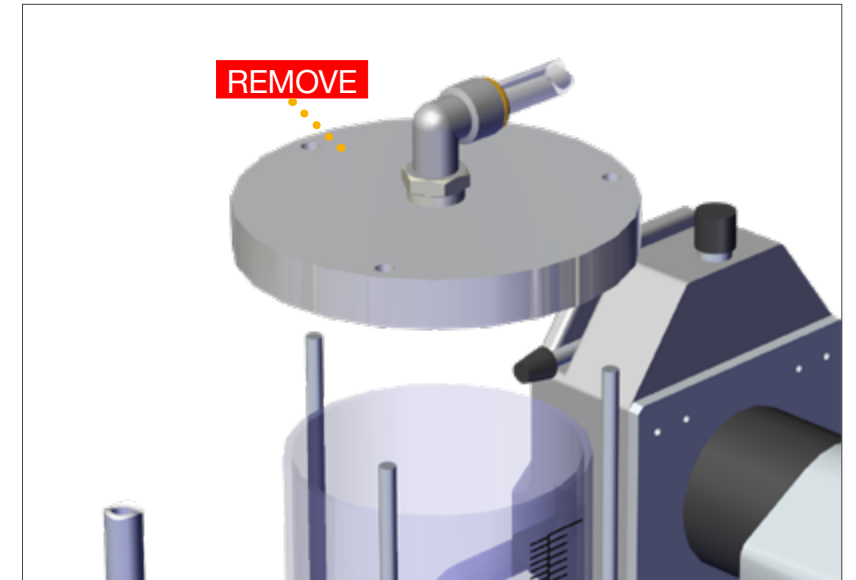
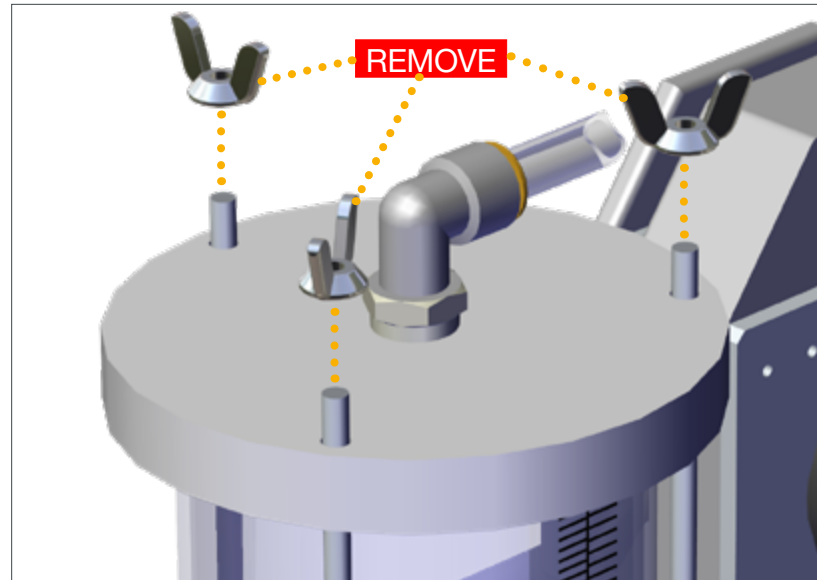
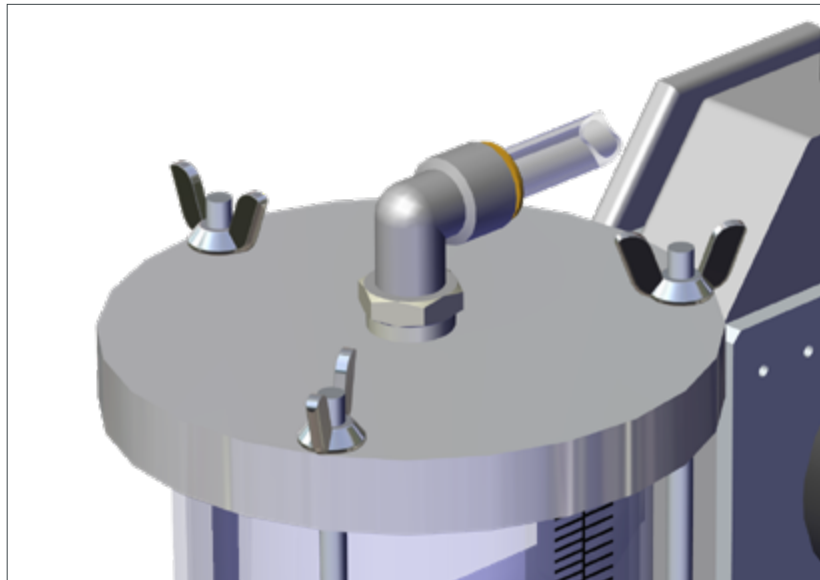


## Calibration Cylinder

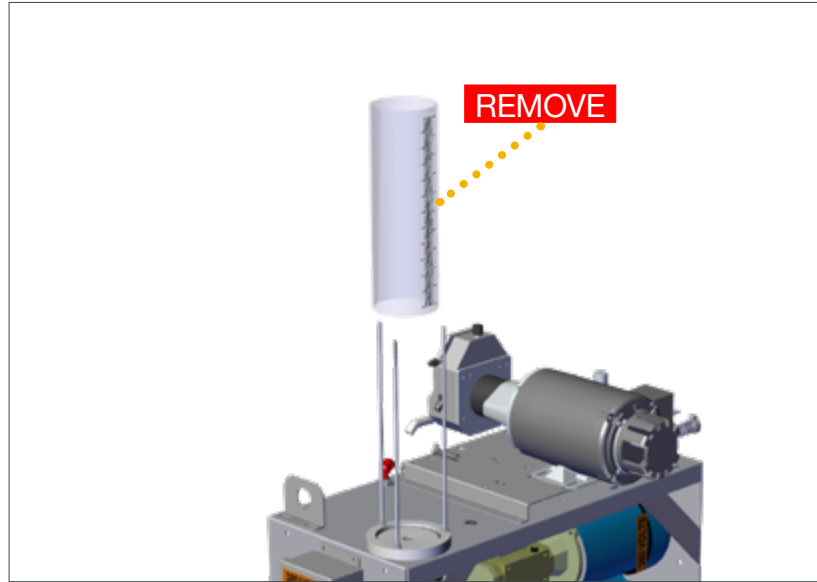
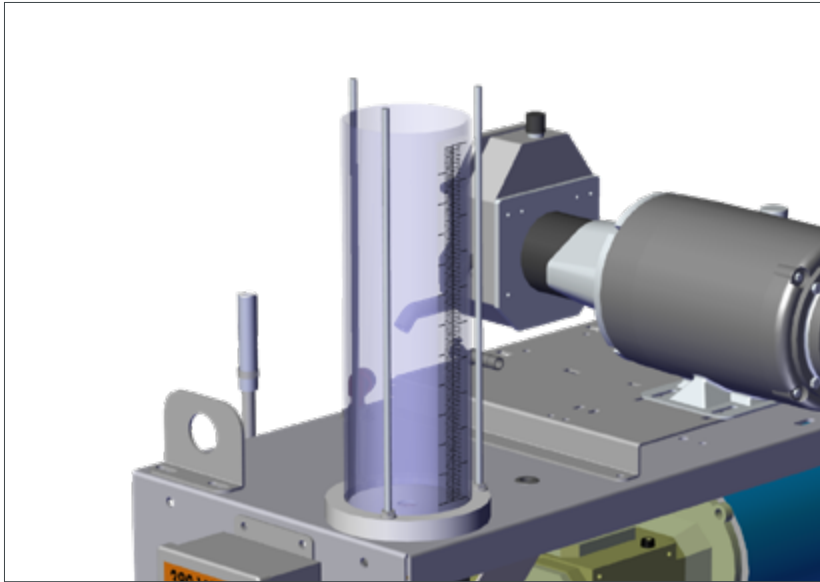
**Step 1:** Remove the three (3) wing nuts from the stud on the Top End Cap.

- Remove the Top End Cap (tubing, elbow fitting and BUNA gasket stay connected to the cap).

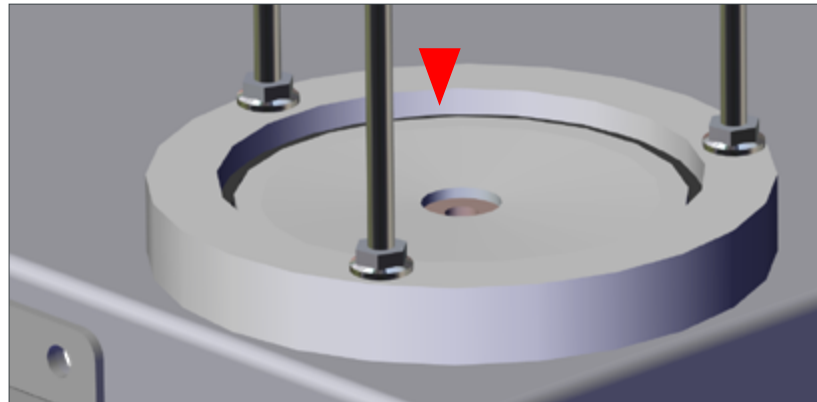
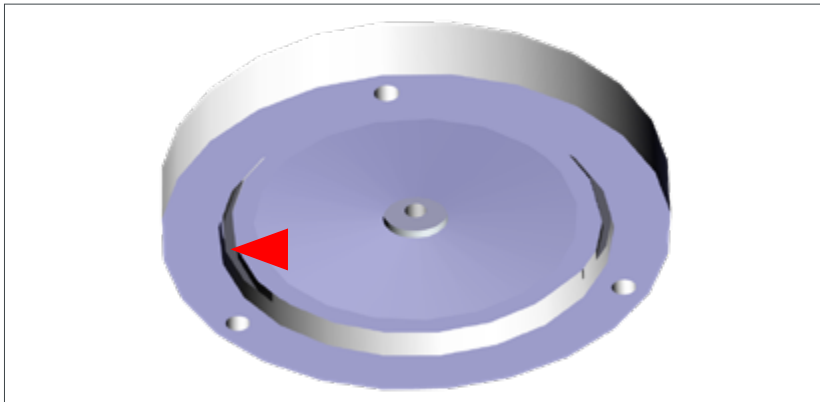
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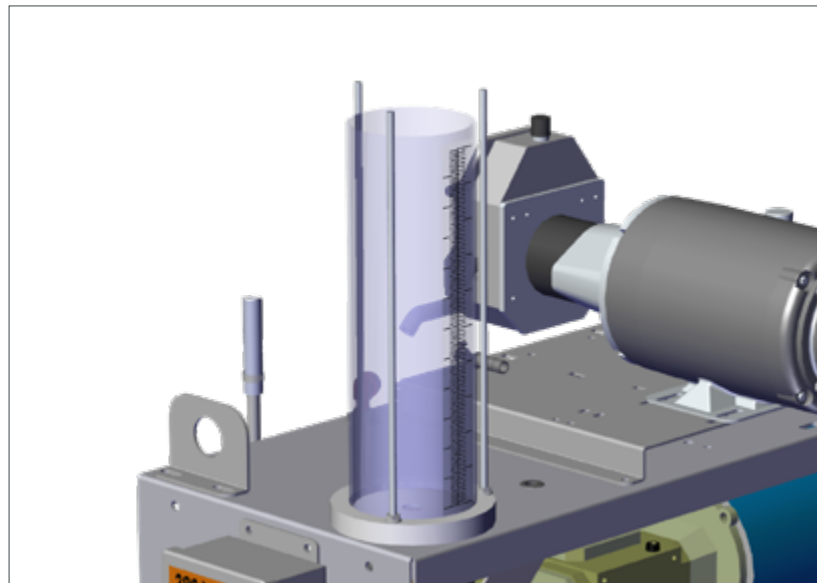
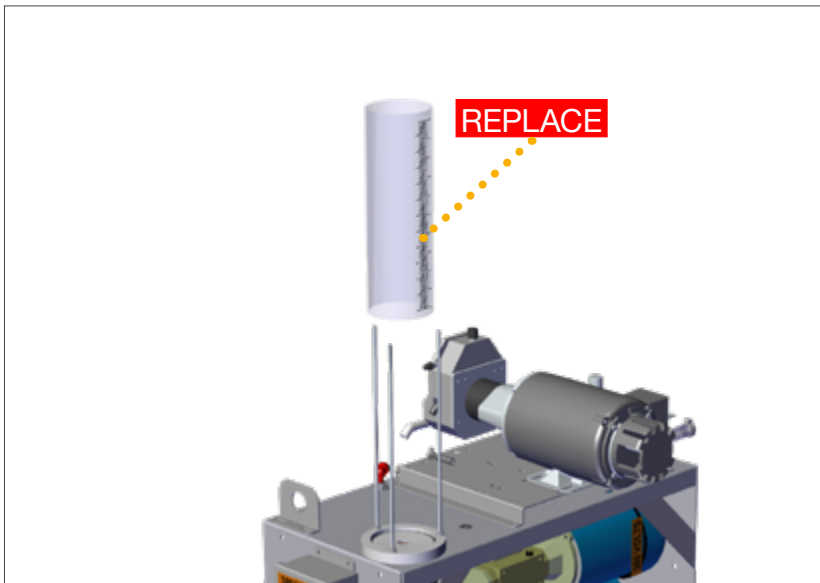


**Step 2:** Remove the Graduated Cylinder from the Lower End Cap and completely clean any chemical residue (inside and outside).



**Step 3:** Check the Gasket in the Lower and Upper End Caps for cracks or wear and replace if needed.

- Replacement gaskets are part of the LP300 Parts Kit shipped with the LP300.
- 1/8" SQ X 4-1/4" ID X 4-1/2" BUNA-N (2)



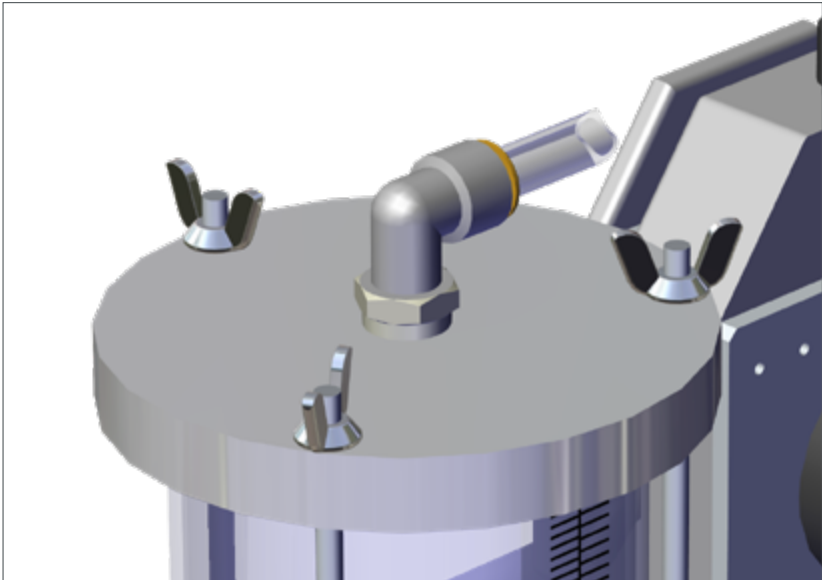
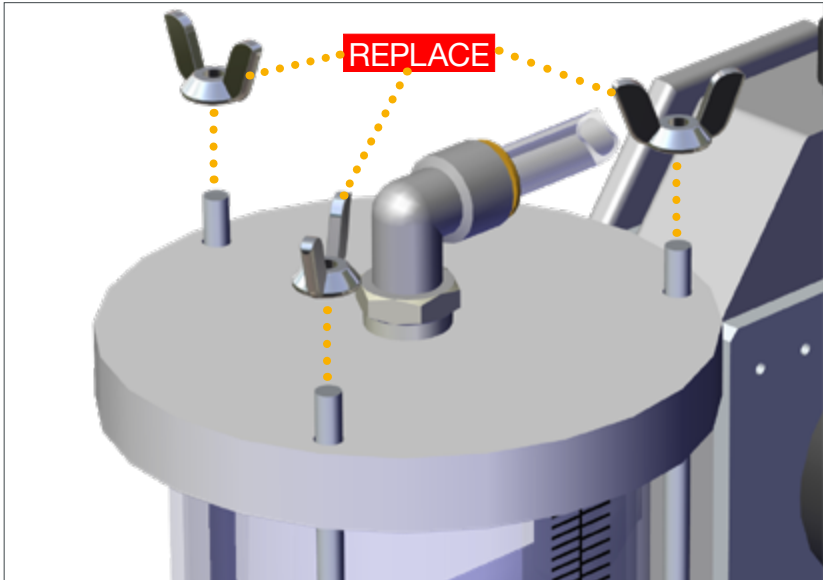
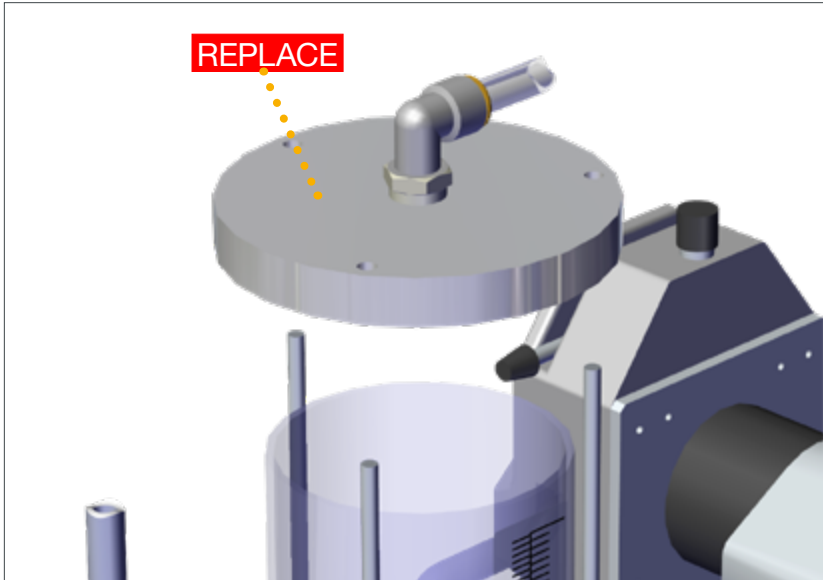
**Step 4:** Replace the Graduated Cylinder in the Lower End cap.

Continued ➞



**Step 4:** Replace the Top End Cap on the Graduated Cylinder.

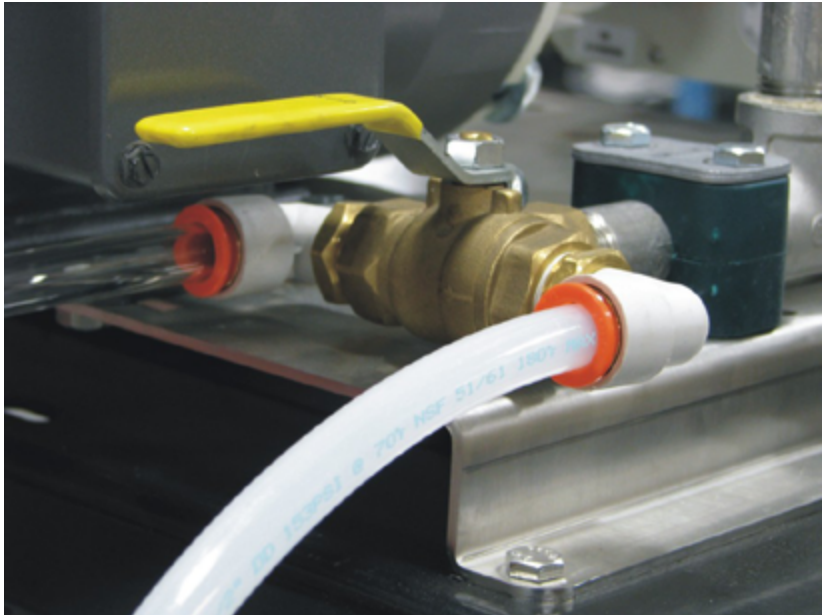
- Thread and tighten each wing nut (3) evenly on each stud.

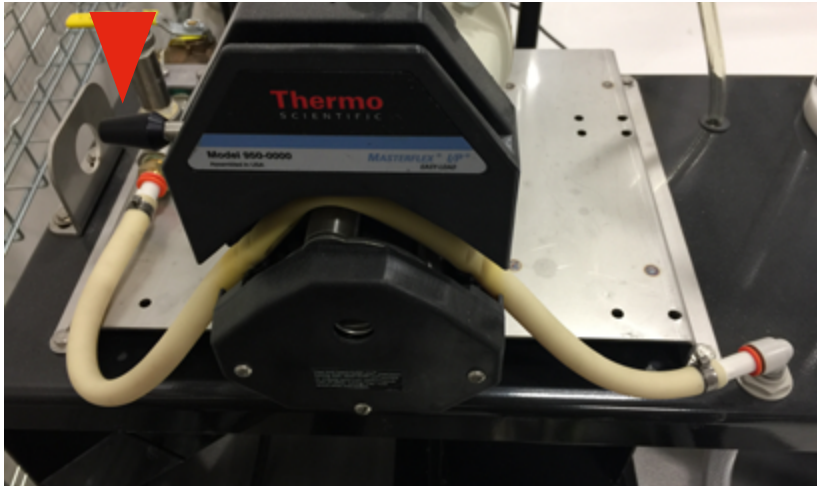


**Pump Tubing**

**Step 1:** Check all tubing and plumbing connections weekly for leaks, cracks or wear and replace if needed.

Continued ➡





## Change IP Pump Element

**Step 1:** Use the Pump Handle to open the Pump Head.

- Remove the existing Pump Element from the Pump Head Rollers.
- Push in the orange press lock fitting to remove the Pump Element from both the right and left side of the Pump Head



**Step 2:** Lay the new Pump Element on the Pump Rollers.

- Align the Pump Element behind the Pump Head Clips, as shown.

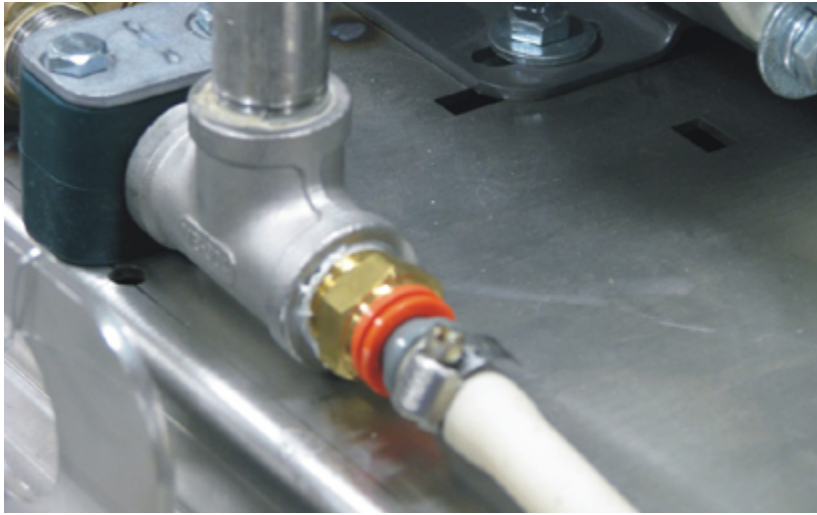


**Step 3:** Insert the new Pump Element press lock fitting into the Tank Elbow on the right hand side of the Pump Head, as shown.

Continued ➞



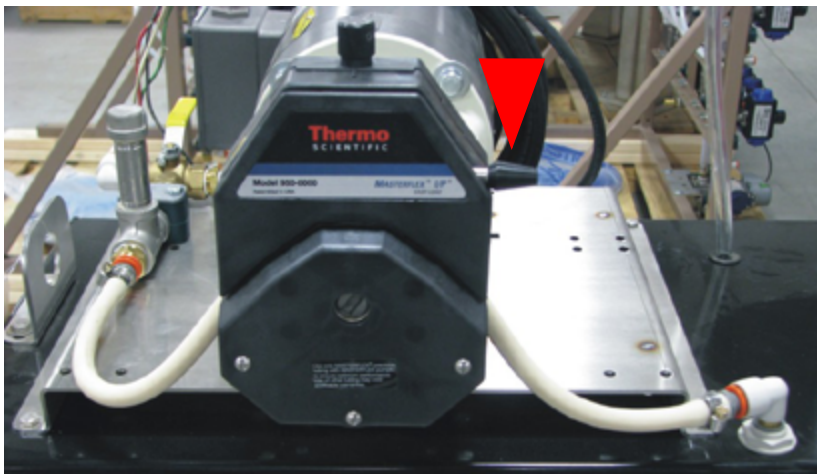




**Step 4:** Connect the other press lock fitting into the Pump Discharge Plumbing Assembly on the left hand side of the Pump Head.



**Step 5:** Align the Pump Element on the Pump Head grooves to ensure proper fit (may require two people).



**Step 6:** Use the Pump Handle to close the Pump Head onto the Pump Element.

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 LP300 tank.



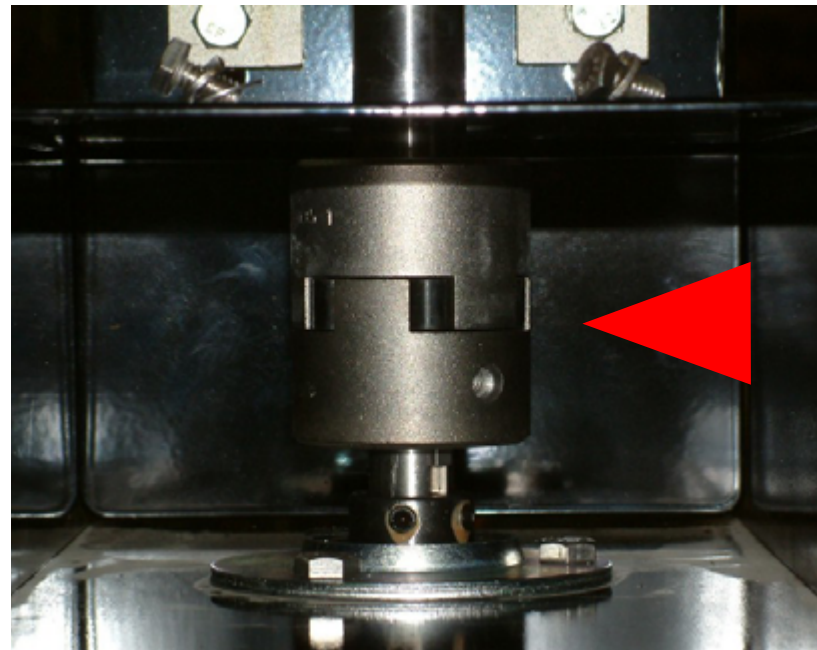
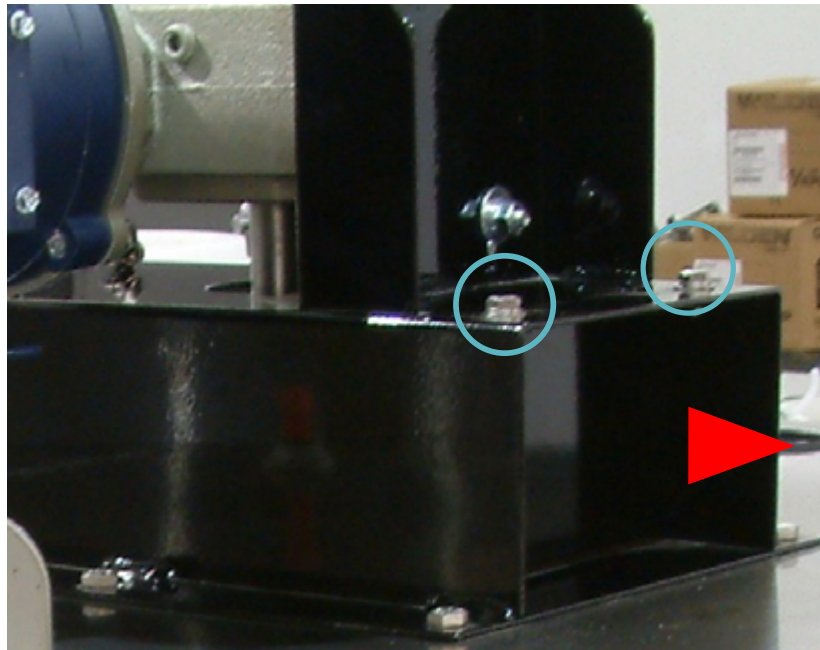
### PSD Tank PM Checklist

- Inspect plumbing for leakage - Weekly
- Rinse inside of Tank & Plumbing - End of Season

### 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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