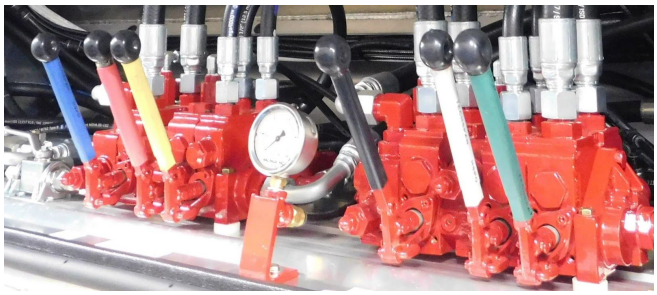
Walinga Xpress Hopper Auger Blower (HAB) Unloading Procedure - V20 Controls

Before operating a WALINGA bulk feed trailer, please read and understand all operating instructions and safety warnings.

Never leave the controls unattended while unloading!



Prior to Start Up

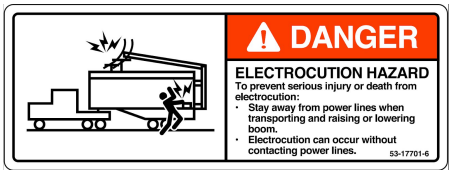
1. Operation of the equipment should only take place in daylight or in areas with good artificial lighting.
2. Be familiarized with the location and function of all controls.
3. On semi units, position the tractor and trailer in a straight line and on a firm, level surface to provide maximum stability when swinging the boom and unloading.
4. Ensure that the unit parking brakes are applied.
5. Ensure that all safety guards and covers are properly installed and all auger access doors are closed and remain closed while operating the equipment.
6. Ensure that all hydraulic controls are in their neutral position.
7. Make sure that the area around the PTO drive shaft (if equipped) and each of the augers are clear of bystanders or other objects which have the potential to get caught or may pose a safety hazard with the start-up of the hydraulic system.
8. Verify that the hydraulic oil reservoir is filled to the proper level.
9. Inspect the unit for hydraulic leaks, damaged components and hoses with weather cracks or abrasions which may be deep enough to expose the steel braids. Complete any required repairs before operating the unit.
10. Ensure that the wet line couplers are tight. The female coupler should be turned down until the edge of the coupler reaches the marked line on the male twist couplers.

PTO Engagement / Hydraulic System Start-Up

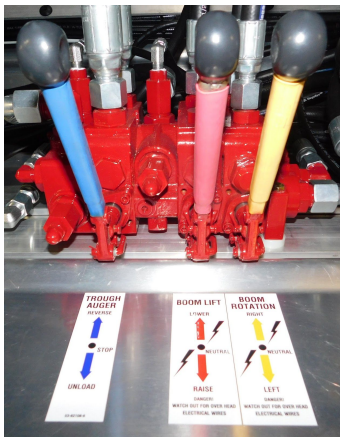
1. Disengage the clutch by depressing the clutch pedal and wait for the transmission or PTO gears to stop rotating.
2. Set the parking brake.
3. Shift the transmission into Neutral.
4. Shift the PTO into gear.
5. Slowly release the clutch pedal to re-engage the clutch.

Boom Positioning

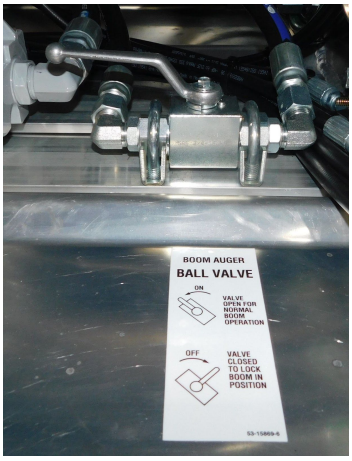
Warning – never position the boom or operate the unit within 30 feet (10 meters) of overhead power lines.



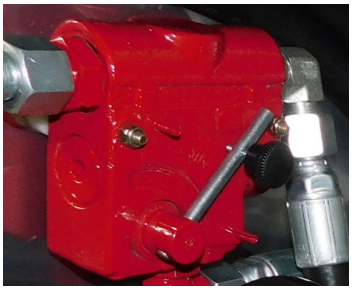
1. For the best visibility while positioning the boom and unloading the unit, it is recommended that the unit be positioned so that the bin or unloading area is on the left side (driver side) of the unit. Be aware of any power lines, buildings or other obstructions which may interfere with boom movement.



2. With the engine running at idle speed, gently raise the boom out of the saddle(s) using the manual control handles. Note - positioning the boom at high engine speeds may result in damage to the equipment.
3. Raise and rotate the boom as necessary until it is positioned over the bin or the product storage location. Take care that the hydraulic hoses which run to the boom do not become tight or snagged. If necessary, rotate the boom in the opposite direction to prevent hydraulic hose damage.



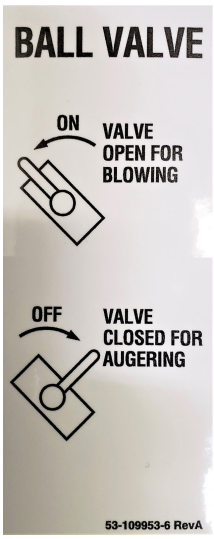
4. Position the discharge end of the boom directly over the bin opening. Lower the boom sock into the bin opening. Leave at least 8” between the bottom of the boom and the top of the bin. Resting the boom on the storage bin may result in damage to the boom and/or the storage bin.
5. Close the ball valve to engage the boom lock; which will prevent the boom from drifting down when under load.
6. Do not move the unit with the boom out of saddle or when the boom is full of product. Always empty the boom prior to repositioning. Moving the unit with the boom out of the saddles may cause major damage to the boom and upper vertical assembly**.**



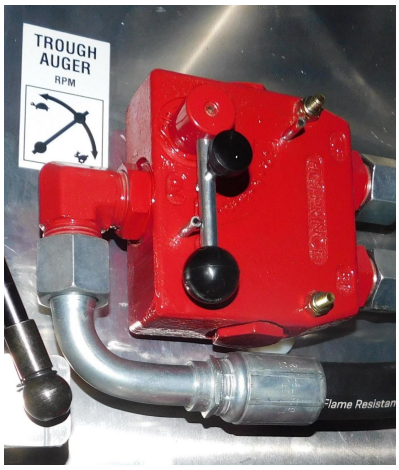
7. On units with a paddle conveyor in the trough there is an additional flow control valve installed which divides the oil flow between the trough auger and the boom positioning functions in order to allow for finer control of the paddle conveyor when blowing. This flow control valve is factory set to 7 on the valve speed indicator; which in most cases will allow the operator to position the boom or run their trough auger without ever having to adjust the flow control valve. On units with longer booms or very low idle speeds, it may be necessary to adjust this control in order to direct more oil to the boom when positioning. Prior to augering, this flow control valve should be readjusted back to its original setting in order to ensure sufficient oil flow for unloading.

Auger Unloading

1. Before beginning to unload product, particularly in temperatures below 32° F / 0° C, ensure that the oil has been adequately warmed at idle speed. Cold oil will result in higher start-up pressures and may cause damage to hydraulic components; particularly the hydraulic cooler elements (if equipped).



2. Never leave the controls unattended while unloading! If a problem occurs and the system is allowed to operate at a pressure higher than the relief valve pressure setting for an extended period of time, severe damage may be done to the hydraulic pump(s) and pressure relief valve(s).
3. If the unit is fitted with a hydraulic oil bypass ball valve, ensure that the valve is positioned for augering. **Always ensure that the pump PTO is disengaged when shifting the bypass valve. Shifting this valve with the pump running may result in damage to the system.**
4. The trough speed is controlled manually by adjusting the trough auger speed control.
5. Start the boom auger, then the vertical auger and finally the trough auger using the manual control handles. Starting the augers in this order is important to ensure that the product is not being fed into a stationary auger.



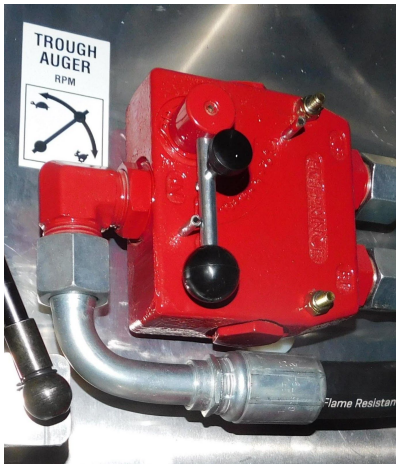
6. Open the gate for the first compartment to be unloaded. In order to achieve maximum efficiency with minimum wear on the system, units should be unloaded starting at the discharge end of the trailer (rear → front for rear unload units and front → rear for front unload units).
7. It is the Operator's responsibility to monitor the auger and system pressures and to operate the unit within the desired pressure ranges. It is recommended that the unit operates within a pressure range between 1800 psi and 2200 psi for the auger motor with the highest pressure. The highest pressure will most often be seen on the boom auger but this can vary depending on the length of the boom and/or the height of the bin being unloaded into. If any of the auger or system pressures climb beyond 2200 psi, the trough auger speed should be decreased by adjusting the trough auger speed control until the pressures are operating back within the desired range.

8. If unloading multiple compartments, do so one compartment at a time. Monitor the trough auger pressure and adjust the trough auger speed control as required. As each compartment empties the trough pressure will drop and the next compartment can be opened.
9. Leave the gates in the empty compartments open to reduce the pressure at the trough auger motor. **NOTE:** Unloading product below closed gates will result in higher than necessary trough auger motor pressures, leading to increased motor wear as well as potential damage and wear to the trough liner. This will also put outward pressure on the gates; eventually reducing their ability to achieve a tight seal.

10. When the destination bin reaches capacity, the product may plug up against the boom auger and cause the boom auger pressure to spike and the system to dump oil over the relief valve. In the event that this happens, the augers should be shut down to prevent damage to the equipment.
11. If the destination bin reaches capacity before the trailer is empty, raise the boom up higher from the bin opening. **Note - Do not move the truck or trailer with the boom out of the saddle or when the boom is full of product. Always empty the boom prior to repositioning. Moving the unit with the boom out of the saddle may cause major damage to the boom, and upper vertical assembly.**
12. Empty the remaining product out of the boom by pulling the Boom Auger handle on the hydraulic control. It is important to empty the boom before moving the trailer.
13. When unloading is complete, shut down the trough auger, then the vertical auger and finally the boom auger. Shutting down the augers in this order is important for ensuring that product is not being delivered to a stationary auger.
14. Bring the engine speed to an idle.
15. Discharge any residual product into a bucket or bag if necessary. **Always keep all guards and covers in place and access doors closed when the hydraulic system is in operation.**
16. At idle speed, open the boom lock ball valve and position the boom into the boom saddles. Always be aware of your surroundings and stay well clear of overhead power wires and other obstructions.
17. Shut down the pump PTO.
18. Close and secure all of the gates in order to ensure that the unit is not reloaded with open gates. The trough should be empty at start-up to avoid feed type cross-contamination and to minimize start-up damage to the auger motors.

Pit Dumping

1. Before beginning to unload product, particularly in temperatures below 32° F / 0° C, ensure that the oil has been adequately warmed at idle speed. Cold oil will result in higher start-up pressures and may cause damage to hydraulic components; particularly the hydraulic cooler elements.
2. Do not leave the controls unattended while unloading! If not shut down immediately, severe damage may be done to the hydraulic pump(s) and pressure relief valve(s) if the system is allowed to operate over the relief pressure setting for an extended period of time.



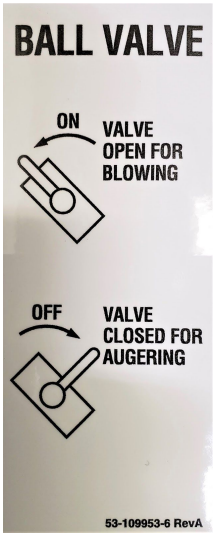
3. The trough speed is controlled manually by adjusting the trough auger speed control.
4. With the augers off, open the pit dump door at the rear of the unit.
5. Start theTrough Auger using the manual control handle.
6. Open the gate for the first compartment to be unloaded. In order to achieve maximum efficiency with minimum wear on the system, units should be unloaded starting from the rear and working towards the front when pit dumping.

7. It is the Operator's responsibility to monitor the auger and system pressures and to operate the unit within the desired pressure ranges. It is recommended that the unit operates within a pressure range between 1800 psi and 2200 psi on the auger so long as the pit is able to keep up with the unloading speed of the unit. If any of the auger or system pressures climb beyond 2200 psi, the trough auger speed should be decreased by adjusting the trough auger speed control until the pressures are operating back within the desired range.
8. If unloading multiple compartments, do so one compartment at a time. Monitor the trough auger pressure. As each compartment empties the trough pressure will drop and the next compartment can be opened.
9. Leave the gates in the empty compartments open to reduce the pressure at the trough auger motor. **NOTE:** Unloading product below closed gates will result in higher than necessary trough auger motor pressures, leading to increased motor wear as well as potential damage and wear to the trough liner. This will also put outward pressure on the gates; eventually reducing their ability to achieve a tight seal.
10. When unloading is completed, turn off the Trough Auger with the manual control handle**.**
11. Lower the engine speed to an idle.
12. Shut down the pump PTO.
13. Ensure that the augers are not running, then close and secure the pit dump door.
14. Close and secure all of the gates in order to ensure that the unit is not reloaded with open gates. The trough should be empty at start-up to avoid feed type cross-contamination and to minimize start-up damage to the auger motors.

Air Unloading:

1. Before beginning to unload product, particularly in temperatures below 32° F / 0° C, ensure that the oil has been adequately warmed at idle speed. Cold oil will result in higher start-up pressures and may cause damage to hydraulic components; particularly the hydraulic cooler elements.
2. Never leave the controls unattended while unloading! If a problem occurs and the system is allowed to operate at a pressure higher than the relief valve pressure setting for an extended period of time, severe damage may be done to the hydraulic pump(s) and pressure relief valve(s).
3. Position the trailer in close proximity to the bin that needs to be filled. The shorter the distance and the straighter that the hoses can be laid out; the more efficient the system will operate.
4. Connect the required delivery hoses from the airlock discharge to the desired bin fill pipe. **Note: To prevent electrostatic discharge and risk of explosion, only use properly grounded hoses and piping when conveying product.**

5. If the unit is fitted with a hydraulic oil bypass ball valve, open this valve to direct excess oil flow directly back to the tank in order to reduce the amount of heat generated in the hydraulic system. **Always ensure that the pump PTO is disengaged when shifting the bypass valve. Shifting this valve with the pump running may result in damage to the system.**



6. Engage the hydraulic pump and the blower PTO's.
7. Increase the engine speed to the required unloading speed.
8. Start the airlock and then the trough auger with the manual control handles.
9. Open the gate for the first compartment to be unloaded. In order to achieve maximum efficiency with minimum wear on the system, units should be unloaded starting from the rear and working towards the front when blowing.
10. It is the Operator's responsibility to monitor the auger and blower system pressures and to operate the unit within the desired pressure ranges. The auger and airlock speeds should be set in a manner which allows the blower line pressure to remain relatively stable between 8-12 PSI with minimal pulsation in the delivery lines and the view window less than 50% covered with product. If the pressure in the blower line is too high or too low, or if the view window is becoming full, the Trough Auger speed control can be adjusted to bring the unit back within the target range. In order to reduce pulsations in the delivery lines, the Airlock speed control can be adjusted until the pulsations settle out. On runs with multiple elbows or when conveying over longer distances, a lower target pressure of 8 PSI is recommended in order to prevent the delivery lines from plugging up. Operating the unit at higher target blower line pressures over shorter, straighter distances will improve efficiency and decrease the unloading time.

11. If unloading multiple compartments, do so one compartment at a time. Monitor the trough auger pressure. As the compartment empties the trough pressure will drop and the next compartment can be opened.
12. Leave the gates in the empty compartments open to reduce the pressure at the trough auger motor. **NOTE:** Unloading product below closed gates will result in higher than necessary trough auger motor pressures, leading to increased motor wear as well as potential damage and wear to the trough liner. This will also put outward pressure on the gates; eventually reducing their ability to achieve a tight seal.
13. When unloading is completed, turn off the trough auger and then the airlock with the manual control handles.
14. Lower the engine speed to an idle.
15. Shut down the pump and blower PTO's.
16. Close and secure all of the gates in order to ensure that the unit is not reloaded with open gates. The trough should be empty at start-up to avoid feed type cross-contamination and to minimize start-up damage to the auger motors.
17. Disassemble and properly store all delivery lines.