

GSR500 Ram Assembly



General Description

The GSR500 single post lift / ram uses a 3-1/4" air powered cylinder, which is welded to a heavy gauge base. It is normally used to raise and lower a fluid handling pump and follower in and out of a standard 5 gallon / 20 liter pail, or when used as a ram, it can force high viscosity flow able material into the pump inlet. When properly secured this unit has the ability to raise a pump to clear a standard 5 gallon / 20 liter pail. The operator is then able to easily remove the pump from the pail.

This lift / ram uses a rotary 3-way control valve which controls the air necessary to raise and lower the lift / ram. This unit includes an auxiliary manual air valve which is used to supply a controlled amount of air pressure to the bottom of the follower plate. When the control valve is in the "up" position, a small amount of air pressure applied under the follower plate will help raise the follower plate, pump and lift / ram by relieving the vacuum.

OPERATING AND SAFETY PRECAUTIONS

Read and heed all warnings, cautions and safety precautions before operating.

WARNING: READ THE GENERAL INFORMATION MANUAL INCLUDED FOR OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

WARNING: Store and operate the lift on a level surface.

WARNING: ANCHOR THE LIFT BASE TO A CONCRETE FLOOR OR CART.

An improperly secured lift could be unsafe. Do not attempt to use the lift until all possible measures have been taken to insure that the lift has been properly installed and the base has been secured. It is the duty of the installer to provide anchor bolts / studs (not included) and for them to be securely embedded in concrete which is more than 2" (50.8mm) thick.

WARNING: PREVENT ELECTRICAL SHOCK. Be certain the area above lift is clear of electrical fixtures, devices and wiring. Examine the working area and take necessary action to assure adequate clearance for the lift and pump assembly to raise to the fullest limit and function properly.

WARNING: PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with container. In the raising and lowering function, the lift could get hung up or the descent could be temporarily restricted. The lift could, in some situations, drop suddenly and be hazardous. If the follower plate does not enter the drum properly, DO NOT ATTEMPT TO RE-POSITION IT WITH YOUR HANDS. Release the downward pressure, raise the lift, realign the pail and restart.

WARNING: STAND CLEAR. When raising or lowering the lift keep clear and operate from a safe position.

WARNING: HAZARDOUS PRESSURE. Do not exceed maximum inlet air pressure of 125 p.s.i. (8.6 bar). Operating lift at higher pressure may cause lift damage and / or personal injury and / or property damage. Do not service or clean pump, hoses or dispensing valve while the system is pressurized.

WARNING: DO NOT EXCEED DRUM PRESSURE LIMITS. Know the pressure limitations of the drum and regulate the air pressure within safe limits when supplying air to the follower plate.

WARNING: Place the main valve in the “neutral” (center) position before air pressure is directly connected or turned on to the system.

WARNING: Depressurize the lift / ram before performing maintenance by disconnecting the main air line and rotating the main valve to relieve pressure.

CAUTION: Be certain all operators of this equipment have been trained for safe working practices, understand it's limitations and wear their safety goggles / equipment as required.

CAUTION: When the lift is in the raised position, the pump mount may be rotated away from the bucket. Rotating the pump 360 degrees may damage tubing.

NOTICE: To prevent premature failure of the piston rod and / or seals, it is good practice to keep the piston rod clean and free debris and any other type of contamination.

LIFT / RAM INSTALLATION

WARNING: Failure to properly install the lift assembly can result in severe injury and property damage. Read the warning above.

1. This lift / ram assembly comes completely assembled.
2. Establish the desired location of the lift / ram and pay special attention to the work area above. This area above the lift must be open, without obstructions and safely away from any electrical devices.
3. **THE LIFT MOUNTING BASE PLATE MUST BE SECURELY ANCHORED TO THE CONCRETE FLOOR.** The mounting plate itself can be used as a template for establishing the proper anchor locations.
4. Assemble the pump to the pump mounting plate. **NOTE:** The combined weight of the piston pump and accessories (follower plate, etc.) must not exceed 150 lbs (68.0 kg).

5. Install the pump air hose and follower plate air hose from the control valve.
6. Assemble the vent plug to the follower plate.

NOTE: The ram was tested at the factory. The unit should be generally checked over for leakage, because the fittings on the system may have loosened in shipment.

NOTE: Re-torque all fasteners before operation.

TO RAISE LIFT, (THE FIRST TIME):

1. Take note of the pump / pail clearance above. Be certain the lift / ram is clear of any objects above. Also, refer to “Operating and Safety Precautions”, found on page 2.
2. Connect the air supply (125 p.s.i. / 8.6 bar maximum) to the air inlet. Adjust the air pressure on the lift / ram pressure regulator (turn knob clockwise) to 20 p.s.i. (1.4 bar).
3. Shift the control valve lever to the “up” position.
4. Raise the lift / ram high enough to clear the height of the pail. Stop the lift upward travel by moving the control valve lever to the “neutral” (center) position.
5. Once the lift / ram assembly and pump are in the “up” position, place and center an opened pail of material on the lift / ram base.
6. Check the vent plug on the follower plate to be sure it easily threads in and out. It is recommended to lubricate the threads of the plug to help prevent possible set up of the compound at this point.

TO LOWER LIFT:

WARNING: PINCH HAZARD. Follower can descend quickly, causing injury. Keep hands clear when aligning with container.

NOTE: Be certain the follower plate vent plug has been removed so that the air trapped between the follower and the material is allowed to escape from this vent.

NOTE: The lift / ram may hesitate momentarily before starting downward. The air pressure inside the post air chamber must decrease before it will begin to descend.

1. Shift the control valve lever to the “down” position and proceed to lower the pump.
2. Increase the ram air pressure as required until material oozes out of the vent port.
3. Re-install the vent plug.
4. Open the material by pass valve at the outlet of the transfer pump.
5. Increase the transfer pump air pressure slowly until the pump starts to stroke.

6. Pump until material exits the by-pass valve.
7. Close the by-pass valve.
8. Continue to pump until the material transfer hose is loaded and the pump stalls.
9. Increase the ram and transfer pump air pressures an additional 10-20 PSI, or as required to have a continuous flow / operation of the transfer system to the metering pump assembly.

TO RAISE LIFT, (NORMAL OPERATION):

1. Lower the transfer pump air pressure to zero.
2. Shift the control valve lever to the “up” position.
3. Raise the lift / ram high enough to clear the height of the pail. Stop the lift upward travel by moving the control valve lever to the “neutral” (center) position.

TO CHANGE DRUM:

NOTE: The control valve lever should be in the “neutral” position and the pump air supply valve should be closed.

1. To avoid damage, **DO NOT OVER-PRESSURIZE THE PAIL.**
2. Open the follower plate air supply valve to allow air under the follower plate.
3. Shift the control valve lever to the “up” position.
4. Place and center a new pail into position. Remove cover.