



## **REASSEMBLY OF VERTICAL LIFT DOORS**

**Note: For adjustment only, refer to step 12.**

All vertical lift doors are fully assembled and tested at the factory prior to shipment. The door and superstructure are then fully or partially removed from the oven to reduce the shipping size. As each part is removed, it is tagged for reassembly at the installation site. Photographs are provided to guide reassembly.

The door and counterweight combination are very heavy and must be handled carefully.

Reassembly of the door and superstructure must proceed as follows for satisfactory results. Not all units are disassembled to the same extent; however, all steps of reassembly are included for clarity. Please read through these instructions completely before starting to determine which steps are necessary for your unit.

1. Move the oven body into position and level it side to side. If the oven is not level, the door will hang squarely over the door opening. Make sure that the oven is completely supported and not resting on two or three high spots on the floor. Shim as necessary. If the oven is not on solid footing it will rock as the door is opened and closed.
2. It is critical that the door face of the oven be perpendicular to level (plumb) – shim the oven if necessary. If front face is not plumb, the door will not move up and down parallel to the face of the oven and the gasket may rub on the face of the oven or the door will not seal correctly.
3. Once oven is level side to side and plumb front to rear, permanently attach any shims that were installed so that they do not move out from under the oven over time.
4. Identify the main vertical superstructure members and attach them to each side of the doorway with the bolts provided. (NOTE: Some vertical lift door assemblies have vertical superstructure members both at the front and the rear. Make sure that the correct structure is selected for each end.)
5. Assemble top horizontal angles to vertical uprights making sure parts are placed correctly according to the tags on the parts. (NOTE: Most vertical lift door units have horizontal and vertical superstructure members integrally welded together.)
6. Mount the assembly consisting of shaft, pillow blocks and sprockets to the top of the superstructure. On most units this equipment is already assembled to the superstructure. (NOTE: If more than one shaft assembly is used, make sure that the correct assembly is being put in the correct location.)
7. Position the door squarely over the oven opening. Set the door between the uprights and against the face of the oven with the door rollers resting in the doorstops. In some cases, the door will be shipped in place on the oven. If this is the case, remove any bolts, shipping clips or other packaging that held the door in place for shipping.
8. Attach the roller chains to the pins on the top of the oven door -- follow tags and photographs. Pass each chain over the sprocket directly above the pin it is attached to. Make sure that there are the same number of links between the door pin and sprocket at each chain. Make sure that on electric operated doors, the chain with the limit switch operators is on the same side of the door as the limit switch.
9. One or more safety (back-up) chains are provided in the middle of the door. These are purposely left slightly slack. Should one of the working chains fail, the safety chain will take up the load. If this happens, the door will hang crooked indicating a chain failure that must be repaired.
10. Lift the counterweight into the rear of the superstructure over the roof of the oven and attach it to the roller chains. (NOTE: On units with separate rear superstructure, the counterweight will be mounted at the rear of the oven.) In some cases, the counterweight will be bolted in place within the superstructure. If this is the case, remove any bolts, shipping clips or other packaging that held the counterweight in place for shipping.
11. The door can now be operated. Open the door a small amount and make sure that the door moves freely. Be careful not to slam the door open or closed. If the door opening system is not installed, the door can be opened and closed manually by lifting the door or pushing down on the counterweight.



## Reassembly of Vertical Lift Doors (continued)

12. Make the first door adjustment at this time. As the door lifts free of the doorstops, the door must swing forward. It is important that the door swing forward so that the door gasket does not drag on any part of the oven face as the door moves up and down. With the door hanging free, the gasket must clear the face of the oven by approximately 1" or more. For clarification, refer to drawing at the end of these instructions.
13. The door must hang parallel to the face of the oven. It is very important that the face of the oven be perpendicular to level (plumb) so that the door will hang parallel to it. Check the face of the oven at this time with a level and make sure that it is perpendicular to level (plumb). If not, shim the oven. If after shimming the oven the door does not hang parallel to the face of the oven, the following two adjustments are available:
  - a. If the door hangs straight but too close or too far from the oven, the entire shaft/pillow block/sprocket assembly must be shifted forward or backwards to correct.
  - b. If the door does not hang straight beneath the chains it means that the center of gravity of the door is not directly beneath the pins attaching the chain to the door. Loosen the locking nuts at the bottom of the pins and move the pins forward or backward within the oven door until the door hangs parallel to the face of the oven. After this is done, it may be necessary to adjust the shaft/pillow block/sprocket assembly as explained in "a" above.
14. Move the door up and down a few times in small steps to check the limit switch operators are positioned correctly. Do not allow the door to slam against the door roller stops, as this will knock them out of adjustment.
15. With the door in the closed position, make a small pencil mark on the face of the oven around each corner of the door. Lift the door into the open position and engage the safety pin beneath the door. Check the pencil marks to make sure that the door is fitting squarely around the door opening in the closed position. If not, it may be necessary to adjust the angle of the doorstops or screw one of the support chain pins in or out of the door. If the door is very crooked, double check the number of chain links between the door and sprocket to make sure they are the same at each pin.
16. Install the electric or pneumatic door opening system. Match-marked tags indicate location of each component. (NOTE: In most cases these are already installed on the superstructure)

Electric motor systems use limit switches. Make sure that the chain with the limit switch operators is installed on the side with the limit switch. The first time the door is operated automatically do not rely on the limit switch. Open the door in small steps to make sure that the limit switch is engaged at the correct time. In closing, there will be some coast, which will unload some of the weight of the counterweight and seal the door.

Air operated doors do not have limit switches but instead rely on the stroke of the cylinder to determine door travel. Air operated doors have speed controls installed at the cylinder. These have been factory adjusted to provide smooth operation. Due to the basic nature of air systems, there will be a delay in door opening after the operating lever is lifted. Do not allow door to operate rapidly as this will damage the gasket and knock the doorstops out of alignment.
17. Do not slam the door open and closed.
18. After completing installation as described above, heat the oven up following the oven operating instructions and check the door when the oven reaches your normal operating temperature. Slight additional adjustments may be required after the oven has been heated and cooled a few times.
19. The door alignment should be checked periodically to make sure that nothing has slipped out of adjustment.
20. Reassemble guards to frame

Reassembly of Vertical Lift Door (continued)

IF ANY OF THESE INSTRUCTIONS ARE UNCLEAR,  
CONTACT THE FACTORY PRIOR TO PROCEEDING.

WHENEVER WORKING WITHIN THE OVEN WORK SPACE, SLIDE THE SAFETY PIN IN BENEATH  
THE DOOR TO PREVENT ACCIDENTAL CLOSING.

DEPENDING ON THE SIZE OF YOUR OVEN, IT COULD BE CONSIDERED A "CONFINED WORK  
SPACE" BY OSHA. PROVIDE LOCKOUT PROTECTION.

Pillow blocks can be shifted front to rear  
to provide door clearance of 1" from oven  
front to gasket when door is open.

**IMPORTANT NOTE:**  
Hold approximately 1" clearance between door  
gasket and oven face in open position

Door must hang parallel to face of oven  
and not lean in at top or bottom. To adjust,  
loosen bolts at top of door and move in or out  
until the chains hang over the door's center of  
gravity and door hangs parallel to face of oven

Face of oven must be plumb  
Straight up and down. Shim oven as necessary

