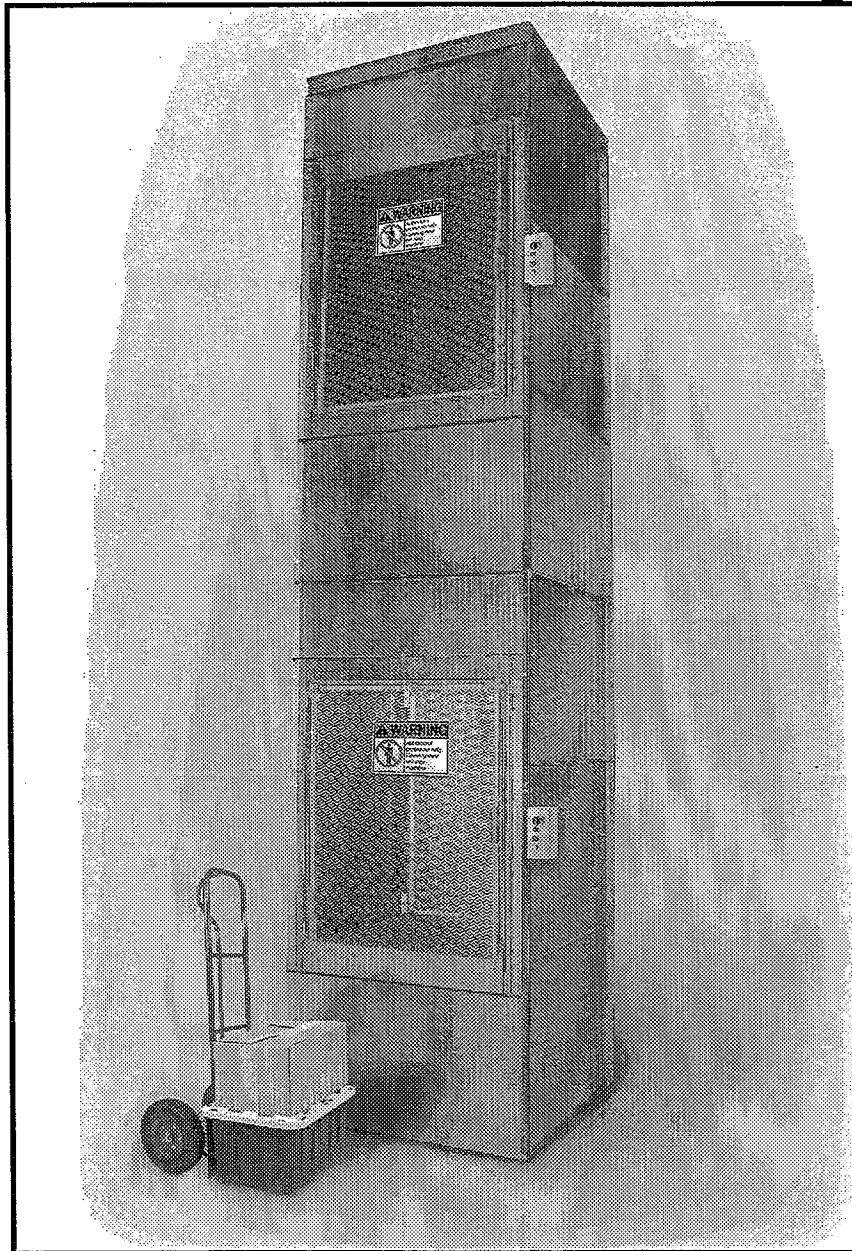


PFLOW VERTICAL LIFTS

The Nation's Largest Manufacturer of Vertical Lifts



INSTALLATION INSTRUCTIONS

SERIES B

READ THIS MANUAL IN ITS
ENTIRETY AND VERIFY JOB SITE
DIMENSIONS AGAINST GENERAL
ARRANGEMENT DRAWING BEFORE
STARTING INSTALLATION

100809-B

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INTRODUCTION

Thank you for purchasing a PFLOW INDUSTRIES, INC., Series B, Vertical Reciprocating Conveyor (VRC). We are confident that your unit will provide you with many years of reliable service.

CODE REQUIREMENTS - VRCs are NOT elevators. Your unit is designed for the movement of materials only, up to its rated capacity, from one level to the next. VRCs have their own national code (ANSI/ASME B20.1) and are specifically exempt from the National Elevator Code. All electrical designs and components are in accordance with National Electric Code (NEC) requirements. Local codes may require initial inspection of the installation and periodic inspection and testing of the unit.

Some states require special components and have specific guidelines regarding how the equipment must be installed, inspected, and tested. If we know in which state the equipment will be located, and if we are kept informed of state and local requirements, Pflow will incorporate the components into the order, as approved by the customer, and also provide any pertinent information, as called out on the general arrangement drawing, related to the installation of the equipment. We will not be on site for the testing, but we strongly advise that the installer be there.

If at any time you have questions about your state's requirements, please feel free to call.

NOTE

The information and illustrations in this manual are intended only as an aid to understanding the VRC's general installation. It does not cover every possible contingency or circumstance regarding non-standard options or site conditions.

If you have a problem, call Pflow at (414) 352-9000, between 8:30 A.M. and 5:00 P.M., CST, Monday through Friday. Ask for the Product Support Department and have your serial number ready.

Parts - Pflow Industries maintains a complete stock of, or has access to, all replacement components. We keep detailed records of all equipment sold. If something is damaged in shipment, is defective or missing, contact us immediately.

Service - Our Product Support Department is available to assist your maintenance personnel with any questions or problems they may have regarding the equipment.

Warranty - Our warranty procedures can be found in this manual. Prior authorization must be obtained from Pflow before commencing work of any kind.

Feedback - Let us know how we are doing. Each installation manual contains a questionnaire. Please fill it out and return it to us. We can't prevent a problem if we are not aware of it.

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B Series

SAFETY

To ensure your safety and the safety of those around you, it is important that you read, understand, and follow ALL the safety precautions relative to a particular task. Safety precautions in this manual are labeled with the alert symbol followed by the word DANGER, WARNING, or CAUTION.

DANGER

When you see this symbol, it means that serious injury or death is likely if the instructions are not followed carefully.

WARNING

When you see this symbol, it means that the potential for personal injury is high if directions are not followed carefully.

CAUTION

When you see this, it means that the potential for damage to the equipment is high if directions are not followed carefully.

NOTE

This term is used to provide additional information to help clarify instructions.

DANGER

HIGH VOLTAGE. Failure to follow proper procedures when performing electrical installation or service may result in serious injury or death.

DANGER

DO NOT ride this equipment. Riding may result in injury or death. VRCs ARE NOT ELEVATORS.

DANGER

DO NOT walk or work under a raised platform.

CAUTION

DO NOT exceed rated capacity.

EQUIPMENT ARRIVAL AND UNPACKING

1. The Series B lift will arrive banded to a pallet. To ease handling and to prevent damage, leave lift on pallet until it is as near to the installation site as possible.
2. The carriage is banded in place to prevent it from moving during shipment.

NOTE

Do not remove bands until the lift is stood upright.

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PRE-INSTALLATION CHECKLIST

Site conditions can mean the difference between an installation that is smooth and one that is difficult.

We have provided a general checklist to help set up your installation. We recommend that the installer, or someone with installation experience, discuss not only these items but all other concerns directly with the people on site.

A pre-installation visit is always recommended and considered to be included in the responsibilities of the mechanical installer.

WARNING

Safety should always be first and foremost in your mind on this or any job. Besides following safe working procedures, items required by OSHA may include: a hard hat, safety shoes, safety glasses and belt, fire extinguisher, and other safety equipment.

Mechanical Installer Responsibilities

- Complete mechanical erection of the equipment as sold by Pflow, called out on the general arrangement (GA) drawing and in accordance with all instructions within this installation manual.
- Return trip upon completion of the electrical installation for final checkout, adjustments and training. (See Completion Checklist.)
- On non-union sites, mounting of all electrical devices.

Customer Responsibilities

- Unloading and transportation of the equipment to the installation area.
- Storage (if applicable). If unit is stored indoors or long-term storage is required, consult Pflow Industries for storage procedures required to keep warranty in effect.
- All necessary site work to prepare for the installation such as pit, floor opening, adequate bracing locations, and shaftway openings.
- Any site/building modifications necessary to get the equipment to the installation area.

- Adequate pick point or lifting mechanism capable of lifting the heaviest load. If weight of load is in question, please call Pflow Industries.

If you have any questions or concerns, please contact our Product Support Department prior to start of work.

- ___ Can the equipment pass through all doorways, hallways, etc.?
- ___ Can you use the customer's fork truck? Is the truck's capacity sufficient?
- ___ Are safety meetings required?
- ___ Are there any work procedure/safety guidelines particular to the job site?
- ___ Is welding permitted? Is a "hot permit" required? Is a fire watch required?
- ___ Is there a pick point capable of lifting the necessary components?
- ___ What hours are you allowed to work on site?
- ___ Who is the authorized site contact?
- ___ Is this a union or non-union site?
- ___ Bracing requirements - Will additional materials be required?
- ___ Is temporary power available within 10 ft. of the unit?
- ___ Do you have a well-lit area to work in?
- ___ Is the installation area ready (pit complete, floor opening cut and/or finished, etc.)?
- ___ Are shaftway openings complete?
- ___ Are there any discrepancies between the site dimensions/application and the Pflow GA drawings? Has this information been provided to Pflow?
- ___ Will customer doors and/or shaftway openings be completed prior to your arrival?
- ___ Will other trades or in-plant production cause conflict with your proposed work schedule?

SITE VS. GENERAL ARRANGEMENT

Comparison Check

1. Check your shipment to make sure that nothing is damaged or missing. Damaged or missing components must be reported to Pflow Industries immediately per instructions in the introduction of this manual.
2. The shipping packet contains a copy of the general arrangement drawing.
3. Compare the dimensions as called out on the general arrangement drawing to actual site conditions. Report any discrepancies to Pflow immediately. The following are just a few of the dimensions that could be a problem if they do not match:

Overall Unit Width
Overall Unit Length
Load Height Clearance
Overhead Clearance
Elevation of Level 1
Elevation of Level 2

Are there any protrusions from the floor level or wall that could interfere with either the installation or operation?

Floor-to-Floor Clearance - Upper Level

CAUTION

Discrepancies between the general arrangement drawing and site conditions must be addressed immediately. Contact the Product Support Department (414) 352-9000 for assistance.

B Series

TOOLS REQUIRED FOR VRC INSTALLATION

The following is a list of tools we feel are necessary to install a VRC in a professional and expedient manner. This is only a guideline. Individual sites and applications may require additional items as needed. If you have any questions regarding these items, contact Pflow Industries.

Forklift - 2,000# capacity or alternative	Plumb bobs
Chain fall - 2,000# capacity minimum	Grease gun
Come-A-Long	25' Measuring tape
Cables or hook chains with 1,000# or greater capacity	Rags
Carpenter's square	Alignment pins
4' Level	
Socket set - 3/8" drive, sockets to 3/4"	
Hammer drill and bits for 3/8" anchors, 4" min.	
Drill and drill bits	
Extension cords	
Portable light	
Sledge hammer (plastic)	
Allen wrenches to 3/8"	
Open or box end wrenches to 3/4"	
Chalk line	

INSTALLATION COMPLETION CHECKLIST

Please make sure all of the following steps are complete:

- ☐ The VRC is braced from front to back and from side to side.
- ☐ Touch up all welds, marks, scrapes, etc. with paint.
- ☐ Make sure that all electrical connections are properly made.
- ☐ Check that the unit stops level at each floor.
- ☐ Is there excessive noise during travel?
- ☐ Do a full load test.
- ☐ Are there any unsafe conditions that exist?
- ☐ Post all operational signs.
- ☐ Remove all debris.
- ☐ Instruct the customer on the proper operation.
- ☐ Instruct the user on proper loading.
- ☐ Instruct the customer on procedures if there is a problem.
- ☐ Complete the Installation Questionnaire and Acceptance Certification. Return both to Pflow Industries.

If so, please report them to Pflow Industries immediately.

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Installation Instructions

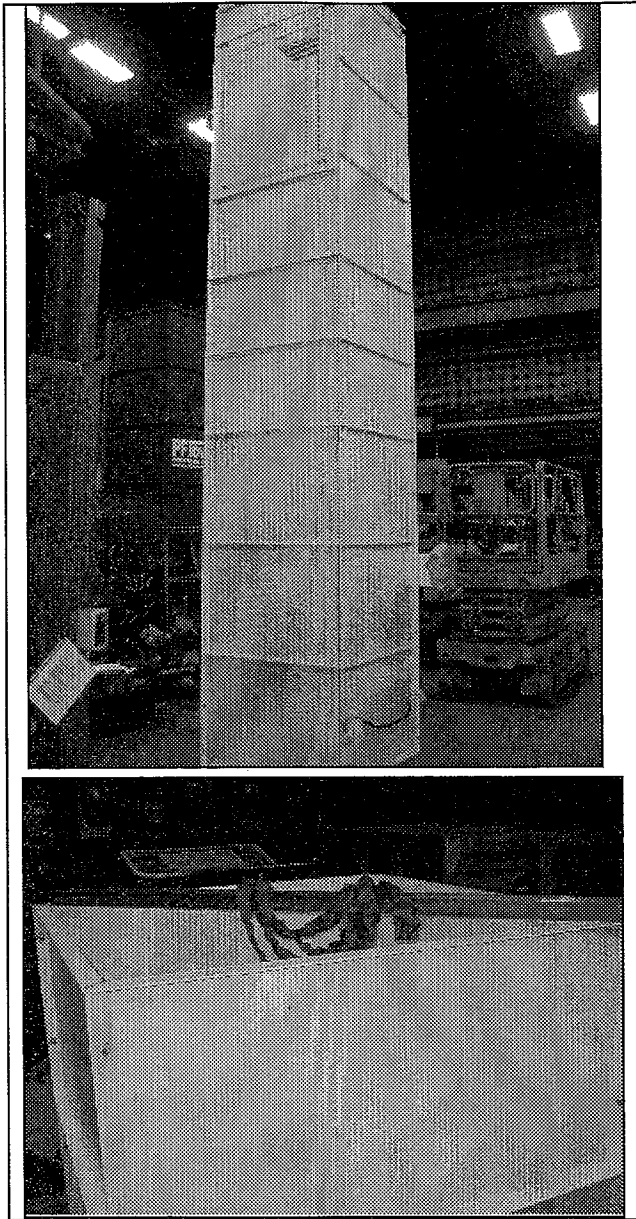


Figure 1

1. Remove bottom section (contains motor and carriage) from skid by using 4" channel bolted to top as lifting point. Move to location in plant, orientate gate opening according to general arrangement print. See Figure 1.

2. Lift top section (with gate) using sprocket frame as lifting point. Be careful of chain and sprockets. Place top section on intermediate section lining up cable track welded to one panel on each section. Bolt with 5/16" bolts, washers and locknuts. Square up sections corner to corner as best you can. See Figure 2.

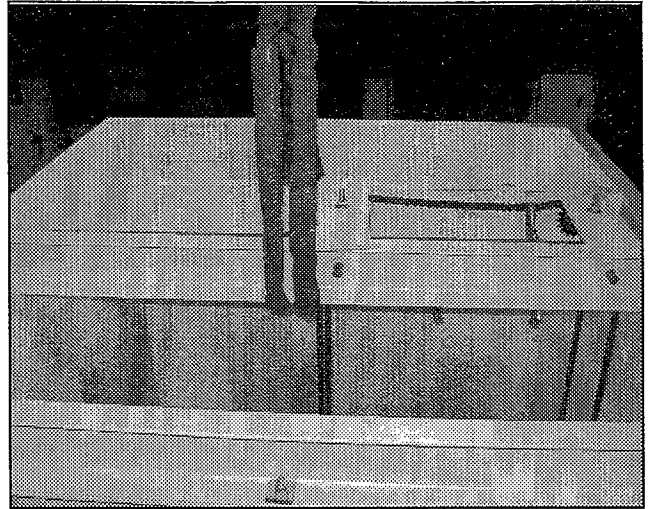


Figure 2

Tap edges with plastic sledge hammer to align inside seams. (You only need to get seams smooth where the guide wheels run, about 2".) You may slightly grind the inside seam where wheels run if needed. See Figure 3.

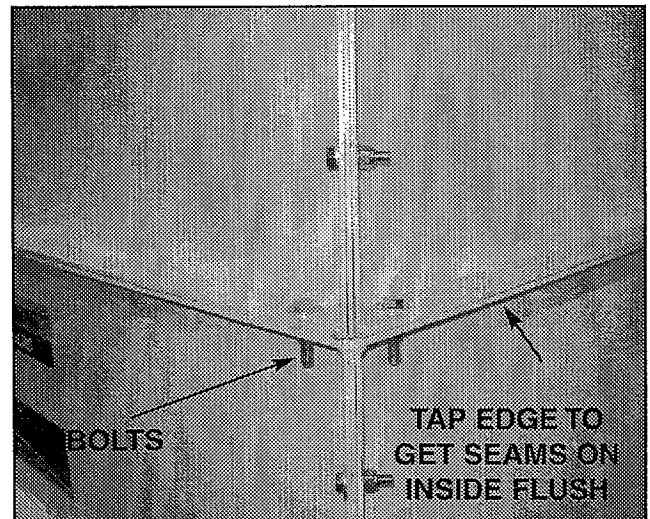


Figure 3

Now lift top sections and place on lower section being careful to keep cable track in line on all panels. Square up and flush seams as before. Double-check that gate is orientated as on the general arrangement drawing.

B Series

3. Remove access cover below lower level gate to gain access to control panel cables. Feed cable (PB1) through hole with grommet in lower panel and to where you have mounted control panel / push button station near lower level gate. See Figure 6. Secure cables inside and outside of lift so they don't interfere with moving parts of lift. Match wire tag to tag on panel. See Figure 4

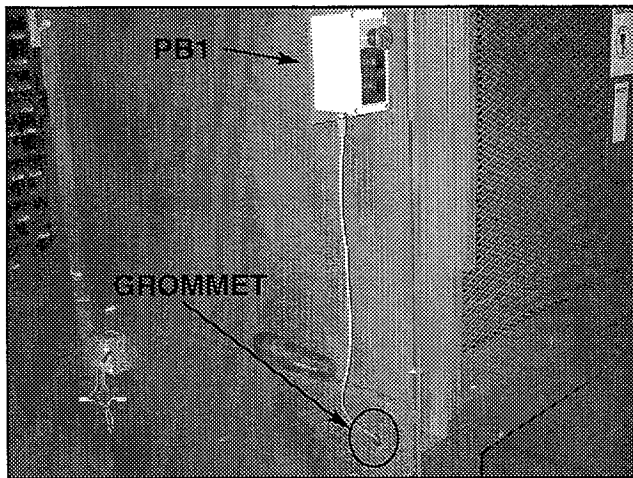


Figure 4

4. Route cables away from moving parts of lift and down cable track on back. Install track covers after running cables. See Figure 5.

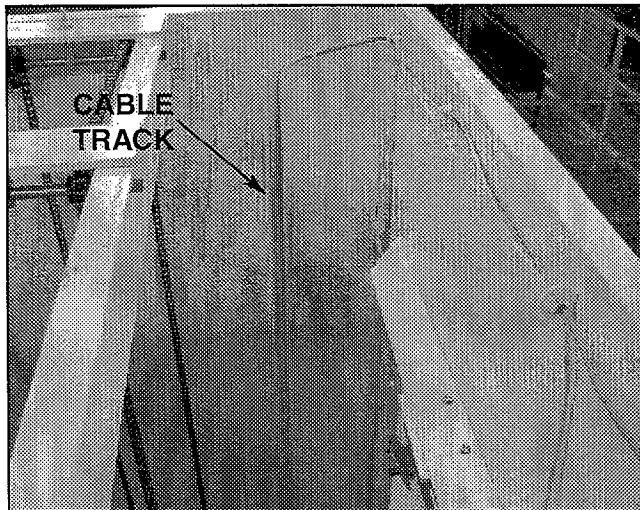


Figure 5

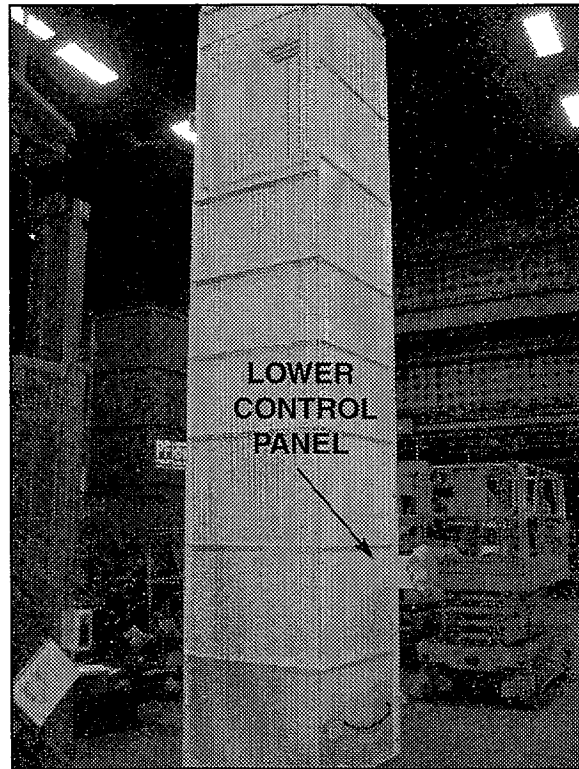


Figure 6

5. Run upper electrical component cables up back panel in unistrut and secure with covers. Rout wires to appropriate components (wire markers) securing around top of lift out of way of any moving parts. Run push button cable over top of lift and down along edges to push button station mounted near gate handle. Secure cable out of way. See Figure 7.

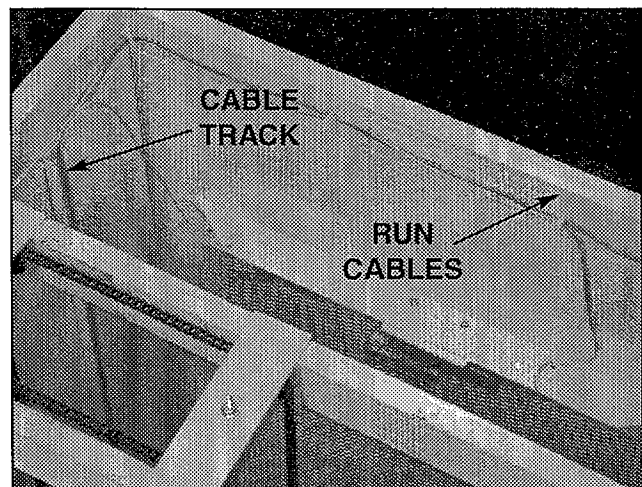


Figure 7

Installation Instructions

6. Route wires away from any moving components. See Figure 8.

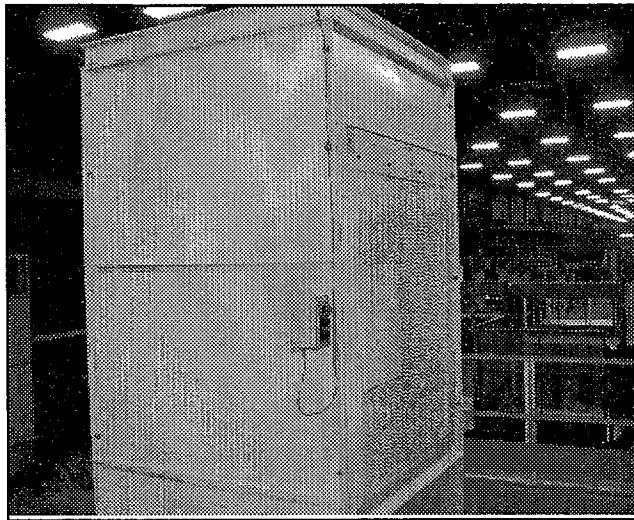


Figure 8

7. Attach push button brackets to one of the bolts holding horizontal edge of lift sides together. See Figure 9.

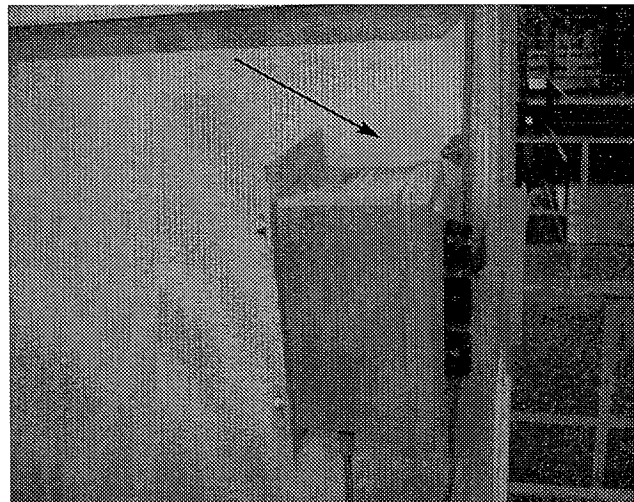


Figure 9

8. Uncoil lift chains which are in the top section of the lift. The chains are temporarily held from rolling over sprockets by bolts through the chain and into a plastic block on top of the lift. After you connect chains to top of carriage and to loose ends of chain behind carriage, you can remove blocks from chains. You must remove blocks before running unit. You can adjust the lift chains to get equal tension on carriage by using the adjusting bolts to which the chains are attached. This should be done when carriage is hanging free on the chains.

The carriage is temporarily sitting on wood 2 by 4's to allow the chains to be attached. After both chains are completely attached to top of carriage and to loose ends behind carriage, lift carriage slightly with fork truck, crow bar, come-along, and remove 2 by 4's. Carriage should be hanging free from chains. See Figure 10.

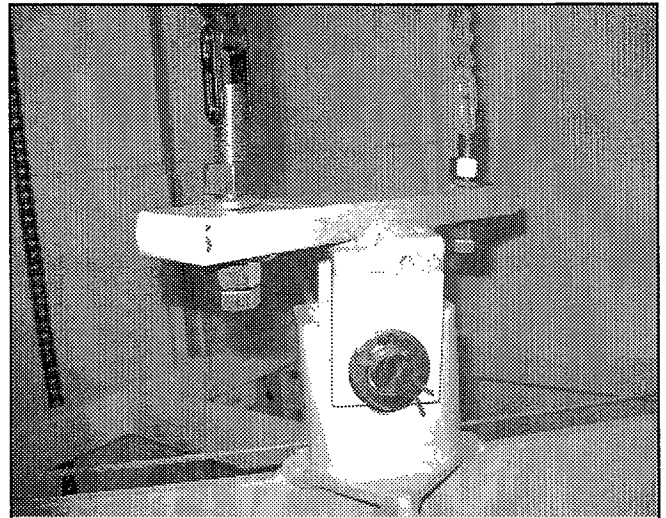


Figure 10

9. Return end of chain. It should already be attached to bottom of carriage via spring. There should be enough tension on springs to keep chain tight around sprockets on motor when lift is at upper level. If more tension is needed, adjust with bolts. See Figure 11.

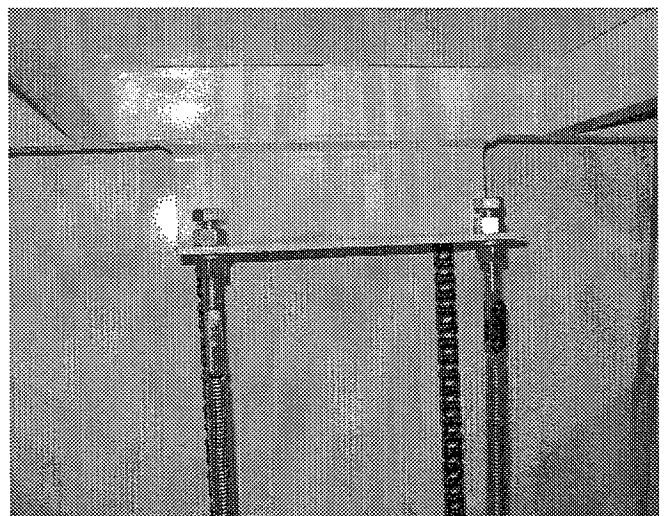


Figure 11

B Series

10. After carriage is hanging from lift chains, back safety pin retaining nuts all the way to the “eye” of eye bolt. Lock into place. The safety pins are now ready to actuate if chains break. See Figure 12. Pins should stick past housing approximately 1/2”. See Figure 15. After raising lift, make sure pins clear rack during normal operation. (Use turnbuckle if needed to adjust pin distance, see Figure 16.



Figure 12

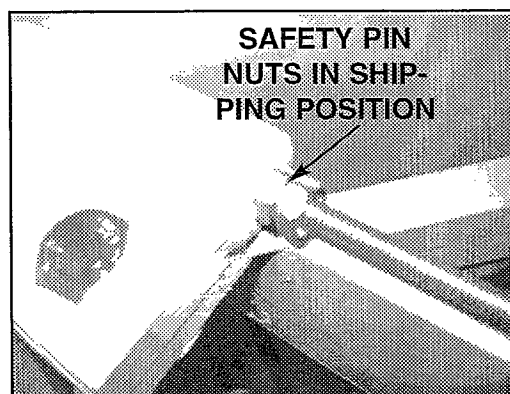


Figure 13

11. Check that safety pin “catch” tracks are in same corners as are safety pins on top of carriage. See Figure 14.

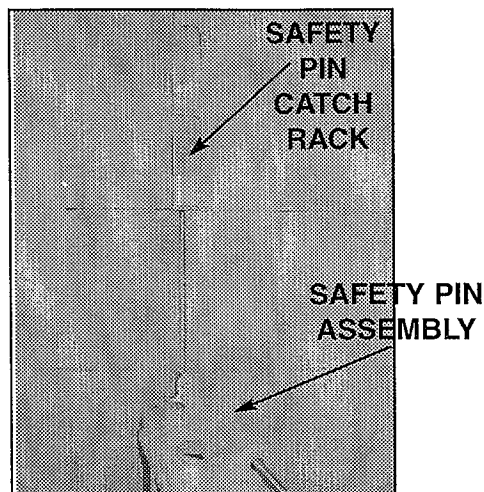


Figure 14

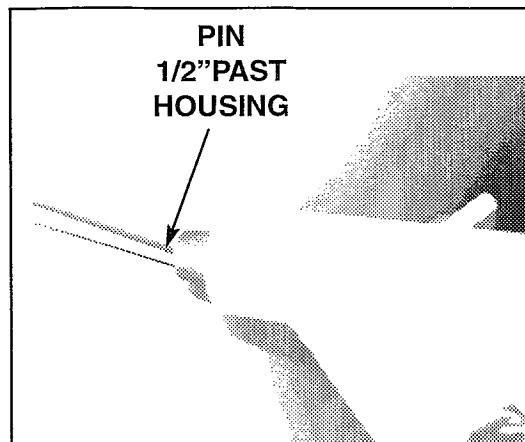


Figure 15

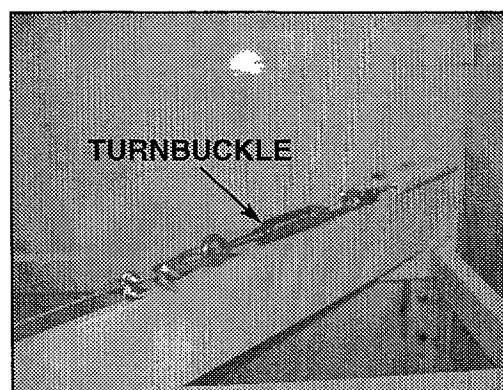


Figure 16

12. Bring power (proper voltage) to 4" box mounted on lower section of lift. See Figure 17.

Before running lift, make sure cables and chains are clear of moving carriage.

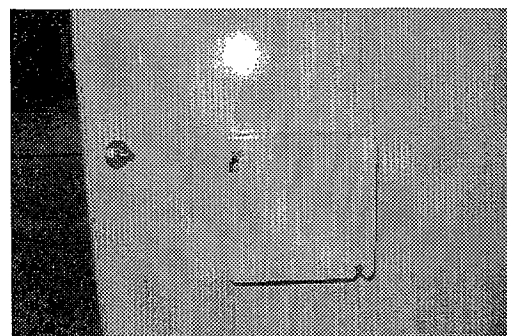


Figure 17

Installation Instructions

13. Use minimum or 3/8" diameter anchors in all four corners (inside lift under carriage.) See Figure 18.

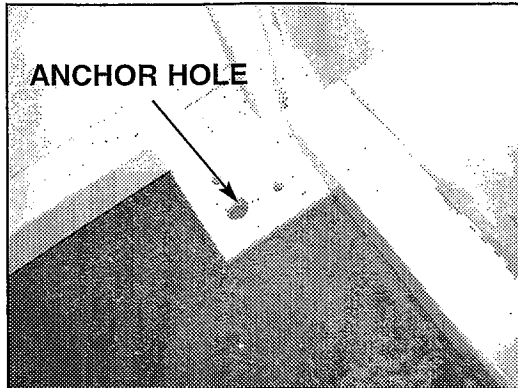


Figure 18

ADJUSTMENTS, IF NEEDED

1. If needed, you can remove bolts and shim out guide wheels. See Figure 19.

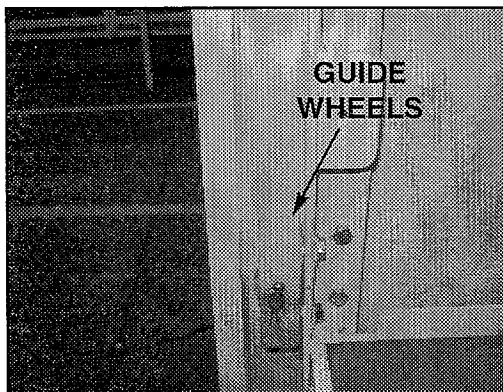


Figure 19

2. Adjust plate up and down or interlock keeper left or right to align into interlock. Adjust magnet to hold gate shut. See Figure 20.

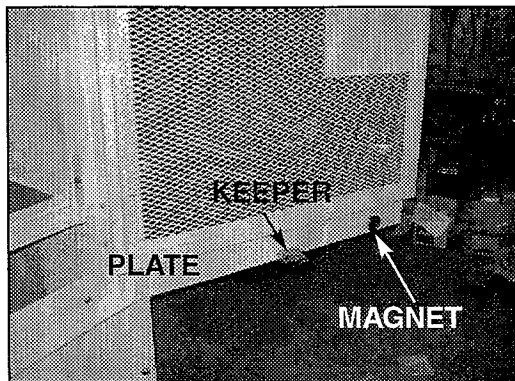


Figure 20

3. Adjust overtravel switch so carriage won't run into interlock or top lift components. See Figure 21.

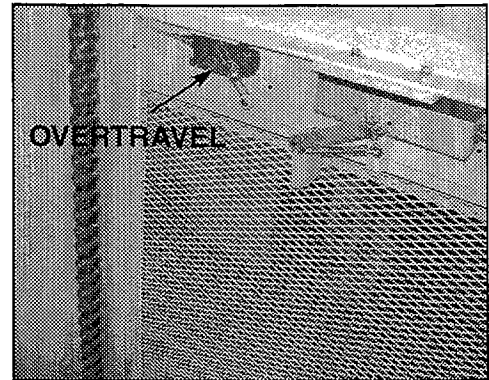


Figure 21

4. Install upper chain jump plates before running. See Figure 22.

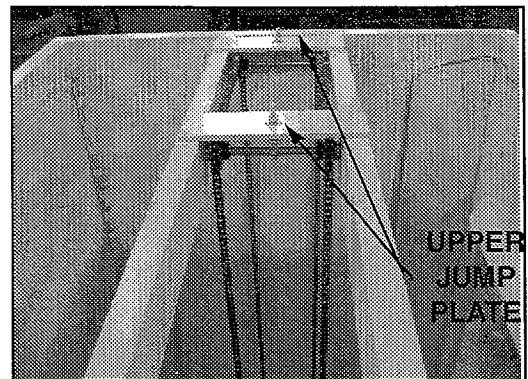


Figure 22

5. Make sure chain break block does not hit reducer before actuating. See Figure 23.

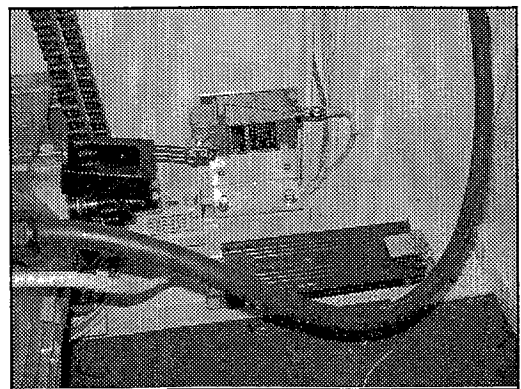


Figure 23

B Series

6. If arm adjustment is needed, loosen nut by eye of bolt and set screw in end of bar. Do not go much past vertical with white rubber block. It must be able to pivot down past end of bar. If it pivots the wrong direction, it will jam device. See Figure 24.

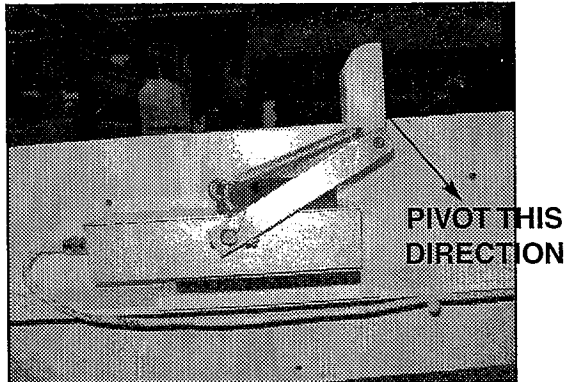


Figure 24

START UP

1. Close gates.
2. Run unit up approximately one foot and push red e-stop on push button station to confirm it works.
3. With someone at upper level near e-stop, run carriage up to second level. It should stop via the interlock / stop switch. If it stops on the overtravel, you will have to re-adjust interlock / stop switch arm to engage carriage sooner or adjust overtravel switch to engage later. Also, carriage should not "bottom out" or "top out" against any physical stops.

WARRANTY

PARTS

StructureLifetime
Manufactured Components.....One Year
Purchased ComponentsOne Year

LABOR

StructureLifetime
Manufactured ComponentsOne Year
Purchased Components90 Days

The Small Print

The warranty period begins 30 days after shipment. All warranty work must be pre-authorized by Pflow Industries' Product Support Department prior to starting work. All billing must be in accordance with our Warranty Procedures. Replacement of defective parts will be handled in accordance with Pflow's Return Goods Authorization policy. If Pflow Industries determines that equipment failures were caused by abuse, improper installation, or lack of maintenance, they will not be covered. Pflow Industries will not accept consequential losses (missed production, etc.), premium time labor, or air freight charges. Manufactured items are defined as those components manufactured and/or assembled by Pflow. Structure is defined as columns and carriage (excluding carriage side guards). Purchased items are those components that are used as supplied by vendors. Gates and enclosures are excluded and covered for 90 days parts and labor. This warranty applies to all models and may not be modified or extended except by written authorization from Pflow Industries, Inc.

We, the manufacturer, sincerely hope that you do not experience problems with the equipment. If you do, the following procedures should be followed:

Pre-Authorization

Pflow Industries must be notified of the problem before we can authorize the repair. We need to determine the cause of the problem, who should be doing the work, and what is involved. If it is our decision to have your organization or your subcontractor do the work, you will be given an authorization number which must be referenced on all subsequent paperwork. During our non-working hours, we ask that you notify us by phone or FAX during the next business day.

Issuance of an authorization number does not guarantee approval and/or payment.

Invoices

1. You have 30 days from the date the work was completed to submit an invoice for approval. If approved, payment is made 30 days from the date of approval.
2. A deduction from outstanding payments to Pflow for warranty is NEVER authorized and will result in a 10% processing fee.
3. Invoices received without sufficient information will be returned. They will be reconsidered for approval when complete documentation is received. All invoices must include, in detail, the following:
 - Description of problem;
 - Pflow serial number;
 - Labor hours per problem;
 - Rate per hour;
 - Travel time incurred;
 - Date work was performed;
 - Copies of receipts for materials purchased locally or labor subcontracted.

Comments

Pflow Industries is not responsible for payment made on claims prior to our approval.

Local purchase of components must be pre-authorized.

Where distance and/or experience may be more cost-effective, Pflow Industries reserves the right to use alternate organizations.

Labor is defined as a maximum of two hours travel per call, plus reasonable on-site repair time as determined by Pflow Industries.