

SHOREMASTER

FLOATING CANTILEVER BOAT LIFT

-OWNERS MANUAL-

Model 4000

Manufactured by ShoreMaster Inc.

Revision no. (3) 3 - 3 - 95

ShoreMaster Inc.

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Fergus Falls, MN 56538

1-800-328-8945

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INTRODUCTION

The ShoreMaster Floating Cantilever Boat Lift is used with floating U-shaped dock systems that allow proper mounting, operation, and positioning of lift. Minimum or maximum slip widths apply, which vary depending on the boat lift model. Lift is used with floating U-shaped dock systems that allow for a four-point-connection and are single boat slip systems. Water depth of about 5 feet or more is required for lift to properly function.

The lift functions by blowing air into the lift tanks (forcing water out) to raise, and releases into the atmosphere (allowing water in) to lower. A properly attached lift, adequate dock system and correctly positioned boat will allow level lifting and lowering of your boat. **The boat must be positioned correctly for proper operation.**

The information in this manual is not all inclusive and does not cover all unique situations. Questions about assembly, installation, use or suitability of this product for your situation can be answered by contacting an authorized ShoreMaster dealer or ShoreMaster toll-free 1-800-328-8945.

WARNINGS AND SAFETY

YOUR SAFETY IS THE MOST IMPORTANT ISSUE RELATED TO THIS PRODUCT. It is critical that all assemblers, installers and users read and fully understand all warnings and safety information contained throughout this manual before using this product!

Safety Instructions

Never exceed recommended weight capacity of your lift. The weight of your craft includes hull, engine, fuel, gear, battery and added accessories. The dry weight reported by manufacturer usually includes only basic craft and engine. The craft manufacturers reported weights can be understated by 10 - 30%! This is before you add fuel, fluids, batteries, accessories etc.! Weigh your craft at a certified scale to be absolutely sure of the total weight. You will be lifting 20 - 50% more than reported dry weight when everything is considered.

- ✂ **! Warning !** If using electric tools near water, use proper safety precautions! **Never allow power tools or cords to touch water.** Not following precautions could result in **Death by Electrocutation!**
- ✂ The assembly and installation process for this boat lift is complicated! **An experienced and properly trained person is needed for assembly and installation of this product.**
- ✂ Use proper protective clothing and safety glasses when assembling, installing or servicing this product.
- ✂ Do not assemble or use this product if items are missing or damaged.
- ✂ This product requires two or more persons to safely assemble and install.
- ✂ Inspect bolts, washers, nuts, pins, hoses, hose clamps, bushings and power cords every three months for damage, wear or loose connections. Tighten or replace parts as needed.
- ✂ Do not ride or stand on lift.
- ✂ Do not position yourself near, on or under lift during operation, or at anytime after installed.
- ✂ Never operate, install or service electrical lift parts without power being disconnected and shut off.
- ✂ Blower box must be properly installed with cover in position before connecting and turning on power.
- ✂ Only a properly trained electrical technician should hook up blower box and power source.
- ✂ Do not make adjustment or alterations when boat is in lift.
- ✂ Do not allow people in boat when lift is in use or in a raised position.
- ✂ Properly cover your boat when it is in raised position on lift. This prevents rain from gathering in your boat. An inch of rain adds several pounds. Added weight may result in boat being over lift capacity.

FLOATING LIFT PARTS LIST

Before assembly, identify each part. Remove parts from boxes, bags and bundles. **Mark each item with proper Part letter** (indicated in left-hand column of next two pages). This will confirm that all parts are here before beginning assembly and allows you to easily follow assembly instructions.

BOLT BAG

Dock Bracket Bolt Bag

- 24- 3/8" x 1 1/4" hex bolt
- 24- 3/8" washer
- 24- 3/8" flange nut
- 8- 1/2" square nut

Axle Bushing Stop Bolt Bag

- 12- 3/8" x 3 1/2" hex bolt
- 12- 3/8" flange nut
- 8- axle bushing stop plate

Bushing Bag

- 4- tie rod 3" bushing
- 8- pivot arm 3 3/4" bushing

Axle Housing Bolt Bag

- 4- 2" x 2" x 1/4" angle 2' long
- 8- 3/8" x 1 1/2" hex bolt
- 4- 3/8" x 3 1/2" hex bolt
- 12- 3/8" flange nut

Pivot Arm Bolt Bag

- 4- 1/2" x 1 1/4" square head bolt
- 4- 1/2" x 3 1/2" hex bolt
- 4- 3/4" x 5 1/2" hex bolt (dock bracket)
- 4- 3/4" x 8" hex bolt (tie rod)
- 4- 1/2" nut
- 4- 1/2" square nut
- 8- 3/4" castle nut
- 4- 1/2" lock washer
- 24- 3/4" washer
- 8- cotter pin

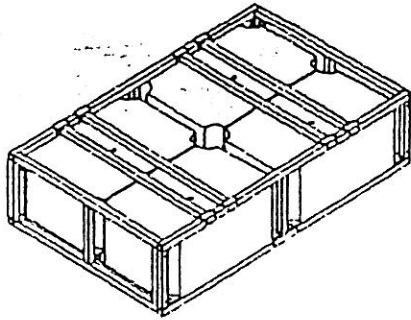
Pivot Arm Protector Bolt Bag

- 24- #14 x 1" Phillips head screws
- 24- #12 finish washers

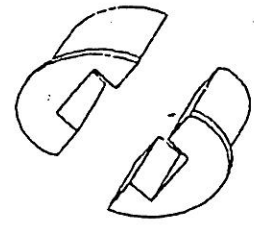
Tools Required for Assembly & Installation

- 8-3/8" x ? Lag Bolts (size depends on dock)
- Magic Marker
- Tape Measure
- Saws-All or Hacksaw
- Knife
- Phillips Screw Driver
- 1/2" Wrench
- 9/16" Wrench
- 3/4" Wrench
- 1 1/8" Wrench (two of these needed)
- Socket Set
- Needle Nose Vise Grip
- Rubber Mallet
- Hammer
- Square
- Channel Lock Pliers
- Boat Plug
- Drill- (with 33/64" & 7/16" & 7/32" bits)

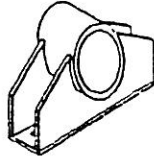
PART A
MAIN FRAME
QTY 1



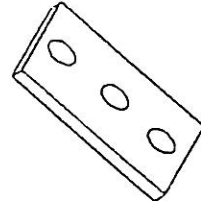
PART G
AXEL BUSHINGS
1 PAIR SHOWN
QTY 4 PAIR



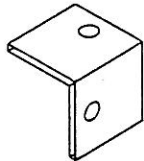
PART B
AXEL HOUSING
QTY 4



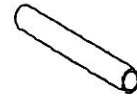
PART H
BUSHING STOPS
QTY 8



PART C
ANGLE
QTY 4



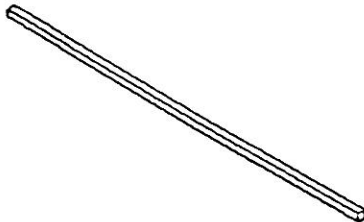
PART I
3 3/4" LONG
BUSHING
QTY 8



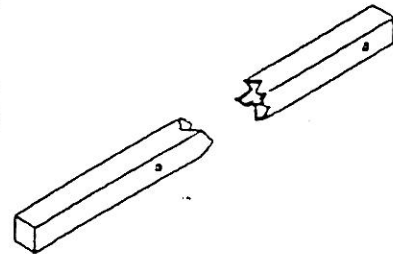
PART J
3" LONG
BUSHING
QTY 4



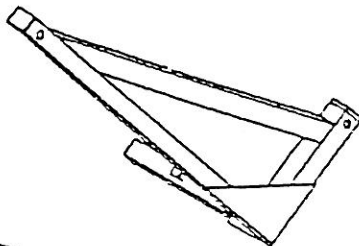
PART D
AXEL
QTY 2



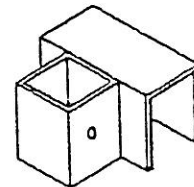
PART K
TIE ROD
QTY 2



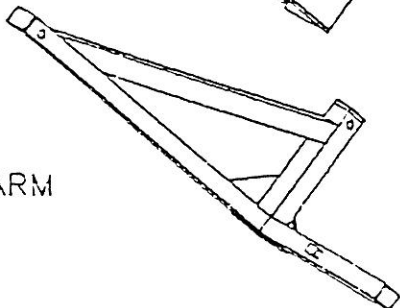
PART E
LEFT PIVOT ARM
QTY 2



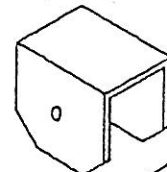
PART L
BUNK POCKET
QTY 4



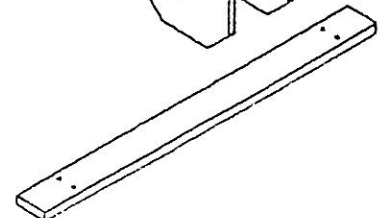
PART F
RIGHT PIVOT ARM
QTY 2



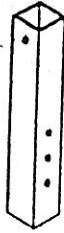
PART M
BUNK CHANNEL
QTY 4



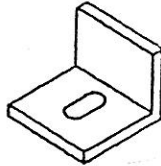
PART N
BUNK BOARD
QTY 2



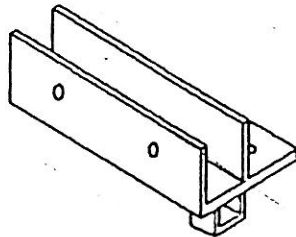
PART O
BUNK LEG
QTY 4



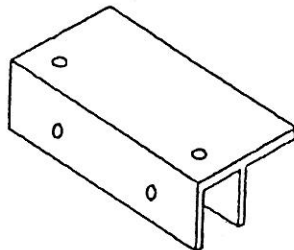
PART P
ADJUSTABLE ANGLE
QTY 8



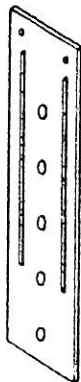
PART Q
LOWER DOCK CLAMP
QTY 4



PART R
UPPER DOCK CLAMP
QTY 4



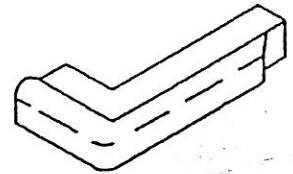
PART S
MOUNTING PLATE
QTY 4



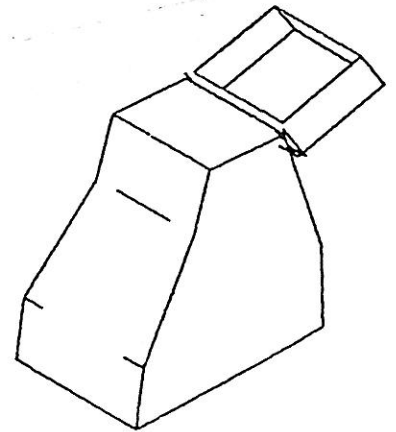
PART U
1/2" X 26" THREADED READY ROD
(NOT SHOWN)
QTY 8

PART V
1" DIA. HOSE
(NOT SHOWN)
QTY 1

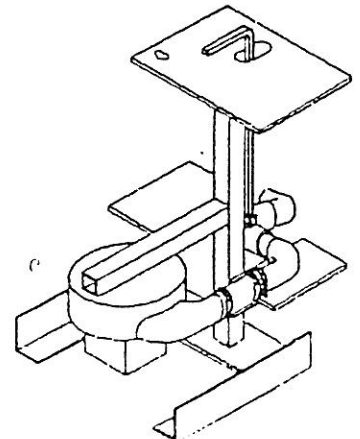
PART W
PIVOT ARM BUMPER
QTY 4



PART X
BLOWER BOX
COVER
QTY. 1



BLOWER BOX
FRAME
PART Y
QTY 1



ASSEMBLY - Part One

(Axles, Pivot Arms, Tie Rods, & Bunks)

****Two or more people are needed to properly assemble and install this product.**

****Fully read and understand each step before proceeding with that step.**

#1 This floating boat lift is sent from the factory with part A (main frame) already assembled. Inspect frame, floats, bolts, nuts, hoses and clamps. Retighten or replace if needed.

#2 Attach B parts (axle housings) and C parts (axle housing angle) as shown. Different size bolts are used in the two holes in each Part B.

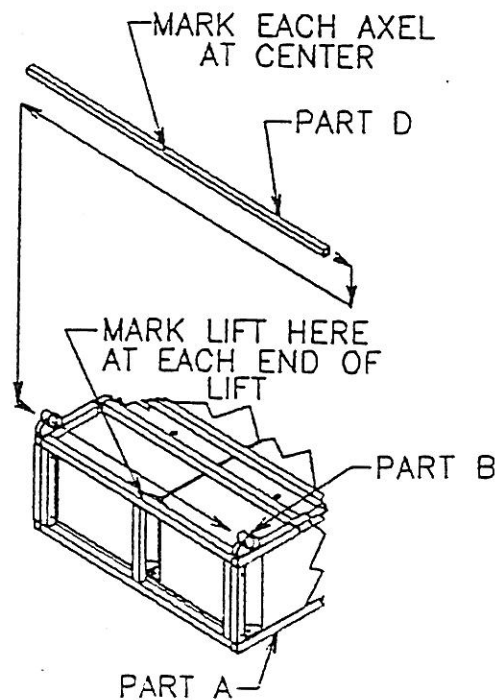
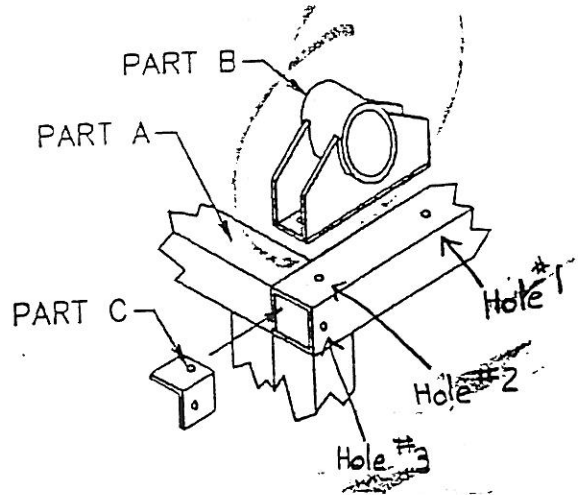
- Use 3/8" x 3-1/2" hex bolt and 3/8" flange nut in hole #1 to attach Part B to Part A.
- Use 3/8" x 1-1/2" hex bolt and 3/8" flange nut in hole #2 to attach Parts A, B, & C.
- Next, use 3/8" x 1 1/2" hex bolt and 3/8" flange nut in hole #3 to attach Part C to Part A.

If part C is not attached properly, warranty is void!

- Complete this attachment at all four corners.
- DO NOT fully tighten nuts yet.

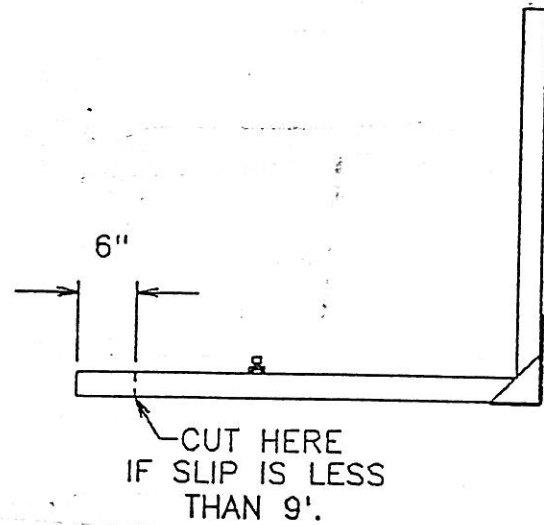
#3 Mark exact center point of D parts (axles) as shown. Mark exact center point at front and rear of main frame as shown. Insert each part D (axle) through B parts so marks line up as shown.

Note: Each part D must be centered so step #5 can be properly completed.



#4 Optional and required only if installing lift in a slip of nine feet or less. Cut 12" off each part D. Cut 6" off each Part E & F as shown. This will allow a completely assembled lift to fit in a narrow slip.

-All parts should be cut equally.

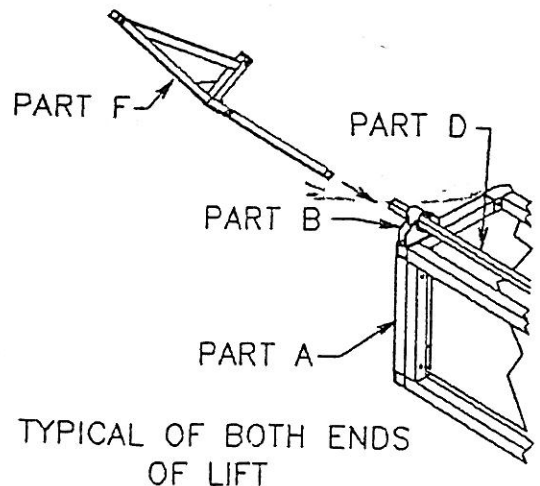
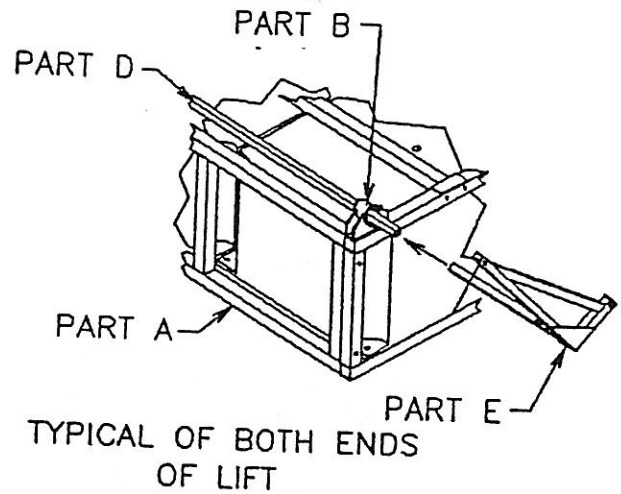


#5-A Slide two E parts (left pivot arms) over D parts (axles) and through B parts (axle housings) as shown. Attach with 1/2" x 1-1/4" square head bolt and 1/2" square nut as shown. Tighten so they are secure but do not over tighten.

#5-B Slide two F parts (right pivot arms) over opposite ends of D parts and through B parts as shown. Attach with 1/2" x 1-1/4" square head bolt and 1/2" square nut as shown. Tighten so they are secure.

Note: Keep D parts aligned and centered properly with center of A part (main frame).

Note: E & F parts are not permanently attached. Later, you will drill through axle and use additional hardware to permanently secure.



CAUTION

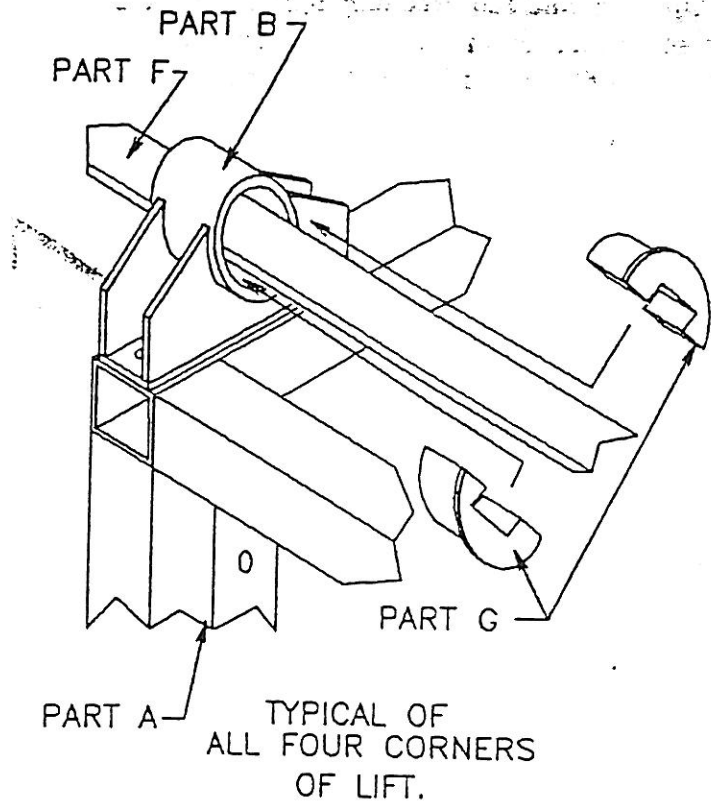
Pivot arms and attachments can slip or swivel if not held firmly in place. A pivot arm or attachment could hit you if uncontrolled pivoting occurred. Rest pivot arm and attachments in secured position to avoid uncontrolled movement.

#6 Place two G parts (axle bushings) around each part E and each part F (pivot arms). Slide into each part B (axle housing) as shown.

-Complete this process on all four B parts.

Note: The shoulder of G parts must be placed so they face the inside of lift.

Note: Be sure part D is still centered with main frame.

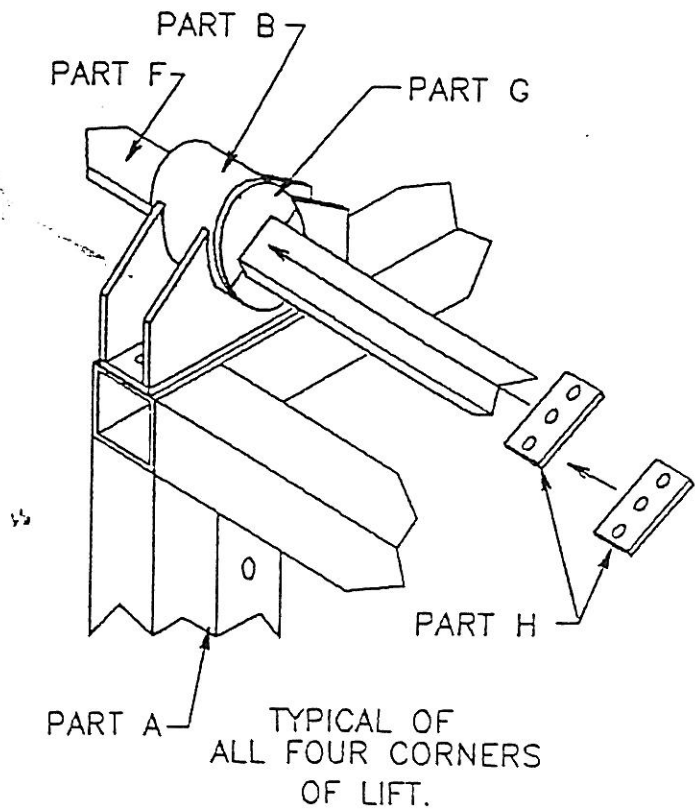


#7 Place two H parts (bushing stops) around each part E and each part F (pivot arms) as shown.

Attach using two 3/8" x 4" hex bolts and two 3/8" flange nuts.

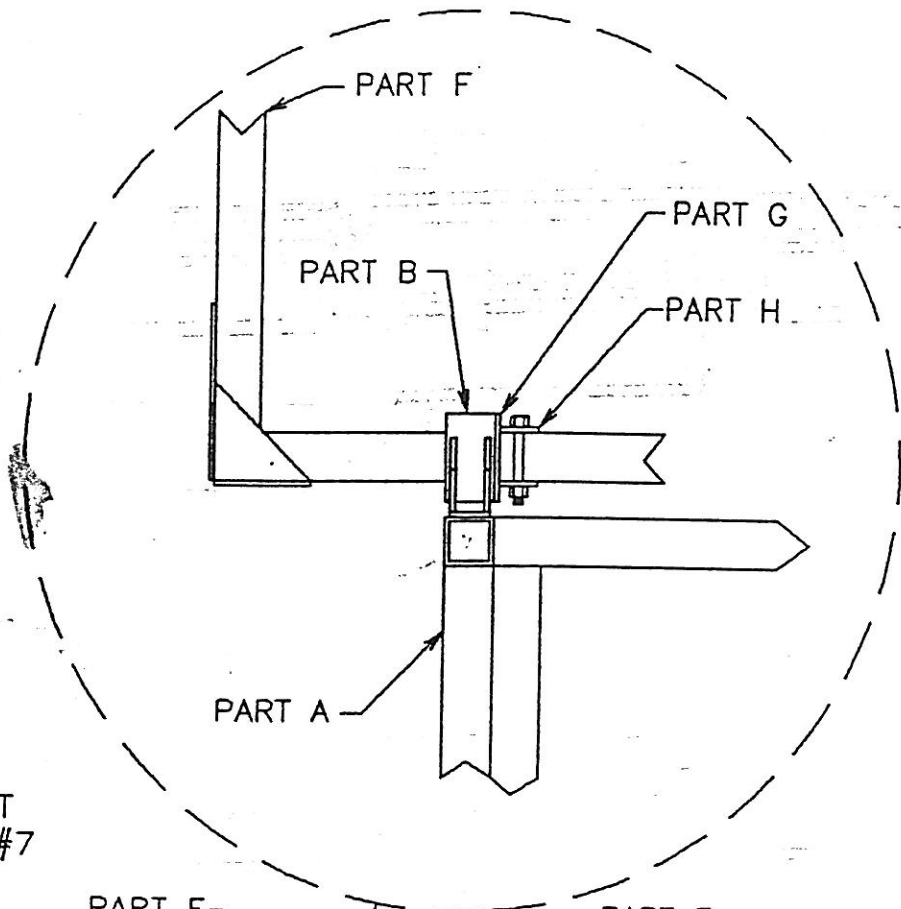
- Note:**
- Use outside holes only.
 - Complete attachment with all four bushing areas.
 - Make sure bushing shoulder is up against Part B.
 - DO NOT fully tighten nuts yet.

Note: Middle hole in H parts used later to permanently secure E & F Parts.

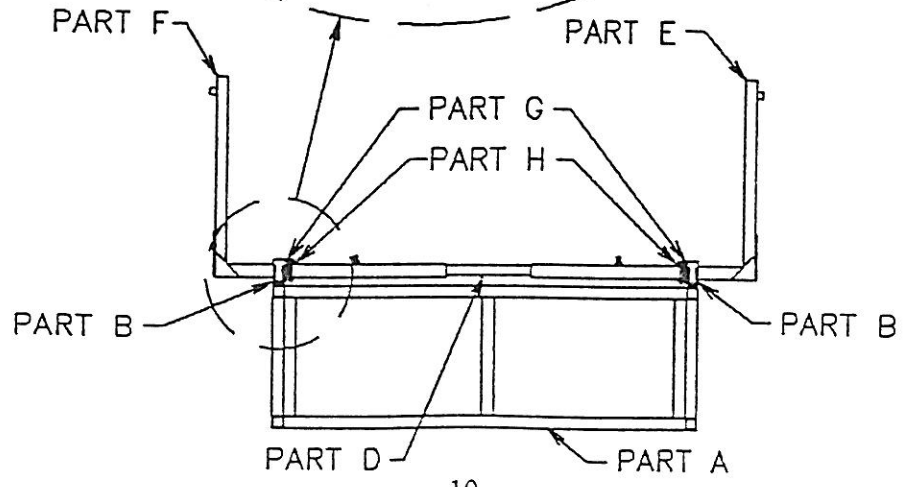


PICTURES OF ASSEMBLY SO FAR.

and have been made ready for use at the time of the assembly of the parts of the machine.

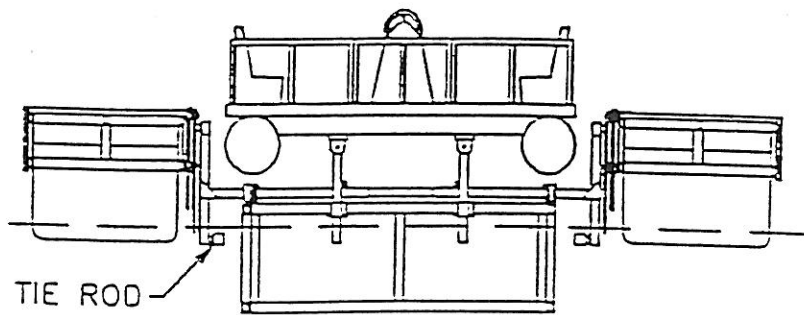
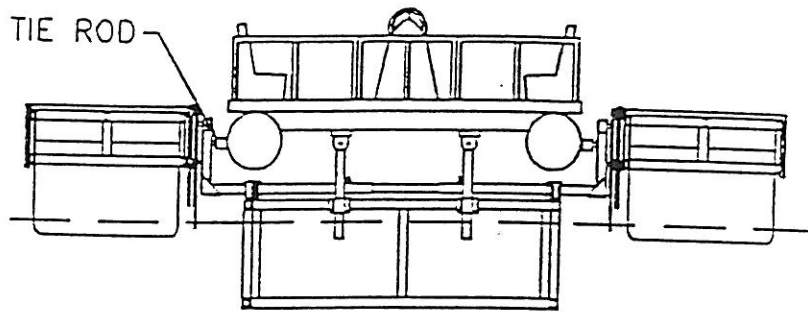


END VIEW
SHOWING LIFT
AFTER STEP #7



**Tie Rod Position Options

Note: With tie rods placed above axles, available width for watercraft is less than if tie rods are placed below axles.



**This step is used only if you require tie rods to be positioned below axles. This may be necessary if you have a wide boat in a narrow slip.

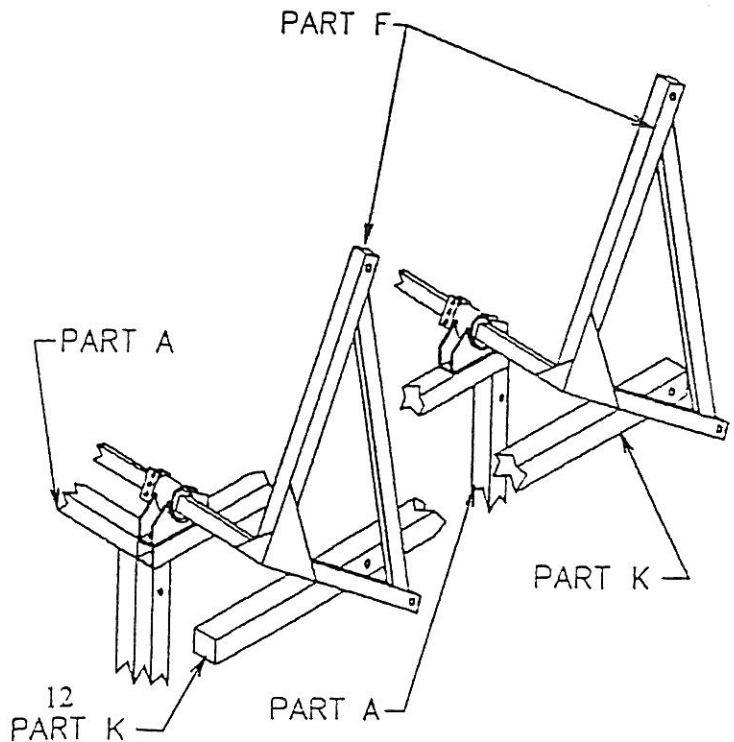
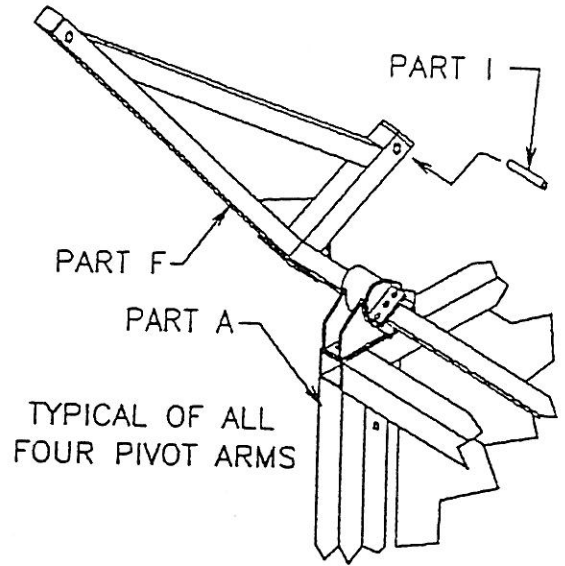
#8-A Optional Position of Tie Rods

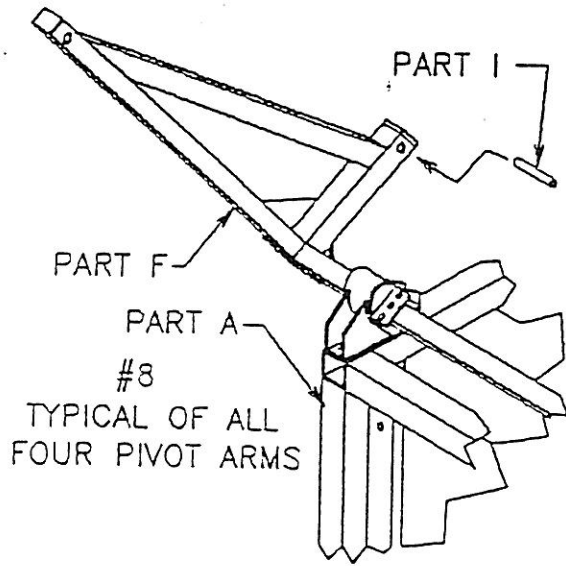
-Slide a 3-3/4" I Part (bushing) into each E part and F part (pivot arms) as shown. There are four parts to attach.

-Slide two 3" J parts (bushings) into each K part (tie rod) as shown. There are two holes in each K part.

Note: K parts will be positioned below Parts E and F (pivot arms) when properly attached.

Note: Drawings in all the following steps will show the standard position of tie rods. Please do not be alarmed by this difference when proceeding.



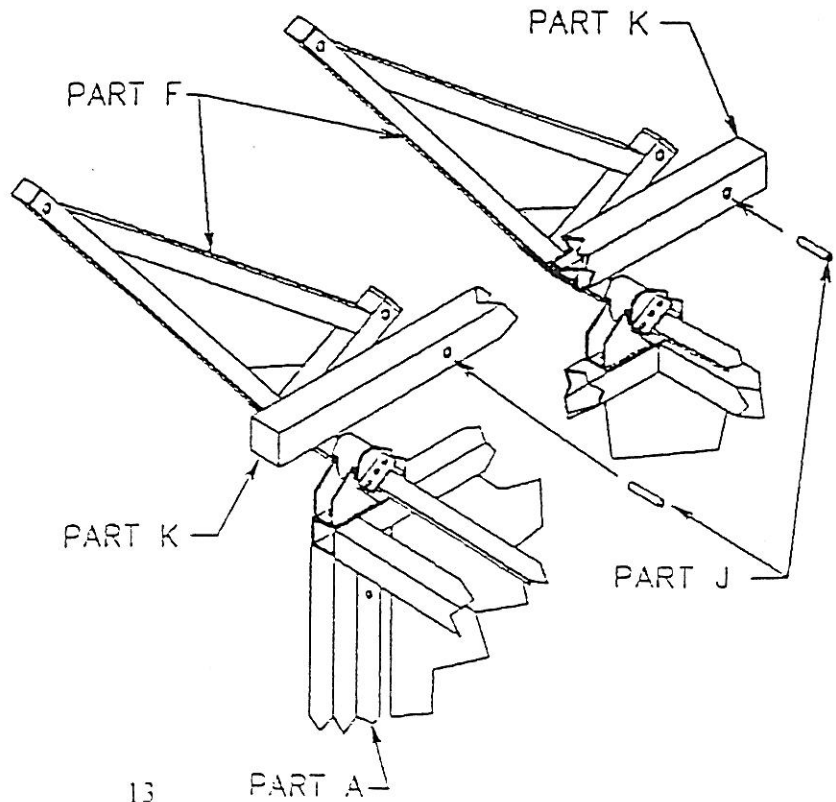


#8-B Standard Position/Tie Rod Above Axle

-Slide a 3-3/4" I Part (bushing) into each E part and F part (pivot arms) as shown. There are four parts to attach.

-Slide two 3" J parts (bushings) into each K part (tie rod) as shown. There are two holes in each K part.

Note: K parts will rest on Parts E and F (pivot arms) when properly attached.



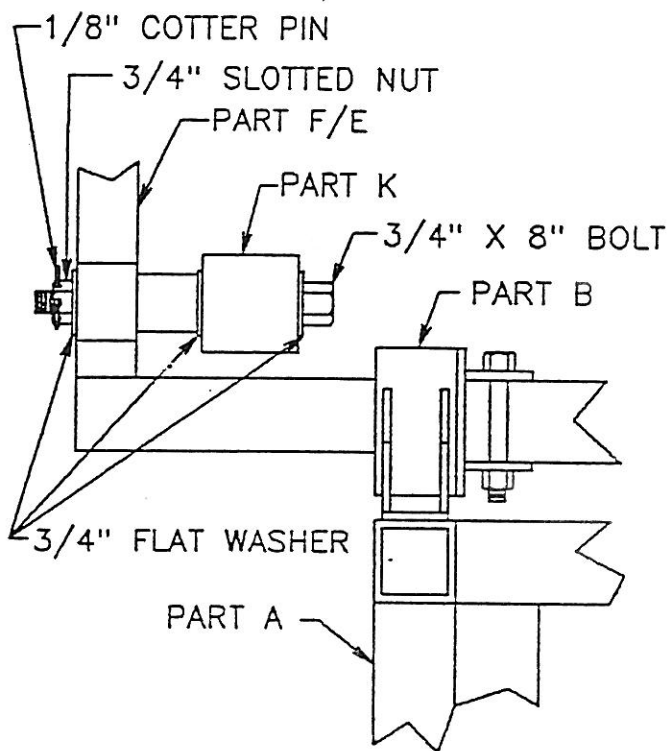
#9 Attach a part K (tie rod) to two short legs of parts E & F (pivot arms) as shown. Attach using 3/4" x 8" hex bolt, **three** 3/4" flat washers, 3/4" slotted nut and 1/8" cotter pin on each connection as shown.

- Repeat this step on opposite side.

If not in proper position, warranty is void!

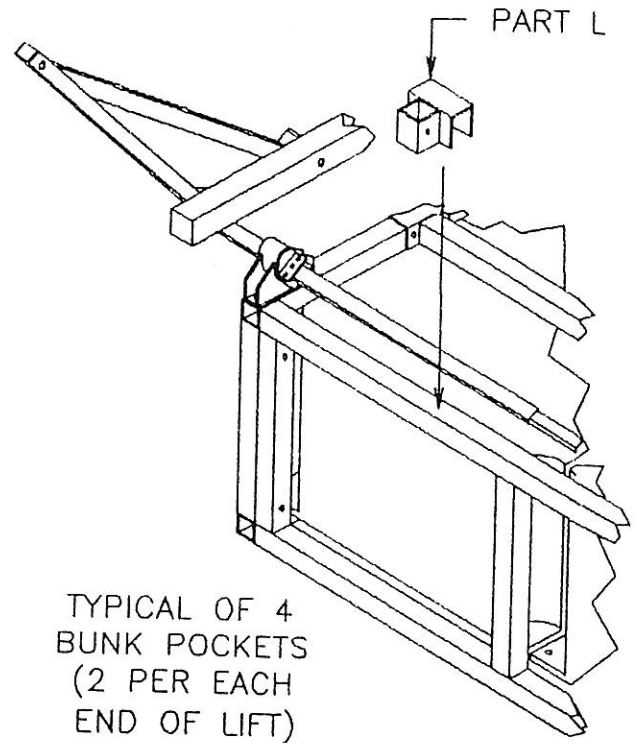
Note: Tighten slotted nuts snug. **DO NOT** over tighten. This is a pivot area and requires room for pivot movement.

Note: Slotted nuts and cotter pins **must be** properly attached as shown. This prevents connection from loosening during use!

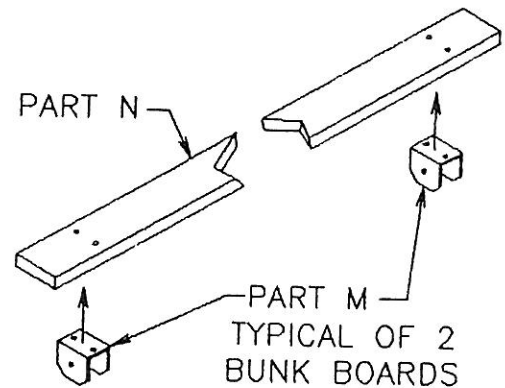


#10 Fully tighten all bolts and nuts used in step #2. These are the bolts and nuts holding B parts (axle housing) and C parts (axle housing angles) in place.

#11 Drop four L parts (bunk pockets) over part A (main frame) as shown. Attach with two 3/8" x 4" hex bolts, two 3/8" lock washers and two 3/8" nuts.
 -One bolt, washer and nut per hole.
 -Complete this connection with all four L parts.
 -Pockets should face away from center of lift as shown.
 -DO NOT fully tighten nuts yet.



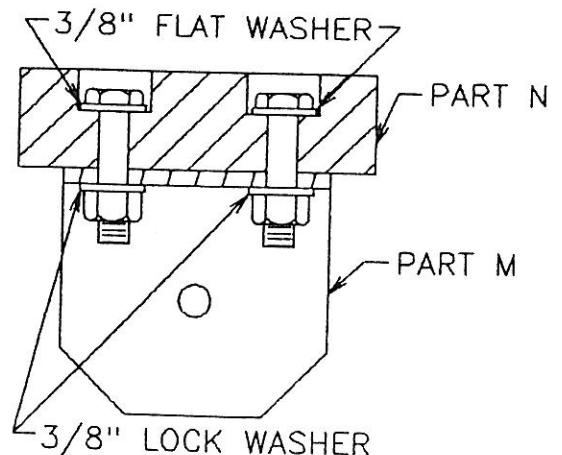
#12 Attach two M parts (bunk channels) to each part N (bunk board) as shown. There are two N parts. Attach using two 3/8" x 2" hex bolts, two 3/8" flat washers, two 3/8" lock washers and two 3/8" nuts.
 -One bolt, flat washer, lock washer and nut per hole.



Note: Flat washer is positioned against bolt head. Lock washer is positioned against nut.

CAUTION

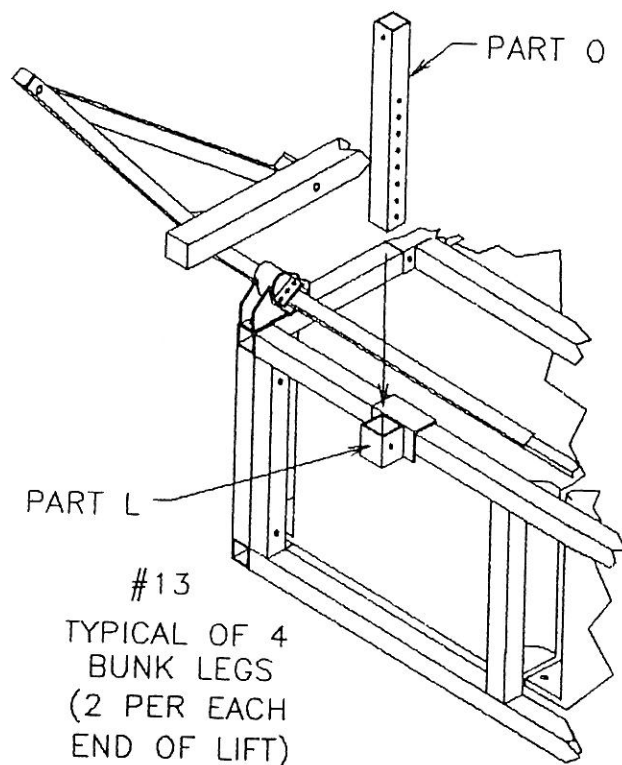
Secure bunk boards and channel very tight! Each bolt head must be positioned **below** surface of bunk board. Not doing this **will** result in scratching or gouging of boat hull!



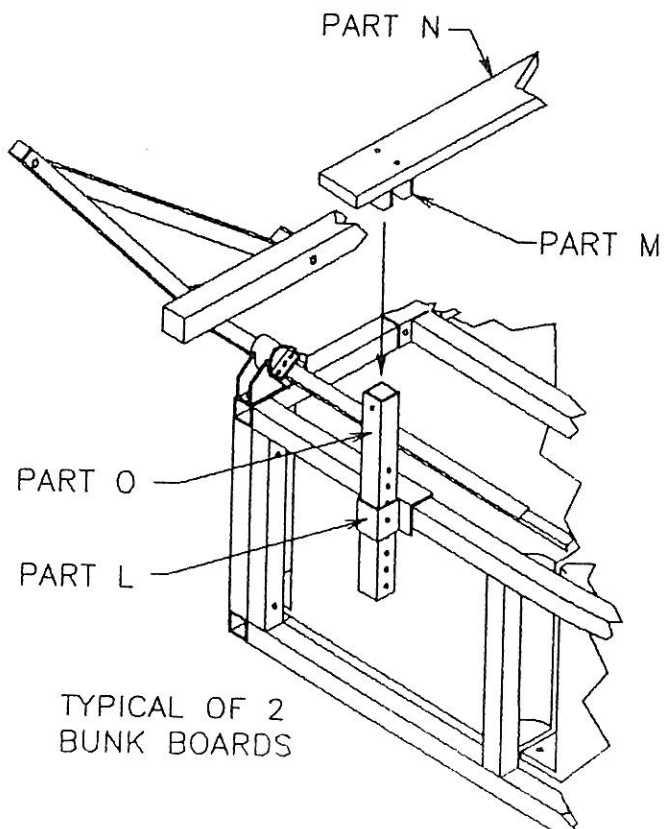
NOTE: BOLT HEADS MUST BE BELOW THE SURFACE OF THE WOOD.

#13 Slide O parts (bunk legs) into L parts (bunk pockets) as shown. Attach all four O parts at same height. Attach each using 1/2" x 4" hex bolt, 1/2" lock washer and 1/2" nut.
-DO NOT fully tighten nuts yet.

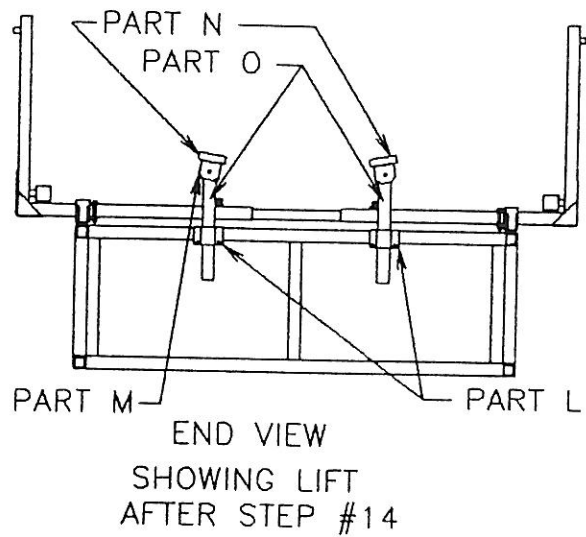
Note: These may require (up or down) adjustment, depending on your boat style and position of L parts.



#14 Slide each part N (bunk board), with M parts (bunk channels) attached, over top of two O parts (bunk legs) as shown. Attach using 1/2" x 4" hex bolt, 1/2" lock washer and 1/2" nut on each connection point.
-DO NOT fully tighten nuts yet.



****End View After Assembly - Part One**



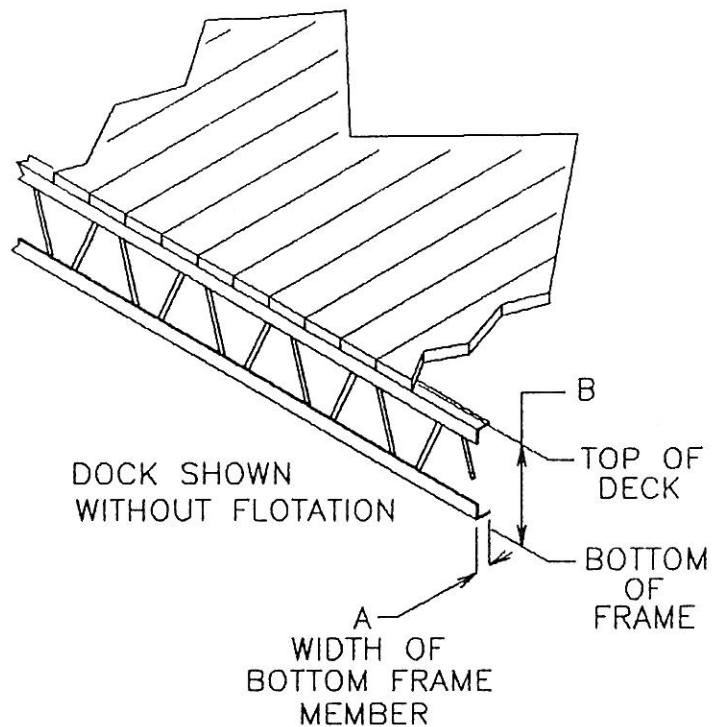
ASSEMBLY - PART TWO

(Assembly and Installation of Dock Brackets and Adjustment of Pivot Arms).

#1 Measure width of **bottom** dock frame member. Record measurement below. Measure from top of deck to bottom of dock frame. Record below. These are needed for next steps.

Frame width- A

Frame depth- B



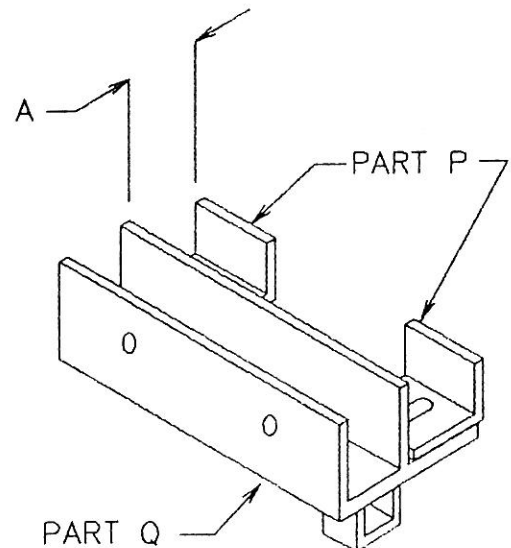
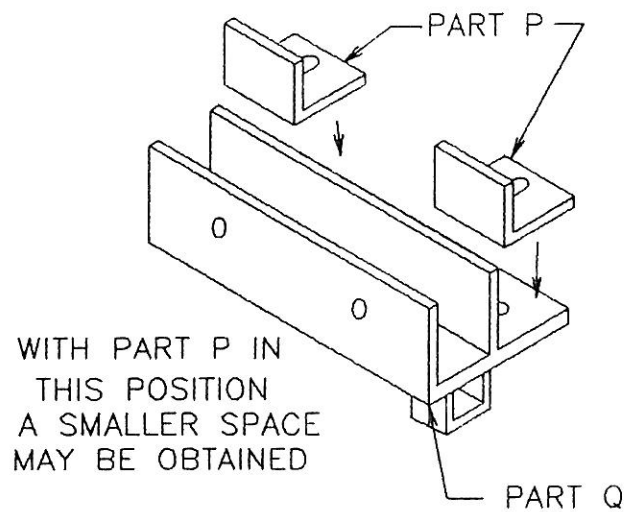
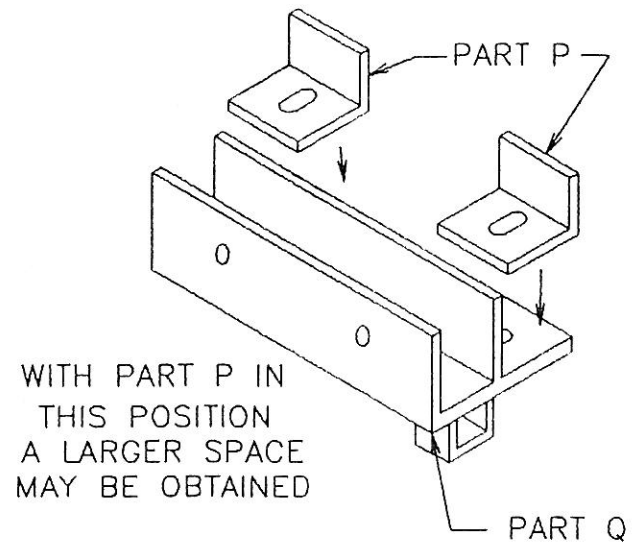
#2 Attach two P parts (adjustable angles) to each part Q (lower dock clamp) as shown. Attach each with 3/8" x 1 1/2" hex bolt, 3/8" flat washer, 3/8" lock washer and 3/8" nut.

-One bolt, flat washer, lock washer and nut per P part.

-Complete this connection using two P parts on each of four Q parts.

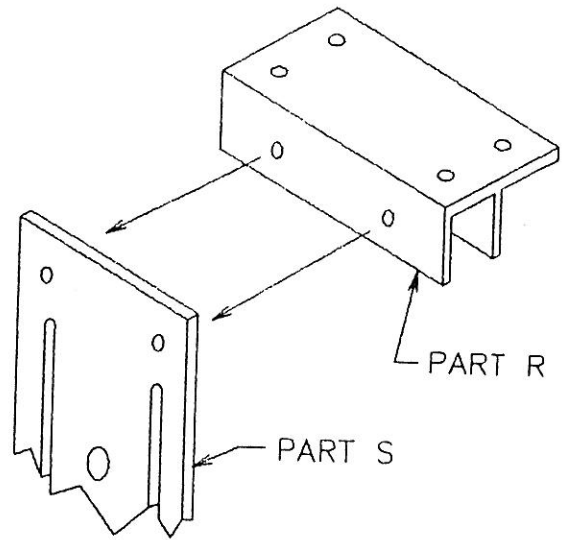
Note: Use frame width recorded on page 18 to decide spacing of P parts as shown.

Note: Flat washer is positioned against bolt head. Lock washer is positioned against nut.



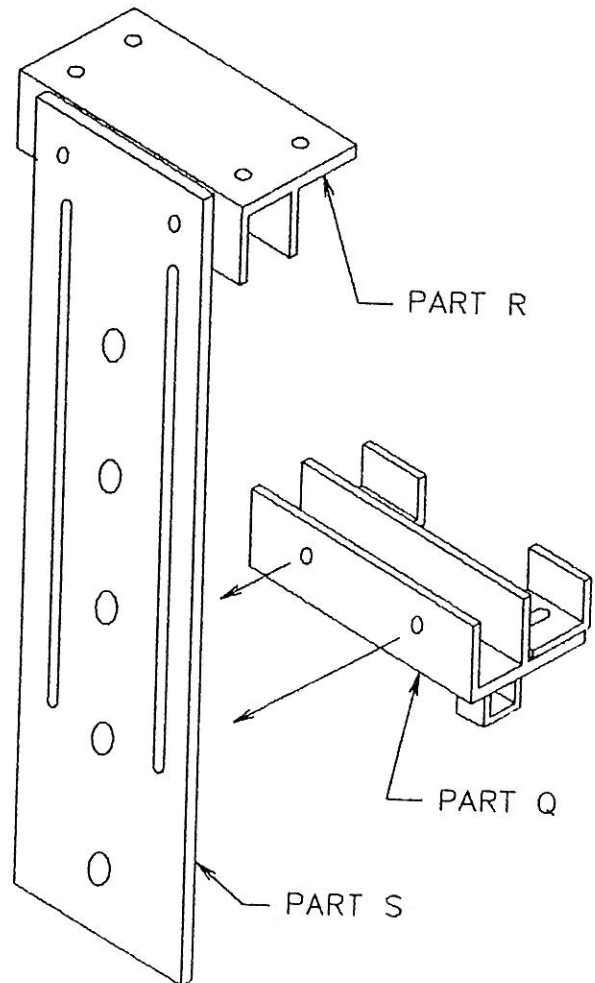
#3 Attach part R (upper dock clamp) to upper holes in part S (mounting plate) as shown. Use two holes as shown. Attach with two 3/8" x 1 1/2" hex bolts, two 3/8" flat washers, two 3/8" lock washers and two 3/8" nuts.
 -One bolt, flat washer, lock washer and nut per hole.
 -Tighten in place.

Note: Flat washer is positioned against bolt head. Lock washer is positioned against nut.
Note: Top edge of part R is parallel with top edge of part S when properly attached.



#4 Attach part Q (lower dock clamp) to slots in part S (mounting plate) as shown. Use two holes as shown. Attach with two 3/8" x 1 1/2" hex bolts, two 3/8" flat washers, two 3/8" lock washers and two 3/8" nuts.
 -One bolt, flat washer, lock washer and nut per hole.
 -DO NOT fully tighten nuts yet!

Note: Flat washer is positioned against bolt head. Lock washer is positioned against nut.



#5 Slide two 1/2" square nuts into nut retainers on part Q (lower dock clamp) as shown. Slide two U parts (26" screw rods) through part R and part Q. Thread U parts into the 1/2" square nuts by turning clockwise.

-Turn U parts until distance between part R and part Q is three inches longer than frame depth measurement recorded on page 18.

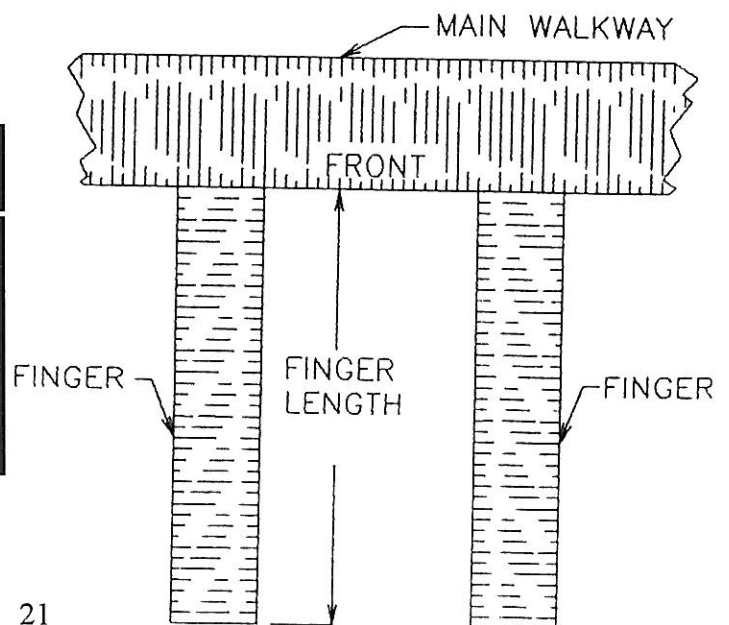
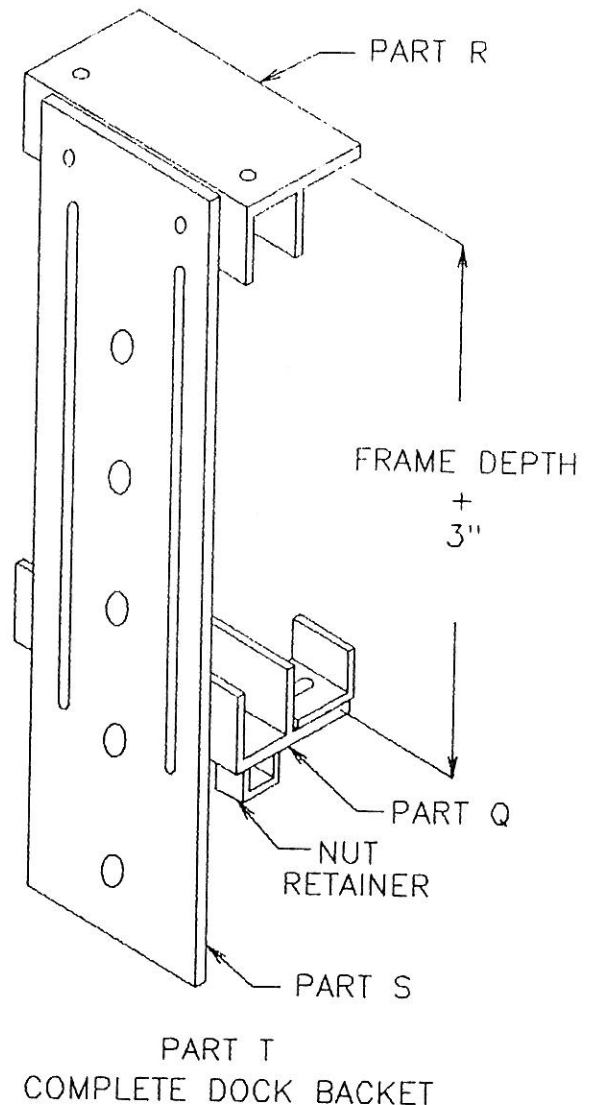
-Example; if frame depth is 12" then provide a distance between upper and lower clamps of about 15".

#6 Measure finger lengths of your U-Shaped Floating Dock. If they are different lengths add extra length of longer finger when measuring back for location of two rear T parts (fully assembled dock brackets).

Note: For proper placement of lift you must know boat length and estimate center gravity point of your boat. Usually your boat is balanced on lift when little, or no part, of your boat hangs past back of lift frame. A cabin cruiser type boat is an exception to this rule. Overhang on front and rear of lift frame (for cabin cruisers) can be about equal.

CAUTION

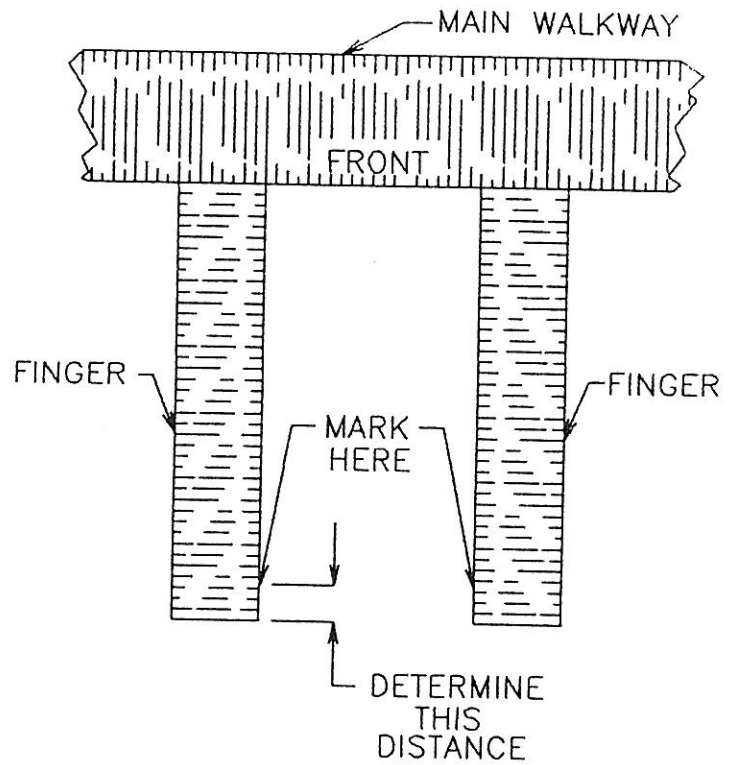
With a fully raised lift, boat and lift should be as far forward in slip area as possible. However, do not allow boat to touch front of U-shaped dock during operation. **Improper boat or lift position will cause damage to dock, lift or boat during lift operation!**



#7 Determine proper location of rear T parts (dock brackets). Measure required distance from end of each finger dock and mark a spot. Marks on finger docks must be directly across from each other. Marks are for centering T parts when attaching them later.

Note: Location of rear T parts and rear of lift must be attached far enough back in slip so boat can be pulled forward in lift and properly balanced on boat lift.

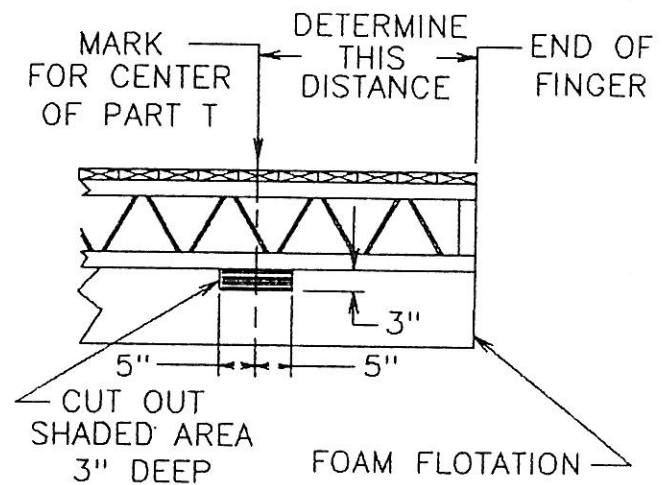
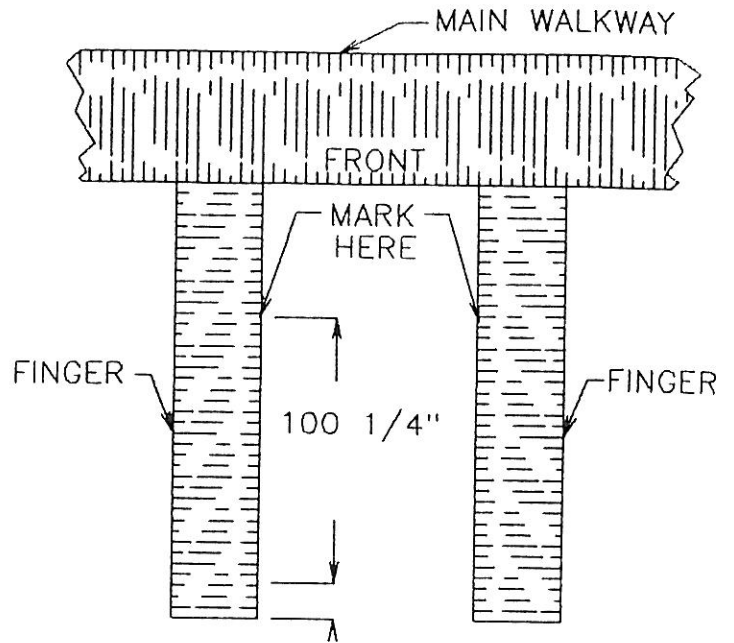
Note: Adequate space is required under your dock to properly attach T parts. See note on step #8.



#8 Measure 100 1/4" from mark made in step #7 toward front of each finger dock. Mark a spot at this point, directly across from each other, on each finger dock. Marks are for centering each part T (dock bracket) when attaching them.

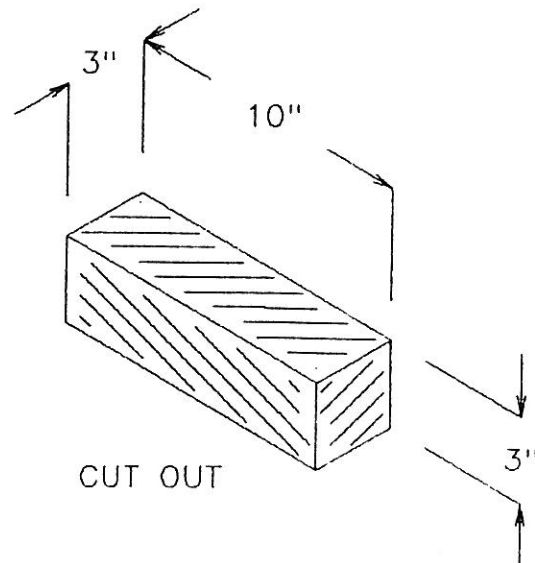
Note: Adequate space is required under your dock to properly attach T parts. The area needed below your dock frame is pictured in opposite column on this page!

- The area 5" on each side of this mark, below dock frame, cannot be obstructed!
- The area 3" inward from outer edge of bottom dock frame, cannot be obstructed!
- The area 3" under bottom of dock frame, cannot be obstructed!



- #9** If the area under dock frame is obstructed;
- a) reposition location of T parts.
 - b) (or) move float to allow adequate room.
 - c) (or) cut away part of float with knife or hand saw.

Note: Do not cut away encapsulated floats or float shells unless they can be properly resealed or protected to avoid water leaking into float.

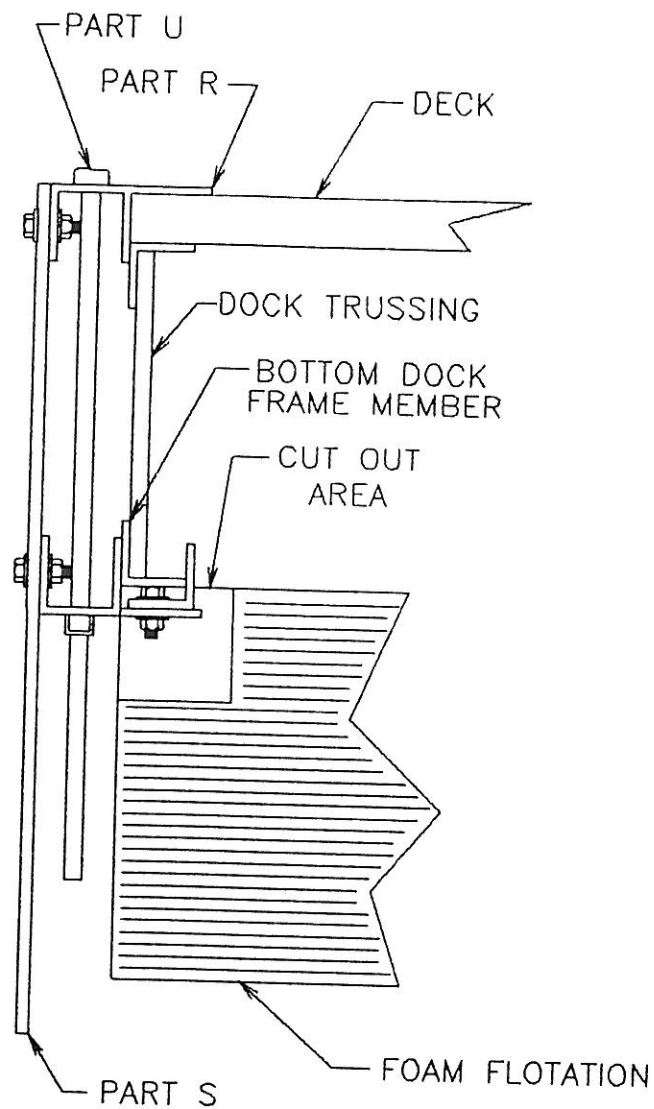


#10 Attach T parts (dock brackets) to dock frame as shown.

- Position part R (upper dock clamp) on top edge of dock frame. This part must be centered over the marks made in previous steps! Hold this in place.
- Reach down and position part Q (lower dock clamp) up under bottom of dock frame. Hold this in place.
- While holding both parts in place, turn part U (screw rod) clockwise. Thread this rod tight, until part S (mounting plate) begins to bow slightly!
- Complete this connection procedure with all four T parts.

Note: When finished with this step make sure all four T parts remain centered over your marks. Be sure entire unit fits securely and tightly around dock frame. Parts must be tight and solid against dock frame! Readjust or retighten if necessary!

Note: Attaching dock brackets correctly can be time consuming. However, this is only done during initial assembly. Even if lift requires removal you can leave the brackets on the dock.

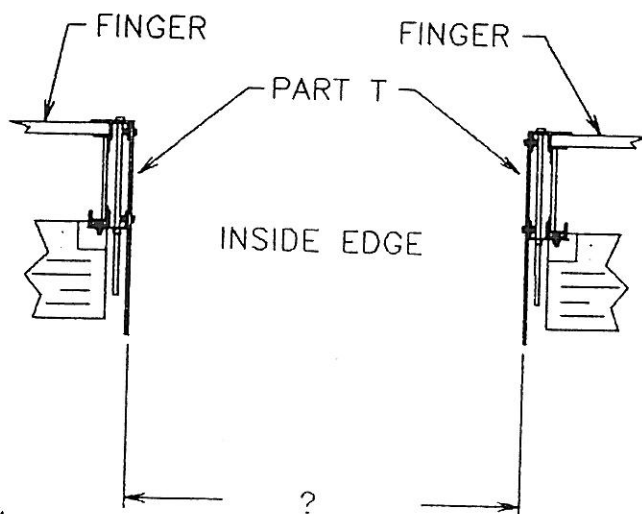


#11 Measure from inside edge of one front part T (dock bracket) across slip to inside edge of other front part T as shown. Make same measurement between the rear T parts. Record distances below. Measurement is needed for next steps.

Note: Because most dock slip areas are not perfectly square these distances may vary a few inches.

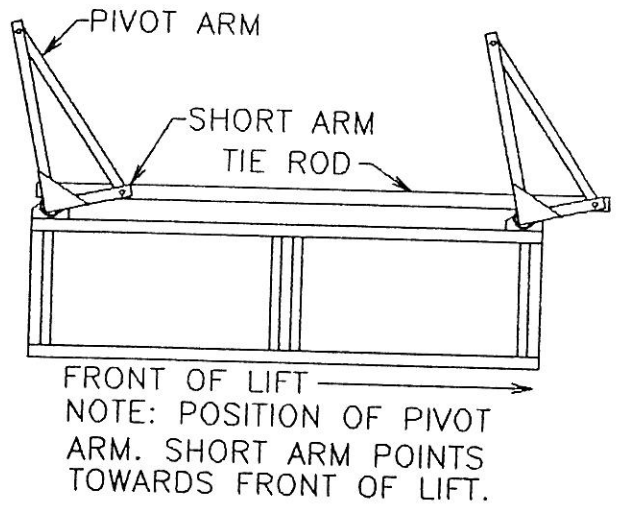
Front distance- _____

Rear distance- _____

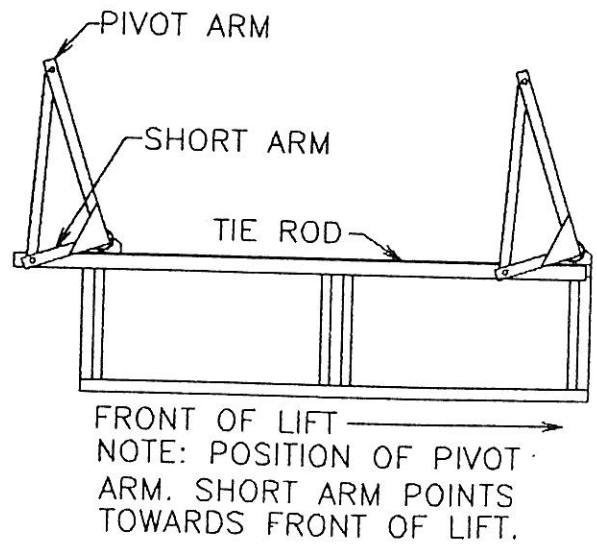


#12 Identify the rear and front of your lift as shown. Position of attached E & F parts (pivot arms) shows front and rear of lift.

TIE ROD MOUNTED ABOVE AXEL



TIE ROD MOUNTED BELOW AXEL

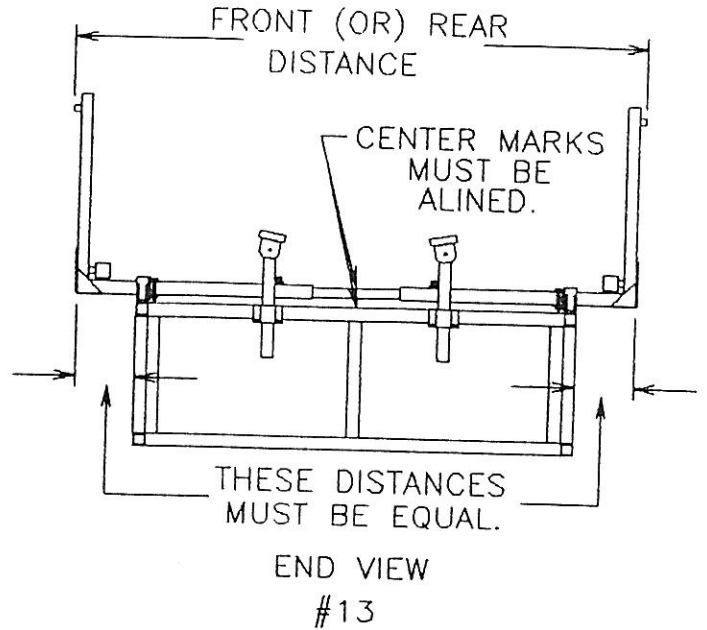


#13 Adjust front E & F parts (pivot arms) to distance recorded on step #11. Adjust rear E & F parts to distance recorded on step #11. Retighten so they are secure.

Note: This measurement is from outside edge of pivot arm tube across to outside edge of opposite pivot arm tube.

Note: Be sure mark on each part D remains lined up with each center mark on part A (main frame).

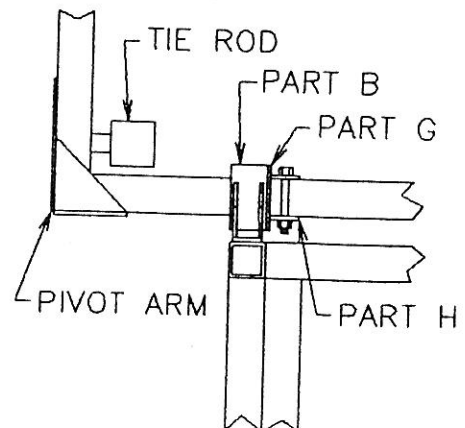
Note: When done adjusting, each front pivot arm must be same distance from main frame.
 -When done adjusting, each rear pivot arm must be same distance from main frame.
 -Measure as shown to check distances.



CAUTION

If front distances differ or rear distances differ, lift will not balance properly during operation. This could result in quick wearing, parts breaking or costly damage to lift, dock or boat! Readjust if necessary!

#14 Check (adjust if necessary) all G parts (axle bushings). Be sure they are fully into all B parts (axle housings). Adjust all H parts (bushing stops) tight against shoulder of G parts. When these parts are snug in place, as shown, tighten them.



#15 Attach one end of part V (20' hose) to open nylon "t" pipe on part A (main frame) using a hose clamp as shown. The "t" pipe is located between your float tanks. Be sure all hoses and hose clamps are secured properly and tightened.
 -Plug other end of part V with a boat plug or other type of plugging device. This plug must fit snug to prevent air escape.

POSITIONING & ATTACHING LIFT

****If using a tow boat to transport lift, two people are needed in boat, one to drive boat and one to watch lift while towing.**

CAUTION

Before placing lift in water be sure air cannot escape from hose or any connection. Air in floats must be trapped so lift does not sink! If air is allowed to escape, floats will take on water and lift will sink! Check buoyancy while lift is in shallow water to avoid lift sinking in deep water!

#1 Place lift in water and float it to dock. Make sure front end of lift enters U-shaped slip first.

Note: If towing lift long distances, over deep water or in rough water, temporarily attach extra float drums or billets. This virtually eliminates possibility of lift sinking due to air loss in tanks.

CAUTION

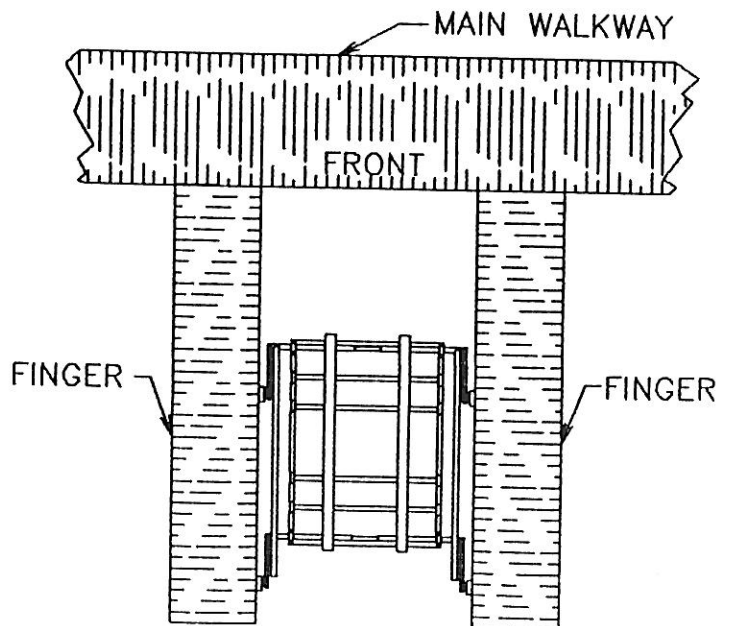
Length of tow rope used should be several feet longer than deepest water you travel over. This would reduce chance of a sinking lift causing your boat to also sink!

CAUTION

When pushing or towing lift in water to dock, move at a very slow speed (under five miles per hour). Moving too fast will cause front of lift to begin dipping down. This could allow air to enter bottom holes in float tanks or may cause lift to tip over. Do not move at a high speed or your lift could sink!

WARNING

Do not ride or stand on lift. Lift parts are very slippery, especially when wet. The lift could sink or you could slip and fall! **Falling or slipping injuries could cause you to drown!!!**



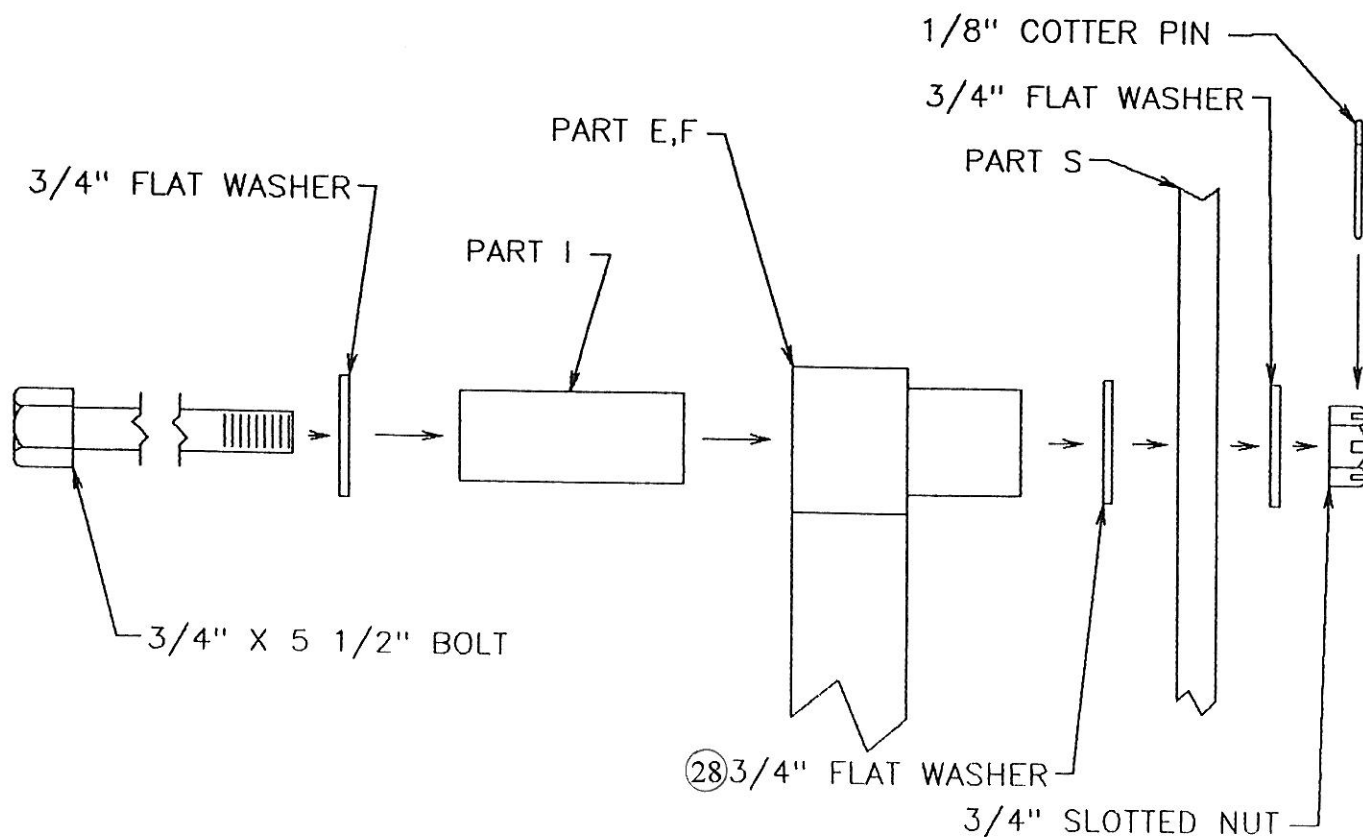
#2 Align and attach all four E & F parts (pivot arms) to all four T parts (dock brackets) as shown. Make attachments in highest hole possible on part T which allows lift to lower far enough to float boat. Attach using one I part (3 3/4" bushing), a 3/4" x 5 1/2" hex bolt, **three** 3/4" flat washers, 3/4" slotted nut and 1/8" cotter pin.

Note: Place washers as shown.

Note: Tighten slotted nuts snug. **DO NOT** over tighten. This is a pivot area and requires room for pivot movement.

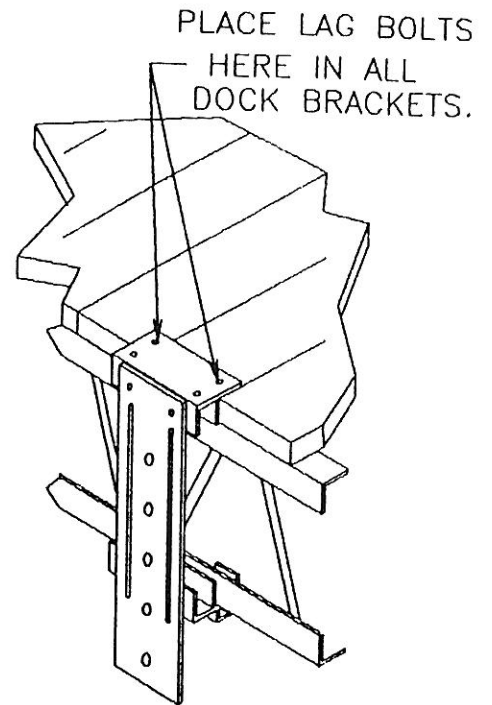
Note: Slotted nuts and cotter pins must be properly attached as shown. This prevents connection from loosening during use!

Note: **DO NOT FORCE PIVOT ARMS TO ALIGN WITH BRACKETS. READJUST DOCK BRACKETS IF NECESSARY!**



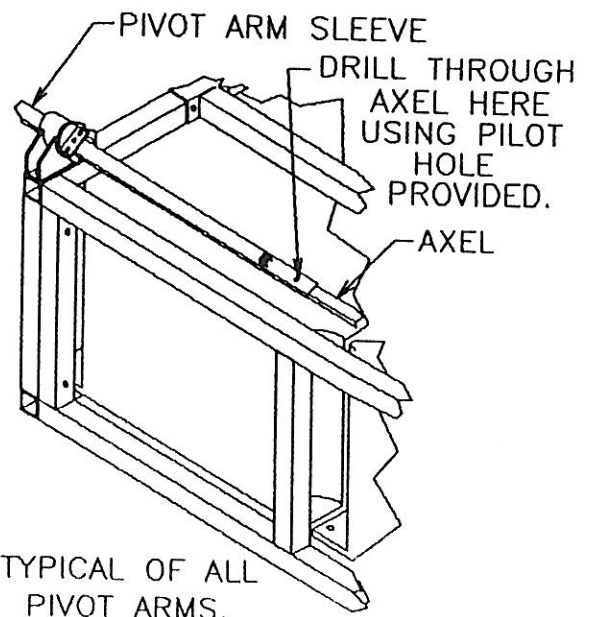
#3 Further secure all R parts (upper dock clamps) as shown, using two lag bolts per part. This prevents dock brackets from pivoting or sliding off top of dock frame.

Note: You need eight 3/8" lag bolts. Lag bolts are not supplied with lift. The length required will vary depending on your dock frame. Bolts must be long enough to secure through dock structure, not just deck surface!



#4 Permanently secure all E & F parts (pivot arms) to D parts (axles) as shown. Drill a 33/64" hole through pilot hole, through axle and backside of pivot arm. Attach using 1/2" x 3 1/2" hex bolt, 1/2" lock washer and 1/2" nut.

Note: NOT DOING THIS STEP WILL VOID YOUR WARRANTY!



TYPICAL OF ALL PIVOT ARMS.

CAUTION

Drill axle holes and attach permanent hardware through axles. Not doing these steps will result in damage to lift and could result in damage to dock or boat!

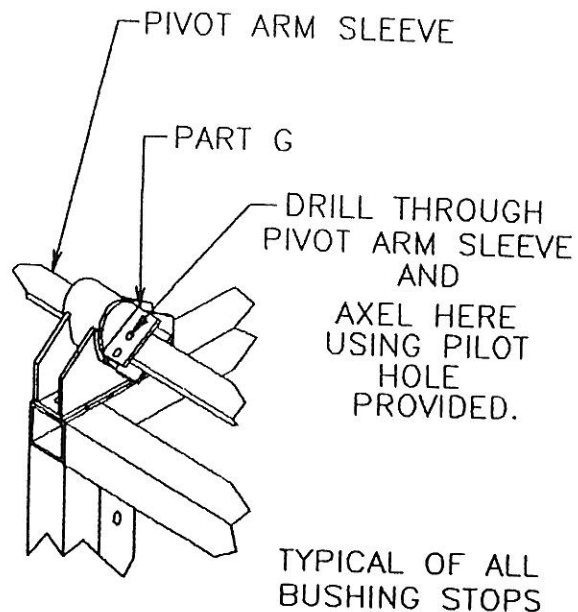
#5 Permanently secure all H parts (bushing stops) to D parts (axles) as shown. Drill a 7/16" hole through pilot hole in each bushing stop, through axle and out the other bushing stop. Attach using two 3/8" x 4" hex bolts, two 3/8" lock washers and two 3/8" nuts.

Note: NOT DOING THIS STEP WILL VOID YOUR WARRANTY!

#6 Pre-adjust complete bunk assembly to estimated height, width and angle. Tighten all nuts and bolts. Final adjustment may be necessary during initial testing and loading of boat. Instruction for this appears later.

Note: Adjust bunks so boat is properly supported. Boat should be at a low position, close to lift axles and frame. However, do not place in such a way that boat touches axles.

#7 Make sure every bolt, washer, nut, pin and clamp on boat lift is tightened and properly in place!

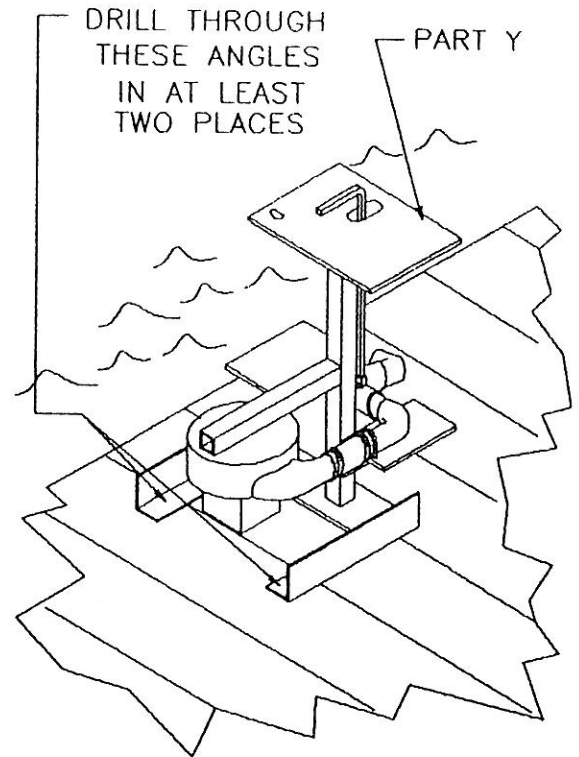


CAUTION

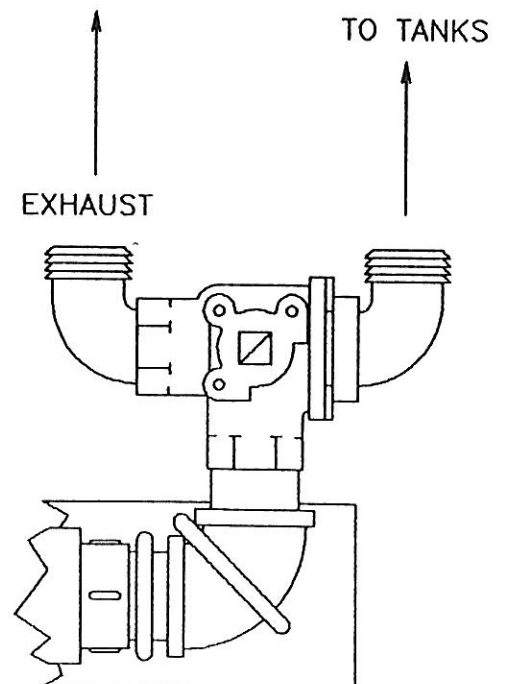
Loose or missing bolts, washers, nuts, pins or clamps could cause damage to your lift, dock or boat! Be sure all items are secured in place. At least every three months, check and retighten.

POSITIONING & ATTACHING BLOWER BOX & PIVOT ARM BUMPERS

#1 Place part Y (blower box) on dock with hose fittings facing lift. Drill $7/32$ " holes through frame of blower box as shown. Secure in place with #14 x $1\ 3/4$ " Phillips head screws as shown.



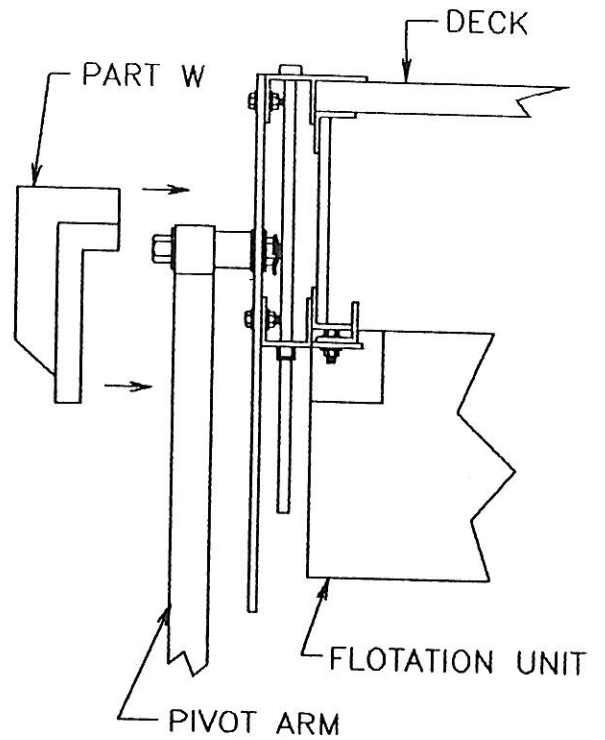
#2 Unplug open end of part V (20' hose). Attach to (to tank) opening using hose clamp as shown.



#3 Place Part W (pivot arm bumpers) over each pivot arm. Drill 7/32" holes for screws. Attach using #12 x 3/4" S.S. Screws and #14 finish washer as shown.

CAUTION

If bumpers are not attached and boat comes in contact with pivot arm or pivot arm bolt, a scratch or gouge to boat hull could occur.



#4 Attach X parts as shown. Drill 7/32" holes. Use #12 x 1" Phillips head screws to attach to Y parts (mounting plate).

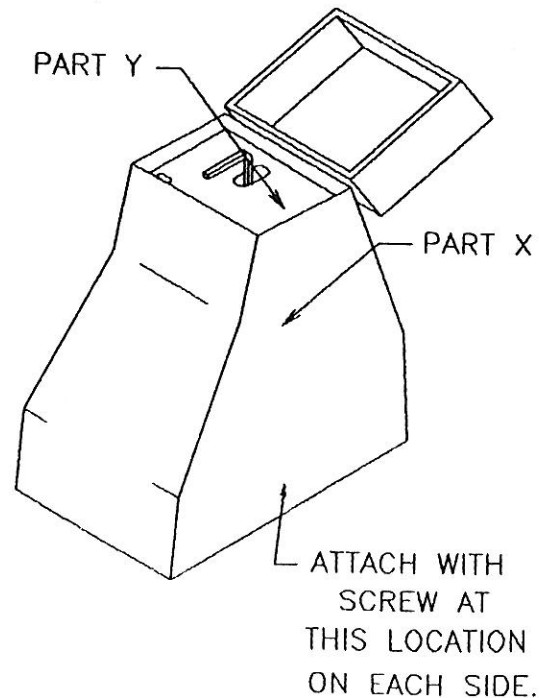
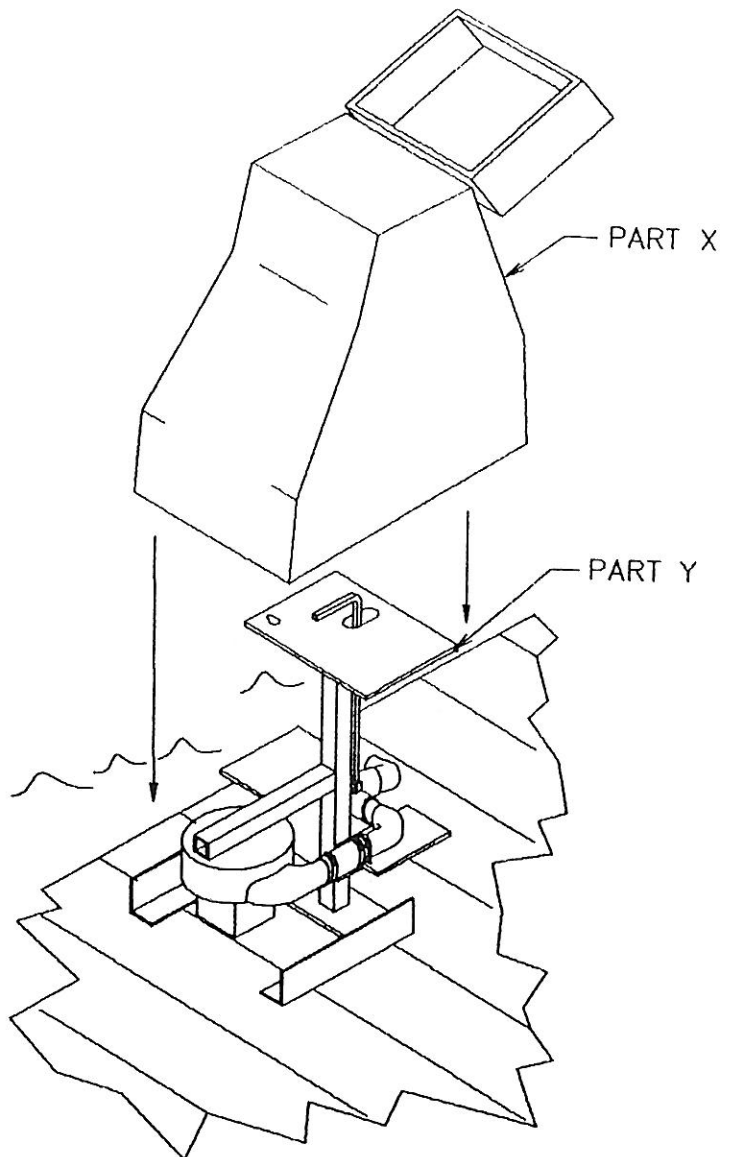
WARNING

Do not plug blower box in until it is completely assembled. Uncovered and unprotected electrical parts with electricity running through them are a potential hazard. **DIRECT CONTACT BY YOU WITH LIVE ELECTRIC WIRES OR PARTS COULD CAUSE DEATH BY ELECTROCUTION!**

#5 Plug G.F.I. (supplied with lift) directly into proper electrical receptacle. Do not use extension cord between G.F.I. and receptacle. Then plug blower box electrical cord, with proper extension cord if necessary, into GROUND FAULT INTERRUPTER.

WARNING

Shore or dockside electrical receptacle **MUST** be protected with an approved **GROUND FAULT INTERRUPTER** switch. Not following this step could cause **DEATH BY ELECTROCUTION**. Only a properly trained electrical technician should hook up blower box and power source.



LOADING OF BOAT

#1 Estimate center of gravity. This is the point you want in the very middle of your lift when positioning your boat before raising.

Note: Transom of boat must be to rear of O parts (bunk legs).

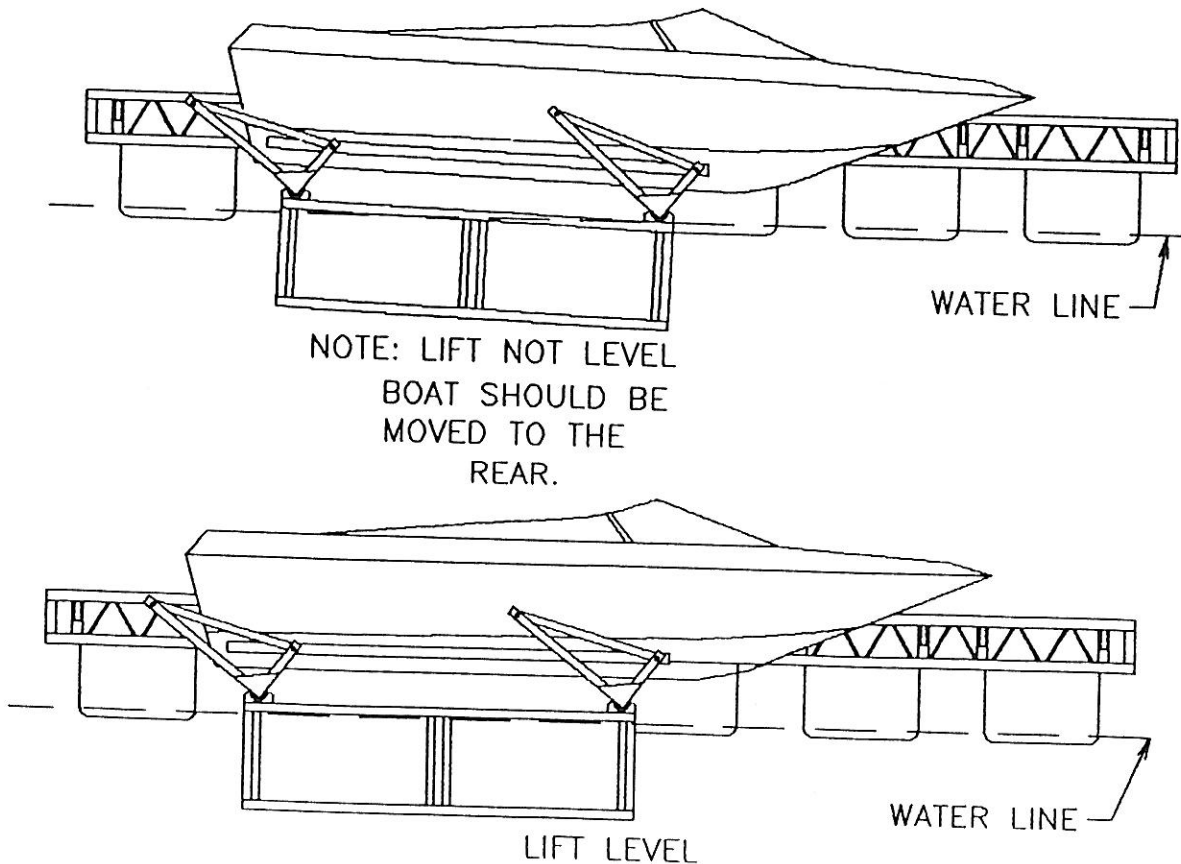
#2 Position boat by estimating the center point. Raise the boat while watching top of part K (tie rod). If K part is not level, stop raising. Lower lift and reposition until lift raises level as shown.

CAUTION

Never position boat too far forward on bunks. Transom of boat must be behind bunk legs. Placing boat too far forward could break bunks, damage lift or cause boat to drop.

CAUTION

Be sure boat out drives, props and prop shafts do not hit or rest on bunks. Not doing so could cause damage to one or all of these boat parts.

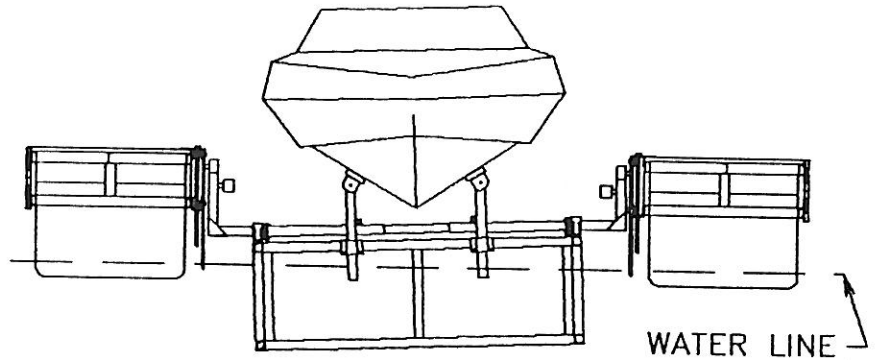


#3 If lift is not raising level from side to side you will need to lower and remove boat to reposition bunks as shown. Moving bunks 1/2" to 1" will normally be enough to correct this.

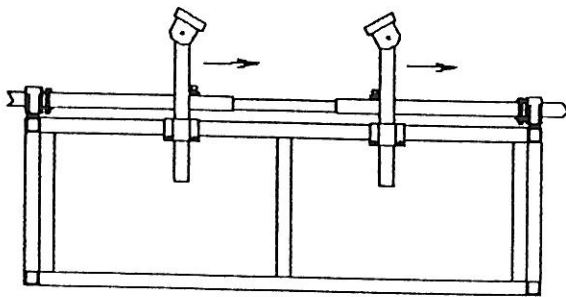
Note: If boat has a fuel tank, holding tank or excess gear on one side of lift this will effect level lifting.

Note: After locating correct loading position, every person using lift (now and in future) must be shown proper location! Align a mark on your boat with a mark on the dock to ensure proper position every time!

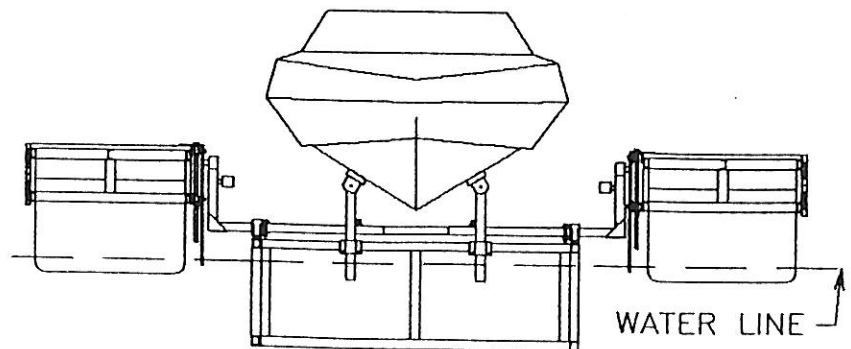
WARRANTY DOES NOT APPLY IF DAMAGE IS CAUSED BY IMPROPER LOADING!!



NOTE: LIFT NOT LEVEL
BUNKS SHOULD BE
MOVED TO THE
RIGHT.



BUNKS SHOULD BE
MOVED TO THE
RIGHT.



35

NOTE: LIFT LEVEL

OPERATION AND USE

-Raising Lift-

#1 Make sure boat is properly positioned before raising. Turn valve handle to UP position then flip toggle switch to ON position.

Note: Always watch boat for level raising.

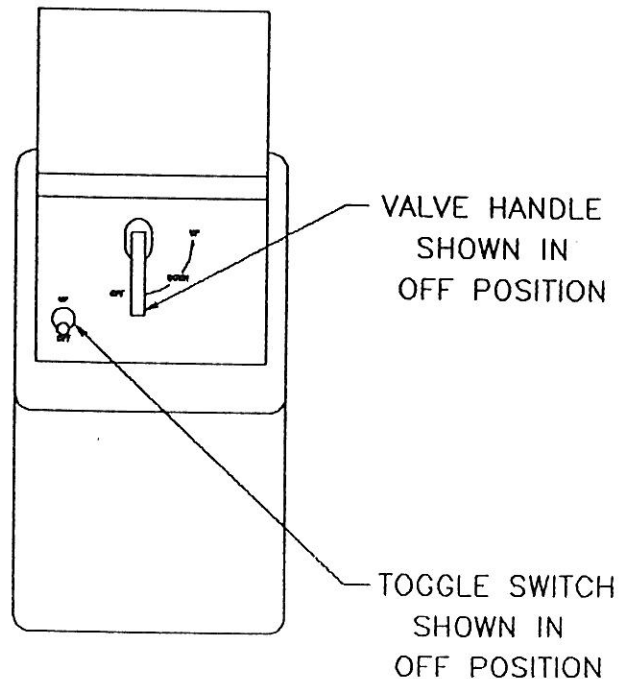
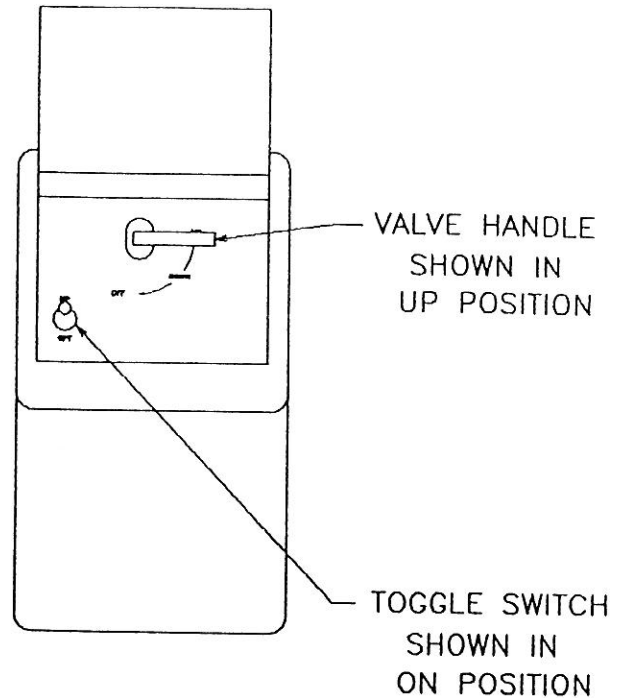
Note: Do not raise higher than necessary.

Leave boat in lowest possible position, with hull safely out of water. Raising lift partially gives added stability to lift, dock and boat.

CAUTION

Raise boat high enough so hull is protected from waves. Not doing this could result in damage to lift, dock or boat.

#2 When desired position is reached, turn valve to OFF then turn toggle switch to OFF.

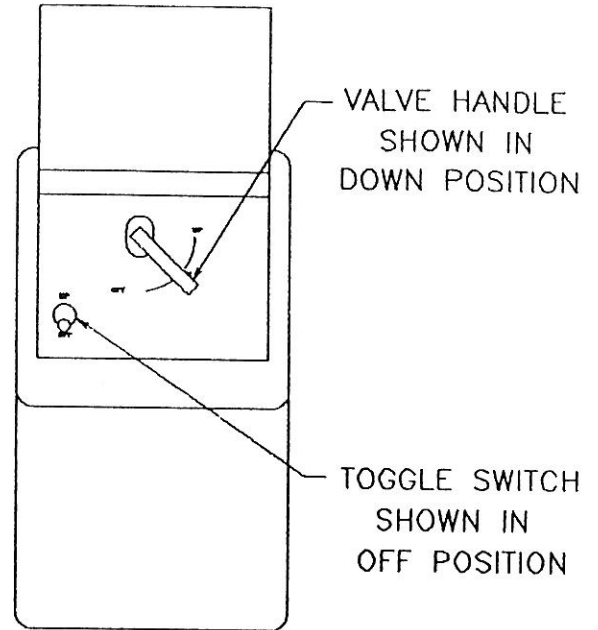


-Lowering Lift-

#1 Turn valve to DOWN position. When lift has been lowered enough for boat to float freely then turn valve back to OFF.

CAUTION

DO NOT leave boat lift in fully lowered position for over 12 hours or during heavy wave activity. Docks are not designed to support full weight of boat lift. "Air up" lift to avoid damage to dock or lift.



STORAGE (winterizing)

*****ShoreMaster does not warrant this product against any damage caused or related to ice!!!**

#1 In areas that **do not** experience winter ice cover, ice flow or severe winter storms, your lift can likely remain in water year around. Find out what is common in your area. If you normally leave your dock or lift in during winter, than you could also leave your ShoreMaster floating lift in.

CAUTION

Ice can severely damage a dock, lift or boat. Do not leave dock, lift or boat in water if ice damage is possible.

#2 Drain all water from hoses and blower box. This will prevent water from freezing and breaking these parts.

#3 Hose openings and blower box openings should be plugged to prevent rodents from entering openings and possibly damaging these parts.

SERVICE (maintenance)

#1 Inspect bolts, nuts, washers, pins, hoses, hose clamps, bushings and power cords every three months for damage, wear or loose connections. Tighten or replace parts as needed.

#2 Inspect lift frame, pivot arms and axle assemblies every three months for unusual wear, damage or bent parts. Replace or repair as needed.

#3 Inspect float tanks for leaks or loose fittings. If tanks require repair contact your local dealer or ShoreMaster for instruction.

#4 ShoreMaster dealers usually offer service visits. Please contact them if you are unable or unwilling to perform maintenance or service to lift.