

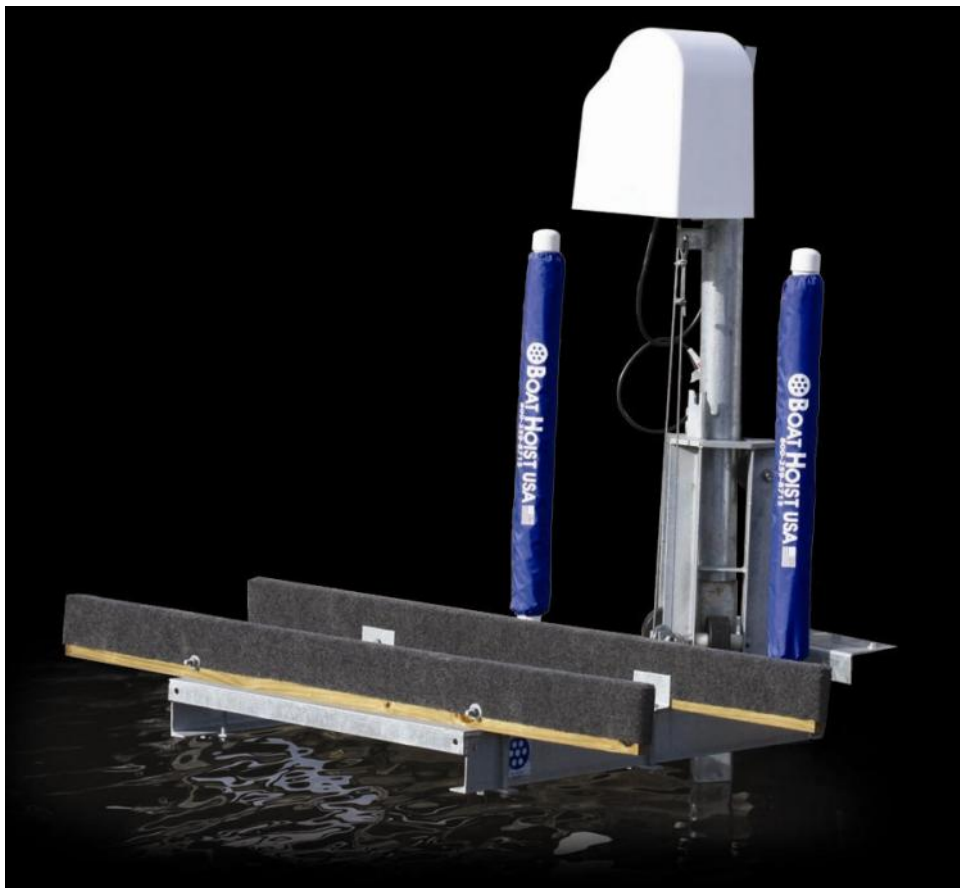


# **BOAT HOIST USA**

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## **Rotating PWC Lift Installation Guide**

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**800 259 8715**

**[www.boathoistusastore.com](http://www.boathoistusastore.com)**

## BHUSA PWC Lift Installation Guidelines by Boat Hoist USA

Check all parts on the packing list to ensure you have all the parts listed for assembly.

Since this lift uses a dock mounting plate, the piling clamps on your ride pipe and be lagged into both the top of the piling and the surrounding deck boards. See mounting guide.

Lift location must be structurally sound to support both the weight of the lift and PWC to be picked up.

Attach the mounting brackets (dock mount, piling mount or seawall mount) to ride pipe with 4 x 1/2" x 1 3/4" galvanized bolt and nuts per tab with no lock washers. One each ride pipe tab there is a small welded nipple on one side. Make sure that the mounting bracket is placed on the opposite side from the nipple. Tighten all 1 3/4" bolts.

Install the ride pipe on the piling. Drop the top bracket over the piling and tighten it leaving the top of the square portion of the ride pipe approximately level with the surface of the dock. Ensure that the pipe is plumb fore to aft and side to side. **CAUTION:** The ride pipe must extend 2 feet below the surface of the water at the lowest expected water level. **IMPORTANT:** The mounting structure must be structurally sound to support the weight of the lift and the intended PWC.

Slide the 1/2" x 3 1/2" round rotate sleeve over the round top of the ride pipe until it rests on the square tube portion of the ride pipe. Install the cradle by sliding it over the rotate tube and letting it sit on the dock. Liberally grease the round portion of the ride pipe to assure smooth and easy operation.

Layout the winch components and the rotate tube.

Mount the motor, large pulley and belt on the winch unit using supplied hardware, making sure to properly align the motor and winch pulleys

Insert cable in hole immediately next to the drum center on the gear side and pull out about 2 feet. Insert cable into the crush sleeve or clamp so approximately 1/4" of the cable is extended past the end of the sleeve and hammer flat. **CAUTION:** Failure to adequately secure the crush sleeve is tight against the side of winch drum. Slide the rotate tube/winch assembly onto the ride pipe until it contacts the rotate sleeve. Rotate the assembly several times to ensure even distribution of the grease. Drop the cable to the tab and attach for straight line pull. Connect the motor to the electrical power. Keeping tension on the cable, wind the cable onto the drum, wrapping the cable tightly. The correct direction of wrap is such that the cable will drop from the drum on the side away from the ride pipe. **IMPORTANT:** The cable must wrap in the correct direction or contact with the rotate tube tab will occur.

Measure the width of the watercraft and divide by 2. Measuring out from the guide pipes stubs, mark the center line of the watercraft on the cradle. This will be the centering mark for the bunk boards. For PWC's, mount each bunk 6" to 8" from the center line, using the bunk board brackets and bolts

supplied. Make sure the bunk boards are resting on a flat part of the PWC and the PWC is not touching the steel at any point and the boat is snug against the guide pipes.

When operating the lift, make sure that the cable is wrapping on the outboard side of the drum and is not wrapping over itself until each layer on the drum is completely full.

Grease the Zerk fittings on the winch unit; they are near the top of the gear, under the motor mount. Rotate the cradle over the water, lower and raise lift several times to make sure it is operating satisfactorily. Grease the Zerk fittings again. The gears must be well greased at all times. On rotating models, raise lift to the point it will clear the dock or seawall and rotate it back and forth several times to check for proper operation. To increase the life of your lift it is recommended that you grease all Zerk fittings every 3 months.

The cable must be kept tight with no slack. The cradle must never rest on the bottom, this could allow the cable to slack and overwrap itself causing the cable to fray and creating an unsafe condition when operating the lift. If the cradle is rested on the dock, caution should be taken to ensure no slack is allowed in the cable

Install a PVC cap on each of the 2' guide pipes. Slide guide pipes over guide stubs on cradle.

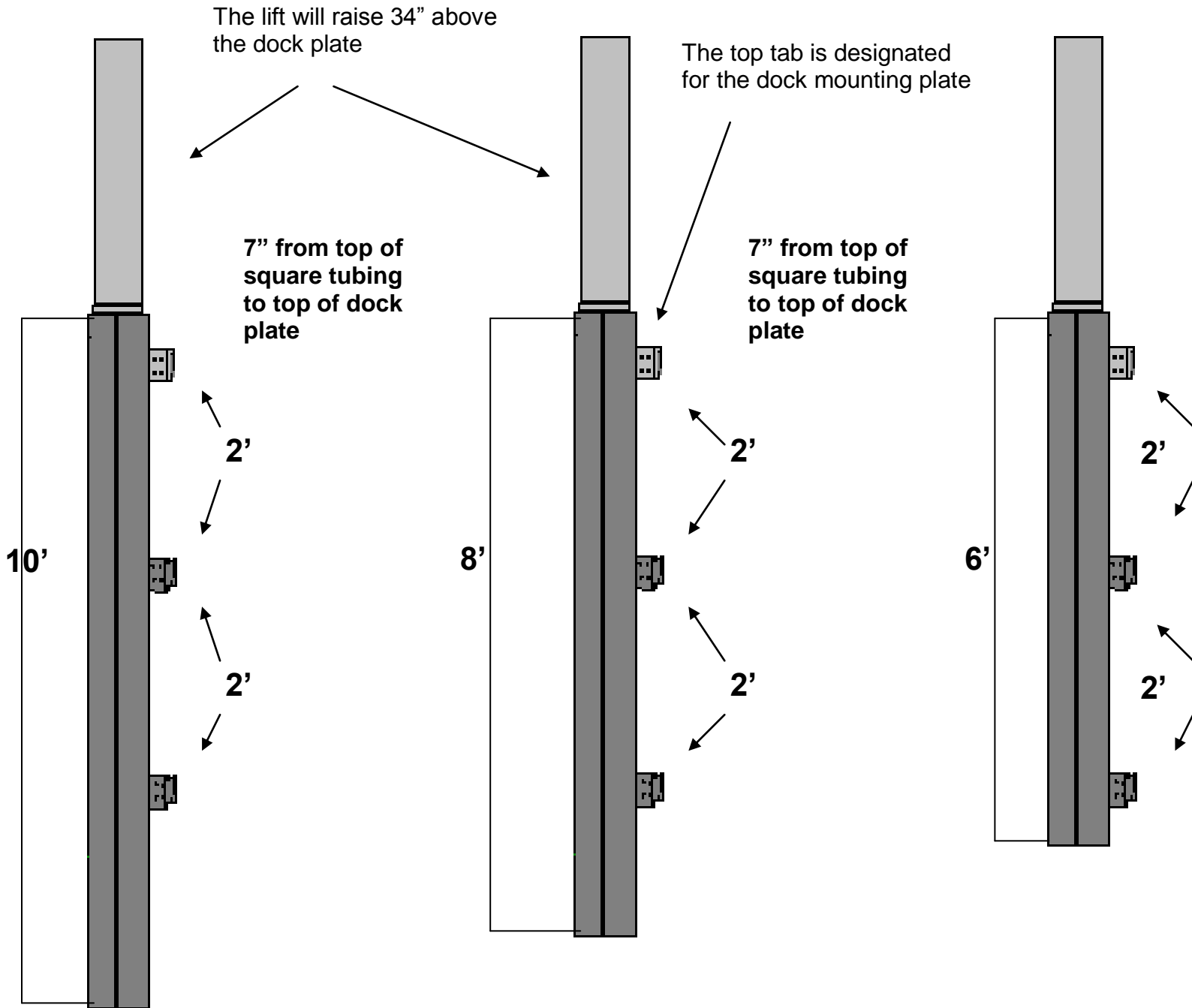
Install the white vinyl motor/gear cover.

**WARNING: Unplug lift and stow cord prior to rotating!**

**WARNING: Any BHUSA Rotating Lift is intended to rotate 180 degrees in either direction. It is not intended to rotate past 180 degrees. Failure to follow this warning may result in the lift cord twisting around the lift with serious consequences. Caution must be exercised when rotating the lift!**

## Measuring for the Boat Hoist USA PWC swinging lift.

The Boat Hoist USA PWC lift comes in three different sizes: 6', 8' and 10' travel pipes. To measure which one is right for you stand on your dock where the lift will be installed and measure from the top of the dock to the lake or bottom. It is recommended that at least 12" of pipe penetrate the bottom. If the lake is deeper than 10 feet other mounting options are available as per the directions.



# Boat Hoist USA PWC Lift Mounting Guide

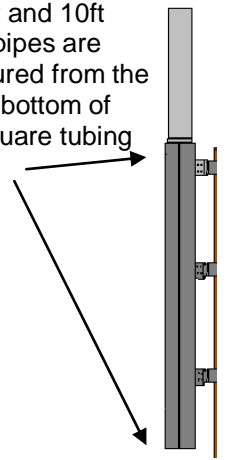
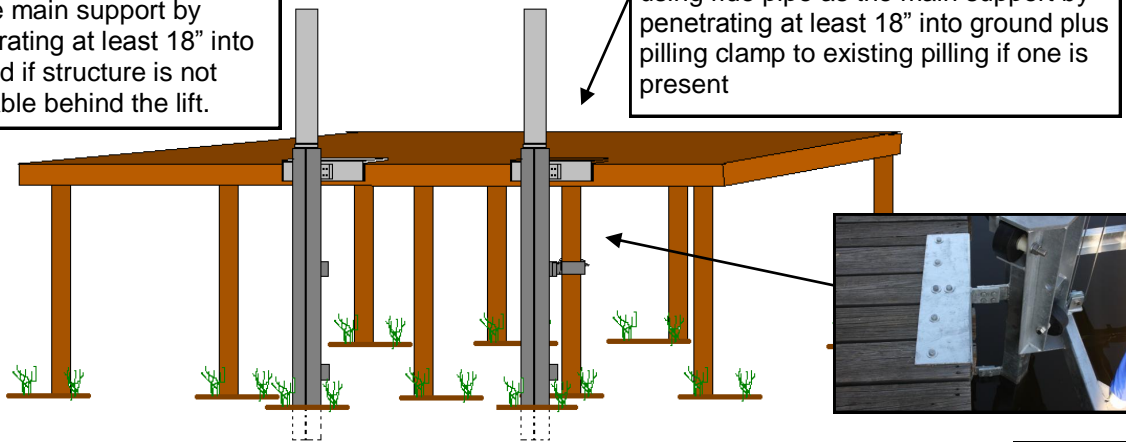
The Boat Hoist USA 1250 lb straight line PWC lift can be mounted to the dock or pier in several different ways. As shown below in the diagrams. Option A and B allow for the ride pipe to actually penetrate the ground below the deck. This creates a strong installation in which there is minimal stress on the dock itself. If the ride pipe cannot reach the bottom, options C and D are also sufficient. For docks with raised pilings, optional pilling brackets (sold separately) can be used.



**Option A**  
Dock Mount for attachment to dock and using ride pipe as the main support by penetrating at least 18" into ground if structure is not available behind the lift.

**Option B**  
Dock Mount for attachment to dock and using ride pipe as the main support by penetrating at least 18" into ground plus pilling clamp to existing pilling if one is present

6ft, 8ft and 10ft drive pipes are measured from the top to bottom of the square tubing only.

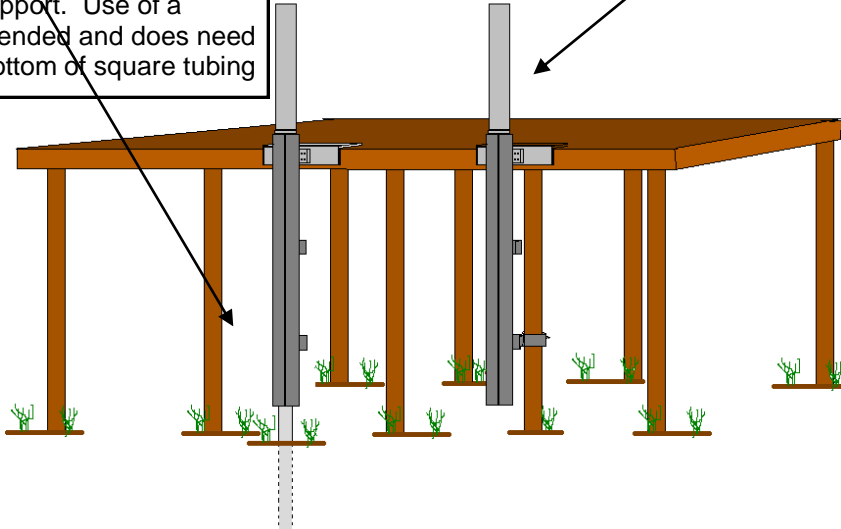


**Option D**  
Mount lift on-top of dock pilling. Use the dock plate and the pilling bracket (included) mount pilling bracket to lowest tab for support. An optional pilling bracket may be purchased for even more support to the dock.

**Option C**  
If ride pipe does not reach the ground, penetrate the ground with a piece of 2" galvanized pipe (not included) and slid the main ride pipe over the top. Use dock mount for support. Use of a spacer is recommended and does need to be welded to bottom of square tubing

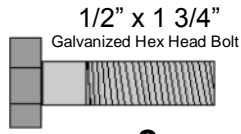
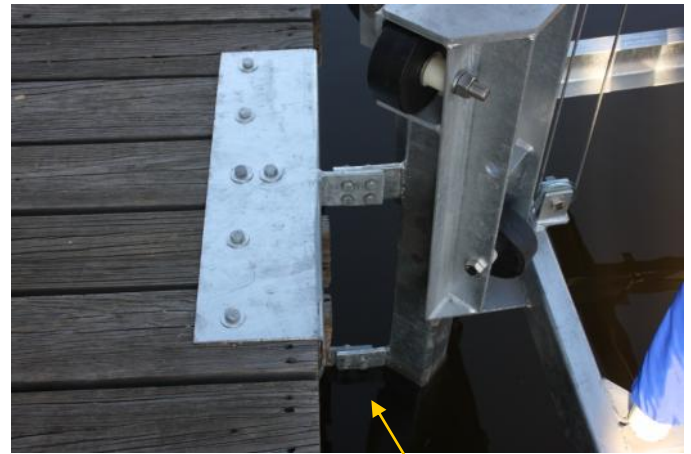
**Straight Pile Mount**

On docks with raised pilling. Mount unit using two extra pilling clamps (not included) The top of the pilling needs to be cut just above the top of the last tab where the square tubing ends so the unit will be able to rotate



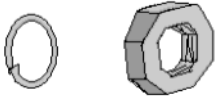
## Installation Tabs

Typical installations will use two of the three available tabs. The top tab is used for the dock mount bracket. The pile mount will be placed on one of the two lower tabs depending on the structure and installation from this dock. Some installations only require one tab (dock mount) to be used if the drive pipe can penetrate the lake bottom by at least 12" .



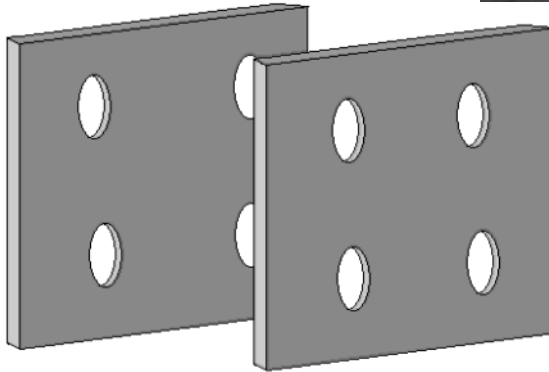
x 8

1/2" Galvanized Lock Washer and Nut



x 8

x 8



There are three tabs welded to the main drive pipe and one tab welded to the dock mount and one tab welded to the included pile mount clamp. The tabs bolt together to support the drive pipe on the dock

Fasteners are NOT to scale and will require you to measure them

## Dock Mount Plate

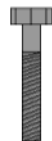


Your PWC Lift is supplied with 1 dock mount plate. Install the dock mount plate first on the dock. Remember to leave room for your lift to rotate on either side. We recommend at least 5 ft. It is recommended to use the 4 x 1/2" bolts supplied and back them up with washers. We do not recommend lag bolting the 4 outside points. The two larger center points can be lag bolted using the larger bolts supplied. .

Boat Hoist USA fasteners for the dock plate that will work on typical dock construction. There is a chance that your dock could require longer bolts. If you are required to purchase special bolts for your application, We recommend using Hot Dipped Galvanized Bolts Only

1/2" x 3" Galvanized Hex Head Bolt

x 4



1/2" Galvanized flat washer and nut

x 4

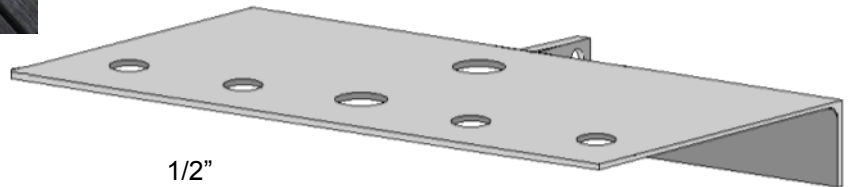
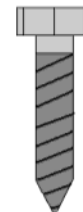


x 4



9/16 x 4" Galvanized Lag Bolt

x 2



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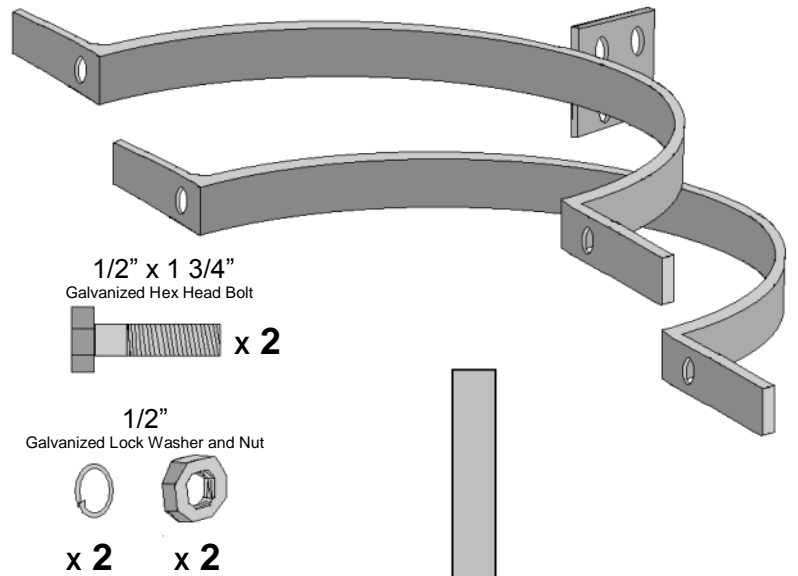


# Installation of Main Drive Pipe

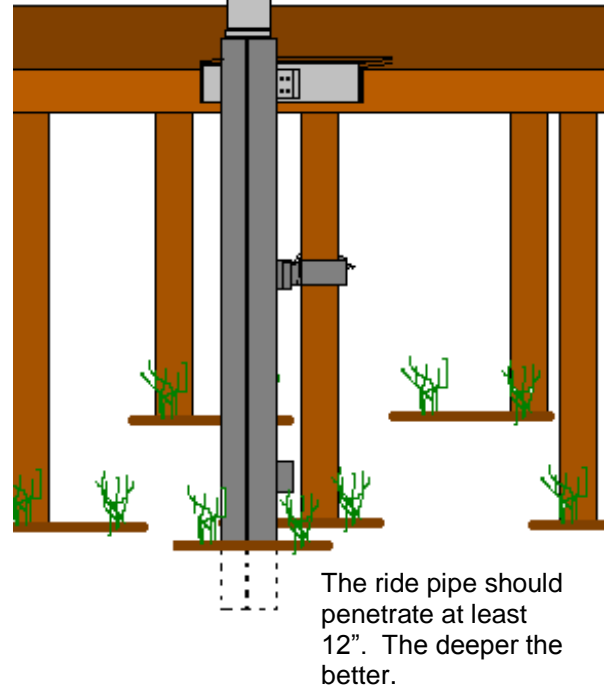
Set the main drive pipe into the water and bolt to the installed dock plate using 4 x 1/2" x 3/4" bolts. Secure the lower portion of the drive pipe to the support structure of the dock using the included piling clamp. If the lower part of the drive pipe can penetrate a minimum 12" into the lake bottom the lower clamp may not be needed even though we recommend using it anyway. Depending on the softness of the lake bottom and depth of your pole into the lake bottom this could be sufficient in supporting the lift from leveraging. If you are able to use the pile clamp we do recommend using it to give the lift extra support. The deeper the drive pipe into the bottom of the lake bottom the better. If the drive pipe does not reach the bottom, install the pile clamp on the lowest tab to help with the stresses that the weight of the PWC will put on the dock. You might also consider purchasing another pile clamp from Boat Hoist USA for extra support in this situation.

**Mounting Directly to a wood piling not using the Dock Mount**

You can mount the Boat Hoist USA PWC Lift directly to a minimum 8" piling and not use the Dock Plate. You will need to purchase two more piling clamps from Boat Hoist USA (the lift only includes one). To be able to rotate the lift you will need to cut the piling off so it is no more than 7" above dock level.

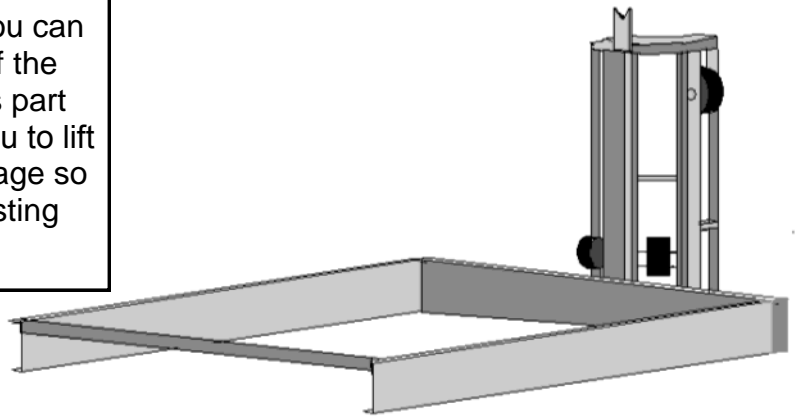


Fasteners are NOT to scale and will require you to measure them



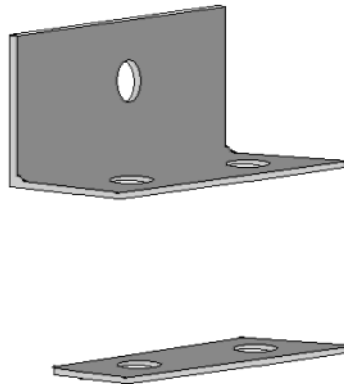
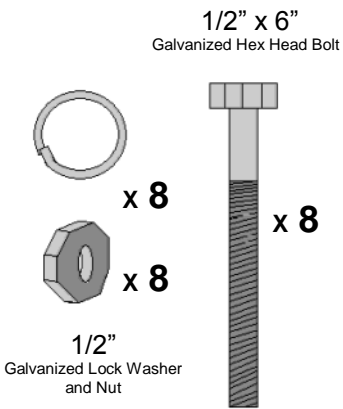
# Main Carriage

Once the main ride pipe is secured to the dock you can lift and slide the main ride carriage over the top of the round tubing at the top of the square tubing. This part will extend 34" above the dock and will require you to lift the main carriage this high. Install the main carriage so the square area where the bunks will mount is resting on the dock.

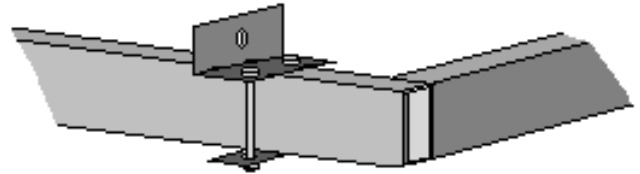


**CAUTION**  
The main Carriage weighs over 160lbs.  
Do not attempt to lift this yourself.

## Installing the Bunk Brackets

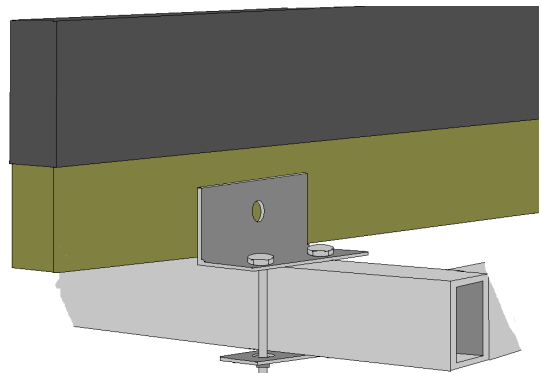
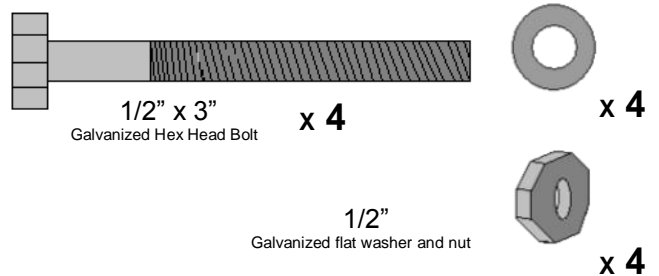


Your lift is supplied with 4 x pc of angle and 4 x backing plates. These will for your bunk brackets. Install these brackets on the square tubing at the bottom of the main ride carriage using 2 x 1/2" x 6" Hex Head bolts for each bracket. Sandwich the bracket to the tubing using the flat back up plate.



## Installing the Wood Bunks

Place the two carpeted wood bunks (included) in place along side the brackets so the angle is on the inside (see image below) Mark these points a drill a hole large enough to slide the 1/2" bolt through to secure the bunks to the brackets.



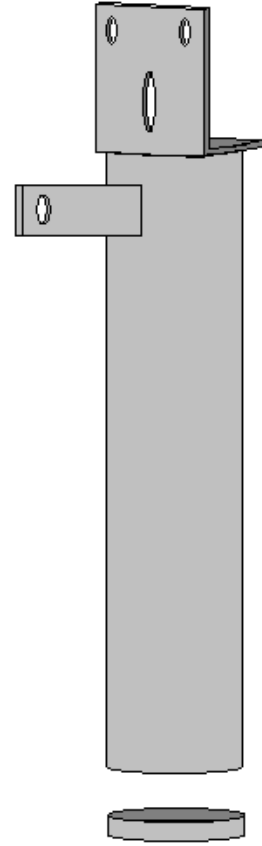
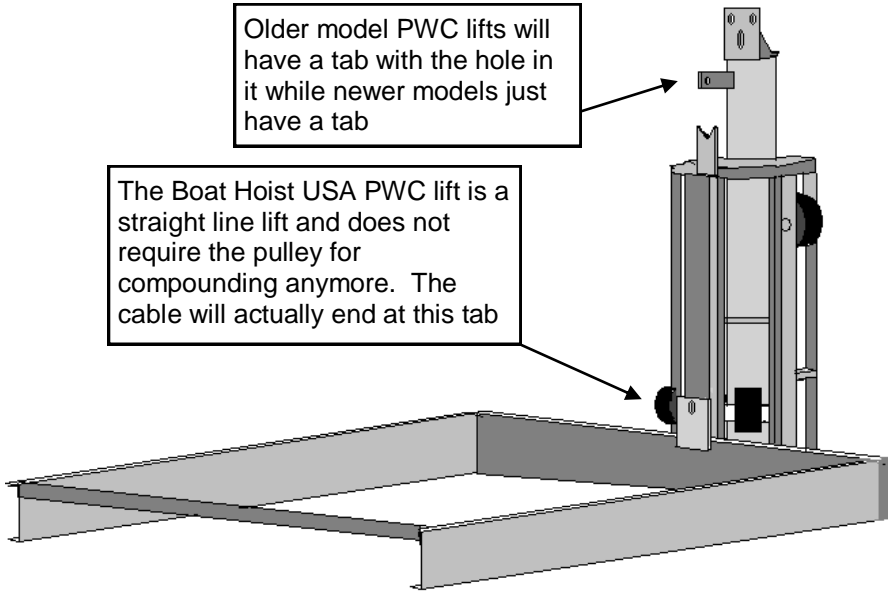


## Rotating Sleeve and Motor Mount

Slide the small rotating sleeve bearing over the main drive pipe first, then slide the rotating sleeve with the motor mount welded to it over the round tube section of the main ride pipe. An installer's tip is to grease the inside of the sleeve before you slide it over the main ride pipe.

Older model PWC lifts will have a tab with the hole in it while newer models just have a tab

The Boat Hoist USA PWC lift is a straight line lift and does not require the pulley for compounding anymore. The cable will actually end at this tab



## Mounting the winch and the motor

Assemble the drive unit by bolting the motor to the top of the gear box using the stainless steel motor mounting hardware supplied in the motor box. Attach the gear box and motor to the top of the rotating sleeve using 3 x 1/2" x 1 1/4" galvanized bolts. Attach the cable to the spool inside the housing using the copper cable stop. Attach the loop of the cable to the tab welded to the main carriage using the included shackle. Put the cover on the unit.



1/2" x 1 1/4"  
Galvanized Hex Head Bolt



x 3

1/2"  
Galvanized Lock Washer and Nut

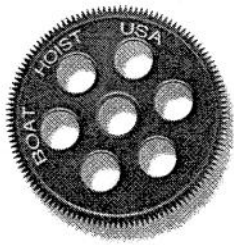


x 3

x 3

### WARNING

Never operate the unit while sitting on the PWC. Never allow the switch to hang down to the PWC. Mount the switch in a dry location where you must get off the PWC and onto the dock to operate the lift. Unplug the electric motor when not in use.



# BOAT HOIST USA

## BHUSA PWC Lift

