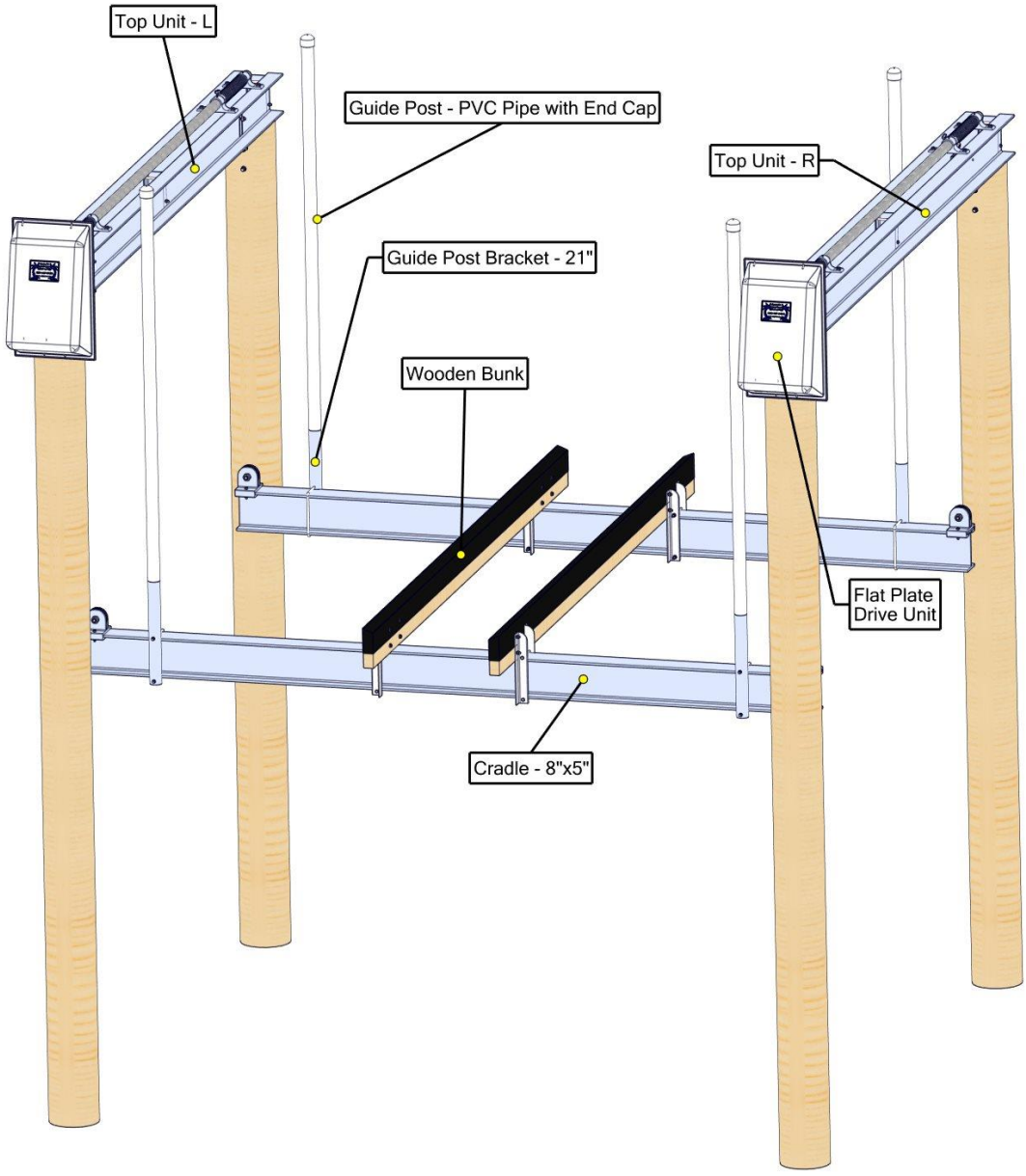
BOAT LIFT DISTRIBUTORS

Four Pole Top Mount Lift – Flat Plate Drive

Boat Lift Distributors

Installation Instructions: Four Pole Top Mount Lift

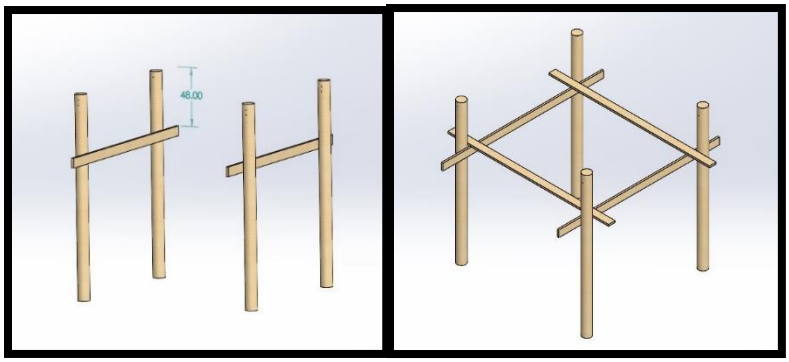
Thank you for your recent Boat Lift purchase. In the pages that follow, we will take you step-by-step through the entire installation sequence, including the lifting of the boat. Please read this manual entirely before attempting the installation. Failure to do so could result in serious injury or death.



Components List					
Top Unit	**4k Flat Plate Drive Unit**		**Top Unit**	**Top Unit**	
	Name	**Qty.**		**Name**	**Qty.**
	Drive Unit - 4k Flat Plate	2		Pre-assembled top unit that includes the galvanized drive pipe, four bearings, and two cable winders with cable bolts installed	2
	Drive Unit Cover - 4k Flat Plate	2			
	Drive Pulley - 10"	2			
	Bottom Slide Plate with Pins	2		Drive Unit Spacer	2
	Motor - 1HP Painted, 56 Frame	2		1/2" Threaded Rod	8
	Motor Pulley - 2"	2		1/2"x1/2" Flat Washer	8
	Top Washer with Pins	4		1/2"x2" Flat Washer	8
	Belt - 4L360 or Ax34	2		1/2" Lock Washer	16
	Carriage Bolt	8		1/2" Hex Nut	16
	Lock Washer - 5/16"	8		**Cable Deadman Brackets**	
	Hex Nut - 5/16"	8		**Name**	**Qty.**
	Hex Bolt - 1/2"x1-3/4"	4		Cable Deadman Bracket - 7"	4
	Lock Nuts - 1/2"	4		Flat Washer - 1/2"	16
	Flat Washers - 1/2"	4		Hex Bolt - 1/2"x2"	8
	Half Moon Pulley Cover	2		Hex Nut - 1/2"	8
	Half Moon Cover Hardware - (2) 1/4"x1" Hex Bolts, (2) 1/4" Nuts	2		Lock Washer - 1/2"	8
Cradle	**Cradle**		**Cradle**	**Bunks - Wooden**	
	Name	**Qty.**		**Name**	**Qty.**
	Pre-Assembled Cradle Beam (12' 6") that includes the cradle ends with pulleys, grease bolts, and zincs installed	2		Bunk Bracket - 14.5"	8
				Flat Washer - 3/8"	16
				Hex Bolt - 3/8"x3"	16
				Hex Nut - 3/8"	24
	Guide Posts			Lock Washer - 3/8"	24
	Name	**Qty.**		Hex Bolt - 3/8"x6-1/2"	8
	PVC (10ft) with Caps	4		Wooden Bunks (Carpeted)	2
	Galvanized Weight Pipe - 50"	4	**Cable**	**Cable**	
	Guide Post Bracket - 21"	4		**Name**	**Qty.**
	U-Bolt - 3/8"x8"	4		SS Cable - 5/16"x33'	4
	Hex Nut - 3/8"	8			
	Lock Washer - 3/8"	8			

STEP 1: SETTING OF TOP UNIT BEAMS

1. Scaffold four lift pilings.



Level and nail 2" x 8" x 16' boards approximately 4' down from top of pilings.

Then, place two more boards across the original boards as shown.

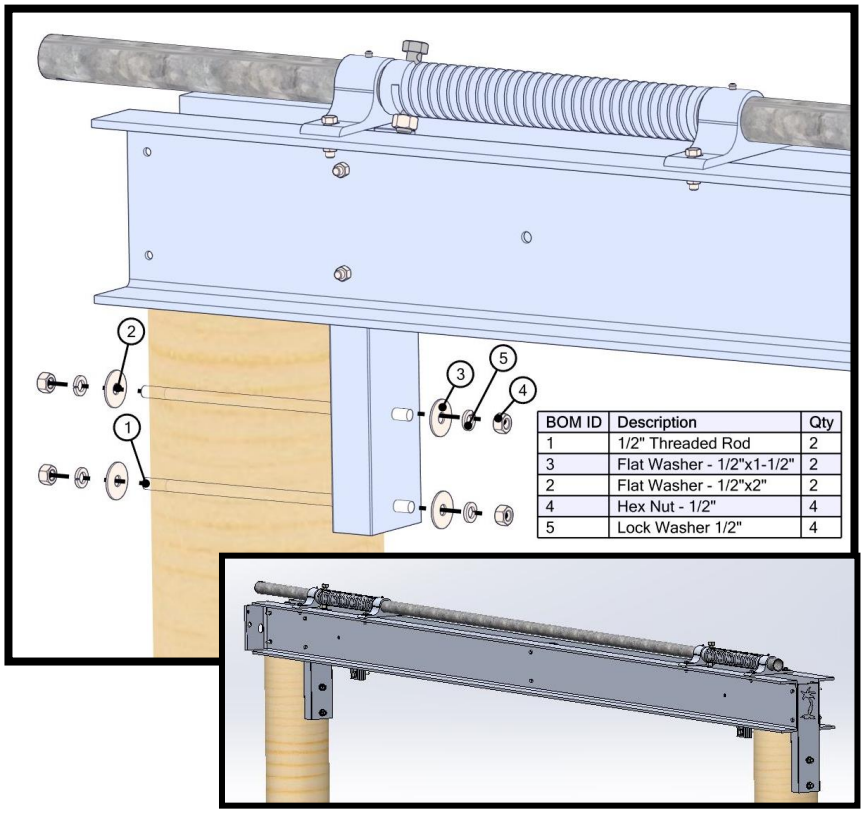
2. Measure the height of pilings off of the water. This measurement reading should be taken from the shortest piling.

3. Mark the remaining three pilings to the same height of the measurement completed in step 2. **NOTE:** Steps 2 & 3 should be completed quickly but accurately as the water tides move frequently. The water level also can be used instead of measuring if desired.

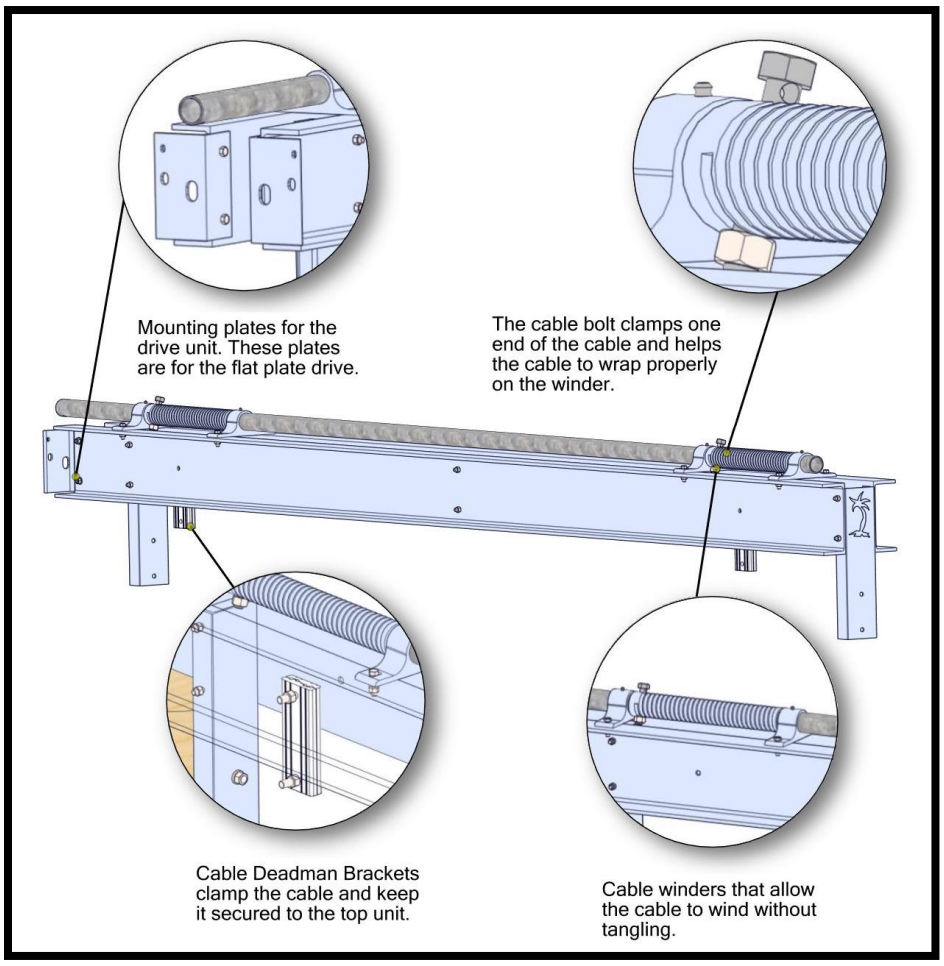
4. With a chain saw cut the four pilings to the same height. Use a 10" level to make sure the pilings tops are now level to allow a solid seating of top unit beams. **NOTE**: Place a rubber mat between the piling and the top units to act as an electrolysis isolator.

5. Top units are now ready to be set at the top of the leveled pilings. This will require two or more people. Position the drive ends towards the stern, and the stickers facing away from each other and place top units on top of the pilings.

6. Drill ½" pilot hole through the piling and piling bracket. Insert the eight ½" x14" stainless steel rods, secure and tighten. (SEE FIGURE ON NEXT PAGE)



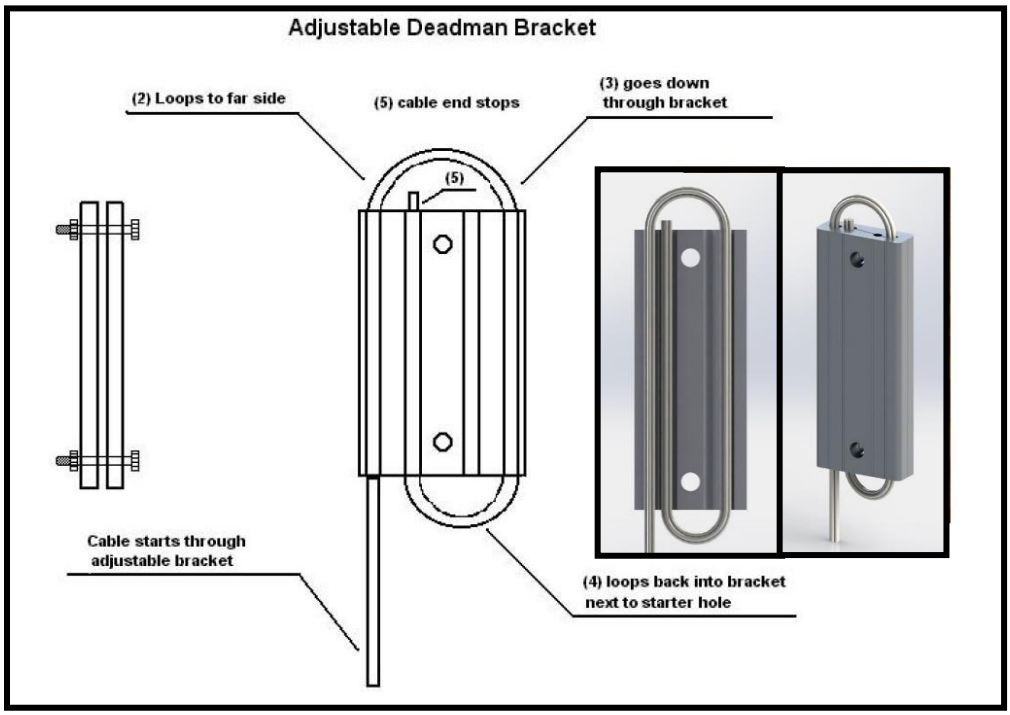
NOTE: Confirm that the top unit beams are level and square by checking to see if diagonal dimensions are equal. The lift must be within 3" of square to operate properly. If out of square more than 3" it may cause the cradle beams to drag against the pilings.

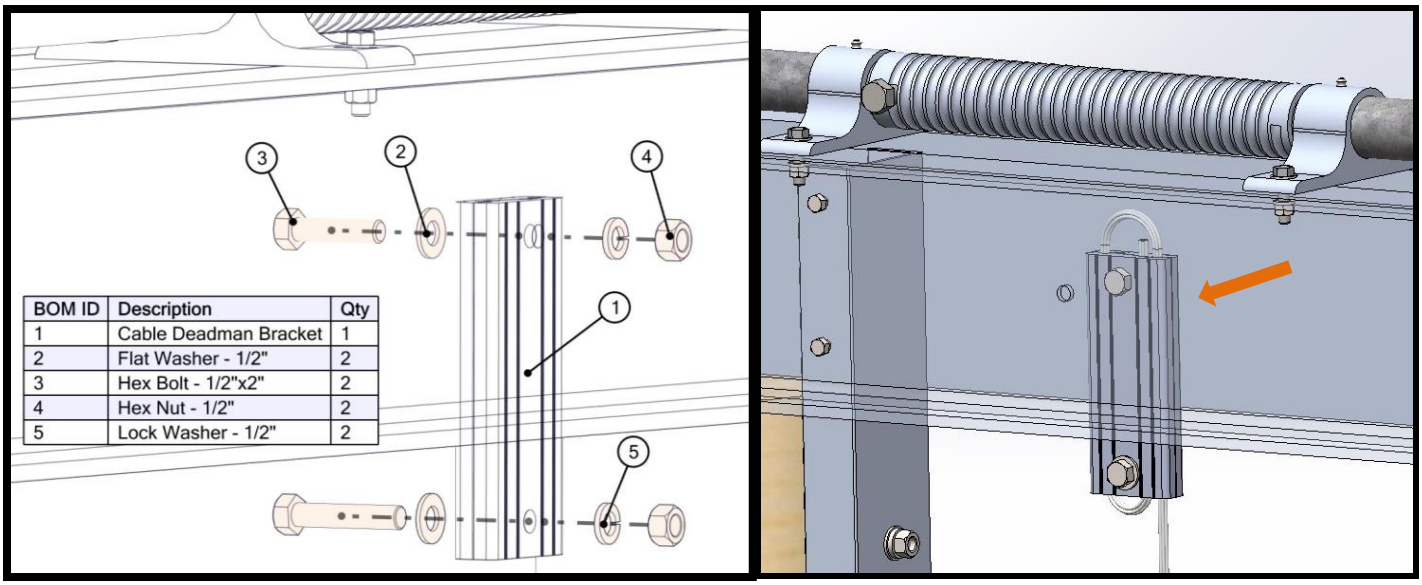


Top Unit Features

STEP 2: ATTACHING ALUMINUM CRADLE BEAMS

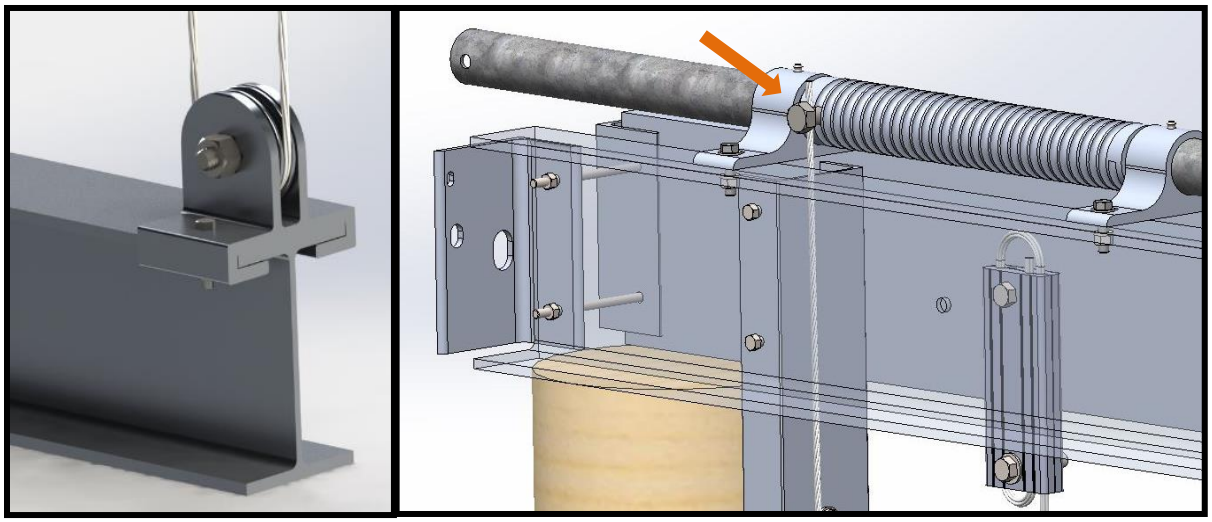
1. Make sure one end of each cable is installed in a deadman bracket as shown.





BOM ID	Description	Qty
1	Cable Deadman Bracket	1
2	Flat Washer - 1/2"	2
3	Hex Bolt - 1/2"x2"	2
4	Hex Nut - 1/2"	2
5	Lock Washer - 1/2"	2

2. Attach the deadman bracket to the top unit beam using the provided hardware.
3. Place cradle beams into position onto ladder scaffold perpendicular to the top unit beams.



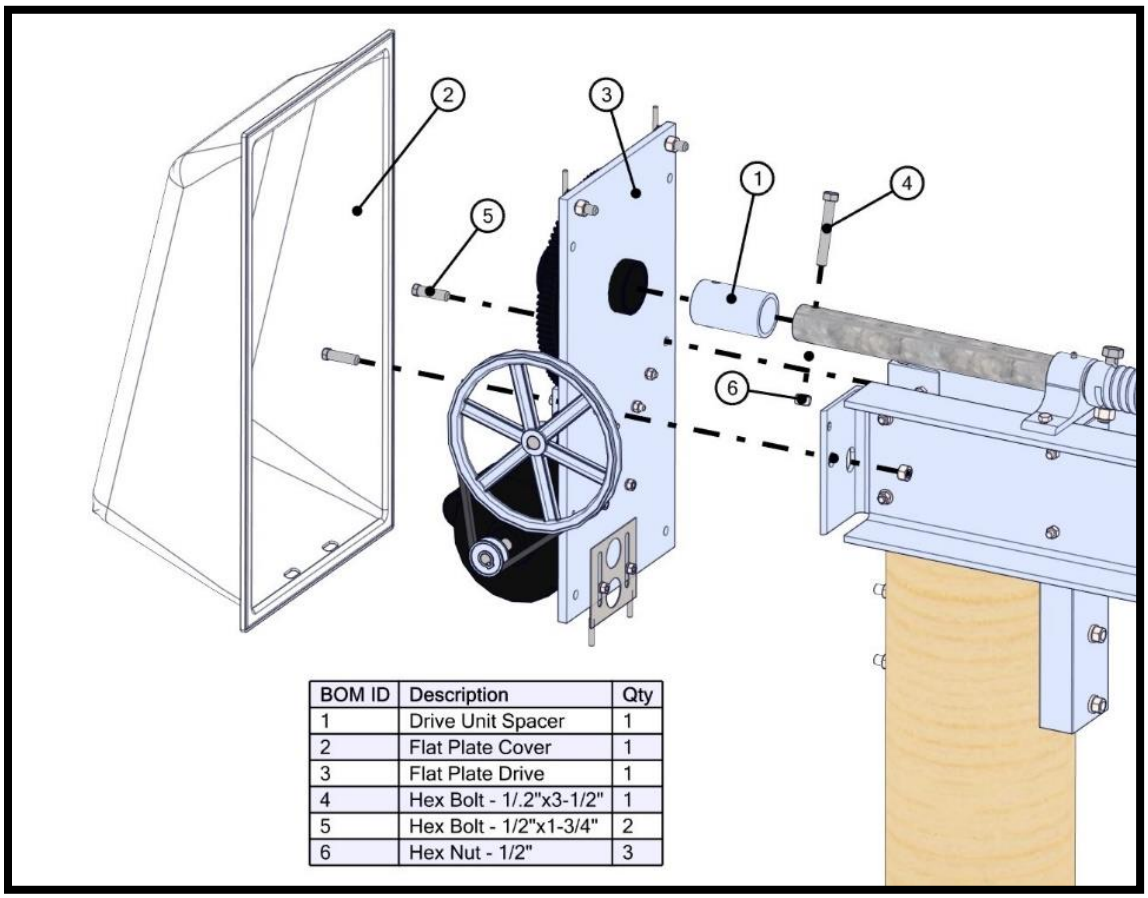
4. Take the free end of the cable and wrap it around each pulley in the top of the cradle arm. Bring the end back up to the cable winder.
5. Insert one end of the cable through the cable bolt hole and tighten the cable bolt until the cable is securely clamped to the cable winder.

NOTE:

1. The total length of the cable should allow for three full wraps of cable on the cable winder before top unit beam is carrying any load.
2. To assure good drainage from boat deck during storage of boat on lift, clamp the bow cables 4” shorter than the stern cables. This will give you 2” of pitch for deck drainage.

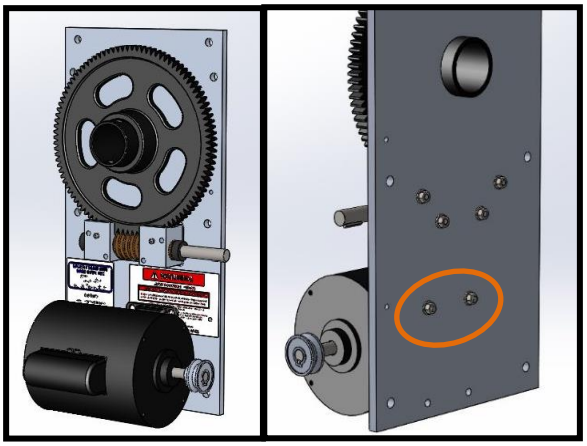
STEP 3: FLAT PLATE DRIVE UNIT INSTALLATION

Drive Unit Installation Overview

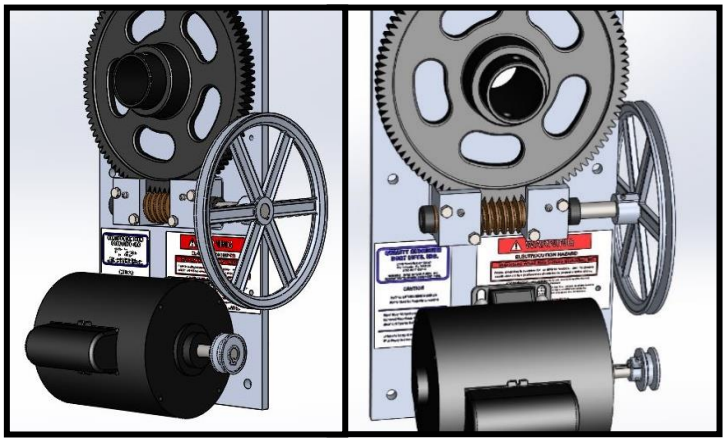


BOM ID	Description	Qty
1	Drive Unit Spacer	1
2	Flat Plate Cover	1
3	Flat Plate Drive	1
4	Hex Bolt - 1/.2"x3-1/2"	1
5	Hex Bolt - 1/2"x1-3/4"	2
6	Hex Nut - 1/2"	3

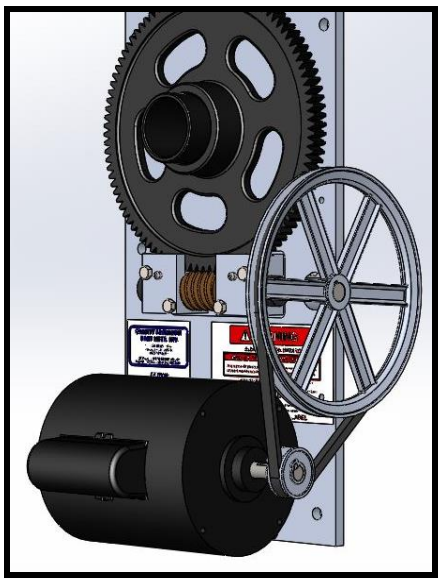
STEP 3: HEFTY HOIST MOTOR PLATE INSTALLATION (continued)



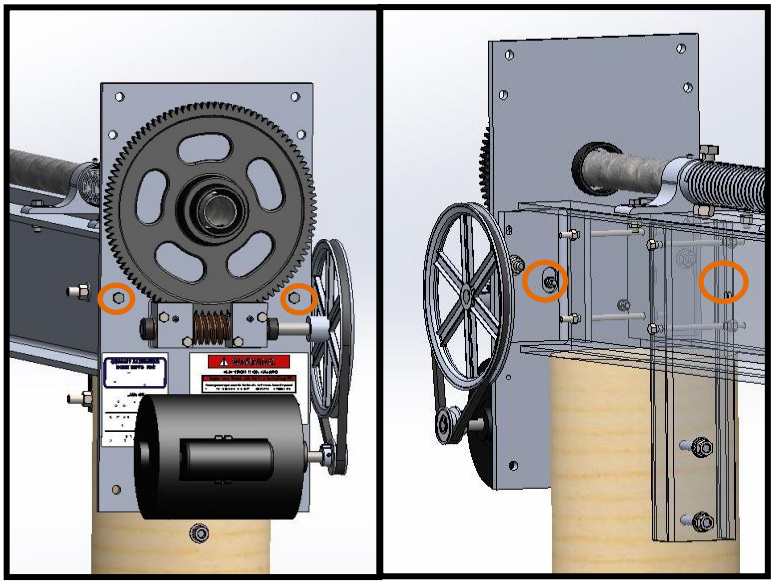
1. Attach the motor to the back plate using the upper two mounting holes and provided carriage bolts.



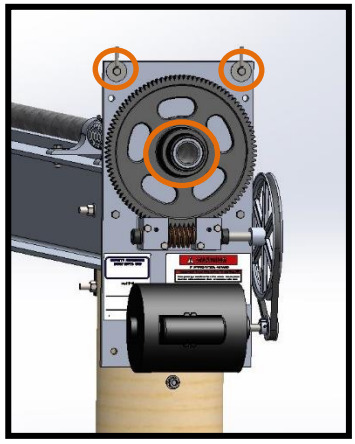
2. Attach the 10” pulley to the hoist plate. Confirm the motor pulley and hoist pulley align.



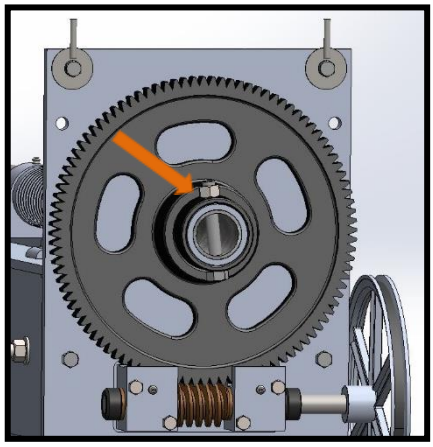
3. Attach the belt to the two pulleys. Tension belt to obtain ¼" of free play.



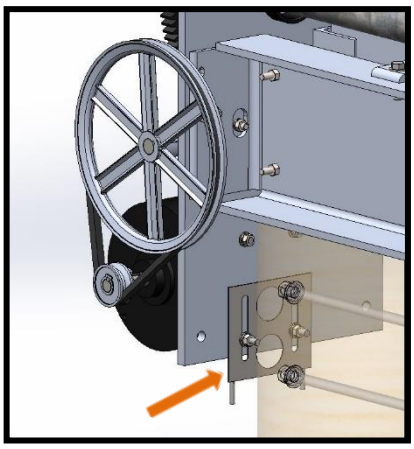
4. Mount the drive unit to the top unit using the two holes shown above.



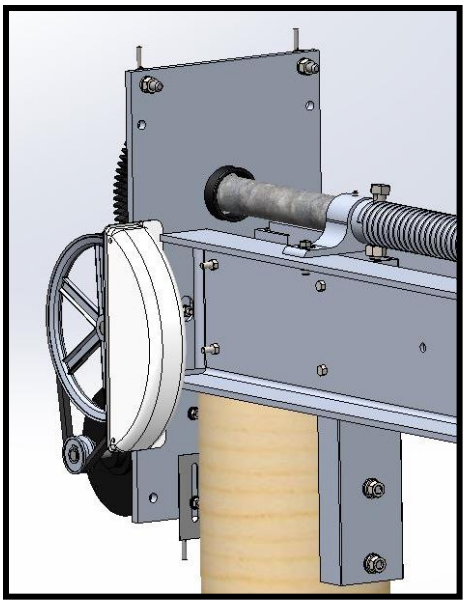
5. Attach the top washers to the drive unit plate. Slide the aluminum motor spacer between the drive pipe and the drive unit gear. This will take the play out of the hoist and the drive pipe.



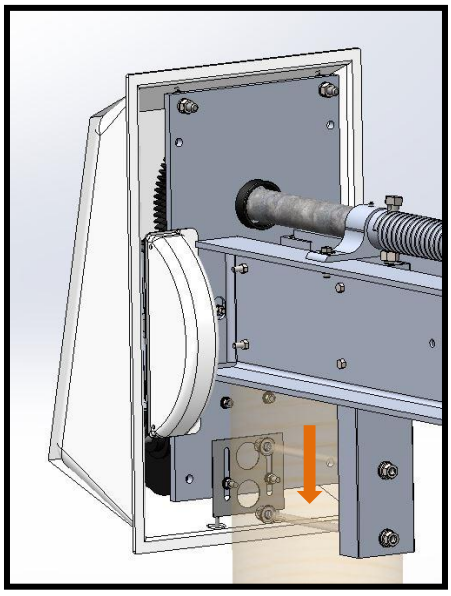
6. Secure the motor spacer with the 1/2" x 3-1/2" gear bolt and 1/2" lock nut provided with the hoist. **IMPORTANT: Do not use a Stainless Bolt if the Bolt is missing.**



7. Attach the bottom sliding plate using two carriage bolts through the bottom motor mounting holes. Lubricate drive plate and motor housings with a rust preventative lubricant such as corrosion block.



8. Install the half-moon cover over the 10” pulley.



9. Put the cover on over the top washer pins and pivot the cover until the bottom holes are in line with the bottom sliding plate. Slide the bottom plate down until the pins fit through the bottom holes in the cover and tighten the plate hardware to secure in place.

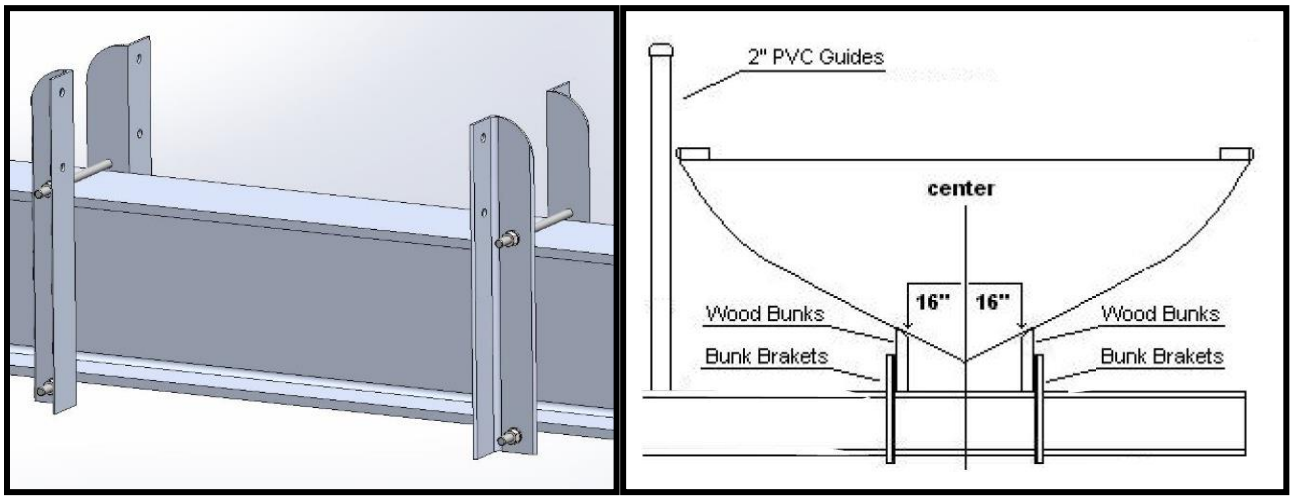
STEP 4: ATTACHMENT OF WOOD BUNKS TO CRADLE BEAMS

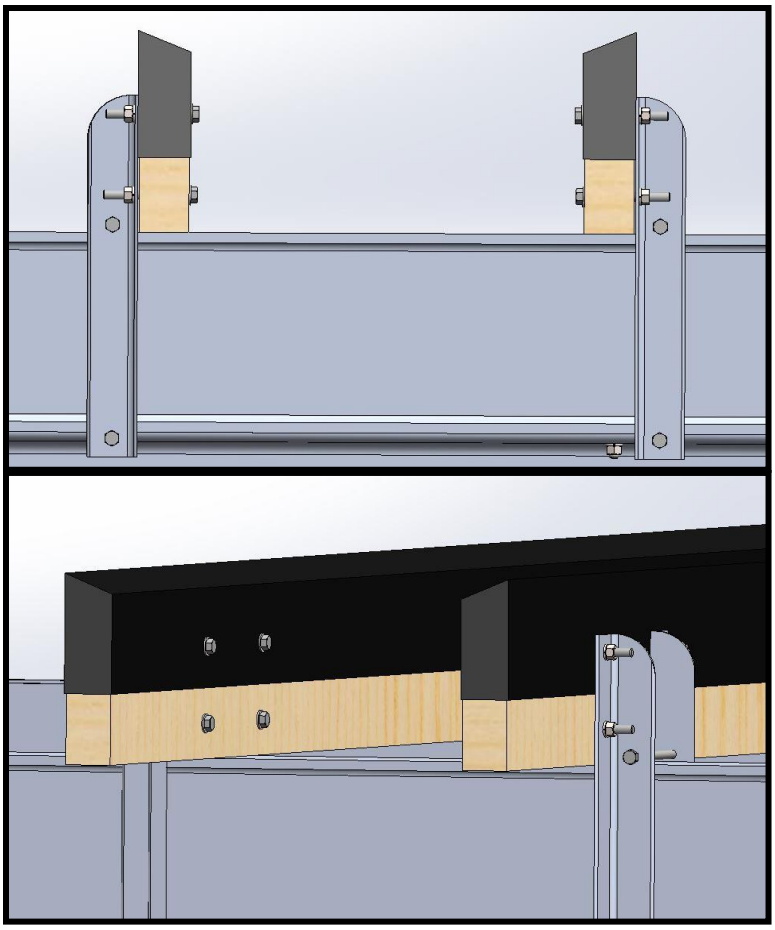
1. Complete the wiring on the drive units. Wiring diagrams are included separately. After wiring complete, start winding cables on cable winder.

   NOTE: It is important to keep tension on lifter cable until weight of cradle beam keeps tension on cable for you. Allowing the beam to be placed in the water will tension the cables if the water is deep enough doing this will allow the cables to wind neatly and tightly.

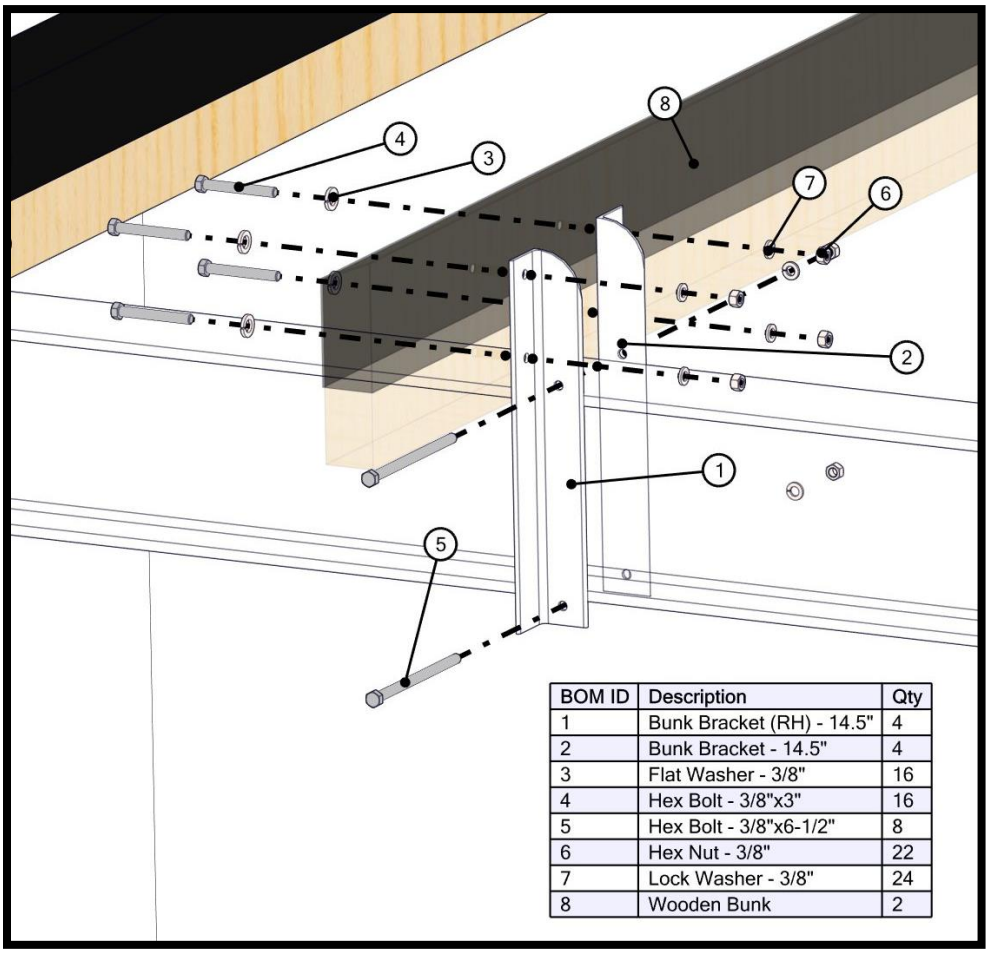
2. Continue to wind the cables until cradle beams are at desired height for attaching bunk brackets and bunks.
3. Measure the width of the boat.
4. Measuring from the insides of the cradle ends, mark the boat’s center location on each cradle beam.
5. Take the eight aluminum brackets (2 pairs per cradle beam) and attach each pair to the cradle arm with two stainless steel bolts. One bolt will rest on top of the cradle arm; One bolt will hang underneath the cradle arm.
6. Mount each of the bunk brackets 12” to 16” away from the center mark.

NOTE: Bunk Spreads typically vary 12” to 14” for boats up to 9000lbs. Larger boats can go up to 16”.



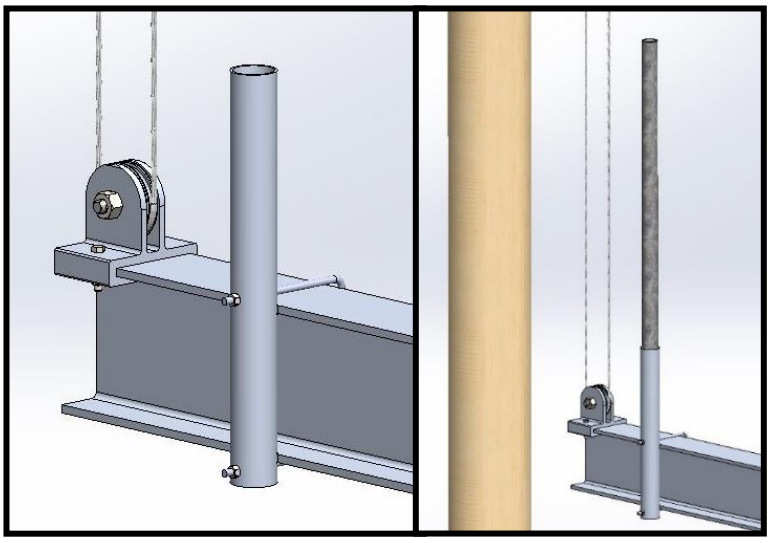


1. Confirm that the cradle arms are hanging freely, and the cable is wound on the cable winder neatly and tightly.
2. Place the bunks on the inside of the bunk brackets.
3. With the cradles square, measure out the distance between the cradle arms and center the bunks between them. The bunks should overhang equally on each side of the cradle.
4. Confirm again that the cradle arms are level and square.
5. Mark the bunk bracket hole location on the bunks.
6. Drill eight, 3/8” holes (four holes on each end of the bunk) where the bunks will be mounted to the bunk brackets.
7. Install the bunks with the provided hardware. (SEE DIAGRAM ON NEXT PAGE) Tighten all hardware.

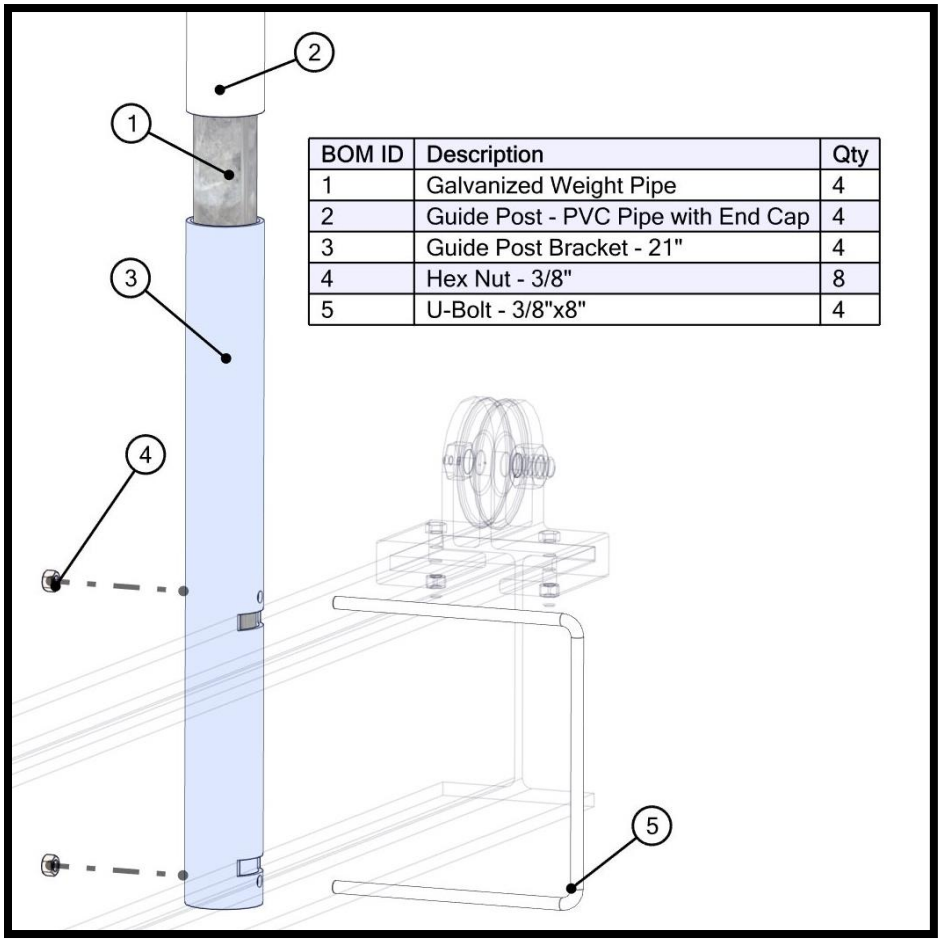


BOM ID	Description	Qty
1	Bunk Bracket (RH) - 14.5"	4
2	Bunk Bracket - 14.5"	4
3	Flat Washer - 3/8"	16
4	Hex Bolt - 3/8"x3"	16
5	Hex Bolt - 3/8"x6-1/2"	8
6	Hex Nut - 3/8"	22
7	Lock Washer - 3/8"	24
8	Wooden Bunk	2

STEP 5: ATTACHMENT OF GUIDE POST BRACKETS



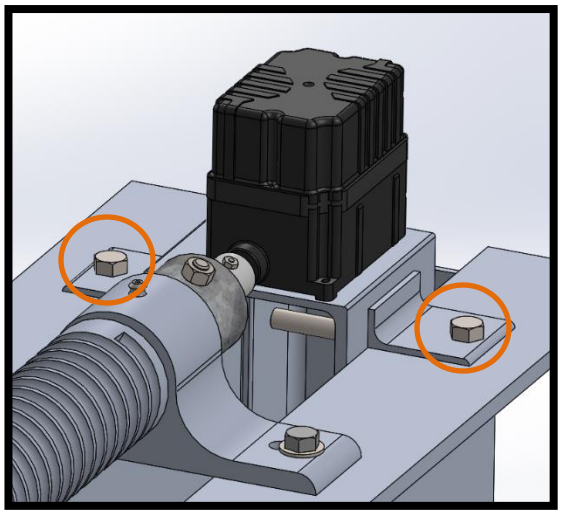
1. Attach the guide post brackets using the u-bolts and provided hardware.
2. Slide galvanized weight pipes inside the guide post bracket and 2” white P.V.C. Pipes over the outside of the guide post bracket and weight pipe.

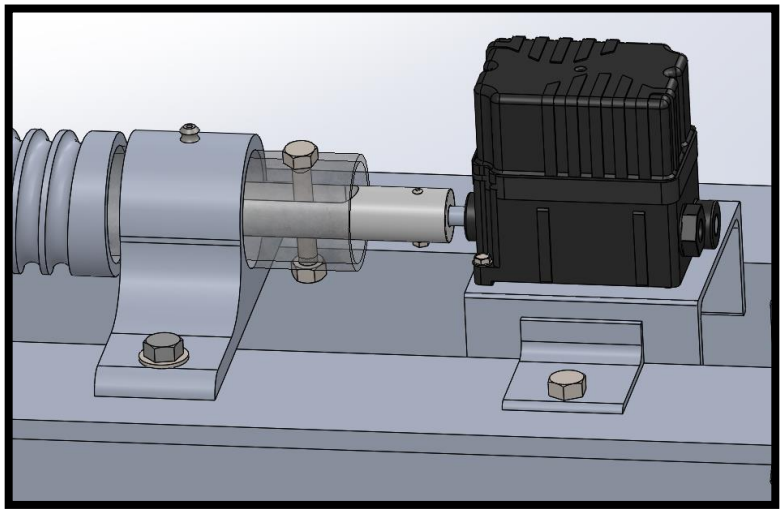


BOM ID	Description	Qty
1	Galvanized Weight Pipe	4
2	Guide Post - PVC Pipe with End Cap	4
3	Guide Post Bracket - 21"	4
4	Hex Nut - 3/8"	8
5	U-Bolt - 3/8"x8"	4

Guide Post Installation Overview

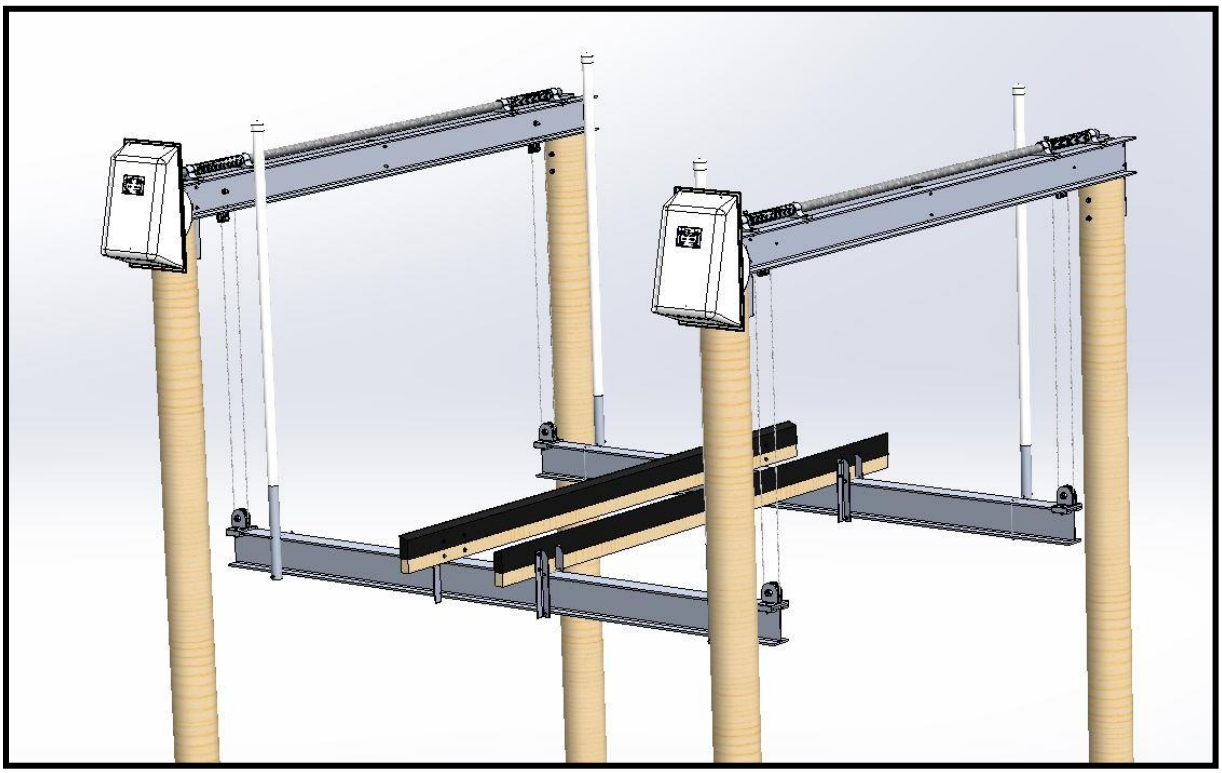
IF YOU HAVE A LIMIT SWITCH:

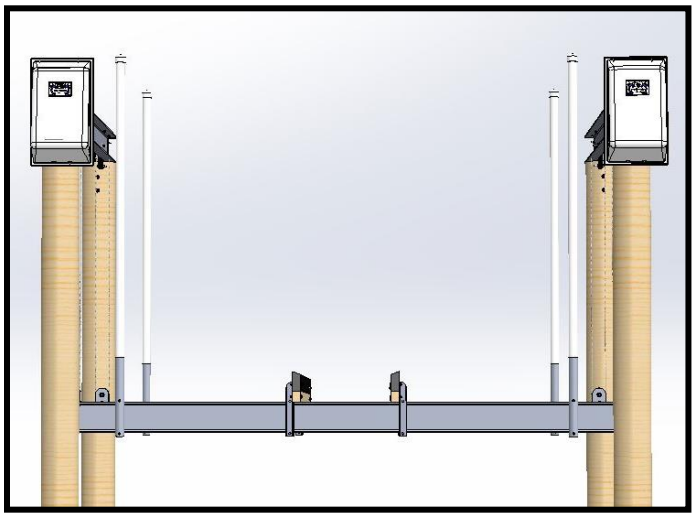


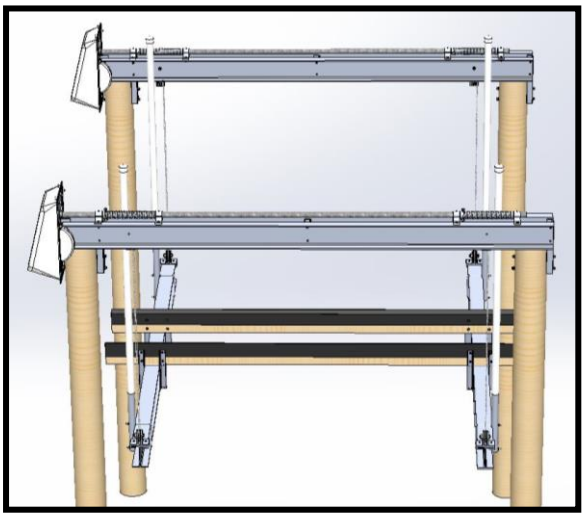


1. Mount the limit switch by drilling two holes at the end of one of the top units as shown.
2. Drill a 5/16” hole through the galvanized drive pipe ¾” from the end of the pipe. Line up the fork in the limit switch shaft with the center of the hole and secure the bolt with the hex nut.
3. Check to make sure the limit switch shaft rotates with the drive pipe.

FINAL ASSEMBLY:







FITTING BOAT TO LIFT:

1. Bunk Adjustment: loosen the eight (8) bunk brackets. Mark center line port to starboard on both cradle beams. The bunk spread varies; for boats up to 9,000lbs. (26' to 28' range). Spread bunks 32" apart; 16' from center lines on cradle beams.

2. Adjust guide post brackets to beam of boat and tighten. Use same centerline on cradle beam as before.

3. Place boat into position for lifting. Guide poles will keep boat centered over bunks. Very seldom is there more than three (3) feet of boat hanging beyond the stern lift pilings. You need to get the center boat balance as close as possible to center of lift (Bow to Stern). This will evenly distribute the load over the two (2) cradle beams. **The Bow and Stern Cable Tension will be equal with a balanced load.**

4. Lifting of the Boat Adjustment: Start lifting the boat, if the boat starts listing as you pick it up you will have to readjust the pickup bunks and lift the boat again. If the boat does not list, lift boat do a visual inspection of hull and bunk contact.

HELPFUL NOTES:

1. We suggest to place a reference mark on a Guide Pole to indicate that the Lift Cradle is deep enough for the Boat Hull to clear the Cradle. This will assure clearance entering and leaving the Cradle as the tide changes.

2. Shallow Water Installations; Reference mark should be placed on a cable to indicate that the cradle has contacted bottom. Turning the lift off at this point will prevent the cable winds from being tangled.

3. Caution: Boat Lifts Are Not Made For Lifting Humans.

4. Place a rubber mat between top of piling and aluminum to prevent electrolysis.

5. Installer is responsible for determining if pilings are square and adequate to carry the lift and the lift's payload.