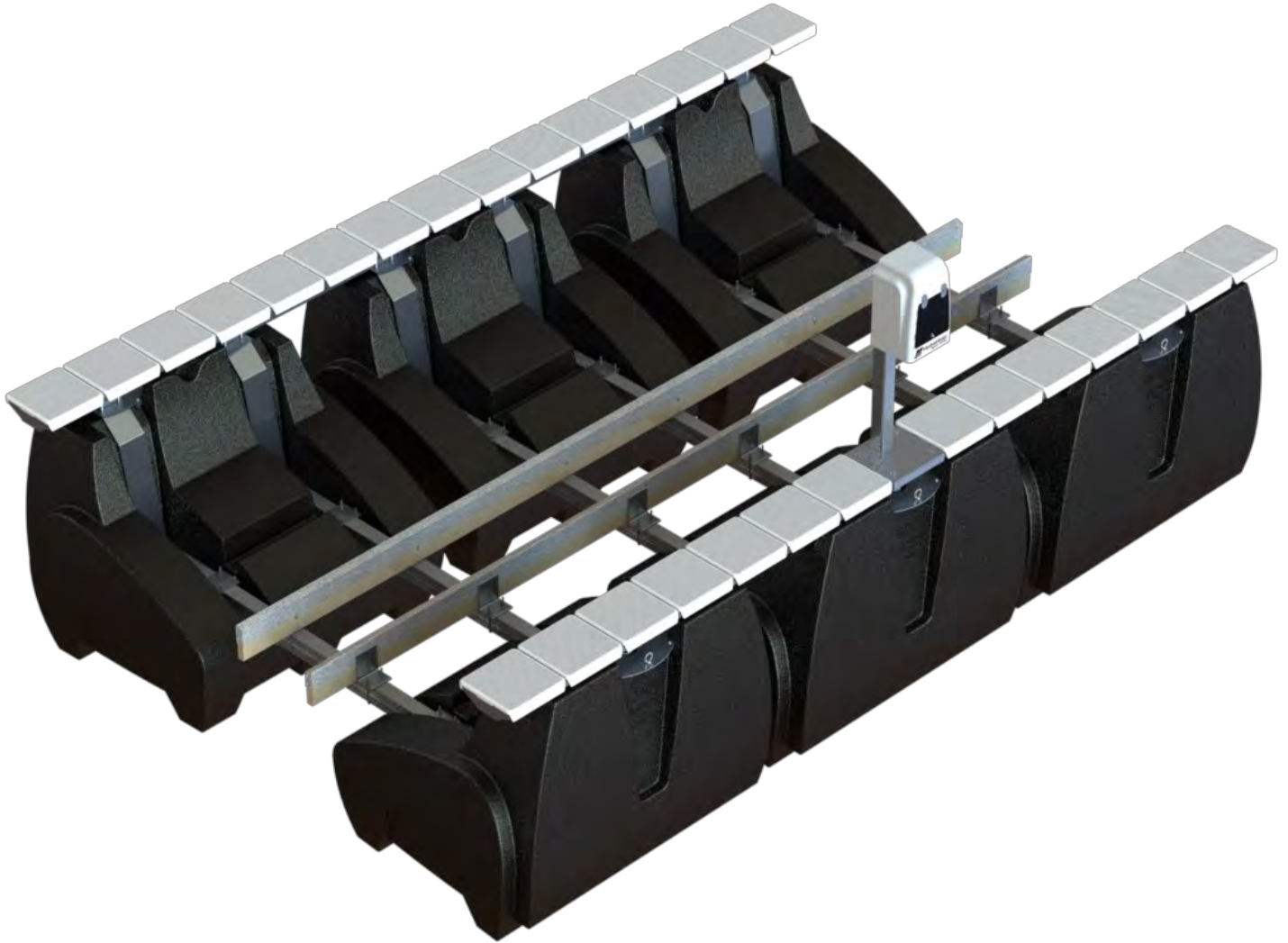


HarborHoist™

BY HYDROHOIST BOATLIFTS



INSTALLATION MANUAL

US PATENT # 6,422,167 B1

Document Revision: June 21st 2018

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BOATLIFT.COM

INTRODUCTION

At HydroHoist® Marine Group, we take pride in bringing the most advanced, easy to use, minimum maintenance boat lift system to the market today. The installation of this lift is simplified by its lightweight design and simple operation. In the pages that follow, we will take you step by step through the entire installation process, including the lofting and lowering of the boat. We urge you to read this manual before attempting an installation.

Before you begin...

The HarborHoist™ G1.5 can be assembled easily by 2 people in a single afternoon. Review all the parts, hardware, and required tool listed below to familiarize yourself with the product before you begin to assemble and don't forget...safety first. You may contact our Technical Support Team to answer any questions.

(ITEMS IN BLUE ARE OPTIONAL THERE NEED AND QTY WILL CHANGE WITH LIFT ORDERED) (PT = PONTOON/ TT = TRITOOON)

ID	PART #	DESCRIPTION	QUANTITY PER CAPACITY					
			4400	6600	8800	12000	15000	18000
A	HH-2601	TOP PLATE—HH ALUMINUM GEN 1 MOD	4	6	8	8	8	8
B	HH-LPL-1024	GASKET—TOP HARBOR HOIST	4	6	8	8	8	8
C	HH-LPL-1025	STRAP PLATE—ALUM. HH	8	12	16	16	16	16
D	HH-LPL-1040	CHANNEL—SUPPORT HH	8	12	16	16	16	16
E	HH-LPL-1027	GASKET—BOTTOM—HARBORHOIST	8	12	16	16	16	16
F	HH-3000	TANK—HARBOR HOIST G1.5	4	6	8	8	8	8
G	HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	8	12	16	16	16	16
H	HH-LPL-1033	TUBE—SPACER, 3X3 ALUMINUM	4	4	4	4	4	4
I	HH-LPL-1034	BEAM—48IN SPAN—ALUM. HH.		4	6	6	6	6
J	HH-2519	BEAM—84IN SPAN—ALUM HH	2					
K	HH-2515	SUPPORT—WALKWAY HARBORHOIST		6	8	8	8	8
L	HH-2518	SUPPORT—WALKWAY HARBORHOIST 4400	4					
M	HH-LPL-1018	I BEAM-84IN	4	6	8	8		
AM	HH-LPL-1036	108" BEAM (OPTIONAL ON V-HULL STD ON PT & TT.	4	6	8	8	8	8
AN	HH-4310	100" V-FRAME (OPTIONAL ON 44-88 STD ON 12-18K)	4	6	8	8	8	8
O	HH-2912	HULL PADS, ALUMINUM 12FT,HARBOR HOIST	2					
P	HH-2916	HULL PADS, ALUMINUM 16FT, HARBORHOIST		2				
Q	HH-2920	HULL PADS, ALUMINUM 20FT, HARBORHOIST			2	2	2	2
R	HH-LPL-1013	BRACKET - HULL SUPPORT - STD. HH	8	12	16	16	16	16
S	HH-2740	CONTROL—HARBORHOIST GEN 1.5 4V	1	1	1			
T	HH-2750	CONTROL—HARBOR HOIST GEN 1.5 5V				1	1	1
U	3072516	HOSE - RUBBER 1-1/4 in. ID X 50 ft. - CUT	1					
V	3072510	HOSE - RUBBER 1-1/4 in. ID X 75 ft. - CUT		1				
W	3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT			1	1	1	1
X	HH-2517	CONTROL—STAND HH AUTOMATIC	1	1	1	1	1	1
Z	HH-LPL-1001	BRACKET—PONTOON HH (PT;TT)	6	6	8	8	8	8
AA	HH-LPL-1112	HH 4400-PONTOON HULL PAD—12'	4/6					

ID	PART #	DESCRIPTION	QUANTITY PER CAPACITY					
			4400	6600	8800	12000	15000	18000
AB	HH-LPL-1116	HH 6600 PONTOON HULL PAD—16' (PT & TT)		4/6				
AC	HH-LPL-1121	HH-8800-PONTOON HULL PAD—20'(PT & TT)			4/6	4/6		
AD	HH-2521	HULL PAD—RISER TRI TOON HARBOR HOIST	3	3	4	4		
AE	HH-2525	END CAP—HH WALKWAY	4	4	4	4	4	4
AF	HH-1428	WALKWAY PANEL—HARBORHOIST G1.5	24	30	40	40	40	39/49
AG	HH-2810	RING MOORING KIT (OPTIONAL)	2	2	2	2	2	2
AG.1	HH-2500	SQUARE MOORING TUBE, HH RING	4	4	4	4	4	4
AG.2	HH-2503	BRACKET, RING MOORING HH	4	4	4	4	4	4
AG.3	HH-2506	PIPE, MOORING HH GEN 1.5 (COVER)	2	2	2	2	2	2
AG.4	HH-2501	HARBORHOIST RING FOR MOORING	2	2	2	2	2	2
AG.5	HH-2505	RING CLIP, HARBORHOIST	2	2	2	2	2	2
AG.6	HH-2504	MOORING PLATE DOCK SIDE	2	2	2	2	2	2
AG.7	HH-2503	KIT HARDWARE—HH RING MOORING	2	2	2	2	2	2
AH	HH-2536/HH-2538	MOUNT-AUXILARY TANK: STYLE MOUNT DECIDED BY TANK CHOICE.				2	4	4
AI	HH-3730	TANK—AUX 36X96X36 FLAT TOP				1	2	
AJ	HH-2690	TANK—AUX 48X96X36 FLAT TOP						2
AO	HH-LPL-1015	KIT DOCK TIE OPTIONAL	2	2	2	2	2	2
AO.1	HH-LPL-1054	MOUNT—SIDE TIE END OPTIONAL	2	2	2	2	2	2
AO.2	HH-1230	PIPE—SIDE TIE BUMPER –G1.5 OPTIONAL	2	2	2	2	2	2
AO.3	HH-1231	U-BOLT W/MOUNTING PLATE - 1/4-20 X 1-3/4 ID X 3" 304 SS (ITEM 12 ON HARDWARE KIT LIST)	4	4	4	4	4	4

Tools Required:

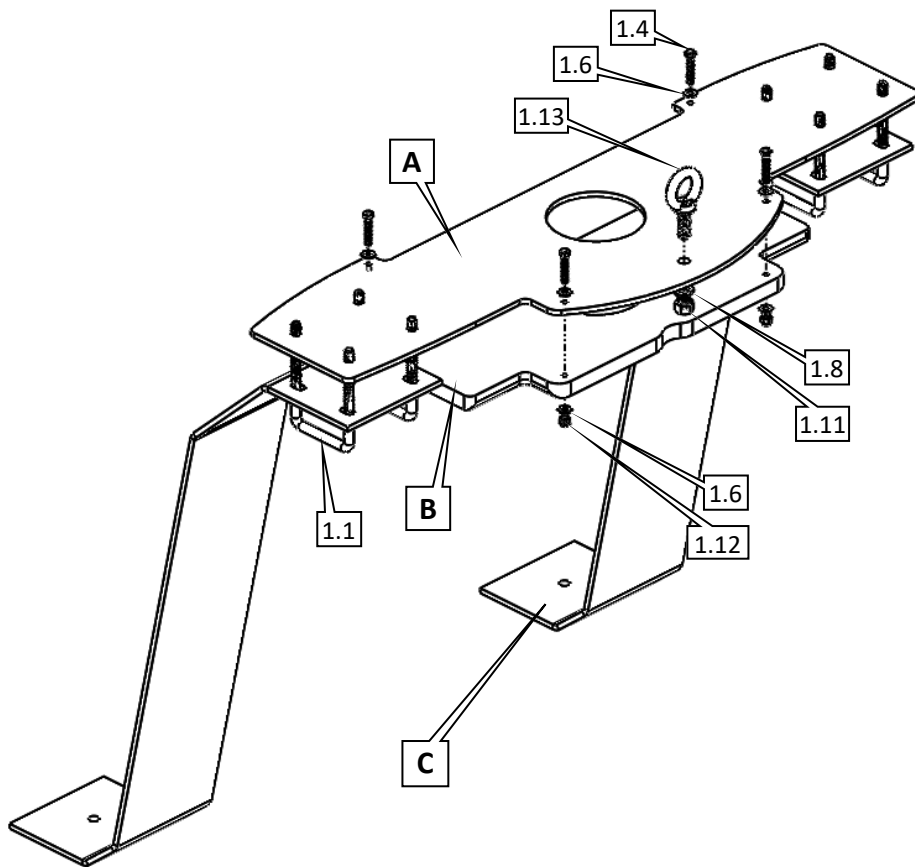
5/16" socket wrench / driver	Taper Tool to aid with hole alignments
7/16" socket wrench / driver	Drill/Impact Driver
9/16" deep socket wrench / driver	7/16 Drill Bit
3/4" deep socket wrench / driver	Hammer / Rubber Mallet
7/16 Box End Wrench	Thread Sealant
9/16" Box End Wrench	Gloves
3/4" Box End Wrench	Safety Glasses

BOLT SIZE	FOOT POUNDS OF TORQUE
1/4-20	5 FT. LBS.
5/16-18	9 FT. LBS.
3/8-16	16 FT. LBS.
7/16-14	26 FT. LBS.
1/2-13	35 FT. LBS.
9/16-12	47 FT. LBS.
5/8-11	76 FT. LBS.

2ID	PART #	DESCRIPTION	QUANTITY PER CAPACITY					
			4400	6600	8800	12000	15000	18000
1	HH-2650	KIT BOX—HH G1.5 TANK SET	2	3	4	4	4	4
1.1	HH-LPL-1503	U-BOLT—.375 X 3 X 5 SS	16	24	32	32	32	32
1.2	HH-LPL-1504	U-BOLT—.375 X 3 X 6 SS	16	24	32	32	32	32
1.3	HH-LPL-1006	BOLT—5 IN FLAT HEAD SS	16	24	32	32	32	32
1.4	HH-LPL-1501	BOLT—HX HEAD—1/4-20X1.5” SS	16	24	32	32	32	32
1.5	HH-LPL-1508	WASHER—FLAT—1/2 X 2 OD SS	16	24	32	32	32	32
1.6	2090216	WASHER—FLAT—1/4” SS	32	48	64	64	64	64
1.7	HH-LPL-1505	WASHER—LOCK 3/8 SS	64	96	128	128	128	128
1.8	HH-1916	WASHER—LOCK 1/2” SCREW SIZE 18-8 SS	4	6	8	8	8	8
1.9	HH-2603	NUT—3/8-16 BRASS	64	96	128	128	128	128
1.10	HH-2100	NUT, 1/2-13 BRASS NYLOCK	16	24	32	32	32	32
1.11	HH-1926	NUT—HEX 1/2—13 BRASS	20	30	40	40	40	40
1.12	HH-LPL-1502	NUT—1/4-20—SS NYLOCK	16	24	32	32	32	32
1.13	HH-2602	LIFTING RING—1.5 X 4 STAINLESS STEEL	4	6	8	8	8	8
1.14	HH-1016	STUB TUBE ASSEMBLY HH G2	4	6	8	8	8	8
1.15	HH-LPL-1031	BUSHING—NYLON—HH TANK	8	12	16	16	16	16
1.16	2090242	WASHER—FLT—3/8” SS	32	48	64	64	64	64
2	HH-2660	KIT HARDWARE HULL PAD TANK SET	2	3	4	4	4	4
3	HH-2689	KIT HARDWARE HOSE CLAMPS 4400	1					
3.1	2090907	CLAMP—HOSE—#24 GEAR—SS300	8					
4	HH-2687	KIT HARDWARE HOSE CLAMPS 6600		1				
4.1	2090907	CLAMP—HOSE—#24 GEAR—SS300		16				
4.2	2093005	TEE - 1 1/4—NYLON HOSE INSERT BARBED		2				
5	HH-2685	KIT HARDWARE HOSE CLAMPS 8800			1	1	1	1
5.1	2090907	CLAMP—HOSE—#24 GEAR—SS300			24	24	24	24
5.2	2093005	TEE - 1 1/4—NYLON HOSE INSERT BARBED			4	4	4	4
6	HH-2655	KIT HARDWARE CONTROL MOUNT G1.5	1	1	1	1	1	1
6.1	HH-1913	BOLT CARRIAGE 1/2-13 X 1.5 SS	4	4	4	4	4	4
6.2	HH-2509	BOLT 1/4-20 X 1IN SS HHCS	4	4	4	4	4	4
6.3	HH-1971	SCREW—#12-24 X 3/4 SS 18-8	8	8	8	8	8	8
6.4	HH-1916	WASHER—LOCK 1/2” SCREW 18-8 SS	4	4	4	4	4	4
6.5	HH-1926	NUT—HEX 1/2-13 BRASS	4	4	4	4	4	4
6.6	HH-2508	WASHER—LOCK 1/4” SS	4	4	4	4	4	4
6.7	HH-1972	WASHER—LOCK #12 18-8 SS	8	8	8	8	8	8
6.8	HH-1973	NUT—#12-24 HEX HEAD 18-8 SS	8	8	8	8	8	8
7	HH-2675	KIT, HARDWARE, PONTOON (PER TANK SET)	3	3	4	4	4	4
7.1	HH-1942	CARRIAGE BOLT-1/4-20 X 2 1/4 SS	12	12	16	16	16	16

ID	PART #	DESCRIPTION	QUANTITY PER CAPACITY					
			4400	6600	8800	12000	15000	18000
7	HH-2675	KIT, HARDWARE, PONTOON (PER TANK SET) (PT-TT)	3	3	4	4	4	4
7.1	HH-1942	CARRIAGE BOLT-1/4-20 X 2 1/4 SS	12	12	16	16	16	16
7.2	HH-2508	WASHER, LOCK 1/4" SS	12	12	16	16	16	16
7.3	HH-1941	NUT, 1/4-20 STAINLESS STEEL	12	12	16	16	16	16
8	HH-2656	KIT—HARDWARE TRITON (SINGLE BRACKET) (TT)	3	3	4	4		
8.1	HH-2604	BOLT—1/2-13 X 1.5 SS	12	12	16	16		
8.2	HH-1916	WASHER—LOCK 1/2" SCREW 18-8 SS	12	12	16	16		
8.3	HH-1926	NUT—HEX 1/2-13—BRASS	12	12	16	16		
9	HH-2503	KIT, HARDWARE HARBORHOIST RING MOORING	2	2	2	2	2	2
9.1	HH-1902	BOLT—1/2-13 X 4 SS HHG2	16	16	16	16	16	16
9.2	HH-1930	BOLT—CARR—1/2-13 X 3.5 18-8 SS	4	4	4	4	4	4
9.3	HH-1916	WASHER—LOCK 1/2" SCREW 18-8 SS	20	20	20	20	20	20
9.4	HH-1926	NUT—HEX 1/2-13 BRASS	20	20	20	20	20	20
10	HH-2672	HARDWARE KIT—AUX. TANK (STRAIGHT FRAME)				1	2	
10.1	HH-1946	BOLT—CARR 5/16-18 X 2.75 SS				8	16	
10.2	HH-1961	BOLT—CARR 5/16-18 X 1.25 SS				12	24	
10.3	HH-1947	WASHER—FENDER 5/16IN ID X 2IN OD SS				16	32	
10.4	HH-1948	WASHER—LOCK 5/16 SS				20	40	
10.5	HH-1949	NUT—5/16-18—BRASS				20	40	
10.6	HH-1962	CLAMP—HARBORHOIST AUX TANK SS				12	24	
11	HH-2668	KIT—HARDWARE HULL PAD ALUMINUM	2	3	4	4	4	4
11.1	HH-LPL-1504	U-BOLT—.375X3X6 SS	8	12	16	16	16	16
11.2	HH-2607	BOLT—3/8-16 X 4 SS	8	12	16	16	16	16
11.3	HH-2606	WASHER—FLAT -3/8 SS	8	12	16	16	16	16
11.4	HH-LPL-1505	WASHER- LOCK—3/8 SS	24	36	48	48	48	48
11.5	HH-2603	NUT—3/8-16 BRASS	24	36	48	48	48	48
12	HH-1231	U-BOLT W/MOUNTING PLATE - 1/4-20 X 1-3/4 ID X 3" 304 SS	4	4	4	4	4	4
13	HH-2673	AUX. TANK KIT -V FRAME OPTIONAL				1	2	2
13.1	HH-1944	BOLT-CARR 5/16-18 X 4 18-8 SS				12	24	24
13.2	HH-1946	BOLT-CARR 5/16-18 X 2.75 18-8 SS				6	12	12
13.3	HH-1949	NUT - 5/16-18 - BRASS				18	36	36
13.4	HH-1947	WASHER - FENDER 5/16IN ID X 2IN OD SS				12	24	24
13.5	HH-1948	WASHER - LOCK 5/16 SS				18	36	36
13.6	HH-2539	PLATE - AUX. TANK CONNEECTION HARBORHOIST				6	12	12

STEP 1: STRAP ASSEMBLY— (Repeat this step for each tanks supplied)



- 1) Attach B to A using 1/4-20 x 1.5" bolts, 2 1/4" flat washers per bolt, and 1/4-20 Nylocks
- 2) Insert 5" U-Bolts through C and A. (U-Bolts become captured once this assembly is placed on the tank, Optionally you can put the washers and nuts from step 5, instruction 3, on the U-bolts to help retain them)

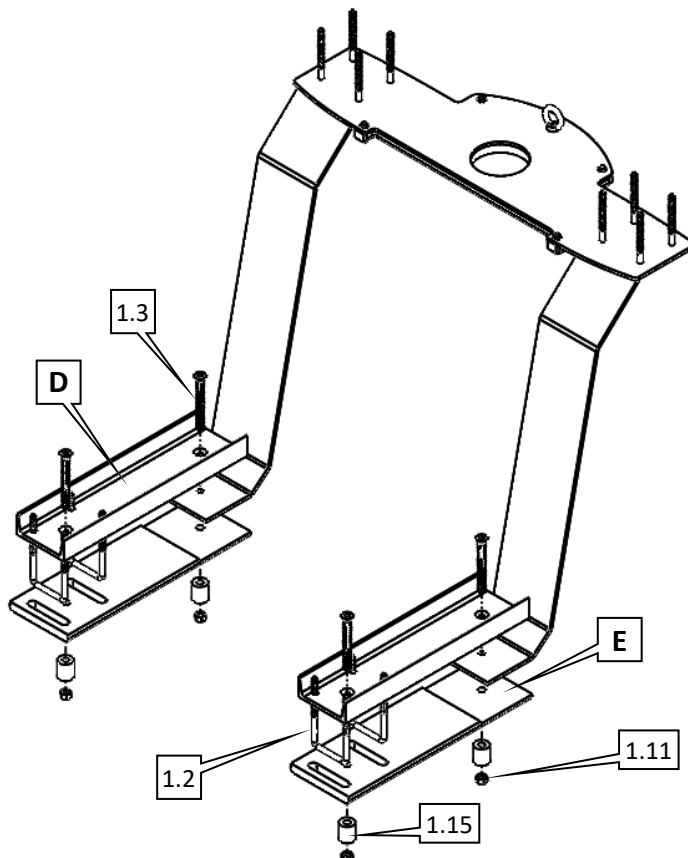
Parts Required (Per Tank)

[A]	Top Plate	x1
[B]	Top Gasket	x1
[C]	Strap Plate	x2

Hardware Required

1	HW Tank Set Kit	
1.1	U-Bolt 3/8-16 x 3 x 5	x4
1.4	Bolt—Hex 1/4-20 x 1.5	x4
1.6	Washer—Flat 1/4"	x8
1.8	Washer—Lock 1/2" 18-8 SS	x1
1.11	Nut—Hex 1/2-13 Brass	x1
1.12	Nut—1/4-20 SS Nylock	x4
1.13	Lifting Ring—1.5 x 4 SS	x1

STEP 2: ATTACH CHANNEL SUPPORTS TO STRAP ASSEMBLY



- 1) Attach D to E using the 5" flat head SS bolts, nylon bushings, and 1/2-13 Brass nuts. Be sure to capture the Strap assembly between the two parts as shown.
- 2) Place the U bolts in place as shown (the U will be in the slot). Optional: You can loosely attach the hardware from step 6 instruction 3 on now to help retain the U-Bolts.

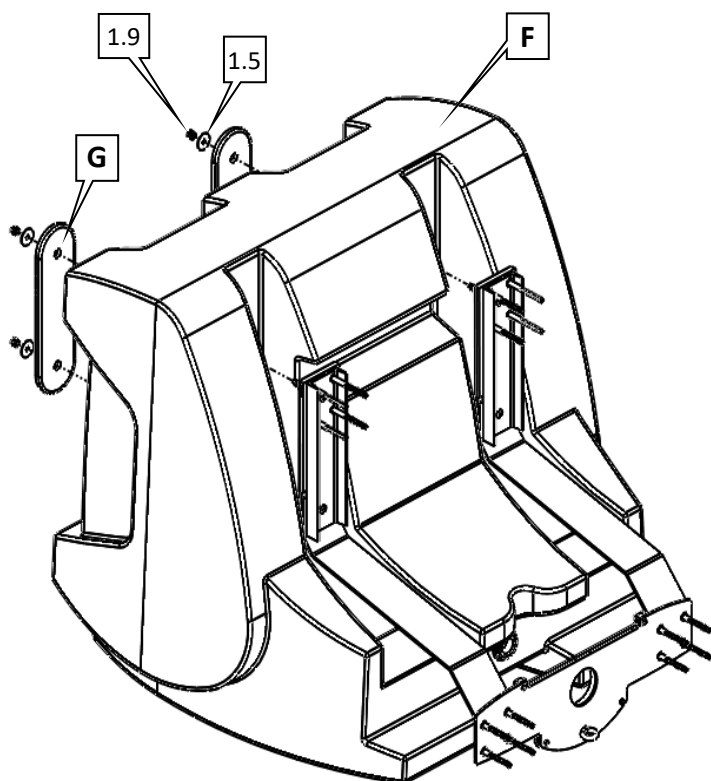
Parts Required (Per Tank)

[D]	Channel Support	x1
[E]	Bottom Gasket	x1

Hardware Required

1	HW Tank Set Kit	
1.2	U-Bolt 3/8-16 x 3 x 6	x4
1.3	Bolt—5 IN Flat Head SS	x4
1.11	Nut—Hex 1/2-13 Brass	x1
1.15	Bushing—Nylon—HH Tank	x4

STEP 3: ATTACH TANK STRAPS TO TANKS



Tank shown on back as indicated in direction 2

- 1) Place the assembly from the previous step on top of the tank with the straps placed in the recesses along the inside of the tank top. Push the top plate and gasket down as tight as you can get it. (depending on the temperature you may not get the gasket to sit flush with the top of the tank) Also be sure to push the channel support / Bottom Gasket down as tight as you can get them as well.
- 2) Roll the tanks on their back, or lift them in the air if you have that availability and install the underneath gasket (rounded side toward the top of the tank) with 2 ea. 1/2"x2"OD Washers and 1/2-13 Brass Nylock nuts per strap.

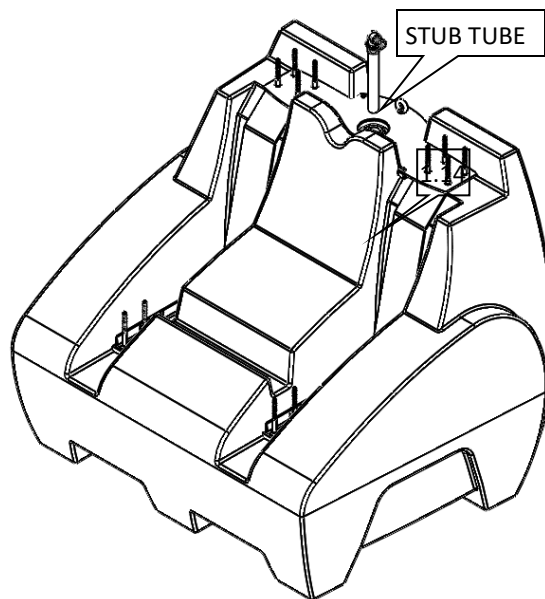
Parts Required (per Tank)

[F]	Tank—HH G1.5	x1
[F]	Gasket—Underneath—HH	x2

Hardware Required

1	HW Tank Set Kit	
1.5	Washer-Flat-1/2X2 OD SS	x4
1.9	Nut, 1/2-13 Brass Nylock	x4

STEP 4: CONNECT STUB TUBES



- 1) Apply thread sealant to the stub tube threads (TFE PASTE, WHITE SLOW SETTING IS RECOMMENDED)
- 2) Screw stub tube into tank, as the threads start to tighten up start looking for the direction you want the hose to point so that you can determine if you can turn the stub another full turn to reach that position or not. You do not want to overshoot the position as backing the stub tube off could result in a leaking fitting.
- 3) Attach Hose ends to the stub tubes, with a hose clamp. Make sure elbows and hoses are routed the correct directions (**4 tank**—toward center of lift / **6 Tank**—Front 4 tanks to the Rear, Rear 2 toward the front / **8 Tank**—Front 2 tanks per side towards each other, and Rear 2 tanks also toward each other). Routing and length can be found later in this manual (Step 12). Hose and hose

NOTE: FOR DEEP V-HULLS THAT REQUIRE MORE WATER DEPTH, (TYPICALLY 8800 & UP) STUB TUBE ASSEMBLY MAY NEED TO BE SHORTENED. TANK SET1 (BOW TANKS) ARE NEVER SHORTENED. FROM THE 2ND TANK SET BACK, YOU CAN SHORTEN TUBES AS FOLLOWS ON CHART.

STUB TUBE MAXIMUM TRIM AMOUNT IF NEEDED				
MODEL	TANK SET 1	TANK SET 2	TANK SET 3	TANK SET 4
4400	0	3"	N/A	N/A
6600/8800S	0	1.5"	3"	N/A
8800L	0	1"	2"	3"
TANK SET 1 IS ALWAYS AT THE BOW OF THE BOAT WHEN LOADED ON THE LIFT				

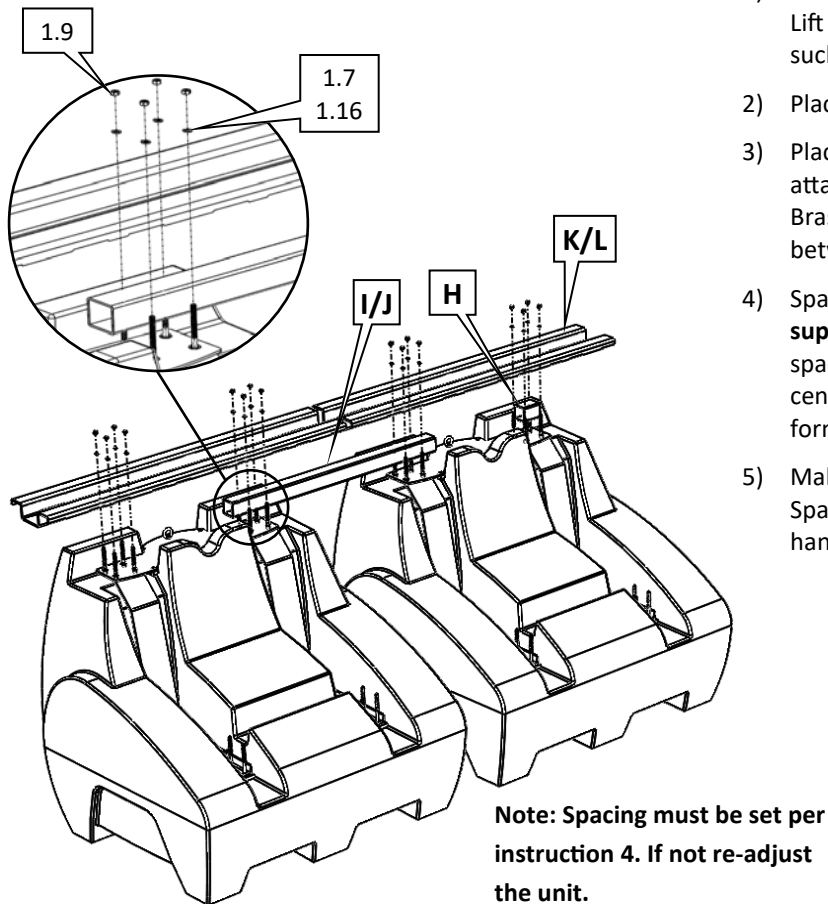
Parts Required (4400/6600/8800 & Up)

[U/V/W]	Hose—Cut	50/75/100 ft.
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Hardware Required (4400/6600/8800 & Up)

1	Kit Box HHG1.5 Tank Set	x2/3/4
1.14	Stub Tube Assembly	x4/6/8
3/4/5	Hardware Hose Clamps	x1/1/1
3/4/5.1	Hose Clamp #24	x4/6/8

STEP 5: CONNECTING FORE—AFT TANKS



- 1) Place Spacer tubes between U-Bolts on The 4 Corners of the Lift (This tube may be replaced with optional components such as mooring components etc). (REFER TO STEP 16)
- 2) Place [I/J] Span Beams between U-bolts of connecting tanks.
- 3) Place Walkway support on top of the tubes and loosely attach with 3/8" Washer, 3/8" SS Lock Washers, and 3/8-16 Brass Nut. On 4400 long side of walkway support is oriented between tanks
- 4) Space tanks so that there is **1.75" gap between walkway support sections (4400 gap is 1.625")**. The tanks will be at a spacing of **68.25" (4400 spacing is 104.68)** You can use the center of the eye bolt to measure from. This will insure uniform spacing of walkway tiles.
- 5) Make sure Span Tubes are centered between sections, and Spacer tubes are in their proper locations. Leave hardware hand tight. Once spacing is confirmed, Tighten Hardware.

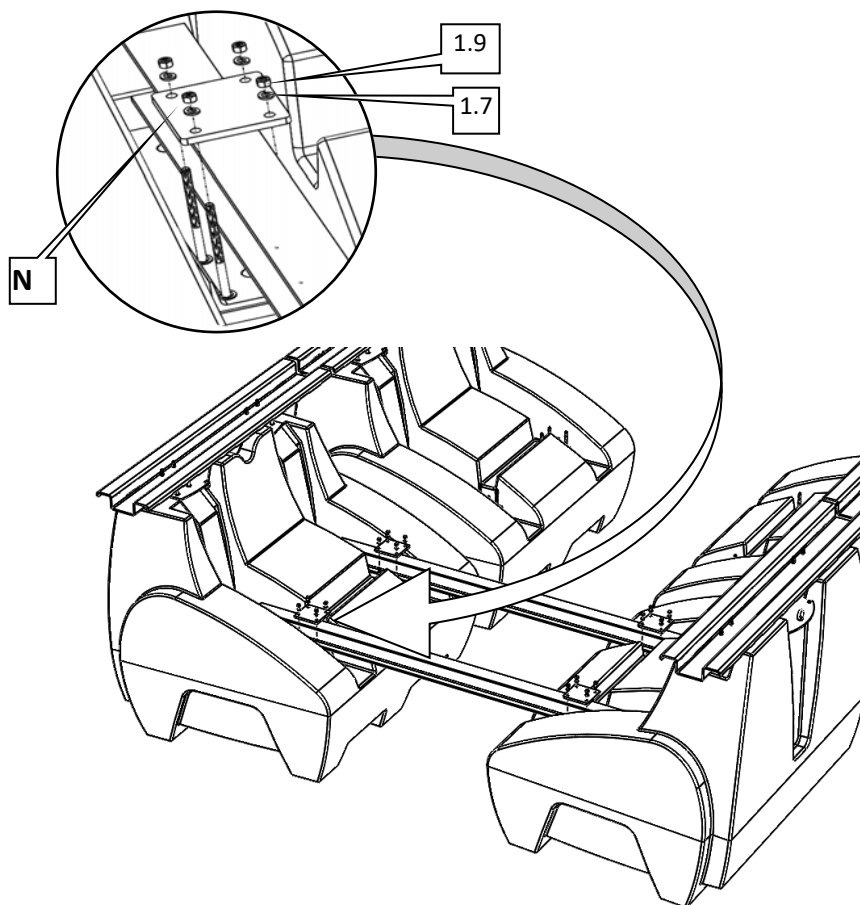
Parts Required (4400/6600/8800 & Up)

[H]	Spacer tube 3x3 alum.	x4
[I/J]	Span Beam (J 4400 Only)	x2/4/6
[K/L]	Walkway Support (L 4400)	x4/6/8

Hardware Required (Per Tank)

1	HW Tank Set Kit	
1.7	Lock Washer 3/8 SS	x8
1.9	Nut—3/8-16 Brass	x8
1.16	Washer—Flt-3/8	x8

STEP 6 : Port—Starboard Assembly



- 1) Separate Port and Starboard tanks such that you have enough room to accommodate the beam of the boat. **For an 8'6" beam the beam will overlap the C-Channel by 15.5"**. To Narrow the lift increase this dimension (about 4" available or 8" total width 7'10" beam) To Widen the lift decrease this dimension (about 6" or 1' total 9'6" beam boat on standard 84" channel)
- 2) Place I Beam [M] into support Channel in between the Existing U-Bolts.
- 3) Place Beam Strap on top of I-Beam and loosely secure with supplied 3/8" SS Lock washer and 3/8-16 Brass Nut. **Note:** Pontoon Pad bracket will replace Beam Strap for Pontoon/TriToon applications where applicable.
- 4) Once Port-Starboard dimensions are confirmed you can tighten the hardware.

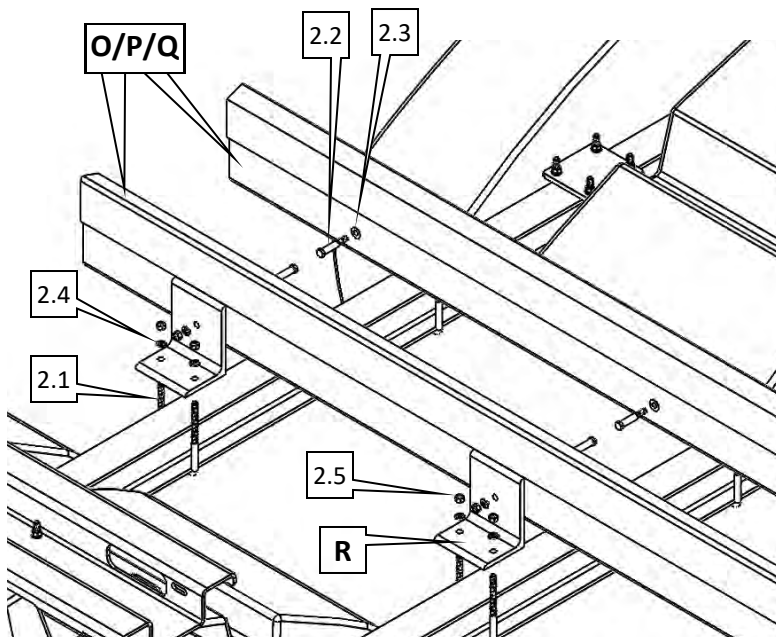
Parts Required (4400/6600/8800 & Up)

[M]	I Beam-84In	x4/6/8
[N]	Beam Strap—Alum.	x8/12/16

Hardware Required (Per Tank)

1	HW Tank Set Kit	
1.7	Lock Washer 3/8 SS	x8
1.9	Nut—3/8-16 Brass	x8

STEP 7: Hull Pad Assembly (V-Hull CONFIGURATION ONLY)



- 1) Attach the Hull Support Brackets to the cross beams with the SS U-Bolts, Lock Washers, and Brass Nuts.
- 2) Center the Hull Pad Bow to Stern.
- 3) Using the Holes in the brackets as a guide, drill a 7/16" hole in the pad and through bolt the pad to the bracket using the supplied 2.5" Bolt, Flat Washer, Lock Washer and Brass Nut.

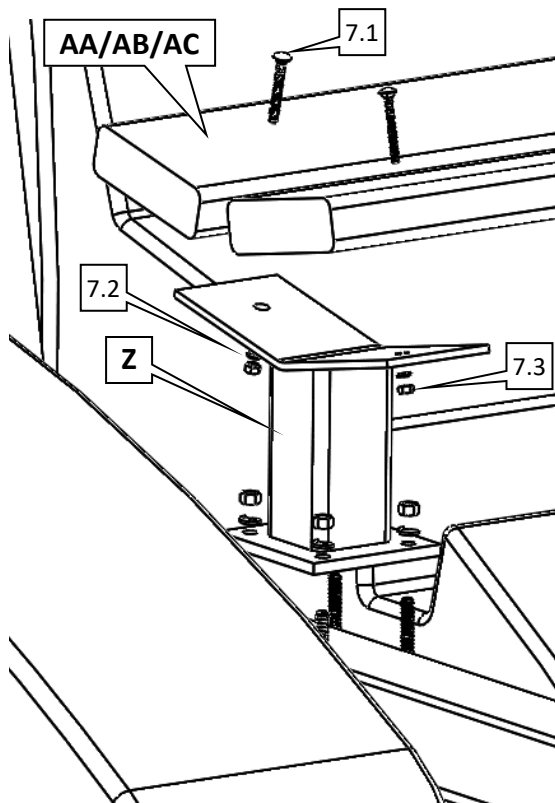
Parts Required (per lift)

[O/P/Q]	Hull Pad (44/66/88up)	x2
[R]	Bracket Hull Support	x8/12/16

Hardware Required (per tank set)

11	Kit HW Hull Pad Set	x2/3/4
11.1	U-Bolt—,375 x 3 x 6 SS	x4
11.2	Bolt, 3/8-16 x 4.0 SS	x4
11.3	Washer, Flat 3/8 SS	x4
11.4	Washer, Lock 3/8 SS	x12
11.5	Nut, 3/8-16 Brass	x12

STEP 8: Hull Pad Mounting (PONTOON AND TRITOON ONLY)



- 1) **Replace the Beam Strap plate** with the pontoon bracket for the following cross channels: **4400**—both rear cross channels and the front cross channel **6600**—Rear cross channels on the center and rear tanks, and the front cross channel of the front tank **8800 & up 8tank units**—Rear Cross Channel on the rear two sets of tanks, front cross channel on front two sets of cross channels.
- 2) Adjust the lift width so that the center of the pontoons will match the bunks. **Be sure you have enough width available for the lift when putting a pontoon on this lift. Lift requires a minimum of: The Pontoon Center Distance plus 78" (39" per side)**
- 3) Mount the Pads to the Pontoon brackets. Drill 5/16 hole through the center of the hull pad using the bracket holes as a guide. Insert carriage bolt through the pad and tighten using supplied lock washer and nut. Be sure to pull the carriage bolt down far enough to be countersunk into the wood such that the head is **flush or below the surface**.

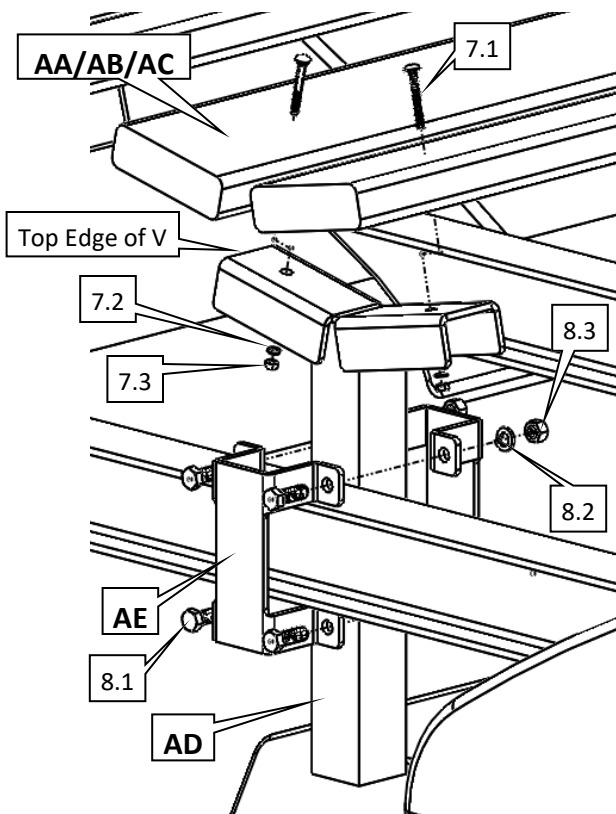
Parts Required (per lift)

[Z]	Pontoon Bracket (44/66/88up)	x6/6/8
[AA/AB/AC]	Pontoon Hull Pad	x4

Hardware Required (per tank set)

7	Kit HW Pontoon	x3/3/4
7.1	Carriage Bolt—1/4-20 x 2 1/4 SS	x4
7.2	Washer, Lock 1/4" SS	x4
7.3	Nut, 1/4-20 Stainless Steel	x4

STEP 9: Hull Pad Assembly
(TRITOON ONLY)



- 1) Follow the steps for a pontoon for the outside tubes
- 2) Determine if there is any offset for the Center tube. For no offset the distance from the I-beam to the top edge of the V is approx. 7.62" (measure from the I-beam to a point on the pontoon bracket and set the tritoon bracket at the same height, adjust as needed for offsets)
- 3) Place the clamps on either side of the riser tube and bolt together with the provided hardware. Tighten just enough to provide enough friction to hold the riser in place. Make any additional adjustments needed
- 4) Tighten the clamp bolts and install the Hull Pads as described in Step 8 Instruction 3 for the pontoon Pads.

Parts Required (per lift)

[AD]	Tritoon Riser (44/66/88up)	x3/3/4
[AE]	Bracket Clamp Riser (44/66/88)	x6/6/8
[AA/AB/AC]	Pontoon Hull Pad	x2

Hardware Required (per tank set)

7	Kit HW Pontoon	x3/3/4
7.1	Carriage Bolt—1/4-20 x 2 1/4 SS	x4
7.2	Washer, Lock 1/4" SS	x4
7.3	Nut, 1/4-20 Stainless Steel	x4
8	Kit HW Tritoon	x3/4
8.1	Bolt—1/2-13 x 1.5 SS	x4
8.2	Washer—Lock 1/2" 18-8 SS	x4
8.3	Nut—Hex 1/2-13—Brass	x4

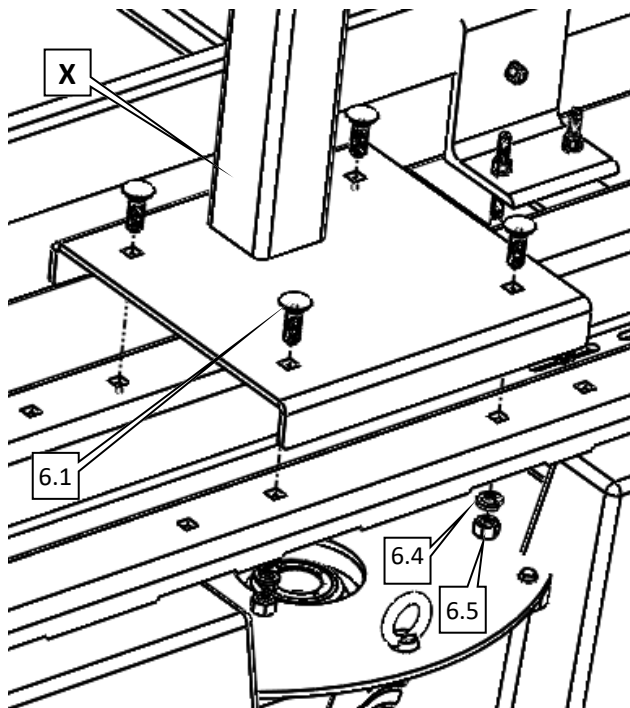
Hull Pad Separation (In)	Max Dead Rise (Deg)	Min Clearance (In)	Flat Clearance (In)	10 deg Clearance (In)	15deg Clearance (In)	20deg Clearance (In)	25deg Clearance (In)	30deg Clearance (In)	35deg Clearance (In)	40deg Clearance (In)	50deg Clearance (In)	60deg Clearance (In)	70deg Clearance (In)	80deg Clearance (In)
5	70.1	1	8.2	7.2	6.6	6.1	5.6	5.4	5.1	4.9	4.2	3.1	1	
10	50.9	1	8.2	6.7	6	5.2	4.4	3.9	3.4	2.8	1.2			
12	45.2	1	8.2	6.6	4.8	4.8	4	3.4	2.7	1.9				
15	38.3	1	8.2	5.3	4.3	4.3	3.3	2.5	1.6	0.07				
17	34.7	1	8.2	5.7	3.9	4	2.8	1.9	0.9					
20	30.2	1	8.2	5.8	3.4	3.4	2.1	1						
25	24.8	1	8.2	5.4	4	2.5	0.9							
30	21.5	1	8.2	5	3.3	1.6								
32	20.5	1	8.2	4.8	3	1.2								
35	19.1	1	8.2	4.5	2.6	0.6								
40	17.6	1	8.2	4.1	2									

ADDITIONAL HULL PAD INFORMATION—

BUNK VALUES (SEPERATION DISTANCES MEASURED INSIDE TO INSIDE OF RECTANGULAR TUBE, Left section of chart shows pad separation and max dead rise angle to maintain 1" minimum clearance listed top to bottom. The Right section lists dead rise angles (in 5 degree increments) from left to right. Looking down the columns lists the clearance values for the Pad separation listed at the Far Left of the chart.

Place the hull pads as wide as possible and still have clearance between the hull and I-beam. Be sure to check the boat, boat trailer, or consult the boat manufacturer to insure the location you choose is clear of any underwater obstructions such as speedometer sensors, water pickups, Fins, etc. The hull pads can be placed on the lift such that the front is narrower than the rear if needed, however be sure that if you need to do this the hull pad does not cross a strake or other feature on the hull that would result in a concentrated loading condition. The chart above is based on the dead rise angle and separation distance and is provided as a starting point only.

STEP 10: Control Stand Mounting—



- 1) Determine where you where on the walkway you want to mount the control (For best leveling it is recommend-
ed to locate the control as near to the center of the lift as possible, although it can be mounted at other locations
along the walkway if needed). For most lifts the control will be mounted at one end of a walkway section in be-
tween two tanks, fot the 6600 it typically will be in the middle of the center tank walkway. It can be mounted
either Port or Starboard side.
- 2) Set stand on the walkway support member. Place Car-
riage bolts (6.1) through the base of Control Stand and
through the holes in the Walkway support. Secure with a
lock washer, and Brass nut. The carriage bolts can be
inserted from either the top or bottom, however a more
finished look is achieved when the carriage bolt is on the
top side of the control stand. Use this orientation when
possible.

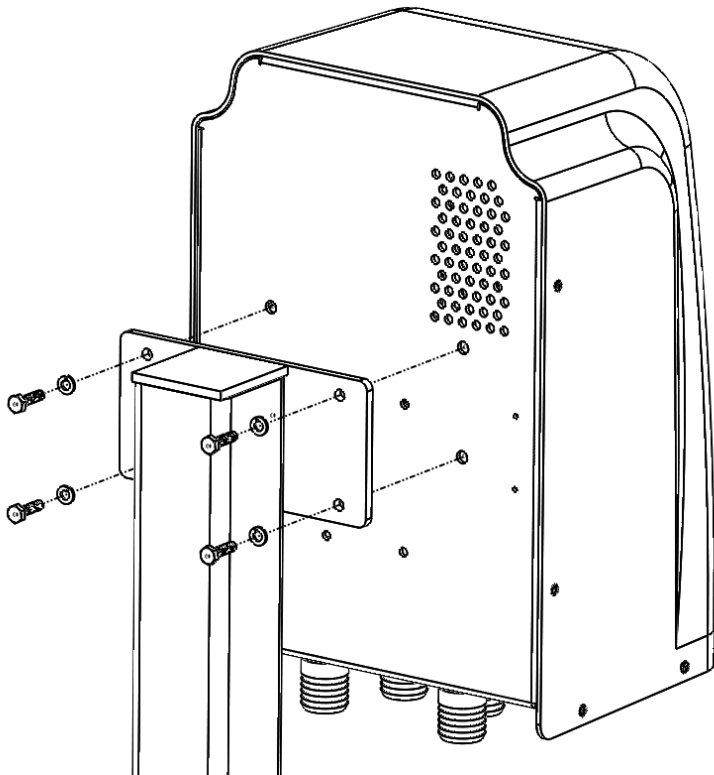
Parts Required (4400/6600/8800 up)

[X] Control Stand HH Auto

Hardware Required

6	Kit HW Control Mount	x1
6.1	Bolt Carriage 1/2-13 x 1.5	x4
6.4	Washer Lock 1/2" 18-8 SS	x4
6.5	Nut—Hex 1/2-13 Brass	x4

STEP 11 CONTROL MOUNTING



- 1) Attach the Control unit [S/T] to the Control
Stand using the supplied 1/4-20 x 1" SS Bolts
(6.6) and 1/4" SS Lock Washers (6.7).

The control you receive will depend on the size of
the lift ordered. The 4400/6600/8800 will come with
the 4 Valve Control [S] and the 1200/15000/18000
will come standard with the 5 valve Control [T]

Parts Required (4400/66600/8800/12000/15000/18000)

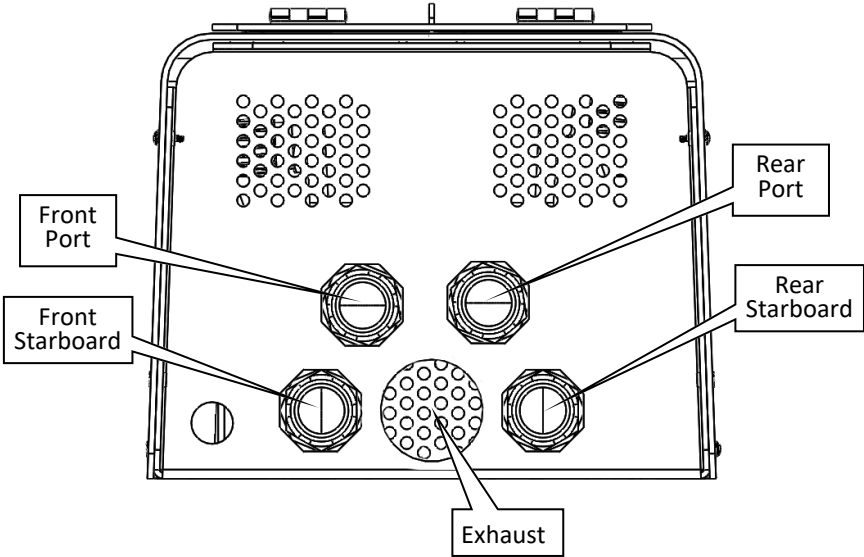
[S] Control—HH G1.5 4 valve x1/1/1/0/0/0
[T] Control—HH G1.5 5 valve x0/0/0/1/1/1

Hardware Required:

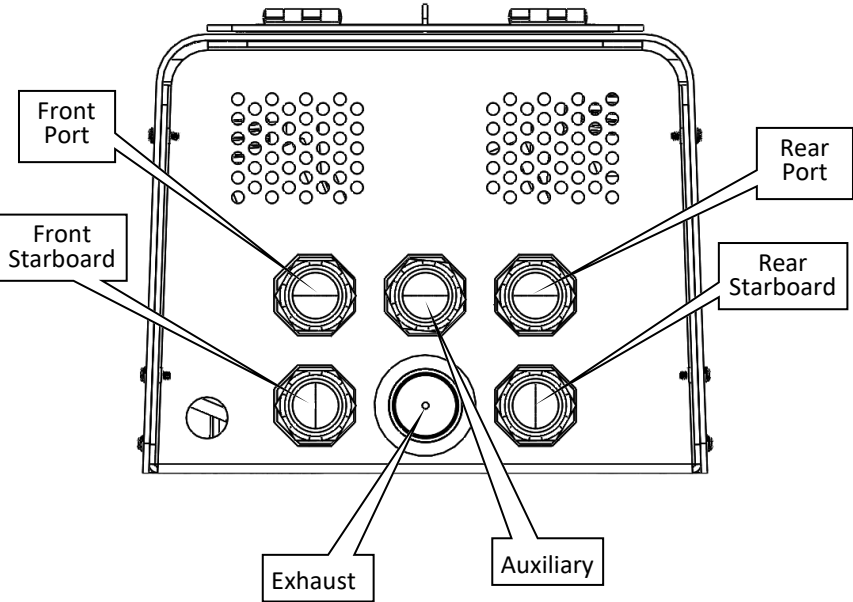
6	Kit HW Control Mount G1.5	
6.2	Bolt—1/4-20 x 1 SS HHCS	x4
6.6	Washer—Lock 1/4" SS	x4

STEP 12 TANK PLUMBING—

4 Valve



5 Valve



Front tanks—4 and 6 tank units: Connect Hoses from stub tubes to corresponding Control connection (Front Port / Front Starboard) with supplied Hose Clamps (3.1/4.1). **8 Tank units:** Connect Hoses from front 2 tanks of each side to a Tee (located between the 2 tanks) using the supplied hose clamps (5.1). Attach another length of hose to the Tees and follow the routing in the diagrams to connect the hoses to corresponding connections on the Control (Front Port / Front Starboard). **Rear tanks—4 Tank units:** Same process as Front to Control connections (Rear Port / Rear Starboard) **6 and 8 Tank Units:** Same process as 8 Tank Front except using the 2 rear tanks on each side and connecting to Control Connections Rear Port / Rear Starboard.

Parts Required (4400/66600/8800 &up)

[U/V/W] Hose (50/75/100 ft) x1/1/1

Hardware Required:

3/4/5 Hardware Hose Clamps x1/1/1

3/4/5.1 Hose Clamp—#24 x4/10/16

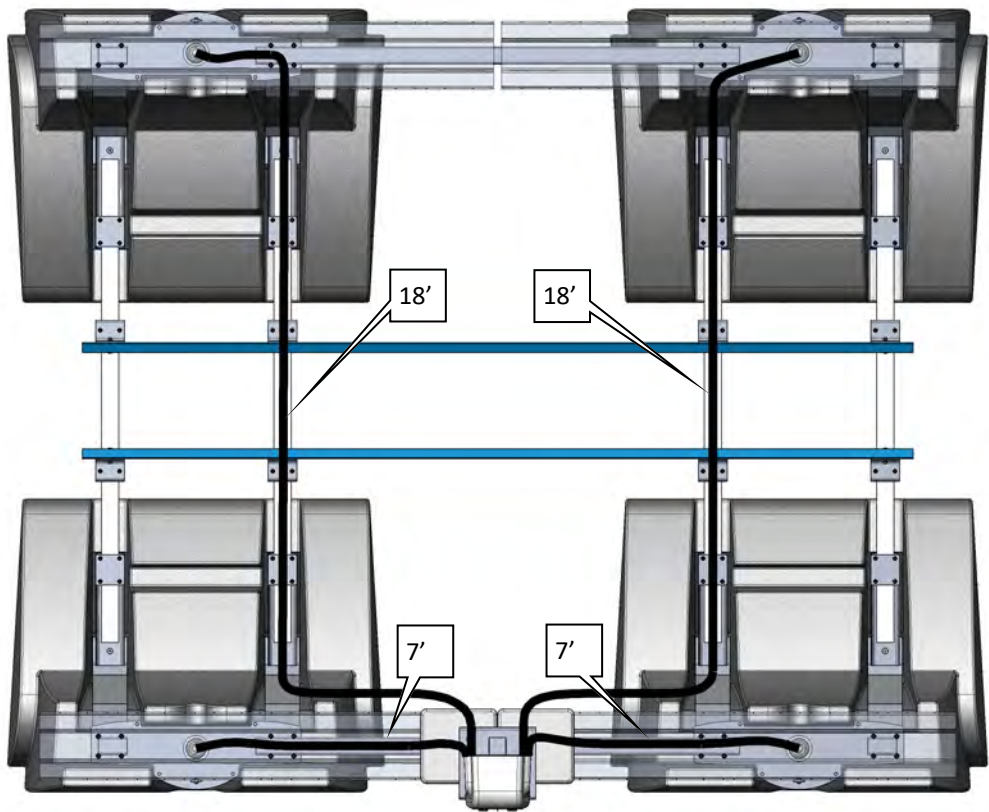
4/5.2 Tee—1/1/4" Nylon Hose Barb x0/2/4

Front tanks—Connect Hoses from front 2 tanks of each side to a Tee (located between the 2 tanks) using the supplied hose clamps (5.1). Attach another length of hose to the Tees and follow the routing in the diagrams to connect the hoses to corresponding connections on the Control (Front Port / Front Starboard).

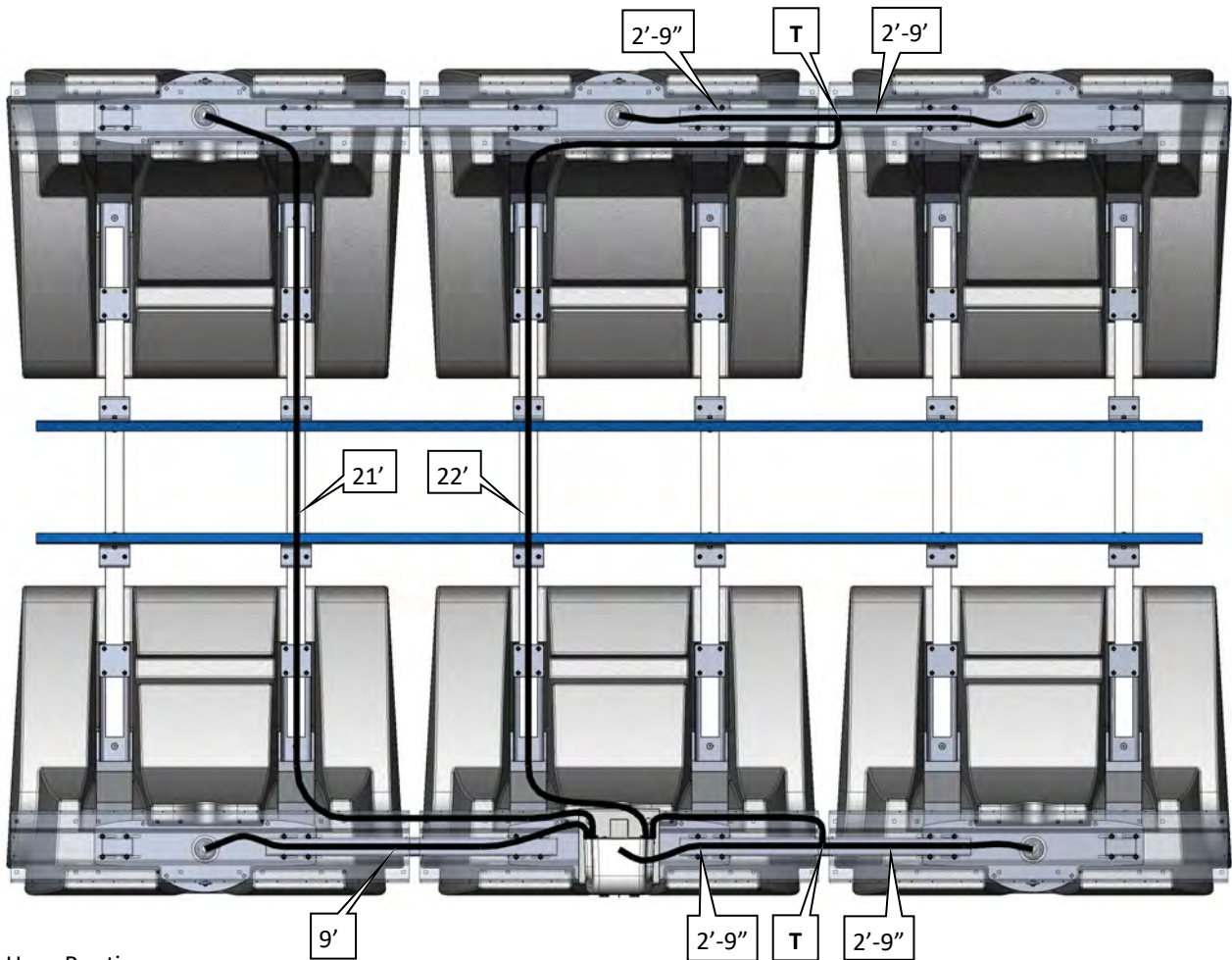
Rear tanks—Same process as the front except using the 2 rear tanks on each side and connecting to Control Connections Rear Port / Rear Starboard.

Auxiliary Tank(s) - For a single Auxiliary tank, Connect the hose from the tank to the Auxiliary port on the control. For dual Auxiliary tanks, connect the two tanks together using one of the supplied tees. Once that is done, connect the teed tanks to the Auxiliary port on the control following the routing diagrams.

STEP 12 ROUTING DIAGRAMS—



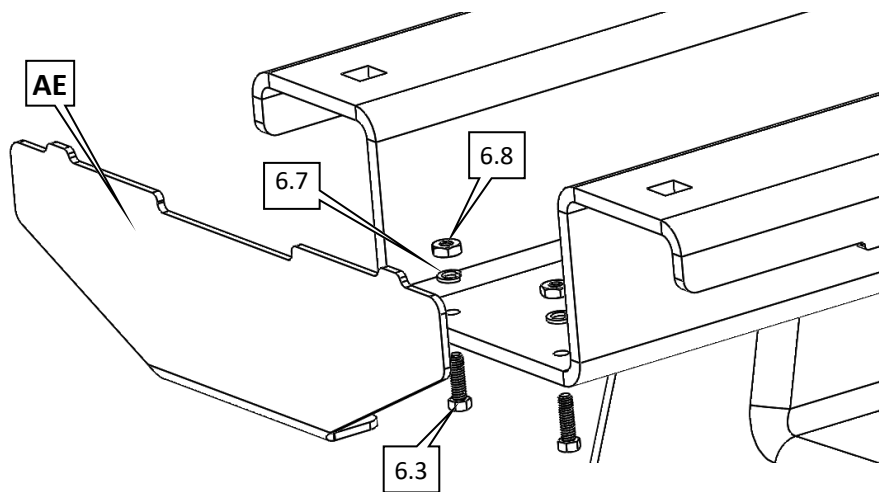
4 Tank Hose Routing



6 Tank Hose Routing

STEP 13—walkway end caps

- 1) Place End Cap on walkway ends and using the supplied hardware to attach the cover plate to the walkway, the tabs on the top side should extend above the top of the walkway support.



Parts Required

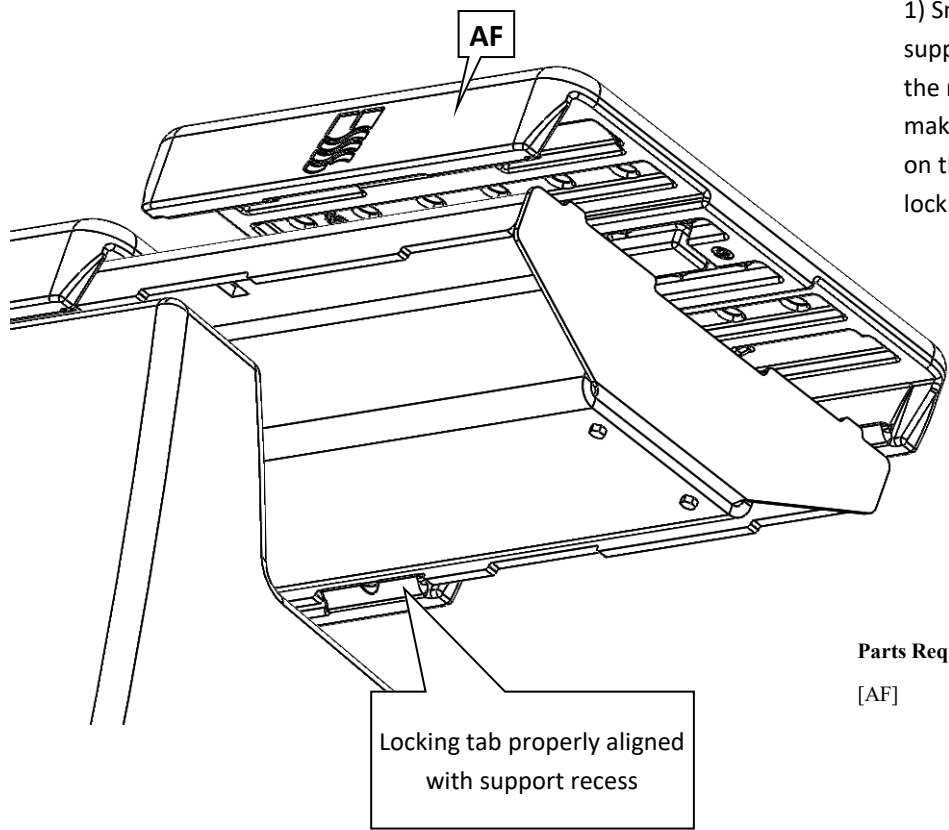
[AE] End Cap—HH Walkway x4

Hardware Required:

6	Kit HW Control Mount	x1
6.3	Screw-#12-24 X 3/4 SS 18-8	x8
6.7	Washer—Lock #12 18-8 SS	x8
6.8	Nut—#12-24 HH 18-8 SS	x8

STEP 14—Walkway Pads

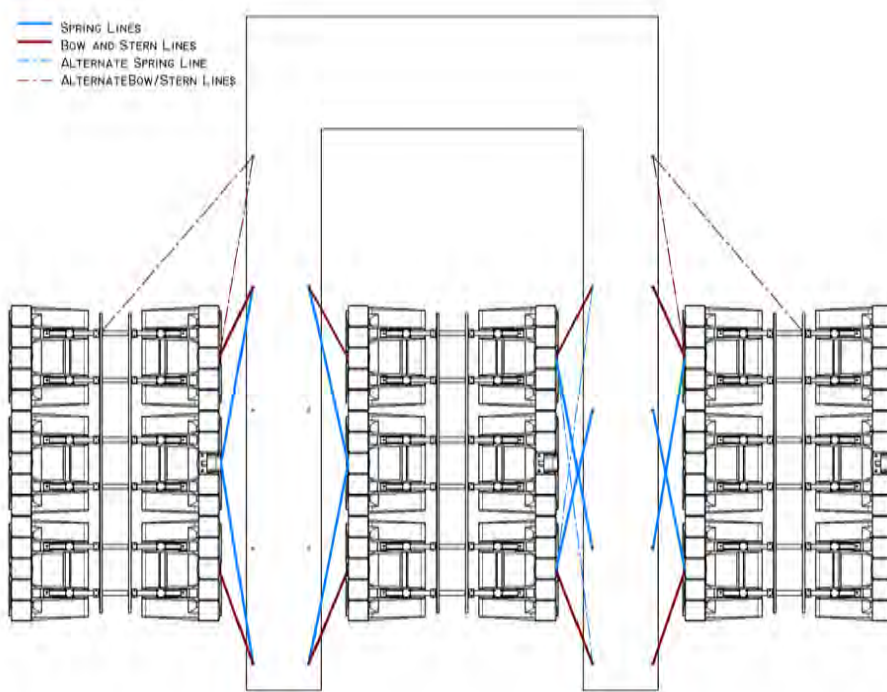
- 1) Snap the walkway panel over the Walkway support making sure to align the locks with the recesses in the support. For the end pieces make sure the end cap tabs align with the slot on the underside of the panel. The tabs will lock in to the slot when properly assembled.



Parts Required (4/6/8 tank)

[AF] Walkway Panel — HarborHoist G1.5 x23/29/39

Tie Off Mooring information — (Mooring ropes not included)



Tie the lift off using a tie off method similar to mooring a boat in a slip. The goal is to restrain the lift as much as possible but still leaving enough slack in the lines that the lift can still raise and lower properly.

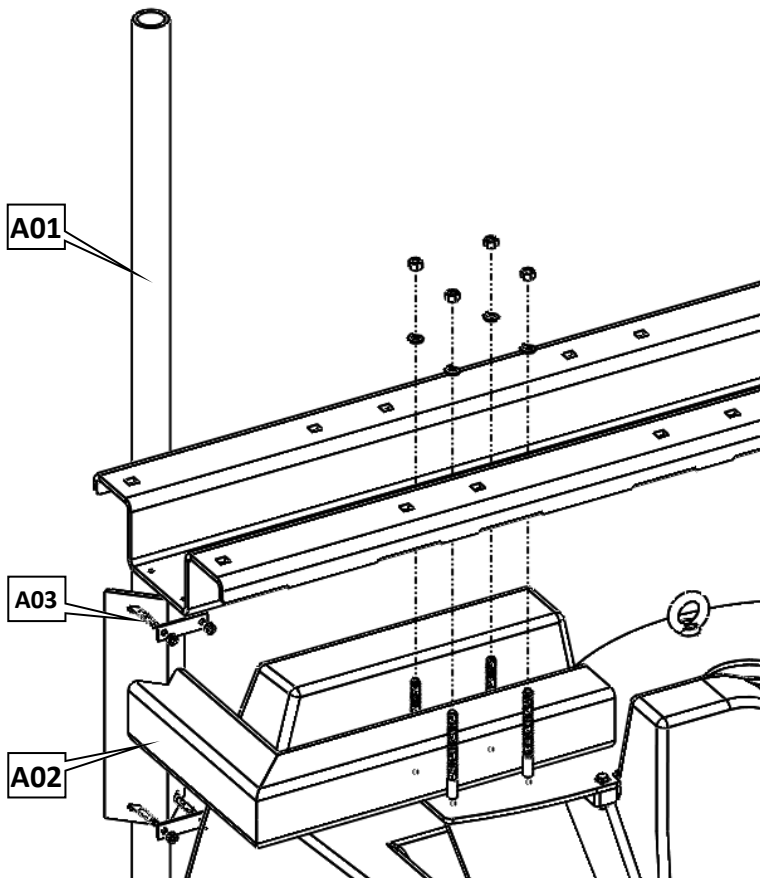
Use a good mooring rope that has enough strength for the size of boat and lift you are installing. **Minimum Rope Dia. of 3/8" for boats up to 25', 1/2" for boats up to 35', and 5/8" for boats up to 45'.**

There are several variables involved in rope selection and tie of locations so be sure that you check the mooring regularly for any changes in rope condition, tie off points, etc.

Be sure that all tie off points are in good condition and are structurally sound enough to handle the load the mooring will apply.

Recommended: Double Braid Nylon Dock lines.

STEP 16: Single Sided Tie Off — (Optional)



- 1) For Single Side Tie off Optional Side Tie post guide: Attach pipe [AL] to Bracket {AK} using the supplied U-Bolt w/ Mounting plate [12]
- 2) Replace the end Spacer Tubes with the Side Tie Post Guide Assembly. **This should be done prior to mounting the walkway support plate.**
- 3) Attach Walkway support as described in Step 5 Instructions 3-5.

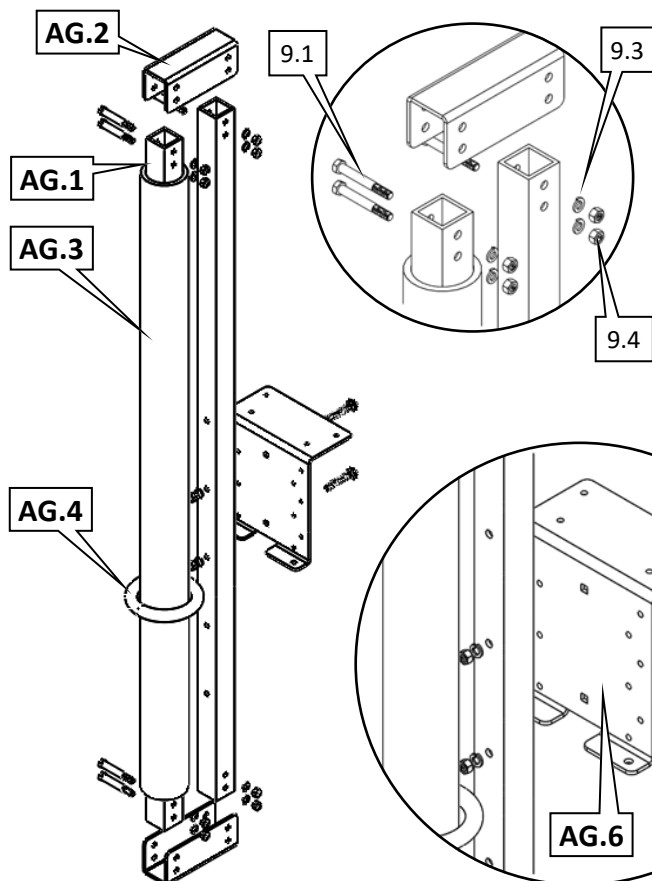
Parts Required

[A02]	Bracket—Side Tie Bumper	x2
[A01]	Pipe—Side Tie Bumper	x2

Hardware Required

[A03]	U-Bolt w/Mounting Plate	x4
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STEP 17: Ring Mooring— (Optional)



- 1) Slide Cover (**AG.3**) over Sq. Mooring Tube (**AG.1**)
- 2) Connect bracket (**AG.2**) to both Sq. Mooring tubes (**AG.1**) tubes at one end. This will require 4 1/2"-13 bolts, 4 lock washers, and 4 brass nuts.
- 3) Slide the mooring ring (**AG.4**) over the tube with the cover on it.
- 4) Attach second bracket (**AG.2**) as you did in step 2.
- 5) Attach the Dock Side Mooring Plate (**AG.6**) as shown using the supplied 1/2-13 carriage bolt, 1/2" lock washers, and 1/2" Brass nuts.

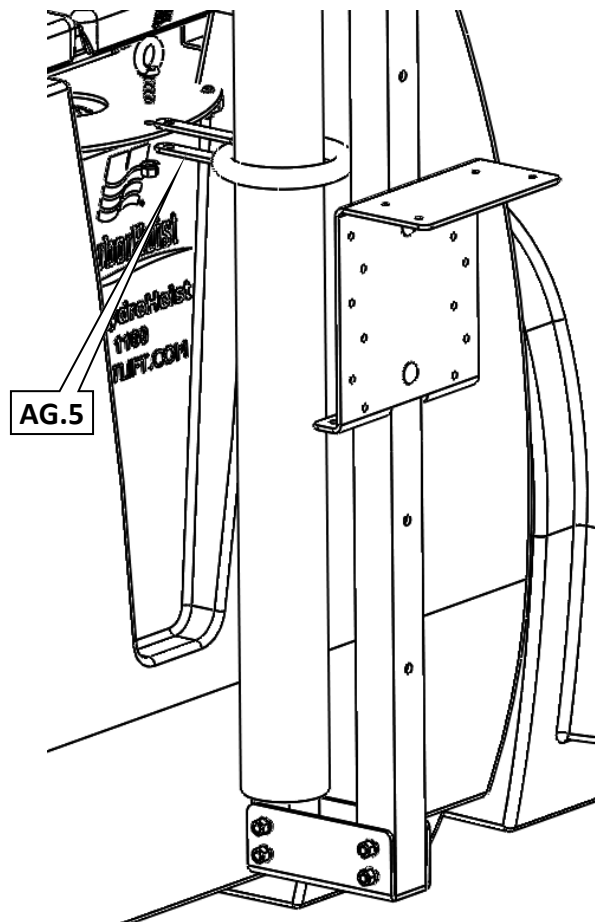
Parts Required (per Mooring Pole)

AG	Ring Mooring Kit	x1
AG.1	Square Mooring Tube	x2
AG.2	Bracket, Ring Mooring	x2
AG.3	Pipe (cover)	x1
AG.4	Ring for Mooring	x1
AG.6	Dock Side Mooring Plate	x1

Hardware Required

9	Hardware Kit Ring Mooring	x1
9.1	1/2-13 x 4 SS Bolt	x8
9.2	1/2-13 x 3.5 SS Carriage Bolt	x2
9.3	1/2" Lock Washer	x10
9.4	1/2" Hex Nut Brass	x10

STEP 18: Attaching Ring Mooring

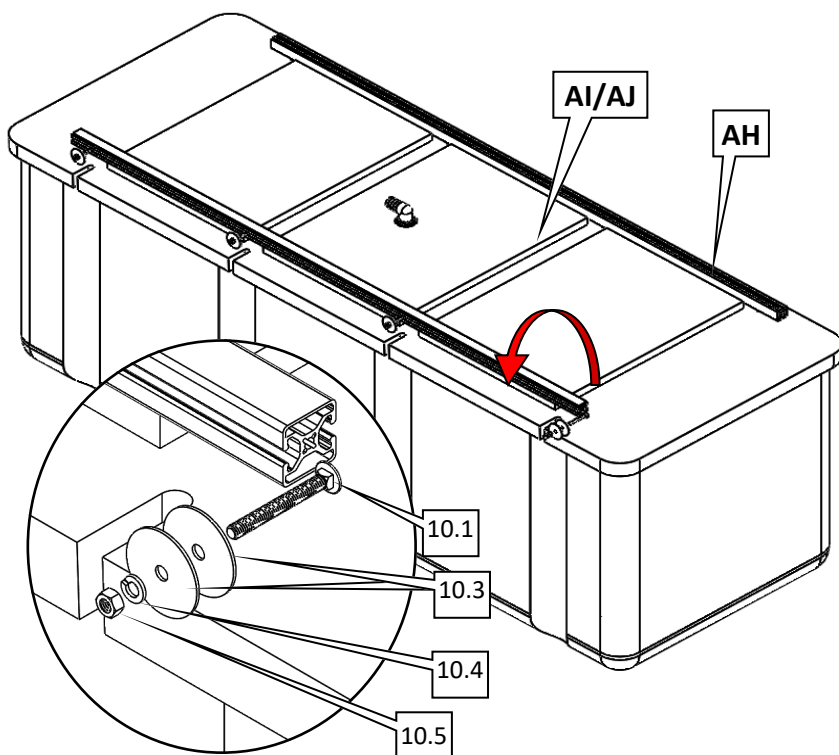


- 1) Determine the location the lift will be mounted in prior to installing the Ring Mooring.
- 2) Locate Center line of first mooring pole. Location will be the center of the Eye Bolt of the first tank.
- 3) Determine where the second mooring ring pole assembly needs to be installed. (measure between I-bolts to confirm) **4400 = 104.68" 6600 = 136.5 8800 (and up 8 main tank units) = 204.75"**
- 4) Mount the plate to the Dock. (Hardware required and qty. will depend on the style of dock and will need to be provided) If mounting to a sea wall or mooring pole the Mounting plate can be removed and the box frame mounted direct.
- 5) Place the Mooring Ring Clip (**AG.5**) around the ring as shown.
- 6) Remove the Eye Bolt from the Top Plate
- 7) Align the holes in the clip with the top plate hole. (one leg of the clip on top one under the plate)
- 8) Replace the I-Bolt and tighten. (May need to compress the clip a little to get the nut and lock washer back on.)

Parts Required (per Mooring Pole)

AG	Ring Mooring Kit	x1
AG.5	Mooring Ring Clip	x1

STEP 19: Auxiliary Tank —



- 1) Lay Mount on top of the tank with the T slot facing the outside edge of the tank
- 2) Place 2 Fender washers, 1 Lock Washer and 1 Brass Nut on each Carriage bolt.
- 3) Slide 4 carriage bolt assemblies into each Mount and space them so that they align with the slots in the tank flange.
- 4) Rotate the Mount 90 degrees so that the Carriage bolts engage the slots in the tank flange.
- 5) Tighten the brass nut down to attach the mount to the top of the tank.

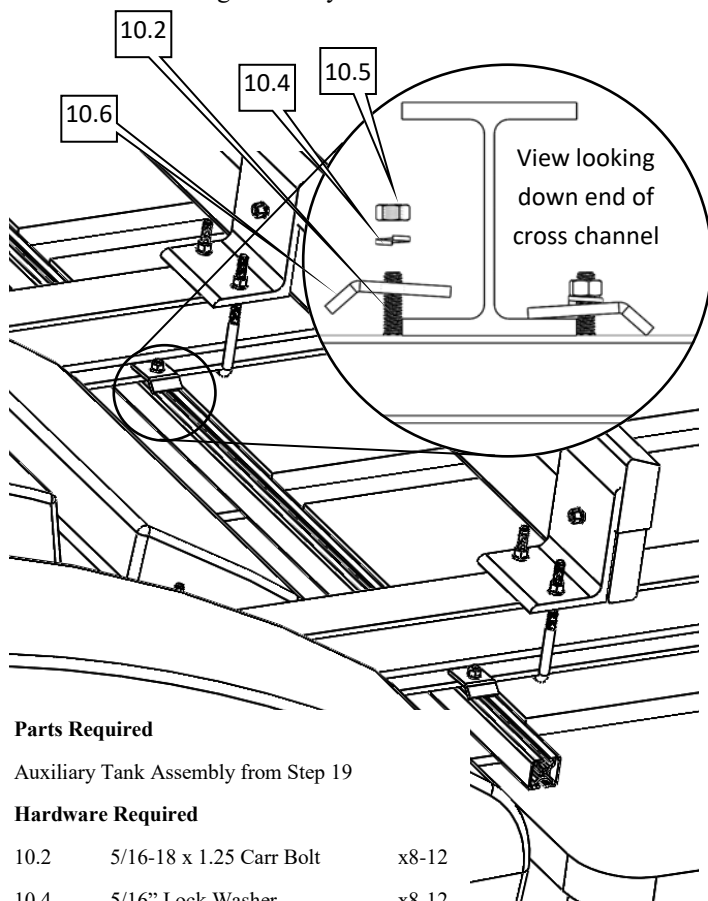
Parts Required (12K/15k/18k)

[AI/AJ]	Auxiliary Tank (AJ 18K)	x1/2/2
[AH]	Mount—Auxiliary Tank	x2/4/4

Hardware Required (per Aux Tank)

10	HW Kit—Auxiliary Tank	x1
10.1	5/16-18 x 2.75 Carr Bolt SS	x8
10.3	Washer - Fender 5/16id x 2od	x16
10.4	5/16 Lock Washer SS	x8
10.5	5/16-18 Brass Nut	x8

STEP 20: Mounting Auxiliary Tank



Parts Required

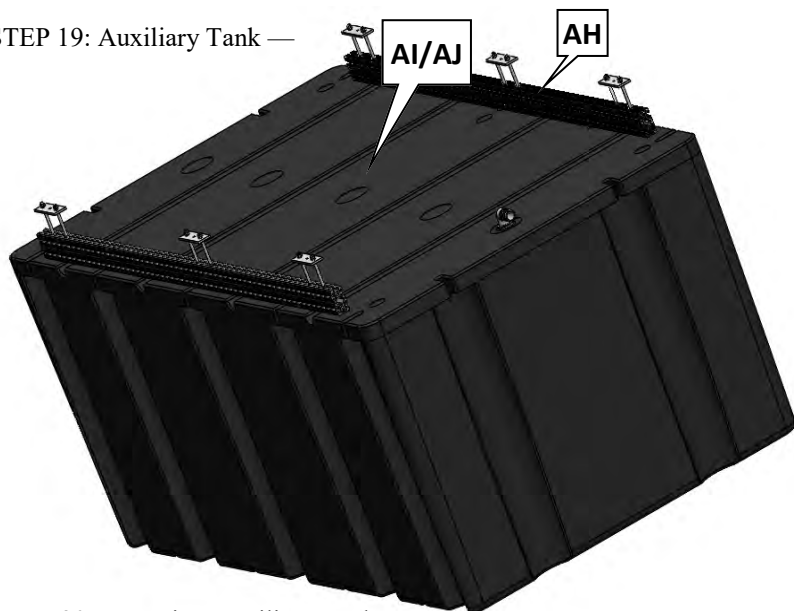
Auxiliary Tank Assembly from Step 19

Hardware Required

10.2	5/16-18 x 1.25 Carr Bolt	x8-12
10.4	5/16" Lock Washer	x8-12
10.5	5/16-18 Brass Nut	x8-12

- 1) Slide 2–4 (depending on where the tank will sit and how many cross channels you will attach to (minimum of 2)) 1 1/4" carriage bolts into the top T-slot and space them out so that 2 will be between each cross channel
- 2) Position the Auxiliary tank wherever you need to place it to achieve the best balance for the boat. The tanks can be slide to almost any location fore and aft.
- 3) Single or Rear Aux tank located even with the rear of the lift will measure approximately 16.2" off the flange of the rear I-beam to the end of the tank. The tank should span 3 Cross channels at this location. (Must attach to a minimum of 2)
- 4) Slide one 1 1/4" carriage bolt into each end of the bracket and locate it near the cross channel. Slide the other carriage bolts over close to the Cross Beam on the inside flanges of the Beams.
- 5) Place a clamp over each of the Carriage bolts and on top of the beam flange and secure with the supplied 5/16 lock washer and 5/16-18 Brass Nuts.
- 6) **If a second Auxiliary tank is required (15 & 18K) repeat the above steps for the additional tank. The tanks can be placed close together or separated depending on what is needed for the boat application. Be sure to place the tanks so that the hose connections are located between the two tanks.** These tanks will be plumbed together with 2 short pieces of hose and a Tee.

STEP 19: Auxiliary Tank —



STEP 20: Mounting Auxiliary Tank

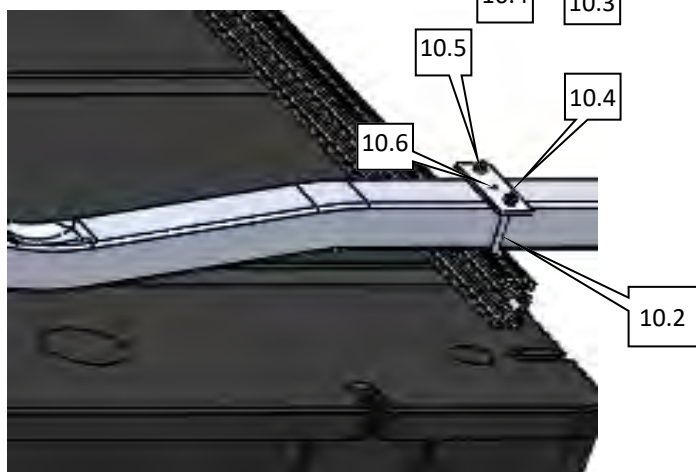
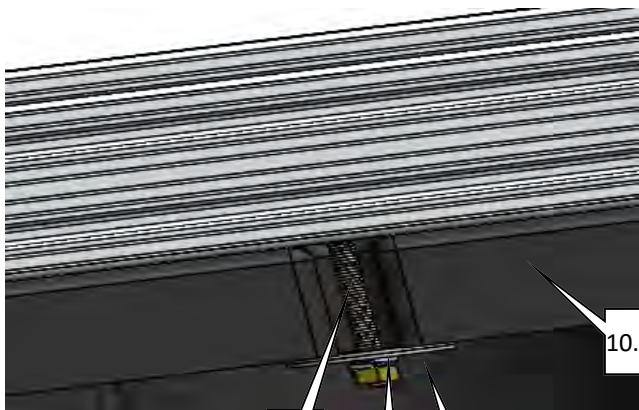
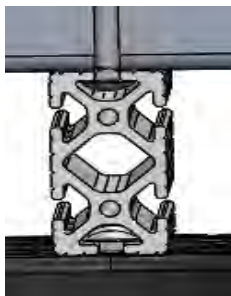
STRAIGHT AND V-FRAME

Parts Required

Auxiliary Tank Assembly from Step 19

Hardware Required

10.2	5/16-18 x 4.00 Carr Bolt	x8-12
10.4	5/16" Lock Washer	x8-12
10.5	5/16-18 Brass Nut	x8-12
10.6	Aux. Tank Clamp	x8-12



- 1) Lay Mount on top of the tank with the T slot facing the outside edge of the tank
- 2) Place 2 Fender washers, 1 Lock Washer and 1 Brass Nut on each Carriage bolt.
- 3) Slide 4 carriage bolt assemblies into each Mount and space them so that they align with the slots in the tank flange.
- 4) Rotate the Mount 90 degrees so that the Carriage bolts engage the slots in the tank flange.
- 5) Tighten the brass nut down to attach the mount to the top of the tank.

Parts Required (12K,15k/18k

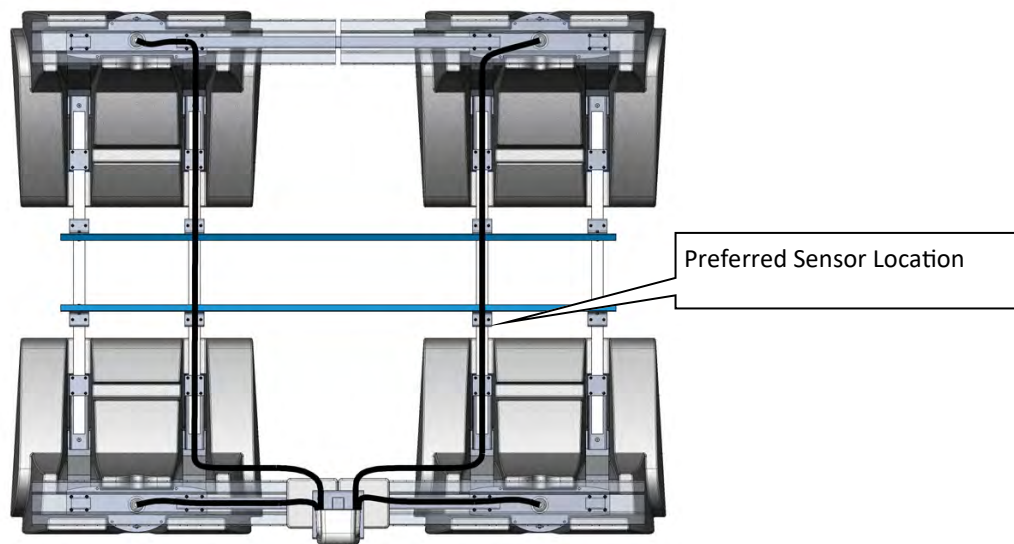
[AI/AJ]	Auxiliary Tank (AJ 18K)	x1/2/2
[AH]	Mount—Auxiliary Tank	x2/4/4

Hardware Required (per Aux Tank)

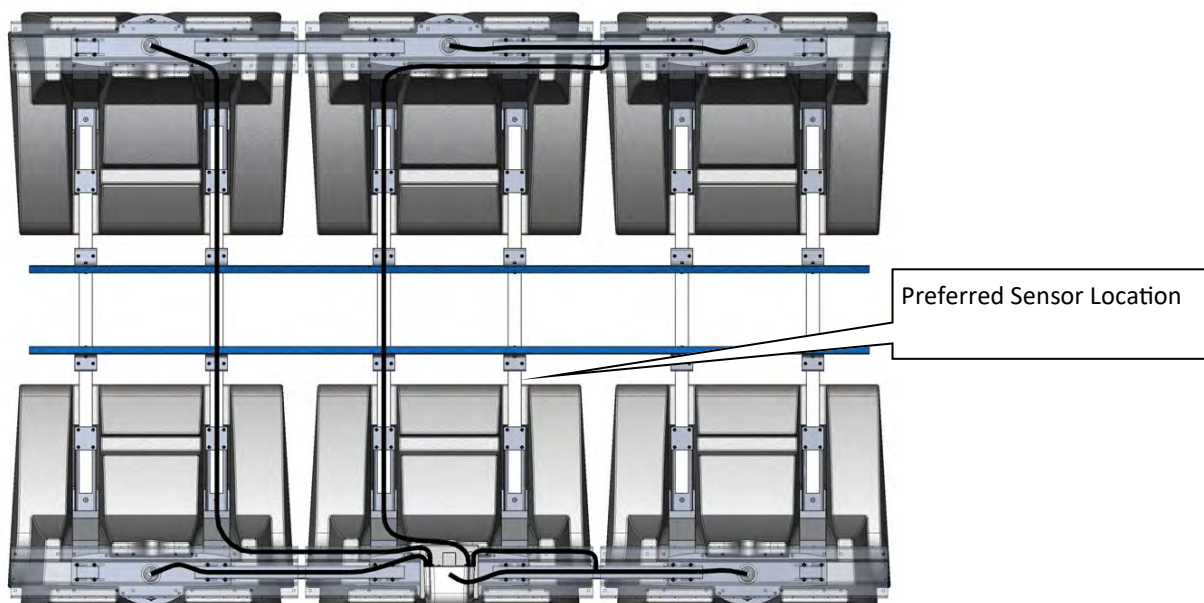
10	HW Kit—Auxiliary Tank	x1
10.1	5/16-18 x 2.75 Carr Bolt SS	x8
10.3	Washer - Fender 5/16id x 2od	x16
10.4	5/16 Lock Washer SS	x8
10.5	5/16-18 Brass Nut	x8

- 1) Slide 2–4 (depending on where the tank will sit and how many cross channels you will attach to (minimum of 2)) 1 1/4" carriage bolts into the top T-slot and space them out so that 2 will be between each cross channel
- 2) Position the Auxiliary tank wherever you need to place it to achieve the best balance for the boat. The tanks can be slide to almost any location fore and aft.
- 3) Single or Rear Aux tank located even with the rear of the lift will measure approximately 16.2" off the flange of the rear I-beam to the end of the tank. The tank should span 3 Cross channels at this location. (Must attach to a minimum of 2)
- 4) Slide one 1 1/4" carriage bolt into each end of the bracket and locate it near the cross channel. Slide the other carriage bolts over close to the Cross Beam on the inside flanges of the Beams.
- 5) Place a clamp over each of the Carriage bolts and on top of the beam flange and secure with the supplied 5/16 lock washer and 5/16-18 Brass Nuts.
- 6) **If a second Auxiliary tank is required (15 & 18K) repeat the above steps for the additional tank. The tanks can be placed close together or separated depending on what is needed for the boat application. Be sure to place the tanks so that the hose connections are located between the two tanks.** These tanks will be plumbed together with 2 short pieces of hose and a Tee.

STEP 21: LOCATING BEST PLACEMENT OF LEVELING SENSOR

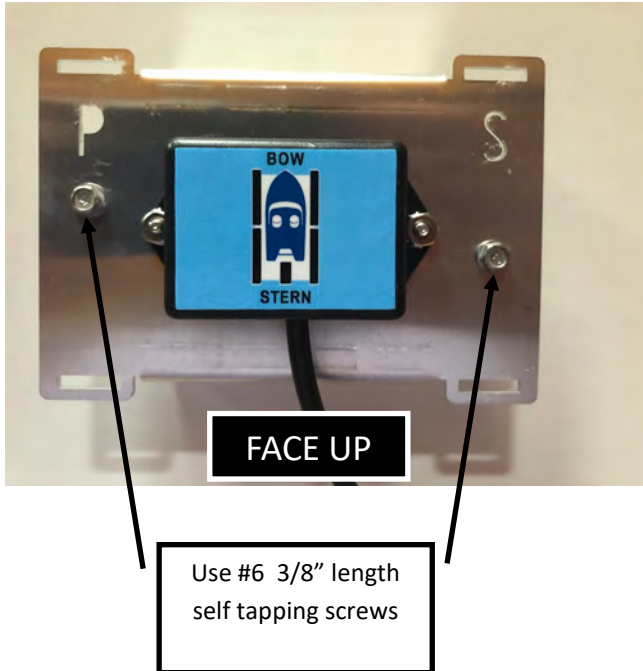


4 Tank Configuration

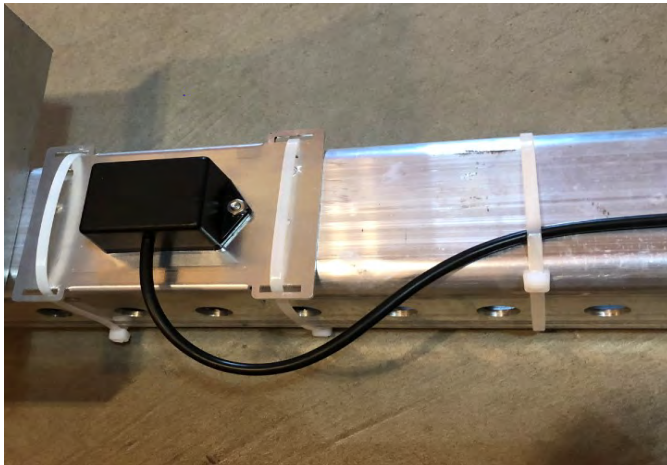


6 Tank Configuration

NOTE: The hoist should be supplied with a leveling sensor to aid in keeping the hoist level during lifting and launching of your vessel. Proper placement of sensor is critical. The sensor should be mounted on the hoist as close as possible to the center of lift. **CRITICAL:** The sensor should be mounted just outside the bunk pad. The sensor must be mounted flat on a beam that is parallel to surface of the water.



- 1) The sensor should be through bolted to the mounting plate with the supplied hardware.
- 2) The sensor assembly should be oriented so the sensor is mounted FACE UP on the cross beam with the cable existing the sensor aft of the lift.
- 3) Utilize the zip ties to fixture the sensor assembly to the cross beam using the supplied #6 self tapping screws.
- 4) Secure the sensor cable along the frame back to the controller utilizing the zip ties.



NOTE: The sensor is WATER PROOF and will be submerged when the lift is lowered

Controller Setup and Operation

Thank You

We would like to a moment to thank you for purchasing a HarborHoist™ G1.5 lift. We believe our lifts are the easiest to use on the market today and know that your new lift will give you many years of trouble free service. The following pages will provide you the necessary information for maintaining your new lift, as well as instructions on its use. Your new HarborHoist™ G1.5 lift is the result of extensive research, design and development in environments where corrosion, marine growth, and severe weather encourage lifting boats out of the water to help protect your investment. As the leader in the industry, the HarborHoist™ G1.5 lift offers features provided exclusively by HydroHoist® Marine Group.



WARNING: Do not operate lift without the initial control setup. Damage to your lift or boat can result from NOT programming controller properly. Consult certified installer or factory for initial set-up

CONTROLLER FUNCTIONALITY

UP=Raises lift

DOWN=Lowers lift

STOP=Stops all controller functions

LEVEL=Levels the lift within ± 0.5 degrees after lift is up

UP + DOWN= Holding for 5 seconds sets zero-level reference point

LEVEL + DOWN= Holding for 5 seconds opens all valves to release all air in tanks. **Not recommended to preform this operation with boat on lift!**

LEVEL + UP= Holding for 5 seconds opens all valves and turns on blower. Used to quickly raise lift in water. **DO NOT preform this operation with boat on lift!**



INITIAL CONTROL SET-UP

MUST BE PERFORMED PRIOR TO LIFT OPERATION AND/OR ATTEMPTING TO LOAD A BOAT:

The Harbor Hoist controller is sold in two configurations, with either an internal or external leveling sensor. This depends on the size of lift and dock configuration.

Each have an unique setup processes if you do not know which you have please contact your installer or Harbor Hoist customer service support.

Internal Level Sensor Setup:

STEP 1: Determine the control position of the boat: Starboard or Port

A: While facing the control if the front of the boat is to the right, it is Starboard.

B: While facing the control if the front of the boat is to the left, it is Port.

STEP 2: Program the control in relation to boat placement

A: For a Starboard control placement: press STOP and UP at the same time until the Starboard LED lights.

For a Port control placement: press STOP and DOWN at the same time until the Port LED lights.

B: When the corresponding LED light (starboard/port) remains on, the control is set.

C: PRECAUTIONARY NOTE: If the valves actuate (open), press STOP and begin again.

STEP 3: Program the control level

A: Press the UP button; this will raise the lift to its highest point.

B: Each tank must be bubbling from the relief hole before hitting STOP.

If a tank does not bubble out hit STOP and zero the control.

-To zero the control, push and hold the UP and DOWN buttons at the same time until the 5 valve LED's flash.

-Press UP, and allow additional time for all tanks to bubble from the relief holes; only then press STOP.

-To zero the control, push and hold the UP and DOWN buttons at the same time until the 5 valve LED's flash.

C: Your lift is now set and ready to use.

External Level Sensor Setup:

Step 1: Before raising the lift for the first time, the zero-level reference point must be programmed. This reference point will remain in permanent memory until reset by user.

Step 2: Remove all air from tanks and see if lift is level or the distance from water to the top of walkway is equal on all corners of lift. If not level, move an adjustable weight to high side of lift to make level. (Approximately 40 pounds might be needed to level lift.)

Step 3: When the lift is level and the HarborHoist Controllers **POWER** light is flashing press **UP** and **DOWN** at the same time and hold for 5 seconds. After 5 seconds, the **PORT** and **STARBOARD** light will flash and the zero-level reference is set.

NOTE: If your level sensor ever loses communication with the controller the middle PORT and STARBOARD LED's will flash together rapidly. Contract your local dealer or Harbor Hoist customer service support for assistance.

General Operation

Familiarize yourself with the Control Box. We have created a simple to use 4 **BUTTON** user interface, consisting of a **UP**, **STOP**, **DOWN**, and **LEVEL** buttons. These are the basic functions for the operating the HarborHoist™ G1.5 lift. Internal to the Control are state of the art valve controls and circuitry that will insure that your lift comes up level each and every time you lift your boat from the water.

Lowering the Lift:

- Make sure the Power LED is illuminated and flashing
- Press the **DOWN** button. This will open the valves.
- Allow the lift to submerge (Walkways will remain above water)
- Untie lift safety lines from boat
- Everyone may board the boat after the boat clears the lift

Raising the Lift:

- Float boat into established pick up position on lift
- Tie off safety lines to the boat
- Everyone must exit the boat before lifting.
- Press **UP** button
- Once the lift is fully raised, air bubbles will be visible exiting from all tanks.
- Press **STOP** on Control

Leveling the Lift:

In the raise function the controller will keep the lift within ± 2 degrees for speed of operation. If the lift needs to be leveled once all the way up, press the yellow **LEVEL** button and the lift will automatically level the lift. The controller will release air out of the appropriate tank(s) to level the lift within ± 0.5 degrees.

Beyond Level Limits Lockout:

In the instance where the lift would get out of level by ± 10 degrees or greater, which could occur over time do to a burping reaction or if the air system springs a leak, the controller will lock itself out and not allow any additional functionality. The CENTER PORT and STARBOARD LED's on the controller will flash back and forth. To **UNLOCK CONTROLLER**:

- Press **STOP** button to clear lockout error
- Press **LEVEL** and **DOWN** buttons together and hold for 5 seconds. All PORT and STARBOARD LED's will turn on indicating all air valves are open allowing the lift to submerge. When the lift is completely submerged you can then re-lift the vessel by pressing the **UP** button

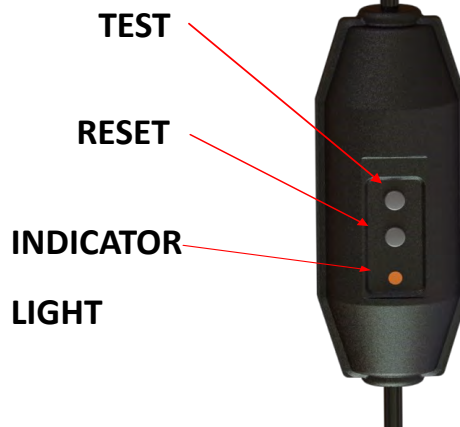
If this issue persists have the air system inspected for leaks.

Safety Tips

- Test GFCI on a monthly basis

To test:

- Plug in cord to power source
- Observe Light is on
- Push “test” bserve light is off
- Press “reset” and verify light is on



- Keep GFCI and plug out of water
- Keep Children away
- Do not overload the lift.
- Do not allow yourself to be distracted or walk away from the lift during operation.
- Make sure bilge pump is set for automatic.

NOTE: Significant water accumulation in the bilge may overload the lift.

- Make sure any ballast tanks are empty before lifting the boat.
- Lift is not designed for lifting people.
- No persons should be under the boat while it is in the suspended position.
- Weight must be distributed equally side to side and bow to stern before lifting, Otherwise the boat will not center properly and appear to be crooked on the lift.

Preventative Maintenance

- Because of the harsh environments in which the HarborHoist™ G1.5 can be installed, it is very important to inspect your HarborHoist™ occasionally to ensure it is at peak performance. On a monthly basis inspect the following:
- GFI trips and resets properly when the TEST and RESET buttons are pressed.
- All air hoses are firmly attached and there are no apparent leaks present.
- All the aluminum components are structurally sound and no heavy corrosion is visible.
- The wood hull pads are structurally sound with no severe cracking.
- All mounting / attachment brackets are secure.
- If rope mooring is used, inspect the ropes for any issues that may compromise the integrity.
- Most importantly, run your blower fan at least once a month even during the off season. Press **UP** button on the control and let it run about a minute to help keep the motor contacts and brushes clean.

Boat Fitment

Take care to clear shafts, thru hull fittings, chines, etc. Keel of boat must NOT rest on cross beam and should clear the beam by at least 1 inch. Center of gravity of the the boat, must be in the the center of the lift (unless Auxiliary tanks are used) bow to stern and port to starboard. This will evenly distribute the load over the lift allowing for maximum lift height and maintains the appearance of the lift floating level.

For boats with Auxiliary Tanks— The goal here is to have the same lifting forces behind the CG of the boat as you do in front in order to achieve good balance. The simple method for this is to make sure you have the same amount of tank forward of the CG of the boat as you do behind the CG. For Auxiliary tank lifts that means we can adjust the 8' long center tanks to help accomplish this. Additional adjustment can be done by shifting the boat fore and aft. The main tanks have a total tank length of 43'4" of tank for an 8 main tank unit. A 12K lift has an additional 8' of tank available, the 15K and 18K have 16' additional each (18K are wider deeper tanks). The CG of the boat when located with the transom at the end of the lift, should never be forward of the Center of the lift. This condition suggests another set of Main tanks may be needed due to length (If it is over by less than 18" the boat can be shifted back. If the Auxiliary tank (s) is completely behind the CG of the boat moving the tank further back, amplifies the lifting effect of the rear. (Much like moving the smaller child further away from the pivot on a teeter totter). If you need to move the Auxiliary tank back further than the end of the lift, be sure you have enough space available between the outdrives and the tanks to avoid damage to one or the other.

Important Notes:

It is the responsibility of the End User to insure that:

- 1) The lift is installed by a certified HydroHoist Installer.
- 2) The end user needs to understand how to operate the lift in a safe manner.
- 3) The end user should understand the need for regular inspection of the lift components.
- 4) Be sure the end user is informed and understands all safety and warning labels affixed to equipment.

No alterations or modifications may be made to the HydroHoist equipment without the express written consent of HydroHoist Marine Group. Re-Installation, adjusting the bunks, and or adjusting the tank beam spacing of the equipment must be performed to the standards set forth by HydroHoist Marine Group. It is the obligation of the end user to inform any operators of the equipment of the above conditions. Owners Manuals and Safety Warning Decals are available on request for HydroHoist Marine Group.