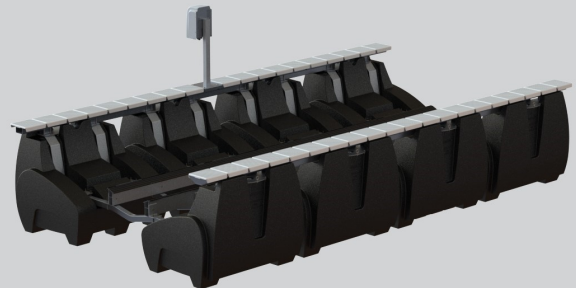


# Installation Manual

MEDIUM CAPACITY 8,800 (SHORT) – 18,000 LBS.

# HarborHoist™

BY HYDROHOIST® BOAT LIFTS



800.825.3379 | [Boatlift.com](http://Boatlift.com)

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 **HydroHoist®**  
BOAT LIFTS

## INTRODUCTION


At HydroHoist® we take pride in bringing the most advanced, easiest to use, and lowest maintenance boat lift systems to the market. Installation of the lift is simple due to its lightweight design and ease of operation.

The following pages contain step-by-step instructions of the installation and operation processes.

The Medium series HarborHoist™ lift takes between 10 and 20 man-hours to assemble on average depending on the size and configuration. Review all parts, hardware, and required tools before beginning assembly. Don't forget: safety first.


If you have questions, contact the Technical Support Team at 1-800-825-3379.

 **Lifts must be installed by an approved HydroHoist® installer. Failure to comply will result in termination of warranty and could cause injury to the user and damage to the lift and vessel.**

 **It is STRONGLY recommended that each installer read the manual before attempting an installation.**

### Legend:

 Requires careful consideration

 **WARNING:** could cause harm or damage to the lift, vessel, and user

## PRE-INSTALLATION CONSIDERATIONS

Due to its size, the following determinations must be made before installing a HarborHoist™:

- Location of lift assembly (remote or on-site)
- Method of transport from assembly to launch site
- Equipment required to safely build, transport, and launch the lift
- Contact points between bunks and the hull (consider strakes and other hull protrusions)

If you plan to build remotely and assemble the lift before transport, first determine the lift's minimum width from **Chart 1**. State regulations may require special permits and escorts for transportation. Consider how to obtain permits and the cost. Remotely building pre-sub assemblies and then completing final assembly at the launch site might be logistically simpler.

Other items to consider:

- Does the launch site allow commercial work?
- Do you need a permit to work and/or launch at the ramp or dock?
- Is there a time limit on dock use?
- How will you transport the lift from the launch site to the install location?
- How much of the lift can be preassembled and transported safely?
- Do you have equipment with the capacity to lift subassemblies onto a trailer for transport to the launch site?
- Does the final assembly location have equipment to hoist and launch the completed lift?
- Is there level ground for final assembly, or will some assembly occur in the water?
- Verify the slip width meets the minimum requirements of the lift width, see **Chart 1**.
- See **Chart 2** for a list of the required tools.

 Working through these considerations is the first step in a successful build.

### Chart 1: General Specification of the Lift

Standard V Hull Series			*Tank Dimensions				Hull Bunk Length	Minimum Lift Width Possible	***Max Beam of Boat @ Minimum Lift Width	Max Lift Width
Lifting Size	Weight of lift (lbs.)	# Main Tanks	# Aux Tanks	Width	Length	Depth				
8,800 Short	3600	6	1	3'	10'	2'	16'	11' 6"	8' 7"	12' 9"
12,000	4400	8	1	3'	8'	3'	20'	12' 2"	9' 4"	14' 10"
12,000 Shallow	4400	8	1	3'	10'	2'	20'	12' 2"	9' 4"	14'
12,000 Wide	4500	8	1	3'	8'	3'	20'	14' 4"	11' 6"	16' 3"
15,000	4600	8	2	3'	8'	3'	20'	12' 2"	9' 4"	14'
15,000 Shallow	4600	8	2	3'	10'	2'	20'	12' 2"	9' 4"	14'
15,000 Wide	4700	8	2	3'	8'	3'	20'	14' 4"	11' 6"	16' 3"
18,000	4700	8	2	4'	8'	3'	20'	12' 6"	9' 8"	14' 5"
18,000 Narrow	4600	10	2	3'	8'	3'	28'	12' 2"	9' 4"	14'
18,000 Wide	4700	8	2	4'	8'	3'	20'	14' 4"	11' 6"	16' 3"

Lifting Size	Max Beam of Boat @ Max lift width	****Minimum Slip Recommended	**Cross Beam Used (inches)	Max Length Boat Recommended	Water Depth Req.	Overall Length of Lift
8,800 Short	10'	34" + Vessel beam	84s	28'	31"+ Draft	16' 10"
12,000	11' 6"	34" + Vessel beam	100B	32'	43" + Draft	22' 6"
12,000 Shallow	11' 6"	34" + Vessel beam	100B	32'	31"+ Draft	22' 6"
12,000 Wide	13' 6"	34" + Vessel beam	126B	32'	43" + Draft	22' 6"
15,000	11' 6"	34" + Vessel beam	100B	34' ( 38ft performance)	43" + Draft	22' 6"
15,000 Shallow	11' 6"	34" + Vessel beam	100B	34' ( 38ft performance)	31"+ Draft	22' 6"
15,000 Wide	13' 6"	34" + Vessel beam	126B	34' ( 38ft performance)	43" + Draft	22' 6"
18,000	12'	34" + Vessel beam	104B	34' ( 38ft performance)	43" + Draft	22' 6"
18,000 Narrow	11' 6"	34" + Vessel beam	100B	40'	31"+ Draft	28' 2"
18,000 Wide	13' 6"	34" + Vessel beam	126B	34' ( 38ft performance)	43" + Draft	22' 6"

<b>*Size = Lift Capacity in lbs. per Tank</b>
3' x 8' x 3' = 3200
4' x 8' x 3' = 5000
Main Tanks = 1100

**\*\* B = 3 x 3 V square bent beam in 100" or 104"**

**\*\*\* This is the minimum the lift can be for 4" of clearance per side**

\*\*\*\* This assumes you are using a rope mooring solution. This measurement allows for a 4" space between the rub rail of the vessel and walkway. If used with a pole mooring system add an additional 24" to the minimum slip width to take into account this system. The additional 24" will allow for mooring on both sides of the lift (12" per side).

**Chart 2: Required Tools**

5/16" Socket Wrench / Driver	Drill / Impact Driver
7/16" Socket Wrench / Driver	7/16 Drill Bit (tin-coated high helix 6" cut length recommended)
9/16" Deep Socket Wrench / Driver	Hammer / Rubber Mallet
3/4" Deep Socket Wrench / Driver	Thread Sealant
7/16" Box End Wrench	Gloves
9/16" Box End Wrench	Safety Glasses
3/4" Box End Wrench	Drill Wax
Taper Tool (to aid hole alignments)	18" Bar Clamps (3)
5/16" Hex Bit Socket	

**Chart 3: Torque Specifications**

<b>BOLT SIZE</b>	<b>FOOT POUNDS OF TORQUE</b>
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.

**Chart 4: PARTS LIST—8800 Short**

<b>HH-8800 V-HULL STRAIGHT BEAM SHORT FRAME</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	6
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	3
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	6
HH-LPL-1024	GASKET - TOP HARBORHOIST	6
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	12
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	12
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	12
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	12
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	12
<b>CROSS BEAM</b>		
HH-LPL-1018	I BEAM - 84 IN. - 8800 HH	6
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	29
HH-2515	SUPPORT-WALKWAY HARBORHOIST	6
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	4
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035105	ASSY HYH HARBORHOIST ALUM BUNK - 16FT	2
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	3
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
HH-2687	KIT, HARDWARE HOSE CLAMPS AND TEES, 6600	1
<b>AUXILLARY (AUX) TANKS</b>		
HHE-7122	I-BEAM - SINGLE AUX TANK MOUNT HH	2
HHE-7112	KIT - HARDWARE - SINGLE AUXILARY TANK HARBORHOIST	1
HHE-7117	KIT - HARDWARE - SINGLE AUXILARY TANK FITTINGS	1
HH-3350	AUXILARY TANK ASSY WITH FITTING - HARBORHOIST 36X120X24 FLAT TOP	1

**Chart 4: PARTS LIST—12000**

<b>HH-12000 V-HULL V-FRAME</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAMS</b>		
HH-4310	CROSS CHANNEL - 3IN SQ. 100IN. V CENTER	8
<b>WALKWAYS</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	4
<b>CONTROLS</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
3072512	HOSE - RUBBER 1-1/4 in. ID X 30 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILLARY (AUX) TANKS</b>		
HHE-7122	I-BEAM - SINGLE AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILARY TANK HARBORHOIST	1
HHE-7117	KIT - HARDWARE - SINGLE AUXILARY TANK FITTINGS	1
HH-3730	AUXILARY TANK ASSY - HARBORHOIST 36X96X36	1

**Chart 4: PARTS LIST—12000 Shallow**

<b>HH-12000 V-HULL SHALLOW V-FRAME</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
HH-4310	CROSS CHANNEL - 3IN SQ. 100IN. V CENTER	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
3072512	HOSE - RUBBER 1-1/4 in. ID X 30 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILLARY (AUX) TANKS</b>		
HHE-7122	I-BEAM - SINGLE AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILIARY TANK HARBORHOIST	1
HHE-7117	KIT - HARDWARE - SINGLE AUXILIARY TANK FITTINGS	1
1034895	TANK - AUXILIARY WITH FITTING HARBORHOIST 48X120X24 FLAT TOP	1



**Chart 4: PARTS LIST—12000 Wide**

HH-12000 V-HULL V-FRAME WIDE		
Part	Description	Expected Qty
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
FRM-06-0007	CROSS CHANNEL - 3IN SQ. V CENTER 126 IN LONG	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
3072512	HOSE - RUBBER 1-1/4 in. ID X 30 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILLARY (AUX) TANKS</b>		
HHE-7122	I-BEAM - SINGLE AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILIARY TANK HARBORHOIST	1
HHE-7117	KIT - HARDWARE - SINGLE AUXILIARY TANK FITTINGS	1
HH-3730	AUXILIARY TANK ASSY - HARBORHOIST 36X96X36	1

**Chart 4: PARTS LIST—15000**

<b>HH-15000 V-HULL V-FRAME</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANKS ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
HH-4310	CROSS CHANNEL - 3IN SQ. 100IN. V CENTER	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
3072512	HOSE - RUBBER 1-1/4 in. ID X 30 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILLARY (AUX) TANKS</b>		
HHE-7123	I-BEAM - DUAL AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILIARY TANK HARBORHOIST	2
HHE-7116	KIT - HARDWARE - DOUBLE AUXILIARY TANKS	1
HH-3730	AUXILIARY TANK ASSY - HARBORHOIST 36X96X36	2

**Chart 4: PARTS LIST—15000 Shallow**

<b>HH-15000 V-HULL V-FRAME SHALLOW</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
HH-4310	CROSS CHANNEL - 3IN SQ. 100IN. V CENTER	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS ( 1 PER TANK SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
3072512	HOSE - RUBBER 1-1/4 in. ID X 30 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILLARY (AUX) TANKS</b>		
HHE-7123	I-BEAM - DUAL AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILARY TANK HARBORHOIST	2
HHE-7116	KIT - HARDWARE - DOUBLE AUXILARY TANKS	1
1034895	TANK - AUXILIARY WITH FITTING HARBORHOIST 48X120X24 FLAT TOP	2

**Chart 4: PARTS LIST—15000 Wide**

HH-15000 V-HULL V-FRAME WIDE		
Part	Description	Expected Quantity
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
FRM-06-0007	CROSS CHANNEL - 3IN SQ. V CENTER 126 IN LONG	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
3072512	HOSE - RUBBER 1-1/4 in. ID X 30 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILIARY (AUX) TANKS</b>		
HHE-7123	I-BEAM - DUAL AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILIARY TANK HARBORHOIST	2
HHE-7116	KIT - HARDWARE - DOUBLE AUXILIARY TANKS	1
HH-3730	AUXILIARY TANK ASSY - HARBORHOIST 36X96X36	2

**Chart 4: PARTS LIST—18000**

<b>HH-18000 V-HULL V-FRAME</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
HH-4310	CROSS CHANNEL - 3IN SQ. 100IN. V CENTER	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALUM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALUM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANKS SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILIARY (AUX) TANKS</b>		
HHE-7123	I-BEAM - DUAL AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILIARY TANK HARBORHOIST	2
HHE-7116	KIT - HARDWARE - DOUBLE AUXILIARY TANKS	1
HH-5130	AUXILIARY TANK ASSY - HARBORHOIST 48X96X36	2

**Chart 4: PARTS LIST—18000 Wide**

<b>HH-18000 V-HULL V-FRAME WIDE</b>		
<b>Part</b>	<b>Description</b>	<b>Expected Qty</b>
<b>TANK ASSEMBLY</b>		
HH-3000	TANK- HARBORHOIST GEN 1.5	8
HH-2650	KIT BOX, HARBORHOIST GEN 1 MOD TANK SET	4
HH-2601	TOP PLATE - HH GEN 1 MOD- ALUMINUM	8
HH-LPL-1024	GASKET - TOP HARBORHOIST	8
HH-LPL-1028	GASKET - UNDERNEATH - HARBORHOIST	16
HH-LPL-1027	GASKET - BOTTOM - HARBORHOIST	16
HH-LPL-1026	BEAM STRAP - ALUMINUM - HARBOR HOIST	16
HH-LPL-1040	CHANNEL - SUPPORT HH - ALUMINUM	16
HH-LPL-1025	STRAP PLATE - ALUMINUM HARBORHOIST	16
<b>CROSS BEAM</b>		
FRM-06-0007	CROSS CHANNEL - 3IN SQ. V CENTER 126 IN LONG	8
<b>WALKWAY</b>		
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5	39
HH-2515	SUPPORT-WALKWAY HARBORHOIST	8
HH-LPL-1034	BEAM - 48IN SPAN - ALUM. HH.	6
HH-LPL-1033	TUBE - SPACER, 3X3 ALUMINUM	4
HH-2525	END CAP- HH WALKWAY WITH DECAL	4
<b>HULL PADS</b>		
1035066	ASSY HYH HARBORHOIST ALIM BUNK LEFT 22 FT	1
1035067	ASSY HYH HARBORHOIST ALIM BUNK RIGHT 22 FT	1
1035195	HARDWARE KIT - HARBORHOIST HULL PADS (1 PER TANK SET)	4
<b>CONTROL</b>		
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt	1
HH-2517	CONTROL STAND HARBORHOIST GEN 1.5	1
HHE-2655	KIT, HARDWARE, CONTROL HARDWARE HH 2018	1
3072517	HOSE - RUBBER 1-1/4 in. ID X 100 ft. - CUT	1
HH-2685	KIT, HARDWARE HOSE CLAMPS AND TEES, 8800	1
<b>AUXILARY (AUX) TANKS</b>		
HHE-7123	I-BEAM - DUAL AUX TANK MOUNT HH	2
1033229A	KIT - HARDWARE - SINGLE AUXILARY TANK HARBORHOIST	2
HHE-7116	KIT - HARDWARE - DOUBLE AUXILARY TANKS	1
HH-5130	AUXILARY TANK ASSY - HARBORHOIST 48X96X36	2

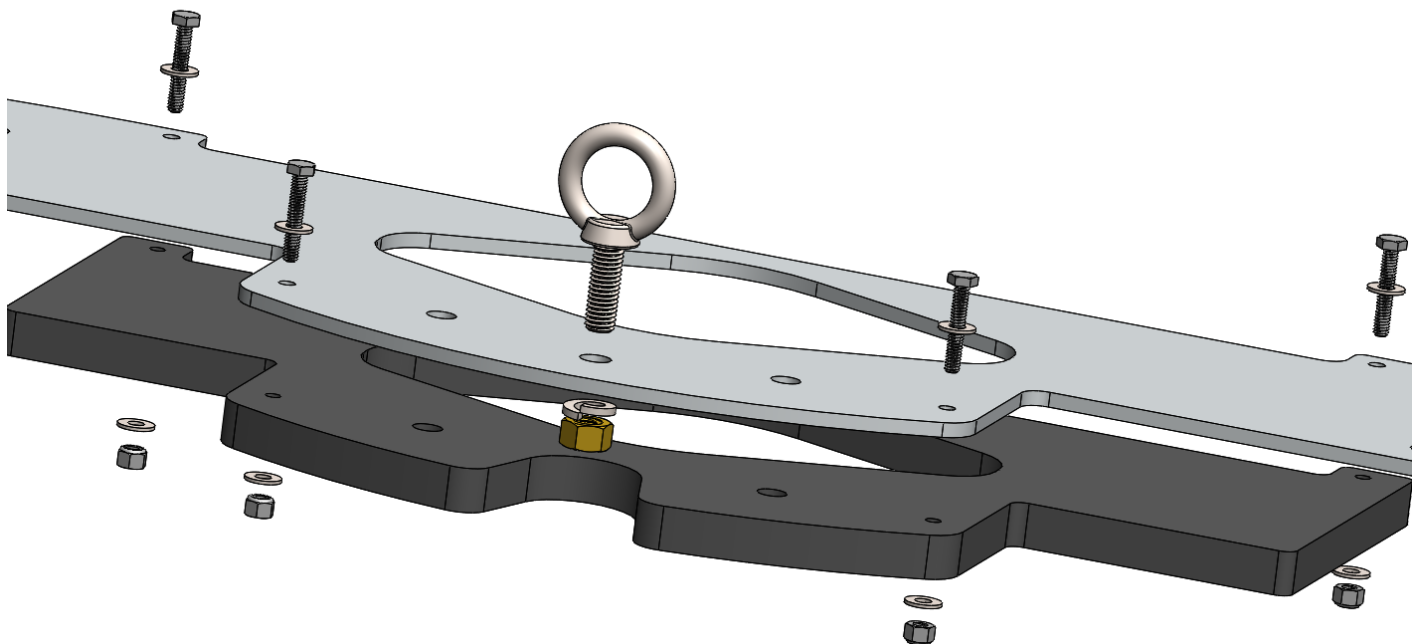
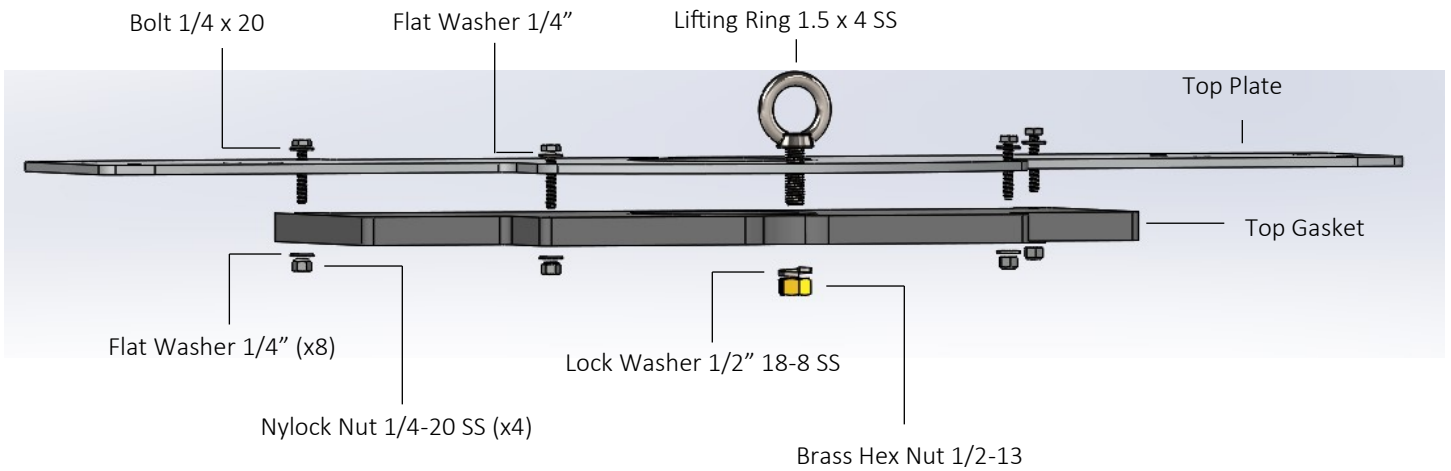
## STEP 1: WALKWAY TOP PLATE ASSEMBLY

Part #	Parts Required (Per Tank)
HH-2601	Top Plate
HH-LPL-1024	Top Gasket

Part #	Hardware Required
HH-LPL-1502	Nyloc Nut (1/4-20 SS)
HH-LPL-1501	Hex Bolt (1/4-20 x 1.5 SS)
2090216	Flat Washer (1/4" SS)
HH-1916	Lock Washer 1/2" 18-8 SS
HH-1926	Hex Nut 1/2-13 Brass
HH-2602	Lifting Ring 1.5 x 4 SS

**i Use Kit Box: #HH-2650**

1. Align the mounting holes for the Top Plate and Top Gasket.
2. Run the Bolts and Lifting Ring through the Top Plate and Top Gasket. Fasten with washers as illustrated below.



## STEP 2: ATTACH TOP PLATE ASSEMBLY TO STRAP PLATES

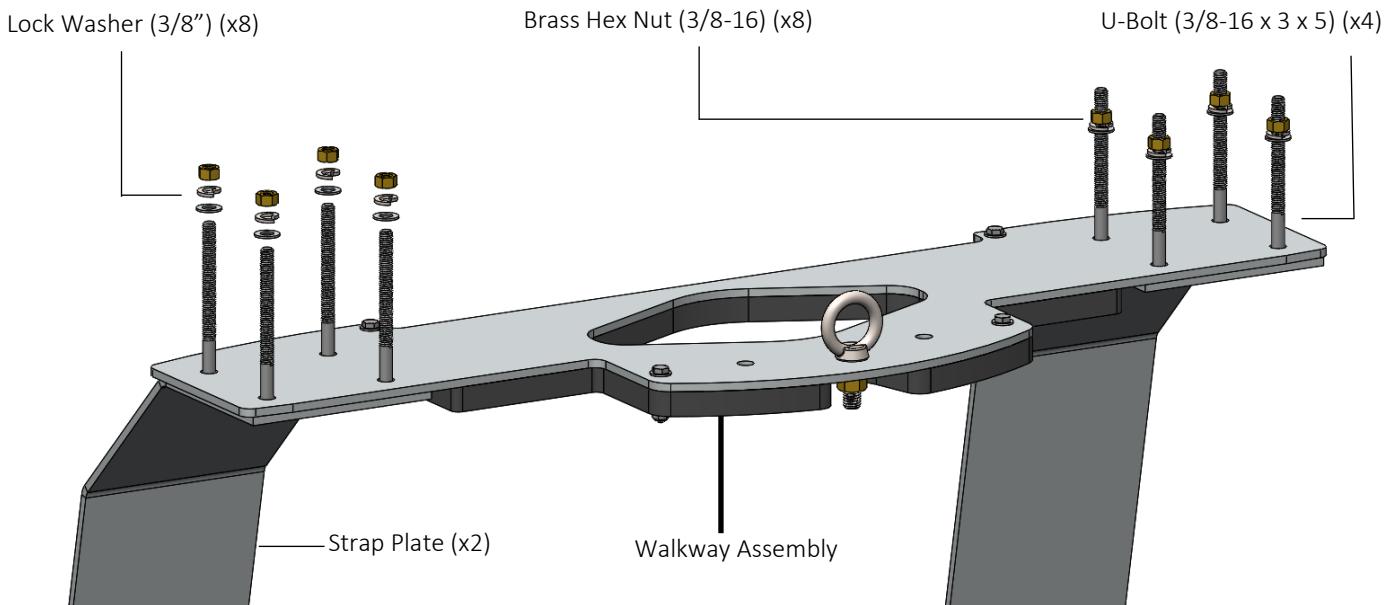
Part #	Parts Required (Per Tank)
NA	Walkway Assembly
HH-LPL-1025	Strap Plate

Part #	Hardware Required
HH-LPL-1503	U-Bolt 3/8-16 x 3 x 5
2090242	Flat Washer 3/8"
HH-LPL-1505	Lock Washer 3/8"
HH-2603	Brass Nut 3/8-16

**i** Use Kit Box: #HH-2650

1. Align the Walkway Assembly with a Strap Plate.
2. Put U-Bolts through the Strap Plate and into the Walkway assembly, loosely fastening as illustrated.
3. Repeat the process for the second Strap Plate.

**NOTE:** Only hand tighten Brass Hex Nuts on top of the U-Bolts. They will be removed later to assemble the walkway.



**i** Assembly aid: Attach zip ties to the bases of the U-Bolts to keep them in place during installation. Zip ties are not provided in the kit.



### STEP 3: ATTACH TANK FRAME BRACKETS TO STRAP PLATES

Part #	Parts Required (Per Tank)
HH-LPL-1040	Channel Support
HH-LPL-1027	Bottom Gasket
HH-LPL-1025	Strap Plate

Part #	Hardware Required
HH-LPL-1504	U-Bolt (3/8-16 x 3 x 6)
HH-LPL-1006	Flat Head Bolt (5" SS)
HH-LPL-1031	Nylon HH Tank Bushing
H-1926	Hex Nut (1/2-13 Brass)
HH-1916	Lock Washer

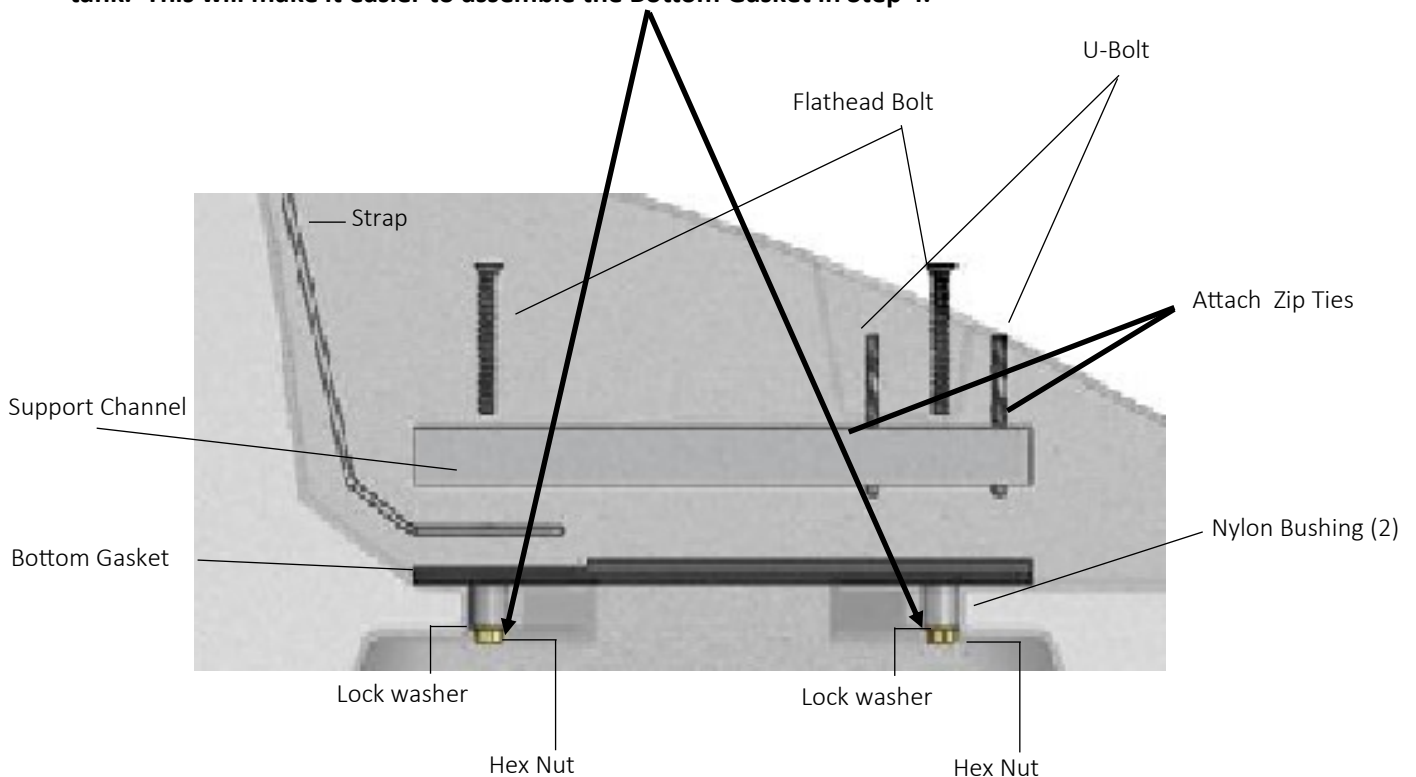
**i** Use Kit Box: #HH-2650

1. Align the mounting holes for the Channel Support, Strap Plate, and Bottom Gasket.
2. Slide the U-Bolts through the bottom of the Channel Support.

**Assembly Aid: Attach Zip Ties to the bases of the U-Bolts to keep them in place during installation. Zip Ties are not provided in the kit.**

3. Insert the 5" Flat Head Bolt through the Channel Support and the Bottom Gasket.

**i** **IMPORTANT: Tighten the Nuts against the Nylon Bushing so the Bolts cannot rotate before assembling into the tank. This will make it easier to assemble the Bottom Gasket in Step 4.**



## STEP 4: ATTACH STRAP TANK ASSEMBLY TO TANK

Part #	Parts Required (Per Tank)
HH3000	Tank
HH-LPL-1028	Gasket - Underneath Tank

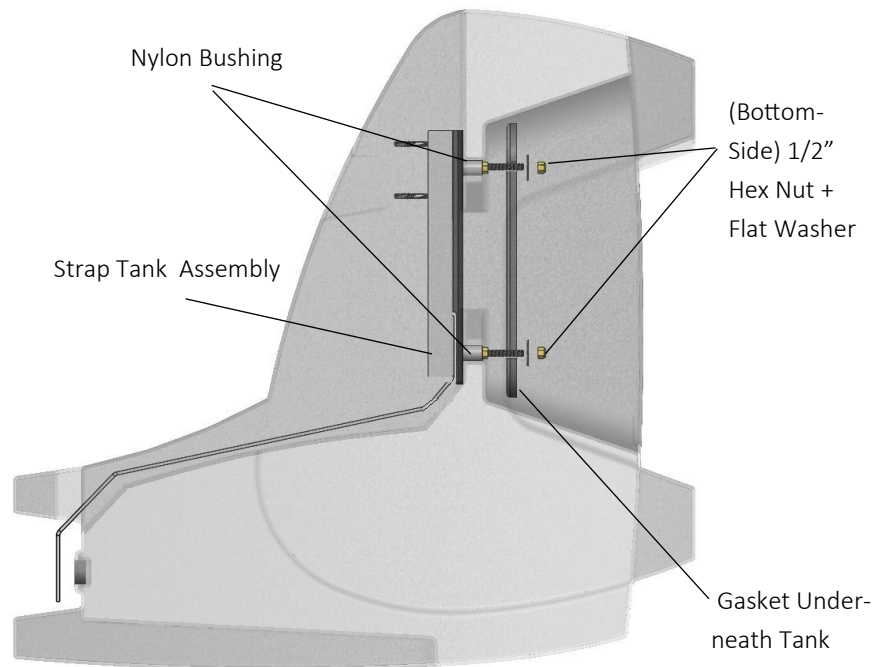
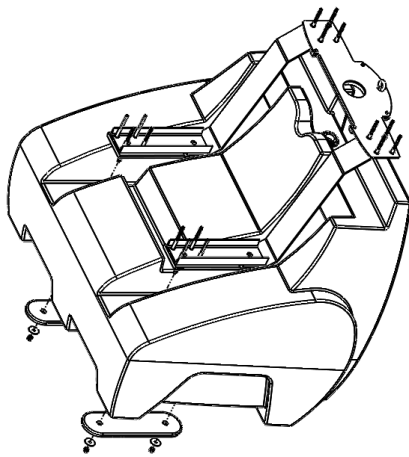
Part #	Hardware Required
HH-LPL-1508	Flat Washer (1/2 x2 OD SS)
HH-2100	Brass Nyloc Nut (1/2-13)

**i** Use Kit Box: #HH-2650

1. Roll the tank onto its back for unobstructed access to the top and bottom of the tank, as illustrated below.
2. Place the completed Strap Plate Assembly into the recesses along the front and top of the tank.

**The next procedure must be followed in order to prevent damage to the tank. DO NOT force the assembly together as this could cause the nylon bushing to damage the tank.**

3. Slide Strap Tank's 1/2 x 13 x 8" Hex Bolts with nylon bushing assembly through the tank.
4. Assemble the Underneath Tank Gasket onto the 1/2" x 13 x 8" bolts and hand tight assemble with the flat washers and Brass Nyloc Nuts.
5. Evenly tighten the Brass Nyloc Nuts so that the assembly pulls together without binding.
6. When you have completely pulled the assembly together Torque the Top-Side Brass Nut to specification.



Tank shown on its back.

## STEP 5: STUB TUBE INSTALLATION

Part #	Parts Required (Per Tank)
HHE-2650	Stub Tube Assembly (Kit Box)

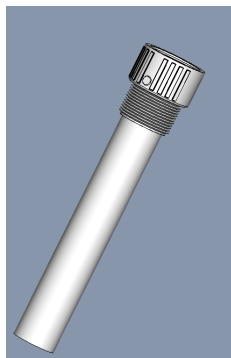
Part #	Hardware Required
HHE-2650	Hose Clamp #24 (Kit Box)
Not supplied	Thread Sealant

**i** Use Kit Box: #HH-2650

1. Reposition the tank in the upright position.
2. Apply thread sealant to the Stub Tube Recommend Sealants: #2 Permatex, 3M 4200, or Permatex with PTFE. Sealant must have PTFE. See sealant manufacturer application instructions.
3. Screw the Stub Tube into the tank fitting.
4. Apply Thread Sealant to the elbow and screw into Stub Tube fitting. You may need to hold the Stub Tube fitting with a pipe wrench to avoid turning it while screwing in the elbow. As the threads tighten, pay attention to the direction that the elbow /hose is pointing.
  - **Often, the lift's hull pad dead rise is shallower than that of the vessel.** To increase the dead rise capability of the lift, the Stub Tube may need to be trimmed. See **Chart 6** for trimming the Stub Tube and **Chart 7** for spacing hull pads. In combination, these will give you the draft of the lift needed for your vessel.
  - **Be careful not to overshoot the desired alignment since backing off the Stub Tube can cause a leak path around the fitting.** The Stub Tube can be hand tightened such that minimal threads on the elbow are visible.



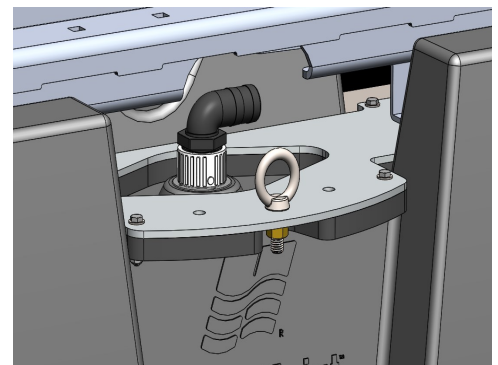
**REPEAT STEPS 1-5 FOR EACH TANK BEFORE PROCEEDING TO STEP 6.**



Stub Tube



Stub Tube Elbow



Stub Tube Assembly in Tank

## STEP 5: STUB TUBE INSTALLATION (Continued)

<b>Chart 6: STUB TUBE MAXIMUM TRIM PER TANK SET</b>					
Model Lifts	Forward	Front to Rear (in.)			Aft
	SET 1	SET 2	SET 3	SET 4	SET 5
8800 Short	0	1.5"	3"		
12000	0	1"	2"	3"	
12000 Shallow	0	1"	2"	3"	
12000 Wide	0	1"	2"	3"	
15000	0	1"	2"	3"	
15000 Shallow	0	1"	2"	3"	
15000 Wide	0	1"	2"	3"	
18000	0	1"	2"	3"	
18000 Long	0	1"	2"	3"	
18000 Wide	0	0.75"	1.5"	2.25"	3"

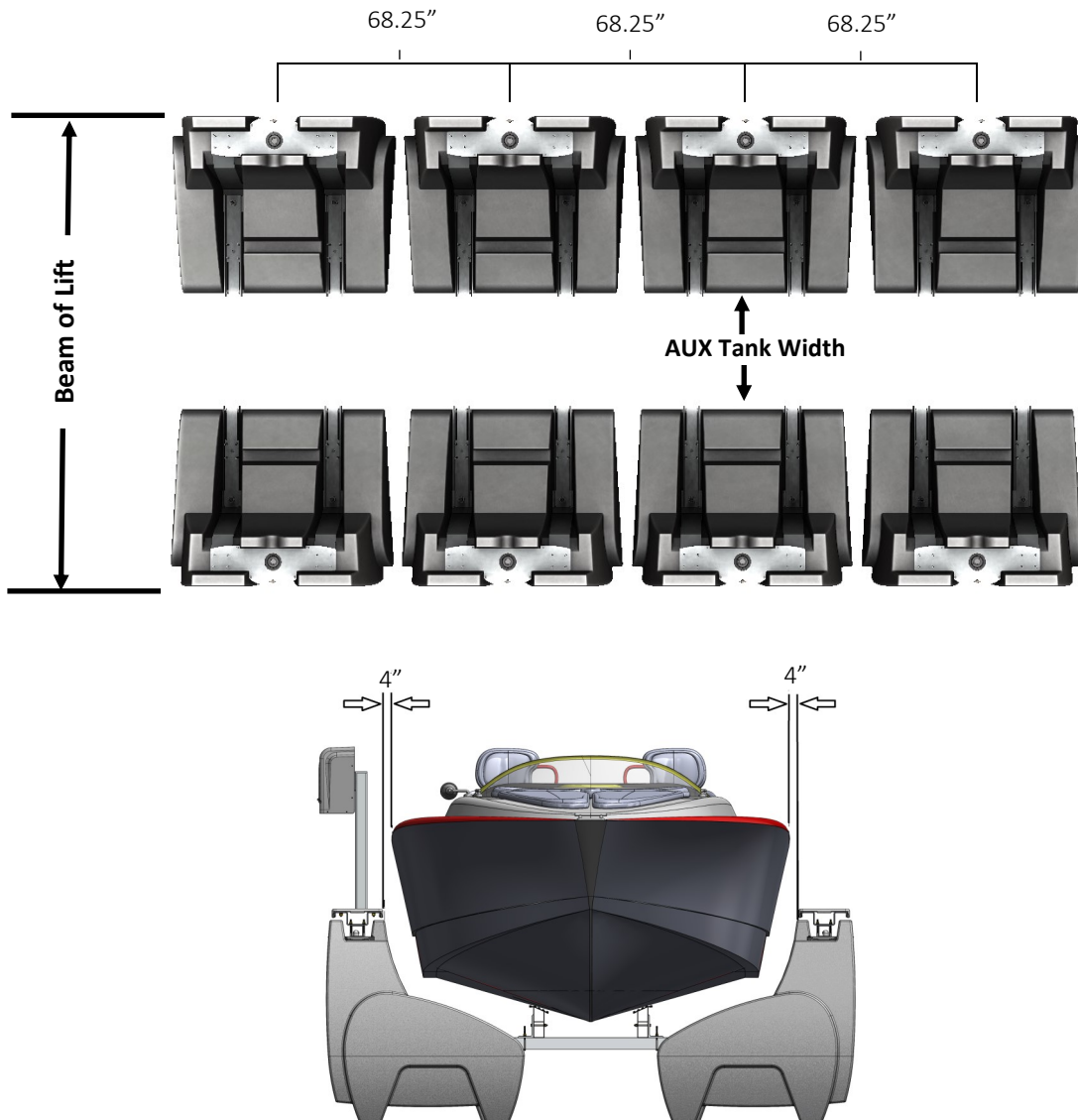


Tanks sets are numbered from front to rear. Set 1 is the farthest forward.

## STEP 6(a): ALIGNING THE TANKS

### Side Alignment

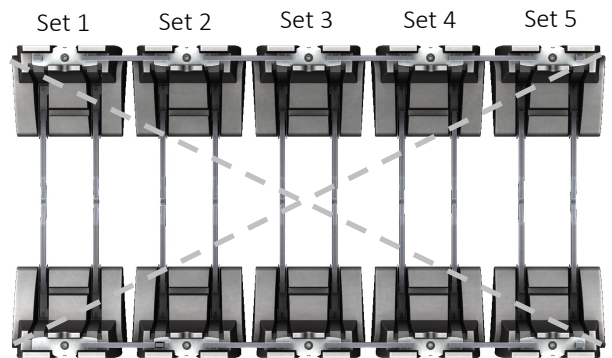
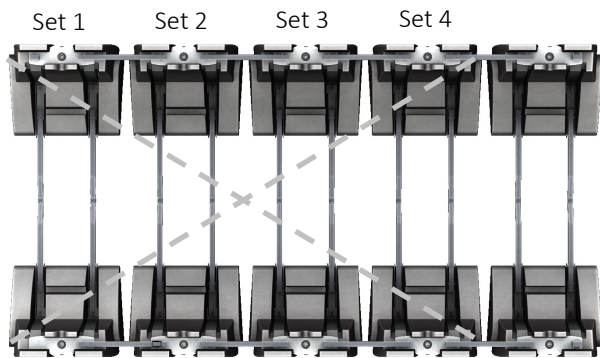
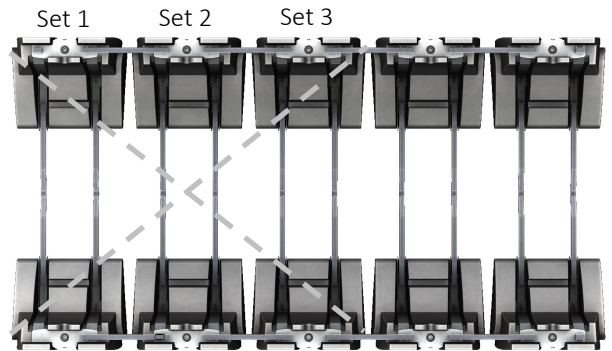
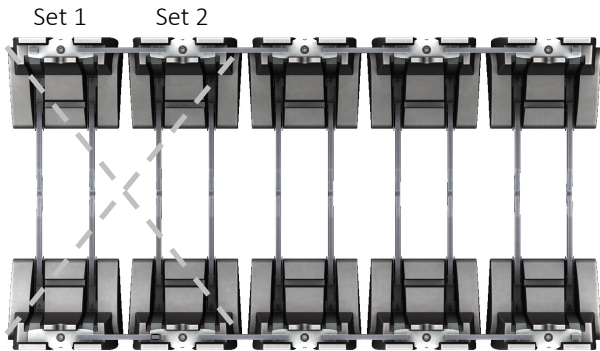
1. Align the tanks next to each other, five on each side, spacing them so the mooring rings are 68.25" apart. You may want to use the full-length hull support bracket as a straight-edge to align the tanks. The hull support bracket is used in a later step.
2. Align tanks opposite each other using the rules for minimum beam of lift or beam of boat. See **Step 6(b)** for proper alignment. **Verify the tanks are separated enough to accommodate the cross channel in STEP 6(c).**



**i** The minimum beam of the lift is calculated by adding 34IN. to the beam of the boat. If the lift uses AUX tanks, the minimum beam of the lift is determined by the width of the AUX tank. Refer to Table 1.

When sizing the slip this way, it will leave a minimum of a 4IN. gap for each of the lifts. Near this width, the walkway could catch on the edge of the dock while raising or lowering. Dock fenders are recommended to prevent this. See **Chart 1** for minimum lift widths.

3. Perform **Steps 6(b) and (c)**. Verify equal length diagonals as you build from tank Set 1 to tank Set 5 as shown below to ensure they are square.
4. After confirming the lift is square and all assembly for **Steps 6(b) and (c)** are completed, tighten all hardware completely.



## STEP 6(b): TANK AND WALKWAY ALIGNMENT AND ATTACHMENT

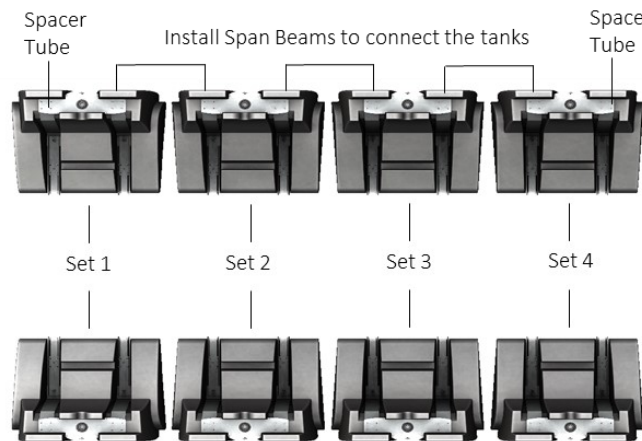
Part #	Parts Required (Per Tank Set)
HH-LPL-1033	Aluminum Spacer Tube (3 X 3)
HH-LPL-1034	Beam - 48in Span—Alum. HH.
HH - 2515	Walkway Support

Part #	Hardware Required (Per Tank Set)
HH-LPL-1505	Lock Washer (3/8" SS)
HH-1975	Brass Nut (3/8-16)
2090242	Flat Washer (3/8" SS)

**i** Use Kit Box: #HH-2650

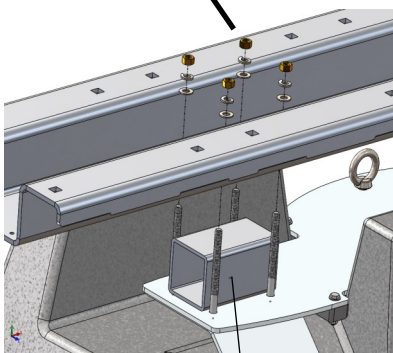
1. Place the Spacer Tubes between the outside set of U-Bolts on the first and last tanks sets. See **Figure B** below.
2. Place Span Beams between the U-Bolt sets on the connecting tanks. See **Figure C** below.
3. Starting with tank Set 3, loosely attach the walkway support on top of the span beam, as illustrated below. Ensure the U-Bolts are centered in the middle of the walkway slots on the walkway support. **As walkway supports are added to the other tank sets, the U-Bolts will shift outward in the walkway slots.** Add walkway supports to from the inner tanks sets to the outer ones. Thus working from the middle out. See **Figure A**.
4. Confirm the Span Beams are centered between the two tanks and the Spacers are in the proper position. **Wait to tighten all hardware on the walkway until you have completed Step 6(c).**

**i** If you use a Single-Sided Tie-Off method for mooring, the Spacer Tubes must be removed in a later step. Do not tighten the U-Bolts fastening the walkway over the spacers. Refer to **STEP 15: TIE-OFF MOORING**.



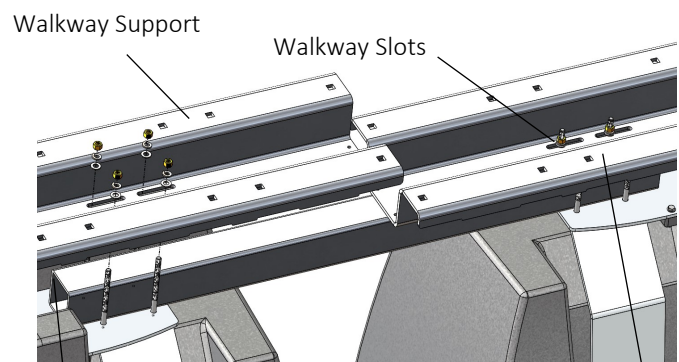
**Figure A:** Tank Walkway Connection

Brass Nut 3/8"  
Lock Washer 3/8"  
Flat Washer 3/8"



Spacer Tube installed between the outside set of U-Bolts on front and rear tank sets

**Figure B:** Spacer Tube



Span Beam installed between U-Bolts on connecting tanks

**Figure C:** Span Beam



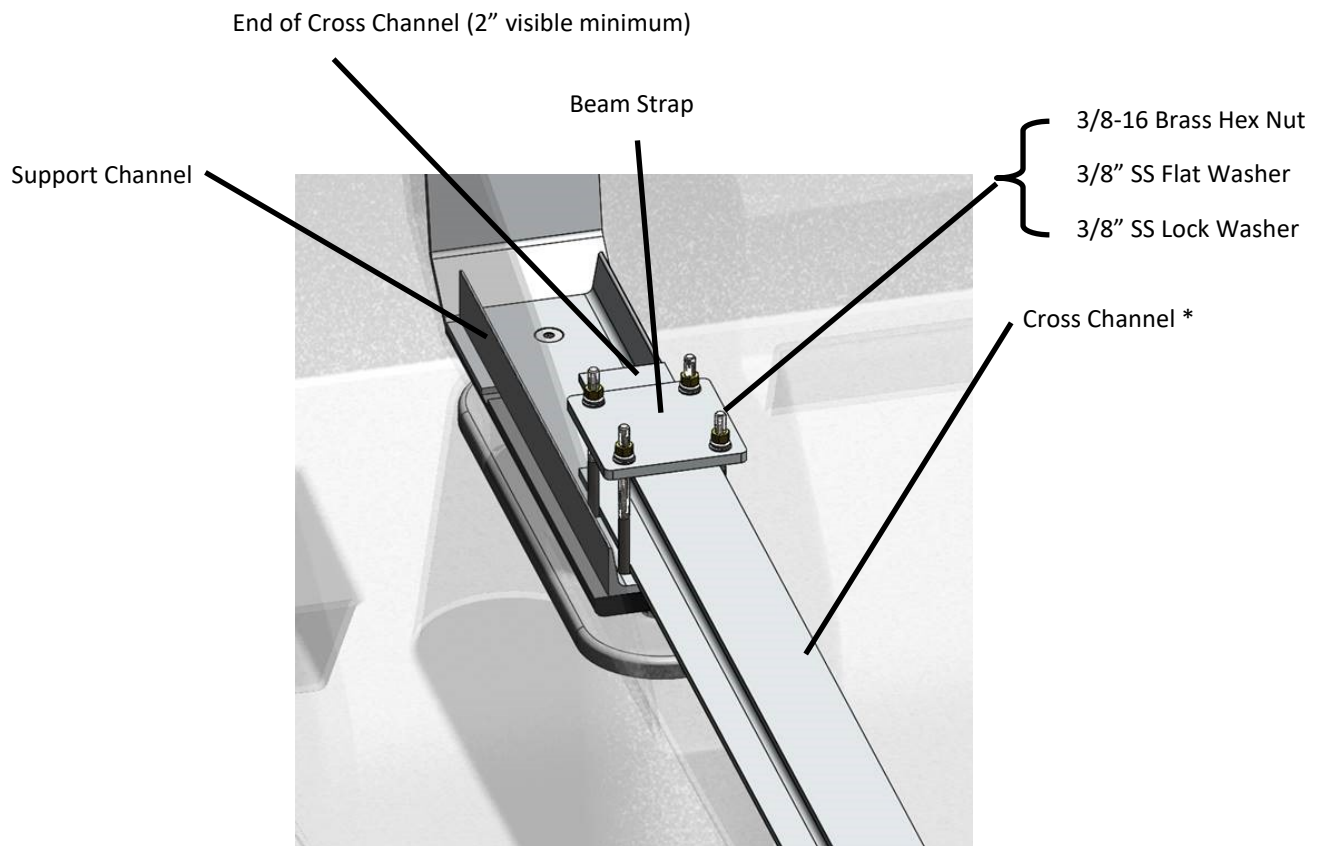
## STEP 6(c): INSTALL TANK CROSS BEAM ASSEMBLY

Part #	Parts Required (Per Tank)
HH-LPL-1026	BEAM STRAP—ALUMINUM –HARBORHOIST
HH-LPL-1018	CROSS CHANNEL - I BEAM 84 inch*
HH-4310	CROSS CHANNEL - 3IN SQ. 100IN. V CENTER*
FRM-06-0007	CROSS CHANNEL - 3IN SQ. V CENTER 126 IN LONG*

Part #	Hardware Required (Per Tank)
HH-1975	BRASS HEX NUT 3/8-16
2090242	FLAT WASHER 3/8" SS
HH-LPL-1505	LOCK WASHER 3/8-16 SS
HH-LPL-1508	WASHER - FLAT-1/2" x 2 OC SS

1. Connect the facing tanks by placing the Cross Channels on top of the Support Channels between the U-Bolts. Install the Beam Strap to the tank frame assemblies.
2. Finger-tighten the U-Bolt nuts to hold the Beam Strap in place. Repeat for each set of tanks.

**i** Do not fully tighten until you verify that Step 6(a), 6(b), and 6(c) have been completed.



**i** \* Use Chart 4 to determine proper Cross Channel for model of lift



**THE CROSS CHANNEL END SHOULD HAVE AT LEAST 2 INCHES OF CHANNEL VISIBLE BEFORE GOING UNDER THE BEAM STRAP.**



## STEP 7(a): HULL PAD ALIGNMENT (V-HULL ONLY) -Straight Cross Beam

Before installing the hull pads, it is important to determine the bunk spacing: how far apart the hull pads should be mounted on the cross beams. To calculate the proper spacing, refer to the table below. Consult your boat manufacturer for dead rise information.

### How to Use the Bunk Value Table

The chart shows pad separation and max dead rise angle to maintain 1" minimum clearance to the cross channel listed top to bottom.

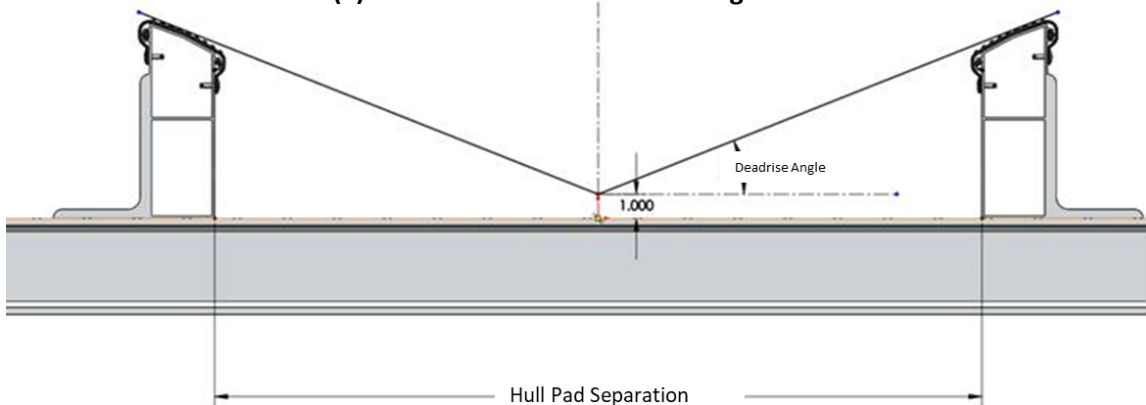
### Aligning the Hull Pads

Place the hull pads as wide as possible while maintaining clearance between the hull and cross beam. Be sure to check the boat, boat trailer, or consult the boat manufacturer to ensure the location is clear of underwater obstructions, such as speedometer sensors, water pickups, fins, etc. The hull pads can be placed on the lift so that the front is narrower than the rear if needed. If you do this, verify that the hull pad does not cross a stake or other feature on the hull that would result in a concentrated loading condition. The chart below is based on the dead rise angle and separation distance and is provided as a starting point only.

**i** IF YOUR VESSELS DEADRISE FALLS IN BETWEEN TWO NUMBERS IN THE CHART ALWAYS MOVE TO THE NARROWER HULL PAD SEPARATION FOR HULL PAD PLACEMENT.

Straight Cross Beam Hull Bunks		
Hull Pad Separation (In)	Max Dead Rise (Deg)	Min Clearance (In)
12	46.2	1
15	39.6	1
17	36	1
20	31.6	1
25	26.4	1
30	22.8	1
32	21.6	1
35	20	1
40	17.9	1

Table 7(a): Maximum Deadrise for Straight Cross Beam



## STEP 7(a): HULL PAD ALIGNMENT (V-HULL ONLY) - V Center Cross Beam

Before installing the hull pads, it is important to determine the bunk spacing: how far apart the hull pads should be mounted on the cross beams. To calculate the proper spacing, refer to the table below. Consult your boat manufacturer for dead rise information.

### How to Use the Bunk Value Table

The chart shows pad separation and max dead rise angle to maintain 1" minimum clearance to the cross channel listed top to bottom.

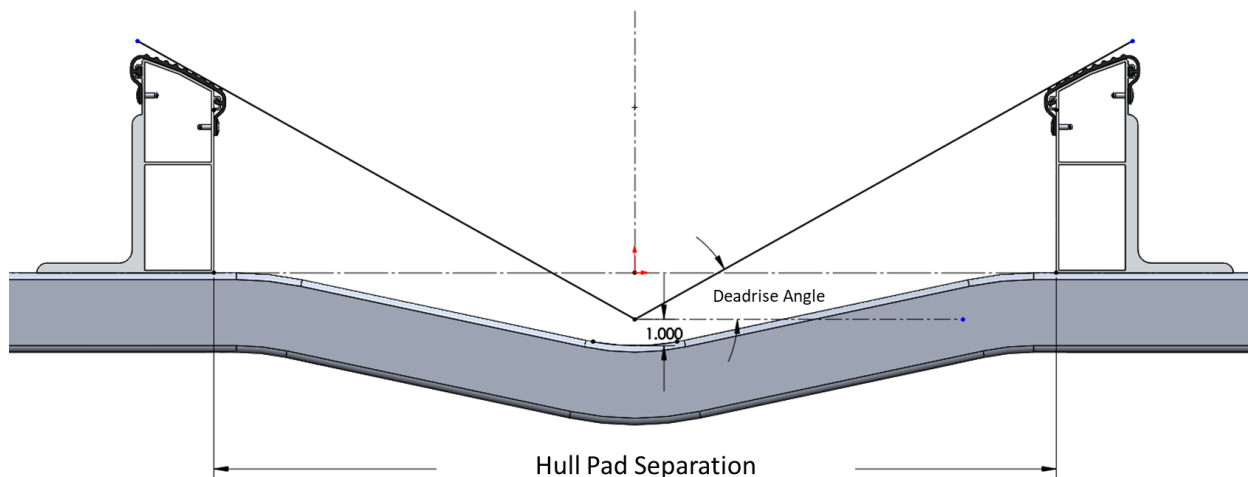
### Aligning the Hull Pads

Place the hull pads as wide as possible while maintaining clearance between the hull and cross beam. Be sure to check the boat, boat trailer, or consult the boat manufacturer to ensure the location is clear of underwater obstructions, such as speedometer sensors, water pickups, fins, etc. The hull pads can be placed on the lift so that the front is narrower than the rear if needed. If you do this, verify that the hull pad does not cross a stake or other feature on the hull that would result in a concentrated loading condition. The chart below is based on the dead rise angle and separation distance and is provided as a starting point only.

**i** IF YOUR VESSELS DEADRISE FALLS IN BETWEEN TWO NUMBERS IN THE CHART ALWAYS MOVE TO THE NARROWER HULL PAD SEPARATION FOR HULL PAD PLACEMENT.

V-Center Cross Beam Hull Bunks		
Hull Pad Separation (In)	Max Deadrise (Deg)	Min Clearance (In)
25	35.5	1
30	30.7	1
32	29.2	1
35	27	1
40	24.3	1

Table 7(a): Maximum Deadrise for V-Center Cross Beam



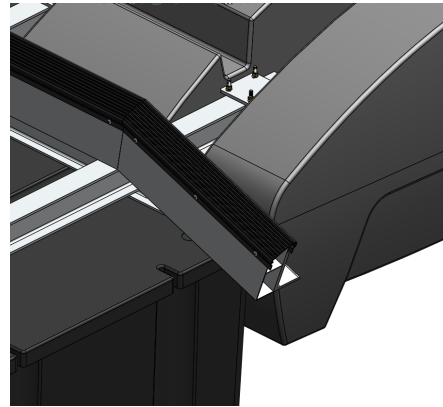
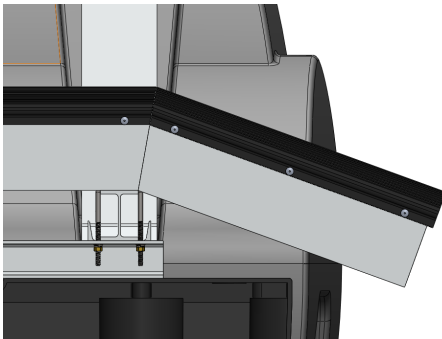
## STEP 7(b): MOUNTING THE HULL PADS (V-HULL ONLY)

Part #	Parts Required
1035066	Assy HarborHoist AL Bunk Left 22FT
1035067	Assy HarborHoist AL Bunk Right 22FT

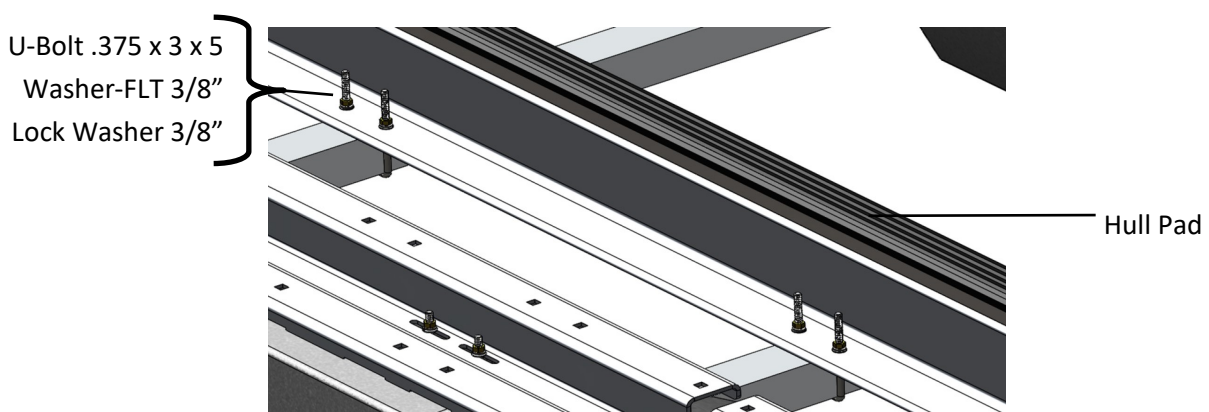
Part #	Hardware Required
HH-2603	Nut 3/8"-16 Brass
2090242	Washer - Flat -3/8" SS
HH-LPL-1505	Lock Washer 3/8" SS
HH-LPL-1503	U-Bolt - .375x3x5 SS

**i** Use Kit Boxes #1035195

1. After confirming the proper spacing, place the angle entry Hull Pad at the back edge of the entry Cross Channel. Hold it in place with an 18" bar clamp.



2. Mount the Hull Pad to the cross channel using the U-Bolts, Lock Washers, and Brass Nuts. Drill a 7/16" hole through the Hull Pad to connect the U-Bolts to the Cross Channel.



3. Repeat these steps for the opposite side Hull Pad.

**i** In some applications, the Hull Pad will align such that the Hull Support Bracket is directly over the AUX tank I-beam. If this occurs, use 3/8" x 5.5" bolts (not supplied) to bolt the support bracket directly to the I-Beam, sandwiching the Cross Beam between the Hull Support Bracket and the I-Beam. The U-Bolts are Discarded. Use the U-bolt Nuts and Washers with these Bolts.

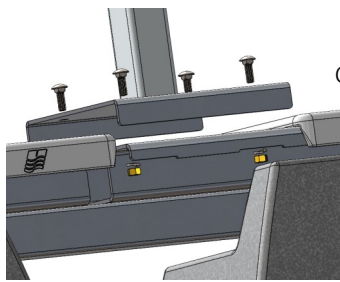
## STEP 8: INSTALLING THE CONTROL STAND

Part #	Parts Required
HH-2517	CONTROL-STAND HARBORHOIST GEN 1.5

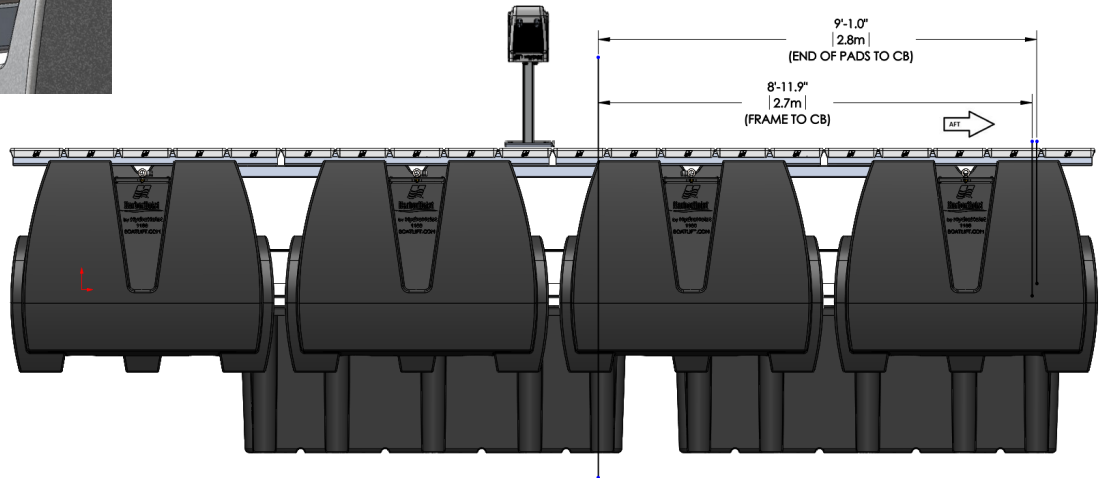
Part #	Hardware Required
HH-1913	BOLT-CARRIAGE 1/2"-13 X 1.5 SS
HH-1916	WASHER-LOCK 1/2" 18-8 SS
2090208	WASHER-FLAT 1/2" SS
HH-1926	NUT-HEX 1/2 -13 BRASS

**Use Kit Box: #HHE-2655**

1. Select a mounting location on the lift walkway. We recommend mounting between two tanks, near the center of the walkway, to keep it as level as possible.
2. Position the stand at the desired location on the walkway. Run the Carriage Bolts through the Control Stand mount and down through the holes in the walkway support. Tighten with the supplied hardware.



Control Stand Mount



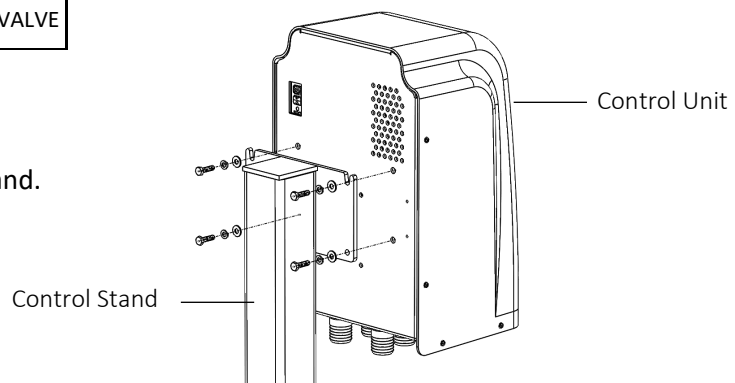
Part #	Parts Required 25000 LIFT
HH-2760X	CONTROL-HARBORHOIST-6 VALVE

Part #	Hardware Required
HH-2603	BOLT -1/4"-20 x 1" SS
2090242	WASHER LOCK 1/4" SS

Part #	Parts Required 20000 LIFT
HH-2750X	CONTROL-HARBORHOIST-5 VALVE

**Use Kit Box: HHE-2655**

3. Attach the Control Unit to the Control Stand.



## STEP 10: ATTACH AUXILIARY TANKS TO LIFT

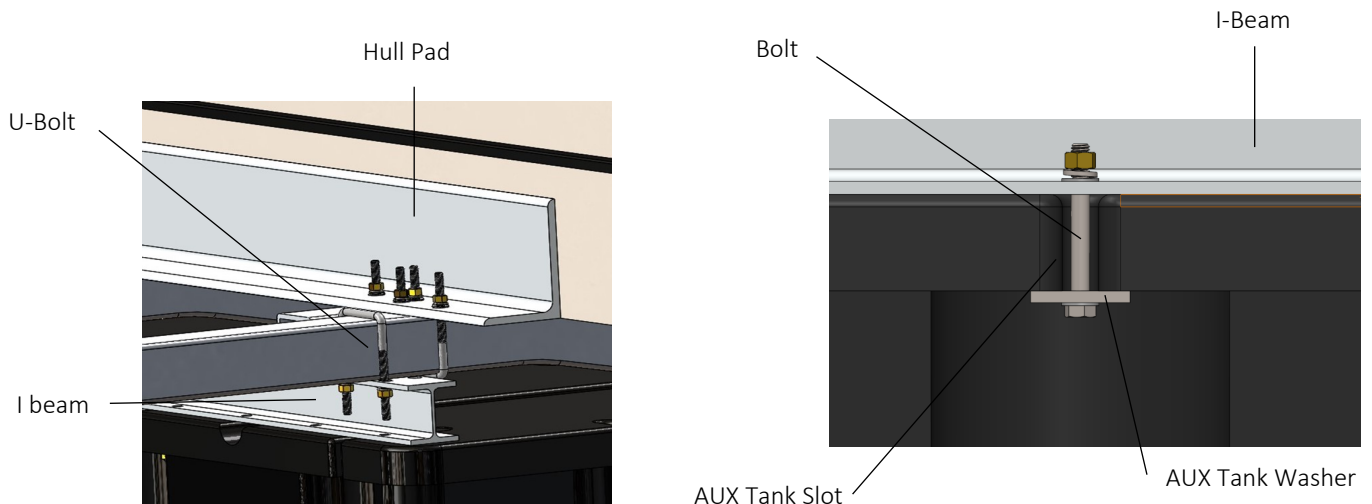
Part #	Parts Required
See <b>Chart 4</b> for Part# for your model of lift	AUXILIARY TANK ASSY-HARBORHOIST
See <b>Chart 4</b> for Part# for your model of lift	I-BEAM E AUX TANK MOUNT HH

Part #	Hardware Required
HH-LPL-1503	U-BOLT .375 x 3 x 5 SS
HH-2603	NUT 3/8"-16 BRASS
HH-LPL-1505	WASHER - LOCK 3/8" SS
2090242	WASHER FLT 3/8" SS
HHE-7111	AUX TANK BOTTOM WASHER
HHE-7110	AUX TANK TO I-BEAM BOLT
20902000	ELBOW-90 DEGREE

**i** Use Kit Boxes : #1033229A or HHE-7116 depending on model of lift. See Chart 4

1. Attach the Elbow to the tank with thread sealant in the same manner. as was completed with the stub tubes. Orienting the Elbow in accordance with hose routing in **Step 11**.
2. Align the I-Beam on top of the tank with the T-Slot facing the outside edge of the tank.
3. Drill a hole through the I-Beams at each slot on the Auxiliary Tank.
4. Run the Bolts through the slots and the AUX tank washers. Loosely fasten the Nut. Repeat this step for each Bolt.
5. Confirm the alignment is correct and tighten the Bolts After mounting the I-Beams, align the tanks 2" aft of the rear cross channel. Spacing between the tanks should be 2".
6. Place the U-Bolts over the cross channel, pointing down toward the AUX tank I-Beam.
7. Drill the AUX tank I-Beams to line up with the U-Bolts.
8. Repeat the process for the each I-Beam/cross channel intersection.
9. Run the U-Bolts over the cross channel and into the drilled holes in the AUX tank I-Beam. Loosely fasten all the U-Bolts with Brass Nuts.
10. After confirming the alignment is correct, tighten the U-Bolts.

**i** To get the AUX tanks under the lift, they can be floated under at the boat slip or the lift can be raised and placed on top of the tanks with a crane or forklift. See Appendix A1 for lifting details.



## STEP 11: INSTALL HOSE SYSTEM

Part #	Parts Required
1035233	HarborHoist Triton 5 Valve Single Blower -110 volt

Part #	Hardware Required
2093005	TEE-HOSE 1 1/4" BARBED NYLON
2090907	HOSE CLAMP
3072517	HOSE-RUBBER 1 1/4" id x 100FT. CUT
3072512	HOSE-RUBBER 1 1/4" id x 30FT. CUT
3072516	HOSE-RUBBER 1 1/4" id x 50FT. CUT

 Use Kit Box: #HH-2685

When running hoses, as recommended in Figures 3 & 4, avoid making dips “p-traps” in the routing of the lines. If water gets in the air system, it can pool in these “p-traps”, which could cause an obstruction of the airline, resulting in a reduction in lifting and lowering performance. Also, avoid running lines between tanks that could pinch the hoses as they inflate

We recommend using the supplied hose labels when plumbing the air system to ensure the hoses are connected to the correct port on the control unit.

### Connecting Front Tanks

1. Run hoses from the Stub Tubes on the front two portside tanks to a tee. Center the tee between the 2 front portside tanks and make sure hoses are equal length. Then, run a hose from the tee to the Front Port connection on the Control Unit.
2. Connect hoses from the Stub Tubes on the front two starboard tanks to a tee. Center the tee between the 2 front starboard tanks and make sure hoses are equal length. Then, run a hose from the tee to the Front Starboard connection on the Control Unit.

### Connecting Rear Tanks

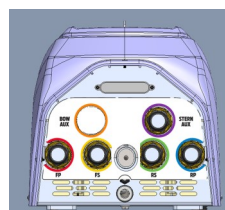
1. Connect hoses from the Stub Tubes on the third and fourth rear port tanks together via a tee. Center the tee between the 2 portside tanks and make sure hoses are equal length. Then, run a hose from the tee to another tee connected to the rear port tank.
2. Run a hose from the tee on the rear port tank to the Rear Port connection on the Control Unit.
3. Connect hoses from the Stub Tubes on the third and fourth rear starboard tanks together via a tee. Center the tee between the 2 starboard tanks and make sure hoses are equal length. Then, run a hose from the tee to another tee connected to the rear Starboard tank.
4. Run a hose from the tee on the rear Starboard tank to the Rear Port connection on the Control Unit.

### AUX Tanks

1. Run a hose from the front AUX tank to one of the AUX Ports on the Control Unit.
2. Connect the other AUX tanks to a tee and then run a hose from that tee to the other AUX Port on the Control Unit.

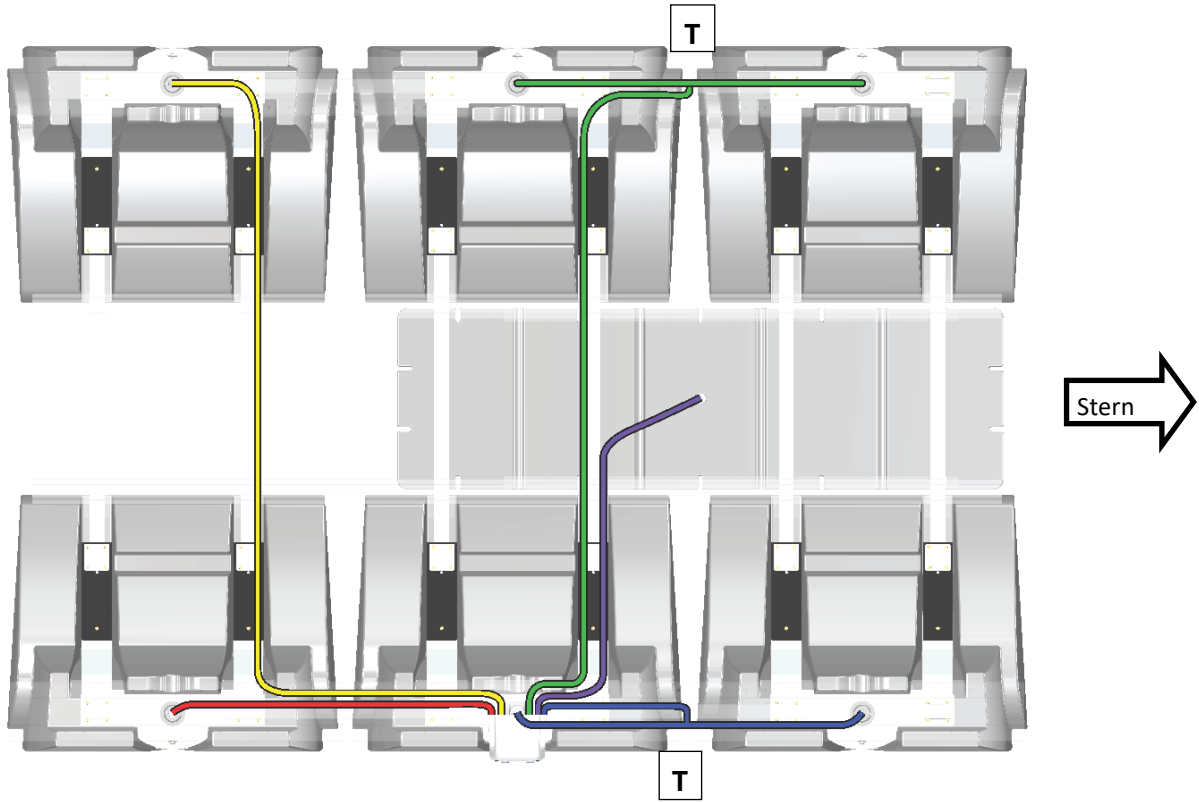


Hose Labels



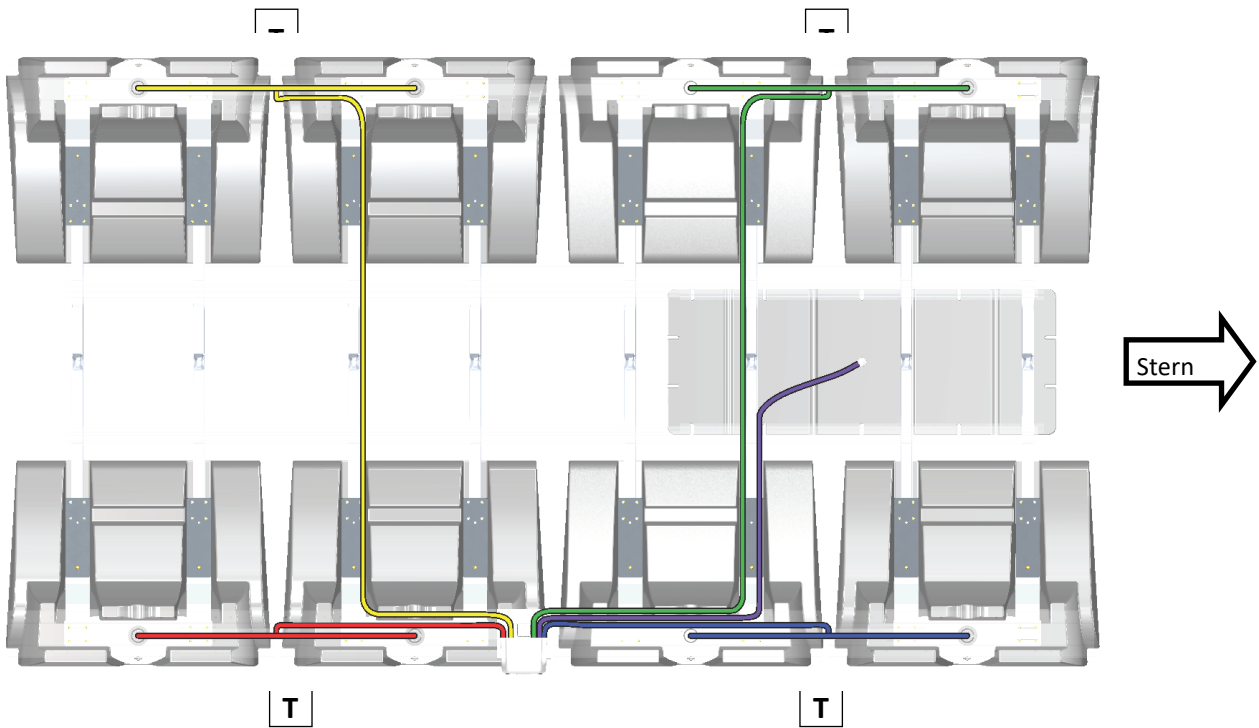
These models will use a 5 valve control with one AUX port.

**Figure 1: 8800 LB. (Short) HOSE ROUTING DIAGRAM**



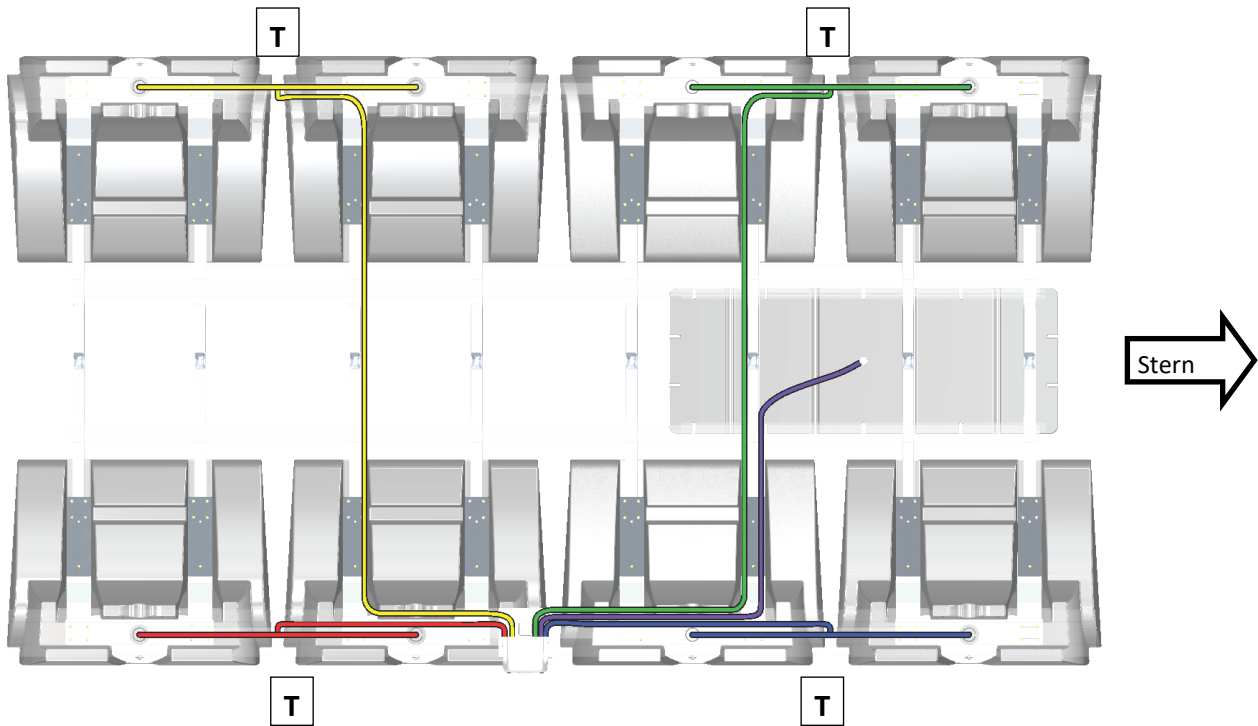
T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 2: 12000 LB. HOSE ROUTING DIAGRAM**



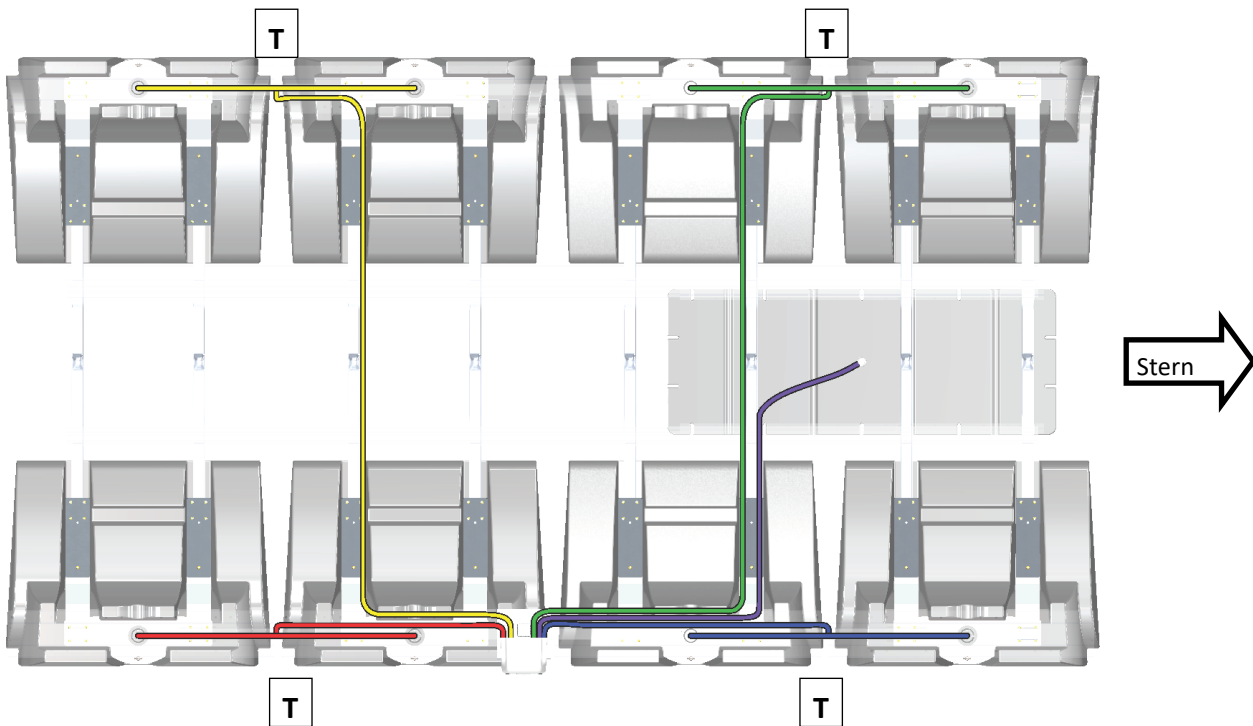
T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 3: 12000 LB. (Shallow) HOSE ROUTING DIAGRAM**



T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

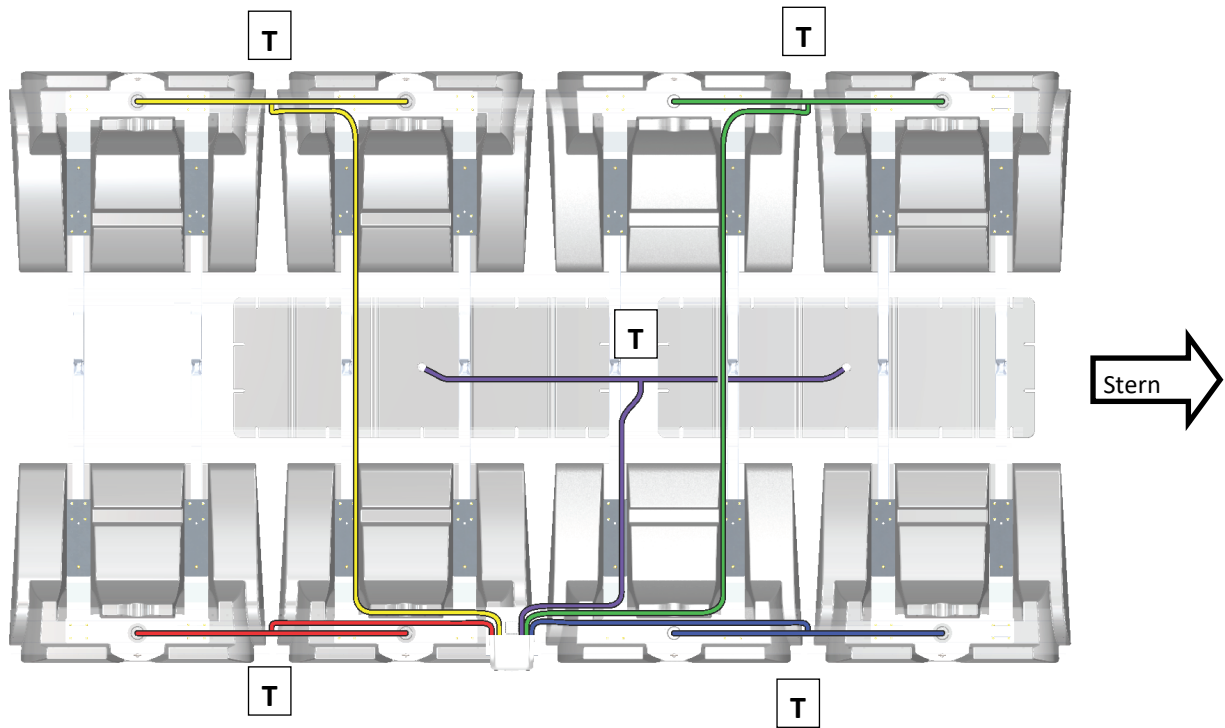
**Figure 4: 12000 LB. (Wide) HOSE ROUTING DIAGRAM**



T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

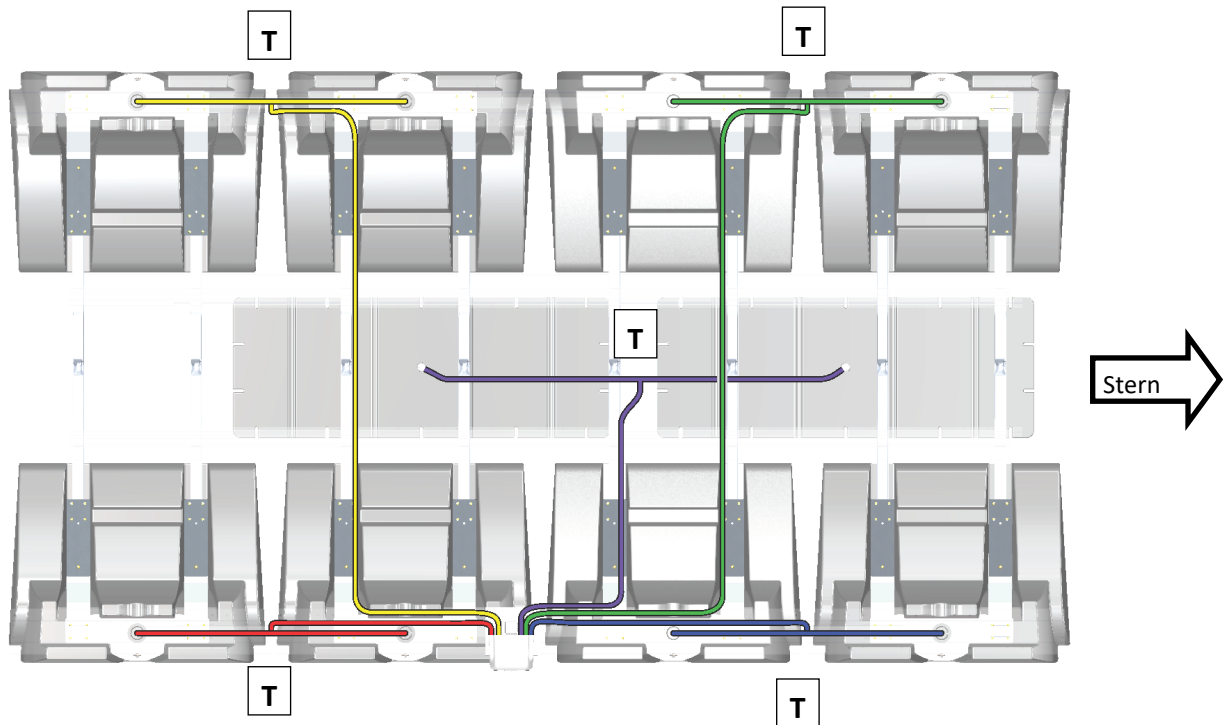


**Figure 5: 15000 LB. HOSE ROUTING DIAGRAM**



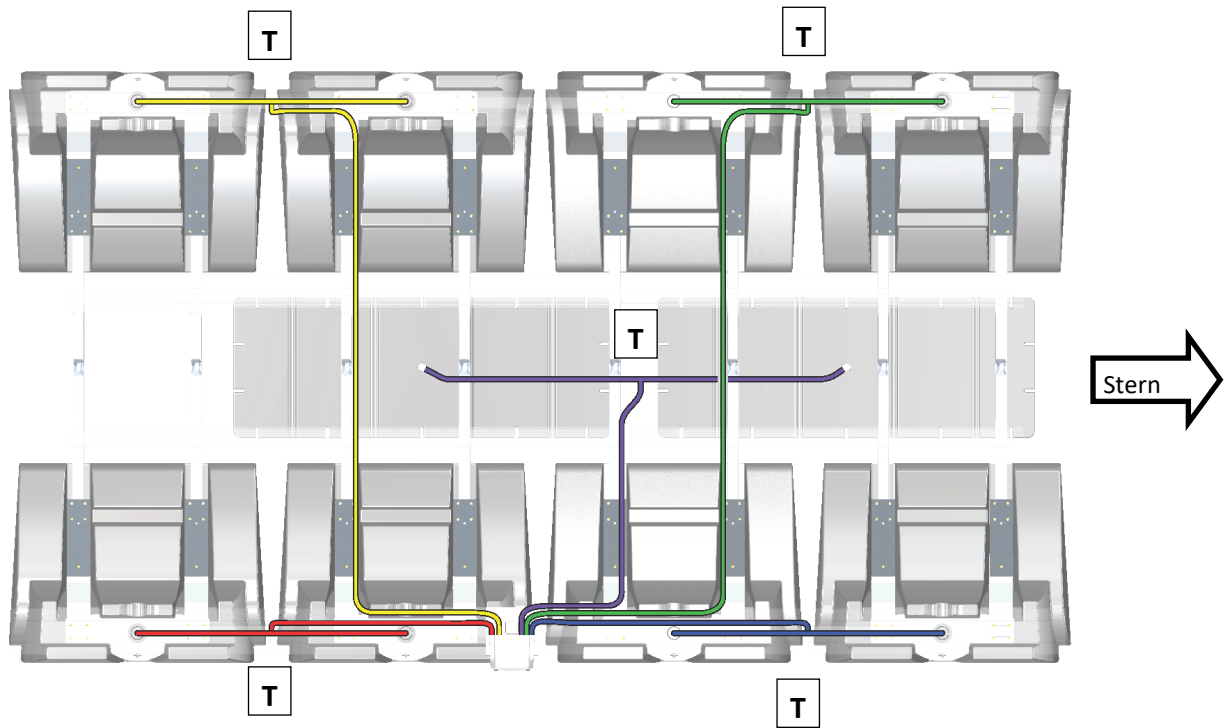
T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 6: 15000 LB. (Shallow) HOSE ROUTING DIAGRAM**



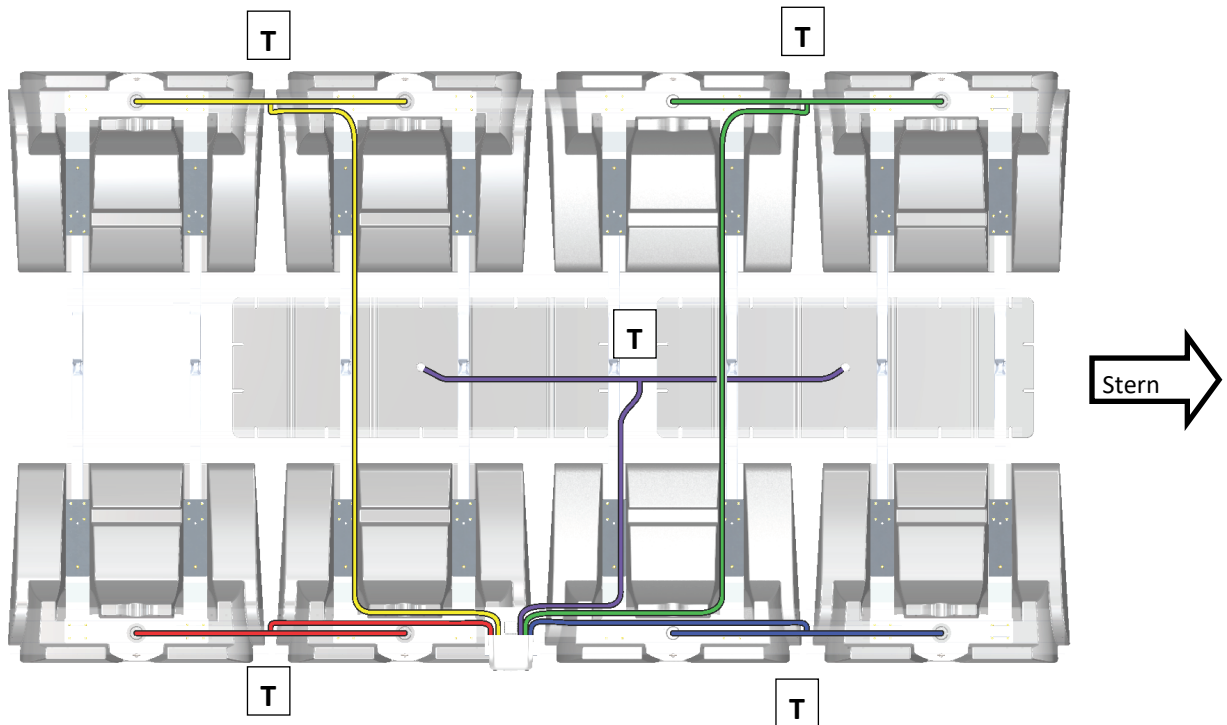
T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 7: 15000 LB. (Wide) HOSE ROUTING DIAGRAM**



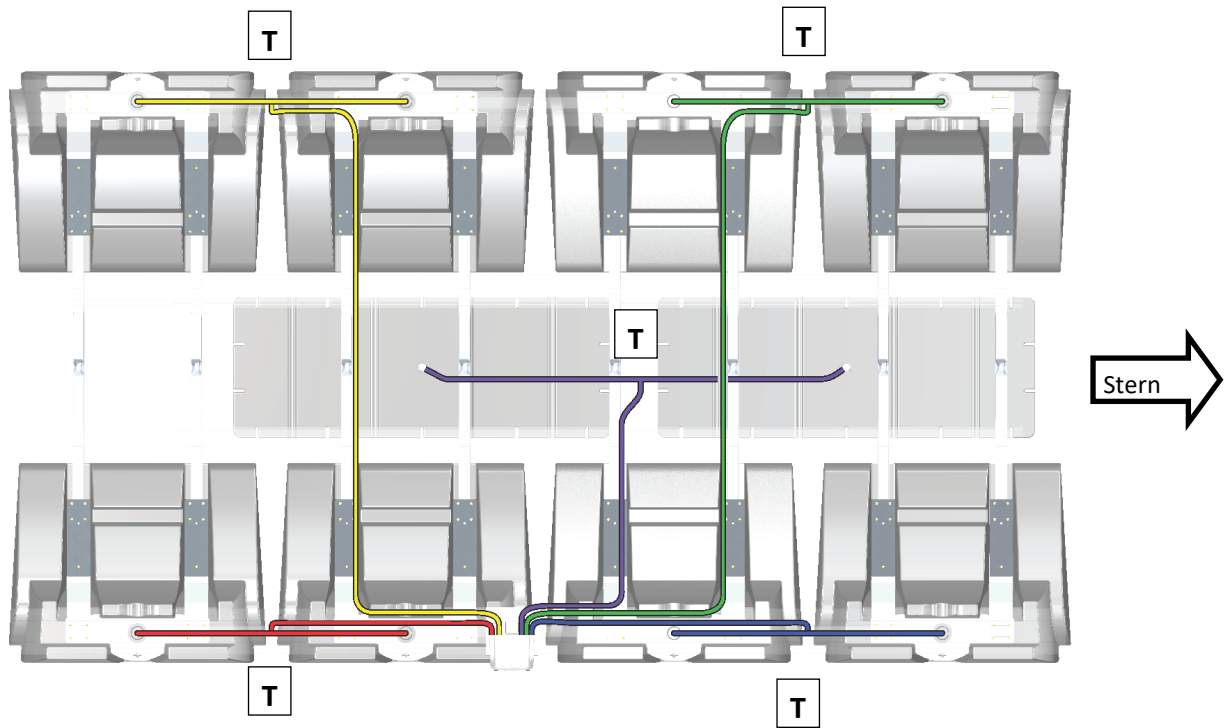
T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 8: 18000 LB. HOSE ROUTING DIAGRAM**



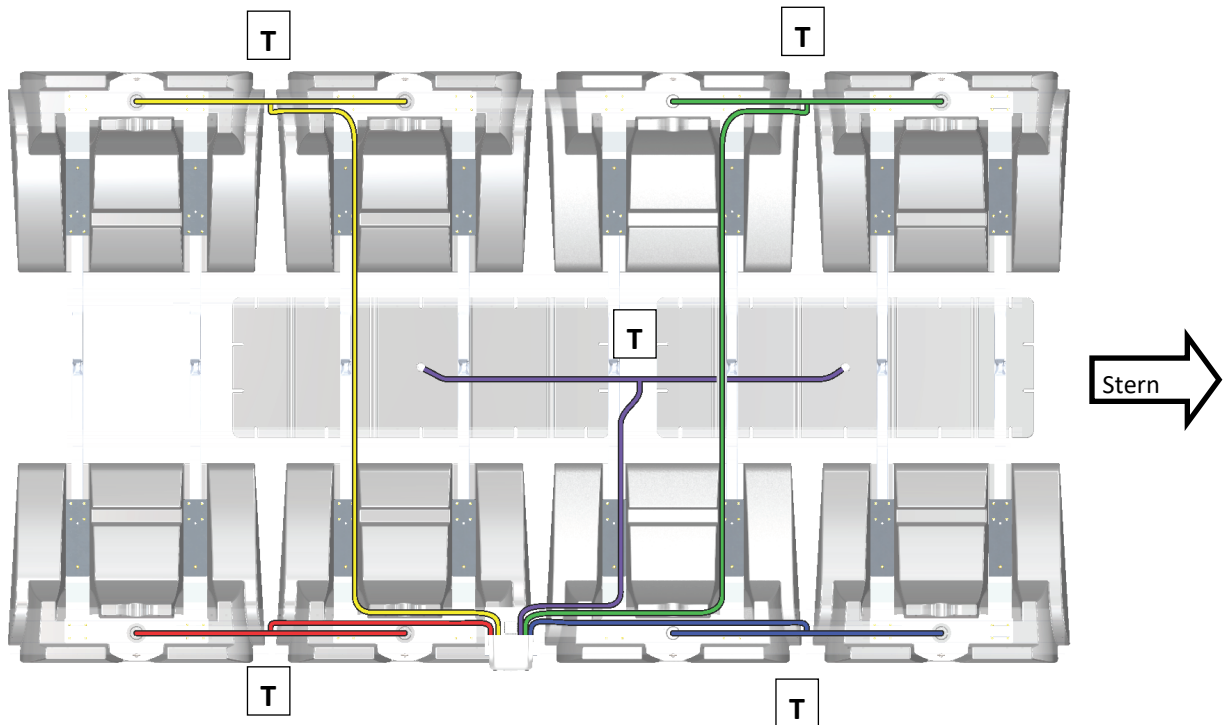
T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 9: 18000 LB. (Wide) HOSE ROUTING DIAGRAM**



T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

**Figure 10: 18000 LB. (Long) HOSE ROUTING DIAGRAM**

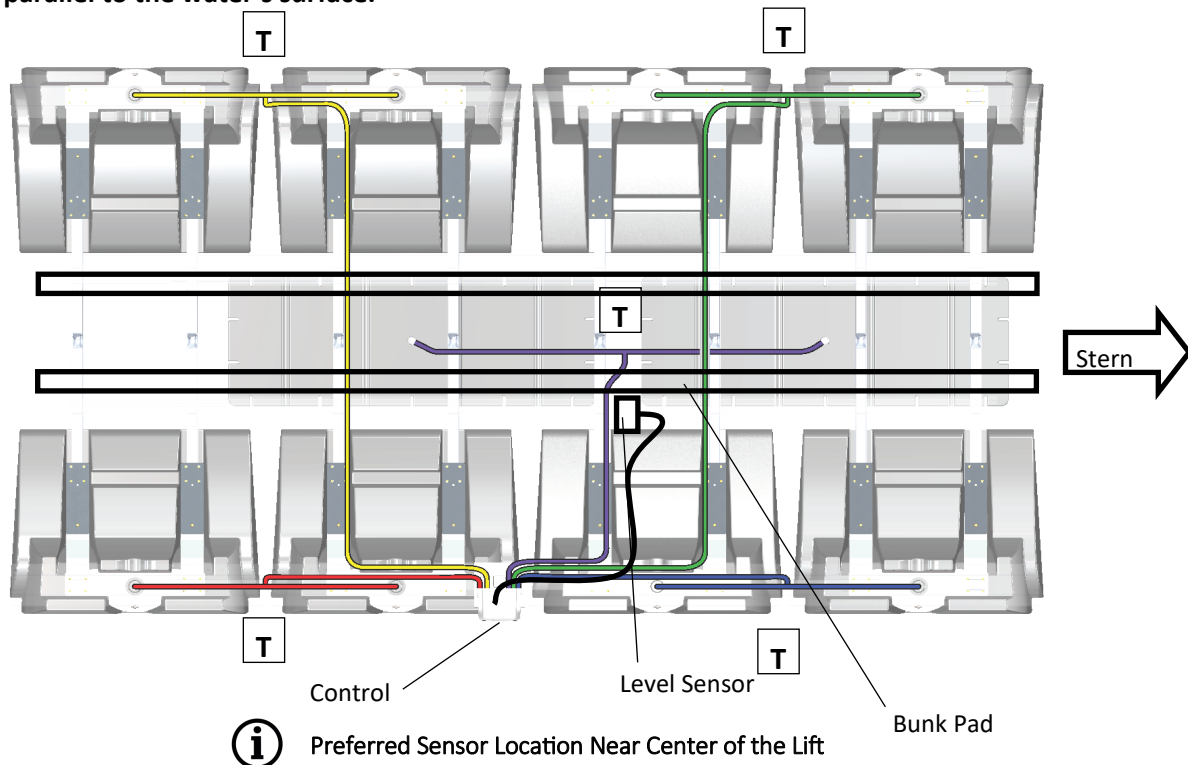


T = Tee (NOTE: Typical hose length from Stub Tube to tee is between 36" and 38")

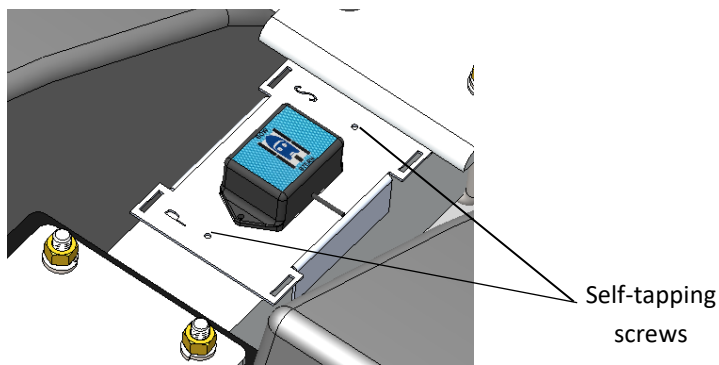
## STEP 12: INSTALL LEVEL SENSOR



The hoist comes with a sensor to keep it level when lifting and lowering. **Proper placement of the sensor is critical.** It should be mounted as close as possible to the center of gravity of the lift as illustrated below. Mount the sensor just outside the bunk pad, on the flat portion of the Cross Channel that is parallel to the water's surface.



1. The sensor should be through-bolted to the mounting plate with the supplied #6 3/8" self-tapping screws.
2. The sensor assembly should be oriented so the **sensor is mounted FACE UP on the cross beam with the cable exiting the sensor aft of the lift.**
3. Use zip ties to hold the sensor assembly to the cross beam, and then fasten the assembly to the beam using the supplied #6 self-tapping screws. **The zip ties are only used to fixture the sensor in place while fastening it.**
4. Secure the sensor cable to the frame using zip ties to prevent damage during operation.



The sensor should be positioned as shown with the control cable exiting towards rear of the lift. The sensor is waterproof and can be submerged during operation.

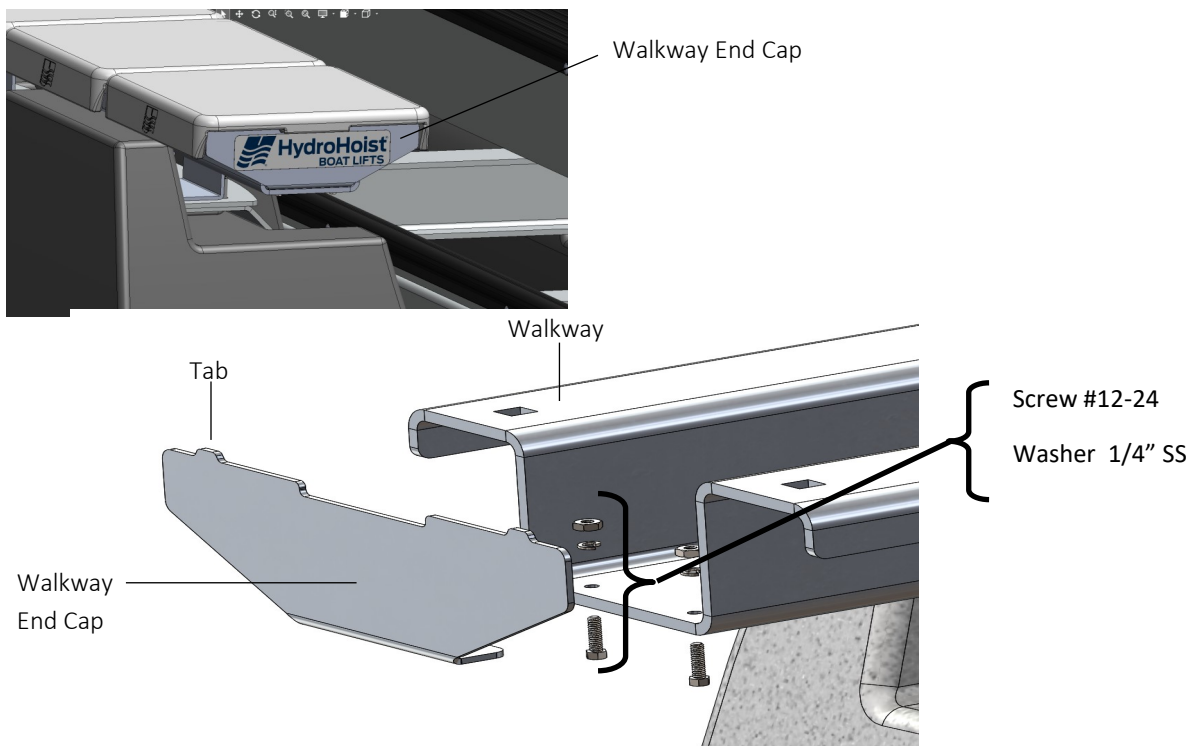
## STEP 13: INSTALL WALKWAY END CAPS AND WALKWAY PADS

Part #	Parts Required
HH-2525	END CAP - HH WALKWAY WITH DECAL
HH-1428	WALKWAY PANEL - HARBORHOIST G1.5

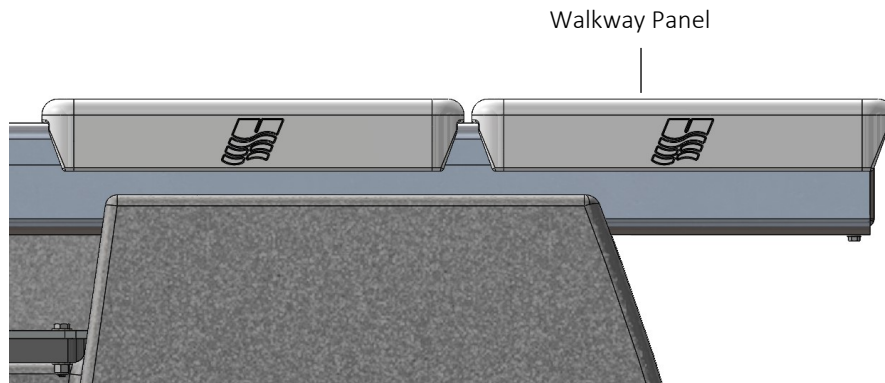
Part #	Hardware Required
HH-1971	SCREW #12--24
HH-2508	WASHER LOCK 1/4" SS
HH-1973	NUT #12-24 HEX HEAD 18-8 SS

**i Use Kit Box: HHE-2655**

1. Place the Walkway End Cap on the end of the walkway and attach using the supplied hardware.
2. Snap the Walkway Panels over the walkway support, verifying alignment of the locks with the recesses in the walkway support.



The tabs on the top side of the Walkway End Cap should extend above the top of the walkway support



When installing Walkway Panel, verify the tabs on the Walkway End Caps align with slots on the Walkway Panel

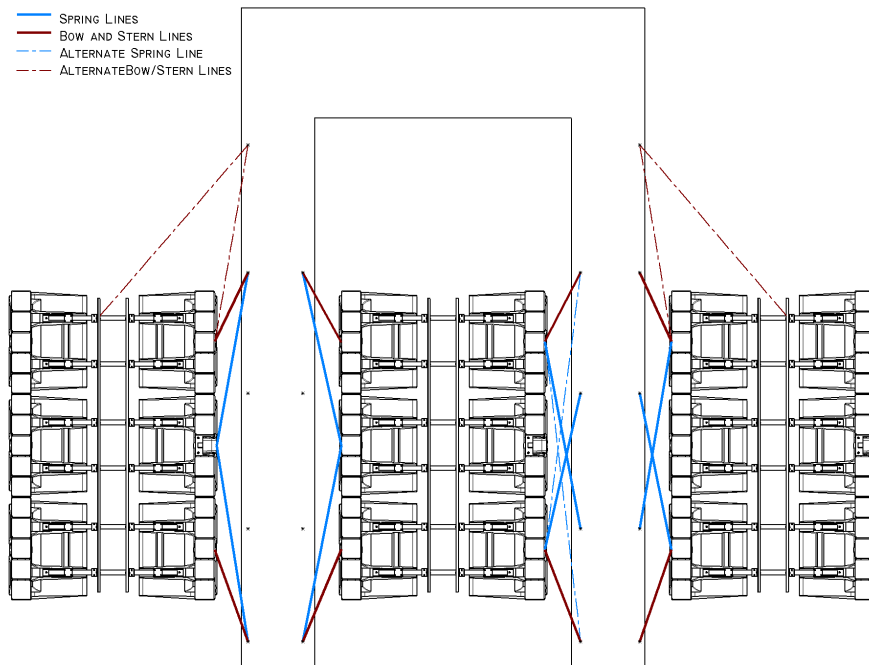
## STEP 14: TIE-OFF MOORING (MOORING ROPES NOT INCLUDED)

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

**NOTE: Use a good mooring rope with enough strength for the size of boat and lift being installed. Use a minimum rope diameter 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-off locations, so check the mooring regularly for any changes in rope condition, tie-off points, etc.

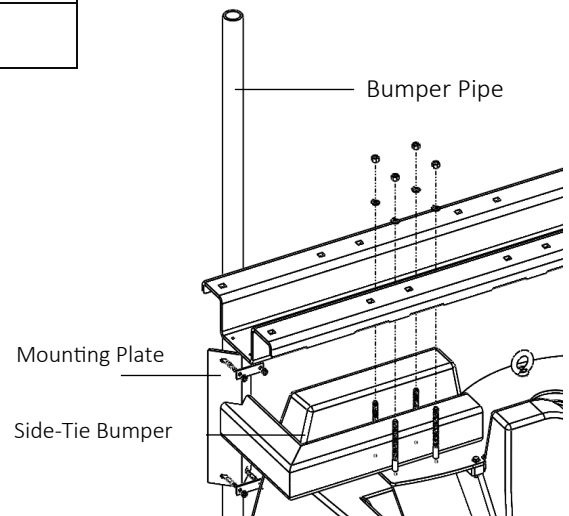
Be sure that all tie-off points are in good condition and structurally sound enough to handle the load the mooring will apply. We recommend Double Braid Nylon Dock lines.



### Single-Sided Tie Off (Optional)

Parts Required	Hardware Required
Side-Tie Bumper (not supplied)	U-Bolt with Mounting Plate
Side-Tie Bumper Pipe (not supplied)	

1. Attach Side-Tie bumper pipe to the Side-Tie Bumper Bracket using the supplied U-Bolt and Mounting Plate.
2. Replace the end spacer tubes with the Side-Tie Bumper.
3. Replace the spacers on the end tanks with the Side-Tie Bumper.
4. Attach the walkway support. For more information, refer to **STEP 8: TANK AND WALKWAY ALIGNMENT/ATTACHMENT.**





## STEP 15: DETERMINE MOORING LOCATION

Lift Capacity	Number Mooring Poles	
	Calm water	Moderate to Rough*
15,000	2	3

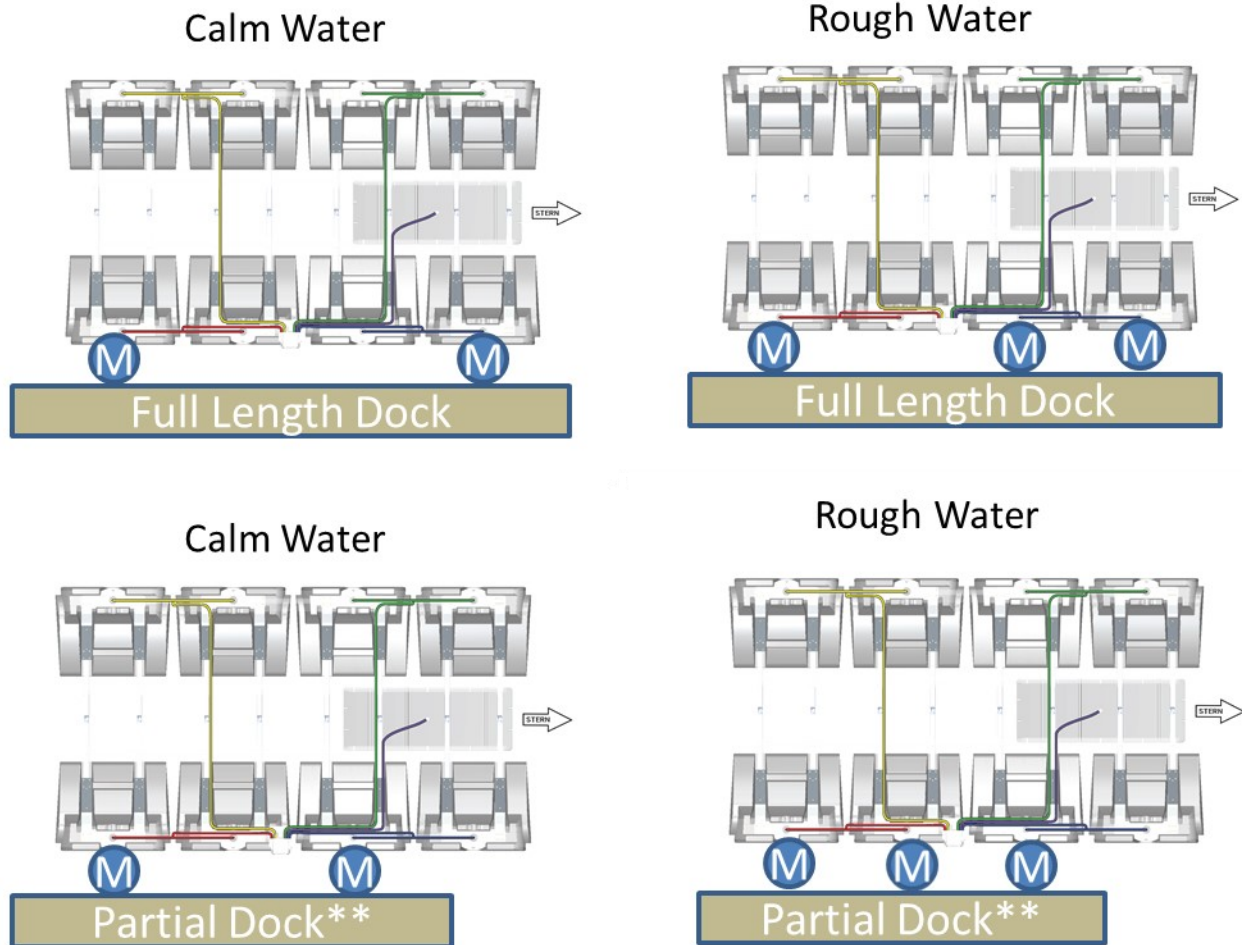
Calm Water: Less than 1' wave action and/or lower than 2mph current.

Moderate to Rough Water: 1-2' wave action and/or more than 3mph current.

\*If fitted with canopy, use rough water bracket configuration.

\*\*On partial dock configuration, connect as far aft as possible on the lift.

### 15000lb Capacity



**M** = Mooring Pole

# STEP 15: DETERMINE MOORING LOCATION

Lift Capacity	Number Mooring Poles	
	Calm water	Moderate to Rough*
8800	2	3

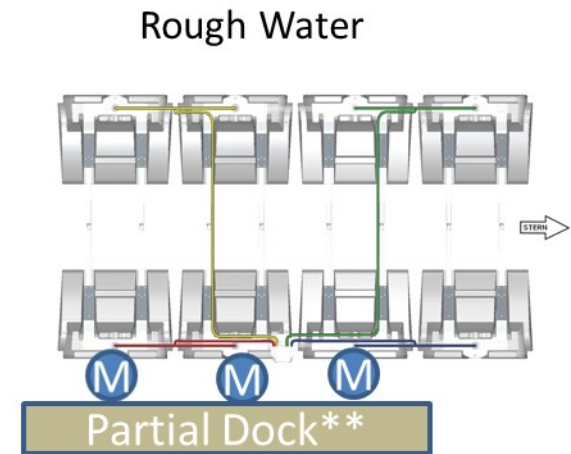
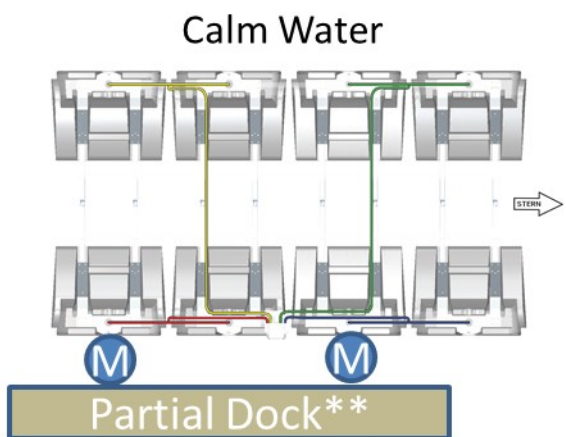
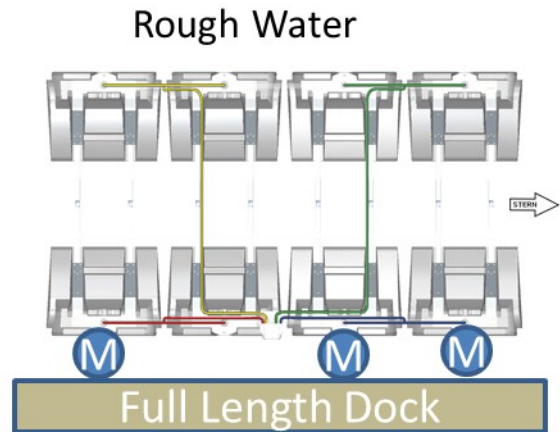
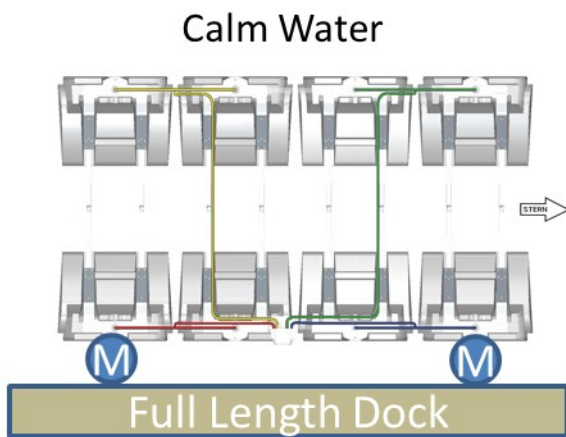
Calm Water: Less than 1' wave action and/or lower than 2mph current.

Moderate to Rough Water: 1-2' wave action and/or more than 3mph current.

\*If fitted with canopy, use rough water bracket configuration.

\*\*On partial dock configuration, connect as far aft as possible on the lift.

## 8800lb Capacity



**M** = Mooring Pole



## STEP 15: DETERMINE MOORING LOCATION

Lift Capacity	Number Mooring Poles	
	Calm water	Moderate to Rough*
12,000	2	3

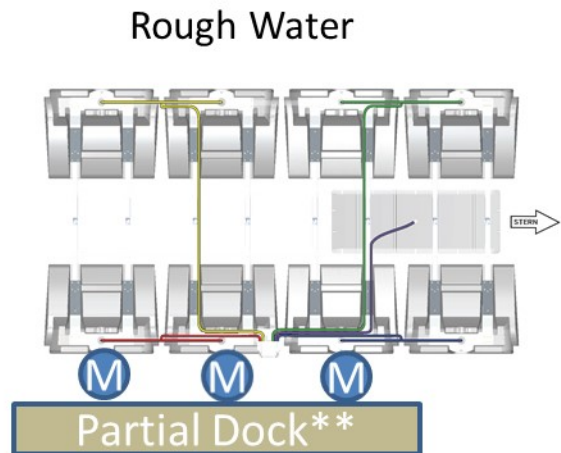
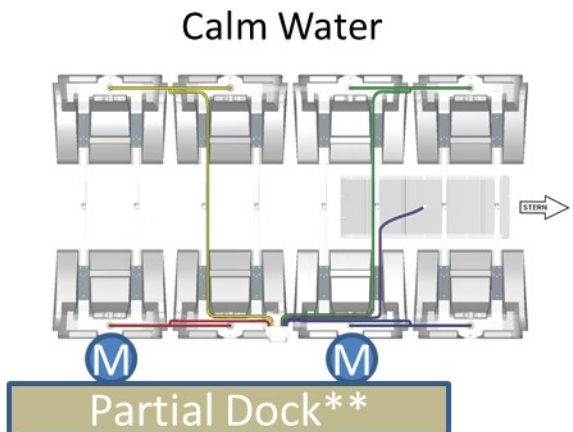
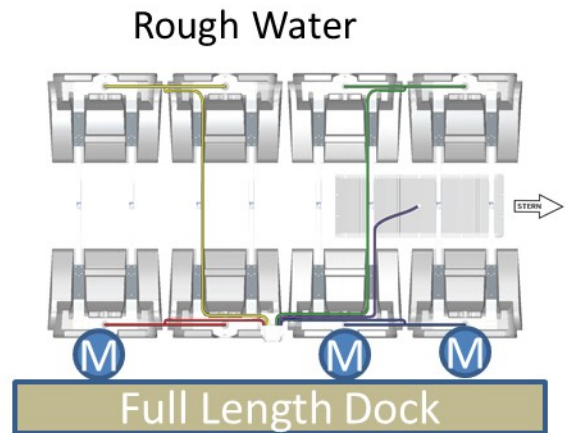
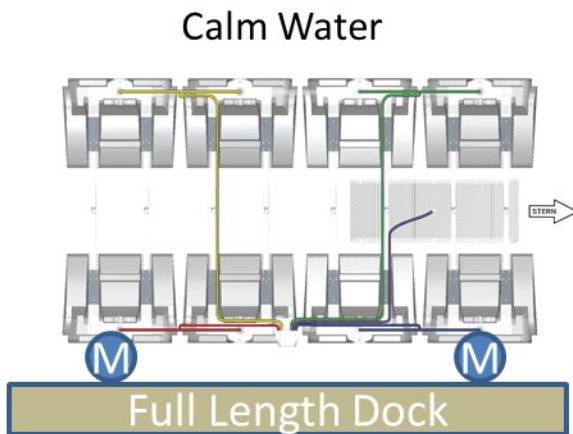
Calm Water: Less than 1' wave action and/or lower than 2mph current.


Moderate to Rough Water: 1-2' wave action and/or more than 3mph current.

\*If fitted with canopy, use rough water bracket configuration.

\*\*On partial dock configuration, connect as far aft as possible on the lift.

### 12000lb Capacity



 = Mooring Pole

## STEP 15: DETERMINE MOORING LOCATION

Lift Capacity	Number Mooring Poles	
	Calm water	Moderate to Rough*
18,000	2	4

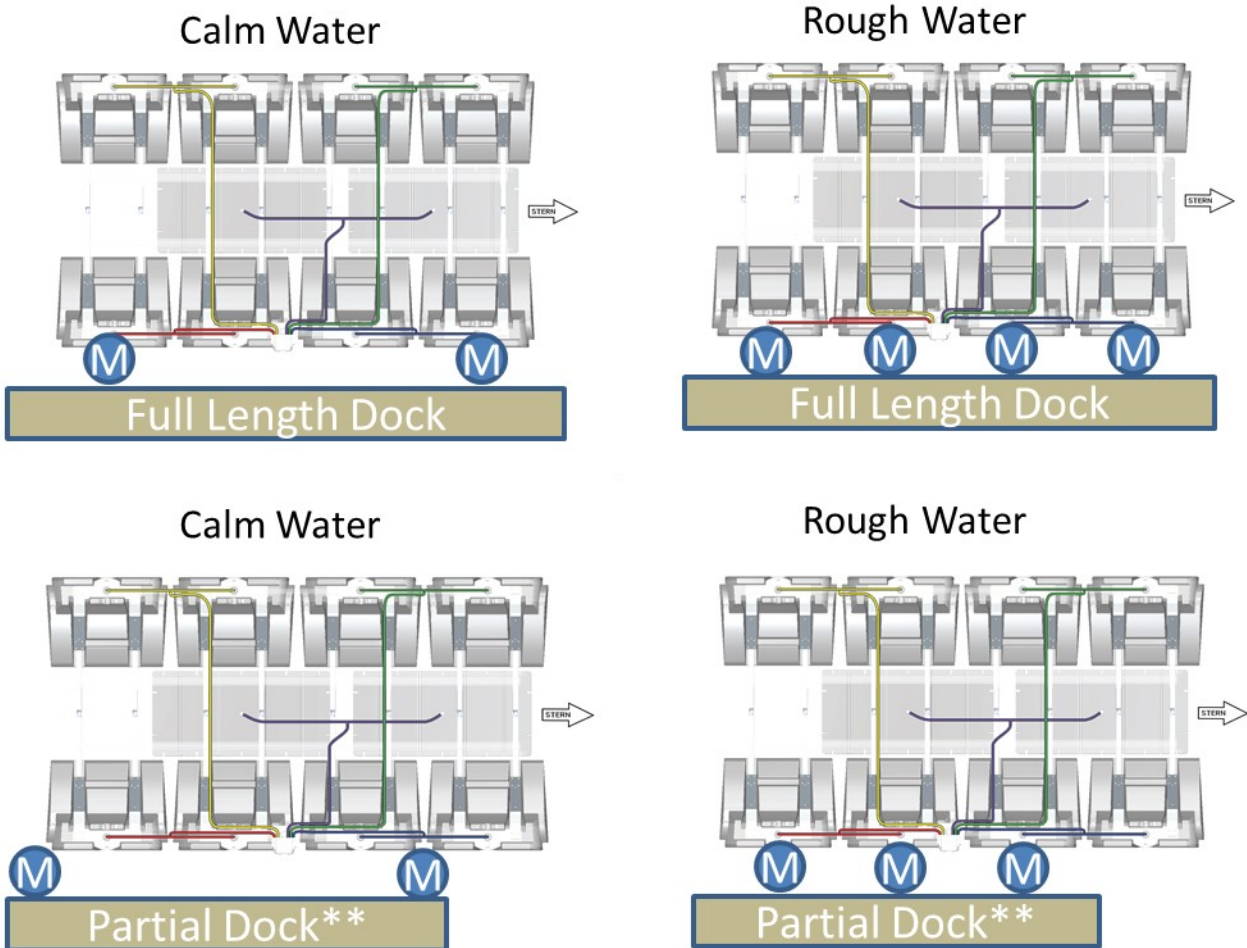
Calm Water: Less than 1' wave action and/or lower than 2mph current.

Moderate to Rough Water: 1-2' wave action and/or more than 3mph current.

\*If fitted with canopy, use rough water bracket configuration.

\*\*On partial dock configuration, connect as far aft as possible on the lift.

### 18000lb Capacity



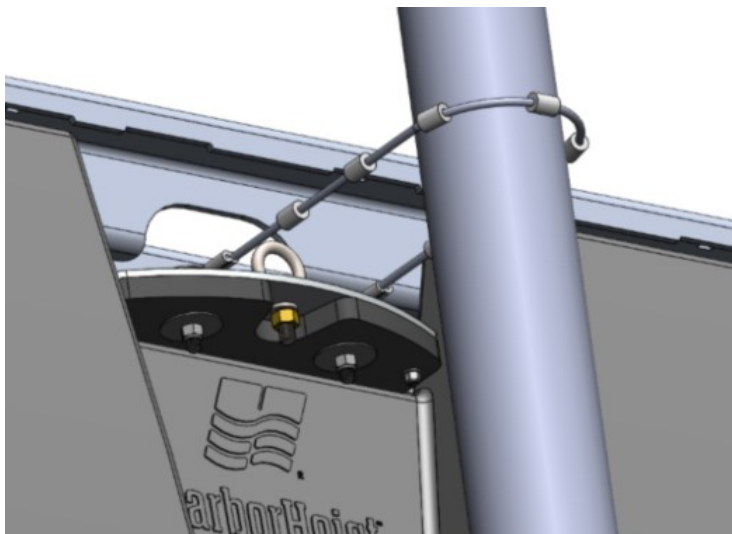
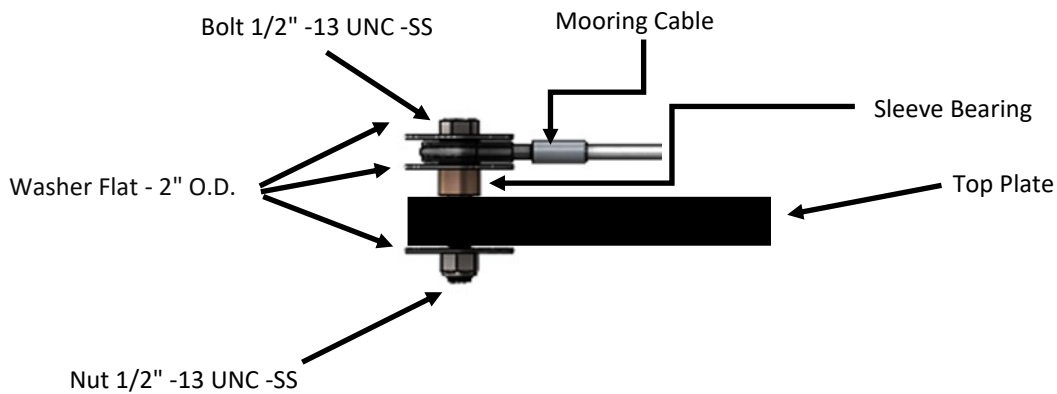
**M** = Mooring Pole

## STEP 15: CABLE MOORING ASSEMBLY INSTALLATION—Optional Kit

**i** Part#: MOR-00-0001

1. The Top Plate and Gasket are pre-drilled for the bolt assembly. In some early models, you may have to field drill them. Contact customer service for instructions in this case.
2. Place the Mooring Cable around the Mooring Pole assembly and bolt, as illustrated below.
3. Tighten the assembly, verifying the bolt is unable to rotate or move. The cable loop at both ends should be free to move with the bolted assembly.

**i** Failure to properly assemble could cause premature wear.



**!** It is highly recommended that you use a double braid nylon dock line at each mooring location to secure the hoist to the dock in case of a mooring failure. The eyelet on the top plate is supplied for this reason. Verify it has slack and cannot catch anything while raising or lowering the hoist or during tide activity.

# Commissioning the Lift

Damage to the lift or vessel can result from improper initial setup of the system.

Consult a HydroHoist approved installer for initial setup and support.

- Installation and service should be performed by a qualified service professional.
- To lessen the risk of electric shock, disconnect the control box from power during installation.
- The GFCI supplied with the control is designed for outdoor applications but is NOT to be submerged or directly sprayed with water by the exhaust port of the control box.
- Verify that the power receptacle is clean and supplies the proper current for the controller.
- Keep children away from setup and assembly.
- Do not become distracted or walk away from the lift during operation.
- Do not overload the lift. Make certain your boat's bilge pump is set for automatic. Significant water accumulation in the bilge may overload the lift.
- Make sure ballast tanks are empty before lifting the boat.
- Lift is not designed to hoist the boat with people in it.
- Never allow a person to be under the boat and/or hoist.
- Weight must be distributed equally side to side and bow to stern before lifting. Otherwise, the boat will not center properly and could be misaligned on the lift.



**Before commissioning the hoist, read the Operation Manual completely to familiarize yourself with all the functions and features of the control box.**

## STEP 18: COMMISSIONING THE LIFT

**i** Perform the following steps after the lift has been installed, **WITHOUT** a vessel on the hoist.

1. With the lift completely lowered calibrate the level sensor. See the Owner-Operating Manual for the procedure.
2. Raise the hoist until all main tanks are bubbling air. Stop the hoist. If the HarborHoist lifted level then lower and position vessel on the lift. The next step may take some trial and error to get the vessel to balance properly on the lift. The best balance is with the center mass of the boat to be within 6" of the center of buoyance of the lift. See the Appendix for location of each models center of buoyance.
3. If the hoist does not raise level, lower the lift and reposition the vessel on the lift and re-raise. Do this until the lift raises level or just slightly rear angled down so rain water can drain to the rear of the vessel.
4. With the vessel fully raised recalibrate the level sensor. See the Owner-Operation Manual for the procedure.
5. Lower and raise the lift once more to verify level operation.
6. While the hoist is completely raised, verify with soapy water that there are no leaks at any connection in the air system.
7. While in operation, inspect the lift for binding of ropes or mooring systems. Resolve any issues.

**i** Please review the Operation Manual for a full list of features and troubleshooting procedures

# Boat Fitment

Take care to clear shafts, through hull fittings, strakes, etc. The boat's keel must NOT rest on a cross beam and should clear the beam by at least 1". The boat's **Center of Gravity (CG)** must be in the center of the lift (unless AUX tanks are used) bow to stern and port to starboard. This evenly distributes the load over the lift, allowing for maximum lift height and level operation.

The CG of the boat, when located with the transom at the end of the lift, should never be forward of the center (**CG**) of the lift. If this occurs, another set of Main Tanks may be needed. If the AUX tank is completely behind the CG of the boat, moving the tank farther back amplifies the lifting effect of the rear. If you need to move the AUX tank back farther than the end of the lift, verify that you have enough space available between the outdrives and the tanks to avoid damage to either.



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

- The lift is installed by a certified HydroHoist Installer
- The lift is operated in a safe manner
- Regular inspection is performed on the lift components
- Customer has read and understands all safety and warning labels
- Has been properly trained in the operation of the lift



**No alterations or modifications may be made to HydroHoist equipment without the express written consent of HydroHoist. Re-installation, adjusting the bunks, and/or adjusting the tank beam spacing must be performed to the standards of HydroHoist. It is the obligation of the End User to inform all equipment operators of the above conditions. Additional Owner Manuals and Safety Warning Decals are available by request.**

# Warranty and Registration

## What Is Not Covered By This Warranty\*

HydroHoist® does not warrant any product, component, or part

- (a) That is not manufactured by HydroHoist®
- (b) That is not installed or serviced by employees or contractors of HydroHoist® or an Authorized HydroHoist® Dealer
- (c) Damaged by failure to provide a suitable installation environment for the lift
- (d) Damaged by use of the lift for purposes other than those for which it was designed
- (e) Damaged by disasters such as but not limited to fire, flood, wind, and lightning
- (f) Damaged by unauthorized attachments or modifications
- (g) Damaged by operation, maintenance, or repair of the product contrary to written instructions of HydroHoist®
- (h) Damaged during shipment
- (i) Damaged by any other abuse or misuse by the user
- (j) Which has an altered or defaced service number

\*Terms and conditions can change without notice. For the latest warranty terms, contact HydroHoist Customer Service at [customerservice@boatlift.com](mailto:customerservice@boatlift.com)

## Parts and Customer Service Contact

Customer service, parts, and shipping: [customerservice@boatlift.com](mailto:customerservice@boatlift.com)

## Product Registration

Verify that a HydroHoist® dealer registered your boat lift. If it is not registered, warranty support may be limited. Visit [www.boatlift.com](http://www.boatlift.com) to register your lift.

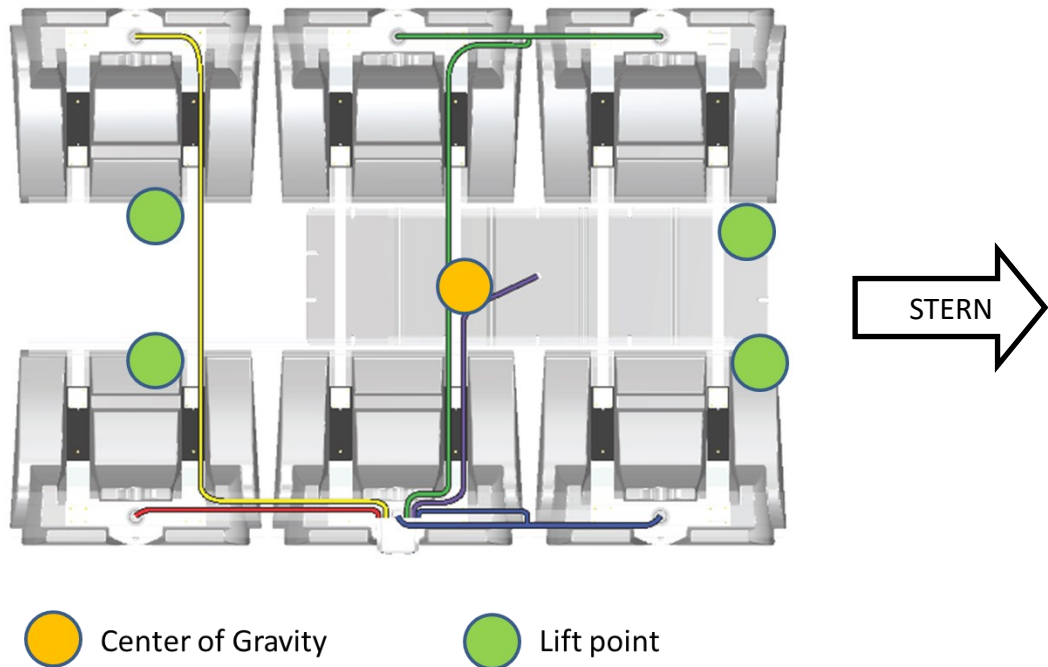
# Appendix



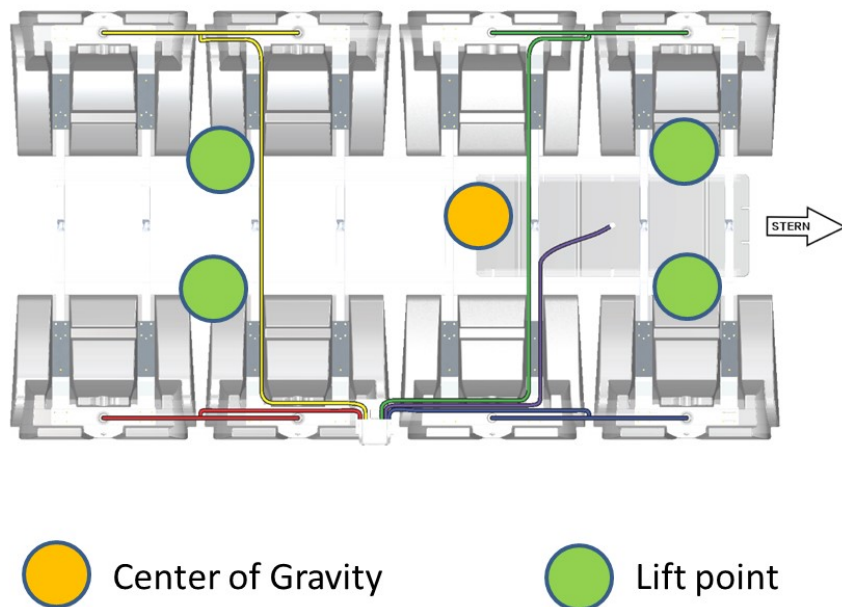
## A1: Lifting Information

1. Verify your lifting has capacity for the weight of the HarborHoist™. See **Table 1** for weight of lift.
2. You will need four straps that can support the load fastened around the Cross Channels outside the Hull Pads, and then attached to a crane or fork lift.
3. Always lift around the center mass of the lift. See diagrams below for locations to attach the straps.

### 8800lbs (Short) HarborHoist—Lift Points



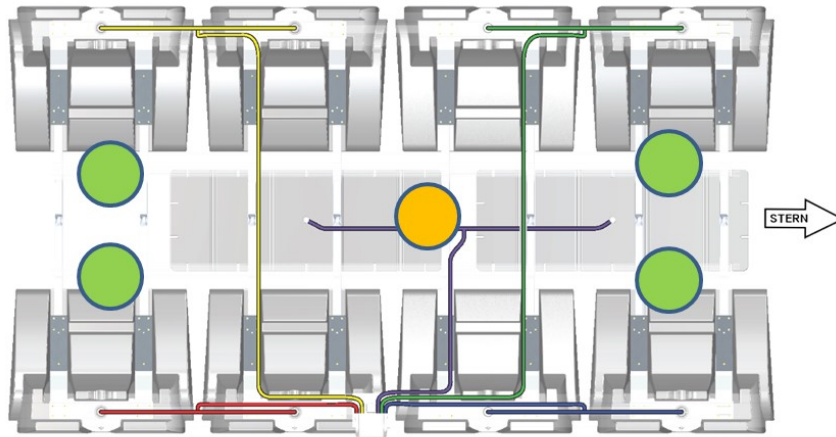
### 12000lbs HarborHoist—Lift Points



## A1: Lifting Information

1. Verify your lifting has capacity for the weight of the HarborHoist™. See **Table 1** for weight of lift.
2. You will need four straps that can support the load fastened around the Cross Channels outside the Hull Pads, and then attached to a crane or fork lift.
3. Always lift around the center mass of the lift. See diagrams below for locations to attach the straps.

### 15000lbs HarborHoist—Lift Points



### 18000lbs HarborHoist—Lift Points

