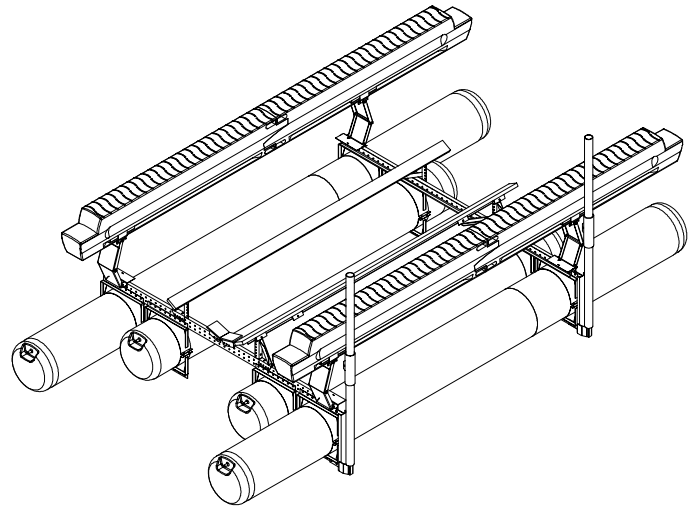
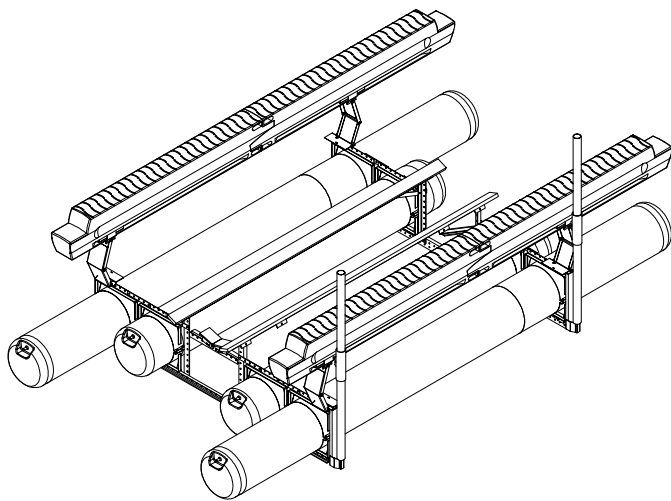


INSTALLATION MANUAL

Side-Tie “B”

MODEL

7500B



TM

HydroHoist Boat Lifts

HydroHoist International, Inc.
P.O. Box 1286 Claremore, OK USA 74018
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Pub. 8/01/04

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WARNING!

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Site Preparation

Verify	The Boat Stall or Mooring Location. ♦ If the hoist is being installed in a commercial marina or multi-slip boat dock, confirm the correct mooring location for hoist and boat.
	The boat specifications. ♦ Make _____ ♦ Model _____ ♦ Length _____ ♦ Beam _____ ♦ Dry Weight of boat _____ lbs. ♦ Fuel: _____ gal. @ 6.6 lbs./gal. = _____ lbs. ♦ Water: _____ gal. @ 7.5 lbs./gal. = _____ lbs. ♦ Gear estimated @ 8% of boat's dry weight _____ lbs. ♦ Other equipment or weight _____ lbs. ♦ TOTAL LIFTING WEIGHT _____ LBS.

Inspect	The boat slip, dock or seawall to which the hoist will be installed.
	♦ The structure should be of good, sturdy construction capable of maintaining a secure mooring for the hoist.
	♦ The 4500B requires a minimum water depth of 4.5 feet water depth in which to operate. Confirm that there is sufficient water depth at all times of the year.
	♦ Check for underwater obstructions, such as structural braces, cables, rocks, or sunken objects which will interfere with the hoist's operation.
	♦ Check for overhead obstructions and confirm that sufficient clearance exists for the lifting of the boat.
	♦ Confirm that electrical supply is available and sufficient for hoist operation.
	♦ Confirm that sufficient dock space is available for mooring the hoist and boat.
	♦ CONFIRM THE BOAT HULL CONFIGURATION - Boats with a stepped hull design, or with through-the-hull apparatus, may require special positioning or alteration to the Hull Support Pads. Contact HydroHoist Engineering Department if proper hull support is in question.

Getting Started

Assembly Platform

Assembly should be done on a flat, level surface.

A flat-bed trailer is preferred, but a boat trailer with planks across the frame will work, provided that the assembly surface is flat and level

Tools

A list of tools needed for hoist assembly is given below. In addition to these, tools for boat dock preparation, dock bumper removal, etc. may also be required.

- ◆ 1/2" Drive Ratchet (minimum 9 inch handle length for leverage)
- ◆ Electric Drill
- ◆ 3/4" Deep Well Socket
- ◆ 9/16" Deep Well Socket
- ◆ 5/8" Deep Well Socket
- ◆ (2) 15/16" Open-end or Combination Wrenches
- ◆ 3/4" Open-end or Combination Wrenches
- ◆ 11/16 Open-ended or Combination Wrenchs
- ◆ 5/16" Nut Runner or medium blade Slotted Screwdriver
- ◆ Medium Phillips Screwdriver
- ◆ Drift Pin or other hole aligning tool
- ◆ Large Hammer (3 or 4 lb. shop hammer is best)
- ◆ Knife or tool for cutting 1" rubber hose
- ◆ Measuring Tape

Symbols & Conventions

All references to the LEFT or RIGHT are considered to be facing forward, as if driving a boat into the slip. Left is Port side, Right is Starboard side.
Parts are occasionally described as LEFT or RIGHT to identify their opposing construction, not location on the hoist.

All numbers in brackets [] after part names refer to the item numbers on the assembly illustrations within the manual.

Assembly Instructions

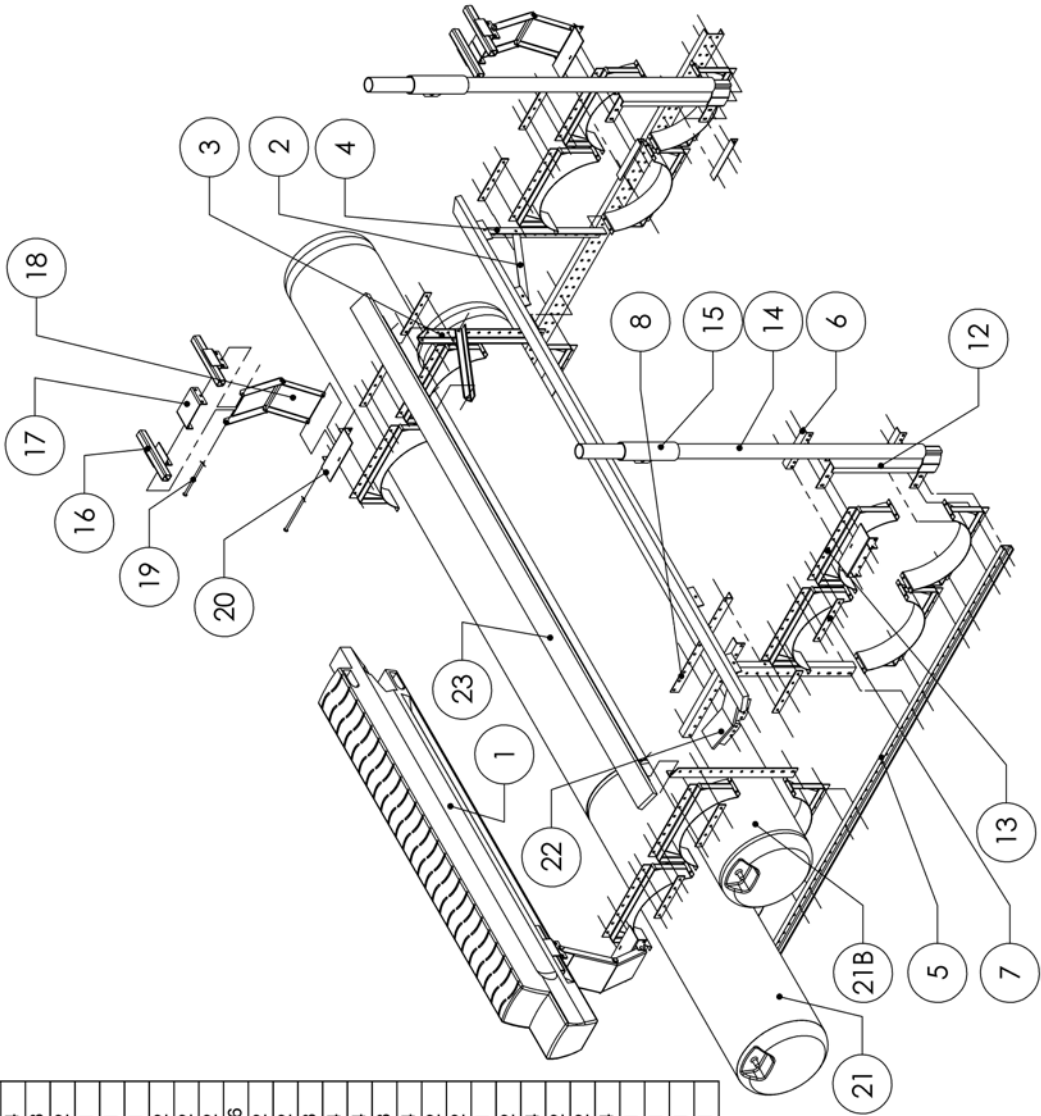
Description The assembly instructions presented within this section represent the steps for assembling the Model 7500B HydroHoist Boat Lift. It is recommended that before assembling the components, you read and understand each procedural step to become familiar with how all parts are assembled.

Tightening of Fasteners In the assembly procedures, DO NOT TIGHTEN fasteners until directed to do so. Insert bolts with appropriate washers, lock washers and nuts, but, unless otherwise instructed, leave the fasteners loose to allow movement of the parts for adjustment during assembly. Tighten all bolts at finish of assembly - proper torque specifications for bolts are listed below:

BOLT SIZE	FOOT POUNDS OF TORQUE
1/4-20	5 FT. LBS.
5/16-18	11 FT. LBS.
3/8-16	18 FT. LBS.
7/16-14	28 FT. LBS.
1/2-13	39 FT. LBS.
9/16-12	51 FT. LBS.
5/8-11	83 FT. LBS.

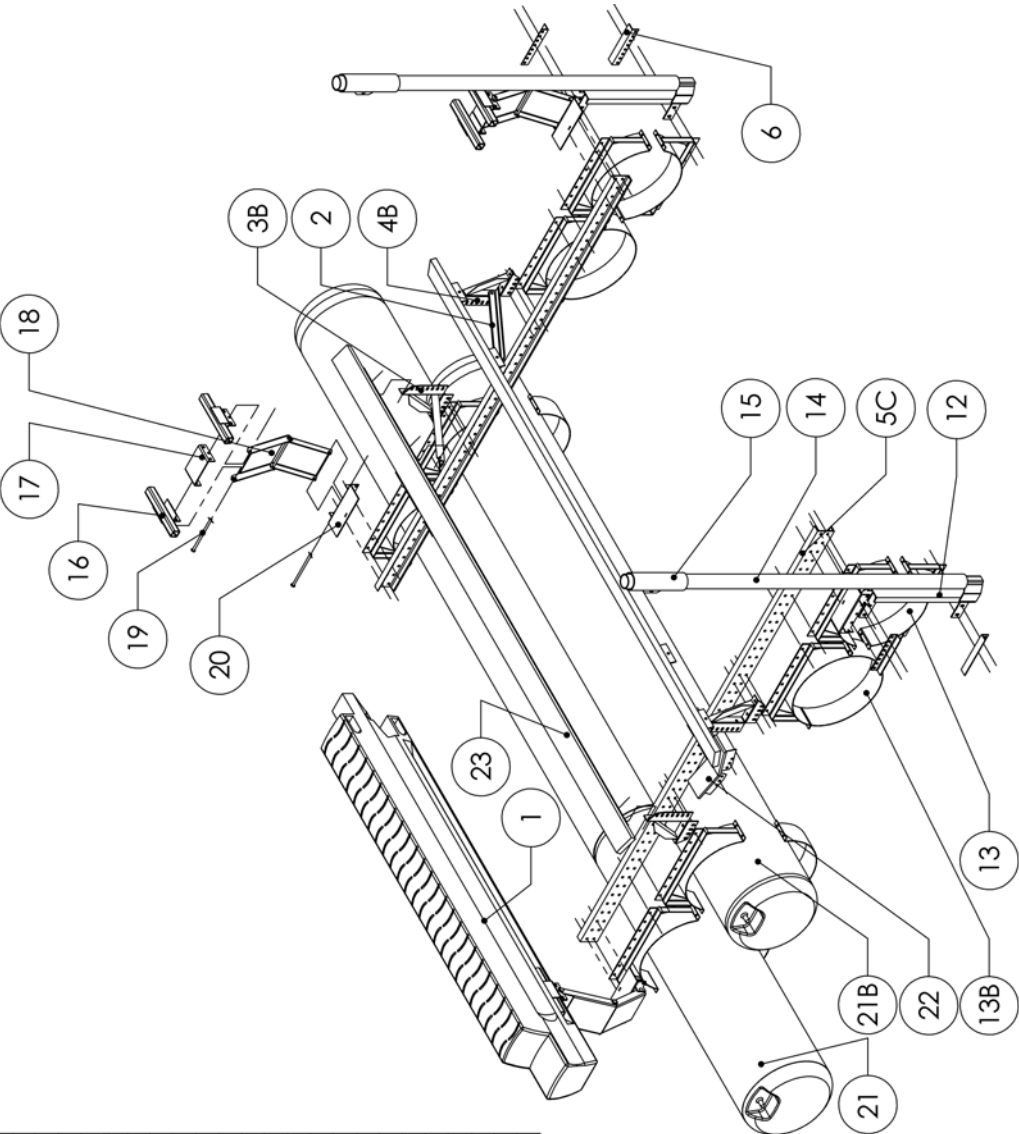
75B-Model-Steel on Bottom-Exploded

ITEM #	PART #	DESCRIPTION	QTY
1	2810000	WALKWAY - BLUE - 10FT	4
2	3031700	BRACE - HULL PAD - 25 3/4 ANGLE	2
3	3033000	COLUMN - HULL SUPT - 36 ANGLE - LH	2
4	3033001	COLUMN - HULL SUPT - 36 ANGLE - RH	2
5	3050650	CHANNEL - END - 3" X11"11"	1
5C	3500340	CHANNEL - END - 5" X11" 8"	1
6	3055000	VERT ADPT - STANDARD H MODEL	4
7	3056300	STRAP - 14 STEEL TIE	8
8	3056400	SPANNER - KEEL - 31 1/2 ANGLE	2
9	3072502	HOSE - 1 ID CUT 75' LONG	1
	3072507	HOSE - 1 ID CUT 40' LONG	1
10	3550026	CNTRL - 4V - 1M 120V PLAST. MAN.	1
11B	4029700	GUIDE - CENTERING - 9' LH (OPT.)	2
	4029701	GUIDE - CENTERING - 9' RH (OPT.)	2
12	4043210	MOORING ASSY - B-MODEL	2
13	4050100	TANK BAND - 24 UPPER	16
14	4666160	COVER - MOORING ASSY - 45/75 B	2
15	4669165	SLIDER - PE - EURO MOORING	2
16	4812025	HINGE GRIP - WALKWAY	8
17	4812030	BRACE - WALKWAY	4
18	4812060	HINGE ASSY - WALKWAY	4
19	4812070	PIN - HINGE 10 1/2	8
20	4812080	HINGE BASE ASSY	4
21	5010310	TANK - 24" X 23" - B - NEW	2
21B	5010200	TANK - 24" X 16" - A	2
22	5025102	PAD - VEE BRACKET	1
23	5025600	PAD - HULL - REGULAR 14'	2
24B	5027802	COVER - 9' CENTERING GUIDE (OPT.)	4
25	3032300	RISER - HULL SUPT. - 12 1/2" ANGLE LH	2
	3032301	RISER - HULL SUPT. - 12 1/2" ANGLE RH	2
26	3031800	RISER - BRACE	4
	6098100	PARTS BAG - LIFT - 7500 B	1
	6937100	PARTS BAG - WALKWAY 45/75/9B4T	1
	6937400	PARTS BAG - CABLE ASSY 45/75 B	1
	6939000	PARTS BAG - MOORING - B303	1



75B-Model-Steel on Top-Exploded

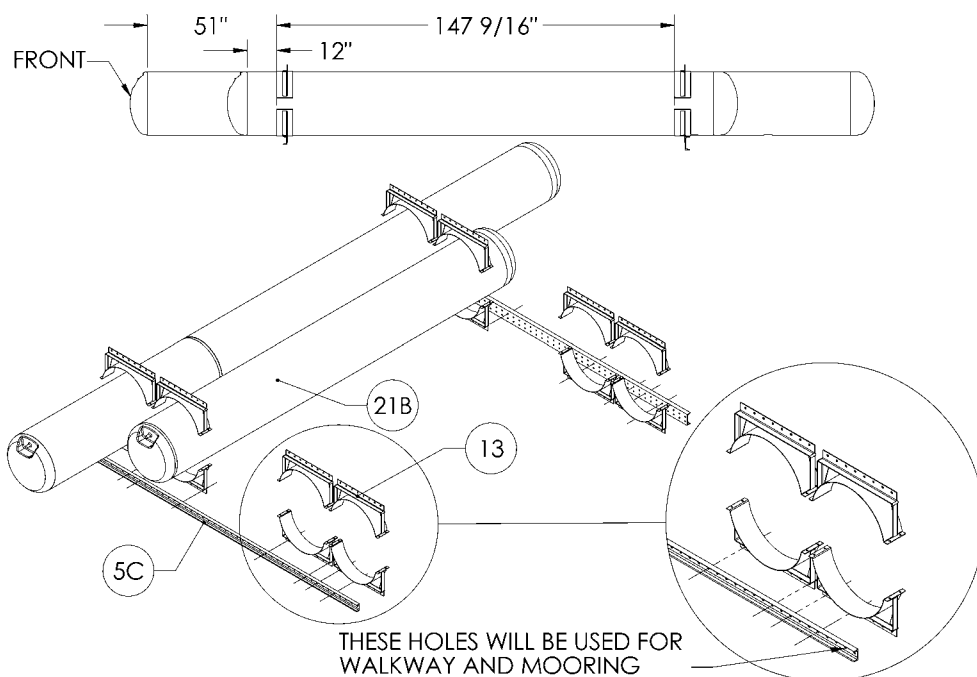
ITEM #	PART #	DESCRIPTION	QTY
1	2810000	WALKWAY - BLUE - 10FT	4
2	3031700	BRACE - HULL PAD - 25 3/4 ANGLE	2
3B	4031100	COLUMN - HULL SUPT - UNIV - NORM	2
4B	4031110	COLUMN - HULL SUPT - UNIV - OPP	2
5C	3500340	CHANNEL - END - 5" X 11' 8"	2
6	3055000	VERT ADPT - STANDARD H MODEL	4
9	3072502	HOSE - 1 ID CUT 75' LONG	1
	3072507	HOSE - 1 ID CUT 40' LONG	1
10	3550026	CNTRL - 4V - 1M 120V PLAST. MAN.	1
11B	4029700	GUIDE - CENTERING - 9' LH (OPT.)	2
	4029701	GUIDE - CENTERING - 9' RH (OPT.)	2
12	4043210	MOORING ASSY - B-MODEL	2
13	4050100	TANK BAND - 24 UPPER	12
13B	3056200	TANK BAND - 24 LOWER	4
14	4666160	COVER - MOORING ASSY - 45/75 B	2
15	4669165	SLIDER - PE - EURO MOORING	2
16	4812025	HINGE GRIP - WALKWAY	8
17	4812030	BRACE - WALKWAY	4
18	4812060	HINGE ASSY - WALKWAY	4
19	4812070	PIN - HINGE 10 1/2	8
20	4812080	HINGE BASE ASSY	4
21	5010310	TANK - 24" X 23" - B - NEW	2
21B	5010200	TANK - 24" X 16" - A	2
22	5025102	PAD - VEE BRACKET	1
23	5025600	PAD - HULL - REGULAR 14"	2
24	5027802	COVER - 9' CENTERING GUIDE (OPT.)	4
	6098100	PARTS BAG - LIFT - 7500 B	1
	6937100	PARTS BAG - WALKWAY 45/75/9B4T	1
	6937400	PARTS BAG - CABLE ASSY 45/75 B	1
	6939000	PARTS BAG - MOORING - B303	1
	6939050	PARTS BAG - 75B STEEL ON TOP	1



Tank bands

Step	Procedure
1.1 Fig. A1	Lay the <i>End Channels</i> [5,5C]] for the tank bands cross wise to where the tanks will set, with the open 'C' of the channels facing away from each other. Position the channels at the points where the tank bands will be put.
1.2 Fig. A2	Position the Lower Tank Bands [13] as shown in Fig. A2. Hand Tighten 1/2" x 1 1/2" bolt, lockwasher & nut in holes 1,8 (outermost hole is 1) on side of hoist opposite mooring. Fasten in holes 5,8 on the side of the hoist the mooring is to be bolted (bolt will be removed from 5 and placed in 2 when mooring is attached). Fasten inner tank bands in the innermost and outermost holes. Set the Tanks [21,21B] in the Lower Tank Bands [13] with the Air Injection Nipple to the front of the hoist assembly and in the 12 o'clock position. Position the tanks such that the end cap seam at the front is 51" from the Front Tank Band on the long tank and 12" from the tank band on the small tank. (16) 1/2" x 1-1/2" bolts, nuts, and lockwashers
1.3 Fig. A2	Site across the lower channel and see if they are level at this time. Next place the tar strips (located in parts bag) on the Upper Tank Bands [13] and carefully set the tank bands on the tanks so that they are oriented the same as shown in Fig. A2. Verify that the tank bands are level with one another and even with the lower tank bands. NOTE: ONCE THE TAR STRIPS CONTACT THE TANK THEY ARE VERY DIFFICULT TO MOVE. PLEASE PERFORM THIS STEP CAREFULLY. IF THE TANK BANDS MUST BE MOVED APPLY SLOW CONSTANT PRESSURE (NOT BLUNT FORCE).

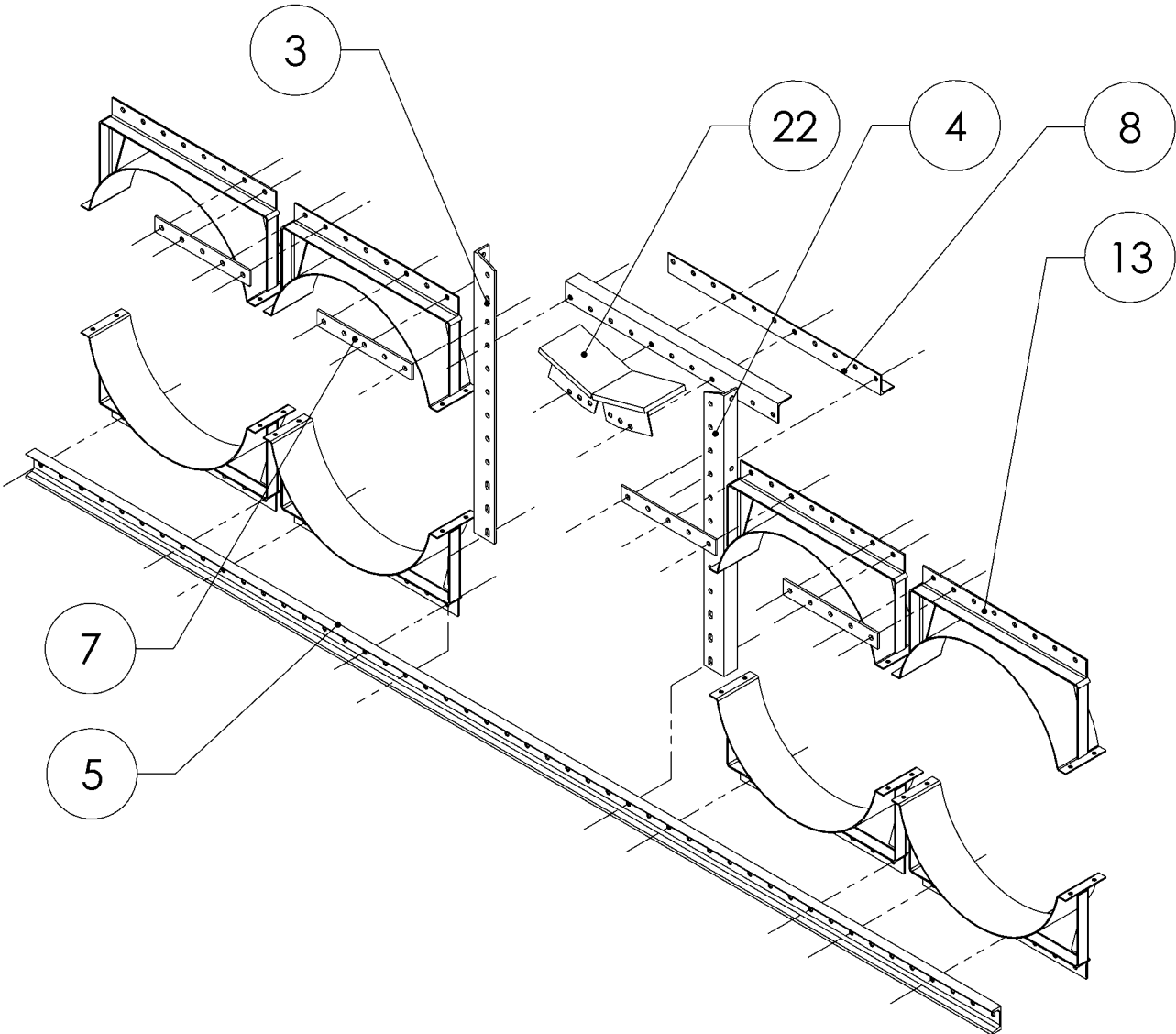
Fig. A2



**Front Hull Pad
Support System**

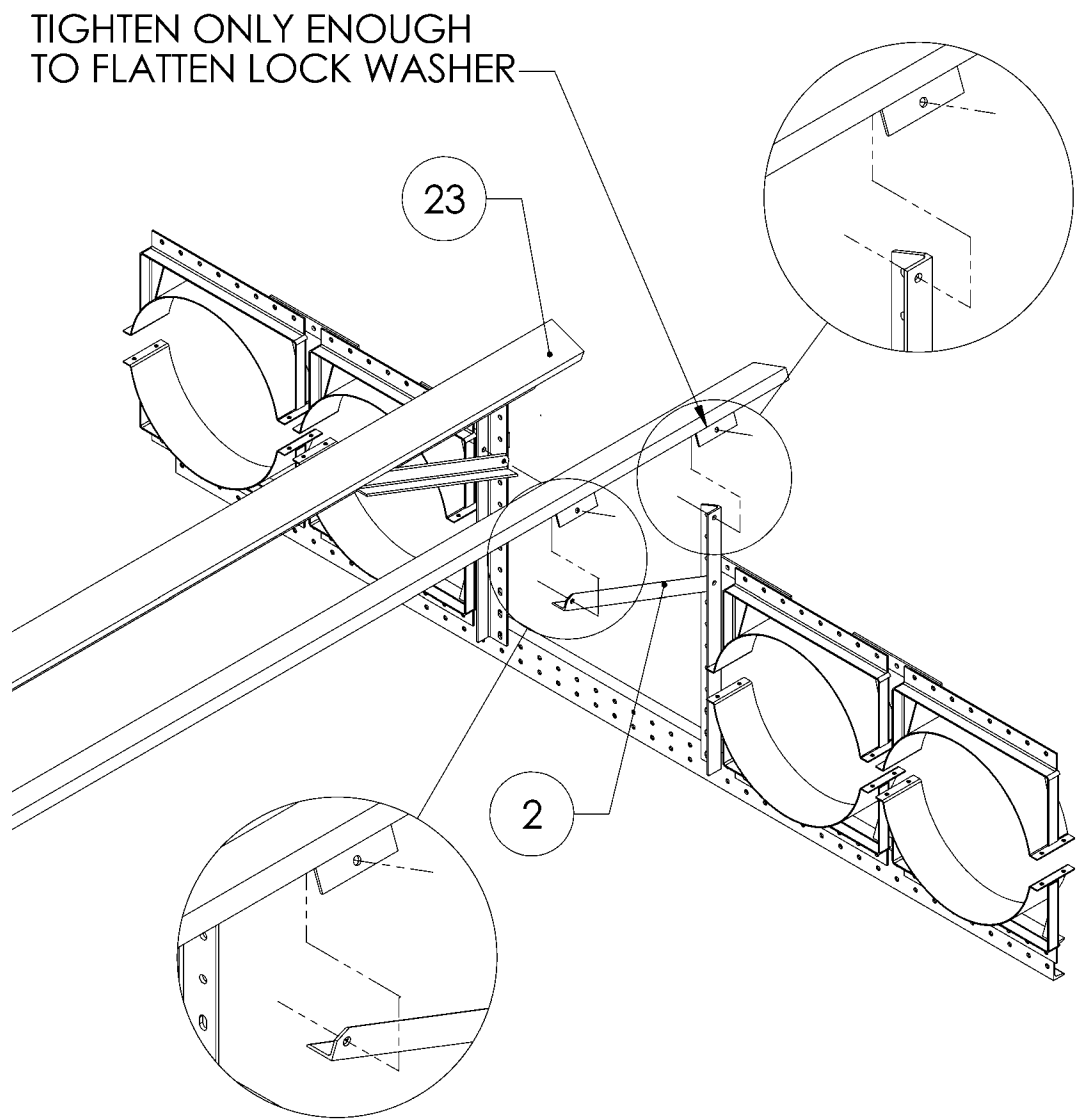
Step	Procedure
1.4 Fig. A3	The assembly for the Front Hull Support system is shown in Fig. A3. Notice the suggested position for the bolts. First the Hull Support Column [3,4] should be bolted to End Channel [5C] using the best estimate for hull pad spacing. The Tie Straps [7] are bolted to the Tank Bands [13] and Hull Support Column [3,4] as shown. Also attach the Front Keel Support [22] to the two Keel Spanners [8] that are positioned between the Hull Support Columns [3,4]. As shown (14) 1/2" x 1-1/2" bolt, lockwasher & nuts are used in both sides of the front assembly.

Fig. A3



	Step	Procedure
Rear Hull Pad Support System	1.5 Fig. A4	The assembly for the Rear Hull Support system is shown in Fig. A4. Notice the suggested position for the bolts. The Hull Support Columns [3,4] and Tie Straps [7], bolt up in the same fashion and with same fasteners as Fig A3.
	1.6 Fig. A4	Attach the Hull Support Pads [23] to the top of the Hull Support Columns [3,4]. The side of the Pads with the long angle iron should be toward the center line of the lift so that the Pad will tilt inboard toward the boat hull. Fasteners per pad (2ea) 1/2" x 5" bolt, lockwasher & nut. Tighten these bolts only enough to flatten the lockwasher.
Hull Pad Braces	1.7 Fig. A4	Install the Hull Pad Braces [2] to the Hull Support Pads [23] and the Hull Support Columns [3,4]. The <i>flat side of the braces face inboard</i> . Fasteners per Brace: (1ea) 1/2" x 1 1/2" bolt, lockwasher & nut at Column (bottom detail), (1ea) 1/2" x 5" bolt, lockwasher & nut at Hull Support Pad. <i>Note: see Sec. 3 Pg. 17 to see detail of how to use Hull Support Risers</i>

Fig. A4



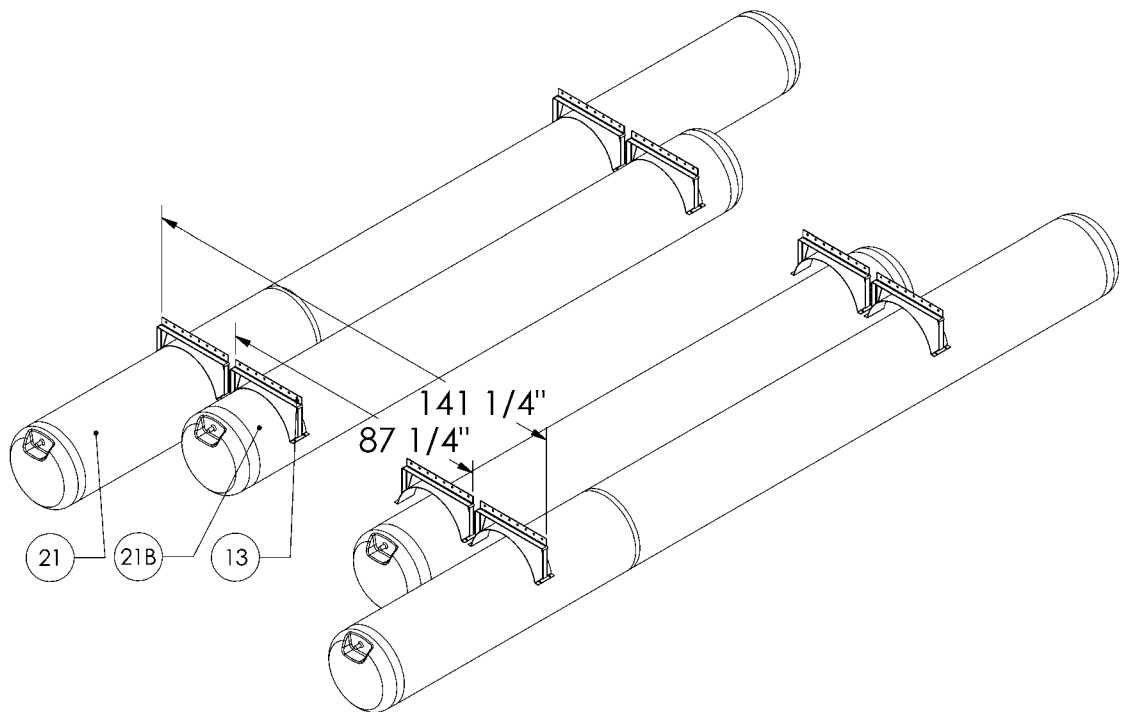
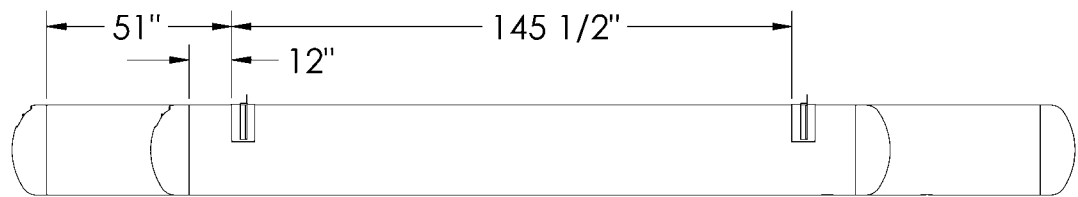
Tank & Steel Assembly
STEEL ON TOP

Tank

Tank bands

Step	Procedure
2.1 Fig. B1	Align the Tanks [21,21B] parallel with each other and with the Air Injection Nipple to the front of the hoist assembly and in the 12 o'clock position.
2.2 Fig. B1	Refer to Fig. B1 for correct Tank Band [13] locations, and position the Tank Bands [13,13B] onto the Tanks [21,21B]. Note the angle of the tank band is facing the front of the hoist.

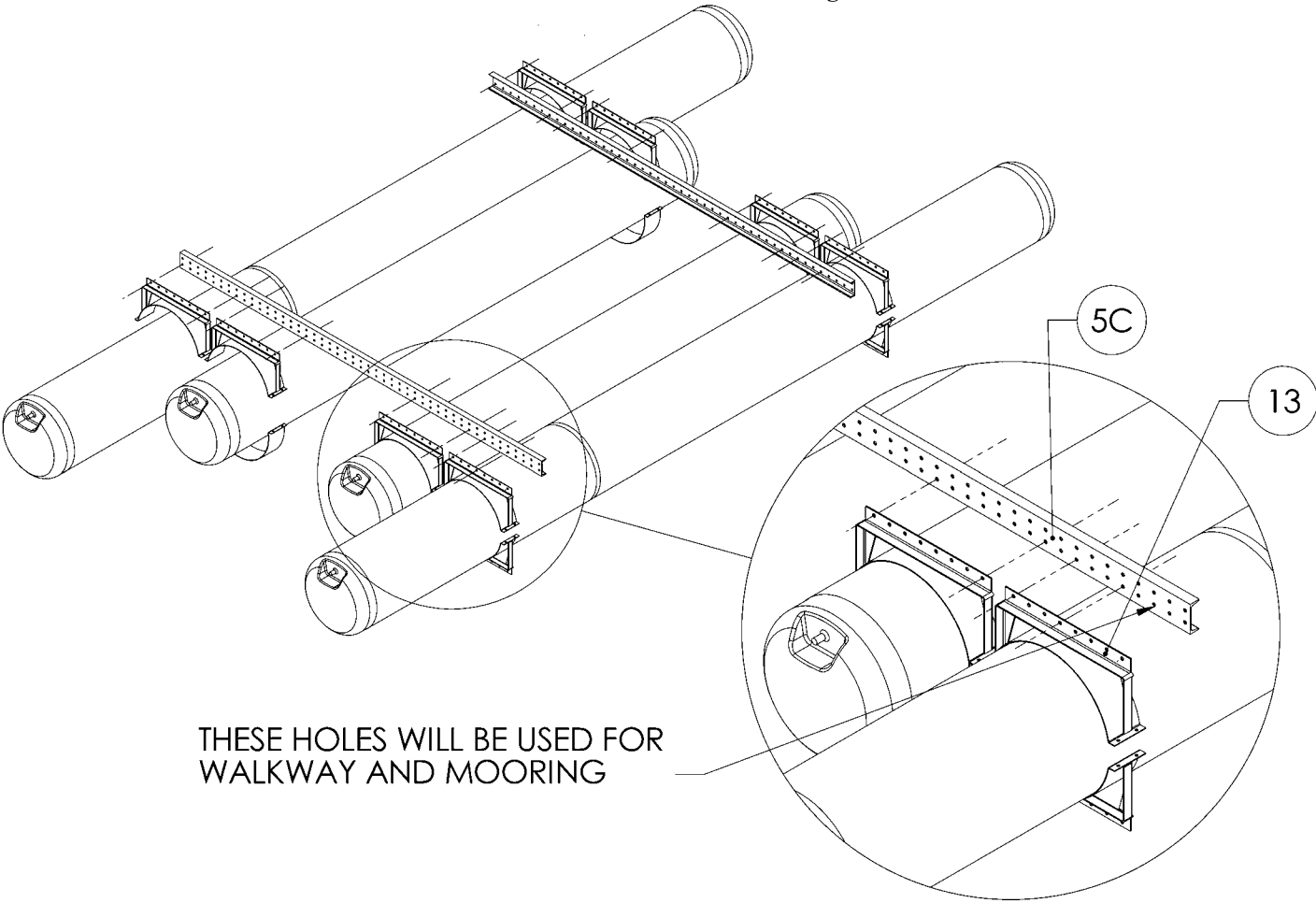
Fig. B1
STEEL ON TOP



End Channels

Step	Procedure
2.4 Fig. B2	Place End Channel [5C] across the Tank Bands [13] as shown so that the channel's flat surface faces the <i>ends</i> of the hoist and hand tighten fasteners (16) 1/2" x 1-1/2" bolts, nuts, and lockwashers.
2.5	Stand at the front of the Tanks and sight from the front to rear band. The horizontal surface of the angles of the front and rear channels must be parallel with each other – adjust if necessary keeping the Tank Nipple at the 12 o'clock position.
2.6	Place the tar strips (located in parts bag) on the Lower Tank Bands and carefully place the tank bands under the tanks so that they are oriented the same as shown in Fig. B2 and start the bolts loosely on the frame. Verify that the tank bands are level with one another and even with the lower tank bands. NOTE: ONCE THE TAR STRIPS CONTACT THE TANK THEY ARE VERY DIFFICULT TO MOVE. PLEASE PERFORM THIS STEP CAREFULLY. IF THE TANK BANDS MUST BE MOVED APPLY SLOW CONSTANT PRESSURE (NOT BLUNT FORCE).

Fig. B2



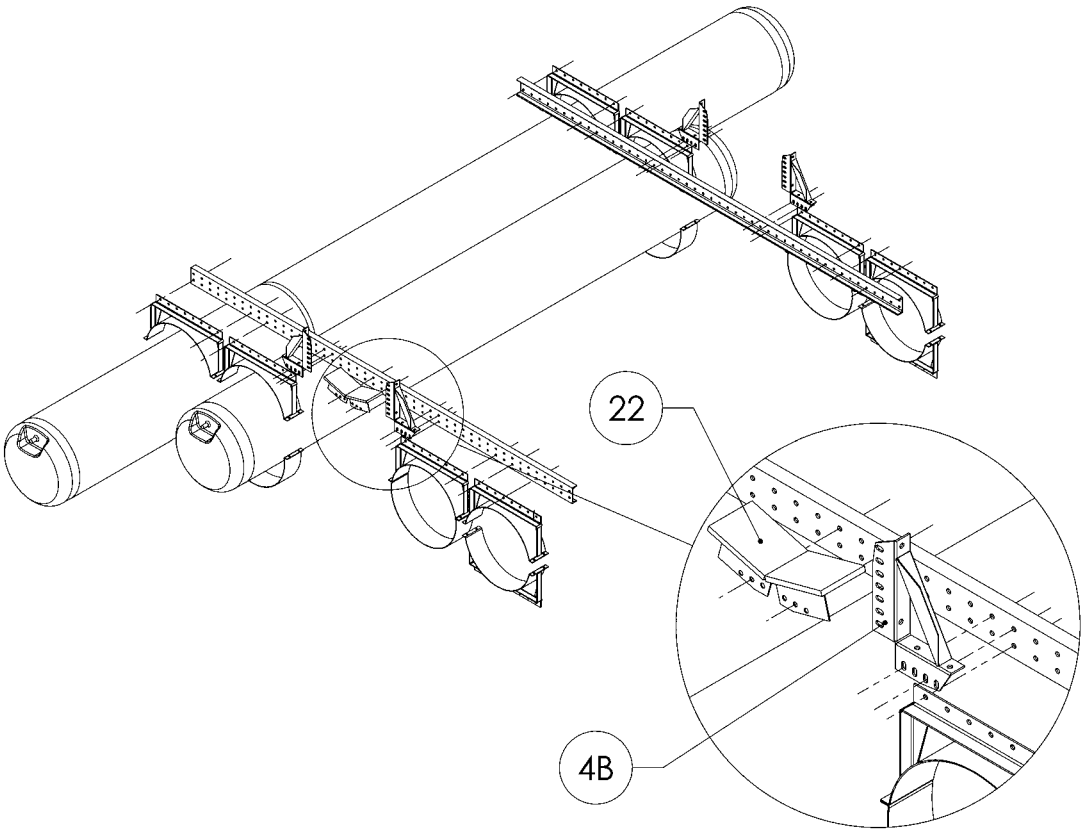
Note... The parts installed in the next steps may have to be moved to better fit the bottom of the boat after it has been lifted. Accurate measurements of the boat's hull before assembly and careful attention to these steps may prevent repositioning the parts over the water.

Positioning... If the boat hull is unable to be measured prior to hoist assembly, space the Hull Support Columns [7] 36" to 42" apart at the rear of the hoist, and the front columns 3" narrower than the rear. Typically, the longer leg of the column [7] is positioned vertically to lift the boat higher above the water, however the shorter leg of the column may be positioned vertically to accommodate a boat with a deeper draft.

**Front Hull
Support
Columns &
Keel Pad**

Step	Procedure
2.6 Fig. B3	Attach two Hull Support Columns [3B,4B] and the Keel Support Pad [22] to the End Channels [5C] at the front as shown. Attach the columns with the flat side of the angles facing to the front of the hoist assembly, and the brace angle of the Support Column outboard. Fasteners per Column: (2ea) 1/2" x 1-1/2" bolt, lockwasher & nut. Fasteners for Keel Support Pad (2ea) 1/2" x 1-1/2" bolt, lockwasher & nut.

Fig. B3



*Hull
Support
Pads*

*Hull
Support
Braces*

Step	Procedure
2.7 Fig. B4	Attach two Rear Support Columns [3B,4B] between the rear End Channels in a similar manner. Attach the Hull Support Pads [23] to the tops of the front and rear Hull Support Columns [3B,4B]. The pad's long angle iron frame member should be <i>inboard</i> so that its weight keeps the pad tilted inboard, toward the boat hull. Fasteners per Pad: (2ea) 1/2" x 5" bolt, lockwasher & nut. Tighten these bolts only enough to flatten the lockwashers.
2.8 Fig. B5	Install the Hull Support Braces [2] to the Hull Support Pads [23] and the Hull Support Columns [3B,4B] at the rear of the hoist. <i>The flat side of the braces face inboard.</i> Fasteners per Brace: (1ea) 1/2" x 1-1/2" bolt, nut & lockwasher at Column; (1ea) 1/2" x 5" bolt, nut & lockwasher at Hull Support Pad (Tighten bolt only enough to flatten lockwasher).

Fig. B4

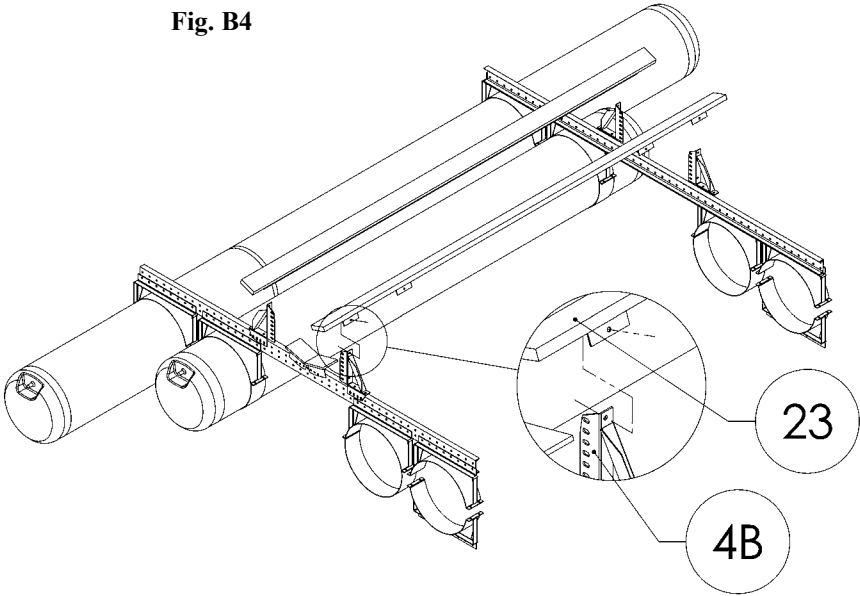
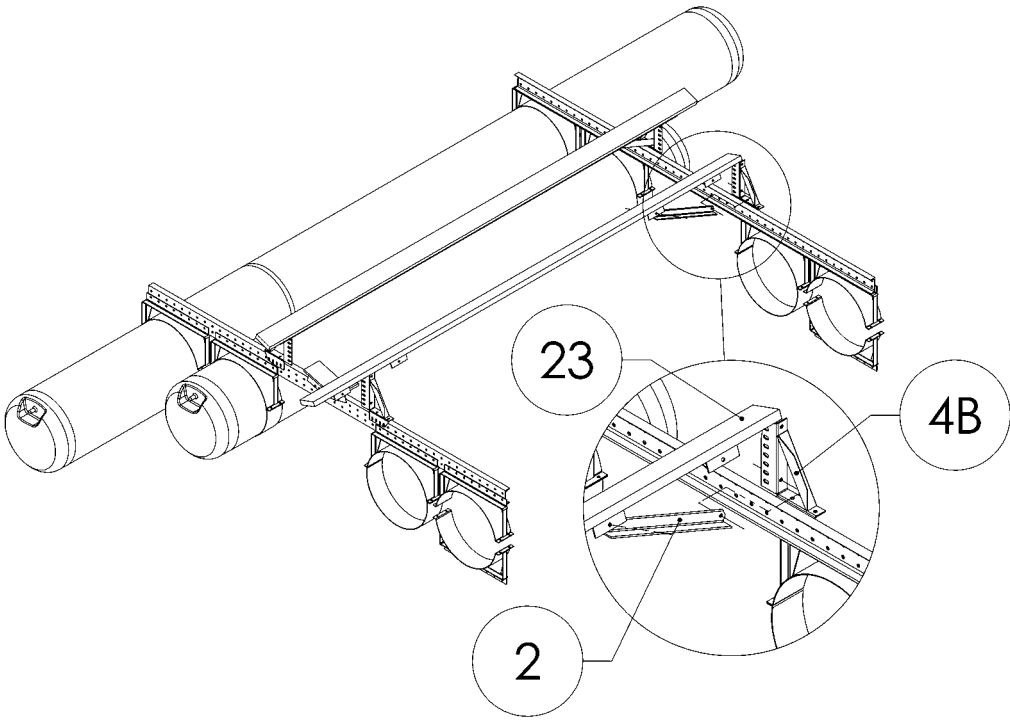


Fig. B5



Walkway Assembly
STEEL ON BOTTOM

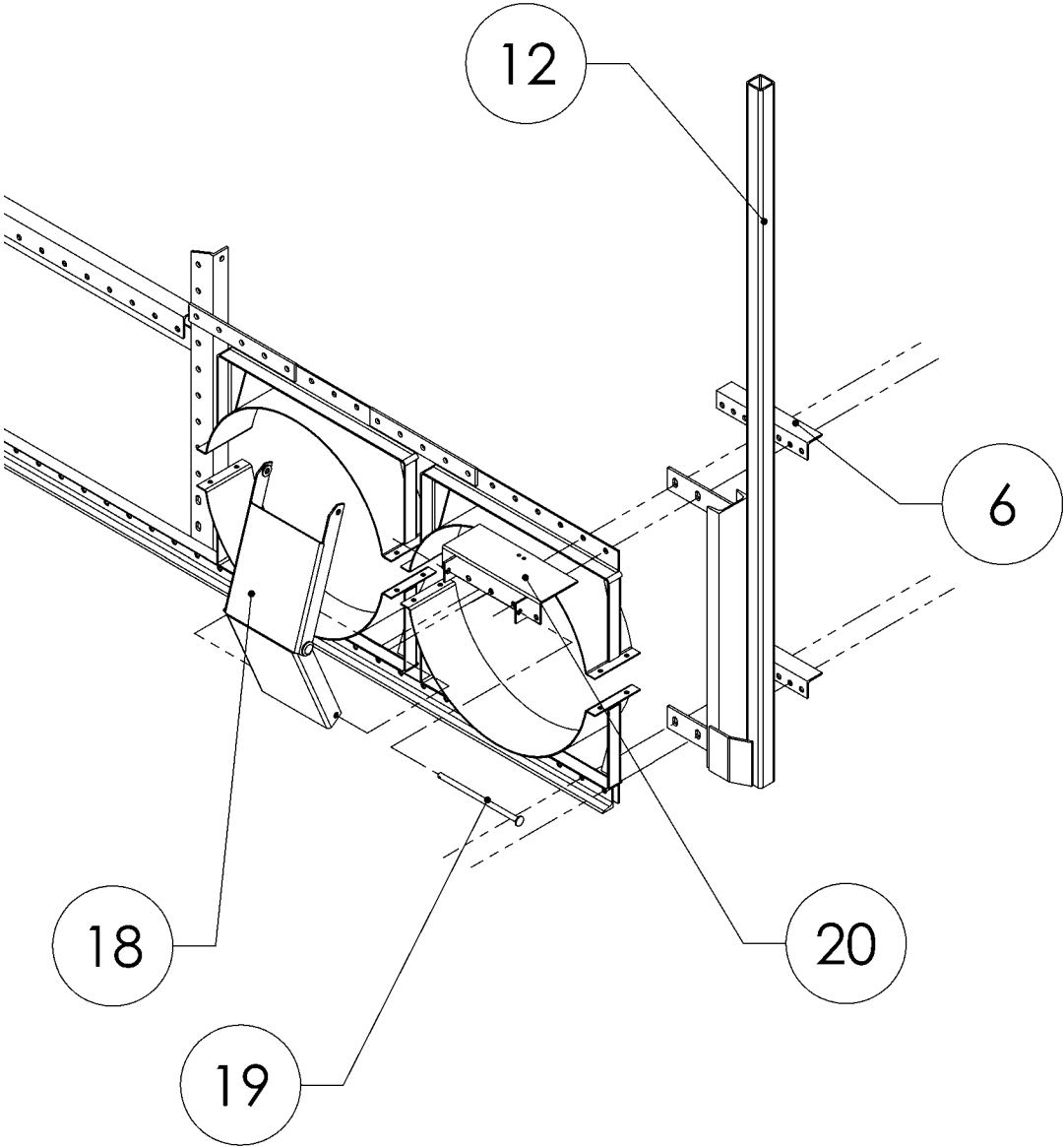
*Euro Mooring
Posts*

Hinge Base

Hinge Assembly

Step	Procedure
3.1 Fig. A5	The side of the hoist to be moored beside a dock or seawall will have Euro Mooring Posts attached to the Bottom and Top Tank Bands [13] as shown. The Mooring Posts [12] top mounting tab will be positioned on the inside of the Tank Band [1] and the Vertical Adapter [6] is placed behind the Mooring Assembly to reinforce the assembly.
3.2 Fig. A5	Place Hinge Base [20] onto the angle of the upper Tank Band [13] and backside of Keel Spanner [8]. Position the outside of the hinge base one hole past the outside end of the Tank Band angle. Assemble these parts and hand tighten the fasteners: (5) 1/2" x 1-1/2" bolt, nut & lockwasher.
3.3 Fig. A5	Attach the narrow half of the Hinge Assembly [18] to the Hinge Base [20]. Attach the Hinge to the Base using a 10-1/2 inch Hinge Pin [19]and secure with a Flat Washer and Cotter Pin.

Fig. A5
STEEL ON BOTTOM



Walkway Assembly
STEEL ON TOP

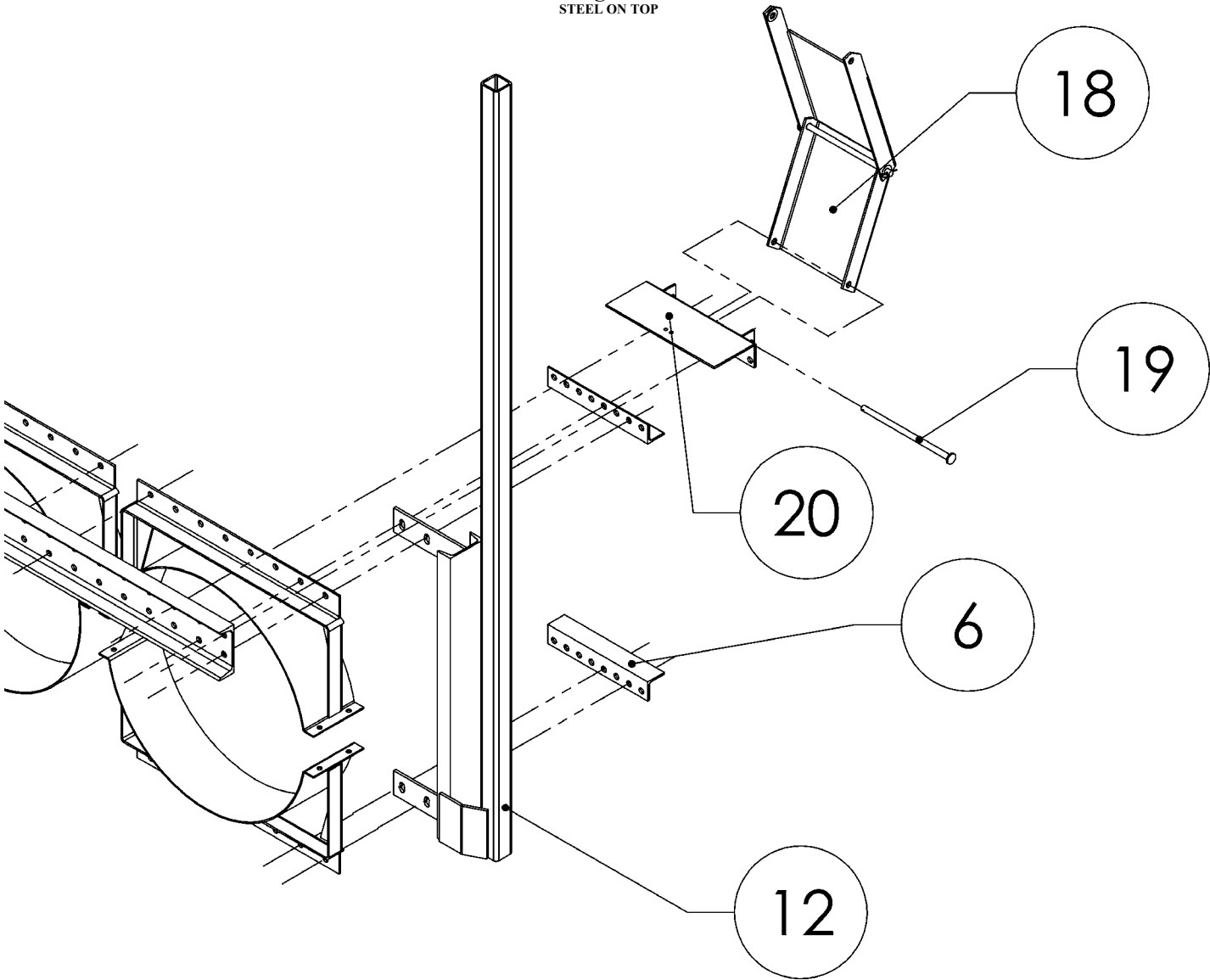
*Euro Mooring
Posts*

Hinge Base

Hinge Assembly

Step	Procedure
3.1 Fig. B6	The side of the hoist to be moored beside a dock or seawall will have Euro Mooring Posts attached to the Bottom and Top Tank Bands [13]. The Mooring Posts [12] top mounting tab will be attached to the End Channel [5C] in the bottom holes on the channel as shown.
3.2 Fig. B6	Place Hinge Base [20] onto the End Channel [5C] in the top holes of the channel as shown. Position the outside of the Hinge Base one hole past the outside hole of the Tank Band angle. Assemble these parts and hand tighten the fasteners: (4) 1/2" x 1-1/2" bolt, nut & lockwasher.
3.3 Fig. B6	Attach the narrow half of the Hinge Assembly [18] to the Hinge Base [20]. Attach the Hinge to the Base using a 10-1/2 inch Hinge Pin [19] and secure with a Flat Washer and Cotter Pin.

Fig. B6
STEEL ON TOP



Walkway Assembly

Step	Procedure
4.1 Fig C1 Fig C2	Lay out two of the Walkway Modules [1] top side up with joint ends together on a flat surface. Pull the two Modules together using the starter bolt (5/8"x3 1/2"). Be sure to include the Walkway Spacer (4812075) on the top joint, in between the two walkway sections, to help reduce sagging of the walkway. Install the opposite side bolt snugly and replace the starter bolt with 2 1/2"x5/8 Galvanized bolt, two flat washers, a lock washer and a nut each. Leave the bolts snug but not tight.. Assemble bolts in the other side in the same manner. Align the two Modules while tightening all four bolts evenly to 83 FT.LBS.
4.2 Fig C2 Fig C3	Roll walkway upside down and assemble the Hinge Grip Assembly [16] in the grooves as far to the front as possible. The tubes can be partially set into the groove with a rubber mallet. Loosely bolt the Brace [17] on each side with four 1 1/2"x1/2" Carriage bolts with lock washers and nuts. Evenly draw the Hinge Grip Assembly together and torque the bolts to 39 ft-lbs. Fit the opposite Hinge Grip Assembly according to Fig. C2.
4.3 Fig C3	Turn the Walkway right side up and set it in place on the Lift. Insert a pin in each Hinge connecting Hinge Assembly [18] and the Hinge Grip Assembly [16] from the inside to the outside and secure with a cotter pin and flat washer.
4.4	Operate the Walkways manually making certain that they can freely travel to the full upright position. If travel is restricted, the first thing to adjust is the distance between the Hinge Grip Assembly.

Fig. C1

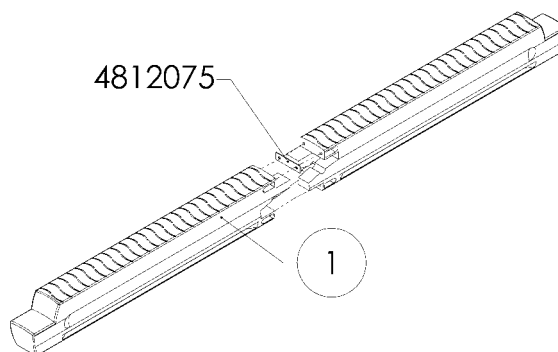


Fig. C3

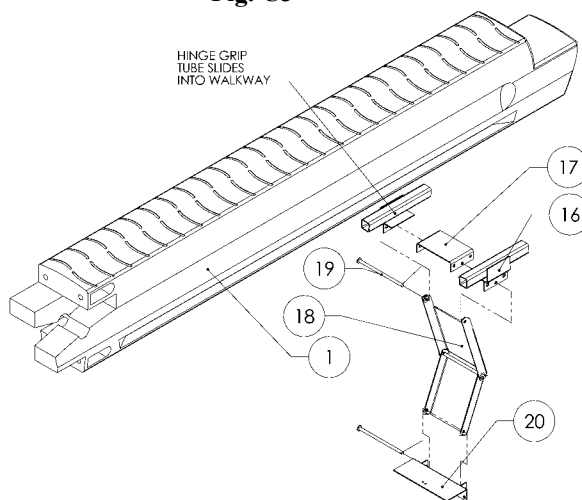
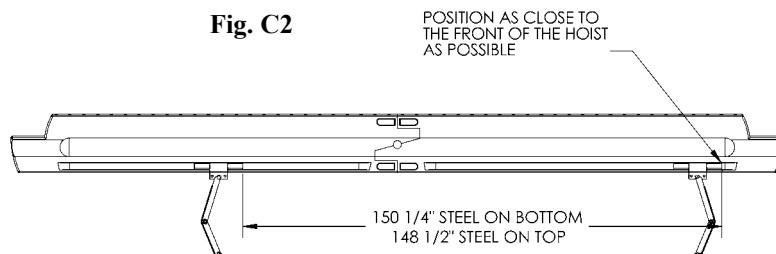


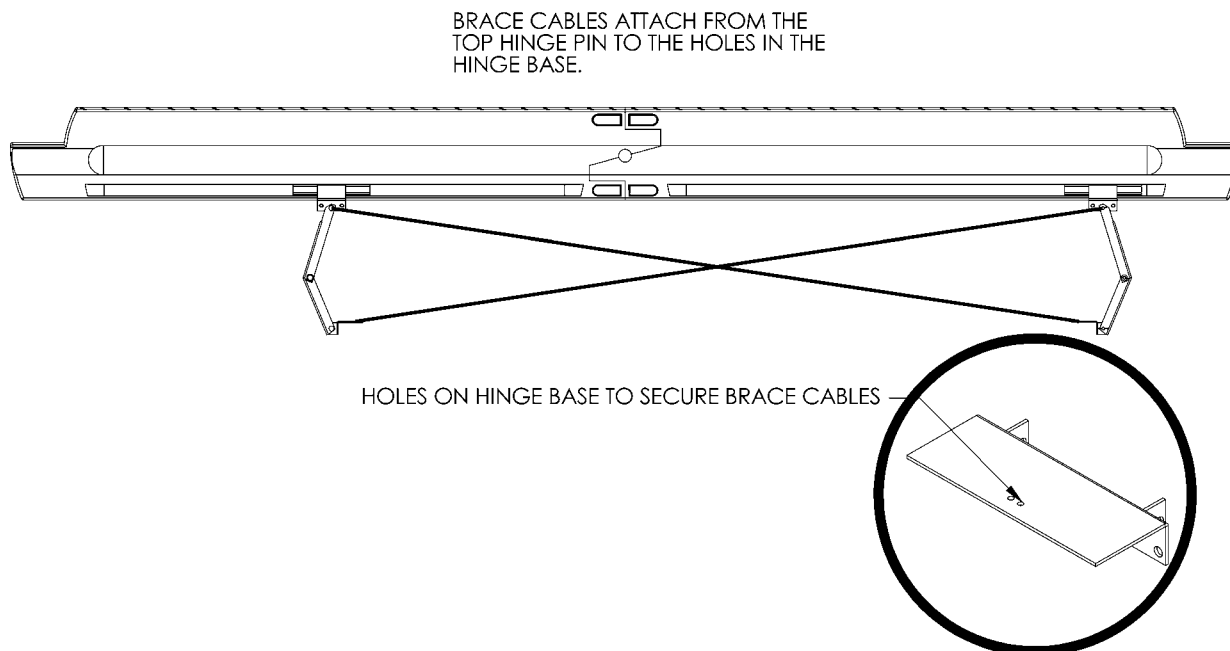
Fig. C2



Brace Cables

Step	Procedure
5.1 Fig C4	The Brace Cables are attached under each Walkway in an 'X' pattern between each Hinge Base and opposite end Hinge Grip Assembly.
5.2 Fig C4	Lift a Walkway to its fully extended position and securely prop it up. Thread the brace cable loop around the pin of the Hinge Grip Assembly. Remove the slack in the Cable and attach the other end with the U-Bolt in the center of the opposite end Hinge Base.
5.3 Fig C4	Attach the second Cable in a similar manner and remove the prop. Lift the Walkway and check for freedom of movement.

Fig. C4



Centering Guides (Optional Equipment)

Fig D1
Fig D2

Step	Procedure
>	<i>The optional Centering Guides help hold the boat in position to reduce side drift while the boat is being lifted. Two guides (1 kit) are required at the stern for stern centering; four guides (2) kits are required for both bow and stern centering.</i>
6.1	Attach Centering Guide [11B] to the End Channel [5C] at a distance wide enough apart to allow the beam of the boat to pass between with a minimum of side drift. Each Centering Guide should be an equal distance from the center of the End Channel. Fasteners: (2 per Guide) 1/2" x 1-1/2" bolt, nut and lockwasher.
6.2	Place Centering Guide Cover [24] over each Centering Guide.

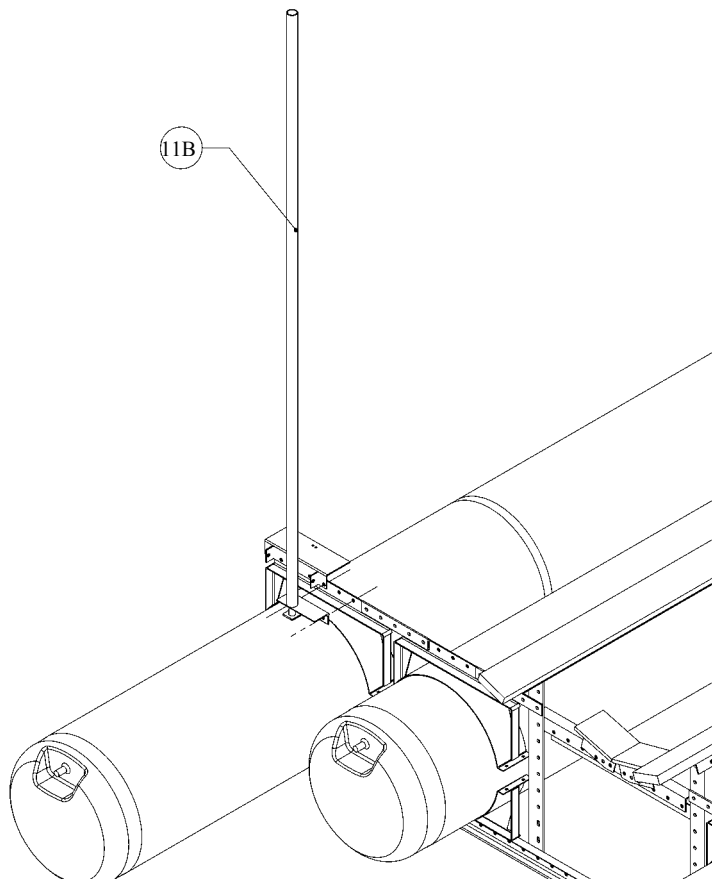


Fig. D1
STEEL ON BOTTOM

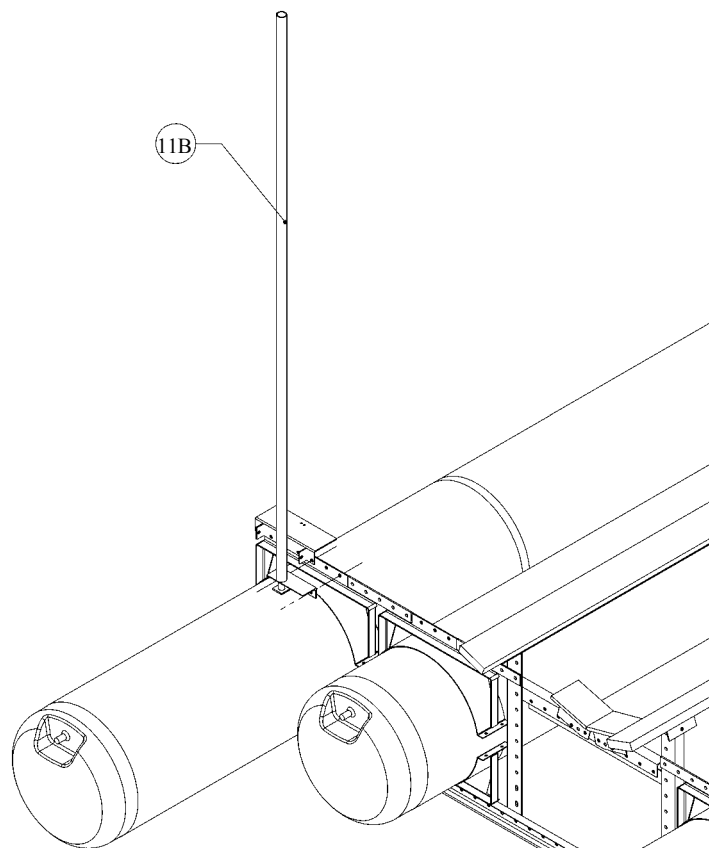
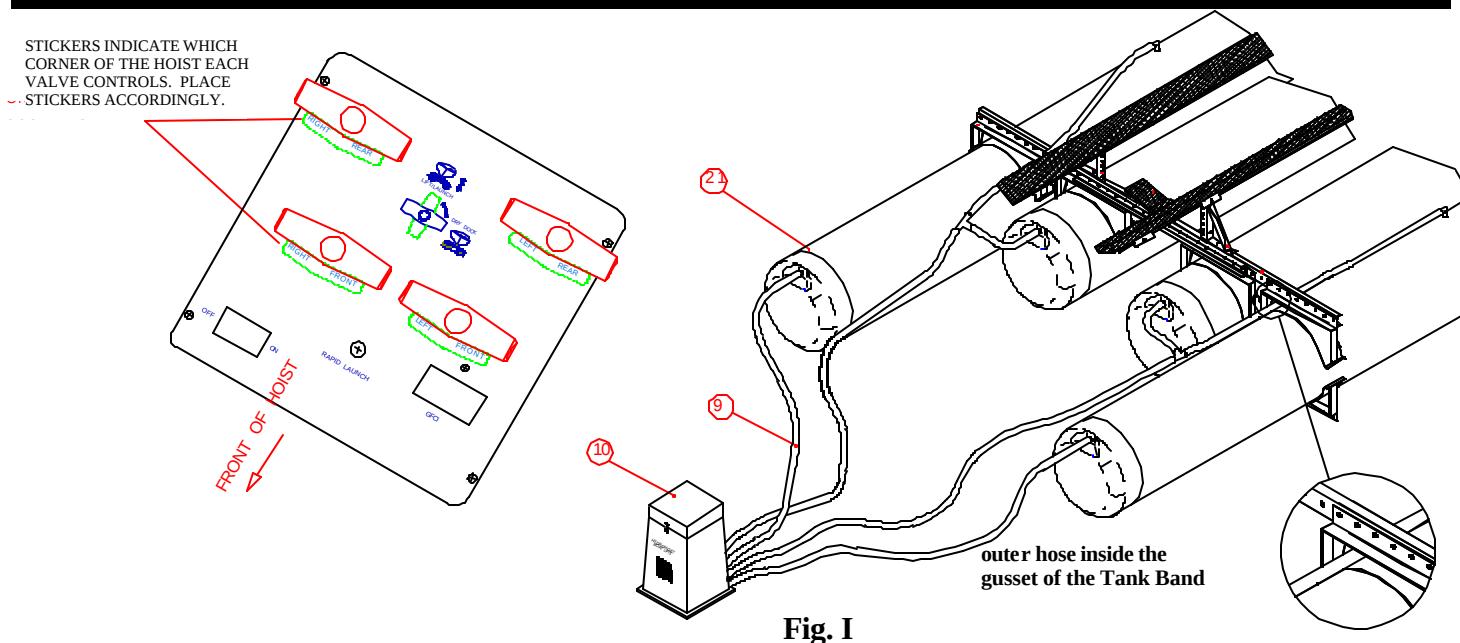


Fig. D2

Leveling the Hoist

Tightening All Fasteners

Step	Procedure
7.1	Stand at the rear of the hoist and sight across the rear End Channels to the front End Channel to make sure the front and rear are parallel and that there is no twist or warp in the hoist. If one corner appears to be low, place a block under that corner, as necessary, to align the corners.
7.2	With the unit level, tighten the 3/8" Tank Band [13] bolts alternating between paired bolts and with the bolts on the other side of the Tank Band to ensure uniform pressure on the tank. Proper tightening is achieved when the tank band flanges begin to deflect and all bolts have equal tension (about 35 ft.-lbs. of torque). <i>It is normal for the metal band to make "popping" noises as it is tightened around the fiberglass tank.</i>
7.3	Tighten all 1/2" bolts to approximately 65 ft.-lbs. of torque. Exception: The 5" Hull Support bolts previously tightened.



Hose Assembly
Fig I

Step	Procedure
>	The hose is shipped in one coil of 75 feet, and must be cut to proper lengths. It is important that the hoses connecting to the front of the tanks be of equal length, and the hoses connecting to the rear of the tanks be of equal length. Cut the hose as follows:
8.1	Cut the 75' hose in half - forming two pieces 37-1/2 feet long.
8.2	Route the hose through the support gusset of the Upper Tank Band (inset fig. I) and attach it to the 90 degree Elbow at the rear section of the large tank. Then a Tee is placed near the front of the smaller tank and a short hose routed to that tank as shown in Fig I. Cut the 40' Section of hose in half and attach each on to the nipple of the larger tanks. Tighten the hose clamps at each connection and pull the hoses to a point in front of the assembly. Then cut the hoses the same length.
8.3	Repeat the above step for the other side of the lft. The result is two front hoses of equal length, and two rear hoses of equal length, with all hoses meeting at the same point in front of the hoist.

Control Unit
Fig. I

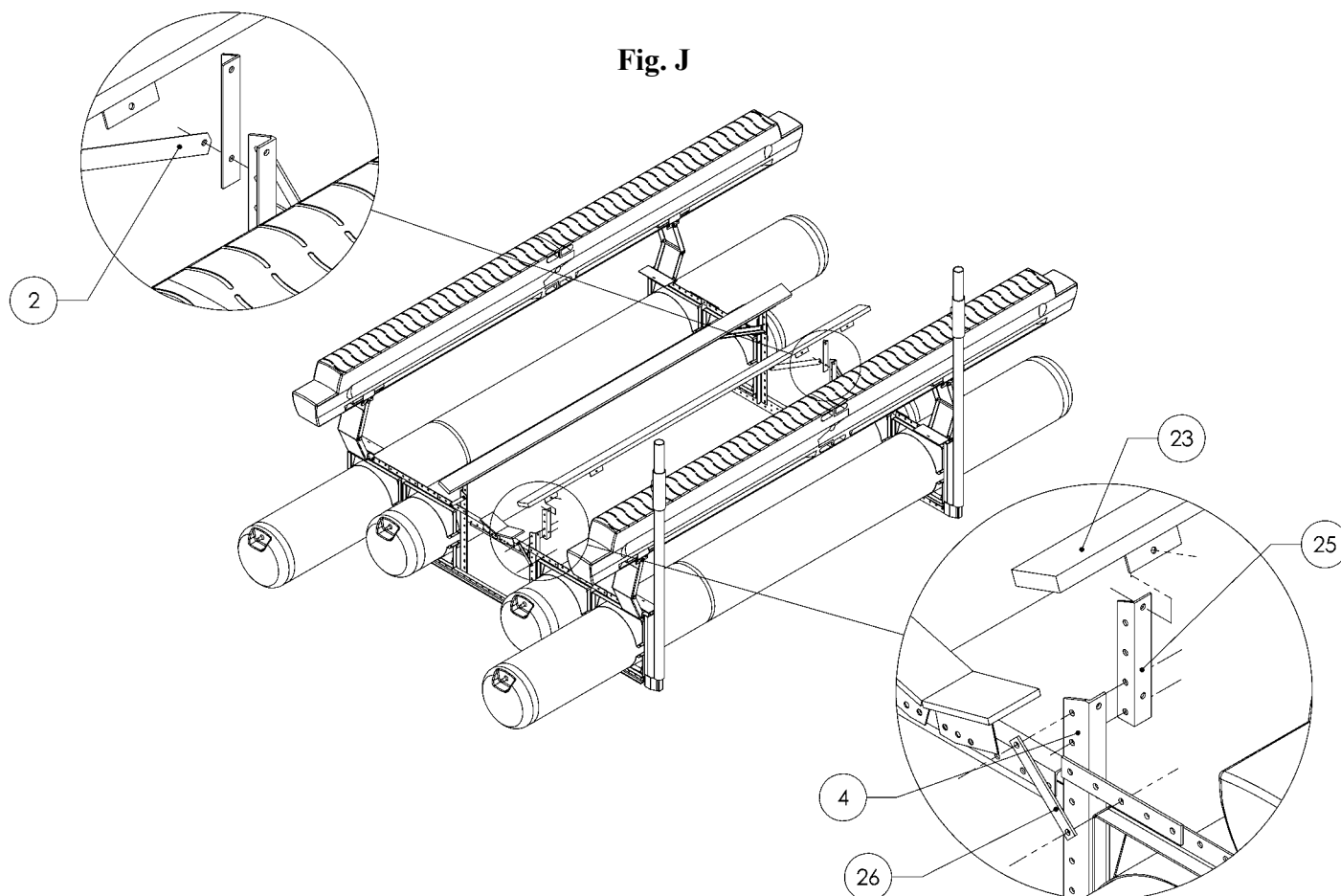
Step	Procedure
9.1	The B-Model hoist is supplied with a 4-valve Control Unit [10]. Each valve, with its connecting hose controls the air supply to a corner of the hoist. Four valves, one for each corner of the hoist. The order of hose attachment can be tailored to fit the application, however, the typical attachment simulates each corner of the Control Unit to the corners of the hoist as shown in Fig. I. Each potential hoist operator must be familiar with the Control Unit and the Valve Handle sequence before operating the hoist.
9.2	Attach Hoses [9] to the valves in the Control Unit [10] and secure with Hose Clamps .

Launching the Hoist
Fig. A

Step	Procedure
10.1	Secure the Control Unit (without housing) to a Hull Support Column [3,4] in the front of the hoist. Make sure all valves are closed in the 'Dry-Dock" position. Attach a towing line to the rear End Channel. Tank Plugs are recommended for all tows.
10.2	Back the trailer into the water to float the hoist. Do this SLOWLY so that the front of the tanks will not pivot hard into the trailer.
10.3	Slowly tow the hoist to its mooring location.

Step	Procedure
1.5A	The assembly for the Rear Hull Support system using Risers [25] is shown in Fig. J. Notice the suggested position for the bolts. The Hull Support Brace [2] must be attached to the Risers [25], with the bolt going from the outside of the lift to the inside, before attaching the Riser [25] to the Hull Support Column [3,4].
1.6A	Once the Hull Support Brace [2] is attached, the Riser [25] can be bolted to the Hull Support Column [3,4]. Notice that the Riser Brace [26] is also attached to this assembly at this time. The opposite end of the Riser Brace [26] should be bolted through the Tank Band and Tie Strap as shown.
1.7A	Attach the Hull Support Pads [23] to the top of the Risers [25]. The side of the Pads with the long angle iron should be toward the center line of the lift so that the Pad will tilt inboard toward the boat hull. Fasteners per pad (2ea) 1/2" x 5" bolt, lockwasher & nut. Tighten these bolts only enough to flatten the lockwasher.

Fig. J

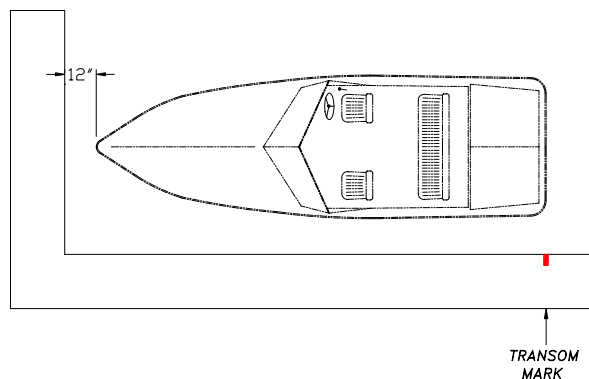


Installation

Selecting Position for Boat & Hoist

Step	Procedure
1.1 Fig. F1	Pull the boat into the boat slip so that the bow can be easily reached from the front of the slip, and allow at least 12 inches of space at the dock level between the dock and the boat in the event the boat may need to be later moved in final positioning.
1.2	With the boat in the desired location, place a mark on the dock where the boat's transom is positioned. Note: Do not include extensions to the hull such as swim platforms; the transom mark should reflect the location of the the end of the bottom of the hull .
1.3	Remove the boat and pull the hoist into the slip.
1.4	Position the hoist along side the dock and align the rear end of the Hull Support Pads with the transom mark on the dock.
1.5	With the hoist held stationary at this position, place marks on the dock at the location of the Rear Mooring Assembly and the Front Mooring Assembly .

STEP 1.1 - 1.2



STEP 1.4 - 1.5

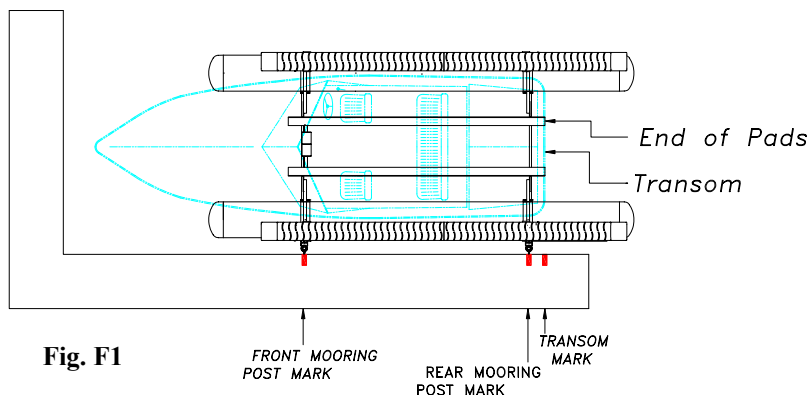


Fig. F1

Mooring the Hoist

Step	Procedure
2.1 Fig. F1	Move the hoist into position and align the rear Mooring Assembly [12] with the mark on the dock.
2.2 Fig. G1	Slide the Mooring Cover [14] over the Mooring Assembly [12] and the Slider [15] over the Mooring Cover [14]. Securely attach the Slider [15] of each Mooring Assembly to the dock. This may be done with a suitable rope of 3/4" diameter (max.). The tab on the Slider should be positioned away from the dock.

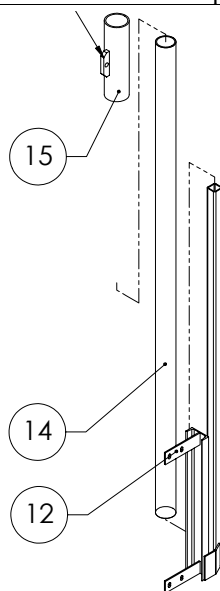
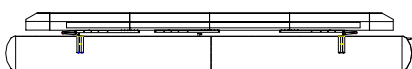


Fig. G1

Final Details

Step	Procedure
3.1	TIGHTEN ALL BOLTS.
3.2	REMOVE ALL TANK PLUGS IF USED.
3.3	Attach the Control Unit frame to the dock in the desired location and install the Control Unit Housing onto the frame.
3.4	Connect the power cord to proper power source and test the motor switch to ensure operation.
3.5	Temporarily secure one end of each guide rope to the outboard end of each front Upper Tank Band. Extend each rope to the rear of the hoist and drape it over the Walkway for use later.



Fully Raised Position

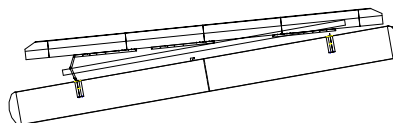
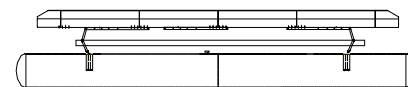


Fig. H1

Stern Lowered Position



Fully Lowered Position

Lowering the Hoist Fig. H1

Step	Procedure
4.1	Rotate the Control Unit Handles operating the valves leading to the REAR sections of the tanks to the Lift/Launch position. <i>When the air is fully exhausted from the rear section of the tanks, the stern section of the hoist is suspended from the Floating Walkways.</i>
4.2	With the hoist in the Stern Lowered Position (Fig. G1) Rotate the Control Unit Handles operating the valves leading to the FRONT sections of the tanks to the Lift/Launch position. <i>With the air fully exhausted from both the front and rear sections of the tanks, the entire hoist is suspended from the Floating Walkways.</i>

Positioning the Boat

Step	Procedure
5.1	Pull the boat over the hoist and align the boat's transom with the transom mark on the dock. <i>This should properly position the transom just above the end of the Hull Support Pads.</i>
5.2	Hold the boat in position at the transom mark and center it side to side over the hoist. Temporarily tie the loose ends of the Guide Ropes to the REAR cleats of the boat to hold the boat in position for the initial lifting steps.
5.3	Continue to hold the front of the boat centered over the hoist, pushing the boat to stern gently until the Guide Ropes are taut. <i>The Guide Ropes center the boat's stern over the hoist, and keep the transom aligned with the rear of the Hull Pads.</i>

Lifting the Boat

Step	Procedure
6.1	<i>Continue holding the boat in position as described in the above step-</i> Rotate the Control Unit Handles operating the valves leading to the FRONT sections of the tanks to the Lift/Launch position and turn the Power Switch to the ON position. <i>Note: It may be necessary to reset the GFCI switch to activate the switch.</i>
6.2	When the hoist contacts the boat hull and the boat is no longer floating freely, you may discontinue pushing back on the boat. As the FRONT of the hoist and boat rise, observe the centering position of the boat on the Hull Support Pads - if not centered correctly, lower the hoist and realign the boat or pads as necessary.
6.3	Continue raising the FRONT of the hoist until air bubbles from under the FRONT of the tanks, then... Rotate the Control Unit Handles operating the valves leading to the REAR sections of the tanks to the Lift / Launch position, and... rotate the Handles leading to the FRONT sections of the tanks to the Dry-Dock position.
6.4	As the REAR of the hoist and boat rise, observe the centering position of the boat on the Hull Support Pads - if not centered correctly, lower the hoist and realign the boat or pads as necessary.
6.5	Continue raising the REAR of the hoist until air bubbles from under the REAR sections of the tanks, then again... rotate the Control Handles operating the valves leading to the FRONT sections of the tanks to the Lift / Launch position to continue filling the FRONT sections of the tanks.
6.6	When air bubbles from all sections of all tanks, turn the Power Switch to OFF and rotate ALL Control Handles to the Dry-Dock position. The hoist should now be fully lifted.

Final Adjustments

Balance and Load

Step	Procedure
1.1	Carefully check the boat's position on the hoist and Hull Support Pads. The boat should be centered side to side, with the hull Support Pads contacting the hull between the chines and to the transom area. Note 1: It is common for some unavoidable crossing of the chines at the bow of the boat, which is acceptable. Note 2: The ends of the Hull Support Pads should extend to the transoms of outboard boats; for stern-drive boats, the ends of the Hull Support Pads should not extend forward of the engine compartment. Reposition the boat or pads if necessary.
1.2	Carefully check the hoist's position in the water. The tanks should be level fore to aft with an acceptable 4 inch drop to stern. Correct the fore to aft position of the boat on the hoist to correct any unbalance.
1.3	At least 1/3 of each tank should be above the water surface for correct lifting and hoist stability. If less than 1/3 of the tank is above the water, the boat is too heavy for the hoist, and a larger hoist should be installed.

Guide Ropes

Step	Procedure
2.1	With the boat correctly positioned on the hoist, untie both the FRONT and REAR ends of each Guide rope. Tie a small loop (about 6 inches in diameter) in one end of each Guide Rope and place the loops over the REAR cleats of the boat.
2.2	Pull the Guide Ropes tight and tie the loose ends to the outboard ends of each FRONT Upper Tank Band. (Right rope to right tank band, left rope to left tank band.)
2.3	Attach the Warning Decals (SP34) to the Guide Ropes.

Final Inspection

Step	Procedure
3.1	Operate the hoist again - launch then lift - checking for proper positioning of the boat and Pads, and for proper operation of the lift and Walkways.

Wrapping Up

◆ Secure a bow line to the boat and to the boat dock. ◆ Confirm that the Operating Instructions are in the Control Unit. ◆ Unplug the power cord and stow it in a secure position. ◆ Complete the Warranty information and apply the adhesive Serial Number Tag to the Top Plate of the Control Unit. ◆ Close and secure the Control Unit Lid. ◆ Whenever possible, instruct the boat owner in the proper operating procedures of the hoist.
--

CAUTION:
HIGH WINDS
AND
ROUGH WATER
CONDITIONS

The HydroHoist Mooring Apparatus is not designed for severe wind or water conditions. Should the potential for severe conditions exist, it is recommended that mooring lines be secured from dock structure to bow and stern of craft to prevent damage to the HydroHoist Mooring Apparatus.

Trouble Shooting

CONDITION:	Hoist will not completely lift boat from water or stern remains low.
CAUSE:	A. Boat loaded too far to rear. B. Water or equipment in boat creating additional weight. C. Boat weight exceeds lifting capacity of hoist.
CORRECTION:	A. Reposition boat forward to balance weight over hoist and adjust the Guide Ropes to maintain proper positioning. B. Remove water or equipment. C. Install correct size hoist to accommodate the boat's true weight.
CONDITION:	Hoist tips side to side when lifting or launching.
CAUSE:	A. Restricted air flow to one quadrant of the lifting tanks. B. Hoses not of equal length. C. Bulkhead inside of tank is broken or leaking D. Host is not square, frame is twisted.
CORRECTION:	A. Remove kinks or water-lock from hoses. B. Correct hose length. C. Replace tank. D. Loosen Tank Bands, level hoist, and proper tighten Tank Bands.
CONDITION:	Walkways unstable when walked upon.
CAUSE:	A. Brace system not functioning properly.
CORRECTION:	A. Repair or replace.
CONDITION:	Hoist leads down on one corner.
CAUSE:	A. Leak in valve, tank, or hose for that quadrant.
CORRECTION:	A. Locate leak and repair.
CONDITION:	Hoist leads down on one side (not just one corner).
CAUSE:	A. Leak in fore and aft quadrant - tank to valve or bulkhead leaking.
CORRECTION:	A. Locate leak and repair. Replace tank if bulkhead damaged.

Parts List

STEEL ON BOTTOM

ITEM #	PART #	DESCRIPTION	QTY
1	2810000	WALKWAY - BLUE - 10FT	4
2	3031700	BRACE - HULL PAD - 25 3/4 ANGLE	2
3	3033000	COLUMN - HULL SUPT - 36 ANGLE - LH	2
4	3033001	COLUMN - HULL SUPT - 36 ANGLE - RH	2
5C	3050650	CHANNEL - END - 3" X11'11"	1
5C	3500340	CHANNEL - END - 5" X 11' 8"	1
6	3055000	VERT ADPT - STANDARD H MODEL	4
7	3056300	STRAP - 14 STEEL TIE	8
8	3056400	SPANNER - KEEL - 31 1/2 ANGLE	2
9	3072502	HOSE - 1 ID CUT 75' LONG	1
	3072507	HOSE - 1 ID CUT 40' LONG	1
10	3550026	CNTRL - 4V - 1M 120V PLAST. MAN.	1
11B	4029700	GUIDE - CENTERING - 9' LH (OPT.)	2
	4029701	GUIDE - CENTERING - 9' RH (OPT.)	2
12	4043210	MOORING ASSY - B-MODEL	2
13	4050100	TANK BAND - 24 UPPER	16
14	4666160	COVER - MOORING ASSY - 45/75 B	2
15	4669165	SLIDER - PE - EURO MOORING	2
16	4812025	HINE GRIP - WALKWAY	8
17	4812030	BRACE - WALKWAY	4
18	4812060	HINGE ASSY - WALKWAY	4
19	4812070	PIN - HINGE 10 1/2	8
20	4812080	HINGE BASE ASSY	4
21	5010310	TANK - 24" X 23' - B - NEW	2
21B	5010200	TANK - 24" X 16' - A	2
22	5025102	PAD - VEE BRACKET	1
23	5025600	PAD - HULL - REGULAR 14'	2
24B	5027802	COVER - 9' CENTERING GUIDE (OPT.)	4
25	3032300	RISER - HULL SUPT. - 12 1/2" ANGLE LH	2
	3032301	RISER - HULL SUPT. - 12 1/2" ANGLE RH	2
26	3031800	RISER - BRACE	4
-	6098100	PARTS BAG - LIFT - 7500 B	1
-	6937100	PARTS BAG - WALKWAY 45/75/9B4T	1
-	6937400	PARTS BAG - CABLE ASSY 45/75 B	1
-	6939000	PARTS BAG - MOORING - B303	1

Parts List

STEEL ON TOP

ITEM #	PART #	DESCRIPTION	QTY
1	2810000	WALKWAY - BLUE - 10FT	4
2	3031700	BRACE - HULL PAD - 25 3/4 ANGLE	2
3B	4031100	COLUMN - HULL SUPT - UNIV - NORM	2
4B	4031110	COLUMN - HULL SUPT - UNIV - OPP	2
5C	3500340	CHANNEL - END - 5" X 11' 8"	2
6	3055000	VERT ADPT - STANDARD H MODEL	4
9	3072502	HOSE - 1 ID CUT 75' LONG	1
	3072507	HOSE - 1 ID CUT 40' LONG	1
10	3550026	CNTRL - 4V - 1M 120V PLAST. MAN.	1
11B	4029700	GUIDE - CENTERING - 9' LH (OPT.)	2
	4029701	GUIDE - CENTERING - 9' RH (OPT.)	2
12	4043210	MOORING ASSY - B-MODEL	2
13	4050100	TANK BAND - 24 UPPER	12
13B	3056200	TANK BAND - 24 LOWER	4
14	4666160	COVER - MOORING ASSY - 45/75 B	2
15	4669165	SLIDER - PE - EURO MOORING	2
16	4812025	HINE GRIP - WALKWAY	8
17	4812030	BRACE - WALKWAY	4
18	4812060	HINGE ASSY - WALKWAY	4
19	4812070	PIN - HINGE 10 1/2	8
20	4812080	HINGE BASE ASSY	4
21	5010310	TANK - 24" X 23' - B - NEW	2
21B	5010200	TANK - 24" X 16' - A	2
22	5025102	PAD - VEE BRACKET	1
23	5025600	PAD - HULL - REGULAR 14'	2
24	5027802	COVER - 9' CENTERING GUIDE (OPT.)	4
-	6098100	PARTS BAG - LIFT - 7500 B	1
-	6937100	PARTS BAG - WALKWAY 45/75/9B4T	1
-	6937400	PARTS BAG - CABLE ASSY 45/75 B	1
-	6939000	PARTS BAG - MOORING - B303	1
-	6939050	PARTS BAG - 75B STEEL ON TOP	1

Technical Supplement

NOTE: The optional Centering Guides take off approximately 5" of width total.

