

**LSP16/LSP21
LSP24/LSP28
Pontoon Lift**

By Lakeshore Products, Inc.

Instruction Sheet.
Read carefully. Failure to
follow the instructions and
safety rules could result in
severe injury or death!!!

Thank you for purchasing a Lakeshore Lift. With proper care, this lift will provide you with years of trouble-free use. Please read all instructions before beginning assembly, and if you have any problems do not hesitate to call us.

CAUTION!!!

Do not overtighten nuts and bolts on your lift. This may severely damage the structural integrity of your lift. When tightening a regular nut against an aluminium tube, tighten until the surface of the tube dimples slightly (1/8"). All lock nuts should be tightened until at least one to one and a half threads of the bolt are showing through the nut. If you crush the tube, it can crack and fail under pressure.

IMPORTANT:

This lift is designed so that the wheel can be placed on either side of the lift. The lift is shipped for wheel setup on the right side. If you desire your wheel to be on the left side: reverse the winch by removing the (4) carriage bolts from the mounting channel, rotating the body of the winch 180 degrees so that the side farthest from the mounting plate now fits into it, and replacing the mounting channel. Make sure the winch drum stays opposite the slot in the mounting channel.

Assembly Instructions:

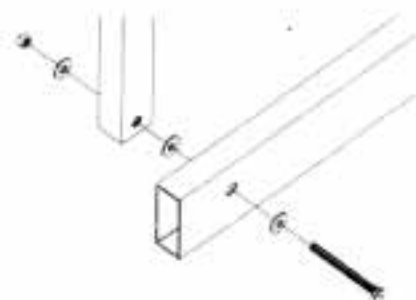
1) Find a level area on which to work. Identify all parts using the exploded view and parts list. Open the package of nuts, bolts, and washers and lay them out by size. Identify them using the bolts list. Only hand tighten nuts until instructed otherwise.

Fasteners List

Fastener	16PL	21PL/24PL	28PL
3/8 x 3 hex bolt	4	4	4
3/8 x 6 hex bolt	2	2	2
1/2 x 3 hex bolt	1	1	1
1/2 x 3-1/2 hex bolt	3	3	3
1/2 x 3-1/2 carr bolt	6	8	10
1/2 x 5-1/2 hex bolt	6	8	10
3/8 lock nuts	6	6	6
1/2 lock nuts	16	20	24
3/8 flat washer	8	8	8
1/2 flat washer	27	35	43
3/4 flat washer	1	1	1

You will require the following tool to assemble your new LAKESHORE PONTOON LIFT:

- 2 - 9/16 wrenches (for 3/8 bolts)
- 2 - 3/4 wrenches (for 1/2 bolts)
- 1 - Tape Measure
- 1 - Hammer
- 1 - Tin Snips (for cutting metal banding)
- A small amount of grease



1) Stand up the (2) Mainframes with the reinforcing plates on the bottom tube on the outside of the lift. If the plates are on the inside, the H-Units will bind on the Mainframes during use. Place the Lower Spreader Tube between the frames at the bottom of the Mainframe upright tube, and attach with

- (4) 3/8 x 3 hex bolts
- (4) 3/8 washers
- (4) 3/8 hex nuts.

The washers belong under the heads of the bolts on the outside of the lift.

2) Place the Front H Unit (the one with pulley holes 7" from the top) between the Mainframes. Use

- (1) 1/2 x 5 1/2 hex bolt
- (3) 1/2 flat washer
- (1) 1/2 lock nut

Place one washer under both the bolt and the nut, and one between the tubes.

3) Assemble the remaining H-Support units in the same manner as step 2), using the V-Unit support as the last support on the lift.

4) Lay the Cradle Tubes in position on top of the H Units with the Wood Bumpers at the rear of the lift. Place a Cradle Pivot Spacer through the top of the Front H Unit and pivot the Front H Unit up and place the drilled tabs on the bottom of the Cradle Tube over the top of the H Unit leg with the spacer in place, use

- (1) 1/2 x 3 1/2 carriage bolt
- (1) 1/2 flat washer
- (1) 1/2 lock nut

BE SURE THAT THE NUT IS TOWARD THE INSIDE OF THE LIFT with the washer under it.

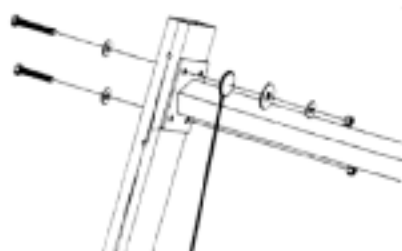


5) Attach both Runner Tubes to all of the Support Units in the same manner.

6) Determine on which side of the lift you want the winch. Lay out the cable in a straight line. Attach the Upper Spreader Tube to the side opposite the winch side with

- (1) 1/2 x 3 hex bolt
- (1) 1/2 flat washer
- (1) 1/2 lock nut

through the bottom hole of the plate and Mainframe. The bolt heads should be on the outside of the lift. Place through the upper hole of the Spreader



under the head. Now install the looped end of the cable over the bolt and place

- (1) 1/2 x 3 1/2 hex bolt
- (1) 1/2 flat washer
- (1) 3/4 flat washer
- (1) 1/2 flat washer
- (1) 1/2 lock nut.

Be sure that this is tight and that the cable will not come loose.

7) Attach the Wheel Support Tube and the other end of the Upper Spreader Tube to the Mainframe with

- (2) 1/2 x 3 1/2 hex bolts
- (2) 1/2 lock nuts.

The bolt heads should be on the outside of the lift.

8) Attach the winch to the Mainframe tube using

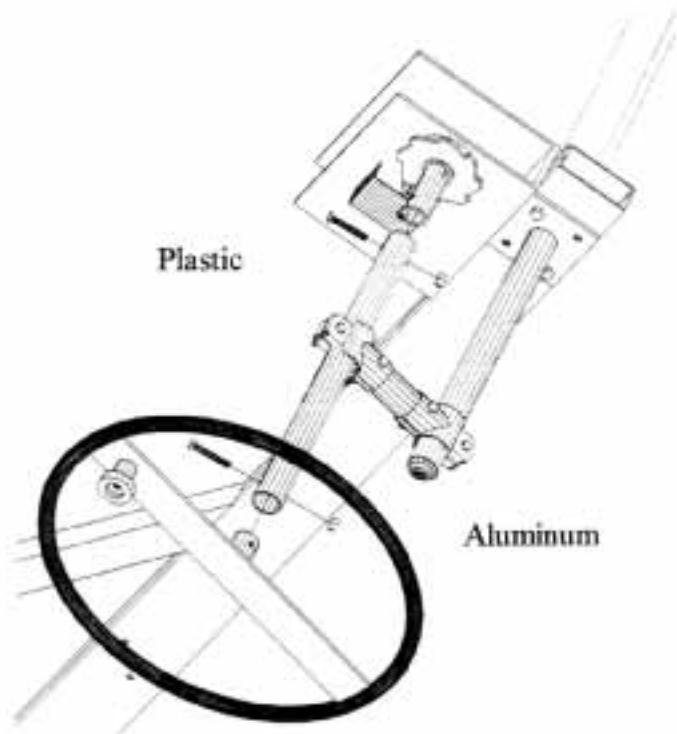
- (2) 3/8 x 6 hex bolts
- (4) 3/8 flat washers
- (2) 3/8 hex nuts

with the nuts inside the winch.

NOTE: When mounting the winch be sure that the slotted hole on the back is in the upper hole position and that the drum of the winch is in the lower end of the winch. THIS IS IMPORTANT FOR PROPER ALIGNMENT OF THE WINCH AND WHEEL MECHANISM. If the slot is not up and the drum is not down then remove the carriage bolts from the backer plate and rotate the body of the winch 180 degrees and reattach the backer plate. REMEMBER, SLOT UP - DRUM DOWN. Mount the winch so that the hub is toward the outside of the lift.

9) You may now tighten all of the bolts that have been installed.

10) Attach the wheel to the wheel extension tube and the extension tube to the hub on the winch. Take the crossarm bearing assembly and attach as shown. Be sure that the plastic clamp with the spacer is attached to the wheel extension tube. If the spacer is not in the proper place the wheel will not operate properly. Tighten all of these bolts. The wheel extension tube should stick out straight from the winch as you turn it. Make sure that the wheel extension tube and the wheel support are parallel. Be sure that the bolts on the clamps are snug. **DO NOT OVERTIGHTEN!!** The clamps will crack or break if too much pressure is applied to them. (The bearing assembly should be moved to the outer end of the tube for the wheel to line up properly.)



11) Install the 3" Eyebolt Pulleys to the front of the Front H Unit. Due to the variations in galvanizing on the eyebolts, it may be necessary to use a hammer to place the bolts into the holes. Secure with (1) 5/8 flat washer, (1) 1/2 flat washer, and (1) 1/2 galvanized hex nut. Tighten these so that the tube just dimples. See the exploded view.

12) Install the 6" Eyebolt Pulleys to the backside of the Mainframes in the holes that are approximately 12" below the Upper Spreader Tube. Due to the variations in galvanizing on the eyebolts, it may be necessary to use a hammer to place the bolts into the holes. Secure with (1) 5/8 flat washer, (1) 1/2 flat washer, and (1) 1/2 galvanized hex nut. Tighten these so that the tube just dimples. See the exploded view.

13) String the cable:

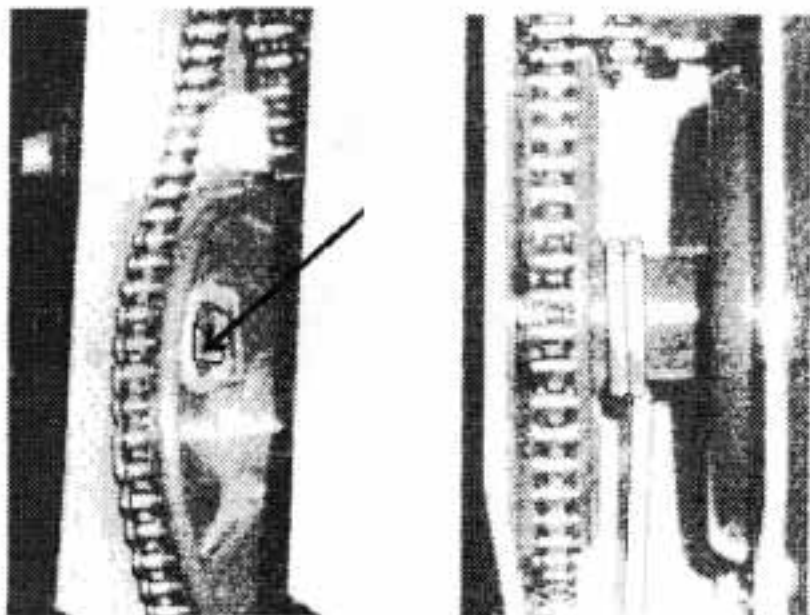
- a) Take the loose end of the cable and run it over the pulley on the H Unit closest to where the cable is attached.
- b) String the Mainframe pulley on the same side of the lift.
- c) String the Mainframe pulley on the opposite side of the lift.
- d) String under the remaining H Unit pulley.

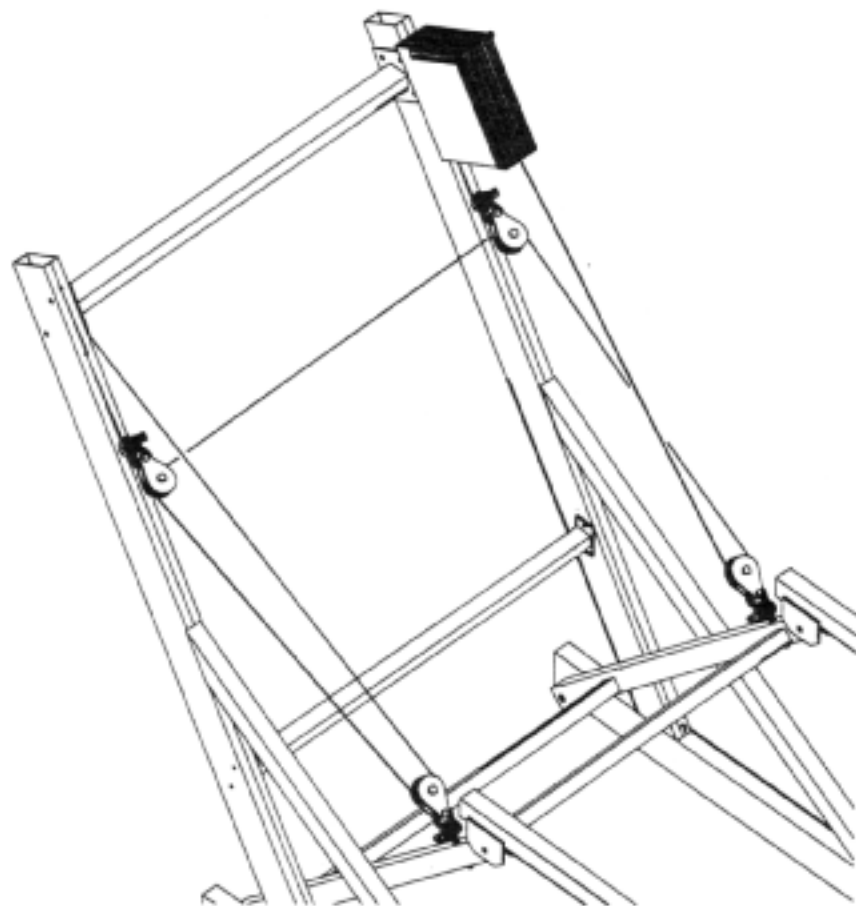
14) Grease the last two feet of the end of the cable. Find the wedge attached to the winch. Wrap the cable around the winch drum clockwise from the outside of the lift and insert the end through the small end of one of the welded channels on the side of the drum. make a loop and push the end back through the welded channel. Insert the steel wedge into the center of the loop you just make with cable. Now pull the main cable down to draw the loop and the wedge into the welded channel. This will secure the cable to the drum. See the left figure below. Take up the slack in the cable by turning the wheel clockwise. make sure the cable winds evenly as in the figure on the right.

15) watch to see that the lift is working properly and the pulleys are turning freely. If everything seems to be correct then it is time to check the lift and tighten any remaining bolts.

SPECIAL NOTES:

A) A second safety decal is provided in the accessories box. If when you assembled the lift the decal is not easily seen, then install the extra decal so anyone using the lift can read the VERY IMPORTANT safety rules!





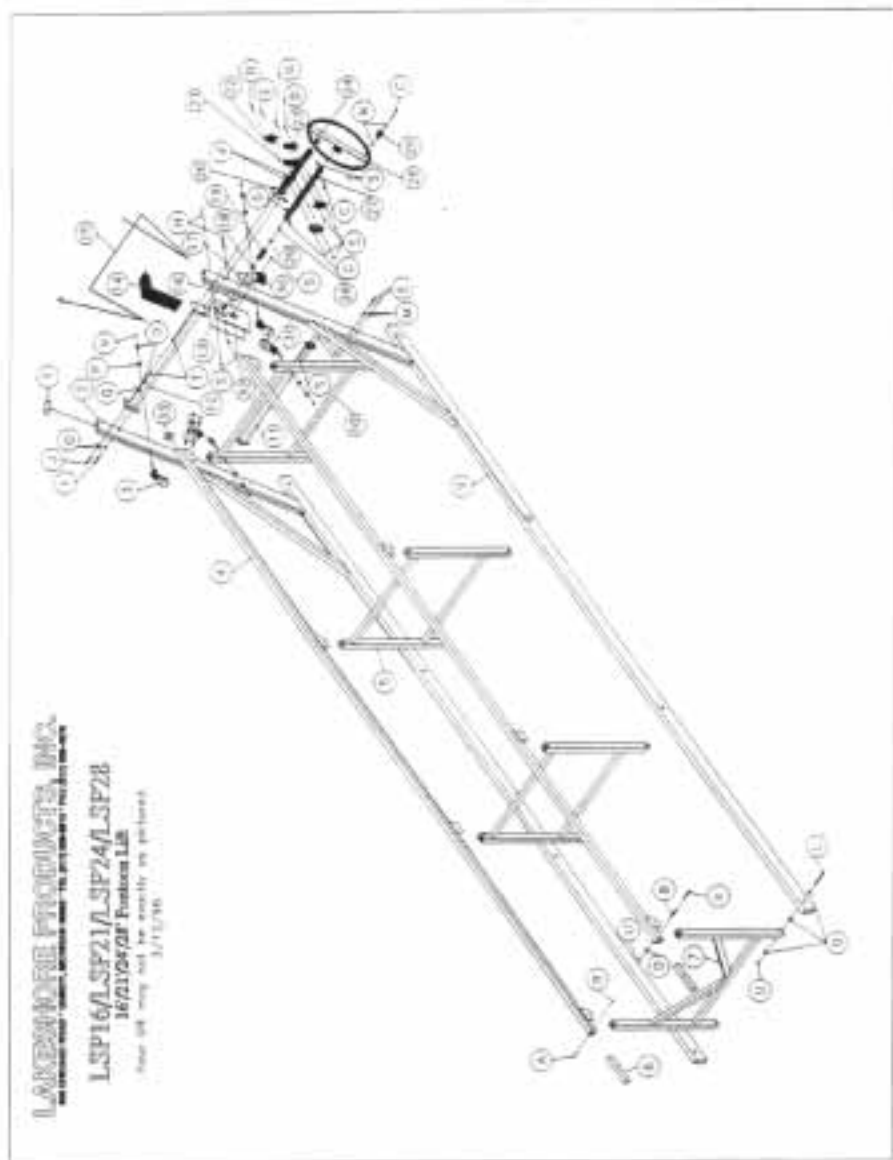
B) Always be sure that all pulleys are turning freely and inspect the cable to be sure it is not worn or frayed. Replace the cable at once if either of these conditions are present.

C) Be careful when pulling your boat over the lift. If the proper care is not taken, you may damage your boat and/or the lift.

D) The "clicker" in the winch will not activate until there is weight or resistance placed on the lift.

E) In rough weather or high waves, it is possible for your boat to be thrown from the lift, causing damage to the boat, the lift, or both. Lakeshore Products, Inc. cannot be held responsible for damage due to these causes. Take precautions to prevent such an occurrence.

F) Be sure to check your cable, pulleys, and winch before installing your lift each year. Pulleys should turn freely, and the winch should turn easily.



Note: Parts for the LSP16, LSP21, LSP24, and LSP28 are very similar. The number of H Units varies between lifts, with corresponding differences in bolt quantities. However, the lifts are assembled in identical fashion.

Pontoon Lift Parts List

Ref.	Part No.	Part Name	Qty
1	DEM25	2 x 5 Platisol Cap	2
2 *	20159/20161/ 20163/20388	Left Mainframe	1
3	PUL6	6" Eyebolt Pulley	2
4 *	PC16/PC21/PC24/PC28	Cradle Tube	2
5	PHU2	Middle H Unit	* 1/2/2/3
6	WD15X2X12	Wood Bumper	2
7	PHU3	Rear H Unit	1
8	SPACER2.1	Cradle Pivot Spacer	8
9 *	20160/20162/ 20164/20389	Right Mainframe	1
10	20053	Front H Unit	1
11	PSTL	Lower Spreader Tube	1
12	PSTU	Upper Spreader Tube	1
13	W2	Small Winch (#2)	1
14	WC2	Small Winch Cover	1
15	16PLC	Cable	1
16	WINCHBP1	Winch Brake Pad	1
17	WLS	Winch Locking Sprocket	1
18	W952	Bronze Thrust Washer	1
19	WSA	Winch Shaft Adapter	1
20	20111	Wheel Support Tube	1
21	XCT	Crossarm	1
22	XCLP	Plastic Crossarm Clamp Ass'y1	
23	XCL	Alum. Crossarm Clamp Ass'y1	
24	RODAG56	Plastic Tube Cap	1
25	KNOB	Spinner Knob	1
26	25WP	25" Pontoon Wheel	1
27	20021	Wheel Extension Tube	1
28	Y556	1/2 Jam Nut	1
29	Y552A	WSA Washer	1
30	WSC	Small Winch Sprocket Cover1	
31	PUL3	3" Eyebolt Pulley	2
32	20039	Winch Wedge	1
33	DEM22	2 x 2 1/2 Platisol Cap	2

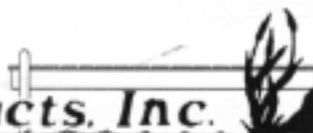
* LSP16/LSP21/LSP24/LSP28

Bolts List

A	Y310	*	5/16 x 2 1/2 Hex Bolt	2
B	Y408C	*	3/8 x 2 Carriage Bolt	1
C	Y410	*	3/8 x 2 1/2 Hex Bolt	3
D	Y410C	*	3/8 x 2 1/2 Carriage Bolt	1
E	Y412	*	3/8 x 3 Hex Bolt	4
F	Y412C	*	3/8 x 3 Carriage Bolt	1
G	Y414	*	3/8 x 3 1/2 Hex Bolt	1
H	Y424	*	3/8 x 6 Hex Bolt	2
I	Y512	*	1/2 x 3 Hex Bolt	1
J	Y514	*	1/2 x 3 1/2 Hex Bolt	3
K	Y514C	*	1/2 x 3 1/2 Carriage Bolt	§ 6/8/8/10
L	Y522	*	1/2 x 5 1/2 Hex Bolt	§ 6/8/8/10
M	Y452	*	3/8 Flat Washer	8
N	X452	*	3/8 Stainless Flat Washer	2
O	Y552	*	1/2 Flat Washer	§ 31/39/39/47
P	Y753	*	5/8 Flat Washer	4
Q	Y652	*	3/4 Flat Washer	1
R	Y351	*	5/16 Lock Nut	2
S	Y450	*	3/8 Hex Nut	14
T	Y550	*	1/2 Hex Nut	4
U	Y551	*	1/2 Lock Nut	§ 16/20/20/24
V	G550		1/2 Galvanized Hex Nut	4

* Available locally
 § LSP16/LSP21/LSP24/LSP28

Lakeshore Products, Inc.



Ten/Two Year Limited Warranty

Lakeshore Products, Inc. (Seller) warrants the aluminum structure on docks and lifts of its manufacture to be free from defects caused by faulty material or poor workmanship. Seller will, at its option, repair or replace any such goods found on examination by Seller, to be defective under normal use and service within ten years from date of purchase. Upon discovery of any such defect, Buyer must notify Seller in writing of defect and provide proof of purchase. Seller warrants cast aluminum parts, mechanical components, and hardware for two years.

Seller shall not be held responsible for repairs or modifications to its docks or lifts unless authorization has been obtained from Seller. This warranty does not cover damage caused by incorrect assembly or adjustments, overloading, improper use, neglected maintenance, alterations, or damage caused by accident, ice, salt water, or acts of God.

Components obtained from other manufacturers and used in Seller's products will be covered under the manufacturer's warranty and shall not be the responsibility of the Seller.

Seller's responsibility under this warranty shall be the repair or replacement of defective items. Seller is not liable for incidental or consequential damages of any kind.

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