OWNER'S MANUAL/ SHOREMASTER 1684/16108 CANTILEVER LIFT

WEIGHT CAPACITY:

1600 lbs.

INTERIOR WIDTH: 84"

WEIGHT CAPACITY: 1600 lbs.

INTERIOR WIDTH: 108"

EFFECTIVE 11-1-92

Before attempting to operate the lift, read this owners manual thoroughly.



PLEASE KEEP THIS FOR FUTURE REFERENCE

The following parts list, operating/safety procedures, assembly instructions and maintenance schedule is for your ShoreMaster boat lift. Please read through the manual entirely before attempting to operate the lift. Pay close attention to all safety related material. If you have any questions contact your dealer or call ShoreMaster toll-free 1-(800) 328-8945.

When assembling any product, the proper safety precautions must be observed. Please make sure that during assembly all the parts are on a flat, clean work area to minimize the chance of accidents. Also, DO NOT allow younger children in the area when assembling, installing, and removing the lift from the water. ALWAYS wear protective eyewear and clothing when assembling, installing, and removing the lift from the water. REMEMBER, ALWAYS PUT SAFETY FIRST!!!

** IMPORTANT **

NEVER exceed the listed weight capacity of a boat lift. Doing so will invalidate the warranty, and could result in damage to the lift and/or boat and serious personal injury or death.

REMEMBER, your boat weight includes: boat, motor, battery, oil, fuel, gear, etc. !!!

Grease pulleys and winch when it is new and every spring and fall. Not doing so will invalidate your warranty.

CANTILEVER PARTS LIST

All ShoreMaster cantilever boat lifts have these same general parts. Although they differ in size from one model to another, the general design is the same.

- 4 Legs (2 front & 2 rear)
- 2 Sides (left & right)
- 2 Bottom Beams (front & back)
- 2 I-Beams (each is the same)
- 1 Top Rack
- 2 Side Braces (left & right)
- 2 Middle Legs (only on #3600 #5000 models)
- 1 Wheel
- 1 Winch Box (assembly hardware, winch, cable, pulleys, bolts, etc.)

Various accessories are available to be mounted on your ShoreMaster lift. These accessories do not come standard with each boat lift. Please refer to your brochure or contact your dealer for details and current pricing.

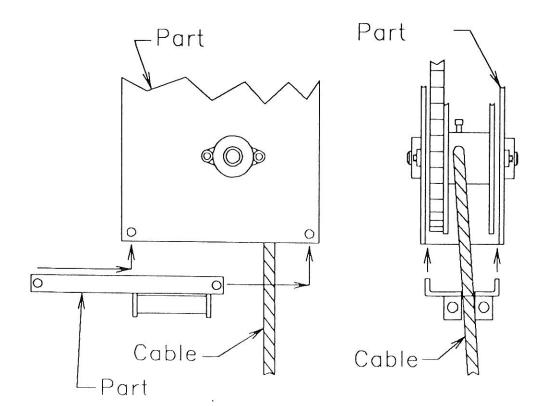
SHOREMASTER INSTRUCTIONAL ASSEMBLY VIDRO'S ARE AVAILABLE FOR PURCHASE OR RENT AT YOUR LOCAL DRALER.

ADDENDUM TO SHOREMASTER CANTILEVER INSTRUCTIONS

3/07/96

#1 Use the four pins and pin clips in your bolt bag to attach your lift legs. The attached assembly instructions may not indicate that we are now offering pins and pin clips to attach lift legs. Substitute the pins and clips for the bolts and nuts shown in the instructions.

#2 If this lift uses a ShoreMaster winch, a cable guide is now offered as a standard component. This does not apply to lifts using Dutton Lainson winches. This new addition may not be indicated in the attached instructions. This guide should be attached to the winch as shown below.



1896 LIFT HARDWARE

QUANTITY	DESCRIPTION	
8	1/2" X 4" MACHINE BOLTS	
2	3/8" X 3 1/2" MACHINE BOLTS	
24	3/8" X 2 3/4" MACHINE BOLTS	
2	3/8" X 4" U-BOLT	
2	7/16" OFF-SET U-BOLT	
8	1/2" LOCKING NUTS	
4	7/16" NUTS	
30	3/8" NUTS	
4	7/16" WASHERS	
10	3/8" WASHERS	
2	1/4" CABLE CLAMPS	

1	BRASS PULLEY W/ 2-LINK 3/8" CHAIN	
2	BRASS PULLEY W/ 3-LINK 3/8" CHAIN	
1	1/4" X 24' CABLE	
1	D.L. 2503 WINCH	
2	#2 BLUE CAPS	
2	#3 BLUE CAPS	
1	DL WHEEL KIT	
1	ROPE CLAMP	
1	INSTRUCTION SHEET	

** DO NOT ATTEMPT TO OPERATE LIFT WITHOUT FIRST STUDYING THE FOLLOWING **

OPERATING & SAFETY

- 1. After assembly (and yearly), check to be sure that all nuts and bolts are tightened as required. Check pulley sheaves, cables, winch, and lift rack to see that they are all operating freely and there are no signs of wear or possible failure.
- 2. <u>ALWAYS</u> wear protective clothing and eyewear when assembling, installing, or removing the lift and/or lift accessories.
- 3. Make all possible adjustments to lift legs, cradles, EPU's and other accessories before installing lift in the water. Adjusting lift parts while in the water is more difficult and potentially more dangerous.

 NEVER make any adjustments with the boat in the lift.
- 4. Test to see that the winch is working properly by winding up cable on spool by turning the wheel clockwise. Hand guide the cable onto the winch spool the first few times the lift is raised so the cable wraps uniformly.
- 5. The winch <u>must</u> be making a clicking sound when raising the boat. A brake will activate automatically when you stop, allowing you safe and controllable use. <u>NEVER</u> lift the ratchet pawl as a means to lower the lift. To lower the lift, please turn the wheel counter-clockwise. When lifting your lift and you turn the wheel and the ratchet is not clicking, you are turning the wheel backwards or your brake mechanism is not working. Rapid spin down may occur. <u>DO NOT</u> attempt to stop if this occurs.
- 6. *** IF AT ANYTIME THE LIFT WHEEL SPINS UNCONTROLLABLY DO NOT ATTEMPT TO STOP IT! DOING SO COULD RESULT IN SERIOUS INJURY OR DEATH ***
- 7. Never attempt to operate lift unless winch is functioning properly. IMPORTANT: ** IT IS RECOMMENDED THAT ANYONE OPERATING THE LIFT FIRST THOROUGHLY STUDY THE OWNERS MANUAL. Study winch maintenance, instructions and safety tips located in your owners manual.
- 8. Never allow rack to be in a fully lowered position while supporting the weight of your boat (winter storage, etc.) Damage may result to the rack (this applies to cantilever models only).
- 9. Be sure that the boat is properly balanced and centered on the lift before attempting to raise the rack. Generally, the boat should be as far forward in lift as possible for proper balance.
- 10. It is recommended that the lift be operated in at least 3' of water. This will allow for easier raising of the lift and less strain on the winch (cantilever models only).

- 11. Do not raise the rack past the recommended height (over center on a cantilever). Doing so could damage the lift or cause the winch or cable to break.
- 12. <u>DO NOT</u> lower the rack to the point where the cable begins to develop slack. Doing so may allow the cable to jump the spool and/or pulleys and cause personal injury and/or damage to the cable and winch.
- 13. If at anytime there is more than the normal resistance when operating the wheel and winch, do not attempt to force it. Lower the lift and check for possible problems with winch or other lift parts.
- 14. NEVER exceed the recommended weight capacity of the lift. Doing so will invalidate your warranty and could damage the lift. Improper loading could cause serious injury or death.
- 15. Pull drain plug from boat when raised on the lift and not in use. Failing to do so may result in water accumulating and the load exceeding recommended lift capacity.
- 16. Lock your wheel and rack in place by chain and padlock when unattended. This will help prevent theft or possible spin down of wheel and rack.
- 17. Never allow anyone (especially children) on, in, under, or near the lift when in a raised position or when being raised or lowered. You may cradle the boat when loading and unloading passengers. This is the point at which your boat is not supported by the lift, but it is prevented from lateral movement during loading or unloading of passengers.

WINCH INSTRUCTIONS, SAFETY & MAINTENANCE

WINCH INSTRUCTIONS

Thread the wheel on to the drive shaft turning clockwise until a clicking sound is heard and the rack begins to raise. After the wheel is in firm contact with the brake pads and ratchet gear, install the wheel kit to prevent the wheel from backing off the winch driveshaft (step 6). To prevent fraying or binding, uniformly wind cable on to winch hub. You may need to hand guide the cable onto the spool the first few times to make sure it wraps uniformly. When doing this please wear protective clothing.

Wind cable off the hub by turning the wheel counter-clockwise (no noise will be produced). To make sure the wheel will remain in position when you let go of the wheel, turn the wheel clockwise so you hear a clicking sound. Sufficient load must be applied to lift for brake mechanism to activate properly, otherwise turning the wheel will only remove the wheel from the shaft. NEVER raise the ratchet pawl as a means to lower the lift. Always satisfy yourself that the winch brake is holding the load before releasing the wheel. IF IT IS NOT, RAPID SPIN DOWN COULD OCCUR. DO NOT ATTEMPT TO STOP WHEEL IF UNCONTROLLED RAPID SPIN DOWN SHOULD OCCUR!!!

If at anytime the wheel turns up or down with great difficulty, the brake may be sticking. The brake pads may be worn or not smooth enough to allow brake to release. It is important that the wheel and shaft threads are greased periodically. DO NOT, however, grease any part of the brake mechanism.

* IMPORTANT *

NEVER wind cable off the winch hub so that excess slack occurs in the cable. Excess slack in the cable could allow the cable to slip off the winch hub or pulleys and cause damage to your lift or winch and may cause personal injury.

WINCH SAFETY

The winch for this lift is strickly for watercraft lifting operations. It is not to be used as a method of supporting or transporting people, or for loads over areas where people may be present.

Check winch for proper operations on each use. If it is damaged in anyway do not attempt to operate.

Never allow children or those unfamiliar with the operation of the lift to use it.

NEVER exceed recommended lift capacity. Personal injury may result.

Never apply load to winch with cable fully unwrapped. There should be at least four full turns of cable on the hub.

NEVER raise the ratchet pawl as a means to lower the lift. Doing so may result in serious injury.

WINCH MAINTENANCE

It is recommended that the winch be inspected periodically (at least twice yearly). Necessary preventive maintenance is required for maximum performance of the winch.

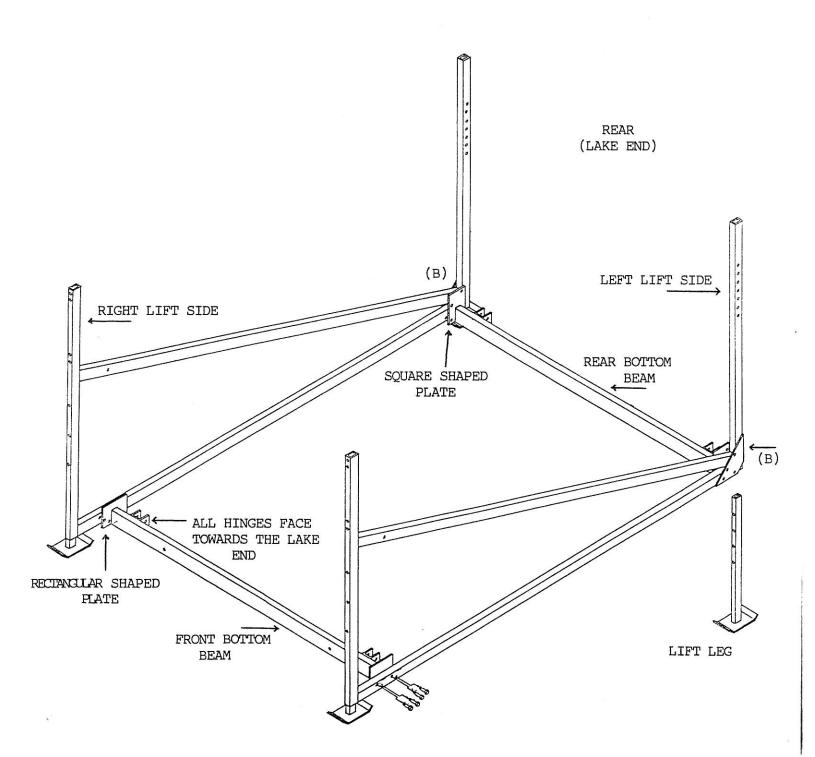
- 1. Remove all the load from the lift. Then turn down until the cable BEGINS to slack. Remove wheel kit and wheel from shaft.
- 2. Remove brake pads and ratchet gear from shaft. Sand off any rust or corrosion on these parts. DO NOT grease the brake pad mechanism.
- 3. Replace brake pads and ratchet gear on the shaft. One brake pad should be on each side of the ratchet gear. Replace wheel and wheel kit.

VERY IMPORTANT:

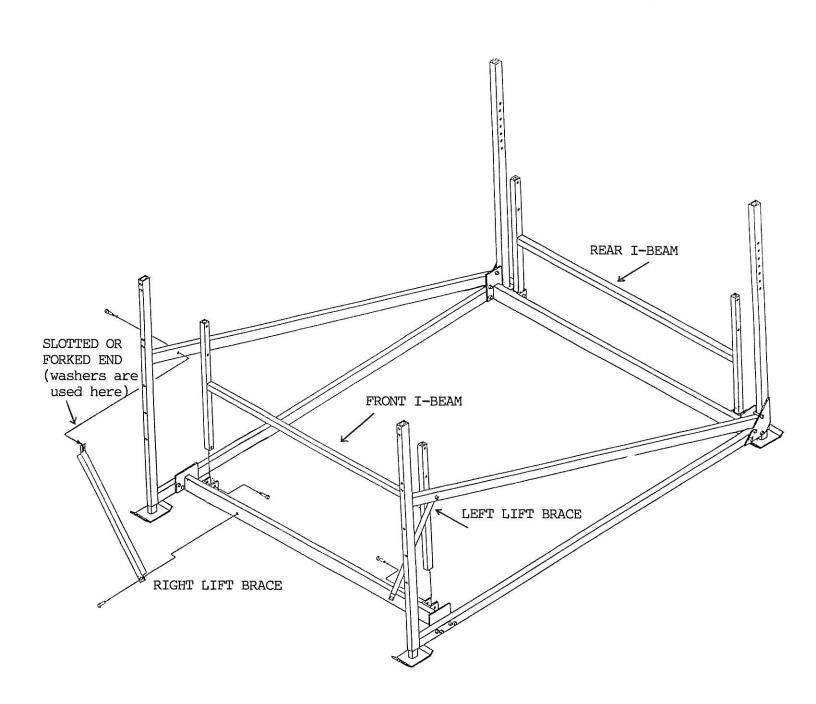
- 4. Check to be sure that ratchet pawl and spring (if used on your lift) are aligned on the ratchet gear. You can do this by turning the wheel clockwise. A clicking sound should be heard. If it is not functioning properly, check to see that your spring (if used on your lift) is in place. New ShoreMaster models with capacities of 2500# and higher manufactured after January 1992 do not use springs on the ratchet pawl.
- 5. Remove the cover and check to see that gears, shafts and chains are attached and turning freely. Grease all bearings and gear teeth with good wheel bearing grease.
- 6. Replace winch cover. Check mounting of winch to be sure that it is secure and properly aligned. Also, check cable to make sure it is secure and there is no abnormal stiffness or broken strands.
- 7. Replace any worn or broken parts with authorized ShoreMaster parts available at your local dealer or ShoreMaster.

IMPORTANT

- DO NOT FULLY TIGHTEN BOLTS & NUTS UNTIL YOU ARE FINISHED WITH ASSEMBLY
- (A) INSERT ALL (4) LIFT LEGS INTO LIFT SIDES AND BOLT IN PLACE USING 3/8" X 2 3/4" MACHINE BOLTS.
- (B) SET LIFT SIDES UP AS SHOWN ABOUT 10 FEET APART. THE TRIANGULAR PLATES ON THE LIFT SIDES SHOULD BE ON THE OUTSIDE.
- (C) BOLT THE FRONT & REAR BOTTOM BEAMS TO THE LIFT SIDES USING 3/8" X 2 3/4" MACHINE BOLTS. THE BOTTOM BEAM THAT HAS THE SQUARE PLATE IS THE REAR BOTTOM BEAM AND THE BOTTOM BEAM THAT HAS THE RECTANGULAR PLATE IS THE FRONT BOTTOM BEAM.



- (A) ATTACH EACH I-BEAM TO THE FRONT & REAR BOTTOM BEAMS AS SHOWN USING 1/2" X 3 1/2" MACHINE BOLTS AND LOCKING NUTS. EACH I-BEAM IS THE SAME. DO NOT OVERTIGHEN TO ALLOW FREE SWIVEL.
- (B) ATTACH EACH LIFT BRACE AS SHOWN USING 3/8" X 2 3/4" MACHINE BOLTS. THE SLOTTED OR FORKED END CONNECTS TO THE LIFT SIDE AND WASHERS ARE RECOMMENDED TO BE USED HERE. THE OTHER END OF THE BRACE CONNECTS TO THE FRONT BOTTOM BEAM. THE BRACES SHOULD BE TIGHTENED SO THAT THE LIFT SIDES ARE NOT BOWING IN OR OUT.



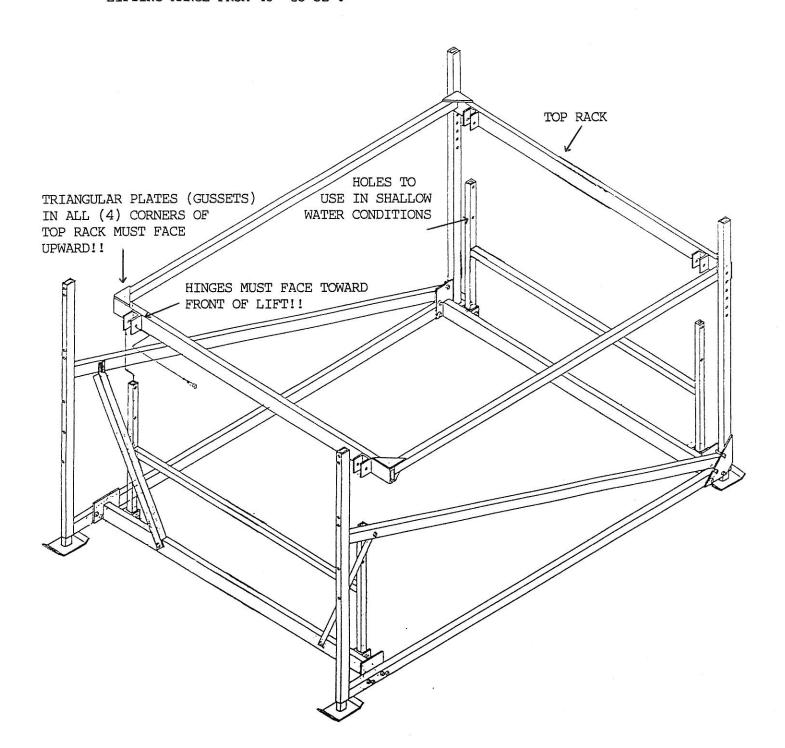
(A) ATTACH THE TOP RACK TO THE I-BEAMS USING 1/2" X 4" MACHINE BOLTS AND LOCKING NUTS. DO NOT OVERTIGHTEN TO ALLOW FREE SWIVEL.

NOTE

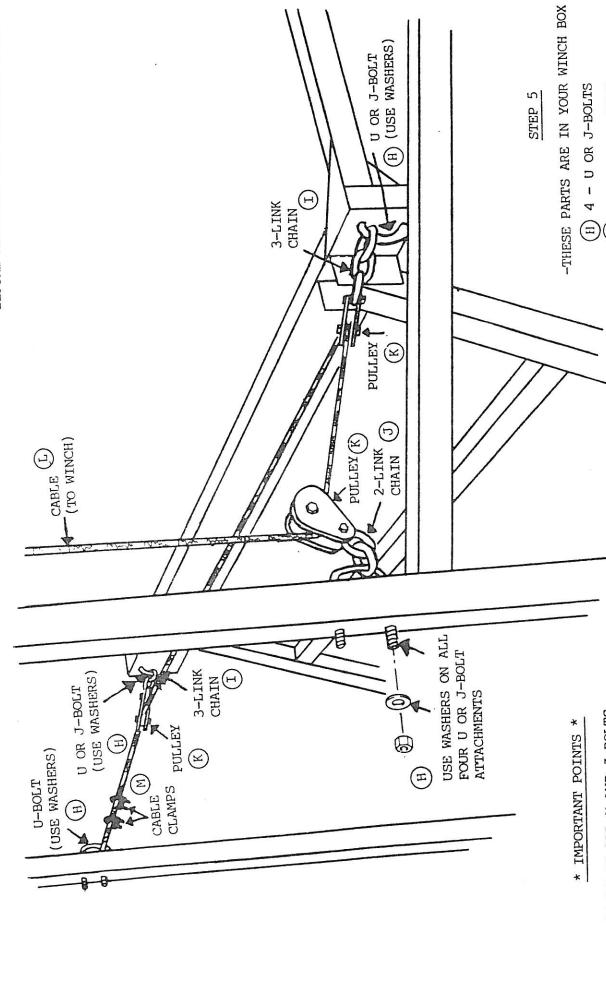
MAKE SURE THE HINGES ON THE TOP RACK FACE TOWARD THE FRONT OF THE LIFT AND THAT THE TRIANGULAR PLATES (GUSSETS) IN ALL (4) CORNERS OF THE TOP RACK FACE UPWARD.

FOR PERMANENT SHALLOW WATER SITUATIONS

YOU MAY WANT TO SHORTEN YOUR I-BEAMS BY CUTTING THE TOP OF THESE OFF ABOUT 1" ABOVE THE SECONDARY HOLE SHOWN BELOW. A SIGNIFICANT ADVANTAGE IS GAINED ALLOWING FOR EASIER LIFTING ESPECIALLY IN FULLY LOWERED SHALLOW WATER CONDITIONS. PLEASE NOTE THAT THIS WILL PERMANENTLY REDUCE YOUR LIFTING RANGE FROM 40" to 32".



**BEFORE BEGINNING - IT MAYBE HELPFUL TO BEFORE ATTACHING THE FOLLOWING PARTS. TIE THE RACK IN A RAISED POSITION



USE WASHERS ON ALL U AND J-BOLTS.

A U-BOLT IS USED WHEN ATTACHING TO THE SIDES.

LINKS AND PULLEYS TO THE TOP RACK (DEPENDING ON A U-BOLT OR J-BOLT IS PROVIDE TO ATTACH CHAIN

GREASE PULLEYS WHEN NEW AND EACH SPRING AND FALL. MODEL).

TIGHTEN CABLE CLAMPS SECURELY. 5.4

2 - 3-LINK CHAIN 1 - 2-LINK CHAIN 3 - PULLEYS

(F)

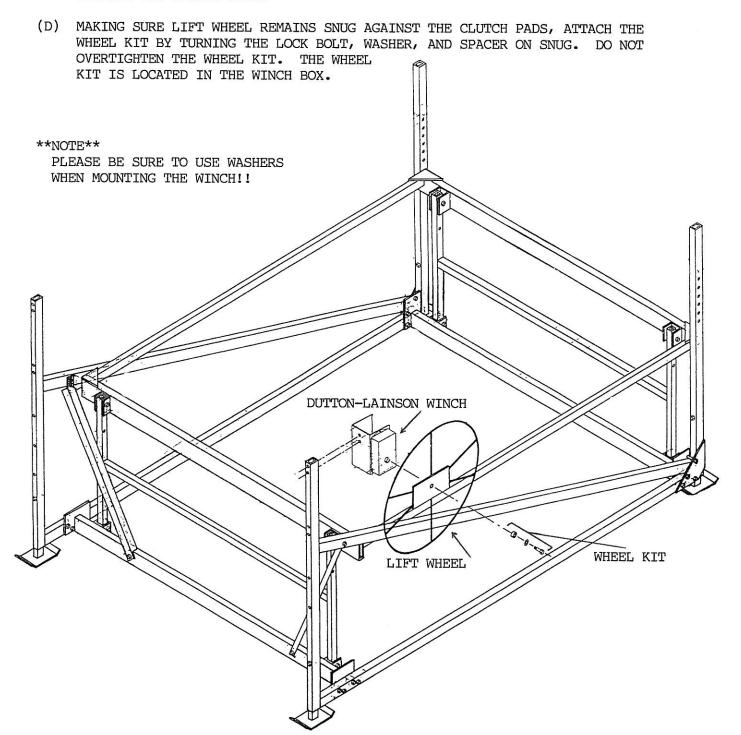
- CABLE

2 - CABLE CLAMPS

IMPORTANT

TO MOUNT A DUTTON-LAINSON WINCH ON THE OPPOSITE SIDE OF THE LIFT ALL THAT NEEDS TO BE DONE IS TO TURN THE WINCH UPSIDE DOWN AND MOUNT IT ON THE OPPOSITE UPRIGHT.

- (A) ATTACH THE LIFT CABLE TO THE WINCH THROUGH THE HOLE PROVIDED IN THE HUB AND SECURE IT BY USING A CLAMP THAT IS LOCATED IN THE WINCH BOX.
- (B) ATTACH THE WINCH TO THE FRONT UPRIGHT OF THE LIFT SIDE USING 3/8" X 3 1/2" MACHINE BOLTS AND WASHERS. PLEASE MAKE SURE THE WINCH IS AS STRAIGHT UP AND DOWN AS POSSIBLE.
- (C) TURN THE LIFT WHEEL ON THE THREADED SHAFT OF THE WINCH UNTIL IT IS SNUG AGAINST THE CLUTCH PADS.



PARTS PRICE SHEET B-2500 WINCH

REF LETTER	PART NAME
Α	BASE ASSEMBLY
В	1" NEEDLE BEARING
С	INTERM DRIVE SHAFT ASSEMBLY
D	REEL BOLT
E	3/8" LOCKNUT (EACH)
F	OILITE BEARING (EACH)
H	5/8" NEEDLE BEARING
J	PRIMARY DRIVE SHAFT
K	GEAR COVER
L	SELF-TAPPING SCREW
М	HANDLE ASSEMBLY
N	9/16" NEEDLE BEARING
0	1/2" LOCKNUT (3)
P	ROPE SIDE SPACER
Q	20-TOOTH GEAR ASSEMBLY .
R	SHORT DRIVE SHAFT ASSEMBLY
S	RATCHET PAWL SPACER
T	BRAKE RATCHET SPRING-OUTER
IJ	RATCHET PAWL
V	3/8" X 1-3/4" SHOULDER (BUSHING CAPS SCREW)
W	CARRIAGE BOLT
Χ	ROPE CLAMP
Y	1/4" HEX NUT
Z	REEL ASSEMBLY-3-1/8" HUB
AA	BRAKE RATCHET SPRING - INNER
ВВ	ASBESTOS BRAKE LINER (2)
CC	RATCHET WHEEL
FF	IDLER GEAR ASSEMBLY
GG	IDLER GEAR SHOULDER BOLT
J.J	COVER SCREWS (2)
KK	GEAR SIDE SPACER
PP	SPACER WASHER (2)
ର Q	1/2" NEEDLE BEARING

PARTS PRICE SHEET (CON'T) B-2500

REF. LETTER	PART NAME
RR	SPACER WASHER
SS	WASHER
ТТ	SPRING
UU	SHAFT EXTENSION
VV	RETAINER WASHER
WW	HEX BOLT
XX	3/8" FLAT WASHER
YY	NYLOK CAP SCREW

PARTS PRICE SHEET B-1500 WINCH

REF. LETTER	PART NAME
A	WINCH BASE ASSEMBLY
В	9/16" NEEDLE BEARING
C	l" NEEDLE BEARING
D	REEL BOLT
E	3/8" LOCKNUT (EACH)
F	OILITE BEARING
G	1/2" LOCKNUT
H	SPACER SLEEVE
J	PRIMARY DRIVE SHAFT ASS'Y
K	GEAR COVER
L	SELF TAPPING SCREW (EACH)
М	WINCH HANDLE ASSEMBLY
N	SPACER WASHER
Q	20 TOOTH GEAR ASSEMBLY
R	SHORT DRIVE SHAFT ASSEMBLY
S	RATCHET PAWL SPACER
Τ	BRAKE RATCHET SPRING
U	RATCHET PAWL
V	5-1/2" X 3/8" HEX HEAD CAP SCREW
W	CARRIAGE BOLT
X	ROPE CLAMP
Y	1/4" HEX NUT
Z	REEL ASSEMBLY 1-1/8" HUB
ZA	REEL ASSEMBLY 2-1/2" HUB
BB	BRAKE LINERS (FIBRE CLUTCH)
CC	RATCHET WHEEL
D D	WASHER
FF	WASHER
GG	3/8" RETAINING SCREW
НН	SPRING
JJ	SHAFT EXTENSION
KK	RETAINER WASHER
LL	HEX BOLT

1600# LIFT HARDWARE (1684 & 16108)

QUANTITY	DESCRIPTION	
8	1/2" X 4" MACHINE BOLTS	
2	3/8" X 3" MACHINE BOLTS	
24	3/8" X 2-3/4" MACHINE BOLTS	
2	3/8" X 4" U-BOLT	
2	7/16" OFF-SET U-BOLT	
8	1/2" LOCKING NUTS	
4	7/16" NUTS	
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4	7/16" FLAT WASHERS	
2	3/16" CABLE CLAMPS	

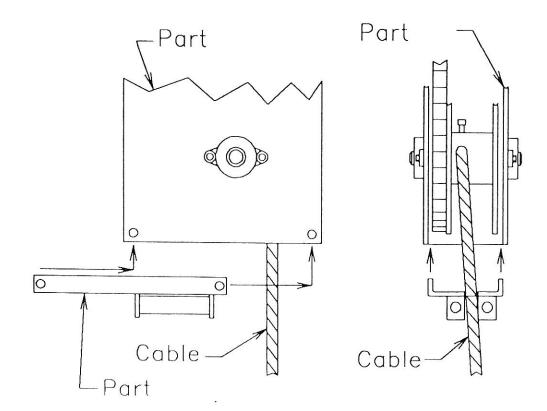
4	#3 BLUE CAPS	
1	BRASS PULLEY W/ 2-LINK 3/8" CHAIN	
2	BRASS PULLEY W/ 3-LINK 3/8" CHAIN	
1	3/16" X 22' CABLE	
1	1502 D.L. WINCH	
1	ROPE CLAMP	
1	DL WHEEL KIT	
1	INSTRUCTION SHEET	

ADDENDUM TO SHOREMASTER CANTILEVER INSTRUCTIONS

3/07/96

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** DO NOT ATTEMPT TO OPERATE LIFT WITHOUT FIRST STUDYING THE FOLLOWING **

OPERATING & SAFETY

- 1. After assembly (and yearly), check to be sure that all nuts and bolts are tightened as required. Check pulley sheaves, cables, winch, and lift rack to see that they are all operating freely and there are no signs of wear or possible failure.
- 2. <u>ALWAYS</u> wear protective clothing and eyewear when assembling, installing, or removing the lift and/or lift accessories.
- 3. Make all possible adjustments to lift legs, cradles, RPU's and other accessories before installing lift in the water. Adjusting lift parts while in the water is more difficult and potentially more dangerous.

 NEVER make any adjustments with the boat in the lift.
- 4. Test to see that the winch is working properly by winding up cable on spool by turning the wheel clockwise. Hand guide the cable onto the winch spool the first few times the lift is raised so the cable wraps uniformly.
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- 1 Winch Box (assembly hardware, winch, cable, pulleys, bolts, etc.)

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SHOREMASTER INSTRUCTIONAL ASSEMBLY VIDEO'S ARE AVAILABLE FOR PURCHASE OR RENT AT YOUR LOCAL DEALER.