



CRADLE LIFT INSTALLATION INSTRUCTIONS

MODELS 7,000 LB. – 45,000 LB.

Important: Read these instructions before installing Cradle Lift.

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Piling Spacing and Installation for all Cradle Lift Systems

Note: Refer to (Fig. 4 and Fig. 5) the support beam length determines location “X” and the cradle beam width determines location “Y”. It is very important the piles be located uniformly and should be checked by measuring the diagonals.

1. Refer to (Fig. 4) for Pile Spacing for 2-motor cradle models 7000 through 25,000.
2. Refer to (Fig. 5) for Pile Spacing for 4-motor cradle models through 45,000.
3. Pilings shall be at the same height for all cradle lift models. Pile tops must be level.
4. Pilings should be of sufficient size to complement the capacity of the cradle (usually 8 to 12 inch diameter). Penetration is dependent upon soil conditions and should be deep enough to prevent leaning or settling.
5. Piling height is determined by local tidal conditions and should accommodate tide, flood, wind, wave and wake action. Usually, 7 feet above the dock is sufficient for areas with 2-3 foot normal tide.
6. The maximum lifting distance is 13 feet useable travel with standard cable and winder. More is available on request with order.

Installation of Support Beams and Motors

1. Refer to (Fig. 1, 2 or 3) to install the upper support beams on top of the pilings and orient them so they are parallel with the boat. Upper beams are held in place by drilling through the pilings and bolting through the piling strap (D) which is in turn bolted to the support beam. Normally (2) 5/8" x 14" galvanized bolts (stainless steel for aluminum) per piling is sufficient.
2. **Direct Drives:** (Fig. 1, 1A) The E-Drive and Premier Direct Drive are bolted directly to the pipe drive and upper support beam bracket with 1/2" mounting bolts as shown.
3. **Chain Drive:** (Fig. 2) Mount gear box and motor to the winch mount. Before bolting the gear box down, lean gear box over to get chain onto sprocket. The winch mount has slots for mounting gear box and adjusting for chain tension. Use 3/8, 7/8 or 1/2 inch bolts (4 per gear box) to attach gear box to winch mount. Attach chain to sprockets before bolting gear box to winch mount. Place chain over large sprocket on pipe drive, then lean gear box to get chain over small sprocket. Make sure that sprockets are correctly aligned with a straight edge. A chain guard is provided. Attach flat plate to support beams behind sprockets with 3/4" bolts. Then attach chain guard to flat back plate.
4. **Aqua Drive:** (Fig. 2) Bolt the winch directly to the pipe drive using the 1/2" bolts, nuts, brass spacer, washers and lock-washers provided.

Cradle Beams Cradle Rigging

1. Suspend both bow and stern lower cradle beams (l) from support beams, using 4 ropes or cable drops the same length, attach from the pad eye on lower cradle beams to the cable bracket on support beams.
2. Unwind and lay out the 4 or 8 stainless steel cables and make sure they are all the same length. Measure water depths. Trim cables as necessary. You may want to trim the front cables slightly shorter than the rear so the boat is able to easily drain. It is suggested that there should only be a maximum difference of 3-4 inches between the front and rear beams.
3. 7000 MODELS: Bolt the swaged end of the cable to the lower beam and then feed other end through the pipe drive cable holes. Install cable stop on end of the cable and smash with hammer.
4. MODELS 10,000 through 45,000: Bolt the swaged end of the cable to the dead end bracket on the support beam. Weave the other end of cable through the sheave mounted on the lower cradle beam and up through the pipe drive cable hole. Install cable stop on the end of the cable and smash with hammer.
5. Install spanner beams using the 1/2" x 1-1/2" bolts, nuts washers provided. Spanner beams must be installed prior to installing the chock system.
6. The rigging eye on the lower cradle beam should not be used to support the weight of the boat.

Pipe Guides

1. Aluminum Lifts: Refer to (Fig. 6) (4) Pipe guide brackets, (4) galvanized steel insert pipes and (4) PVC covers are provided. The Pipe Guide Brackets are attached to the lower beam with (4) SS bolts and aluminum bar clips. Center the bracket over the beam and use the closet 4 aligned holes to the beam edge. Insert bolts into holes thread down. Place bar clip with slot over the bolt from the underside and hand tighten. Slide the bar clip as far into the beam as possible before tightening the nut. Slide the Insert pipe into the bracket and then slide the PVC cover over the insert pipe.
2. Galvanized Lifts: Four pipe guides with PVC covers are supplied. Hook the bent side of the mounting foot over the flange of the beam with flat side of the bracket facing the center of the system. Next pick the set of holes closest to the flange edge and use two of the 1/2" bolts provided. Place bolts through holes thread down. Place bar clip with the slot over the bolts from underside and hand tighten. Slide the bar clip as far into the beam as possible before tightening the nut. Repeat for each bracket. Slide the PVC cover over the pipe.

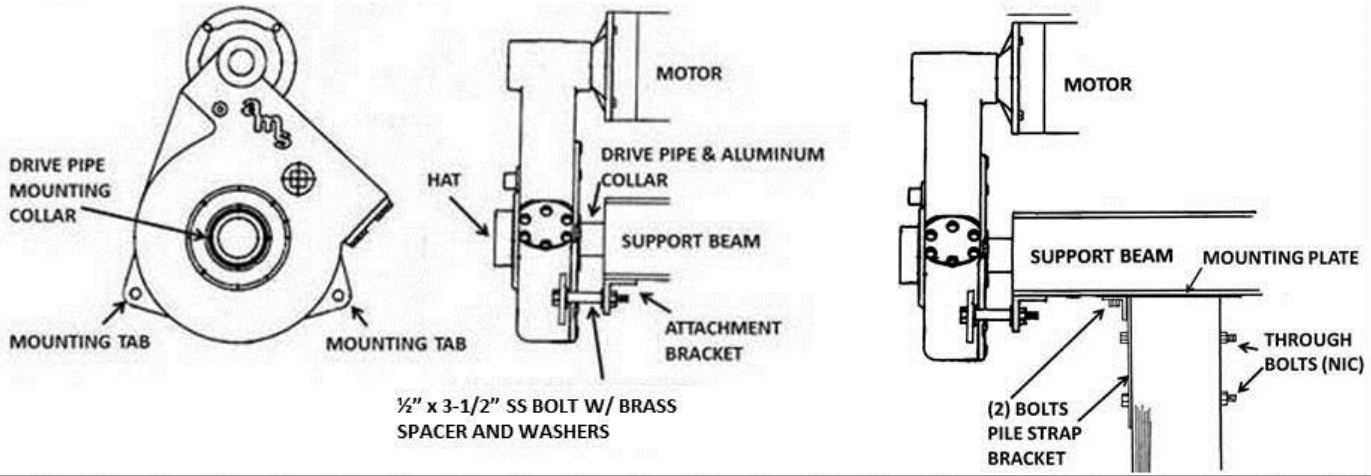
Chock System

1. Aluminum Lifts: (Fig. 8) For 7,000 through 25,000 models two aluminum chock angles in each corner of the lower beams are sufficient to secure the chock boards. (Fig. 8) For 30,000 through 45,000 models four chock angles in each corner of the lower cradle beams are required.
2. The chock angles (L) bolt around the lower cradle beam and through the bunk board as shown. It is very important that the bunk board is secured tightly against the beam flange to insure proper support of the boat hull.
3. Bunk boards must be positioned evenly on the lower beams so the same length extends past the front and back beams.
4. *Note: Custom chock systems may be required for some boats.*
5. Galvanized Lifts: Refer to (Fig.8A) Four chock brackets with hardware are provided. Hook the bent side of the mounting foot over the flange of the beam with flat side of the bracket facing the center of the system. Next pick the set of holes closest to the flange edge and use two of the 1/2" bolts provided. Place bolts through holes thread down. Place bar clip with the slot over the bolts from underside and hand tighten. Slide the bar clip as far into the beam as possible before tightening the nut. Repeat for all brackets. Bolt lumber to the flat side of the bracket. Brackets must be on the outside of boards leaving the center between the boards clear for the boat.

Aluminum Work Platform (Option)

(Fig. 7 & 7b) Install the predrilled side rails on top of the bow and stern beams. Fasten the rails to the top flange with the (8) furnished stainless steel bolts and aluminum bar clips. The work platform panel bolts through the side rails using (6) stainless steel bolts. Additional panels are available upon request. Work platforms can be installed on all models, aluminum and galvanized.

Fig. 1 E-DRIVE DIRECT DRIVE

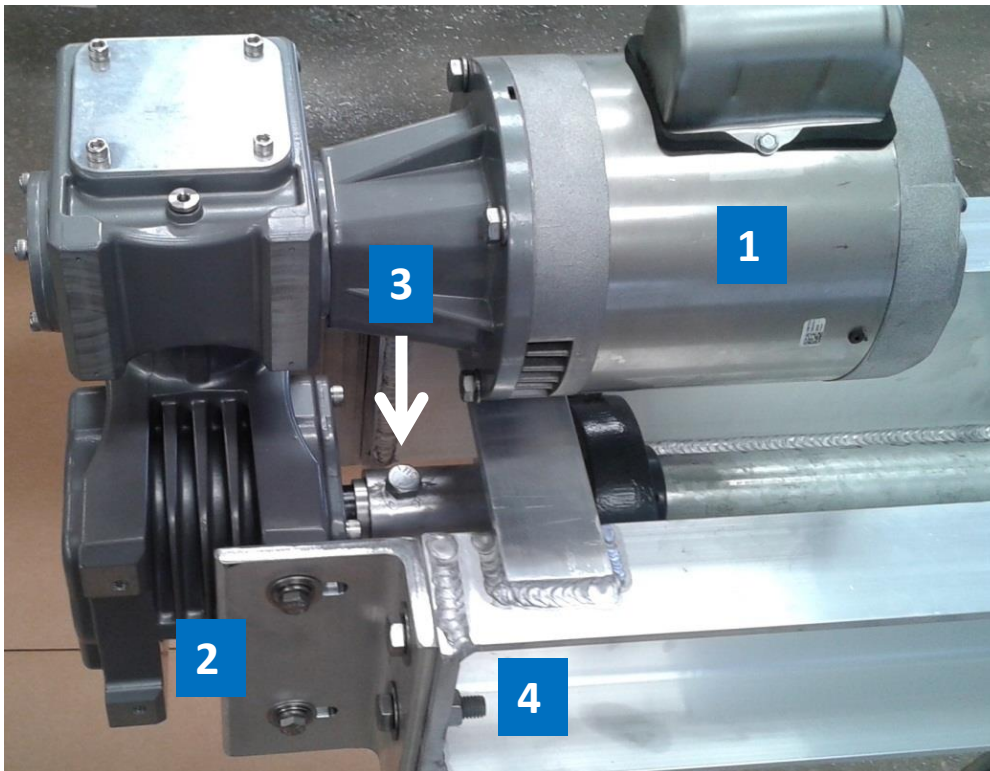


NOTE: A PLASTIC INSULATOR IS INSTALLED BETWEEN THE PILE AND UPPER BEAM & PILE STRAP ON ALUMINUM LIFTS

Slide the E-Drive over the drive pipe with motor located above the upper beam.

1. Align the hole in the Mounting Collar with the hole in the Drive Pipe and aluminum collar.
2. Install the $\frac{1}{2}$ " x 3-1/2" SS attachment bolt through the aligned holes.
3. Turn the E-Drive until the holes in the (2) E-Drive Mounting Tabs align with the (2) holes in the attachment bracket.
4. Install the (2) $\frac{1}{2}$ " x 3-1/2" SS bolts, brass spacer, washers & nuts.
5. Install the black E-Drive Hat cover.

Fig. 1 A PREMIER DIRECT DRIVE



1. Slide the Premier drive inside the drive pipe with motor above the beam.
2. Align the attachment angle holes with the holes in the end of the upper support beam.
3. Install the (1) Grade 8 $\frac{1}{2}$ " x 3" Bolt through the drive pipe and Premier alignment hole.
4. Install the (4) SS $\frac{1}{2}$ " x 2" bolts through the attachment angles and upper beam

AQUA DRIVE AND CHAIN DRIVE

Fig. 2

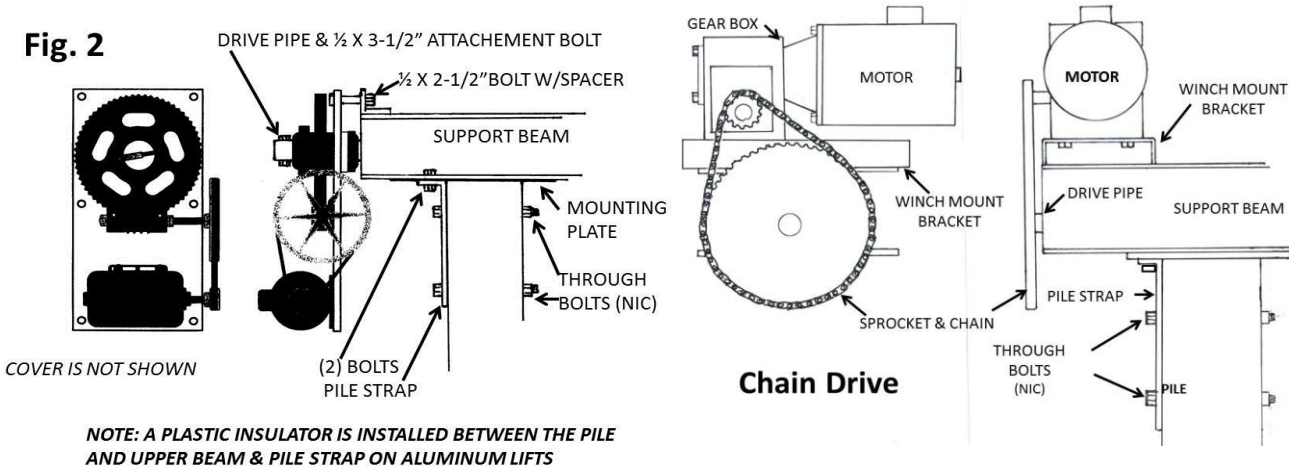
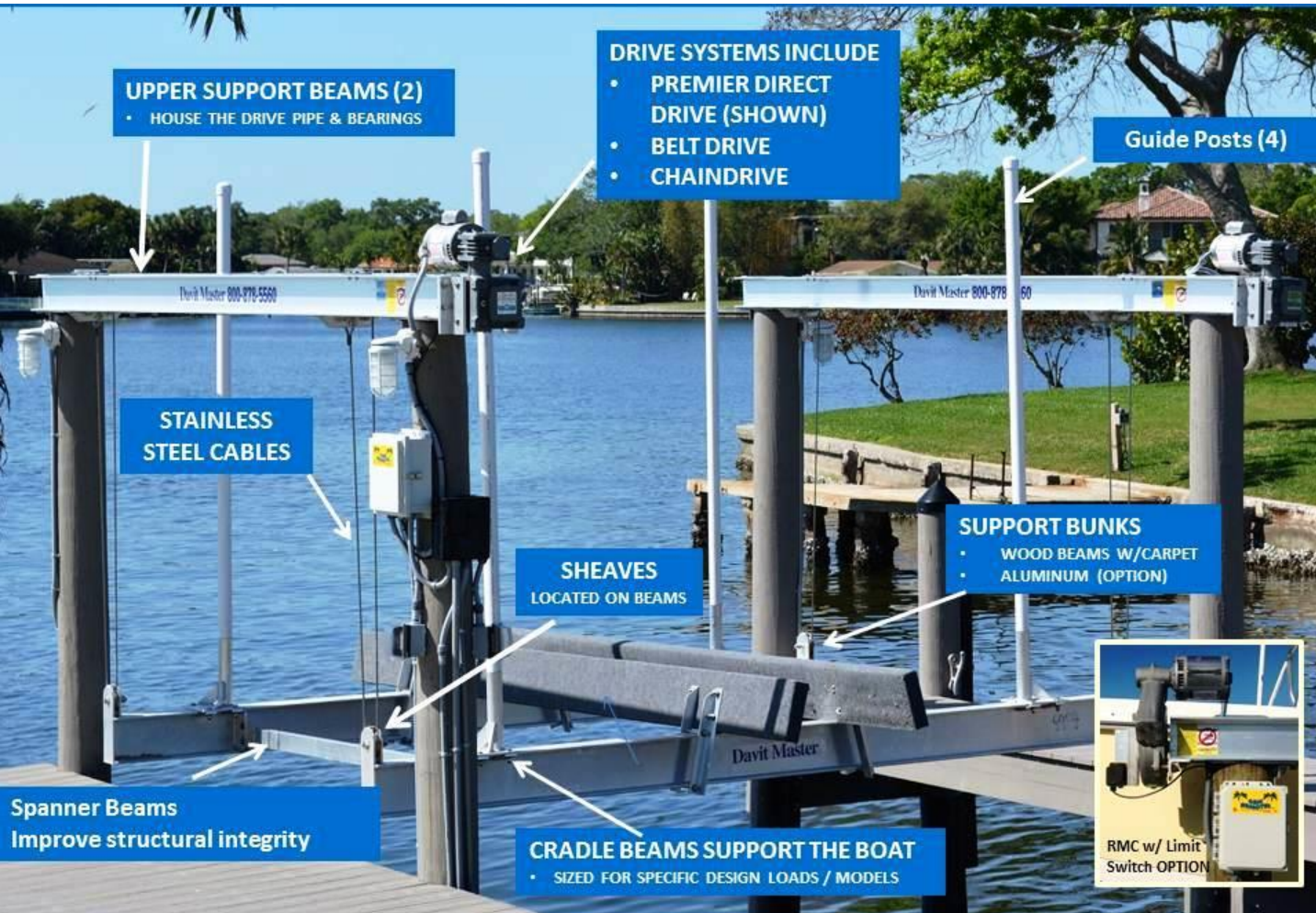


FIG. 3 CRADLE LIFT COMPONENTS 7,000 – 25,000 (4 PILES – 2 MOTORS)



IMPORTANT – All electrical wiring and connections must be performed by a licensed electrician. All electrical work must be done in accordance to Local and National Electrical Codes. Ignoring this can void Factory Warranties.

DO NOT use the wiring diagram on the motor name plate.

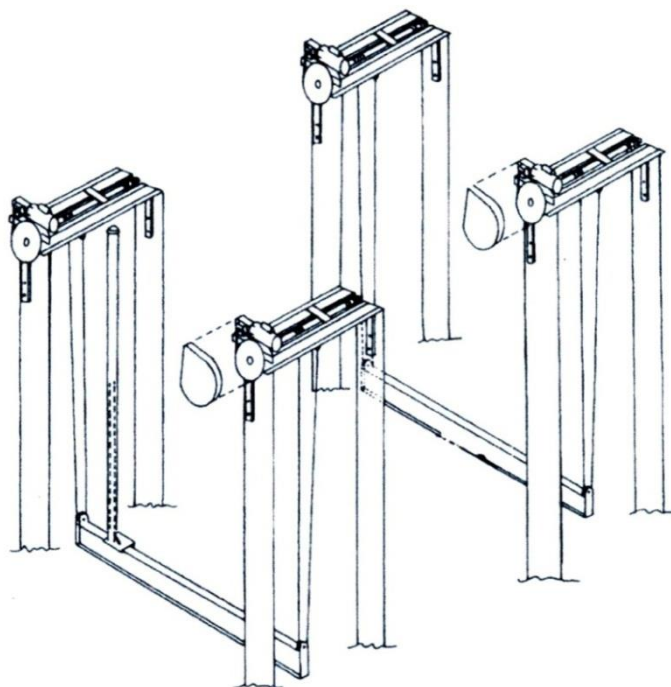
GROUND FAULT CURRENT INTERRUPT (GFCI) MUST BE USED WITH ALL LIFTS.

Power Requirements

Model	Motor	Amperage 110V	Amperage 220V
7,000	(2) ¾ hp.	26 A	13 A
10,000	(2) ¾ hp.	26 A	13 A
13,000	(2) 1 hp.	28 A	14 A
16,000	(2) 1 1/2 hp.	30.4 A	15.2 A
20,000	(2) 1 1/2 hp.	30.4 A	15.2 A
20,000	(4) 3/4 hp.		26 A
25,000	(2) 1 1/2 hp.	30.4 A	15.2 A
25,000	(4) 1 hp.		28 A
30,000	(4) 1 hp.		28 A
35,000	(4) 1 1/2 hp.		30.4 A
40,000	(4) 1 1/2 hp.		30.4A
45,000	(4) 1 1/2 hp.		30.4 A

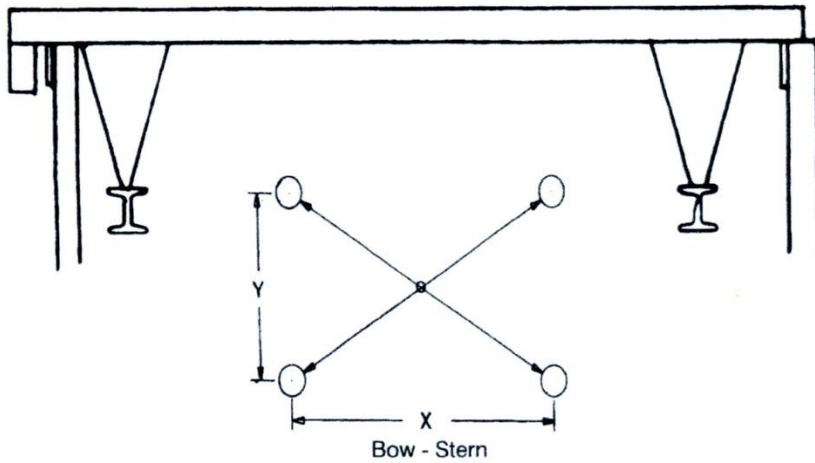
NOTE: 50 HZ and 208 voltage motors are available upon request. Remote Control Units are available for all lifts. DC motors are also available.

Cradle Diagram of 20,000 - 45,000 lb. 4 Motor - 8 Piling Models



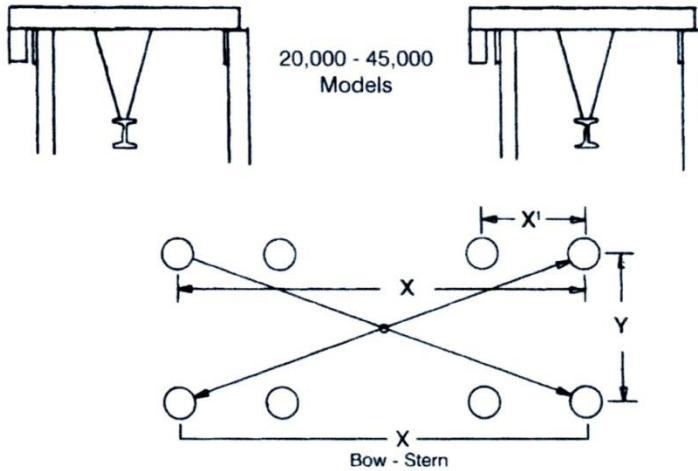
4- Piling Spacing of 7,000 - 25,000 lb. Models 2 - Motor - 4 or 6 Piling Models

Fig. 4



8- Piling Spacing of 20,000 - 45,000 lb. 4 Motor - 8 Piling Models

Fig. 5



Model Number and Piling Spacing

MODEL	X	X ¹	Y	Y(AI)
7,000	11'	N.A.	12'	12'
10,000	11'	N.A.	13'	12'6"
13,000	11'	N.A.	13' - 15'	12'6"
16,000	11'	N.A.	15'	15'
16,000 Extended	15'	N.A.	15'	15'
20,000 - 4 piling	16'	N.A.	17'	17'
20,000 - 8 piling	16'	4' 6"	17'	17'
25,000 - 4 piling	16'	N.A.	17'	17'
25,000 - 8 piling	16'	4' 6"	17'	17'
30,000 - 8 piling	20'	7'	19'	19'
35,000 - 8 piling	20'	7'	19'	19'
40,000 - Call Factory	20'-24'	7'	19'	19'
45,000 - Call Factory	20'-24'	7'	19'	19'

To use this chart:
(Refer to Figs. 4 & 5)

x - Piling spacing - center to center
x¹ - Piling spacing - center to center
y - Piling spacing - center to center

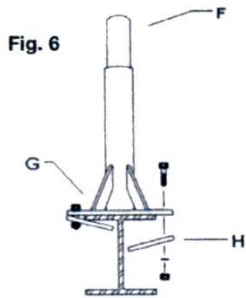


Fig. 7

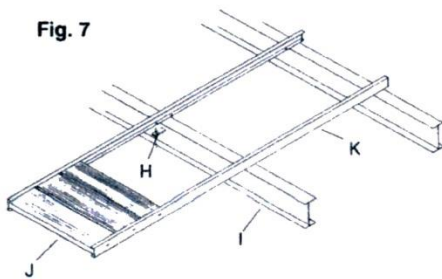


Fig. 8a

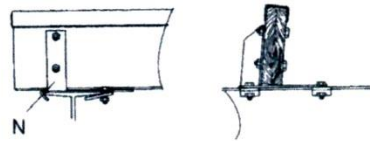
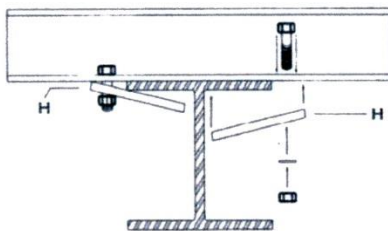
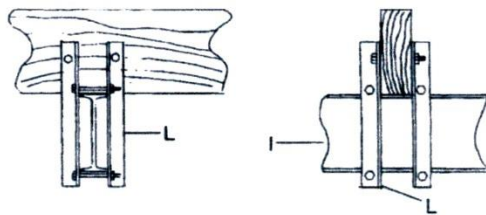


Fig. 7b



Alum Work Platform Attachment

Fig. 8



Electrical Wiring Diagram Salzer Manual Switch			
110 Volt		230 Volt	
POWER	SWITCH	POWER	SWITCH
L1	3	L1	3
L2	1	L2	1
MOTOR		MOTOR	
T5	12	T5	12
T8	8	T4	4
T2&T4	4	T1	2
T1&T3	2		
To change rotation interchange T5&T8		Tie T2, T3, T8 Together	

Electrical Wiring Diagram Bremas Manual Switch			
110 Volt		230 Volt	
POWER	SWITCH	POWER	SWITCH
L1	L1	L1	L1
L2	L2	L2	L2
MOTOR		MOTOR	
T5	9	T5	9
T8	8	T4	2
T2&T4	2	T1	1
T1&T3	1		
To change rotation interchange T5&T8		Tie T2, T3, T8 Together	

Electrical Wiring Diagram AO Smith Motors / Manual Salzer Switch					
110 Volt			220 Volt		
POWER	SWITCH	POWER	SWITCH	For 220 Volts Place motor Black on Pin4, Motor Blue on Pin 5, Motor White on Pin 3. To Change Rotation Interchange Motor Red & Black.	
L1	3	L1	3		
L2	1	L2	1		
Pin 5					
Pin 3					
Rotation					
Motor Red & Black					
MOTOR		MOTOR			
L1	2	L1	2		
Black	12	Red	8		
Red	8	L2	4		
L2	4				

IMPORTANT SAFETY AND MAINTENANCE INSTRUCTIONS

1. PRIOR TO RAISING BOAT CHECK TO BE SURE THAT THE BOAT IS POSITIONED ON THE LIFT PROPERLY. REAR OF BOAT SHOULD NOT EXTEND MORE THAN 4' FROM REAR LIFT BEAM.
2. NOT FOR HUMAN LIFT. NEVER BE IN OR UNDER YOUR BOAT WHILE IT IS BEING RAISED OR STORED.
3. KEEP HANDS CLEAR OF ALL MOVING PARTS AND DON'T STAND IN THE LINE OF THE CABLING AREA WHILE THE LIFT IS IN MOTION.
4. WHILE SERVICING BOAT TURN THE POWER SUPPLY OFF TO THE BOAT LIFT.
5. NEVER LEAVE THE BOAT LIFT RUNNING WHILE UNATTENDED.
6. CHECK CABLE FOR FRAYING AND ANY OTHER SIGNS OF WEAR OR IMPROPER WRAPPING ON CABLE SPOOL BEFORE AND AFTER EACH USE.
7. KEEP CHAINS, SHEAVES AND ALL ZIRC FITTINGS WELL LUBRICATED.
8. LOCATE BOAT ON CHOCK BOARDS SO THAT WEIGHT IS EVENLY DISTRIBUTED ON LOWER CRADLE BEAMS. INSPECT BUNK BOARDS PERIODICALLY FOR UNUSUAL SIGNS OF WEAR OR IMPENDING FAILURE. CHANGE AS NECESSARY.
9. REMOVE KEY WHEN LIFT IS NOT IN USE AND TURN OFF POWER AT BREAKER.
10. INSPECT ALL FASTENERS, NUTS & BOLTS, COTTER PINS, ETC. THAT MAY BECOME LOOSE OVER TIME.
11. DO NOT EXCEED THE FACTORY RECOMMENDED LOAD CAPACITY OF THE LIFT.
12. DO NOT ALLOW BOAT TO FILL WITH WATER.
13. DO NOT POWER BOAT ON TO LIFT. WAIT FOR HIGHER TIDE IF NECESSARY.
14. DO NOT REST BEAMS ON THE BOTTOM ALLOWING CABLE TO GO SLACK. IF THIS HAPPENS, CABLES MUST BE REALIGNED AND TIGHTENED BEFORE LIFTING BOAT.



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