

# **DAVITMASTER SILHOUETTE (OPEN SPAN) CRADLE LIFT**

## **INSTALLATION INSTRUCTIONS**

**MODELS: Up to 16,000 lb.**

**Important: Read this manual before beginning  
installation of SILHOUETTE CRADLE LIFT.**

May, 1997

**THESE INSTRUCTIONS MUST BE LEFT WITH HOMEOWNER**



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This model can be used where upper support beams are objectionable or with existing piling situations with capacities up to 16,000 lbs. Bow to stern piling locations are not critical; however, the side to side (port to starboard) piling measurement is critical for proper operation of the lift.

The lift employs two or four electric winches (depending on the capacity), lower cradle beams, spanner beams, two piling sheave brackets (none for four motor), cable and rigging plus standard Davit Master chocks and guides. Stern work platforms or elevated walkways and remote control are options that can be used with this system.

## Piling spacing and Installation

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1. It is very important that the inboard to outboard piling measurement (center to center) matches the cradle beam length. See Model number and piling Spacing chart (pg. 5).
2. The bow to stern (front to back) measurement is recommended to be twelve feet on center. For any other measurement a silhouette pre-order check list must be submitted when ordering.
3. The minimum height of winch (inboard) must be at least 36 inches above dock or seawall height for proper mounting, operation and service. It is recommended that all pilings be of the same height and size.

## Installation of Piling brackets and winches

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1. Installation of winch brackets (B) and outboard brackets (A) is very critical. (Fig. 2 & 3). Brackets must be installed square relative to the positions of either inboard or outboard pilings.
2. First measure the pilings for proper orientation of the brackets. Then drill pilings and install each bracket with two 3/4" galvanized bolts. The bolt lengths will be determined by the diameters of the piling.
3. The winches (c) are supplied ready to install. Use the two 3/4" x 1 1/2", G-5 bolts provided to install the winches. The bolts go through slots in the base plate (I) and thread into piling bracket (B) at tapered holes in piling bracket.  
**NOTE: Winch is installed with motors up for gear drive and motors down for belt drive. (Fig. 2 & 4)**

## Cradle Beams and Cradle Rigging

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1. Sufficient cable is required to provide 12' of travel. Two sets of cable kits are provided and there are 2 cable kits in each set.
2. Cable length is very important. Cable can be installed on cradle beam while beam is still resting on dock. After moving cradle beam into the water and positioning along side of a set piling, the cable will need to be adjusted to achieve level travel. (Fig. 3~4).
3. Follow cable diagrams carefully to prevent crossing cables and to properly install onto drum of winch. There will be two (2) cable kits provided for each beam - an inboard and an outboard cable kit.
4. (Fig. 3) Attach the shackled end of cable kit #1 to end bracket of cradle beam (N) (Fig. 3) then feed through sheave (or pulley) system as shown.
5. (Fig. 5) Cable #1 attaches to the winch drum closest to the bronze drive gear (H). It is held in place with a cable clamp.
6. (Fig. 4) Attach the shackled end of cable kit #2 to top beam bracket of cradle beam (O) then feed through sheave (or pulley) system as shown.
7. (Fig. 5) Cable kit #2 is the inboard cable and attaches to the drum which, is the furthest from the gearing.  
**NOTE: When attaching cable to drum, cable kit #1 will wrap over it.**
8. (Fig. 6) **Important** - cables spool onto drum on side closest to base of winch (or mounting bolts of winch).
9. (Fig. 1) For overview of complete installation.
10. **UNDER NO CIRCUMSTANCES SHOULD THE RIGGING EYES ON THE LOWER BEAMS BE USED TO SUPPORT THE WEIGHT OF THE BOAT.**

## Chock System for Aluminum Silhouette (Fig. 8)

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1. For 7,000 and 10,000 lb. models two chock angles are provided for each corner of the lower beams. (total 8 Al chock angles) For 16,000 lb. models four aluminum chock angles are provided for each corner (total 16 Al chock angles). Depending on hull configuration of the boat a custom chock system may be required. (Fig. 8a)
2. The chock angles (L) bolt around the lower cradle beams and through the chock boards, as shown in the illustration. It is very important that the chock boards sit on the flange of the lower cradle beam to insure proper support of the boat.  
**NOTE: Custom chocks are available upon special request and require detailed information from the boat manufacturer or a naval engineer.**
3. Four chocks w/bolts, nuts and clips are supplied. The chocks bolt around the top flange of the lower cradle beam (F) w/bar clips (H) and adjust to fit boat hull.

## Standard Chocks - Galvanized Steel

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Four chocks w/bolts, nuts and clips are supplied. The chocks bolt around the top flange of the lower cradle beam (I) w/bar clips (H) and adjust to fit boat hull.

They are bolted through the chock boards as shown in the illustration. It is very important that the chock boards sit on the lower cradle beam to insure proper support of the boat. (Fig. 8)

## Pipe Guides (Refer to Fig. 6)

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Four pipe guides (E) with PVC covers (P) are supplied. The pipe guides bolt around top flange of lower cradle beams (F) with bar clips and adjust so the boat lines up properly over the chocks.

## Aluminum Work Platform (optional) (Refer to Fig. 7)

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The work platform predrilled side rails (R) install on top of both bow and stern lower cradle beams and are fastened to the upper flange using (8) stainless steel bolts and aluminum bar clips. The work platform panel (Q) 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.

## Maintenance

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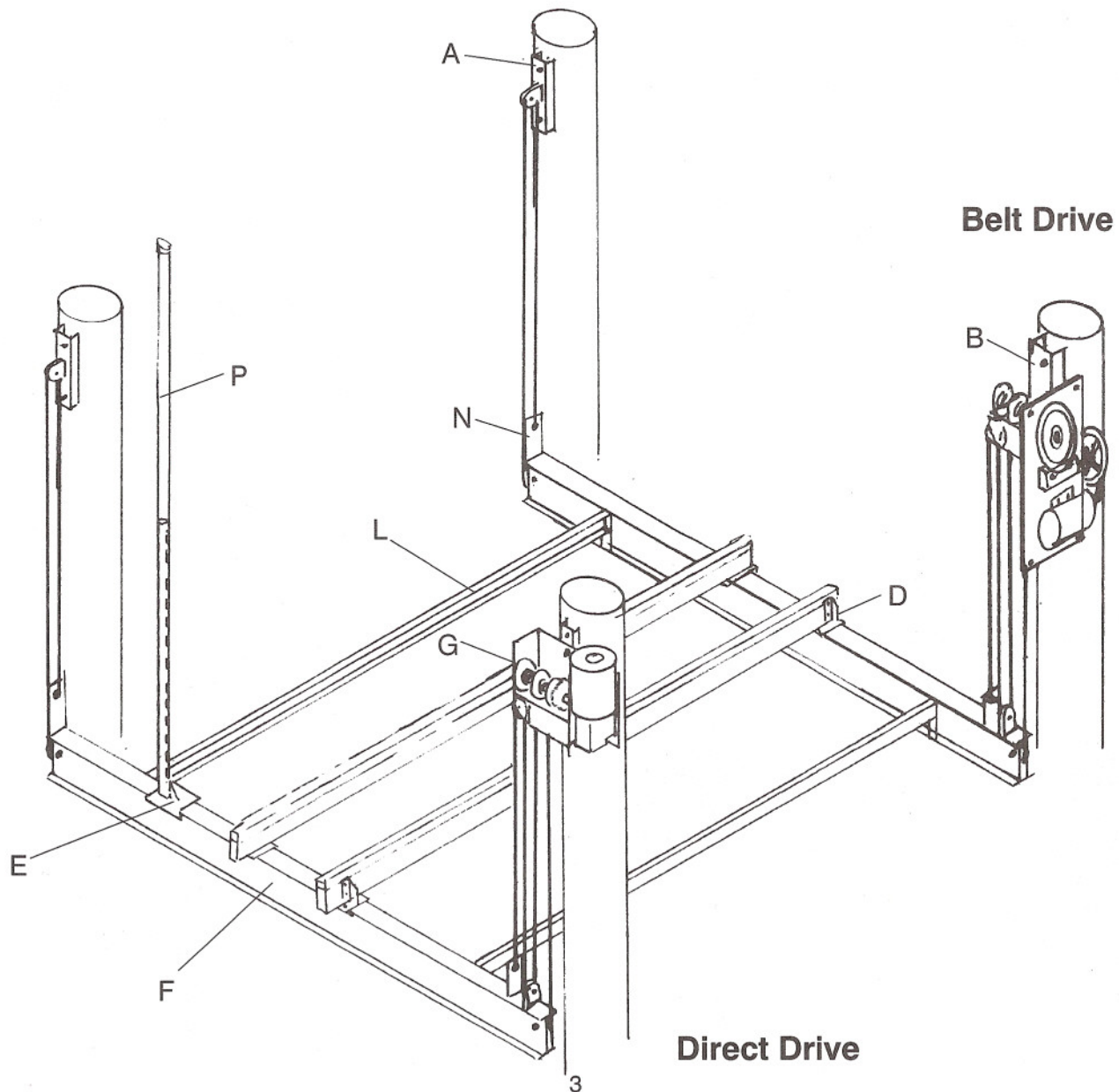
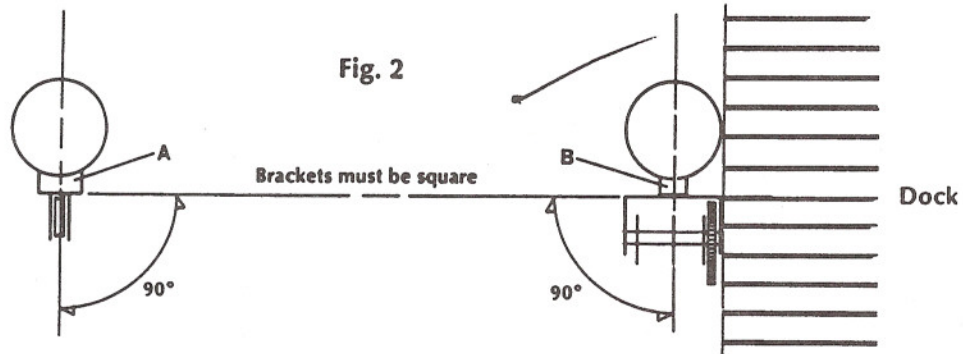
1. Lubricate all sheaves monthly.
2. Winch is supplied with two grease fittings on drum (Fig. 5). Winch should also be greased monthly.
3. Gear box is pre-lubricated. If oil should need to be added use AGMA #8 gear compound.
4. Check cables before each operation of lift. Replace if any fraying occurs.

# Specific Cradle Parts

- A - Outboard Sheave Bracket
- B - Inboard Winch Bracket
- C - Winch
- D - Chock Bracket
- E - Pipe Guide
- F - Lower Cradle Beam

- G - Aluminum Drum
- H - Bronze 10" Gear
- I - Winch Base Plate
- J - Gear Box
- K - Motor
- L - Spanner Beams

- M - 4" Aluminum Sheave
- N - End Beam Bracket
- O - Top Beam Bracket
- P - PVC Pipe
- Q - Work Platform
- R - Work Platform Channels



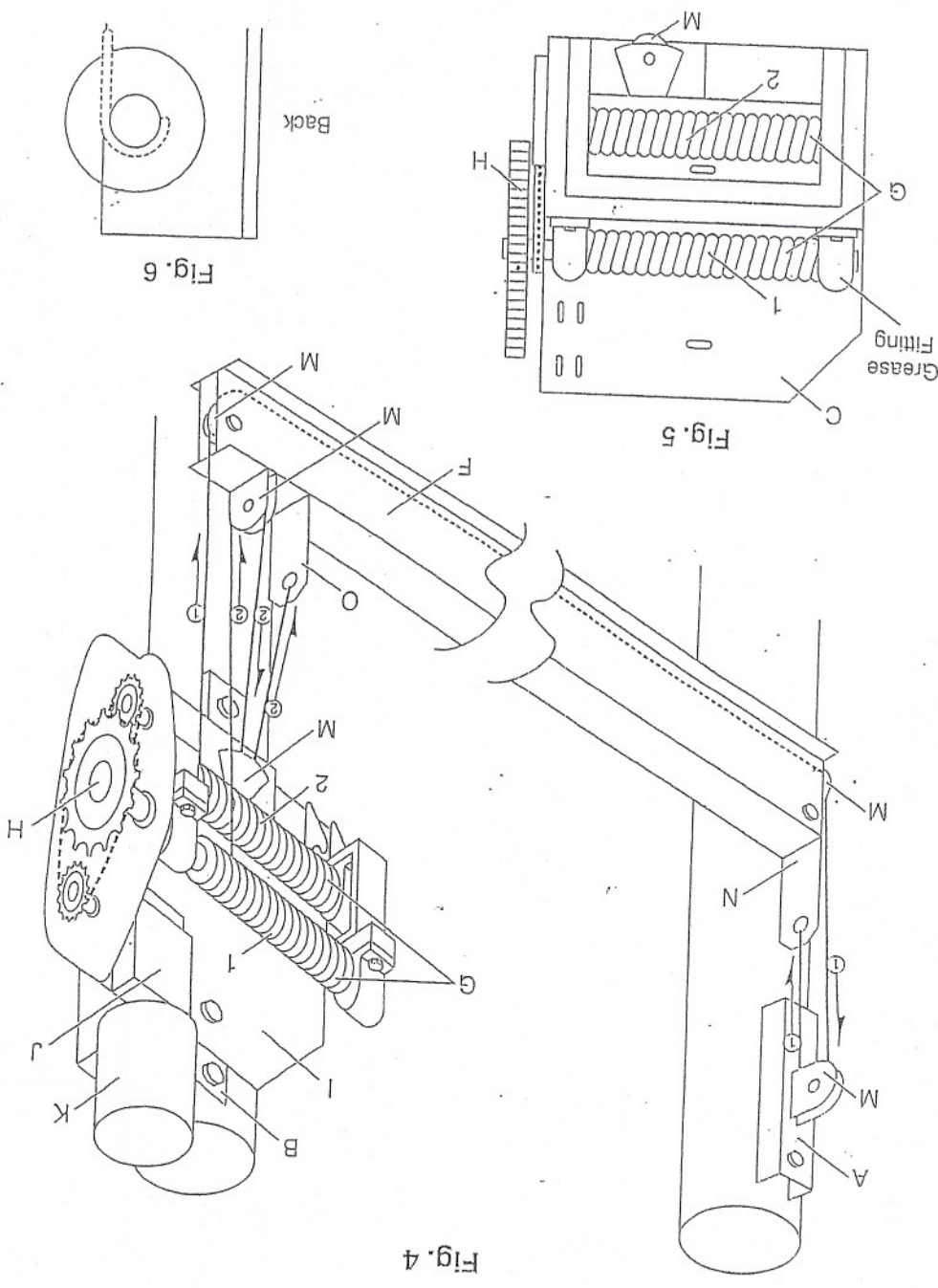


Fig. 6

Fig. 5

Fig. 4

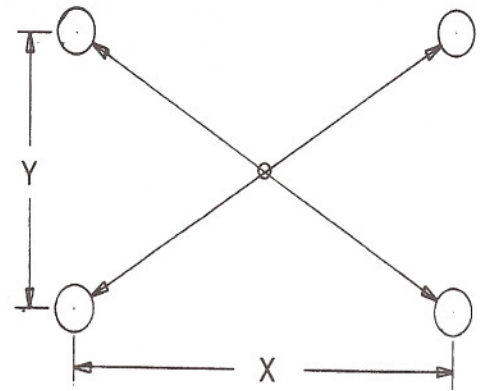
## Model Number and Piling Spacing

MODEL	X	Y	Y (Aluminum)
7,000	12'	12'	12'
10,000 - 2 motor	12'	13'	12' 6"
10,000 - 4 motor	12'	13'	12' 6"
16,000 - 4 motor	12'	15'	15'

Any other piling measurements must be supplied when ordering.

## Power Requirements

MODEL	Motor	Amperage Total (110v / 220v)	
7,000	(2) 3/4 hp.	21.2	10.6
10,000	(2) 3/4 hp.	21.2	10.6
10,000	(4) 1/2 hp.	31.2	15.6
16,000	(4) 1/2 hp.	31.2	15.6



x - Piling spacing - center to center  
x - Denotes bow to stern

y - Piling spacing - center to center  
y - Denotes port to starboard

## Belt Drive 7m Switch 120V-230V

### Power

L1 - #3  
L2 - #1

### Motor

L1 #8  
RED #2 To reverse rotation  
BLACK #4 interchange Red & Black  
L2 #12

## Belt Drive 7m Remote Control

### Power

L1 - Black  
L2 - Red  
Ground - Green  
Neutral - White

### Motor #1

Blue - L1  
Orng. - Red  
Yellow - Black  
Brown - L2

### Motor #2

Pink - L1  
Purple - Red  
Gray - Black  
Brown - L2

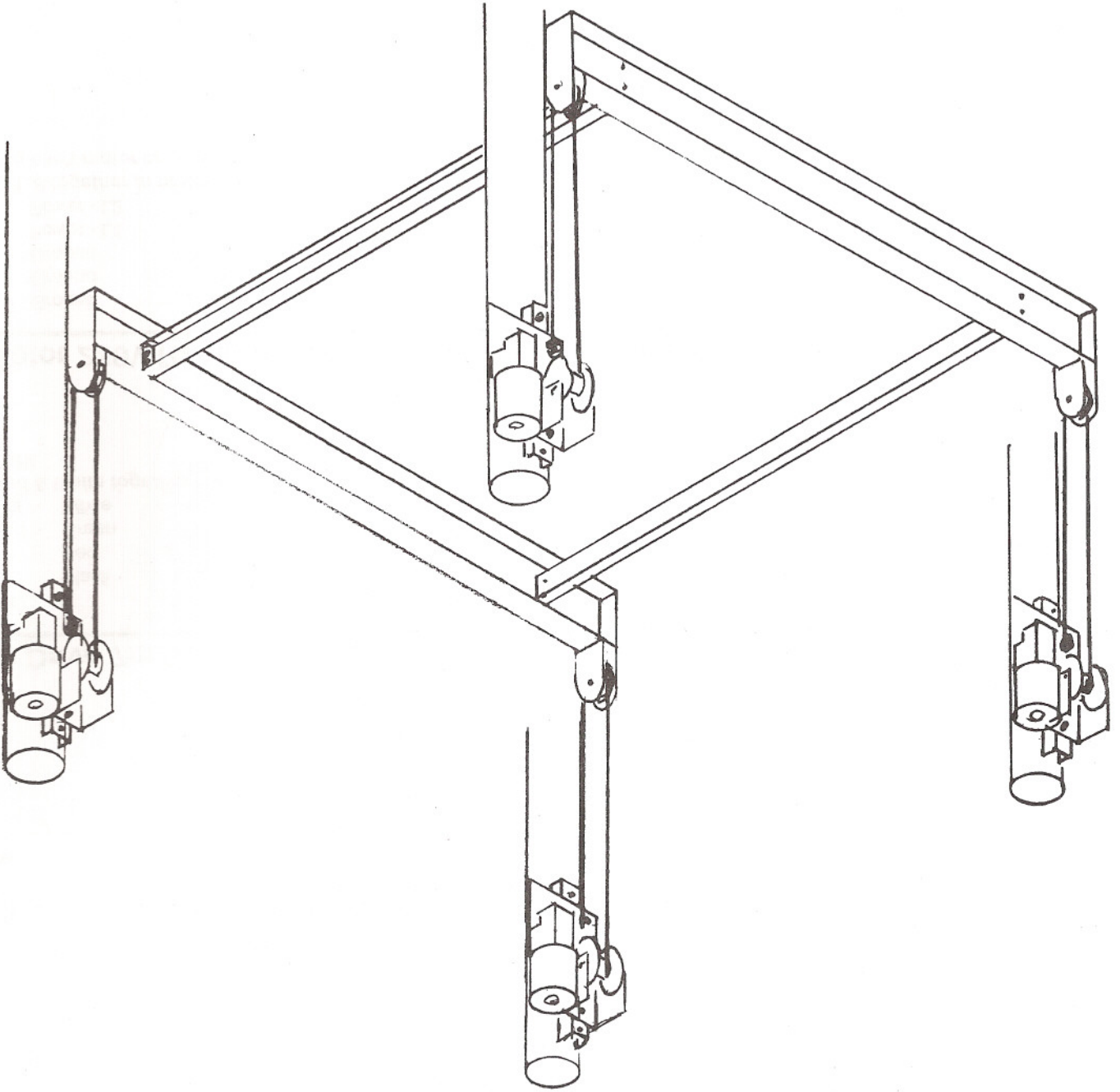
**Tie Red & White together for 120V. Keep separate for 220V.**

## 4 Motor 230V Radio Motor Control Cotrol Connection Diagram

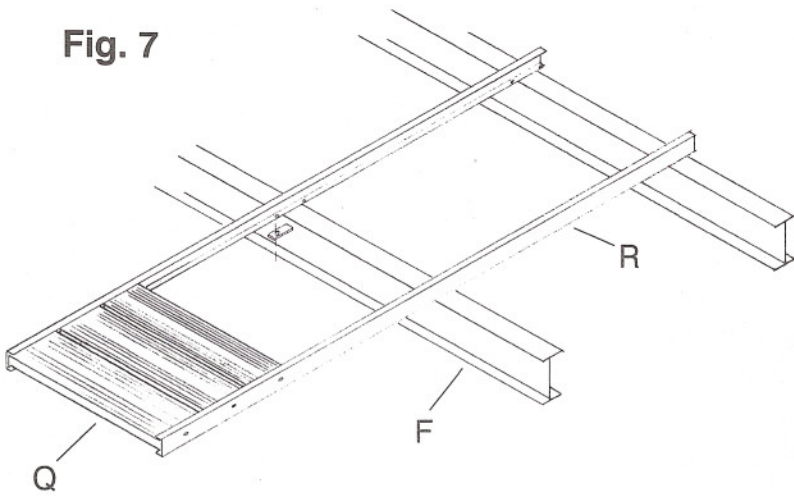
1 - Ground	<b>Motor #1</b>	<b>Motor #2</b>	<b>Motor #3</b>	<b>Motor #4</b>
2 - Ground	6 - T1	9 - T1	12 - T1	15 - T1
3 - Ground	7 - T5	10 - T5	13 - T5	16 - T5
4 - Power - L1	8 - T4	11 - T4	14 - T4	17 - T4
5 - Power - L2				

**Tie 2, 3, 8 together in motor box.**

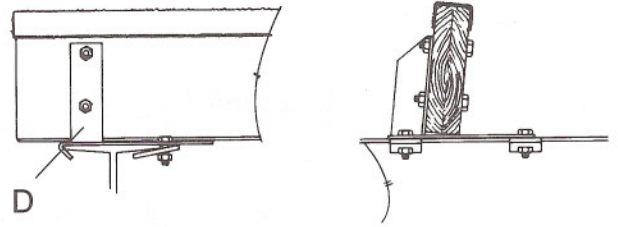
**Ground each motor case.**



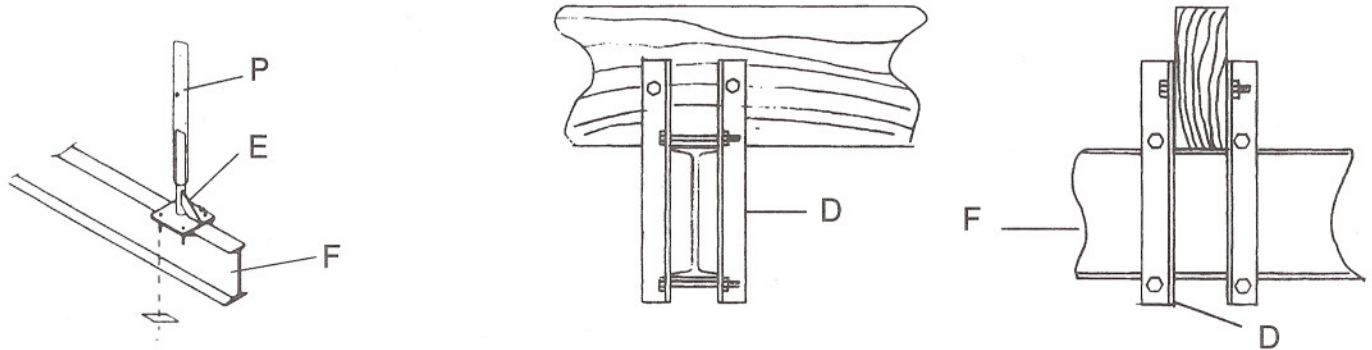
**Fig. 7**



**Fig. 8a**



**Fig. 8**



**Electrical Wiring Diagrams**

Radio Motor Control		Manual Switch	
120 VAC	230 VAC	110 Volt	230 Volt
<b>POWER</b> L1 - BLACK L2 - RED GROUND - GREEN NEUTRAL - WHITE  <b>TIE RED AND WHITE TOGETHER</b>  <b>MOTOR #1</b> BLUE - T1 & T3 ORANGE - T5 YELLOW - T8 DARK BROWN - T2 & T4  <b>MOTOR #2</b> PINK - T1 & T3 PURPLE - T5 GRAY - T8 LIGHT BROWN - T2 & T4	<b>POWER</b> L1 - BLACK L2 - RED GROUND - GREEN NEUTRAL - WHITE  <b>MOTOR #1</b> BLUE - T1 ORANGE - T5 YELLOW - NOT USED DARK BROWN - T4  <b>CAP TOGETHER T2, T3, T8</b>  <b>MOTOR #2</b> PINK - T1 PURPLE - T5 GRAY - NOT USED LIGHT BROWN - T4  <b>CAP TOGETHER T2, T3, T8</b>	<b>POWER</b> L1 - 3 L2 - 1  <b>MOTOR</b> 8 - 8 5 - 12 2 & 4 - 4 1 & 3 - 2	<b>POWER</b> L1 - 3 L2 - 1  <b>MOTOR</b> 5 - 12 4 - 4 1 - 2  <b>TIE 2, 3, 8 TOGETHER</b>

**Always Ground Each Motor To Main Ground To Reverse Rotation Interchange T5 and T8**

**DM-5**

- Not For Lifting Human Beings • Motor Must Be Properly Grounded • Must Have Ground Fault Protection •
- Must Meet All Applicable Electrical Codes And Be Wired By Licenced Electrician •

# **IMPORTANT SAFETY AND MAINTENANCE INSTRUCTIONS**

1. **PRIOR TO RAISING BOAT CHECK TO BE SURE THAT THE BOAT IS POISONED ON THE LIFT PROPERLY.**
2. **NOT FOR HUMAN LIFT NEVER BE IN OR UNDER YOUR BOAT WHILE IT IS BEING RAISED OR LOWERED.**
3. **KEEP HANDS CLEAR OF ALL MOVING PARTS AND DON'T STAND IN THE LINE OF THE CABLE 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 BEFORE EACH USE.**
7. **KEEP CHAINS, SHEAVES AND ALL ZIRC FITTINGS WELL LUBRICATED**



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