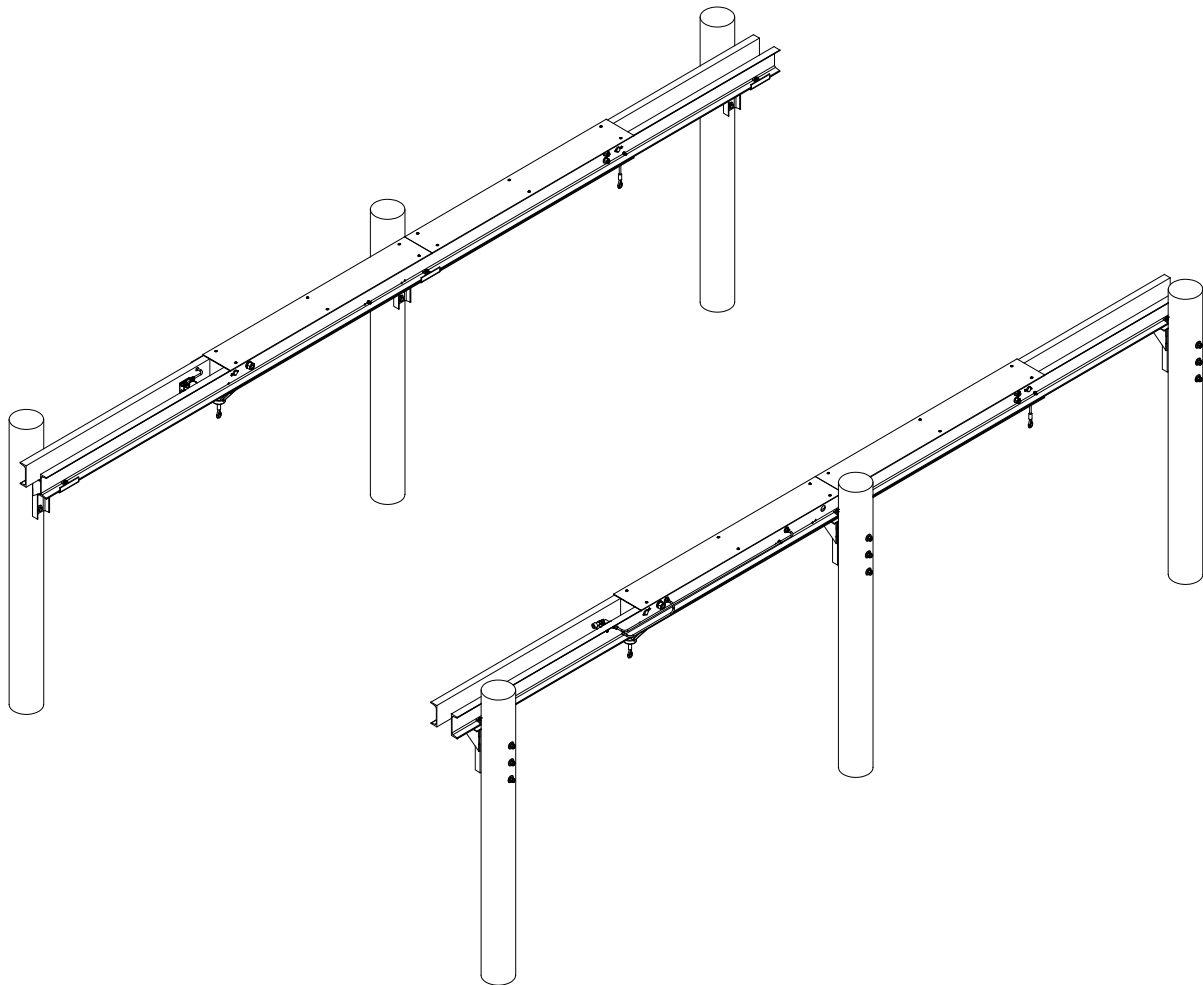




# HPM8K HYDRAULIC SIDE & TOP PILE MOUNT LIFT INSTRUCTIONS



**EIMANN & GEORGER CORPORATION**  
**MARINE PRODUCTS**  
P/N 6112---

**BUFFALO, NY**  
02/21/19

# TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
<b>1</b>	<b>SAFETY .....</b>	<b>1</b>
1.1	Introduction .....	1
1.2	Safety Definitions .....	1
1.3	Equipment Safety Labels .....	1
1.4	Equipment And Personnel Safety .....	1
1.5	Installation Safety .....	2
1.6	Operating Safety .....	2
1.6.1	General .....	2
1.6.2	Safety When Raising the Boat .....	3
1.6.3	Safety When Lowering the Boat .....	3
1.7	Maintenance and Storage Safety.....	3
<b>2</b>	<b>SPECIFICATIONS .....</b>	<b>4</b>
2.1	Technical Data .....	4
2.2	Nameplate and Serial Number Tag .....	4
2.3	Optional Equipment.....	5
<b>3</b>	<b>INSTALLATION AND SETUP .....</b>	<b>7</b>
3.1	Pre-Installation Checks .....	7
3.2	Prior To Setup .....	8
3.3	Side Mount Cylinder Assembly .....	8
3.4	Top Mount Cylinder Assembly.....	9
<b>4</b>	<b>OPERATION .....</b>	<b>10</b>
4.1	Before Operating The Lift .....	10
4.2	Testing Lift Operation .....	10
4.3	Testing Lift With Remotes.....	11
4.4	Raising And Lowering The Boat .....	11
4.5	Securing Lift When Not In Use .....	11
<b>5</b>	<b>INSPECTION AND MAINTENANCE .....</b>	<b>12</b>
5.1	General Maintenance Rules .....	12
5.2	Wire Rope Inspection Procedure .....	12
5.3	Annual Inspection .....	13
5.4	Battery Maintenance.....	13
5.5	Remote Control Information.....	14
5.6	Storage Procedure.....	15
5.7	Hydraulic System Flush .....	15
<b>6</b>	<b>TROUBLESHOOTING .....</b>	<b>17</b>
<b>7</b>	<b>PARTS LISTS .....</b>	<b>20</b>
7.1	HPM Side Mount Bracket (4) (8" Diameter Piling) .....	20
7.2	HPM Top Mount Bracket (4) (8" Diameter Piling).....	20
7.3	HPM8K-72" Cylinder Assembly 240" Channel .....	21
7.4	HPM8K-96" Cylinder Assembly 240" channel .....	22

## TABLE OF CONTENTS (CONTINUED)

CHAPTER	TITLE	PAGE
---------	-------	------

### LIST OF FIGURES

FIGURE	DESCRIPTION	PAGE
2-1	Typical Product Nameplate .....	4
3-1	Side Mounting Bracket to Piling .....	8
3-2	Top Mounting Bracket to Piling .....	9
5-1	Wire Rope Components .....	13
7-1	HPM8K Cylinder Assembly LH.....	24
7-2	HPM8K Cylinder Assembly RH .....	25

## PRE-LIFTING CHECKLIST

The lift and related equipment must be thoroughly inspected prior to each use. Only those who have read and understood this entire manual and related equipment manuals are qualified to do this inspection. This checklist is to be used as a guideline in conjunction with the maintenance and inspection procedures outlined in this manual. It is recommended that the inspection be maintained as a permanent record.

- Ensure the lift installation will clear all power lines and obstructions.
- Ensure all structural members of the lift are free of defects and damage that may affect the integrity.
- Ensure that an electric drive, if used, has been inspected and installed by a certified electrician in accordance with local electrical codes. A Ground Fault Circuit Interrupter (G.F.C.I.) must be installed by your electrician and work properly.
- Ensure that any user or dealer installed locking devices have been removed before operating the lift.
- Operate the lift first without, and then with, your boat on the platform to test the operation of both the lift and the winch.
- Ensure the boat is properly positioned on the lift before doing any raising or lowering.
- Ensure the lift is not being used beyond its rated capacity.
- Ensure any drain plug is in place on the boat before launching.
- Conduct the wire rope inspection procedure described in Chapter 5 at least monthly.
- Ensure the frame and platform fastenings are tight.

# 1 SAFETY

## 1.1 INTRODUCTION

Your Reimann & Georger Corporation Marine Products Aluminum Hydraulic Pile Mount Lift has been engineered to provide lifting performance, long term economics and safety advantages that no other type can match. However, even a well-designed and well-built lift can malfunction or become hazardous in the hands of an inexperienced and/or untrained user. Therefore, read this manual and related equipment manuals thoroughly before operating your lift to provide maximum safety for all operating personnel, and to get the maximum benefit from your equipment.



### **WARNING:**

**DO NOT OPERATE THIS LIFT WITHOUT STUDYING THIS ENTIRE MANUAL. FAILURE TO DO THIS CAN LEAD TO EQUIPMENT MISUSE WITH RESULTING SERIOUS PERSONAL INJURY AND/OR DAMAGE. CONTACT YOUR RGC® MARINE DEALER IF YOU HAVE ANY QUESTIONS.**



### **WARNING:**

**DO NOT SERVICE THE HYDRAULIC PILE MOUNT LIFT WITH YOUR BOAT ON THE LIFT. DO NOT SERVICE THE HYDRAULIC PILE MOUNT LIFT WITH CRADLE IN THE RAISED POSITION. DO NOT DISCONNECT ANY HYDRAULIC LINES UNLESS THE CRADLE IS COMPLETELY LOWERED.**

## 1.2 SAFETY DEFINITIONS

A safety message alerts you to potential hazards that could hurt you or others or cause property damage. The safety messages or signal words for product safety signs are **DANGER**, **WARNING**, and **CAUTION**. Each safety message is preceded by a safety alert symbol and is defined as follows:

**DANGER:** Indicates an imminently hazardous situation which, if not avoided, **will** cause death or serious injury. This safety message is limited to the most extreme situations.

**WARNING:** Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.

**CAUTION:** Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices and property-damage-only accidents.

## 1.3 EQUIPMENT SAFETY LABELS

These labels warn you of potential hazards that could cause injury. Read them carefully. If a label comes off or becomes illegible, contact a Reimann & Georger Corporation dealer for a free replacement.

## 1.4 EQUIPMENT AND PERSONNEL SAFETY

1. Do not use the lift, control box, or the remote control if any item shows any signs of damage.
2. Do not expose the internal control box components or remote control to water or inclement weather conditions.
3. Understand the use of all controls and connections provided with the control box.
4. Never operate the lift with a substitute hydraulic power supply. Use only the control box provided with the lift.
5. Do not store any articles in the control box, as this can damage the pump or electrical system.
6. Do not allow persons other than authorized service personnel to repair any part of this equipment.
7. Do not exceed the rated maximum lifting capacity of this equipment.
8. Never try lifting anything other than a boat with this equipment.

9. Never allow people in the boat any time it is suspended above the water on the platform or when the lift is in use.
10. Do not stand or walk on the loading platform while it is in any raised position.
11. Do not allow anyone to swim or play under, near or on the lift at any time. Raise the bunks out of the water when leaving the lift unattended to allow swimmers to see its location.
12. Never use the lift to hang or store any auxiliary equipment such as boating hardware.
13. Never operate the lift during an electrical storm.



**WARNING:**

**ALL ELECTRIC DRIVES MUST BE INSTALLED AND INSPECTED BY A CERTIFIED ELECTRICIAN IN ACCORDANCE WITH LOCAL ELECTRICAL CODES. THIS INSTALLATION MUST INCLUDE A PROPERLY WORKING GROUND FAULT CIRCUIT INTERRUPTER. (G.F.C.I.)**



**WARNING:**

**DO NOT STAND OR WALK ON THE PLATFORM WHILE IT IS IN ANY RAISED POSITION. THIS CAN CAUSE SERIOUS PERSONAL INJURY.**

## **1.5 INSTALLATION SAFETY**

1. Ensure that all bolts and nuts are fastened securely prior to operation.
2. Do not weld or otherwise modify the lift. Such alterations may weaken the structural integrity of the lift and void the warranty.
3. Ensure that the frame is level and square.
6. The following precautions must be observed when lifting any part of this equipment:
  - a. Be sure of your footing.
  - b. Bend your knees and lift with your legs.
  - c. Hold the equipment section close to your body when lifting.
7. Wear heavy leather gloves when handling wire rope. Insufficient hand protection when handling wire rope can cause personal injury.

## **1.6 OPERATING SAFETY**

### **1.6.1 General**

1. Never use this equipment beyond its rated capacity. This can damage the lift and/or boat with resulting serious personal injury.
2. Before allowing anyone to operate the lift, be certain they fully understand the proper operating procedure.
3. Completely remove any user or dealer installed locking devices before operating the lift.
4. Follow the Pre-Lifting Checklist before operating.
5. Do not try lifting or launching your boat in rough water conditions. This can damage your boat and/or the lift.

6. The boat must be secured on the lift before raising or lowering. Failure to do this can cause equipment damage and/or serious personal injury.
7. Keep people and pets clear during operation of the lift.
8. Keep fingers and clothing clear of all moving parts.
9. Check the lift periodically for frayed cables and/or binding pulleys.
10. Do not attempt to make any adjustments on the lift while it is being operated.
11. Do not operate the lift under the influence of drugs, alcohol, or medication.
12. Never use the lift to hang or store any auxiliary equipment such as boating hardware.
13. A clear visual path is required when using a remote transmitter. Obstacles, radio frequency interference, and weak transmitter batteries will degrade the performance and range of your remote transmitter.
14. Never adjust or service the lift during operation or while connected to the control box.
15. Do not adjust the components in the control box while operating the lift.
16. Completely lower the platform before performing any type of maintenance or repair.
17. Never allow anybody to work in or on the boat when it is suspended above the water on the lift.
18. At end of operation, secure the control box and the lift to prevent unauthorized use. Never assume you will find the equipment in the same condition in which you left it.
19. Never operate the remote control or hydraulic power unit when connecting or disconnecting hydraulic hoses.
20. Do not operate the lift when under the influence of drugs, alcohol, or medication.

### **1.6.2 Safety When Raising the Boat**

1. Do not try to raise the boat beyond the maximum lifting height of the platform.

### **1.6.3 Safety When Lowering the Boat**

1. Do not continue lowering the platform after the boat floats freely. Excessive slack in winch cable may cause binding.

## **1.7 MAINTENANCE AND STORAGE SAFETY**

1. At least once a year, the lift must be thoroughly inspected as described in the Maintenance chapter of this manual.
2. Completely lower the platform before performing any type of maintenance or repair.



### **WARNING:**

**NEVER ALLOW ANYBODY TO WORK IN OR ON THE BOAT WHEN IT IS SUSPENDED ABOVE THE WATER ON THE LIFT.**

3. Immediately replace any components found to be defective as described in Chapter 5—Inspection and Maintenance.





The following options are available which enable you to customize your lift for your particular operation. Installation instructions are provided as part of each option kit.

1. **Solar Panel**—Slowly recharges battery when lift is unused. Extends interval between full recharges.
2. **AC Charger**—Recharges battery between periods of high usage or when insufficient solar energy is available.
3. **Pile mount Bracket**- two different style mounting brackets available, top mount or side mount.

## 3 INSTALLATION AND SETUP

### 3.1 PRE-INSTALLATION CHECKS

1. Do not assemble the lift if any part shows any sign of damage.
2. Do not weld or otherwise modify the lift. Such alterations may weaken the structural integrity of the lift and void the warranty.
3. All lifting accessories such as platforms shall be commercially manufactured, have a rated load capacity equal to that of the lift, and be properly maintained and installed.



#### **WARNING:**

**ALL ELECTRIC DRIVES MUST BE INSTALLED AND INSPECTED BY A CERTIFIED ELECTRICIAN IN ACCORDANCE WITH LOCAL ELECTRICAL CODES. THIS INSTALLATION MUST INCLUDE A PROPERLY WORKING GROUND FAULT CIRCUIT INTERRUPTER. (G.F.C.I.)**



#### **WARNING:**

**DO NOT SERVICE THE HYDRAULIC LIFT WITH YOUR BOAT ON THE LIFT. DO NOT SERVICE THE HYDRAULIC LIFT WITH LOAD TUBES IN THE RAISED POSITION. DO NOT DISCONNECT ANY HYDRAULIC LINES UNLESS THE LIFT IS COMPLETELY LOWERED.**

### 3.2 PRIOR TO SETUP

The part reference numbers and letters used in the subassembly drawings of sections 3.3 through 3.9 are the same as those shown in Figure 3-1 and listed in the parts lists of Chapter 7.

### 3.3 SIDE MOUNT HPM CYLINDER ASSEMBLY

1. (Reference 3-1). Existing pilings must be capable of supporting rated load of HPM lift. The pilings must be in-line with each other within 1/2". Install side mounted brackets to existing pilings using 5/8"-11 Stainless bolts. Bolts should be 2" longer than piling diameter. Example: If pile is 8" diameter, bolt needed should be 5/8-11 x 10" long.
2. Drill clearance holes in piling for the side mounting brackets.
3. Install side mount brackets to each piling using all stainless hardware; 5/8" bolts, 5/8" flat USS washers, 5/8" lock washers & 5/8-11 hex nuts.
4. Install and position HPM cylinder assemblies onto brackets. The HPM cylinder assembly must be secured to the mounting brackets. Drill 13/32 clearance holes onto the HPM cylinder side channels.
5. Install nylon pad between the HPM cylinder assembly and the galvanized bracket. Use 3/8" bolt, beveled washer and nylon nut

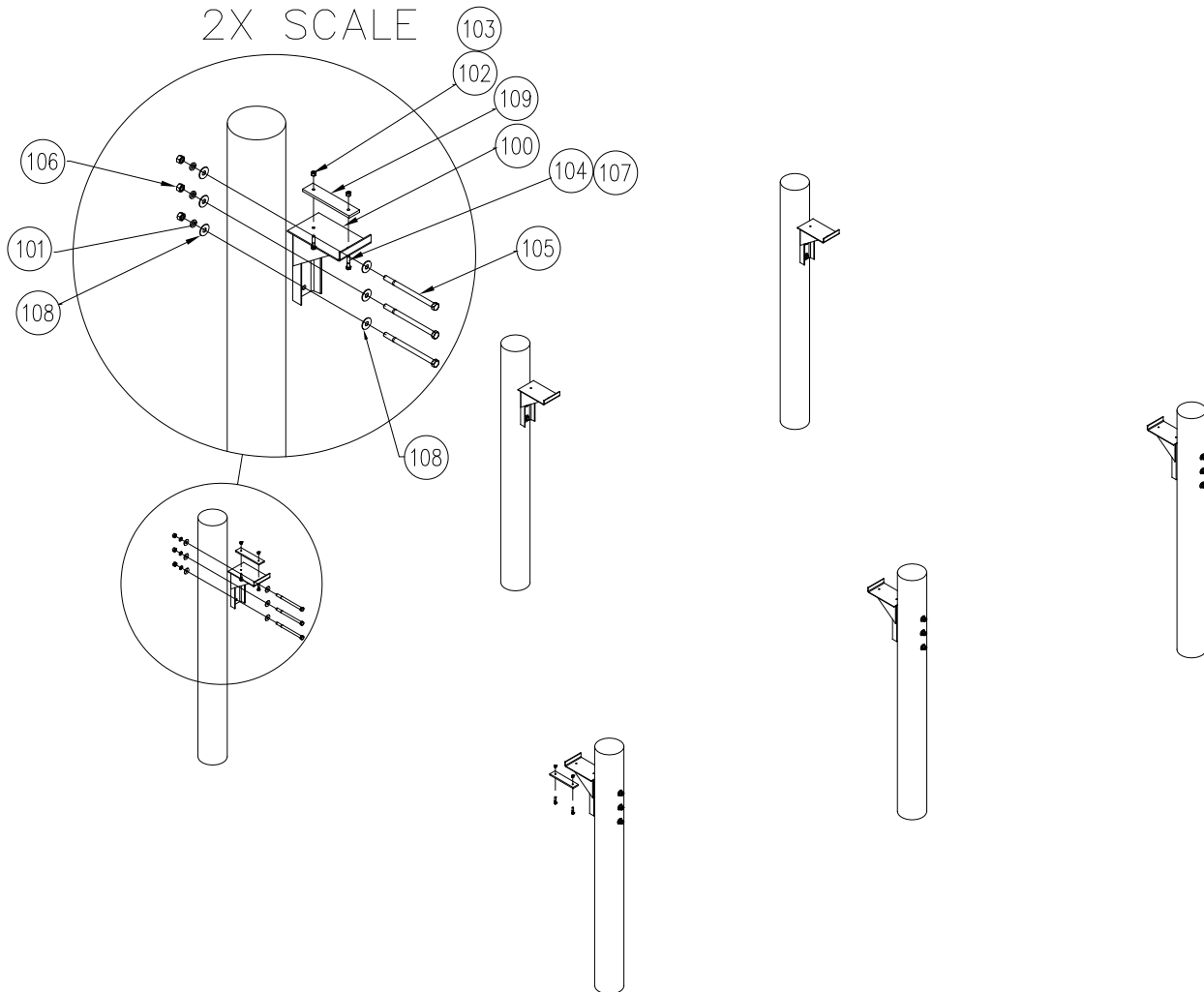


Figure 3-1.  
Side mounting bracket to Piling.

### 3.4 TOP MOUNT HPM CYLINDER ASSEMBLY

6. (Reference 3-2). Existing pilings must be capable of supporting rated load of HPM lift. The pilings must be in-line with each other within  $\frac{1}{2}$ ". A minimum of two pilings per cylinder assembly is required for support. All top of pilings should be cut to same height for installing the HPM cylinder assembly. Install top mounted brackets to existing pilings using  $\frac{1}{2}$ "-13 stainless bolts. Bolts should be 2" longer than pile diameter. Example: If pile is 8" diameter, bolt needed should be  $\frac{1}{2}$ -13 x 10" long.
7. Drill clearance holes in piling for the top mounting brackets.
8. Install top mount brackets to each piling using all stainless hardware,  $\frac{1}{2}$ " bolts,  $\frac{1}{2}$ " flat USS washers,  $\frac{1}{2}$ " lock washers &  $\frac{1}{2}$ -13 hex nuts.
9. Install and position HPM cylinder assemblies onto brackets. The HPM cylinder assembly must be secured to the mounting brackets. Drill  $\frac{13}{32}$  clearance holes onto the HPM cylinder side channels.
10. Install nylon pad between the HPM cylinder assembly and the galvanized bracket. Use  $\frac{3}{8}$ " bolt, beveled washer and nylock nut.

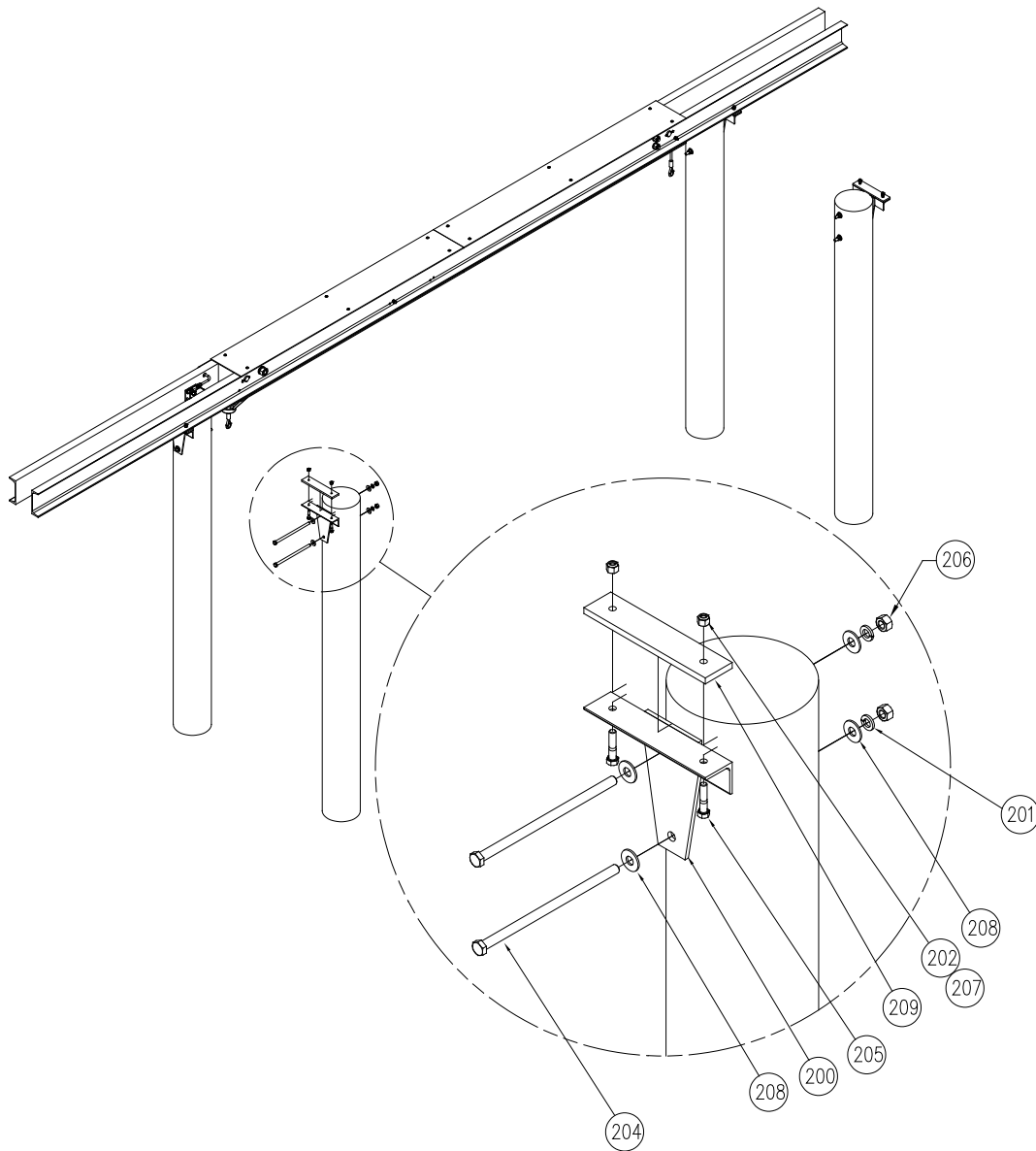


Figure 3-2.  
Top mounting bracket to Piling.

## 4 OPERATION

### 4.1 BEFORE OPERATING THE LIFT

1. Review and follow all the safety precautions given in Chapter 1.
2. Do not use the lift if it shows any signs of damage.
3. Insure that all bolts and nuts are fastened securely prior to operation.
4. Ensure that the frame is square and that the lift sits level.



**WARNING:**

**IF THE FRAME IS NOT SQUARE OR THE LIFT IS NOT LEVEL, BINDING MAY RESULT. THIS CAN CAUSE PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.**

5. Never try lifting anything other than a boat with this lift.



**WARNING:**

**NEVER TRY TO USE THIS EQUIPMENT BEYOND ITS RATED CAPACITY. THIS CAN DAMAGE THE LIFT AND/OR BOAT RESULTING IN PERSONAL INJURY.**

**THE BOAT MUST BE PROPERLY POSITIONED ON THE LIFT BEFORE DOING ANY RAISING OR LOWERING. FAILURE TO DO THIS CAN CAUSE PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.**

6. Never try to lift or launch your boat in rough water conditions. This can damage your boat and/or the lift.
7. Follow the Pre-Lifting Checklist before operating.
8. Read and know the instructions and insure that everyone understands the proper operating procedure.
9. Understand the use of all the controls and connections provided with the power supply and the remote transmitter.

### 4.2 TESTING LIFT OPERATION

After the lift installation is complete, it is important to test it for proper functioning before any load is applied. Proceed as follows:

1. Use the up/down switch inside the control box to cycle the lift up and down. Insure that the hydraulic hoses are not binding or being pinched by any part of the lift.



**WARNING:**

**DO NOT STAND OR WALK ON THE LIFT PLATFORM WHILE IT IS IN ANY RAISED POSITION. THIS CAN CAUSE SERIOUS PERSONAL INJURY.**

2. The loading platform should move up and down smoothly without excessive stress or squeaking.
3. After cycling the lift a couple of times, inspect all hardware to insure that they are still secure and tight. Also test the remote control and underwater lighting system.
1. Contact your authorized dealer if the hydraulic system fails to perform as described in this section. Do NOT tamper with either system.

#### 4.3 TESTING LIFT WITH REMOTES

1. To unlock the remotes, press the two blue buttons simultaneously, this will unlock the unit. To lock the remote, press the two blue buttons simultaneously will lock the unit.
2. Press the 'UP' button to make the lift go in the upward direction. Press 'DOWN' to make the lift go in the downward direction.

#### 4.4 RAISING AND LOWERING THE BOAT

1. Position the boat so that the boat's center of gravity is between forward load cradle beams and rear load cradle beam.
2. Carefully raise the platform until the bunks "capture" the boat. Stop the lift and check to see that the bunks have automatically positioned themselves to the shape of the hull, as they were installed to do in Chapter 3. If this has occurred, continue bringing the boat out of the water until it is about 1 foot above the surface.



#### **WARNING:**

**NEVER ALLOW PEOPLE IN THE BOAT ANY TIME IT IS SUSPENDED ABOVE THE WATER ON THE LIFT.**

3. Keep fingers and clothing clear of all moving parts. Keep people clear during operation of the lift.
4. Stop the lift again and check the stability of the lift. Insure that it is remaining level and will not topple over.
5. Continue lifting the boat, closely observing the position of the lift, until the platform is in the fully upright and over center position.



#### **CAUTION:**

**ALWAYS ADJUST THE HEIGHT OF THE LIFT TO LIMIT WAVE ACTION AGAINST THE HULL. WAVE ACTION CAN SERIOUSLY DAMAGE THE LIFT AND/OR YOUR BOAT.**

6. Two weeks after installation, check to see that the lift is still level, as it may have settled over time. Readjust the lift cable connection. Install anchor shackles and lift chain at cable connection to level cradle. CAUTION: Select 1.5-ton rated anchor shackles and 9/32" grade 80 lifting chain rated for the load of the lift. Repeat this inspection and adjustment procedure at the frequency found necessary.

#### 4.5 SECURING LIFT WHEN NOT IN USE

1. Make the lift visible by leaving the platform in any elevated position when it is not loaded with a boat. This prevents the lift from being a hidden underwater obstruction, and protects the bunks from prolonged water immersion.

**WARNING: Do not store with bunks in the water, raise platform out of water when not used to prevent bunk damage due to wave and rough water.**

2. Lock out your control box to prevent unauthorized use when your boat lift is unattended. Never assume you will find the lift in the same condition that you left it.
3. When storing the boat on the lift, the following additional precautions must be observed:
  - a. Position the boat on the platform so that the boat's center-of-gravity is between the forward load cradle beam and the rear cradle load beam when in the down position.
  - b. Prevent rainwater from accumulating in your boat when leaving it on the lift for long term storage. A boat that has water in it from a rainstorm could exceed the recommended weight capacity of the lift. **Just 1 gallon of water weighs over 8 pounds.** Be sure to remove the plug while the boat is up on the lift. Make sure you replace the plug prior to launching your boat.

## 5 INSPECTION AND MAINTENANCE

### 5.1 GENERAL MAINTENANCE RULES

1. Do not allow persons other than authorized service personnel to repair this equipment.
2. If slings are used, inspect them for deterioration. Replace them immediately if they are worn.
3. Do not weld or otherwise modify the lift. Such alterations may weaken the structural integrity of the lift and invalidate your warranty.
4. Completely lower the lift before performing any type of maintenance or repair.



**WARNING:**  
**NEVER ALLOW ANYBODY TO WORK IN OR ON THE BOAT WHEN IT IS SUSPENDED ABOVE THE WATER ON THE LIFT.**



**WARNING:**  
**BEFORE STARTING ANY MAINTENANCE ON THE LIFT, DISCONNECT AND LOCK OUT THE POWER SUPPLY TO PREVENT ACCIDENTAL OPERATION.**

5. Immediately replace any components found to be defective.



**CAUTION:**  
**POOR OR IMPROPER MAINTENANCE CAN LEAD TO EQUIPMENT DAMAGE OR FAILURE.**

### 5.2 WIRE ROPE INSPECTION PROCEDURE

Inspect the wire rope prior to each use for signs of wear, damage, or pinching. Inspect the entire wire rope working length. Thoroughly inspect the rope sections that pass over sheaves or drums, or that make opposing turns. Inspect wire rope and end attachments carefully. While inspecting, examine sheaves, guards, guides, drums, flanges, and other surfaces contacting wire rope during operation. Correct any condition harming the rope in use or other damage or worn surfaces at this time.

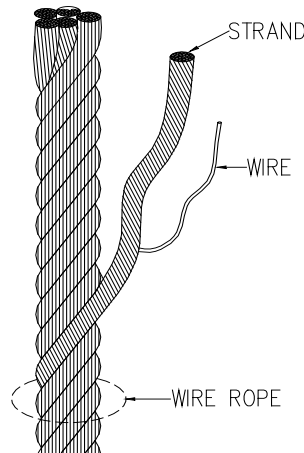


**CAUTION:**  
**WEAR HEAVY LEATHER GLOVES WHEN HANDLING WIRE ROPE. INSUFFICIENT HAND PROTECTION WHEN HANDLING WIRE ROPE CAN CAUSE PERSONAL INJURY.**

Remove and immediately replace wire rope with one or more of the following defects:

1. Corrosion
2. Broken wires:
  - (a) One or more valley breaks. A valley break is a wire break occurring in the valley between two adjacent strands.
  - (b) Six randomly distributed broken wires in one rope lay. A rope lay is the length of rope along which one strand makes a complete revolution around the rope. See Figure 5-1. Keeping the rope clean and wound evenly on the winch drum will increase its life and efficiency.
3. Abrasion: Scrubbing, flattening or peening causing loss of more than one-third of the original diameter of the outside wires.
4. Kinking: Severe kinking, crushing, bird caging or other damage causing distortion of the rope structure. Bird caging is a bulging in the cable caused by the individual wires becoming untwisted. This untwisting of individual wires is usually caused by impact loading on the cable (such as a sudden stop).

5. Heat damage: Evidence of any heat damage caused by a torch or by contact with electrical wires.



**Figure 5-1.**  
**Wire Rope Components**

6. Reduction of more than 1/64 inch from a nominal 5/16-inch or less diameter cable. Reduction of more than 1/32 inch from a nominal 3/8-inch to 1/2-inch diameter cable.

### 5.3 ANNUAL INSPECTION

At least once a year, the lift must be thoroughly inspected using the following procedure.



**WARNING:**  
**DO NOT ALLOW ANYBODY TO USE THE LIFT UNTIL THIS MAINTENANCE IS COMPLETED.**

1. Tighten all bolts.
2. Remove top covers from HPM cylinder assemblies and inspect & clean cylinder rods. Also inspect lift cables for worn or frayed.
3. Check that all the sheave and cylinder pins are lubricated properly.
4. Check frame thoroughly for defects.
5. Inspect all hydraulic lines, fittings and hoses for leaks and risks of rupture as follows:
  - a. Inspect each hydraulic line, fitting, and hose for breaks, cracks, worn spots, bulges, chemical attack, kinks or any other damage. Never try to stop any detected leak with any body parts. Do not put your face close to suspected leaks. Hold a piece of cardboard close to suspected leaks and then inspect the cardboard for signs of hydraulic oil.
  - b. Replace a damaged line, fitting or hose immediately. Never repair the part.

### 5.4 BATTERY MAINTENANCE

1. Use a 12 volt, group 27 marine deep-cycle battery with a minimum of 500 CCA, or with a reserve capacity of 160 amp hours or more. We recommend the following batteries: U.S. Battery Model 27 TMX, Trojan Battery Model 27 TMX or Rolls Battery Engineering Model 27112XJM. Reserve capacity is the most important feature.
2. The lift has an energy capacity of about 20 full cycles using a new battery with a reserve capacity of 160 amp hours. However, avoid dipping below 50% battery capacity because the solar panel will have trouble recovering from such a deep draw. For constant usage, we recommend that the battery be hooked up to an AC charger on a full time basis. We



recommend the following chargers: Guest Charge Pro Model 2608 (6 Amp) or Guest Charge Pro Model 2611 (10 Amp).

3. The following table lists maximum monthly full lifting cycles (down and up), using a single solar panel, to keep the battery capacity at a steady state energy level. The capacity of the battery will allow for additional cycles for any particular month. The values assume all-day exposure with typical seasonal weather.

Month	Cloudy northern climate	Sunny southern climate
January	2 cycles	27 cycles
February	8	29
March	14	29
April	18	31
May	21	27
June	22	25
July	24	28
August	24	31
September	19	29
October	12	29
November	4	28
December	1	25

4. If the solar panel does not keep the battery charged, try any of the following:
  - a. Move the solar panel to an area with less obstructed sunlight.
  - b. Add a second solar panel, or add an a/c charger.
  - c. Booster charge the battery at mid season.
5. Check water level in battery every three months. If the water level is low, fill it up with distilled water. Booster charge the battery with a 2A charge using a 10A charger in the beginning and end of the season.

### 5.5 REMOTE CONTROL INFORMATION

The remote transmitter can de-program due to either a power loss (dead battery) or electrical interference, which will require re-programming of the transmitter.

Proper function of the RC system is dependent upon several factors that are not controllable by the manufacturer. RGC is not responsible for the following: Improper installation, Low battery, Natural occurrences, Use other than intended, Location of panel, receiver or transmitter too close to interfering metal objects, Multiple RC panels within 15 feet of each other, Use in area with external interference such as radio, cell phone, and TV towers or a natural magnetic field, Blocked or shielded antenna, Other transmitter interference from cell phones, cordless phones, wireless systems, CB and mobile transmitters, computer and industrial equipment, electric motors, even fluorescent lights.

See the instruction manual on the power unit for re-programming the receiver & transmitter.

## 5.6 STORAGE PROCEDURE

1. Position boat on platform so the lower unit of the motor is against the optional motor stop (if used).
2. A boat that has water in it from a rain storm could exceed the recommended weight capacity for the lift. Just 1 gallon of water weighs over 8 pounds. Be sure to remove the plug while the boat is up on the lift. Make sure you replace the plug prior to launching your boat.
3. Protect your lift as far as possible from damage caused by environmental factors such as airborne fallout, chemicals, tree sap, and weather hazards.
4. Never use the lift to hang or store any auxiliary equipment such as boating hardware.
5. Do not allow anyone to swim or play near the lift at any time.



### **CAUTION:**

**DO NOT STORE THE LIFT IN THE WATERWAY IF FREEZING TEMPERATURES ARE EXPECTED. THIS WILL CAUSE EQUIPMENT DAMAGE.**

6. Disconnect and store battery to prevent from freezing.
7. Disconnect and store hydraulic cylinders, hydraulic hoses, and control box in a warm dry area if temperatures or wind chill factors below minus 20 degrees F are expected.

## 5.7 HYDRAULIC SYSTEM FLUSH

It is recommended that as part of an annual maintenance program, the hydraulic system be drained and fresh aqua-marine Grade hydraulic oil installed. RGC recommends CITGO Aqua Marine Hydraulic 46 (or equivalent biodegradable oil) be used.

1. Lower the platform until the cylinder are fully retracted.



### **WARNING:**

**FOLLOW THE SAME SAFETY RULES WHEN WORKING INSIDE THE CONTROL BOX AND AROUND THE BATTERY THAT APPLY TO ANY CAR OR BOAT BATTERY. A BATTERY CAN EXPLODE AND CAUSE PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.**

2. Disconnect couplings between cylinder hoses and control box.
3. Unscrew reservoir oil fill cap.
4. Siphon old oil from reservoir using a hand siphon or vacuum pump. If not available, remove the 12-volt battery from control box, and very carefully tip over the control box to drain oil from reservoir into a bucket.
5. Remove reservoir from pump assembly to inspect oil filter screen. Be careful not to damage O-ring seal for reservoir. If necessary, clean the filter screen with soap and water.
6. Reassemble reservoir and pump assembly, then fill reservoir with fresh CITGO Aqua Marine Hydraulic 46.



### **WARNING:**

**LIQUID UNDER HIGH PRESSURE CAN PIERCE THE SKIN, CAUSING DEATH OR SERIOUS INJURY. IN CASE OF INJURY, GET IMMEDIATE MEDICAL ATTENTION.**

7. Depressurize cylinder hoses as follows:
  - a. Depressurize the cylinder hose with male coupling by wrapping a rag around the coupling (to prevent spray) and carefully pressing the end button against a hard flat surface. Use caution to avoid damaging the coupling button.

- b. Depressurize the cylinder hose with female coupling by wrapping a rag around coupling (to prevent spray) and carefully press the internal button using a 3/8" bolt. Be very careful not to damage the internal O-rings. Be sure that both couplings are kept clean at all times.
9. Clean the lower cylinder hose coupling and reconnect to the control box.
10. Connect a spare coupling or remove quick-disconnect from the upper cylinder hose assembly.
11. While holding open hose end over a suitable container, press the UP button until cylinders are fully extended.
12. Reverse the hoses so that the spare fittings are on lower cylinder hose.
13. Be sure to keep reservoir filled with new oil.
14. While holding open hose end over a suitable container, press the DOWN button until cylinders are fully retracted.
15. Repeat steps 10 to 13 until oil coming from disconnected hose is clean. Then reconnect hose couplings to control box.
16. As these procedures are performed, additional oil may need to be added to the reservoir. Perform a final check of oil level with cylinders fully retracted.

## 6 TROUBLESHOOTING

The following chart is intended to assist with troubleshooting your vertical lift. While not all inclusive, the chart outlines the most common causes of a problem and the recommended course of action.



**CAUTION:**

**IF THE PROBLEM WITH THE POWER SUPPLY IS NOT CERTAIN, ALWAYS FOLLOW THE MANUFACTURER’S WARRANTY POLICY BEFORE ANY OTHER REPAIR OR MAINTENANCE IS ATTEMPTED.**

SYMPTOM	CAUSE AND CORRECTIVE ACTION
Hoses cannot be connected.	<p>System is pressurized. Depressurize the hoses as follows:</p> <ol style="list-style-type: none"> <li>a. Depressurize the male fitting by carefully pressing the button on the end of the nipple or by briefly tapping the down switch. Use caution to avoid damaging the nipple button.</li> <li>b. Depressurize the female fitting by tapping the “up” switch briefly, which will depressurize the pump. If necessary, depressurize the female fitting on the hose by carefully pressing the internal button using a 3/8” bolt. Be careful not to damage the internal O-rings. Wrap the fitting with a rag while depressurizing to prevent spray. Keep the connectors clean.</li> </ol>
Battery does not keep a charge.	<p>Check the battery fluid levels, age, and time of last booster charge. The battery must be booster charged at the beginning and end of the season using a 10A charger.</p> <p>Verify solar panel or a/c charger is plugged in correctly.</p> <p>Check the voltage output of the solar panel. Output should be about 14-18 volts when exposed to light.</p> <p>Verify that the polarity (positive or negative) of the solar panel matches the battery’s polarity.</p> <p>Verify that the solar panel gets an adequate amount of light and the lift usage is within the monthly seasonal limits. The solar panel may be mounted up to 50 feet away from the battery if necessary. You may also order a bracket to mount the solar panel on top of the canopy. The remote control should only be drawing about 5 mA, and the pump 20 mA. The solar panel has an output of about 750 mA in direct sunshine.</p>
Battery terminal becomes hot.	Verify cable is clean and tight on battery terminal
Remote control not functioning.	The remote control is designed to stop working if the battery drops below 10 volts to alert the user that the battery is getting low. If the lift operates with the up/down switch in the power supply, but not with the remote, charge the battery using a 10A booster charger.

<b>SYMPTOM</b>	<b>CAUSE AND CORRECTIVE ACTION</b>
Lift is operating properly, but platform raising is either difficult or impossible.	<p>Platform is binding because frame is either not square or not set level in the water—refer to Sections 3.6 and 3.7.</p> <p>One or more wires are broken—refer to Section 5. 2</p> <p>Sheaves binding—inspect/lubricate/replace.</p> <p>One or more cables are excessively worn—replace as required and follow monthly wire rope inspection procedure described in Section 5.2.</p> <p>Load exceeds rated capacity— Reduce load weight as needed.</p> <p>User or dealer installed locking devices are in place—remove these.</p> <p>Auxiliary equipment such as boating hardware is being improperly hung on lift—remove this equipment permanently.</p>
Boat is not lifting level—stern is lifting higher or lower than the bow.	Cradle is not level in the water—Use chain links to adjust level of cradle at cable connection if necessary.
Boat shifts position when operating the lift.	Boat is not properly secured on the lift—failure to properly secure boat can cause equipment damage and/or serious personal injury.
Boat is getting damaged during raising or lowering operations.	One or more bolts are installed improperly--all bolts except those on the bottom parts of the braces must be installed from the inside of the lift.
Remote control range is limited.	Check battery in key chain transmitter. If the range is only limited while in your boat, try holding the transmitter over your head. Proximity to cell phone towers, power lines, and other electromagnetic interference can also reduce remote control range.
Fluid overflows reservoir.	It is normal to see some fluid overflow from the reservoir when the platform is cycled all the way down the first few times.

<b>SYMPTOM</b>	<b>CAUSE AND CORRECTIVE ACTION</b>
Lift stops after a split second.	Battery is low. If the battery is becoming low, the remote control will stop functioning at about 11 volts. The lift can still be operated using the up/down switch in the power supply, but the pump motor will stop and the green solenoid light will shut off if the voltage drops below 9 volts. Charge the battery using a 10A charger.
Power supply is operating properly, but platform raising is either difficult or impossible.	Cradle is binding because cradle frame is either not square or not set level in the water—refer to Section 3.10. Cables in cylinder assembly maybe damaged or sheaves maybe worn.

	<p>Load exceeds rated capacity— reduce load weight as needed.</p> <p>User or dealer installed locking devices are in place—remove these.</p> <p>Auxiliary equipment such as boating hardware is being improperly hung on lift—remove this equipment permanently.</p> <p>Hoses to cylinders are leaking fluid in line, have a poor connection, or are kinked.</p> <p>Hydraulic system malfunctioning—contact your authorized service center.</p>
<p>Cylinders fail to hold the platform in a given position as described in the test procedure of Section 4.2</p>	<p>Check hose connections.</p> <p>Contact your authorized dealer—tampering with the hydraulic system can cause equipment damage that may invalidate your warranty.</p>
<p>Lift does not go down.</p>	<p>Turn the speed control knob counter clockwise. This valve only limits the downward speed of the lift. If that does not solve the problem, check that the black wire is connected to the left coil on the pump, and the yellow wire is on the right coil.</p> <p>Sheaves binding—inspect/lubricate/replace.</p>

## 7 PARTS LISTS

Each reference number or letter in the following parts lists can be matched with the reference number or letter referred to in both the text and illustrations of Chapter 3, Installation and Setup.

### 3641394 HPM SIDE MOUNT BRACKET (4) (8" DIAMETER PILING) KIT

REF #	PART #	QTY	DESCRIPTION
100	3641351	6	HPM PILE SIDE MOUNT BRACKET GALVANIZED
101	5806246	12	WASHER SPILT LOCK 5/8" SS
102	5840103	12	NUT HEX NYLOCK 3/8-16 ALUM
103	5840204	12	WASHER BEVEL 3/8" ALUM
104	5896250	12	HHCS 3/8-16 X 1-3/4" SS
105	5896314	12	HHCS 5/8-11 X 10" SS
106	5896380	12	NUT HEX 5/8-11 SS
107	5896406	12	WASHER SAE 3/8" SS
108	5896415	12	WASHER FLAT USS 5/8" SS
109	3641919	6	NYLON PAD 3/8" X 2" X 9"

### 3641388 HPM TOP MOUNT BRACKET (4) (8" DIAMETER PILING) KIT

REF #	PART #	QTY	DESCRIPTION
200	3641353	4	HPM PILE TOP MOUNT BRACKET GALVANIZED
201	5806244	8	WASHER SPLIT LOCK 1/2" SS
202	5840103	8	NUT HEX NYLOCK 3/8-16 ALUM
203	5840204	8	WASHER BEVEL 3/8" ALUM
204	5894077	8	HHCS 1/2-13 X 10 SS
205	5896250	8	HHCS 3/8-16 X 1-3/4 SS
206	5896379	8	NUT HEX 1/2-13 SS
207	5896406	8	WASHER FLAT SAE 3/8" SS
208	5896410	16	WASHER FLAT USS 1/2" SS
209	3641919	4	NYLON PAD 3/8" X 2" X 9"

3641378 HPM8K-72 CYL ASSY LH 240" CHAN

3641379 HPM8K-72 CYL ASSY RH 240" CHAN

REF #	PART #	QTY	DESCRIPTION
1	3608002	2	VL GLIDE PLATE 1.6-5K
2	3641376	2	HPM SHEAVE W-BUSHING 4.75"OD
3	3641377	3	HPM SHEAVE W-BUSHING 5.25"OD
4	3641381	1	HPM COUNTERBALNCE ASSY
5	3641391	1	HPM SHEAVE BRKT WLDMNT-ROD END-SILVER
6	3641392	1	HPM SHEAVE BRKT WLDMNT-CYL END SILVER
7	3641393	1	HPM LIMIT SWITCH ASSY
8	3641490	1	HPM8K CYL CLEVIS WELDMENT
9	3641594	1	HPM CHAN 6" X 240" LH
10	3641595	1	HPM CHAN 6" X 240" RH
11	3641600	1	HPM COUNTERBALANCE MTG SPACER
12	3641773	1	HPM COVER 66"-CABLE NON CYL SIDE
13	3641774	1	HPM COVER 66"-CABLE CYL SIDE
14	3641776	2	HPM COVER TOP 66"
15	3641788	1	HPM CYL SUPT TUBE 4.75"
16	3641906	1	HPM8-12K CYL SHEAVE PIN
17	3641907	2	HPM8-12K FIXED SHEAVE PIN
18	3641908	1	HPM CA ASSY SS 3/8 X 168"
19	3641909	1	HPM CA ASSY SS 3/8 X 301"
20	3641981	1	HPM8-12K TUBE HYD 3/8"OD-SHORT
21	3641982	1	HPM8-12K-72 TUBE HYD 3/8"OD-LONG
22	5636414	2	ADAPTER 3/4SAEM X 9/16JICM
23	5806222	2	HHCS 5/16-18 X 3/4 CZP
24	5806227	2	HHCS 5/16-18 X 1-3/4 CZP
25	5806241	24	SCREW PH MS 1/4-20X1/2 PHIL SS
26	5806375	4	NUT HEX 5/16-18 CZP
27	5806378	1	NUT HEX 1-1/8 -12 GR5 UNPLATED
28	5806402	4	WASHER FLAT EXT TOOTH 5/16"CZP
29	5840103	4	NUT HEX NYLOCK 3/8-16 ALUM
30	5893100	4	NUT HEX NYLOCK THIN 10-24 SS
31	5894108	6	PIN,COTTER 5/32 X 1-3/4 SS
32	5896171	1	HHCS 1-8 X 6-1/2 SS
33	5896186	2	HHCS 3/4-10 X 6-1/2 SS
34	5896244	4	SCREW FH PH 10-24 X 1" SS
35	5896267	4	HHCS 3/8-16 X 6 SS
36	5896383	1	NUT HEX 1-8 SS
37	5896417	4	WASHER FLAT SAE 3/4" 300 SS
38	5896419	2	WASHER FLAT SAE 1" SS
39	5896420	1	WASHER SPLIT LOCK 1" SS
40	5896421	2	WASHER FLAT USS 1-1/4" SS
41	5897014	2	NUT HEX NYLOCK 3/4-10 SS/WAX
42	6036417	1	CYLINDER 36"STROKE,3"BORE
43	6405101	1	WINCH CABLE STOPPER- RED 3" DIA X 1-3/4"THK

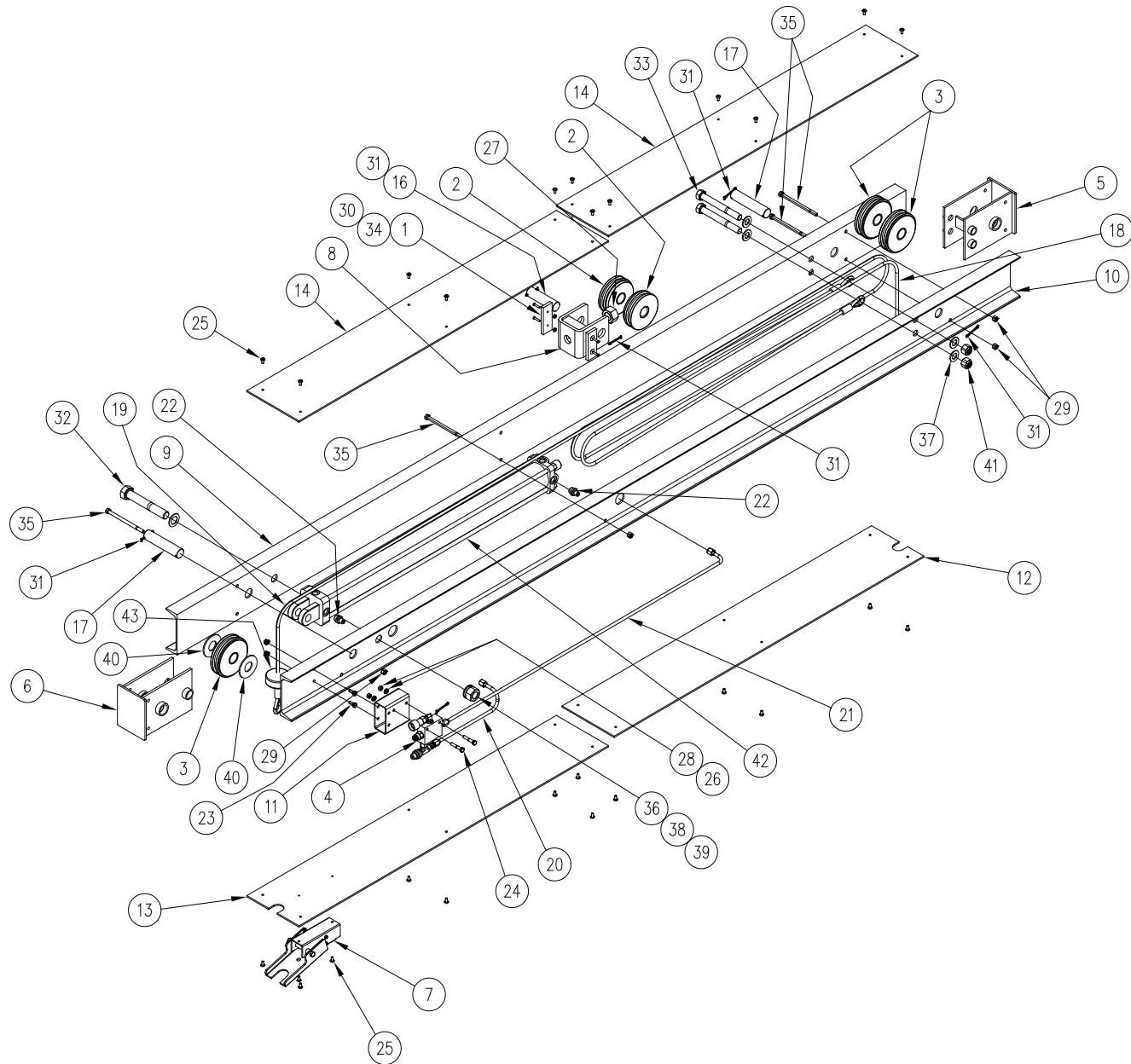


3641396 HPM8K-96 CYL ASSY LH 240" CHAN

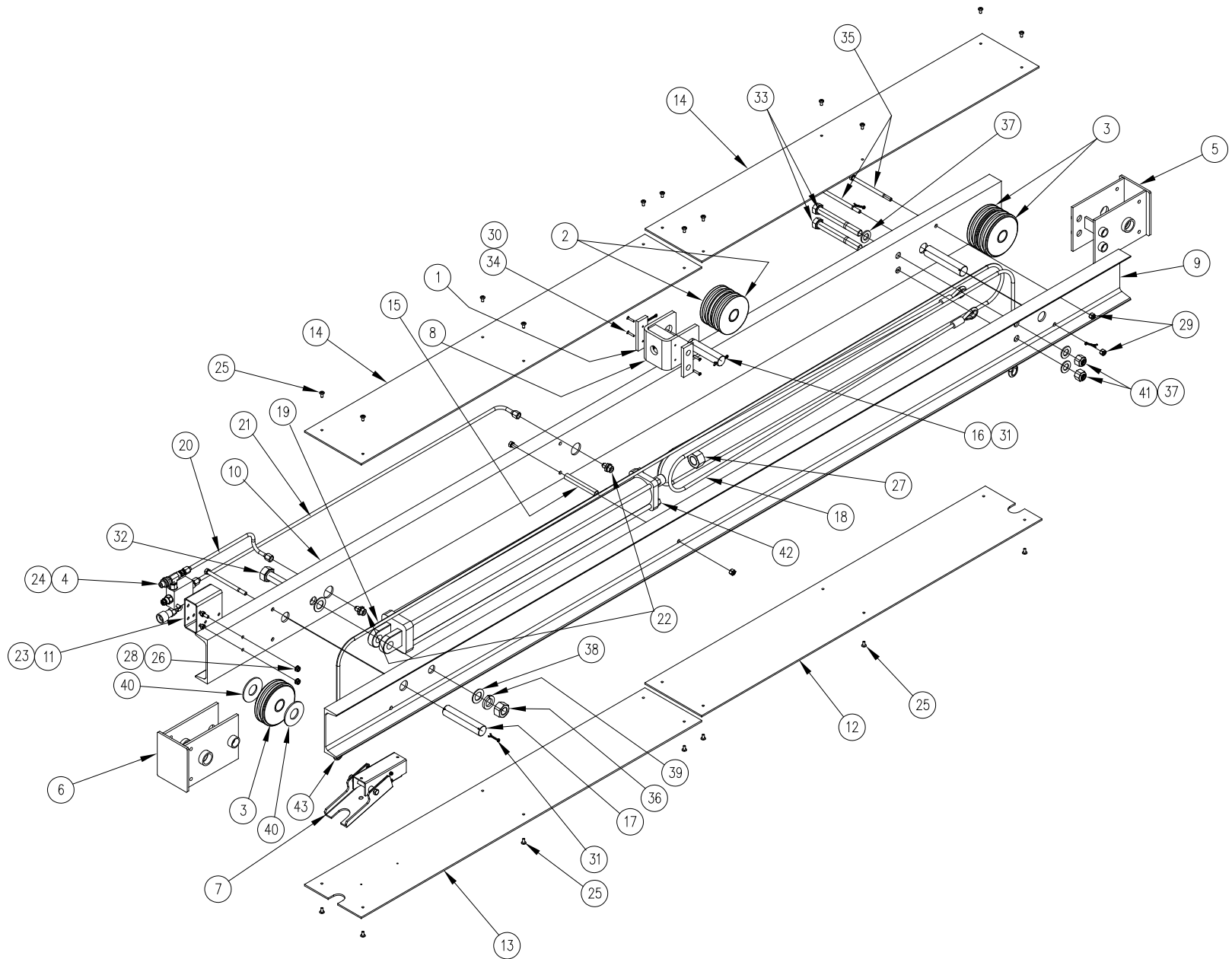
3641397 HPM8K-96 CYL ASSY RH 240" CHAN

REF #	PART #	QTY	DESCRIPTION
1	3608002	2	VL GLIDE PLATE 1.6-5K
2	3641376	2	HPM SHEAVE W-BUSHING 4.75"OD
3	3641377	3	HPM SHEAVE W-BUSHING 5.25"OD
4	3641381	1	HPM COUNTERBALNCE ASSY
5	3641391	1	HPM SHEAVE BRKT WLDMNT-ROD END-SILVER
6	3641392	1	HPM SHEAVE BRKT WLDMNT-CYL END SILVER
7	3641393	1	HPM LIMIT SWITCH ASSY
8	3641490	1	HPM8K CYL CLEVIS WELDMENT
9	3641594	1	HPM CHAN 6" X 240" LH
10	3641595	1	HPM CHAN 6" X 240" RH
11	3641600	1	HPM COUNTERBALANCE MTG SPACER
12	3641773	1	HPM COVER 66"-CABLE NON CYL SIDE
13	3641774	1	HPM COVER 66"-CABLE CYL SIDE
14	3641776	2	HPM COVER TOP 66"
15	3641788	1	HPM CYL SUPT TUBE 4.75"
16	3641906	1	HPM8-12K CYL SHEAVE PIN
17	3641907	2	HPM8-12K FIXED SHEAVE PIN
18	3641913	1	HPM CA ASSY SS 3/8 X 144"
19	3641914	1	HPM CA ASSY SS 3/8 X 277"
20	3641981	1	HPM8-12K TUBE HYD 3/8"OD-SHORT
21	3641983	1	HPM8-12K-96 TUBE HYD 3/8"OD-LONG
22	5636414	2	ADAPTER 3/4SAEM X 9/16JICM
23	5806222	2	HHCS 5/16-18 X 3/4 CZP
24	5806227	2	HHCS 5/16-18 X 1-3/4 CZP
25	5806241	24	SCREW PH MS 1/4-20X1/2 PHIL SS
26	5806375	4	NUT HEX 5/16-18 CZP
27	5806378	1	NUT HEX 1-1/8 -12 GR5 UNPLATED
28	5806402	4	WASHER FLAT EXT TOOTH 5/16"CZP
29	5840103	4	NUT HEX NYLOCK 3/8-16 ALUM
30	5893100	4	NUT HEX NYLOCK THIN 10-24 SS
31	5894108	6	PIN, COTTER 5/32 X 1-3/4 SS
32	5896171	1	HHCS 1-8 X 6-1/2 SS
33	5896186	2	HHCS 3/4-10 X 6-1/2 SS
34	5896244	4	SCREW FH PH 10-24 X 1" SS
35	5896267	4	HHCS 3/8-16 X 6 SS
36	5896383	1	NUT HEX 1-8 SS
37	5896417	4	WASHER FLAT SAE 3/4" 300 SS
38	5896419	2	WASHER FLAT SAE 1" SS
39	5896420	1	WASHER SPLIT LOCK 1" SS
40	5896421	2	WASHER FLAT USS 1-1/4" SS
41	5897014	2	NUT HEX NYLOCK 3/4-10 SS/WAX
42	6036423	1	CYLINDER 36"STROKE,3"BORE
43	6405101	1	WINCH CABLE STOPPER- RED 3" DIA X 1-3/4"THK





**Figure 7-1 Hydraulic Cylinder Assembly HPM8K-LH- exploded view**



**Figure 7-2 Hydraulic Cylinder Assembly HPM8K-RH- exploded view**

## LIMITED PRODUCT WARRANTY

### Reimann & Georger Corporation Marine Products

RGC Marine products, hereafter referred to as the “Manufacturer”, extends this limited warranty to the original purchaser of this product. The original purchaser, hereinafter referred to as the “Buyer”, is defined as the first legal owner of this product other than an authorized distributor or dealer who has bought the product from the Manufacturer for resale to the public. **The Buyer must complete and return the Warranty Registration section of the provided Warranty Card to make this limited warranty effective.**

#### CONSUMER PRODUCT PROVISIONS

**I. ARTICLE I—CONSUMER PRODUCT PROVISIONS: THE FOLLOWING PROVISIONS SHALL BE APPLICABLE IF THIS PRODUCT IS BEING PURCHASED FOR PERSONAL, FAMILY OR HOUSEHOLD PURPOSES.**

**THE CONSUMER PRODUCT PROVISIONS CONTAINED IN THIS ARTICLE I SHALL APPLY UNLESS THIS PRODUCT IS BEING PURCHASED SOLELY FOR COMMERCIAL OR INDUSTRIAL USE, IN WHICH EVENT THE PROVISIONS CONTAINED IN ARTICLE II BELOW SHALL APPLY AND THE PROVISIONS CONTAINED IN THIS ARTICLE I SHALL BE INAPPLICABLE.**

#### **A. 2-YEAR LIMITED WARRANTY**

The Manufacturer warrants to the Buyer that all supplied parts shall be free of defects in material and workmanship for a period of two (2) years from date of original purchase. This limited warranty covers the cost of all parts and labor needed to repair any item that is found to be defective in material and workmanship. Items covered include cables, sheaves, chains, motors, reducers, switches, control panels and ground fault circuit interrupters.

#### **B. 15-YEAR LIMITED WARRANTY ON VL/PL SERIES ALUMINUM FRAME EXTRUSION**

The Manufacturer warrants to the Buyer that the frame and extrusions shall be free of defects in material and workmanship for a period of fifteen (15) years from date of original purchase. This limited warranty covers the cost of all parts and labor needed to repair any item that is found to be defective in material and workmanship.

#### **C. MANUFACTURER’S OBLIGATIONS**

The Manufacturer’s sole obligation under either of these limited warranties is the replacement or repair, at the Manufacturer’s discretion, of parts found to be defective.

#### **D. NO SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES**

**IN NO EVENT SHALL THE MANUFACTURER BE LIABLE TO THE BUYER OR ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL LOSSES OR DAMAGES CONNECTED WITH THE USE OF THE PRODUCT UNDER WARRANTY. SUCH DAMAGES FOR WHICH THE MANUFACTURER SHALL NOT BE RESPONSIBLE INCLUDE, BUT ARE NOT LIMITED TO, LOST TIME AND CONVENIENCE, LOSS OF USE OF THE PRODUCT, THE COST OF A PRODUCT RENTAL, COSTS OF GASOLINE, TELEPHONE, TRAVEL, OR LODGING, THE LOSS OF PERSONAL OR COMMERCIAL PROPERTY, AND THE LOSS OF REVENUE.**

Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

**E. NO LIABILITY IN EXCESS OF PURCHASE PRICE**

**IN NO EVENT SHALL THE MANUFACTURER'S OBLIGATIONS UNDER THIS LIMITED WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT.**

**F. NO EXTENSION OF STATUTE OF LIMITATIONS**

**ANY REPAIRS PERFORMED UNDER EITHER OF THESE WARRANTIES SHALL NOT IN ANY WAY EXTEND THE TWO-YEAR AND FIFTEEN-YEAR STATUTES OF LIMITATIONS CONTAINED IN THIS LIMITED WARRANTY.**

**G. PROCEDURE FOR WARRANTY PERFORMANCE**

If the product fails to perform to the Manufacturer's specifications, the Buyer must contact the dealer from whom the product was purchased. The Buyer must provide the dealer with the applicable model and serial numbers, the date of purchase, and the nature of the problem.

**H. PREAPPROVAL OF LABOR COSTS**

All labor costs related to a dealer's performance of the warranty obligations under this limited warranty must be pre-approved by Reimann & Georger Corp. Marine Products.

**I. NO OTHER EXPRESS WARRANTIES**

**THE MANUFACTURER IS NOT SUBJECT TO ANY EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH ABOVE.**

**J. LIMIT ON DURATION OF IMPLIED WARRANTIES**

**THE DURATION OF ANY IMPLIED WARRANTIES UNDER APPLICABLE STATE LAW RELATING TO THE PURCHASE OF THIS PRODUCT SHALL BE LIMITED TO A PERIOD OF TWO (2) YEARS FROM THE DATE OF PURCHASE.**

Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

**K. QUESTIONS REGARDING LIMITED WARRANTY**

Any questions regarding this limited warranty or the procedure which the consumer should follow in order to obtain performance of any warranty obligation may be addressed to either the dealer from whom this product is purchased or to Reimann & Georger Corp. Marine Products, P.O. Box 681, Buffalo, NY 14240.

**L. EXCLUSIONS FROM LIMITED WARRANTY. THIS LIMITED WARRANTY DOES NOT COVER ANY OF THE FOLLOWING:**

1. Equipment which has been abused, damaged, used beyond rated capacity, or which is damaged or has defects caused by repairs or service completed by persons other than authorized service personnel.
2. Costs of repairing damage caused by environmental factors which include, but are not limited to, airborne fallout, chemicals, tree sap, salt, ocean spray, and water hazards.
3. Damage caused by acts of God which include, but are not limited to, hailstorms, windstorms, tornadoes, sandstorms, lightning, floods, and earthquakes.

4. Damage under conditions caused by fire or accident, by abuse or negligence, by improper installation, by misuse, by incorrect operation, by “normal wear and tear”, by improper adjustment or alteration, by alterations not done by the Manufacturer, or by failure of product parts from such alterations.
5. Costs of repairing damage caused by poor or improper maintenance, costs of normally scheduled maintenance, or the cost of replacing any parts unless done as the result of a repair covered by your two-year limited warranty.
6. Costs of modifying the product in any way once delivered to the Buyer, even if such modifications were added as a production change on other products made after the Buyer’s product was built.

**M. RIGHT TO MODIFY PRODUCT**

The Manufacturer has the right to modify this product at any time without incurring any obligation to make the same or similar modifications on products previously purchased.

**N. NO AUTHORITY TO ALTER WARRANTY**

No agent, representative, distributor or dealer has any authority to alter the terms of this warranty in any way.

**O. SPECIFIC LEGAL RIGHTS**

This warranty gives you specific legal rights and you may also have other rights which vary from State to State.

## **COMMERCIAL PRODUCT PROVISIONS**

**II. ARTICLE II—COMMERCIAL PRODUCT PROVISIONS: THE FOLLOWING PROVISIONS SHALL BE APPLICABLE ONLY IF THIS PRODUCT IS BEING PURCHASED SOLELY FOR COMMERCIAL OR INDUSTRIAL USE. IF THIS PRODUCT IS BEING PURCHASED FOR PERSONAL, FAMILY OR HOUSEHOLD PURPOSES, THE PROVISIONS CONTAINED IN THIS ARTICLE II SHALL NOT BE APPLICABLE AND THE PROVISIONS CONTAINED IN ARTICLE I ABOVE SHALL APPLY.**

### **A. 1-YEAR LIMITED WARRANTY**

The Manufacturer warrants to the Buyer that all supplied parts shall be free of defects in material and workmanship for a period of one (1) year from date of original purchase. This limited warranty covers the cost of all parts and labor needed to repair any item that is found to be defective in material and workmanship. Items covered include cables, sheaves, chains, motors, reducers, switches, control panels and ground fault circuit interrupters.

### **B. 5-YEAR LIMITED WARRANTY ON VL/PL SERIES ALUMINUM FRAME EXTRUSION**

The Manufacturer warrants to the Buyer that the frame and extrusions shall be free of defects in material and workmanship for a period of five (5) years from date of original purchase. This limited warranty covers the cost of all parts and labor needed to repair any item that is found to be defective in material and workmanship.

### **C. MANUFACTURER'S OBLIGATIONS**

The Manufacturer's sole obligation under either of these limited warranties is the replacement or repair, at the Manufacturer's discretion, of parts found to be defective.

### **D. NO SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES**

**IN NO EVENT SHALL THE MANUFACTURER BE LIABLE TO THE BUYER OR ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL LOSSES OR DAMAGES CONNECTED WITH THE USE OF THE PRODUCT UNDER WARRANTY. SUCH DAMAGES FOR WHICH THE MANUFACTURER SHALL NOT BE RESPONSIBLE INCLUDE, BUT ARE NOT LIMITED TO, LOST TIME AND CONVENIENCE, LOSS OF USE OF THE PRODUCT, THE COST OF A PRODUCT RENTAL, COSTS OF GASOLINE, TELEPHONE, TRAVEL, OR LODGING, THE LOSS OF PERSONAL OR COMMERCIAL PROPERTY, AND THE LOSS OF REVENUE.**

### **E. NO LIABILITY IN EXCESS OF PURCHASE PRICE**

**IN NO EVENT SHALL THE MANUFACTURER'S OBLIGATIONS UNDER THIS LIMITED WARRANTY EXCEED THE PURCHASE PRICE OF THE PRODUCT.**

### **F. NO EXTENSION OF STATUTE OF LIMITATIONS**

**ANY REPAIRS PERFORMED UNDER EITHER OF THESE WARRANTIES SHALL NOT IN ANY WAY EXTEND THE RESPECTIVE STATUTES OF LIMITATIONS CONTAINED IN THIS LIMITED WARRANTY.**

### **G. WAIVER OF OTHER WARRANTIES**

**THESE EXPRESS WARRANTIES ARE IN LIEU OF AND EXCLUDE ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**



## **H. PROCEDURE FOR WARRANTY PERFORMANCE**

If the product fails to perform to the Manufacturer's specifications, the Buyer must contact the dealer from whom the product was purchased. The Buyer must provide the dealer with the applicable model and serial numbers, the date of purchase, and the nature of the problem.

## **I. PREAPPROVAL OF LABOR COSTS**

All labor costs related to a dealer's performance of the warranty obligations under this limited warranty must be pre-approved by Reimann & Georger Corp. Marine Products.

## **J. EXCLUSIONS FROM WARRANTY. THIS LIMITED WARRANTY DOES NOT COVER ANY OF THE FOLLOWING:**

1. Equipment which has been abused, damaged, used beyond rated capacity, or which is damaged or has defects caused by repairs or service completed by persons other than authorized service personnel.
2. Costs of repairing damage caused by environmental factors which include, but are not limited to, airborne fallout, chemicals, tree sap, salt, ocean spray, and water hazards.
3. Damage caused by acts of God which include, but are not limited to, hailstorms, windstorms, tornadoes, sandstorms, lightning, floods, and earthquakes.
4. Damage under conditions caused by fire or accident, by abuse or negligence, by improper installation, by misuse, by incorrect operation, by "normal wear and tear", by improper adjustment or alteration, by alterations not done by the Manufacturer, or by failure of product parts from such alterations.
5. Costs of repairing damage caused by poor or improper maintenance, costs of normally scheduled maintenance, or the cost of replacing any parts unless done as the result of a repair covered by your one-year limited warranty.
6. Costs of modifying the product in any way once delivered to the Buyer, even if such modifications were added as a production change on other products made after the Buyer's product was built.

## **K. RIGHT TO MODIFY PRODUCT**

The Manufacturer has the right to modify this product at any time without incurring any obligation to make the same or similar modifications on products previously purchased.

## **L. NO AUTHORITY TO ALTER WARRANTY**

No agent, representative, distributor, or dealer has any authority to alter the terms of this warranty in any way.

## **M. SPECIFIC LEGAL RIGHTS**

This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.