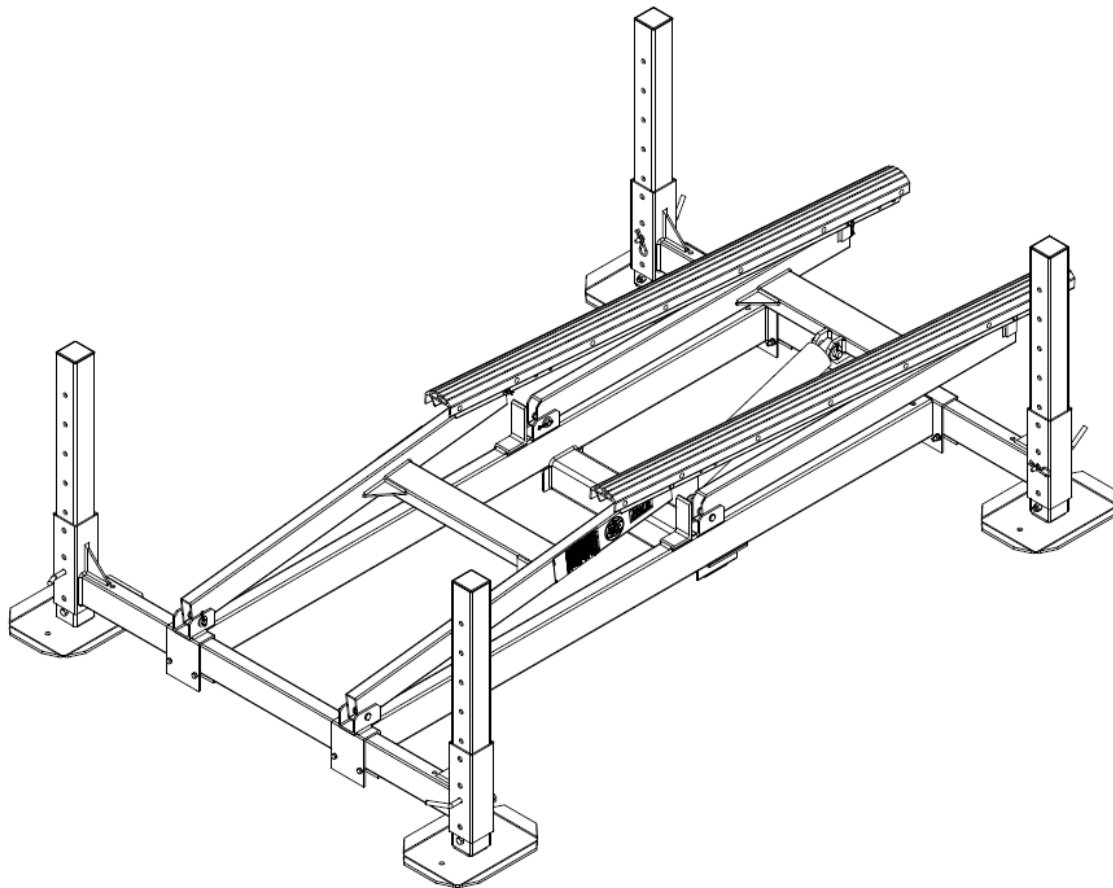




# HL20058, HL20065 HYDRAULIC BOAT LIFT INSTRUCTIONS

(Applies to P/N's 4108800, 4108803, 4108806)



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# 1. SAFETY

## 1.1. INTRODUCTION

Your Reimann & Georger Corporation Marine Products Hydraulic 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.**

## 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 that, 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.

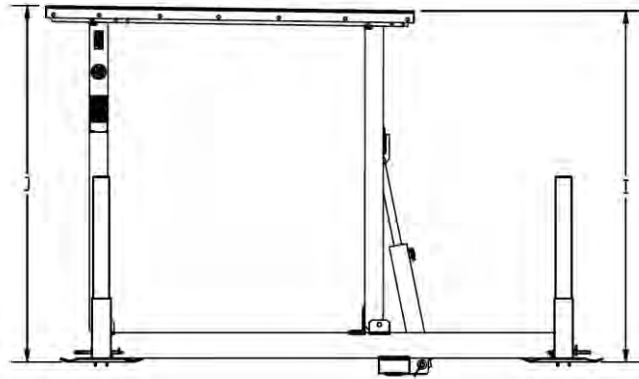
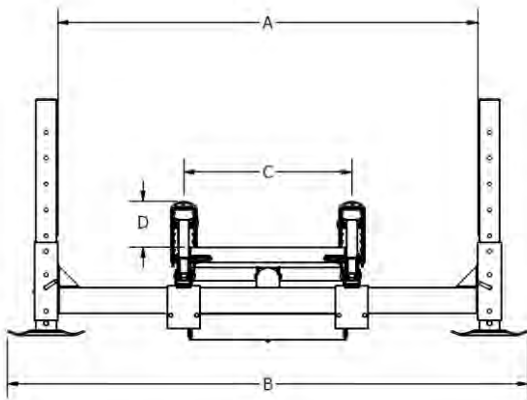
## **1.5. INSTALLATION SAFETY**

1. Do not weld or otherwise modify the lift. Such alterations may weaken the structural integrity of the lift and void the warranty.
2. All lifting accessories such as pontoon brackets, pivoting bunks, and guide-ons, must be commercially manufactured, and be properly maintained and installed.
3. Ensure that the frame is level and square.
4. 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.

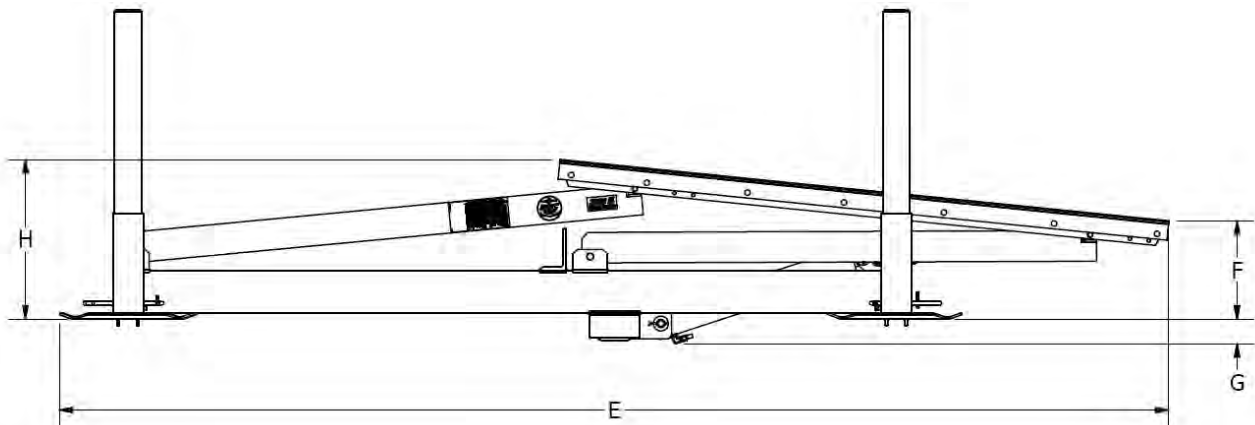
## **1.6. OPERATING SAFETY**

1. Before allowing anyone to operate the lift, be certain they fully understand the proper operating procedure.
2. Completely remove any user or dealer installed locking devices before operating the lift.
3. Follow the Pre-Lifting Checklist before operating.
4. Ensure the center of gravity of the boat is between forward load tube and rear foot plates.
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 stored with the lift in the over center position.
7. 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.
8. Keep people and pets clear during operation of the lift.
9. Keep all clothing and all body parts clear of moving parts.
10. Never adjust or service the lift during operation or while connected to the control box.
11. Do not adjust the components in the control box while operating the lift.
12. Completely lower the platform before performing any type of maintenance or repair.
13. Never allow anybody to work in or on the boat when it is suspended above the water on the lift.
14. 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.
15. Never operate the remote control or hydraulic power unit when connecting or disconnecting hydraulic hoses.
16. Do not operate the lift when under the influence of drugs, alcohol, or medication.

## 2. SPECIFICATIONS



Model	ID	HL20058-48	HL20065-48	HL20065-60
Part Number		4108803	4108806	4108800
Weight Capacity		2000 lb	2000 lb	2000 lb
Maximum Beam	A	58"	65"	65"
Overall Width (incl feet)	B	73 ½"	80 ½"	80 ½"
Width at Bunks	C	26"	26"	26"
Keel Clearance from Bunks	D	6"	6"	6"
Overall Length	E	119 ½"	119 ½"	131 ½"
Bunk height, lowered, at rear of lift	F	13 1/8"	13 1/8"	11 ½"
Cylinder depth below shallow water feet position	G	3"	3"	3"
Bunk height, lowered, at front of lift	H	18 5/8"	18 5/8"	18 ¾"
Lifting range, rear of lift	(I-F)	44"	44"	57 ½"
Lifting range, front of lift	(J-H)	39"	39"	51"
Approximate lifting time at full load		45 sec up, 25 sec down	45 sec up, 25 sec down	45 sec up, 25 sec down
Shipping Weight less power unit		300 lb	300 lb	300 lb



All lifts include 72" aluminum/vinyl bunks, stainless steel hardware, and a single hydraulic cylinder.

## 2.1. NAMEPLATE AND SERIAL NUMBER TAG

It is important to identify your lift completely and accurately whenever ordering spare parts or requesting assistance in service. There are two product nameplates for each lift; one nameplate located at the top of the Right-Hand Forward Lift Arm and another nameplate in the control box. Each label shows the model and serial numbers and capacity rating. The lift label should appear as the sample nameplate shown in Figure 2-1. Record lift information from both nameplates below for future reference.

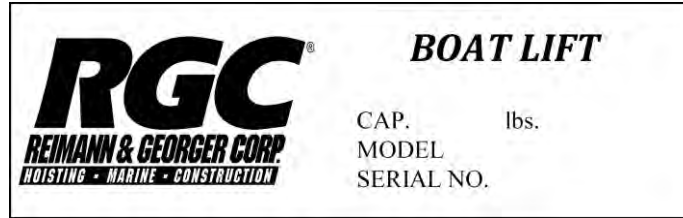


Figure 2-1 Typical Product Nameplate

### HYDRAULIC LIFT NAMEPLATE INFORMATION

MODEL \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

CAPACITY RATING \_\_\_\_\_

### CONTROL BOX NAMEPLATE INFORMATION

MODEL \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

CAPACITY RATING \_\_\_\_\_

## 2.2. REQUIRED ACCESSORIES

1. **Extension Legs**—Adjustable legs available in pairs. Standard lengths are 3' or 5'. Choose the length that corresponds to your water depth and desired lift height at the front and rear of the lift.
2. **Control Box** — Contains the remote control receiver, a 12V battery, and the hydraulic pump that powers the boat lift.
3. **Control Box Charger** – An AC charger, solar panel (with solar panel mount and solar charge controller), or other method of keeping the 12V battery charged is required.

## 2.3. OPTIONAL EQUIPMENT

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. **Guide Posts (pair)**—Vertical guide posts make entering the lift easy in various water conditions.
2. **Underwater or dock Lights**—Remote controlled waterproof lights available that can be mounted to the lift frame and control box lighting for greater nighttime visibility.
3. **Hose Extensions**—Enables remote installation of the hydraulic control box. Available in lengths of 5', 12', and 20'.

### 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 shall be commercially manufactured, and be properly maintained and installed. Consult the manufacturer's separate instructions provided for these accessories.

#### 3.2. Prior to Setup

1. This product has been supplied with stainless steel hardware to protect against a harsh marine environment and provide outstanding performance. Due to the chemistry and surface condition of stainless steel, there is a natural tendency for the hardware to "gall, lock up, or seize" during assembly. To prevent this from occurring, it is **strongly recommended** that the anti-seize supplied in the hardware bag be applied to the mating surfaces of all stainless steel fasteners before assembly. Lubricants containing molybdenum disulfide, graphite, mica or talc may also be used.



**CAUTION:**

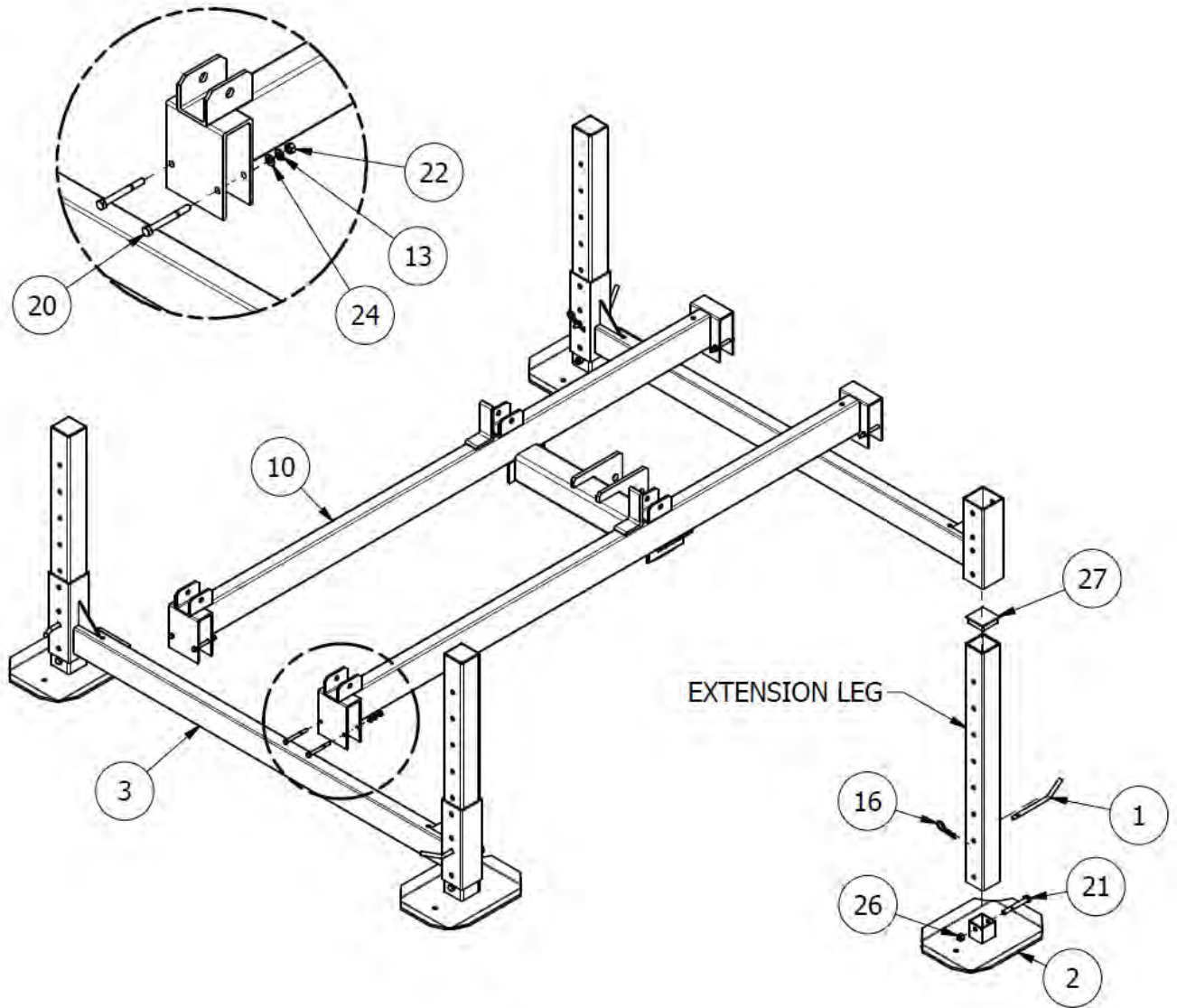
**DO NOT EXCEED THE MAXIMUM TORQUE RATING ON ALL BOLTS OF 20 FT-LBS.**



**WARNING:**

**FAILURE TO APPLY A SUITABLE LUBRICANT TO THE MATING SURFACES OF STAINLESS STEEL THREADED FASTENERS MAY CAUSE GALLING AND/OR SEIZING OF ASSEMBLY.**

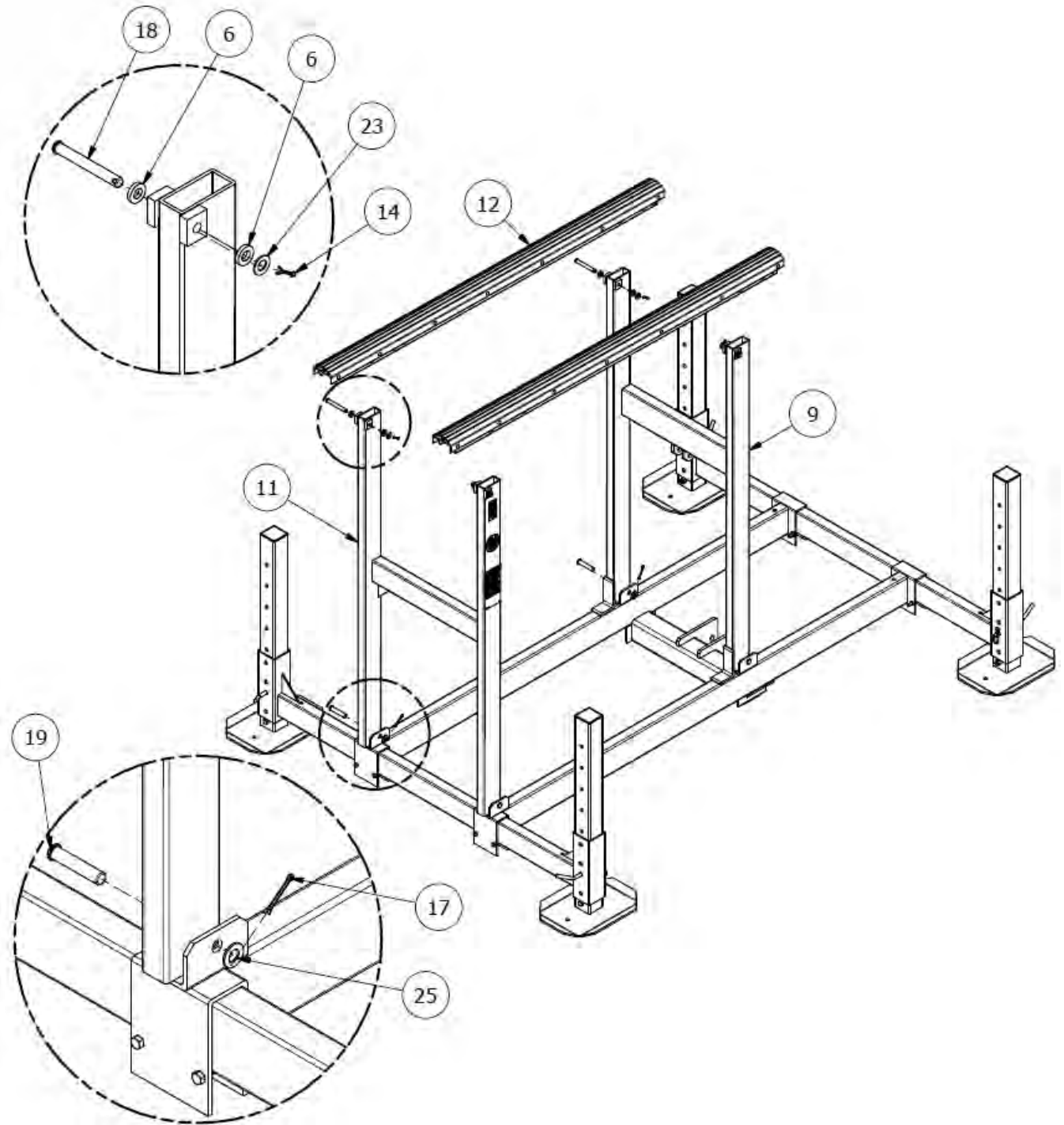
### 3.3. Leg & Main Frame Assembly



1. At each corner, attach extension leg to foot plate (2) as shown. Install cap (27). Slide extension leg to required height in leg (3) and secure with leg pin (1). Ensure each leg sits level.
  - a. For very shallow water applications: A 12" length of extension leg can be used. In this case, secure foot plate (2) and extension leg to leg (3) with leg pin (1), omitting nut (26) and bolt (21). Note, the main frame mounting ears and cylinder cross tube will be slightly lower than the feet.
2. Install main frame (10) on both legs (3).
  - Main frame weighs approximately 80 lbs and will require at least two people to lift.
  - To center main frame on leg (3), position the outside edge of the main frame 17" from the inside of the leg pocket (13½" on 58" wide models).
  - Secure main frame with hardware (13, 20, 22, 24) as shown.



### 3.4. Liftarm Installation



1. Position rear liftarm (9) above the cylinder cross tube on the main frame in the orientation as shown. Secure to main frame with pin (19), stainless washer (25), and cotter pin (17).
2. Position front liftarm (11) at the end of the main frame, in the orientation shown. Secure to main frame with pin (19), stainless washer (25), and cotter pin (17).
3. Secure bunks (12) to liftarms (9, 11) using pin (18), stainless washer (23), and cotter pin (14). Capture nylon washer (6) between bunk and liftarm (eight places). Spread all cotter pins.



### 3.6. Operating Position

The lift may be assembled on land and moved to the operating position. The lift may be removed from the waterway seasonally or for maintenance and returned to the operating position. Whenever the lift is newly placed in the operating position, ensure that the lift is sitting level left/right as well as front/rear. After operating the lift fully loaded, and several weeks after the lift has been operating, check for level again in case of settling.

### 3.7. Connecting Hydraulic Power Supply

1. Before making any hydraulic connections, 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.



#### **WARNING:**

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

2. Wipe the mating surfaces of the hose couplings as well as the control box couplings with a clean rag prior to making connection.
3. Insert the hoses through the flexible cable boot in the back of the control box. Connect the hose couplings.
4. If the quick connect fittings are difficult to attach, relieve some of the pressure in the system by pushing in on the tip of the male hose connector. Pressing the tip against a clean hard surface is suggested. Use caution not to damage the fitting. This will release a small amount of fluid, which is acceptable. Once the pressure has been released, you should be able to connect both hoses.



#### **WARNING:**

**ENSURE HYDRAULIC HOSES ARE PROPERLY CONNECTED AND IN GOOD CONDITION.**

6. Ensure that the hydraulic fluid supply is adequate.
7. Attach the red battery lead to the positive battery terminal, and the black lead to the negative terminal. Tighten each wing nut with a pair of pliers, as even a slightly loose connection can cause the battery terminals to heat up. Keep battery terminals clean with a corrosion protective coating.



#### **WARNING:**

**FOLLOW THE SAME SAFETY RULES WHEN WORKING INSIDE THE POWER SUPPLY 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.**

9. Verify that the system is switched “on” using the on/off switch located inside the power supply box on the side of the electrical control box.
10. Install any solar panels and/or battery chargers, following the instructions supplied with those accessories.

## 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. Ensure that all bolts and nuts are fastened securely prior to operation.
4. Ensure that the frame is square and that the lift sits level. (see Sec. 3.11)



#### **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 ensure 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. Ensure 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 bunks should move up and down smoothly without excessive stress or squeaking. If there is excessive squeaking or binding, check that all pivot pins are properly lubricated.
3. After cycling the lift a couple of times, inspect all hardware to ensure that they are still secure and tight. Also test the remote control and underwater lighting system. Ensure the hydraulic fluid level in pump reservoir remains adequate.
4. Contact your authorized dealer if the hydraulic system fails to perform as described in this section. Do NOT tamper with either system.

### 4.3. RAISING AND LOWERING THE BOAT

1. Position the boat so that the boat's center of gravity is between forward and rear support legs, and centered between the front and rear liftarms.
2. Raise the platform until the boat is supported on the bunks.



#### **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. Ensure 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.
6. Remove the boat from the lift and check to see that the lift is still level. If not, the legs will have to be re-adjusted.



#### **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.**

7. Two weeks after installation, check to see that the lift is still level, as it may have settled over time. Readjust the legs as described above and repeat this inspection and adjustment procedure at the frequency found necessary.

### 4.4. 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.
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. When storing the boat, the platform must be in the upright over center gravity lock position for maximum safety. The over center position will prevent the boat from lowering if any hydraulic leak occurs.
  - b. Position the boat on the platform so that the boat's center-of-gravity is between the front lift arm and the rear foot plates when in the down position.
  - c. 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. 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.**



**WARNING:**

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

3. Immediately replace any components found to be defective.



**CAUTION:**

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

4. Do not weld or otherwise modify the lift. Such alterations may weaken the structural integrity of the lift and invalidate your warranty.

## 5.2. 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. Clean cylinder rods.
3. Check that all the pivot 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:
  - c. 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.



### **WARNING:**

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

- d. Replace a damaged line, fitting or hose immediately. Never repair the part.

## 5.3. STORAGE PROCEDURE



### **CAUTION:**

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

1. Remove the lift from the waterway for the season before ice forms on the waterway.
2. Wipe cylinder rods before storing hydraulic lift at the end of the season.
3. Disconnect and store battery fully charged to prevent from freezing.
4. Disconnect and store hydraulic cylinders, hydraulic hoses, and control box in a warm dry area if temperatures below minus 20 degrees F are expected.
5. Refer to control box manual for additional information about hydraulic system maintenance.

## 6. TROUBLESHOOTING

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

Note: Disassembling the power supply may invalidate its warranty. Consult manufacturer's warranty before attempting any repair or maintenance.

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 AC 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 11 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.
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.
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,



	<p>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.</p>
<p>Power supply is operating properly, but platform raising is either difficult or impossible.</p>	<p>Platform is binding because frame is either not square or not set level in the water—refer to Chapter 3.</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> <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>If that does not solve the problem, check that the green wire is connected to the down coil on the pump, and the yellow wire is on the up coil.</p>
<p>Lowest platform position is too high or low relative to the water.</p>	<p>Connections between the vertical and adjustable legs need readjusting as described in Chapter 3.</p>
<p>Boat is not lifting level—stern is lifting higher or lower than the bow.</p>	<p>Frame is not level in the water—relocate pin connections between the adjustable and vertical legs.</p>
<p>Boat shifts position when operating the lift.</p>	<p>Boat is not properly secured on the lift—failure to properly secure boat can cause equipment damage and/or serious personal injury.</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 Section 6.

### 7.1. HL2K Boat Lift

REF #	DESCRIPTION	QTY	PART NUMBER
1	HL/VL10K LEG PIN 4"	4	4100505
2	HL FOOT PLATE 12X16-FORMED SQ, (2&3-3/16)	4	4107534
3	HL1.75K-HL2K LEG ASSY WLDMT 67.5	2	4107565 (4107586 on HL20058)
4	PIN, CLEVIS 7/8 X 4-1/8 SS	1	4107913
5	HL CLEVIS PIN 7/8X7-1/16 SS	1	4107919
6	HL A/V BUNK WASHER 1 OD X 3/16	8	4107946
7	HL CYL SPACER 2"X29/32"X3/16"	2	4107949
8	HL2K CYL & SS HOSE ASSY	1	4108809
9	HL2K REAR LIFTARM WLDMT 60"	1	4108821 (4108824 on 48" models)
10	HL2K MAIN FRAME WLDMT	1	4108827
11	HL2K(60") FRONT LIFTARM ASSY	1	4108896 (4108830 on 48" models)
12	HL1.75K-HL2K A/V BUNK ASSY 72" BLACK	2	4197401
13	WASHER SPLIT LOCK 3/8 SS	8	5806243
14	PIN,COTTER 1/8 X 1 SS	4	5893501
15	WASHER FLAT SAE 7/8 300 SS	4	5893625
16	PIN, HAIR COTTER 5/8-7/8 SHAFT	4	5893781
17	PIN,COTTER 5/32 X 1-3/4 SS	8	5894108
18	PIN, CLEVIS 1/2 X 4 SS	4	5894112
19	PIN, CLEVIS 5/8 X 3 SS	4	5894113
20	HHCS 3/8-16 X 3-1/2 SS	8	5896257
21	HHCS 1/2-13 X 4 SS	4	5896292
22	NUT HEX 3/8-16 SS	8	5896377
23	WASHER FLAT SAE 1/2 SS	4	5896400
24	WASHER FLAT SAE 3/8 SS	8	5896406
25	WASHER FLAT SAE 5/8 SS	4	5896414
26	NUT HEX NYLOCK 1/2-13 SS	4	5897018
27	3" SQUARE PLASTIC CAP	4	6436105

### 7.2. 4108809 Cylinder & Hose Assembly Components

REF #	DESCRIPTION	QTY	PART NUMBER
	HOSE ASSY 100R14 20'X1/4" JIC-4 SWIV X 1/4NPT SS	2	4107977
	ADAPTER 90DSS9/16SAEMX7/16JICM	2	5694101
	CYLINDER ALUM BODY 15-7/8"STROKE,3"BORE	1	6041071
	COUPLING 1/4 NPT FEMALE	1	6041364
	COUPLING 1/4 NPT MALE	1	6041365

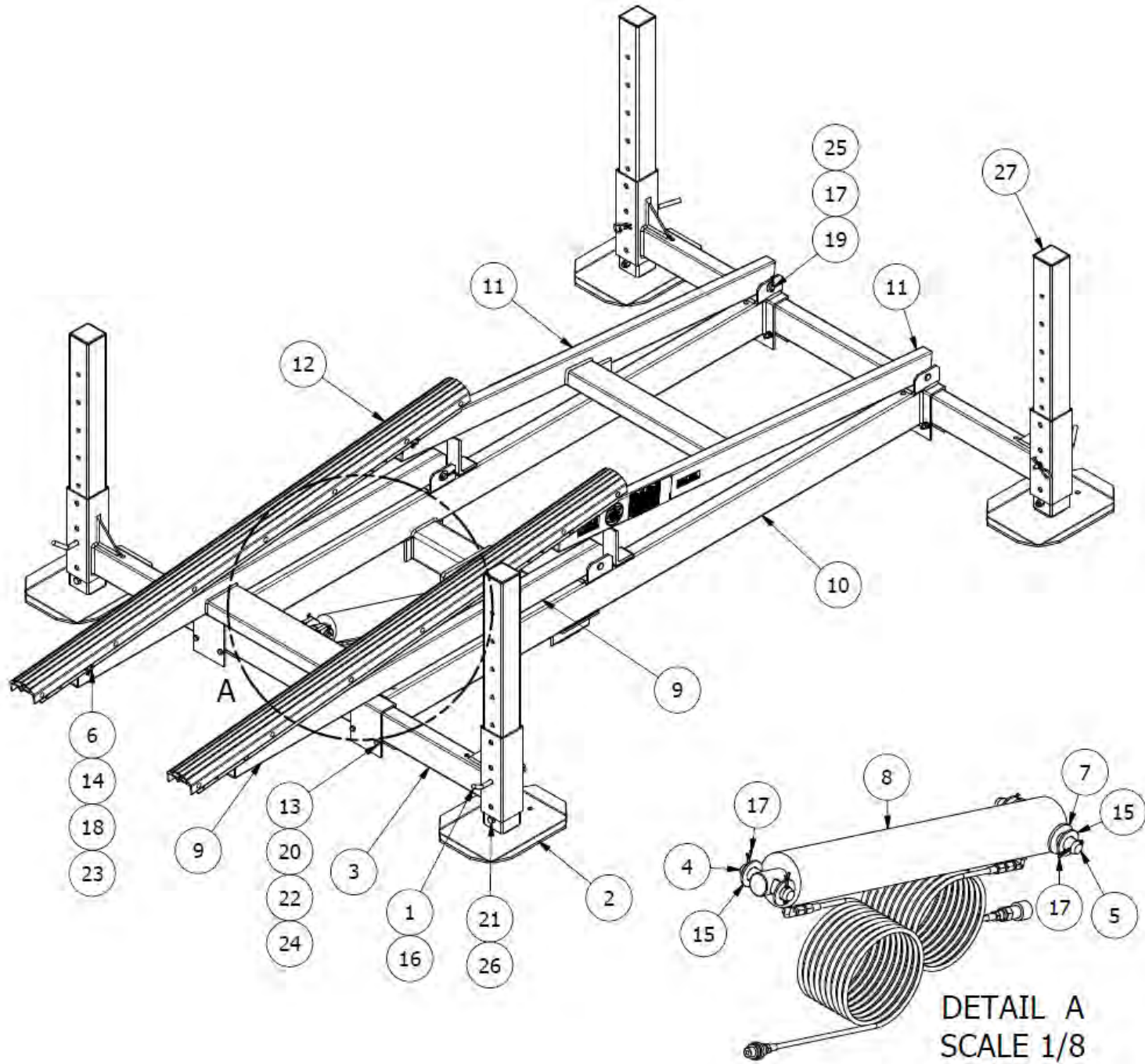


Figure 7-2: Complete HL Hydraulic Lift Assembly

# LIMITED PRODUCT WARRANTY

Reimann & Georger Corporation

Marine Products

RGC Marine products, hereafter referred to as the “Manufacturer”, extend 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. 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 hydraulic unit, cylinders, hoses, bearings and remote control.

### **B. 15-YEAR LIMITED WARRANTY ON HL 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 ONE-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 ONE (1) YEAR 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 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.

**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 hydraulic unit, cylinders, hoses, bearings and remote control.

**B. 5-YEAR LIMITED WARRANTY ON HL 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 OF 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.