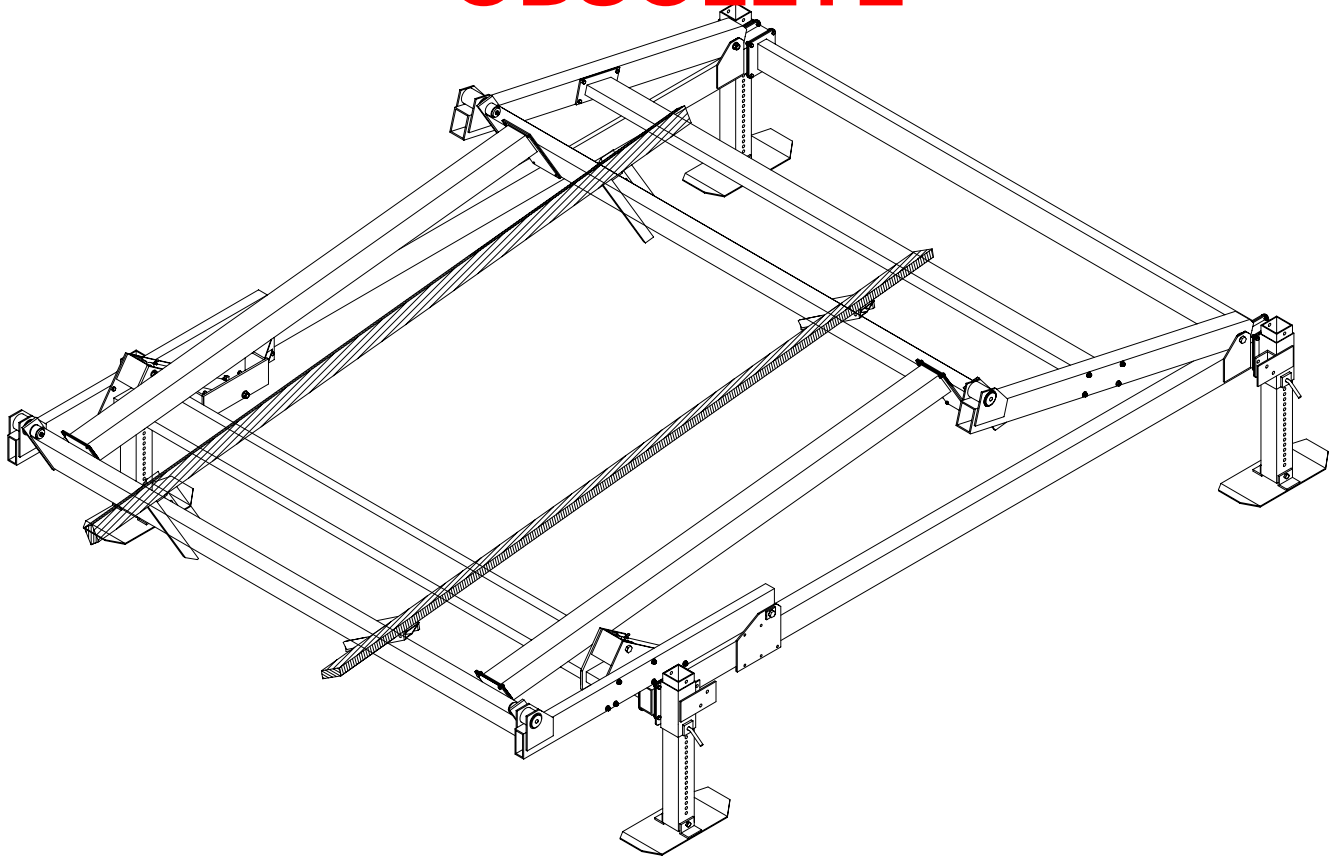




HL HYDRAULIC BOAT LIFT INSTRUCTIONS

OBSOLETE



REIMANN & GEORGER CORPORATION
MARINE PRODUCTS
P/N 6114100

BUFFALO, NY
06/14/06

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.

- Insure the lift installation will clear all power lines and obstructions above and below the water line.
- Insure all structural members of the lift are free of defects and damage that may affect the integrity.
- Insure the frame and platform fastenings are tight.
- Insure the leg pins connect the bottom frame assembly to the adjustable legs. Insure the leg height has been properly adjusted for the lowest platform position relative to the water.
- Insure the frame is square and the lift is sitting level.
- Insure hydraulic hoses are properly connected and in good condition.
- 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.
- Verify battery cable is clean and tight on battery terminal.
- Verify that the polarity (positive or negative) of the solar panel matches the battery's polarity.
- Verify solar panel or a/c charger is plugged in correctly.
- Verify that the solar panel is getting an adequate amount of light.
- Check the voltage output of the solar panel.
- Insure that any user or dealer installed locking devices have been removed before operating the lift.
- Insure that no auxiliary equipment such as boating hardware is being hung on the lift.
- Insure the lift is not being used beyond its rated capacity.
- Insure the boat is properly positioned and secured on the lift before doing any raising or lowering.
- Insure any drain plug is in place on the boat before launching.
- Operate the lift first without, and then with, your boat on the platform to test the operation of both the lift and the power supply.
- When using a remote transmitter, insure you have a clear visual path for safety and optimum operation.

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. Insure 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

2.1 TECHNICAL DATA

Model	HL50116	HL50116XL	HL50124	HL50124XL	HL70124	HL70124XL
Weight Capacity	5000 lbs.	5000 lbs.	5000 lbs.	5000 lbs.	7000 lbs.	7000 lbs.
Maximum Beam	116"	116"	124"	124"	124"	124"
Lifting Height	48"	60"	48"	60"	48"	60"
Overall Width (Including Feet)	122"	122"	130"	130"	130"	130"
Overall Length (Including Feet)	152"	174.5"	152"	174.5"	158"	174.5"
12' Full Length Pivot Bunks	Std.	Std.	Std.	Std.	Std.	Std.
Stainless Steel Hardware	Std.	Std.	Std.	Std.	Std.	Std.
Adjustable Legs	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.
Hydraulic cylinders (2)	Std.	Std.	Std.	Std.	Std.	Std.
Control Box with Hydraulic Power Unit, Solar Panel and Remote Control Unit	Std.	Std.	Std.	Std.	Std.	Std.
Control Box with Hydraulic Power Unit, Solar Panel, Remote Control Unit, and AC Charger	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.

2.2 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 information from both nameplates for future reference.

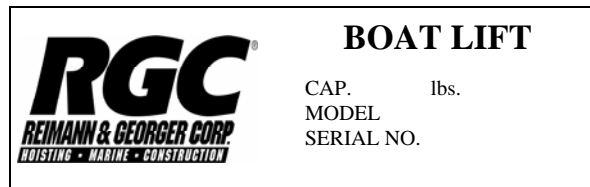


Figure 2-1.
Typical Product Nameplate

HYDRAULIC LIFT NAMEPLATE INFORMATION

MODEL _____

SERIAL NUMBER _____

CAPACITY RATING _____

CONTROL BOX NAMEPLATE INFORMATION

MODEL _____

SERIAL NUMBER _____

CAPACITY RATING _____

2.3 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. **Canopies**—Boats tucked neatly under the heavy duty canopy are protected from the elements, reducing the need for boat coverings. Various canopy sizes and colors are available.
2. **Full Length Guide-On**—Cushioned guide-ons make entering the lift easy in various water conditions.
3. **Underwater Lights**—Remote controlled waterproof lights that can be mounted to the load tube and control box for greater nighttime visibility.
4. **Motor Stop**—Assists in positioning boat on the lift for balanced lifting.
5. **Pontoon Deck Brackets**—These brackets are designed to lift pontoon boats from under the deck. The vertical leg bumper kit is included which supplies carpeted side bumpers. Wood for bunks is not supplied.
6. **Pontoon Cradles**—Cradle brackets designed for lifting pontoon boats from under the pontoons. The vertical leg bumper kit is included which supplies carpeted side bumpers. Wood for bunks is not supplied.
7. **Extension Legs**—Adjustable legs available in pairs with bracing. Standard lengths are 29", 4', 6', 8', and 10'.
8. **Control Box Shelf**—Provides a convenient and safe storage place for the power supply.
9. **Hose Extensions**—Enable operation of the power supply when at an extended distance from the lift.
10. **AC Charger**—Provides an additional method of recharging 12volt DC battery. Compensating for either high usage of boat lift, or insufficient solar energy to recharge battery completely.
11. **Wheel Kit**—Enables boat lift to be rolled in and out of the water for off-season storage on dry land.

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 pontoon brackets, pivoting bunks, and guide-ons 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. The assembly instructions refer to the placement of components in terms of forward, rear, right-hand and left-hand. The rear of the lift corresponds to the rear of the boat. The rear is also where the cylinders are placed.
2. In choosing a place to assemble the lift, keep in mind the final placement of the lift. The lift may be placed on either side of your dock and the boat must enter the rear of the lift.
3. Place one bag of hardware at each corner, ideally in a tray or bin.
4. 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 **highly 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 POCKET ASSEMBLY

1. Refer to Figure 3-1. Fasten an “A” Leg Pocket Assembly #20 onto “A” side frame mounting flange and a “B” Leg Pocket Assembly #22 onto “B” side frame mounting flange of Right Hand Side Frame #12 using hardware E and K. Repeat this procedure for Left Hand Side Frame #4, refer to Figure 3-2 for orientation.
2. Fasten an HL Extension Leg #32 onto each of the Foot Plates #10 using hardware G and L. Insert these subassemblies into the bottoms of each of the “A” and “B” leg pocket assemblies.
3. Connect the extension legs to the leg pocket assemblies with supplied HL Leg Pins #23. Adjust the leg height according to water depth: the deeper the leg is in the water, the further the foot plate should be from the leg pocket.

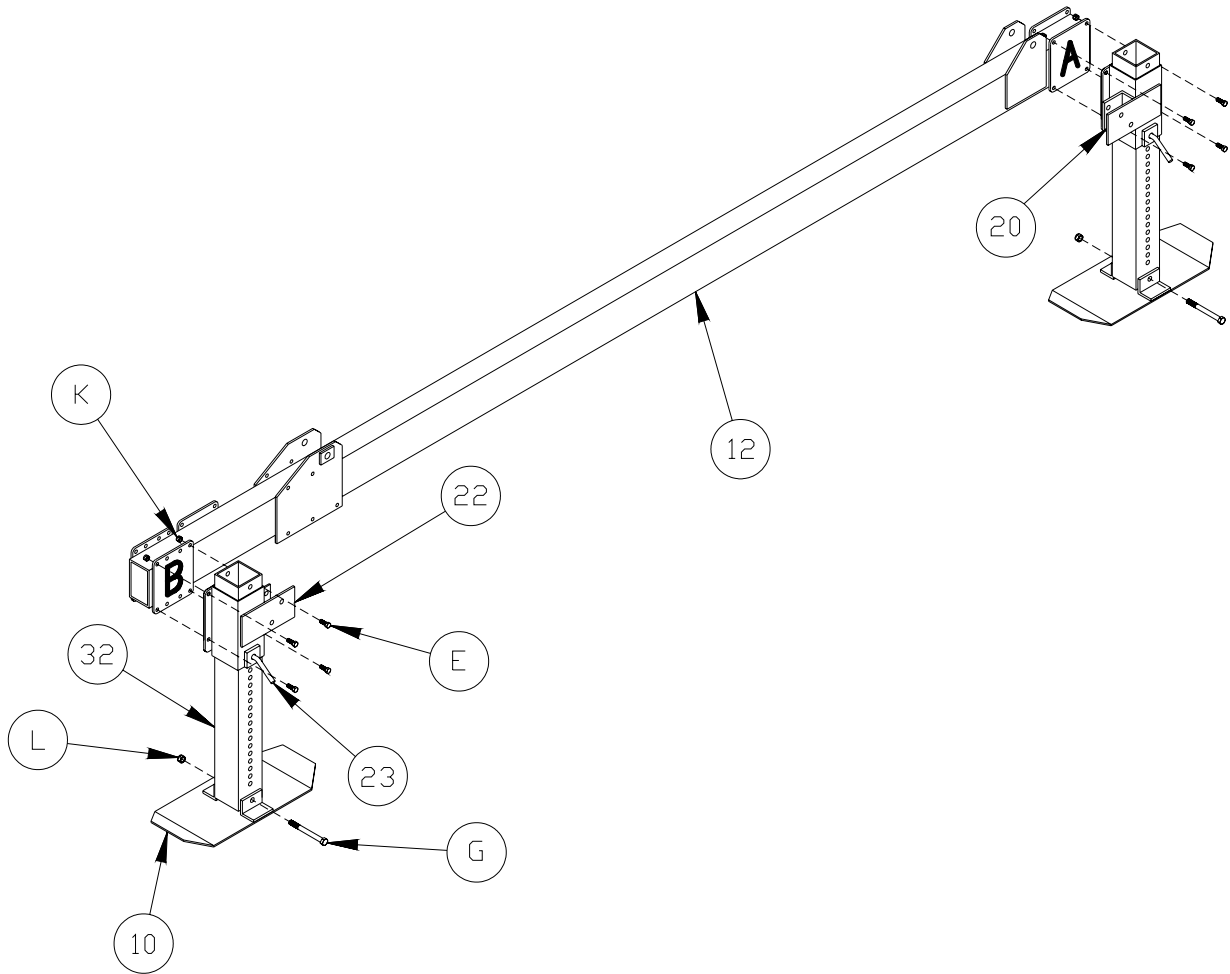


Figure 3-1.
Leg Pocket Assembly

3.4 BOTTOM FRAME ASSEMBLY

1. Refer to Figure 3-2. Fasten the Rear Frame Cross Tie #16 between the rear mounting plates (8 hole plates) of the Side Frames #4 and #12 using hardware E and K.
2. Fasten the Forward Frame Cross Tie #7 between the forward mounting plates (4 hole plates) of the Side Frames #4 and #12 using hardware E and K. Ensure that the 5K116 and 5K124 cross ties are offset to the top.
3. Install the Lower Cylinder Mount Assemblies #3 and #13 such that the gussets are facing toward the front of the lift using hardware E and K. Position the bolt-heads toward the inside of the lift to prevent interference between the bolt and hydraulic cylinder.

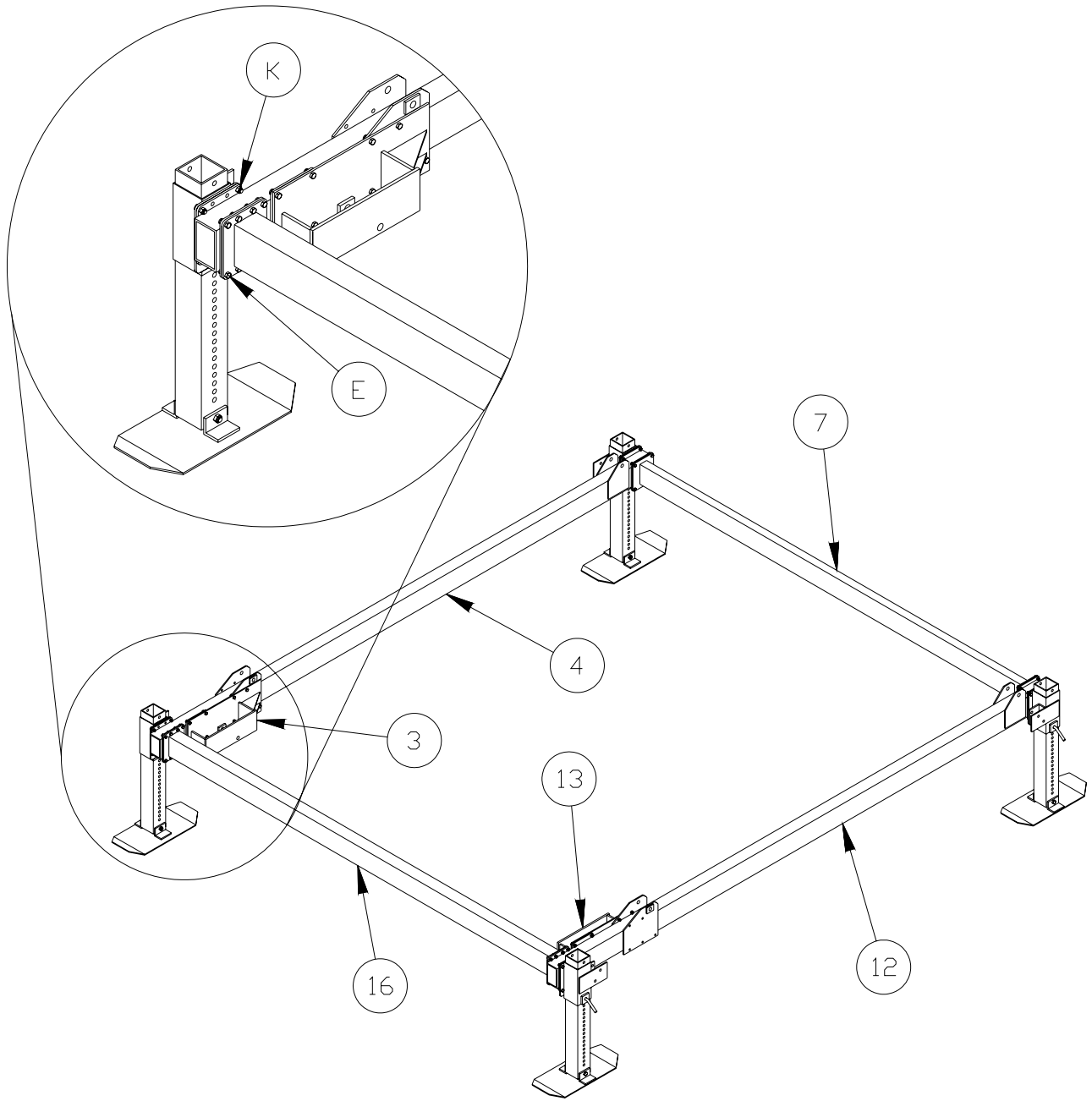


Figure 3-2.
Bottom Frame Assembly

3.5 LIFT ARM & LOAD TUBE INSTALLATION

Refer to Figure 3-3 and Figure 3-4. There are four unique lifting arms, one for each corner. Ensure that the correct lifting arm is used in each corner.

1. Install the Upper Pivot Bearing #26 into the Lifting Arms #1, #5, #11, and #14. Push the Upper Pivot Bearing flush to the outside surface of the lifting arm. A light coating of lithium grease on the bearing may ease installation. To aid in the bearing being pushed in square, a c-clamp and a piece of metal bridging the bearing may be used. Repeat for all lifting arms.
2. Install the 1" OD x 3" Long Bushing #29 into the Lower Pivot Bearing #28. Repeat for all (4) Lower Pivot Bearings.
3. Install the Lower Pivot Bearing assembly #28 and #29 into the Lifting Arms #1, #5, #11, and #14. Push the bearing flush to the inside surface of the lifting arm. Again using a c-clamp and grease may ease installation. Repeat for all lifting arms.
4. Before installing the lifting arms onto the Load Tube #8 ensure each lifting arm is orientated in its correct position and the platform side mounting plates on the load tube are facing toward the center.
5. Install the Upper Pivot Washer #27 onto the Load Tube pivot. Repeat for all Load Tube pivots.
6. Install the lifting arm onto the Load Tube #8. Applying light coating of lithium grease on the bearing may ease installation. Repeat for all lifting arms.
7. Install the rear lift arm –load tube assembly onto the side frames. The rear lift arms fit between the rear pivot plates of the side frame. Align holes and install hardware C, I, and J.
8. Install the forward lift arm –load tube assembly onto the side frames. The forward lift arms fit between the forward pivot plates of the side frame. Align holes and install hardware P, I, and J.

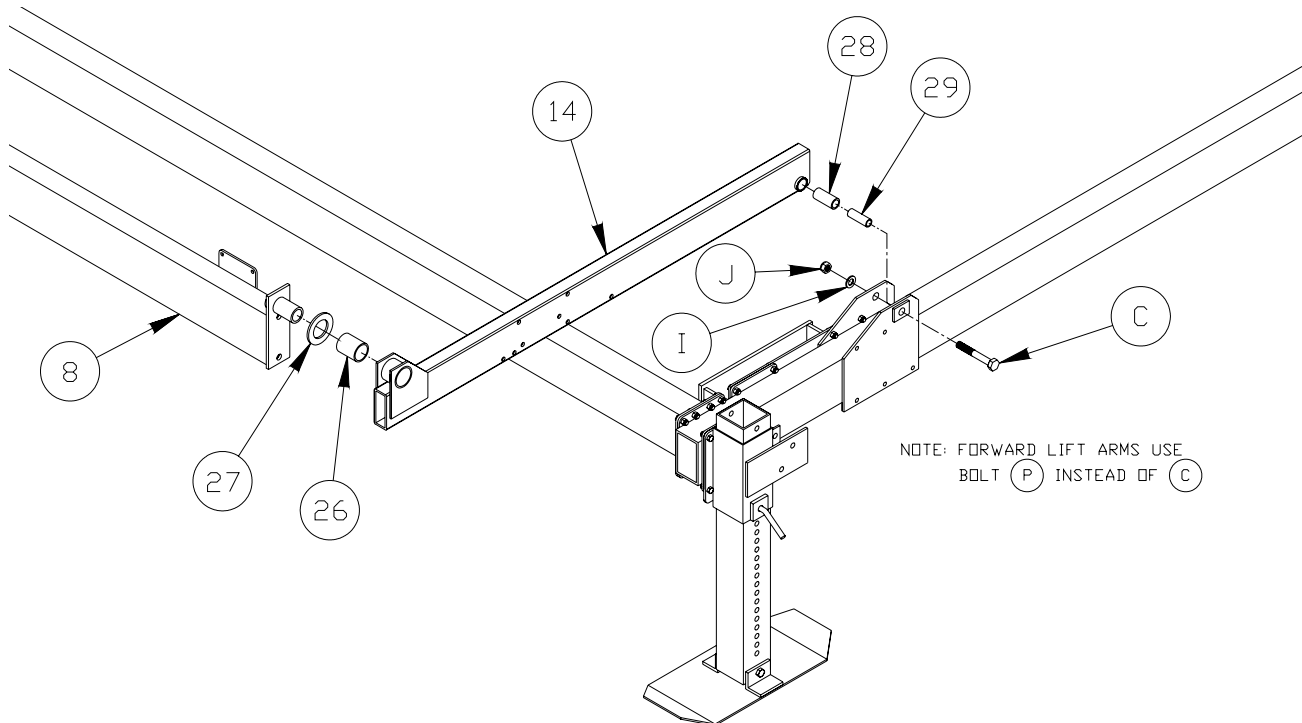


Figure 3-3.
Lift Arm & Load Tube Assembly

3.6 LIFT ARM CROSS TIE INSTALLATION

Refer to **Figure 3-4**. when following these procedures.

1. Install Rear Lift Arm Cross Tie **#18** between the rear lift arms. Ensure the rear lift arms are lowered all the way back. Install the hardware **F**, **H**, and **L** so that the bolt head is next to the cross tie to prevent interference between the bolt and the hydraulic cylinder. Do not tighten hardware until all hardware is threaded by hand.
2. Install Forward Lift Arm Cross Tie **#6** between the forward lift arms. Ensure the forward lift arms are lowered all the way back. Install the hardware **F**, **H**, and **L**. Do not tighten hardware until all hardware is threaded by hand.
3. Install a Load Tube Bearing Retainer **#24**, Upper Pivot Bearing Washer **#25**, and hardware **B**, **M**, **N**, and **O** at each load tube pivot.

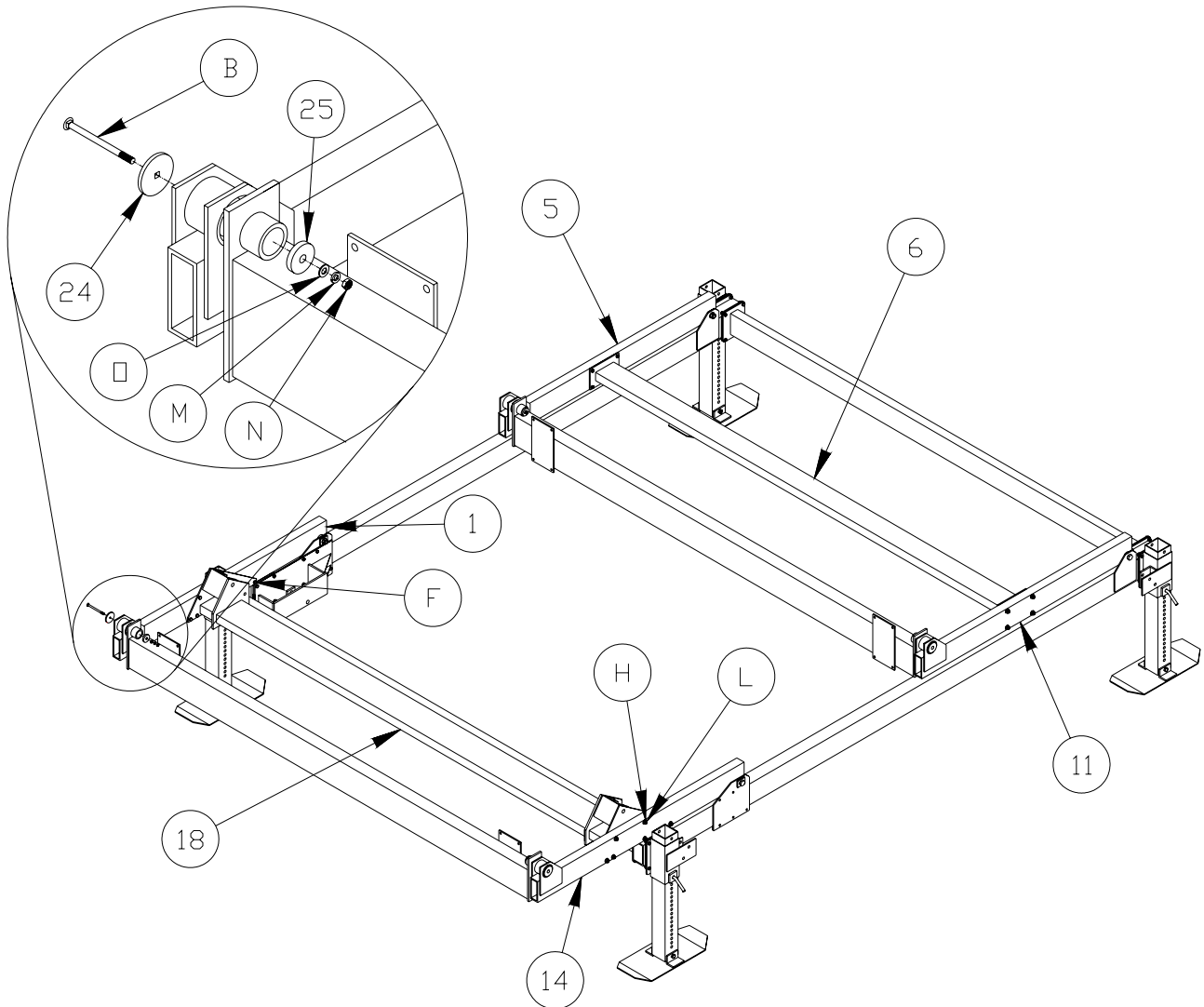


Figure 3-4.
Lift Arm Cross Tie Assembly

3.7 HOSE / CYLINDER ASSEMBLY INSTALLATION

Refer to Figure 3-5. (Figure shown without hoses for clarity.)

1. Wipe the mating surfaces of the couplings with a clean rag prior to connecting the hose couplings together. Keep them connected until ready to be connected to the control box.
2. Install a Lower Cylinder Bearing #31 in both Hydraulic Cylinders.
3. Install a Cylinder Rod End Bearing #30 in both Hydraulic Cylinders.
4. Install the Hydraulic Cylinders #2 onto the Lower Cylinder Mount Assemblies #3 and #13 using hardware A&D (for HL units) or D (for HL XL units), along with I, and J. The hose fittings should be facing up when positioning the cylinder on the lift. Insure the machined flat on the bolt head A, is facing up. Do not over-tighten the hardware.
5. Install the Hydraulic Cylinder rod into the upper cylinder mount of the Rear Frame Cross Tie #18 using hardware D, I, and J. The cylinder rod may have to be rotated slightly in order to align holes. Final hole alignment is achieved by lifting the rear load tube.
6. Insure the hoses are routed under the side frame and away from any pinch point. Insure that the hoses are not bent at a sharp angle. Use UV stabilized nylon cable ties, (black zip ties) to attach the hoses to the lift frame. If the optional light bar will be used, only attach hoses loosely at this time.

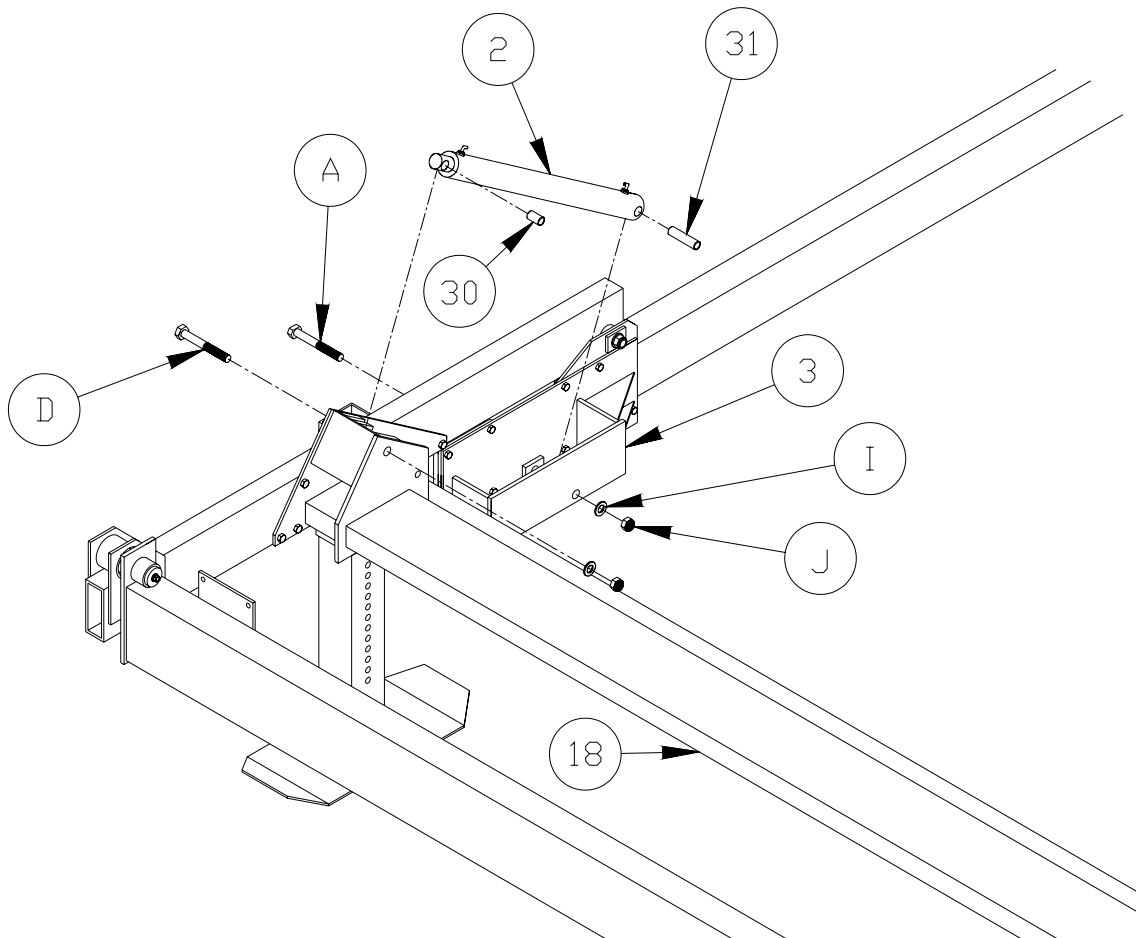


Figure 3-5.
Hose / Cylinder Assembly

3.8 PLATFORM SIDE INSTALLATION

Refer to **Figure 3-6**. Platform Side #**21** is installed between the forward and rear Load Tubes #**8** such that it is offset toward the top of the load tube.

1. Lift the forward load tube until the Platform Side can fit between the forward and rear load tubes.
2. Rotate the load tube until the mounting plates are parallel. Align holes and install hardware **E** and **K**.

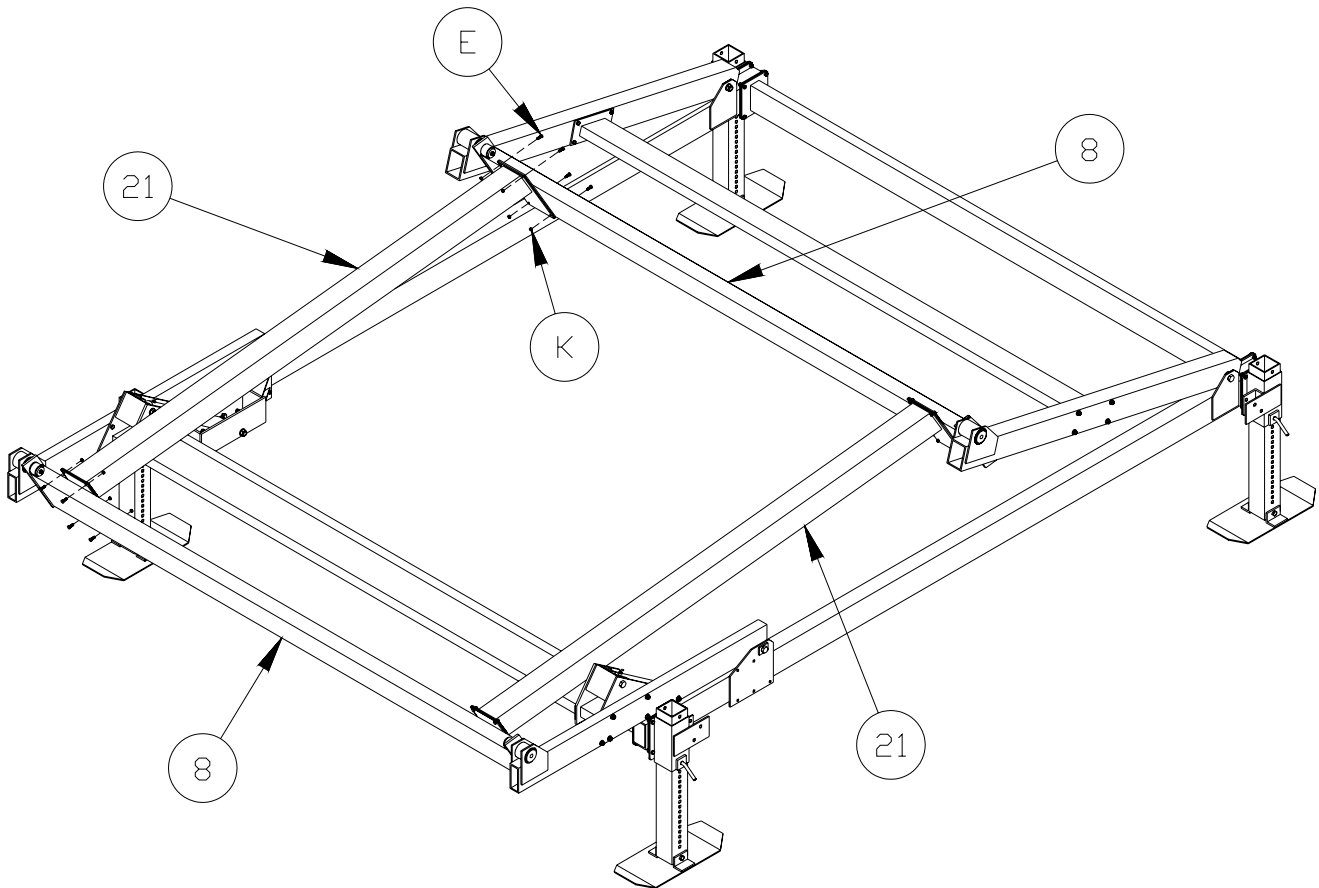


Figure 3-6.
Platform Side Assembly

3.9 WOOD BUNK ASSEMBLY



WARNING:

DO NOT ALLOW ANYONE TO OPERATE THE POWER SUPPLY WHILE INSTALLING THE WOOD BUNKS. THIS CAN CAUSE PERSONAL INJURY AND/OR EQUIPMENT DAMAGE.

1. **Refer to Figure 3-2.** Loosely attach one cradle bracket angle #17, to each side of Load Tube #8, using the supplied Hex Head Cap Screws **S**, Flat Washers **H**, Lock Washers **R**, and Hex Nuts **T**. The hardware will be tightened after adjustments are made in Steps 6 through 8.
2. Loosely attach a cradle bracket #19, using the supplied Hex Head Cap Screw **S**, Flat Washer **H**, Lock Washer **R**, and Hex Nut **T**. The hardware will be tightened after adjustments are made in Steps 6 through 8.
3. Repeat Steps 1 and 2 for the remaining bunk brackets.
4. Position wood bunk #15, over the cradle bracket #19. Attach bunk using the supplied Carriage Bolt **Q**, Flat Washer **M**, Lock Washer **N**, and Hex Nut **O**. Tighten carriage bolts using a 9/16" socket/ratchet.
5. When double bunk units are used, the shorter cradle bracket angles are installed nearer the center of the load tube.

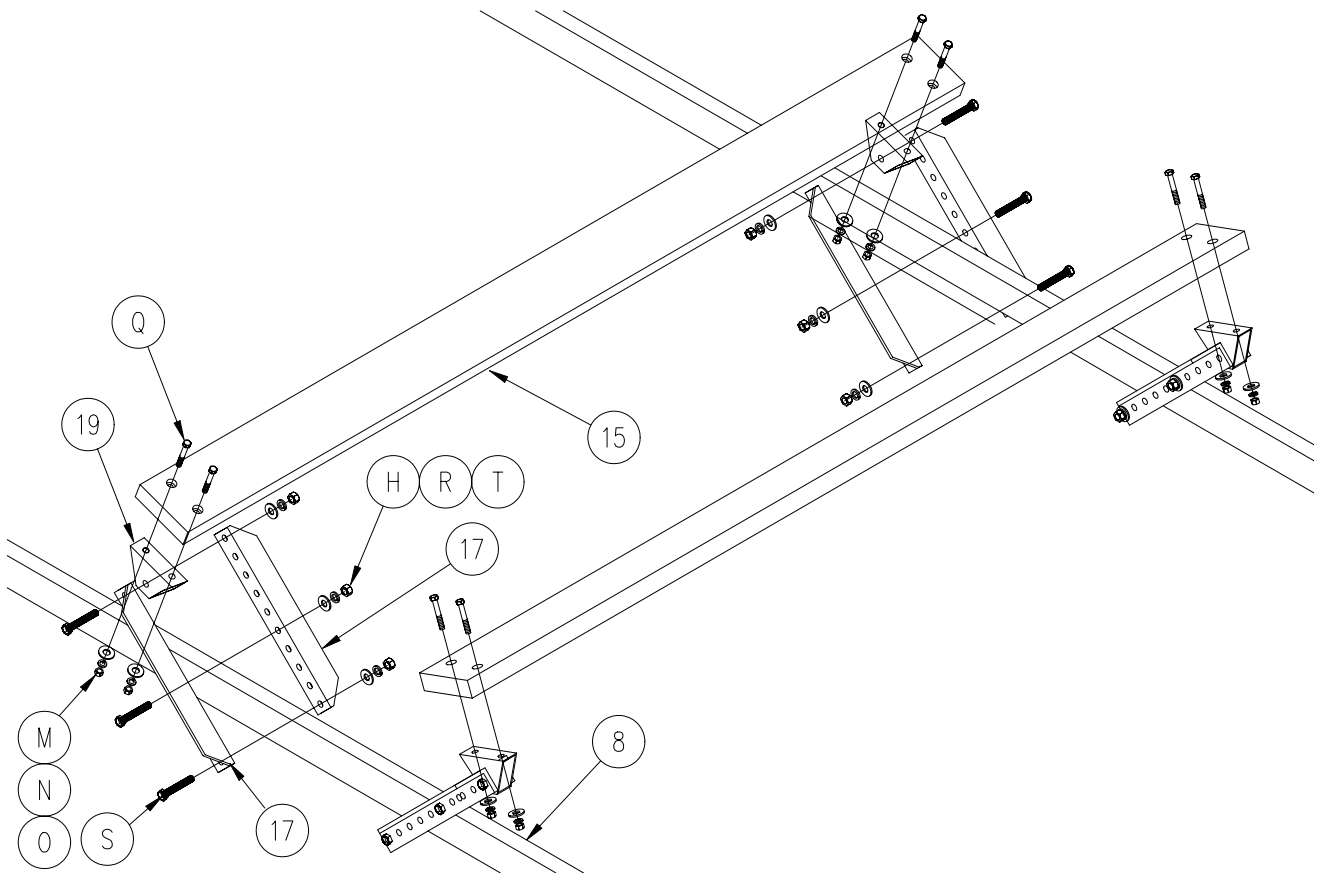


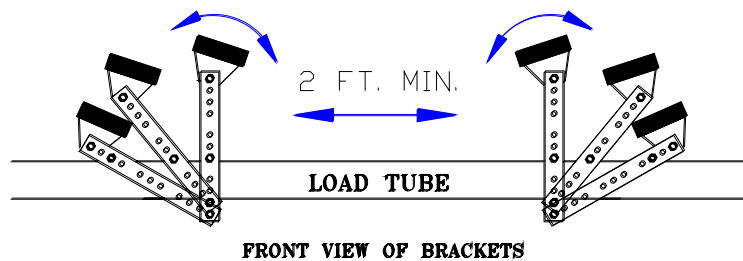
Figure 3-7.
Bunk Assembly



CAUTION:

INSURE THE HEADS OF THE CARRIAGE BOLTS ARE PULLED BELOW THE SURFACE OF THE WOOD BUNK TO PREVENT DAMAGE TO THE BOAT HULL.

6. **Refer to Figure 3-3.** The location of the center bolt, washers, and nut determines the height and angle of wood bunk. Select the hole pattern in the brackets that gives the desired bunk height and angle. The following guidelines are recommended:
 - a. Take measurements from a boat trailer as a reference for proper bunk adjustment
 - b. Brackets at the bow end of the lift can be mounted closer together than the stern. This will help center and guide the boat onto the lift.
 - c. The brackets must be mounted vertically for water-ski boats to achieve the proper skag and drive shaft clearance.
 - d. Properly adjusted bunks will give full-length support to the hull and do not allow the keel to contact the lift load tube.
7. Position each bracket, a minimum distance of 1 foot from the center of the load tube.
8. Pivot cradle head until wood bunk is at the desired angle to properly support the hull.
9. After the final adjustments are made to the bunks, tighten all bolts using a 3/4" socket and wrenches.



**Figure 3-8.
Bracket Positioning**

3.10 MAKING POWER CONNECTIONS

1. If the optional light bar will be used on the lift, route the light bar wire along with the hydraulic hoses to the control box. Using UV stabilized nylon cable ties, (black zip ties) attach the wire and the hydraulic hoses to the lift frame. Insert the wire through one of the holes in the back of the box, and plug into the light connector.
2. 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.

3. Wipe the mating surfaces of the hose couplings as well as the control box couplings with a clean rag prior to making connection.
4. Insert the hoses through the holes in the back of the control box. Connect the hose couplings.
5. 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. Insure 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.

8. 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.

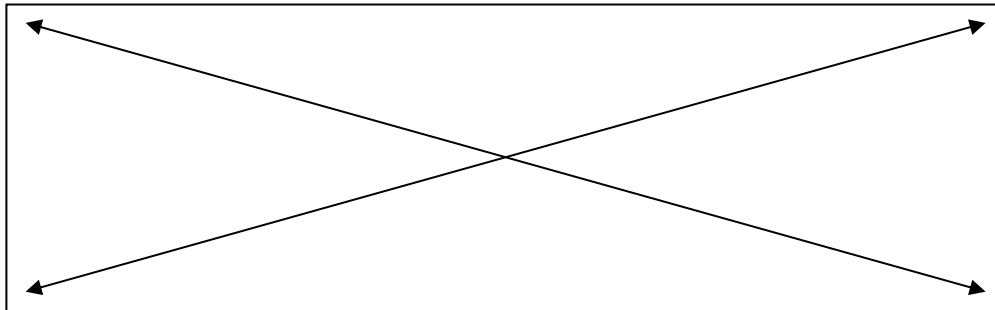
3.11 OPERATING POSITION

After moving your lift to the operating position, insure that the bottom lift frame assembly is square and sets level. Measure diagonally the inside edge of rear extension leg to inside edge of opposing front extension leg. Repeat for alternate corners. Lift is considered square when the **difference between the two measurements shall not exceed 1/4 of an inch.**



CAUTION:
SEVERE OUT OF LEVEL INSTALLATION MAY CAUSE BINDING, RESULTING IN EQUIPMENT DAMAGE.

Frame Diagonal Measurement Diagram
(Measure to Inside Corners)



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. (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 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. 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 insure that they are still secure and tight. Also test the remote control and underwater lighting system.
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 load tube and rear foot.
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.
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.
8. After removing the boat from the lift, re-tighten the bunk bolts as required.

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 forward load tube 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 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.

5.3 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.

Lock/ Unlock remote unit

To unlock or lock your remote units, press the two blue buttons simultaneously on your remote. The display will indicate locked or unlocked mode.

Reprogramming Your Remote Control

In the event that you may need to reprogram your remote control unit, please follow these step instructions:

1. Hold down both the red button (located on the black RC box) and the "UP" button (located on the hand held remote) at the same time for five (5) seconds.

Note: If black box does not have red button on the outside use the next procedure below.

2. Release "RED" button (located on the black RC box) and continue to hold down the "UP" button (located on the hand held remote) for a additional five (5) seconds.

-OR-

1. Remove cover from black RC box. A see-through cover control unit is inside this box. Hold down "black" button (located on the side of the see-through control unit) until red light flashes once in the see-through control unit located in corner.
2. Release the "black" button then hold down the "UP" button (located on the hand held remote) for five (5) seconds.

You may have to repeat these two (2) steps more than once to reset your remote control unit.

5.4 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:
 - 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.

5.5 STORAGE PROCEDURE



CAUTION:

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

1. Wipe cylinder rods before storing hydraulic lift at the end of the season.
2. Disconnect and store battery to prevent from freezing.
3. 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.

5.6 HYDRAULIC SYSTEM FLUSH

It is recommended that as part of an annual maintenance program, the hydraulic system be drained and fresh Vegetable Grade hydraulic oil installed. RGC recommends Mobil Vegetable Oil EAL 224 H (or equivalent non-petroleum based biodegradable oil) be used.

1. Lower the platform until the cylinders 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. Manually cycle solenoid valve back and forth several times using a small rod or flat end of a nail to remove pressure in the lines and cylinders.
3. Disconnect couplings between cylinder hoses and control box.
4. Unscrew reservoir oil fill cap.
5. 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.
6. 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.
7. Reassemble reservoir and pump assembly, then fill reservoir with fresh Mobil Vegetable Oil EAL 224 H.



WARNING:

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

8. 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 hydraulic 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"> 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. 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.
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 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, 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.	Platform is binding because frame is either not square or not set level in the water—refer to Chapter 3. Load exceeds rated capacity— reduce load weight as needed. User or dealer installed locking devices are in place—remove these. Auxiliary equipment such as boating hardware is being improperly hung on lift—remove this equipment permanently. Hoses to cylinders are leaking fluid in line, have a poor connection, or are kinked. Hydraulic system malfunctioning—contact your authorized service center.
Cylinders fail to hold the platform in a given position as described in the test procedure of Section 4.2	Check hose connections. Contact your authorized dealer—tampering with the hydraulic system can cause equipment damage that may invalidate your warranty.
Lift does not go down.	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.
Lowest platform position is too high or low relative to the water.	Connections between the vertical and adjustable legs need readjusting as described in Chapter 3.
Boat is not lifting level—stern is lifting higher or lower than the bow.	Frame is not level in the water—relocate pin connections between the adjustable and vertical legs.
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.

7 PARTS LISTS

7.1 #4151648 HL50116 HYDRAULIC BOAT LIFT WITH SOLAR PANEL ONLY

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4100830	1	HL HOSE/CYLINDER ASSEMBLY
	4100915	1	HL CARTON OF PARTS (SEE SEC. 7.15)
	4151646	1	HL50116 BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.23)
	4151647	1	HL50116 BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.24)
9	4105700	1	HL CONTROL BOX 5K W/SOLAR PANEL

7.2 #4151660 HL50116XL HYDRAULIC BOAT LIFT WITH SOLAR PANEL ONLY

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4101830	1	HL XL HOSE/CYLINDER ASSEMBLY
	4101915	1	HL XL CARTON OF PARTS (SEE SEC. 7.21)
	4151658	1	HL50116XL BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.25)
	4151659	1	HL50116XL BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.26)
9	4105698	1	HL CONTROL BOX 5K XL W/SOLAR PANEL

7.3 #4152448 HL50124 HYDRAULIC BOAT LIFT WITH SOLAR PANEL ONLY

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4100830	1	HL HOSE/CYLINDER ASSEMBLY
	4100915	1	HL CARTON OF PARTS (SEE SEC. 7.15)
	4152446	1	HL50124 BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.27)
	4152447	1	HL50124 BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.28)
9	4105700	1	HL CONTROL BOX 5K W/SOLAR PANEL

7.4 #4152460 HL50124XL HYDRAULIC BOAT LIFT WITH SOLAR PANEL ONLY

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4101830	1	HL XL HOSE/CYLINDER ASSEMBLY
	4101915	1	HL XL CARTON OF PARTS (SEE SEC. 7.21)
	4152458	1	HL50124XL BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.29)
	4152459	1	HL50124XL BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.30)
9	4105698	1	HL CONTROL BOX 5K XL W/SOLAR PANEL

7.5 #4172448 HL70124 HYDRAULIC BOAT LIFT WITH SOLAR PANEL ONLY

REF #	PART #	QTY	DESCRIPTION
15	3605921	4	BUNK ASSEMBLY 2-HOLE 6-7K
	4100960	1	BUNK (DBL) SS CARTON OF PARTS 7K (SEE SEC. 7.14)
2	4100830	1	HL HOSE/CYLINDER ASSEMBLY
	4100915	1	HL CARTON OF PARTS (SEE SEC. 7.15)
	4172446	1	HL70124 BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.31)
	4172447	1	HL70124 BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.32)
9	4105699	1	HL CONTROL BOX 7K W/SOLAR PANEL

7.6 #4172460 HL70124XL HYDRAULIC BOAT LIFT WITH SOLAR PANEL ONLY

REF #	PART #	QTY	DESCRIPTION
15	3605921	4	BUNK ASSEMBLY 2-HOLE 6-7K
	4100960	1	BUNK (DBL) SS CARTON OF PARTS 7K (SEE SEC. 7.14)
2	4101830	1	HL XL HOSE/CYLINDER ASSEMBLY
	4101915	1	HL XL CARTON OF PARTS (SEE SEC. 7.21)
	4172458	1	HL70124XL BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.33)
	4172459	1	HL70124XL BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.34)
9	4105697	1	HL CONTROL BOX 7K XL W/SOLAR PANEL

7.7 #4151649 HL50116 HYDRAULIC BOAT LIFT WITH SOLAR PANEL & AC CHARGER

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4100830	1	HL HOSE/CYLINDER ASSEMBLY
	4100915	1	HL CARTON OF PARTS (SEE SEC. 7.15)
	4151646	1	HL50116 BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.23)
	4151647	1	HL50116 BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.24)
9	4105696	1	HL CONTROL BOX 5K W/SOLAR PANEL & AC CHARGER

7.8 #4151661 HL50116XL HYDRAULIC BOAT LIFT WITH SOLAR PANEL & AC CHARGER

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4101830	1	HL XL HOSE/CYLINDER ASSEMBLY
	4101915	1	HL XL CARTON OF PARTS (SEE SEC. 7.21)
	4151658	1	HL50116XL BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.25)
	4151659	1	HL50116XL BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.26)
9	4105694	1	HL CONTROL BOX 5K XL W/SOLAR PANEL & AC CHARGER

7.9 #4152449 HL50124 HYDRAULIC BOAT LIFT WITH SOLAR PANEL & AC CHARGER

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4100830	1	HL HOSE/CYLINDER ASSEMBLY
	4100915	1	HL CARTON OF PARTS (SEE SEC. 7.15)
	4152446	1	HL50124 BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.27)
	4152447	1	HL50124 BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.28)
9	4105696	1	HL CONTROL BOX 5K W/SOLAR PANEL & AC CHARGER

7.10 #4152461 HL50124XL HYDRAULIC BOAT LIFT WITH SOLAR PANEL & AC CHARGER

REF #	PART #	QTY	DESCRIPTION
15	3605919	2	BUNK ASSEMBLY 2-HOLE 5K
	3679320	1	BUNK-TALL SS CARTON OF PARTS 5K (SEE SEC. 7.13)
2	4101830	1	HL XL HOSE/CYLINDER ASSEMBLY
	4101915	1	HL XL CARTON OF PARTS (SEE SEC. 7.21)
	4152458	1	HL50124XL BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.29)
	4152459	1	HL50124XL BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.30)
9	4105694	1	HL CONTROL BOX 5K XL W/SOLAR PANEL & AC CHARGER

7.11 #4172449 HL70124 HYDRAULIC BOAT LIFT WITH SOLAR PANEL & AC CHARGER

REF #	PART #	QTY	DESCRIPTION
15	3605921	4	BUNK ASSEMBLY 2-HOLE 6-7K
	4100960	1	BUNK (DBL) SS CARTON OF PARTS 7K (SEE SEC. 7.14)
2	4100830	1	HL HOSE/CYLINDER ASSEMBLY
	4100915	1	HL CARTON OF PARTS (SEE SEC. 7.15)
	4172446	1	HL70124 BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.31)
	4172447	1	HL70124 BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.32)
9	4105695	1	HL CONTROL BOX 7K W/SOLAR PANEL & AC CHARGER

7.12 #4172461 HL70124XL HYDRAULIC BOAT LIFT WITH SOLAR PANEL & AC CHARGER

REF #	PART #	QTY	DESCRIPTION
15	3605921	4	BUNK ASSEMBLY 2-HOLE 6-7K
	4100960	1	BUNK (DBL) SS CARTON OF PARTS 7K (SEE SEC. 7.14)
2	4101830	1	HL XL HOSE/CYLINDER ASSEMBLY
	4101915	1	HL XL CARTON OF PARTS (SEE SEC. 7.21)
	4172458	1	HL70124XL BDL 1 OF 2 LIFT FRAME (SEE SEC. 7.33)
	4172459	1	HL70124XL BDL 2 OF 2 LIFT FRAME (SEE SEC. 7.34)
9	4105693	1	HL CONTROL BOX 7K XL W/SOLAR PANEL & AC CHARGER

7.13 #3679320 BUNK (TALL) SS CARTON OF PARTS 5K

REF #	PART #	QTY	DESCRIPTION
19	3603935	4	BUNK CRADLE BRACKET 3"
17	3693801	8	CRADLE BRACKET ANGLE 22-3/8"
	3605979	1	BUNK SS BAG OF BOLTS 5K (SEE SEC. 7.16)

7.14 #4100960 HL BUNK (DBL) SS CARTON OF PARTS 7K

REF #	PART #	QTY	DESCRIPTION
19	3603935	8	BUNK CRADLE BRACKET 3"
17	3693801	8	CRADLE BRACKET ANGLE 22-3/8"
	3603938	8	CRADLE BRACKET ANGLE 15-7/8"
	4100961	1	HL BUNK (DBL) SS BAG OF BOLTS 7K (SEE SEC. 7.17)

7.15 #4100915 HYDRAULIC LIFT CARTON OF PARTS

REF #	PART #	QTY	DESCRIPTION
22	4100520	2	HL5K-7K (A) LEG POCKET ASSEMBLY
20	4100521	2	HL5K-7K (B) LEG POCKET ASSEMBLY
23	4100900	1	HL LEG PIN SET (4 ea. PINS & CLIPS)
	4100955	1	HL BEARING BAG (SEE SEC. 7.18)
	4100905	2	HL REAR LIFTING ARM BAG OF BOLTS (SEE SEC. 7.19)
	4100910	2	HL FORWARD LIFTING ARM BAG OF BOLTS (SEE SEC. 7.20)

7.16 #3605979 BUNK SS BAG OF BOLTS 5K

REF #	PART #	QTY	DESCRIPTION
N	5806243	8	3/8 SPLIT LOCK WASHER
R	5806244	12	1/2 SPLIT LOCK WASHER
S	5896293	12	1/2 X 4-1/2 HEX HEAD CAP SCREW
Q	5896323	8	3/8 X 2-1/2 CARRIAGE BOLT
O	5896377	8	3/8 HEX NUT
T	5896379	12	1/2 HEX NUT
H	5896400	12	1/2 SAE FLAT WASHER
M	5896406	8	3/8 SAE FLAT WASHER

7.17 #4100961 HL BUNK (DBL) SS BAG OF BOLTS 7K

REF #	PART #	QTY	DESCRIPTION
N	5806243	16	3/8 SPLIT LOCK WASHER
R	5806244	24	1/2 SPLIT LOCK WASHER
S	5896293	24	1/2 X 4-1/2 HEX HEAD CAP SCREW
Q	5896323	16	3/8 X 2-1/2 CARRIAGE BOLT
O	5896377	16	3/8 HEX NUT
T	5896379	24	1/2 HEX NUT
H	5896400	24	1/2 SAE FLAT WASHER
M	5896406	16	3/8 SAE FLAT WASHER

7.18 #4100955 HYDRAULIC LIFT BEARING BAG

REF #	PART #	QTY	DESCRIPTION
24	4100256	4	HL UPPER BEARING RETAINING PLATE
25	4100257	4	HL UPPER PIVOT WASHER
26	4100800	4	HL BEARING UPPER PIVOT
28	4100805	4	HL BEARING LOWER PIVOT
27	4100810	4	HL BEARING WASHER UPPER PIVOT
29	4100815	4	HL BUSHING 1" O. D. X 3" LONG
30	4100820	2	HL BEARING CYLINDER ROD END
31	4100825	2	HL BEARING LOWER CYLINDER

7.19 #4100905 HL REAR LIFTING ARM BAG OF BOLTS

REF #	PART #	QTY	DESCRIPTION
A	4100904	1	HL LOWER CYLINDER MOUNT BOLT
B	5893803	1	3/8 X 5-1/2 CARRIAGE BOLT
C	5896184	1	3/4 X 5-1/2 HEX HEAD CAP SCREW
D	5896186	1	3/4 X 6-1/2 HEX HEAD CAP SCREW
E	5896247	25	3/8 X 1 HEX HEAD CAP SCREW
F	5896288	6	1/2 X 3 HEX HEAD CAP SCREW
G	5896294	1	1/2 X 5 HEX HEAD CAP SCREW
H	5896400	6	1/2 SAE FLAT WASHER
I	5896417	3	3/4 SAE FLAT WASHER
J	5897014	3	3/4 NYLOCK HEX NUT
K	5897016	25	3/8 NYLOCK HEX NUT
L	5897018	7	1/2 NYLOCK HEX NUT
M	5896406	1	3/8 SAE FLAT WASHER
N	5806243	1	3/8 SPLIT LOCK WASHER
O	5896377	1	3/8 HEX NUT

7.20 #4100910 HL FORWARD LIFTING ARM BAG OF BOLTS

REF #	PART #	QTY	DESCRIPTION
B	5893803	1	3/8 X 5-1/2 CARRIAGE BOLT
P	5896183	1	3/4 X 4-1/2 HEX HEAD CAP SCREW
E	5896247	12	3/8 X 1 HEX HEAD CAP SCREW
F	5896288	4	1/2 X 3 HEX HEAD CAP SCREW
G	5896294	1	1/2 X 5 HEX HEAD CAP SCREW
H	5896400	4	1/2 SAE FLAT WASHER
I	5896417	1	3/4 SAE FLAT WASHER
J	5897014	1	3/4 NYLOCK HEX NUT
K	5897016	12	3/8 NYLOCK HEX NUT
L	5897018	5	1/2 NYLOCK HEX NUT
M	5896406	1	3/8 SAE FLAT WASHER
N	5806243	1	3/8 SPLIT LOCK WASHER
O	5896377	1	3/8 HEX NUT

7.21 #4101915 HYDRAULIC LIFT XL CARTON OF PARTS

REF #	PART #	QTY	DESCRIPTION
22	4101520	2	HL XL (A) LEG POCKET ASSEMBLY
20	4101521	2	HL XL (B) LEG POCKET ASSEMBLY
23	4100900	1	HL LEG PIN SET (4 ea. PINS & CLIPS)
	4100955	1	HL BEARING BAG (SEE SEC. 7.18)
	4100910	2	HL FORWARD LIFTING ARM BAG OF BOLTS (SEE SEC. 7.20)
	4101905	2	HL XL REAR LIFTING ARM BAG OF BOLTS (SEE SEC. 7.22)

7.22 #4101905 HL XL REAR LIFTING ARM BAG OF BOLTS

REF #	PART #	QTY	DESCRIPTION
B	5893803	1	3/8 X 5-1/2 CARRIAGE BOLT
C	5896184	1	3/4 X 5-1/2 HEX HEAD CAP SCREW
D	5896186	2	3/4 X 6-1/2 HEX HEAD CAP SCREW
E	5896247	31	3/8 X 1 HEX HEAD CAP SCREW
F	5896288	6	1/2 X 3 HEX HEAD CAP SCREW
G	5896294	1	1/2 X 5 HEX HEAD CAP SCREW
H	5896400	6	1/2 SAE FLAT WASHER
I	5896417	3	3/4 SAE FLAT WASHER
J	5897014	3	3/4 NYLOCK HEX NUT
K	5897016	31	3/8 NYLOCK HEX NUT
L	5897018	7	1/2 NYLOCK HEX NUT
M	5806243	1	3/8 SPLIT LOCK WASHER
N	5896377	1	3/8 HEX NUT
O	5896406	1	3/8 SAE FLAT WASHER

7.23 #4151646 HL50116 BDL 1 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
16	4100121	1	HL 5K116 REAR FRAME CROSS TIE
7	4100126	1	HL 5K116 FORWARD FRAME CROSS TIE
14	4100130	1	HL 5K RIGHT HAND REAR LIFT ARM
1	4100135	1	HL 5K LEFT HAND REAR LIFT ARM
5	4100140	1	HL 5K LEFT HAND FORWARD LIFT ARM
11	4100145	1	HL 5K RIGHT HAND FORWARD LIFT ARM
12	4100150	1	HL 5K-7K RIGHT HAND SIDE FRAME
4	4100155	1	HL 5K-7K LEFT HAND SIDE FRAME
10	4100500	4	HL FOOT PLATE ASSEMBLY—SMALL

7.24 #4151647 HL50116 BDL 2 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
8	4100101	2	HL 5K116 LOAD TUBE ASSEMBLY
18	4100104	1	HL 5K116 REAR LIFT ARM CROSS TIE
21	4100110	2	HL 5K PLATFORM SIDE
6	4100116	1	HL 5K116 FORWARD LIFT ARM CROSS TIE
13	4100160	1	HL 5K-7K RIGHT HAND LOWER CYLINDER MOUNT ASSEMBLY
3	4100165	1	HL 5K-7K LEFT HAND LOWER CYLINDER MOUNT ASSEMBLY

7.25 #4151658 HL50116XL BDL 1 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
16	4101121	1	HL XL116 REAR FRAME CROSS TIE
7	4101126	1	HL XL116 FORWARD FRAME CROSS TIE
14	4101131	1	HL XL RIGHT HAND REAR LIFT ARM
1	4101136	1	HL XL LEFT HAND REAR LIFT ARM
5	4101141	1	HL XL LEFT HAND FORWARD LIFT ARM
11	4101146	1	HL XL RIGHT HAND FORWARD LIFT ARM
12	4101150	1	HL XL RIGHT HAND SIDE FRAME
4	4101155	1	HL XL LEFT HAND SIDE FRAME
10	4100501	4	HL FOOT PLATE ASSEMBLY—LARGE

7.26 #4151659 HL50116XL BDL 2 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
8	4101101	2	HL 5XL116 LOAD TUBE ASSEMBLY
18	4101105	1	HL XL116 REAR LIFT ARM CROSS TIE
21	4101110	2	HL 5XL PLATFORM SIDE
6	4101116	1	HL XL116 FORWARD LIFT ARM CROSS TIE
13	4101160	1	HL XL RIGHT HAND LOWER CYLINDER MOUNT ASSEMBLY
3	4101165	1	HL XL LEFT HAND LOWER CYLINDER MOUNT ASSEMBLY

7.27 #4152446 HL50124 BDL 1 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
16	4100120	1	HL 5K124 REAR FRAME CROSS TIE
7	4100125	1	HL 5K124 FORWARD FRAME CROSS TIE
14	4100130	1	HL 5K RIGHT HAND REAR LIFT ARM
1	4100135	1	HL 5K LEFT HAND REAR LIFT ARM
5	4100140	1	HL 5K LEFT HAND FORWARD LIFT ARM
11	4100145	1	HL 5K RIGHT HAND FORWARD LIFT ARM
12	4100150	1	HL 5K-7K RIGHT HAND SIDE FRAME
4	4100155	1	HL 5K-7K LEFT HAND SIDE FRAME
10	4100500	4	HL FOOT PLATE ASSEMBLY—SMALL

7.28 #4152447 HL50124 BDL 2 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
8	4100100	2	HL 5K124 LOAD TUBE ASSEMBLY
18	4100108	1	HL 5K124 REAR LIFT ARM CROSS TIE
21	4100110	2	HL 5K PLATFORM SIDE
6	4100115	1	HL 5K124 FORWARD LIFT ARM CROSS TIE
13	4100160	1	HL 5K-7K RIGHT HAND LOWER CYLINDER MOUNT ASSEMBLY
3	4100165	1	HL 5K-7K LEFT HAND LOWER CYLINDER MOUNT ASSEMBLY

7.29 #4152458 HL50124XL BDL 1 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
16	4101120	1	HL XL124 REAR FRAME CROSS TIE
7	4101125	1	HL XL124 FORWARD FRAME CROSS TIE
14	4101131	1	HL XL RIGHT HAND REAR LIFT ARM
1	4101136	1	HL XL LEFT HAND REAR LIFT ARM
5	4101141	1	HL XL LEFT HAND FORWARD LIFT ARM
11	4101146	1	HL XL RIGHT HAND FORWARD LIFT ARM
12	4101150	1	HL XL RIGHT HAND SIDE FRAME
4	4101155	1	HL XL LEFT HAND SIDE FRAME
10	4100501	4	HL FOOT PLATE ASSEMBLY—LARGE

7.30 #4152459 HL50124XL BDL 2 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
8	4101100	2	HL 5XL124 LOAD TUBE ASSEMBLY
18	4100109	1	HL 7K-XL124 REAR LIFT ARM CROSS TIE
21	4101110	2	HL 5XL PLATFORM SIDE
6	4100117	1	HL 7K-XL124 FORWARD LIFT ARM CROSS TIE
13	4101160	1	HL XL RIGHT HAND LOWER CYLINDER MOUNT ASSEMBLY
3	4101165	1	HL XL LEFT HAND LOWER CYLINDER MOUNT ASSEMBLY

7.31 #4172446 HL70124 BDL 1 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
16	4100122	1	HL 7K124 REAR FRAME CROSS TIE
7	4100127	1	HL 7K124 FORWARD FRAME CROSS TIE
14	4100131	1	HL 7K RIGHT HAND REAR LIFT ARM
1	4100136	1	HL 7K LEFT HAND REAR LIFT ARM
5	4100141	1	HL 7K LEFT HAND FORWARD LIFT ARM
11	4100146	1	HL 7K RIGHT HAND FORWARD LIFT ARM
12	4100150	1	HL 5K-7K RIGHT HAND SIDE FRAME
4	4100155	1	HL 5K-7K LEFT HAND SIDE FRAME
10	4100501	4	HL FOOT PLATE ASSEMBLY—LARGE

7.32 #4172447 HL70124 BDL 2 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
8	4100102	2	HL 7K124 LOAD TUBE ASSEMBLY
18	4100109	1	HL 7K124 REAR LIFT ARM CROSS TIE
21	4100111	2	HL 7K PLATFORM SIDE
6	4100117	1	HL 7K124 FORWARD LIFT ARM CROSS TIE
13	4100160	1	HL 5K-7K RIGHT HAND LOWER CYLINDER MOUNT ASSEMBLY
3	4100165	1	HL 5K-7K LEFT HAND LOWER CYLINDER MOUNT ASSEMBLY

7.33 #4172458 HL70124XL BDL 1 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
16	4101120	1	HL XL124 REAR FRAME CROSS TIE
7	4101125	1	HL XL124 FORWARD FRAME CROSS TIE
14	4101131	1	HL XL RIGHT HAND REAR LIFT ARM
1	4101136	1	HL XL LEFT HAND REAR LIFT ARM
5	4101141	1	HL XL LEFT HAND FORWARD LIFT ARM
11	4101146	1	HL XL RIGHT HAND FORWARD LIFT ARM
12	4101150	1	HL XL RIGHT HAND SIDE FRAME
4	4101155	1	HL XL LEFT HAND SIDE FRAME
10	4100501	4	HL FOOT PLATE ASSY—LARGE

7.34 #4172459 HL70124XL BDL 2 OF 2 LIFT FRAME

REF #	PART #	QTY	DESCRIPTION
8	4100102	2	HL 7K124 LOAD TUBE ASSEMBLY
18	4100109	1	HL 7K-XL124 REAR LIFT ARM CROSS TIE
21	4101111	2	HL 7XL PLATFORM SIDE
6	4100117	1	HL 7K-XL124 FORWARD LIFT ARM CROSS TIE
13	4101160	1	HL XL RIGHT HAND LOWER CYLINDER MOUNT ASSEMBLY
3	4101165	1	HL XL LEFT HAND LOWER CYLINDER MOUNT ASSEMBLY

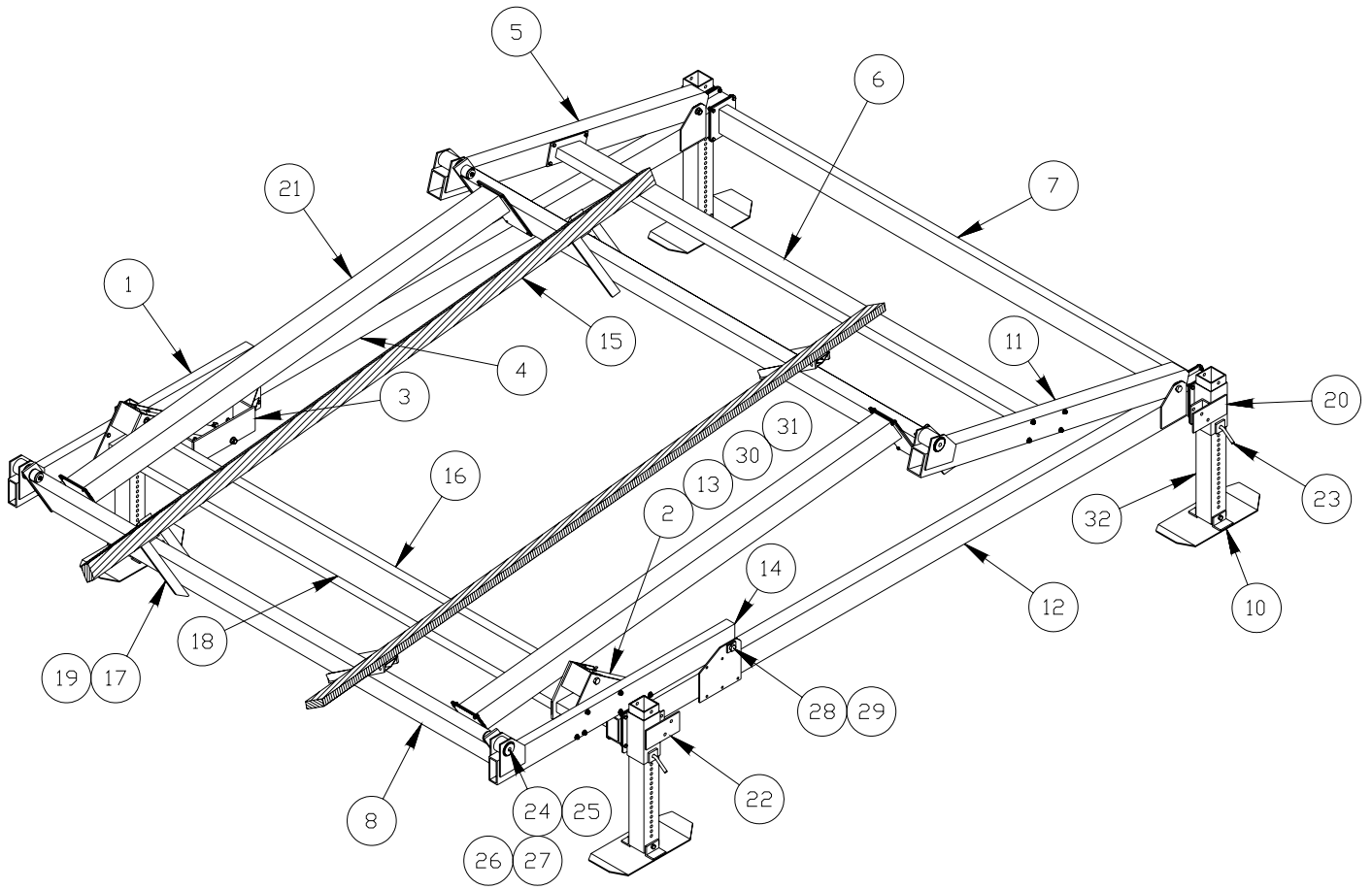


Figure 7-1.
Hydraulic Lift Assembly

RGC HYDRAULIC BOAT LIFTS
HYDRAULIC SYSTEM FLUSH
PROCEDURE



1 PREPERATION FOR SYSTEM FLUSH

1.1 LIFT



WARNING:

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

1. Lower lift platform until cylinder rods are retracted.
2. Disconnect couplings between cylinder hoses and control box.

1.2 CONTROL BOX



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.

1. Unscrew reservoir oil fill cap.
2. Remove oil from control box reservoir. An oil pump (vacuum) can be used. If vacuum is unavailable, remove 12V battery from box, and carefully tip over to drain oil from reservoir.
3. Inspect oil filter screen (between the pump and reservoir.) If necessary, the reservoir will have to be removed from the pump to gain access and clean oil filter screen.
4. Fill reservoir with Mobil Vegetable Oil EAL 224 H (or equivalent.)

1.3 CYLINDERS AND HOSES

1. Depressurize the cylinder hoses as follows:
 - a. Depressurize the male fitting by carefully pressing the button on the end of the nipple against a flat surface. Wrap the fitting with a rag while depressurizing to prevent spray. Use caution to avoid damaging the nipple button.
 - b. 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.
2. Disconnect cylinders from upper and lower mounts on lift.
3. Cylinder rods should be fully retracted. Place cylinders in buckets, or containers, to contain oil. Disconnect upper cylinder fittings.

2 SYSTEM FLUSH

1. Clean couplings between cylinder hoses and control box. Reconnect couplings.
2. Reinstall control box battery if it was removed.
3. Run pump in lift up direction to extend cylinder rods and evacuate oil from upper area of cylinders.
4. Run pump in lift down direction to evacuate oil from upper cylinder hoses (these hoses were disconnected in Section 1.3 - Step 3, hold in buckets to contain oil.)
5. Disconnect couplings between cylinder hoses and control box. Depressurize lower cylinder hose (Section 1.3 - Step 1.)
6. Reconnect upper cylinder fittings and disconnect lower cylinder fittings. Reconnect couplings.
7. Run pump in lift down direction to retract cylinder rods and evacuate oil from lower area of cylinders.
8. Run pump in lift up direction to evacuate oil from lower cylinder hoses (these hoses were disconnected in Step 6 above , hold in buckets to contain oil.)
9. Repeat some, or all, of the steps in the above sections as required to completely remove contaminated oil from system.
10. As these procedures are performed, and upon completion, additional oil will need to be added to the reservoir.

Addendum

Important Remote Control Information

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 as 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

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 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.