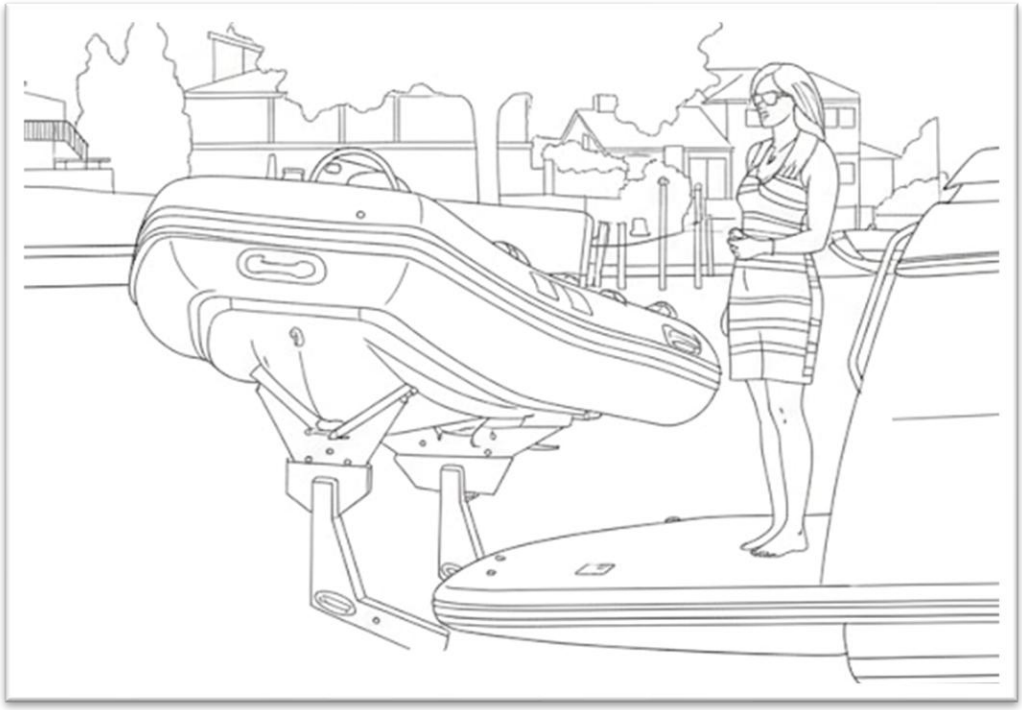
FreedomLift®

THE ULTIMATE
TENDER LIFT SOLUTION



Installation Manual

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Introduction

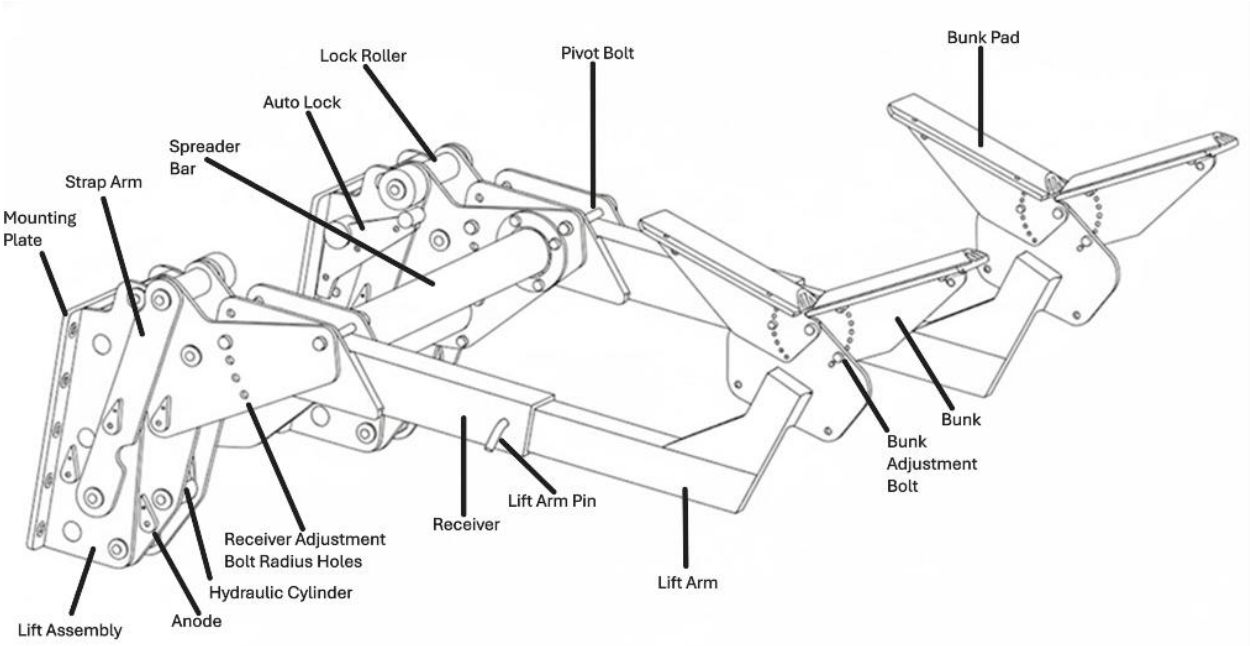
The FreedomLift is a transom-mounted hydraulic lift system that can be mounted on virtually all inboard or Pod (IPS/Zeus) powered boats. The lift is rated to carry a maximum weight of **800 lbs.** in normal conditions.

Proper installation is essential for optimal performance and safety.

Tools and Materials Required

- Drill with appropriate bits (1/2”)
- Measuring tape
- Level
- Wrench set (9/16”, 3/4”, 15/16”)
- 3M 5200 Fast Cure Marine Adhesive
- Marine Grade 2 AWG wire for connecting power to hydraulic power unit (HPU)
- TCC Epoxy for curved transom boats (included in the package)
- Product-specific hardware (included in the package)

Parts Diagram



1. Pre-Order Process: Sizing and Measurements

The *Freedom*Lift can be mounted on virtually all inboard or Pod (IPS / Zeus) powered boats by determining the following measurements:

External Measurement Requirements

- Distance from the bottom of the swim platform to the bottom of the transom, generally at or near the prop shafts – a minimum vertical distance of 23 inches is required for installation (call us for models requiring less space).
- Distance from the water line to the bottom of the swim platform.
- Distance from the transom (under the swim platform) to the end of the swim platform (at approximately the prop shafts).
- Anticipated distance between the center of the Mounting Plates (these plates measure 10" wide).
- Swim platform "thickness" from the bottom to the top of the platform.

Internal Measurement Requirements

- Based on the anticipated external mounting location, verify that there is sufficient access for the Mounting Plates and bolts inside the boat.
- Verify that stringers will not hinder through bolts.
- Allow adequate room for Backing Plates, Nuts, Hydraulic Fittings and Hoses, Cable Brackets, and Hydraulic Power Unit mounting location.
- Review anticipated mounting location for Hydraulic Power Unit verifying distance to transom, ability to mount, 12-volt (24-volt optional) DC access and serviceability (i.e. checking fluid level or accessing Remote Control Box).

Capacity

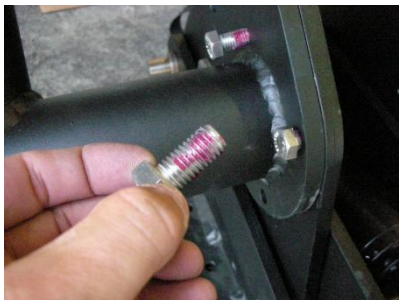
Note the *Freedom*Lift is rated to carry a **maximum weight of 800 lbs.** in normal conditions. The recommended capacity for your boat may be limited to the capacity of the transom. For transom capacity information please consult your boat manufacturer.

Once determined, **NEVER** exceed this capacity.

2. Transom Installation Process

Step 1 – Connecting Spreader Bar

- Unpack *Freedom*Lift equipment
- Before attaching to the boat, fasten the Spreader Bar between the two Lift Assemblies using the Stainless-Steel Spreader Bolts ½" (four (4) or eight (8) per side depending on model) with red Loctite thread locker. When using a Single Tube Spreader, it can be mounted in the upper or lower hole pattern.



Step 2 – Drill Mounting Holes – Note – Remove Auto Lock System for access

DO NOT MOUNT FLUID PASSING BOLTS IN EITHER OF THE TOP TWO MOUNTING HOLES! They will prevent the Auto Lock System from working.

- Using boat jack stands or other supporting devices, align the *Freedom*Lift to the selected mounting location.
  Verify the following:
  - Mounting plates do not extend below the hull.
  - The thru bolts have adequate internal and external clearance.
  - Confirm the lift will operate unhindered by the swim platform, boat hull, trim tabs, or other transom accessories.
- Once the mounting location is verified, select six (6) holes on **each** Mounting Plate (3 on the inside and 3 on the outside) to attach the *Freedom*Lift.

Note - the top bolts **MUST BE** in the top holes and the bottom holes should be as low as possible preferring location 5 or location 4. A minimum of six (6) bolts must be used for securing each mounting plate – two (2) on top, two (2) in the middle and two (2) toward the bottom. Additional mounting bolts may be used if desired. The **Fluid Passing Bolts** must **NEVER** be used in the top holes or 2nd holes since they will interfere with the Auto Lock System, and are not as strong.

- With the *Freedom*Lift against the transom, drill six (6) ½" holes (per side) in perpendicular alignment through mounting plates and transom.

Step 3 – Mounting

- Remove any anti-fouling paint from the transom where the *Freedom*Lift will mount plus 1" in addition to the *Freedom*Lift footprint. This assures that the *Freedom*Lift is not electrically bonded to the boat through the bottom paint which often contains copper.

- Mount the *Freedom*Lift to the transom and LOOSELY tighten the mounting bolts. Use **3M 5200** to seal the bolts on the inside of the boat and outside at the *Freedom*Lift Mounting Plates. Insert bolts with external washer through the top bolt holes. Be sure there is adequate 3M 5200 to assure a watertight seal. Fit internal top plates on the inside of transom and add washer, lock washer and nut. Snug tighten. NOTE THAT EACH SIDE OF THE FREEDOMLIFT MUST BE PARALLEL TO EACH OTHER. ONLY SNUG TIGHTEN AT THIS TIME.

- Fluid Passing Bolts – Prior to installing, be sure the hole bore through the bolt is covered to prevent **ANY** internal contamination with the 3M 5200. Use a sufficient grade of tape to assure the bore is sealed.

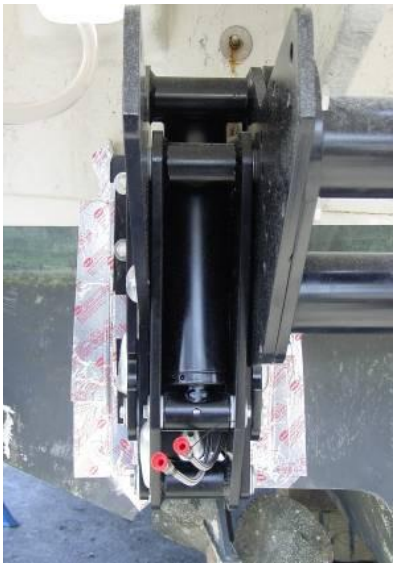
- On the exterior, add washer and using red Loctite Thread locker, lock the **fine threaded** nut in place leaving approx. ¾" of thread for the hydraulic line. On interior add square aluminum backing plate, washer, locking washer, and **fine threaded** nut. Proceed by tightening interior nuts until snug. (Be certain not to run out of thread when tightening the nut) Also, do not mount these Fluid Passing Bolts in the top or 2nd set of holes as they will interfere with the Auto Lock System.

- **FOR INSTALLATION ON A CURVED TRANSOM** - Seal the gap between the plate and the transom using aluminum backed tape. Be sure to **COMPLETELY** seal the area so that no TCC product can leak out during filling. Tape over any holes on the mounting plate that do not have bolts in them.

    - SHAKE EACH TCC PRODUCT AT LEAST 1 MINUTE, then mix **2** parts of **TCC Part A** to **1** part **TCC Part B**. (**2:1**). Only mix enough to fill approximately the bottom 2" of the gap. Working time is approx. 20 minutes. Once the product gets warm, pour mixed TCC into the top of the dammed area.

    - Once this initial pour cures (approx. 15-40 minutes) continue additional pours until the gap is completely filled. Once the TCC is cured (several hours), fully tighten mounting bolts and remove the damming tape.

    Once cured, the TCC product will have filled any gaps, eliminated the ability for water penetrations, and created a perfect mold fit between the Mounting Plate and the transom creating a perfect shim.



Step 4 - Fastening

Tighten all mounting bolts to a minimum of 80 lb. ft. torque. Do not let the bolt turn while tightening.

BE SURE WHEN TIGHTENING BOLTS THAT THE MOUNTING UNITS REMAINS SQUARE TO EACHOTHER. USE A STRAIGHT EDGE ACROSS THE END OF THE UNITS TO DETERMINE IF THEY ARE SQUARE.

Step 5 – Load Distribution Cables

On interior of transom, attach the stainless-steel Load Distribution Cable to the top of the plate and secure to L plate on the stringer or other structural area with lag bolts or through bolts (preferred). Tighten cable to VERY taught position. Repeat on the other side.

DO NOT CONNECT THE *FREEDOM*LIFT ® TO THE BOAT'S BONDING SYSTEM IN ANY WAY.

3. Hydraulic Power Unit (HPU)

Step 1 – Determine mounting location of the Hydraulic Power Unit (HPU) verifying:

- Distance to the Fluid Passing Bolts
- Proximity to 12-volt (24-volt optional) power
- Access for servicing and checking fluid

Once verified, mount the HPU.

The HPU's measurements are approximately **16" L x 8" W x 13" H**

HPU

Step 2 - Hydraulic Lines

Run the hydraulic lines from the HPU to the Fluid Passing Bolts (FPB) using the following schematic.

- Connect the BLUE marked fittings on the inside of the transom to the FPB and connect the BLUE marked fittings on the Hydraulic Cylinder line on the outside to the same FPB.

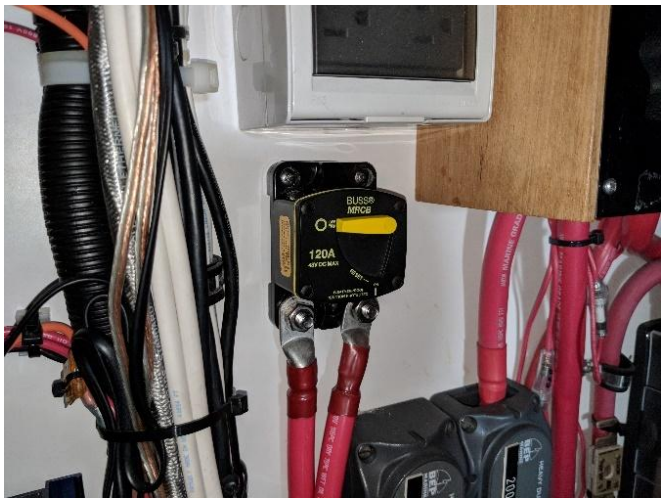
- Connect the RED marked fittings on the inside of the transom to the FPB and connect the RED marked fittings on the Hydraulic Cylinder line on the outside to the same FPB.

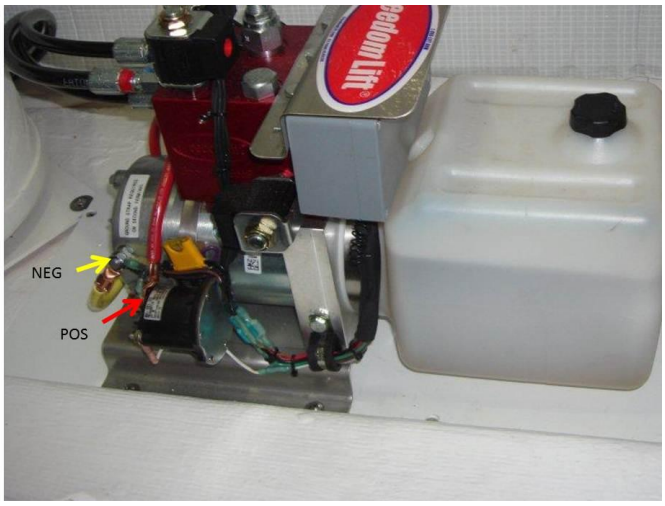
- i.e. BLUE to BLUE and RED to RED.

Carefully tighten all connections (do not use any type of thread tape or sealer)

Step 3 - 12-Volt Power (24-Volt Optional)

Connect HPU to 12V (or optional 24V) DC power source using the 120 AMP circuit breaker provided, and proper gauge power cables depending on length of cable run. Refer to marine gauge chart for correct cable size (generally #1 or larger). Mount the circuit breaker as close to the battery as possible (within 8” inches).





- Connect the POSITIVE Cable to the Solenoid (same stud where inline fuse connects)
- Connect the NEGATIVE cable to the isolated ground stud ON THE MOTOR

Verify that all mounting screws, hydraulic line fittings, and power connections are securely fastened.

USE ONLY THE SPECIAL ISO 32 BIODEGRADABLE, FULL SYNTHETIC HYDRAULIC FLUID, PROVIDED BY *FREEDOM*LIFT

4. Initial Operation

After verifying all connections, bolts, hydraulic lines, etc., operate the *Freedom*Lift through complete up and down cycles **six (6) times**.

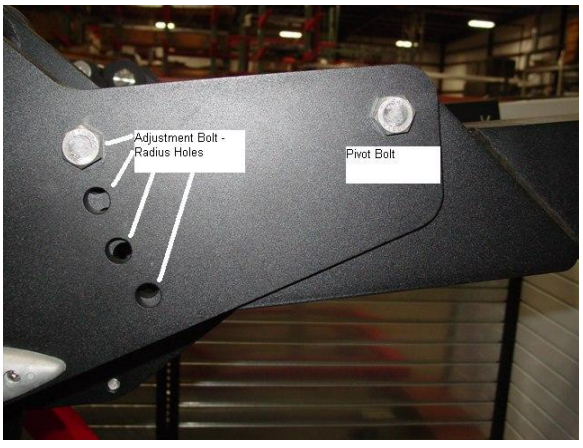
During these runs, check for any loose hydraulic fittings (no leaks) or any hull, swim platform or accessory interference. This will also bleed out any air trapped in the hydraulic lines during installation.

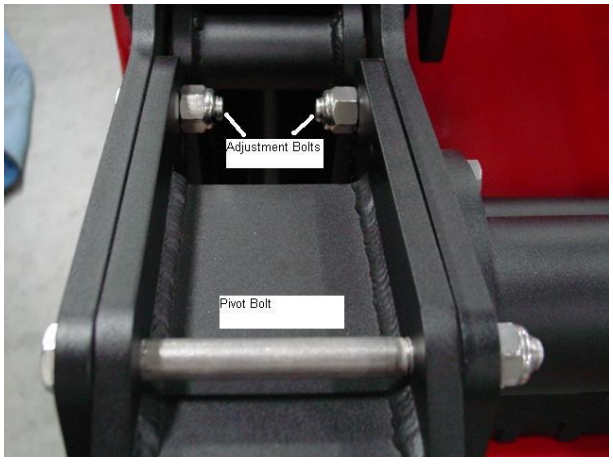
With the *Freedom*Lift in the full upright position, check the HPU Fluid level and verify it is filled to ¾ capacity.

5. Lift Arm Receivers

Attach the Lift Arm Receiver using the 15/16" bolts & nuts provided (end pivot bolt and 2 securing bolts per Receiver). Insert Lift Arms into Receiver**. Adjust Receiver to allow the center of the bunks to travel approximately 12"-14" below waterline (since the *Freedom*Lift has 44+" of vertical travel, this will allow the bottom V of the bunks to be approx. 30+" above the waterline in the full up position).** Adjust Lift Arm Bunks to accommodate PWC, tender, or dinghy. Be certain to adjust the bunks so the tender tilts toward the swim platform as shown. This will assure the proper running angle at cruising speeds. Also, be sure that the bunk touches the hull evenly.

*Watch our video at freedomlift.com/video for more information on adjusting the Lift Arm Receivers.





Tie down straps four (4) are included with the *Freedom*Lift and must always be secured whenever the tender is on the lift. *Freedom*Lift **STRONGLY** recommends securing the tender utilizing **FOUR (4)** straps. Two (2) from the outside bunk of each Lift Arm, over the top of the tender to the inside bunk arm and tightened. One (1) ratchet strap from the bow eye to the Lift Arm plate, and one (1) ratchet strap from the stern to the Lift Arm plate. **It is solely the operator's responsibility to secure the tender AT ALL TIMES. *Freedom*Lift is not responsible for any damage to the boat, *Freedom*Lift, or tender resulting from inadequate securing of the tender.**

*Watch our video at freedomlift.com/video for more information on securing the tender.

6. Final Certification

Verify all connections, fittings, bolts, and wiring to proper torque specifications. Also, check to be sure all bolts on the *Freedom*Lift are tight and secure.

Protection and Anti-Fouling Paint

The *Freedom*Lift is shipped from the factory with Plascoat PPA571 – a marine rated thermoplastic powder coating. Sacrificial aluminum anodes (10-12) are also attached. However, it is the sole responsibility of the installer and the customer to properly coat and apply anti-fouling paint as necessary. *Freedom*Lift assumes NO liability caused by corrosion. Proper coating and maintenance of the aluminum *Freedom*Lift including the hydraulic cylinders is absolutely essential for proper operation and years of trouble-free operation. **ONLY USE ANTI FOULING PAINT SPECIFICALLY DESIGNED FOR USE ON ALUMINUM (LIKE TRILUX 33 or SEA HAWK COLORKOTE).**

Fluid Level

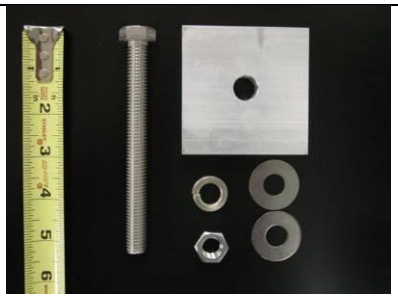
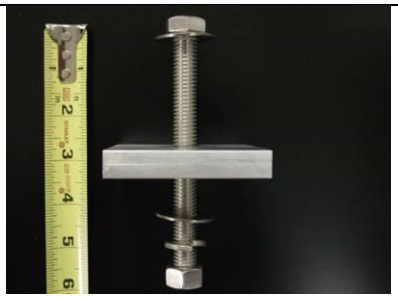
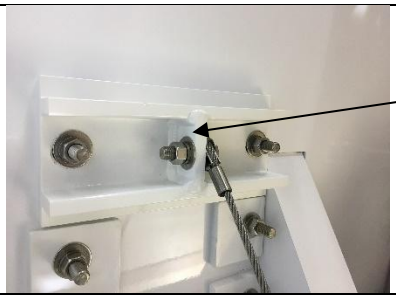
Regularly check the HPU Fluid level and maintain at ¾ of reservoir capacity when the lift is in the up position. **USE ONLY THE SPECIAL ISO 32 BIODEGRADABLE, FULL SYNTHETIC HYDRAULIC FLUID, PROVIDED BY *FREEDOM*LIFT**

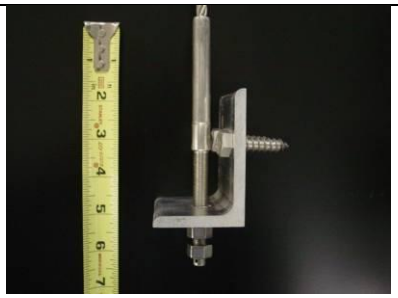
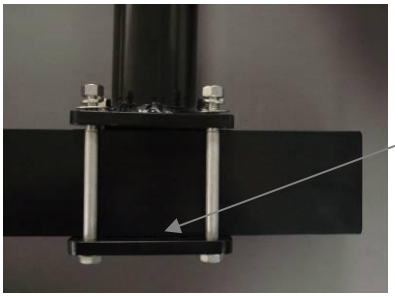
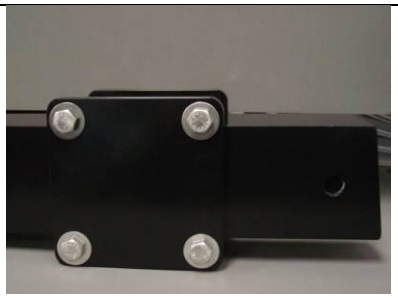
Maintenance

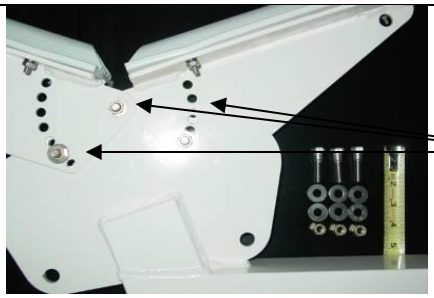
- Regularly clear the *Freedom*Lift of all marine growth.
- Replace the sacrificial anodes as needed – generally replace when the anode is 50% sacrificed.
- Check all fittings, connections, bolts, and 12/24 volt wiring every three (3) months to verify everything is secure and to torque specifications.
- Annually assure that hydraulic rams are free from any corrosion or marine growth. They should be clean and smooth.

Regular (Each Use)	• Keep FreedomLift clear of marine growth
Every 3 Months	• Check all fittings, connections, bolts, and 12/24 volt wiring to verify everything is secure and to torque specifications. • Remove and re-install lift arms
Annual	• Assure that hydraulic rams are free from any corrosion or marine growth • Check anodes and replace as needed
Every 5 Years	• Replace Hydraulic Fluid

7. Hardware Kit

	Spreader Bolts - ½” x 1” Bolts – Eight (8) with Single Spreader, (16) with Double Spreader to attach Spreader Bar to threaded Frame sides. Use Red Loc-Tite, **no washers**
	Mounting Bolts - ½” x 5” mounting bolts with two (2) flat washers, one (1) 3”x 3” inside transom backing plate, one (1) lock washer and one (1) nut. Eight (8) sets included
	Same set shown above assembled
	Fluid Passing Bolts – four (4) Fluid Passing Bolts with two (2) **FINE THREAD** nuts each, two (2) flat washers and one (1) lock washer
	Inside Transom Backing Plate (Must be mounted in Top holes) – Flat washer, lock washer and nut

	Stainless Steel Cable – Attached to Backing Plate with one (1) ½”x 2” bolt two (2) flat washers, one (1) lock washer and nut
	Stainless Steel Cable – L Plate attached to strong support (stringer) with two (2) lag bolts, cable tensioned with two (2) nuts
	Receiver Spreader – Option for longer Receiver lengths. (2) 6” x 6” Plates (8) ½” x 6” Bolts (16) Flat Washers (8) Lock Washers (8) Nuts
	Receiver Spreader - Optional (outside view)
	Receiver Spreader – Optional (inside view)

	Receiver Adjustment (2) 5/8” x 7” Bolts (2) 5/8” x 3” Bolts (2) 5/8” x 2” Bolts (6) Nyloc Nuts
	Lift Arm Bunks (per Arm) (2) Bunks (3) 3/8” x 1.5” Bolts (6) Flat Washers (3) Brass Nyloc
	Lift Arm Pins two (2) with two (2) locking pins
	120A BUSS MRCB Circuit Breaker
	Tender Tie Down Straps