



OWNER'S MANUAL Raptor Lifts



ATTENTION!

Read and follow all safety guidelines and operating procedures carefully.

IMPORTANT SAFETY MESSAGES

Always read and obey all safety messages.

This manual is intended to serve as an owner's guide for a Raptor Lift that has been properly assembled by a qualified, trained professional. The following are general safety and maintenance guidelines that should be adhered to for your safety and the longevity of your hoist.



NOTE: DANGERS are safety messages that indicate a potentially hazardous situation which, if not avoided, **WILL** result in serious injury or death if you don't follow instructions.

- Do not allow anyone on or under this lift system while it is being operated, or it is supporting the weight of a watercraft.
- Stay clear of boat lift when a boat is entering or exiting the lift with a boat.
- Never work on or make adjustments to boat, boat lift or boat lift accessories while the lift is supporting the weight of the boat.
- **Never work or play within 3 feet of the lift.**
- Do not board the watercraft on the lift while the lift is being raised or lowered.
- Make sure the boat lift is completely clear of people or other obstructions prior to operating. Do not operate a boat lift with people inside the boat.



NOTE: CAUTIONS are safety messages that indicate a potentially hazardous situation which, if not avoided, **COULD** result in minor or moderate injury if you don't follow instructions.

- Do not exceed the maximum lifting capacity of this unit. Overloading may cause mechanical failure and/or serious personal injury.
- While operating the lift, keep all body parts, long hair, loose clothing and jewelry away from all moving parts, including (but not limited to) the drive-train mechanism, cables, pulleys, rollers and lift system.
- Be sure the lift arms are completely lowered before any adjustments or repairs are made to the hoist or lift system.
- Always keep all people clear of the boat lift support structure and lifting arms. Never swim or play near a boat lift, even if it is not being operated.
- If the boat lift system is not assembled, installed, or operated properly, mechanical failure, as well as serious injury or death, **could** result. All users must understand that this lift system is a piece of heavy equipment that requires the use of good judgement in addition to the understanding and adherence to all safety instructions outlined in this document.



NOTE: WARNINGS are safety messages that indicate a potentially hazardous situation, which, if not avoided **MAY** result in mechanical failure, product damage and/or cause serious injury or potential death if you don't follow instructions.

Know the maximum capacity of your hoist. It is important not to exceed the maximum load capacity of your hoist. Overloading may cause failure or poor functionality. Maximum load capacity is half of the load (in lbs.) for forward and aft lift arm pairs.

Never board a boat while it is raised on the hoist. Always lower the lift arms before boarding the boat so it is floating free from the platform. Use caution while boarding and un-boarding boat.

Remove the drain plug from the boat before leaving for any length of time, especially if the hoist does not have a canopy cover. Accumulation of water in the boat from a rainstorm may increase the weight of your boat passed the capacity of the hoist.

It is recommended that your **Raptor Lifts** hoist be thoroughly inspected at the start of each season.

- Check the frame thoroughly for bent members and signs of fatigue.
- Check all visible pulleys and rollers - they must be turning freely, show no signs of wear or damage.
- Inspect all cables for fraying, wearing and deterioration. Inspect the stress on the cable attaching ends. If any signs of stress appear, replace the cables immediately. See the Inspections & Maintenance section on page 9 for more information.
- **Use Caution during Maintenance and Repairs.** Always remove the boat from the lift and fully lower the platform before any maintenance and repairs are performed. Only remove the safety shields after the platform is fully lowered. Never reach into the hoist mechanism and manipulate any of the hoist parts when the platform is raised.
- Lift must be assembled and installed properly or mechanical failure and possible injury may occur. Only have an authorized dealer install the lift.
- Never overload a boat lift. See capacities/specifications for important information regarding the boat's actual weight and boat lift capacity limitations.
- If boat is open to the accumulation of rain water, be sure boat's drain plug is pulled. Additional water weight may cause the maximum lift capacity to be exceeded, resulting in potential lift damage or bodily injury.
- Never operate a boat lift that is not level. Under normal conditions a boat lift operates under extreme force. When the lift is not level, these forces are greatly multiplied and bodily injury or damage to the lift can result.
- Perform all inspections and maintenance on a regular basis. Replace any damaged or defective parts immediately to avoid potential lift failure. Ensure all pulleys and rollers are operating properly and that all cables and their attach points are secure and free of excessive wear and fraying. See the Inspections & Maintenance section on page 9 for more information.
- Never lift a boat with water filled ballast bags. This extra weight will overload the lift.
- Bodily injury or damage to lift system may result if installation or removal of this lift is attempted without first reading and understanding the installation and removal section of this manual on page 4.
- If this unit is equipped with a canopy, severe wind damage may occur if the lift is not securely held down to the lake bottom by screw anchors or by some other means.
- Never install the lift system in a body of water where either the rising water or wave action will not always flow under the main lift beam. For example, do not install lift in bodies of water with significant water fluctuation or large water bodies that have excessive wave action.

The images on this page are the safety precautions stickers applied to your lift. If they are not visible or legible, please contact your dealer for replacement.



GENERAL HOIST SAFETY PRECAUTIONS



MOVING PARTS ENTANGLEMENT HAZARD

- **Always** keep hands clear of rope, during operation and when spooling in or out.
- **Always** disconnect all wires from battery, before beginning work.
- **Always** disconnect negative terminal first and reconnect negative terminal last.



MOVING PARTS ENTANGLEMENT HAZARD

- **Never** operate this hoist when under the influence of drugs, alcohol or medication.
- **Always** remove any element or obstacle that may interfere with safe operation of the hoist.
- **Never** hoist with less than 5 wraps of rope around the drum, the rope could come loose from the drum.
- **Never** touch rope while in tension or under load.
- **Never** touch rope while someone else is at the control switch or during hoisting operation.
- **Always** stand clear of rope and load and keep others away while hoisting.
- **Always** be aware of stability of load during hoisting. Alert all bystanders of any unstable condition.
- **Always** keep remote control lead clear of the drum, rope and rigging. Inspect for cracks, pinches, frayed wires or loose connections. Replace remote control if damaged.

AVOID HOIST AND EQUIPMENT DAMAGE

- **Always** store the remote control in a protected, clean, dry area.

LIFT CAPACITIES & DIMENSIONS

WARNING – Do not to exceed the maximum load capacity of your hoist. Overloading could cause mechanical failure and serious personal injury.

RAPTOR LIFT DIMENSIONAL SPECIFICATIONS

MODEL/ CAPACITY	DRIVE TRAIN	BUNKS	LIFT TRAVEL	INSIDE WIDTH	OUTSIDE WIDTH	FRAME LENGTH
NZD-7500/7500 lbs.	Planetary Drive	Aluminum w Poly	60"	117"	138"	122"
NZD-10000/10000 lbs.	Hydraulic	Aluminum w Poly	48"	117"	138"	122"
CROSS BAR HEIGHT	LEVELING LEGS	TRAVEL WIDTH	CANOPY OPTION	GUIDE-IN OPTIONS	WATER HEIGHT (BELOW DRAFT)	WEIGHT
124.5"	0-24"	30-65"	24', 27',30'	Side Rails	0.5"	900 lbs.
124.5"	0-24"	30-65"	24', 27',30'	Side Rails	0.5"	1000 lbs.

Table 1 – General Characteristics of the Raptor Lift Models

INSTALLATION AND REMOVAL

It is recommended that Raptor Lifts are installed and removed by an authorized dealer. The recommended method of installation is using a wheel kit and rolling/towing/pulling into place.

Attaching Optional Wheel Kit (P/N TBD)

- Attach Wheel Kit Plates on Lower Longitudinal Structure beams utilizing hardware provided.
- Attach Wheel Hib and Wheels (Not Provided) per instructions

Attaching Optional Tow Kit (P/N TBD)

- Raise Hoist to Min of 3 Feet From Lowest Position

- Attach Front and Rear Side Stabilizer bars with included fasteners.
- Attach 8 Wheel Brackets to Lower Side Arms
- Attach Wheels to Wheel Brackets
- Attach Tow Bar (Not Included) to Front Side Stabilizer

Leveling of the Hoist

It is critical to have a level hoist. The leveling legs should be adjusted and a level should be used to ensure lift is level in the installed position.

Installation & Adjustment at Dock

It is recommended that the hoist leg heights are estimated prior to installation into the water. This will limit the need to bring the hoist back out of the water to adjust a leg in order to achieve a level unit.

Cable Adjustments

Each Cable has a threaded swage fitting on either end which can be used for adjustment. The Nut takes a 5/16" wrench and the swage can be held from turning using locking pliers or other similar tools. The lift structure **MUST BE LEVEL USING A LEVEL**, and the traveling portion of the lift must be level as well to function properly.

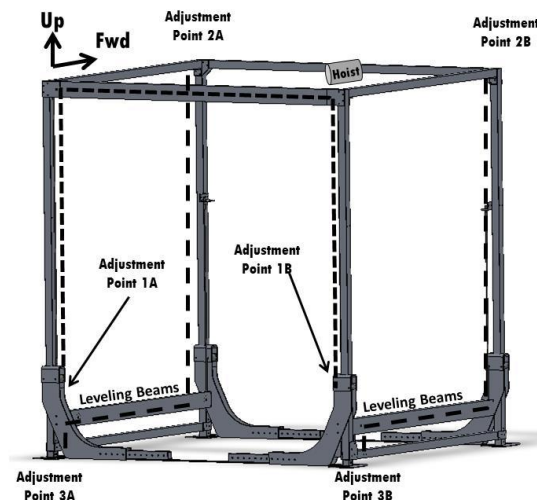
CABLE ADJUSTMENT:

STEP 1

Without the boat on the lift raise the arms just above water level until bunks are above the water surface. Using the tools described above, and a level, Adjust Points 1A and 1B until they are level with one another. Backing the nut off the swage on one side will lower that side and tightening the nut on that side will raise that side. **NEVER BACK NUT OFF MORE THAN HAVING AT LEAST TWO THREADS PROTRUDING FROM THE NYLON.**

STEP 2

Without the boat on the lift and using tools described above, adjust Points 2A and 2B (and/or 3A and 3B) in the same manner until leveling beams are level. At this point the lift structure and the traveling portion should both be level.



CONNECTING BATTERIES

CHECK THE FOLLOWING TO ENSURE PROPER OPERATION OF THE ELECTRIC MOTOR DRIVE

Electrical System:

- All cables used in the lift shall be 6 AWG or larger cables. Failure to do so can harm the lift and/or cause lift failure.
- Power wires to the batteries & motor are properly connected, corrosion free & tight.
- Batteries are fully charged.
- Ensure the wired remote is installed securely and is connected tightly.

WARNING! CHEMICAL AND FIRE HAZARD

- Never operate lift in an environment containing explosive or combustible material.
- Always remove jewelry and wear eye protection.
- Never lean over battery while making connections.
- Always verify area is clear of fuel lines, fuel tank, brake lines, electrical wires, etc. when operating, installing or

- performing maintenance.
- Never route electrical cables:
 - Across any sharp edges.
 - Through or near moving parts.
 - Near parts that become hot.
- Always insulate and protect all on exposed electrical connectors.

The Raptor Lifts do not come standard with batteries. Raptor lifts operates on 24V batteries and this can be accomplished by connecting two 12V batteries in series using a 6 AWG Marine Series Cable as shown in the figure below.

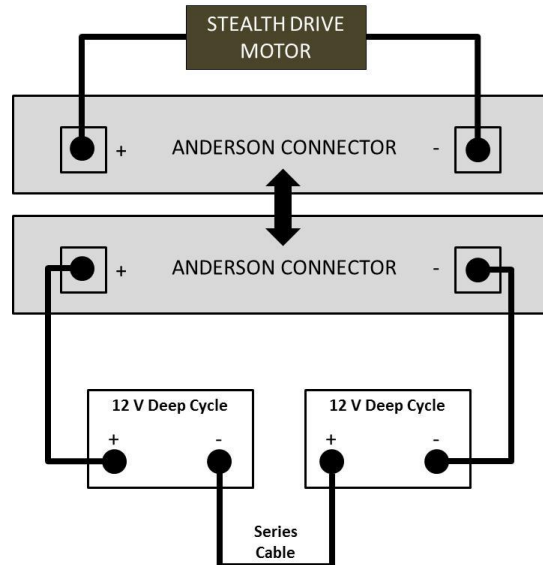


Figure 1 – Demonstrates the proper way to connect two 12V Deep Cycle batteries in series to create 24V and how to connect to the system.

WARNING: Batteries that are improperly connected can cause injury or damage to the lift system, the batteries, and a potential explosion.

SELECTING THE BATTERIES FOR 24-VOLT DC MODELS

Batteries are not included with the lift system. The recommended batteries are two 12-Volt, deep-cycle, Group 24 (casesize), with 600 cold cranking amps and stud post terminals with wing nuts (lead top posts).

CHARGING THE BATTERIES

In order to achieve peak lift performance and maximum battery life, the batteries must be properly charged and maintained. If batteries are run down or faulty, the lift system will either move very slowly or not at all.

Battery boxes include a built in battery condition indicator to let you know the level of your charge

WARNING: When charging batteries, it is important to follow the manufacturer's instructions for both the battery and charging systems to ensure that batteries are not damaged by improper or overcharging.

Standard Charging Option – Raptor Lifts include a Lake Lite 24V 20W Charging System which includes solar panel, battery tray and charging indicators. Please follow the included instructions on how to install the battery charging system.

NOTE: Solar panels will only maintain a charge on batteries. Be sure batteries are fully charged before installing a solar panel. Fully charge the battery according to the manufacturer's instructions.

AC Charging Option – AC Charging can be accomplished using a Battery Tender 24V Waterproof Charger. Please contact your Raptor Lift Dealer for details and installation instructions.

CONNECTING AND USING THE WIRED REMOTE

Raptor Lifts come standard with a wireless remote control and backup key. The wireless remote control includes limit control capabilities. Information on how to operate the wireless remote and set limit control capabilities are available in the corresponding documents. To raise the lift with the key, simply turn the key in the direction specified as "UP" on the control panel and to lower the lift, simply turn the key in the direction specified as "DOWN" on the control panel. The lift will **NOT stop automatically when it reaches the** maximum and minimum **travel limits unless previously set by wireless remote.** The operator should be properly trained/know/understand the lift's maximum and minimum travel limits prior to operating the lift.

The wireless remote is weather resistant and should not be exposed to the elements. For added safety and security store indoors when not in use. Remove the key while storing the lift to.

RAISING AND LOWERING THE LIFT

Before raising or lowering the lift, it is important that you understand how to operate the remote and how to ensure that the lift is both level and in adequate water depth. Please read the safety statements and information in this section carefully before connecting power to the lift and operating it for the first time.

It is important to stop raising the boat before it or any accessories make contact with the canopy frame or fabric or other structure.

NOTE: Many boats accessories that are either permanent or plug in that can interfere with upwards motion. Be aware of all accessories and remove those that are plug in such as anchor lights prior to using the lift.

In order to get maximum travel from the lift a tight wind as far aft as possible is required. If the cable is not winding properly please call your installer for assistance. It is important not to let the cable contact any object (including slot walls of mount plate) other than the hoist drum and sheave. This could cause premature wear on the cable.

When the lift arms are in their lowered position on a properly leveled lift in adequate water depth, the boat floats free of the bunks as it enters or leaves the lift. When determining required water depth, take wavy conditions into consideration. There should be no chance of the boat hull lifting up on a wave and dropping down onto the bunks.

WARNING: Prior to entering or exiting the lift with your boat, you must first ensure that the lift's bunk system is lowered far enough so that the boat hull or any other system makes contact with the bunk system. Powering on or off the bunk system can cause severe damage not covered by the warranty.

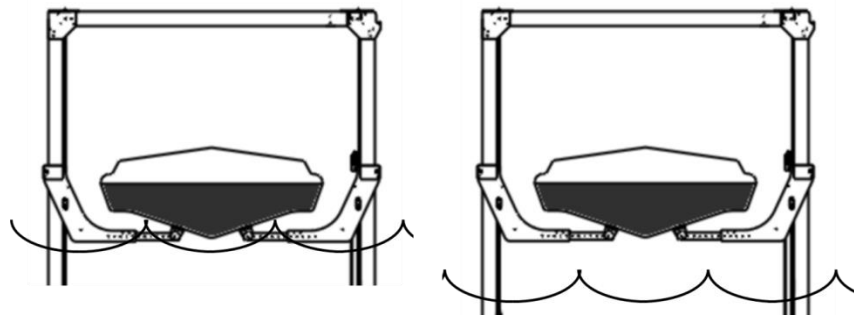


Figure 2 – The picture on the left demonstrates a lift that is set too low and the water can hit the cantilever arms when raised. The picture on the right shows a lift that is set properly where the water, including waves, does not interfere with the cantilever arms when raised.

To maintain the optimum water level for proper lift operation, the minimum water depth is 0.5" below the draft of your watercraft (as defined in the watercraft operators manual)

DANGER: Never allow anyone on, under or within 3 feet of this lift system while it is being operated or supporting the weight of a watercraft.

DANGER: Stay clear of boat lift when someone is entering or exiting the lift with a watercraft.

DANGER: Never work on or make adjustments to boat, boat lift or boat lift accessories while the lift is supporting the weight of the boat.

POSITIONING

BEFORE PUTTING A BOAT ON THE LIFT YOU NEED TO KNOW THREE VERY IMPORTANT THINGS:

1. Determine the total loaded boat weight?

The weight of your boat is the total dry weight listed in your manual (ensure that weight includes the motor, oil etc.), plus the weight of a full fuel tank and any other equipment you will store in your boat (lifejackets, water sports gear, boat cover etc.) all added together. **It is recommended that the full load not exceed 85% of the lift capacity of the lift. This ensures safe and proper function.**

- Determine the boats center of gravity or CG?

A boats CG is the center of all the weight, fuel etc. in your boat. Your dealer or the manufacturer of the boat should be able to help you locate the boat's CG. Be sure that the motor and gear weight have been taken into consideration.

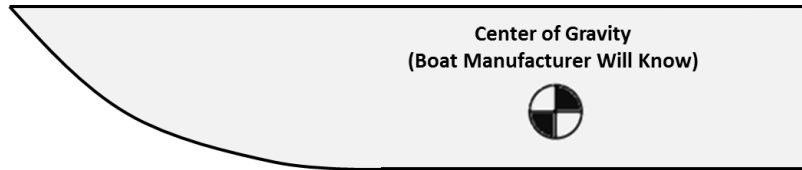


Figure 3 – The CG of the boat is shown.

- The boat shall be positioned so that the CG is centered between the lifting cantilever arms in the forward to aft direction.

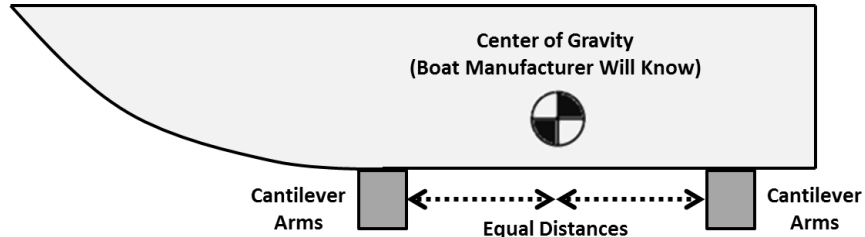


Figure 4 – The CG is properly placed between the cantilever arms.

- Once the proper position is located, develop a method that ensures that this location will remain consistent every time the boat is used in the lift.

If your boat is not positioned properly, you can extremely overload one of the cantilever arm assemblies and can cause severe damage not covered by the warranty.

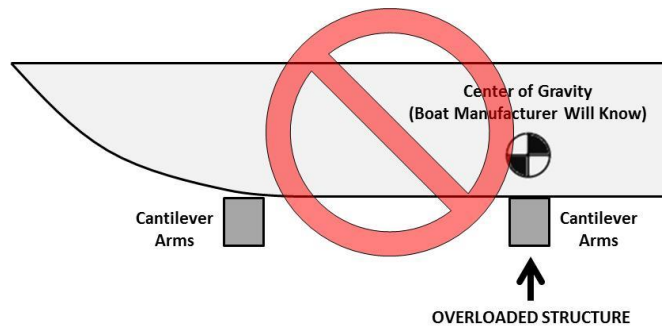


Figure 5 – The CG is NOT properly placed yielding one cantilever arm pairing to be overloaded. This can cause binding, and/or damage to the lift

Level Installation - The lift must be installed so it is setting level both front-to-rear as well as side to side. Doing so will allow the hoist to operate smoothly.

WARNING: Never operate a boat lift that is not level. Under normal conditions a boat lift operates under extreme force. When the lift is not level, these forces are greatly multiplied and bodily injury or damage to the lift can result.

WARNING: Never attempt to adjust the bunk system (or any boat lift component) with the weight of the boat on it. Doing so could kill or cause serious bodily injury due to a fast dropping boat.

DETERMINING THE PROPER WIDTH

The proper width of the bunk system depends on the contour of the boat hull. As a rule of thumb, the bunks should be spread as wide as possible. If the boat is on a trailer, measure the width that will provide optimal support and hull fit. The setup of the trailer bunks may provide a helpful guide.

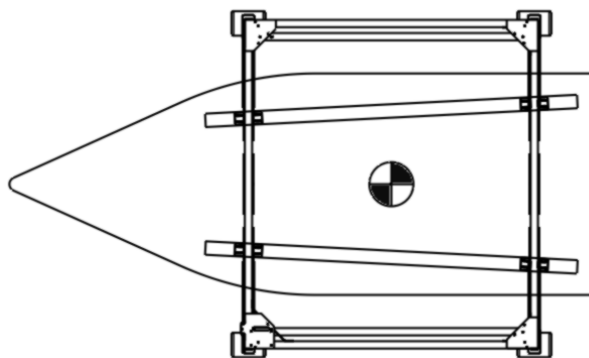


Figure 6 – Demonstrates the bunk set up on a V-Hull boat.

WARNING: Know the draft of your boat. This can be found by contacting your boat dealer or manufacturer. Be sure to check/know water depth prior to lowering boat. You will need 0.5" of water below your boat. If there is not enough water for your boat to float, and you lower lift all the way, the prop/hual will touch the bottom and could cause damage to your boat/prop.

WARNING

Improper weight distribution could cause an overload situation which could result in lift failure and potential bodily injury. If you do not know where your boat's balance point is, consult your dealer.

CANOPY FABRIC INSTALLATION

- Use Provided Canopy Chord and Hardware

WARNING: Do not attempt to install or remove canopy fabrics in windy conditions. Strong winds or wind gusts can make fabric handling extremely difficult and can cause a potentially dangerous situation.

WARNING: Do not adjust canopy frame with boat on lift. If lift failure were to occur, there is potential for serious bodily injury or even death. Damage may also result from the loosened framework making contact with the boat.

WARNING: If the lift will be left without a boat on it for any extended amount of time, the canopy fabric should be removed to reduce the possibility of wind damage.

CAUTION: If the lift has a canopy, it is possible for strong winds to move the lift system or blow it over. This is especially true if the lift does not have a boat on it. Even with a boat's weight, extreme winds can possibly move a boat lift causing potential damage. The possibility of wind damage to the lift or canopy may be reduced by anchoring the lift to the lake bottom with a screw-auger anchor system.

INSPECTIONS & MAINTENANCE

WARNING:

- Always wear heavy leather gloves when handling wire rope.
- Never let rope slip through your hands.
- Always be aware of possible hot surface at hoist motor, drum or rope during or after hoist use.

WARNING: Improperly installed fasteners can cause instability in the lift frame resulting in premature wear to the lift structure and create a structurally unsafe boat lift. Check fasteners regularly/ before each use of lift system for damage and/or missing hardware. Damage due to improperly installed or damaged fasteners caused by inadequate maintenance or from not being assembled correctly by a certified dealer will void warranty. If you have questions on fastener install and maintenance you should contact your authorized Raptor Lift Dealer.

WARNING: Do not use a boat lift with cables that show any abnormalities. If a cable breaks under pressure, the boat will drop suddenly causing potential damage to the boat, the boat lift, and can cause serious injury or death.

- Inspect all cables at least annually. Any frayed, deteriorating or visibly stressed cables must be replaced before the lift is used.
- Check all seven pulleys (sheaves) annually to make sure they are turning free and true.
- Visually inspect lift frame annually for cracks or damage. Replace any cracked or damaged parts before using lift.
- If the lift receives wind damage or is moved or blown over by the wind, a full inspection (by a trained RAPTOR LIFTS dealer or other knowledgeable professional) must be completed before the lift is used.
-

Cable Abnormalities



15 YEAR LIMITED WARRANTY

1. **The Limited Warranty (“Warranty”):** Subject to the terms and conditions set forth below, Raptor Lifts, LLC (“Company”) warrants to the original retail purchaser of a Raptor Lift from an authorized Raptor Lift dealer (“Purchaser”) that the Parts (as defined in Section 2 below) will be free from defects in materials or workmanship at the time of purchase, and Company will repair or replace any Part that is not free from defects in material or workmanship at the time of purchase provided that Company is notified in writing of the defects by Purchaser during the Warranty Period.
2. **Warranty Period and Coverage:** The Warranty is limited to each of the following parts (each a “Part” and, collectively, “Parts”), with the period for notifying the Company of a defect in a particular Part (“Warranty Period”) as set forth below:
 - A. Ten years from the date of purchase by the Purchaser for a structural part of the Raptor Lifts excluding canopy fabric, motor and motor hardware, cables, pulleys, sheaves, rollers, bunks, and plastic covers (“Structural Part”). For the next five years immediately following that ten-year period, the Company will be responsible for the following percentage of the cost to repair or replace a defect in a Structural Part covered by the Warranty: year 11 = 80%; year 12 = 70%; year 13 = 50%; Year 14 = 30%; and Year 15 = 10%.
 - B. Ten years from the date of purchase by Purchaser for cables and pulleys.
 - C. One year from the date of purchase by Purchaser for motor and motor hardware.
 - D. Five years from the date of purchase by Purchaser for rollers.
 - E. Two years from the date of purchase by Purchaser for canopy fabric (does not include high wind or flying object damage from storms or color fading).

Notwithstanding any of the foregoing, if the Raptor Lift is exposed at any point to a salt-water or brackish-water environment, then the Warranty Period for all Parts will be one year from the date of purchase by Purchaser.

3. **Disclaimer of All Other Warranties:** Company makes no other warranties, either express or implied, other than the Warranty, and no representative of Company or an authorized Raptor Lift dealer has the authority to make any other warranty in addition to the Warranty. **COMPANY EXPRESSLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.** To the extent that any state or federal law forbids the foregoing disclaimer of implied warranties, then the Company expressly limits such implied warranties to the duration of, and remedies set forth in, the Warranty.
4. **Replacement Exclusive Remedy:** The Company’s sole obligation under the Warranty is to repair or replace Parts that were defective at the time of purchase by Purchaser when brought to the Company’s attention during the Warranty Period. Repair or replacement of defective Parts is the exclusive remedy provided for by the Warranty, and the Company expressly disclaims all other remedies. The Company will not pay for any labor costs or other expenses incurred in replacing any defective goods other than those authorized by the Company in writing and performed by an authorized Raptor Lifts dealer. **COMPANY WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES** related to the Raptor Lifts it sells, including (but not limited to) any damages, losses, costs, or expenses resulting from loss of use of the goods, loss of time, inconvenience, loss or damage to real or personal property, loss of income, loss of profits, or personal injuries.
5. **Restrictions on Warranty:** The following restrictions apply to the Warranty, the failure to abide by any one of which will **void** the Warranty:
 - **30-day written notice.** Purchaser must provide Company written notice by certified mail to the address in Section 6 below within 30 days of when the Purchaser discovers or should have discovered the defects in the Part(s).
 - **No alterations or improper use.** The Parts must not have been altered by more than normal use and wear and must not have been improperly used. In addition, Purchaser must have complied with all provisions in the Raptor Lift Owner’s Manual regarding the proper use of and care for the Parts.
 - **No transfer.** The Warranty applies to the Purchaser only and is not transferable.
 - **Repairs by authorized Raptor Lift dealer.** Purchaser must have all repairs under this Warranty performed by an authorized Raptor Lift dealer.
 - **Proper documentation required.** Upon request by Company, Purchaser must provide documentation verifying proof of purchase, the purchase date, Purchaser’s name and address, and the serial number of the Raptor Lift.
 - **Damage excluded.** All damage to Parts caused by (1) wind, fire, or other acts of nature or (2) damage resulting from poor or bad usage are not covered by the Warranty.
6. **Contact Information:** For further information, please contact the Company by email to info@raptorliftsmarine.com and include the words “Warranty Claim” in the subject or by mail to Raptor Lifts, Warranty Department, 15261 Valentia Dr Granger IN 46530.