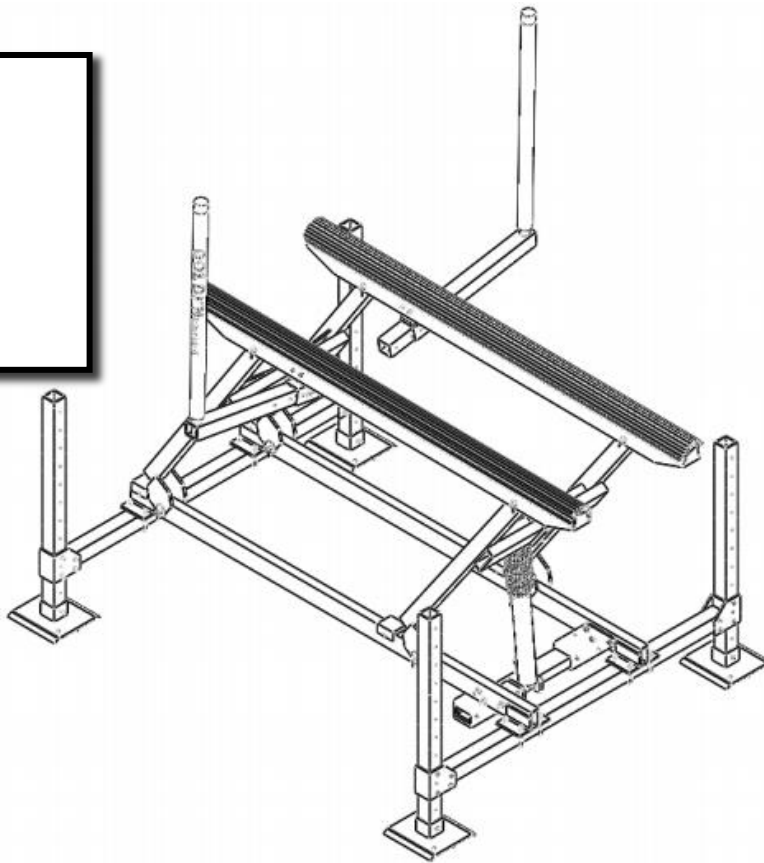




OPERATIONS MANUAL

MODELS:

1-CYLINDER
2-CYLINDER
4-CYLINDER
6-CYLINDER
8-CYLINDER



TORNADO LIFT



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REVISION A
PUBLISHED 7/15/2020



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INTRODUCTION

Golden is proud to introduce the Tornado Lift to our line of lifts.

This lift is a free-standing adjustable hydraulic lift manufactured with T-6 marine grade aluminum and stainless-steel hardware. This lift is ideal for freshwater and saltwater applications where shore power might be an issue or code regulations prevent piling or fixed structure lifts.

We weld all components that are not adjustable, which prevents premature loosening of parts and there is no contact of dissimilar metals in a saltwater environment, we enclose our hydraulic shafts in our exclusive Air Bellow. The 'Air Bellows' prevent any harmful particles and marine growth from damaging the hydraulic cylinders, seals and shafts.

We use only eco-friendly biodegradable fluid. It is 100 % water soluble and meets the strict guidelines of the US Fish & Wildlife Service as non-toxic.

FEATURES

- Hardened Stainless Axles with Nylatron Sleeves.
- Highest Lift Travel at 6° of Rise
- Long Range Wireless Remote with 2 Transmitters
- Marine Grade Aluminum & Stainless-Steel Construction.
- Aluminum Bunks with Rubber Capped Adjustable Inserts.
- Hydraulic Cylinders with Stainless Steel Shafts.
- Hydraulic Cylinder Shafts are Protected with the Exclusive Air Bellows
- Larger Structural Components Prevent Flex and Wear; our Lifts are much Heavier than all Others.
- The Golden Exclusive Multi-Bunk Can Accommodate V-hulls, Step-Hulls, Pontoon and Deck Boats, As Well As PWCs.
- Optional and Removable Accessories Such as Adjustable Guide Poles with Cushions, Bumpers or Optional Walkways, Bow Stops and Wheel Kits (see accessories).



SAFETY

SAVE THESE SAFETY INSTRUCTIONS FOR FUTURE REFERENCE

SAFETY INFORMATION (READ THOROUGHLY)

The TORNADO BOAT LIFT was designed, tested and certified to be installed in the recommended area approved by certified and approved personnel under the specific installation and operation guidelines laid out in the installation and operation manuals issued by GOLDEN BOAT LIFTS.

Note: Any installation or operation methods outside the guidelines described within the manual(s) mentioned above will void the product warranty.

Note: Only a trained and certified service provider should install the Tornado boat Lift.

Note: Before beginning installation of the Tornado Boat Lift, please ensure that the area selected for installation meets all local and state guidelines and regulations.

Note: To avoid damage to the Tornado Boat Lift and/or personal injury/death, carefully follow each step outlined in the manual(s).

Note: Before beginning installation of the Tornado boat Lift, clear adequate space around the installation site so that all parts, hardware, and tools can be laid out in a safe and organized fashion.

! CAUTION !

HEAVY OBJECTS

Failure to follow this warning can result in personal injury or death and/or damage to the Tornado Boat Lift.

The Tornado Boat Lift has many heavy parts. To avoid bodily harm and/or damage to the Tornado Boat Lift, ensure that proper handling and lifting techniques are used.

Note: Machinery may be required to move individual parts and/or finished product.

When completing the steps outlined in this Installation Manual, please ensure that only proper handling and lifting techniques are used to transport parts to desired locations. In some circumstances, machinery may be required to move individual parts.

The Tornado Boat Lift comes with a 12V DC Double-Acting Hydraulic Power Unit (SPX Stone Hydraulic Power unit) which provides the power for operation of the Tornado Boat Lift.

Note: After installation of the Tornado Boat Lift, please reference the HYDRAULIC POWER PACK INSTALLATION MANUAL provided to continue installation of the power supply for the Tornado Boat Lift. Failure to reference and follow these instructions before attempting to operate the Tornado Boat Lift may cause damage to the lift and/or personal injury/death.

! WARNING !

MOVING PARTS HAZARD

Failure to follow this warning can result in personal injury or death and/or damage to the Tornado Boat Lift.

The Tornado Boat Lift has many moving parts while in operation. To avoid bodily harm and/or damage to the Tornado Boat Lift, ensure the lift is operated from a safe distance, and never on the lift or boat.

Note: Never operate a lift while on the lift or inside the boat.

After completing the steps outline in the TORNADO INSTALLATION MANUAL and the HYDRAULIC POWER PACK INSTALLATION MANUAL, the Tornado Boat Lift should be ready to operate.

Note: Before operation, it is important to verify that every step outlined in the TORNADO INSTALLATION MANUAL and the HYDRAULIC POWER PACK INSTALLATION MANUAL has been correctly completed.

To operate the Tornado Boat Lift, please reference the TORNADO BOAT LIFT OPERATION MANUAL.

Note: Never Exceed the maximum capacity of the lift.

Note: Never go under the lift or boat, especially when the lift is in the raised position. Never operate a lift while on the lift or inside the boat.

Note: It is recommended that the Tornado Lift be raised to the upward position after removing the boat, indicating a hidden underwater obstruction for others.

SAVE THESE INSTRUCTIONS



STANDARD OPERATION

Note: Please thoroughly read the following Standard Operations instructions before attempting to operate the Tornado Boat Lift.

Note: Please ensure that all the steps and guidelines outlined in both the TORNADO BOAT LIFT INSTALLATION MANUAL and the HYDRAULIC POWER PACK INSTALLATION MANUAL have been completed and inspected by qualified personnel before proceeding.

Note: Please ensure the included transmitter(s) has/have been paired correctly with the pump and boat lift before proceeding.

Waking the Remote-Control Transmitter(s):

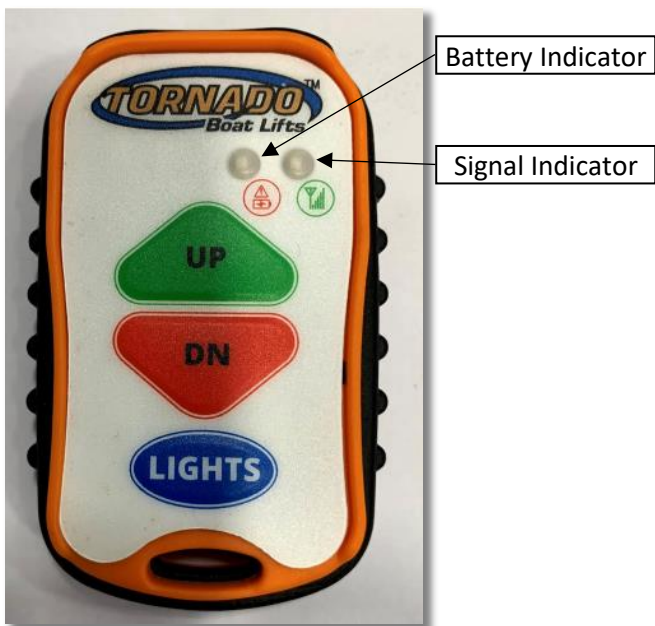
Note: The lift will not operate while more than one transmitter is in the Woke state. Wait 30+ seconds for the transmitter(s) to enter Sleep mode.

Note: Battery Indicator flashing red = Low Battery

Note: Signal Indicator flashing green = Wake State

Note: Signal Indicator flashing red = Unit Out of Range

1. Press any button on the transmitter(s) to put the transmitter into a "wake" state, distinguished by a green flashing light.
2. Now, the Remote-Control Transmitter is ready to operate the Tornado boat Lift:
 - UP Button (UP)- Raises the boat lift
 - DOWN Button (DN)- Lowers the boat lift
 - LIGHTS Button (LIGHTS)- If applicable, will turn power on/off to accessory light(s)



Standard Operation Procedure: Parking

Note: Do not operate the Tornado Boat Lift while on the lift or inside the boat

1. Using the Remote-Control Transmitter, ensure the Tornado Boat Lift is in the desired lowered position.
2. Carefully position the boat in appropriate location resting hull on bunks of boat lift.

Note: It is important to consult the boat manufacturer to determine how to position boat on bunks. Failure to do this may result in damage to the Tornado Boat Lift, the boat, and/or bodily harm.

3. From a safe location away from the boat lift and boat, use the Remote-Control Transmitter to raise the boat to the desired height.

Standard Operation Procedure: Launching

Note: Do not operate the Tornado Boat Lift while on the lift or inside the boat

Note: It is important to verify that there are no obstructions before lowering the boat lift.

1. From a safe location away from the boat lift and boat, use the Remote-Control Transmitter to lower the boat until it is freely floating on the water.
2. Carefully position the boat away from the lift before boarding the boat.

Pairing Remote-Control Transmitter(s)

Note: All transmitters must be programmed at same time. To do this, follow steps 1-3 for each remote before proceeding to step 4.

1. Ensure RECEIVER power button is in the "OFF" position.
2. Ensure Remote-Control Transmitter is in sleep mode (no flashing lights).
3. Hold "UP" and "LIGHT" buttons on transmitter at the same time until the Battery Indicator and Signal Indicator begin flashing alternately red and green.
4. Turn the RECEIVER power button to the "ON" position.
5. If pairing was successful, the transmitter will begin flashing only green.

Note: If the transmitter is not flashing green or is not working, please repeat these steps.



RECOMMENDED MAINTENANCE

Note: Please refer to the HYDRAULIC POWER PACK INSTALLATION MANUAL for a more detailed description for maintenance.

Checking the Fluid/ Oil Level

It is standard to add fluid to the pump periodically as needed. To verify there is enough fluid in the pump:

- Position lift to the UP position- The fluid should be between 1-1/2" to 2" from the bottom of the tank.
- Position lift to the DOWN position- The fluid should be between 1-1/2" to 2" from the top of the tank

If the fluid is lower than described above, carefully add more fluid, following the detailed description in the HYDRAULIC POWER PACK INSTALLATION MANUAL.

Note: Only add fluid when the lift is in the DOWN position. Failure to follow this will result in overflowing the reservoir tank and causing damage to the pump and lift.

Changing the Oil

The oil should be replaced every two years to ensure maximum life of unit. During this time, it is recommended that the Inlet Suction Strainer also be cleaned.

Note: The oil will need to be drained before the Inlet Suction Strainer is accessible.

Note: The oil will need to be changed at a faster rate the more frequently the lift is used.

Note: The oil may need to be changed more frequently depending on the environment/climate the lift is in.

Battery Maintenance

Periodically check the battery cables and connections for corrosion. If corrosion is present, remove corrosion using standard methods and reapply Dielectric Grease (or any corrosion protectant rated for boat lifts).

Cleaning the Solar Panel

Use a mild cleaner to remove any dirt/grime from the solar panel. Doing this regularly will improve the charging ability and extend the battery life.



SPECIFICATION SHEET

1-Cylinder Lift(s)

- LIFT CAPACITY: 2,000 lbs. (907 kgs)
- NUMBER OF CYLINDERS: 1
- WEIGHT \approx 507 lbs. (230 kgs)
- HEIGHT ADJUSTMENT RANGE \approx 55 in - 117 in (1.4 m - 3 m)
- FRAME SIZE \approx 96 in x 72 in [L x W] (2.44 m x 1.83 m)
- BUNK LENGTH \approx 96 in (2.44 m)
- POWER SUPPLY: 12 V DC H.D. Pump & Solar Package enclosed within fiberglass lock box (Operated using provided transmitters)

2-Cylinder Lift(s)

- LIFT CAPACITY: 4,500/6,000 lbs. (2,041/2,722 kgs)
- NUMBER OF CYLINDERS: 2
- WEIGHT \approx \leq 900 lbs. (408 kgs)
- HEIGHT ADJUSTMENT RANGE \approx 55 in - 117 in (1.4 m - 3 m)
- FRAME SIZE \approx 144 in x 127 in [L x W] (3.65 m x 3.05 m)
- BUNK LENGTH \approx 144 in (3.65 m)
- POWER SUPPLY: 12 V DC H.D. Pump & Solar Package enclosed within fiberglass lock box (Operated using provided transmitters)

4-Cylinder Lift(s)

- LIFT CAPACITY: 8,000 / 10,000 / 12,000 lbs. (3,629 / 4,536 / 5,443 kgs)
- NUMBER OF CYLINDERS: 4
- WEIGHT \approx 1,062 lbs. (482 kgs)
- HEIGHT ADJUSTMENT RANGE \approx 55 in - 117 in (1.4 m - 3 m)
- FRAME SIZE \approx 144 in x 132 in [L x W] (3.65 m x 3.35 m)
- BUNK LENGTH \approx 144 in (3.65 m)

- POWER SUPPLY: 12 V DC H.D. Pump & Solar Package enclosed within fiberglass lock box (Operated using provided transmitters)

6-Cylinder Lift(s)

- LIFT CAPACITY: 15,000/18,000 lbs. (6804/8,165 kgs)
- NUMBER OF CYLINDERS: 6
- WEIGHT \approx 1,800/2,000 lbs. (817/907 kgs)
- HEIGHT ADJUSTMENT RANGE \approx 55 in - 117 in (1.4 m - 3 m)
- FRAME SIZE \approx 216 in x 144 in [L x W] (5.49 m x 3.66 m)
- BUNK LENGTH \approx 72 in & 192 in (1.83 m & 4.88 m)
- POWER SUPPLY: 12 V DC H.D. Pump & Solar Package enclosed within fiberglass lock box (Operated using provided transmitters)

8-Cylinder Lift(s)

- LIFT CAPACITY: 24,000 lbs. (10,886 kgs)
- NUMBER OF CYLINDERS: 8
- WEIGHT \approx \geq 2,000 lbs. (817/907 kgs)
- HEIGHT ADJUSTMENT RANGE \approx 55 in - 117 in (1.4 m - 3 m)
- FRAME SIZE \approx 288 in x 168 in [L x W] (7.3 m x 4.27 m)
- BUNK LENGTH \approx 96 in & 192 in (2.44 m & 4.88 m)
- POWER SUPPLY: 12 V DC H.D. Pump & Solar Package enclosed within fiberglass lock box (Operated using provided transmitters)



MAINTENANCE LOG

Tornado Boat Lift

Capacity: _____

INSTALLATION PROVIDER: _____ INSTALLATION DATE: _____

INSTALLATION ADDRESS: _____

MAINTENANCE PROVIDER	DATE	DESCRIPTION	INITIAL	SIGNATURE