

Thank you for choosing **ShoreStation!**

Enclosed please find the operating instructions for your new **ShoreStation** boat hoist. Please read this document carefully before using your hoist.

Keep it in a safe place for future reference.

If you have any questions about your hoist or need service, contact your local **ShoreStation** dealer. If you have difficulty contacting a dealer, please call our Customer Service Department at (800) 859-3028 or e-mail: shorestation@midwestindustries.com, so we can assist you in contacting a dealer.

You should have received a packet of warranty documents with your hoist. Be sure to fill out and mail your Warranty Registration Card to activate your hoist's warranty. If you did not receive this information, ask your dealer for a copy or visit www.shorestation.com and register online.

Please fill in the following information for your records.

Model Year: _____

Model: _____

Serial Number: _____

Lifting Capacity: _____

Date Purchased: _____

Purchased From: _____

Salesperson: _____

Phone Number: _____

*Models and specifications are subject to change. Because of the continual improvements to our hoist products, **ShoreStation** reserves the right to add or discontinue models at any time or to change design and specifications without notice and incurring obligations.*

YOU AND YOUR SHORESTATION

Our goal is your complete satisfaction. That is why we recommend reading this manual in its entirety. A better understanding of your hoist's features and adjustments will make your boating experience more pleasurable.

It is important that you maintain and store your boat hoist and accessories properly to ensure that it continues to provide the dependable performance year after year.

IMPORTANT: Read this manual carefully with special attention directed toward all **WARNING**, **CAUTION**, and **IMPORTANT** information.

ShoreStation has been manufacturing boat hoist since 1959. Our current product offering of hoists ranges from 1000 lb. PWC hoists through 15,000 lb. hydraulic hoists.

Certain models (not available in all weight capacities) are an all steel construction while others are an all aluminum construction. Still others are a combination of the two metals to offer the strongest and best built product in the marketplace today.

Some hoists are of the cantilever style lift system while others are the vertical style lift. It is your decision to choose the style hoist that will best fit your needs in your location.

This manual includes information for the aluminum vertical lift boat hoists with the mechanical winch system. It also lists what hoist accessories are currently available, what they are used for and how they operate

USING YOUR HOIST

Basic Hoist Operating Tips and Guidelines

IMPORTANT: Before using your **ShoreStation** hoist, read this Owner's Manual for detailed operating instructions and safety information.

Here are some basic guidelines to follow:

Know the maximum capacity of your hoist. It is important not to exceed the maximum load capacity of your hoist. Overloading could cause mechanical failure and serious personal injury.

Never board a boat while it is raised on the hoist. Always lower the hoist platform before boarding the boating so it is almost floating free from the platform, but is still stabilized by the platform. This will aid in the user's ability to load while not placing excess weight on the hoist.

Use Caution during Maintenance and Repairs. Always remove the boat from the hoist 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 winch mechanism and manipulate any of the winch parts when the platform is raised.

DO NOT let Children Play on or around the Hoist. Children should not be allowed to play under or around the hoist.

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.

Properly Positioning the Boat on the Hoist

The boat should be positioned on the hoist so that there is an equal amount of weight on each platform. This position will vary from boat to boat because the center of gravity on every boat is different. The equal weight distribution is determined by how far forward or backward the boat is positioned on the hoist. Once identified, adjust the motor stop (adjustable on 1500 – 9,000 lb. aluminum hoists) or front end boat stop (USED ON INBOARDS) so it will stop the boat in this position in future use.

Positioning an Inboard Boat on the Hoist

When placing an inboard boat on the hoist, it is necessary to install a front-end boat stop on your hoist. This option will protect your drive shaft and prop from being bent when the platform is raised to support the boat. The boat must be positioned rearward far enough so the bunks are supporting the boat before the drive shaft contacts the cross member as the platform is raised. A new hoist installation for an inboard should NOT have the motor stop installed. If an existing hoist is going to be used for an inboard, the motor stop should be removed before placing the boat on the hoist.

Platform Height Positioning. The height that the platform should be positioned when the boat is removed for use is best determined by lowering the hoist platform until the boat is about to float above the platform. Once at this point, start the engine and put the unit in reverse. With the engine idling, continue to lower the platform. As the boat breaks free from the platform, the power of the engine in reverse will pull the boat out of the hoist. Discontinue lowering the platform at this point. Positioning the platform at this location will allow the platform bunk system to also serve as a centering system guiding your boat into the hoist when you return.

Upon returning to the hoist, slowly drive your boat into the hoist. Doing so will allow the bunk system to center your boat on the hoist platform. Continue to power into the hoist until the boat is stopped by either the motor stop or front end boat stop installed on your hoist.

Level Installation. The hoist 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 without binding as the platform is raised and lowered.

For Added Safety and Security. Always lock your hoist when it is unattended for any period of time. Set the wheel lock in the "locked" position on hoists equipped with mechanical winches. A padlock can be placed around the spoke on the big wheel and then through the wheel lock for added security. This protects both you and your boating equipment.

DO NOT OPERATE THIS HOIST WITHOUT FIRST STUDYING AND UNDERSTANDING THIS OWNER'S MANUAL FOR PROPER OPERATING PROCEDURES.

SAFETY

The following are safety and maintenance tips that should be adhered to for your safety and the longevity of your hoist.

HAND WHEEL OPERATION

WARNING: Turn the operator's hand wheel clockwise when raising the platform. Failure to do so will cause the brake mechanism to not engage creating a free-wheel spinning situation. This may

cause potential bodily injury and/or possible damage to the boat and hoist.

OVER-CRANKING THE WINCH MECHANISM

WARNING: Continuing to crank the winch mechanism once the platform is in its fully raised position will create tremendous internal loading of the cables, pulleys, the winch assembly and its components. This overloading may cause some components to fail. Once the platform has reached its' fully raised position, discontinue cranking.

New versions of the aluminum hoist models with the mechanical winch system have an automatic stop mechanism built into the hoist so that the wheel can not be turned once the platform has reached its fully raised position. Make sure your automatic stop mechanism is properly installed and maintained to eliminate overcranking.

Do not exceed the maximum lifting capacity of this unit. Overloading may cause mechanical failure and serious personal injury.

Do not board the watercraft on the hoist while the hoist is being raised or lowered.

Completely lower the hoist's platform before removing the winch cover to work on or inspect the winch. Never reach through the hand wheel and manipulate any of the winch mechanism when the platform is raised.

MAINTENANCE

REFER TO THE PARTS MANUAL FOR YOUR PARTICULAR HOIST WHEN ORDERING REPAIR PARTS FROM YOUR DEALER.

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

Check all fasteners for tightness.

Check the frame thoroughly for bent members and signs of fatigue.

Check all pulleys, they must be turning freely, show no signs of wear and are turning properly.

Inspect all cables for fraying, wearing and deterioration. Check the stress on the cable attaching ends. If any of the above signs appear, replace the cables immediately.

Check the winch mechanism to make sure it is functioning properly. A winch servicing schedule must be followed annually to prevent possible failure.

Grease the winch drive chain at the start of each season.

WINCH MECHANISM

Remove the large hand wheel and apply a light coating of grease on the acme threads to prevent the wheel hub from seizing to the drive shaft. To remove the hand wheel, use the following instructions:

With the hoist in the lowered position, remove the acorn nut and flat washer from the winch drive shaft. Turn the lift wheel counter-clockwise on the drive shaft. This will thread the wheel off of the drive shaft.

Remove the oilite washer, ratchet sprocket and clutch plate.

Inspect the brake disc pad for glazing on the braking surfaces. The braking surfaces can be reconditioned by using Emory cloth to clean the surfaces from rust and glazing. While cleaning, inspect the surfaces of the clutch plate for stress cracks. If stress cracks appear on the clutch plate, replace before reassembling.

Replace the reconditioned clutch plate or new clutch plate and ratchet sprocket. (Be sure the ratchet is properly positioned and aligned so it will engage the notches or teeth on the outer diameter of the sprocket.)

Place on the oilite washer. Place a small amount of grease on the threads inside the hub of the hand wheel and the acme threads on the drive shaft. A small tube of grease is supplied with your hoist for your convenience. Remove the winch cover. The tube of grease is attached with Velcro to the inside of the winch case. Use this brand grease or an equivalent for the wheel hub only.

CAUTION: After maintenance has been performed on the winch mechanism, follow "checking the winch mechanism" before using the hoist.

ALUMINUM HOIST MODELS WITH WINCH STYLE LIFT MECHANISMS

ShoreStation incorporates the vertical lift design in all aluminum winch style boat hoists it manufactures with a lifting capacity range of 1,500- 6,000 lb. The vertical lift design will raise the boat straight up without moving it through an arc as the platform is raised.

This style hoist has a V-platform so it can be used in shallow water applications. The hoist platform is lowered and raised through the use of cables to transfer the load equally to all corners.

The main lifting mechanism is in the winch tube assembly that is located on the dock side of the hoist. This winch tube assembly is adjustable up and down for height so it is easier to access your boat if it is an issue. See the following instructions for adjusting.

WINCH TUBE HEIGHT ADJUSTMENT

For all Aluminum Vertical Lift Boat Hoists with a Mechanical Winch System

The winch tube height can be adjusted to various heights to better accommodate your installation, making it easier for you to enter and exit your boat when it is in the hoist.

Currently all assembly instructions are written to position the winch tube assembly in its highest position. This maximizes the lift height for your hoist. However, there are applications where you may not be in deep, rough water. Another application may be where your dock is positioned closer than 24" to the water level. If one of the above is your situation, the winch tube can be lowered to better match your dock height. It can be lowered as follows:

1. Install the hoist in position along side the dock. Level the hoist and adjust so you can enter and exit the hoist with your boat as desired.
2. Remove the boat from the hoist and lower the platform to its lowest position. This will remove all load and tension on the winch and lift cables.

NOTE: Decals are located on the upright posts of the hoist that the winch tube is attached to. These decals are positioned on the posts at the factory so that when the winch tube assembly is positioned on the upright posts at identical locations on the decals, the winch tube should be located level with respect to the other post.

NOTE: For every inch that you lower the winch tube assembly, you will lose one inch of lift. The cable mechanism is designed that any excess cable that is created by you moving the winch tube downward will be taken up by the winch cable attached in the winch.

Adjusting Instructions

3. Loosen the bolts in the clamps that attach the winch tube to the upright posts. Note that the bolts should **NOT** have to be removed to lower the winch tube if loosened sufficiently.
4. Using a hammer, tap the clamps slightly on the top side causing them to slide down the post. They will have a tendency to bind around the post as the winch tube is lowered so they will have to be moved together. Both ends of the winch tube need to be adjusted together. It works best to have a person on each end of the winch tube assembly so both ends can be lowered at the same time. If you are alone, lower one side about an inch, then lower the other end the same distance. Repeat this process until you have lowered it to the desired height.
5. Once the winch tube has been lowered to its desired position, tighten the clamps on one end of the winch tube assembly. When they are tightened, adjust the remaining end to a matching height using the decals on the post.
6. Once all of the clamps are tightened, turn the hand wheel clockwise to wind up the excess cable created by lowering the winch tube assembly. Carefully guide the cable on the drum with one hand while you turn the hand wheel with the other. The cable should be guided on the drum so the wraps of cable will lie beside each other as it winds on the drum. Done properly, the cable will form one complete wrap on the winch drum without wrapping over itself when the platform is in the full up position.
7. Raise the platform completely to check the height that it can now be raised with the new winch tube height adjustment. If the desired height is reached, the adjustment is complete. If not, repeat the above process. If the platform will not raise high enough, the winch tube assembly will have to be raised using the same process only raising the winch tube assembly instead of lowering.
8. Once all adjustments are complete and the platform is at the desired height, place the boat back on the hoist platform for storage and future use.

LEVELING THE HOIST PLATFORM

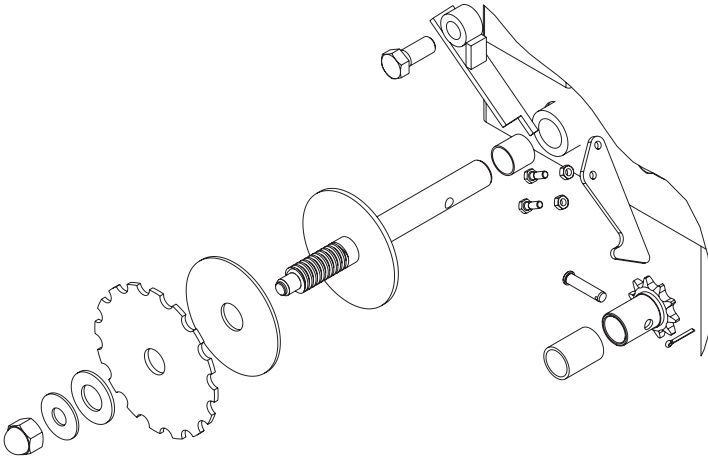
The level cables are the cables that run from the corner cable brackets on the lower frame of the hoist, up through the hoist platforms, and then upward and connect to the top side rail on the side opposite of the winch tube side of the hoist. These cables are designed and built to a standard length that is compatible for a specific hoist width and size. When installed according to the assembly instructions, they will keep the platform level in the hoist. However, should the situation arise where the platform is not level in the hoist, it can be adjusted as follows:

1. Determine which side of the platform is high.
2. If the side of the platform under the winch tube is high, there are two procedures for correcting the problem. Remove the boat from the hoist to perform this procedure.
 - A. If the difference is minimal (one to two inches) the platform can be leveled by threading the nuts farther onto the threaded portion of the cable ends located on each end of the level cables. The amount of additional adjustment available to you is dependant on how far the nuts were threaded onto the cable ends during the assembly of the hoist. This will determine how much additional adjustment can be achieved.
 - B. If the adjustment is two inches or more, it is more than what you can gain by threading the nuts further onto the cable ends. The top side rail can be adjusted up as a unit to gain the additional height that you may need to level the platform.
3. If the side of the platform opposite the winch tube assembly is high, the cables need to be lengthened. There are two procedures for correcting the problem. Remove the boat from the hoist to perform this procedure.
 - A. If the difference is minimal (one to two inches) the platform can be leveled by unthreading the nuts onto the threaded portion of the cable ends located on each end of the level cables. The amount of additional adjustment available to you is dependant on how far the nuts were threaded onto the cable ends during the assembly of the hoist. This will determine how much additional adjustment can be achieved. The nuts should never be loosened beyond less than two threads protruding through the nuts.
 - B. If the adjustment has to be 2 inches or more, it is more than you can gain by threading the nuts off of the cable ends. The top side rail can be adjusted down as a unit to gain the additional adjustment that you may need to level the platform.

WINCH TUBE SERVICE INSTRUCTIONS

The winch tube assembly was pre-assembled at the factory. It is important that the internal parts and cable routings are assembled properly in order for the winch tube assembly to function properly. It also requires special tools during the assembly process. It is therefore recommended that you contact your local dealer should you ever have issues with the winch tube assembly.

In the event that you are experiencing a problem and do not have a **ShoreStation** dealer available to assist you, contact ShoreStation at www.shorestation.com for assistance. You can also reach customer service by calling 1-800-859-3028. If necessary, we can supply you with a schematic drawing of the appropriate winch tube assembly for your hoist. You will need to supply us with the year of manufacture and the model of your hoist when you call.



How the Winch Brake Mechanism Operates

This unique brake mechanism includes a feature that holds your platform in the raised position when the grip on the hand wheel is released. It is designed to hold the load applied to the hoist at any position the hand wheel is released. It is up to you to maintain the brake system to make sure that it is always operating properly.

Brake System Assembly Instructions

The brake mechanism consists of several component parts that must be assembled in the following manner for the brake system to operate properly.

1. The drive shaft has a flat disc that is welded to the shaft in a permanent location.
2. The disc brake pad is placed on the drive shaft and slid against the welded flat disc.
3. The clutch sprocket is placed on the drive shaft next. Note that there are notches on the outer diameter of the clutch sprocket. The clutch dog must be raised so that the outer diameter of the clutch sprocket can be slid under the end of the clutch dog so that the notches on the outer diameter and the end of the clutch dog will engage each other during operation.
4. Slide a flat oilite washer onto the drive shaft until it contacts the clutch sprocket installed in step 3.
5. Note that there should be a small amount of grease applied to the threads on the inside of the wheel hub before you attempt to assemble it on the drive shaft. A small amount is necessary to allow the threads to move freely against each other but care must be taken not to over grease.

WARNING: Excess grease will have a tendency to work itself onto the brake disc assembled in step 2. Once grease is applied to the disc brake surfaces, normal use of the winch will cause a glazing to form on the disc surface, thus reducing the amount of friction that can be generated with the braking system leading to premature failure.

6. Place the large hand wheel onto the end of the drive shaft so the center hub of the wheel is aligned and positioned on the end of the drive shaft. Apply light pressure inward on the center of the hand wheel as you rotate the hand wheel clockwise. The large acme threads inside the hub of the hand wheel will thread onto the acme threads of the drive shaft. Rotate the hand wheel until it is fully threaded onto the acme threads and the center hub is against the flat washer installed in step 4.

7. Place on a 5/8" flat washer until it contacts the step in the shaft between the standard threads on the end of the shaft and the acme threads.

8. Thread on the 5/8" cap nut and tighten it against the flat washer just installed. This will prevent the hand wheel from threading off of the acme threads when the hand wheel is turned counterclockwise to lower the hoist platform.

9. Assembly is complete.

Winch and Brake Mechanism Operation

How the Brake Mechanism Operates

RAISING THE PLATFORM

1. To raise the hoist platform, rotate the large hand wheel clockwise. As the hand wheel is rotated the hub in the hand wheel will thread itself onto the acme threads of the drive shaft. Once it has threaded itself onto the threads far enough so that the clutch sprocket and disc brake pad are fully compressed against each other, the complete brake system will rotate with the drive shaft.
2. As the hand wheel is continued to be turned clockwise, you will hear a definite clicking sound. This click is created by the clutch dog engaging the notches on the outer diameter of the clutch sprocket. This will continue to happen until you stop rotating the hand wheel.
3. When the hoist platform is at the desired height, stop turning and release the grip on the hand wheel. The brake system is now engaged if operating properly and will hold the platform in its raised position.

LOWERING THE PLATFORM

1. To lower the platform, rotate the hand wheel counterclockwise. When you do, the first thing that happens is the hub inside the hand wheel will thread itself off of the acme threads on the drive shaft. When it does, the pressure it has created against the clutch plate and the disc brake pad will be reduced allowing the drive shaft to rotate counterclockwise from the load that is applied to it.
2. It will rotate quickly and catch up to the hand wheel releasing and controlling the brake system. This all happens simultaneously to give the appearance of the hand wheel turning the winch system to lower it when in actuality the turning of the hand wheel is only releasing the brake system so the load can lower itself.
3. If the hand wheel rotation is stopped as the platform is being lowered, the brake system will automatically engage holding the hoist platform in its location.

WARNING: Never raise the hoist platform by rotating the hand wheel counterclockwise.

The winch brake mechanism will operate and function properly when it is used properly as described above. In the event that you turn the hand wheel counterclockwise to raise the hoist platform, you totally eliminate the brake system from operating and create a very hazardous situation. Turning the hand wheel counterclockwise eliminates the breaking system because it will not engage itself when turning the hand wheel counterclockwise. When the grip on the hand wheel is released, the hand wheel will spin uncontrollably, allowing the load on the platform to propel it. This can create a potentially dangerous situation and you should **NEVER** try to put your

hand on or into the hand wheel or try to prevent it from spinning downward in any way.

Servicing the Brake System

The brake system is basically maintenance free as long as grease is not allowed to get on the disc brake pad surfaces. It is therefore recommended that the following maintenance be done at the start of each season.

1. Disassemble the brake system by removing the 5/8" cap nut and flat washer containing the hand wheel on the drive shaft.
2. Unthread the hand wheel and remove the component parts. Clean any grease or rust that may have built up on the disc brake pad, the clutch plate and the flat surface of the drive shaft. Clean the surfaces using emery cloth.
3. Check the disc brake pad to see if a glazing has formed on the surfaces. If it has, the pad can be reconditioned by roughing the surfaces with emery cloth. If it can not be reconditioned, it must be replaced.
4. Reinstall the component parts using the instruction as described above.
5. Place a small amount of grease on the threads of the drive shaft and wheel hub taking care that any excess grease is wiped away so it does not get on the brake mechanism. This is very important for the brake mechanism to function properly.
6. Rethread the hand wheel back onto the drive shaft as described above. Secure in place using the flat washer and 5/8" cap nut. Tighten.

Fitting a Boat on an Aluminum ShoreStation Hoist

Your boat will spend most of its time setting on the hoist when not in use. Therefore it is important that the boat is properly supported while on the hoist. It is also important that the boat is properly positioned on the hoist so that the weight of the boat is equally distributed on both hoist platforms opposed to it being supported mostly by one. This is more important as the size of the boat is increased. That is why the motor stops on the **ShoreStation** hoist are adjustable forward and backward on the 3,000 lb. hoists and larger.

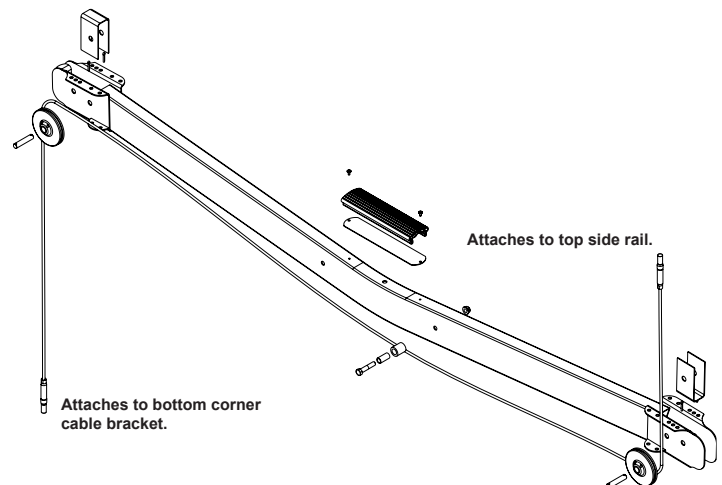
Position using the following steps:

STANDARD OUTBOARD BOATS OR BOATS WITH AN OUTDRIVE

1. Position the motor stop so it is adjusted as close to the rear platform as possible.
2. Adjust the bunks in or out from the centerline of the hoist to the position you think will best fit your boat. Also make sure that the bunks are adjusted high enough to keep your boat from contacting the cross members of the platform when the platform is raised. **NOTE:** The bunks can be adjusted higher in the front than the back if you so choose to do so. This will assist you in centering the boat when you drive in on the hoist once the adjustments are complete.
3. Identify the approximate center of gravity of your boat. Carefully place the boat on the hoist so the center of gravity is as close to the center of the platform cross members as possible. This does not apply to inboard boats.

4. Slowly raise the platform on the hoist to see how well the bunks fit the boat hull. The bunks may need to be moved in or out from the centerline of the platform depending on how well you positioned them beforehand. Note that the bunks can be adjusted closer together at the front platform of the hoist opposed to the rear as long as you are not crossing a strake on the boat bottom. Otherwise, it is recommended that you place the bunks just to the outside of a strake. This not only gives you good support but will also help you in centering your boat on entry if the platform is properly positioned when the boat is removed for use.
5. Once the bunks are positioned to your boat, the motor stop must be positioned to fit the drive unit of your boat. Slide the telescoping arms until the motor stop contacts the drive unit. Tighten in position.

CABLE ROUTING FOR 1500-15,000 LB. LEVEL LIFT HOIST PLATFORMS



The level cables installed in the aluminum level lift hoist are made of stainless steel.

The platform is assembled as shown in the Diagram above. The component parts will vary depending on the size hoist but the concept is basically the same on all models.

Starting on the end of the cable that is attached to the Top Side Rail, the cable comes down, then under the pulley as shown. The cable must be in the pulley groove and contained there by the cable retainer. It is important that the cable does not come out of the pulley groove. Cable damage will occur if it does not have the pulley diameter to route the cable around the bend. Manually raising the platform assembly on the top side rail side of the hoist only will cause slack in the level cables creating the possibility of the cables slipping out of the pulley grooves.

The cable is then routed through the platform tube under the bushing located inside the platform tube to keep the cable from rubbing on the top inside of the platform tube.

The cable is then routed in the pulley groove on the top side of the pulley on the winch tube side of the hoist. Again the cable retainer channel is used to keep the cable in the pulley groove. Note that this cable retainer is located on the top side of the pulley while the one installed on the other end of the platform is positioned on the bottom side of the pulley.

The cable is then routed down and attached to the bottom corner

cable bracket. The nuts used to attach the cables on either end are made from brass so they can be easily removed in the event the cable has to be replaced in the field.

NOTE: Check the pulleys periodically to make sure they are turning. The pulleys **MUST TURN** at all times when the platform is being raised or lowered to prevent damage to the pulleys and/or cables.

Should you have any questions regarding the cables and pulleys, contact your local **ShoreStation** dealer.

OPTIONAL EQUIPMENT FOR YOUR SHORESTATION BOAT HOIST

ShoreStation supplies the standard boat hoist with the basic equipment that is required to raise and support your boat to protect it from the algae growth and damage that can occur from sitting in the water when not in use. **ShoreStation** also manufactures numerous pieces of optional equipment that will enhance the use of your hoist. Some are designed for a specific purpose and may be more valuable for a particular style boat opposed to another.

The following is a list of the optional equipment for your hoist, how they would be installed and how they would be used to enhance your hoist.

- Transport Unit for transporting the hoist on land and water.
- Hoist roll-in kit.
- Extension legs
- Canopies
- Front end boat stops
- Post style load guides
- Spring loaded load guides
- Bunk style load guides
- Electric drive units

Each piece of optional equipment is listed with a short description of its application and how it is meant to be used.

TRANSPORTING OF HOIST ON LAND AND WATER

Attaching Optional Trail Unit



Attach spindle mounting brackets (SS230A) to lower frame with 3/8" X 3-1/2" hex bolts, include flat washer on both sides and hex lock nuts approximately 36" from post opposite winch end.



Raise hoist, place spindle SS#50 in holes and secure with hairpin. Repeat on the other side.



Raise platform and place tongue unit (SS231A) around winch post. Secure with 3/8" pin and hairpin. Repeat on the post opposite winch.

Swing right and left tongue together and drop in 3/8" pin and secure with hairpin.

You are now ready for low speed land transporting of your **ShoreStation** hoist to water access such as a public ramp.

Caution: Hoist is over 8' wide.

For on Water Transporting

NOTE: For water transport, use the following method with a flat bottom boat. Styrofoam material can also be used. Be sure the floatation material will support the weight of the unit.

Lay reverse transport winch assembly (HA0014) on the platform opposite side of the hoist the winch. Raise the hoist platform up high enough so the floatation can be slipped between the bottom of the platform and the top of the lower frame.



Place winch ratchet in neutral position. Unwind rope and fasten to the lower frame hooks. Place the hooks under the frame. Raise, pulling up onto the lower frame leave the winch in neutral position.



Before backing unit down ramp, measure approximately 30" from top of the lower frame and mark with waterproof marker or scribe. Repeat on all four posts. This is recommended water level and will assist in final leg adjustments.



Back the hoist into at least 24" of water.



Place floatation device under the raised platform toward the winch side for balance. If using boat, place boat in backwards.



Important: The floatation is to be inserted above the lower frame and below the platform. Once the floatation is in place, unwind the hoist winch cable allowing platforms to rest on the floatation device. Continue to turn lift wheel counterclockwise another 6 to 8 turns. Lock ratchet on transport winch and crank winch and platform down onto floatation until floatation is secure between platform and lower frame.



Remove wheel and spindle assembly.

Important: If floatation does not become secure and hoist does not float, it may be necessary to again turn lift wheel on hoist winch counterclockwise. Warning: Too much pressure will crush floatation. Check floatation balance. Hoist must be riding level in water. Tie floatation to each side of the hoist, eliminating accidental slippage to one side or the other.



CAUTION

Transport at low power setting.

Avoid abrupt turns.

Use only a quick release tow line.

Remove canopy cover before towing.

Do not ride on hoist in tow.

Transport only in calm water conditions.

SS233A Carrying Handles, 4/pkg.

The aluminum hoist may be installed manually by as few as 3 people. It can be carried into position and adjusted.

NOTE: Carry from the outside of the hoist only.

The carrying handles (SS233A) slide onto the lower frame from the bottom side.



Installation

Installation & Adjustment at Dock

Once the hoist is positioned at the dock, leveling and leg adjustment can be accomplished by either of the two following methods:

1. When the hoist is positioned at dock site, crank reverse winch backwards until marks on the post are at water level. Remove leg pins and lower pads to bottom. Secure in position by replacing leg pins and hairpin. Repeat on all four corners. Unwind reverse winch. Make necessary minor leg adjustments level with water marks. Be sure hoist is supported by all four legs. Unhook ropes from lower frame. Raise platform by turning winch wheel clockwise. Remove floatation. Installation is complete.
2. Before releasing floatation and lowering hoist into position, preadjusting the legs can be accomplished easily by the following method.

Use an oar or pole - lower it to the lake bottom and mark the water depth. Set the oar on the foot pad, remove pin and lower the leg with the adjusting rod till the water mark on the oar is in line with the water mark on the leg. Repeat on all four corners. Unwind reverse winch. Make necessary minor legs adjustments to level to water marks. The hoist must be supported by all four legs. Unhook ropes from lower frame. Raise platform by turning winch wheel clockwise. Remove floatation. Installation is complete.

Adjusting the Lift Height

It is recommended that the 2X5 winch tube with the lifting cable be left at the position stated in the assembly instructions. This will give you the maximum protection for your boat and hoist. You may lower this tube if desired. **Caution:** Do not attempt to lower tube with the platform raised. Keep the winch tube level. The lower you drop the bar, the less lift your hoist will have.

Removal of Hoist

Removal of hoist is achieved by performing the installation procedure in reverse order. Upon reaching the ramp, attach trail unit and connect to vehicle, secure wheels to the lower frame using 1-1/4" hairpin cotter keys. Then transfer the weight of the hoist from the floatation to the transport wheels by unwinding the transport winch.

Caution: When unwinding the transport winch be sure ratchet is engaged.

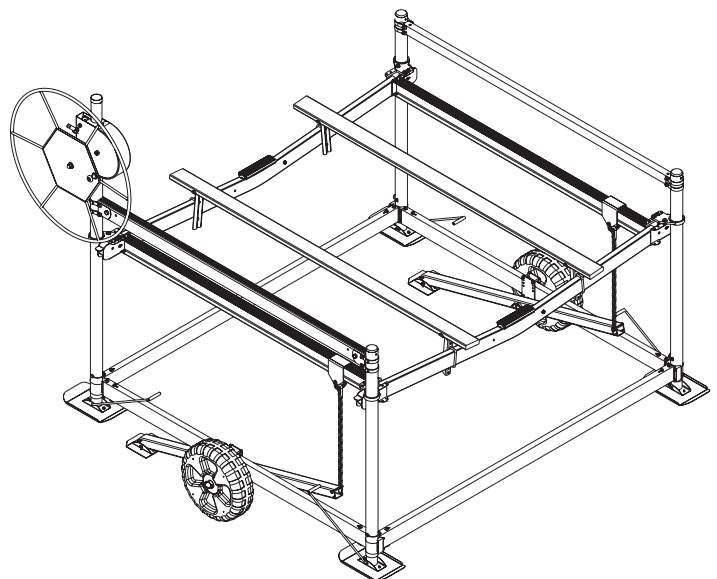
Failure to do so will result in a rapid spin down of wheel. A spin-down will not damage the hoist, but could result in bodily injury to hands if attempts were made to grasp the spinning wheel.

Once the weight is on the wheels, platform raised and floatation material has been removed, your hoist is now ready for transport.

Hoist Installation and Removal

It is possible for a **ShoreStation** boat hoist owner to roll the hoist from dry land into the water and position it along side the dock for use. It is also possible for them to remove the hoist at the end of the season and roll it back onto the shore for winter storage.

This is accomplished by using the optional HA0017 Elevating Arm Kit and the HA0018 Spindle Mounting Kit. Also required will be a one pair of the plastic transport wheels. Depending on the shoreline and hoist size, it may be desirable to use a pair of wheels on each end of the hoist to better cope with the terrain. These kits allow the operator to use the lifting mechanism of the hoist to lift the complete hoist up so the transport wheels can be installed for moving the hoist. They can also be used to raise the hoist up to extend the adjustable legs once the hoist is positioned beside the dock.



This accessory can also be used to readjust the extension legs on the hoist in the event that you have abnormal water fluctuation that requires you to re-position the legs to keep the hoist at the proper water depth for use.

For more information see your dealer or visit us at www.shorestation.com.

EXTENSION LEGS

Extension legs are required in most installations where the depth is greater than 36-42 inches. This will vary on the hoist model and design. They are sold individually because there may be instances where only one extension leg may be required per hoist installation. Other installations may require extension legs on only the lake end of the hoist when the lake bottom drops off quickly. They may also be required on all four legs when being installed in deeper water. The type and size hoist you have will determine which optional extension leg is required to adapt your hoist to the surroundings.

Determine what the water depths are in your location, then check the following Water Depth Chart to determine the correct extension legs you will need for your hoist. The chart lists a minimum and maximum water depth that can be obtained with each hoist model with each length extension leg installed. Your goal should be to pick an extension leg that will give you some adjustment either way in the event that your water level rises or falls during the season or from year to year.



BOAT HOIST WATER DEPTHS

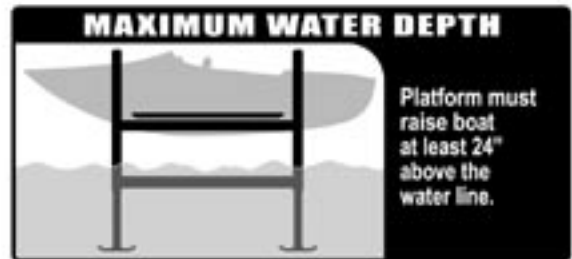
The chart below lists minimum and maximum water depths for installing **ShoreStation** hoists.

To function properly, the hoist must be installed at a depth where the boat is nearly floating free in the lowered position and protected from the waves in the raised position.

Maximum Water Depth measurements are taken on the lake end of the hoist with the legs fully extended. They are based on raising the boat out of the water 24 inches. **NOTE:** In lakes with extremely rough water, the boat may need to be raised more than 24 inches.

Minimum Water Depth is determined by taking the measurement listed on the following charts plus the draft of the boat. These measurements are taken at the end of the hoist closest to shore. The measurement listed is the distance from the platform to the ground when sitting on a level surface.

IMPORTANT: The boat draft must be added to the measurement on this chart to determine the true minimum water depth.



MODEL	LEG ADJUSTMENT	LEG OPTION	MINIMUM WATER DEPTH	MAXIMUM WATER DEPTH
STANDARD ALUMINUM HOIST				
SSV15100	4 – 20"	standard	11"	56"
	4 – 40"	SS-KA	11"	76"
	4 – 60"	SS-1230	29"	114"
SSV20100	4 – 20"	standard	11"	56"
	4 – 40"	SS-KA	11"	76"
	4 – 60"	SS-1230	29"	114"
SSV30108	4 – 20"	standard	11"	56"
	4 – 40"	SS-KA	11"	76"
	4 – 60"	SS-1230	29"	114"
SSPV30108	4 – 20"	standard	16"	61"
	4 – 40"	SS-KA	16"	81"
	4 – 60"	SS-1230	34"	119"
SSV30120	4 – 20"	standard	11"	56"
	4 – 40"	SS-KA	11"	76"
	4 – 60"	SS-1230	29"	114"
SSPV30120	4 – 20"	standard	16"	61"
	4 – 40"	SS-KA	16"	81"
	4 – 60"	SS-1230	34"	119"
SSV40108	4 – 20"	standard	11"	56"
	4 – 40"	SS-KA	11"	76"
	4 – 60"	SS-1230	29"	114"
SSPV40108	4 – 20"	standard	16"	61"
	4 – 40"	SS-KA	16"	81"
	4 – 60"	SS-1230	34"	119"
SSV40120	4 – 20"	standard	11"	56"
	4 – 40"	SS-KA	11"	76"
	4 – 60"	SS-1230	29"	114"
SSPV40120	4 – 20"	standard	16"	61"
	4 – 40"	SS-KA	16"	81"
	4 – 60"	SS-1230	34"	119"
SSV50108	4 – 20"	standard	11"	62"
	4 – 40"	SS-KA-55	11"	82"
	4 – 60"	SS-1230	29"	120"
SSV50120	4 – 20"	standard	11"	62"
	4 – 40"	SS-KA-55	11"	82"
	4 – 60"	SS-1230	29"	120"
SSV60132	4 – 20"	standard	11"	62"
	4 – 40"	SS-KA-55	11"	82"
	4 – 60"	SS-1230	29"	120"

MODEL	LEG ADJUSTMENT	LEG OPTION	MINIMUM WATER DEPTH	MAXIMUM WATER DEPTH
DW (DEEP WATER) ALUMINUM HOIST MODELS				
SSV15100DW	4 – 55"	standard	11"	91"
	4 – 60"	SS-1230	29"	114"
SSV20100DW	4 – 55"	standard	11"	91"
	4 – 60"	SS-1230	29"	114"
SSV30108DW	4 – 55"	standard	11"	91"
	4 – 60"	SS-1230	29"	114"
SSV30120DW	4 – 55"	standard	11"	91"
	4 – 60"	SS-1230	29"	114"
SSV40108DW	4 – 55"	standard	11"	91"
	4 – 60"	SS-1230	29"	114"
SSV40120DW	4 – 55"	standard	11"	91"
	4 – 60"	SS-1230	29"	114"
SSV50108DW	4 – 55"	standard	11"	97"
	4 – 60"	SS-1230	29"	120"
SSV50120DW	4 – 52"	standard	11"	97"
	4 – 60"	SS-1230	29"	120"
SSV60132DW	4 – 52"	standard	11"	97"
	4 – 60"	SS-1230	29"	120"

CANOPY

ShoreStation manufactures a canopy system to fit the cantilever style hoists that are equipped with four upright legs. Hoists with only two legs on one end of the hoist will require you to purchase the additional upright posts so that the canopy has a support system on both ends of the hoist.

Contact your local dealer for the size and color of canopies that are available for your particular model hoist.

Canopy Adjustment

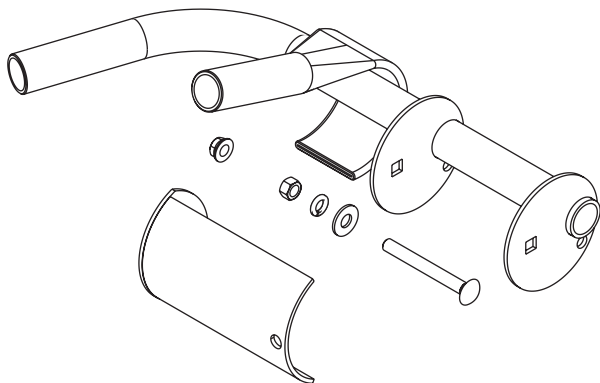
IMPORTANT: BE CAREFUL WHEN RAISING THE BOAT ON YOUR HOIST WITH A CANOPY FOR THE FIRST TIME. FAILURE TO DO SO MAY RESULT IN YOUR BOAT BEING FORCED INTO THE CANOPY FRAME AND COVER CAUSING POTENTIAL STRUCTURAL DAMAGE TO THE CANOPY FRAME, PUNCTURING THE COVER, AND/OR DAMAGING THE BOAT.

Once the boat is fully raised, position the canopy frame down so it is positioned as low as possible above the boat and yet not contact it. This will give you the ultimate protection.

The canopy frame can be moved forward or backward as well so it can be centered over your boat. This is accomplished by loosening the clamps securing the canopy frame to the upright posts. Reposition if needed, then retighten in the new position.

CANOPY FRAME ADJUSTMENT

The canopy frames are designed with the ability to be shortened 1 ½ inches on each end. This is important because over a period of years the canopy cover will have a tendency to shrink. See the following instructions on how to change the length of your canopy frame to fit your canopy cover.



The frame length should be adjusted as follows:

1. Loosen the nuts on the adjusting bolts located in the end of the side frame tube weldments. Doing so will shorten the overall length of the frame. Put the cover over the framework. Once the cover is on the framework attach the ends of the cover to the end hoods with the bungee cords provided.
2. Once the bungee cords are installed the frame can now be lengthened to fit the cover by tightening the nuts on the bolts in the side frame tube stop weldments just loosened in Step 1. Turn clockwise. As the nut is threaded onto the bolt it will pull the end hood out of the side frame thus increasing the length of the canopy framework. Continue to lengthen the frame until it is the right length to fit the cover.

3. Once the proper length for the frame has been achieved, stop turning the nut. Adjustment is complete.

CANOPY STORAGE AND CLEANING

Proper care and cleaning of the canopy cover are very important in extending the appearance and life of your canopy cover. This care should not only be while the cover is in use on the hoist, but also how it is prepared for storage and stored during the off season.

The vinyl material has a mildew retardant built in when it is produced at the factory. This retardant will stay with the vinyl for a period of years but over time will disappear. There are some chemical cleaners that will expedite the disappearance of the retardant. It is recommended that these not be used to clean the vinyl. The following cleaning process is recommended to extend the life of your vinyl cover.

1. Ordinary oil and dirt can be removed with soapy water such as laundry detergent. Apply with a mop, sponge, brush or cloth followed by a clear-water rinse. Stubborn spots can be removed by using rubbing (Isopropyl) alcohol in a well ventilated area, away from open flames. Do **NOT** use gasoline, kerosene, Methyl Ethyl Keytone (MEK) or other solvents or bleaches.
2. Remove the vinyl cover when storing the hoist in the off season.
3. Always clean the cover before storing.
4. Make sure the cover is completely dry before folding for storage.
5. Store the cover in a clean, warm, dry place.

The attaching bungees should be stored with the cover as well. This eliminates the issue of loose components that may be lost in the off season.

FRONT END BOAT STOPS

ShoreStation builds different versions of the front end boat stops to fit various size hoists. The larger the boat, the stronger the front end boat stop must be to stop the forward momentum of the boat. The hoist model will determine the front end boat stop required. See your dealer for assistance in choosing the correct front end boat stop for your hoist.

The main objective of the front end boat stop is to stop and position the boat on the platform for proper weight distribution using the front of the boat. This is especially true with inboard boats. A standard motor stop supplied with the hoist can not be used on an inboard because the drive shaft comes out at an angle and can not be used to stop the forward motion of the boat. If the boat goes onto the platform too far, the prop shaft will bend when it contacts the platform cross member either upon entry or when the platform is raised.

ADJUSTING AN INBOARD BOAT ONTO A HOIST

Contact your dealer for the appropriate front end boat stop to fit your hoist.

Care must be used when placing an inboard boat on the hoist for the first time to make sure the drive shaft or prop do not get damaged during entry or when the platform is raised.

Most inboards require the adjustable bunk brackets to be extended as far upward as possible, especially if your boat has the fins on the keel. If your bunk brackets are not long enough to provide fin and drive-unit clearance, contact your dealer for the pricing and availability of a longer bracket meant for this application.

Place the boat on the hoist as described above, then very carefully raise the platform making sure the drive shaft of the boat does not contact the platform cross member.

Once the boat is raised on the hoist and there is ample clearance between the drive shaft and the hoist platform, adjust the front end boat stop against the boat so that it will stop the boat in its position as it is driven on the hoist in the future. Tighten.

LOAD GUIDE SYSTEMS

ShoreStation manufactures several different style load guides to assist in the loading and unloading of the boat on the hoist. Again, depending on your application, water and wind conditions will determine which type will best fit your situation.

POST STYLE LOAD GUIDES

A post style load guide is available for the 1500 – 9000 lb. aluminum hoists. They are supplied in pairs for one end of the hoist. They will stay in their fixed position once secured to the platform. Depending on your application, you may want to use just one pair on one end of the hoist while others may want them on both ends of the platform. The post load guides placed at the transom of the boat must be spaced far enough apart so the widest part of the boat's gunnel can pass through them during entry and removal.

Another application is placing them on just the front platform for the bow of the boat, then using the spring loaded post guides on the rear platform.

SPRING-LOADED POST LOAD GUIDES

The spring-loaded post load guides are used on the rear platform only. The post load guides on each side of the boat are connected to each other. They are spring-loaded so they will contact the boat early as it is brought into the hoist. As the boat enters the hoist, the load guides will move outward under spring-loaded tension causing the boat to center itself. More pressure will be applied to the load guide that is farther away from the centerline of the hoist platform when the boat is forcing it over. It reduces the pressure on the opposite side, thus forcing the boat to the center of the hoist.

The spring – loaded post load guide is designed to be used on the rear platform only. In the event that you would like a post load guide on the front platform, the stationary type can be added as described above and will be in a fixed position once installed.

BUNK STYLE LOAD GUIDES

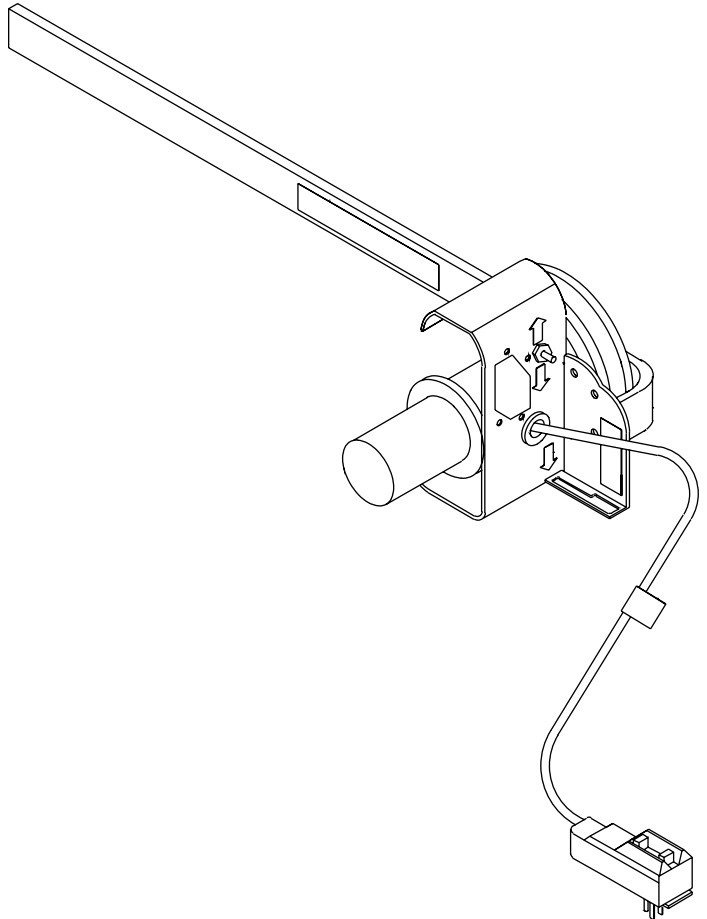
The bunk style load guides are the most popular load guide that **ShoreStation** offers. The bunk style load guide attaches to both the front and rear platforms of the hoist. It is adjustable inward and outward to fit your boat. The spacing on the front platform can be at a different width position than the rear to assist in better centering of the boat. The load guides are adjustable up or down to contact your boat for centering.

The load guide can also be used as a step to assist in getting in and out of the boat.

ELECTRIC DRIVE SYSTEMS

AC2/DC2 Electric Drive Systems

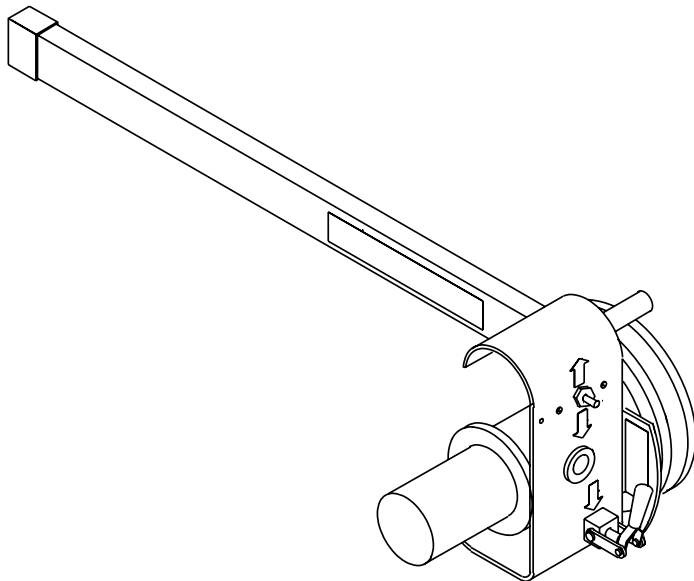
The AC2 and DC2 electric drive systems are used to assist in the raising and lowering of the **ShoreStation** platform on boat hoists equipped with a manual winch and a large hand wheel. They are designed with a grooved rubber wheel that contacts the outer rim of the hand wheel. It will grip the hand wheel and turn it eliminating the need for you to turn the wheel by hand.



AC2 Electric Drive System (Only)

The AC2 system is designed to operate on a 110 volt ground fault protected power supply.

The advantages of the AC2 unit are once the unit is plugged into the power supply, you have constant power for the unit. It never has to be recharged. It does require you to have a 110 volt ground fault protected power supply on your dock. See the manual for the amp draw required to operate the unit.



DC2 Electric Drive System (Only)

The DC2 system operates on a 12 volt battery power supply. The DC2 is supplied with the power cord section that attaches to the boat battery on one end while the other end of this power cord has a quick disconnect connector. This plugs into the power cord from the DC2. It can be disconnected so the boat can be removed from the hoist and used as normal. When returning from boating, you simply connect the power cord from the boat to the DC2 drive unit connecting the power to operate the DC2 drive system.

The advantage of this unit is that the battery is being charged while you are out boating. It does not require an additional battery to operate the DC2 electric drive.

A separate battery can be set on the dock and used to power the DC2 eliminating the need to connect the power to the boat. However, it does require you to recharge the battery on occasion to keep it properly charged.

Electric Drive Troubleshooting Guide:

Symptom	Cause	Correction
Motor will not run	Poor electrical connection	Check that all electrical connections are tight free of corrosion.
	Insufficient power supply	Check that proper voltage is supplied to the drive.
	blown in-line fuse	Replace fuse with exact replacement
GFCI cord keeps tripping	bad rectifier	
GFCI cord keeps tripping	insufficient power supply	Check that proper voltage is supplied to the drive.
	power supply shorted to ground	
	rectifier bad	
	GFCI cord is bad	
Inline fuse keeps blowing	Motor brushes are worn out	replace motor brushes
	motor is bad	replace motor
Fuse or breaker at main panel box keeps tripping		
Motor seems sluggish or will not lift the boat	excessive voltage drop	check for proper cord size
		Check that all electrical connections are tight free of corrosion.
	Motor brushes are worn out	replace motor brushes
Motor runs in one direction only	Motor is bad	replace motor
	Bad toggle switch	replace toggle switch

ShoreStation AC/DC Drives - Frequently Asked Questions

Will the GFCI protect me from shock?

No, The GFCI does not prevent line to ground electric shock, but does limit the time exposure to a period considered safe for normal healthy persons. It also will not protect persons against line-to-line or line-to-neutral faults.

Will the GFCI protect the motor from overload or damage?

The GFCI does not protect against short circuits or overloads. This is the function of the fuse or circuit breaker.

What will be the effect of excessive voltage drops?

The effects of excessive voltage drop could cause unsatisfactory motor speed, torque, or excessive heat build up.

What is excessive voltage drop?

The ***National Electrical Code*** recommends that the voltage drop from the point of service entrance to the final distribution point be no greater than 5%.

How do I know if the GFCI is bad?

Refer to the troubleshooting guide.

How do I know if the rectifier is bad?

Refer to the troubleshooting guide.

Do's and Don'ts

Always disconnect the power cord prior to servicing the drives.

Always replace the motor fuse with a fuse of the same voltage and amperage.

Do not replace the GFCI cord end with a standard cord end unless you are certain that you have plugged into a circuit that is GFCI protected.

Do not use a two-wire extension cord or cut off the ground plug to hook into a two-wire ungrounded system.

Do not attempt to disassemble and repair the motor and gearbox.

Do not attempt to repair the GFCI cord end.

ShoreStation Hoists – Frequently Asked Questions

Q. How much can a hoist lift?

A. This depends on the model number. The first 2 or 3 (SSV150144HYD) numbers are the capacity in hundreds.

Q. What corner of the hoist can the winch be mounted?

A. Left front or right rear on aluminum and right front or left rear on steel.

Q. What is the minimum water depth the hoist will work in?

A. Approximately 12"-14" plus the draft of the boat.

Q. What is the maximum water depth the hoist can installed in?

A. The standard hoist leg can be used in up to 4 ½ ft. The extension leg can be used in up to 6 ft. of water. The deepwater hoist models can be used in up to 9 ft. of water.

Q. Should I buy a steel or aluminum hoist?

A. This is strictly personal preference.

Q. What parts of the hoist need lubrication?

A. The threads of the winch drive shaft, winch cable, and drive chain.

Q. Can I change my 3000lb. hoist to a 4000lb. hoist?

A. It can be done by changing the winch on 2000 MY and newer models.

Q. How do I know when to replace the cables?

A. When cables start to fray, they should be replaced.

Q. Can I replace the winch cables?

A. With some guidance, they can be replaced.

Q. Can I anchor my hoist?

A. Some owners choose to do this in high wind areas. We do not suggest or condone this, since this might result in a void warranty.

Q. Can I assemble the hoist myself.

A. Yes, by following the assembly manual.

Q. How long does it take to assemble the hoist?

A. About two hours without the canopy.

Q. How hard does the wheel turn?

A. With the hoist at capacity, it takes 40 lbs. of rim pull to raise the hoist.

Q. Is the winch tube adjustable?

A. Yes, it can be adjusted up or down to the corresponding numbers on both ends of the tube. This will limit the lifting height.

See the **ShoreStation Aluminum Hoist Warranty** for further information regarding **Owner's Warranty Information**.

CE

DECLARATION OF CONFORMITY

Midwest Industries, Inc., Ida Grove, IA 51445 U.S.A. manufactures and declares that this **ShoreStation** Boat Hoist is in conformity with the essential health and safety requirements specified in The Machinery Directive 98/37/EC.

Andy Brosius, CEO