

Rebel OWNER'S MANUAL



SPINDRIFT ONE DESIGNS

Division of Rebel Industries Inc., Jackson, Michigan

Welcome

We at Rebel Industries are proud that you have chosen one of our boats for sailing pleasure.

Rebel Industries today follows the same traditions that have made them popular since 1948. That tradition is to build the finest, strongest, safest, best looking, best sailing production boats in the world. Using the most modern materials, unsurpassed quality and engineering but still following timeless production techniques of hand layed up hulls and decks, the best of standing and running rigging, in the final analysis, makes our philosophy very simple. It is to make the best boat money can buy, a boat that can be sailed anywhere, at anytime, under most all conditions. A boat we can be proud of, and you too.

Thank you again for your purchase.

Happy Sailing
Rebel Industries

Warranty

Your Rebel sailboat is built to very high standards and is covered by extensive warranty. Details on page 24.

Your Spindrift One Design Dealer

wants you to be totally satisfied with your new boat. He carries a complete line of parts and accessories to provide for your sailing enjoyment. Should you encounter any problems, consult your dealer immediately.

Introduction to the Classes

Through the years many active sailors have gotten together to formulate plans to sail together either to race or just swap sailing stories about their boats. As these people found the friendship and activity increasing, they formulated more rigid activities and began to call themselves clubs or yachting organizations.

Spindrift sailboats today enjoy the tradition of having well run class activities for all their models of boats. Through these organizations the class associations congratulate you as a new owner. It's their pleasant task to wish you a warm welcome to one of the Spindrift sailboat fleets. These Associations are nonprofit membership organizations designed to promote racing and cruising for our boats and safe boating in general. Since their establishment they have sponsored sailing events, including regional and national championship regattas, and have encouraged members to get together in fleets to expand their sailing horizons and, therefore, the enjoyment of your boat. For the isolated owner, this organization serves as a useful link to the outside world as well as a source of information not available anywhere else. Your boat represents a sizable investment. The function of sailboating organizations has proven itself over the years with many classes of boats: Those with active associations tend to grow in numbers and hold their value, while those lacking organizations tend to fade away as does their resale value. Incidentally, the class associations are completely independent of the manufacturer but enjoy excellent relationships with the firm.

On behalf of all the classes, "welcome aboard and good sailing."

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REBEL
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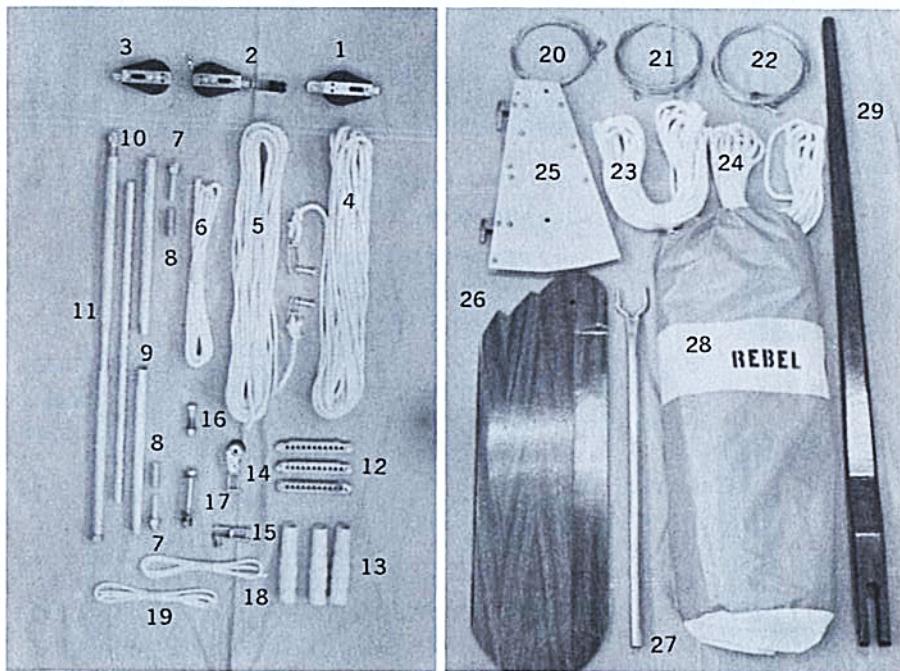
RHODES 19
Ron Curio
2755A Prairie
Evanston, Ill. 60201

Safety Section

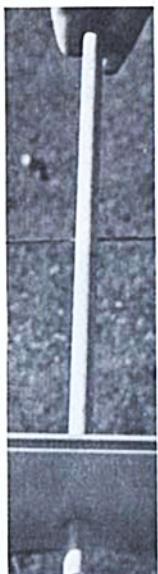
There are certain areas of the manual which contain warnings issued for the safety and benefit of you and your crew. Therefore, read this manual completely and carefully. A brief summary follows.

1. **ALWAYS** look for high tension wires before raising your mast. Accidental contact between mast and such wires could cause severe or fatal electrical shock.
2. **ALWAYS** check all fittings, clevis pins, "O" rings, spar attachments, etc. before raising the mast or going sailing to be sure they are properly fastened.
3. **ALWAYS** carry a Coast Guard approved flotation device for each passenger. It is strongly recommended that everyone wear their flotation device at all times.
4. **ALWAYS** check to be sure the inner hull drain plugs (located on the transom) are tightly closed before launching your Rebel sailboat.
5. **ALWAYS** consult your local weather station for weather conditions before you go sailing. If there is any indication of unfavorable conditions, stay home.
6. When boarding your sailboat, step onto the cockpit seats or, preferably, directly into the cockpit sole. Standing or walking on the cockpit rail could result in capsizing. It is recommended that proper boat shoes be worn to avoid slipping.
7. It is not advised that you leave your sailboat unattended on a mooring. It is possible, under some conditions, that the boat may capsize.
8. Your sailboat is designed for use in protected waters and should be used accordingly. In the event you capsize and you **CANNOT** right the boat, **DO NOT SWIM AWAY**. It is far wiser to stay with your boat for these reasons:
 - A. The boat will float indefinitely.
 - B. The boat is more easily spotted by rescue craft than are swimmers.
 - C. The land is always farther away than it looks, especially when swimming against rough water or current.
9. Before you set sail, be sure to move everything on the boat to see how it works. Let the centerboard down, pull it up and let it down again (until you are more familiar with sailing, it is best to keep the centerboard down all the time while sailing). Check your tiller before setting sail, examine the stays, haul the sheets in and out, and the halyards up and down.

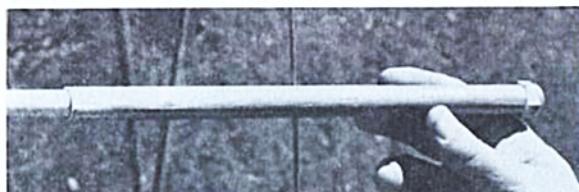
Rigging Your Rebel



1. Block w/Becket for back of boom
2. Traveler Block
3. Small block for Boom
4. Main Halyard 47'x $\frac{1}{4}$ " with shackle
5. Jib Halyard 34'x $\frac{1}{4}$ " with shackle
6. Traveler Line 7' x $\frac{1}{4}$ "
7. Adjuster Bolt for Spreader
8. Spreader Adjuster Shim
9. Outer Spreader Casting
10. Inner Spreader Bar
11. Complete Spreader Bar Assembly
12. Stay Adjusters
13. Adjuster Cover
14. Small block with shackle for Jib Halyard.
15. Bow Swivel Block
16. Rudder Bolt & Nut
17. Tiller Bolt & Nut
18. Outhaul Line
19. Downhaul Line
20. Diamond Stays
21. Forestay
22. Sidestays
23. Mainsheet
24. Jib Sheet
25. Rudder Cheeks
26. Rudder Blade
27. Boom Crutch
28. Sail, Bag and Battens
29. Tiller Handle



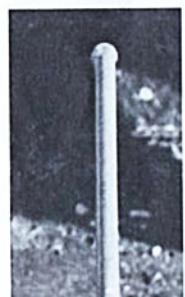
With mast supported between two objects, insert spreader bars thru holes drilled in the mid section of mast.



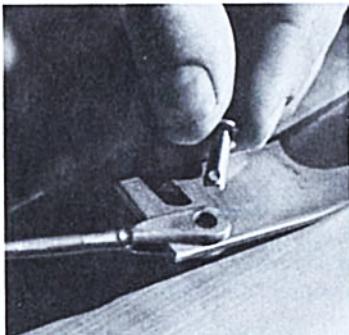
Next slide outer casting over bar and insert adjusting screw into bar ends.



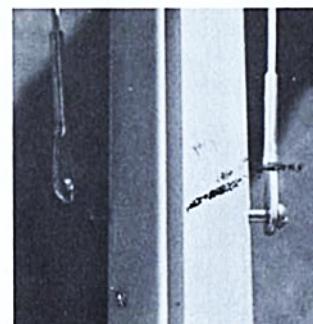
End of spreader will have an inner sleeve to insert in bar.



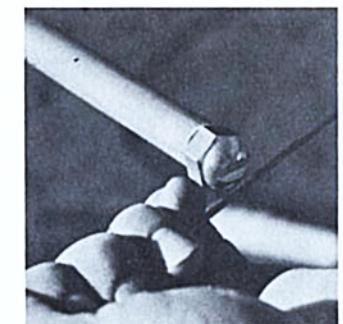
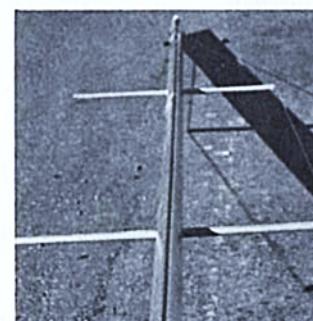
Picture at left shows properly installed spreader bar assembly. Move on to the next section of mast and install the next spreader bar assembly.



Near the top section of mast insert diamond stay wires (size) at the tangs in the holes opposite the sail slot. Fasten with split rings.

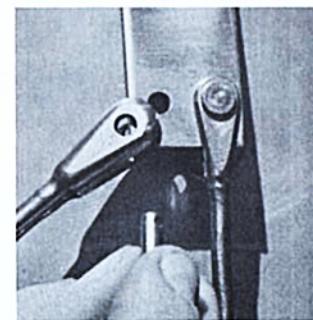


At the base of the mast attach the opposite ends of the diamond stays with bolt and nut.

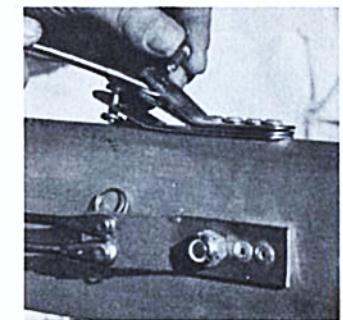


Now you are ready to rig the diamond stays. Slowly pull wires out and insert into each end of adjusting nut.

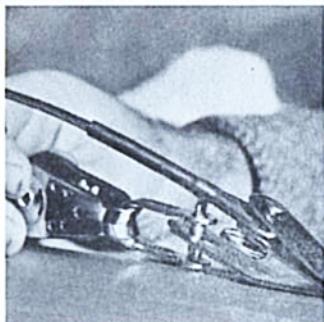
When the diamond stays are properly rigged you should be able to look straight up the mast slot and see no deviation in the mast. If there is a slight bend, remove diamond stay wires and use adjusting screws to make corrections. Periodically during the sailing season check the tension on these wires since they will stretch with use.



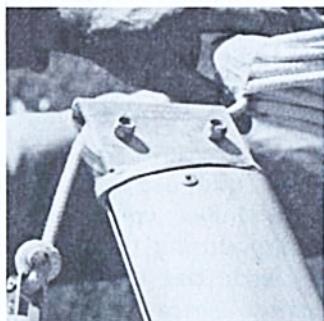
Next install side stays (size) opposite diamond stays at the top section of mast. Fasten with split rings.



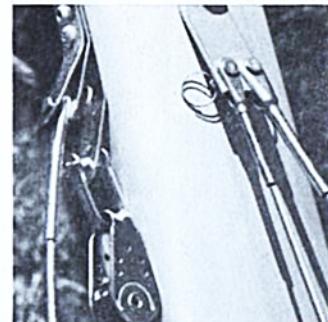
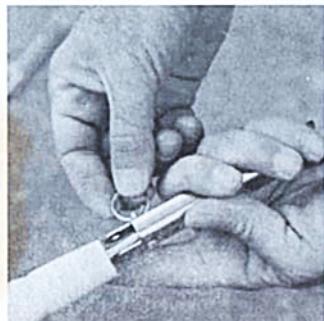
Attach forestay at the front tang in the upper hole.



Attach small block with shackle in the hole directly below forestay.



Run the main halyard thru the top of mast with the shackle facing the slotted side of mast.



If all steps have been followed, the proper installation of stays and blocks should look like above picture.



Run the jib halyard thru the pulley near the tangs. Make sure the shackle is facing the top of mast when line goes thru.

Install adjuster covers on lower end of forestay and sidestays. Next attach stays to adjusters at the top hole with clevis pin and keeper ring. Lay mast on top of boat with slotted end facing down and the top of mast facing the stern.



Attach side stays to metal chain plates, extending thru the deck on each side of boat.



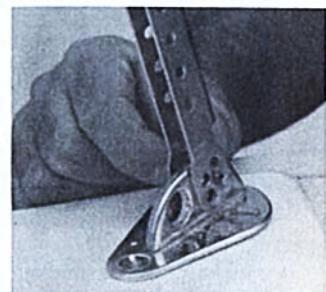
With the help of another person slowly place base of mast on deck plate.



Slowly raise mast into full upright position.



With one person holding the mast, the other holding the mast on the base plate...

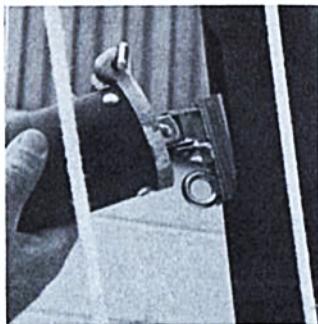


Now take the forestay with clevis pins and attach to forward hole of stemplate.

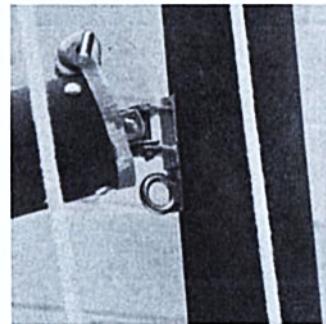
NOTE: Before raising mast, check all tangs, clevis pins, keeper rings, stays, and sheaves aloft for wear, kinks and corrosion. Be sure the main and jib halyards are running free and both will be accessible when the mast is in an upright position. It is recommended that two (2) people raise the mast.

CHECK TO BE SURE THERE ARE NO OVERHEAD HIGH TENSION WIRES

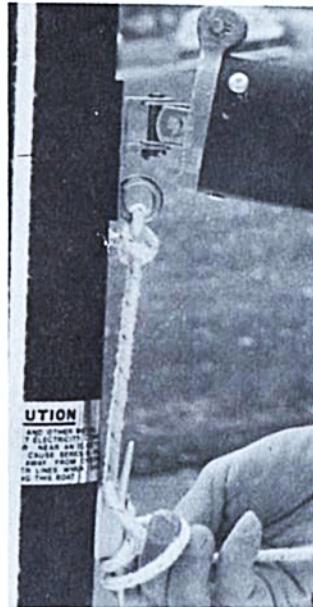
Note: Now that the mast is raised, the rigging may appear to be loose. Return to the upper part of each side stay adjuster and slowly remove the clevis pin one side at a time with another person steadyng the mast. Lower side stays down along adjusters the same number of holes on each side until stays are fairly taunt. As the shrouds stretch during use it will be necessary to fine the rigging at another time by making minor adjustments with the stay adjusters.



Now take the boom and insert the end with gooseneck slide into sail slot on mast with oval ring facing down.



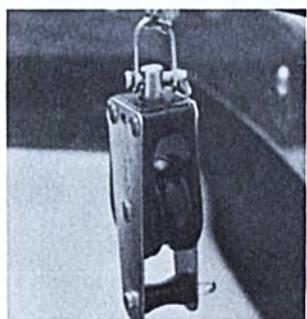
Slowly lower boom down slot in mast.



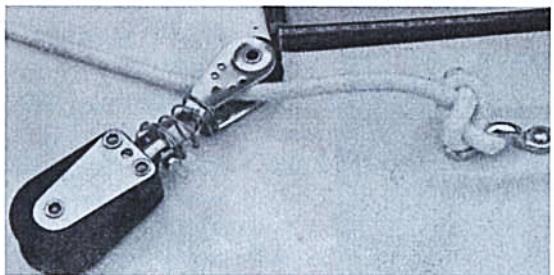
Pass the traveler line thru small block on traveler block assembly.

Attach downhaul line to lower ring on gooseneck. Attach bottom end of downhaul line around cleat at base of mast, leaving approximately 2 ft. between gooseneck and cleat.

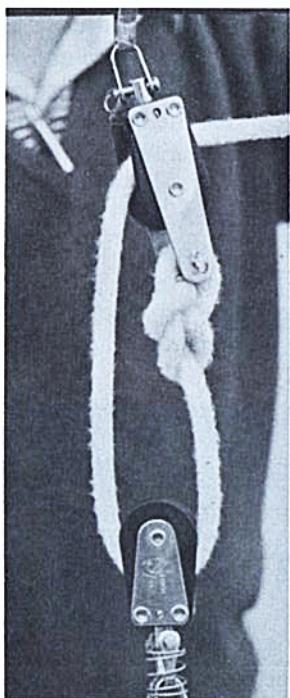
The downhaul allows you to adjust the tension on the leading edge of the sail. This tension moves the draft of the sail forward or back depending on the amount of tension. Maximum downhaul tension will move your pocket forward for light air and minimum downhaul tension will move pocket aft in heavy air. Experiment in different winds and you will soon find the best downhaul tension.



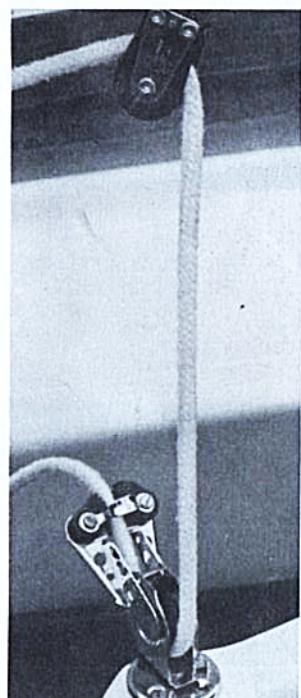
Attach block with becket near rear of boom on the boom bail. Secure very tightly with the screw fitting. Attach the remaining block to the boom bail near the middle of boom.



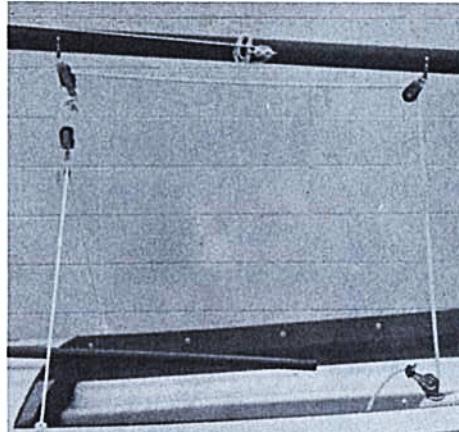
Secure each end of traveler line on eye straps at the rear quarter of boat.



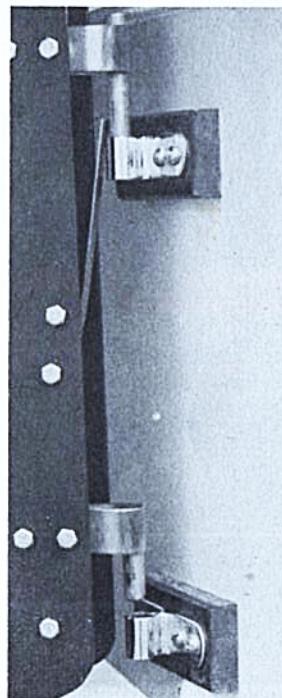
Tie one end of the mainsheet to the becket, pass the other end of the line through the block on traveler from fore to aft up through the block on the end of boom from aft to forward.



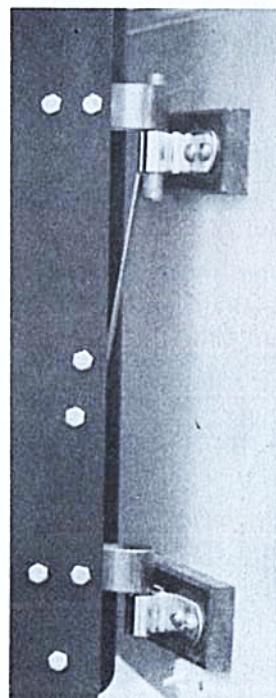
Pass the line forward to the next block, aft to fore, down to the mainsheet block and thru the jaws.



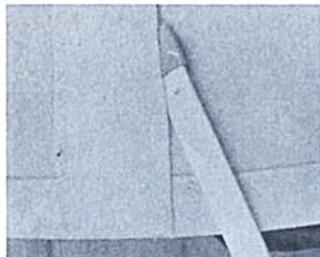
Picture above shows the proper sheet attachments.



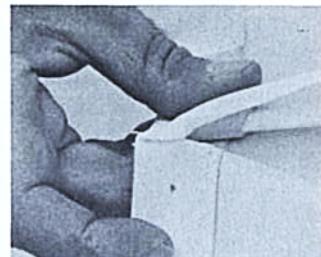
Mount the rudder head on the transom making sure the pintles are firmly located in the gudgeons.



The spring clip should snap below the upper gudgeon.



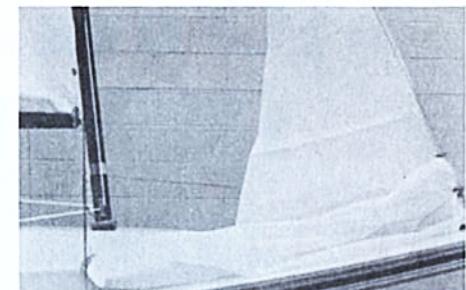
Insert battens in the designated pockets in sail



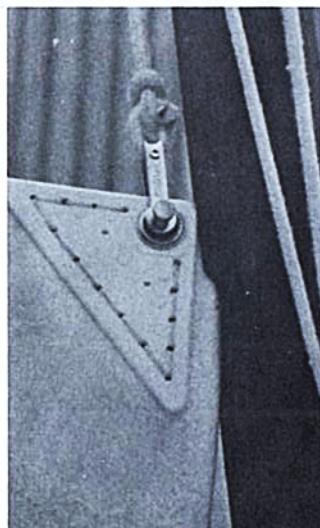
Make sure the battens are firmly lodged in place.



Remove jib halyard from mast (port side) and attach spring clip to sail.



Next raise the jib with the halyard and cleat off.



Next attach head of sail with spring loaded shackle from the main halyard.



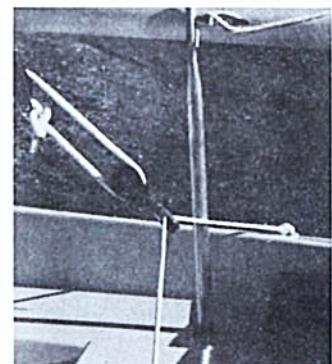
Feed the sail into the mast slot and raise the sail; make sure the bow is facing the direction of the wind.



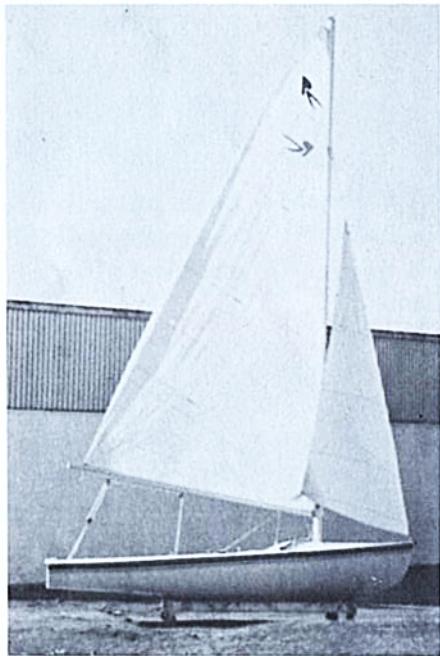
Attach jib sheet to the clew board on sail.



Pass the opposite ends of the sheets through the deck mounted cleats, tie a figure eight knot in the free ends of the main and jib sheets to prevent the lines from accidentally freeing themselves.



Supplied with rigging box is a metal tube called a boom crutch. This is inserted in the black tube on the rear deck so when the sail is dropped, the boom will not scratch the boat. Remove before sailing.



These are the rigging instructions for the Rebel. Additional equipment may alter some of these procedures. This is only a guideline and acts as a help for the first time buyer and sailor.

For cruising or racing, backed by proven performance, reliability and style, catch a Rebel.

Happy Sailing.

Taking Care Of Your Spindrift

Care and Maintenance

The sailboat's deck and hull are fiberglass and are resistant to most forms of corrosion and marine borers. Waxing and polishing with a hard wax twice a year is recommended to maintain the high gloss. Certain rusts and stains can be removed with nail polish remover or acetone. When the boat is exposed to excessive amounts of sun, a rubbing compound before waxing will return the luster of the gel coat. If the boat is to be left in the water (fresh or salt) the bottom should be sanded and painted with an anti-fouling paint; follow the directions on the can. Always hose down the hull and deck (and the centerboard slot, if possible) after use in salt water, in order to wash off the salt from the wood parts, lines, stainless steel fittings and rivets. To care for the wood parts on your boat, hose them down periodically and varnish whenever the finish needs a touch-

up. Varnish more often if the boat is used year round. Your deck and hull are constructed of end grain balsa, care should be taken that all holes into the deck and hull are sealed if punctured.

The Sail

The Sail is the primary source of power for your boat. With proper care and maintenance it will last for years.

Don't wad the sail into a bundle.

Don't let the sail flutter in the wind; this might break down the stitching.

Don't wash the sail in hot water or in an automatic washer.

Be careful of chemicals, oil, tar and paint as these might stain the sail and cannot be removed.

Always put the sail away dry.

Fold the sail after use. The accordion fold is the easiest and should be varied to avoid permanent creases.

Avoid scratching and creasing the windows. Sometimes scratches can be removed with a soft cloth and a plexiglass cleaner.

Ropes and Lines

Rebel Industries has seen fit to equip their boats for all running rigging with New England Ropes' yacht braid. You can rest assured your new boat has the ultimate in quality and the same lines used by the best sailors throughout this country and abroad as well.

A well made sheet or halyard demands little in care, in consideration of the performance and service life you will receive over the years. There is no end-of-season "lay up" procedure to follow though some owners like to wash their lines with any household detergent to bring them back to a cleaner appearance. If you wish to do this, do not use a washing machine, but rather flake the rope down in a tub of tap water and detergent and leave overnight. Rinse with fresh water, hang to dry and store for winter.

One of the more common causes of rope problems is snagging, caused by the rope catching on a sharp object such as a cotter pin. To eliminate this possibility, check all areas where sheets and halyards may run under all points of sail and tape or in any other way protect rope from contact with this situation.

Your line is manufactured from the finest Dacron fiber available from DuPont. Service

life will of course depend upon the use to which the line is put. It is rather like an automobile tire in this regard and what you have aboard your boat is no less than the 60,000 mile tire quality. The lines will fuzz up a bit after use but this is no cause for alarm as the tensile strength has not been reduced substantially.

Unless a boat is being raced hard every weekend throughout a four month season, there should be no need for replacement of lines more often than every three to four years. Lines wear in a given area (around winches, etc.) so it is a good idea to end for end your lines midseason to distribute this wear and lengthen the service of that rope in that particular position.

Gel Coat Maintenance

Ferro Corporation, the world's largest manufacturer of polyester coatings, has been asked by the manufacturer of your new boat to assemble some helpful hints in maintaining the durable luster of the coating on your fiberglass boat known as gel coat.

Ferro Corporation uses nothing but the highest quality raw materials in preparation of its polyester gel coats. The premium that these quality raw materials command, by itself,

speaks highly of the integrity with which Rebel Industries has constructed your new day sailor.

Your new sailboat, as in a new automobile, regardless of the make, requires a certain amount of preventative maintenance to insure its optimum performance. Although a fiberglass boat requires nowhere near the labor intensive preventative maintenance as a wood boat, it is not "maintenance-free".

A few minutes a season is all that is required to follow these simple maintenance instructions.

I. At the beginning of each season, thoroughly inspect the hull and deck for any nicks, cracks, or other small damage that may have occurred during storage. These small damaged areas should be repaired before placing the boat in the water to prevent a wicking action through the fiberglass which could possibly result in more serious damage.

II. In order to maintain the rich luster of your fiberglass coating, it is always best to wash and wax all external fiberglass areas at least once a season. Although there are several grades of waxes available for fiberglass products, any high grade automotive wax will prove adequate. After applying the wax, it is always best to use a high speed buffer to polish out the wax which

enhances the luster of your fiberglass coating.

III. It is always best on a regular basis to wash the deck and hull of your fiberglass boat with a mild non-abrasive soap to remove any dirt or algae that will accumulate throughout the season.

IV. If at any time you suspect you may have damaged the gel coat through trailering, docking, or contact with another boat, it is always best to inspect and repair the damaged area to prevent water permeation into the sub-surface laminate.

By following these simple maintenance instructions on a regular basis, you can easily maintain the durable luster of the gel coat and ultimately the resale value of your sailboat.

Deck Hardware

To ensure that your new boat is a superior value, Rebel Industries has chosen to outfit it with **Sail Speed - THE WORLD'S FINEST BALL BEARING BLOCKS.** Ball bearing blocks, while costing more, offer significant advantages over conventional blocks.

Ball bearing blocks reduce friction making sail trim easier and less fatiguing. Further, lines sheet in and out more quickly so your sails can be

trimmed faster in response to changing conditions. If you are hit with a sudden puff of wind the sails can be eased faster thus reducing the possibility of a capsize. In light air ball bearing blocks allow lines to run more freely so sails ease out in far less wind than with regular blocks.

Your Sail Speed blocks feature sheaves which "float" on two races of precision ground Delrin® ball bearings. These ball bearings are self lubricating and require no attention other than an occasional flushing with water (particularly in a salt water environment). The occasional water treatment will ensure that dirt and grit are expelled from the ball races so your blocks will always operate smoothly.

Sail speed ball bearing blocks are constructed using the highest quality raw materials; BS316 stainless steel and high impact resistant Delrin® throughout. The combination of salt water corrosion proof stainless steel and the high impact plastics eliminate galvanic corrosion associated with blocks made of stainless and aluminum.

Sail Speed incorporates superior design features into each block. For example, they feature higher break strengths than comparable ball bearing blocks, yet weigh less. Sail Speed, with separate tooling for each type of block and having the

widest variety of ball bearing blocks on the market, assures that each block is designed specifically for its use.

Finally, Sail Speed warrants your blocks to be free from defects in materials and workmanship for as long as you own your boat. If a Sail Speed block fails to operate satisfactorily, please return it to American International Marine or the point of purchase with the date of purchase and an explanation of the problem for free repair or replacement.

Sail Speed, distributed nationwide by:

AIM - American International
Marine Corporation
P. O. Box 405
Millersville, MD 21108

The deck hardware on your Rebel Sailboat is purchased from SECO. It is manufactured in England by both RWO Marine Equipment Ltd. and R.S.J. Barton Ltd. Both firms have a long standing reputation for exceptional quality and versatile design. Their standards far exceed many other manufacturers, and are the reason we are able to say in our simple Guarantee: "If anything goes wrong with any SECO sailboat fitting, bring it back and we'll exchange it - No Questions Asked."

Knowing Your Hardware

by Schaeffer Marine

The hull of a sailboat has often been described as the platform upon which the process of sailing is performed. Gear and hardware are the tools used in this performance. Selecting these tools with care and intelligence not only keeps the process smooth, simple and efficient but adds greater enjoyment and safety to the sport of sailing.

To keep pace with the variety of jobs that must be performed on sailboats of all sizes, shapes and makes, producers of yacht hardware are developing and producing an ever increasing variety of equipment from which choices can be made. Helpful in the choice of proper hardware is a basic knowledge of its anatomy, terminology, and function.

Although aluminum is well known for its lightness and resistance to corrosion, certain of its alloys are stronger than structural steel. Aluminum is also exceptionally workable. It can be easily stamped, cast or welded and accepts a wide variety of finishes. The alloy most widely used in our product line is 6061-T6, which has a tensile strength of 45,000 psi and a yield strength of 40,000 psi.

This process coats the surface of aluminum with a corrosion resistant protective film by subjecting the metal to electrolytic action. We use a hard-coat anodizing process, which adds about 1 to 1.5 thousandths of an inch of tough aluminum oxide to the aluminum. Our XL "Black Block" line has a distinctive black dye added during the process. Hard coat anodized finishes have withstood corrosion for more than 1,000 hours in salt spray tests.

A steel alloy containing iron, carbon, silicon, manganese, nickel and at least 12% chromium (which makes the iron passive in air at normal temperatures). We generally use type 304 stainless steel, whose combined properties of corrosion resistance, strength and elasticity make it ideal for marine use.

Contrary to the implication of its name, stainless steel is not totally rust proof. All stainless steel will rust to a certain degree, due to natural chemical reaction to air and salt water (particularly in areas of abrasion, friction and welding where a chemical imbalance in the metal might occur). The problem though, is mainly a cosmetic one and is solved with metal polish and frequent fresh water rinsing.

Trailering

It is very important that the sailboat, when trailered,

have the trailer properly fitted. Serious hull damage may occur if the placement of bunks, pads and rollers are not in the proper position. The main load of the boat should be directly down the centerline, using rubber rollers with padded bunks positioned against the side of the hull near the stern for solidarity. A rubber bow chock should be positioned just above the bow eye, to keep your boat from moving forward when braking.

Helpful hints for trailering.
1. Double check safety chains, lighting hookups tiedowns and the ball lock before driving. If the trailer has a tilt bed, make sure latch is secured.
2. While moving around a launch area, always check for low power lines before step-

ping mast.

3. Always remove rudder before trailering.
4. Unscrew rear drain plugs while under way.
5. Check the grease packing in the bearings at least twice a year. If the trailer is submerged a lot repack as needed.
6. Load the boat on the trailer so there is approximately 30 to 40 pounds minimum of tongue weight on the hitch.
7. Periodically check lugs nuts for they will become very loose at times.
8. Tie down all objects and tape any loose fittings. Vibration will cause damage while underway.
9. Always unplug connector between car and trailer for running lights before submerging trailer in water.

LIMITED WARRANTY

Rebel Industries, Inc., 145 West Monroe, Jackson, Michigan, warrants to the original consumer purchaser only for a period of one year from the date of delivery that this new boat will be free from defects in material and workmanship.

The warranty does not apply to (1) equipment or accessories carrying their own individual warranties, (2) accessories or equipment installed by anyone other than the factory, (3) gel coat cracks, crazing or gel coat bubbles, (4) canvas, vinyl, upholstery, plastic and trim, (5) any boat that has been altered, subjected to misuse, negligence or accident, (6) any boat that has been sold or used for commercial rental or promotional purposes or other than as a factory first for normal pleasure use, (7) any boat that is damaged due to being transported on any other type boat trailer that is expressly designed and sold by Rebel Industries for that purpose.

In the event of a defect, malfunction or failure to conform with this written warranty, Rebel Industries, Inc. will make repairs without charge to consumer at its plants or authorized Rebel Industries dealer. Transportation costs are the responsibility of the owner.

The liability of Rebel Industries, Inc. shall be limited to repair or replacement of any part which does not conform with this written warranty.

REBEL INDUSTRIES, INC. WILL NOT BE RESPONSIBLE FOR ANY OTHER INCIDENTAL OR CONSEQUENTIAL EXPENSES OR DAMAGES.

THERE ARE NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, BEYOND THOSE EXPRESSLY STATED IN THIS WRITTEN WARRANTY.

DEALERS OF THIS BOAT HAVE NO AUTHORITY OR AGENCY EXPRESS, OR IMPLIED, TO MAKE ANY FURTHER REPRESENTATIONS BEYOND THIS WRITTEN WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts or exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.