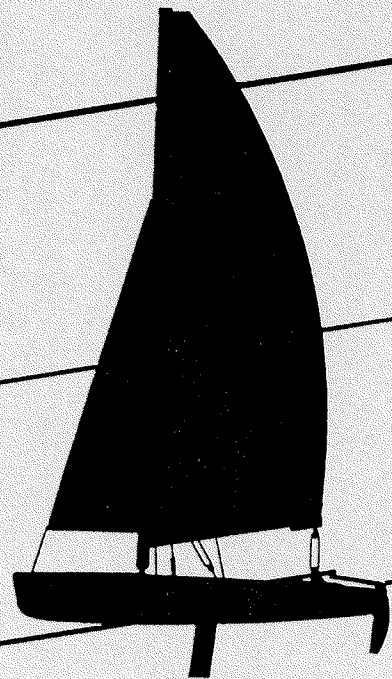
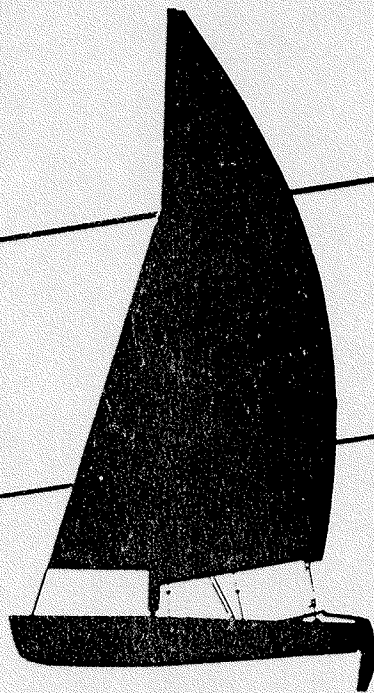
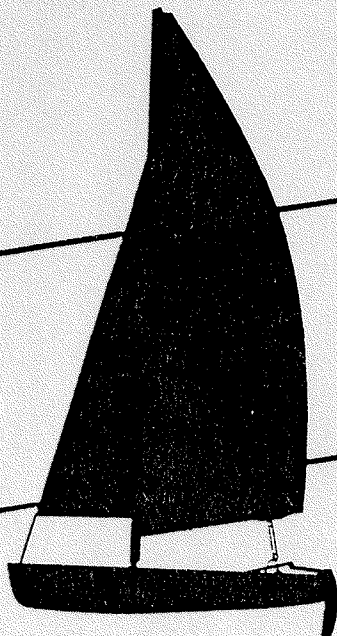


**Owners
Manual**

SUPERCAT

15 17 19



INTRODUCTION

Congratulations you have just joined the growing Fleet of Supercat owners. A considerable amount of time and care was taken in the design, construction and selection of materials in your Supercat. With proper care and operation, you can have many years of happy sailing.

Please read this Assembly/Owners manual carefully before you assemble, rig, and sail your Supercat. There are many suggestions and tips that will make the operation of your Supercat easier and more pleasurable. There are also some instructions which must be followed to avoid damaging the boat and voiding your warranty.

This manual is not intended to be an instruction book on how to sail the Supercat, but more of a guide to proper rigging, with tips on the use of the traveler and other adjustments aimed at obtaining maximum performance from your Supercat.

Novice catamaran sailors are urged to purchase a good book devoted to sailing catamarans and use it to gain initial knowledge and understanding of catamaran sailing. The best source of information in regards to sailing Supercats comes from other Supercat owners. I'm sure you'll find other owners helpful and eager to get you started correctly. If you should have difficulty locating owners or fleets in your area please feel free to write us at the address below and we will be most happy to help you either in locating other owners or answering any questions you may have.

AQUARIUS SAIL INC

26568 FALLBROOK LANE

WYOMING MN 55092

651-462-SAIL

Good Luck and Good Sailing.

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ASSEMBLY INSTRUCTIONS FOR THE SUPERCAT 15, 17, and 19

A complete Supercat is shipped in four cartons. The two large cartons contain the hulls. The round tube contains the mast and the large cardboard crate contains the beams, sails, battens, rudders, standing rig, running rig and any options or accessories.

Check the packing list and familiarize yourself with the various components. Follow the steps as described and your Supercat will soon be ready for the water.

HULL AND CROSSBEAM ASSEMBLY

- 1) Carefully remove the end caps of the hull cartons.
- 2) Place the hull cartons approximately 8 feet apart on a level solid surface.
- 3) Cut the straps securing the center carton section. Caution: the hull will be supported by the cradles but care must be taken not to tip them from the cradle during beam assembly.
- 4) Remove the top center sections of each carton and carefully cut the plastic bag away from the hull.
- 5) The hulls should be 8 feet apart with the trampoline tracks facing each other, Photo A1.
- 6) The front beam has the nylon mast step ball atop the casting. The rear beam has the Harken traveler and center swivel assembly or mainsheet attachment ring on top. Place the beams gently in their respective saddle locations making sure that the rear beam tramp track is facing forward. See Photo A2.
- 7) Important! Using a carpenter's level, make sure that the hulls are level fore and aft. See Photo A3. Failure to align the hulls properly will lead to difficulty when mounting the beams.
- 8) Carefully align the holes in the beam with the holes in the beam saddle, and gently seat the beams into the saddles using a soft rubber mallet if necessary. See Photo A4.
- 9) After the beams are properly seated and aligned with the holes, the moon washers must be inserted into the crossbar and bolted into place. The moon washers are drilled off center and the larger portion of the moon washer should be placed towards the centerline of each hull. Newer moon washers have an arrow cast into them, this arrow should point towards the hull centerline.
- 10) Place the lock washer on the 3/8 inch beam bolt and liberally coat the bolt with Never Seize. (Never Seize will reduce

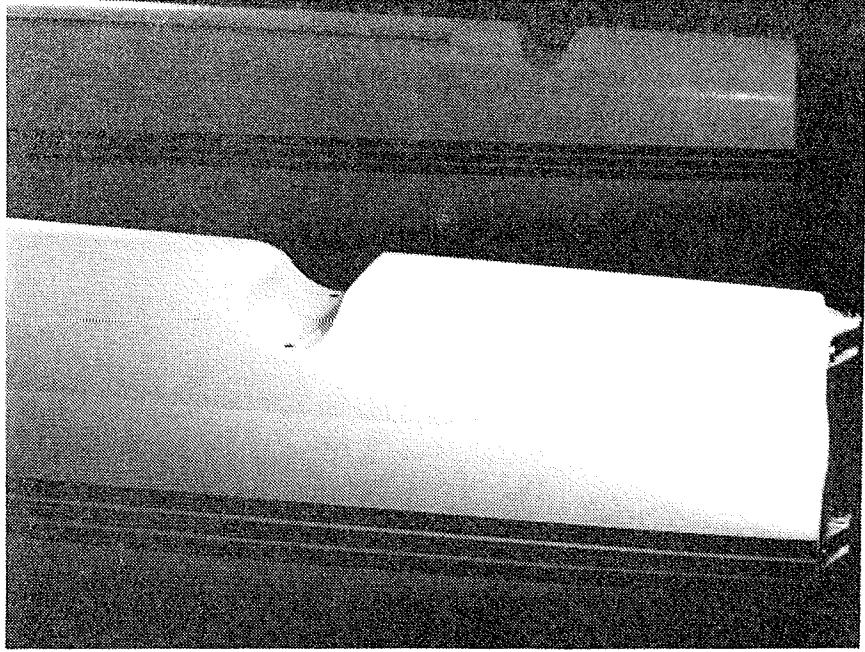


Photo A1. Setting up hulls for assembly.

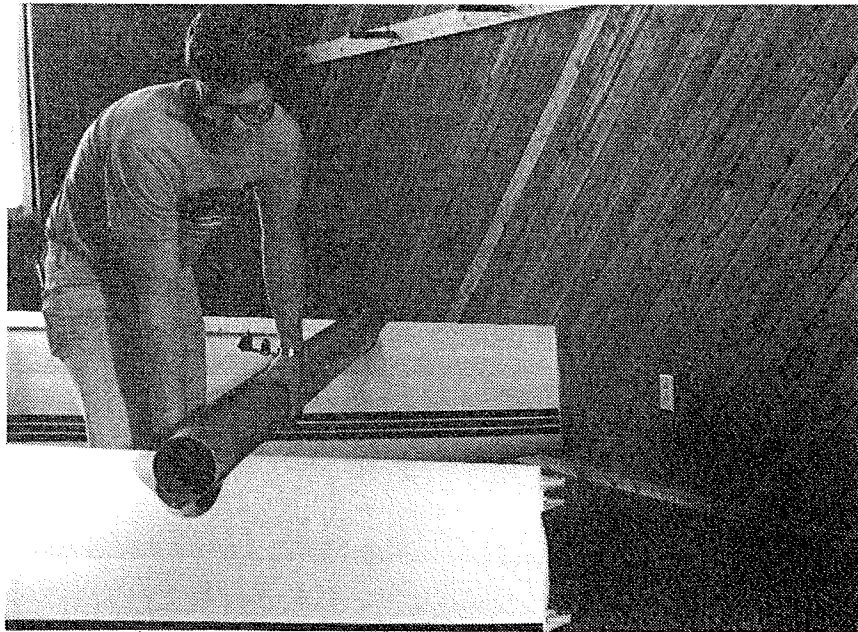


Photo A2. Placing beams into the saddle.

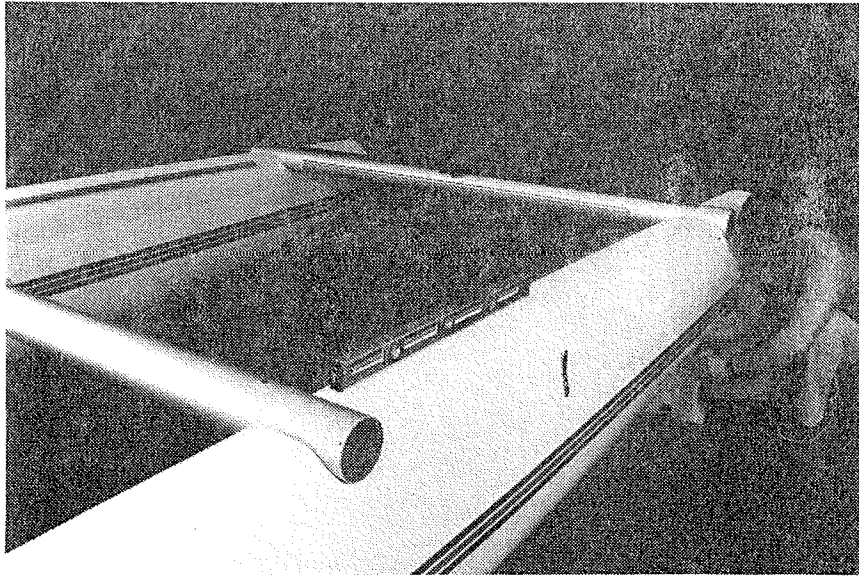


Photo A3. Leveling the hulls.

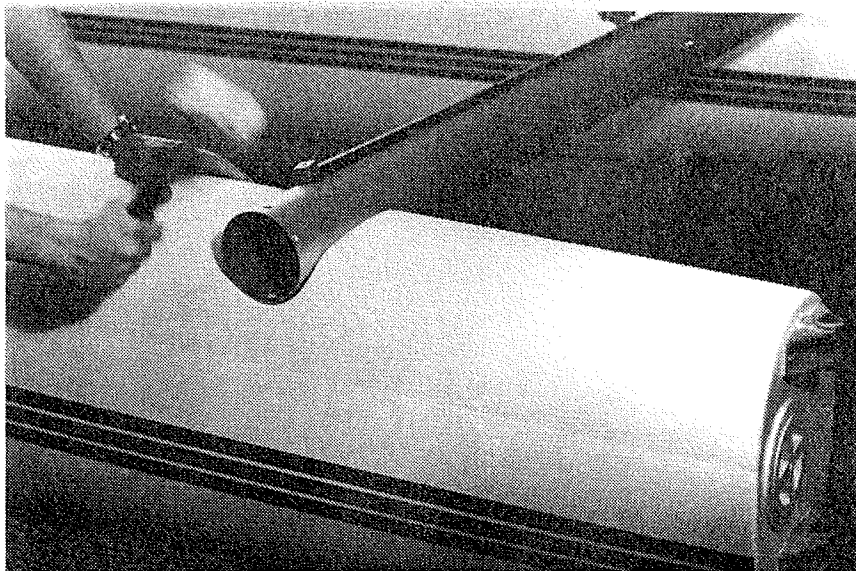


Photo A4. Seating the beams into the saddles.

galvanic corrosion between the stainless steel bolt and the threaded aluminum hull insert as well as the moon washer. This will help maintain the strength of the threaded fasteners and ease bolt removal should it be necessary at a later date.) Insert the bolt through the moon washer and thread it into the hull. Note: The bolt should thread easily into the hull, if not, gently tap the beam into alignment. Inserting the inside moon washer first is easiest. See Photos A5, A6, and A7.

- 11) After all 8 bolts are mounted, torque each bolt to 180 to 240 inch-pounds (15 to 20 foot-pounds). See Photo A8 and A9.
- 12) Next, install the Harken traveler on the rear beam. Begin by removing the bolt that secures the end stop to the track. Place the Harken car and installation track directly against the end of the exposed track. Remove the retaining clip and gently roll the car onto the track. See Photo A10. (Note: Be sure to remove the clip from the end of the installation track which is furthest from the ball access notch. This notch is used to load new bearings into the car.) Replace the end stop and secure the bolt with a lock nut. See Photo A11. Be sure to save the Harken traveler installation track for reloading the balls should they need replacement at some future date.
- 13) Complete the beam installation by installing the beam end caps on each beam. The beams are predrilled for end cap fasteners but the end cap tabs are not, this is done to allow better alignment of the end caps. See Photo A12.

Insert the end cap into the beam and drill a pilot hole for the screws provided and secure the screws. (It is suggested that after drilling, each end cap be numbered to insure that they always are mated to the same beam end.)

Install the black plastic beam plugs in the access holes to finish the beam installation. See Photos A13 and A14.



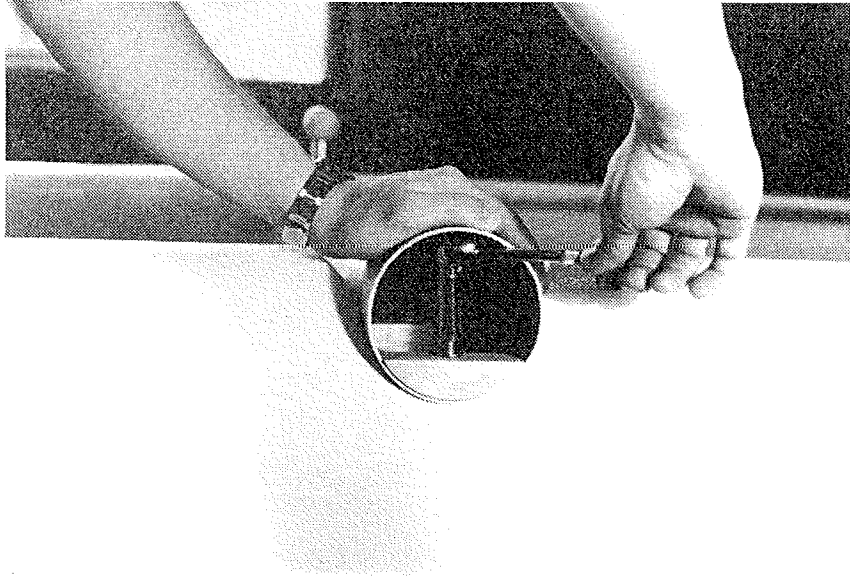


Photo A7. Installing beam bolts.

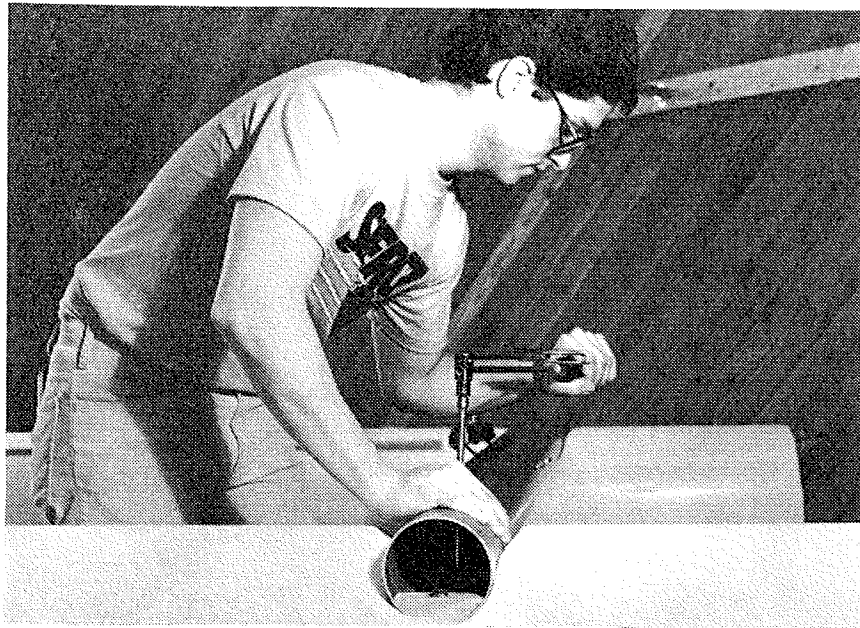


Photo A8. Torqueing inner beam bolt.

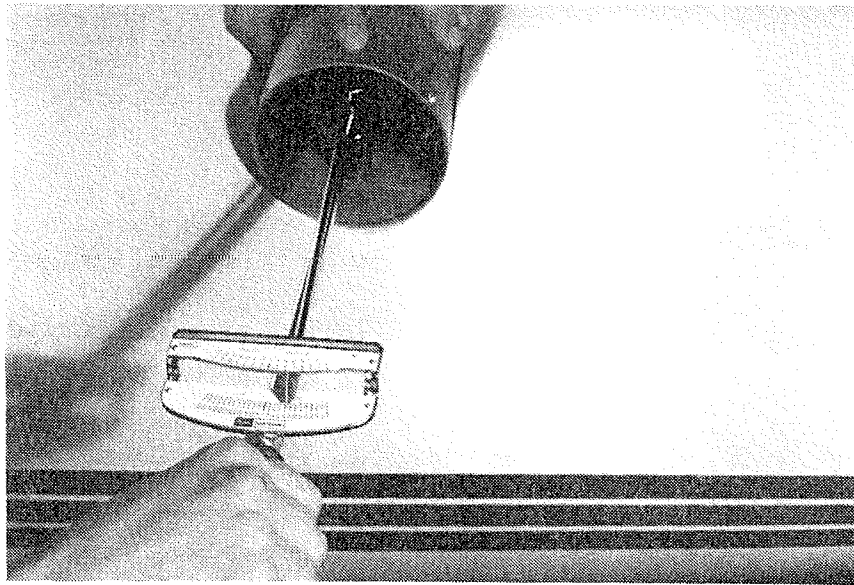


Photo A9. Torqueing outer beam bolt.

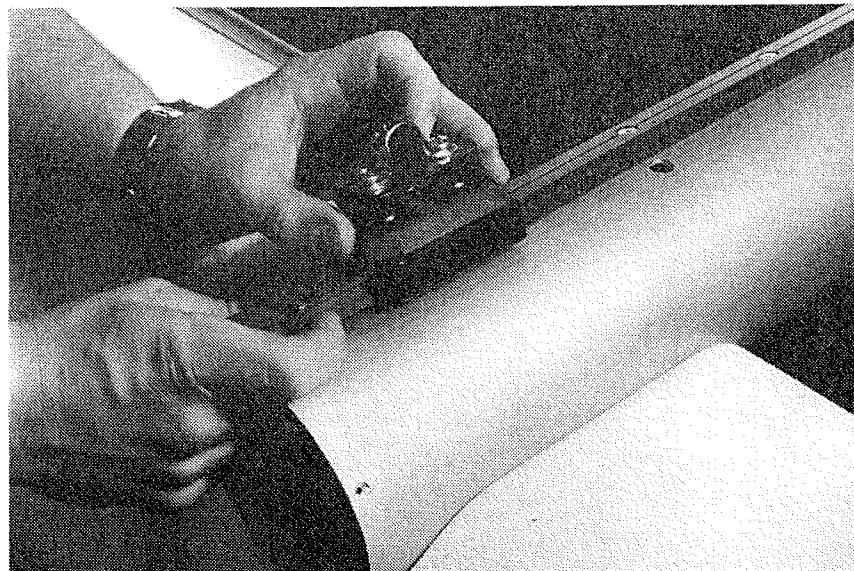


Photo A10. Traveler car installation.

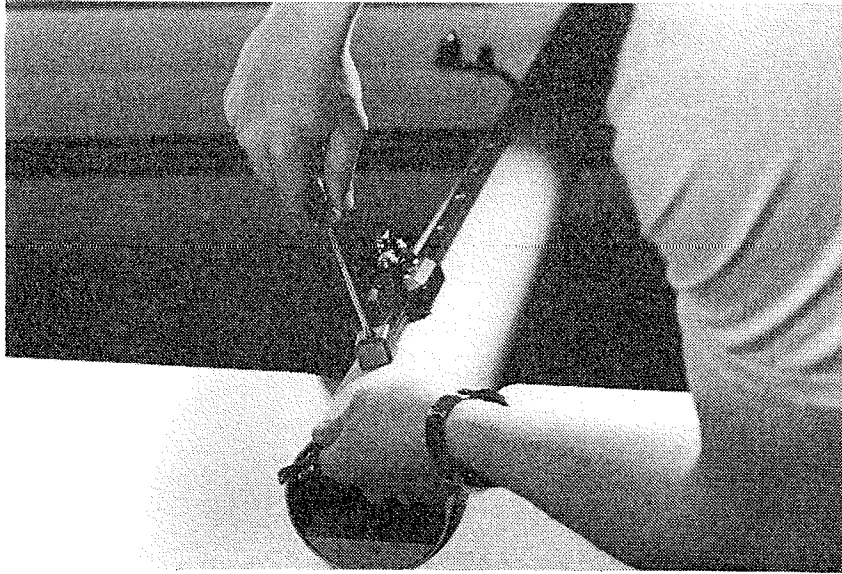


Photo A11. Traveler track end stop installation.

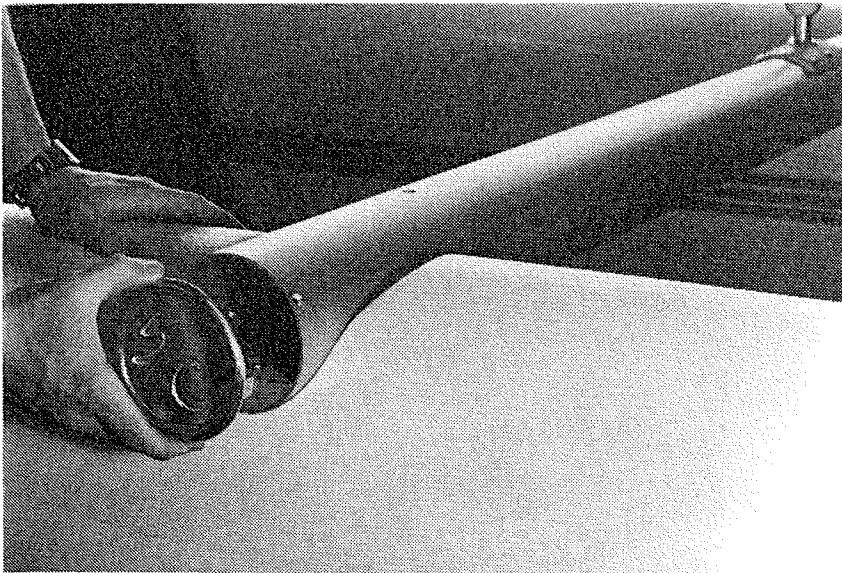


Photo A12. Beam end cap installation.

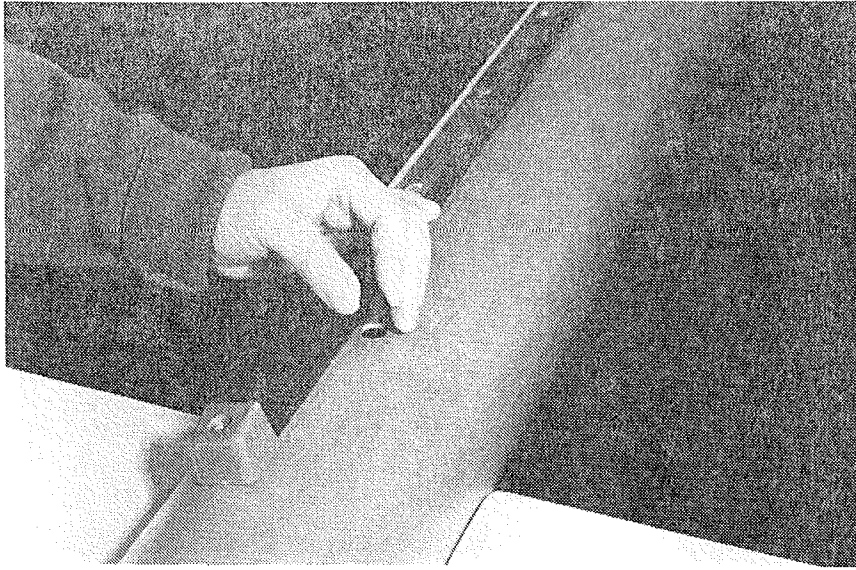


Photo A13. Beam access hole plug.

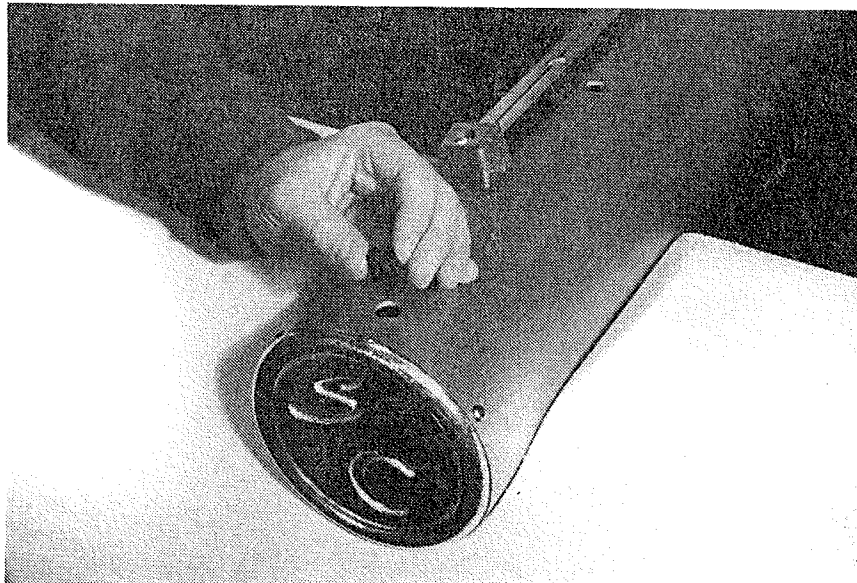


Photo A14. Beam plugs installed.

TRAMPOLINE INSTALLATION

- 1) Unfold the trampoline and place the large zippered pocket at the front beam. See Photo B1.
- 2) Thread the aft boltrope into the rear beam tramp track. Photo B2.
- 3) Secure the rear corner grommets with the eyestraps mounted to the ends of the rear beam. This will prevent pullout of the trampoline from the rear beam.
- 4) Feed the side boltropes into the tracks on each hull and work the trampoline evenly toward the forward beam. See Photo B3.
- 5) Wrap the trampoline around the forward beam and begin lacing the trampoline. Photo B4 and B5.
- 6) It is easiest to divide the tramp lacing line in half, tie the center of the line to the aft center lacing grommet, and proceed to lace each half of the tramp independently. See Photo B6. (Note that the trampoline tension does not contribute to the rigidity of the boat, hence extreme tightness is not necessary for good sailing performance.)
- 7) Install the hiking straps starting at the aft end of the trampoline and working forward. Tie a overhand knot or figure eight knot at each point where the hiking strap goes below the trampoline. Any excess line may be tucked into the forward lacing and secured. See Photo B7.

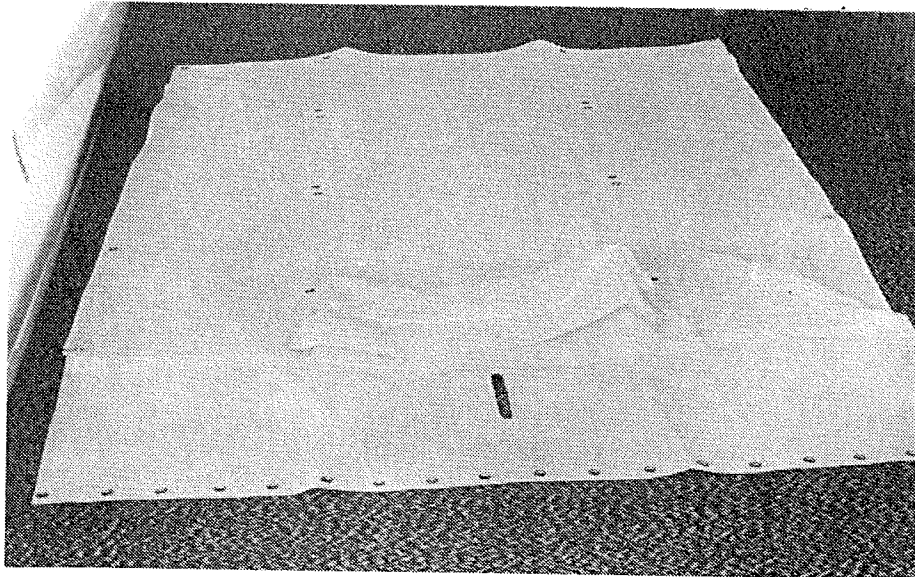


Photo B1. Unfolding the trampoline.

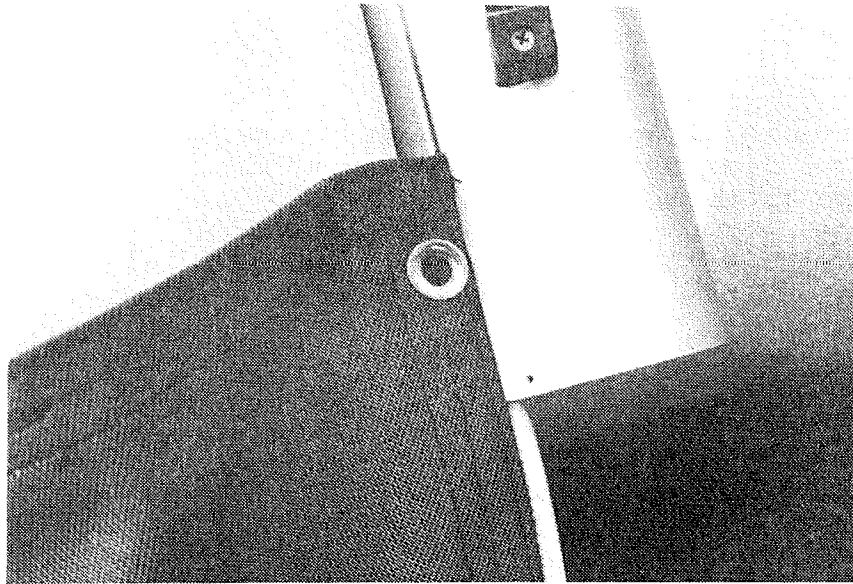


Photo B2. Threading the trampoline into the rear beam.

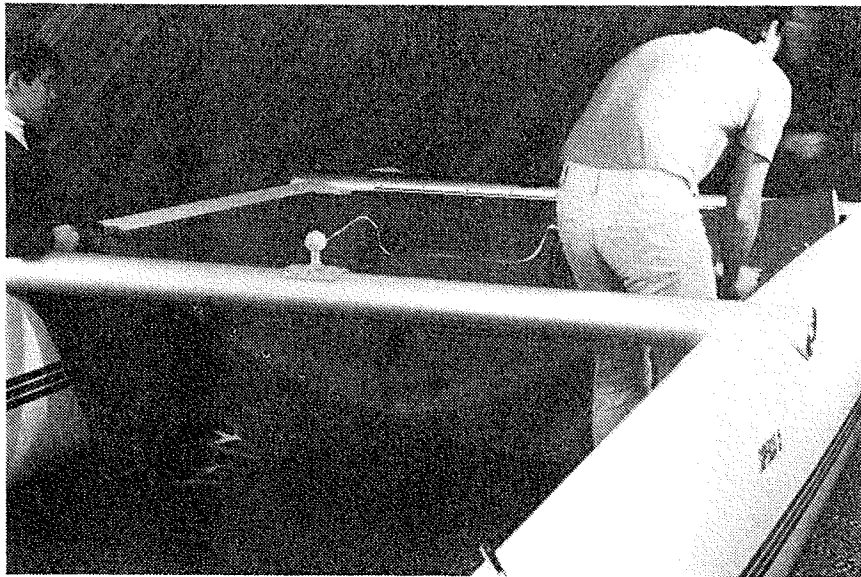


Photo B3. Feeding the tramp into the hull tracks.

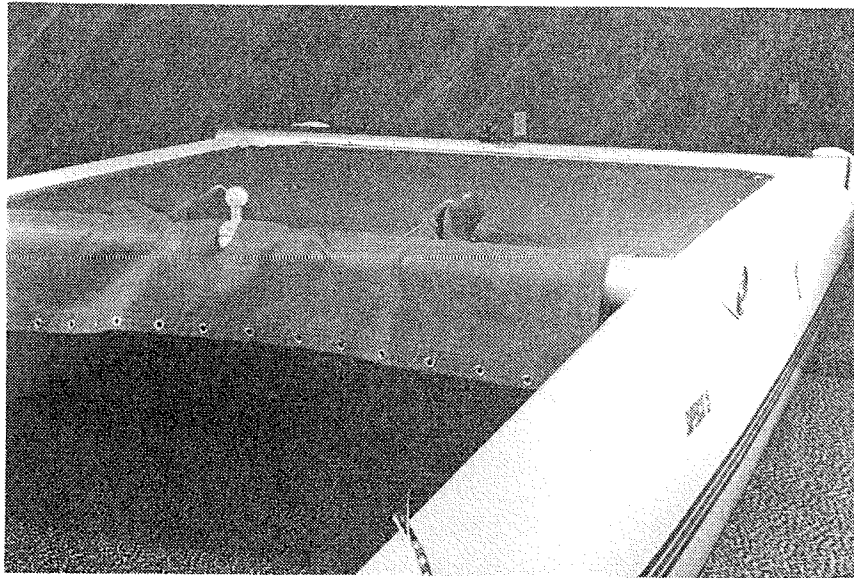


Photo B4. Placing the trampoline around the forward beam.

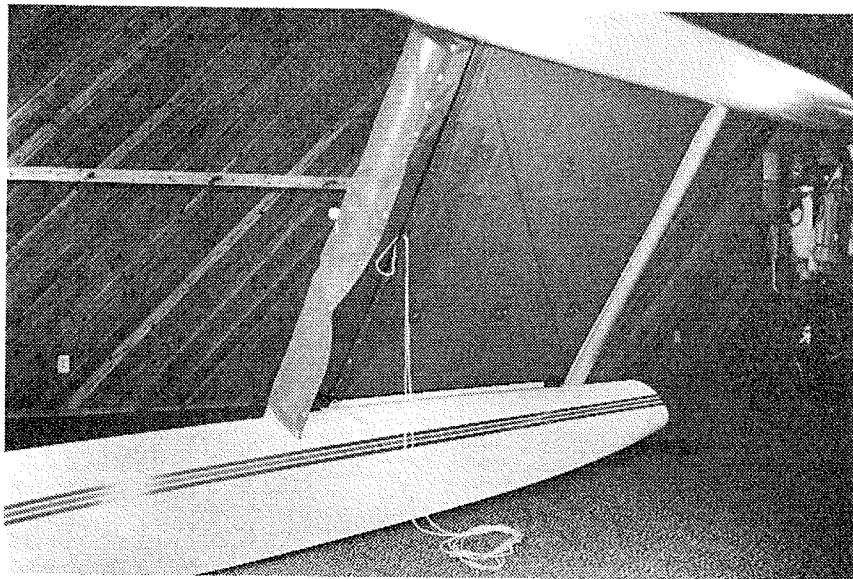


Photo B5. Tie trampoline lacing line to the aft center lacing grommet.

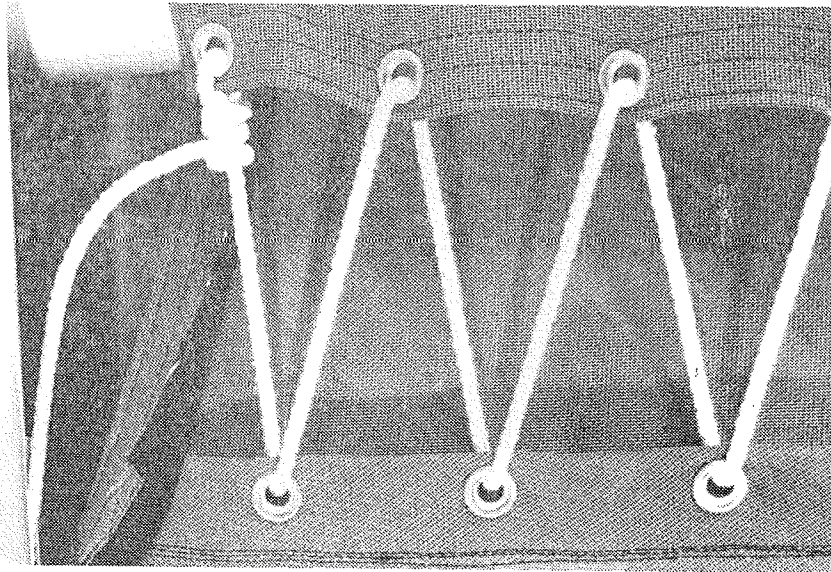


Photo B6. Tightening the trampoline.

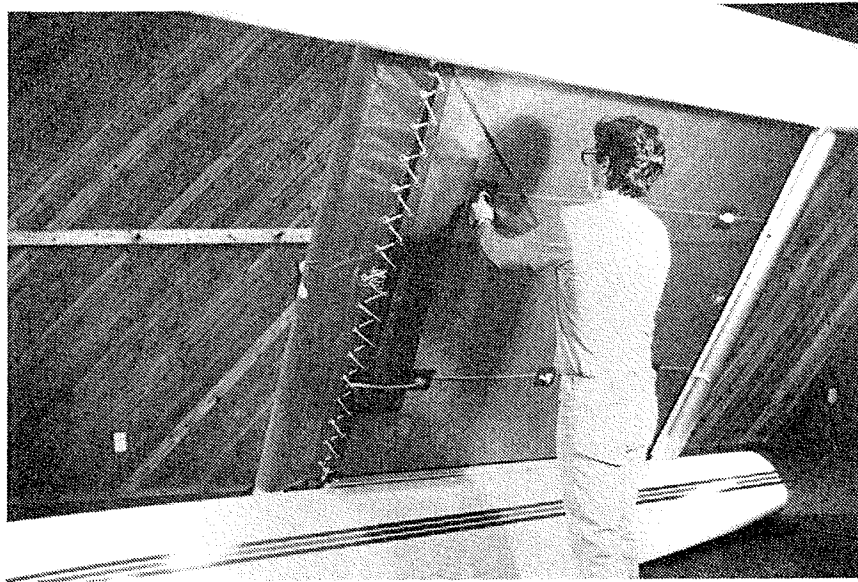


Photo B7. Hiking strap installation.

RUDDER AND CROSSBAR INSTALLATION

- 1) The rudder assemblies are designed with Acherman Steering Compensation, thus the tiller arms will angle in toward the centerline of the boat.

Be sure to install the rudder assemblies to the correct hulls.

- 2) The rudder assemblies are secured to the gudgeons with 1/2 inch diameter pins. These pins are shipped installed on the gudgeons. Remove one cotter pin from each rudder pin and slide it out of the gudgeon.
- 3) Place the large nylon washer on the bottom inside of the gudgeons and insert the pins from the bottom up. This will help hold the washer in position while the casting is being installed. You will find it easiest to install the top gudgeon pin first. See Photos C1 and C2.
- 4) If stainless pins are used, lubricate them liberally with Lanocote or Never Seeze.
- 5) After both gudgeon pins are in place, insert the stainless steel cotter pins and bend them to secure them in place. See Photo C3.
- 6) Install the crossbar to the tiller arms with the 1/4 x 20 bolt and nut provided on one arm and the Avibank pin on the opposite arm. See Photos C4 and C5.
- 7) Rudder toe-in can now be adjusted. Place both rudders in the full up and locked position and aligned with the centerline of the hulls. Measure the distance between rudder centerlines at the tips of the rudders and at the castings. The distance between the rudders at the tips should be 1/8 to 1/4 inch greater than at the castings.

If this distance is incorrect, loosen the adjusting screws on the center crossbar adjuster and correct the toe-in. Extend or retract both arms an equal amount from the adjuster to maintain the tiller extension in the center of the crossbar.

After the toe-in is correct tighten the adjustment screws.

- 8) Mount the tiller extension to the tiller crossbar. Be sure you have the black nylon bearing on top of the crossbar when inserting the mounting bolt. Tighten the stop nut securely, but remember that the extension must swivel freely from side to side without binding as you tack the boat. See Photo C6.

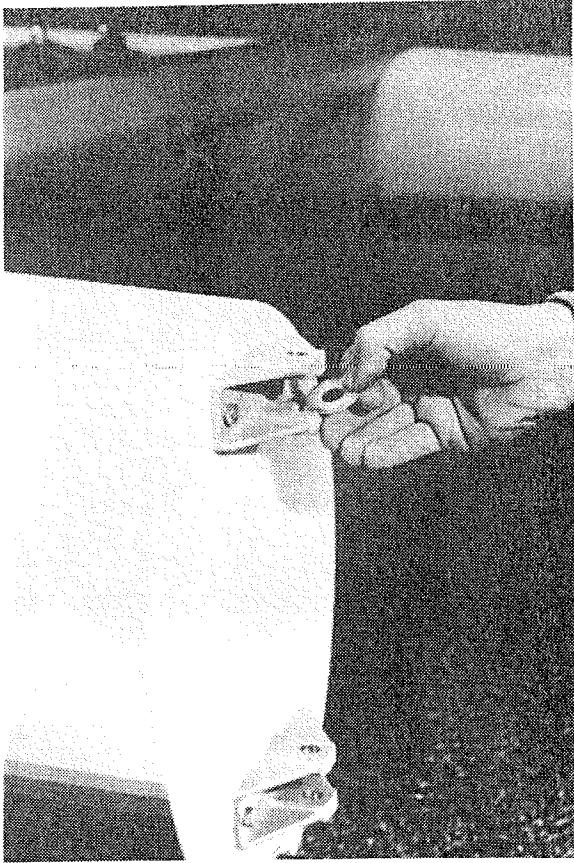


Photo C1. Gudgeon washer installation.

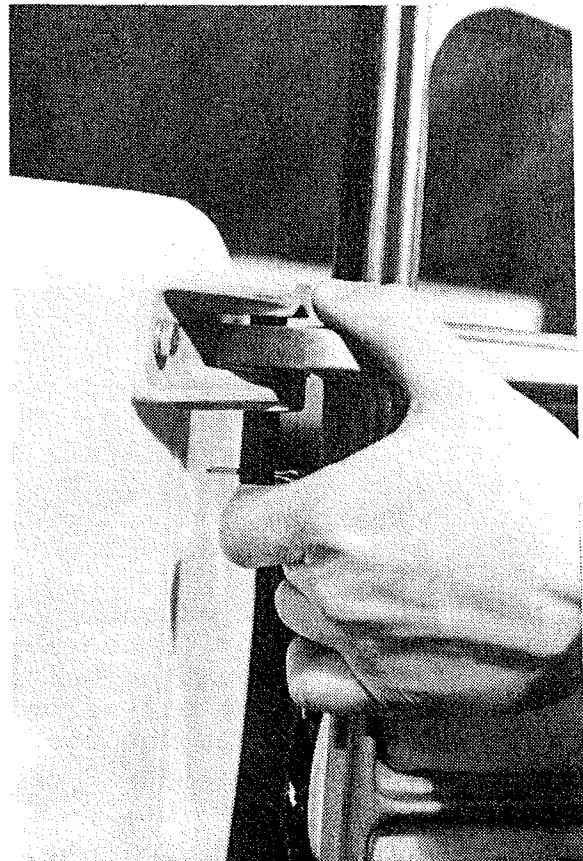


Photo C2. Gudgeon pin installation.

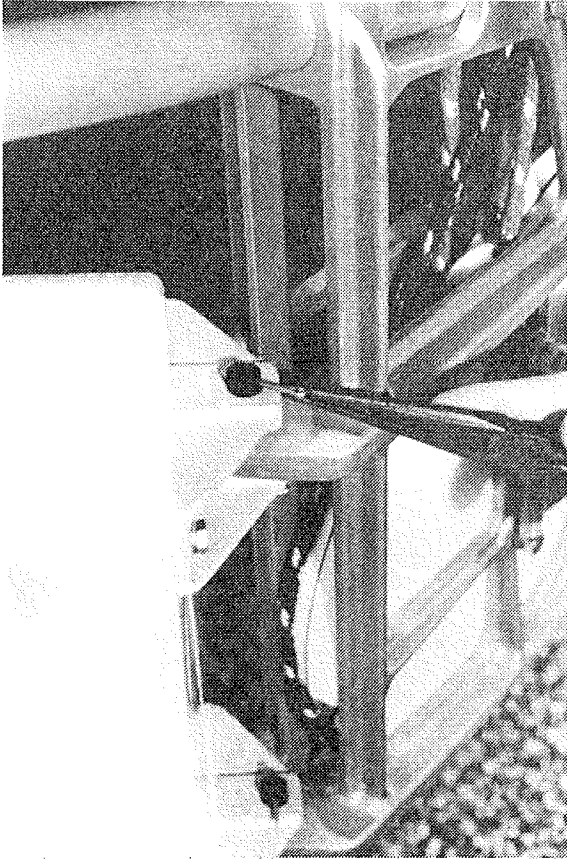


Photo C3. Installing cotter pins in the gudgeon pins.

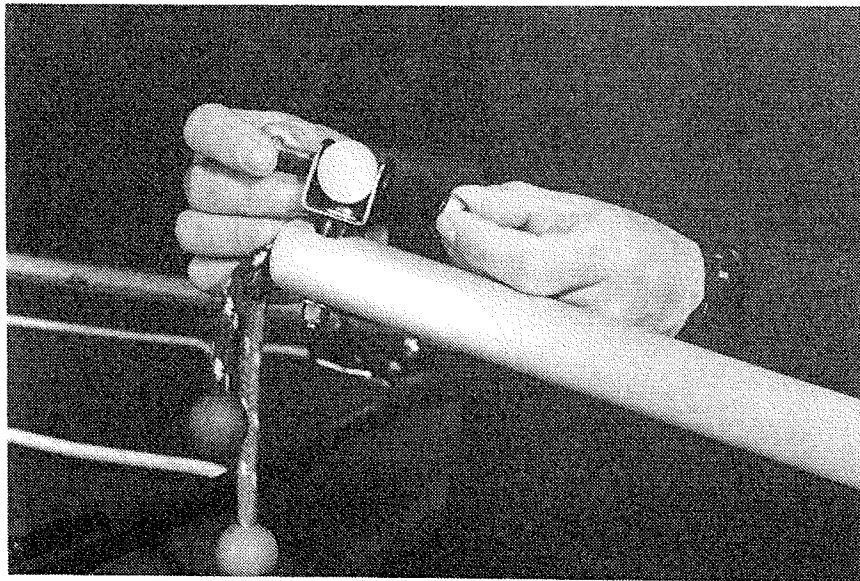


Photo C4. Bolting tiller crossbar to the port tiller arm.

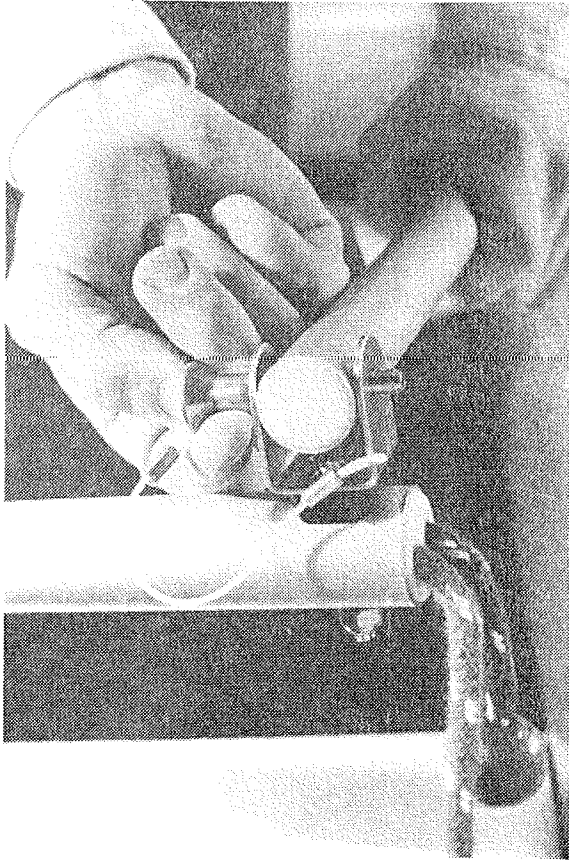


Photo C5. Installing the Avibank pin in the starboard tiller arm.

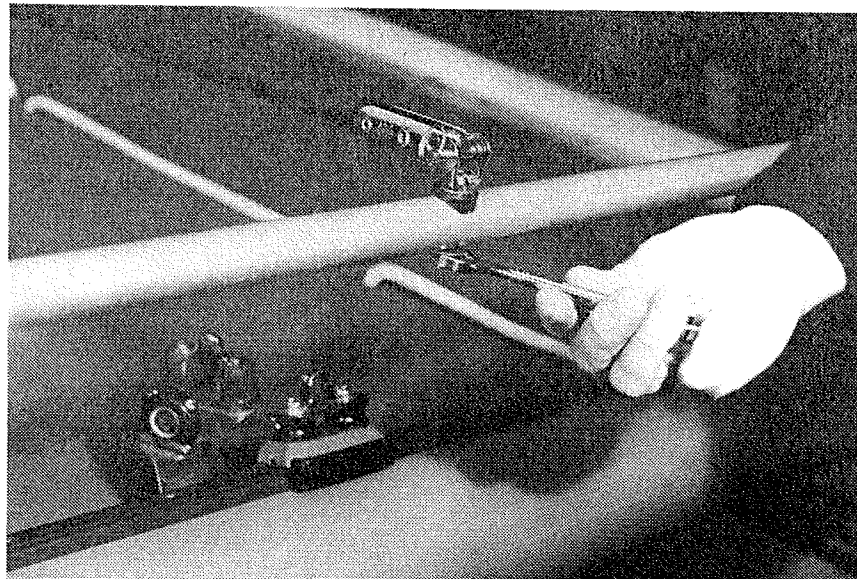


Photo C6. Mounting the tiller extension to the crossbar.

STANDING RIG INSTALLATION

- 1) Carefully remove the mast assembly from the packing tube and remove the plastic bagging.
- 2) Lay the mast on the ground and locate the standing rig kit.
- 3) Lay each wire assembly parallel to the mast starting at the hound. Be certain that you uncoil all wires fully and that there are no kinks present.
- 4) Begin installation by locating the forestay assembly. The large shackle with safety wire and nylon washers should have the forestay pigtail already in place.
- 5) Remove the shackle pin and place the sidestays onto the shackle, with one sidestay on each side of the forestay pigtail assembly.
- 6) Attach the shackle to the hound, be sure to insert 3 nylon washers on each side of the hound fitting. This will help keep the shackle centered on the fitting. Tighten the shackle securely and safety wire it. See Photo D1.
- 7) The trapeze wires should be placed on a separate shackle in the hole above the sidestay shackle. Tighten this shackle securely also.
- 8) Remove the jib turning block sheave and install the jib halyard. See Photo D2 for the roller furling turning block and Photo D3 for the standard forestay turning block.
- 9) Remove the main halyard sheave and install the main halyard by walking the ring and shackle from the mast base to the top, around the sheave and back down to the base. Be sure the ring and shackle exit from the sheave housing with the halyard down inside of the mast track. See Photos D4 and D5.
- 10) Install the jib bridle wires to the bow tangs. Pinched shackles are used on the SC-15 and SC-17. The threads should have Loc-tite applied to them before assembly and then tightened securely. See Photo D6. On the SC-19, a standard pin and ring is used to fasten the fork fitting to the tangs. See Photo D7.

Check to insure that the bridle wires are not twisted and are securely attached to the forestay adjuster assembly. At this point your Supercat is ready to be rigged for sailing.

- 11) The SC-19 mast assembly must also have the spreaders and wires installed. The spreaders are mounted with six stainless steel pop rivets. Locate the spreaders on the six pre-drilled holes and fasten the spreader to one side of the mast with three of the pop rivets provided. Position the spreader on the remaining three holes on the opposite side of the mast and install the remaining three rivets.

Note: This is a two person job. Be certain that you have the spreader seated securely against the mast before inserting the rivets. See Photo D8.

- 12) After the spreaders are installed, locate the spreader wires and extend the adjuster to its maximum length. Attach the aircraft-fork end to the upper tang using the pin and ring provided. Placing the ring on the inside of the tang against the mast protects the ring from accidental damage. See Photo D9. Attach the adjuster to the bottom tang, placing the ring to the inside of the tang. Keep the graduations on the adjuster to the outside and visible. See Photo D10.
- 13) After you have mounted both ends of the spreader wires to their respective tangs, place the Delrin spreader tip in the spreader tube and seat it firmly with a plastic faced hammer. See Photos D11 and D12.
- 14) A preliminary tightening of the spreader wires should be made. As a rule, for a medium tight rig the wires should be able to touch the mast approximately 10 inches above the lower tang when pressure is applied by hand. More refined tuning will be needed for various wind conditions. The basic rule is, the harder it blows the looser the diamond wires are run.

Important: Don't overdo the loosening of the diamond wires. They are meant to support the mast. Removing their support may cause severe mast damage.

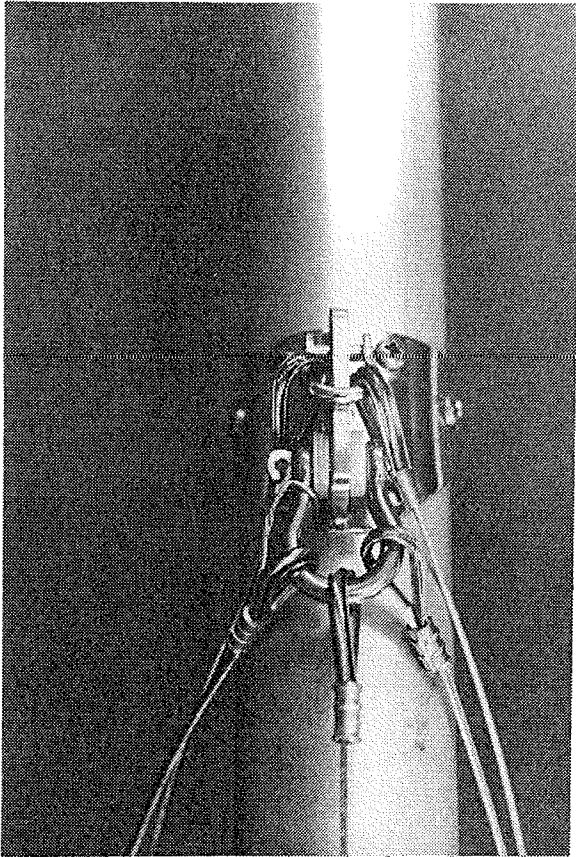


Photo D1. Attaching stays to the hound.

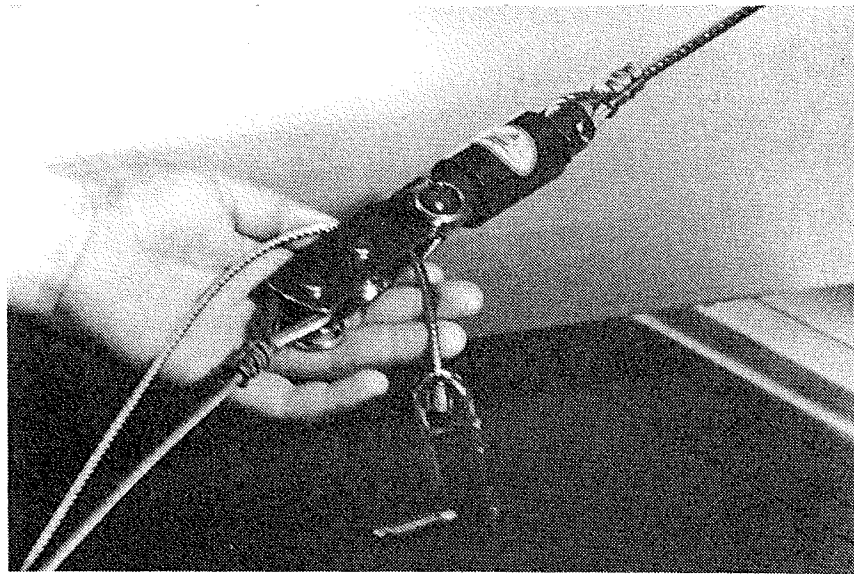


Photo D2. Roller furling jib turning block.

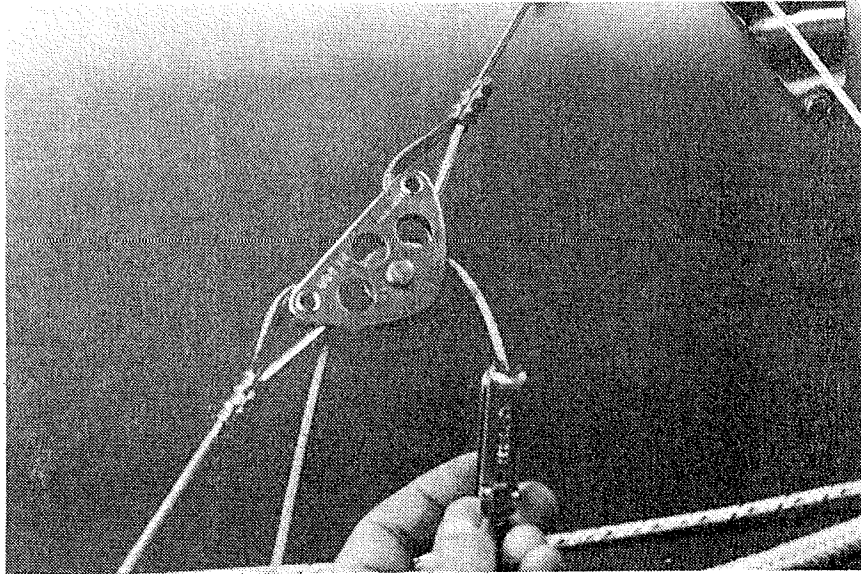


Photo D3. Standard forestay turning block.

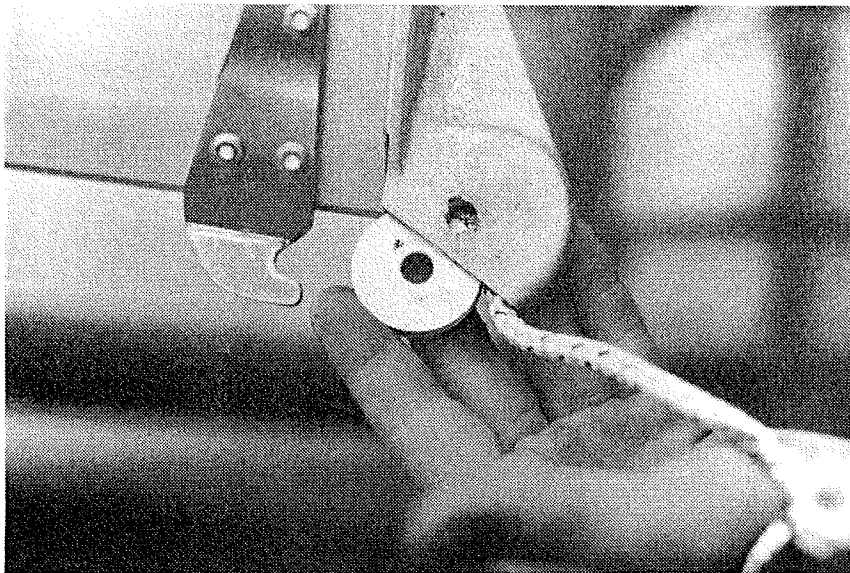


Photo D4. Main halyard installation.

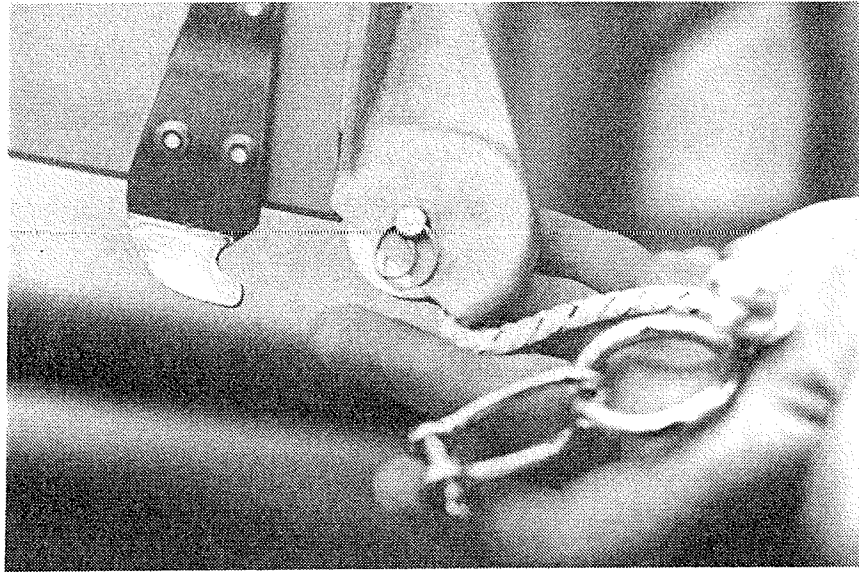


Photo D5. Halyard in the mast track.

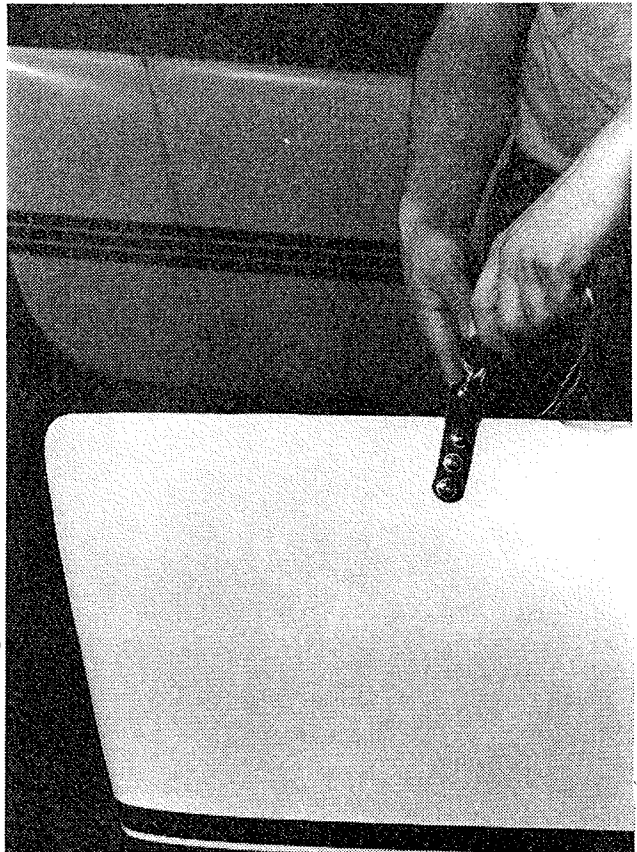


Photo D6. Installing the bridle wires to the bow tangs.

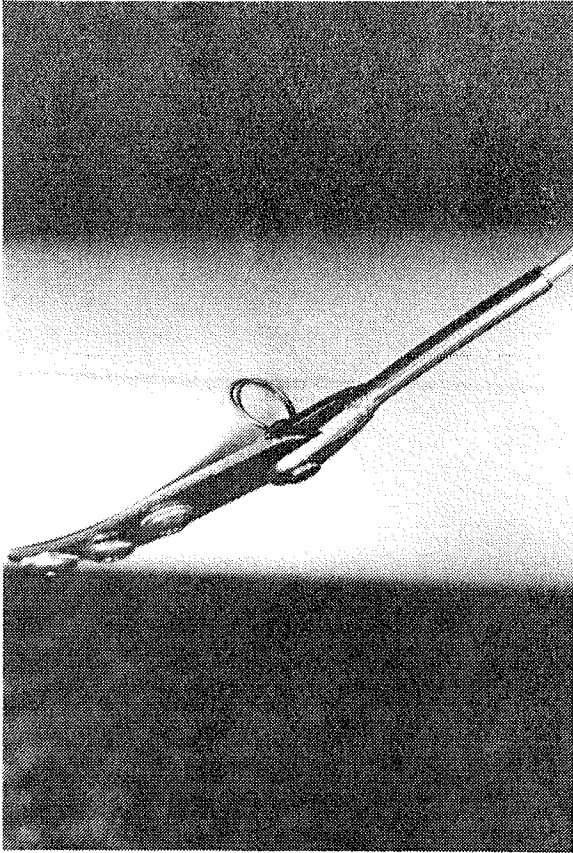


Photo D7. SC-19 bridle wire installation.

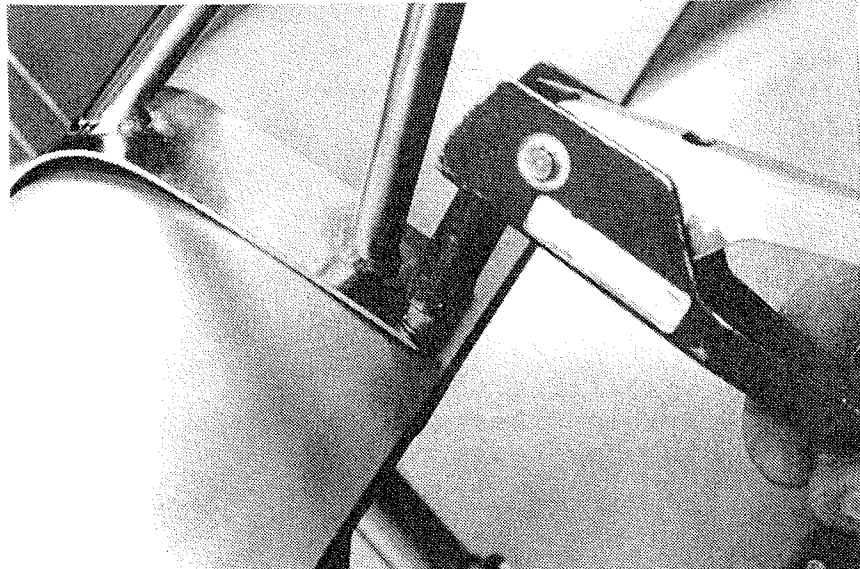


Photo D8. SC-19 spreader installation.

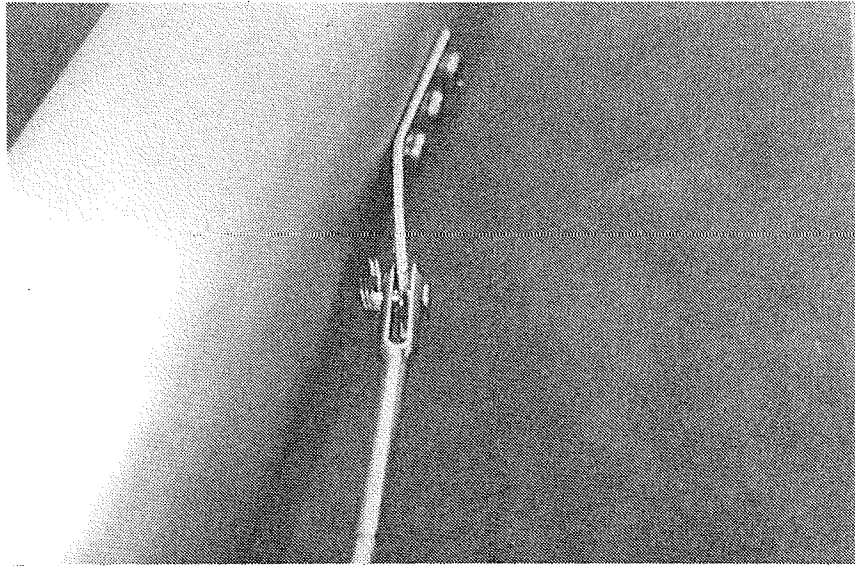


Photo D9. Diamond wire installation, upper tang.

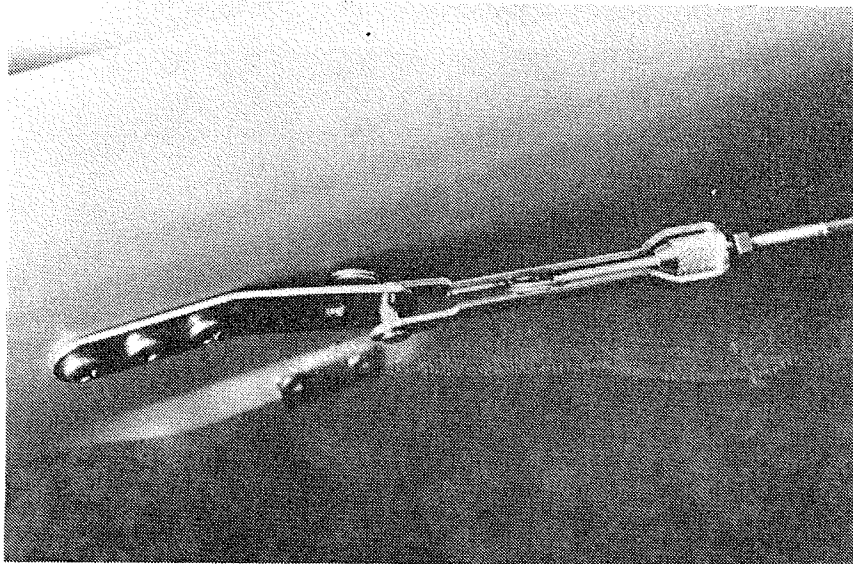


Photo D10. Diamond wire installation, lower tang.

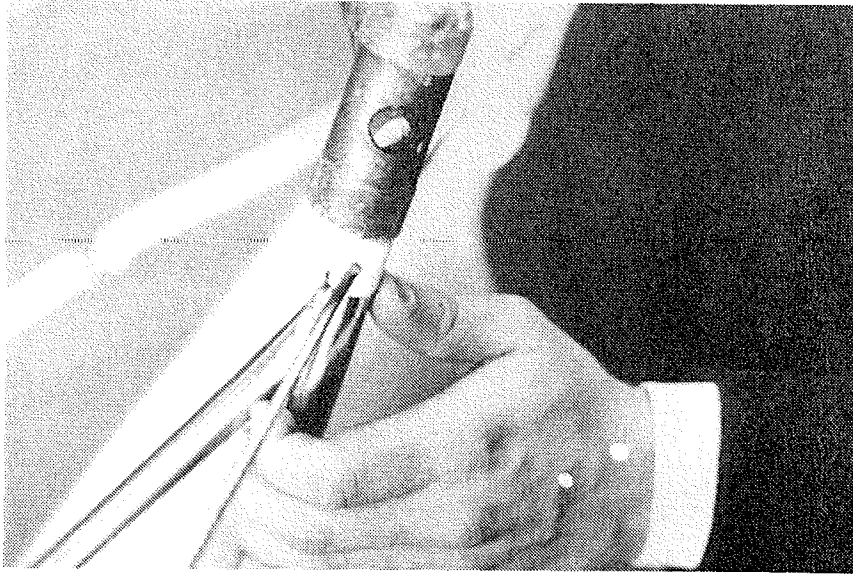


Photo D11. Diamond wire installation at spreader tip.

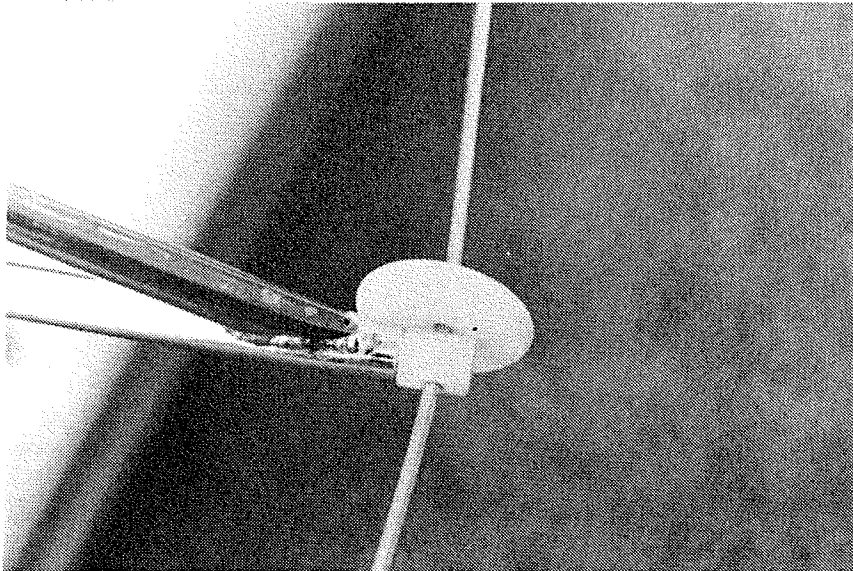


Photo D12. Spreader tip and roller in position.

RUNNING RIG INSTALLATION

- 1) Install the mainsheet block assembly to the traveler car with the shackle provided. See Photo E1.
- 2) Locate the bitter end (free end) of the mainsheet and thread it first through the swivel camcleat and fairlead, then through the Harken traveler car sheaves. From the traveler car the line is passed through the eye strap at the center of the rear beam and secured with a figure 8 knot. See Photo E2.
- 3) Next install the jib sheet system. The short lines tied to the jib blocks should be tied to the eyestraps on the trampoline tracks. The length of the line may be adjusted to allow for easy uncleating of the jib when out on the wire during trapeze conditions. See Photo E3.

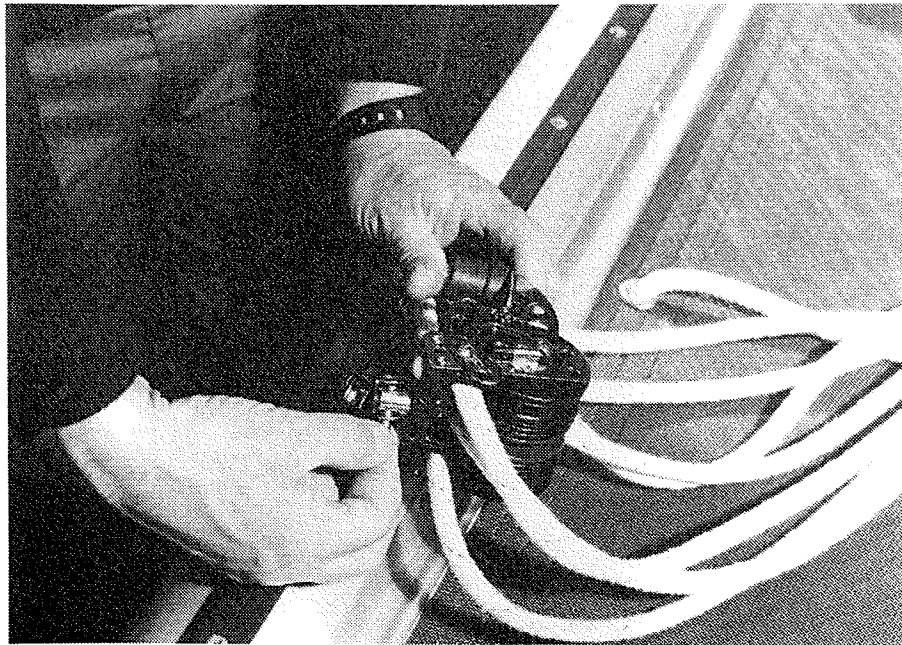


Photo E1. Installing the mainsheet block assembly.

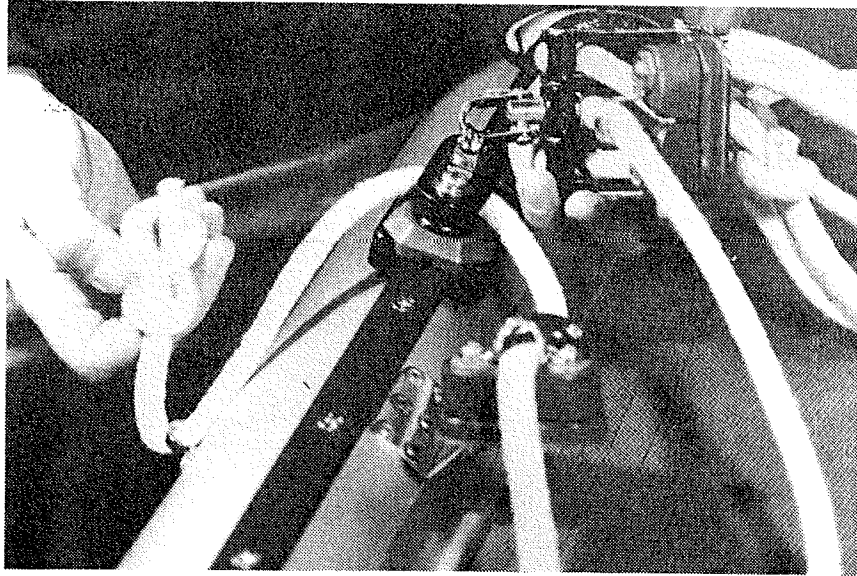


Photo E2. Traveler car control line installation.

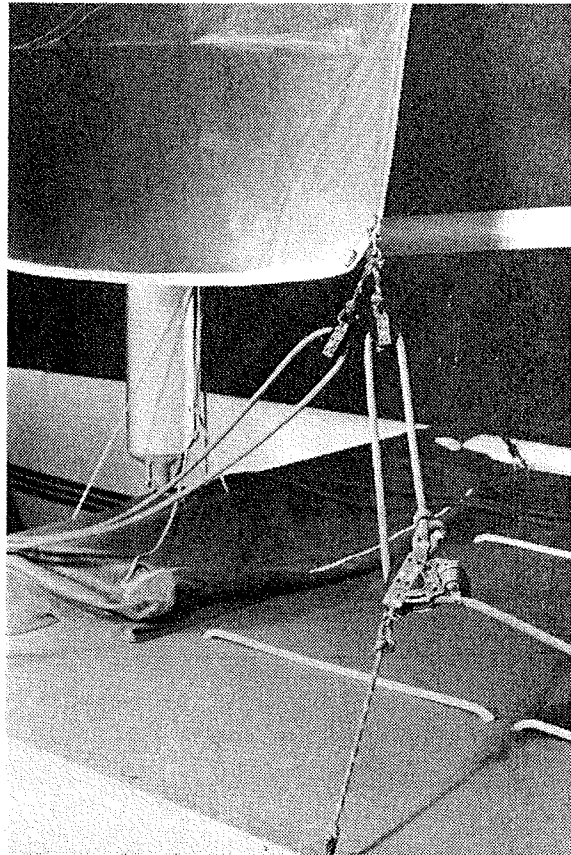


Photo E3. Jib sheet installation.

SETTING UP THE SUPERCAT: FROM TRAILER TO WATER

RAISING THE MAST

Step number one is to find a suitable and safe spot. Park the boat and trailer on level ground, note the wind direction and avoid cross winds. Look aloft and check for overhead power lines. Avoid power lines! Park far enough away from power lines that the mast cannot touch them no matter which way the mast might swing.

Check to be sure there are no overhead dangers (like power lines, telephone lines, tree limbs, etc.) along the way to the water that could be encountered and damage the boat or hurt you or anyone around the boat. It is far safer to step the mast with the boat off from the trailer. Rigging the boat off the trailer removes the possibility of accidentally towing the fully rigged boat into an overhead powerline.

Untie the Supercat mast from its mast carrier(s) on the trailer and walk it aft so that the mast base is near the mast step ball located on the center of the front beam. Locate the two jib clew blocks on the blue jib sheet, (these blocks are free floating and are not secured to the boat except by the jib sheet) and place them and the sheet in front of the mast step ball. Lubricate the mast ball with Lanocote. Remove the mast base keeper pin and slide the mast base onto the ball, replace the keeper pin in the mast base. See Photos F1 and F2.

It is suggested that you support the mast at the rear beam with a cushion or the mast support to prevent possible damage to the sail track or the traveler track.

Before stepping the mast, double check the mast hound and wires to make sure there are no tangles. Also make sure the mast hound shackle is tight and safety wired. If you have the built-in righting feature have one of the levers in the open/up position before stepping the mast. (Note: opening both levers may allow the mast to lean too far forward and bend the keeper pin.) See Photos F3, F4 and F5.

The Supercat mast weights approximately 55 pounds fully rigged. You should not have any difficulty raising it by hand. If you experience any difficulty, however, the best solution is to have another person assist you either on the trampoline or pulling a rope attached to the forestay while standing out in front of the boat. Additional mast raising or lowering sideways stability can be achieved by tying the trapeze wires to the front beam at the hull with a short piece of line or use the righting line. This way the trapeze wires form an

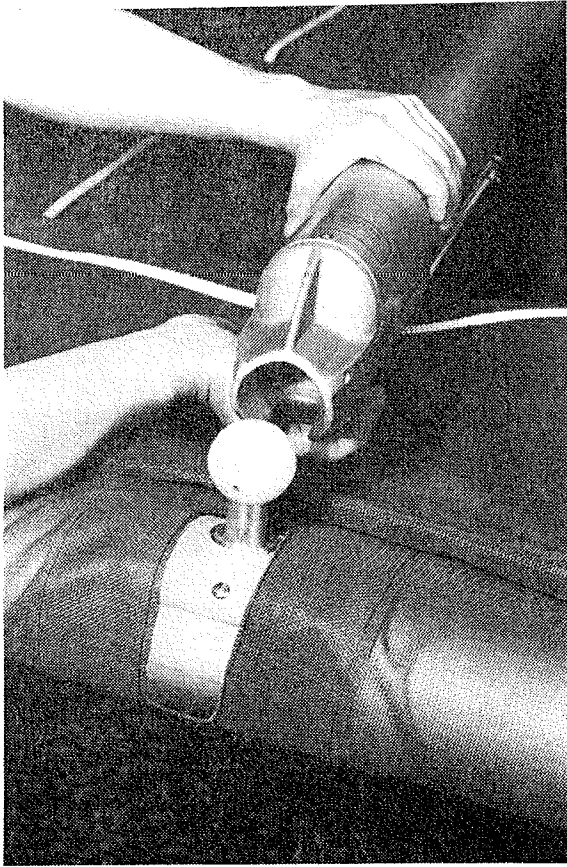


Photo F1. Mounting the mast base onto the ball.

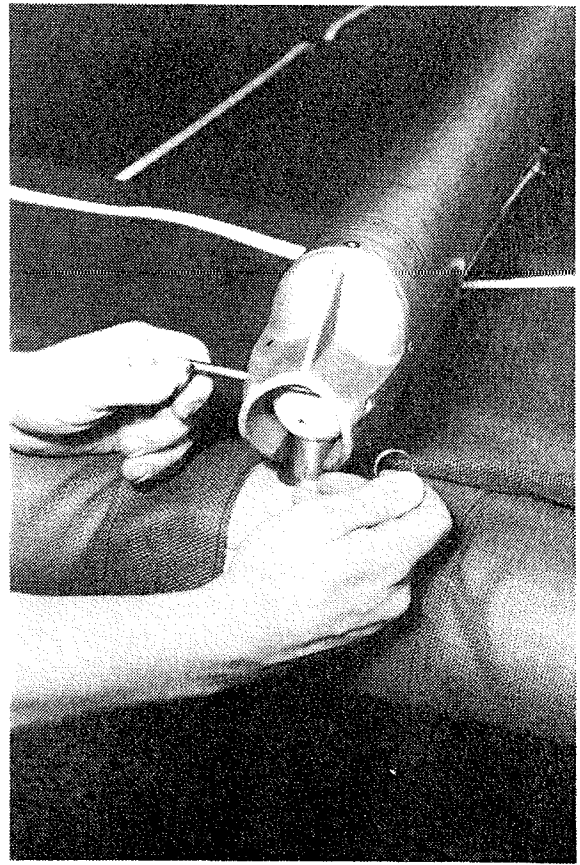


Photo F2. Installing the mast base keeper pin.

"A-frame" about the mast. Once the mast is completely stepped, it is necessary to secure the forestay in the forestay adjuster.

WARNING

When raising and lowering the mast, the mast must be in the unrotated position (facing fore and aft) on the ball. When the mast is in this position, the sail track opening is pointing directly aft on the boat. With the mast in this position, the opening in the back of the mast bottom casting will pass over the mast pedestal as the mast is lowered or raised. If the mast is turned to one side or the other while it is being lowered there is danger of damaging the mast step pedestal casting and/or the mast bottom casting.

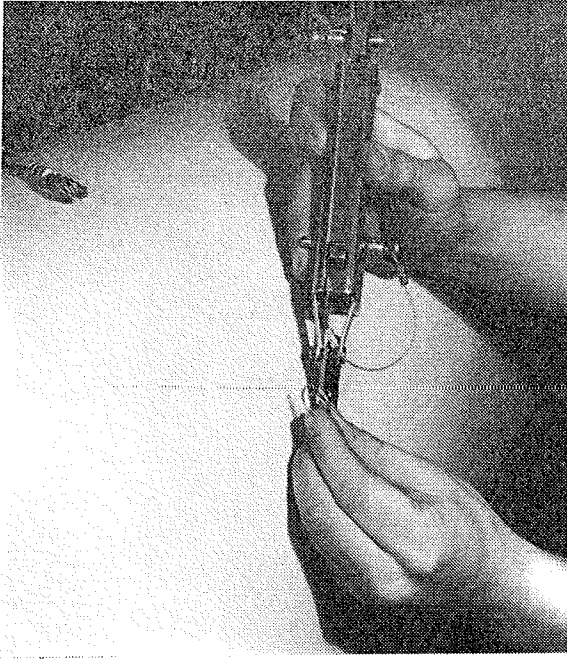


Photo F3. Mounting the righting system lever.



Photo F4. Installing the shroud extension assembly.

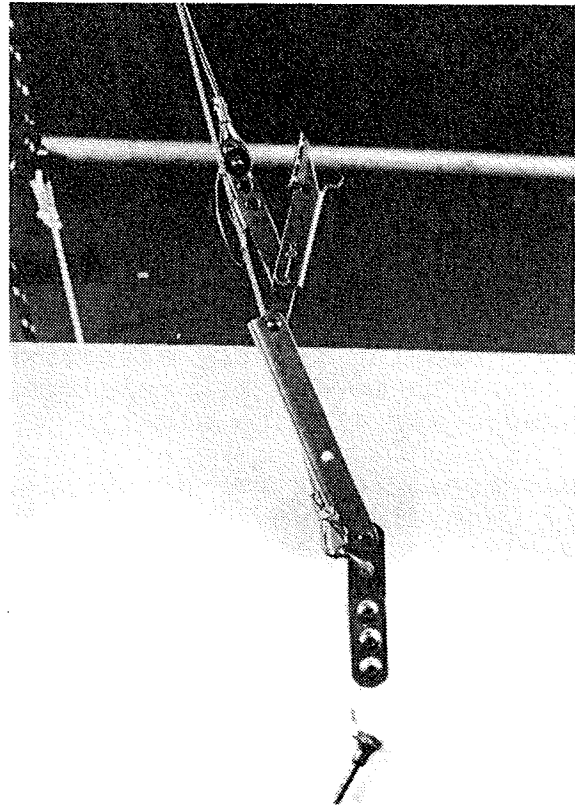


Photo F5. Righting system lever in the open position.

The forestay adjustor is located in the center of the forestay bridle. Place the thimble on the end of the forestay into the forestay adjustor and secure it with the clevis pin and split ring that have been provided. See Photo F6.



Photo F6. Securing the forestay in the adjustor.

The proper rig tension is related to wind speed. Light tension for light winds and firm tension in strong winds. Tension can be set adjusting the forestay and or sidestays. The shroud levers make adjusting the shrouds an easy operation. See Photos F7, F8, F9, and F10. (Note: Best performance is obtained with the rig tension loose enough to allow full rotation of the mast parallel to the forward beam. Running the rig excessively tight will restrict mast rotation in light to medium air resulting in degraded performance both to windward and off the wind.)

The trapeze lines are maintained in their ready to use position by a 3/16 inch diameter shock cord that runs beneath the trampoline from one side to the other. To install the trapeze lines, first tie a 3 foot length of 1/4 inch line to the stainless steel dogbone. Pass the free end of the line through the eye on the end of the trapeze wire and then through the adjustable stopper. See Photo F11. Leave approximately 12 inches of line beyond the stopper with which to attach the trapeze retractor shock cord. Tie the trapeze line to the shock cord and pass the shock cord through the grommet at the edge of the trampoline across to the opposite side and up through the corresponding grommet. Rig the trapeze line on the opposite side and tie it to the shock cord. If you plan to remove the mast from the boat frequently, a considerable amount of time can be saved by attaching small plastic hooks to the ends of the shock cord. They can

be rapidly hooked and unhooked from loops tied into the ends of the trapeze retractor lines.

RIGGING CHECKS

There are certain connections in the rigging that are critical to the mast staying up. These parts should be checked for security each time prior to sailing. If the boat is kept near the water in a rigged condition, these connections can be safety wired for the sailing season. If the boat is trailered to the water each weekend, these connections should be checked each time they are put together and safety taped.

Critical Connections Are:

- Mast Hounds Shackle
- Forestay-Bridle Wires - At Hull Intersection
- Shroud/Shroud Lever to Shroud Chain plate

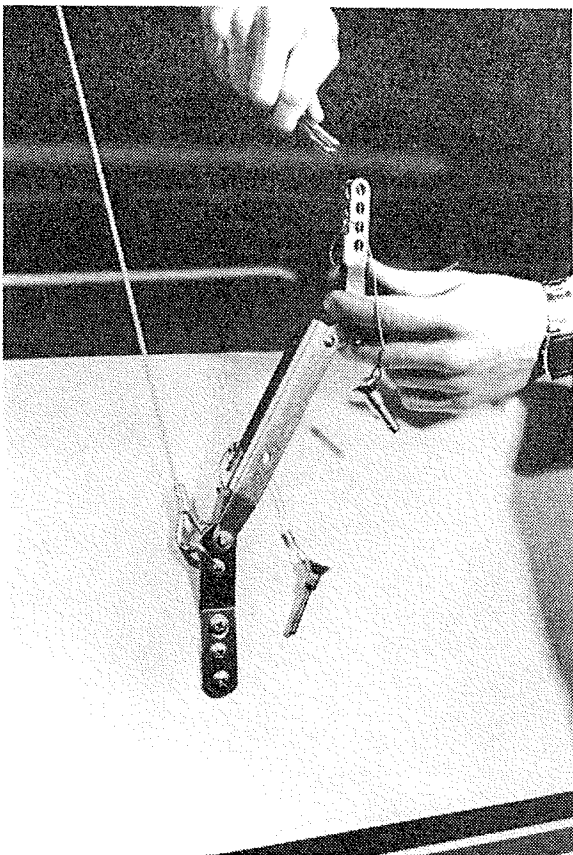


Photo F7. Sidestay attachment to the righting system lever.

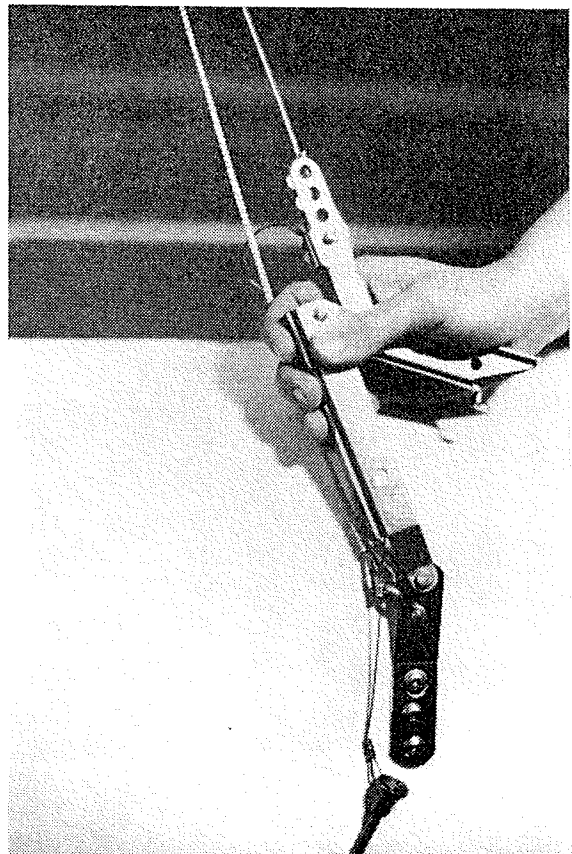


Photo F8. Closing the righting system lever.

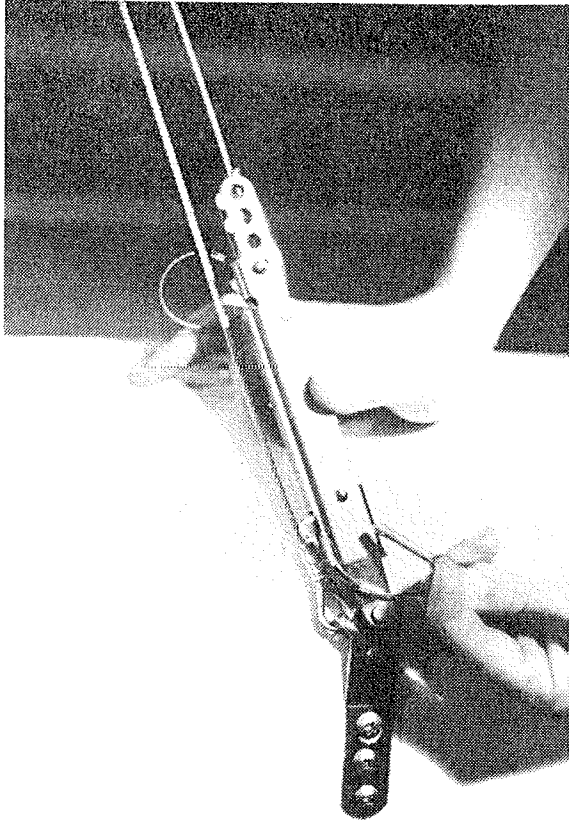


Photo F9. Inserting the bottom Avibank pin.

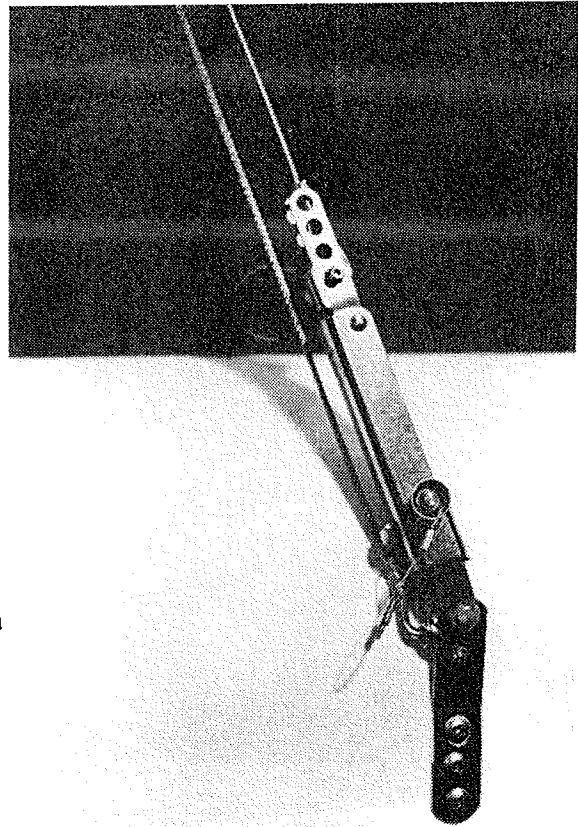


Photo F10. Correctly closed and locked righting system lever.

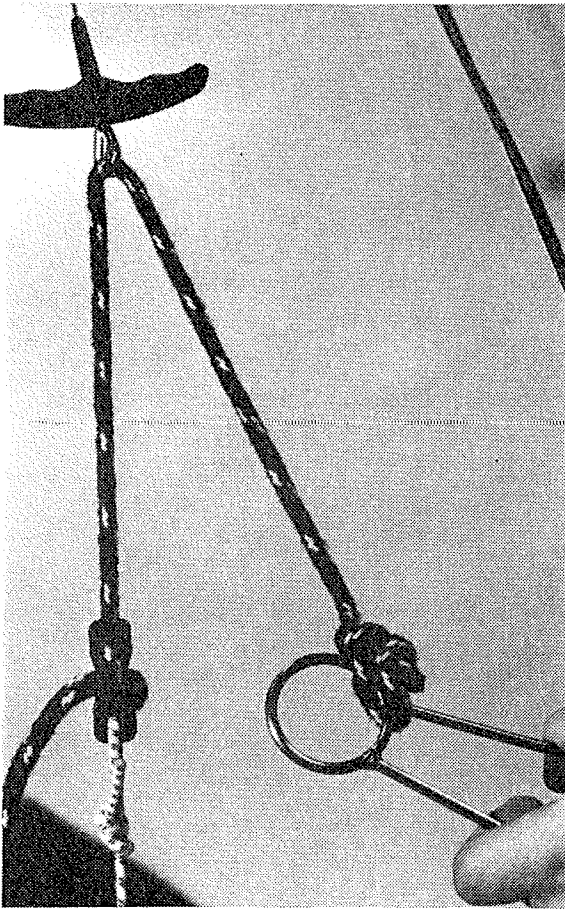


Photo F11. Trapeze retractor rigging.

UNLOADING THE SUPERCAT FROM THE TRAILER

DON'T FORGET THE DRAIN PLUGS!! See Photo F12.

It is not necessary to float the Supercat off of the trailer. Back the wheels of the trailer to the edge of the water, remove all of the tie-downs that secure the boat to the trailer and slowly push the boat back into the water. The rudders should be in the UP position during unloading. Lift the bow as the boat leaves the trailer to avoid scraping the waterline tape or bow seam.

With the Supercat in the water and docked, or beached, prepare to raise the sails. The boat should ALWAYS be facing into the wind when raising the sails! Cross winds, or winds from behind push the sails into the rigging as they are going up creating problems and much friction.

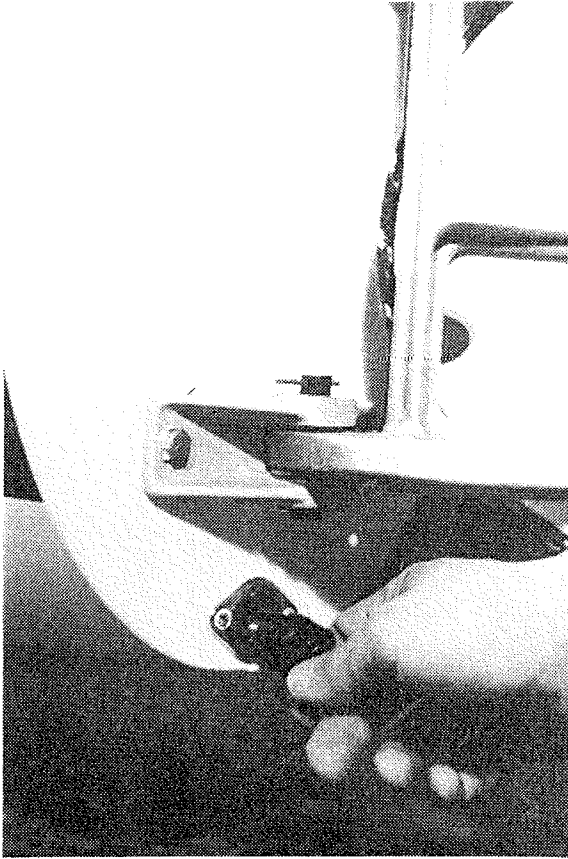


Photo F12. Installing the
drain plugs.

PREPARING THE SUPERCAT FOR SAILING AND SAILING OPERATIONS

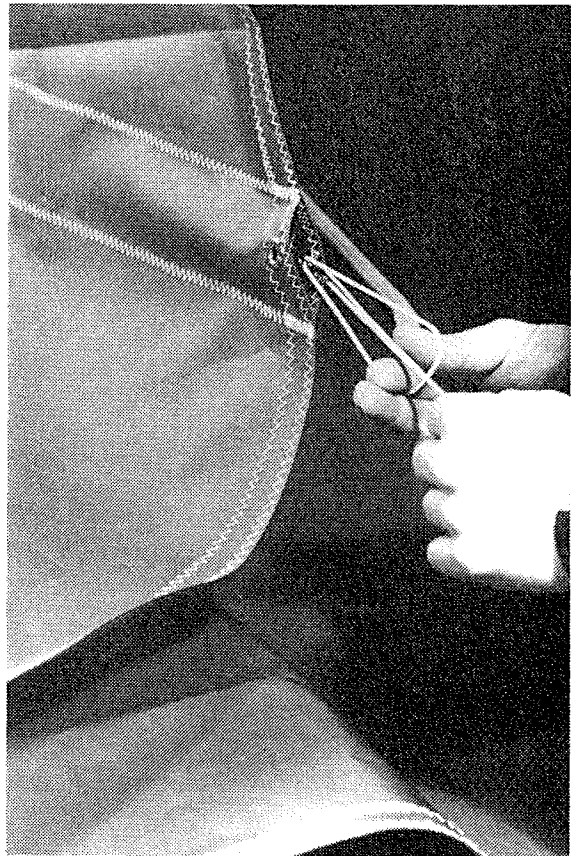
RAISING THE SUPERCAT SAILS

1) Adjusting the Battens:

The Supercat mainsail has adjustable battens. They stick out of the sail a couple of inches at the leech. Thread the line through the adjuster as shown in Photos G1 thru G5.

Tension on the battens should be adjusted so there are no wrinkles across the batten pockets, running up and down the sail. #DO NOT# put an excessive amount of tension on the battens. The battens are tapered for Supercat sails and require a medium amount of tension for perfect sail shape. Excessive tension will push the sail pocket forward and increase its depth which will decrease the boats ability to go to windward. Also excessive batten tension will make it difficult to get the sail camber to reverse when you change tacks in light air.

Photo G1. Install the batten tie lines.



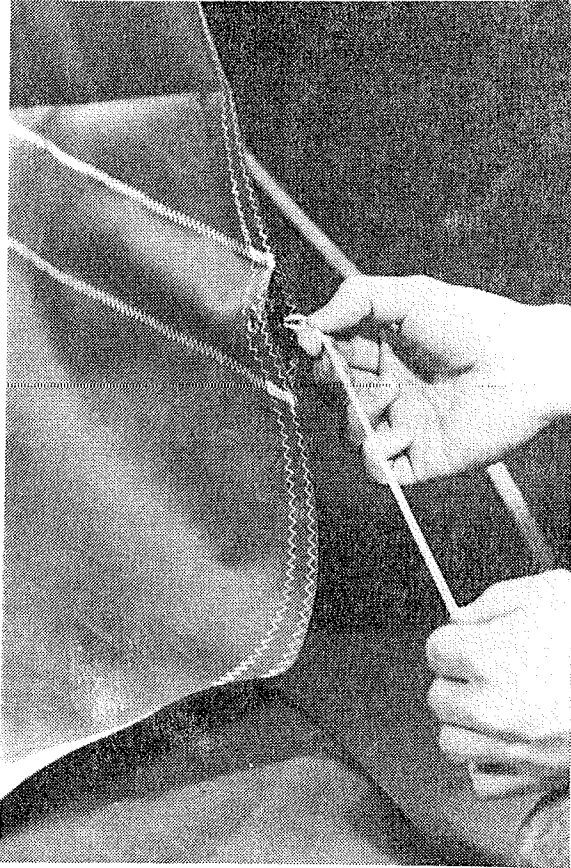
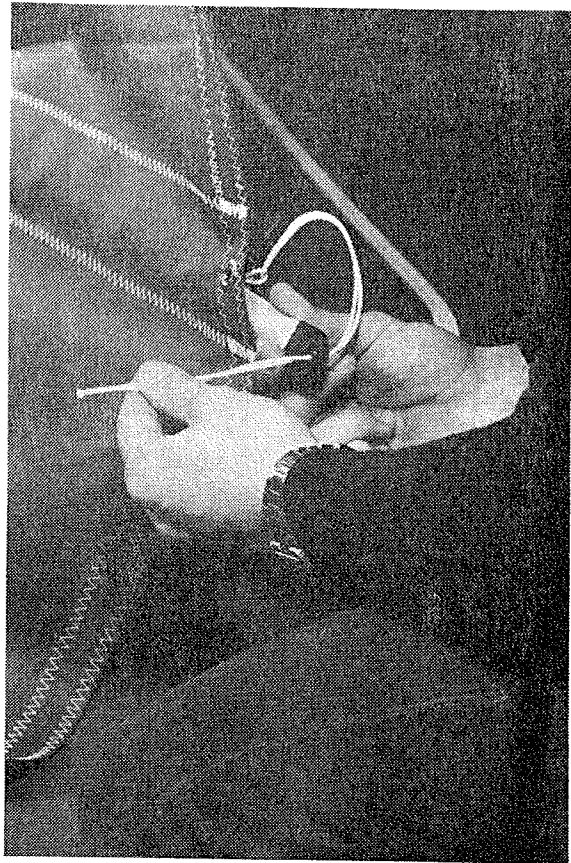


Photo G2. Snug the batten tie line knot.

Photo G3. Insert batten and thread the tie lines from bottom to top of the batten.



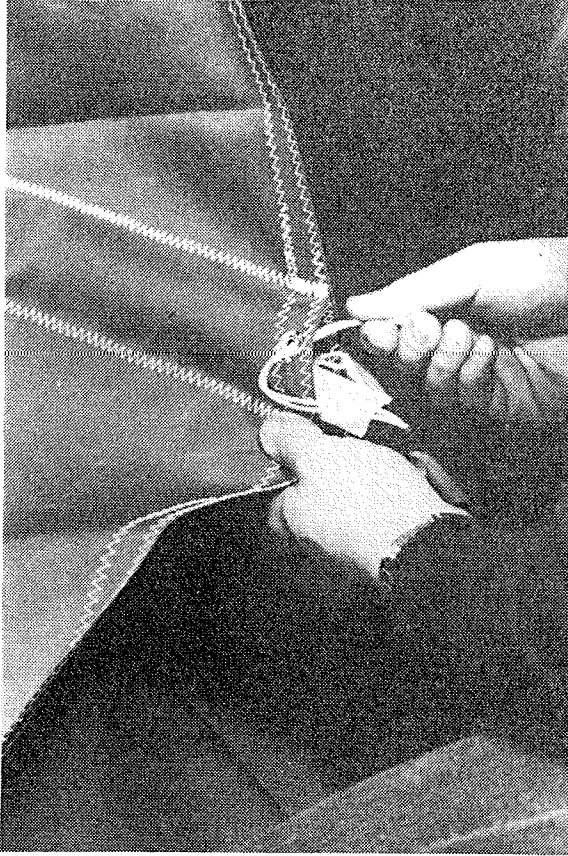
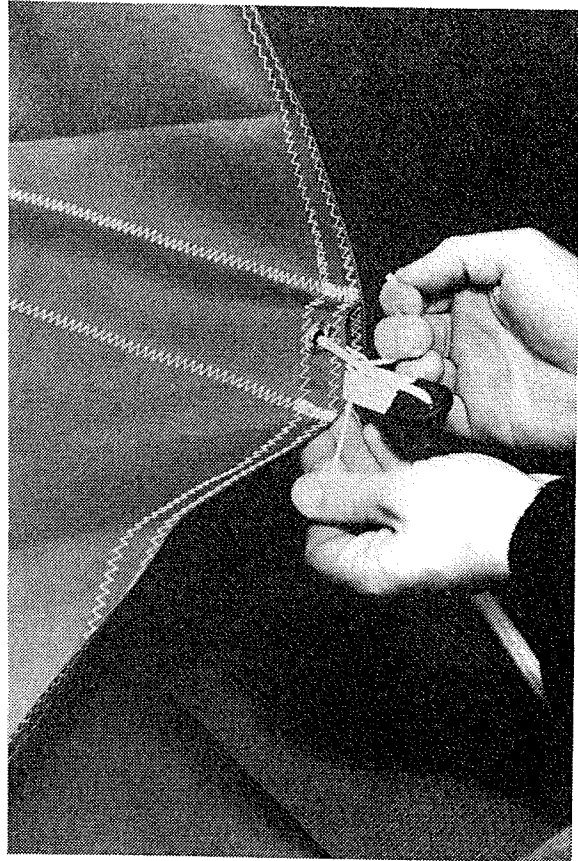


Photo G4. Thread the tie lines into the sail leech grommet from outside to inside.

Photo G5. Split the batten ties, and tie them together on top of the lines that were previously threaded from batten end cap to leech grommet.



2) Raising the Mainsail:

Always turn the boat into the wind before raising the sails. To raise the mainsail, attach the main halyard shackle to the headboard of the sail. Make sure that the knot on the halyard ring faces the mast and that the halyard lies on the starboard (right) side of the hook located at the top of the mast. (Note: Failure to observe these two subtle procedures can make it very difficult to engage the halyard ring on the mast top hook.) See Photo G6.

When the sail is being hoisted to the top of the mast, as the halyard ring nears the top of the mast a metallic click will be heard indicating that it has passed over the hook at the masthead. Continue to pull firmly on the halyard until it stops raising the mainsail. Look up to assure that the headboard of the sail is aligned straight back from the mast track, then release the halyard, the ring should drop down onto the hook securely. See Photo G7. Stow the excess halyard line in the storage pocket at the front of the trampoline.

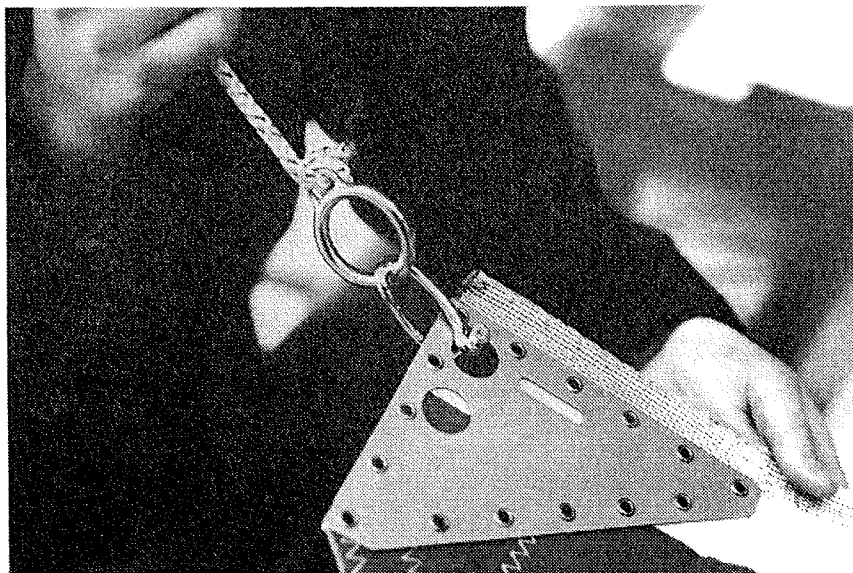


Photo G6. Proper ring and shackle installation to the headboard.

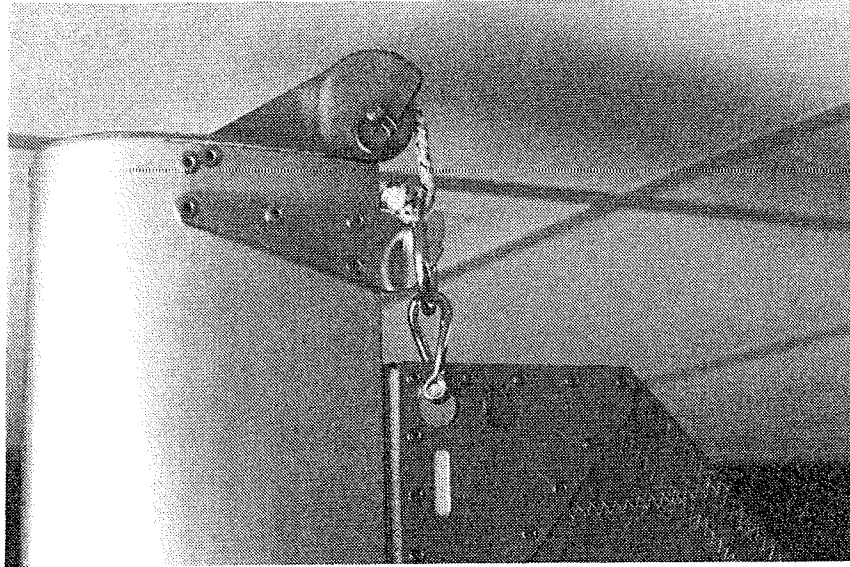


Photo G7. Ring properly hooked at the masthead.

3) Downhaul Operation:

Once the mainsail has been raised and secured, the downhaul must be secured. The threading is as follows: a length of braided prestretch line, 1/4 inch in diameter, has been secured to the eyestrapping mounting the main halyard sheave to the base of the mast. Pass the end of this line up through the #1 tack grommet, then back around the block on the port side of the mast, then back through the #2 tack grommet and down through the cleat on the starboard side of the mast. Pull up on this line firmly. Additional tension may be obtained as mainsheet tension is applied. See Photos G8, G9, and G10 for the proper downhaul line threading. Luff tension helps to provide the Supercat mainsail with a smooth airfoil from top to bottom. The basic rule is "more wind - more tension". Always tension the luff until the mainsail is smooth - no wrinkles. Excessive downhaul is indicated by one or more diagonal wrinkles in the mainsail pointing at the tack when the mainsheet is set to its normal sailing tension.

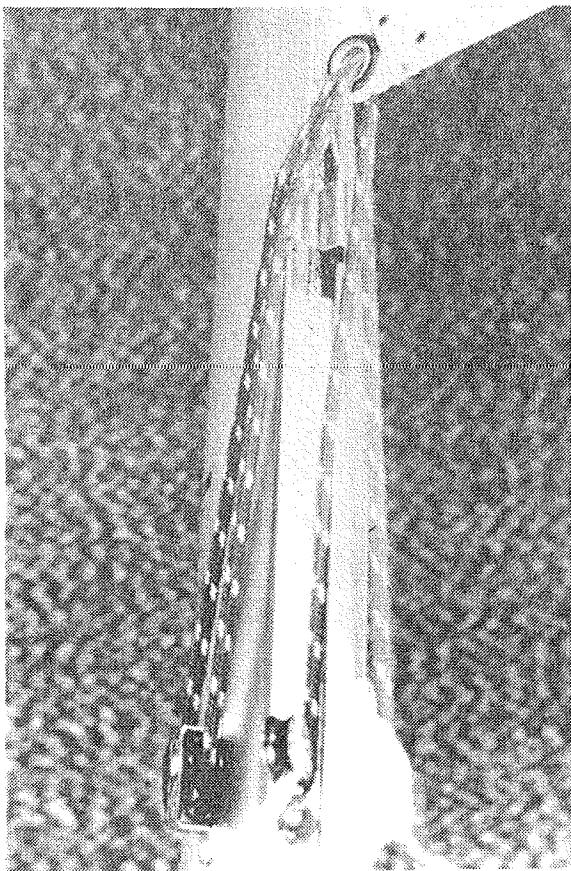


Photo G8. Start with the downhaul at the eyestraps at the main halyard turning block.

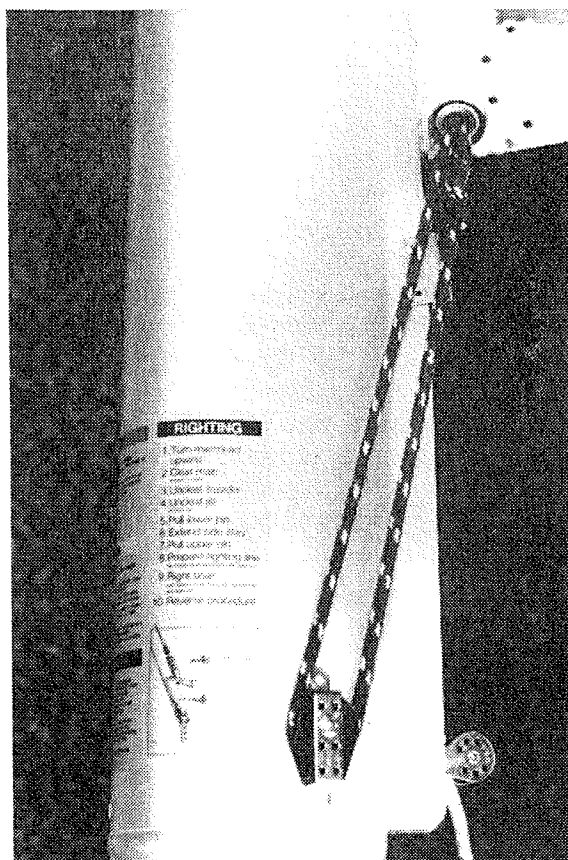


Photo G9. Port side cheek block.

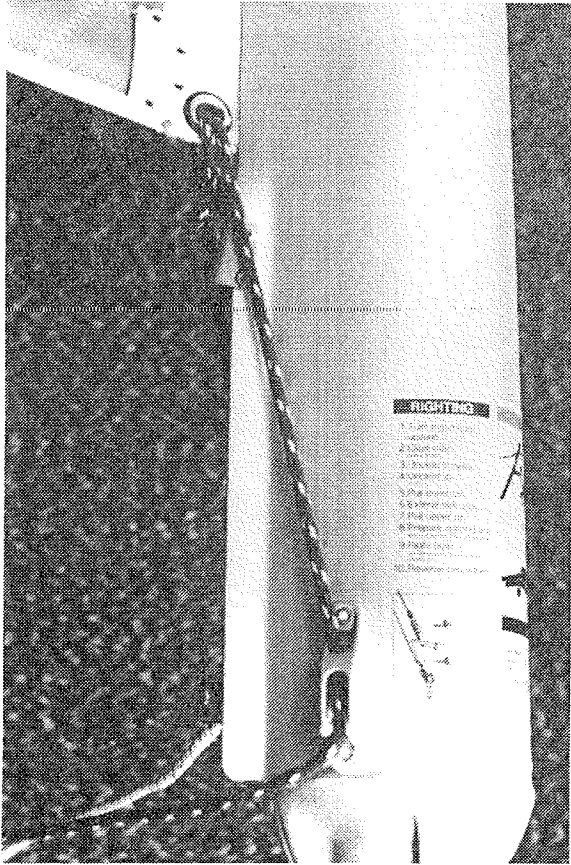


Photo G10. Starboard side clamcleat.

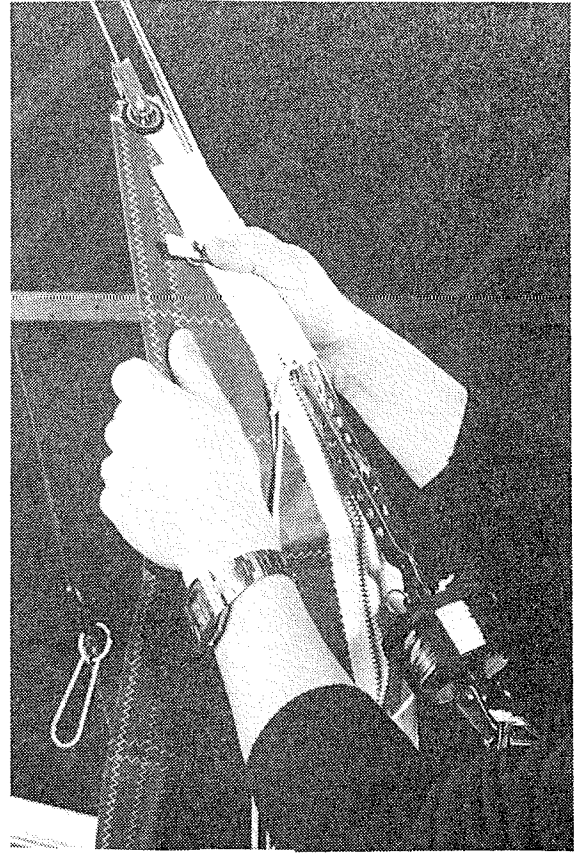


Photo G11. Correct halyard location and strap closing at the head of the jib.

4) The Jib:

Before raising the Supercat jib, make sure the line and wire portion of the jib halyard are not twisted around the forestay. On a windy day turn the Supercat about 20 to 30 degrees away from straight into the wind. This way, as the jib goes up and begins to luff and jerk around, it will not be chaffing the mast.

Secure the jib halyard shackle to the head of the jib, place the "zipper luff" portion of the jib around both the forestay and the jib halyard and pull the zipper down approximately 6 inches. See Photo G11. Secure the snap strap located on the luff. Continue raising the jib and closing the zipper simultaneously until the jib is completely raised, Photo G12. The zipper is most easily closed by tying the jib luff tensioner line to the zipper handle. Then as the jib is raised the zipper will be closed automatically. As you are raising the jib, the halyard is actually being pulled through the luff of the sail.

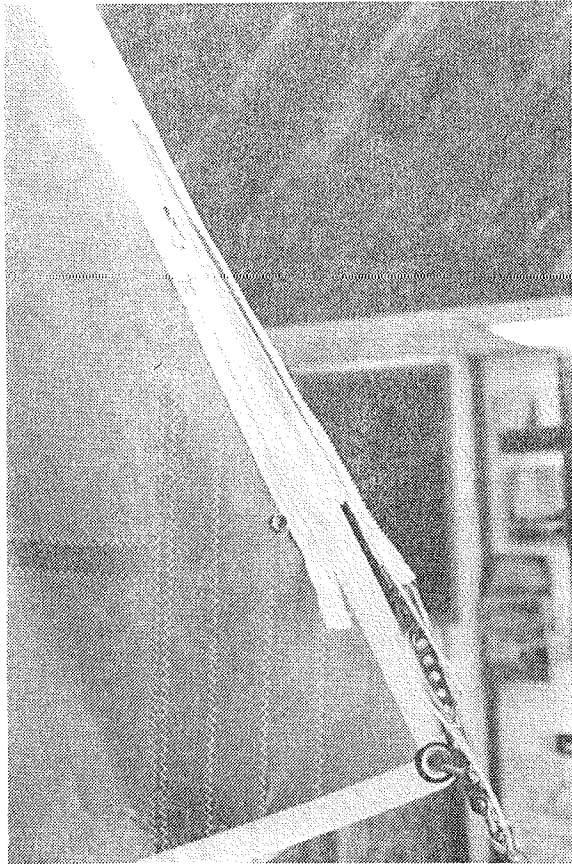


Photo G12. Jib tack shackle attached.

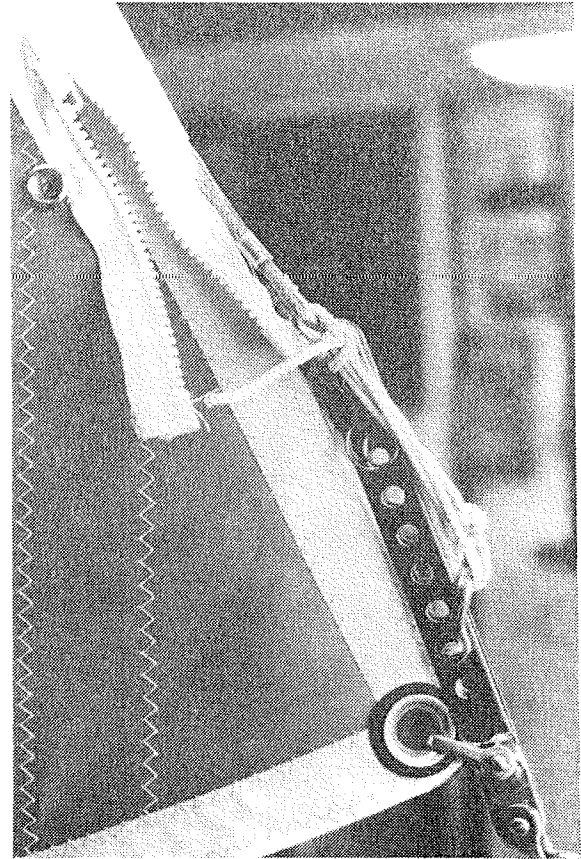


Photo G13. Jib luff tensioner properly secured.

Attach the jib tack shackle to the lowest hole at the bottom of the forestay adjuster. When the sail is raised, the thimble on the wire portion of the halyard will be exposed at the bottom of the jib luff sleeve. The jib luff tensioner is a 3 foot line, 1/8 inch in diameter, attached to a shackle on the front of the forestay adjuster. Untie this line from the jib luff zipper. Pass the luff tensioner line up through the thimble on the jib halyard, back through the shackle and up through the thimble again and again until all of the line is used up. Tie off the end of the line using two or three half hitches as shown in Photo G13. Excessive tension will cause the forestay loads to be carried by the sail resulting in poor shape and excessive stretching. Too little tension will leave the jib full of wrinkles. Untie the rope portion of the jib halyard from the halyard thimble and stow it in the storage pocket on the trampoline. Finish closing the jib luff zipper and snap the bottom strap similar to the one at the head of the sail. See Photo G14.

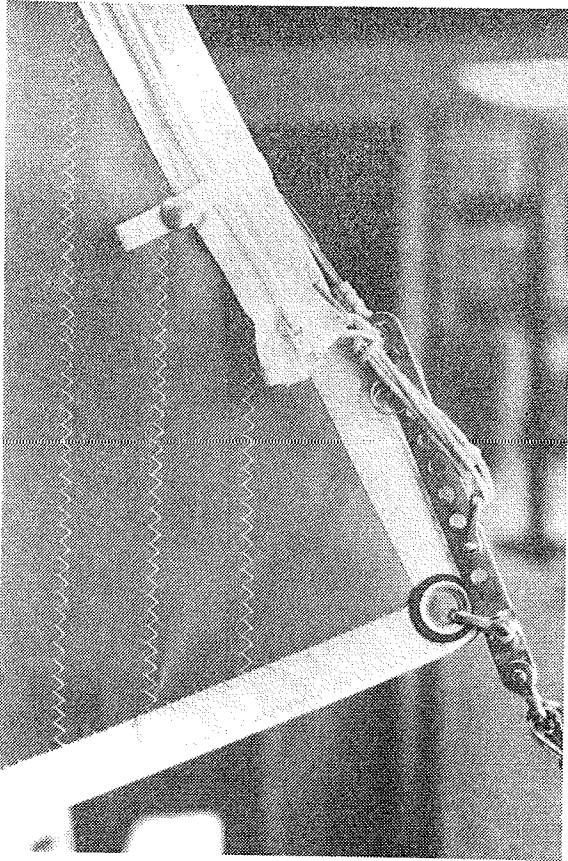


Photo G14. Complete zippering the jib luff and remove the halyard line.

The jib clew blocks are equipped with a brummel hook, and there is a matching brummel hook on the clew of the jib sail. These hooks fasten together and the jib can now be trimmed from the trampoline using the jib sheet. See Photo G15 for an illustration of how brummel hooks are engaged.

5) Optional Roller Furling Assembly:

If your boat is equipped with an optional roller furling assembly, Photo G16, you must be sure there are sufficient turns on the drum to allow proper operation of the roller furling system. With the jib out in the sailing position, there should be just enough line coming from the drum to reach the trampoline and cleat. This insures enough turns on the roller furling drum to furl the sail completely. To roll the jib up, you simply uncleat the jib sheet from the jib ratchet blocks and pull on the line coming from the drum. The jib should roll up completely. If it does not roll up completely, you need to put more turns on the drum. This is accomplished by simply disconnecting the jib sheet from the sail at the brummel hook and, by hand, wrapping the sail around the forestay a few more turns until it is completely rolled up. Then, reconnect the jib sheet to the sail with the brummel hook. Now, when the sail unrolls (uncleat the roller furling line and pull the jib sheet), the drum will make sufficient turns to roll the sail back up again. This check should be made before the boat leaves the beach.

Note: If you experience problems with the roller furling line coming off from the drum and becoming wrapped around the lower bearing, you may have too much line on the drum. Assuming that you have rigged your jib as described above, and after furling your jib, you observe that there is more than two layers of line remaining on the furling drum, it is suggested that the excess be removed until only two layers of windings remain. This is done by furling the jib, disconnecting the brummel hooks and then allowing the jib to rotate several more turns as the excess line is pulled from the drum. Reconnect the brummel hooks unfurl the jib and cleat the line in the cleat on the right side of the trampoline. Cut off the excess line, leaving only enough extra to secure a stopper or tie it off on the trampoline.

6) Jib Sheet Anti-tangle:

A length of 3/16 inch shock cord is included with each Supercat to be used to keep the jib sheet from being caught under the mast base when tacking. The installation is very simple and effective. Tie one end of the shock cord to a trampoline grommet, about 1.5 feet from the hull on the underside of the of the front beam. Run the shock cord under the jib sheet on that side of the boat and through the tack grommet of the mainsail. The shock cord then passes underneath the jib sheet on the other side of the boat and ties to a trampoline grommet 1.5 feet from the other hull on the underside of the front beam. See Photo G17.

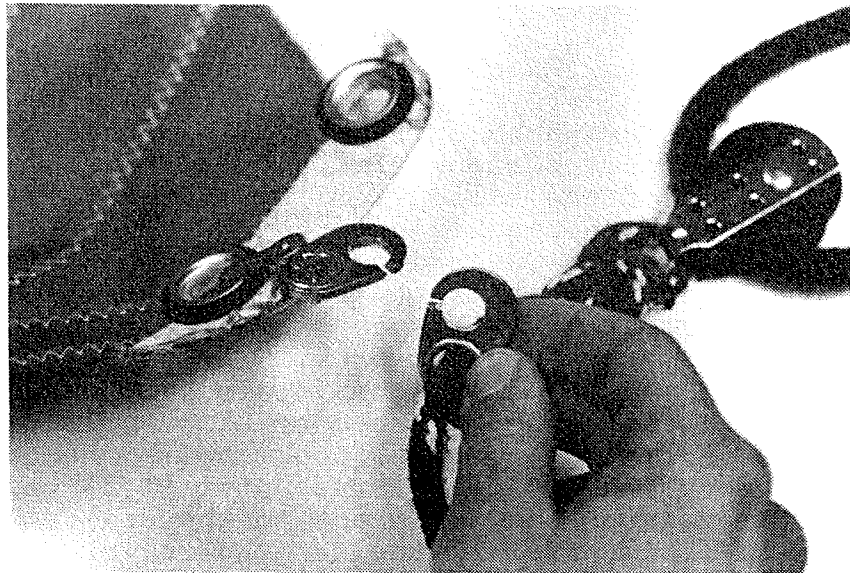


Photo G15. Engaging the brummel hooks on the jib clew.

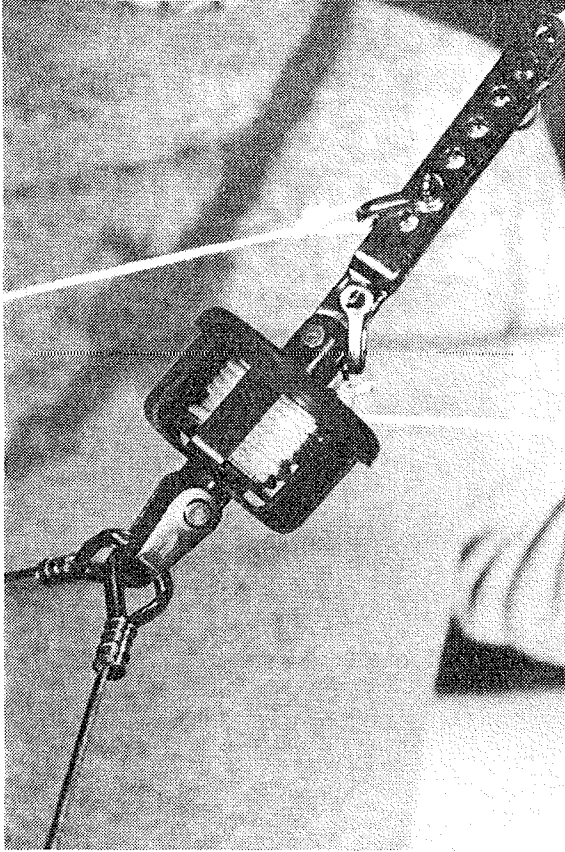


Photo G16. Roller furling drum and luff tensioner line.

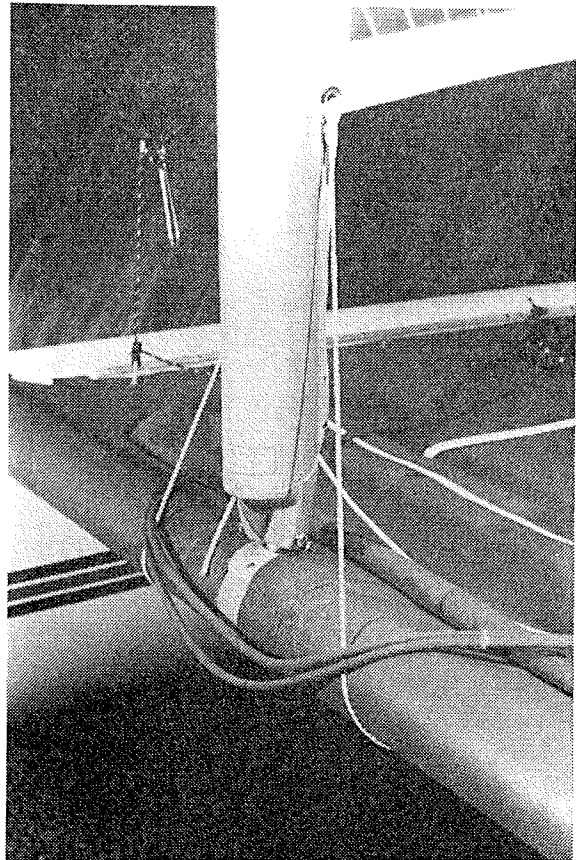


Photo G17. Anti-tangle line installation.

TRAVELER CAR ATTACHMENT AND OPERATION

THREADING THE TRAVELER CONTROL LINE

Pass the end of the mainsheet through the swivel cam cleat and fairlead assembly and then through the traveler car. After passing through the traveler car, return to the eyestraps in the center of the rear beam and thread down through the eye strap and secure using a figure 8 knot. See Photo H1.

USING THE TRAVELER

The mainsheet traveler on the Supercat is used to control the angle of the sail to the wind and the sail twist. Use of the traveler and mainsheet tension is best summarized in the following table:

<u>Boat Heading</u>	<u>Light Wind</u>	<u>Moderate Wind</u>	<u>Heavy Wind</u>
WINDWARD	-Centered to 6" to leeward	-Centered	-6" or more to leeward
	-Slight leech twist	-Slight twist	-Medium twist
	-Light mainsheet tension	-Firm tension	-Firm tension
BEAM REACH	-6" to leeward	-Centered to 6" to leeward	-12" or more to leeward
	-Medium twist	-Medium twist	-Full twist
	-Light tension	-Medium tension	-Firm tension
BROAD REACH	-Out to hiking strap	-Out to hiking strap	-Uncleat traveler & play mainsheet only
	-Maximum twist	-Maximum twist	-Sail will be at maximum twist

MAINSHEET BLOCK ATTACHMENT

The Supercat 15, 17, and 19 have a boomless rig and the mainsheet blocks attach directly to the clew plate of the mainsail. The upper mainsheet block is equipped with a hook which may be hooked into one of several holes in the clew plate. The lower mainsheet block attaches to the traveler car. The basic rule for hooking the mainsheet to the mainsail clew is the heavier the wind, the further forward you make the attachment, in lighter winds, further aft. See Photo H2 for hook installation.

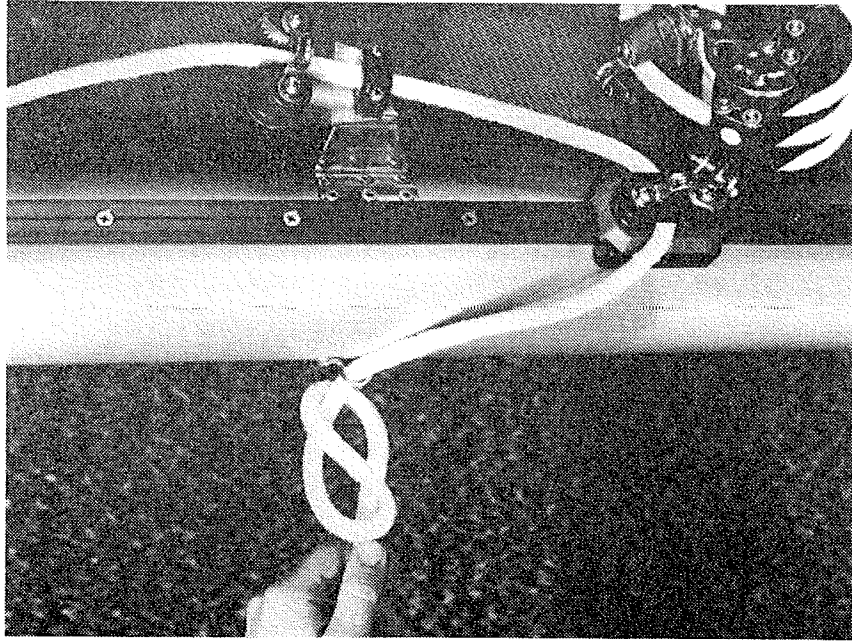


Photo H1. Traveler car with the control line. secured by a figure 8 knot.

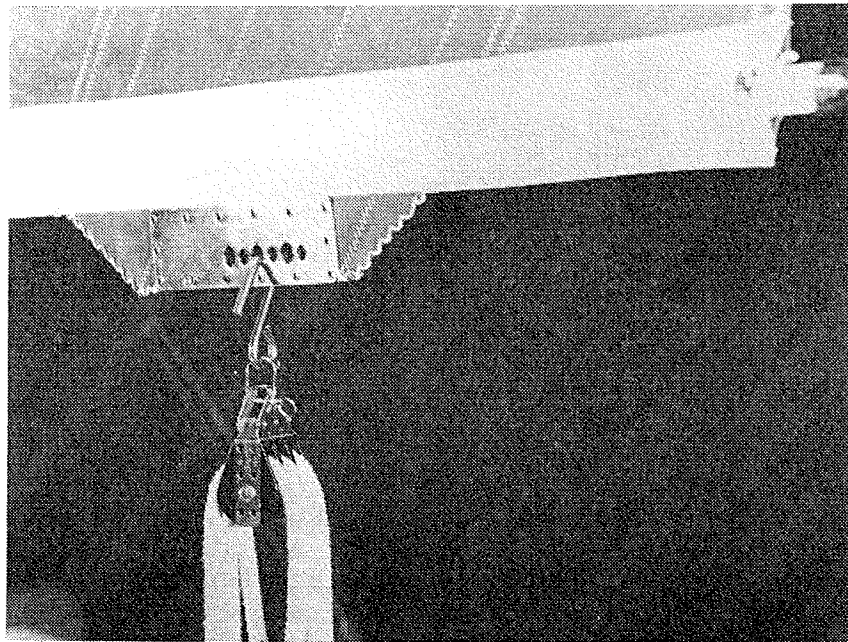


Photo H2. Mainsheet block attached to the clew plate center hole.

TILLER CROSSBAR INSTALLATION

Insert the tiller crossbar into each tiller swivel on the tiller arms. Secure the crossbar by using the Avibank pin on one side and the bolt on the other side. The Avibank pin is provided at one end for quick positioning of the tiller crossbar along the hull and out of the way while raising and lowering the mast. See Photo H3.

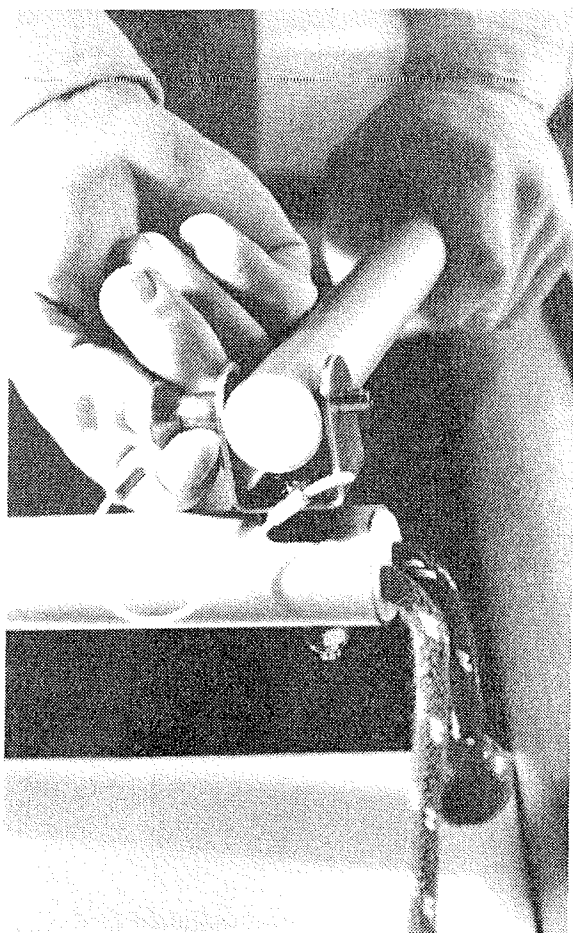


Photo H3. Tiller crossbar installation.

RUDDER OPERATION

Supercat rudders are equipped with a kickup release system to minimize harm to the boat in the event of running aground. When the rudders are in the up and locked position, they can be lowered in one of two ways: They can be lowered by using the rudder control lines (red - up; blue - down) or they can be pushed down by hand. To lower the rudder, first pull on the red line to raise the locking pin, then pull on the blue line and simultaneously release the red line and the rudder will go all the way down. It is necessary to pull firmly on the blue line in order to lower the rudder. See Photos H4 thru H7.

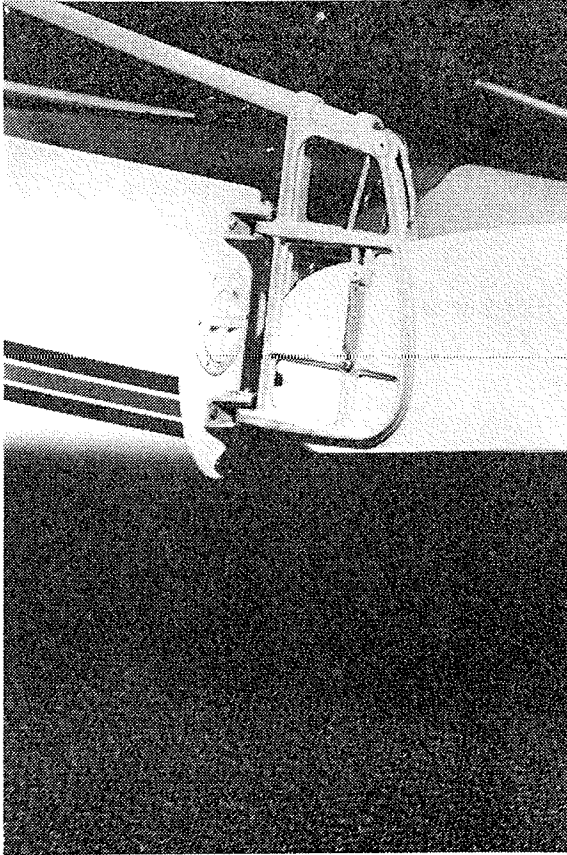


Photo H4. Rudder locked up.

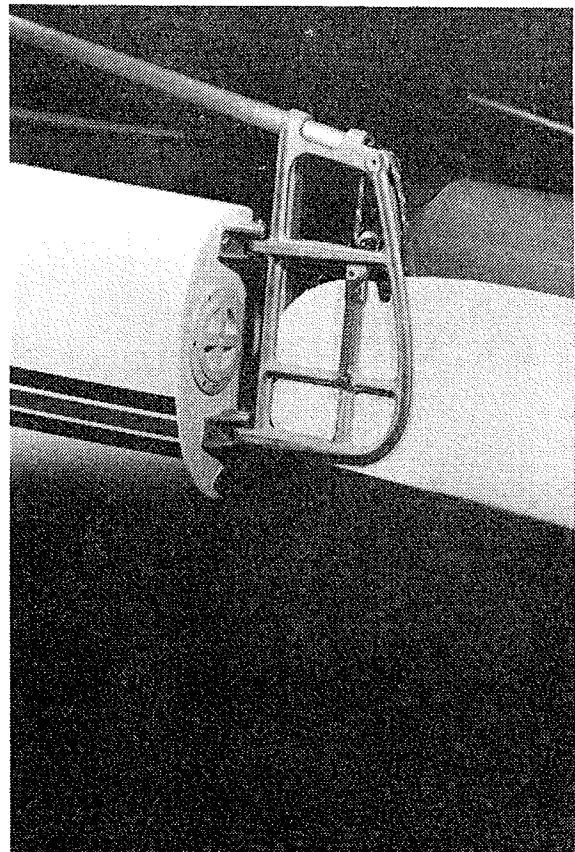


Photo H5. Rudder unlocked.

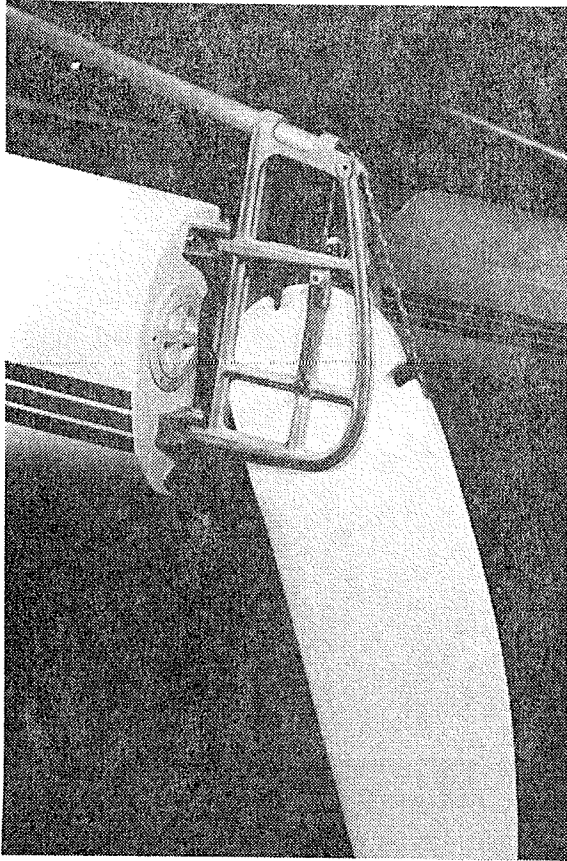


Photo H6. Rudder being lowered.

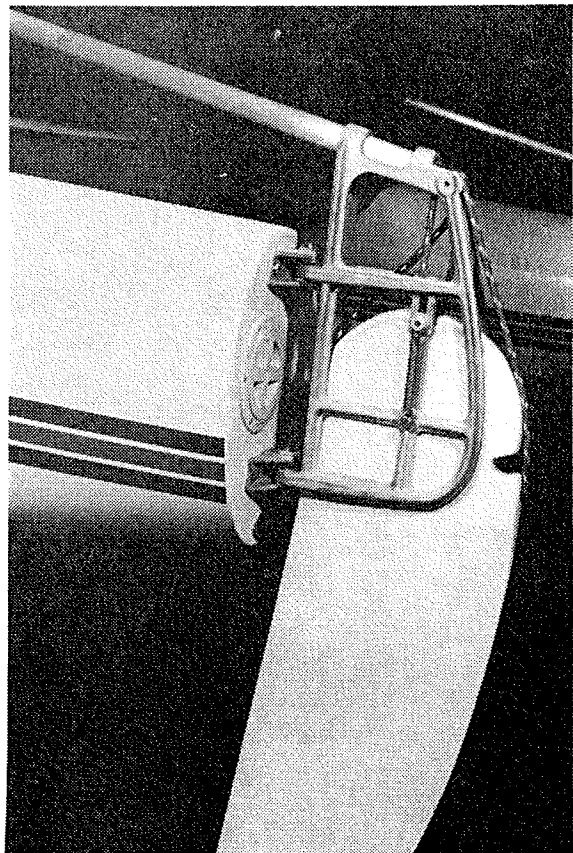


Photo H7. Rudder locked down.

When the boat runs aground, the rudders will automatically kick up, however, it is recommended that you pull on the red line to raise the rudder prior to beaching the boat or running aground to avoid rudder tip damage.

DAGGERBOARD INSTALLATION

The Supercat 18, 19, and 20 are outfitted with NASA Series 63 foil shape daggerboards. The boards are interchangeable - i.e. no port or starboard and interchangeable between all three boats.

Before inserting the daggerboards, retrack the daggerboard retainer with the shock cord passing through it (adjacent to each daggerboard trunk). Stretch it over the trunk, so that it is putting tension on the daggerboard after the board is in the trunk. The shock cord should be adjusted so it will hold the board in any 'up' position without slipping.

Each daggerboard has a dark marking on it, at its trailing edge, designating when the bottom of the board is flush with the keel of the hull. This mark must be just above the deck in order for the board not to protrude through the keel. See Photo H8 for a view of the daggerboard properly in place with the dark colored mark exposed.

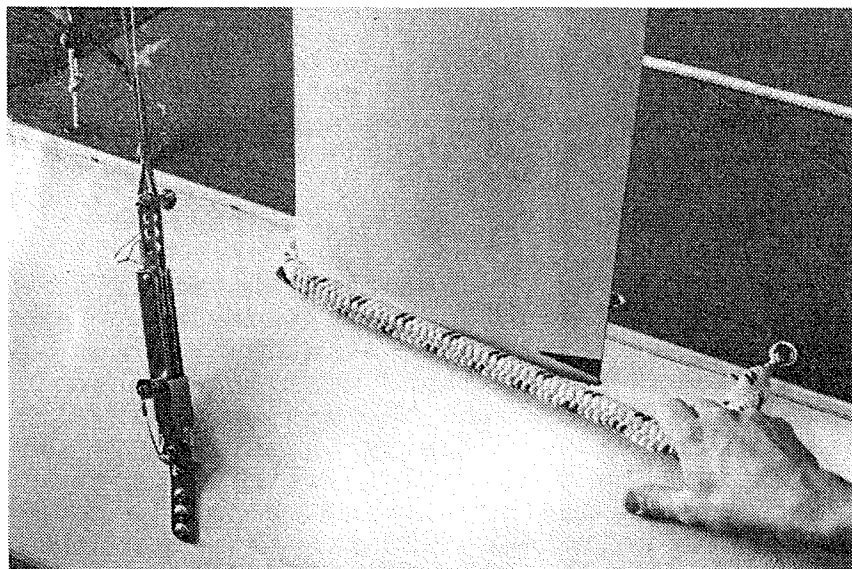


Photo H8. Daggerboard installation.

RIGHTING AN OVERTURNED SUPERCAT

TECHNIQUE WITH THE SUPERCAT RIGHTING SYSTEM

The Supercat is outfitted with a special righting feature that allows one 160 pound person to right the boat in the event of a turnover. The feature works in such a way that it allows the sailor to lengthen the shroud and take advantage of the upper hull's weight in righting the boat.

Once you have turned over and are in the water, release the jib sheet and the traveler control line. Pull 4 to 6 feet of slack into the mainsheet and recleat it. If you have a roller furling jib, roll it up.

Next, stand near the transom of the hull that is in the water. This will cause the boat to swing around with the mast pointing into the wind. Now walk back to the front beam and step up onto the mast base. Reach over the upper hull at the shroud lever and remove the quick release pin at the base of the shroud lever and throw the lever open. This will put slack in the rig and allow you to pull the upper Avibank pin that extends the shroud. Once the shroud is released, climb down to the lower hull and take hold of the righting line. Hook it into your trapeze belt, lean backwards and pull. The shroud will now extend as you pull on the righting line.

Once the boat is righted, climb back on and secure the released shroud back into its normal position. Push the lever back down into its sailing position, insert the Avibank pin and continue sailing.

The minimum weight required to right the boat varies with wind speed. The stronger the wind, the lighter the weight required. In winds over 20 knots it is usually not necessary to extend the shroud.

RIGHTING TECHNIQUE WITHOUT THE RIGHTING FEATURE

To right an 8' beam catamaran requires approximately 300 lbs. of total crew weight with no special righting assist devices. Should you turn the Supercat over, there are a number of steps you must follow in order to right the boat. First, stand near the transom. This will cause the boat to swing around with the mast pointing into the wind. If the boat does not appear to be swinging, drop into the water and hold onto the transom. The boat will quickly swing around. In this position, the wind against the trampoline will help you right the boat. Next release the mainsheet, the traveler car control line and the jib sheet. If you have a roller furling jib, roll it up. With the mast still pointing into the wind, climb up onto the hull, being careful not to scratch the hull with your trapeze gear, and take hold of the righting line (which is connected to the front beam at its intersection with the hull). Hook into it (there should be a small loop tied at the end with a bowline knot) and lean back with all your

weight. The larger person should hook directly into the righting line. The smaller person should sit on the larger persons knees and then lean back, to help as much as possible. When the boat is righted, the easiest place to climb on is over the rear beam. Use the quick-release Avibank pin in the tiller crossbar to quickly swing the crossbar out of your way before climbing on.

THE DO's and DON'Ts IN A TURNOVER

- Don't remain on the top hull when the boat is turned over. Jump into the water and hang onto the boat.
- Don't attempt to right the boat unless the mast is pointing into the wind.
- Don't leave the jib sheet or the traveler car cleated when righting the boat. If you have a roller furling jib, roll it up.
- Do leave the mainsheet cleated (when using the righting system) after 4 to 6 feet of slack has been pulled into the system.
- Don't scratch or gouge the hull with your trapeze hook as you climb up onto the hull. As you pull yourself up onto the hull, roll to one side and avoid putting your weight on your trapeze hook.

THE RIGHTING FEATURE - SHROUD LEVER DETAIL

One of the special features on Supercats are the shroud levers. These levers perform two special functions, one of these is to put tension on the rigging to adjust for a 'tight rig' or 'loose rig'. The other function is to lengthen the shroud in the event that the Supercat is turned over. See Photos I1 thru I4 for operation of the righting levers.

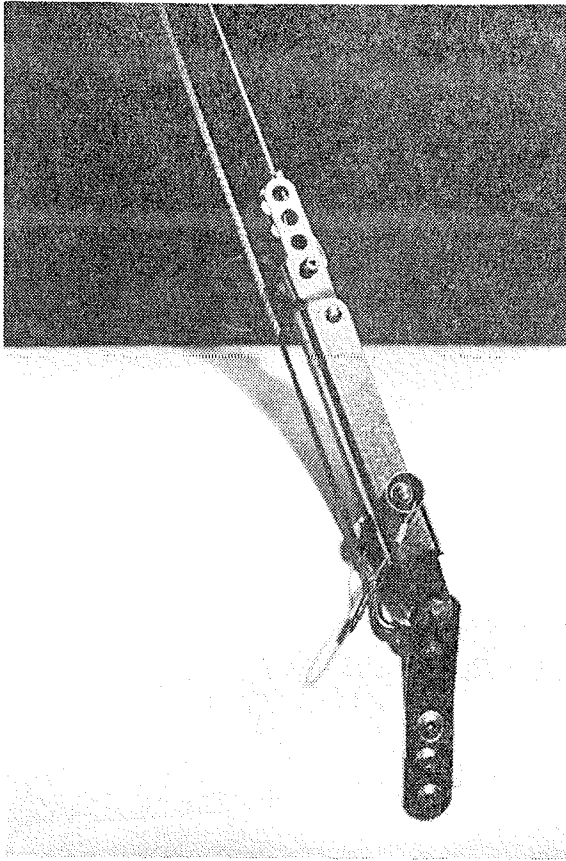
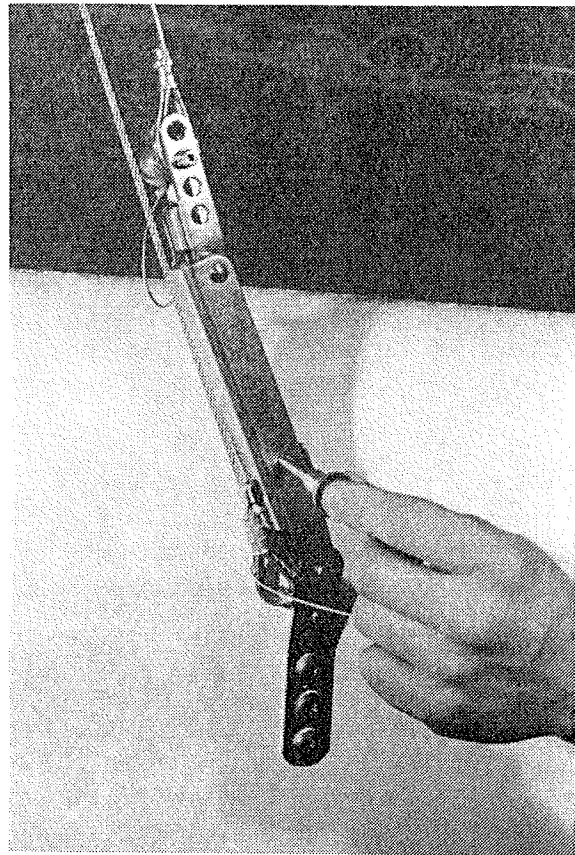


Photo I1. Righting system lever closed.

Photo I2. Remove bottom Avibank pin.



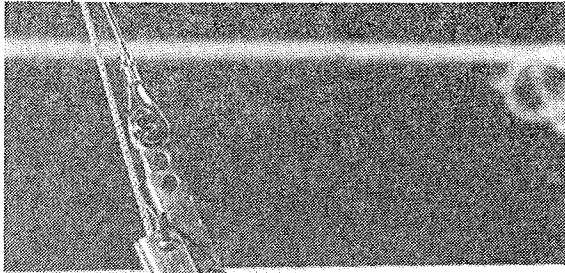


Photo I3. Releasing lever.

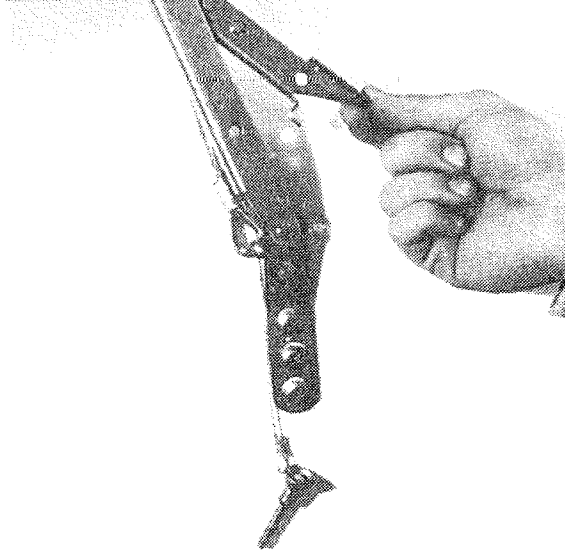
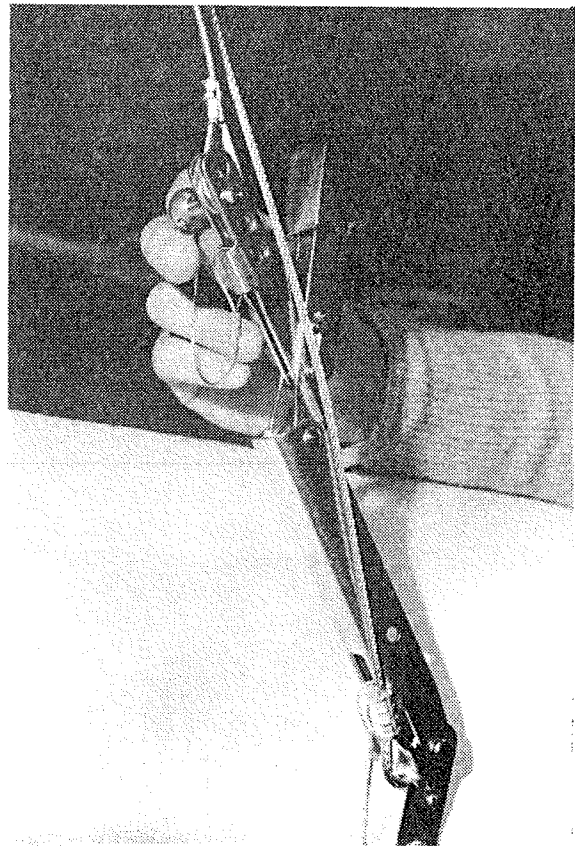


Photo I4. Remove upper Avibank pin.



TRAILERING THE SUPERCAT

LOWERING THE SAILS

Before lowering the sails, turn the boat so that it is about 10 degrees from pointing directly into the wind.

1) Lowering the Jib:

Lower the jib sail first. Locate the jib halyard line and tie it to the thimble at the end of the jib halyard.

Untie the jib luff tensioner and slacken the halyard. Remove the jib tack shackle and unfasten the jib blocks and sheet via the brummel hooks at the clew. Unsnap the strap on the jib luff and begin to unzip the luff zipper while lowering the jib sail.

When the sail is completely lowered, remove the halyard shackle from the head of the jib and secure the line portion of the halyard to the shackle. Tie the halyard line and shackle loosely to the forestay bridle. Do not tie the jib halyard to the mast.

2) Lowering the Mainsail:

Remove the mainsheet blocks from the clew plate and ease off of the downhaul and remove it. Take the main halyard and pull on it as if you were attempting to raise the sail. Rotate the mast opposite to the direction of the sail and release the halyard. See Photo J1. Lower the sail by pulling down on the luff rope. Be sure the main halyard rope tail is clear, no knots, no tangles, etc. If you are going to leave the mast up, secure the main halyard away from the mast, either to a trapeze wire or to the mainsheet blocks. This will prevent the wind from constantly whipping the halyard against the mast.

STORING THE SUPERCAT SAILS PROPERLY

With both the main and jib completely lowered, you should store them in the sail bag at this time. It is strongly recommended that both the main and jib be rolled up starting at the head and rolling toward the foot. If the sail is improperly stored, i.e. wadded up, undesirable creases occur and the sail could become misshapen. Rolling a sail minimizes the creases in the material. (Note that the foot of the sail is likely to be wetter than the head due to spray hitting the sail. Rolling the sail from head to foot places the dampest part of the sail on the outside of the roll for faster drying. Secondly, the rolled sail will be stiffer if it is rolled from head to foot.) If you have put extra tension on the mainsail battens, the tension should be eased for storage.

When it comes time to store the Supercat sails for an extended time, they should be clean and dry, and stored indoors off from the floor. If you exercise good judgment and follow these instructions, your sails should last for several seasons.

LOADING THE SUPERCAT ONTO THE TRAILER

To load the Supercat onto the trailer, back the trailer tires to the water's edge. Lift the bows and slide the boat forward onto the trailer. A trailer winch can be used to pull the boat forward. Once the boat is on the trailer, use tie-downs to secure the boat in preparation for trailering.

Trailers equipped with hard rollers are NOT recommended. The point contact between the trailer roller and the hull surface is too small and rollers on a rough road have been known to puncture catamaran hulls. Use of hard rollers may void your warranty. It is recommended that padded cradle type supports at least 4 inches in length be used rather than any type of roller.

TAKING THE MAST DOWN

With the boat secured to the trailer, pull the boat and trailer to level ground if possible. Look around for power lines and always avoid them. Out of courtesy to other boaters, move out of the ramp area to prepare the boat for trailering. Release the shroud levers. Disconnect the Avibank pin on the tiller crossbar and position it on the trampoline parallel to the hull. Place a boat cushion or life preserver over the center of the rear crossbeam to protect the traveler track and mast. Stand on the trampoline, put forward pressure on the mast and have someone release the forestay. See Photo J2.

CAUTION! When lowering the mast, the mast must be aligned parallel to the boat. Attempting to lower the mast with the mast rotated to one side or the other causes binding in the mast base. This may result in breaking the mast base or the support pedestal.

To lower the mast, walk aft lowering the mast until it can be laid gently on the cushion. (Do not have someone stand behind the boat to "catch" the mast. Should you slip and drop the mast, your friend may instantly become much shorter.) Remove the mast base keeper pin, take the mast base off from the ball, walk the mast forward and place it on its mast carrier at the front of the trailer. Support the aft portion of the mast at the rear beam. The Supercat fiberglass mast support is best. Do not tie wires or ropes against the mast, doing so will scratch and gouge the mast while trailering. Coil wires up neatly on the trampoline and secure them to the hiking straps.

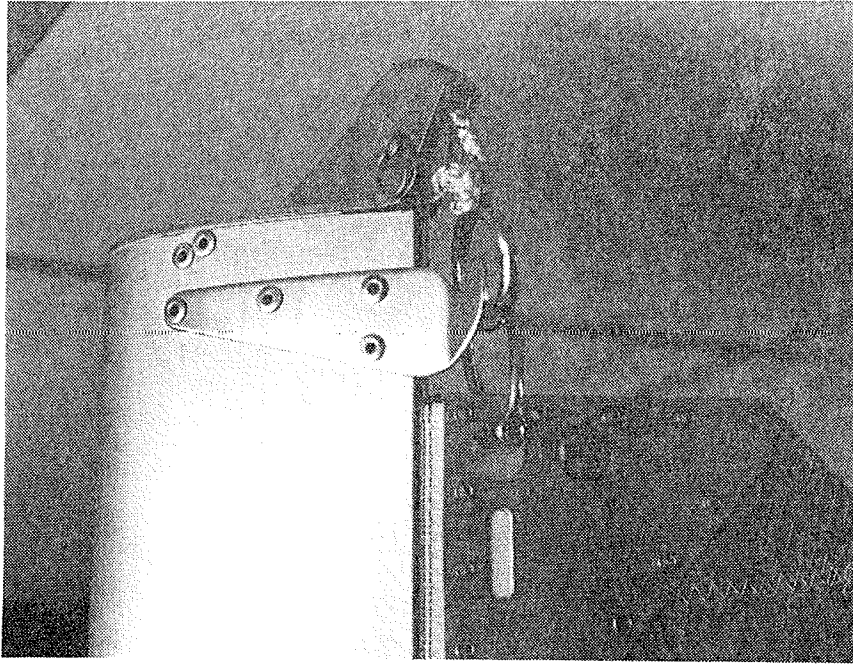


Photo J1. Rotating the mast to release the halyard hook.



Photo J2. Proper stance for lowering the mast.

TYING EVERYTHING DOWN

Before driving away, there are a few things that have to be secured on the boat. The tillers have to be secured in such a way that the rudders will not sway from side to side. The tiller crossbar and extension should be tied to the trampoline. The mainsheet blocks and mainsheet should be fully tied down. The jib sheet and blocks can be stored in the trampoline pocket. The shroud and trapeze wires should be coiled separately and tied to the hiking straps. Small pieces of shock cord work well for tying things down. Remove the drain plugs and store them in a safe place.

- Check the trailer tires for air.
- Check the trailer lights for proper working order.
- Check the trailer hitch for complete locking and check the safety chains.

MAINTENANCE RECOMMENDATIONS FOR THE SUPERCAT

Each time you use your Supercat, especially in salt water, you should wash the boat completely with soap and fresh water. This will minimize salt corrosion and get the mud and sand out of all the hardware and ropes. Lubricate all stainless hardware with moving parts (shroud levers, Avibank pins, etc.). Use either teflon spray or a silicone spray to prevent dirt from sticking to the parts. Mild soaps are good fiberglass cleaners; lacquer thinner will usually remove tar (and waterline tape, so be careful). Any boat that is left out in the weather will show its age sooner than it should, so it is recommended that the Supercat owner treat the finish of the boat with care. It is wise to wax the hulls at least twice per year. This will help maintain the luster and overall beauty of the boat. (For maximum speed while racing and for reduced hull slipperiness when trapezing, the wax should be washed off with a strong dish washing detergent before the race.)

Soapy Brillo pads and/or rubbing compounds are good for cleaning and shining stainless steel wires, straps, screw heads, etc.

Whenever any of the ropes/lines on the Supercat appear to be wearing out, it is important to replace them, not only for cosmetic reasons, but for safety reasons as well. See the replacement line dimensions table.

LUBRICATION POINTS

The following is a list of all the places that need to be checked periodically for corrosion and salt buildup. Marine lubricants, (oils) are preferred for usage in each case. Lubricate these items at least once a month:

- 1) Rudder gudgeon, where rudder head pivots on the Delrin pin.*
- 2) Rudder head lock pin vertical slot (use grease).**
- 3) Tiller to tiller crossbar universal joints.*
- 4) Main halyard sheaves at the masthead.**
- 5) Jib halyard sheave on the forestay.**
- 6) Forestay swivel for optional roller furling.*
- 7) Shroud adjuster levers.*
- 8) Mainsheet block swivels and jam cleats.*
- 9) Jib sheet block swivels and jam cleats.*
- 10) Traveler car cam cleat.*
- 11) Traveler car sheaves.*
- 12) Mast step ball, lubricate every time before stepping the mast.**
- 13) Traveler car bearings.*

* - Teflon spray
** - Lanocote

SUPERCAT RUDDER ADJUSTMENT

- 1) Pull the red rudder release line or push the rudder down by hand until the upper locking cam is free of the locking slot.
- 2) Tighten or loosen the stop nut on the bolt through the center of the rudder head until the blade falls gently down due to its own weight when it is released from the up position. The blade should be snug in the rudder head with no sloppiness.
- 3) Roller Rod Adjustment -- (needed less frequently). Loosen the outer 3/8 inch nylon jam nuts. Adjust the nuts so the rod slides freely up and down. Tighten the outer jam nut to the inner one. Lubricate generously with grease (Lanacote). Failure to keep this area lubricated can lead to premature pin failure.

FASTENER CHECKS

After the Supercat has been sailed a few times all of the screws and bolts should be checked for proper tightness. In particular the bolts holding the crossbeams to the hulls should be retorqued. The screws holding the trampoline side rails to the hulls should be checked and the screws holding the traveler track to the rear crossbar should be checked. The screws holding the bridle wires and shroud chain plates to the hulls should be tightened. If they appear excessively loose, the screws should be removed, recoated with a marine sealant (3M 5200 Marine Sealant) and reinstalled. After the boat has been sailed extensively and the fasteners tightened several times, the fasteners will take a proper set and will not need to be retorqued as frequently.

RIGGING CHECKS

On a periodic basis inspect all standing rigging for wear, fraying, twists, or kinks in the wire, and for broken strands. Inspect all shackles for tightness and wear, and inspect all thimbles and Nicopress fittings for wear, rust or stress cracks. For safety reasons replace any worn or stressed rigging promptly. The size, length and type of lines required are listed in the following table.

SUPERCAT REPLACEMENT LINE DIMENSIONS

LINE		LINE LENGTHS		
SIZE*	ITEM	SC-15	SC-17	SC-19
1	Mainsheet	50'	50'	55'
2	Jib Sheet	43'	43'	43'
3	Downhaul (main)	10'	10'	10'
6	Downhaul (jib)	3'	3'	3'
3	Jib Clew Bridle	2'	2'	2'
6	Jib Halyard Line	20'	23'	23'
3	Main Halyard Line	55'	60'	60'
6	Roller Furling Line	15'	15'	15'
3	Jib Block Strop	2'	2'	2'
3	Trapeze Retractor Line (4)	3'	3'	3'
8	Trapeze Shock Cord (2)	7'	7'	7'
8	Jib Tango Shock Cord	5'	5'	5'
4	Righting Lines (2)	12'	12'	12'
5	Trampoline Lace	30'	30'	30'
9	Hiking Straps (2)	8'	9'	10'
4	Rudder Line Red (2)	5' 6"	5' 6"	5' 6"
4	Rudder Line Blue (2)	4' 9"	4' 9"	4' 9"
7	Batten Tie Line (11)	18"	18"	18"

* SIZE KEY:

1 = 3/8	White Braid	6 = 1/8	Braid
2 = 3/8	Blue Braid	7 = 3/32	Braid
3 = 1/4	Low Stretch	8 = 3/16	Nylon Shock Cord
4 = 1/4	Braid	9 = 1/2	Poly Braid
5 = 3/16	Braid		