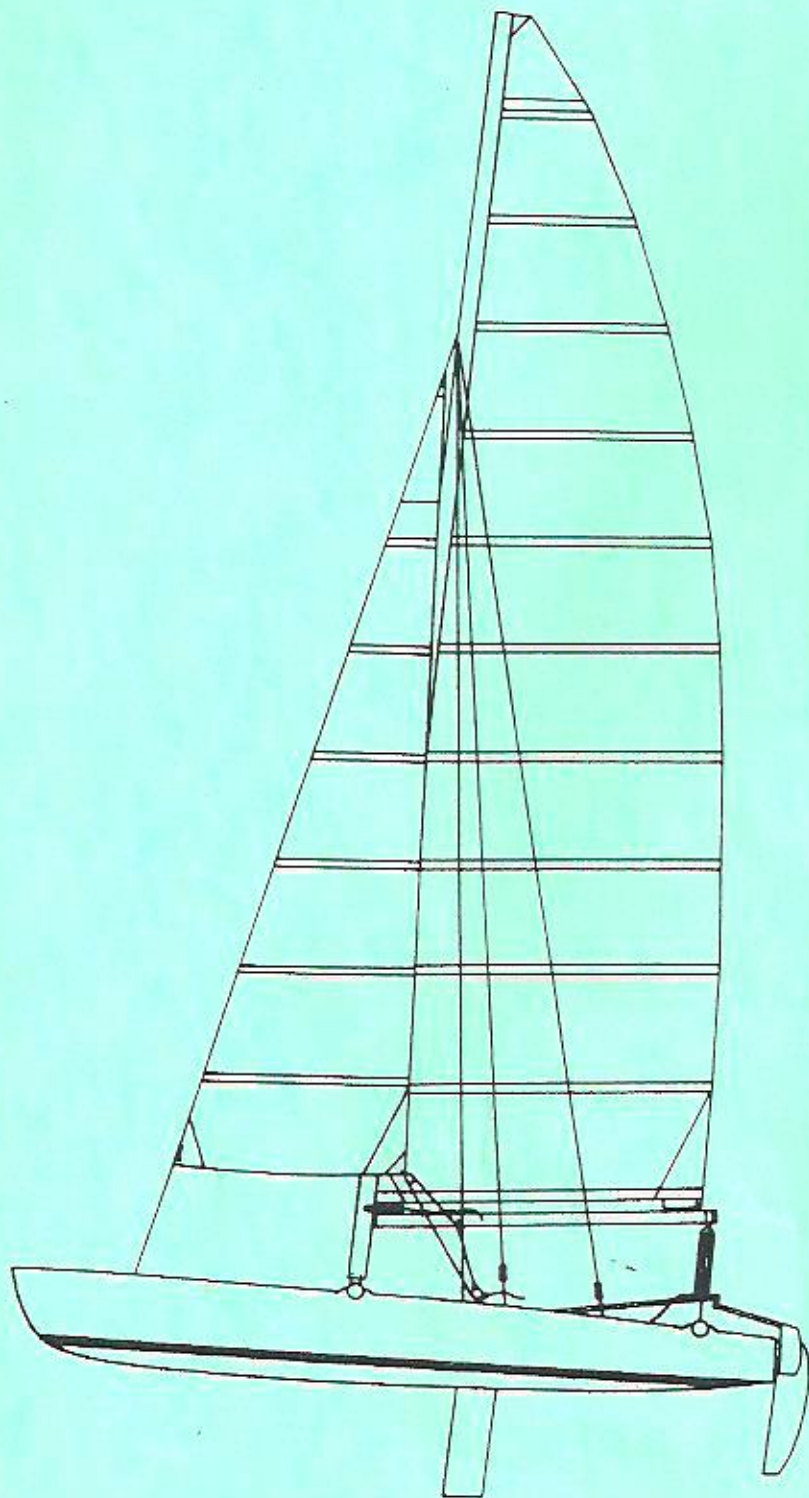


Super Cat 20 Owners Manual



TELESCOPING THE SUPER CAT

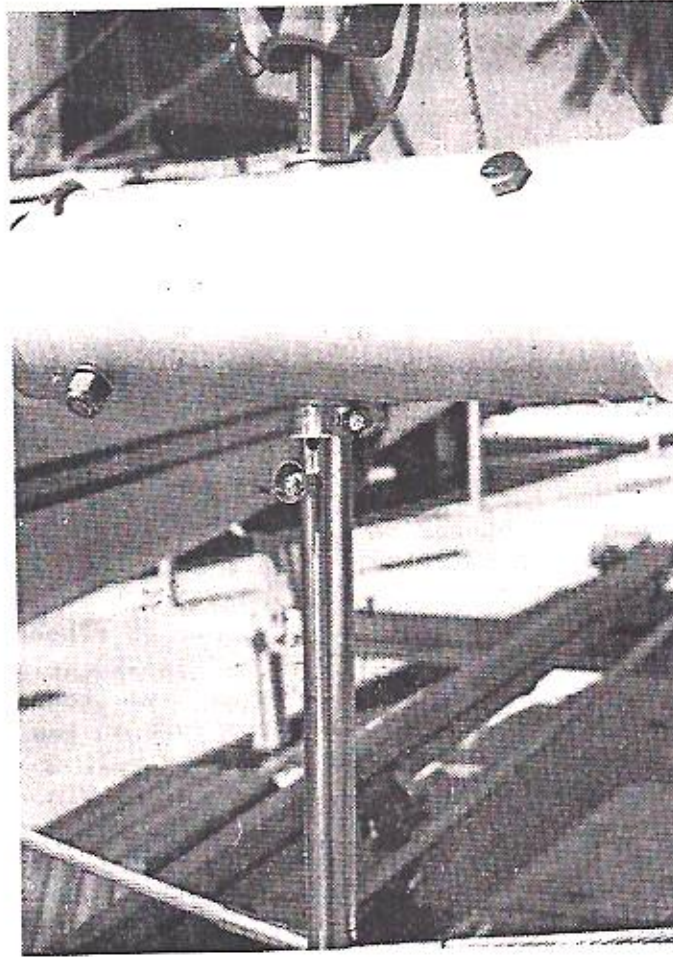
The following steps should be followed closely in order to make telescoping the Super Cat an easy operation. Make sure all of the knots that were tied to secure items on the Super Cat during trailering are untied before telescoping. Tie the line from the winch to the thimble marked "pull open" after passing the line under the large red pulley at the base of the mast carrier.

Remove the blue handled keeper pins from telescoping arms on the trailer. These pins are located at the meeting point of each set of telescoping arms just under the frame of the trailer.

Crank the winch and the Super Cat will begin to telescope out. Should the telescoping operation become difficult, walk to the back beam, and lift up on it slightly in the middle. This lifting will ease some of the tension on the beam and allow the boat to telescope more freely. You may want to shake the bows on either side of you, thus allowing the boat to telescope more freely. Telescoping is complete when the bolt holes of both beams have lined up. If you happen to telescope the boat too far, pushdown on the dolphin striker cable until the holes line up, and/or pull up on the traveler cable on the back beam. Tension on the winch line should be eased slightly to make adjustments in telescoping.

Once telescoping has been completed, remove the crossbeam bolts from the tool kit and the wrenches. A tube of waterproof silicone has been provided in the tool kit for lubricating the bolts before they are secured through the beams. Apply a liberal amount of grease to each bolt, place each bolt through a beam, with the head on top, and tighten each bolt until it is snug. Very little torque is required to secure the bolts in the beams as a result of the nylon lock nuts.

Place the dolphin striker post bushing through the front beam and secure it using the hose clamp fitting. Next place the dolphin striker post through its bushing and over the "tee" on the cable. Secure the post with the safety pin provided. The pin is secured to the trampoline grommet with a small safety wire. The pin should pass through the post underneath the bushing. If there is not enough clearance to push the pin through the post, ease off on the hose clamp and push the bushing up slightly, then secure the pin. Be sure and use a liberal amount of silicone lubricant when installing the dolphin striker assembly. For an example of a properly installed dolphin striker assembly, see illustration #1.



TIGHTENING THE SUPER CAT TRAMPOLINE

In order to tighten the trampoline properly, it is recommended that sailing gloves be worn

Underneath the back beam of the Super Cat, there are lacings for the trampoline on both sides. Starting close to the hulls and moving inward, toward the center, tighten the lines, doing one side at a time, so that there is about 2" between the flaps. Tie the lines off using half hitches and stow the excess up over the flap.

The center trampoline lacing should be tightened starting in the middle of the trampoline. Tighten the after line first, putting the line through all of the grommets except for the last two. If there is any excess, thread this through the remaining grommets. Tighten the other lacing forward, passing through all of the grommets. Tie these lines off using half hitches. Use equal tension, or make sure all of the grommets on opposing sides are an equal distance from one another upon tightening the trampoline. This helps to evenly distribute the load on the trampoline. Try to get the trampoline tight.

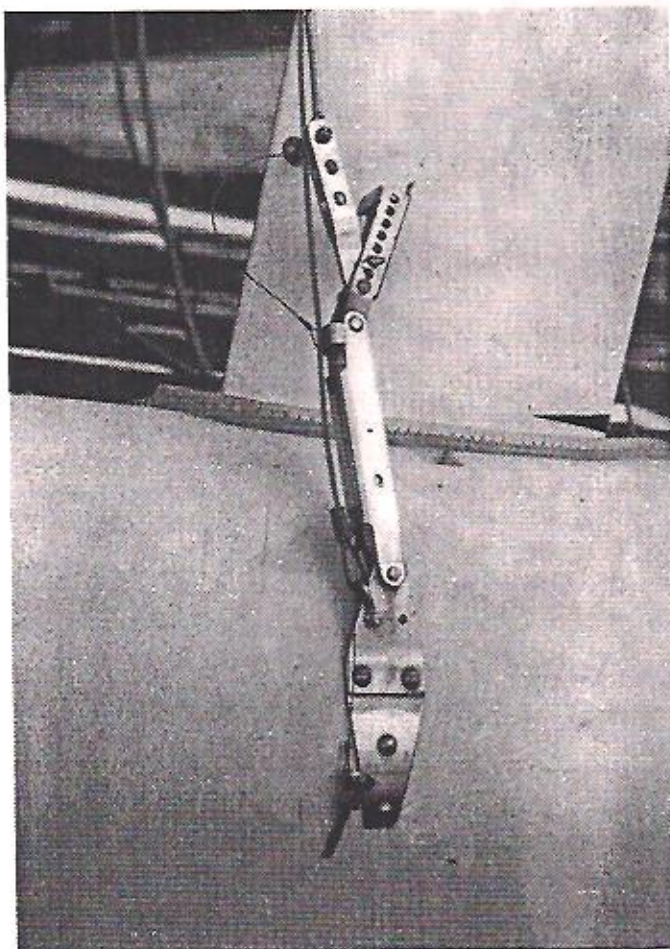
RAISING THE SUPER CAT MAST

Untie the Super Cat mast from its mast carrier(s) and walk it aft, so that the mast base is near the delrin ball on the dolphin

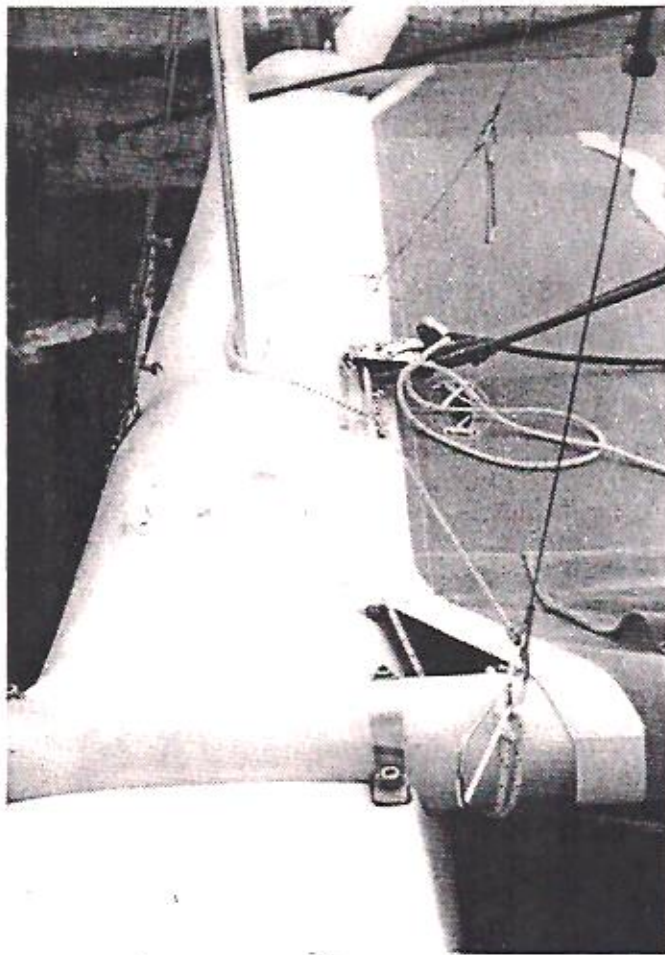
striker post. Locate the two jib clew blocks on the blue jib sheet, (these blocks are free floating and are not secured to the boat except by the jib sheet), and place them in front of the dolphin striker post. Remove the mast base safety pin and slide the mast base onto the delrin ball on the dolphin striker post. Replace the safety pin.

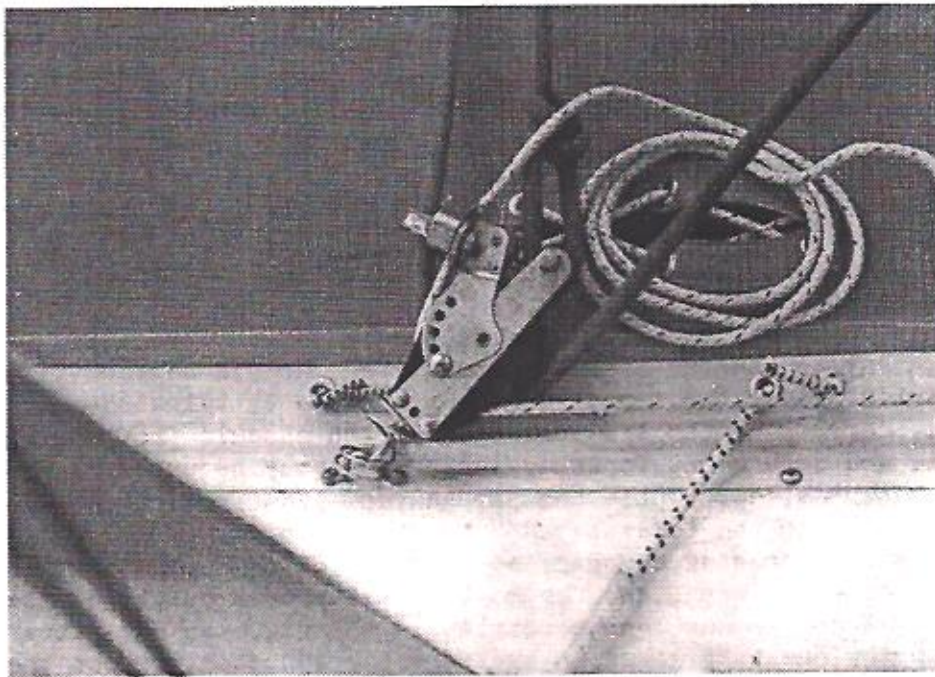
Double check the mast hound to make sure none of the wires are tangled. Check the shrouds and trapeze wires to make sure there are no kinks or twists in them.

Shroud adjustors and righting levers are located to port and starboard. Both of the righting levers should be released so that they are in the raised position. See illustration #2.



If winds are in excess of 15 knots, it is recommended that a person stand on the trampoline to assist in raising the mast. This would require little lifting effort as the winch will do all of the lifting. The person provides the mast with a stabilizing force to prevent the wind from making the mast sway from one side to the other.





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Closely examine illustrations #3 and 4. Here the mast is being secured from swaying by using the trapeze dogbones and the righting lines. The process works as follows: bring the aft trapeze dogbone forward to the front cross beam. Pass the righting line through the small ring in the dogbone, pull it forward and pass the line under the front cross beam and up through the small opening between the trampoline and the cross beam. Untie any knot in the end of the righting line and feed the line through the jib sheet block with the ratchet, push the jib sheet out of the cam cleat, and put the righting line in the cleat and pull it until the dogbone is snug against the front crossbeam. Do the same for the other side of the boat. Be sure before securing the dogbones to the cross beams, that the mast is in the center of the back cross beam. This will allow for equal tension on each trapeze wire, and will form an A-frame which will prevent the mast from falling to either side during stepping.

Tie the line from the winch to a small bell shackle, and connect the shackle to the forestay. Lift the mast raising bar, located on the trailer, to the mast base, and secure it around the dolphin striker post using a line. Place the line from the winch in the pulley in the top of the mast raising bar, and crank the winch. The mast will begin to come up. Crank the winch slowly and make sure none of the wires or lines are tangled.

With the mast approximately 3 or 4 feet from the fully raised position, ease off the righting lines in the jib sheet cam cleats slightly. Continue to raise the mast until the line from the winch and the forestay are tight.

Once the mast is completely stepped, it is necessary to secure the forestay in the forestay adjuster. Use the jib halyard line to temporarily secure the mast. This may be done by tying the line to the mast carrier on the trailer. Remove the shackle from the forestay and secure the forestay in the forestay adjuster using the clevis pin provided. Untie the jib halyard line from the trailer and secure it to the forestay adjuster temporarily.

With the forestay secured, push the righting levers back into their sailing position, and secure them with their quick release pins. If there is not enough tension in the rig, you may either put the forestay one hole lower in the forestay adjuster, or put the shrouds one hole lower in their adjusters. If one of the levers is too hard to push down, pull on one of the trapeze handles on that side of the boat and the lever should go down.

The quick release pins for the built in righting feature should always be facing in such a way that they can be easily removed to extend a shroud to right the boat.

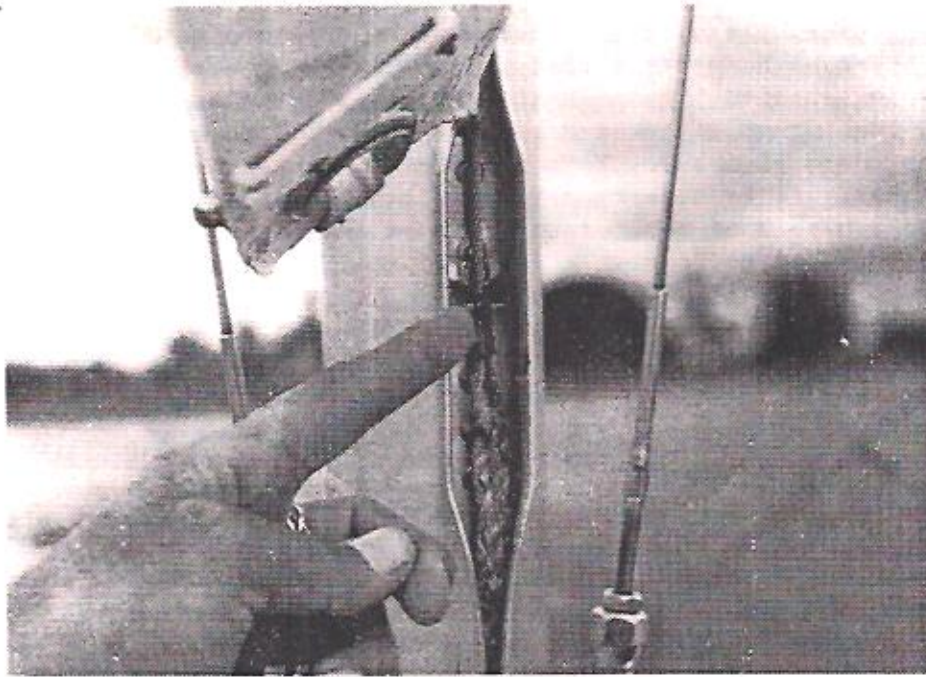
Before backing the boat into the water, make sure the drainplugs have been installed tightly in place.

RAISING THE SUPER CAT SAILS

THE MAINSAIL

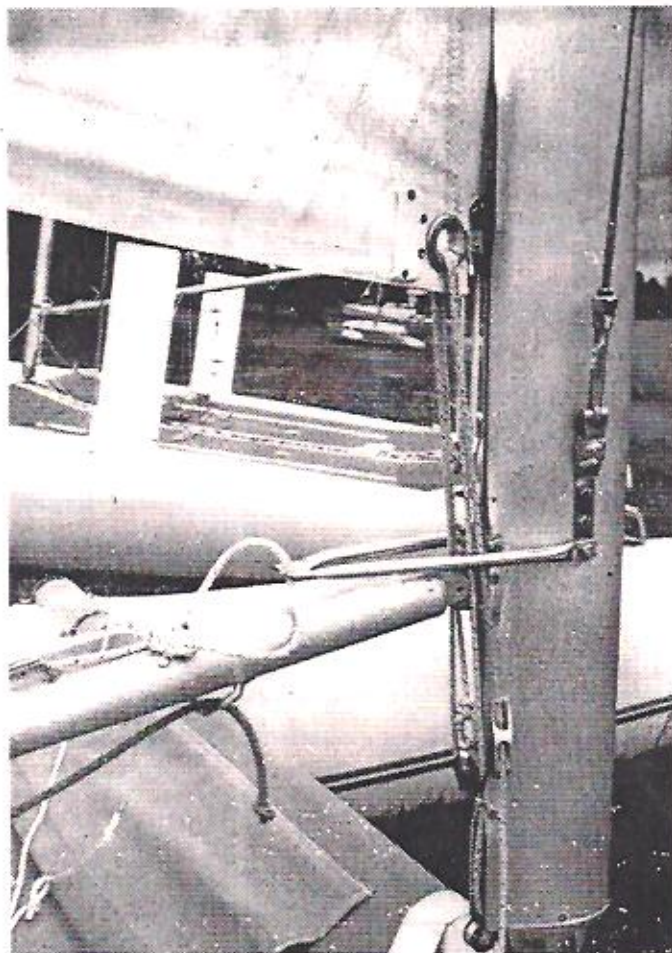
Before raising the mainsail on the Super Cat, it is necessary to check for batten tension. Each batten should be snug in its pocket. To raise the mainsail, attach the main halyard shackle to the forward hole in the head of the mainsail. Guide the boltrope on the luff of the sail into the sailtrack on the mast where the mast has been spread open, just above the bracket for the gooseneck fitting on the boom. The main halyard is located on the after side of the mast at the very bottom.

Pull the halyard and simultaneously feed the boltrope into the sailtrack. When the sail is all the way up, secure the main halyard by pushing the nico press fitting, located on the wire portion of the main halyard that is now located in the spreaded portion of the mast, underneath the fork provided. See illustration #5. Stow the halyard line in one of the pockets on the forward portion of the trampoline.



CUNNINGHAM OPERATION

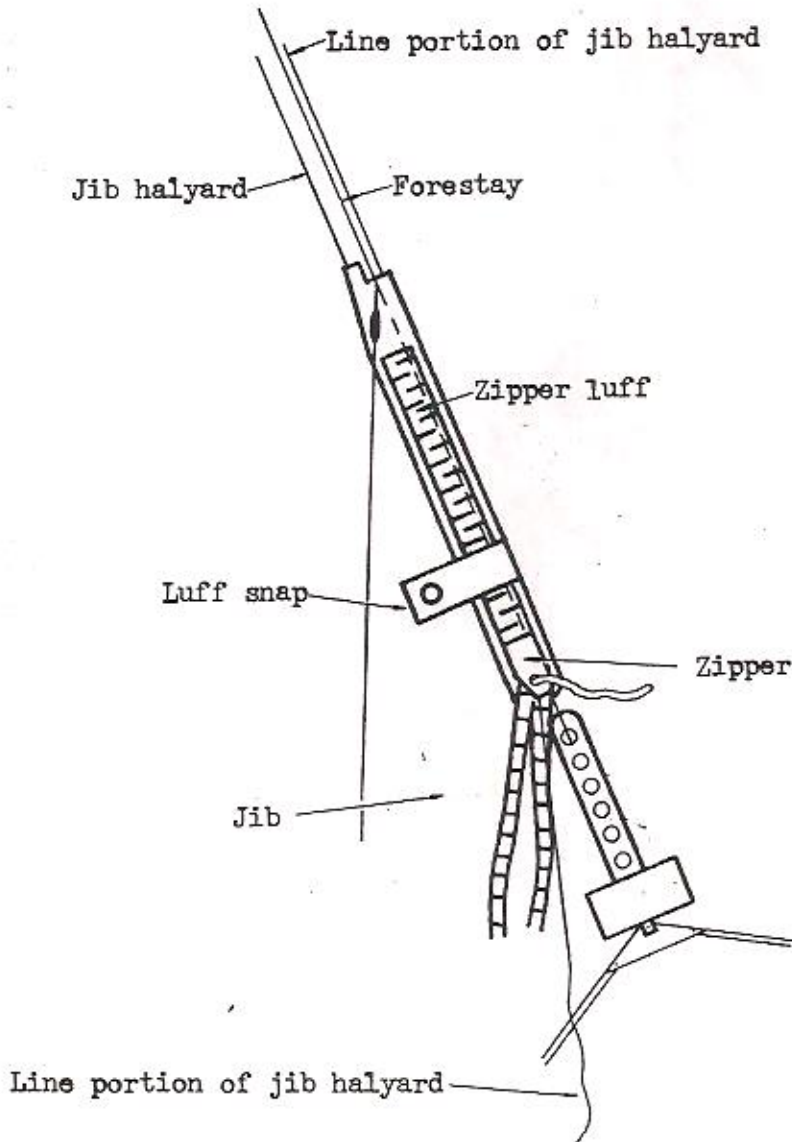
Once the mainsail has been raised and secured, the cunningham should be threaded. The cunningham provides the luff of the Super Cat mainsail with tension, thus making the airflow across the sail as even as possible. The threading operation is as follows: A 6' length of braided pre-stretch line, 1/4" in diameter, has been tied to the bullet block with a becket just underneath the boom. This line passes up between the mast rotation limiter and the boom, and through the grommet at the tack of the mainsail. Pass the line down the other side, between the boom and mast rotation limiter and through the sheave of the bullet block. Pass the line up through the grommet again, and back down to the clam cleat on the right side of the mast near the bullet block with the becket. Pass the cunningham line through the clam cleat. Simultaneously pull down on the cunningham line and guide the slide at the tack of the mainsail into the sail track. To achieve maximum tension on the luff of the mainsail, it is necessary to wait until the boom and the mainsheet blocks have been secured to the boom and clew, put tension on the blocks, then go forward and pull down on the cunningham line and secure the line in the clam cleat. Tension on the blocks helps to pull the cunningham down farther than would be possible without their use. See illustration #6 for an example of a properly installed cunningham line.



THE JIB

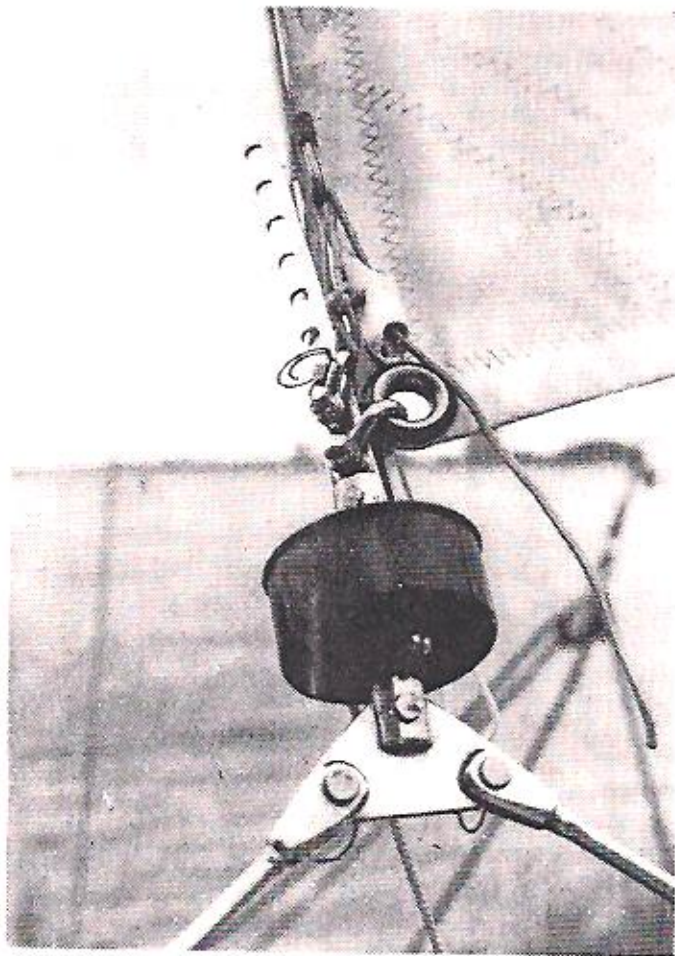
Before attempting to raise the jib, check to see if the roller furling drum has enough turns on it so the jib may be furled completely around the forestay. This can be done by checking to see how much slack there is in the roller furling line. If the roller furling line is not secured to the forward portion of the trampoline in its clam cleat, secure at this time. Once the line is secured, there should be no more than 3" of slack in it as it leads aft to the trampoline. If there is too much slack in it, simply turn the forestay in the direction to twirl the excess line back into the drum.

Secure the jib halyard shackle to the head of the jib. Place the "zipper luff" portion of the jib around the forestay and put the line portion of the jib halyard inside the zipper portion along with the forestay. Pull the zipper closed, and raise the sail slightly, until it is a few inches below the snap on the luff, and fasten the snap. See illustration #7.



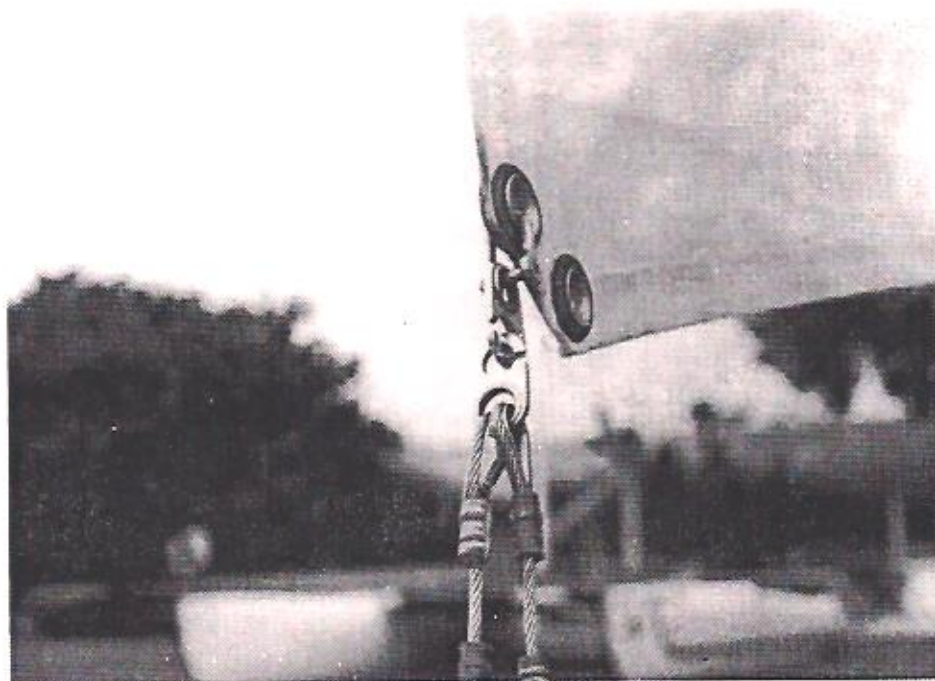
Begin raising the jib and closing the zipper simultaneously until the jib is complete raised. Fasten the snap on the luff near the tack of the sail, just like the one near the head. Attach the jib tack shackle to the forestay adjuster at the bottom of the adjuster. (As you are raising the jib, the jib halyard is actually being pulled through the luff of the sail. When the sail is raised, the thimble on the wire portion of the halyard will be exposed at the foot of the jib.)

Just above the jib tack shackle, there is another shackle with a 3/32" x 2' leach line attached to it. Pass this line up through the thimble on the jib halyard, back through the shackle and back up through the thimble. Pull this line real tight and secure it through the jam cleat on the left side of the luff near the tack. This line is referred to as the luff tensioner, and it is necessary to have the luff of the Super Cat jib tight for good performance. See illustration #8 for an example of the luff tensioner.



Untie the line portion of the jib halyard and stow it in either one of the trampoline pockets, or in one of the storage bags in the hulls. The roller furling line leads aft to a clam cleat on the forward right hand side of the left half of the trampoline. If there is too great an excess of roller furling line at the clam cleat, take hold of the tack of the jib and turn it, around the luff, until the right amount of line is extended back to the clam cleat. With the jib in its sailing position, the roller furling line should have no more than 3" of slack in it.

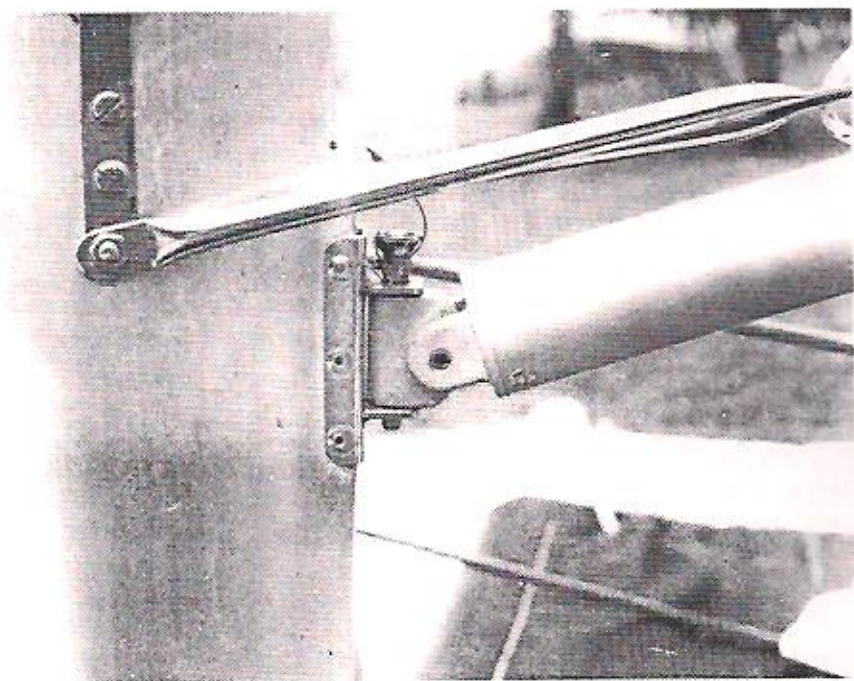
The jib clew blocks are equipped with a Brummel hook and there is a matching Brummel hook on the clew of the jib. These hooks fasten together and the jib can now be manipulated from the trampoline using the jib sheet. See illustration #9 for an example of how Brummel hooks work.



9

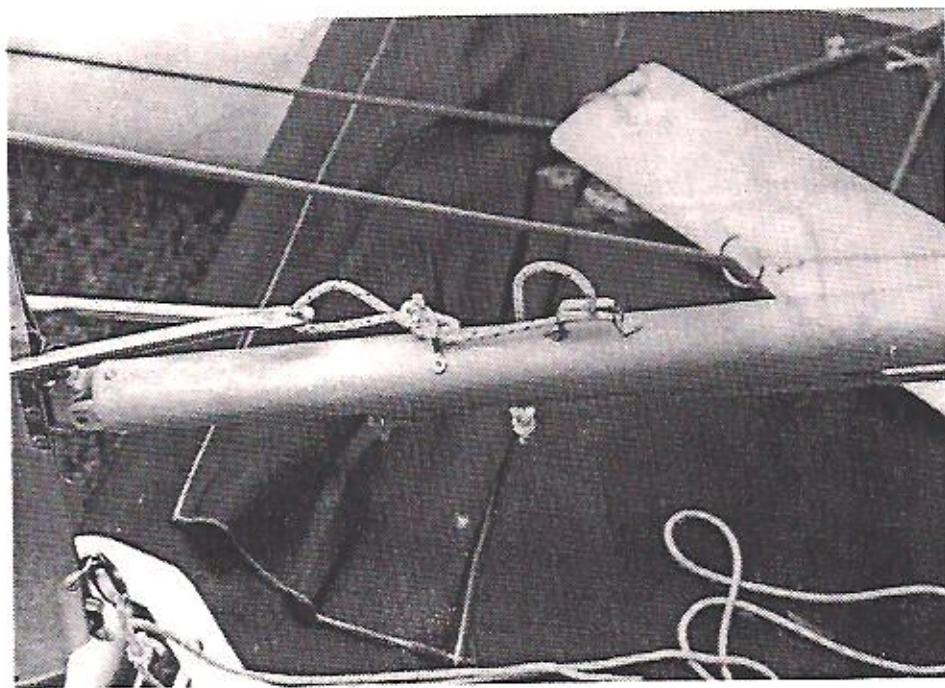
BOOM INSTALLATION

The boom is secured to the mast just below the spreaded portion of the mast where the mainsail is hoisted. The boom should be secured in the bracket with the quick release pin provided. The wishbone attached to the mast should be above the boom. The boom is properly in place when the orange line attached to it is on the underside. See illustration #10 for an example of proper boom installation.



MAST ROTATION LIMITTER

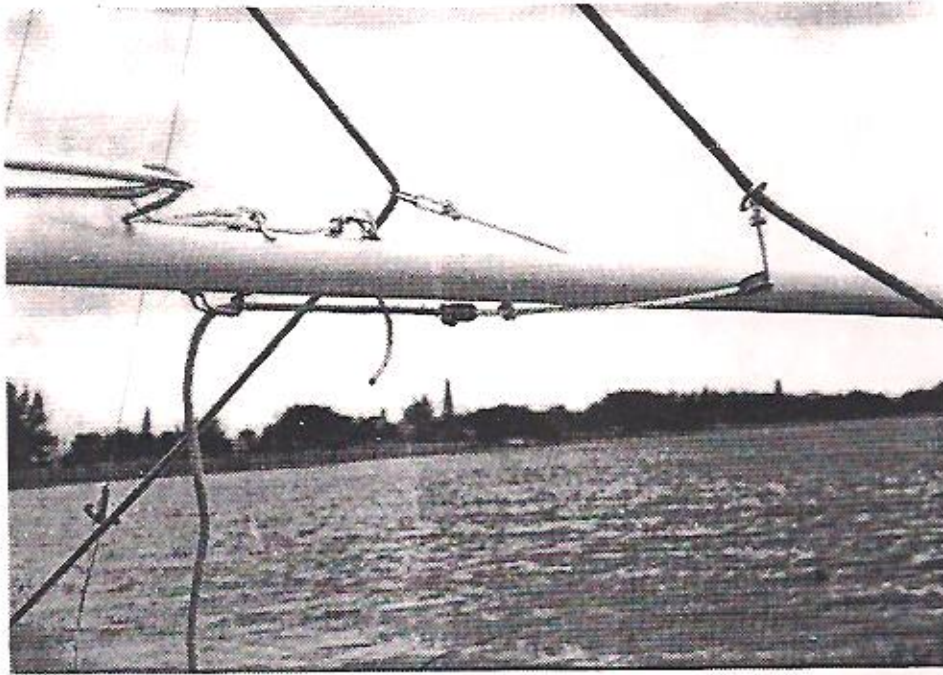
The Super Cat has been equipped with a mast rotation limiter to enable a skipper to have an additional means of control of the airflow over his sail. Skippers generally use their own discretion in setting the limiter, but as a rule of thumb, the limiter should be set so the leeward side of the mast is flush with the forward section of the leeward side of the mainsail. For a look at what the mast rotation limiter will appear like when properly installed, see illustration #11.



11

BARBERHAULER

Instead of outfitting the Super Cat with a jib sheet traveler, a barberhauler system has been incorporated which affords control over the jib sail, superior to that of a standard traveler. The barberhauler enables a skipper to manipulate the distance between the windward side of the jib and the leeward side of the mainsail. When properly installed, the barberhauler will appear as it does in illustration #12.

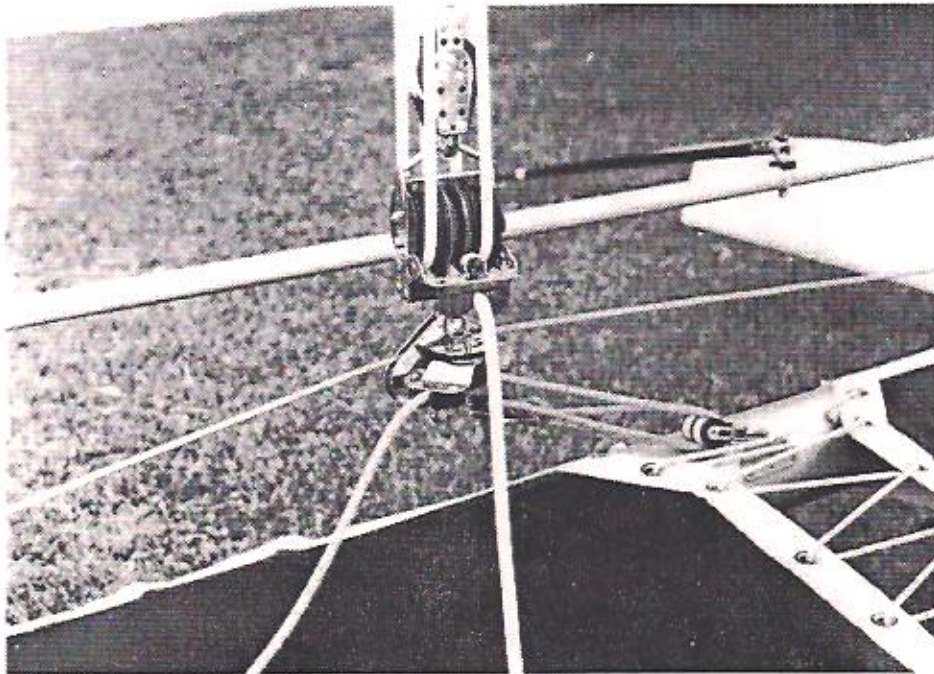


12

Notice how the stainless steel rings on the jib sheet are attached to the barberhauler line on the boom, extending out from the bullet blocks. The barberhauler is manipulated by the orange 1/4" braided dacron line on the underside of the boom. Pulling forward on the line pulls the jib clew toward the mainsail, releasing the line allows the jib clew to move away from the mainsail.

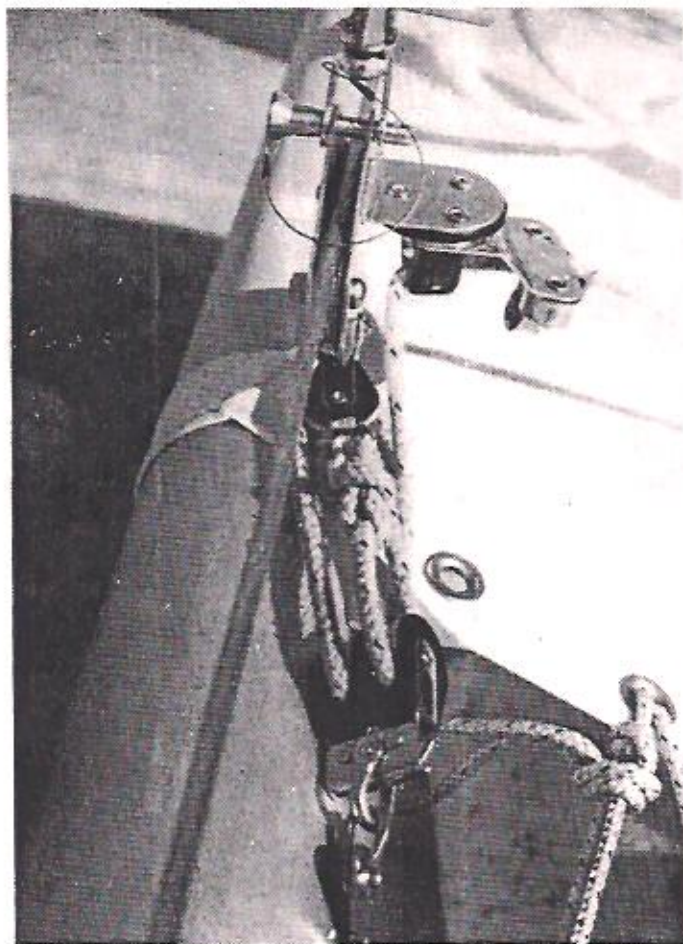
TRAVELER CAR ATTACHMENT, OPERATION

The traveler car is attached to the 1/4" stainless steel cable on the rear cross beam of the Super Cat. The top of the traveler car is the point where the mainsheet blocks attach to the car. Disconnect the traveler car from the mainsheet blocks and place the cable on the rear beam, between the plates of the traveler car. Secure the mainsheet blocks back to the traveler car. The plate on the traveler car with the cam cleat and swivel secured to it, must be facing forward. See illustration #13 for a view of a properly installed traveler car.



13

The traveler control line is installed in the following fashion: Feed a bitter end of the 1/4" orange braided dacron line through the eyestraps on the cam cleat of the traveler car. Pass this line through the fairlead just in back of the eyestraps. Feed the line through one of the sheaves on the double block secured to the rear beam. Then, lead the line back to the sheave on the single block with the bucket at the traveler car, pass the line through this block. The line leads to the second sheave on the double block, back to the single block and ties off at the becket. Illustration #14 shows the traveler control line properly threaded.



14.

USING THE TRAVELER

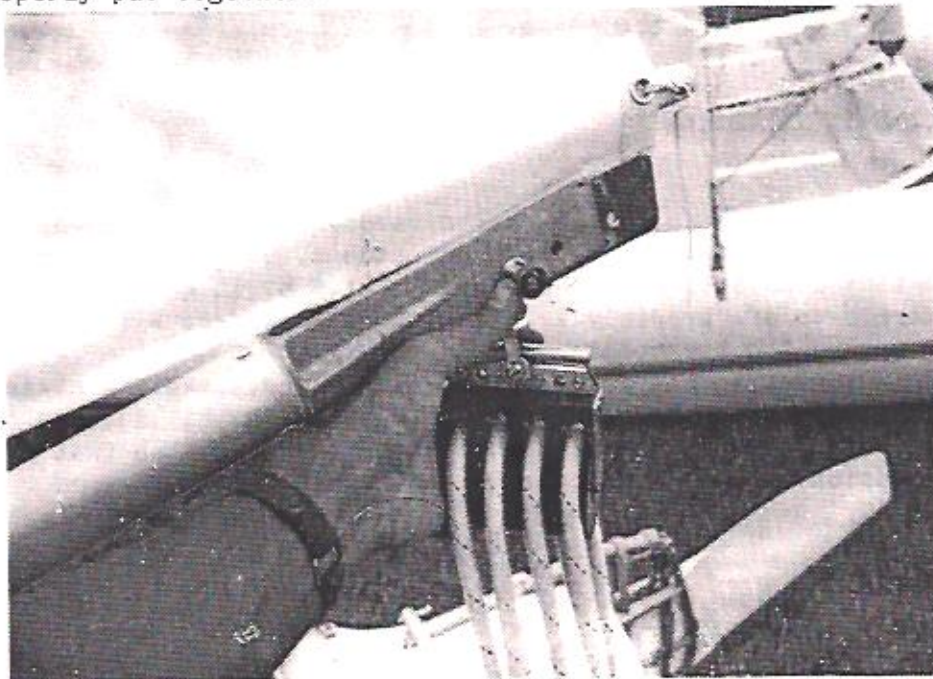
The traveler on the Super Cat is used to manipulate the angle of the sail with respect to the direction of the actual wind, and its effect on the apparent wind speed. When sailing anywhere from a beam reach up to pinching very high into the wind, the traveler is usually left either on center, or perhaps a foot off center. Sailing below a beam reach requires the use of the traveler for maximum performance, and thus optimum airflow.

The traveler essentially offers the skipper the option of letting his sail out to take advantage of the apparent wind direction when sailing off the wind, without spilling the wind from his sail because of insufficient leach tension. So, the traveler affords more control over the airflow on the sail when sailing off the wind.

MAINSHEET BLOCKS INSTALLATION

Attaching the Mainsheet to the Boom End and Main Clew Plate

The boom and mainsheet of the Super Cat are attached to the clew plate of the mainsail at the same time. Check to make sure the quick release pin in the forked end of the boom is removed and hanging on its safety wire. The top set of mainsheet blocks has a swivel attached to it. This swivel fits on the outside of the forked end casting on the boom and the main clew plate is inserted into the forked end casting on the boom. Line up the holes in the swivel, the forked end and the clew plate and insert the quick release pin through all of these fittings, thus securing the mainsheet blocks and the boom to the clew plate of the mainsail. See illustration #15 for what the assembly appears like when properly put together.



Securing the Mainsheet to the Traveler Control Line

It is recommended that the bitter end of the mainsheet and the bitter end of the traveler control line be secured to one another, thus forming a continuous line. This may be done by tying a figure eight knot around the traveler control line with the mainsheet and then tying a figure eight knot around the mainsheet with the traveler control line. Pull the two knots until they are fast against one another, and you have a continuous mainsheet and traveler control line.

JIB SHEET OPERATION AND INSTALLATION

Upon receiving your Super Cat from your dealer, the jib sheet should already be in place. If it is not, the threading procedure is as follows: Take a bitter end of the 3/8" blue braided dacron line and tie it to a becket on one of the jib sheet blocks. Take the other bitter end and pass it through one of the 1" stainless steel rings on the barberhauler. Locate the jib clew blocks, seen in illustration #9, and pass the jib sheet through either of the blocks. Bring the bitter end back to the jib sheet block and pass it underneath the ratchet sheave and out through the cam cleat. The cam cleat should be facing the center of the trampoline. Feed the bitter end through the cam cleat and around the ratchet sheave on the other side of the trampoline. Pass the end through the other jib clew block, through the other stainless steel ring, bring the end back to the second ratchet block and tie it off at the becket.

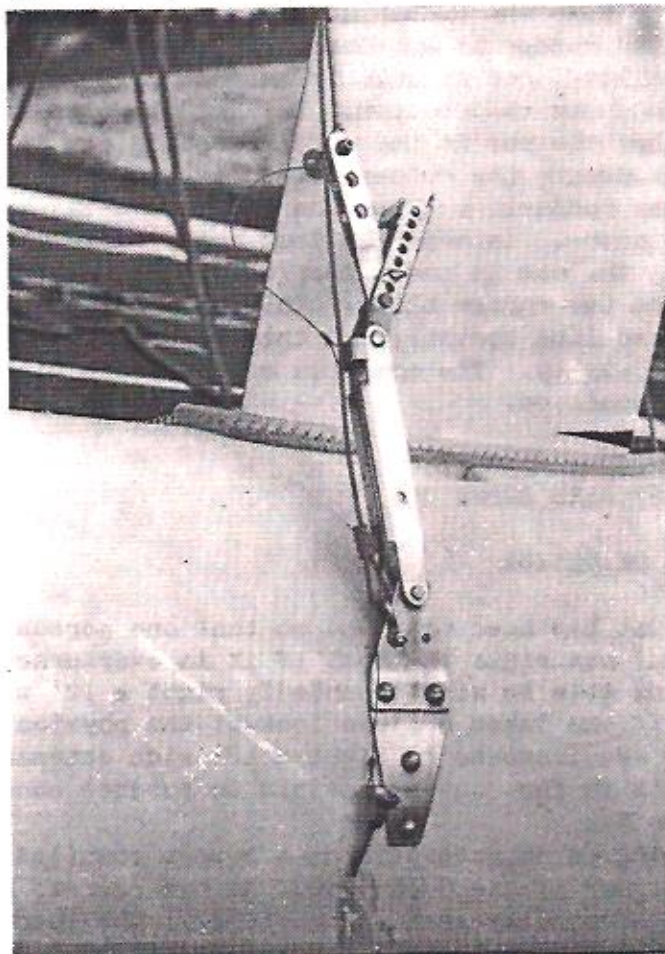
Jib sheet operation on the Super Cat is as simple as on any other catamaran. There is, however, one big difference: Do not leave the jib sheet cleated while tacking. Back winding the Super Cat jib is not necessary. In fact, back winding the jib during tacking will slow the tack down. The key to successful Super Cat tacking is in releasing the jib sheet just as you begin to tack.

DAGGERBOARD INSTALLATION

The Super Cat has port and starboard daggerboards. Boards can be differentiated between outside and inside by comparing the delrin stoppers that pass through the boards at the top, in center. When the daggerboards are properly in place, these stoppers will be pointing toward the trampoline.

Before inserting the daggerboards into place, take the clear plastic tubing with the shock cord passing through it, adjacent to each daggerboard trunk, and stretch it over the trunk, so that it is putting tension on the daggerboard once in its trunk.

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 illustration #16, for a view of a daggerboard properly in place with the black mark exposed.



16

TILLER CROSSBAR INSTALLATION

The tiller crossbar has a port and a starboard side to it and each is designated with a "P" and "S", and these designations are located on the end of each side of the crossbar. Insert the proper end into each tiller swivel and secure the crossbar using the provided quick release pins.

RUDDER OPERATION

Super Cat rudders are equipped with a kick up release system, so that one need not worry about harming the rudders 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: 1) they can be

pushed down by hand, or 2) they can be lowered by using the lines in the tiller.

There is a delrin fitting with two holes in it, in the end of each tiller. Coming out of these two holes are two lines. The top line is red and the bottom line is blue. To lower a rudder, pull on the red line and the rudder will kick down slightly, then pull on the blue line and release the red line and the rudder will go all the way down. Be sure the rudder locks in place when pulling the blue line. If the rudder is not locked in place, it will work its way up during sailing, and it will be necessary to pull on the blue line again to lock the rudder down. Pulling the blue line lowers the rudder so that the cam in the rudder casting can lock into the rudder blade and secure the rudder down.

To raise the rudders, pull on the red line until a rudder comes up and locks in place. In order to lock a rudder in place in the raised position, the cam in the rudder casting needs to be in the lower cut away on the rudder blade. This can be accomplished by pulling on the red line abruptly and then releasing it before the blade is all the way up. The momentum of the blade will carry it up into the locked position.

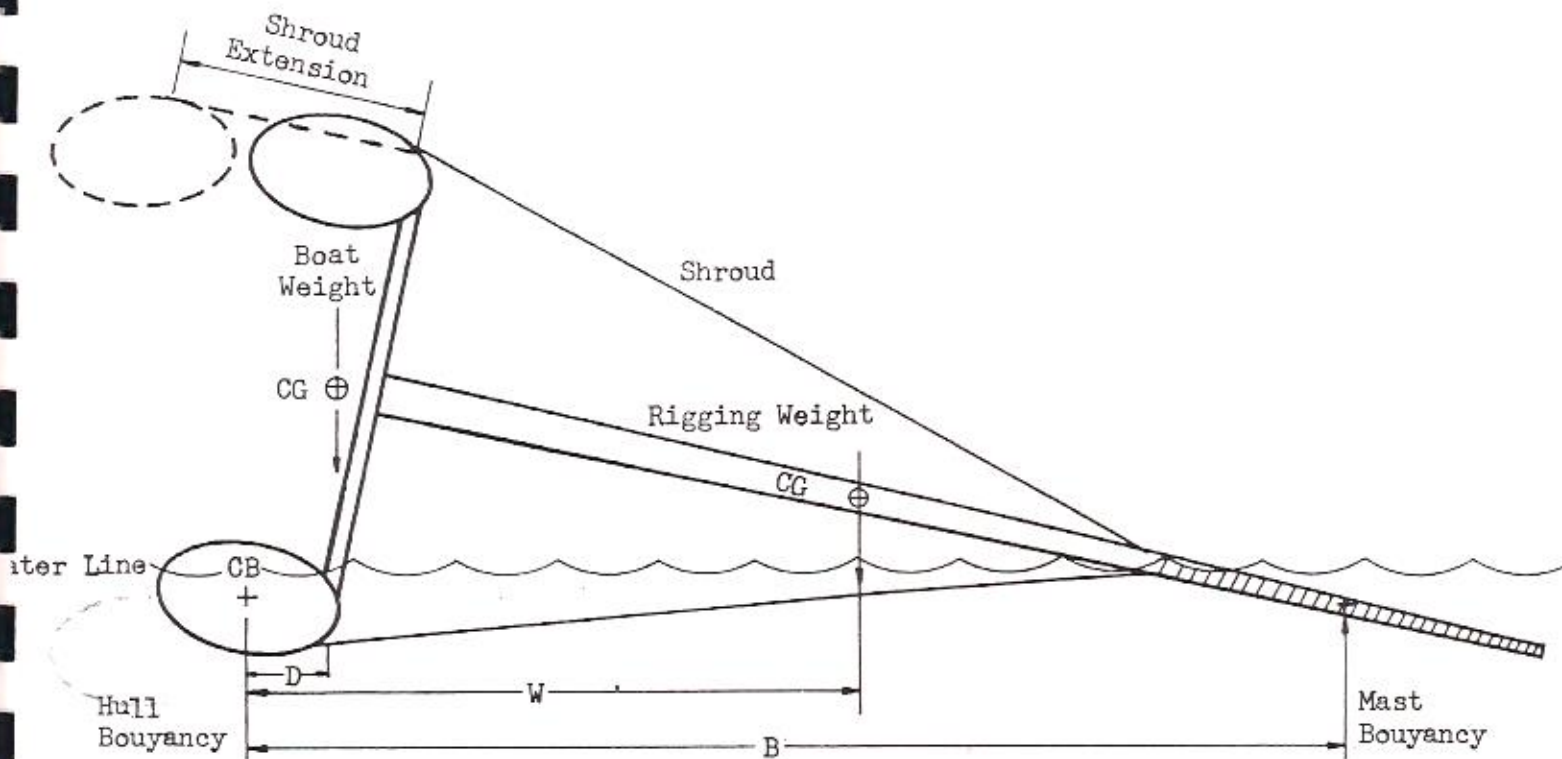
RIGHTING AN OVERTURNED SUPER CAT

CHARACTERISTICS OF DESIGN

The Super Cat has been designed so that one person of average weight (165 lbs.) can right the boat if it is overturned. To some, the idea of being able to single handedly right a 12' wide catamaran seems absurd. If one takes a close look at the physical parameters surrounding the requirements to right a 12' wide catamaran, he will notice that it is in fact quite feasible to produce enough leverage to right a Super Cat.

The following is an excerpt from a report compiled by Bill Roberts, co-designer of the Super Cat. In his report, Bill outlines and explains both verbally and mathematically, the specific design characteristics that make the Super Cat "rightable" by one person.

Surprisingly enough, these safety criteria did set the design of some of the major parts of their boat, like the mast's maximum allowable weight, and its minimum volume per unit length. Most catamarans are designed with mast of insufficient volume per unit length and this lets the boat go turtle in a turnover. In the sketch below, it can be seen that the submerged mast volume times its leverage must be equal to or greater than all the other torques which are trying to turtle the boat, or it will indeed go turtle.



OVERTURNED CATAMARAN

In detail, the equation becomes:

$$\text{Boat weight} \times D + \text{Rig weight} \times W = \text{Mast Bouyancy} \times B.$$

Using the above equation, Mast Bouyancy can be solved for, which will allow the boat to float steady state on its side.

Using the above equations and the "no turtle" requirement, the Super Cat mast was designed. The resulting section is the most streamlined mast available with a fineness ratio of nearly 2.0. Also, once the hull weight, mast weight, and turn over steady state position are known, a shroud extension length for one person righting can be determined. On the 12 foot beam Super Cat, this extension is 21".

DEVICE BUILT INTO THE SIDESTAY

The Super Cat has been equipped with a special tension lever located on each of the main chainplates. This lever performs two specific functions, one of which is putting tension on the rigging for a "tight rig," while under sail. The other reason, is that in the event one turns a Super Cat over, this lever can be released and the shroud extended so that the boat can be righted. See illustration #2 for a view of the righting levers, both locked and released.

RIGHTING TECHNIQUE

The moment you turn a Super Cat over the first thing to do is jump off the boat into the water. If the wind is blowing hard, the trampoline will act as a sail. So, you should be sure the boat does not float away from you.

Once you are holding onto the boat in the water, pull the daggerboard on the hull in the water, until it is fully extended. Now, sit on the end of the daggerboard with your feet in the water. This will cause the boat to round up into the wind, and the mast and top side of the trampoline will be into the wind. It is very important that the mast be facing into the wind before you attempt to right the Super Cat.

If the wind is blowing hard enough (twenty knots +) you probably will not have to use the special righting feature. Simple take hold of the righting line, on the hull up in the air, located at the intersection of the forward main beam and the hull, stand on the end of the lower daggerboard and pull. If this process fails to work, climb up the ladder on the underside of the trampoline, walk on the trampoline center lacing around to the other side of the trampoline, to the mast base, and stand on the mast base. Reach up and pull the necessary pins to extend the shroud. Climb back down the ladder, onto the end of the daggerboard, and pull on the righting line.

Once the boat is righted, climb back on and secure the shroud back into the lever. Push the lever back into its tension position, and continue sailing.

THE DO'S AND DON'TS

- Do not remain on the top hull when the boat is turned over.
- Do not attempt to right the boat unless the mast is facing the wind.
- Do not leave the jib sheet cleated when righting the boat.

- Do leave the main sheet cleated, but make sure the two sets of blocks are at least three feet (3') apart.
- Do let the traveler line and consequently the traveler car to its fully extended position.

TRAILERING A SUPER CAT

LOWERING THE SAILS

THE JIB

To lower the Super Cat sails, face the bows into the wind and lower the jib first. Locate the jib halyard line, and tie it to the thimble in the jib halyard. Untie the jib luff tensioner, if you have tied it, and release it from the clam cleat on the luff of the jib. Remove the jib tack shackle, unstrap the strap on the luff, begin to unzip the luff, and lower the 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 to the forestay bridal loosely, as you may need to use it when lowering the Super Cat mast.

THE MAINSAIL

To lower the mainsail, remove the mainsheet blocks and the boom from the clew plate of the mainsail, by removing the quick release pin holding them on the sail. It may be necessary to push upward on the boom to ease tension on the pin, in order to remove the pin. Go forward and remove the boom from the mast, and untie it from the mast rotation limiter. Ease the cunningham and remove it from the grommet in the sail. Lift up on the foot slightly and remove the slug from the sail track so that the internal halyard is exposed. Take the line portion of the halyard in hand and pull on it to release the halyard from its lock. Take hold of the wire portion of the halyard with your fingers and pull it away from its lock and begin to lower the sail. If anything should get hung up, pull of the halyard to raise the sail, and begin the procedure again.

LOADING THE SUPER CAT ON THE TRAILER

To successfully load the Super Cat on its trailer, it is not necessary to back the axle of your trailer into the water. Telescope the trailer to its twelve foot width, and back it down to the water so that the tires are barely touching the water. Lift the bows and pull the boat up on the trailer slightly. Take the line from the winch and tie it around the front beam in the center. Crank the winch slowly and the boat will load on the trailer.

Pull the boat up on the trailer until the front main beam is above the telescoping arm at the front of the trailer. With the boat on the trailer in this fashion, you now have a balanced load.

Secure the Super Cat to the trailer with the shock cords used to tie it down. Pull the trailer up on level ground and position the boat so that the transoms are facing into the wind.

STEPPING THE MAST DOWN

Make sure the boat has its transoms facing the wind. Release the shroud levers on both sides of the boat. This will release the tension in the rig and make it simple to disconnect the forestay. Use the line portion of the jib halyard to temporarily secure the mast in the upright position while the forestay is disconnected. Tie the line to the mast carrier on the tongue of the trailer.

Using the bell shackle used to raise the mast, secure the line from the winch of the trailer to the forestay. Put tension on the forestay with the winch and untie the jib halyard line. Begin lowering the mast by paying line out of the winch. When the mast is approximately 3 or 4 feet from the upright position, secure the small rings in the dogbones of the trapezes to the front beams using the righting lines. Pass the righting lines under the front beam, up through the opening in the trampoline at the beam, and back through the cam cleat on the jib sheet block. For an illustration of how this is done see illustration #'s 3 and 4 on pages 4 and 5.

Raise the mast support bar on the trailer and secure it to the front beam in the same fashion as when raising the mast. Continue to lower the mast making sure the line goes into the roller on the mast support bar. When the mast is all the way down, untie the winch line from the forestay, release the trapeze dogbones, and return the righting lines to their normal position.

REMOVABLES

Remove the mast from the dolphin striker post, and move the mast forward so that the top of the mast is even with the after end of the rudders. Secure the mast in the mast carrier on both the trailer and the after main beam on the boat. Tie a line from the mast carrier on the tongue of the trailer to the diamond spreader, to prevent the mast from moving backward while trailering.

Remove daggerboards from the boat, remove the tiller crossbar, and if you do not want to tie the boom down to the trampoline, it may also be removed by untying the barberhauler lines from the stainless steel rings on the jib sheet. You may want to remove the mainsheet blocks and the traveler car from the boat. This requires unthreading the orange traveler control line from its sequence of blocks. Unthreading the traveler control line is simple and is outlined on page #15 of this manual.

LOOSENING THE TRAMPOLINE

In order to freely telescope the Super Cat in to its 8' trailering width, it is necessary to take the tension out of the trampoline. This is done by untying some of the lacing on the underside of the trampoline. Start with the after lacings. Untie the knots on the after lacings closest to the center of the trampoline. Do not unthread or unlace the line. Merely use the extra line provided to loosen the aft end of the trampoline.

Next, loosen the center lacing starting at either end. Here it is necessary to unlace the line through about four grommets on each side. This enables the trampoline to have enough slack to telescope in and out easily. Be sure and tie knots in the end of the lacings both aft and forward, so the lines will not unlace themselves while trailering.

TELESCOPING THE SUPER CAT IN FOR TRAILERING

Special markings have been provided on the wires on the trailer to indicate which thimble telescopes the Super Cat in and which telescopes the boat out. Tie the line from the winch, after passing it underneath the large red roller, to the thimble marked "pull close."

Next, remove the dolphin striker post and its assembly from the front main beam, then remove the bolts in the beams, both fore and aft. Begin to crank the winch, and the boat will telescope together. If you experience any difficulty in telescoping the boat, check to make sure that you have removed everything necessary to complete the operation. The trampoline will begin to bunch up on the starboard side with the smaller beam. Let it bunch up until the last few inches, then take the whole bundle and pull it up and onto the larger section of the beam. At any point in the telescoping operation, you may be required to push on the starboard hull at mid ship to make the boat telescope in. Do not let this worry you, just put tension on the cables with the winch, and go push the boat together.

TYING EVERYTHING UP

Once the boat has been telescoped together, you must tie some things up before driving away. All of the shrouds, forestay, jib halyard and trapeze wires should be coiled individually and secured to the trampoline with a piece of string or shock cord. This facilitates easy untying for the next sailing day. Simply tie these wires to the hiking straps on the trampoline.

Tie the tiller on each rudder, so that the rudder will not swing from side to side while under tow. If you choose not to

remove the mainsheet blocks and traveler car from the boat, extend the blocks so that all of the sheet line is used up, pull the top set of blocks as far forward as possible, and tie them to the trampoline, either at a grommet or at a hiking strap.

The tiller crossbar can be stowed in the back of a stationwagon or tied to the trampoline. One end of the bar goes in a slot provided in the mast carrier, and is secured with a shock cord, the other end can be left loose at the forward end of the trampoline. It is recommended that a small section of indoor-outdoor carpet be tied around the end of the tiller crossbar to prevent it from chafing the trampoline. The boom may be secured in a fashion similar to the tiller crossbar, by placing the end fork in the mast carrier on the after beam, securing it there, and letting the other end lay in the trampoline. Once again, you should tie a piece of carpeting around the end of the boom to prevent it from chafing the trampoline.

The traveler cable may ride without being tied up, provided it is in front of the mast carrier on the after beam. The dolphin striker cable must be tied up. Perhaps the easiest way to do this is to pull the cable forward, tie a line to it, pass the line around the mast twice, then tie the line off to the forestay bridle. This way, both the forestay bridle and the dolphin striker cable are secured for trailering.

Secure the aft beam mast carrier to the beam by using the shock cord provided. Make sure that the mast is secured into the carrier by the shock cord passing over the top of the mast and going through the two holes in the upper portion of the carrier on either side of the mast. If the mast is not secured in this fashion, the carrier will slip around the beam enough to allow the mast to rub the trampoline and perhaps damage it. If you have chosen to secure your boom and tiller crossbar in the mast carrier, be sure you have enough shock cord to hold everything together safely. Pass the shock cord on the mast carrier under the main beam and over the mast for double protection at least twice. This way the mast will travel securely.

The final operation in tying everything up, requires you to secure some pieces of all purpose carpet to the shroud adjustors so they will not scratch the hulls while under tow, and to secure some carpet between the mast and the wires attached to the mast at the hound fitting. This way the mast and hulls will not be unnecessarily chafed during trailering on the road.

MAINTENANCE SUGGESTIONS FOR A HEALTHY SUPER CAT

Every Super Cat that leaves the factory in Florida does so with all of the joints where metal works on metal having been greased. After sailing the boat a couple of times, however, one may notice that these joints do not work as smoothly as at first. Consequently, it is recommended, that all owners check to see that all joints are lubricated properly... It is also necessary to use a

liberal amount of waterproof silicone lubricant on the main beam bolt holes and on both parts of the dolphin striker assembly. These places just mentioned should be greased everytime the boat is set up from the trailer, and should be checked periodically for boats that are left on the beach telescoped out.

Every couple of months, it may be necessary to remove the rudders from the casting to remove some of the growth that has accumulated on both the rudders and on the inside of the castings. It is not necessary to remove the lines that operate the rudders though. The rudder hangs nicely on the lines. Maintenance such as this will help the rudders to operate smoothly at all times.

Each time one uses a Super Cat, he should rinse the boat down completely upon completion of a day's sailing. All of the aluminum on the Super Cat has been anodized, but this only prevents salt from causing any immediate damage when they are exposed to extended salt abuse.

If you should develop a severe kink or a breakage in any of the wires that are critical to the Super Cat's performance and safety (and they all are) it should be replaced without hesitation. Any boat that is left out to weather will show its age sooner than it should, so it is recommended, a Super Cat owner treat the finish of his boat with care. It is wise to wax the hulls of the Super Cat at least twice a year. This will help to maintain the luster of the gelcoat and the overall beauty of the boat.

If any of the wires should develop any rust, or what appears to be rust, it is recommended that the owner obtain some Naval Jelly or some other type of rust remover, and carefully remove any of the corrosion appearing on the boat. If any of the chainplates appear corroded, use some Nevr-Dull or some Brasso to remove the corrosion.

When ever any of the lines on the boat appear to be wearing out, it is important to have them replaced, not only for cosmetic reasons but for safety reasons as well.

Daggerboards should be cushioned during travel so that they will not get damaged. Daggerboards are delivered from the factory already tuned, so that they require no sanding or grinding. If, however, a singing sound from either the daggerboards or the rudders develops, use fine sandpaper to sharpen the trailing edges of either and the singing should stop.

Sails should be periodically washed with a mild detergent and rinsed so that they will have a longer life than if not cared for. Every time you go sailing, you should make a point to check the tension of the battens in the mainsail. Tension should be adjusted so that there aren't any wrinkles visible in the batten pocket. The Super Cat battens have a natural taper to them, so it is not necessary to tighten them to a tremendous tension.

SUPER CAT MAINTENANCE LIST FOR SPECIFIC OPERATIONS

Lubrication points: The following is a list of all of the necessary places that need to be checked periodically for corrosion and salt build up. Marine lubricants are preferred in each of the cases in order to prevent corrosion.

- 1) Rudder gudgeon, where rudder head meets transom of boat.
- 2) Main halyard sheave at mast head.
- 3) Jib halyard sheave on forestay.
- 4) Forestay swivel for roller furling.
- 5) Shroud adjuster levers.
- 6) Gooseneck fitting on boom.
- 7) Mainsheet swivels on blocks.
- 8) Traveler car cam cleat.
- 9) Traveler car sheave axles.
- 10) Front and rear crossbeam bolts.
- 11) Dolphin striker assembly.

SUPER CAT REPLACEMENT LINES AND SHOCK CORDS

Mainsheet: 45' $\frac{3}{8}$ " white braid for 8:1 add 10' for 10:1

Jib sheet: 52' $\frac{3}{8}$ " blue braid one piece

Traveler line: 16' $\frac{1}{4}$ " gold braid one piece

Trampoline lacing:

- 1) lacing for front flaps (each): 10' $\frac{1}{4}$ " pre stretch
- 2) lacing for aft flaps (each): 20' $\frac{1}{4}$ " pre stretch
- 3) center lacing (each): 21' $\frac{1}{4}$ " pre stretch
- 4) righting lines (each): 11'6" $\frac{1}{2}$ " pre stretch
- 5) slit lacings (each): 25" $\frac{1}{4}$ " pre stretch
- 6) ladder lines (each): 40" $\frac{5}{16}$ " white braid

Rudder lines:

- 1) red line for cam manipulation: 5'1" $\frac{1}{4}$ " red braid
- 2) blue line for lowering rudder: 4'5" $\frac{1}{4}$ " blue braid

Main halyard line: 36' $\frac{1}{4}$ " 3 strand pre stretch

Jib halyard line: 24' $\frac{1}{8}$ " white braid

Cunningham line: 9' $\frac{1}{4}$ " pre stretch

Barberhauler line: 3' $\frac{1}{4}$ " gold braid

Mast rotation limiter line: 3' $\frac{1}{4}$ " pre stretch

Roller furling line: 18' $\frac{1}{8}$ " white braid

Batten tie lines: 20" #205 leach line

Jib luff tension line: 3' 6" #505 leach line

Shock cord for trapeze wires: 12' $\frac{5}{32}$ "

Shock cord for daggerboard tension: 30" $\frac{3}{16}$ "