325

HOOD
YACHT SYSTEMS

Sea Furl 5

INSTALLATION MANUAL

Uses #6 Sail Tape

Thank you for purchasing the new Hood Seafurl 5 roller reefing system. The Hood engineering team spent thousands of hours researching and developing this system. We have combined the experience of 20 years as the leader in furling technology with the simplicity of today's designs. Your Seafurl 5 will provide years of trouble free service and will add value and beauty to your boat.

The following manual will walk you through the proper installation of the roller furler. You will be altering your rigging, so care and caution should be taken to insure your boat remains safe. Take your time, measure things twice and enjoy the installation process.This will improve your confidence in the system and a job well done.

Thanks again for choosing the new Hood Seafurl 5.

Safety

Hood Yacht Systems strongly suggests that you inspect the condition of your mast fittings and headstay before attempting installation. If your headstay has been in a salt water environment for more than four years, shows any fraying, or rust contamination, you should consider replacing it prior to installation.

The quality of your installation is heavily dependent on proper planning. Therefore it is critical that you make sure the drive unit will have adequate clearance over deck hardware, bow pulpits, anchor locker doors, or rollers. Inadequate clearance can be remedied with the addition of stay extension hardware available from rigging suppliers. Hood Yacht Systems recommends using as short an extension as possible due to the loss of performance of the unit and sail as extensions become longer.

Installing the unit during inclement weather or without adequate work space is heavily discouraged. The silicone sealant and LOCTITE adhesives provided with your unit require dry working conditions with temperatures above 60°. If these conditions are not met, the longevity and future performance of your unit may compromised. Also, the cutting of your headstay and extrusion pieces require accurate measurements. Having adequate work space will greatly improve the quality of your installation.

VERIFYING YOUR RIGGING DIMENSIONS AND TYPE

A. Double check your headstay diameter to make sure you have chosen the proper system size. Write the measurement here._____

B. Double check your Clevis pin diameter to make sure you have chosen the proper system components. Write the measurement here. _____

C. Attach a tape measure to a jib halyard and take a rough measurement of headstay length to make sure you have enough luff extrusions to complete the installation.

D. Check your rigging type. We consider "standard" rigging to be an open body, integral toggle turnbuckle swaged to 1 X19 wire. The "standard" upper end would have a swage eye pinning to a masthead toggle. Other arrangements exist and require different rigging fittings to accommodate them, some of the most common are as follows:

1. Isomat mastheads - These do not use masthead toggles, the stay passes through the masthead and uses a stemball for toggle action. If your boat uses stemball fittings a stemball eye to a double jaw toggle is required. This should be readily available through your rigging supplier. Note: This will change your pin to pin measurement. Be sure to compensate for the length of the stemball eye and toggle.

2. Link plates and toggles - Many headstays use link plates or toggles to lengthen the stay. If this is the case your pin-to-pin length should be measured to the pin that attaches to the stem fitting. Attach the Hood toggle below any link plates to allow for proper toggle action.

COMPONENT CHECKLIST

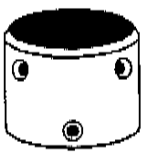
Installation requires the temporary removal and cutting of your headstay. Therefore, after unpacking your new Seafurl 5 unit it is very important that you...

CHECK THAT ALL PARTS LISTED BELOW ARE CONTAINED IN YOUR KIT.

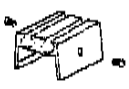
Drive Unit Box

Tack Socket

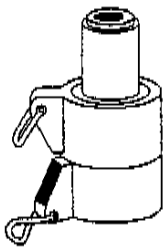
Tack Socket Adapter



Feeder Piece



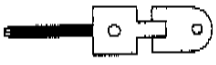
Halyard Swivel

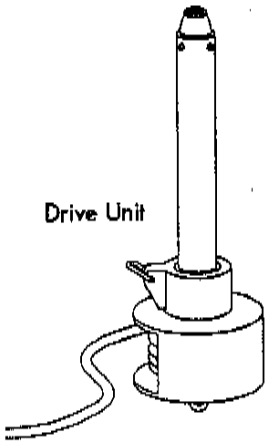


Toggle for 1/2" pins

or

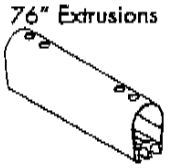
Toggle for 5/8" pins



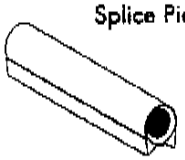


Extrusion Box

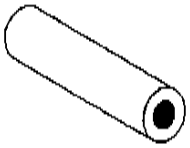
76" Extrusions



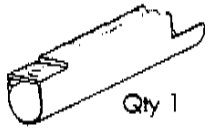
Splice Piece



Bearing Tube



21" Feed Extrusion

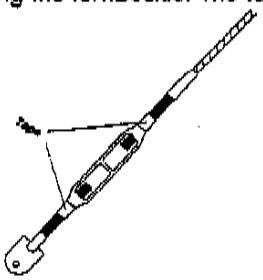


Qty 1

One splice piece and bearing tube per extrusion.

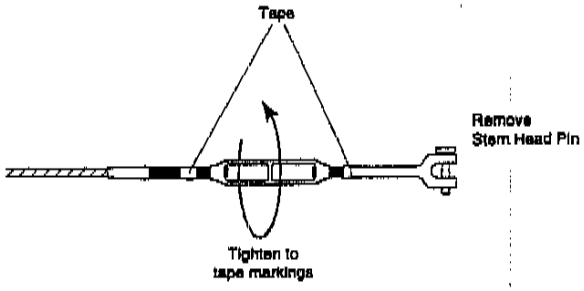
MEASURING YOUR HEADSTAY

1. In order to determine the amount of headstay wire you will be removing, you first need to get an accurate Pin to Pin measurement (the total length of the headstay from the center of the masthead pin to the center of the stemhead pin) with the headstay at proper tension. This can be done by applying tape to the threads on both ends of the turnbuckle, before loosening the turnbuckle. The tape will allow you to retention the stay to it's original length for future measurement.

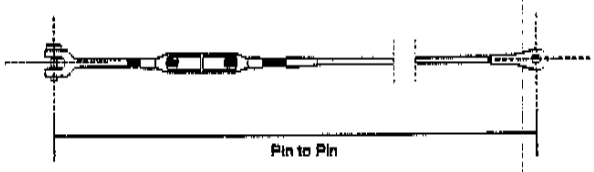


2. After properly securing your mast, the headstay must be removed. Loosen the turnbuckle and remove the stay by removing the masthead and stemhead clevis pins.

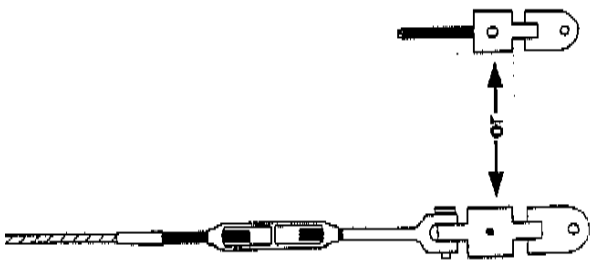
3. With the headstay on the ground,re-tighten the turnbuckle to it's "taught" length using the tape markings.



4. Lay the headstay out as straight as possible and measure the Pin to Pin length as described earlier in step 1 and write this length down. Subtract 1 3/8" from this number to compensate for the Norseman fitting.

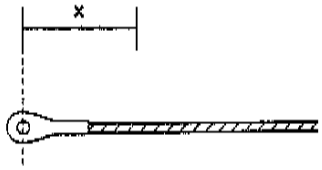


5. Attach the supplied Hood toggle adapter to the bottom of the turnbuckle. For stays with clevis pins of 5/8" remove the lower threaded fork from your turnbuckle and replace with the Hood Stud and Toggle assembly. Readjust your turnbuckle so that the top and bottom studs are threaded approximately 2/3 open.



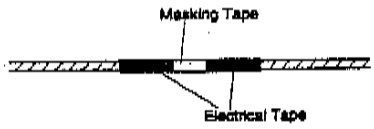
CUTTING YOUR HEADSTAY

1 . From the Center of the new stem head pin (from the supplied hood toggle), mark the point on the headstay of your original Pin to Pin minus the 1 3/8" for the Staylock terminal. Note: Special Circumstances

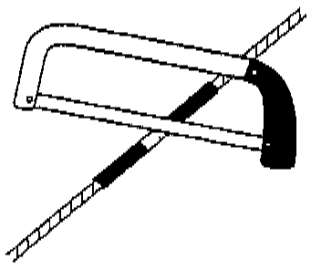


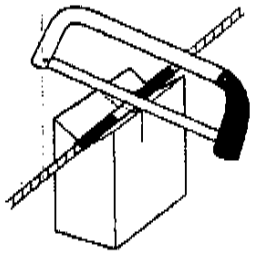
A. If you have determined that your Hood SeaFurl 5 drive unit will require an extension tang for adequate deck clearance. Install the extension tangs below the supplied Hood toggle. Measure your pin to pin measurement from the new stemhead attachment point.

2. Wrap the headstay tightly with electrical tape approximately two to three layers thick extending about 3/4" above and below the measured point. Place a piece of masking tape centered at this point and after re-measuring, mark the masking tape with a pen.



3. Your headstay can be cut relatively well using a hack saw as shown in Figure 3a. Figure 3b shows a better method using an angled slot in a piece of scrap wood as a jig.

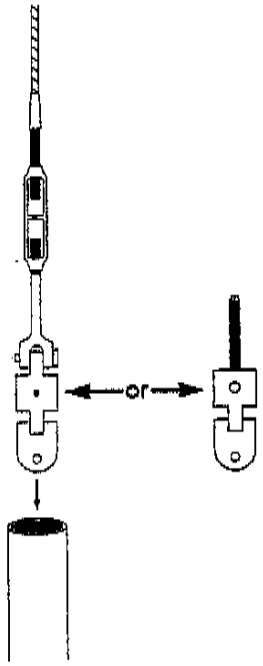




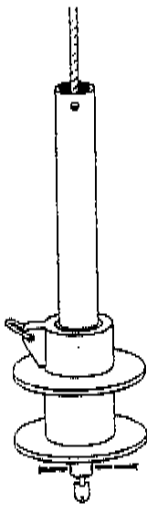
INSTALLING YOUR DRUM ASSEMBLY

1a. Before you can pin the headstay in the base of your Drive Unit you will need to remove its Stainless Steel Cover. Unscrew the two set screws holding the Stainless Steel Cover halves together on top. Underneath the basket, unscrew the two Allen head screws in the black plastic clamp (be careful not to lose the retaining nuts).

1b. Slide the Drive Unit assembly up and over the turnbuckle until the center eye of the Hood Lower Toggle lines up with the holes at the base of the Drive Unit assembly.

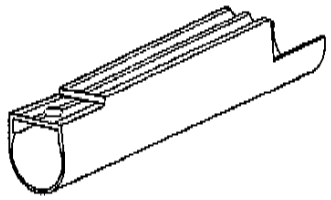


2. Push the retaining pin through the hole in the base of the Drive Unit assembly and center eye of the Hood Lower Toggle and screw into place (see diagram).

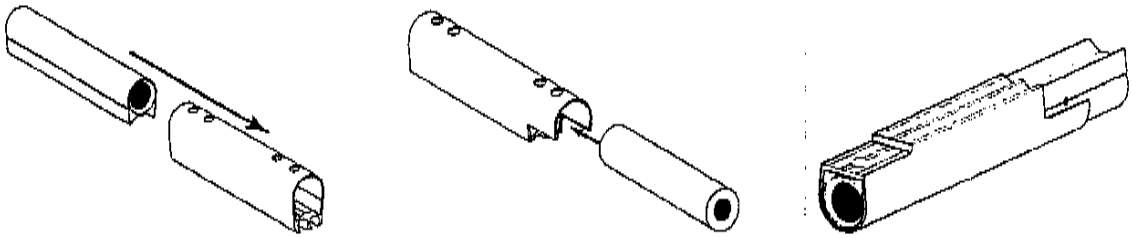


INSTALLING YOUR EXTRUSIONS ON THE HEADSTAY

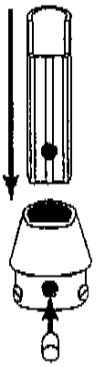
1. Your SeaFurl 5 is equipped with foil shaped extrusions and twin aft facing luff grooves. The first extrusion that you will need to locate for assembly on the unit is the Feed Section extrusion. This extrusion is the shortest one and has part of its luff grooves removed on the top and bottom.



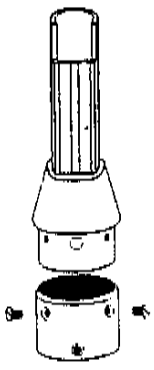
2. Apply silicone sealant to the special 6" short Splice Piece and slide flush up inside the bottom of the extrusion (the end with the straight cut). Then slide the short 29" plastic Bearing Tube down the other (notched) end, followed by the Splice Piece with two drilled holes on either side (pre-siliconed). This last splice piece should be sticking half way out of the notched end of the extrusion. Line up the set screw holes on the forward edge of the extrusion with the holes in the 12" Splice Piece. Apply blue LOCTITE to the threads of the small socket head cap screws (allen type) and secure into place.



3. Insert the bottom end of the extrusion (straight cut end) into the Tack Socket. Notice the depth the extrusion seats into the Tack Socket. Remove, apply silicone sealant to interfacing areas and re-seat extrusion into the Tack Socket. Secure in place with the Tack Socket Stud.



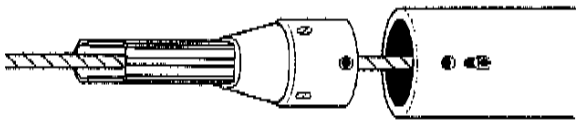
4. Silicone interfacing areas and install the Tack Socket Adapter, over the Tack Socket.



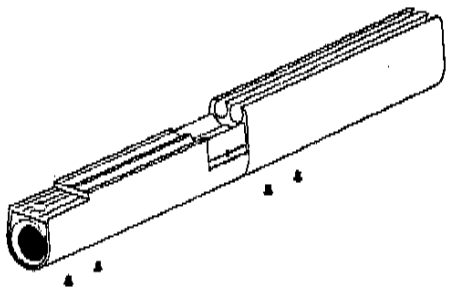
5. Apply blue LOCTITE to the 4 Flat Head Machine Screw threads. Install Screws in-screw holes of the Tack Socket Adapter until they are securely in place, but not overly tight.

Note: LOCTITE takes 24 hours to fully cure, but will cure partially in about 20 minutes. Any LOCTITE exposed to air will remain a gooey residue, which is not indicative of the state of cure inside.

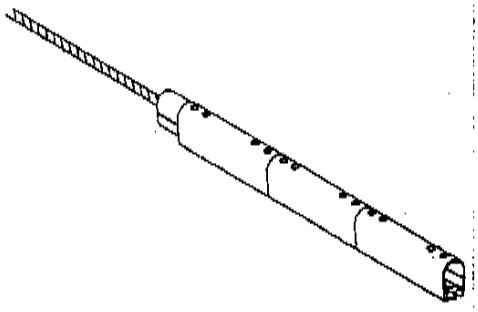
6. Slide the extrusion, Tack Socket end first, down the head stay (cut wire end). Fit the Tack Socket Adapter into the top of the Drive Unit (turnbuckle tube) assembly and temporarily set it in place with 4 Allen screws.



7. Slide the short 76" plain extrusion down the headstay and onto the pre-siliconed Splice Piece on the notched end of the Feed extrusion. Insert the short (approx. 64") Bearing Tube down the headstay and inside the top of the extrusion. Apply blue LOCTITE to the set screws holding the Splice Piece inside the two extrusions.



8. Next put silicone on the outside of the Splice Piece. Slide half way into the open end of the extrusion until the set screw holes on the forward edge of the extrusion line up. Temporarily set in place with set screw.



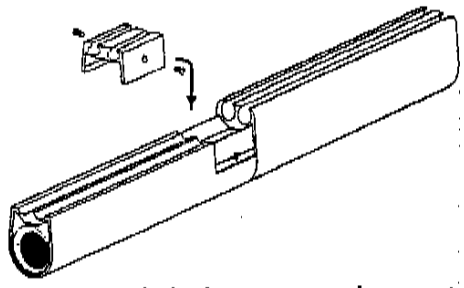
9. Slide the next extrusion down the headstay and on to the pre-siliconed Splice Piece already in place. Apply LOCTITE to the set screws and screw in place. Wipe off any excess silicone and LOCTITE.

10. Repeat steps 8 and 9 until you are near the top of the wire, but the addition of another extrusion would make it to long.

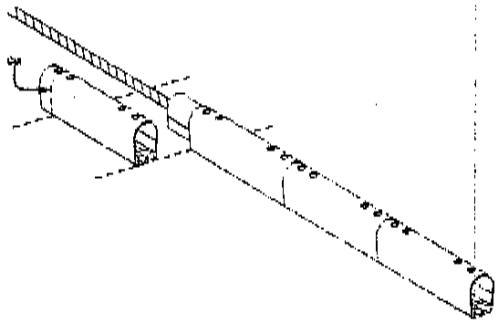
Note: The top extrusion is the only extrusion that will not have a Splice Piece on top.

11. Install the grooved Chrome Feeder with the open (wider) end pointing down towards the Tack Socket, into the rectangular cut out on the Feed extrusion using the set screws provided. The set screws should be tightened onto the Splice Piece showing through the notched cutout.

Note: In order to use your Seafurl 5 as a racing foil, you will need to remove and reinstall the Chrome Feeder (See Setting Up Your Drive Unit), for this application Hood Yacht Systems suggest coating both the screw threads and interfacing parts with Tef-Gel or never seize. If you do not plan to use the system as a racing foil, the Chrome Feeder should be installed with silicone sealant and blue LOCTITE on the threads.

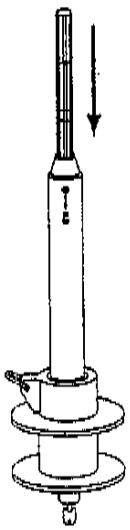


12. Line up one of the remaining extrusions with the last piece on the wire (see diagram). Cut this last section 4" below the point where you cut your wire earlier. After making sure this measurement is correct, cut the extrusion to length and install as in step 9.

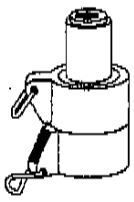


13. Slide one of the remaining bearing tubes inside and mark the tube to be cut flush with the top extrusion. Remove the Bearing Tube, cut, re-install and apply silicone on the cut edge of the top extrusion.

14. Go down to the other end of the stay and remove the Allen screws in the torque tube of the Drive Unit (the ones holding the Tack Socket Adapter/Tack Socket temporarily in place). Holding the headstay at the other end, slide the extrusions and tack socket down and inside the Drive Unit assembly as far as they will go.



15. Slide the Halyard Swivel over the top extrusion with the longer tube portion of the part pointing up (mast end of stay). Slide the Halyard Swivel up and down the length of the extrusions (be careful not to bend the extrusions) to make sure it does not catch or bind on any screw heads.



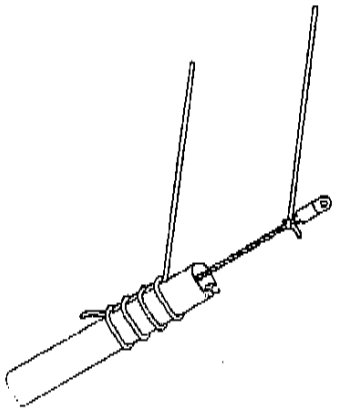
16. At this point you will need to install the Norseman terminal. Refer to the directions enclosed with your terminal.

17. With your Norseman terminal in place slide the extrusions back up the wire until the Tack Socket Adapter screw holes line up with the holes in the torque tube of the Drive Unit. Again temporarily hold it in place with the screws in preparation for re-installation on the mast. Slide the Halyard Swivel down as far as possible and tape/tie in place (this is to prevent the swivel from rapidly sliding down the extrusions as the headstay is raised).

RAISING THE HEADSTAY

(FOR BOATS WITH THE MAST ALREADY IN PLACE)

1. Tie off your jib halyard with a number of half hitches approximately one foot below the end of the top extrusion. Attach a second "Safety Halyard" to the Norseman terminal as a precaution only, remember to leave your best halyard free for the Bosun's chair.



2. Have one person guide the system up, while the other hauls the stay up the mast. The system should be **hauled with the "Safety Halyard" somewhat slack the entire time.**

Note: Do not haul the system from up in the Bosun's chair. Also the person guiding the system from the deck should he careful never to stand under the system, in case of accidental dropping.

3. With a helper on deck holding the halyard tied to the extrusions, go aloft and re-insert the masthead pin. Once this is done the halyard holding the extrusions and the "Safety Halyard" can be carefully eased and finally removed.

4. Back on deck you will need to re-tie your halyard to the lower part of your extrusions with a few half hitches just beneath the Chrome Feeder in order to loosen the Tack Socket set screws again. If your headstay is long enough to re-insert the stemhead pin now, do so (if not wait until step 6).

5. Put enough tension on the halyard to hold the extrusions in place (but not too much). Remove the Tack Socket screws, remove the pin that goes through the base of the Drive Unit and Hood Lower Toggle.

6. Slide the drive assembly up to uncover your turnbuckle. If need be, loosen the turnbuckle in order to re-insert the stemhead pin (if you haven't already done so in step 4) and adjust headstay to desired tension.

7. Slide the drive assembly back down, put the pin back through the bottom of the Drive Unit/Hood Lower Toggle, re-insert the Flat Head Screws in the top of the drive unit with blue LOCTITE.

8. Locate the Drum Half with a furling line hole in the inside of the spool and put the end of your furling line through the hole with an eight knot on the other side. Be careful not to leave a long end on the knot that might get caught on something.

9. Reinstall the two Stainless Steel Drum Covers, reversing procedure of 3a – Installing Your Drum Assembly.

10. Attach your jib halyard to the top shackle of the Halyard Swivel.

11. If your sail has a UV protective strip on the port side, you will need to wind the furling line up by spinning the drum counter clockwise before hoisting your sail. The larger the sail, the more line you will need to wrap on the drum.

12. To haul your sail, first attach the tack of your sail to the Tack Swivel shackle, just above the Stainless Steel Cover. Slide the head of your sail into the Chrome Feeder and up the luff grooves a foot or so. Attach the head of your sail to the bottom shackle on the Halyard Swivel. Hoist your sail with one person guiding the sail into the feeder.

DISASSEMBLING THE DRIVE UNIT FOR SERVICE/RACING

Service/Racing

1. Unscrew the two screws holding the Stainless Steel Cover halves together on top. Underneath the basket, unscrew the two Allen head screws in the black plastic clamp (be careful not to loose the retaining nuts).

2. Your system can be used as a racing foil by removing the four screws holding the Drum Halves together until they feel noticeably loose and the Drum Halves can be split (these screws are captive, complete removal is unnecessary). Remove the Drum Halves and stow in a safe place with the Stainless Steel Cover halves.

Racing

3. After removal of the Drum Halves, with your jib off of the system, loosen the two chrome feeder screws and remove. Slide the Halyard Swivel down until it is resting on the Drive Unit. Reinstall the Chrome Feeder and unshackle your jib halyard from the Halyard Swivel.

4. Attach the tack of your sail to a shackle on your stem head and your jib halyard to the head of your sail. You can now use your system as a racing foil with full hoist sails and quick uninterrupted headsail changes.

HOW TO FURL YOUR SAIL

When reefing or furling your sail, it is important to head up into the wind and ease sheets. If reefing, advance your lead forward to keep the trim stripe (on a Hood sail) lined up with the sheet. Keep minimal sheet tension to hold a tight furl. If you have your halyard tightened up to maintain luff shape, ease the halyard to help prevent halyard wrapping and to free up the movement in the system.

MAINTENANCE

The bearings on all HYS Sea Furls are specially designed with 316 stainless steel balls running in work hardened 304 stainless steel races.

The races are open in design and should be flushed with water periodically. Lubrication is unnecessary and will only attract dirt.

Simply pour the water into the bearings and rotate them in both directions. Don't use a pressure water hose. At this time spray WD 40 (or another similar lubricant) into the race while revolving them, until friction is acceptable. At NO TIME attempt to disassemble these swivel (bearing) units. If stickiness or friction is excessive, such that they are not functioning acceptably, remove the entire offending assembly from the boat, and return it to a Hood Yacht Systems Dealer or Distributor for servicing or replacement.

DECK LAYOUTS

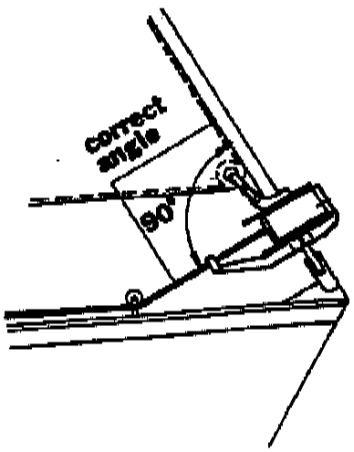
There are an infinite number of ways to lead your furling line aft, to a position of convenient operation.

It is most important to set up the proper lead from the Drive Unit to the first swivel lead block. The drawing in the lower corner illustrates the correct angle that must be achieved to assure the smooth operation of your Sea Furl.

To locate the lead blocks, first install the furling line onto the furling drum.

With one hand, tension the reefing line while you move the lead block with the other hand until a 90° angle is achieved between the headstay and the reefing line as it leaves the Drive Unit.

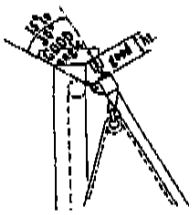
When the proper position of the lead blocks has been determined, mark the position and securely install at this point.



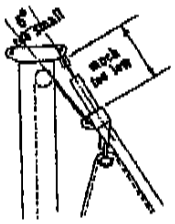
Stanchion bases (if one is in the right location) or a pad eye may be used to attach the lead block.

When placing the additional lead blocks, try to use as few as possible to minimize line friction. Very often these blocks can be shackled to stanchion bases, if not, pad eyes may be used.

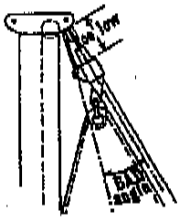
PROPER INSTALLATION



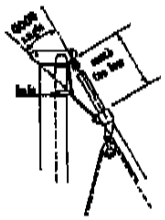
An ideal circumstance is when the Halyard Swivel is hoisted to the end of the luff sections and has an angle (aft) between the headstay and the halyard sheave of 15 degrees to 30 degrees.



The swivel is too low, decreasing the angle between the headstay sheave and halyard sheave to 6 degrees. While this installation may function, it would be better to attach a pennant.



Shows a common problem caused by the location of the masthead sheave. A bad angle (no aft restraining force) is created between the headstay and sheave. This condition is aggravated by the swivel not being high enough on the luff section.



Another alternative is to install a strap bale or block that restrains the halyard. Without such a device, the condition illustrated in Fig. 12 would cause halyard wrap problems. Note: The angle shown here is exaggerated for illustration purposes. The bale should be placed so that the halyard just lightly rubs on the inside of the bale. We recommend the Forespar P.E. - 35C pad eye when a bale is necessary.

COMMON OPERATING PROBLEMS

Halyard Wrap.

Halyard wrap is a situation that arises during the furling and unfurling of your jib, when the Halyard Swivel does not "spin" allowing the jib halyard to remain stationary. As the sail is rolled in or out, the halyard and swivel assembly roll with it, winding itself around the headstay.

Halyard wrap is probably the most common problem associated with furling systems. It's also the easiest to correct through proper installation. The key to avoiding halyard wrap is the angle created between the Halyard Swivel (with sail fully hoisted) and the halyard exit box. See section on proper installation.

HOOD LIMITED WARRANTY FOR SEAFURL 5 PRODUCTS

I. WARRANTY: Hood Yacht Systems warrants that Hood Seafurl and Gemini headstay products will be free from defects in material and workmanship for as long as you own the system. That period shall commence upon receipt of the Hood warranty registration card within 30 days upon receipt of the goods. Any part which proves defective in normal usage will be repaired or replaced by Hood Yacht Systems to the original purchaser.

This Warranty is subject to the following conditions and limitations:

A. Hood Yacht Systems liability shall be limited to repair or replacement, at Hood Yacht Systems discretion, of goods or parts defective in materials or workmanship. This shall be the buyer's exclusive remedy.

B. Except where otherwise specified, quality shall be in accordance with Hood Yacht Systems specifications.

C. The Hood Sea Furl 5 must be installed and maintained properly and used under normal conditions in the application for which they were intended.

D. This warranty does not apply to any products that were improperly installed or maintained, or subject to misuse or negligence during normal operation and storage.

E. Hood Yacht Systems shall not be responsible for shipping charges or installation labor associated with any warranty claims.

I. Failure to obtain an owner's manual or otherwise be aware of the information contained in the owner's manual may void this warranty.

II. The limited warranty is in lieu of all other warranties; any implied warranties are limited in duration to the duration of the warranty stated here.

III. Hood is not responsible for consequential damages of any sort, to the extent that such exclusion is permitted by applicable law.