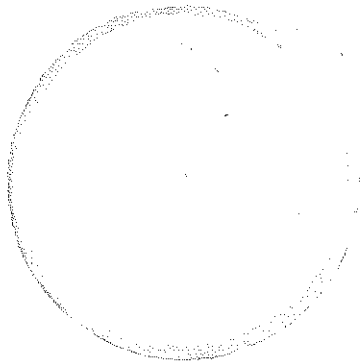


Hood YACHT
SYSTEMS

705/810/915 LD

SEAFURL

MANUAL



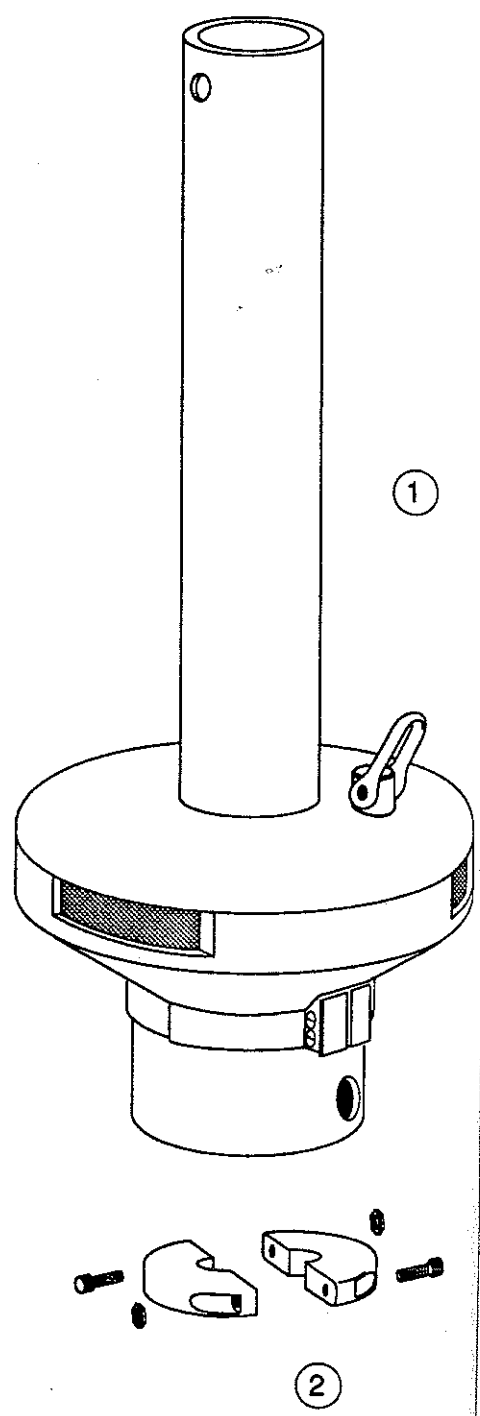
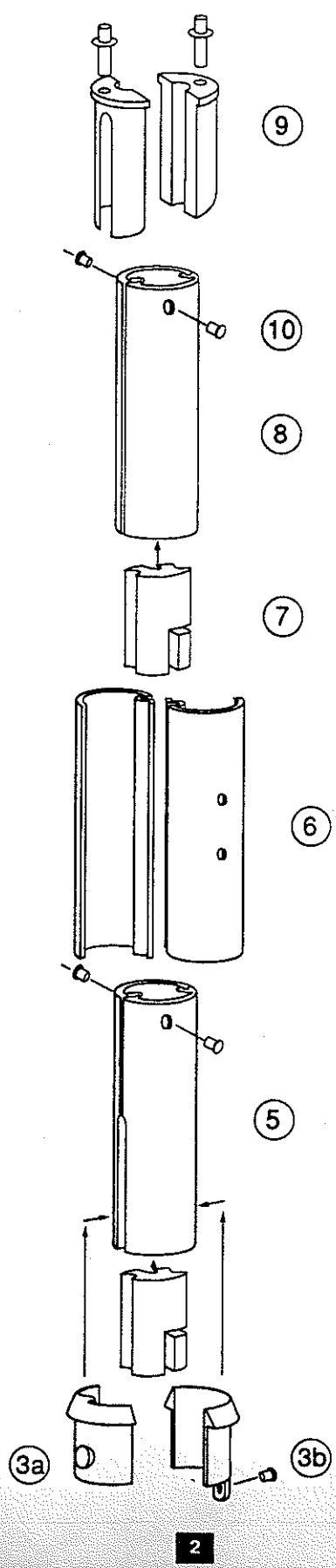
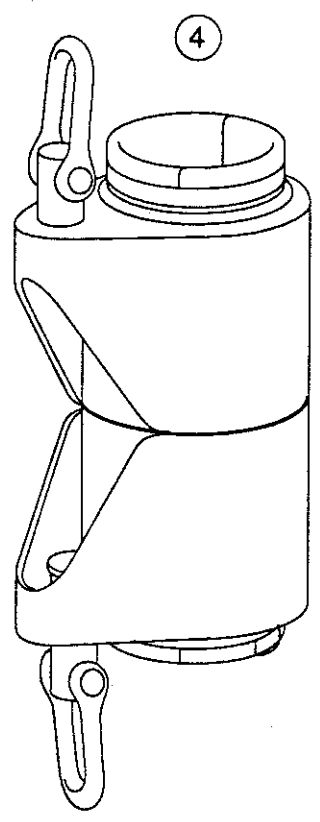
APRIL 92

Maritime Drive Portsmouth, RI. 02871 USA Tel: (401) 683-2900 HYS Fax: (401) 683-2410

READ THIS PAGE

To insure continued satisfaction and trouble-free operation it is necessary to follow the simple guidelines listed below.

1. Rinse the bearings regularly with fresh water.
2. Watch for halyard wrap. Look up!
3. If it jams – find out why – Don't force it.
4. Treat this unit like any other equipment – inspect it regularly.
5. If any problem persists, call your dealer.



SEA FURL LD CHECK LIST

1. Drive Unit Assembly	<input type="checkbox"/>
2. Centering Clamp Assembly	<input type="checkbox"/>
3. Tack Socket (2 halves – 3a aft, 3b fwd)	<input type="checkbox"/>
4. Halyard Swivel Assembly	<input type="checkbox"/>
5. Feed Extrusion	<input type="checkbox"/>
6. Splice Pieces (2 halves per Plain Extrusion)	<input type="checkbox"/>
7. Luff Bearing (1 per Plain Extrusion)	<input type="checkbox"/>
8. Plain Extrusions (determined by headstay length)	<input type="checkbox"/>
9. Top Bearing with (2 Rivets 2 halves)	<input type="checkbox"/>
10. Drive Rivets (4 per Plain Extrusion)	<input type="checkbox"/>
Not Shown Tube of Silicone Seal (1 small tube)	<input type="checkbox"/>

TOOLS REQUIRED FOR ASSEMBLY

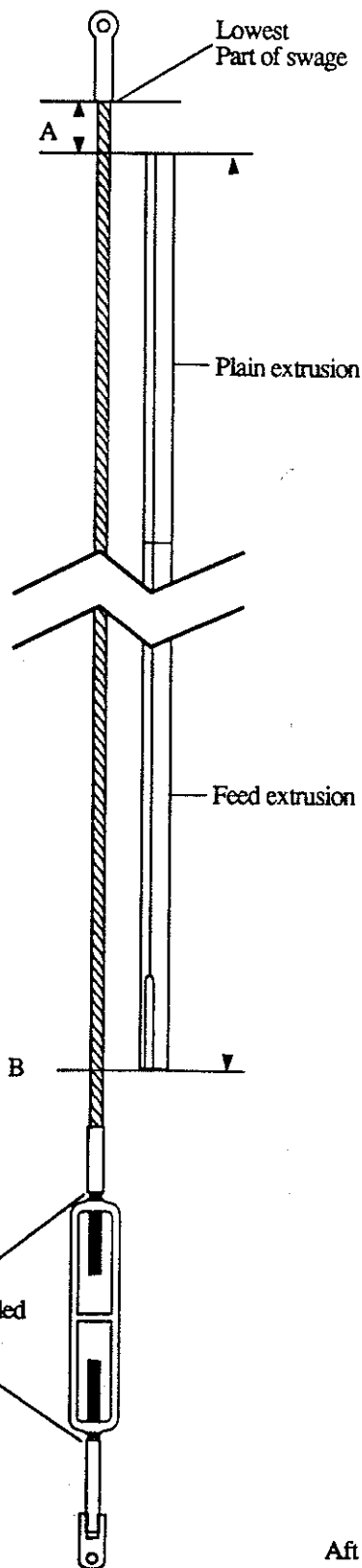
1. Tape Measure (50' OR 100')	5. Hack Saw
2. Rigging Tape	6. Fine Metal File or Sandpaper
3. Felt Tip Marker	7. Small Hammer
4. Allen Wrench (Included)	8. Bos'n Chair

If you've gone through the check list and have parts missing please contact Hood Yacht Systems or your distributor.

(Fig. 3)

These extrusion assembly procedures must be used when the marine eye won't pass through an extrusion:

1. Refer to standard instruction on page # 5 & 7
2. From the marked position on the headstay, lay the feed extrusion alongside the wire. Begin to lay each one of the extrusions out end to end so that the joint is kept as close as possible for the entire length of the headstay during this measurement.
3. Measure down the lower part of the swage the measurements from (Fig. 3a). Mark the headstay and the extrusion.
4. Cut the extrusion at this mark and be certain that all sharp edges are filed smooth.
5. Unscrew the turnbuckle to expose the threaded stud. Start to slide the extrusion over the wire beginning with the piece that has been cut.
6. Complete extrusion assembly as per standard instructions on page 7.



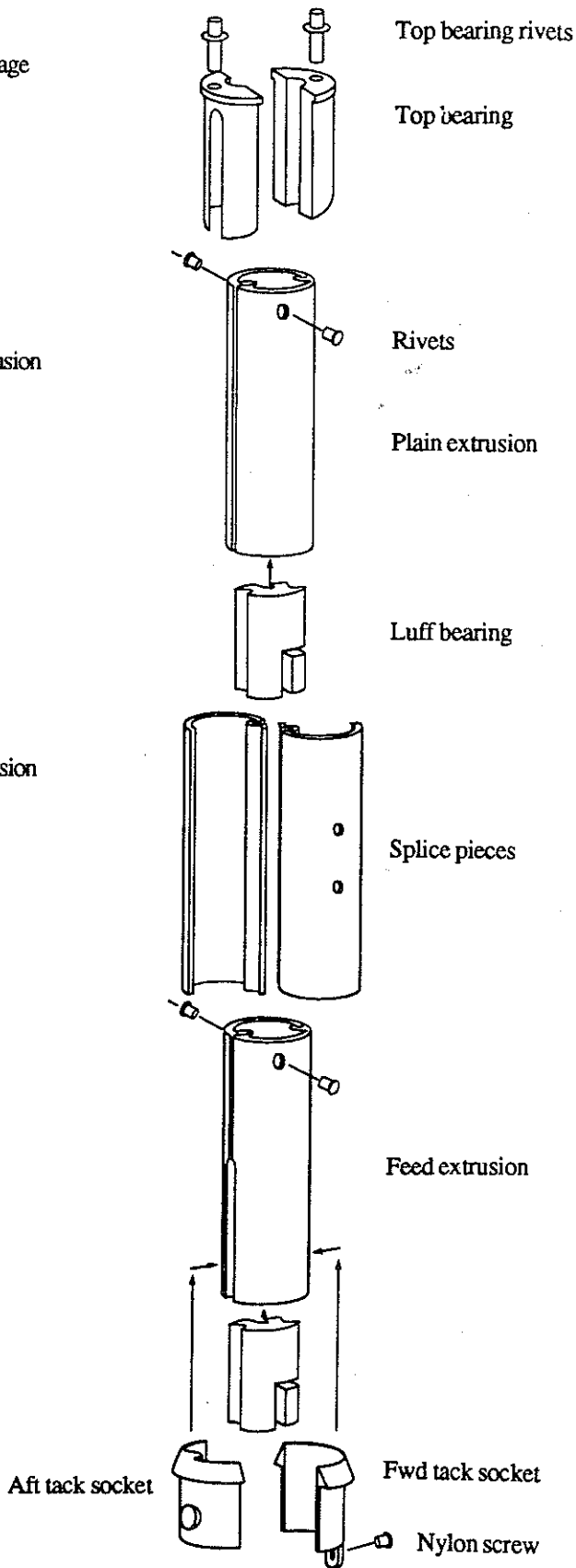
(Fig. 3a)

705	810	915
3/4"	1"	1 3/4"
19mm	25mm	44mm

Dimension B

Taped threaded position

(Fig. 4)



1. Locate the Feed Extrusion from the Luff Extrusion. The Feed Extrusion can be identified as the section which has its luff grooves machined open at its lower end.

NOTE: IF THE SWAGED EYE ON THE UPPER END OF THE HEADSTAY WIRE DOES NOT FIT THROUGH THE EXTRUSIONS, THEN FOLLOW THE DIRECTIONS ON PAGE 6 (Fig 3)

Slide the Feed Extrusion over the top of the headstay; lower end first. All Extrusions are designed so that a standard marine wire end fitting will pass through the inside of the Extrusion. Slide this Extrusion all the way down the headstay until its lower end is even with the mark which locates the lower end of the Luff Extrusion assembly (determined in step 6 on page 5).

2. Take one of the black plastic Luff Bearings and twist it onto the headstay above the Feed Extrusion. Insert it into the top of the Feed Extrusion. (This Luff Bearing will slide down and rest on the Aft Tack Socket once the system is in its place.)

3. Take two of the Splice Pieces and mate them together as a pair around the headstay. Apply silicone liberally to the lower half of the splice piece. Insert them into the top of the Feed Extrusion.

4. Line up the two lower holes in the pair of Splice Pieces with the two larger holes in the upper end of the Feed Extrusion. Insert a rivet into each hole and fasten them with a hammer. (Note that the head of the rivet should sit inside the larger hole in the Feed Extrusion locking the Splice Pieces into place.)

5. Take one of the Luff Extrusion and slide it over the top of the headstay; liberally apply silicone to the upper half of the splice piece. Slide it down over the Splice Pieces that are now sticking out of the top of the Feed Extrusion. Rivet the Luff Section to the Splice Pieces. Twist on another Luff Bearing on to the headstay, insert it into the top of the Luff Section. Rivet another set of splice pieces into the top of the section. (Remember to clean off excess silicone from the jointed extrusion)

6. Repeat step 5 until the top of the Luff Extrusion assembly comes within 6ft of the top of the headstay. (Remember to apply silicone to each splice piece and to clean off excess silicone from the jointed sections.)

7. The last section to be assembled should be cut so that when the Top Bearing is installed the upper portion of the Top Bearing should be within 1/4" (6.35mm) of the lowest portion of the wire terminal. After cutting this upper Luff Extrusion (be sure to deburr the edges), slide it over the top of the headstay and rivet it to

the Splice Pieces of the next lower section. Remember to apply silicone to the upper half of the splice piece before you rivet the Top Extrusion together. After riveting, insert a Luff Bearing into the top of the Luff Extrusion. To complete the Luff Extrusion assembly, insert the two halves of the Top Bearing into the top of the Extrusion assembly. The Top Bearing should be installed in the upper section and secured with the rivets supplied.

8. Install the Luff Extrusion and Headstay to the Masthead. There must be toggle at the masthead for a proper headstay installation. (A stemball-type masthead fitting will not give the proper headstay movement.)

9. Remove the Centering Clamp.

10. Slide the Halyard Swivel Assembly up over the Feed Extrusion. The tabs on the inserts should be down.

11. Slide the Drive Unit up over the turnbuckle and the Feed Extrusion. Secure it over the Feed Extrusion temporarily so that the turnbuckle can be attached to the stemhead. (Refer to page 10 & 11 for furling line installation)

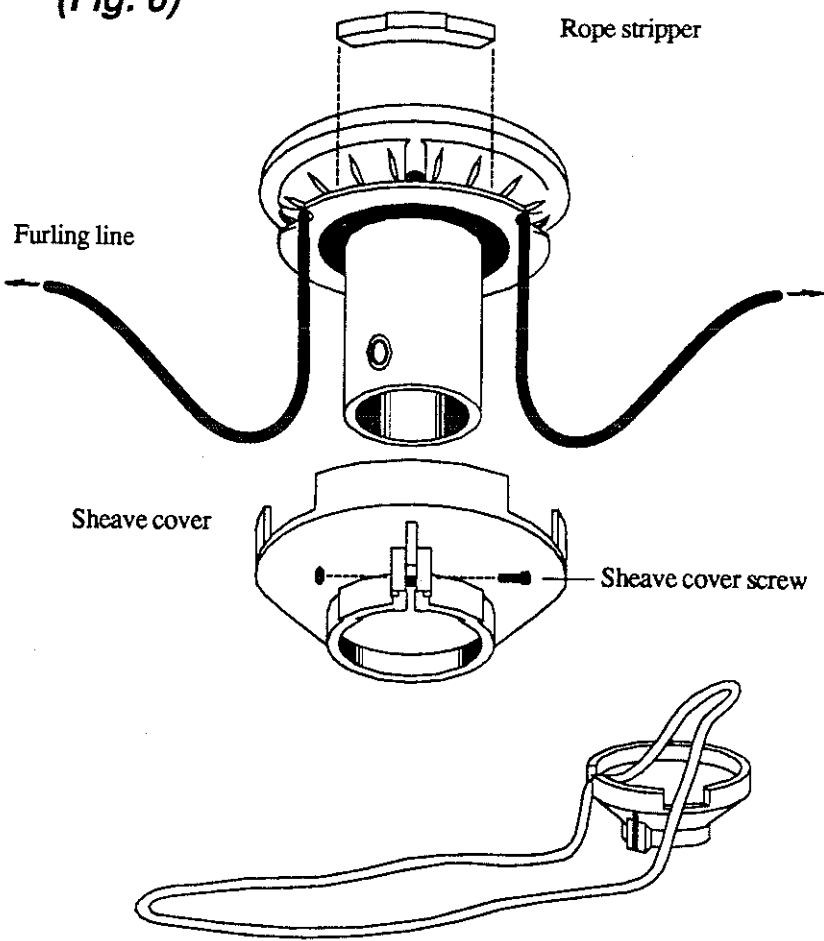
12. Adjust the turnbuckle to the taped position. Secure the turnbuckle screws properly and tape over the bent cotter pins.

13. Reattach the Centering Clamp in the position mentioned in Fig.2
Do not over tighten it.

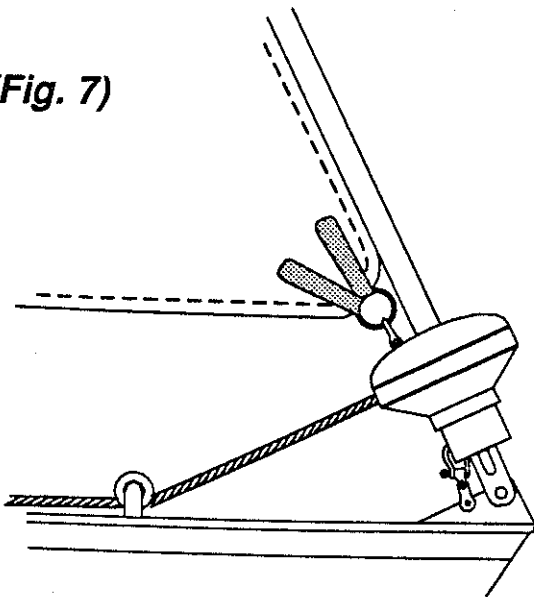
14. Slide the Drive Unit back down over the Centering Clamp. To assemble the Feed Extrusion to the Drive Unit. (Refer to #2 of the Extrusion Assembly instructions,) it is important to make sure that the Luff Bearing is installed in the lower end of the Feed Extrusion just above the Aft Tack Socket. Attach the Aft Tack Socket to the Feed Extrusion (Fig. 5) and insert into the Drive Assembly, aligning the "knob" on the Tack Socket with the hole in the turnbuckle tube. Slide the Forward Tack Socket into the other side and tighten the screw. (Do not over tighten this nylon screw as this screw carries no load. The nylon will avoid corrosion problems that may occur in dissimilar metals.)

Assembly Is Now Complete.

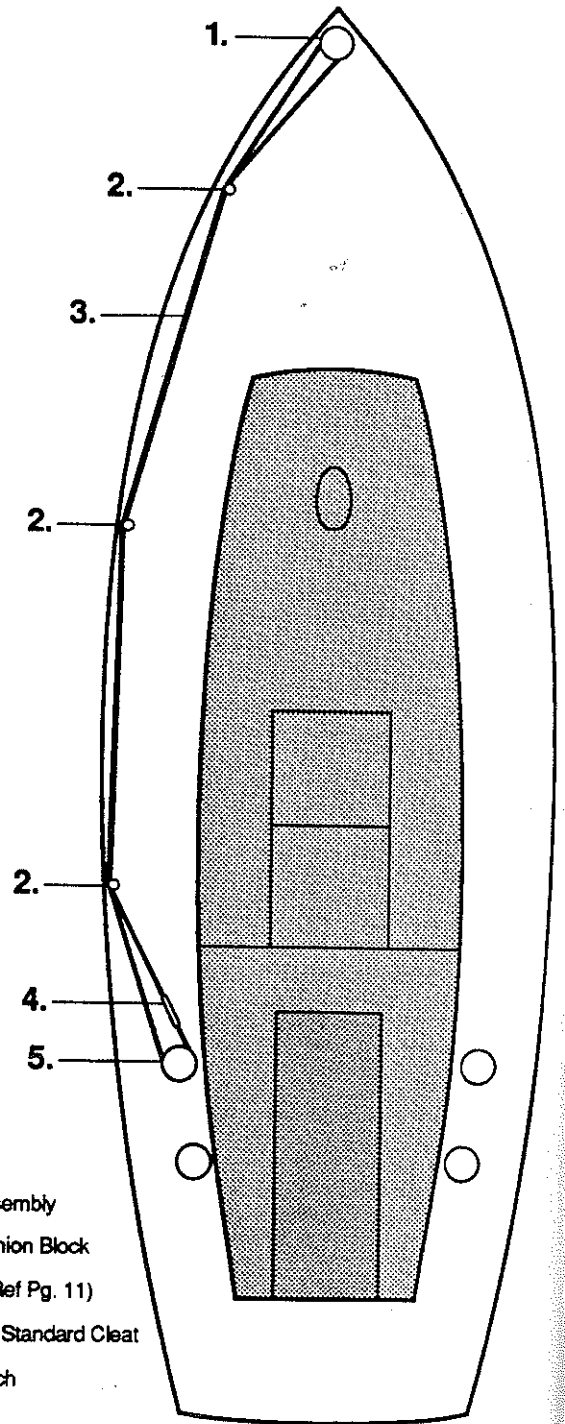
(Fig. 6)



(Fig. 7)



(Fig. 8)



- 1. Drive Unit Assembly
- 2. Double Stauchion Block
- 3. Yacht Braid (Ref Pg. 11)
- 4. Cleat or Standard Cleat
- 5. Standard Winch

FU
FU

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Furling Line

The Sea Furl models #810 and #915 are driven with a continuous loop of 7/16" (11mm) diameter line. Model #705 is driven with a continuous loop of 3/8" (10mm) diameter line. The furling line should be run through the appropriate lead blocks (if the sheaves are not removable) and around the Drive Sheave. The ends of the furling line should be spliced to form a continuous loop. Be sure to run the line through the fairlead blocks before splicing. Splice instructions are included in the back of this manual. The loop should be long enough to reach back to the cockpit where it can lead to a cleat. (Ref. Fig #8)

The stripper is secured in the Sheave Cover (flat side down) between the two exits for the line. Ref. Fig.#6. Once the furling line is installed, adjust the Sheave Cover so the line is lead properly to the first furling block. There should also be a gap of approximately 1/8" (3mm) between the top of the Sheave Cover and the bottom of the Sheave Top.

The angle between the headstay and furling line leading to the first fairlead blocks should be 90° as shown in Fig. #7. This will prevent chafe and friction on the drive unit assembly.

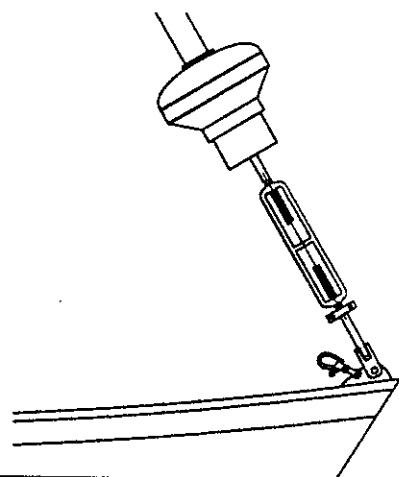
* We suggest the use of Yale Cordage ULS™ yacht braid.

Operation

When reefing or furling the sail it is important to head up into the wind and ease the sheet. To furl the drum, pull the part of the furling line that rolls the sail in the correct direction so that the sail cover is on the outside. Keep minimal sheet tension to create a properly furled sail.

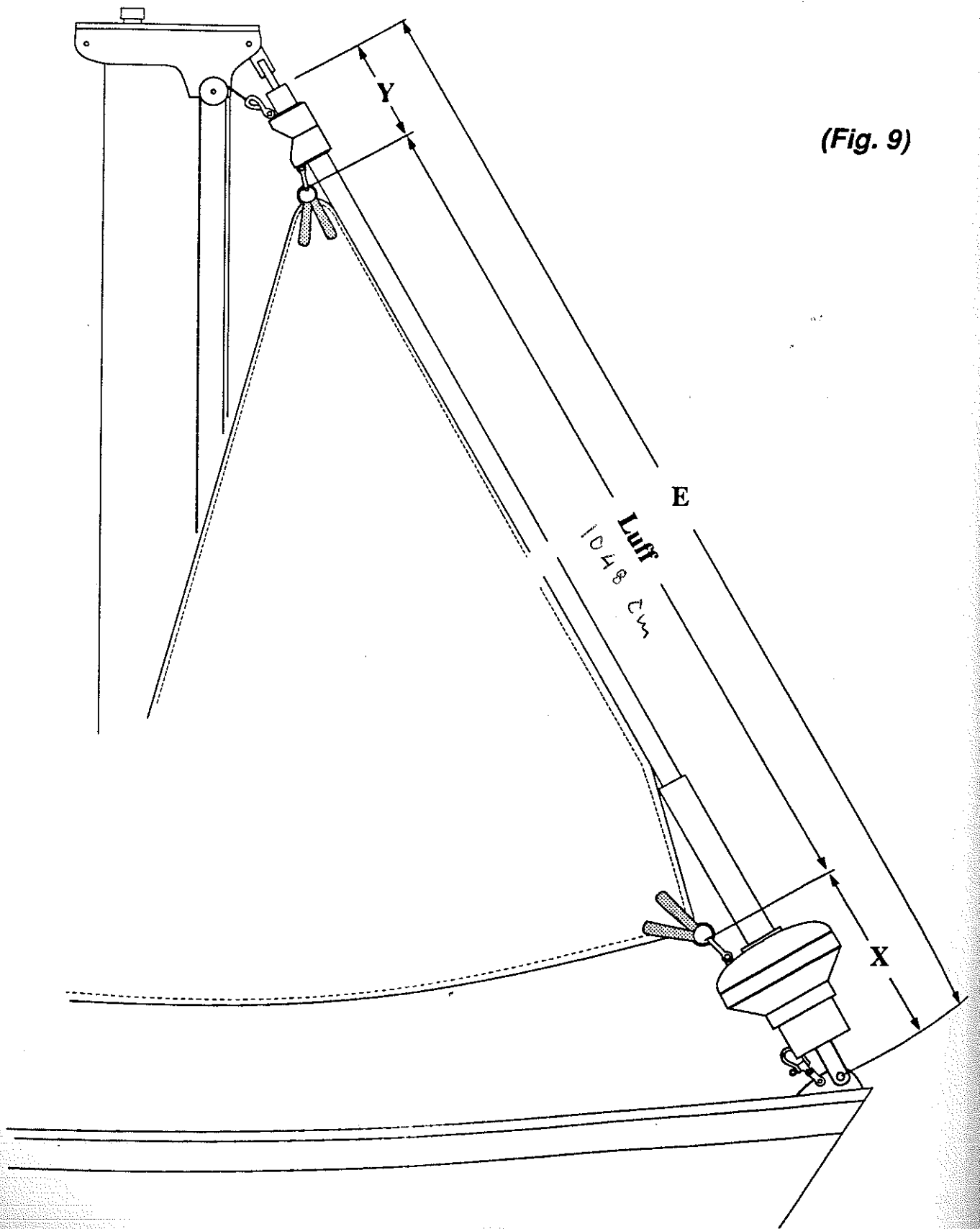
To reef (reduce sail area) the sail, head into the wind, ease the leeward sheet, pull the furling line until the desired amount of sail is reefed. Secure **both parts** of the furling line to a cleat. Sheet in the leeward sheet. It may be necessary to move the genoa lead block forward to obtain a proper lead when the headsail is reefed.

Readjusting the headstay



(Refer to Fig. 5)

1. Remove the sail and, using a 3/16" Allen wrench, remove the Forward Tack Socket screw so as to slide the Forward Tack Socket up.
2. Disengage the Feed Extrusion and the Aft Tack Socket from the Turnbuckle Tube; then remove the Aft Tack Socket from the Feed Extrusion so that the Extrusions slide down to rest on the turnbuckle.
3. Remove the shackle that attaches the Drive Unit Assembly to the stemhead; attach the halyard to the Tack Shackle on the Drive Unit and raise the Assembly up over the Feed Extrusion to expose the turnbuckle.
4. Remove the tape and cotter pins and, with the appropriate tools, adjust the headstay; reverse this procedure to reassemble.



(Fig. 9)

SeaFurl Sails

Precisely measure the distance from the bottom of the halyard shackle (at the masthead) to the center of the stemhead pin (Dimension E).

From Dimension E, subtract drum and halyard swivel measurement using the table.

This will give you the maximum luff dimension for your sail, when it is fully stretched.

Overall length from sheave top to Stemhead Pin		(E) _____
Halyard swivel deduction including shackles	(Y)	_____
Drum assembly deduction including shackle and toggle	(X)	_____
Maximum sail luff length		_____

"X" tape or 3/16" diameter bolt rope tape must be used on the luff so that the sail easily slides up and down, yet doesn't pull out in heavy air.

Webbing loops can be sewed at the head and tack of the sail, to replace cringles. These loops should be 2" to 3" longer than the corner of the sail. Their use creates a much tighter roll, improving sail shape, and eliminating the need for swivel shackles. The webbing can easily twist 90 degree to allow the sail to lie flat against the luff extrusion when reefed, whereas cringles and twist shackles promote wrinkly furls.

Your sailmaker should terminate the luff tape portion of the luff tape approximately 30" down from the head, and 30" up from the tack. This provides better reefed shapes.

If extreme halyard tension has been applied to alter sail shape when sailing, it is advisable to ease the halyard once the sail is furled to relieve the static load on the swivel bearings. This is especially true if the boat is moored for days at a time.

	705	810	915
X	8.5" 216mm	9.5" 241mm	13" 330mm
Y	7.5" 191mm	8.5" 216mm	10.75" 273mm

SAIL

Installation**Sail Installation**

Due to the great variation in masthead construction, sail stretch and individual halyard loads, the following sail installation steps should be carefully followed. If you install your LD as follows a smoothly operating system will be assured.

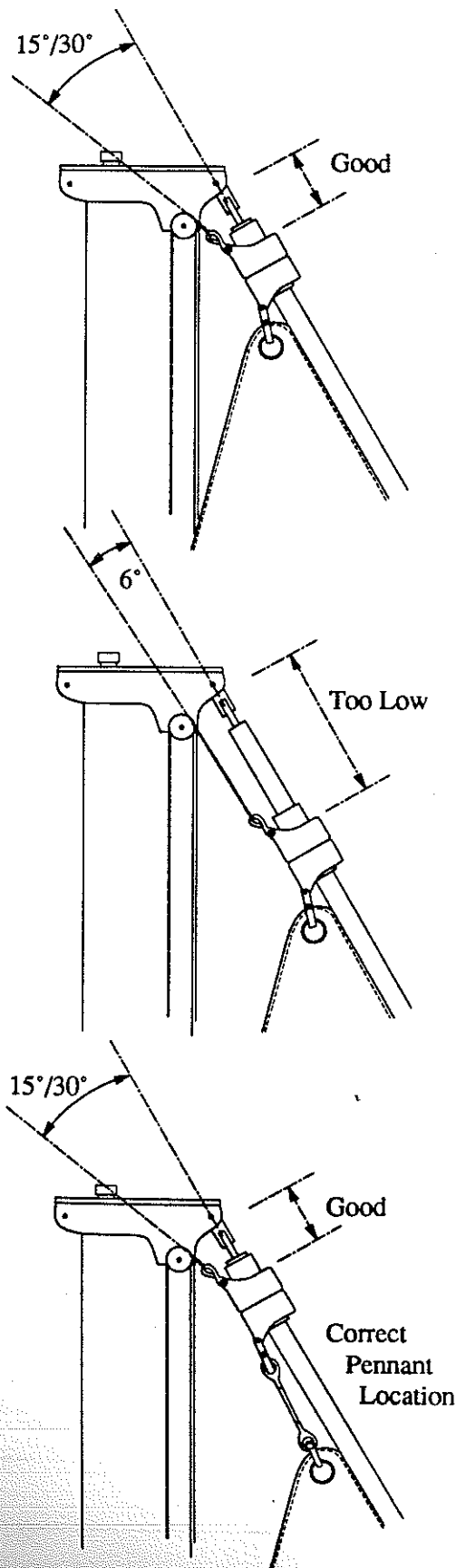
Attach the head of the sail to the lower shackle of the halyard swivel, but DO NOT attach the tack.

Hoist the sail into the groove which aligns with the tack shackle on the Drive Unit. A swivel deck feeder can be used to assist the luff tape in to the feed extrusion.

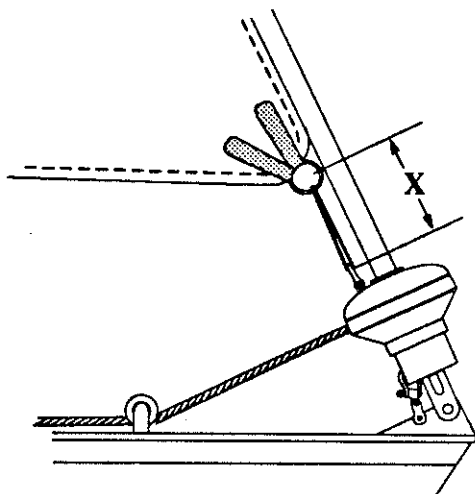
Hoist the swivel and sail as high as it will go, without straining, and secure.

Down haul the sail, utilizing a spare line temporarily attached to the sail tack and lead thru the tack sheave shackle, until the maximum desired luff tension is achieved.

Furl and unfurl the sail several times while watching the halyard swivel, to see if it is rotating smoothly and not being restricted in its operation.

**(Fig. 10)**

Installation



If the final distance between the sail tack and tack shackle is greater than 6", the temporary lashing should be replaced with a permanent wire pennant. If this distance is less than 6", a pennant lashing (a minimum of 3 turns of line) can be used. You may choose to leave the pennant at the bottom or place it between the halyard swivel and the head of the sail. Refer to (Fig. 10).

Maintenance

Maintenance

The bearing assemblies in your LD Seafurl have been equipped with Torlon balls. Whenever possible flush the bearings in the drive unit and halyard swivel assemblies with water. Torlon is self lubricating therefore it is not necessary to use any additional lubrication. In fact, many commercially available lubricants will be absorbed by the Torlon bearing. Making the balls enlarge affecting the operation of the system.

If after extensive use, or at any time stickiness or friction becomes excessive such that the bearings 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. At no time attempt to disassemble these swivel (bearing) units yourself.

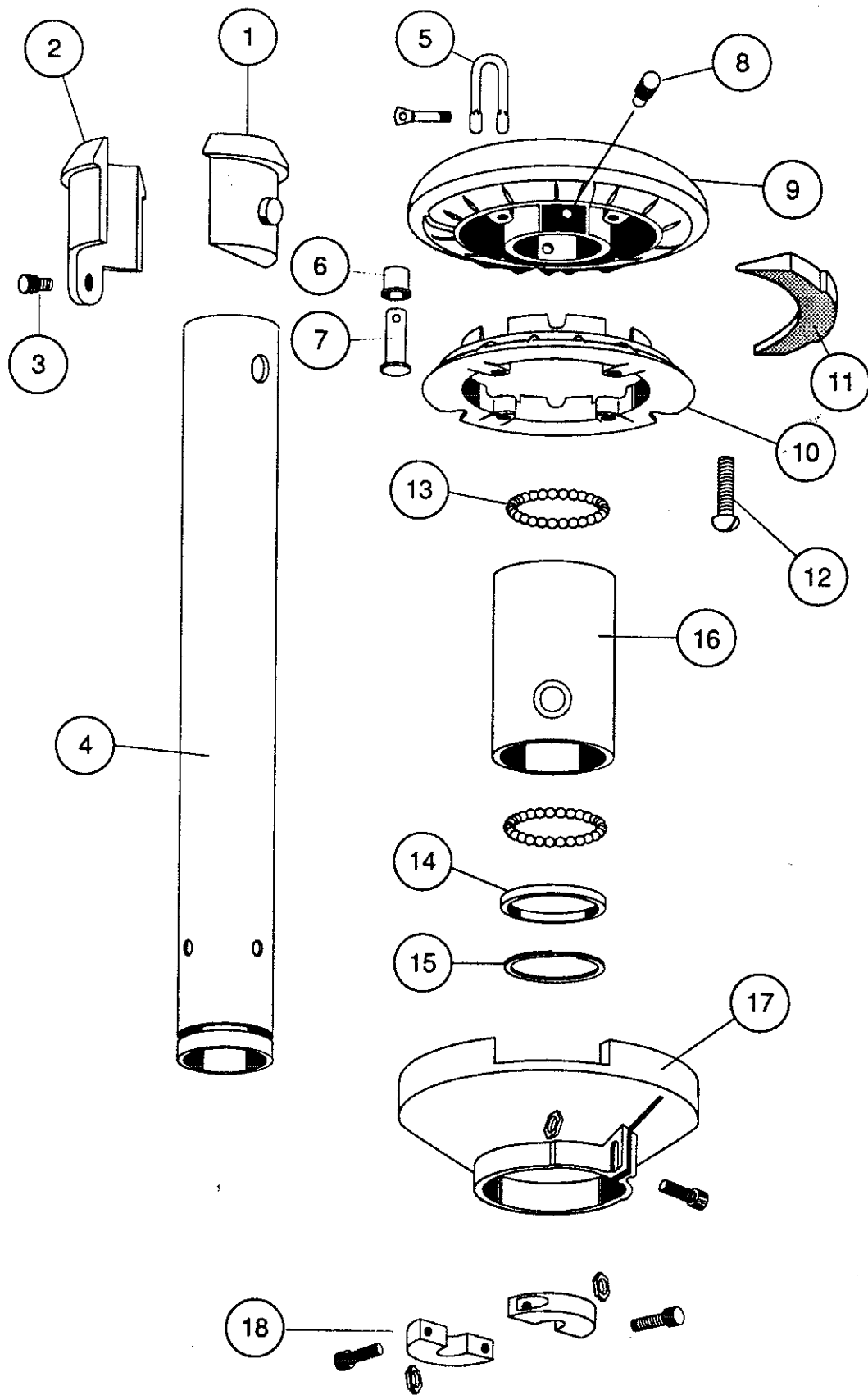
Storage

When rigging or unrigging your Seafurl, for storage or any other reason, every attempt should be made to keep the extrusions as straight as possible. When storing, the entire unit can be lashed to the mast or supported on a mast rack.

Winter Storage

Remove the drive unit and swivel and store them in a dry compartment onboard or at home. It isn't good practice to completely cover the drive unit and swivel assembly with plastic, this will trap any condensation that occurs, and the aluminum components will eventually start to oxidize.

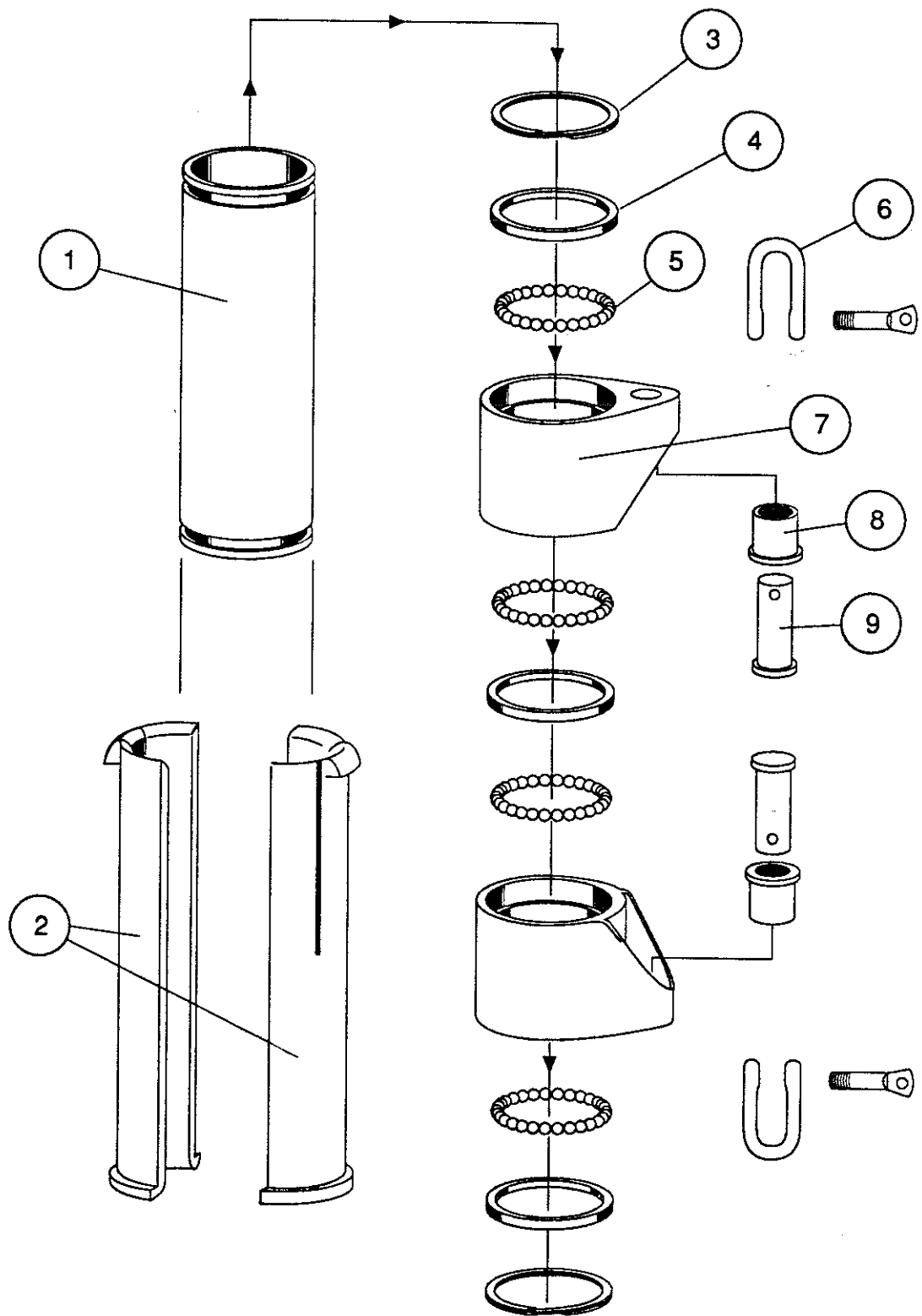
During recommissioning in the spring, it is recommended to soak both the drive unit and swivel in a bucket of hot soapy water, then rinse them both with fresh water before installing them.



DRIVE UNIT ASSEMBLY
Parts List

Reference # Description	Part Number		
	705	810	915
1. Aft Tack Socket	6405	5960	5997
2. Forward Tack Socket w/screw	6406	5959	5998
3. Tack Socket Screw (Nylon)	1/4 - 28 X 1/4 SHCS	1/4 - 20 X 3/8 SHCS	
4. Turnbuckle Tube	6402	5958	6001
5. D Shackle	WICH 1212	WICH 1213	WICH 1214
6. Shackle Stud Bushing	6412	5983	5994
7. Shackle Stud	6411	5982	5993
8. Sheave Set Screw	3/8 - 28 x 3/8 Half dog point set screw	3/8 - 16 x 3/8 Half dog point set screw	3/8 - 16 x 1/2 Full dog point set screw
9. Sheave Top	6395	6021	6102
10. Sheave Bottom	6397	5979	6005
11. Rope Stripper	6427	5984	5996
12. Sheave Ass'y Screws (RHMS)(4)	1/4 - 20 x 3/4"	1/4 - 20 x 1"	5/16 - 18 x 1"
13. Bearings (Torlon)* (2 Bearings Races)	1/4 - 4203L 23 balls per race	1/4-4203L 28 per race	3/8 - 4203L 23 per race
14. Thrust Washer	6410	5957	5995
15. Spirolox Rings	WSM 175 S	WSM 200 S	WSM 237 S
16. Bearing Tube /w Grommet	6401	5980	5991
17. Sheave Cover w/screw	6396	5977	6006
18. Centering Clamp Assembly	6429-0	5861-0	5999-0
LD Drive Unit Assembly	6435	6013	6000
Torlon Bearing Assembly Bag (2 ea.)	7604	7605	7606

These bags have enough Torlon balls to replace two complete bearing races, with two extra balls.

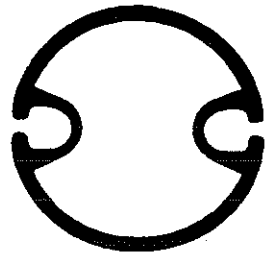
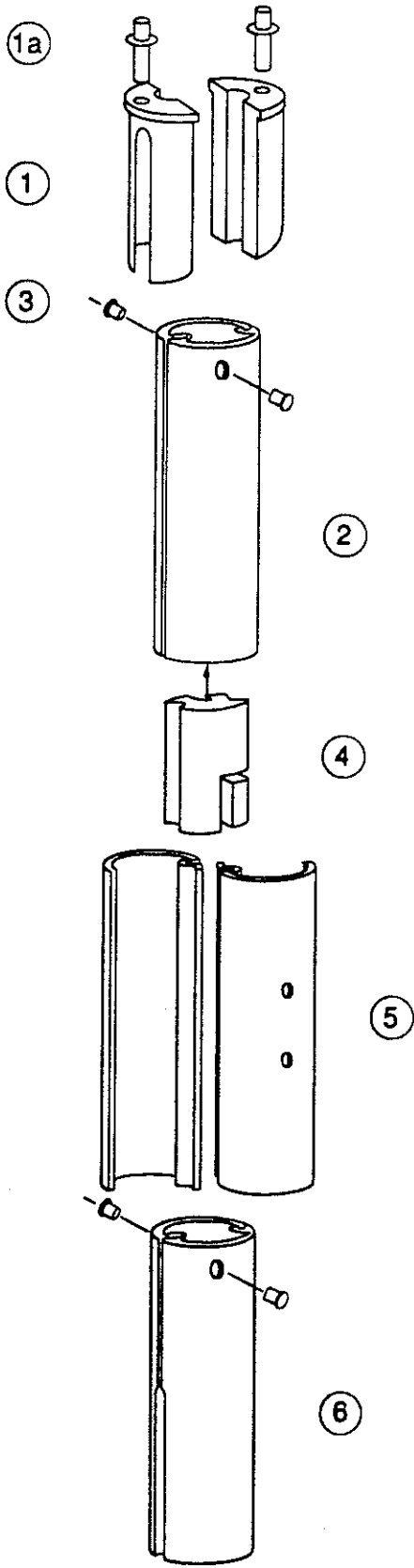


HALYARD SWIVEL ASSEMBLY

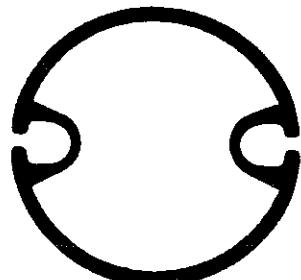
Parts List

Reference #	Description	Part Number		
		705	810	915
1.	Swivel Tube	6874	6012	6016
2.	Halyard Swivel Inserts (Half 2 ea.)	6875	6017	6018
3.	Spirolox Rings (2 ea.)	WSM 175 S	WSM 200 S	WSM 237 S
4.	Bearing Thrust Washer (3 ea.)	6410	5957	5995
5.	Bearings (Torlon)*	1/4 - 4203L	1/4 - 4203L	3/8 - 4203L
	4 Bearings Races	23 per race	28 per race	23 per race
6.	D Shackle (2 ea.)	WICH 1212	WICH 1213	WICH 1214
7.	Halyard Swivel Cup (2 ea.)	6398	6011	6015
8.	Shackle Stud Bushing (2 ea.)	6412	5983	5994
9.	Shackle Stud (2 ea.)	6411	5982	5993
	* Torlon Bearing Assembly Bag (2 ea.)	7604	7605	7606

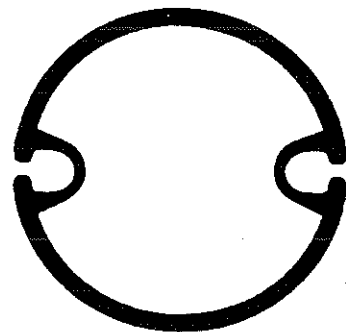
These bags have enough Torlon balls to replace two complete bearing races, with two extra balls.



705



810



915

LUFF SECTION ASSEMBLY

Parts List

Reference #	Description	Part Number		
		705	810	915
1.	Top Bearing (Half) (2 ea.)	6428	6019	6020
1a.	Top Bearing Rivets (2 ca.)		38-106-20-13	
2.	Luff Extrusion	6432	5945	5946
3.	Drive Rivet		3/16 Alu.	
4.	Luff Bearing	6431	5985	6007
5.	Splice Piece (Half) (2 ca.)	6404	6112	6113
6.	Feed Extrusion	6433	6125	6126
	705 Rivet Bag (25 per bag)	6837		
	810/915 Rivet Bag (40 per bag)		6838	6838
	Assembly Bag	6839	6840	6841
	2 Top Bearing (Halves) W/Rivets, 40 Drive Rivets, 3/16" allen wrench (705 25 Drive Rivets)			
	Plain Extrusion Assembly	6424	5945-0	5946-0
	Plain Extrusion-Luff Bearing-Splice Pieces (pr.) -4 ea.Rivets			
	Feed Extrusion Assembly	6425	6125-0	6126-0
	Feed Extrusion-Luff Bearing-Splice Pieces (pr.) -4 ea.Rivets			

HOOD LIMITED WARRANTY FOR SEAFURL PRODUCTS

I. WARRANTY: Hood Yacht Systems warrants that Hood Seafurl and Gemini headstay products will be free from defects in material and workmanship for a period of five years. 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 during the five year period will be repaired or replaced by Hood Yacht Systems.

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 and Gemini 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.
 - D. Hood Yacht Systems shall not be responsible for shipping charges or installation labor associated with any warranty claims.
 - F. Terms of this limited warranty shall be one year if the product is used in commercial, rental or charter operations as well as with respect to any swaged attachments to wire, either standing or running rigging.
- II.** Failure to obtain an owner's manual or otherwise be aware of the information contained in the owner's manual may void this warranty.
- III.** 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.
- IV.** Hood is not responsible for consequential damages of any sort, to the extent that such exclusion is permitted by applicable law.

Hood YACHT
SYSTEMS

LINE DRIVE
SPLICE

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Maritime Drive Portsmouth, RI. 02871 USA
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JL Y90

GENERAL INFORMATION

Introduction

These instructions detail a special end-to-end splicing technique which will optimize performance of the Hood Line Drive Seafurls, Line Driven Stoway Mast and Stoboom.

Developed for use with Yale Cordage ULS (Ultra Low Stretch) Yacht Braid, the LD splice modifies standard splicing instructions to insure the line's diameter in the spliced section does not exceed the capacity of the driver head or deck hardware in the system. This splice will also work with most standard yacht braid ropes.

Installed as recommended, Yale ULS Yacht Braid will assure years of smooth and reliable service.

Rope selection

7/16" diameter double braided polyester rope, or 3/8" diameter for the model 705 LD and 600 Stoboom.

Rope length

Get enough rope!!!

The rule of thumb is to get twice your boats length in rope. This will be sufficient for most Line Drive Seafurls on aft cockpit boats.

Stoboams and Stoway Mast that the Line Drive Winch will be installed in the cockpit. Measure the height of the boom above the deck then back to the area where the Line Drive Winch will be installed then double it, then add three feet for the splice. This will give you enough length to make up the splice.

Tools required

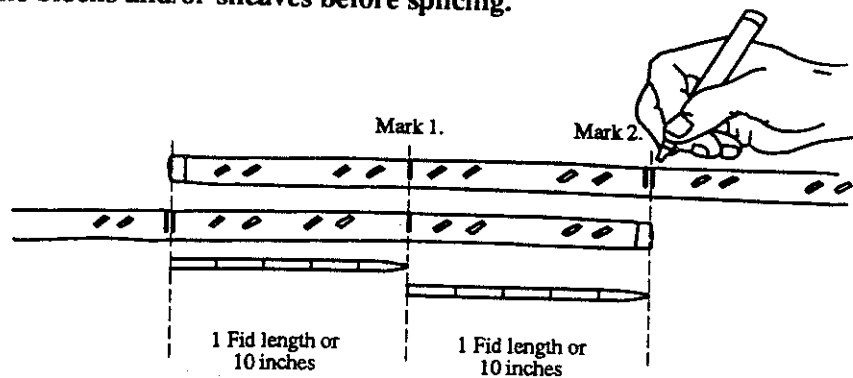
1. 7/16" or 3/8" Splicing Fid
2. Tape
3. Knife or scissors.
4. Marking pen
5. Whipping twine
6. Needle

Instructions

Note: Be certain the line is properly led through all of the blocks and/or sheaves before splicing.

Step 1. Marking

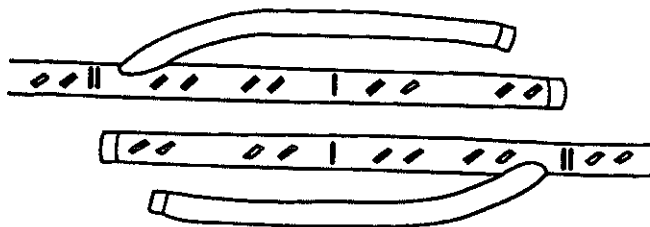
Mark of one fid length (*mark 1*) and two fid lengths (*mark 2*) on both ends of the line. (*step 1*).



Instructions

Step 2. Extracting the cores

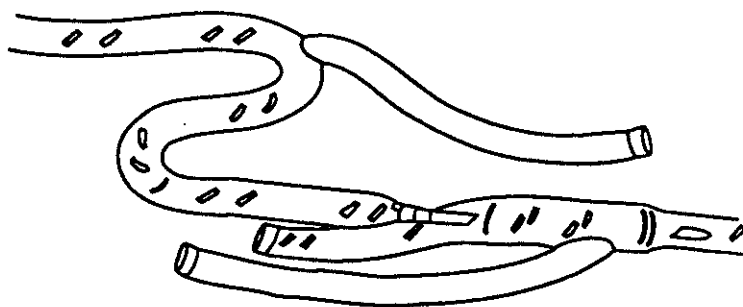
Tie a slip knot about six feet from each end or where ever possible close to the splice. Bend the line sharply at the second fid mark. Spread the cover strand apart using the splicing fid. First pry, then pull each core completely out of the cover from the second fid mark to the bitter end. Remove the slack in the cover by "milking" the cover towards the cores close to each exit point. Untie the slip knots before proceeding to (step 3.)



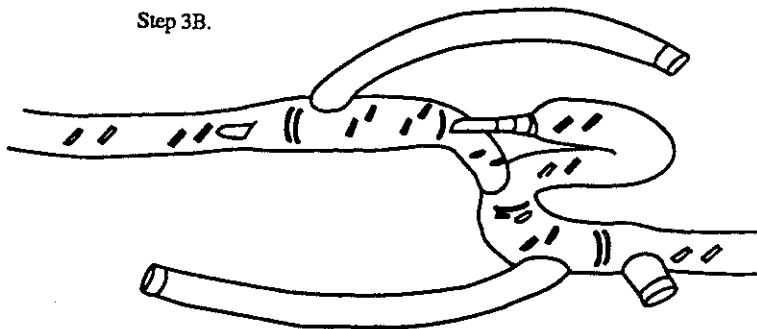
Step 3. Inserting covers into each other

Insert the nose of the fid into the cover of one of the ends at the first mark (going towards the second mark). Attach the other cover to the fid by slipping it into the fid tail and securing. Now continue pushing the fid down the center of the cover and completely exit just beyond the second mark (step 3A). Repeat this for the opposite side (step 3C)

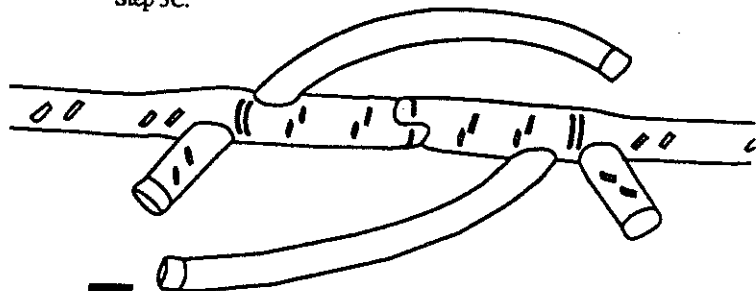
Step 3A.



Step 3B.

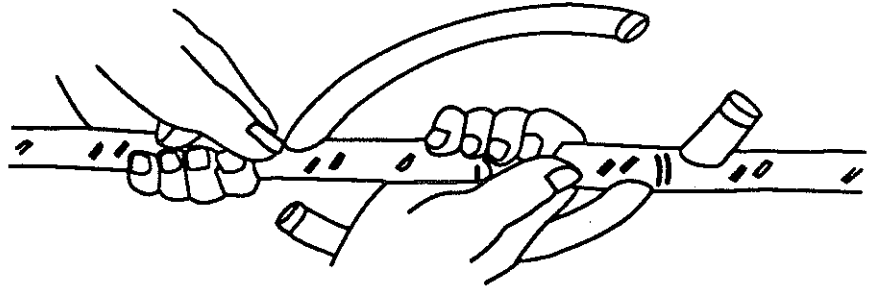


Step 3C.

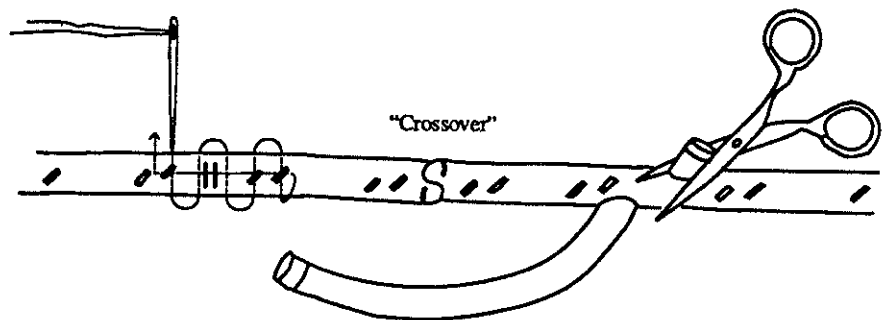


Step 4.

Firmly hold the intersection of mark 1's and smooth the cover away towards *mark 2* on each side until the rope is firm. Sew 2" to 3" either side of the "crossover". Next, smooth the cover from the standing side of *mark 2* to *mark 2* both sides. Now, being careful not to cut any yarns, trim the cover and tails at the rope's surface. Continue to smooth the cover in the manner just described until all the tails disappear inside the cover.

**Step 5.**

"Milk" the splice smooth towards each of the other marks. Now, sew each side of *mark 2*'s for 2" to 3".



Note: Whipping should not be on any part of the line. The splice diameter should not be larger than any part of the line.

If there are any questions regarding this splice or your installation. Please contact your dealer or Hood Yacht Systems.