DUTCHMAN®

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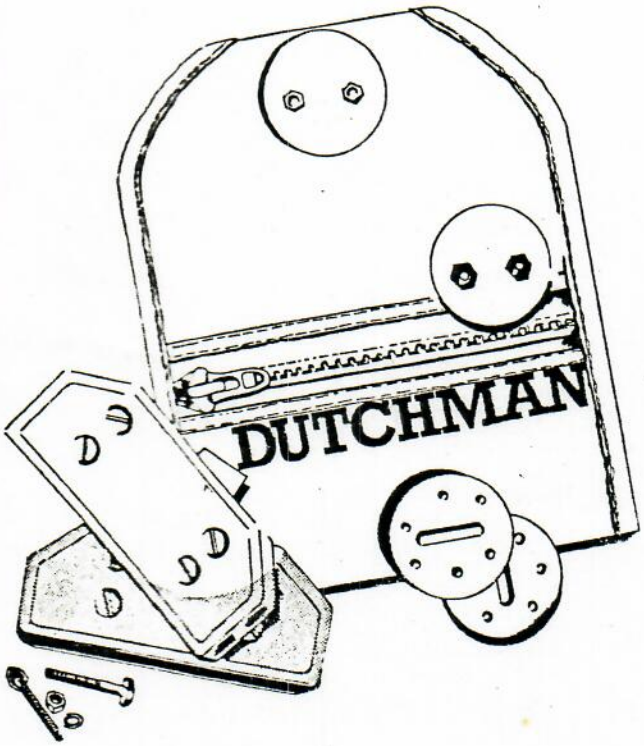
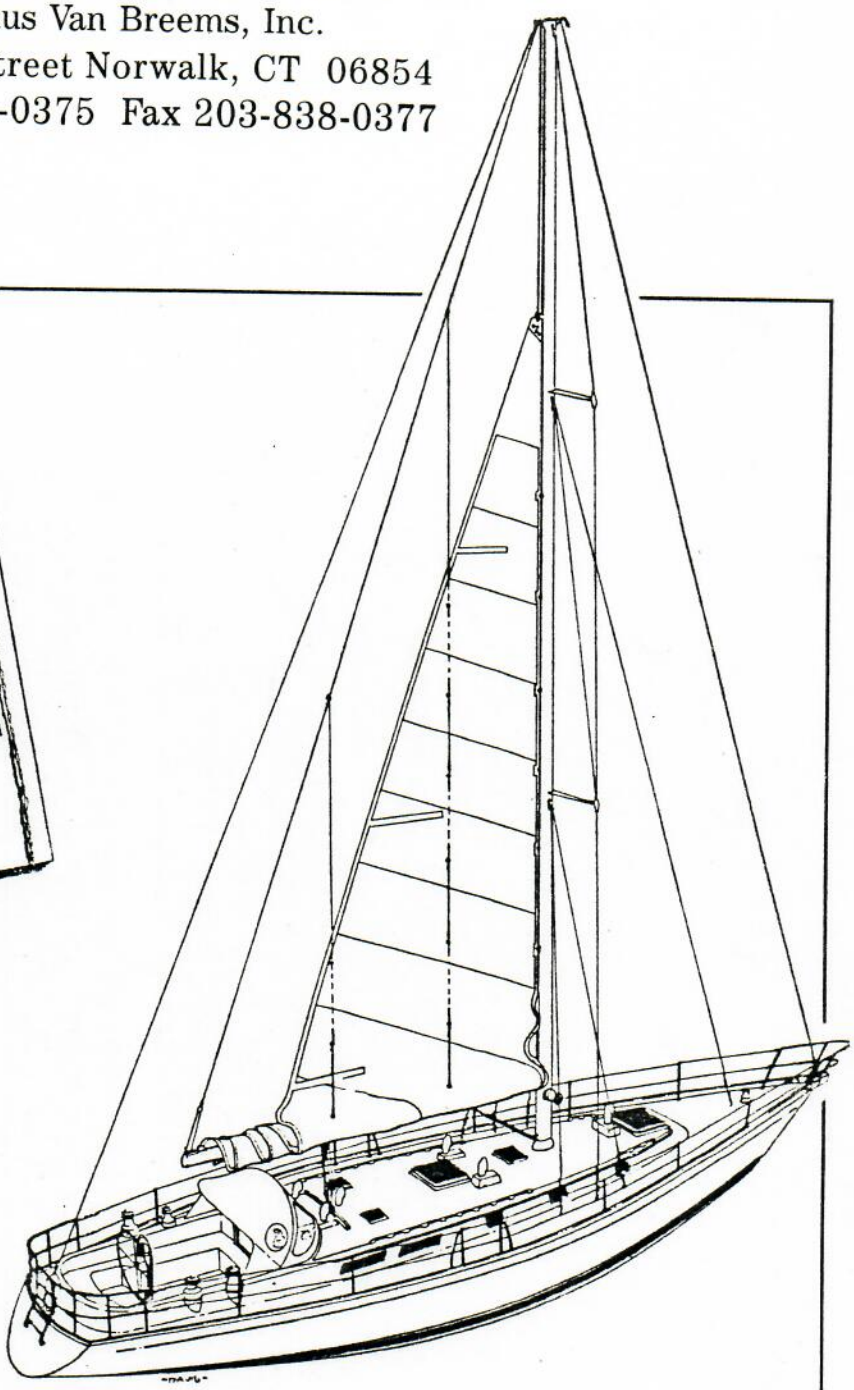




Owner's Manual

For the **DUTCHMAN** Sail Flaking System
Type A - Halyard Style Topping Lift May 1996

Subject	Page

Introduction

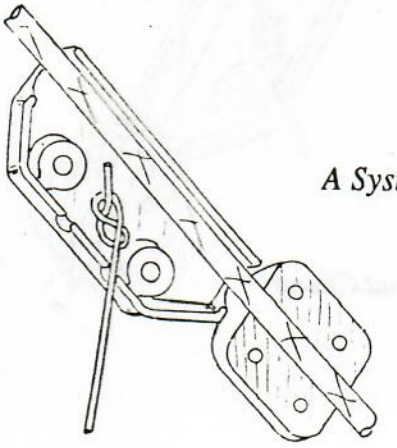
Thank you for your purchase of a Dutchman Sail Flaking System. We work hard to produce quality, effective products and provide excellent customer service. We're here to help you. Call, fax, or contact Martin van Breems - 103533,2753 on CompuServe. On the Internet, it's 103533.2753 @CompuServe.COM. We monitor the Compuserve Sailing Forum. Bear in mind that we guarantee your satisfaction with our products. See our guarantee for more details. Finally, we know many of our sales come from customer recommendations, which we appreciate very, very much.

How well the system will work is dependent on how well it's adjusted, and how stiff the sail is. As we mention in our brochure, you **must** read through this manual. Quickly review pages 1-6, and focus on pages 7 and 8 - 'Adjust the Topping Lift Clamps', and 'Adjust the Control Line Length'. This will take about 20 minutes. The two most common mistakes we find when checking out a problem is that the control lines are too loose, or that the topping lift clamps are in the wrong position. After the system is set up, review the rest of the manual to learn how to operate the system. As an inducement to read through this, we have several offers for **FREE** stuff scattered through this manual! It really pays to read this!

You have an A system. This means the control lines are fastened to a single topping lift pennant which can be removed with the sail. We recommend the A System only for boats with halyard style topping lifts, where the topping lift runs over a sheave at the top of the mast, like (or can be) a second main halyard. With a halyard topping lift, you only have to connect the lower end of the topping lift pennant to the boom, hoist up the pennant, and run the lines through the sail to install the system. To remove the sail, just lower the pennant down and remove it with the sail. If you have a boom adjusted topping lift (the topping lift is fixed at the top of the mast), use the B or C system, or better yet, add a halyard topping lift. Otherwise, you will have to go aloft to set up and adjust the system, or replace the control lines.

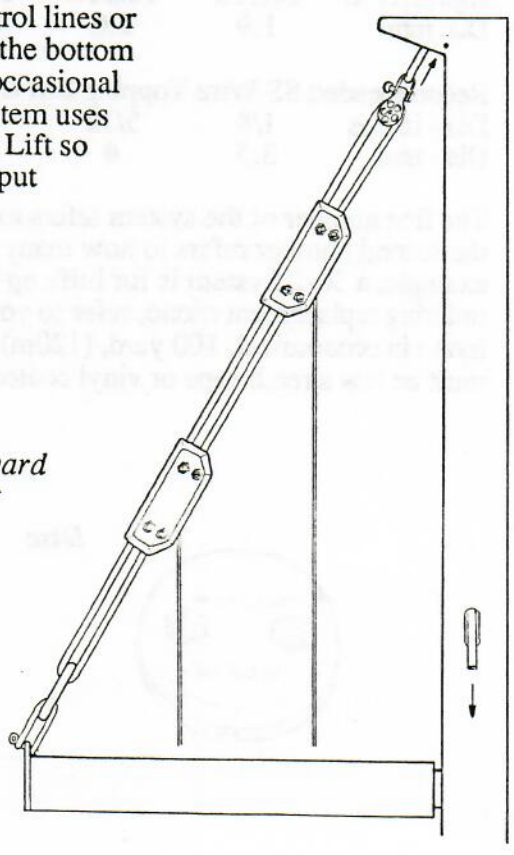
B and C systems are for boom adjusted topping lifts (the topping lift is fixed to the top of the mast). The Continuous Topping Lift of the B and C system works like a clothes line loop. The topping lift clamps can be moved up or down from the deck by rotating the Continuous Topping Lift, to replace the control lines or adjust the clamp positions. The B System uses a simple jam cleat at the bottom of the Continuous Topping Lift and a regular block up top, fine for occasional adjustments or replacing the control line. The more expensive C system uses ball bearing blocks at the top and bottom of the Continuous Topping Lift so it can be easily rotated. This allows you to slack the control lines to put on a sailcover or awning without slits, or use a roller reefing boom.

Again, please read this manual. After over 10,000 systems, we've learned a few things. Thank you, and we look forward to hearing from you.



A System Clamp

B System with a Halyard Style Topping Lift



Definitions

Boom Topping Lift - A topping lift which is fixed to the top of the mast. There is usually an adjusting line attached to the boom. If this is what you have, add a halyard topping lift (see page 4) or use the B or C system.

Halyard Topping Lift - Topping lift runs over a sheave at the top of the mast. Can be a second or spare main halyard, or can be run externally. Needed for the A system.

Pennant - Usually vinyl coated wire, the topping lift pennant is what the control lines are attached to. With a halyard topping lift, one end is attached to the end of the boom, and the other end is hoisted up by the topping lift line.

Tools and Parts Required

Read through instructions before collecting tools and parts. Depending on what jobs you need to do, you may need different tools, beyond the basic list below. If you already have a halyard style topping lift, all you need is;

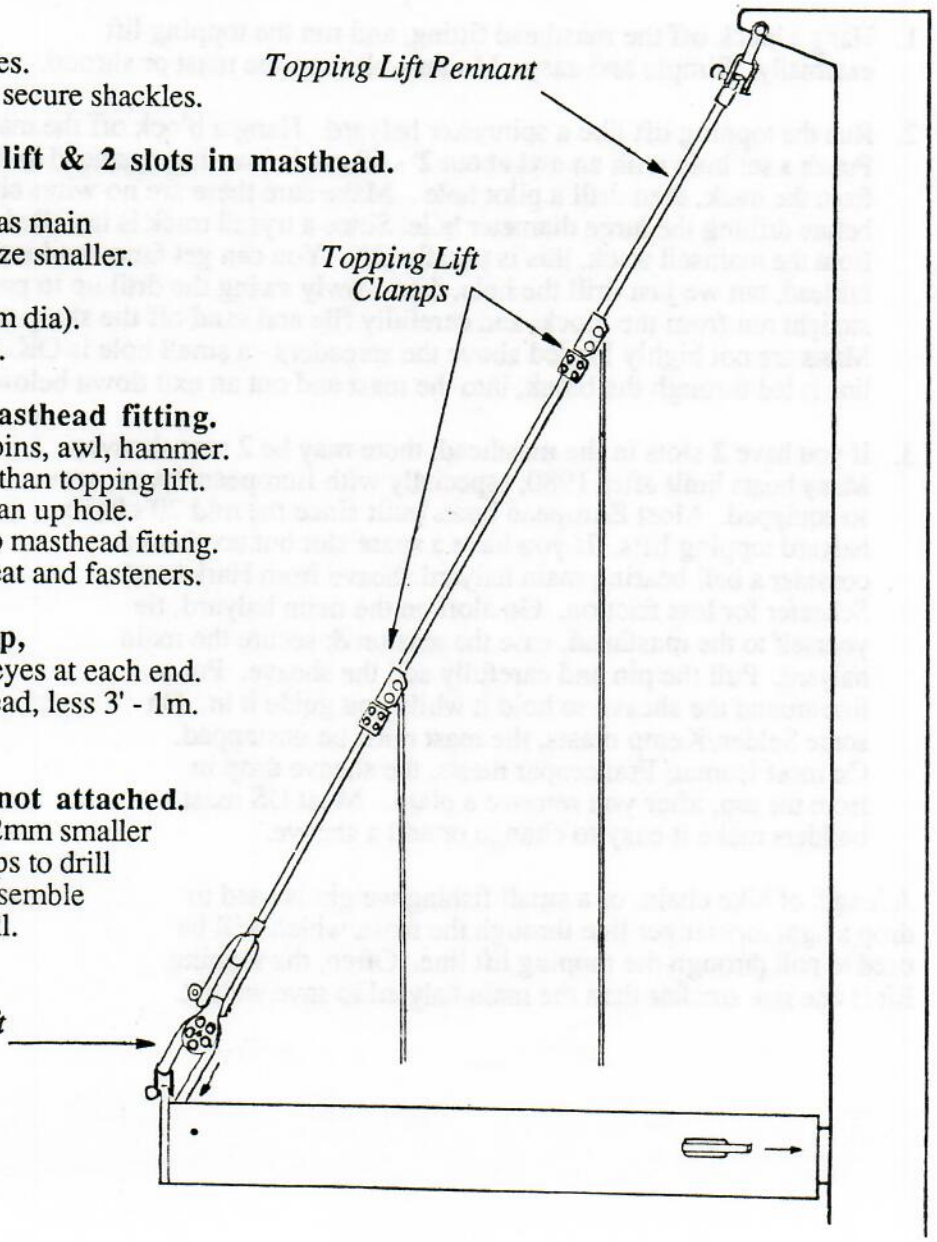
#2 Philip screwdriver.
Pliers to cut mono, tighten shackles.
Seizing wire or silicone sealant to secure shackles.

If you have a boom topping lift & 2 slots in masthead.
Bosun's chair, vinyl (elec) tape.
Line with eye splice, same length as main halyard, same diameter or one size smaller.
Fishing weight or bike chain.
Messenger line (about 1/16" - 2mm dia).
Sheave (if no sheave in extra slot).

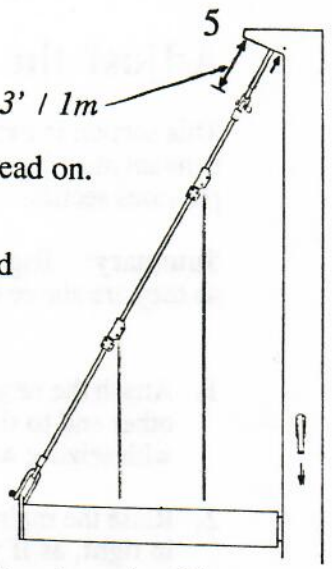
If no spare sheave slot in masthead fitting.
Slotted screwdriver, spare cotter pins, awl, hammer.
Drill and bits, 1/16" - 2mm larger than topping lift.
Fine round file, emery cloth to clean up hole.
Single block w/shackle to attach to masthead fitting.
May also need a halyard exit, a cleat and fasteners.

If Pennant is not yet made up,
Rope or coated SS wire pennant, eyes at each end.
Length - end of boom to masthead, less 3' - 1m.
Diameter - see Specifications.

- and/or topping lift clamps not attached.
Round file or drill and bit 1/16" - 2mm smaller than the pennant diameter. It helps to drill the donut clamps beforehand - assemble with the spacers in a vice and drill.



Rig the Topping Lift Pennant and Control Lines



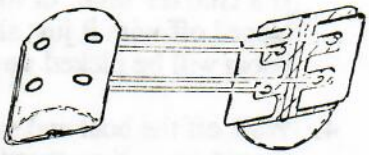
Your sailmaker may have made up a topping lift pennant and run the control lines through the sail. If so, go to the next section 'Adjust the Topping Lift Clamps'. If not, read on.

Summary: You need a vinyl coated SS wire pennant to run from the end of the boom to just below the mast top. Spectra line can be used instead to save weight aloft. Drill and roughly position the donut and mono clamps. Count the fairleads, loosely attach the discs to the tabs, thread the lines through the fairleads and secure the lines to the tabs.

1. If not supplied, make up a topping lift pennant. Measure from the boom end to the top of the mast for the length, less about 3' - 1m so the boom can be raised. Refer to the Components section for the minimum suggested diameter. Make an eye at each end. Attach to the end of the boom and the halyard topping lift. **Secure shackles** with seizing wire or Loc-Tite.

Pennant on a halyard topping lift

2. Roughly position and attach the lower donut clamps to the topping lift, using the 3/4" - 20mm screws. The donut clamps must be drilled or filed if used with over 3/16" - 5mm rope or vinyl coated wire. File them, or assemble the clamp with the **2 spacers**. Drill, then reuse the spacers for the next clamp. The drill bit should be 1/16"-2mm smaller than the vinyl coating or rope. The clamp must tightly grip the pennant - do not drill the hole too large or forget to use the spacers.



Assemble clamp with spacers

3. Tie a fig 8 in the end of the mono. Using the 1/2" (13mm) screws, fasten the mono clamp above the **upper** donut clamp.

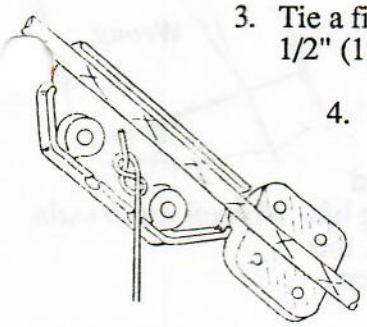
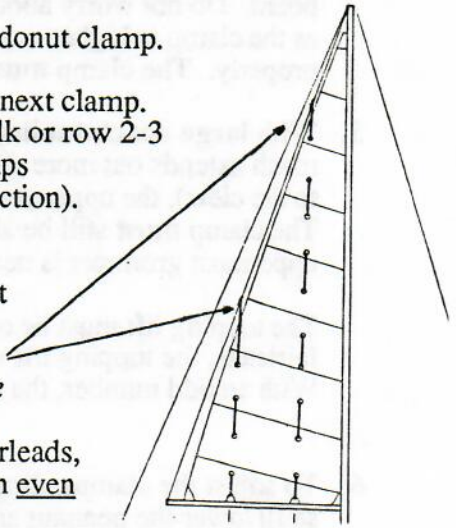


Fig 8 knot in mono

4. Tie a fig 8 in the other end of the mono. Assemble the next clamp. The mono will form a loop. Hoist up the pennant, walk or row 2-3 boat lengths away, and check that the topping lifts clamps are higher than the uppermost grommet (see the next section).

5. Cut the mono so it ends 3' - 1m under the boom. For 3 or more lines, lower the pennant and repeat steps 3, 4 and 5.



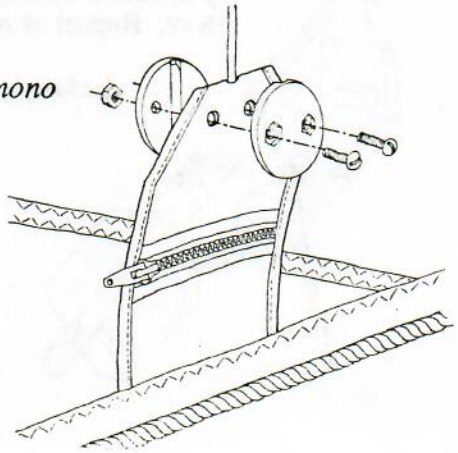
Even rows - start on tab side

6. Count the number of fairleads in each vertical row. All the rows are normally even or odd in number. If an <u>odd</u> number of fairleads, start the control line from the <u>opposite</u> side of the sail as the tab is on. If an <u>even</u> number, start the control line on the <u>same</u> side of the sail as the tab is on.

7. Loosely attach the 2" - 5cm nylon discs to the tabs. The nuts face the sail. Drop the sail. Thread the mono through the sail using 2 people, one on either side. It's easy to miss a fairlead - be careful. In light winds, raise the sail as you thread the mono.

Attach discs, insert mono

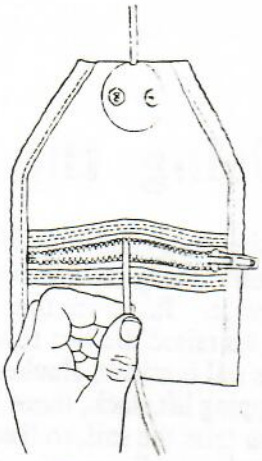
8. Insert the control line into the tab from the top hole. The discs must be loose. Be sure to get the line between the inner layers of the tab. Stick the line in from the other direction to open a space between the layers of fabric. Then thread the line into the tab, pull it tight, and tighten the screws.



Adjust the Control Line Length

Again, read and follow this section **very** carefully. The control lines must be run through the sail. See page 5 if they are not. You **must** be certain that the topping lift clamps are above the uppermost grommet, by sighting the sail from 1-2 boat lengths away (the **only** way to check). **Read** page 6.

Summary Adjust the control lines so they are just slack. With a large roach, the control lines will be snug. The sail must be all the way up.



Control line just slack

1. Raise the main up **tight**. Slacken the topping lift, then pull the mainsheet and vang all the way in, as if you're sailing upwind in 16 knots. Snug up the topping lift so it's just slack. The topping lift should be marked (see previous section), so it can be set to this position before or immediately after the sail is raised. A rigid vang, if fitted, must also be marked, so it does not push up the boom when the sail is dropped.

2. Loosen the tab discs. Open the zipper and adjust the control lines until there is **under** one inch (2.5cm) of slack in the line. Tighten down the discs. When the sail drops, it will push the tabs down, tensioning the control line. **Basically, the flaked sail hangs off the control lines.** If you lift up the folds where the tabs are, you should find the tab partially folded, with the top of the tab at least 2" or 5cm **above** the boom.

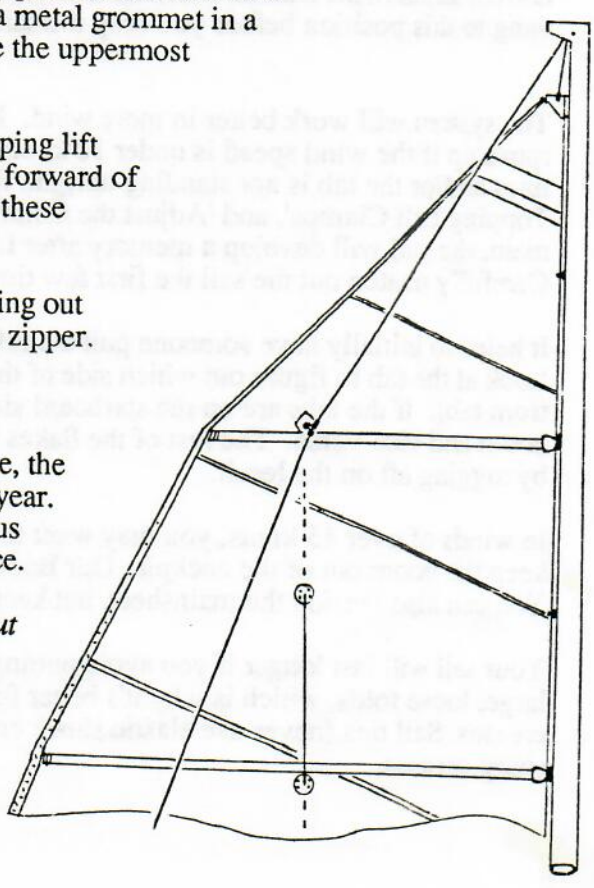
Tab partly folded down

3. If a **Large Roach Main**, the control lines will be snug, not slack. First carefully read the Large Roach Main instructions in the section 'Adjust the Topping Lift Clamps'. The control lines must pull or bow the topping lift out to the uppermost grommets, which they can easily do if the topping lift is slack. The wind will also push the topping lift aft, and mast bend and sail shape help pull the sail forward. The uppermost grommet in large roach mains is normally a metal grommet in a patch to help take the extra load. Also, we normally locate the uppermost grommet by a batten, to prevent sail distortion.

   Adjust the tension on the control lines so that, with the topping lift slack, the clamps are above and no more than 4" or 10cm forward of the uppermost grommet. With sail luffs over 50' or 15m, these dimensions increase to no more than 8" or 20cm.

4. Tie a knot at the end of the control line to keep it from pulling out of the tab. Coil the mono, put it into the tab, and close the zipper. The system is ready to use!

Getting the correct adjustment takes a few tries. Once it's done, the system will need very little future adjustment, perhaps once a year. You must spend some time to get it correct initially. Contact us (see introduction of Owners Manual) if you need any assistance.



Topping lift will bend out with large roach mains.

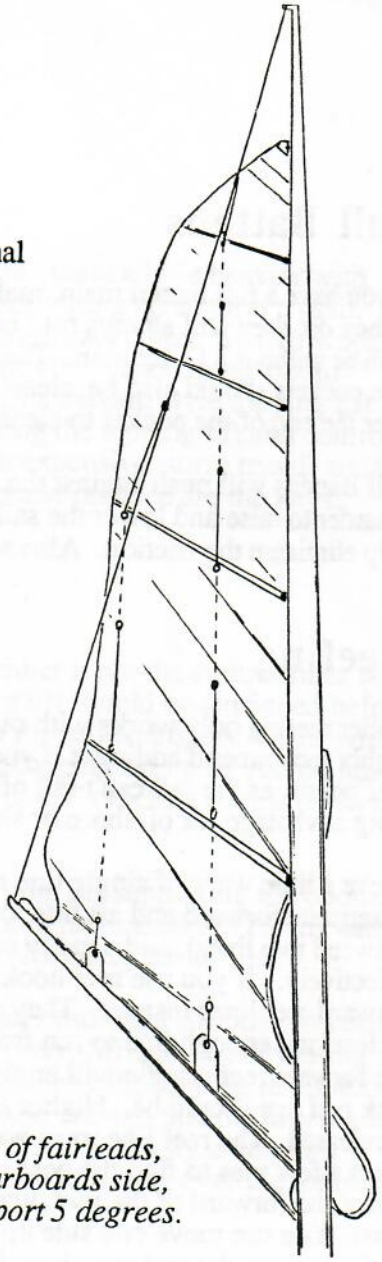
Large Roach Mains

You need to raise a large roach main a little differently than you do a normal main. By large roach, we mean a catamaran or Freedom style rig with no backstay, and a full batten sail with a roach extending out about 2 - 4 feet or 60 -120 cm beyond the straightline from the headboard to the clew.

On a normal main, if the topping lifts gets caught or snagged on the roach, it will clear itself when the topping lift becomes slack and the sails luffs. If a large roach main, this will not happen. With a Dutchman, the topping lift will always lie on one side of the sail. You need to head off, or adjust the traveler, so the sail is blown to the correct side of the topping lift. The topping lift must lie on the side of the sail that the control lines exit the uppermost fairlead. If you have an even number of fairleads, this will be the same side of the sail as the tabs are on. If an odd number, it will be the opposite side.

Let's say you have an even number of fairleads, and the tabs are on the starboard side of the sail. You want the topping lift to also lie on the starboard side of the sail. By heading the boat a few degrees to port as the sail is raised the last few feet, the sail will end up on the starboard side of the topping lift.

This is a lot easier than trying to raise the sail between a set of lazy jacks, with a foot or so between the lines that you have to raise the sail between. This difficulty in raising the sail with lazy jacks is why major boatbuilders are using the Dutchman now on large roach mains. You **must** read the large roach mains sections of 'Adjust the Topping Lift Clamps', and 'Adjust the Control Line Length' to adjust the system properly.



Even number of fairleads, tabs on the starboards side, head boat to port 5 degrees.

Downwind

Due to the design of sail slides, a sail will drop more easily if you are closer to the wind, but as long as the sail is luffing, the Dutchman System does not care what point of sail you are on. If you are below a beam reach, ease the main sheet and head up until the sail is just off the spreaders and luffing. Sheeting in the jib helps blow the sail off the spreaders. Don't sheet the main in until after the sail is secured. Our reasonably priced ball bearing track system (or any similar ball bearing track system) will allow you to raise and lower the sail much more easily on any point of sail.

There is a very remote possibility that when running downwind, a control line may become snagged on a spreader tip if the spreader tip is not well faired. If this were to happen, the sail could be damaged when it is sheeted in. Therefore, when initially running downwind, check how close the control line is to the spreader tip. We try to keep the lines away from the spreader tips when building the system into your sail to prevent this from happening. Avoid uncontrolled jibs (consider our Boom Brake, which allows you to control the speed of boom or hold the boom like a preventer from the cockpit), make sure your spreader tip has nothing that could catch a line and/or cover it and remove anything that might snag a control line.