

# How to measure the Shearwater sails

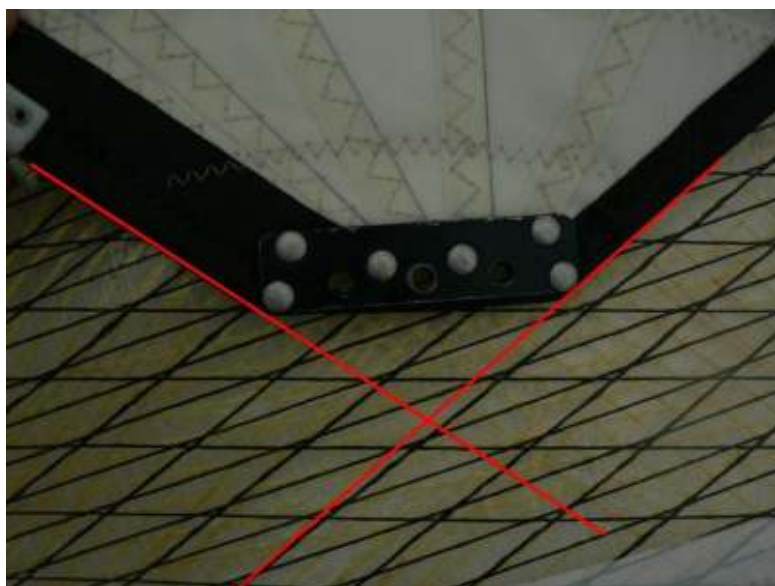
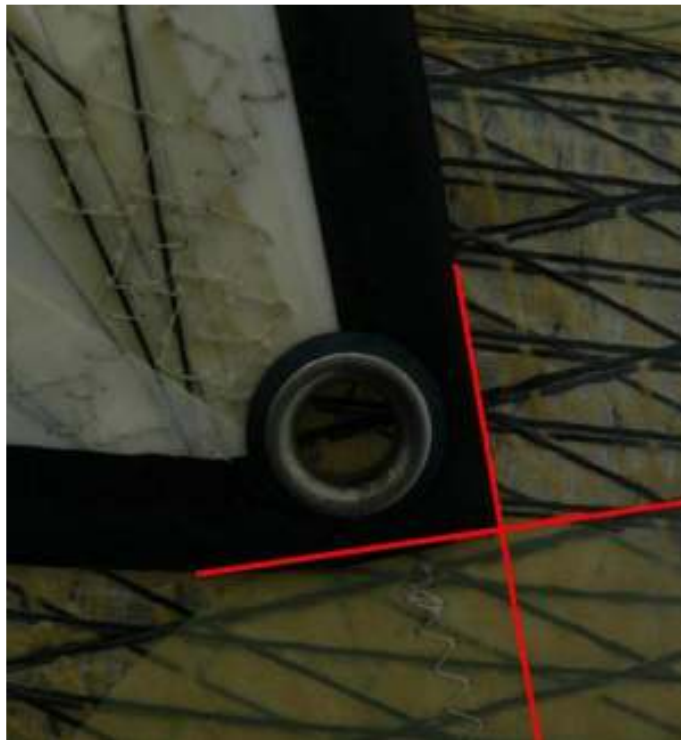
Issued 2010

Nigel Stuart  
8/22/2010

## How to measure the Shearwater sails

### General

- All measurements are to be taken in millimetres.
- Light tension (with fingers) should be applied when taking measurements to remove slack in the cloth.
- The point to measure on a load point is the point where sail ends. This is shown in the photos below by the red X. If the sail has had the corner cut off the projected point is the one used

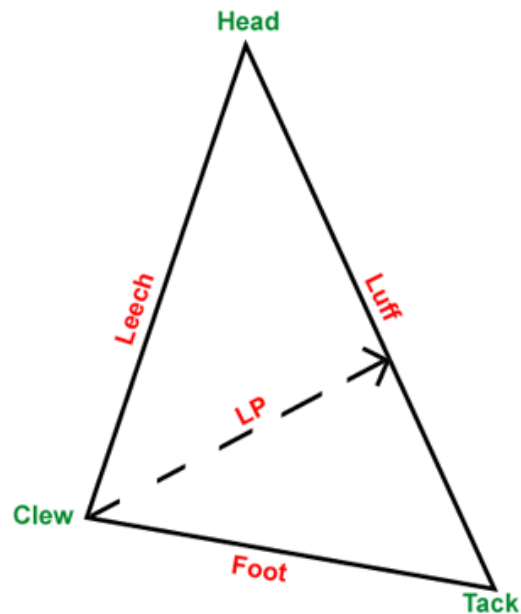


## Jib

The measurements are from the load points (Head, Tack and Clew)

The two measurements to take:

1. Luff- (Head to Tack)
2. Clew to luff as shown in diagram below as LP. To measure LP place the tape measure end on the clew and find the smallest distance to the luff. The intersection the luff should be at 90 degrees.



To calculate the jib area; times the two measurements together and divide by two million.

$$\text{Area} = \frac{\text{Luff} \times \text{LP}}{2,000,000}$$

## Main Sail

First consideration is to work out if the sail is a fat head or not.

A fat head sail is one where the top batten projects the sail out above 140mm from the top of the sail. Measure down the luff by 140mm and take a 90 degree line across the sail, if the batten is in the area above the line then it is a fat head. As shown by the green line on the main sail diagram.

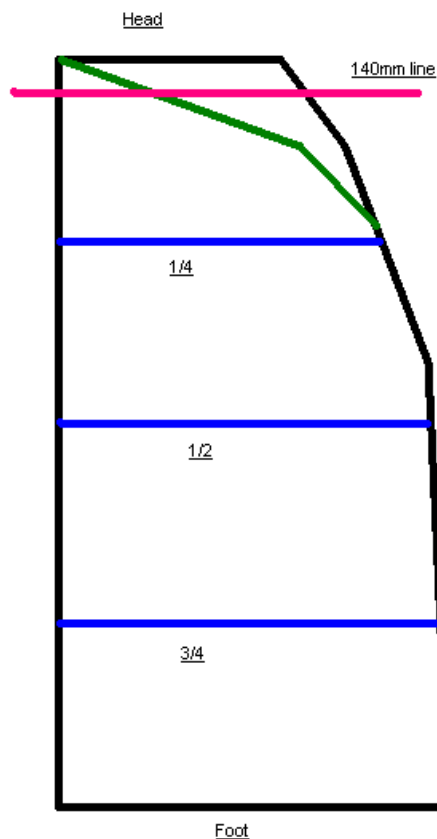
To measure the sail the luff and leach need to be divided and quartered. You may need to remove battens to do this. Fold the sail along the luff so the sail is in half; mark the fold with a pen. Unfold the sail, fold the head and foot in the pen mark the two new folds. The luff should now have three pen marks dividing the luff in quarters.

The measurement of the 1/4, 1/2, and 3/4 widths are taken perpendicular to leach at the marked points.

The measurements need to be entered in the Shearwater excel spreadsheet where the area will be calculated.

Measure:

1. Foot
2.  $\frac{3}{4}$
3.  $\frac{1}{2}$
4.  $\frac{1}{4}$
5. Head (fat heads only)
6. Luff (head to tack)



## Spinnaker

Check if the spinnaker complies with the following two points

- A headboard may be fitted but if fitted shall be not more than 120mm in any direction.
- The fitting of leech wires or other means of adjusting leech tension is not permitted.

The following pictures show how the measurements are to be taken. Remember to apply light tension to the sail when taking the measurements.

The length of each leech shall be not more than 5000mm or less than 4900mm. Both leeches must be of equal length.



The half width of the foot shall be not more than 1890mm or less than 1830mm. The sail must be folded along the foot and tension applied.



The length of the centre fold shall be not more than 6200mm or less than 5800mm. Tension the sail at the centre point of the foot of the sail and the head.



The half height cross width shall be not more than 2020mm or less than 1940mm. With the sail folded in half with the clews & leeches together fold the head to the clews as shown. Hold the leeches together at the fold point (where the tape measure is in the photo) and keep the head board and clews together when removing all folds in the cloth before taking the measurement.



The half three quarter cross shall be not more than 1670mm. After the half height cross width measurement take the head to the half height point on the leech. The new fold is the three quarter measurement. Note: it is unlikely that a sail will exceed this measurement.

