

THE HARTLEY TRAILER-SAILER 16 ASSOCIATION OF AUSTRALIA

Sail Measurement Form

This form is to be used with the measurement form for initial measurement of and for subsequent sail measuring.

Sails shall be measured in a dry state laid on a flat surface.

All measurements shall be in straight lines using a steel tape with the sail pulled out with just sufficient tension to remove all wrinkles. The points on the leach from which the cross measurements are taken shall be determined by bridging any hollows the leach with straight lines. The sail must be capable of being stowed into a sail bag.

Material to be used for construction of sails must comply with the following:

Single ply woven film cloth or polyester reinforced polyester laminate. Body of sail shall be flexible and be capable of being folded flat in any direction without damaging the film.

- Any finishing material or coating applied to the cloth shall not prevent the sail from being folded flat.
- For a material to be considered as woven, when it is torn it should be possible to separate the fibres without leaving evidence of a film.
- Polyester reinforced polyester laminate only, no kevlar, carbon fibre or 'exotic' reinforcing materials allowed.
- Combination of materials not allowed.
- Windows may be made of any materials to the maximum areas as currently specified.

The minimum weight cloth for headsails shall be 170 grams / square metre.
(4 oz./lin.yd. US Rating, 5 oz./sq.yd. UK rating)

The minimum weight cloth for mainsails shall be 210 grams / square metre.
(5 oz lin yd. US Rating, 6.3 oz./sq.yd. UK rating)

One or two panels of transparent material may be used in each sail. These panels shall not exceed a total area of **0.6 sq. metres** in either sail and shall not be placed closer than **150mm** from any edge of the sail.

Tuft windows in addition to the above panels are allowed.

A set of sails shall comprise two jibs and one mainsail. Only one jib and only mainsail to be used at any one time as a maximum.

Sail plan and measurements are to be no larger than the maximum set down in -measurement form. Sail areas may be reduced providing final measurements are contained within those laid down in the plans. Sails shall be measured in accordance with instructions in the sail measurement form.

Sails measured and passed as satisfactory shall be stamped near the tack and dated by the measurer. The stamps shall be issued to the measurers by the Management Committee.

- Boats competing under these rules must carry measured and passed sails as above.
- Mainsail roller reefing or reefing points and jib furling gear is optional.
- Spinnakers will not be permitted for competition racing.
- Whisker poles may be used for goosewinging the jib when running.
- Sheeting arrangements for sails are left to the owner's discretion.

1 HEADSAILS

1.1 DEFINITION.

1.1.1 The "HEAD" shall be the point obtained by extending the luff and leach to a point excluding any rounds or hollows.

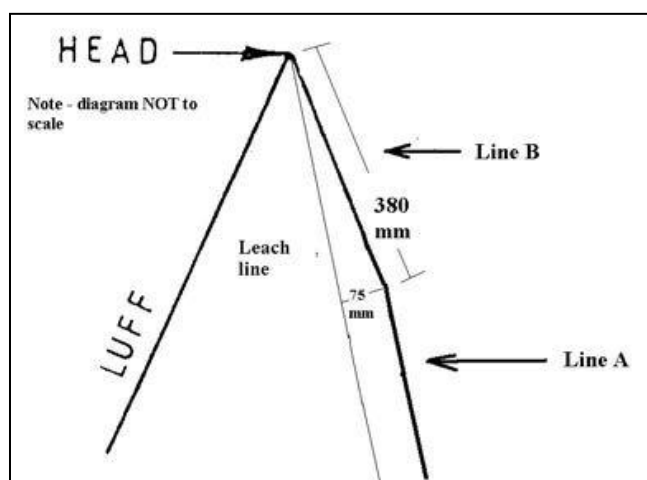
1.1.2 The "TACK" shall be the lowest point of the sail at the tack corner excluding any external tack eye or thimble

1.1.3 The "CLEW" shall be the lowest point of the sail at the clew corner excluding any external cringle

1.2 The luff shall be the distance between the head and the tack and shall not exceed - **4750mm**

1.3 The leach shall be the distance between the head and the clew and shall not exceed - **4350mm**

1.4 No part of the leach round shall fall outside a line (referred to in diagram as line A), parallel to and **75mm** from the leach, as described in 1.3 and a **380mm** straight line (referred to in diagram as line B) drawn from the head and intersecting line A.



Note:- the diagram is NOT to scale

1.5 The foot shall be the distance between the tack and the clew and shall not exceed - **2520mm**

1.6 The foot round shall lay within the confines of a flexible batten held against pegs at the tack and the clew, (the batten being allowed to pivot freely around such pegs) and pushed out at one point, such as to create a fair even curve, a distance not exceeding **152mm** from a straight line between the tack and clew.

1.7 The vertical girth shall be the distance between the head and the centre of the foot (as obtained by folding the sail so that the clew and the tack coincide) and shall not exceed - **4530mm**

1.8 The horizontal girth shall be the distance between the midpoint of the luff (as measured) and the midpoint of the leach (as obtained by folding the sail so that the head and the clew coincide) and shall not exceed - **1340mm**

1.9 Four jib battens may be carried, each one not exceeding **305mm**. One placed anywhere in the foot and three spaced evenly in the leach. Alternatively one leach batten may extend to the luff wire and the remaining two must be placed so as to divide the leach between that batten and the clew into approximately equal parts.

1.10 The following are prohibited:- zippers, clew, head or tack boards, corner reinforcing other than natural sail cloth.

2 MAINSAILS

- 2.1 **THE BLACK BANDS.** On the mast the luff measurement shall be the distance between the upper edge of the lower band and the lower edge of the upper band - **5790mm**

The top of the boom shall not be lower than the upper edge of the lower band and no part of the sail shall be above the lower edge of the upper band.

On the boom the foot measurement shall be the distance between the forward end of the after band, along the top of the boom to the after side of the mast excluding sail track- **3405mm**

No part of the sail shall go aft of the forward edge of the after black band.

- 2.2 **THE LENGTH OF THE LEACH** shall be the straight line distance between the lowest point of the sail, directly under the clew cringle and the highest point of the headboard nearest the luff and shall not exceed - **6475mm**

When the top of the headboard is at any other angle than 90 degrees to the mast, the measurement shall be taken from the highest point of the headboard.

- 2.3 **CROSS MEASURES** shall be determined as follows:-

The midpoint of the luff shall be determined by folding the sail upon itself with the highest point of the headboard nearest the luff even with the lowest edge of the boltrope nearest the tack.

The midpoint of the leach (after edge of the sail) shall be determined with the highest point of the headboard nearest the luff even with the lowest point of the sail directly under the centre of the clew cringle.

The half cross measurement shall be the distance between the midpoints of the luff and leach with the sail laid on the floor with just sufficient tension to remove wrinkles. The bolt rope shall be included.

Quarterway cross measurements shall be determined in a similar way by folding a second time.

The measurement for the -

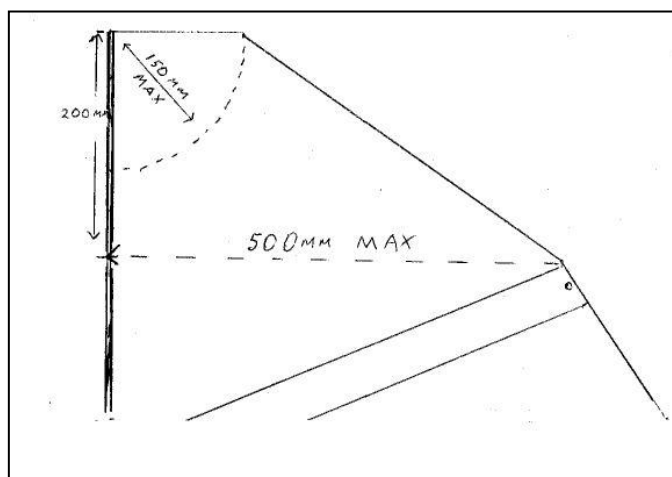
Top quarter shall not exceed - **1245mm**

Midpoint quarter shall not exceed - **2135mm**

Bottom quarter shall not exceed - **2895mm**

Where the tack of the mainsail cannot be clearly defined, the midpoint of the luff shall be found by stretching the full length of the luff, under hand tension (sufficient to remove all wrinkles) and measuring from the head along the luff, a distance equal to half the measurement between the inner edge of the black bands on the mast, (as shown on the measurement form). Quarter measurements on the luff shall be determined by measuring from the head, using the black bands in a similar manner.

- 2.4 **Head Control Measurement** to be taken at 90° from the luff, including the bolt rope, from a point **200mm** down from the head to a maximum width of **500mm**. There will be no batten pocket or solid material above this line, except for an eyelet or headboard and bolt rope. The headboard, or equivalent, shall be measured square to the mast from the bolt rope with a maximum radius of **150mm**. **(This is to apply to sails made after 1st January 2003)**



- 2.5 BATTENS a maximum of five (5), two (2) through allowed in the head with three fitted to the leach. The leach battens to have a maximum length of **915mm**, placed at the sail makers' discretion.
 - 2.6 The foot of the mainsail will have a bolt rope attached and it must continue to within **300mm** of the Tack and **200mm** of the Clew
 - 2.7 Zipper and loose footed mainsails are prohibited.
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