Bluenose Class Jib Trim by: Andreas Josenhans (North Sails Atlantic)

The current Bluenose Jib has been unchanged from 2006-2015. Over the years, a Bluenose headsail was changed to achieve the following.

Create maximum sail area in the upper ½ by filling the available foretriangle.

Be a decksweeper from the tack almost to the clew.

Have a top full batten option to enhance durability.

To change from an overlapping low aspect ratio genoa to an easy tacking high aspect efficient blade jib.

Interestingly; the change from the old Genoa to today's highly evolved Bluenose jib had a few unintended consequences. For example the high aspect (shorter foot with a longer luff) added stress to the sail cloth and the area reduction diminished the jib's power in light air. We wanted to keep the high aspect ratio and easy tacking characteristics….. so we made a second round of "enhancements". We selected a higher performance sail cloth to handle the higher sheet load and pushed maximal area into the upper leech by making the sail about a foot wider above the spreader as well as increasing the jib's wing span by 18". Presto! Now the sail has good light air-excellent heavy and has a proven to be competitive for a three season life span.

Is it ***"about the cut of your jib"*** ?

The Genoa of old vs the high aspect blade of today!

The controls you have to adjust the cut of your jib: **Halyard**

If you have upgraded your boat to include a high modulus jib halyard (Spectra/Kevlar/Vectran) you can control the length of the luff wrinkles with precision. Note to self….have a high modulus jib halyard.

*more halyard tension =shorter horizontal wrinkles cause the deepest part of the jib to move forward.

*when overpowered or in chop shorter wrinkles are better. So add jib halyard tension and watch the wrinkle length get shorter until they are barely visible.

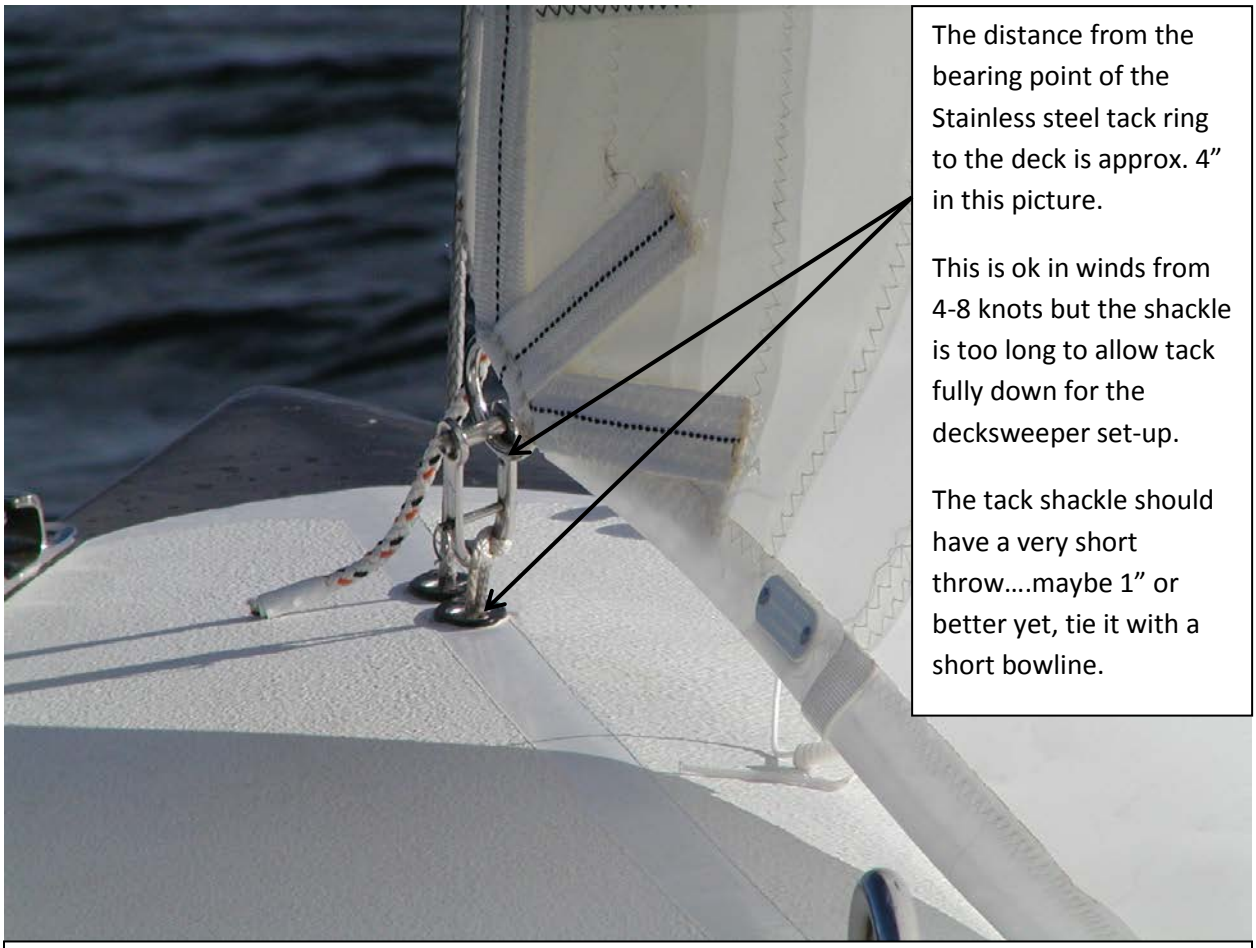
*ideally, luff wrinkles are between 2” and 8” those shown in this image the wrinkles are 24”long therefore 16” too long!

* fewer and shorter wrinkles are needed to control the mid leech because more sailcloth is carrying the sheet load.

Red arrow shows luff wrinkle to be about 24” which is excessive.

Blue arrow is ideal for light air. By pulling the halyard tighter by 1.5” the halyard will be correct. Aerodynamically you are moving the sail’s deepest point forward by at least 6”.

Jib Tack height control: A surprisingly misunderstood but speed critical item.



The distance from the bearing point of the Stainless steel tack ring to the deck is approx. 4" in this picture.

This is ok in winds from 4-8 knots but the shackle is too long to allow tack fully down for the decksweeper set-up.

The tack shackle should have a very short throw….maybe 1" or better yet, tie it with a short bowline.

The jib tack should be controlled from the cockpit to allow changes in height on the fly. The theory goes like this. The extra material in the jib foot called foot round should rest on the deck firmly in strong winds preventing the "foot round" from flapping. The low tack creates a nice the "end plate" which is desirable. The light air mode with the tack up like this allows the sail area to be pushed upward getting the jib into sweeter faster air up high.

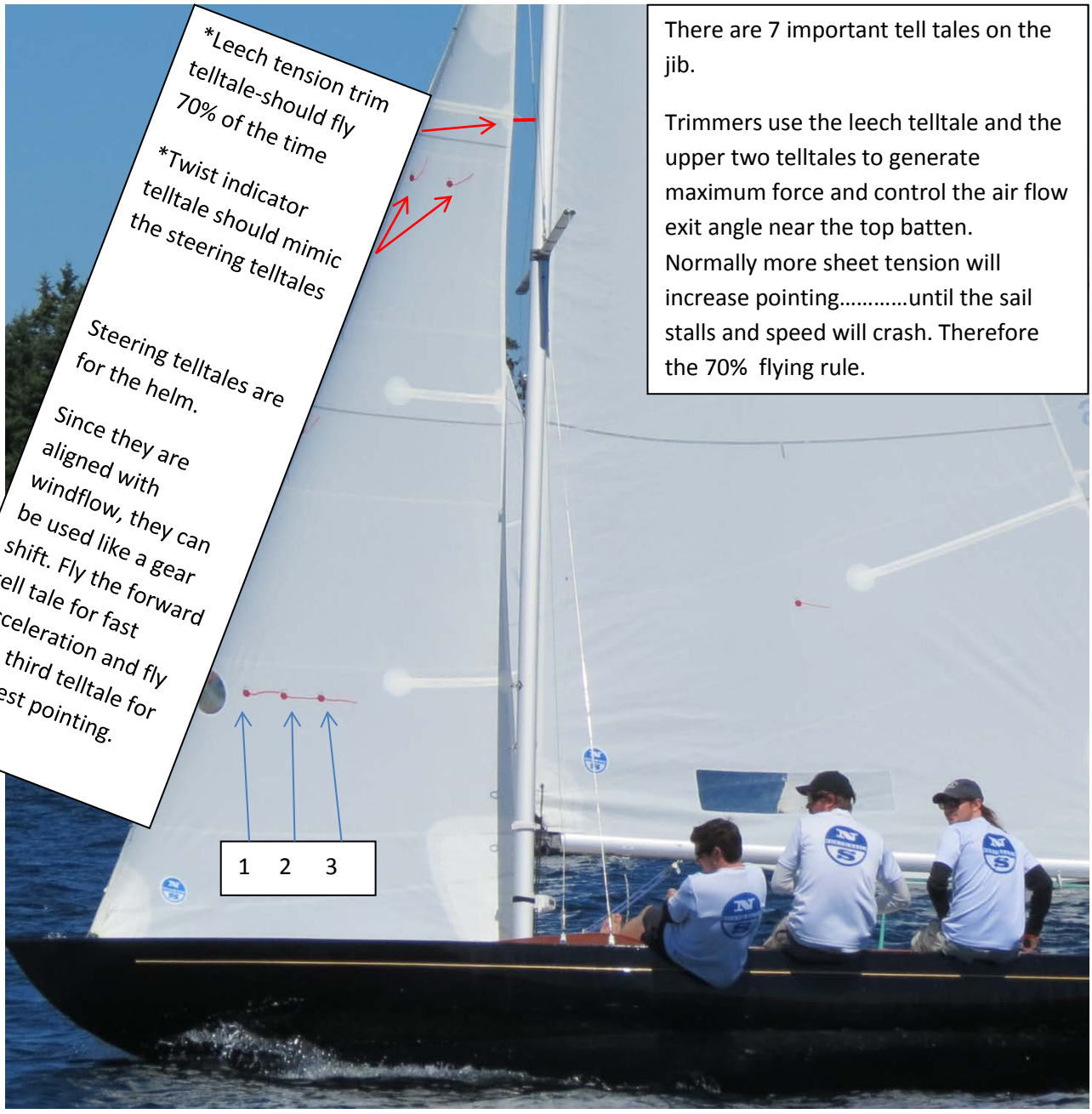
Note; if the foot flaps-pull the foot cord which is visible in the photo.

Here the rules of thumb:

*-Lower jib tack to minimum when overpowered.

*-Raise Jib tack when underpowered in 8 knots or less. BUT only to a max height of 3" or the jib top batten will catch the jumper when tacking.

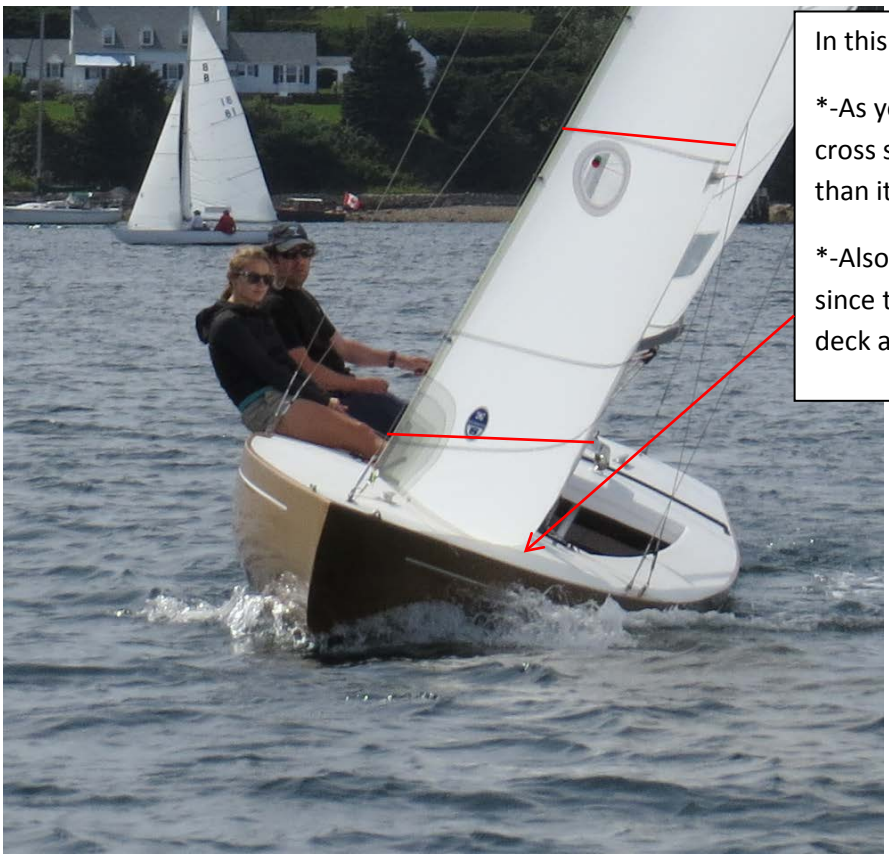
The ***Tell Tales:***



There are 7 important tell tales on the jib.

Trimmers use the leech telltale and the upper two telltales to generate maximum force and control the air flow exit angle near the top batten. Normally more sheet tension will increase pointing……until the sail stalls and speed will crash. Therefore the 70% flying rule.

The ***Jib Lead*** position-is controlled both fore-aft and laterally. The fore and aft controls the foot depth. Forward positioning of the jib turning pulleys moves the clew toward the tack and makes the sail fuller as a result. The in-out or sheeting angle control allow you point higher as the jib clew is moved toward the centerline of the boat……..until the space between jib and main becomes chocked off and speed/acceleration suffers when the main backwinds because the slot is too compressed for the amount of air passing through.



In this picture the jib foot is too deep.

*-As you see the sail is deeper at the cross section below the North logo than it is above the telltale window.

*-Also the jib tack is above optimum since the jib foot is not sweeping the deck and they have plenty of power.

So is there perfect trim?

You bet there is:

Tack height-luff tension-sheet tension-lead position-headstay sag… all good! Look at that lovely bow wave of a Bluenose at full speed and point!