

Switching to High Aspect Albacore Sails

Modern Albacore sailors use one of two distinct types of sails on their boats commonly called either “low aspect” or “high aspect” according to the cut of the jib. While very different in shape and how you set each of these types of sails, both have produced top results in the class for over 20 years.

Some History

In the late 1970’s and 1980’s high aspect sails were favored by the top sailors in the class (Poyntz, Storer, Luard, Ewing and McNamara) who captured top places in North American regattas with sails cut by Storer/Sobstad, Eggers and McNamara. In the late 1980’s and 1990’s a new group of top sailors (Clark, Humphreys, Holmes, Weiss, and Harris) began to dominate the class using low aspect jibs from North Sails. By 2000 most sailors in North America were following the lead of Barney Harris and using low aspect North Sails while most UK sailors stayed with the high aspect design from McNamara.

Making the Switch

The early 2000’s have seen a distinct trend back to high aspect sails as top sailors have used them to win the 2001 Internationals and place 2nd in 2003 Internationals as well as finish at the front of many national and regional regattas. Switching types of sails often requires a significant re-learning period. The purpose of this article is to help those making the switch from low aspect to high aspect sails do so as quickly and efficiently as possible. While the information in this article can be generally applied to any high aspect jib, it is specifically based on nearly 30 years of experience I’ve had using the high aspect sails from Sobstad Sailmakers in Barrie, Canada. These sails were originally developed by Richard Storer in the 1970’s and optimized by Barry Poyntz who used them to dominate North American Albacore sailing from 1977 to 1985 winning many National and regional titles as well as Worlds in 1977 and 1983. The sails currently produced by the Sobstad loft in Barrie are built from the Poyntz templates with slight modifications.

Before you go sailing

The Sobstad jib is 10-12 inches longer on the luff and much shorter on the foot than the low aspect sail you have been using. As such a few modifications are required to your boat to get the sail to function well. Just putting them up on a boat set up for low aspect (North) will almost certainly end in disappointment and frustration. There are two modifications needed on most boats: 1) shorten the jib halyard and 2) extend/relocate the jib fairlead tracks inboard and forward.

First shorten your jib halyard. While you might have enough range to get the jib up, you almost certainly won’t have enough range to use the sail in all wind conditions. To decide how much to shorten your halyard, lay your current jib on top of your Sobstad jib and measure the difference in the length of the luff wire between bearing points. Shorten your halyard by this amount (+/- about an inch), remaking the Nico press or swages as needed. (If you want to switch back to the low aspect sail you can easily do so by making

a luff wire extender for the top of your low aspect jib using a short length of Kevlar or Spectra line).

Second, examine your jib tracks. Measuring from the aft face of the transom along the top of the seats, you will need to be able to position the vertex of your jib sheet in the fairlead block in the range of 92-105 inches ahead of the transom, with 98+/- 4 inches being the most commonly used range. High aspect jibs can also be sheeted much farther inboard, especially in light wind to maximize pointing. The vertex of the jib sheet can be as narrow as 13-14" off the centerline, but the most common range is 15-16" off center. If you can not get your fairleads to these positions, then you will need to relocate your jib tracks in order to properly set the jib.

With these two adjustments, you can probably get the Sobstad sails to function properly. For best performance, go through the full tuning guide (the most current copy can be found on the web at www.albacore.org/USA/members/tuning_training/tuning_guide_sobstad.asp) and set up your boat according the guide. Note that the guide is a work in progress is it is updated when new information about how to get the most from your Sobstad sails is available.

Setting the jib

If you have been using low aspect sails and switch to Sobstads, the first thing you will notice is they look and set very differently. The first temptation is to try to make the Sobstad jib "look like a North." This is nearly impossible and many top sailors have been frustrated trying. After noting that both are curved triangles of cloth, the similarity ends. So one of the first things to do is NOT to try to make them look and function like a low aspect jib.

Setting a Sobstad jib correctly requires balance of three adjustments:

- 1) sheet tension (how hard you pull the jib sheet)
- 2) jib luff sag (as controlled by rig tension through jib halyard and main vang)
- 3) fairlead position (as controlled by where you locate your jib fairlead car)

Setting a high aspect jib requires feel and experience to get the balance of these three controls right so the sail is fast. Pointing and speed are both affected by these settings. Get them right and the boat will sail upwind performance equal or better than the rest of the fleet. Assuming you have set the boat up according to the tuning guide and you are sailing in moderate (8-12 knot winds) on flat water, initially set the jib up as follows:

- 1) set the fairlead to place the vertex of the jib sheet in the fairlead block about 100 inches ahead of the transom
- 2) set the jib halyard at about 8 inches of rake (as measured on the forestay from sheerline to bow) and adjust to give the appearance of about 2 inches of sag between the jib luff and the forestay pulled in a straight line with shock chord. Note that boom vang tension can affect luff sag (more vang=less sag). I'm assuming the vang is set appropriately for the wind conditions (leach just firm and overbend wrinkles from clew to luff just beginning to appear).

- 3) Sheet the jib sheet to bring the leach in to where it appears to be about 2" off the spreader when viewed from the skipper's station through the visibility window on the main.

With these settings you should see a small amount of backwind from the jib on the main (in the area 9-12" aft of mast and about 36" above boom).

From this starting point, begin to make finer tuning adjustments to optimize speed relative to other boats.

- if boat is not going or pointing try easing jib sheet 1/2-1 inch. This will not change sheeting angle, but will put twist in jib and open leach. Jib needs to retain a considerably curved fore/aft shape. If it ever looks "flat" like a North jib, it is probably oversheeted. These sails are much more sensitive to sheet tension. When in doubt, ease jib a bit (1-2 inches) to build speed and then slowly work sheet back in to develop pointing. In light air, do not try to point high; ease sheets and keep sails full and boat moving to avoid stalling.

- if boat is moving, but not pointing try slightly reducing luff sag. This can be done with jib halyard tension, vang or both. Experiment to find the right mix. Be careful not to remove too much luff sag. Sail is designed to have about 2". If the boat feels like it has too narrow a steering groove, then try adding some luff sag. In light air or chop add more luff sag for more power. 3-4 inches of luff sag is okay in the 1-2 foot chop produced by 12 knots of breeze on open waters like Lake Ontario or the Chesapeake Bay.

- adjust fore/aft position of jib leads to optimize even break in jib luff and adjust backwinding of main. Further aft on jib lead will reduce tendency to luff at bottom first and reduce backwinding of main.

- do not get obsessed with making a jib leach telltale flow. A leach telltale on a high aspect jib behaves much more like the leach telltale on a mainsail. It flows only about 30-50% of the time with continual flicking to the leeward side of the sail. This might seem to indicate a closed leach, but the sail works fine under these conditions. Also don't be fooled by the visual appearance of a closed leach. The high aspect sail has a narrow chord that often appears to be more closed than a wider chord low aspect sail.

See tuning guide for more complete suggestions for setting sails.

Setting the main

In contrast to setting a high aspect jib which takes some practice and experience, setting the main is a snap. The main has moderate draft forward and a very smooth airfoil shape which requires very little fiddling with the mast to get it to set right. Unlike the North main which requires a lot of pre-bend and considerable mast adjustment to keep the very deep main trimmed correctly, the Sobstad main requires very little applied mast bend and adjustment.

The sail is cut with about 2 inches of luff round that needs to be accommodated by mast bend. With the spreader settings and rig tensions suggested in the tuning guide this is easily achieved without any pre-bend of the mast in all but the lightest conditions (< 5 knots).

Assuming you have set the boat up according to the tuning guide and you are sailing in moderate (8-12 knot winds), initially set the main up as follows:

- 1) Raise the main to the black band at the top of the mast. Pulling the boom down to the lower black band should produce a slight tension fold along the luff of the sail. This will blow out as soon as you begin to sail. In very light conditions you can release about 1/4 inch of main halyard tension to avoid over flattening the luff of the sail.
- 2) Apply vang tension to the point that you begin to see overbend wrinkles extending from the clew to the luff. In this wind range the leach telltale will stream about 30-50% of the time and flick to leeward the rest of the time. In very light winds (< 5 knots) you can increase the twist in the main and open the leach by applying a some pre-bend to the mast to retain the 2 inch luff curve cut into the sail. If you apply pre-bend you will need to adjust jib halyard tension to take up the induced luff sag.

Fine Tuning

Getting the most out of your sails requires optimizing the way you set them for your style of sailing, crew weight, equipment and conditions of the day. This article is intended to help you make the most important adjustments to get high aspect sails working on your boat. The full tuning guide offers more advice, but the ultimate performance from any set of sails is developed through hours of boat-on-boat tuning taking note of what works and what doesn't. I encourage you to share knowledge you gain with me and other users of Sobstad sails. As new settings and techniques are proven out over a wide number of sailors I'll incorporate those into updates of the tuning guide.

I look forward to your comments, success stories, questions and tips.

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