

How to perfectly trim your Headsails with Rod Davis

There are fewer controls available to shape the genoa than there are for the mainsail, so the sail shape built in at the loft is critical. Unlike the main the genoa is supported only by the luff; both the foot and leech are controlled by the sheet alone. When the boat becomes overpowered it is best to change to a smaller jib. Failing that there are some tricks that can be used to make the sail more efficient.

Cloth selection is critical. Mylar is better than dacron because of its stretch to weight ratios. Kevlar is even better but does have certain drawbacks, including price! The low-stretch qualities allow the sailmaker to build in a predetermined shape that the sail will take. The sail is less susceptible to wind speed changes so trimming is less. New Mylar and Kevlar sails are made to be set in a relaxed state. When you first put the sail up use only enough tension on the halyard to remove the wrinkles. Later the halyard can be fine tuned.

Once the sail is hoisted, it is time to get it trimmed properly. First check the fore and aft until the tell tails lift evenly from top to bottom as you slowly head up into the wind. If the lead is too far forward, the leech will be tight and cause more back-wind in the main than normal. Also, the tell tail will lift first at the bottom. If this is the case, move the lead aft one hole on the track, and sheet the sail in. Continue this process until the whole sail breaks evenly. If the top tell tail lifts first, then move the lead forward.

When all the tell tails break evenly you are ready to go upwind. there are times when you will be overpowered and will want to change jibs but cannot, move the lead back to induce more twist. This will let the top of the sail luff, spilling off the extra power. Also this will flatten the bottom of the sail, making it more efficient for a higher wind velocity.

The draft location is another important aspect to good jib trim. Ideally the maximum draft should be at 35% to 45% aft. By this we mean the deepest part of any horizontal section of the sail should be over one-third, but less than halfway back from the luff towards the leech. As the wind increases the draft tends to move back. Increasing the halyard tension will pull the draft forward. One thing to note is that as the halyard is pulled, the sail in effect is lifted up off the deck, so the jib lead will have to be moved aft to keep the same relative position. The helmsman can often tell if the halyard is not tight enough, as the sail will be draft aft and hard to steer too. The tell tails will easily stall and the sail will appear to have no groove. Pulling the halyard up will make the draft move forward, and the front of the sail rounder, making it much easier to sail to. Headstay tension controls how full the jib is. It is much like mast bend but rather than bending forward like the mast, a headstay sags the fuller the jib gets. On most boats the backstay is used to tension the headstay and reduce sag. It is very important, since pulling the backstay will flatten both the jib and main, that the two sails are matched. This way they will both be the correct depth at the same time. In light wind the jib needs to be fuller so the headstay should have sag. Some boats, like SOLINGS, never sail with the headstay tight. Even though there is a lot of headstay sag, SOLINGS are one of the closest winded boats. Reducing sag is not the key to pointing higher; the sectional shape of your jib is.

The headstay should be at the correct tension to make the jib full enough for the conditions.

On boats with swept-back spreaders, the cap shrouds take most of the headstay load. There is very little you can do to get increased headstay tension while sailing. The backstay really only bends the top of the mast, doing little to the headstay sag. Usually we like to set these boats up with very tight cap shrouds to keep the sag from becoming excessive in windy conditions.

The genoa sheet is the most important control for the sail. As mentioned earlier, the genoa does not have boom to support the foot, so the sheet has to act as the boom, vang, outhaul and traveller as well as the sail tension device. More than any other control the sheet has a greater proportional effect over all the aspects of the genoa trim.

Once the halyard has been set and the lead positioned properly, the in-and-out action of the sheet will change the shape of the genoa in relation to the changes in wind velocity. When a puff hits the genoa will stretch and distort somewhat. The leech will open up and the sail will become deeper. By trimming the sheet more you will reverse these reactions by tightening the leech and bringing the sail back closer to the midships of the boat.

Exact sheet tension for upwind conditions is hard to specify. But, as a rule the maximum sheet tension should be so the genoa kisses the upper spreader.

When reaching with a genoa, the first thing to do is to move the lead as far outboard as possible. This will open up the slot or gap between the main and the leech of the genoa, tossing less back-wind in the main, allowing it to be eased more. To make the genoa luff evenly from top to bottom, the lead will have to be moved forward. When the wind is 90 degrees apparent there will no longer be any benefit in moving the lead further forward because the sail will be so eased and twisted. Moving the lead far enough to fix this will cause the bottom of the sail to be too full and the leech excessively tight.

Good genoa trim has to be in harmony with the main trim and helming of the boat. Communication between all parties is critical to sail trim and thus the speed of the boat.