The Bayview One Design Regatta Wrap-up/Light Air Genoa Set-Up

By: Erik Ryan, owner USA 632

Greetings fellow Cal 25 sailors! John McCallister and I have been having a good conversation recently about the design and construction of light air genoas, and the overall trim/set-up of the genoa in light air. After some discussion, we both agreed that we should post a lot of the details of this conversation by way of this article, in order to keep the entire class up-to-speed with some of the things we’re discovering about the sails and set-up of the sails in light air conditions. To re-cap for anyone that did not participate in the Bayview One Design regatta, the regatta was scheduled for 3 days of windward/leeward racing on Lake St. Clair, just north of Detroit, Michigan. Unfortunately, due to a lack of wind, racing only took place on the first two days of the event, as there was simply not enough wind on the third day to manage any racing at all. The conditions on the first and second day were quite similar, with most of the racing taking place in 4-6 kts TWS.

As luck would have it, the boat that I own in partnership with Adam Hollerbach came out of the regatta 3 points ahead of John McCallister’s team, thereby squeezing our team into a first place finish in our class, which was then determined to be the overall winner of the regatta. It felt pretty good to see the Cal 25 class in Detroit be deemed the most competitive one design class of the regatta, likely beating out stiff competition from the Beneteau 36.7 class, and the always competitive Melges 24 class, with a solid mix of amateur and professional teams alike.

That all said, our team battled with John’s team throughout the weekend, more often fighting for clear air and more pressure, rather than the usual boat-boat combat, where either one of us would be right on one another’s leebow, trying to squeeze that extra 1-2 degrees of angle or speed out of the boat and sails, that would make the difference between holding a lane and being forced to tack or gybe away. However, we often ended up very close to one another several times throughout the regatta, where we were constantly comparing our speed and pointing abilities in the lighter air, and realized that while the set-up of the mainsails was quite similar, there were some differences in the set-up of the genoas that we both noticed.

To be specific, Adam and I purchased a Doyle Sails LPT genoa (150% LP) from Al Declerq in Detroit, Mi. for this season, and I believe John purchased a North Sails cross-cut genoa (150% LP) from Mike Boston in Detroit, Mi. The only reason I bring up the specific sailmakers here is because of an issue I stumbled onto while I was sailing with a local team in Annapolis last year for the Cal 25 National Championship. The team I sailed with had a full set of North Sails, and were under the impression that since they bought their sails from their local North Sails loft, that they were getting the same sail design and construction as the ones that Brian Shenstone has been purchasing from Mike Boston at the North Sails loft in Detroit, and winning countless National Championships with across the country. I was quick to point of the differences between the two different sets of sails, and unfortunately created a bit of a problem for the two different North Sails lofts. However, I think the class is better served by knowing that just because you buy your sails from the same parent company, does not mean you will get exactly the same sails as what’s being produced by a different loft working for the same parent company in a different part of the country, unless you specifically request them to share the design, and even then I’m not sure if their franchise agreements will allow them to do so. Let’s get back to the discussion about the differences in the genoa set-ups though.

Our team took some pictures of the Doyle Detroit mainsail and genoa in the 4-6 kt wind range that weekend, and compared them with some photos of the North Detroit mainsail and genoa taken in the same condition. Without getting into too much detail, and revealing too much about the developmental design work that has been done by either sailmaker, I’ll sum up the findings as generally as I can. While the mainsails set-ups on both boats appeared to be almost identical, (since it’s virtually impossible to bend a Cal 25 mast fore-aft without breaking it,) we noticed some significant differences in the genoas. The Doyle Detroit genoa was set up with about the same overall amount of draft as the North Detroit sail, but we were able to bring the draft further aft in the Doyle Detroit genoa, (through a combination of greater backstay tension and less halyard tension,) than the North Detroit genoa. What we believe this set-up enabled us to do was flatten out the entry on the Doyle Detroit genoa, which gave us slightly less pointing ability, but also required fewer and less dramatic rudder adjustments as the puffs came on, thereby eliminating a far more devastating source of drag through the water.

Let’s not lose sight of the bigger picture here though, we’re talking about sail set-up in 4-6 kts TWS, and there were plenty of occasions that weekend where the breeze was 0-3 kts TWS! These are not the typical conditions any of the Cal 25 fleets sail in, to the best of my knowledge. So the adjustments that we were making to the backstay and halyard tensions should be considered to be at the extreme end of the spectrum, as opposed to the norm.

To be specific, the halyard tension on our boat was so loose that there were wrinkles radiating out from each of the genoa hanks almost 2 feet into the body of the sail. This super light halyard tension, and the corresponding effect it had, (allowing the draft to slide further back into the sail,) was the key difference between the way our Doyle Detroit genoa was set up, and the way the North Detroit genoa was set-up. The key to the theory John and I have discussed on what the difference may have been, lies in the different construction methods of the two sails. The Doyle Detroit sail is made from a very light base material, which is assembled in a cross-cut orientation, then reinforced with load bearing fibers applied externally to the joined panels, along the projected load paths of the sail. The North Detroit sail is made with the same cross-cut panel orientation, but rather than applying the load oriented fibers externally to a light weight base material, the load oriented fibers are laminated within the base material itself, thereby creating a somewhat more rigid panel, which might thereby allow for less manipulation of the draft position, (by way of halyard tension,) in the lighter wind conditions.

Once again, please note that we are talking about one very specific set-up, in one very specific wind range, that should be considered to be at the extreme end of the average wind conditions that all the Cal 25 fleets sail in across the country. While we discovered that the Doyle Detroit genoa design and construction may have enabled us to achieve a somewhat more optimal set-up in the light air conditions this event was held in, we’ll have to wait and see what how our respective sails set-up in the more average to opposite end of the wind range. In any event, John and I have agreed that we’re going to try and continue to create and post this type of information to the website as we progress through this season, and hopefully more to come. Sail safe, sail fast, and sail smart. I hope to see you all out on the water soon!

-Erik Ryan-

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