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Roller furling vs. storm jib dilemma solved ... turn the ketch into a 'klutter'

When we added roller furling to VALHALLA, our Fuji 32 Ketch, we then faced the problem of dealing with changing headsails from the genoa to the storm jib. I could envision the nightmare (and the time when the need to shorten that much sail usually happens at night) of removing a 130% genoa from the roller furler in what would be deteriorated weather conditions, lurching about and hanging on as best you can out on the bowsprit, and being plunged knee deep into heavy seas. I had previously experienced that fearful event too many times prior to acquiring the roller furler and wasn't pleased with the prospect of continuing these acrobatic maneuvers, not withstanding wearing a good harness secured to jacklines. The sail would necessarily be fully extended before it could be lowered and the exercise would have to be done head to wind, or nearly so, with the attendant flapping and flogging by the sail of everything in its path, including me. After that exercise the storm jib would be hoisted while the boat suffered from no jib to keep it moving into the wind. Thrilling for some, perhaps, but why practice being miserable?

Although I have seen advertising for a device that wraps around the furled jib, attaches to the storm jib and is hoisted by an extra halyard I am not impressed with this solution. It seems cumbersome to hoist during storm conditions. Something more secure and convenient was desired such as a good old-fashioned wire stay.

Inner forestay

The solution was to add an inner forestay to the boat, essentially turning the ketch into a 'klutter' (properly called a cutter ketch?). An added bonus is the advantage of flying the storm jib closer to the mainmast. The moment of effort exerted by a sail hoisted on the forestay compared with a sail one-half the distance closer to the mainmast is halved. We find the driving force to be just about right in gale conditions for the small storm jib we have and when the wind begins to abate, extending a bit of genoa keeps the boat moving until it's time to strike the storm jib.

A permanent inner forestay presented it's own problem of interference, however, since while at anchor the small foredeck area on VALHALLA is normally consumed by our squall-proof windscoop (ON Issue No 99, p 71). A removable stay became the answer. The need to have a simple fastening and tensioning method was a prime consideration, again envisioning the conditions under which setting up the stay may have to be done.

Design and installation

Mounting locations on the mast and deck were chosen with rigging strength and integrity in mind. Though secondary in importance and probably not absolutely necessary, I wanted the forestays to be as parallel as possible for aesthetic reasons.

The topmost location of the stay was selected to be slightly above the spreaders. My reasoning was that the aft lower shrouds would serve the purpose of backstays to compensate for the forward effort of the jib. The head of the storm trysail is at this same height and also provides additional aft thrust when it is hoisted and tensioned. A consultation with a naval architect confirmed these thoughts.

To attach the stay to the mast I decided on hounds for maximum strength. As I sat in the boatyard on an old spar I made a sketch of what I thought would do for a set of hounds. When done I stood up, thinking of where I could have this fabricated, looked down and discovered I had been sitting directly over a set of hounds almost identical to my sketch. Serendipity had struck! The owner of the spar was even willing to part with the hounds in exchange for an old winch I had in the spare parts box. This old spar, originally the mainmast

on some boat, was intended to be used as a mizzen mast on a ketch the owner was rebuilding. Another fortuitous discovery was that the whisker pole topping lift could now serve double duty as a halyard for the inner forestay.

The attachment point on deck was based on considerations of strength, non-interference with deck hardware such as the windlass, parallel alignment with the forestay, and sufficient length for the jib. The chosen location was on a timber brace for the bowsprit, which necessitated adding a filler block between it and the fiberglass deck. I had previously installed a thick stainless steel plate below the foredeck area to take the strain of the windlass and cleats. In lieu of a chain-plate fitted through the deck I felt this would be strong enough for my purposes.

I investigated commercially available shroud levers to permit attaching the stay to the deck and as a means of tensioning the stay. None were found that were of a suitable size and strength.

Instead, I chose a high-strength folding padeye securely bolted through to the reinforcing plate below the deck.

I then used a combination of hardware to fabricate a quick-release unit using a snap-shackle, turnbuckle, and a bent rod for a clevis pin that serves as one handle to tighten the turnbuckle. An additional long shackle through the turnbuckle serves as the second tightening handle.

This arrangement eliminates the need for hand tools on deck when it's easy to lose them.

That long shackle also serves as an attachment point for the tack of the jib, and it also serves as a stop to keep the clevis pin cum handle from moving. This photo shows the storm jib tacked to the assembly. Note the sensible color of the storm jib!

Stowage

While not in use the removable forestay is secured to a forward lower shroud.

Additional use

Always searching for more boat speed I decided to add a staysail now that I had the stay. I cut down a jib made for a 22-foot daysailer and gave it a try. With the wind abeam in light to moderate airs we have gained up to one knot using the additional driving force of the staysail.