



STORM SAILS - DO YOU NEED THEM?

Article originally published in SAIL Magazine



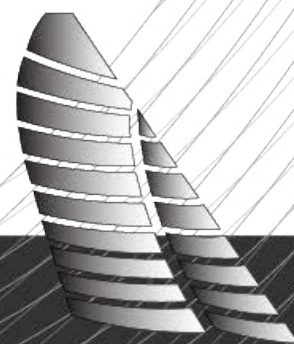
It's that time of year again for those of us living in the Northern Hemisphere. The cold weather is coming and like migrating birds we are loading our boats and heading south toward warmer waters. It's a tricky time of year for passagemaking with tropical storms swirling around the warmer latitudes and cold fronts marching eastward over cooler waters. Conditions are ripe for some heavy weather sailing and we had best be ready for it. Somewhere between here and there we may need our storm sails.

ALL ABOUT SAILS

Most sailors heading offshore will take along the obligatory storm jib and trysail with the vague idea that the sails may come in handy, but few have an intimate understanding of how and when to set the sails. Worse yet we all wait until the wind is really howling before we set them by which time it's dangerous and most definitely unseamanlike. Things are not helped by stories from seasoned sailors who have rarely had the need for storm sails. Dave Ullman, founder of Ullman Sails is one of them. "In the 40 plus years I have been sailing I have only used storm sails once and that was on a race from Sardinia to France and back. The wind came up to gale force, we all set storm jibs and trysails, and kept on racing." Perhaps Ullman has just been lucky but it's getting to be more obvious that there are more and larger storms these days than in the past so with prudence being a good guiding principal for passagemaking, let's start at the very beginning.

Many of us shove the sails into a closet or under some bunk leaving the more readily accessible space for other items we deem more important. This is a mistake; nothing is more important than the safety of the boat and crew so give up the good locker space for your storm sails and have them readily accessible. When the boat is rail down and rolling wildly you will be glad you did. You might want to go a step further and mark the location of both the storm jib and trysail so that a new crewmember, perhaps the only one who is not seasick, can easily locate them when needed.

Before you leave the dock, let's set the sails. This is a very important step and while you may feel as foolish as you did when you wore your lifejacket to the bar, it's a good thing to do despite the sideways glances from your neighbors. There are a number of reasons for doing a dry run, the most important of which is to find and mark the location of the sheeting positions of both sails. Before you do this you need to adjust the length of the tack strops of both sails. The storm jib will have a length of sturdy rope spliced to the tack of the sail. The strop allows you to raise the sail up off the foredeck to allow waves to wash under the sail and not into it. The amount you raise it will depend upon the size of your boat. It may also depend on where you have



ALL ABOUT SAILS

a strong point located on the deck. You will want to sheet the storm jib to your strongest turning block. Because storm jibs have high clews to begin with, you have some flexibility when it comes to sheet location. Raise the sail with a spare halyard until the sheeting position, with the sail sheeted for sailing close hauled, is in the right place. Then note the location of the tack and mark the length of the strop at the base of the stay. When it comes time to set the sail in a storm you will just need to attach the strop at the base of the stay and hoist the sail. Your sheeting position will automatically be in the right place.

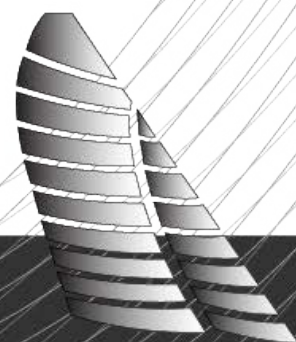


Storm Jib and deep reefed main

cruising boat. Since you are the racer among us you take the 45 foot light ocean racer and I will ask my friends, the cruising couple, to take their 50-foot blue water cruiser. Three different boats with three different rig configurations all heading for the same cold front. Should be interesting.

The reason for the strop at the tack of the mainsail is a little different. You want to be able to set the sail above your mainsail which will be lashed to the boom. You do not want any of the trysail to chafe against the main. Just as you did with your storm jib, locate a sturdy sheeting point for the sail. A strong point on either rail will be best. Sheet the sail to the strong point, hoist it with the halyard, and when the sheeting position is correct mark the length of the tack strop. As with the storm jib your sail will be sheeted correctly when you need to set it.

Now it's time to head offshore and to make it more interesting there are three of us going. I am taking my family on my 36 foot



ALL ABOUT SAILS

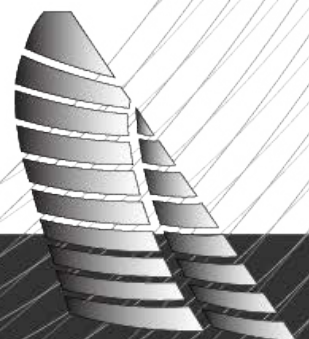


Rigging a Gale Sail

My small cruising boat has what's called a Gale Sail or a Sleeve Sail, depending on who makes it, but the idea is the same. I have a 130% reefing headsail on a furling unit. The sail has a two-ply leech and foam luff which serves to remove shape from the sail when it's reefed. I have reinforced the sail at certain places on the leech and foot where it can be reefed, but in no way do I think that this sail will ever serve as an adequate storm sail. Here is the problem; in order for the sail to be used in light winds the sailmaker needs to build it out of fairly light fabric. In this case it's Dacron. A second ply up the leech and along the foot adds necessary strength to the high load areas so that the sail can be used reefed. Problem is that an adequate

storm jib for a boat of this size needs to be built from 8-10 ounce fabric and have a high clew. It should also be orange so that it can easily be seen. The working genoa is definitely not up to the task.

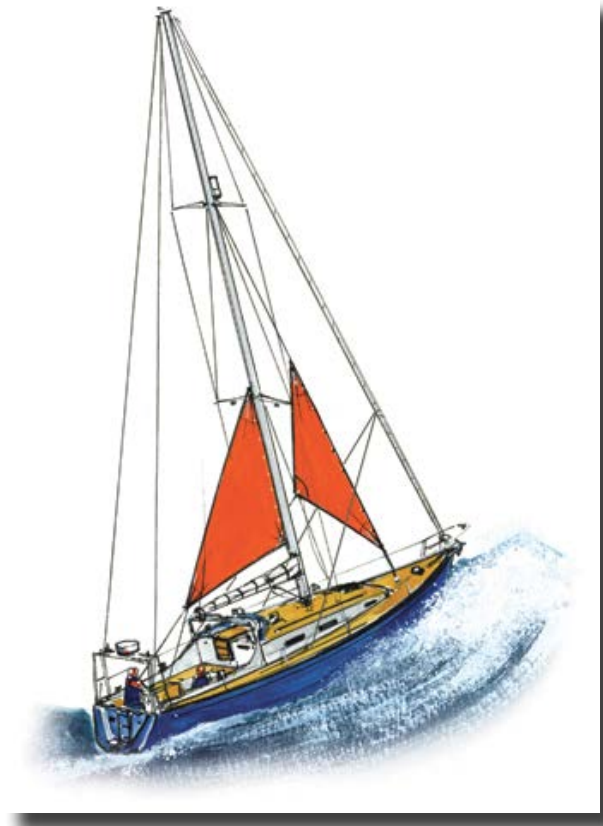
My preferred rig for offshore sailing is a cutter rig which has a permanent inner-forestay. This stay can be used for a heavy weather staysail as well as a storm jib. The sails on the inner-forestay are usually set with hanks so it's not a lot of work to lower and lash the staysail and then hoist the storm jib. Unfortunately my boat does not have an inner forestay so I am going to have to set the storm jib over the sail that is rolled up on the forestay. No way would I attempt to lower the sail in order to use the groove in the furling unit to set the storm jib. This would mean unrolling the sail at a time when the wind is on the



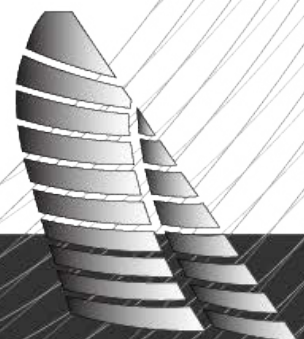
ALL ABOUT SAILS

increase. The only solution is the Gale Sail which is an alright option. The sail has some drawbacks but it also has a lot of plusses. A Gale Sail has a sleeve that wraps around the furled up sail. It doubles back on itself and is attached with large, easy to manage with cold fingers, piston hanks. As the sail is hoisted the Dacron sleeve slides over the Dacron fabric of the sail on the headstay with surprisingly little friction. If you have ever stepped on a flaked Dacron sail where there is Dacron over Dacron, you will know how slippery it can be. The sail can be set using a spare genoa halyard if you have one, or your spinnaker halyard. Once hoisted there is very little chafe as there is no point-loading anywhere along the luff of the sail. The sleeve spreads the load across the entire length of the luff of the storm jib. With the tack strop pre-measured, the sheeting position is in the correct place as soon as the sail is hoisted.

As the wind builds on any boat, you want to be able to lower the center of effort of your sail plan and bring that center of effort as close to the middle of the boat as possible. That's one of the reasons having an inner-forestay is so useful. Using the inner-forestay to set the storm jib means that it is away from the bow of the boat, closer to the mast. This is also a much safer place to set and douse the sail. The Gale Sail is set off the forestay which is not ideal in terms of center of effort, nor is it a safe and convenient place to attach the sail. It's one of the drawbacks of the system, but at the end of the day a purpose-built storm jib set securely over the furled headsail is an adequate sail for gale force conditions.



Center of effort lower and closer to the middle of the boat

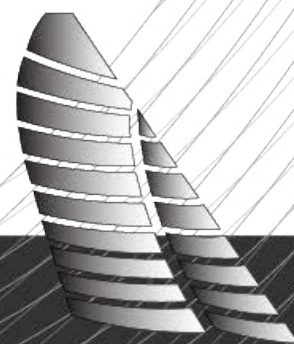


ALL ABOUT SAILS

Chris Howes, a long time sailmaker with Doyle Sails has his own recommendations for a storm jib. “This is not an inexpensive solution but it’s practical and works,” he said. “You can buy anti-torque lines and single-line furling systems. The anti-torque lines are easy to coil and stow and can be built right into the luff of a storm jib. With a two-to-one halyard you can get sufficient tension on the luff and once hoisted it’s easy to unroll the storm sail.” This eliminates the need for a permanent inner-forestay.

The cruising couple on their 50-foot blue water cruiser do have a permanent inner-forestay and they hank their storm job onto the stay. The strop at the tack lifts the sail up off the deck allowing not only waves to pass underneath, but also leaves room for the working staysail to remain attached to the stay and stowed in it’s own custom bag.

Because this couple like to exercise an abundance of caution they also have a separate track for their storm trysail. This is a very prudent thing to do if you are planning to do any amount of blue water sailing. Having a separate track means that you can lower and lash the mainsail without having to remove the slides from their track. Feeding slides onto a track is not something that you want to be doing in a storm. In fact this couple take things one step further. Their trysail track runs all the way down to the deck. This allows them to load the trysail slides onto the track and leave the trysail permanently attached in it’s own custom bag at the base of the mast. This clearly shows a very cautious approach to storm conditions, but some people argue that the sail is always in the way and even though it’s stowed inside a bag that protects it from the sun, they argue that the sail does suffer some degradation and may not be as strong as one stowed below decks. It’s more matter of preference and perhaps age. A young, fit couple could get the trysail from below and load it onto it’s track without too much difficulty so long as they do so long before the gale force winds hit. An elderly couple might prefer the convenience of a separate trysail halyard already attached to the trysail which is already loaded onto the track. It’s a simple matter of hoisting the sail and if the tack strop is pre-measured the sail will be properly trimmed when hoisted.

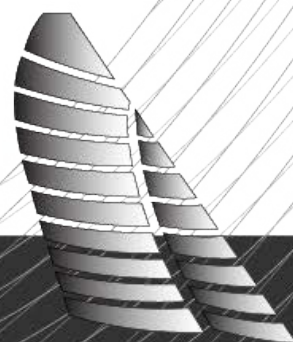


ALL ABOUT SAILS



Heavy going upwind

Our crack crew on the 45-foot racing boat have opted to forego carrying a trysail on board. They contend that it's unnecessary extra weight. Instead they have asked their sailmaker to build a mainsail that has a very deep third reef. The sailmaker also added large reinforcement patches at the tack and clew. When the wind builds the crew will simply reef down to the third reef. This is certainly not a bad option providing the reef is deep enough. It may look small at the dock but in the teeth of a gale even a small sail starts to look big. There is an old adage that says, "big winds, little sails." Chris Howes is of the opinion that both a deep third reef and trysail are a good idea for any passagemaker. "There are certainly times when you can sail with three reefs in the main and be OK, but



they may also come a time when it's too much sail. If you have to drop the main completely you will lose maneuverability and this is when it's best to have a trysail on board." Dave Ullman is more circumspect. "One should never go offshore without a trysail. That's courting disaster and unseamanlike."

One of the advantages of using your reefed mainsail as a storm sail is that it has a much more efficient sail shape than a trysail. Most trysails are cut very flat and their geometry with a long leech and foot compared to the luff make them relatively inefficient especially if you are the kind of sailor who believes that it's important to keep a boat moving during a storm. A moving boat gives you some kind of maneuverability which allows you to get out of the way of the biggest waves. On the other hand many sailors simply view their trysail as a good sail for heaving to and would rather save the wear and tear on their mainsail. If you are like Dave Ullman you will likely keep racing, but most of us will slow the boat down and take things cautiously.

Our racers would like to have a storm jib with an anti-torque line but it's out of their budget. Instead they have a different setup for their storm jib. Their boat does not have a permanent inner-forestay; instead they use a very low stretch aramid line which is fastened permanently to the mast at the height where an inner-forestay would be attached. The line is kept back at the mast when racing leaving the foretriangle open to make tacking easy and quicker. If they need to set a storm jib they attach the lower end to a block and tackle on the foredeck with the line led back to a winch. This allows them to get sufficient tension on the stay. Their storm jib is bright orange for visibility and has soft hanks along the luff. These hanks are made from webbing which does not chafe on the aramid stay and are easily wrapped around the stay and fastened back on themselves. Their solution is light and easy to set up, but not recommended if you are doing extensive offshore sailing.

There are many variables to storm sail configurations. Much of it has to do with the age and agility of the sailors. Young, fit, strong sailors might not have too much problem dragging a sail out onto a heaving foredeck and attaching it. For others it may be too much to contemplate. ■

