

Garth Hobson

Shields Mainsail Full Top Batten



From: Ched Proctor <ched.proctor@northsails.com>

Thanks!

On Wed, Feb 19, 2020, 6:15 PM Ched Proctor <ched.proctor@northsails.com> wrote:

My thoughts are this. The current Mainsail top batten is long enough to be effective in producing a good shape. The Shields mast section may make it a problem to have good interaction with a batten box fitting. The back is flat so it may contact the mast to the side and stress the bolt rope. Probably this could be worked out, but I don't think the mast section makes it as easy as others like the Etchells. It needs to be checked. We could make up a sample and try it in a mast.

I think longer battens in the jib with a full length top batten would provide more benefit in longevity of the sails's competitive life. For the ten years that we raced the Shields, we only replaced the mainsail once, the spinnaker once and every other sail replacement was a jib. As the owner said, "Every time we put on a new jib we immediately went faster."

That's my quick thoughts on the subject.

Regards,

Ched Proctor

NORTH SAILS ONE DESIGN

Up Wind



From: Randall Shore <rshore@sailorandseam.com>

Garth,

Sorry this isn't arriving "before Monday" hopefully still timely enough to be useful.

I would start by asking; "what problem are you trying to solve for?"

My answer to that is: when the Shield mainsail ages, it gets deeper in the top section. With the top batten being so close to full length, this means that extra depth tends to get pushed right to the front of the batten creating a hard spot there. in other words, as the sail ages, it doesn't do so uniformly at that top batten as is typical with aging sails.

By adding a top batten, you would go a long way to smoothing that out, especially if done properly.

My next question: "Is it difficult to add?"

Quick answer: no.

Last question: "So, it sounds worth it, why not do it?"

Answer: As well as the prudent questions you are asking (which I'll answer too)- Are people using their sails beyond their proper racing life such an issue that the fleet needs to get go through the process to change the rules for? Personally it sounds like work for the class, and for the sailmakers for very little tangible result. So, I would go either way on it.

- Specific answers below in red.

1. Would this assist in more appropriate shaping of the upper portion of the Main?

The current leading Class sails (North, Quantum) already have appropriate shaping based from historical design refinement. Adding a top batten won't improve those sails, indeed they would require a re-evaluation of the shape to make sure it still sets-up the same with a full length batten (but probably not need a "design change"). Will it make it easier for new sailmakers to jump in and have an easier time getting the top to set-up right? I don't know.

2. Is there any competitive advantage in the modification?

Having a full length top batten should not provide a competitive advantage, unless it impacts sail area.

Can it impact Sail area? Sorry, I can't answer that without the Mainsail and rulebook out in front of me... is there a way to use that top batten projection to push a little more area into the top of the main? Or is the dimensional rules (batten placement in relation to the max top girth) tight enough to prevent any extra area being added? look at this carefully - I've seen this become a major problem in other classes when the rules didn't restrict it.

3. If the modification came into being, could sails previously manufactured be easily modified at a nominal cost?

I think so. 1 hour of modification, a \$15 batten receptacle, and a \$20 batten. That could probably be cut by 1/3 if you did them in bulk.

4. Are there any other recommendations that you might conceive that would be beneficial to the Shields Mainsail as we know it today?

I still like the idea of going to a loose foot, but like the full length top batten, I'm not sure the benefit outweighs the issues created at implementing it.

Down Wind



John Jenkins <john@jenkinssails.com>

Wed 2/19/2020 2:17 PM

Hi Garth

The main advantage of the full length top batten is you can poke the roach out at the top batten to a point where you can run a straight line between battens one, two, and three and still hit the 1/4 and 1/2 girth measurements. Area up high is advantageous in mainsails as demonstrated by the square top mainsails you see on many racing boats today. In the Star class we have been able to poke the top batten out about 3 inches and the full length batten supports the added roach. This has also worked well in the Comet and Windmill class. The one downside is in light air the batten remains inverted on a tack or gybe and you have to pop the sail to get it right. These classes don't have a fixed backstay and the advantage of increased area up high more than offset the inversion problem.

The Shields has a fixed backstay and if you look at the sail plan the roach at the top batten is already very close to the backstay. You can only overlap the backstay a little before the batten will hang up on every tack. We made some mainsails for the Gibson Island 210 fleet with full length top battens and increased roach and they had to add flickers to the top of the mast to hold the backstay away from the sail on a tack. Sometimes the backstay would have to be eased.

As to shaping the top of the sail the full length top batten does keep the draft more centered in the sail and this is a secondary advantage to the increased area. Converting existing sails can be easily done by removing the closed end of the top batten and adding an extension, but adding any roach would be much more difficult.

I am guessing that sailmakers popular in the class have already pushed the top batten out to a point that it clips the backstay when tacking. By going to a full length batten you might cause the batten to hang on a tack.

Probably the best approach would be to convert an old sail and run some tests. I could convert one of John S old sails and the class can decide if this is a good upgrade

Best regards

John Jenkins



David Hodges <scsailsdh@gmail.com>

Wed 2/19/2020 4:27 PM

Hi Garth, Putting a full batten in the top will smooth out the shape in the upper part of the sail. It is a way to make an older sail look better. Retro fitting an old sail is easy and should not run more than 100.- to 150.- depending on the sail loft and type of batten used. Not sure there is any performance difference over a partial batten sail that is cut and used right. I have some Express 27 customers who prefer a partial batten up top so it can clear the backstay in light air. A partial batten sail with the same roach as a full batten one will tack through the backstay easier. I can't think of any other changes that would make the Mainsail any better. The Shields Main is a nicely proportioned sail that makes for a long lasting sail.

- David



ULLMAN SAILS

SAN FRANCISCO & MONTEREY BAY

DAVID HODGES
104 Bronson Street, Suite 20
Santa Cruz CA 95062
(831) 454-0868

Section V

5.6 Battens

There shall be 3 lower battens each 42 inches long, and a top batten 36 inches long **or a full batten**. These are maximum lengths. The maximum width of any batten is 2 inches. Battens shall be spaced at equal intervals along the leech. (See Specification - Sails 4.8)

