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## FAQ answered by North Sail's Vince Brun

### Courtesy of the North Sails One-Design website

**I am struggling with the boom vang how much tension should I have upwind? What should I be seeing in terms of leech tension?**

I'm not familiar with anyone in the Etchells class using boom vang when upwind. I believe the boom section isn't strong enough and the angle is very small to really have an impact on leech tension. Most of the lower bend control comes from mast blocks and mast step position. As far as vang downwind, in moderate breeze the vang should be pulled only enough to make the last 2 feet of top batten parallel to the boom angle. Some do have the vang pulled less ( more twist ) if they are sailing dead downwind. This will ease the helm, and will help the steering up and down the wave. Too much vang will load up the helm when downwind.

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**I recently purchased a boat. Keel needs some dings repaired fore and aft and is faired with bondo. I will not be dry sailing this boat. Is it crucial to get the bondo replaced?**

Yes, bondo does not work well if you are planning to wet sail your boat. It is best to replace it with an epoxy filler that will not absorb water like Bondo, which is polyester based.

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**We are about 80 Kilos below max weight. What are the changes we should make to the figures on tuning guide for all wind strengths considering our weight?**

The Etchells (or any other boat) require two distinct approaches for best performance.

**Light to Medium** ( 0 to 11 kts ) - On this conditions max power is needed for best performance, and the crew weight will have absolutely no affect on the setup of the sails and mast. Follow the tuning guide independent of your crew weight.

**Medium Heavy** ( 11 kts to anything above ) - in this conditions the heavy crew will be able to handle more power and therefore the optimum sail trim will reflect on the crew weight. If you have a light crew, you will have to set up the rig and sails for couple kts more wind speed than what you have, in other words, depower further and sooner.

To me the most important adjustment when overpowered is the lower shrouds. Having them tighter will pull the middle of the mast to windward making the middle of the main flatter decreasing weather helm. If I have too much helm and the boat is "bound up", make the lower tighter, this will free the helm, and improve forward speed.

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**What do you suggest for long-term storage, should I take the sails out of the box and unfold them and roll them back up, or keep them in the box?**

We suggest that you take the sails out of the box and roll them in "full length". This would make the sail stay smooth longer.

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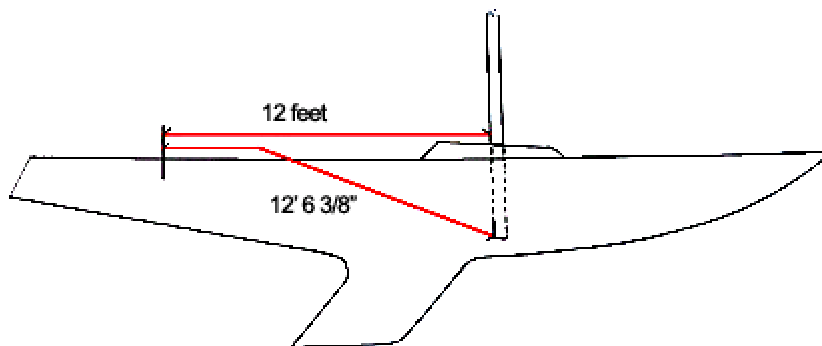
**What is the correct position to have your mast step on the Etchells?**

As we all know, the mast step position will control the pre-bend. Having the correct amount of pre-bend translates on the correct forestay sag, and therefore superior speed. The pre-bend is mainly generated by the offset position on your mast partner, and the alignment of the mast step and the rounds. Since in most boats the mast partners distance from the transom varies, to get the pre-bend right, you have to first to locate the partner position on your own boat.

This is what I do:

1. First I make a mark on the center line of the aft deck, 12 feet from the aft edge of the mast partner. Normally I add a thin aft partner block ( 1/4 inch ) for my std up wind setting. The measurement should include this block.

2. From this mark on the aft deck, I measure 12' 6 3/8" and make new mark on the mast step "I" beam. This is now your new baseline mast step position, for winds between 6 to 9 knots.



**Mast Step Chart:**

0 to 5 knots	aft 1/4"
6 to 9 kts	neutral
10 to 14 kts	forward 1/4"

15 to 20 kts        forward 1/2"

20 kts and above   forward 3/4"

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**Is there a significant difference in a factory built deep keel and an older boat that had the keel redone? I also have heard that there is a stiffness issue for boats that are older than (when?). Is there a difference in builder? I have heard of Ontario and Bashford. Are there other builders of good boats?**

Ok this is what I know:

#### **Keel depth**

Yes they have made the keel deeper after hull number 850 . Definitely the deeper keels are faster in strong winds, but I'm not sure if in the light stuff we sail, makes it any better. We have many boats bellow that number that are great fast boats bellow the 10 knots wind range. It is noticeable that the older boats are faster downwind in all conditions, but it is hard to beat the newer boats in winds above 14 knots.

The Bashfords are the first one to make the keel deeper, and are good heavy air boats in general. I sail a Ontario hull number 1000 that is a great all around boat. If I was buying a boat I would look for a boat number near that. Prices are still reasonable and normally the boat is still in good shape.

#### **Masts**

There are a few different masts out there: Proctor, Kenyon, Australian, and New Zealand masts. I use a Proctor and this mast is right in the middle in terms of bending characteristics. Normally the Kenyons have soft sections (old supplier in most old boats ) and the Australian and NZ are in general on the stiff side.

The rule of thumb is, that a softer mast is better in light winds and the stiff mast is better in heavy winds. If you send me the deflection, I will let you know how the mast compare with others. Deflection is done with the mast supported on the mast partner and at the top band, with the shrouds and spreaders on. Measure the deflection fore & aft only, and without any weight. Normal measurement should be: 1 5/8 spreaders height and 1 1/8 at the hounds.

#### **Stiff boats**

I think the stiffness of the Etchells greatly improved on the lower number boats and I don't see much difference on any of the newer boats. They are plenty stiff for the normal sailing we do here in the US.

Answer by [Vince Brun](#)