

Improving your speed: how do you set up a Devon Yawl to go fast?

Andrew Hattersley from DY 184 *Amadeus* gives some hints.

Most of us would like our Yawl to go a little faster either to improve our racing performance or just to get home faster when beating against the tide after a family picnic. This article aims to give some tips on how to go about improving the speed of your Yawl by ensuring it is set up optimally. In the next issue of the Yawl I will talk about how to set the sails to the conditions. Both articles are based on the help I have had from many friends in Topsham over the last 6 years.

Is it the boat?

Boat speed is probably only 20% boat and sail set up and 80% helm and crew skill so don't forget to spend your time on the water as well as in the chandler! My previous experience in the strict Laser and Laser2 one designs has showed that the key part of any boat is the nut that holds the tiller. Improving sailing skill may be difficult so what can we do about the boat speed? There is no doubt that boat set up does alter speed – *Amadeus* came last by over 400 yards in my first race at Topsham with a new mast and new sails and within three months we were consistently in the top three in club races. My first instinct was that I didn't know how to sail a heavy dayboat but swapping boats showed that *Amadeus* was going so slowly that whoever sailed her was overtaken to windward or to leeward on a short close hauled leg. Since then *Amadeus* has found herself consistently at the front of the nationals fleet so what is the secret?

The aim of boat set-up: copying is fast!

The main secret is to listen to the people who are at the front – I found the Topsham hot shots including Clive Jacobs, Graham Rich, Shane Buckley, Ed Williams, Tony Bradford and Trevor Greendale incredibly helpful in my early days at Topsham. The main thing is to aim to make your boat as fast as the others and the best way to do this is by copying not by doing something different. If Scane's sails and Superspars have won the nationals for the last 4 years then using the same is unlikely to be slow. The time to innovate is when your boat is at the front looking for those extra small speed increments and not when the rest of the fleet is ahead of you. If you want to know if it is you or your boat ask someone at the front of the fleet to swap boats with you either for a race or more helpfully for some dedicated "2 boat tuning". Sailing on a long leg avoiding each others dirty wind and swapping helms will soon show speed differences and by keeping one boat constant and altering the other it is possible with patience to bring the slower boat up to the faster boats speed.

But my boat just does not go!

If you swap boats and it is clear that there is a very big difference in speed then there may be a single cause for this. So what can make a very big difference? The most dramatic effect I have seen was when the misalignment of the mast step meant that the mast was not vertical. Moving the mast foot so it was directly underneath the mast gate transformed a slow boat into a fast boat. Also be wary that the shrouds may need to be different lengths to keep the mast straight – symmetry of the two sides is not a strong point in some Devon Yawls construction! The other place where things can go badly wrong is beneath the water line – a damaged slot gasket can be horribly slow and a well-profiled rudder helps both speed and steering. (We use a Tim Coombe standard blade in an RWO stock) The sails and mast are the boat's powerhouse and it will be difficult to win with an unbending untapered mast and baggy tired sails. That said it is probably the rig set up that matters more than the specific equipment used. A great deal of effort is put in keeping the weight down. The truth is that even 10 lbs. is less than one percent of the all up weight and will make very little difference. Probably hull weight should only be a priority for those with crews who have shed all their excess weight and never sail with water in the bilges! Many hours are spent on hull finish but as long as all the barnacles are removed it will be hard to detect any difference on the racecourse. Still come the nationals I will scrub my bottom and use some 600 wet and dry sandpaper on the hard antifouling (VC 17) as it helps sooth the soul.

Setting the boat up – the standing rigging

How should I set up my boat? This is a difficult question to answer as it will vary with the sails, the position of the mast and the shape and position of the centreboard but as a rough guide these were *Amadeus's* settings when she won the nationals and are a reasonable starting point. We chose the tapered Superspar mast and Chris Scane's sails. Some people consider the Scane sails to be too flat – as a non sail maker I cant possibly comment but it is impossible to argue with the results they have achieved and we have never lacked speed or power when we need it. We set the spreaders as short as possible and in their most aft position aiming for Mike Robert's suggested optimum of deflecting the shrouds 1" out and 1" back. The mast foot is approximately 2cm back from the front of the mast step rack. Mast rake is slightly aft and this is most easily judged by using a measuring tape attached to top of the

main halyard to top aft corner of transom. If there is not rig tension i.e. normal shroud tension without any jib halyard tension this distance should be approximately 7.515m.

Setting the jib can be tricky to get the correct angle on the clew the jib tack needs to be raised 5cm either by being raised by large shackle or by roller reefing by about 5 cm. Our jib fairleads are set on an RWO track (which is adjustable in and out as well as forward and back) with the mid point set 12 cm in from the shrouds with the mid position 3 cm behind shrouds

Adjusting the adjustable

It is really important to get the sails setting just how you want them – this means that all the adjustable controls must be easily adjustable. I would suggest that the priorities in order are:

- Jib sheets: - these should be clearly marked so their position is consistent for a given set of conditions. On the shore look at the effect 0.5” of sheet position makes – it will amaze you how much the shape of the sail and the slot change. Always be very careful not to oversheet, as it will close the slot between the jib and the main.
- Jib fairleads: - fore and aft position is the priority – adjust so the three tell tales placed at different heights up the jib luff all lift together or if anything the top tell tale just lifts first
- Kicking strap – this is the only control I lead to both sides. A taut kicking strap is crucial upwind in heavy wind but it can kill your speed offwind or upwind if the wind becomes moderate or light.
- Centreboard; in Topsham where, at least for newcomers to the club, running aground is a regular exercise it is crucial to have shockcord to take the weight of the centreplate and a swivel jam cleat on the thwart that can be adjusted by either helm or crew from either side
- The mainsheet needs to be easily adjustable and rapidly cleated and uncleated. I use a Harken central main jammer and a 3:1 centre sheeting arrangement with a ratchet pulley for the windy days.
- Jib halyard tension – we have a 3:1 system which hooks on to a wire jib cleat with a 2:1 purchase providing a total of 6:1. This is easily enough purchase to get enough tension upwind on heavy days.
- Main halyard tension – I have my main halyard easily adjustable with a 2:1 purchase and a clamcleat. This allows me let off the main halyard when the wind is light preventing creases and excess fullness at the front of the main.
- Mizzen sheet – the position of the mizzen doesn’t make a great deal of difference to boat speed but going to the stern to adjust it does slow the boat so it is worth getting the mizzen sheet adjustable from both sides. We use a very simple arrangement where we have a rotating cleat on the aft deck and then the mizzen sheet is tied to the tiller extension meaning it is always available to adjust.
- Outhaul – our outhaul is lead to the underside of the boom close to the mast with a 4:1 purchase so that the sail can be flattened when the wind freshens.
- Mast chocks – we have 2 simple plywood 6 mm chocks which help to straighten the mast in moderate winds by fitting in the mast stop in front of the mast. These can be removed in light or strong wind.
- Cunningham – the cunningham is rarely needed so we just have a simple 2:1 system with a cleat on one side of the boom.

In the next article I will talk about how I adjust the rig upwind and downwind to suit the conditions. As promised by the editor there will be a pre-nationals release of our settings on the web site so get clicking on www.devonyawl.com Good luck and good speed!