Mast and Standing Rigging

Ed: Behind-the-mast mainsail reefing kit should NEVER be fitted to a Sea Wych. Roy Sallabank tells of an owner who did this, and became so alarmed at the way that the boat rolled, that he called in a surveyor. The surveyor declared the boat to be dangerously unstable, and likened the effect of fitting the kit to "lashing a heavy outboard halfway up the mast".

1. Mast Raising/lowering

Like most things in life, it is fairly straightforward, provided you do it in the right order, take care as you go, and don't rush it.

Before You Start

1. If you aren't already onshore, BEACH the boat, as level as possible. It's far steadier and safer that way when you are messing around on the coachroof etc. You can also recover all the spanners and bits you drop overboard, as you will..!
2. Take off the sails, both the mainsail and the genoa. Don't leave them on the spars, they can soon get damaged, stretched or badly soiled, and they are very expensive to replace.
3. Undo any electrical connectors from the mast foot to the coach roof, ie, for masthead lights, radio, Decca etc. Make sure that you plug off or tape off all connectors, plugs or sockets to protect them as best as possible against corrosion.
4. Remove the main boom, undo the main sheet blocks from the traveller rail, and put the boom, sheets, sails etc, safely away in the cabin. Tie up the halyards to the mast cleats.
5. Make up a simple wooden crutch from two bits of wood about five feet long to support the mast clear of the cockpit and main companionway hatch when the mast is lowered (see sketch). [The idea is to support the lowered mast clear to allow access into the cabin and cockpit and to protect the cross trees.]
6. The crutch should be lashed to the pushpit at each side of the cockpit to hold it steady.
7. Get some thin shockcord elastic, to thread through the eyes of the side and rear stays, just at the top end of the bottlescrews, and tie the eyes to the nearest safety line or to the pushpit, as appropriate, so that the elastic is just taut. This will stop any unfortunate accidents later on with the bottlescrews getting bent or broken.
8. Loosen the nut on the pivot bolt at the foot of the mast at the rear end of the mast step bracket. Do not yet remove the bolt.

Now We Can Start

a) Loosen the bottlescrews on both rear stays so those stays are good and loose. Note: If the boat has twin lower side stays, on each side of the mast, it will also be necessary to loosen and unfasten the forward lower stays at the deck fixing. It should not be necessary to unfasten any other stays. In fact it is best not to.

Undo any ties holding the reefing drum on the forestay to the bow stem fitting or pulpit, and remove the locking split pin or ring on the clevis pin holding the forestay bottle screw to the bow stemhead fitting.

c) With one person on the coachroof holding the mast steady, and one person firmly holding the forestay reefing spar, remove the clevis pin holding the forestay to the stem head fitting. If the forestay

reefing gear is original, there may be a slotted stainless bush under the reefing drum to protect the talurit at the eye on the forestay. This is best taken off for safe keeping *(Ed: or put two or three turns of plastic tape round it so that it can't fall off.)*

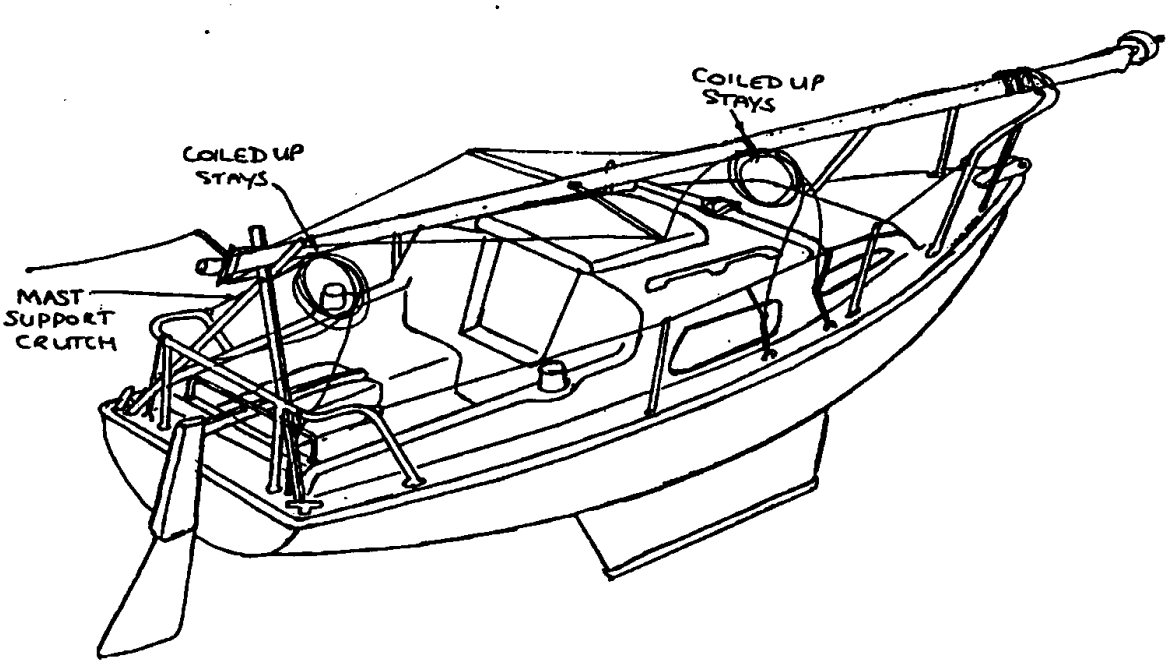
d) Holding on to the forestay reefing spar, slowly lower the mast backwards, with the person on the coachroof steadying the mast, and making sure that it doesn't tip sideways. You should find that the cross trees are just clear of the support crutch, once the mast is fully lowered.

e) Holding the mast foot down, remove the pivot bolt from the mast step. [N.B Put the bolt somewhere safe, best in a box in the cabin. Put forestay sleeve plus any clevis pins you have removed there too.)

f) Two persons are required to lift the mast and forestay reefing spar, and carry them forward until the mast foot is resting just forward of the rail of the pulpit, and the mast head on the crutch of the stern. [It is a good idea to put some padding like old bits of carpet under the mast to protect it]. Lash the mast to the pulpit and to the crutch and lash the forestay spar to the mast, trying to keep the forestay spar flat and straight against the mast.

g) Tidy up the halyards and stays into nice big loops, taking care not to kink the stays, and lash the loops to the mast. N.B: If you have a masthead aerial antennae, tricolour lamp, etc., take them off now. Remember to plug off or seal any connectors.

N.B: If laying up for the winter, it can he kinder to your mast to ensure it is properly supported at the centre of the mast *(Ed: a fender makes a good support)* and have a good look at both ends of the rigging at all the clevis pins and locking rings or split pins. It is a good idea to replace all split pins with new stainless pins before the boat goes back in the water. From experience, also check over the boom topping lift rope for fraying or chafe, particularly where it normally runs over the masthead pulley. While you are at it, also check out the halyards in the same way.



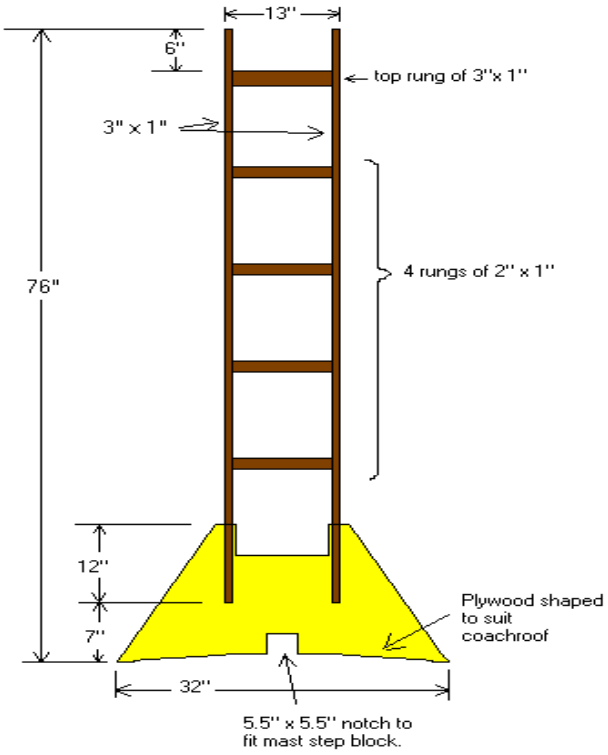
Raising The Mast

1. Untie the stays and halyards. Unlash the forestay, and mast.
Find where on earth you put the mast step pivot bolt for safe keeping and the clevis pins, and get them handy to put in place. With two persons lift the mast back aft, so that the heel of the mast foot is located onto the mast step and replace the pivot bolt. If there are any masthead fittings, radio aerial tricolour light, etc, to replace, do it now.
3. DID you leave the shock cord elastics in place at the ends of the stays? If not, make sure they are there before proceeding further, if you value your bottlescrews. Reconnect the shrouds to the bottlescrews.
4. With one person pulling on the forestay, and another person steadying and helping to lift the mast, pull the mast up. The side upper and lower stays should help steady the mast, as it goes up.
5. Secure the forestay bottlescrew to the bow stem fitting with the clevis pin. Lock the pin. Replace the slotted talurit bush under the reefing drum.
6. Carefully re-tension the twin rear stays, and refasten and adjust any front lower side stays; re-tension the forestay if necessary. Replace the ties under the reefing drum.
7. When re-tensioning the stays, sight up the mast sail track to make sure the mast is straight. I recommend that you obtain a copy of the Practical Boat Owner booklet on rigging the mast, for that can be an art in itself. But remember, the mast should be vertical relative to the longitudinal waterline, with a slight convex bob towards the bow to assist windward sail setting. *(Ed: see p52 for detailed guidance on tensioning the rigging)*
8. Replace the boom, and perhaps refit the sails.
9. Lastly, make sure any electrical connectors are working. If you have a VHF radio, make a radio check call to the local marina or harbour master before you get sailing, to check transmission and reception.

Roy Sallabank (1991)

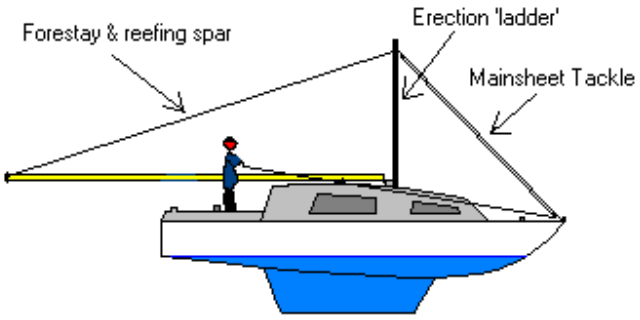
2. Mast Raising/lowering

For a few years now I've been using a home made ladder to put up the mast single-handedly. I've always put the mast up on my own, just using the mainsheet tackle and walking forward as I pushed the mast above my head, but the years are beginning to tell so I decided I could use a little mechanical help. I therefore made the ladder shown on the sketch. (right). This I can use to get aboard when the boat is on its trailer, and I can then pull the ladder up after me and use it as a pivoting prop to put up the mast, using the forestay and the mainsheet tackle fixed to its top rung.



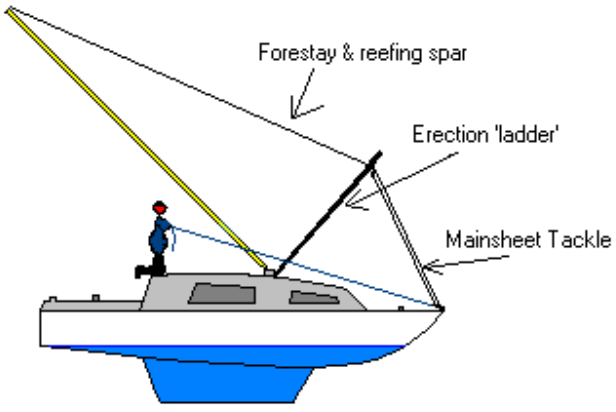
Mast erecting ladder

The way this is done should be clear from the sketches. The dimensions shown are not critical; they are just those of my own ladder and were mostly governed by the sizes of the pieces of timber and ply that I had lying about in the garage. A bit shorter would be OK, but any longer and it would probably jam on the pulpit as the mast was finally raised.



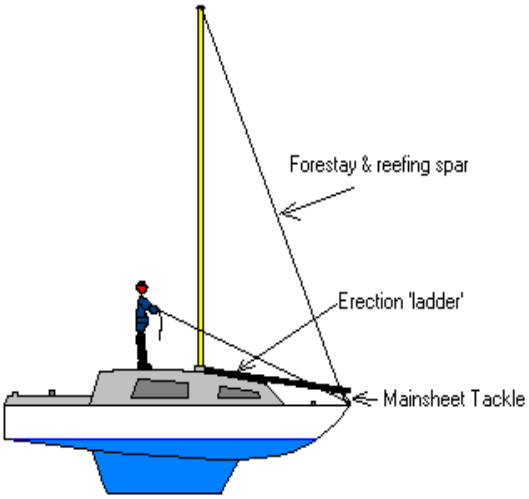
Starting Position

To keep the mast central as it rises, you can walk forward and keep it steady with one hand while pulling in the tail of the mainsheet with the other. On my boat, I happen to have blocks at each end of the mast beam (which I normally use to turn the topping lift and main halyard back to the cockpit) and I use these to take lines from eyes on the mast about 3ft. above the deck (which I otherwise use for the upper ends of shock-cords protecting the genoa sheets from snagging on the mast cleats) back to the winches (securing the lines to the upper mast cleats would probably do equally well). Tightening these lines keeps the mast central as it is raised so that I can let go of the whole thing, if necessary, to clear any rigging that snags as the mast is raised. The cam-cleat on the mainsheet block will hold the mast in a partially raised position.



Half way up

The same procedure can be used in reverse to lower the mast, but you may prefer to disable the cam-cleat on the mainsheet tackle to prevent it inadvertently engaging during lowering.



Mast erected

For those of you with other classes of boat, I've used the same system successfully on another boat to raise a much heavier 30' mast fitted with an on-mast reefing system, but you will need to devise a different method of securing the base of the ladder to some strong deck mounting points, both fore and aft and laterally, as not many boats have such a convenient deck beam and mast step block as the Sea Wych.

Oh, just in case you think it's a big piece of equipment to make and have lying around for only a few uses a year, during the summer, I use the ladder upside down so that the ply panel leans onto a tall hedge in the garden when I'm cutting it!

Tony Bromley (2002)

3. Mast Raising/Lowering

This two-handed job – though a third pair of hands is valuable to unhook the inevitable snagged stay – requires one person to keep tension on the roller reefing spar. A simple dodge I used to employ meant that the 'spar controller' could both do this and be in the most useful place, i.e. on the coachroof by the mast, at the same time.

I used to run a heavy line (I used one of my jib sheets) from the mast, forward and under the bow roller. This forward end was securely tied to the eye at the bottom of the forestay. Someone standing by the mast could then apply tension to the reefing spar.

The advantages of this device include:

- tension on the reefing spar is always applied in an exact fore/aft line
- the 'spar controller' can take the weight of the mast whilst the other person moves from cockpit to coachroof (or vice versa)
- it eases the task of inserting/removing the clevis pin in the stemhead fitting

If necessary, the mast can be locked in any position by making-off the free end of the line onto one of the mast cleats – the higher the better.

Barri Hopkins (1996)

4. Rigging Checking & Tensioning

Recently, someone asked me (*Roy Sallabank*) what I knew about mast failures on Sea Wyches. The most common reason for mast failures is incorrectly adjusted or failed rigging, so after you have first checked your mast for any damage, let's look at the correct way to set up your rigging to give the mast it's best chance of survival. Yeah I know it's the end of the season, but when you bring your pride and joy (the boat I mean) out of the water, its time to do some careful checking.

Bearing in mind how old most Sea Wyches are now, it is worth starting off with carefully examining the mast for any signs of fatigue cracking or physical /accident damage Look first just above and below where the cross trees are fixed to the mast. This is where most mast failures have occurred. If fine cracks are found, the mast is likely to fail and should be replaced. Next, check all other surfaces of the rest of the mast for dents or creases which could have been due to handling accident during transport - or perhaps it "dropped off the boat" when getting ready to trail off somewhere, or was not supported adequately during transport, or when stored for the winter in your garden. Severe dents or creases will drastically reduce the ability of your mast to take rigging and sailing loads, so cherish and look after it this winter. If it's damaged, speak to your insurance company. Its possible you may be able to make a claim if you word it right. It is an expensive item to replace. *(Ed: See Carolyn Crook's article at p53).*

Now look carefully at all places where rigging is attached to the mast. If any bolts or clevis pins are badly worn (i.e. heavy wear flats or necking) replace them. Examine the shrouds, forestay and backstays. Where possible, check each of them all along their length for broken strands, severe kinking or damaged hard eyes. If any one strand is broken, or there are signs of severe kink, or a damaged hard eye at the end of a piece of rigging, replace that piece of rigging. It could fail at any time.

It is worth noting that some insurance companies insist on all "standing rigging" being replaced whatever it's apparent condition after ten or fifteen years. This is due to corrosion caused by exposure and/or metal fatigue which can occur in rigging after years of high frequency vibration due to wind or sailing stress. While we are at it, look at each bottle screw and clevis pin where the rigging is attached to the hull. If wear flats are found on the clevis pins, replace them. It's best to replace all split pins or security clips used to secure clevis pins every year. Better safe than sorry, at least they are cheap.

Now, let's set up the rigging properly. Whatever you may have been told by old salts about keeping rigging slack, forget it. It is only the rigging, which holds up your mast. It has to hold it straight and upright at all times and must be kept tight. When you raise your mast and secure it to the mast step, secure all the rigging to hold it loosely in place. Then adjust the back stays and forestay together. Tighten the bottlescrews up by hand as tight as possible to bring the mast to its correct fore and aft position. Looking from the side, a Sea Wych mast should be as near vertical as possible when the boat is in its normal position in the water. Tighten each bottle screw further by 4 turns over hand tight using a spanner and using a marlinspike or sturdy screwdriver held through the rigging or bottlescrew eye to make sure you do not also twist the wire. Try to ensure that the clevis pins in the ends of the bottlescrews are kept at right angles to the deck and rigging eyes. It is important to ensure the forestay is kept as taut as possible, to allow the roller reefing gear to work properly and assist correct headsail setting

Next tighten the outer shrouds, Use the main or spare halyard to check the mast is vertical to the boat.

When the mast is correctly vertical to the boat, the halyard should be the same length each side when the halyard is stretched out tight to just reach the top of each of the outer shroud D-bolts. As before, use the principle of hand tight, then apply 4 full turns using tools. Make sure, by looking up the mainsail slot, that the mast is straight and not bent to one side. If it is bent to one side, you may have to ease the outer shroud or backstay load on the side towards where it is bent, or perhaps tighten the opposite shrouds still further to pull it back the other way.

Last of all, tighten the lower shrouds. As before remember 4 turns over hand tight. This time, keep checking, by looking up the mast slot, that the mast is straight. Adjust shroud tension to avoid any lateral bends in the mast. A mast under load and not straight can easily collapse.

OK, so you think you have rigged her now... OH NO, YOU HAVEN'T FINISHED YET. The last part of rigging is to take the boat out for a sail. Check when sailing on a reach, on both tacks, that at all times all the leeward rigging remains taut and the mast remains straight. If it doesn't, then as soon as possible, bring her back to the mooring and tighten the rigging still further each side until, when sailing, all of the leeward shrouds remain taut. Making sure, of course, that the mast keeps straight and true. Providing the D-bolts are correctly reinforced below decks, it is virtually impossible to over tighten shrouds. (This is also why it is so important your mast support beam is in good condition, to properly support your mast).

If you are really keen and want to learn more about rigging for performance etc, then I recommend getting hold of the Yachting Monthly video called "Sailpower for better Cruising". It is not cheap, but is, in my opinion, one of the best and easiest ways to learn and understand rigging and sail tuning. It also comes with a very useful companion booklet you can take on the boat

Roy Sallabank (199?).

5. Losing One's Mast....

……..So, with instructions to watch the depth, watch the bridge and call if anything changed, I went below. With hindsight I realize that Fellowship must have been drifting out into the current without me noticing it and just as I went below we were caught and swept (with a force I had totally underestimated) up to the bridge. I can't have been below for more than a minute, but I came up to find the bridge where it *hadn't* been when I left it!

Initially we were swept against a pier port-side on and I called to the others to fend off while I started the engine.....I banged it into reverse and.....it flew up at me. The stern slewed round and we were under and at an alarming angle. I furled the Genoa and dropped the mainsail then threw a halyard to a helpful motor boat, hoping he could free the mast from the bridge as they lifted it - things didn't quite co-ordinate and there was a resounding crack as the mast snapped and came down. On the plus side, no-one was hurt, no damage was done other than to the mast,, and we came upright again, which was quite a relief. The motor boat towed us through. I did drop the anchor at last and I got everything on board and lashed down before starting the outboard again. No reverse, but we could motor home, which I did, to be met on the jetty by a wonderful sailing friend, who took over the tidying up operation and administered much needed hugs and comfort to us all.
The next step was to contact the insurance company and to get the 3 required quotes. Our local rigger

was my preferred choice and the best quote. He reckoned that I ought to have a new boom as well as the mast, as the gooseneck had been bent anyway, and to use the old one would have required a lot of modification - and that all the stays and shrouds should be replaced after the stress they'd suffered, though he thought the rigging screws were OK. His quote (mast and boom from Z spars) was £1850 and the repair to the outboard was £150. Gulp! I sent all this onto the insurance company and they contacted me with an offer of £1000 less £75 excess.

With some incredulity I questioned this, and they started to talk about 'betterment'! They were only obliged to restore the boat to her previous state, they said, not to improve her. "Fine", I replied. "She had a mast before - I just want her to have a mast again. A lot of this cost is labour and that won't increase the value of the boat. But it's necessary to get the job done!"

Well, finally, they upped their offer to 70p short of £1800 as a write-off payment (so no excess, but the policy was terminated 2 months early.....My final bills totalled about £1900, and I do have to admit to a far superior rig - so I have no complaints about the shortfall.

The sails were undamaged and the spar was also OK, so no problems there. I had recently bought a new Genoa and had planned a new mainsail this winter so I got it a bit early! Both came from Rockall who were very helpful and quick to deliver....and the sails seem excellent. I shopped around for insurance and found Bishop Skinner to be the most sympathetic, and the only people willing to allow Fellowship to remain in commission until the end of December, without a hefty penalty charge.

Very much a case of 'All's well that ends well!" The worst things were the six weeks of sailing I lost and the sheer embarrassment of it! Not to mention the jokes.....amazing just how many bridge jokes people can think of! The best things were the sympathy and shared confessions of very much more experienced sailors and the kindness of those who took me sailing like some sort of refugee.

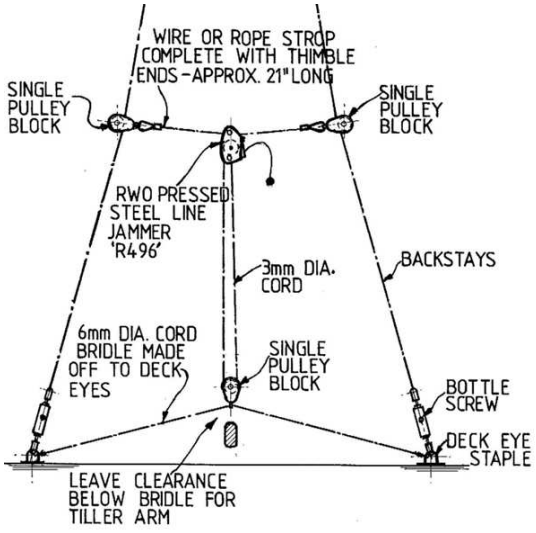
I hate outboard motors more than ever. It didn't get me into trouble (I managed that myself) but it might have got me out of it had it worked. My first trip with the new mast was, of course, around Sheppey again and I'm very glad to say it was a perfect day and that the bridge behaved impeccably.

In conclusion....after 1 season sailing Fellowship I can only say that if we learn by our mistakes, then I'm probably the most knowledgeable person on the creek! If only.....

Carolyn Crook (2001)

6. Back Stay Tensioner

When close-hauled, the mast should, for a variety of reasons, be slightly bent aft. All the slack had been taken up in my rear bottle screws and the stays were not tight enough in normal conditions, let alone when close-hauled. The solution I adopted was both cheap and effective, applying tension evenly to both stays and only when needed. The diagram (right) should be self-explanatory. Make sure that the two blocks that run over the stays have removable pins.



To increase tension, the lanyard is hauled down, bringing the bridging strap down and thus effectively shortening both stays. When not required, the lanyard is released and the strop pushed upwards and sideways and out of the way.

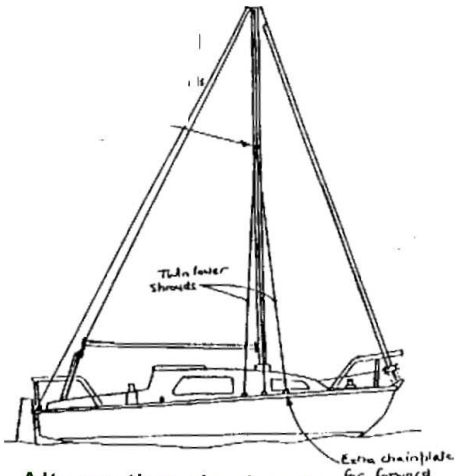
If you have fitted forward lower shrouds, it is important to check that these are not bar-tight when tension is applied. If they are, then loosen them otherwise the section of the mast above the spreaders will be subjected to considerable strain.

When inserting the tiller, remember to slide it underneath the 6mm cord between the deckeyes…… *Ed: there is a photo at p 90)*

Barri Hopkins (1999)

7. Adding an Extra Shroud

On some Wyches, additional lower shrouds have been added to reinforce the rig and to provide better support for the mast. A good example of this is Peter Hubbard's boat "Emma" as featured in the PBO. It is a good idea and it's easy to convert existing boats. All you need are two extra lower shrouds - identical to the existing lowers *(Ed: but see p56).* Add two new chainplates to the deck, spaced an equal distance forward from the existing. Make sure that the new chainplates are properly reinforced under the deck with, plywood and large penny washers. This type of rig allows the spreaders to be set square to the mast instead of being swept back resulting in a stiffer rig. You can also introduce a small amount of forward convex mast bend (to improve mainsail setting) but do not allow more than 3 inches mast bend.



Alternative rigging to provide stiffer rig

Roy Sallabank (1997)

8. Adding an Extra Shroud - caution!

Seeking tips on how to set up my rigging properly, I re-read Roy Sallabank's article in the Dec 1997 Wychcraft and found it very helpful. I skimmed the last section about adding an extra shroud, until I came to the bit about needing only a new shroud, the same length as the existing lowers.

When I did this mod, I had to have new uppers made and the old uppers converted into lowers. This embarrassment arose whilst in the process of launching…….

The problem with the uppers was that moving them abeam of the mast effectively shortened their 'route' to the masthead by about 15mm, even if the deck had been flat. The 'route' was further shortened by some 20mm, because the deck slopes upwards - as can clearly be seen in the excellent drawing in Roy's article *(above)*. I thus needed to take up around 35mm in the bottlescrews, but I didn't have this much bite left. So, new uppers. It followed that the old lower, abeam the mast, needed theoretically to be 35mm longer if it was to become the new aft lower……..
An easy mod and well worth making, but do please think carefully about the lengths of your shrouds in their intended new positions. It is probably worth temporarily moving the upper and lower shrouds - ONE AT A TIME - to their intended positions to see if they are long/short enough. The length of the new shroud can also and easily be estimated.

NB The figures quoted are rough estimates, made hanging on to the side of my boat in the broker's yard whilst breathing 'flu germs all over it, and without a square root function on my calculator!

Barri Hopkins (1999)

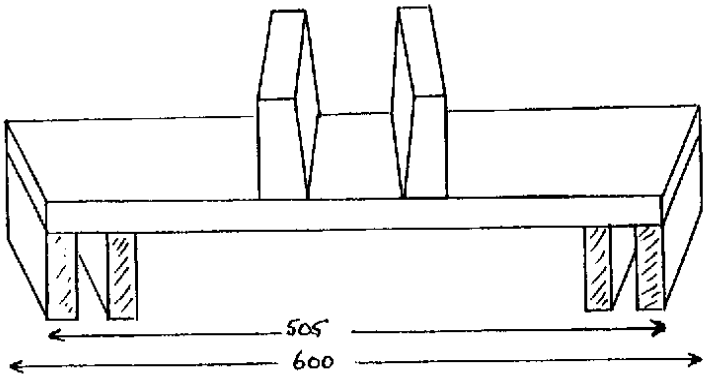
9. Drooping Spreaders

On many Sea Wyches, and other boats with similar standing rigging, you will often see the cross-trees drooping as they have slid down the cap shrouds. Not only does this look untidy, but it means that the cross-trees are ineffective, and the shrouds have lost their tension. To prevent this happening, a few turns of self-amalgamating tape round the shrouds immediately below the cross-trees will keep them in position. You can do this before the mast is erected, by setting up the top part of the rigging while the mast is lying on the top of the boat. It should last a few seasons before you need to do it again. Alternatively, the smallest size of wire grip in the same position will do the same job, but make sure they are stainless steel, as many of them sold in chandlers are just chrome-plated mild steel.

Tony Bromley (2000)

10. Bow Mast Crutch

The sketch below is of a simple bow crutch designed safely and easily to locate the heel-end of the mast when the boat is being trailed or stored. It simply clips over the pulpit and the mast and reefing foil sit between the two upright sections. To ensure that the device is tailored to your pulpit, lay the (overlong) piece of timber selected as the bed across the pulpit and mark the exact angle and width of the pulpit on the underside of the bed. The device is screwed and glued together and given a coat or two of varnish.



Barri Hopkins (1997)

11. Forestay Replacement

In June this year, just two days before my flight back home to Spain, I noticed the forestay wire just above the furling gear on my Mark 1 Sea Wych was badly frayed. There was nothing I could do about it in those two days left of my holiday, as the weather was near gale force. The following 10 odd weeks, before we came back in August, were not wasted, with enquiries being made through Wychnet, to which I received an abundance of helpful replies.

For the record, this is how I replaced the wire. (Note: the furling gear is Cooney, which I understand is common to most of the Sea Wyches). You may also find looking at the picture, below, helpful.

1. The mast had to come down which isn't too difficult. I won't go into the procedure as there have been many articles on this, but it is worth reiterating that extreme care must be taken to avoid any sideway movement. The shear load at the base is immense and if the mast leans sideways, I guess a fair amount of damage could be done to the mast mounting point if anything more than slight movement were allowed.

2. At both ends of the furling gear are two hard nylon bushes. Each bush is made of two semicircular units, which fit into their retaining cup, and are held in place through the side of the cup with self-tappers. When the 2 units are joined, they leave a small hole suitable for a 4mm wire to pass through. As the damage to the wire was at the top, I had to remove the bush at the bottom (refer to picture). This was by far the most difficult part of the whole procedure.

Unless you have a spare set *(Ed: now available from the Sea Wych shop),* you have to extract the bushes undamaged, which I tried through various means but to no avail. Although I had unscrewed the self-tappers, nothing would budge them, not even brute force. Eventually, I had to resort to drilling them out and even then, this took well over an hour. Fortunately, I had a spare set and would have been totally lost without them; Tony Bromley please take a bow.

(The photo shows the s/s bearing taped up to avoid accidental loss, the old (well butchered) nylon

bush, the empty cup ready to receive the new bushes and the envelope from Tony Bromley they were received in. Finally, to the left, liquid tranquillizer.)

4. The bottom part of the wire is first of all crimped onto an eye, which goes through the bottlescrew. On top of this, there is a stainless steel bearing which is slightly tapered and fits over the crimp. This bearing has a slot on the side through which the forestay wire passes so that it can sit on the crimp. It is easily tapped off the crimp. All of this I left intact for the time being, except to wrap some tape around the bearing in case it came off accidentally and got lost through the gaps in the pontoon.

5. I then cut the forestay wire at the top of the furling gear, and joined firmly to it some thin cord. This attachment was then tightly wrapped with sticky tape so that when it was drawn through the furling gear, nothing was snagged. The cord was thus left inside the gear, ready to draw the new wire back through.

6. I had already measured the length of the forestay wire as a precaution, but I took everything down to the riggers who set up the new wire, including fixing the bottom eyelet onto the bottle screw. I made a note of the diameter of the top eyelet as it was too big to go through the furling gear foil.

***** In the end, I had to make do without the eyelet for the top end and the wire was rounded on its own and then crimped. I further had to pinch this (but only very slightly to avoid any damage to the new wire) to be able to pull the wire back through. *(Ed: See footnote)*

The top of the new forestay wire was then fixed to the cord which had been drawn through on the extraction of the old wire, and the joint tightly wrapped again with sticky tape to ensure there was no snagging when I drew the new wire back through the furling gear.

7. With the new wire in place, the stainless steel bearing then had to be drifted onto the new bottom crimp. The crimp needed a little bit of filing to accommodate it. I have also left good strong tape around the side of this bearing so that, in the unlikely event of it coming loose, it cannot fall off.

8. When I raised the mast I attached a small length of cord to the bottom eye just as a precaution. This was worth doing as the new forestay was a fraction shorter than the other (possibly because it is unstretched) and it allowed me to temporarily fix the forestay in place whilst I had a breather and made adjustments to the bottle screw to accommodate the required adjustment.

9. My thanks to all who were able to help. Without it, I do not believe I would have been able to replace the wire without outside help.

Ian Hunter (2002)

******** In no circumstance should this arrangement be used; Tony Bromley subsequently wrote to Ian Hunter:**

" Reading through your piece in Wychnet (thanks for the appreciative comment, happy to be of help) I notice that you have the top of your new forestay only as an open loop.

This worries me a bit. An open loop might be OK round the 2" dia. top of a mirror dinghy mast, but I don't think it's very suitable for going round the bolt on the mast crane of a Sea Wych. I reckon you'll be renewing the forestay again next year if you leave it like that, and maybe a lot of other things too when the mast falls down!

I suggest you firstly ask your rigger if he has a portable swaging machine that will swage a proper eye onto the end of the forestay while you're on the pontoon. Failing that use a 'Sta-lock' or similar eye that you can fix yourself, following the instructions given with it (or your rigger would do it if you're not happy about doing it yourself). If that leaves your forestay a bit short then use a 'spade and fork toggle' at the top (and bottom if need be). Using a toggle is always a good idea on a forestay as it moves about more than the other stays and shrouds.

If you've got a Baseline catalogue (www.baselinehardware.co.uk) the Sta-lok stuff and toggles are all in there."

12. Furling Foil Repair (Cooney Kit)

When I bought my Wych (in 1990), the foil around which the genoa furls was both bent and broken. There was no manufacturer's name on the kit, other than an etched "1977". Not then knowing of SWOA, I set off on a lonely crusade to try to determine who had made the foil. Thin cross-sections of the foil were cut and sent to various spar makers. The consensus was that Cooney – who were no longer in business, had made it. However, one firm I had contacted had taken a damaged Cooney kit in part exchange, and I was able to buy the bits. The next problem was how to 'splice' in a straight length to replace the bent section(s), bearing in mind that the centre of the foil had to remain sufficiently 'open' to allow the eye on the end of the forestay to be drawn through.

The answer was 22mm tube with a slot cut along the length of it, which proved to be a snug fit inside the foil. I used stainless steel for the two splices, but I remember experimenting with copper tube to find how wide the slot needed to be, because it was easier to work with – and was cheaper.

The two ends of the broken foil, and of the piece to be spliced in, were cut cleanly and squarely, and the 6" (I think) splice was gently tapped half way into one of the main pieces of foil. This was then drilled in the same pattern as the original (manufacturer's) splice in the foil, and pop-riveted. It is important to use rivets of the right length; overlong rivets could cause an internal obstruction, which could prevent the forestay being drawn through. The splicing piece of foil was then tapped home *snugly* over the protruding tube, and drilled and riveted. The process was then repeated for the other join.

Barri Hopkins (2005)