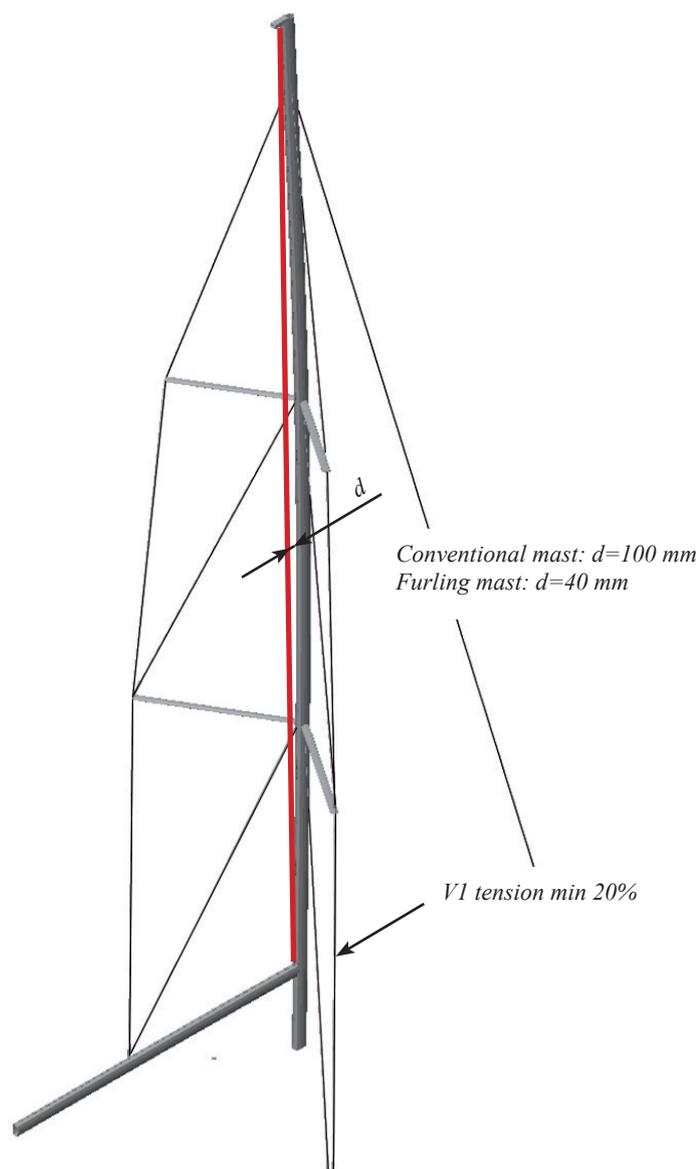


Tuning instructions S.O. 349

Complementary information to the manual:

“Hints and advice “ 595-540-E (Instructions for rigging. Conditions for valid guarantee).

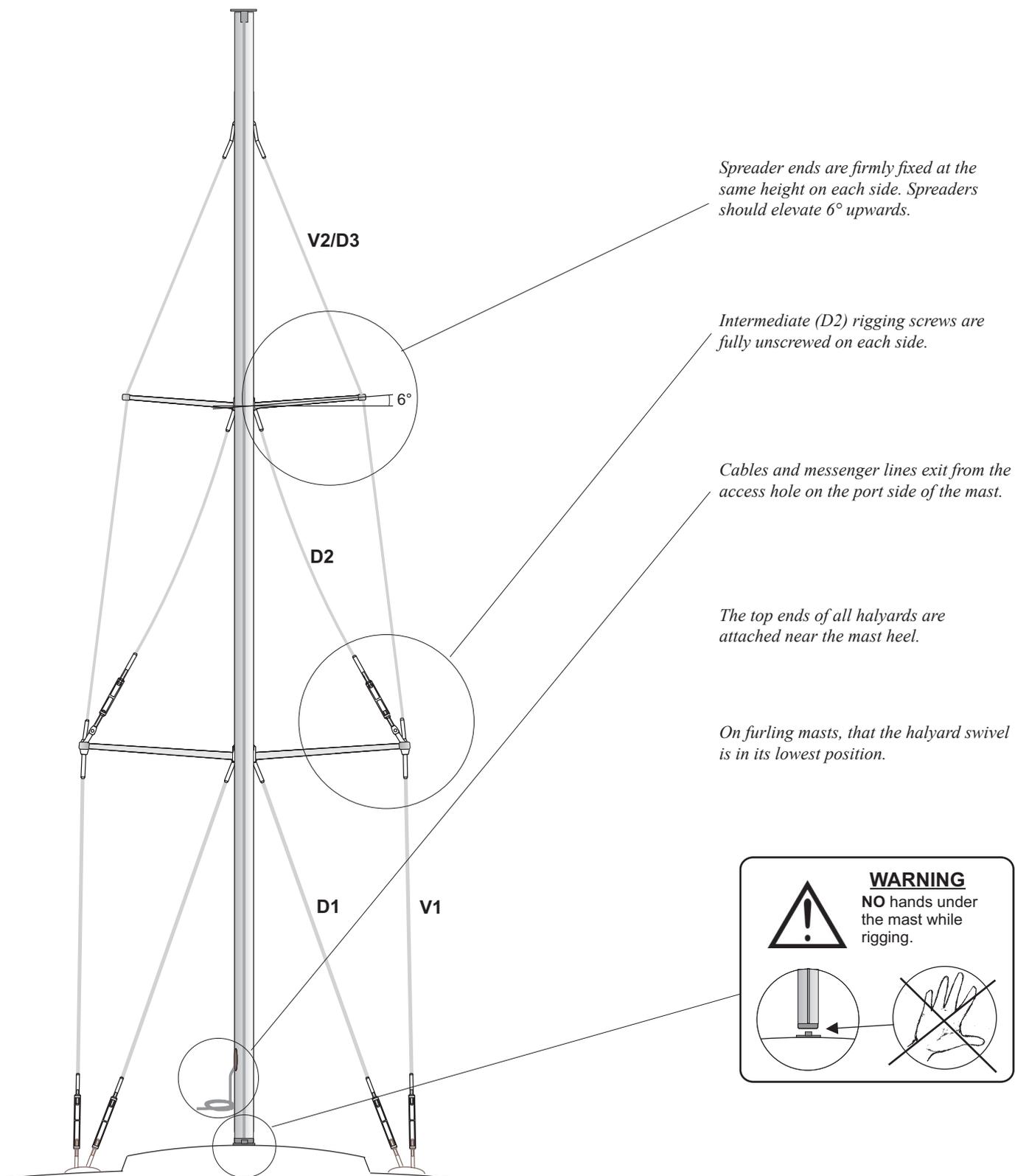
The rig setup to S.O. 349 differs from conventional rig setups. Some versions of the S.O. 349 does not have any permanent backstay at mast top. Extra attention to the rig tuning and setup is needed.



Correct wire tension and prebend are of great importance.

On the following pages detailed instructions will follow.

Before stepping the mast make sure that:



Stepping the mast:

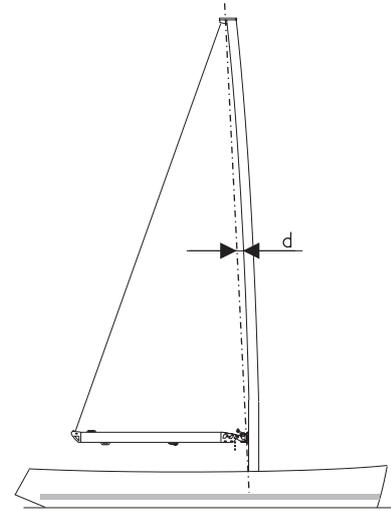
Step the mast and connect the forestaystay and shrouds to their chainplates. The lower shrouds (D1) shall, as well as the intermediate shrouds (D2), be completely slack.

The mast stands upright with the help of the forestays and the cap shrouds (V1's) only.

Make sure that the boom does not hang on the topping lift or that any halyard carries a load which might affect the curvature of the mast.

Tuning of the rig:

- The V1 shrouds should be tensioned to approximately **10%** of their breaking load for both the conventional and furling mast. Use “The folding rule” method, please see last page.
Now you should have a prebend of approximately **220 mm** for the conventional mast and **160 mm** for the furling mast.
Use the main halyard as a reference to judge the prebend .



- Tune the D1 shrouds until you have achieved the desired prebend of **100 mm** for the conventional mast and **40 mm** for the furling mast.

Note that after the D2 shrouds are tensioned, the curvature will decrease by approximately **10 mm**.

The prebend affects the shape of the main sail. The sailmaker may have design assumptions for the mainsail which is used on the boat. The prebend may have to be adjusted after test sailing. However the prebend shall not be below **80 mm** for the conventional mast and **25 mm** for the furling mast.

Sight up through the sail groove to check that the mast is straight in a sideways direction.
If it's not straight, adjust the D1's as required.

- When you are satisfied with the straightness sideways, tighten the D2 shrouds equally. The D2's should be tensioned enough to make the mast to bend in an even curvature, in its longitudinal direction. Approximately **8 whole turns** on each rigging screw after that the rigging screws has been hand tightened. Double check that the mast has an even curvature. Also sight up through the sail groove again, from deck to make sure that the mast is straight sideways. The D2 shrouds may have to be adjusted after test sailing.

Don't forget to lock the rigging screws with split pins.

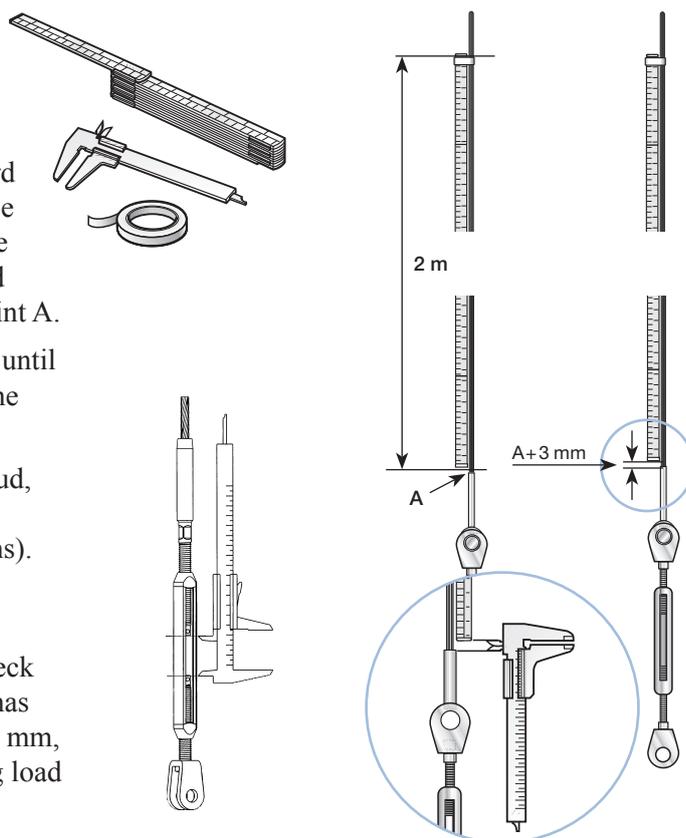


The folding rule method

The following materials are required:

- A 2 metre long measuring rod (a folding rule is recommended)
- Adhesive tape
- Vernier callipers

1. Start with the cap shrouds only hand-tight.
2. Tape the upper end of the folding rule to the starboard cap shroud. The lower end of the folding rule shall be approximately 5 mm above the upper end of the wire terminal. Measure the distance between terminal and folding rule precisely. This is index 0, let's call it point A.
3. Counting the turns, tension the starboard cap shroud until the distance is $A + 2$ mm between the terminal and the folding rule. Measure using the vernier callipers.
4. Leave the folding rule attached to the starboard shroud, move across to the port side and tension the shroud rigging screw the equivalent amount (number of turns). Use the vernier callipers to check that you have the same gap on each V1 rigging screw.
5. Continue to tension each V1 in turn. At intervals, check the starboard side to see how much the folding rule has moved from the end terminal. When the gap is $A + 4$ mm, the cap shrouds are tensioned to 20% of the breaking load of the wire ($4 \times 5\% = 20\%$).



Hint! Count how many turns on the rigging screw corresponds to 1 mm elongation (5% of the breaking load). Make a note of it. This is useful to know if you ever need to tension "another 5%".



www.seldenmast.com

Sweden: Seldén Mast AB • Tel: +46 (0)31 69 69 00 • info@seldenmast.com
 UK: Seldén Mast Ltd. • Tel: +44 (0)1329 50 40 00 • info@seldenmast.co.uk
 USA: Seldén Mast Inc. • Tel: +1 843-760-6278 • info@seldenus.com
 Hong Kong: Seldén Mast Asia Ltd • Tel: 852 3572 0613 • info@seldenmast.com.hk

Denmark: Seldén Mast A/S • Tel: +45 39 18 44 00 • info@seldenmast.dk
 the Netherlands: Seldén Mid Europe B.V. • Tel: +31 (0)111-698 120 • info@seldenmast.nl
 France: Seldén Mast SAS • Tel: 33 (0) 251 362 110 • info@seldenmast.fr
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