

North Sails J-109 Tuning Guide

To get the best from your J-109 and your new sails it is essential that the boat is set up correctly, this North tuning guide is designed to make this as easy as possible and provide you with a set-up that we will refer to as “base”.

The tuning is geared to follow a straight mast method, which is used by the J-24 and J-105 classes. To ensure a ‘straight’ mast the forward face of the mast at cabin sole should be 480mm from the aft edge of the bulkhead. When the mast is first put into the boat the first step is to make sure that the mast foot is in the correct place in the boat, which is almost max forward on the adjustable plate, depending on which hull number you own. To access your mast plate you will have to take off the front-end panel of the table by un-doing the 6 screws.



You may need to alter at a later stage to suit the luff curve in the mainsail.



When the mast foot is secured, move onto the deck. The J measurement is taken from the intersection of stem and shearline to the front face of the mast and measures 4085mm. It is also important to centre the rig in the boat at deck level by measuring from the chainplates until the rig is equidistance on each side.

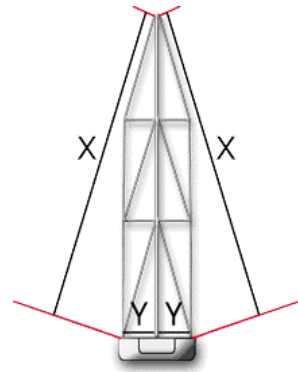


The next stage is to set the forestay to the correct length to get the correct rake. To do this take the jib Halyard and raise it to the top of the black band at the gooseneck.

Swing the halyard out to the forestay. Where the halyard intersects the headstay, place a mark on the headstay. Measure down from the forestay mark to the stem/shearline intersection and adjust the headstay accordingly to get a measurement of 2260mm.



Now Centre the rig in the boat. With the D1's and D2's slack hand tighten the cap shrouds. Use the centre Halyard (X in picture) and measure down to the chain plates on either side. Adjust each cap shroud until each side is even.



With the rig now in the centre of the boat, add the same amount of turns to each of the cap shrouds until you have a reading of 55 (1800lbs) on the Loo's R10 rod gauge.

Just like the caps the diagonals (D1's) should start by being hand tight to centre the rig in the boat, then add even turns to each D1 until you have a reading of 46 (1300lbs) on the tension gauge.

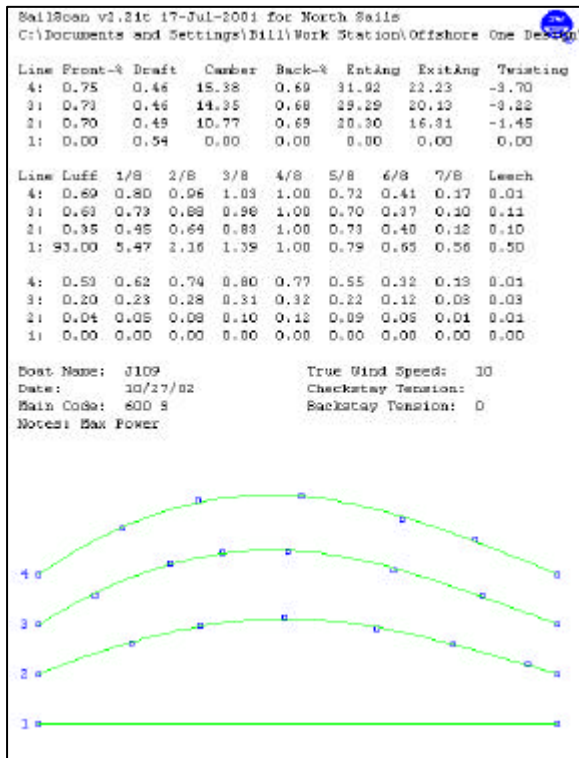
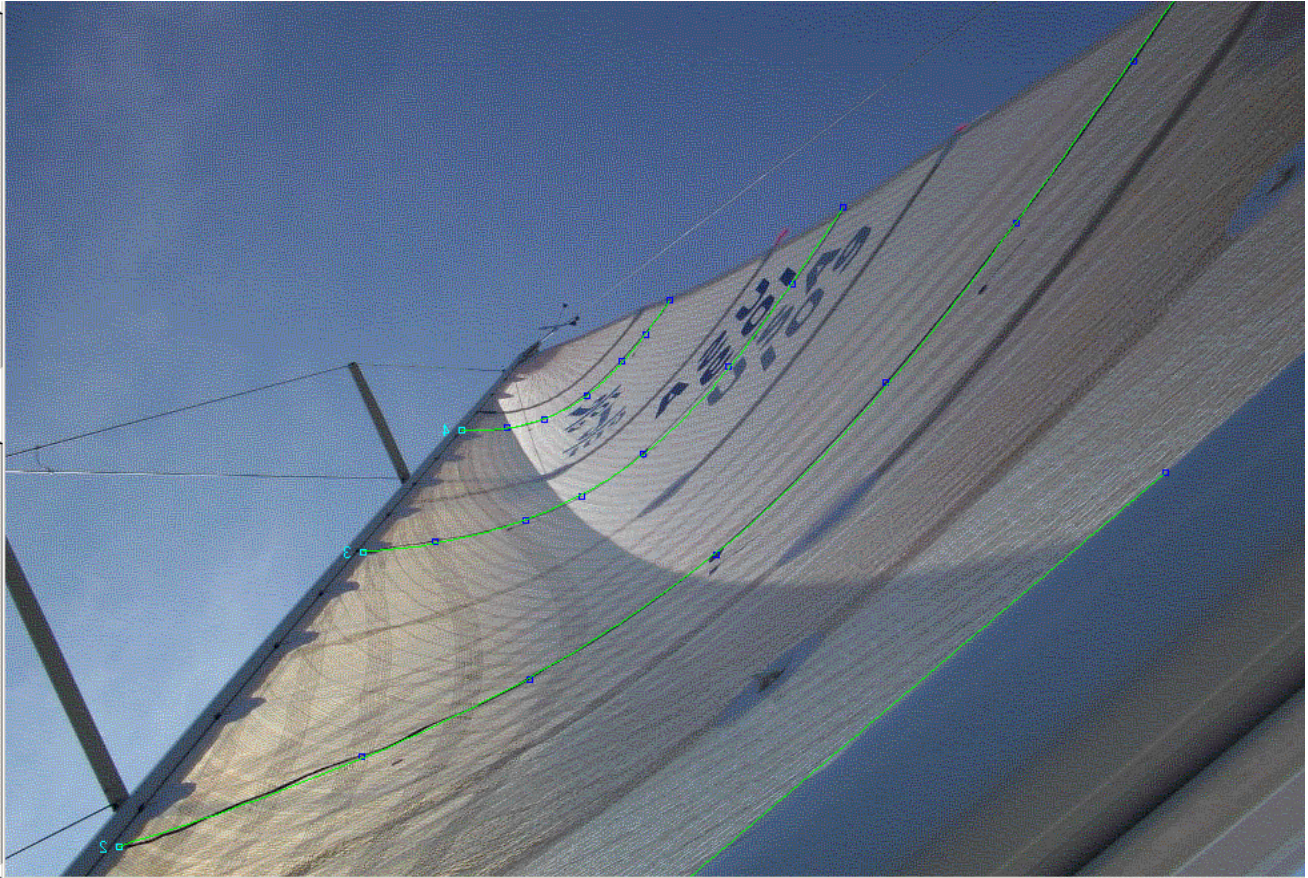


Follow this procedure with the D2's. They should start by being hand tight to get the centre of the rig into column and then be adjusted until you have a reading of 23 (950lbs) on the tension gauge.

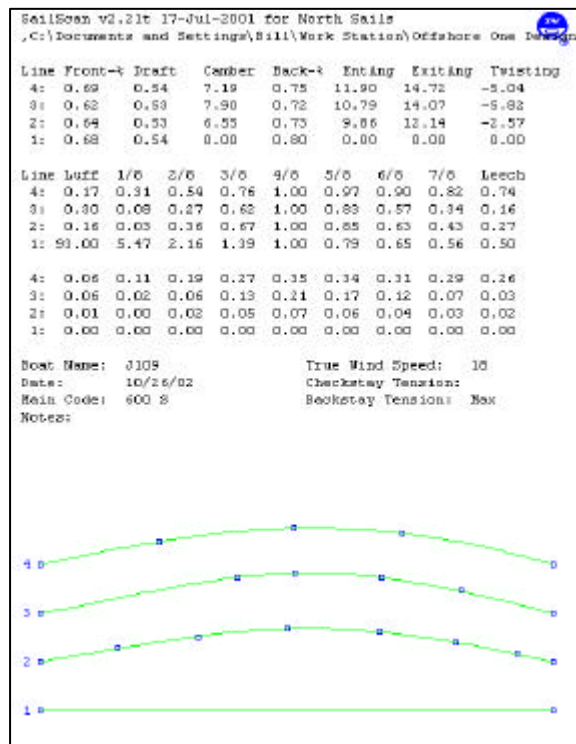
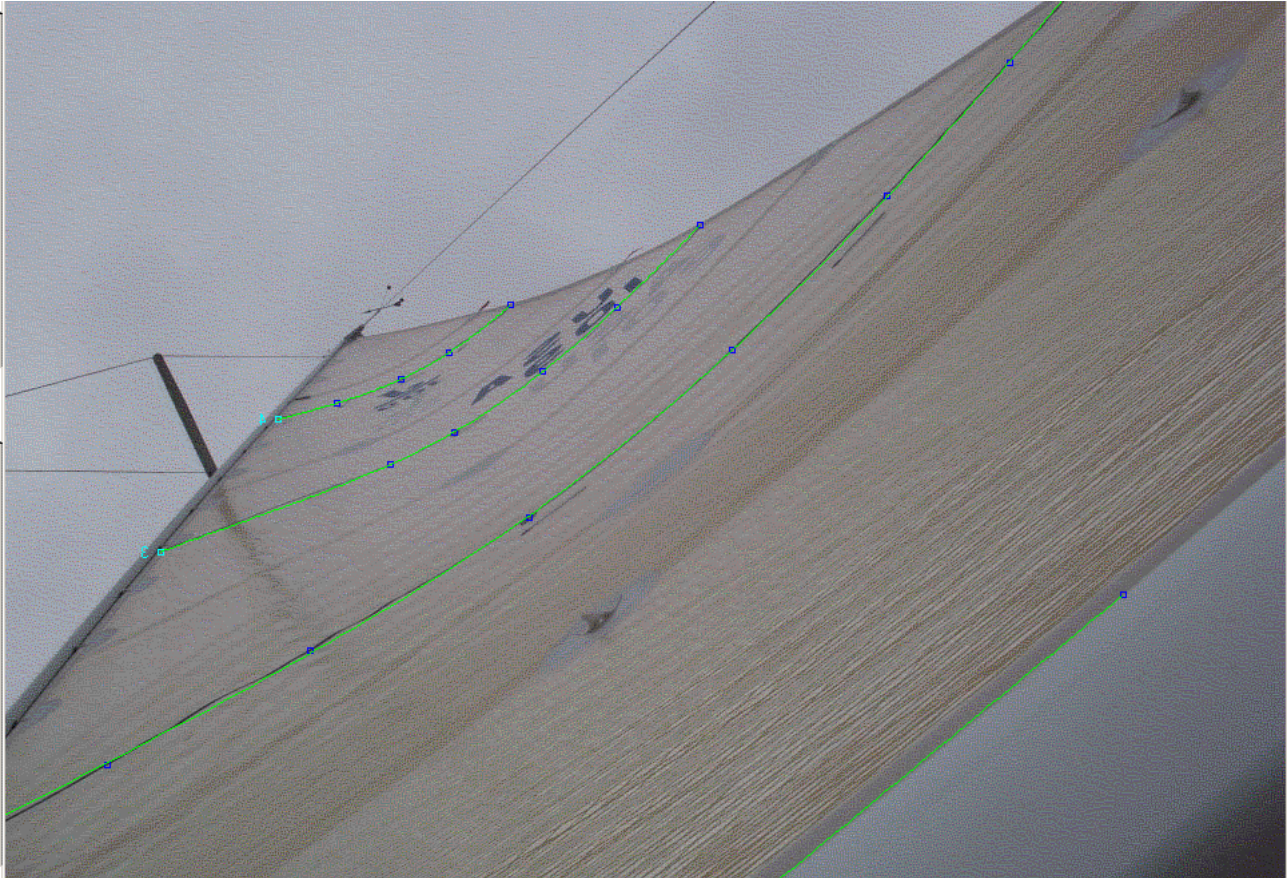
Base Settings		
Rake	Measured from swing arc mark on headstay down to stem at shearline	2260 mm
J Dimension	Measured to intersection of stem and shearline	4085 mm
Mast Butt	Measured from forward face of mast to aft edge of bulkhead	480 mm
Pre-Bend	Measured at max bend between S1/S2	38 mm
Shroud Tension		
Cap Shroud	.250 rod rigging measured on RT10 loos tension gauge	55 units 1800lbs
D2	.198 rod rigging measured on RT10 loos tension gauge	23 Units 950lbs
D1	.250 rod rigging measured on RT10 loos tension gauge	46 Units 1300 lbs

Base Settings			
Mast Butt	480 mm		
J Dimension	4050 mm		
Rake	2260 mm		
Pre-Bend	38 mm		
Shroud Tensions			
True Wind Speed	Cap Shrouds	D2's	D1's
Light 10 and Under	Base -2 turns	Base -3 turns	Base -2 turns
Medium 12-16 - Base	55	23	46
Heavy 18 and over	Base +4 turns	Base +3 turns	Base +2 turns

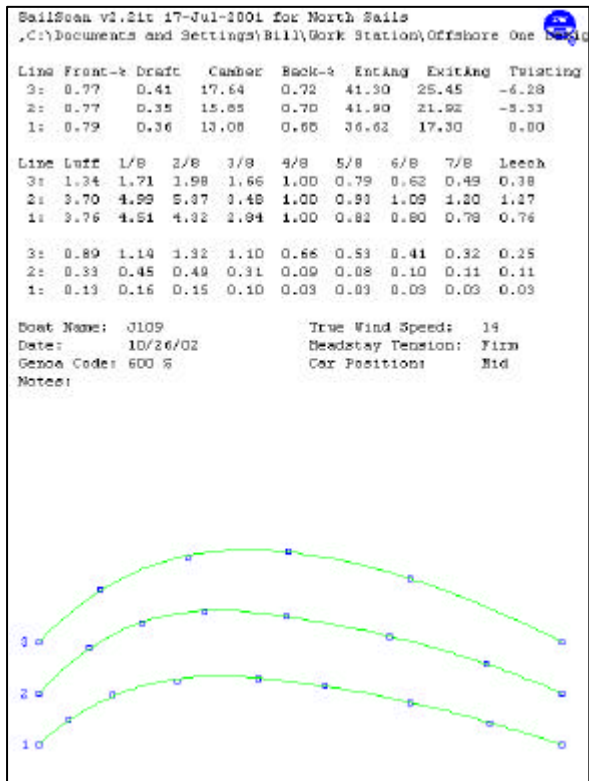
J109 Mainsail Underpowered



J109 Mainsail Overpowered



J109 Genoa Powered Up



J109 Genoa with Headstay Sag

