

## SOLING TUNING GUIDE 1995

### *By North Sails One Design*

#### RAKE

Mast rake is checked by measuring the amount that the forestay length exceeds the mast length. Hold your forestay along the front of the mast and simply mark the forestay at the point where the surface of the deck would be. If the forestay is shorter than the mast, the mark will be on the pennant. We check our rake by measuring the distance from this mark along the forestay to the deck.

The standard rake setting is 28", We use this setting for all conditions.

#### SCHROUDS

Our spreaders extend straight out from the mast, with no forward sweep. We have five settings for the fore and aft location of the shrouds at the deck with a total travel of 12". Even though we use separate tracks for the uppers and lowers, the cars move together.

0 - 3 Knots Full forward  
4 - 8 At 3 inches  
9 - 13 Aft 6 inches (mid track)  
13 - 15 Aft 9 inches  
16 plus Full aft

Our shroud tension is measured with the shrouds in the middle location, and the forestay and backstay totally stack. Uppers 600 lbs in all conditions. Lowers 1/2" sag at spreader for light air, increasing tension to 600 lbs at 18 knots and 800 lbs above 22 knots. Our lower shroud tracks are ramped 1/2" steeper than the uppers to give relatively more tension to the lowers as both shrouds are moved aft in heavy air, and more slack in the lowers as they are moved forward in light air.

#### MAINSHEET AND TRAVELER TRIM

Up to 7 knots, trim mainsheet hard enough to make the top batten parallel to the boom. In smooth water and high pointing conditions, trim harder to cock the batten slightly to weather. In choppy conditions, the top batten must twist off slightly. As the breeze picks up you will find it necessary to use quite a bit of mainsheet tension to keep the top batten from falling off. This main sheet tension, when combined with the backstay, should be enough to keep the forestay under control.

In light air, the boom should be set W' above centerline. Above 8 knots, drop the traveler enough to keep helm and heeling under control. As the breeze increases, we find best results by increasing mast bend and twist instead of lowering the main traveler.

#### Other Sail Control Settings:

0 - 7 knots Outhaul - eased 1 1/2 inches Vang none Cunningham none  
8 - 14 knots Outhaul - eased 1 inches; Vang - just enough to prevent mast pumping; Cunningham pull to get half the wrinkles out  
15 - 20 knots Outhaul all the way out; Vang just enough to prevent mast pumping; Cunningham pull to get all the wrinkles out  
20 + knots Outhaul all the way out; Vang you may need more vang to ease helm ; Cunningham pull hard to help ease helm

There are two things the backstay does. Controls fullness in the main and controls forestay sag. This is probably the, most important adjustment in the Soling. The more backstay tension, the flatter the main and the forestay tension flattens the jib. I have my backstay marked at every two inches, so I can repeat fast settings and have the boat ready quickly after mark roundings.

#### MAINSHEET TENSION

The mainsheet controls the top part of the mainsail. The quickest and most accurate way to trim the mainsail is to watch the top batten. Sighting from under the boom, the top batten should be parallel to the boom or slightly tighter most of the time, when not in overpowered conditions. Under ideal conditions, (flat water) the top batten can point 5-8 degrees to weather of centerline, and when overpowered, it should open from centerline until it balances the helm. 3

#### BOOM VANG

Our sails are designed so it is only necessary to use vang in a few situations. For upwind sailing, I use only enough vang to keep the mast from pumping, except in heavy air when I occasionally use vang to reduce helm.

#### TRAVELER

The boom should be above centerline until both crew are 'over the side', then the traveler should be eased down to reduce weather helm. The traveler should be played with each puff in over 14 knots, but if the wind is steady, the backstay should be adjusted to depower the top of the mainsail and the traveler kept in the middle. Maximum out should be about 10" in 15 to 20 knots.

When using the V 1 Jib, start with the sheet in the second hole from the top, when the sail is new.

We slide the sail up or down the forestay to adjust the lead, instead of moving the hole. As the sail ages, it becomes necessary to go to the third hole.

WIND\*\* CLEW \*\* HOLETACK \*\* HGT. LUFF TENSION \*\* JIB TRAV.

0 - 3 \*\* 3 \*\* 3 inches \*\* Big wrinkles \*\* 12 inches  
4 - 6 \*\* 3 \*\* 3 inches \*\* Big Wrinkles \*\* 10 inches  
7 - 10 \*\* 3 \*\* 2.5 inches \*\* Small wrinkles \*\* 10 inches  
11 - 15 \*\* 3 \*\* 2 inches \*\* No wrinkles \*\* 11,5 inches

I prefer to switch to the A 1 at about 12 knots, but the two sails will overlap well from 10 15 knots.  
When using the A 1, put the sheet in third hole from the top. Again, slide the sail up and down for lead adjustment.

WIND\*\*CLEW HOLE\*\*TACK HGT.\*\*LUFF TENS.ION\*\*JIB TRAV.

10 - 12 \*\* 3 \*\* 3 inches \*\* Slight wrinkles \*\* 10 inches  
13 - 15 \*\* 3 \*\* 2.5 inches \*\* Just smooth \*\* 10.5 inches  
16 - 18 \*\* 3 \*\* 2 inches \*\* Smooth \*\* 11 inches  
19 - 22 \*\* 3 \*\* 1 inches \*\* Smooth \*\* 12 inches  
23 plus \*\* 3 \*\* 0 inches \*\* Smooth \*\* Down enough to

Thanks to North Sails One Design company