



*One Design*

For any question you may have on tuning your A Scow for speed, contact one of our A Scow experts listed below:

**ONE DESIGN ZENDA**

Andy Burdick . Harry Melges . Jim Gluek

262 275 9728 F 262 275 8012

[harry@melges.com](mailto:harry@melges.com)

[andy@melges.com](mailto:andy@melges.com)

[jim@od.northsails.com](mailto:jim@od.northsails.com)

## **A Scow Tuning Guide**

### Knowledge is power.

We see this in every sport throughout the world. Racing sailboats is much different from the other sporting events. Sailing requires tuning for different wind and water conditions. Many of these tuning adjustments are very small, yet critical.

We have outlined tuning information for many different boats that we race on a regular basis. The measurements achieved have been tested through countless hours on the water in a variety of conditions. What is truly unique with this guide is the fact that we have simplified the tuning process for all of these classes in order to make the process easy for our customers. You will be able to achieve newfound speed in your class. These measurements coupled with the fastest one-design sails in the world will give you the knowledge for speed. In sailboat racing this is a combination for power and speed!

North Sails will continue to bring you the very best in sailing service and technology. Our objective is to allow you to set the pace in your racing class.

### North Sails One Design

Fast Sails, Friendly Service and Cutting Edge Knowledge for your sailing program!

## The Swept Spreader Rig

The new swept spreader rig was developed to take A scow racing to the next level of simplicity and enjoyment. This new rig is deck stepped, making the rigging process for two people a fraction of what it was with the old rigs. The new rig is pre bent via the upper shrouds running through the spreader tips back to the base of the mast. This set up allows us to remove the permanent backstay and the ram as the mast bend can be fine tuned with the upper shrouds. This rig is more forgiving to use in regard to all aspects of rigging and sailing. This new rig allows the boat to accelerate in the puffs making the boat much easier to sail and in light air the mainsail shapes to the mast correctly, bringing the fleet closer together in terms of boat speed.

### MAST AND SHROUD SET-UP

1. Untie the mast from the boat, place the mast rest pole in the boom rest socket.
2. Attach the mast head fly to the top of the mast and retrieve any halyards that are pulled to the top and attach the running backstays into the mast, take care to go around upper shrouds properly so that when mast is flipped over tunnel down the running backs are properly lead.
3. With a person at each end of the mast, flip the mast over so the tunnel is down, carry aft and latch in the base of the mast in the deck plate and rest the top of the mast in the mast support.
4. Attach the Intermediates to the aft hole in the chainplate, make sure the spinnaker sheets are lead outside the chainplates when attaching the shrouds.

5. Attach the Lower to the forward hole in the chainplate.

6. Tie the jib halyard feeder line onto the end of the jib halyard and pull jib halyard through deck and out the side of the back bone. Be careful not to lose feeder line inside back bone or the line will have to be re-lead through the pulleys.

7. Pull the jib luff lines tight on both sides of the deck and insure that they are properly cleated, attach the block and tackle of the mast stepping pole to the jib luff, attach the forestay to the eyestay on the other side of the mast stepping pole, place the mast stepping pole saddle over the base of the mast. Stand on the front side of the mast stepping pole purchase and with a person on each side of the boat holding on to an upper shroud to guide the mast and keep the mast centered on the way up, pull up the mast using the purchase system. Make sure that the mast stays centered on the way up so as not to damage the mast step.

8. Make sure the spinnaker sheets are lead in front of the forestay and attach the forestay.

9. Remove the mast stepping pole and stow away.

10. Attach boom and finish rigging and running lines and taping all necessary fittings.

### Mast Pre-Bend

The upper shrouds run through both spreader tips and back to the base of the mast. When the upper shrouds are tensioned, they pre-bend the mast. The all purpose setting for the pre-bend is 5". This is found by running a string along the back of the tunnel and measuring at the midpoint of the spar.

## Removing the pre-bend for storage

The pre-bend should be taken out of the spar for winter storage. Mark the turnbuckles and spin off the turnbuckles or, if you have the levers, either release those with the mainsail up and trimmed in, or when the spar is down on horses and you have someone put their weight on the middle of the spar to bend and take pressure off the upper shrouds. Never remove the pin on the lever when the uppers are under load.

## Mast Rake

We now measure the mast rake from the deck up to the junction of the forestay pin along the forestay. The measurement range is between 15" and 19", 15" being the max forward position in light air and 19" would be max aft in the big breeze.

## FINE TUNING THE MAST RAKE

### Light air

The light air mast rake setting can be as far forward as 15", especially if you are sailing with heavy crew weight. You may even want to experiment with the rake further forward if you sail heavy.

### Heavy air

The mast should be raked aft so that the mainsheet pulleys trim close to "block to block". This measurement should be around 19", some fine tuning may be necessary to dial this in to the perfect rake. Basically, when you have big breeze and you have the running backstay cranked on hard, you will want to be able to trim out the mainsail and close up the top batten. If you are raked too far aft, the mainsail will stay twisted open too much.

TUNING CHART			
	Light Air 0-12	Medium Air 10-18	Heavy Air 18 +
<b>Mast Rake</b>	15"	16.5"	18"-19"
<b>Upper Shrouds Pre-Bend</b>	Ease off 2 turns 4"-4.5" Pre-Bend	Back up 2 turns to 5"-5.5" of Pre-Bend	Standard spot 5"-5.5" of Pre-Bend
<b>Intermediates</b>	180-200 lbs on Model A Loos gauge	+ 8 Full turns	+ 8 Full turns
<b>Lowers</b>	Set up so mast Has 1/2" sag	+ 6 Full turns	+ 6 Full turns

## DOWNWIND

When sailing downwind, the only adjustment we have to make in regard to the mast and the standing rigging is with the running backstays. You only want to snug up the backstays downwind to help support the mast and take some of the shock load off the chainplates in big waves and big puffs. Generally, you could sail downwind with no backstays on at all if you wish as the upper sidestays support the top of the mast and with the chainplates swept aft, you do not need the backstays to support the mast. It is recommended that in medium to heavy air you snug the windward runner to ease the load on the chainplate area, however, take care not to pull the runners too tight and invert the mast up high. It is a good idea to have a crewmember sight the mast bend and make sure there is not too much running backstay on.

## JIB SET UP

The jibs should be set up so that they are low to the deck. The foot skirt should curl

on the deck in light air. The jib should be set up fairly full down low, and the luff should break evenly as you slowly head into the wind. As the wind builds you will want to gradually flatten the foot of the jib and twist open the upper leech, causing the jib luff to break sooner up high when luffing into the wind slightly. The upper leech should have a telltale on the top batten. This telltale should always be flowing. To find the correct trim, trim until the telltale stalls and then ease the sheet until it begins flowing—that would be maximum trim.

### Jib luff

Just pull the wrinkles out in all conditions. Over tensioning the luff may over stretch the sail.

### Jib Track

The maximum inboard position would be even with inboard edge of cockpit. Ease outboard in medium/heavy wind to keep mainsail from "backwinding". Set to the maximum outboard setting when reaching and running.

## Mainsail Controls

CUNNINGHAM	
Light Air	None
Medium Air	Pull out wrinkles
Heavy Air	Pull hard to move draft forward and open leech

VANG	
Light Air	Loose
Medium Air	Start to play the vang on in the puffs to bend the mast and depower the mainsail.
Heavy Air	Very firm to vang sheet in puffs and to flatten the mainsail.

OUTHAUL	
Light Air	Ease in approximately 1/2" to 3/4" from boom band to power up bottom of mainsail.
Medium Air	Pull to black band to flatten and depower.
Heavy Air	Pull to black band.

RUNNING BACKSTAY	
Light Air	Keep soft to sag headstay and power up the jib, you can even tape forward along side-stays to get them out of the way if you wish.
Medium Air	Ease in lulls, pull hard in puffs to depower and flatten jib, and depower and twist open mainsail.
Heavy Air	Pull very hard to depower and flatten jib and mainsail.

TRAVELER	
Light Air	Pull to windward of centerline approximately 8" - 10", this allows you to keep a loose mainsheet tension and allow the mainsail to twist open as much as possible up high. As the breeze builds and the crew starts to move towards the windward rail, ease the traveler down to center and trim the mainsail harder to remove twist.
Medium Air	Center and work down in puffs to keep boat on her lines.
Heavy Air	Work up and down in puffs. Maximum out is at rudder posts.

SHEET	
Light Air	Twist top batten open, keep top leech telltale flowing as much as possible. Choppy conditions require more mainsail and jib twist with fullness down low.
Medium Air	Trim until top telltale stalls half of the time. Or sight back 1/3 of top batten parallel to boom. Again, more twist if the chop is big.
Heavy Air	Flatten and twist main, work sheet to keep the boat on her lines and driving.

## Asymmetrical Spinnakers

### 0 - 6 knots

Use the small VMG asymmetrical. Induce Maximum leeward heel. Take jib down if necessary.

### Over 6 knots

Use the big one. Keep maximum heel, Use 2/3's to max board board. Work the shifts. Work the puffs. If the breeze is up, everyone must hike, mainsheet in fairly tight and press the boat up to go as fast as possible all the time.

### HOISTING ASYMMETRICALS

Hoist halyard first, under main and keep sail under control to leeward. At the same time pull out bowsprit. When the kite is

approximately 1/2 to 2/3's of the way up, pull out tack making sure that a crew member feeds the kite out of the bag keeping tension on the foot and the tack line to keep it up on the deck and out of the water, and fill chute. The helm should bear away during the hoisting process to not fill the kite too quickly, however, if it looks like the kite is going to go in the water and shrimp, the helm should head up to fill the kite and lift it out of the water.

### **PAY ATTENTION NOT TO CAPSIZE FROM HEADING UP TOO FAR.**

### **GYBING ASYMMETRICALS**

There are two gybes that work best on the A scow, the Mexican gybe and the pre-gybe.

#### **Mexican Gybe**

The Mexican gybe works best when there is over 7 or 8 mph of breeze. To perform the Mexican gybe, the trimmer overtrims the kite as the boat bears away, strapping the foot tight as if to do a Mexican takedown. As the kite loads up on the new gybe, the trimmer blows the sheet off and the other trimmer overhauls the new sheet. Make sure that the sheets run free and that there are no sharp objects at the sidestays or the forestay. The helm will come through the first part of the turn fairly quickly to help load up the kite on the new gybe, the helm will hold the turn at the point where the kite loads up on the new side to give the kite a chance to fill, then freshens up to accelerate.

#### **Pre Gybe**

The pre gybe works best in light air when there is not enough pressure to load up the kite on a Mexican. On the pre gybe, the helm bears away to almost dead down

wind, the trimmer starts to trim the kite around to the new side and at the same time the bow overhauls the new sheet at the shrouds to help the kite around. The helm waits until the clew is at the sidestay before gybing through the wind onto the new gybe. If done properly, the kite will come out filled and off you go.

### **ASYMMETRICAL TAKEDOWNS**

#### **The windward take down**

Head the boat straight down wind, start jibing spinnaker and overhaul windward sheet around until clew is near the main-sheet position. An early release on the tack line will help take the pressure out of the kite to pull it around faster. The jib trimmer must tend to the tack line to keep it from running out too far and going under the boat. The helm should steer under the kite to help blow it on the deck and a foreward crew should control the foot to keep it out of the water.

#### **Leeward take down**

On a leeward takedown you must first throw the lazy spinnaker sheet forward around the headstay into the water to blow it aft alongside the leeward side of the boat. A crew member grabs the lazy sheet pulling off the clew as far forward as possible in the cockpit, right behind the shrouds. The helm bears away to take some load off, the tack is blown off and the clew is pulled in and down quickly under the boom. Pay attention to the upper leech of the mainsail as the kite will sometimes catch on the leech. Also, you must tend to the tack line to keep it from running out too far and getting tangled in the rudder or board.

#### **Mexican take down**

Approach the leeward mark on starboard tack approximately 1.5 boat lengths to

windward of buoy. When just shy of port lay line gybe the boat and at the same time trim the chute tight on the port side, release the bow sprit and the tack line to allow the kite to be trimmed further aft behind the shrouds, and as the chute blows into the rig release the halyard and drop the chute on the deck. Keep control of the foot and sail to keep it out of the water, steer under sail, tail tack and halyard lines down. This is the most effective take down if done properly. In a Mexican, there is very little time in between the steps and the crew needs to practice the steps to get it down properly and quickly.

## **Troubleshooting**

### **Too much windward helm**

Pull on max outhaul, then rake mast aft, then more running backstay, if that doesn't do it then pull some board up.

### **Can't point**

Jib car might be too high, or jib is set-up too full down low. Rig may be too tight or mast rake too far aft or both. Mainsail may be set up too full.

### **Leeward helm downwind**

Not enough board.

### Sail Care

Your North Sails are constructed out of the best materials on the market today. We make sure of this by testing every roll of cloth we use. Through proper care and maintenance your sails will give you the performance you have come to expect from a North sail.

The most important factor for a long life for your sails is to watch them for signs of wear and tear in high load and chafe areas. Be sure to wash the sails off with fresh water and dry the sails thoroughly before storing. A dry, mild climate is best. Excessive heat can cause problems with the sails due to the possibility of shrinkage. It is best to roll the mainsail and jib.

#### MAINSAIL

When hoisting and lowering the sail try to minimize the amount of creasing or wrinkling of the sail. Every time the sail gains a crease the cloth breaks down that much faster. Always have someone contain the leech and luff during these procedures. The battens can be left in the sail without any problems. Be sure to roll the sail parallel to the battens so that the battens will not twist. This could cause damage to the battens.

#### JIB

When rolling the jib keep the battens perpendicular to the leech. Pay special attention to the battens and batten pockets for wear and tear.

#### SPINNAKER

The spinnaker is fairly straight forward. Be sure to repair all tears and pulled stitches. Folding the sail when storing is best. Always dry a spinnaker after every use. Do not hoist the spinnaker up the mast to flog

it dry unless there is very little wind. The flogging breaks down the material much faster.

### Contact Us

This tuning guide only begins to cover all there is to know about racing the A Scow. The Scow team at North One Design Zenda is available to help you make you're a Scow sailing the best that it can be. Please contact us in Zenda to help you take you're a Scow racing to the next level!

At North Sails we are constantly striving to make our products better. If you have any comments on this tuning guide and how it could be improved for your purposes we'd love to hear from you. Please give us a call or drop us a line.

### Good Sailing!

### TENSION GAUGE CONVERSION CHART

Over the past few year Loos Co. has introduced it's new style PT-1, 2 and 3 professional tension gauges to the market. Since many of us are replacing our older model A and B gauges with these new models we are posting the following conversion chart for your convenience.

MODEL A	MODEL PT-1		
	3/32	1/8	5/32
5	6		
10	9		
15	12	14	
20	16	16	
25	20	19	
28	23	21	
30		22	
35		27	25
38		30	28
40		33	30
42			33
44			36
45			38
46			39
47			40

Model B	Model PT-2			PT-3
	3/16	7/32	1/4	
10	11			
15	13			
18	15			
20	16	18		
22	18	20		
24	19	22		
26	21	24		
28	23	25		
30	25	27	25	
32	27	29	27	
34	29	31	29	
		33	31	
		36	33	6
		37	36	7
			37	9
				10
				11
				12
				14
				16
				18
				20
				25

### NORTH SAILS ONE DESIGN QUALITY CONTROL CHECK

MAINSAIL		JIB		SPINNAKER	
Corners		Corners		Corners	
Cunningham		Luff Tabs		Rope tension	
Lake Code		Telltale		Serial Number	
Numbers		Telltale window		North Logo	
Leech Telltale		Battens		Bag	
Battens		North Logo		Sail name label	
Leech Cord		Serial Number			
Insignia		Sail name label			
North Logo		Luff rope			
Bag					

Checked by: \_\_\_\_\_

Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_