ONE SAILS - Tuning guide 1

MELGES 32

V 2.3

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Tools

to make a proper job at least these tools are needed:

- tension gauge Loos&Co PT2-M
- tension gauge Loos&Co PT3-M
- or tension gauge Spinlock 0508
- 20 mt tape measure possibly metallic
- plier and screwdriver
- caliper

Step 1 Mast Butt

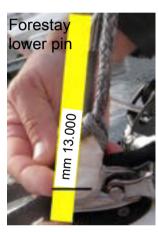
position it all the way forward and check the measure from the aft surface of the mast and the aft surface of the bulkhead: 100 mm



Step 2 Forestay lenght

With the mast stepped and the shrouds just tighten, pull the backstay to have some tension in the forestay and measure from pin to pin. Adjust the turnbuckle to obtain mm 13.000

This will be the rake base setting.





Step 3 shrouds setting

With the mast jack all the way down tighten the uppers (D1 and D2 completely loose) at 5 on the PT3 tension gauge (required by class rules) and check that the mast is centered sideways with the jib halyard on the sheerline.

Now tighten by hands D1 and D2, pump the jack to 4000 psi.

Tensions of the shrouds should be as in the table below, adjust it moving the turnbuckles to obtain this result and look at the mast groove to check if it's straight. If not make the necessary adjustments.

	Uppers	D1	D2	
Pt 2/3	16	9	21	
Spinlock 0508	640	400	240	
with the jack at 4000 psi (attention move up the chafe guard				



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Step 4 Jack reference

Find your favourite system to quickly measure the butt height (see sample picture)

Mark your reference at 5 different positions as in the table below

Reference	PSI	
0	0 all the way down	
1	1800	
2	2300	
3	3000	
4	4000	base check setting



Sailing settings

TWS (kn)	Jack pos.	Rake	D1	D2	V1
0/8	0/3	0	- 2 turns	- 2 turns	0
9 / 10	2/4	0	0	0	0
10 / 13	3/4	+5 turns (tot +5)	0	+ 1 turn	0
13 / 18	4/5	+ 5 turns (tot +10)	0	+ 1 turn (tot +2)	0
18 / 20	5	+ 0 turns (tot +10)	0	+ 1 turn (tot +3)	+ 1 turn (tot +1)
20 +	5	+ 0 turns (tot +10)	0	0 turn (tot +3)	0 turn (tot +1)

Step 5 record your tuning

Measure with a caliber the distance between the screws in the turnbuckles and mark it, next time will be a lot easier to prepare the boat.

Remember that every material is "moving" therefore keep checking your tensions with the gauge and record the unavoidable changes.



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Step 6 Backstay marks

with the rake in position 0 and the jack at 3 pull the backstay to have about 20 of tension (PT 2) and mark the position of the backstay block in the cockpit (see picture). From that mark make the entire scale from 1 to 11 with 10 cm of distance between marks.





Sail selection chart					
TWS (kn)	Jib		Gennaker		
	flat	waves	flat	waves	
0/6	# 1	# 1	A1,5	A1,5	
7 / 10	# 2	# 1	A2	A2	
11 / 14	# 2	# 2	A2	A2	
15 / 18	# 2	# 2	A2	A2	
18 / 21	# 4	# 4	A2	A1,5	
22 +	# 4	# 4	A1,5	A1,5	



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Mainsail trimming					
TWS (kn)	Wang	Mainsheet	Mainsheet Backstay		Main traveller
0/6	off	upper TT just flying	off	off	all the way up
7 / 10	off	upper TT just flying	3/5	a little to remove big wrinkles	all the way up
11 / 14	30 / 60 %	max for right heel	5/8	no wrinkles	from center to half up
15 / 19	80 / 100 %	max for right heel	8/10	tight	center
20 +	100%	max for right heel	9/11	very tight	center

Jib trimming					
TWS (kn)	lead	sheet	note		
0/6	3	3	upper leech tell tale flying 50%, round base		
7 / 10	4	4.5	upper leech tell tale flying 80%, round base		
11 / 14	4.5	4.5	upper leech tell tale flying 100%, flat base		
15 / 19	5	5	upper leech tell tale flying 100%, tight base		
20 +	1.5	8	upper leech tell tale flying 100%, ease sheet in puff		



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measures registration table

Shrouds and forestay					
Upper port	oper port Upper D1 port D1 starboard D2 port D2 starboard forestay				
register mm between turnbuckle screws measured with caliber					

Mast Jack reference		
0	all the way down	
1	4,0 mm	
2	8,0 mm	
3 11,0 mm		
4 13,5 mm		
distance between steps in mm from 0		

Jib lead reference		
distance from forestay of point 1	mm 3860	
distance between points mm 35		
is strongly suggested to drill intermediate holes		

Jib sheet reference		
distance from forestay of point 1 mm		
distance between points mm 55		
position mark on the sheet at 2380 mm from pin		





