

# Scorpion Quick Tuning Guide

Adjustments									
TWS	MAST RAKE	MAST PREBEND	RIG TENSION	CUNNINGHAM	OUTHHAUL	KICKER	FLATTENER	JIB SHEETING	CENTREBOARD
Light 1-6 Knots	22' 8"	19mm	25	None	Hard (Flat) Ease 20mm (Choppy)	Take up slack	None	2000mm	Leading edge vertically down
Moderate 7-13 Knots	22' 4"	19mm	25 (Flat) 28 (Choppy)	Take out minor creases	Ease 20mm	Keep top tell tail flying 90%	None	2100mm	Raise 1-2"
Heavy 14-20 Knots	22'	19mm	28	Lower the cunningham block further by 30mm	Hard	Hard	Half on	2200mm	Raise 3-4"
20 Knots +	21' 8" (Flat) 21' 4" (Choppy)	19mm	30	Very Hard	Hard	Hard	Touching the boom	2300mm	Raise 5-6"

**Mast:** Selden Cumulus / Super Spar M7+

**Mast Foot:** 2795mm (From aft transom to fore face of the mast heel)

**Spreader Length:** 372mm (From the outside of the shroud perpendicular to the bearing surface of the mast track)

**Spreader Deflection:** 148mm

**Rig set up:** Set the foot of the mast up 2795mm from the aft edge of the transom to the aft face of the mast. Also apply the spreader settings as stated above. Once the mast is in the boat apply the 'light' air settings using the tuning matrix below. Now calibrate these settings as a useful reference point so you can easily adjust when required. Now systematically go through the 'moderate', 'heavy' and '20 Knot +' plus settings and calibrate to these also.

Loos Gauge RT-10 is used on the D2s.  
Numbers may vary with gauge.

Loos Gauge RT-11 is used on the D1s and V1s.  
Numbers may vary with gauge.

Turn headstay counter clockwise to tighten and clockwise to loosen.

## General Notes:

To measure mast rake, send a tape measure to the top of the mast on the main halyard and measure 18' to the top of the black band, lock this off and then swing the tape measure to the inside edge of the transom on the floor.

Mast rake is a setting that should be applied in relation to the crew's weight and feel of the boat. The boat should be set up bolt upright with 22' 8" of rake in light airs and should be gradually taken back when the breeze starts to build and you are unable to hold the boom on the centreline (this will vary on the crew weight) As the breeze starts to build and more rake is applied, the kicker will need to be adjusted accordingly also. In moderate to heavy airs it will be near impossible to keep the boom on the centre line when sailing upwind, apply kicker to keep the boom the same height when the mainsail is eased in gusts. Try and keep the outside end of the boom inside the back quarter of the boat.

Kicker controls the amount of twist that is in the mainsail. If you have a traditional system doesn't have a 'prodder' then this will also help bend the lower part of the mast and which will flatten the sail. In the light airs the kicker should be applied so the slack is taken out which will stop the boom from rising up when tacking and keeping power when exiting the tack. The kicker will need to be adjusted when more rake applied to try and keep the same leech profile.

The mast prebend is the distance measured between the main halyard and the mast track at spreader height. This measurement is kept the same throughout the wind range.

The Cunningham has two effects; moving the draft forward and bending the top half of the mast. In light airs no Cunningham should be applied, but make sure that the tack ring is kissing the top of the boom (fully down).

The flattener is a second eyelet in the clew of the mainsail that is only used when the crews struggle to get underneath the boom when tacking upwind when the mast is fully raked back.

Jib sheeting in the tuning matrix is measured from the bearing surface of the pulley on the car track to the centreline of the inside edge of the transom. As the mast is raked back the jib cars will need to be move forward to control the leech twist on the jib, if you follow the tuning matrix you should be fine. The upper part of the slot should be kept as narrow as possible to get the most out of the rig.