

<http://forums.sailinganarchy.com/index.php?/topic/120314-a-cat-mainsail-trim-upwind/>

Very general info here but hopefully helpful.

An A-Class rig fully powers up in about 8-9 knots of wind. Most sailors are at max downhaul at 10-12 knots of breeze. Most downhauls have a range of 125 - 140 mm so check and be sure you have enough range and power (12:1 to 16:1 purchase).

Make sure you have sufficient prebend in the mast through a combination of proper spreader rake/sweep and diamond tension. Good numbers are spreader sweep from 55 mm to 60 mm for the Lars1 and diamond tension of around 33-35 on the Loos A gauge (silver) or 26-28 on the Loos Pro gauge (black) when the breeze builds.

Mast rotation in general starts out at or just in front of the daggerboard trunk in light air, around the end of the traveller track in medium air (up to around 15 knots) and back to the end of the rear beam as the breeze builds more. Most sailors will not rotate further back than a straight line from the rotator arm to the leeward hull rudder pintle.

Mast rake is boat dependent but around 1-2 degrees for light air and up to around 5-6 degrees in heavy air.

If you do all of the above and find the boat is still "sticky" and not going well, try easing the traveller down 1-2 car widths. You might lose some height but better to get the boat moving. Each boat, mast, sail has its own characteristics but in general the info above should be applicable.

As long as you have done all of the other steps with the mast setup and being sure you are getting maximum downhaul than it can work to ease the mainsheet but usually it should be no more than a few inches. If the water is rough, try easing the mainsheet first and keep the traveller centered. this will help the top of the sail twist off a bit and make the boat easier to steer. If the water is flatter, try more mainsheet tension and perhaps ease the traveller 1 carwidth.

You are absolutely correct that the boat has a "sweet spot". Just be sure if you ease the mainsheet or traveller, you don't start reaching rather than beating. The adjustments are subtle and you are trying to keep good speed over your foils which will translate to upwind height.

Not enough cunningham and too eased mainsheet = too full sail, and poor power management. Result is smaller topspeed (due to fuller sail) and rougher and more tiring ride as the power management requires too much attention.