

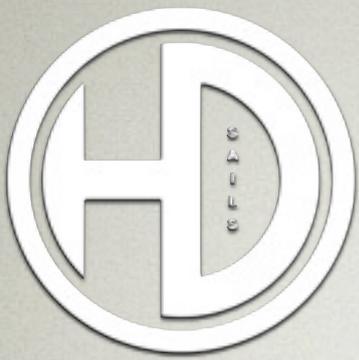


HD SAILS

SOLO TUNING GUIDE

BY

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TUNING STEPS

- Introduction
- Solo Rig Setup
- Datum setting
- Light Airs
- Medium Airs
- Heavy airs



Welcome to the HD Sails Solo Tuning Guide. Please ensure you take time using the guide in setting up your boat. Make sure that all your control lines work well and have the right amount of adjustment for their job. Once this is achieved it will make the boat much faster through the varying conditions and help you achieve the best performance out of your sails.



RIG SETUP

IN THE GUIDE WE TALK ABOUT THE 3 BASIC PRIMARY SET UPS FOR OUR HD RADIAL SAIL / D+ SOLO RIG.

WAY BACK IN 2006 I ASKED SELDEN FOR AN ALTERNATIVE MAST TO THE CUMULUS. HAVING DONE A BIT OF FINN SAILING (AND FOUND OUT I WASN'T MAN ENOUGH!) I WANTED A MAST THAT WOULD DELIVER THE SAME AMOUNT OF POWER AS THE CUMULUS, BUT WOULD ALSO MAKE THE UPPER LEECH MORE DYNAMIC UPWIND. SELDEN MANAGED THIS BY USING THE D+ SECTION WHICH IS STIFFER FORE AND AFT THAN THE CUMULUS, BUT SOFTER SIDWAYS. WITH THE CHANGE TO A FRONT TAPER ON THE TOP MAST, THE D+ WOULD DEFLECT SIDWAYS MORE READILY BUT MOVE LESS FORE AND AFT. IT WOULD ENABLE US TO MAKE A SAIL THAT HAD LESS LUFF ROUND AND MORE ROACH AND RELIED MORE ON SIDWAYS BEND TO LOOK AFTER THE LEECH PROFILE. THE SET UP COULD BE USED WITH LESS LEECH TENSION IN OVERPOWERED CONDITIONS, WITHOUT THE SAIL BEING TOO DEEP OFF THE LUFF. THE REDUCED LEECH TENSION MADE THE SAIL MORE ACTIVE UPWIND IN WAVES THAN THE CUMULUS RIG WHICH TENDED TO BE SAILED WITH A LOT MORE KICKER.

I THINK THERE'S LITTLE TO CHOOSE BETWEEN THE CUMULUS AND D+ ON FLAT WATER, BUT THE D+ HAS AN EDGE IN WAVES AND IT'S MORE AERODYNAMIC PROFILE ABOVE THE HOUNDS MAKES IT QUICKER IN LIGHT AIRS.

IN THE FOLLOWING PICTURES A D+ MAST AND TECHNORA RADIAL HD SAIL.

MAST IS SET AT BACK OF GATE AND CHOCKED IN ALL CONDITIONS





DATUM SETTING

THE FRONT OF THE MAST HEEL IS AT 3070MM FROM THE OUTSIDE OF THE TRANSOM.

THE SHROUDS COME INTO TENSION WHEN THE MAST (WITHOUT THE SAIL UP) IS 5MM FROM THE FRONT OF THE GATE.

THE BACK OF THE MAST AT THE GATE HAS BEEN CUT AWAY BY 10MM TO GIVE 22MM OF RANGE IN THE GATE.

THE FORESTAY COMES INTO TENSION WHEN THE MAST IS RESTING ON THE BACK OF THE GATE. I EASE THIS 1 -2 FULL HOLES ON A SELDEN 174-208 ADJUSTER FOR LIGHT AND HEAVY AIRS. EASING THE FORESTAY ALLOWS THE MAST TO BEND THE SAME AMOUNT FOR LESS LEECH LOAD. EASING THE FORESTAY MEANS THAT THE FRONT OF THE SAIL WILL LOOK THE SAME WHILE THE BACK WILL BE MORE OPEN AND FLATTER. USUALLY WHAT YOU WANT IN LIGHT AND HEAVY AIRS.

I'VE GIVEN UP USING THE INHAUL – I DON'T SAIL ENOUGH ANYMORE, SO NEED TO KEEP IT SIMPLE AND JUST TIE THE TACK AROUND THE MAST. THE INHAUL IS A CONTROL THAT I GET ASKED ABOUT MOST OFTEN, I'LL TRY AND EXPLAIN HOW TO USE IT.

FIRSTLY MAKE SURE THE BLOCKS THAT ARE TIED AROUND THE MAST TO CONTROL THE LINE TO THE TACK HAVE THEIR BEARING SURFACE LEVEL WITH THE TOP OF THE BOOM. IF THEY ARE LOWER THE PULL FROM THE INHAUL IS TOO LOW AND TIGHTENS THE LUFF, PULLING THE DRAFT FORWARD IN THE SAIL – THERE'S A CUNNINGHAM FOR THAT.





DATUM SETTING

IF THE INHAUL IS SET LOOSE THERE WILL BE A DISTORTION LINE FROM THE BOTTOM OF THE SAIL TRACK (ABOUT 250MM UP FROM THE GOOSENECK BAND). A GOOD DATUM SETTING IS TO PULL THE INHAUL UNTIL THE DISTORTION LINE IS JUST REMOVED. ON MOST SAILS THIS IS WHEN THE TACK EYE IS OVER THE TACK PIN HOLE ON THE BOOM.

USE THE DATUM SETTING FOR MOST OF YOUR SAILING.

IF YOU WANT TO FLATTEN THE LOWER $\frac{1}{4}$ OF THE LUFF OF THE MAINSAIL AND CLOSE THE LOWER LEECH EASE THE INHAUL SO THE TACK MOVES AFT ABOUT 5 – 10MM. THIS SETTING WILL GIVE MORE HEIGHT AND POWER THAN THE DATUM SETTING AND IS USEFUL IN MEDIUM AIRS, FLAT WATER.

IF YOU WANT TO ROUND THE LUFF ENTRY IN THE LOWER $\frac{1}{4}$ OF THE MAINSAIL AND STRAIGHTEN THE LOWER LEECH PULL THE INHAUL FORWARD ABOUT 5-10MM FROM DATUM. THIS SETTING WILL GIVE AN EASIER SAIL TO STEER TO IN WAVES AND A MORE “FAST FORWARD” SET UP THAN DATUM IN HEAVY AIRS AND WAVES.

IN LIGHT AIRS UNCLEAT THE INHAUL DOWNWIND TO REMOVE ANY DISTORTION FROM THE TACK TO THE BOTTOM BATTEN. IN HIKING CONDITIONS UPWARDS LEAVE IT CLEATED DOWNWIND.





LIGHT AIRS

LIGHT AIRS – UP TO SITTING ON GUNWALE.

AIM – KEEP FLOW ATTACHED AND DEVELOP POWER WITHOUT STALLING. MAST NEEDS TO BE BENT TO FLATTEN SAIL AND GENERATE HEIGHT, BUT THIS CAN ONLY BE DONE BY PUTTING TENSION ON THE LEECH. BOOM NEEDS TO BE SHEETED WIDE TO KEEP LEECH OPEN AND STOP SAIL STALLING.

CENTRE OF TRAVELLER CAR IS 230MM OUT.

OUTHHAUL IS PULLED FAIRLY TIGHT TO REMOVE DEPTH FROM FOOT AND STRAIGHTEN LOWER LEECH.

KICKER IS IN TENSION TO KEEP TRAVELLER CAR OUT AND BEND LOWER MAST.

CUNNINGHAM IS SLACK.

MAINSHEET IS TIGHT TO BEND MAST AND FLATTEN SAIL.

BOOM IS JUST OUTSIDE BACK CORNER TO KEEP LEECH OPEN – MIDDLE LEECH IS PARALLEL TO CENTRELINE OF BOAT.





MEDIUM AIRS

MEDIUM AIRS – SAT ON GUNWALE UP TO FULLY HIKE
OVERPOWERED

AIM – DEVELOP MAXIMUM POWER AND HEIGHT. MAST NEEDS TO
HELD STRAIGHTER, BY NOT USING KICKER. UPPER LEECH NEEDS
TO HAVE SOME MOVEMENT TO ASSIST STEERING THROUGH
WAVES AND GUSTS.

CENTRE OF TRAVELLER IS 180MM OUT.

OUTHHAUL IS EASED TO PUT MORE DEPTH IN AND CLOSE THE
LOWER LEECH

KICKER IS SLACK TO KEEP MAST AS STRAIGHT AS POSSIBLE.

CUNNINGHAM IS SLACK

MAINSHEET IS SLIGHTLY TIGHTER THAN LIGHT AIRS – HEAD OF
SAIL IS MORE OPEN SO THAT BOOM CAN BE CLOSER TO
CENTRELINE.

MIDDLE LEECH IS PARALLEL TO CENTRELINE OF BOAT.





HEAVY AIRS

AIM – LOSE POWER AND DRAG BY FLATTENING SAIL BUT KEEPING DRAFT FORWARD TO ASSIST STEERING.

TRAVELLER IS CLOSE TO CENTRELINE TO REDUCE MAINSHEET LOAD.

OUTHHAUL IS VERY TIGHT TO REMOVE DEPTH AND STRAIGHTEN LOWER LEECH – EASE FOR MORE HEIGHT.

KICKER IS ON HARD TO BEND LOWER MAST AND FLATTEN SAIL.

CUNNINGHAM IS ON VERY HARD – EASE FIRST IF YOU ARE HAVING TO TRIM THE BOOM INSIDE BACK CORNER TOO OFTEN.

MAINSHEET IS EASED TO OPEN LEECH AND KEEP SPEED UP. IT NEEDS TO BE TRIMMED ON THROUGH FLAT SPOTS TO GAIN HEIGHT AND EASED THROUGH GUSTS / WAVES TO KEEP SPEED.

BOOM IS 150 – 300MM OUTSIDE BOAT

