

OLSON 30 PERFORMANCE TUNING GUIDE



619-226-1133
WWW.UllmansailsSanDiego.com
Info@UllmansailsSanDiego.com

OLSON 30 PERFORMANCE TUNING GUIDE

This tuning guide contains concise information that will help you achieve top performance with your Ullman Sails. It represents years of Ullman Sails racing experience. We believe it will make your sailing safer, easier, faster, and most of all more fun.

A well tuned boat will help you achieve those valuable seconds you need to gain and inside overlap or reach a favorable shift.

Chapter 1 **Preparation.....3**

Chapter 2 **Tuning the Rig.....6**

Chapter 3 **Sail Trim.....11**

**The Olson 30
Performance
Tuning Guide
brought to you by:**



We hope you have enjoyed this edition of the Olson 30 Tuning Guide. It was written by Ullman Sails with special thanks to Chuck Skewes

Copyright 2009 Ullman Sails

All rights reserved. No portion of this document may be reproduced in part or in whole in any form without written consent from Ullman Sails

Spinnaker Selection

0-6 knots true, flat water Airx 500

6-18 knots true, choppy water Airx 600

12-20 knots true Airx 700

The New Ullman Airx Nylon Spinnakers

The Airx Nylon spinnaker from Ullman Sails is built with a easy to trim and maximum size. The shape is fairly flat but with constant camber to provide optimum performance on deep running or broad reaching.

Trimming the spinnaker needs to be easy so that you do not have the spinnaker collapsing and slowing the boat. It is important that the spinnaker trimmer is where they can see the sail at all times and is supported so that if the boat moves they will not lose their balance. In light to medium winds standing at the shrouds with one arm around the shrouds works very well.

The New Ullman Blade

The Ullman blade or 98% jib is built with a full top batten and 3 partial battens. This gives you a very straight leach and allows you to control the backwind of your main. The clew height is custom designed for each boat so that you can use the inboard and outboard jib leads with ease.

The New Ullman Main

The new Ullman Dacron main is built to maximum girths and has tapered battens for optimum performance. Built with a straight mast in mind the sail has up to 6% more effective sail area

Chapter 1

PREPARATION

Your preparation goals should be to ensure that your boat and gear:

- Are safe and strong enough for extreme conditions
- Present a clean hydrodynamic profile to the water and aerodynamic profile to the wind
- Allow smooth and easy control of all adjustments

Rig

Before the mast is stepped— Check standing rigging for broken or strained rod where it attaches to the mast and where it passes through a spreader.

Check mast thoroughly. Check the condition of the mast below where it passes through deck for compression damage. Also it is a good idea to remove light at top of mast and conduit out of the mast. Replace light with pulpit mounted lights. This reduces weight in the mast.

Lubricate sheaves and check halyards. Clean your turn buckles and lubricate them with lanolin or Never-Seez. Check and clean instrument wiring connections and re-seal instrument housings.

Remove any extraneous equipment or replace it with lighter (but not weaker) gear aloft whenever possible.

Smooth all surfaces, especially where your sails may make contact with the rig or boat. Tape all cotter pins with rig wrap or tape. File your spreader ends smooth and tape over to protect your sails.

Give the rig a thorough cleaning and give your rod rigging a quick hard coat of wax. This reduces friction and keeps them clean and fair.

Underwater

Make sure your bottom is fair and symmetrical. The keel and rudder should receive the most attention. The rudder and keels are often not symmetrical on Olson 30's. A well faired keel will provide more lift (better pointing) upwind and less drag (better speed) off of the wind. If you choose to have your rudder or keel professionally faired Ullman Sails can direct you to a qualified boat shop with class legal templates.

Sails

The best time to prepare your sails is at the end of the season when problems are fresh in your mind and the off season discounts are at your local Ullman Sails loft.

This is a good time to make a written list of all of the things on the boat which need repair before the spring season. Also it is a good idea to spread your sails out one at a time and check them thoroughly paying special attention to leeches, corners, battens, and batten pockets. If your sails need repair you can bring them into your local Ullman Sails loft for professional attention.

Review the effectiveness of your sail inventory in different conditions with your Ullman sailmaker. Identify the strengths and weaknesses of your current sails. Your goal should be to improve your ability to handle a variety of conditions by having the proper size sails. It is prudent to purchase one or two sails a year rather than face the prospect of replacing the whole inventory at one time.

In establishing your replacement priorities, cover those conditions you see the most often. If you sail in San Fransico Bay, you should replace an old tired blade before considering a new #1. If you sail in Seattle you will want to think about the #1 more.

Fiberpath Genoa

Ullman Sails Fiberpath Genoa's are the fastest genoas in the fleet. We have 2 version, Black Magic which is the light to medium air rocket. It is designed for sailing in light lumpy conditions like coastal racing in Southern California.

The Dave Ullman Genoa is the flat water or Medium Heavy genoa. This genoa is fast in the middle to high end of the genoa condition or flatter water like Puget Sound or Long Island Sound. This is considered our A.P. Genoa.

Fiberpath sails are light and strong. They are a very strong autoclave laminate that last well and will give you great performance over the range.

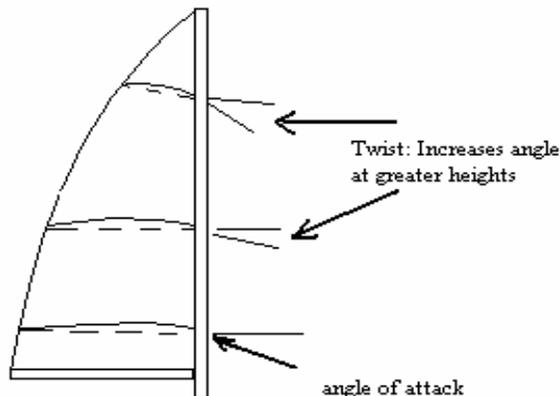


Head Sail Selection

0-10 knots true	155%
10-16 knots true	135%
14-25 knots true	98%
25-30 knots true	98% on outboard lead

Headsail Trim		
Control	Action	Effect
Sheet	Trim	Reduces depth, twist, increase angle of attack.
Halyard	Tension	Moves draft forward, decreases depth.
Lead	Forward	Reduces twist, increases lower depth
	Outboard	Reduces angle of attack, usually reduces depth.

Spinnaker Trim		
Control	Action	Effect
Sheet	Trim	Increases angle of attack, reduces depth slightly.
Guy	Trim	Reduces angle of attack
Pole Height	Raise	Reduces depth, reduces twist, destabilize
Sheet Lead	Forward	Reduces Twist, increases depth, stabilize.



The ideal inventory will vary on local conditions and crew expertise. Your Ullman sailmaker will thoroughly discuss these details, as well as sailing goals, to help you choose the correct inventory.

Battens

Be sure to always have a spare set of battens. It is a good idea to have a light and heavy air batten for the top batten. Always install battens with the more flexible end forward and use the stiffer ones in the lower part of the sail.

Telltails

Telltails are the way your sails communicate with you. Position sets at intervals along the luff of all of your head sails 8-12 inches away from the luff. Main sails should have telltales at the outboard end of the batten pockets.

Deck

Controls should be led to the crew members who use them. It is not a good idea on the Olson 30 to have the controls lead to the cockpit. By having the controls further forward it will entice the crew to sit forward and out of the cockpit.

Be certain to have adjustments like the foreguy double ended so it can be adjusted from both sides of the boat and the crew weight can remain on the side of the boat where it is needed.

It is a good idea to have the spinnaker halyard cleat on the side of the mast so only one person hoist the halyard and it is easy to uncleat at the leeward mark.

Crew

Focus on sailing—Do all you can to keep your crew’s focus on sailing during the off season. Attend sailing seminars and subscribe to sailing magazines. Hold a few winter social get together and talk about the up coming season.

Boat Prep is Crew Prep—When time comes to work on your boat to get ready for the next season, don’t hesitate to call your crew. The more the crew has invested into the boat the more they will focus on winning. They will contribute some valuable ideas once they understand that their input is appreciated.

Get Psyched—Finally, don’t neglect your mental and physical preparation. Sharpen your sense of timing—practice predicting how long it will take you to get to the next overpass on the freeway, or adjust your pace so you will reach the next corner in exactly 10 seconds. Try to predict the weather by watching the sky or park on a over head look out and see how the tide and wind puffs go across your sailing courses.

Chapter 2

Tuning the Rig

Your tuning goals are:

- To center your rig athwartships for equal performance on both tacks.
- To rake your rig fore and aft for proper balance
- To set your prebend on your mast for proper behavior under load.
- To get properly set up for conditions you sail most in.

Chapter 3

Sail Trim

Your sail trim goals should be to properly adjust the following for whatever conditions you meet:

- the amount of sail area presented to the wind.
- the depth of curvature in the sails (draft).
- the position of that curvature fore and aft in the sails.
- the angle of attack of the sails to the wind.
- the twist of the sails at different heights.

Elements of Trim

The five elements listed above encompass all of the important aspects of sail trim. A complete discussion of sail trim is beyond the scope of this guide; instead we will look quickly at sail controls for each sail and show how each affects the element below. Remember some of the controls such as the backstay control more than one sail; the effects on both sails should be considered when making

Main	Action	Effect
Sheet	Trim	Increases angle of attack by swinging main leech to weather. Decreases twist and increases depth by tensioning leech.
Traveler	Trim	Increases angle of attack by swinging main leech to weather
Halyard/ Cunningham	Tension	Moves draft forward.
Outhaul	Tension	Reduces depth, especially in lower third of sail.
Backstay	Tension	Reduces depth by bending mast
Vang	Tension	Decreases twist and increases depth by tensioning leech

Re-tune Your Boat

After sailing a few times you may want to re-tune your boat. Rigging some times stretches and the mast butt may settle slightly if you had to move it. Also if your rig is substantially looser after sailing you will want to inspect several things. Start with the bulkheads that hold the chain plates and work to the mast itself under the deck.

Follow the same steps for setting your mast up if it has loosened up. Always make sure that you pin and tape the shrouds when you are done.

Trimming Your Boat

An often neglected aspect of tuning is boat trim. The Olson 30 is very sensitive to weight. It is very important not to carry any items that you do not need. Leave all fenders and spare lines (other than safety gear) on the dock.

Put all of your sails on the cabin floor over the keel. Put the least likely sail to get used on the bottom and the most likely on top. Keep fuel tank out of the stern.

Clean the boat early in the morning before the race. This helps the crews mental attitude and eliminates any possible slick spots on the deck.

Crew Weight

Try to sail with maximum crew weight in most conditions. The Olson 30 is a tender boat and it is fast to have maximum weight on the rail in the breeze.

In light air only 2 people should be behind the back of the cabin on all legs of the course.

In heavy winds one person should sit behind driver and crew weight should move aft.

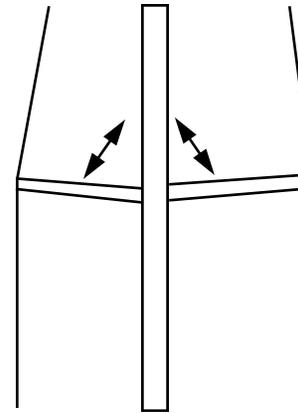
Stepping the Mast

There are two concerns when stepping the mast. First, the step itself must be in the right place. Second the butt of the mast must bear properly on the step.

To be in the right place the mast step should be centered athwartships and parallel to the boats centerline. This is tricky to determine and hard to change if it is wrong. In most cases it is no problem, but it is important to confirm this. Even a slightly twisted mast step can cause markedly different performance on opposite tacks. In addition, incorrect placement will cause difficulty in subsequent athwartships tuning.

The mast should have a slight fore and aft rocker in the bottom where it sets on the step this allows the mast to rake without inducing bend. It is especially important that the mast does not bear on the front end.

Athwartship Alignment



Spreader Angle

Once the mast is stepped, the next job is to line it up athwartships. Attach the standing rigging and tighten it just enough to keep the rig from moving. Walk to the stern of vantage point off the boat and check that the spreaders are properly angled. Spreaders must be the same height on both sides and angled up slightly from the mast outboard. Spreader ends should be firmly wired with seizing wire and then taped well.

Make sure your mast is straight in the boat first by measuring back from the bow stem to the toe rail at the shrouds. put a pencil mark on the toe rail. Duplicate this measurement on the other side of the boat so that both marks are exactly the same distance back from the bow.

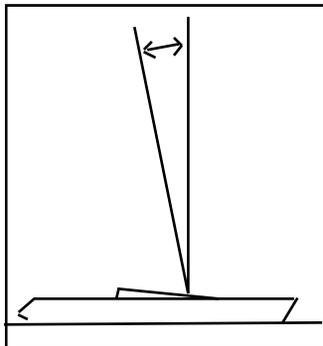
Using a metal tape go up on your Jib halyard. Make sure that it is a center halyard. If you do not have a center halyard then use the main halyard for this measurement.

Measure to your marks on both sides of the boat pulling tight on the tape. These measurements should be the same form side to side. If they are not adjust rig until they are the same. Sighting up the sail groove on the back side of the mast it should be straight. If is not straight adjust the intermediate shrouds and lowers to straighten the mast.

Rake

To measure your rake you will need a 50 metal tape measure.

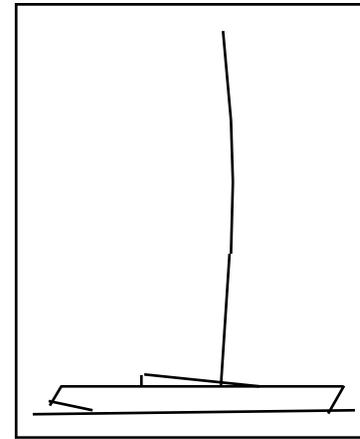
Using a metal tape connect it to your main halyard and hoist it until the main halyard is two blocked. Measure to the middle of the hull deck joint where the transom and the deck meet in the center of the boat (in line with tiller). Pull the tape tight Take the measurement above and add it to the



length of the main halyard shackle this should be between 39'2" and 39'4"

To get the correct rake with the correct prebend it may require moving the mast but slightly

Rake



Prebend

Your mast should be set up with very little prebend. With the backstay unattached the mast should actually show a hint of being inverted in the lower third. With the backstay attached the mast will be straight hinting on having a little

Rules of Thumb

The correct amount of prebend varies with the cut of your sails. Ullman Sails has designed their Olson 30 sails with a fairly straight mast for optimum performance. If you do not have Ullman Sails and your sails are very full with a straight mast you will need to put some prebend in to compensate for this. Be careful not to carry to much prebend because it will cause your forestay not to get enough tension and will make your genoa to full and this will hurt your pointing.

Shroud Tension

Make sure that you always sight up the main sail groove to see that the mast is straight while tensioning it. The correct shroud tension using a loos gauge should read.

UPPERS	35
INTERMEDIATES	26
LOWERS	32