

Your mast is held aloft by the Standing Rigging (forestay, backstay, upper shrouds, and double lower shrouds). The term "tuning" refers to adjustment of the standing rigging so the mast remains "in column" (not bent) when under load. The mast should be set straight athwartship (from side to side) in the boat and have a slight rake aft of 8 inches at the masthead. This is accomplished by the procedure outlined below:

Tuning Your Mast at the Dock:

1. Remove any slack in the halyard by attaching a light weight to the shackle. Adjust the halyard so the weight is suspended several inches above the deck.
2. Using the suspended weight as a plumb bob, adjust the forestay and backstay so the mast is perpendicular to the deck. Apply tension until the plumb bob is at the base of the mast. The mast is now perpendicular to the deck.
3. Adjust the upper shrouds so the mast is perpendicular to the deck athwartships (from side to side). The upper shrouds should be firm but not overly tight. A 50 pound push applied at shoulder level should deflect the shroud approximately one inch.
4. The four lower shrouds should have less tension applied to them than the upper shrouds. They should be adjusted to have light tension equally applied to each one. No lower shroud, when pushed, should deflect the mast more than any other shroud when pushed equally hard. If this can not be achieved, the upper shrouds are too tight. Back off one-half turn at a time on the upper shroud turnbuckles until the tension on the lower shrouds is brought into balance.

Fine Tuning While Sailing

The object of fine tuning is to have the mast in column when sailing in conditions typical for your area. This is accomplished through adjustments to the lower shroud turnbuckles. Here are some points to look for:

1. When sailing on port tack, sight up the mast from the base. If the middle (where the spreaders are) is sagging to leeward, take up equally on both port lower shrouds until the mast is in column. Repeat this procedure on starboard tack.

2. If, when sighting up the mast while on port tack, the middle is bent forward (but not to leeward) take up a turn on the port aft lower shroud and let out a turn on the port forward lower shroud turnbuckle. Reverse these adjustments if the middle of the mast is aft of the in column position.

3. If a perfectly straight mast is not obtained, the masthead (top) may be curved aft and to leeward. The masthead should **never** be "hooked" forward or to weather.

All rigging wire used on yachts has a tendency to stretch, especially on a new yacht. Therefore, you should periodically check the tension on the shrouds and stays, tightening them up if it is required.

Rigging, as well as tuning, becomes all important when setting up the mast. A knowledgeable person should oversee the rigging and tuning so as to eliminate the possibility of an eccentric load which might occur with an improperly adjusted shroud. Special attention should be given to the initial stretch of the shrouds and a further gradual stretch of the wire over the first few hard outings.

Always before leaving the dock for a day's sail, check all your turnbuckle cotter pins. Also, visually inspect the fittings aloft. **Most mast failures have been traced back to loosened turnbuckles and improper tuning.**

Spar Maintenance

The mast and boom are anodized. Coating the new spars with a good paste wax like Vista or Simonize will help protect the aluminum from foreign matter. It is suggested that you wax the spars once a year. Halyards should be tied away from the mast. This stops annoying dockside clanging and saves the mast finish.

Spreaders

The air foil spreaders are of aluminum. They should be cared for the same way as the spars, i.e., waxing. Anti-chafing tape or spreader boots should be wrapped around the spreader tips. This tape should be checked monthly.

Rigging Maintenance

Salt water will gradually stiffen dacron line. Hosing with fresh water will make the line soft and flexible again. Keep coiled and stowed in a dry area. Clean sails start with clean rigging, a quick trip aloft with damp rag takes care of this problem. While aloft, check the entire rig for loose screws, nuts, bolts, cotter pins, and chafe which may have resulted from hard sailing. Periodic inspection of the rig from aloft is one of your best insurances against rigging and spar failure.

All stainless rigging should be waxed with a paste wax once a year. Threads on turnbuckles should be kept oiled so they can be turned freely when adjustment is necessary.

