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CARBON FIBER SPARS

A word about carbon fiber:

Each piece has been manufactured using heat and pressure autoclave curing, the best process available.

Regardless, carbon fiber has properties differing from aluminum, the conventional mast material. Though carbon composite is stronger than aluminum, it is less resistant to impact loads. Where aluminum will dent, on severe impact, carbon composite could shatter or suffer serious delamination. Clearly, subjecting your carbon spars to severe impact is to be avoided.

Since carbon fiber composite is different than aluminum to drill, file, or otherwise process, always contact Hall Spars for advice before making any modifications to the mast.

Handling/ Storage:

When you receive your carbon fiber mast remove the plastic packaging bag immediately. If the mast is left in the plastic bag, the Awlgrip coating can be damaged. Do not store your mast with any type of cover.

The mast can be lifted by conventional methods again making sure fork lifts, cranes or hoists are adequately padded to protect the mast from sharp impact.

Commissioning:

Carbon masts utilize the same rigging package as the aluminum version. Rigging of the carbon mast are the same with the following exceptions:

- Spreader bar installation should be done with care. Do not force the bar into the mast. If the bar does not go in with the light tap of a rubber mallet, check spreader bar hole for excess paint/ primer build up. Lightly sand off excess build up and re-insert bar. After installing bar, attach on spreader and insert clevis pins. Fit other spreader and insert pins. If second spreaders pins do not appear to line up, gently squeeze mast with carpenters clamp (with clean rag to pad mast) to facilitate insertion of pins.

NOTE: Use Spartite to insure the carbon mast is supported evenly in the mast collar area.

- Spreader tips: Some upper and lower spreaders require the use of stainless steel seizing wire to secure rod rigging to the spreader tip. The two holes provided in the tip are used to secure the seizing wire. After seizing, tape the spreader tips to prevent sail chafe.

Installations of electronics:

- Wind instrument: Install in conventional manner, securing by drilling and tapping through the mast head cap into the masthead crane. Coat screws with red Loctite before final installation.

- Windex: Install at outboard end of crane only. Install by drilling and tapping crane. Coat windex threads with red Loctite.

- VHF Antenna: Install on side of mast with standard “L” type of stainless steel bracket. Drill and tap. Coat screws with red Loctite.

If you add more wires than above, you may require an additional conduit.

Modifications:

Any modifications or addition of hardware must be approved by Hall Spars in advance. Please call us if you have any questions. CALL BEFORE YOU DRILL!

Here are a few examples of typical questions:

1) Can a radar be installed on the mast?

Yes, but we do not recommend this. Firstly, the weight aloft is excessive and the radar interferes with the jib while tacking. If a radar must be installed, a custom backing plate must be installed to accept the bracket fasteners.

2) Can a flag halyard block be fastened to the lower spreader?

Yes, but a fitted backing plate must be installed to accept the fasteners of the padeye.

3) Instrument brackets: Can they be fastened under the boom by conventional methods?

Yes. Drill and tap as in aluminum, but coat screws with red Locite. Call Hall Spars for best location of wire entry hole.

Maintenance/ Cleaning:

Your spars are faired with Awlgrip epoxy primers and coated with Awlgrip, a paint originally developed for aircraft. It is a tough paint with excellent gloss retention. But it can be damaged. Here are some hints:

1) Use care when servicing mast. Cover areas adjacent to work area with cloth rags.

2) Cleaning Mast: Use light detergent (Softscrub or similar - NON abrasive cleansers!) For especially tough grease smudges Acetone or Toluol may be used if coating had cured at least one month (Awlgrip is fully cured after one month). Remember both Acetone and Toluol are hazardous materials - use gloves and use only in well ventilated areas.

3) Touch up:

- Small scratches: Using Awlgrip touch up kit available from Hall Spars, mix parts 1 to 1 and apply carefully in scratch with modelers' brush.

•Large scrapes: Repair should be done by professional painters using Awlgrip products.

(A paint scratch is a cosmetic problem with no danger of structural damage. If spar is gouged, it may be damaged. Call Hall Spars for advice.)

4) Hairline cracks: Report all hairline cracks to Hall Spars regardless of harmless appearance. These cracks may be structural in nature. Generally though, hairline cracks represent filler material brittleness. To remedy, fill crack with body filler, lightly sand, then touch up as directed in Item 3 above.

Tuning

The tuning of your carbon fiber mast is the same as that of an aluminum mast.

Please contact Hall Spars with any specific tuning questions or problems.