Care of Carbon Fiber Spars

Each carbon-fiber piece built by Hall Spars & Rigging has been manufactured using heat and pressure autoclave curing, the best process available.

Since carbon fiber composite is different than aluminum to drill, file, or otherwise process, always contact Hall Spars & Rigging 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.

Carbon fiber has properties differing from aluminum. 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.

Commissioning

Rigging a carbon mast is the same as an aluminum mast, with the following exceptions:

**Spreader bar installation** — 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 reinsert bar. After installing bar, attach spreader and insert clevis pins. Fit the other spreader and insert pins. If second spreader’s pins do not appear to line up, gently squeeze the mast with a carpenter’s clamp (with clean rags to pad the mast) to facilitate insertion of pins.

**Spreader tips** — Upper and lower spreaders may 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. The upper spreader may also require the above seizing wire treatment.

NOTE: Use Spartite to ensure the carbon mast is supported evenly in the mast collar area.
**Installation of Electronics**

**Wind instruments** — Install in conventional manner, securing by drilling and tapping through the masthead 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.


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 & Rigging 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 unit be installed on the mast?**
   Yes, but we do not recommend it. First, the weight aloft is excessive and the radar interferes with the jib while tacking. If a radar unit is required, 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. **Can I fasten instrument brackets under the boom?**
   Yes. Drill and tap as in aluminum, but coat screws with Red Locite. Call Hall Spars & Rigging 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 to preserve the finish:

**Use care when servicing the mast** — Cover areas adjacent to work area with rags.

**Cleaning the mast** — Use light detergent (SoftScrub or similar NON abrasive cleansers). For especially tough grease smudges, Acetone or Toluol may be used if coating has cured at least one month (Awlgrip is fully cured after one month). Remember both Acetone and Toluol are hazardous materials — wear gloves and use only in well-ventilated areas.
**Small scratches** — Using an Awlgrip touch-up kit available from an Awlgrip distributor, mix parts 1 to 1 and carefully fill the scratch using a modeler's 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 the spar is gouged, it may be damaged. Call Hall Spars & Rigging for advice.)

**Hairline cracks** — Report all hairline cracks to Hall Spars & Rigging 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 "small scratches," above.

**Tuning**

See the link to "Tuning Your Rig." Please contact Hall Spars & Rigging, info@hallspars.com, with any specific tuning questions or problems.

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