

# Rigging and Maintenance Tips

On this page we will have rigging and maintenance tips that are specific to the J/105. Suggestions from owners are solicited. To get things started we'll reprint some articles from past newsletters.

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## J-105 Furler Warning from Harken!!!

**Mike Lee, Harken, March 2001**

There are some serious mistakes being made when the adjustments are being set to the forestay. It was first discovered at Key West Race Week on several different J-105, and thereafter we have been taking some phone calls about it.

**Symptoms:** The foils will not rotate because they will appear to be stuck. However the real danger is that there is a slim chance of losing the rig.

**Danger:** The forestay is unscrewing from the drum. The problem is that the threaded-stud that is attached to the forestay is backing out of the drum because it wasn't locked down properly. When the stud backs out it is in effect getting longer and therefore it will jam up against the foils preventing them from rotating.

**The Solution:** To lock it properly, there is a piece that is called the locking collar that lives underneath the torque tube. The locking collar needs to be screwed all the way up so that it bottoms out snug on the underside of the rod fitting. This will lock everything tight in place and if it were not done it would have the same effect as leaving the cotter pin out of a turnbuckle.

If this adjustment still sounds foreign or if more adjustments are needed then it would be best to consult the manual. If a manual can not be located it can be downloaded at this site.

<http://www.harken.com/unit1.pdf> (pg. 47 in PDF)

Please consult page 24 of the manual. If this is still confusing then please give us a call at 262-691-3320 in Technical Service for more help.



Download a Microsoft Word version of the warning. Click [here](#).

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## Importance of Keeping Dry Inside

**J/Boats Tips, February 1998**

- Rich Moody, TPI Customer Service Rep, notes that there is greater danger of water penetration into the core from the inside of the hull than from the outside. Thus it is important to keep water out and to keep any screw holes from the inside well caulked. He recommends painting the bilge with airdry gelcoat after about five seasons of use.
- Jeff Johnstone reminds us that J/105 owners should routinely recaulk their chainplates at least once per year, preferably in the spring, after the mast is installed and the shrouds tightened up. It's very simple to do. Back off the two screws on the above-deck chainplate cover. Scrape any old silicone away. Then recaulk using Sikaflex compound. This will keep moisture from wicking down the chainplate and creating damage over time.
- Another winter tip: The best way to cover the mast hole is to cut a piece of plywood slightly larger than the mast hole. Then bed that down on top using a thick bead of silicone on top of the partners.

## Ventilation Tips

### J/105 Website Feedback, November 1996

- Tomas Petkus (*Vytus*, #104) -- I installed two Nicro solar fans on the rear deck. We cut through the bulkheads in the galley and nav station and installed grilles. With the forward hatches on vent, there is more than enough air circulation in the boat. We are on Lake Michigan and July and August is pretty sultry. I used a reciprocating saw (Sawzall by Milwaukee). A scroll or sabre saw will work, but it will be a little longer and more tedious since the motors are not as powerful. Since the deck is balsa cored, it is relatively easy. Make sure, regardless of what you use, to put down a wide layer of masking tape around the hole. If you don't, you run the risk of marring the gelcoat. This is particularly true of the bulkheads where you cut the hole for the grilles and especially acute if you use a scroll saw since they tend to have a large foot.
- Andy Skibo (*Plum Crazy*, #90) -- Regarding the question of ventilation. Plum Crazy installed a solar vent in the cabin top, port side just aft of furled dodger location. Works fine, definitely helped with ventilation in NJ summers. Two notes of caution: make sure whoever installs the vent seals the core exposed in the hole with epoxy resin (not caulk). I've seen too many J-24's with rotted core caused by unsealed edges. Second, make sure you pick the location with dodger installed and furled. We installed our vent while boat was set up for PHRF (no dodger) and wound up with vent slightly shaded by dodger when it was re-installed.

## Tips From The Owners

### J/105 News, June 1995

- Alan Paris (*Learning to Fly*, #14) -- Drill a hole through the Sailtech backstay adjuster handle and secure it with line to the backstay, so as not to lose another handle overboard.
- Ed Crist (*Vector*, #92) -- I do a lot of single-handing. I find cross sheeting the jib to the high side winch allows easy jib trimming with one hand on the winch handle and the other for tiller and mainsheet.
- Wes Herdman (*pNeuma-J*, #30) -- On starboard tack with a full water tank (optional tank), the head and galley water taps tend to siphon. We later stopped this problem by installing plastic ball valves on the hoses between the foot pump and the tap.
- Christian Ripard (*Bigfoot*, #54) -- I have fit two more teak foot rests on each side of the cockpit floor, about six inches further inboard than the ones already in place. This has made steering easier in the rough stuff.

## Tuning the J/105 Rig

### J/105 News, June 1992

So far so good, but we will continue to learn. To achieve about 3 inches of headstay sag in 12-14 knots of wind (a test set of checkstays only improved this by 1/2 inch with slower boat speed), the following tune was applied to

## J/105 #24 Sandpiper.

1. Headstay length is standard with about 2.5 inches of thread showing under the Harken Drum with no toggles. Backstay was set up with toggle under the hydraulic cylinder to set the handle forward and release aft. Mast step bolts in middle of slots. No mast wedges in to start. Rake from the back of the mast to a weighted main halyard is 30" on the cabin top. [Webmaster's Note: Harken states that there should be no more than 2.0" of thread showing under the drum. There is a red dot at the maximum. Maximum headstay length of 13.00 meters can be achieved by moving the toggle from the bottom of the backstay (below the cylinder) to the top of the forestay.]
2. After connecting and taking up shrouds hand-taut to center the mast using the main halyard to equalize distance to the rail outboard of the chain plates, apply maximum backstay on cylinder to bend mast.
3. Tighten upper shrouds equally port and starboard with wrench as far as you dare without stripping threads.
4. Ditto for intermediates.
5. At this point, the front of the mast will be against the forward edge of the mast hole in the deck. Run a jib sheet around the front of the mast from one turning block to the other and winch back the mast to permit insertion of the forward mast wedge. Insert the remaining mast wedges. You will have to slice the back of the mast boot (collar) for this operation.
6. Tighten lowers hand tight, being particularly sure that the mast is not inverted because the asymmetric spinnaker will make it even more so. In fact, be sure to leave your mast bent in heavy air by NOT releasing the backstay going downwind.
7. Double check you handiwork by looking up the backside and frontside of the mast to be sure that it is straight from side-to-side.
8. Go sailing in 12-14 knot winds with max backstay. Take up on the leeward upper and intermediate by two full turns each with a wrench. Release backstay to intermediate position and take up on the leeward lower hand taut. Tack and repeat the process on the new leeward side.
9. Check the straightness and repeat the process making minor adjustments to leeward rigging only to correct.

[Webmaster's Addendum: To adjust the length of the forestay, first remove the roller furling line. Then back off the nut below the drum making sure that the lock washer drops down as well. Next turn the drum (counterclockwise looking from the top to lengthen the headstay). Make sure that no more than 2.0 inches of thread is showing below the drum. On Kima the headstay is almost at max (13.00m between the centerline of pins at the stem and mast fitting) with the toggle on the forestay and the 2.0 inches of thread. Retighten the nut and reattach the furler line and you should be ready to go. For us, max headstay seems fast even up to 18-20 knots.]

## Technical Notes and Helpful Hints

### J/105 News, December 1992

**Mast Location:** With the mast centered by chocks at the deck, the location of SANDPIPER's mast at the base in the head is 9.5 inches, measured from the back surface of the mast about 3 inches above the floor to the forward face of the formica of the main bulkhead, above the fiberglass flange of the floor pan.

**Water Trap:** Under the drainage compartment for the J/Sprit there is an enclosed area accessible from under the V-Berth through an inspection port. After one month's usage, SANDPIPER's had about 2 gallons of water in it. This is a bad place for weight. My solution was to drill a limber hole on centerline to insure that water would not accumulate but instead would drain to the bilge.

**Securing the Wheel at Mooring:** Run the tails of the traveller control lines through the becket of the spinnaker blocks then tightly tie above a wheel spoke on either side to avoid wear and tear on the wheel brake.

**Shrouds:** Tie a 1/8 inch cord between upper and intermediate shrouds about one foot above the lower spreaders. The sock often gets blown aft through the opening and then gets wedged, cleat-like in the "V".

**Netting:** Use more 1/8 inch Dacron cord to create netting between deck and upper lifeline forward of the mast. Instead of making holes in the toe rail, start your net by stringing a piece of the 1/8 Dacron or some Kevlar cord, very tightly between the base of the pulpit and the 1st and 2nd stanchions back. Then lace into that as you would the top lifeline and middle lifeline with a series of three clove hitches or modified rolling hitches between the uprights.

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## Technical Tips

### J/105 News, April 1996

**Halyard Chafe on Mast Exit:** Most J/105s are now sailing with all rope halyards. If your boat originally had wire/rope halyards, be careful of burrs at the mast exits which can quickly chew your new rope halyards. File down any sharp edges which may have been created by the old wire.

### Spring Maintenance Check List:

- Re-tape spreader tips
- Tie preventer line between upper and diagonal shrouds, just above spreaders
- Re-caulk chainplates (after rig is tensioned)
- Flush out and check Harken lower rudder bearing
- Re-pack winches
- Check for any leaky fittings and re-caulk as necessary

**Rod Rigging News:** Alan Paris of LEARNING TO FLY recently had a rod failure on a lower shroud. Alan has sailed his boat about 12,000 miles, most of which has been ocean going miles, in addition to what was put on by the previous owner. Hall Rigging and Navtec conducted a thorough evaluation of the J/105, and J Boats received the following report from Phil Garland of Hall Rigging:

"After comparing the rod loading situations of many sizes of boats, both racing and cruising, we found that the J/105 falls somewhere in the middle of the load case range. It is possible that by over-tightening the lowers to reduce pre-bend, the loads might be higher than what's recommended, but in any case it's not extreme. There are many criteria that affect the life of rod rigging. It is often hard to say what may have caused a particular failure. In addition to the load case and head geometry there is the type of fittings used, bending fatigue, environment (sailing condition, temperature, corrosion and vibration), and age of the assembly.

"For offshore or hard racing usage and after extended mileage, it is advisable to rehead the -8 lowers and headstay with the recently developed head dies or to upsize to -10 rod. This should result in extended life of the rod system. If an owner were to have his lowers reheaded with the new dies, the price would be approx. \$75 per set assuming the rod could be re-used and just replace the turnbuckle screw at the lower end. The rod would end up about 1" shorter. For the headstay it would be about \$135 which would be for a new "HF" jaw and a new rod. The complicated part of the headstay would be taking the Harken foils apart so the rod could be coiled and shipped to us. Please have interested owners contact us at Tel 401-253-4858 or Fax 401-253-2552."

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