

## Clean Up Those Lines

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How many times have you caught an external halyard at a crucial moment when you were hoisting or lowering a sail? It always happens when you least need that problem. I daresay that is has happened to almost everyone who has been sailing for any length of time. The answer to that problem is to change them from external to internal which is a relatively simple process. Below are the steps required to accomplish the task:

1. Lower the mast to give access to all parts of the mast.
2. Remove all the screws from the mast and reattach all items with 3/16 inch stainless steel pop rivets to eliminate meat hooks inside mast, which will damage rope halyards.
3. Check the mast crane to be sure the sheaves are made of durlin (brown fibrous material which is original in older boats). These are strong and will withstand the extra load created by using one sheaf. If they are plastic, they need to be replaced with aluminum because they will not withstand the load. Remember that with external halyards, there are two sheaves and the load is distributed between the two.
4. Remove the thimble from both wire halyards where the rope halyard is attached, then eye splice the rope into the wire eye. Compress the wire eye and wrap the rope and wire with electrical tape, or use a heat shrink tube purchased at a hardware store, and you have a cheap wire-to-rope splice.
5. Remove the sheaves and fish the rope end of the halyard through the mast with stiff wire, making sure that they go aft of the spacer bolt at the spreaders. This will assure that they run free when the mast has pre-bend.
6. Make a new sheaf spacer (A) from thin aluminum (old whisker pole) to make room for the larger and wider spinnaker sheaf (B).
7. Reinstall the sheaves and the new thin spacer, but substitute the forward port sheaf with the larger one to accommodate a spinnaker halyard.

8. Feed the jib halyard over the starboard front sheaf and the main halyard over the starboard aft sheaf.
9. At the base of the mast, cut exit holes (C) and attach Harken through-deck blocks if halyards lead to port and starboard, or cheek blocks inside mast if halyards lead aft to a Johnson board.

10. At seven to eight feet from base of mast, on the starboard side, cut an opening and attach a halyard exit plate (D). Four inches below the plate, attach a lance cleat (E). Be sure to position the cleat so that the spinnaker halyard will clear the cleat when pulled through the cheek block (F) at the base of the mast. This allows the spinnaker to be hoisted from the cockpit without cleating at the mast.

11. Just below the spreaders and on the front side of the mast, place a through-deck block for the spinnaker pole topping lift. At the base of the mast, on the port side, use a halyard exit plate and cheek block to extend the pole topping lift aft. Feed the topping lift line through the through-deck block, making sure it stays in front of the spreader spacer bolt, and out the exit plate and through the cheek block at the base of the mast.
12. Attach a bull's eye fairlead with insert at the port side base of the mast for leading the pole foreguy aft.

13. At the front of the mast crane, flatten a spot at about twenty degrees in relation to the top of the mast crane. Drill and tap two holes for 10 - 32 screws and attach a bull's eye fairlead with insert (G) for the spinnaker halyard.

14. On the deck, even with the aft lower and next to the toe rail, attach a bull's eye fairlead with insert (H) on both sides. These are

used to feed the spinnaker tweaker lines through.

15. On the side of the cabin top above and behind the aft window, attach a cam cleat with fairlead (J) on both sides. These are used to adjust the tweaker lines.

