



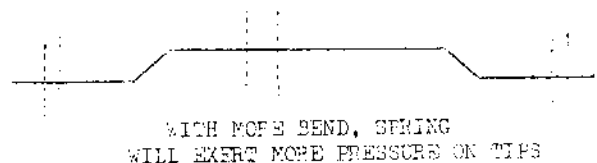
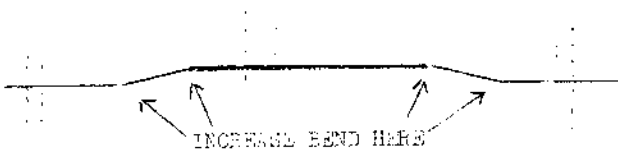
Flying Scot®, Inc.

Route 3, Box 1525, Cemetery Street, Deer Park, Maryland 21550
Telephone: (301) 334-4848 • Fax: (301) 334-8324

USE OF THE FLYING SCOT HALYARD WINCH

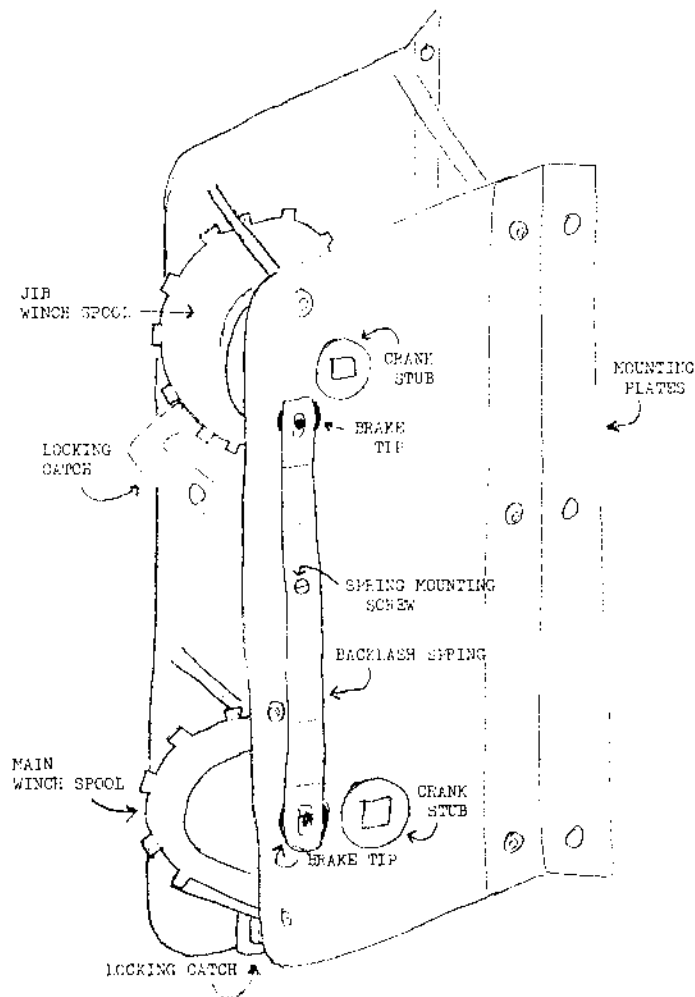
The halyard winch on your Flying Scot is designed for easy raising and lowering of the main and jib sails. The spools of the winch should be lubricated periodically with a light oil or grease. We suggest that you lubricate the winch after a day of sailing so that the lubricant has a chance to soak into the phenolic before its next use. This prevents loose oil from being thrown out onto the sails. Lubricate the winch between the spool and the phenolic side plate. Also lubricate the spool where the crank stub protrudes through the phenolic side plate. The winch will make loud noises as the sail is lowered when it needs lubrication.

The spring on the side of the winch should be adjusted so that the spools will not backlash (spin backwards when the spool is released). Proper spring tension will insure that the halyard wires will unroll from the spools neatly while the sail is being lowered. To adjust the spring tension, turn the screw that is holding the spring to the winch clockwise to increase tension and counterclockwise to reduce tension. The delrin spring tip must move freely in its hole through the side of the winch for proper tension. While turning the winch spool with the crank, you should be able to see the tip moving in and out slightly. If the tip is jammed, remove the spring and spring tip from the winch. Clear the tip hole with a small knife or screwdriver. If the tip seems to have swelled and is too large for the hole, reduce the diameter of the tip by placing the stem of the tip in an electric drill and hold the tip against a piece of 120 grit sand paper while the drill is turning. If back-lashing continues even though the tip is moving freely in its hole and the tension screw is turned all the way in, the spring may need to be reformed. Remove the spring from the winch and bend the spring so that it exerts more pressure on the tips. See drawing below.



When operating the winch, always insert the crank from the starboard side. Be sure to insert the crank fully to reduce the chance of breaking the crank. Also, when tensioning the halyards, hold the crank in close to the winch to help prevent breaking. Before hoisting, check the halyards aloft to be sure they are not fouled around a mast fitting and that the halyard and sail paths are clear. Always remove the crank from the winch after use to prevent loss of the crank overboard. Store the crank in a place where it will not fall overboard or into the centerboard trunk. NOTE - If a crank falls into the centerboard trunk, remove it before raising or lowering the centerboard. Serious damage to the centerboard or centerboard trunk could result. It is wise to have one crank attached to the boat by lanyard or tape so that it cannot be lost if the boat capsizes. If all the cranks are lost in a capsize, the sails may be difficult or impossible to lower when the boat is righted.

Hoisting sails should require little pressure on the winch crank. If it is difficult or if it becomes difficult part way up, stop and find out why. Main sheet cleated too tight, vang cleated too tight, mainsail caught under the tiller, jib sheet cleated are all common problems. Recommended procedure is to feed the main into the sail track with the left hand while turning the crank with the right. The halyard must always be wound on the winch spools with tension. When hoisting the jib, hold the jib halyard between the left forefinger and thumb above where it exits the sail track on the stbd. side of the mast. This allows you to hold tension on the wire while turning the crank with your right hand. Tension the mainsail so that the wrinkles along the bolt rope are pulled out and the jib so that the toggle under the foredeck is level. (NOTE - Racing sailors may use more or less tension to adjust the sail shape. The above is general rule for daysailing and will provide a longer service life for the standing rig and mast.) When the sail has been properly tensioned, lock the winch by holding the catch into the spool while easing back on the crank. To lower the sails, turn the spool clockwise until the catch drops and pull the crank from the winch. The sail will fall part way and may be easily pulled down the rest of the way.



Before you install your new halyard winch, take a close look at how your current winch is installed. The winch dogs must open down, that is they should be to port. Use the hook described below to pull the halyards out to port, from where they are locked in the center core of the spool. Note that the jib halyard is lead aft of the top winch spacer, the main halyard forward of it. Cut the wires, pull them up, out of the way, and tape them to the mast.

The winch is installed with drive rivets. To remove these, drive the center pin through into the mast, drill out the rivet shanks with a $3/16$ " bit. You can also shave the rivethead off with a chisel.

Now hold the winch in place, dogs to port, insert one rivet, drive center pin flush. Do the same on the opposite side, diagonally across. Drive the center pin flush only. Two or three blows with the hammer will do it. The drift pin is handy in lining up the holes. After the winch is in place, and all the rivets are driven home, install the halyards. Jib and main halyard must be separated by the upper, forward winch spacer. Feed the halyard into the small hole in the winch spool, feed it out to port of the square winch center hole, with the aid of the hook. You can tie a knot in the main halyard, then pull it back into the spool. The jib halyard should be locked in place with a Nico Press sleeve, as shown below. The wire is too soft to hold a knot.

Tools:

Hook:

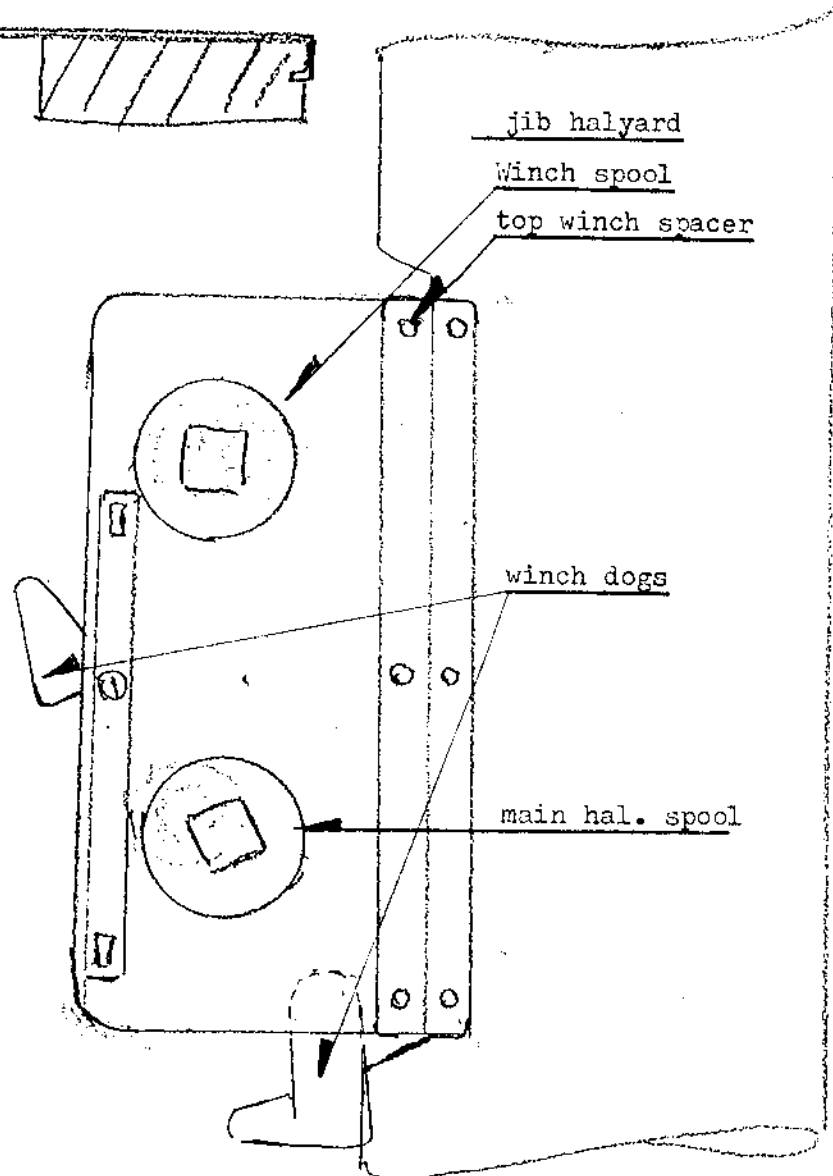
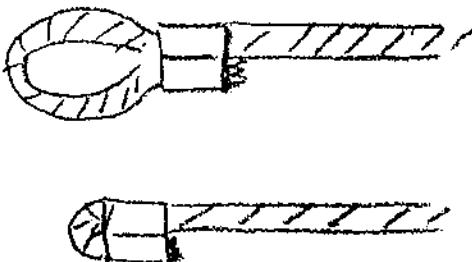
Drift pin:

Nico Press sleeve:

For jib halyard only:

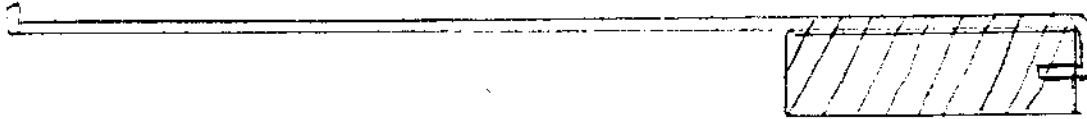
Full wire through sleeve, return to form loop. Pull wire into a tight 180 and tap sleeve with hammer, or press with Nicopress, or squeeze with vice grips.

The job can be done with the mast on the boat, while she is in the water. Or you can lay the mast on two horses, winch up, hold in place with clamps. The rivets are with the kit we supply. Good luck.

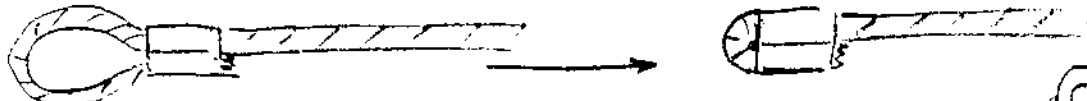


INSTALLATION OF JIB AND MAIN HALYARD

Before you install your new halyards, have a close look at how they are installed now. The jib halyard mounts in the upper winch spool, the main halyard in the lower spool. The upper spacer in the sailgroove separates the halyards. Installation is easiest when you have your mast off the boat, lying on a pair of horses. Feed the new halyard in place exactly the same way you saw the old one. For this you will need a small hook made from coathanger material, with a 1/8" - 90 degree bend. To save your hand, secure the other end to a wood dowel or piece of broom handle, as shown in the sketch. The hook serves to remove the old halyard from the winch, and to install the new one.



With this hook you can fish the halyard through masthead sheaves, and behind the gooseneck. Insert the halyard into the winch spool, and pull it out to port. Take care to separate jib and main halyard with the winch spacer. Pull out enough wire to allow you to tie a knot in the main halyard, or in case of the jib halyard, to make a loop through the Nico Press Sleeve we furnish for this purpose. The knot works only in 7x7 wire. In 7x19 wire, which we use for the jib, the nico press sleeve will hold. Make the loop, pull the wire into a tight 180 ° bend. This will lock the wire.*



Be sure to wind your halyards neatly, always starting from a bare spool when hoisting sail. You will avoid birds nests. The halyards will last longer, and you will have better sail control. Be sure to lubricate the winch often enough to insure free operation. The winch should never screech.

Use Nico Press Sleeve to anchor jib halyard.

Use knot to anchor main halyard.

* If you have no Nico press, a squeeze with vice grips, or a blow with a hammer will lock the sleeve.

