

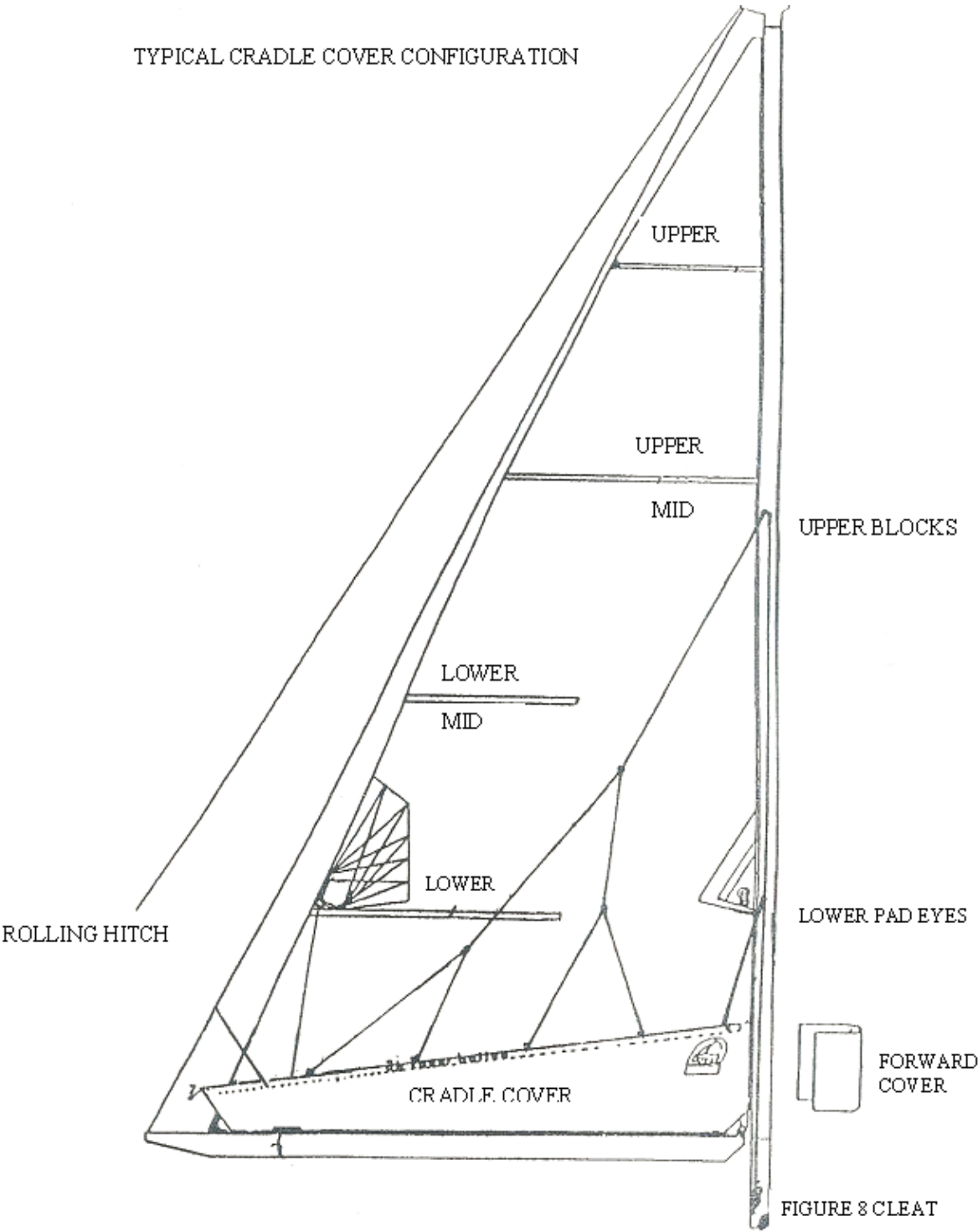


# Cradle Cover Installation Manual

## **PLEASE NOTE**

THIS MANUAL SETS FORTH GUIDELINES. CRADLE COVER INSTALLATION KIT COMPONENTS WILL VARY AS WILL BATTEN POCKET CONSTRUCTION AND CONFIGURATION.

TYPICAL CRADLE COVER CONFIGURATION



## CRADLE COVER INSTALLATION INTRODUCTION

The following Cradle Cover instructions have been written with the expectation that the initial installation will be done under ideal conditions: calm weather and seas, five knots of wind or less, boat head to wind on a mooring or at the dock. Under these conditions the initial Cradle Cover installation can be made in less than three hours. If it is not possible to wait for all of these ideal conditions in your particular case, please remember **IT IS VERY HELPFUL TO HAVE THE BOAT HEAD TO WIND DURING THE INSTALLATION PROCEDURE.**

Once the Cradle Cover unit has been installed correctly, the unit should give efficient service and long life in any reasonable sailing weather, as long as the "Cradle Cover Tips" and prudent seamanship rules are observed.

NOTE: The Cradle Cover has been adapted to fit a wide range of boats however, for your Cradle Cover to function correctly, the slide gate on the mast must allow slides to start stacking up directly above the tack fitting.

The sailmakers at Doyle take great pride in constructing this Cradle Cover and provide all of the components necessary to easily and properly install it. When you receive your Cradle Cover, please check the package for the following components:

- A) Cradle Cover of correct color and attached, coiled lazy jacks.
- B) Bundle of two full-length battens. In some cases it is necessary to shorten the lengths for shipping. This means the batten is cut in half and a batten joiner is used to put the batten back together during installation.
- C) Cradle Cover Installation Kit in a small bag contains the following:
  - o Two Bullet Blocks
  - o Four Stainless steel pad eyes
  - o Eight stainless 1/2" x 10 x 24 round head self-taping screws
  - o Two figure 8 cleats
  - o Four 1 \_" screws
- D) The steps for installing the Cradle Cover should be taken in proper Sequence to insure correct and, hopefully, carefree installation. Please read through the whole procedure first to familiarize yourself with the overall picture:
  - o Install upper block on mast.
  - o Install lower pad eyes on mast.

- o Install figure 8 cleats
- o Install cover battens
- o Install Cradle Cover on boom.
- o Rig lazy jacks.
- o Lead forward cover lines to lower pad eyes.
- o Lead aft cover line with rolling hitch to topping lift.

After completing the above steps, be sure to make a dry run, at the dock or on the mooring. Lower and stack the sail, close and zip the Cradle Cover to insure everything is in proper working order. During this practice session, make any final adjustments and familiarize yourself with the forward cover.

### INSTALLING UPPER BLOCKS

Pad eyes with blocks are most easily installed on the mast before the mast is stepped. If this cannot be done, it is necessary to send someone aloft in a bos'n's chair. Upper pad eyes should be located 45% down from the masthead, on opposite sides of the mast, just behind the shroud tangs. On most double spreader rigs the roots of the upper spreaders make a good place for installing the upper blocks. If they are positioned 4 – 8" out from the root it will allow a larger gap in the port and starboard lazy jacks for hoisting. **DO NOT INSTALL PAD EYES ON THE AFT PORTION OF THE MAST, NEAR THE MAST TRACK.** If located on this aft section, the pad eyes will position the lazy jacks in such a way that they will snag the sail when it is hoisted. Do not locate pad eyes in any position where the lazy jacks will cross a shroud, a piece of hardware, or any other equipment.

NOTE: It is always more important to keep pad eyes, lazy jacks, and other Cradle Cover rigging clear of other gear than to install them in any specifically defined location. Once you have determined the best location of your pad eyes, hold them against the mast and mark the holes with a felt tip marker. Drill, insert screw, and secure pad eye with the block before drilling second hole.

### INSTALLING LOWER PAD EYES

To determine the position of lower pad eyes on the mast, measure up from the gooseneck approximately 15% of the mainsail luff length, i.e., 15% of the distance between the black bands. Another way to estimate the distance is 2 times the height of the front of the Cradle Cover above the gooseneck.

Install lower pad eyes using the same technique as used for upper pad eyes.

## INSTALLING THE FIGURE 8 CLEATS

Two figure 8 cleats are supplied and should be installed on either side of the mast near the Gooseneck. They will allow for adjustment of lazy jacks.

## INSTALLING CRADLE COVER BATTENS

- (1) Insert the batten into the end of the pocket
- (2) Insert the Velcro® tab into the pocket and with the batten pusher (supplied and tied to the clew) push the tab into the pocket until the batten is very tight.
- (3) Remove the batten pusher and repeat with the other batten.

## TO REMOVE THE BATTENS

- (1) Insert the batten pusher into the pocket to break the Velcro® bond.
- (2) Gently pull on the exposed line. The tab should pull out easily allowing you to remove the batten.

**WARNING: EXCESSIVE PULLING ON THE LINE WHEN REMOVING BATTEN IS NOT NECESSARY. INSURE YOU HAVE BROKEN THE VELCRO® BOND BEFORE PULLING.**

## INSTALLING CRADLE COVER ON BOOM

In order for the Cradle Cover to work properly the foot of your mainsail must be out of the boom. Slide the Cradle Cover into the slot of the boom and lace it at the front and back with the line provided. It must be very tight to insure no sag off the top of the boom.

## RIGGING THE LAZY JACKS

The lazy jacks are already attached to the cover. The other end of the line must pass through the block on the mast and lead down to the figure 8 cleat.

## LOWERING AND STACKING THE SAIL

Before proceeding with this next step, go over the following list and be sure you have checked these things out:

- o Read the enclosed sheet: Cradle Cover TIPS.
- o Tighten topping lift to relieve load on lazy jacks. Lazy jacks are not designed to withstand the dynamic loading of a dropping boom. ALWAYS USE THE TOPPING LIFT TO SUPPORT THE WEIGHT OF THE BOOM AND SAIL.
- o Secure the boat so it is head to wind and the sail is luffing. Full-length battens can put twisting strains on sail slides. This causes them to bind in the track. Only when the sail is luffing in the wind can the slides be made to move freely.
- o Lazy jacks must be cleared securely in their cleats. If they come loose while the sail is being lowered, the sail will start to fall outside the cover portions. The lazy jacks may also be hard to tighten when the sail is down. Adjustment of the lazy jacks is always easier with the sail hoisted.

When you have checked the above points, you may lower the sail by easing the main halyard. The halyard must be completely eased, and the sail must be lying in the cover before the main zipper is zipped.

The Cradle Cover is a simple efficient sail furling system, but it is not automatic! A few moments spent tweaking the sail into the cover will insure smooth operation of the zipper and a neat appearance of the cover.

#### INTERNAL REEF LINES WITH END BOOM SHEAVES

Starting from the sheave at the outboard end of the boom, thread the reef line up between the two halves of the cover zipper and through the reef grommet itself. Then, pass the line down through the top of the cover, inside the acrylic portion, and out the slit provided in the foot of the cover. Go around the boom and back through the slits in the cover and foot of the sail, and tie off to itself. (A rolling hitch works well.)

#### EXTERNAL REEF LINES

Make sure the reef block is positioned well aft of the clew itself. When reefed, the clew reef line should pull down and back. Follow same path as for internal lines.

#### REEFING

Reef normally, securing the new tack first, then the new clew. Once the new tack and clew are secure the sail is reefed. The two sides of the Cradle Cover can be zipped at the luff, just as it is when the sail is at full hoist.

## ZIPPING AND CLOSING THE CRADLE COVER

Grasp the zipper tail at the aft (clew) end of the cover; work the zipper car forward to the acrylic cover. Pinch the two sides of the cover together while zipping the car onto the acrylic for the first 12".

After that, the car should run freely with an occasional push or tuck to the leech and batten ends, if they poke out.

When the cover is zipped almost all the way to the mast, remove the halyard from the head of the sail and fasten it to the webbing loop just Aft of the mast. This will prevent the halyard from slapping against the mast.

## FINAL ADJUSTMENT

With the cover zipped, stand back and examine the set of the cover. The top edge of the acrylic cover should run fairly straight from the mast to clew.

Adjust the forward cover lines to support this end at a comfortable height. The cover should be upright, with these lines just taking a load. With the line attached to the ring at the aft end, use a rolling hitch around topping lift and tie off to other ring. This line need only be tight enough to keep the aft end from sagging or flopping.

**CAUTION:** Always tie rolling hitch to the part of the topping lift which dead ends on the boom. Otherwise, this line will try to hold the boom up when topping lift is eased, risking damage to the cover.

A final adjustment to the lazy jacks at the cleats may be needed to remove any sag or bow in the top edge of the cover.

## FORWARD MAST COVER

The forward mast cover is fitted with separating zippers that zip onto the main cover at each side. Zip one side on, starting at the bottom. Then pass the forward flap around the mast, inside of all of the halyards and rigging, to avoid any possible chafe.

Zip on the second side and your Cradle Cover has completely stowed your mainsail and stands crisply on the boom.

## FINAL CHECK

Before leaving your boat, check on the following points:

- o Is the cover completely zipped?
- o Are the lazy jacks snug and secure, not too loose or not too tight?
- o Is the topping lift supporting the weight of the boom? Not the lazy jacks?
- o Is any rigging or hardware fouling or chafing the cover or lazy jacks?
- o Is the main sheet secure and is the boom not swinging?

### CRADLE COVER TIPS

"Head to Wind" - To experience the smoothest hoisting and lowering of the mainsail, be sure the boat is directly head to wind. This minimizes the friction of the mainsail against the lazy jacks while lowering and reduces the chance of a batten catching on the lazy jacks while hoisting.

"Flaking the Luff" - If possible, a guiding hand at the mast while lowering the sail goes a long way in producing the smoothest drop. With any fully battened mainsail, if the halyard is stuck and the sail is allowed to drop without gentle tugs on the luff, the aft end of the battens will touch the boom before the forward end. This can result in a mainsail that stops two thirds of the way down with the battens now wedged against the mast, preventing the luffslides from stacking. Again, a helping hand at the mast as the halyard is smoothly lowered, flaking the luff from side to side will make for the neatest drop and will allow most of the mainsail to drop into the cover without help. This procedure produces the best flake or furl for any mainsail and is not particular to Cradle Cover.

"Helping the Zipper" - After the sail has been stuffed inside its cover, the best technique for zipping is to hold the cover battens together with your hand closer to the bow and zip with your aft hand. This takes load off the zipper slider, greatly reducing friction and, hence, the force required to pull the slider. At the same time you will be increasing the life of the zipper.

"Quick Close" - If for any reason you wish to close the Cradle Cover for a short period of time it is not necessary to close with the zipper. There are bronze snap hooks at the bottom of each lazy jack along one side of the Cradle Cover. Close the snap around the opposite lazy jack this will temporarily close the Cradle Cover to protect your main sail and also increase the life of the zipper.

"Cleanliness" - Before removing your Cradle Cover, be sure the deck is clean and the mast and boom have been thoroughly wiped clean in areas that will come in contact with the cover while the it is being slid off.

"Maintenance" - A thorough washing and yearly maintenance of your Cradle Cover is advisable. When removing the Cradle Cover, it is easiest to leave the battens, and lazy jacks with the boat. The lazy jacks are easily detached just above the cover, and the battens are all removable from the forward end of the cover.