

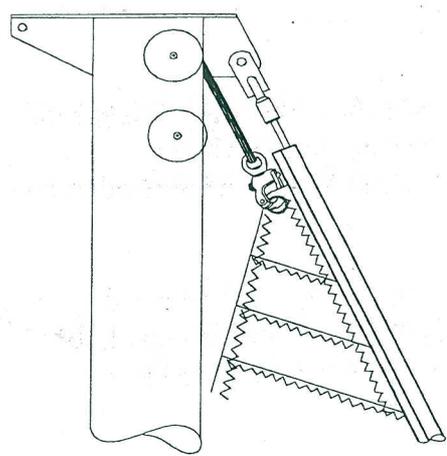
Tuff Luff Problem Solving

1. Insure the crew is not sheeting the Genoa too soon before the sail is fully hoisted and proper Luff tension is applied. Sheeting the Genoa too soon will result in compressing the boltrope and pulling the boltrope out of the feeder and prefeeder, and can damage the Tuff Luff just above the feeder.
2. The Luff sail tape should be the correct length. Please insure the Luff tape is 6" below the feeder. A short Luff tape can pull out of the Tuff Luff and can crack the foil. The feeder supports the foil and the luff tape. The tape should clear the prefeeder and be 6" longer than the main feeder.
3. Careful attention to proper halyard lead is very important. Insure that the lead is parallel to the Tuff Luff. An improper lead aloft can pull the sail out of the top of the foil.
4. Ensure the Luff tape is clean and the Tuff Luff is clean. If necessary, have your sailmaker make a cleaner device in order to clean your Tuff Luff. Use a dry lubricant, such as McLube on the boltrope.
5. When not sailing, it is important to tension the Tuff Luff to prevent the foil from resonating (vibrating) at the dock or during winter storage. The foil is an advanced PVC formulation, but is plastic. A 2-foot length of Luff tape with grommets can be manufactured by your sailmaker to allow the Tuff Luff to be tensioned.
6. If stored on the headstay during the winter, insure the Tuff Luff is straight and protected properly during winter storage, as improper care is not covered under warranty. Do not remove the Tuff Luff once installed. Re-installing the Tuff Luff in cold conditions can lead to breakage.
7. Not all Luff tape is the same both in quality and sizing and this can cause problems with the foil. Some #5 boltrope as well as #6 boltrope is fractionally different. Ensure that your sailmaker is aware of this.
8. Check the Luff tape for tears, damage, as a poor luff tape can damage the Tuff Luff foil.

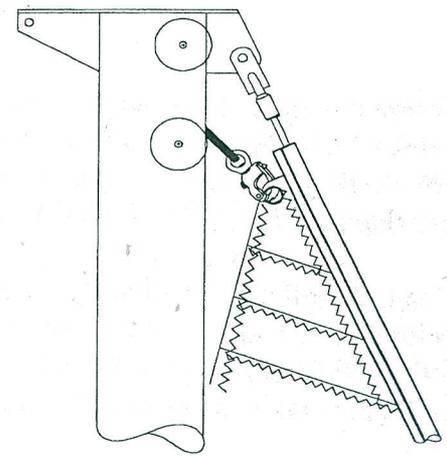
TUFFLUFF

FROM SCHAEFER MARINE

Rigging Hints and Tips

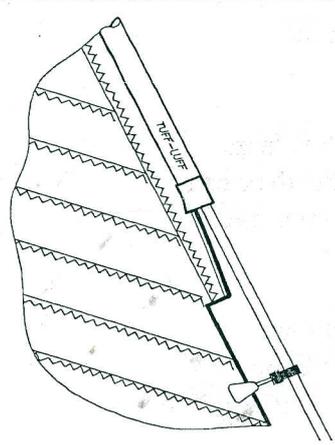


Correct

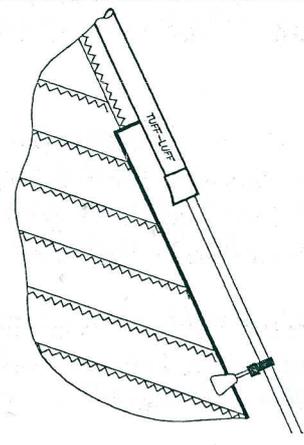


Incorrect

Correct halyard lead is critical to reduce the chances of damage to the head of the Tuff Luff extrusion. Proper halyard lead should be parallel to the headstay, not at a reduced angle.



Correct



Incorrect

- * Avoid striking the Tuff Luff with spinnaker poles.
- * Never raise or lower the sail without the feeder.
- * Always inspect the Tuff Luff for wear and damage.
- * Always use the pre-feeder when raising sail.
- * Avoid chafing sheets against foil.
- * Abuse of system does not qualify for warranty replacement.
- * Use of a dry lubricant may reduce friction between sail and Tuff Luff.
- * Do not sheet in genoa until sail is fully raised.
- * Loading of sail while hoisting will damage the foil.

Headsail luff tape **must** extend below the Tuff Luff headstay systems should be directed to Schaefer Marine. Proper use of this product should provide years of use without hassle. Improper use will cause plastic extrusion to deform and break.

Luff tape should extend 6" below the feeder.

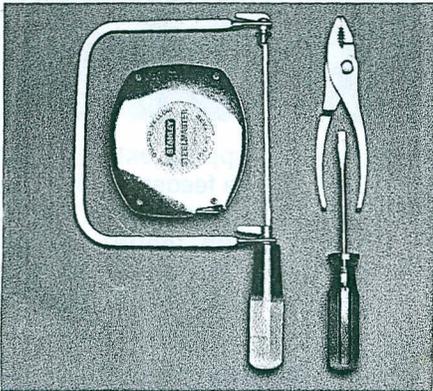
Any questions regarding the safe and proper operation of Tuff Luff headstay systems should be directed to Schaefer Marine. Proper use of this product should provide years of use without hassle. Improper use will cause plastic extrusion to deform and break.

SCHAEFER
LEGENDARY STRENGTH

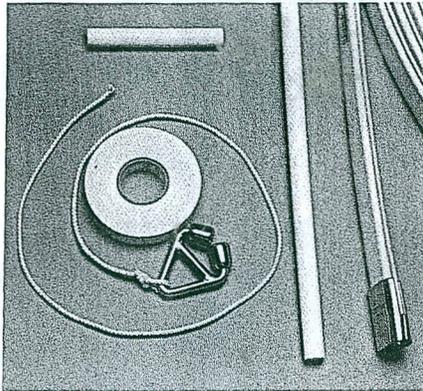
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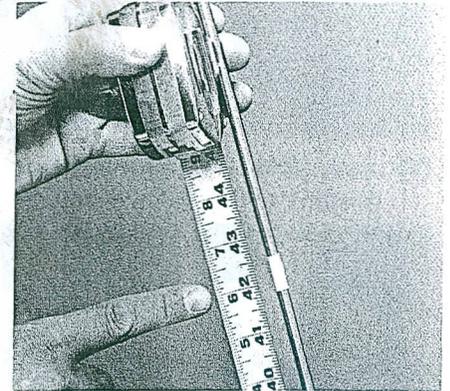
METHOD A: Installing **TUFF LUFF** Headstay Luff System with mast stepped: When using Model 1205 with a - 12 headstay, use Method C. The 'zero clearance' with - 12 rod prevents sliding TUFF LUFF as employed with Method A or B.



- 1 Tools required:**
- 1) Hacksaw or fine-toothed saw
 - 2) Slotted screwdriver
 - 3) Pliers
 - 4) Tape measure

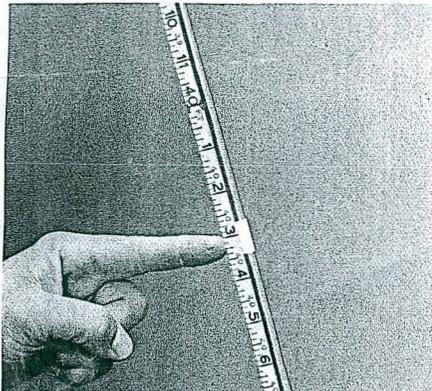


- 2 Unpack system. Parts included are:**
- 1) Coiled extrusion with feeder
 - 2) Feeder with 4-40 SS machine screw
 - 3) Prefeeder with seizing line
 - 4) Two spacer tubes, 4" and 44"
 - 5) White marine tape

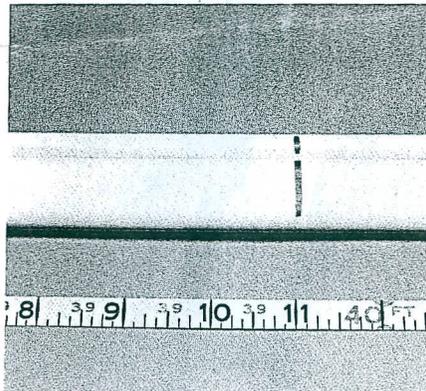


- 3 Mark headstay with tape or a felt marker 42" up from deck line.**

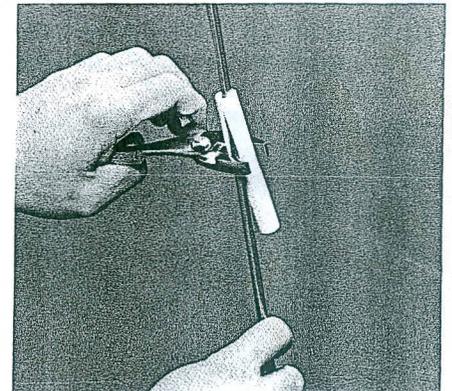
$$34'8 - 4 = 34'4$$



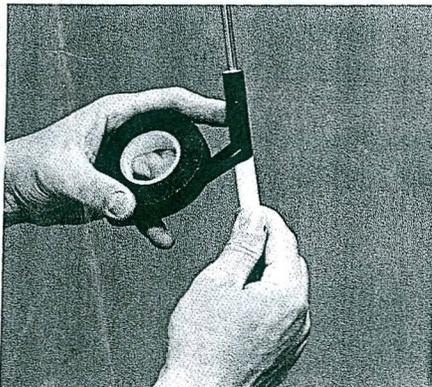
- 4 Use jib halyard to raise tape measure to masthead, measure to mark (from step 3), and then subtract 4" for top spacer tube.**



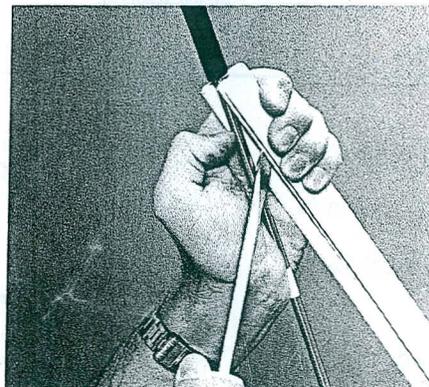
- 5 Lay out and cut extrusion to this length. Cut only from top end (end without feeder attached).**



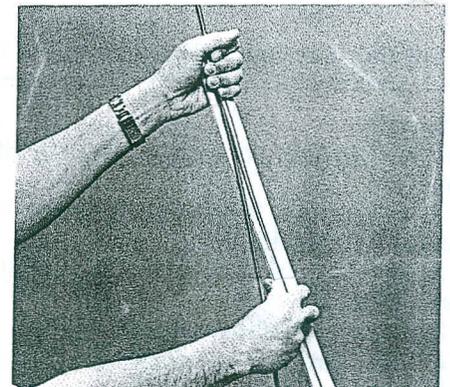
- 6 Snap on 4 inch spacer tube using pliers, if necessary.**



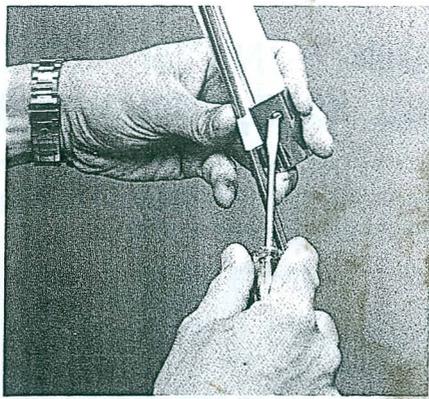
- 7 Tape full length of top spacer tube with the tape provided (Black tape is used in Photos for picture clarity).**



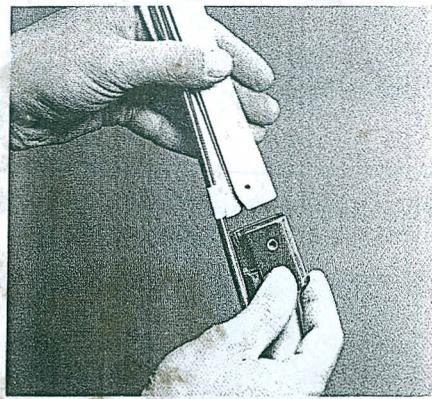
- 8 Insure that headstay is taut. Start extrusion onto headstay by spreading it with screwdriver.**



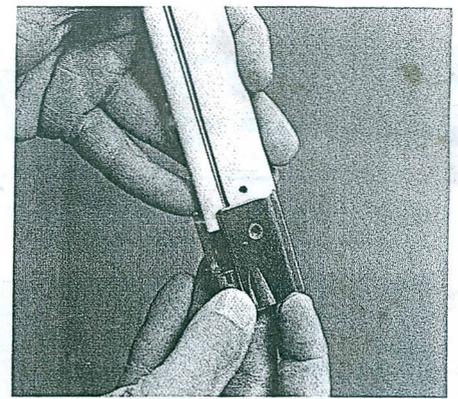
- 9 Now extrusion is snapped on by pulling aft with one hand while sliding it up with other hand.**



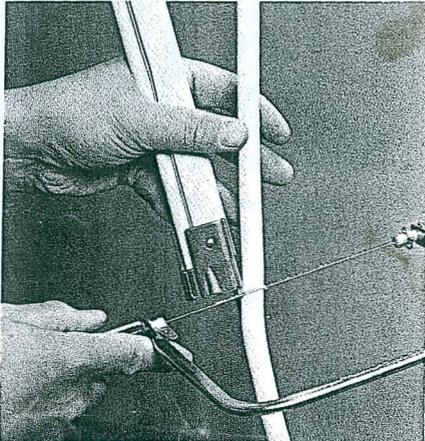
10 Remove feeder screw when extrusion is almost all the way on.



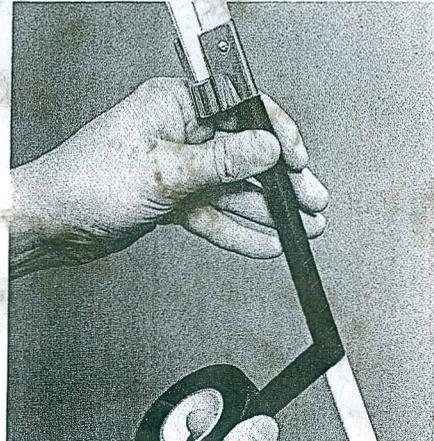
11 Remove feeder by sliding it downward.



12 Finish snapping extrusion on and replace feeder, taking care to "catch" the port groove behind ridge inside feeder. Screw should be just flush with port side of feeder when installed. **DO NOT OVERTIGHTEN.**



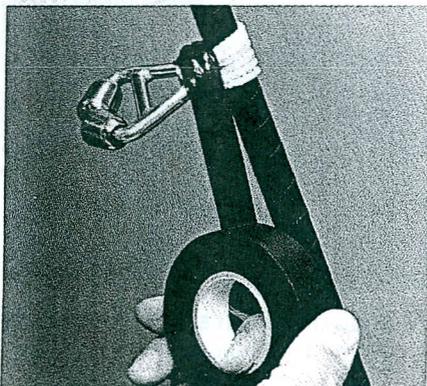
13 Snap on the lower spacer tube, using pliers if necessary, and cut it to length as shown.



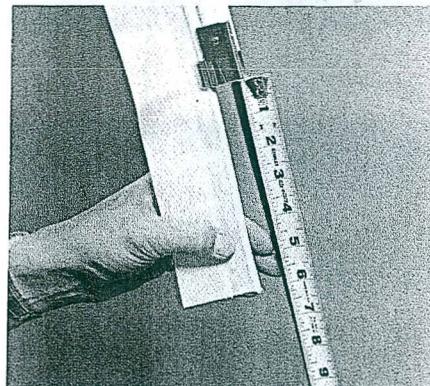
14 Tape full length of lower spacer tube with tape provided.



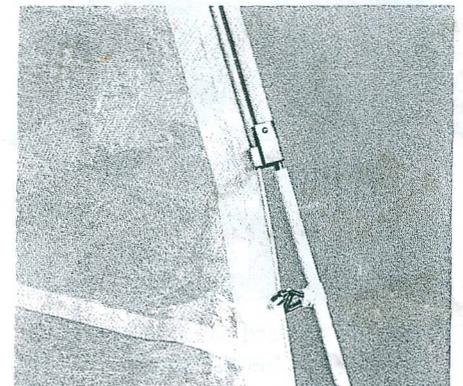
15 Seize roller prefeeder 12" below feeder.



16 Tape seizing line with the tape provided.



17 With sail raised, luff tape should protrude 6" below feeder.



18 Sail with it! When raising sails, always use both feeder and roller prefeeder to prevent chafe.

ASSEMBLY TIME: Approximately 14 minutes.

METHOD B:

Installing extrusion with mast stepped without measuring forestay:

Step 1: Snap on 4" top spacer tube and tape as shown in Steps 6 and 7, Method A.

Step 2: Slide extrusion onto headstay UPSIDE DOWN (with feeder removed).

Step 3: Cut off 42" above deck.

Step 4: Pull extrusion off headstay and slide on again right side up.

Step 5: Proceed with Step 12 from Method A.

METHOD C:

Installing with mast unstepped: Stretch headstay **very** taut at a good working height (waist level) and proceed as with Method A or B.

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