Parts Required

ID	Description	Specification
Order one 3 pc set for each batten to be converted		
15H-1260	BTN TIP LEVER TYPE THREADED PC	FRONT PART OF TWO PIECE ASSEMBLY
15H-1261	BTN TIP LEVER TYPE - LEVER PC	REAR PART OF TWO PIECE ASSEMBLY
10N-2031	BATTEN TIP THREADED INSERT	0.338OD X 0.5L X M7x1.0 THREAD

We recommend that you also order at least 4 pc ea of 15H-1260 and 15H-1261 as spares for each glider.

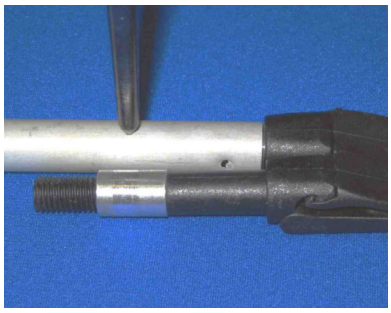
Tools Required

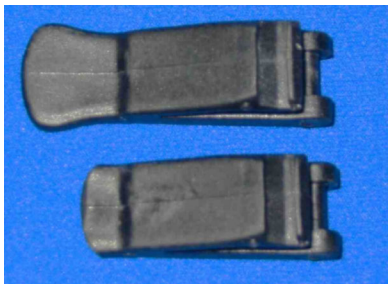
Hammer
Sharp steel center punch
Saw or tubing cutter capable of making a clean, square cut through 10mm 7075 tube
Deburring tool for the inside of the tube, such as 70L-1601 TUBE DEBURRING TOOL
File or sanding disc for deburring outside edge of tube
Tape measure or ruler

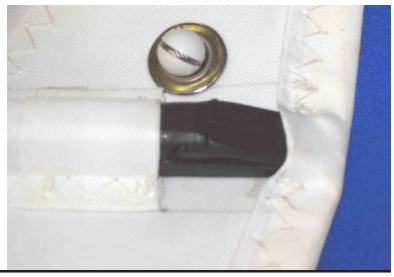
Conversion Procedure

1. Set up the glider and measure the distance between the edge of the batten pocket and the back edge of the trailing edge hem.
   a. If the distance is greater than 1-3/4 inches, the sail can be converted to use standard configuration lever batten tips.
   b. If the distance is less than 1-3/4 inches but at least 1-1/2 inches, the sail can be converted to use a modified configuration lever tip
   c. If the distance is less than 1-1/2 inches, the sail cannot be configured with lever tips.
2. Install spring battens in one side of the sail. Measuring from the back edge of the folded hem, mark the batten tube
   a. at 1-15/16 inches to use standard lever tips
   b. at 1-11/16 inches to use modified lever tips.
3. Match the left and right wing battens sets and trim each tube to the mark from item (2). Remove any sharp edges and burrs.
4. Orient the batten so that the curved shape is aligned with the vertical plane, curve up. Install the lever tip assembly (with the aluminum insert threaded all the way on to the plastic stud) into the batten tube. Using a hammer and a sharp center punch, peen a dimple 1 inch from the end of the tube to secure the threaded insert. One sharp rap with a light hammer is usually sufficient for each dimple. The batten tip will be difficult to adjust if the dimples are too deep. Rotate the batten 180 degrees and repeat.
5. If you sail requires ‘modified lever tips’, trim 1/4” from the rear of each plastic lever as shown in the third picture on the right.









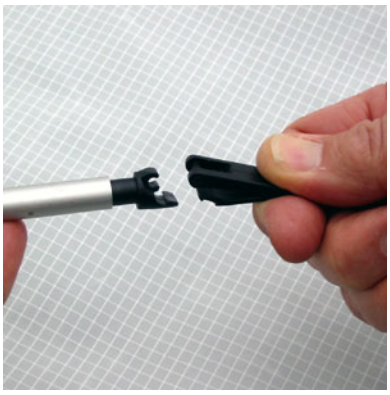
Adjustment and Use

The new Lever Type tip incorporates a hinge and a snap locking mechanism, as well as a threaded shank which allows for adjustment of the overall batten length, and hence the chord-wise tension that the batten puts on the sail.

The new tips are relatively easy to use, but there are a few things that are important to know. Please read this entire addendum before installing your battens for the first time.

To Install the Battens

1. Insert the batten into the sail as you would normally. Hold the batten by the aluminum part when inserting. Avoid holding the batten by the rear tip, or applying any significant force at the rear tip during installation. The tip is not overly fragile, but it can be broken, and it is relatively easy to pop the hinge apart. (IF the hinge does pop apart, you can simply pop it back together. If you break the tip, it is most likely to break at the locking tab on the rear portion of the tip. In this case, push down on the top of the rear portion until you pop the hinge loose, and then snap on a replacement rear portion.)
2. To fit the rear tab of the tip into the hem in the trailing edge, you must first unlock the hinge and pivot the rear of the tip upwards. To unlock the tip, apply a slight downward pressure to the top of the tip, while squeezing upwards on the locking tab on the bottom of the tip, and rotate the rear of the tip upwards. (Note: If you pull up on the tip without releasing the locking tab, you will break the tab. If you don't apply a slight downward pressure on the tip while squeezing to release the lock, it will not release.)





3. Turn the trailing edge of the sail upwards and fit the tab on the batten tip into the gap in the hem of the sail.




4. Pivot the rear of the tip downwards until the locking tab snaps into place.

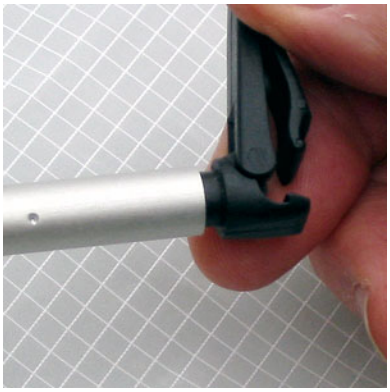
To Remove the Battens

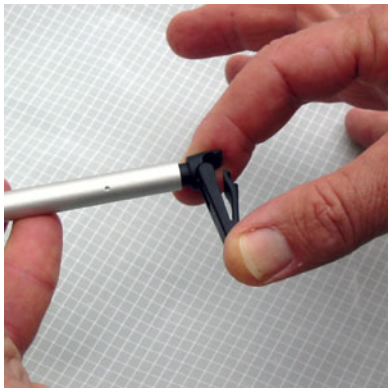
1. Unlock the tip, by applying a slight downward pressure to the top of the tip, while squeezing upwards on the locking tab on the bottom of the tip, and rotating the rear of the tip upwards.
2. Pull the trailing edge of the sail off of the end of the batten tip.
3. Pivot the tip downwards until it locks again.
4. Remove the batten – taking care to minimize the force applied to the batten tip itself.

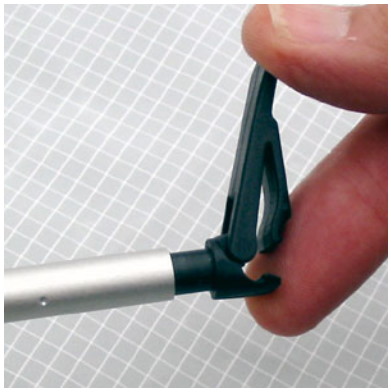
Adjusting Batten Tension

A maximum adjustment range of about 5/8" (16mm) is provided. Your glider will come to you with the battens properly adjusted for length and tension. If you need to adjust batten tension follow these guidelines:

To shorten the batten and loosen the batten tension, rotate the tip clockwise to screw the tip into the batten. Rotate counterclockwise to lengthen the batten and increase batten tension.







Note: battens inboard of the crossbar junction should be adjusted with fairly little tension, especially on the most inboard battens. Note that with the leverage provided by the lever type tip, it is easy to over-tension the battens. A good way to judge batten tension is to note how the visible tension on the sail changes as you lever the tip down into the locking position. When judging tension, before levering the tip down, make sure the batten is fully inserted. Observe the indications of slackness in the sail along the batten pocket as you lever the tip into position. On the inboard battens, you should not see the slack begin to be pulled out of the sail until the tip is almost fully engaged – the lever portion will be within 30 degrees of so the horizontal engaged position. On the battens outboard of the crossbar junction, you should see the slack begin to pull out of the sail when the lever is still up at about a 45 degree angle. This represents a difference in tension of a little more than one quarter inch, or about 7mm.