the uninsured
RELATIVE WORKSHOP inc
Engineering Department

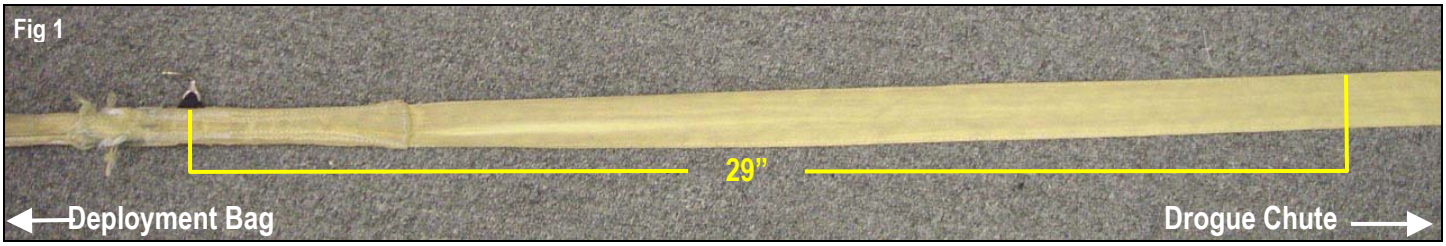
SIGMA "DETACHABLE" DROGUE BRIDLE MODIFICATION - (26 JUN 2003)

Modification kit checklist:
1 x disc attachment assembly (**fig #1**)
1 x replacement center line (**fig #2**)
2 x Type 3 - ¾" tape, 3" long buffers (**fig #3**)
1 x PD-Slink kit including installation instructions (**fig #4**)

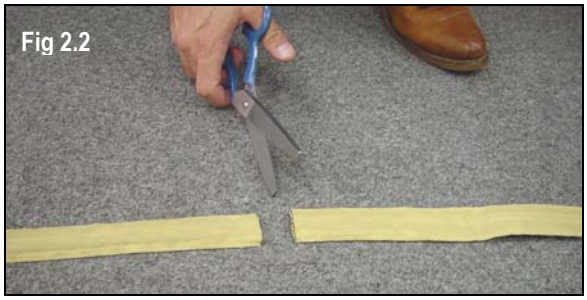
Tools Required: 2 x 3/32" hex head wrenches (with T-handles recommended).

Before you begin, disconnect drogue bridle from the deployment bag, disassemble the disc from the sigma bridle assembly, and remove the centerline.

1. To mark where the Kevlar bridle should be cut, lay it out on a flat surface and smooth out as much as possible. Measuring from the **center** of the Type-1 tape (which attaches the Sigma safety pin) towards the drogue chute, mark **29"** on bridle (**Fig 1**).

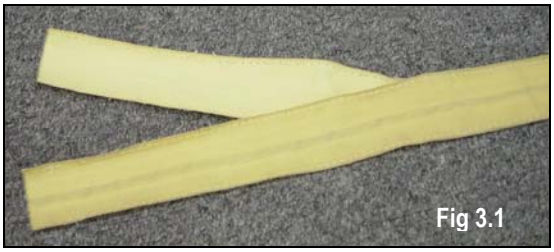


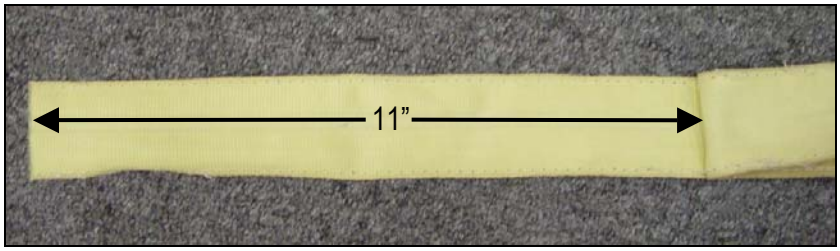
2. Use a good, sharp pair of scissors to cut the Kevlar bridle (**Fig 2.1**). This will ensure a clean and accurate cut (**Fig 2.2**).



NOTE: Be sure your scissors are very sharp. We suggest you practice on a lower section of Kevlar (below the disc). The cut will be more accurate when the Kevlar is under tension.

3. Once the bridle has been cut, unpick the stitching which joins the two layers of Kevlar webbing (**Fig 3.1**). The two layers should be separated to at least **11"** This will be a sufficient amount to construct the loop ends (**Fig 3.2**).





4. The two sides of the bridle will now be converted into loop ends. Mark 5" from each of the two ends on the outer surface (**Fig 4.1**). With inner surface facing up, fold the webbing into the center on this 5" mark (**Fig 4.2**). Using E-thread, sew a double pass of zigzag stitching, or one bar tack, or four passes with a single needle machine across this mark (**Fig 4.3**).

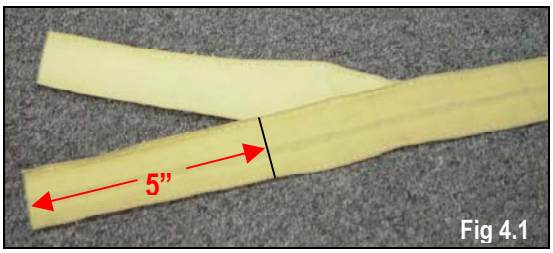


Fig 4.1


Fig 4.2

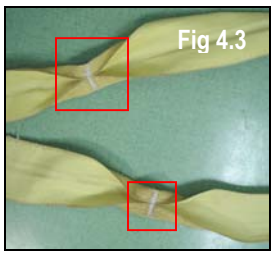


Fig 4.3

5. Identify the two 3" pieces of Type-3 (3/4") tape (**Fig 5.1**). These pieces will serve as buffers. Center one Type-3 buffer over the inside of the folded area and sew down using E thread in a 5-sided box stitch pattern (**Fig 5.2**). Repeat this on both ends.

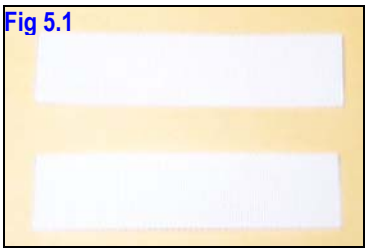


Fig 5.1

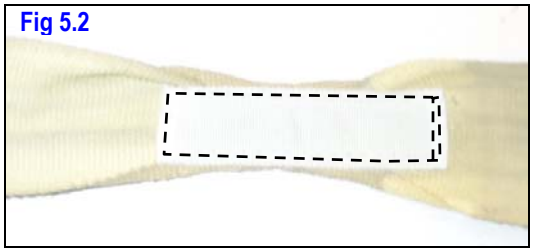


Fig 5.2

6. Fold back the raw end of Kevlar ½" where indicated with the red arrow (**Fig 6.1**) before forming the loop end and sewing the boxed 4-point. The finished boxed 4-point should be 3" in length (**Fig 6.2**). Repeat the process on the other end (**Fig 6.3**). Join the two pieces together using E thread, lock stitched at each end as shown in red (**Fig 6.4**). It is important to maintain **equal length** of the two loop ends (**Fig 6.5**).

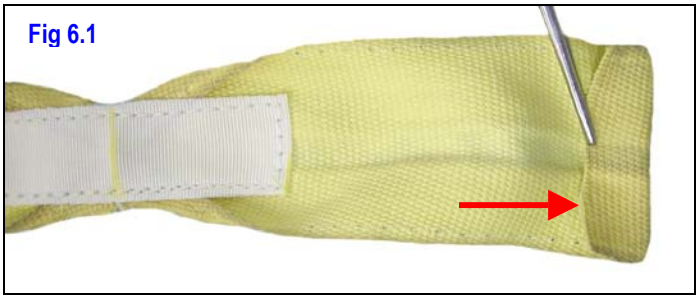


Fig 6.1

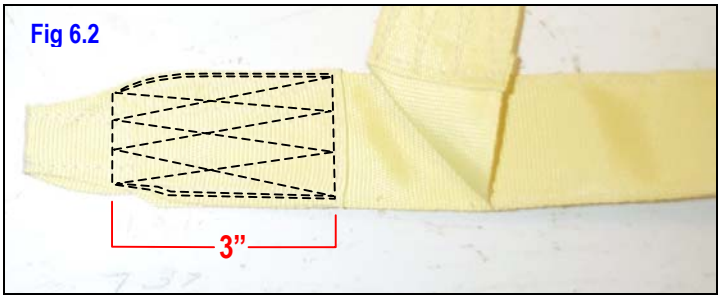


Fig 6.2

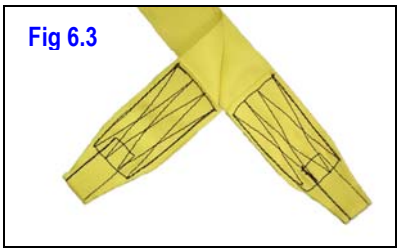


Fig 6.3

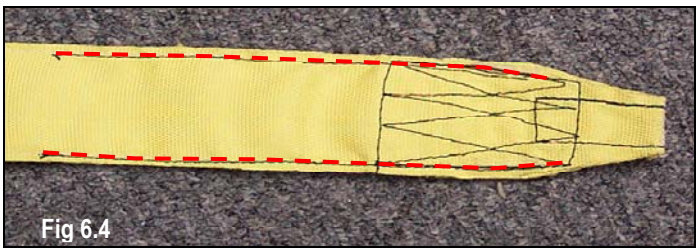


Fig 6.4


Fig 6.5

7. With the modification to the bridle now complete, connect the new ***disc attachment assembly*** (**Fig 7.1**) to the modified upper bridle assembly by following the instructions for **PD-Slink installation** (**Fig 7.2**). These are provided with your kit (**Fig 7.3**).


Fig 7.1

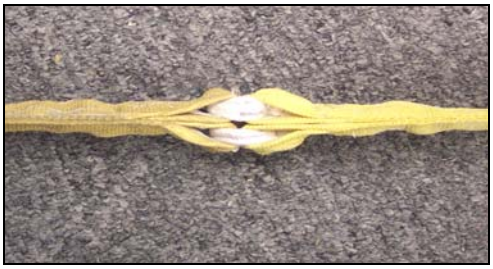


Fig 7.3

8. Insert the centerline into the Kevlar bridle. Check the centerline length by extending the Kevlar drogue bridle assembly completely. The centerline knot should be **1"– 1 ½"** (**Fig 8.1**) from the guide grommet when properly **tuned**. Lengthen or shorten the centerline accordingly. Reattach the drogue bridle assembly to the deployment bag.

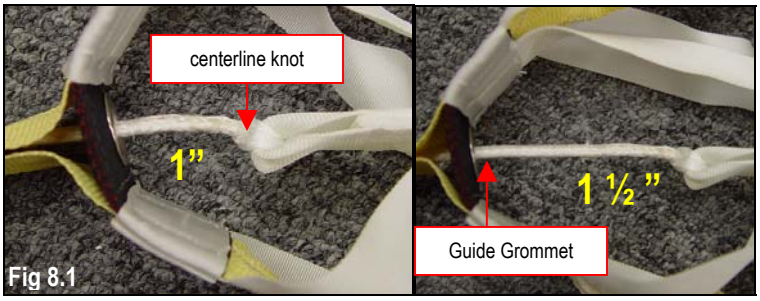


Fig 8.1