# MIRAGE SYSTEMS, INC.

### **PRODUCT SERVICE BULLETIN 12-04**

#### **Product Modification Procedure**

Authorized Repairman: FAA Master Parachute Rigger or Foreign Equivalent.

#### Tools required:

- 1. Snips or small pointy scissors. (Seam ripper optional)
- 2. Small crafts glue gun. (Optional)
- 3. A 3/4" x 1 5/8" squared plastic template, with a mark at 3/8". (See step 1)
- 4. Tailors marking pencil.
- 5. Lighter and/ or hot knife.

#### Machine required:

1. Medium to heavy duty 301 Straight Stitch (5-9 spi.) Capable of sewing through .040 nylon plastic.)

#### Materials required:

- 1. 3 1/4" length of 3/4" type III nylon binding tape (cover for elastic keeper.)
- 2. Size E / 69 nylon thread. (Color black or matching)

Time required: 15-20 min.

#### Procedures:

#### Step 1.

Cut a 3/4" X 1 5/8" (2 X 4 cm.) template using a piece of plastic template material or firm craft poster board. Mark at 3/8" (1cm) as shown.



# Step 2.

With main canopy removed, open reserve container (if not already), remove free-bag, remove suspension lines from pocket and chain link. Bag the canopy in its free-bag with pilot chute and tie off with pull-up cord at the reserve risers.



# Step 3.

Completely unthread the Cypres cutter from the underside of #1 kicker flap and temporarily store it in the channel under the reserve pack tray.



Step 4.

Carefully remove the elastic cutter keeper and rip-stop channel from the under side of the #1 kicker flap. Retain elastic keeper for repositioning to under side of #3 center flap.



Step 5.

Carefully remove the grommet guard from the back side of closing flap #3.



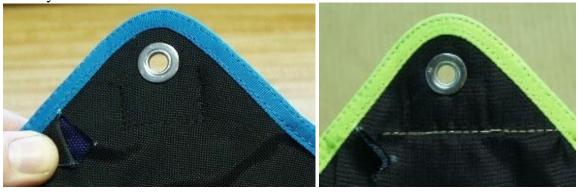
# Step 6.

Lay the template against binding tape and grommet. Mark three locations as shown.



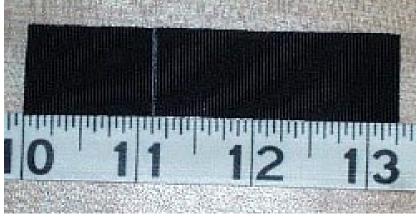
### Step 7.

- a. With snips or seam ripper, carefully cut the L shape that connect the dots through the Para pack layer only. Lightly sear the cut Para pack edge with a hot knife or lighter.
- b. If the center flap has this row of stitching running below the grommet, a short section may need to be removed.



# Step 8.

a. Hot cut a 3 1/4" length of 3/4" type III nylon binding tape and mark at 1 1/8".



b. The elastic cutter keeper setup may be pre-sewn as shown here or glued as follows.



c. With a crafts hot glue gun, run a thin bead across the binding of the elastic keeper and firmly lay type III binding tape in place.

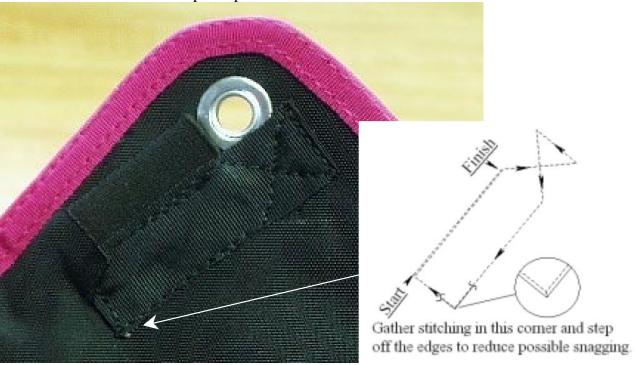


d. Fold short end over and lightly hot glue back side into place.



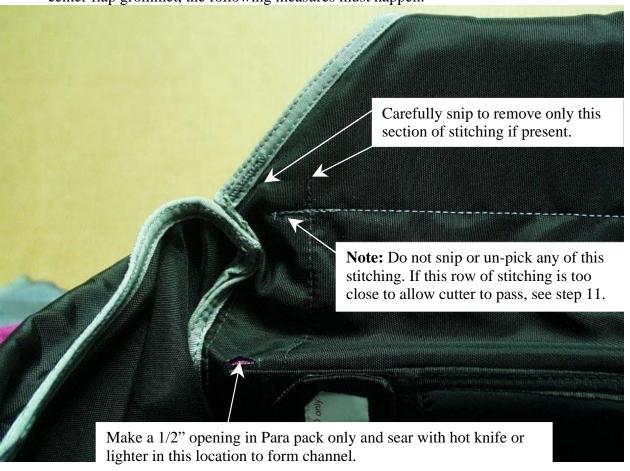
Step 9.

Place elastic cutter keeper in place and sew as shown.



Step 10.

In order to open a channel for the cutter cable to pass from to processing unit to the #3 center flap grommet, the following measures must happen.



# Step 11.

Only if the center flap row of stitching is too close to the corner to allow the cutter to pass, 2 additional 1/2" openings will need to be made around this stitch pattern and carefully seared with a hot knife or lighter. This will allow the cutter cable to bridge this stitch pattern.





Step 12

Use a bodkin or similar tool to draw a pull-up cord with cutter through the newly formed cutter channel as shown below.







# Modification Confirmation:

Confirmation of this mod is easily made by identifying the stitching just under the reserve

pin cover and side flap.



**Note:** When removing the cutter, push it back through with your thumb. Do not pull it out by its cable.

