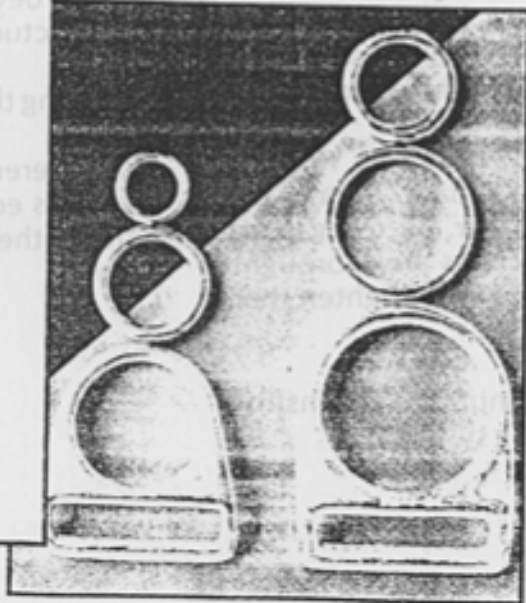


W · O · N · D · E · R · H · O · G

Vector

OWNER'S MANUAL



Relative Workshop

1725 N. Lexington Ave. • DeLand, FL 32724 • (904) 736-7589 • Telex: 3728031

The first part of this chapter describes procedures for packing round reserve canopies into the Vector while the second part covers ram-air reserves.

An FAA Senior or Master rigger certificate is required to pack any reserve parachute that will be carried for use in the U.S.

If the rig is to have an FXC 12000 or SSE Sentinel MK 2000 automatic activation device, see the instructions later in this chapter.

For Round Reserves:

Because of the wide variety of reserve canopies on the market, this manual does not contain instructions on inspecting, assembling and folding the reserve parachute canopy. The rigger must refer to the packing instructions provided by the canopy manufacturer for this information.

Required Tools:

- One temporary pin
- One pull-up cord (48 in. of 550 cord sheathing)
- One packing paddle

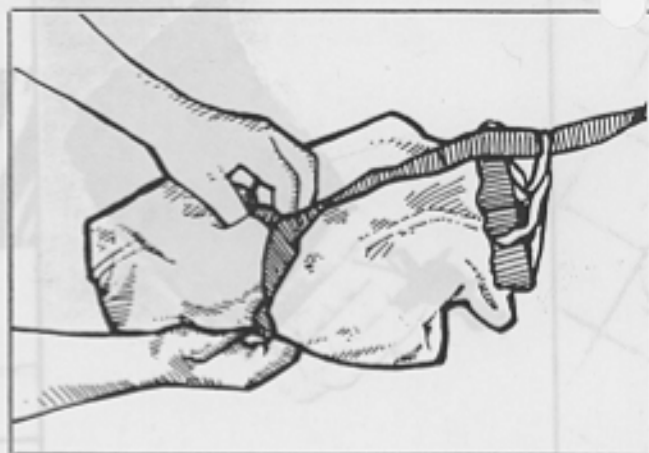
The reserve flaps are numbered 1 through 6 for reference. Close them in that sequence.

It's a good idea to read all of these instructions before starting to pack the reserve.

1. Attach the canopy to the risers with the steering modifications and/or data panel facing to the wearer's rear. If using L-bar links, make sure their screws are thoroughly tightened. If using Rapide links, tighten them to snug, plus a quarter-turn.

2. Follow the canopy manufacturer's instructions to set up the steering system.

the apex lines and the larger attaches to the pilot chute. Do not substitute other bridles because the length of this bridle is important for fast deployment. Do not substitute another pilot chute for the Vector reserve pilot chute.



4. Inspect the entire reserve system carefully, beginning with the pilot chute and ending with the harness.

5. Flake the reserve canopy according to the manufacturer's instructions.

6. If your reserve canopy does not have a diaper or other deployment device, fold the skirt up parallel to the radial seams, then fold the canopy into fifths.

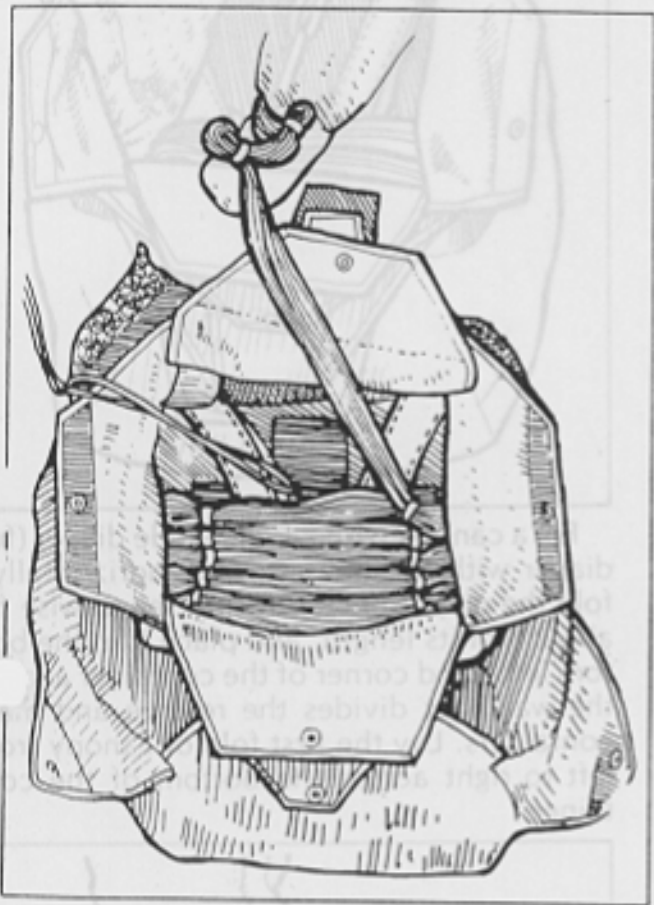
7. If your canopy is equipped with a diaper or similar device, close it according to the manufacturer's instructions.

8. Placing the canopy in the pack tray.

A different packing procedure is used if the Vector is equipped with an FXC 12000 AAD. Follow the instructions under (A) or (B) below:

container with the links lying between the line-stow loops and the grommet stiffener plate. Fan the riser ends out rather than stacking them on top of each other.

Make the first stow of suspension lines at the bottom and stow the lines from left to right, working toward the top of the container. Be sure to stow the lines the full width of the container.

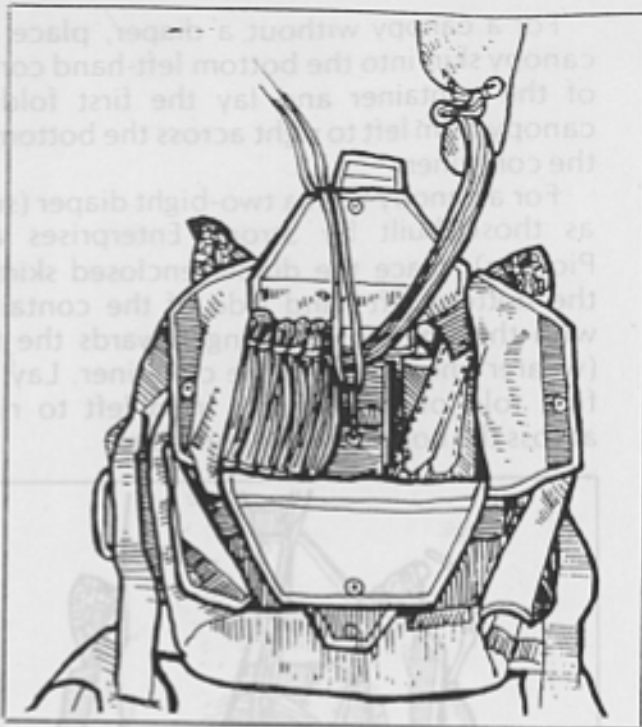


(Skip the next section and continue with Step 9 below.)

B. With FXC AAD

Place the reserve risers into the reserve container with the links lying between the line-stow loops and the grommet stiffener plate. Fan the riser ends out rather than stacking them on top of each other.

outside and working toward the middle of the container.



Note: If the canopy has a diaper with all the lines stowed on it (a "full-stowage" diaper), then stow the lines on the diaper instead of stowing them in the pack tray. Then lay the diaper and lines on the opposite side of the container from the power unit.

9. Check the length of the reserve closing loop. The length from the stiffener plate to the end of the loop should measure approximately 2 to 2¼ inches for small canopies like the Pioneer K-XX and the National Phantom 22 canopies. For other canopies, the loop will have to be lengthened accordingly.

Two factors determine the correct loop length. First, it should not take an excessive amount of effort to close the last flap (Flap #6).

And when the container is closed, you should not be able to compress the pack more than ¼ inch when you push down on the top of the pilot chute.

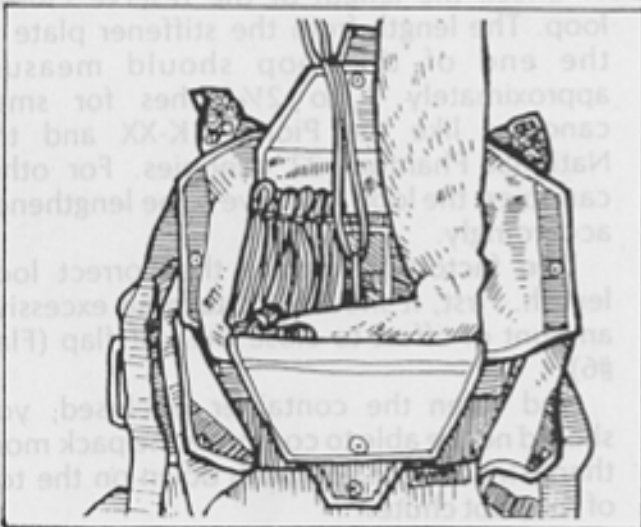
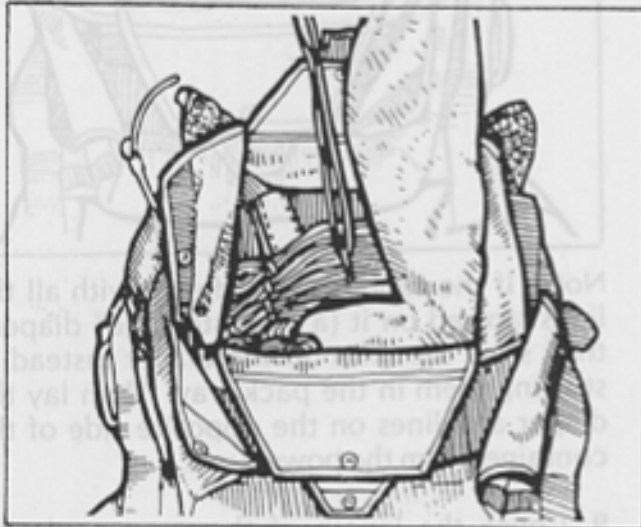
If excessive play in the spring has developed after the reserve has been packed for awhile, open the container and shorten the loop.

10. Insert the pull-up cord through the reserve locking loop.

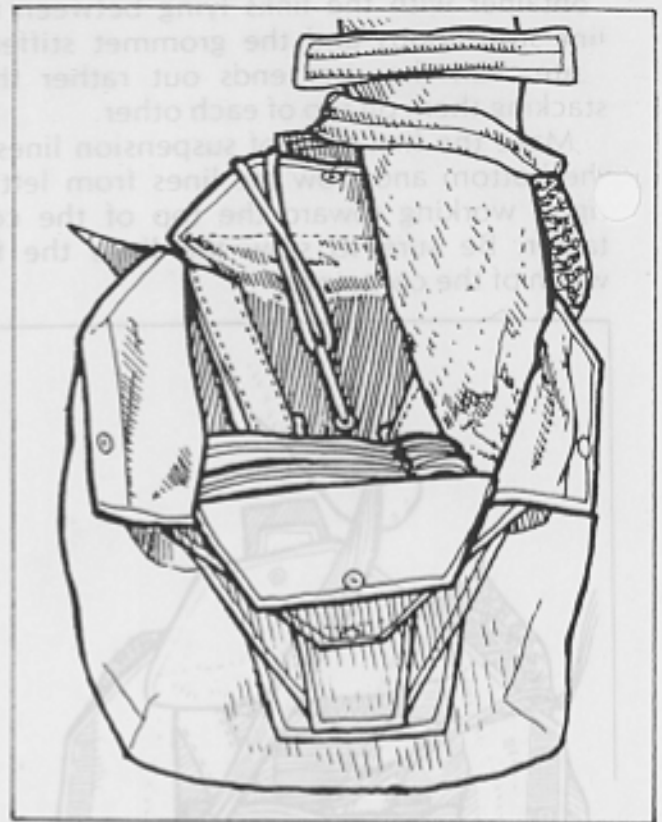
A. The First Fold:

For a canopy without a diaper, place the canopy skirt into the bottom left-hand corner of the container and lay the first fold of canopy from left to right across the bottom of the container.

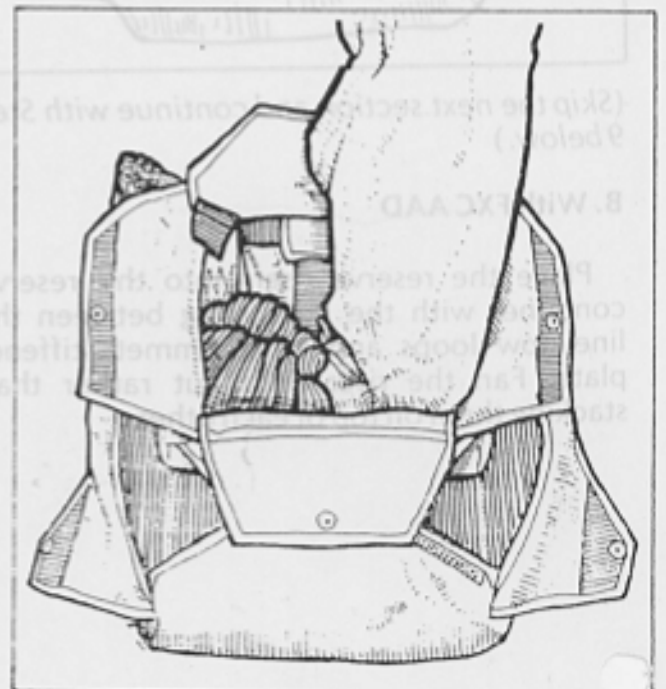
For a canopy with a two-bight diaper (such as those built by Strong Enterprises and Pioneer), place the diaper-enclosed skirt in the bottom left-hand side of the container with the line stows facing towards the top (wearer's head end) of the container. Lay the first fold of the canopy from left to right across the bottom of the container.



For a canopy with a full diaper on which the lines stow vertically (such as the Strong Enterprises Lopo Lite), lay the diaper-enclosed skirt in the bottom left-hand corner of the container against the dividing wall between the reserve and main containers. The stows should face up (towards the wearer's head).



For a canopy with a Piglet-style diaper (full diaper with the lines stowed horizontally), fold the diaper enclosed skirt lengthwise for about $\frac{1}{3}$ of its length, and place it in the bottom left-hand corner of the container against the wall that divides the reserve and main containers. Lay the first fold of canopy from left to right across the bottom of the container.



For a canopy with no diaper or a two-bight taper, the canopy can now be S-folded into the container. Make the folds slightly wider than the container. This will help fill out the sides better.

For a canopy with a full diaper such as the Reserve 3 and the Featherlite, even out the bulk by making one (or two) short folds into the container corner opposite from the skirt. The subsequent fold can then be made across the entire width of the container, on top of the diaper to give the container its proper thickness. Then S-fold the rest of the canopy toward the top of the container, making each fold slightly wider than the pack tray.

With small canopies such as the National Phantom 22 and the Pioneer K-XX, the best appearance results from having no more than two folds above the loop.

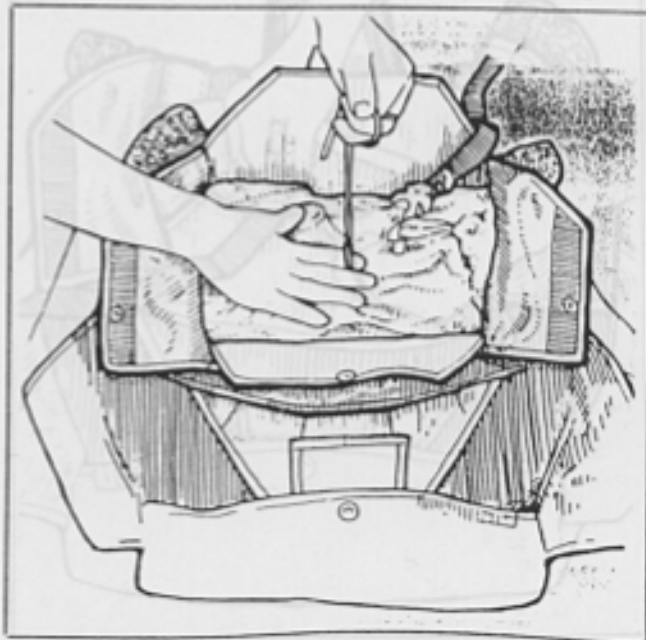


to lengthen the loop.

Make the folds above the closing loop slightly wider than the container to fill the space under the side flaps.



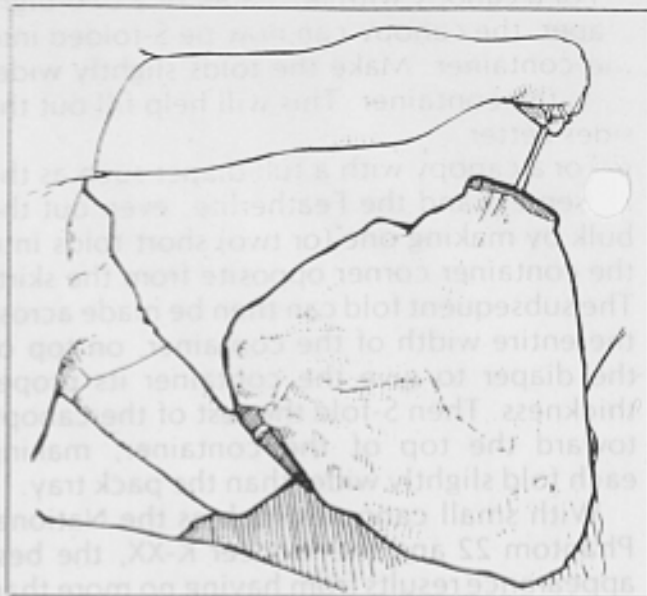
12. Route the pull-up cord and locking loop straight up through the folds in the canopy.



A. Close the inside bottom flap first (Flap #1) and secure it with a temporary pin.



B. Route the reserve bridle toward the bottom right-hand side of the container and close the inside top flap (Flap #2), securing it with a temporary pin.



D. S-fold the bridle up and down on top of the two flaps, so that it will be under the base of the pilot chute without fouling the closing loop.



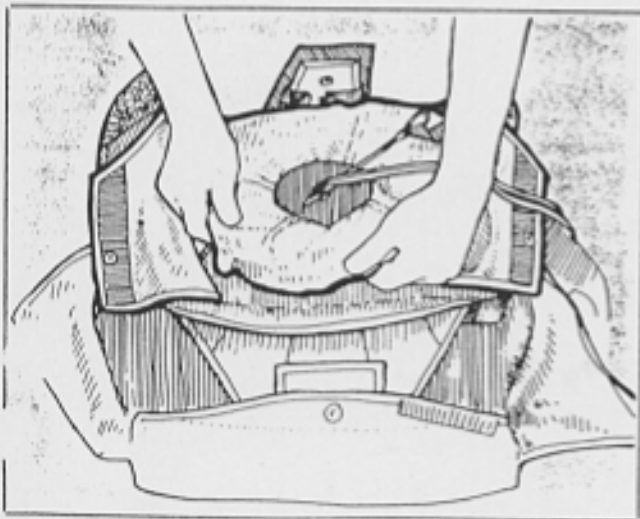


F. Pull all the canopy fabric out from between the spring. Folding the fabric—rather than stuffing it between the coils—reduces the bulk of the packed container.

After pulling the fabric from between the spring, check to make sure the pilot chute is centered under the crown.

Now fully collapse the spring to see how much loop can be pulled through the top of the pilot chute. If you can pull more than $\frac{1}{2}$ to $\frac{3}{4}$ in. through, the loop is too long. Now would be the best time to open the container and shorten the loop.

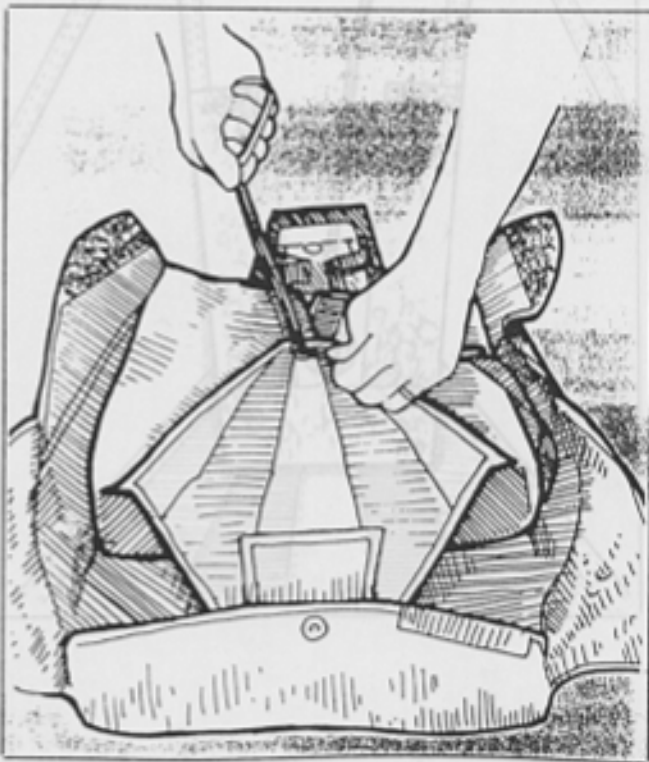
G. Lay the fabric flat all around the pilot chute and fold it under in wide folds to the center. Fold the top and bottom under first, then the sides. Keep the fabric folds of the pilot chute out from under the open reserve flaps.



oids in the pilot chute stay flat and neat.



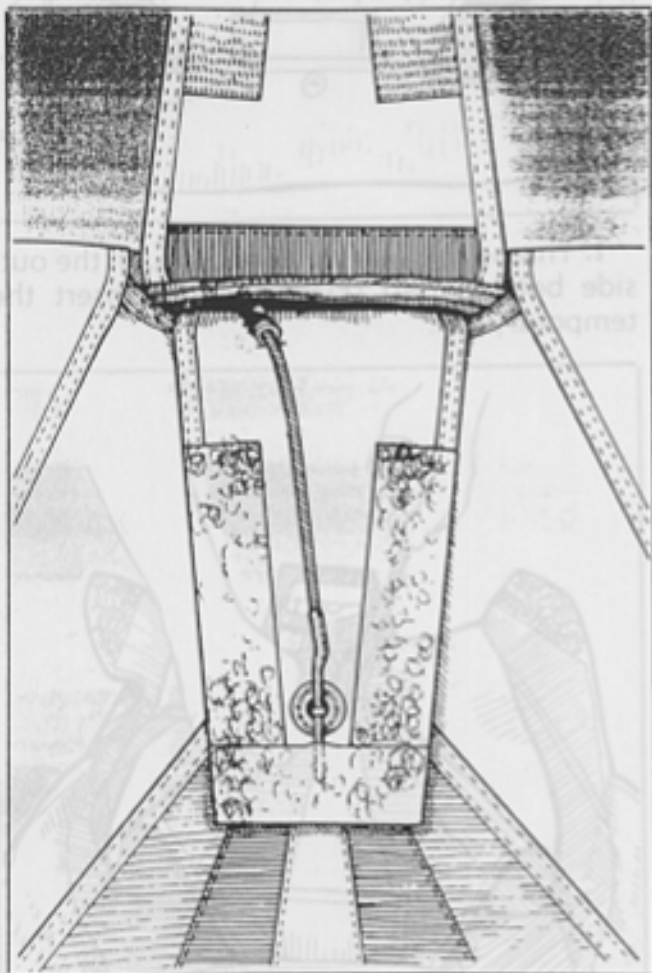
I. Thread the pull-up cord through the outside bottom flap (Flap #5) and insert the temporary pin.



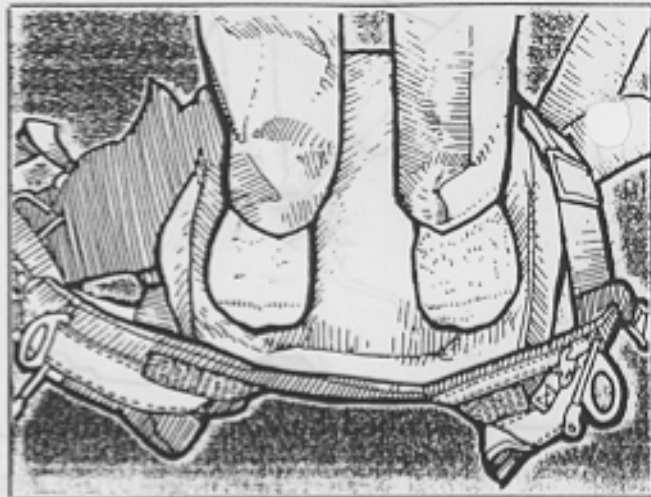
porary pin. If the force necessary to close the last flaps seems excessive, your loop may be too short. Use a scale to check the force required to extract the pin. With the canopy packed properly and the right-sized loop, 8 to 12 lbs. of force should extract the pin.

K. Replace the temporary pin with the reserve pin. Insert the ripcord handle into its pouch on the main lift web.

L. Roll back Velcro at bottom of reserve flap and gently push reserve pin under it.



stocking feet or clean shoes to help expel air from the container and make it flatter.



15. Dress the container, seal, sign and log the reserve.

16. Count your tools.

G. Lay the fabric flat all around the pilot chute and fold it under in wide folds to the center. Fold the top and bottom under first, then the sides. Keep the fabric folds of the pilot chute out from under the open reserve flaps.



For a Ram-air Reserve with the Vector Free Bag, Bridle and Pilot Chute System

Because of the wide variety of ram-air reserve canopies available today, this manual does not contain instructions on inspecting, assembling and flaking. For these steps, the rigger must follow the instructions provided by the canopy manufacturer.

Two packing methods are shown here. The first is preferred, although the second will also yield satisfactory results.

The procedures required to pack a ram-air reserve into a Vector and its free bag are different than those specified by Para-Flite, Inc., for the free bag system it supplies with its ram-air reserves. **Para-Flite approves the procedures described here for use with its reserves in the Vector.**

See the instructions later in this chapter for installing the FXC 12000 and SSE Sentinel Mk 2000 automatic activation devices.

REQUIRED TOOLS:

- One temporary pin
- Pull-up cord (About 6 ft. long)
- One packing paddle

Part One: Packing the Canopy

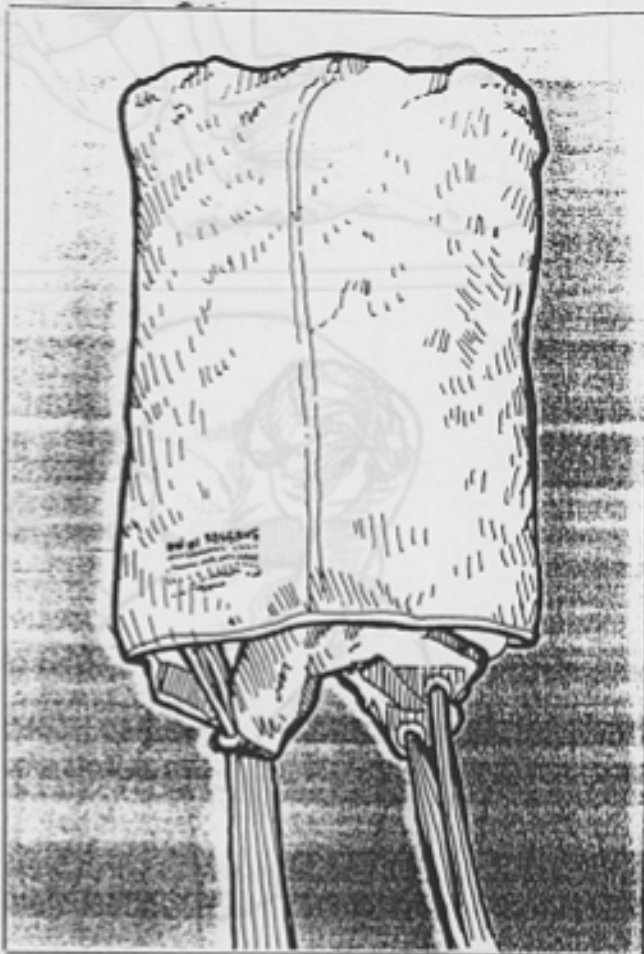
1. Thoroughly inspect the pilot chute, bridle, deployment bag, canopy, lines, links, locking loop, risers, container and harness.

2. Follow canopy manufacturer's instructions for:

- A. Attaching the canopy to risers
- B. Attaching toggles and/or steering lines.
- C. Flaking the canopy.
- D. Folding the nose and canopy.
- E. Setting deployment brakes.
- F. Splitting the tail.
- G. Stowing the slider.
- H. Dressing the canopy.

3. Prepare the free bag so that it is ready to be packed. To do this, insert one end of a pull-up cord through the grommets in the top and bottom of the bag. Tie it to the other end so it won't slip out during the packing procedure. (Note: some riggers prefer to use a T-bar instead of a pull-up cord, inserting it through the bag from the bottom.) The T-bar or pull-up cord will be used later to pull the locking loop through the bagged canopy.

4. Dress the canopy to a width 4 in. wider than the bag (2 in. on each side).

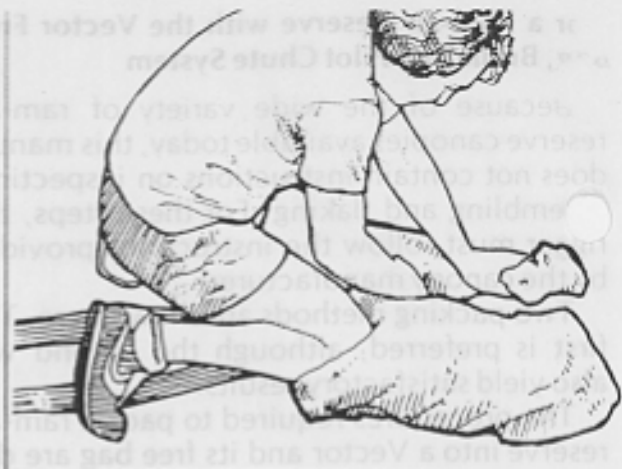


5. Stack the canopy on top of itself, making each fold no longer than the distance from the mouth of the bag to the grommets in the center of the bag.

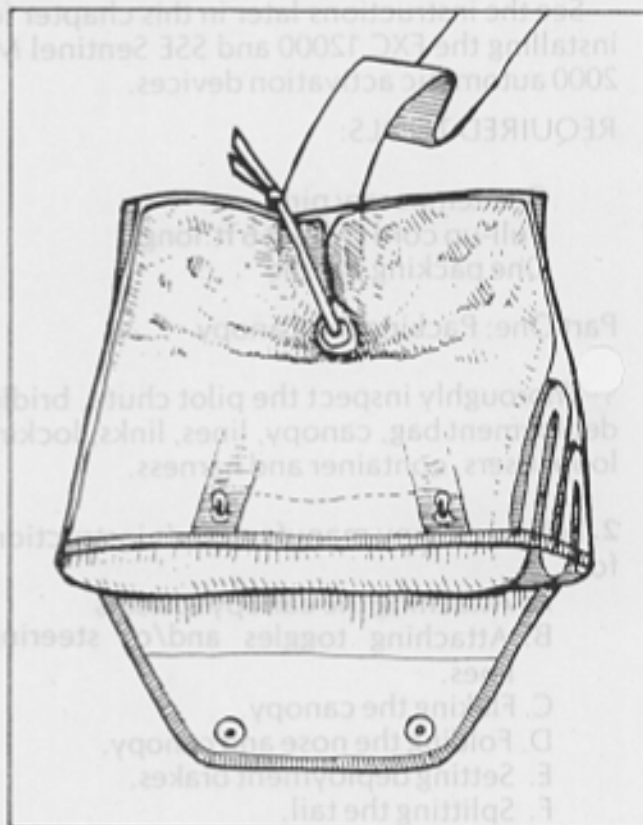




6. After the canopy is stacked on itself, unfold the top portion into two sections or "ears."

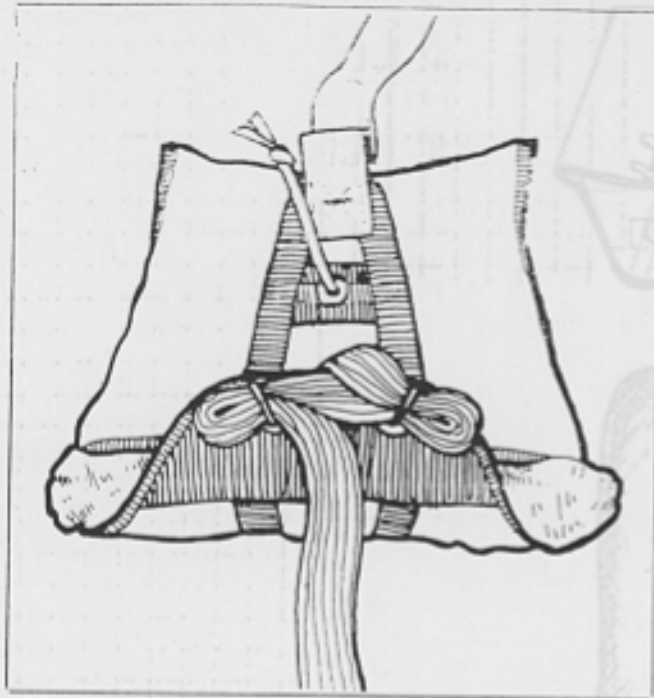


8. Carefully slide the bag over the canopy, pushing each "ear" into the top corners of the bag, filling the corners evenly and leaving a tapered shape.

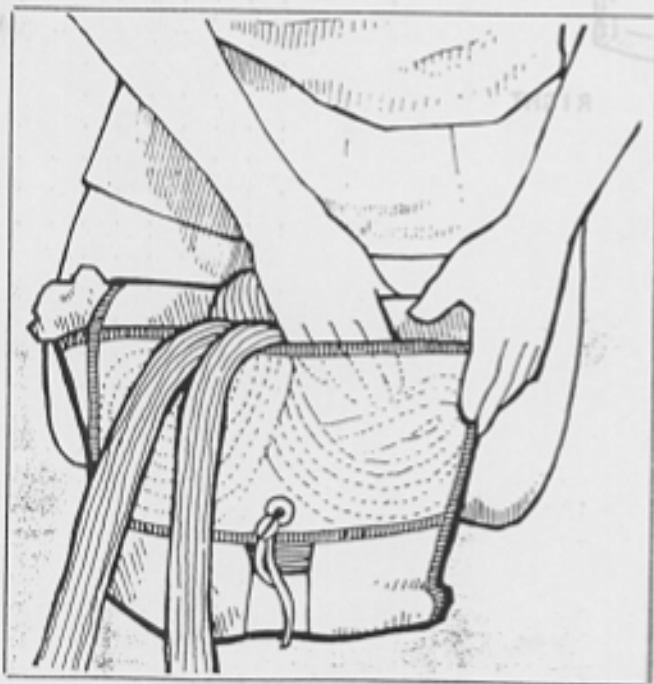


3. Prepare the free bag so that it is ready to be packed. To do this, insert one end of a pull-up cord through the grommets in the top and bottom of the bag. Tie it to the other end so it won't slip out during the packing procedure. (Note: some riggers prefer to use a T-bar instead of a pull-up cord, inserting it through the bag from the bottom.) The T-bar pull-up cord will be used later to pull the locking loop through the bagged canopy.

suspension line. A safety stow is used, not rubber bands.



10. Stow the remainder of the suspension lines into the pouch on the underside of the bag. Use S-folds that extend from one side of the pouch to the other. Be sure none of the lines are trapped between the Velcro at the mouth of the pouch.

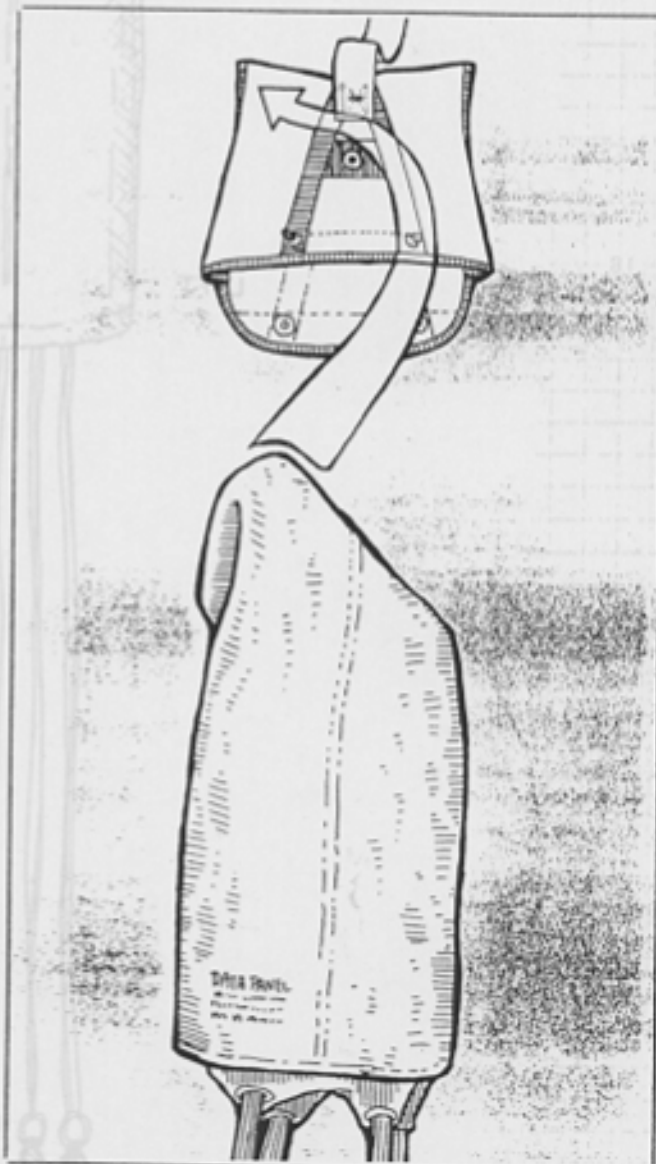


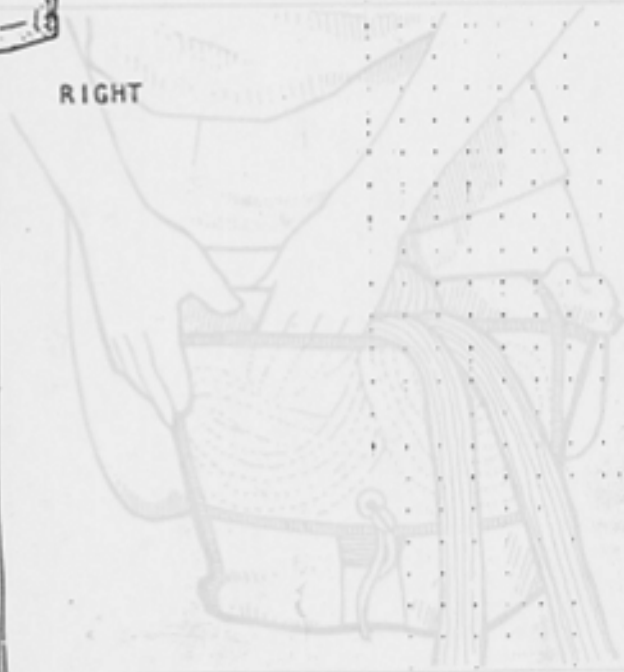
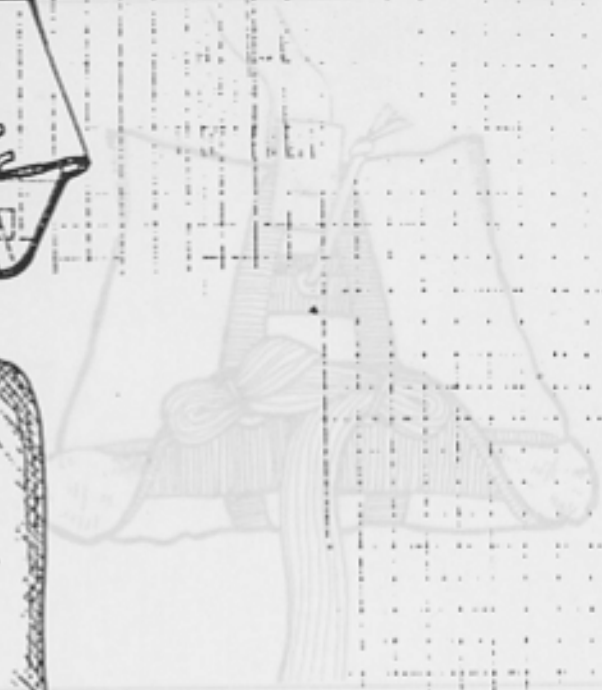
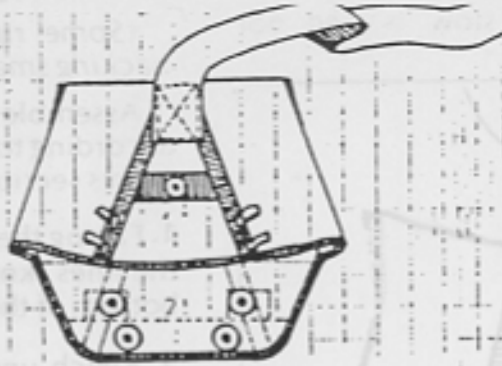
(Skip the following section titled "Alternate Method" and continue with "Part 2: Placing the Bag into the Container," which follows the Alternate Method.)

(Some riggers prefer this method when backing smaller canopies into the Vector.)

Assemble, inspect and flake the canopy according to the instructions at the beginning of this section.

1. Facing the top of the canopy and straddling the lines, kneel on the edge of the tail at the bottom of the canopy.
2. Reach underneath the canopy and fold it all back into your lap, exposing the folded nose. Spread the nose of each cell across the front, so it will be the first part of the canopy to take air.
3. Grasp the top right corner of the flaked canopy and fold it across and under the left side in a 45-degree angle. Be sure not to cover the exposed nose. Lay the canopy back on the table.





18

LEFT

RIGHT

BOTTOM

Diagram #1

SWW

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Diagram #2

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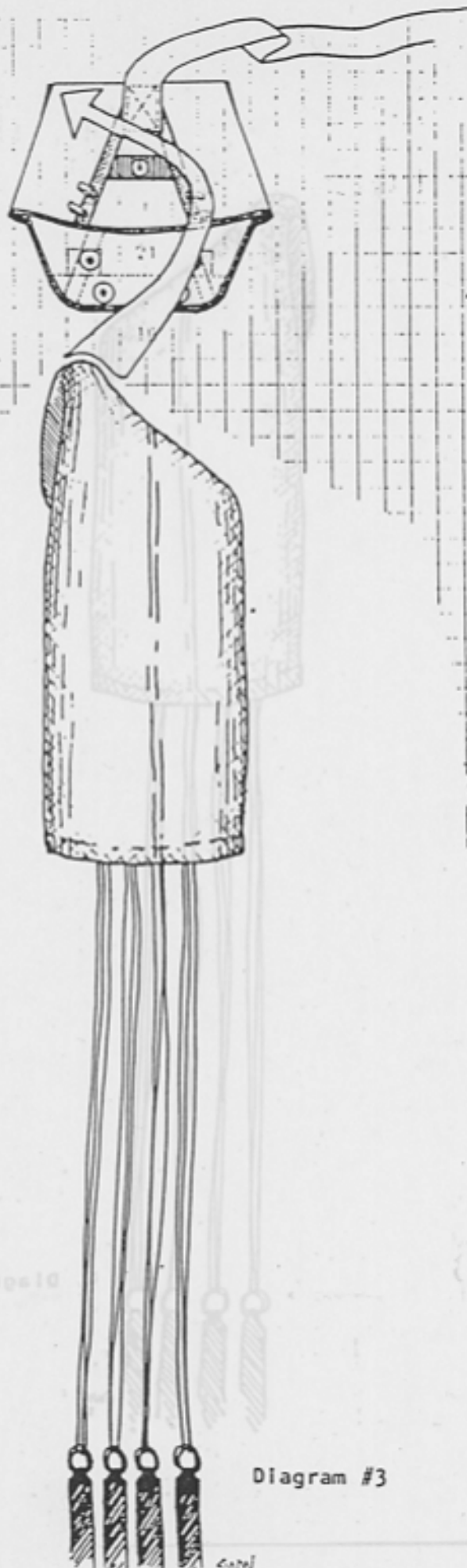


Diagram #3

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Diagram #4

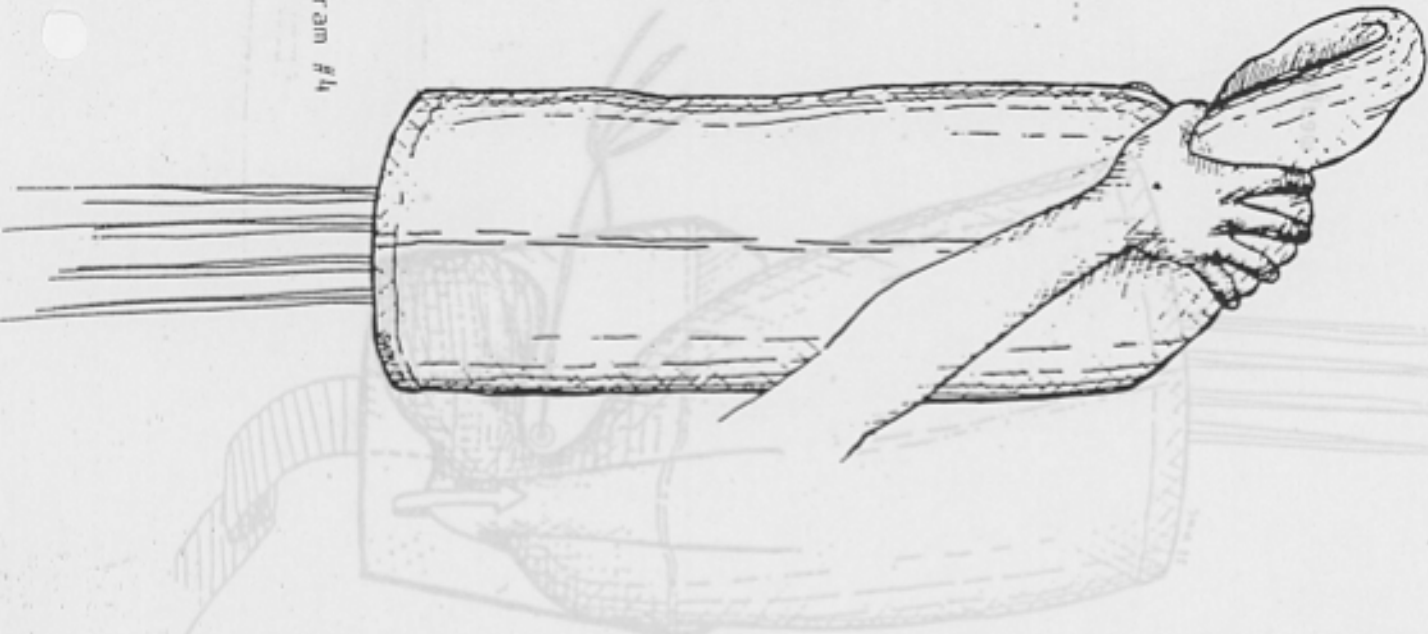


Diagram #5

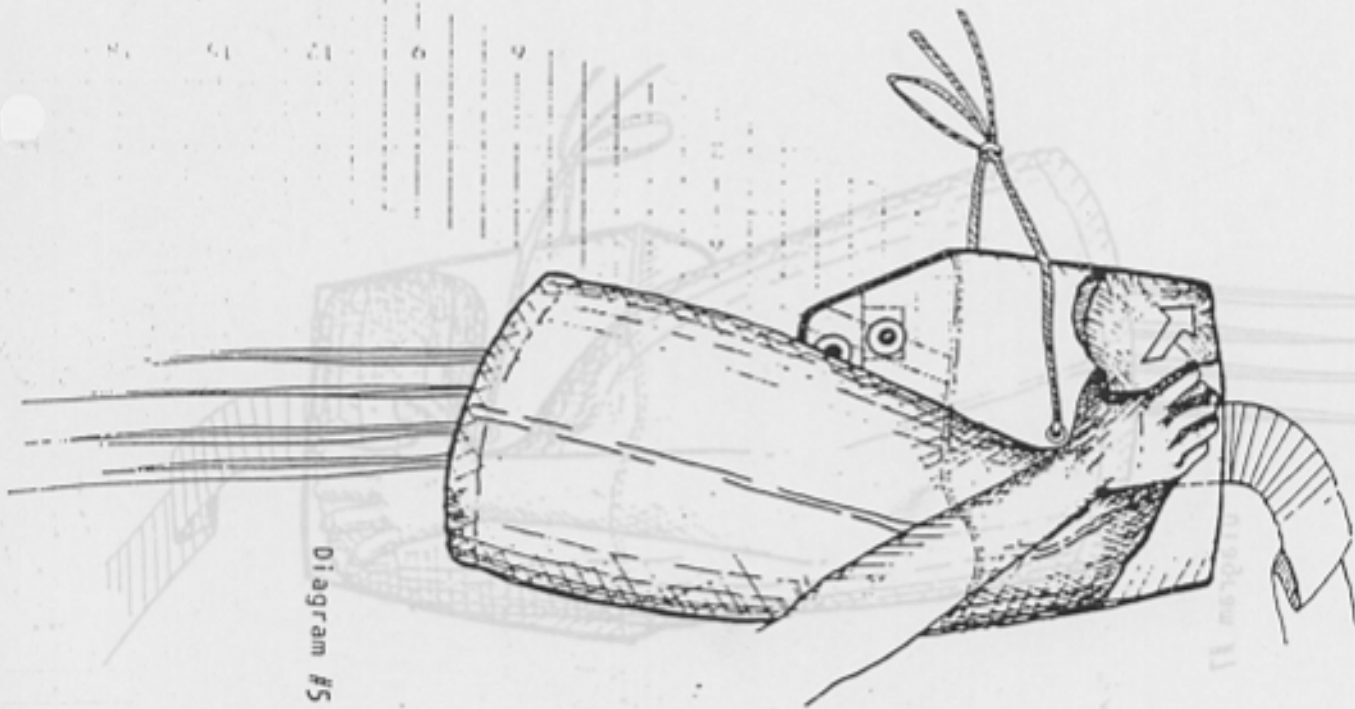


Diagram #6

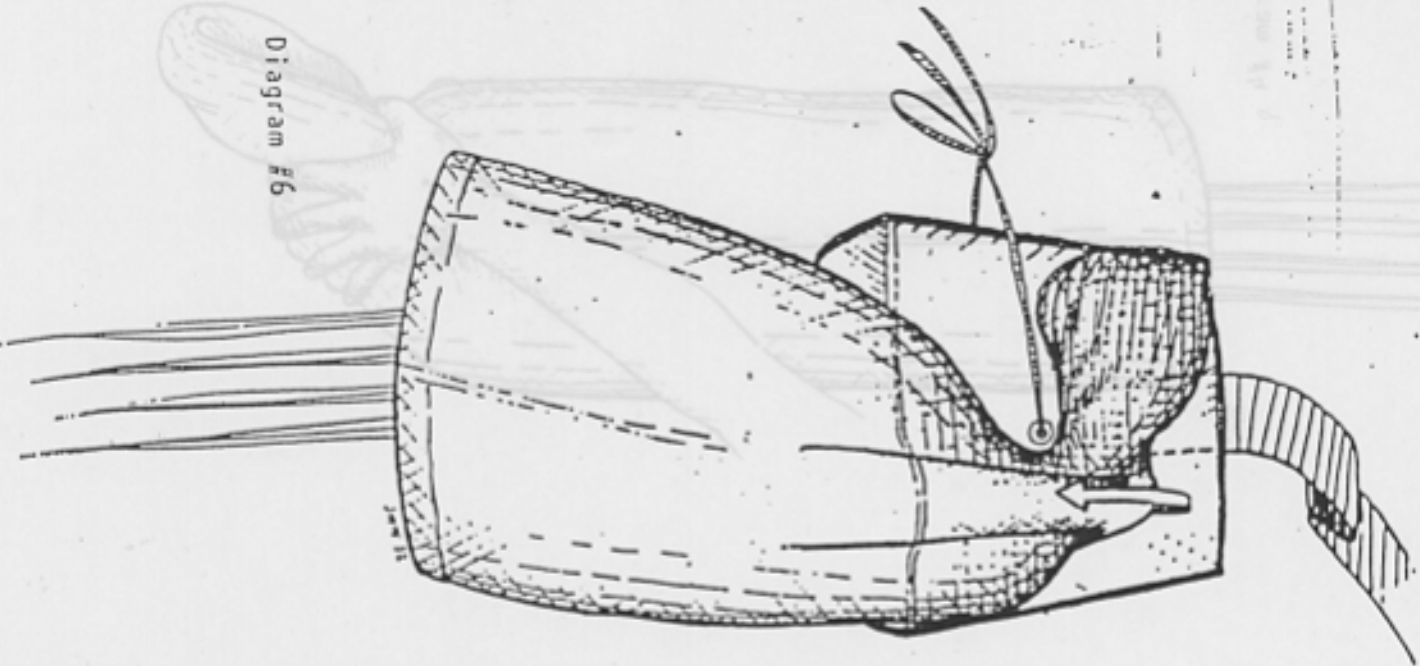


Diagram #7

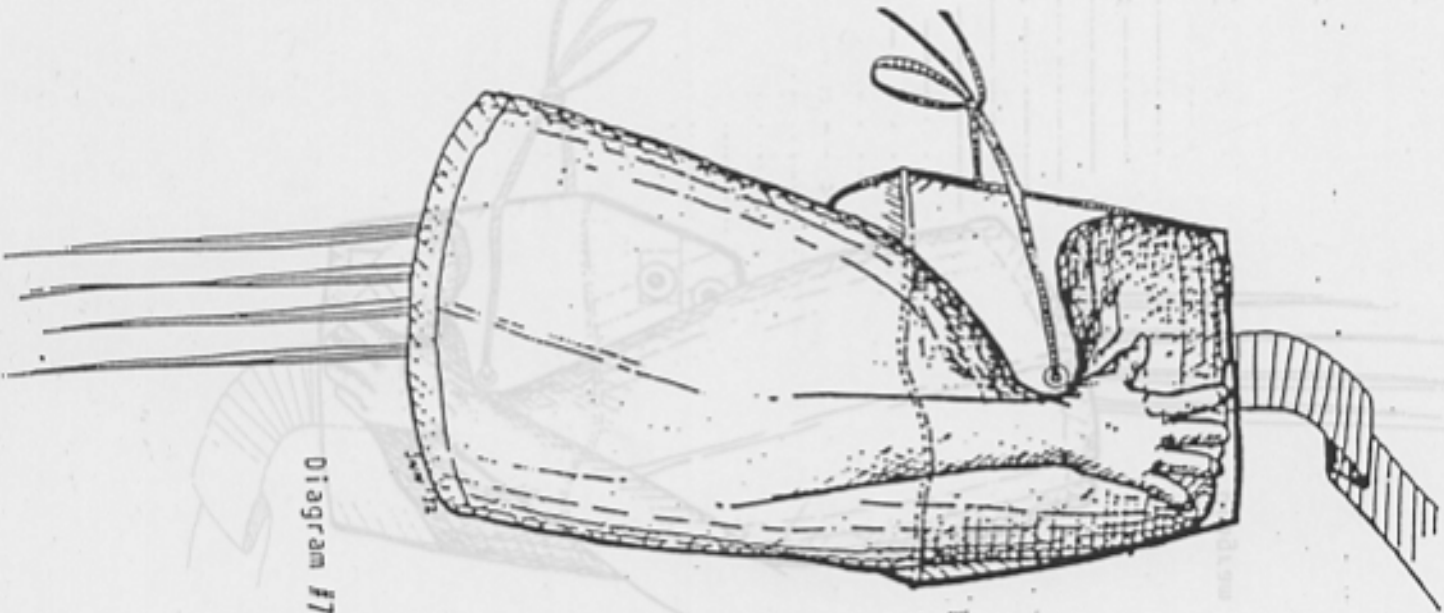




Diagram #8

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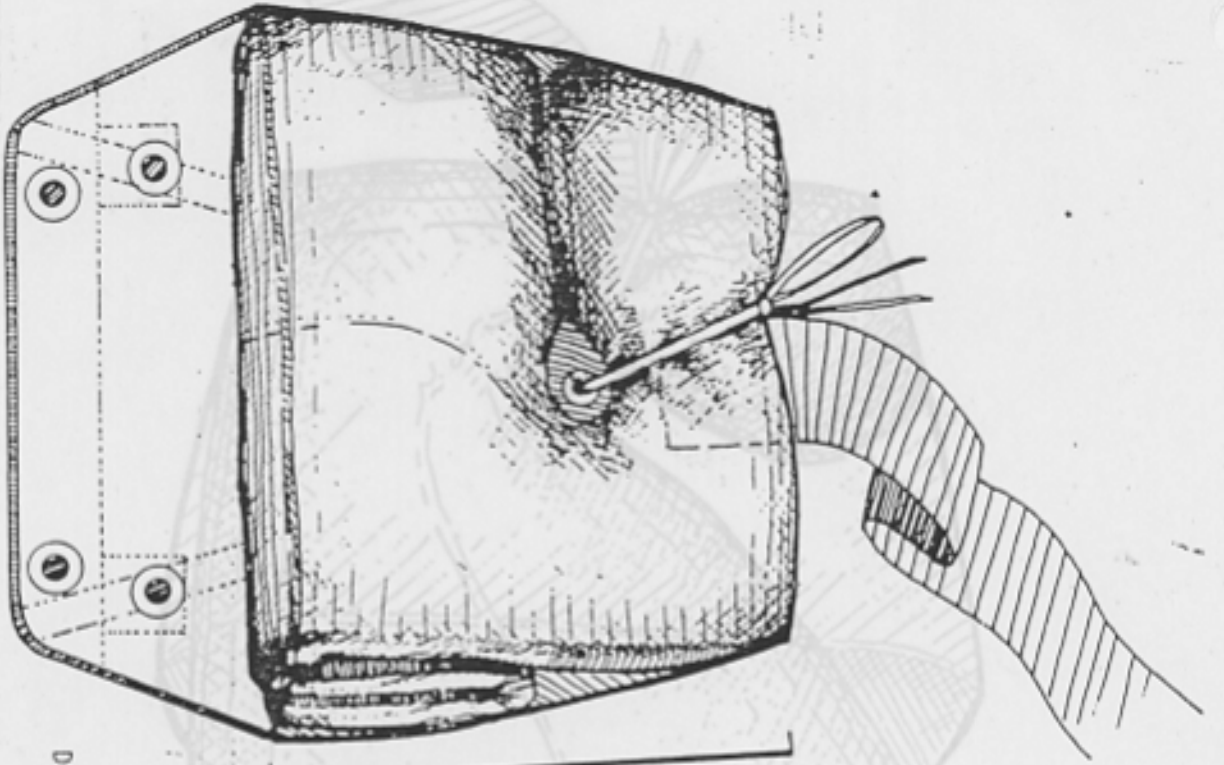


Diagram #9



Diagram 18

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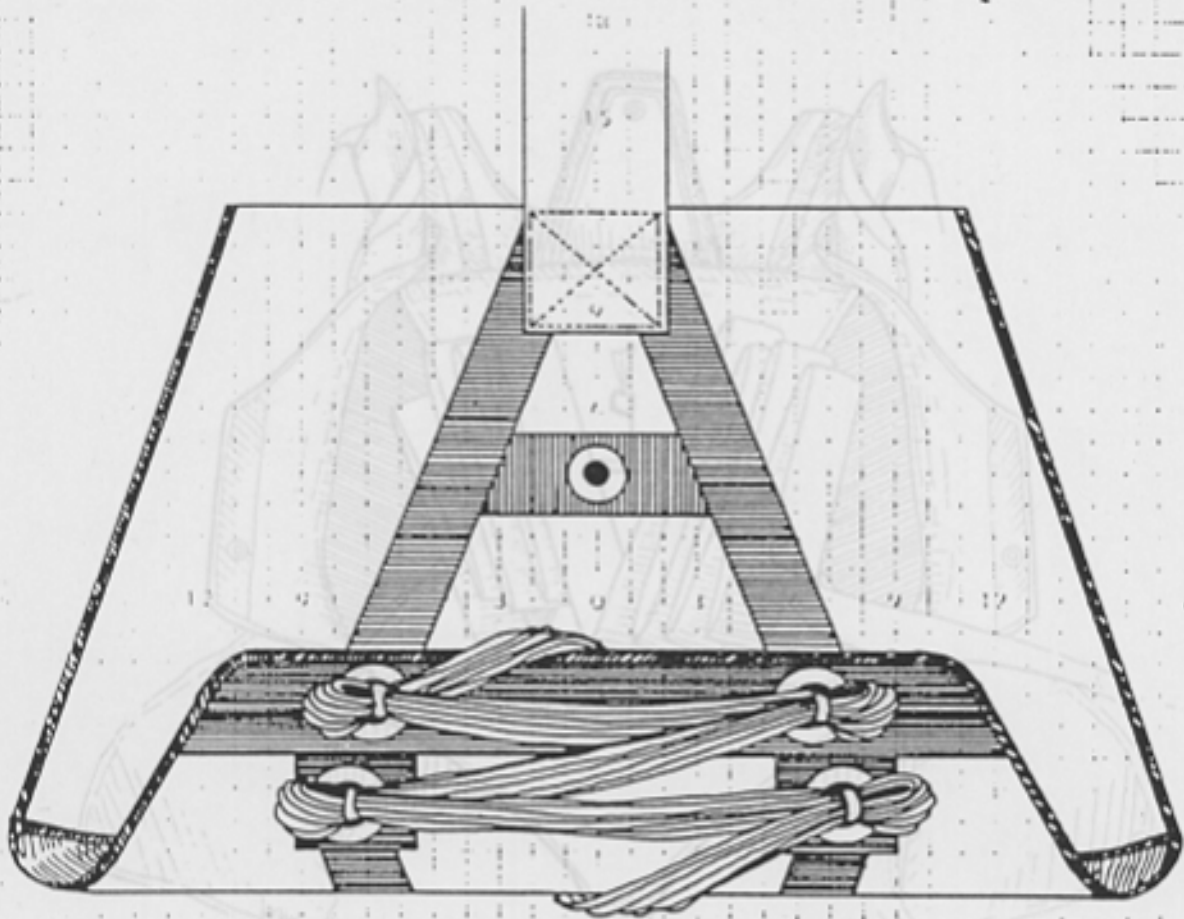


Diagram #10

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21

24

27

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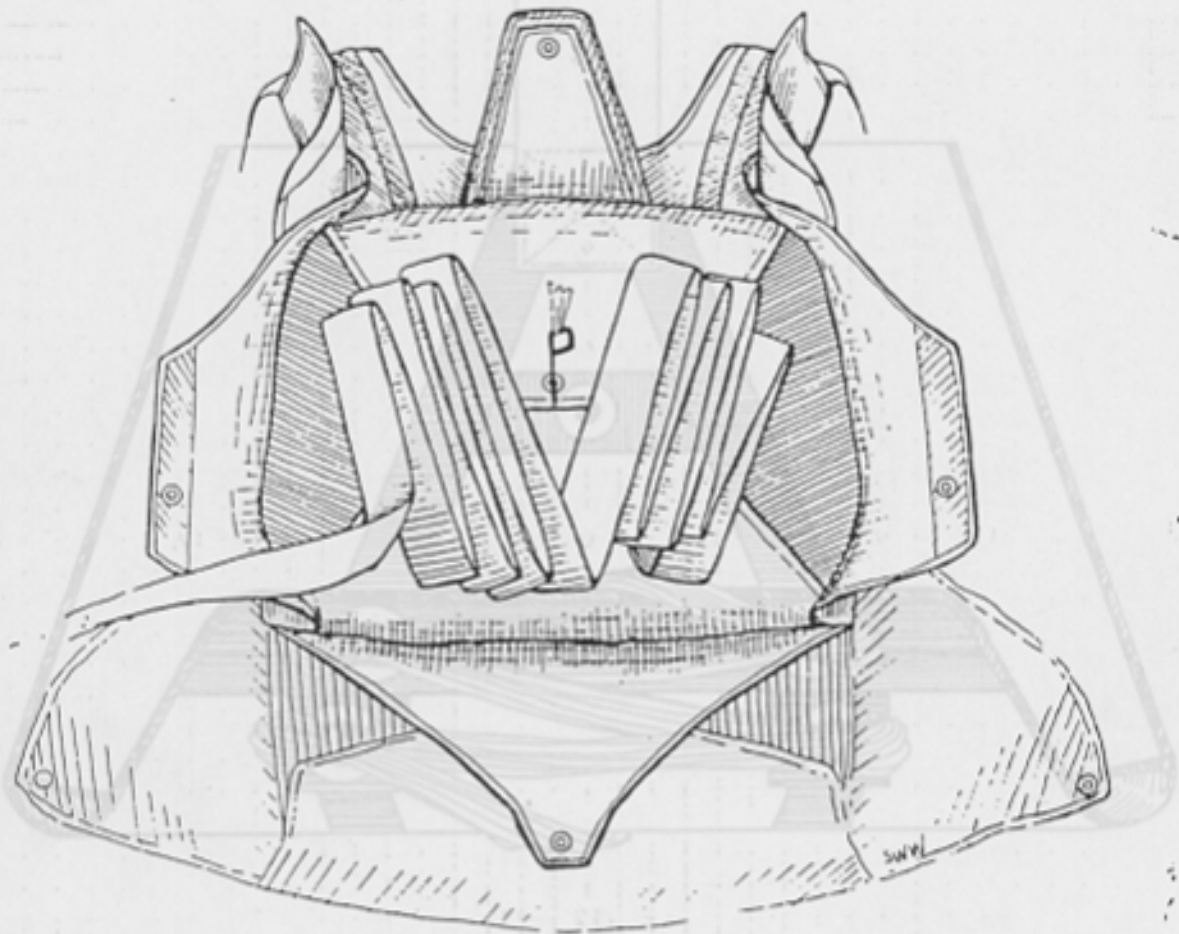


Diagram #11

Diagram #10

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