PACKING INSTRUCTIONS
for
the
Strong Enterprises

# Military Tandem Tether Bundle

# MTTB

Canopy
Part No. 420709

Manual No. 510055
REV: B
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Parachuting is a hazardous activity that can result in serious injury or death. Failure to follow all warnings, instructions and required procedures may result in serious injury or death. Parachutes sometimes malfunction, even when they are properly designed, built, assembled, packed, maintained and used. The results of such malfunctions are sometimes serious injury or death. There are so many factors, both human and natural, beyond our control that we want you to clearly understand that by using or intending to use our parachutes, you are assuming a considerable risk of personal injury or death. If you are not willing to assume that risk, please return the parachute to the dealer where it was purchased for a full refund.

# DISCLAIMER

There are NO WARRANTIES which extend beyond the description of the parachutes in this manual and neither the seller nor any agent of the seller has made any affirmation of fact or promise with respect to the parachutes except those that appear therein.

The liability of the seller is limited to the duty to replace defective parts found upon examination by the manufacturer to be defective in material or workmanship within 7 days after purchase and found not to have been caused by any accident, improper use, alteration, tampering, abuse or lack of care on the part of the purchaser.

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## SCOPE

This manual constitutes the manufacturer's instructions for the operation, packing, and maintenance of the Military Tandem Tether Bundle (MTTB), a parachute cargo delivery system manufactured by Strong Enterprises.

## DESCRIPTION

The MTTB system is a manually operated parachute cargo delivery system fitted with a 28-foot (8.5 m) diameter, steer able canopy. The canopy is housed in a chest pack with an integrated tether harness. The tether harness is connected directly to the tandem harness at one end, and to the cargo container at the other end. There is a swivel device incorporated in the tether to address a spinning load. The cargo harness secures the payload with five lateral straps and two longitudinal straps. The straps can be quickly removed from the tether by the barrel harness quick release box. Additional straps are provided for a cruise box container.

## SYSTEM FUNCTION

The MTTB is a parachute cargo delivery system designed for one parachutist to deliver a payload of between 200 to 400 pounds ( 91 to 181 kg) with a max ramp weight 600 lbs. ( 272 kg). The MTTB system allows the payload to be tethered 10 feet below the parachutist. The payload can be landed three different ways:

A. Land with parachutist.
B. Static line from parachutist, to land under independent 28-foot (8.5 m) round canopy.
C. Release into freefall to open under independent canopy at a pre-determined altitude by automatic activation device (AAD).

## CAUTION

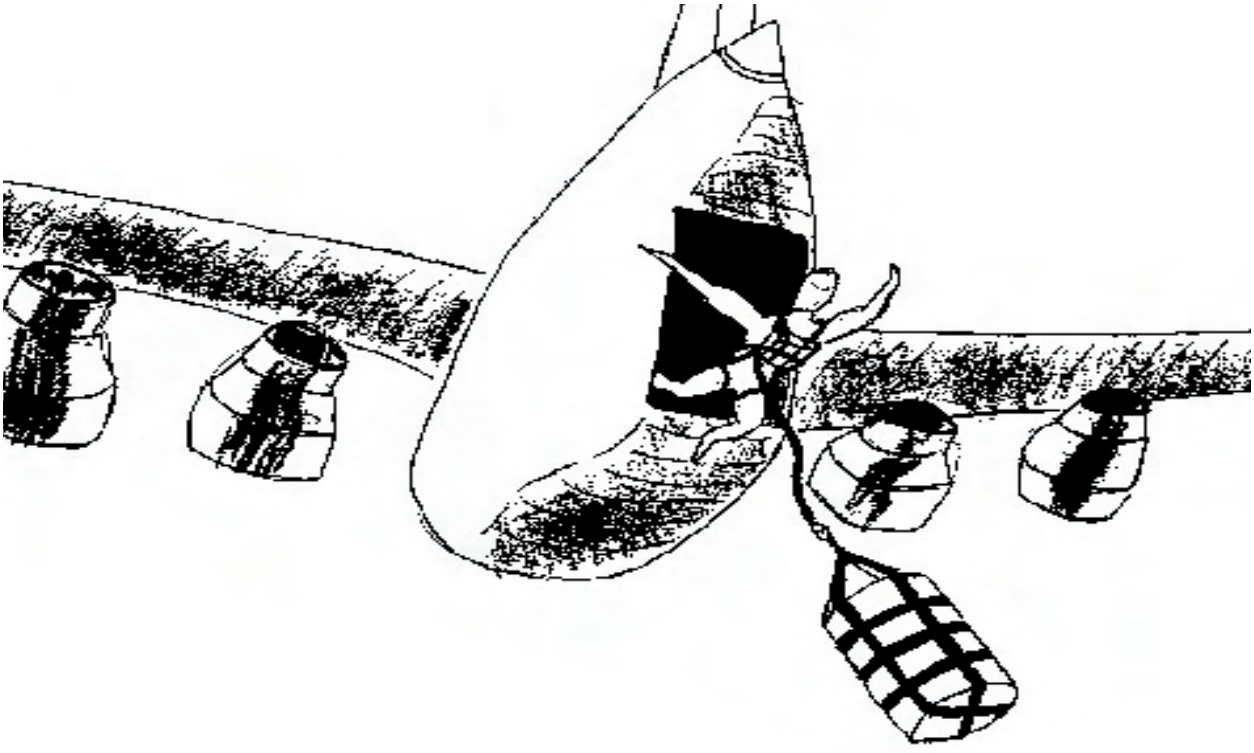
Read and understand all instructions in this manual before proceeding.
This system is to be used only by properly qualified tandem rated instructors and other properly trained and authorized personnel. It is not available for sale to or use by the general skydiving public.

In aircraft:

1) The bundle parachutist first inspects and dons their parachute system.
2) The normal donning of the MTTB is performed shortly before exiting a tailgate aircraft at altitude. There are four attachment points:
a) Two upper connections at the shoulders
b) Two lower connections at the hips
3) One jump master extracts and holds the deployment drogue or secures the drogue static line of the parachutist to the aircraft.
4) Upon signal, the parachutist will push the MTTB cargo bundle out of the aircraft.
5) The parachutist follows. [Diagram 1]
6) The drogue is extracted out of the jump masters hands or is deployed by the drogue static line.

CAUTION

Size and weight of the cargo bundle is critical to a successful jump.



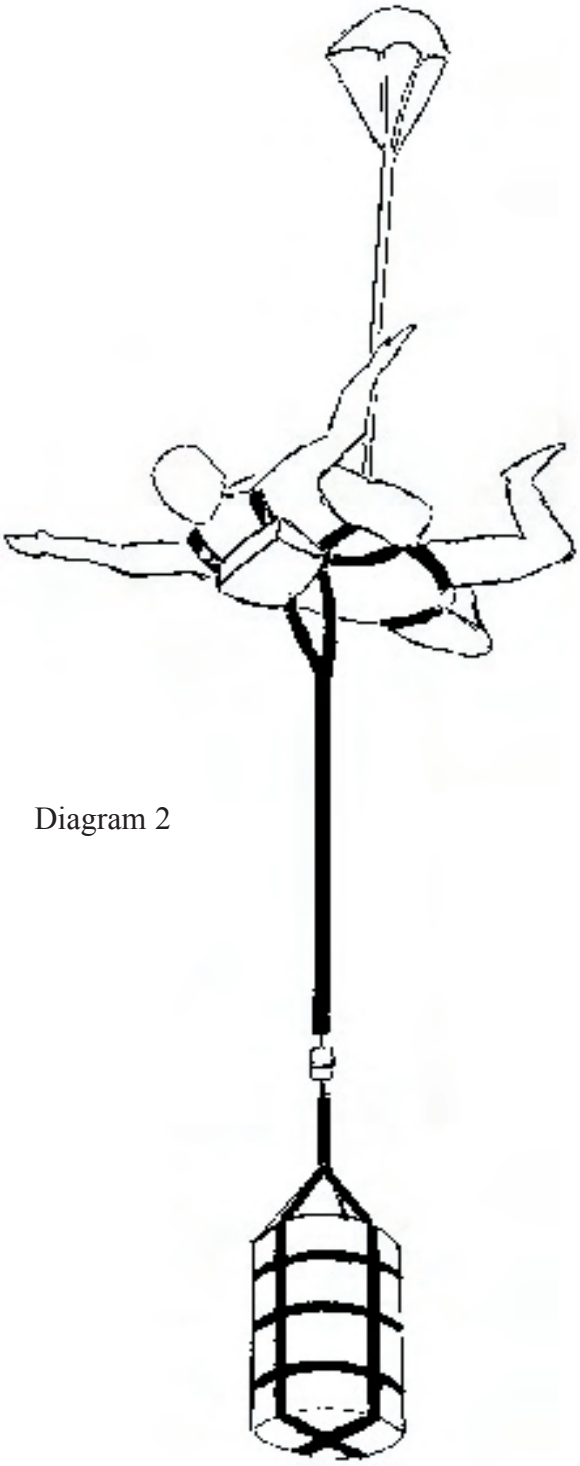


Diagram 2

Free-fall:

1) Drogue fall is stable with the MTTB cargo hanging 10 feet (3 m) below the parachutist.
[Diagram 2]

2) At a predetermined altitude the parachutist activates the main parachute by releasing the drogue.

Under parachute:

1) Under open main parachute the parachutist flies the main parachute unhindered, with the cargo directly attached to him. The MTTB is suspended 10 feet (3 m) below on the tether line. [Diagram 3]

2) At anytime in flight the parachutist has the option of continuing to fly with the MTTB cargo bundle until landing, or releasing the cargo.

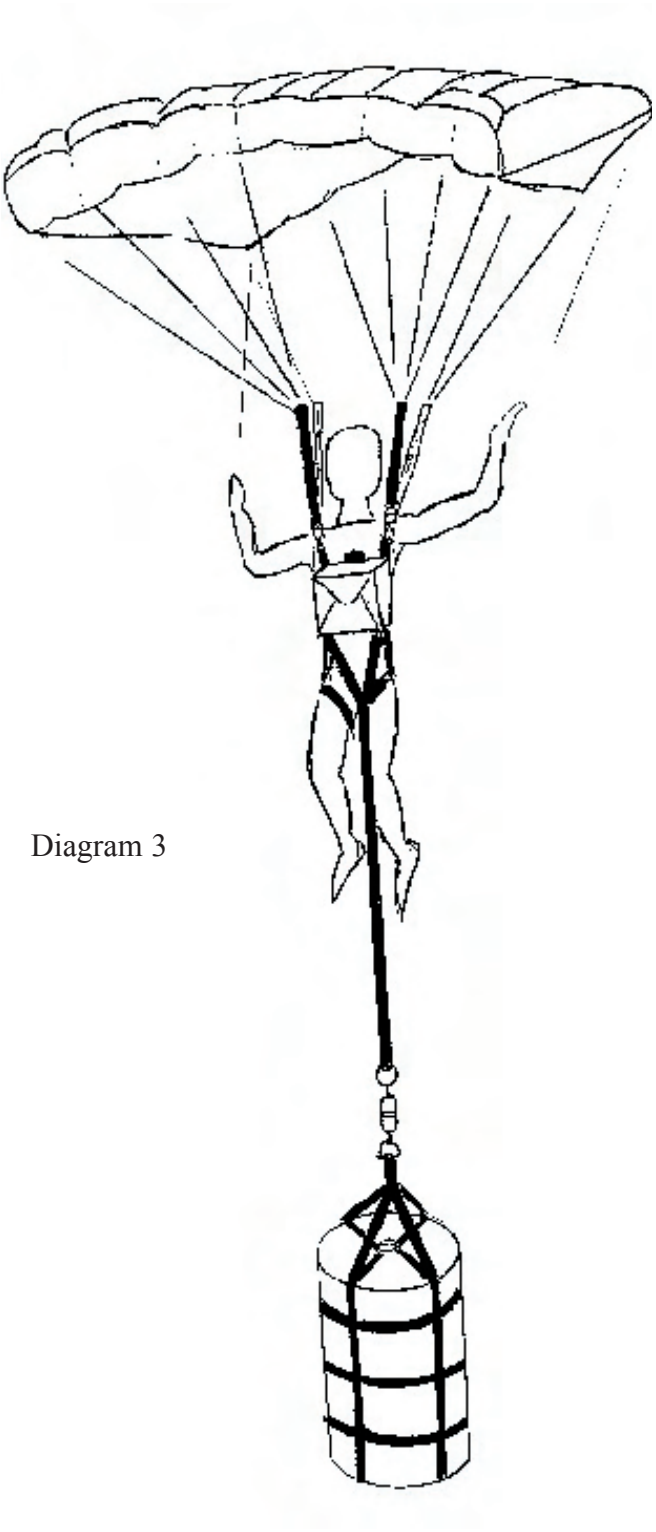


Diagram 3

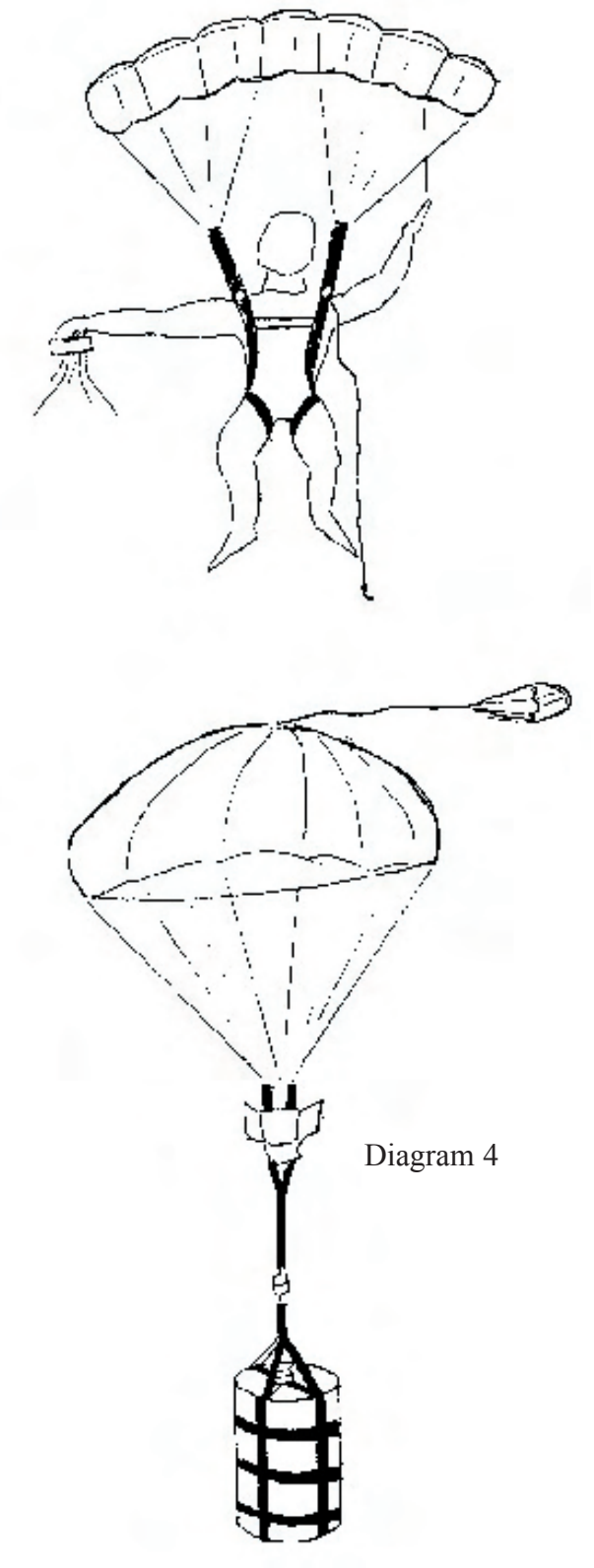


Diagram 4

Release of cargo in the air:

There are two options when releasing the cargo under canopy:

a) Attach the static line to the parachute harness then pull the cargo/parachute release handle, the cargo is released and the parachute deployed.
[Diagram 4]

b) Pull the cargo/parachute release handle and allow the parachute to open by automatic activation device (AAD). [Diagram 5]

Diagram 5

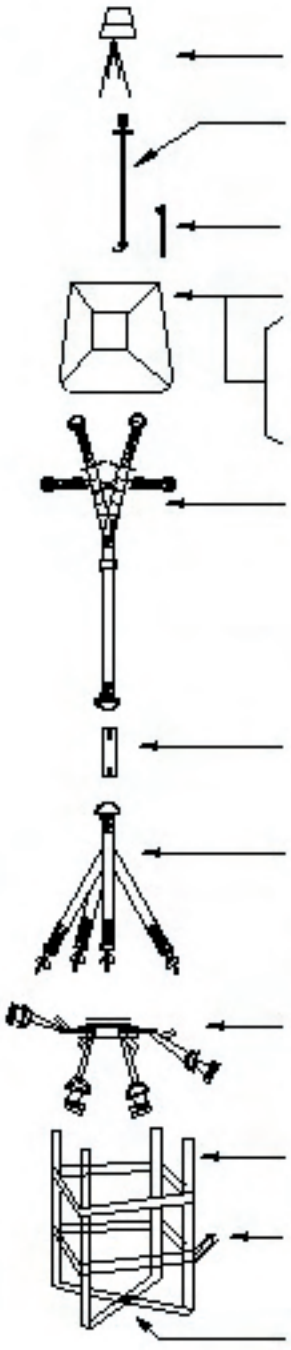
Landing:

Landing with the MTTB cargo is achieved by reducing canopy flight speed to half brakes just before the cargo lands, then performing full flair to land.

CAUTION

Care needs to be taken to assure the tether line is to one side and not between the legs.

# PARTS LIST



| DESCRIPTION | PART NO |
|---|---|
| RELEASE HANDLE, 5-CABLE | 862016 |
| STATIC LINE ASSY | 780125 |
| CLOSING LOOP, 2 HEAD | 861019 |
| CONTAINER | 360050-2 |
| PILOT CHUTE (INSIDE) | 790144 |
| BRIDLE (INSIDE) | 810151 |
| D-BAG (INSIDE) | 730232 |
| CANOPY (INSIDE) | 420709 |
| UPPER TETHER LINE ASSY | 360050-2 |
| CONNECTOR “CARGO” LINK | 913080 |
| CONNECTOR “L” LINK (2 REQ’D) | 913050 |
| UPPER TETHER LINE “TOP” | 839510-1 |
| SWIVEL | 929003 |
| LOWER TETHER LINE | 280011 |
| BARREL HARNESS “TOP” (WITH QUICK RELEASE BOX) | 280010-A |
| LATERAL STRAP (5 REQ’D) | 280010-C |
| BUNDLE HANDLE (2 EA) | 280010-E |
| LONGITUDINAL STRAP ASSY | 280010-B |
| CRUISE BOX LATERAL STRAP (NOT SHOWN) (2 REQ’D) | 280010-D |

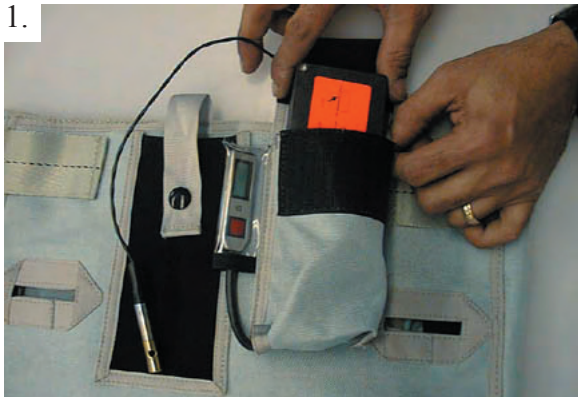
ASSEMBLY PART NO. 150300 HAS 1-PIECE UPPER TETHER LINE: NO LINK
ASSEMBLY PART NO. 150303 SAME AS PN 150300, BUT FOR CYPRES AAD.
ASSEMBLY PART NO. 150302 AS SHOWN, WITH TWO PIECE UPPER TETHER LINE AND CONNECTOR LINK.

# REQUIRED TOOLS

| | |
|---|---|
| 60” (152 cm) Pull Up Cord | 3 ea |
| Temporary Pin (FLAGGED) | 1 ea |
| Packing Paddle or “Fid” | 1 ea |
| Line Separator | 1 ea |
| Shot Bags | 4 ea |
| Medium Blade Flat Screwdriver | 1 ea |

# ASSEMBLY

1.



1. Install CYPRES and position control unit in plastic sleeve.

2.

2. Install CYPRES cutter on left side flap of container. The cutter head runs through the channel and then into the elastic keeper at the grommet.

3.

3. Route the canopy attachment loops of the upper tether line assembly, located near the 3-ring release, up through the two reinforced slots on the bottom of container. Then route the three ring straps through the locating loops on the outside of the container.

4.

4. Route the three ring side straps through the locating loops on the outside of the container.

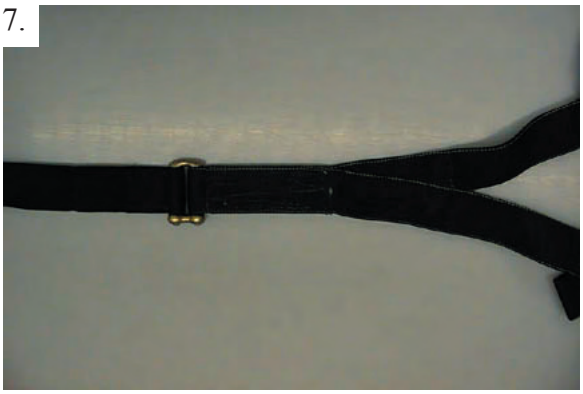
5.

5. Center cross strap and secure to locating loops with 1 hand tack each side.

6.

6. Secure cross strap to binding tape on yoke just outside of locating loop with 2 hand tacks each side of container.

7.



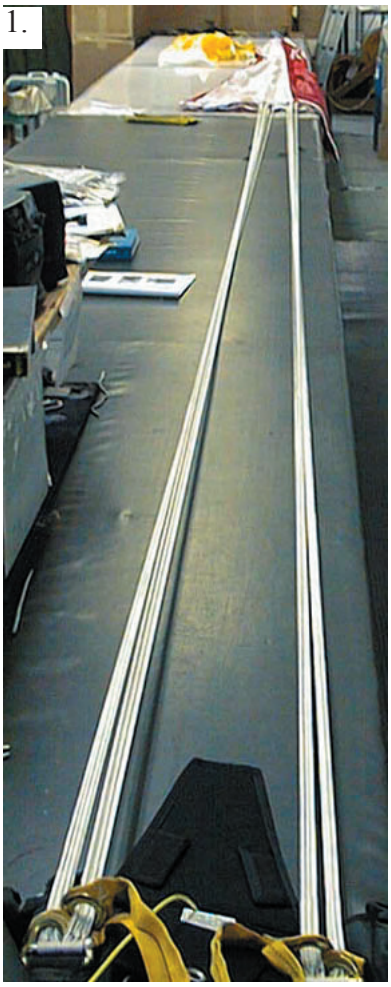
7. Connect top and bottom halves of upper tether line together using a cargo link (PN 913080).

8.

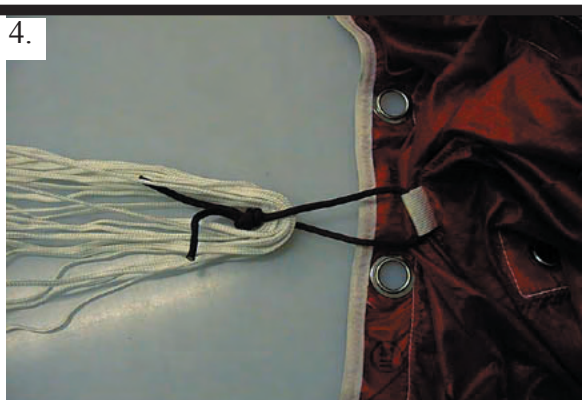
8. Connect the canopy to the attachment loops with L-links (PN 913050). Perform a continuity check, ensure slider is clear, then tighten the links.

9.

9. Install a closing loop into the container. Length should be approximately 2 3/4" (7 cm) from the face of the grommet.

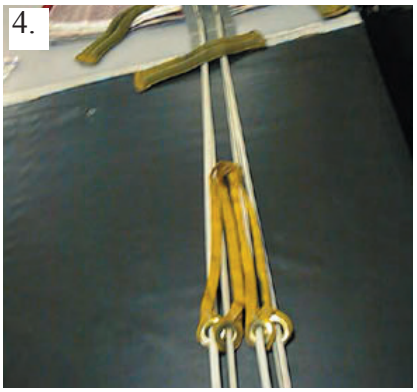



1. Lay canopy on table. Apply tension.




2. Attach d-bag to canopy apex vent lines with an overhand knot.


3. Clear gores, 12 on each side.




4. Bring slider all the way up the lines to the slider stops. Position center grommet toward canopy.


5. Fold skirt on one side parallel to the radial tapes.


6. Repeat on opposite side.


7. Long-fold the canopy to the center, parallel to the radial tapes.


8. Repeat on opposite side.


9. Long-fold the canopy across the center-line in thirds.


10. Repeat on opposite side, overlapping.

11.

11. Begin to close the diaper by routing lower rubber band through lower grommet and lock with a 1 1/2 inch bite of suspension line.

12.

12. Continue with the upper rubber band and grommet. Be sure that the slider is clear of rubber band and still at slider stops.

13.

13. S-fold slider onto inner diaper so that it stays clear of suspension lines.

14.

14. Close outter diaper and lock with three bites of suspension line using rubber bands and grommets.

15.

15. Stow all but 4 feet of remaining suspension lines on diaper.

16.

16. After S-folding the first three folds of canopy into d-bag, place a pull up cord through the grommets of the d-bag.

17.

17.Continue to S-fold the canopy into the d-bag.

18.

18. S-fold remainder of canopy into d-bag ( making the folds slightly wider than the bag). Begin to close the bag with a bight of suspension line, starting with the inner grommets.

19.

19. Stow the remaining lines to within 12 inches of the links.

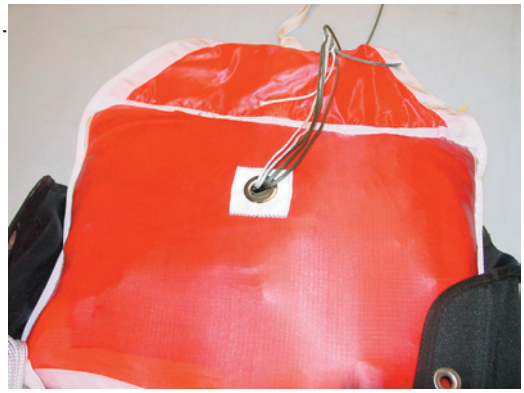
20.

20. SUPERVISOR INSPECTION. Proper d-bag closing and line stowage.

21.

21. Route one pull-up cord through only the green closing loop. Route another pull-up cord through only the white closing loop.

22.



22. Place the d-bag in container and bring pull-up cords through bag with original pull-up cord.

23.

23. Close the top sub flap of the container with the pilot chute bridle exiting the bottom. Lock with temporary pin.

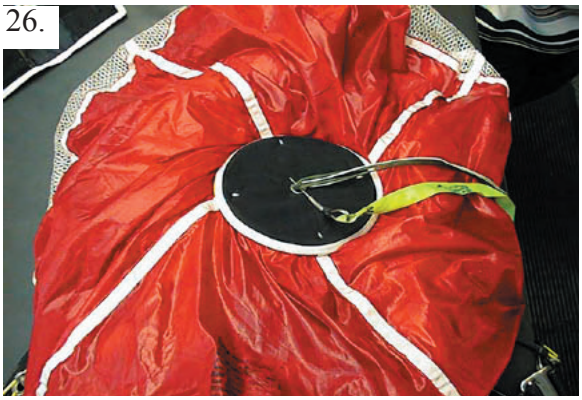
24.

24. Close the bottom sub flap of the container with the pilot chute bridle exiting the top. Lock with temporary pin.

25.

25. S-fold remainder of bridle in center of sub flaps.

26.



26. Place pilot chute in the center of sub flaps and compress. Clear excess material from between spring coils and lock with temporary pin.

27.

27. Roll canopy of pilot chute so that it lays evenly on all sides.

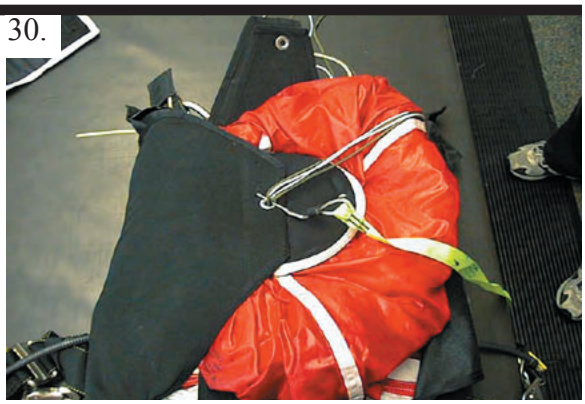
28.

28. Pull the white closing loop through the CYPRES cutter then the grommet on the left side flap.

29.

29. Route the green closing loop to the outside of the CYPRES cutter and then through the grommet on the left side flap. Be sure that the cutter is clear of the green loop.

30.



30. Close left side flap. Install temporary pin.

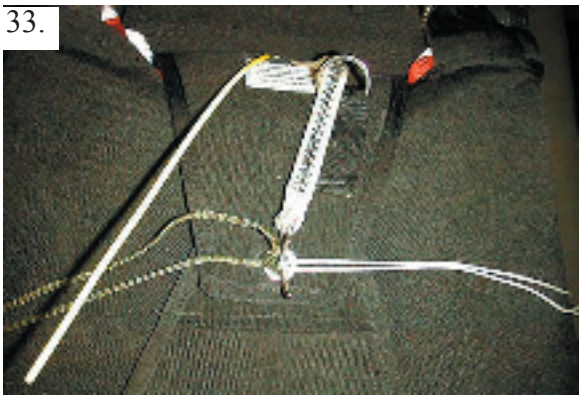
31.

31. Close right side flap. Install temporary pin.

32.

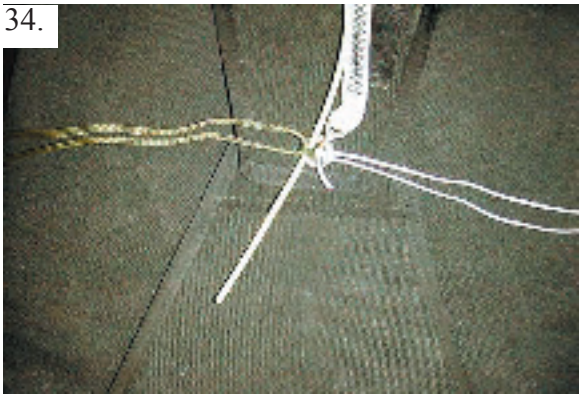
32. Close bottom flap. Install temporary pin.

33.



33. Close top flap. Install curved pin in white loop.

34.

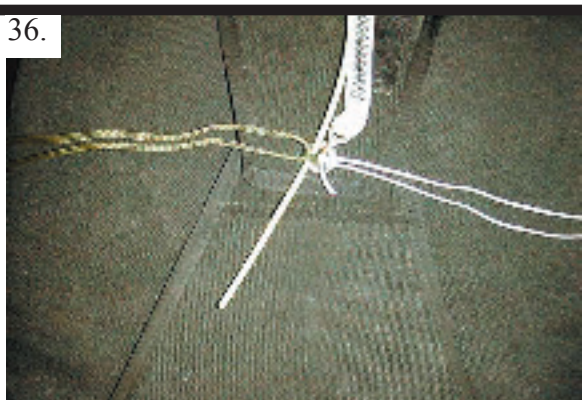


34. Install yellow cable in green loop. Stow cable end.

35.

35. Remove pull up cords. Tuck in flaps. Dress container. Clear static line.

36.



31. SUPERVISOR INSPECTION
Curved pin through white loop. Small yellow cable through green loop.

37.

37. Attach large ring, snap tabs to the outside. Stow tips of cables.

38.

38. Ensure that all tools are accounted for. Record log book entry.
SUPERVISOR FINAL INSPECTION

# REPAIR GUIDELINES

The following repair specification is set forth to aid riggers in the maintenance of Strong Parachutes. Repairs must be made only by appropriately rated parachute riggers or lofts.

CANOPY

| Type of Repair | Limitations |
|---|---|
| Restitching | No limit as to length or number. |
| Patch, single side | Size limit: 50% of panel area.<br>Limit of 3 per panel, 15 per canopy. |
| Panel replacement | Limit 9 per canopy. |
| Radial seams | Size limit: 12” (30 cm), no more than 4 per canopy. |
| Lateral bands | Damage: size limit 2” (5 cm) |
| Upper | Limit: 1 per canopy |
| Lower | Limit: 4 per canopy |
| Line tabs | No limit |
| Suspension lines | No limit |

Pilot Chute

Same as set forth for canopies.

Bridles

Damaged bridles should be replaced.

Container

Standard military single side patches or replacement of the damaged area is authorized.

Harness

Any portion of the harness which is structurally damaged should be replaced in a manner to duplicate the original equipment.

Release handles

Damaged release handles should be replaced.

Data Card

Data cards should not be discarded or replaced. When filled, they should be attached to the new card so that a complete log of packing, repairs and alterations is recorded. This is the history of the parachute.

CAUTION

Darning and ripstop tape are not authorized for canopies as they may weaken the fabric. Single side patches are recommended for even small damaged ares.