MILITARY JAVELIN (MJ)
TECHNICAL MANUAL

OPERATION AND ORGANIZATIONAL
MAINTENANCE INSTRUCTIONS

MJ Harness/Container
TR-375 Tactical Reserve
MS-360 Military Silhouette

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CHAPTER 1

INTRODUCTION

SECTION 1-1

WARNING AND DISCLAIMER

1.1 WARNING AND DISCLAIMER

It is beyond the scope of this manual to teach you how to deploy, fly and land this parachute. This manual is only a general guide about this parachute system. It is not a replacement for proper training and instruction.

Parachute systems sometimes fail to open properly, even when properly assembled, packed, and operated. There is a risk of equipment damage, serious injury, or death each time this system is used.

Each time you use this parachute system you risk bodily injury and death.

You can substantially reduce this risk by: (1) assuring every component of the parachute system has been assembled and packed in strict accordance with the manufacturer's instructions. (2) by obtaining proper instruction in the use of this parachute and the rest of the equipment, and (3) by operating each component of the system in strict compliance with the owner's manual and safe parachuting practices.

STATEMENT OF COMPLIANCE

The policies contained herein comply with the Federal Aviation Regulations, Part 21.

REVISION LIST

Complete Parachute Solutions Inc. (CPS) may revise this manual at any time. The only way to be sure this manual is current for your parachute is to check with CPS at www.cpsworld.com CPS welcomes suggestions of ways to improve this publication. If you feel parts are incomplete or hard to understand, please let us know by writing or emailing CPS, Complete Parachute Solutions Inc.

DISCLAIMER NO WARRANTY

Because of the unavoidable danger associated with the use of this parachute system, the manufacturer makes no warranty, either expressed or implied. It is sold with all faults and without any warranty of fitness for any purpose. The manufacturer also disclaims any liability in tort for damages, direct or consequential, including personal injuries resulting from a defect in design, material, workmanship or manufacturing whether caused by negligence on the part of the manufacturer or otherwise.

By using this parachute system, or allowing it to be used by others, the user waives any liability of the manufacturer for personal injuries or other damages arising from such use.

SECTION 1-2

PARACHUTE PACKING AND DEPLOYMENT LOG

1.2 PARACHUTE PACKING AND DEPLOYMENT LOG

As any conventional ram air reserve is repeatedly handled and repacked, the fabric permeability will increase. This increased permeability will affect opening, flight and/or landing characteristics. To monitor this important issue, we have incorporated a tracking and inspection program into our reserve canopies. Compliance with this program is mandatory. Each time the reserve is inspected and packed, a single diagonal line / is to be placed in the next open box on the label. In the event of an actual deployment, an X is to be placed in the next available box.

The warning label should accurately reflect the repacks and uses on that reserve parachute. In the event a rigger encounters a discrepancy between the packing data card and the warning label, the label should be brought into compliance, just as the rigger would do with any other piece of equipment. The owner of the reserve should be informed that the rigger is simply complying with Performance Designs' requirement for the label to accurately reflect the repacks and/or uses on that parachute.

After 40 repacks or 25 deployments have been reached, the reserve must have its permeability tested. (In most countries, 40 repacks are usually performed over a 10 to 20 year period.) The testing is performed to insure that the fabric permeability has not reached a point where the openings and landing performance would be unacceptable. Subsequent to passing this testing, an additional label is affixed and the parachute is then returned into service. The label will contain additional boxes, the specific number being chosen according to the results of the test.

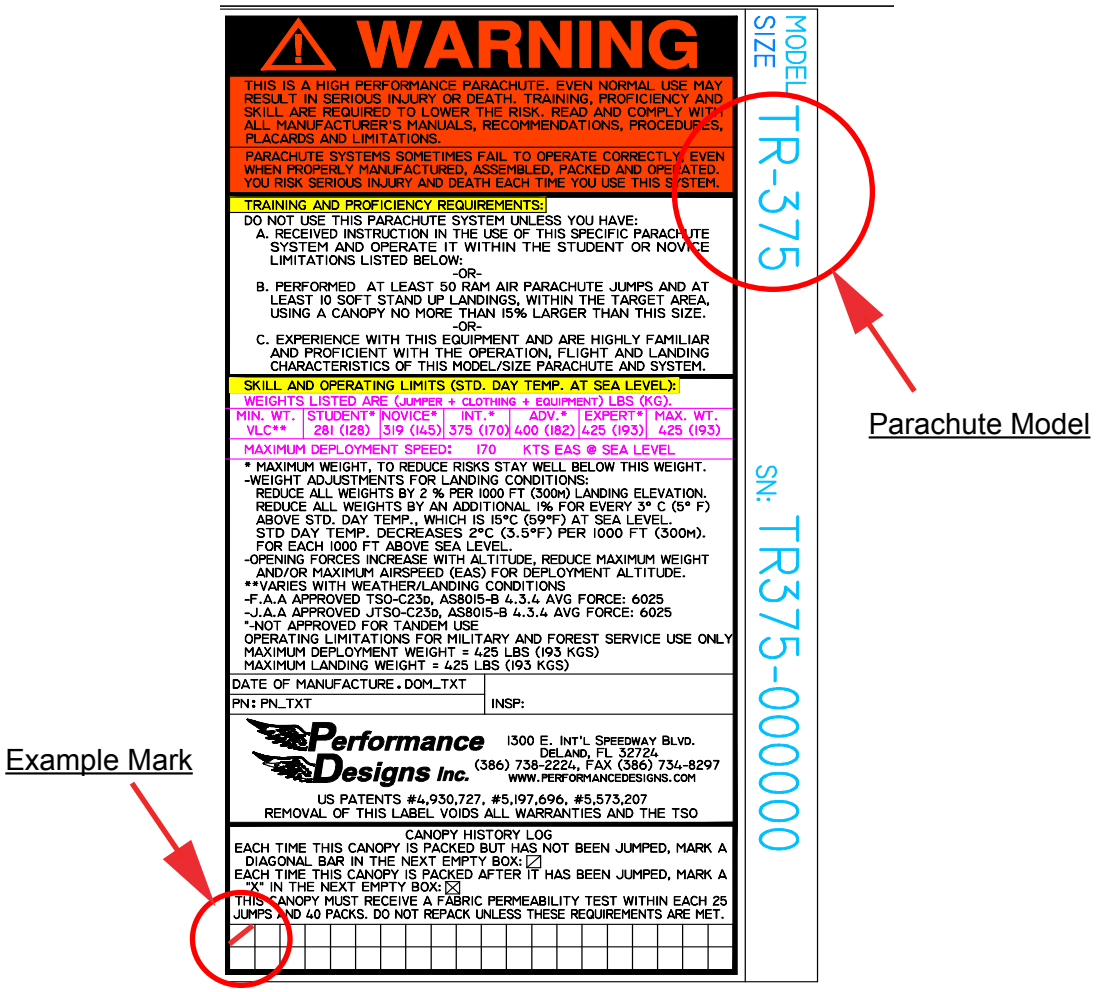

Figure 1-1

SECTION 1-3

HARNESS AND CONTAINER NOMENCLATURE

MJ Harness and Container Nomenclature

BACK VIEW

Figure 1-2

MJ Harness and Container Nomenclature

LEFT FRONT VIEW

Figure 1-3

MJ Harness and Container Nomenclature

RIGHT FRONT VIEW

Figure 1-4

MJ Harness and Container Nomenclature

RIGHT SIDE VIEW

Figure 1-5

MJ Harness and Container Nomenclature

LEFT SIDE VIEW

Figure 1-6

MJ Harness and Container Nomenclature

STATIC LINE CLIP

Figure 1-7

MJ Harness and Container Nomenclature

REAR VIEW-STATIC LINE

Figure 1-8

SECTION 1-4

MJ TECHNICAL DATA

1-4 MJ TECHNICAL DATA

SYSTEM WEIGHT	20 lbs (average, excluding canopies and depending on accessory options) 48-50 lbs including canopies and dependant on options
CANOPIES	Performance Designs Tactical Reserve Series Performance Designs Military Silhouette Series
FABRIC TYPE	1000 Denier Nylon Cordura
HARNESS TYPE	Type 7 Mil/PIA Spec webbing throughout
HARNESS FEATURES	Fully adjustable harness with unique adjustable rings at the hip junctions for flexibility and comfort. The Main Lift Webbing (MLW) features color-coded bars for symmetrical MLW settings. The leg pads are double wide and double padded. Leg hardware options- B-12 or quick ejector. Accessory rings for front and rear mounted rucksack. Oxygen Pocket and Utility Pocket for Radios etc. **Reserve** – Primary activation is ripcord with backup activation by means of an RSL (Reserve Static Line), (Skyhook System) and/or AAD (Automatic Activation Device). **Main** Over The Shoulder Ripcord Activation. Static Line (Double Bag-High Speed exits)
AAD SETUP	Reserve –Standard setup for Military CYPRES AAD Main – none

RESERVE CANOPY

CONTAINER	SIZE	MAX DEPLY WT	MAX SPEED	MAX LANDING WT.
MJ-12	TR-375	425 lbs.	170 kts.	425 lbs.

MAIN CANOPY

	SIZE	MAX ALL UP WT	MAX SPEED
MJ-12	MS-360	425 lbs.	150 kts.

CHAPTER 2

ASSEMBLING AND PACKING THE TR-375 RESERVE PARACHUTE

SECTION 2-1

RESERVE PARACHUTE INSPECTION

2.1 OVERVIEW

The Performance Designs reserve parachute must be inspected thoroughly before its first pack and before each subsequent repack. This inspection should be performed with even more care and attention when first assembled and after a deployment. A certificated rigger must inspect the new Performance Designs reserve and determine its compatibility with your rig. This inspection should be done in a clean, well-lit area with enough room to spread out the reserve parachute.
This manual describes two parachute packing methods (Ground Pro-Pack and Over -the Shoulder Pro-Pack).

2.1.1 VISUAL INSPECTION

2.1.1.1 TOP SURFACE

Spread the parachute out on its bottom surface and inspect the top surface starting at the front of the left end cell. Check half of the cell from nose to tail. Then check the other half from tail to nose. Repeat this pattern until each cell's top surface has been inspected. Look for rips, stains, snags, burns, abrasions or failed seams.

2.1.1.2 BOTTOM SURFACE

Turn the parachute over and spread it out to inspect the bottom surface. Again use the procedure of inspecting half-cells as on the top surface. Check for rips, stains and failed seams. Look very closely at the line attachments. Even slight damage is cause for rejection in these areas. Line attachments must be completely free of any damage or defects. Check under the ends of the line tabs.

2.1.1.3 RIBS

Inspect each rib from leading edge to the trailing edge by looking inside each cell. Check for items such as burns, tears, seam integrity and pulled threads. Also check the cross ports for tears.

2.1.1.4 STABILIZERS AND SLIDER STOPS

Lay the parachute neatly on one side, stacking each loaded rib on top of the others. Verify that the left and right mirror-imaged lines are of the same length. Check that the trim differential between each line group is correct for this reserve. Check the condition of the stabilizers and slider stops on the stabilizer.

2.1.1.5 SUSPENSION LINES

Check the full length of each line for damage and wear. Look for fraying at all cascades and where each line attaches to the connector link. Check that all lines are sewn with a bar tack and that the stitching is good. Check the continuity and routing of each line.

2.1.1.6 SLIDER

Ensure the fabric is not torn, the grommets are undamaged with no sharp edges or burrs, and that they are securely attached to the slider. Be sure every suspension line and both steering lines pass through the proper grommet on the slider.

2.1.1.7 PERMEABILITY

The permeability of the fabric is very important. As the permeability increases, the parachute will open more slowly and flight performance will deteriorate. The rate of descent will increase and the forward speed will decrease. The ability of the parachute to flare to a soft landing will decrease.

To ensure the parachute is safe to use, Performance Designs has established an average permeability limit of 8.0 cfm for the reserve parachute throughout its service life.

Fabric permeability does not change while the parachute is packed; it changes because of use, packing and handling. That's why it is important to maintain a complete history of the parachute.

Fabric permeability must be tested if any of the following events occur:

- The parachute has been submerged in water.
- 25 jumps have been made on the parachute since it was new or last certified.
- The parachute has been repacked 40 times since it was new.
- The parachute has an unknown number of jumps, repacks, or there is reason to believe that jumps or repacks that were not properly logged.
- Flight performance appears to be substandard.
- There are other reasons to believe the fabric permeability may exceed specifications.

The Performance Designs factory is equipped to perform permeability testing. It is recommended that any parachute needing such testing be returned to the factory.

2.1.1.8 RISER AREA

Visually check the link and its condition. If the link is not bent, cracked or damaged, the link is OK for continued service.

2.1.1.9 OPTIONAL PROTECTIVE LINK COVERS

Insure that the protective link covers located on the connector links are the correct size, are positioned correctly, are in good condition and are properly secured with tacking cord.

2.1.1.10 TOGGLES

The toggles must be installed correctly and must match the guide ring and the hook and loop fastener on the risers. Performance Designs canopies come with brake settings and toggle tie on marks set for PIA standard riser/brake dimensions. This standard calls for 4 inches (10.16 cm) from the top of the riser to the top of the brake-setting ring. If the risers are more than 1 inch or (2.54cm) different from this standard the parachute must be modified. This modification may only be done by Performance Designs, Inc. In addition, any changes must be marked on the parachute's data panel.

2.1.2 FABRIC STRENGTH TESTING

2.1.2.1 Performance Designs recommends that a random sample of 10% of all reserves placed in service within your organization be strength tested once per year. A minimum of 3 per year should be tested if the inventory is less than 30 parachutes. If a failure occurs during one of the tests, the cause of that failure shall be determined. If the cause of fabric failure is due to an isolated event (i.e. acid contamination or a cigarette burn), then the testing may be continued at the 10% level. If the cause of the failure is undetermined, contact the manufacturer for further guidance on further testing and any other required actions. The environment in which the parachute has been used may have a significant effect on the strength of the fabric (i.e., desert sun, salty conditions).

2.1.2.2 Use commercially available 1 inch (2.54 cm) wide fabric testing clamps with rubber-faced jaws and appropriate scale. The scale should be calibrated at least once per year and be accurate within 1.0 lb (0.4536 kg). The clamps should be free of any burrs or rough edges that could snag the fabric.

2.1.2.3 Three fabric strength tests should be performed on each of the following locations on the parachute:

- left end cell, top surface
- right end cell, top surface
- center top surface near trailing edge

2.1.2.4 The test should never be done where any part of the fabric involved in the test is within 3 inches (7.62 cm) of any seam or the data panel. The test should be done chord-wise. An additional test must be performed on any stained or discolored areas.

2.1.2.5 Attach the locking fabric clamps to the ripstop fabric. The distance between the clamps should be 3 inches (7.62 cm) and the clamps should be aligned so that the ripstop pattern is parallel to the edge of the jaw.

2.1.2.6 Lock the clamps securely to avoid slippage. Pass a short length of cord through the eye of one clamp and secure to the packing table or other object that will allow a 30 lbs (13.61 kg) load without movement. Pass the hook from the spring scale through the other eye and apply a 30 lbs (13.6 Kg) load for 3 seconds.

2.1.3 MAINTENANCE AND REPAIRS

Information on maintenance, repairs and associated limitations may be found in Chapter 7, Section 7-3 located on page 166 entitled “Repair Limitations.”

SECTION 2-2

INSTALLING THE CYPRES AAD

2.2.1 INSTALLING THE CYPRES AAD

2.2.1.1 Secure the closing loop by placing a double overhand knot (then tighten against disk). Follow with a single overhand knot (then tighten against the double overhand knot.

MJ finished loop length is 2-3/4 inches plus or minus 1/4 inch.
(See figure 2-1)

Figure 2- 1. CYPRES AAD Closing Loop

2.2.1.2 Ensure that each knot has been tightened and that the correct loop length has been achieved.
(See figure 2-2)

Figure 2- 2. Secure The CYPRES Closing Loop Disc

2.2.1.3 Place the closing loop through the grommet located in the floor plate.
(See figure 2-3)

Figure 2- 3. Insert Closing Loop In Anchor Plate

2.2.1.4 Place the CYPRES control unit and cutter through the hole in the CYPRES pocket flap.
(See figure 2-4)

Figure 2- 4. CYPRES Cable Routing

2.2.1.5 Place the cutter through the type 3 channel sewn in the pack tray.
(See figure 2-5)

Figure 2- 5. CYPRES Cutter Routing

2.2.1.6 Place the cutter through the opening provided in the channeling. Place the cutter in the elastic keeper channel placed at the closing loop.
Thread the closing loop through the hole in the cutter.
(See figure 2-6)

Figure 2- 6. Final CYPRES Cutter Placement

2.2.1.7 Place the CYPRES control unit through the white channel sewn in the pack tray.
(See Figure 2-7)

Route the CYPRES cable UNDER the Collins Lanyard before placing the CYPRES control unit into the clear control unit pocket.

Figure 2- 7. CYPRES Control Unit Route

2.2.1.8 Place the CYPRES control unit through the short channel sewn beneath flap 4A.
(See figure 2-8)

Figure 2- 8. Short Channel Route

2.2.1.9 Pull the CYPRES control unit cable out of the channeling.
(See figure 2-9)

Figure 2- 9. Exit The Channel

2.2.1.10 Place the CYPRES control unit in the pocket located underneath flap 4. (See figure 2-10)

Figure 2-10. Placing The Control Unit (Bottom View)

2.2.1.11 Place the control unit between the plastic window and the elastic layer inside the pocket. (See figure 2-11 & 2-12)

Figure 2-11. Placing The Control Unit (Top View)

Figure 2-12. Control Unit Fully Inserted Into The Pocket

2.2.1.12 After installing the cutter and control unit, place the excess CYPRES control box cable around the processing unit.
(See figure 2-13)

Figure 2-13. CYPRES Excess Cable Placement

2.2.1.13 Place the processing unit and excess cable in the elastic pocket that is sewn to the base of the reserve container.
(See figure 2-14)

NOTE: After the CYPRES installation, test the unit by turning it on.

Refer to the CYPRES operation manual page 17 for the correct procedure.

Figure 2-14. Finished CYPRES Box Installations

SECTION 2-3

ATTACHING THE TR-375 RESERVE OR MS-360 MAIN

2.3.1 ATTACHING THE PARACHUTE (MAIN OR RESERVE) TO THE RISERS

2.3.1.1 OVERVIEW

When assembling a Performance Designs parachute onto risers it is important that the directions are followed precisely. If these directions are followed correctly, and only parts supplied by Performance Designs are used, these links will provide excellent service.

2.3.1.2 CONNECTOR LINKS

Remove all grease and dirt from links, using a solvent that will leave no residue. *Trichloroethylene or electrical contact cleaner is recommended.*

Inspect the links carefully. Check for nicks, burrs and any sign of bending or stress. Check to be sure the barrel will screw down at least 2-3/4 turns from first engagement with no resistance.

If link covers are to be installed, slide them over the links and onto the lines. You can use a pull up cord to assist you in doing this.

Attach the connector links onto the risers and tighten the links finger tight.

Perform a thorough line continuity check at this point, making sure that the parachute is rigged correctly.

Tighten the link finger tight and torque to 20-30 in lbs-force (2.26 – 3.39 Nm). To accurately gauge this, place a 5 lb. (2.268 kg) weight on a wrench, 5 inches (12.7 cm) from the link. When the wrench is horizontal and the barrel no longer turns, the link is fully tightened. Do not tighten more than 30 in lbs-force (3.39 Nm).
(See figure 2-15) **RIGGERS CHECK.**

Figure 2-15. Tighten The Link

2.3.1.3 Hand tack the risers below the links using one strand of tacking cord and secure with a surgeons knot, followed by a locking knot.
(See figure 2-16)

Figure 2-16. Hand Tacked Riser

2.3.2 OPTIONAL INSTALLATION OF THE LINK COVERS TO THE RISERS

2.3.2.1 The installation or use of link covers is optional. To install the link covers, first run the covers up the lines far enough to allow attaching the connector link to the riser. Once the link has been installed, inspect the suspension lines for correct continuity.

Bring the link covers back down the suspension lines and place over the link. (See figure 2-17)

Cut four 12 inch lengths of waxed nylon super tack cord. Run one strand end between the four suspension lines and the other end through the connector link of each riser. Using a surgeons knot, followed by a locking knot, tie the ends together. Snip the long ends off one half inch from the knot.

NOTE: 2-17 shows the 2 left link covers in the stopped position.
Note that access to the link barrel is possible for inspection as shown on the 2 right link covers. (Shown for illustration purposes only)

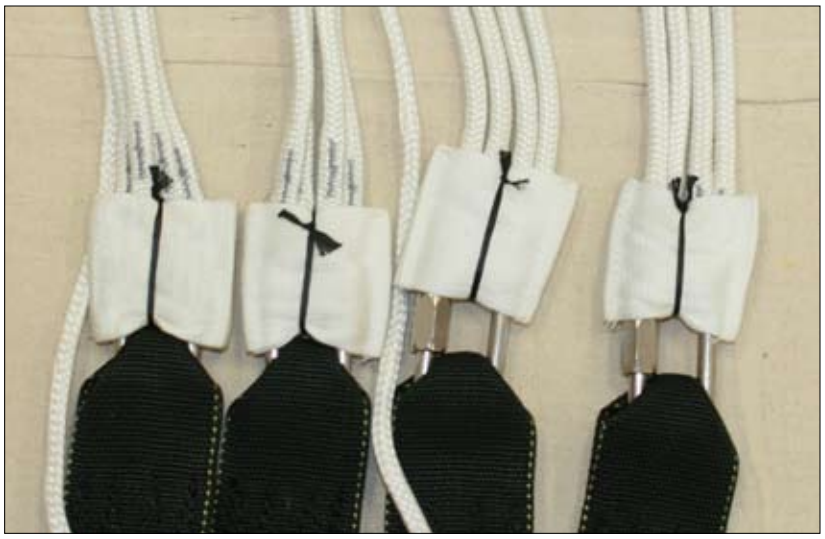

Figure 2-17. Link Protectors Installed

2.3.3 OPTIONAL STEERING LINE ATTACHMENT METHODS FOR TR-375 RESERVE PARACHUTE AND MS-360 MAIN PARACHUTE.

2.3.3.1 OVERVIEW

The parachute manufacturer allows the rigger to use either of the two following methods for attaching the reserve steering toggle to the lower steering line.

METHOD 1:

Secure the steering toggle to the lower steering line by a secured routing and finish knot. This method is described later in this section.

METHOD 2:

Secure the steering toggle to the lower steering line by making a larks head knot with a pre-made cat's eye loop at the end of the steering line terminal end.
This method is described later in this section.

Method 1 OR 2 may be used for the reserve parachute AND/OR the main parachute.

2.3.3.2 METHOD 1: TIED ON TOGGLE ATTACHMENT

Once the parachute has been correctly attached to the risers and while it is still laid on its side, begin to attach the reserve steering toggles using the following steps:

Ensure the steering lines are correctly routed (i.e. they should not wrap around any suspension lines). This is accomplished by starting at the tail of the parachute. Trace the upper steering lines down to the lower steering line. Check that the right hand steering line passes through the right hand rear slider grommet and the left hand steering line passes through the left hand rear slider grommet.

Locate the mark on the lower steering line that indicates the correct toggle location.
Thread the steering line through the steel guide ring that is located on the back of the rear riser. Now thread the end of the steering line through the steering toggle grommet starting from the Velcro ™ side of the toggle.

Adjust the steering line so that the mark (on the steering line) is close to the grommet but has not passed through it.
(See figure 2-18)

Figure 2-18. Thread Steering Line Through Steel Ring And Toggle Grommet

2.3.3.2.1 While holding the toggle put the mark in place, wrap the cut side of the steering line around the toggle 1 1/2 times. (See figure 2-19)

Figure 2-19. Proper Toggle Mark Position

2.3.3.2.2 Insert the steering line through the grommet again from the backside of the toggle and pull it snug.
Ensure that the toggle mark has remained in the correct location.
(See figure 2-20)

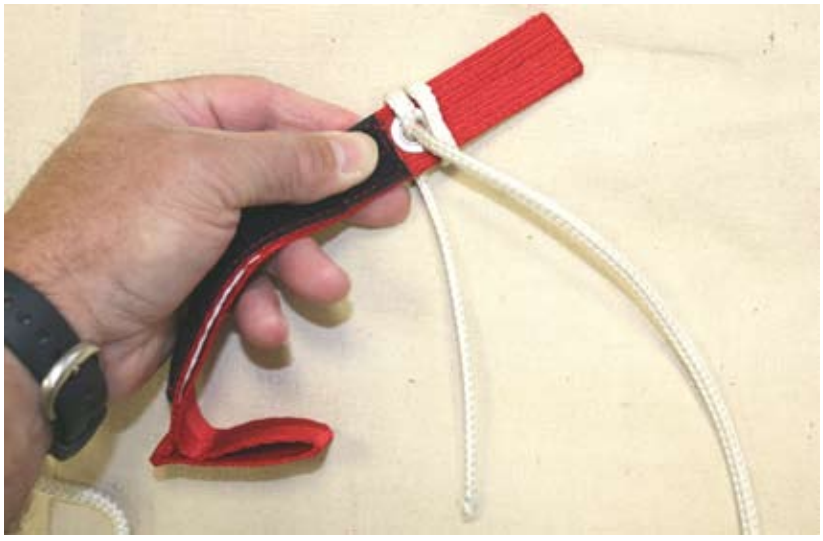

Figure 2-20. Second Pass With The Steering Line

2.3.3.2.3 Tie an overhand knot as close to the grommet as possible.
Tie a second overhand knot directly below the first.
(See figure 2-21)

RIGGER CHECK.

Figure 2-21. Overhand Knots

2.3.4 METHOD 2: LARKSHEAD TOGGLE ATTACHMENT PREPARATION.

2.3.4.1 The factory mark distance from the top of the cat-eye for each model and size can be found in Table 2-1, Page 40. (See figure 2-22)

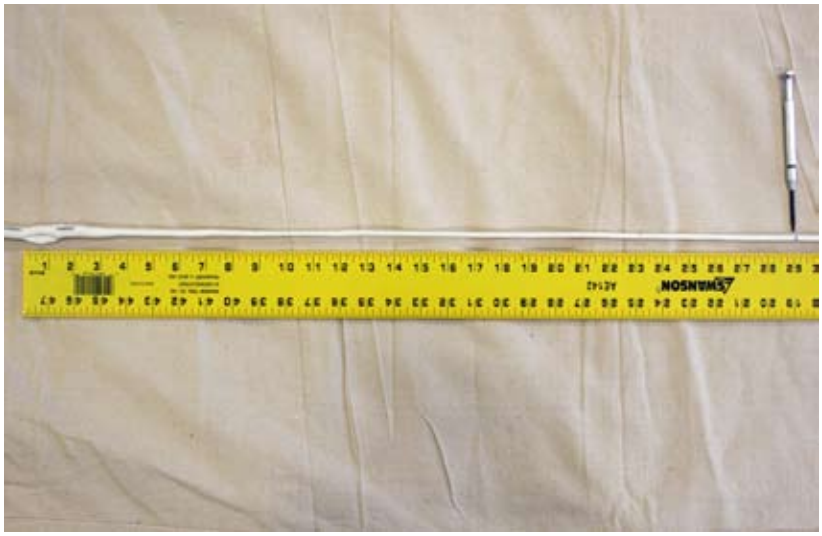

Figure 2-22. Factory Toggle Mark

2.3.4.2 Working towards the cut tail, place a mark at each of the following locations:

- 1/2 inch from the original mark towards the tail.
- 3 1/2 inches from the original mark towards the tail.
- 6 1/2 inches from the original mark towards the tail.

This is the cut mark.

Use a different color ink than the factory placed mark to help distinguish between the original and the newly place marks. (See figure 2-23)

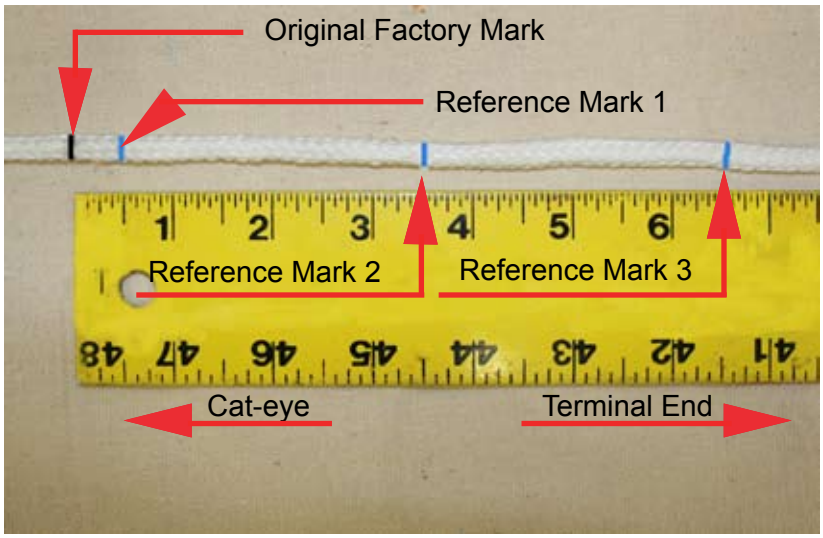

Figure 2-23. Line Orientation

2.3.4.3 At the 6 1/2 inch mark, cut the line at a 35 degree angle using scissors.

Do not use a hot knife.

(See figure 2-24)

Figure 2-24. Tail End Angle Cut

2.3.4.4 Insert the finger-trapping tool into the line at a distance greater than the amount of line being finger-trapped. The finger trap tool should emerge at the 1/2 inch mark drawn in step 2.

The line between the 3 1/2 inch mark and the 6 1/2 inch mark is the portion to be finger trapped.
(See figure 2-25)

Figure 2-25. Finger Trap Tool Insertion

2.3.4.5 Insert the terminal end of the line through the eyelet of the finger-trapping tool.
(See figure 2-26)

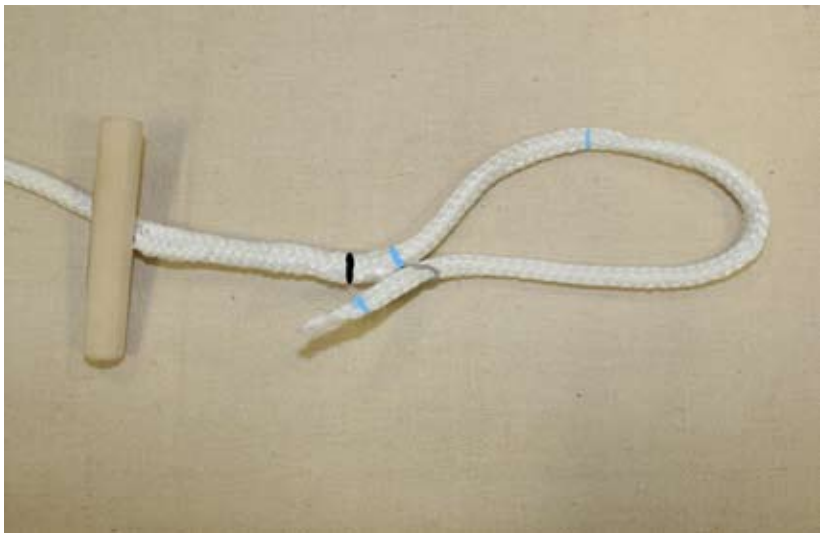

Figure 2-26. Insert The Tail Of The Line

2.3.4.6 Pull The line through until the 3 1/2 inch mark and the 1/2 inch mark are in alignment.

Remove the finger trap tool.
(See figure 2-27)

NOTE: Ensure that the terminal end remains completely inside the line.

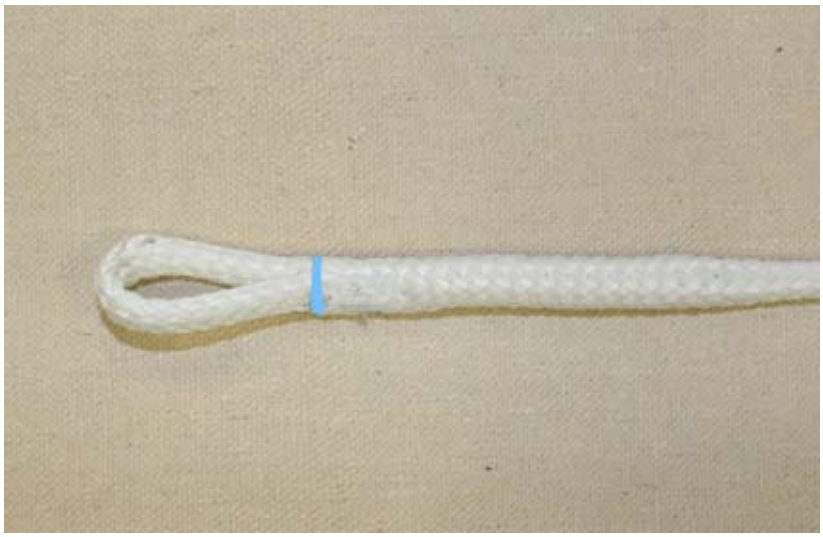

Figure 2-27. Proper Alignment

2.3.4.7 Place a 3/4 inch bartack with 42 stitches at the fingertrap insertion point (1-1/4 inch from the beginning of loop) to secure the fingertrap.
(See figure 2-28)

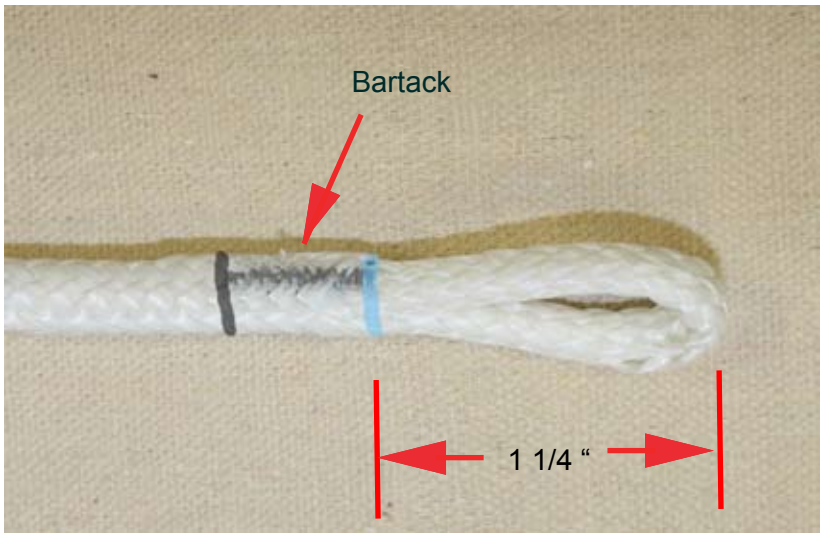

Figure 2-28. Completed Bartack

2.3.4.8 Double check your measurements against the ruler. The distance between the top of the cat-eye...
(See figure 2-29)

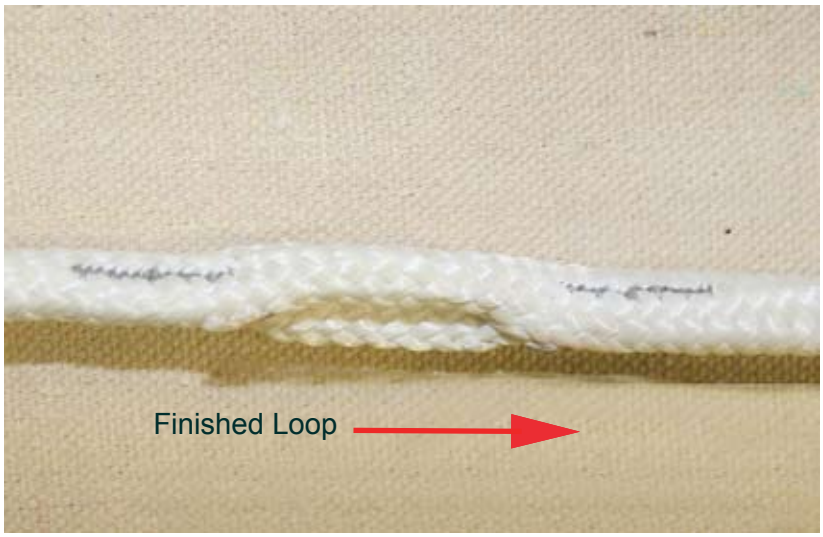

Figure 2-29. Top Of The Cat-Eye

2.3.4.9 ...and the very end of **the finished loop is 23 inches.**
For additional lengths see Table 2-1 on page 30.
(See figure 2-30)

RIGGER CHECK.

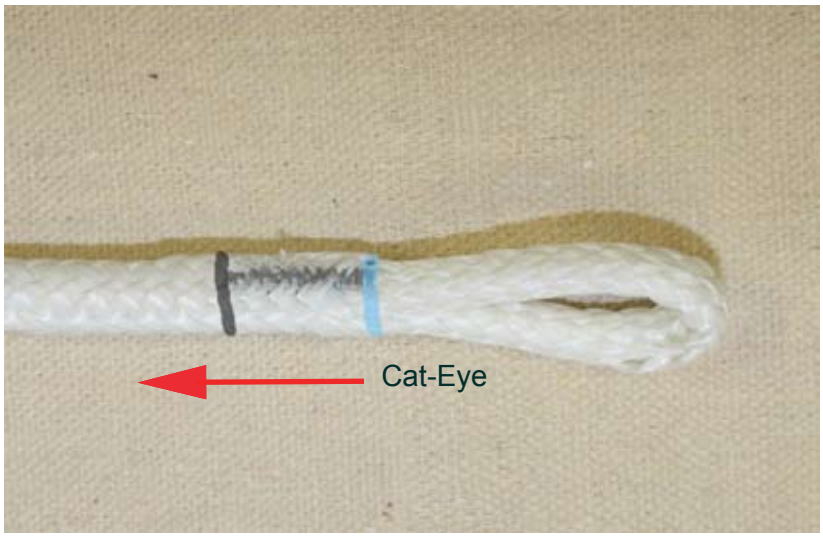

Figure 2-30. Finished Loop

2.3.5 STEERING LINE LENGTH SPECIFICATIONS FOR LARKSHEAD ATTACHMENT

2.3.5.1 All measurements are in inches and are based on the original factory toggle mark distance from the top of the cat-eye toward the terminal end.

NOTE: Factory mark length equals the finished length.

2.3.5.2 Use a different color ink to place reference marks in order to distinguish between the factory mark and the reference marks.

TABLE 2-1

MODEL	FACTORY MARK	REFERENCE MARK 1	REFERENCE MARK 2	REFERENCE MARK 3
RESERVE PARACHUTE				
TR-375	28 1/8	29 5/8	32 5/8	35 5/8
MAIN PARACHUTE				
MS-360	23.0	23 1/2	26 1/2	29 1/2

2.3.6 Installing The Toggle Using The Larkshead Method.

2.3.6.1 Route the steering line down through the guide ring located on the riser.

NOTE: Prior to hooking up the steering toggles, make sure the steering line passes through the grommet on the slider. (See figure 2-31)

Pass the steering line through the steel guide ring only!
DO NOT pass through the locking loop

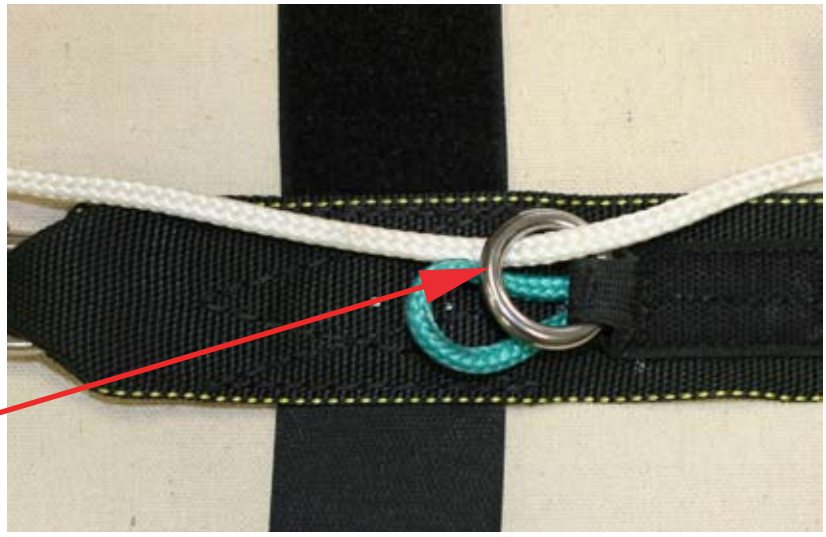

Figure 2-31. Thread Steering Line Through Guide Ring

2.3.6.2 Thread a piece of waxed nylon tack cord through the steering line loop. Put both ends of the tack cord through the toggle grommet from the Velcro™ side.

Pull the steering line loop through the grommet using the tack cord as shown. (See figure 2-32)

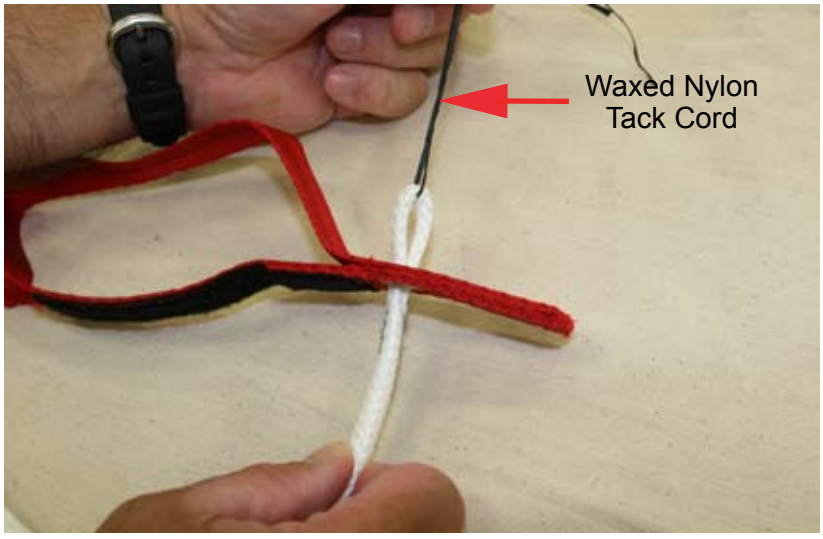

Figure 2-32. Thread Steering Line Through Toggle

2.3.6.3 Thread the toggle handle through the finished loop creating a larks head knot.

Do not thread the upper end of the toggle through the loop, this is not a secure method and may detach.
(See figure 2-33)

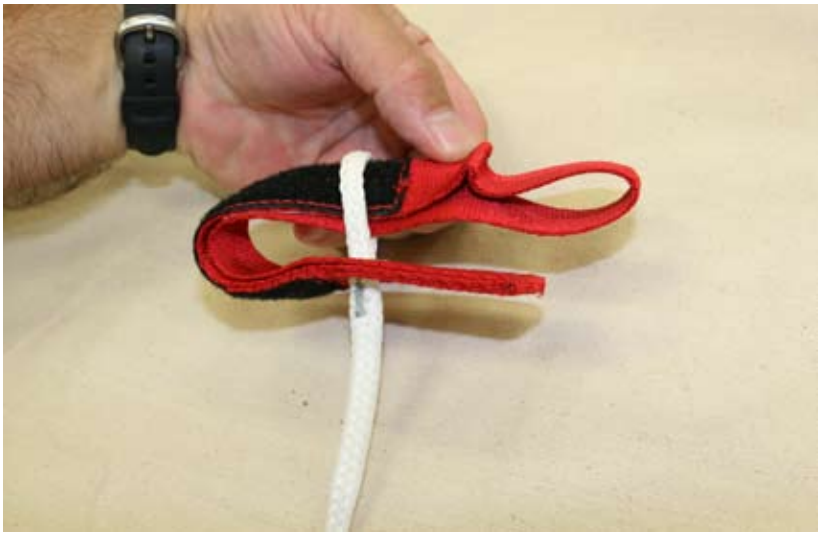

Figure 2-33. Thread Toggle Through Steering Line Loop

2.3.6.4 Pull the toggle completely through and tighten the knot around the toggle. Repeat this procedure for the other steering line.
(See figure 2-34)

RIGGER CHECK.

Figure 2-34. Lock The Toggle As Shown

SECTION 2-4

TR-375
GROUND PRO PACK INSTRUCTIONS

PARACHUTE RIGGER
PACKING TOOL CHECKLIST

This checklist is to be used with each auxiliary parachute inspection and repack cycle. An inventory of the packing tools must be done before the work is to begin and after the work has been completed. Multiple tools of the same type must be counted and recorded. If zero used, mark "0" in the blank provided next to that tool.

Some of the tools listed below are optional and may be used to perform the rigger's duties. Some tools may damage the parachute system if used incorrectly. If left in the completed packed parachute, some tools will prevent the parachute from opening properly. This will cause injury or death to the jumper. ***If you are unfamiliar with any tool refer to Poynter's Parachute Manual, or US DOT FAA Parachute Rigger Handbook. FAA-H-8083-17.***

Check After Completion

Pre-inspection	Post-Inspection
Packing Paddle (wood) _____ each	Packing Paddle (wood) ____each
Packing Paddle (metal) _____each	Packing Paddle (metal) ____each
Shot Bags _____each	Shot Bags _____each
Pull Up Cords _____each	Pull Up Cords _____each
Locking Pull Up Cord _____each	Locking Pull Up Cord _____each
Leverage Device _____each	Leverage Device _____each
Molar Strap _____each	Molar Strap _____each
Velcro ™ Line Protectors _____each	Velcro ™ Line Protectors _____each
Temporary Locking Pin _____each	Temporary Locking Pin _____each
Temporary Tacking _____each	Temporary Tacking _____each
Tensioning Device _____each	Tensioning Device _____each
Pull Check Tool _____each	Pull Check Tool _____each
Packing Hook _____each	Packing Hook _____each
Needle _____each	Needle _____each
Nipper _____each	Nipper _____each
Scissors _____each	Scissors _____each
Bodkin _____each	Bodkin _____each
Seam Ripper _____each	Seam Ripper _____each
Closing Plate _____each	Closing Plate _____each
Power Tool _____each	Power Tool _____each
Para Tool (pliers) _____each	Para Tool (pliers) _____each
Wrench _____each	Wrench _____each

2.4.1 System Continuity Check

2.4.1.1 After attaching the reserve parachute connector links and steering toggles to the risers, begin the line continuity check.

2.4.1.2 Place the harness/container with the harness facing away from the packing surface. Lay the parachute away from the harness/container. (As shown) Place the slider at the connector links. Ensure that all risers have no twists and are laying flat on the floor.

2.4.1.3 Arrange the reserve parachute by gathering the leading edge (nose) together and lift off the ground. (See figure 2-35 and figure 2-36). Release all but the right or left end cell. Starting with the end cell, ensure that the outside end cell line runs straight through the slider grommet and connects at the outside of the connector link. Ensure that there are no other lines twisted around that line. Check the inside line of the end cell for the same type of continuity. Performing the same procedure, work towards the center cell by checking each cell and line for continuity without interference.

2.4.1.4 Once reaching the center cell, check the opposite end cell outside line and continue the same procedure to the center cell.

2.4.1.5 After the leading edge of the reserve parachute has had a continuity check, arrange the reserve parachute by gathering the trailing edge (tail) together and lift off the ground.
(See Figure 2-35)

Figure 2-35. Check “A line” Continuity

2.4.1.6 Now turn the harness/container over in the direction that will undo the 180 degree turn in the lines and lay it on the ground with the harness facing the packing surface. At this point the lines and rear risers must not have any twist in them.

2.4.1.7 Return to the reserve parachute and gather all upper steering lines on the right or left side. Ensure that the slider grommets are touching the rear connector links and that there are no twist in the risers. Trace the upper steering lines to where the steering line cascade is. Continue tracing the line through the slider grommet then through the riser guide ring and finally to the steering toggle. Ensure that the steering line's path is straight and not wrapped around any other suspension lines. Perform the same procedure on the opposite steering line.

2.4.1.8 Check the "D" line group. Grasp the upper steering lines in one hand and grasp the stabilizer panel where the end cell outside line is. Drop the steering lines. Beginning with the outside line, visually trace the line through the slider grommet and onto the outside of the connector link. Now check the inside line on the end cell and ensure that it is the next line on the connector link. Continue this procedure until you have reached the center cell lines. Repeat this process on the opposite side of the parachute until you have reached the center cell.
(See figure 2-36)

Figure 2-36. Check Steering And "D Line" Continuity

RIGGER CHECK

NOTE: If any line on the reserve parachute is routed incorrectly or obstructed between the line attachment point and the connector link, you must disconnect the affected connector link and reroute each line with correct continuity.
For verification of canopy trim, see page 186.

2.4.2 SETTING THE BRAKES

2.4.2.1 Pull the steering line brake setting cateye through the guide ring. Pass the brake setting locking loop through the steering line cat-eye.
(See figure 2-37)

Figure 2-37. Pull The Locking Loop Through Cat-Eye

2.4.2.2 Insert toggle tip through the locking loop.
(See figure 2-38)

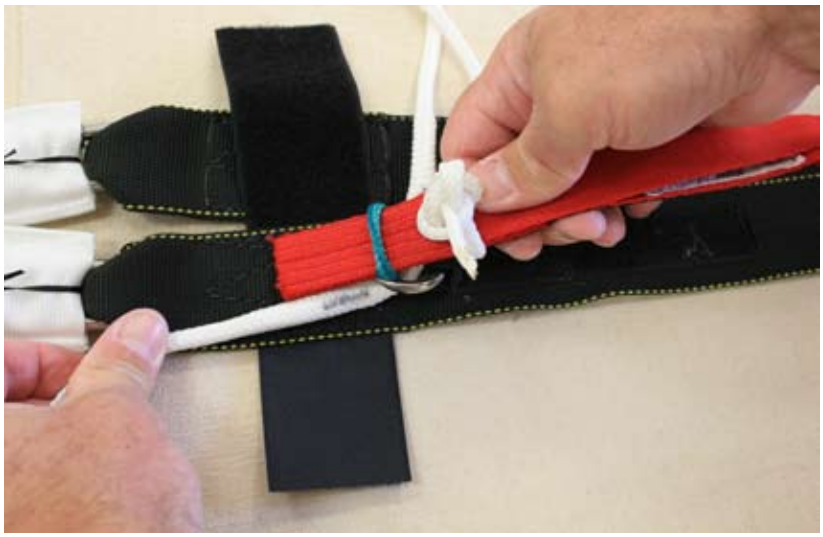

Figure 2-38. Insert Toggle Tip

2.4.2.3 Gather the excess brake line, “S” fold and stow the excess brake line around the toggle tip.
(See Figure 2-39)

Figure 2-39. S Fold And Stow Excess Brake Line

NOTE: Links are shown with the optional installation of the link covers.

2.4.2.4 Secure the excess brake line with the Velcro™ cover.
(See figure 2-40)

RIGGER CHECK.

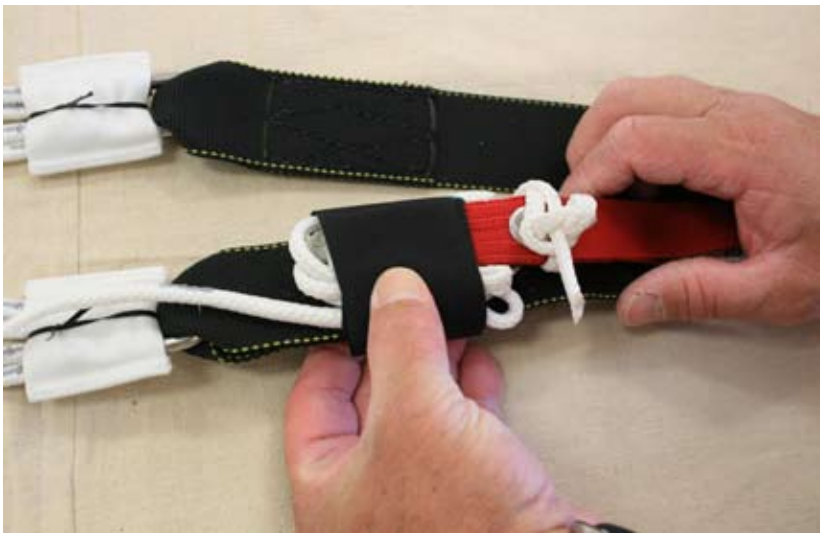

Figure 2-40. Secure Excess Brake Line

2.4.3 FLAKING AND FOLDING THE TR-375 RESERVE PARACHUTE

2.4.3.1 Place the slider up against the connector links. Separate the front line groups from the rear line groups (rear line group includes steering lines).
(See figure 2-41)

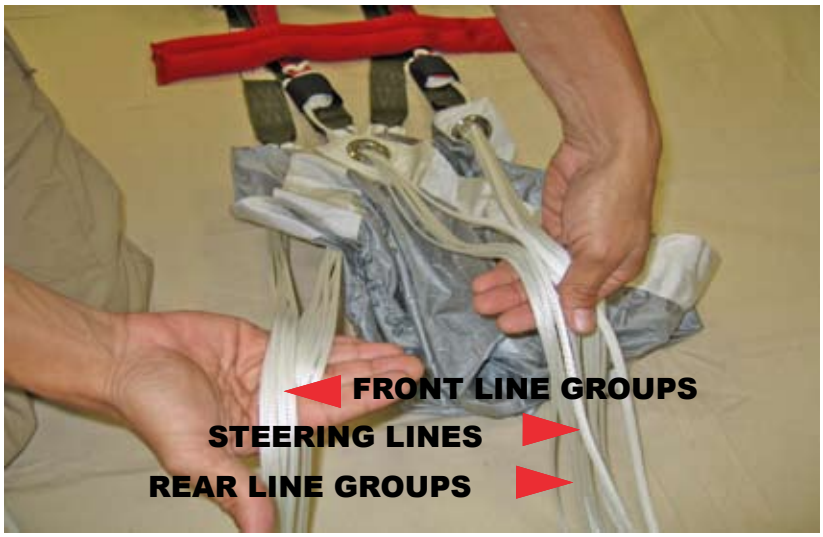

Figure 2-41. Proper Line Separation

2.4.3.2 In one hand grab the right and left rear line groups and in the other hand grab the right and left front line group. The leading edge may be orientated to the right or left side. (Rigger's preference)

2.4.3.3 Step in between the separated line groups and walk towards the parachute working the line groups apart.

2.4.3.4 While spreading the line groups apart, shake the parachute side to side to settle the fabric.
(See figure 2-42)

Figure 2-42. Parachute Orientation

2.4.3.5 In a single motion, swing the parachute forward and lay it on the floor.
(See figure 2-43)

Figure 2-43. Place The Parachute On The Packing Surface

2.4.3.6 Flake the parachute until all T seams at the top skin are straight from leading edge to the trailing edge. T seams are easily identified by the two visible rows of stitching that run from the leading edge to the trailing edge.

2.4.3.7 While flaking, put some tension on the suspension lines to straighten them as you work.
(See figure 2-44)

Figure 2-44. Flaking The Parachute

2.4.3.8 Continue straightening the T seams working toward the tail section.
(See figure 2-45)

Figure 2-45. Straighten The Tail Section

2.4.3.9 Flake the nose. Ensure that the reinforcement tapes are aligned.
(See figure 2-46)

Figure 2-46. Flaking The Leading Edge

2.4.3.10 Fold the three bottom cells under the parachute. Fold the three top cells on top of the parachute.

Spread the center cell. Place half under the parachute and half on top.
(See figure 2-47)

Figure 2-47. Prepare The Leading Edge

2.4.3.11 Grasp the parachute fabric at the A and B line group and the fabric between the A and B line group. While holding equal tension on each line group, place the A line group underneath the B line group.
(See figure 2-48)

Figure 2-48. Begin Stacking The Line Groups

2.4.3.12 Pull the fabric of the three cells to the *left to separate the two parachute sides. *Right side if you orientate the nose to the right.
(See figure 2-49)

NOTE: Use the center cell seam as a guide. This is typical in stacking all line groups.

Figure 2-49. Riggers View

2.4.3.13 While keeping tension on the B line group, grasp the fabric directly above the C line group, and place the C line group on top of the B line group.
(See figure 2-50)

Figure 2-50. Place C Line Group Onto B line Group

2.4.3.14 Rigger view showing three cells placed to the right and three cells placed to the left.
NOTE: The center cell is dividing each side.
(See figure 2-51)

Figure 2-51. Riggers View

2.4.3.15 Keeping tension on the C line group, grasp the fabric directly above the D line group and place the D line group on top of the C line group.
(See figure 2-52)

Figure 2-52. Place D Line Group Onto C Line Group

2.4.3.16 Rigger view showing three cells placed to the left and three cells to the right. NOTE: The center cell is dividing each side. Shot bags may be used to keep the fabric in place.
(See figure 2-53)

Remove the shot bags when finished

Figure 2-53. Riggers View

2.4.3.17 Divide the left and right line groups by pulling the line groups six inches apart while working toward the bottom surface of the center cell.
(See figure 2-54)

Figure 2-54. Separate The Left & Right Line Groups

2.4.3.18 While holding tension on the D line group, sweep the fabric between the D and C line groups toward the outside. Begin running the hand at the line attachment point working toward the end on the stabilizer panel.
(See figure 2-55)

Figure 2-55. Clear Fabric Between Line Groups C & D

2.4.3.19 While holding tension on the D and C line groups, sweep the fabric between the C and B line groups toward the outside.
Begin running the hand at the line attachment point working toward the end on the stabilizer panel.
(See figure 2-56)

Figure 2-56. Clear Fabric Between Line B & C

2.4.3.20 While holding tension on the C and B line groups, sweep the fabric between the B and A line groups toward the outside.
Begin running the hand at the B line attachment point working toward the A line attachment point.
(See figure 2-57)

Figure 2-57. Clear Fabric Between Line Groups A & B

2.4.3.21 Clear each stabilizer to ensure that they are unobstructed.
Repeat the same process of sweeping the fabric between line groups and clearing the stabilizers on the other side of the parachute.
(See figure 2-58)

Figure 2-58. Clear All Stabilizers

2.4.3.22 Once each side has been cleared, grasp the entire right line group and parachute fabric at the top and apply tension to straighten the lines. Repeat this process with the left side of the parachute. (See figure 2-59)

Figure 2-59. Gather Line Groups

2.4.3.23 Once both sides have been cleared, move the tail section away from the center of the pack job.

Grasp the fabric fold between the C & D line groups, place the fold onto the C & D line fabric fold on the other side of the parachute.
(See figure 2-60)

Figure 2-60. Temporarily Place The C-D Fabric On Top

2.4.3.24 Remove the large wrinkles from the A-B fabric fold by smoothing the fabric by hand.
(See figure 2-61)

NOTE: Always work the fabric away from the lines. This will help maintain line tension.

Figure 2-61. Neaten The A-B Fabric Fold

2.4.3.25 Place a long fold along the A-B fabric.
(See figure 2-62)

Figure 2-62. Long Fold The A-B Fabric Fold

2.4.3.26 Grasp the fabric fold between the C & D line groups that was temporarily moved and place it back on top of the A-B fabric fold.

Remove the large wrinkles from the C-D fabric fold by smoothing the fabric by hand.
(See figure 2-63)

Figure 2-63. Neaten The C-D Fabric Fold

2.4.3.27 Place a long fold along the C-D fabric.

Repeat this procedure by neatening and long folding the opposite side of the parachute.
(See figure 2-64)

Figure 2-64. Long Fold The C-D Fabric Fold

2.4.3.28 Pull the stabilizer out and lay it on top of the C-D fabric fold.

Hint: Clear the stabilizer panel that runs from the outside D line to the parachute trailing edge.
(See figure 2-65)

Figure 2-65. Clear The Stabilizer Panel

2.4.3.29 Flake the tail.

Hint: each half cell will have a fold in it using an “S” fold method.
(See figure 2-66)

Figure 2-66. Flake The Tail

2.4.3.30 Tail section shown flaked, “S” folded and laying on one side.
(See figure 2-67)

Figure 2-67. Close Up Of The Flaked Trailing Edge

2.4.3.31 Locate the manufacturer's warning label.
(See figure 2-68)

Figure 2-68. Tail Shown Flaked To One Side

2.4.3.32 Split and flip half the tail forward onto the opposite side of the parachute.
(See figure 2-69)

Figure 2-69. Lay Half The Flaked Tail Over

2.4.3.33 Spread the center cell out evenly to cover the flaked tail.

Ensure that the manufacturer's data block is centered in the middle.
(See figure 2-70)

RIGGER CHECK.

Figure 2-70. Dress The Center Cell Over The Flaked Tail

2.4.3.34 Pull the slider up by grabbing the tapes around its center and walking from the connector links to the base of the folded parachute. (See figure 2-71)

Figure 2-71. Raise The Slider Grommets To Slider Stops

2.4.3.35 Quarter the slider. This is accomplished by pulling the material between the front and rear slider grommets toward the outside into the fold formed by the stabilizers. Repeat the process on the other side.
(See figure 2-72)

Figure 2-72. Quarter The Slider

2.4.3.36 Grasp the fabric of the slider and pull the slider up the suspension lines until **ALL** the slider grommets are snug against **ALL** the slider stops. (See figure 2-73)

RIGGER CHECK.

Figure 2-73. Set The Slider

2.4.3.38 Ensure that **ALL** the slider grommets are snug against **ALL** the slider stops sewn to the stabilizer panels. (See figure 2-74)

Figure 2-74. Begin The "S" Fold

2.4.3.37 "S" fold the dressed parachute by making the first "S" fold approximately 6 to 8 inches. With the right hand grasp the stabilizers and slider. Place the left hand on the parachute approximately 15 inches up from the lower edge.

Fold the stabilizers and slider toward the top of the parachute. In the same motion "S" fold the base of the slider back toward the harness / container system. (See figure 2-75)

Figure 2-75. Finish The "S" Fold

NOTE: After the first "S" fold, reset the the slider grommets snug against the slider stops. Notice that the grommets have moved during the fold process.

2.4.3.39 Replace the center cell of the tail back to its original position and tuck the parachute fabric back in between the nose and A-B line groups' fabric. (See figure 2-76)

Figure 2-76. Tuck The Parachute Fabric In Place

Figure 2-77. Properly Cocooned Parachute

2.4.3.40 The width of the cocooned parachute should be about the same width as the deployment bag.
(See figure 2-77)

Continue by using the instructions “Packing The Reserve Deployment Bag” Section 2-6.

SECTION 2-5

TR-375 OVER-THE-SHOULDER PRO PACK INSTRUCTIONS

1320 E. International Speedway Blvd. Suite 1
Deland, Florida 32724 Tel: 382-736-3862 Fax: 386-736-3899
www.cpsworld.com

2.5.1 FLAKING AND FOLDING THE TR-375 TACTICAL RESERVE PARACHUTE

2.5.1.1 Facing the reserve parachute. With your fingers, separate the front and rear suspension lines. With the thumbs separate the steering lines as shown.
(See figure 2-78)

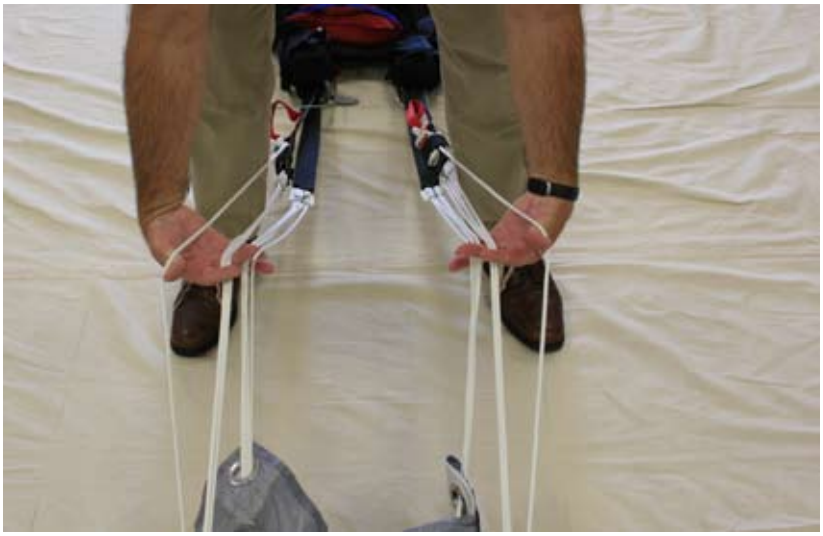

Figure 2-78. Separate The Suspension Lines

2.5.1.2 Keeping the suspension line groups separated, walk towards the parachute pushing the slider as you go. Separate the right and left line groups and shake the parachute side to side to settle the fabric.
(See figure 2-79)

Figure 2-79. Separate The Right And Left Line Groups

2.5.1.3 Bring all suspension line groups together and place in one hand then place all line groups to rest on the shoulder. (Either side)

Starting with the parachute end cell nearest the body, pull out the leading edge cells one at a time to clear and organize the nose. (See figure 2-80)

Figure 2-80. Clear And Organize The Nose

2.5.1.4 Place the organized nose between the knees to keep the nose in control. (See figure 2-81)

Figure 2-81. Place The Nose Between The Knees

2.5.1.5 Starting with either the right or left side, locate and separate the A and B line groups. Place your arm between the line groups down into the parachute and push the parachute fabric to the outside.

Repeat this process between the B and C, line groups then the C and D line groups.

Repeat this process on the opposite side of the parachute between each line group. (See figure 2-82)

Figure 2-82. Push The Fabric To The Outside

2.5.1.6 Here is an example showing the line groups unobstructed with the parachute fabric. Notice that the fabric between each line group is organized to the outside of the line groups.
(See figure 2-83)

Figure 2-83. Unobstructed Line Groups

2.5.1.7 Place all line groups in one hand and place the other mid way down the parachute to support the fabric. Lay the parachute on the packing surface while maintaining control.
(See figure 2-84)

Figure 2-84. Lay The Parachute On The Packing Surface

2.5.1.8 Once the parachute is on the packing surface, neaten the fabric to decrease pack volume by using the hand to sweep the fabric to the outside between each line group on both sides.
(See figure 2-85)

Figure 2-85. Neaten The Fabric

2.5.1.9 Carefully roll the parachute fabric over to expose the nose.

Straighten and organize three cells each on both sides of the parachute as shown.
(See figure 2-86)

Figure 2-86. Expose The Nose

2.5.1.10 Return the fabric between the A and B line groups back to the original position.

Smooth the fabric to decrease wrinkles.

Ensure that the slider remains quartered while smoothing the fabric .
(See figure 2-87)

Figure 2-87. Smooth The Fabric

2.5.1.11 Long fold the fabric between the A and B line groups as shown. Smooth the fabric to decrease wrinkles.

Repeat this same process with the fabric between the B and C line groups.

Repeat this same process on the other side of the parachute.
(See figure 2-88)

Figure 2-88. Long Fold The Fabric

2.5.1.12 Locate the parachute stabilizer panel between the outside D line and the outside line on the trailing edge (tail).

Grasp the outside line on the tail section and place it so that the line is stacked on the major line groups.
(See figure 2-89)

Figure 2-89. Clear The C-D Stabilizers

2.5.1.13 Fold each cell into quarters.

Ensure that the upper steering lines are placed in the middle during the flaking so that they all are stacked on the major line groups.

Repeat this process on the other side of the tail section. When finished the warning label must be centered on top of the completed tail section.
(See figure 2-90)

Hint: Fold each half cell in half.

Figure 2-90. Quarter Each Cell

2.5.1.14 Between the right and left line groups, pull the slider reinforcing tape from between the line groups clearing the fabric from any
obstruction.

Now grasp the fabric in the center of the slider and pull up towards the stabilizers to ensure that the slider grommets are tight up against the slider stops sewn to the stabilizer panels.

Wrap the center cell of the tail section around the fabric between the A-B, B-C, C-D line groups and tail as shown. Do not wrap the tail around the nose section.
(See figure 2-91)

Figure 2-91. Wrap The Center Cell

2.5.1.15 Fold the three leading edge cells over towards the parachute to where the reinforcement tapes are touching the tail section.
(See figure 2-92)

Figure 2-92. Fold The Leading Edge Cells

2.5.1.16 Now fold the nose under the parachute leaving the reinforcement tapes in the same place.

Hint: the nose reinforcement tapes will lay on the packing surface when finished.
(See figure 2-93)

Figure 2-93. Fold The Nose Under

2.5.1.17 Ensure that all line groups are stacked on top of each other and that **ALL** slider grommets are snug against **ALL** the slider stops sewn to the stabilizer panels.
(See figure 2-94)

RIGGER CHECK.

Figure 2-94. Fold Stabilizer Panels Over The Slider

2.5.1.18 "S" fold the dressed parachute by making the first "S" fold approximately 6 to 8 inches. With the right hand grasp the stabilizers and slider. Place the left hand on the parachute approximately 15 inches up from the lower edge.

Fold the stabilizers and slider toward the top of the parachute. In the same motion "S" fold the base of the slider back toward the harness / container system.
(See figure 2-95)

Figure 2-95. Begin The "S" Fold

2.5.1.19 Ensure that **ALL** the slider grommets are snug against **ALL** the slider stops sewn to the stabilizer panels.
(See figure 2-96)

Figure 2-96. Finish The "S" Fold

2.5.1.20 Replace the center cell on the tail back to its original position and tuck the parachute fabric back in between the nose and A-B line groups' fabric.
(See figure 2-97)

Figure 2-97. Tuck The Parachute Trailing Edge In Place

SECTION 2-6

PACKING THE RESERVE DEPLOYMENT BAG

2.6.1 RESEVERVE DEPLOYMENT BAG COMPONENT IDENTIFICATION AND PREPARATION

Figure 2-98. Deployment Bag Safety Stow Locations

2.6.1.1
The deployment bag is oriented so that the safety stow loops are visible and the line pouch is towards the packing surface (floor) as shown.

This is the bag position when placing the flaked and folded parachute inside.

Safety stows: each set of safety stows is a continuous bungee with loops sewn into both ends that runs through a channel, creating two safety stows.

The band closest to the ***outer*** portion of flap 1 is the ***outer*** safety stow.

The band closest to the ***inner*** portion of flap 1 is the ***inner*** safety stow.
(See figure 2-98).

Figure 2-99. Deployment Bag Flap Numbering Sequence

2.6.1.2
Flap 1 is shown folded back and contains the safety stow bands. There are 4 safety stow loops.

Flap 2 and 3 are side flaps and are closed in that order. Each flap contains two grommets.

Flap 4 is the last flap to be closed. It contains 4 grommets.
(See figure 2-99)

2.6.1.3 Prepare the reserve deployment bag by mating Velcro™ line protectors onto the Velcro™ hook strips sewn at the line pouch opening placed on the back of the bag.
(See figure 2-100)

Figure 2-100. Install Velcro™ Line Protectors

2.6.1.4 Place the deployment bag on or near the cocooned parachute.
Ensure that the width of the folded parachute is the same width as the widest portion of the bag plus or minus 1 inch.
(See figure 2-101)

Figure 2-101. Check Width Against The Deployment Bag

2.6.1.5 Gently lift the base of the parachute with one hand being
careful not to disturb the folds or lines, and with the other hand slide the deployment bag underneath the parachute.
(See figure 2-102)

Figure 2-102. Slide Deployment bag Under The Parachute

2.6.1.6 With the deployment bag placed under the parachute, make an S-fold in the parachute.
(See figure 2-103)

Figure 2-103. S-Fold

2.6.1.7 While kneeling on the reserve parachute, lift the top and place it in your lap. Inspect the nose arrangement. The nose cells are easily identified by the white reinforcement tapes.

Ensure that there are three nose cells pointing to the right and three nose cells pointing to the left.

Spread the center cell apart placing half to the right and half to the left. (See figure 2-104)

Figure 2-104. Inspect The Nose

2.6.1.8 Place the top of the parachute back down on the packing surface.

Locate the two rows of stitching in the middle of the center cell. Follow the two rows of stitching working your way to the nose section. As you work your way to the nose section, separate the parachute fabric by pulling the right side to the right and the left side to the left. Keep the center cell in a neutral position.
(See figure 2-105)

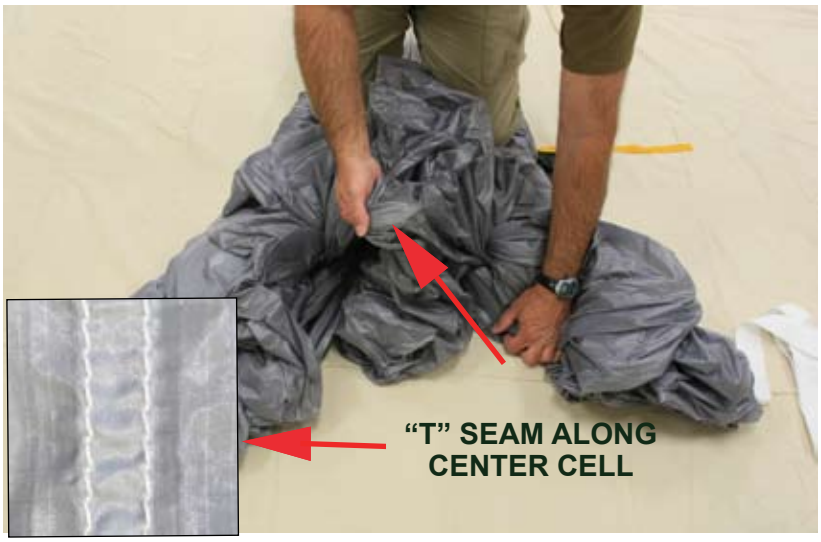

Figure 2-105. Split The Parachute Top Into Two Sections

2.6.1.9 Form the two sections by dressing them into a long and narrow roll. Roll the top of the center cell under as shown but keep the nose leading edge exposed.
(See figure 2-106)

Figure 2-106. Form The Two Sections

2.6.1.10 Fold the ear under itself to reduce the length to the depth of the bag.
(See figure 2-107)

Figure 2-107. Reduce The Length

2.6.1.11 Lift the top of the deployment bag to open it and place the right or left folded ear into the upper corner of the bag. Work the fabric into the top by pushing the reserve parachute up into the corner while pulling against the bag.
(See figure 2-108)

Fold the other ear in half and place it into the deployment bag.

Figure 2-108. Begin Inserting The Parachute

Figure 2-109. Deployment Bag Displacement Check

2.6.1.12 Make both folds even in length to ensure proper displacement of bulk in the deployment bag. After placing the second ear into the other side of the bag, grasp the side flap and push the folded parachute into the bag forcing the fabric into the upper corners. Do this on each side of the bag. Ensure that the corners are even.
(See figure 2-109)

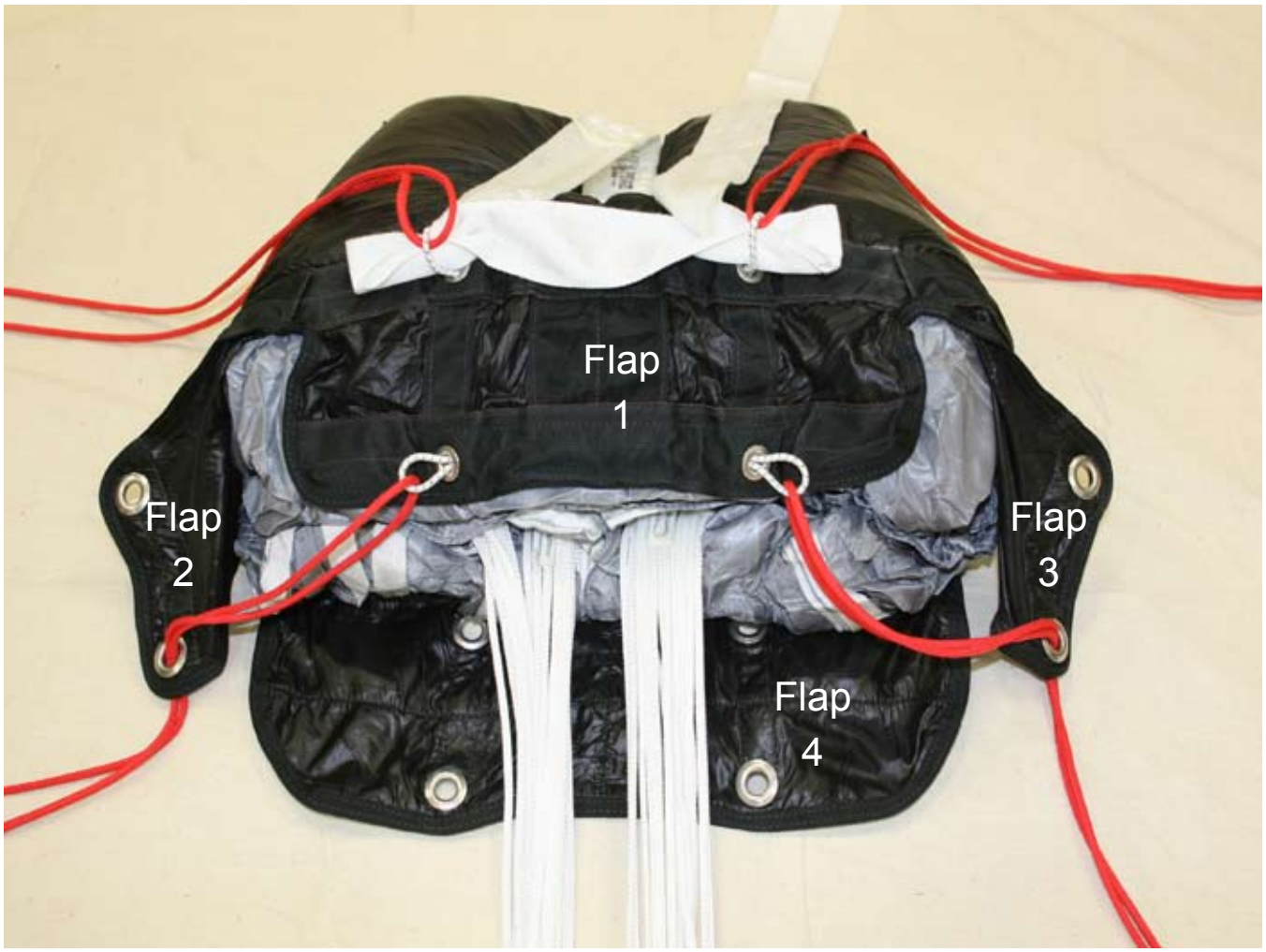

Figure 2-110. Place Pull Up Cords Through Each Safety Stow Loop

2.6.1.13 Place a red type III (or like material) 48" pull up cord in each safety stow loop as shown on flap 1. Using the deployment bag bridle, place a bight of bridle in each safety stow loop on the "inner" safety stow.
(See figure 2-110)

2.6.1.14 Thread the colored pull up cord through the lower grommet on side flaps 2 and 3.
(See figure 2-110)

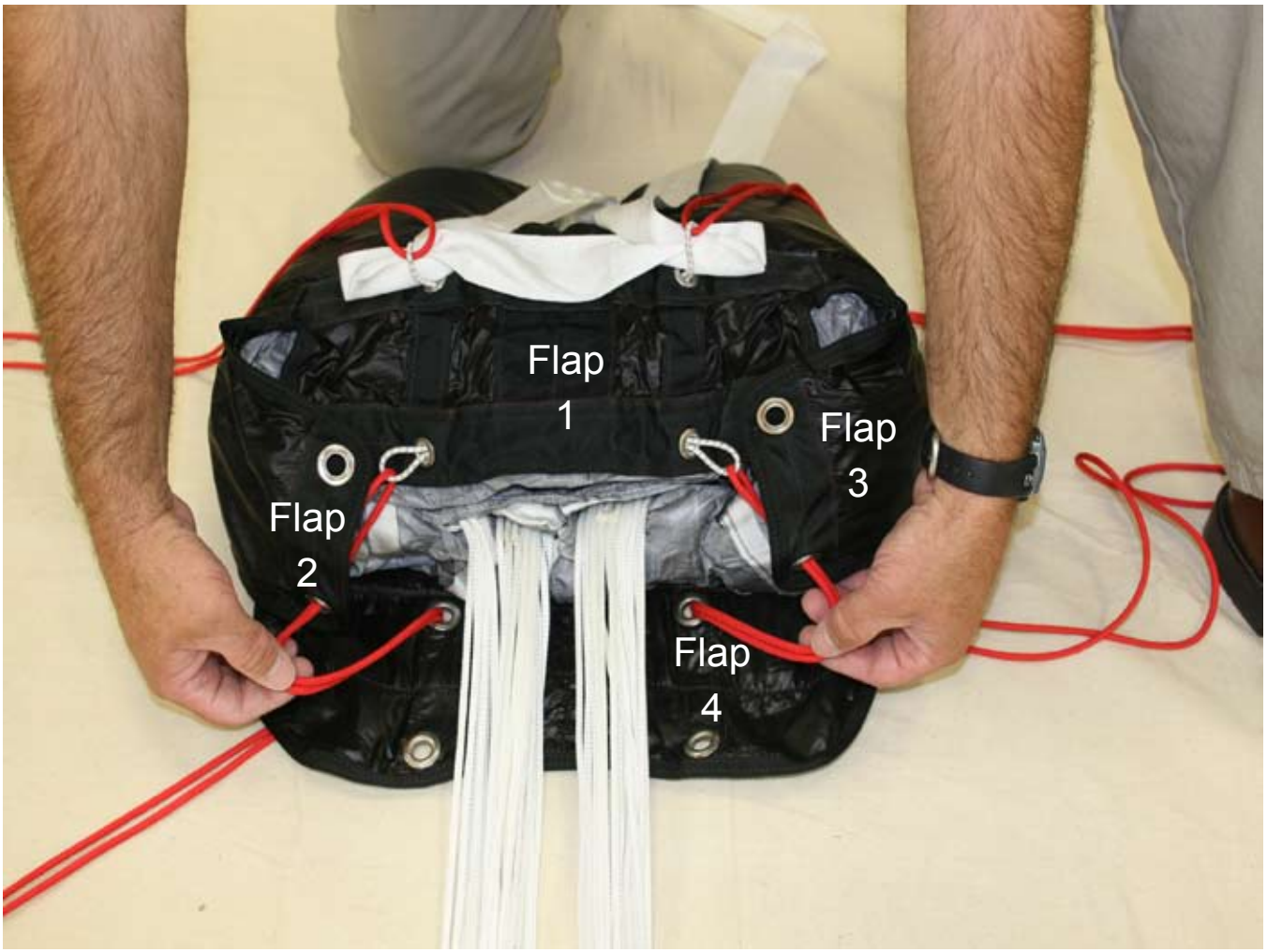

Figure 2-111. Outer Safety Stow Pull Up Cords

2.6.1.15 Thread the “outer safety stow” pull up cords from flap 1 and 2 through the inner grommets on flap 4.
(See figure 2-111)

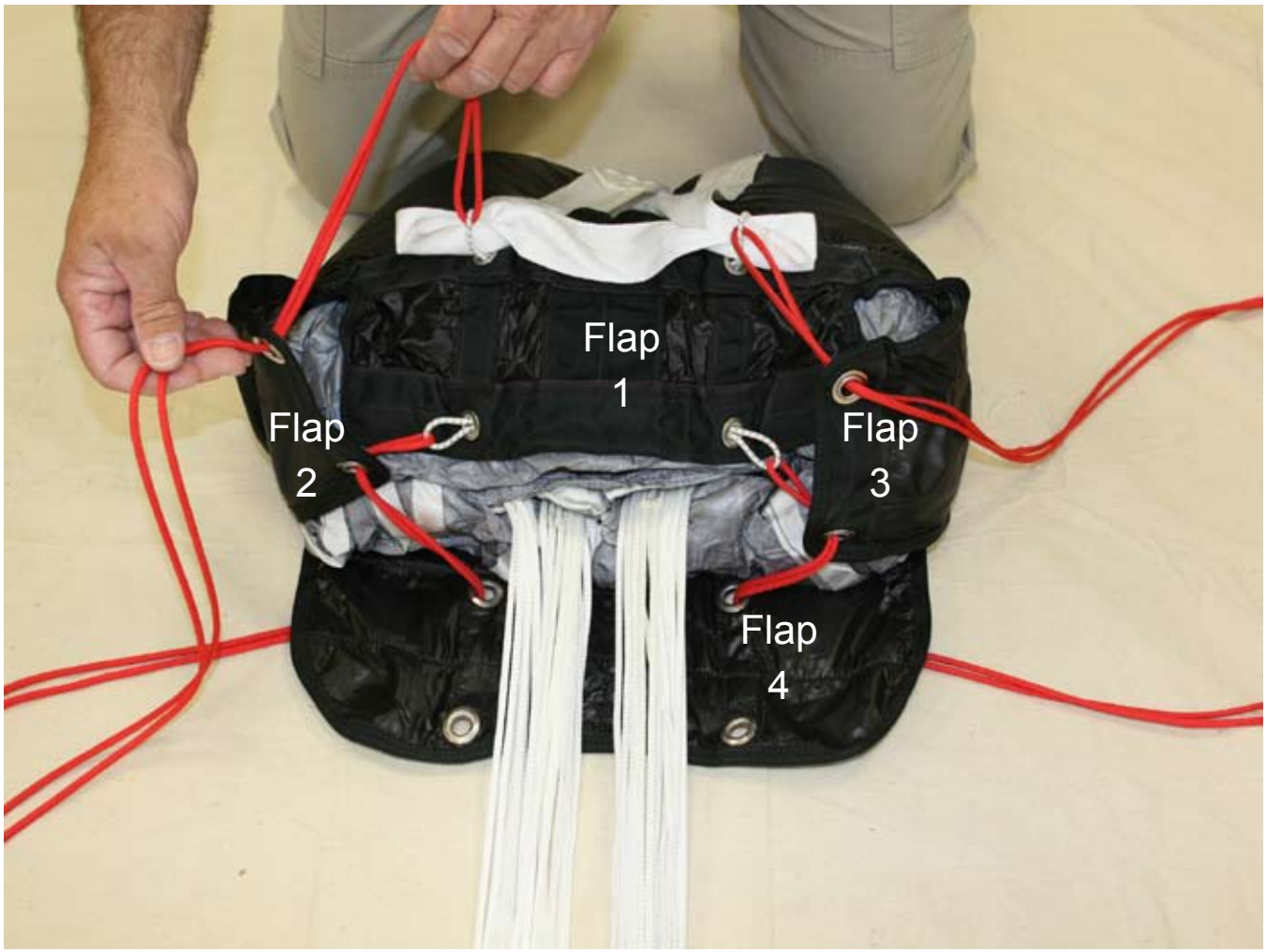

Figure 2-112. Inner Safety Stow Pull Up Cords

2.6.1.16 Thread The “Inner Safety Stow” Pull Up Cords From Flap 1 Through The Upper Grommets On Flaps 2 and 3.
(See figure 2-112).

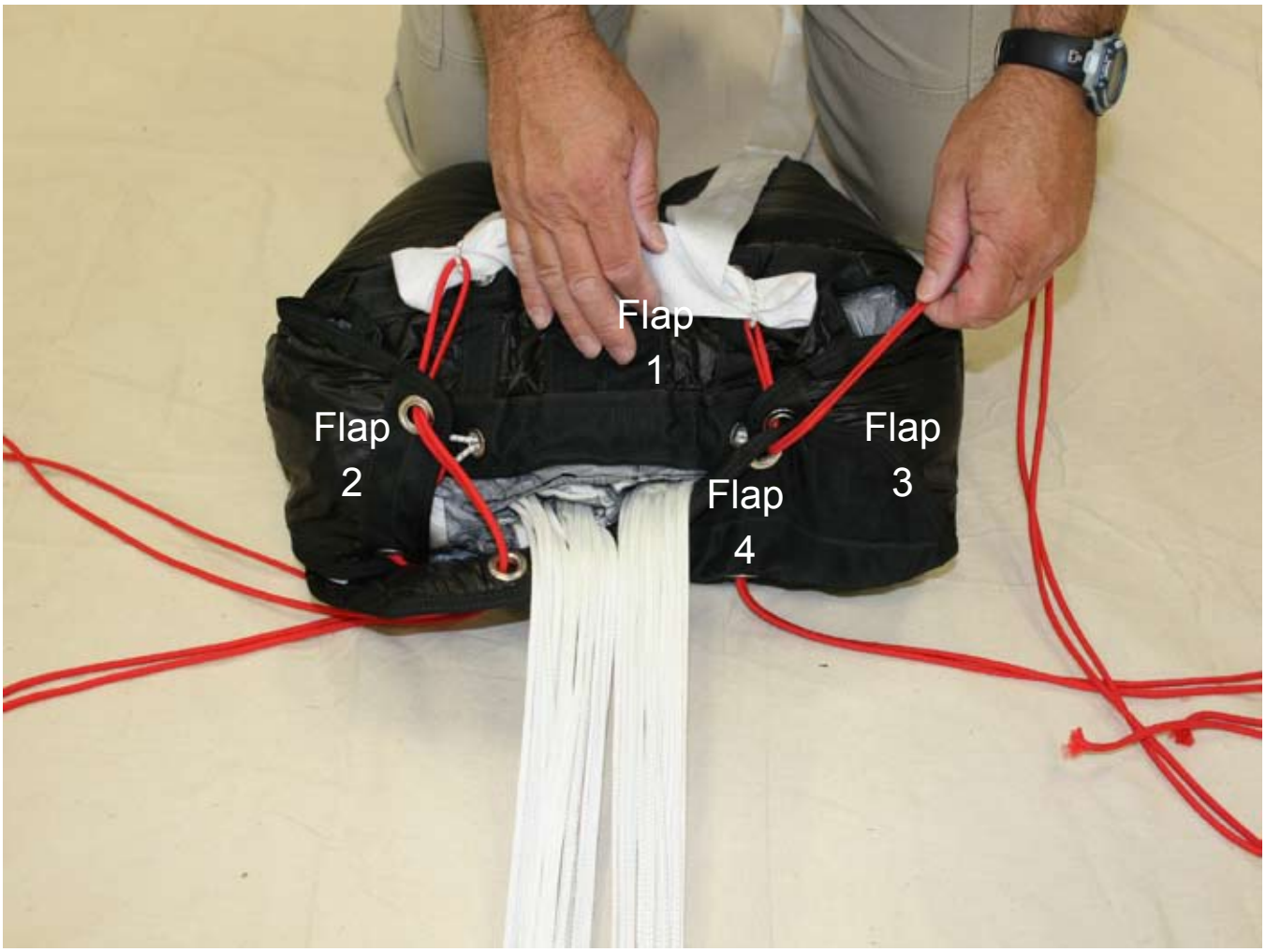

Figure 2-113. Close Flap 4

2.6.1.17 Continue threading the pull up cords through the outer grommets on flap 4. (See figure 2-113)

NOTE: Ensure that no canopy material is trapped in the grommets and that the grommets are aligned.

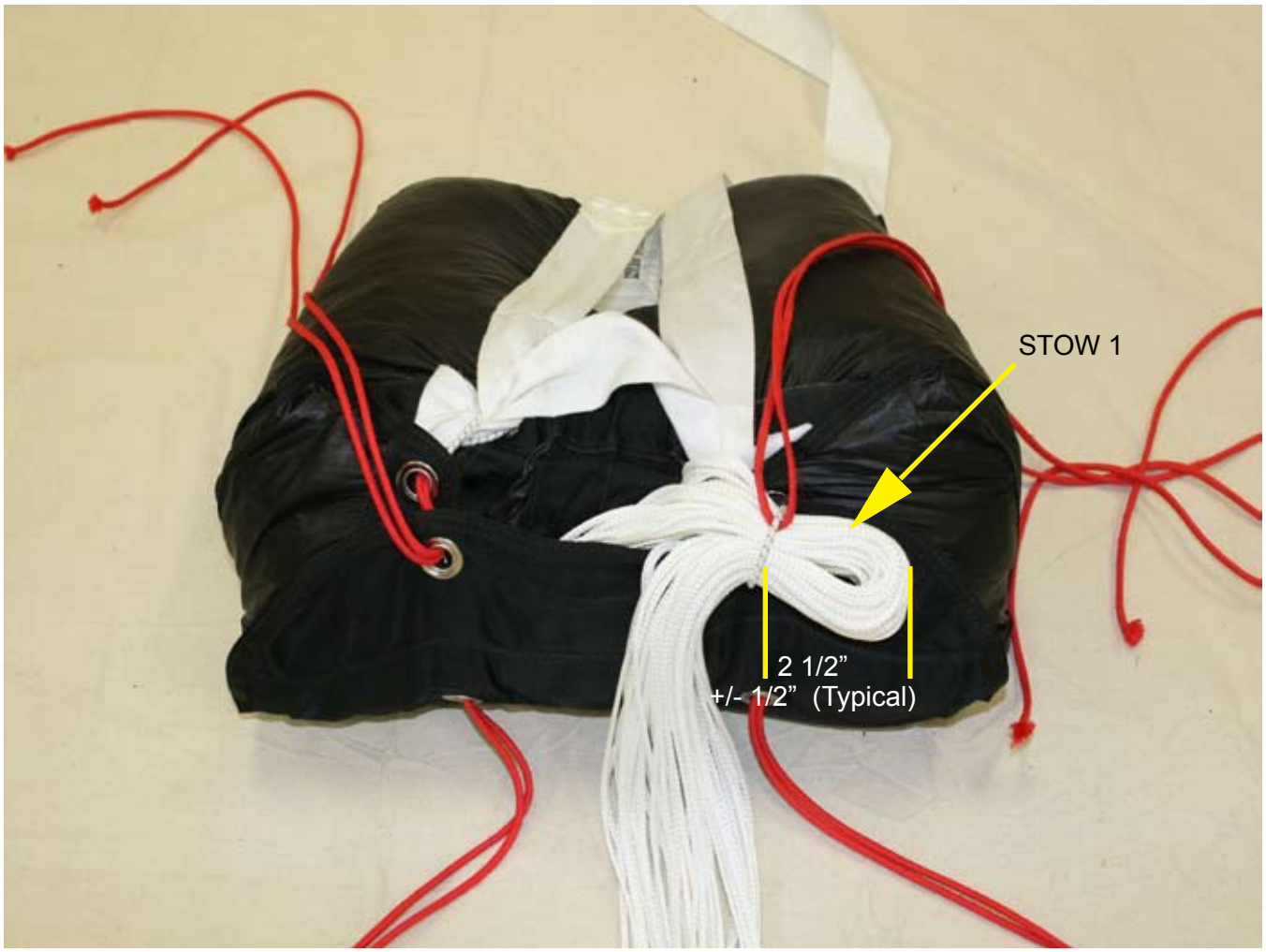

Figure 2-114. Place The First Safety Stow

2.6.1.18 While facing towards the harness container, grasp the left pull up cord coming from the outer grommet from flap 4 and pull it through the series of grommets until there is enough safety stow loop to allow for a bight of suspension lines. Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight.

Slowly remove the deployment bag bridle bight and safety stow pull up cords from the safety stow loop.
(See in figure 2-114)

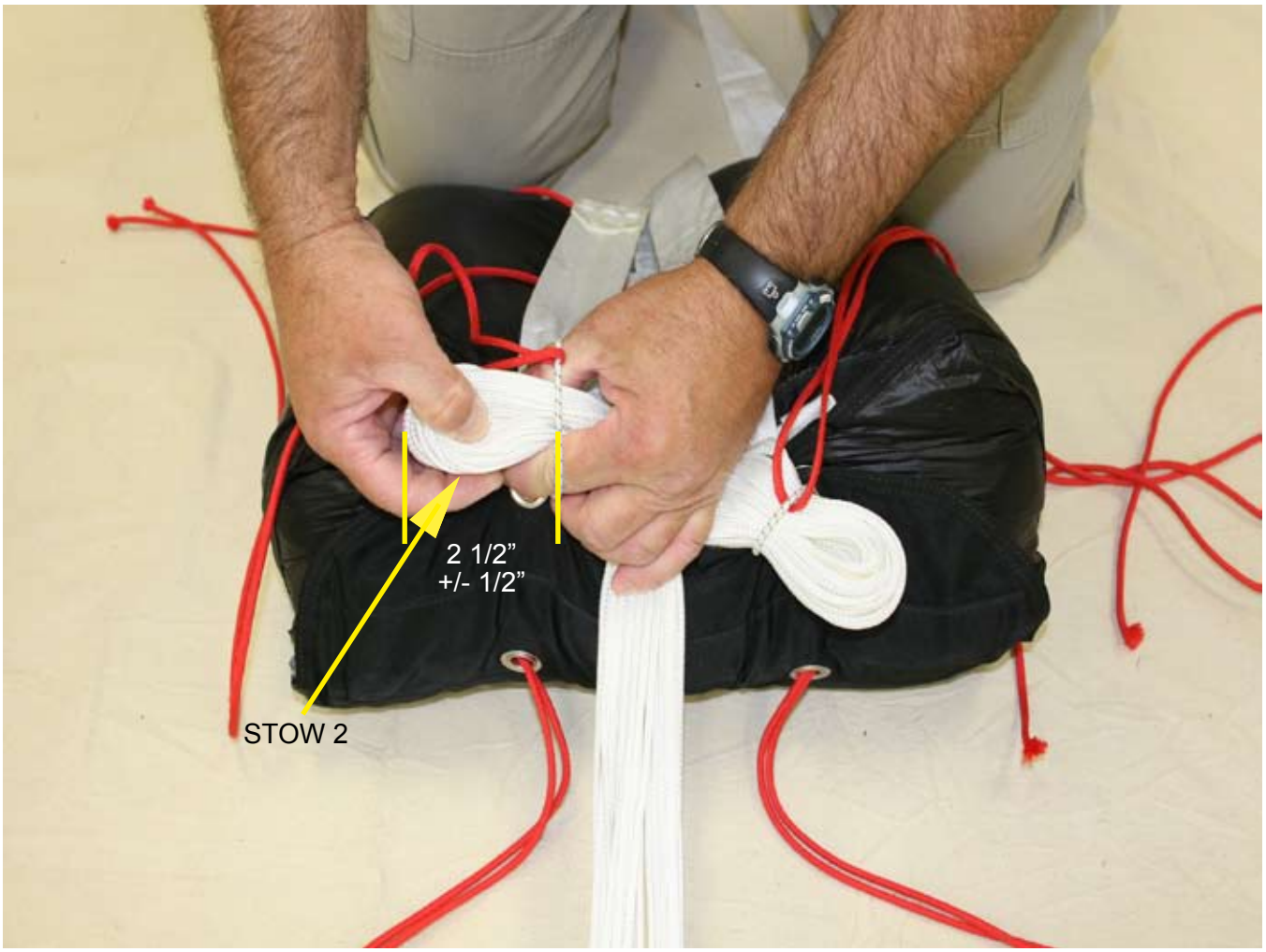

Figure 2-115. Place The Second Safety Stow

2.6.1.19 Pull the safety stow pull up cord through the series of grommets until there is enough safety stow loop to allow for a bight of suspension lines. Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight.

Slowly remove the deployment bag bridle bights and safety stow pull up cords from the safety stow loops.
(See figure 2-115)

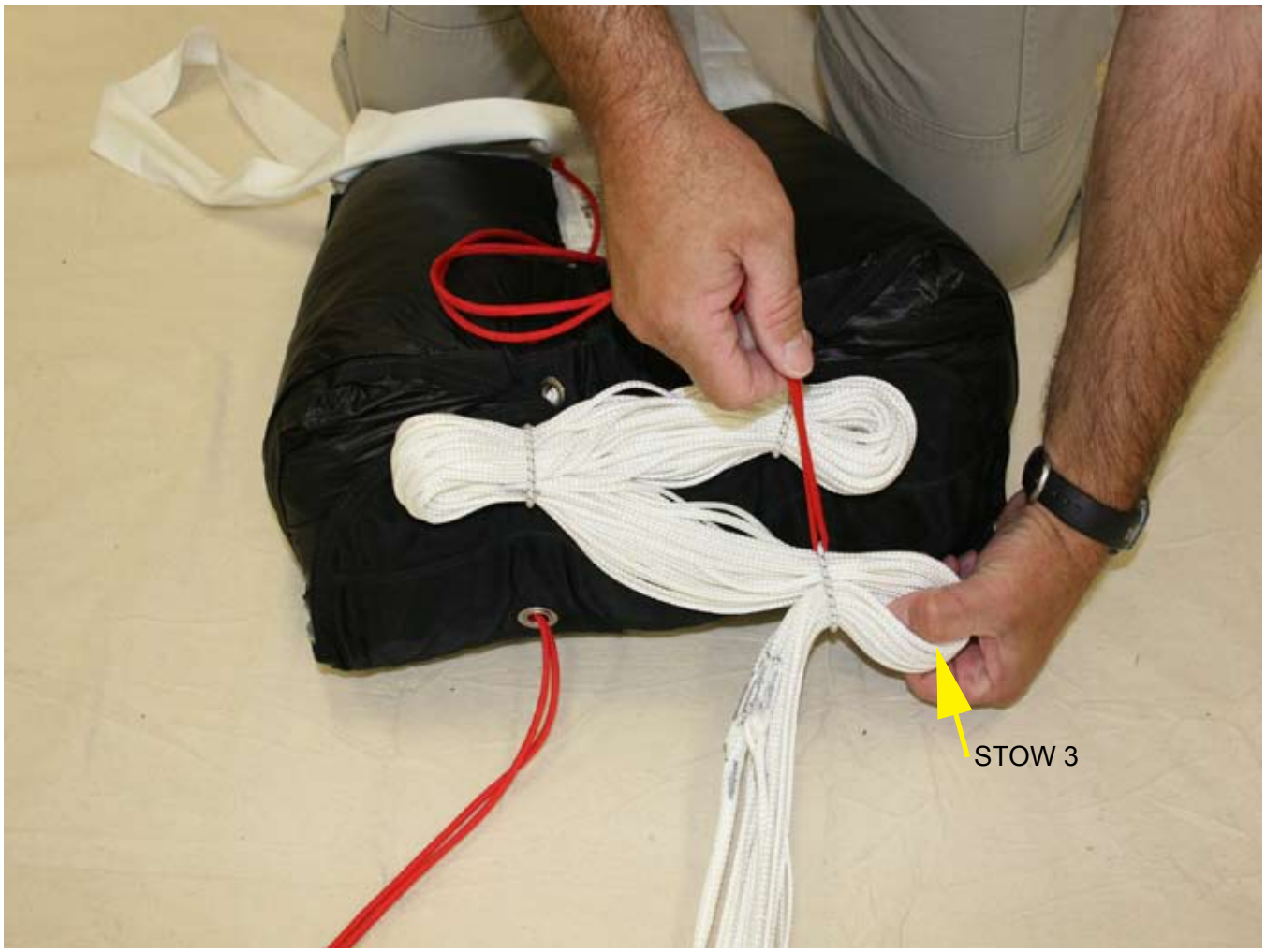

Figure 2-116. Place The Third Safety Stow

2.6.1.20 Pull the safety stow pull up cord coming from the inner series of grommets on the opposite side until there is enough safety stow loop to allow for a bight of suspension lines. Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight.
(See figure 2-116)

NOTE: Although the opposite safety stow is not locked it is easily retrievable by slowly pulling the safety stow pull up cord.

Figure 2-117. Place The Final Safety Stow

2.6.1.21 Continue by pulling the final safety stow pull up cord through the last inner grommet until there is enough safety stow loop to allow for a bight of suspension lines. Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight.

Slowly remove both safety stow pull up cords.
(See figure 2-117)

2.6.1.22 Ensure that the upper and lower steering line “cascades” are placed between two locking stows as shown.
(See figure 2-118)

WARNING: **Do not place the steering line cascades within any stow bight.**

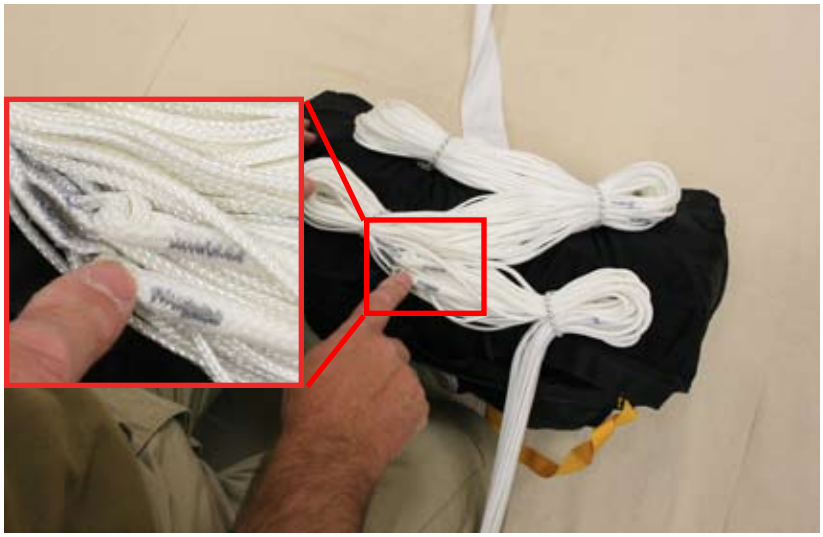

Figure 2-118. “Caution” Steering Line Cascades

2.6.1.23 To prevent line damage cover the entire hook portion of the Velcro™ strip with the pile tabs.
Open the line pouch on the back of the deployment bag, place a bight of lines into the opposite corner from the last locking stow.
(See figure 2-119)

Figure 2-119. Begin Stowing The Suspension Lines

2.6.1.24 Place a bight of lines on the opposite side of the pouch. Make each line stow the same width as the inside of the pouch.
(See figure 2-120)

Figure 2-120. Finish Stowing The Suspension Lines

2.6.1.25 Continue stowing the remaining lines until there are 12 to 14 inches of line between the pouch and connector links. Ensure that the lines exit the center of the deployment bag.

Once the suspension lines are stowed, remove the Velcro™ line protection strips. Mate the hook and pile at the line pouch.
(See figure 2-121)

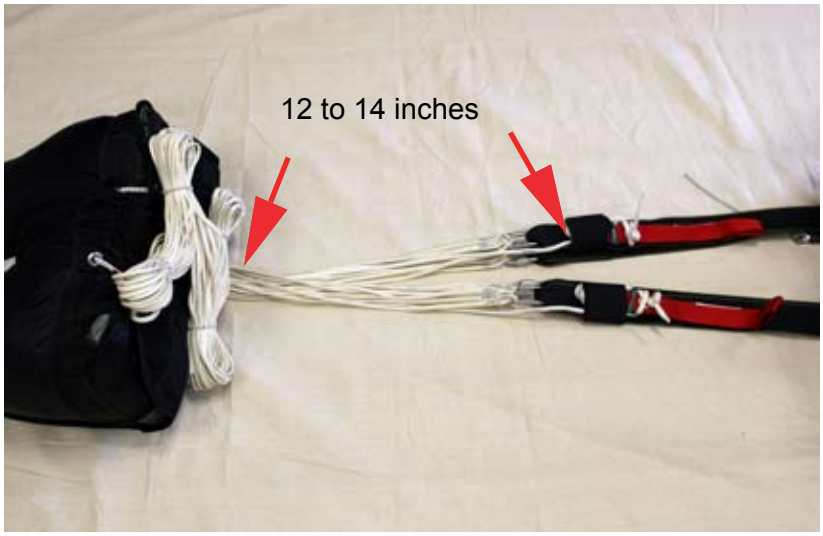

Figure 2-121. Stow Lines With 12 to 14 Inches Remaining

SECTION 2-7

CLOSING THE RESERVE CONTAINER

2.7.1.1 Prior to placing the reserve parachute into the reserve container set the CYPRES loop length at 2-3/4 inches (plus or minus 1/4 inch from the disc). The loop at this length will protrude from the floor plate 2-1/2 inches (plus or minus 1/4 inch). Thread a pull up cord through the reserve container closing loop. Thread the pull up cord ends through the hole in the CYPRES cutter as shown.(See figure 2-122)

NOTE: Recommended minimum pull up cord length is 48 inches

Ensure that the reserve closing loop passes through the cutter hole.

Figure 2-122. Reserve Container Pack Tray

2.7.1.2 Lift the deployment bag and temporarily place it on the main parachute pack tray. Arrange the reserve parachute risers in the reserve pack tray. Ensure that the risers lay flat without twist in the pack tray. Ensure that the risers lay flat along the shoulder line and into the tray. **Do not allow any slack in the risers after they are set.**
(See figure 2-123)

Figure 2-123. Place The Reserve Risers

2.7.1.3 Place the deployment bag on the top portion of the reserve pack tray. Straighten the suspension lines between the bag and risers.
(See figure 2-124)

Figure 2-124. Place Deployment Bag On The Container

2.7.1.4 Place the reserve parachute into the reserve pack tray. Work the corners of the bag into the bottom corners of the container.
(See figure 2-125)

IF USING A SKYHOOK GO TO SECTION 2-7A BEGINNING ON PAGE 100.

Figure 2-125. Work The Bag Corners Into Container

2.7.1.5 S-fold the bridle using four folds aproximately 8 inches each.

Spread the four folds apart to form a “V”.

Thread the pull up cord through the grommet on Flap 1. Pull the closing loop to the surface, place a temporary pin in the closing loop.
(See figure 2-126)

Figure 2-126. Close Flap 1

2.7.1.6 Thread the pull up cord through the grommet on flap 2. Pull the closing loop to the surface, pull the temporary pin out from flap 1 and place it in the closing loop above flap 2. Thread the pull up cord through the grommet on flap 3.
(See figure 2-127)

Figure 2-127. Close Flap 2

2.7.1.7 Pull the closing loop to the surface, pull the temporary pin out from flap 2 and place it in the closing loop above flap 3. (See figure 2-128)

Figure 2-128. Close Flap 3

2.7.1.8 Run a bodkin through the grommet located on the top of the reserve pilot chute. (See figure 2-129)

Figure 2-129. Place A Bodkin Into The Top Grommet

2.7.1.9 Pass the end of the bodkin through one of the openings in the base of the reserve pilot chute. (See figure 2-130)

Figure 2-130. Run The Bodkin Through To The Bottom

Figure 2-131. Pull The Pull Up Cord Through Pilot Chute

2.7.1.10 Place both ends of the pull up cord through the slot at the end of the bodkin. Pull the pull up cord through the reserve pilot chute. Lay the pilot chute down near the folded bridle. (See figure 2-131)

Figure 2-132. Place The Bridle and Pilot Chute Next To Closing Pin

2.7.1.11 Place the “S” folded bridle on one side of the closing loop / flap 2 grommet and place the bagged high speed pilot chute on the other side of the closing loop /flap 3. This distributes the bulk evenly. (See figure 2-132)

Figure 2-133. Compress The Pilot Chute

2.7.1.12 While holding onto pull up cord, place pilot chute base on grommet and compress evenly. (See figure 2-133) **RIGGER CHECK.**

Figure 2-134. Compress The Pilot Chute Spring

2.7.1.13 Center the reserve pilot chute base over the grommet on flap 3. While pulling the pull up cord, compress the pilot chute spring until the top is flush with the container. Ensure no fabric is trapped in between the spring coils. (See figure 2-134)

2.7.1.14 Pull the closing loop to the surface, remove the temporary pin from above flap 3 and pin the loop above the top of the reserve pilot chute. (#4)
(See figure 2-135)

Figure 2-135. Pin The Pilot Chute

2.7.1.15 Tuck the pilot chute fabric evenly underneath the pilot chute cap top and sides only.
(See figure 2-136)

NOTE: Use care not to tear or damage the pilot chute fabric by using sharp tools. Use a wooden packing paddle only.

Figure 2-136. Tuck The Fabric Under The Cap

2.7.1.16 Divide the remaining pilot chute evenly to the right and to the left. Thread the pull up cord through the grommet on the number 5 flap.
(See figure 2-137)

Figure 2-137. Divide The Remaining Pilot Chute Fabric

2.7.1.17 Place flap 5 over the folded pilot chute fabric. Tuck the fabric under Flap 5.

Place the pull up cord through the grommet on flap 5.

Pull the closing loop to the surface, remove the temporary pin from above the pilot chute cap (4) and temporarily pin the closing loop above flap 5.
(See figure 2-138)

Figure 2-138. Close Flap 3

2.7.1.18 Insert the closing pin through the Marine eye located at the terminal end of the reserve ripcord cable. The Marine eye is bevel cut, so place the closing pin through the eye from the beveled side.
(See figure 2-139)

Figure 2-139. Mate The Closing Pin And Marine Eye

2.7.1.19 Place the pull up cord through the grommet on flap 6 and
pull the closing loop to the surface
Pin the closing loop above flap 6 with the reserve closing pin.
(See figure 2-140)

Be sure to remove the temporary locking pin between flap 5 and 6.

Figure 2-140. Pin The Closing Loop With The Closing Pin

2.7.1.20 Place the end of flap 4 into the pocket at the end of flap 3.

Place the point of the closing pin under the Type III binding tape.

Mate the hook and pile Velcro™ on the closing pin lanyard to the Velcro™ piece on flap 4.
(See figure 2-141)

RIGGER CHECK.

Figure 2-141. Place Flap 4 Into Retaining Pocket

2.7.1.21 Place a packing paddle into the reserve tuck tabs.
(See figure 2-142)

Figure 2-142. Reserve Tuck Tab Location

2.7.1.22 Tuck the tabs in between the back of the deployment bag and reserve risers.
(See figure 2-143)

Figure 2-143. Carefully Tuck In The Reserve Tuck Tabs

2.7.1.23 Place the reserve static line (RSL) under the flap beneath the reserve riser on the wearers right shoulder. Access to the flap is possible with or without the reserve parachute being packed.
(See figure 2-144)

RIGGER CHECK.

Figure 2-144. Place The Reserve Static Line

2.7.1.24 Fold the tuck tab under the RSL and RSL flap.
(See figure 2-145)

Figure 2-145. Place The Tuck Tab Under The RSL Flap

2.7.1.25 Place the reserve closing pin protection flap over flap 6; tuck the tabs under the sides of flap 6

Tuck the end tab into the pocket on flap 5.
(See figure 2-146)

Figure 2-146. Place Pin Cover Over Flap 6

COUNT YOUR TOOLS

Figure 2-147.

NOTE: When threading the main parachute "long" cutaway cable through the cable housing, ensure that the cable passes **"through"** the loop at the end of the Collin's lanyard.
(See figure 2-147).

WARNING: The Collins lanyard loop must only have one lanyard attached by a larks head knot. (Locking pin lanyard).
Route the cables under the reserve risers. Ensure there is no interference with the AAD cables or the reserve toggles.

Only the long cutaway cable shall pass through the loop.

SECTION 2-7A

SUPPLEMENTAL SKYHOOK INSTRUCTIONS

1320 E. International Speedway Blvd. Suite 1
Deland, Florida 32724 Tel: 382-736-3862 Fax: 386-736-3899
www.cpsworld.com

2.7.A.1 Supplemental Instructions For The Optional SKYHOOK System

2.7.A.1.1 Ensure that the red Skyhook lanyard and 1000 lbs. Spectra closing pin lanyard are attached to the reserve static line (RSL) using a larks head knot.
Part # JR007-MJ-SH

Fold the red Skyhook lanyard 3 1/2 inches from the larks head knot. Place the fold in the red pocket on flap 1.
(See figure 2-148)

Figure 2-148. Insert The Red Skyhook Lanyard

2.7.A.1.2 Fold the reserve deployment bag bridle up to the green loop/Skyhook. (Skyhook is located on other side of bridle behind the green loop.

Place two folds of bridle on each side of the deployment bag grommet.
(See figure 2-149)

Figure 2-149. "S" Fold The Bridle Material

2.7.A.1.3 Place the pull up cord through the grommet on flap 1.

Pull the closing loop to the surface. Using a temporary pin, pin the closing loop above the Flap 1.
(See figure 2-150)

Figure 2-150. Pin The Closing Loop Above Flap 1

2.7.A.1.4 Pinch the green loop located on the bridle and insert it into the Type III pocket on flap 1.
(See figure 2-151)

Figure 2-151. Green Loop Installation

2.7.A.1.5 Flip the bridle over to expose the Skyhook. Place the red lanyard **OVER** the bridle to the left. Place the red lanyard loop over the Skyhook and between the Lexan covers. (See figure 2-152)

Figure 2-152. Skyhook Inverted

2.7.A.1.6 Secure the red lanyard to the Skyhook by using a safety tie. Use one turn of seal thread (4-6 lbs. tensile strength maximum) through the holes in both top and bottom Lexan covers. Secure the safety tie with a surgeons knot finished with a locking knot. Clip ½ inch from knot.
(See figure 2-153)

RIGGER CHECK.

WARNING: Failure to secure the red lanyard to the Skyhook with safety tie may cause the Skyhook to be inoperable.

Figure 2-153. Secure The Lanyard

2.7.A.1.7 Close flaps 2 and 3 using the same method previously illustrated in the standard system “without” Skyhook. See pages 90-91.
Ensure that the reserve bridle is routed out the top of the container.
(See figure 2-154)

Figure 2-154. Close Flaps 2 and 3

2.7.A.1.8 S-fold the remaining bridle material and place it on flap 2. Place the bagged high speed pilot chute on flap 3. (See figure 2-155)

Place the reserve pilot chute and close the reserve container using the same method previously illustrated in the standard system “without” Skyhook on pages 90-91.

Figure 2-155. Place The Pilot Chute On Flap 3

2.7.A.1.9 When threading the main parachute “long” cutaway cable through the cable housing, ensure that the cable passes **“through”** the loop at the end of the Collins lanyard. (See figure 2-156).
WARNING: The Collins lanyard loop must only have two lanyards attached by a larks head knot. (Locking pin lanyard and the red Skyhook lanyard).
Only the long cutaway cable shall pass through the loop itself.

COUNT YOUR TOOLS

Figure 2-156. Collins Lanyard Loop

CHAPTER 3

ATTACHING THE MAIN PARACHUTE TO THE RISERS

SECTION 3-1

THE 3-RING RELEASE SYSTEM

3.1 THE 3-RING RELEASE

3.1.1 THE 3-RING RELEASE CABLE LENGTHS

3.1.1.1 After the cables have been installed in the housings of your Javelin harness/container there should be 6 inches of excess cable on the user's left-hand side (non RSL) and 7 inches of excess cable on the users right hand side (RSL). These measurements are based on extensive testing and should not be altered in any way to change the correct operation of the reserve static line, (RSL).

3.1.2 THE 3-RING RELEASE SYSTEM

3.1.2.1 The 3-Ring Release System was invented by the Relative Workshop in 1976. It was the first practical release that allowed parachutists to jettison their main canopies in one motion by simply pulling a single handle. Not only is the 3-Ring easier to operate than previous parachute release systems, it is also more reliable. Failures of a properly built and assembled 3-Ring system are virtually unknown. Once the main is jettisoned, the only things left on the harness are two smooth rings that cannot snag a deploying reserve. Some other popular release systems can-and have-interfered with the deploying reserve.

3.1.3 GETTING TO KNOW THE 3-RING RELEASE SYSTEM

3.1.3.1 Knowing how the 3-Ring release works will help you assemble and inspect it properly.
Begin by peeling the release handle from the Velcro ™ on the harness. Peeling, rather than pulling, makes it easier to separate the handle from the webbing. Look behind the risers near the harness and observe the movement of the cable as you pull the handle. When the cable clears the white loop, the release is disengaged. Now slowly pull one of the risers off the harness. As you pull, you'll notice that the white loop gets pulled through the grommet by the action of the smallest ring. Each ring forms a lever with a ten-to-one mechanical advantage as it passes through the other. A force of 1,000 lbs. on the large harness ring exerts a force of only ten pounds on the white loop. (Opening shock usually totals about 1,000 lbs., or 500 lbs. on each riser).

3.1.3.2 Because of the mechanical advantage provided by the 3-Ring design, only a force of approximately a pound on the top ring keeps the release together. That's why it's important to keep foreign matter like bits of grass and sticks out of the 3-Ring assembly.
A small stick in the white loop could prevent a riser from releasing. It is also important to understand one of the properties of the nylon components of the system. When nylon stays in the same position for a long time, it begins to conform to that position, or take a "set". If the 3-Ring release system stays assembled for too long, the nylon can become so stiff that the low drag from a malfunction (such as a streamer) won't pull the riser off the ring.

3.1.3.3 Before assembling the 3-Ring release, make sure the risers aren't twisted or reversed. Lay the JAVELIN face down, as you would to pack it

SECTION 3-2

RIGGING THE 3-RING RELEASE SYSTEM

3.2.1 Pass the ring on the end of the riser through the large ring from above. Fold it back toward the front riser.
(See figure 3-1)

Figure 3-1. Insert Second Ring

3.2.2 Thread the smallest ring through the middle ring in the same way, ensure it doesn't pass through the larger ring.
(See figure 3-2)

Figure 3-2. Insert Third Ring

3.2.3 Bring the locking loop over the small ring only and then down through the riser grommet so it passes through the back of the riser.
(See figure 3-3)

Figure 3-3. Insert Locking Loop Through The Riser

3.2.4 Continue threading the locking loop through the grommet on the end of the cable housing. The flat side of the cable housing grommet should be against the riser.
Thread the cable through the locking loop, ensure the locking loop isn't twisted. Do not put a sharp bend in the cable, this may put a permanent kink in it.
(See figure 3-4)

Figure 3-4. Insert Release Cable Through The Locking Loop

3.2.5 After locking the loop, ensure all cable slack has been pulled from the cable housing. Insert the free end of the cable in the channel on the back of the riser. Repeat the above steps with the other riser.
(See figure 3-5)

Figure 3-5. Insert The Cable Into The Retention Channel

3.2.6 Attach the reserve static line (RSL) shackle to the ring located on the side of the right riser and secure tab with the snap.
(See figure 3-6)

RIGGER CHECK.

Figure 3-6. Properly Rigged 3-Ring Release

3.3 REQUIRED PERIODIC MAINTENANCE FOR THE 3-RING RELEASE SYSTEM

3.3.1 The Booth 3-Ring Release System has been in use for many years with excellent results. Although the system is as durable as the rest of the harness/container assembly, it requires periodic maintenance and inspection to ensure proper operation. Generally it is NOT recommended that the risers be attached to the harness when new and "forgotten." Like all parachute gear, the 3-Ring Release should be carefully inspected and operated on a regular basis. The procedures below should be done at least every month. This is especially important if the rig has not been used for a month or more, such as during the winter. **Immediate inspection is required if it has been subjected to some abuse such as a drag across the runway, a water landing or exposure to a lot of dust or sand.**

3.3.1.1. Every month operate the 3-Ring release system on the ground. Extract the cable completely from the housings and disconnect the risers.

3.3.1.2. While the system is disassembled, closely inspect it for wear. Check the white locking loops (the ones that pass over the smallest ring and through the grommet) to be sure they are not frayed.

3.3.1.3. Check the Velcro™ on the breakaway handle and main lift web to be sure it is clean and adequately holds the handle.

3.3.1.4. Check the cable ends for a smooth finish. The ends are finished at the factory to have a smooth, tapered surface. This prevents the cable from hanging up in the loop. Check the cable ends and consult a rigger or the manufacturer if a burr or "hook" is present.

3.3.1.5. Check the stitching, including that which holds the large rings to the harness.

3.3.1.6. Pull downward on the housings. They shouldn't move downwards more than 1/2 inch.

3.3.1.7. Take each riser and vigorously twist and flex the webbing near where it passes through each ring. The idea is to remove any set or deformation of the webbing. Do the same thing to the white loop.

3.3.1.8. Check the housings for dents or other obstructions. Use the cable to do this.

3.3.1.9. Clean and lubricate the release cable with a light oil such as a "3-in-1" brand. Put a few drops on a paper towel and firmly wipe the cable a few times. A thin invisible film should remain – too much will attract grit and dirt, or the oil could become tacky in cold weather. Too much oil will require more force to extract the cable during a breakaway.

3.3.1.10. Inspect the fittings at the end of each housing. If one of these fittings were to come off the housing, a riser might release prematurely.

3.3.1.11. If any wear is found, consult a rigger or the manufacturer before using the Military Javelin.

3.3.1.12. Reassemble the system. Double check it. Make sure the risers aren't reversed. It's important to maintain the system even more frequently in humid, muddy or freezing conditions. If the Military Javeilin becomes immersed in mud or muddy water, clean the 3-Ring release system with a mild solution of soap and water. Any rusted components must be replaced.

CHAPTER 4

ASSEMBLING THE MS-360 MAIN PARACHUTE

SECTION 4-1

ATTACHING STEERING LINES TO THE TOGGLES

For Optional Steering Line Attachment Methods
and Instructions
See Chapter 2, Section 2.3.3, Page 34

SECTION 4-2

INSERTING THE MAIN RIPCORD AND SETTING THE DEPLOYMENT BRAKES

4.2.1 INSTALLATION OF THE MAIN RIPCORD

4.2.1.1 Insert the main ripcord into the cable housing and check the cable for freedom of movement.
(See figure 4-1)

Figure 4-1. Insert The Main Ripcord Cable

4.2.1.2 Secure the main ripcord handle in the Velcro ™ ripcord pocket. Press the Velcro™
(See figure 4-2)

Figure 4-2. Secure The Main Ripcord Handle

4.2.2 SETTING THE DEPLOYMENT BRAKES.

4.2.2.1 Pull the steering line brake setting cat eye through the guide ring. Pass the brake setting locking loop through the steering line cat eye.
(See figure 4-3)

Figure 4-3. Set The Brakes

4.2.2.2 Insert the toggle tip through the locking loop.
(See figure 4-4)

Figure 4-4. Lock The Brake

4.2.2.3 Lock the lower steering toggle down by putting the lower toggle tip in the keeper on the back of the riser.
(See figure 4-5)

Figure 4-5. Stow The Excess Brake Lines

4.2.2.4 Fold the steering line in half then thread the fold end through the top and bottom loops located on the back of the riser.
Figure 4-6 shows the completed toggle and steering line stowed.

Figure 4-6. Steering Toggle Completed

CHAPTER 5

PACKING THE MAIN PARACHUTE AND CLOSING THE MAIN CONTAINER

SECTION 5-1

OVER THE SHOULDER RIPCORD CONFIGURATION

5.1.1 FOLDING AND FLAKING THE MS MAIN PARACHUTE - OVER THE SHOULDER RIPCORD CONFIGURATION

5.1.1.1 Start by installing 5/8 inch by 2 inch tandem retainer bands on all stow loops. Install the main parachute deployment bag by turning it inside out. Locate the loop sewn to the inside top.

Place the loop through the bag attachment ring located on the center cell of the main parachute.

Now place the entire bag through the loop sewn to the bag to produce a lark's head knot.
(See figure 5-1)

RIGGER CHECK.

Figure 5-1. Attach the Deployment Bag To The Parachute

5.1.1.2 Attach the pilot chute bridle by placing it through the loop sewn to the top outside of the main parachute deployment bag.

Run one end of the bridle through the loop on the opposite end making a lark's head knot.
(See figure 5-2)

Attach the pilot chute by placing the free end of the bridle through the loop at the pilot chute base. Now place the entire pilot chute through the loop making a lark's head knot.

NOTE: Yellow bridle used for illustration purposes only.

Figure 5.2. Attach The Bridle And Pilot Chute

5.1.1.3 In one hand gather all the packing tabs located on the parachute top surface.

Begin with the tabs located near the trailing edge. Keep them separate from the tabs located on the leading edge.

Once you have ten tabs each from the trailing and leading edge, put some tension on the lines, spread the tabs and lay the parachute on the packing surface.
(See figure 5-3)

Figure 5-3. Gather Front And Rear Packing Tabs

5.1.2 FOLDING THE MS-360 MAIN PARACHUTE

5.1.2.1 Complete a suspension line continuity check of the outside 4-line and brake lines.
(See figure 5-4)
(See system continuity check on page 43)

Figure 5-4. Inspection And Continuity Check

5.1.2.2 Straighten the top seams. Flake the leading edge by clearing all nine nose cells.
(See figure 5-4)

Figure 5-5. Clear The Nose Cells

5.1.2.3 Fold the nose even with line group "A".
(See figure 5-6)

Figure 5-6. Fold The Nose Over

5.1.2.4 Fold line group “A” onto line group “B”.
(See figure 5-7)

Figure 5-7. Fold The A Line Group Onto The B Line Group

5.1.2.5 Fold group “C” on top of line groups “A” and “B”.
(See figure 5-8)

Figure 5.8 Fold The C Line Group Onto The A & B Groups

5.1.2.6 Using the forearms and knees press the air out of the main parachute.

Smooth the fabric out and keep tension on the line groups that have been rolled or stacked.
(See figure 5-9)

Figure 5-9. Smooth The Folds

5.1.2.7 Fold group “D” on top of line groups “A, B and C”.
(See figure 5-10)

Figure 5-10. Fold The D Line Group Onto The C Line Group

5.1.2.8 Clear stabilizers (3 on the right and 2 on the left).
(See figure 5-11)

Figure 5-11. Clear The Stabilizers

5.1.2.9 Locate the parachute stabilizer panel between the outside D line and the outside line on the trailing edge (tail). Pull this portion of the stabilizer out and lay it on the fabric fold.

Grasp the outside line on the tail section and place it so that the line is stacked on the major line groups.

Snug the slider against the stops.
(See figure 5-12)

Figure 5-12. Locate The Stabilizer Panel Near The Tail Section

5.1.2.10 Flake the tail section by folding each cell into quarters by beginning with the end cell.

Fold each half cell *in half* to resemble an “S” fold of the entire tail section on each side.

Ensure that the upper steering lines are placed in the middle during the flaking so that **“all”** are stacked on the major line groups.
(See figure 5-13)

Figure 5-13. Flake The Tail Section

5.1.2.11 Repeat this process on the other side of the tail section. When finished the warning label must be on top of the completed tail section. (See figure 5-14)

Figure 5-14. Flake The Opposite Side

5.1.2.12 Move the slider up to the parachute and place **ALL** four slider grommets snug against the slider stops. (See figure 5-15)

WARNING: Failure to place ALL four slider grommets snug against the parachutes slider stops may result in a hard opening and can lead to injury.

Figure 5-15. Move The Slider Up

5.1.2.13 Spread the center cell out to full cell width.
(See figure 5-16)

RIGGER CHECK.

Figure 5-16. Spread The Center Cell

5.1.2.14 Pull the parachute trailing edge down so that it is flush with the slider grommets.

Ensure that ALL four slider stops remain snug against the parachutes slider stops.
(See figure 5-17)

Figure 5-17. Lower Trailing Edge Just Below The Slider

5.1.2.15 Starting on the outside, fold the spread center cell under the parachute.
(See figure 5-18)

Figure 5-18. Fold The Center Cell Around The Parachute

5.1.2.16 Cocoon the parachute by wrapping the spread center cell around the parachute.
Using the forearms and knees, press the air out of the parachute.
(See figure 5-19)

Figure 5-19. Cocoon The Parachute

5.1.2.17 Begin by making the first of two "S" Folds.
(See figure 5-20)

Note: Make the first "S" fold the same depth as the bag.

Ensure that all four corners of the slider are pointing towards the suspension lines.

Figure 5-20. Properly Cocooned

5.1.2.18 Make the second "S" Fold with the parachute (See figure 5-21)

Note: By kneeling on the first "S" fold, make the second fold by placing the fold in your lap then roll the top to shape it into bag size.

Figure 5-21. "S" Fold The Parachute

5.1.2.19 Prepare the deployment bag by inspecting the retainer bands. Replace any worn or broken retainers with new 2 inch X 5/8 inch tandem retainer bands.

Carefully place the deployment bag flap under the folded parachute.

Begin placing the parachute into the main deployment bag (flap down and kicker plate up) by placing one end of the parachute in the bag.
(See figure 5-22)

Figure 5-22. Place The Parachute In The Main Deployment Bag

5.1.2.20 Finish with the opposite side. Work the parachute into the corners of the bag. (place a hand between the “S” folds to push fabric down into corners.
(See figure 5-23)

Figure 5-23. Finish Inserting The Parachute

5.1.2.21 Ensure that the bridle is pulled from the grommet on top of the deployment bag to prevent damage to the parachute or bridle.
The main deployment bag is now ready to close.
(See figure 5-24)

Figure 5-24. Ready For The Locking Stows

5.1.2.22 Begin placing the locking stows with the inner most retainer band, left or right side (riggers choice). Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight. (See figure 5-25)

Figure 5-25. Begin Placing The Locking Stows

5.1.2.23 Place the second locking stow at the inner most retainer band on the opposite side. Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight.
(See figure 5-26)

Figure 5-26. Place The Second Locking Stow

5.1.2.24 Place the third locking stow at the outer most retainer band on the same side as the first stow. Open the loop and insert a bight of lines **2 ½ inches plus or minus ½ inch** measured from the safety stow loop to the outside edge of the bight.

Now place the fourth stow using the same procedure.
(See figure 5-27)

Figure 5-27. Place The Third And Fourth Locking Stow

5.1.2.25 Stow the remaining lines as shown until there is 18 to 24 inches of suspension line remaining.
(See figure 5-28)

RIGGER CHECK.

Figure 5-28. Stow The Remaining Suspension Lines

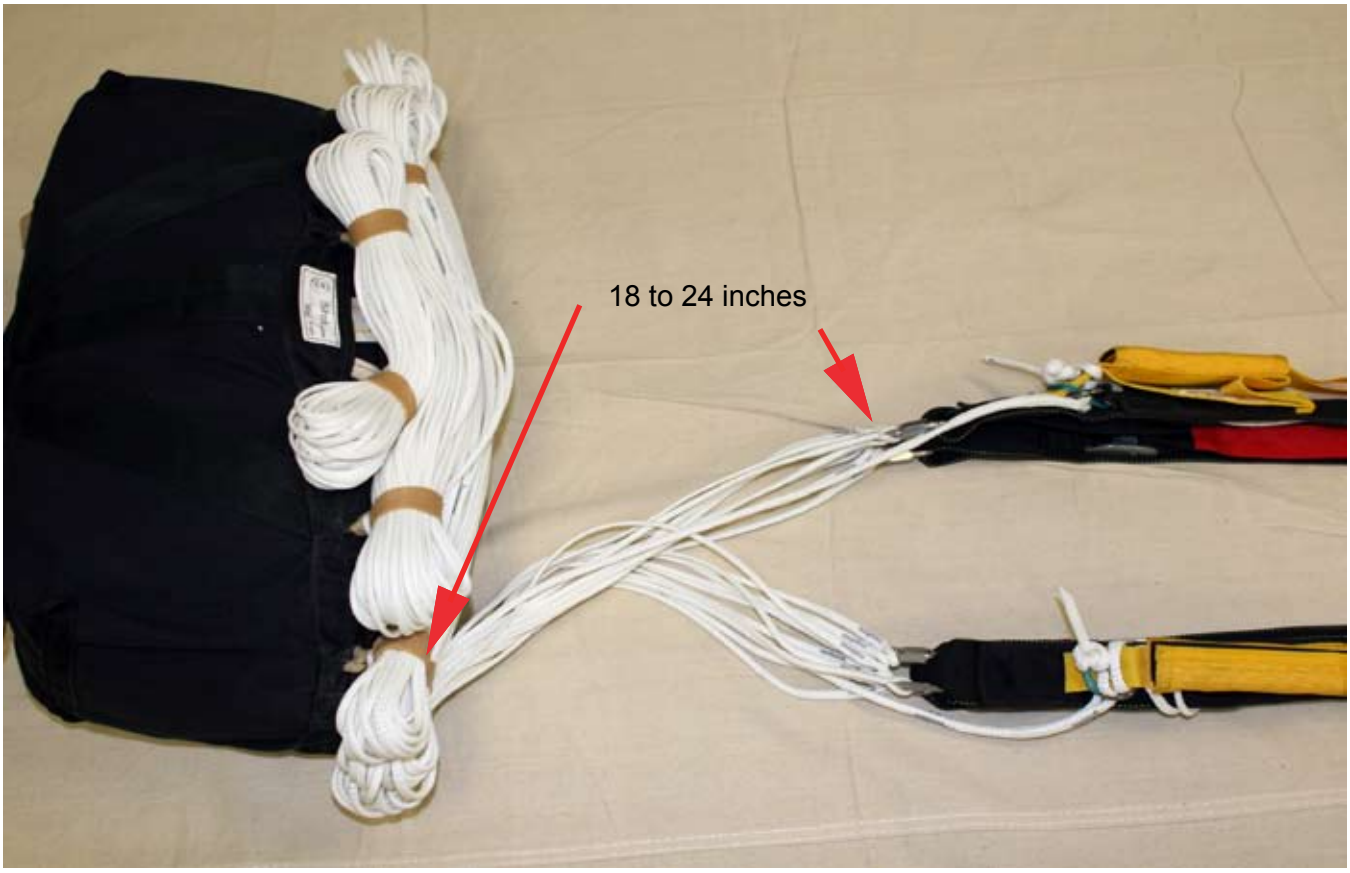

Figure 5-29. 18 to 24 Inches Of Line Remaining

5.1.2.26 Once all suspension lines are properly stowed, lift the main parachute by the bridle then lay the bag down just below the main container.

Take any twist out of the risers and place them flat along side of the reserve container. (See figure 5-30)

Note: Place the main risers ON TOP of the sub flap which lays on top of the reserve risers.
Ensure that there is no slack in the risers between the 3-Ring riser attachment and the parachute connector links as shown.

Figure 5-30. Lay The Deployment Bag Below Main Container

5.1.2.27 Before placing the main parachute in the main pack tray, place a pull up cord in the main closing loop.
(See figure 5-31)

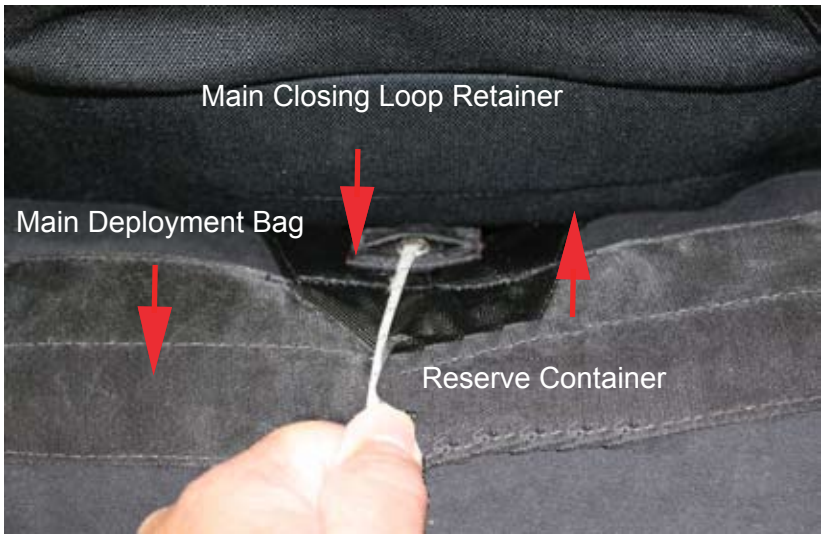

Figure 5-31. Main Closing Loop Anchor

5.1.2.28 Lift the main parachute deployment bag up and place it into the pack tray with the lines facing down in the tray. The bridle attachment must be on top facing up.
(See figure 5-32)

Figure 5-32 . Place The Deployment Bag Into The Pack Tray

5.1.2.28 Place the kicker sub flap connected to flap 1, over the main deployment bag.
"S" fold the entire main parachute bridle to a width of 8 inches plus or minus 1 inch. Place it on top of the sub flap.
(See figure 5-33)

Figure 5-33. "S" Fold The Main Parachute Bridle

5.1.2.29 Place the base of the spring loaded pilot chute on top of the folded bridle and deployment bag. Begin compressing the spring from the bottom of the pilot chute placing fabric in between each coil. Work your way up to the pilot chute cap until the spring is completely compressed. Hold the compressed pilot chute down with one knee, and then thread the pull up cord through the grommet on the flap 1. Continue holding the pilot chute cap down and pull the closing loop through the grommet until the loop surfaces. You may temporarily pin the loop with the ripcord pin or continue holding the pull up cord and loop with the knee.
(See figure 5-34)

Figure 5-34 Place Pilot Chute Base On Top Of The Bridle

5.1.2.30 Thread the pull up cord through the grommet on flap 2 and pull the closing loop through the grommet until the closing loop surfaces.

If used, pull the ripcord pin from the closing loop and insert it above flap 2.
(See figure 5-35)

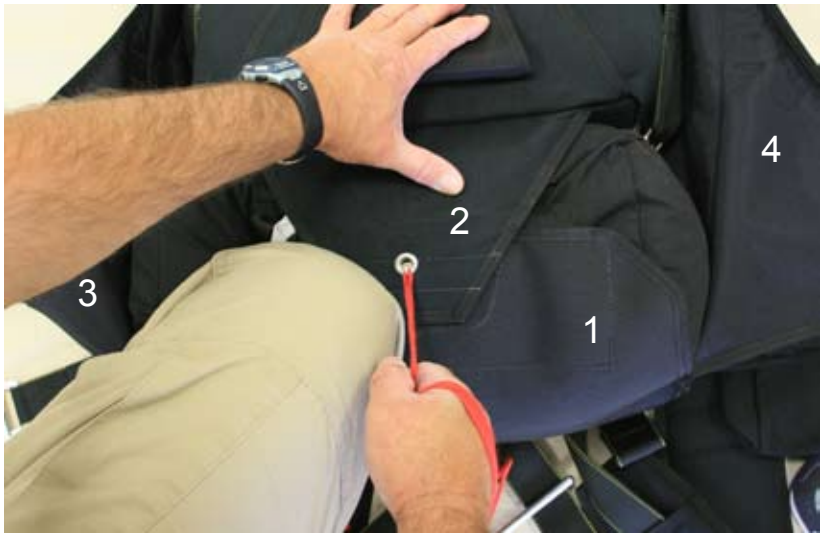

Figure 5-35. Close Flap 2

5.1.2.31 Thread the pull up cord through the grommet on flap 3 and pull the closing loop through the grommet until it surfaces. (See figure 5-36)

Figure 5-36. Close Flap 3

5.1.2.32 Thread the pull up cord through the grommet on flap 4 and pull the closing loop through the grommet until it surfaces.

Using the ripcord pin, pin the closing loop above flap 4.

To avoid damage to the locking loop, move the pull up cord to the side and under the ripcord pin prior to removal. ***Slowly*** pull the pull up cord out of the closing loop.

Tuck the main pin flap in under flap 2. (See figure 5-37)

Figure 5-37. Close Flap 4 And Pin

RIGGER CHECK.

5.1.2.33 MJ parachute system pack job completed. (See figure 5-38)

Figure 5-38. Completed Pack Job

COUNT YOUR TOOLS

SECTION 5-2

DOUBLE BAG STATIC LINE CONFIGURATION

5.2.1 Installing The Slider Reefing Line System

5.2.1.1 Place the four bridle connector links through the grommet at the top of the inner bag. Pull the bridle through the grommet until the bag stop hits the grommet. Attach the bridle end to the pilot chute using a Larkshead knot.
(See figure 5-39)

Figure 5-39. Attach The Pilot Chute To The Bridle

5.2.1.2 Place the four bridle connector links through the grommet located on top of the main parachute. Lift the grommet, force the red lines into the grommet and shake the grommet area to work the connector links through the grommet located at the bottom of the parachute.
(See figure 5-39 and 5-40)

Figure 5-40. Pass Connector Links Through Top Grommet

5.2.1.3 Once one of the links has come through you may use it to pull the remaining links through.
(See figure 5-41)

Figure 5-41. Lines Pulled Through

5.2.1.4 With the harness/container facing the packing surface, spread the right and left line groups apart.

Place the bridle and connector links near the slider.

(See figure 5-42)

Figure 5-42. Routing The Reefing Line

5.2.1.5 Install the links onto the slider. Ensure that all lower bridle links are installed as illustrated in figure 5-43.

Figure 5-43. Attach The Bridle Reefing Line

5.2.1.7 With the harness/container backpad facing the packing surface, spread the right and left line groups apart. Ensure that the bridle runs from the slider to the grommet on the bottom of the main parachute without interference from any suspension line. (See figure 5-44)

RIGGER CHECK.

Figure 5-44. Check The Reefing Line Routing

5.2.1.8 Fold the nose even with line group "A".
(See figure 5-45)

Figure 5-45. Fold The Nose Over

5.2.1.9 Fold line group "A" onto line group "B".
(See figure 5-46)

Figure 5-46. Fold The A Line Group Onto The B Line Group

5.2.1.10 Fold line group "C" on top of line groups "A" and "B".
(See figure 5-47)

Figure 5-47. Fold The C Line Group Onto The A & B Groups

5.2.1.11 Using the forearms and knees press the air out of the main parachute.

Smooth the fabric out and keep tension on the line groups that have been rolled or stacked.
(See figure 5-48)

Figure 5-48. Smooth The Folds

5.2.1.12 Fold line group “D” on top of line groups “A, B and C”.
(See figure 5-49)

Figure 5-49. Fold The D Line Group Onto The C Line Group

5.2.1.13 Flake the tail section as shown in Section 4.3.2.8, page 121 through Section 4.3.2.11, page 122.
(See figure 5-50)

Figure 5-50. Flake The Tail Section

5.2.1.14 Once the parachute tail is flaked, pull the slider reefing line through the grommet located on the top surface of the parachute as shown. This will pull the slider up the lines towards the slider stops. (See figure 5-51)

Figure 5-51. Pull The Slider Reefing Line Through The Grommet

5.2.1.15 Grasp the center of the slider, lift up slightly and with the other hand clear a channel way for the lower red reefing line to be placed as shown. (See figure 5-52)

Figure 5-52. Clear A Channel For The Reefing Line

5.2.1.16 Once the lower red reefing lines have been placed clear of any obstructions, Snug all slider grommets up against all the slider stops. Dress the slider. Return to the upper slider reefing line located at the grommet on the top surface of the parachute. Lightly pull the slider reefing line to remove any slack. (See figure 5-53)

NOTE: Removing any slack from the slider reefing line will help prevent damage to the parachute.

Figure 5-53. Snug All Slider Grommets Against The Stops

5.2.1.17 Set the top of the slider back in place.
(See figure 5-54)

RIGGER CHECK.

Figure 5-54. Set the Slider Back In Place

5.2.1.18 Pull the parachute trailing edge down so that it is flush with the slider grommets.

Wrap the tail section around the parachute to cocoon the flaked parachute.
(See figure 5-55)

Figure 5-55. Lower Trailing Edge Just Below The Slider

5.2.1.19 Place one hand under the slider and one hand on top the parachute approximately 18 to 20 inches from the trailing edge of the parachute.

Make the first fold by bringing the trailing edge on top of the parachute.

Ensure that the corners on the slider grommets are pointing towards the harness/ container.
(See figure 5-56)

Note: You must be able to see the Parachute Packing/ Deloyment Log placard.

RIGGER CHECK.

Figure 5-56. Make The First “S” Fold

5.2.1.20 Make the second “S” fold by making a fold on top of the first fold..
(See figure 5-57)

RIGGER CHECK.

Figure 5-57. Make The Second “S” Fold

5.2.1.21 After making the second fold, roll and tuck the top of the canopy away from the center cell grommet to expose the center cell grommet. This will prevent burn damage to the parachute.
(See figure 5-58)

Figure 5-58. Expose The Grommet

5.2.1.22 Ensure that the top parachute surface grommet is exposed so that it can be matched up with the inner static line bag grommet when placed into the inner static line bag.
(See figure 5-59)

Figure 5-59. Match Parachute and Inner Bag Grommet

5.2.1.23 Place the S-folded main parachute into the inner static line bag.
(See figure 5-60)

NOTE: At the locking stow loop attachments, place natural colored tandem tube stoes™ on locking stows one and two. Locking stow attachment points three through twelve use 2 3/8 inch standard retainer bands.

Figure 5-60. Place The Main Parachute In The Bag

5.2.1.24 Ensure that the two grommets line up and that no fabric is trapped between the grommets.

Lightly pull any slack out of the bridle that may be trapped between the grommets.
(See figure 5-61)

RIGGER CHECK.

Figure 5-61. Ensure Grommets Are Clear Of Any Fabric

5.2.1.25 “Rigger’s view”, facing the deployment bag and “away from the harness” , place flap 1 over the bag. Place the tube stoe™ through the left grommet. (See figure 5-62)

Figure 5-62. Insert First Tube Stow

5.2.1.26 Place flap 2 over the bag. Place the same tube stoe™ through the left grommet.

Pull the bridle to the tube stoe™ and place a 2” inch bridle bight plus or minus ½ inch into the tube stoe™. (See Figure 5-63)

NOTE: This 2 inch length of bridle bight shall be typical for all bridle bights when closing the inner static line bag.

NOTE: Except for stows one and two each bridle bight shall have two wraps with the retainer band.

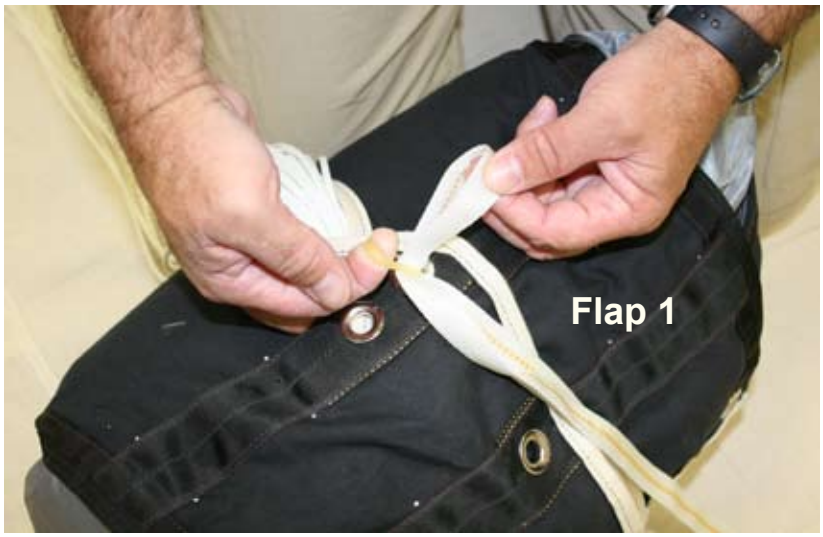

Figure 5-63. Secure First Bridle Bight

5.2.1.27 Fold flap 1 back to get access to the adjacent tube stoe™. Grasp the tube stoe™ and place it through the grommet on flap 1. (See figure 5-64)

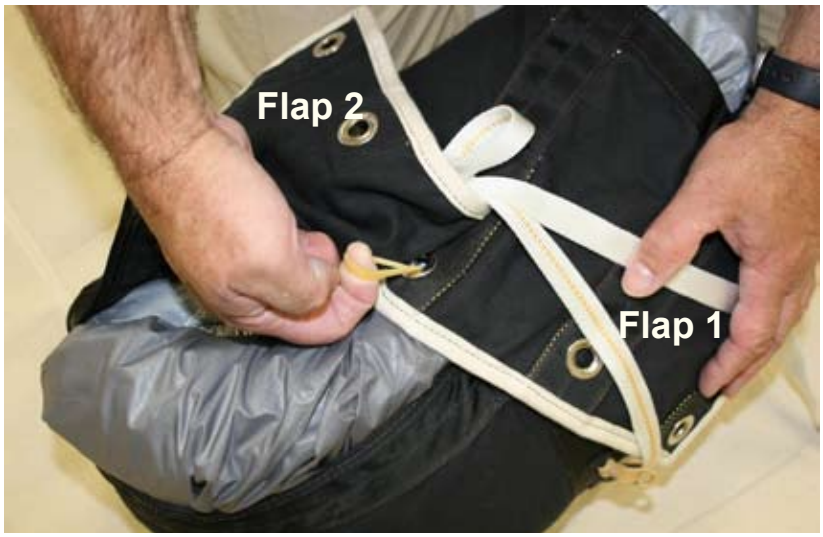

Figure 5-64. Pull Tube Stow Through Grommet On Flap 1

5.2.1.28 Return flap 2 back in position then place the tube stoe™ through the grommet on flap 2.
(See figure 5-65)

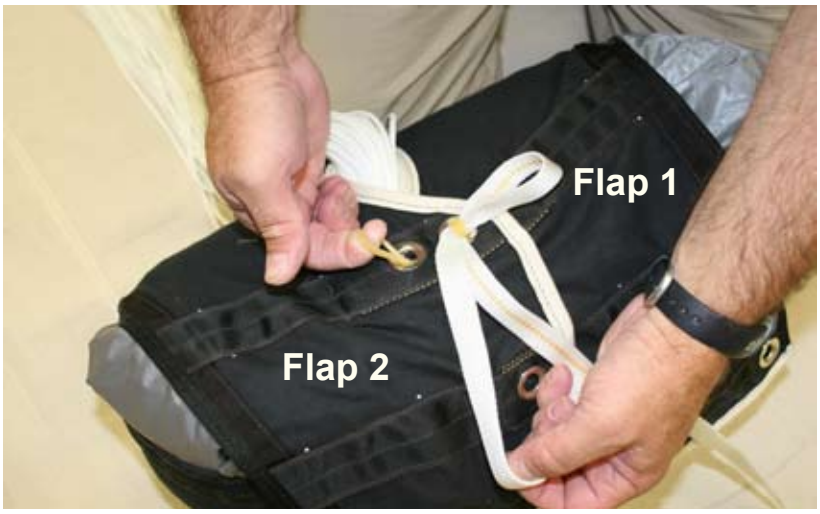

Figure 5-65. Pull Tube Stow Through Grommet On Flap 2

5.2.1.29 Place a bridle bight into the tube stoe™.
(See figure 5-66)

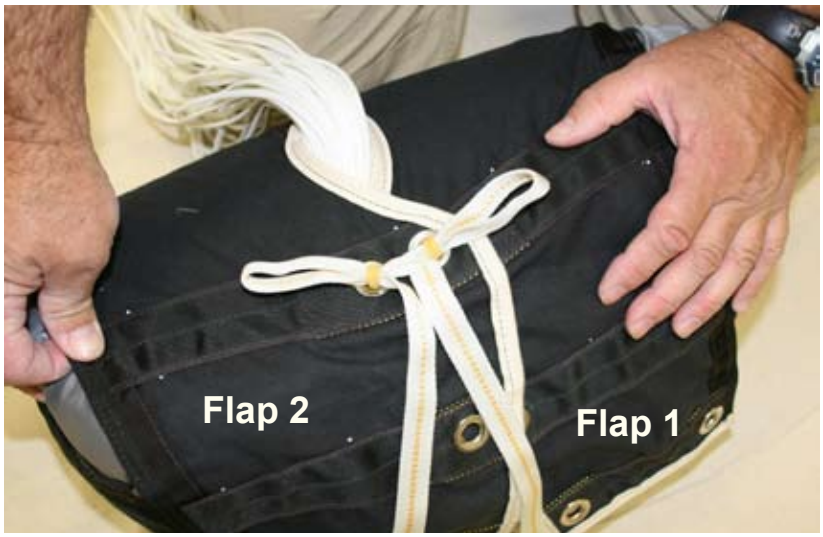

Figure 5-66. Make The Second Bridle Bight

5.2.1.30 Locate the retaining band at mid bag. Place the retainer band through the grommet on flap 1.
(See Figure 5-67)

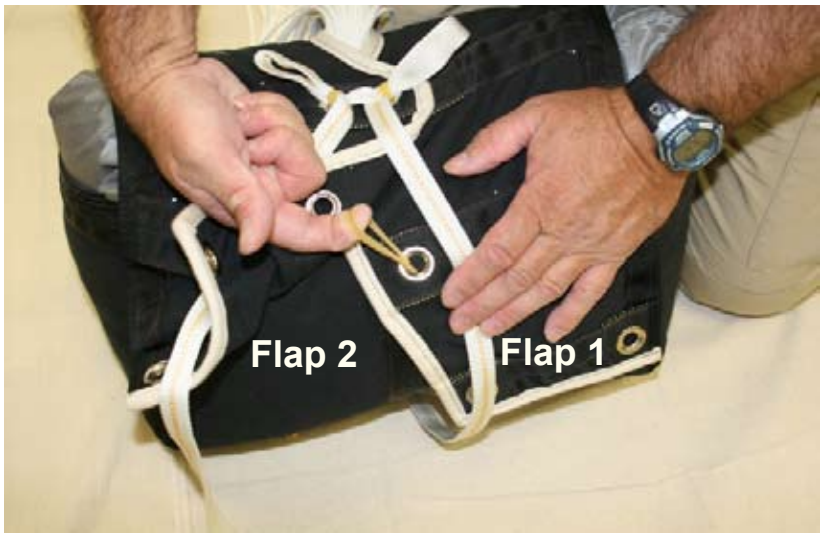

Figure 5-67. Place Retainer Band 1 Through Flap 1

5.2.1.31 Place the same retainer band through the grommet on flap 2 and place a bridle bight in the retainer band. (See figure 5-68)

Note: Each bridle bight shall have two wraps with the retainer band.

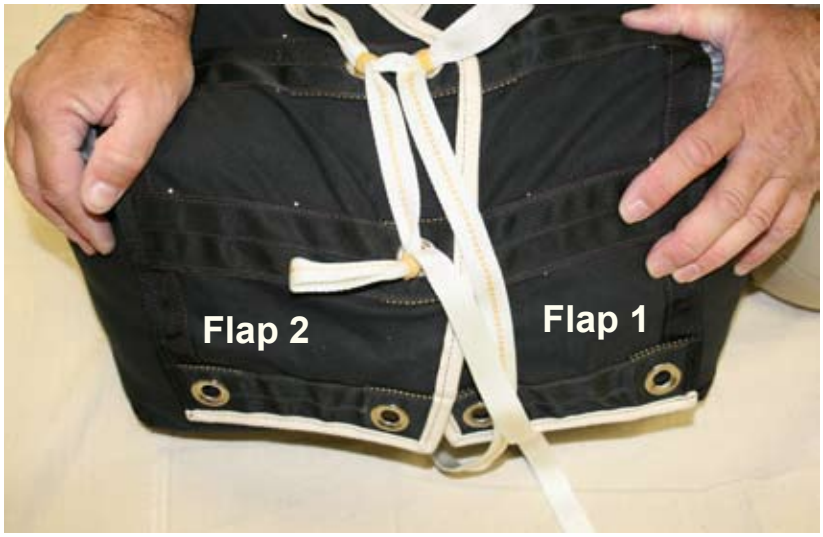

Figure 5-68. Secure Bridle Stow Number 3

5.2.1.32 At the top of the bag, place the retainer band through the grommet on flap 1. (See figure 5-69)

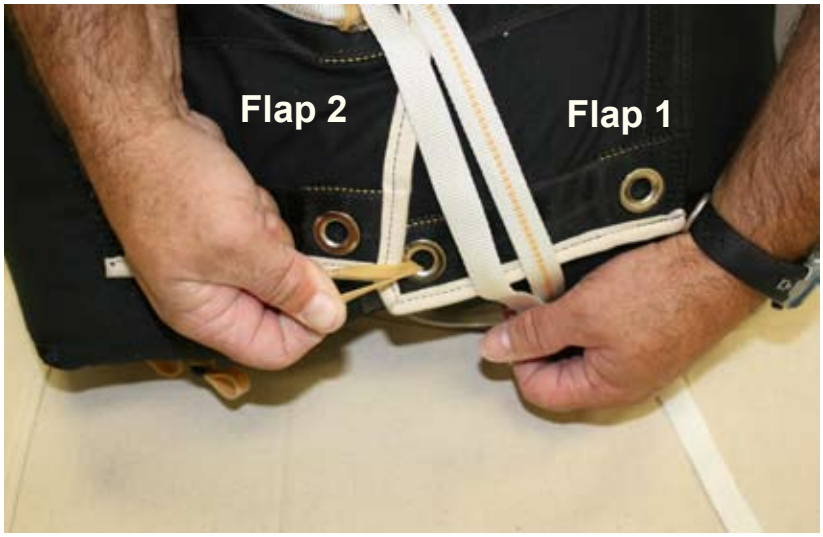

Figure 5-69. Prepare The Fourth Bridle Stow

5.2.1.33 Take the same retainer band and place it through the grommet on flap 2. Place a bridle bight in the retainer band. (See figure 5-70)

Note: Each bridle bight shall have two wraps with the retainer band.

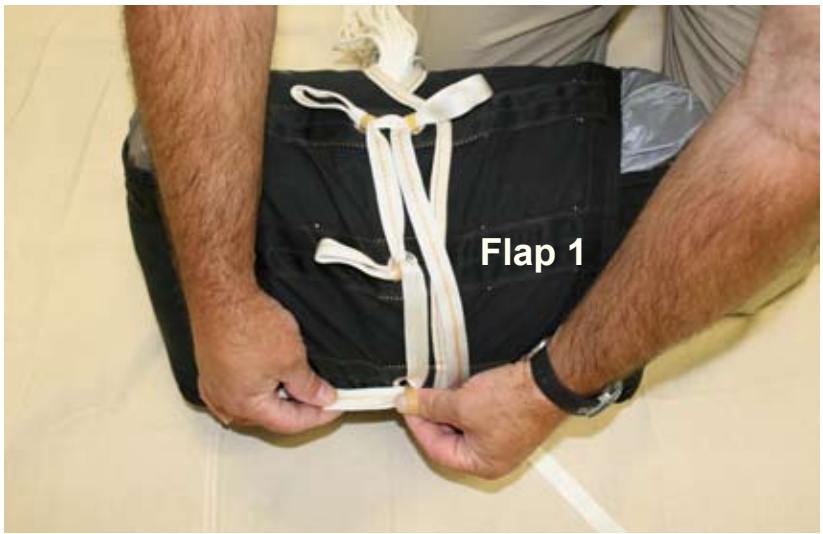

Figure 5-70. Secure Bridle Stow Number 4

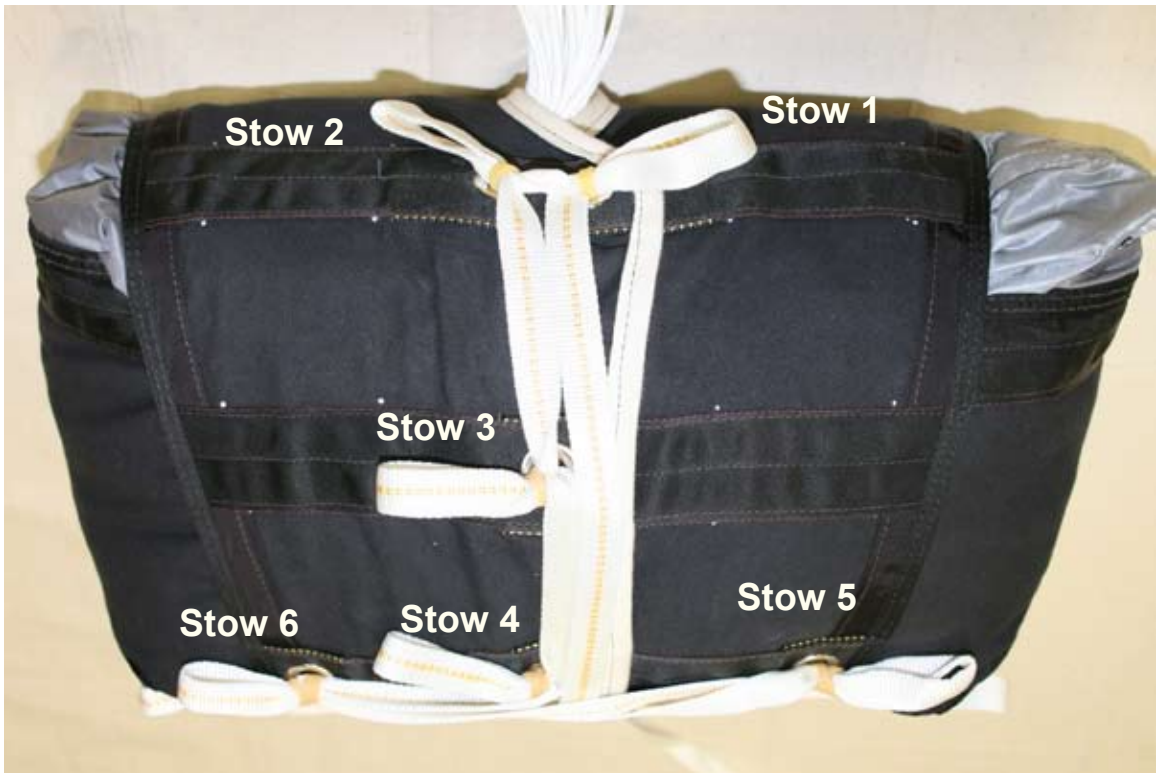

Figure 5-71. Complete The Locking Stow Sequence

Figure 5-72. Properly Stowed Inner Deployment Bag

5.2.1.34 Use one bridle fold for stows 7 and 8, and then use two bridle folds for the remaining stows. Set the bag upright and continue stowing the bridle. (See figure 5-72)

Note: Each bridle bight shall have two wraps with the retainer band.

5.2.1.35 Place one strand of 80 lb. cotton break cord 12-18 inches long, under the static line-to-bag attachment intersection. (See figure 5-73)

NOTE: Prepare the outer static line bag by installing 2x5/8 inch (tandem retainer bands) on all band attachment loops.

Figure 5-73. 80-Pound Break Cord Under Static Line Attachment

5.2.1.36 Now place both ends of the 80 lb. cotton break cord through the grommet of the outer static line bag. (See figure 5-74)

Figure 5-74. Place 80-Pound Break Cord Through Grommet

5.2.1.37 Pull both ends of the 80 lb. cotton break cord through the grommet. (See figure 5-75)

Figure 5-75. View Of Inside Outer Bag

5.2.1.38 Locate the Type 4 loop at the apex of the pilot chute. Place one end of the 80 lb. cotton break cord through the loop. (See figure 5-76)

Figure 5-76. Outer Static Line Bag

5.2.1.39 Using the cotton break cord, tie the pilot chute to the outer static line bag by using a surgeons knot, followed by a locking knot. (See figure 5-77)

Figure 5-77. Tie The Pilot Chute To The Static Line Bag

5.2.1.40 Cut the excess 80 lb. break cord one half to one inch away from the knot. (See figure 5-78)

Figure 5-78. Cut The Excess Break Cord

5.2.1.41 Lay the outer static line bag on the packing surface.

Arrange the pilot chute over the bag. Long fold the pilot chute twice.

Ensure that there is 20 to 24 inches of bridle left unstowed between the pilot chute base and the final bridle stow.
(See figure 5-79)

Figure 5-79. Long Fold Pilot Chute Twice

5.2.1.42 Short fold the pilot chute so that it is the same width as the outer bag.
(See figure 5-80)

Figure 5-80. Short Fold Pilot Chute Once

Figure 5-81. Place The Pilot Chute Into The Outer Bag

5.2.1.43 Short fold the pilot chute and place in the outer static line bag.

Pull the outer static line bag up while pushing the pilot chute down into the bag.
(See figure 5-81)

RIGGER CHECK.

5.2.1.44 Roll the inner static line bag containing the main parachute forward. Place the corners of the inner static line bag onto the outer static line bag.

Push the inner bag into the outer bag until it is completely inside the other bag.
(See figure 5-82)

Figure 5-82. Place The Inner Bag Into The Outer Bag

5.2.1.45 Starting with either right or left "center" locking stow retainer bands, draw the flap and bag mouth together.

Place the retainer band through the white Type III nylon cord loop.
(See figure 5-83)

Figure 5-83. Start with Either Center Locking Band

5.2.1.46 Open the retainer band and insert a bight of lines 2 ½ inches plus or minus ½ inch measured from the retainer band to the outside edge of the bight.
(See figure 5-84)

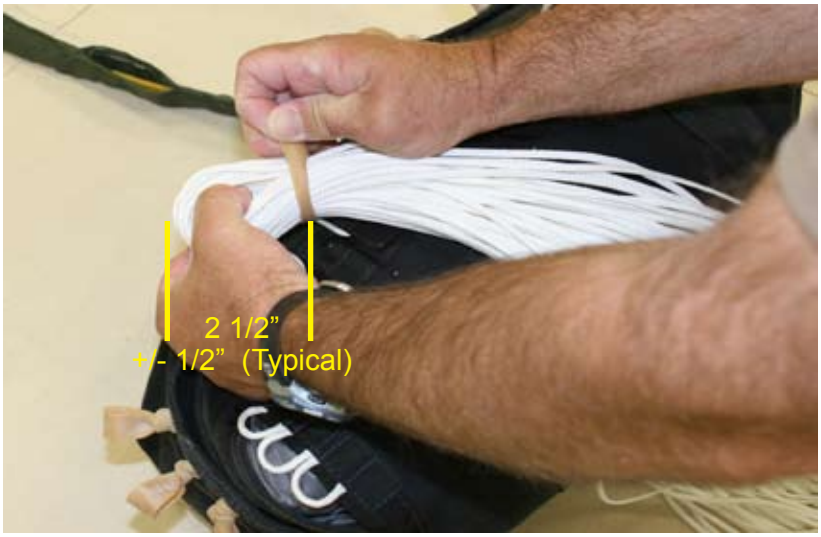

Figure 5-84. Insert First Bight Of Lines

5.2.1.47 Repeat the stow procedure on the other center locking stow retainer band.
(See figure 5-85)

Figure 5-85. Repeat On Other Side

5.2.1.48 Make the two locking stows. Ensure that they are made using the same procedure as the first two locking stows.

Stow the remaining lines by placing the retainer band through the white Type III nylon cord loop, then by placing a line bight in the retainer band.
(See figure 5-86)

NOTE: Make the last line stow so there are approximately 18 - 24 inches of suspension lines between the last stow and the connector links.

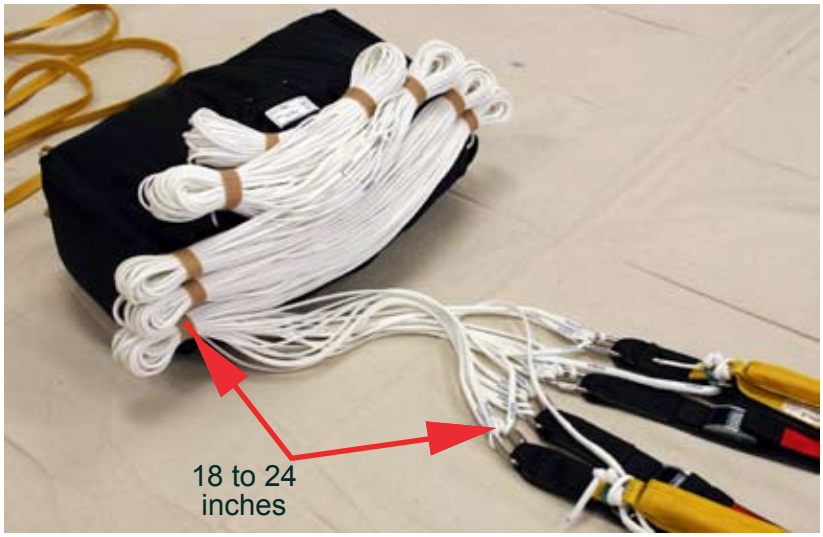

Figure 5-86. Stow The Remaining Lines

5.2.1.49 Place the main parachute below the main container.

Place the main risers along the shoulder line and tuck them into the space between the container flaps and riser covers.

.
Ensure that the risers lay flat along the shoulder line and into the pack tray. Ensure that the risers do not have any twist in them. Do not allow any slack in the risers after they are set.
(See figure 5-87)

Figure 5-87. Arrange The Risers

5.2.1.50 Place a pull up cord through the main closing loop. Place the main parachute in the main container pack tray. Tuck the bottom corners of the bag into the container.

Pull both line groups on the right and left risers out of the container near the connector links.

Make a 2 inch line stow bight on the right line group and place it in the retainer band attached to the top of the static line bag. Use two wraps with the retainer band. Do the same process on the left line group.

Press all four corners of the bag into the pack tray.
(See figure 5-88)

Figure 5-88. Set The Static Line Bag

RIGGER CHECK.

5.2.1.51 Ensure that the static line is placed to the right side.

Thread the pull up cord through the grommet on the flap 1. Pull the closing loop through the grommet until the loop surfaces. You may pin the loop with the static line cable pin or continue holding the pull up cord and loop with the knee.
(See figure 5-89)

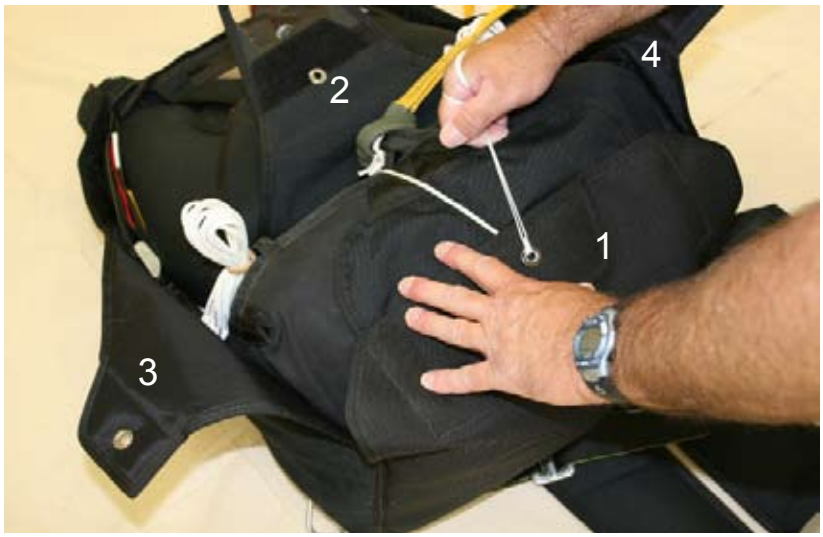

Figure 5-89. Close Flap 1

5.2.1.52 Thread the pull up cord through the grommet on flap 2 and pull the closing loop through the grommet until it surfaces.

If used, pull the static line cable pin cable from the closing loop and place it back in the loop above flap 2.
(See figure 5-90)

Figure 5-90. Close Flap 2

5.2.1.53 Thread the pull up cord through the grommet on flap 3 and pull the closing loop through the grommet until it surfaces.

If used, pull the static line cable pin from the closing loop and place it back in the loop above flap 3.
(See figure 5-91)

Figure 5-91. Close Flap 3

5.2.1.54 Thread the pull up cord through the grommet on flap 4 and pull the closing loop through the grommet until it surfaces.

If used, pull the static line cable pin from the closing loop and place it back in the loop above flap 4.

Slowly pull the pull up cord out of the closing loop pulling away from the tip of the cable pin.
Route the static line to the right.
Tuck the main pin protection flap under flap 2.
(See figure 5-92)

Figure 5-92. Close Flap 4

5.2.1.55 Stow the static line beginning with the lower right retainer band by placing a 3 inch bight using two wraps with the retainer band.

Continue with the same process back and forth until there is enough static line left to stow the static line clip in the clip pocket.
Rotate the flexpin and place in the ripcord channel.
(See figure 5-93)

RIGGER CHECK.

NOTE: Each static line stow must be held in place with two wraps of the retainer band.

Figure 5-93. Begin To Stow The Static Line

5.2.1.56 Continue with placing a static line bight in the lower left retainer band then using the same process back and forth until there is enough static line left to stow the static line clip in the clip pocket.
(See figure 5-94)

Figure 5-94. Continue Stowing The Static Line

Figure 5-95. Completed Dual Bag Static Line Configuration

CHAPTER 6:

JMPI OF THE MJ HARNESS AND CONTAINER

6.1 The jumpmaster uses the following sequence to detect and identify deficiencies. With hands and eyes working together, he starts at the front of the parachutist and moves to the rear, from top to bottom, right side to left side.

6.1.1 Harness:
Checks for proper fit before continuing the JMPI

6.1.2 Helmet and goggles:
-Uses approved helmet
-Makes sure it fits properly and is serviceable
-Uses approved goggles
-Makes sure the lenses are clear and not cracked or scratched
-Makes sure the the goggle strap is secured if worn outside the helmet
-Checks that the bayonet receivers (if present) are securely attached and the two adjustment screws are present on the receiver covers
-Checks chin strap for proper attachment and serviceability, with excess stowed

6.1.3 Right riser:
-Open the right main riser cover
-Makes sure no twists are present in front or rear riser cover to 3-ring release assembly

6.1.4 Right 3-ring release assembly:
-Checks for correct assembly—small ring, medium ring, and base ring (elongated snowman effect)
-Gives small and medium ring a one-quarter turn to check for free movement
-Right main canopy release cable and cable housing
-Inspects for tacking and proper routing
-Makes sure the 3-ring locking loop is through the small ring and the grommet on the riser and the eye on the cable housing (without any twists or frays)
-Rotates riser toward the parachutist's neck, ensuring the release cable is routed through the locking loop and running end is stowed in the stowage flute
-Leave main riser cover open if 1st JMPI
-Close Main riser cover if 2nd JMPI

6.1.5 Main ripcord assembly:
-Makes sure the housing is tacked properly
-Makes sure there are no broken strands on main ripcord cable
-Makes sure the two swage balls are present on the end of the ripcord cable
-Checks that the main ripcord handle is properly seated in the elastic pocket
-Cutaway handle (main canopy release ripcord)
-Makes sure that the cutaway cables are not twisted more than 180 degrees
-Checks that the handle is seated in its pocket and the Velcro™ is properly mated

6.1.6 Chest strap:
-Makes sure there are no twists and is properly routed (to include the chest strap extension)
-Makes sure the excess is rolled under and stowed in the slack retainer
-Makes sure it is properly routed through the friction adapter

NOTE: If jumping with a weapon, jumpmaster follows the inspection IAW specific unit instruction. Then he continues with the following:

6.1.7 Reserve ripcord:
-Makes sure it is properly seated in the elastic pocket
-Checks that the two swage balls are present on end of the reserve ripcord
-Makes sure there are no broken strands
-Makes sure the cable is properly routed to the cable housing
-Makes sure the housing is tacked

6.1.8 Left riser
-Open the left main riser cover
-Makes sure there are no twists in the front or rear riser from the riser cover to the 3-ring release assembly

6.1.9 Left 3-ring release assembly:
-Checks for correct assembly—small ring, medium ring, and base ring (elongated snowman effect)
-Gives small and medium ring a one-quarter turn to check for free movement
-Left main canopy release cable and cable housing
-Inspects for tacking and proper routing
-Makes sure the 3-ring locking loop is through the small ring and the grommet on the riser and the eye on the cable housing (without any twists or frays)
-Rotates riser toward the parachutist's neck, ensuring the release cable is routed through the locking loop and running end is stowed in the stowage flute

6.1.10 Reserve static line:
-Makes sure the reserve static-line quick release lanyard is attached
-Makes sure the reserve static-line loop is attached to the release shackle and routed correctly
-Leave main riser cover open if 1st JMPI
-Close main riser cover if 2nd JMPI

6.1.11 Left main lift web:
-Checks that the equipment ring-front and equipment ring-rear are present
-Checks that the equipment ring-front are properly stowed. (For slick and rear mounted combat equipment jumps)
-Makes sure the running end of the adjustable MLW is rolled and stowed in the MLW cover.
-Makes sure there are no twists

NOTE: If jumping with a rucksack, jumpmaster follows the same inspection sequence as the MC-4 and MC-5 parachute systems

6.1.12 Right main lift web:
-Checks that the equipment ring-front and equipment ring-rear are present.
-Checks that the equipment ring-front are properly stowed. (For slick and rear mounted combat equipment jumps)
-Makes sure the running end of the adjustable MLW is rolled and stowed in the MLW cover.
-Makes sure there are no twists

6.1.13 Waistband and waistband extension:
-Makes sure that the waistband is routed through the guide on the oxygen bottle pouch
-Checks that there are no twists from its attachment point on the right side of container to the attachment point on the left side of the container
-Makes sure that the waistband is routed through the guide of the utility pocket (if present)
-Makes sure that both slide fasteners on the utility pocket are closed (if present)
-Makes sure the excess is rolled under and stowed in the slack retainer
-Checks for proper routing through the waistband extension friction adapter

6.1.14 Right leg strap:
-Makes sure the B-12 or Quick Ejector hardware closes and has proper spring tension
-Makes sure the excess is rolled under and stowed in the slack retainer
-Checks for correct routing, with no twist in the leg strap or saddle

6.1.15 Left leg strap:
-Makes sure the B-12 or Quick Ejector hardware closes and has proper spring tension
-Makes sure the excess is rolled under and stowed in the slack retainer
-Checks for correct routing, with no twist in the leg strap or saddle

6.1.16 Approved altimeter:
-Makes sure it is located on the parachutists left wrist, that it fits snugly, and it is properly attached (with 0 at the top)
-Checks for proper free-fall altimeter setting
-Taps lens to ensure it is present
-Ensures one heavy-weight retainer band is affixed to the wrist strap
Tells the parachutist to turn and continue the JMPI

6.1.17 Reserve container: (Observed through the Clear Reserve Top Flap)
-Makes sure the CYPRES control unit is at the proper default for the current free-fall operation. (i.e. 1500 35A for solo parachutist, 2500 35A for tandem)
-Makes sure the CYPRES control unit LED indicator light is not lit
-Checks that the control unit LCD screen displays the proper mbar or 0↓ setting
-Checks that the reserve static line is routed correctly, and that the reserve ripcord cable runs through the reserve static-line ring and fixed cable ring
-Checks the the reserve ripcord cable has no broken strands
-Makes sure the pin is inserted straight down
-Makes sure the CYPRES closing loop of the reserve is not frayed
-Makes sure the reserve pin is not seated past the shoulder
-Makes sure the reserve pin is not bent

Tells the parachutist to bend

-Makes sure the main ripcord cable housing is tacked

6.1.18 Main container: (Observed through the Clear Main top Flap).
-Checks that the main ripcord cable has no broken strands
-Makes sure the closing loop is not frayed
-Makes sure the main pin in not seated past its shoulder
-Makes sure the main pin is not bent.(curved or straight)

Slaps the bottom of the container to indicate the completion of the JMPI

CHAPTER 7

PARACHUTE MAINTENANCE AND REPAIR

SECTION 7-1

365 DAY REPACK CYCLE

1300 E. International Speedway Blvd • DeLand, FL 32724 USA
Tel: +1.386.738.2224 • Fax: +1.734.8297 • www.performancedesigns.com

DATE: Tuesday, November 21, 2006

TO: CPS

RE: 365-Day Parachute Repack Cycle (Main and Reserve)

Performance Designs, Inc. recognizes many factors may affect opening times of a packed, stored main parachute. Some of these factors are beyond the control of Performance Designs, Inc. Currently, too many of these variables exist to accurately quantify a maximum timeframe for which a main parachute may remain packed until use.

Therefore, Performance Designs, Inc. recommends the end user pay very close attention to the following list of items. These items should be considered while the main parachute remains packed and stored.

Factors that can affect the main parachute opening time include, but are not limited to:

- **The chemical reaction that occurs between rubber** (rubber bands) **and brass** (deployment bag grommets). If left in contact with each other, a reaction between the rubber bands and brass grommets causes deterioration of the rubber. This can severely change the opening characteristics by creating a line dump scenario.
- **Excessive temperature**. High temperatures, while increasing the elasticity of rubber, also decrease its strength.
- **Rubber degradation due to extended shelf life or storage conditions**. If rubber is stored in excessive heat or for long periods without use, it can degrade and/or become brittle (dry rot).
- **Zero-porosity fabric has the potential to maintain its packed, brick-like shape over time**. A remote possibility exists for the layers of packed fabric to take a set in its stored position after being compressed for some length of time. The longer the layers of fabric are compressed, the more potential for the fabric to take a set.

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PD recommends the following in order to minimize some of these factors:

- Ensure the use of non-brass (i.e. stainless steel) grommets on the D-bag to prevent the brass-rubber reaction.
- Performance Designs, Inc. recommends the following storage conditions for the canopies: temperatures ranging between 60°F and 75°F and humidity ranging from 30% to 60%. For long-term storage and storage outside those ranges, we recommend representative samples be tested and/or inspected to ensure no harmful conditions have occurred during storage.
- Replace all rubber bands when packing if there is a chance the parachute will be stored for an extended period of time. Use rubber bands with a recent manufacture date. Also make sure to exercise the rubber bands by stretching them. If a packed parachute has been dormant for a year, the rubber band may have become brittle and the user runs the risk of premature breakage.

As long as the aforementioned conditions and factors are controlled and adherence to the guidelines is exhibited, Performance Designs, Inc. has no objections to the use of a 365-day repack cycle.

If you have any further questions or comments, please do not hesitate to contact Performance Designs, Inc.

Sincerely,

Bill Coe
Performance Designs, Inc.
President

September 14th, 2006

Dear CPS/valued customer,

Re: 365 Day Parachute Repack Cycle

Sun Path Products, Inc. has an objective to use of a 365 Day Parachute Repack Cycle for the Military Javelin (MJ) Parachute System to benefit the reduction of excessive packing wear and tear on the fabrics that make up the harness and container system.

We would like to stipulate that the harness container system undergo a visual check every 6 months (182 days) to verify airworthiness condition of the harness container components.

If you have any questions please feel free to contact us.

Yours truly,

Dave Singer
Engineering Manager
Sun Path Products, Inc.
Dave@sunpath.com
www.sunpath.com

4139 Skyline Ln.e. Zephyrhills FL. 33542. USA Tel: 813-782-9747. Fax: 813-788-4057 www.sunpath.com

SECTION 7-2

CLEANING THE PARACHUTE ASSEMBLY

7.2.1 CLEANING THE PARACHUTE ASSEMBLY

7.2.1.1 OVERVIEW

Washing a parachute is not recommended unless deemed absolutely necessary. Washing a parachute can weaken and/or increase the permeability of the fabric. Washing can also cause shrinkage in the nylon fabric, tapes and the cotton/Nomex® components (i.e., bridle attachment area). Do not dry clean parachutes. Parachute components may be spot cleaned or cleaned as a unit and care must be taken that the cleaning process does not do more damage than the original soiling.

This chapter also covers identification and removal of some types of contamination. Items such as acid, salt water, and petroleum products are covered.

7.2.1.2 HAND WASHING (IF ABSOLUTELY NECESSARY)

1. A mild soap or soap solution, and a water softener may be used.

2. Immerse the parachute into clean, fresh water contained in a smooth vessel, such as a bathtub.

3. Do NOT wring the parachute fabric. Damage to fabric permeability will result.

4. Gently move items by hand until all air pockets are removed. Agitate as little as possible or damage to fabric permeability will result.

5. Empty the vessel of dirty water and refill with fresh warm, clear water.

6. Rinse the parachute several times in warm, fresh water until rinse water is clear.

7.2.1.3 DRYING A PARACHUTE

The procedure for drying a parachute is as critical as the procedure for washing it. Asymmetric shrinkage may occur if the parachute is dried unevenly.

1. Remove pilot chute assembly and/or drogue/slider control line.

2. Hang parachute full-length or the seams may experience uneven shrinkage creating a built in turn.

3. Hang reserve parachute assembly by all four connector links for the same time.

7.2.1.4 ACID CONTAMINATION

Nylon that has been contaminated by acid may have irregular shaped spots of gray or dead white color. The acid-contaminated fabric may also become powdery when scraped lightly.

Parachute components suspected of acid contamination may be tested with blue litmus paper. Dampen the suspect area with distilled water. Then lay the litmus paper on the area in question. If the paper turns pink, acid is present. Be careful not to touch the litmus paper. Touching the paper can cause an erroneous response.

If an area tests positive for acid and the effected area is known to be localized, that area should be neutralized with a solution of distilled water and ammonia. Household ammonia will work. Ammonia will not damage nylon or hardware. The damaged area should be removed and the resulting hole should be patched. If the extent of contamination cannot be determined or if it effects large portions of the parachute, the parachute should be first destroyed then disposed of.

7.2.1.5 REMOVAL OF SALT WATER CONTAMINATION

Crystals of dry salt and the presence of pale brown, circular stains often evidence salt-water exposure. If the parachute is allowed to dry after salt-water immersion without being rinsed in fresh water, salt crystals will form causing damage to the fabric and suspension lines.

1. Parachutes exposed to salt water should be rinsed out several times in warm, fresh water in a smooth tub. Use of a water softener is recommended. Hang assembly in drying tower in accordance with the section above entitled “Drying a Parachute.”

The maximum complete salt-water immersion limits for the parachute are listed below. The parachute assembly should be cleaned within 8 hours of immersion.

Remove from service any parachute assembly or sub-assembly for any of the following conditions:

1. Immersion in salt water for more than 6 hours if the parachute contains cadmium plated parts.

2. Immersion in salt water for more than 24 hours if the parachute contains stainless steel parts (i.e., slider stops).

3. Immersion in salt water and cannot be cleaned for 36 hours.

7.2.1.6 REMOVAL OF PERSPIRATION

Perspiration causes damage to the parachute much like salt water does. Small amounts are not significant and may be ignored. For larger areas heavily contaminated, clean the parachute in accordance with the “Removal of Salt Water Contamination” section above.

7.2.1.7 REMOVAL OF FRESH WATER

Dry parachute assembly in accordance with the section above entitled “Drying a Parachute.”

7.2.1.8 REMOVAL OF MILDEW

1. Wash affected area with mild soap and water solution.

2. Rinse affected area thoroughly with fresh, clear water.

3. Hang assembly in drying tower in accordance with the section above entitled “Drying a Parachute.”

7.2.1.9 REMOVAL OF FIREFIGHTING AGENTS

Parachute fabric and webbing exposed to light water, protein foam, PKP, and any combination of such shall be thoroughly washed within 30 hours after exposure. Hang assembly in drying tower in accordance with the section above entitled “Drying a Parachute.”

Metallic parts or components so exposed shall be disassembled as far as practical, washed, dried, and examined. Metallic components treated in this manner may be returned to service if undamaged.

Remove from service any parachute assembly or sub-assembly for any of the following conditions:

1. Contamination by soda-acid firefighting agent. Hardware items may be returned to service after cleaning.
2. Contamination by firefighting agents such as light water, protein foam, PKP or any combination of such, if not decontaminated within 30 hours. Hardware items may be returned to service after cleaning.

7.2.1.10 REMOVAL OF PETROLEUM PRODUCTS

Hydrocarbons usually do not harm nylon. Petroleum products such as oil or grease have a greenish or brownish appearance. Wash the affected area by repeated applications of mild soap and water solution. Each application shall be followed by a rinse in clean, fresh water.

1. Continue washing and rinsing affected area until clean.
2. Hang assembly in drying tower in accordance with the section above entitled “Drying a Parachute.”

7.2.1.11 REMOVAL OF BLOODSTAINS

1. Soak the stained area in cold water.
2. Hand wash affected area with mild soap and water solution.
3. Rinse affected area thoroughly with fresh clean water.
4. Hang assembly in drying tower in accordance with the section above entitled “Drying a Parachute.”

7.2.1.12 REMOVAL OF SOIL

1. Hang the parachute and shake to remove most of the dirt and sand.
2. Brush lightly with a soft-bristled brush.
3. If the assembly is extremely contaminated, perform the following:
    a. Wash only the soiled areas in warm water with a mild soap.
    b. Rinse affected area thoroughly with fresh clean water.
4. Hang assembly in drying tower in accordance with the section above entitled “Drying a Parachute.”

SECTION 7-3

REPAIR LIMITATIONS

7.3.1 REPAIR LIMITATIONS

7.3.1.1 OVERVIEW

This section contains some limitations to adhere to when performing parachute repairs.

7.3.1.2 REPAIR QUALIFICATIONS

Minor Repairs - a senior rigger or country's equivalent may perform minor repairs.

Major Repairs - a master rigger or country's equivalent may perform major repairs.

Factory Repairs - these repairs may only be performed at the PD factory. These include all repairs that are not specifically listed as minor or major repairs.

7.3.1.3 PATCHES

Holes or snags smaller than the size of one ripstop box (1/8 inch, 3.2mm) may remain unrepaired as long as no more than one hole exists within any 10-inch (25.4cm) circle. A maximum of three such holes or snags per cell are allowed.

Ripstop tape is not authorized for use on Performance Designs reserve parachutes. If the damage is enough to warrant a repair, a sewn repair must be performed.

Darning is not a means of repairing Performance Designs parachutes.

Any hole or tear up to 10 inches (25.4 cm) in length may be repaired by a senior rigger as long as the closest area of the completed repair is at least 1 inch from the nearest seam and at least 5 inches from the nearest tape or line attachment. These are minor repairs.

7.3.1.4 MATERIALS

Reserves may only be repaired using certified materials. All replacement materials must come from the Performance Designs factory. Under-strength thread and fabric is frequently found in the field. The only way to be sure the material meets Performance Designs standards is to obtain them directly from Performance Designs.

SECTION 7-4

BASIC PATCH PROCEDURE

7.4.1 BASIC PATCH PROCEDURE

7.4.1.1 OVERVIEW

The Raghanti Basic Patch is recognized as the preferred patching method throughout the industry. The patching method does not require pins nor does it require a measuring square.

The Raghanti Basic Patch can be made in almost any size as long as it falls within the limitations for patches (listed in “Limitations” section below).

7.4.1.2 LIMITATIONS

A senior rigger (or country’s equivalent) is qualified to repair any damage up to 10 inches (25.4 cm) in length or width as long as the closest area of the completed repair will be:

- At least 1 inch (2.54 cm) from the nearest seam, and
- At least 5 inches (12.7 cm) from the nearest tape or line attachment.

Small snags and holes smaller than 1/8-inch square (one ripstop box) located further than 10 inches (25.4 cm) from the closest line attachment may remain unrepaired as long as there are no more than one in any 10-inch (25.4 cm) diameter circle. A maximum of three such snags per cell are allowed.

Ripstop tape is not authorized for use on Performance Designs reserve parachutes. If the damage is enough to warrant a repair, a sewn repair must be performed.

7.4.1.3 EXAMPLE OF A 6 INCH SQUARE PATCH

Equipment and supplies needed:

- Marking pencil
- Single needle sewing machine with white “E” thread
- Square pieces of fabric of the same type and color as the parachute area that is to be repaired.

  1-13.5 Inch
  1- 7 inch

- Ruler
- Hemostat
- Scissors
- Nippers

7.4.1.4 Inspect the entire parachute for damage.
Mark the boundaries of the damage.
Allow two inches for repair from each boundary.
A six inch patch will cover approximately two square inches of damage for this example.
We will need a seven inch square piece of fabric to make a six-inch patch, using one-half inch seam allowance.

Always place the patch on the inside of the parachute.
(See figure 7-1)

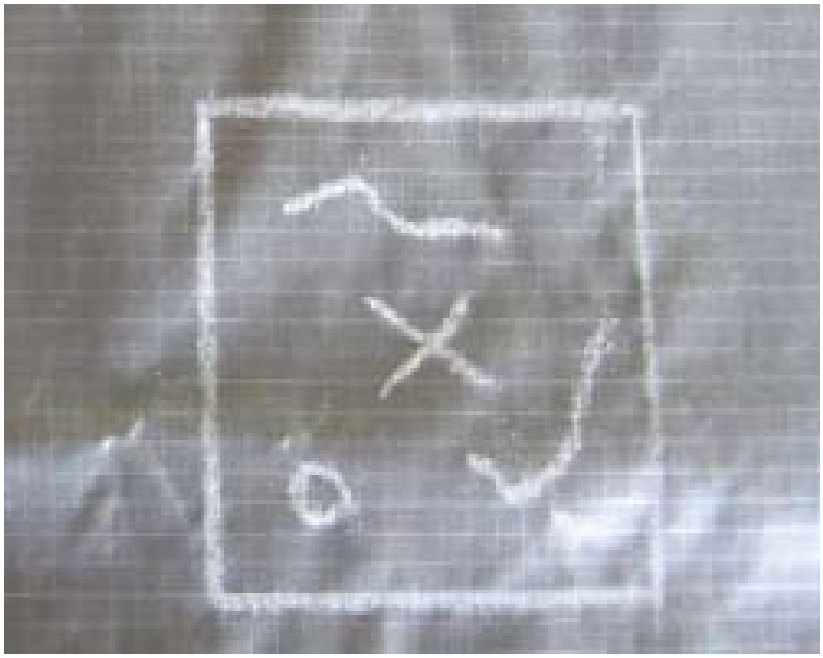


Figure 7-1. Locate And Mark Damaged Area

7.4.1.5 Measure half the patch size or three inches out to the left of the center of damage following one rip stop line in the fabric.

Make a center line mark and a intersecting left border mark as shown.

Measure half the patch size or three inches up to the left border rip stop line from the center line mark the top border and left border as shown.

Count down 10 ripstop boxes from the top border and make a mark. This is the start mark.
(See figure 7-2)

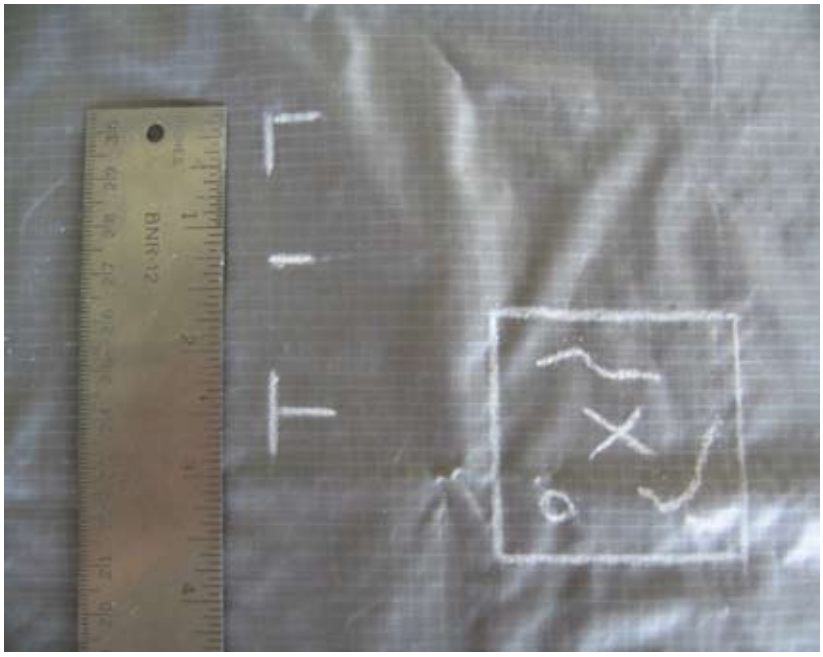


Figure 7-2. Determine Patch Layout

7.4.1.6 Count 14 rip stop boxes down from any corner of the seven 7-inch square piece and make a start mark.
(See figure 7-3)

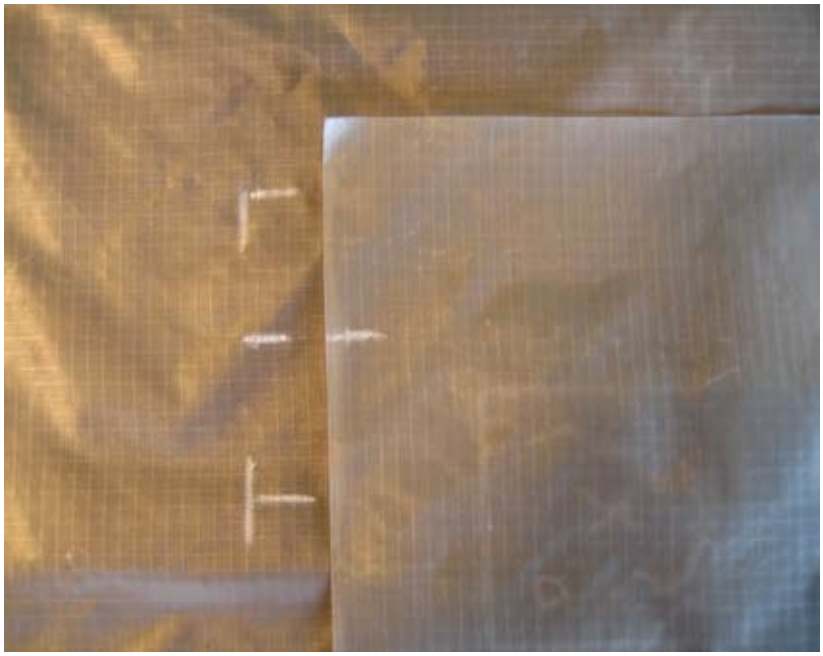


Figure 7-3. Mark The Repair Starting Point

7.4.1.7 Make a four block fold in the patch, place the two start marks on top of each other using the hemostat to hold the four block seam allowance in place and sink the needle.

Always sew in a counter clockwise direction around patches so the bulk of the parachute does not have to go through the bed of the machine.

Beginning at the start mark, sew the first side to the mid point or the patch.
(See figure 7-4)

Figure 7-4. Establish The Start Point

7.4.1.8 Count up four blocks from the bottom edge of the patch and use the hemostat to form a corner. Line up the rip stop boxes and load each piece with the same pressure. Then, sew to the corner maintaining 1/16" edge distance.
(See figure 7-5)

Figure 7-5. Sewing The First Seam

7.4.1.9 Repeat this step until you have sewn the first two corners down. At this point, check the last corner to insure it will fall in the top and left border marks made when the measurement step was done. Then sew the Last two corners down.

It is important to pull the fabric the same speed the machine goes while sewing and to set the hook in the stitch loop before lifting the foot to turn a corner.
Always make a four to six inch oversew past the start point.
(See figure 7-6)

Figure 7-6. First Two Corners Sewn Down

7.4.1.10 If the fabric was loaded correctly , the patch will be square and lay flat without any bubble.
(See figure 7-7)

Figure 7-7. First Side Complete

7.4.1.11 Using the scissors, cut the damage out out of the parachute making your initial cut to within seven ripstop boxes in from the stitching that holds the patch on.

Be very careful not to cut the patch material.
(See figure 7-8)

Figure 7-8. Begin Removing Damaged Material

7.4.1.12 Place your hand through the cut you just made and remove the remaining damage seven stop blocks in from the stitching.

Using your hand to protect the back side will prevent damaging the patch.
(See figure 7-9)

Figure 7-9. Complete Removal Of Damaged Material

7.4.1.13 Make a diagonal cut in each corner to within three rip stop boxes from the corner stitching.(See figure 7-10)

Figure 7-10. Cut The Corners

7.4.1.14 Place the work under the sewing machine foot and, using the hemostat, grab one rip stop in the from the cut edge. Place the parachute fabric behind the fold back of the patch forming a French fell seam.

Do this in two places and seat the one space box fold back against the patch stitch row with the tip of the hemostat.

Sink the needle and repeat this step until the second side of the patch is sewn. Finish with a 4 inch to 6 inch oversew.

NOTE: Begin sewing the side opposite of the original start point and sew around the parachute patch repeating this process on each side.
(See figure 7-11)

Figure 7-11. Preparing The French Seam

7.4.1.15 Ensure that each corner is fully seated and square.

Use the side of the presser foot as a guide for stitching.

Inspect the work thoroughly.
(See figure 7-12)

Figure 7-12. Completed Patch

SECTION 7-5

LINE REPLACEMENT

7.5.1 LINE REPLACEMENT

7.5.1.1 OVERVIEW

Damaged suspension lines shall not be repaired. A Master Rigger or his equivalent should replace the lines. Also, lines shall be replaced in pairs to minimize any asymmetrical line trim issues that may result from a single line replacement. Any line, tape, or webbing damage is classified as a major repair and therefore can only be performed by a Master Rigger or his equivalent.

7.5.1.2 REQUIRED EQUIPMENT AND MATERIALS

- Replacement lines from manufacturer
- V-T-295 size E nylon thread of the same color as used on the rest of the lines
- Bar tack or zig-zag machine
- Scissors
- Seam ripper
- Finger trapping needle

7.5.1.3 COMPLETE STEERING LINE REPLACEMENT

PROCEDURE

1. Remove the damaged steering line.

2. Starting with the outboard side, attach the new line to the parachute using the same knot as used on the other lines.

3. Bartack the fingertrap. Ensure the bartack originates at the fingertrap entry and extends toward the live side of the fingertrap.

4. Repeat steps 1 through 3 to attach all upper steering lines to the parachute.

5. Thread the lower steering line through the slider and steering line guide ring on the riser and tie to the steering toggle or loop.

6. Apply even tension and adjust all knots. Recheck all measurements.

7. Inspect the work thoroughly. Double check line lengths.

8. Perform a line continuity check.

7.5.2 LOWER STEERING LINE (LST) REPLACEMENT

7.5.2.1 PROCEDURE

1. Remove the damaged lower steering line.

2. Place the new lower steering line through the lower loops of the upper steering lines.

3. Fingertrap the line back into itself, ensuring the marks on the line match up.

4. Bartack the fingertrap ensuring it originates at the fingertrap entry and extends toward the live side of the fingertrap.

5. Attach bottom end of the lower steering line to the rapide link in the same location as the damaged lower line.

6. Perform a continuity check.

7.5.2.2 SUSPENSION LINE REPLACEMENT

The line being replaced will either be an A/B line or a C/D line. These lines come from the factory as follows:

- The “A” portion of the A/B line and the “C” portion of the C/D line will have a prefabricated loop for parachute attachment. (see picture)

- The “B” portion of the A/B line and the “D” portion of the C/D line come straight line (without a loop) and cut at an angle for finger trapping.

7.5.2.3 PROCEDURE

1. Remove the damaged line.

2. Attach either the A or the C line (depending on which line is being replaced) to the parachute using a lark’s head knot.

3. Attach either the B or the D line (depending on which line is being replaced) to the parachute by wrapping the line around the parachute attachment loop to resemble a lark’s head knot.

4. Verify the finger-trap match marks are aligned. This ensures the line is at its proper length.

5. Fingertrap the line back into itself, ensuring the marks on the line match up.

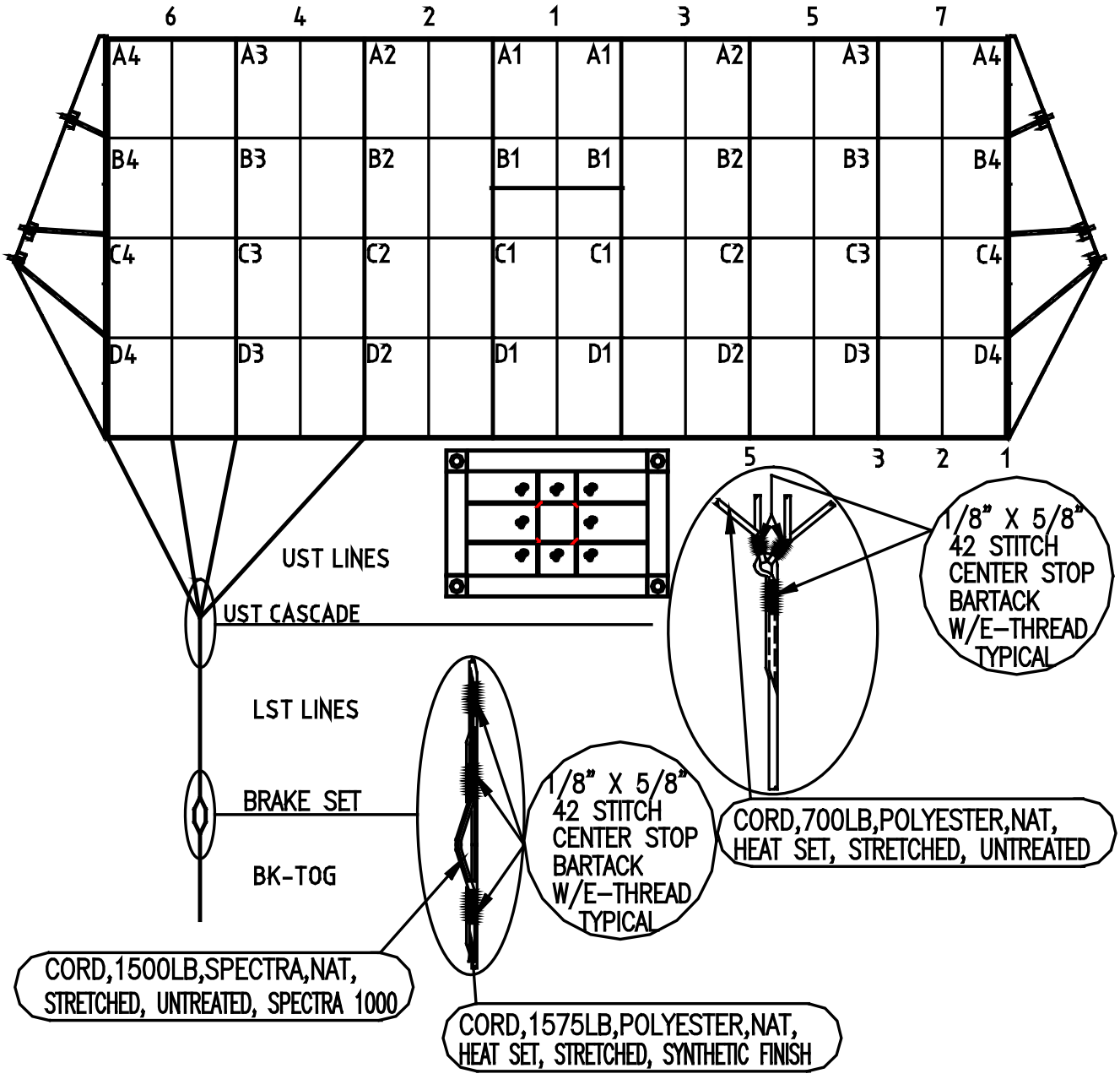
6. Bartack the fingertrap. Ensuring it originates at the fingertrap entry and extends toward the live side of the fingertrap.

7. Perform a line continuity check.

8. Repeat steps 1 through 7 for the line opposite the damaged line to ensure symmetry and trim.

CHAPTER 8

DRAWINGS



LINE LENGTHS FOR EQUIPMENT INSPECTION

A LINE	181 1/2"	± 1"	A TO B	4 3/4"	± 1/2"
BRAKE TO TOGGLE	29 1/8"	± 1/2"	A TO C	17 1/4"	± 1/2"
SEAM TO SEAM TOP SKIN #1	47 1/8" TO 48 1/8"		A TO D	31 7/8"	± 1/2"
B1 TO C1	35" TO 36 3/8"		A TO UST	17 1/2"	± 1/2"

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Figure 8-1. TR-375 Planform Drawing

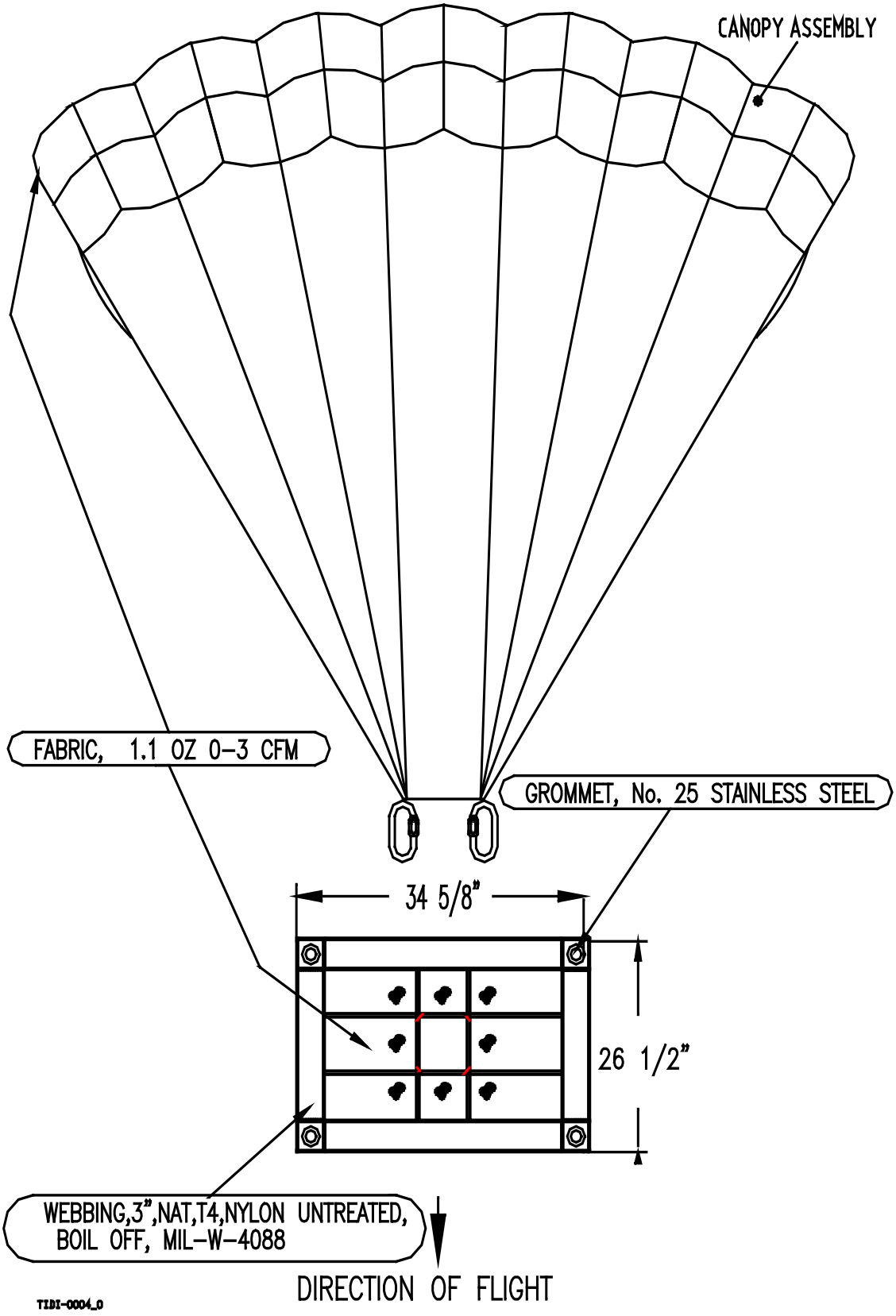


Figure 8-2. TR-375 Flying Front

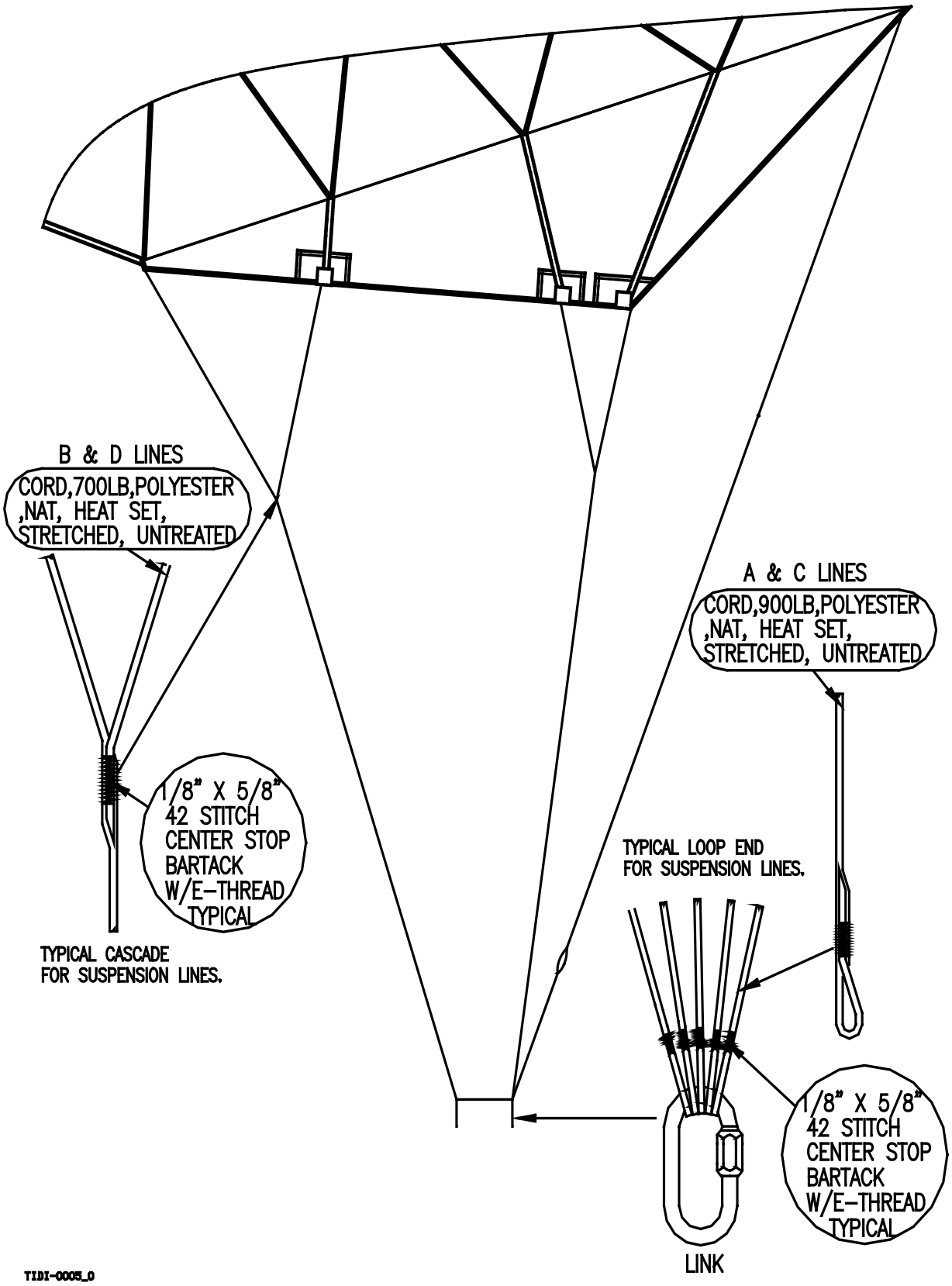
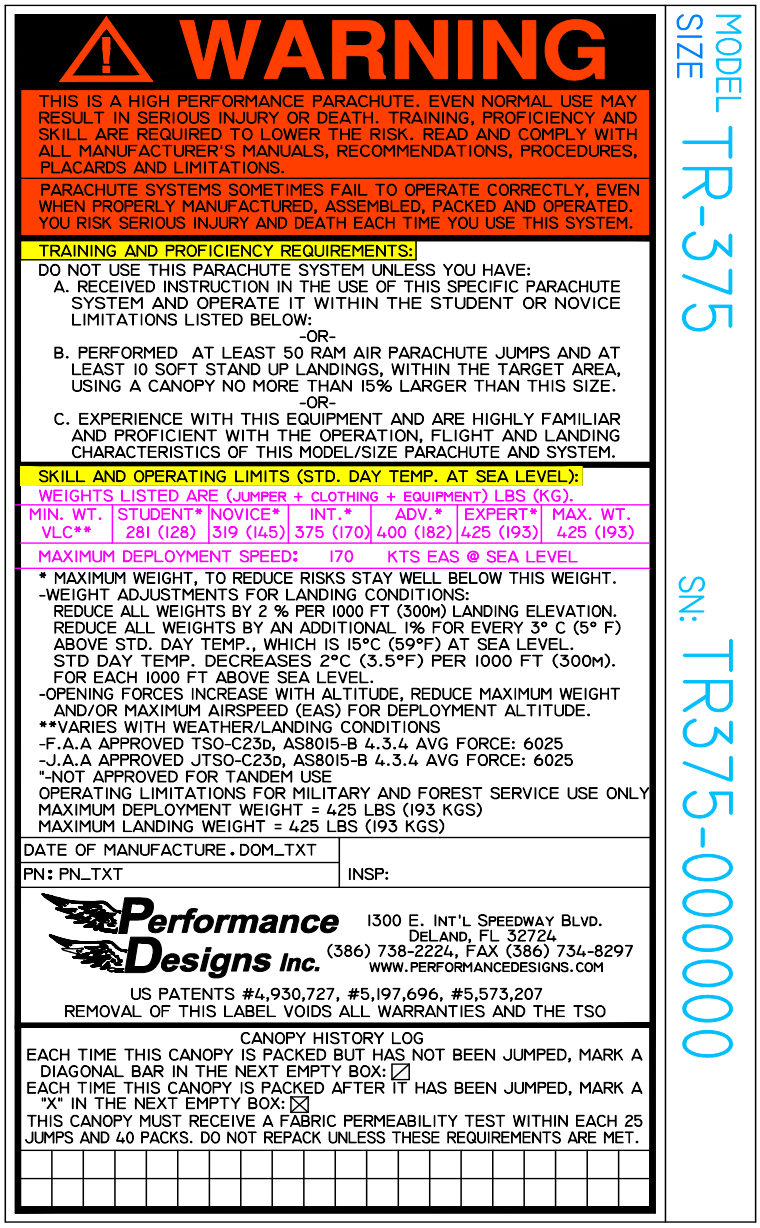


Figure 8-3. TR-375 Sideview



TR-375	MODEL #
TR375+CUT REVISION FROM PRODUCTION ORDER	PART #
TR375-NUMBER FROM PRODUCTION ORDER	SERIAL #

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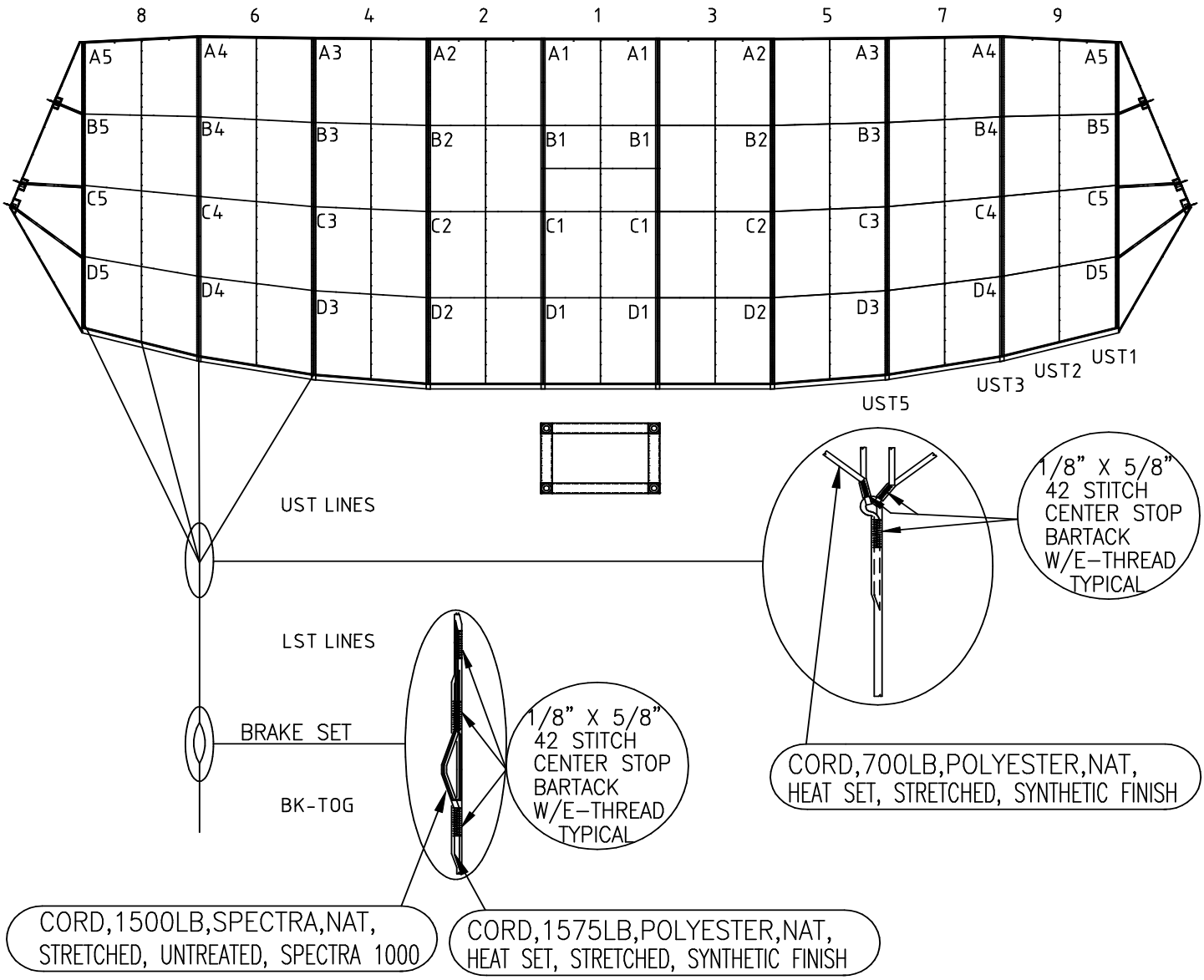
Figure 8-4. TR-375 Warning Label



LINE LENGTHS FOR EQUIPMENT INSPECTION

A5 LINE	186 1/4"	± 1"
A4 LINE	186 3/8"	± 1"
A3 LINE	186 1/2"	± 1"
A2 LINE	186 5/8"	± 1"
A1 LINE	186 5/8"	± 1"
BRAKE TO TOGGLE	23"	± 1/2"
SEAM TO SEAM TOP SKIN #1	38 1/4" TO 39 1/4"	
B1 TO C1	32 1/8" TO 33 5/8"	

A5 TO B5	3 3/8"	± 1/2"	A2 TO B2	3 3/4"	± 1/2"
A5 TO C5	10 1/2"	± 1/2"	A2 TO C2	13 1/2"	± 1/2"
A5 TO D5	21 1/8"	± 1/2"	A2 TO D2	26 5/8"	± 1/2"
A4 TO B4	3 3/8"	± 1/2"	A1 TO B1	3 3/4"	± 1/2"
A4 TO C4	11 7/8"	± 1/2"	A1 TO C1	13 1/2"	± 1/2"
A4 TO D4	24"	± 1/2"	A1 TO D1	26 3/4"	± 1/2"
A3 TO B3	3 5/8"	± 1/2"			
A3 TO C3	13"	± 1/2"	A5 TO UST1	19 1/2"	± 1"
A3 TO D3	26"	± 1/2"			

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Figure 8-5. MS-360 Planform

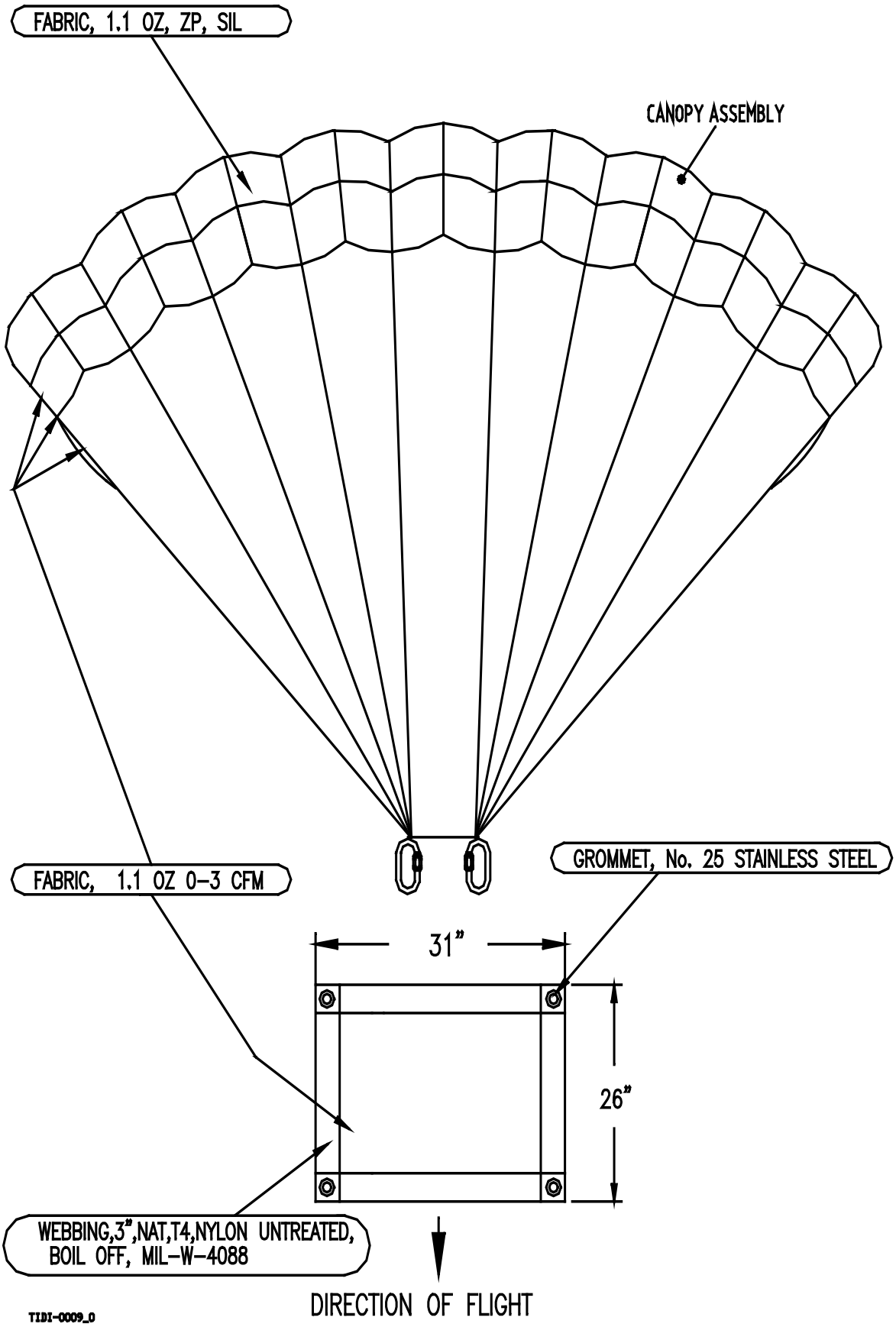


Figure 8-6. MS-360 Flying Front

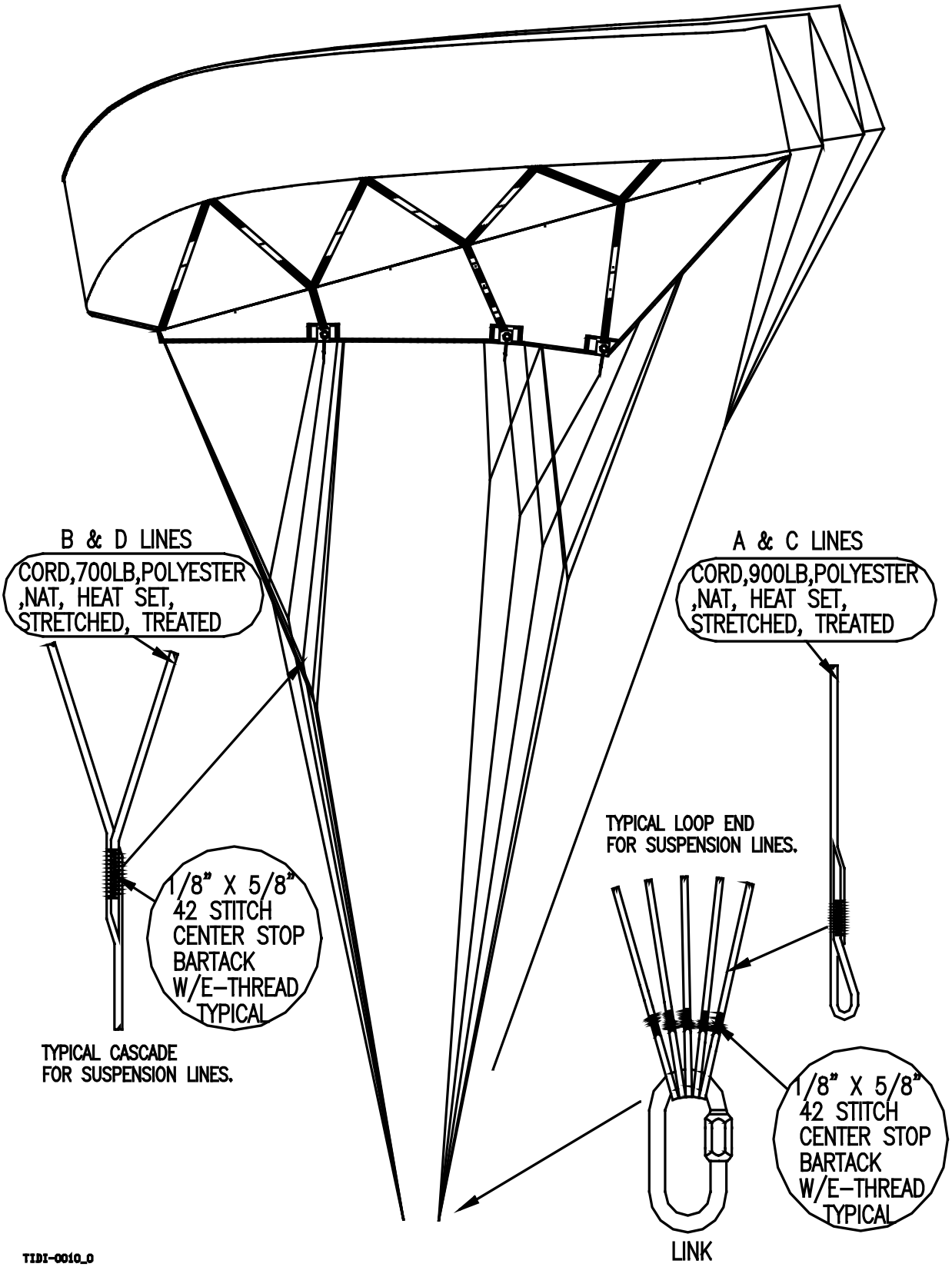
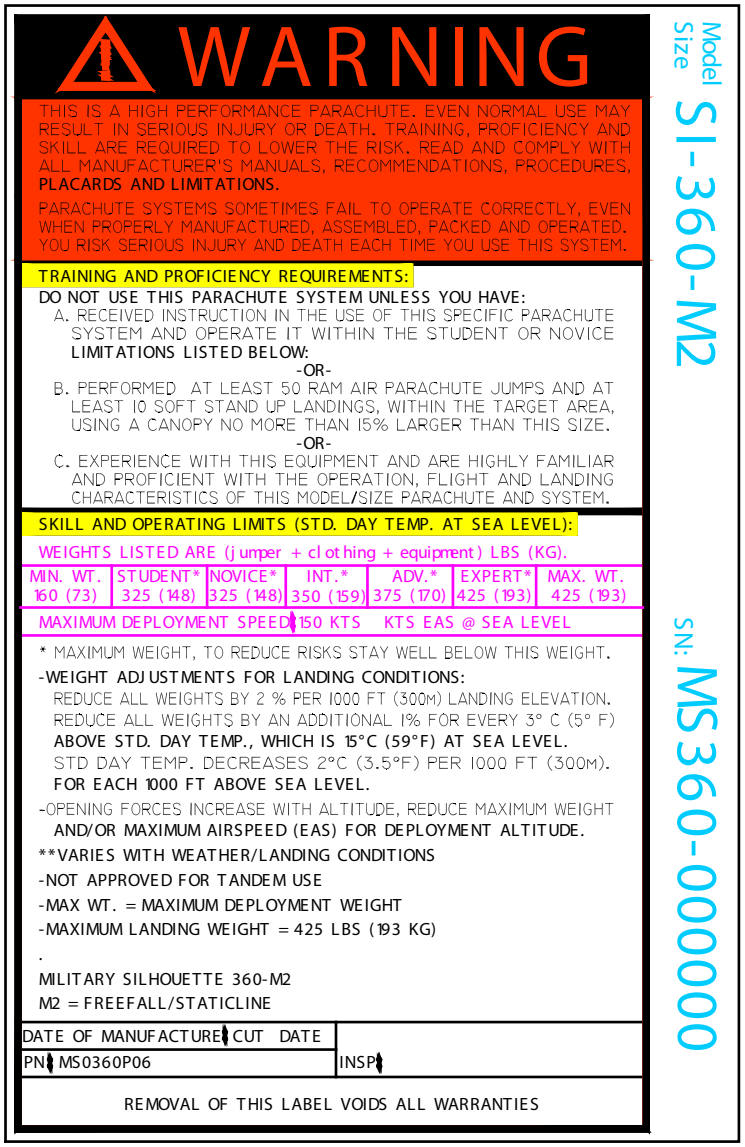


Figure 8-7. MS-360 Sideview



SI-361-M2	MODEL #
MS1361+CUT REVISION FROM PRODUCTION ORDER	PART #
MS361-NUMBER FROM PRODUCTION ORDER	SERIAL #

TIDI-0011_0

Figure 8-8. MS-360 Warning Label

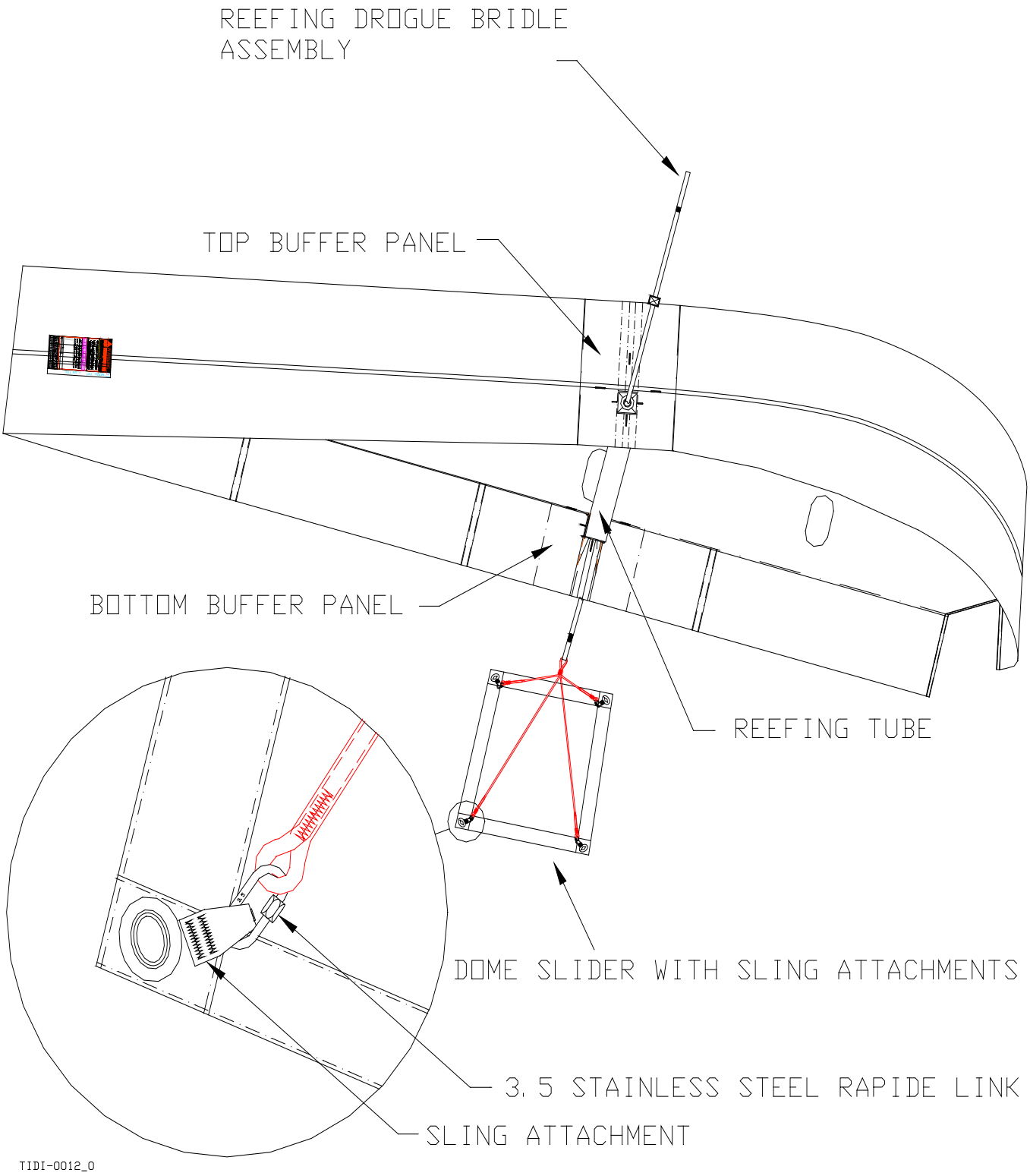


Figure 8-9. MS-360 Reefing Assembly

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CHAPTER 9

MJ-12
CRITICAL ITEMS LIST &
ILLUSTRATED PARTS LIST

Figure 1. Skyhook Configuration

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
1	1	3B7S7	CPS-JR007-MJ-SH	RESERVE STATIC LINE (SKYHOOK)	EA.	1
1	2	3B7S7	CPS-JM004-36.5	MAIN RIPCORD 36.5”	EA.	1
1	3	3B7S7	CPS-JR005A-23	RESERVE RIPCORD 23”	EA.	1
1	4	3B7S7	CPS-JM015-PET-RED	CUTAWAY HANDLE	EA.	1
1	5	3B7S7	CPS-PELA-LARGE	ELASTIC KEEPERS	EA.	5

Figure 2. Standard Reserve Static Line (RSL) Configuration

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
1	1	3B7S7	CPS-JR007-1	STANDARD RESERVE STATIC LINE	EA.	1

Figure 3. Rear View

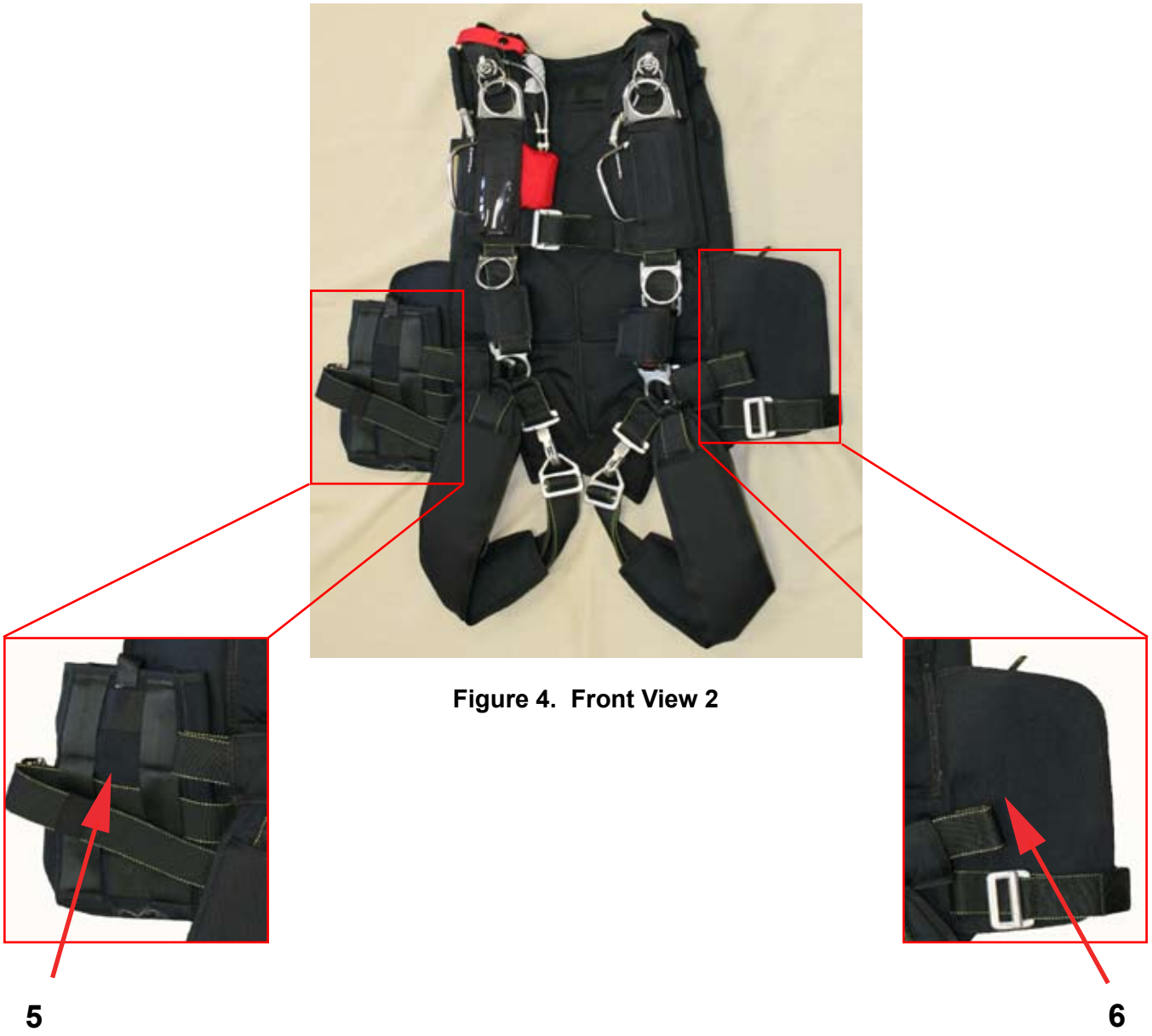


Figure 4. Front View 2

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
2	1	3B7S7	CPS-JA-001-MJ-12	HARNESS/CONTAINER ASSEMBLY MJ-12	EA.	1
3	2	3B7S7	CPS-PAAD-CYPLOOP	CYPRES CLOSING LOOP	EA.	3
3	3	3B7S7	CPS-ML-960100	CYPRES CLOSING LOOP DISC	EA.	3
3	4	3B7S7	CPS-JM003-1	MAIN CLOSING LOOP	EA.	5
4	5	3B7S7	CPS-JM016-80	OXYGEN POCKET 80 CU IN	EA.	1
4	6	3B7S7	CPS-JM021-03-L,BLK	UTILITY POCKET, LEFT, FIXED	EA.	1

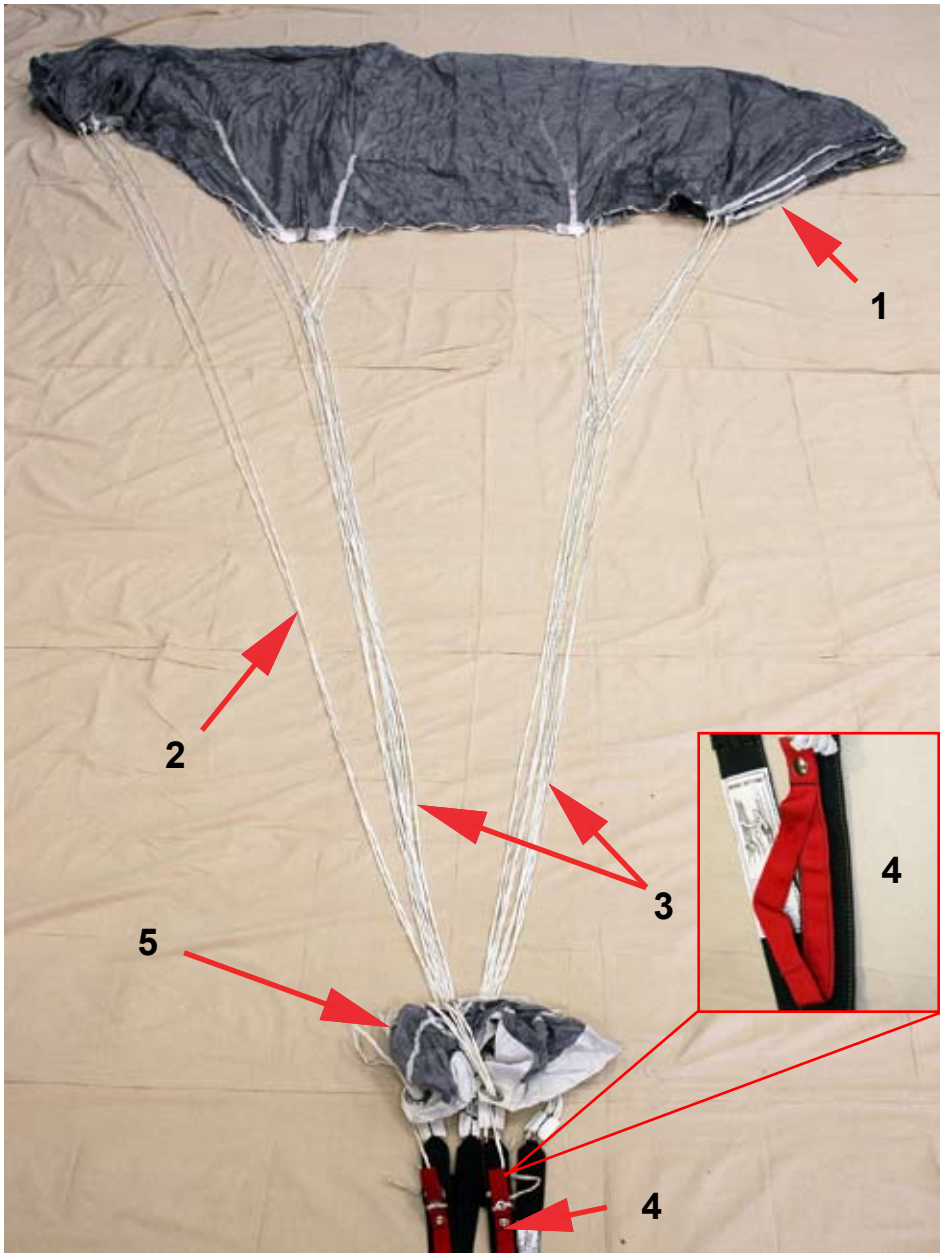


Figure 5. TR-375 Tactical Reserve Parachute Assembly

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
5	1	3B7S7	CPS-TR-375	TR-375 RESERVE CANOPY	EA.	1
5	2	3B7S7	CPS-FRP-LS-TR-0375-2430-12-NA	CONTROL LINE SET, TR-375	EA.	1
5	3	3B7S7	CPS-FRP-LS-TR-0375-1430-01-01	COMPLETE LINE SET TR-375	EA.	1
5	4	3B7S7	CPS-JR008	STEERING TOGGLES -RED	EA.	2
5	5	3B7S7	CPS-FRP-SL-2650-3462-01-B-A-C	SLIDER-TR-375	EA.	1

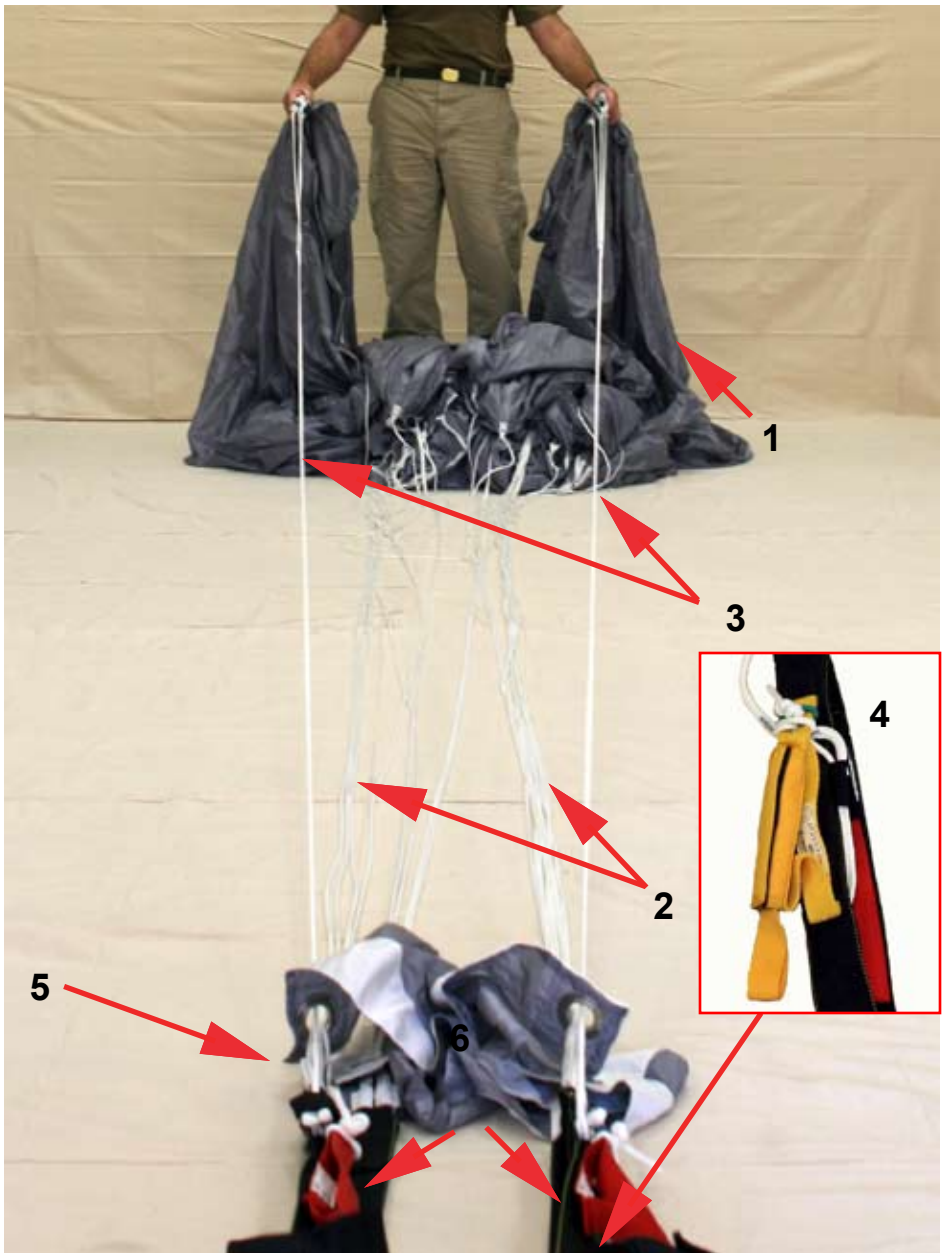


Figure 6. MS-360 Main Parachute Assembly

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
6	1	3B7S7	CPS-MS-360 M2C	MS-360 MAIN PARACHUTE	EA.	1
6	2	3B7S7	CPS-FRP-LS-MS-0360-1030-01-01	COMPLETE LINE SET, MS-360	EA.	1
6	3	3B7S7	CPS-FRP-LS-MS-0360-2530-12-NA	CONTROL LINE SET, MS-360	EA.	1
6	4	3B7S7	CPS-JM014-2-TC	STEERING TOGGLES, YELLOW W/JM014-EXT-ON HAHO EXTENSION	EA.	2
6	5	3B7S7	CPS-FRP-SL-2600-3100-07-B-A-F	SLIDER, MS-360M2C	EA.	1
6	6	3B7S7	CPS-JM012-2	MAIN RISER ASSEMBLY, MS-360	EA.	2

Figure 7. MJ-12 Main Deployment Bag Assembly

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
7	1	3B7S7	CPS-JM001	MAIN SPRING PILOT CHUTE	EA.	1
7	2	3B7S7	CPS-JM017-3	MAIN DEPLOYMENT BAG	EA.	1
7	3	3B7S7	CPS-JM020-1A	MAIN PILOT CHUTE BRIDLE	EA.	1

Figure 8. Dual Speed Reserve Deployment System

FIG.	ITEM	CAGE	PART	DESCRIPTION	UNIT	QTY.
8	1	3B7S7	CPS-JR004EZ-SIL	DUAL SPEED PILOT CHUTE SYSTEM	EA.	1
8	2	3B7S7	CPS-JR003	DUAL SPEED RESERVE PILOT CHUTE	EA.	1
8	3	3B7S7	CPS-JR002	RESERVE FREEBAG W/BRIDLE	EA.	1
8	3	3B7S7	CPS-J009	RESERVE DEPLOYMENT BAG SAFETY STOW	EA.	2

CHAPTER 10

ILLUSTRATED PARTS LIST & SPECIFICATIONS

CPS PART # CPS-JR002
DESCRIPTION: Freebag, MJ W/Bridle (Non Skyhook)
SPECIFICATIONS
F111 Construction Bridle, 2” Natural Nylon/Poly Length: 11’ 10” +/- 2” Safety Stow Loops, (2) (At Limit 14” ±1”, 356 ± 25mm)

Figure 1. Freebag

CPS PART # CPS-JR002 -12-SH
DESCRIPTION: Freebag, MJ W/Bridle, Skyhook Option
SPECIFICATIONS
F111 Construction Bridle, 2” Natural Nylon/Poly Length: 11’ 10” +/- 2” Safety Stow Loops, (2) (At Limit 14” ±1”, 356 ± 25mm) Skyhook Equipped

Figure 2. Freebag W/Skyhook Option

CPS PART # CPS-JM017-3-12
DESCRIPTION: Main Deployment Bag, Freefall, Kicker Plate
SPECIFICATIONS
Fabric Construction, 500D Cordura Grommets, #2 Stainless (X4) Stow Band Loops (10)

Figure 3. Main Deployment Bag

PART # CPS-PS003-21
DESCRIPTION: Kicker Plate, Deployment Bag, MJ-10, ,
SPECIFICATIONS
.06 High Density Polyurethane. 8 3/8 inches X 4 inches X 1/16 inch

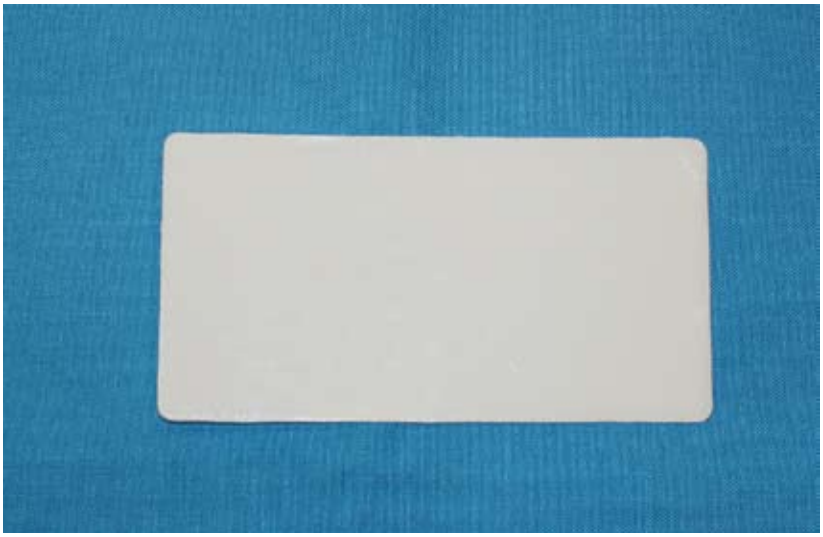


Figure 4. Kicker Plate Replacement Panel

CPS PART # CPS-JR003
DESCRIPTION: Pilot Chute, Main, Double Bag Static Line
SPECIFICATIONS
36” Finished Diameter F111/Mesh Construction

Figure 5. Pilot Chute, Main, DBSL

CPSPART # CPS-JM001
DESCRIPTION: Pilot Chute, Main W/Spring,
SPECIFICATIONS
36” Finished Diameter F111/Mesh Construction Spring Loaded

Figure 6. Pilot Chute Main W/Spring

CPS PART # CPS-JR004-EZ
DESCRIPTION: Pilot Chute, Reserve, W/Spring
SPECIFICATIONS
36” Finished Diameter F111/Mesh Construction Spring Loaded

Figure 7. Pilot Chute, Reserve, W/Spring

CPS PART # CPS-JM012-2
DESCRIPTION: Riser Assembly, Main, 3-Ring Release
SPECIFICATIONS
Type 7 Construction Finished Length: 26” +/- .25” (measured with ring out flat) RSL Ring on Left Riser. (W/O Skyhook) RSL Ring on Right Riser (W/Skyhook) Velcroless Toggle Setup

Figure 8. Main Riser Assembly

PART # CPS-JM014-2-TC
DESCRIPTION: Toggle, Velcroless, Main Parachute W/HAHO Extension
SPECIFICATIONS
W / Optional CPS-JM014-EXT-ON Extension Type 4 Toggle: Type 17 Construction

Figure 9. Main Toggles W/HAHO Extension

PART # CPS-JR007-2
DESCRIPTION: Standard Reserve Static Line (RSL)
SPECIFICATIONS
Doubled 1” Type 4-Square Weave. Stainless Steel Snap Shackle Red, 4” Type 3 tab w/snap SR4 or Equivalent CAD Ring

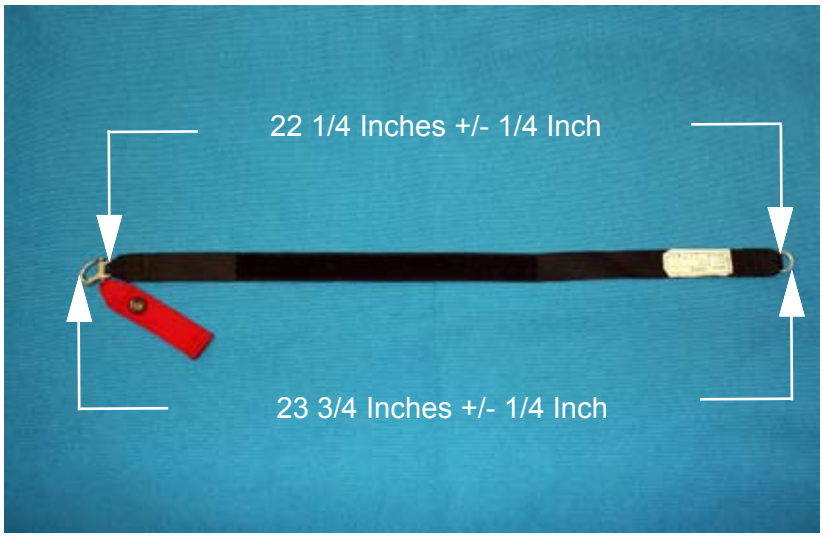


Figure 10. Reserve Static Line

PART # CPS-JR007-MJ-SH
DESCRIPTION: Skyhook Reserve Static Line (RSL)
SPECIFICATIONS
Doubled 1” Type 4-Square Weave. Stainless Steel Snap Shackle Red, 4” Type 3 tab w/snap SR4 or Equivalent CAD Ring

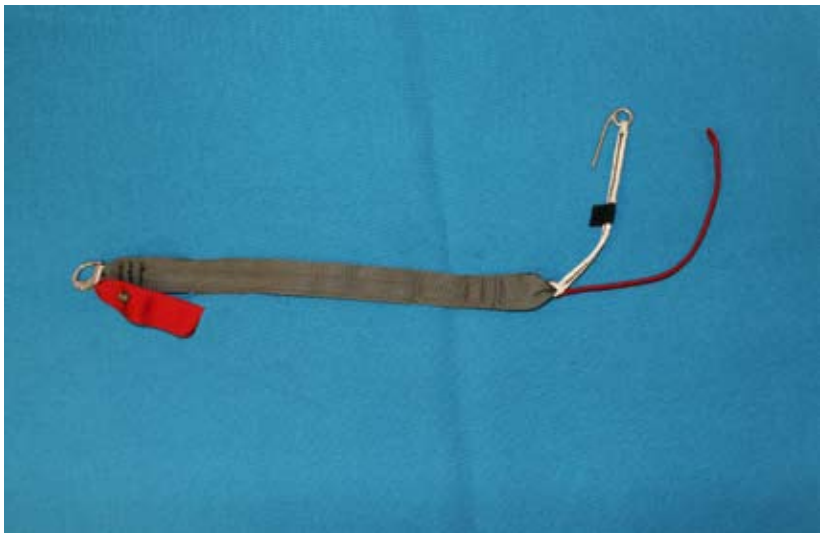


Figure 11. Skyhook Reserve Static Line

PART # CPS-ARZ-Clip
DESCRIPTION: Snap Hook, Parachute Static Line
SPECIFICATIONS
Hot Forged Alloy Steel Thermal Treated Cad plated 100% Proof Load Tested @ 1750 lbs Minimum Tensile Strength 8000 lbs Approximate weight 9.0 ounces Meets or exceeds PIA-H-7195 Meets SAE-AMS-F-7190

Figure 12. Snap Hook, Static Line

CPS PART # CPS-JM010-1
DESCRIPTION: Static Line, Main
SPECIFICATIONS
Length 14’ 8” Type 8 Yellow

Figure 13. Static Line

CPS PART #
DESCRIPTION: Bridle, Main Spring Large Loop
SPECIFICATIONS
1 inch type 4 Finished Length: 79 1/16 inch +/- 1.5 inch

Figue 14. Main Bridle

CPS PART # CPS-JR005A-SH-XX
DESCRIPTION: Ripcord MJ Skyhook
SPECIFICATIONS
7X7 Stainless Steel Cable Terminal Ball and Shank 3/16” Marine Eye 5/16” O.D., 0.035, 304 Stainless Steel Tube

Figure 15. Ripcord, Reserve, Skyhook, Marine Eye

PART # CPS-JM004-36.5
DESCRIPTION: Ripcord, Main, 36.5 Inch
SPECIFICATIONS
Finished Cable Length: 36.5” End of Pin to First Ball and Shank Bent Pin, Double Ball and Shank Handle Length Dimension: 129mm +2/-1mm Tolerance

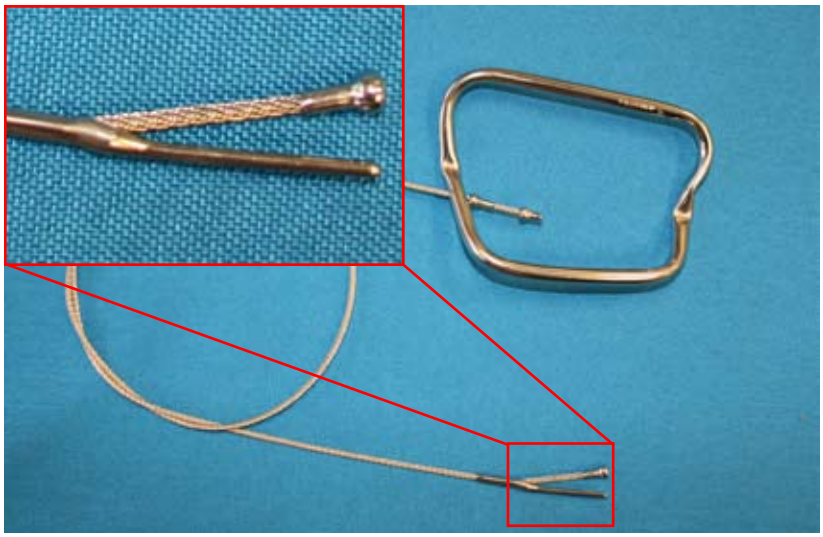


Figure 16. Ripcord, Main With Pigtail

PART # CPS-JR005-23
DESCRIPTION: Ripcord, Reserve, 23 Inch
SPECIFICATIONS
Finished Cable Length: 23” End of Pin to first Ball and Shank Terminal Pin, Double Ball and Shank Handle Length Dimension: 129mm +2/-1mm Tolerance (Elastic Pocket Only)

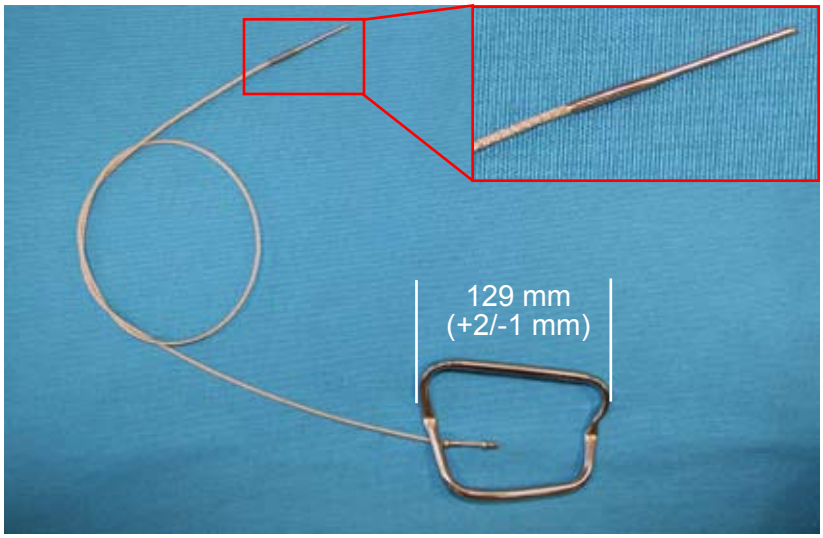


Figure 17. Ripcord, Main, Terminal Single Pin

PART # CPS-JM015-PET-RED
DESCRIPTION: Cutaway, Extra Thick
SPECIFICATIONS
Color: Red Cable: Clear Lolon Cable Length: Long: 42.05” (1068mm) Short: 12.75” (325mm) (+/- 6mm)

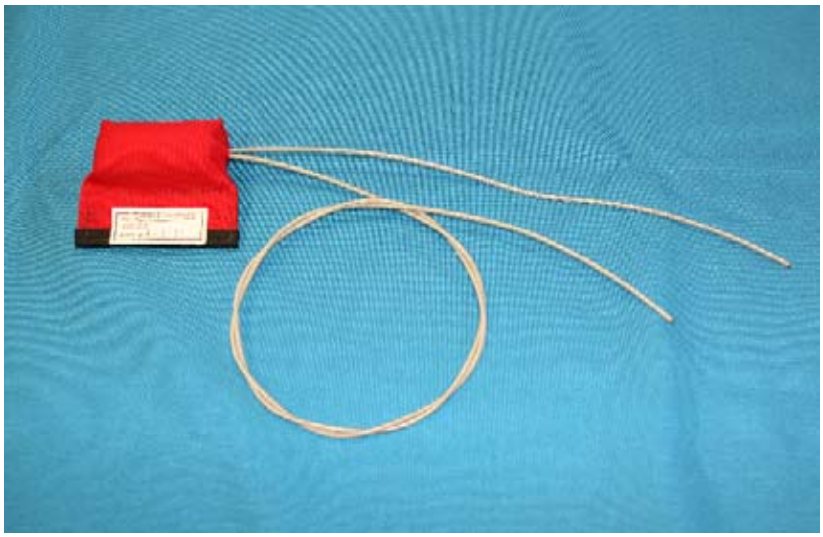


Figure 18. Handle Assembly, Cut Away

CPS PART # CPS-JM008-12
DESCRIPTION: Deployment Bag, DBSL, Outer
SPECIFICATIONS
Cotton Duck Fabric Loops=550lb. Type # Nylon Cord #5 Nickel Spur Grommet (1) 16mm Type 4 Web 19mm Type 3 Binding Tape 25mm Type 3 Tape 45mm Type 8 Web 45mm Type 12 Web 75mm Type 4 Web

Figure 19. Outer Bag, Dual Bag Static Line

CPS PART # CPS-JM009-12
DESCRIPTION: Deployment Bag, DBSL, Inner
SPECIFICATIONS
Cotton Duck Fabric Loops=550lb. Type # Nylon Cord #5 Nickel Spur Grommet (10) #25 Stainless Steel Spur Grommet (1) 16mm Type 4 Web 19mm Type 3 Binding Tape 25mm Cotton Tape 45mm Type 7 Web 45mm Type 12 Web 75mm Type 4 Web

Figure 20. Inner Bag, Dual Bag Static Line

PART # CPS-JR008
DESCRIPTION: Toggle, MJ Reserve
SPECIFICATIONS
Type 17-Color-Red Velcro Stainless Steel Grommet

Figure 21. Steering Toggle, Reserve

PART # See Specifications Below
DESCRIPTION: Stow Bands Tube Stoes™
SPECIFICATIONS
1 - CPS-PB001-REG. Stowbands, Regular 2 X 3/8” 2 - CPS- PB001-TAN, Stowbands, Large, DBSL 2 X 5/8” 3 - CPS-TUBE STOES-TK, Tube Stoes™, Natural

Figure 22. Stow Bands and Tube Stoes™.

PART # CPS-AAD2C1M1535A-1500/35/A
DESCRIPTION: CYPRES-2
SPECIFICATIONS
1 Pin Military 1500 ft.35 M/S ABS

Figure 23. CYPRES AAD 1500 Ft.

PART # JM003-1
DESCRIPTION: MJ Main Closing Loop
SPECIFICATIONS
Type IIA White/Green Finished Loop Length 1 1/2” +/- 1/4” Measured from washer to the end of the loop. #8 Washer

Figure 24. Main Closing Loop

PART # PAAD-CYPLOOP
DESCRIPTION: MJ Reserve Closing Loop
SPECIFICATIONS
CYPRES Loop Material Finished Loop Length= 2 3/4” +/- 1/8” Measured from washer to the end of the loop.

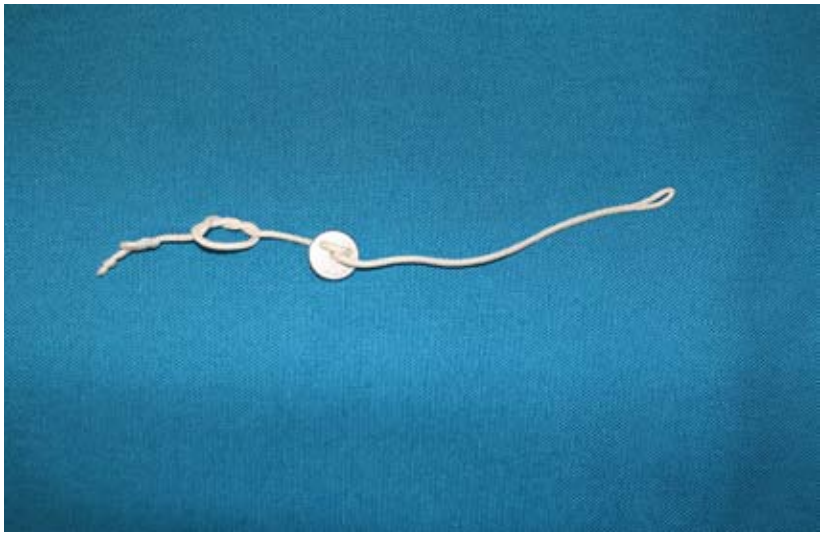
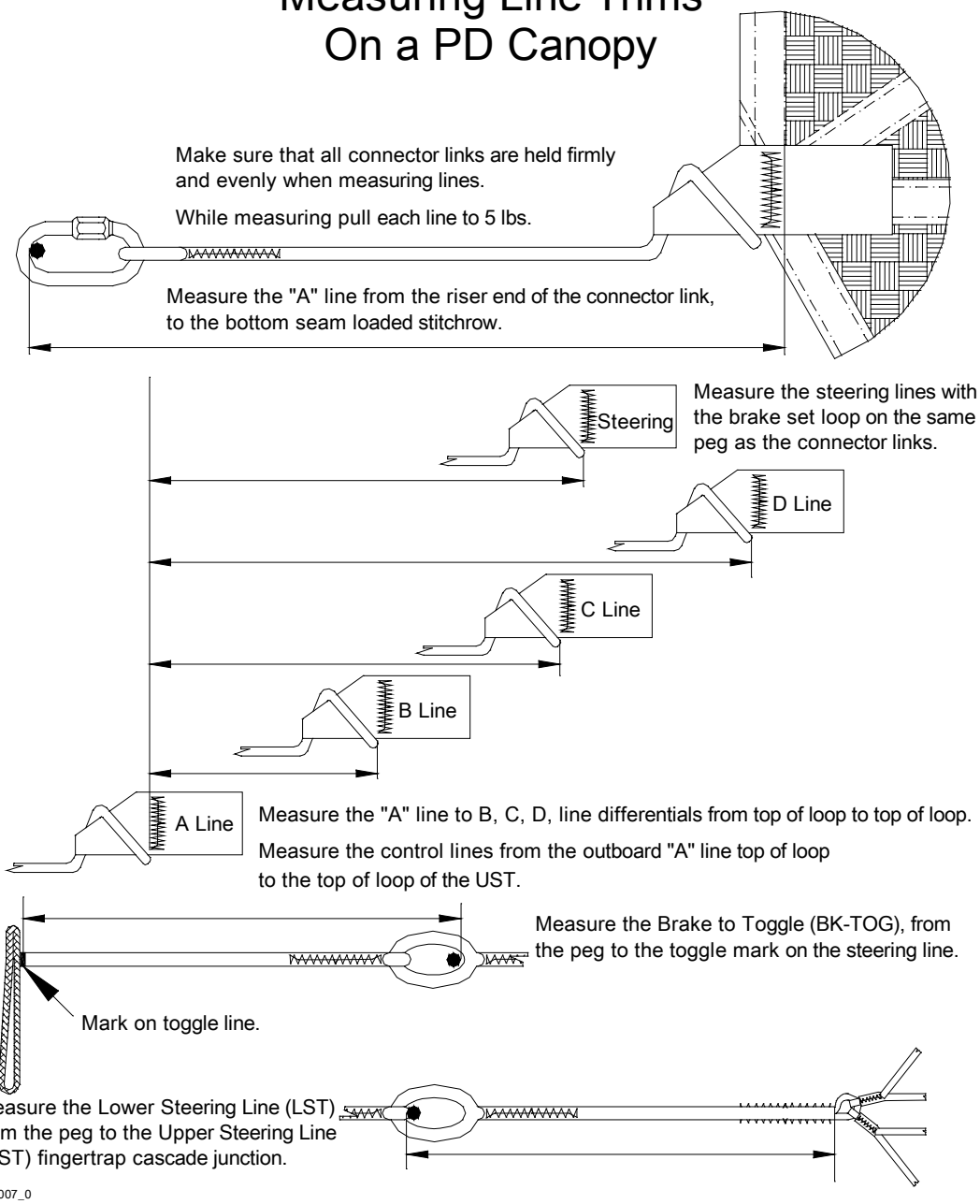


Figure 25. Reserve Closing Loop (CYPRES)

CHAPTER 11

MEASURING LINE TRIM

Measuring Line Trims On a PD Canopy



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