Owner's Manual for Packing, Donning, and Maintenance of the TPDS

MILITARY INSTRUCTOR SYSTEM (MIS)

2024

TACTICAL PARACHUTE DELIVERY SYSTEMS, Inc.
4035 Correia Drive
Zephyrhills, FL 33542 USA

Phone: +1.813.782.7482
Fax: +1.813.788.2799
E-mail: info@tpdsairborne.com
Website: www.tpdsairborne.com

Manual P/N: TPDS-MIS-700

SERIAL NUMBER_____

Tactical Parachute Delivery Systems, Inc.
4035 Correia Drive, Zephyrhills, FL 33542
Phone 813.782.7482 Fax 813.788.2799

STATEMENT OF CONFORMANCE

This letter is to inform that all components of the **Military Instructor System (MIS) Harness/Container System** by **TPDS, Inc.** are manufactured under Federal Aviation Administration (FAA) Technical Standard Order (TSO) requirements of the Federal Aviation Regulation 14, Code of Federal Regulations Part 21, Subpart O.

Furthermore; the Military Instructor System meets all Military Standards and Specifications.

Sincerely,

TACTICAL PARACHUTE DELIVERY SYSTEMS, INC. CORPORATE SEAL 2007 FLORIDA

Henri Pohjolainen
President
Tactical Parachute Delivery Systems, Inc.

WARNING!

PARACHUTING IS A HIGH RISK ACTIVITY WHICH CAN CAUSE OR RESULT IN SERIOUS INJURY OR DEATH.

The following information must be read and understood before any use of this equipment:

USER KNOWS THE RISKS OF PARACHUTING AND ACCEPTS THAT:

Parachuting can cause **death** and/or **serious injuries**. Many of these deaths and injuries can be attributed to equipment problems or malfunctions.

Parachuting equipment can fail, even if all possible precautions are taken by the user, the equipment manufacturers and everyone else involved with the jump.

Failure to activate the main or reserve parachute (or follow emergency procedures) at a safe altitude, and/or equipment failure can result in **severe injury or death**.

IT IS THE USER'S RESPONSIBILITY TO:

Receive proper training before any use of all parachuting equipment.
Be extremely careful and cautious.

Read and Understand all owner's and operating manuals for all parachuting equipment.

Thoroughly check all parachuting equipment and replace any defective or worn component prior to use.

Review emergency procedures before each use of this and all parachuting equipment.

Check equipment warnings –

WARNING!

DO NOT EXCEED EQUIPMENT LIMITATIONS!

Never violate the training and experience requirements for the specific equipment use.

DISCLAIMER – STATEMENT OF WARRANTY

Because of the unavoidable dangers involved in the use of this and all parachute equipment – **Tactical Parachute Delivery Systems, Inc**., (including but not limited to all owners, officers, staff, and employees), hereafter referred to as **"TPDS"** makes no warranties of any kind, expressed or implied. The liability of the seller is limited to replacing defective parts found upon examination by the manufacturer to be defective in material or workmanship within 7 days after purchase and found not to have been caused by an accident, improper use, alteration, tampering, abuse or lack of care on the part of the purchaser.

By using this equipment or allowing it to be used by others, owner/buyer waives any liability of **TPDS** for personal injuries or any other damages arising from such use. Any promise or representations inconsistent with or in addition to the **Statement of Warranty** are not authorized by **TPDS** and shall not be binding.

!WARNING!

Parachuting is a hazardous activity that can result in serious injury or death. Failure to follow all warnings, instructions, and required procedures may result in serious injury or **DEATH!** Parachutes sometimes malfunction even when they are properly designed, built, assembled, packed, maintained and used.

Table of Contents

Chapter 6 Reserve Parachute Packing

Chapter 7 Main Parachute Packing

Chapter 8 Donning the *MIS* Harness/Container

Chapter 9 Operations of the *MIS* Harness/Container

Chapter 10 Parts List

Chapter 11 Spare Parts

Chapter 12 Care and Maintenance

Chapter 13 Repairs

Chapter 14 Notes

Chapter 1

Product Information

1.1 Tactical Parachute Delivery Systems, Inc. (TPDS)

TPDS is committed to providing you with the latest, most versatile and dependable skydiving systems available on the market today. **TPDS** can provide you with a system designed to suit or exceed the expectations of your demanding and changing environment with each assembly built to support a range of parachute combinations and options. If your operation requires a custom solution, please feel free to contact us.

This manual should provide you with the necessary information to help select and operate your system to the maximum of its abilities.

1.2 Harness/Container Information

While each system is available in a combination of sizes and options there are several standard features of the **Military Instructor System (MIS)** which includes:

- Main Pin Cover – Having an upward facing pin cover creates the ultimate in pin protection from unintended knocks or bumps causing premature pin extraction.
- Bridle and Riser Cover Protection – Zero exposed riser or main bridle ensures proper function in any manner of orientation or use.
- Reserve Static Line **(RSL)** – A lanyard connecting the main riser and reserve ripcord which allows minimum altitude loss on the reserve opening during the event of a cutaway.
- Single Pin Reserve Closing.
- Partially Exposed Reserve Pilot-Chute.
- Type VII Mil-SPEC Harness and Reserve Risers.
- Foam Padded Yoke, Back Pad and Leg Pads.
- Automatic Activation Device Set-up - ready for installation.
- Main Deployment – BOC Throw-out or Pull-out.
- Cutaway Location – Inboard.
- Reserve Ripcord Location- Inboard.
- **"Reserve Boost"** Main Assisted Reserve Deployment **(M.A.R.D.)** System.

The **TPDS MIS** Harness/ Container is tested and manufactured under the Technical Standard Order **(TSO) C23d** of the Federal Aviation Administration **(FAA)**.

1.3 Parachute Information

Since the mid-1970's, the company that would become **TPDS** has designed, built, tested and sold multiple types of parachutes to thousands of skydivers, glider, ultra light and fixed wing pilots. These parachutes include **Mains**, popular with many military and student markets as a predictable and safe platform, and **Reserves,** manufactured under the Technical Standard Order **(TSO) C23d** of the Federal Aviation Administration **(FAA)**.

TPDS pioneered the idea of wing loading, appropriately matching the size of the parachute to the weight of the jumper, thereby allowing multiple jumpers of different weights and sizes to jump the same parachute.

This makes it easier to translate how to fly a parachute effectively and safely by having not just a parachute that compares in name but in flying characteristics, handling and landing performance.

Chapter 2

Technical Information

2.1 Container Harness Specs:

- Harness is Tested and Approved under **FAA TSO C23d**.
- Main Lift Webbing, Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Leg Straps and Laterals, Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Chest Strap, Doubled Type 8 Mil-W-4088 Tensile Strength, 4000 lbs.

  or
- Chest Strap, Doubled Type 17 Mil-W-4088 Tensile Strength, 2500 lbs.
- Reserve Risers, Type 7 Mil-W-4088 Tensile Strength, 6000 lbs.
- Main Harness Riser Ring, No.1 or No.8 Proof Load, 2500 lbs.
- Optional Adjustable Hip Ring, 555-2 Ring.
- Leg Strap Hardware, PS 22040-1 or Flip-Flop Stainless Steel Adjuster
  Tensile Strength, 2500 lbs.
- Chest Strap Hardware, PS 70101-1 or 1" Quick Fit Adapter
- Type 17 Mini Risers, Mil-W-4088, Tensile Strength, 2500 lbs.
- Large Ring Main Risers, Type 8 Mil-W-4088, Tensile Strength, 4000 lbs.

2.2 Container Assembly Specs:

- Reserve Container and all pertaining parts are Tested and Approved under **FAA TSO C23d**.
- Automatic Activation Device (AAD) set-up with the Control Unit in the Reserve Top Cover Flap or Back Pad.
- 1000 Denier Cordura lined w/ 1/4" Para-pack nylon backed black foam.
- Inboard Reserve and Cutaway Handles.
- 0# Stainless Steel Grommets.
- All Stainless Steel Housings
- .040 Nylon Stiffeners
- .062 Aluminum Reserve Floor Plate
- 500 Denier Cordura Main Deployment Bag.
- Velcro-less Main Toggles.
- Stainless Steel Reserve Ripcord Handle.
- Left Riser Reserve Static Line (RSL).

Chapter 3

Inspection Processes

3.1 *TPDS* Military Instructor System (MIS) Harness/Container.

- Main Lift Web
  - Sizing Identification is Symmetrical (same color).
  - Fold-overs are present and sewn.
  - Harness Stitching: 3 and 4 point stitching is intact, no broken stitches.
  - Selvage edge is intact.
  - Webbing is free of wear and abrasions.
  - Velcro for Main Release and Reserve Ripcord is correct and in place.
  - Main Release and Ripcord Housings are in place and secured.
  - Chest Strap fold-over is present and sewn.
  - TSO Label present and info correct.

- Laterals
  - Symmetrical (if adjustable)
  - Harness stitching is present and correct.

- Leg Straps/ Leg Pads
  - Fold-overs are present and sewn.
  - Leg pads have reinforcing bar tacks.
  - Harness stitching is present and correct.

- Reserve Container
  - Grommets secure without burrs or sharp edges.
  - Binding tape is secure and sewn correctly.
  - AAD pocket and window sewn in place for AAD set-up.
  - Floor Plate sewn in place.
  - RSL Ring in place.

- Reserve Risers
  - Symmetrical
  - Harness stitching is present and correct.
  - Toggles and Velcro in place.
  - Guide rings present, free of wear, no abrasions.
  - Steering Line Locking Loop is present.
  - Guide Ring is present and in good shape.

- Main Container
  - Binding Tape, present and no stitches missing
  - Closing Loop Retainer present.
  - Grommets, free of burrs, sharp edges.
  - Housings are secure and no sharp edges.

- Reserve Free-Bag and Pilot-Chute
  - Grommets secure without burrs or sharp edges.
  - Bridle bar tacked.
  - Spring crimped.
  - Cap and snaps present and secure, TSO Label present.
  - Free bag size matches container.
  - Velcro and pocket secure, TSO Label present.

- Reserve Ripcord
  - Handle is correct shape and smooth.
  - No broken strands of cable.
  - Straight pin.
  - Ball & Shank in place.

- Main Risers
  - Ring shape
  - No Corrosion or wear
  - Harness Stitching present and correct.
  - Bartacks, present.
  - Velcro, Hook secured.
  - Grommets secure w/o burrs or sharp edges.
  - T-IIA Loop present.
  - Steering Line Locking Loop present.
  - Snap Shackle RSL present and in good working order.

- Other Hardware
  - No Corrosion or wear.
  - In shape

- Reserve Static-Line (RSL)
  - Bartacks are present.
  - No Corrosion or wear.
  - Mini Ring present & Lanyard intact.

- Main Deployment Bag and Deployment Option
  - Deployment Bag is correct size. Grommets have no burrs or sharp edges.
  - Deployment Handles are present and in good shape.
  - Pilot Chute is present and correct.
  - Static Line (if used) is present and all stitching is correct and present.

3.2 Reserve Parachute

- Links should be:
  - Clean of corrosion, debris and without cracks or visible damage.
  - No sharp or raw edges.
  - Free moving barrel, which should be able to tighten 2 ¾ turns from first engagement of the barrel without resistance.

- Rapide Link Covers
  - Covers should be firmly seated on top of links.
  - Covers tacked in place to prevent slippage.

- Lines
  - No excessive fraying or damage to lines.
  - Continuity is correct.
  - Bartacks sewn correctly on each line.
  - Each line is without twists and correctly installed from link to parachute, passing through correct slider grommet.

- Slider
  - Grommets seated correctly without burrs or damage.
  - Slider is without holes, burns or other damage.

- Bottom Skin
  - Inspect each cell for any tears, fraying or other damage.
  - Seams and attachment points stitched correctly and evenly.

- Ribs
  - Cross ports without damage.
  - Stitching correct on seams.
  - Reinforcing tape present on loaded ribs.
  - No other damage on entire rib section.

- Top Skin
  - Seams are sewn correctly.
  - Leading edge bar tacks are in place.
  - Control line attachment points are reinforced.

- Stabilizers
  - Slider stops are present and secured.
  - Lines bar tacked to lower edge of stabilizer.
  - Slack is present in stabilizer when line is taut.

3.3 Main Parachute

- Links should be:
  - Clean of corrosion, debris and without cracks or visible damage.
  - No sharp or raw edges.
  - Free moving barrel, which should be able to tighten 2 ¾ turns from first engagement of the barrel without resistance.

- Rapide Link Covers
  - Covers should be firmly seated on top of links.
  - Covers tacked in place to prevent slippage.

- Lines
  - No excessive fraying or damage to lines.
  - Continuity is correct.
  - Bar tacks sewn correctly on each line.
  - Each line is without twists and correctly installed from link to parachute, passing through correct slider grommet.

- Slider
  - Slider is without holes, burns or other damage.
  - Reinforcement Tape in place and secure.
  - Grommets seated correctly without burrs or damage.

- Bottom Skin
  - Inspect each cell for any tears, fraying or other damage.
  - Seams and attachment points stitched correctly and evenly.

- Ribs
  - Cross ports without damage.
  - Stitching correct on seams.
  - Reinforcing tape present on loaded ribs.
  - No other damage on entire rib section.

- Top Skin
  - Seams are sewn correctly.
  - Leading edge bar tacks are in place.
  - Control line attachment points are reinforced.

- Stabilizers
  - Slider stops are present and secured.
  - Lines bar tacked to lower edge of stabilizer.
  - Slack is present in stabilizer when line is taut.

Chapter 4

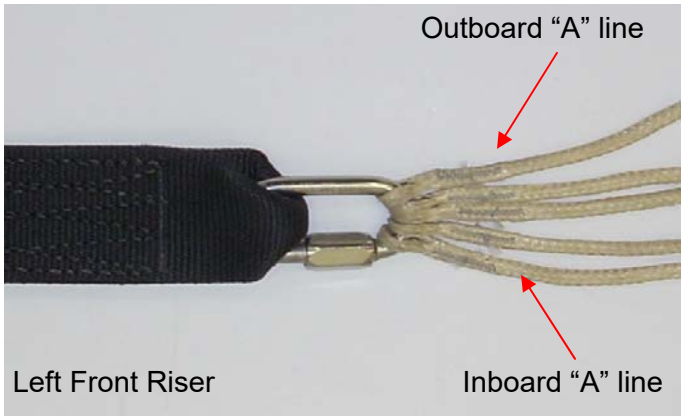
Assembly Instructions

4.1 Assembly of Reserve Canopy.

Assembly of Reserve Canopy using Rapide Links.

After inspecting the Parachute and the ***MIS*** Harness/Container System, hang or lay the parachute out on the ground with the nose section on the ground and the ***MIS*** Harness/ Container System oriented face down.

When using **Rapide Links**, check to see that bumpers have been installed. See pg.5 for instructions on bumper installation.



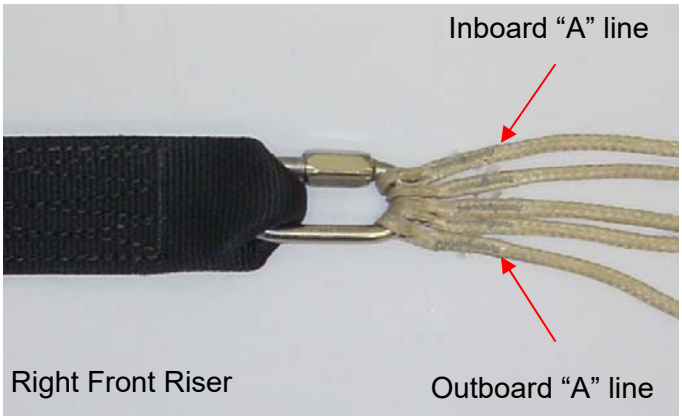
Begin the assembly process by ensuring that all lines are connected to the links correctly with the Outboard “A”-lines on the outside of the link and the Center “A”-line towards the inside of the link, the longer side of the link towards the riser.

Once the continuity of the lines is set, ensure the slider is correctly oriented; the slider should be longer span-wise than chord-wise, with the reinforcing tape of the slider on the side facing the reserve parachute.

Fold the ends of the risers to narrow the top section. Place the link of the Right Front line-set onto the end of the Right Front Riser. **Be careful not to twist the line sets.**

Tighten the barrel finger tight and then an additional ¼ turn with a small wrench until the link is tight. Pull the Bumper down and secure as per the instructions on page 5 of this chapter.

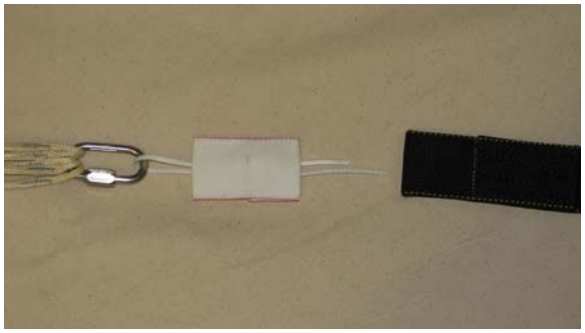
Repeat this step for the Left Front Riser.



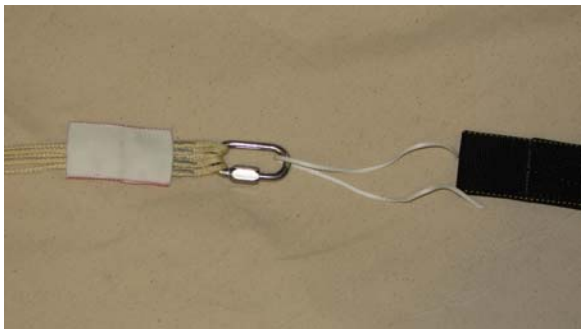
Repeat these steps for the two Rear Risers, ensuring that the Outboard “C” line is on the link first.

Installing the Slider Bumpers.

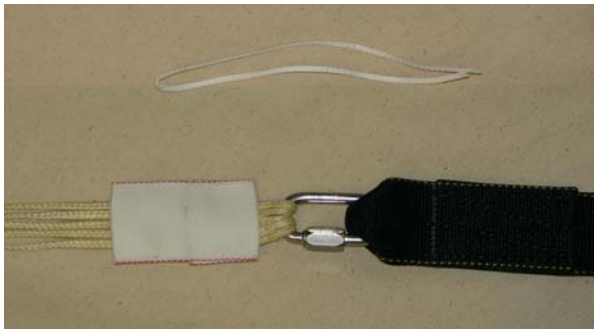
Follow these Instructions when using Rapide links for the Reserve Parachute.



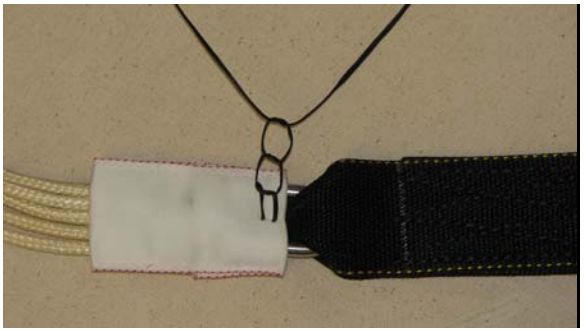
With the line group correctly assembled onto the link, run a short piece of line through the closed link and the center of the bumper.



Pull the link through the bumper without twisting or turning the link.



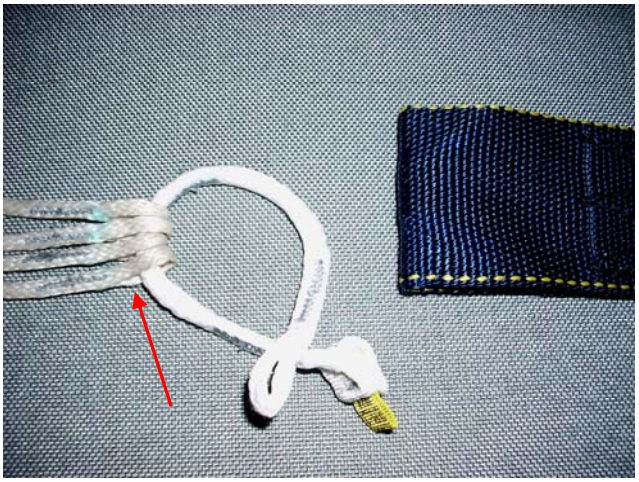
Fold the top of the riser and install the link. Tighten the barrel of the link. Ensure continuity of the line group.



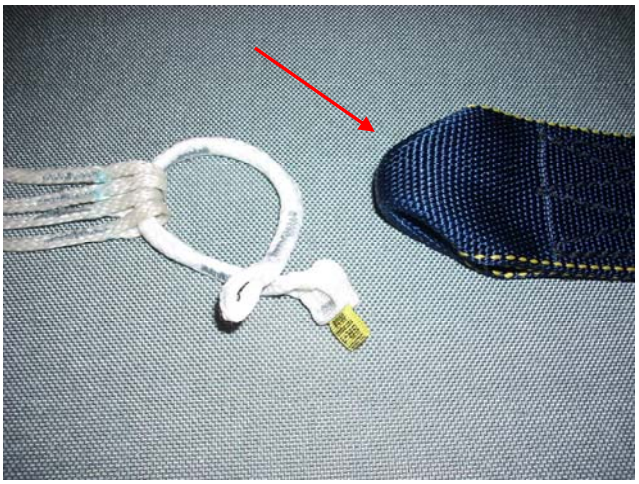
Cinch the bumper over the link and tack into place. The tacking should go through both sides of the bumper and include a surgeon's knot and locking knot. Once tight, cut the loose ends of the tacking thread.

Assembly of Reserve Canopy using Soft Links.

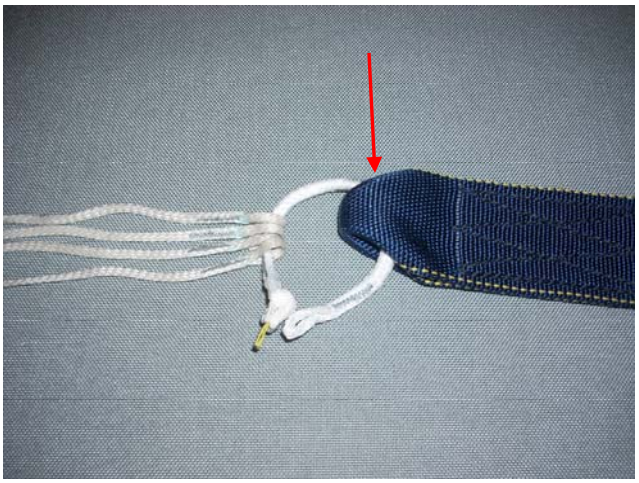
Always Read and Follow the Instructions provided by the Soft Link manufacturer.



While keeping the continuity of the lines in order pass the Soft Link through each line.



Fold the end of the Reserve Riser as shown.

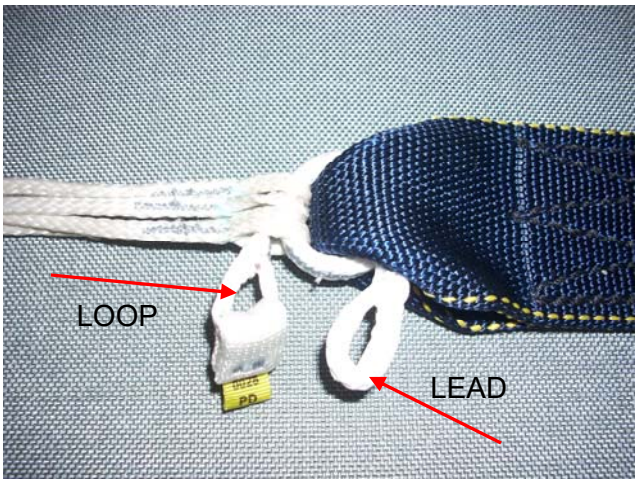


Pass the Soft Link through the Reserve Riser.

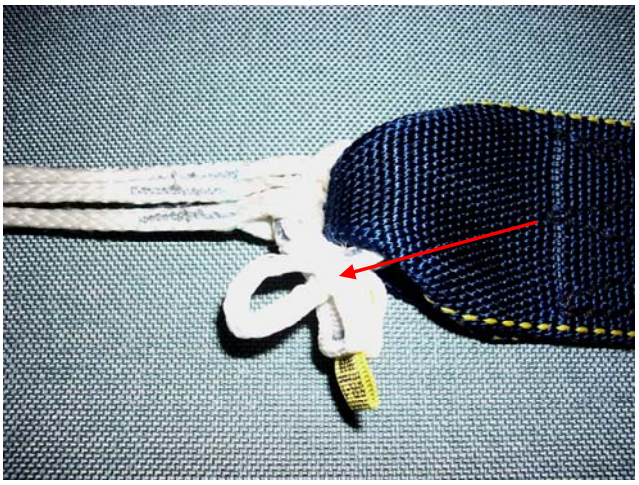
Pass the lead of the Soft Link through the lines again.

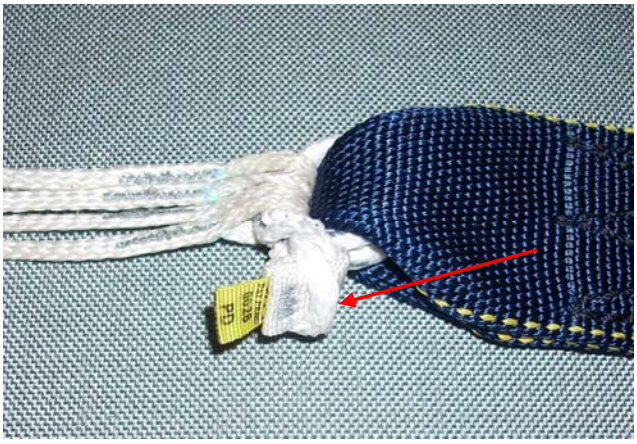
Depending on the Soft Link Manufacturer you may have to pass it through the Reserve Riser and the lines once or twice again.

Follow the manufacturer's instructions.

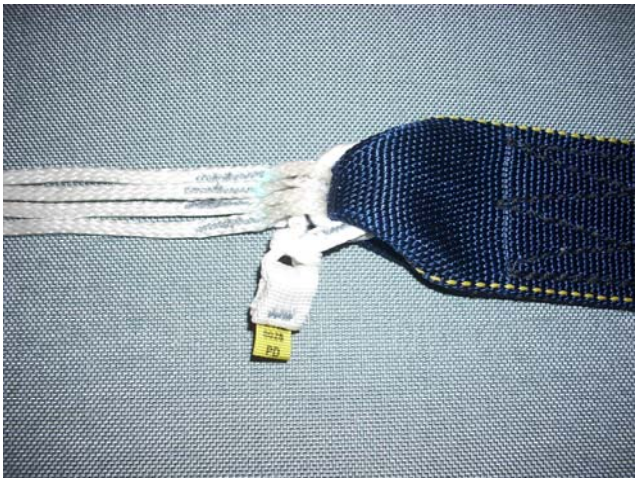


After passing the Soft Link through the lines and the Reserve Riser the proper number of times pass the Soft Link lead through the loop of the other end of the Soft Link.

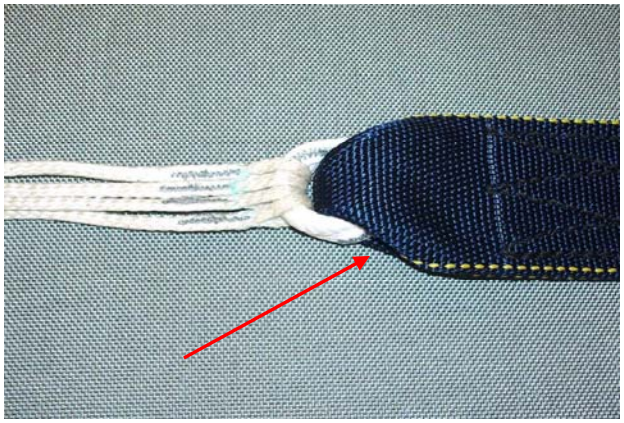




Pass the Loop end back through the Lead then tighten the knot formed



Should look like this.

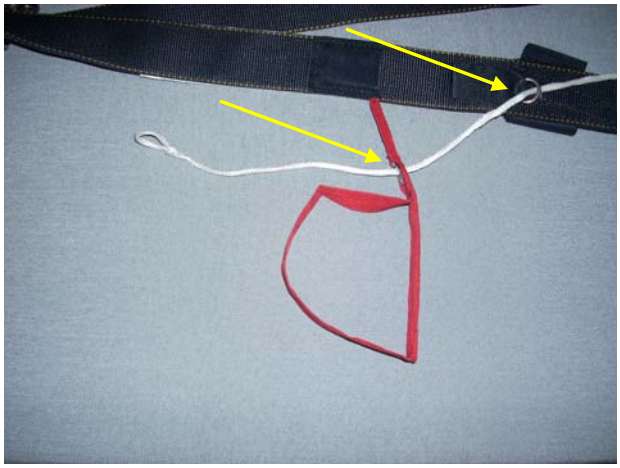


Tuck the Loop and Lead ends under the Reserve Riser.

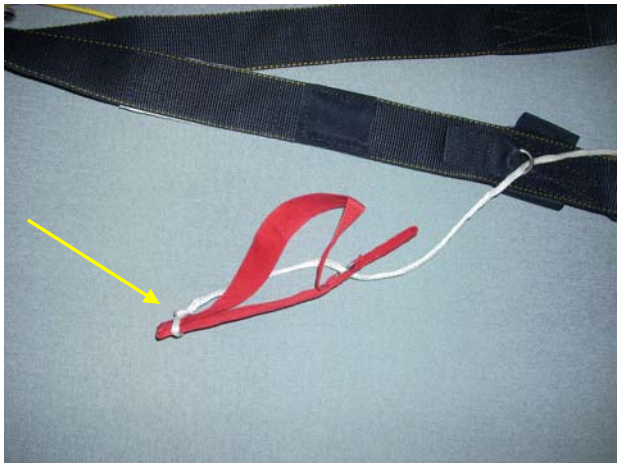
A hand-tack may be used to secure it under the Reserve Riser.

4.2 Installing the Reserve Steering Toggles onto the Control Lines.

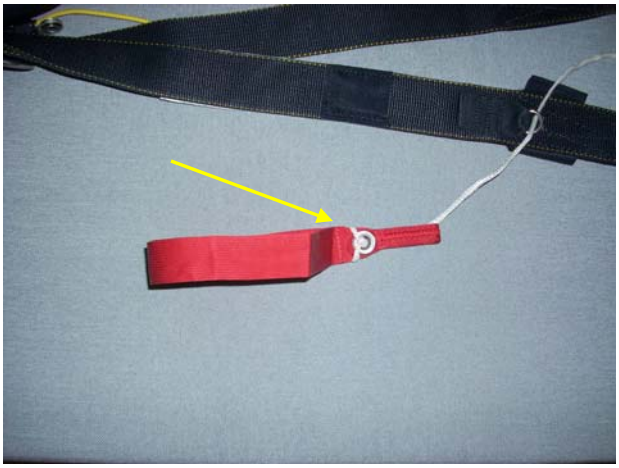
Once the Reserve Parachute is assembled onto the Reserve Risers, feed the Control Line through the appropriate slider grommet and guide ring on the reserve riser.

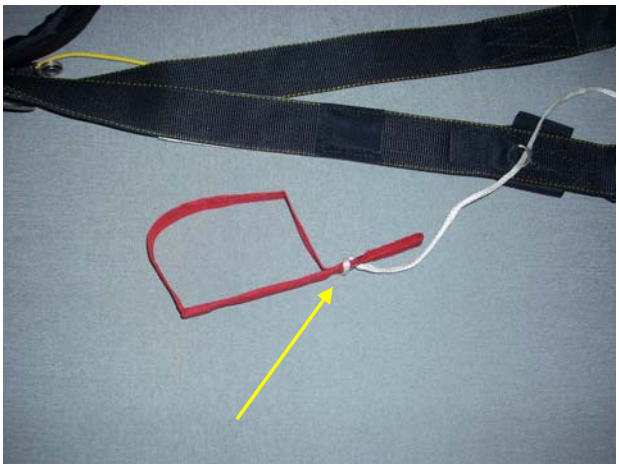


Pass the Control Line through the rear of the toggle.



Pass the loop of the Control Line over the bottom of the toggle.





Tighten the loop up to the grommet.

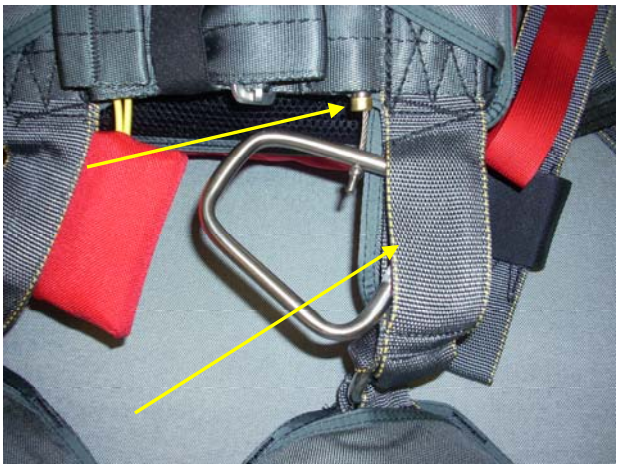
Repeat for the other toggle.

The parachute brakes are now ready to be stowed.

4.3 Assemble the Reserve Static Line. (RSL) Optional

Mate the Pile Velcro of the RSL with the Hook Velcro under the RSL channel on the Left Side of the Yoke. Start at the lower end of the channel and proceed to the top.

Close cover when Velcro has been mated and RSL has been installed.



Install the cable of the Reserve Ripcord Handle into the Reserve Ripcord Housing on the left side Main Lift Webbing.

Install the Reserve Ripcord Handle into the Reserve Ripcord Pocket.

Pass the Ripcord Cable through the guide ring of the RSL.

If using the **"Reserve Boost"** pass the Ripcord Cable through the guide ring in the middle of the RSL.

Pass the Ripcord Cable through the guide ring on the Container.

Installation is complete.

4.4 Installing the Reserve Closing Loop.

Pictured above is the Reserve Container with the new dual grommet bottom plate.

This configuration allows the closing loop to be inserted from the top of the first grommet then up from the bottom through the second grommet.

Begin by lifting the elastic covering of the top grommet.

Feed the closing loop down through the top grommet.

Pass the closing loop up through the bottom grommet as shown.

Tuck the excess closing loop under the elastic cover.

Installation of the Reserve Container Closing Loop is complete.

4.5 Installing the Automatic Activation Device (AAD)

Read the **AAD Owner's Manual** and become familiar with the different components of the unit and details of its use.

Insert the **Processing Unit** into the spandex pocket located on the bottom wall of the reserve container. (fig. 1)

Route the **Release Unit** under the reserve floor plate and through the slot and elastic housing. Stow the excess cable in the spandex pouch. (fig.2)

Route the **Control Unit** through the channel next to the floor plate. Once threaded through this channel, insert the Control Unit into the Back Pad pocket or the Reserve Cover Flap. (fig. 3)

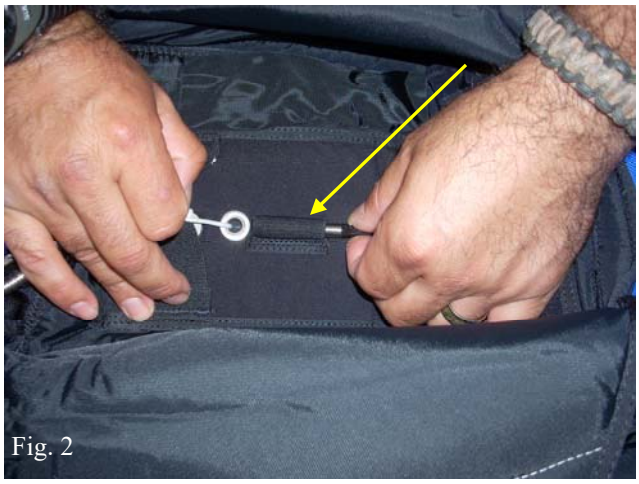
Once secured in the spandex pocket, the display should be clearly visible through the clear plastic window of the back pad.

Stow the excess cable in the channel or spandex pocket.

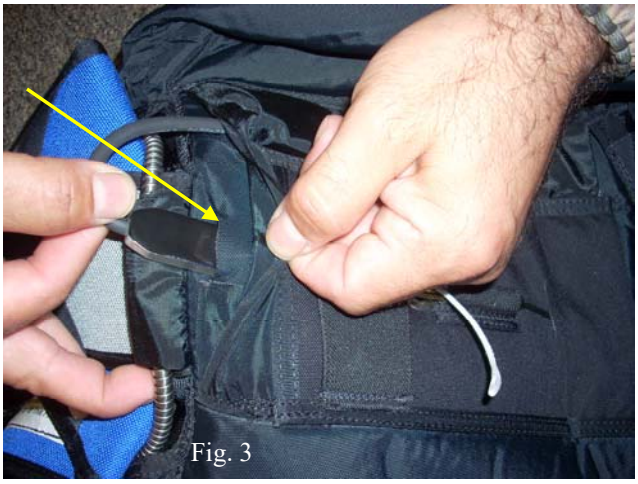
Close the Velcro pocket on the spandex pouch.

Installation is complete.

Processing Unit



Release Unit



Control Unit

Installation complete.

Chapter 5

Tools

Use this page to record which tools are used during the packing of your TPDS, Inc. **Military Instructor System *(MIS)*** Harness/Container. Mark which tools, and how many were used for packing and document all tools after work is complete.

5.1 Packing Tool Check-List

Tool used:	**Pre-packing**	**Post-packing**
Packing paddle	____ used	____ used
Shot bag	____ used	____ used
.22 Gun cleaning rod	____ used	____ used
Pull up cord	____ used	____ used
Leverage device	____ used	____ used
Temporary pin	____ used	____ used
Mechanical Tension Device	____ used	____ used
Closing plate	____ used	____ used
Additional tools:		
_____	____ used	____ used
_____	____ used	____ used
_____	____ used	____ used
_____	____ used	____ used
_____	____ used	____ used
_____	____ used	____ used
_____	____ used	____ used
_____	____ used	____ used

5.2 Recommended Packing Tools

SHOT BAG

MECHANICAL TENSION DEVICE

PACKING PADDLE

TENSION PLATE

TEMPORARY PIN

.22 GUN CLEANING ROD

SCREW DRIVER

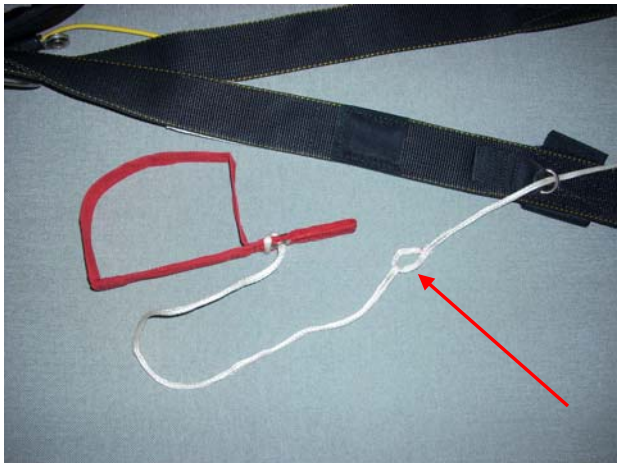
SCISSORS

PULL-UP CORD

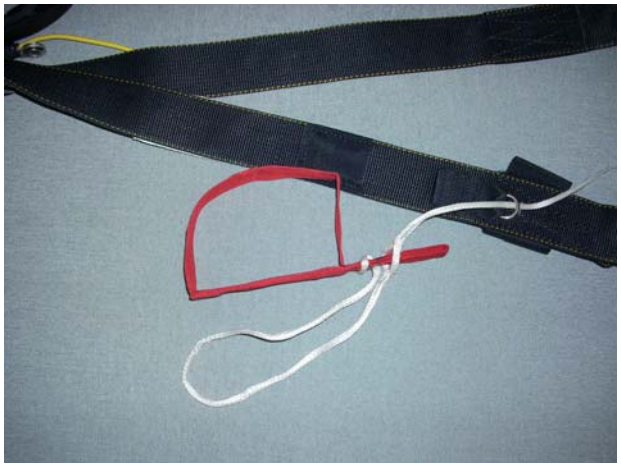
Chapter 6

Reserve Packing Instructions

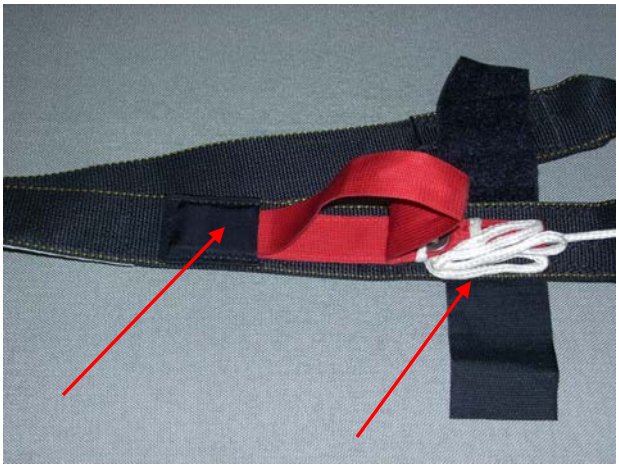
6.1 Setting the Reserve Canopy Brakes.



After assembling the toggles correctly, pull the control line so that the “cat’s eye” of the control line is just below the guide ring located on the riser.



Insert the toggle into the “cat’s eye”.



Tuck the bottom of the toggle into the keeper.

“S”-fold the excess control line next to the toggle tip.

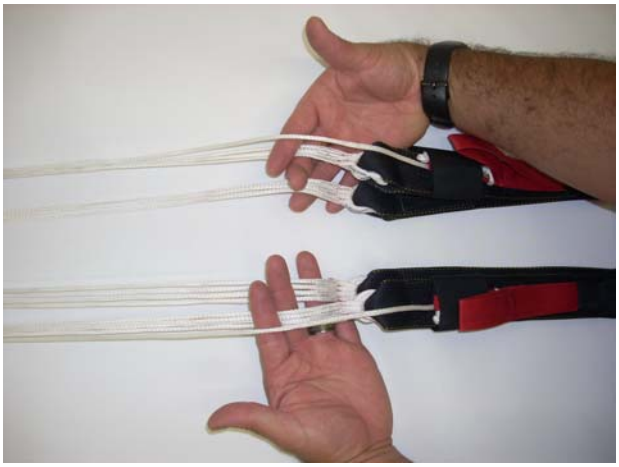
Wrap and secure the Velcro around the toggle tip.

Repeat steps for the other brake.

6.2 PRO-Pack Method of the Reserve Parachute.

BEFORE PROCEEDING: NOTE THE MAXIMUM OPERATING WEIGHT OF THE RESERVE CANOPY AND MARK ON THE DATA CARD!

Follow the instructions for stowing the Reserve Brake Toggles on page 1.



With no twists in the risers, place the left front riser line group between the middle and ring finger of the **LEFT** hand.

Place the left rear riser group between the middle and fore finger of the same hand.

Place the control line between the fore finger and the thumb.

Repeat for the opposite hand and line groups.

The slider should be between your body and the parachute.

Walk towards the parachute between the line groups, moving the slider up the lines with you and separate the line groups in your hands.

Upon reaching the parachute, **check that the control lines are not twisted around any other line groups.**

If so, restart this step or perform another continuity check.

Step outside of the lines, group the lines together in one hand and place this group over your shoulder.

For these instructions, the parachute is over the left shoulder. Switch orientation if using the right shoulder.

With the parachute in the correct orientation (nose towards the container, tail away from the container) start counting the leading edge cells out.

Start by slightly turning the parachute over your shoulder, resting the right outside cell against your body.

Count each cell and grasp this group.

Push the nose through the center of the parachute and pull it briskly back out.

Place the tip of the leading edge between your knees and hold the material in place.

Starting with the A-line group, count the 3 right cells between the A- and B- line attachment points and flake the material away from the center of the parachute.

Count the 3 right cells between the B- and C- line attachment points and flake the material away from the center of the parachute.

Count and flake the 3 right cells between the C- and D- lines.

Count and flake the 3 right cells between the D- lines and the Control Lines / tail.

Repeat this process on the other side of the canopy.

Separate the nose, one half on the side, center cell in the middle and second half on the other side.

Raise the canopy so that it is parallel to the floor and gently lay it on the floor.

Pull the slider down and away from the slider stops. Flake the nose cells on one side of the canopy.

On the outside folds, smooth out the material between the A-B lines.

Fold the A-B panels in half to narrow the pack job for the free-bag.

Do **Not** Include the **Nose** in these folds. Repeat for B-C, C-D panels.

Flake the tail of the parachute on top of itself.

After one side is flaked and smoothed out, repeat the other side.

Pull tail down carefully to just above slider and cocoon the parachute by wrapping the tail around the flaked cells.

DO **NOT** include the nose in this cocoon. The cocoon should roughly be the same width as the free bag.

Carefully squeeze out any trapped air.

“S”-fold the three (3) nose cells under the corresponding side of the parachute.

“S”-fold lower portion of canopy up to the trailing edge of the parachute and place under the trailing edge.

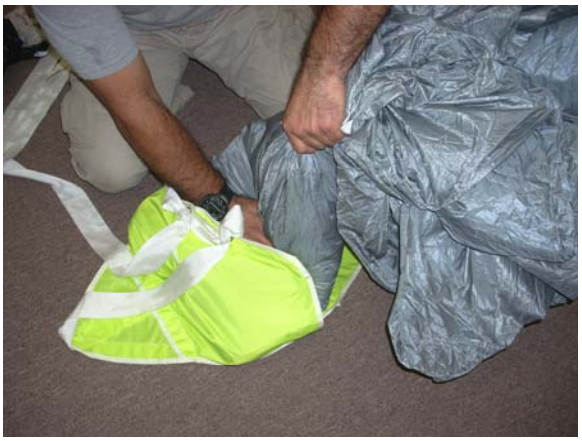
Place the Free-bag under the canopy.

“S” -fold the canopy on top of itself.

Fold the canopy back over itself.

Tuck the canopy into the corners of the Free-bag.

Use the Free-bag bridle to hold the safety stow in place.



"S"-fold the canopy over onto itself once again.

Smooth out and make sure that the canopy is no wider than the Free-bag.

Follow the center seam to the end.

Roll the center material to the depth of the Free-bag. Place your knee on to hold in place.

Straighten and smooth out the “ear” formed after following the center seam.

Grasp “ear” and “S”-fold it on top of itself.

Place into the Free-bag.

Repeat the other side “ear”.

Fold the Free-bag over the canopy in order to close with the safety stow.

Use two (2) line bights @ 1 1/2" -2" to secure the Free-bag closed.

Begin to stow the rest of the reserve parachute lines into the pocket on the Free-bag.

Alternate back and forth until lines are into the pocket and Reserve Risers are to the Free-bag.

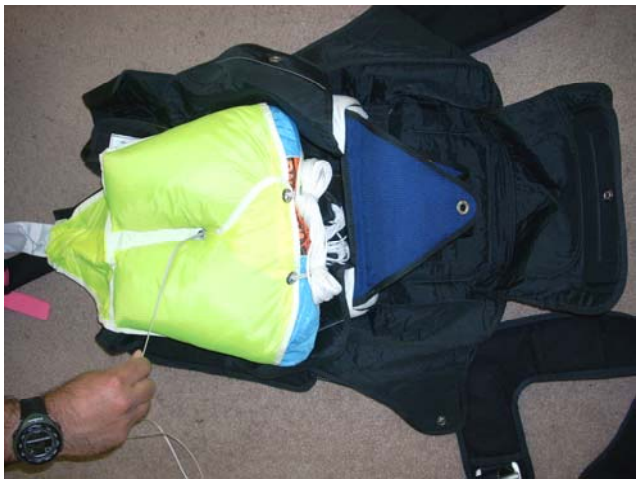
Open up the Reserve Container. Check to be sure that the Reserve Static Line is installed correctly. If using a M.A.R.D. ***"Reserve Boost"*** be sure that you are using a M.A.R.D. ***"Reserve Boost"*** RSL and that the Reserve Ripcord cable passes through the middle ring of the RSL.

Carefully lift the Free-bag.

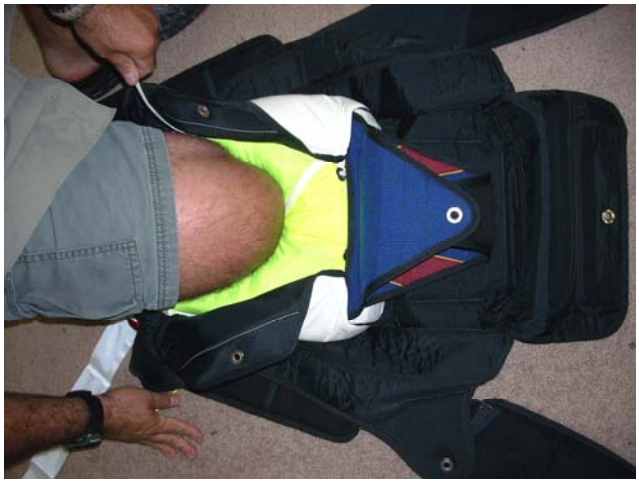
Check to be sure that the AAD cutter is installed correctly and that the closing loop goes through the cutter.

Flip the Free-bag over to the bottom of the Reserve Container.

Do **NOT** twist the lines.



Thread a pull-up cord through the closing loop and the center grommet of the Free-bag.



Use a knee to form a “nest” for the Reserve Pilot chute Spring.

Tuck the anti-twist flap under the Free-bag.

Bring the Bridle towards the bottom of the Reserve Container.

"S"-fold the Bridle into 6"-8" folds (depends on the width of the Free-bag) leaving about 3' of Bridle remaining.

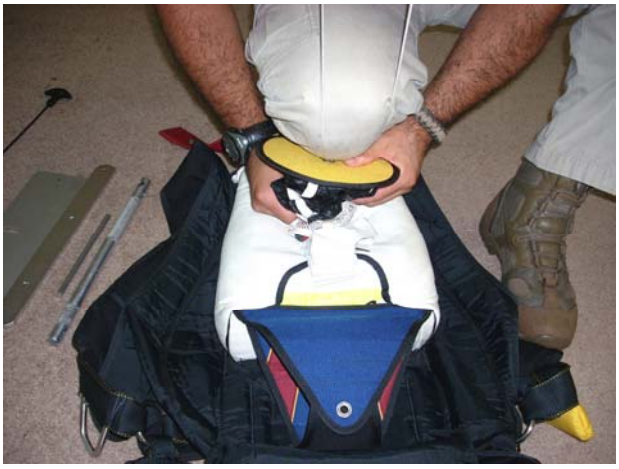
Tuck the folded Bridle under the Side Flaps.

Do **NOT** tuck more than 1" on each side.

Close the Left Side Flap then the Right Side Flap.
Secure with a temporary pin.

"S"-fold the remaining Bridle as shown.

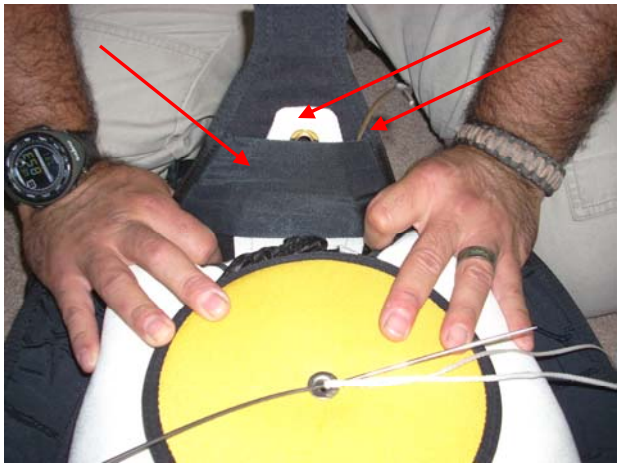
Pull the pull-up cord through the pilot chute.



While compressing the Pilot chute be sure to keep all of the pilot-chute material folded into the spring and secure with a temporary pin.

Check that the RSL is properly installed.

The Ripcord cable must be through the ring of the RSL and the guide ring of the ***Wings*** and above the cutaway housing.



Be sure that the **Top Closing Flap** and the **Ripcord Pin** are under the tape of the **Top Cover Flap** as shown.

Close the Top Flap and secure with a temporary pin.

Close the Bottom Flap and secure with the Ripcord Pin.

Tuck the Top Reserve Cover Flap into the Bottom Reserve Flap pocket.

Follow all applicable Rules for Documenting and Sealing the **Reserve Container**.

COUNT THE TOOLS USED DURING THE PACKING.

The ***MIS*** is ready for the Main Parachute to be packed.

6.3 Closing with the M.A.R.D. *"Reserve Boost"* RSL.

Bring the Bridle towards the bottom of the Reserve Container.

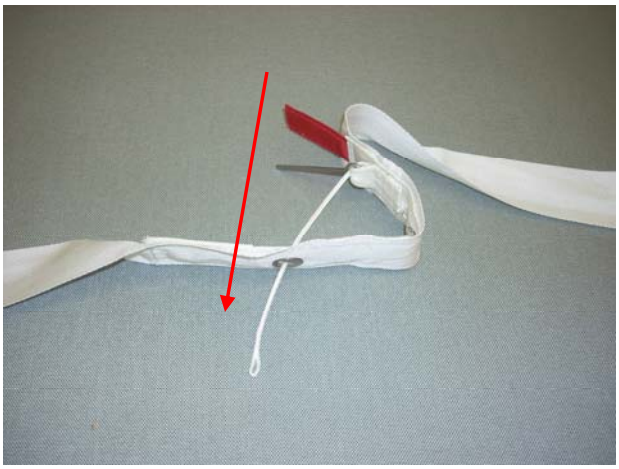
"S"-fold the Bridle into 6"-8" folds (depends on the width of the Free-bag) to the **"Reserve Boost"** modification.

Fold the Bridle back towards the top of the container.

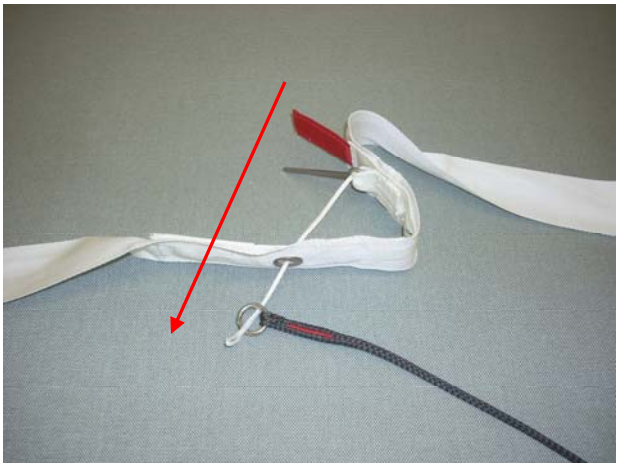
Tuck the folded Bridle under the Side Flaps.

Do **NOT** tuck more than 1" on each side.

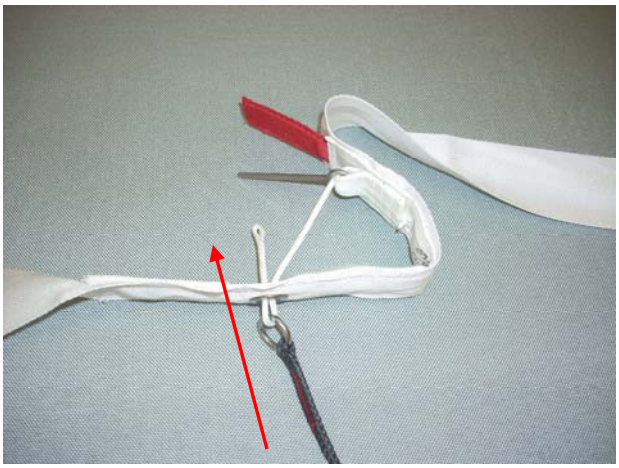
Keep the Bridle to the left side of the center of the Free-bag.



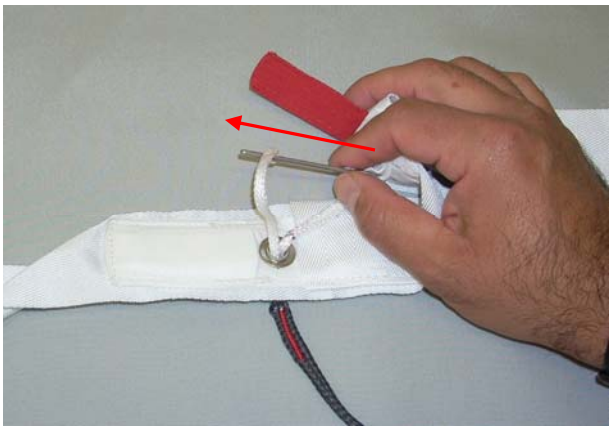
"Arm" the M.A.R.D. ***"Reserve Boost"*** at this time by passing the Spectra Line Loop down through the #0 grommet.



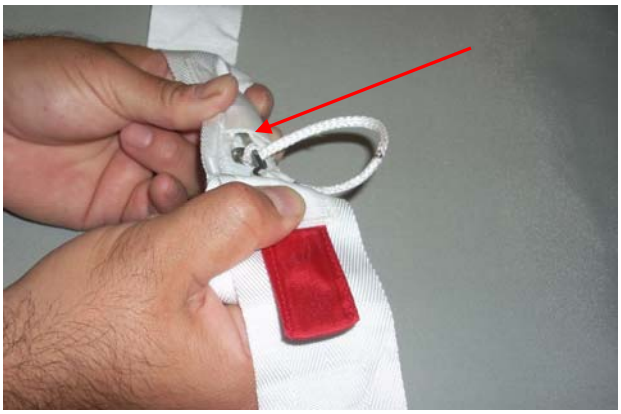
Pass the Spectra Line through the mini ring of the M.A.R.D. ***"Reserve Boost"*** RSL.

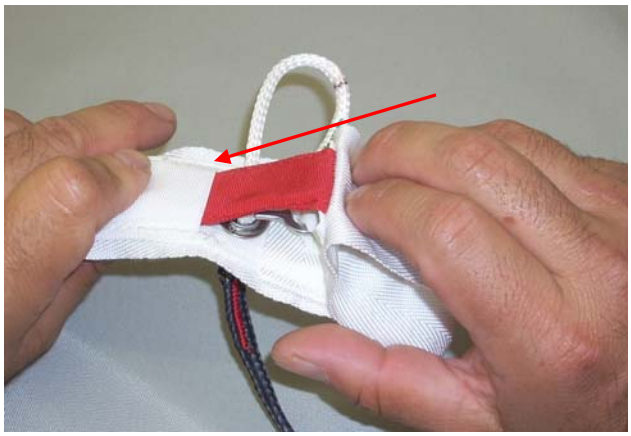


Loop the Spectra Line back up through the #0 grommet of the Bridle.

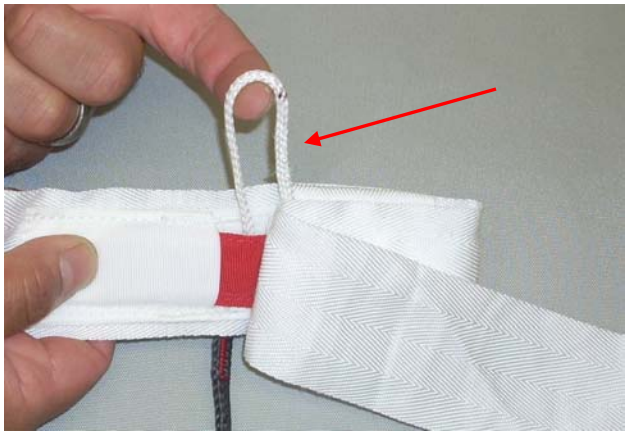


Slide the Long Pin through the loop then stow into the channel under the tuck tab channel. Be certain that it is in its own channel.

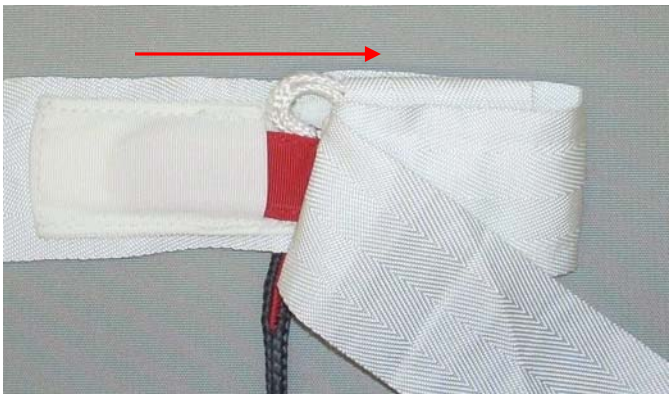




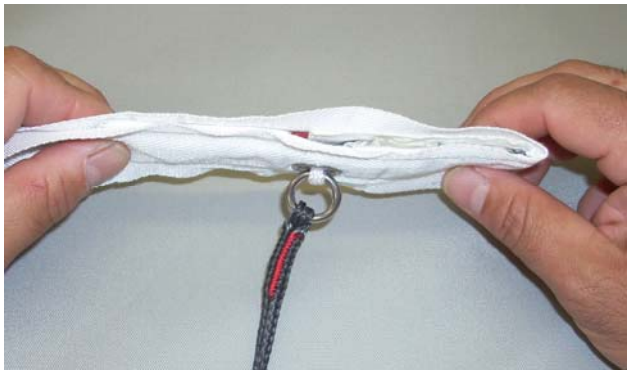
Tuck the stiffened T-III Tab into the tuck channel on top of the Long Pin Channel.



Take up the slack of the Spectra Line Loop.



Stow the Spectra Line Loop into the looped polyester sleeve opposite the long pin channel.



Should look like this.

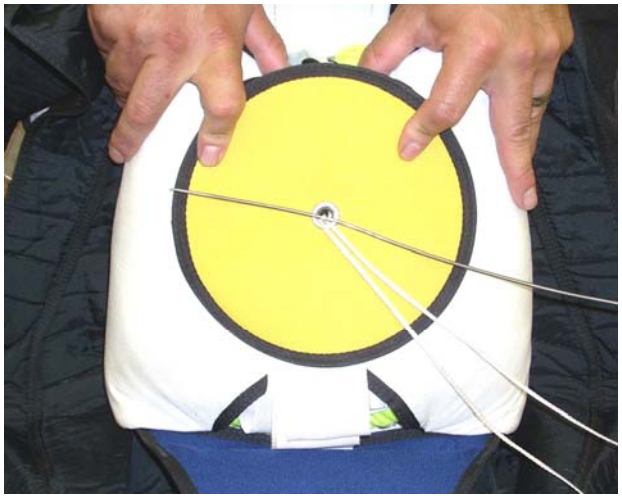
Tuck any excess RSL into the channel pocket on the top left side of the free-bag.

The M.A.R.D. *"**Reserve Boost**"* is armed. Continue to close the Reserve Container.

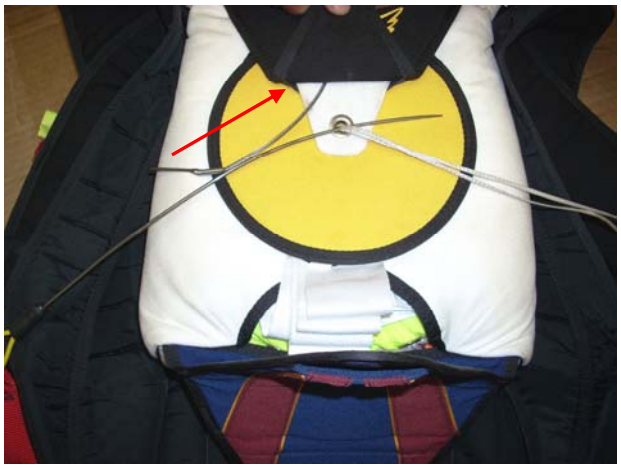
Close the side flaps. Secure with a temporary pin.

Pull the pull-up cord through the Pilot chute.

Center the Pilot-chute over the Side Flap grommets.



While compressing the Pilot-chute be sure to keep all of the pilot-chute material folded into the spring and secure with a temporary pin.



Make sure the Top Closing Flap is under the retaining tape of the Top Pin Cover Flap. Close and secure with a temporary pin.

Close and secure the Bottom Closing Flap with the Reserve Ripcord Pin.

Tuck the Top Reserve Cover Flap into the Bottom Reserve Flap pocket.

Follow all applicable rules for Documenting and Sealing the Reserve Container.

COUNT THE TOOLS USED DURING PACKING.

Chapter 7

Main Parachute

7.1 Main Parachute Inspection

- Links should be:
  - Clean of corrosion, debris and without cracks or visible damage.
  - No sharp or raw edges.
  - Free moving barrel, which should be able to tighten 2 ¾ turns from first engagement of the barrel without resistance.

- Rapide Link Covers
  - Covers should be firmly seated on top of links.
  - Covers tacked in place to prevent slippage.

- Lines
  - No excessive fraying or damage to lines.
  - Continuity is correct.
  - Bar tacks sewn correctly on each line.
  - Each line is without twists and correctly installed from link to parachute, passing through correct slider grommet.

- Slider
  - Slider is without holes, burns or other damage.
  - Reinforcement tape in place and secure.
  - Grommets seated correctly without burrs or damage.

- Bottom Skin
  - Inspect each cell for any tears, fraying or other damage.
  - Seams and attachment points stitched correctly and evenly.

- Ribs
  - Cross ports without damage.
  - Stitching correct on seams.
  - Reinforcing tape present on loaded ribs.
  - No other damage on entire rib section.

- Top Skin
  - Seams are sewn correctly.
  - Leading edge bar tacks are in place.
  - Control line attachment points are reinforced.

- Stabilizers
  - Slider stops are present and secured.
  - Lines bar tacked to lower edge of stabilizer.
  - Slack is present in stabilizer when line is taut.

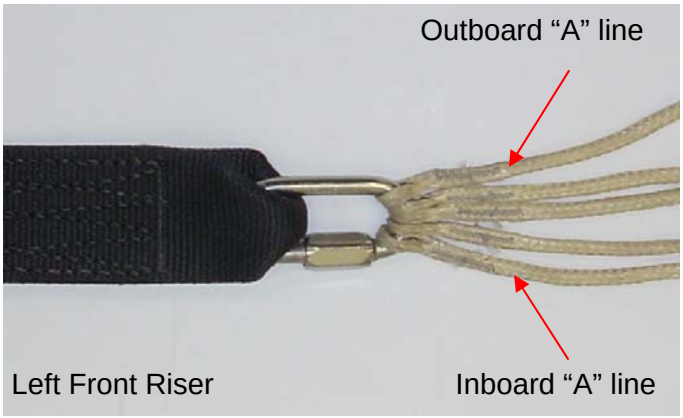
7.2 Assembly Instructions

7.2.1 Assembly of Main Canopy.

Assembly of Main Canopy using Rapide Links.

After inspecting the Parachute and the ***MIS*** Harness/Container System, hang or lay the parachute out on the ground with the nose section on the ground and the ***MIS*** Harness/ Container System oriented face down.

When using Rapide links, check to see that bumpers have been installed. See **pg.3** for instructions on bumper installation.

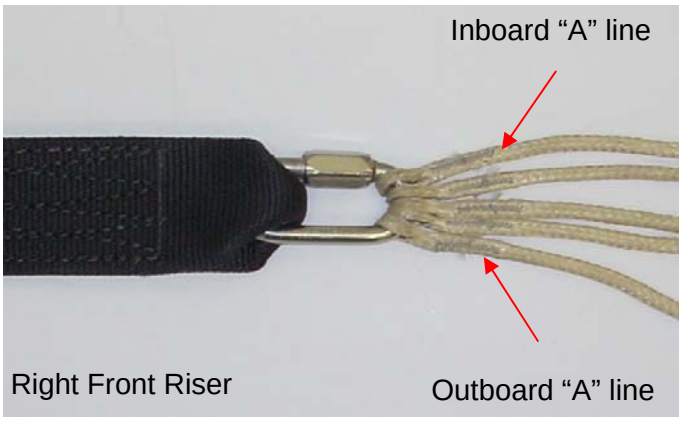


Begin the assembly process by ensuring that all lines are connected to the links correctly with the Outboard “A”-lines on the outside of the link and the Center “A”-line towards the inside of the link, the longer side of the link towards the riser.

Once the continuity of the lines is set, ensure the slider is correctly oriented; the slider should be longer span-wise than chord-wise, with the reinforcing tape of the slider on the side facing the main parachute.

Fold the ends of the risers to narrow the top section. Maintain line continuity and place the link of the Right Front line-set onto the end of the Right Front Riser.

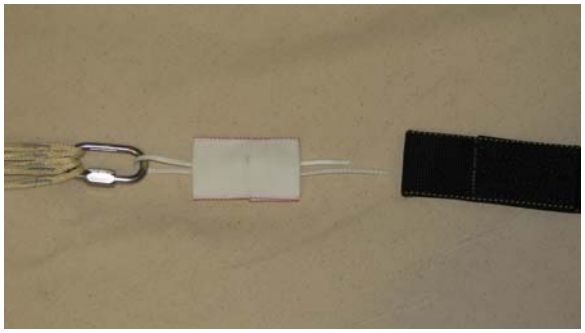
Tighten the barrel finger tight and then an additional ¼ turn with a small wrench until the link is tight. Pull the Bumper down and secure as per the instructions on **pg. 3** of this chapter.



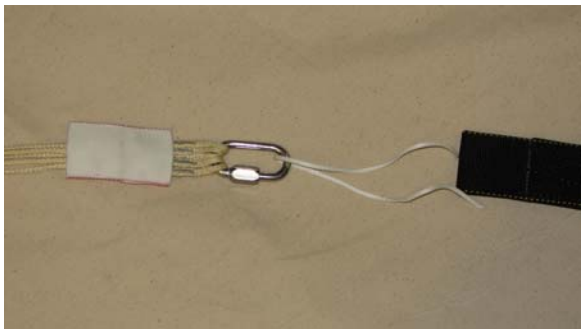
Repeat these steps for the two Rear Risers, ensuring that the Outboard “C” line is on the link first.

Installing the Slider Bumpers.

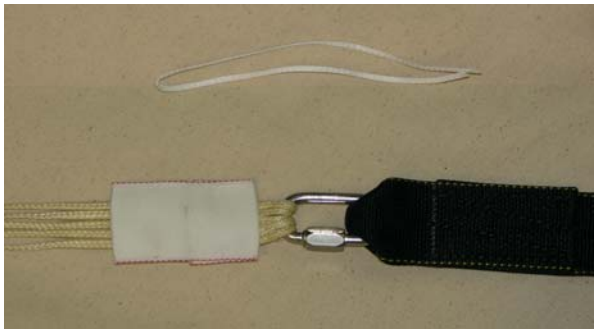
Follow these Instructions when using Rapide links for the Main Parachute.



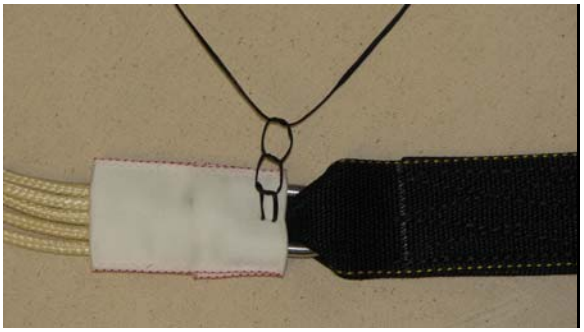
With the line group correctly assembled onto the link, run a short piece of line through the closed link and the center of the bumper.



Pull the link through the bumper without twisting or turning the link.



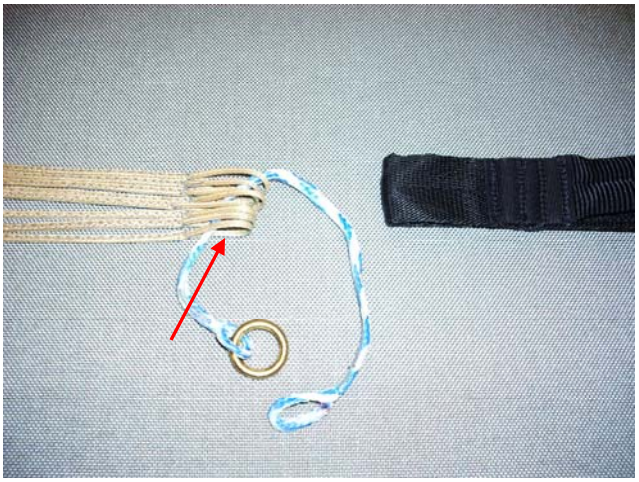
Fold the top of the riser and install the link. Tighten the barrel of the link. Ensure continuity of the line group.



Cinch the bumper over the link and tack into place. The tacking should go through both sides of the bumper and include a surgeon's knot and locking knot. Once tight, cut the loose ends of the tacking thread.

Assembly of Main Parachute using Soft Links.

Always Read and Follow the Instructions provided by the Soft Link manufacturer.



While keeping the continuity of the lines in order pass the Soft Link through each line.

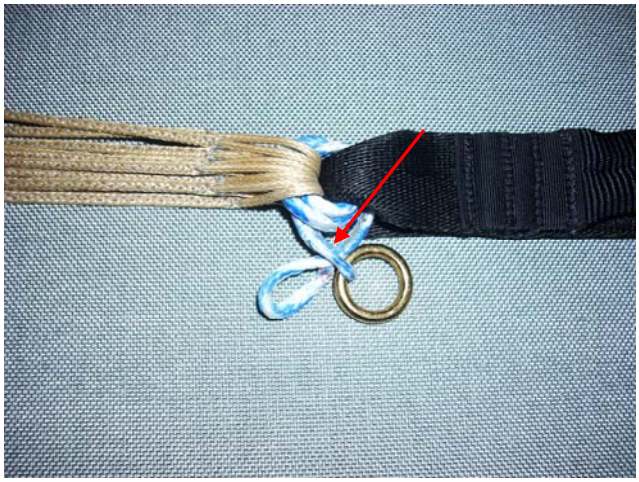
Fold the end of the Main Riser as shown.
Pass the Lead of the Soft Link through the Riser.

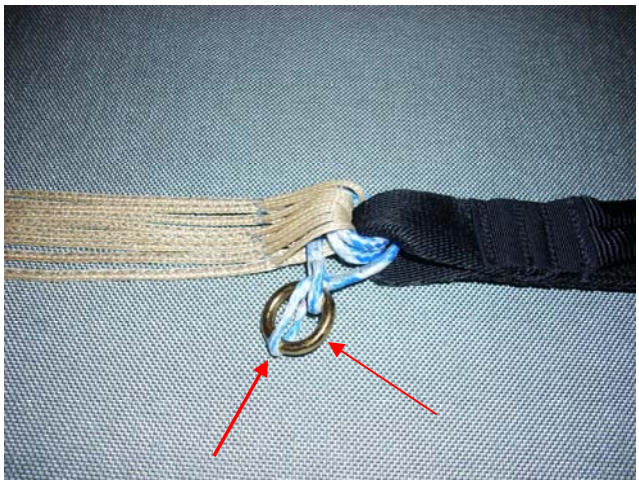
Pass the lead of the Soft Link through the lines again.

Depending on the Soft Link Manufacturer you may have to pass it through the Main Riser and the lines once or twice again.

Follow the manufacturer's instructions.

After passing the Soft Link through the lines and the Main Riser the proper number of times, pass the Soft Link lead through the loop of the other end of the Soft Link.





Pass the Ring through the Lead then tighten the knot formed

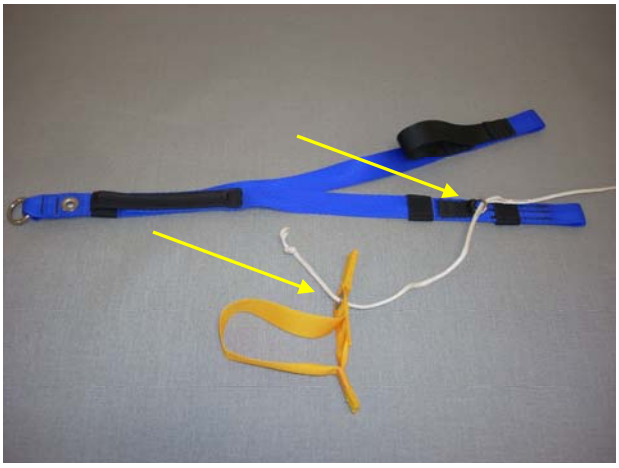
Should look like this.

Tuck the Loop and Lead ends under the Main Riser.

A hand-tack may be used to secure it under the Main Riser.

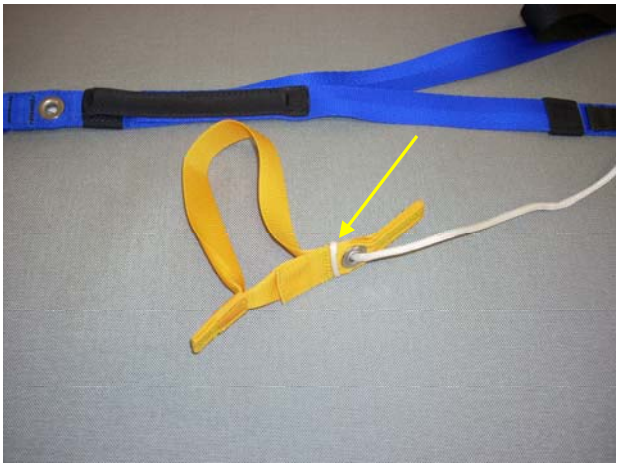
7.3 Installing the Main Steering Toggles onto the Control Lines.

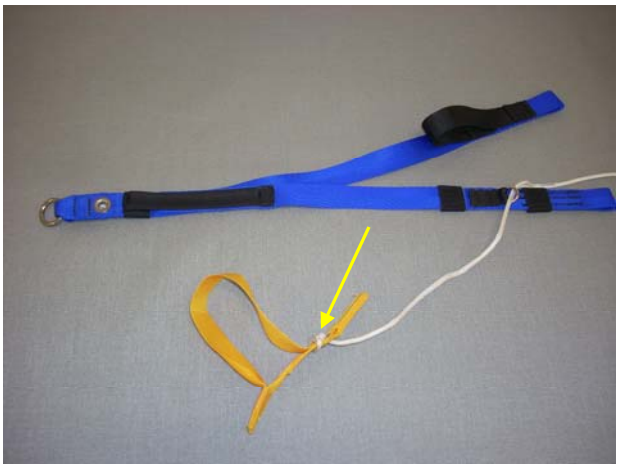
Once the Main Parachute is assembled onto the Main Risers, feed the Control Line through the appropriate slider grommet and guide ring on the Main Riser.



Feed the Control Line through the rear of the toggle.

Pass the loop of the Control Line over the bottom of the toggle.



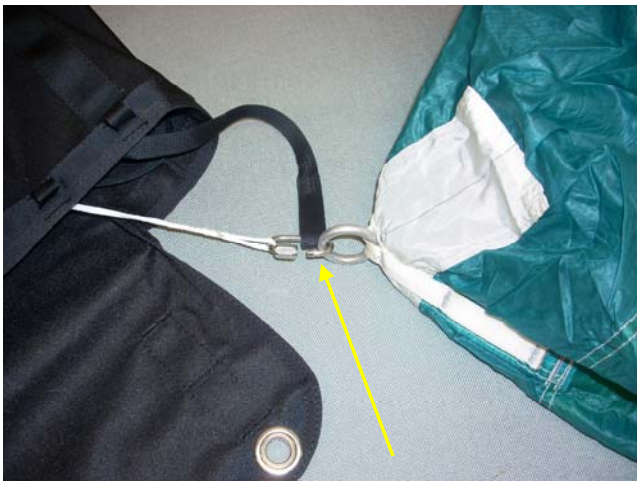


Tighten the loop up to the grommet.

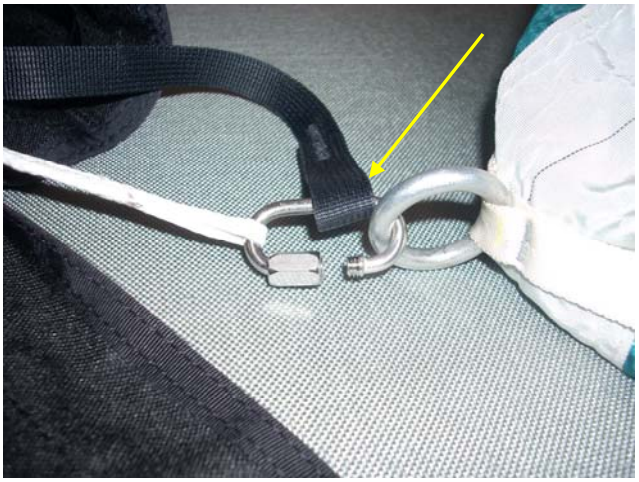
Repeat for the other toggle.

The parachute brakes are now ready to be stowed.

7.4 Attaching the Deployment Bag to the Canopy.



Open the Rapide Link of the Deployment Bag and place over the ring of the Main Canopy.
Make sure that the security line and kill-line are straight and not tangled.



Tighten the Rapide Link finger tight then use a small wrench to turn the barrel 1/4 turn. Do **NOT** over-tighten the link.

The Deployment Bag is now attached and ready to have the rubber bands or tube stows attached.
Use the correct size rubber band or tube stow as per the canopy manufacturer's instructions.

7.5 Installation of the Main Canopy Release Handle.

Inspect the ends of the yellow cables of the Release Handle for sharp edges.

Ends should be smooth so as to not snag the Type IIA line loop of the risers.

Begin by feeding the shortest yellow cable into the short cutaway housing.

Feed the other yellow cable into the other cutaway housing.

Mate the Hook Velcro of the Main Canopy Release Handle to the Pile Velcro in the pocket on the Right Main Lift Webbing.

7.6 Attaching the 3-Ring Risers.

Pass the large ring of the Riser through the large ring of the Harness.

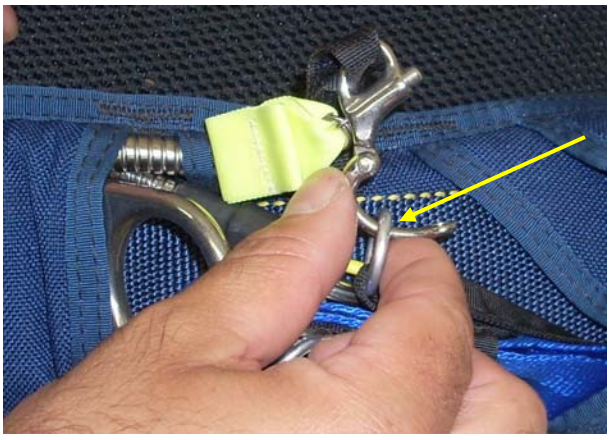
Pass the small ring of the Riser through the large ring of the Riser.

Pass the Type IIA loop through the small Riser ring and into the grommet.

CAUTION: Be sure that the loop goes through only the small ring.

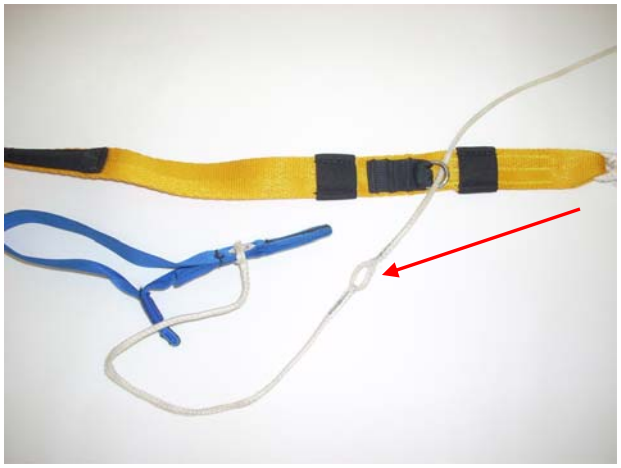
From the back side of the Riser, feed the loop through the housing grommet.

Feed the yellow cable through the loop.

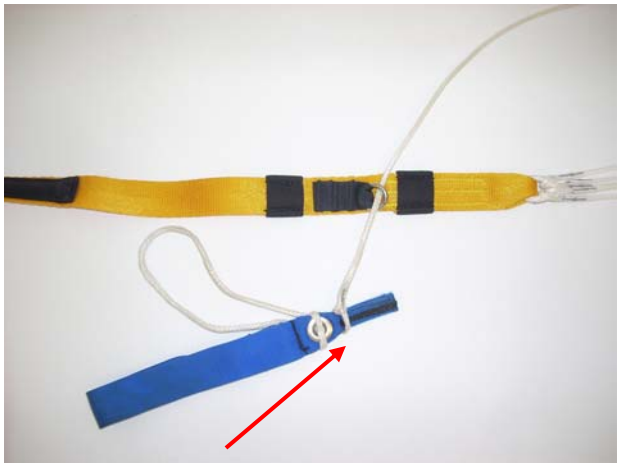


Attach the Shackle to the Reserve Static Line (RSL) ring.

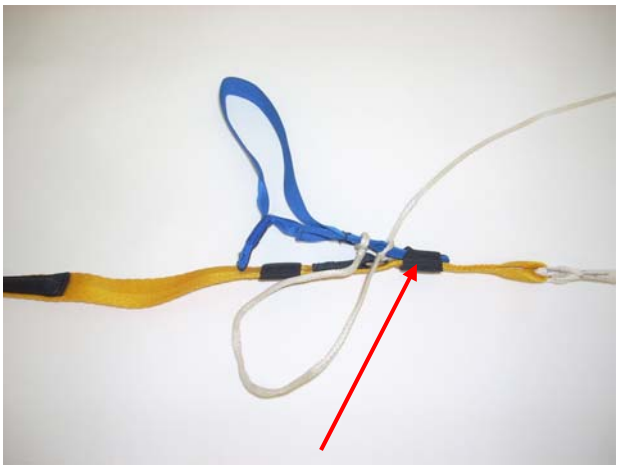
7.7 Stowing the Main Steering Toggles.



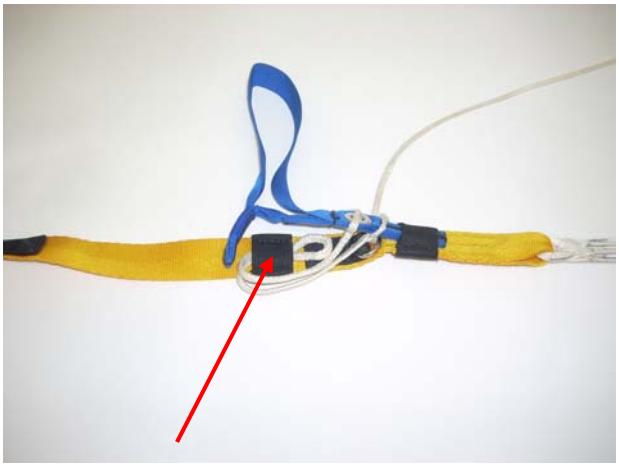
Begin by pulling the steering line until the "cat's eye" is just through the guide ring.



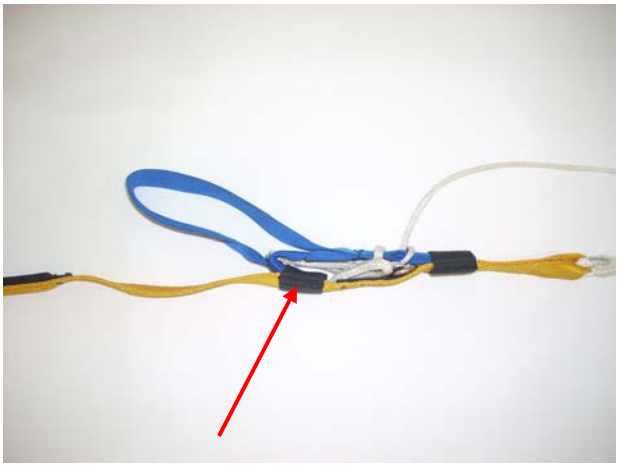
Pass the toggle through the "cat's eye" of the steering line.



Tuck the toggle into the elastic keeper.



Stow the excess brake line under the elastic keeper.



Tuck the toggle tail into the elastic keeper.

7.8 Flat Pack Method of the Main Parachute.

Read and follow the instructions for stowing the Main Steering Toggles on **pg 10.**

Grasp the rear line and control line groups in the **LEFT** hand and the front line groups in the **RIGHT** hand.

Walk towards the parachute, leaving the slider at the top of the risers, separating the line groups as you go.

Once at the stabilizer edge, shake the parachute from side to side.

While maintaining control of the line groups, lay out the parachute in front of you and away from the harness/container assembly.

Maintaining line tension will help in later steps.

Walk to the top of the canopy and:
Count and flake out the cells leading edges.
Count and flake out the B-line seams.
Count and flake out the C-line seams.
Count and flake out the D-line seams.
Count and flake out the control lines and the remainder of the trailing edge of the canopy.

With tension on the A-line groups, fold the leading edge under the A-line group.

With tension on the A- and B-line groups, fold the B- line section on top of the A-lines.

With tension on the B- and C-line groups, fold the C- line section on top of the B-lines.

With tension on the C- and D-line groups, fold the D- line section on top of the C-lines.

Place the control line group on top of the line groups.

Follow the instructions on page 10 for stowing the Main Steering Toggles.

Separate the tail section, place the right control lines and material on the right side of the pack job, and the left control lines and material on the left side of the pack job.

Bring the slider up to the slider stops and quarter the slider.

Fold the material between the control lines out and away from the center of the pack job.

While keeping the control lines in the center of the pack job, begin wrapping the tail around the canopy. Make sure to include the slider.

Compress the air out of the parachute and continue cocooning the canopy until it is slightly wider than the deployment bag.

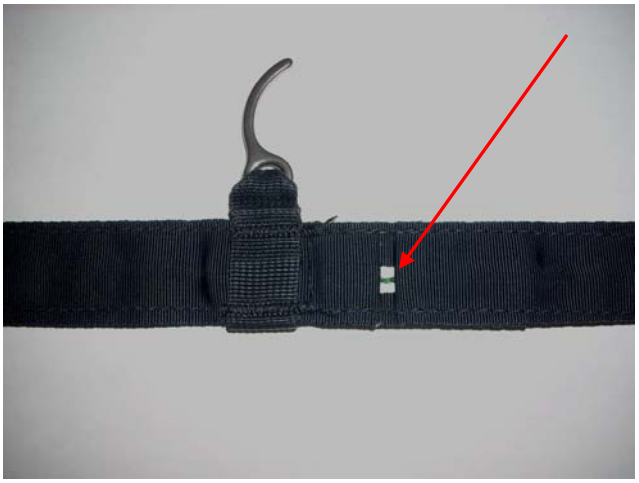
Start “S”-folding the parachute. The first “S”-fold should be approximately 1/3 of the canopy material.

Fold the remaining material on top of the first “S”-fold.

If using a Collapsible Pilot Chute “cock” the system now.

Cock the pilot-chute before placing into the Deployment Bag.

While placing a foot on the bridle near the top of the canopy, hold the pilot chute handle or hacky firmly and pull until the slack has been removed from the bridle and the pilot chute is extended to the length of the inside 3/8” tape.



Pull the pilot-chute handle until you see the mark in the window and the line is taut.

Place one corner of the canopy stack into the Deployment Bag.

Insert the other corner of the canopy into the other corner of the Deployment Bag.

Bring the lines up through the center of the canopy and out of the Deployment Bag.

With the lines from the center of the folded canopy, Stow the first line bight through either of the center grommet stow bands.

Stow another line bight through the other center grommet stow band.

Stow the 3rd and 4th line bights using the remaining two grommet stow bands.

Continue stowing the lines, alternating back and forth, until approximately 12” remain.

Open the Main Container and check for debris, twigs and pebbles.

Attach the Pull-up Cord to the Closing Loop from the #0 grommet at the top of the Main Container.

Lift the Main Deployment Bag over the container without twisting the lines and place into the Main Container with the lines towards the Bottom Flap of the container and the Bridle towards the Reserve container.

Lay the Main Risers into the trough beside the Reserve Container. Be sure to place the Main Risers on top of the Reserve Riser cover flap as shown.

Tuck the Riser Cover into the pocket as shown.

With the Bridle placed at the top right corner, close the **Bottom Main Flap** over the D-bag and feed the closing loop through the grommet of the Main Bottom Flap.

Pull the closing loop through the **Top Main Flap** grommet.

Close the **Right Side Flap**.

Close the **Left Side Flap**.

Secure with the Closing Pin.

Close the Pin Protector Flap and tuck the pilot chute bridle under the Right Side Flap as shown.

Fold the Pilot chute in 1/2 with the bridle coming out of the middle.

Fold the Pilot chute in 1/2 again with the bridle still coming out of the middle.

"S"-fold the bridle on top of the folded pilot chute.

Fold the Pilot chute into 1/3's towards the center.

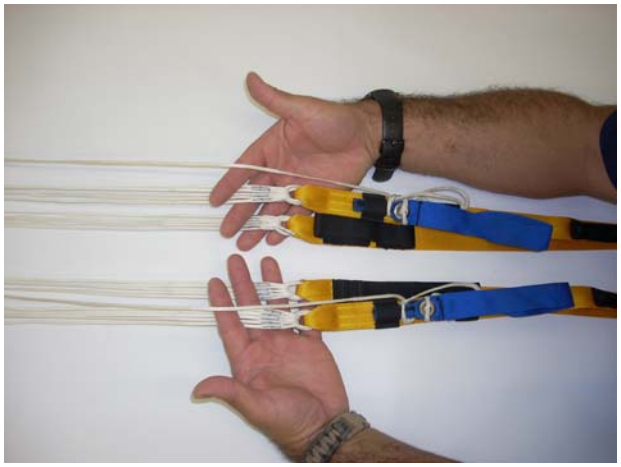
Roll the Pilot chute into a tube shape small enough to fit into the Pilot chute Pocket on the bottom flap.

Insert the Pilot chute into the pocket.

MIS packed and ready to Skydive!

7.9 PRO-Pack Method of the Main Parachute.

Read and follow the instructions for stowing the Main Steering Toggles **pg 10.**



With no twists in the risers, place the Right Front Riser line group between the little and ring finger of the Right hand.

Place the Right Rear Riser group between the middle and fore finger of the same hand.

Place the control line between the fore finger and the thumb.

Repeat for the opposite hand and line groups.

The slider should be between your body and the parachute.

Walk towards the parachute between the line groups, moving the slider up the lines with you and separate the line groups in your hands.

Upon reaching the parachute, check that the control lines are not twisted around any other line groups.

If so, restart this step or perform another continuity check.

Step outside of the lines, group the lines together in one hand and place this group over your shoulder.

For these instructions, the parachute is over the left shoulder. Switch orientation if using the right shoulder.

With the parachute in the correct orientation (nose towards the container, tail away from the container) start counting the 9 leading edge cells out.

Start by slightly turning the parachute over your shoulder, resting the right outside cell against your body.

Count each cell and grasp this group.

Push the nose through the center of the parachute and pull it briskly back out.

Place the tip of the leading edge between your knees and hold the material in place.

Starting with the A-line group, count the 5 right cells between the A- and B- line attachment points and flake the material away from the center of the parachute.

Count the 5 right cells between the B- and C- line attachment points and flake the material away from the center of the parachute.

Count and flake the 5 right cells between the C- and D- lines.

Count and flake the 5 right cells between the D- lines and the Control Lines / tail.

Repeat this process on the other side of the canopy.

Separate the nose, one half on the side, center cell in the middle and second half on the other side.

Quarter the slider by placing the section between the B-C attachment points away from the center of the parachute and separating the front and rear portions in a similar position.

Slowly wrap the tail around the line groups. Begin to roll the tail carefully be sure not to disturb the canopy. Keep the roll tight and make enough turns until the top skin appears tight and able to hold the cocoon shape.

Gently lay the canopy on the floor. Keep the lines tight and do not disturb the pack job.
Carefully lay on the canopy to remove as much excess air out of it as possible.

Do not allow the canopy to bellow out.
After tightening the cocoon to the width of the Deployment Bag, start to “S”-fold the parachute.

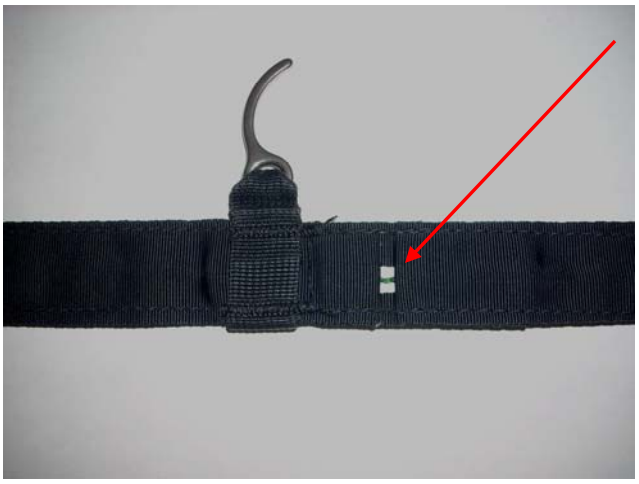
The first “S”-fold should be approximately 1/3 of the canopy material.

Fold the remaining material on top of the first “S”-fold.

If using a Collapsible Pilot Chute "cock" the system now.

Cock the pilot-chute before placing into the Deployment Bag.

While placing a foot on the bridle near the top of the canopy, hold the pilot chute handle or hacky firmly and pull until the slack has been removed from the bridle and the pilot chute is extended to the length of the inside 3/8" tape.



Pull the pilot-chute handle until you see the mark in the window and the line is taut.

Place one corner of the canopy stack into the Deployment Bag.

Insert the other corner of the canopy into the other corner of the Deployment Bag.

Bring the lines up through the center of the canopy and out of the Deployment Bag.

With the lines from the center of the folded canopy, Stow the first line bight through either of the center grommet stow bands.

Stow another line bight through the other center grommet stow band.

Stow the 3rd and 4th line bights using the remaining two grommet stow bands.

Continue stowing the lines, alternating back and forth, until approximately 12” remain.

Open the Main Container and check for debris, twigs and pebbles.

Attach the Pull-up Cord to the Closing Loop from the #0 grommet at the top of the Main Container.

Lift the Main Deployment Bag over the container without twisting the lines and place into the Main Container with the lines towards the Bottom Flap of the container and the Bridle towards the Reserve container.

Lay the Main Risers into the trough beside the Reserve Container. Be sure to place the Main Risers on top of the Reserve Riser cover flap as shown.

Tuck the Riser Cover into the pocket as shown.

With the Bridle placed at the top right corner, close the **Bottom Main Flap** over the D-bag and feed the closing loop through the grommet of the Main Bottom Flap.

Close the **Right Side Flap**.

Close the **Left Side Flap**.

Secure with the Closing Pin.

Close the Pin Protector Flap and tuck the pilot chute bridle under the Right Side Flap as shown.

Fold the Pilot chute in 1/2 with the bridle coming out of the middle.

Fold the Pilot chute in 1/2 again with the bridle still coming out of the middle.

"S"-fold the bridle on top of the folded pilot chute.

Fold the Pilot chute into 1/3's towards the center.

Roll the Pilot chute into a tube shape small enough to fit into the Pilot chute Pocket on the bottom flap.

Insert the Pilot chute into the pocket.

MIS packed and ready to Skydive!

7.10 Closing the Main Container for Pull-out Pilot chute.

CAUTION:
BE SURE THAT THE PILOT CHUTE IS "ARMED" IF IT IS A COLLAPSIBLE PILOT CHUTE!

Follow the Instructions for placing the Deployment Bag into the Main Container and closing the Riser Covers.

Thread the pull-up cord through the closing loop from the #0 grommet at the top of the Main Container. Arrange the bridle into folds 6"-8" long and lay the folded bridle across the upper part of the bag.

Be sure **NOT** to tuck these folds down between the deployment bag and the bottom of the Reserve Container. To do so may retard the action of the pilot chute.

Using your pull-up cord, close the Bottom Flap.

Loosely fold the pilot chute and lay it across the D-bag.

IMPORTANT!!! THE HANDLE AND THE PIN MUST EXIT THE CONTAINER AT THE LOWER RIGHT SIDE!

Close the Top Flap, keeping the Pin and the Handle outside of the container on the lower right.

Tuck the handle stiffeners into the pull-out pouch folds on the bottom of the Main Container. **See Fig. 1, 2, & 3.**

Fig. 1

Always keep these parts on top of the Bottom Closing Flap.

Fig. 2

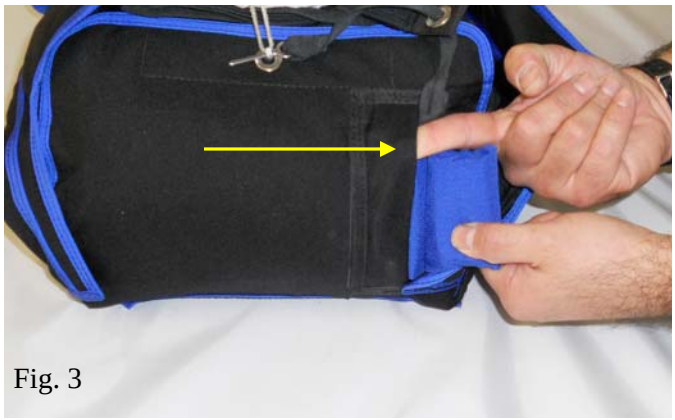


Fig. 3

For tight pack jobs, Tuck BOTH Stiffeners into the Right Side Pouch <u>ONLY</u>.

Close the Right Side Flap.

Close the Left Side Flap and secure with the Straight Pin.

Tuck the extra Pull-out Bridle under the Right Side Flap.

Close the Main Pin Protector Flap.

MIS packed and ready to Skydive!

Chapter 8

Donning the *MIS* Harness/Container.

IMPORTANT: Inspect the complete system before donning the **TPDS, Inc. *MIS* Harness/Container.**

8.1 Proper Fit of the *MIS* Harness/Container.

The ***MIS*** Harness / Container is custom built in a variety of container sizes, lengths, and widths. These configurations along with options make sizing of the harness and container to the individual jumper vital to the safe operation of the system. If the system does not fit properly, the handles may be either inaccessible or may shift in free-fall or under canopy, therefore causing problems that may result in injury or death.

The ***MIS*** is designed to fit snugly, yet comfortably, when properly adjusted. A harness that is either too small or too large for the jumper's body size can affect safety and comfort during a skydive.

A ***MIS*** dealer is the best person to measure a skydiver for the proper size harness and container.

8.2 Equipment Check of the *MIS* Harness/Container.

Every jumper should do a thorough equipment check before every skydive, no matter how experienced the jumper is. Your pre-jump equipment check should follow a logical order.

A thorough pre-jump equipment check includes the following checks:

1. Check the Reserve Pin and Cable. The reserve pin should be straight and seated deep into the locking loop with the end of the pin covered by the pin protection pocket. Slide the reserve ripcord cable back and forth in its housing to ensure that it moves freely. This is especially important in sub-freezing temperatures.
2. Open the Main Container Pin-protector Flap and check the closing pin. It must be at least halfway through the closing loop.
3. Ensure that the Bridle is routed correctly, from the closing pin into the pilot-chute pouch. A misrouted bridle may cause a pilot-chute-in-tow malfunction.
4. Make sure both the Reserve and Main Pin Protector Flaps are tucked into their proper places.
5. If your ***MIS*** includes an Automatic Activation Device, calibrate it according to the manufacturer's instructions.

6. If using the Reserve Static Line (RSL) be sure that it is properly hooked up.
7. Make sure that the 3-Ring Release System is assembled properly and is free of dirt or other foreign matter.
8. Check the position of the Reserve Ripcord Handle. Make sure that it is properly seated and that the Velcro secures it in its pocket to minimize the chance of it floating or dangling during free-fall.
9. Check the Main Parachute Release Handle (Cutaway Handle). It should be mated to the Velcro on the harness, and no more than 1/2" of yellow cable should be visible between the cutaway handle and the cable housing.
10. Ensure that the Chest Strap is threaded properly and that it is not threaded through the Reserve Ripcord Handle.
11. Ensure that the Leg Straps are threaded properly and not twisted. The free ends of the leg straps should be tucked into the leg pads.

8.3 Donning of the *MIS* Harness/ Container.

Put the rig on and loosely thread the leg straps. Check the leg straps for twists before threading them.

Tighten the leg straps so that they are snug, but not so tight that they will restrict mobility in a relaxed arch or turning motion.

Make sure that the left and right straps are evenly adjusted. Slide the excess leg strap through the elastic keepers and stow in the leg pads so that they won't flap around in free-fall.

Adjusting the Leg Straps.

Thread the Chest Strap through the friction adapter. Snug up the Chest Strap but do not over-tighten. The Main Lift Webbing should remain parallel when the chest strap is properly adjusted. Stow the excess in the elastic keeper.

Stow all excess straps in the elastic keepers.

Be certain that all Handles are properly seated and accessible.

Chapter 9

Operation of the *MIS* Harness / Container.

9.1 Deploying the Main Pilot Chute.

Before using the ***MIS*** Harness/Container for the first time, practice the procedures on the ground under the supervision of a knowledgeable Instructor.

To deploy the Main Parachute:

1. Find the Pilot chute Handle.
2. Firmly grasp the Handle with the right hand, while compensating for stability with the left hand.
3. Pull the handle from its pouch and:

a. If using a **Throw-out** Pilot chute, throw the Pilot chute away from the body immediately.

or

b. If using a **Pull-out** Pilot chute, pull the Pilot chute out to arm's length and release into the relative wind.

or

c. If using a **Ripcord**, firmly grip the handle and pull down and away from the body to arm's length.

9.2 Releasing the Main Parachute.

Certain circumstances may require the release of the Main Parachute from the ***MIS*** Harness/ Container.

Practice these procedures on the ground before boarding the aircraft to skydive.

1. Locate the Main Parachute Release Handle (Cutaway Handle) on the **Right** Main Lift Webbing.
2. Grasp the handle and peel in an upward motion.
3. In a swift and smooth motion, pull the Handle down and away from the body to arm's length.

9.3 Pulling the Reserve Handle.

To deploy the Reserve Parachute:

1. Locate the Reserve Ripcord on the **Left** Main Lift Webbing.
2. Grasp the handle and peel in an upward motion.
3. In a swift and smooth motion, pull the Ripcord down and away from the body to arm's length.

Chapter 10

Parts List
Military Instructor System

PART #	Manufactured Parts
TPDS-MIS-100	Reserve Pilot Chute
TPDS-MIS-101	Reserve Free Bag and Bridle, specify size
TPDS-MIS-102	Reserve Free Bag and Bridle w/**Reserve Boost** Modification
TPDS-MIS-103	Reserve Pilot Chute Cap, specify color & material type
TPDS-MIS-104	Reserve Static Line **(RSL)** w/Release Clasp
TPDS-MIS-105	Reserve Static Line, **(RSL)** (military type)
TPDS-MIS-106	Reserve Static Line Extension for **Reserve Boost** Modification
TPDS-MIS-107	Reserve Ripcord Assembly **(Wedge) (in-board)** specify length
TPDS-MIS-110	Reserve Ripcord Assembly **(Pillow type) (in-board)** specify color & length
TPDS-MIS-112	Reserve Ripcord Assembly **(Loop style) (in-board)** specify color, & length

TPDS-MIS-116	Reserve Closing Loop
TPDS-MIS-118	Reserve Toggles (Sport) (Pair)
TPDS-MIS-119	Safety Stow Loop, Reserve Freebag
TPDS-MIS-204	Main Risers – Type 8, (specify color, length, ring type and size)
TPDS-MIS-208	Main Risers – Type 17 1" wide, (specify color, length, ring type- stainless or Cad)
TPDS-MIS-209	Main Risers – Type 17 1" wide w/Velcro Toggles, (specify color, length, & ring type- stainless or Cad)
TPDS-MIS-210	Main Risers – Type 17 **CReW**, (specify color, length, ring type)
TPDS-MIS-211	Main Risers- Type 17 **Accuracy** (specify color, length, ring type and size)
TPDS-MIS-212	Main Risers – Type 17 1" **Swoop Style**, (specify color, length and ring type- stainless steel or Cad)

TPDS-MIS-216	Main Toggles- Sport (Pair) (specify color)
TPDS-MIS-217	Main Toggles- Sport w/Velcro (Pair) (specify color)
TPDS-MIS-218	Main Toggles- CReW
TPDS-MIS-230	Main Spring-loaded Pilot Chute
TPDS-MIS-231	Main Throw-out Pilot Chute w/plastic handle (specify size, color)
TPDS-MIS-232	Main Throw-out Pilot Chute w/Hacky (specify colors, size)
TPDS-MIS-233	Main Throw-out P/C Collapsible w/Hacky Handle (specify size and colors)
TPDS-MIS-234	Main Pull-out Pilot Chute (specify color and size)
TPDS-MIS-235	Main Pull-out Pilot Chute Collapsible (specify color and size)
TPDS-MIS-236	Main Pull-out Handle with Pin Lanyard (specify color)
TPDS-MIS-237	Main Closing Pin- Curved
TPDS-MIS-238	Main Closing Pin- Straight

TPDS-MIS-245	Main Throw-out Bridle
TPDS-MIS-246	Main Throw-out Collapsible Bridle
TPDS-MIS-247	Main Spring-loaded P/C Bridle
TPDS-MIS-248	Main Pull-Out Bridle
TPDS-MIS-249	Main Pull-Out Collapsible Bridle
TPDS-MIS-250	Main Release Handle – **Pillow** – **In-board** (specify color)
TPDS-MIS-252	Main Release Handle – **Loop**- **In-board** (specify color)
TPDS-MIS-254	Main Ripcord, Metal, Bent, In-board (specify length and cable type)
TPDS-MIS-256	Main Ripcord, Plastic Handle - BOC

TPDS-MIS-259	Main Ripcord, Plastic Handle -Hip
TPDS-MIS-270	Main Deployment Bag (specify size and color)
TPDS-MIS-271	Main Deployment Bag w/Kicker Plate (specify size and color)
TPDS-MIS-273	Semi-Stowless Deployment Bag (specify size and color)
TPDS-MIS-275	Main Closing Loop, Type II-A
TPDS-MIS-277	Main Closing Loop - Elastic
TPDS-MIS-281	Optional Type 17 Free-fly Belly Band

TPDS-MIS-288	Hook Knife w/Pocket	(specify pocket color)
TPDS-MIS-289	Jack the Ripper Knife and Pocket	(specify pocket color)
TPDS-MIS-290	Magnets (Box)	
TPDS-MIS-291	Rapide Links Stainless Steel #3 ½	(Box)
TPDS-MIS-292	Rapide Links Stainless Steel #4	(Box)
TPDS-MIS-293	Rapide Links Stainless Steel #5	(Box)
TPDS-MIS-294	Rubber Bands (Tandem) (Box)	
TPDS-MIS-295	Rubber Bands (Large)	(Box)
TPDS-MIS-296	Rubber Bands (Small)	(Box)
TPDS-MIS-297	Elastic Strap Keepers	(Dozen)
TPDS-MIS-298	Elastic Keeper w/Snap	

TPDS-MIS-320 2000 lbs. Spectra Line Soft Links

TPDS-MIS-600	Gear Bag (Extra Large)
TPDS-MIS-601	Gear Bag (Large)
TPDS-MIS-700	**Military Instructor System Manual**

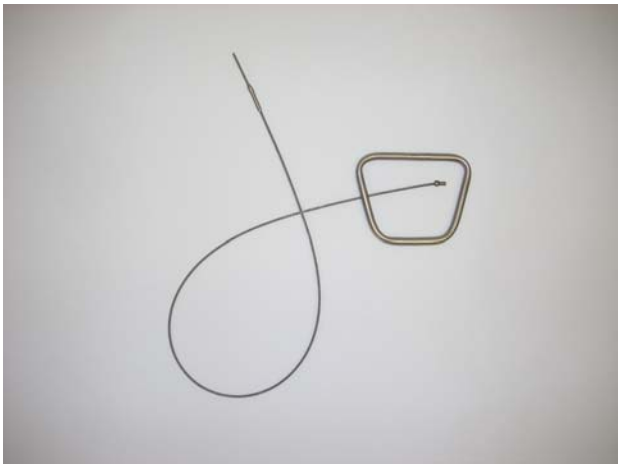
Chapter 11

Spare Parts

TPDS-MIS-100 Reserve Pilot Chute

TPDS-MIS-118 Reserve Toggles

TPDS-MIS-103 Reserve Pilot Chute Cap

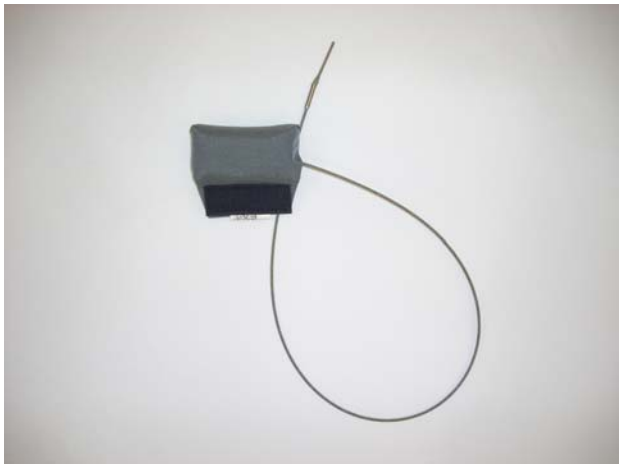


TPDS-MIS-107 Reserve Ripcord Handle

TPDS-MIS-101 Reserve Free-bag w/ Bridle

TPDS-MIS-104 Reserve Static Line (RSL)

TPDS-MIS-106 **"RESERVE BOOST"** RSL EXTENSION LANYARD



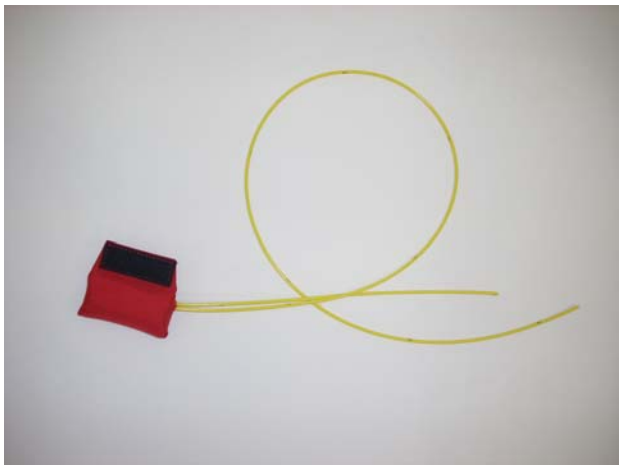
TPDS-MIS-110 Reserve Ripcord *Pillow*

TPDS-MIS-102 ***"Reserve Boost"*** Free-bag & RSL

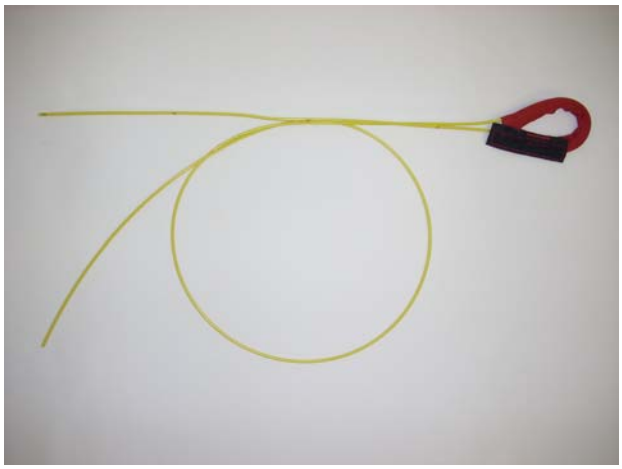
TPDS-MIS-204 Main Risers T-8

TPDS-MIS-208 Main Risers T-17

TPDS-MIS-216 Main Steering Toggles



TPDS-MIS-250 Main Release Handle



TPDS-MIS-252 Main Release Loop Style

TPDS-MIS-230 Main Spring P/C w/Bridle

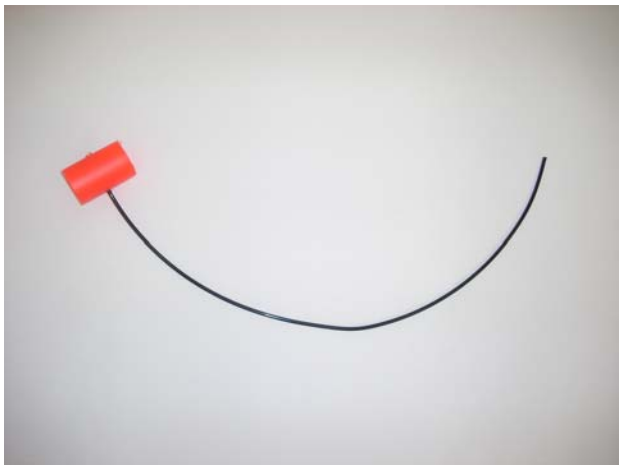
TPDS-MIS-233 Main Collapsible P/C w/ Hacky

TPDS-MIS-270 Main Deployment Bag

TPDS-MIS-273 Main Deployment Bag Semi-Stowless

TPDS-MIS-277 Main Deployment Bag Closing Bungee

TPDS-MIS-254 Main Metal Ripcord



TPDS-MIS-259 Main Ripcord Plastic Handle

TPDS-MIS-700 Owner's Manual

Chapter 12

Care and Maintenance

12.1 General Storage Requirements for Personal Parachute Systems

The following is an advisory statement and each country/unit may follow its own protocol:

General Storage Requirements:

To ensure that serviceability standards of the stored harness/parachute assembly are maintained, every effort will be exerted to adhere to the following general storage requirements:

1. When available, a climate controlled building should be used to store the harness/ parachute assembly.

2. The harness/parachute assembly shall be stored in a dry, well ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents and direct sunlight.

3. The harness/parachute assembly will **NOT** be stored in a manner which would prevent ventilation or interfere with light fixtures, heating vents, fire fighting devices, cooling units, exits or fire doors.

4. The harness/parachute assembly will **NOT** be stored in a damaged, dirty or damp condition.

5. All stored harness/parachute items will be marked, segregated and located for accessibility and easy identification.

6. The harness/parachute assembly will **NOT** be stored in direct contact with any building floor or wall. Storage will be accomplished using bins, shelves, pallets, racks or dunnage to provide airspace between the storage area floor and the equipment.

7. All available material handling equipment should be used as much as possible in the handling of the harness/parachute assembly.

8. Periodic rotation of stock, conversion of available space, proper housekeeping policies and strict adherence to all safety regulations will be practiced at all times.

Storage Specifics for Parachutes:

In addition to the storage requirements stipulated in the general storage requirements paragraph, above, the following is a list of specifics that must be enforced when storing parachutes:

1. Except for those assemblies required for contingency operations, parachutes will **NOT** be stored in a packed configuration.

2. Stored parachute assemblies will be secured from access by unauthorized personnel.

3. A parachute that is in storage, and is administered a cyclic repack and inspection, will **NOT** be exposed to incandescent light or indirect sunlight for a period of more than **36** hours. In addition, exposure to direct sunlight will be avoided entirely.

In-Storage Inspection:

General information:

1. An in-storage inspection is a physical check conducted on a random sample of parachutes that are located in storage.

2. Parachutes in storage will be inspected at least once every 180 calendar days and at more frequent intervals if prescribed by the local parachute maintenance officer.

3. Inspect the parachute to ensure that it is ready for use.

4. Check the parachute for proper identification.

5. Check that no damage or deterioration has incurred.

6. Ensure that all modifications or similar requirements have been completed.

7. Check the adequacy of the storage facilities, efforts should be taken to control pests and rodents and unfavorable climatic conditions.

12.2 Water Contamination Guidelines

If the parachute or any of its components have been immersed in salt-water for more than 24 hours the equipment shall be condemned.

Equipment made of cotton fabric immersed in salt water shall be condemned.

If the parachute or any of its components have been immersed in water, be it fresh water or salt-water, the parachute and any components immersed shall be rinsed immediately or placed in a double plastic bag with the top securely closed to keep the contents in a wet state until they can be rinsed. If they cannot be rinsed within 24 hours, **they shall be condemned**.

Once a parachute or any of its components have been immersed in water, be it fresh or salt-water, then the system shall have 50 jumps or 5 years, whichever comes first, to be used before **it is condemned.**

! CAUTION !

REMOVE ALL INSTRUMENTS! BEFORE RINSING THE PARACHUTE ASSEMBLY

Rinsing the Parachute Assembly after Water Immersion:

1. Place the parachute assembly in a large container filled with enough fresh water to completely cover it.
2. Agitate the contents of the container by hand for 5-minutes.
3. Remove the parachute assembly from the container and suspend or elevate it in a shaded area for a period of 5–10 minutes to allow it to drain. Do not wring the fabric nor the suspension lines.
4. Repeat the procedures in steps 1. through 3. above, twice (2x), using fresh, clean water for each rinse.
5. After the 3rd rinse, allow the parachute assembly to drain thoroughly. Upon completion of draining, dry the assembly by elevating or suspending the item in a well ventilated room or a heated drying room with the temperature not to exceed 130° Fahrenheit or 55° Celsius. When heat is used it shall not exceed 160° F or 71° C. The preferred temperature is 140° F. / 60°C. The use of electric circulating fans will reduce the drying time.
6. When dried, perform a technical/rigger-type inspection of the parachute assembly. Corroded metal components or corrosion stain fabrics or suspension lines will be either repaired or replaced.
7. Record the immersion and rinsing and any repairs made to the parachute assembly in the parachute log record.

12.3 15 Year Maximum Life Limitations

15 year Maximum Life Limitations for *TPDS* Military Instructor System (MIS).

Without further limitations, each ***TPDS*** **Canopy** has a maximum life limitation of **15 years** from the date of manufacture.

Further limitations include:

	Reserve	**Main**	**Harness/Container**
Service Life Limitation:	15 years	15 years	15 years
Useful Life Limitation:	20 deployments	500 deployments	500 deployments

WATER JUMPED CANOPIES:

Reserve- Non-Deployed - if the Reserve Parachute is used in a water jump but **NOT** deployed- it shall have 5 years or 20 jumps **(which ever comes first)** remaining for its Useful Life Limitation.

Reserve- Deployed- if the Reserve Parachute is used in a water jump and has been deployed- **It Shall be Condemned.**

Main Parachute- if the Main Parachute is used in a water jump- it shall have 5 years or 50 jumps **(which ever comes first)** remaining for its Useful Life Limitation.

HARNESS/CONTAINER:

If the Harness/Container is jumped into water, it shall have 5 years or 50 jumps **(which ever comes first)** remaining for its Useful Life Limitation.

If at any time the unit is discovered to be B.E.R. (beyond economical repair) it will be removed from service and disposed of by the equipment activity officer.

Main canopy limitations are similar to reserve canopy limitations with regard to total calendar time; however their initial **Useful Life Limitation** is **500** deployments, at which time they may be relined and evaluated by an appropriately rated parachute technician for extended service period.

12.4 Factory Authorization of One Year Reserve Repack Cycle

All of the materials, purchased items and parts used in the fabrication process for **Tactical Parachute Delivery Systems (TPDS)** Main and Reserve Parachutes are acquired from suppliers on our Approved Supplier list as part of our Federal Aviation Administration **(FAA)** approved Quality Control System for parachutes produced under **FAA TSO C-23d.**

There are no component parts utilized in these parachutes that necessarily require re-certification at a specific repack cycle. Our experience indicates that a repack cycle of one year should not adversely affect the performance of the parachute or compromise safety based on the element of time alone.

Factors that might affect a parachute's airworthiness could come into play during any repack cycle and include:

1. Storage temperature, humidity, and ultraviolet radiation
    a. When not in use, the parachute should be stored in an environment wherein the temperature is controlled between 60°- 85° F. (15°-30° C.) and within the relative humidity limits of 30% and 60%. Ultraviolet radiation (daylight) in the storage facility should be zero.

2. Damage from normal handling and use
    a. The entire system should be inspected prior to each use as well as after each use to determine if any damage has occurred during normal use. If the parachute ever becomes damp, a thorough drying, inspection, and repack are strongly recommended, and the wetting agent should be analyzed for elements that may cause deterioration of nylon and other synthetic components that make up the parachute system.

3. Other components that make up the system
    a. Other components like the container, or the reserve deployment free bag and pilot chute, or any other component that contains material unsuitable for an extended repack cycle could disqualify the system from the extension.

4. Chain of custody
    a. Our approval of extending the repack cycle to one year is authorized only if a logbook is maintained describing a chain of custody and documenting storage and use as outlined in each of the previous items.

When in compliance with these four detailed elements, we approve a repack cycle of both our **Main** and our **TSO'd Reserve Parachute** canopies to **1 year** for certain military and civilian applications, in countries that do not impose a more restrictive repack cycle for parachute products.

Chapter 13

Repairs

13.1 Repair Guidelines

Stitching and re-stitching on parachute items constructed from cloth, canvas, and webbing should be accomplished with thread, which matches the color of the original stitching, when possible.

All straight stitching should be 7-11 stitches per inch, and locked by overstitching the existing stitching by at least 2-inches. Zigzag stitching should extend at least 1/2-inch into undamaged stitching at each end. Re-stitching should be made directly over the original stitching, following the original stitch pattern as closely as possible.

All thread on the canopy should be VT-295E, Type II, Class A, Size E, VY, and sewn with a light or medium duty machine.

Canopy

Type of Repair	**Limitations**
Re-stitching:	No limit as to length or number.
Patch, single side:	Size Limit: Maximum 50% of panel area. Limit of 3 per panel, 15 per canopy.
Panel replacement:	Limit 9 per canopy
Radial Seams:	Size Limit: 12", no more than 4 per canopy.
Lateral bands:	Size Limit: 2", no more than 10 per canopy
Upper	Size Limit: 4", Limit 1 per canopy
Lower	Size Limit: 36", Limit 4 per canopy

Static Line

A Damaged Static Line should be replaced.

Container

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

Ripcords

Damaged ripcords should be replaced.

13.2 Keeping Track of Repairs and Packing

Data Card

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

Note!

Darning and Ripstop Tape are **NOT** authorized for Certified Canopies as they may weaken the fabric. Single side patches are recommended for even small damaged areas.

NOTES: