

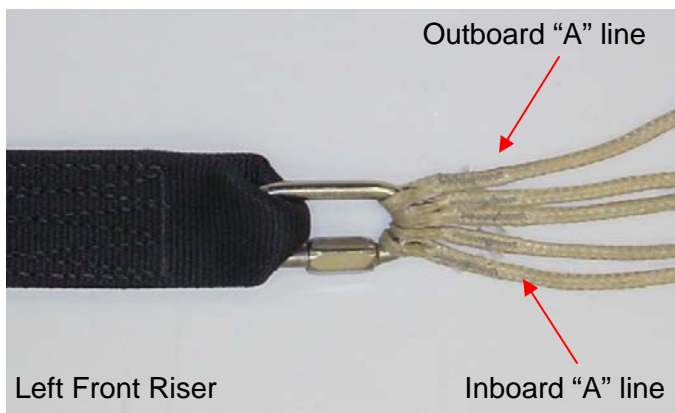
4.2 Assembly Instructions

4.2.1 Assembly of Reserve Canopy.

Assembly of Reserve Canopy using Rapide Links.

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

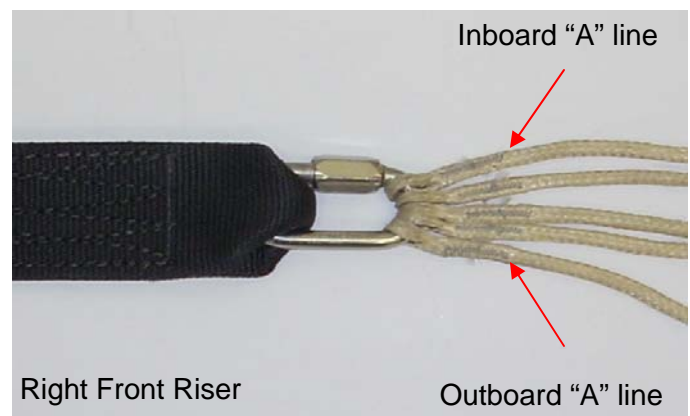


Begin the assembly process by ensuring that all lines are connected to the links correctly with the Outboard "A"-lines on the outside of the link and the Center "A"-line towards the inside of the link, the longer side of the link towards the riser.

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.**

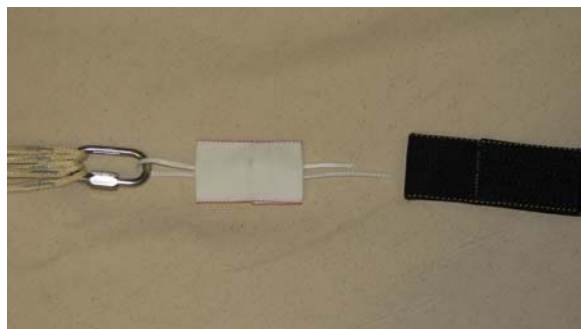
Tighten the barrel finger tight and then an additional $\frac{1}{4}$ turn with a small wrench until the link is tight. Pull the Bumper down and secure as per the instructions on page 5 of this chapter.



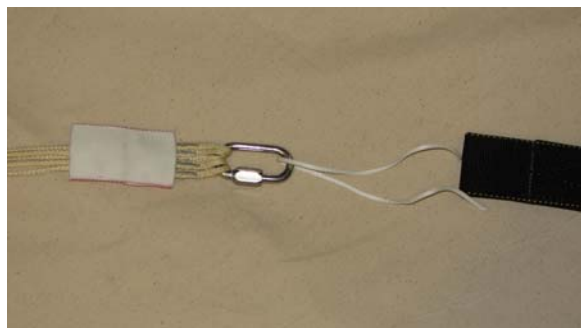
Repeat these steps for the two Rear Risers, ensuring that the Outboard "C" line is on the link first.

Installing the Slider Bumpers.

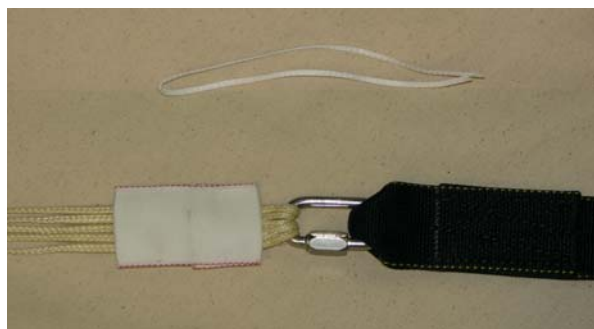
Follow these instructions when using Rapide links for the Reserve Parachute.



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.



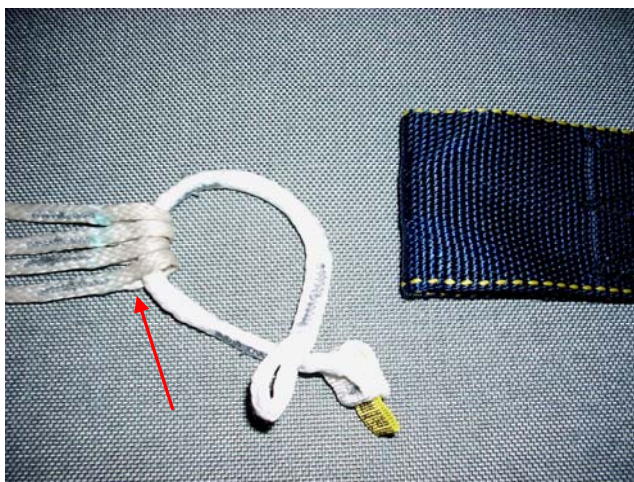
Fold the top of the riser and install the link. Tighten the barrel of the link. Ensure continuity of the line group.



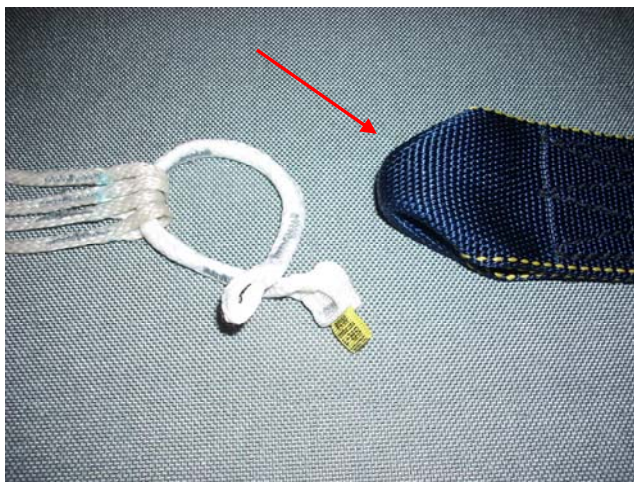
Cinch the bumper over the link and tack into place. The tacking should go through both sides of the bumper and include a surgeon's knot and locking knot. Once tight, cut the loose ends of the tacking thread.

Assembly of Reserve Canopy using Soft Links.

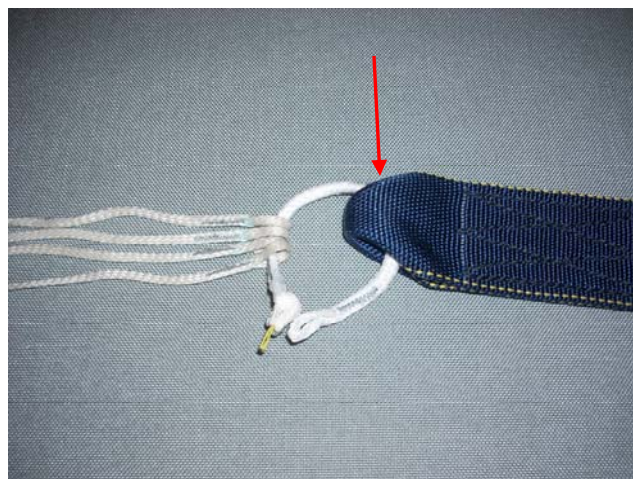
Always Read and Follow the Instructions provided by the Soft Link manufacturer.



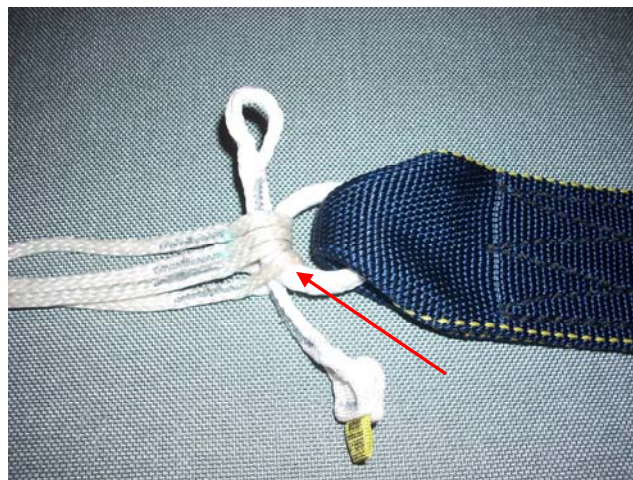
While keeping the continuity of the lines in order pass the Soft Link through each line.



Fold the end of the Reserve Riser as shown.



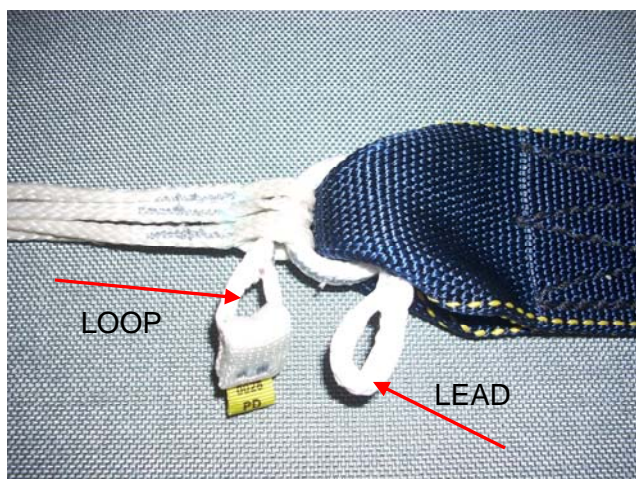
Pass the Soft Link through the Reserve Riser.



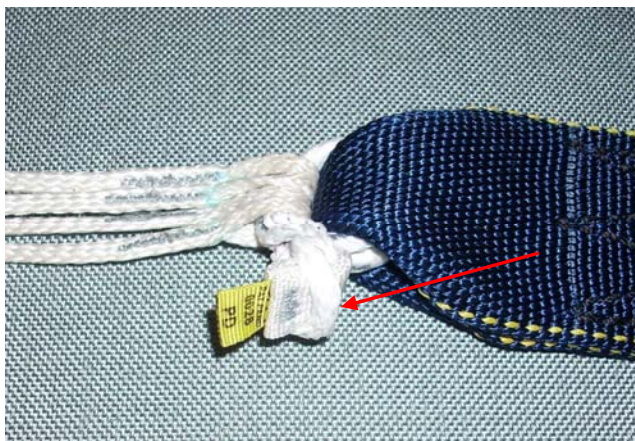
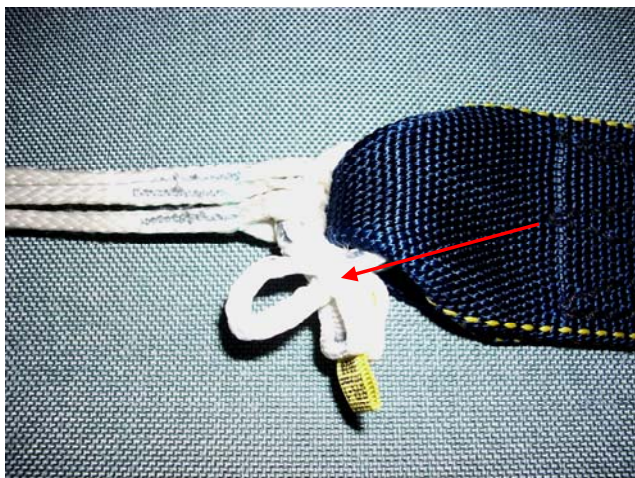
Pass the lead of the Soft Link through the lines again.

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.



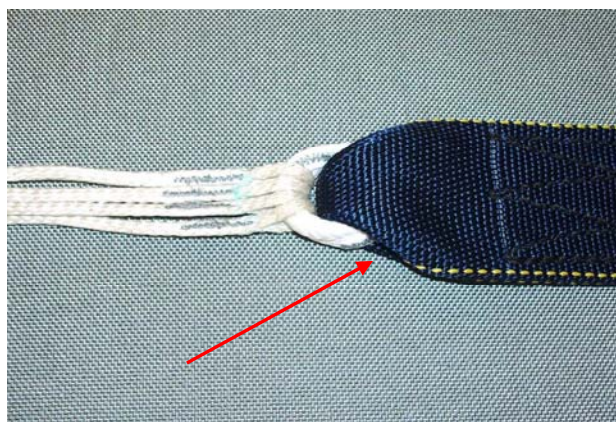
After passing the Soft Link through the lines and the Reserve Riser the proper number of times pass the Soft Link lead through the loop of the other end of the Soft Link.



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



Should look like this.

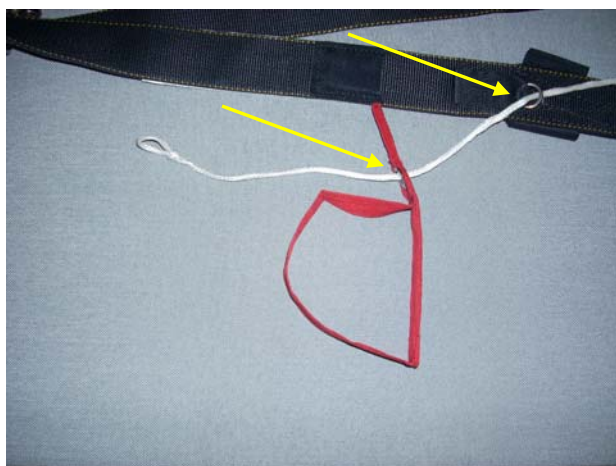


Tuck the Loop and Lead ends under the Reserve Riser.

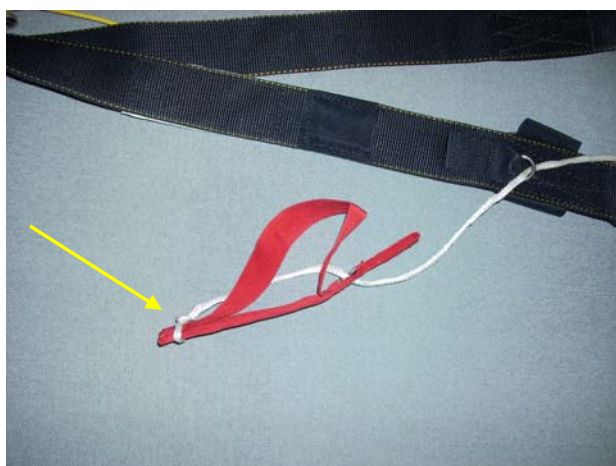
A hand-tack may be used to secure it under the Reserve Riser.

4.2.2 Installing the Reserve Steering Toggles onto the Control Lines.

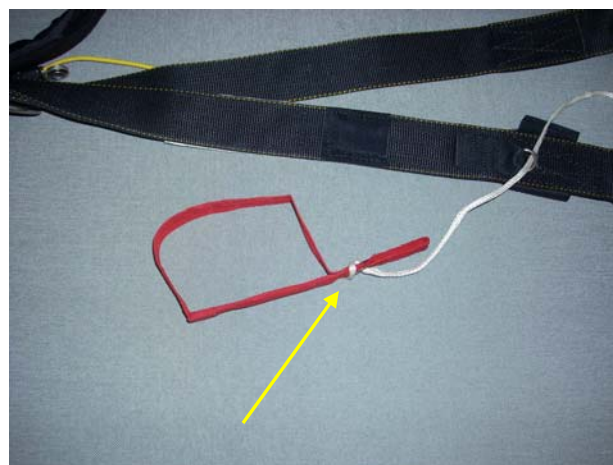
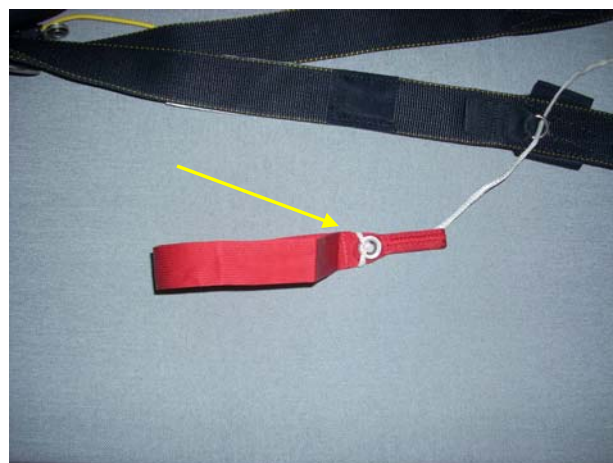
Once the Reserve Parachute is assembled onto the Reserve Risers, feed the Control Line through the appropriate slider grommet and guide ring on the reserve riser.



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.

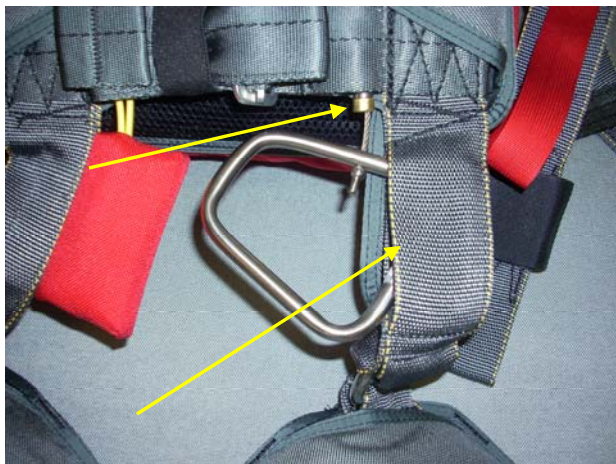
The parachute brakes are now ready to be stowed.

4.2.3 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.

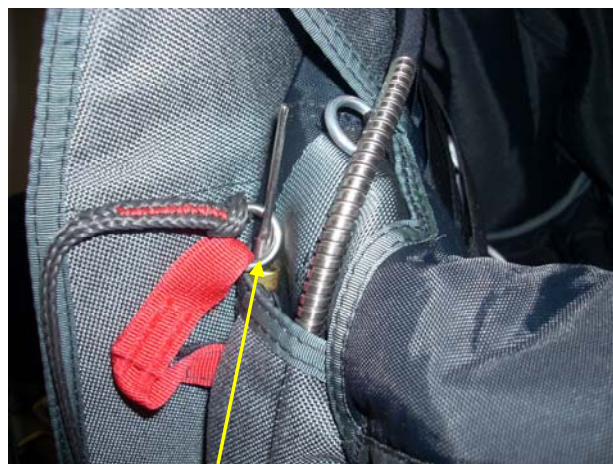


Install the cable of the Reserve Ripcord Handle into the Reserve Ripcord Housing on the left side Main Lift Webbing.

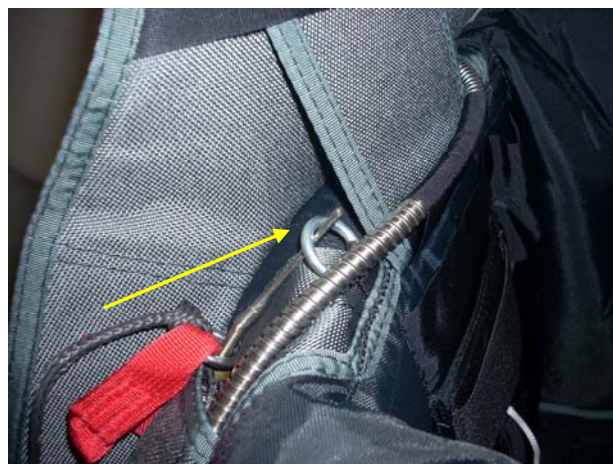
Install the Reserve Ripcord Handle into the Reserve Ripcord Pocket.



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.

4.2.4 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.

4.2.5 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.



Fig. 1

Processing Unit

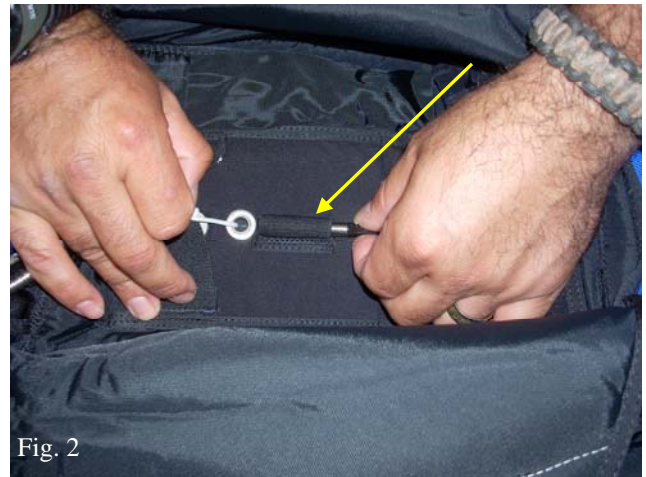


Fig. 2

Release Unit



Fig. 3

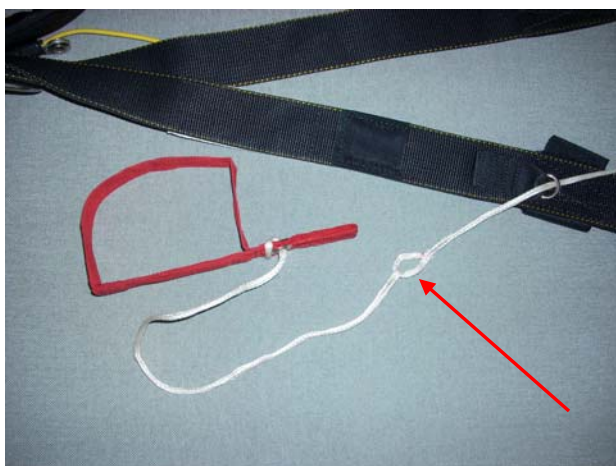
Control Unit



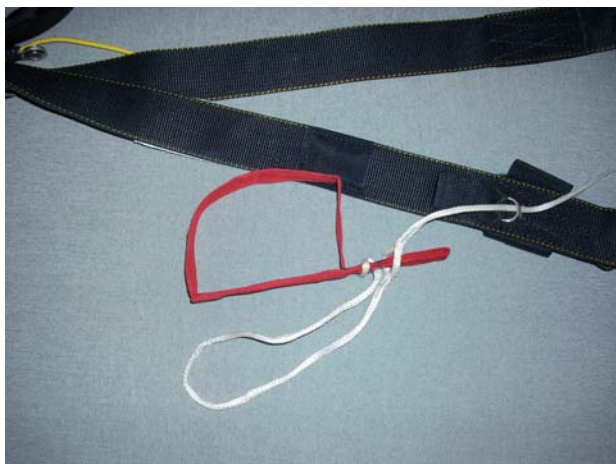
Installation complete.

4.3. Reserve Packing Instructions

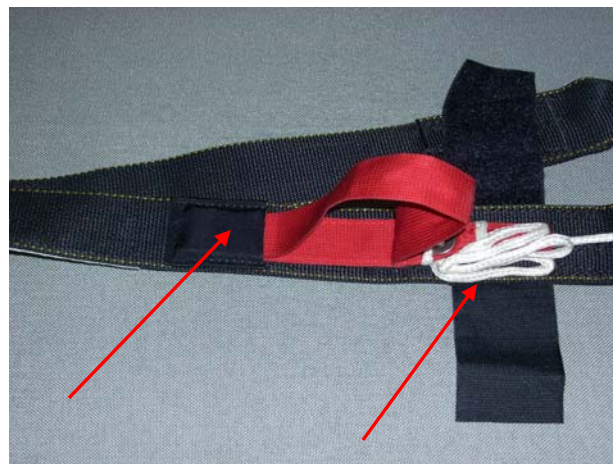
4.3.1 Setting the Reserve Canopy Brakes.



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.

4.3.2 Flat Pack Method of the Reserve Parachute.

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



Place the slider at the connector links.
(NOT SHOWN for clarity of line groups)

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 risers** and 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.

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.



Fold the leading edge under the A-line group.



Grasp the B-line group under slight tension and fold over the A-line group.



Grasp the C-line group under slight tension and fold over the B-line group.



Grasp the D-line group under slight tension and fold over the C-line group.



Pull out the left three (3) cells of the nose towards the left.

Pull out the right three (3) cells of the nose towards the right.

Flake the control lines onto the center of the canopy, splitting the groups and corresponding trailing edge into half.

The Reserve Brakes may be stowed at this time. [See page 12.](#)

Bring the slider up from the connector links until it is touching the slider stops and quarter the slider between the slider stops.



Flake the tail of the parachute on top of itself. This step will involve folding half cells between the control lines and whole cells on the remainder of the trailing edge.



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.

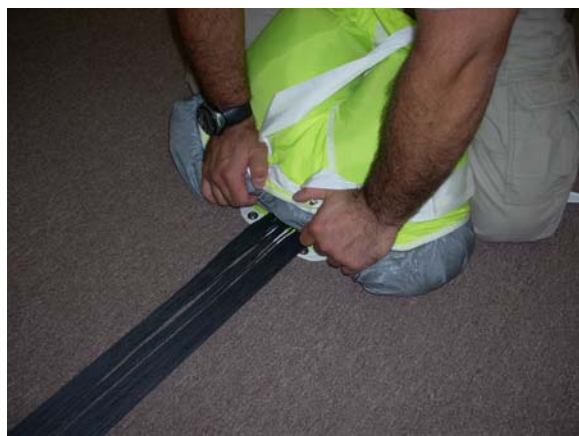


Grasp "ear" and "S"-fold it on top of itself.



Place into the Free-bag.

Repeat the other side "ear".



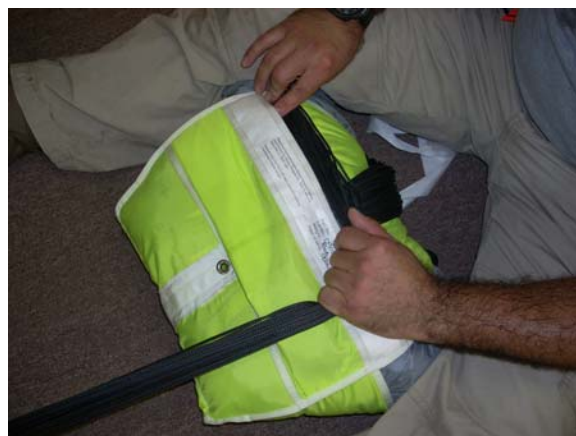
Fold the Free-bag over the canopy in order to close with the safety stow.



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



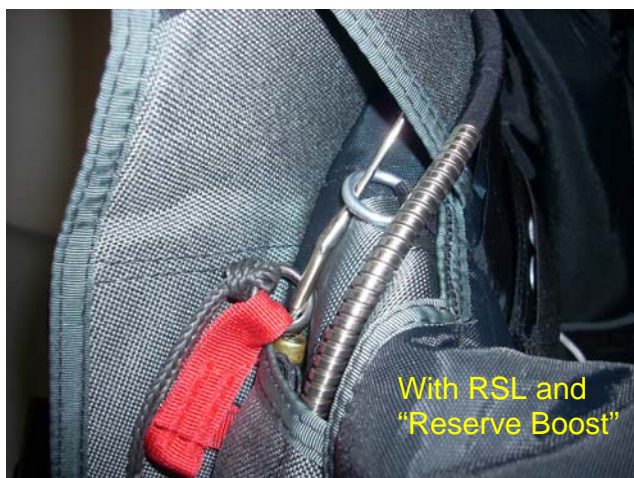
Begin to stow the rest of the reserve parachute lines into the pocket on the Free-bag.



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 Ripcord is installed correctly.

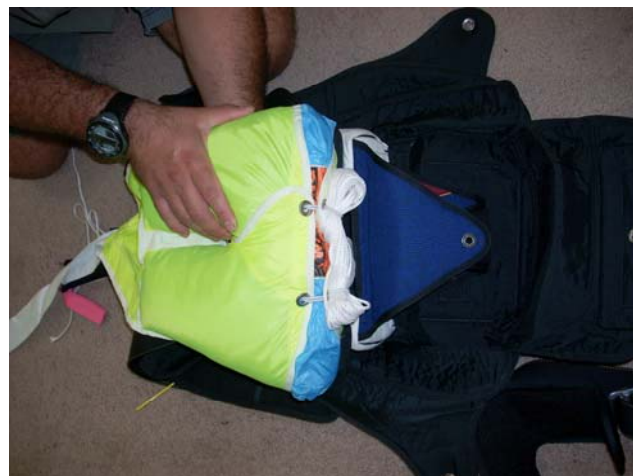


If using the Reserve Static Line with or without the “**Reserve Boost**” check to be sure that it is installed correctly.



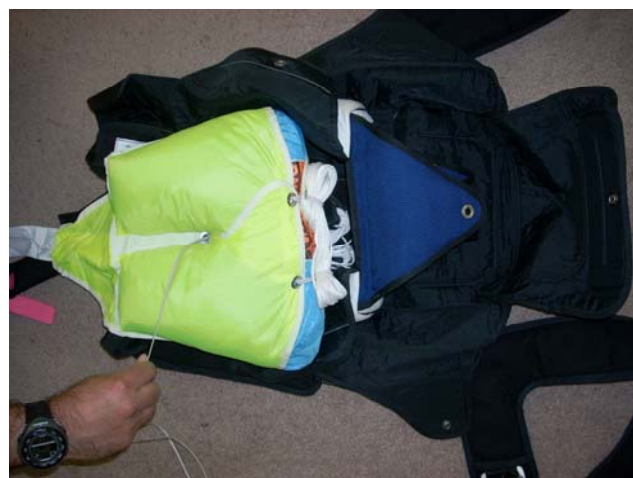
Carefully lift the Free-bag.

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

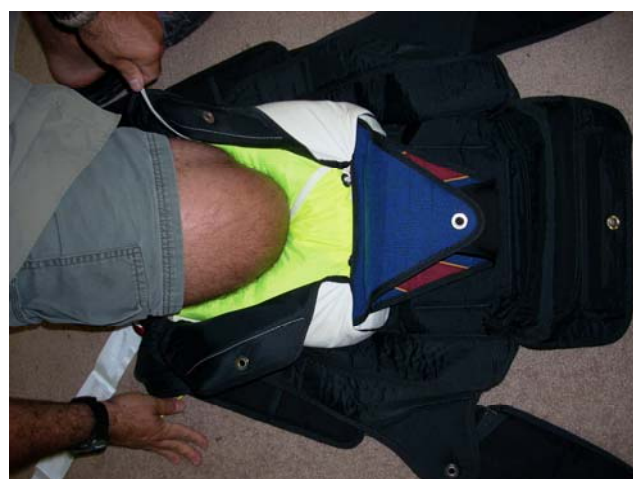


Flip the Free-bag over to the bottom of the Reserve Container.

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.



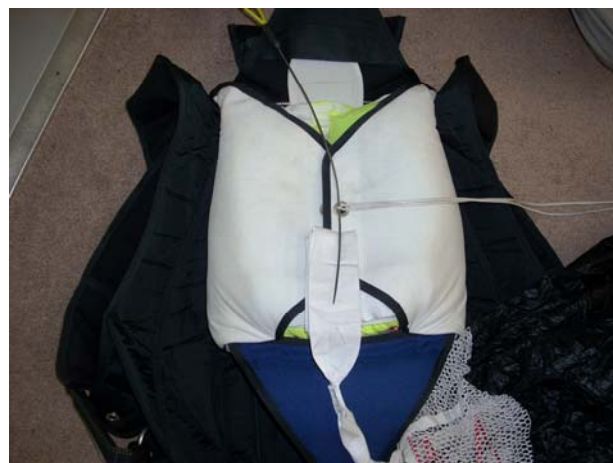
Tuck the folded Bridle under the Side Flaps.

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



Close the Left Side Flap then the Right Side Flap.

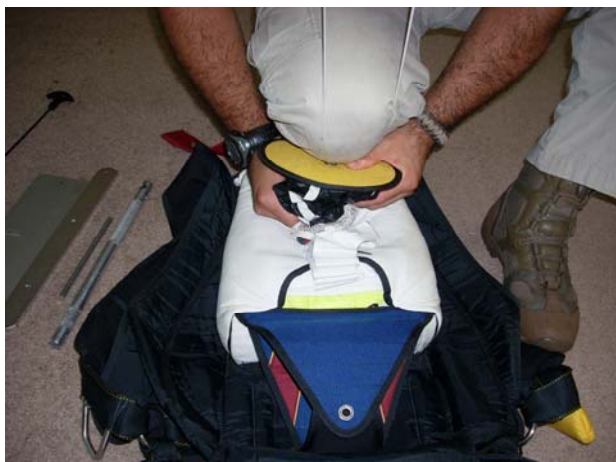
Secure with a temporary pin.



"S"-fold the remaining Bridle as shown.



Pull the pull-up cord through the pilot chute.

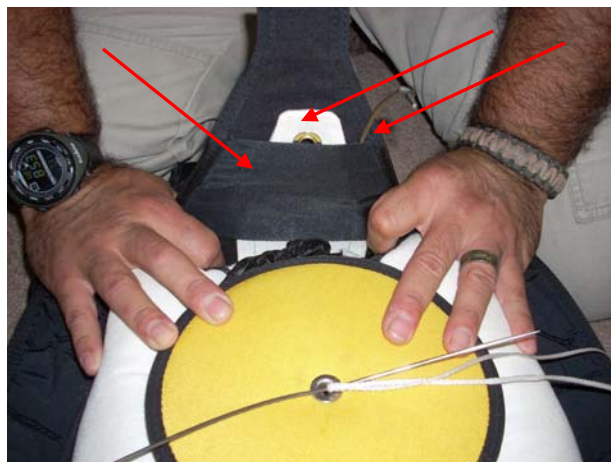


While compressing the Pilot chute be sure to keep all of the pilot-chute material folded into the spring and secure with a temporary pin.



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 be 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.



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

RECOUNT THE TOOLS USED DURING THE PACKING.



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

The **Wings** Harness/ Container ready for the Main Parachute to be packed.

4.3.3 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 12.



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.



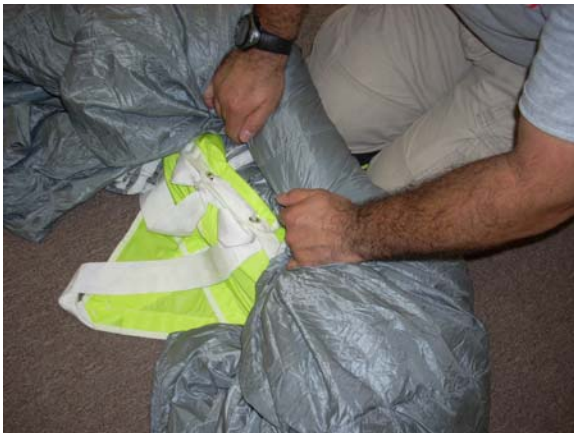
"S"-fold the canopy over onto itself once again.



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.

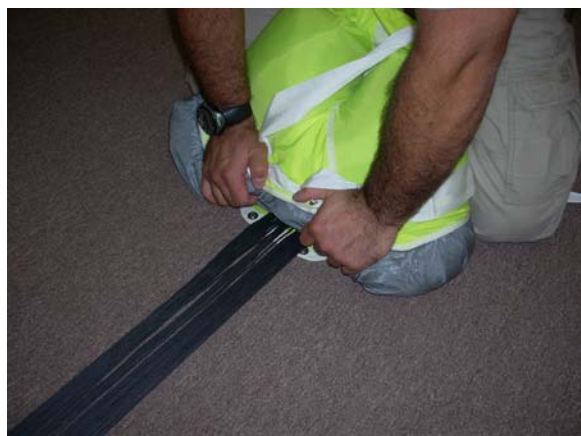


Grasp "ear" and "S"-fold it on top of itself.



Place into the Free-bag.

Repeat the other side "ear".



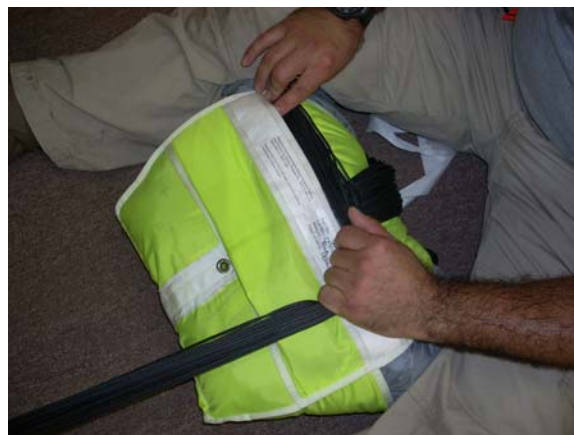
Fold the Free-bag over the canopy in order to close with the safety stow.



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.



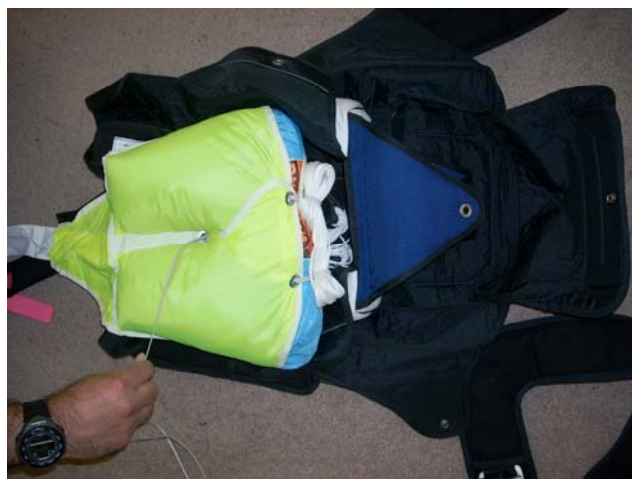
Carefully lift the Free-bag.

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

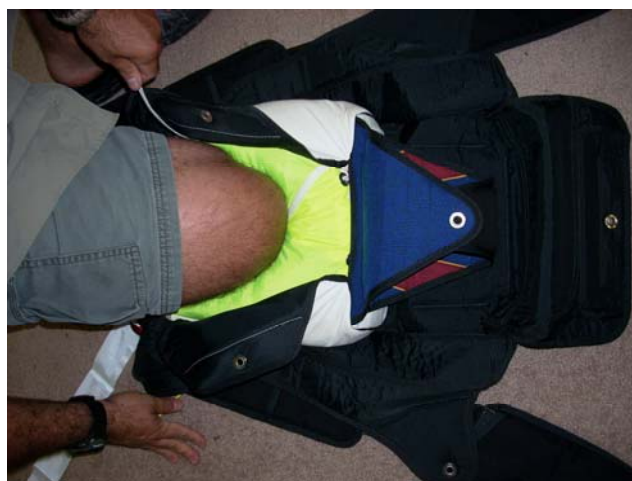


Flip the Free-bag over to the bottom of the Reserve Container.

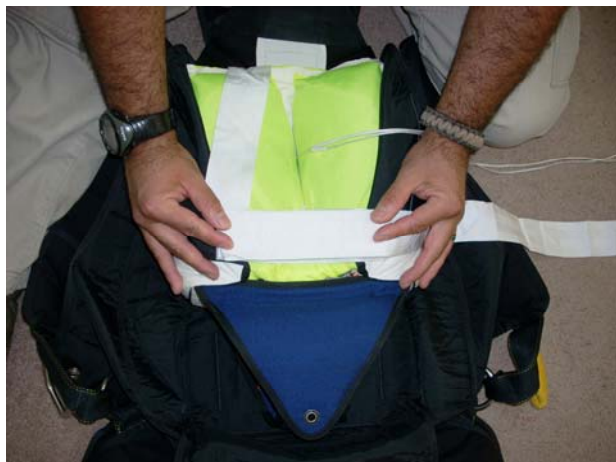
Do **NOT** twist the lines.



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.

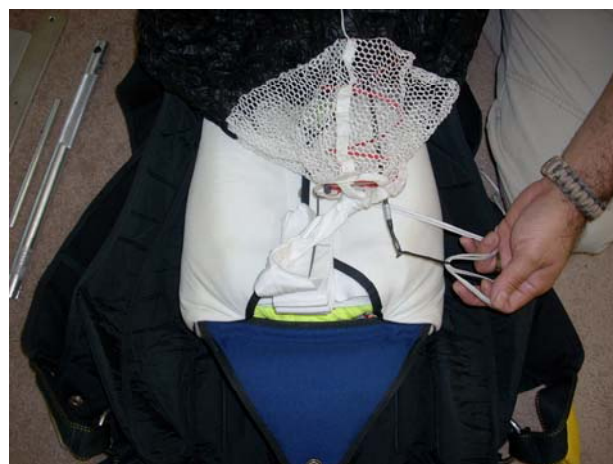


Close the Left Side Flap then the Right Side Flap.

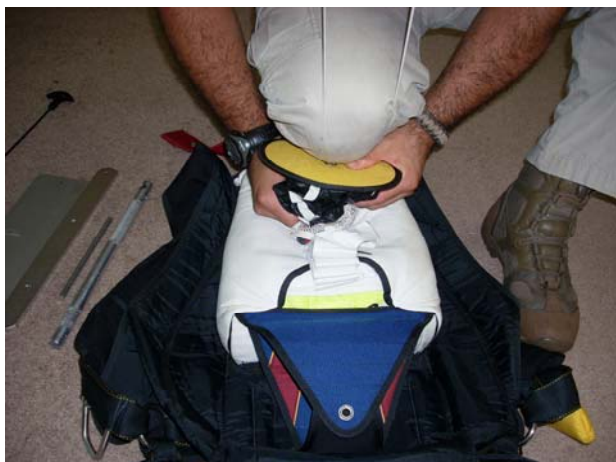
Secure with a temporary pin.



"S"-fold the remaining Bridle as shown.



Pull the pull-up cord through the pilot chute.

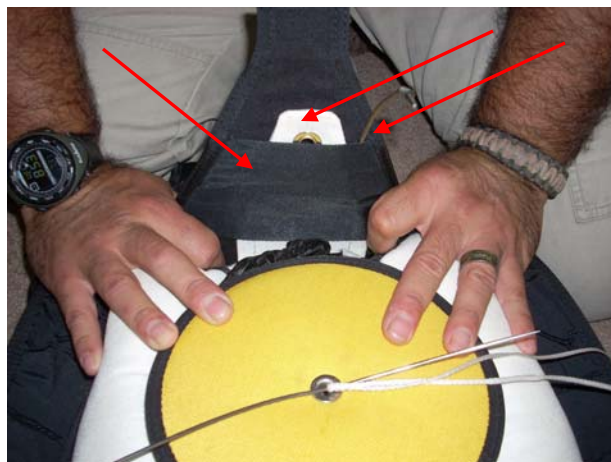


While compressing the Pilot chute be sure to keep all of the pilot-chute material folded into the spring and secure with a temporary pin.



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.



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

RECOUNT THE TOOLS USED DURING THE PACKING.



The **Wings** ready for the Main Parachute to be packed.

4.3.4 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.

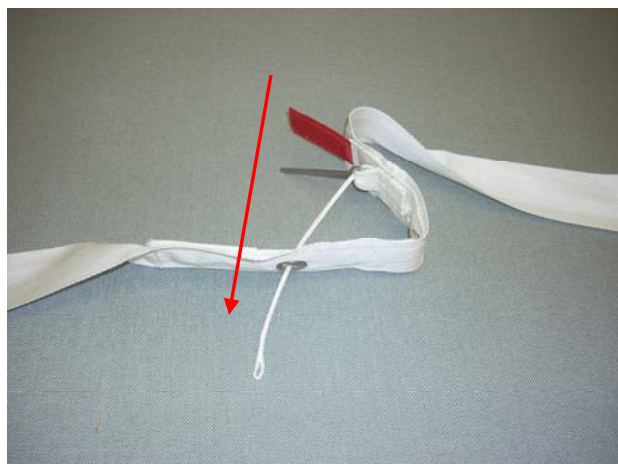
Fold the Bridle back towards the top of the container.



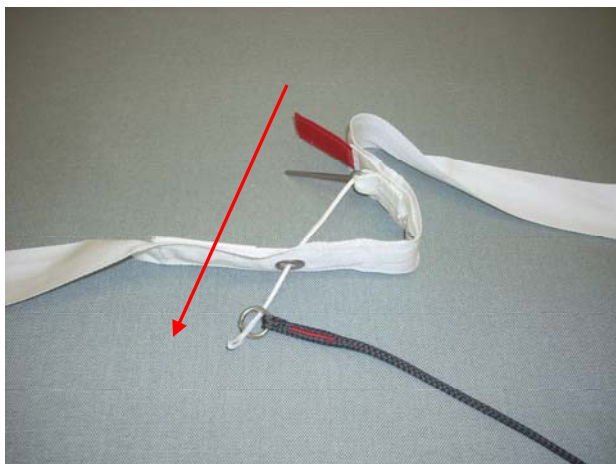
Tuck the folded Bridle under the Side Flaps.

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

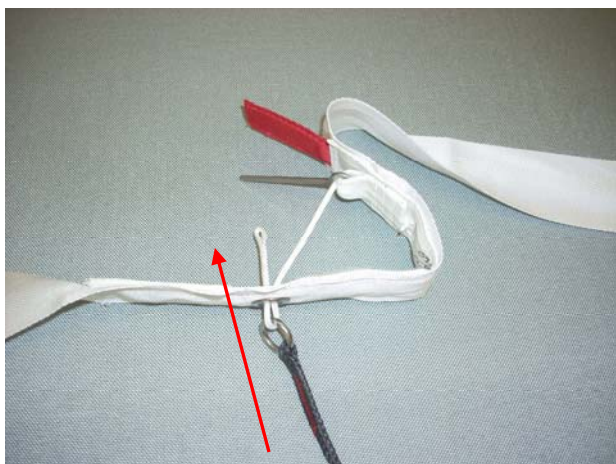
Keep the Bridle to the left side of the center of the Free-bag.



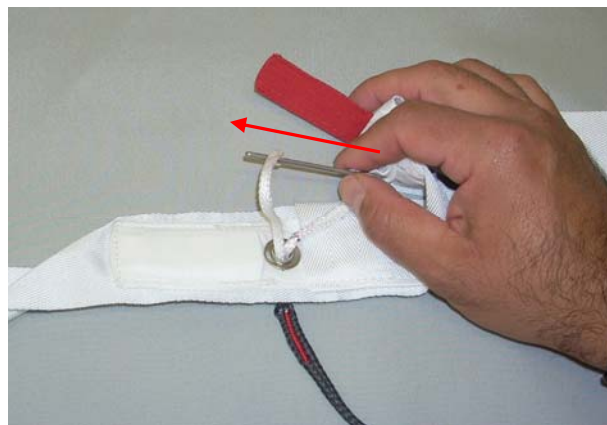
“Arm” the M.A.R.D. **“Reserve Boost”** at this time by passing the Spectra Line Loop down through the #0 grommet.



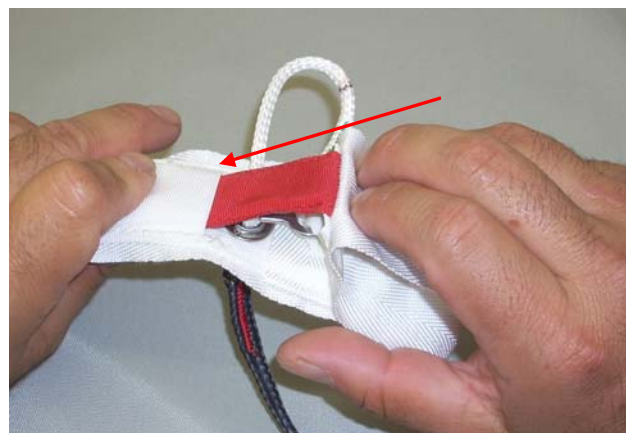
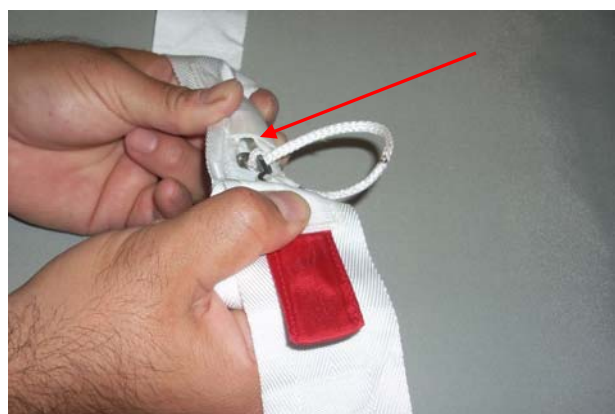
Pass the Spectra Line through the mini ring of the M.A.R.D. **“Reserve Boost”** RSL.



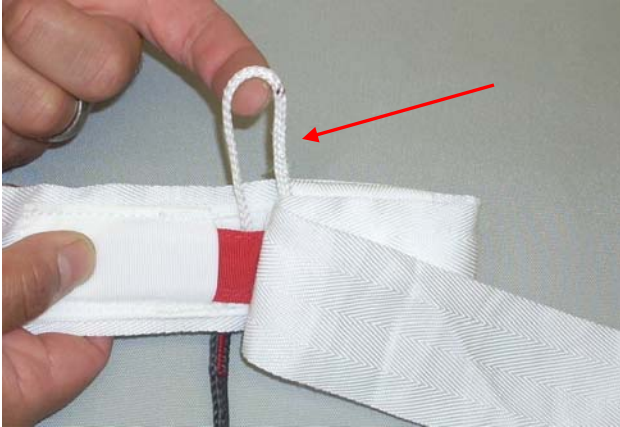
Loop the Spectra Line back up through the #0 grommet of the Bridle.



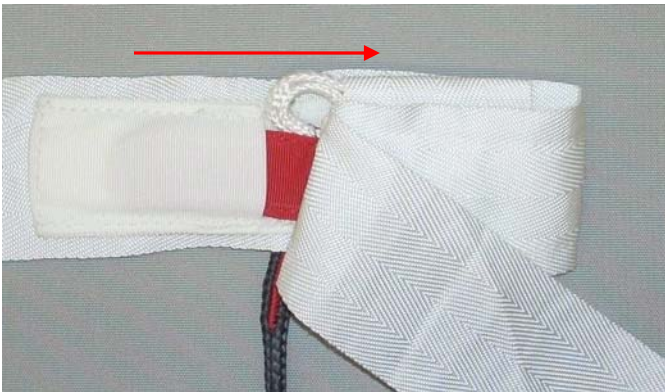
Slide the Long Pin through the loop then stow into the channel under the tuck tab channel. Be certain that it is in its own channel.



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.

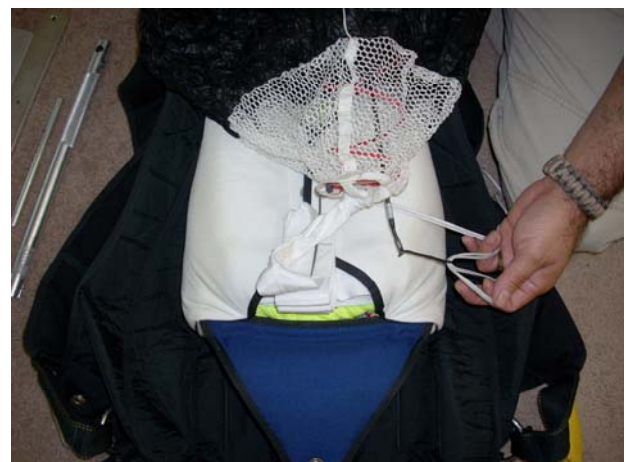


Tuck any excess RSL into the channel pocket on the top left side of the free-bag.

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



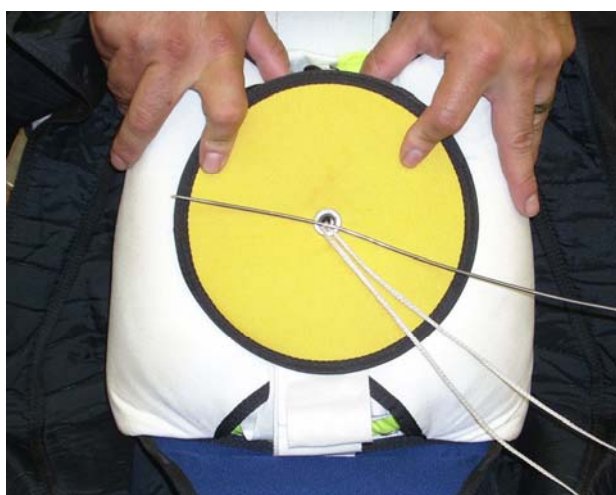
Close the side flaps. Secure with a temporary pin.



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.