

Advance

OWNER'S MANUAL

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Advance container system

Table of contents

Introduction	page 3
Parts list	page 4
Main packing instructions	pages 5-7
Throw-out and Pull-out packing instructions	pages 8-9
Reserve packing instructions	pages 10-14
Closing the container with and without R.S.L.	page 15
Closing the container with the S.O.S. system	page 16
The R.S.L. system	pages 17-19
View of R.S.L. and handles	page 20
The S.O.S. system	page 21
The 3-rings release	page 22
Before using the Advance	page 23

Introduction

Parafun has become the third French manufacturer with the Advance container system. Advance is a new generation of container system with many innovations, its name proves it. The reserve container is characterized by the no side flaps technology and it's partially exposed reserve pilot chute. The no side flaps improve the extraction of the reserve free bag and limit the container closing mistakes. When you look at the Advance, what you see is, the reserve free bag itself, reinforced with the same material which the container is built. The strength of it in case you are dragged on the ground after landing is exactly the same as any other brand of container.

The reserve free bag is protected on its laterals and top sides to avoid any catching with the main risers.

The Advance container system is equipped with the 3 ring release system. Other standard features include kill line throw out or pull-out pilot chute, hip rings, no velcro toggles and risers with front loops. The harness is available in 2 types of webbing, type 7 or type 8.

The R.S.L. and S.O.S. systems are also innovations of the Advance container system. Descriptions of these options are explained further in this manual. These 2 systems must not be used together.

Design and testing of the Advance was accomplished over a period of 15 months, and has resulted in being one of the most innovating rigs on the market. We remind you that you have to be qualified to assemble and pack the Advance container system.

Advance offers you all these options at no extra cost:

Hip rings

No velcro toggles

Front loop risers

Custom harness size

Custom colors*

Kill line main pilot chute

L.E.S. or Stevens system

S.O.S. system or double action system (standard system) S.O.S cannot be installed with R.S.L.

* According to available list

The Advance container system has been tested in accordance with AS-8015B and EQ-530-03, and is approved under TSO C-23d, JTSO and French certification QAC 121 and EQ-530-03.

Parts List

The Advance container system is delivered with the following components:

- Harness-container
- Main risers with control toggles
- Main deployment bag with kill-line pilot chute installed
- Release handle
- Reserve handle
- Reserve free bag and bridle*
- Reserve Pilot chute**
- Reserve control toggles
- Main closing loop
- Reserve closing loop
- One extra main closing loop
- Rubber bands
- Owner's manual

All Advance equipment are manufactured Cypres ready.

No other components can be used with the Advance container system.

All components listed above are also available individually from Parafun and it's official dealers.

Advance limatations of use are 110 kg at 150 kts. Parafun cannot be responsible of a use over theses weight and speed limits.

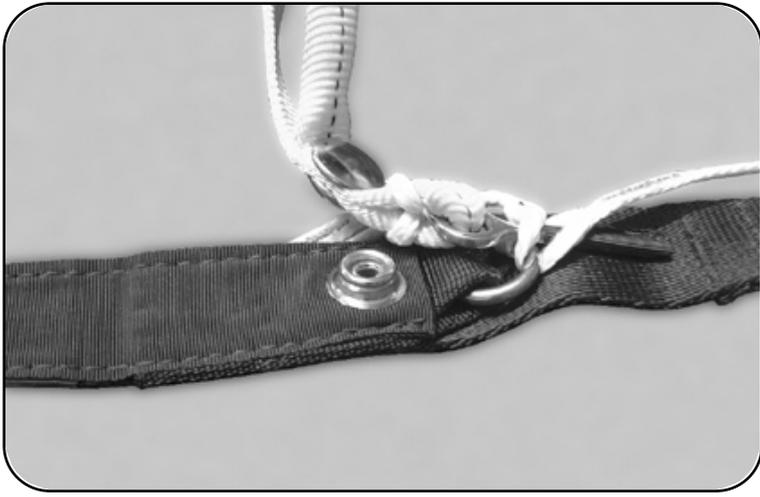
* Only the Advance reserve free bag can be used with the Advance container system.

** Only the Advance reserve pilot chute can be used with the Advance container system.

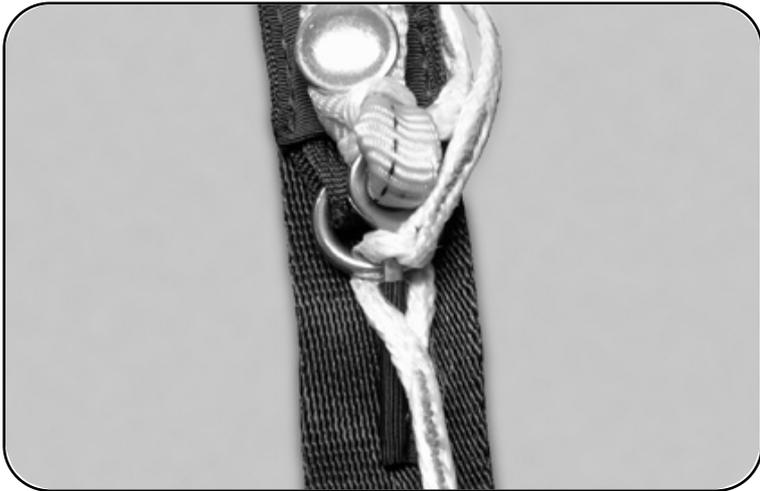
Advance main packing instructions

This chapter deals with the procedures for packing the main canopy into the Advance container system. Assembly and packing of the main canopy must be done by a qualified person or by the person making the jump. These persons must follow the canopy manufacturer instructions for the assembly and the packing. Parafun cannot be responsible of a misrouting of the canopy on and into it's Advance container system.

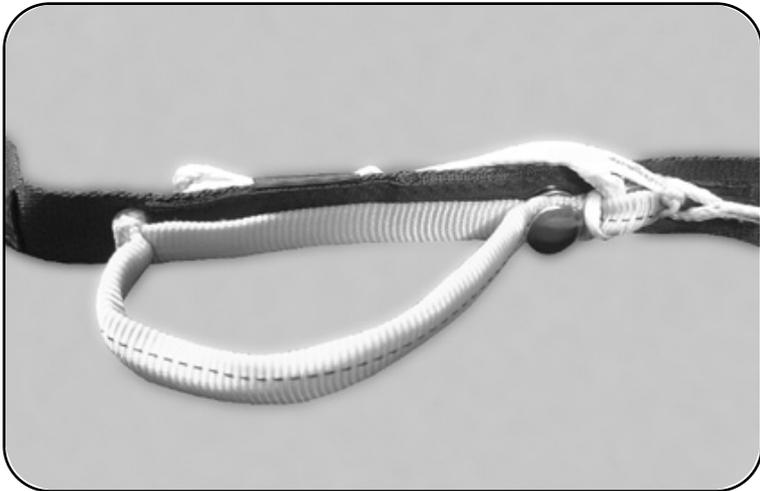
- 1) Carefully inspect the main canopy, suspension lines, control lines, slider and grommets, connector links and other parts of the main before assembling it with the risers. Replace or repair any worn or damaged parts. Also, inspect the deployment bag, bridle, and pilot chute.
- 2) Attach the main canopy to the main risers, being sure that the canopy is facing the same direction as the container system, and that each suspension line is clear from its attachment point all the way through the slider grommet to the connector link without passing around any other line. Be sure the control lines are clear from the trailing edge of the canopy through the slider grommets and through the ring guides on the rear risers to the control toggles. Each control toggle must be securely tied to its control line at the location specified by the canopy manufacture. Also be sure that the connector links are tight enough so that they cannot be loosened with the fingers alone.
- 3) Attach the connector link of the main bridle (located into the main bag) on the ring located at the top of the main canopy and tighter it enough.



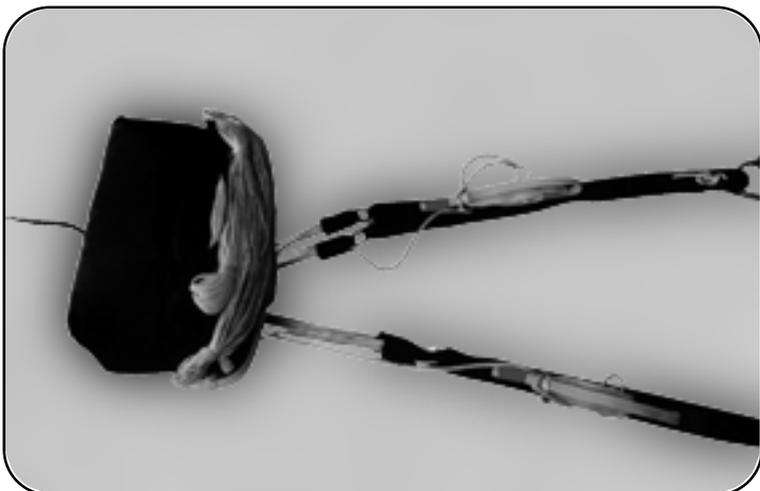
Set the deployment brakes on each side by pulling the control line down through the guide until the brake loop passes through the guide ring.



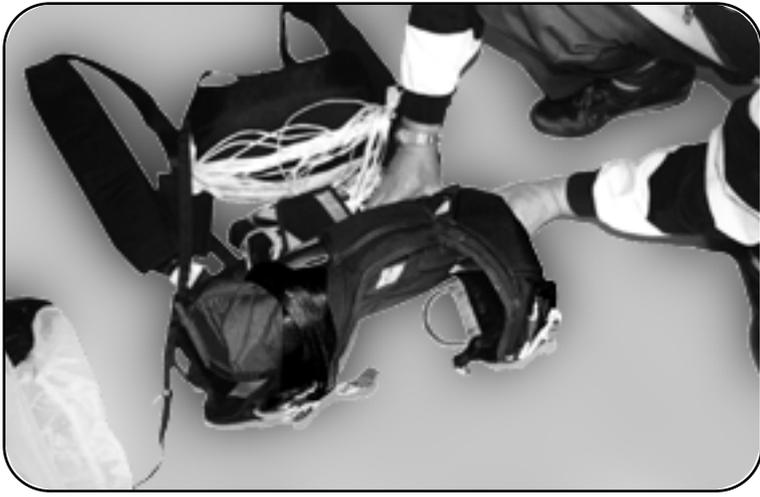
Insert the stiffened upper portion of the toggle through the loop and pull it back up tightly against the ring guide. Insert the top of the toggle into its locking stow.



Insert the lower part of the toggle into its locking stow. S-fold the slack into the red tape.



At this point, refer to the directions by the canopy manufacturer for packing it. After the packing into the main bag it must resemble this picture.



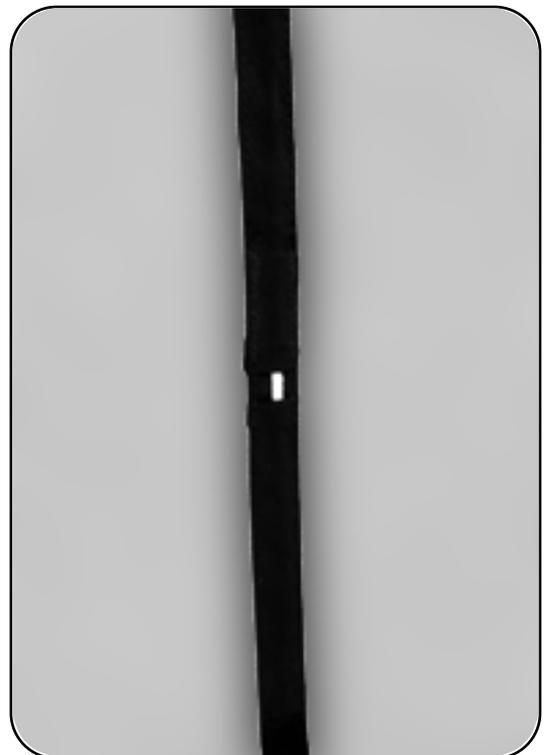
Lay the risers in the trough between the sides of the reserve container and the risers covers. Close the risers covers and stow the risers straight on the side of the reserve container.



Place the main bag into the container with the line stows toward the bottom. This position is important; if the line are toward the top, it may be more difficult for the pilot chute to extract the bag. Also the lines can wrap around the main closing loop. Be aware to not have any line over the closing loop. The main bridle must be routed to the right of the closing loop as shown.



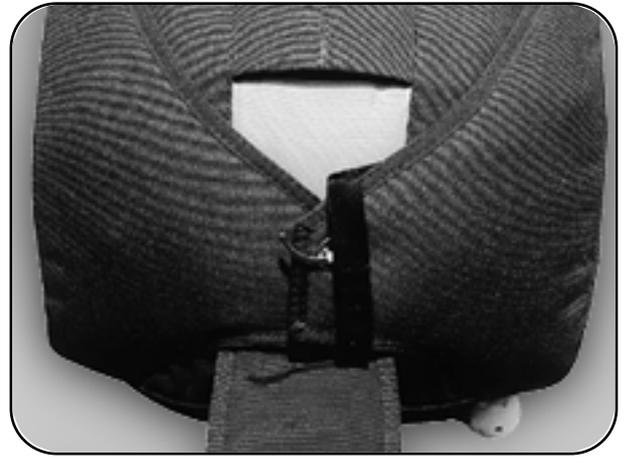
At this point, cock the system of the kill line main bridle pilot chute.



The colored mark must be visible in the window. If not cock the system.



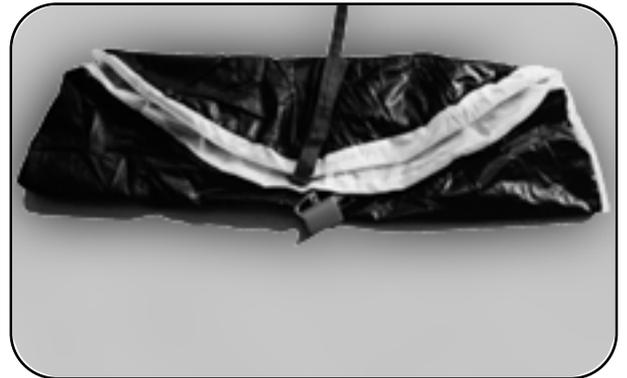
Thread the pull-up cord through the closing loop and bring the closing loop over the top of the bag. Thread the pull-up cord through the bottom flap grommet and close the bottom flap. Close the top flap, keeping the bridle to the right. Mate the velcro on the bridle to the velcro on the top flap. Close the left sideflap then the right side flap, inserting the curved pin into the closing loop. Remove the pull-up cord.



The completed closing phase must look like this photo. Tuck about 20 cm of the bridle under right side flap being sure to make it snag proof and secure.



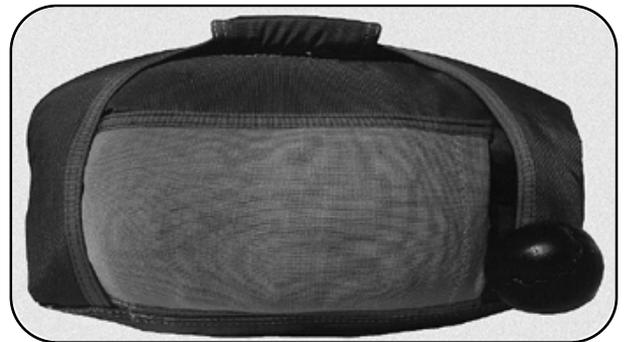
Lay the pilot chute out flat with mesh side up. Fold the excess bridle on top of the layed out parachute, and fold the pilot chute in half over the bridle.



Now fold the curved side up about 10 cm. Fold the bridle twice. Keep some slack between the bridle and the handle stick.



Fold the pilot chute into thirds, and then roll it tightly into a cylindrical shape. Tuck the slack of bridle into the pouch, then tuck the pilot chute. Lay the pilot chute into the pouch.



The handle must be set at the opposite side as the bridle is to ensure an easy grip. The bridle is set under its special cover at the right hand corner of bottom flap.

Closing the Advance container with a pull-out opening system

AT FIRST COCK THE KILL LINE OF THE PILOT CHUTE

- 1) Mate the velcro from the pull-out pad, with velcro under pull-out pad cover located at the right hand corner of bottom flap.
- 2) Thread the pullup cord through the closing loop and lay it back across the reserve container temporarily to keep it out of the way. Arrange the bridle in folds 15 to 20 cm long, and lay the folded bridle across the upper part of the bag. Be sure not to tuck these folds down between the bag and the bottom of the reserve container. To do so may retard the action of pilot chute.
- 3) Loosely fold the pilot chute and lay it across the bag.
- 4) Close the bottom flap, then the top flap, securing the closing loop with the pin.
- 5) Close the left side flap, then the right side flap, securing the closing loop with the pin.
- 6) Tuck the slack in the tape under the right side flap.
- 7) Close the top flap protector by tucking it underneath the flaps.

Reserve packing instructions into the Advance container system

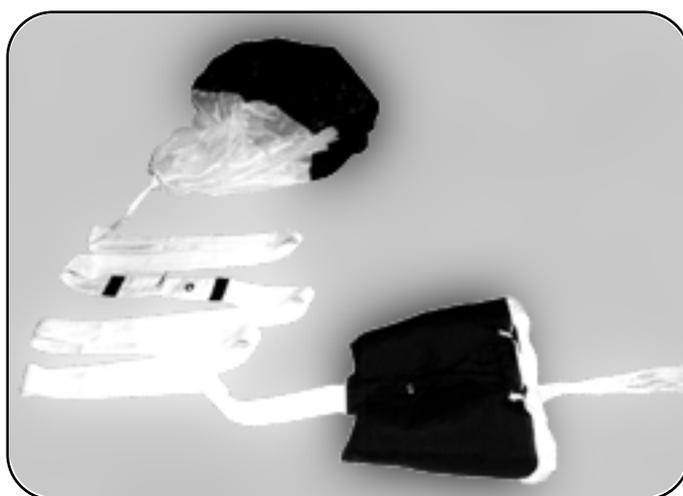
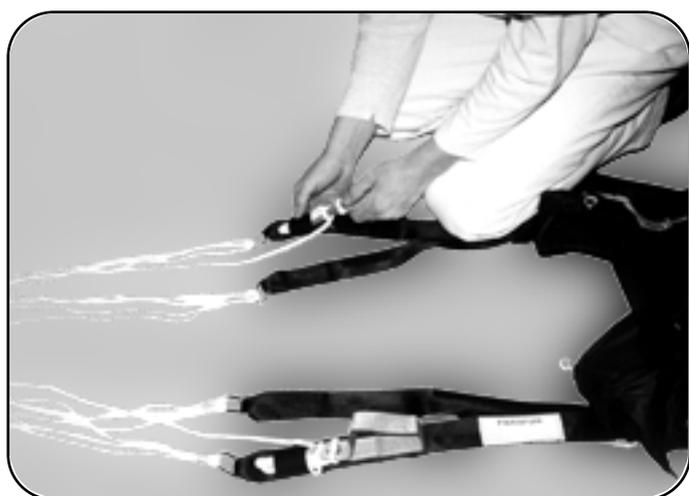
This chapter deals with the procedures for packing a ram air reserve canopy into the Advance container system. Assembly and packing of the reserve must be accomplished by a certified rigger, or by the manufacturer of the Advance container system. Before starting to pack using your riggers log book copy down the type of canopy, S/N and DOM from canopy data panel.

Required tools:

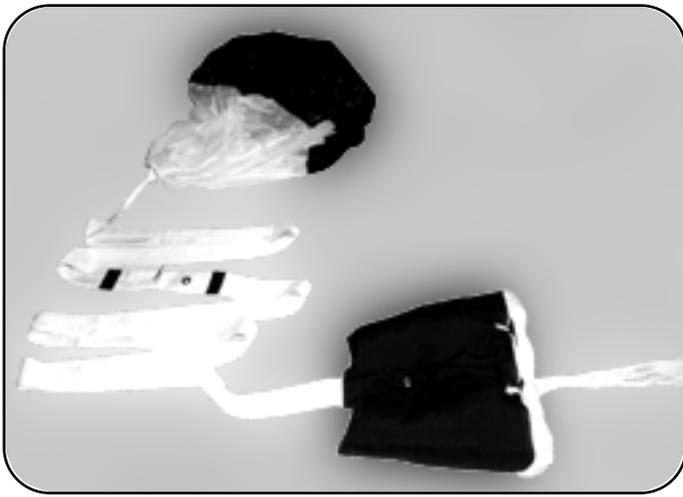
One temporary pin (with warning flag attached), One pull-up cord (120 cm minimum length), One packing paddle or long bar, One T bar, Two 15 cm strips of 2,54 cm velcro loop, The closing loop must be from 6 cm to 6,5 cm long.

Make a thorough inspection of all components of the reserve parachute. Reserve pilot chute, Reserve bridle, Free bag, Reserve canopy, lines, slider, connector links, Harness and container system. Follow the canopy manufacturer's directions for the inspection, attachment to risers, routing of control lines, attachment of control toggles, setting deployment brakes, and for flaking and folding the reserve canopy. Parafun highly recommends the Pro-pack for all ram-air reserves packed into the Advance container system. This Pro-pack can be done in different maners.

This manual is not done to explain to you how to pack a reserve canopy but how to set the free-bag into the Advance container system. But, because of the new shape of the reserve container it is important to fill both the upper corners and the bottom of the free-bag as much as you can. Avoid to have a lot of material on the sides of the free-bag. This filling must be symmetrical and will help you to have a good secure hold of the two upper side closing devices.



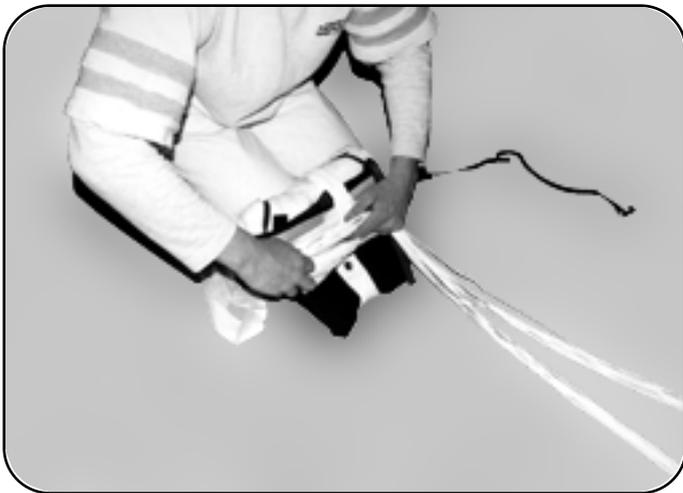
Set the deployment brakes on each side by pulling the control line down through the guide until the brake loop passes through the guide ring. Insert the stiffened upper portion of the toggle through the loop and pull it back up tightly against the ring guide. S-fold the slack between the toggle and the brake-set, and stow it under the elastic located on top of the guide ring. Mate the velcro on the toggle with the velcro on the riser.



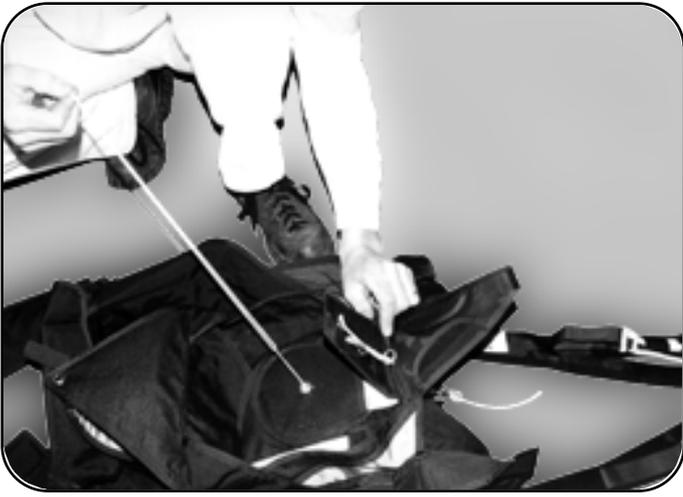
Place main bulk of canopy on each bottom side of the free bag. Lock the mouth of the free-bag by making two stows with the suspension lines in the safety stow.



Stow the remainders of the suspension lines in the line-stow pouch on the back of the bag. This is where it is useful to use the velcro strips mentioned in the list of tools. Cover the hook velcro on the pouch with the strips of loop velcro while stowing the lines into the pouch. Make S folds on the lines the full width of the pouch.



Leave a slack of 40 cm from the free bag to the risers. Remove the strips of loop velcro and mate the velcro at the mouth of the pouch, being sure that none of the suspension lines are trapped by the closure.



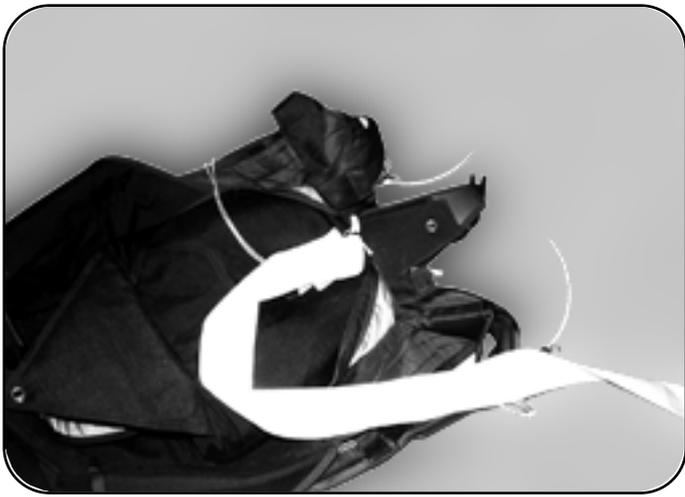
Prepare the reserve container. If the Cypres is installed, pass the reserve closing loop through the Cypres cutter, and then the pull-up cord through the reserve closing loop.



Lay the reserve risers in the container so that the connector links are in the lower corners of the container. Thread the pull-up cord and the reserve closing loop through the grommet of the free-bag.



Lay the bag in the container with the line stow pouch on the under side. Lay the line protection flap located on the bottom part of the reserve container on the free-bag. Secure with the temporary pin.



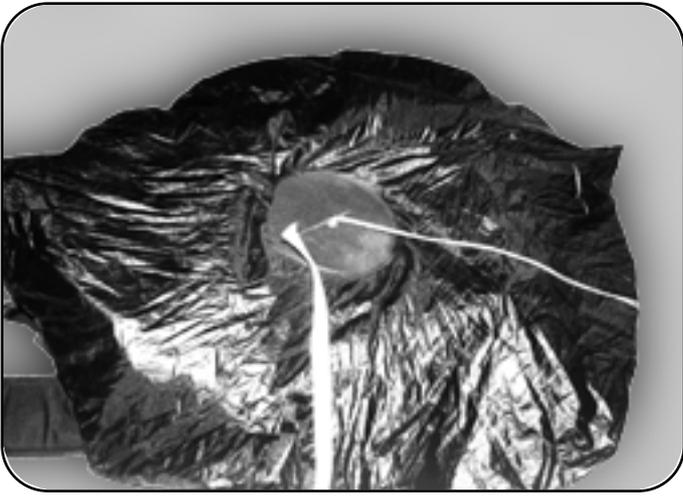
The bridle must stay toward the reserve container. S fold 30 cm of bridle up and down on the free-bag. Close the two upper closing devices by setting them over the two corners of the free-bag. Pass the elastic through the grommet and secure it with 3 cm maximum of the free bag bridle after giving a triangle form to the bridle. Always keep the bridle toward the reserve container to avoid any misrouting on the closing procedure.



Make two folds up and down right over the closing system. For the Advance container system equipped with the R.S.L. system report to pages 15 to 18.



“S” fold the remaining free-bag bridle up and down both sides of the temporary pin and pull-up cord. Pass the pull-up cord through the pilot chute and out through the top plate. Be careful to not pass through in and out the springs.

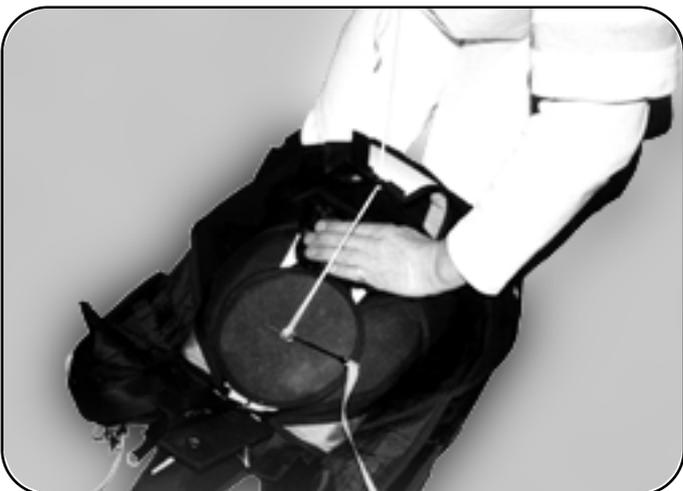


Seat the lower end of the pilot chute on top of the free-bag grommet and bridle, keeping the pull-up cord tight, compress the pilot chute and lock it with the temporary pin. Now pull all the fabric out from under the top plate so that the pilot chute canopy makes a circle. At this point check the length of the closing loop. If the pilot chute top plate can rock back and forth or from side to side, the loop is too long. Shorten the loop so

that when the pilot chute is compressed and locked with the temporary pin, the top plate will be firmly seated in the nest formed by the shape of the free-bag.

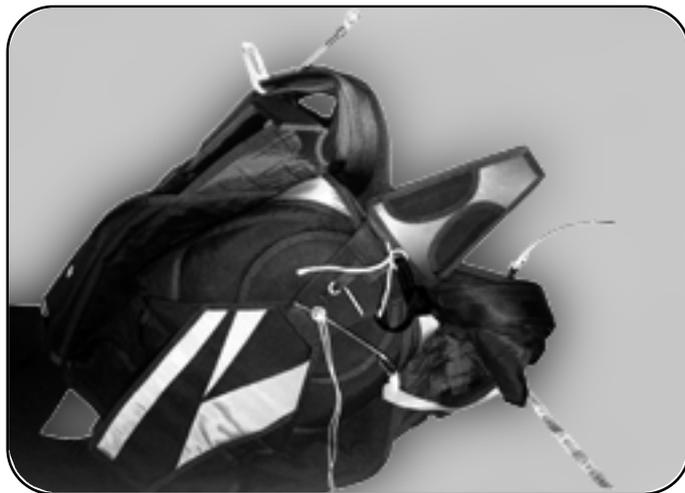
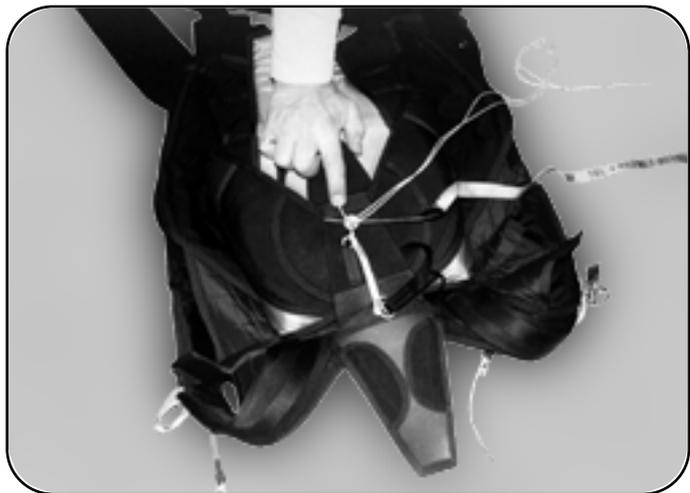


Fold or roll the pilot chute fabric at the top of the pilot chute parallel with the top of the container, and push this roll under the top plate of the pilot chute. Draw the rest of the pilot chute fabric down the sides of the pilot chute top plate pushing the excess fabric under the pilot chute top plate. Fan out the pilot chute fabric, so that it extends wider than the bottom flap.



Be sure to keep the point of the fan narrow and tight to the middle of the bottom of the pilot chute plate. Close the bottom flap and secure it with the temporary pin.

Close the top flap and secure it with the temporary pin. Push the side tuck flaps under the ears of the bag.



1) Standard system.

Close the container with the reserve cable pin. Remove the temporary pin.



2) Standard system with the R.S.L.

Pass the reserve cable through the upper guide ring, through the R.S.L. ring, then through the lower guide ring. Close the container with the reserve pin. Remove the temporary pin.

Report to page 17th through 20th for more informations on how install the R.S.L.



3) With the S.O.S. system, no R.S.L.

Pass the S.O.S. cord and the yellow reserve cable through the guide ring by keeping them side by side. Set the yellow reserve cable first on the reserve closing pin then the cord second. Close the container with the reserve pin. Remove the temporary pin.

Setting with S.O.S. and R.S.L. systems like shown is forbidden



Do not forget to remove the temporary pin. Seal the reserve container and log the work on the packing data card and in your rigger's logbook. Place the completed data card in the pocket provided on the underside of the reserve top flap cover. Secure the top flap by inserting the tongue on each side under the top flap and into the lower flap.

Count your tools.

The R.S.L. System.

In the Winter of 1995, Eric Fradet invented an innovating système destined at first for the Base jumping. After an agreement with him, Parafun company decided to develop and commercialize this system that for us, today, is the most interesting in it's area. This system is a R.S.L. which allows an automatic opening of the reserve container after a cutaway of the main canopy (this cutaway has to be made at a sufficient altitude to allows the system to work). But, this is not the only goal of this system, it also extracts the reserve free bag for a quicker reserve opening . Until now the existing equivalent systems opened the reserve container, but nothing can guarantee the reserve free bag will get out. The Advance R.S.L. fills this gap because it ensures the extraction of the reserve bag, and by this suitable principle you will save many indispensable meters that you need.

This system doesn't replace the normal activation of the reserve handle. As any mechanical system, it might not work. Remember, you always need to make the full procedure, cutaway the main and activate the reserve. For the few cases where immediate reserve activation may not be desired, the Advance R.S.L. features a quick-release which can be used to disconnect it. This quick release consists of a snap-shackle which is normally attached to a small ring on the inboard side of the left main riser. Release of the snap-shackle is accomplished by a quick tug on the red ribbon attached to the release ring.

Some jumpers feel that the R.S.L. should not be connected during Canopy Relative Work, preferring to disconnect from the main and then fall free of a "wrap" before deploying the reserve. Also, if winds are high, the jumper may disconnect the main canopy after landing to avoid being dragged. In this case the quick-release can be used prior to landing to prevent an unnecessary activation of the reserve.

Assembling the R.S.L.

There are two rings mounted on the reserve top flap near the end of the ripcord housing. After installing the reserve ripcord in the housing, the cable must be passed first, through the upper guidering, then through the R.S.L. ring, located at the end of the R.S.L. bridle and at last through the lower guide ring. It is important to assemble the cable with the rings in this exact order.

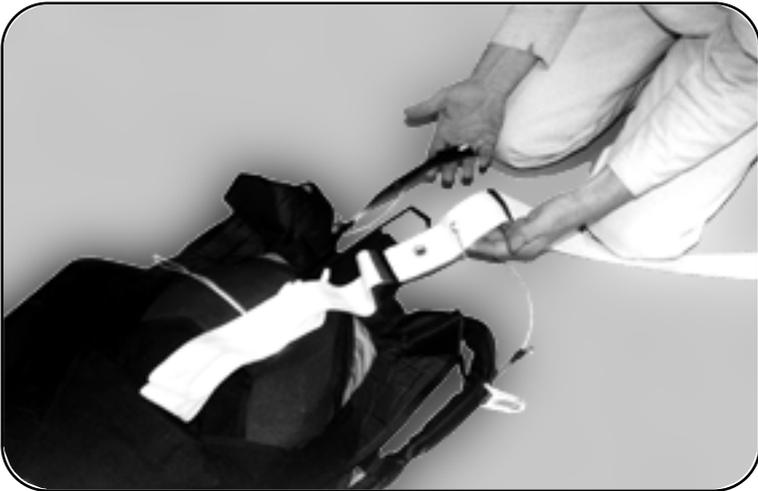
Before the reserve container is closed, the R.S.L. bridle must be routed out from under the reserve pin cover at the upper left. The velcro of the R.S.L. bridle should be mated to the velcro on the left reserve riser to bring the bridle over the shoulder. Then the snap-shackle can be connected to the small ring behind the inboard side of the left main riser. There should be enough slack in the R.S.L. bridle so that the main riser can be pulled in any direction without putting any tension on the reserve riser. Any slack in the R.S.L. bridle near the reserve pin cover must be tucked under the reserve top flap.

Caution

Although the R.S.L. is considered to be very dependable, it is only a backup, and should never be relied upon entirely for activation of the reserve. In the event of a breakaway or cutaway, the jumper should follow through by pulling the reserve ripcord handle as if there was no R.S.L. It must also be understood that the R.S.L. will not operate in the event of a total malfunction of the main canopy. It must be not installed with the S.O.S. sytem.



The velcro of the R.S.L. bridle should be mated to the velcro on the left reserve riser to bring the R.S.L. bridle over the shoulder.



Take in one hand the extremity of the bridle on which is found the velcro and the whiteloop. With the other hand, hold the reserve free bag bridle where the R.S.L. system is set.



On the velcro side, mate the two velcros together, and pass the white loop through the R.S.L. grommet.



Secure the white loop with the closing pin and pass it through the pin keeper.



The mounting must match this photo.



The mounting must match this photo.



Fold the free bag bridle on itself and mate the velcros.



Lay the system on the upper part of the reserve free bag right over the two upper closing devices. Report to page 13th to 16th to install the reserve pilot chute and close the container.

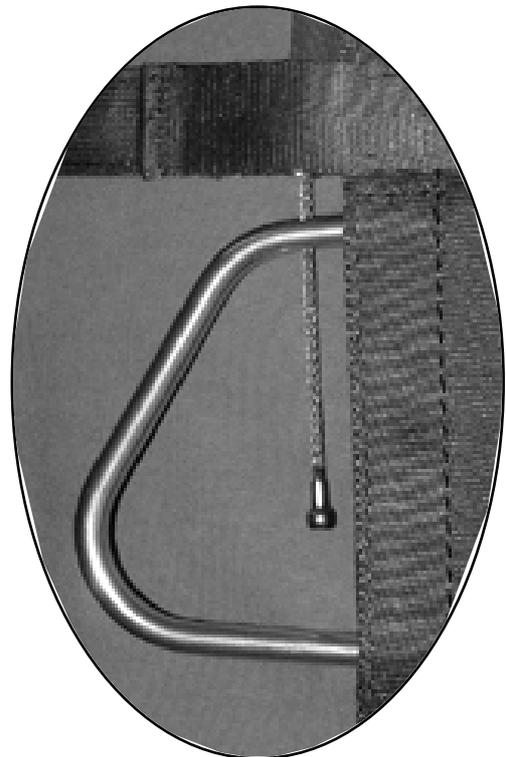


Connect the R.S.L. snap-shackle to the small ring or loop, behind the inboard side of the left main riser. Your R.S.L. system is activated. To disactivate it, disconnect the snap-shackle

View of the Breakaway handle



View of the reserve handle with is security cable slack



The S.O.S. System

Everybody knows the existence of this system which allows to cutaway the main canopy then open the reserve with the same handle. This kind of system is not completely accepted because it has its own problems like the possibility of the entanglement of the reserve if the riser(s) still connected to the harness after the cutaway. Really, how many people have been facing this situation and how many people never pull the reserve handle?

This S.O.S. system on the Advance container system is a completely new concept. The breakaway handle is identical to a classic cutaway handle, on the former are installed 2 elements. A sleeve swage and a sliding lanyard. These two elements are installed on the left cutaway cable. The goal of the swaging sleeve installed on the left cutaway cable is to push the sliding lanyard at a precise moment to open the reserve container. The placement of this swage sleeve is very precise and it is formally forbidden to displace it or to install it by yourself.

The sliding lanyard is a loop both ends lanyard. The upper loop end has the cutaway yellow left cable passing through and the lower loop end has the reserve closing pin passing into it and securing the reserve container.

When you cutaway the main canopy, everybody knows that the last cable to cutaway is the left one. This is the reason why the system is mounted on this cable. At the cutaway action the swage sleeve will push the sliding lanyard only when the left cable has been disconnected from the left riser. At this moment the sliding lanyard will pull the reserve closing pin and activate the reserve container opening.

Only Parafun company is authorized to install this system on its rigs.

The reserve handle is still at the same position and has the same action as on any rigs on the market. This allows you to activate the reserve in case of a total malfunction and so keeps your habits on the cutaway and reserve activations.

Caution

Any rig has its own length of cables and its own specific swage sleeve placement. This is due to the container size and the yoke of the rig. Only the cutaway and reserve handles made for this rig can be used. After a cutaway do not use any other kind of handles.

In case you have chosen the S.O.S. system on your Advance container system.

Do not pull the breakaway handle before having inserted a temporary pin to prevent accidental opening of the reserve container. The breakaway handle of the S.O.S. system and its cables must be set before closing the reserve container. The S.O.S system must not be installed with the R.S.L. system.

THE 3 RINGS RELEASE SYSTEM

The periodic maintenance of the 3 rings release system is strongly recommended. This maintenance has to be performed every month.

- 1) Extract the cable completely from its housing and disconnect the risers.
- 2) While the system is disassembled, closely inspect it for wear. Check the white locking loops to be sure they are not frayed.
- 3) Check the velcro on the breakaway handle and main lift web to be sure it is clean and adequately holds the handle.
- 4) Check the cable ends for a smooth finish. The ends are finished at the factory to have a smooth, tapered surface. This prevents the cable from hanging up in the loop. Check the cable ends and consult a rigger or manufacturer if a burr or hook is present.
- 5) Check the stitching, including that which holds the large rings to the harness.
- 6) Pull downward on the housings. They shouldn't move downwards more than 1,30 cm.
- 7) Take each riser and vigorously twist and flex the webbing near where it passes through each ring. The idea is to remove any set or deformation of the webbing. Do the same thing to the white loop.
- 8) Check the housings for dents or other obstructions. Use the cable to do this.
- 9) Clean and lubricate the release cable with a light oil such a 3 in 1 brand. Put a few drops on a paper towel and firmly wipe the cable a few times. A thin, invisible film should remain, too much will attract grit and dirt, or the oil could become tacky in cold weather. Too much oil will require more force to extract the cable during a breakaway.
- 10) Inspect the fittings at the end of each housing. If one of these fittings were to come off the housing, a riser might release prematurely.
- 11) If any wear is found, consult a rigger of the manufacturer before using the Advance.
- 12) Reassemble the system. Double check it. Make sure the risers aren't reversed. Only the risers provided by Parafun are allowed to be installed on the Advance harness/container system. It is formally forbidden to modify or to use any other types of risers.

Assembly of the 3 rings system

- 1) Thread the cable into its housing and stick the handle to the harness. The handle should be positioned as close to the ends of the housings as possible so that no cable is exposed.
- 2) With the rings of the riser facing toward the floor, pass the ring on the end of the riser through the large harness ring from above. Fold it back toward the canopy and risers.
- 3) Thread the smallest ring through the middle ring in the same way, but make sure it doesn't pass through the large ring.
- 4) Bring the white loop over the small ring only and then through the riser grommet so it pokes out at the back of the riser.
- 5) Continue threading the white loop through the grommet on the end of the cable housing. The flat side of the cable housing grommet should be against the riser.
- 6) Thread the yellow cable through the white loop, making sure the loop isn't twisted. Be careful with the cable so you don't bend it too sharply or kink it. Insert the free end in the channel on the back of the riser.
- 7) Repeat the above steps with the other riser.

Periodic Maintenance of the Advance container system

Before using the Advance container system you must read this manual and proceed to the following checks. These checks must be done at least once a month or after 50 jumps. The maintenance must be done by a qualified person (up to the country of use regulations).

Velcros, spandex pouch and reserve elastic closing system

Main and reserve closing loops

Harness, all webbings, chest strap and leg straps

Sewings of the container and the harness

Routing of handles, cables and bridles

Housings and cables

Main pilot chute and bridle

3 rings system

Main risers

All the hardware

Grommets

Main deployment bag

R.S.L or S.O.S. systems if mounted on your rig

We thank you for choosing the Advance system, and we
hope for your continued confidence
in Parafun sarl.

Maintenances and repairs

Length of the reserve closing loop

From size “Z” to size “2”, the length of the closing loop must be set between 7 and 7,5 cm.

From size “3” to size “4”, the length of the closing loop must be set between 8 and 8,5 cm.

Rigging and maintenance

They are set in 2 categories:

1) Class 1 repair

Everything can be done by a certified rigger except the following:

Harness - reserve container and all parts identified as a “Part Number” and listed into the capability list (reserve bag - reserve pilot chute - main risers - reserve ripcord).

2) Class 2 repair

All work on the harness and reserve container must be done by the manufacturer. Nobody is allowed to do it so.

Only raw material allowed by Parafun must be used.

Only the spare parts with a Parafun “Part Number” and listed on Parafun capability list are allowed to be used with the Advance System since February the 1st 2000.

