

SUN PATH PRODUCTS INC.  
HARNESS AND CONTAINER SYSTEM (JA-101)  
OWNER'S MANUAL



MANUFACTURER OF FINE PARACHUTING EQUIPMENT  
SINCE 1987



Sun Path Products Inc. requires that all of our products are used in accordance with the Basic Safety Requirements that are outlined by the governing or controlling parachute body of the country in which the equipment is to be used.



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# SUMMARY OF CHANGES

## Rev. 0 to Rev. 1

- Added Harness/Container System Part Number to Front Cover
- Updated Average Test Peak Forces Measured (Page 5)
- Updated Table of Contents
- Added Sun Path Approved AAD List (Located on Page 2-14)
- Updated Supplied Parts with Newest Split Lanyard RSL (Page 2-2)
- Updated Lanyard Pictures (Page 2-6)
- Updated Pictures of Routing Sky Hook RSL/Collin's Lanyard (Page 2-7)
- Added Cutaway Cable Close Up Photo of Collin's Lanyard (Page 2-8)
- Added Photo of NEW Floor Plate Diagram (as Figure 24 on Page 2-11)
- Updated Main Canopy Compatibility Chart (Page 4-4)
- Added New Section in Appendix for Sky Hook RSL Assembly for Containers Manufactured Prior to February 2015 (Begins on Page 6-2)
- Added New Section in Appendix for Packing a Reserve without a Sky Hook for Odyssey Containers Manufactured Prior to February 2015 (Begins on Page 6-4)
- Added New Section in Appendix for Javelin Legacy Reserve Closing Instructions (Begins on Page 6-10)
- Added QR Code to Front and Back Covers to Allow Quick Access to the Manual on Sun Path Website

# JAVELIN INTRODUCTION



Thank you for your purchase of a Sun Path Products Inc. harness and container system! We appreciate your business and we are confident you will enjoy skydiving more than ever when you are jumping a Javelin or Javelin Odyssey. Read this manual and familiarize yourself with the assembly, packing, wearing and care of our products. Also make sure your rigger has this manual available when assembling, or re-packing your Sun Path harness and container system. This owner's manual is the first of its kind in skydiving offering not only a printed presentation of assembly, packing and wearing of our products but also an interactive experience where riggers and skydivers can watch video, and learn directly from our staff riggers and engineers how to get the most out of your new Javelin or Javelin Odyssey!

## WARNING

PARACHUTING IS A HAZARDOUS ACTIVITY AND THERE ARE INHERENT RISKS AND DANGERS WHICH SOMETIMES CANNOT BE FORESEEN OR PREVENTED. SERIOUS INJURY OR DEATH CAN RESULT FROM THE USE, MISUSE, OR ATTEMPTED USE OF ANY PARACHUTE EQUIPMENT. IN USING THIS EQUIPMENT, THE USER ASSUMES ALL RISKS OF SERIOUS BODILY INJURY OR DEATH; HOWEVER, YOU MAY SUBSTANTIALLY REDUCE THESE RISKS BY:

1. ASSURING THAT EVERY COMPONENT OF THE PARACHUTE SYSTEM HAS BEEN ASSEMBLED AND PACKED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S INSTRUCTIONS;
2. OBTAINING PROPER AND THOROUGH INSTRUCTION, BY EXPERIENCED AND QUALIFIED INSTRUCTORS, IN THE USE OF ALL OF YOUR EQUIPMENT, INCLUDING THE SUN PATH PRODUCTS, INC. ("SUN PATH") HARNESS AND CONTAINER SYSTEM;
3. OPERATING THE EQUIPMENT IN STRICT COMPLIANCE WITH MANUFACTURERS' INSTRUCTIONS AND RECOMMENDATIONS AND SAFE PARACHUTING PRACTICES AND PROCEDURES.

PARACHUTE SYSTEMS, HOWEVER, SOMETIMES FAIL TO OPERATE PROPERLY, EVEN WHEN PROPERLY ASSEMBLED, PACKED AND OPERATED, SO YOU RISK SERIOUS INJURY AND DEATH EACH TIME YOU USE THE PARACHUTE SYSTEM, INCLUDING THE SUN PATH HARNESS AND CONTAINER SYSTEM.

# DISCLAIMER OF WARRANTIES

PARACHUTE JUMPING INVOLVES DANGEROUS ACTIVITIES, AND THERE ARE KNOWN AND UNKNOWN RISKS INVOLVED EACH TIME YOU MAKE A PARACHUTE JUMP. YOU CAN BE SERIOUSLY AND PERMANENTLY INJURED, OR EVEN KILLED AS A RESULT OF YOUR PARTICIPATION IN PARACHUTE JUMPING.

THERE IS NO WARRANTY THAT THE EQUIPMENT WILL FUNCTION AS INTENDED, REGARDLESS OF HOW WELL IT IS ASSEMBLED, PACKED, MAINTAINED OR USED. SERIOUS INJURY OR DEATH CAN RESULT FROM THE USE, MISUSE OR ATTEMPTED USE OF ANY PARACHUTE EQUIPMENT.

THE BUYER OF THIS SUN PATH PRODUCTS, INC. ("SUN PATH") HARNESS AND CONTAINER SYSTEM UNDERSTANDS AND AGREES THAT BECAUSE OF THE UNAVOIDABLE DANGER ASSOCIATED WITH THE USE OF THE PRODUCT, SUN PATH MAKES NO WARRANTY WHATSOEVER, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE, EXCEPT THAT SIMILAR HARNESSES AND CONTAINERS HAVE PREVIOUSLY BEEN USED FOR PARACHUTE JUMPING. THE HARNESS AND CONTAINER ASSEMBLY IS SOLD WITH ALL FAULTS AND WITHOUT ANY WARRANTY, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR USE. SUN PATH DISCLAIMS ANY LIABILITY UNDER THE LAW, IN TORT OR OTHERWISE, FOR DAMAGES, DIRECT OR CONSEQUENTIAL, INCLUDING BUT NOT LIMITED TO DAMAGES FOR PERSONAL INJURY, WRONGFUL DEATH, PROPERTY DAMAGE AND LOSS OF USE OF EQUIPMENT, RESULTING FROM ANY MALFUNCTION, OR FROM ANY DEFECT IN DESIGN, MATERIAL, WORKMANSHIP OR MANUFACTURING, WHETHER CAUSED BY NEGLIGENCE ON THE PART OF THE SELLER, OR BY THE MANUFACTURER OF ANY PART, ACCESSORY, COMPONENT, OR APPLIANCE MADE A PART OF, OR APPURTENANT TO, THE SUN PATH HARNESS AND CONTAINER SYSTEM. BUYER, BY BUYER'S USE OF THE SUN PATH HARNESS AND CONTAINER SYSTEM, AND/OR BY ALLOWING IT TO BE USED BY OTHERS, WAIVES ANY CLAIM OF LIABILITY ON THE PART OF SUN PATH AND ITS

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AS A CONDITION AND IN CONSIDERATION OF BEING PERMITTED TO PURCHASE THE SUN PATH HARNESS AND CONTAINER SYSTEM AND/OR REPLACEMENT COMPONENTS THEREFOR, BUYER EXPRESSLY ASSUMES ALL RISK OF DEATH, AND/OR PHYSICAL INJURY AND/OR PROPERTY DAMAGE WHICH MAY RESULT TO BUYER AND/OR TO OTHERS AS A RESULT OF THE USE, AND/OR MISUSE, OF THE SUN PATH HARNESS AND CONTAINER SYSTEM, AND BUYER AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS SUN PATH OF AND FROM ANY AND ALL DAMAGES WHICH MAY RESULT TO SELLER FROM ANY USE AND/OR MISUSE OF THE SUN PATH HARNESS AND CONTAINER SYSTEM.

IF THE BUYER, DOES NOT AGREE WITH ALL OF THE TERMS AND CONDITIONS CONTAINED IN THIS DISCLAIMER OF WARRANTIES, BUYER'S SOLE REMEDY IS TO RETURN THE SUN PATH HARNESS

AND CONTAINER TO SUN PATH, BEFORE IT IS USED, AND WITHIN TWENTY-ONE (21) DAYS OF THE DATE ON WHICH IT WAS RECEIVED BY BUYER, ALONG WITH A LETTER STATING THE REASON FOR ITS RETURN.



The Sun Path Products Harness and Container Systems were tested in accordance with AS-8015A and is approved by the FAA under TSO C23c, Category B.

In October 2001 the Sun Path Products Harness and Container Systems were retested in accordance with AS-8015 Rev. B and is approved under TSO C23d and QAC (1) 121:

Max Operating Exit Weight of :

Max Operating Speed of:

Average Test Peak Forces Measured:

300lbs (136 kg)

170 knots (198 mph)

7629.5 lbs.

The TSO label is located under the reserve pin cover flap on the Legacy, and behind the warning label on the back pad on the Odyssey series.

If this label is not present or has been removed DO NOT PACK THE RIG.  
Removal of the TSO label voids the TSO and all certification approvals.

# Using This Manual

The purpose of this manual is to acquaint the rigger and prospective users with the functions, packing procedures and other features of the Sun Path Products Inc. harness and container systems. This manual should be read and understood by anyone who intends to use a Sun Path Products harness and container system for sport parachuting. It is the responsibility of the owner to be sure that the Sun Path Products harness and container system and all applicable components are correctly assembled, packed, maintained and used. It is also the jumpers own responsibility to assure that they themselves are qualified for participation in sport parachuting activities.

The packing sections of this manual are designed to provide insight into the tips, tricks and techniques developed and taught by the Engineering and Rigging team at Sun Path Products since 1987. The conventions below are intended to assist you in the packing procedures and techniques.



## Tips and Tricks

Following the light bulb icon will be detailed descriptions of the tips and tricks we use daily at Sun Path Products.



## Navigation

This compass icon will give you a reason, understanding and information on how the step you are currently working on will affect later aspects of the rigging process.



## Tools

When you see the tool icon, we will be specifying what tools we use for each step and their condition standards.



The movie icon will direct you to a helpful video that is specific to the step you are currently working on.

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# SECTION ONE

## MAINTENANCE AND REPAIRS



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# SUN PATH MAINTENANCE AND REPAIRS

## Before Using a Sun Path Products Harness and Container System

The user must read and understand this manual and be properly qualified to participate in sport parachuting activities.

## Pre Jump Inspection

1. Check both 3-Ring release assemblies and ensure that they are assembled correctly and check to see that the release handle hook and pile is securely attached to the main lift web.
2. Inspect the harness and hardware to determine whether it is showing any signs of abrasion, fraying, nicks, unusual wear or any other visible damage that may degrade its strength.
3. Check the reserve container for correct pin closure and routing of the ripcord. Be sure the reserve ripcord handle is well seated in the hook and pile pocket.
4. Check the main container closure for correct pin position and correct routing of the bridle. The pile on the bridle must be mated to the corresponding hook on the top flap.
5. The main pilot chute must be secure with the handle easily accessible.

# 3 Ring Release System Inspection

The procedures below should be done monthly. Immediate inspection is required if the container has been subjected to abuse such as being dragged across the runway, a water landing or excessive exposure to dust or sand.

1. Operate the 3-Ring release assemble on the ground. Extract the cable from the housings only enough to disconnect the risers.
2. While the system is disassembled, closely inspect it for wear. Check the white locking loops (the white loops that pass over the smallest ring and through the grommet) to be sure they are not frayed.
3. Check the hook and pile on the release 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 the manufacturer if a burr or "hook" is present.
5. Check the stitching, including that which holds the large rings to the harness.
6. 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. Repeat the same procedure with the white loop.
7. Clean and lubricate the release cable with a food grade silicone spray. Spray lightly onto a paper towel and firmly wipe the cable a few times.
8. Inspect the fittings at the end of each housing.
9. If any wear is found, consult a rigger or the manufacturer before using the harness and container system.
10. Reassemble the system. Double check it. Make sure the risers aren't reversed. It's important to maintain the system even more frequently in humid, dusty or freezing conditions. If the harness and container system becomes immersed in mud or muddy water, clean the 3-Ring release system with a mild solution of soap and water. Any rusted components must be replaced.



# Donning the Harness

The Javelin harness was designed to put you securely into the rig.

- With the leg straps at full extension, step into the harness and pull the container over your shoulders.



Fig.1

- Thread the chest strap through the friction adapter. Lift the bottom of the container up with your left hand as you tighten the chest strap with your right hand until it is comfortably snug. Stow the excess with the elastic keeper.



Fig.2

- Tighten your leg straps evenly until they are comfortably snug.



Fig.3

- Thread the excess through the elastic keepers and stow the remainder in the leg pad pockets.



Fig.4

## Correct Friction Adapter Routings

### SP888 Leg Adapters

- Route the webbing through both pieces from the underside.
- Pass the webbing above the top piece and under the bottom piece.
- Secure the excess with an elastic keeper.



Fig.5

### Quick Fit Chest Adapters

- Route the webbing through the frame from the underside.
- Pass the webbing above the bar and back under the frame.
- Secure the excess with an elastic keeper.



Fig.6

# Storage

Textiles and other materials used in the manufacturing of parachute equipment to include the harness/container systems are sensitive to the following environmental elements; Water/humidity • Salt water • Ultraviolet rays (Sunlight) • All petroleum based products (oil, grease) • Rodents, Pests • Smoke • Excessive heat • Chlorine (bleach) • Acid

While the parachute equipment is not in use it is recommended to store the gear in a gear bag out of direct sunlight and in a room or closet where the temperature and humidity are controlled.

# Repairs

It is strongly recommended that all major repairs or modifications to a Sun Path Products harness and container system be made at the manufacturing facility in Raeford, North Carolina or by an authorized Sun Path Products certified repair facility.

At every repack cycle the entire harness and container system should be thoroughly inspected by a certified and appropriately rated Parachute Rigger. Completion of this inspection and annotation of A-I-P or A-I-R (Assemble•Inspect•Repack) on the packing data card implies that the Rigger has inspected and deemed that harness and container system and all applicable components to be airworthy and ready for use.

**IF YOU NOTICE ANY SIGNS OF WEAR OR DAMAGE, HAVE YOUR  
HARNESS AND CONTAINER SYSTEM THOROUGHLY INSPECTED BY A  
CERTIFIED PARACHUTE RIGGER OR OUR MANUFACTURING FACILITY  
IN RAEFORD, NORTH CAROLINA BEFORE THE NEXT USE.**





## SECTION TWO

# RESERVE ASSEMBLY



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# *Prodrive* ASSEMBLY

## Sun Path Supplied Parts

- |  |   |
|--|---|
| 1. Harness/Container (JA 101-(4) .....               | A |
| 2. Reserve pilot chute (PPC-RESP) .....              | B |
| 3. Reserve static line (JR007-10-SH).....            | C |
| 4. Red Sky Hook lanyard (PRIP-SH-LANYARD) .....      | D |
| 5. Sky Hook pin lanyard (PRIP-SH-RESRPIN) .....      | E |
| 6. Release/Cutaway handle (PHAND-CUTPHATDADDY) ..... | F |
| 7. Reserve ripcord with Marine Eye (JP061-3) .....   | G |
| 8. Safety stow (PBAG-SSTOW) .....                    | H |
| 9. Reserve free-bag and bridle (PBAG-FREE-SH) .....  | I |
| 10. Reserve toggles (PTOG-NVT) .....                 | J |
| 11. Reserve closing loop (JR-PAAD-CYLOOP).....       | K |
| 12. Reserve packing data card (PB007) .....          | L |

Only reserve components manufactured by Sun Path Products  
 can be used with this harness and container system.  
 Thoroughly inspect all components before assembling.



Fig.7

# Required Tools

- |  |   |
|--|---|
| 1. Tension tool.....                   | A |
| 2. Aluminum paddle .....               | B |
| 3. Wooden paddle.....                  | C |
| 4. .22 caliber rifle cleaning rod..... | D |
| 5. Line protector .....                | E |
| 6. Pull up cord .....                  | F |
| 7. Temporary pin .....                 | G |
| 8. Crescent wrench .....               | H |
| 9. Snips .....                         | I |
| 10. Seals.....                         | J |
| 11. 8lb seal thread .....              | K |
| 12. Seal press .....                   | L |
| 13. 6 mm crochet hook.....             | M |
| 14. Ruler.....                         | N |

All tools must be free of any nicks, burrs, or dents that could cause damage to any part of the harness and container or parachute system.



*Drive*  
ASSEMBLY

Fig.8

# Reserve System Inspection

The entire harness and container system and all applicable components must be thoroughly inspected before deeming the system airworthy and ready for use.

An itemized checklist like the one below is recommended.

<b>Harness/Hardware</b>	<b>RSL/Sky Hook Assembly cont.</b>
•Hardware functional and free of nicks, burrs, or scrapes	• No broken stitches on any part of assembly
•Hook and pile clean and in place	•White lanyard free of damage
•No cuts, fraying or broken stitches on webbing or junctions	•Sky Hook pin free of damage and secured to white lanyard
•Housings free of damage and securely attached	•Red lanyard free of damage
<b>Container</b>	<b>RSL/Collin's lanyard free of damage</b>
•Grommets seated securely without damage	•Collin's lanyard correct size to yoke and stamped
•Plastic stiffeners intact and unbroken	•Sky Hook and green lanyard securely attached to reserve bridle
•Fabric free of excessive wear or holes	• Rings secure with no nicks, burrs or scrapes
•No broken stitches	•Arrow on Sky Hook pointing towards pilot chute
•Hook and pile clean and in place	•Green and red pockets secured to Sky Hook sub flap
•Elastics taut and in good condition	
<b>Ripcord/Release Handles</b>	<b>Free-Bag and Reserve Pilot Chute</b>
•No excessive kinks or dents in cutaway cables	•Free of damage or tears in fabric
•Reserve ripcord pin undamaged	•Grommets seated securely without damage
•Reserve ripcord cable free of any damage	• Hook and pile secure and not frayed
•Reserve ripcord steel swedge secure	•Free-bag is the correct size for the container system and QC stamped
<b>RSL/Sky Hook Assembly</b>	<b>•Reserve bridle secured to reserve pilot chute with a lark's head knot</b>
• Hook and pile secure and not frayed	•Reserve pilot chute is QC stamped
• Snap shackle functioning	•Reserve pilot chute spring free of damage or kinks

Tbl.1



# Assembling the Reserve System

The performance standards outlined in the FARS Section 65.129 E and F state; No certified parachute rigger may pack, maintain, or alter a parachute system in any manner that deviates from procedures approved by the Administrator or the manufacturer of the parachute system; or exercise the privileges of his certificate and type rating unless he understands the current manufacturer's instructions for the operation.

All applicable service bulletins for all Sun Path Products harness and container system can be found at [www.sunpath.com](http://www.sunpath.com) and can be provided upon the verbal or written request of the user or certified parachute rigger.

**Please read and understand all instruction and procedures of this manual and service bulletins before exercising the privileges of your Parachute Rigger's Certificate or Foreign Equivalent.**

## Reserve Canopy Compatibility

- Do not install a reserve canopy larger than the sizing chart calls for as there are serious safety issues that may arise from "over stuffing" a main or reserve container.
- When in doubt contact Sun Path directly with canopy/container compatibility questions.

Container Model	F-111 Reserve Canopy	Low Bulk Reserve Canopy
RSK	106-120	113-126
RSK.5	106-120	113-126
RSK.1	106-120	113-126
NJK	113-120	126
DNKY	120-126	143
TJNK	126-135	143
TJNK.5	126-135	143
OJK	143-150	160
J1KS	143-150	160
J1KL	143-150	160
J2K	160-170	176
J3K	160-170	176
J4K	176-190	193
J4.5K	193-210	218
J5K	218-235	235
J6NK	235-245	235
J7NK	245-253	
J8K	281	

Tbl.2





## Sky Hook Reserve Static Line Assembly (DOM February, 2015 or later)

For Sky Hook RSL Instructions (DOM before February, 2015) Refer to Pg. 6-2

For Non Sky Hook RSL Instructions Refer to Pg 6-4

For Legacy RSL Instructions Refer to Pg 6-6



Fig.9

### Assembling the Lanyards

- With the white label facing up, pass the red lanyard through the loop on the RSL lanyard.
- In the same manner lark's head the white reserve pin lanyard to the RSL as pictured (c)

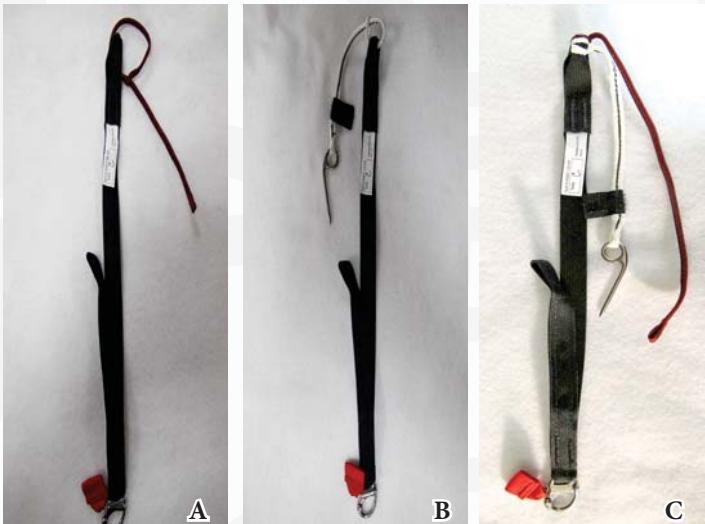


Fig.10

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## Routing the Sky Hook RSL Assembly

- Completely unfold the the RSL lanyard channel located on the wearer's right side yoke. Ensure the cutaway cable passes through the RSL split lanyard.
- Lay the lanyard assembly along the outboard portion of the unfolded channel as shown.
- Fold the channel with the lanyard assembly back to its closed position so the mouth of the snap shackle faces outboard.



Fig.11

- Fold the red lanyard at the midpoint.
- Insert the red lanyard into the red pocket on the Sky Hook sub flap.



## Installing the Release Handle

See Pg. 6-24 for instructions on  
Release Cable Lengths

- Insert the release cables into their respective housings below the chest strap.
- Pull the extent of the long side cable out of the first portion of the split housing.
- Seat the release handle into the pocket and mate the hook and pile.

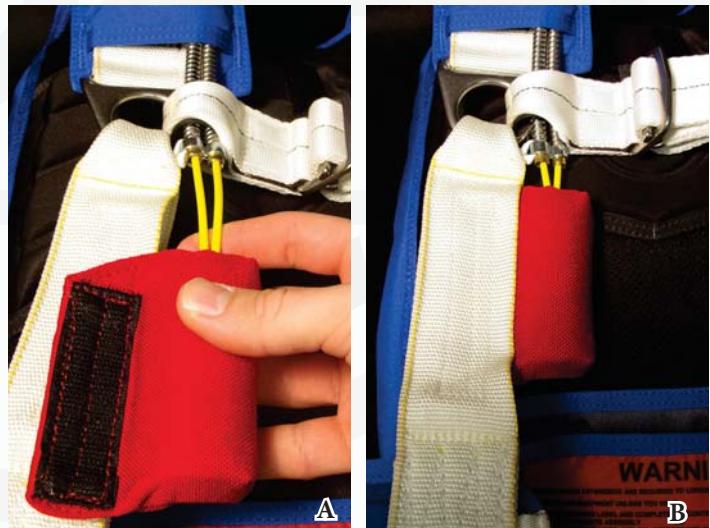


Fig.13



- Pass the long side release cable through the loop in the end of the Collin's Lanyard and continue to route the release cable into the second portion of the spit housing.



Fig.14

### Installing the Ripcord

- Route the reserve ripcord cable with marine eye into the end of the reserve ripcord housing on the main lift web.
- Seat the handle into the main lift web pocket and mate the hook and pile.



Fig.15

### Routing the Marine Eye and White Pin Lanyard

- Mate the hook on the white lanyard to the pile on the reserve pin flap so the eye of the pin faces the hook and pile.
- Route the pin through the marine eye with the bevel of the marine eye facing the insertion point of the pin.



Fig.16

## Installing the AAD

(See Pg. 2-14 for Approved AAD List)

If an AAD unit specific pocket is installed, follow the AAD manufacturer's instructions for installing the unit into the pocket.

- Wrap the AAD unit's excess cable around the processing unit and secure with a rubber band.
- Always avoid pulling, bending, twisting or kinking the cables.

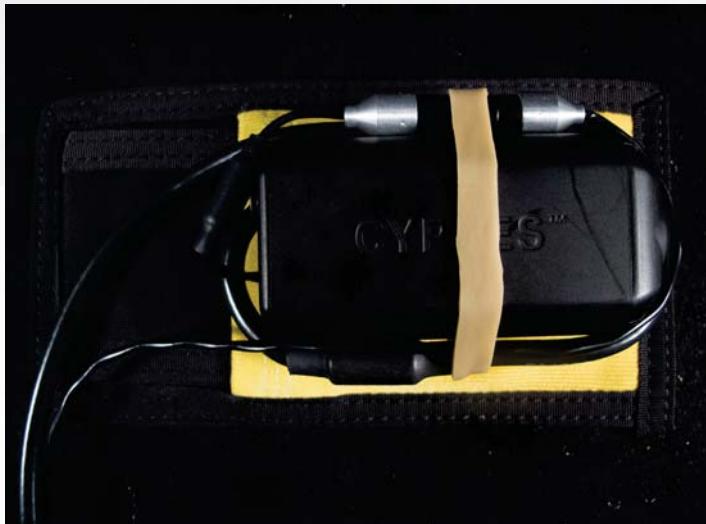


Fig.17

- Place the processing unit into the pocket so that the cables lay flat across the bottom of the pocket.
- Route the cables to the bottom left corner of the pocket.
- Cover the exposed cables with the cable protector.



Fig.18

- Insert the tongue into the pocket above the AAD processing unit.



Fig.19

## Routing the Cutter

- Route the cutter into the end of the cable channel closest to the AAD pocket.
- Work the cutter up the channel and out of the gap across from the cutter elastic.
- Feed the cutter through the elastic keeper.
- Center the hole in cutter with the grommet



Fig.20

## Routing the Control Unit

For Pin Flap Display Instructions Refer to Pg 6-7

- Route the AAD control unit into the end of the channel closest to the AAD pocket.
- Work the control unit up the cable channel past the cutter cable and out the opening at the other end of the channel.



Fig.21

- Insert the control unit into the back pad pocket, so the display is visible from the other side.
- Check the AAD Initiating sequence before continuing.

For Pin Flap Display Instructions Refer to Pg 6-7



Fig.22

## Closing Loop Length

Follow the AAD manufacturer's instructions for the washer threading and the closing loop knot.

- All harness and container models can be closed with the same loop length range.
- The closing loop should be measured unstretched from the base of the washer and should be between 2 1/8" (53mm) and 2 1/4" (56mm) in length.

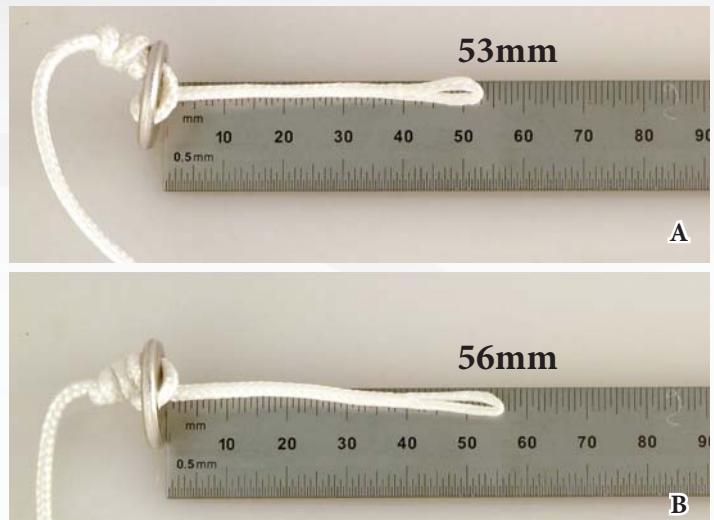


Fig.23

## Installing the Closing Loop

- Route the end of the closing loop through the grommet from the under side of the reserve container floor plate.
- Be sure to thread the closing loop through the hole in the AAD cutter.



Fig.24

## Prepping the Risers

- Locate the midpoint in the canopy attachment points of the reserve risers.
- Fold the outer edges into the center.
- Press firmly to set the butterfly fold in place.

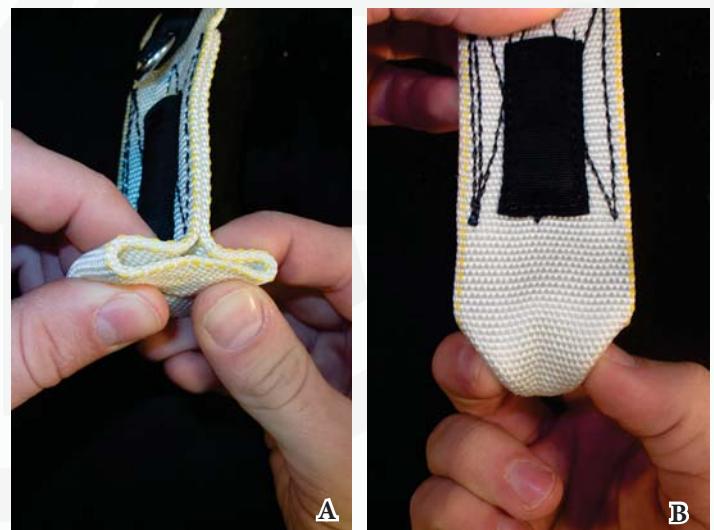


Fig.25



## Attaching the Reserve to the Risers

Follow the reserve canopy manufacturer's instructions for assembling the reserve suspension lines using hard or soft links.



Fig.26

## Assembling the Toggles With Finger Trapped Micro Line

For Dacron line instructions Refer to Pg 6-7

- Pass the reserve control line through the guide ring on the rear reserve riser.
- From the under side, thread the control line through the grommet in the control toggle.
- Pass the bottom of the control toggle through the loop in the control line creating a lark's head knot.
- Cinch the control line tight.

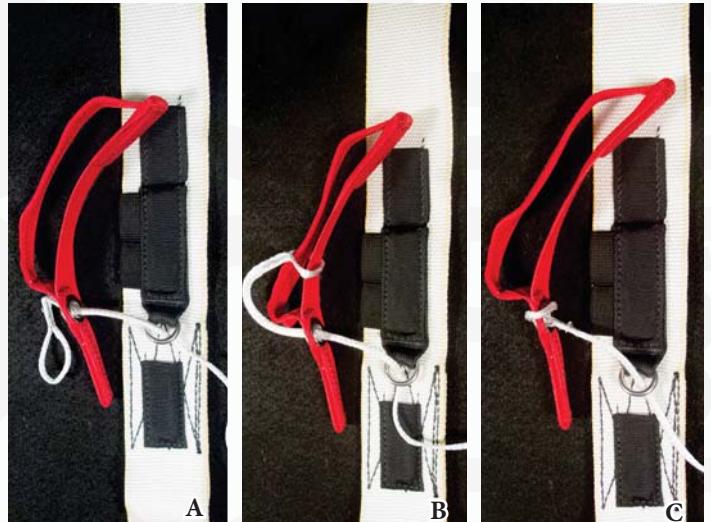


Fig.27

## Setting the Brakes

- Pull the lower control line and cat eye through the guide ring on the reserve riser.
- Insert the top tab of the reserve toggle through the cat eye.
- Secure the top and bottom tabs in the in the keepers located on the reserve risers.
- Cinch the upper control line tight.

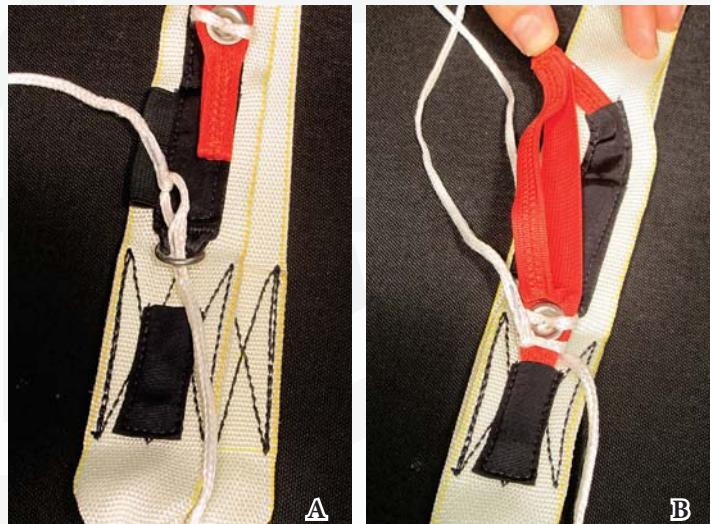


Fig.28

- Thread a 6 mm crochet hook through both parts of the elastic keeper from the bottom.
- S-fold the excess lower control line.
- Pull the S-folded lower control line through the keeper.

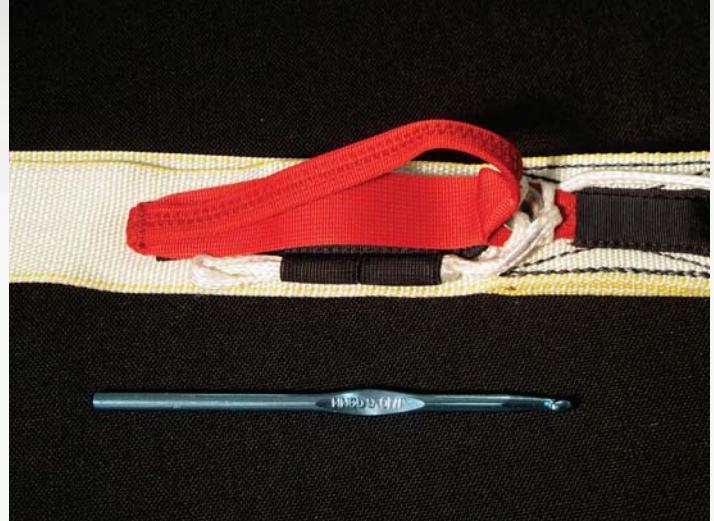


Fig.29

### Continuity Check

**Perform a full continuity check and inspection of the reserve canopy according to the manufacturer's recommendations.**



Fig.30



# Approved AAD List

Sun Path Products Inc. has completed PIA TS112 testing and overall fit evaluations on the below listed automatic activation devices (AAD) to determine compatibility with all Javelin harness/container systems.

The following automatic activation devices are authorized for installation and determined that when properly installed, do not interfere with the normal manual operation of our harness container systems

Manufacturer	Model
Airtec	CYPRES
Airtec	CYPRES 2
Airtec	CYPRES C Mode
Advanced Aerospace Designs	VIGIL
Advanced Aerospace Designs	VIGIL 2
MarS	m2
FXC Corporation	12000

Tbl.3

# SECTION THREE

## PACKING THE RESERVE



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# *P*ACKING *P*ACKING THE RESERVE

Follow the instructions provided by the reserve parachute's manufacturer for Pro Packing.

See Pg. 2-12 for instructions on  
Setting the Brakes



Fig.31

## The E Fold

- Flaking out the fabric in between the seams that connect the D lines to the Control line's attachment points will remove extra bulk from the center of your canopy.

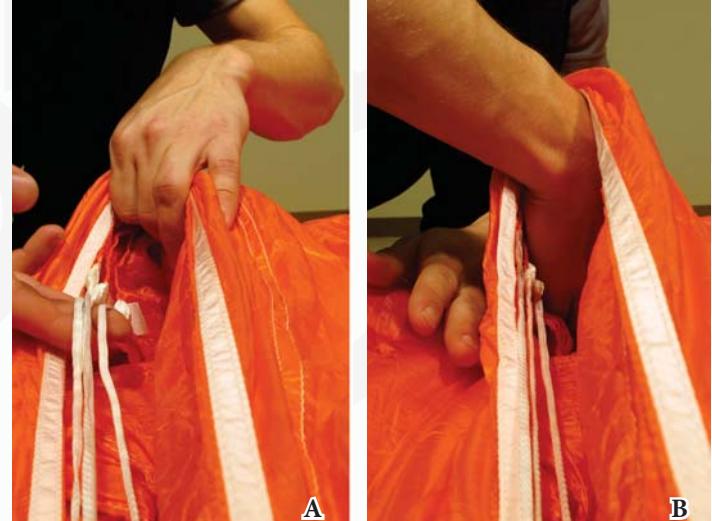


Fig.32

## Reduction Folds

- Reduce the width of the canopy by making a single reduction fold to each flaked group.
- Starting with the top flaked group fold, the outer edge to the center.
- Repeat this fold on the next two flaked groups down and then follow this procedure on the opposite side of the canopy.



Fig.33



### E Fold

- The use of the E fold will help you create and manage a clear channel in the center of your canopy once placed inside the free-bag. This is particularly helpful when packing our small containers.

### Reduction Folds

- With one hand in center, gently hold the fold in place , slide your free hand to continue the fold in either direction. Your reduction folds should all come out to an equal width.



### Looking Forward

- Think of rigging as a chain of events, the step you are currently working on will have an affect on the following steps.
- Even though you have just started to flake the canopy you should already be thinking ahead on how the canopy will fit into the free-bag and how the free-bag will fit into the container.



### Before You Start

- Gather only the tools needed to pack this reserve system. Keeping your workspace free of unnecessary items or tools will significantly reduce the possibility of packing a foreign object into the container.
- Inspect your tools. Though parachute materials are durable, they can be damaged by tools that have fallen into poor condition.



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**PACKING**  
THE RESERVE

Ensure that both sides of the canopy are symmetrical.



Fig.34

### Flaking the Tail

- Dress the tail by folding the canopy at each seam and aligning them down the center of the canopy.
- When placing the seams down the center of the canopy they will naturally lay in the channel you created earlier.
- If necessary pull back the tail of the center cell to allow for the first S-fold.



Fig.35

### First S-Fold

- With your fingers between both line groups and your wooden paddle on your fold point, create the first fold so it's finished length is equal to the length in between the free-bag's mouth and it's center grommet.
- Place the slider grommets one inch back from the outside of the fold and a few inches apart.

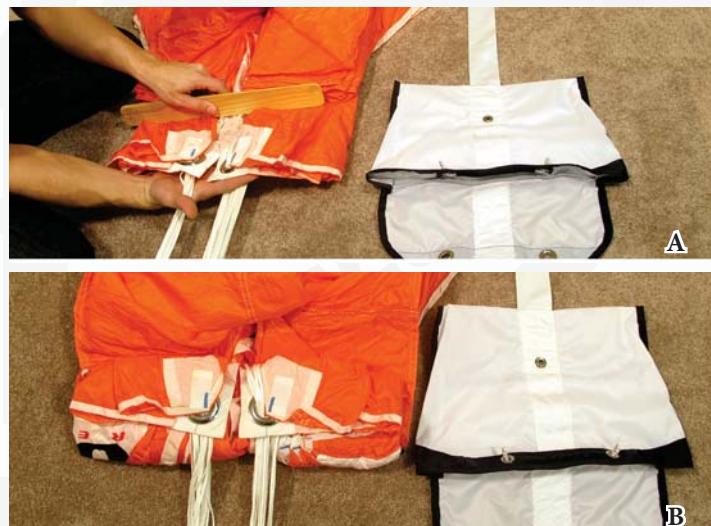


Fig.36



### First S-Fold

- The edges of this first S-fold should come out square in shape and stacked evenly on top of one another.



### Slider Grommets

- Spacing your grommets will create a recess in the pack job big enough for the AAD to fit into later on.
- The slider grommets can naturally move forward and closer together during the bagging process. You can dress them again before you close your free-bag with the safety stow.



### Wooden Paddle

- Ensure that the paddle you use to manage the canopy is in like-new condition and free of rough edges, splinters or burrs.



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**PACKING**  
THE RESERVE

## Cocooning

- Bring the tail of the canopy just below the edge of your first S-fold.
- Place your knees on the corners to hold the fold and tail in place with the center seam evenly dividing the canopy.
- Starting with the trailing edge seam of the canopy under your knees, wrap the center cell around your reduction folds.
- Leave the nose of the canopy exposed outside of this cocoon.



A



B

Fig.37

- Create tight square corners with the trailing edge of the canopy and resume holding them in place with your knees.
- Apply pressure to the top of the canopy to pull tension on the top skin.
- With your free hand reduce the width of the canopy to be a slightly smaller than the width of the free-bag.



Fig.38

- Count the 3 nose cells on either side of the center cell before making an S-fold and sliding them under the cocooned canopy.



A



B

Fig.39



## S Folding the Nose

- It is easiest to S-fold the nose under while your forearm and knee are holding tension on the canopy. Using the arm that is pulling tension on the canopy, hold the nose cells at the edge of the cocoon to create the first fold point. Place your free hand at the mid point of the nose and slide it under the cocoon.



## Reducing the Canopy

- Do not try to reduce the canopy width all at once, take your time and work symmetrically from left to right until you achieve the ideal size.

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 **PACKING**  
THE RESERVE

## Splitting the Canopy

- Place your knees on the trailing edge of the canopy to hold the S-fold below in place.
- Start your split directly above the end of your first S-fold, just behind the corresponding imaginary line that divides the free-bag's length at the center grommet.
- This will be referred to as "the grommet reference line" from here on out.



Fig.40

- Lock your wrists to your knees as you pull the center seam towards you creating according folds with your fingers.
- Try not to move the fabric from the outside of the canopy.
- Accordion fold the center seam until you reach the rib in the nose dividing the center cell of the canopy.



Fig.41

- Now that the canopy is equally divided, you can move the two halves away from the center into a Y shape in order to help define the split.
- After separating the two halves you can run the center cell again to regroup the accordion folds along the center seam.



Fig.42



### Splitting the Ears

- Locking your wrists to your knees while creating your accordion folds will keep the split point from straying up and away from the grommet reference line.



### Splitting the Ears

- Splitting the ears now and S-folding the two halves separately will create an empty channel in the center of the pack job. This will allow space for the pilot chute and bridle.

[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)



**PACKING**  
THE RESERVE

## The Roll Fold

- With your knees still securing the tail and the first S-fold, pull tension on the rib of the center cell to encourage this split to come all the way to the first S-fold right on the grommet reference line.
- Take a few inches of the nose and tail above the label and roll them into one another so they are in line with your grommet reference point.



Fig.43

## S Folding the Long Split

- Choose one of the long ears to work with and bring it in line with your first S-fold, perpendicular to the trailing edge of the canopy.
- Now treat this one side as if it were a separate canopy.
- Cocoon this side with the top skin to form a long rectangle that is equal in width to one half of the free-bag.



Fig.44

- Create a fold point by placing your thumb in line with the top end of your first S-fold directly on the grommet reference line.
- Hold the ear with your free hand an equal distance above your thumb as the length of the first S-fold you made earlier. This will create the second fold point.



Fig.45



### The Roll Fold

- The bulk of the center cell accordion folds can be stored behind the grommet line under the tail skin that is cocooned over the first S-fold.

### S-folding the Long Split

- By placing tension between your knee and one hand at the top of the ear, you can easily dress the canopy with your free hand.
- This step is all about finesse. Maintain the rectangular shape of the ear as you dress the canopy prior to making the next S-fold.



### S-Folding The Long Split

- S-fold the ears with consideration for how the canopy will fit the free-bag's length and width.
- Secure the accordion folds by keeping pressure on the roll fold with your knee throughout the next S-folds.

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**PACKING**  
THE RESERVE

- With your thumb in place securing the bottom fold point, pull the ear up and back towards you as you move your knee out of the way. Place the back of the S-fold in line with trailing edge of the canopy.
- The remainder of the fold will lay in place squarely on top.
- Secure this S-fold and the one beneath it with your knee and repeat this fold with the other half of the canopy.



Fig.46

### Folding for the Ears

- Make the width and length of these S-folds smaller than the actual width of the free-bag molar.
- The fold point for the ears should line up with the end of the free-bag.
- Once the fold is created lift you knee slightly to allow you to tuck the excess in between the previous S-fold.



Fig.47

- Secure this fold and all the folds below with your knee as you repeat these steps with the other half of the canopy.
- At this stage you should have your canopy folded to the exact shape of your free-bag.



Fig.48



### Folding For the Ears

- Use light pressure on the S-folds when controlling them with your knees so as not to deform the wedged shape you are working towards.



### Folding For the Ears

- Before creating your ear folds, check that the S-folds you have created are going to fit between the mouth of the free-bag and the grommet reference line in the center of the free-bag. Making sure every fold fits the free-bag will ensure that the bagging process goes smoothly.



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**PACKING**  
THE RESERVE

## Bagging the Canopy

- Start with one side of the canopy.
- Fold the bottom flap of the free-bag back on itself so it lies flat on the floor.
- Work as much of the free-bag as you can over one ear while your knees are still securing the S-folds.

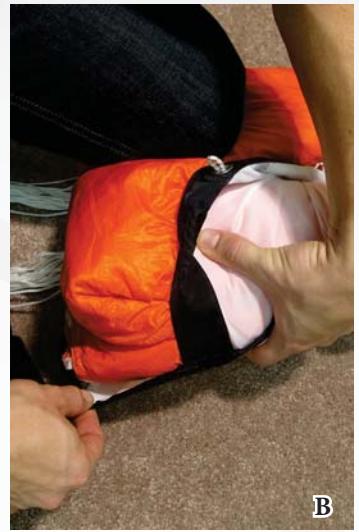


Fig.49

- Work the free-bag around one side of the canopy and continue to place as much ear into the molar as possible.
- Pull the bottom flap out from underneath.
- Resume light pressure on this side with your knee.
- Repeat these steps on the opposite side.

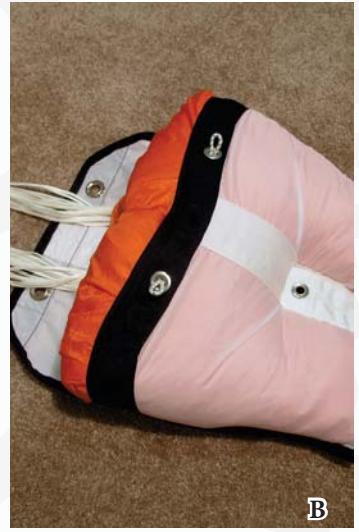


Fig.50

- Check the slider's grommet placements.
- Make sure they are horizontal to the floor, set back from the trailing edge of the canopy and far enough apart to create a space for the AAD.



Fig.51



## Bagging

- The underlying goal of bagging the canopy is to fit the free-bag around the canopy with as little movement to the canopy as possible.



## Bagging

- After you have worked the free-bag around the canopy, it is normal to have an inch or two of canopy outside of the free-bag. We will dress this after closing the free-bag with the safety stow.
- If your slider grommets are allowed to turn vertical to the floor it will create a barrier keeping the AAD unit from settling into the reserve pack job. This will force the AAD into the space needed for the main canopy.



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**PACKING**  
THE RESERVE

## Setting the Safety Stow

- Make a needle fold out of the bridle and thread it through one side of the safety stow.
- Thread the other side of safety stow through the opposing grommet on the bottom flap of the free-bag.
- Leave 2 inches of slack in the line group before the first bite of the stow.
- Once the first stow is secure, remove the needle fold and pass the safety stow through the opposing grommet to make your closing stow.
- We recommend that each line group bite through the safety stow to be approximately 1.5 in (38mm) long.



Fig.52

## Precision Paddling

- Start by placing the free-bag on its side.
- Insert the tapered end of your wooden paddle down the side of your free-bag above the canopy until the end is even with the crease of the ear fold.
- Rotate the paddle into this fold and push the fold deeper into the ear of the free-bag filling it out completely and evenly.
- As you do this be careful not to unroll the ear fold.



Fig.53

- Now insert your wooden paddle between the first and second S-folds, on the same side of the free-bag.
- Gently push this fold straight back and deeper into the free-bag.
- Rotate the free-bag back the way it came and onto the other side to repeat these steps.
- You can work each side of your canopy a little at a time back and forth until it is fully in the free-bag.



Fig.54



### Safety Stow

- Using your bridle to secure one end of the safety stow will free up both of your hands for making the first line stow.

### Precision Paddling

- To avoid inadvertently displacing any material as you insert the paddle, keep it visible between the free-bag and canopy.
- It is important not to inadvertently create line twists by rotating the bag in one direction as you are working back and forth with your paddle.



### Safety Stow

- Leaving slack before your first bite will help prevent your slider grommets from moving forward and together as you close the free-bag; ensuring a suitable space is maintained for your AAD.

### Precision Paddling

- Once you have the canopy in the free-bag, you can use a wooden paddle as an extension of your hand to move the individual S-folds into their proper location. This technique will help you fit the free-bag into the container as well as the placement of your reserve pilot chute and bridle.



### Wooden Paddle

- Ensure that the paddle you use to manage the canopy is in like-new condition and free of rough edges, splinters or burrs.

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- Return the free-bag to it's original position on the floor.
- You can now clear out the channel in the center that you created earlier.
- Find the division between the two halves of your canopy and create as much free space as possible in the center of the free-bag.



Fig.55

### Stowing the Lines

- Rotate the free-bag so you can open your line pocket.
- Cover the 1 inch hook with a pile line protector.
- Route the line group down the center to the bottom of the pocket, then over to one corner.
- Figure eight the line group from one side of the pocket to the other working towards you.
- Continue stowing the lines until you have 2-3 inches remaining.
- Remove the line protector and evenly mate the hook and pile velcro of the free-bag.



Fig.56

### Placing the Free-Bag

See Pg. 2-11 for instructions on  
Closing loop Length

- Place the risers and free-bag into the container with the line stow pocket laying flat against the floor plate.
- As you place the free-bag into the container be sure the excess line is clear of any obstruction.
- Now is a good time to route your pull up cord through the closing loop and thread it through the center grommet of the reserve free-bag.

We recommend the use of silicon on closing loop.



Fig.57



### Stowing the Lines

- Placing the line protector over your line group as it routes into the line pocket will allow you to remove it without disturbing the lines. Place your fingers into the pocket and push the lines away from the 1 inch hook, remove the line protector a few inches at a time mating the hook and pile as you go.

### Placing the Free-Bag

- Hold the top flaps out of the way with your forearm or foot as you rotate the free-bag into the reserve container



Ensure the reserve closing loop is through the AAD cutter.

Refer to AAD's owners manual for further information.



### Line Protector

- We prefer a single line protector around 18 inches long. This length accommodates all the sizes of free-bags we offer and eliminates one tool from your count.

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**PACKING**  
THE RESERVE

## Routing the Risers

- Fold the bow of the toggles away from the yoke line.



Fig.58

- The risers are set on top of one another as they pass over the yoke and fanned apart at the line attachment points once inside the container.

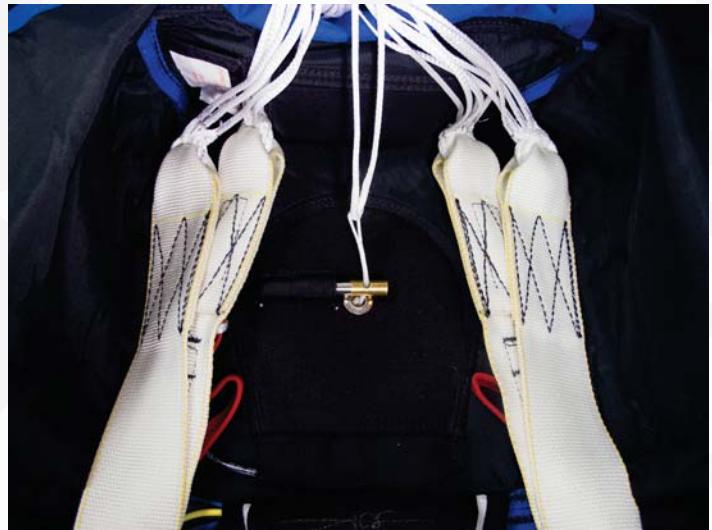


Fig.59

## Positioning the Free-Bag

- With tension on your pull up cord, position the center grommet of the free-bag directly over the grommet of the floor plate.



Fig.60



## Routing the Risers

- Pulling the yoke of the harness toward you will allow the plastics in the yoke's tuck tab pockets to lay flat. Carefully place your knees on the reserve risers to keep tension without bending or breaking the plastics.



## Positioning the Free-Bag

- Make a mental note where your reserve ears sit on the yoke line, your free-bag should not stray from this point for the remainder of the closing sequence.



## Pull Up Cord

It is possible to use a 1000 lb Spectra pull up cord because the closing loop has already passed through the cutter. This will open the eye of the closing loop more than using a length of Cypress cord.

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**S  
PACKING**  
**THE RESERVE**

- With one hand, compress the area in between the slider grommets as you position the free-bag into the back of the container.
- Press your free hand against the AAD unit from the outside of the container to sink it into the recessed space that you have created in between the slider grommets.

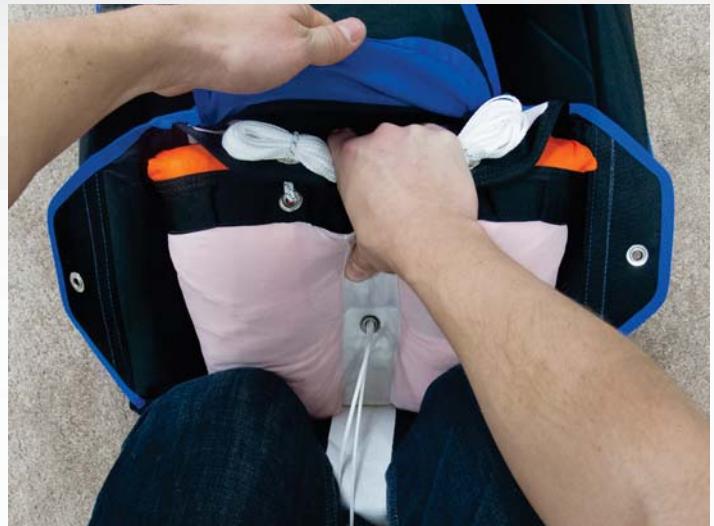


Fig.61

- If part of the canopy has worked its way out of the mouth of the free-bag, roll it down and back into place before continuing.
- With your knees still firmly in place, work from one side to the other to completely fill out the boxed corners of the reserve container.



Fig.62



**Packing with a Sky Hook RSL**  
Continue on to the next page for instructions

**Packing without a Sky Hook RSL**  
See Pg. 6-8

**Packing a Javelin Legacy**  
See Pg. 6-10



Fig.63





### Positioning the Free-Bag

- Grip the edge of the free-bag with your fingertips resting on the outside binding along the bottom seem of the reserve free-bag. Sink this ledge to the floor of the reserve tray on both sides to help ensure an even positioning.

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 **PACKING**  
THE RESERVE

## S-Folding the Bridle

- Starting at the bridle's attachment point to the free-bag, create S-folds in the bridle approximately 9 inches long on one side till you reach the attached Sky Hook.
- Equally V split the bridle to either side of the free-bag's center grommet so the two groups lay opposite one another inside the molared channel.
- The Sky Hook must be on the wearer's left hand side of the V split.



Fig.64

## Setting the Sky Hook

(As shown on the reserve pin flap information label)

- Fully insert the green loop located on the back of the reserve bridle into the green pocket on the Sky Hook sub flap.
- Route the remaining end of the red lanyard over the reserve bridle towards the Sky Hook.
- Place the eye of the red lanyard onto the hook in between the two pieces of the clear lexan cover.
- If the lexan cover is damaged or not present please contact Sun Path Products Inc. for a replacement part and instructions.

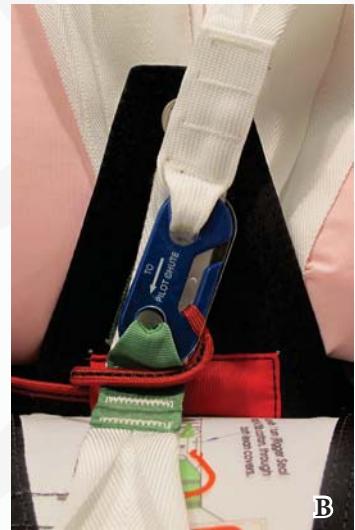


Fig.65

- Route a single piece of Rigger's seal thread through the two holes in the lexan cover and securely tie with a surgeon's knot.
- Trim the threads leaving the tail approximately 10 mm long above the knot.
- Once you have finished setting up the Sky Hook route your pull up cord through the grommet on the Sky Hook sub flap.



Fig.66



### Setting the Sky Hook

- The lexan covers are flexible enough for you to gently spread them apart with your thumb and forefinger. This will make it much easier to slide the eye of the red lanyard onto the Sky Hook.



### Now is the time to double check the Sky Hook System Assembly

See Pg. 2-6 for instructions on  
**Sky Hook RSL Assembly**

- Orientation of the Sky Hook on the reserve bridle
- White reserve pin lanyard is secured to the Collin's lanyard with a lark's head knot
- Red lanyard secured to the Collin's lanyard below the white reserve pin lanyard with a lark's head knot
  - Release cable routes through the Collin's lanyard
- Red lanyard's midpoint is folded and stowed in the red pocket on the Sky Hook sub flap



- Only use Rigger's seal thread to seal the Sky Hook.



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**PACIFIC**  
THE RESERVE

## Closing the Wearer's Left Flap

- Route your pull up cord through the wearer's left side flap grommet.
- With your free hand hold the free-bag and bridle in place, keep tension on your pull up cord as you bring the left side flap across to be temporarily pinned.



Fig.67

## Closing the Wearer's Right Flap

- Route your pull up cord through the wearer's right side flap grommet.
- With your free hand hold the free-bag and bridle in place, keep tension on your pull up cord as you bring the right side flap across and temporarily pin.



Fig.68

## Placing the Line Cover

- Form a free space in the center of the S-Folds.
- Conform the line cover to this space.



Fig.69



### Closing the Side Flaps

- After you position the free-bag you can keep your knees in place securing the reserve risers and free-bag ears until the left and right flaps are temporarily pinned.



### Closing the Side Flaps

- Once you have your left and right reserve flap temporarily pinned, it is prudent to double check the tension on your reserve risers and the position of your reserve free-bag before continuing.



### Temporary Pin

- Check the condition of your temporary pin. A rough pin will quickly fray the closing loop and damage grommets.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

**SUNPACKING**  
THE RESERVE

## The Remaining Bridle

- S-fold the bridle down and up the length of the reserve container.
- Find the fold length that allows the tri-folded portion of the bridle to lay continuously and end near the center grommet.
- Split your bridle to either side of your pull up cord so the bulk is evenly distributed.



Fig.70

## Seating the Reserve Pilot Chute

- Insert a 22 mm rifle cleaning rod through the pilot chute and extract your pull up cord cleanly through the center of the pilot chute spring.
- Position the pop top's binding tape run off towards the bottom of the container.
- Center the base of the pilot chute spring around the side flap grommets, on top of the S-folded bridle.



Fig.71

- Compress the pilot chute so all the fabric is outside of the spring coils on all sides.
- Use a tension device to aid in temp pinning the pilot chute.



Fig.72



### Compressing the Pilot Chute

- You can hold the reserve pin and pin cover flap to the floor and out of the way of the compressing coils with a knee or foot. This will also keep the container from sliding away from you as you compress the reserve pilot chute. Compress the pilot chute at the same angle as the reserve container to prevent uneven compression.
- While using your tension tool for temporarily pinning, firmly tapping around the edges of reserve pilot chute's pop top (with a closed fist) will help sink the coils into the container.



### Compressing the Pilot Chute

- Before compressing the pilot chute, look through the grommet in the pop top to check the pull up cord's routing and the spring position around the grommet.



### Tension Tool

- It is beneficial to use a tension tool that is long enough to clear the sides of the reserve container.

[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)



**PACKING**  
THE RESERVE

## Stowing the Pilot Chute Fabric

- With your knee, push down on the back end (6 o'clock position) of the pilot chute pop top to raise the opposite side.
- Lay the pilot chute fabric on the opposing side up and over your knee.
- Evenly feed the mesh and f-111 a few inches at a time under and around either side of the pop top.



Fig.73

- Reposition yourself to the opposite side of the container and place your knee off to one side (9 o'clock position) of the pop top slightly lifting the opposing side.
- Lay the pilot chute fabric over your knee.



Fig.74

- Use a hand to hold the bridle in place while you feed the mesh followed by f-111 a few inches at a time until all the fabric on that side is within the channel you created.
- Repeat on the opposite side.

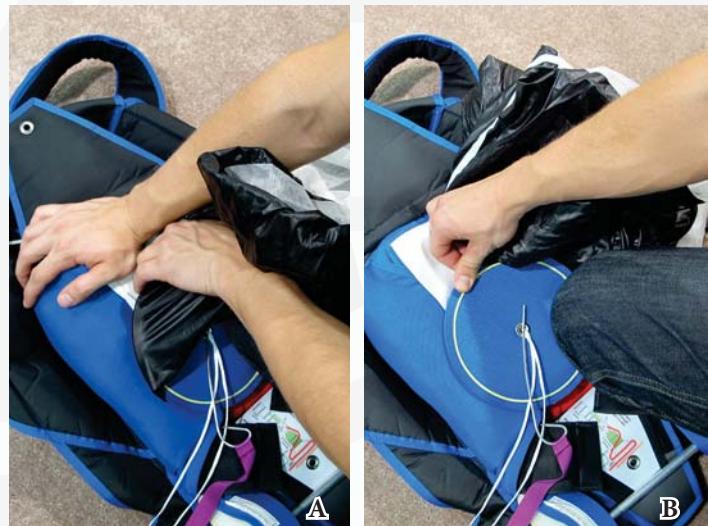


Fig.75



### Stowing the Pilot Chute Fabric

- Start feeding the mesh around the pop top first, the F-111 will follow. This will prevent the two materials from bunching up around the spring.



### Stowing the Pilot Chute Fabric

- Once all of the pilot chute fabric is in position at the bottom of the container, check around the edges of the pop top to ensure the even distribution of fabric.
- At this point, the pop top should be firmly seated with no gaps between the edge and the container. Closing the next two flaps will not seat the pop top any further into the container.



### Temporary Pin

- When moving your temporary pin from one side to the other, be sure to always return the pin from the direction in which it came to avoid twisting the loop's eye closed.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

**PACKING**  
THE RESERVE

- Lay the pilot chute fabric into the channel, evenly filling it's width and length.
- S-fold the remaining fabric to create a 'T' shape that extends beyond the reserve bottom flap.



Fig.76

### Pinning the Bottom Flap

- Thread your pull up cord through the grommet in the bottom flap.
- Keep pressure on the pilot chute fabric as you bring this flap up with a tension tool.
- Allow the ends of this "T" to remain outside of the pinned bottom flap.



Fig.77

### Placing the Reserve Ear Covers

- Use your aluminum paddle to place the reserve ear covers around the free-bag ears and into the container.



Fig.78



### Pinning the Bottom Flap

- As you pull the bottom flap closed use your hand to hold the S-folded pilot chute in place at the bottom of the container. If fabric is allowed to roll above the pop top the misplaced bulk can create additional pressure on the closing loop and pin.



### Tension Creases

- Once the bottom flap is closed, there should be tension creases running up from the bar tacks in the mid flap. These creases will come into play when stowing your reserve pilot chute material.



### Aluminum Paddle

- Use an aluminum paddle to avoid potentially damaging your wooden paddle.
- Ensure that the paddle you use to manage the reserve ear covers is in like-new condition and free of rough edges or burrs.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

**PACKING**  
THE RESERVE

## Set the Angle of the Pilot Chute

- Hold the container off the ground from the underside to protect the AAD control unit.
- Give the pop top a few taps to seat it at the same angle as the container.



Fig.79

## Closing the Pin Flap

- Thread your pull up cord through the pin flap grommet and use a tension tool to bring it down.
- Ensure that the Sky Hook pin is routed through the marine eye of the rip cord and the bevel on the marine eye is facing the pin's entry point.
- Insert the pin through the eye of the closing loop with the marine eye outside of the grommet.
- Slowly extract the pull up cord and inspect the closing loop for any damage.
- If the loop shows any signs of damage, replace it.
- Rotate the end of the pin into the type 3 pocket.



Fig.80

## Stowing the Remaining Pilot Chute

- Create an S-fold in the pilot chute fabric around the end of your aluminum paddle.
- Push the fabric under the bottom flap and angle your paddle up to move the fabric over the S-folded bridle and into the center of the mid flap between the tension creases.
- Press down firmly on the mid flap above the pilot chute fabric to seat the material.
- Repeat on the other side.



Fig.81



### Closing the Pin Flap

- Removing the ripcord handle from its pocket will give the cable more play and make pinning much easier. Cover any exposed hook, and return the handle to its pocket immediately after the pin is in place.



### Sky Hook

- Until you close your pin flap the Sky Hook is still visible under the pop top. Give the assembly one final check.



### Aluminum Paddle

- Use an aluminum paddle to avoid potentially damaging your wooden paddle.
- Ensure that the paddle you use is in like-new condition and free of rough edges or burrs.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

 **PACKING**  
THE RESERVE

## Seal the Pin

- Double lark's head a length of Rigger's seal thread onto the eye of the Sky Hook pin.
- Pass the bitter ends of the thread through the holes in the seal.
- Route the thread coming through the bottom hole of the seal under the pin on the far side of the loop before passing it through the top hole in the seal from the opposite direction of which it came.
- Tie a surgeon's knot and lock with a square knot
- Seal with a press and trim the excess thread

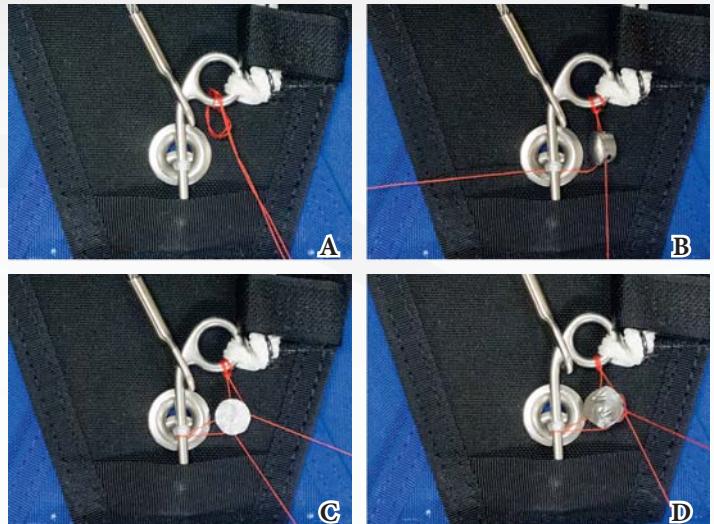


Fig.82

## Placing the Pin Cover Flap

- Insert the pin cover flap's tuck tabs under the pin flap.
- Insert the end of the pin cover flap into the reserve bottom flap.



Fig.83

## Shaping the Container

- Turn the container on its side.
- Flatten the bow out of it by massaging in a fanning pattern with your aluminum paddle.
- Repeat on the opposite side.



Fig.84



## Shaping the Container

- Shaping the sides of the container will allow for more room when routing the main risers.



### Aluminum Paddle

- Use an aluminum paddle to avoid potentially damaging your wooden paddle.
- Ensure that the paddle you use is in like-new condition and free of rough edges or burrs.

[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)



**PACKING**  
THE RESERVE

- Check to ensure that all work is correct.



Fig.85

## The Packing Data Card

- The packing data card is to be stored under the data label.
- The packing data card must be filled out in accordance to 14 CFR, section 65.131 or foreign equivalent with the following.
  - Date and location of packing.
  - Notation of any defects found on inspection.
  - Parachute rigger certificate number.
  - Parachute rigger name and signature.

OWNER INFORMATION																																		
NAME																																		
STREET ADDRESS																																		
CITY, STATE, ZIP/POSTAL CODE																																		
TELEPHONE																																		
<b>WARNING!</b> USE OF THIS PARACHUTE MAY RESULT IN SERIOUS INJURY AND DEATH. FAR PARTS 91 AND 105 REQUIRE THAT THIS PARACHUTE BE INSPECTED AND REPACKED EVERY 180 DAYS BY A CERTIFIED AND APPROPRIATELY RATED PARACHUTE RIGGER.																																		
CANOPY MODEL & SERIAL NUMBER	Harness & Container Model & Serial Number																																	
CANOPY MANUFACTURER	DATE OF MFG.	MANUFACTURER	DATE OF MFG.																															
AAD Model & Serial Number		SB Compliance Number, Date, Rigger & Certificate No.																																
DATE	LOCATION	CERTIFICATE NO. & SEAL	SIGNATURE	REMARKS																														
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Fig.86

## The TSO Data Label

- The data label can be found either on a pouch in the back pad or inside the pin cover flap.
- The following information should appear as pictured
- Container part number.....A
- Container model.....B
- Harness type.....C
- Manufacturer information.....D
- TSO information.....E
- Date of manufacture.....F
- Serial number.....G
- Inspection stamp.....H

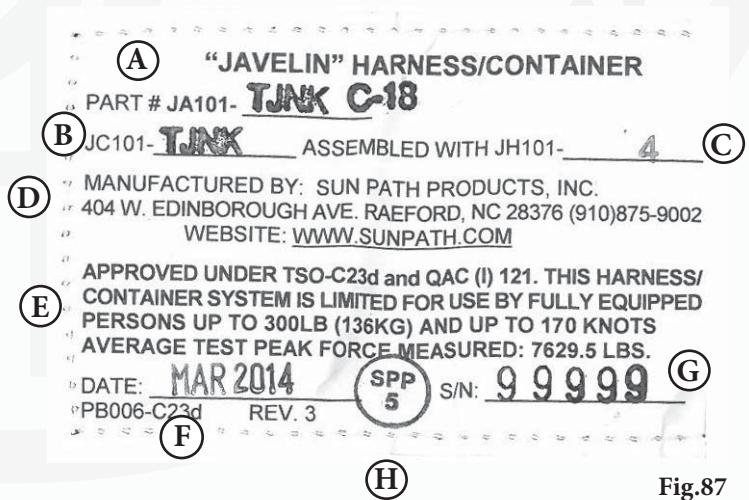


Fig.87

**PACKING**  
**THE RESERVE**

## SECTION FOUR

# MAIN ASSEMBLY



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# Sun Path Supplied Parts

- |   |   |
|---|---|
| 1. Harness/Container (JH101-4) .....                      | A |
| 2. Main risers and toggles (PRIS-TY17MINISS) .....        | B |
| 3. Main pilot chute and bridle (PPC-KLTOFF).....          | C |
| 4. Main deployment bag (PBAG-MAIN) .....                  | D |
| 5. Main cutaway/release handle (PHAND-CUTPHATDADDY) ..... | E |
| 6. Main closing loop (PLOOP-MAIN) .....                   | F |
| 7. Owners manual and courtesy kit .....                   | G |
| 8. Hook knife and pocket (PPOC-KNIFE&POCKET) .....        | H |

**Thoroughly inspect all components before assembling.**



Fig.88

# Main System Inspection

The entire harness and container system and all applicable components must be thoroughly inspected before deeming the system airworthy and ready for use.

An itemized checklist like the one below is recommended.

Container	Risers and Toggles
<ul style="list-style-type: none"><li>• Grommets seated securely without damage.</li></ul>	<ul style="list-style-type: none"><li>• Grommets seated securely without damage.</li></ul>
<ul style="list-style-type: none"><li>• Plastic stiffeners are not cracked or broken.</li></ul>	<ul style="list-style-type: none"><li>• No cuts, fraying or broken stitching on webbing or junctions.</li></ul>
<ul style="list-style-type: none"><li>• No excessive wear in the fabric.</li></ul>	<b>Pilot Chute and Deployment Bag</b>
<ul style="list-style-type: none"><li>• No broken stitching.</li></ul>	<ul style="list-style-type: none"><li>• Reinforcing tape on pilot chute body intact.</li></ul>
<ul style="list-style-type: none"><li>• Hook fastener clean and in place.</li></ul>	<ul style="list-style-type: none"><li>• No broken stitching.</li></ul>
<ul style="list-style-type: none"><li>• BOC spandex taut with no excessive wear.</li></ul>	<ul style="list-style-type: none"><li>• No excessive wear on the bridle.</li></ul>
<b>3 Ring Release</b>	<ul style="list-style-type: none"><li>• No excessive wear or twists in the kill line.</li></ul>
<ul style="list-style-type: none"><li>• 3 rings free of nicks, burrs or corrosion</li></ul>	<ul style="list-style-type: none"><li>• Stow band attachments not broken.</li></ul>
<ul style="list-style-type: none"><li>• 3 rings move freely and interlock easily.</li></ul>	<ul style="list-style-type: none"><li>• Grommets seated securely without damage.</li></ul>
<ul style="list-style-type: none"><li>• Spectra loop undamaged.</li></ul>	<ul style="list-style-type: none"><li>• No excessive wear in any fabric.</li></ul>
<ul style="list-style-type: none"><li>• All stitching intact.</li></ul>	

Tbl.4

## Assembling the Main System

The performance standards outlined in the FARS Section 105.43 A; The main parachute must have been packed within 180 days before the date of its use by a certificated parachute rigger, the person making the next jump with that parachute, or a non-certificated person under the direct supervision of a certificated parachute rigger.

All applicable service bulletins for any Sun Path Products harness and container system can be found at [www.sunpath.com](http://www.sunpath.com) and can be provided upon the verbal or written request of the user or certified parachute rigger.

Please read and understand all instruction and procedures of this manual and service bulletins before exercising the privileges of your parachute Rigger's certificate or foreign equivalent.



# Main Container Compatibility

- Canopies with dacron suspension lines or custom artwork will have a higher pack volume.
- Only F-111 main pilot chutes are recommended for use in Sun Path Products Inc. harness and container systems.
- Generally the next smaller size main canopy can be safely installed and jumped in any given main container, although Sun Path has not tested every application of this.
- Do not install a main or reserve canopy larger than the sizing chart calls for as there are serious safety issues that may arise from “over stuffing” a main or reserve container.
- When in doubt contact Sun Path Products Inc. directly with canopy/container compatibility questions.

Container Model	Zero Porosity Main Canopy	Hybrid F-111/ZP Main Canopy	Low Bulk Main Canopy	Cross braced Main Canopy	F-111 Main Pilot Chute (Cut Diameter)
RSK	83-99	135	107	68-75	28
RSK.5	100-107		120	80-88	28
RSK.1	109-120	135	135	88-96	28
NJK	109-120	135	135	96-103	28
DNKY	109-120	135	135	96-103	28
TJNK	135	150	150	108-120	28
TJNK.5	150	170	170	120	33
OJK	135	150	150	120	28
J1KS	150	170	170	135	33
J1KL	170	190	190		33
J2K	150	170	170	135	33
J3K	170	190	190		33
J4K	190	210	210		33
J4.5K	210	230	230		33
J5K	240	260	260		35
J6NK	260				35
J7NK	280				35
J8K	300				35

Tbl.5



## Adjusting the Closing Loop Length

- The closing loop must be adjusted to end inside the Z box stitch pattern on the back side of the top main flap.
- Secure the loop length with a square knot below the washer.



Fig.89

## Release Cable Lengths

See Pg. 6-24 for instructions on  
Searing Release Cable Ends

- Measured from the end of the release housing ferrule to the end of the release cable.

RSL Side	Non RSL Side
(7 in)	(5.5 in)
178 mm	140 mm
<b>No RSL</b>	
Trim for RSL configuration as if it were installed	

Tbl.6

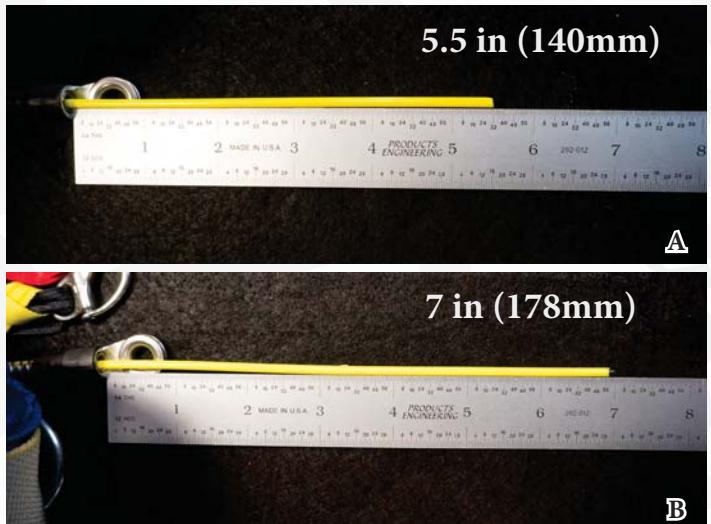


Fig.90

## Assembling the 3 Ring

- Ensure the riser with the RSL ring is assembled on the appropriate side.
- Pass the large ring on the riser through the main lift ring.
- Pass the small ring on the riser through the large ring.
- Pass the white loop through the small ring and the grommet on the the riser.

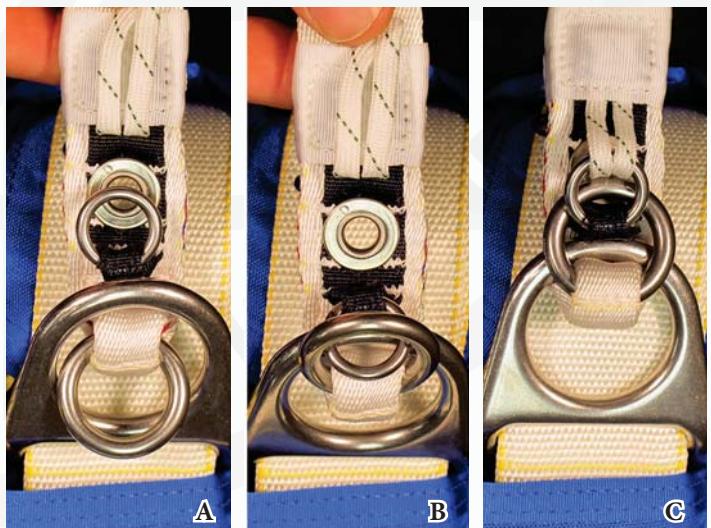


Fig.91



- Pass the loop through the grommet of the release cable housing.
- Insert the release cable through the loop before routing the excess release cable into the anti-twist tube on the back of the riser.
- Repeat on the opposite side.

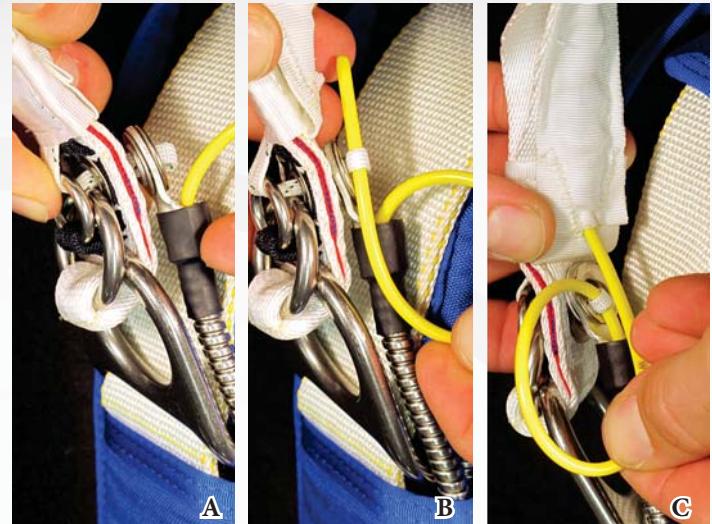


Fig.92

### Connecting the RSL

- Attach the snap shackle to the RSL ring on the riser.
- Ensure that the RSL has an unobstructed path from the ring to its channel.



Fig.93

### Prepping the Risers

- Locate the end of main risers.
- Fold the outer edges into the center.
- Press firmly to set the butterfly fold in place.

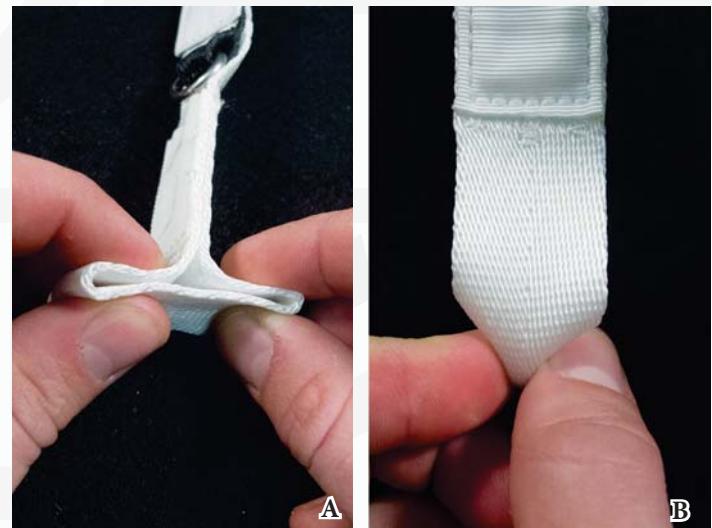


Fig.94

## Connecting the Parachute

- Follow the parachute manufacturer's instructions for assembling the suspension lines onto hard or soft links.



Fig.95

## Finger Trapping Micro line

For Dacron line Instructions Refer to Pg 6-7

- Thread your finger trap tool through the weave of the micro line far enough away from the manufacturer's mark to hide the excess tail.
- Start your trap 1/2" (25 mm) past the manufacturer's mark.
- Trap the line leaving a 2.5-2.75" (65-70mm) loop.
- Tie a square knot above the manufacturer's mark.

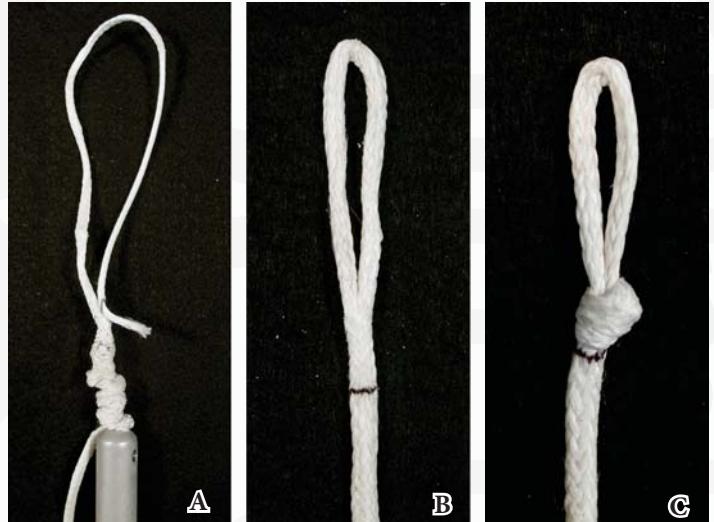


Fig.96

## Assembling the Toggles

- Pass the control line through the guide ring on the rear riser as shown.
- From the under side, thread the control line through the grommet in the toggle.
- Pass the bottom of the toggle through the loop in the control line creating a lark's head knot.
- Cinch the control line tight.
- Repeat on the opposite side.

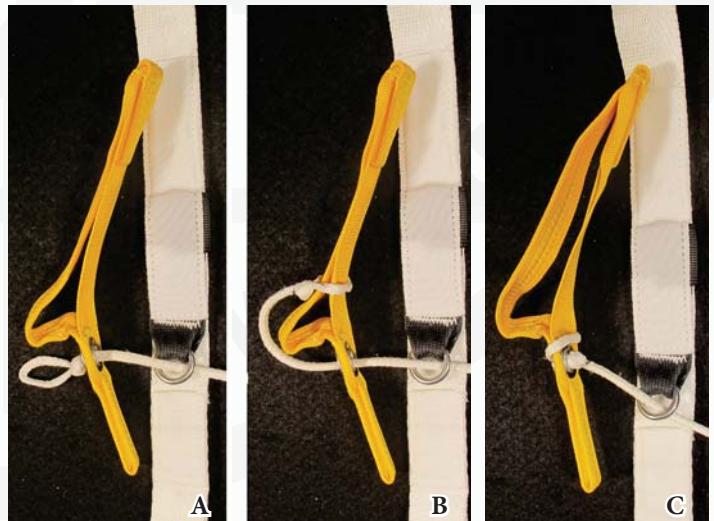


Fig.97

## Setting the Brakes

- Pull the lower control line and cat eye below the guide ring on the riser.
- Insert the tab of the toggle through the cat eye.
- Cinch the upper control line tight.
- Secure the top and bottom tabs in the in the keepers located on the main riser.

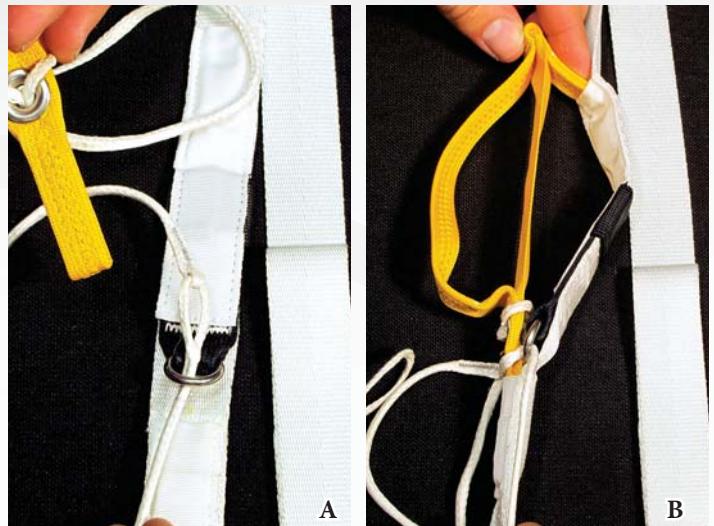


Fig.98

- S-fold and stow the excess steering line through the elastic keeper on the back of the main riser.
- Repeat on the opposite side.



Fig.99

## Continuity Check

- Perform a full continuity check and inspection of the parachute according to the manufacturer's recommendations.



Fig.100

## Attaching The Stow Bands to the Deployment Bag

- Lark's head rubber stow bands to each of the locking stow retainer loops.
- Lark's head additional rubber stow bands as needed to the retainer loops located on the sides of the deployment bag.



Fig.101

## Connecting the Retrofit Bridle to the Deployment Bag

- Route the kill line, security line and both attachment loops through the grommet in the bottom of the deployment bag as shown.



Fig.102

- Ensure the kill line is cleanly routed in-between the two attachment loops.
- Thread the included hard link through both attachment loops.
- Tighten the hard link with an adjustable wrench.

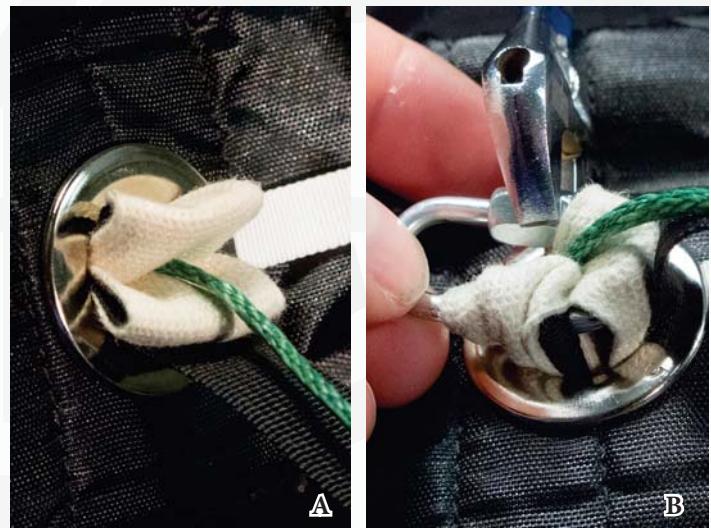


Fig.103

- Rotate the hard link so the barrel is inside one of the attachment loops.
- Ensure that the kill line and security line are free of any twists or tangles before attaching it to the main canopy.



Fig.104

### **Connecting the Pilot Chute and Deployment Bag Assembly to the Canopy**

- Assemble the kill line and security line to the canopy attachment point with a hard or soft link..
- All hard links should be finger tightened before applying a quarter turn with an adjustable wrench.
- Over tightening may result in cracking or stripping the barrel.



Fig.105

# SECTION FIVE

## PACKING THE MAIN CANOPY



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Stowing the Pilot Chute .....	5-7

# PACIFIC THE MAIN

Follow the instructions provided by the parachute's manufacture for Pro Packing the main parachute.



Fig.106

## Cocking the Collapsible Pilot Chute

- While securing the deployment bag, pull the apex of the pilot chute to fully extend the kill line.
- Test to make sure the pilot chute inflates.
- The kill line seen through the window on the bridle will be green when fully cocked.



Fig.107

## Reducing the Cocooned Canopy

- Place your knees on either side of the base of the cocoon to secure the tail of the canopy.
- Compress the air out of the canopy and reduce the width of the canopy to the approximate width of the deployment bag.



Fig.108

## First S-Fold

- Create an S-fold at the base of the cocoon equal in length to the depth of the deployment bag.



Fig.109

## Reducing the Width of the Canopy (again)

- Secure the first S-fold with your knee behind the slider grommets.
- Starting from the base of the first S-fold compress the cocooned canopy to the approximate width of the deployment bag.
- Hold the outside skin of the cocoon from the under side.



Fig.110

## Second S-Fold

- Fold the cocooned portion of the canopy back and on top of the first S-fold.
- Continue your hold on the under skin of the cocoon as you apply pressure to contain the S-folds below.

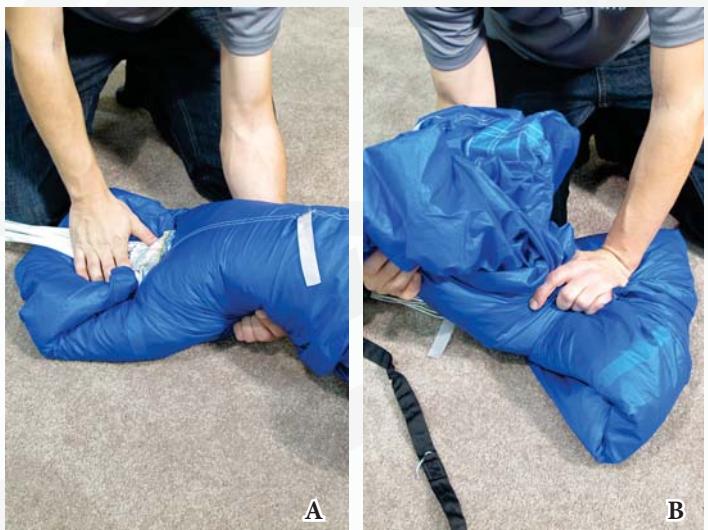


Fig.111

- With your free hand, fold the remainder of the cocoon over on it's self to complete the second S-fold.
- Contain the S-folds with your knee to free both hands for positioning the deployment bag.



Fig.112

### Bagging the Canopy

- Position the deployment bag so the closing flap is on the floor.
- Work the deployment bag around one side of the S-folded canopy.
- Grasp the exposed side of the S-folded canopy at it's top corner.
- Pull the side of the deployment bag around to meet this corner.
- Work the deployment bag around this half of the S-folded canopy.

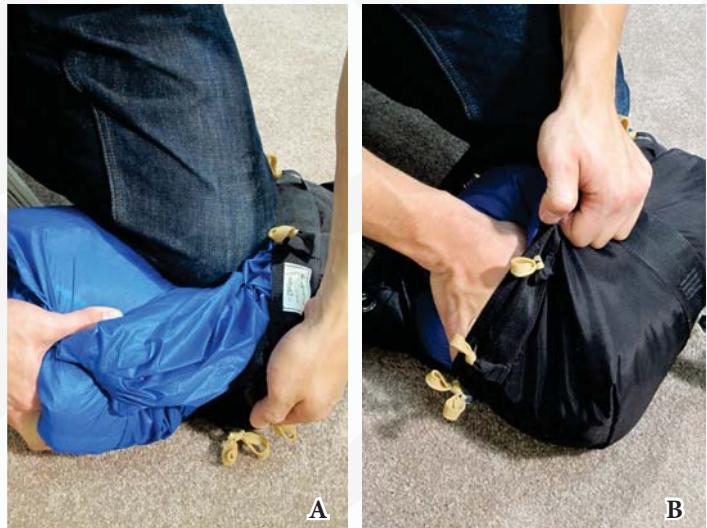


Fig.113

### Stowing the Lines

For 3 stow bag packing instructions refer to Pg 6-25

- Starting with the center, route the stow band through the corresponding grommet of the closing flap and secure a line bite approximately 2" (50mm) in length.
- Repeat the stows on alternating sides.
- Continue alternating line stows down the sides of the deployment bag until you have 12 -18 inches of suspension line between your last stow and the line's attachment points to the risers.



Fig.114

- Pick up the deployment bag and place it line stows down past the main container.
- With the risers on top of the upper yoke route them along the side of the reserve container with the control toggles facing inboard.
- Tuck the riser cover into its pocket on the yoke.
- Repeat on the opposite side.



Fig.115

### Placing the Bag

- Route the excess suspension lines towards the bottom of the container.
- Rotate the deployment bag into the main container so the line stows face the bottom of the main container.
- Pulling the reserve container up by the main closing loop will assist seating the deployment bag fully and evenly into the main container.



Fig.116

### BOC Closing Sequence

For Pull Out Instructions Refer to Pg 6-26  
**Bottom Flap**

- Route the bridle to the wearer's right of the closing loop.
- Thread your pull up cord through the grommet of the bottom flap. Pull as much closing loop through the grommet as possible to ease the closing of the proceeding flaps.

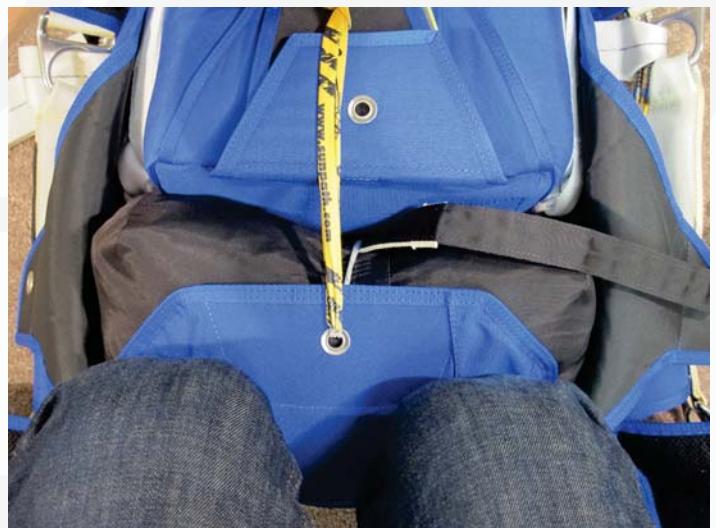


Fig.117

## Top Flap

- Keep tension on your pull up cord as you thread it through the grommet on the top flap and draw it closed.
- Mate the pile on the bridle with the hook on the top main flap.
- Neatly tuck the excess bridle under the top or bottom flap.



Fig.118

## Left Flap

- Thread your pull up cord through the left flap grommet.
- With one hand holding the deployment bag and bottom flap in place draw the left flap closed.



Fig.119

## Right Flap

- Thread your pull up cord through the right flap grommet.
- With one hand holding the deployment bag and bridle cover in place, draw the right flap closed.



Fig.120

## Pinning the Main and Routing the Bridle

For alternate bridle routing instructions refer to Pg 6-29

- Insert the closing pin right to left so the curve of the pin points to the top of the container.
- Route the bridle under the plastics of the exposed flaps.
- Continue to route the bridle under the right flap, into the top of the bridle cover and down to the BOC pocket.



Fig.121

## Stowing the Pilot Chute

- Lay the F-111 side on the ground and pull the bridle attachment point and mesh down to the bottom edge.
- fold the remaining pilot chute down in half.
- Fold the two halves with the bridle attachment point up to the handle.
- S-fold the bridle equal in length to the folded pilot chute.



Fig.122

- Fold both ends of the pilot chute into the center.
- Roll the ends evenly to either side of the bridle.
- Insert the rolled pilot chute into the BOC pocket so only the handle is exposed.
- Flatten the pilot chute so it expands to the width of the BOC pocket.



Fig.123



# SECTION SIX

## APPENDIX



<b>Odyssey Sky Hook Reserve Static Line</b>	
(DOM before February, 2015) .....	<b>6-2</b>
<b>Odyssey Without Sky Hook Reserve Static Line</b>	
(DOM before February, 2015) .....	<b>6-4</b>
<b>Legacy Reserve Static Line</b> .....	<b>6-6</b>
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<b>Searing the Release Cable Ends</b> .....	<b>6-24</b>
<b>Replacing the Release Handle</b> .....	<b>6-24</b>
<b>3 Stow Deployment Bag</b> .....	<b>6-25</b>
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## Sky Hook Reserve Static Line Assembly (DOM before February, 2015)

For Non Sky Hook RSL Instructions Refer to Pg 6-4

For Legacy RSL Instructions Refer to Pg 6-6



### Assembling the Lanyards

- From the tab side of the snap shackle, pass the end of the yellow lanyard furthest from the label through the snap shackle attachment loop in the RSL lanyard.
- Avoid any unnecessary twist in the yellow Collin's Lanyard as you pass the opposite end through it's self to complete the lark's head knot.



- With the white label facing up, pass the red lanyard through the loop on the RSL lanyard.
- Pass the opposite end of the red lanyard through itself to complete the lark's head knot.
- In the same manner lark's head the white reserve pin lanyard to the RSL above the red lanyard.



## Routing the Sky Hook RSL Assembly

- Completely unfold the the RSL lanyard channel located on the wearer's right side yoke.
- Lay the lanyard assembly along the outboard portion of the unfolded channel as shown.
- Fold the channel with the lanyard assembly back to its closed position so the mouth of the snap shackle faces outboard.



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A

B





## Assembling without a Sky Hook (DOM Before February, 2015)

### Odyssey Reserve Static Line Lanyard Assembly.

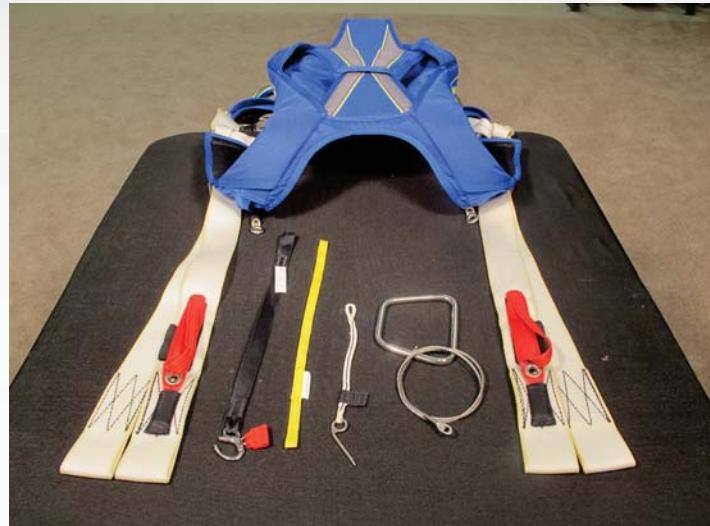


Fig.130

#### Assembling the Lanyards

- From the tab side of the snap shackle, pass the end of the yellow lanyard furthest from the label through the snap shackle attachment loop in the RSL lanyard.
- Avoid any unnecessary twist in the yellow Collin's Lanyard as you pass the opposite end through its self to complete the lark's head knot.

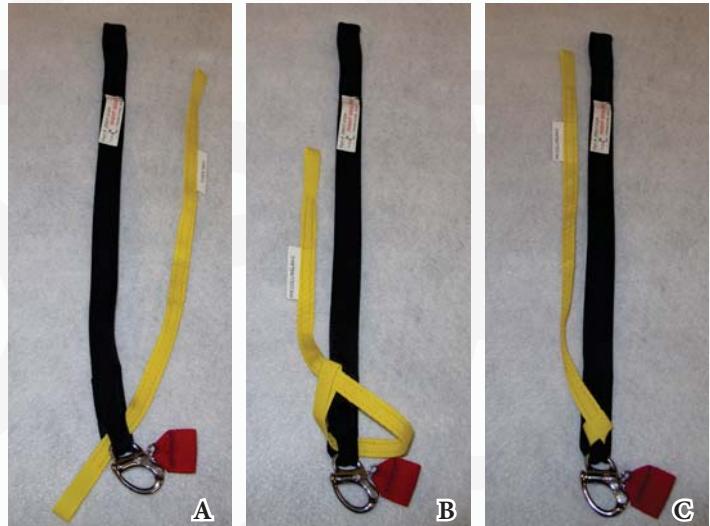


Fig.131

- With the white label on the RSL facing up, pass the looped end of the white reserve pin lanyard through the loop on the RSL lanyard.
- Pass the opposite end of the pin lanyard through its self to complete the lark's head knot.

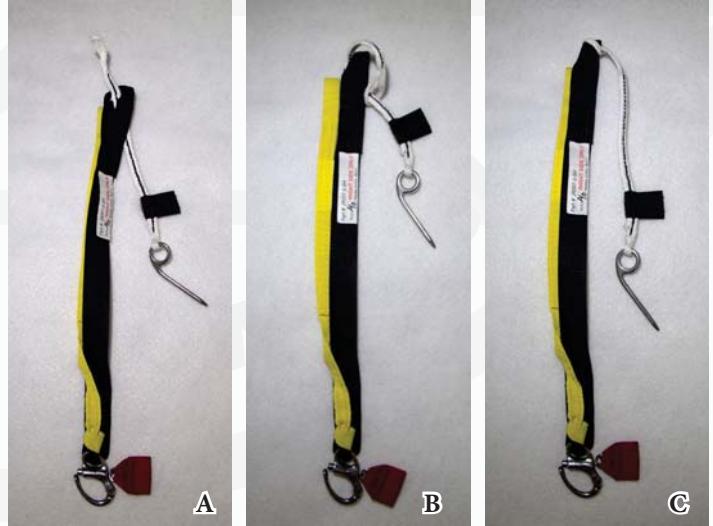


Fig.132

## Routing the Reserve Static Line Assembly

- Completely unfold the RSL lanyard channel located on the wearer's right side yoke.
- Lay the lanyard assembly along the outboard portion of the unfolded channel as shown.
- Fold the channel with the lanyard assembly back to it's closed position.



Fig.133

## Installing the Release Handle

- Insert the release cables into their respective housings below the chest strap.
- Pull the extent of the long side cable out of the first portion of the split housing.
- Seat the release handle into the pocket and mate the hook and pile.

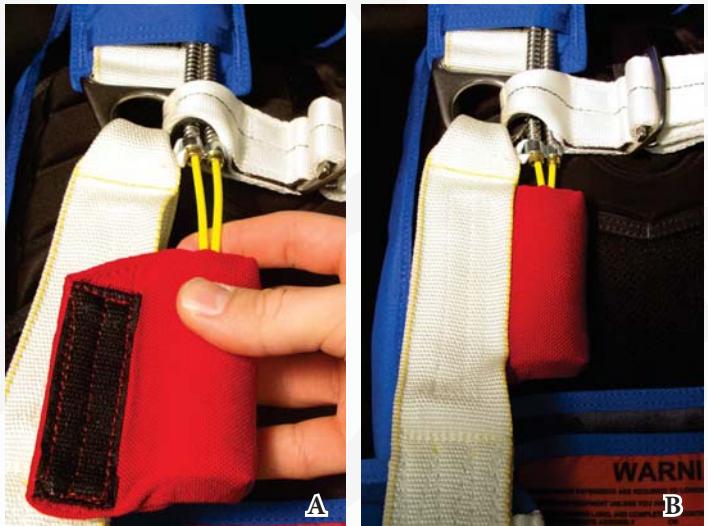


Fig.134

- Pass the long side release cable through the loop in the end of the yellow Collin's Lanyard and continue to route the release cable into the second portion of the spit housing.

continue instructions on Pg. 2-9



Fig.135



## Legacy Reserve Static Line Assembly

If RSL lanyard is not in use:

- The hook on the reserve riser must be covered by an equal length of pile or removed by a Master Rigger.
- The terminal pin reserve ripcord must route through the rings on the pin flap.



Fig.136

### Installing the Reserve Static Line Lanyard

- Orient the RSL lanyard so the snap shackle end is closest to the main ring junction.
  - Mate the pile of the RSL lanyard to the hook on the reserve riser..
- \*If applicable cover the RSL with the Riser protector.



Fig.137

### Routing the Ripcord

- Install the ripcord as shown in fig.15
- Position the ring on the RSL lanyard in between the two rings on the pin flap.
- Route the terminal pin reserve ripcord consecutively through the three aligned RSL rings.
- Stow the excess RSL lanyard under the reserve pin flap with a single S-fold.

continue instructions on Pg. 2-9

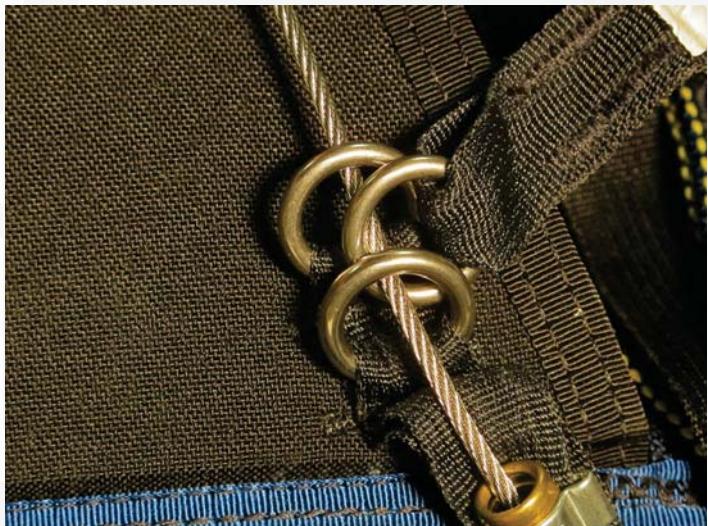


Fig.138

## Pin Flap Display AAD Routing

- Insert the control unit into the pocket accessible from the underside of the pin cover flap.
- Check the AAD Initiating sequence before continuing.

continue instructions on Pg. 2-10



Fig.139

## Assembling Dacron Steering Lines

- Pass the reserve control line through the guide ring on the rear reserve riser.
- From the under side, thread the control line through the grommet in the control toggles.
- Loop the line around one side and back through the grommet from the underside and cinch tight.

continued from Pg.2-12

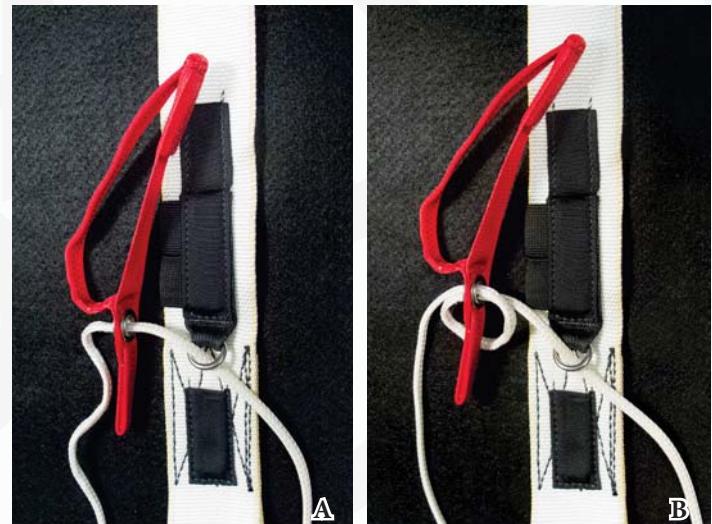


Fig.140

- Loop the line around the other side and back through the grommet from the underside and cinch tight.
- Tie a square knot as close to the grommet as possible and lock with another square knot.

continue instructions on Pg. 2-12

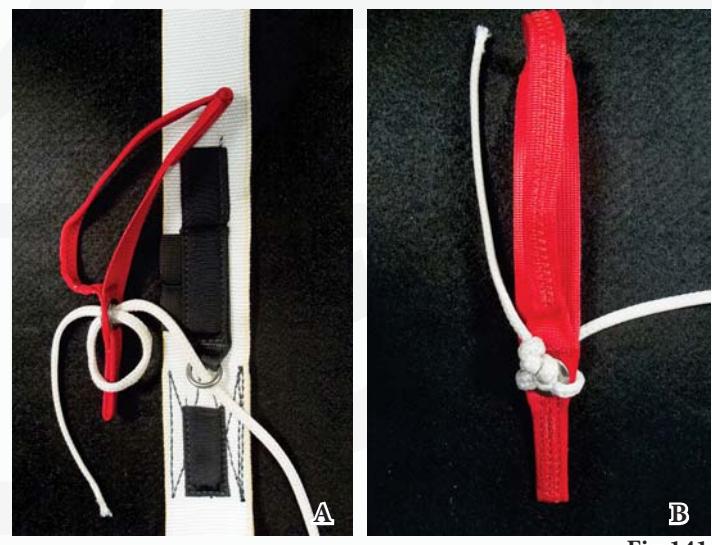


Fig.141



## Packing without a Sky Hook RSL

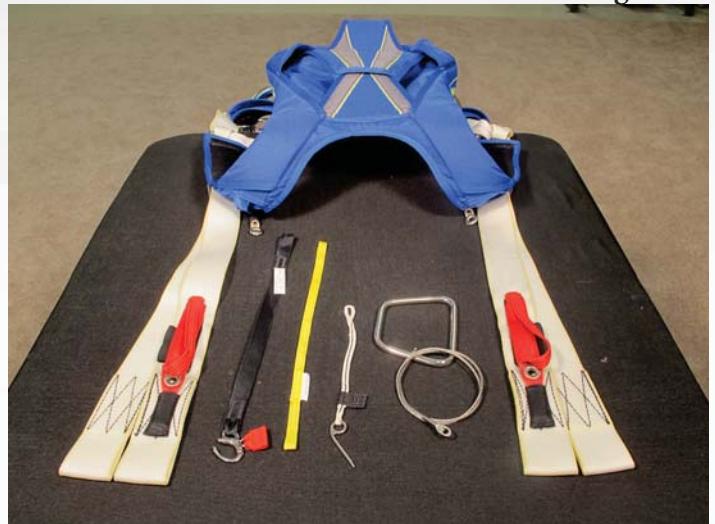


Fig.142

### S-Folding the Bridle

- Starting at the bridle's attachment point to the free-bag, create 4 S-folds in the bridle approximately 9 inches long.
- Equally V split the bridle to either side of the free-bag's center grommet so the two groups lay opposite one another inside the molared channel.
- Route the excess 4-5 ft of bridle out of the top of the reserve container, above the Sky Hook sub flap.



Fig.143

### Closing the Wearer's Left Flap

- Route your pull up cord through the wearer's left side flap grommet.
- With your free hand hold the free-bag and bridle in place, keep tension on your pull up cord as you bring the left side flap across.
- Use a tool if necessary to assist in temporarily pinning this flap.

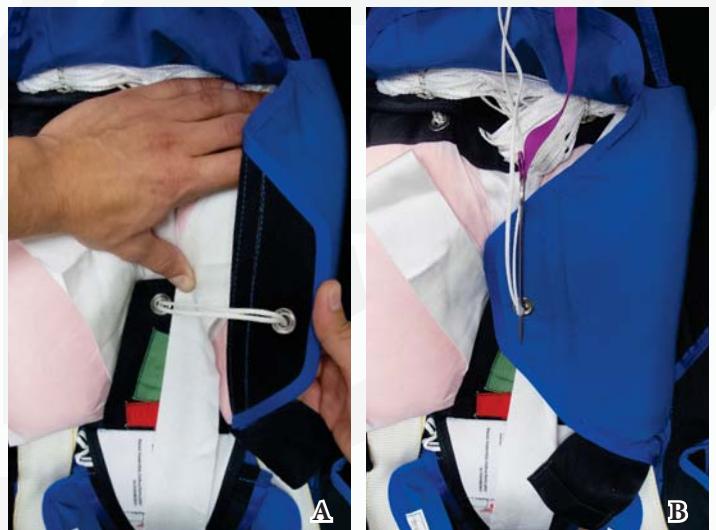


Fig.144

## Closing the Wearer's Right Flap

- Route your pull up cord through the wearer's right side flap grommet.
- With your free hand hold the free-bag and bridle in place, keep tension on your pull up cord as you bring the left side flap across.
- Use a tool to assist in temporarily pinning this flap.



Fig.145

## Placing the Line Cover

- Form a free space in the center of the S-folds
- Conform the line cover to this space.



Fig.146

## Routing The Bridle

- S-fold the bridle down and up the length of the reserve container.
- Find the fold length that allows the tri-folded portion of the bridle to lay continuous and end near the center grommet.
- Split your bridle to either side of your pull up cord so the bulk is evenly distributed.

continue instructions on Pg. 3-28



Fig.147



## Packing the Javelin Legacy

Continued from Pg. 3-22



Fig.148

### S-Folding the Bridle

- Starting at the bridle's attachment point to the free-bag, create S-folds in the bridle approximately 9 inches long on one side until you reach 4-5 feet from the reserve pilot chute.
- Equally V split the bridle to either side of the free-bag's center grommet so the two groups lay opposite one another inside the molared channel.



Fig.149



### Closing the Side Flaps

- After you position the free-bag you can keep your knees in place securing the reserve risers and free-bag ears until the left and right flaps are temporarily pinned.



### Closing the Side Flaps

- Once you have your left and right reserve flap temporarily pinned, it is prudent to double check the tension on your reserve risers and the position of your reserve free-bag before continuing.



### Temporary Pin

- Check the condition of your temporary pin. A rough pin will quickly fray the closing loop and damage grommets.

[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)



**PACKING**  
THE RESERVE

## Closing the Wearer's Left Flap

- Route your pull up cord through the wearer's left side flap grommet.
- With your free hand hold the free-bag and bridle in place, keep tension on your pull up cord as you bring the left side flap across to be temporarily pinned.

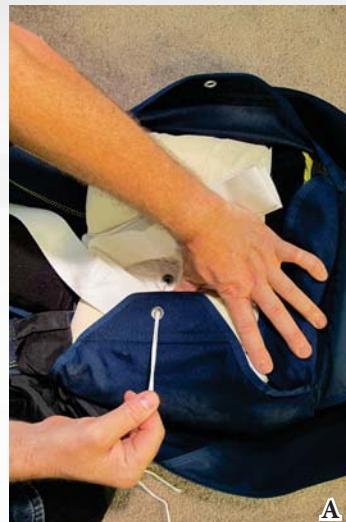


Fig.151

## Closing the Wearer's Right Flap

- Route your pull up cord through the wearer's right side flap grommet.
- With your free hand hold the free-bag and bridle in place, keep tension on your pull up cord as you bring the right side flap across and temporarily pin.



Fig.150

## Place the Line Cover

Form a free space in the center of the S-Folds and conform the line cover to this space.

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## The Remaining Bridle

- S-fold the bridle down and up the length of the reserve container.
- Find the fold length that allows the tri-folded portion of the bridle to lay continuously and end near the center grommet.
- Split your bridle to either side of your pull up cord so the bulk is evenly distributed.



Fig.152

## Seating the Reserve Pilot Chute

- Insert a 22 mm rifle cleaning rod through the pilot chute and extract your pull up cord cleanly through the center of the pilot chute spring.
- Position the pop top's binding tape run off towards the bottom of the container.
- Center the base of the pilot chute spring around the side flap grommets, on top of the S-folded bridle.



Fig.153

## Compressing the Reserve Pilot Chute

- Compress the pilot chute so all the fabric is outside of the spring coils on all sides.
- Use a tension device to aid in temp pinning the pilot chute.



Fig.154



### Compressing the Pilot Chute

- You can hold the reserve pin and pin cover flap to the floor and out of the way of the compressing coils with a knee or foot. This will also keep the container from sliding away from you as you compress the reserve pilot chute. Compress the pilot chute at the same angle as the reserve container to prevent uneven compression.
- While using your tension tool for temporarily pinning, firmly tapping around the edges of reserve pilot chute's pop top (with a closed fist) will help sink the coils into the container.



### Compressing the Pilot Chute

- Before compressing the pilot chute, look through the grommet in the pop top to check the pull up cord's routing and the spring position around the grommet.



### Tension Tool

- It is beneficial to use a tension tool that is long enough to clear the sides of the reserve container.

[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)



**PACKING**  
THE RESERVE

## Stowing the Pilot Chute Fabric

- With your knee, push down on the back end (6 o'clock position) of the pilot chute pop top to raise the opposite side.
- Lay the pilot chute fabric on the opposing side up and over your knee.
- Evenly feed the mesh and f-111 a few inches at a time under and around either side of the pop top.



Fig.155

- Reposition yourself to the opposite side of the container and place your knee off to one side (9 o'clock position) of the pop top slightly lifting the opposing side.
- Lay the pilot chute fabric over your knee.



Fig.156

- Use a hand to hold the bridle in place while you feed the mesh followed by f-111 a few inches at a time until all the fabric on that side is within the channel you created.
- Repeat on the opposite side.



Fig.157



### Stowing the Pilot Chute Fabric

- Start feeding the mesh around the pop top first, the F-111 will follow. This will prevent the two materials from bunching up around the spring.



### Stowing the Pilot Chute Fabric

- Once all of the pilot chute fabric is in position at the bottom of the container, check around the edges of the pop top to ensure the even distribution of fabric.
- At this point, the pop top should be firmly seated with no gaps between the edge and the container. Closing the next two flaps will not seat the pop top any further into the container.



### Temporary Pin

- When moving your temporary pin from one side to the other, be sure to always return the pin from the direction in which it came to avoid twisting the loop's eye closed.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

**PACKING**  
THE RESERVE

- Lay the pilot chute fabric into the channel, evenly filling it's width and length.
- S-fold the remaining fabric to create a 'T' shape that extends beyond the reserve bottom flap.



Fig.158

### Pinning the Bottom Flap

- Thread your pull up cord through the grommet in the bottom flap.
- Keep pressure on the pilot chute fabric as you bring this flap up with a tension tool.
- Allow the ends of this "T" to remain outside of the pinned bottom flap.

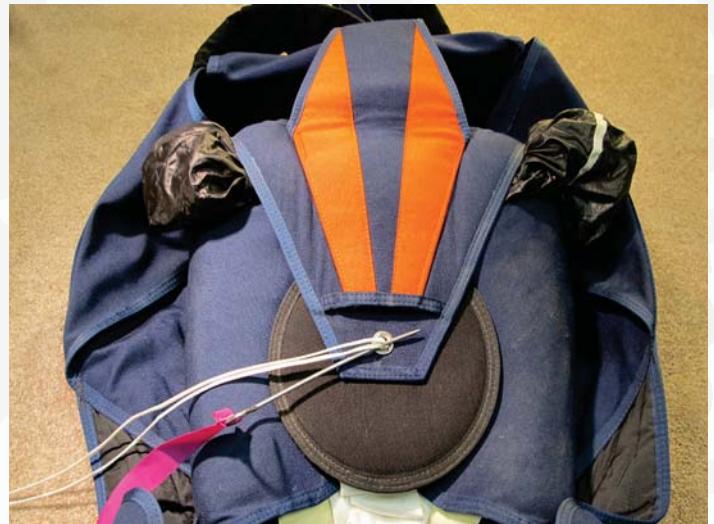


Fig.159

### Placing the Reserve Ear Covers

- Use your aluminum paddle to place the reserve ear covers around the free-bag ears and into the container.

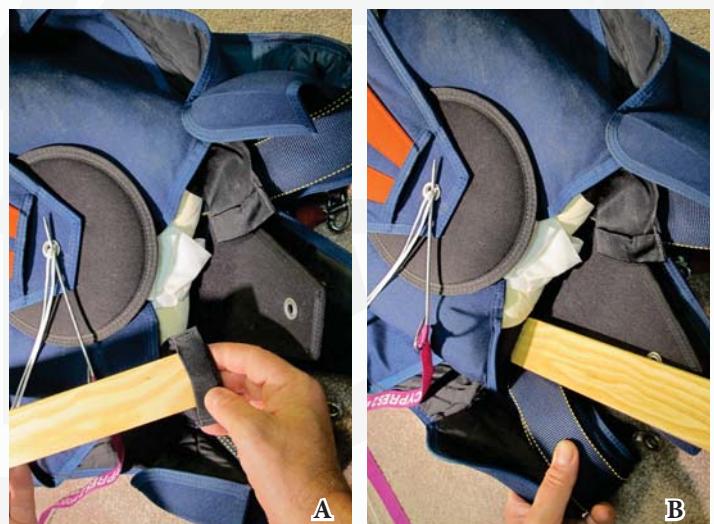


Fig.160



### Pinning the Bottom Flap

- As you pull the bottom flap closed use your hand to hold the S-folded pilot chute in place at the bottom of the container. If fabric is allowed to roll above the pop top the misplaced bulk can create additional pressure on the closing loop and pin.



### Tension Creases

- Once the bottom flap is closed, there should be tension creases running up from the bar tacks in the mid flap. These creases will come into play when stowing your reserve pilot chute material.



### Aluminum Paddle

- Use an aluminum paddle to avoid potentially damaging your wooden paddle.
- Ensure that the paddle you use to manage the reserve ear covers is in like-new condition and free of rough edges or burrs.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

**SUNPACKING**  
THE RESERVE

## Set the Angle of the Pilot Chute

- Hold the container off the ground from the underside to protect the AAD control unit.
- Give the pop top a few taps to seat it at the same angle as the container.
- Thread your pull up cord through the pin flap grommet and use a tension tool to bring it down.

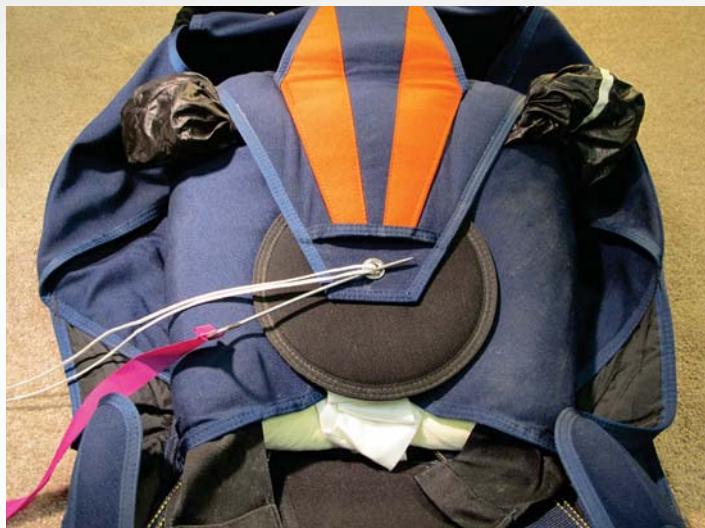


Fig.161

## Closing the Pin Flap

- Ensure that the terminal pin and ripcord cable are routed through the RSL guide rings.
- Insert the terminal pin through the eye of the closing loop.
- Slowly extract the pull up cord and inspect the closing loop for any damage.
- If the loop shows any signs of damage, replace it.
- Rotate the end of the pin into the type 3 pocket.



Fig.162

## Stowing the Remaining Pilot Chute

- Create an S-fold in the pilot chute fabric around the end of your aluminum paddle.
- Push the fabric under the bottom flap and angle your paddle up to move the fabric over the S-folded bridle and into the center of the mid flap between the tension creases.
- Press down firmly on the mid flap above the pilot chute fabric to seat the material.
- Repeat on the other side.



Fig.163



### Closing the Pin Flap

- Removing the ripcord handle from its pocket will give the cable more play and make pinning much easier. Cover any exposed hook, and return the handle to its pocket immediately after the pin is in place.



### Aluminum Paddle

- Use an aluminum paddle to avoid potentially damaging your wooden paddle.
- Ensure that the paddle you use is in like-new condition and free of rough edges or burrs.



[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)

**PACKING**  
THE RESERVE

## Seal the Pin

- Double lark's head a length of Rigger's seal thread onto the ripcord cable above the terminal pin.
- Pass one end around the back of the closing loop and under the pin.
- Pass both ends of the thread through lead seal.
- Tie a surgeon's knot and lock with a square knot.
- Press seal and trim the excess thread.



Fig.164

## Placing the Pin Cover Flap

- Insert the pin cover flap's tuck tabs under the pin flap.
- Insert the end of the pin cover flap into the reserve bottom flap.



Fig.165

## Shaping the Container

- Turn the container on its side.
  - Flatten the bow out of it by massaging in a fanning pattern with your aluminum paddle.
  - Repeat on the opposite side.
- 
- Check to ensure that all work is correct.



Fig.166



## Shaping the Container

- Shaping the sides of the container will allow for more room when routing the main risers.



## Aluminum Paddle

- Use an aluminum paddle to avoid potentially damaging your wooden paddle.
- Ensure that the paddle you use is in like-new condition and free of rough edges or burrs.

[www.sunpath.com/manuals.php](http://www.sunpath.com/manuals.php)



**PACKING**  
THE RESERVE

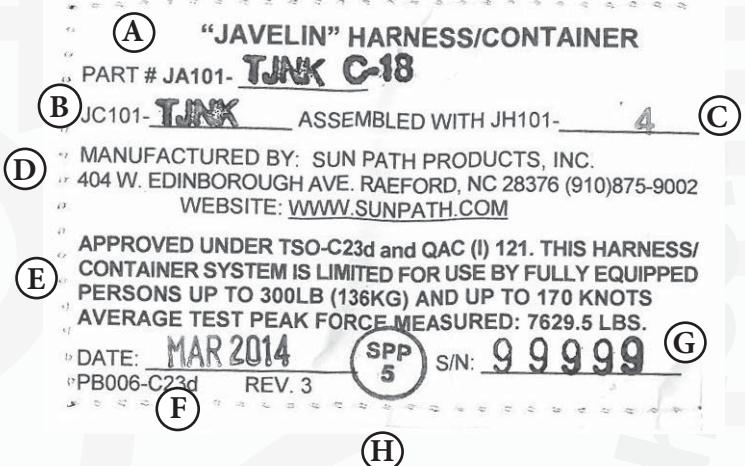
## The Packing Data Card

- The packing data card is to be stored under the data label.
- The packing data card must be filled out in accordance to 14 CFR, section 65.131 or foreign equivalent with the following.
- Date and location of packing.
- Notation of any defects found on inspection.
- Parachute rigger certificate number.
- Parachute rigger name and signature.

OWNER INFORMATION				
NAME _____				
STREET ADDRESS _____				
CITY, STATE, ZIP/POSTAL CODE _____				
TELEPHONE _____				
<b>WARNING!</b> USE OF THIS PARACHUTE MAY RESULT IN SERIOUS INJURY AND DEATH. FAR PARTS 81 AND 105 REQUIRE THAT THIS PARACHUTE BE INSPECTED AND REPACKED EVERY 180 DAYS BY A CERTIFIED AND APPROPRIATELY RATED PARACHUTE RIGGER.				
CANOPY MODEL & SERIAL NUMBER _____				
CANOPY MANUFACTURER _____ DATE OF MFG. _____				
AAD MODEL & SERIAL NUMBER _____				
HARNESS & CONTAINER MODEL & SERIAL NUMBER _____				
MANUFACTURER _____ DATE OF MFG. _____				
BB COMPLIANCE NUMBER, DATE, RIGGER & CERTIFICATE NO. _____				
DATE	LOCATION	CERTIFICATE NO. & SEAL	SIGNATURE	REMARKS

## The TSO Data Label

- The data label can be found either on a pouch in the back pad or inside the pin cover flap.
- The following information should appear as pictured
- Container part number .....A
- Container model .....B
- Harness type .....C
- Manufacturer information .....D
- TSO information .....E
- Date of manufacture .....F
- Serial number .....G
- Inspection stamp .....H



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## Replacing the Release Handle

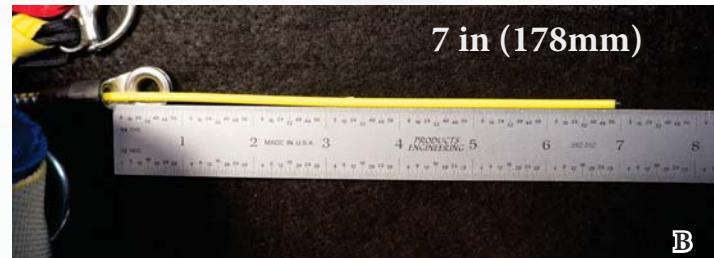
- Ensure that the release handle is properly installed as instructed on Pg. 2-7.
- Lay out the rig with the harness straight and positioned underneath the container.
- pull all slack out of the release cables.
- Measure from the end of the release housing ferrule to the end of the release cable and trim at the marks.

RSL Side	Non RSL Side
(7 in) 178 mm	(5.5 in) 140 mm
<b>No RSL</b>	
Trim for RSL configuration as if it were installed	

continued from Pg. 2-7



5.5 in (140mm)



7 in (178mm)

B

Fig.170

## Searing the Release Cable Ends

- Lightly heat the tip of the release cable to soften the plastic sheathing.
- Quickly grasp the cable with your thumb and forefinger just below the hot end.

continued from Pg. 4-5



A



B

Fig.171

- Pinch the cable and run your fingers off the end to create a taper.
- Reheat and repeat until the wire cable is completely and smoothly covered.

continue instructions on Pg. 4-5

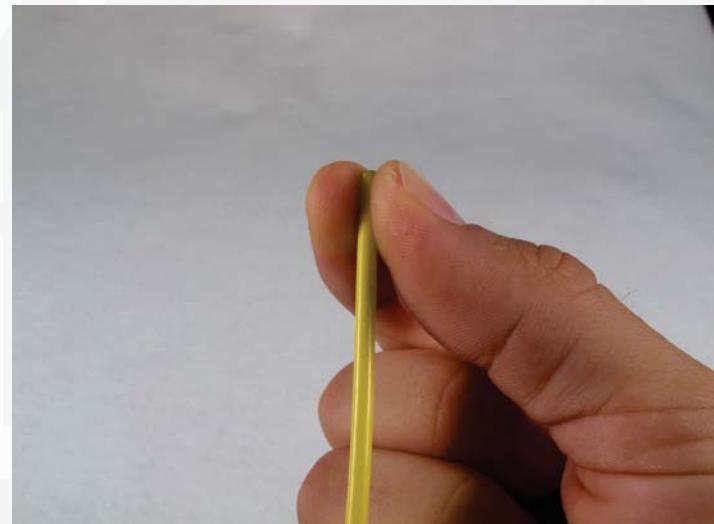


Fig.172

**APPENDIX**  
**MAIN ASSEMBLY**

### 3 Stow Deployment Bag

#### **Stowing the lines**

- Place locking stows facing up, and the line stow flap lying flat on the ground.
- Route the suspension lines to the center of the deployment bag and to one side to match its width.



Fig.173

- Figure 8 the main suspension lines on top of the line stow flap as shown.
- Each figure 8 should be smaller than the preceding one.



Fig.174

#### **Closing the Side Flaps**

- Rotate the bag 90 degrees toward the container.
- Close the side tuck tabs on the line stow flap.



fig. Fig.175

## Closing the Top Flaps

- Rotate the bag 90° back towards you and close both top locking tabs making sure all of the suspension lines are between the two top locking tabs.

continue instructions on Pg.5-5



Fig.176

## Pull Out Closing Sequence

- Thread your pull up cord through the bottom flap grommet with the bridle routed to the wearer's right hand side.

continued from Pg. 5-5



Fig.177

## Stowing the Bridle

- S-fold the bridle equal to the width of the deployment bag.
- Place the pilot chute to the wearer's left and the grommeted tab with lanyard to the right of the closing loop.



Fig.178

**APPENDIX**  
PACKING THE MAIN

## Stowing the Pilot Chute

- Separate the mesh of the pilot chute from the F-111.
- Gather the mesh near the F-111 connection point to form a mushroom shape.
- Fold the F-111 down over the mesh.



Fig.179

## Bottom Flap

- Place the mushroom folded pilot chute on top of the S-folded bridle as shown.
- Ensure that the grommeted tab and lanyard are clearly routed to the wearer's right hand side of the closing loop.
- Draw the bottom flap closed.

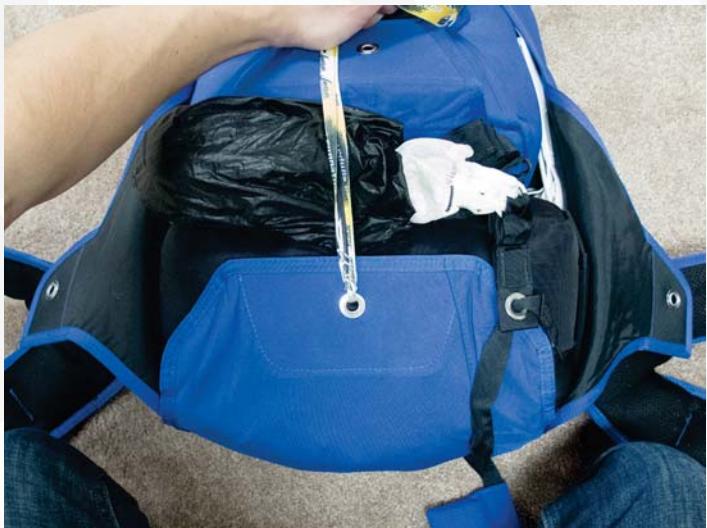


Fig.180

## Top Flap

- Thread your pull up cord through the grommet of the top flap and draw it closed.
- The end of the grommeted tab should be even with the end of the top flap.



Fig.181

## Right Flap

- Thread your pull up cord through the wearer's right side flap.
- Hold the grommeted tab in place as you close the wearer's right side flap.



Fig.182

## Left Flap

- Thread your pull up cord through the wearer's left side flap and draw closed.
- Insert the pin in an upwards direction so the lanyard routes to the bottom.
- Cover the unused hook bridle retainer with an equal portion of pile.



Fig.183

- Tuck the lanyard under the exposed flap's plastics and route it into the bridle protector.
- Mate the pile of the pud to the hook under the bridle protector.
- Insert the main tuck tab underneath the exposed flap's plastics and bridle.



Fig.184

## Alternate Main Bridle Routing

- Route the bridle to the bottom of the container so the kill line window is visible.
- With one hand holding the deployment bag and bridle cover in place, draw the right flap closed.

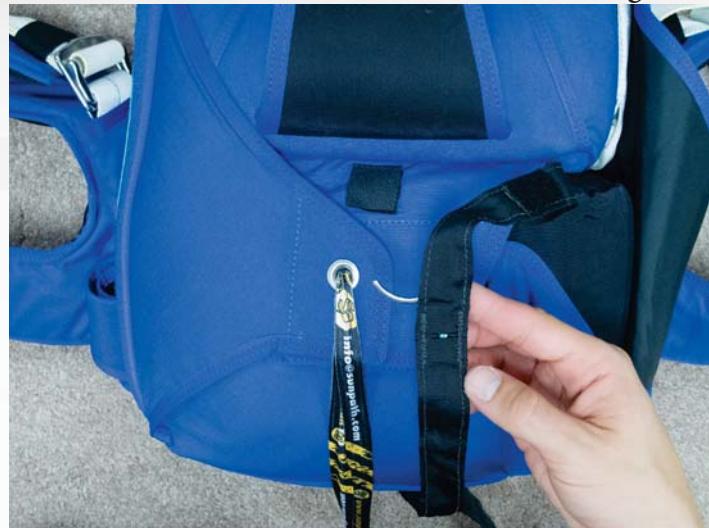


Fig.185

- Insert the pin from right to left in an upwards direction so the remaining bridle routes down.
- Ensure that kill line window is visible.
- It is important to leave slack in the portion of bridle between the side flap and the pin.



Fig.186

- Route the bridle under the plastics of the left and right flaps
- Continue to route the bridle under the right flap, into the top of the bridle cover and down to the BOC pocket.

continue instructions on Pg. 5-7



Fig.187

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