

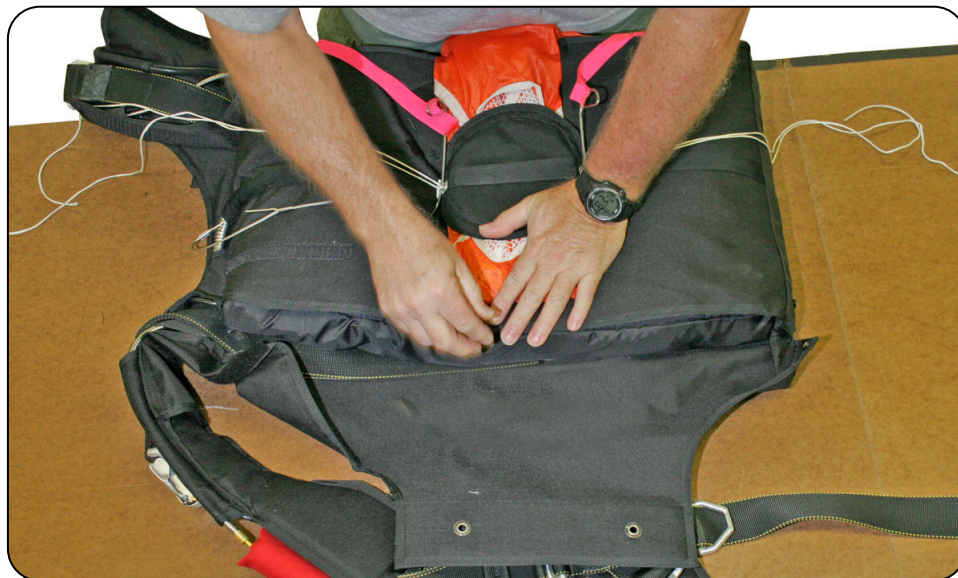
Butler Parachute Systems, Inc.

High Altitude Emergency Parachute System Assembly and Packing Instructions

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Revision G

12/15/2024



Butler Parachutes Systems
P.O. Box 6098
1820 Loudon Avenue, NW
Roanoke, VA 24017-0098



www.butlerparachutes.com
Phone: 540-342-2501
FAX: 540-342-4037
info@butlerparachutes.com

Revision History

Title	High Altitude Emergency Parachute System, User Guide
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Issue	Description	Date	Approving Authority
0.1	Baseline Document	6/21/11	XX
1.0	Initial Release	9/30/12	Tom Fowler
2.0	Revision A	10/1/13	Roberto Montañez
3.0	Revision B	6/30/14	Roberto Montañez
4.0	Revision C	12/4/15	Roberto Montañez
5.0	Revision D	3/28/16	Roberto Montañez
6.0	Revision E	2/20/19	Roberto Montañez
7.0	Revision F	7/8/20	Roberto Montañez
8.0	Revision G	12/15/24	Roberto Montañez

List of Effective Changes

The portion of the text affected by the changes to the preceding released document are indicated by a black vertical bar in the left outer margins of the page.

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Since we have no control over the actual conditions of usage we make no guarantee, expressed or implied, that a parachute system will successfully save a particular individual regardless of correct manufacture, assembly, packing and usage in any and all conditions under which it might be used.

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Warranty for Emergency Parachute Systems

Butler Personnel Parachute Systems, LLC (hereafter referred to as BPS) manufactures the finest emergency parachute systems in the world. Accordingly, subject to the *Terms & Conditions of Warranty* set forth below, we warrant that our emergency parachute systems are free from defects in materials, workmanship and design for a period of five years from the date of manufacture.

Terms & Conditions of Warranty

This warranty excludes any condition that (in the sole opinion of BPS) has resulted from misuse, abuse, modification, improper maintenance, neglect, exposure to ultraviolet light, damage from aircraft parts and/or any other condition that is outside the realm of normal usage. Usage of this product in a manner that violates state or federal law is a misuse of the product and voids all warranties, express or implied. BPS shall not be liable in any manner whatsoever for damages related to the use of this product in an illegal manner.

This warranty excludes any condition related to color fastness, fading and/or the matching of any particular lot of materials with any color.

All BPS products have been thoroughly tested and found to be in conformance with all applicable FAA requirements for TSO C-23 certification in effect on the date of authorization. However, since we have no control over the actual conditions of usage, this warranty specifically excludes any guarantee, express or implied, that a parachute system will successfully save a particular individual in all conditions under which it might be used.

This warranty covers the product only when it is used in accordance with the manufacturer's instructions and within the stated and/or placarded operating limits regarding maximum pack opening airspeed and maximum gross weight for the lowest rated component of each assembly. Failure to follow these guidelines for the use of the product voids any and all warranties.

This warranty does include any changes that may be required under BPS Service Bulletins or FAA Airworthiness Directives, if issued. It does not include changes or updates that are recommended but not required.

The warranties and agreements herein set forth are exclusive and are expressly in lieu of all other warranties and agreements, express, implied, or statutory. There are no implied warranties of merchantability, workmanship or fitness for a particular purpose.

The customer's sole and exclusive remedy for any breach of this warranty is limited to repair or replacement of any BPS product deemed to be defective. BPS shall have no other liability for any incidental, consequential or punitive damages.

1. Introduction

The following symbols are used throughout this manual:



WARNINGS indicate a procedure or situation that may result in serious injury or death if instructions are not followed correctly.



CAUTIONS indicate any situation or technique that will result in potential damage to the product, or render the product unsafe if instructions are not followed correctly.



NOTES are used to emphasize important points, tips, and reminders.



Butler Parachute Systems, Inc. reserves the right to revise this publication without obligation to provide notification of such changes. Butler Parachute Systems, Inc. does its best to provide current and accurate information in this manual. However, Butler Parachute Systems, Inc. reserves the right to change any specifications and product configurations at its discretion without prior notice and without obligation to include such changes in this manual.

The Butler High Altitude Emergency Parachute system is a back pack style parachute designed for pilots and air crew operating at altitudes above 15,000 feet. The High Altitude Emergency Parachute system is equipped with a Butler HX-500/24 high speed military canopy that is rated for 416 pounds at 170 knots*, a CYPRES Automatic Activation Device (AAD), and bailout oxygen.

Airtec GmbH manufactures the CYPRES AAD. The CYPRES AAD is a backup device to the manual activation of the parachute in the event that the user is unable to pull the ripcord. The AAD is activated with a manual or static line release pin. After the arming pin is pulled, the unit will activate the parachute deployment if the user is falling faster than 78 miles-per-hour below 13,000 feet.

The oxygen bailout bottle is a modified U.S. Air Force bottle (MS22069) with a 21 inch breathing hose. The modifications are designed to allow remote operation of the bottle by pulling on the activation handle located on the right side of the parachute harness. A CRU-60 regulator attachment plate is fitted to the parachute harness.

These instructions outline the procedure to assemble and pack the components and canopy into the container. A basic proficiency of parachute rigging is required to service and pack the Butler High Altitude Parachute. You may need additional manuals to install or service optional

* Knots equivalent airspeed

components that are not covered in this manual. Contact Butler Parachute Systems if you are not sure you have the manuals you need. **Do not attempt to pack the parachute without a complete set of instructions.**

The Butler High Altitude Parachute is an important piece of survival equipment. Proper installation, maintenance, and packing are necessary for the parachute to deliver the safety performance it is designed to provide. It is important that you become familiar with these instructions to properly install the components, fold the canopy, and pack the canopy in the container. Improper installation of the components and improper packing may result in failure of the parachute system during use.



In most cases, we prefer to do a factory installation of the oxygen and CYPRES AAD. However, master riggers, or their foreign equivalent, may install a CYPRES AAD or the bailout oxygen providing they follow these instructions and the parachute system is equipped with the factory modifications for these options.



Improper use or negligent care of this equipment can cause serious injury or death.

2. Service Life and Repack Interval

All personnel parachutes manufactured by Butler Parachute Systems, Inc. are manufactured and certified under the Technical Standard Order (C23) processes of the Department of Transportation, Federal Aviation Administration (FAA) and have a recommended service life of 20 years.

When used in civil aircraft in the United States of America, under the rules and regulations of the Federal Aviation Administration, parachutes must be inspected and repacked in accordance with the applicable service manuals and Federal Aviation Regulations every 180 days. If more than 180 has passed since the last inspection and repack, the parachute is considered unairworthy.

When used in military or civil aircraft outside the United States of America, the local regulations or military directives for parachute maintenance may be applied. However, under no circumstances should the inspection and repack cycle be extended beyond one (1) year (365) days.

3. General Methods

Unless stated otherwise, secure all hand tacks and ties with a surgeons knot and locking knot.

All directional references are as the equipment is worn by the user.

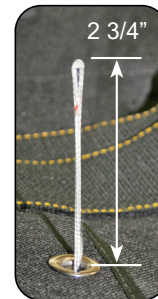
Always count your tools before and after you work on a parachute to ensure nothing is missing or left inside the parachute.

3.1 Closing loop Length

Adjustable soft closing loops made with CYPRES approved cord must be used on all High Altitude packs equipped with a CYPRESS AAD. No other closing loop material is approved for use. The loop must be installed with a CYPRES anchor disc*. Make the closing loop so it is 2 3/4" from the base of the pack tray.

* See the Airtec publication titled *CYPRES Packer's Checklist* for instructions on attaching the loops to the discs.

** You may have to adjust the length of the closing loops to achieve a neat and uniform pack.



WARNING It is the rigger's responsibility to ensure that the ripcord pull force is at or below 22 pounds for each assembly and each repack every time you work on the parachute.

3.3 Locking Stow Band Type and Maintenance Cycle

The only stow bands approved for use on the High Altitude Back Parachute are 1 1/4" X 3/8" retainer bands for low bulk lines

Butler Parachute Systems recommends that the four locking rubber bands on the deployment bag be replaced at every repack cycle.

3.3 Parachute Canopy Fabric Pull Test Procedure

A canopy cloth pull test is recommended once every 2 years. A canopy cloth pull test is required at the 10 and 20 year anniversary of the date of manufacture. The purpose of this test method is to provide a non-destructive method for verifying the strength of parachute fabric. Follow the pull test procedures outlined in PIA Technical Standard 108-1 (<http://www.pia.com/PIAPUBS.htm>). Write an entry in the logbook noting when canopy pull test are made.



CAUTION Caution should be exercised as this test can damage the fabric if the clamps are not tight.

4. Tools and Materials

We consider the following tools to be the minimum tools necessary to pack a complete emergency parachute system. While all the tools listed may not be necessary to perform the steps outlined in this manual, they are necessary to perform the packing service of a complete emergency parachute system from start to finish.

2	CYPRES brand temporary closing pins
2	Pull-up cords – 50”, made from CYPRES closing loop material
2	Locking pull-up cords with washer
4	Packing weights
1	Line separator (Optional)
1	Packing paddle
1	9mm or 3/8” wrench
1	6-foot cable bodkin with hole for attaching tack cord, or gun cleaning rod
1	Line stow bodkin or packing hook
1	Scissors & tacking needle
As Needed	*Lite Super Tack cord (50 lb.) A-A-52080, Type 1, Size 3, Finish B
As Needed	80-pound break tape (MIL-T-5661, Type 1, 1/4”)
As Needed	3-cord cotton (15 lb.), ticket 8/4, A-A-52094B, Type V, Tex 270 or A-A-52094, Type V, Tex 350
1	Bridle break loop (10” of PIA-T-5038, T3, 1/2”)
As Needed	Closing loop material (CYPRES approved 408 pound, 1.7 mm Spectra cord)
As Needed	CYPRES approved silicone gel

* Super Tack size 2 (80 lb.) is approved for use as an alternative.



Cable Bodkin, PN: 801157



8” Line Stow Bodkin, PN: 801156-3

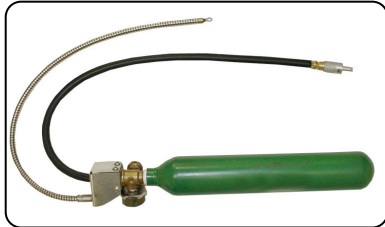


Locking Pull-up Cords, PN: S7667

5. Parts List

Butler High Altitude Back Pack - PN: Order Specific

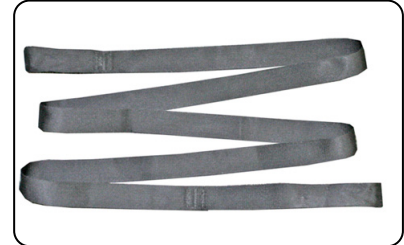
Butler HX-500/24 Military Canopy - PN: 3106



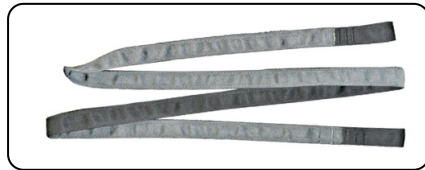
O² Bottle Assembly
PN: 801145



Deployment Bag
PN: 701056



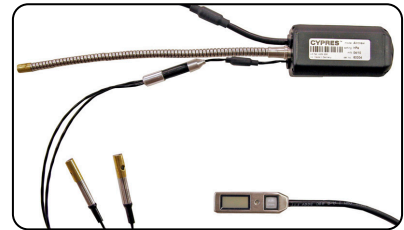
Pilot Chute Bridle
PN: 701062



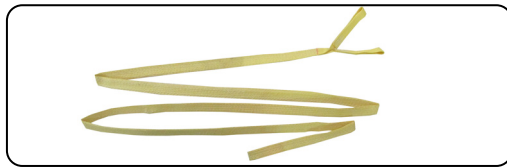
Channel Bridle
PN: 701060



Riser
PN: 201048



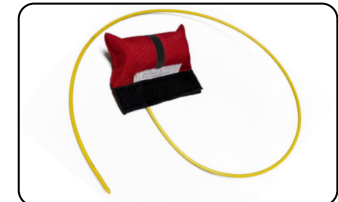
CYPRES AAD - PN: 801146



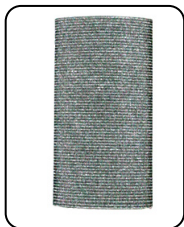
Zip-strip Bridle - PN: 701097



O² Activation Handle
PN: 801140



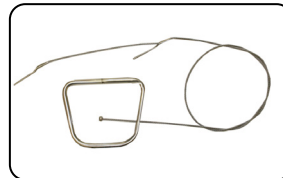
AAD Arming Handle V2
PN: 801170



Bridle Keeper
PN: 701059



CRU-60 Bracket
FPI PN: 1636



Ripcord
PN: 801121-1



Pilot Chute
PN: 501010 or 501011



Retainer Stow Band
1 1/4" X 3/8", PN: S7111

← Either →



Optional Stow Band
Tube Stow Band
PN: Microbulk-nat



Steering Line Toggle
PN: 70107



Closing Loop & Disc
PN: AACROK2#5

6. Installing the Components

6.1 CYPRES Installation

Handle the CYPRES with care. Never pull, twist, or kink the cutter wires or the control unit cable. A bend in any of the cables cannot be less than 0.94" (24mm) (the diameter of a U.S. quarter).

Visually inspect the CYPRES for damage or wear.

Verify that the maintenance cycle of the CYPRES will not expire before the next scheduled service of the parachute. Refer to the *Emergency Air Crew CYPRES 2 User's Guide* for CYPRES maintenance guidelines.

Write the CYPRES serial number and date-of-manufacture in the parachute packing data book.



All CYPRES Automatic Activation Devices installed on Butler Parachute Systems parachutes delivered after May 2019 include the option to select the opening altitude when the device will activate the deployment of the parachute.

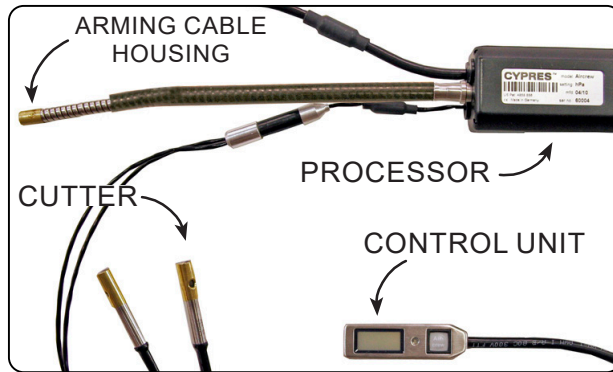
Please be aware that the altitude setting is the “**standard day MSL.**” Pressure and temperature changes at your location can and will affect the actual altitude that the unit will fire. For this reason I will caution you to never set the unit to activate below **2000 feet MSL above the highest point of the intended flight region.**

FOR EXAMPLE: If the highest point of the intended flight region is 1500 feet MSL, do not set the activation point lower than 3500 feet MSL.

The procedure for setting the altitude can be found on page 10 of the *Aircrew CYPRES 2 User's Guide*.

Make sure all the settings are correct before use. **Wrong settings can cause injury or death.** After changing the altitude settings, switch the unit “ON” and verify the settings are what you want.

Any adjustment is made exclusively at the user's own risk.



6.1.1

Insert the processor into the pouch located on the top flap.

Place the processor in the pouch so the cutter wire and control unit cable are under the arming cable housing.





The cutter wire and the control unit cable must be located on the bottom, flat against the pack tray, and underneath the arming cable housing.



6.1.1 Wire and cable orientation.

6.1.2

Route the cutter wires underneath the control unit cable and the arming cable housing to the left side of the container.



The cutter wires must be routed underneath the control unit cable and the arming cable housing.



6.1.2 Routing the cables.

6.1.3

Pass both of the cutters through the cutter channel and install the cutters in the cutter pockets.

Align the hole in the cutter with the grommet.



6.1.3 Installing the cutters.

6.1.4

Coil the excess cutter wire and stow it in the CYPRES pocket underneath the control cable and the housing.



Do not pinch or bend the wires while you are stowing them.



6.1.4 Stowing the excess cutter wire.

6.1.1 CYPRES Arming Cable Housing Installation - Manual Activation

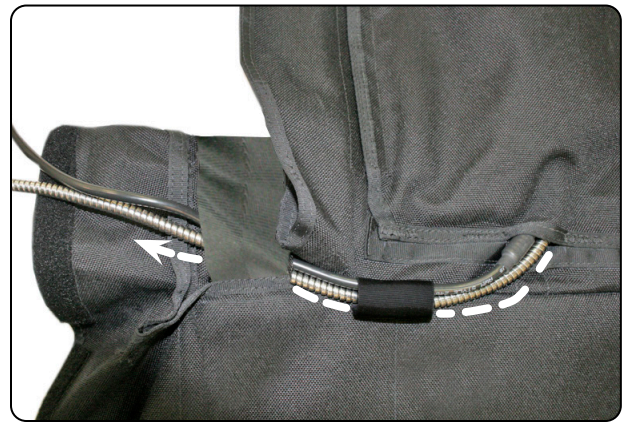


If the system you are packing has a CYPRES that is armed with a static line, skip this section and go to “6.1.2 CYPRES Arming Cable Housing Installation - Static Line Activation” on page 16 instructions on installing the arming cable housing.

6.1.1.1

Route the control unit cable and the arming cable housing through the channel at the top of the pack tray.

Continue routing the housing and cable underneath the harness webbing on the left shoulder yoke.

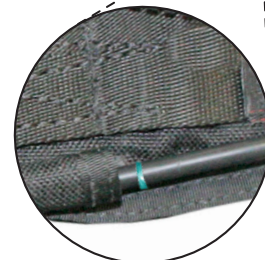
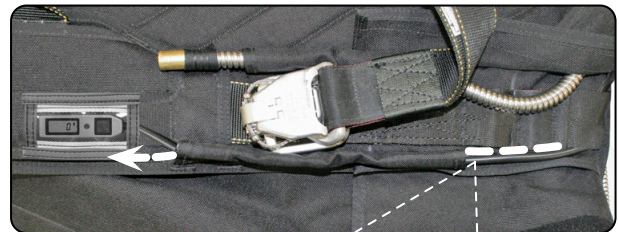


6.1.1.1 Routing the control unit cable.

6.1.1.2

Thread the control unit through the outboard channel on the yoke and stow it in the pocket.

Tack* the cable to the container above the channel.



6.1.1.2 Stowing the control unit.

* One-turn-single of Lite Super Tack cord (50 lb.) A-A-52080.

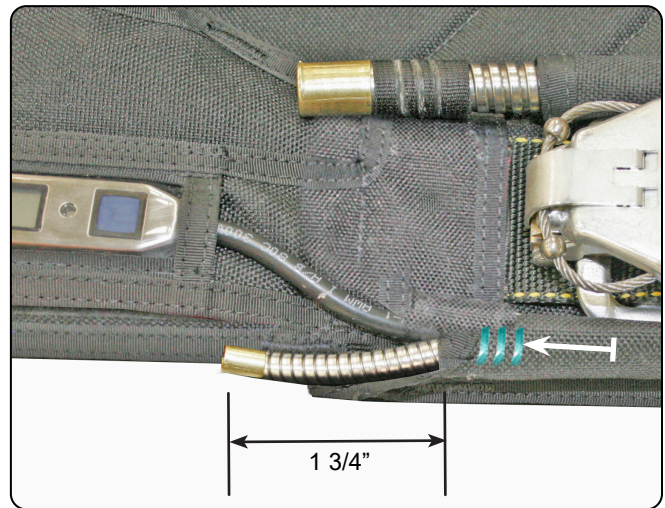


Ensure there is enough slack in the cable to prevent tension anywhere on the cable.

6.1.1.3

Thread the arming cable housing through the outboard channel on the yoke and tack* it to the channel so the ferrule is 1 3/4" from the bottom of the channel.

* Three-turns-single of Lite Super Tack cord (50 lb.) A-A-52080.



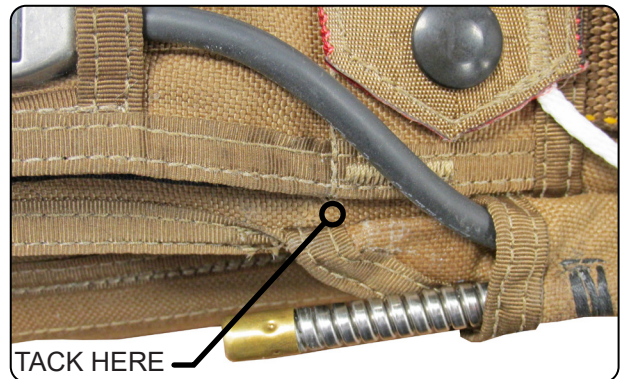
6.1.1.3 Installing the arming cable housing.

6.1.1.4.1

Move the housing in so the brass ferrule is in-between the binding tape that forms the pocket for the arming cable handle.

Tack* the housing above the brass ferrule with the knot tied on the back of the yoke.

* Two-turns-single of Lite Super Tack cord (50 lb.) A-A-52080.



6.1.1.4.1 Installing the arming cable housing.

6.1.1.4.2

If you are assembling an High Altitude system equipped with the Dual Mode Activation option, tack the cable housing between the brass ferrule and the collar that is fitted to the cable housing.



6.1.1.4.2 Installing the arming cable housing with the Dual Mode option.

6.1.2 CYPRES Arming Cable Housing Installation - Static Line Activation

6.1.2.1

Route the control unit cable through the channel at the top of the pack tray.

Continue routing the cable underneath the harness webbing on the left shoulder yoke.



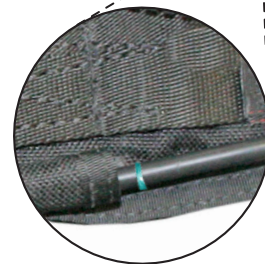
6.1.2.1 Routing the control unit cable.

6.1.2.2

Thread the control unit through the outboard channel on the yoke and stow it in the pocket.

Tack* the cable to the container above the channel.

*One-turn-single of Lite Super Tack cord (50 lb.) A-A-52080.



6.1.2.2 Stowing the control unit.



Ensure there is enough slack in the cable to prevent tension anywhere on the cable.

6.1.2.3

Remove the yellow activation cable and route the arming cable housing through the cable housing channel.

Thread the arming cable housing through the cable housing port and to the outside of the pack.

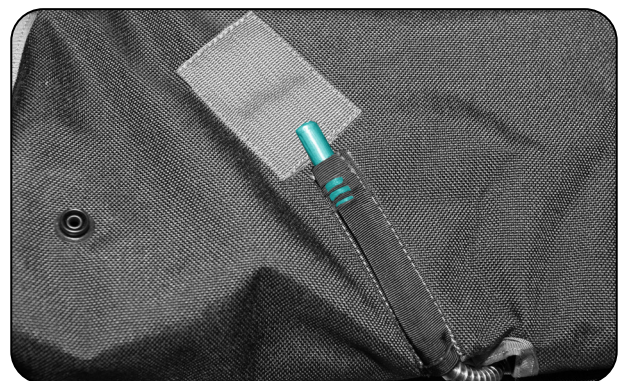


6.1.2.3 Installing the arming cable housing.

6.1.2.4

Thread the cable through the cable housing channel and tack* the cable to the housing so only the ferrule of the cable is exposed.

*One-turn-single of Lite Super Tack cord (50 lb.) A-A-52080.



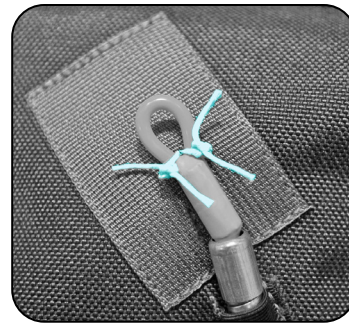
6.1.2.4 Installing the cable housing.

6.1.2.5

Insert the arming cable into the cable housing until the cable swage is against the housing ferrule.



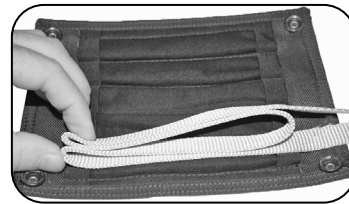
The arming cable must be seated completely with the cable swage against the housing ferrule.



6.1.2.5 Installing the arming cable.

Tack* the arming cable to the reinforcement patch in two places so the cable remains seated against the housing ferrule.

*One-turn-single of ticket 8/4, 3-cord cotton.

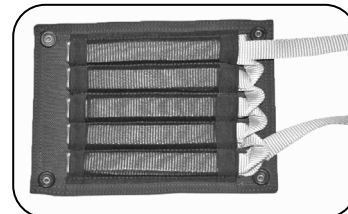


6.1.2.6

Stow the static line in the pouch flutes. Stow two folds of the static line into each flute. Stack the second fold on top of the first fold. Continue stowing the static line across the pouch.



Do not extend the static line past the flute more than 3/8".



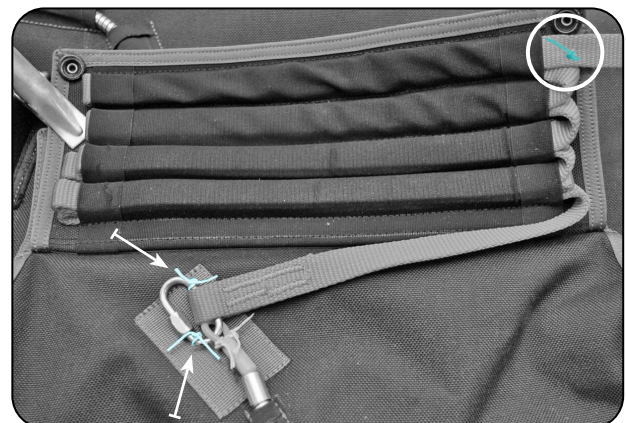
6.1.2.6 Stowing the static line.

6.1.2.7

Attach the static line Rapide link to the arming cable and tighten it hand-tight plus 1/4 turn with a 9mm or 3/8" wrench.

Tack* the rapide link to the reinforcement patch in two places.

Tack* the static line where it exits the pouch.



6.1.2.7 Tacking the Rapide link.

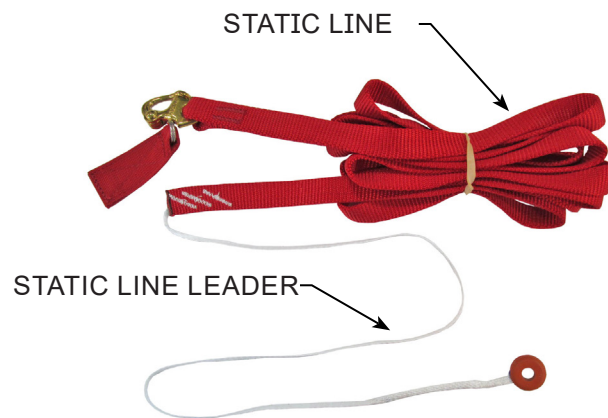
*One-turn-single of ticket 8/4, 3-cord cotton.

6.1.2.8

Close the static line pouch and snap it to the container flap.

6.1.3 CYPRES Dual Mode Arming Installation

Install the CYPRES AAD as outlined in “6.1.1 CYPRES Arming Cable Housing Installation - Manual Activation” on page 14.

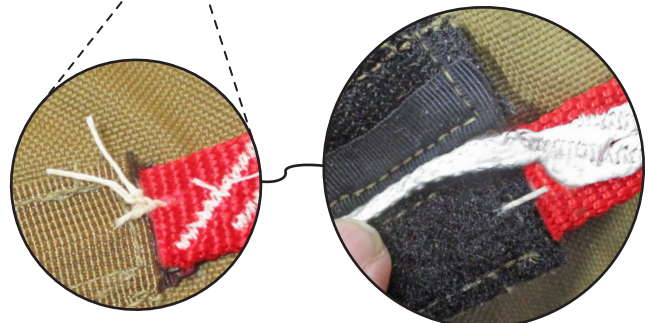


6.1.3.1

Open the static line leader channel and place the static line leader in the channel so the static line is against the bottom of the channel.

Tack* the static line to the end of the channel.

* *One-turn-single of ticket 8/4, 3-cord cotton.



6.1.3.1 Tacking the static line leader.

6.1.3.2

Install the static line leader inside the remainder of the leader channel (over the shoulder and down the front yoke of the container.)

Route the leader on top of the T-3 tape that is on the inside of the Velcro channel so the leader is **not** stowed against the hook Velcro.

Close the leader channel.



6.1.3.2 Stowing the static line leader.

6.1.3.3

Install the grommet onto the brass ferrule of the cable housing so the grommet is against the black collar sleeve.

Fit the grommet on the ferrule so the static line leader will be underneath the housing channel when the installation is complete.



6.1.3.3 Fitting the grommet.

6.1.3.4

Install the CYPRES arming cable and mate the Velcro on the handle to the Velcro on the pocket.



6.1.3.4 Installing the release handle.

6.1.3.5

Tack* the leader in three places as shown.

Tie the tack closest to the handle first, then the middle tack next.

Tack* the excess leader underneath the riser cover so there is no loose leader. Thread the 3-cord around the leader on both sides of the riser cover.

* One-turn-single of ticket 8/4, 3-cord cotton.



6.1.3.5 Tacking the leader.

6.2 Oxygen Installation

6.2.1

Ensure that the pressure gauge needle is in the *green* range of between 1800 and 2500 pounds-per-square-inch. Do not install an oxygen bottle that is under charged with less oxygen than 1800 pounds-per-square-inch.



Do not install an oxygen bottle that is under charged with less oxygen than 1800 pounds-per-square-inch.

6.2.2

Open the pocket on the right side of the container.

Thread the cable housing and the oxygen hose through the channel at the top of the pocket.

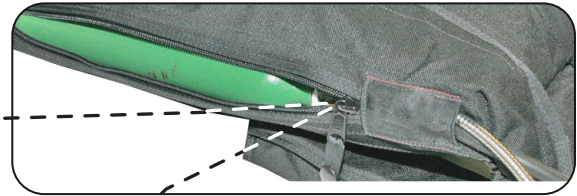


6.2.2 Installing the cable housing and hose.

6.2.3

Install the bottle with the pressure gauge facing out.

Wrap the anchor cord around the bottle neck and tie with a bow-tie knot.



6.2.3 Installing the bottle.

6.2.4

Close the pocket and the zipper snap.



6.2.4 Closing the pocket.

6.2.5

Route the oxygen hose and the cable housing through the port on the riser cover.

Thread the oxygen hose through the outboard channel on the yoke.

Thread the activation cable housing under the harness webbing and through the inboard channel on the left side of the yoke.



6.2.5 Routing the cable and hose.

6.2.6

Thread a cable tie* through the grommet on the channel so the cable tie head is underneath the channel.

Tighten the cable tie around the housing as tight as possible and trim the excess tie.

The head of the cable tie will be underneath the channel when the installation is complete.

* 8" x 0.18". cable tie with a minimum breaking strength of 50 pounds.



6.2.6 Installing the cable tie.

6.2.7

Install the oxygen activation handle on container with the cable loop facing up.



6.2.7 Installing the oxygen activation handle.

6.2.8

Connect the handle to the activation cable with a #2.5 stainless Rapide link*. Close the barrel and tighten hand-tight, plus 1/4 turn.

*Genuine French Maillon Rapide Links are the only connector links approved for installation on Butler products.



6.2.8 Connecting the handle.

7. Canopy Assembly and Packing

Thoroughly inspect the complete parachute system for damage and wear. Refer to the *FAA Flight Standard Service, Parachute Rigger Handbook* for guidance on parachute inspection.



WARNING

If you find damage or wear on the parachute system, you must stop. Do not proceed with packing the parachute. Damage or wear that will effect the airworthiness of the parachute must be repaired or replaced before you pack the parachute.

It is the rigger's responsibility to determine the airworthiness of the parachute system. Contact butler parachutes if you have questions regarding the airworthiness of the parachute system.

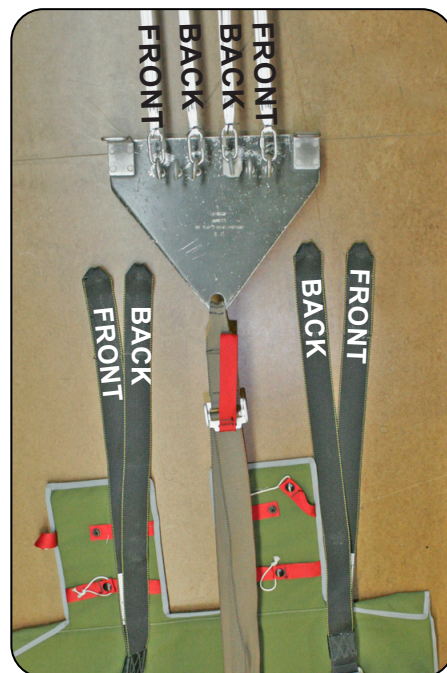
7.1 Canopy Assembly and Container Preparation

7.1.1

Connect the links to a tension board with the back line groups on the inside and the front line groups on the outside.

Place the harness/container on the table behind the tension board with the front risers on the outside and the back risers on the inside.

Connect the canopy to the risers and tighten the rapide links hand-tight plus 1/4 turn with a 9mm or 3/8" wrench.



7.1.1 Layout.

7.1.2

Thoroughly inspect the entire parachute system for damage or wear.

Place the canopy on the table with the back (panel 24) of the canopy facing up.

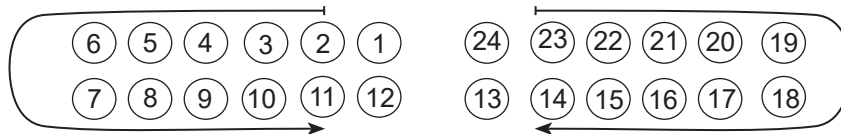
Position the slider halfway between the canopy and the container between the two line groups.

Perform a line continuity check:

- a. Spread the two main line groups apart so the #1 and #24 gores are in the middle of the line groups.
- b. Starting with panel #24 on the left side; pick up each line from the table on the left side and ensure that it runs free and clear from the canopy to the link.
- c. Repeat the same procedure for the right side.



7.1.2 Line continuity.



Be sure the suspension lines run free and clear through their respective slider grommet in the same order that the suspension line is installed on the connector link.



7.1.3 Slider continuity.

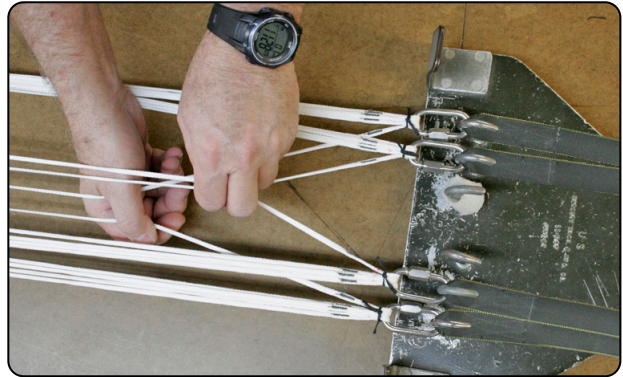
7.1.4

Connect the canopy Rapide links* to the risers and tighten them hand-tight plus 1/4 turn with a 9mm or 3/8" wrench.



Do a four line check to verify continuity.

* Genuine french Maillon rapide links are the only connector links approved for installation on butler products.



7.1.4 Connectivity and four line check.

7.1.5

Tack the riser below the link.

Figure-eight a piece of tack* cord through each group of the suspension line loops at the link and tie the lines together.

* One-turn-single of Lite Super Tack cord (50 lb.) A-A-52080.

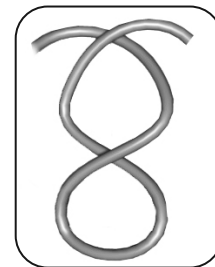
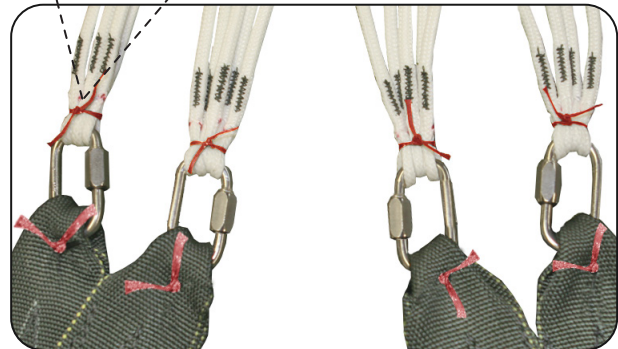


FIGURE-EIGHT KNOT



7.1.5 Riser and line tacks.

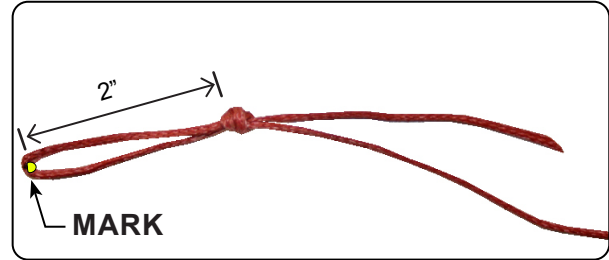


WARNING Do not tie any lines together from different riser groups.

7.1.6

The steering line is marked for the toggle location. Installing the toggle with the mark at the toggle grommet provides 2" of slack in the steering line*.

Tie an overhand knot to make a 2" loop with the mark at the end of the loop.



7.1.6 Installing the steering line toggle.



* It is the responsibility of the rigger installing the steering line to ensure there is enough slack in the steering line to prevent tension on the steering line when the canopy is inflated.

7.1.7

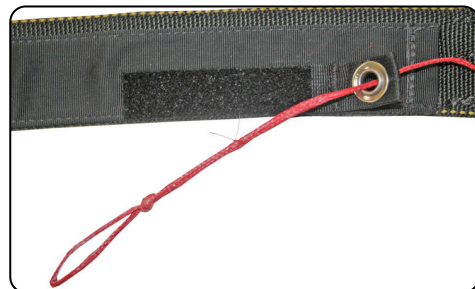
Finger trap and tack the excess steering line no longer than 1/4" below the knot with ticket 24/4 cotton thread.



7.1.7 Installing the steering line toggle.

7.1.8

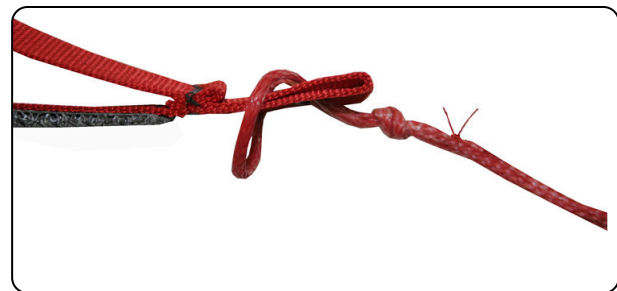
Thread the steering line through the steering line guide on the riser.



7.1.8 Threading the steering line guide.

7.1.9

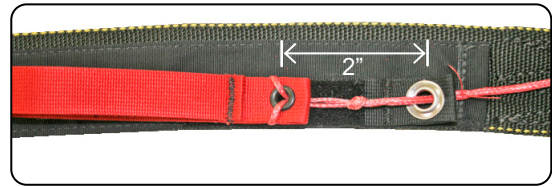
Thread the steering line through the toggle grommet from the back and form a Lark's Head knot.



7.1.9 Installing the steering line toggle.

7.1.10

Pull the toggle down so there is no slack in the steering line to ensure there is a minimum of 2" [$\pm 1/2$ "] of slack in the steering line.

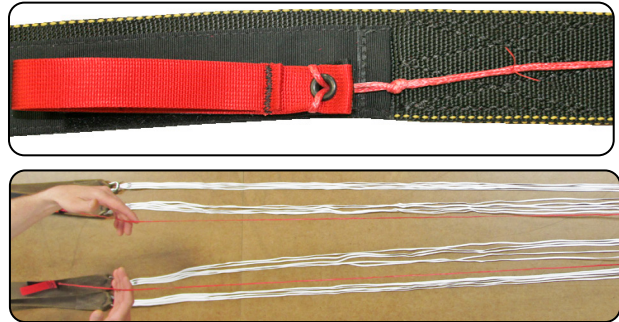


7.1.10 Inspecting the steering line slack.

7.1.11

Mate the toggle to the Velcro so the grommet on the toggle is on top of the grommet on the steering line guide.

Pickup the steering lines and ensure they run free-and-clear from the toggle to the cascade where it enters the suspension line.



7.1.11 Setting the toggle.

7.1.12

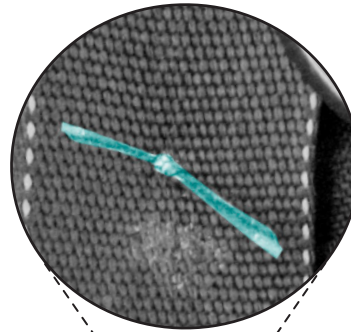
Thread a 10" piece of break tape* through the loop below the closing loop plate on the pack tray.

Coat the closing loops with CYPRES approved silicone.

* 80-pound break tape (MIL-T-5661, Type 1, 1/4").



7.1.12 Preparing the pack tray.



7.1.13

Fold the risers back and onto the pack tray.

Tack* both of the risers where the risers enter the pack tray.

Reconnect the canopy links to the tension plate.

* One-turn-single of Lite Super Tack cord (50 lb.) A-A-52080.



7.1.13 Tacking the risers.


7.2 Canopy Preparation

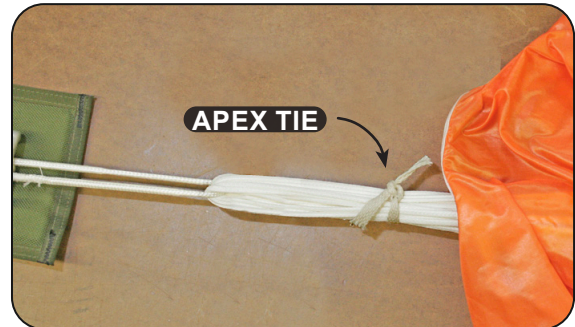
7.2.1

Straighten the canopy apex.

Tie the vent lines with a piece of break tape* 4" to 6" from the top of the apex lines.

*80 pound break tape (MIL-T-5661, Type 1, 1/4").

 Make this tie as tight as possible.

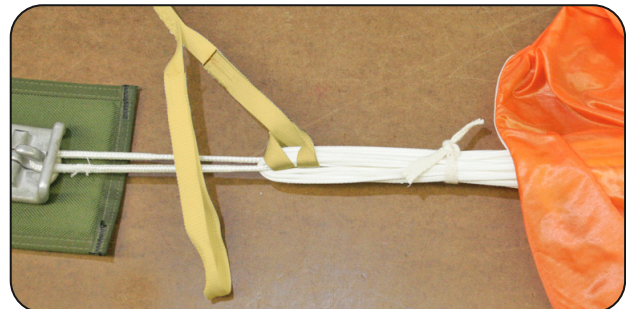


7.2.1 Apex tie.

7.2.2

The zip-strip bridle splits at one end with two looped ends.

Attach the zip-strip bridle to the apex with a Lark's Head knot.

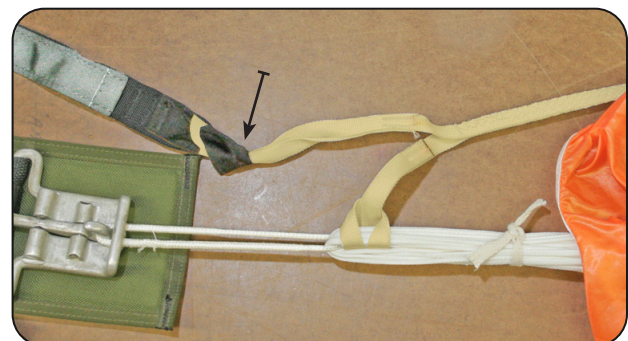


7.2.2 Attaching the zip-strip bridle to the apex.

7.2.3

Attach the channel bridle to the zip-strip bridle with a Lark's Head knot.

Do not tighten the knot as you must pass the break loop through the knot.

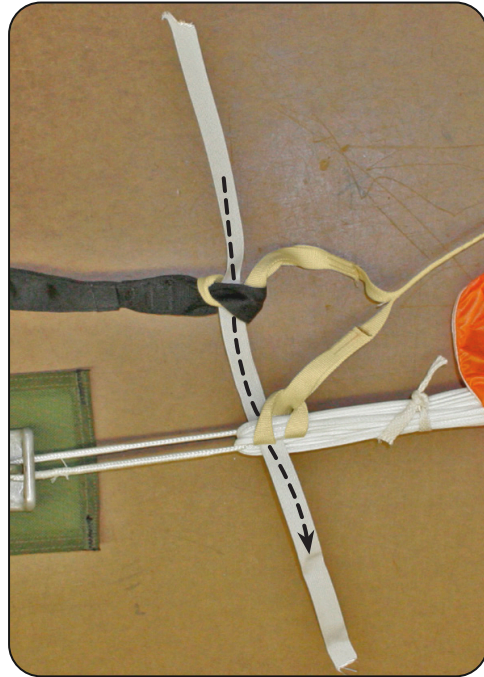
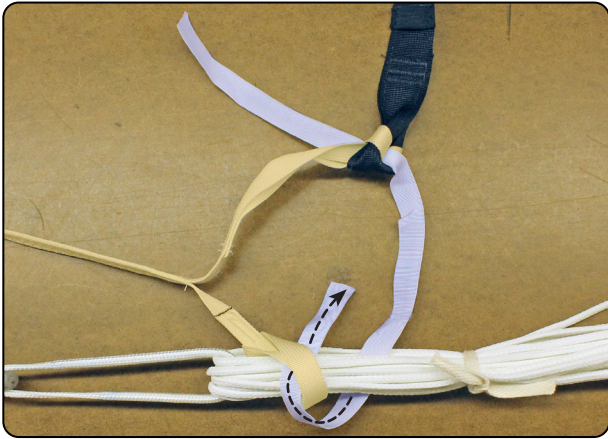


7.2.3 Attaching the deployment bag bridle.

7.2.4

Thread the break loop material* through the Lark's Head knot on the channel bridle, then through the apex lines and the zip-strip Lark's Head knot

* MIL-T-5038, T3, 1/2" x 10".



7.2.4 Threading the break loop.

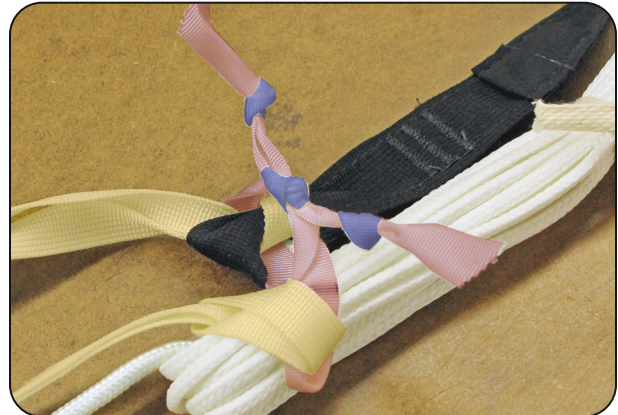
7.2.5

Form a 2"* loop with the tape and tie with a square knot. Tie an overhand knot on each leg.

Tie an overhand knot on each free end of the tape.

Tighten the Lark's Head knot on the bridle.

*Measured distance when extended.



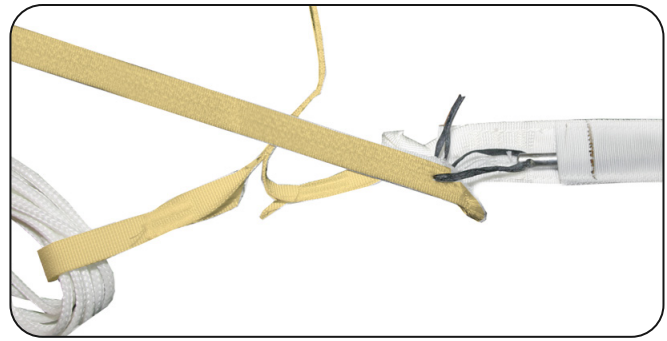
7.2.5 Tying the break loop.

7.2.6

Insert a 6' bodkin through the channel on the channel bridle from the top.

Thread a piece of Tack cord through the hole in the bodkin and through the tip of the zip-strip bridle.

Pull the zip-strip bridle through the channel.



7.2.6 Threading the zip-strip bridle.



Be sure the zip-strip bridle is flat and has no twists in it before you begin to thread it through the channel.

7.2.7

Thread the channel bridle keeper onto the channel bridle.



7.2.7 Installing the channel bridle keeper.

7.2.8

Thread the end of the pilot chute bridle with the 3" loop through the deployment bag.



7.2.8 Pilot chute bridle through the deployment bag.

7.2.9

Thread the pilot chute bridle through the loop in the channel bridle and back through the top of the deployment bag.



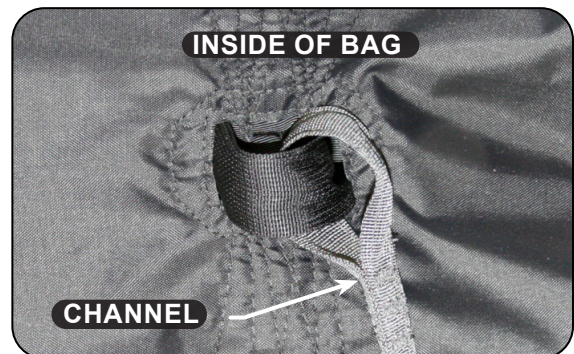
7.2.9 Connecting the bridles.

7.2.10

Thread the free end of the pilot chute bridle (the end with the 7" loop) through the 3" loop to form a Lark's Head knot around the apex of the deployment bag.

Tack* the Lark's Head knot.

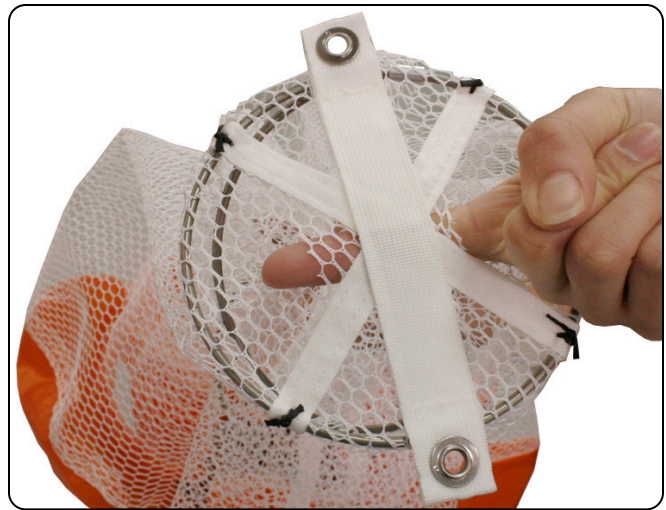
* One-turn-single of Lite Super Tack cord (50 lb.) A-A-52080.



7.2.10 Connecting the bridles.

7.2.11

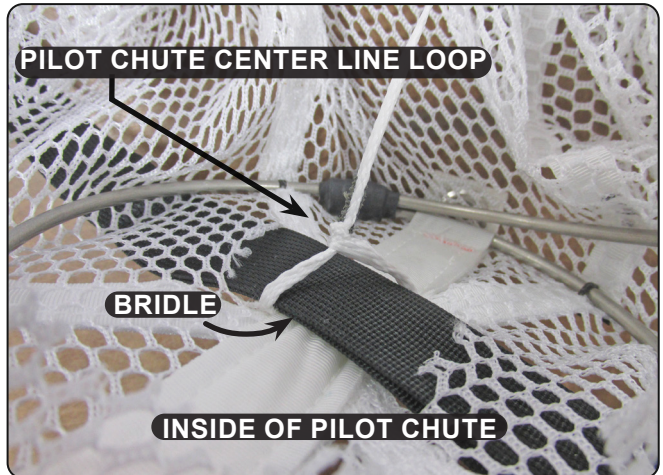
Cut two 1" slits in the mesh at the base of the pilot chute. Cut one slit on each side of the grommet tab.



7.2.11 Cutting the pilot chute mesh.

7.2.12

Thread the free end of the channel bridle around the bottom grommet strap on the pilot chute, and through the pilot chute center line loop.



7.2.12 Threading the channel bridle.

7.2.13

Pass the pilot chute through the loop on the channel bridle to form a Lark's Head knot.



7.2.13

Continued.

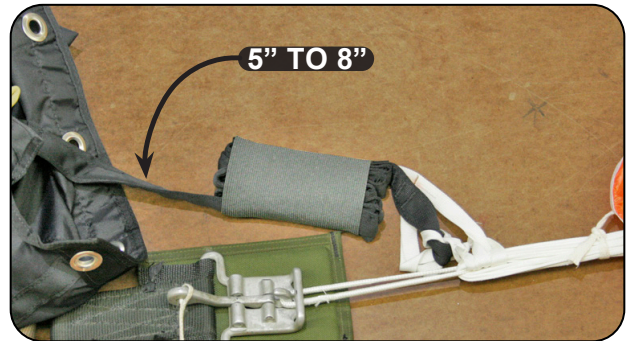


7.2.13 Installing the pilot chute.

7.2.14

S-fold the channel bridle and stow it in the channel bridle keeper.

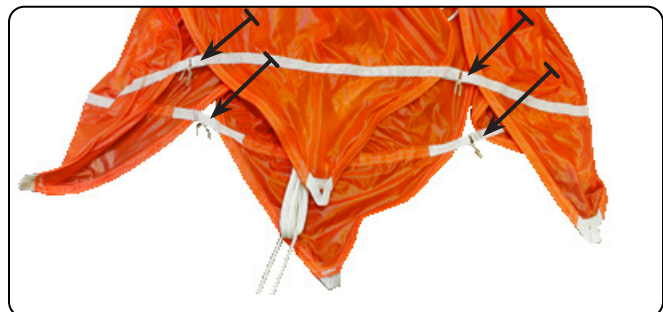
Leave approximately 5" to 8" of the channel bridle outside of the keeper.



7.2.14 Stowing the channel bridle.

7.2.15

Tie the 4 center tie-tabs together with one-turn-doubled of ticket 8/4, 3-cord cotton.



7.2.15 Tying the center tie-tabs.

7.2.16

Tie the 4 top tie-tabs together with one-turn-doubled of ticket 8/4, 3-cord cotton.



7.2.16 Tying the top tie-tabs.

7.3 Canopy Folding

7.3.1

Flake the canopy with an equal number of gores on each side with gore #24 on top.

Dress the skirt.



7.3.1 Flaking the canopy.

7.3.2

Ensure that the slider is clear of the suspension lines and centered between the two line groups.



7.3.2 Stowing the slider.

7.3.3

Pull the slider up the suspension lines and place it in the canopy wind channel under the top panel of the canopy.



7.3.3 Stowing the slider.

7.3.4

Dress the skirt of the slider.

Pull each section of the skirt out from between the suspension lines. While you are dressing the skirt, ensure that each slider grommet is seated against the stop ring.



7.3.4 Dressing the slider skirt.

7.3.5

Stack the slider skirt in two groups with an equal number of skirt sections on each side of the suspension lines.



7.3.5 Dressing the slider skirt.

7.3.6

Fold the canopy into thirds.

Fold the skirt of the canopy on top of itself so the width of the skirt is the same width as the deployment bag.

Fold the right side of the canopy first, then fold the left side of the canopy over the right side.



7.3.6 Folding the canopy.

7.4 Stowing the Canopy in the Deployment Bag

It is important to distribute the bulk of the canopy evenly in the deployment bag. As you are S-folding the canopy into the deployment bag, fill the area between the grommets with enough canopy to fill out the corners of the bag and provide enough volume in each section for a smooth and even pack.

7.4.1

Install four locking bands on the deployment bag.

See the parts list in “4. Tools and Materials” on page 9 for the approved stow bands to use.



7.4.2

Stow the canopy into the deployment bag with the suspension line flutes facing up.

S-fold the canopy into the deployment bag with the apex in the left corner of the deployment bag.

Fill the deployment bag with canopy folds to the first grommet with the last fold turning 8” to 11” past the lower lateral band.



7.4.2 Folding the canopy into the deployment bag.

7.4.3

Thread a locking pull-up cord through the top and bottom grommet and install a washer on the pull-up cord with a Lark's Head knot.

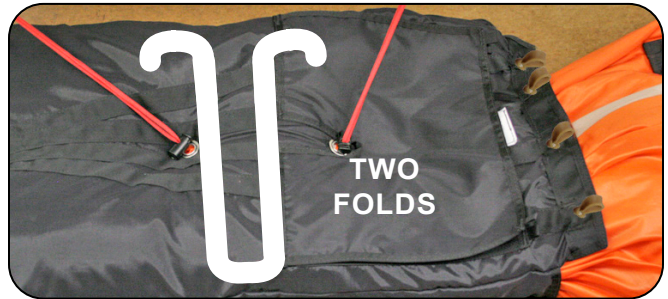
Cinch the slip cord lock snug against the bag.



7.4.3 Installing the locking pull-up cord.

7.4.4

Fill the deployment bag with two folds between the first and second grommets. Install a locking pull-up cord as outlined in step 7.4.3.



7.4.4 Folding the canopy into the deployment bag.

7.4.5

Slide the remaining canopy into the deployment bag. S-fold the canopy on top of itself as you slide the canopy into the bag.

Fill the mouth of the deployment bag with the skirt of the canopy.



Fill in the corners of the deployment bag with the skirt of the canopy.



7.4.5 Folding the canopy into the deployment bag.

7.5 Stowing the Suspension Lines

7.5.1

The suspension lines come out of the bag between the inside locking stows.

Pull the inside locking stow bands through the grommets and form two locking stows, left side first.

Close the outside locking stows in the same manner.



Make the suspension line stow loops between 1 1/2" and 2" long.



If you are using tube stows, do not pull the knot on the tube stow through the grommet.



7.5.2

Make the first stow in the 2nd flute at the top-left side.

Do not expose more than 3/4" of suspension lines past the stow flutes.



Do not expose more than 3/4" of suspension line past the stow flutes.



7.5.1 Closing the locking stows.



7.5.2 Stowing the suspension lines.

7.5.3

Continue stowing the suspension lines back and forth toward the mouth of the canopy.

Leave approximately 18" to 20" of suspension line unstowed.



7.5.3 Stowing the suspension lines.

7.5.4

Close the line stow cover and tie* the corners to the bag

* One-turn-single of ticket 8/4, 3-cord cotton.



7.5.4 Closing the line stow cover.

7.6 Closing the Container

7.6.1

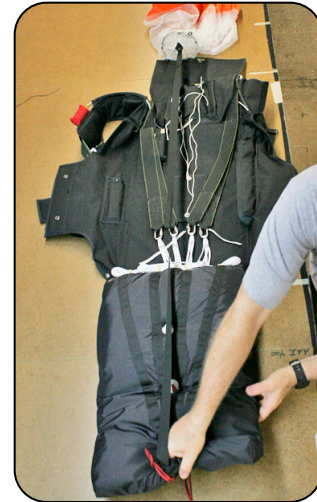
Pick the bag up and place it in the container with the line stows facing up.



7.6.1 Placing the bag.

7.6.2

Flip the bag over to expose the pack tray.



7.6.2 Flipping the bag.

7.6.3

Fan the risers so the links are not stacked on top of each other.

Form a stow-bight with the unstowed line and tie it to the pack tray with the 80-pound break tape.



7.6.3 Pack tray line stow.

7.6.4

Thread pull-up cords through the closing loops and flip the bag back onto the pack tray.



7.6.4 Flipping the bag.

7.6.5

Remove the washer from the locking pull-up cords and thread the pull-up cords on the pack tray through the locking cords.



7.6.5 Threading the pull-up cords.

7.6.6

Pull the pull-up cords through the deployment bag and install temporary closing pins.



7.6.6 Securing the pull-up cords.

7.6.7

Close the bottom flap.



7.6.7 Closing the bottom flap.

7.6.8

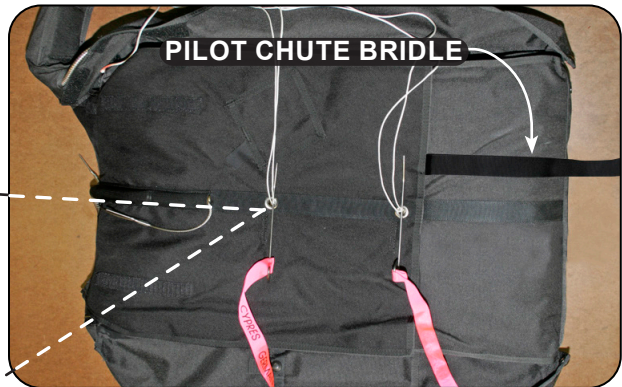
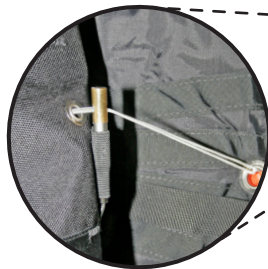
Close the top flap. Thread the pull-up cords through the CYPRES cutters before you thread them through the flap grommets.

Route the pilot chute bridle out and to the right side of the grommets.



WARNING

The closing loop must pass through the CYPRUS cutters.



7.6.8 Closing the top flap.

7.6.9

S-fold the bridle between the grommets and fan the folds to reduce the bulk.



7.6.9 Folding the bridle.

7.6.10

Place the pilot chute over the folded bridle and secure the bottom of the pilot chute with the temporary pins.



7.6.10 Securing the pilot chute.

7.6.11

Compress the pilot chute and pull all of the material out from between the spring.



7.6.11 Compressing the pilot chute.

7.6.12

Place your knee on the cap and pull the center line out from the middle of the pilot chute.



7.6.12 Extracting the center line.

7.6.13

S-fold the center line and place it back inside the spring at the center of the pilot chute.



WARNING

Failure to stow the center line properly may result in a pilot chute malfunction.



7.6.13 Folding and stowing the center line.

7.6.14

Fold the material under at the grommets and stow it between the top two coils of the spring.

Pull the closing loops through the top grommets on the pilot chute and insert temporary pins.



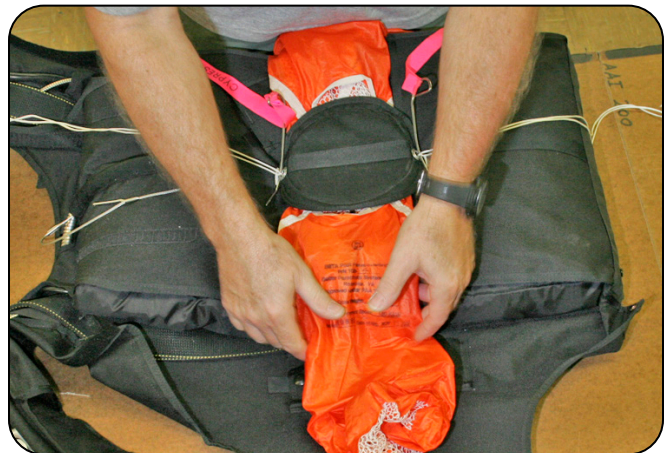
All of the material must be stowed at the top of the spring where the grommets are located. Damage to the material may occur if it is not stowed properly.



7.6.14 Stowing the material.

7.6.15

Gently pull on the remaining exposed material to ensure that it is cleared from the spring.



7.6.15 Clearing the material.

7.6.16

Fold the material on the left side.

Fold the material under so it lays flat.



Fold the material on top of the closing flap. Do not put any material between the closing flap and the deployment bag.



7.6.17

Close the left container flap and insert temporary pins.

Dress and shape the top and bottom flaps as you close the side flaps.



7.6.18

Fold the pilot chute material on the right side as outlined in step 7.6.14.

Close the right container flap with the ripcord pins.

Slowly remove the pull-up cords after routing them underneath the ripcord pin.



Do not remove the pull-up cord while it is against the closing loop. Doing so may burn the closing loop. Before you remove the pull-up cord, thread it underneath the ripcord pin.



7.6.16 Folding the material.



7.6.17 Closing the left container flap.

7.6.19

Dress the container and connect the snaps.



7.6.18 Closing the right container flap.

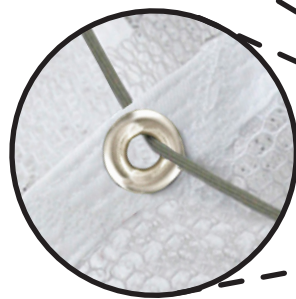
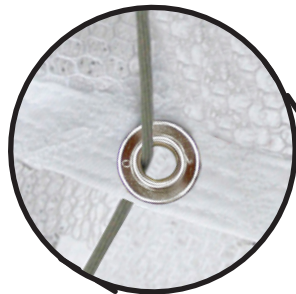
Appendix A. Installing the Slider

Install the slider so the grommet (smooth side) is facing down (toward the links) and the grommet washer is facing up toward the canopy.

Install the slider in the same sequential order as the suspension lines. Install the suspension lines on the canopy links as you install the slider. When you are finished with the installation, the slider should be centered between the two line groups.

Inspect the suspension lines and slider for continuity. Ensure that the suspension lines run free and clear through their respective slider grommets in the same order that the suspension line is installed on the connector link.

Washer (rimmed) faces up toward the canopy.



Grommet (smooth) faces down toward the links.



Slider runs free and clear of the suspension lines and is centered between the two line groups.



BUTLER

Butler Parachute Systems, Inc.
P.O. Box 6098
1820 Loudon Avenue, N.W.
Roanoke, VA 24017-0098
Telephone: (540) 342-2501 Fax: (540) 342-4037
E-mail: info@butlerparahcutes.com
Web Site: www.butlerparachutes.com

