



# **PARA-** **CUSHION**

**EMERGENCY PARACHUTES**

US Patent 3,908,937

**Owner's Manual**  
**For packing and maintenance of**

## **Para-Cushion** **Model L-39**

**Part Number 124112**  
**with**  
**Strong C-9 Canopy**  
**Part Number: 401010**



### **L-39 Jet Trainer**



## **Strong Enterprises**

*"The parachute company with imagination"*

Division of S.E. Inc.

6448 Pinecastle Blvd Suite 104, Orlando, FL 32809

Tel. (407) 859-9317 Fax: (407) 850-6978

[www.strongparachutes.com](http://www.strongparachutes.com) [sales@strongparachutes.com](mailto:sales@strongparachutes.com)

# **! WARNING !**

*Parachuting is a hazardous activity that can result in serious injury or death. Failure to follow all warnings, instructions and required procedures may result in serious injury or death. Parachutes sometimes malfunction, even when they are properly designed, built, assembled, packed, maintained and used. The results of such malfunctions are sometimes serious injury or death. There are so many factors, both human and natural, beyond our control that we want you to clearly understand that by using or intending to use our parachutes, you are assuming a considerable risk of personal injury or death. If you are not willing to assume that risk, please return the parachute to the dealer where it was purchased for a full refund.*

## **DISCLAIMER**

*There are NO WARRANTIES which extend beyond the description of the parachutes in this manual and neither the seller nor any agent of the seller has made any affirmation of fact or promise with respect to the parachutes except those that appear therein.*

*The liability of the seller is limited to the duty to replace defective parts found upon examination by the manufacturer to be defective in material or workmanship within 7 days after purchase and found not to have been caused by any accident, improper use, alteration, tampering, abuse or lack of care on the part of the purchaser.*

# Table of Contents

## Warning / Disclaimer

<b>Table of Contents</b>	<b>3</b>
<b>1. Introduction</b>	<b>4</b>
1.1. Scope.....	4
1.2. FAA Approval.....	4
1.3. Operational Limitations .....	4
1.4. Repack Cycle .....	4
1.5. Model Description .....	4
1.6. System Function.....	5
1.7. Care of your L-39 Emergency Parachute System .....	5
1.8. Service Life .....	6
1.9. Preflight Inspection.....	6
1.10. Fitting the Parachute.....	6
1.11. Plan Ahead .....	6
1.12. How to get out of the Airplane .....	7
1.13. How to open the Parachute .....	7
1.14. How to Steer .....	7
1.15. How to Land .....	8
1.16. Recovery.....	8
1.17 Reporting Equipment Improvement Recommendations.....	9
<b>2. L-39 Product Description</b>	<b>9</b>
2.1. Parts List.....	10
<b>3. Required Packing Tools</b>	<b>11</b>
<b>4. Prepare Parachute for Packing</b>	<b>12</b>
<b>5. Pre-Packing Inspection</b>	<b>12</b>
<b>6. Packing the L-39 Parachute System</b>	<b>13</b>
6.1. Folding the Parachute.....	13
6.2. Stowing the Lines.....	15
6.3. Placing the Parachute into the Container.....	19
6.4. Closing the Flaps of the Container.....	21
6.5 Closing the Container.....	23
<b>7. Repair Guidelines</b>	<b>29</b>
<b>8. Changing the Pilot Chute Loop and Cap</b>	<b>30</b>
<b>FAA Approval Letter (Inside Back Cover)</b>	

# 1. Introduction

Thank you for purchasing a new Para-Cushion Model L-39 Emergency Parachute System from Strong Enterprises. It is one of the finest available anywhere and with a little care, should last you a very long time. Rest assured that your new Para Cushion has been constructed to retain the durability, reliability and comfort that Strong Enterprises has been building into its products for over 50 years. We welcome your comments so that we may continue to improve our products and help make flying safer and more comfortable.

## 1.1 Scope

This owner's manual constitutes the manufacturer's instructions for the operation, packing and maintenance of the L-39 Emergency Parachute System.

## 1.2 FAA Approval

Originally certified in 1973 under TSO C-23b, standard category, the Para-Cushion parachute assemblies were upgraded in 1992 and are now FAA approved under TSO C-23c, (in accordance with AS 8015A category B and FAR 21, Subpart O).

## 1.3 Operational Limitations

Limited to use by persons up to 254 lbs (115 kg) fully equipped (person, clothes and equipment), and up to 150 knots IAS when equipped with the C-9 Parachute Assembly.

## 1.4 Repack Cycle

Your Para-Cushion model L-39 is designed for a 365-day repack cycle. Your countries laws may dictate a stricter schedule, check your local regulations. The Para-Cushion model L-39 must be packed by an FAA certificated parachute rigger, or foreign equivalent, with an appropriate rating or returned to Strong Enterprises for inspection and repack. If your Para-Cushion is exposed to moisture, excessive dirt or is damaged it should be inspected sooner than the maximum allowed.

***Note!***

***USA current repack regulations can be found in FAA FAR 91.307***

## 1.5 Model Description

The Para-Cushion series of Emergency Parachutes, including the L-39 Emergency Parachute System, is an FAA approved emergency parachute system fitted with a round, steerable canopy. The Para-Cushion model L-39 has been designed exclusively for use in the L-39 Jet Trainer. The system replaces the original Czech Parachute Seat Harness. The unique arrangement of each Para-Cushion system, with its externally mounted pilot chute (U.S. Patent #3,908,937) allows for a soft flexible container with protected ripcord pins.

***! WARNING !***

***This Parachute System must be installed  
by a trained and appropriately rated Aircraft Mechanic.***

## 1.6 System Function

The L-39 Emergency Parachute System is released from the seat by pulling the handle located at the bottom right hand side of the seat. This releases the locking mechanisms keeping the parachute securely in place allowing you to exit the aircraft.

### ***! WARNING !***

***A complete and proper course of training on L-39 emergency procedures from a trained, properly rated professional is required before using this system.***

The Para-Cushion is activated by pulling the ripcord handle. This action withdraws the ripcord pins and releases the locking loops allowing the pilot chute to eject, catch air and extract the parachute canopy from the container. The balance of the lines are stowed inside the container. On deployment, the canopy and suspension lines are extracted from the container.

Once clear of the aircraft, activate the Parachute System by pulling the ripcord handle. This should be done whether the included static line is installed or not.

Typically, it takes about 2 to 3 seconds from ripcord pull to fully inflated canopy, traveling a vertical distance of 150 to 300 feet. This does NOT mean that you should plan on jumping or pulling at 300 feet. Deployment time and distance depend on many factors including airspeed.

## 1.7 Care of Your L-39 Emergency Parachute System

Observe these precautions to maximize the service life of your Para-Cushion Emergency Parachute System. Parachutes are simultaneously very rugged and quite delicate. They are life saving devices and should be treated with great care. Parachutes are made of nylon, a very strong and durable, but not invincible, material. Nylon is deteriorated by small amounts of acid and weakened by ultraviolet sunlight. These surface effects do not seriously influence thicker materials, such as webbing or pack material, but canopy cloth is very vulnerable. If your Para-Cushion is opened or used, it should be brought to an appropriately certified parachute rigger, or returned to the manufacturer for airing, drying, inspection and repack. FAA FAR 65.129 requires that no parachute be packed, maintained, or altered in any manner that deviates from procedures approved by the manufacturer.

The parachute should be left unopened inside its protective container ready for use. When you take your Para-Cushion to your rigger for servicing, they will be glad to allow you to pull the ripcord yourself, give you a functional demonstration, and answer all your questions. We urge you NOT to open your parachute in the field for demonstration purposes. Foreign objects can cause costly damage to the canopy.

When your Para-Cushion is in the aircraft, care must be exercised to ensure that it is not damaged. Be sure that it does not come in contact with any sharp or loose metal surfaces, or any objects within the plane, which might cut or snag it. All metal edges, exposed nuts and bolts, etc. should be taped or covered to prevent wear on the parachute container. Be sure that your parachute does not come in contact with water, oils, acids, grease, dirt, agricultural or fire retardant chemicals. When not in use, store your Para-Cushion in its carrying bag in a clean, dry, protected area. If in doubt as to its condition, consult your nearest parachute rigger or Strong Enterprises.

## **1.8 Service Life**

FAA FAR 65.129 requires that “No certificated parachute rigger may pack a parachute that is not safe for emergency use”. The continued airworthiness of an assembly is at the discretion of the FAA licensed parachute rigger’s inspection during re-pack. While proper care can no doubt extend its usefulness, an older parachute should be examined more closely for signs of deterioration. Your parachute is a sensitive piece of life saving equipment and should be treated as such. However, it should not be expected to last forever, even with proper care.

## **1.9 Preflight Inspection**

The parachute must be inspected by the wearer prior to each use. Check it visually for any unsafe condition. Be sure the harness is not twisted or misrouted. Be sure the fittings are not rusted. Be sure the ripcord handle is securely in its pocket (under the fabric pocket covering). Lift the Velcro on the back pad and check the ripcord pins. Be sure they are properly seated in their loops. All pins should extend at least 1/2-inch beyond the fabric locking loop. Be sure the rigger’s seal and thread are still intact around the last pin. That’s your assurance it has not been opened since it left the rigger’s packing table. Check the packing data card in the nearby pocket to be sure that the parachute is current and has been repacked in accordance with regulations.

## **1.10 Fitting the Parachute Harness**

The parachute system designed for the L-39 is unique to the aircraft it is installed in and once installed is locked in position. Therefore to wear the parachute, you must climb into it while it is installed on the seat. If you are putting the parachute on for the first time; unstrap the straps, and loosen all adjustment points. Sit down and slip your arms through the main lift web (the vertical straps in front), much like putting on a jacket. Next, reach between your legs, pick up each leg strap, untwist them if necessary, and snap them in place on each side of the lower portion of the main lift webs (Right strap snaps into the right side hardware). Pull the leg strap webbing below your hips, tightening them snugly yet comfortably around your thighs. Next adjust the vertical straps, one on each side located below the ripcord handle, and pull upward until the straps are snug. Adjust the horizontal straps, the ones behind your lower back, and finally snap the belly-band, and the chest strap hardware, and adjust. Fold and stow all loose webbing ends in the elastic keepers. Be sure the ripcord handle is accessible. Resist the urge to excessively tighten the harness. This could restrict your escape from the cockpit.

## **1.11 Plan Ahead**

Be prepared in the event of an emergency situation. Know and rehearse your emergency procedures before they are needed. With the parachute on, sit in your cockpit and fasten your lap and shoulder belts. Be certain these are over your parachute harness. Wear gloves, helmet and goggles, even headphones if you normally use them. Mentally organize your bailout procedure. Inspect your cockpit for projections or sharp edges that may damage the parachute, or injure you. Consider canopy ejection, oxygen disconnect, or other requirements that you may be faced with. All these things take time, and an emergency leaves you little time for errors. Generally, you are better off staying with the aircraft if it is controllable. However, your margin of safety is reduced as time passes evaluating your situation. With time many situations can get worse. Make your decision quickly because all these actions consume altitude.

## 1.12 How to Get Out of the Airplane

There are only two steps to remember when you must leave your aircraft. 1) Get clear of the aircraft, 2) then pull your ripcord, in that order. If the parachute begins to open while you're still aboard, the wind may inflate it, dragging you out or into the tail. Also, it may entangle with the aircraft. There are no other rules - the aircraft may be tumbling, spinning, or inverted. Simply get yourself out any way you can. Clear the aircraft and pull your ripcord immediately. There is enough oxygen to breath and you'll be descending into denser air.

## 1.13 How to Open the Parachute

The ripcord handle is located near the chest strap on the wearer's left front of the harness. The key is to:

**LOOK** at the ripcord handle, rather than fumble or tug on a harness fitting. Beneath the fabric cover, the ripcord handle is held in place by a pocket. Look at it first because it may have been dislodged by your exit.

**REACH** over and grab it with both hands (typically with your right hand and left thumb), and **PULL!** This is no time to be gentle!

If the ripcord doesn't come free on the first pull, check to make sure it is the handle in your hand, not some other piece of hardware. Back the handle up to the housing to create slack in the cable, then punch it out again. The entire cable assembly should come completely out of the housing.

To reduce the pull force, push the handle in the direction that the protective ripcord housing points - rather than straight out from your chest. The ripcord housing on the Para-Cushion L-39 comes over your shoulder, so push the handle down toward your feet. By having both hands together on the handle, you also reduce the chance of the canopy or lines entangling with an extended limb. Keep your feet together for the same reason. Body position is secondary to pulling.

***Remember to LOOK-REACH-PULL.***

## 1.14 How to Steer

The C-9 Military Parachute in your L-39 Parachute System uses a method called a four line release to give your parachute forward speed making it steerable. Once under canopy you will notice over your head, on each side, a red loop attached to a series of knots. Securely grasp the loops, one in each hand, and pull hard until all the knots have been released and the rear four lines of your canopy are free. Doing this will give you the ability to steer your parachute. Pull down right to turn right, pull down left to turn left. During a repack operation, ask your rigger to show you this steering assembly, and explain it further.

## **1.15 Landing and Recovery**

Ideally, you want to reduce your landing speed by facing into the wind (or quartering slightly). Avoid all but very slight turns below 200 feet.

Push your feet and knees tightly together and point your toes slightly so you don't land on your heels. The tension caused by keeping your ankles and knees pressed tightly together increases their individual support, reducing your chance of injury. Keep your elbows in and try to look at the horizon, not down at the ground. This will give you a better idea of your altitude (much like looking out the side, rather than over the nose during a landing flare).

If the wind keeps your canopy inflated after touchdown, you may be dragged. Pull in the lines closest to the ground to spill some air, and then run around the canopy to collapse it.

In most cases you can maneuver the canopy as necessary to avoid as many obstacles as possible. In the event of a tree or power line landing, keep your feet together so you don't straddle a limb or wire. Be prepared to slide through and hit the ground afterwards. You should be able to avoid power lines, but if not, throw away the ripcord -- it is an electrical conductor. If suspended from a power line, do not attempt to climb down and do not accept assistance from anyone until the power has been shut off.

To prepare for a water landing, the chest strap may be unfastened (except with the Aerobatic harness) as long as you cross your arms in front of the harness to prevent falling out. Depth perception over water is difficult, so do not attempt to leave your harness above the water. Take a deep breath just before you splash down. Once under water, unfasten your harness straps and swim as far as possible upstream, allowing the canopy to blow away from you. Entanglements with wet nylon cloth and lines can weigh you down.

## **1.17 Reporting of Equipment Improvement Recommendations**

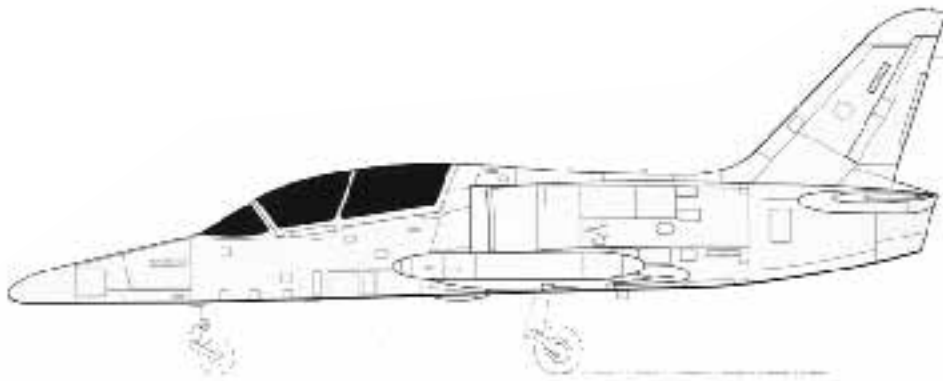
In our effort to continuously improve our products, processes, and services, we invite you to send us your comments and suggestions. As a user of this equipment, you are uniquely suited to provide us with valuable feedback regarding design and/or performance. Feel free to tell us what you like and what you don't like. Send us an email or mail a letter to:

Strong Enterprises  
6448 Pinecastle Blvd. Ste. 104  
Orlando, FL 32809  
sales@strongparachutes.com



## 2. L-39 Product Description

This system is designed specifically for use in the L-39 and L-29 Trainer Jets. This design incorporates the Russian designed Parachute Harness / Pilot Restraint system found on the original parachute assembly. As designed, this system perfectly replaces the original equipment while providing the pilot with absolute comfort found on the Strong Enterprises entire line of Para-Cushions.



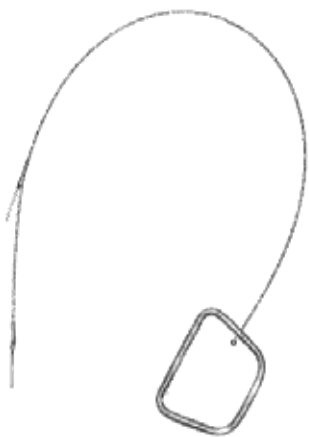
## 2.1 Parts List



Harness and Container Assembly  
124114



26-foot C-9 Canopy  
401010



Ripcord Assembly  
611406



Pilot Chute, Lil Grabber  
790121



Static Line  
16 ft length, 5/8 tubular  
780530



G-Pad Back Cushion with  
Sheepskin padding  
812114



Locking Loop  
861044



Cap for Pilot Chute  
799030



Carrying Bag  
816007



Owner's Manual  
510085

### 3. Required Packing Tools

**A - Shot Bags at least 4 each**

**B - Line Separator 1 each**

**C - Pilot Chute Locking Rod 1 each**

**D - Pilot Chute Locking Strap 1 each**

**E - T-handles 3 each**

**F - Pull-Up Cords 3 each**

**G - Flat Head Screwdriver 1 each**

**H - Tension Plate 1 each**

**I - Tension Hook 1 each**



## 4. Prepare Parachute Assembly for Packing

1. Gather the appropriate tools.
2. Always count your tools to ensure you don't leave any in the packed parachute.
3. Lay the harness, container and canopy down on the table with the harness facing down.
4. Attach canopy apex to tension hook and attach container to tension plate. By tightening both ends canopy will be stretched out, allowing easier inspection and packing.

## 5. Pre-Packing Inspection

Always perform the following inspection prior to packing:

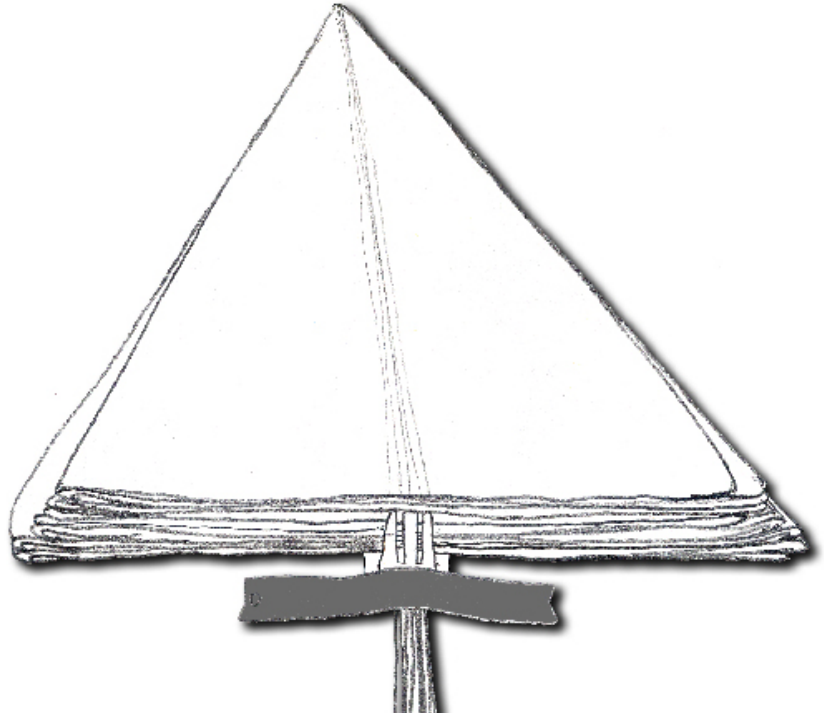
- Inspect the entire assembly for completeness and any damage.
- Inspect Pilot Chute and bridle.
- Check that the larks-head knot on the pilot chute is secure.
- Inspect Apex area.
- Check entire canopy for damage.
- Inspect lines for damage.
- Check line sequence and 4 line release system.
- Check that the screws are tight in the L-Bars.
- Inspect Harness and Container Assembly.
- Check that the elastic stow bands are in good condition.
- Check tackings for tightness and condition.
- Inspect Hardware for functionality and condition.
- Inspect Harness for nicks, abrasions and sun damage.
- Check ripcord is snug in pocket.
- Check locking loop length. Loop should be 10 inches.

# 6. Packing the L-39 Emergency Parachute System

## 6.1 Folding the Parachute

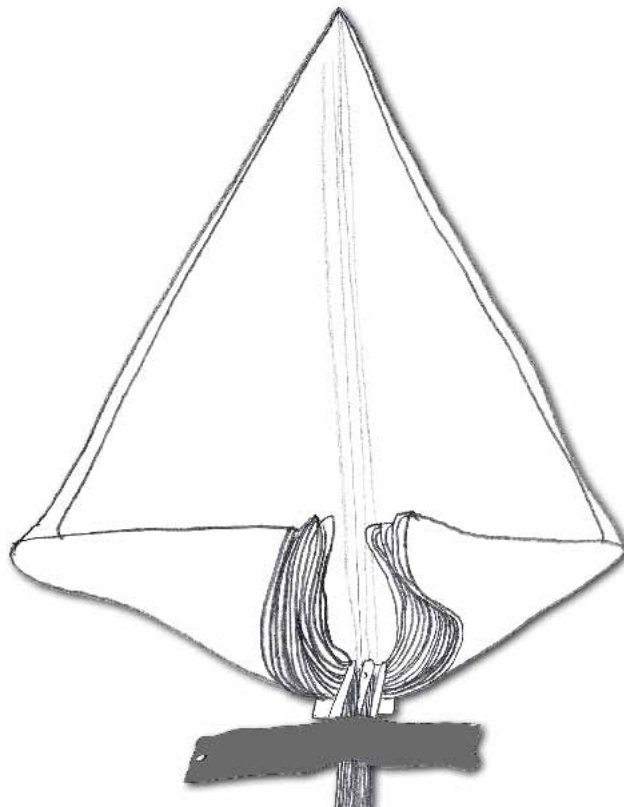
### 6.1.1

Lay harness, container and canopy down on the table with the wearer side facing down. Inspect entire assembly for completeness and any damage. Check line sequence and 4 line release system. Flake canopy and pleat in the normal manner with an equal number of gores to each side.



### 6.1.2

Fold skirt up 90° on each side parallel to the radial seams.



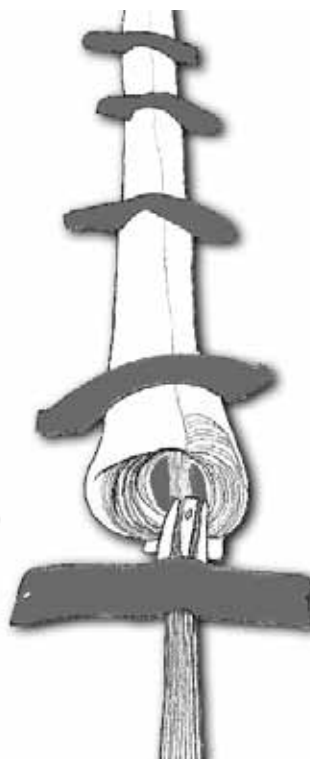
### 6.1.3

Fold the canopy into thirds by bringing the sides up to the middle. First right side and then left.



### 6.1.4

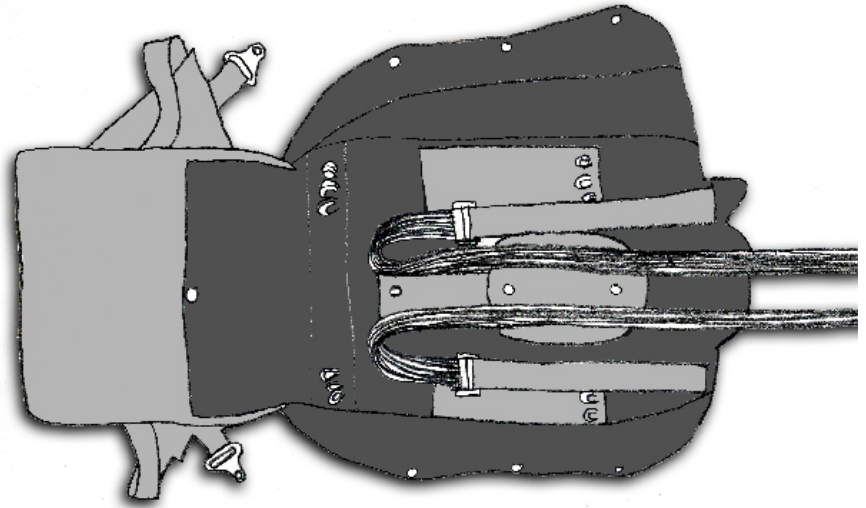
Long fold the canopy into fifths, long and tight, bringing the right side just past center then folding the left side over center.



## 6.2 Stowing the Lines

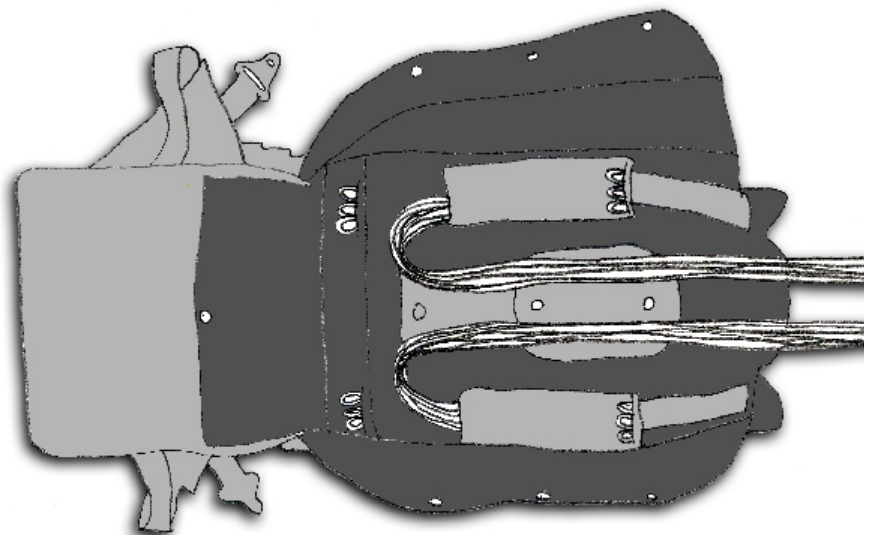
### 6.2.1

Release tension from the assembly and prepare container to begin stowing lines by laying the risers in the pack tray



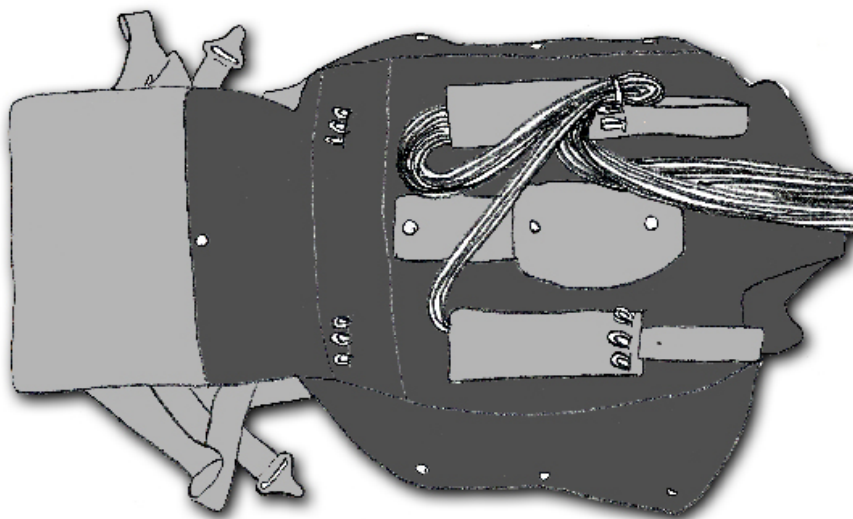
### 6.2.2

Lay risers under riser covers and close with Velcro© provided.



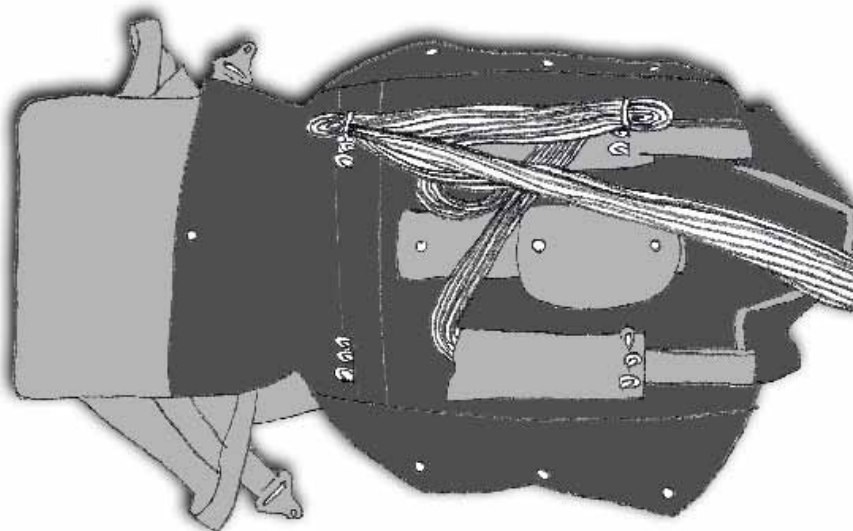
### 6.2.3

Keeping lines straight and untwisted; make your first stow in the top left of the container extending about 1 1/2 inches past the stow band.



### 6.2.4

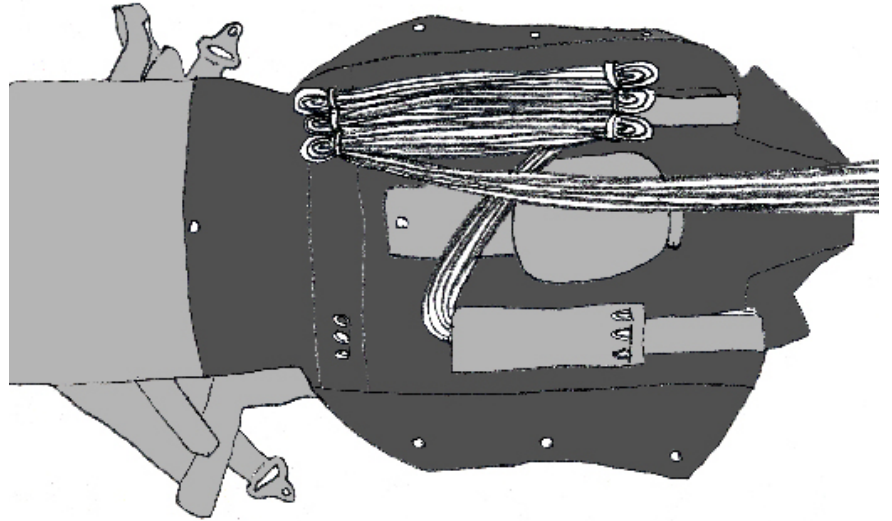
Extend the lines down the pack tray making your second stow in the wearer's bottom left stow band.



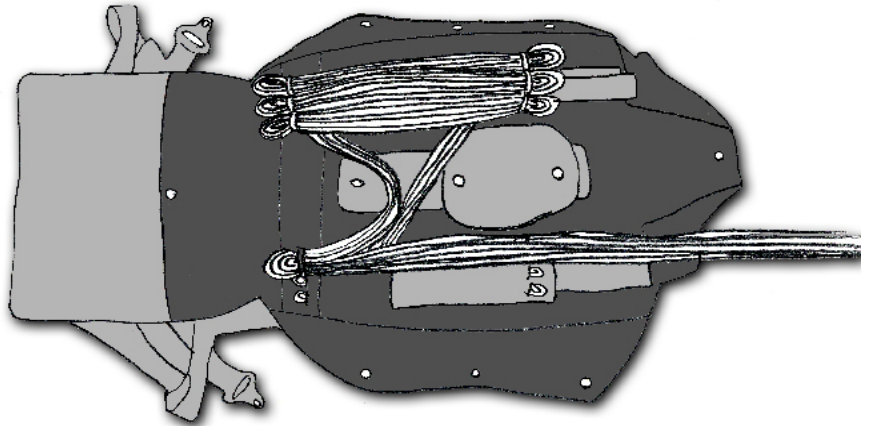


**6.2.5**

Continue stowing the lines in the same manner, up then down, until stow bands on left are complete.

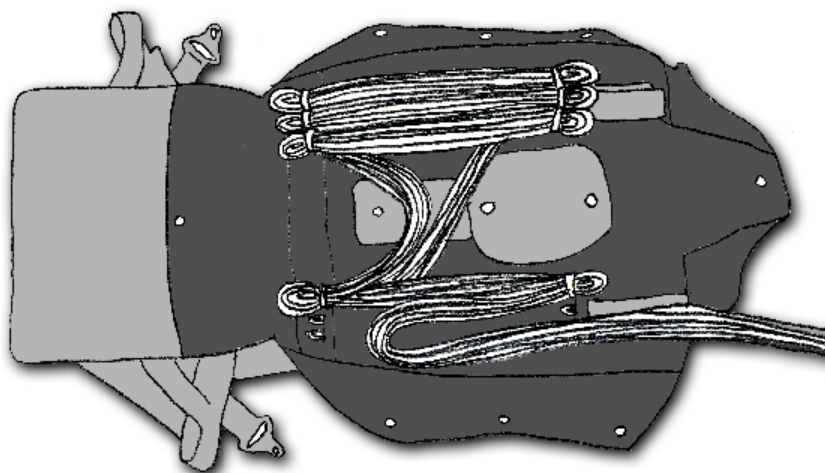
**6.2.6**

Cross over with the lines to the other side going in between the 2nd and 3rd grommets in the container. Make the first stow on the right side bottom inboard stow band as shown in the picture.



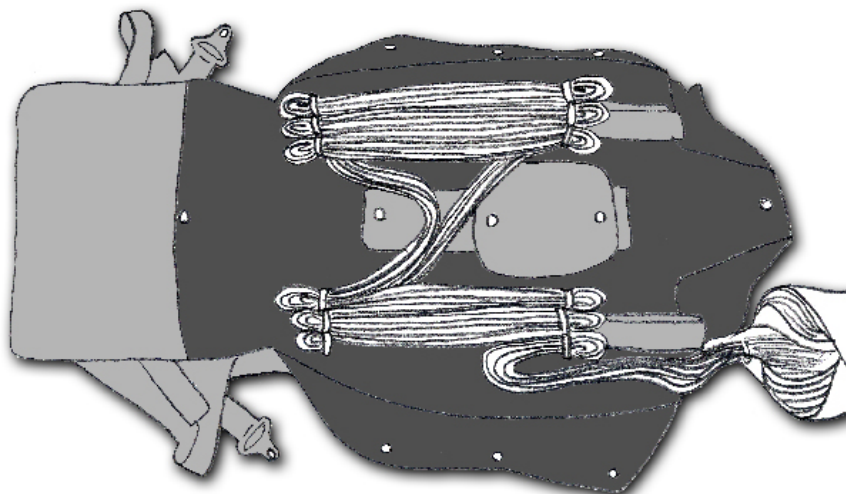
**6.2.7**

Make your second stow in the inboard top right side as shown in the picture.



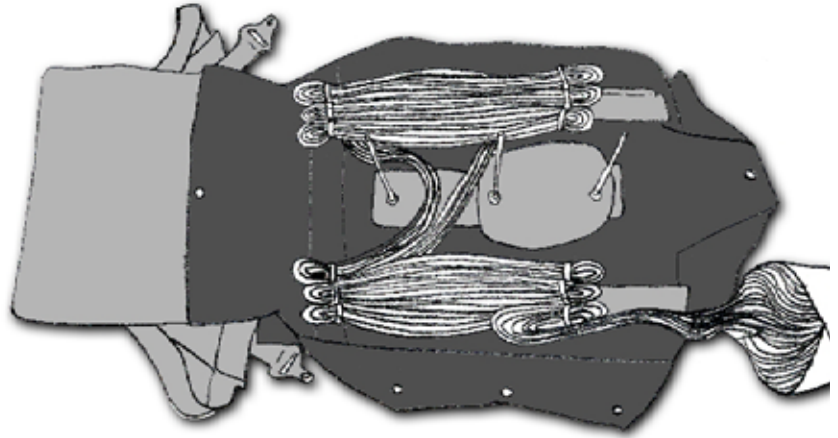
**6.2.8**

Continue stowing the lines in the right side of the container up then down, until all lines are stowed and you have about 12 to 18 inches of unstowed line remaining.

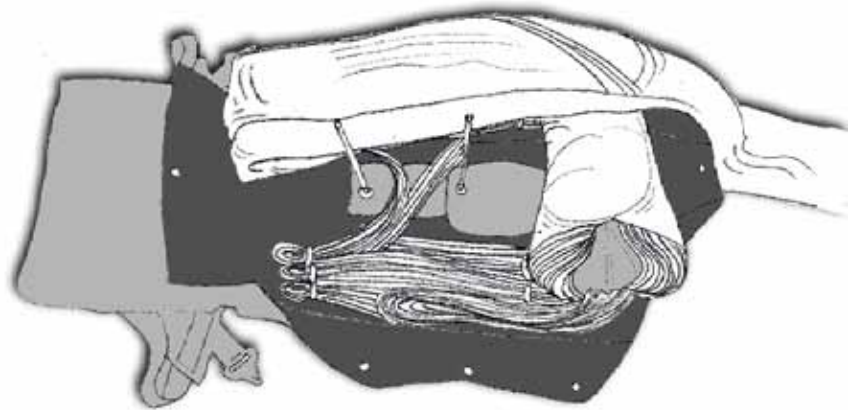


**6.2.9**

Bring a T-handle up through each of the three grommets in bottom of container.

**6.3 Placing the Parachute into the Container****6.3.1**

Place skirt of the canopy in top right corner with canopy laying across top of container. Make a 90° turn with the canopy and make the of parachute down the right side. Place the canopy in position and extend down to the right bottom corner of container.



**6.3.2**

About 3/4 of the way up the container make a 45° fold and bring canopy over to left side. Canopy should pass between the bottom two grommets /T-handles. Allow the canopy to extend about 5" past the bottom of the container.



**6.3.3**

Next fold remaining parachute into the container up the right side to the skirt. "S fold" any remaining canopy up close to, but not on top of, the skirt.



### 6.3.4

Fold the remaining bottom 5 inches of the parachute at a 90° angle across the bottom of container, filling in the bottom and right corner.

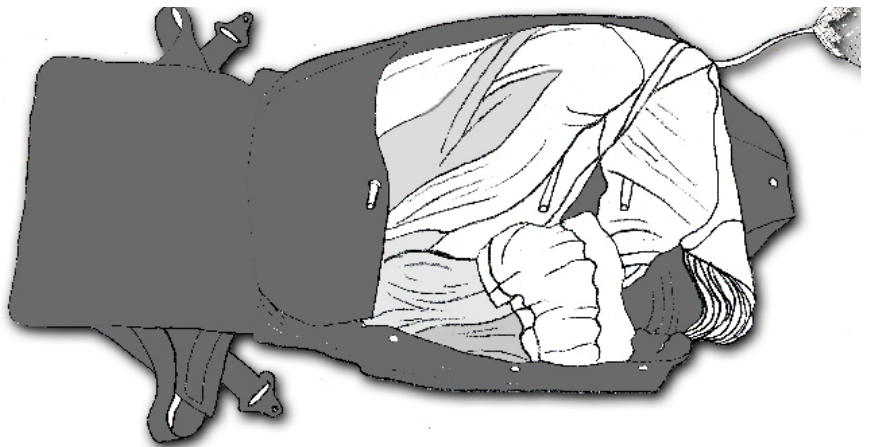
Bring protector flaps, located around grommets, up around T-handles. These flaps keep lines and canopy away from closing loops and grommets.



## 6.4. Closing the Flaps of the Container

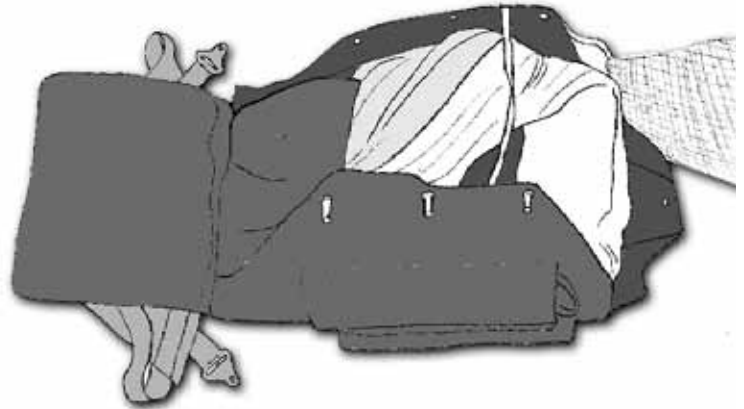
### 6.4.1

Begin closing the container by bringing the bottom flap up and inserting bottom T-handle through grommet.



### **6.4.2**

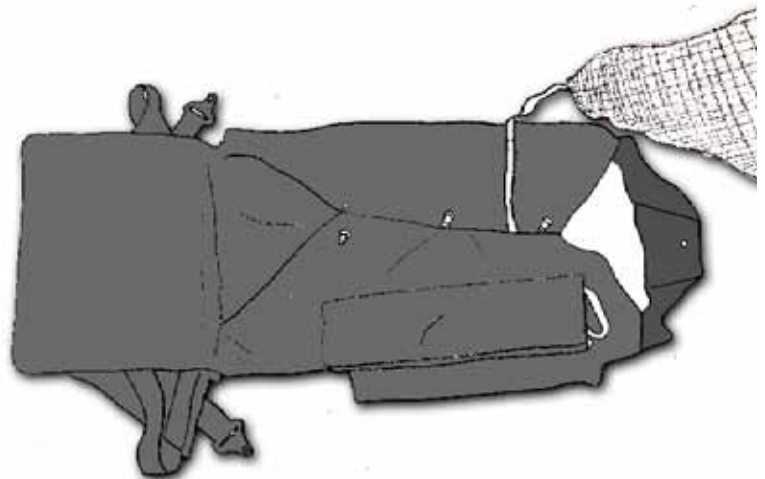
Dressing as you go and keeping the canopy as far outboard and neat as possible; close the right side flap by sliding grommets over T-handles. Keeping the canopy outboard, will create a nest that the pilot chute will eventually snuggle into. Route the bridle out in between the 1st and 2nd grommets of container.



### **6.4.3**

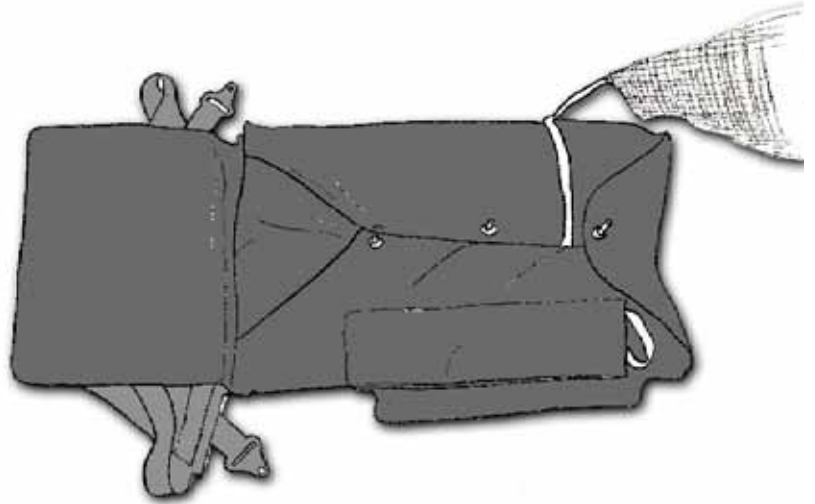
Close the left side flap; the canopy should be tight against the outboard side. Slide the grommets of the flap over the T-handles.

Reach inside and make sure protector flaps have not shifted or moved. No part of the canopy should be inside protector flaps.

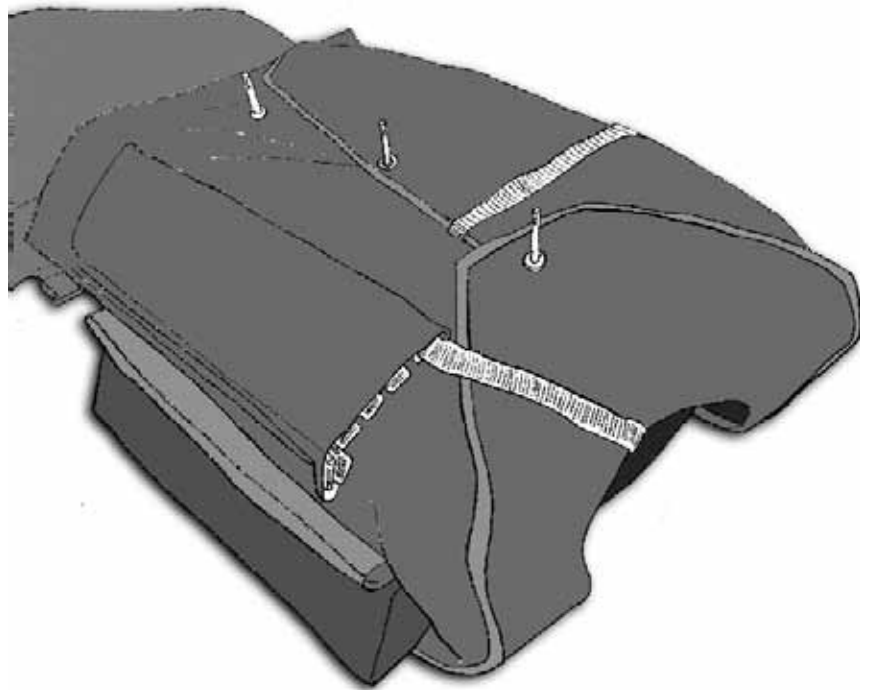


**6.4.4**

Close the top flap last, sliding the grommet over the T-handle.

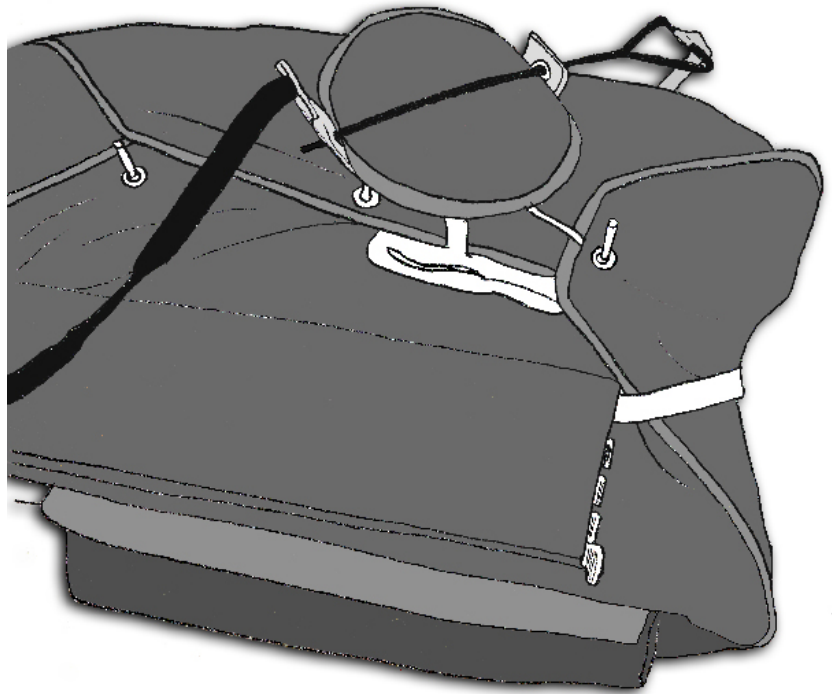
**6.5 Closing the Container****6.5.1**

The small opening at the top of the parachute system is for the static line. Locate the opening and insert the end of the static line with the round ring 6 inches into this slot. Locate the Velcro® on the static line and mate with the Velcro® on the top flap. Stow the remaining static line temporarily in a rubber band.



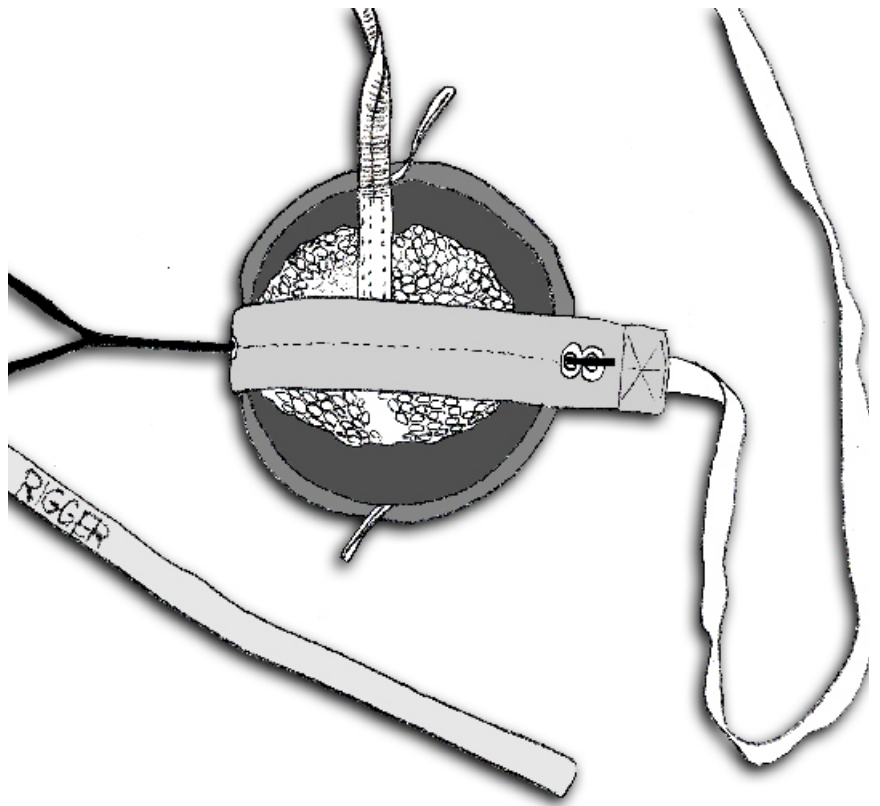
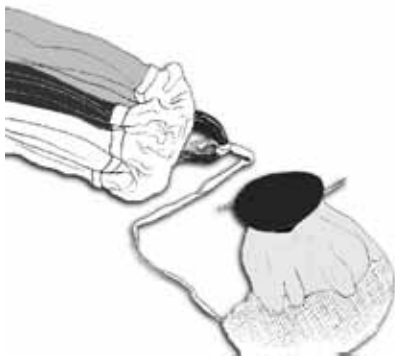
**6.5.2**

“S-fold” the bridle of the pilot chute in between the 1st and 2nd grommets of the flaps and tuck in between flaps slightly.



**6.5.3**

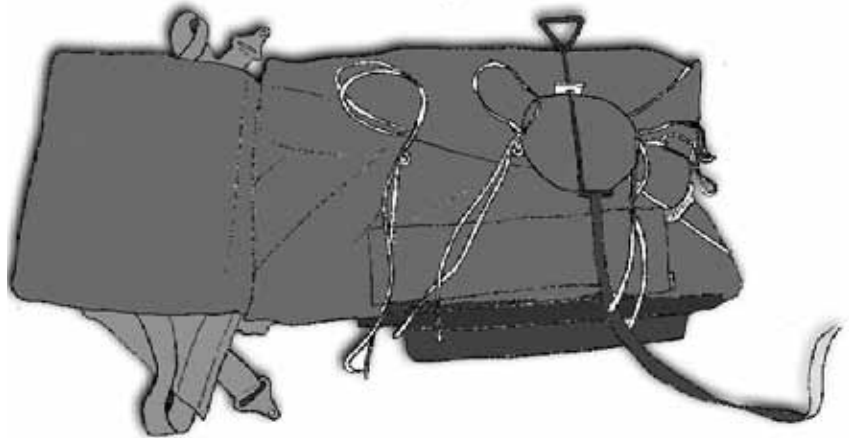
Collapse Pilot Chute onto the locking rod. Secure with pilot chute locking strap. Make sure locking rod and strap are at 90° angle to pilot chute looping lock.



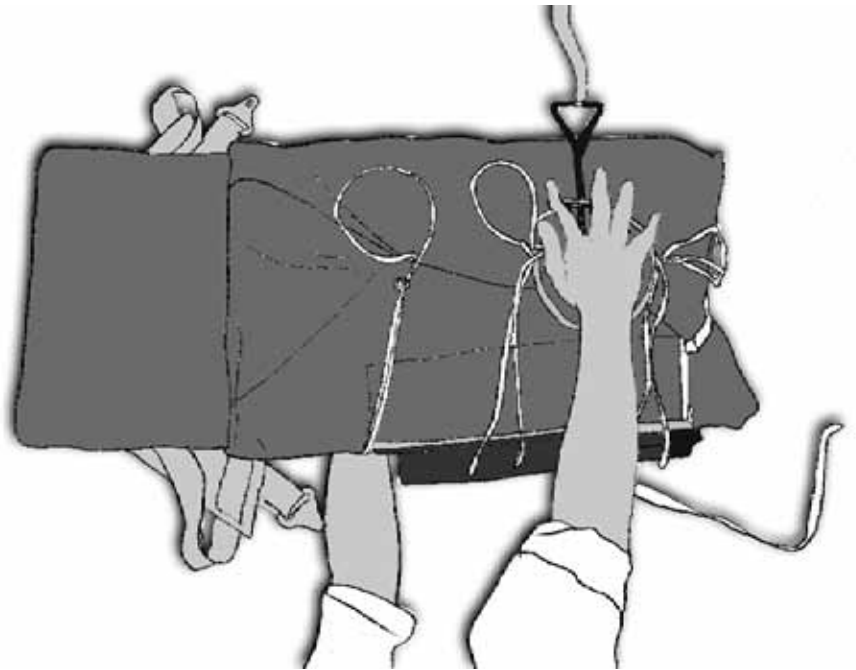


**6.5.4**

Place the Pilot Chute on top of the bridle in between the 1st and 2nd grommets of the container. With locking loops next to T-handles. Run a pull-up cord through the 2 loops of the pilot chute and the loop located inside the bottom left flap. Insert your pull-up cords through the T-handles.

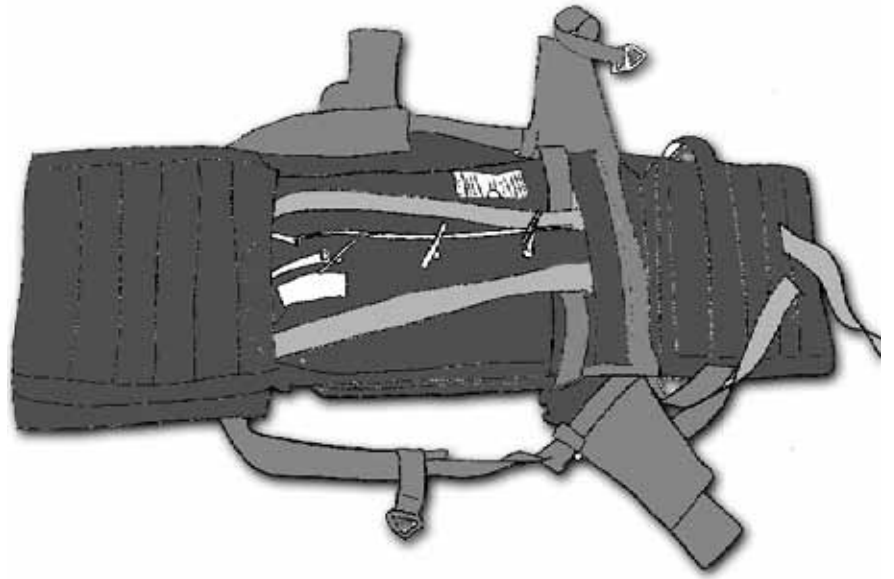
**6.5.5**

Prepare to flip the container over onto its back by placing your right hand on top of the compressed pilot chute and your left hand under the container. This will help keep everything secure and in place.



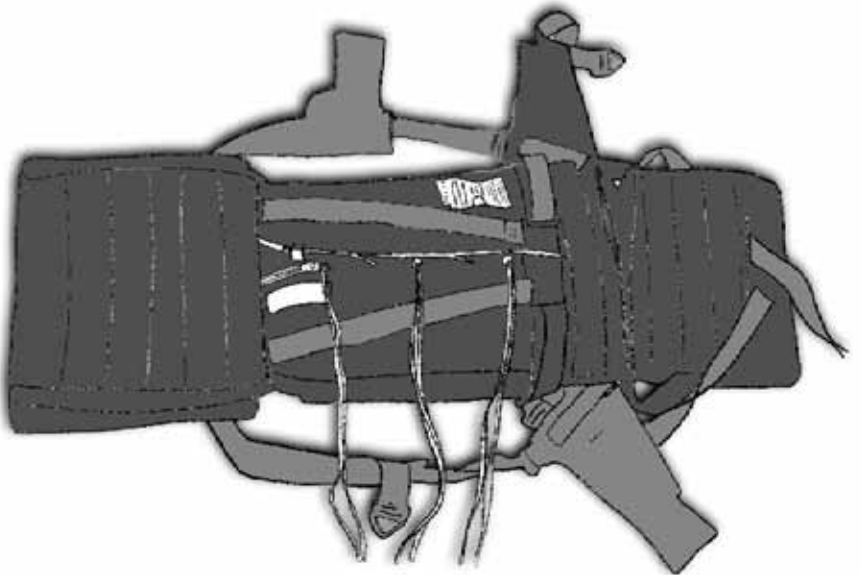
**6.5.6**

In one continuous fluid motion, flip the container over onto its back. Peel back the Velcro® on the back pad and lift exposing the grommets, T-handles and ripcord pins.



**6.5.7**

Pull the T-handles out of the container, bringing the pull-up cords through the container up with them.

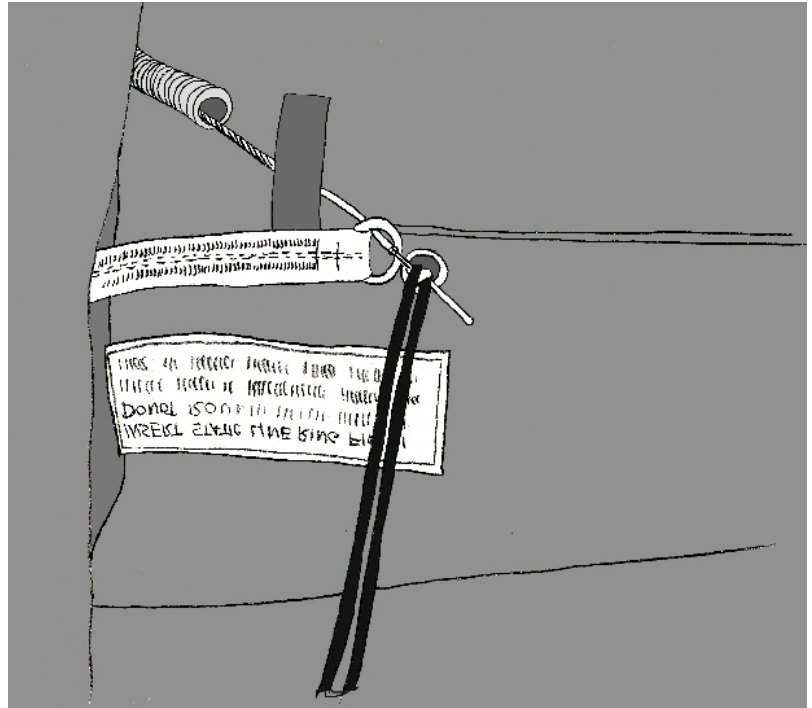


**6.5.8**

Insert the 1st pin of the ripcord (the one closest to the housing) through the static line ring. Using the pull-up cords, firmly pull the top loop of the pilot chute up thru the pack and insert the ripcord pin.

Next pull the center locking loop through and lock in place with center pin.

Now pull the bottom pull-up cord up and expose the loop attached to the bottom left flap of the container. Lock in place with the last pin of the ripcord assembly and gently remove the pull up cords to avoid damaging the locking loops.

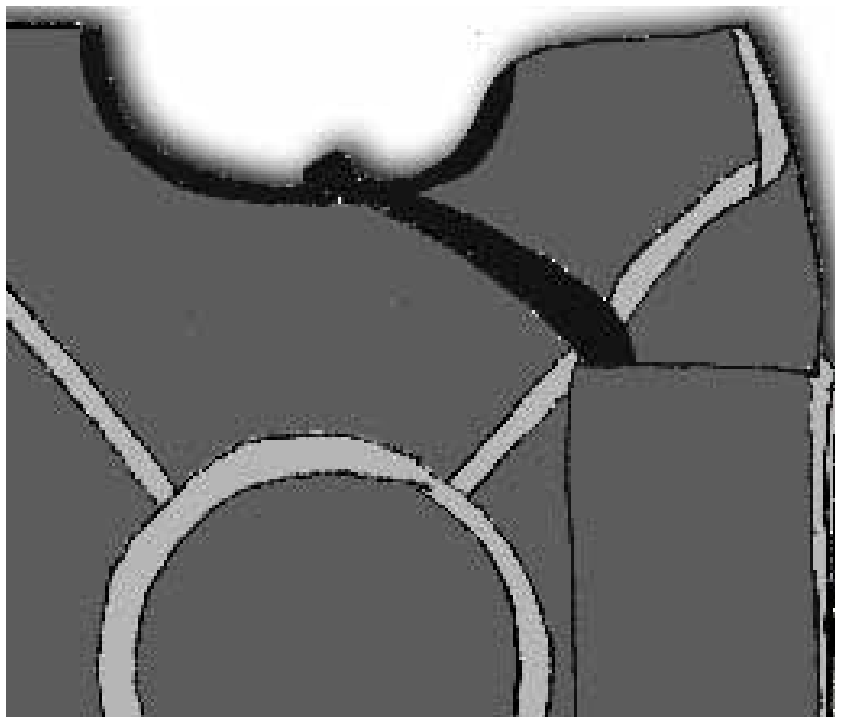
**! WARNING !**

***Do not insert ripcord cable through static line ring.***

**6.5.9**

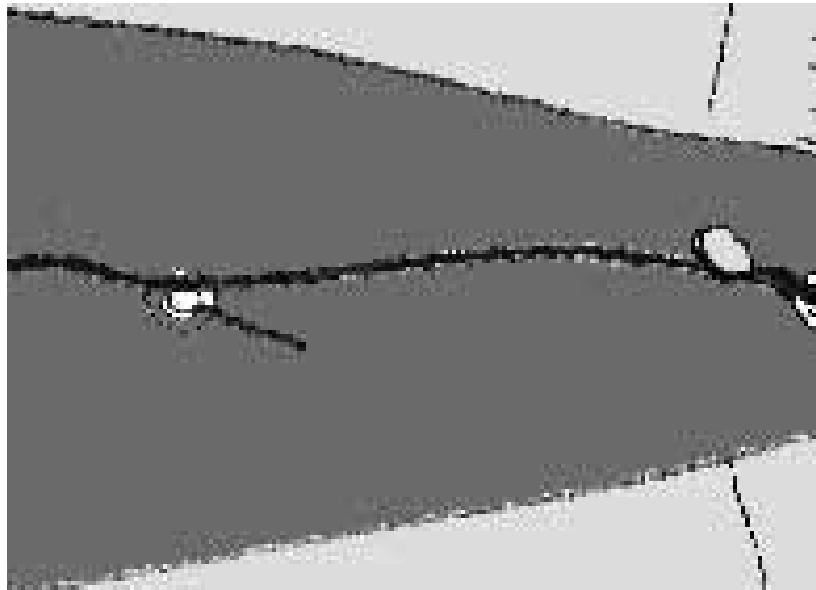
Stow the static line in the pocket provided on the outside of the container.

Static line should be stowed by alternating from top to bottom stows.



**6.5.10**

Seal the last pin, fill out data on packing data card, count your tools and dress the assembly.



***! WARNING !***  
***Count your tools***  
***to insure you have not left any in the packed parachute.***

## 7. Repair Guidelines

The following repair specification is set forth to aid riggers in the maintenance of Strong Parachutes. Repairs must be made only by appropriately rated FAA certified parachute riggers.

### CANOPY

#### TYPE OF REPAIR

Re-stitching:

Patch, single side:

Panel replacement:

Radial Seams

Lateral bands

Upper

Lower

“V” tabs:

Suspension Lines:

#### LIMITATIONS

No limit as to length or number.

Size limit: 50% of panel area.

Limit of 3 per panel, 15 per canopy.

Limit 9 per canopy

Size limit: 12”, no more than 4 per canopy.

Damage: size limit 2”

Limit: 1 per canopy

Limit: 4 per canopy

No limit

No Limit

### PILOT CHUTE

Use re-stitching or single side patch. Anything more, replace.

### PILOT CHUTE CAP

Replace when Spandura fabric becomes worn.

### LOCKING LOOP

Replace one time per year. (See Chapter 8). Length for L-39 locking loop is 10 “ (+0 / -1/4”). Change if out of tolerance or worn.

### BRIDLES AND STATIC LINES

Damaged bridles and static lines should be replaced

### CONTAINER

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

### HARNESS

Any portion of the harness which is structurally damaged must be replaced in a manner to duplicate the original equipment.

### RIPCORDS

Damaged ripcords should be replaced.

### DATA CARD

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

#### *Note!*

*Darning and ripstop tape are not authorized for certified canopies as they may weaken the fabric. Single side patches are recommended for even small damage areas.*

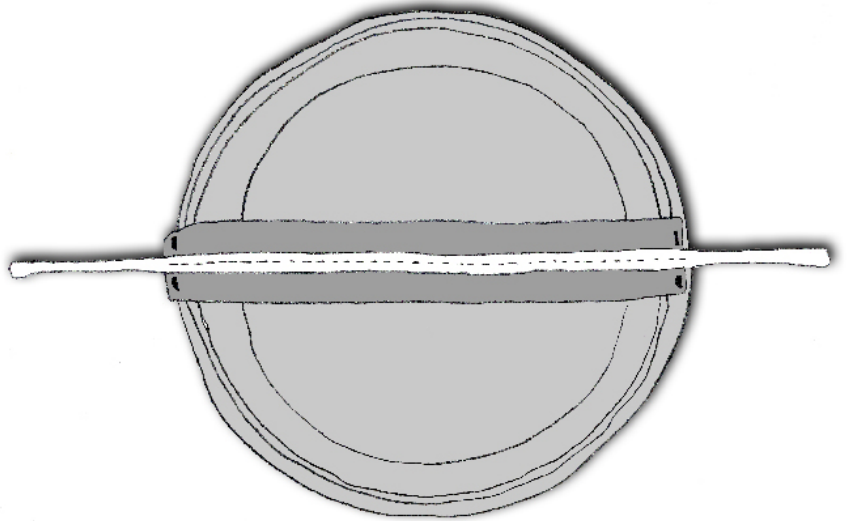
## 8. Changing the Pilot Chute Loop and Cap

### 8.1

The L-39 Parachute Assembly has a Pilot Chute Cap with a Spandura Rim. This Spandura Rim is hand-tacked to the top of the pilot Chute at 90° angles to the loop openings. By snipping this hand tacking, you can easily remove the cap and lift it off.

### 8.2

Once the cap is removed, remove the loop by snipping the hand tacking. Install a new loop by hand tacking from the bottom side up, then back through down, up on the other side, then down again on the opposite edge, followed by a good surgeon's knot.



#### *Note!*

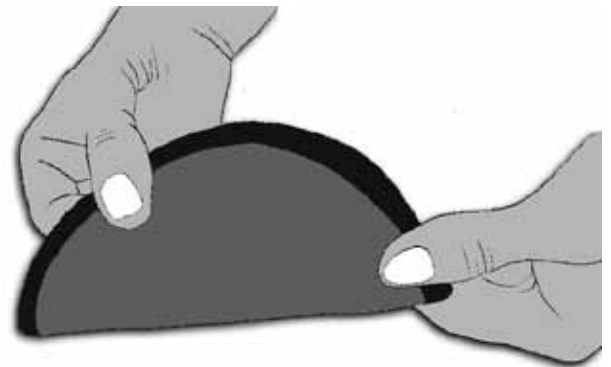
*The Pilot Chute Loop must be placed as close to dead center as possible. Being off even a couple of degrees may cause The Pilot Chute to not sit properly on the packed container.*



### 8.3

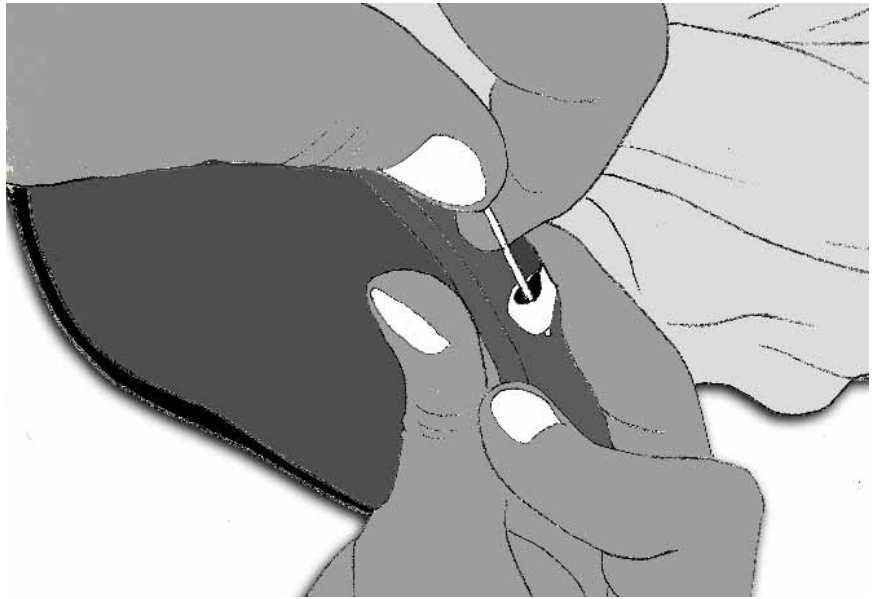
If you are replacing the cap, you must make two small holes where the loops will come through the Spandura. Do this near the seam in the binding tape, place second hole directly opposite the first hole.

**Rigger tip:** Once you have cut the first hole in the Spandura for your loop to come through, fold the cap perfectly in half at that hole, making a crease. Unfold the cap, you can see where 180° is and where to place the opposite hole.



**8.4**

Once the holes are cut, install the new cap over the loop by aligning the loop ends with the holes in the Spandura cap. Pull the loop through the holes with your hand tack needle.

**8.5**

Hand tack new cap in place at 90° angles to the loops. Do this by going through pilot chute top and through Spandura as close to binding tape as possible. Tie off with surgeon's knot.

**Note!**

*Be careful not to catch the pilot chute canopy cloth below the stitch line at the top of the pilot chute. Doing so may result in stress being put on the cloth resulting in a hole in the canopy.*

Mr. Edward Strong  
President, Strong Enterprises  
A Division of S.E. Inc.  
11236 Satellite Boulevard  
Orlando, FL 32837



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Dear Mr. Strong:

This is in response to your March 9, 1992, and subsequent submittals requesting Federal Aviation Administration authorization to identify Para-Cushion Series, Part No. 1045-( ) emergency parachutes assemblies, in accordance with the requirements of Federal Aviation Regulation (FAR) Part 21, Subpart O, Technical Standard Order (TSO) C23c, and SAE Aeronautical Standard AS-8015A, Category B.

We find your March 9, 1992, Statement of Conformance submitted with your request and your Quality Control Manual dated December 6, 1988, acceptable.

The following data as submitted by your letter will be retained on file for this authorization:

- a. Strong Enterprises Test Summary dated March 9, 1992.
- b. Strong Enterprises Drawings for the Para-Cushion Series P/N 1045-( ) submitted with your March 9, 1992, request.
- c. Strong Enterprises Owner's Manual which includes limitations and instructions and was submitted on May 7, 1992.

Effective this date, you are authorized to identify the Para-Cushion Series, Part No. 1045-( ) parachute assemblies with the appropriate TSO markings required by the applicable TSO and FAR 21.607(d).

This authorization is not transferable to another person or location and is effective until surrendered, withdrawn, or otherwise terminated by the Administrator.

Your responsibilities as a holder of a TSO authorization are outlined in FAR 21.3 and FAR 21, Subpart O.

The Airframe Engineer for this authorization is Cindy Lorenzen, telephone number (404) 991-2910. The Technical Support Specialist is Lorraine Dash, telephone, (404) 991-6137.

Sincerely,

A handwritten signature in black ink, appearing to read "John Tigue".

John Tigue  
Manager, Atlanta Aircraft  
Certification Office





# Strong Enterprises

*"The parachute company with imagination"*

Division of S.E. Inc.

11236 Satellite Blvd. Orlando, FL 32837

Tel. (407) 859-9317 Fax: (407) 850-6978

[www.strongparachutes.com](http://www.strongparachutes.com) [sales@strongparachutes.com](mailto:sales@strongparachutes.com)

## **CUSTOMIZE YOUR L-39 PARA-CUSHION EMERGENCY SYSTEM**



### **Custom Monogram PN:099105**

We can monogram your name, N number, Company Name, Nose Art or anything you can imagine. Space provided 6" X 2.5"



*Call or email for more information and pricing.*