

TEMPO PACKING MANUAL

APPLIES TO:

Tempo 120 PISA Part No. PI 141-00
Tempo 150 PISA Part No. P0991-00
Tempo 170 PISA Part No. PI 142-00
Tempo 210 PISA Part No. PI 143-00
Tempo 250 PISA Part No. P0986-00

PARACHUTE INDUSTRIES OF SOUTHERN AFRICA (PTY) LTD.
Factory: 29 Duiker Road, Canelands, Natal, South Africa
P.O. Box 1616, Verulam 4340, South Africa
Telephone: (0322) 33 0333 Telex: 6-24458 Fax: (0322) 33 0262





WARNING

1. TRAINING **AND/OR** EXPERIENCE ARE REQUIRED TO LOWER THE RISK OF **SERIOUS INJURY** OR DEATH.

NEVER USE THIS EQUIPMENT UNLESS YOU HAVE READ AND UNDERSTAND THIS WARNING LABEL, AND ALSO UNLESS:

A. YOU HAVE COMPLETED A "**CONTROLLED PROGRAM OF INSTRUCTION**" IN THE USE OF THIS EQUIPMENT

— OR —

B. YOU HAVE READ AND UNDERSTAND ALL APPROPRIATE FLIGHT MANUALS & PACKING INSTRUCTIONS, AND HAVE COMPLETED AT LEAST 100 RAM AIR PARACHUTE JUMPS.

THIS PARACHUTE IS APPROVED **UNDER** FAA TSO **C-23c** AND ALTHOUGH THE FAA REQUIRED PLACARD STATES:

"**CATEGORY B:** This parachute is limited to use by persons up to 115kg (254 lb) fully equipped, and up to 150 knots".

2. TO LOWER THE RISK OF DEATH, SERIOUS BODILY **INJURY**, CANOPY DAMAGE AND HARD **OPENINGS** NEVER EXCEED THE **FOLLOWING LIMITATIONS:**

MAXIMUM DEPLOYMENT SPEED	130 KNOTS
MAXIMUM GROSS WEIGHT (JUMPER + CLOTHING + EQUIPMENT)	LBS.
MODEL:	
PART NUMBER:	
SERIAL NUMBER:	
DATE OF MANUFACTURE:	

3. A. SPORT PARACHUTING IS A HAZARDOUS ACTIVITY THAT CAN RESULT IN **INJURY** OR DEATH.

B. 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.

C. IF YOU USE YOUR PARACHUTE — OR IF YOU ALLOW SOMEONE ELSE TO USE IT — YOU ARE ACKNOWLEDGING SPORT PARACHUTING'S RISK AND ACCEPTING THE FACT THAT THE PARACHUTE OR ITS COMPONENTS MAY MALFUNCTION.

D. IF YOU ARE NOT WILLING TO ACCEPT THE RISKS OF SPORT PARACHUTING, OR IF YOU AREN'T **WILLING** TO ACCEPT THE POSSIBILITY THAT YOUR PARACHUTE OR ITS COMPONENTS MAY MALFUNCTION AND PERHAPS CAUSE YOU TO BE INJURED OR KILLED, THEN YOU SHOULD RECONSIDER YOUR INVOLVEMENT IN SPORT PARACHUTING.

MANUFACTURED **UNDER** FAA TSO **C23c** BY:
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REMOVAL OF THIS LABEL VOIDS THE T.S.O.

CONGRATULATIONS!

*You are the proud owner of a TEMPO Reserve.
This is one of PISA's reliable, high quality TSO'd skydiving products.*

*We hope you get as much enjoyment from using this product as we had in designing,
manufacturing and testing it.*

PISA invites you to test fly more of their reliable products:-

*FAA TSO C23c Category "B" Approved
NARO Harness/Container*

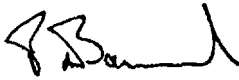
*CONQUEST Zero Porosity 9-Cell Main Canopies
COE-D F111 9-Cell Main Canopies
CR UISLITE F111 7-Cell Main
CCL (250) F111 7-Cell Accuracy Canopy
Firebee (280) F111 7-Cell Accuracy Canopy
Swift F111 5-Cell Reserve
Swift Plus F111 7-Cell Reserves
SKIMASTER (280) 9-Cell Student Main*

*Specially designed for your Students and approved to FAA TSO C23c
Category "B" • Our STUDENT NARO Harness/Container System*

We look forward to your favourable custom.



*Ben van Buuren
(Director)*



*Pete Barnard
(Technical)*



*Angus McDonald
(Quality)*

Blue Skies and great Dives!

The "PISA" Team



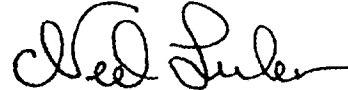
*Ian Douglas
(Production)*



*Jill Bartels
(Sales)*



*Chris Gill
(Operations)*



*Ned Luker
(Marketing)*



*Norman Girdwood
(R & D)*



To make packing your "TEMPO" easier, prolong the life of the canopy and to prevent damage during packing, please observe the following instructions.

1. Pack where the wind cannot affect your "TEMPO".
2. DO not pack on concrete or asphalt. Pack your "TEMPO" on a dry lawn or on a packing mat, thereby minimising the wear on lines, links and fabric.
3. Inspect your "TEMPO" prior to packing. Look for any damage, wear and tear. Ensure that the lines have no twists, tangles or turns.

SPECIFICATIONS

SIZE	AREA	SPAN	CHORD	ASPECT	VOLUME	WEIGHT	MAX	SUS	WT
120	118	16.1	7.3	2.2	229	5		132	
150	148	18.0	8.2	2.2	293	5.7		165	
170	178	19.8	9.0	2.2	338	6.1		200	
210	203	21.4	9.5	2.2	366	6.6		223	
250	251	23.5	10.7	2.2	421	8		250	

The TEMPO Range of Reserve canopies are a 7 cell design, incorporating O-3 CFM parachute fabric and Spectra/Microline Suspension line. All specifications are in the American system of measurement rather than the metric System.

The TEMPO Range of Reserve parachutes are approved under the United States Department of Transport FAA TSO C-23c Category B.



U.S. Department
of Transportation
Federation Aviation
Administration

AIRCRAFT CERTIFICATION OFFICE

c/o American Embassy
27, Boulevard du Regent
B-1 000 Brussels, Belgium

In reply refer to: **SG/vk/01/12/125:93**

January 12, 1993

Mr B.H. Cowan
Department of Transport
Forum Building
Strubenstraat
Private Bag X 193
Pretoria 000 1
South Africa

Dear Mr Cowan,

We accept the CAA South Africa certification of compliance **contained** in your letter dated **December 7, 1992**, Ref. **J44/331**, that the below mentioned parachutes & harnesses manufactured by PARACHUTE INDUSTRIES OF SOUTH AFRICA (Pty) Ltd., 452 5th St. Bramley, 2018 Wynberg Sandton, Transvaal, S. Africa, have been examined, tested and found to meet the Performance Standards of Federal Aviation Regulations (FAR) Part 21, **Section 21, 305(b)** and Technical Standard Order (TSO) **C23c**:

PO99 1-00 TEMPO 150 Reserve Canopy	PO138-00 NARO Harness/Container Assembly
PO986-00 TEMPO 250 Reserve Canopy	PO 172-00 STUDENT/ NA RO Harness/ Container Assembly

On the basis of the CAA certification, the designs of the above mentioned parachutes & harnesses are hereby granted FAA approval and may be identified in accordance with the provisions of FAR 21, **617(c)**. **Each parachute** exported for installation on United States registered **civil aircraft** must be accompanied by your Certificate of Airworthiness for Export to facilitate acceptance **under FAR 21.502**.

The following technical data submitted with the request for TSO design approval are considered to have fulfilled the requirements for data of TSO **C23c** and are being retained in this office:

- Operating Instructions, Equipment Limitations
Inspection and Test Procedures
- Maintenance Procedures & Specifications
- Test Report

Sincerely,

Everett W. Pitman
Manager, Aircraft Certification Office
FAA-Brussels



U.S. Department
of Transportation
Federation Aviation
Administration

AIRCRAFT CERTIFICATION OFFICE

c/o American Embassy
27, Boulevard du Regent
B-1 000 Brussels, Belgium

In reply refer to: SG/vk/03/09/TSO C23c

March 10, 1993

Mr B.H. Cowan
Department of Transport
Strubenstraat
Private Bag X 193
Pretoria 000 1
Republic of South Africa

Dear Mr Cowan,

We accept the Department of Transportation (DOT) certification of compliance contained in your letter dated February 26, 1993. Ref. J15/3/10/1/J44/331, that the below mentioned parachute assemblies manufactured by PARACHUTE INDUSTRIES OF SOUTHERN AFRICA, P.O. Box 391447, Bramley, 2018, South Africa have been examined, tested and found to meet the Performance Standards of Federal Aviation Regulations (FAR) Part 21, Section 21, 305(b) and Technical Standard Order (TSO) C23c:

TE M PO 120 Reserve Canopy:	PISA P/N PI 141-00
TEMPO 170 Reserve Canopy:	PISA P/N PI 142-00
TEMPO 210 Reserve Canopy:	PISA P/N PI 143-00

On the basis of the CAA certification, the designs of the above mentioned parachute assemblies are hereby granted FAA approval and may be identified in accordance with the provisions of FAR 21, 617(c). Each parachute assembly exported for installation on United States registered civil aircraft must be accompanied by your Certificate of Airworthiness for Export to facilitate acceptance under FAR 21.502.

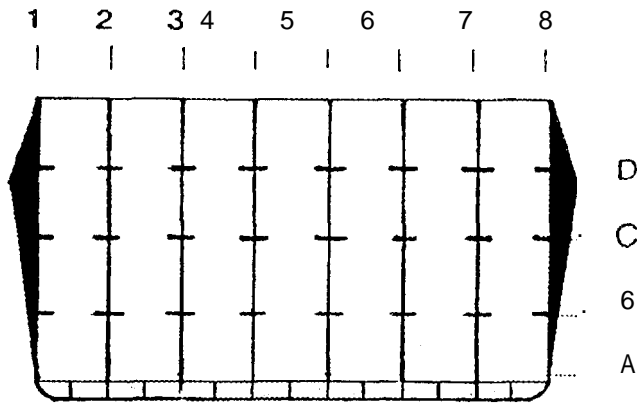
The following technical data submitted with the request for TSO design approval are considered to have fulfilled the requirements for data of TSO C23c and are being retained in this Office:

- Operating Instructions, Equipment Limitations
- Inspection and Test Procedures
- Specifications, Maintenance Procedures
- Qualification Test Report

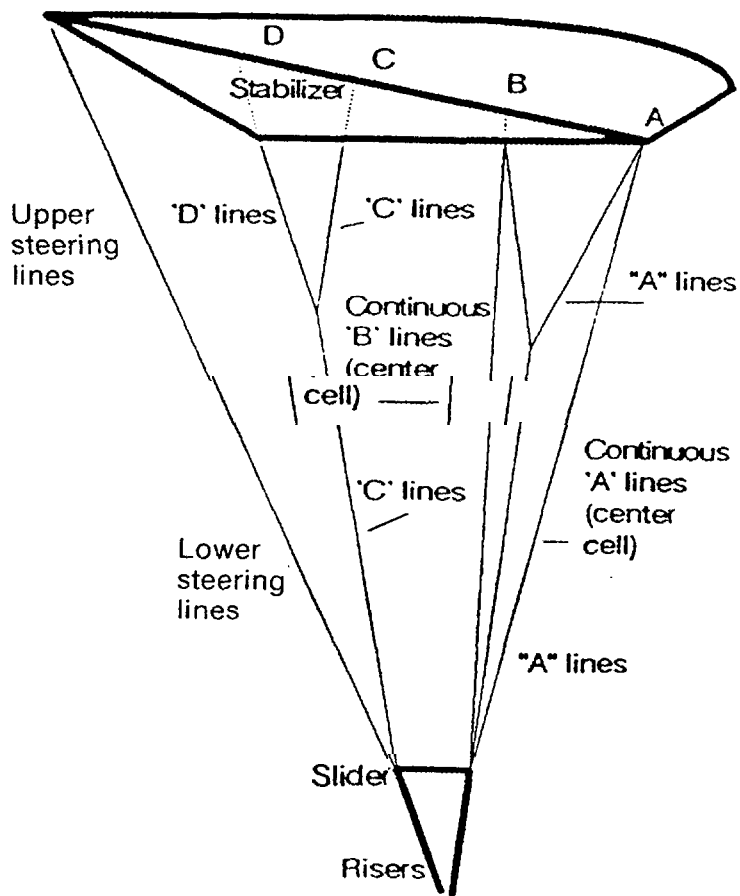
Sincerely,

Everett W. Pittman
Manager, Aircraft Certification Office
FAA-Brussels

Bottom view



Flight



Nomenclature

ASSEMBLY INSTRUCTIONS

THE **TEMPO RESERVE** MUST BE ASSEMBLED BY A QUALIFIED RIGGER.

Before assembly, check the **TEMPO RESERVE** canopy, lines and links ensuring that the **TEMPO RESERVE** is compatible with the harness /Container and deployment system with which it is to be used.

ASSEMBLY

1. Lay the canopy and harness out and individually attach each connector link to its respective riser. Ensure proper line continuity and that the links are compatible with the risers.
2. Check that the slider is correctly installed (tapes facing the canopy).
3. Tighten the connector links. (DO not overtighten!).
4. Clear the steering lines of any twists and route them through the appropriate slider grommets and guide rings on the rear risers.

CAUTION: The steering lines must pass directly fro the trailing edge of the canopy through the slider grommet and the guide ring, without passing under or through any Suspension lines.

5. Attach the steering toggles at the trim marks on the steering lines. (Refer Harness/ Container Owners Manual).
6. Re-check the whole assembly for line continuity and direction of flight i.e. canopy facing forward.
7. Carry out a thorough inspection before packing the reserve, especially if the reserve has been used.

INSPECTION INSTRUCTIONS

Prior to packing the **TEMPO RESERVE**, a thorough inspection must be made.

Take note of any worn, damaged, corroded or incorrectly rigged components, which must be repaired or replaced before the reserve is packed for use.

REPAIRS MUST BE MADE EITHER BY THE MANUFACTURER OR BY A QUALIFIED RIGGER!

Important points to note during the inspection are:

1. Visually inspect the canopy for defects or damage to the fabric, tapes and seams. Any holes or tears must be patched with an overlay or standard sew-in patch. No ripstop tape patches are allowed. Any damage which requires the replacement of an entire panel or cell must be done by the manufacturer.
2. Check that all slider stops are present, intact and secure. There are six slider stops, one on each of the outer B, C and D line groups.
3. Check that all line attachment tapes are secure. (Bartack present).
4. Check Suspension and steering lines continuity and ensure that all connections and finger traps have been stitched. Lines that are worn or have broken strands must be replaced.
5. Inspect the connector links for serviceability and check that they have been correctly tightened.
6. Check the slider for correct installation, the reinforcing tape must be facing the canopy. Inspect the inner surface of the grommets for nicks and sharp edges. Inspect the fabric for wear and tear.
7. Using the manufacturer's manual as a guide, inspect the harness/container system into which the **TEMPO RESERVE** is to be packed. Check all stitching for completion. Inspect

hardware for damage and corrosion (rust may be removed with a lightly oiled rag).

8. Inspect the pilot chute, bridle and deployment bag. Ensure that the bridle is securely fastened to both the pilot chute and bag.
9. The ripcord cable must not be frayed. Inspect the pin and swages for security.
10. The canopy's serial number, name of manufacturer and date of manufacture printed on the identification panel, must be recorded on the packing data card.

ATTACHING THE STEERING TOGGLES

1. Check your Harness/Container Owners Manual for the particular attachment method required.

PACKING INSTRUCTIONS

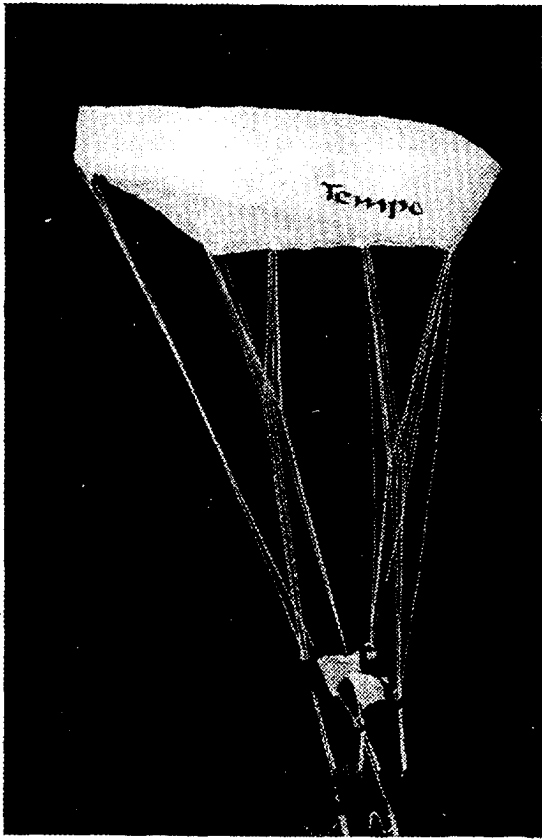
THE TEMPO RESERVE MUST ONLY BE PACKED BY A QUALIFIED RIGGER/RESERVE PACKER.

A. LAYING THE CANOPY OUT

After assembling and inspecting the TEMPO and harness/container, lay the system out on a smooth, clean surface.

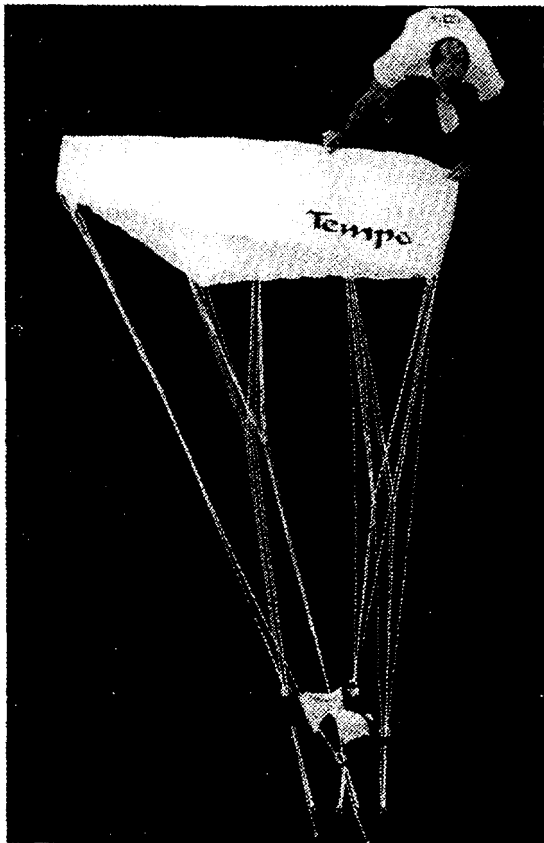
The Container must be facing up and the risers toward the canopy. The nose of the canopy should be facing the right with the canopy lying on its left side. The slider must be down against the connector links.

2. Clear the steering lines to ensure that they are routed correctly and re-check the suspension lines continuity.



B. FLAKING THE CANOPY

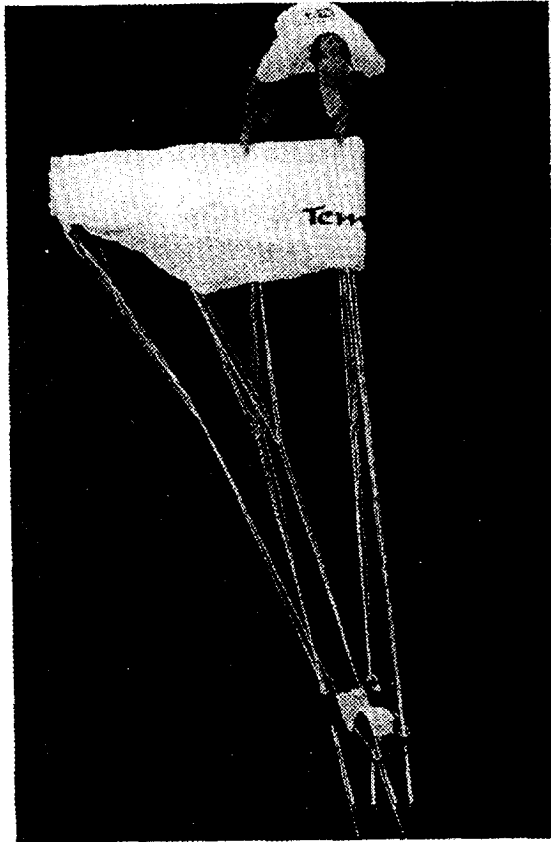
- 1 Individually pull **each** of the top mid-seams away from the Container until the lines are taut, flaking the canopy from nose to tail. Clear each of the nose cells.



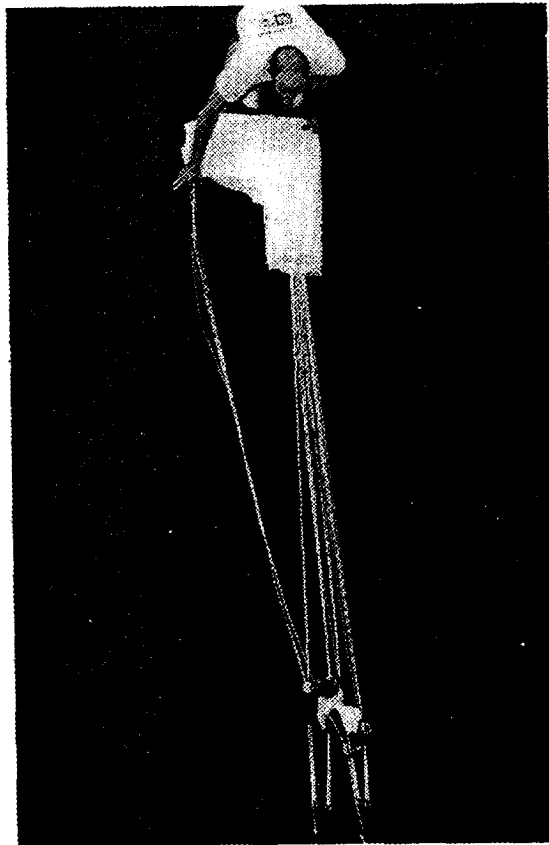
C. FOLDING THE CANOPY

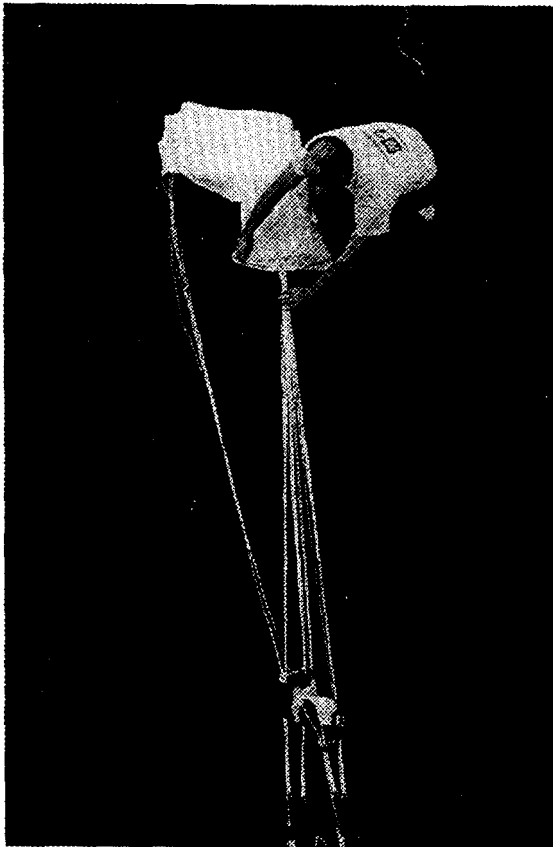
- 1 Move the Aline group directly in line with the Container and fold the nose under the canopy.

- 2** Keeping the tension on the A line group, take the top mid-seams above the B line group and “S” fold the canopy to place the B line group on top of the A line group.



- 3** Repeat the above procedure with the C line group and then again with the D line group. Remember to keep even line tension. All four Suspension line groups are now stacked one on top of the other leaving the steering lines free.





D. CLEARING THE STABILIZERS

- 1 Clear the stabilisers (3 on each side) pulling out the slack and ensuring that no lines are wrapped around them.

E. SETTING THE DEPLOYMENT BRAKES

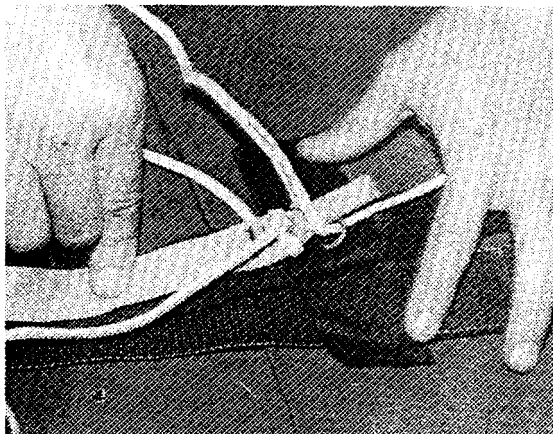
- 1 Start with the left steering line group and follow the steering lines from the trailing edge of the canopy to the left rear riser. Clearing it of any twists.

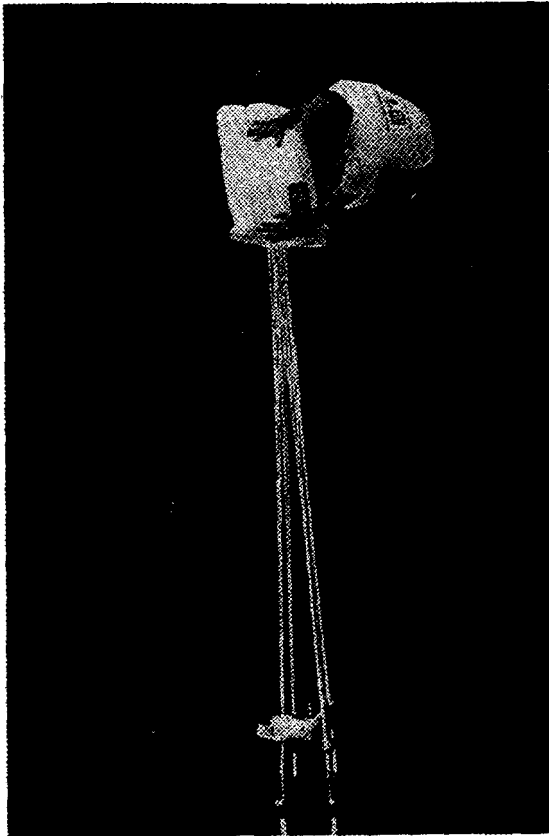
- 2 Locate and thread the deployment brake loop through the left rear slider grommet and then through the steering line guide ring on the left rear riser.

- 3 Lock the loop with the bar tacked end of the steering toggle.

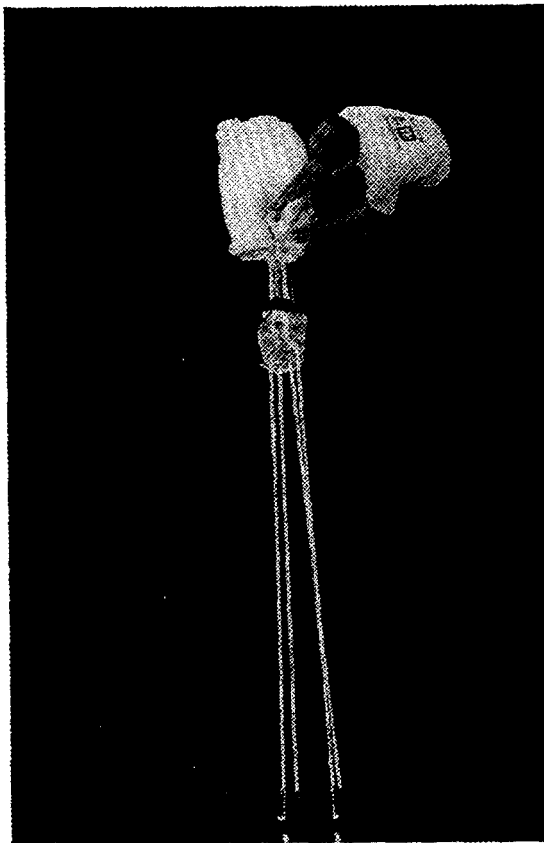
NOTE: Insert approximately 20mm of the toggle into the deployment brake loop. If the toggle is inserted too far, it will be difficult to release after deployment.

- 4 Hand tack the bar tacked end of the steering toggle to the rear riser with a single loop of doubled cotton thread with a tensile strength of less than 6 lb.





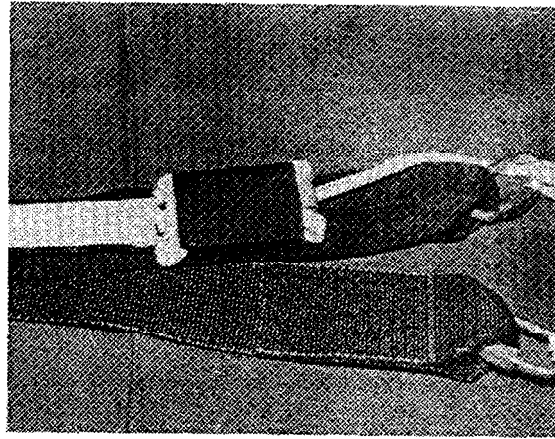
- 2** Fold half of the tail back to expose the centre panel and spread it to cover the canopy.



G. STOWING THE SLIDER

- 1** Fold the stabilisers at a 45 degree angle towards the centre of the canopy.

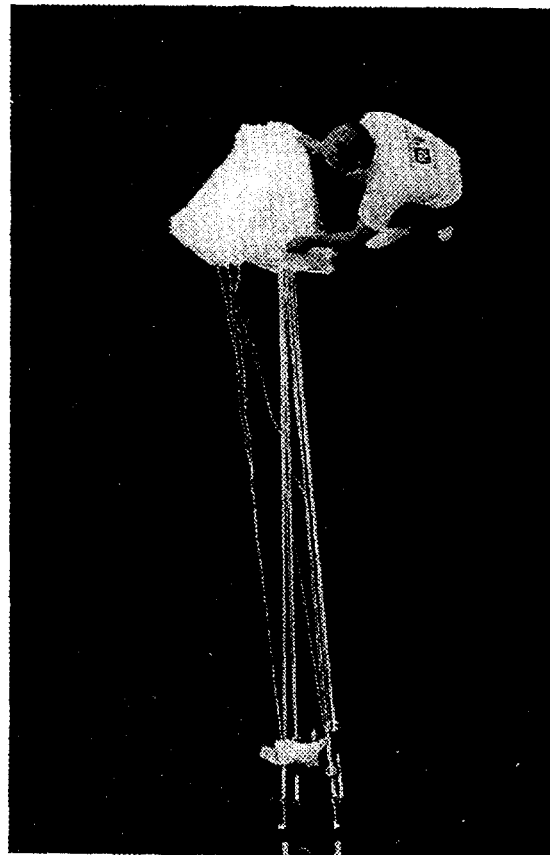
- 5** Fold the excess steering line neatly and place this beside the toggle. Close the velcro cover securely.

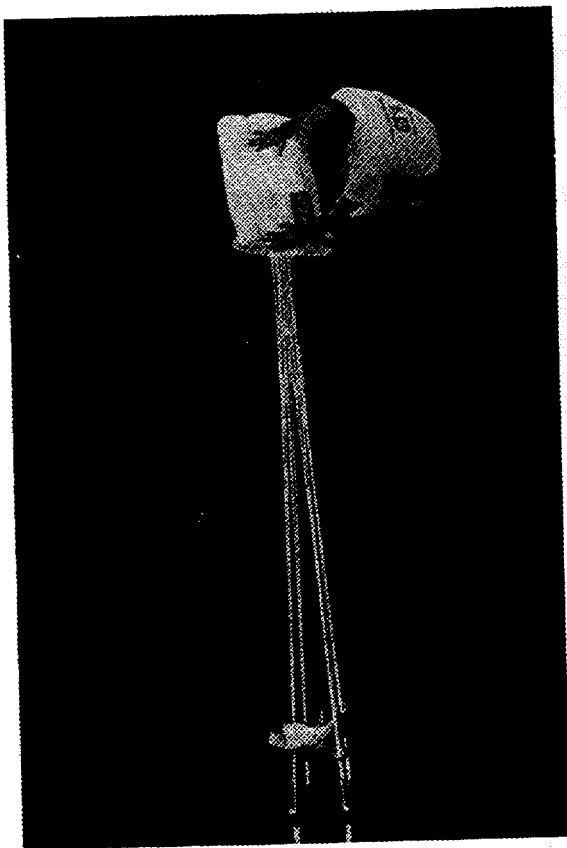


- 6** Repeat the above steps to set the right deployment brake (E1-E5).

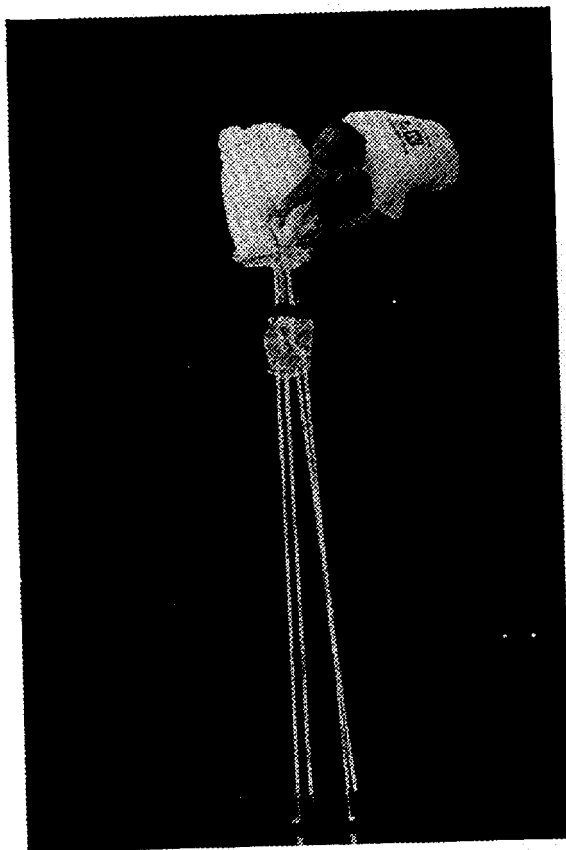
F. FLAKING THE TAIL

- 1** Start with either the left or right side, flake the tail panels keeping the steering lines taut.





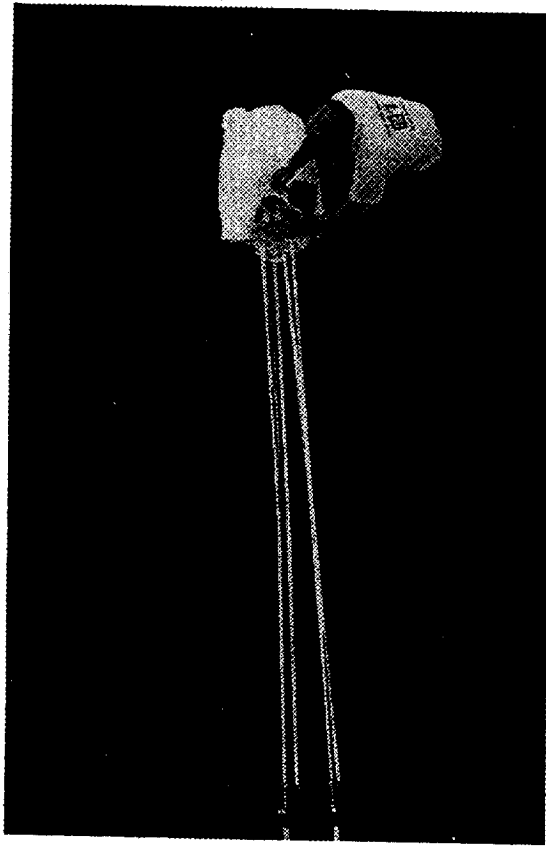
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- 1** Fold the stabilisers at a 45 degree angle towards the centre of the canopy.

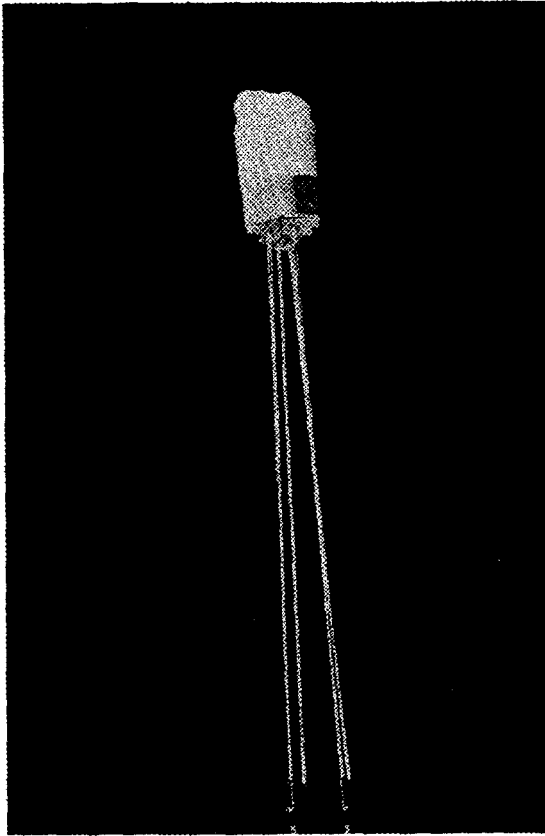
- 2** Pull the slider up to the slider stops and stow it under the centre top panel.



H. DRESSING THE CANOPY

- 1** Expose the cell openings of the canopy.





- 2** Wrap the centre **panel** around the **canopy** and dress to the **approximate** width of the bag.

NOTE: DO not wrap the centre **panel** around the **cell** openings of the canopy!

1. FOLDING THE CANOPY INTO THE DEPLOYMENT BAG

Foillow the **harness/ Container** manufacturer's instructions for **further packing** instructions.



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