

# AIR-POL<sup>®</sup> Sp. z o. o.

Członek Krajowej Rady Lotnictwa

Członek Parachute Industry Association

Członek Stowarzyszenia Producentów Polskiego Przemysłu Lotniczego

# User Manual

# 092-06

for the

SK-94

# backpack rescue parachute

Revision III C
For parachutes produced after February 2011



PART #: 02.00.00.00

EU registered design #: 001843558-0001

Parachute	#:	

Legionowo 2013

# PART I TECHNICAL DESCTRIPTION

1.	Purpose of the SK-94 parachute4
2.	Specifications4
3.	In-the-air performance5
3.1. 3.2.	Procedure during the jump
4.	Parachute description6
4.1. 4.2. 4.3. 4.4. 4.5. 4.6. 4.7. 4.8. 4.9. 4.10.	Ripcord release handle (Cat. No. NA-05.00-1). 6 Pilot chute (Cat. No. 02.30.00.00A). 6 Bridle (Cat. No. 02.40.00.00). 7 Canopy with suspension and steering lines (Cat. No. 02.10.00.00). 8 Steering grips (Cat. No. NA-25). 8 Rubber ring (2" x 3/8"). 9 Container and harness (Cat. No. 02.20.00.00). 9 Transport bag (Cat. No. 02.60.00.00). 11 Static line pocket (Cat. No. 02.70.00.00). 11 Static line (Cat. No. 02.80.00.00). 11
PART II PACKING	
1.	Inspecting the parachute before packing12
2.	Tools and accessories for packing the parachute12
3.	Packing the parachute13
PART II ADJUSTI	I NG THE PARACHUTE (HARNESS)29
PART IV STATIC	LINE31
PART V STORING	, MAINTENANCE, AND SPECIAL ACTIVITIES 36

#### DISCLAIMER

The AIR-POL Company has committed to made the utmost effort to achieve the highest possible quality and safety standard of the parachute you just bought. The parachute's components are made of the top quality materials meet all the relevant requirements which apply to this kind of equipment. The tests which we put our parachutes to help us make sure that the technological solutions we chose were indeed correct. Nevertheless, AIR-POL Sp. Z o. o. cannot preclude a risk of equipment damage or malfunction in case of coincidence of extremely adverse circumstances which are outside the Company's control and liability. In order to minimize such risk:

- make sure that each and every part of the system was assembled and packed in accordance with the manufacturer's instructions;
- 2. always store and use the parachute in accordance with the user manual, and
- 3. always follow the general national parachuting safety precautions.

Remember that the parachute you bought is intended to be used as an emergency rescue device. Therefore, any other kinds of use may be dangerous. Your parachute has been designed with 20-year long life cycle in mind.

The AIR-POL Sp. z o. o. guarantees the quality of all the parachute's components for a period of one year after the purchase date. Should you experience any anomalies or subjective sense of functional hazard, the parachute should be immediately sent to an authorized dealer for a checkup by an expert.

We congratulate you on your purchase and wish a successful use.

All rights reserved. The Air-Pol SK-94 user manual may be copied for distribution only in entirety without any change, amendment or alteration. The current version of the user manual is not valid unless in entirety which is to include all trademarks and references to the author and copyright owner, Messrs Air-Pol Sp. Z o.o. Any change, amendment or alteration including partial duplication or quotation (especially drawings and photographs) without reference to the user manual, or copying, publishing, recording in part or whole by means of electronic or mechanical devices or storage in part or in whole on any database is expressly prohibited without the written agreement of the copyright owner.

The Air-Pol SK-94 is a registered design in the European Union under number: 001843558-0001

Copyright © by AIR-POL Sp. z o. o., Legionowo, 2013

## PART I TECHNICAL DESCTRIPTION

### 1. Purpose of the SK-94 parachute.

The SK-94 backpack rescue parachute is designed for evacuation jumps from gliders, airplanes, powered paragliders, balloons, helicopters, and other aircraft. The SK-94 parachute can be equipped with an additional, dedicated static line and pocket system (static line pocket part no. 02.70.00.00, static line part no. 02.80.00.00). The system enables the parachute to open automatically after the separation from the aircraft.

Caution: before putting the parachute on and taking a seat in an aircraft, please read the SK-94 parachute user manual and adjust the harness, especially the length of the tight straps, breast strap, and container straps.

If you have an additional, dedicated to the SK-94 parachute static line system, refer to its manual and inspect the installation and snap-hook connection to the aircraft (part IV in this manual).

#### 2. Specifications.

The parachute complies with the following tactical and technical data:

Spread canopy area	<b>51</b> m <sup>2</sup>
Total system weight (pilot+equipment)	100 kg / 220 lbs
Maximum deployment speed	<b>270</b> km/h / <b>145</b> kts
Maximum deployment speed (with min. 3 sec. delay)	<b>350</b> km/h / <b>189</b> kts
Minimum jump height during level flight $(V_{min}=130 \text{ km/h} - 70 \text{ kts})$	<b>70</b> m / <b>230</b> ft
Min. jump altitude from a hovering helicopter	<b>150</b> m / <b>490</b> ft
Descent speed (70 kg load)	3,6 m/s / 12 ft/s
Descent speed (100 kg load)	<b>4,4</b> m/s / <b>14,5</b> ft/s
Forward speed	<b>2</b> m/s
Max. 360° turn rate	<b>12</b> s
Dimensions when packed (length x breadth x height)	550 x 400 x 85 mm
Weight	7,5 kg / 16,5 lbs
Repacking interval	<b>1</b> year ( <b>365</b> days)

The service life of the parachute is 20 years from the date of manufacturing. That includes storage, transport, repairs, and the general technical condition.

After that period, the parachute must be decommissioned.

After deployment, the parachute should be carefully inspected in order to determine its fitness for further service by a qualified SK-94 parachute packer.

As long as the above is considered, the parachute may be used many times without limitations.

#### 3. In-the-air performance.

The SK-94 parachute opens when the release handle is pulled. When that happens, the ripcord pins slide out of their respective loops in the pilot chute container. Forced by a spring, the pilot chute is ejected out of the container and filled in the airstream. That generates a drag which in turn pulls the canopy and the suspension lines out from the container. When the canopy has filled completely, the pilot chute deflates and stays connected with the canopy.

The SK-94 rescue parachute provides excellent in-flight stability and easy steerage during the fall by pulling at the steering grips attached to the risers.

As the airflow is guided through a net-covered slot at the canopy rim, the parachute gains forward speed which helps the user choose a suitable landing spot.

#### 3.1. Procedure during the jump.

Evacuation from an aircraft by means of a parachute is the ultimate rescue procedure for the crew if there is no way of bringing that aircraft back to the ground in a controlled manner.

When performing an emergency evacuation from an aircraft the following actions should be performed depending on the actual circumstances and the aircraft type:

- disconnect oneself from any headsets, oxygen installations etc.,
- open/eject the canopy or emergency exit doors,
- unfasten the seat straps,
- jump out of the cabin staying clear of any aircraft parts,
- having successfully separated from the aircraft at a safe distance, pull the ripcord release handle,
- when canopy opens, check if the parachute is steerable:
  - a) to unlock the steering handles which are attached to the risers, grip them and pull down,
  - b) when the left steering line is pulled, the parachute should turn left,
  - c) when the right steering line is pulled, the parachute should turn right,
- check the wind direction (by observing smoke from smokestacks, fires etc.),
- taking advantage of the forward speed and steerage, choose the glide direction (downwind if possible) and the landing spot,
- immediately before the touch-down, pull the legs together and bend your knees,
- after landing, deflate the canopy and release the harness locks.

#### 3.2. Procedure after the jump

- deflate the canopy, clean it of objects (twigs, etc.), stretch it if possible, tuck it into the container and tie it up with lines;
- for transport, wrap the parachute in a cloth, foil, or a large piece of garment.

#### 4. Parachute description.

Basic	parts	Catalog number	Qty.
4.1.	Ripcord handle	NA-05.00-1	1
4.2.	Pilot chute	02.30.00.00A	1
4.3.	Bridle	02.40.00.00	1
4.4.	Canopy with suspension lines	02.10.00.00	1
4.5.	Steering grip	NA-25	2
4.7.	Container and harness	02.20.00.00	1
4.8.	Transport bag	02.60.00.00	1

#### Additional parts (optional)

ı				
	4.9.	Static line pocket	02.70.00.00	1
	4.10.	Static line	02.80.00.00	1

#### Spare parts

4.2.	String with loops	02.30.30.00A
4.6.	Rubber band	2"x3/8"

#### 4.1. Ripcord release handle (Cat. No. NA-05.00-1).

The ripcord release handle consists of a metal handle and a steel ripcord with two pins and a stopper.



#### 4.2. Pilot chute (Cat. No. 02.30.00.00A).

The purpose of the pilot chute is to pull the canopy and the suspension lines out of the container in order to inflate the canopy. During the packing the parachute, it is the pilot chute that effectively closes the container.

The pilot chute consists of the following:

• canopy of approx. 0.5 sq m made of low permeable fabric with an integrated spring with a diameter of approx. .5 sq m, a net which serves as suspension lines, and an apex cap,

The apex cap consists of two parts: upper and lower.

The lower parts contains a conical spring and a section of a Velcro webbing to secure the rubber bands and a webbing loop which secures the canopy and net under the packed parachute,

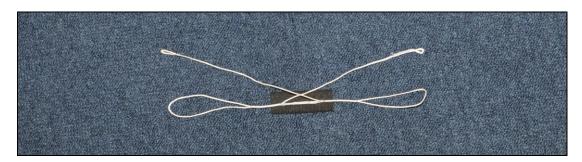
The upper part covers the webbing and serves as a décor part,

both parts are partly sewn together and partly secured by Velcros.



#### • Adjustable length loops (Cat. No. 02.30.30.00A)

They close the container and allow to adjust the spring force after closing the container. They are also equipped with Velcros to attach them to the pilot chute.



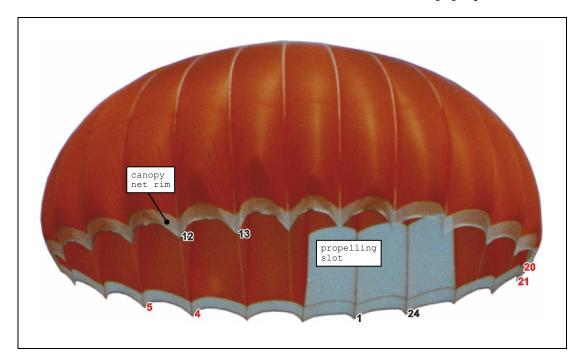
#### 4.3. Bridle (Cat. No. 02.40.00.00).

The pilot chute is connected with the main canopy with a bridle. A bridle sleeve is sewn over the bridle and when pulled over the canopy apex it closes the vent opening thereby accelerating the inflating of the canopy. When the canopy is inflating, the sleeve moves down the apex lines and over the knot that connects the bridle with the apex lines and opens the venting hole in order to stabilize the airflow around the canopy.



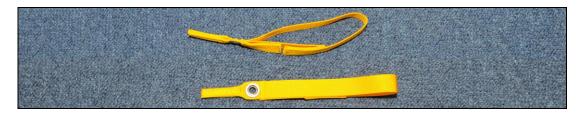
# 4.4. Canopy with suspension and steering lines (Cat. No. 02.10.00.00).

It consists of a 24 gores of fabric with webbing. The canopy rim and the lower parts of three rear gores that form the propelling slots are made of nets. On top of the canopy there is a vent opening with a diameter of .5 m. 24 suspension lines are attached to the canopy rim webbing. The bottom ends of the suspension lines are connected with detachable connectors to two risers (12 suspension lines to each riser). There are two additional line pairs which serve as steering lines and are connected with no. 4 and 5 suspension lines on the right hand side and with no. 20 and 21 suspension lines on the left hand side. Both are terminated with steering grips.



#### 4.5. Steering grips (Cat. No. NA-25).

Attached to the risers and connected with the steering lines, they allow to easily control the parachute. They are made of webbing of a contrasting color.

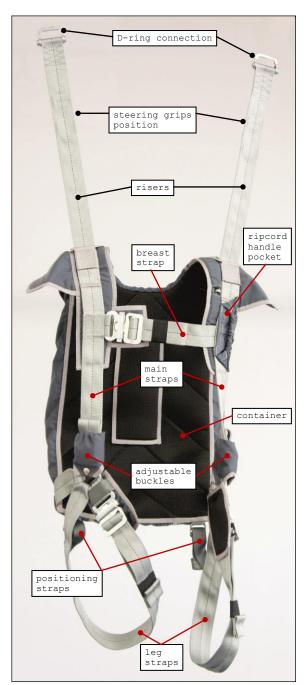


#### 4.6. Rubber bands $(2" \times 3/8")$ .

The rings help secure folded suspension lines inside the container.



### 4.7. Container and harness (Cat. No. 02.20.00.00).



The container and the harness form an entity. The container is made of permeable fabric and consists of a back plate with which flaps form an envelope. On the back plate of the container there are two rows of rubber rings with which the bundles of the suspension lines are wrapped. After the suspension lines are bundled up and wrapped with rubber bands and the canopy is stowed in the bottom part of the container, the container flaps are closed and secured with a springloaded chute whose closing loops pass through the grommets in the flaps and the back plate of the container where they are secured with the ripcord pins. Those parts of the parachute container which come in contact with the user's body are padded with a permeable fabric to increase the level of comfort for the user when performing in-flight duties.

The harness consists of the main webbing which is connected with the lower part of the harness with adjustable rings of the hip connectors to which leg side and straps attached. The adjustable buckles (which become visible after the cover was removed) allows to adjust the length of the harness to the user's for and hip posture the connector to rest against the user's body without causing discomfort. In the breast part of the harness there is a

breast strap. Depending on the harness version, the breast and leg straps can be adjusted in either of the following ways:

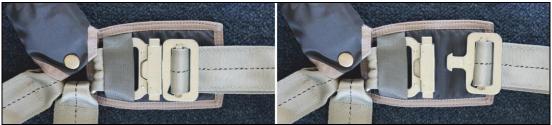
with hook buckles (B-12)



• with quick ejector buckles:



• with AB locks:



• with thread-thru buckles:



On the harness there are also two risers with connectors for the suspension lines and steering lines with steering grips.

On the calf and hip straps, there is a container positioning system which consists of tightening straps and buckles with are integrated with the back part of the container.



#### 4.8. Transport bag (Cat. No. 02.60.00.00)

The parachute bag is manufactured from impermeable, waterproof material and is designed and intended for the storage and transportation of the parachute before use. The parachute bag is equipped with back-pack webbing straps and a document pocket.



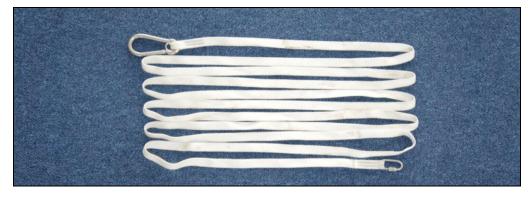
#### 4.9. Static line pocket (Cat. No. 02.70.00.00)

Pocket is designed to be mounted with the SK-94 backpack rescue parachute to set static line inside.



#### 4.10. Static line (Cat. No. 02.80.00.00)

Static line used to pull the ripcord after the separation from the aircraft.



#### PART II

#### PACKING MANUAL

The parachute must be inspected and serviced by a certified rigger who has been trained by the parachute's manufacturer (in accordance with FAR part 65.11).

A detailed technical inspection of the entire parachute is mandatory before each packing.

#### 1. Inspecting the parachute before packing

Before the parachute is packed before a jump, it is necessary to inspect all its components.

#### 1.1. Pilot chute:

- canopy fabric, nets and seems must be undamaged,
- spring must not be damaged, corroded or deformed; the bottom clamp must be tight,
- closing loops must not be damaged/frayed,
- Velcros should securely connect the closing loops with the pilot chute.

#### 1.2. Bridle:

- knot connecting the bridle with the parachute must be made in accordance with this manual (sec. 3.1),
- no damage to the webbing, seams and cotton sleeve must be visible,
- rubber rim string must remain sufficiently elastic.

#### 1.3. Canopy:

- the knot connecting the bridle with the canopy must be made in keeping with this manual (sec.3.1.),
- the canopy fabric, nets, apex lines, and seams must not damaged.

#### 1.4. Suspension lines and steering lines:

• The lines must not be damaged.

#### 1.5. Harness, container:

- fabric, webbing, metal parts and seams must not be damaged,
- hooks with which suspension lines are attached to the harness should be screwed tight,
- steering lines should be free of twists and entanglements, from suspension lines, through grommets on the risers, up to the steering grips as in sec. 3.6.
- Rubber rings should be sufficiently elastic,
- all rubber rings should be of the same type,
- all harness buckles must connect securely and prevent inadvertent disconnection.

#### 1.6. Ripcord handle:

- ripcord must neither be damaged, corroded nor deformed,
- pins and stopper must be securely tight,
- grip must neither be damaged, corroded nor deformed (especially in the points of contact with the ripcord).

#### 2. Tools and accessories for packing the parachute.

Packing should be performed in a clean and dry place on a special table of at least 11 m in length or on a field table.

The following accessories are required for packing:

- pilot chute packing strap (Cat. no. NA-03)
- two 'T' pegs with holes (Cat. no. NA-18-2)
- 5 clamps or weights made of fabric and filled with shot or coarse sand two weight down the folded canopy,
- wooden ruler to help close the container flaps,
- 2 cords (of 70 cm each)
- the 'NSN 8310-10-493-6030" sealing thread or cotton thread of strength not greater than 2.15 daN.

### 3. Packing the parachute.

other.

3.1. Connect the smaller bridle loop with the pilot chute webbing loops and pull the knot tight.

Thread the bundle of the main canopy sleeve lines through the loop at the opposite end of the bridle. This forms another loop through which you should now thread the pilot chute and its bridle. Pull knot tight. The apex lines of the canopy should be sorted so as the funnel rim gores are next to each

3.1.

3.2. Open the pilot chute cap cover.

Place the closing string centrally on the Velcro strap and thread the string loops through the cap eyelets.

If the parachute is equipped with a string with adjustable closing loops, thread them through the cap eyelets so that both a closing loop and the loose end that helps to draw the opposite loop are in the same eyelet. Adjust the length of the closing loops as needed. Close the cap cover.

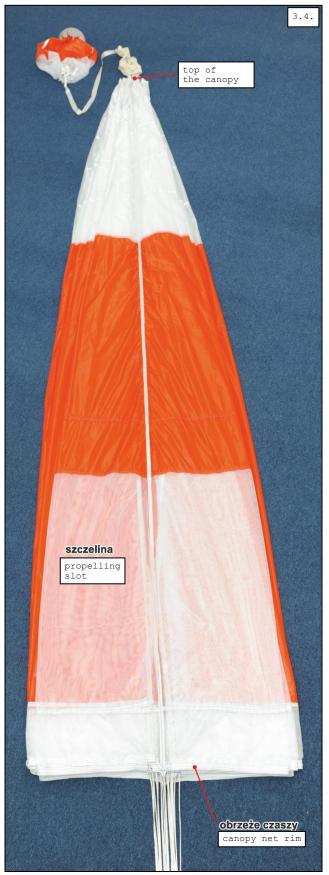
NOTE: Check the condition of the loop. The loop must not be worn or frayed. Replace a damaged loop.



3.3. Thread the ripcord through the sleeve, insert the ripcord handle into the pocket on the harness.



#### 3.4. Fold the canopy.



Folding the canopy includes gathering the suspension lines one after the other, placing them over one another and pulling the canopy fabric out and away from between them.

Attach the apex of the canopy to the apex tie down and apply tension to the canopy using a tension device.

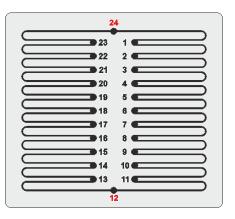
Find the suspension line no. 12 and start folding the left part of the canopy from there up to line no. 24.

Throw the unfolded right part of the canopy over the left part and continue folding from line no. 12 to line no. 1.

After both parts were folded, the line no. 12 should be at the bottom of the canopy and line no. 24 should be at the top.

All suspension lines must be placed side by side and the canopy fabric must be pulled out sideways and stretched. The canopy rim should be even with each fold on top of the other.

Here is how a correctly folded canopy should look:



3.5. Make sure that the suspension lines are not twisted or tangled.

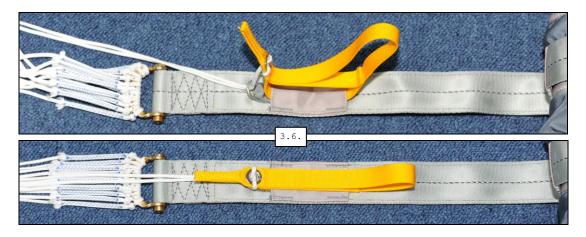
# When checking the lines, the container should lie with the harness side facing down.

Lines no. 1 and 24 should be clear of twists and tangles with other lines and run directly from the canopy to the inside sides of the "D" connectors which connect suspension lines with risers.

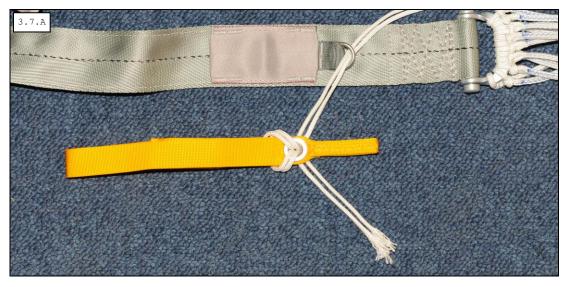
3.6. Put the steering grips into the pockets.

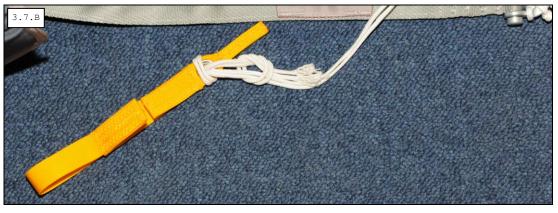
The steering lines must not be twisted.

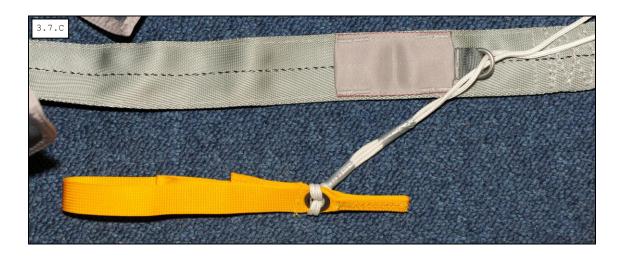
Place both parts of the grips in the pocket on the riser.



3.7. For the canopies manufactured before February 2011, connect the steering lines as shown on fig. 3.7. A,B,C:



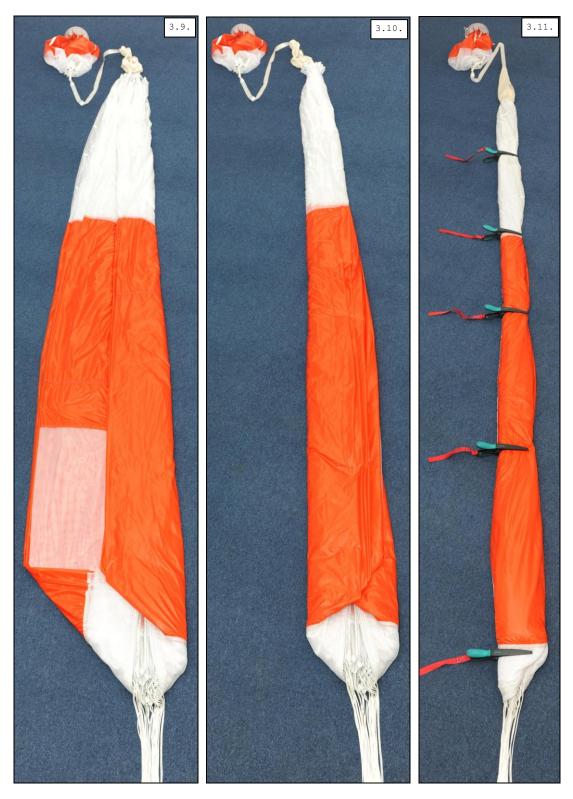




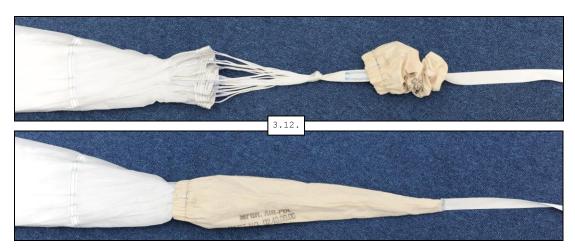
3.8. Fold the corners of the left and right halves of the lower canopy  $\ensuremath{\operatorname{right}}$ 



- 3.9. Fold the right hand group of the gores at about 1/3 of the canopy width and put them over the central part of the canopy.
- 3.10. Fold the left hand group of the gores rightwards and put them on top of the previously folded gores.
- 3.11. Fold the canopy that is now folded in three again in half and secure with weights or clamps.



3.12. Pull the cotton sleeve, which is sewn to the pilot chute bridle, over the canopy apex and pull the bridle taut.



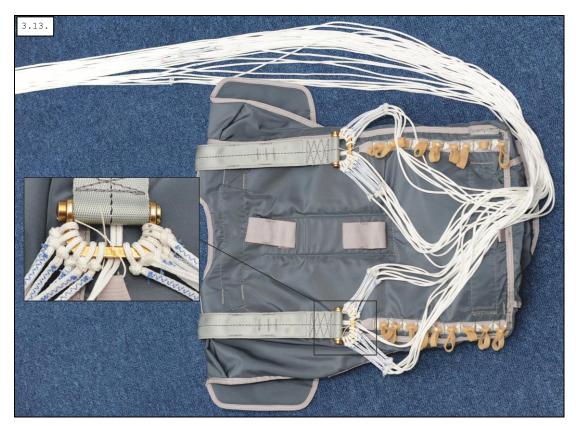
3.13. Now turn up the container flaps under the container in so that the inside of the container back plate shows up. All the locks and clamps should now rest under the container to prevent damage to the canopy.

Now carefully tuck in the risers into the container placing the D-connectors in front of the respective rubber band pockets.

Now group the suspension lines on the D-connectors by 6. Using a 5 daN strong thread, tie each D-connector to the loop at the bottom of the container.

Cut away the extra thread length.

Inspect the rubber bands and replace the damaged bands with new ones of the same type and size.



3.14. Rotate the container on the table 90 degrees clockwise.

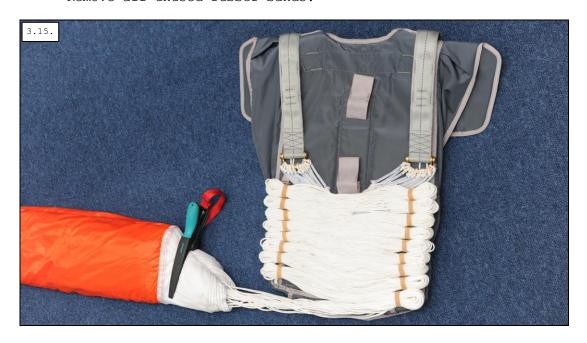
Thread the line bundle through the right hand upper rubber band all the way to align in with the side flap webbing.

Do the same with the line bundle through the left hand upper rubber band.



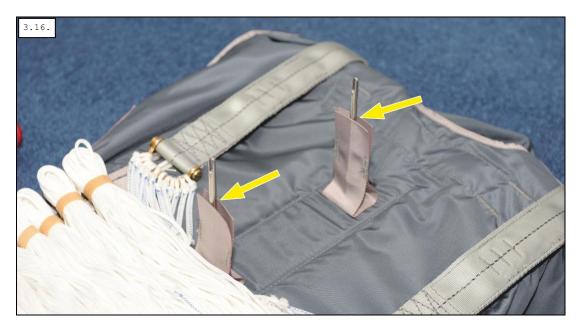
3.15. Tuck the combined bundle of all lines in a zigzag pattern across the container back plate from the left to the right rubber band. As the ropes become shorter, move the container towards the canopy.

Leave the remaining 50 cm of the lines free. Remove all unused rubber bands.



3.16. Push the T-type assembly pegs through the grommets on the container's back plate (from underneath).

Pull the side flaps which were previously folded under the container out and up.



- 3.17. This is what the canopy should look like when inside the container.
- 3.18. Tuck the canopy rim, without twisting it, into the right bottom corner of the container (1).



- 3.19. Rotate the container 90° counterclockwise.

  Align the bottom part of the folded canopy with the bottom container flap up to the left hand corner and tuck it there.

  Then, tuck the rest of the canopy in along the left hand flap.
- 3.20. Fold the canopy pack by  $180^{\circ}$  at the upper container rim (3), place it next to the previous fold. Then, fold the canopy pack at right angle (4) and place it parallel to the bottom container rim next to the previous layer, then guide it parallel to the right hand container rim up to its upper corner (5).



- 3.21. Fold again the remaining part of the canopy pack  $180^{\circ}$  at the upper container rim (6) and place it next to the previous layer. Fold again the remaining part of the canopy pack  $180^{\circ}$  (7) and place it next to the previous layer.
- 3.22. Fold the canopy pack  $180^\circ$  down (8) and place it next to the previous layer. Fold the canopy apex  $180^\circ$  up (9) and place it at the left hand side of the container.

Try to distribute the canopy pack evenly inside the container.



3.23. At the base of the pilot chute cap (10), fold the remaining part of the canopy and the apex lines in a sleeve (11 and 12) so as to evenly fill up the space between the base of the container, the closing loop, and container side flaps. Thread the bridle towards the center of the right hand side of the container.



- 3.24. Place the bottom flap grommet over the bottom T-type assembly peg and secure with a pin. Then, place the top flap grommet over the top T-type peg and secure with a pin.
- 3.25. Place the right flap grommets over the T-type pegs and secure with a pin. Fold the bridle a couple of times and place it between the pegs.

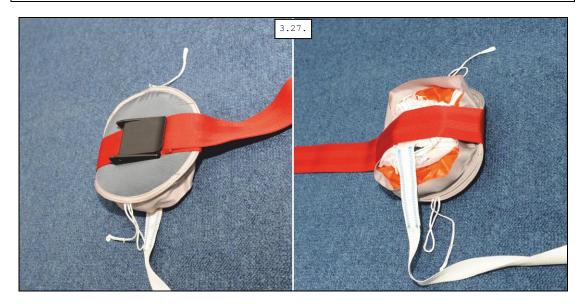


3.26. Make sure that the bridle is folded as on the figure. Separate the canopy pack from the closing loops, place the left and right flap grommets over the T-type assembly pegs and secure them with pins.



3.27. Compress the pilot chute spring and secure it with the folding strap. Tuck in the pilot chute fabric and net between the spring coils so that the cap is flat and prevents that the chute fabric gets out of from between the spring coils and from under the chute cap.

Caution: Do not wrap the fabric and net around the spring coils as this may lead to a delayed filling of the pilot chute!



3.28. Fold the bridle over several times and place it in the middle between the T-type assembly pegs.

Remove the securing pins and thread in their lieu the auxiliary strings through the closing loops at the sides of the pilot chute cap, making sure that these are not the looped ends, and through the T-type assembly peg holes.



3.29. Place the pilot chute spring base on the folded bridle centrally between the container flap grommets.

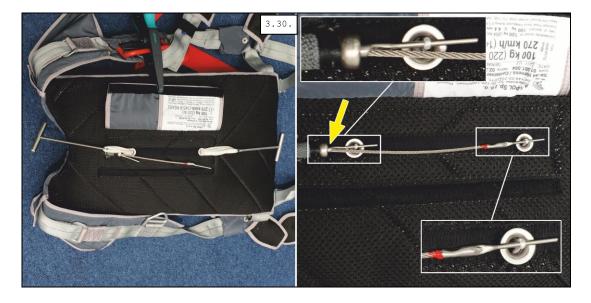


3.30. Holding the pilot chute in a depressed position, turn the parachute container around with the back plate facing up. Now thread the auxiliary cords through the grommets and remove the assembly pegs.

Thread the closing loop through the upper grommet of the container making sure that the canopy fabric is not jammed in the grommet and secure the closing loop with the ripcord pin. Repeat the same operations for the lower grommet.

Caution: before sticking the second pin in place make sure that the upper pin connector on the ripcord is fully covered by the ripcord sleeve and the ripcord itself runs straight (see fig.).

Caution: The pins should be threaded through the loops so that there is only one pin in each grommet.



3.31. Keeping the pilot chute compressed, turn the whole parachute around back to its previous position. Then pull the upper and lower ends intermittently each time by a small amount of the line so that the pilot chute cap finally rests firmly against the container surface.



Caution: As air escapes from the canopy in the process of packing, the parachute tends to compact which decreases its volume. Therefore, if the pilot chute cap lifts itself from the surface of the parachute container, it is possible to compress the cap again by pulling at the ends of the lines. This however should be done only by a rigger who is certified to maintain the SK-94 parachute.

3.32. Carefully remove the auxiliary strings.

Remember, when removing the auxiliary strings, to pull them under the closing pins so as to avoid the strings being rubbed against the closing loops.

#### 3.33. Final steps:

- Having turned the parachute over with the pilot chute facing down, carefully compress the entire container with your knees in order to evenly distribute the canopy inside the container.
- Check the position of the ripcord handle in the pocket.

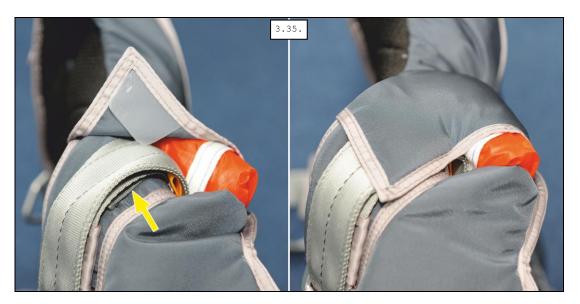
Having turned the parachute over make sure that:

- the pilot chute fabric does not protrude from under the chute. IF so, then using the wooden ruler carefully tuck in the fabric under the container flap,
- the pilot chute rests firmly and evenly against the container. It should be slightly sunken in the container pack. If not, straighten it and tighten with the loops (see 2.30),
- the top and bottom container flaps are sufficiently tight. If not, use the ruler to tighten and even the container cover.
- 3.34. Tuck in the free ends of the lines under the pilot chute cap and secure them with the Velcro strap on the cap.



3.35. Close the top flap.

Place the flap ends inside the pockets under the risers and harness.



3.36. Close the shoulder part of the side flaps.

Pull the part with a flap tight, fold it, and place under the harness webbing.



- 3.37. Check if the force that is necessary to pull out the ripcord handles does not exceed 9.5 daN. If a greater force is needed, repeat packing the pilot chute in the container.
- 3.38. On the last ripcord pin, make a security seal using the special 'NSN 8310-10-493-6030' parachute sealing thread or a cotton thread with a strength not greater than 2.15 daN.
- 3.39. Close the flap over the ripcord and the pins.

Caution: Having finished the packing, count the tools which were used for packing.

#### PART III

#### ADJUSTING THE PARACHUTE (HARNESS):

As people differ by height, weight, and posture, the SK-94 parachute harness has been equipped with the size adjustment features. Below you can find some general hints as to how to adjust your harness correctly.

- 1. First, loosen the main harness straps so that the number of adjustment seams on either side is the same.
- 2. Loosen the calf, breast, and container straps.
- 3. Put the parachute on.
- 4. Close the breast strap and both calf straps.
- 5. Straighten yourself.
- 6. Pull the breast strap tight so that the parachute is pressed comfortably to your body. The breast strap should not be too lose but it should also not pull the shoulder part of the container together.
  - Roll the loose end of the strap and place it under the rubber band.
- 7. Pull the calf straps tight avoiding over tightening. With their tension correct you should be able to put your palm under either of them.
  - Roll the loose end of the strap and place it under the rubber band.
- 8. Adjust the length of the vertical straps so that the breast strap rests slightly over your breast and the adjustment buckles of the vertical straps are at your waist level.



Caution: Leaving the vertical straps too long may cause the breast strap slide up upon the parachute opening and press against the throat and chin.

9. Make sure that both sides of the harness have been adjusted symmetrically (count the adjustment seams). Place the buckle covers on and roll and secure the loose ends of the straps. Close the Velcros together inside the ring.



10. Tighten the container straps.





# PART IV STATIC LINE

#### 1. TECHNICAL DESCRIPTION

#### 1.1. PURPOSE

The system is intended for assembly to the Air-Pol SK-94 backpack emergency parachute system and provides an automatic release of the ripcord handle immediately after the exit from the aircraft in an emergency.

#### 1.2. RESTRICTIONS

The system is intended for assembly to the Air-Pol SK-94 backpack emergency parachute system.

Use only components produced by the manufacturer as serviceable parts.

#### 1.3. SYSTEM COMPONENTS



1. Static line pocket: 02.70.00.00

Photo No. 1



Photo No. 2

2. Static line: 02.80.00.00 Length: 4,2 m [13 ¾ ft]

### 1.4. LIMITED LIFE CYCLE COMPONENTS

1. rubber bands......2" x 3/8"

# 2. ASSEMBLY OF THE SYSTEM TO THE SK-94 PARACHUTE HARNESS AND TO THE AIRCRAFT

When under instruction, the fitting of the SK-94 backpack rescue parachute to the student pilot and the attachment of static line system is to be made by the supervising instructor.

All components are to be inspected for serviceable condition before the parachute is fitted. The parachute and / or static line system should be withdrawn from service if any worn or damaged components are observed.

# 2.1. INSTALLATION OF THE STATIC LINE POCKET TO THE PARACHUTE HARNESS



Photo No. 3

- 1. Place the static line pocket under the chest strap.
- 2. Fasten the upper fastening pocket tape to the harness. Undo the press fasteners and position the upper fastening tape above the chest strap and pass it between the rip-cord handle pocket and harness lift web. Wrap the upper fastening tape around and behind the harness lift web and secure with the velcro and press fastener.
- 3. Fasten the lower pocket fastening tape to the harness. Undo the press fasteners and position the lower fastening tape below the harness comfort pad. Wrap the upper fastening tape around and behind the harness lift web and secure with the velcro and press fastener.



Photo No. 4

4. Pass the end of the chest strap through the loop on the static line Unthread pocket. chest strap from the snap hook, pass the chest strap through the loop on the static line pocket and re-thread the chest strap through the snap hook. N.B. Ensure correct rethreading of the chest strap through the snap hook adjuster mechanism.

#### 2.2. CONNECTING THE STATIC LINE TO THE RIPCORD CABLE



No. 5.

- 1. Attach the "Rapide" connector to the ripcord cable between the handle and the ripcord housing. Firmly tighten the barrel on the "Rapide" connector.
- 2. Ensure the static line is untwisted.
- 3. S-fold the static line into the pocket, positioning the top of the bands below the velcro. To prevent 'fluffing' of the static line, prevent contact with the 'hook' side of the velcro.
- 4. Leave sufficient unbanded static line to allow connection to the static line hard point in the aircraft.
- 5. Allow approximately 5 cms of 'loop' in each rubber band making two or three loops with the rubber bands to ensure the static line is securely held.



Photo No. 6. The static line with the release handle ready for use.

- 6. Route both ends of the static line under the velcro closure. To prevent 'fluffing' of the static line, prevent contact with the 'hook' side of the velcro.
- 7. S-fold the remaining part of the static line with and secure using the external rubber bands.
- 8. Make two or three loops with the rubber band to ensure the static line is securely held.
- 9. Protect the static line from accidental extraction from the pocket by securing the snap-hook to the chest strap.
- 10. Check the correct installation of the pocket to the harness, connection of the static line to the ripcord cable, stowage of the static line in the pocket and the location of the ripcord handle in the ripcord pocket.

#### 2.3. INSPECTION OF THE INSTALLED STATIC LINE SYSTEM

Inspect correct assembly of the static line to the ripcord handle and the ripcord pocket of the container harness and also the correct routing of the static line to and within the pocket.

Inspection procedure:

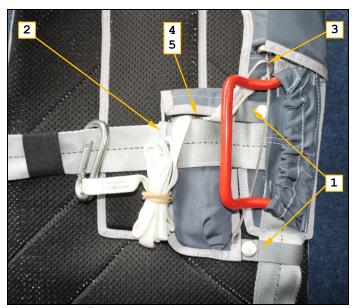


Photo No. 7. Points for inspection.

- 1. Connection of the static line pocket to the harness and the connection of fastening tapes and press fasteners. The fastening tapes may include only the vertical tapes of the harness.
- 2. The chest strap is threaded through the static line pocket " loop".
- 3. The "Rapide" link is secured to the ripcord cable between the ripcord handle and ripcord housing.
- 4. The routing of the static line passes under the pocket top flap.
- 5. The internal rubber bands securely retains the static line Sfolds.

#### 2.4. CONNECTING THE STATIC LINE SYSTEM TO THE AIRCRAFT

- 1. Fit the parachute in accordance with the parachute manual
- 2. Connect the static line snap-hook to the designated aircraft hard point.
- 3. Once seated in the aircraft check that the routing of the static line is free from obstructions.

#### ATTENTION!

Ensure that the static line routes directly from the pocket to the aircraft hard point. Any obstructions of the static line by the parachute harness, the parachute pack and parts of the body can obstruct the deployment of the parachute in an emergency and may cause a static line "hang up" behind the aircraft.

#### PART V

### STORING, MAINTENANCE, AND SPECIAL ACTIVITIES.

The SK-94 emergency parachute is to be stored under the following conditions:

- The parachute store should be adequately heated and ventilated.
- The relative humidity within the parachute store should be between 30%-80%.
- ullet The air temperature within the parachute store should be between 10C-30C.
- Storage of corrosive materials or contaminants within the parachute store is expressly forbidden, i.e. acids, alkalis, solvents, inflammable liquids, oils and petrochemicals.
- Storage shelving within the parachute store should not be sited closer than 1 meter from heating sources.
- The maximum period of storage between periodic inspection and repacking is 1 year (365 days). Unpacking of the parachute prior to packing and the inspection and repacking is to follow the instructions in the user manual, without deviation.
- Parachutes suspected of becoming soaked with water should be unpacked in a clean, well ventilated location, kept out of direct sunlight and hung until completely dry.
- Parachutes suspected of becoming soaked with saltwater should first be thoroughly rinsed with clean freshwater before being dried as per the previous instruction.
- All parts of the parachute assembly are to be allowed to dry naturally without the application of heat or being wrung out.