RESERVE PACKING GUIDE

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British Skydiving Manual Update Policy

The British Skydiving Reserve Packing Guide is updated periodically. As British Skydiving rules are continually evolving, the primary operational document, the British Skydiving Operations Manual, is regularly updated at meetings of the British Skydiving Safety & Training Committee which are held every two months.

Therefore, in the case of any conflict between rules or requirements set out in the Operations Manual and any other British Skydiving manual, the provisions in the Operations Manual shall always have primacy as the definitive statement of the current position.

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Introduction

The aim of this 'Guide' is not to teach reserve packing (this must be done on a one-to-one basis) but to cover reserve packing in general. Anyone who wishes to become an Advanced Packer for reserve parachutes should follow some simple guidelines. Take your reserve packing seriously, stay current and treat it like the life saving device it is. If in doubt, ask! This Guide is an Aid to inspecting and packing reserve parachutes and not a mandatory requirement.

1. Preparation

Packing reserves should be done in a clean, well lit, area away from any sort of contamination.
Round reserves, although rarely seen these days and no longer used at British Skydiving Affiliated PTOs for Training of students need a long smooth table or a long-carpeted area with the appropriate hardware to stretch the canopy out under tension. Ram air reserves are best packed on a clean, carpeted area. Select and count all tools to be used and make a note of how many.

The selection and control of tools to aid packing is an important subject.
Misuse of tools can damage equipment, and the lack of an adequate tool control system could have catastrophic consequences.

The following is a recommended list of tools for the potential Advanced Packer to acquire, preferably before attending their AP Training course:

- Knee Plate
- Pull up bar
- Rifle Rod
- Wooden Packing Paddle
- Cypres Kit
- Safety tie
- Pull Test Scales
- 7" T bar (2)
- Positive lever bar with plate
- Pull check tool
- Wax thread
- Soft Bodkin
- Locking pull up cord
- Velcro Covers for Freebag

2. Deployment

On receiving a set of kit for a reserve repack ask the owner (if present) to put it on his/her back and deploy the reserve using the correct cutaway and reserve procedures, as outlined in Annex C. However, if you feel their drills need changing you must consult an instructor.
You should be checking for the following:

a. Pulling the ripcord should not require so much force that a skydiver would be thrown unstable.

b. Make sure the pilot chute adequately clears the container flaps.

c. Holding the pilot chute walk away from the container to determine if the parachute feeds out of the pack easily and in the proper sequence.

d. Remove the main canopy and put to one side.

e. Spray some silicone on a clean cloth and wipe the cutaway cable clean, inspect for damage prior to replacing it back in the container.

3. Safety Information

Check the Reserve Canopy, Automatic Activation Device (AAD) and Container serial numbers to see that the three agree with the information on the packing card and whether any part of the system has been affected by a Safety Notice.

Note: *It is your job as a reserve packer to be fully conversant with all Safety Notices affecting parachute equipment, (refer to Index of Safety Notices). This can be found on the British Skydiving website and downloaded via this link:* https://www.britishskydiving.org/safety-notices/

The Index of Safety Notices may not include the most recent bulletins, and further searches may be required to ensure there are no Safety Notices pending prior to inspection and packing a reserve parachute.
A manufacturer's manual for both the reserve canopy and the container should be to hand and the reserve packer must be fully conversant with their contents. (Do not just pack it as the previous packer has, as he/she may not have packed it correctly).
Safety Notices and procedures can change. Ensure you keep up to date with them.

4. Inspecting the Reserve

No matter how neatly it is packed a reserve that has not been thoroughly inspected might be a threat to the safety of its user. Also, a brand-new reserve canopy is not necessarily an indication that it is in good condition.
THAT'S WHY AN INSPECTION IS CRITICAL.

5. The Pilot Chute

The following suggested steps should be taken when inspecting the Reserve Pilot Chute:

a. Test the fabric strength by stretching and popping the fabric with the hands.

b. The cap should be clean and properly stitched.

c. Check the spring for serviceability.

d. The base of the spring should be secured to the pilot chute fabric by at least four separate tackings.

e. Pilot chutes with mesh in them may require a bromocresol and tensile test. (Refer to Index of Safety Notices).

f. There should be no marginal conditions in the pilot chute such as snags or patches. This part of the assembly has to work perfectly. Any repairs to the reserve pilot chute can only be made by an Advanced Rigger.

6. Bridle Line and Freebag

The following suggested steps should be taken when inspecting the Reserve Pilot Chute:

a. Inspect for serviceability.

b. On round reserves the bridle line should be attached to the apex lines of the canopy by an open loop that is tacked, it should not be clinched down tightly around the lines. The loop allows the lines to equalize during pilot chute snatch and canopy inflation.

c. On freebag systems the mouthlock is usually the safety stow method, most manufacturers have now adopted this method.

d. Be aware of the size of the safety stow if changing to micro line reserves.

7. The Canopy

Check the canopy fabric for snags, tears or other problems, by carefully inspecting it panel by panel, any patches should be checked for proper applications and security. Check the strength of the canopy fabric by pulling on fabric with both hands, (canopies with sub strength fabric are easy to tear) this simple but effective test is applied to many areas of the canopy. Any reserves with mesh in have to have a bromocresol test on

every reserve repack and may also require a tensile test. (Refer to Annex E). Inspect all seams and bartacks, etc, for security. If possible, a canopy hoist is to be used as this is an excellent inspection aid.

8. Suspension Lines

Suspension lines are given a continuity check to ensure that each line is in the correct order on the connector link and is attached to the proper riser, also check lines for burnt or snagged spots. If it is rigged incorrectly and you pack it, then it becomes your mistake and someone else's life. Inspect all stitching for security.

9. Connector Links

There are different types of connector links used in conjunction with reserves and it is vital that you use only those recommended by the canopy manufacturer.

1. Separable 'L' links:

Check that the screws are tight with a screwdriver, remember all connector links and screws are not interchangeable.

2. Maillon rapide links:

Check they are tightly secured (hand tight and a quarter turn with a small spanner or adjustable) do not over tighten. Check the barrel and replace if cracked, beware of cheap imitations that have no tensile strength marked on them and remember, rapide links have no side load bearing strength. Some manufacturers state whether size 5 or 6 links should be used.

3. Soft Links

Only those specifically authorised by the manufacturer for reserve use may be used.

Note: *Performance Designs "Slinks SM-1" cannot be used on reserves. Beware the similar name, but different clearance for use.*

10. Risers

Check for serviceability, also check stitching (any sewing machine stitch can look good on one side and not have any thread on the other side).

11. Harness and Container

Thoroughly check the harness and container throughout inspecting grommets, pack tray, webbing for fraying, wear, abrasion, defective stitching, etc (look in hidden areas).

12. Reserve Ripcord

Check the ripcord, ripcord housings, ripcord pocket and associated sewing.

FINALLY AIR THE CANOPY BEFORE REPACKING AND SEE TO ALL DOCUMENTATION.

13. Compatibility

Make sure the canopy you are packing is the right size for the pack tray. Also check the freebag is the right size.

14. Closure Loop length

A closing loop that is too short could result in a dangerously hard pull. One that is long, looks messy and is susceptible to snagging and possibly premature deployment of the reserve.

Attachment of a quick loop and cap to pilot chutes is important and maybe dangerous if not carried out correctly. It has been found that quick loops and caps have been sewn to pilot chutes in a manner that would damage the pilot chute if they were used.

Quick loops have been pulled down tighter to tidy up pop tops, if this is done, a test pull must be done again to ensure the user can still operate the reserve.

Note: *This is true with 1 pin 'pop tops' as well, always ensure a pull test is done after readjustment*.

15. Taken from Talon Owner's Manual

"Note: Under no circumstances is a 'T' Bar closing device to be used in conjunction with packing this system, to do so can result in higher than allowable pull force and also damage to the container."

16. Tacking Thread

Total malfunctions of the reserve have resulted from the wrong use of tacking thread and the wrong type of thread used. British Skydiving Advanced Packers are allowed to seal reserves if they wish using the British Skydiving approved method (Form 215) contained in Annex A.

17. Clear Channel for the Loops

Inspect the completed pack job from the back and front of the container, make sure that no line, canopy or pilot chute material can hinder the closing loop passage through the container. Take care when packing.

18. Rubber Bands

Rubber bands must be in perfect condition. They must be the correct size, if in doubt change them.

19. Automatic Activation Device (AAD)

Read the AAD manual and abide by the recommendations. Make sure that when the AAD works it removes the pin from the closing loop completely (FXC).
Ensure the AAD is within the service date and battery replacement date.
Check inside the cutter (Cypres/Vigil/Mars) for sharp edges that may damage the loop.

20. Reserve Static Line (RSL)/Stevens Lanyard

Check the serviceability and correct routing. If routed incorrectly this could cause the canopy to hang up after cutting away. Take particular care to follow the specific instructions when packing a Skyhook or similar.

21. Inspection and Packing Report

A Record of Inspection (ROI) report, form112 (Annex B) is to be filled in during the inspection and packing process and is to be given to the owner after packing. Keep the duplicate copy within the Record of Inspection Book (carbon Copy) and this may be used as your reserve packing log.
A separate Packing Inspection Report is available for Tandem equipment (form 112a).

Note: *Both the Record of Inspection Check list and the Reserve Packing Card/Log are required.*

It is considered good practice to record the AAD jump numbers within the comments box of Forms 112 & 112A. This aids with the recording of total jump numbers on components parts especially in the case of student equipment and Tandem Systems.

Packing data cards should be annotated with information related to the re-lifing or any other work carried out on the reserve parachute. Any supporting documentation should be retained with the equipment documentation.

22. Packing

Pack the reserve as taught and according to the manuals. Determine as to how tight the closing loop is and perform a pull test. (See Test Pull Procedure below).
Count your tools at this stage, ensuring the number is the same as you started with. Service the 3-ring release system (see Annex D), and reconnect the main parachute ensuring you perform a line sequence check.

23. Test Pull Procedure

A test pull must be done using a pull tester or fish scale, there should be a minimum of 5lbs pull (min 10lbs when used with an electronic AAD) and a maximum of 22lbs (15lbs max. front mounted reserves). The pull force required is to be recorded on the Record of Inspection sheet.

24. Older equipment

Extra care should be taken when packing older equipment as some manufacturers have recommendations that should be followed.
Some place a 20-year life on reserves, whilst others want a permeability test done after 40 repacks, or 10-20 uses. This usually means returning the canopy to the manufacturer who will then recertify the canopy for a further number of repacks.
Where the manufacturers have made no recommendations, it is for the Packer to decide on the serviceability of the reserve. The Tensile Test can be used (Annex E).

25. Repairs

Any repair to any part of the reserve system can only be carried out, and endorsed, by an Advanced Rigger. Temporary repairs such as self-adhesive patches are not permitted on the reserve system."

26. Summary

Reserve packers must be inquisitive. If you see someone packing a reserve go and talk to them, watch and ask questions. If you see a write up referring to reserve packing, read and study it. Read all the reserve packing manuals you can get your hands on.

Attached at Annex F are some reports that have been collated from various sources, use them for their educational value, and don't make the same mistakes. Be professional and gain the knowledge that will enable you to be "safe

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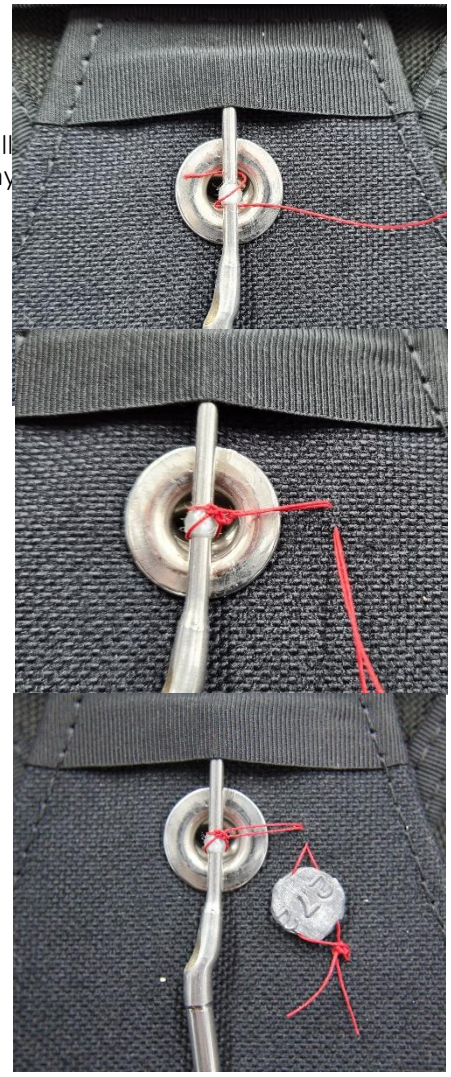
Annex A: British Skydiving Acceptable Reserve Sealing Method

The British Skydiving Operations Manual states the following in Section 6 (Equipment) Paragraph 8.11 (Reserve Sealing Thread.)

"Only Riggers, Advanced Packers, and Packers with the appropriately endorsed packing certificate may seal reserves and must use a method acceptable to the British Skydivers Riggers Sub-Committee. The rigger/packer should use a method of identification that is identifiable to him/her. Seal thread must be thread manufactured with a tensile strength of 4.75 lbs and should break at no more than 6lbs. (NSN 8310-01-493-6063) The sealing of reserves is optional."

There are two methods of sealing a reserve. Both methods can use either a lead seal and press, or a paper label, as the method to identify the rigger/packer.

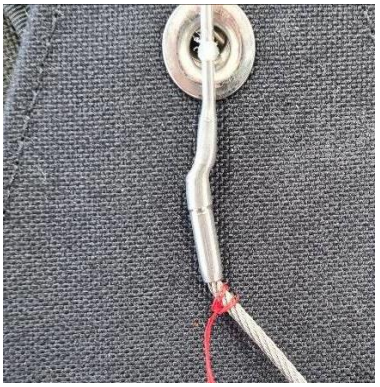


Method One:

This method is so designed to ensure the thread does not have to be broken to operate the ripcord, thereby not increasing the pull force required. This method also ensures the lead seal is kept away from the pin and grommet to avoid any adverse interference.

- Take a piece of Safety Thread approximately 40cm long.
- With the rig laying on a flat surface, the reserve pin visible and orientated in 12 O'clock and 6 O'clock position.
- Take one end of the thread and above the closure loop, pass the Safety Thread under the closing pin, from right to left.
- Using the same end, below the closure loop, pass the Safety Thread under the closing pin, from right to left.
- Tie a Surgeons knot.
- Find a clear space alongside the grommet and tack both ends of the thread through the fabric.
- Fit an appropriate seal or label.
- Compress with a seal press.
- Find a clear space alongside the seal and tack one end of the thread through the fabric.
- Tie a Surgeons knot.
- Trim the threads to no shorter than 10mm.
- Check your work.
- Count your tools.

Method Two:



This method is so designed to ensure the thread must be broken to operate the ripcord, which unfortunately increases the pull force. This method has a better international acceptance than method one.

- With the rig laying on a flat surface and the reserve pin visible and orientated in 12 O'clock and 6 O'clock position.
- Take a piece of Safety Thread approximately 40cm long, find the middle and tie two larks head knots around the ripcord cable, just above the shank of the ripcord pin.
- Thread one end of the thread through the lead seal and under the reserve ripcord pin, below the grommet, then back through the lead seal using the other hole.
- Tie a Surgeons knot with the other end of the thread. N.B. Leave enough slack in the thread to allow for movement of the pin, but not too much so that the pin can be extracted without breaking the thread.
- Trim the threads to no shorter than 10mm.
- Position the seal over the knot and compress with the seal press.
- Check your work.
- Count your tools.

With a 'Skyhook' type pin route the thread through the eye of the pin.

Ensure that the seal cannot fall into the grommet.

Paper label:

This should be approximately 40mm long x 20mm wide. The information on the label should contain the following: Rigger's identification mark / Date of seal / Rigger signature.

Maintaining the highest safety standards in our sport.

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Annex B: Record of Inspection sheet

British Skydiving
5 Wharf Way, Glen Parva
Leicester, LE2 9TF

0116 278 5271
info@britishskydiving.org
britishskydiving.org

Record of Inspection

The following equipment has been subjected to a detailed routine inspection.

Container Type: _____ Serial No: _____ DOM: _____

Reserve Canopy: _____ Serial No: _____ DOM: _____

AAD Type: _____ Serial No: _____ DOM: _____

Inspection Checklist

	Tick/Cross/NA
1. Cut away main canopy, unpack reserve and inspect.	☐
2. Pilot chute condition, spring effectiveness, correct type for rig.	☐
3. Bridle line conditions (if round loop at apex tacked)	☐
4. If square, free bag and bungee condition	☐
5. * Reserve canopy condition (if round examine and test for acid and if applicable-tensile strength)	☐
6. ** Safety notices checked in respect of this equipment and all safety mods complied with	☐
7. *****Condition of lines and sequence	☐
8. Condition of steering toggles, stowage, and tack as relevant	☐
9. Connector Links: Correct type, condition, and fitting	☐
10. Condition of container including-grommets, stiffeners, Velcro closures and closure loops, (on container or pilot chute)	☐
11. Reserve handle, cable and pin(s), handle pocket, cable housing.	☐
12. Inspect remainder of container and harness.	☐
13. Harness and stitching sound.	☐
14. Leg strap retainer elastics fitted and sound.	☐
Comments	

	Tick/Cross/NA
15. Condition and routing of RSL.	☐
16. *** Attachment of AAD if fitted.	☐
17. AAD next service date: _____	☐
18. Battery next replacement date: _____	☐
19. Reserve Seal	☐
20. Condition of risers - compatibility with system.	☐
21. 3-ring system clean, flexible, rings free, loop sound.	☐
22. Condition and function of cutaway pad, cables, and housing.	☐
23. **** Test pull by user Users signature_____	☐
24. **** Poundage Force of pull (Mandatory whether user test pulls or not)_____lbs. Signature_____	☐
25. Tool check.	☐
26.	☐
27.	☐
28.	☐
29.	☐

Owner: _____

Contact detail: _____

Example / Not for use

In the personal opinion of the Inspector, the equipment at the time of the examination was considered to be safe for further usage. Whilst the equipment has been inspected with all reasonable care, the opinion expressed by the Inspector does not give or imply a guarantee that the equipment is free from defects other than any identified above.

(PRINT)

Inspected by: _____ Signature: _____

British Skydiving No: _____ Date: _____

Riggers No. (if applicable) _____ Packers No. (if applicable) _____

The next inspection is due within a maximum of 6 calendar months from the above date, by _____

All sections of the form must be completed, or the form is not valid.

No.

* Acid and tensile strength test may only be carried out by riggers, Instructors or anyone who has been examined for the reserve packing certificate after the 4th of September 1991.
*** Where electronic AADs are to be fitted, instructions as to the installation/fitting, acceptable to the AAD manufacturer, must be available. However, it is the responsibility of the installer/fitter to ensure that neither the manufacturer of the AAD nor of the container objects.
**** Reserve ripcords on piggyback equipment may be test pulled by the user after the reserve has been repacked. The user should then sign at 23, above, to indicate that he/she has made the test pull. In all cases, the packer must test pull the reserve ripcord with a scale and sign for the recorded poundage at 24, above. The maximum acceptable pull force is 22 lbs.
***** 7, above, must be checked in a flying configuration at assembly or re-assembly.

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Annex C: Reserve Opening Procedure

1. Purpose

To monitor the opening performance of the reserve system at the end of the repack cycle. Providing valuable information, helping maintain packing standards and identifying the reasons for any poor performance found.

2. Expectation

We expect the reserve system to operate effectively even when deployed at low speed and low altitude, although exactly what these limits are is subject to some speculation. We also expect the reserve pilot chute to clear any burble and be able to extract the free bag even if the main is still in the container and all flaps are securely closed. We also expect the length of time the reserve has been packed to have no adverse effect on deployment performance.

3. Various Methods

Method 1.

With an assistant, preferably the owner of the system, wearing the container. The main packed and all flaps and riser covers closed. The assistant lays horizontally on their front so the container is on top (prone). The assistant whilst arching carries out reserve drills. The assistant should be discouraged from rolling from side to side as this may cause the reserve pilot chute to deploy to one side. Arching will tend to hold the top and bottom flaps together and is more representative of a real-life deployment.

Observe the height the pilot chute achieves. A height of 4ft to 5ft for the top of the pilot chute is desirable. This would-be eye level for the average observer. A line or mark on a wall behind the pilot chute would assist your observation.

The extraction should be measured while pulling the reserve bridle in a direction producing the lowest possible extraction force. With the assistant still laying horizontally on their front. Stand at the assistants' head and attach a luggage scale by tying a simple loop in the reserve free bag bridle.

Pull 20 to 30 degrees from the vertical towards the jumpers' head (see fig 1) and observe the force required to extract the free bag from the container. 18 lbs or less is desirable although only one manufacturer will state a maximum.

See YouTube https://www.youtube.com/watch?v=bSvxHutNFTM for a demonstration video.

Method 2.

With the container on a table or the floor supported, usually at the yoke, to keep the top of the reserve as horizontal as possible, the main packed and all flaps and riser covers closed.
Deploy the reserve by pulling the reserve handle and observe the height the pilot chute achieves above the container. A height of 4ft to 5ft for the top of the pilot chute is desirable.
This method of observing is likely to be less accurate.

The extraction should be measured while pulling the reserve bridle in a direction producing the lowest possible extraction force. Attach a luggage scale by tying a simple loop in the reserve free bag bridle. Pull 20 to 30 degrees from the vertical towards the shoulders of the container (see fig 1.) and observe the force required to extract the free bag from the container. 18 lbs or less is desirable. Packing weights placed under the top part of the container resting on the lift webbing will hold the container in place.

See You Tube https://www.youtube.com/watch?v=bSvxHutNFTM for a demonstration video

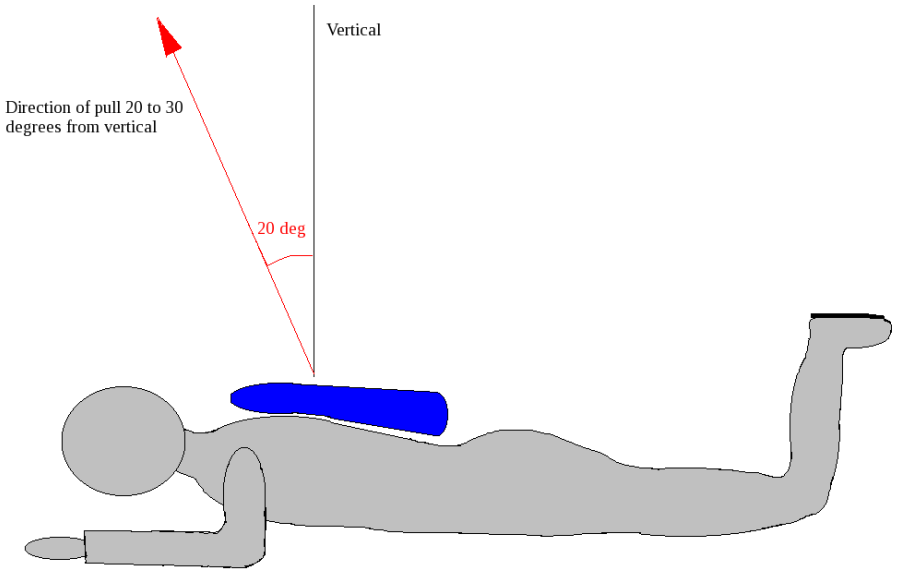


fig 1.

Action

Poor pilot chute clearance above the container.

If the pilot chute fails to clear the container by 4ft it is because it did not possess sufficient energy once it had cleared the container flaps. Four common reasons are:

1. The pilot chute spring was not fully compressed to start with. Almost half the available force is in the last 1" of spring compression.
2. Too much of the available energy was absorbed by the flaps of the reserve container.
3. Weak or damaged spring.
4. Bridle trapped or restricted holding the pilot chute back.

Check the length of the loop. Long loops will result in springs not being fully compressed. Inspect the free bag while the reserve is still inside for signs of significant amounts of parachute material packed under the reserve spring. Trapped material will compress and let the bottom of the spring down over the duration of the pack cycle. There may have been no visible sign of this situation from the outside. If it is not possible to identify a reason for the poor performance, that can be rectified by good packing, then refer the system to riggers committee for advice and or further action.

High extraction force

If the force required to extract the free bag from the container is high. Check the size of the reserve and the container size to see if the combination meets the container manufacturer specifications.
Whilst it may seem obvious to ask the manufacturer to confirm that the extraction force is acceptable. The manufacture has no way of knowing that the observed result is accurate and may well wish to examine the system or may choose not to answer without more information. Refer the system to Riggers Committee for further advice and/or action.

Annex D: Maintenance of 3 Ring Release

1. The 3 Ring Release

Knowing how the 3 ring release works will help a skydiver assemble and inspect it properly. Each ring forms a lever with a ten-to-one mechanical advantage as it passes through the other.
A force of 1000lbs on the large harness ring exerts a force of only 10lbs on the white loop, (opening shock usually totals about 1000lbs or 500lbs on each riser).

Because of the mechanical advantage provided by the 3 ring design, only a force of approximately a pound on the top ring assembly. A small stick in the white loop could prevent a riser from releasing. It is also important to understand one of the properties of the nylon components of the system. When nylon stays in the same position for a long time, it begins to conform to that position – it takes a 'set'.

If the 3 ring release system stays assembled for too long, the nylon can become so stiff that the low drag from a malfunction (such as a streamer) will not pull the riser off the ring.

2. Servicing The 3 Ring Release

a) Closely inspect it for wear and tear.

b) Check the white locking loops to be sure they are not frayed.

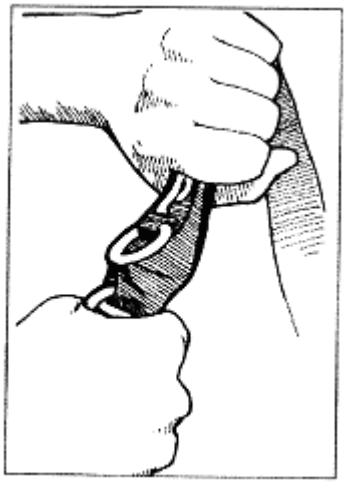
c) Check the velcro on the cutaway handle and main lift web to be sure it is clean and adequately holds the handle.

d) Check the cable ends for a smooth tapered finish this prevents the cable from hanging up in the loop, if a burr or hook is present consult a rigger.

e) Check the stitching including that which holds the large rings to the harness.

f) Check the hand tacking's that prevent the housings from sliding through their keeper (this keeper is a loop of narrow webbing located a few inches above the release handle). Pull downwards on the housings they should not move downwards more than ½ inch.

g) Take each riser and vigorously twist and flex the webbing near where it passes through each ring.
The idea is to remove any set or deformation in the webbing. Do the same to the white loops.



h) Check the housings for dents or other obstructions, use the cable to do this.

i) Clean and lubricate the release cable with silicone spray or WD40. Put a few drops on a paper towel and firmly wipe the cable a few times, a thin invisible film should remain, too much will attract grit and dirt also the oil could become tacky in cold weather requiring more force to extract the cable during a cutaway.

j) Inspect the security of the fittings at the end of each housing. If one of these fittings were to come off the housing a riser might release prematurely.

k) If necessary, inform the owner that he/she needs to service it more often.

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Annex E: Parachute Canopy Fabric Tensile Test, Non-Destructive Method

1. Background

The purpose of this test method is to provide a simple, standardized, non-destructive method of verifying the strength of parachute fabric. This method if readily usable in the field and is designed to replace the old "Rigger's Thumb Test". This test was devised in response to the "acid mesh" discovery in the mid 1980's.

2. Tools Required

a) Locking Fabric Clamps

b) Spring Scale, 50lb minimum capacity.

c) 6" Rule.

d) Permanent Marking Pen.

e) Bromocresol green indicator solution, 0.04% PH Range, 3.8 (Yellow) to 5.4 (Blue).

3. Test Procedure

This test has been written on the assumption that the purpose of the test relates to the acid mesh problem. If the test is to be performed for other purposes, the procedure may need to be modified.

a) Locate the mesh vents in the canopy and determine the fabric areas which are in contact with the mesh when the canopy is packed. These areas are shown (diagonally shaded) in illustration #1 for typical trivent canopy.

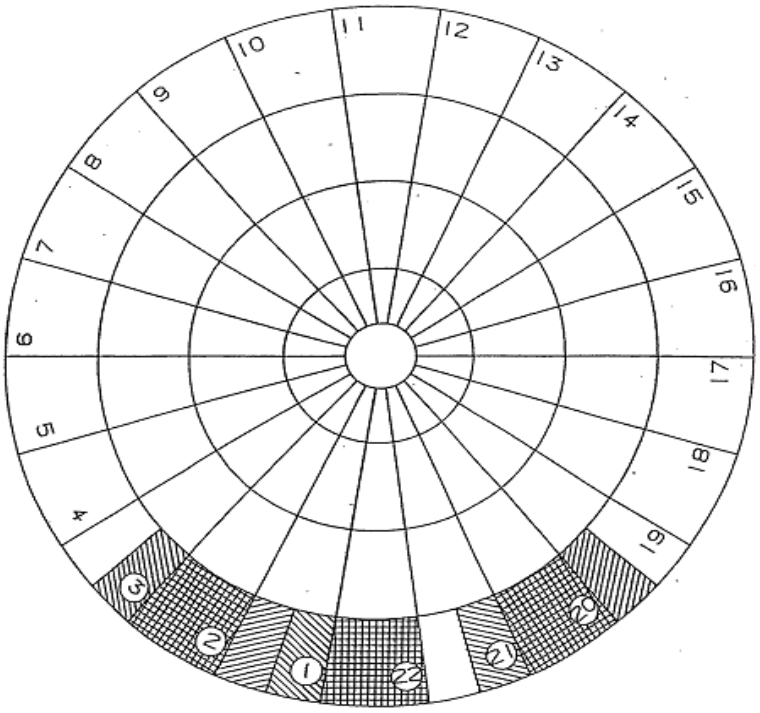
b) A total of 4 tests should be performed for each canopy. With a trivent canopy, one test should be performed in the panel adjacent to each mesh vent. At least 2 tests should be performed in each direction, (2 warp and 2 fill).

c) Attach the locking fabric clamps to the ripstop fabric shown in illustration #2.
The distance between the clamps should be 3" (7.5cm) and the clamps should be aligned so that the ripstop pattern is parallel to the edge of the jaw. Lock the clamps securely so as to avoid slippage.

d) Pass a short length of suspension line through the eye of one clamp and secure to the packing table or other object which will allow a 40lb (18kg) load without movement. Pass the hook from the spring scale through the other eye and apply a 40lb (18kg) load for 3 seconds.

e) Before removing the clamps place a dot at each corner of the area of the fabric involved in the test, this will encompass an area of 1" x 5" to mark for future reference.

f) Only one test is required on pilot chutes.



DIAGONALLY SHADED AREAS ARE
FABRIC IN CONTACT WITH MESH

Illustration #1

Netted areas: 2, 20, 22

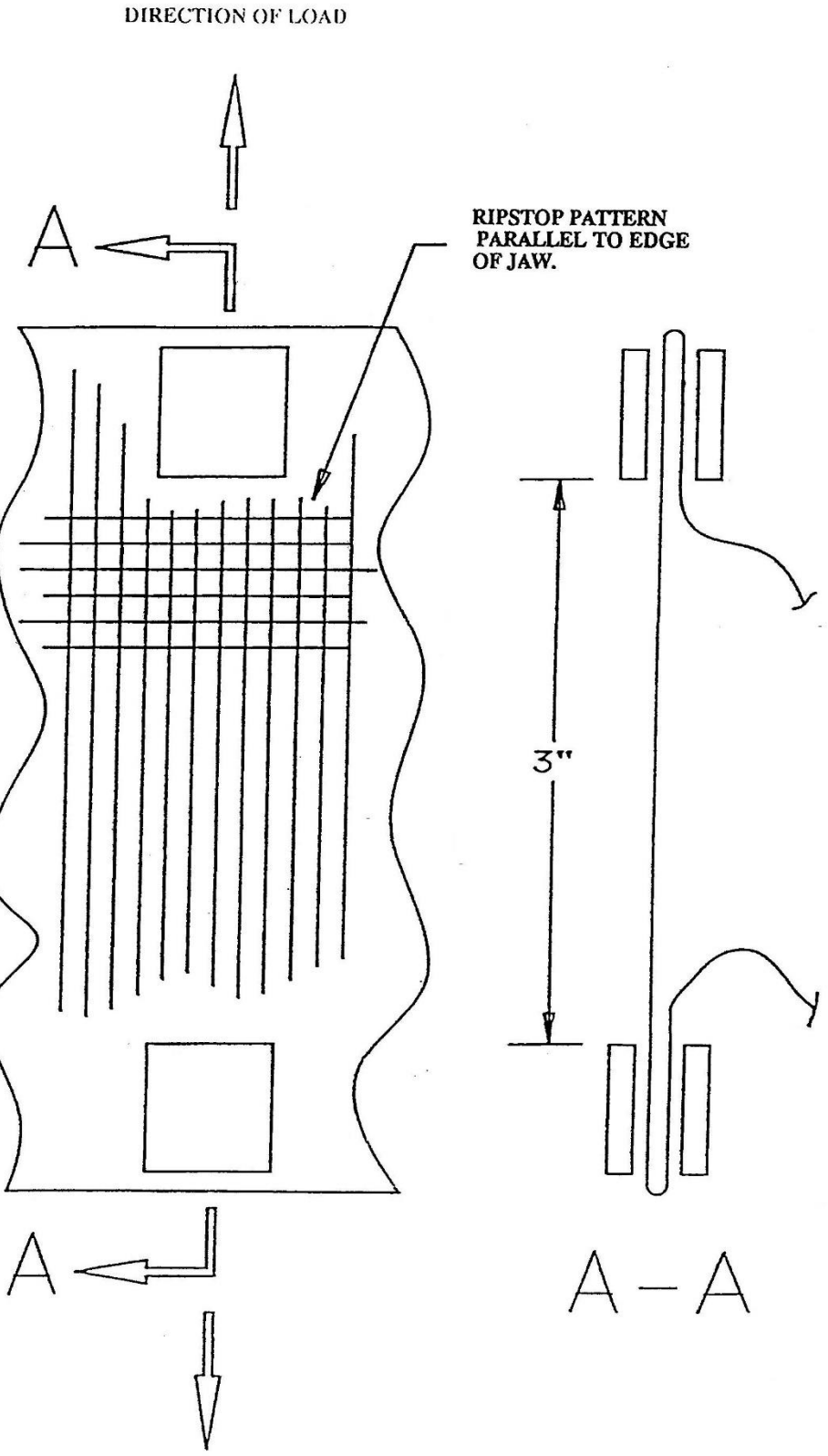


Illustration #2

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Annex F: Various Problems Encountered

1. DO NOT TAMPER WITH ANOTHER PERSON'S RESERVE INSPECTION OR REPACK
   (Safety Information, October 98)

2. Reserve Connector Links
   Packers are reminded that they should follow the manufacturer's instructions/requirements when fitting links for the attachment of reserves to risers/containers, as under strength links may fail during a hard opening. (Safety Information, February 03) (Safety Information September 2015)

3. Packing manuals.
   During a reserve repack on a TSE 1 pin Teardrop container it was discovered that the bridle line had been incorrectly routed/stowed. Which would almost certainly have resulted in a reserve 'pilot chute in tow' type malfunction had the reserve needed to have been used. Reminding packers of the importance of following the manufacturers packing instructions and that it is a British Skydiving requirement that when packing reserves, the equipment manufacturers manuals must be to hand (Safety Information, March 05).

4. Ripcord pins
   These have caused a number of notices to be issued: In 2001 there was an issue about pins being brittle (Capewell CW03-01), Vector pins can have a 20-degree bend (10/08)
   If not swaged correctly the pin can detach from the cable (Firebird FB2019-01)

5. Sticky Fabric
   The coating on some fabrics can get sticky which may require washing or other treatment (PdeF BSATOM25-001, BSATOM 25-002 7/16) (Sunpath SPSB 004 12/05)

6. Cutaway Cable lengths
   The RSL side should not release before the other. (Sunpath SPSB008 2/13) (AVA AD20012.6.20)

7. Steering Toggles: should release from the eye in the brakeline (and not from the line itself) (Parachute Systems PS0420 2012)

8. Hardware that has escaped the quality control test and subsequently been withdrawn (RW1.82 SN1/2/84) (Parachute Systems DSF Stainless PSB2016-01)

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