

ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

DESCRIPTION AND PRINCIPLES OF OPERATION

NC-3 PERSONNEL PARACHUTE ASSEMBLY

PART NO. 580AS100-5 AND 580AS100-6

List of Effective Work Package Pages

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Reference Material

Illustrated Parts Breakdown, NC-3 Personnel Parachute Assembly WP 010 04

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Record of Applicable Technical Directives

None

1. DESCRIPTION.

2. **GENERAL.** The NC-3 Personnel Parachute Assembly is a chest-type parachute used primarily in transport type aircraft.

3. The NC-3 assembly includes a multicolored (white, olive green, international orange, and sand shade), 28 ft. diameter, flat, circular, nylon canopy with 28 gores. Water deflation pockets are provided on alternate gores. The canopy is packed in a container assembly secured to the aircrew's chest by means of a harness assembly (Figure 1).

4. **CONFIGURATIONS.** Two different configurations of the NC-3 parachute assembly may be used in-service. The difference is the size of the harness, NC-3R (regular) or an NC-3O (oversize). Refer to the Illustrated Parts Breakdown (WP 010 04) for exact configuration requirements. The two configurations of the NC-3 assembly may also be used in-service with the Standard Soft Pack (SSP) depending on aircraft application (WP 010 04). The SSP is one of several types of packaged LR-1 life raft assemblies (NAVAIR 13-1-6.3).

5. **SUBASSEMBLY CONFIGURATIONS.** The subassemblies listed below and shown in (Figure 2) make up the NC-3 regular and oversize assemblies. Refer to (WP 010 04) for detailed information.

Pilot Parachute Assembly

Pilot Parachute Connector Strap

Canopy Assembly

Harness Assembly

Lift Web Assembly

Cushion Assembly

Ripcord Assembly

Container Assembly

6. PRINCIPLES OF OPERATION.

7. Deleted

a. The ripcord is manually pulled. The ripcord pins are then removed from the locking cones, permitting the container side and end flaps to separate. The container spring opening assemblies pull the side and end flaps apart allowing the pilot parachute to spring from the container.

b. The aircrew falling away from the pilot parachute causes the canopy to be pulled from the container, followed by the suspension lines. The canopy begins to inflate during this operation.

c. The tackings on the lift web assembly break as load is applied. The lift webs are then pulled from the container, and the canopy inflates. This permits the aircrew to descend suspended in the harness. Manual actuation of the four-line release system will reduce oscillation during descent and provide a method of maneuvering the parachute to a less hazardous landing site.

8. REPACK SCHEDULE.

a. Scheduled repack cycle is 672 days.

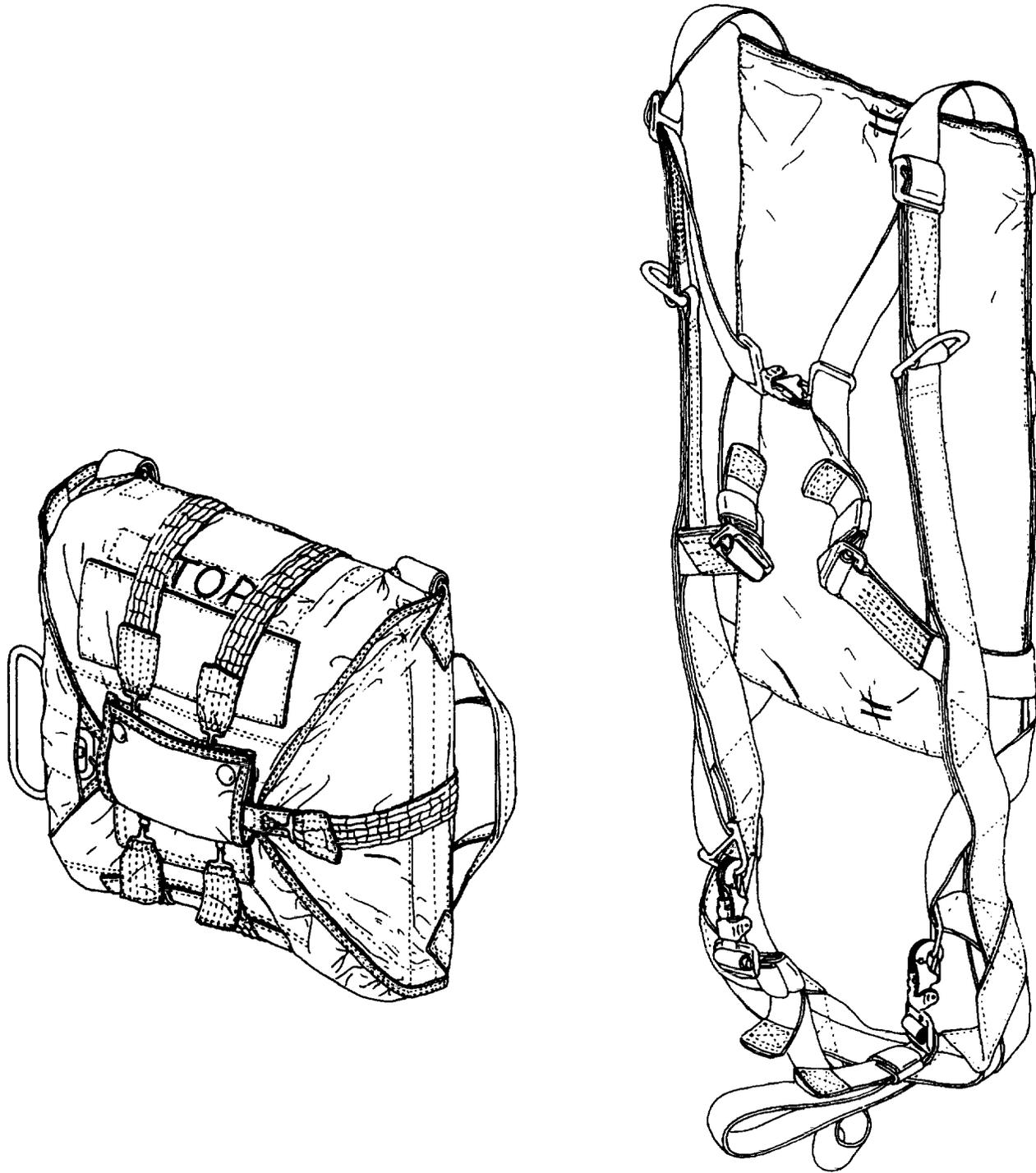
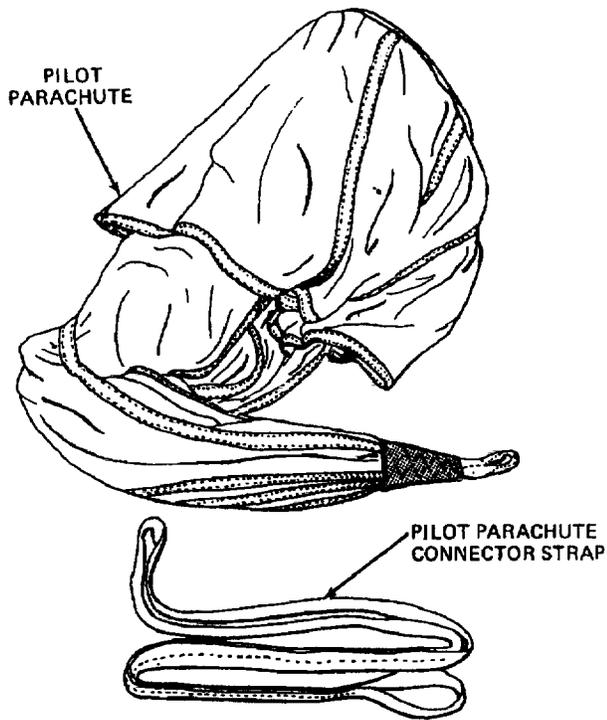
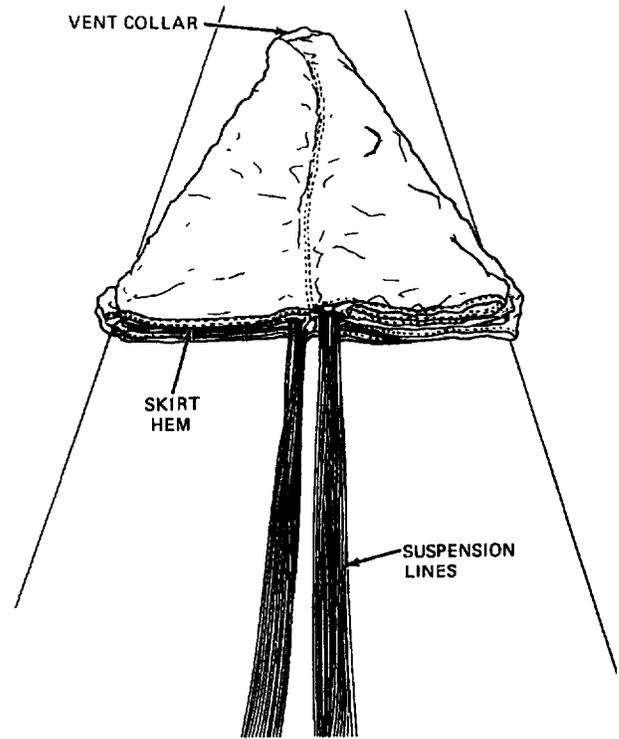


Figure 1. Personnel Parachute Assembly, NC-3



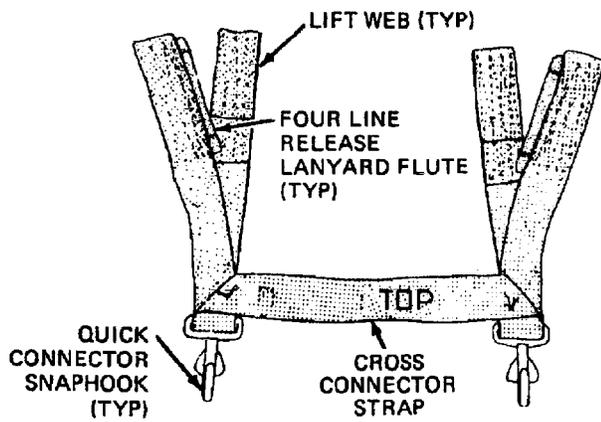
PILOT PARACHUTE AND CONNECTOR STRAP ASSEMBLIES

6.2-5002A



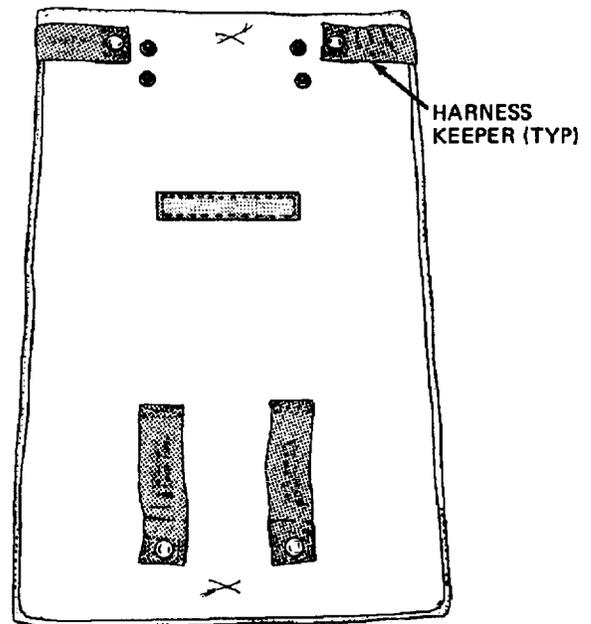
CANOPY

6.2-5002C



LIFT WEB ASSEMBLY

6.2-5002B



CUSHION

6.2-5002D

Figure 2. Subassemblies, NC-3 (Sheet 1 of 4)

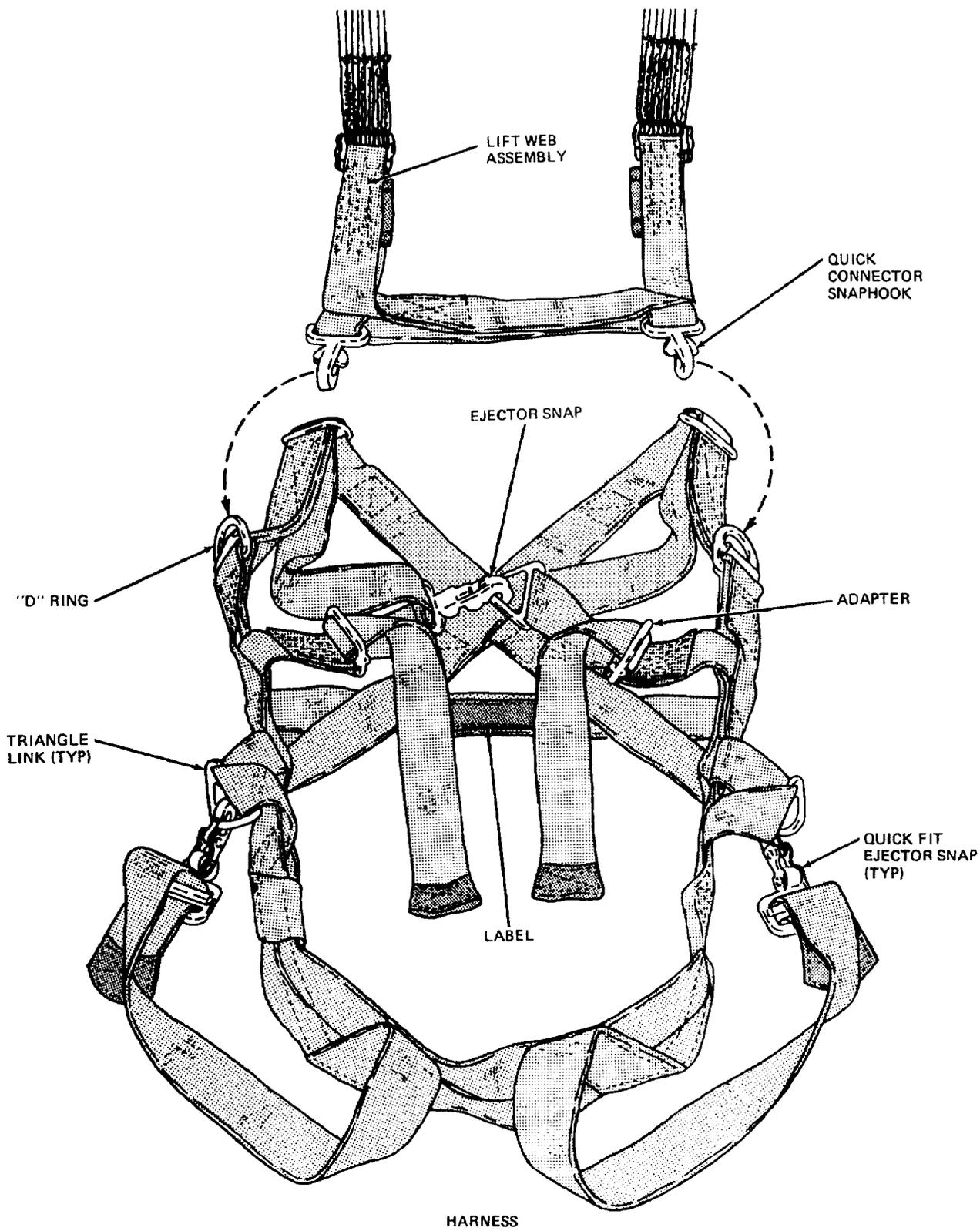


Figure 2. Subassemblies, NC-3 (Sheet 2 of 4)

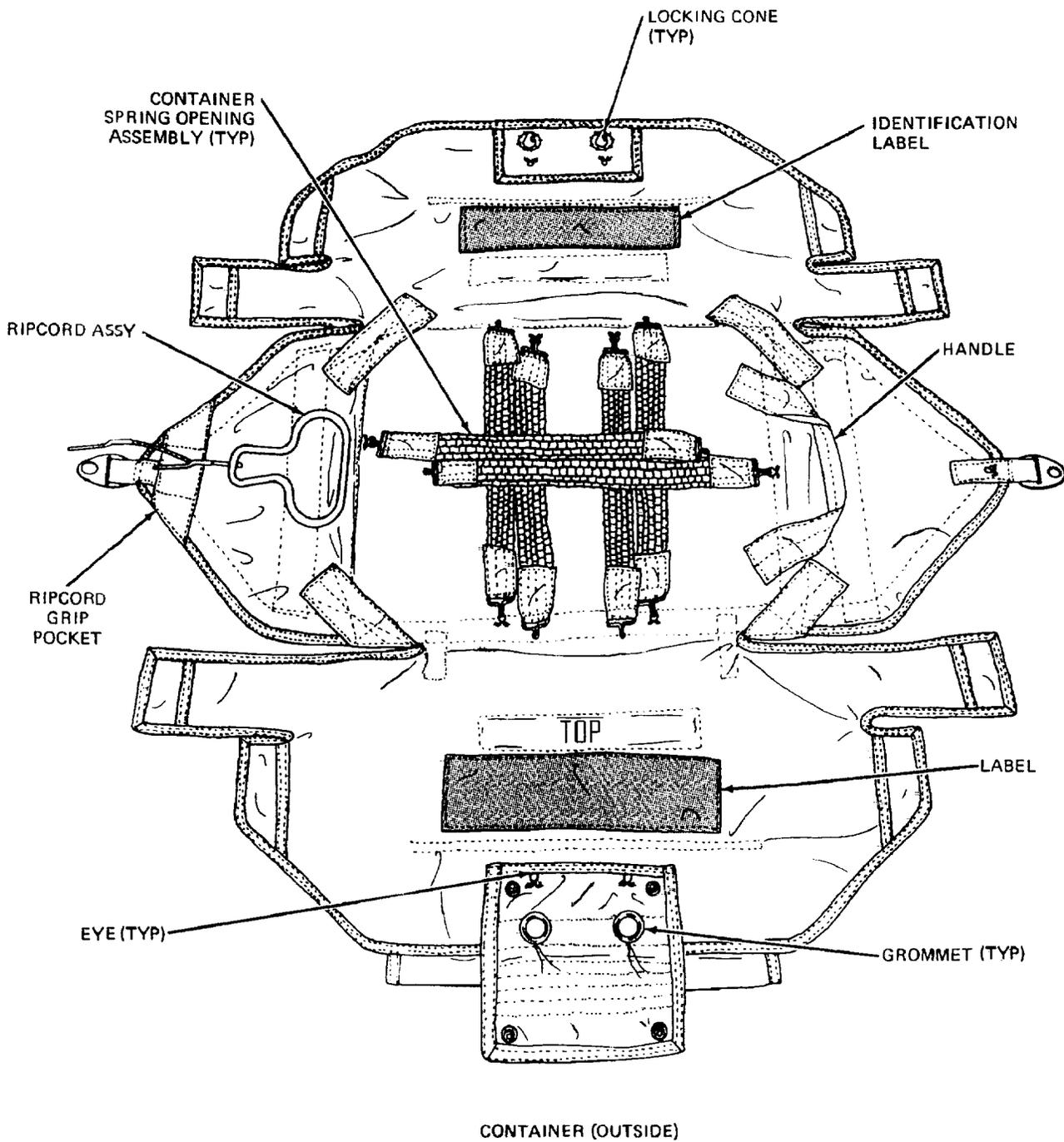


Figure 2. Subassemblies, NC-3 (Sheet 3 of 4)

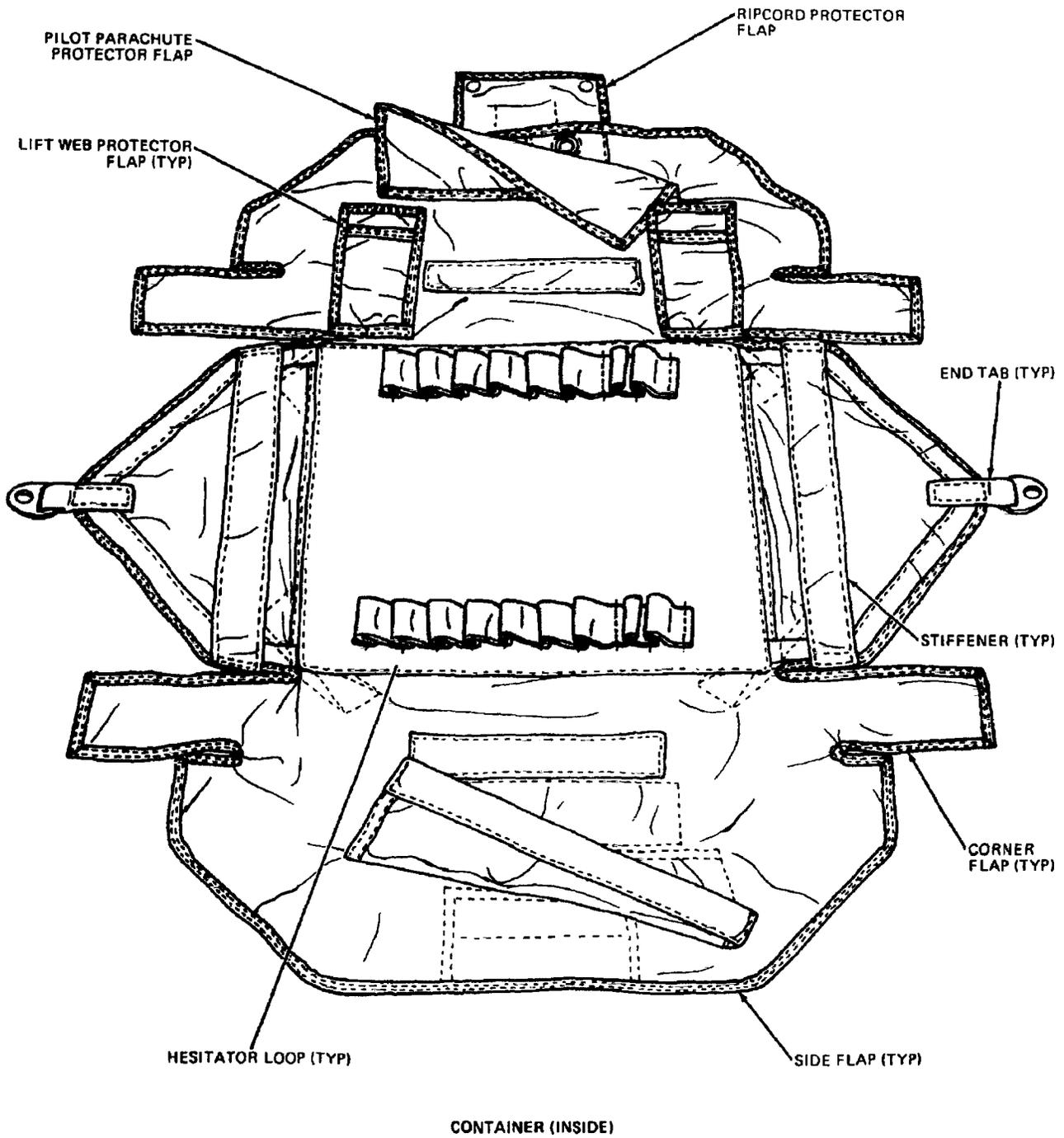


Figure 2. Subassemblies, NC-3 (Sheet 4 of 4)

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ORGANIZATIONAL MAINTENANCE
REPAIR PROCEDURES
NC-3 PERSONNEL PARACHUTE ASSEMBLY
PART NO. 580AS100-5 AND 580AS100-6

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Reference Material

Intermediate and Depot Maintenance, Common Repair Procedures	WP 004 00
Intermediate and Depot Maintenance, Packing Procedures, NC-3 Personnel Parachute Assembly	WP 010 02
Introduction, Organizational, Intermediate and Depot Maintenance with Illustrated Parts Breakdowns, Emergency Personnel and Drogue Parachute Systems	WP 002 00

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Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This Work Package (WP) contains instructions for organizational level repair to ensure that the parachute assembly remains in Ready-For-Issue (RFI) status.

b. Refer to WP 004 00 for common repairs.

c. When performing repairs detailed in this WP follow these guidelines:

(1) Review all applicable instructions prior to starting repair.

(2) Ensure that all necessary support equipment and materials required are available prior to starting repair.

(3) When required, remove enough material from it's source for immediate use only. Ensure that the material identification ticket remains with the source material at all times. Material that cannot be identified will not be used.

(4) To ensure conformity, all repair work shall be carefully inspected and compared to applicable instructions at completion of work.

(5) A Quality Assurance (QA) inspector shall examine the finished work.

2. HARNESS ASSEMBLY.**3. REPLACEMENT OF HARNESS ASSEMBLY.**

a. Inspect replacement harness per WP 010 02.

b. Mark date placed in-service on identification and service life label.

c. Lay out harness assembly on table so that a wearer would be face down on table with head toward canopy. Position back cushion underneath with cushion keepers released (Figure 1).

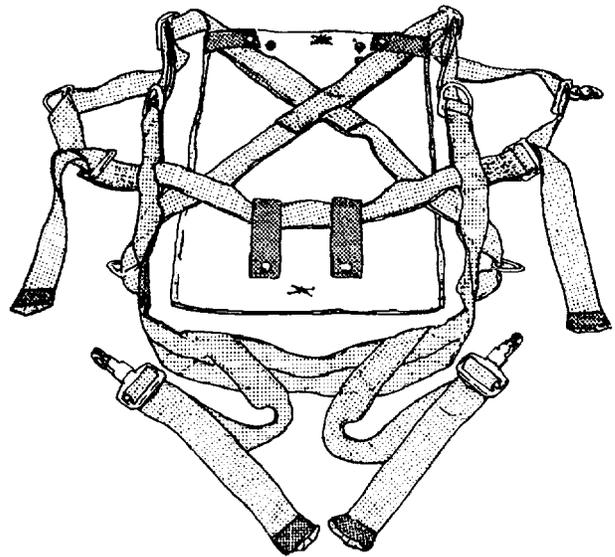
d. Secure diagonal backstraps under upper corner keepers and horizontal backstrap under two bottom center keepers.

e. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

4. REPLACEMENT OF CUSHION ASSEMBLY.

a. Inspect replacement cushion per WP 010 02.

b. Lay out harness assembly on table so that a wearer would be face down on table with head toward canopy. Position back cushion underneath with cushion keepers released (Figure 1).



6.2-5467

Figure 1. Replacement of Harness Assembly

c. Secure diagonal backstraps under upper corner keepers and horizontal backstrap under two bottom center keepers.

5. CONTAINER ASSEMBLY.**6. REPLACEMENT OF CONTAINER OPENING SPRING ASSEMBLY.**

a. Measure length of replacement spring assembly. Required length is $13 \frac{7}{8} \pm \frac{1}{4}$ -in. when measured from end of one hook to end of other hook with no tension applied.

b. Inspect spring assembly for broken springs, contamination, corrosion, cuts, fraying, bent or broken hooks, elasticity, and loose or broken stitching.

c. Attach hook end of spring opening assembly, without pull tab, to eyelet on container frame with hook facing down. Crimp hook to eyelet.

d. After ensuring that spring assembly is reeved between container and lift webs, attach opposite end of spring assembly to corresponding eyelet on container.

7. SURVIVAL KIT.

8. REPLACEMENT OF STANDARD SOFT PACK (SSP) COMBINATION CARRYING CASE AND EQUIPMENT CONTAINER.

a. Insert SSP combination carrying case and equipment container into SSP outer container, equipment end first and with shoulder straps facing packed parachute.

b. Pass vertical strap over handle on combination carrying case and equipment container, and fasten quick-disconnect shackle.

9. REPLACEMENT OF QUICK-CONNECTOR SNAPHOOK TIES/TACKING ON SSP OUTER-CONTAINER.

Materials Required

Specification or Part Number

Nomenclature

PIA-C-5040

Cord, Nylon, Type III

V-T-295

Thread, Nylon, Size 6, Type I or II, Class A

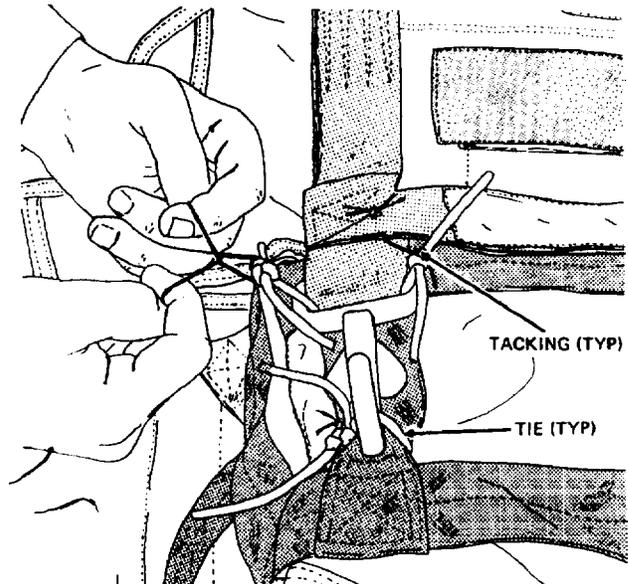
NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Cut a 10-in. length of nylon cord.

b. Pass cord under proper horizontal or vertical strap on outer container.

c. Pass cord thru side of snaphook or around hook, as applicable, tie off with a square knot (Figure 2).



6.2-5647

Figure 2. Replacement of Quick-Connector Snaphook Ties/Tackings on SSP Outer Container

d. Tack thru square knot on tie with one turn of size 6 thread, single and waxed; tie off.

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INTERMEDIATE AND DEPOT MAINTENANCE

PACKING PROCEDURES

NC-3 PERSONNEL PARACHUTE ASSEMBLY

PART NO. 580AS100-5 and 580AS100-6

List of Effective Work Package Pages

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Intermediate and Depot Maintenance, Common Repair Procedures	WP 004 00
Introduction, Organizational, Intermediate and Depot Maintenance with Illustrated Parts Breakdowns, Emergency Personnel and Drogue Parachute Systems	WP 002 00
Organizational, Intermediate and Depot Maintenance, Illustrated Parts Breakdown, NC-3 Personnel Parachute Assembly	WP 010 04
Organizational, Intermediate and Depot Maintenance, Parachute Loft Requirements/Administration	WP 003 00
Organizational, Intermediate and Depot Maintenance, Support Equipment	WP 005 00

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Record of Applicable Technical Directives

None

1. GENERAL.

a. Packing instructions are provided with the assumption that they will be carried out under ideal conditions in a parachute loft (WP 003 00). When a parachute assembly must be packed under unfavorable conditions, provisions must be made to protect it from possible damage and excessive humidity.

b. In no case shall the packing of a parachute assembly be interrupted after packing operation has been started. If the packing operation is interrupted, due to unforeseen circumstances, the parachute assembly shall be completely repacked per the instructions contained in this work package (WP).

c. Quality Assurance (QA) points have been included in the packing procedures. When a procedural step is followed by "(QA)" there is a quality assurance requirement. Witnessing of QA steps may be delayed by QA if their satisfactory completion is verified in later steps.

d. During packing procedures, packer shall be positioned on left side of packing table, and helper on right side when viewed from harness/risers end of table.

2. PRELIMINARY PROCEDURES.

Support Equipment Required

Part Number	Nomenclature
Refer to WP 005 00	Fid
11-1-3512	Small Line Separator
Refer to WP 005 00	Long Bar
Refer to WP 005 00	Packing Hook
Refer to WP 005 00	Ripcord Pin Lock
DPP-50	Scale, Spring
Refer to WP 005 00	Shot Bag (4)
Refer to WP 005 00	Temporary Locking Pins (2)

Materials Required

Specification or Part Number	Nomenclature
PIA-C-5040	Cord, Nylon, Type I or IA

a. Ensure that all support equipment and materials required are available prior to starting.

b. Inspect packing tools for nicks, burrs, or sharp edges which may cause damage to the parachute assembly.

c. Count and record number of packing tools.

d. Clean packing table.

3. LAYOUT OF RIGGED PARACHUTE ASSEMBLY.

a. Completely open parachute container and detach spring opening assemblies.

b. Remove canopy and suspension lines from container and stretch full length on a clean packing table.

c. Locate gore 28 (nameplate gore) and place uppermost in center of packing table.

d. Attach tension strap hook to canopy vent lines.

e. At skirt hem separate suspension lines into two equal groups with lines 1 thru 14 on packer's side and 15 thru 28 on helper's side. Grasping each group of lines, walk from skirt hem to connector links removing any dips or twists between the two groups.

f. Position container on packing table with inside facing up and ripcord pin protector flap turned away from canopy. Insert tensions hooks into connector links.

g. Turn container over so that inside faces packing table and side flap with locking cones faces away from canopy. Insert tension hooks into holes in packing table (Figure 1).

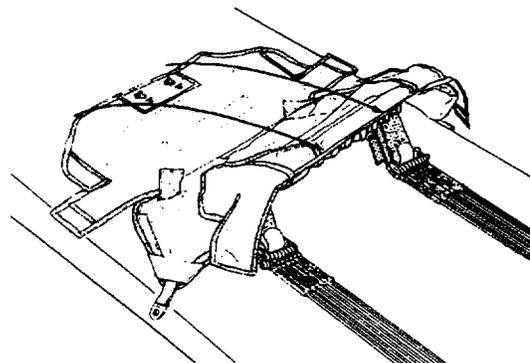


Figure 1. Layout of Rigged Container

6.2-6005

- h. Tension canopy using tension strap.
- i. Pull canopy vent collar below vent hem. Ensure that vent hem is even.
- j. Straighten vent hem if necessary.
- k. Pull vent collar back to original position.

4. INSPECTION (SPECIAL).

- a. Maximum scheduled repack cycle is 672 days.

5. SERVICE LIFE CHECK AND CONFIGURATION UPDATING.

NOTE

Unless otherwise noted, parachute component life shall start on the month of the date of manufacture and expire on the last day of that month.

- a. All internal service life components, including cartridges, shall be replaced if service life expires prior to the next repack cycle. Repack cycles may be shortened to correspond to the first component that is expiring prior to the next inspection cycle. An external overage component (i.e. Parachute Harness Sensing Release Unit Cartridge) can be replaced without a parachute repack.

NOTE

Upon initiation of any Quality Deficiency Report (QDR), contact the In-Service Support Team at NAWCWD, China Lake, CA.

- b. When replacing an external overage component without a parachute repack, draw a single red line through any information pertaining to that component on the Parachute Record (OPNAV 4790/101). The replacement component will be annotated on the next available line. The QA who witnessed the task shall apply the QA stamp to the right of the entry and complete the VIDS/MAF (OPNAV 4790/60).

- c. A parachute assembly may be opened to permit compliance with a Technical Directive. After completion of directive, the parachute assembly repack cycle may be re-based if all parachute components have the necessary life available or may be returned with the original repack date in order to keep it aligned with the actual aircraft inspection cycle.

- d. When a component reaches the service/total life limit, it shall be returned to supply for disposition.

- e. If parts received from supply are lacking a date of manufacture and are new in manufacturer's packaging, they may be used for one complete repack cycle, then removed. Place "No Date of Manufacture" in the Date of Manufacture's block on the Parachute Record (OPNAV 4790/101). Submission of a Quality Deficiency Report (QDR) shall follow each occurrence.

- f. Components without a service/total life shall be removed from service if the components do not pass inspection, as determined by Quality Assurance Representative (QAR) or Collateral Duty Inspector (CDI).

- g. Check date placed in-service and date of manufacture on each parachute part for service/total life as follows:

Nomenclature	Service Life (Yr)	Total Life (Yr)
Canopy Assembly	None	15
Cross-Connector Strap	(See Note)	(See Note)
Harness Assembly	None	15
Lift Web Assembly	None	15
Pilot Parachute		15
Pilot Parachute Connector Strap		15

Note: Replace at Canopy Assembly replacement.

- (1) Markings for completeness, legibility, and agreement with information on Parachute Record.

- (2) Compare configuration of parachute assembly to WP 010 04 Record of Applicable Technical Directives, and Illustrated Parts Breakdown.

6. SUSPENSION LINE CONTINUITY CHECK.

- a. Grasp line 1 on left side of gore 28 and raise line to height sufficient to ensure that line is free of dips and twists from skirt hem to connector links. Continue procedure with lines 2 thru 14. (QA)

- b. Use same procedure as in task 1 on right side of gore 28 except that packer shall start with line 28 and work thru line 15 (Figure 2).

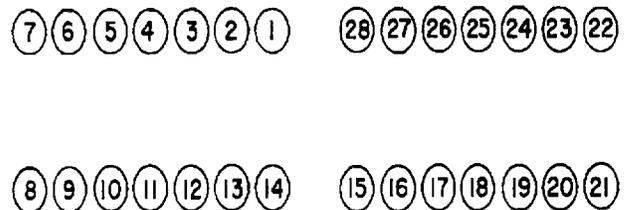


Figure 2. Arrangement and Orientation of Suspension Lines on Connector Links

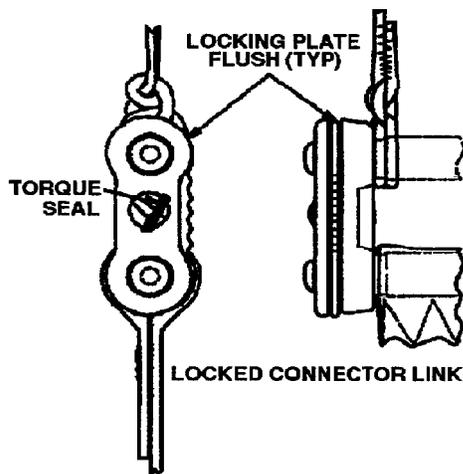
7. CANOPY ASSEMBLY.

- a. Canopy skirt hem, fabric surface, diagonal seams, radical seams, vent hem, water deflation pockets, for cuts, holes, ruptures, contamination, deterioration, and loose or broken stitching.
- b. Suspension lines and canopy apex lines for fraying, ruptures, protruding inner core lines, burns, contamination, and presence of twists.
- c. Attachment of suspension line at skirt hem for security and condition of V-tabs.
- d. Attachment of four-line release anchor loops to suspension lines 3 and 26.
- e. Attachment of four-line release lanyards to anchor loops on suspension lines 3 and 26.
- f. Four-line release system for proper rigging and security of tacking WP 004 00. (QA)

NOTE

For Double "L" Connector Link, refer to WP 010 03 for disassembly, assembly, and inspection instructions.

- g. Connector links for corrosion, distortion, nicks, burrs, sharp edges, and cracks.
- h. Connector links for defective yoke and plate assemblies. Maximum of 1/32-in. play allowable in plate.
- i. Torque seal unbroken with yoke and plate assemblies installed with knurled portion facing up and screwheads facing outboard (Figure 3). (QA)



6.2-1101

Figure 3. Torque Seal Unbroken

8. PILOT PARACHUTE AND CONNECTOR STRAP.

- a. Fabric surfaces, and seams for cuts, tears, burns, fraying, and loose or broken stitching.
- b. Vane material for cuts, tears, burns, fraying, and deterioration.
- c. Seam area at crown for seam separation.
- d. Spring assembly for distortion.
- e. Loose or broken tackings (4 places) at bottom of coil spring.
- f. Connector strap for cuts, fraying, burns, loose or broken stitching.
- g. Connector strap for proper attachment at apex lines and pilot parachute loop.
- h. Connector strap for loose or broken tacking of lark's head knot at pilot parachute loop.

9. HARNESS/BACK CUSHION.

- a. Webbing for contamination, rust at points of contact with metal parts, cuts, twists, fading, wear, fraying, burns, abrasions, and loose or broken stitching.
- b. Elastic keepers for condition, number (4) and proper location.
- c. D-rings and triangle links for damage, corrosion, and security of attachment.
- d. Ejector snaps and adapters for damage, corrosion, and security of attachment, and ease of operation.
- e. Back cushion for cuts, tears, burns, dirt or oil, loose or broken stitching, and missing or defective keepers and snap fasteners.
- f. Back cushion for proper attachment to harness.

10. LIFT WEB ASSEMBLY.

- a. Webbing for contamination, rust at points of contact with metal parts, cuts, twists, fading, wear, fraying, burns, abrasions, and loose or broken tackings and stitching.
- b. Four-line release flute for wear and proper attachment.

- c. Quick-connector snaphooks for broken springs, corrosion, pitting, dents, and sharp edges.
- d. Proper tacking of snaphooks to container.
- e. Loose or broken four-line release tackings.

11. CONTAINER ASSEMBLY.

- a. Grommets, cones, end tabs fasteners for security of attachment, cracks, corrosion, nicks, and gouges.
- b. Snap fasteners for proper operation.
- c. Fabric areas and hesitator loops for seam separations, loose or broken stitching, cuts, tears, contamination, and deterioration.
- d. Spring opening assemblies for broken springs, contamination, corrosion, cuts, fraying, bent or broken hooks, elasticity, and loose or broken stitching.
- e. Spring opening eyes (12) for security of attachment.
- f. Stiffeners for distortion and breaks.

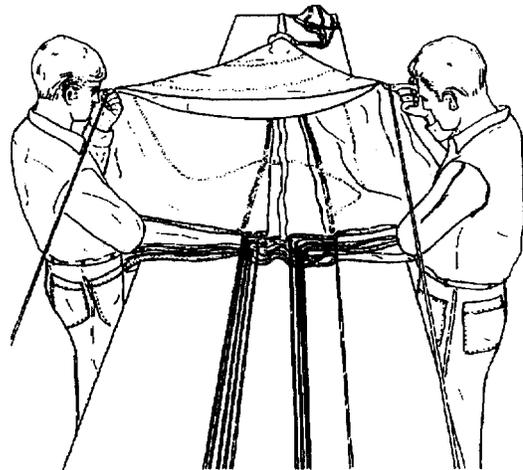
12. RIPCORD ASSEMBLY.

- a. Cable for corrosion, bends, fraying, broken strands and security of attachment of swaged ball.
- b. Locking pins for bends, dents, cracks, security of attachment to cable, and corrosion.
- c. Grip for bends, dents, cracks, and corrosion.

13. PACKING.

14. WHIPPING AND FOLDING OF CANOPY.

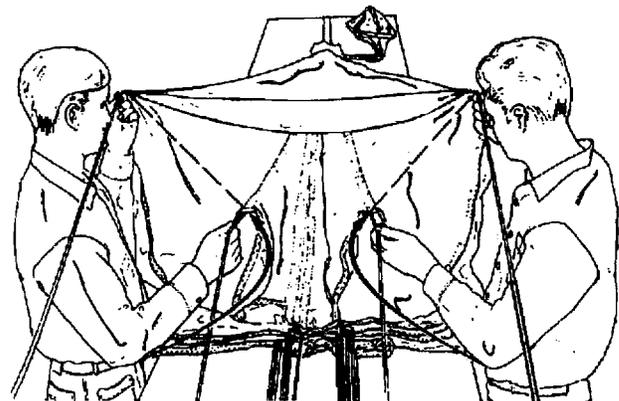
- a. Packer and helper shall lift the suspension line on each side of nameplate gore up and out. The skirt hem between lines shall be taut so that canopy apex can be seen on inside. While holding suspension lines up, each man shall whip the gore hanging from line outwards to prepare canopy for folding (Figure 4).



6.2-5184

Figure 4. Lift Suspension Line on Each Side of Nameplate

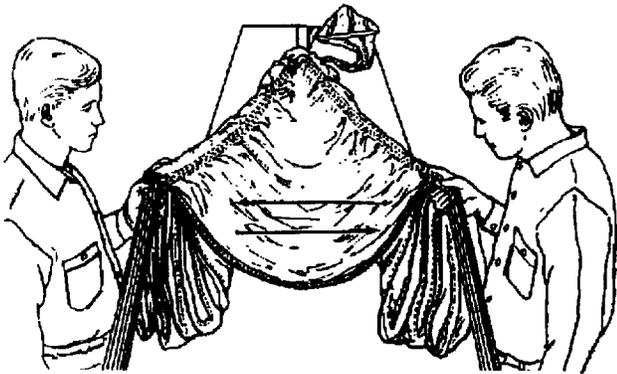
- b. Draw next suspension line upwards to suspension line in hand, using a rapid circular motion (Figure 5).



6.2-5184A

Figure 5. Draw Suspension Lines Upward

- c. Continue whipping operation for all gores. Ensure radial seams are not overlapped by gore material. Move whipped gores rapidly back and forth across packing table (Figure 6).

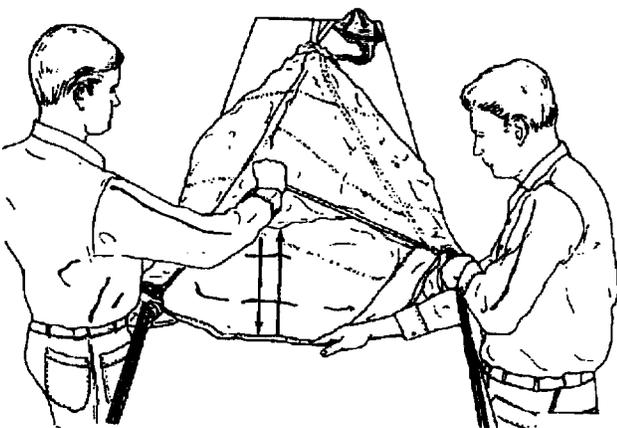


6.2-5184B

Figure 6. Continue Whipping Operation

d. Two groups of suspension lines shall be stretched to the edges of packing table with folded gores hanging over sides. Packer and helper shall grasp all folds at outer edges on skirt hem and hold suspension line groups at edges of packing table. Packer and helper shall simultaneously move folds up and down rapidly, in a whipping motion.

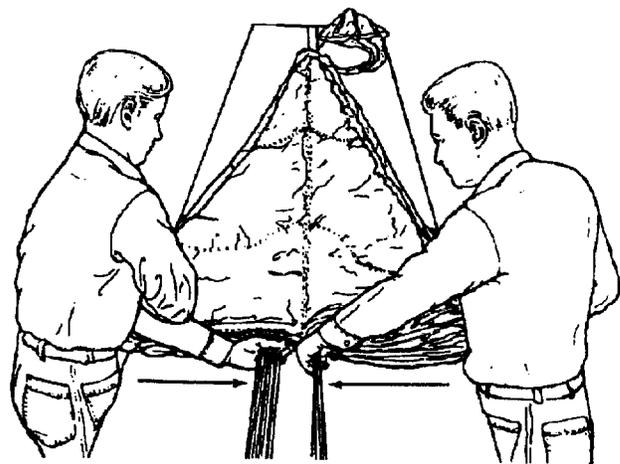
e. Packer shall flap top gore up and down at skirt hem center as helper holds bottom gore at skirt hem center (Figure 7).



6.2-5184C

Figure 7. Packer Shall Flap Top Gore Up and Down

f. On signal, packer and helper shall draw their respective gores, at skirt hem centers, towards table edge while at same time bringing suspension line groups to center of packing table (Figure 8).

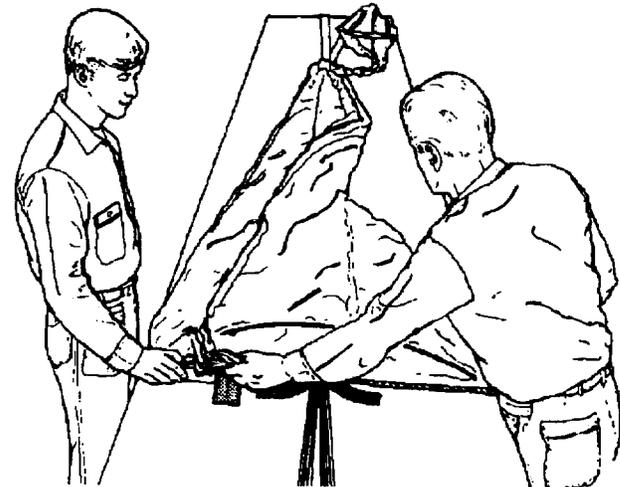


6.2-5185

Figure 8. On Signal Draw Respective Gores at Center

g. Insert suspension line groups into their respective slot in small line separator and place shot bag on lines. Packer shall place second shot bag across skirt hem on left side of suspension lines.

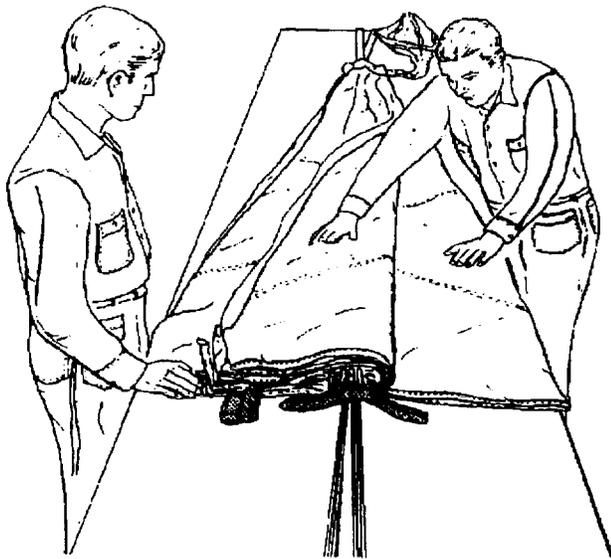
h. Helper shall rotate all gores as a group, except bottom gore, from helper's side top packer's side of packing table (Figure 9).



6.2-5185A

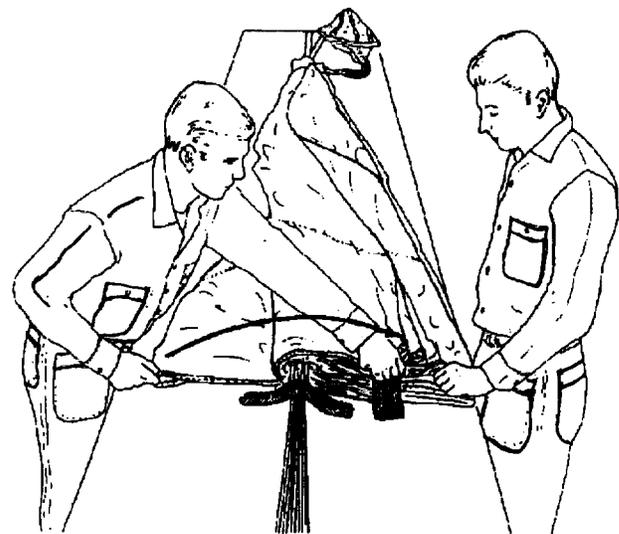
Figure 9. Rotate All Gores as a Group

i. Helper shall straighten and smooth bottom gore on helper's side of packing table thru out its length to apex (Figure 10).



6.2-5185B

Figure 10. Straighten and Smooth Bottom Gore

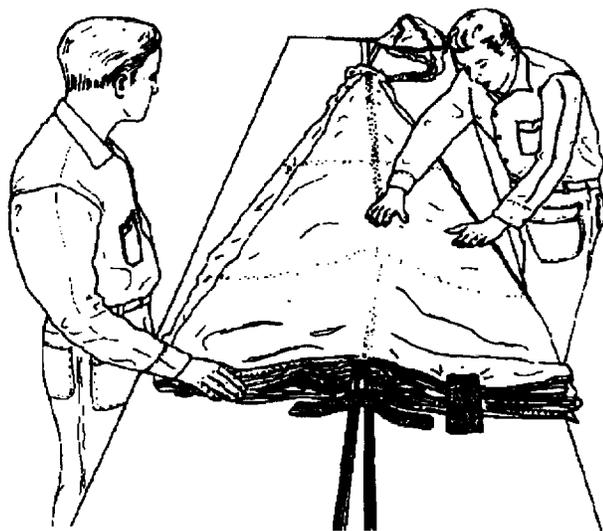


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Figure 12. Rotate all Gores as a Group Except Bottom Gore

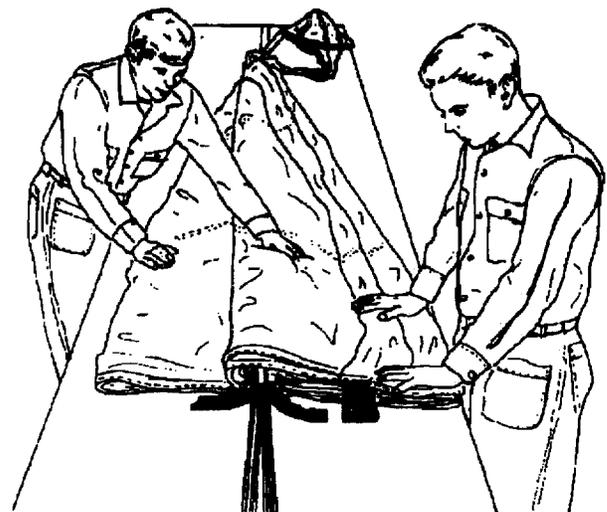
j. Return gores above shot bag on helper's side of packing table to packer's side one at a time. Helper shall straighten and smooth each gore and place the shot bag on skirt hem (Figure 11).

l. Packer shall straighten and smooth bottom gore on packer's side of packing table throughout its length to apex (Figure 13).



6.2-5185C

Figure 11. Return Gores Above Shot Bag

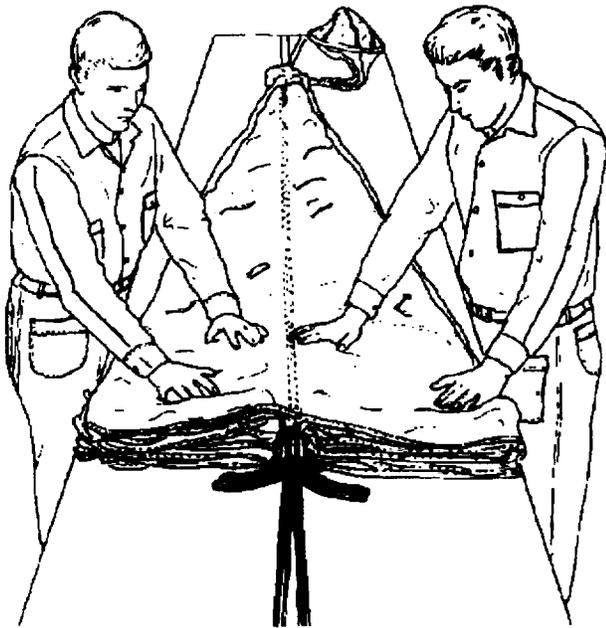


6.2-5186A

Figure 13. Packer Shall Straighten and Smooth Bottom Gore

k. Packer shall rotate all gores as a group except bottom gore, from packer's side to helper's side of packing table (Figure 12).

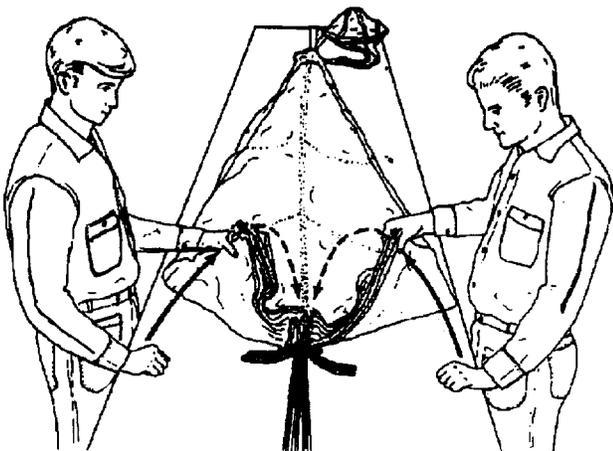
m. Helper shall return folded gores above shot bag to packer's side of packing table. Packer shall straighten and smooth each gore. Remove shot bag from canopy (Figure 14).



6.2-5186B

Figure 14. Helper Shall Return Folded Gores Above Shot Bag

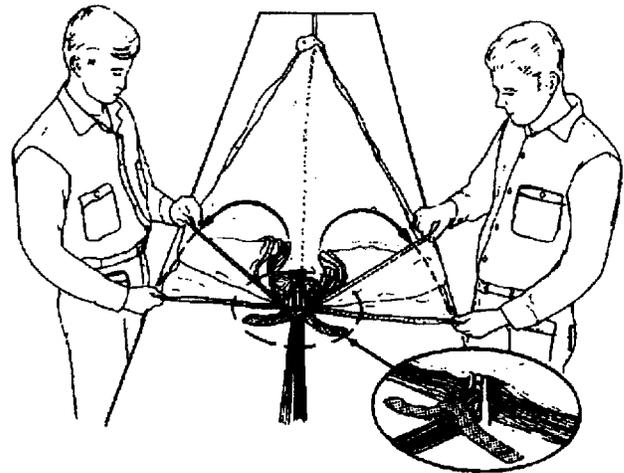
n. Packer and helper shall grasp skirt hem at midsections of gores and rotate towards suspension lines (Figure 15).



6.2-5186C

Figure 15. Packer and Helper Shall Grasp Skirt Hem at Midsections of Gores

o. Packer and helper shall grasp the bottommost gore fold and extend outwards. Aligning edge of the skirt hem and suspension line V-tab reinforcements. Remaining 13 gores shall be aligned in a similar manner. Ensure that all V-tab reinforcements face same direction and that 14 gores have been counted on each side (Figure 16).

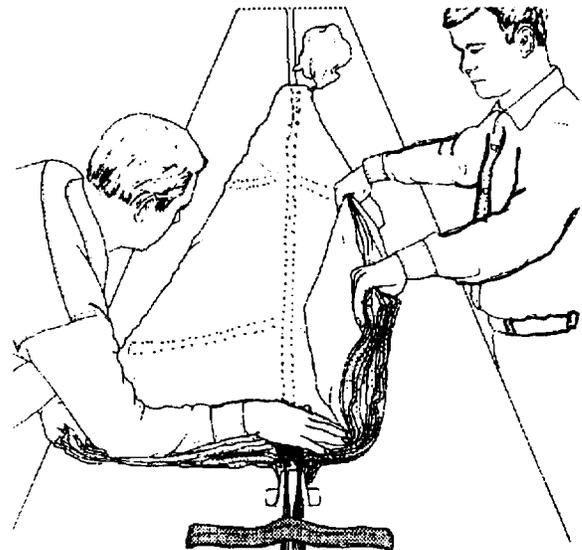


VIEW AFTER COUNTING AND ALIGNMENT

6.2-6006

Figure 16. Packer and Helper Shall Grasp Bottommost Gore

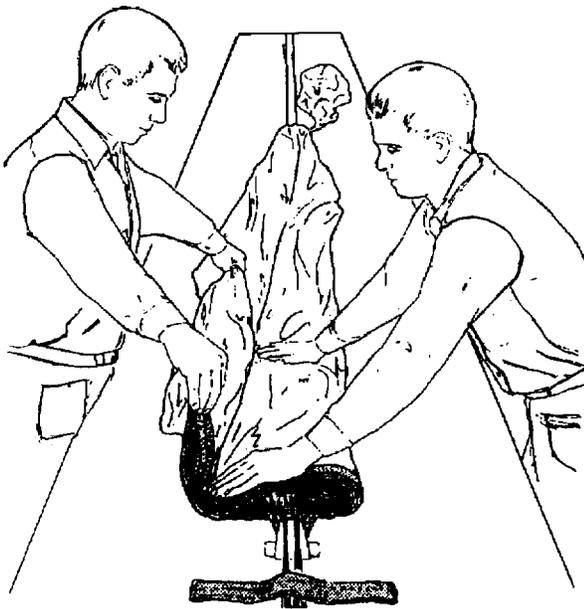
p. Canopy shall be folded in thirds by packer placing his hand on helper's side of skirt hem 6-in. from suspension lines. Helper shall rotate gores over center of canopy to left side of packing table (Figure 17).



6.2-6006A

Figure 17. Canopy Shall be Folded in Thirds

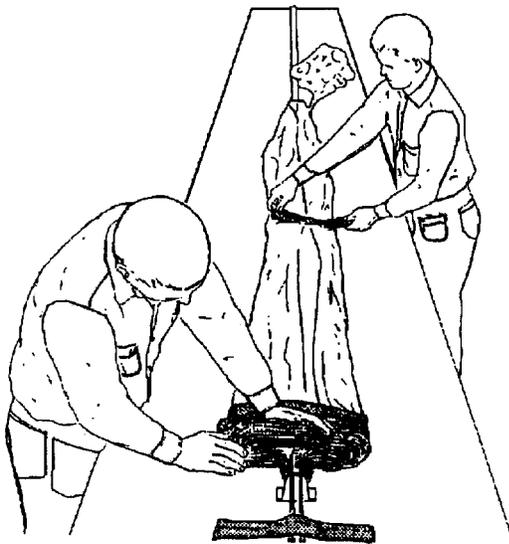
q. Helper shall place his hand on packer's side of skirt hem 6-in. from suspension lines. Packer shall rotate gores over center of canopy to right side of packing table. The two groups of folded gores shall overlap. Note that canopy cannot be folded throughout entire length but breaks two-thirds the distance to apex (Figure 18).



6.2-6006B

Figure 18. Helper shall Place His Hand on Packer's Side of Skirt Hem

r. Place a shot bag slightly behind skirt hem and another at middle of canopy. Place pilot parachute on top of canopy (Figure 19).



6.2-6006C

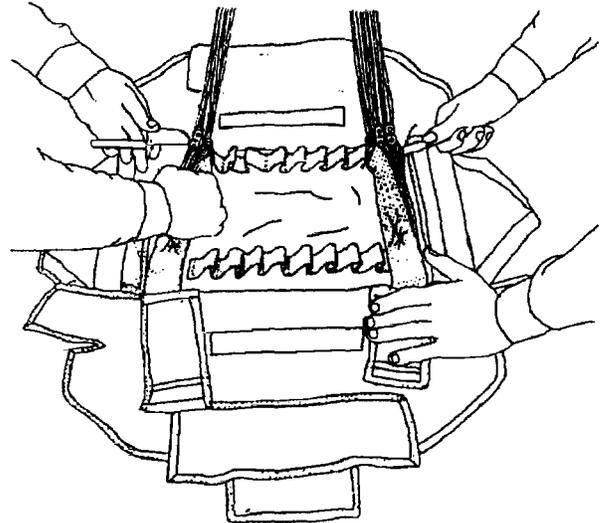
Figure 19. Placement of Shot Bag

15. STOWAGE OF SUSPENSION LINES.

NOTE

During stowing operation, ensure suspension lines do not become loose, rotated, or left out of hesita-tor loops.

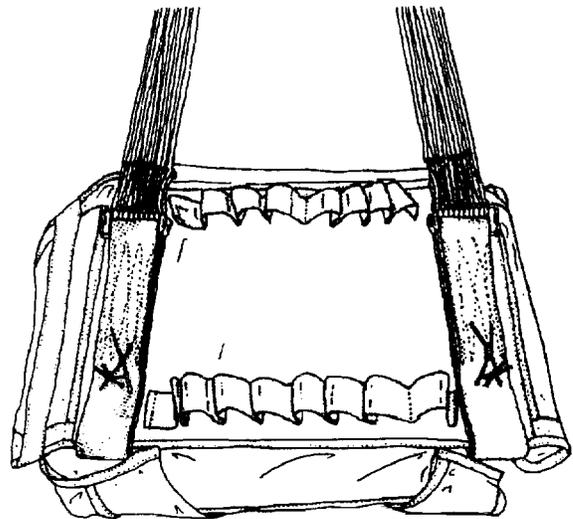
- a. Remove tension strap hook from canopy vent lines.
- b. Turn container over so that inside faces up, ripcord pin protector flap is turned away from canopy, and lift webs are positioned on top of container. Remove tension hooks from connector links, then remove hooks from packing table (Figure 20).



6.2-6007A

Figure 20. Inside Face Up

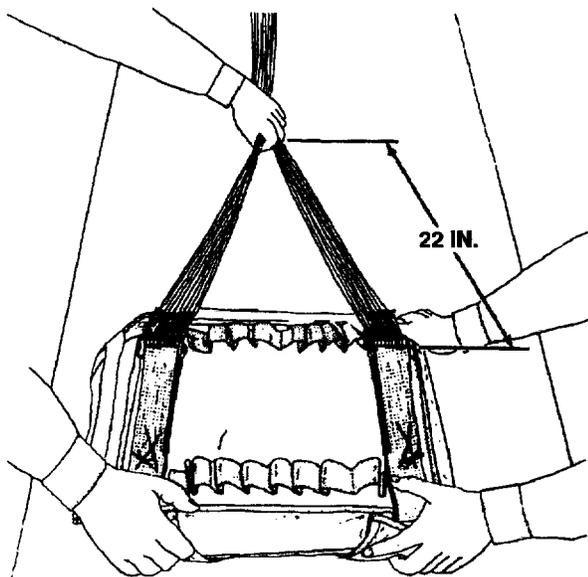
- c. Fold side and end flaps under container (Figure 21).



6.2-6007B

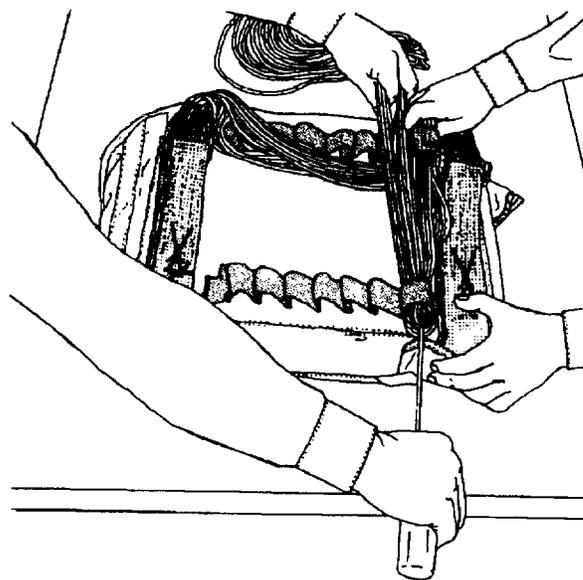
Figure 21. Fold Flaps Under Container

- d. Packer shall grasp both groups of suspension lines 22-in. from connector links to make first bight. Ensure that there are equal amounts of suspension line in both groups, from connector links to hand. Canopy shall be drawn along packing table only in enough lengths to permit each bight to be performed (Figure 22).



6.2-6007C

Figure 22. Grasp Both Groups of Suspension Lines

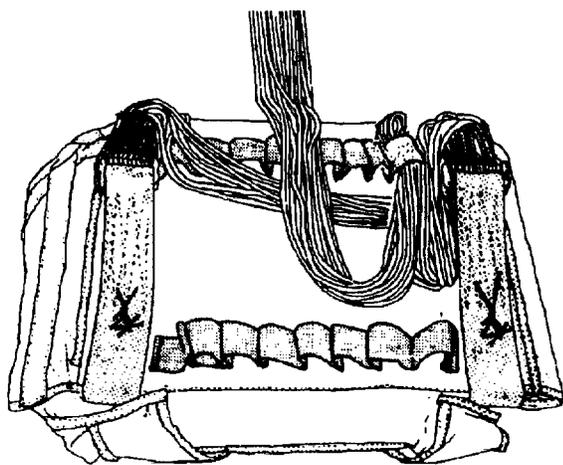


6.2-6008A

Figure 24. Draw Suspension Lines Toward Container

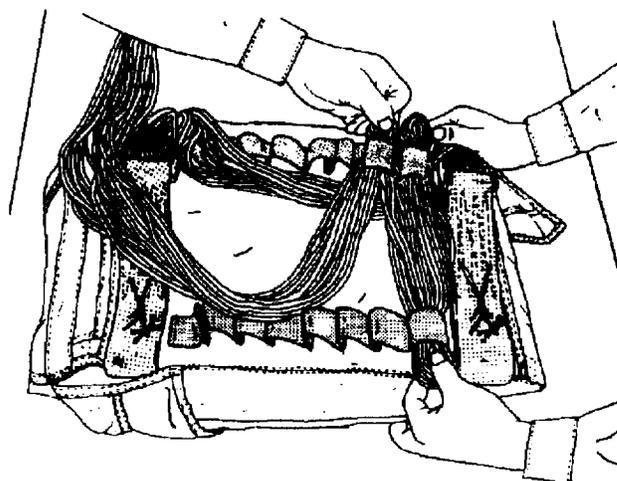
e. Packer shall form a bight in suspension lines at hesitator loop closest to canopy and helper. Packer shall draw bight thru hesitator loop but not beyond container frame (Figure 23).

g. The suspension line slack between connector links and first stow shall be arranged to fill voids in container corners. Packer shall form a third bight in suspension lines at hesitator loop closest to canopy at helper's side. Packer shall draw bight thru, but not beyond container frame (Figure 25).



6.2-6007D

Figure 23. Form a Bight in Suspension Lines



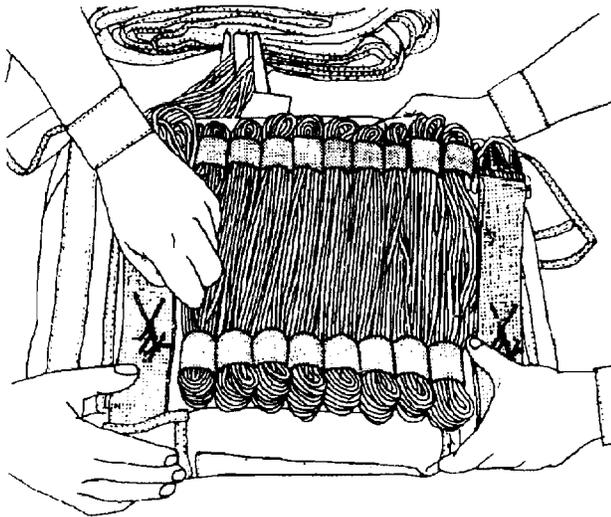
6.2-6008B

Figure 25. Slack Between Connector Links and First Stow

f. Packer shall draw suspension lines and folded canopy towards container to form second bight at the hesitator loop farthest from canopy and nearest to helper. Packer shall draw bight thru hesitator loop, but not beyond container frame (Figure 24).

h. Fourth bight is formed in same manner as in previous steps. Bight pulled thru hesitator loop next to second stow.

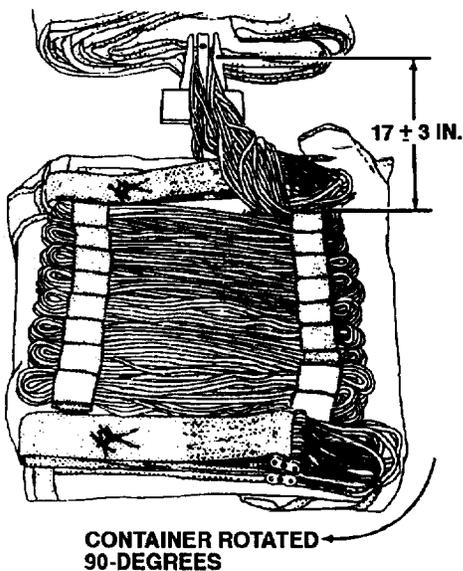
i. Continue stowing suspension lines in hesitator loops. As each stow is completed, ensure suspension lines are not rotated or loose and that there are no suspension lines left out of hesitator loops. Stowed bights shall not extend beyond container frame. Straighten all hesitator loops using temporary locking pin (Figure 26).



6.2-6008C

Figure 26. Continue Stowing Suspension Lines

j. When suspension lines are stowed in all hesitator loops, there shall be 17 ± 3 -in. between last stow and canopy skirt hem (Figure 27). (QA)



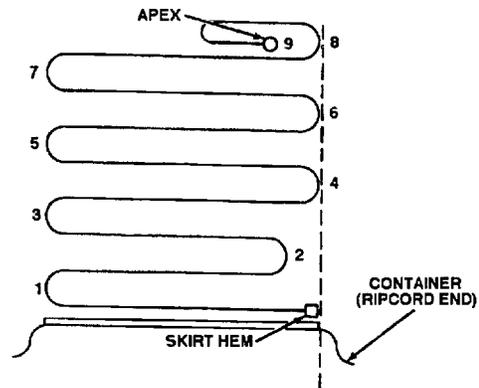
6.2-6008D

Figure 27. Checking Distance Between Last Stow and Canopy Skirt Hem

16. STOWAGE OF CANOPY.

a. Pull side and end flaps out from under parachute container. Place lift web protector flaps on top of lift webs. Remove shot bags from canopy.

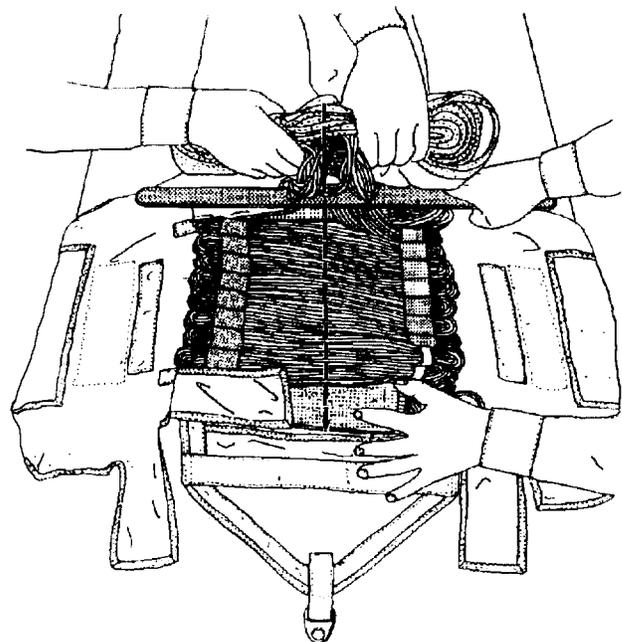
b. Nine folds shall be made when stowing canopy. Use the following illustration as a guide while stowing canopy (Figure 28).



6.2-5219

Figure 28. Alignment of Folds

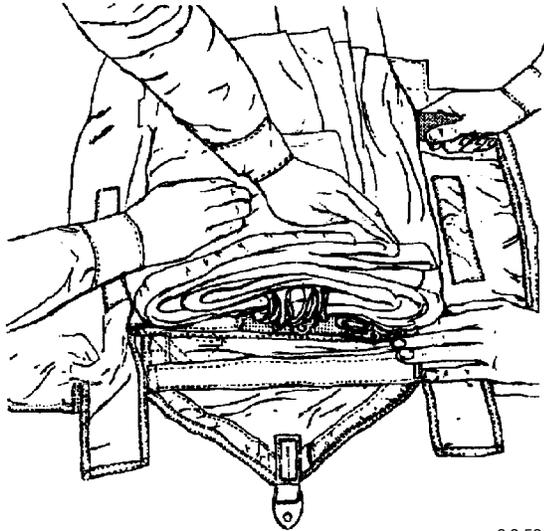
c. Remove small line separator. Helper shall place long bar over suspension lines, parallel with upper container edge. Packer shall grasp canopy skirt hem on each side of suspension lines and draw canopy across container (Figure 29).



6.2-5219B

Figure 29. Removal of Small Line Separator

d. Skirt hem shall be aligned with bottom container edge. Allow folded canopy to extend 2-in. over sides of container (Figure 30).



6.2-5219A

Figure 30. Align Skirt Hem with Bottom of Container

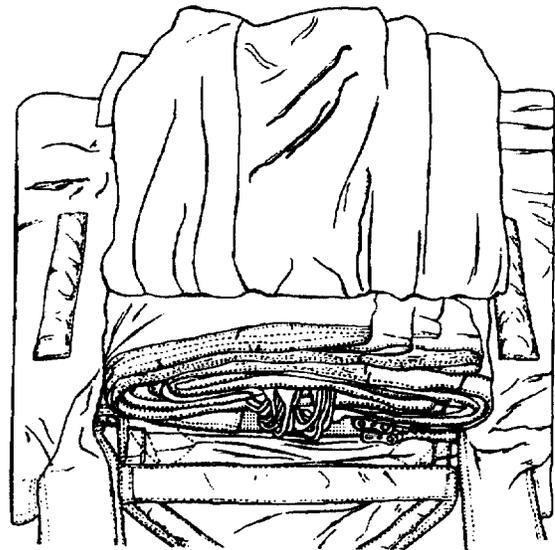
e. To make first and second folds, helper shall remove long bar from between canopy and container and place it on top of canopy, parallel with upper container edge. Packer shall grasp canopy one container length from long bar and draw it across container (Figure 31).



6.2-5219C

Figure 31. Make First and Second Folds

f. Second fold shall be positioned slightly behind skirt hem. Sides of canopy shall extend 2-in. over sides of container (Figure 32).



6.2-6009

Figure 32. Position Second Fold Behind Skirt Hem

g. To make third and fourth folds, helper shall use long bar in same manner as with first and second folds. Fourth fold is extended to align with skirt hem.

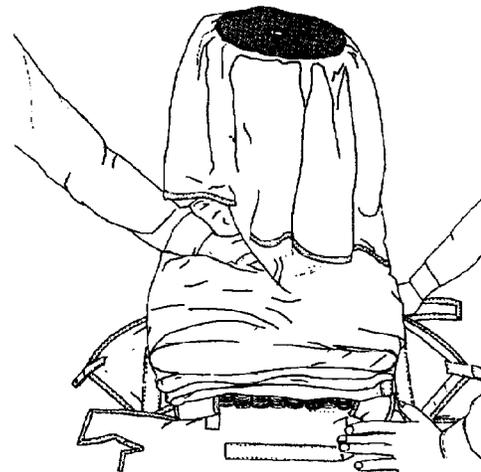
h. Continue accordion folding remainder of canopy into container, maintaining 2-in. overlap on sides of container. As apex of canopy is drawn close to container, pilot parachute shall be placed back onto packing table.

i. When insufficient canopy remains to continue folding operation, canopy shall be folded under about 9-in. from apex. Folded under portion of canopy shall be positioned on top of canopy to form uppermost fold (Figure 33).



6.2-6009A

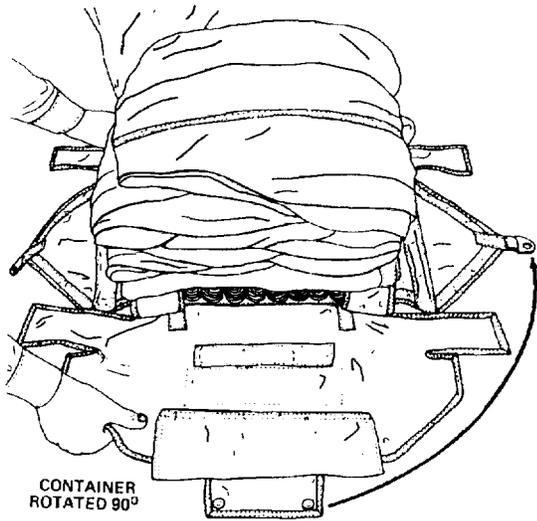
Figure 33. Fold Canopy Under 9-in.



6.2-5221

Figure 35. Position Pilot Parachute

j. Adjust canopy, as required, to obtain neat and square folds. Rotate container 90-degrees counter-clockwise (Figure 34).



CONTAINER ROTATED 90°

6.2-6009B

Figure 34. Adjust Canopy

17. CLOSING OF CONTAINER.

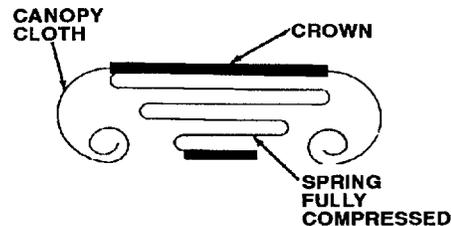
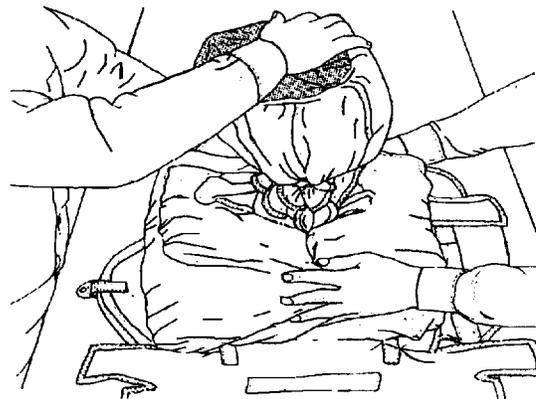
a. Ensure pilot parachute connector strap is free of entanglements

b. Position pilot parachute on top of folded canopy with bridle eye in center (Figure 35).

CAUTION

Ensure that pilot parachute cloth is not twisted around or entangled in compressed pilot parachute spring.

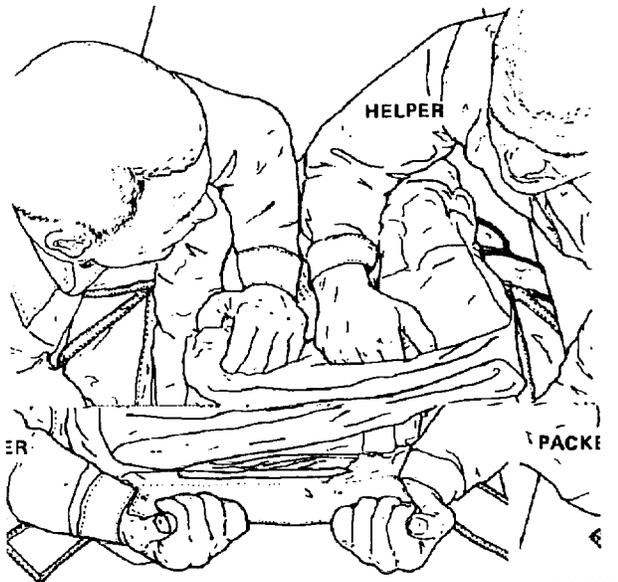
c. Gradually compress pilot parachute fully on top of canopy. Roll pilot parachute cloth under outer edge of crown. Check folding of canopy and proper position of pilot parachute (Figure 36). (QA)



6.2-5221A

Figure 36. Gradually Compress Pilot Parachute

d. Packer and helper shall pull pilot parachute protector flap on side flap with locking cones over canopy while holding pilot parachute compressed (Figure 37).

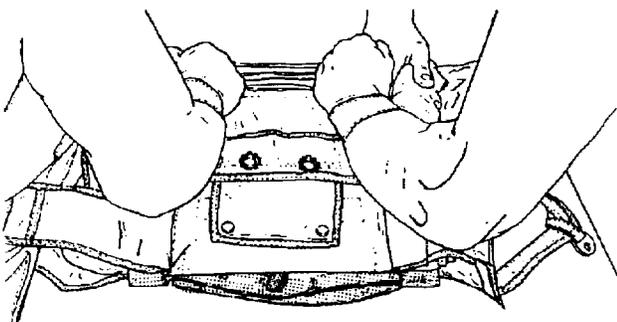


6.2-5222

Figure 37. Pull Pilot Parachute Protector Flap with Cones Over Canopy

e. The protector flap on side flap with locking cones shall be held in place.

f. Pull pilot parachute protector flap on side flap with grommets over canopy and place on top of protector flap from opposite side. Keep canopy movement to a minimum (Figure 38).

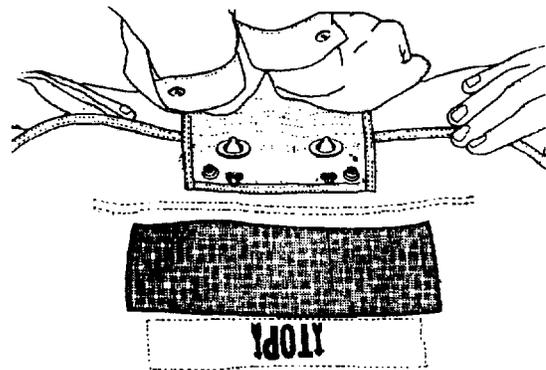


6.2-5222A

Figure 38. Pull Pilot Parachute Protector Flap with Grommets Over Canopy

g. Pull side flap with locking cones over pilot parachute protector flap and hold in place.

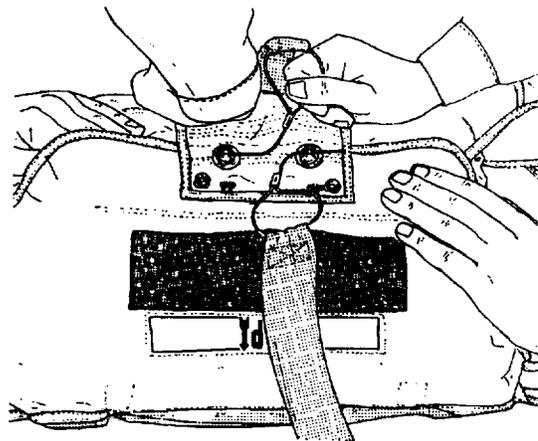
h. Pull side flaps with grommets over side flap with locking cones and place grommets over locking cones (Figure 39).



6.2-5222B

Figure 39. Pull Flap With Locking Grommets Over Locking Cones

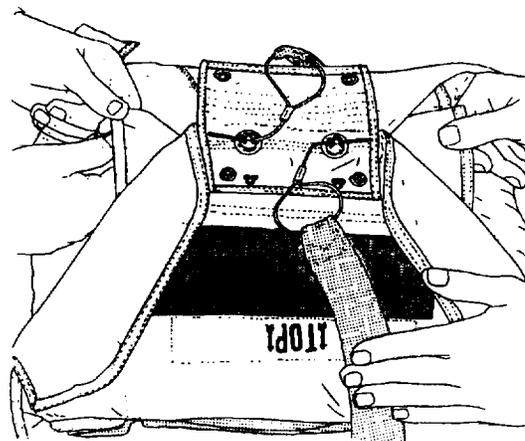
i. Insert temporary locking pins into locking cones. Note direction of locking pins (Figure 40).



6.2-5222C

Figure 40. Insert Temporary Locking Pins

j. Straighten pilot parachute protector flaps and ensure they are properly overlapped. Arrange canopy folds at each end of container to obtain neat, square corners (Figure 41).



6.2-5223

Figure 41. Straighten Pilot Parachute Protector Flaps

k. Helper shall pull corner flaps together on ripcord handle pocket side of container, and packer shall push down on side flaps (Figure 42).

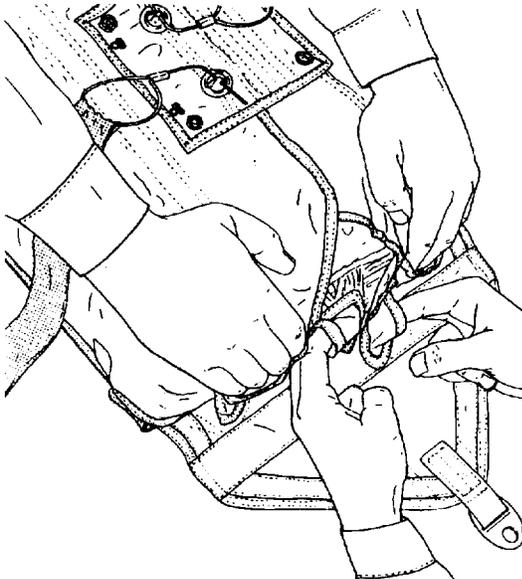


Figure 42. Pull Flap Together

6.2-5223A

l. Packer shall hold side and corner flaps together with fingers in pockets. Helper shall pull end flap over top of container placing fastener tab over cone (Figure 43).

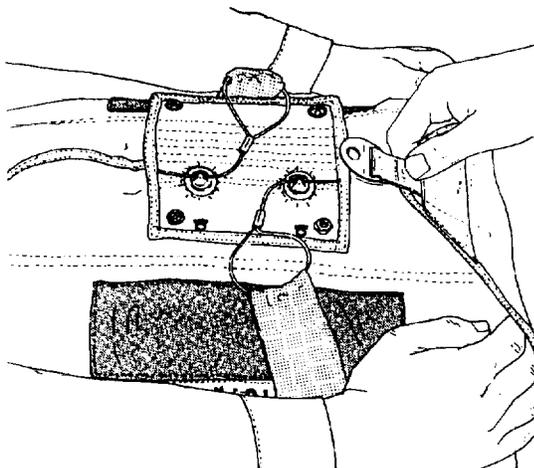
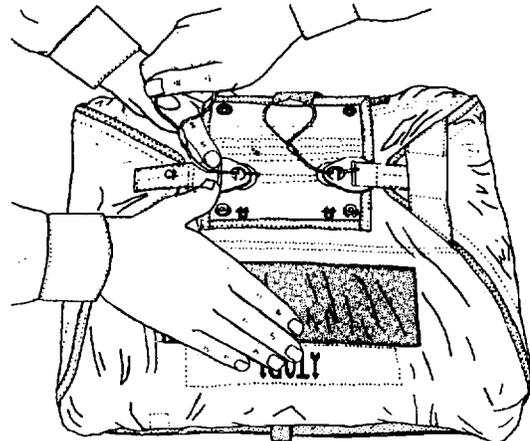


Figure 43. Packer Hold Side and Corner Flaps

6.2-5223B

m. Packer shall hold fastener tab over locking cone as helper removes temporary locking pin. Helper shall then re-insert temporary locking pin from inboard side of locking

cone, securing metal end tab in place. Opposite end flap is closed and secured in same manner, inserting temporary locking pin from outboard side of locking cone. Ensure temporary locking pins are inserted properly (Figure 44).



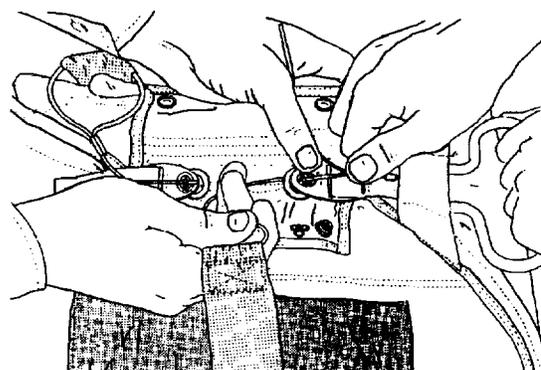
6.2-5223C

Figure 44. Hold Fastener Tab Over Locking Cones

WARNING

Use of the ripcord pin(s) as an alignment aid during installation may cause bending of pin(s) and result in excessive pull forces.

n. Partially insert ripcord handle (bend facing up) into ripcord handle pocket. Packer shall carefully remove temporary locking pin from locking cone nearest ripcord pocket. Helper, at same time, shall insert top ripcord pin into locking cone, inserting ripcord handle in elastic ripcord pocket (Figure 45).



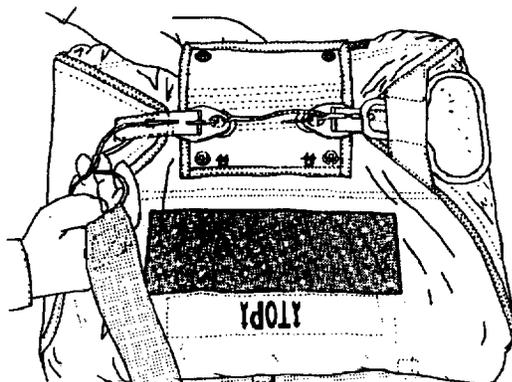
6.2-5224

Figure 45. Partially Insert Ripcord Handle

WARNING

Ripcord pins must be centered in locking cones.

o. Remove temporary locking pin from second locking cone and insert bottom ripcord pin in same manner as top ripcord pin, inserting ripcord handle in elastic ripcord pocket (Figure 46).



6.2-5224A

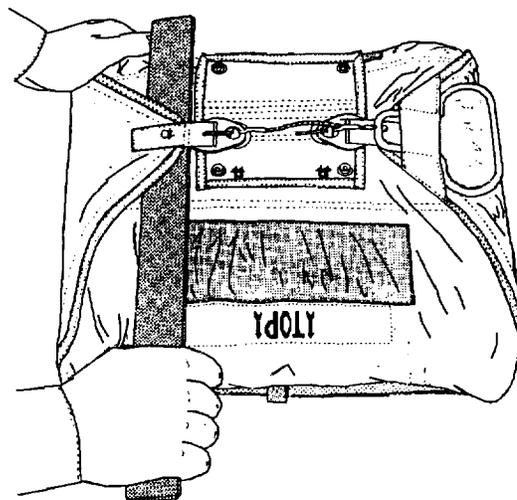
Figure 46. Remove Temporary Locking Pin

p. Ensure ripcord pins are centered in locking cones so that shoulder of ripcord pin is not jammed against hole in locking cone, but extends more than 1/2-in. beyond locking cone. (QA)

CAUTION

Improper insertion of long bar into container may cause bar to enter pack and disturb arrangement of canopy folds or flaps.

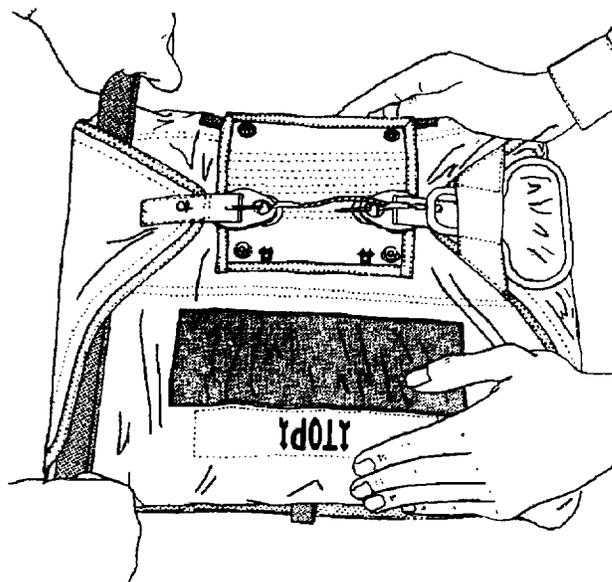
q. Insert long bar under end flap from direction of side flap containing ripcord protector flap (Figure 47).



6.2-5224B

Figure 47. Insert Long Bar

r. Push downward and work long bar in a see-saw fashion to shape pack and remove wrinkles (Figure 48).

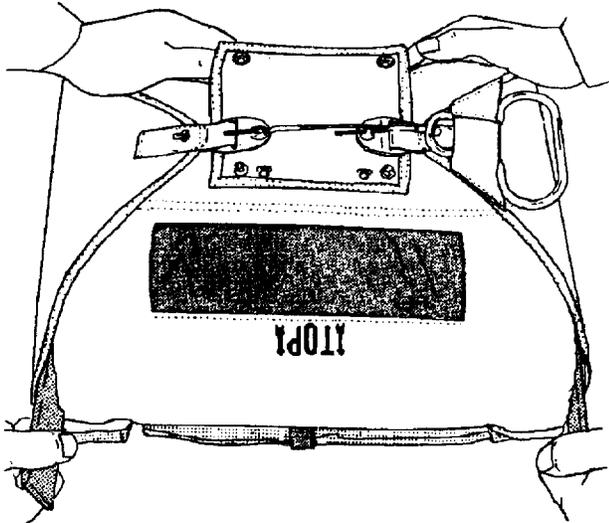


6.2-6010A

Figure 48. Push Downward and Work Long Bar

s. Shape opposite end of pack in same manner.

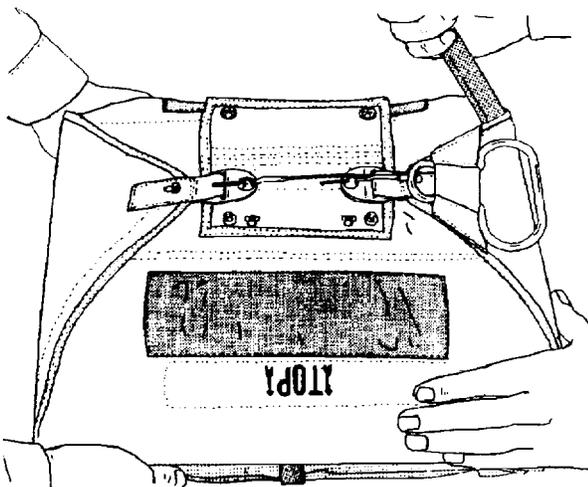
t. Push four corner flaps firmly into container using packing fid inserted into pockets. Ensure corners are firm and square with no canopy cloth exposed (Figure 49).



6.2-6010B

Figure 49. Push in Four Corners Firmly

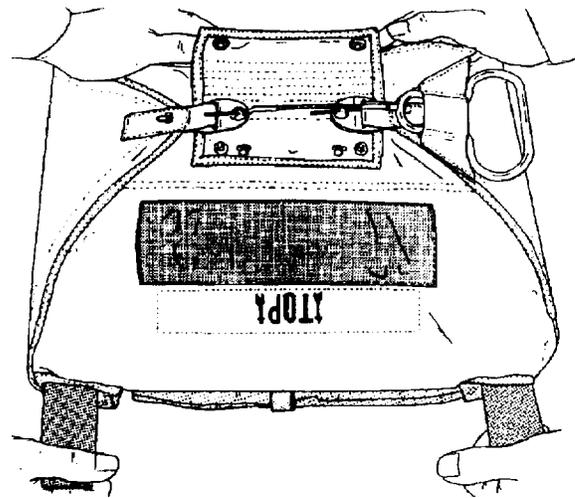
u. Insert packing fid into pockets at corners of both side flaps and push firmly into place, smoothing container cloth as required (Figure 50).



6.2-6010C

Figure 50. Insert Packing Fid Into Corner Pockets

v. Insert packing fid into pockets of lift web protector flaps and push firmly inward, straightening flaps (Figure 51).



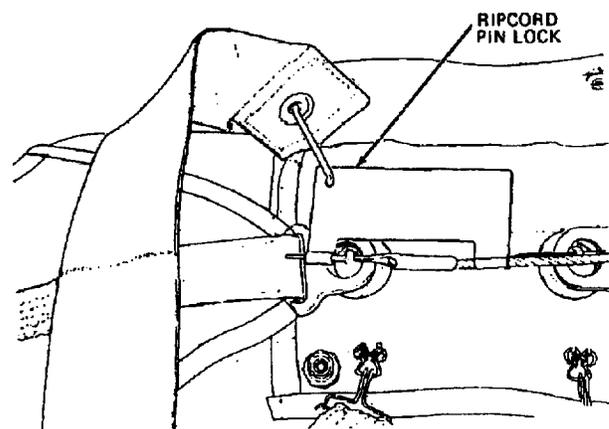
6.2-6010D

Figure 51. Insert Packing Fid Into Pockets of Lift Webs

w. Attach four container spring opening assemblies to eyes on side flaps, spring opening assembly hooks must face down. Attach two remaining container spring opening assemblies to eyes on end flaps. Ensure container spring opening assemblies are reeved between container and lift web assembly. Crimp hooks on container eyes on each opening assembly.

18. RIPCORD PIN PULL CHECK.

a. Insert ripcord pin lock on bottom ripcord pin (Figure 52).



6.2-5473

Figure 52. Ripcord Pin Pull Check

b. Attach spring scale to ripcord handle with a nylon cord. Set spring scale at zero.

c. Using the scale, apply a straight steady force to ripcord handle until initial movement of ripcord pins is observed. Most allowable force is 27 lbs. (QA)

WARNING

Ripcord pin lock must be removed.

d. Remove ripcord pin lock. (QA)

e. If necessary, reposition ripcord pins so they are centered in locking cones with each pin extending more than 1/2-in. beyond locking cone.

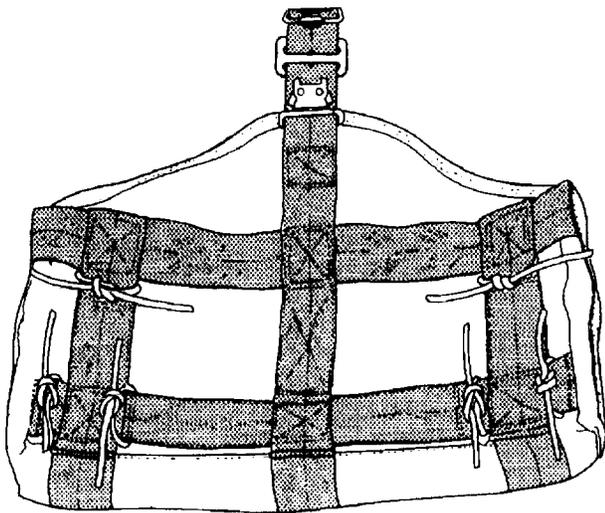
f. Snap ripcord pin protector flap closed.

19. ATTACHMENT OF STANDARD SOFT PACK (SSP) (IF APPLICABLE).

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

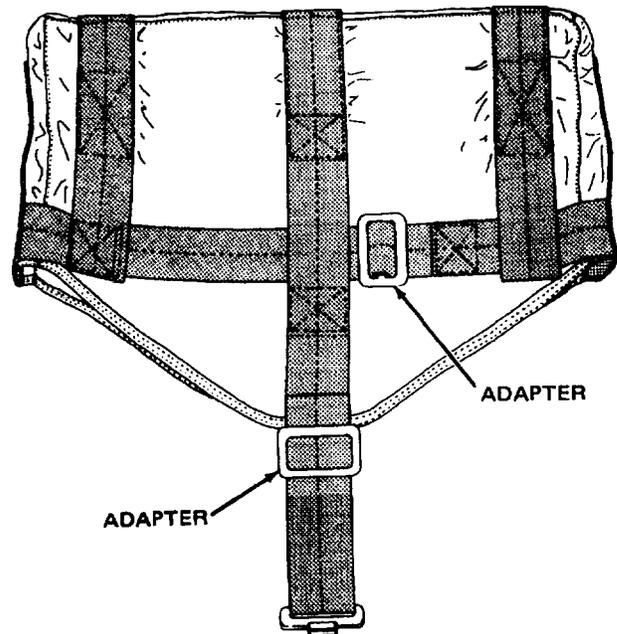
a. Ensure that six 10-in. lengths of nylon cord are tied to SSP outer container. Remove and discard inner cord and sear ends of casing (Figure 53).



6.2-6002A

Figure 53. Tie Six Lengths of Cord to Outer Container

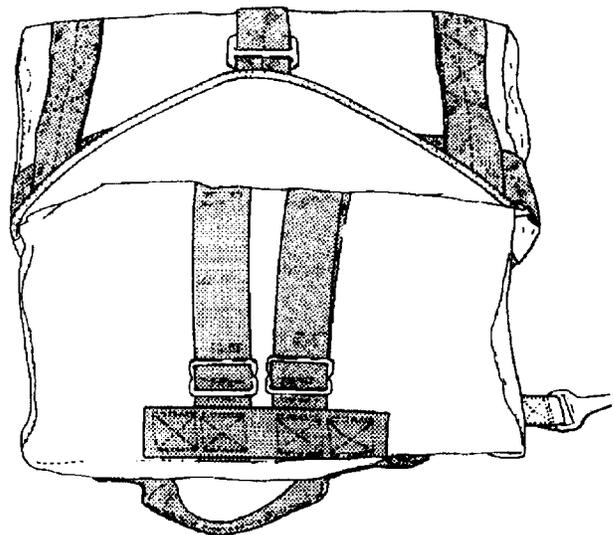
b. Position SSP outer container on packing table so that horizontal and vertical strap adapters face up (Figure 54).



6.2-6002B

Figure 54. Position SSP Outer Container

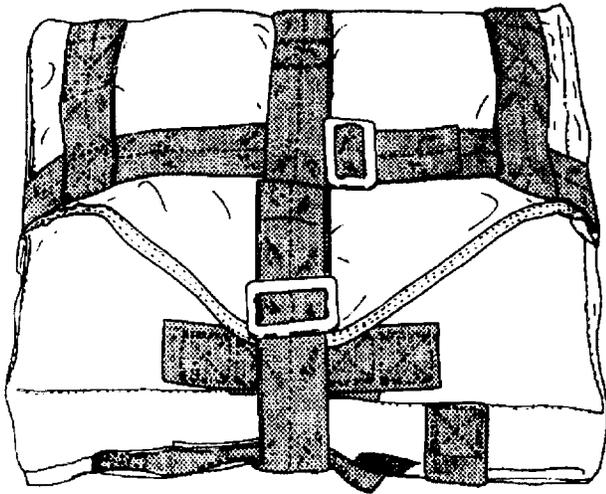
c. Insert combination carrying case and equipment container into outer container with shoulder straps facing up and strap handle positioned at open end of outer container (Figure 55).



6.2-6002C

Figure 55. Insert Combination Carrying Case

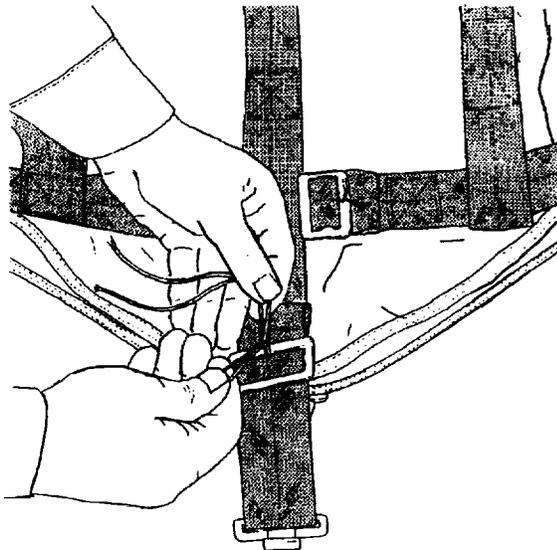
d. Pull outer container main panels over sides of combination carrying case and equipment container and fasten vertical strap quick-disconnect shackle. Reeve horizontal and vertical straps snugly together (Figure 56).



6.2-6002D

Figure 56. Pull Outer Container Main Panel Over Sides

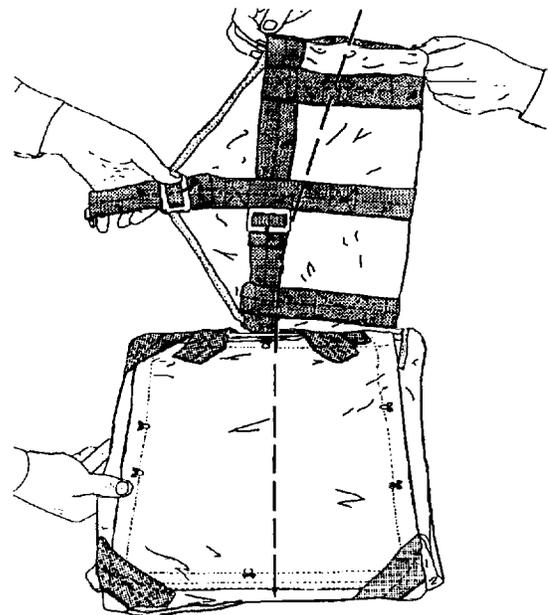
e. Mark horizontal and vertical straps midway between adapter and end of strap (Figure 57).



6.2-5173A

Figure 57. Mark Horizontal and Vertical Straps

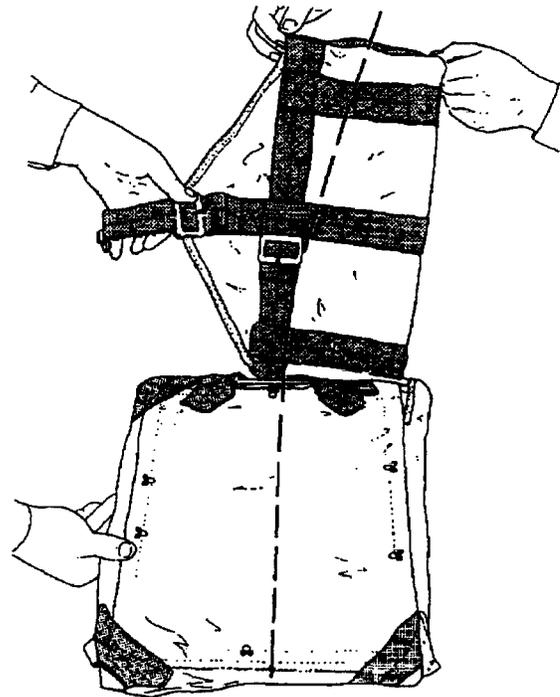
f. Remove combination carrying case and equipment container from outer container. Fold horizontal and vertical strap under at mark per step e, and tuck strap ends under adapter. Tack folded strap to strap located beneath it, passing cord around adapter and using one turn of size 6 thread, doubled and waxed; tie off (Figure 58).



6.2-5173B

Figure 58. Remove Combination Carrying Case

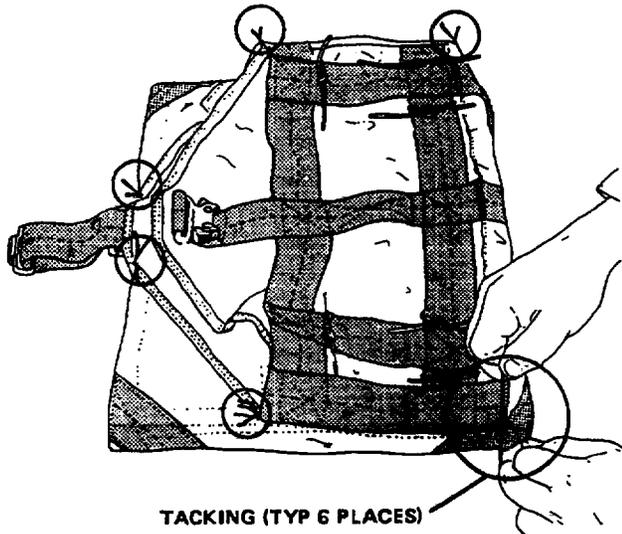
g. Position SSP outer container on top of parachute container, with outer container adapters facing parachute container, and open end facing locking cones (Figure 59).



6.2-5173C

Figure 59. Position SSP Outer Container

h. Tack four corners of SSP outer container to bottom of parachute container. Tack outer container main panel on each side of vertical strap to parachute container. Pass all tackings around parachute container wire frame. Tackings shall be with two turns of size 6 thread, doubled and waxed; tie off (Figure 60).



6.2-6003A

Figure 60. Tack Four Corners of SSP

i. Insert combination carrying case and equipment container into SSP outer container.

j. Insert combination carrying case and equipment container into SSP outer container. Position parachute container with shoulder straps of combination carrying case and

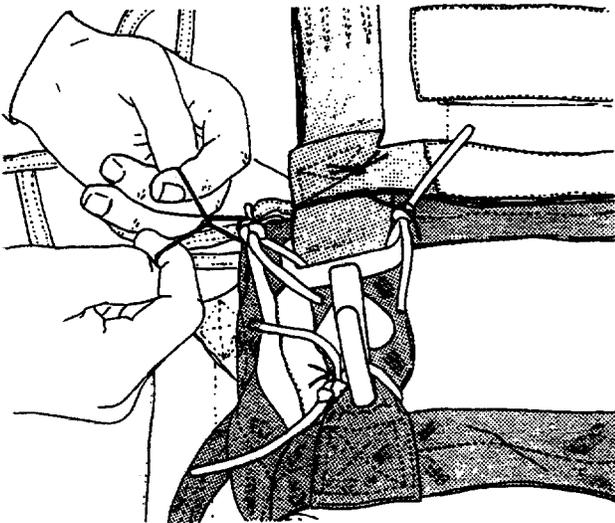
equipment container facing parachute container under lift web assembly with inside facing packing table and ripcord pin protector flap facing canopy. Remove tension hooks from connector links and packing table (Figure 61).



6.2-6003B

Figure 61. Insert Combination Carrying Case

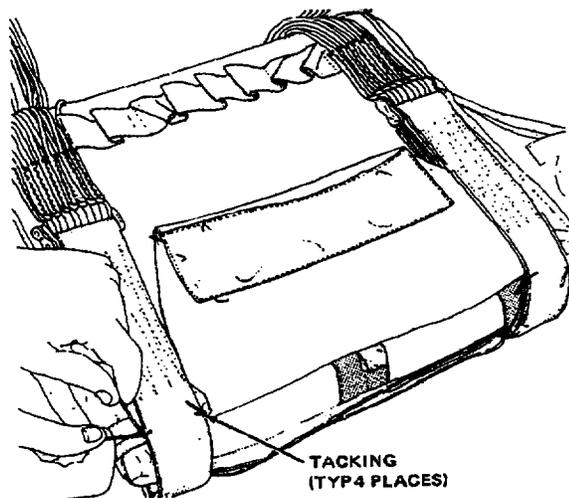
k. Tie lift web assembly quick-connector snaphooks to the SSP outer container using six 10-in. lengths of nylon cord. Pass cord thru each side of slot and around hook on both snaphooks; tie ends with a square knot. Tack thru each square knot with one turn of size 6 thread; single and waxed; tie off (Figure 62).



6.2-6003C

Figure 62. Lift Web Assembly Quick-Connector Snap Hooks

l. Rotate parachute container, from ripcord pin protector flap side over, so that SSP faces packing table. Connector links shall be positioned on top of container with lift webs thru top side of flap slots. Tack both sides of lift webs to container passing one turn of size E thread, single and waxed, thru webbing and around container frame; tie off (Figure 63).

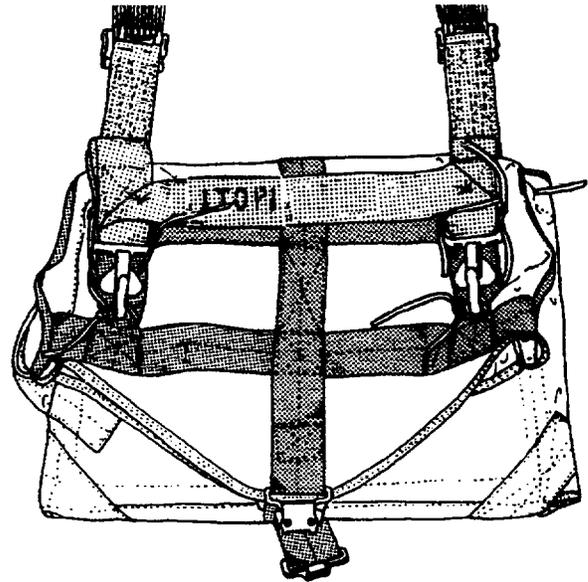


6.2-6004A

Figure 63. Rotate Parachute Container

m. Remove combination carrying case and equipment container from SSP outer container.

n. Pull parachute container out from under connector links so that inside of parachute container faces packing table and ripcord pin protector flap faces canopy. Fold side and end flaps under container (Figure 64).



6.2-6004B

Figure 64. Pull Parachute Container Out From Under Connector Links

20. FINAL CHECKOUT.

- a. Account for all packing tools.
- b. Examine packed parachute for general condition.
- c. Packer shall complete and sign Parachute Record (OPNAV 4790/101). (QA)
- d. QA inspector shall examine completeness and accuracy of all entries on Parachute Record (OPNAV 4790/101).
- e. QA inspector shall sign Parachute Record (OPNAV 4790/101).
- f. Send a (legible) copy of new Parachute Record to: Commander, Code 461000D, NAVAIRWARCENWPNDIV, 1900 N Knox Road Stop 6206, China Lake, CA 93555-6106.

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INTERMEDIATE AND DEPOT MAINTENANCE

REPAIR PROCEDURES

NC-3 PERSONNEL PARACHUTE ASSEMBLY

PART NO. 580AS100-5 and 580AS100-6

List of Effective Work Package Pages

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Reference Material

Common Repairs	WP 004 00
Intermediate and Depot Maintenance, Packing Procedures, NC-3 Personnel Parachute Assembly	WP 010 02
Organizational, Intermediate, and Depot Maintenance, Illustrated Parts Breakdown, NC-3 Personnel Parachute Assembly	WP 010 04
Parachute Loft Requirements/Administration	WP 003 00
Support Equipment	WP 005 00

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Replacement of Pilot Parachute	2
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Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This work package (WP) contains instructions for the maintenance, repair, replacement, and fabrication of various parachute parts or subassemblies to ensure that proper items of equipment remain in a Ready-For-Issue (RFI) status. Selected repairs shall be documented on Parachute Record. For common repairs refer to WP 004 00.

2. PILOT PARACHUTE AND CONNECTOR STRAP REPAIRS.

a. Repair of the pilot parachute and/or connector strap is limited to the following:

- (1) Cleaning of contaminated areas.
- (2) Replacement of loose or broken tacking.
- (3) Repair of holes or tears 0 to 1-in. in diameter in cloth by single patch.

b. Replace pilot parachute and/or connector strap for any of the following:

- (1) Service/total life per WP 010 02.
- (2) Seam separations and loose or broken stitching (yarn separation is acceptable) that may affect the safe operation of the parachute assembly.
- (3) Holes or tears over 1-in. in diameter or length and more than five holes or tears per pilot parachute.
- (4) Pilot parachute spring is broken or distorted.
- (5) Pilot parachute locking cone or grommet is loose or damaged.
- (6) Connector strap finished length is incorrect.

3. REPLACEMENT OF PILOT PARACHUTE.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

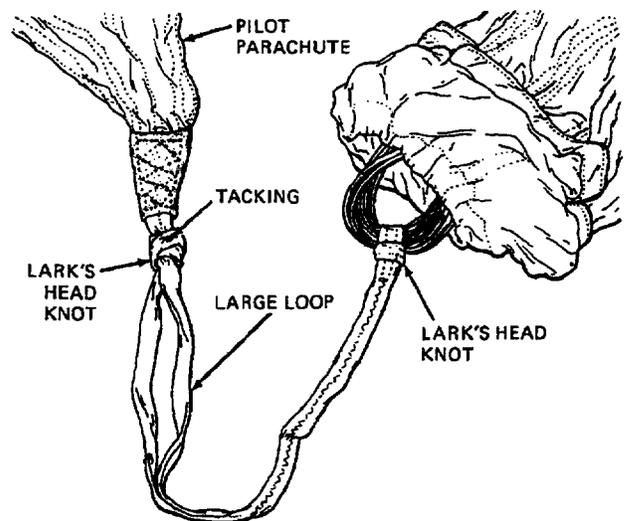
NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Inspect replacement pilot parachute per WP 010 02.

b. Remove tacking at lark's head knot and then remove pilot parachute.

c. Pass large loop of connector strap in pilot parachute. Form a lark's head knot by passing entire pilot parachute thru loop of connector strap and pull tight (Figure 1).



6.2-5004

Figure 1. Pilot Parachute and Connector Strap Removal and Replacement

d. Tack lark's head knot with two turns of size 6 thread, single and waxed; tie off (Figure 1). (QA)

e. Mark date placed in service on pilot parachute per WP 004 00. (QA)

f. Make proper entries on Parachute Record (OPNAV 4790/101).

4. REPLACEMENT OF PILOT PARACHUTE CONNECTOR STRAP.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Inspect replacement connector strap for cuts, fraying, and loose or broken stitching.

b. Measure length of connector strap. Proper unattached length is $23 \frac{1}{2} \pm \frac{1}{2}$ -in

c. Grasp a suspension line at canopy vent, count, and hold 14 consecutive lines.

d. Pass small loop end of connector strap thru and around all apex lines. Forming a lark's head knot, pass large loop end of connector strap thru small loop end; pull tight (Figure 1).

e. Pass large loop end of connector strap thru loop in pilot parachute. Form a lark's head knot by passing entire pilot parachute thru large loop of connector strap (Figure 1).

f. Tack lark's head knot at pilot parachute with two turns size 6 thread, single and waxed; tie off (Figure 1). (QA)

g. Mark date placed in service on connector strap per WP 004 00. (QA)

h. Make proper entries on Parachute Record (OPNAV 4790/101).

5. REPLACEMENT OF PILOT PARACHUTE CONNECTOR STRAP LOOSE OR BROKEN TACKING.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove broken and loose tacking.

b. Pull Lark's head knot tight.

c. Tack lark's head knot at pilot parachute with two turns of size 6 thread, single and waxed; tie off. (QA)

6. REPLACEMENT OF PILOT PARACHUTE LOOSE OR BROKEN TACKING (PLATE ASSEMBLY).

Material Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Remove broken and loose tacking.

NOTE

The plate assembly is attached at the base of the coil spring.

b. Locate the four holes in the plate assembly within the pilot parachute fabric.

c. Tack thru holes with two turns of size 6 thread, doubled and waxed; tie off.

7. CANOPY REPAIRS.

8. REPLACEMENT OF CANOPY.

Support Equipment

Part Number	Nomenclature
Refer to WP 005 00	Temporary Locking Pin
—	Screwdriver, Torque

Materials Required

Specification or Part Number	Nomenclature
F-900 Torque Seal (Color Optional)	Sealing Compound
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

For Double “L” Connector Link, refer to Paragraph 21 for disassembly, assembly, and inspection instructions.

- a. Remove pilot parachute and connector strap from vent lines. Retain for reinstallation.
- b. Remove four-line release rigging from connector links and then remove lanyard from riser flutes.
- c. Remove connector link yoke and plate assemblies.
- d. Remove connector links from lift web loops and then reinstall yoke and plate assemblies.
- e. Dispose of canopy per supply directives.
- f. Lay out replacement canopy assembly full length on clean packing table.
- g. Attach tension strap hook to canopy vent lines.
- h. Locate gore 28 (nameplate gore) and place uppermost in center of packing table.
- i. At skirt hem, separate suspension lines into two equal groups with lines 1 thru 14 on packer’s side and 15 thru 28 on helper’s side. Grasping each group of lines, walk from skirt hem to connector links removing any dips and twists between two groups.
- j. Place connector link holding lines 1 thru 7 on top of connector link holding lines 8 thru 14. Place connector link holding lines 22 thru 28 on top of connector link holding lines 15 thru 21. Insert tension hooks into connector links and insert hooks into packing table (Figure 2).

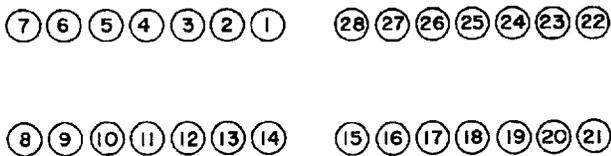


Figure 2. Arrangement and Orientation of Suspension Lines on Connector Links ¹⁰⁰³⁻²

- k. Pull suspension lines taut, pull vent collar toward canopy, and align exposed upper lateral band.
- l. Check suspension line continuity on left side of gore 28. Packer shall grasp line 1 at skirt hem and raise to enough height to ensure line is free of dips and

twists. Continue procedure with lines 2 thru 14 (Figure 2). Helper shall be positioned at connector links to check lines selected by packer.

- m. Check suspension line continuity on right side of gore 28. Packer shall grasp line 28 at skirt hem and raise to enough height to ensure line is free of dips and twists. Continue procedure with lines 27 thru 15 (Figure 2). Helper shall be positioned at connector links to check lines selected by the packer.
- n. Inspect four-line release anchor loops for proper attachment to lines 3 and 26. Measure $30 \pm 1/2$ -in. above upper connector link bar. Anchor loops must be attached with 2-in. of zigzag stitching.
- o. Inspect canopy assembly per WP 010 02.
- p. Reattach pilot parachute and connector strap per Paragraphs 4 and 5.
- q. Remove connector links from tension hooks. Remove tension hooks from packing table.
- r. Remove connector link yoke and plate assemblies from bottom connector links.
- s. Insert bottom connector links into bottom lift web loops and connector links into top lift web loops.
- t. Reattach yoke and plate assemblies to bottom connector links ensuring knurled portions of plate faces up and screwheads face outboard.
- u. Remove connector link yoke and plate assemblies from top connector links.
- v. While maintaining continuity, slide suspension lines onto a temporary locking pin or rod.
- w. Insert connector links into top lift web loops.

CAUTION

Ensure that clove-hitch and half-hitch at ends of suspension lines do not separate during handling.

- x. Reinstall suspension lines 3 thru 7 and 26 thru 22 onto connector links.
- y. Reattach yoke and plate assemblies to top connector links ensuring knurled portion of plate faces up and screwheads face outboard.

z. Insert tension hooks into connector links and then tension canopy.

aa. Perform suspension line continuity check as in steps m and n. (QA)

ab. Tighten screws on top and bottom connector links to a torque value of 20 to 25 in-lbs. (QA)

ac. Apply torque seal to each connector link screwhead.

ad. Mark date placed in service on canopy assembly per WP 004 00. Make proper entries on Parachute Record (OPNAV 4790/101). (QA)

ae. Fabricate four-line release lanyards, if required per WP 004 00.

af. Attach four-line release lanyards to suspension lines 3 and 26, per WP 004 00.

ag. Rig four-line release lanyards per WP 004 00.

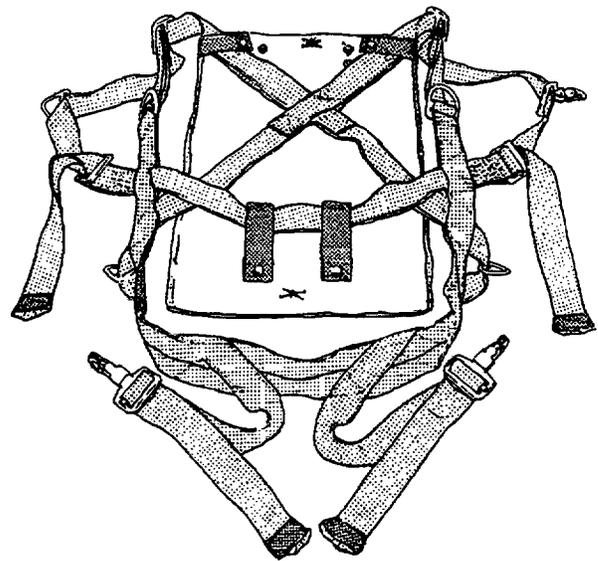
9. HARNESS REPAIRS.

10. REPLACEMENT OF HARNESS LABEL.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

- a. Remove back cushion.
- b. Carefully remove old label.
- c. Mark required information on replacement label.
- d. Machine stitch label to harness in center of horizontal backstrap with label positioned to face wearer.
- e. Lay out harness on packing table so that wearer would be face down on packing table with head towards canopy and position back cushion underneath harness with back cushion keepers released (Figure 3).
- f. Secure diagonal backstrap under upper corner keepers and horizontal backstrap under two bottom center keepers (Figure 3).



6.2-5467

Figure 3. Back Cushion Attachment

11. MODIFICATION OF HARNESS FOR STANDARD SOFT PACK (SSP) APPLICATION.

Materials Required

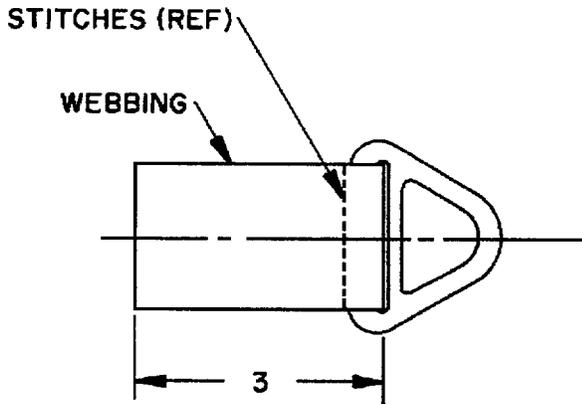
Specification or Part Number	Nomenclature
PIA-W-4088	Webbing, Nylon, Type XXVIII, 1 3/4-in.
	-or-
PIA-W-4088	Webbing, Nylon, Type XIII, 1 3/4-in. Class 1 or 1A
PIA-T-5038	Tape, Nylon, Type IV, 1-in. Class 1 or 1A
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A
MS22020-1	Link, Parachute Harness Triangle (2)

- a. Cut two 6 1/4-in. and two 13-in. pieces of webbing. Sear cut edges. Avoid forming sharp edges while hot knifing and searing.
- b. Mark off 6 5/8-in. from end of each 13-in. length of webbing.

c. Cut two 6 3/4-in. lengths of tape. Sear cut edges. Avoid forming sharp edges while hot knifing and searing.

d. Modify harness.

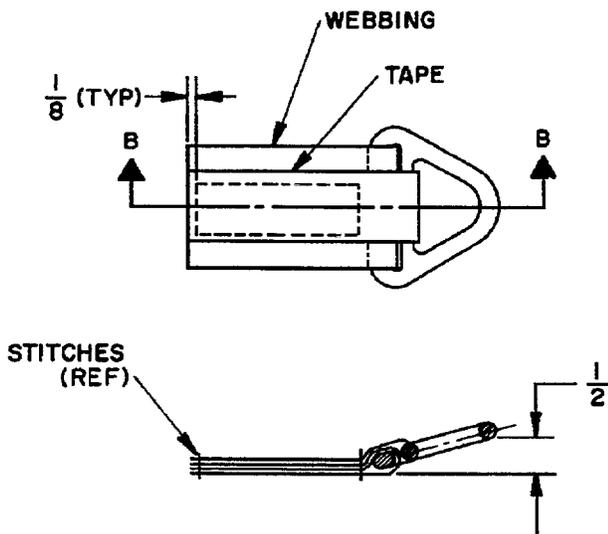
e. Insert each 6 1/4-in. piece of webbing into the slot of each triangle link. Line up both ends. Sew both nylon webbing folds at triangle link base. Stitch as close as possible to link (Figure 4).



6.2-5896A

Figure 4. Insert Webbing Into Slot

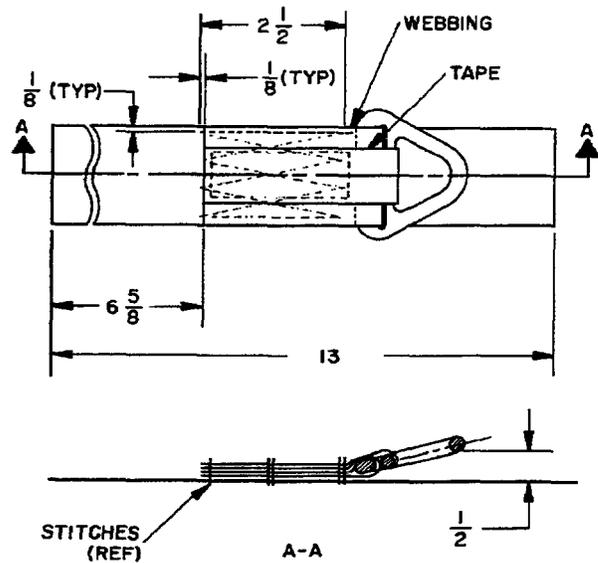
f. Insert tape thru eye and reeve back thru slot of each triangle link. Line up both ends. Sew tape and webbing together (Figure 5).



6.2-5896B

Figure 5. Insert Tape thru Eye

g. Position links with webbing and tape installed on marked-off area on webbing. Sew in place using a four-point crosstitch (Figure 6).

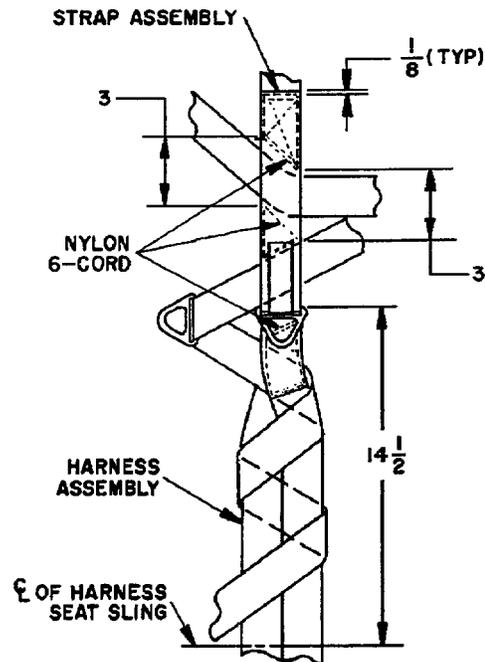


6.2-5896C

Figure 6. Position Links with Webbing

h. Position one strap on each side of main member of harness to harness so that base of V-ring is 14 1/2-in. from centerline of harness seat sling.

i. Match four-point crosstitch with harness pattern and sew strap to harness. Stitch as close as possible to fitting. Check that horizontal and diagonal back straps are free to adjust and are not sewn down (Figure 7).



6.2-5896D

Figure 7. Match Four-Point Crosstitch

12. REPLACEMENT OF BACK CUSHION SNAP FASTENERS.

Support Equipment Required

Part Number	Nomenclature
CAGE 57771	Chuck, Stud and Die, Eyelet, -or-
CAGE 57771	Chuck, Socket and Die Button

Materials Required

Specification or Part Number	Nomenclature
MS27980-8B and MS27983-3	Fastener, Snap, Eyelet Fastener, Snap, Stud -or-
MS279083-1 and MS27983-2N	Fastener, Snap, Button Fastener, Snap, Socket -or-
MS27980-1B and MS27980-6B	Fastener, Snap, Button Fastener, Snap, Socket -or-
MS27980-8B and MS27980-7B	Fastener, Snap, Eyelet Fastener, Snap, Stud

a. Remove damaged fastener using care not to damage cushion or webbing.

b. Install new fastener.

13. REPLACEMENT OF QUICK-CONNECTOR SNAP TACKING.

Material Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

a. Completely remove loose or broken tacking.



Use of hot needles or soldering irons to aid in tacking of lift web is forbidden.

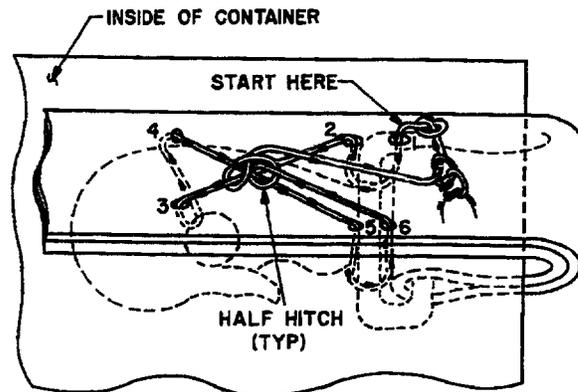
b. With container and lift web in position, tack quick-connector snaps to container bottom using size 6 thread, doubled and waxed. Make tacking as follows:

(1) After threading needle, tie overhand knot about 6-in. from end of thread.

(2) Starting from inside of container, pass needle thru lift web (Figure 8, #1). Tacking shall pass thru snap slot and between lift web strap and shank.

(3) Pass tacking around shank, and down thru container and lift web straps (Figure 8, #2).

(4) Pass tacking thru lift web straps and container (Figure 8, #3), around hook, and back thru container and lift web straps (Figure 8, #4).



6.2-5471

Figure 8. Replacement of Quick-Connector Snap to Container

(5) Pass tacking back thru lift web straps and container (Figure 8, #5) around shank, and thru snap-hook slot (Figure 8, #6).

(6) Form two half-hitches. Pull thread tight and tie off. Ending on inside of container (Figure 8).

14. CONTAINER REPAIRS.

15. REPLACEMENT OF CONTAINER.

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A

- a. Completely remove tackings securing lift web from container.
- b. Inspect container per WP 010 02.
- c. Position container under lift web, with inside facing packing table and ripcord pin protector flap facing canopy. Lift web cross-connector strap shall be positioned on top of container, just inside container frame (Figure 9).
- d. Position container on end with side locking cone flap on table and lift webs inserted thru slots on upper corners of container. Lift web cross-connector strap shall be positioned at upper edge of container and spring-loaded guards of quick-connector snap facing away from container (Figure 9).
- e. Attach lift webs to container per Paragraph 16.

16. REPLACEMENT OF STANDARD SOFT PACK (SSP) CONTAINER.

Materials Required

Specification or Part Number	Nomenclature
PIA-C-5040	Cord, Nylon, Type III Six 10-in. Lengths
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A
V-T-295	Thread, Nylon, Size E, Type I or II, Class A

NOTE

Tie off all rackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

- a. Remove ties securing riser quick-connector snaps to SSP outer container.
- b. Remove tackings securing SSP outer container to parachute container. Remove parachute container.
- c. Inspect parachute container per WP 010 02.

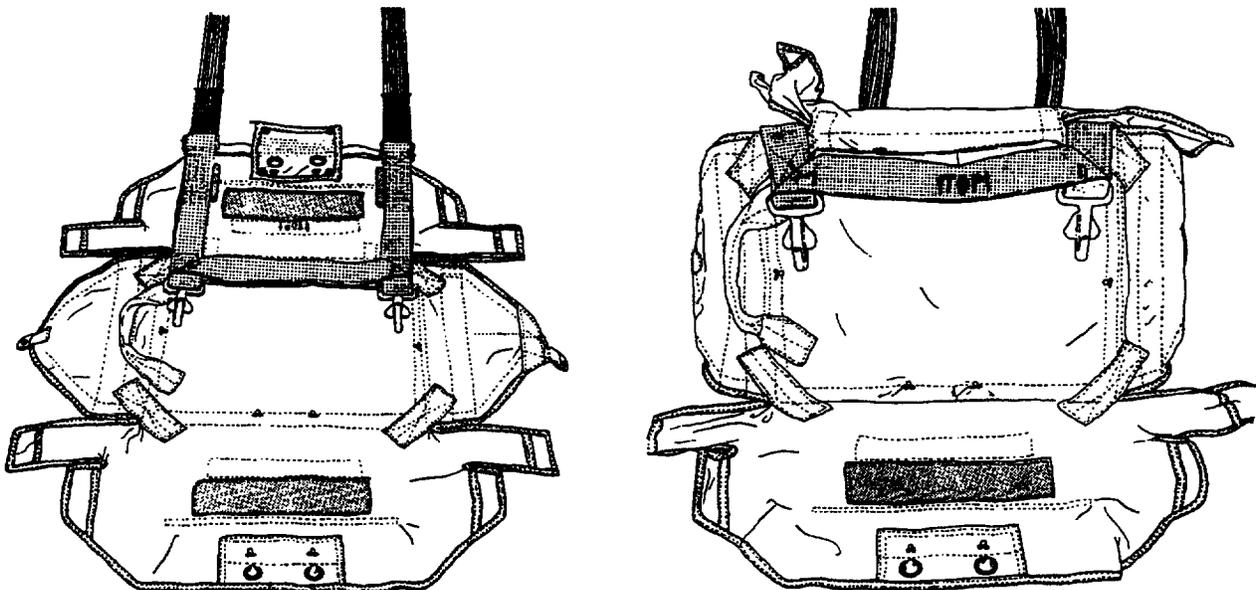
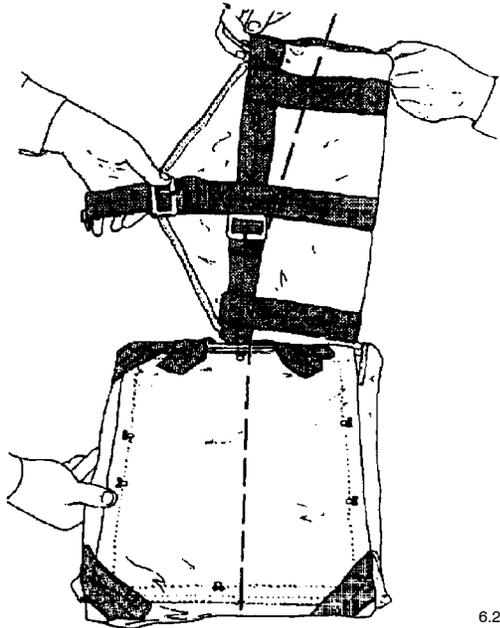


Figure 9. Attachment of Risers to Container

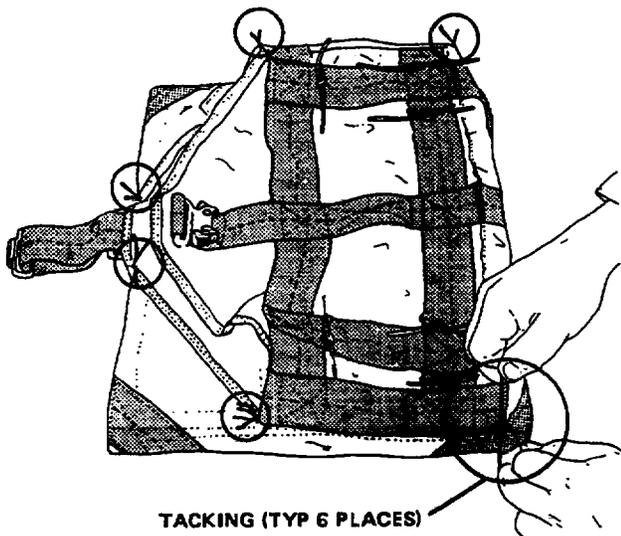
- d. Attach SSP outer container to parachute container.
- e. Position SSP outer container on top of parachute container, with outer container adapters facing parachute container, and open end facing locking cones (Figure 10).



6.2-5173C

Figure 10. Position SSP Container

- f. Tack four corners of SSP outer container to bottom of parachute container. Tack outer container main panel on each side of vertical strap to parachute container. Pass all tackings around parachute container wire frame. Tackings shall be made with two turns of size 6 thread, doubled and waxed; tie off (Figure 11).

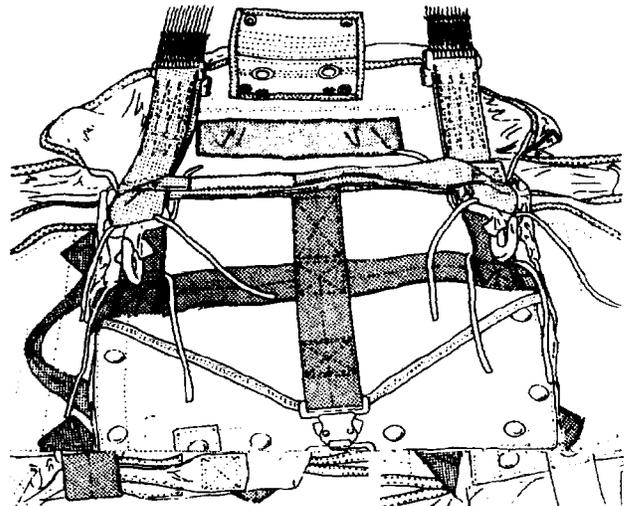


TACKING (TYP 6 PLACES)

Figure 11. Tack Four Corner

6.2-6003A

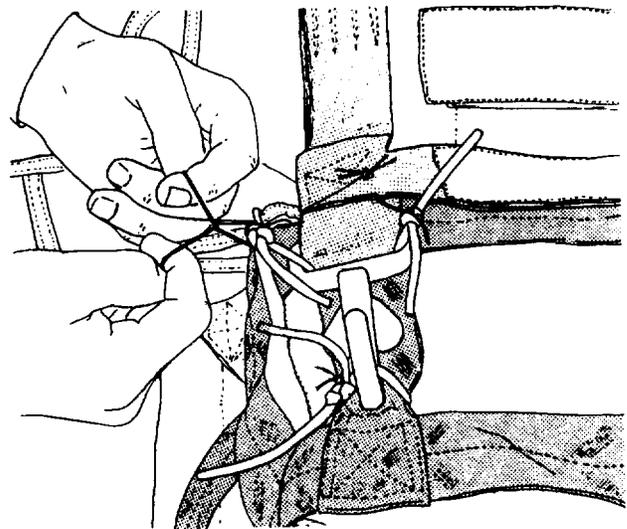
- g. Insert combination carrying case and equipment container into SSP outer container. Position parachute container under lift web with inside facing packing table and ripcord pin protector flap facing canopy. Remove tension hooks from connector links and packing table (Figure 12).



6.2-6003B

Figure 12. Insert Combination Carrying Case

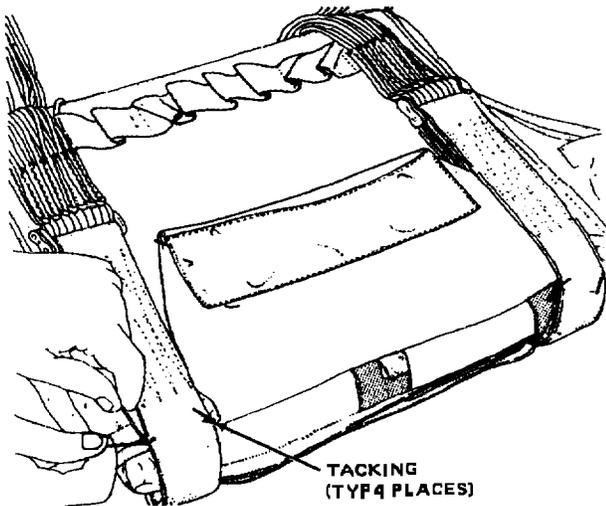
- h. Lift web quick-connector snap to outer SSP container using six 10-in. lengths of nylon cord. Pass cord through each side each square knot with one turn of size 6 thread, single and waxed; tie off (Figure 13).



6.2-6003C

Figure 13. Tie Quick-Connector Snap to Container

i. Rotate parachute container, from ripcord pin protector flap side over, so that SSP faces packing table. Connector links shall be positioned on top of container lift webs thru top side flap slots. Tack both sides lift webs to container passing one turn of size E thread, single and waxed, thru webbing and around container frame; tie off (Figure 14).

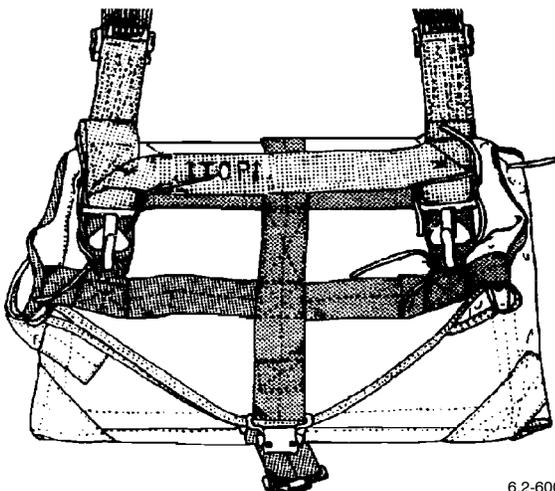


6.2-6004A

Figure 14. Rotate Parachute Container

j. Remove combination carrying case and equipment container from SSP outer container.

k. Pull parachute container out from under connector links so that inside of parachute container faces packing table and ripcord pin protector flap faces canopy. Fold side and end flaps under container and insert tension hooks into connector links and packing table (Figure 15).



6.2-6004B

Figure 15. Pull Parachute Container Out from Under Connector Links

17. LIFT WEB REPAIRS.

a. Repair of lift webs is limited to the following:

- (1) Cleaning of contaminated areas.
- (2) Repair of stitching if less than three stitches are loose or broken.
- (3) Removal/repair/replacement of four-line release flutes.

b. Replace lift webs for any of the following:

- (1) Cuts, tears, or holes in webbing.
- (2) Loose or broken stitching in excess of three stitches.
- (3) Damaged quick-connector snaps.
- (4) Twists, fading, wear, fraying, contamination, and abrasion.

18. REPLACEMENT OF LIFT WEB.

Support Equipment

Part Number	Nomenclature
Refer to WP 005 00	Bodkin
Refer to WP 005 00	Locking Pin, Temporary
—	Screwdriver, Torque

Materials Required

Specification or Part Number	Nomenclature
V-T-295	Thread, Nylon, Size FF, Type I or II, Class A
V-T-295	Thread, Nylon, Size 6, Type I or II, Class A
F-900 Torque Seal (Color Optional)	Sealing Compound

NOTE

Tie off all tackings with a surgeon's knot topped with a square knot, followed with a binder knot per WP 002 00. Trim off excess leaving 1/2-in.

NOTE

For Double "L" Connector Link, refer to Paragraph 21 for disassembly, assembly, and inspection instructions.

- a. Remove four-line release pull loop tacking.
- b. Insert a temporary locking pin in last daisy chain loop to prevent inadvertent release of daisy chain.
- c. Carefully break tackings at top of flute and pull lanyard pull loop up thru flute.
- d. Remove torque seal from screwhead. Remove connector link yoke and plate assembly from each connector link. Remove lift web from connector links.
- e. Loosely reattach connector link yoke and plate assembly.
- f. Completely remove tacking securing lift web assembly to container.
- g. Inspect lift web per WP 010 02.
- h. Attach lift web to container per Paragraph 13.
- i. Lay out lift web and container on packing table with corresponding lift webs facing each other and positioned at connector links.
- j. Remove connector link yoke and plate assemblies from connector links. Slide riser loops onto connector link bars.
- k. Reattach yoke and plate assemblies to connector link bars. The spring-loaded guard of quick-connector snaphooks and lift webs with four-line release flute shall face up on packing table and screwheads face outboard.
- l. Check suspension line continuity (Figure 2). (QA)
- m. Tighten screws on yoke and plate assemblies to a torque value of 20 to 25 in-lbs. (QA)
- n. Apply torque seal to screwhead.
- o. Using a bodkin or equal tool, insert and pull release lanyard pull loops thru flute. Pull loops should extend completely thru flute with tops of loops butted up against lower edge of flute.
- p. Tack release lanyard to flute with one turn of size FF thread, single and waxed. Tacking shall pass thru outer cover of flute, thru the release lanyard, thru and around last daisy chain loop and then back thru flute; tie off.

q. With lanyard pull loop fully extended, tack lift webs together. Tack at center of lift web and 1/2-in. above bottom of lanyard pull loop with one turn of size FF thread, single and waxed; tie off.

19. RIPCORD REPAIRS.

- a. Repair of the ripcord assembly is limited to the following:
 - (1) Cleaning contaminated areas per WP 004 00.
- b. Replace ripcord assembly for any of the following:
 - (1) Bent, broken, or cracked locking pins.
 - (2) Corroded, frayed, or permanently bent cable.
 - (3) Loose cable swage ball.
 - (4) Corroded, cracked, or bent handle.

20. REPLACEMENT OF RIPCORD.

- a. Inspect ripcord per WP 010 02.
- b. Replace ripcord assembly in the proper step of packing procedures.

21. REPLACEMENT OF MS22021-1 CONNECTOR LINK (SPEED LINK) WITH MS22002-1 (DOUBLE "L") CONNECTOR LINK.

NOTE

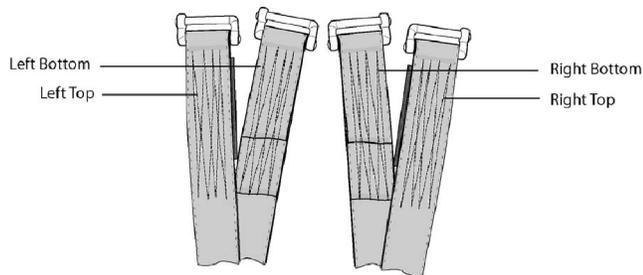
New canopies received from supply may have the Double "L" Connector Links installed.

Instructions for attachment of Firing Lanyards, PDVL's, Four-Line Release Systems, etc., will remain the same and will be contained in the application parachute manual.

Materials Required

Specification or Nomenclature	Part Number
MS22002-1	Connector Link (Double "L")
F-900 Torque Seal (Color Optional)	Sealing Compound
—	Torque Screwdriver
MIL-S-43243 (See WP 002 00)	Separator, Link or Equivalent

- a. Remove yoke and plate assembly from parachute connector link, P/N MS22021-1.
- b. Slide suspension lines from connector link onto a temporary locking pin or rod.
- c. Remove cross-connector strap.
- d. Slide riser loop off connector link bar and dispose of connector link, P/N MS22021-1.
- e. Remove screws from the double "L" connector link, P/N MS22002-1 and separate the two halves of the link.
- f. It may be necessary to use a separator device to separate the two halves of the connector link if a separator device is not available, loosen both screws of the connector link by four turns. Place a long bar between the connector link bars to hold the link in place. Using a rawhide or rubber mallet, tap one screw head and then the other screw head several times until the connector link bars separate.
- g. Install suspension lines on the new connector link bar. The short leg of the "L" connector is to be positioned to the inside (Figure 16).



Riser (Typ) with Double "L" Connector Links Installed

Figure 16. Double "L" Connector Link Layout

- h. Install cross-connector strap.
- i. Slide riser loop onto opposite connector link bar.
- j. Mate both halves of the connector link together.
- k. Install screws (2 each).

NOTE

Screws must make a minimum of 6 full turns prior to applying torque.

- l. Check suspension line continuity. (QA)
- m. Tighten screws to a torque value of 15 in-lbs. (QA)

WARNING

Care must be taken when tightening screws as screwdriver may slip and cause minor injury.

NOTE

It may be necessary to check the torque value on each screw more than once due to the interference fit design feature of the connector link.

- n. Apply torque seal to both screw heads and allow to dry before proceeding with remainder of parachute packing.
- o. Repeat steps a through l on each riser group.
- p. Re-identify the parachute canopy by using an indelible black pen to cross out the existing part number and marking the new superceding part number per Illustrated Parts Breakdown (IPB) WP 010 04.

ORGANIZATIONAL, INTERMEDIATE, AND DEPOT MAINTENANCE

ILLUSTRATED PARTS BREAKDOWN

NC-3 PERSONNEL PARACHUTE ASSEMBLY

PART NO. 580AS100-5 AND 580AS100-6

List of Effective Work Package Pages

<u>Page No.</u>	<u>Chg. No.</u>						
1 thru 5			11			

Reference Material

None

List of Figures

<u>Title</u>	<u>Page</u>
NC-3 Personnel Parachute Assembly	2

Record of Applicable Technical Directives

None

1. INTRODUCTION.

a. This Work Package (WP) contains information for ordering and identifying parts for the NC-3 Personnel Parachute Assembly (Figure 1).

2. USABLE ON CODES.

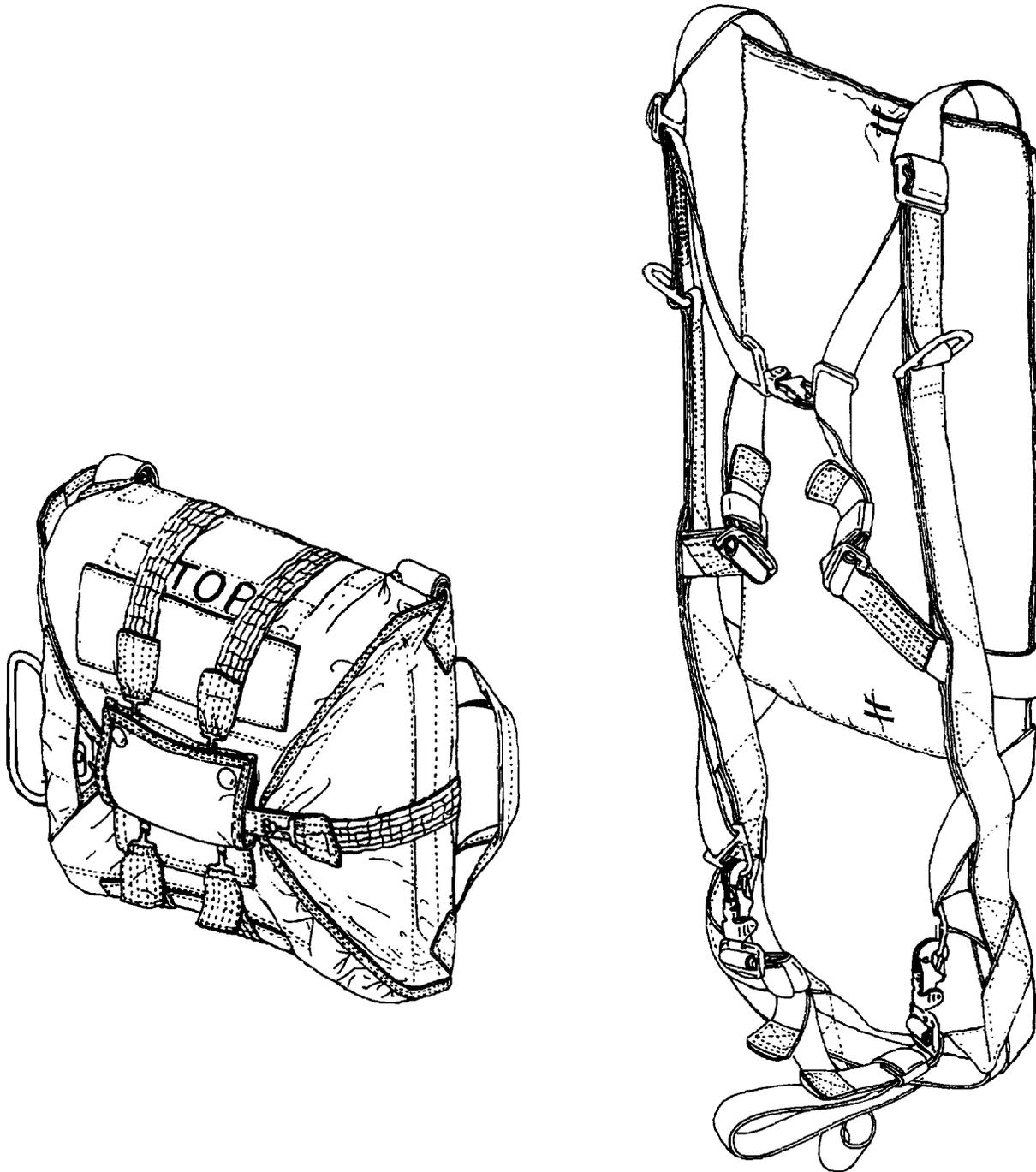
a. The usable on codes in this WP refer to the aircraft applications for the NC-3 Personnel Parachute Assembly.

b. The following usable on codes apply to this WP:

A, B - C-130

3. SERVICE/TOTAL LIFE.

a. The service/total life information is contained in WP 010 02.



6.2-5759

Figure 1. NC-3 Personnel Parachute Assembly (Sheet 1 of 4)

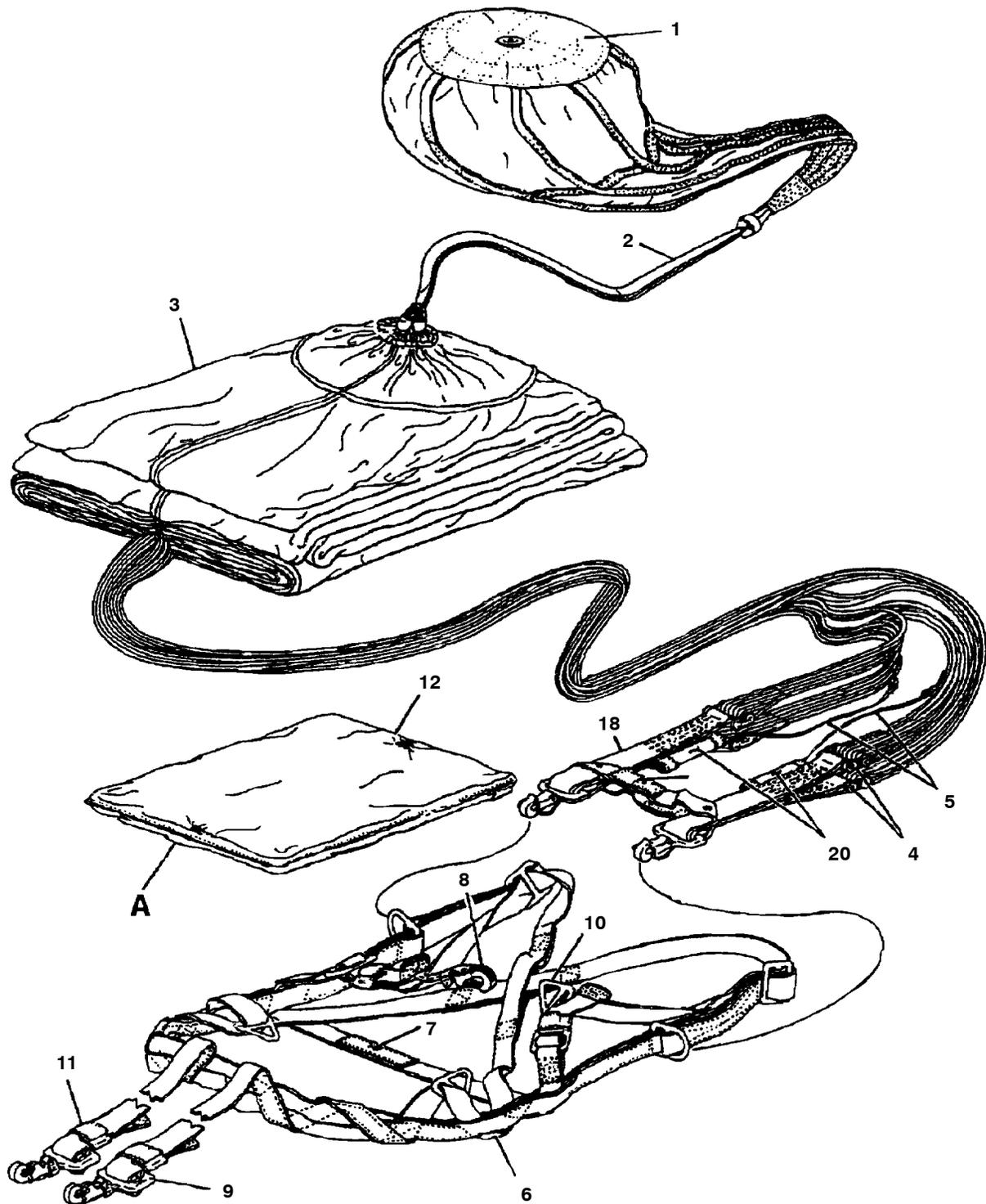
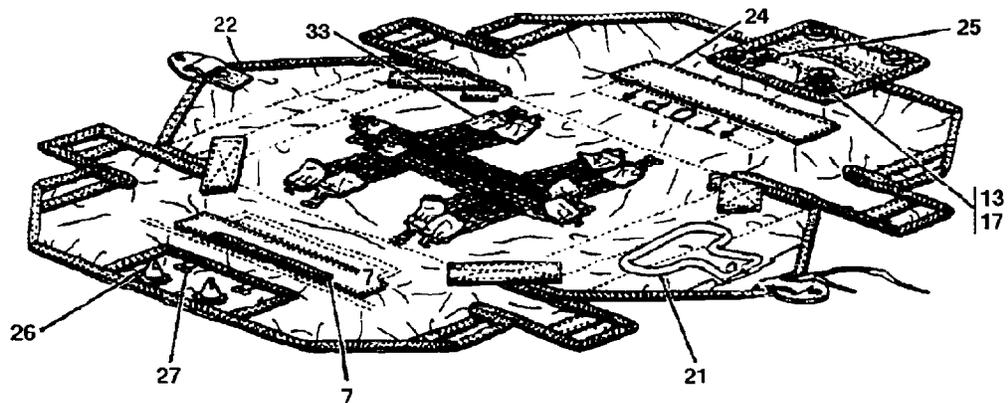
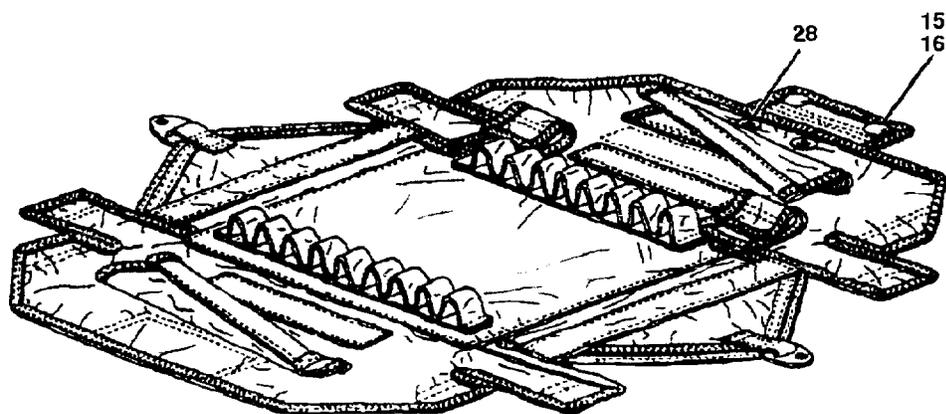


Figure 1. NC-3 Personnel Parachute Assembly (Sheet 2 of 4)



CONTAINER (OUTSIDE)



CONTAINER (INSIDE)

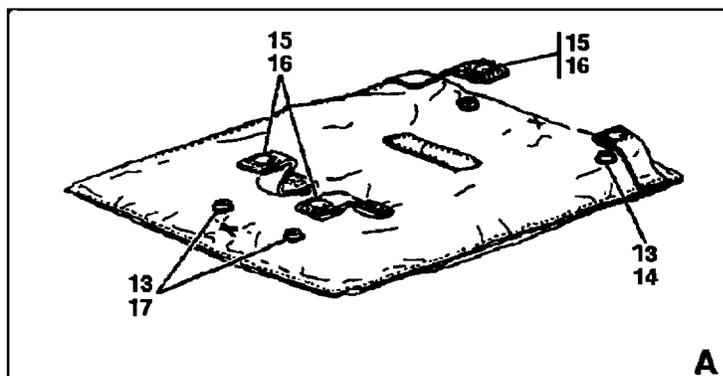


Figure 1. NC-3 Personnel Parachute Assembly (Sheet 3 of 4)

INDEX NO.	PART NUMBER	DESCRIPTION 1 2 3 4 5 6 7	UNITS PER ASSY	USABLE ON CODE	SM&R CODE
	580AS100-5	PARACHUTE ASSEMBLY, NC-3 REGULAR	REF	A	AGOGG
	580AS100-6	PARACHUTE ASSEMBLY, NC-3 OVERSIZE	REF	B	AGOGG
1	60A125E16-1	. PARACHUTE ASSEMBLY, PILOT	1		PCGZZ
2	666AS100-1	. STRAP, PILOT PARACHUTE CONNECTOR . . .	1		PCGZZ
3	814AS110-1	. CANOPY ASSEMBLY /USE UNTIL EXHAUSTED/	1		PCGGG
	60A113E5-18	. CANOPY ASSEMBLY	1	*	PCGGG
4	MS22021-1	. . LINK, REMOVABLE CONNECTOR	4		PAGZZ
5	666AS101-1	. . LANYARD, FOUR-LINE RELEASE	2		MGGZZ
6	675AS102-1	. HARNESS ASSEMBLY, REGULAR	1	A	PCOGG
	675AS103-1	. HARNESS ASSEMBLY, OVERSIZE	1	B	PCOGG
7	676AS100-1	. . LABEL	3		MDGZZ
8	MS22017	. . SNAP, PARACHUTE HARNESS EJECTOR . . .	1	*	PAGZZ
	68D37721-3	. . SNAP, PARACHUTE HARNESS EJECTOR . . .	1	*	PAGZZ
9	MS22018	. . SNAP PARACHUTE HARNESS QUICK FIT EJECTOR	2		PAGZZ
10	MS22020-1	. . LINK, PARACHUTE HARNESS TRIANGLE . .	3		PAGZZ
11	675AS102-10	. . KEEPER STRAP SUBASSEMBLY	4		MGGZZ
12	60A130E1-1	. . CUSHION ASSEMBLY	1		PAOGG
13	MS27980-8B	. . . FASTENER, EYELET	6		PAGZZ
14	MS27980-7B	. . . FASTENER, STUD	2		PAGZZ
15	MS27983-1	. . . FASTENER, BUTTON	4		PAGZZ
16	MS27983-2N	. . . FASTENER, SOCKET	4		PAGZZ
17	MS27983-3	. . . FASTENER, STUD	4		PAGZZ
18	675AS105-11	. WEB ASSEMBLY, LIFT	1		PCGGG
19	666AS102-6	. . FLUTE, FOUR-LINE RELEASE LANYARD . .	2		MGGZZ
20	675AS107-1	. RIPCORD ASSEMBLY	1		PAGZZ
21	675AS101-32	. CONTAINER ASSEMBLY	1		PCGGG
22	621AS100-1	. . LABEL, IDENTIFICATION	1		MDGZZ
23	MS22048GC1	. . GROMMET	2		PAGZZ
24	60A116C16-1	. . CONE	2		PAGZZ
25	60A113C28-1	. . EYE	12		PAGZZ
26	60A113C25-1	. . WASHER, GROMMET	2		PAGZZ
27	60A113D11-5	. . SPRING ASSEMBLY, CONTAINER OPENING	6	*	PAGZZ
	MS70105-3	. . SPRING ASSEMBLY, CONTAINER OPENING	6	*	PAGZZ

Figure 1. NC-3 Personnel Parachute Assembly (Sheet 4 of 4)

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