ARMY TM 10-1670-271-23&P
AIR FORCE TO 14D1-2-464-2
MARINE CORPS TM 01136B-23&P/1

TECHNICAL MANUAL

UNIT AND INTERMEDIATE DIRECT SUPPORT (DS) MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR PARACHUTE, PERSONNEL TYPE: 35-FOOT DIAMETER, T-10B TROOP BACK PARACHUTE ASSEMBLY NSN 1670-00-591-0720

This copy is a reprint which includes current pages from Change 1.

The following manuals, TM 10-1670-269-23&P, TM 10-1670-274-23&P, TM 10-1670-27-23&P, TM 10-1670-273-23&P and TM 10-1670-27A-23&P, in their entirety, supersede TM 10-1670-213-23, dated April, 1969, including all changes.

HEADQUARTERS, DEPARTMENTS OF THE ARMY AND AIR FORCE,
AND HEADQUARTERS, U.S. MARINE CORPS

16 SEPTEMBER 1988

WARNING

DEATH could result if inspections are not performed as specified in this manual. Perform all inspections as specified.

WARNING

DEATH from burns or parachute failure could result if cleaning solvents other than tetrachloroethylene are used in cleaning this equipment. Other solvents shall not be used because of their flammable properties and nylon-damaging substances.

WARNING

Prolonged inhalation of tetrachloroethylene vapors can cause respiratory injury. Provide adequate ventilation when using it. Also avoid skin contact. Repeated exposure can cause injury.

For First Aid treatment, refer to FM 21-11

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ARMY TM 10-1670-271-23&P
AIR FORCE TO 14D1-2-464-2
MARINE CORPS TM 01136B-23&P/1
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NO. 3

HEADQUARTERS DEPARTMENTS OF
THE ARMY, THE AIR FORCE AND
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WASHINGTON, D.C., 1 April 1997

Unit and Intermediate Direct Support (DS) Maintenance Manual
(Including Repair Parts and Special Tools List)
for
PARACHUTE, PERSONNEL TYPE: 35-FOOT DIAMETER
T-10B TROOP BACK PARACHUTE ASSEMBLY,
NSN 1670-00-591-0720

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Unit and Intermediate Direct Support (DS) Maintenance Manual
(Including Repair Parts and Special Tools List)
for
PARACHUTE, PERSONNEL TYPE: 35-FOOT DIAMETER
T-10B TROOP BACK PARACHUTE ASSEMBLY,
NSN 1670-00-591-0720

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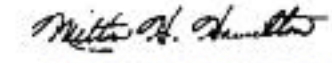

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Unit and Intermediate Direct Support (DS) Maintenance Manual
(Including Repair Parts and Special Tools List)
For

PARACHUTE, PERSONNEL TYPE:
35-FOOT DIAMETER, T-10B
TROOP BACK PARACHUTE ASSEMBLY
NSN 1670-00-591-0720

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Unit and Intermediate Direct Support (DS) Maintenance Manual (Including Repair Parts and Special Tools List) for PARACHUTE, PERSONNEL TYPE: 35-FOOT DIAMETER T-10B TROOP BACK PARACHUTE ASSEMBLY, NSN 1670-00-591-0720

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

ARMY

You can help improve this manual. If you find any mistakes, or if you know of a way to improve these procedures, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual directly to: Commander, US Army Aviation and Troop Command, ATTN: AMSAT-I-MP, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. You may also submit your recommended changes by E-mail directly to <mpmt%avma28@st-louis-emh7.army.mil>. A reply will be furnished directly to you. Instructions for sending an electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

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Reports by U.S. Air Force units should be submitted on AFTO Form 22 (Technical Order Publication Improvement Report and Reply) and forwarded to the address prescribed above for the Army. An information copy of the prepared AFTO Form 22 shall be furnished to SA-ALC/TILDP, Kelly AFB, TX 78241-6421.

MARINE CORPS

Commander, ATTN: (Code 850), Marine Corps Logistics Bases, 814 Radford Blvd., Albany, GA 31704-1128.

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CHAPTER 1

INTRODUCTION

OVERVIEW

This chapter includes the general information common to all parachute manuals and specific information pertinent to the parachute described in this manual.

Section I. GENERAL

1-1. Scope. The scope of this manual is described in the following subparagraphs.

a. Type of Manual. This manual provides unit and intermediate maintenance instructions for parachute, NSN 1670-00-591-0720. This is a 35-Foot Diameter Troop Back Parachute (Figure 1-1). This manual also provides a Repair Parts and Special Tools List located at Appendix C.

b. Equipment Name. T-10B Troop Back Parachute Assembly, 35-Foot Diameter.

c. Purpose of Equipment. The parachute provides capability to safely deliver an airborne soldier and individual equipment from an aircraft in flight for a vertical assault on an enemy.

1-2. Maintenance Forms and Records. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System and TB 750-126. Maintenance forms and records used by Marine Corps personnel are prescribed by TM 4700-15/1.

1-3. Destruction of Army Materiel to Prevent Enemy Use. Destruction methods are described in the following subparagraphs.

a. General.

(1) *Objective*. Methods of destruction used to Inflict damage on air delivery equipment should make it impossible to restore equipment to a usable condition In a combat zone by either repair or cannibalization.

(2) *Authority*. Destruction of air delivery equipment that is In Imminent danger of capture by an enemy is a command decision that must be made by a battalion or higher commander or the equivalent.

1-3. Destruction of Army Materiel to Prevent Enemy Use (CONT).

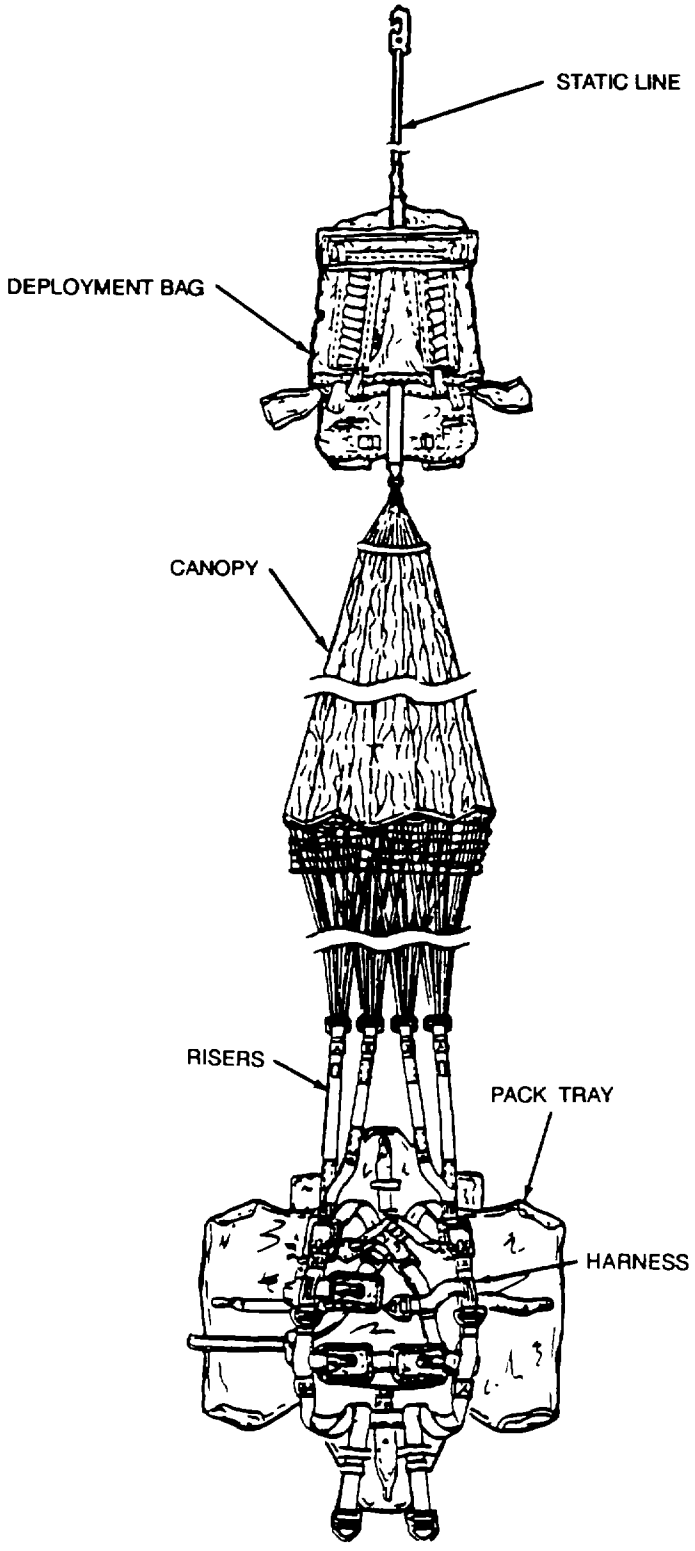


Figure 1-1. 35-Foot Diameter, T-10B Troop Back Parachute Assembly, Deployed.

(3) *Implementation plan*. All units which possess air delivery equipment should have a plan for the Implementation of destruction procedures.

(4) *Training*. All personnel who use or perform such functions as rigging, packing, maintenance, or storage of air delivery equipment should receive thorough training on air delivery equipment destruction procedures and methods. The destruction methods demonstrated during training should be simulated. Upon completion of training, all applicable personnel should be thoroughly familiar with air delivery equipment destruction methods and be capable of performing destruction without immediate reference to any publication.

(5) *Specific methods.* Specific methods of destroying Army materiel to prevent enemy use shall be by mechanical means, fire or by use of natural surroundings.

b. Destruction by Mechanical Means. Air delivery equipment metal assemblies, parts, and packing aids shall be destroyed using hammers, bolt cutters, files, hacksaws, drills, screwdrivers, crowbars, or other similar devices to smash, break, bend or cut.

WARNING

Exercise extreme care when using petroleum products to destroy equipment by fire, as these materials are highly flammable.

c. Destruction By Fire. Items that can be destroyed by fire shall be burned. The destruction of equipment by use of fire is an effective method of destroying low-melting-point metal items (e.g., side rails, threaded portions of nuts and bolts, and platform sheeting). However, mechanical destruction should be completed first, whenever possible, before initiating destruction by fire. When items to be destroyed are made of metal, textile materials (or some comparable low combustible material) should be packed under and around the items, then soaked with a flammable petroleum product and ignited. Proper concentration of equipment which is suitable for burning will provide a hotter and more destructive fire

d. Destruction By Use of Natural Surroundings. Small vital parts of assemblies which are easily accessible may be disposed of as follows: Disposal or denial of equipment to an enemy may be accomplished through use of natural surroundings. Accessible vital parts of assemblies may be removed and scattered through dense foliage, buried in dirt or sand, or thrown into a lake, stream, or other body of water. Total submersion of equipment in a body of water will provide water damage as well as concealment. Salt water will inflict extensive damage to air delivery equipment.

1-4. Preparation for Storage or Shipment. For storage, refer to TM 10-1670-201-23 T 0. 13C-1-41/NAVAIR 13-1-17, and Chapter 2, Section VII of this manual.

1-5. Reporting of Equipment Improvement Recommendations (EIR). If your parachute system needs Improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mall it to us at: Commander, U S Army Troop Support Command, ATTN: AMSTR-OX, 4300 Goodfellow Blvd., St Louis, MO 63120-1798. We will send you a reply. Marine Corps EIRs should be submitted, in accordance with MCO 1650.17, to Marine Corps Logistics Base, ATTN Code 850, Albany, Georgia 31704-5000.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-6. Equipment Characteristics, Capabilities and Features. A summary of the characteristics, capabilities and features of the equipment is contained in the following subparagraphs.

a. *Characteristics*. Provides a capability to deliver an airborne soldier and individual equipment from an aircraft in flight for a vertical assault on the enemy.

b. *Capabilities and Features.*

(1) Capable of supporting 350 pounds.

(2) Highly portable

(3) Complete assembly weight- 31 pounds

(4) Components of the system

(a) Canopy assembly.

(b) Deployment bag.

(c) Pack tray.

(d) Harness assembly.

(e) Risers.

1-7. Location and Description of Major Components. The following subparagraphs contain locations and descriptions of major components.

a. *Canopy*. (Figure 1-2.) The T-10B parachute canopy has a 3 3/4-inch mesh anti-inversion net attached to the skirt of the canopy. The net extends 18 inches below the canopy skirt. The canopy has two vent line centering loops.

b *Pack Tray*. (Figure 1-3.) The pack tray holds the T-10B parachute, packed in the deployment bag, to the parachute harness. It is constructed of 7.25 ounce nylon duck. The waistband is located near the bottom of the pack tray.

NOTE

Waistband extension may be required.

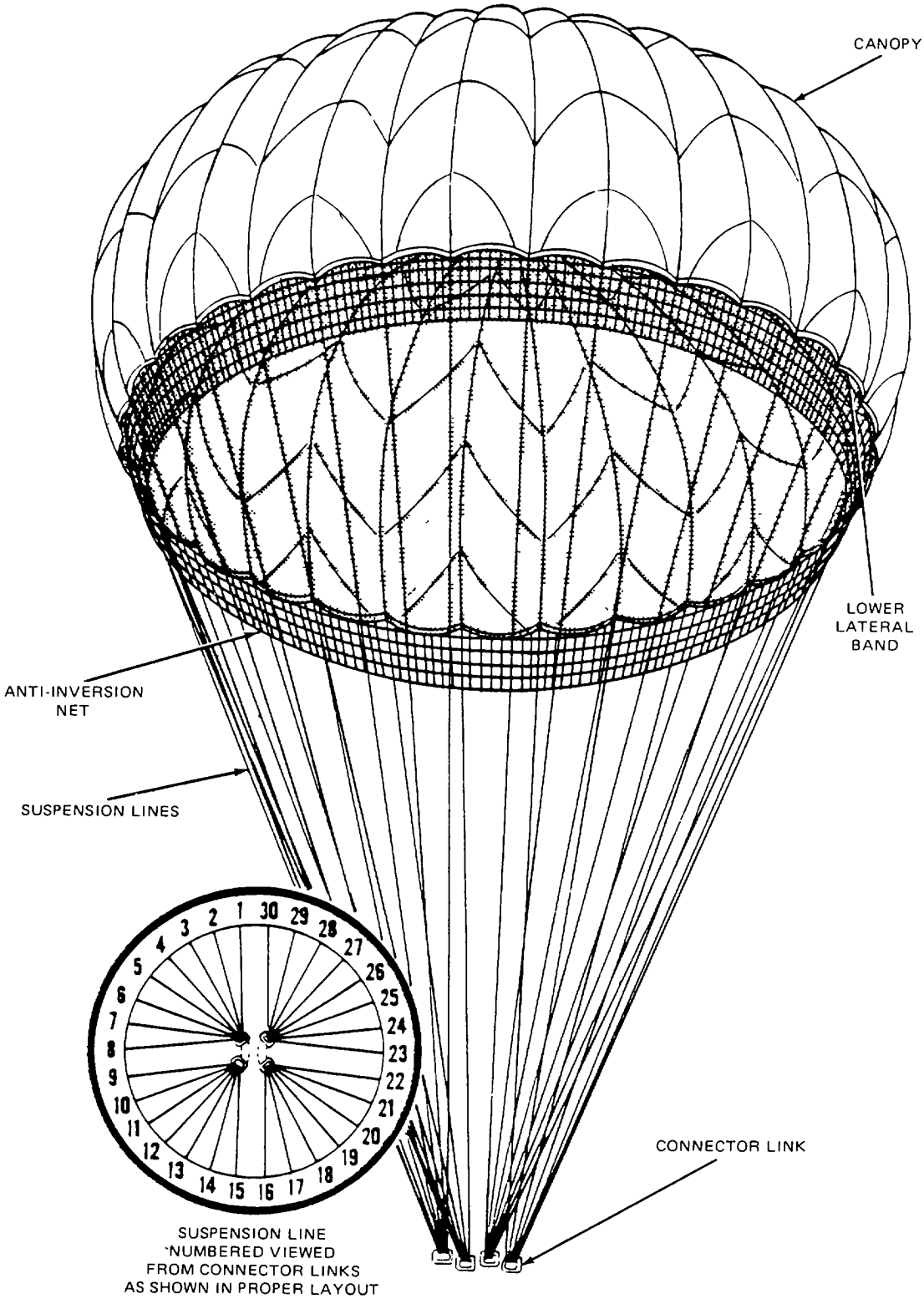


Figure 1-2. Canopy Assembly.

1-7. Location and Description of Major Components (CONT).

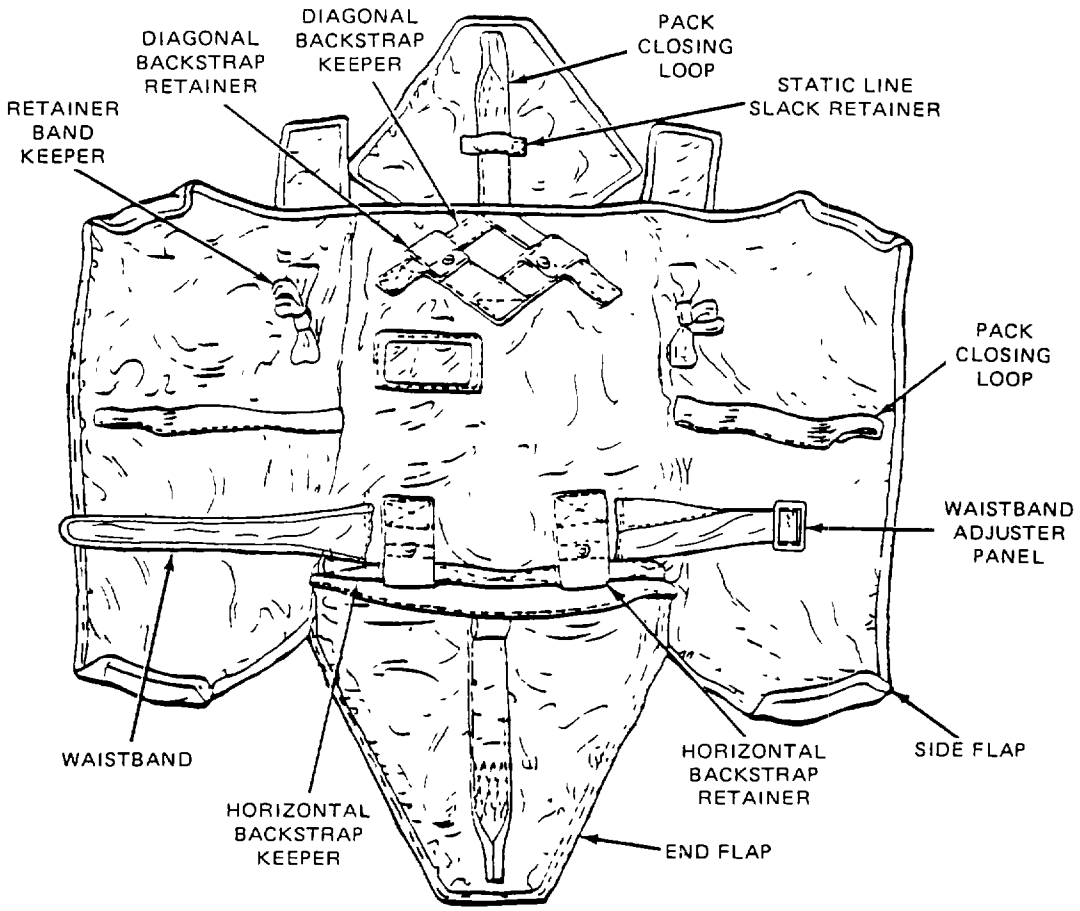


Figure 1-3. Pack Tray.

c. *Deployment Bag*. (Figure 1-4.) The T-10B parachute is packed in the deployment bag. The deployment bag is constructed of 8.8 ounce cotton sateen cloth with a static line attached. Two types of deployment bags are available for use. These bags differ in the construction of the stow loops - rolled stow loops (A, figure 1-4) and manufactured woven stow loops (B, figure 1-4).

d. *Harness Assembly.* (Figure 1-5.) The parachute is attached to the harness assembly which secures the parachute to the paratrooper before the jump and during descent. The T-10B parachute harness assembly is equipped with one chest and two leg straps secured with quick-ejector snaps. The female portion of the canopy release has a cable loop-type release.

NOTE

The troop harness assembly (NSN 1670-00-004-8876), equipped with quick-ejector snaps, will replace the T-10 parachute harness assembly through attrition. Also, the nylon pack tray with waistband located in lower position will replace the cotton and nylon pack trays with waistband located in center of pack tray through attrition. During the transition period, numerous configurations may occur interchangeability of components is permitted, provided shelf service life and serviceability criteria are met.

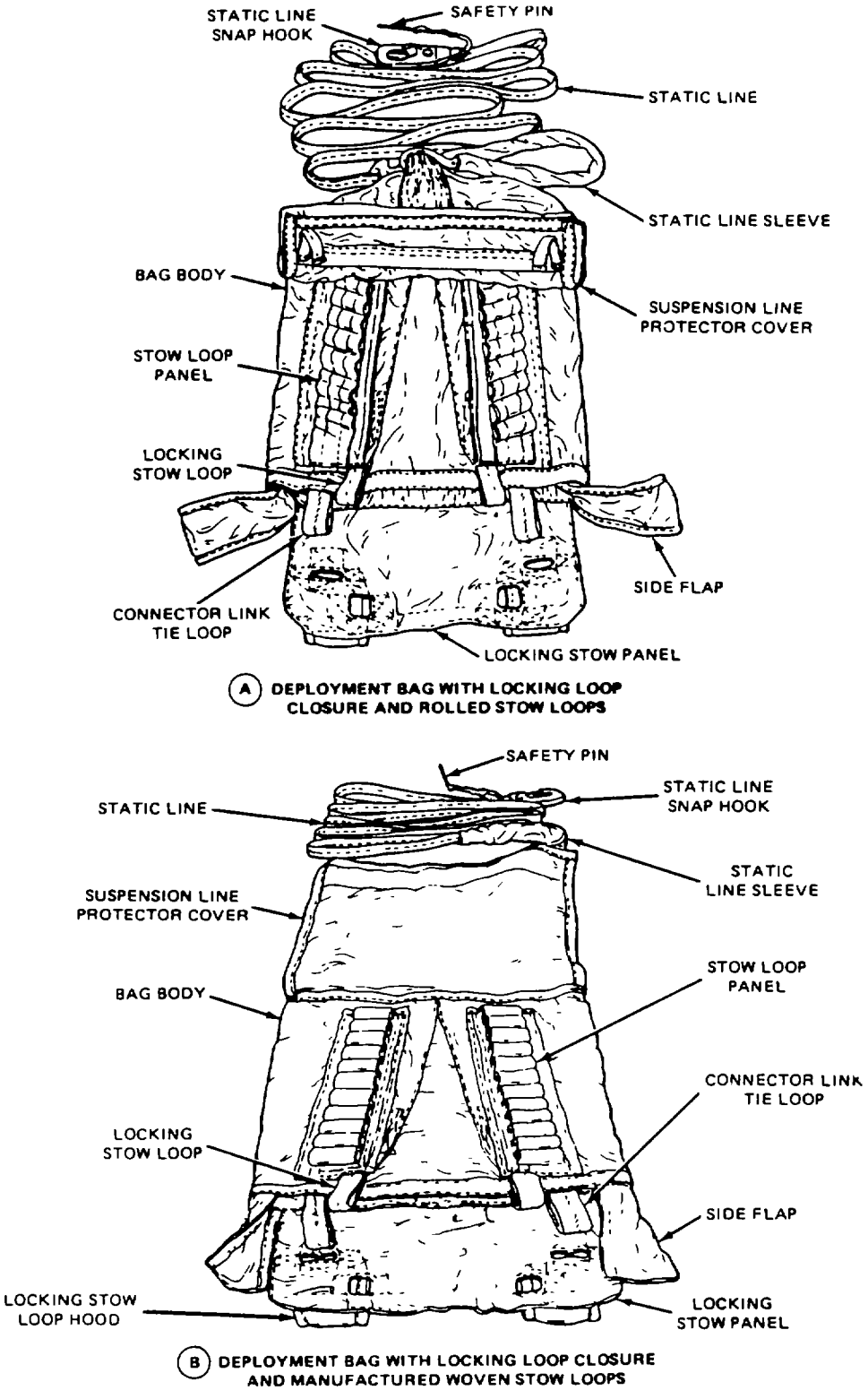


Figure 1-4. Deployment Bag.

1-7. Location and Description of Major Components (CONT).

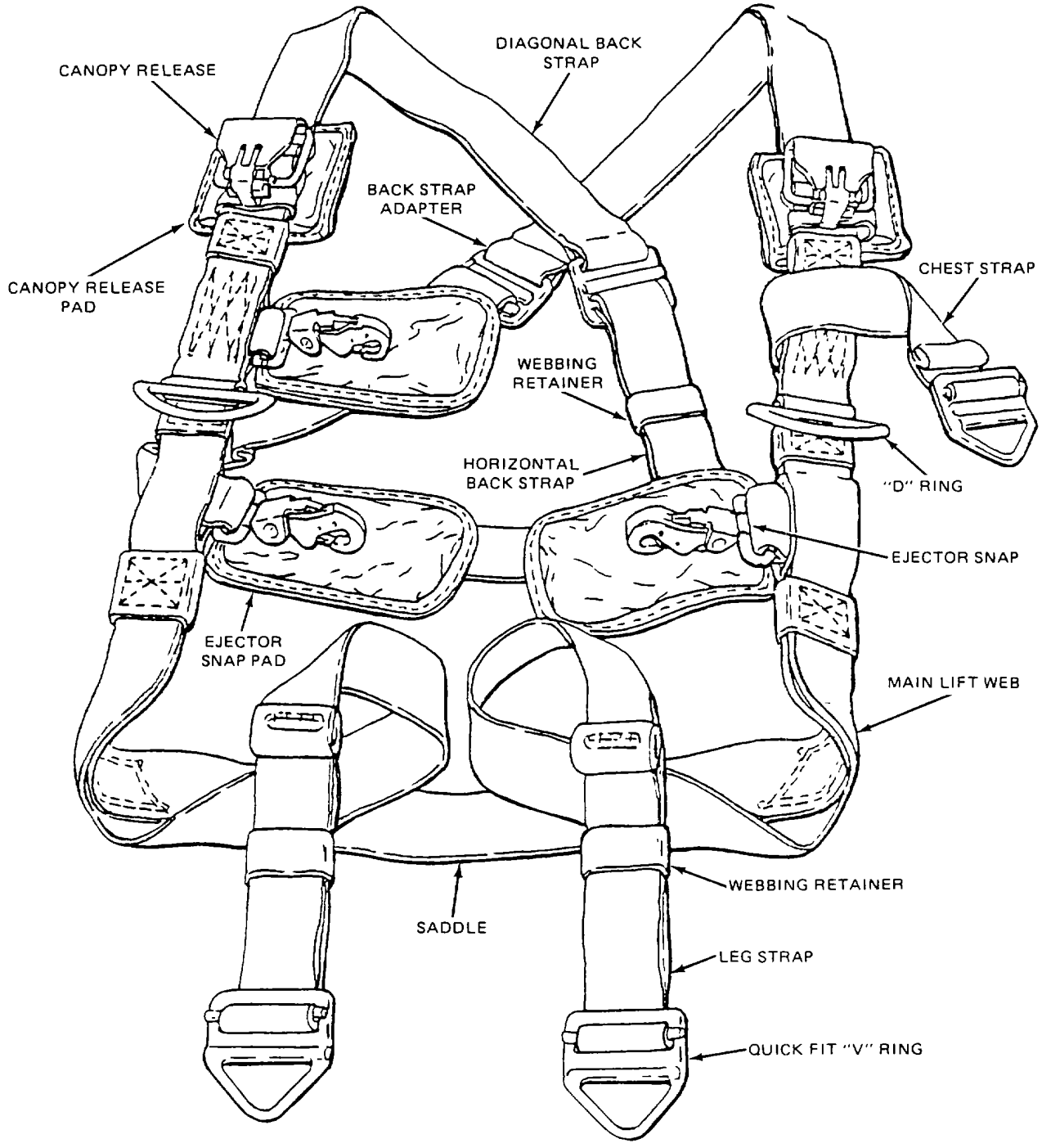


Figure 1-5. T-10B Parachute Harness Assembly.

e. *Riser Assembly.* (Figure 1-6.) Each of the two riser assemblies is constructed of a of type XIII nylon webbing with the male canopy release fitting permanently attached in the center. The finished risers are 30 inches long. The two ends of each riser are looped for attachment to suspension line connector links.

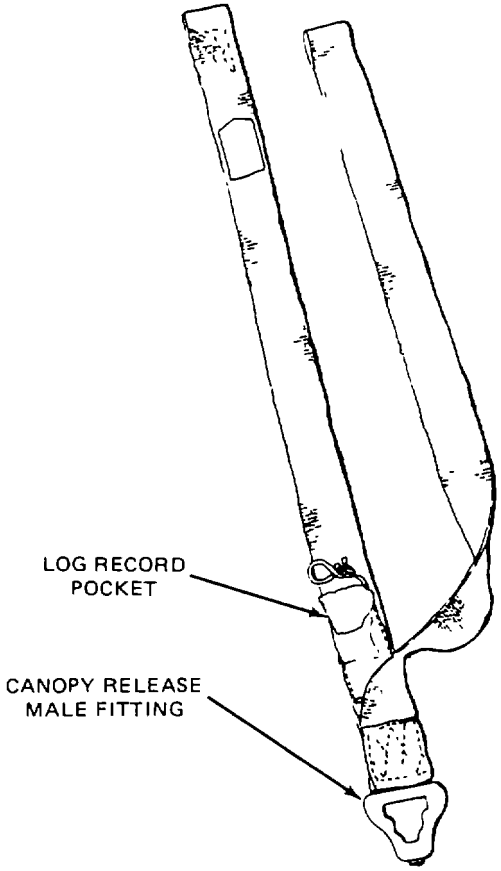


Figure 1-6. T-10B Parachute Riser Assembly.

1-8. Equipment Data. The following listing summarizes the specific capabilities and limitations of the equipment and other critical data needed by the unit and intermediate (DS) maintenance personnel for maintenance of the T-10B Troop Back Parachute Assembly.

a. *Weight* (packed for airdrop)..... 31 lbs (approx)

b. *Canopy Assembly*

Shape.....	Parabolic
Diameter (nominal)	35 feet
Diameter of skirt	24.5 feet
No. of gores.....	30
No. of sections per gore.....	4 or 5
Gore material.....	1.1 oz. type I ripstop nylon parachute cloth
No of radial tapes.....	30
Radial tape material.....	9/16-in. type I nylon webbing
No of vent lines.....	15

1-8. Equipment Data (CONT).

Vent line material	Type II nylon cord
No of suspension lines	30
Suspension line material	Type II nylon cord
Length of suspension line (connector link to lower lateral band)	25 ft. 6 in.
Length of canopy (lower lateral band to upper lateral band)	17 ft. 2-7/32 in.
No of V-tabs	30
No of pocket bands	15
No of connector links	4 L-bar
Anti-inversion net	3-3/4 in. mesh

c. Pack Tray

Panel material	Nylon duck, 7.25 oz

d. Harness Assembly

Strap material	Type XIII nylon webbing

e. Deployment Bag

Bag material	8.8-oz cotton sateen cloth

f. Riser Assemblies (2)

Material	Type XIII nylon webbing
Length	30-in.

1-9. Safety, Care and Handling. The following subparagraphs summarize the safety, care and handling requirements for the parachute assembly.

a. Safety. Use care In handling packed parachutes as exposed metal parts could cause painful Injuries.

b. Care and Handling.

(1) Every effort shall be made to protect the parachute from weather elements, dust, dirt, oil, grease, and acid.

(2) Unpacked parachute shall be placed In aviator kit bag.

(3) When available, an environmentally controlled building should be used to store parachutes.

(4) Parachutes shall be stored In a dry, well-ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents, and direct sunlight.

CHAPTER 2

MAINTENANCE INSTRUCTIONS

OVERVIEW

This chapter contains information necessary to maintain the T-10B Troop Back Parachute on the unit and intermediate maintenance levels In accordance with the Maintenance Allocation Chart (MAC) for the equipment. It includes the following:

a. Procedures for processing a new or used parachute assembly upon receipt.

b. Assembly of components prior to packing.

c Preventive maintenance procedures to ensure continued serviceability of all components.

d. As-required inspections and maintenance procedures performed prior to packing such as shakeout and airing, cleaning and drying, and acidity and salt-water contamination tests.

e. Detailed packing procedure.

f. Repair methods and repair or replacement procedures for all components of the parachute assembly.

Section I. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

2-1. Common Tools and Equipment. For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

2-2. Special Tools, TMDE and Support Equipment. Special Tools, TMDE and Support Equipment are not required.

2-3. Repair Parts and Special Tools Lists (RPSTL). Repair parts are listed and Illustrated in Appendix C of this manual.

Section II. SERVICE UPON RECEIPT

2-4. Initial Receipt. The following describes the procedures for processing parachutes upon initial receipt.

a. General Procedures for Air Delivery Equipment. When air delivery equipment is initially procured from a supply source and issued to a using unit, the item(s) will be unpacked from the shipping container(s) and inspected by a qualified parachute rigger (MOS 43E). The inspection performed will be a technical/rigger-type which will be conducted as outlined in paragraph 2-9. Upon completion of the inspection, the item(s) will be tagged as prescribed in TB 750-126. Serviceable equipment may then be entered either into storage or into use in airdrop operations, as applicable. An unserviceable item will be held and reported in accordance with DA PAM 738-750/MCO 4855.10 (MC).

b. Inspection Personnel. Personnel other than parachute rigger personnel may assist in the unpacking process of initially received parachutes as directed by the local air delivery equipment maintenance officer. However, the maintenance officer will insure that the entire unpacking effort is conducted under the direct supervision of a qualified rigger (MOS 43E).

c. Configuration/Condition. Acceptance of new equipment from the manufacturer is based upon inspections made of sample lots which have been randomly selected in accordance with military standards. It is Incumbent upon the using activity personnel to bear this in mind whenever equipment is first placed in service. Changes will sometimes evolve from the original equipment design and sometimes contractors are authorized deviations in material and construction techniques. Air delivery equipment that has been in the field cannot be expected to meet exacting manufacturing specifications; however, the equipment should closely reflect desired design characteristics. Since repairs, modifications, and/or changes can alter or detract from the configuration originally desired, such equipment shall be airworthy, safe, of the desired configuration, and adequate for intended use.

d. Marking Parachutes. Prior to being placed into service, personnel parachutes that have had no previous use will be marked to reflect the date of entry into service. The marking will be made on the canopy information data block by stenciling the lettering in 1/2-inch characters using the procedures in paragraph 2-19. Other applicable parachute components will be marked adjacent to existing data. The stenciled data will appear on "IN-SVC" followed by the date which will indicate the month and calendar year such as "Jan 85". Insure the added marking does not infringe upon or obliterate any original data on the information data block.

e. Parachute Log Record. The Army Parachute Log Record DA Form 10-42 or DA Form 3912 and AFTO 391 are history-type maintenance documents which accompany the parachute canopy and pack tray assemblies through the period of service of the individual assembly. The log record provides a means of recording maintenance actions performed on a parachute canopy assembly. Normally, a log record is initiated and attached to a pack tray upon receipt by a using unit. However, if the Item is subjected to alteration or modification by a maintenance activity during the interim period from date of manufacture to receipt by a using unit, the log record will be prepared by the activity performing the maintenance function. Once initiated, a log record will be attached to and contained in an affixed parachute log record/inspection data pocket until such time as the parachute canopy assembly is destroyed or rendered unfit for further use or repair. Additionally, should an item that requires a log record be transferred from one unit to another, the log record for the parachute assembly will

accompany the item In the transfer action. A prepared log record will not be removed or separated from a parachute, and especially a packed parachute, except as directed by the local air delivery equipment maintenance activity officer. A log record which is illegible, lost, damaged, soiled, or precludes further entries due to lack of space will be replaced upon the next repack or Inspection, as applicable, with a serviceable item from stock.

f. *Installing Attaching Tie*. Install attaching tie as follows:

(1) Cut a 30-inch length of ticket No. 6 waxed nylon thread and double the thread length.

(2) Pass the looped end of the doubled thread length around the centerfold of the log record and form a slip loop on the outside at the log record top (A, figure 2-1).

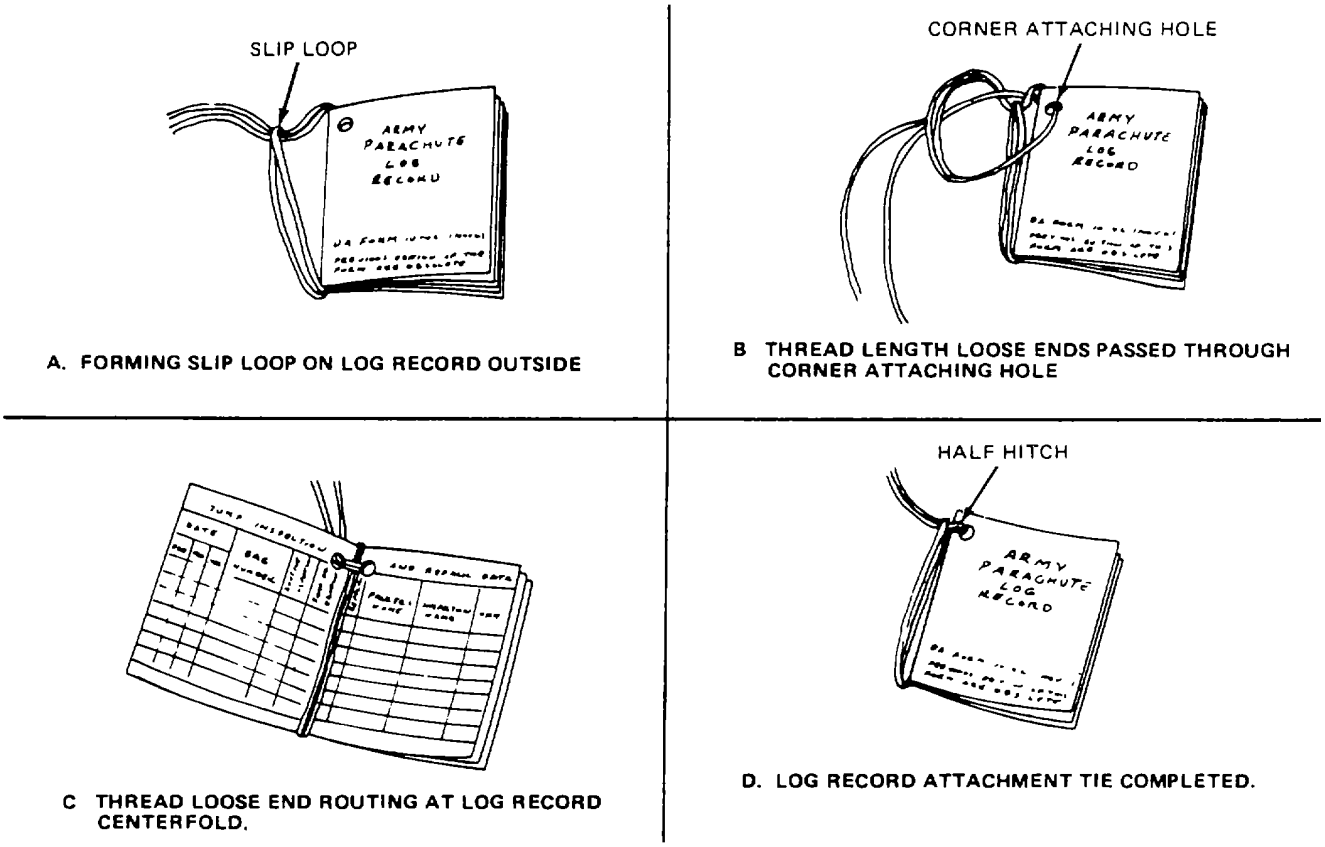


Figure 2-1. Installing Attachment Tie on Parachute Log Record.

(3) Pass the thread length running ends through the corner attaching hole from the front cover of the log record (B, figure 2-1) and insure the running ends are routed over that part of the thread length located along the log record centerfold (C, figure 2-1).

(4) Complete the attachment tie by making a half hitch on top of the slip loop made in (2) above.

(5) Thread one running end of the log record attachment tie In a tacking needle and pass the tacking needle with attached thread end through the edge binding of the applicable parachute log record/inspection data pocket.

2-4. Initial Receipt (CONT).

(6) Remove the thread end from the tacking needle and make a finished 10-inch-long log record attaching loop by securing the two thread ends together with an overhand knot.

(7) Insert the log record into the pocket and secure the record within the pocket using the pocket flap and applicable type flap fastener.

g. Accomplishing a Log Record. Upon completion of the first technical/rigger-type inspection, the individual performing the inspection will Initially prepare a log record for an individual parachute or applicable type parachute harness and accomplish subsequent record entries using the following procedures:

NOTE

Log record book entries will be made with a suitable type blue or black marking device that cannot be erased

(1) *Inside front cover.* Using the information provided on the parachute canopy data block, make the following entries on the Inside front cover of the log record (figure 2-2). Entries may be continued on the inside of the back cover, if necessary.

(a) *Serial number*. Enter the parachute canopy assembly serial number.

NOTE

A parachute canopy serial number is recorded in a log record as a method of establishing control for maintenance, Equipment Improvement Report (EIR) and Quality Deficiency Report (QDR) documentation, and to insure the correct original record is reattached should the record become detached. A canopy serial number will not be used for property accountability, except in test projects or other special instances.

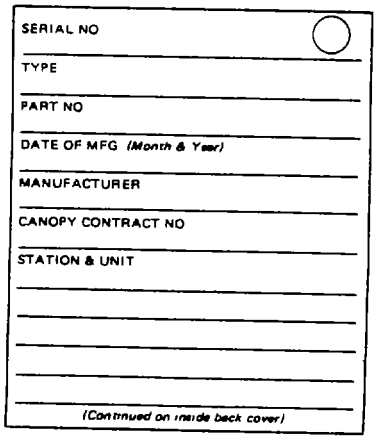


Figure 2-2. Inside Front Cover of Parachute Log Record.

(b) Type. Enter the parachute type.

(c) Part number. Enter the part number of the parachute canopy.

(d) Date of manufacturer. Enter the month and year the parachute canopy was manufactured.

(e) Manufacturer. Enter the name of the parachute canopy manufacturer.

(f) Canopy contract number. Enter the entire contract number specified for the parachute canopy.

(g) Station and unit. Enter the name of the station and unit to which the parachute canopy Is currently assigned. When a parachute is transferred permanently to another station and/or unit the original entry will be lined out and the name of the receiving station and/or unit will be entered.

(2) *Inside back cover.* Entries may be continued on the inside back cover, if necessary (figure 2-3).

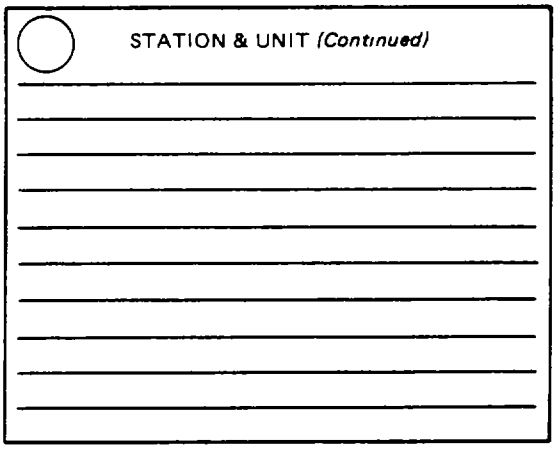
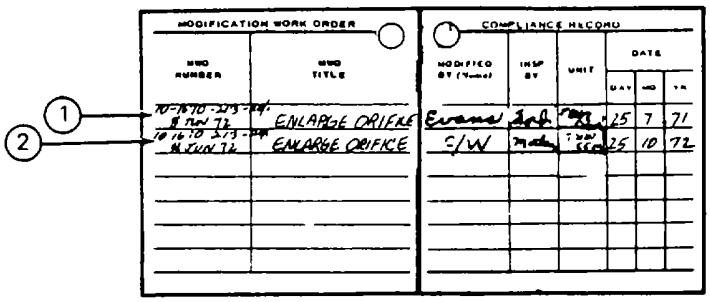


Figure 2-3. Inside Back Cover of Parachute Log Record.

(3) Modification Work Order (MWO) Compliance Record page. When a modification is performed on a parachute canopy, the following entries will be made on the "Modification Work Order Compliance Record" pages of the Log Record (figure 2-4).



1 MODIFICATION WORK ORDER COMPLIANCE COMPLETED
2. MODIFICATION COMPLETED BY UNKNOWN DUE TO LOST ORIGINAL LOG RECORD

Figure 2-4. Log Record Entries for the Modification Work Order Compliance Record Page.

2-4. Initial Receipt (CONT).

(a) MWO number. Enter the publication number and date of the MWO which describes the MWO (1, figure 2-4).

(b) MWO title. Enter a short, abbreviated title extracted from the MWO prescribing the work.

(c) Modified by. Enter the last name of the individual who has performed the modification. If the original log record for the parachute has been lost, and it has been ascertained through inspection that a particular modification has been accomplished, the entry for this column will be C/W "Complied With" (2, figure 2-4), which signifies the applicable MWO has been complied with.

(d) Inspected by. The individual who accomplished the Inspection required after modification will sign this entry with his last name only.

(e) Unit. Enter the unit designation responsible for performing the MWO or in the event of a lost Log Record, the unit to which the inspector is assigned.

(f) Date. Enter the day, month, and year the modification work was completed.

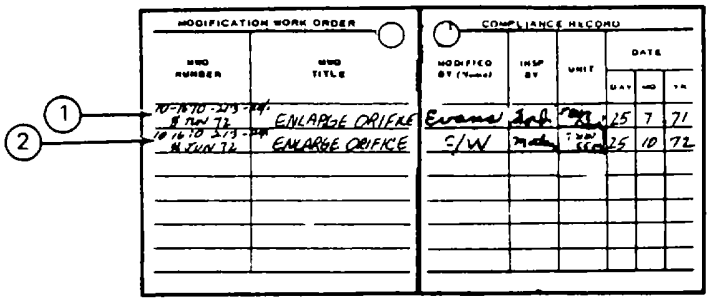
(4) *Unit and intermediate repair and Inspection data*. When a parachute canopy assembly is initially received from a supply source and a technical/rigger-type inspection is performed, the inspection accomplishment will be documented on the "Unit and Intermediate Repair and Inspection Data" page of the individual Parachute Log Record (figure 2-5) Additional entries will also be made on this page each time the canopy assembly is repaired or is administered an Inspection in compliance with a one-time inspection Technical Bulletin (TB). The page completion criteria is as follows.

(a) Type of repair. Enter the type of repair, completion of Initial inspection, repair accomplishment, Technical Bulletin inspection compliance.

(b) Inspection by. The Individual who accomplished the Inspection required will sign this entry with last name.

(c) Unit. Enter the unit designation responsible for performing the type of repair.

(d) Date. Enter the day, month and year the repair was performed.



1 MODIFICATION WORK ORDER COMPLIANCE COMPLETED
2. MODIFICATION COMPLETED BY UNKNOWN DUE TO LOST ORIGINAL LOG RECORD

Figure 2-5. Log Record Entries for Unit and Intermediate Repair and Inspection Data Page.

(5) Note page. A page is provided at the back of a parachute log record to accommodate recording of additional data pertinent to the serviceability of a parachute canopy assembly (figure 2-6). This shall also include the month and year the item was placed in service.

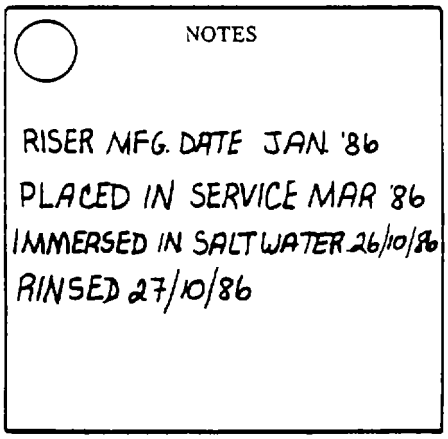


Figure 2-6. Data Entries for a Log Record Note Page.

2-5. Receipt of Used Parachute. Upon initial receipt of used parachute proceed as follows:

a. Follow procedures given in paragraph 2-4a, and check each component for excessive wear and tear.

b If defects or damages are discovered, process the parachute for maintenance at the maintenance level assigned by the MAC (Appendix B).

2-6. After-Use Receipt. When a parachute is received at the maintenance activity following Its use by the parachutist during air delivery, it must be given a shakeout and aired (para 2-11), and if necessary, cleaned (para 2-12) before it can be returned to service. If a parachute is issued but is not used, it does not need to be given a shakeout, however, it must be given a routine inspection by a qualified parachute rigger.

Section III. ASSEMBLY

Paragraph — Page

2-7. Assembling the T-10B Parachute. When the parachute is received from the supply activity and before it is packed for use, the components must be assembled. This must be accomplished during the layout of the parachute (para 2-16c). If, in assembling components, any component is found to be defective, the parachute must be processed for repair. Place the components on a packing table and obtain proper layout of the canopy assembly, then assemble components as follows.

a. T-10B Harness. Attach the harness to the pack tray as follows:

(1) Place the pack tray on table with back strap retainers and keepers up, and with end flap containing the static line slack retainer toward apex end of table.

2-7. Assembling the T-10B Parachute(CONT).

(2) Attach the harness to the pack tray as illustrated In figure 2-7, by threading each of the pack tray diagonal backstrap retainers through the harness diagonal backstrap channels for the required size and through backstrap keepers.

(3) Secure the pull-dot snap fasteners.

(4) Secure both pack tray horizontal backstrap keepers over horizontal backstrap as illustrated in figure 2-7.

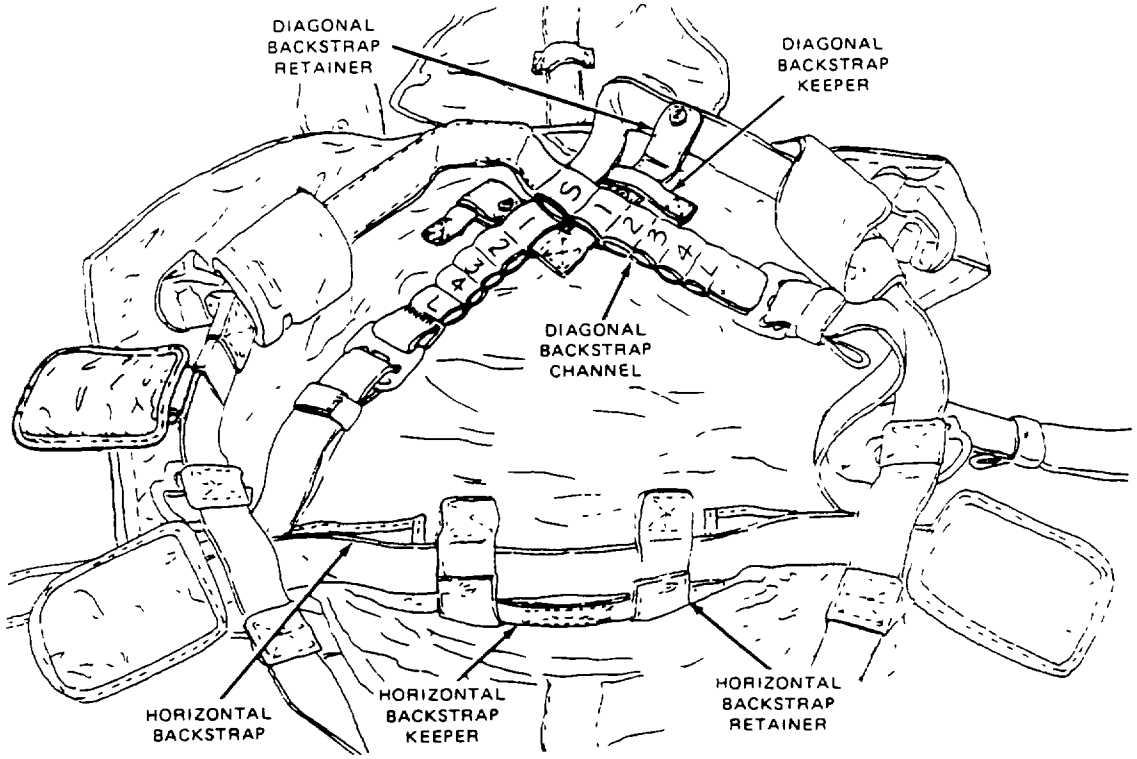


Figure 2-7. Attaching Pack Tray to the T-10B Harness.

b. Risers. Attach the risers to the T-10B harness as follows (see figure 2-8):

(1) Lay parachute, harness down, with female fittings of harness near male fittings of risers.

(2) Fit heel of male fitting into groove of female fitting (A, figure 2-8).

(3) Fit toe of male fitting into slot of female fitting, close latch (B, figure 2-8), and ensure that the latch is securely locked. Operate latch and check for smooth operation. Close and lock latch (C, figure 2-8).

(4) Position the cable loop around the latch (D, figure 2-8).

(5) Fit the heel of the safety clip into the slot of the latch (E, Figure 2-8).

(6) Close the safety clip (F, figure 2-8).

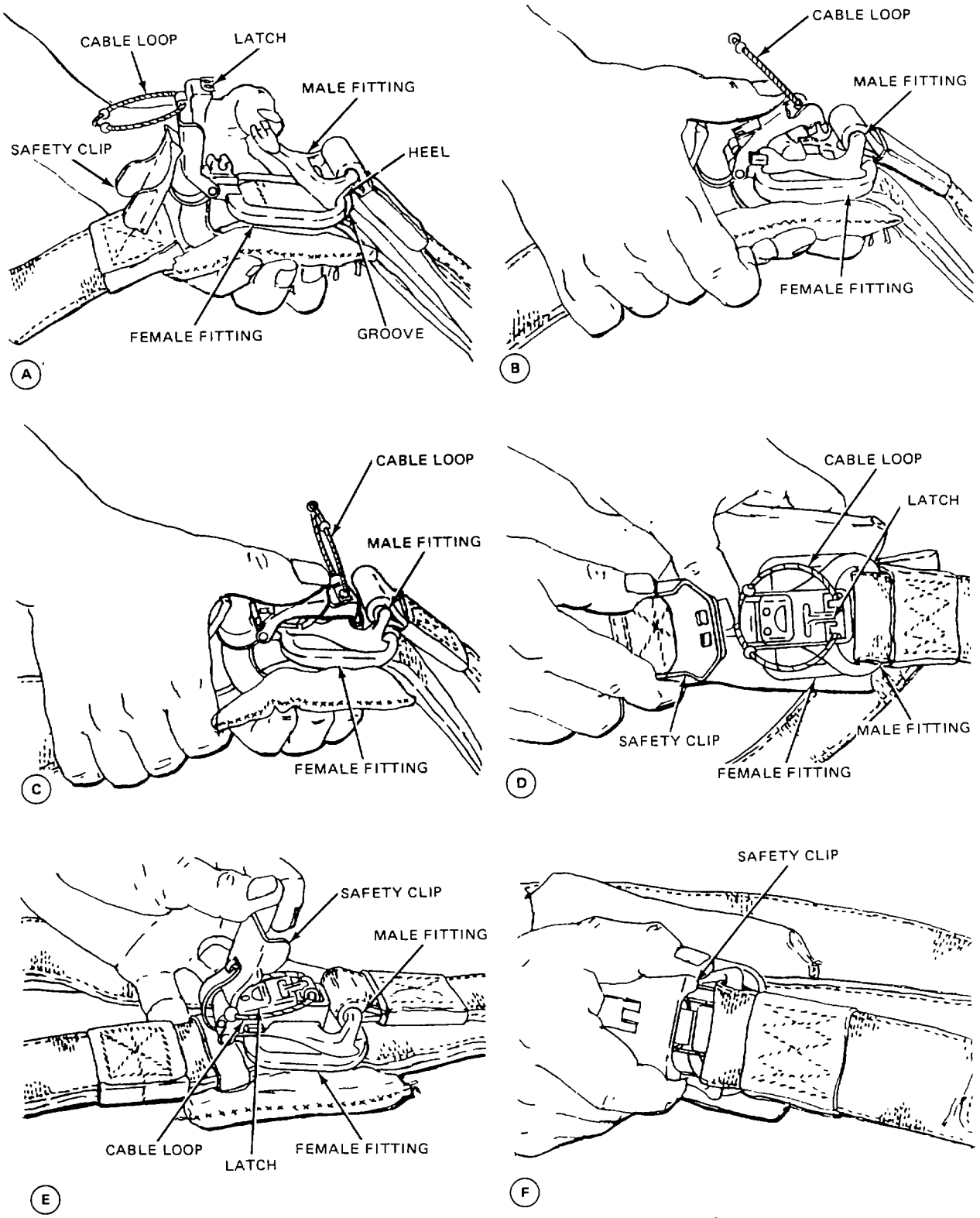


Figure 2-8. Assembling Cable Loop-Type Canopy Release.

2-8. Adapting the T-10B Parachute Harness to Open-Circuit Scuba Equipment. Refer to TM 10-1670-290-23&P.

Section IV. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-9. PMCS Procedures. The following describe PMCS procedures on the unit and intermediate levels.

a. General. Table 2-1 lists preventive maintenance checks and services. The purpose of PMCS is to assure that the T-1OB parachute is operational.

b. Frequency of Performing. PMCS. PMCS will be performed before equipment is packed for use, during modification and repair after use, or at any time deemed necessary by the air delivery equipment maintenance officer.

c. PMCS Columnar Entries Table 2-1. Enter data in columns as follows:

(1) *Item number.* The item number column shall be used as a source of the Item number required for the "TM Number" column on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) when recording the results of PMCS.

(2) *Interval.* This column identifies the required PMCS interval.

(3) *Item to be inspected.* Contains the common name of the item to be inspected.

(4) *Procedures*. Provides a brief description of the procedure by which the checks are to be performed.

d. Recording Defects. All defects discovered during the inspection will be recorded using the applicable specifics in DA Pamphlet 738-750, TB 750-126, and TB 43-0002-4 (will be superseded by TB 43-0002-43).

e. Over Age Items. During any inspection or at any time that an item is found to be over age (shelf/service life has expired as specified in TB 43-0002-4) the item will be removed from service, condemned, and tagged in accordance with TB 750-126.

f. Conservation of Resources. To conserve time and labor, and to avoid evacuation to an intermediate maintenance activity, unit/detachment commanders may designate, in writing, rigger personnel to accomplish classification inspection of over age air delivery equipment.

g. Inspection Function Requirement. Normally, a technical/rigger-type inspection will be performed by air delivery equipment maintenance personnel at a packing, rigging, or repair activity. The inspection of initial receipt items will be performed as a separate function from packing or rigging activity, the item to be inspected will be placed in proper layout on packing table or suitable sized floor area. Should defect or damage be discovered at any point during the inspection, the inspection will be terminated and the applicable item will be processed and forwarded to repair activity. The repair activity, in turn, will conduct a technical/rigger-type inspection that will be performed by only those parachute rigger personnel cited in AR 750-32. The repair activity inspection of personnel parachutes will be made on a shadow table. Any defect discovered during a unit level repair activity inspection which

exceeds the capability of that activity will require the affected item to be evacuated to an intermediate maintenance function for further determination of economic repair and repair accomplishment, if applicable.

NOTE

Parachutes which are deemed unserviceable by a packing or rigging activity will be rigger-rolled (see paragraph 2-38) prior to being sent to a repair activity.

Table 2-1. Preventive Maintenance Checks and Services (PMCS).

B - Before D - During A - After

Item no.	Interval B	Interval D	Interval A	Item to be inspected	Procedures
00	•		•	T-10B assembly	Verify that assembly Is complete, no components missing Check for proper assembly, foreign material, mildew or stains, and log record book.
01	•		•	Canopy	*Canopy Assembly Fabric.* Inspect for rips, burns, holes, tears, dampness, debris, frays, broken or loose stitching, and marred and Illegible marks. *Bridle Loop*. Inspect for cuts, breaks, frays, burns, and Improper installation, loose or broken stitching. *Apex Line.* Inspect for burns, cuts, thin cords, breaks, loose or broken stitching on lateral band or radial seam. *Upper Lateral Band.* Inspect the upper lateral band for holes, cuts, frays, tears, burns, and loose or broken stitching. *Gore Sections.* Inspect the gore sections for dampness, dirt, foreign material, holes, cuts, snags, tears, frays, burns, loose or broken stitching, and marred or illegible markings. *Informational Data Block.* Inspect for Illegibility of data. *Radial Seams*. Inspect for loose and broken stitching, holes and tears. *Radial Tapes.* Inspect for loose or broken stitching, holes, tears, lack of freedom within radial seam.

2-9. PMCS Procedures (CONT).

Table 2-1. Preventive Maintenance Checks and Services (PMCS) - CONT.

B - Before D - During A - After

Item no.	Interval B	Interval D	Interval A	Item to be inspected	Procedures
01	•		•	Canopy (CONT)	*V-Tabs*. Inspect for loose or broken stitching, frays, tears, burns, cuts. *Pocket Bands.* Inspect for cuts, frays, tears, burns, and loose or broken stitching. *Lower Lateral Band.* Inspect for loose or broken stitching, rips, snags, burns. *Anti-Inversion Net*. Check for cuts, broken cords and loose or broken stitching. *Lines.* Inspect for loose or broken stitching, broken lines, broken core cords, frays, burns, tears. *Connector Links.* Inspect for rust, burrs, rough spots, corrosion, cracks, foreign material, loose or missing screws, stripped threads, ends not locked.
02	•		•	Risers	*Risers*. Inspect for loose or broken stitching and tackings, burns, frays, tears, deterioration and marred or illegible markings. *Canopy Release Male Fittings*. Inspect for corrosion, rough spots, bends, cracks. *Log Record Pocket.* Inspect for loose or broken stitching.
03	•		•	Harness	*All Webbings and Binding & Cloth Duck.* Inspect for loose or broken stitching, burns, frays, tears and marred or illegible markings. *All Hardware and Functional Fittings.* Inspect for improper operation, rust, corrosion, burrs, cracks. *Retainer Webbings.* Inspect for loose or broken stitching, loss of elasticity, cuts and frays.

Table 2-1. Preventive Maintenance Checks and Services (PMCS) (CONT).

B - Before D - During A - After

Item no.	Interval B	Interval D	Interval A	Item to be inspected	Procedures
03	•		•	Harness (CONT)	*Canopy Release and Ejector Snap Pads.* Inspect for loose or broken stitching and hand tacking, cuts and tears *Horizontal Backstrap - 96-Inch and 120-Inch.* Inspect for loose or broken stitching, burns, frays, tears and marred or illegible markings
04	•		•	Pack tray	*Pack Tray.* Inspect for illegible markings. Inspect webbings, bindings, cloth duck for loose or broken stitching and tacking, holes, tears, burns and frays. *Backstrap Retainers & Keepers.* Inspect for loose or broken stitches, tears, burns or frays, missing or damaged snap fasteners. *Pack Closing Loop.* Inspect for loose or broken stitches, burns, frays and tears. *Retainer Band Keepers.* Inspect for loose or broken stitches, burns, frays and tears. *Static Line Slack Retainer.* Inspect for loose or broken stitches, burns, frays and tears, elasticity. *Waistband & Waistband Extension.* Inspect for loose or broken stitches, burns, frays and tears, metal adjuster for rust, burrs or corrosion.
05	•		•	Deployment bag	Inspect all webbing and tapes for loose or broken stitching. *Main Panel.* Inspect for holes and tears, loose and broken stitching. *Stow Loops and Reinforcement Panel.* Inspect for loose or broken stitching, holes, tears, burns or frays. *Edge Reinforcement Webbing*. Inspect for loose and broken stitching, holes, tears, burns, or frays.

2-9. PMCS Procedures (CONT)

Table 2-1. Preventive Maintenance Checks and Services (PMCS) (CONT).

B - Before D - During A - After

Item no.	Interval B	Interval D	Interval A	Item to be inspected	Procedures
05	•		•	Deployment Bag	Side Flaps. Inspect for loose and broken stitching, (CONT) holes, tears, burns or frays. *Locking Stow Panel.* Inspect for loose and broken stitching, holes, tears, burns or frays. *Locking Stow Loop Hoods.* Inspect for loose or broken stitching, holes, tears, burns or frays. *Closing & Locking Stow Loops*. Inspect for loose or broken stitching, holes, tears, burns or frays. *Suspension Line Protection Cover.* Inspect for loose or broken stitching, holes, tears, burns, frays, and Illegibility of markings. *Cover Tiedown Loops.* Inspect for loose or broken stitching, holes, tears, burns or frays. *Connector Link Tie Loops*. Inspect for loose or broken stitching, holes, tears, burns, or frays.
06	•		•	Static Line	Webbing Inspect for loose or broken stitching, holes, tears, burns, or frays. *Sleeve and Buffer.* Inspect for loose or broken stitching, holes, tears, burns, or frays. Inspect entire portion of static line covered by sleeve. *Pack Opening Loop*. Inspect for loose or broken stitching, burns, tears, or frays. *Snap Hook*. Inspect for proper operation, excessive wear, rust, burrs, corrosion, cracks and verify that proper hole has been drilled.

Table 2-1. Preventive Maintenance Checks and Services (PMCS) (CONT).

B - Before D - During A - After

Item no.	Interval B	Interval D	Interval A	Item to be inspected	Procedures
06	•		•	Static Line (CONT)	Safety Pin. Inspect for rust, corrosion, breaks, and twist. Safety Pin Lanyard. Inspect for proper ties, frays, thin spots and breaks.

Section V. UNIT AND INTERMEDIATE MAINTENANCE PROCEDURES

2-10. General Information. The following paragraphs contain general information pertinent to unit and intermediate maintenance procedures:

a. *Scope.* This section contains maintenance procedures which are the responsibility of the specified technician as authorized by the Maintenance Allocation Chart (MAC) and the Source, Maintenance and Recoverability (SMR) coded Items that are identified in the Repair Parts and Special Tools Lists (RPSTL).

b. *Maintenance Functions/Procedures.* Each paragraph identifies a maintenance function specified in the MAC All maintenance procedures required to complete a maintenance function are identified under “This task covers:", in the order in which the work is most logically accomplished.

2-11. Shakeout and Airing.

This task covers:

a. Shakeout b. Airing

Materials/Parts.

Brush, scrub, household, Item 3 Appendix D.

Personnel Required: (2)

43E(10) Parachute Rigger

Equipment Condition:

Parachute Suspended

a. Shakeout. The shakeout will be accomplished by a two-person team, either Indoors within a shakeout room or outdoors at a shakeout tower. Each parachute will be suspended by the canopy vent and all debris removed by shaking the canopy thoroughly or by brushing with a dry soft-bristled brush as detailed below:

(1) With assistance from the No. 2 person, the No 1 person will connect the snap on a pulley rope to the canopy bridle loop (A, figure 2-9).

(2) Through use of the pulley rope, the No 2 person will raise the canopy to a suitable height which will enable the No. 1 person to perform shakeout on each of the canopy gores. Until the gore shaking process is completed the No 2 person will maintain a steady pull on the pulley rope to hold the suspended canopy at the working height needed by the No 1 person.

(3) The No. 1 person will grasp any two consecutive suspension lines, one in each hand (B, figure 2-9), and vigorously shake the first gore When the gore is free of debris, the No. 1 person passes the line from the right hand to the left hand and grasps the next consecutive suspension line in the right hand. The No 1 person will shake out each consecutive gore until all suspension lines are held in the left hand and all gores are free of debris.

(4) Once the gore shaking process is completed, the No. 2 person will slowly raise the suspended canopy higher as the No 1 person clears the suspension lines of debris and removes entanglements (C, figure 2-9) when possible.

(5) After the suspension lines have been cleared, the No 2 person may hold or temporarily secure the pulley rope while the No 1 person proceeds to clear debris from other parachute components such as the risers, harness, pack tray.

(6) When all components are free of debris, the No 2 person will slowly lower the canopy while the No 1 person S-folds the suspension lines into the pack tray, or aviator's kit bag (D, figure 2-9), as applicable After the suspension lines have been completely folded, the No 1 person will accordion-fold the canopy length on top of the folded lines.

(7) As the canopy folding is being completed, the No 1 person disconnects the canopy vent from the pulley rope snap Secure the folded canopy assembly for further handling.

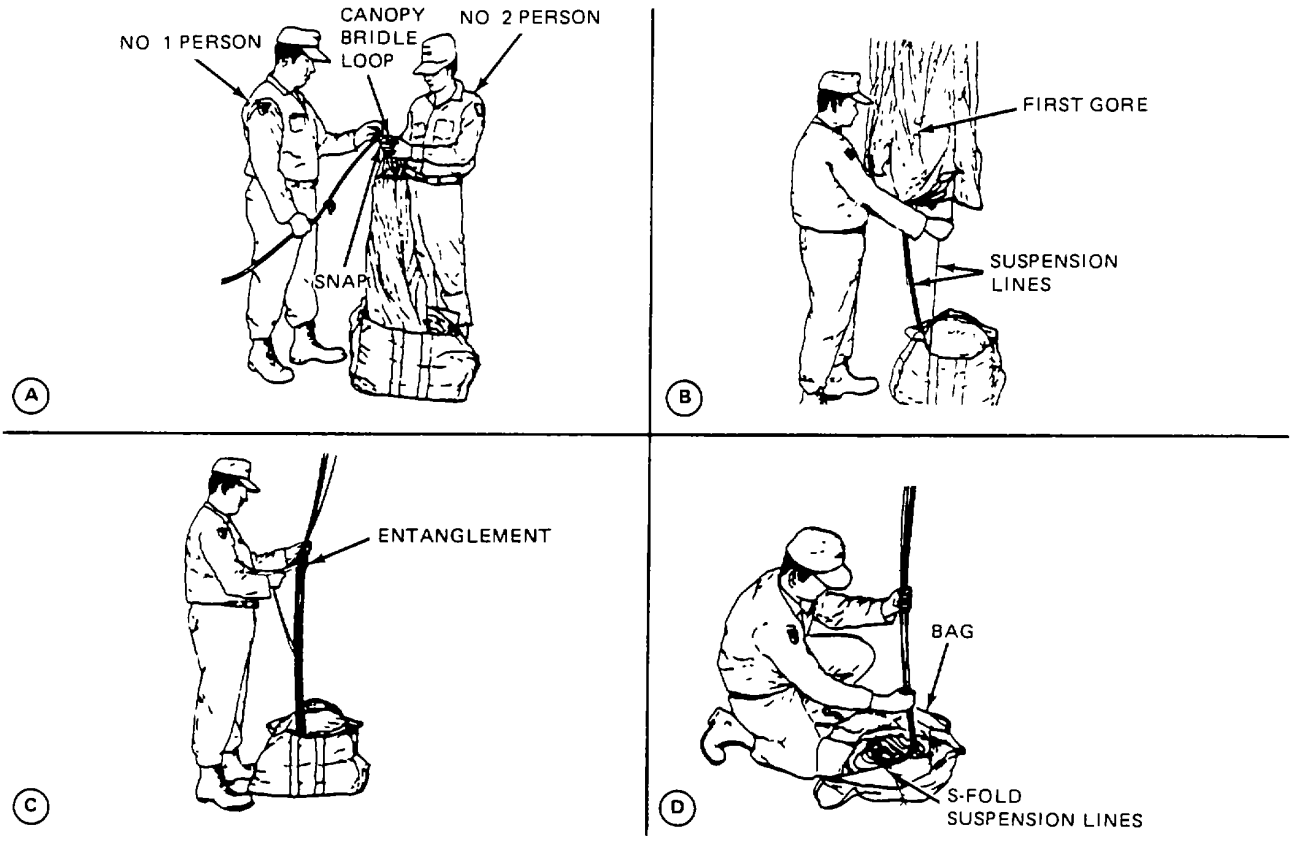


Figure 2-9. Shakeout.

b. *Airing*. Where dampness and mildew are prevalent, air delivery equipment will be aired at frequent intervals according to the severity of the prevailing conditions. Parachutes that have been previously packed or are unpacked, which have been subjected to conditions of dampness or mildew, will be aired for a period of at least 6 hours prior to being repacked. Air delivery items may be aired either indoors or outdoors in dry weather. However, fabric items will not be aired in direct sunlight. Airing may be accomplished by suspending or elevating the applicable item(s) in a manner which would allow entire exposure to the circulation of air. Outside facilities used for the shakeout of parachutes may be used for the airing of air delivery equipment. If weather conditions permit. If the shakeout facilities are inadequate for airing, the applicable item(s) may be suspended or elevated at several points or by draping over suitable type objects which would not cause damage.

2-12. Cleaning and Drying.

This task covers.

a. Cleaning fabric items with cleaning solvent
b. Cleaning fabric items with dish washing compound
c. Rinsing parachute assembly immersed in salt water
d. Rinsing parachute assembly immersed in fresh water
e. Drying fabric items
f. Cleaning metal items

Materials/Parts:

Cloth, Abrasive, Item 7, Appendix D
Dish washing Compound, Item 16, Appendix D
Lubricant, Solid Film, Item 24, Appendix D
Rag, Wiping, Item 32, Appendix D
Tetrachloroethylene, Item 49, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Special Environmental Condition:

Ventilation required as repeated or prolonged inhalation of cleaning solvent vapors can be detrimental to human health.

Equipment Condition:

Layout on packing table or other suitable area.

WARNING

Due to flammable properties and nylon-damaging substances, cleaning solvents other than tetrachloroethylene will not be used in the spot-cleaning of air delivery equipment. Tetrachloroethylene will only be used in areas where substantial ventilation is available. Repeated or prolonged inhalation of the solvent vapors can be detrimental to human health. In addition, avoid prolonged or repeated contact of the solvent fluid with areas of the skin. Tetrachloroethylene must not be taken internally.

CAUTION

If during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to Intermediate maintenance activity for determination as to the nature of the substance and item disposition. If the substance cannot be identified or if normal repair procedures will not eliminate all traces of chemical or acid damage, the applicable item will be condemned.

NOTE

Cleaning of parachutes should be held to a minimum and should be performed only when necessary to prevent malfunction or deterioration. When a parachute contains debris, or when it is soiled by dirt, oil, grease, rust, corrosion, or other foreign substances to such an extent that cleaning is necessary, the cleaning should be performed manually and should be limited to the soiled area only, unless the parachute has been contaminated by water. The methods of cleaning must be determined by the nature of the substance to be removed. Do not use cleaning solvent to clean item soiling caused by air sickness. Use a solution of hand dish washing compound to clean this type of soiling.

a. *Cleaning Fabric Items with Cleaning Solvent*. Use cleaning solvent to clean fabric items as follows:

(1) Gently brush with a soft bristle brush.

(2) Spot clean with cleaning solvent tetracholoroethylene.

(a) Rub the soiled area with a clean cloth dampened with tetrachloroethylene.

(b) Rinse the cleaned area by repeating the rubbing process with the clean portion of the cloth dampened with the cleaning solvent.

NOTE

Do not wring out the rinsed area If an excessive amount of cleaning solvent was applied.

b. *Cleaning Fabric Items with a Solution of Hand Dish washing Compound*. Use dish washing compound to clean fabric Items as follows.

(1) Gently brush with a soft bristle brush.

(2) Spot clean with a solution of dishwashing compound.

(a) Dissolve one-half cup of dishwashing compound In one gallon of warm water.

(b) Rub the soiled area with a clean cloth dampened with the solution of dishwashing compound.

(c) Rinse the cleaned area by repeating rubbing process with a clean portion of the cloth dampened with the dishwashing compound.

c. *Rinsing Parachute Assembly Immersed in Salt Water*. If the parachute, or any of its components, has been immersed in salt water in excess of 24 hours it will be condemned. Additionally, if the parachute, or any of its components, has been Immersed in salt water for a period less than 24 hours, but which cannot be rinsed within 48 hours after recovery, it will also be condemned. However, if the cited time limitations can be met, then immediately upon recovery, suspend or elevate the parachute assembly in a shaded area and allow it to drain for at least 5 minutes. Do not attempt to wring the fabric

2-12. Cleaning and Drying (CONT).

or the suspension lines. Within 48 hours after recovery, under the supervision of a qualified parachute rigger (43E), rinse the recovered parachute assembly as follows:

(1) Place the parachute assembly in a large water-tight container filled with a suitable amount of fresh, clean water to cover the assembly.

NOTE

If the salt-water-soaked parachute assembly is too large to be placed into a rinsing container, then the rinsing process will be effected by applying fresh, clean water to the assembly using a hose.

(2) Agitate the container contents by hand for 5 minutes.

(3) Remove the parachute assembly from the container and suspend or elevate it in a shaded area, allowing a 5-minute drainage period Do not attempt to wring the fabric or the suspension lines.

(4) Repeat the procedures in steps (1) through (3) above, twice, using fresh, clean water for each rinse.

(5) After the third rinse, allow the parachute assembly to drain thoroughly. Upon completion of draining, dry the assembly in accordance with procedures in e., below.

(6) When dried, perform a technical/rigger-type inspection of the parachute assembly. Corroded metal components, or corrosion-stained fabrics or suspension lines, will be either repaired or replaced as prescribed by the Maintenance Allocation Chart (MAC) in Appendix B.

(7) Record any repairs, Immersion and rinsing In the parachute log record as shown in figure 2-5 and figure 2-6.

d. *Rinsing Parachute Assembly Immersed in Fresh Water*. Any parachute, or its components, that has been immersed in a fresh water lake, river or stream will not require rinsing unless it has been ascertained that the water is dirty, oily or otherwise contaminated. Procedures for handling a fresh water immersed parachute are as follows:

(1) *Contaminated fresh water*. If the parachute, or its components, has been immersed in contaminated fresh water, rinse and dry (see c., above) and, If applicable, repair.

(2) *Uncontaminated fresh water*. If the parachute, or its components, has been immersed in uncontaminated fresh water, it will be cleaned and dried as outlined in a., b., e. and f., above and below. Minor discoloration of fabric tems resulting from immersion in uncontaminated fresh water may occur

NOTE

Fabric items will not be dried in direct sunlight or by laying an item on the ground.

e. *Drying Fabric Items*. Dry fabric Items as follows:

(1) Suspend or elevate the Item in a well-ventilated room or in a heated drying room.

(2) Drying time may be reduced by using electric circulating fans.

(3) When heat is used, the heat temperature shall not exceed 160°F (71°C) The preferred temperature is 140°F (60°C).

f. Cleaning Metal Items. Clean metal items as follows:

CAUTION

Use care not to damage the adjacent fabric materials.

(1) Remove burrs, rough spots, rust or corrosion from metal items by filing with a metal file or by buffing and polishing with abrasive cloth.

WARNING

Use tetrachloroethylene only in areas where substantial ventilation is provided. Repeated or prolonged inhalation can be detrimental to human health. Avoid prolonged or repeated contact with skin areas. Tetrachloroethylene must not be taken internally.

(2) Remove all oils and filings by brushing and dipping In tetrachloroethylene. Allow to dry.

NOTE

Shield adjacent fabric material before spraying solid film lubricant.

(3) Spray metal items with a solid film lubricant and allow to air dry for 24 hours

NOTE

A small amount of lubricant will not damage fabric, but may cause discoloration and make fabric appear soiled.

2-13. Inspection.

This task covers	a. Technical-Rigger-Type b. Pack-in-Process	c. Routine d. In-storage

Personnel Required	*Equipment Condition*
43E(10) Parachute Rigger	Unpacked

a. *Technical/RiggerType Inspection Procedures.* Perform Inspection as follows:

(1) Overall inspection. An overall Inspection will be made on the T-10B parachute to ascertain the following

(a) Log record/parachute inspection data pocket and form. As applicable, inspect the assembly log record/parachute inspection data pocket to insure the Army Parachute Log Record (DA Form 10-42 or 3912) is enclosed and properly attached as prescribed in paragraph 2-4e. Further, remove the log record from the pocket and evaluate the recorded entries to insure compliance with paragraph 2-4e.

(b) Assembly completeness. Insure that the applicable assembly is complete and no components or parts are missing.

(c) Operational adequacy. Check the Item components and parts to insure proper assembly which includes attachment and alinement, and that the assembled product functions in the prescribed manner. Further insure that no stitch formation or sewn seam has been omitted

(d) Markings and stenciling. Inspect each assembly and components for faded, illegible, obliterated, or missing informational data and identification numbers

(e) Foreign material and stains. Inspect each assembly and related components for the presence of dirt or similar type foreign materials. Also check for evidence of mildew, moisture, oil, grease, pitch, resin, or contamination by salt water.

(2) *Detailed inspection.* In addition to the overall Inspection performed in (1) above, a detailed inspection will be performed on the materials which constitute the assembly or component construction using the following criteria, as applicable:

(a) Metal. Inspect for rust, corrosion, dents, bends, breaks, burrs, rough spots, sharp edges, wear, deterioration; damaged, loose, or missing grommets, safety pins, connector snap, hook eye, pack fastener; improper swaging or welding; loss of spring tension, missing or loose screws

(b) Cloth. Inspect for breaks, burns, cuts, frays, holes, rips, snags, tears, loose, missing, or broken stitching or tacking; weak spots, wear, or deterioration.

(c) Fabric tape, webbing, and cordage Inspect for breaks, burns, cuts, frays, holes, snags, tears, incorrect weaving, and sharp edges formed from searing, loose, missing, or broken stitching, tacking, whipping, and weaving, weak spots, wear, and deterioration.

(d) Pressure-sensitive (adhesive) tape. Inspect for burns, holes, cuts, tears, weak spots, looseness and deterioration.

(e) Rubber and elastic Inspect for burns, cuts, holes, tears, weak spots, loss of elasticity and deterioration.

b. *Pack-in-Process Inspection.* A pack-in-process inspection is performed at specified intervals during the packing of a parachute to insure that only authorized procedures and methods are being used. The inspection will be accomplished by a parachute rigger other than the packer or rigger preparing the applicable equipment for use. The intervals at which the inspection is performed is as follows:

WARNING

Deployment bag will be given a complete Inspection including static line and that portion of the static line that is covered by the static line sleeve.

(1) After the parachute is placed in proper layout.

(2) After the gores are folded and flat fold is completed.

(3) After the canopy is long folded and break cord is tied.

(4) After deployment bag is closed.

(5) After suspension lines are stowed.

(6) After pack tray is closed.

(7) After static line is stowed.

c. *Routine Inspection*. A routine inspection is a visual check performed to ascertain the serviceability of all visible components of a parachute that is packed or rigged for use. The inspection will be made on all components that can be inspected without opening the parachute pack. This inspection will be administered by a parachute rigger prior to issue. Personnel parachutes issued for an air delivery operation and not deployed will receive a routine inspection prior to being placed into ready-for-issue storage.

d. *In-Storage Inspection.* An in-storage inspection is a physical check conducted on a random sample of air delivery equipment which is located in storage. The purpose of the inspection is to insure that the equipment is ready for issue, that the item is properly identified and segregated from other types of equipment, that no damage or deterioration of equipment has been incurred, and that all modifications or similar action requirements have been completed. The Inspection shall also concern the methods and procedures applied to the storage of air delivery items, the adequacy of storage facilities, efforts of pest and rodent control, and protection against unfavorable climatic conditions. Air delivery equipment which is in storage will be inspected at least semiannually and at more frequent intervals if prescribed by the local parachute maintenance officer. The frequency of inspection may vary according to the type of storage facilities and local climatic conditions. In-storage Inspection will be conducted only by parachute rigger personnel designated by local parachute maintenance officer.

2-14. Acidity Test.

This task covers: Acidity test

Tools:	*Personnel Required:*
Packing Paddle, Item 20, Appendix B	43E(10) Parachute Rigger
Materials/Parts:	*Equipment Condition:*
Medicine Dropper, Item 26, Appendix D Three-Color pH Paper, Item 29, Appendix D Spool with Color Chart, Item 39, Appendix D	Unpacked. Layout on packing table or other suitable area.

a. Fabric and Webbing Acidity Test. Components and parts that are constructed from fabric or webbing will be administered an acidity test whenever the material is discolored, stained, or the presence of acid is suspected. The acidity test will be accomplished using approved colorimetric pH paper, strip type, with the color comparison chart on the side of each manufacturer's dispenser, to determine the acidity level in steps of 1 pH on a fabric or webbing item.

b. Test Procedure. Perform test as follows:

(1) Using a medicine dropper or equivalent type applicator, place one to two drops of water on the item in the intended test area. If water drops do not penetrate the material, gently rub the moistened area with a flat side of a clean metal packing paddle.

(2) Tear a suitable length of colorimetric pH paper from dispenser, place the piece of pH paper on the wetted area and press the full surface of the paper against the material with a flat side of the packing paddle used in step (1) above insure the pH paper becomes thoroughly wet.

(3) Using the color comparison chart enclosed in the dispenser, compare the color of the moistened pH paper strip with the pH 1-3 color scale. If the color of the pH paper matches the numerical pH 1-3, the acidity present in the material exceeds the acceptable level and the item is to be removed from use and condemned and processed for disposition.

(4) After a packing paddle has been used as outlined in steps (1) and (2), above, thoroughly rinse and dry the paddle before using the paddle for any other functions.

2-15. Salt-Water Contamination Test.

This task covers: Inspection

Personnel Required:	*Equipment Condition.*
43E(10) Parachute Rigger	Layout on packing table or other suitable area

Inspection. Look for a white crystaline residue. If evidence of salt-water/fresh-water contamination is found, refer to paragraphs 2-12c. and 2-12d.

2-16. Packing theT-10B Parachute.

This task covers

a Inspection
b Orientation
c. Preparing Parachute for Proper Layout
d Removing Tangles and Twists from Apex Lines
e Removing Inversion
f. Locating Suspension Lines
g Folding the Gores
h Long folding the Canopy
i. Tying the Break cord
j. Stowing the Canopy
k Closing Deployment Bag and Stowing Suspension Lines
l. Tying Connector Links and Suspension Line Protective Cover
m Closing the Pack Tray
n. Stowing the Static Line
o. Army Parachute Log Record
p. Static Line Extension
q. Folding the Harness

Tools.

Packing Weights, Item 21, Appendix B
Line Separator, Item 16, Appendix B
Packing Paddle, Item 20, Appendix B
Knife, Item 13, Appendix B
Stow Hooks, Item 29, Appendix B
Plate, Tension, Item 21A, Appendix B

Materials/Parts

TB 750-126
Retainer Band, Rubber, Item 1, Appendix D
Webbing, Cotton, Type I, 1/4-in , Item 58, Appendix D
Tape Adhesive, 2-in., Item 43A, Appendix D

Personnel Required.

43E(10) Parachute Rigger

Equipment Condition:

Parachute cleaned (reference paragraph 2-12) and given a shakeout (reference paragraph 2-11).

References'

TM 10-1670-201-23 T O. 13C-1-41/ NAVAIR 13-1-17
TB 43-0002-4 (will be superseded by TB 43-0002-43)

WARNING

Failure to detect areas of damage may result in malfunction of the parachute and injury or loss of life to personnel.

a. Inspection. If defects or damages are discovered during Inspection of a parachute, the parachute must be rigger-rolled and processed for maintenance in accordance with paragraph 2-38 and TB 750-126. A technical/ rigger-type inspection and a pack-in-process inspection must be performed In conjunction with each packing of a parachute (refer to paragraph 2-13 above).

(1) Technical/rigger-type inspection Before each parachute is packed for air delivery, it must be given a technical/rigger-type inspection by the packer in accordance with paragraph 2-13.

NOTE

The pack-in-process inspector must be an E-5 in grade with 2 years of parachute packing experience or an E-4 (Promotable) with 2 years packing experience. The E-4 in-process inspector must be granted a waiver which must be initiated by the air drop systems technician and approved by the first 0-6 in the chain of command.

(2) *Pack-n-process inspection.* A pack-in-process inspection must be performed by a designated supervisory rigger, other than the packer, at seven intervals in the packing procedure. The inspection is performed to insure that the parachute is packed according to authorized packing procedures (refer to paragraph 2-13).

b. *Orientation.* Throughout this manual, all directions (right, left, upper, lower, top, bottom, clockwise, and counterclockwise) are given from the rigger's point of view, as the rigger stands at the tension plate end of the packing table facing the apex-hook end of the table (figure 2-10).

(1) Top, that portion of the equipment that is farthest from the packing table surface.

(2) Bottom, that portion of the equipment that is nearest to the packing table surface.

c. *Preparing Parachute for Proper Layout.* Prepare the parachute as follows:

(1) Place packing tools in convenient locations on the packing table.

(2) Lay the canopy assembly lengthwise on the packing table, and attach the canopy to the packing table apex hook (figure 2-11).

d. *Removing Tangle-s/Twists from Apex Lines.* Remove tangles or twists from the apex lines as follows:

(1) Locate radial tape 30 at lower lateral band and follow it to apex line 30, removing turns from the canopy.

(2) Continue tracing apex line 30 to the bridle loop, removing any tangles/twists by rotating bridle loop until lines are in proper location.

e. *Removing Inversion.* To remove an inversion, proceed as follows:

(1) Remove the canopy from the apex hook, pass the apex down through the canopy (A, figure 2-12).

(2) Bring the canopy out the skirt between two adjacent suspension lines (B, figure 2-12).

(3) Reattach the canopy to the apex hook after the inversion is removed.

f. *Locating Suspension Lines.* To properly locate suspension lines, proceed as follows:

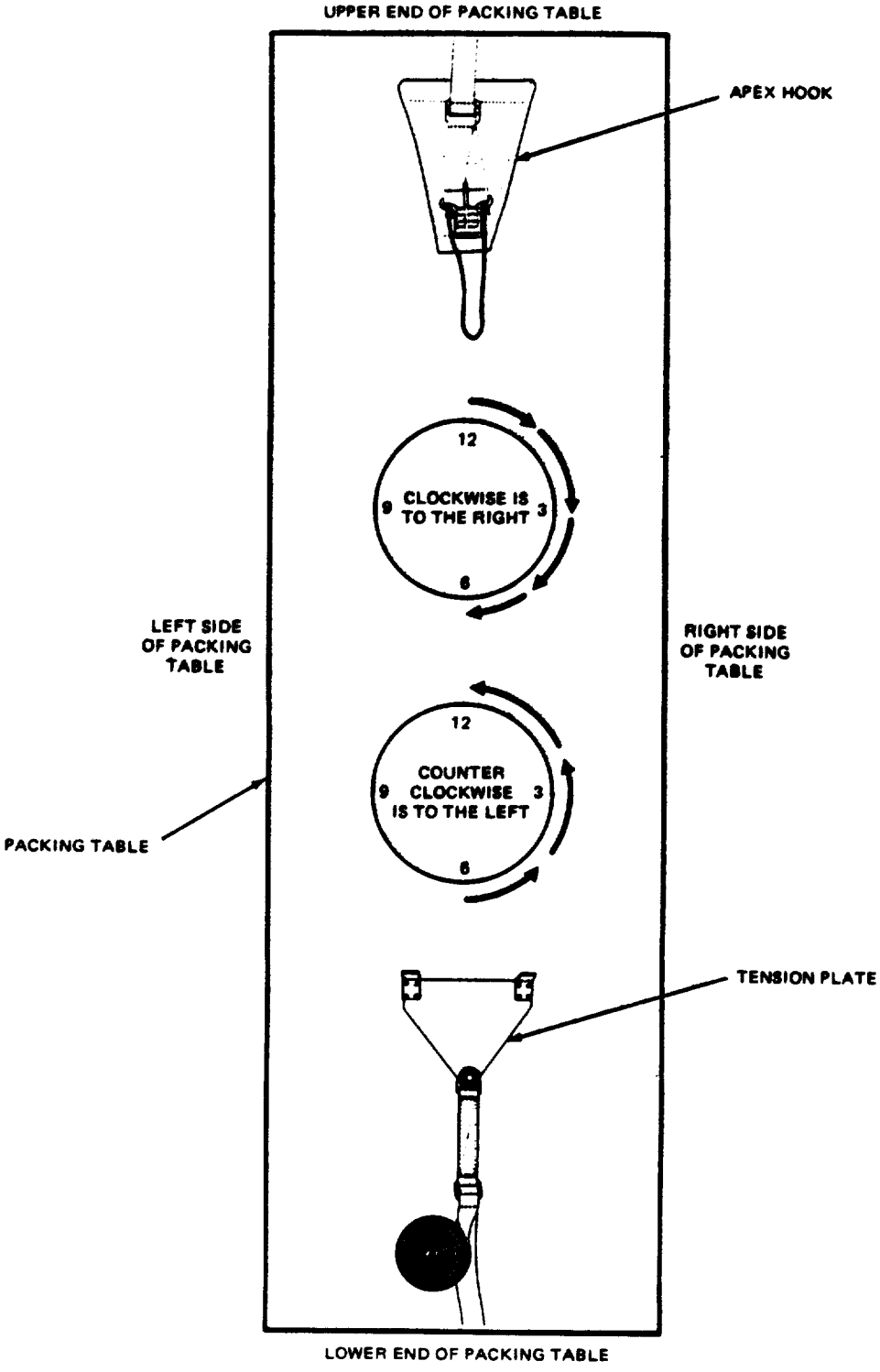
NOTE

Suspension lines 1 thru 30 are divided into two groups, 1 to 15 in left group and 16 thru 30 in right group.

(1) Locate the top center gore of the canopy and divide the suspension lines into the left and right groups (refer to figure 1-2).

(2) Place a packing weight around the right group of lines and move the weight toward the risers, checking for turns, tangles and twists.

2-16. Packing the T-10B Parachute (CONT).



RIGGER'S POSITION

Figure 2-10. Rigger's Orientation.

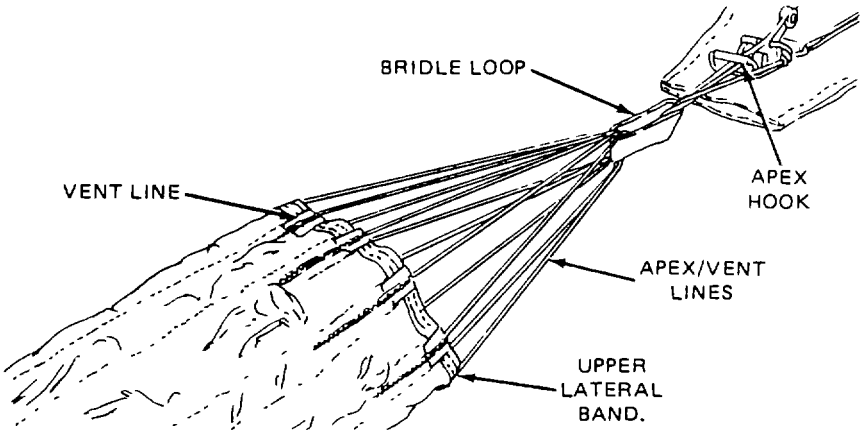


Figure 2-11. Canopy Attached to Packing Table Apex Hook.

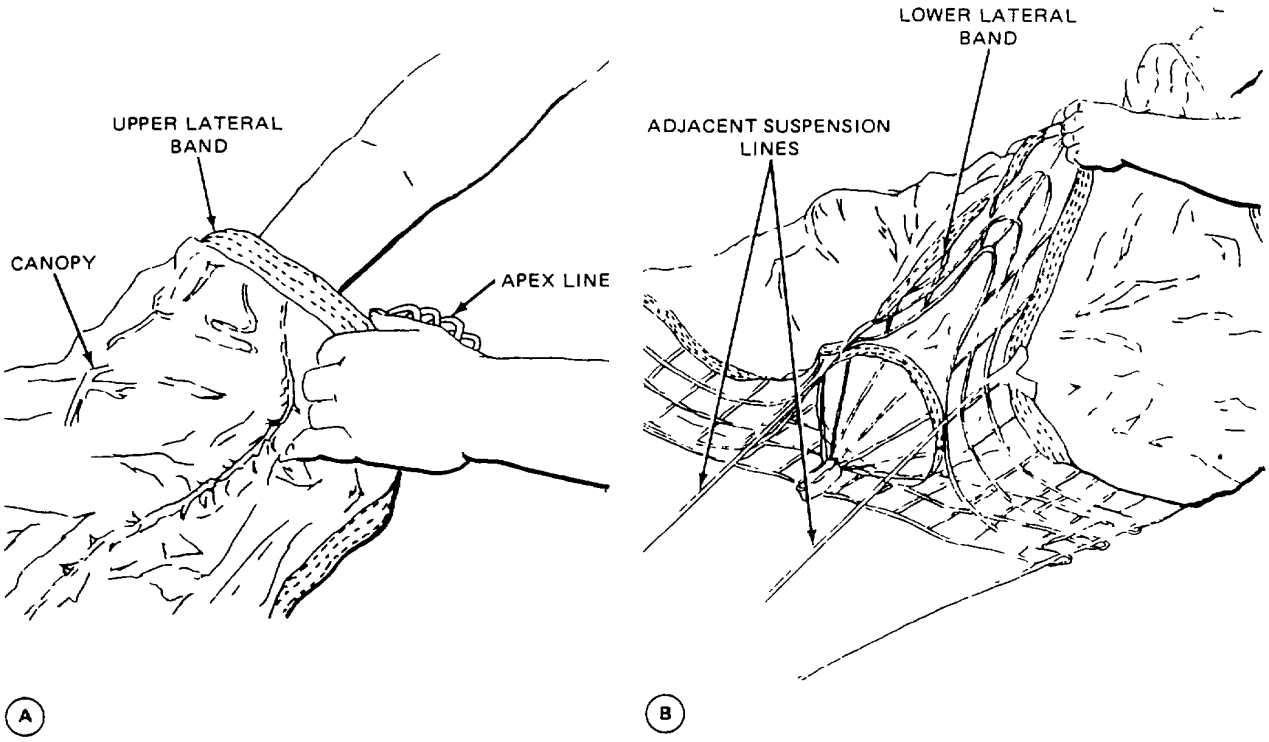


Figure 2-12. Removing Inversion.

(3) Remove turns, tangles and twists as follows.

(a) Turns. A turn occurs when one group of suspension lines rotates around the other group (figure 2-13).

1 Remove the connector links from the tension plate and remove a turn by rotating the risers or pack in the direction opposite to the direction of the turn.

2 Reposition the connector links on the tension plate.

2-16. Packing the T-10B Parachute (CONT).

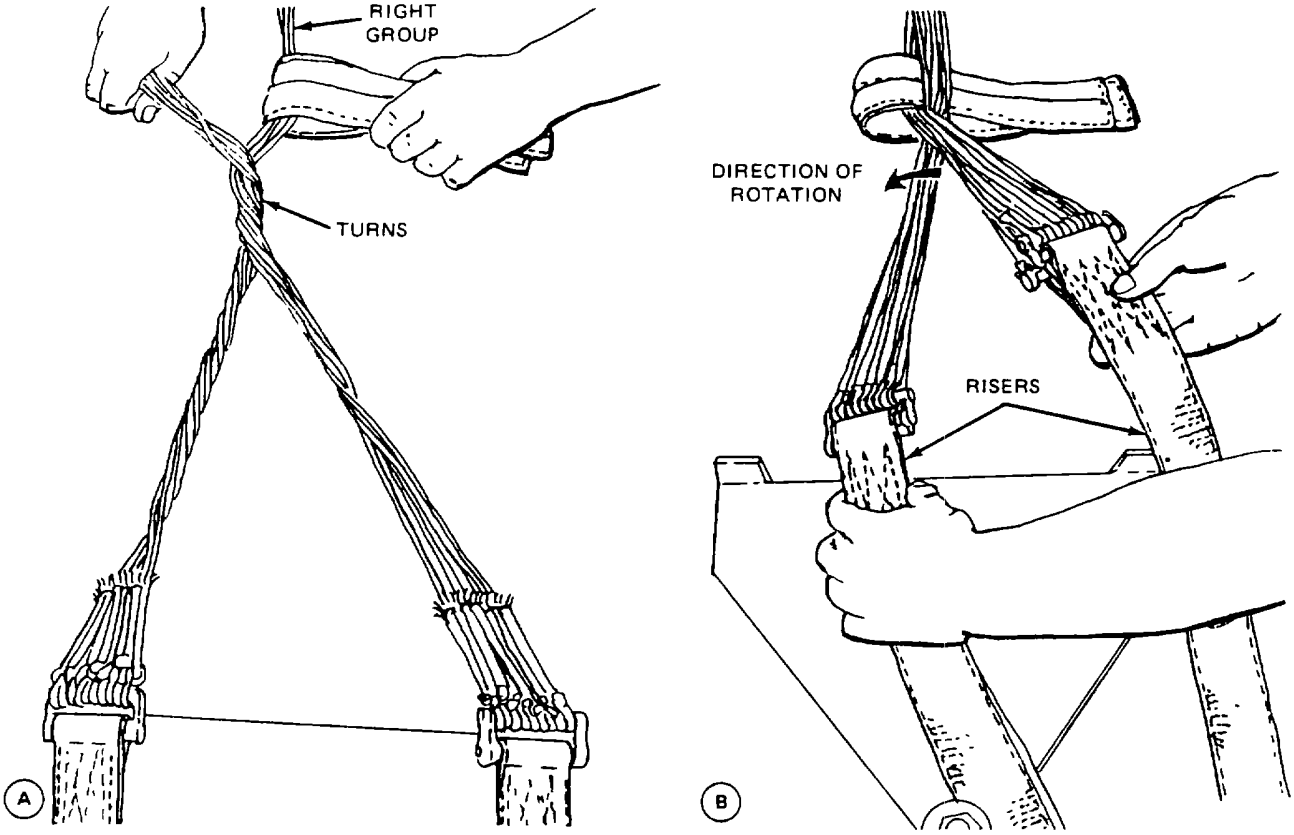


Figure 2-13. Removing Turns from Suspension Lines.

(b) Tangles. To remove a tangle, or tangles, keep the two groups of lines separated and work the tangle, or tangles, as close to the connector links as possible. Detach connector links from the tension plate.

1 Select the top line, or lines that form the tangle and, with the left hand, lift the line, or lines, away from the other lines (A, figure 2-14)

2 Reach through the opening, created by lifting the suspension lines, with the right hand (B, figure 2-14) and pull risers, or pack assembly, through the opening (C, figure 2-14). Do not permit risers or pack assembly to turn.

3 Replace connector links on tension plate.

(c) Twists. A twist occurs when the suspension lines within one group become improperly crossed (A, figure 2-15).

NOTE

Insert packing weight around lines 1 and 15 while working on lines 16 and 30.

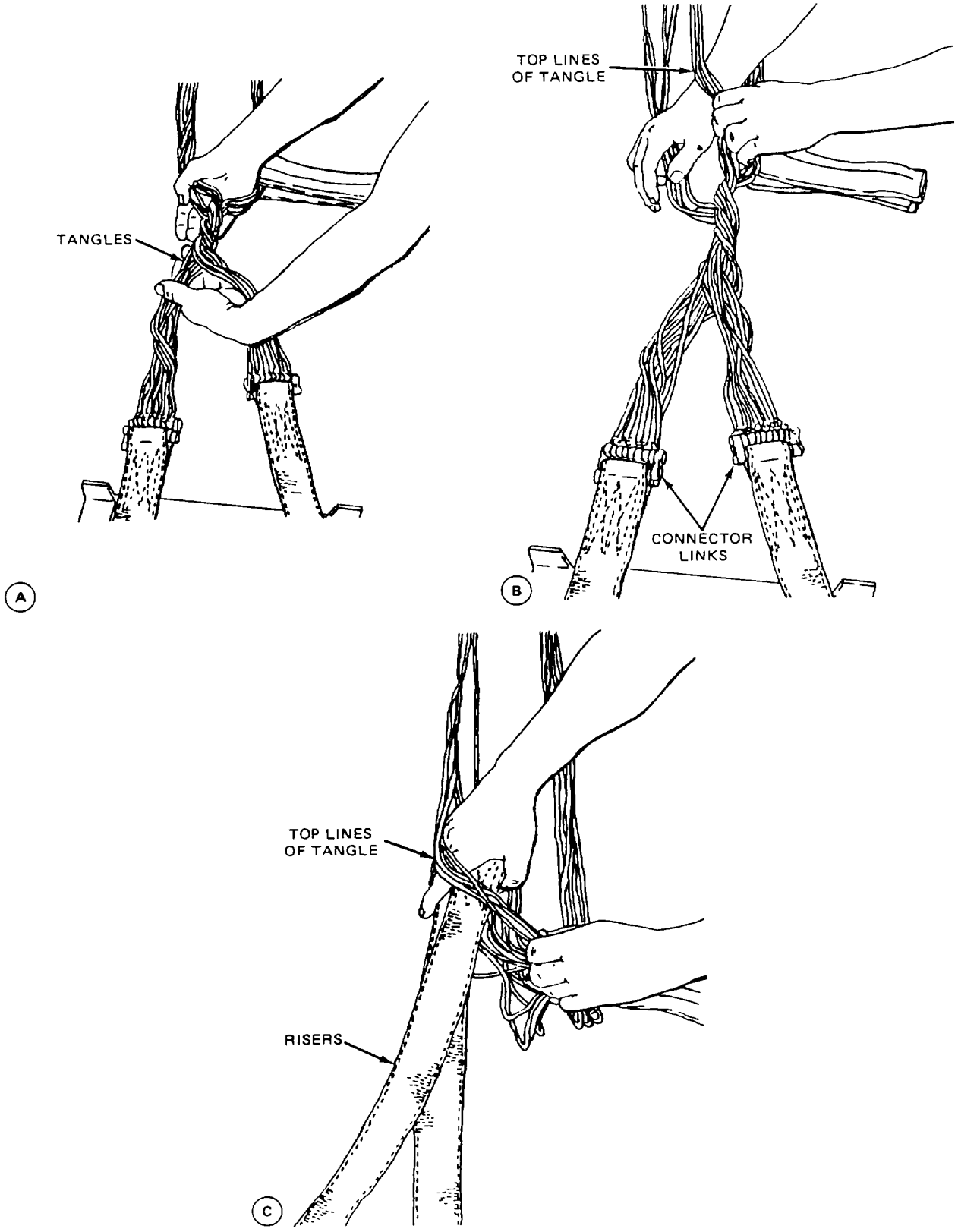


Figure 2-14. Removing Tangles from Suspension Lines.

2-16. Packing the T-10B Parachute (CONT).

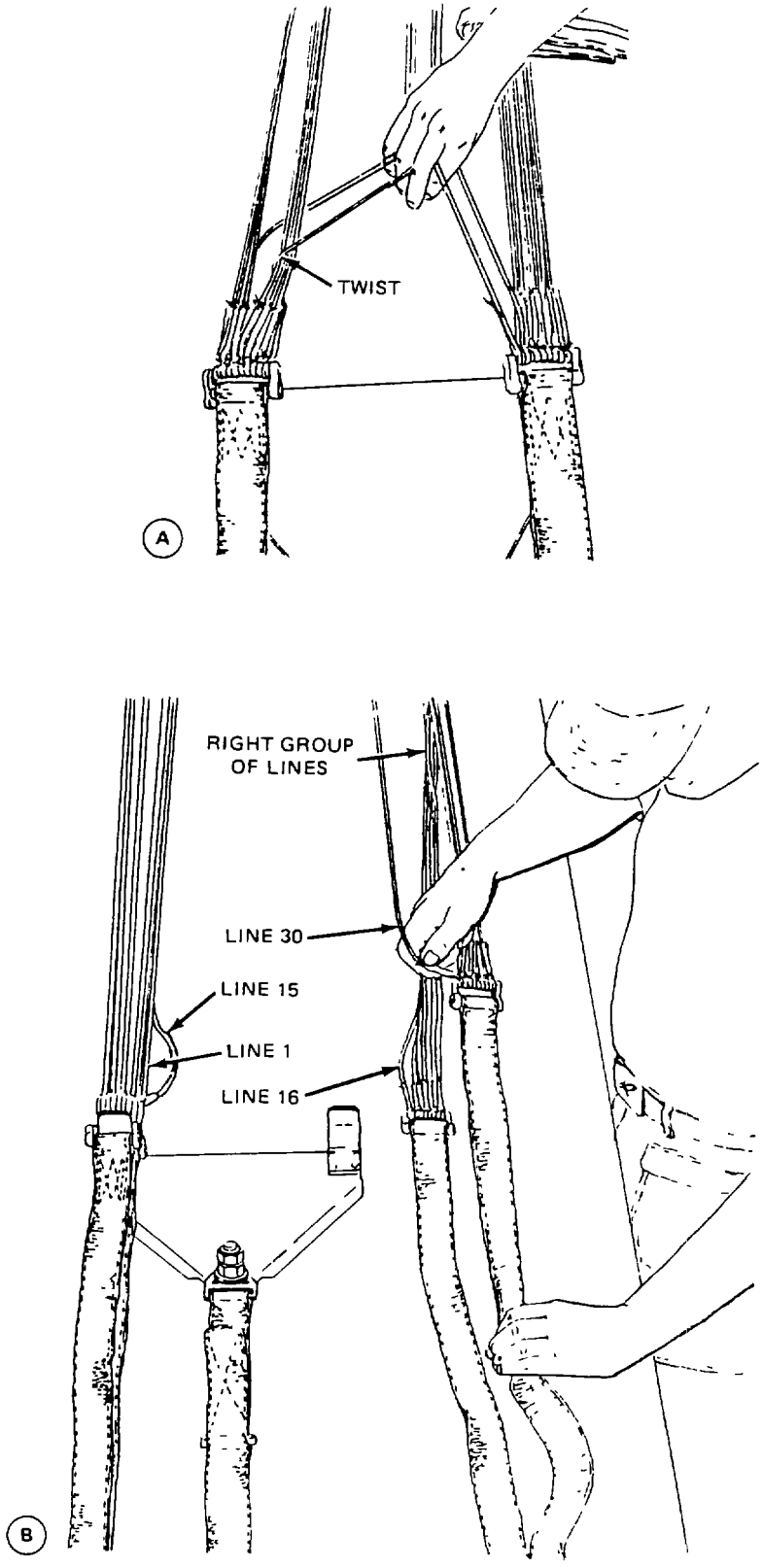


Figure 2-15. Removing Twists from Suspension Lines.

1 To remove twists, grasp top and bottom inside lines (lines 1 and 30, and 15 and 16)) at skirt of canopy and trace them to connector links (B, figure 2-15).

2 Remove twists from one group at a time by rotating risers until lines are in proper location on the connector links.

(4) Check suspension lines for proper layout (figure 2-16) Left group should have line 1 on top inside of connector link and line 15 on bottom inside of connector link. Right group will have line 30 on top inside of connector link and line 16 on bottom inside of connector link.

(5) Assemble parachute components In accordance with paragraph 2-7.

(6) Parachute is now in proper layout, ready for folding the gores (figure 2-17).

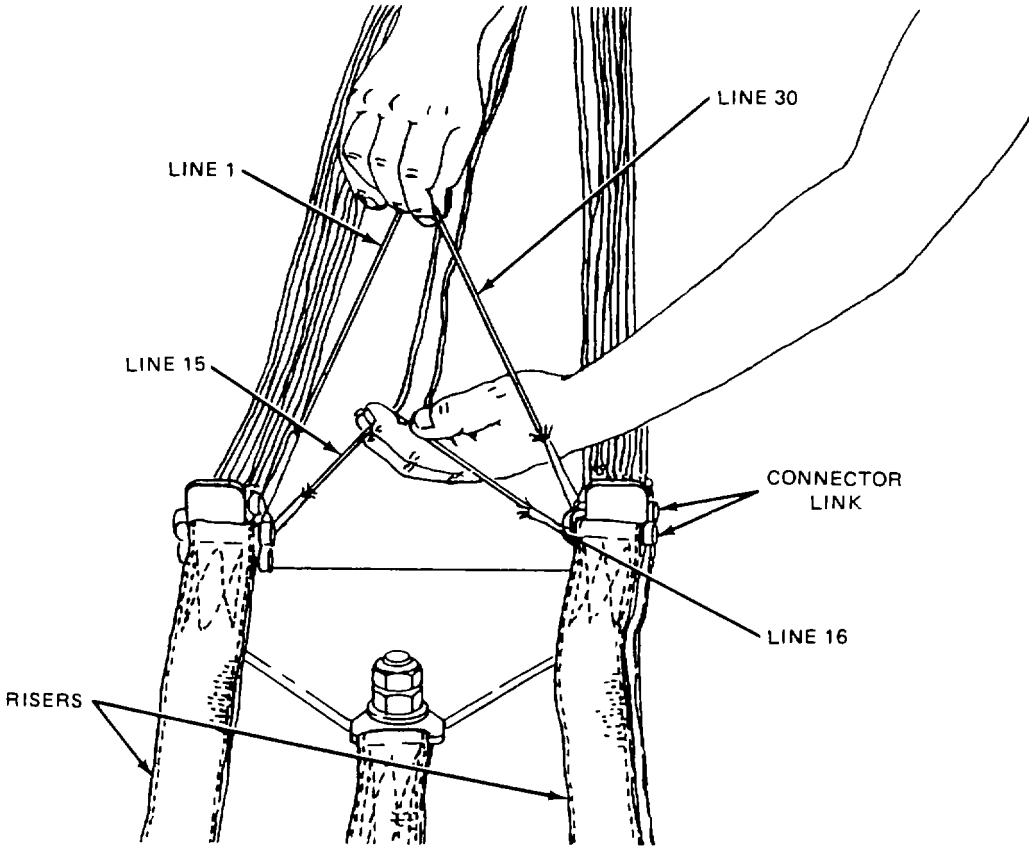


Figure 2-16. Tracing Suspension Lines to Connector Links.

g. Folding the Gores. After the parachute has been properly laid out, proceed as follows

(1) Move to the apex end of the table. Grasp the upper lateral band on both sides with your fingers through the apex vent lines. Apply pressure toward the tension end of the table until the upper lateral band is alined (figure 2-18). Move to the lower end of the table and apply first tension on the parachute until the suspension lines are taut and rise off the table.

2-16. Packing the T-10B Parachute (CONT).

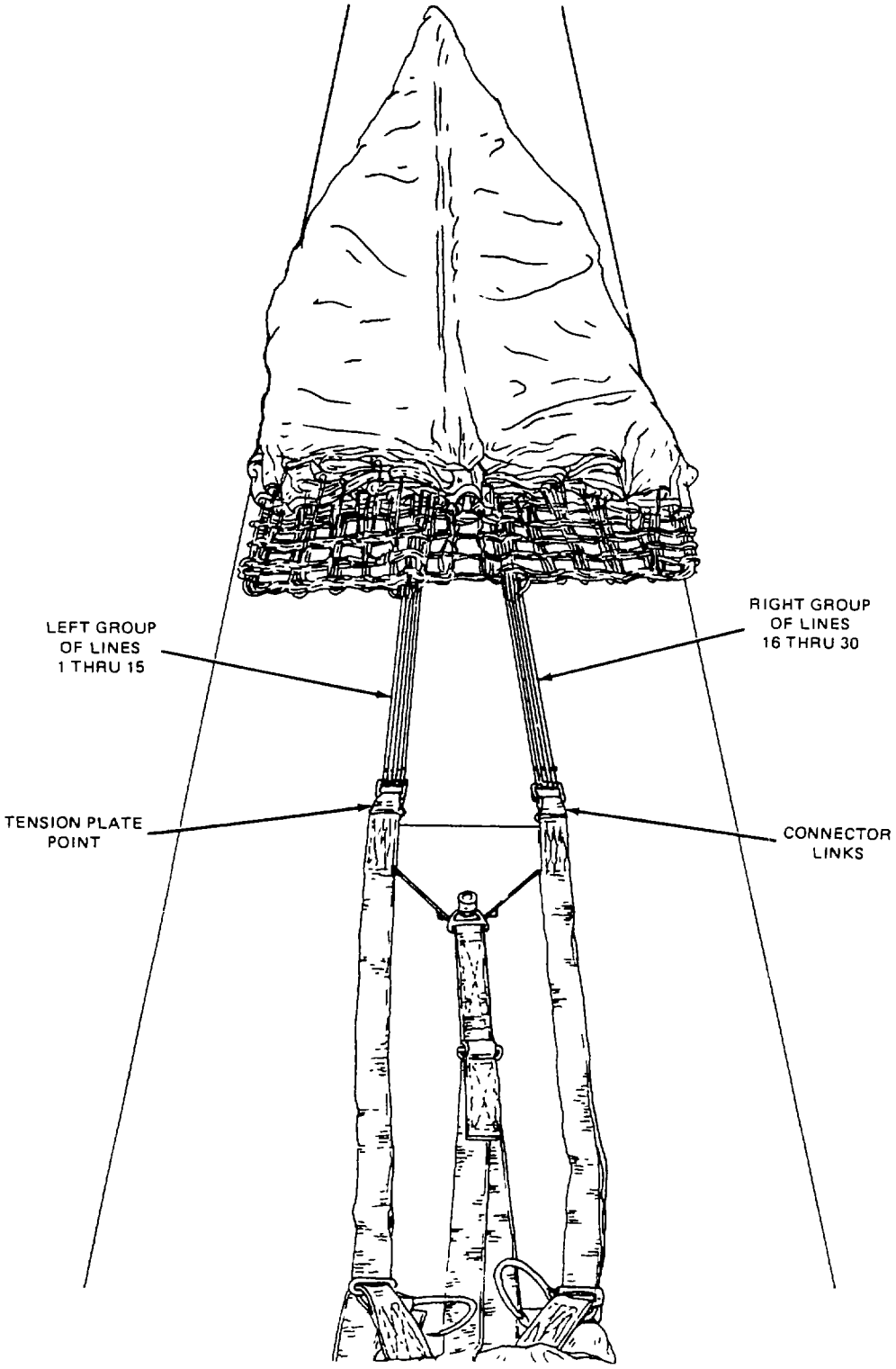


Figure 2-17. Parachute in Proper Layout.

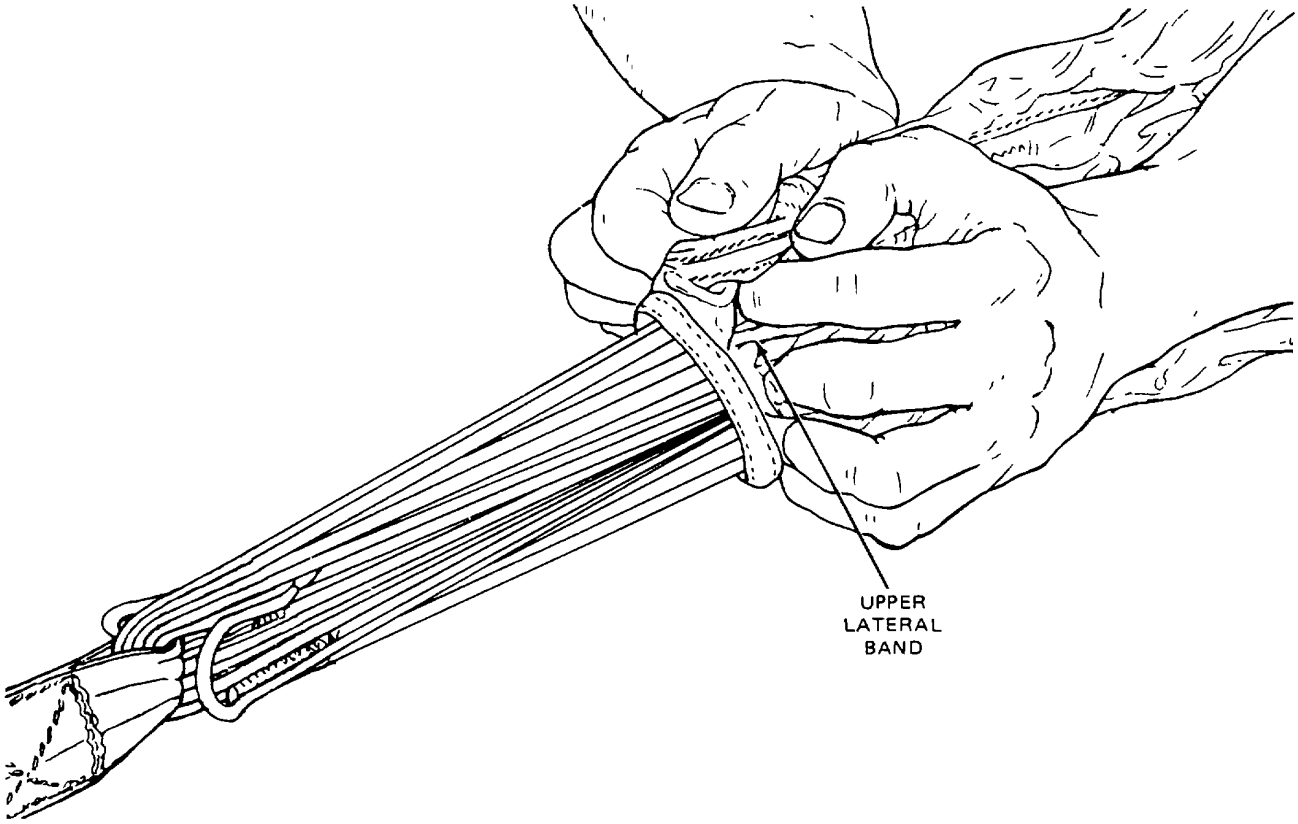


Figure 2-18. Dressing Apex.

(2) Move to the lower lateral band of the canopy with the right group of lines in the left hand. Lift right group of suspension lines with the left hand at the anti-inversion net. Hold top center gores in position with the right hand, and flip right group of gores over left group (figure 2-19).

(3) Start with line number 16 in the right hand. Pick up line 17 with the left hand and lift straight up until slack is removed from the lower lateral band. With a smooth continuous movement bring the left hand over the head. When gore inflates, place line 17 on top of line 16. Make certain the V-tabs are facing down (figure 2-20) and that the gore material folds to the right side.

(4) Continue folding gores until you reach line no 30.

(5) Hold the right group of lines with the left hand. With the right hand, fingers pointing down, scissor the right group of lines between the 1st and 2nd fingers (figure 2-21).

(6) Rotate this group of lines clockwise until the fingers are tilted slightly upward, so that line 30 is on the bottom and line 16 is on the top (figure 2-22).

(7) Starting with line 1, fold the left group of gores using the same movement as in step (3), above. Continue folding the gores until you reach suspension line no. 14. Raise suspension line no 15 and drape the last gore on the left and the next to last gore on the right (figure 2-23).

2-16. Packing the T-10B Parachute (CONT).

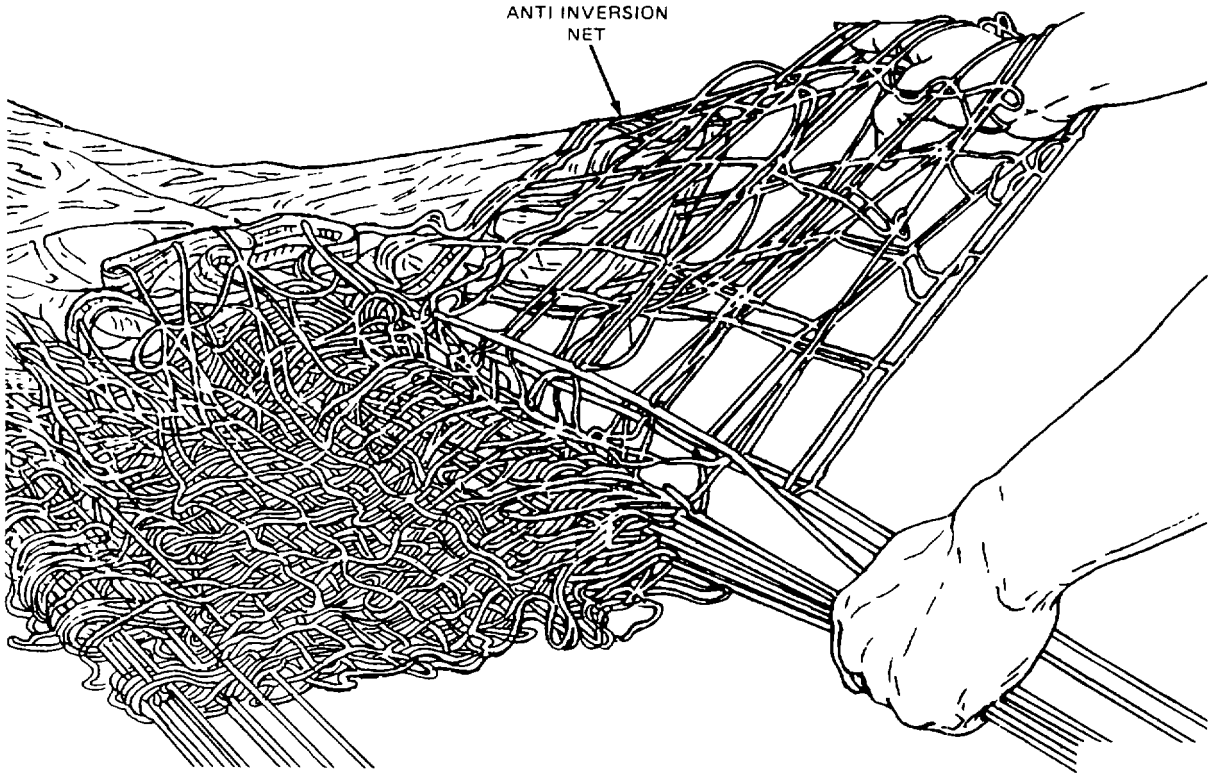


Figure 2-19. Flipping the Right Group of Gores Over the Left Group.

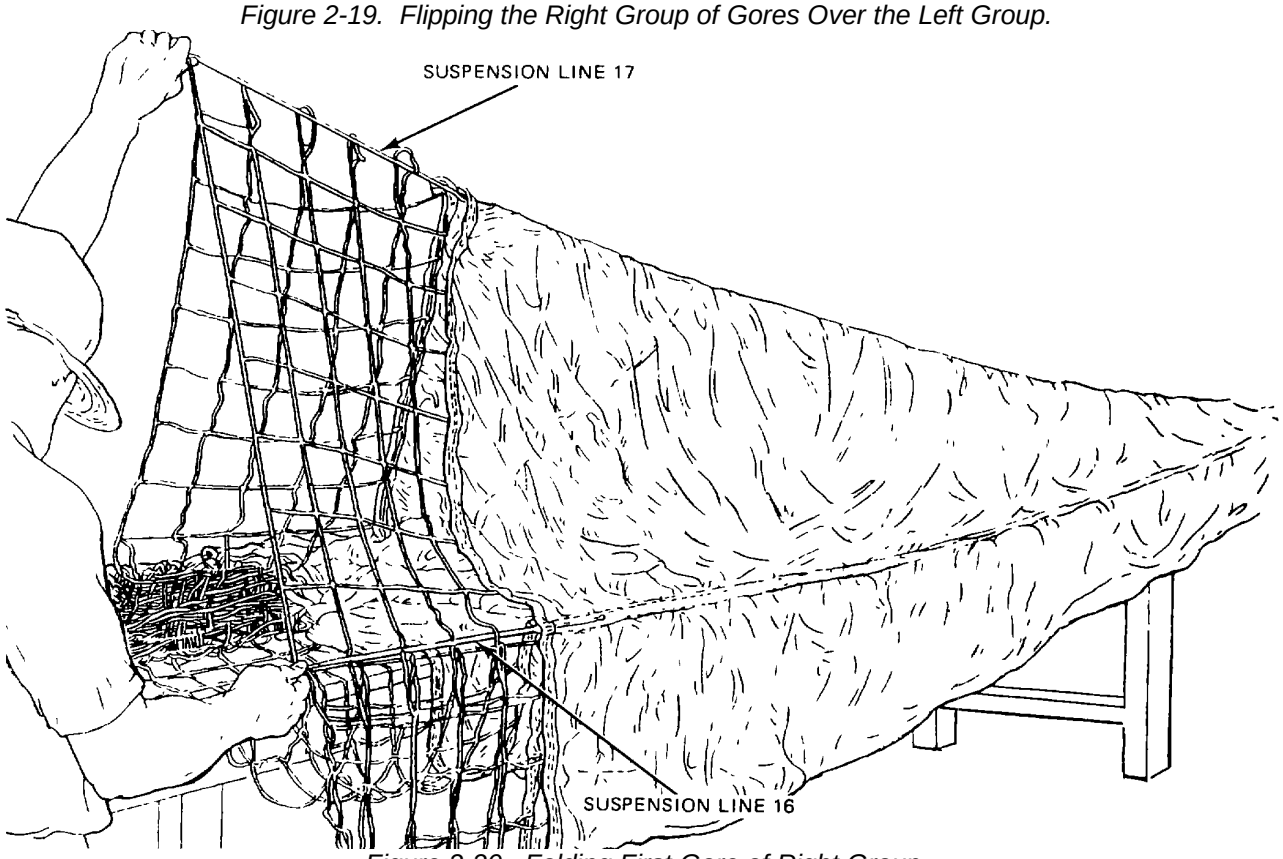


Figure 2-20. Folding First Gore of Right Group.

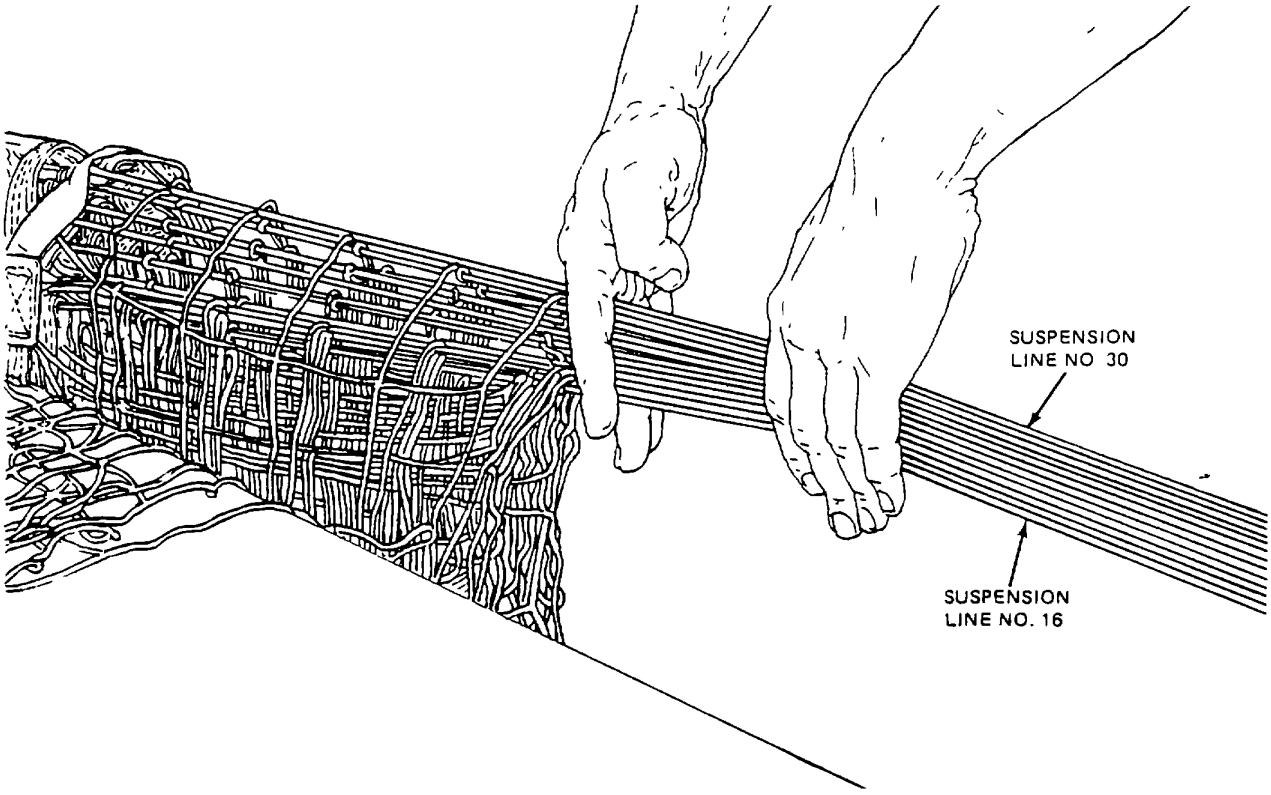


Figure 2-21. Grasping and Scissoring Right Group of Suspension Lines.

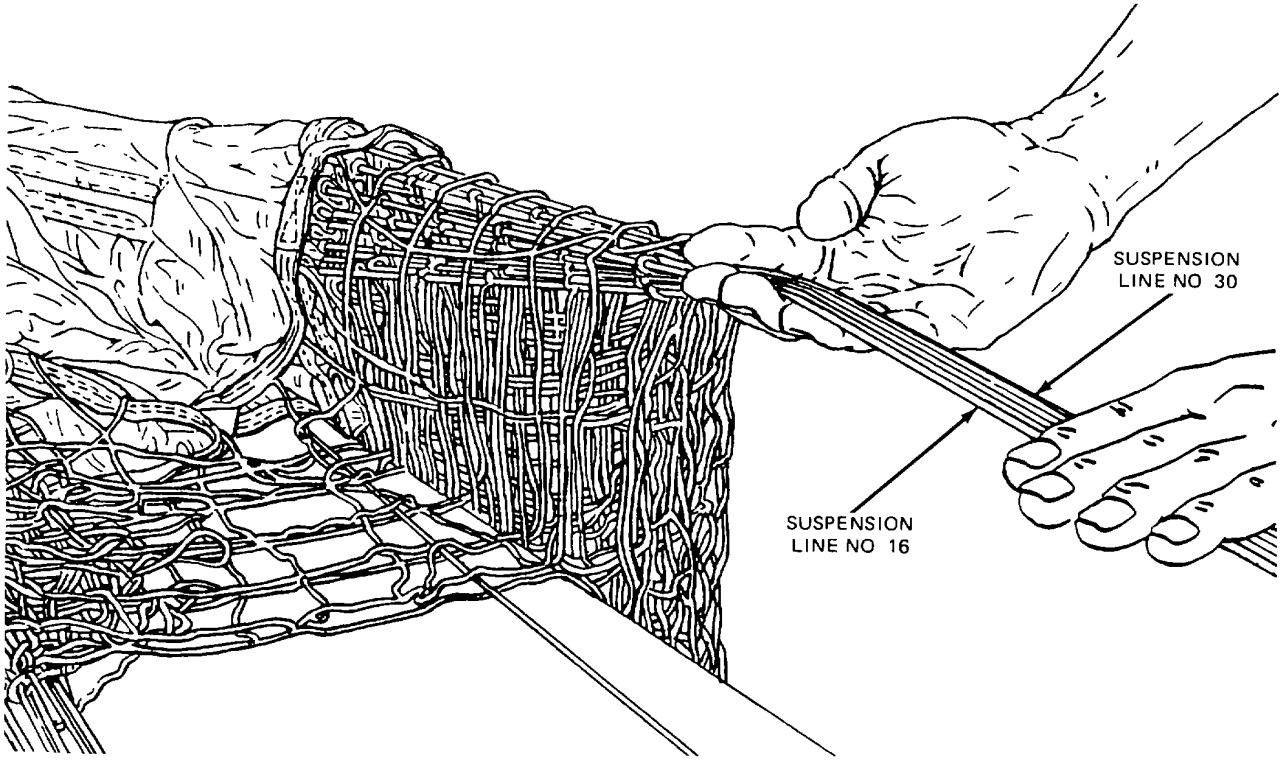


Figure 2-22. Completed Scissoring and Rotating Right Group of Suspension Lines.

2-16. Packing the T-10B Parachute (CONT).

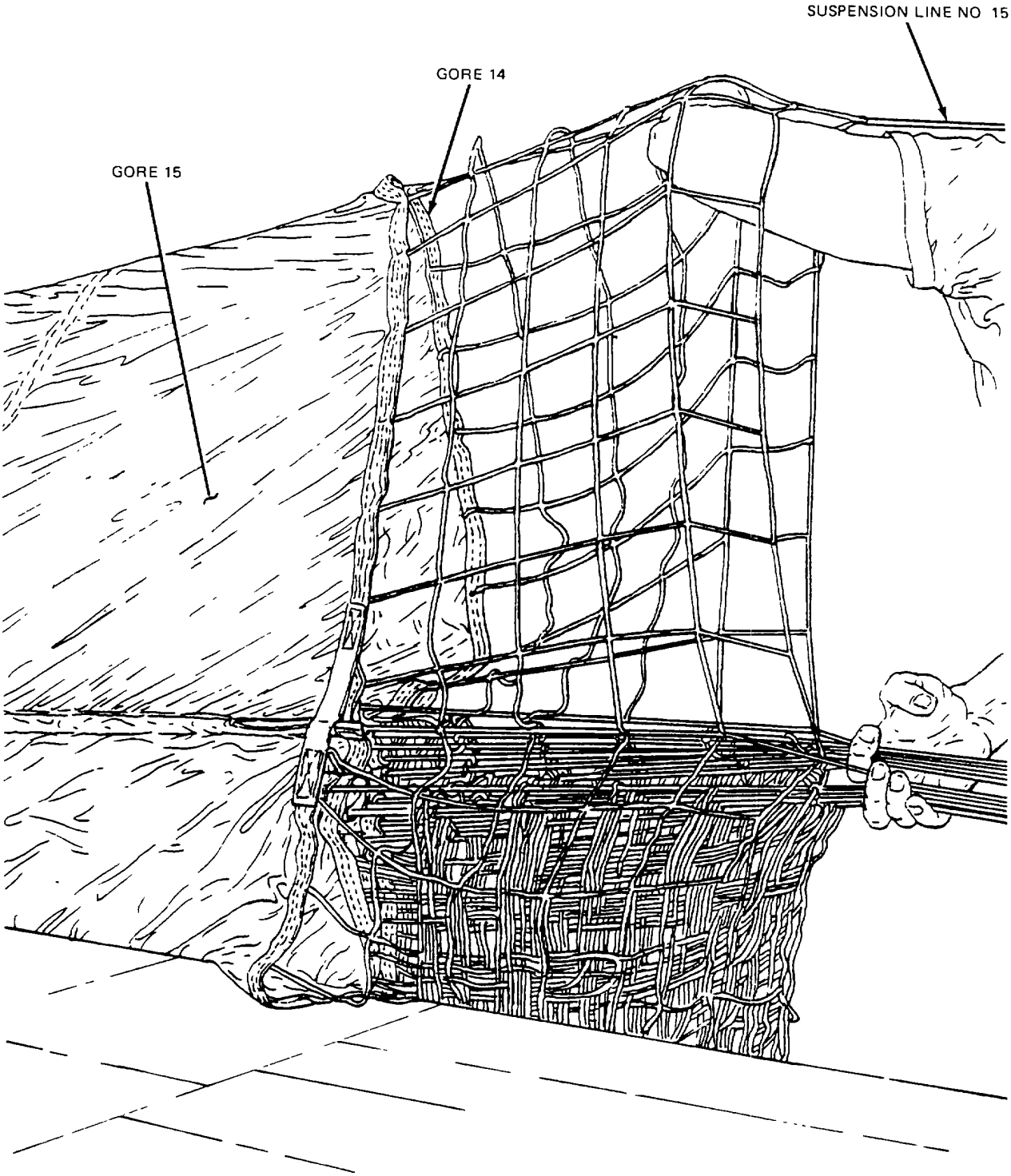


Figure 2-23. Folding Last Two Gores of Left Group.

(8) Insert the two groups of lines into a line separator with the left group of lines in the left slot and the right group of lines in the right slot.

(9) Hold base of line separator tight against canopy anti-inversion net and pull canopy off the table so that all gores drape to the right of table (figure 2-24).

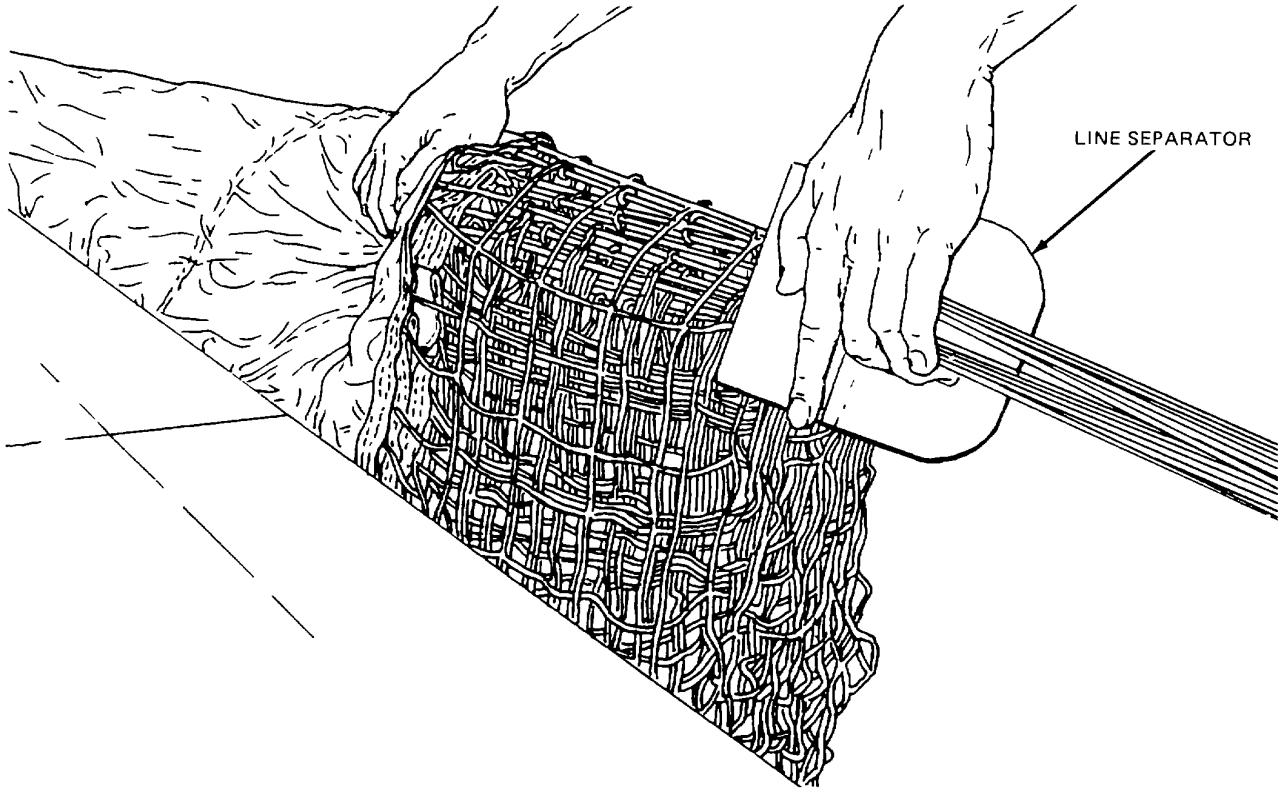


Figure 2-24. Two Groups of Lines Inserted in Line Separator and Folded Gores Draped to Right Side of Table.

(10) Turn line separator counterclockwise so that base is down and slide it back on the table (figure 2-25).

(11) Place packing weight on suspension lines next to separator (figure 2-26).

(12) Apply additional tension to suspension lines, and flip left group of gores (top half) to left side of table (figure 2-27).

(13) Dress the bottom gores by pulling gently on the left and right sides of the canopy, moving from the lower lateral band to the apex.

(14) Dress the top gores by pulling gently while moving to the lower lateral band. The canopy is now in a flat fold (figure 2-28).

2-16. Packing the T-10B Parachute (CONT).

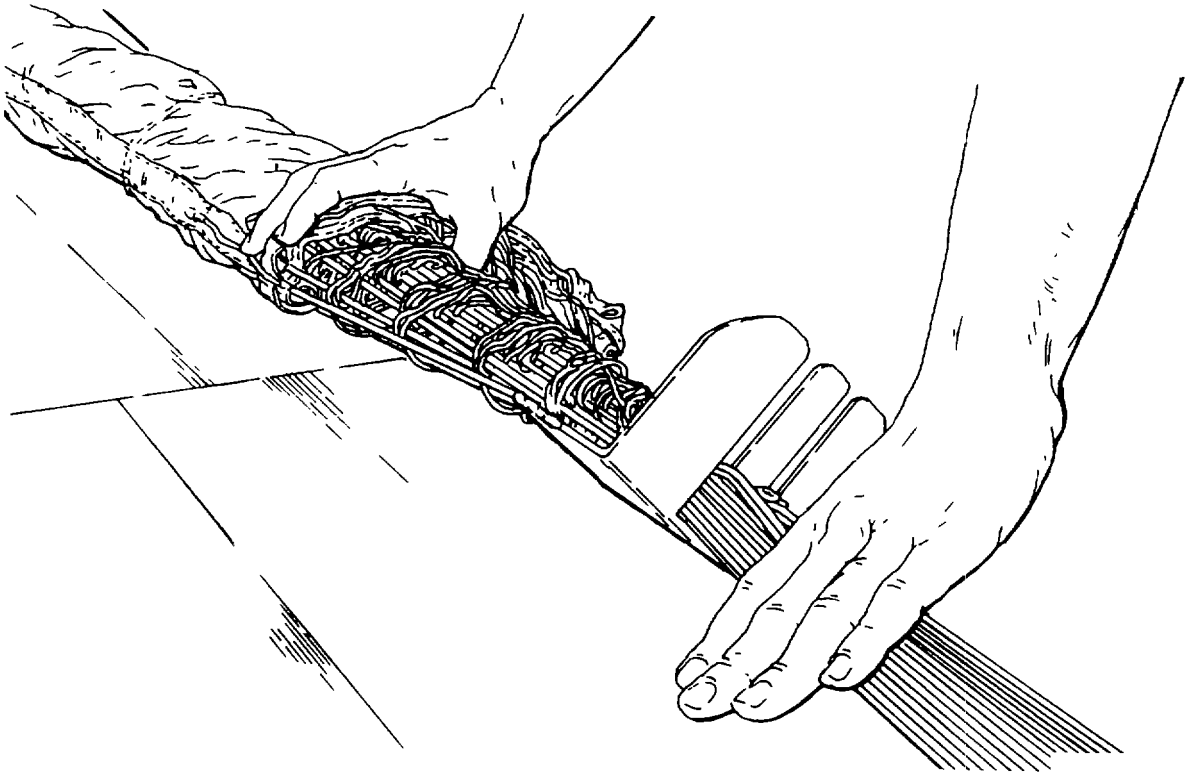


Figure 2-25. Turning Line Separator Counterclockwise.

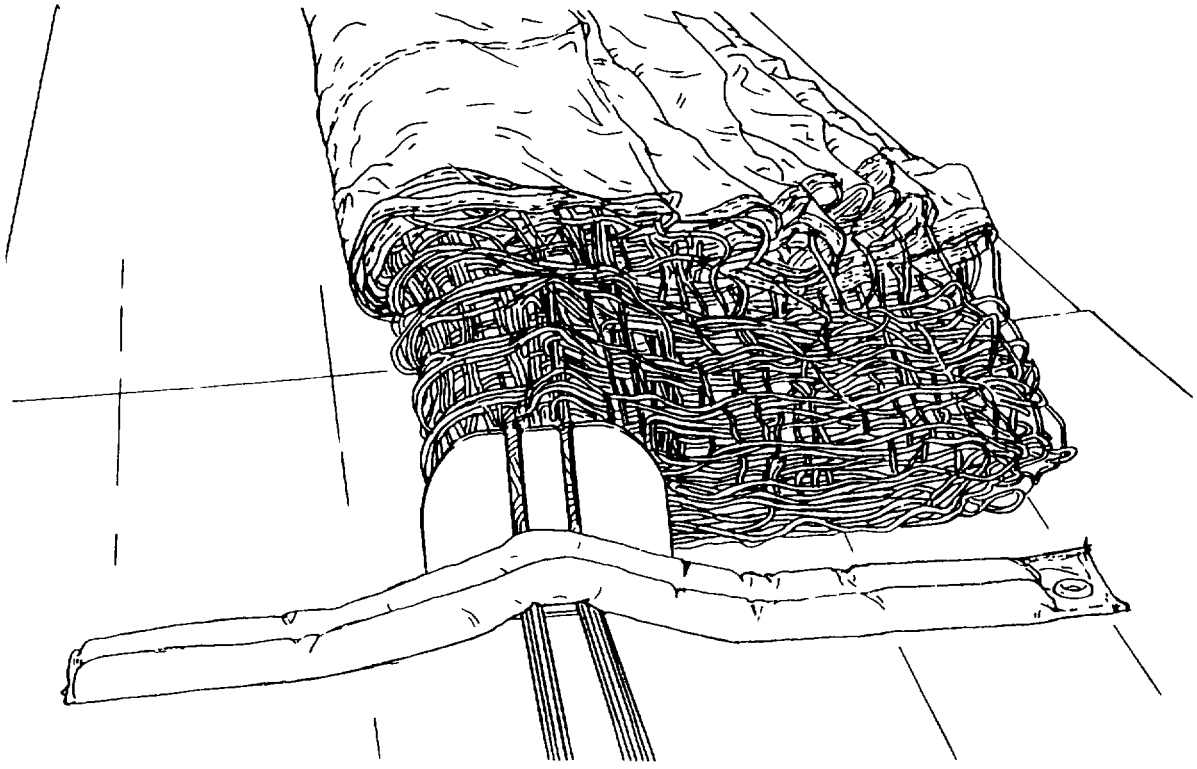


Figure 2-26. Packing Weight on Suspension Lines.

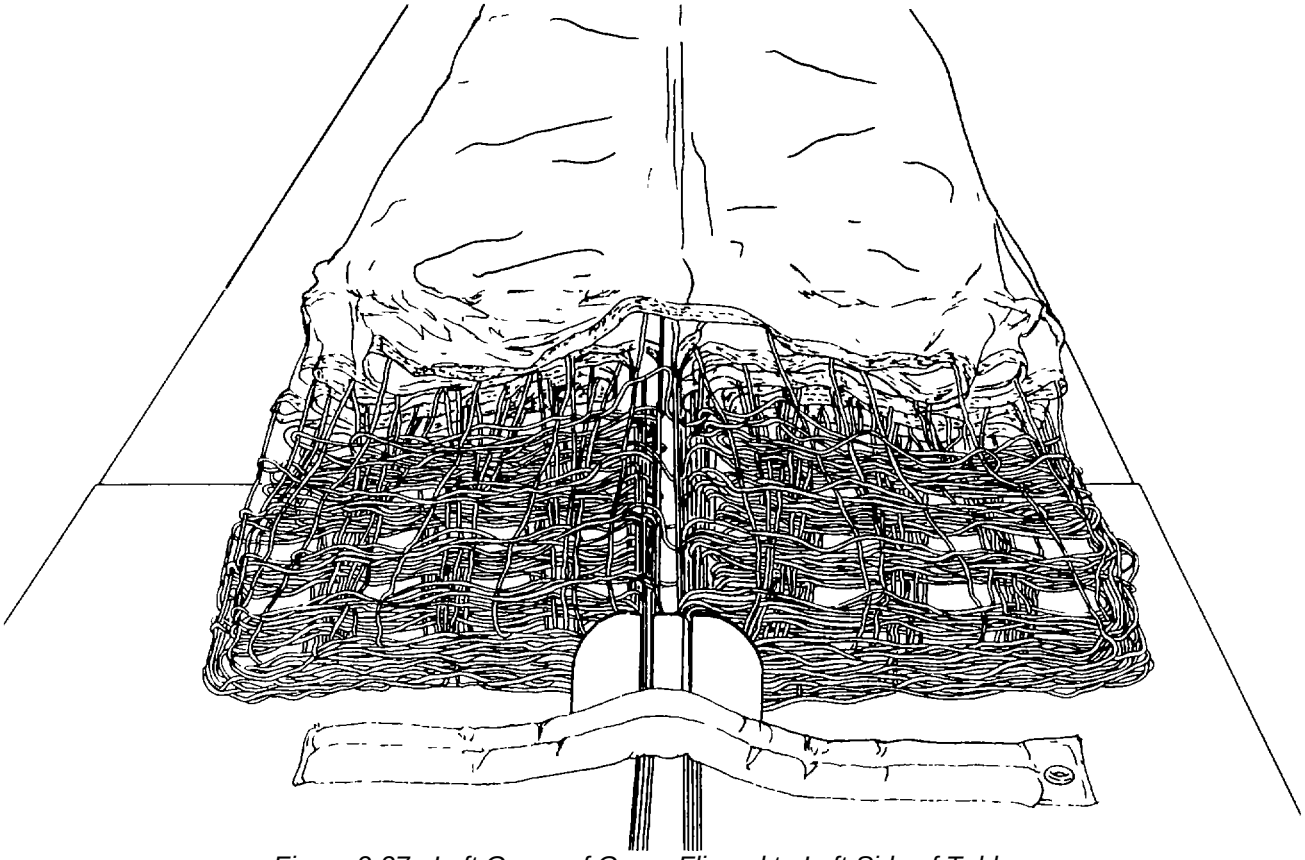


Figure 2-27. Left Group of Gores Flipped to Left Side of Table.

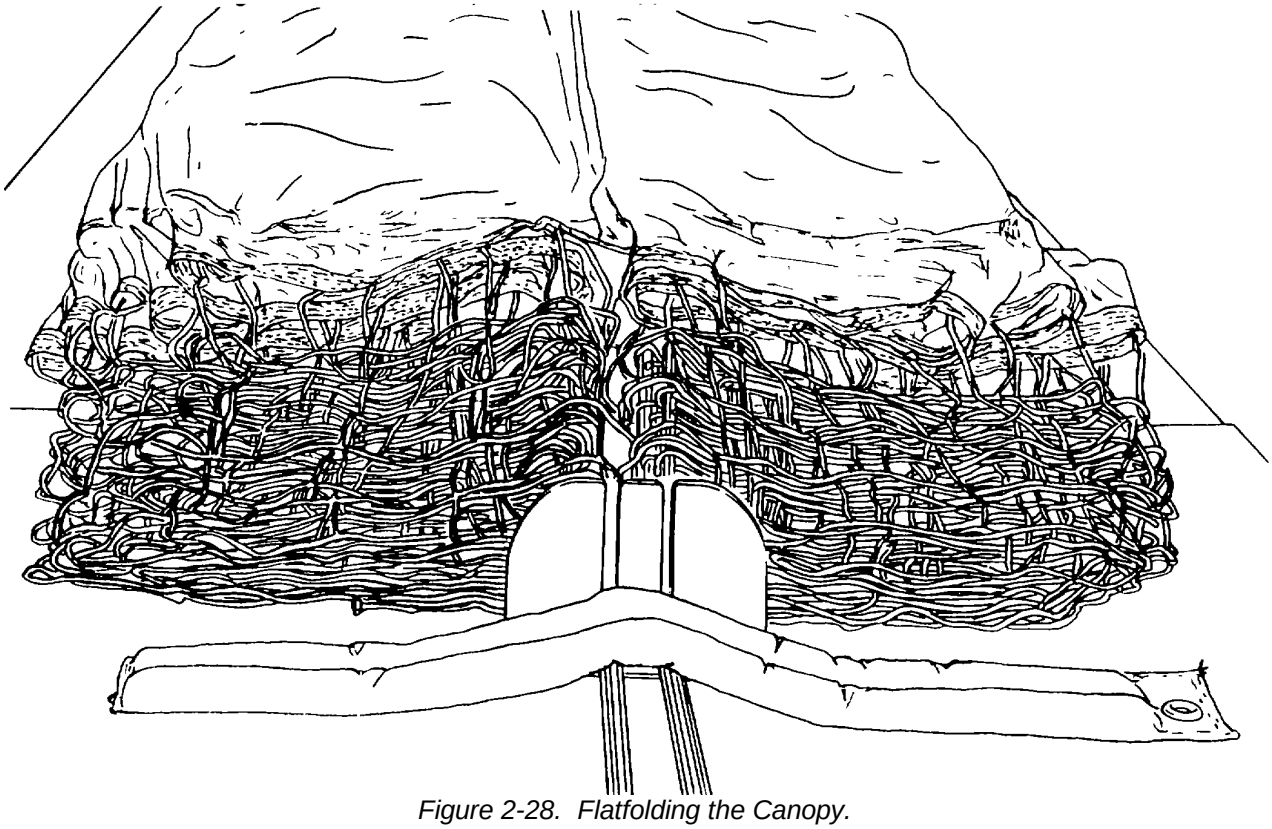


Figure 2-28. Flatfolding the Canopy.

2-16. Packing the T-10B Parachute (CONT).

NOTE

Make sure that radial tape no. 30 is on top

(15) Fine dress the lower lateral band and anti-inversion net. Fine dress each gore section of the lower lateral band, working from bottom to top of the left group. Repeat the procedure for the right side (figure 2-29)

(16) This completes the flatfold of the canopy (figure 2-30).

(17) Raise the top radial tape, no. 30, and check for a clear channel (figure 2-31).

NOTE

If material is in the channel, repeat the fine dressing procedure.

h. *Longfolding the Canopy.* After flatfolding, the canopy is ready for longfolding. Proceed as follows:

(1) The anti-inversion net and lower lateral band of the canopy will be folded 180 degrees, with the right group folded first so that the lower edges are parallel to each other and extend slightly (approximately 2 inches) over the two groups of suspension lines.

(2) Grasp the edges on the right side of the anti-inversion net with the left hand and the lower lateral band In the right hand. Fold edges slightly over suspension lines/radial seam (approximately 2 inches) (figure 2-32).

(3) Place the first packing weight on the lower lateral band

(4) Continue folding right group in the same manner (figure 2-33) until you reach halfway up the canopy. Place the second packing weight. Continue folding until you reach approximately 48 inches from the apex (figure 2-34). Then place the third packing weight.

(5) Fold the left group of anti-inversion net and lower lateral band over the right group (figure 2-35).

(6) Fold the left group of gores In a similar manner, adjusting packing weights to hold both groups of gores (figure 2-36). Longfold is completed.

NOTE

After longfolding, parachute should be approximately 10 inches wide at the skirt (lower lateral band) and 6 inches wide where the fold breaks near the apex.

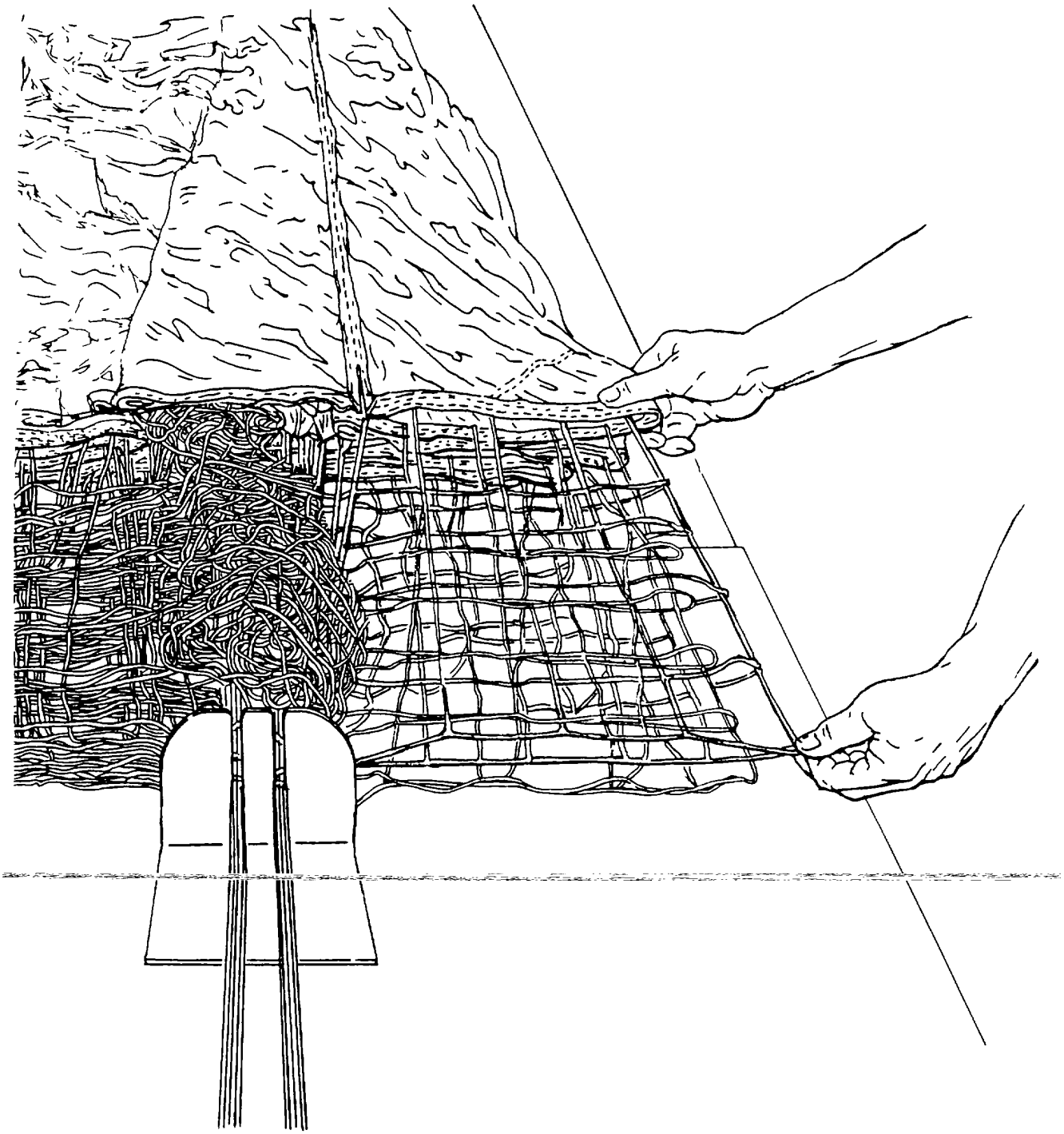


Figure 2-29. Dressing Right Side.

2-16. Packing the T-10B Parachute (CONT).

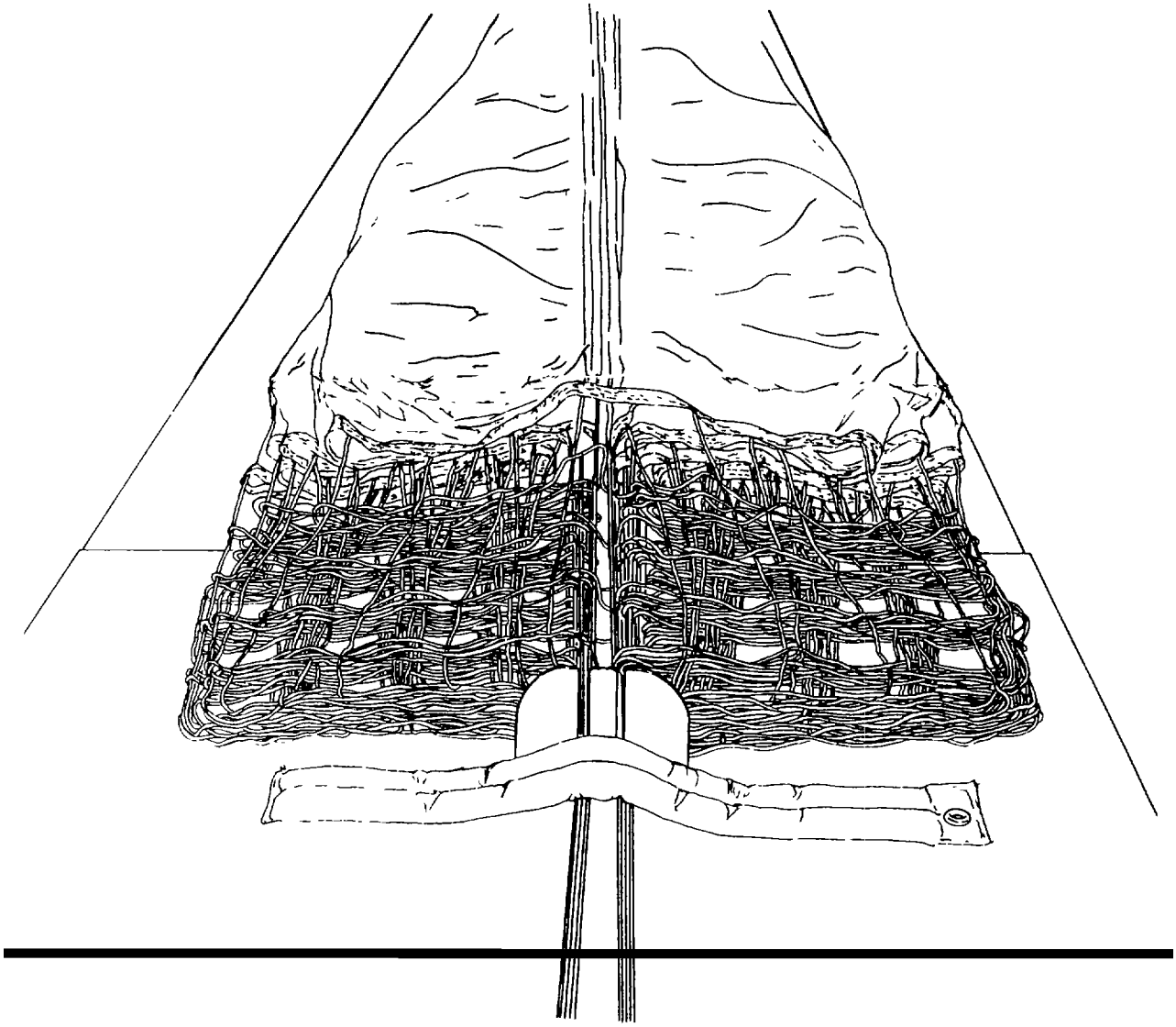


Figure 2-30. Flatfolding Completed.

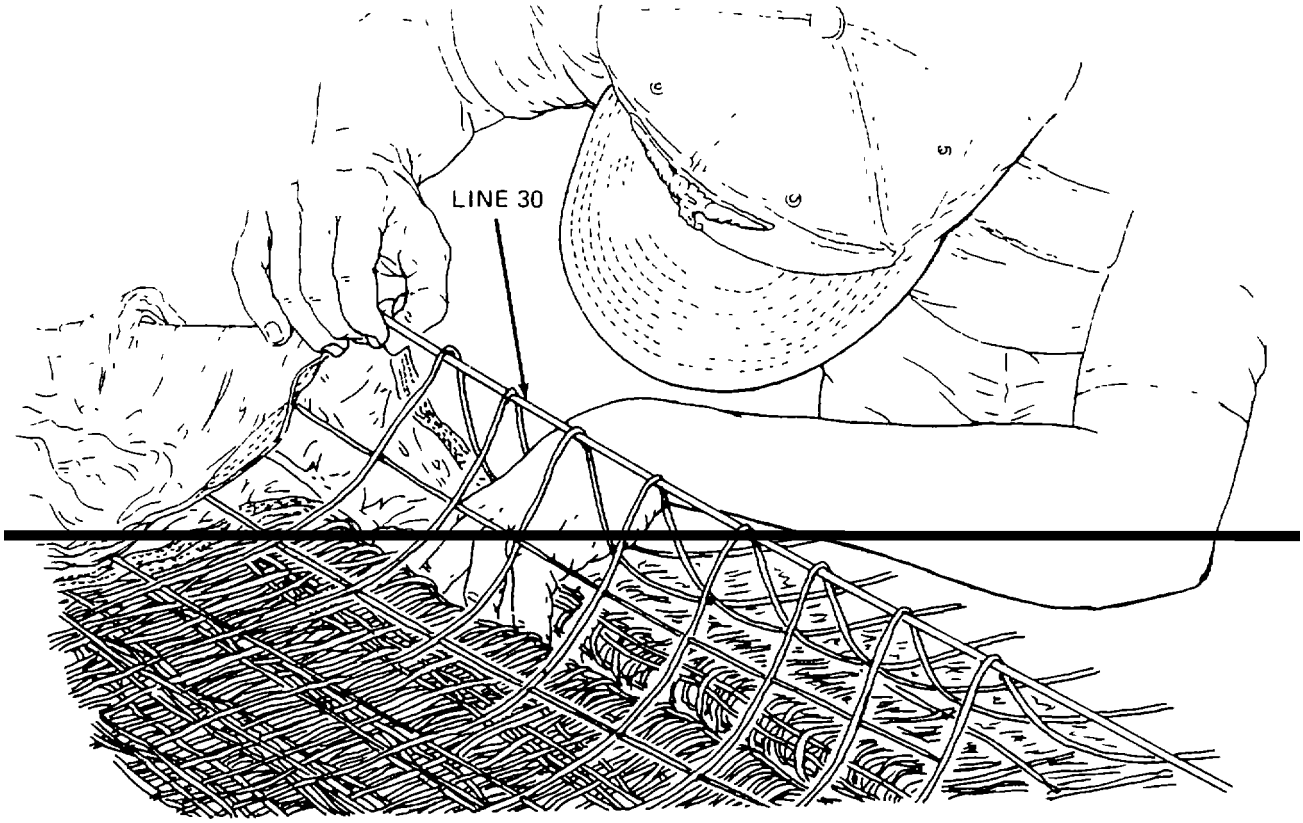


Figure 2-31. Checking for Clear Channel.

Figure 2-32. Longfolding the Net and Lower Lateral Band.

2-16. Packing the T-10B Parachute (CONT).

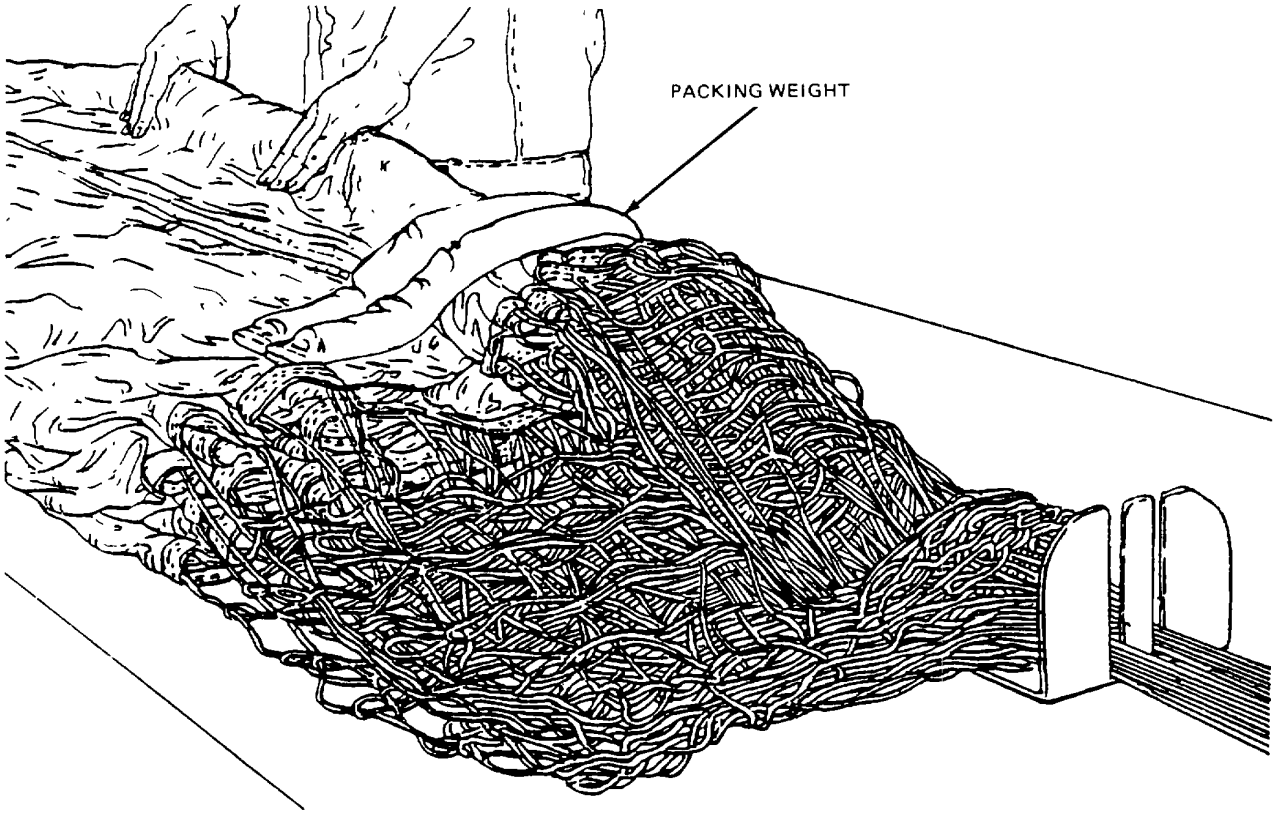


Figure 2-33. Beginning Longfold of Canopy.

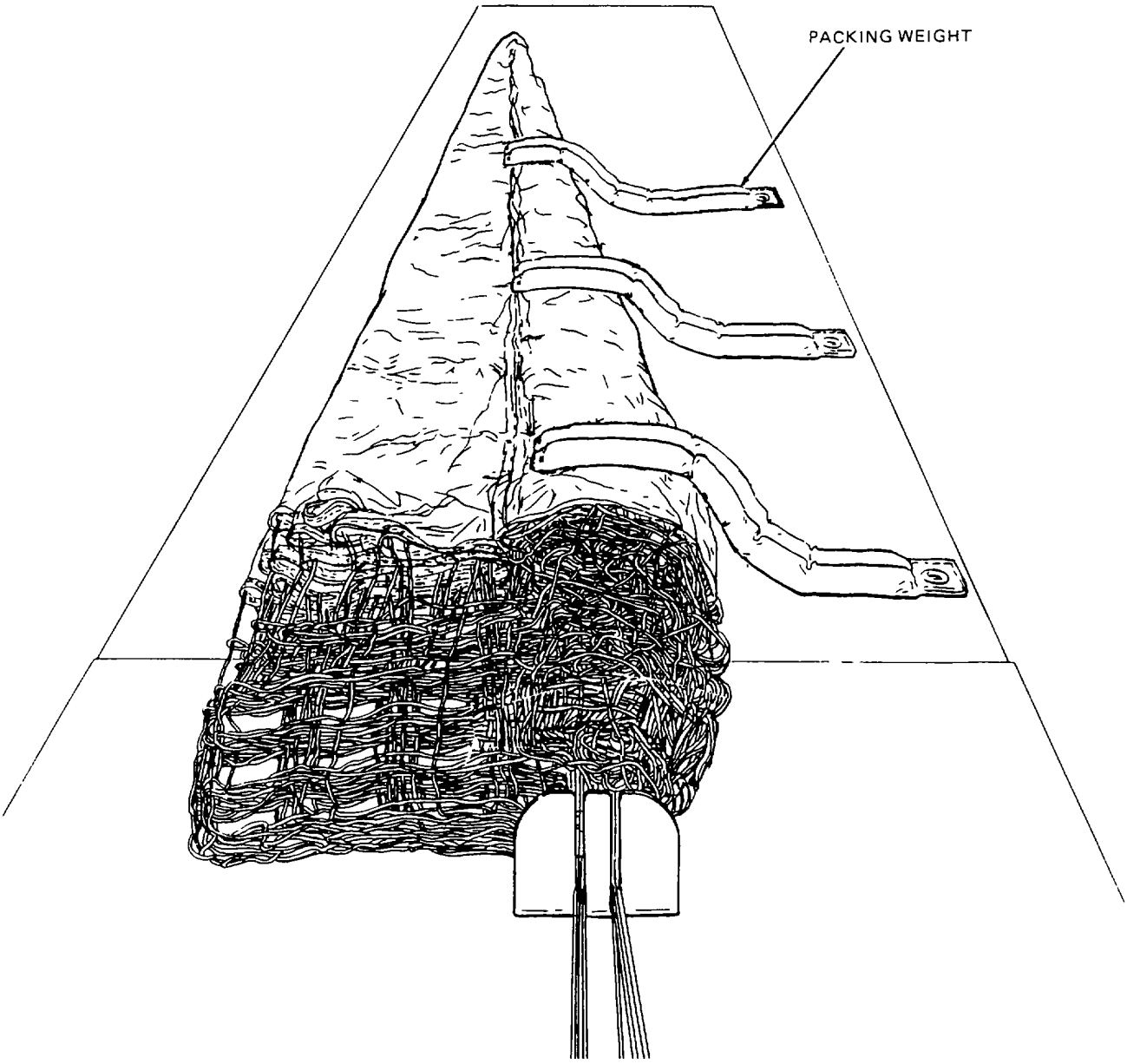


Figure 2-34. Right Side of Longfold Completed.

2.16. Packing the T-10B Parachute (CONT).

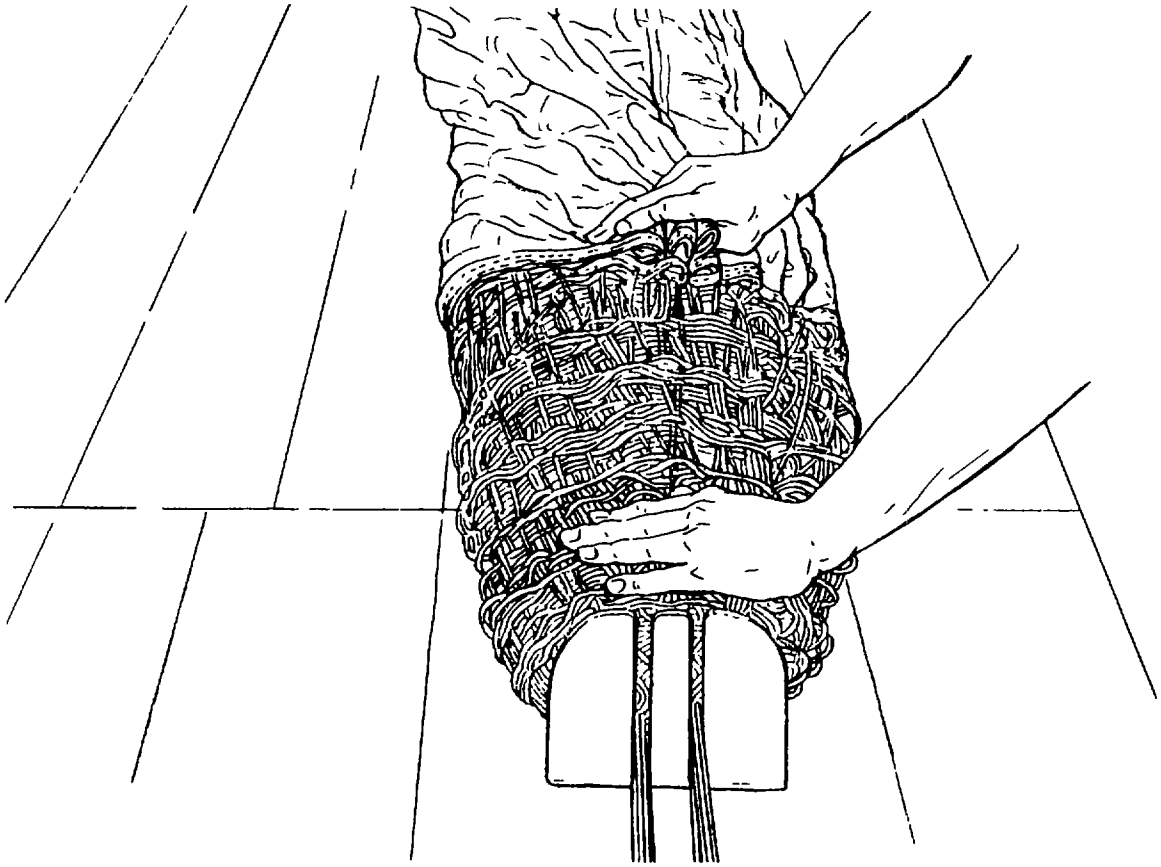


Figure 2-35. Beginning Longfold of Left Side/

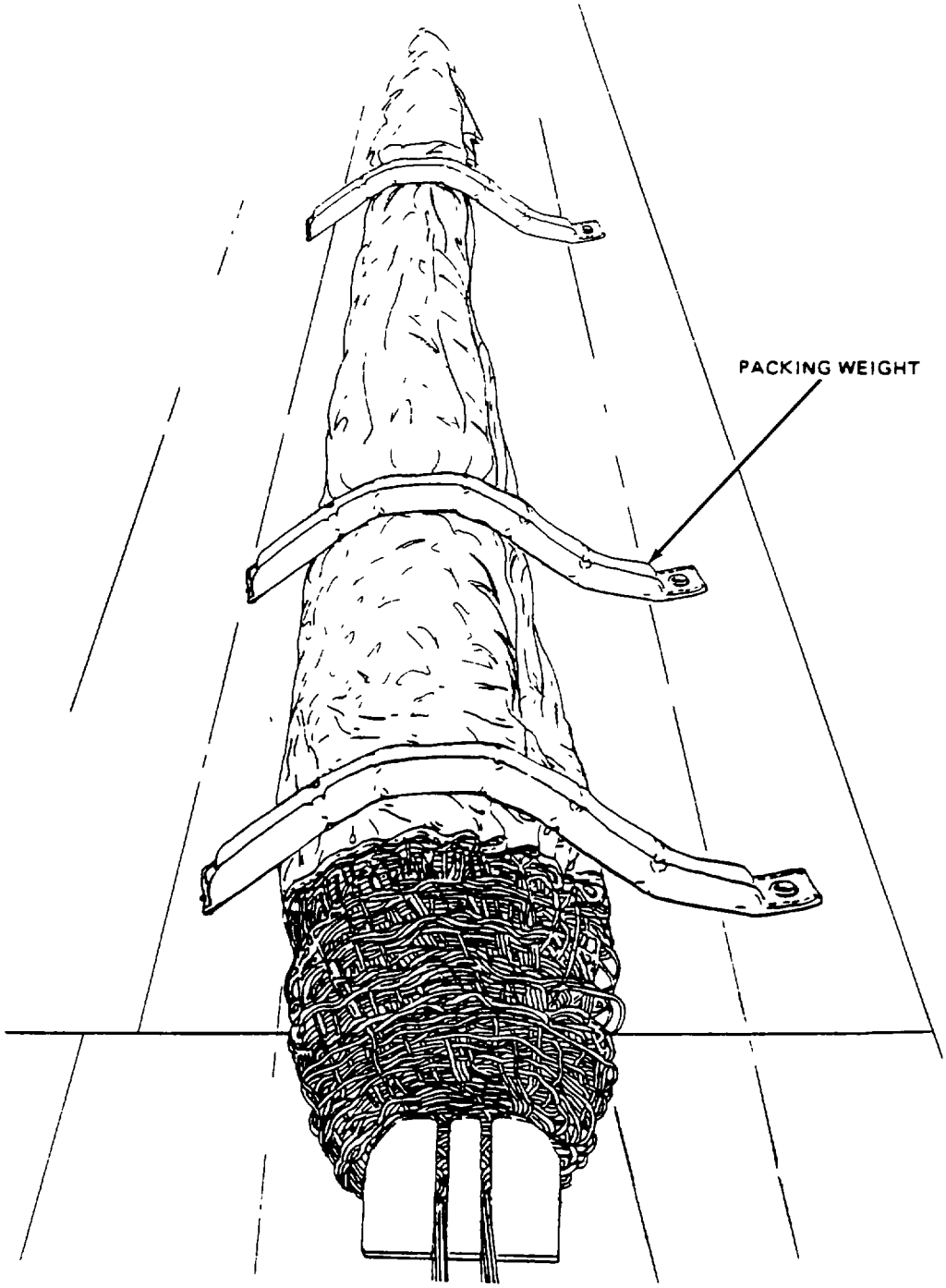


Figure 2-36. Longfold Completed.

2-16. PACKING THE T-10B PARACHUTE (CONT).

i. Tying Breakcord. Before stowing the canopy in the deployment bag, the canopy must be attached at the bridle loop to the static line loop. Proceed as follows:

Warning

Inspect deployment bag and entire static line including that portion under sleeve.

(1) To secure the static line while stowing the canopy, S-fold the static line and roll the suspension line protector flap around the folded line. Secure ends of the protector flap with rubber retainer bands (see detail A, figure 2-37).

(2) Double 36-inch length of Type 1, 1/4-inch cotton webbing, and pass one end of doubled webbing through the loop in the end of the static line, through bridle loop of the canopy, and back through loop In the end of the static line.

NOTE

Packing paddle may be used to aid In tying the breakcord tie. Remove the packing paddle after completing the tie.

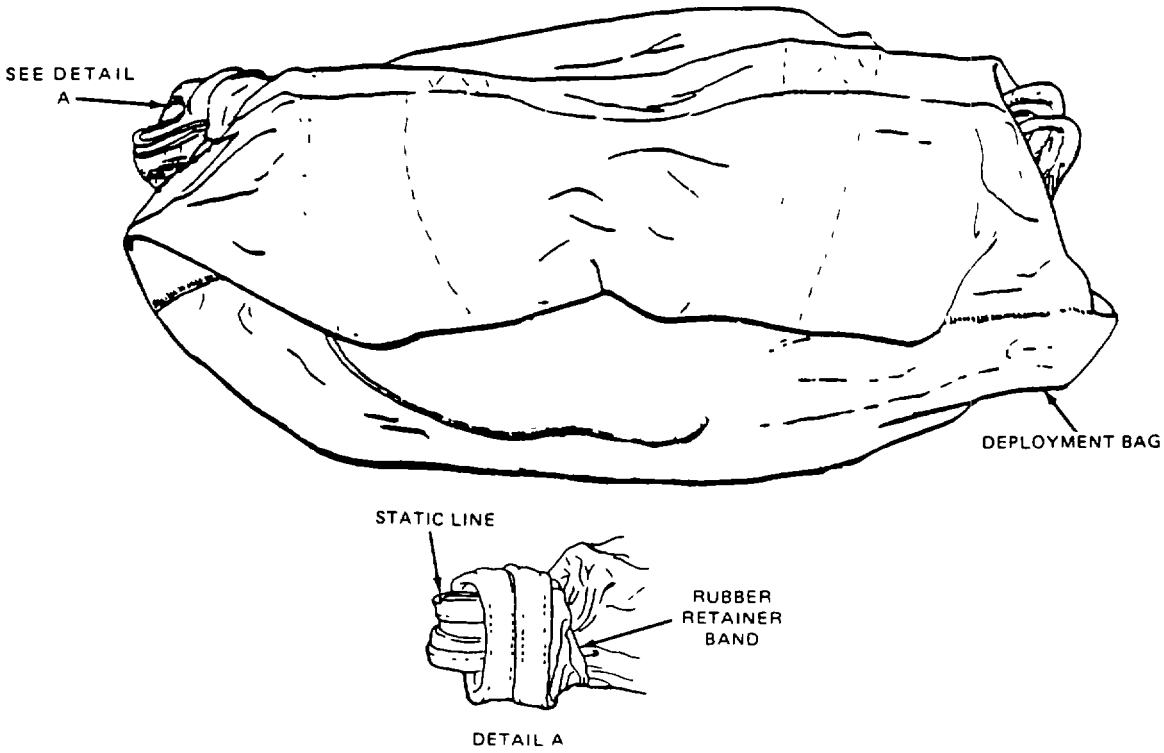


Figure 2-37. Deployment Bag Prepared for Stowing of Canopy.

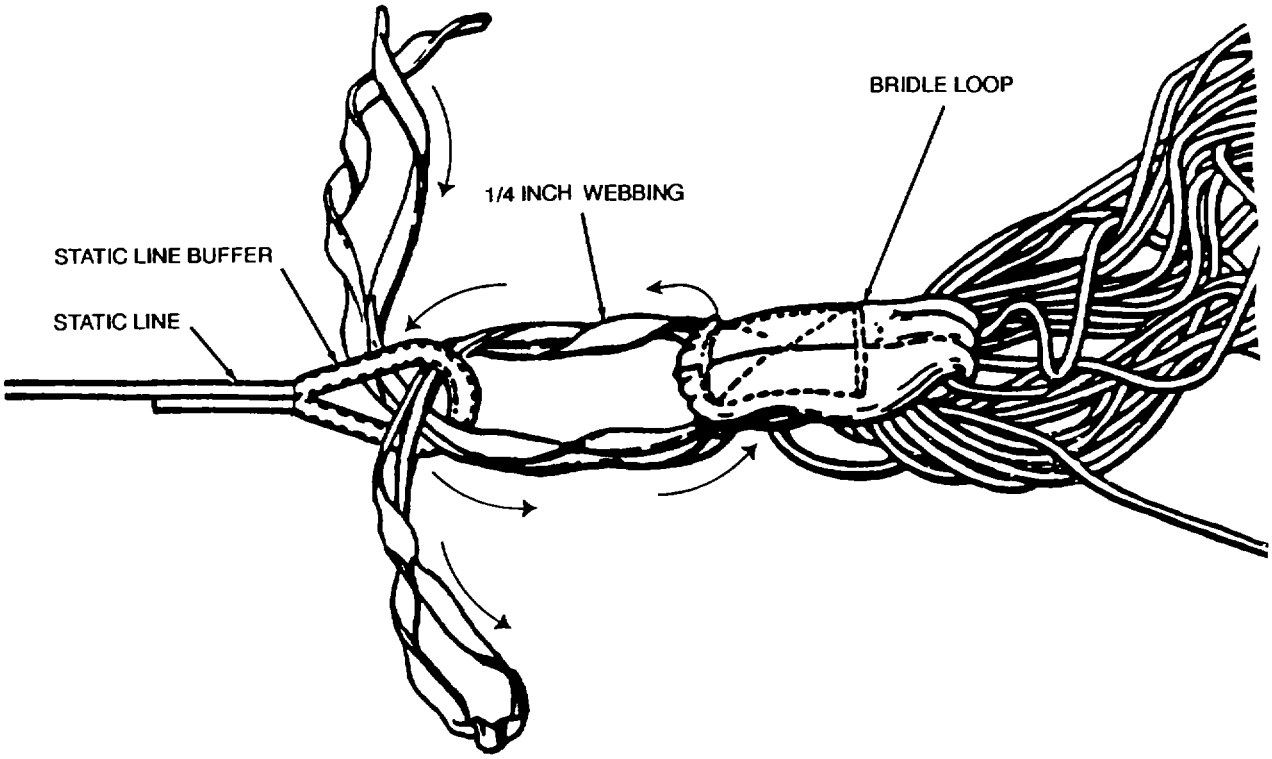


Figure 2-38. Tying Static Line Loop to Bridle Loop.

(3) Tie ends of webbing over the static line loop (A, figure 2-39), using a surgeon's knot and a locking knot (B, figure 2-29). Allow approximately a 3-inch loop between the static line loop and the bridle loop. Cut off excess webbing , leaving ends approximately 2 inches long.

j. Stowing Canopy. Proceed to stow the canopy as follows:

(1) Release tension and unhook the bridle loop from the apex hook. Hold the deployment bag open with the right hand and grasp the canopy near the apex. Place the apex of the canopy into the upper right corner of the deployment bag (figure 2-40).

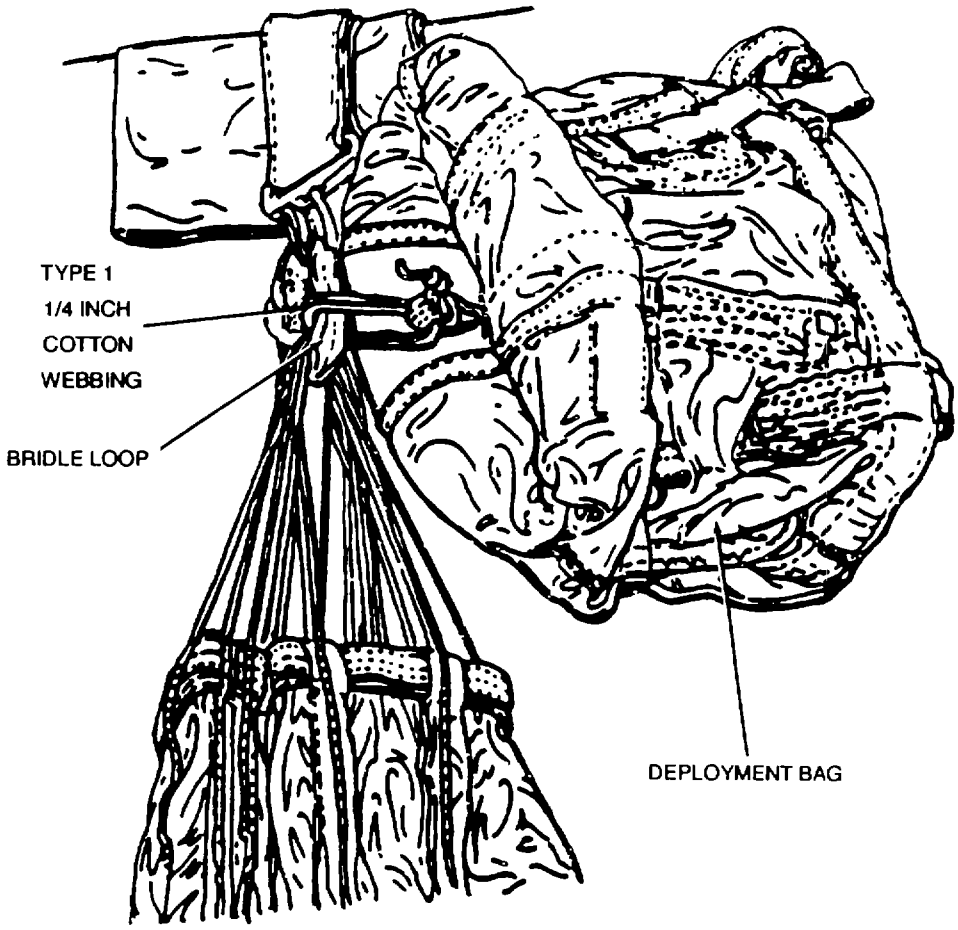
(2) Grasp the canopy with the left hand, approximately the width of the deployment bag, and place the second stow in the upper left corner

(3) Continue stowing the canopy In alternating sides of the deployment bag until the lower lateral band and anti-inversion net are reached (figure 2-41).

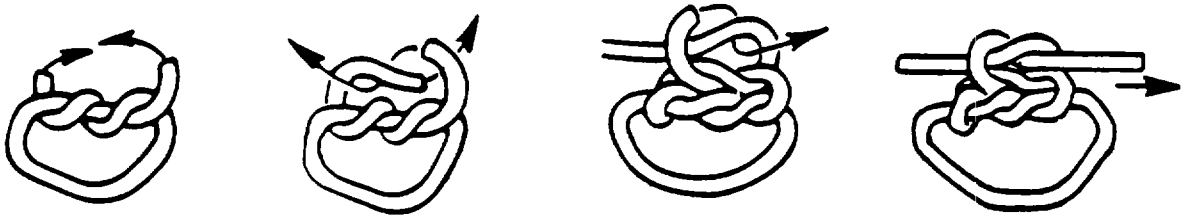
(4) Grasp the lower lateral band and slide it into the center of the deployment bag.

(5) With the middle finger of the right hand placed between the left and right group of suspension lines, grasp the anti-inversion net.

2-16. PACKNG THE T-108 PARACHUTE (CONT).



A STATIC LINE LOOP TIED AND SECURED



B SURGEON'S KNOTS AND A LOCKING KNOT

Figure 2-39. Static Line Loop Secured to Bridle Loop with Surgeon's Knot and Locking Knot.

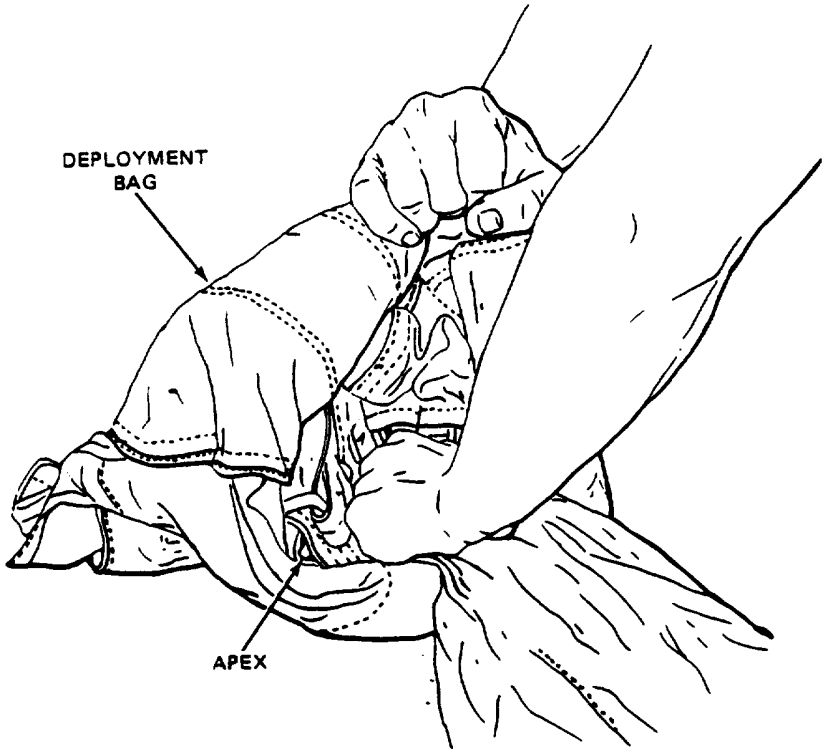


Figure 2-40. First Canopy Stow.

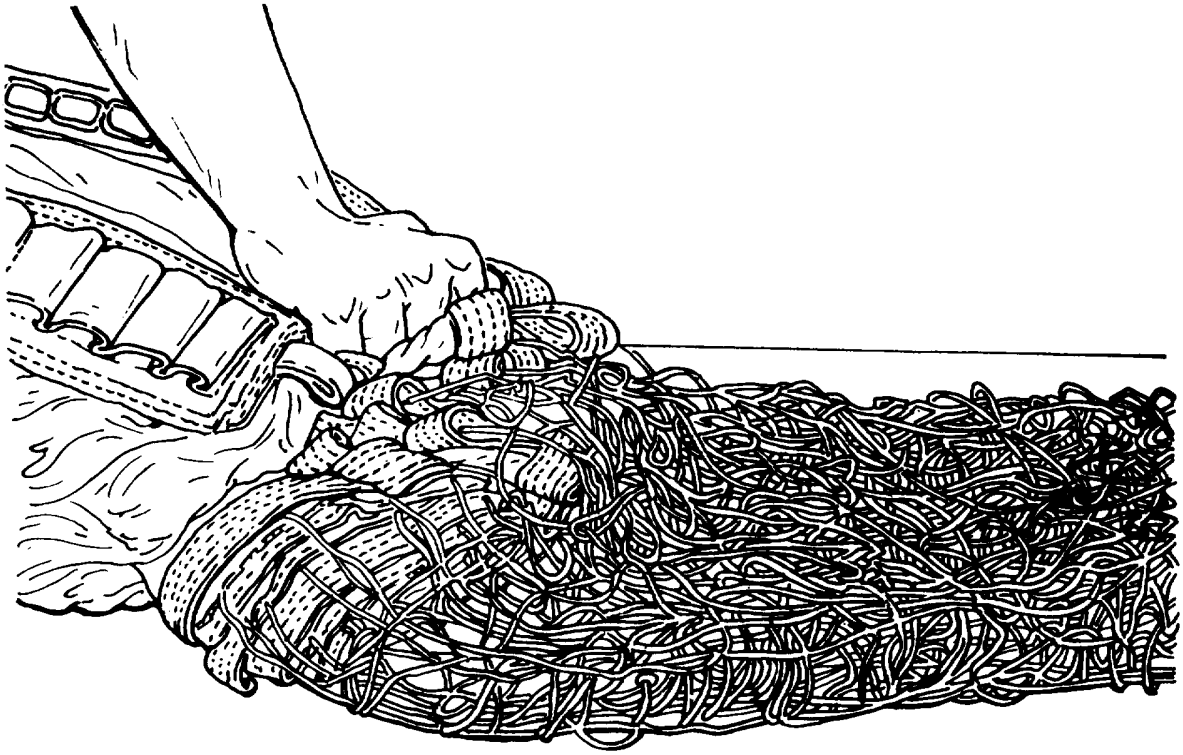


Figure 2-41. Continuing Canopy Stow.

2-16. Packing the T-10B Parachute (CONT).

(6) With the left hand move the packing weight and line separator. Then place the left hand on the mouth of the deployment bag and, with the right hand, slide the anti-inversion net into the center of the deployment bag (figure 2-42).

(7) Turn deployment bag upright, with static line end down. When entire canopy and net are stowed, suspension lines should be centered on top of deployment bag.

k. *Closing Deployment Bag and Stowing Suspension Lines.* After canopy stow has been completed, continue as follows:

(1) Pull suspension lines over top center of the deployment bag, fold side flaps of the deployment bag over the stowed canopy anti-inversion net and fold the locking stow panel over the side flaps. Insert locking stow loops and connector link tie loops through the slots in the locking stow panel.

(2) Insert stow hooks in locking stow loop hoods to hold the deployment bag dosed (figure 2-43). Insert a packing paddle through the connector link tie loops and lay deployment bag down.

(3) Grasp all suspension lines and form a loop which reaches from the center of the deployment bag to 2 inches beyond the locking stow loop hood (figure 2-44).

(4) Insert right stow hook through loop formed by suspension lines. Ensure that the stow hook is around all of the suspension lines (figure 2-45).

(5) Pull the suspension line loop through the right locking stow loop. Ends of stow should extend 2 inches beyond locking stow loop hood (figure 2-46).

(6) Grasp suspension lines approximately the width of the bag and form a second loop which extends 2 inches beyond the left stow loop hood.

(7) Insert left stow hook through the formed suspension line loop. Ensure that the stow hook is around all of the suspension lines (figure 2-47).

(8) Pull the suspension line loop through the left locking stow loop. Enclosures of stow should extend 2 inches beyond locking stow loop hoods (figure 2-48).

NOTE
Flatten deployment bag.

(9) Extend suspension lines to upper right comer of deployment bag. Form first regular stow (figure 2-49).

NOTE
Insure that stow hook is around all suspension lines when making stows. Regular stows should extend through the stow loops to the outer edge of the reinforcement panels, but not more than I inch beyond outer edge of stow loop.

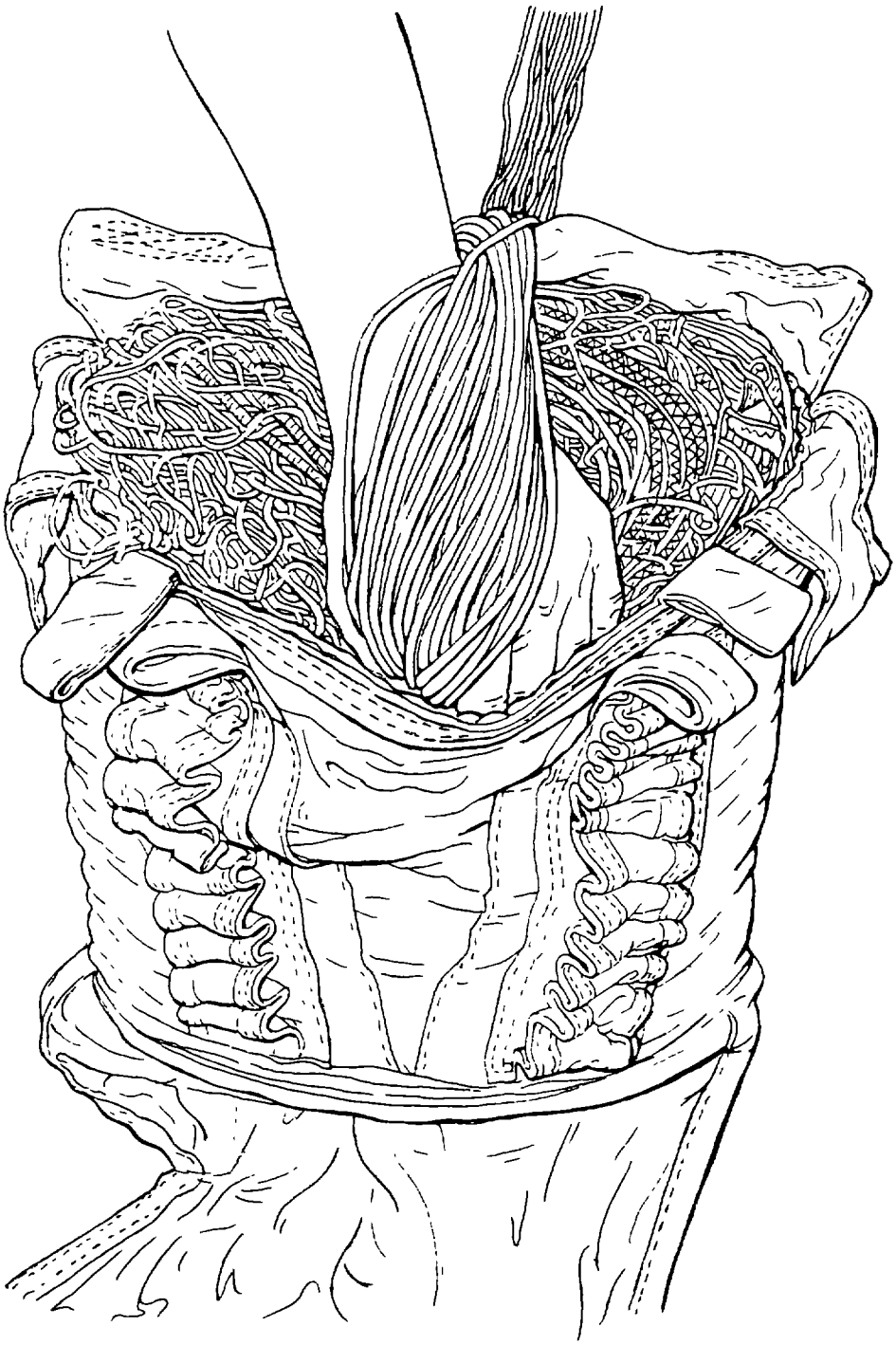


Figure 2-42. Stowing Remaining Canopy and Net.

2-16. Packing the T-10B Parachute (CONT).

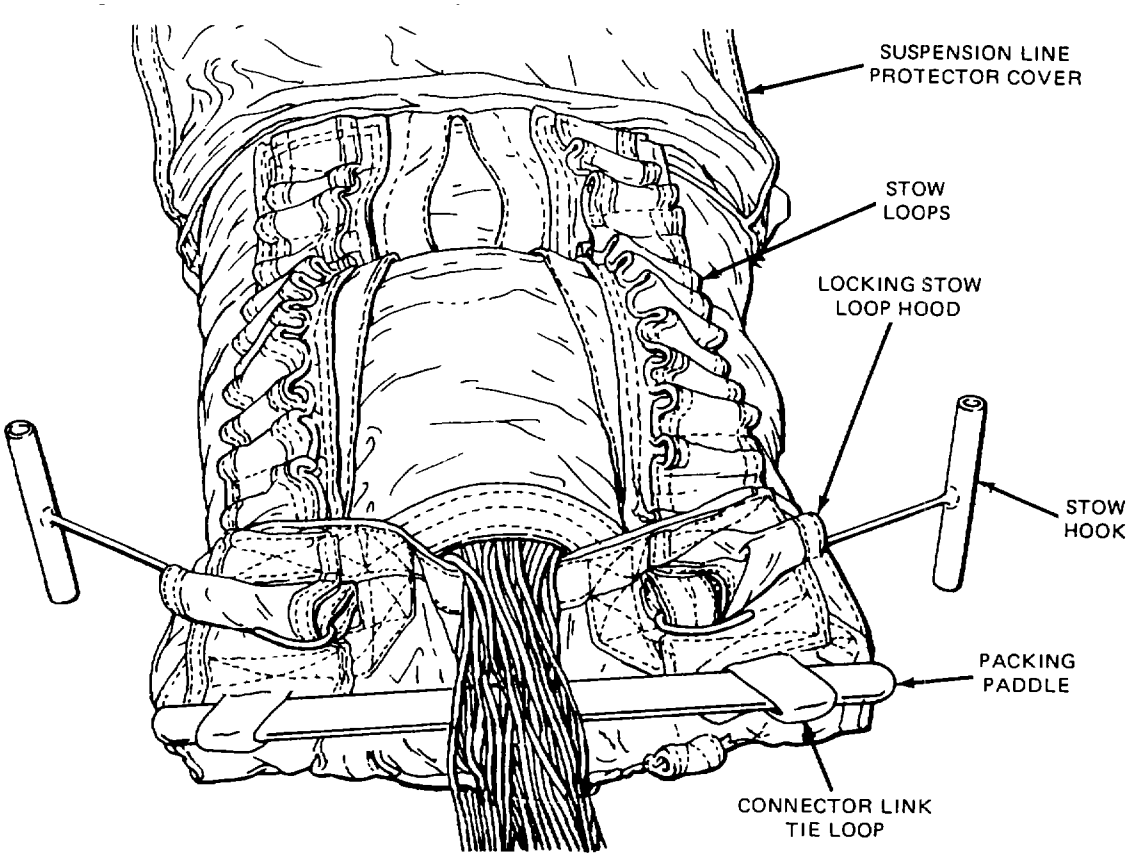


Figure 2-43. Closing the Deployment Bag.

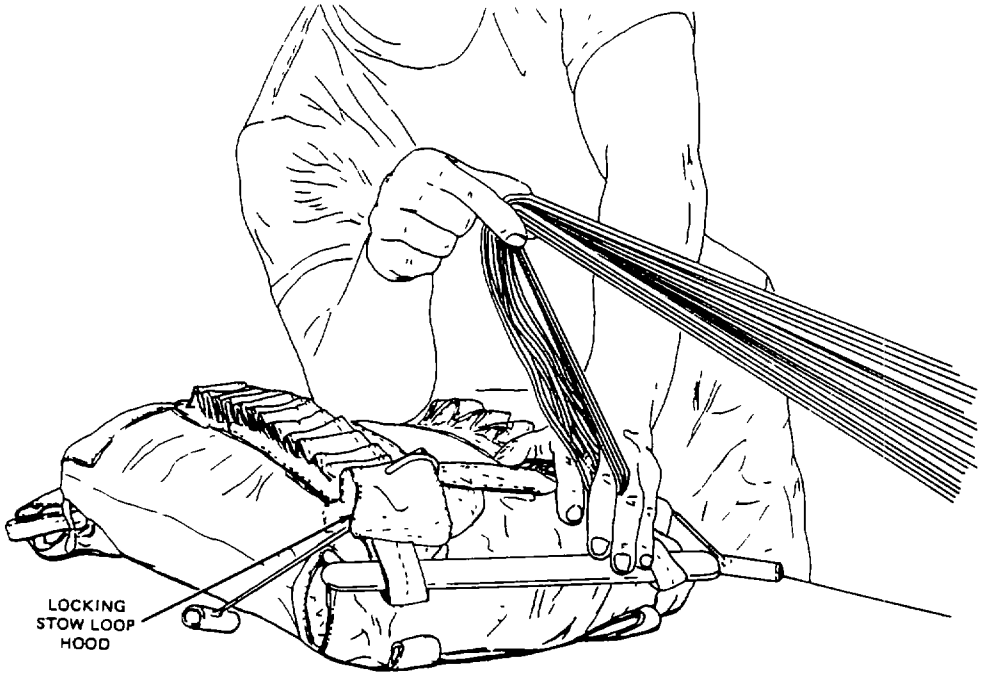


Figure 2-44. Forming a Locking Loop.

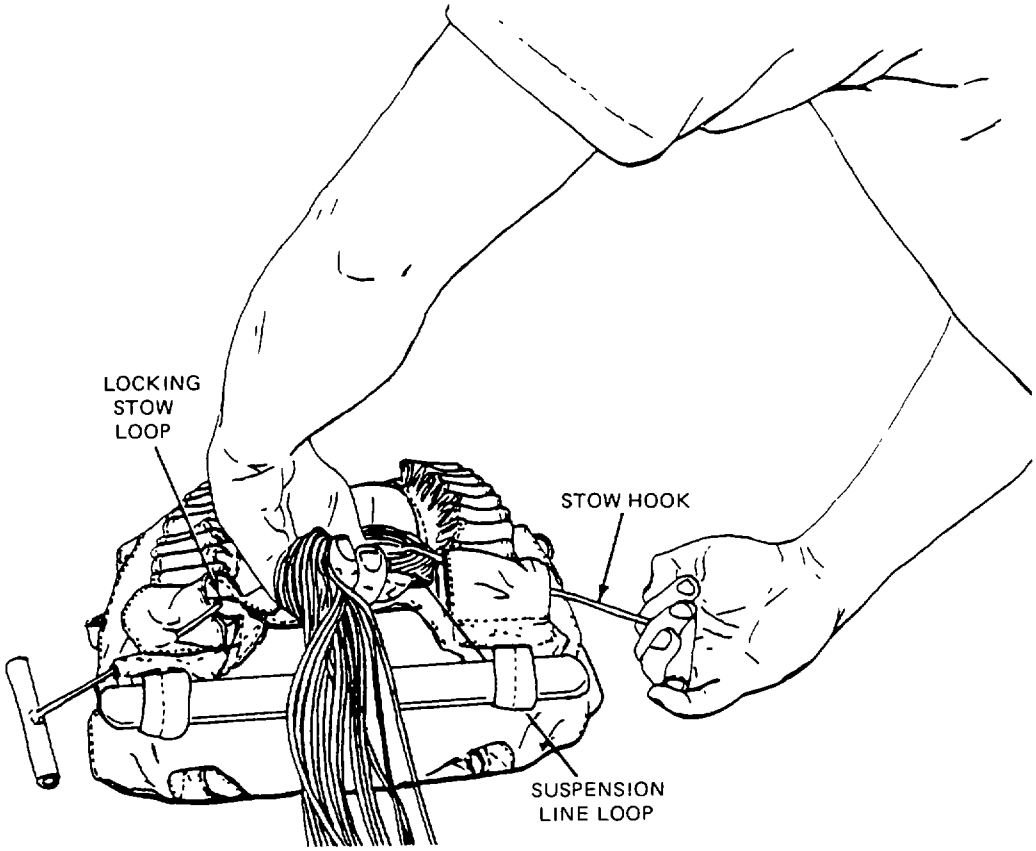


Figure 2-45. Inserting Stow Hook, Right Side.

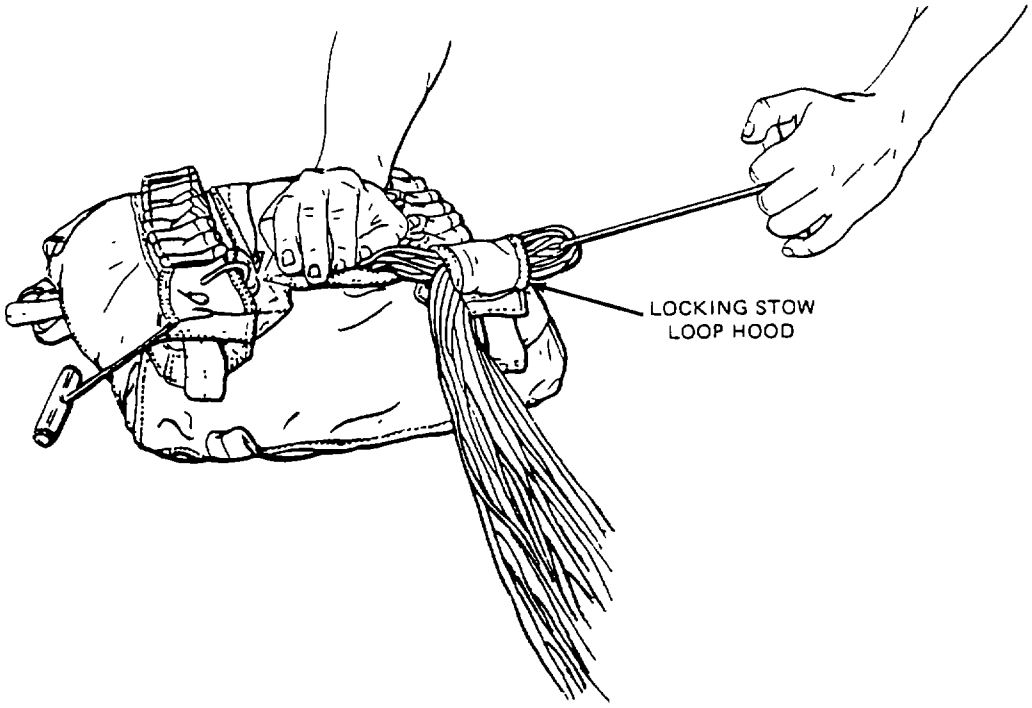


Figure 2-46. Right Locking Stow Loop.

2-16. Packing the T-10B Parachute (CONT).

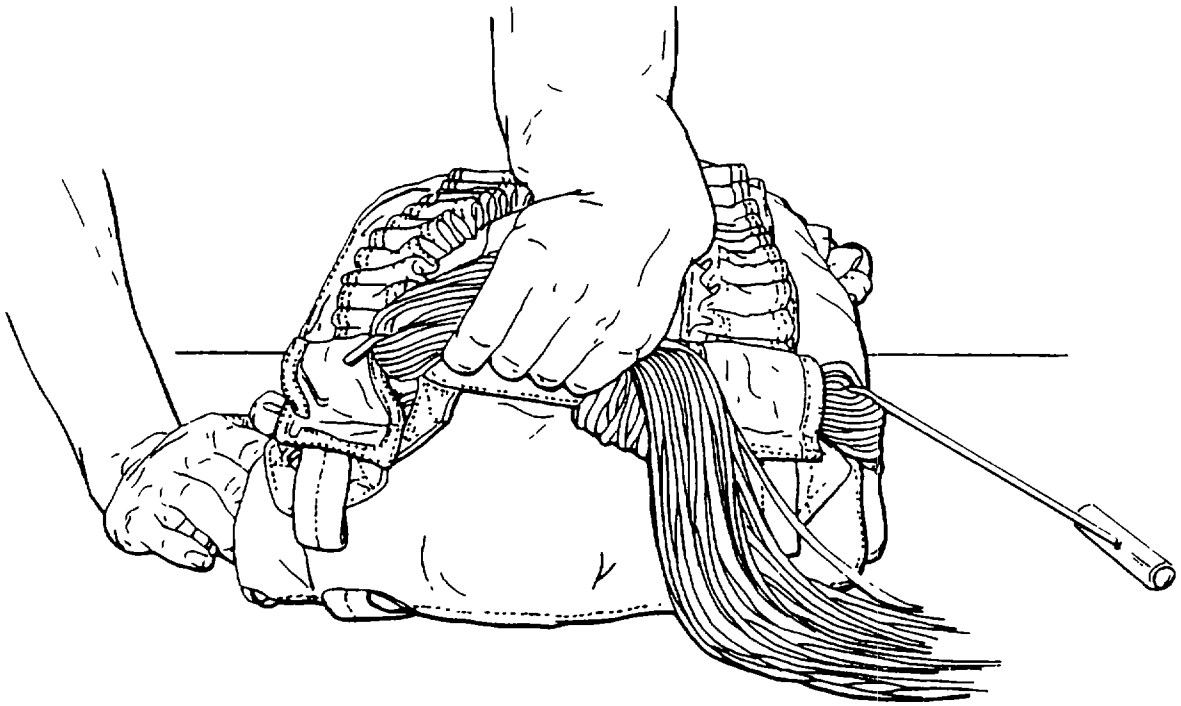


Figure 2-47. Inserting Stow Hook, Left Side.

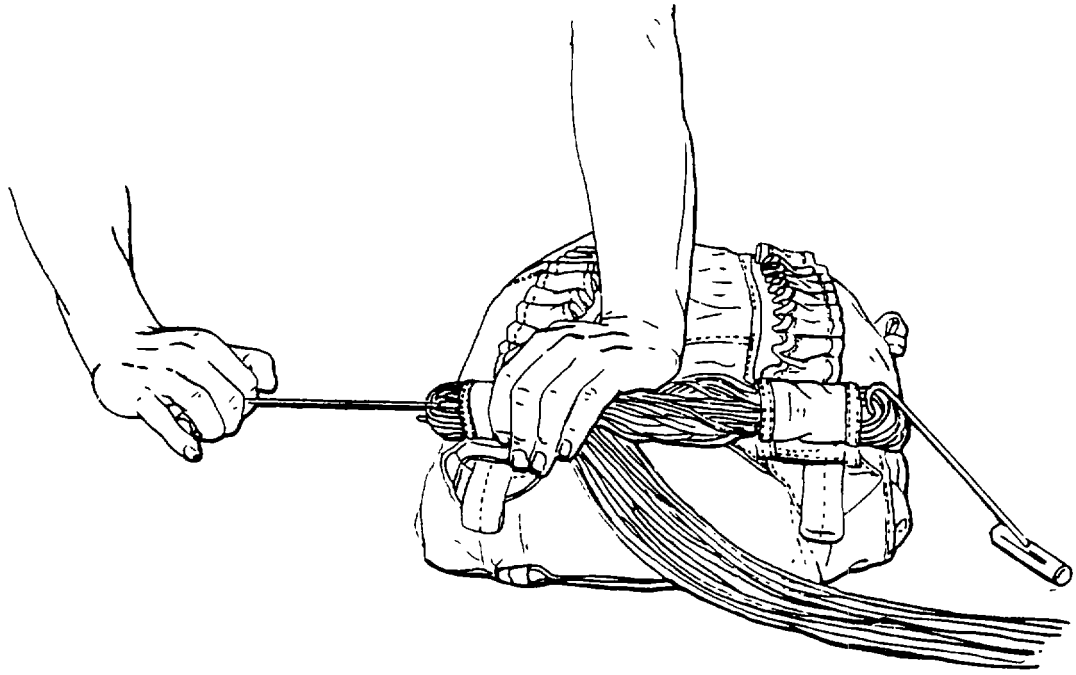


Figure 2-48. Completing Second Stow.

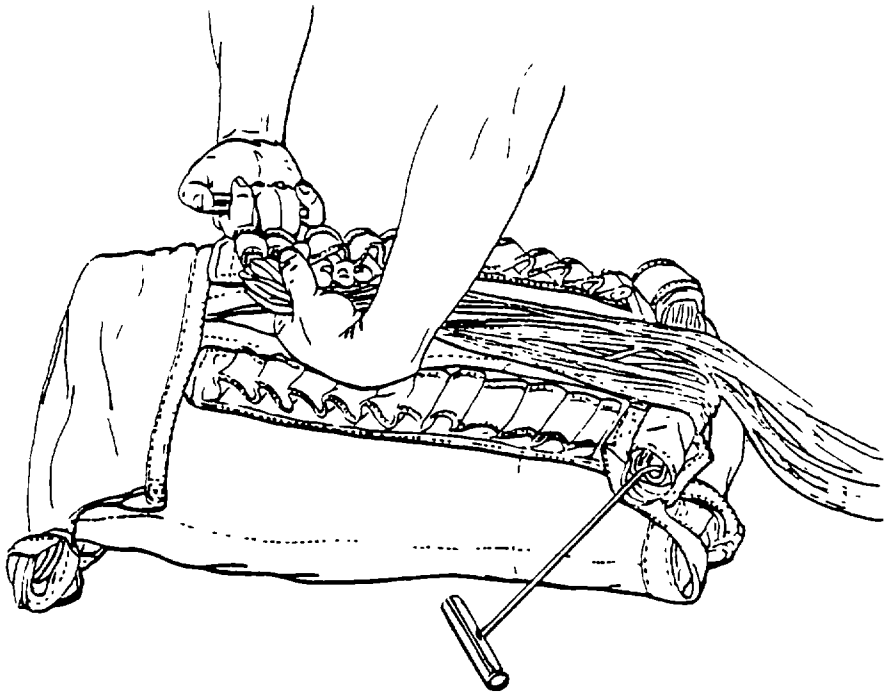


Figure 2-49. Forming First Regular Stow

(10) Using a stow hook, make the first regular stow in the upper right stow loop (figure 2-50).

(11) Rotate deployment bag one-quarter turn clockwise.

(12 Grasp suspension lines approximately the width of the deployment bag and sliding the bag on the table, form the second regular stow in the upper left corner of the bag.

(13) Using stow hook, make second regular stow In upper left corner (figure 2-51).

(14) Continue alternating stows from right to left until approximately 8 to 10 inches of suspension lines are left unstowed (figure 2-52).

NOTE

There should be a minimum of 8 stows on each panel.

(15) Remove the connector links from the tension plate.

(16) Fold the excess slack from the remaining suspension lines over the stowed suspension lines.

2-16. Packing the T-10B Parachute (CONT).

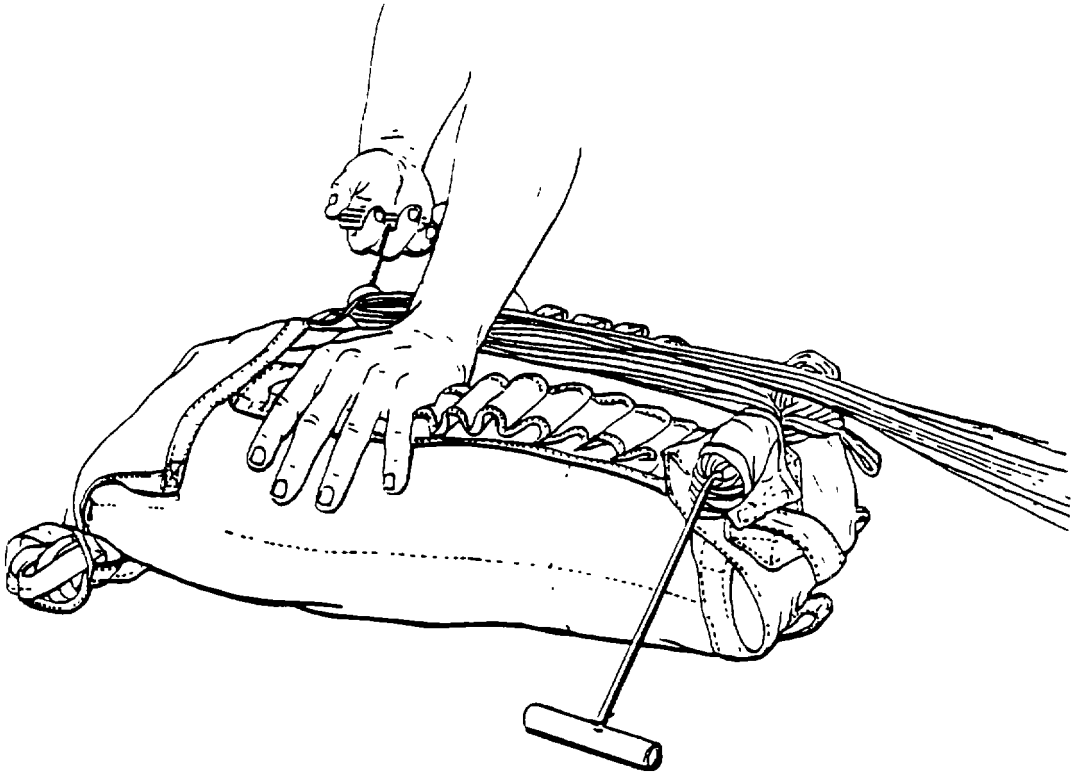


Figure 2-50. Completing First Regular Stow.

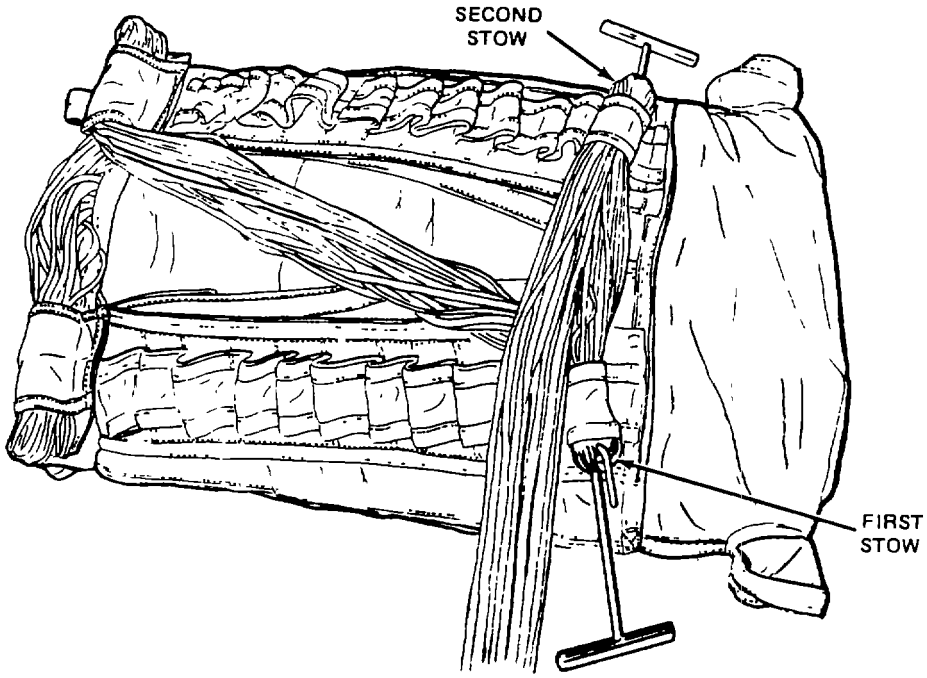


Figure 2-51. Completing Second Regular Stow.

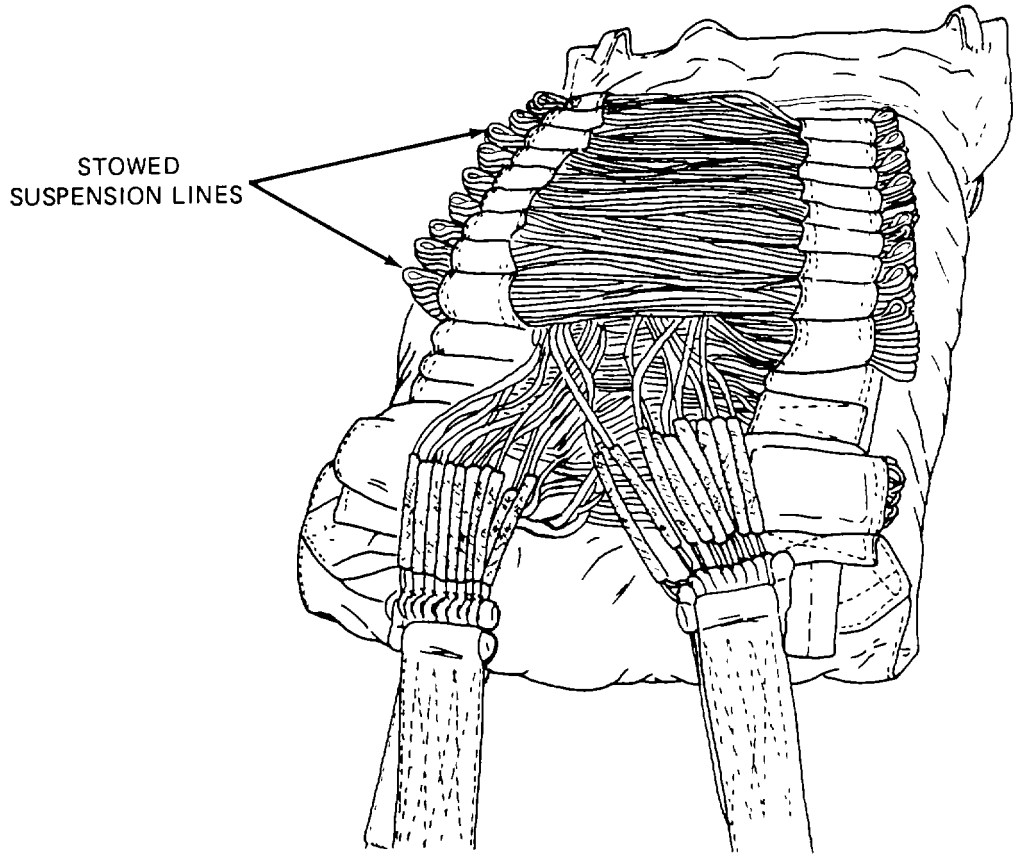


Figure 2-52. Stowed Suspension Lines.

l. *Tying Connector Links and Suspension Line Protective Cover.* To secure the packed deployment bag, continue as follows:

(1) Unroll suspension line protector cover and cover suspension lines.

NOTE

Ensure that the risers are still in proper layout.

(2) Using a 14-inch length of Type I 1/4-inch cotton webbing, pass an end through the right bottom connector link tie loop, through right pair of connector links, through top right connector link tie loop, and through cover tie loop (figure 2-53).

(3) Secure all tie loops and connector links together with a surgeon's knot and a locking knot. Cut excess webbing, leaving end approximately 2 inches long.

(4) Secure the left tie loops and connector links using procedures in steps (2) and (3) above (figure 2-54).

(5) Enter deployment bag number in log record book (figure 2-55).

2-16. Packing the T-10B Parachute (CONT).

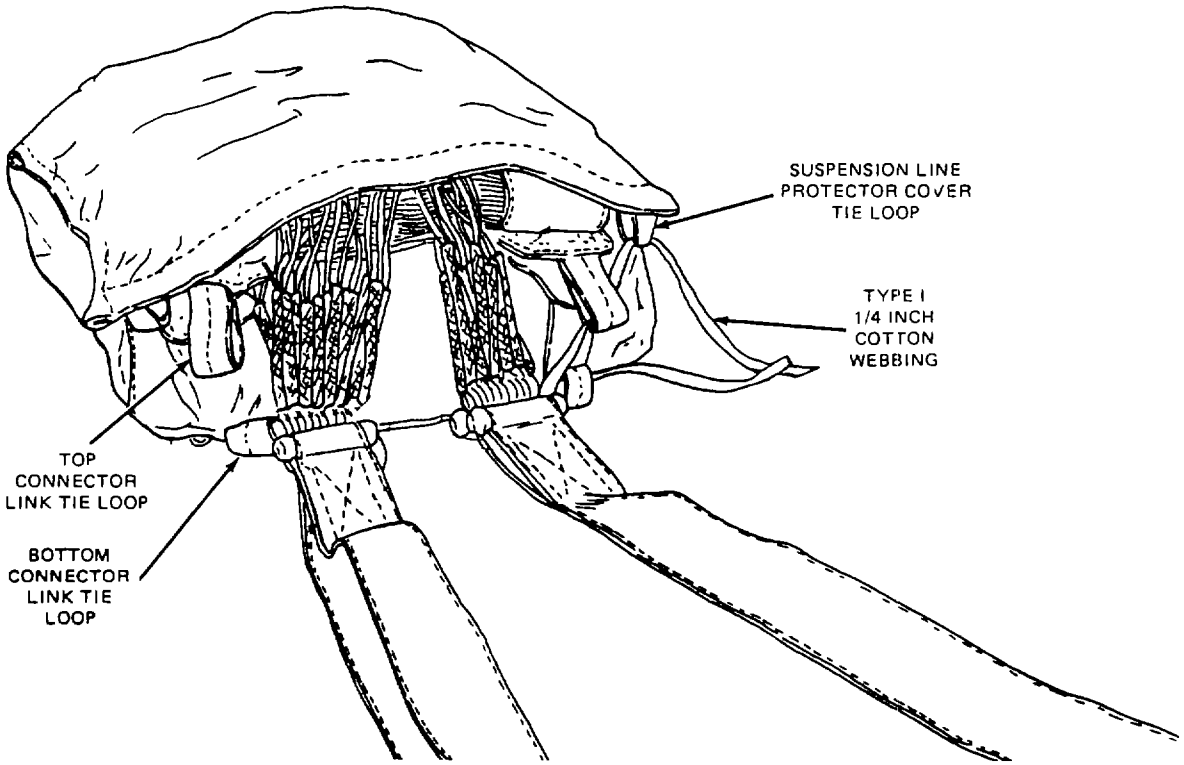


Figure 2-53. Tying connector Link.

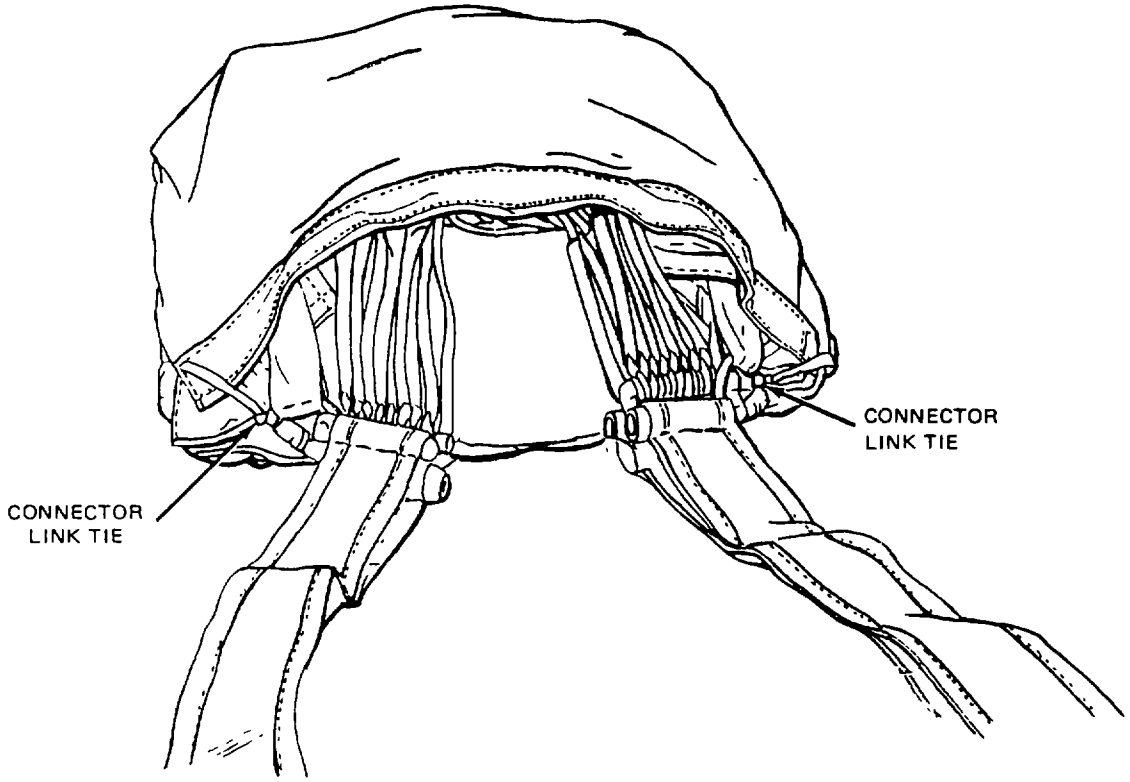


Figure 2-54. Connector Link Ties Completed.

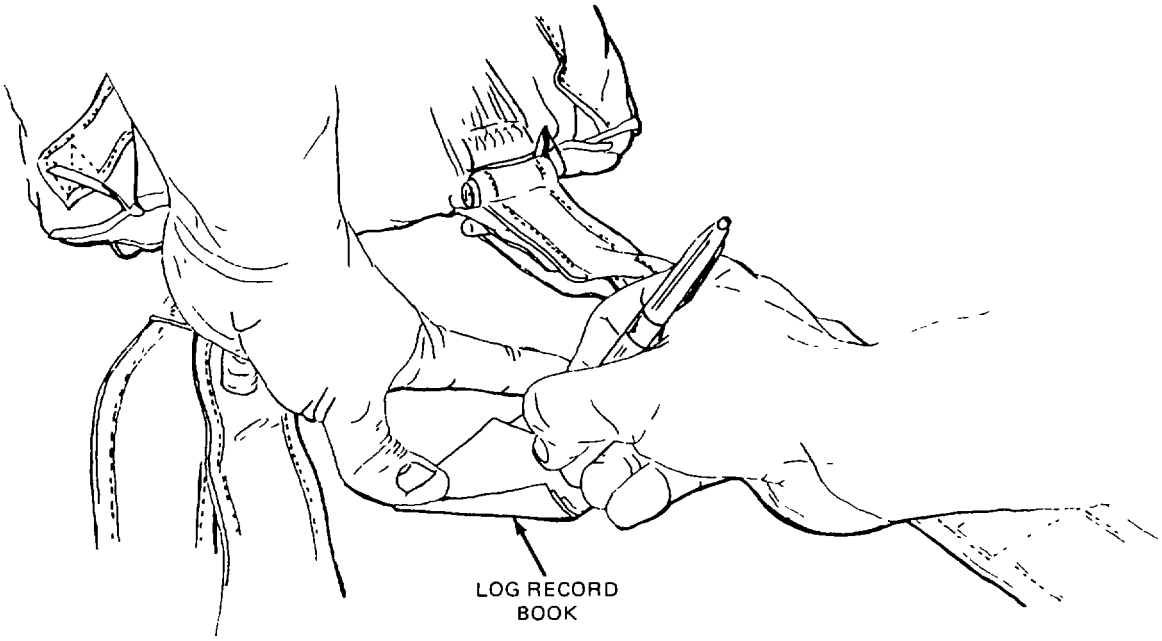


Figure 2-55. Packer Entering Deployment Bag Number.

m. Closing the Pack Tray. To stow the packed deployment bag In the pack tray, proceed as follows:

(1) With the right hand hold the risers In place next to the canopy release assembly. With the left hand grasp the edge of the pack tray Slide pack tray forward approximately half way up the risers. Spread pack tray flaps (see figure 2-56).

(2) Slip risers through riser slots in upper flap of the pack tray U-fold risers onto the pack tray (figure 2-57).

(3) While holding folded risers in place, grasp the static line at end of the deployment bag, and rotate the bag onto the pack tray (figure 2-58).

(4) Remove twists from the static line and fold static line across the deployment bag so that the pack opening loop is up and In center of bag. Fold remaining sleeve portion under upper end of the deployment bag (figure 2-59).

NOTE

Be sure that none of the webbing passes over the static line.

(5) Lay pack closing flaps over the deployment bag. Thread a 40-inch length of type I 1/4-inch cotton webbing through the lower end flap closing loop, the static line pack opening loop, the left side flap closing loop, the upper end flap closing loop, under the static line, and through the right side flap closing loop (figure 2-60).

2-16. Packing the T-10B Parachute (CONT).

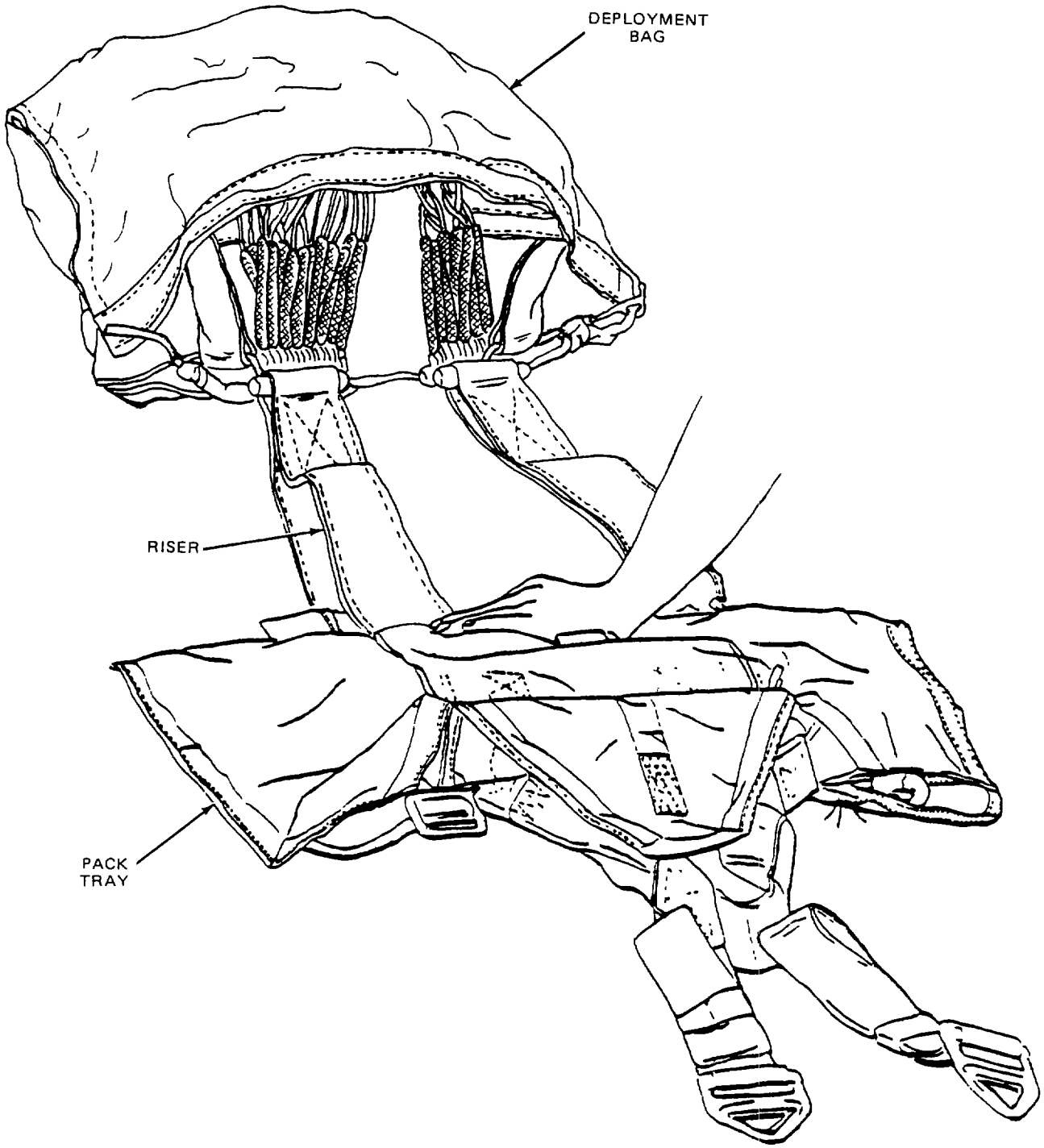


Figure 2-56. Pack Tray Moved Forward on Risers.

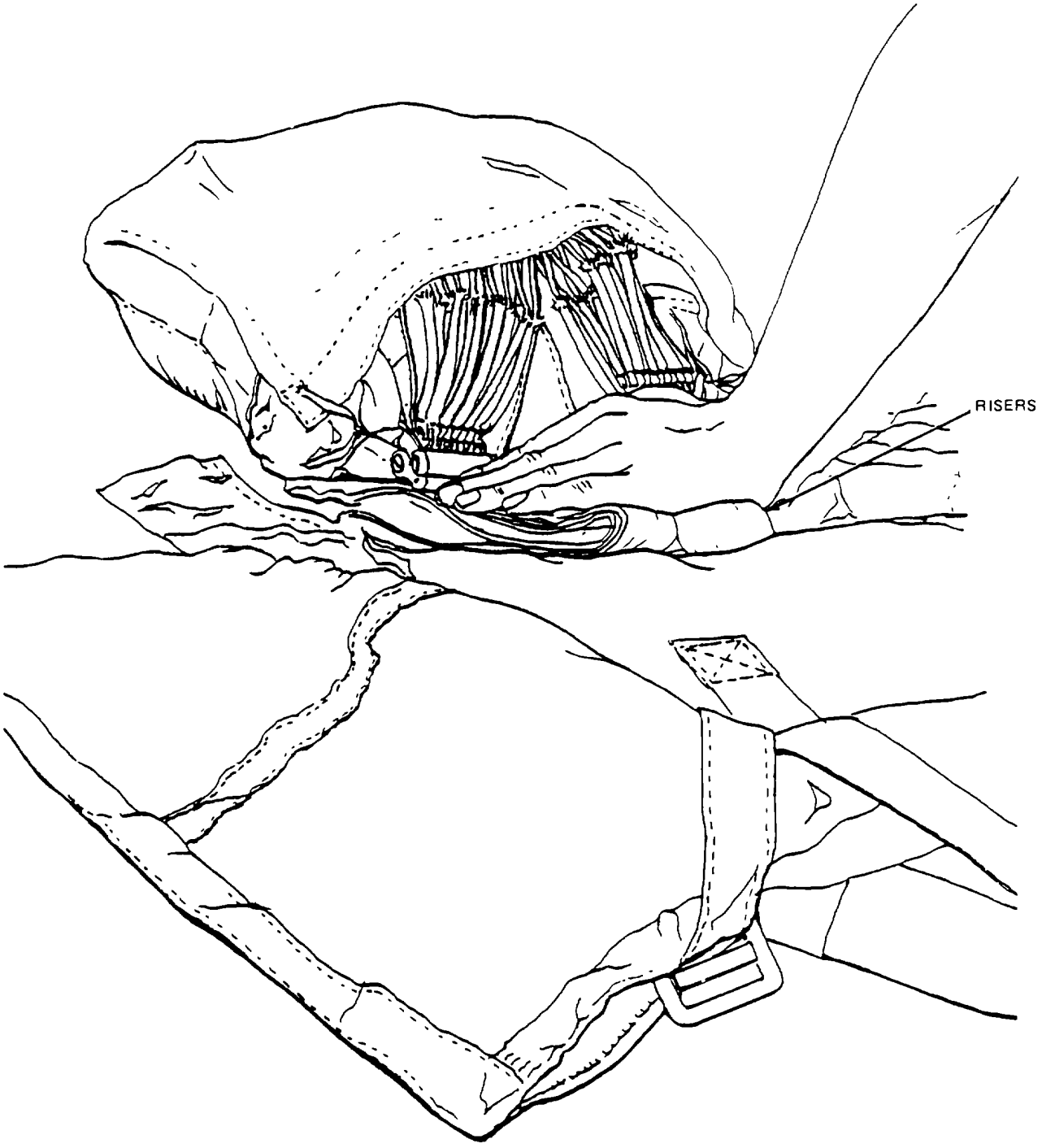


Figure 2-57. U-Fold of Risers.

2-16. Packing the T-10B Parachute (CONT).

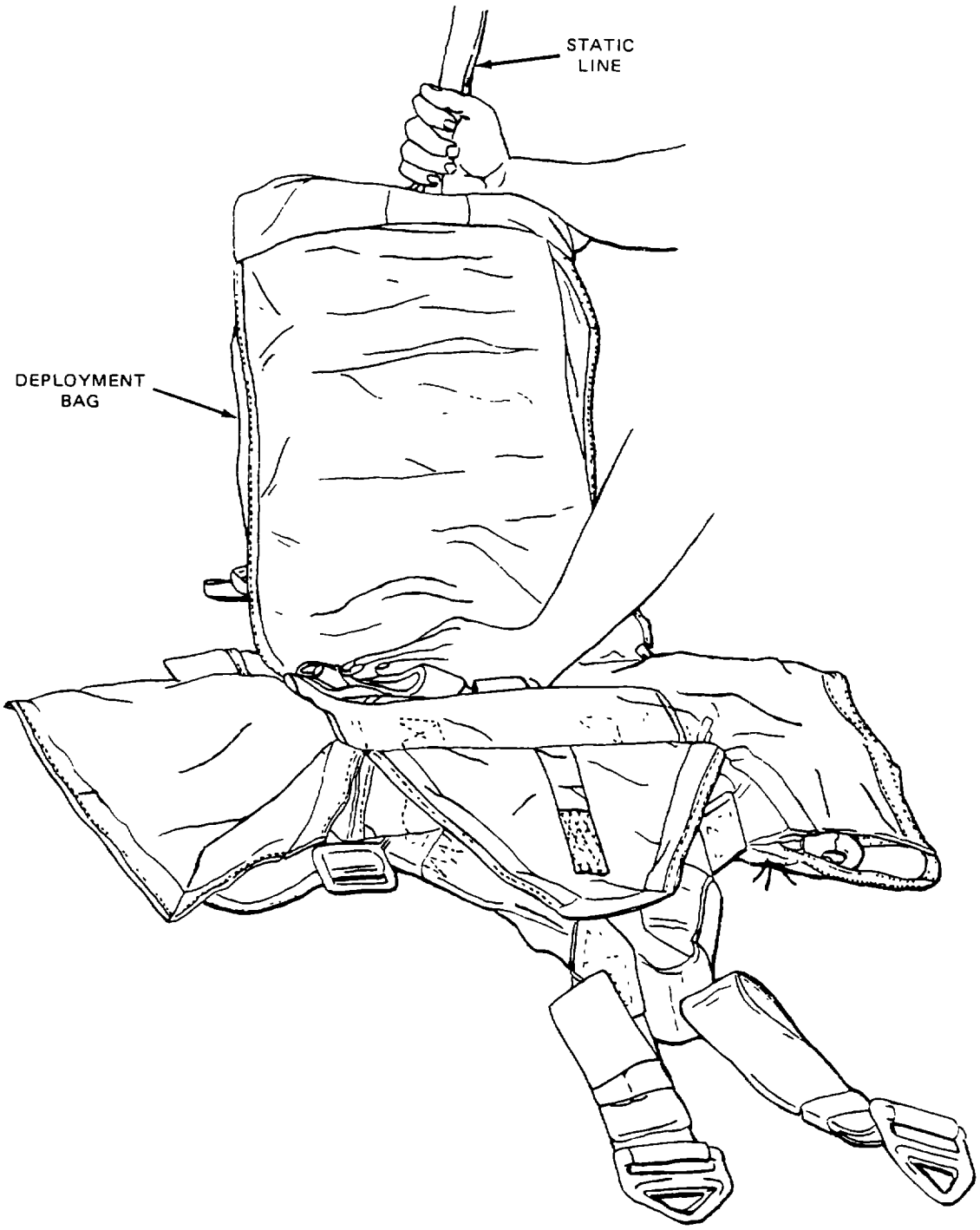


Figure 2-58. Rotating Deployment Bag.

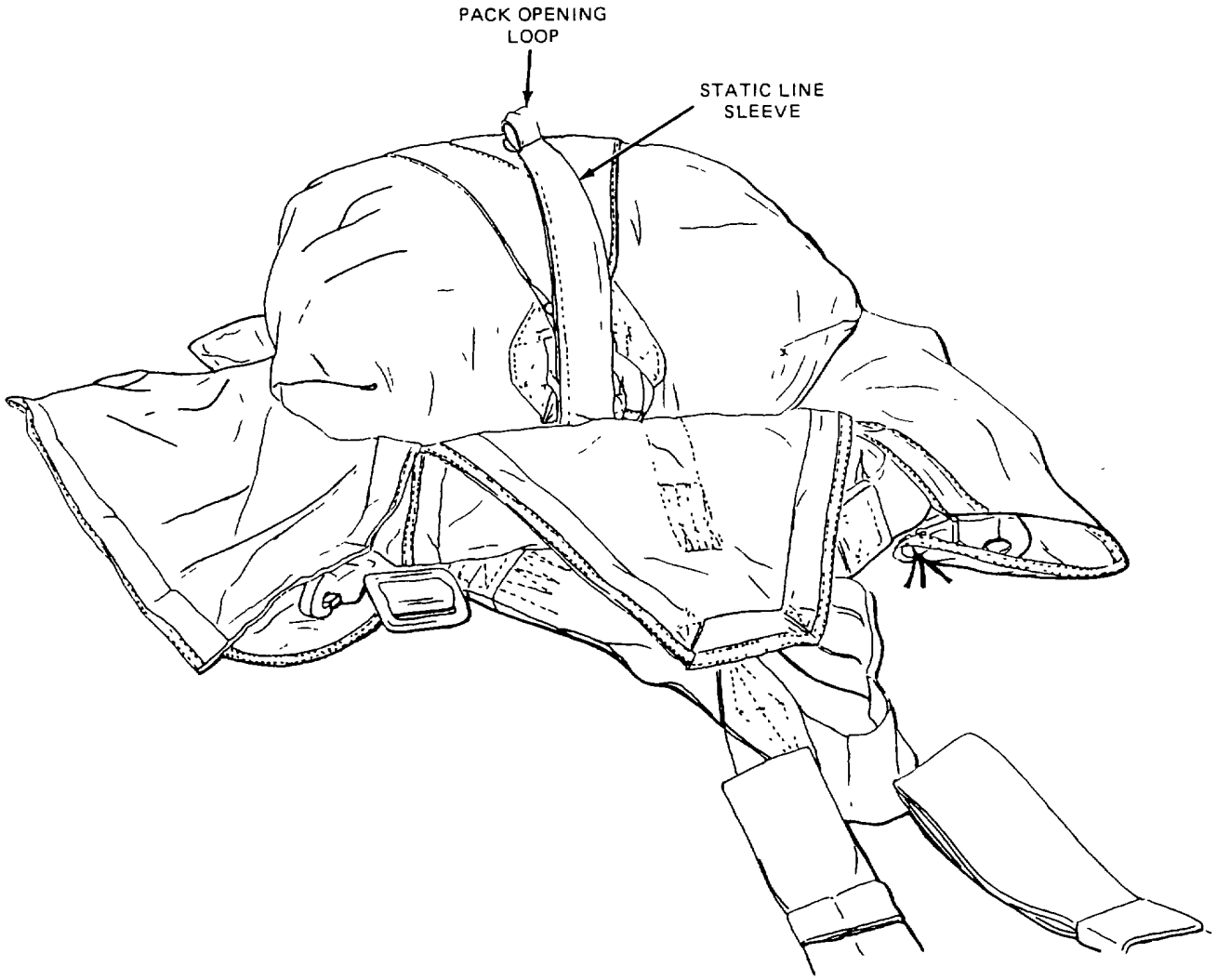


Figure 2-59. Static Line Sleeve Folded.

2-16. Packing the T-10B Parachute (CONT).

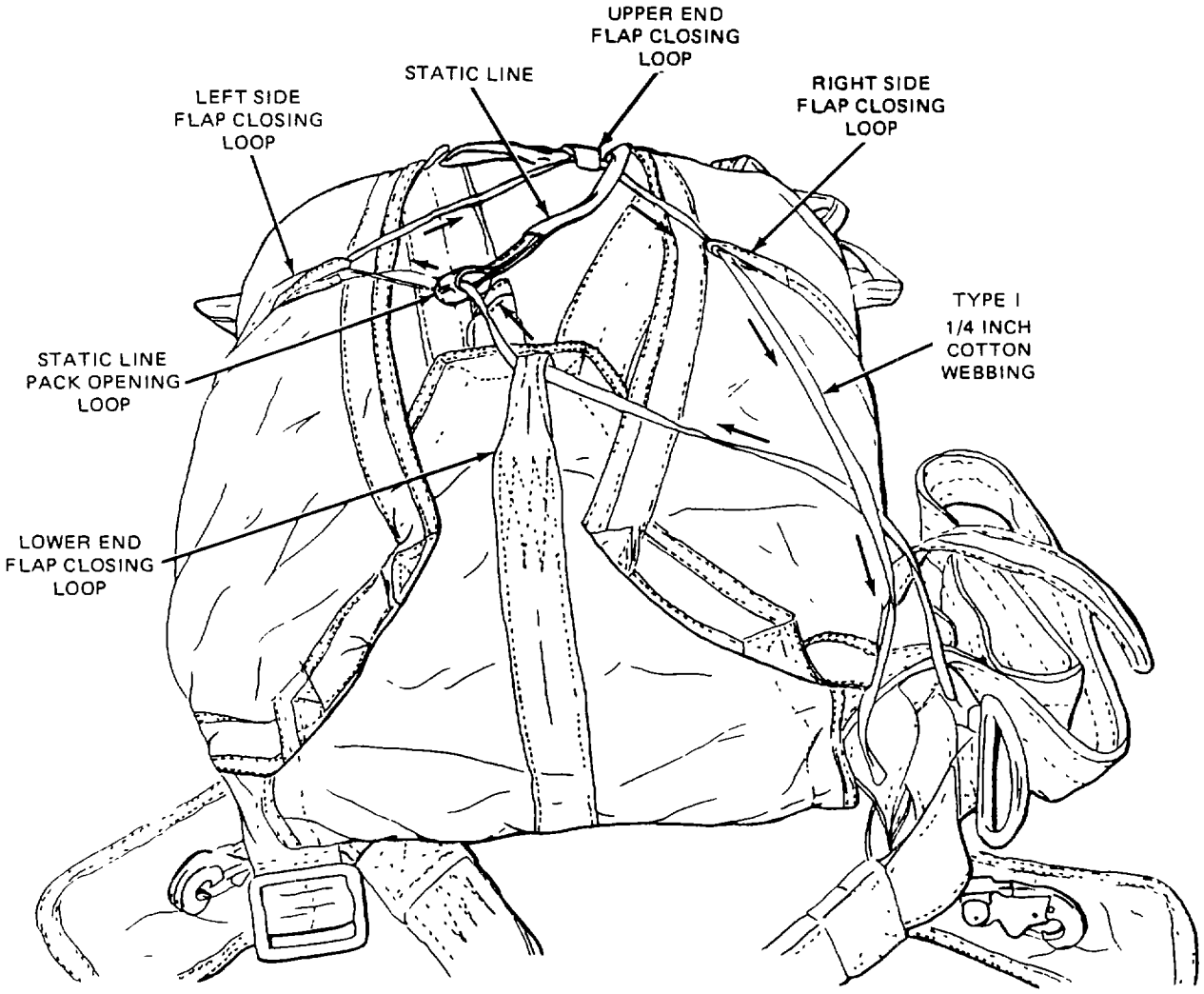


Figure 2-60. Threading Type 1, 1/4-inch Cotton Webbing.

(6) Pull loops close enough together to have an opening between loops of approximately 2 Inches in diameter. Tie webbing with a surgeon's knot and a locking knot, making tie between right side flap and lower-end flap closing loops. Cut webbing approximately 2-inches from knot. Keep remaining lengths for next connector links ties (figure 2-61).

(7) Using a packing paddle, insert flaps and dress pack The pack tray is now closed (figure 2-62).

n. Stowing the Static Line. After the pack tray is dressed, stow the static line as follows.

NOTE

Install three rubber retainer bands on the left and right static line retainer band keepers with a girth hitch.

(1) Rotate the pack tray a quarter-turn counterclockwise. Make the first static line stow on the right side of the pack, securing the stow with two turns of a rubber retainer band. Alternate stows from right to left, making three stows on the right and two stows on the left (figure 2-63).

(2) Fold remaining static line in half, and rotate it a quarter-turn counterclockwise. Pass the folded end through the static line slack retainer. After hooking the static line snap hook to the static line pack opening loop, pass the folded end under the stowed line. Pull the static line taut, and slip the folded end of the line under the lower end flap (A, figure 2-64).

NOTE

The following is an alternate method for completing the static line stow.

(3) After making the static line stows described in step (1), above, stow the running end of the static line as follows (B, figure 2-64):

(a) Double the remaining static line length and rotate the doubled length one-quarter turn counterclockwise.

(b) Connect the static line snap hook to either the static line pack opening loop or the pack left-side retainer band keeper.

(c) Pass the folded end of the static line through the static line slack retainer at the pack upper end, under the stowed line toward the pack lower end, and draw the doubled line taut.

(d) Insert the static line folded end under the pack lower end flap.

2-16. Packing the T-10B Parachute (CONT).

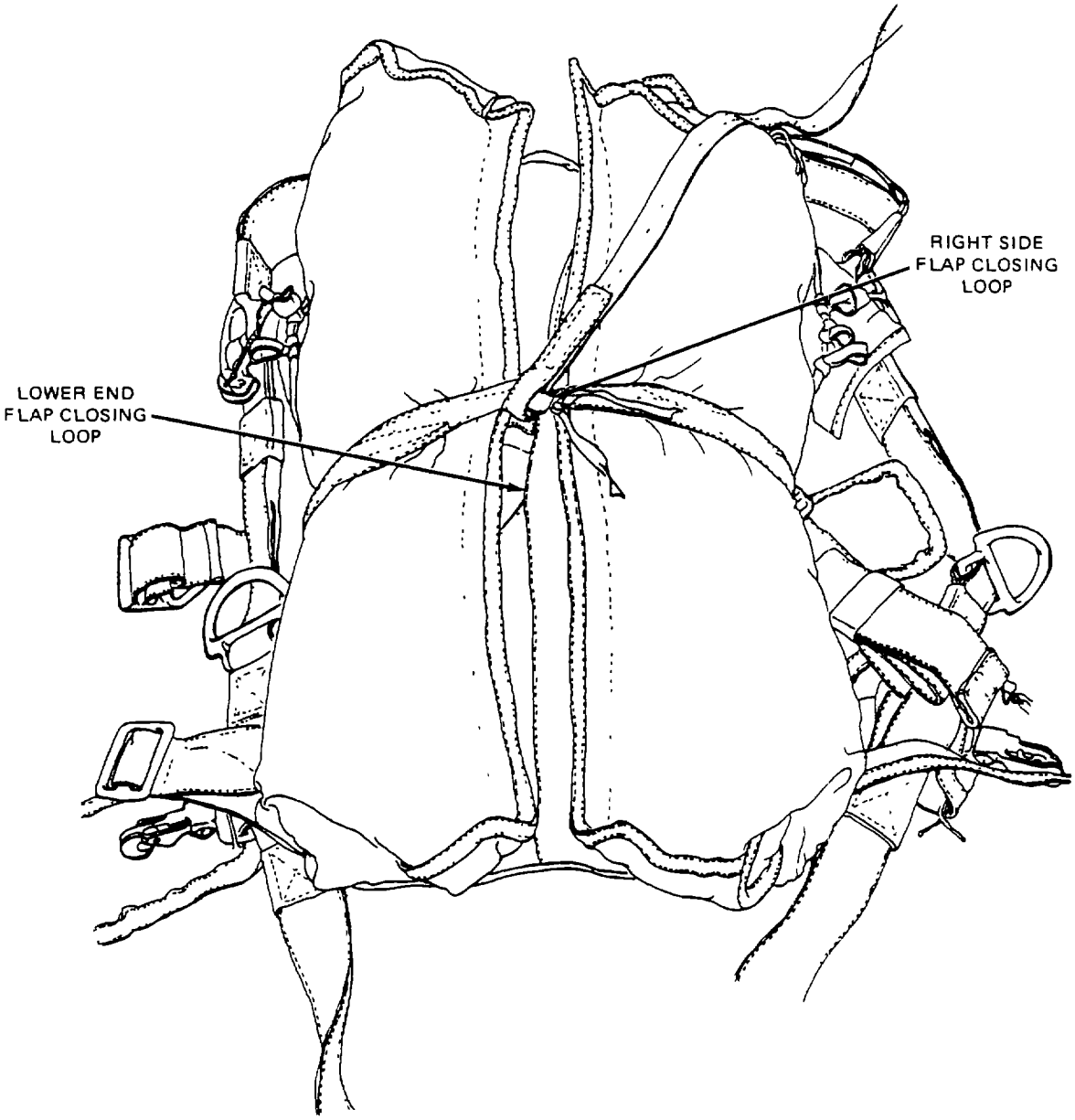


Figure 2-61. Tying Pack Closing Loops.

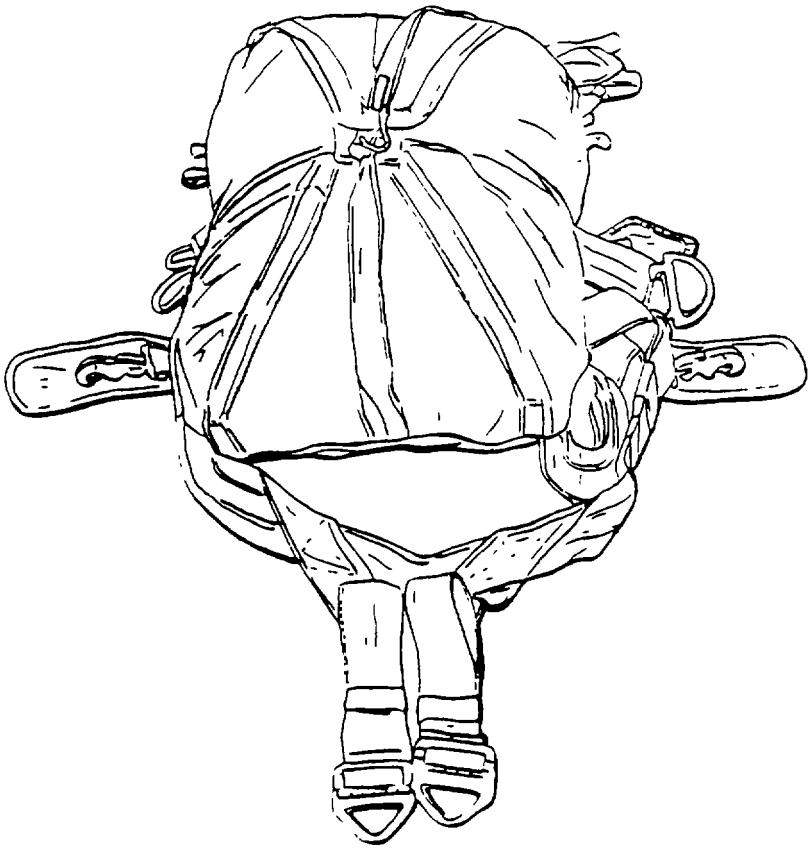


Figure 2-62. Pack Tray Dressed.

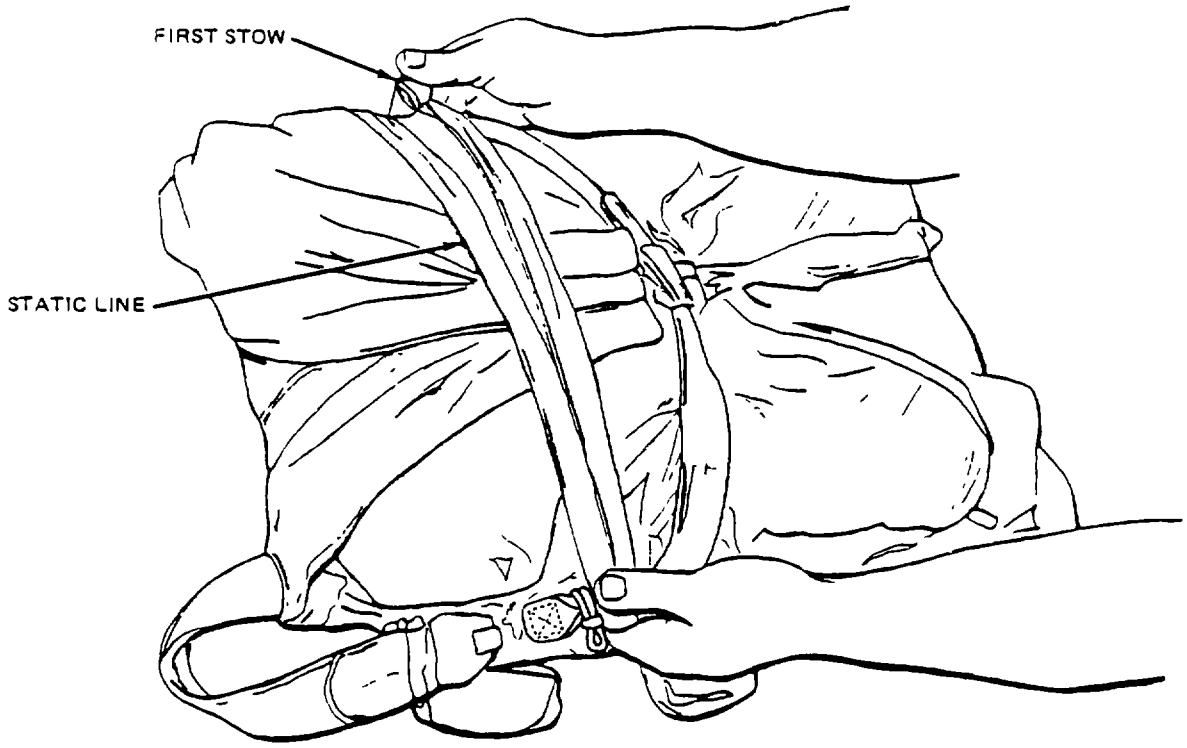
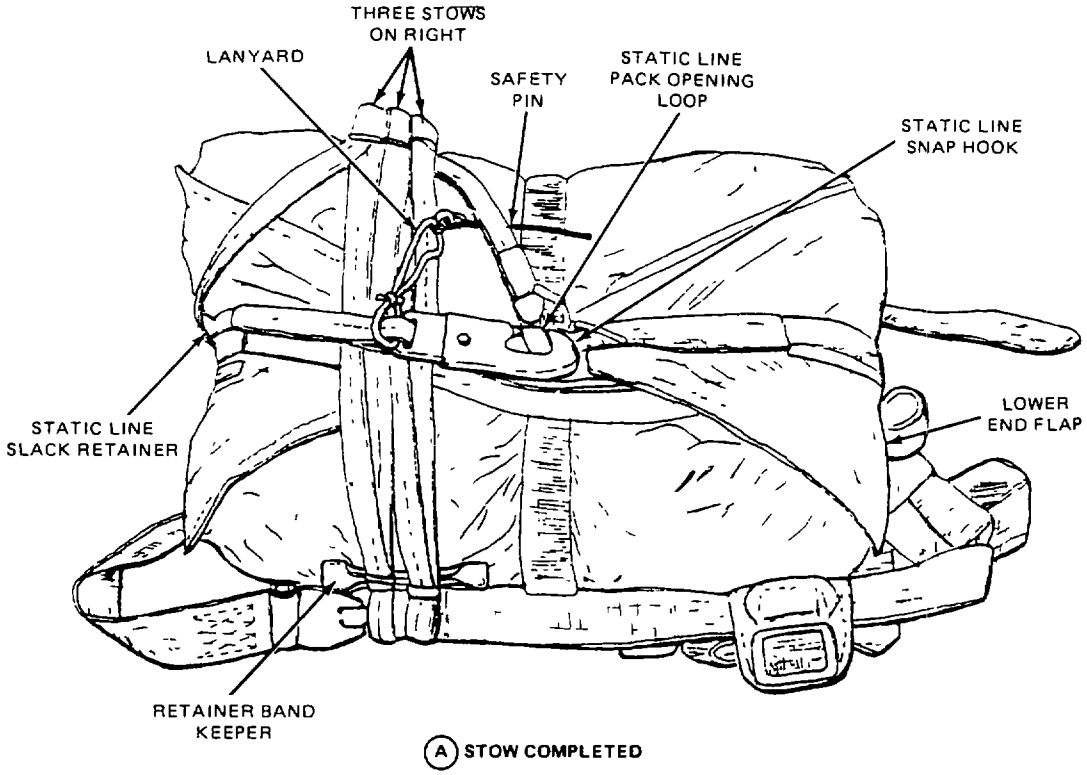
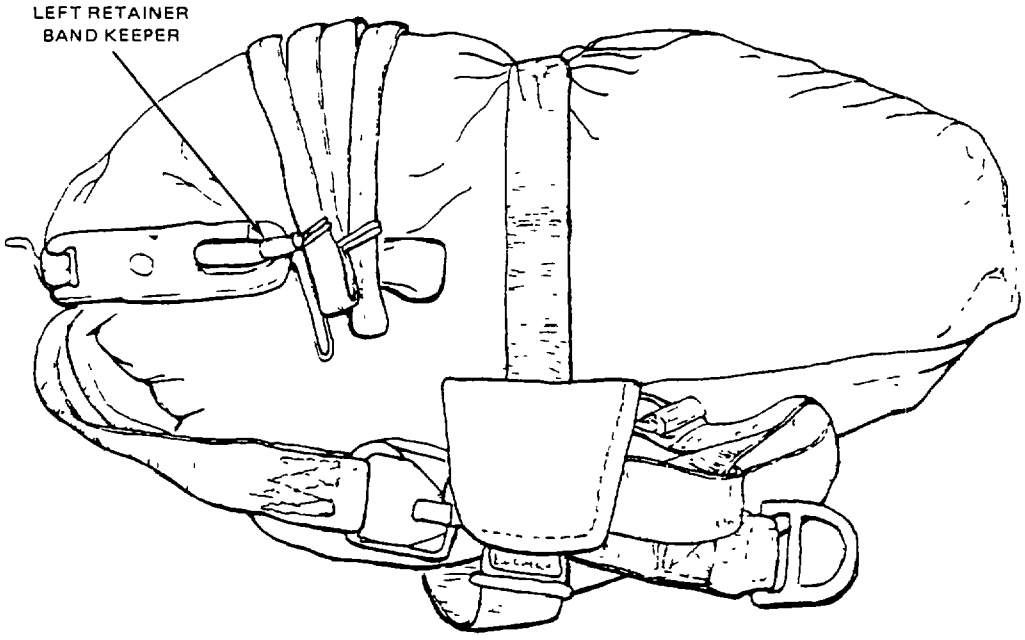


Figure 2-63. First Static Line Stow.

2-16. Packing the T-10B Parachute (CONT).



(A) STOW COMPLETED



(B) STOW COMPLETED (ALTERNATE METHOD)

Figure 2-64. Static Line completely Stowed.

o. Army Parachute Log Record. Beginning with the Initial packing of a parachute and each time a parachute is repacked, the log record must be completed, as follows:

(1) Remove the log record (DA Form 10-42 or DA Form 3912) from the parachute inspection data pocket (log record pocket) located on the riser.

(2) Make entries on the "Jump, Inspection and Repack Data" page as follows (figure 2-65).

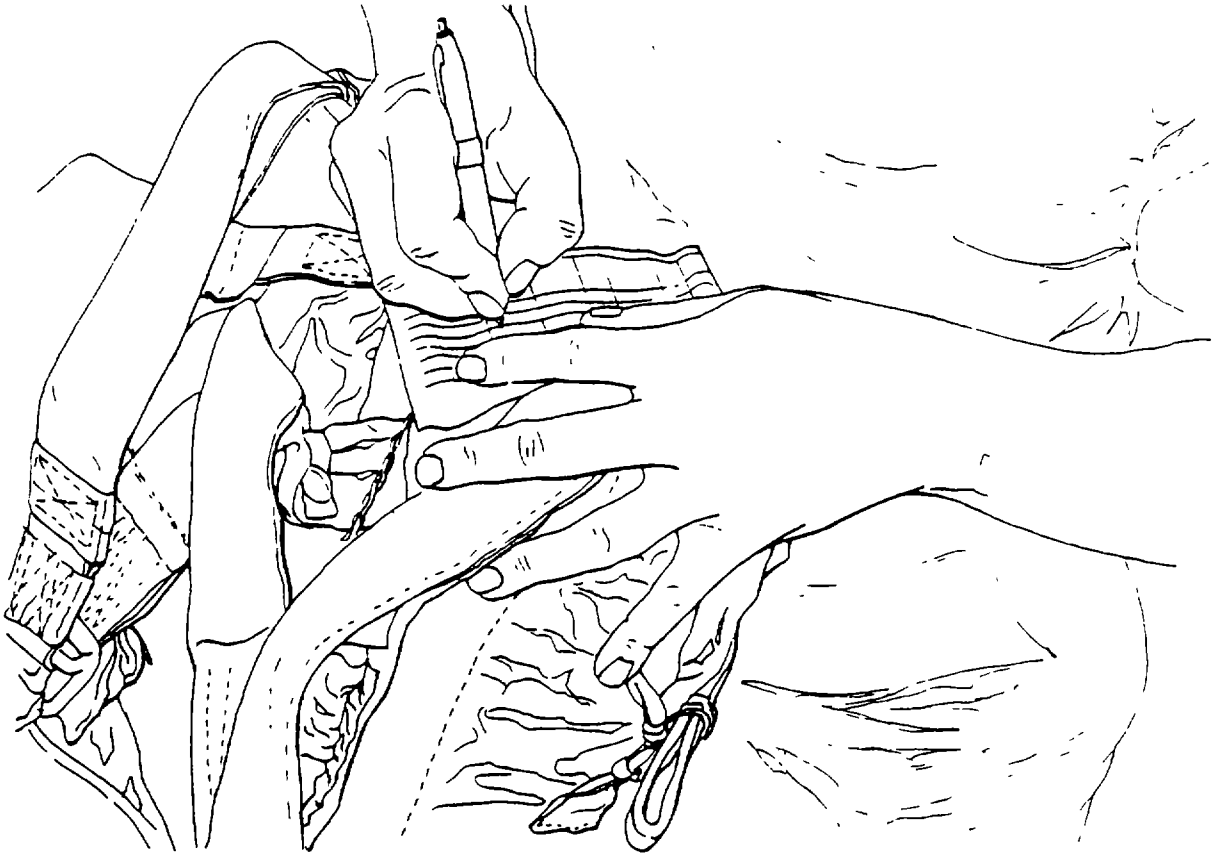


Figure 2-65. Signing Log Record.

(a) Date. Enter the day, month and year of each packing action.

(b) Bag number. Entry made in paragraph I., step (5), above.

(c) Routine inspection. No entry required.

(d) Jumps or dropped. No entry required.

(e) Repack. For Initial packing, enter "IN "; thereafter, enter a checkmark in the column each time the parachute is repacked.

(f) Packer's name. The packer performing the packing will sign this entry.

2-16. Packing the T-10B Parachute (CONT).

(g) Inspector's name. The inspector who has performed the pack-in-process inspection will sign this entry.

(h) Unit. Enter the unit designation to which the packer and/or inspector are assigned.

(3) Return the log record to the log record pocket upon completion of the entries Packing is now completed.

p. Static Line Extension. A 5-foot static line extension is required when jumping the CH-46 and CH-53 helicopters The static line extension will be attached and stowed as follows.

(1) Attach the 5-foot extension to a 15-foot static line by attaching the snap hook on the static line to the ring on the extension Insert and bend safety pin (figure 2-66).

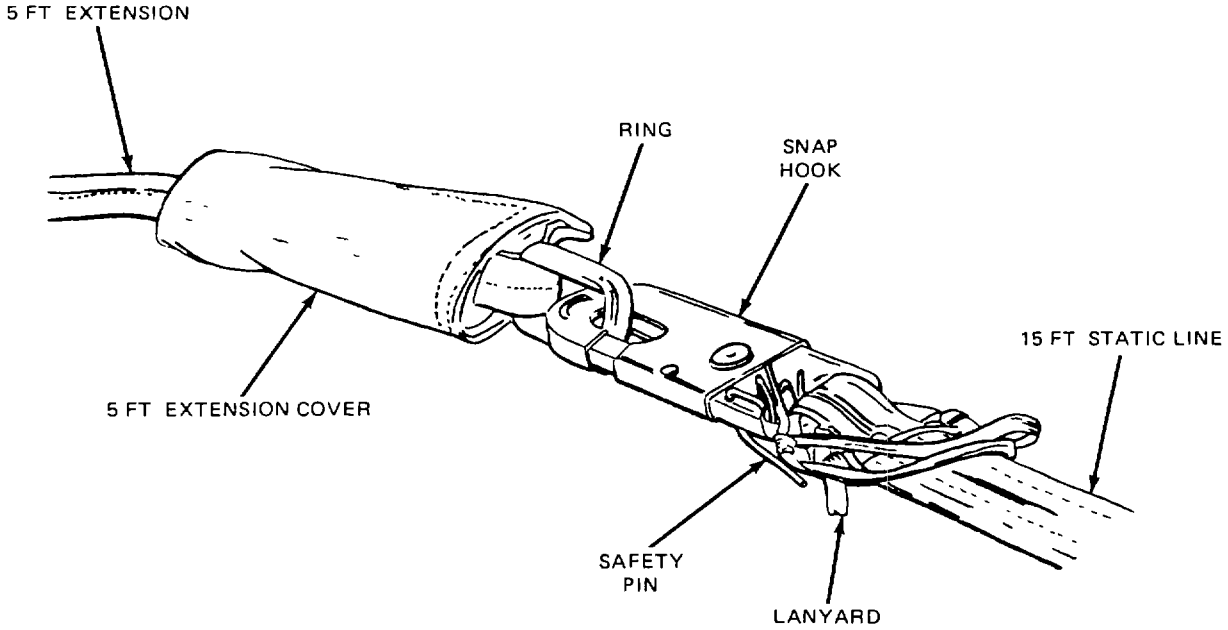


Figure 2-66. Attaching 5-Foot Static Line Extension.

(2) Slide the cover that is permanently attached to the 5-foot extension down over the snap hook of the 15-foot static line and tie and tape In place (figure 2-67).

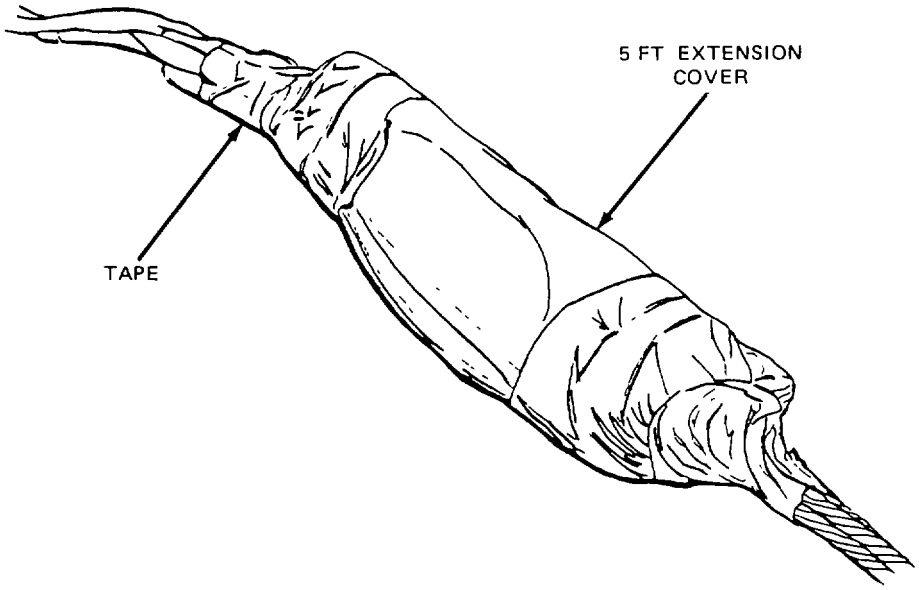


Figure 2-67. Taped Static Line Extension Cover.

2-16. Packing the T-10B Parachute (CONT).

(3) Stow the static line In accordance with paragraph n. steps (1) and (2), above, except make four stows on the right and three stows on the left (figure 2-68).

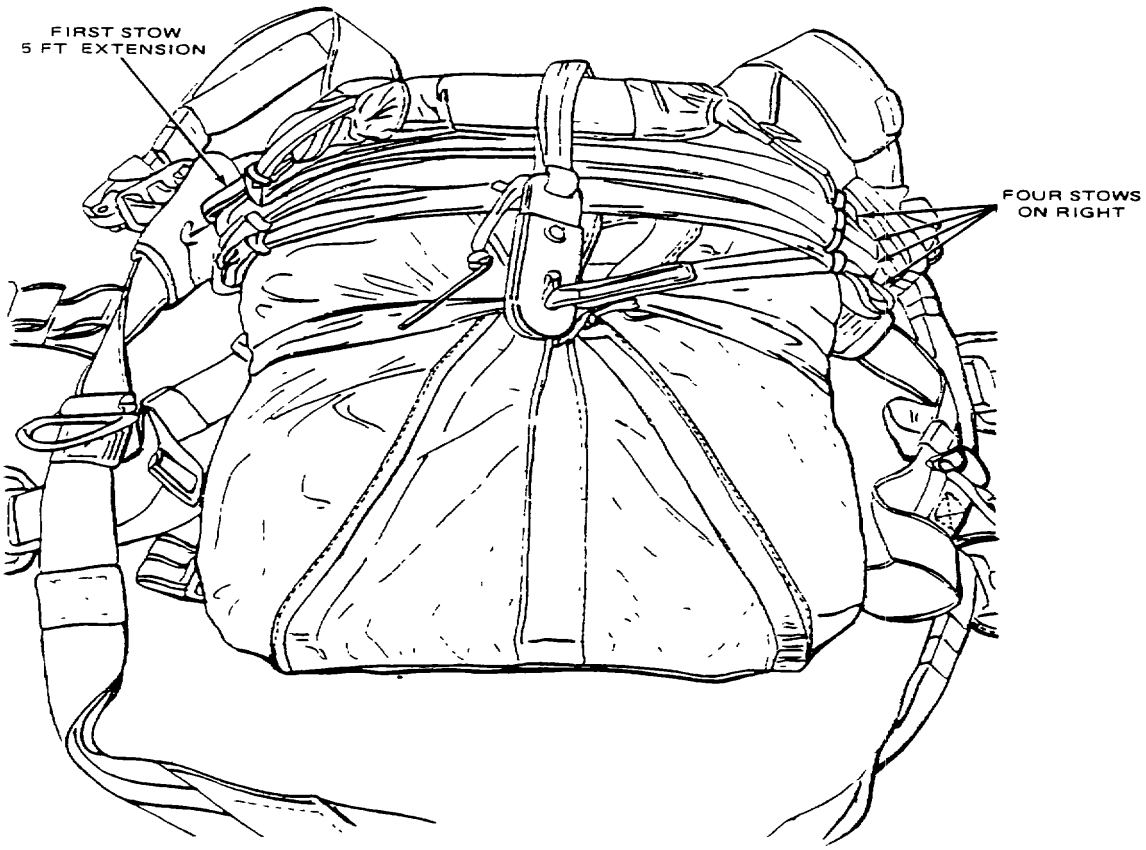


Figure 2-68. Stowing 5-Foot Extension Line.

q. Folding the Harness. For easier handling of the T-10B parachute after packing is completed, fold the harness as follows:

(1) Turn the pack over and place the kit bag on top of the pack tray and attach the chest strap quick-ejector snap to the adjusting V-ring (figure 2-69).

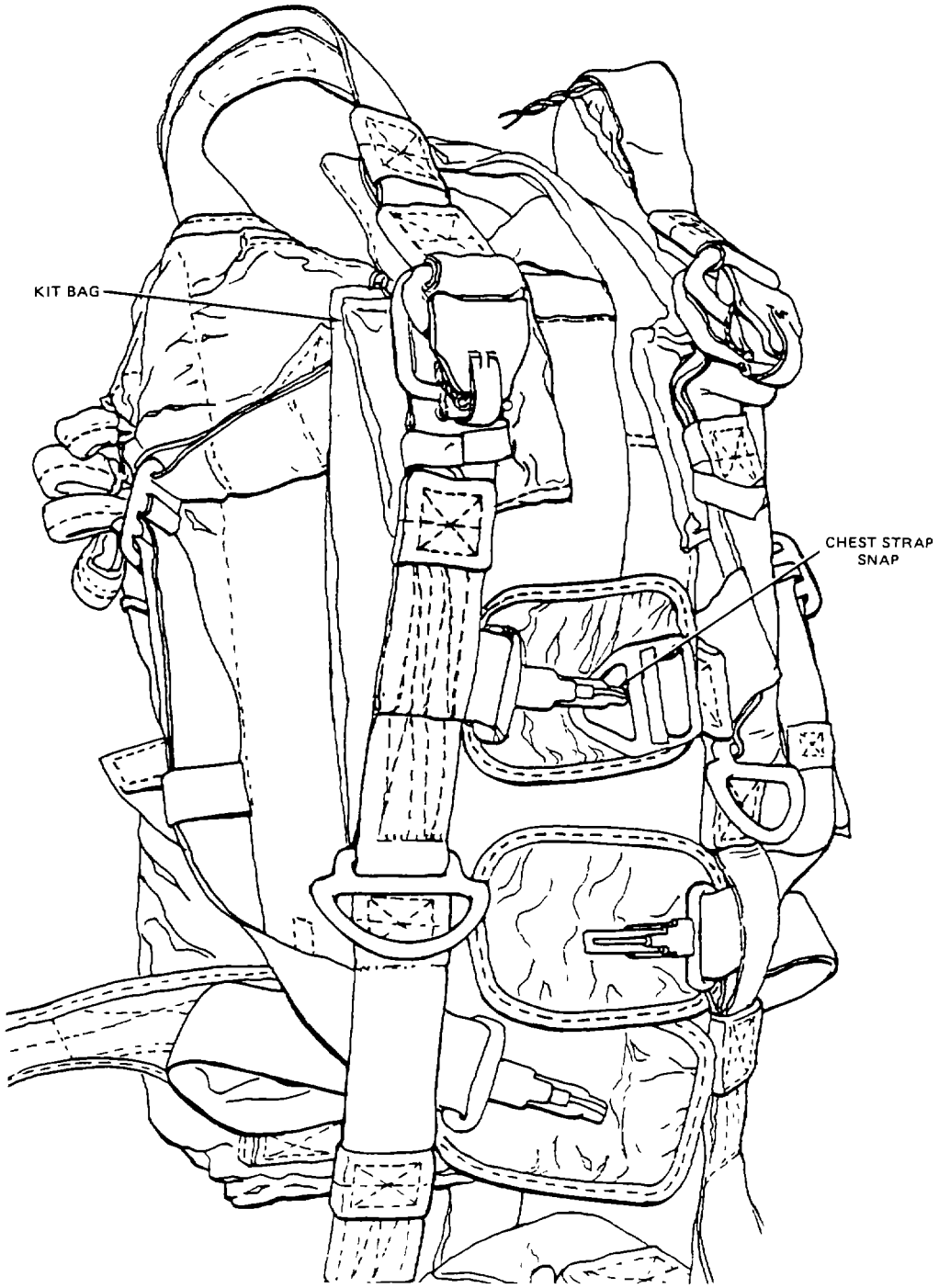


Figure 2-69. Attaching Chest Strap Snap.

2-16. Packing the T-10B Parachute (CONT).

(2) Pull leg strap through kit bag carrying handle, under diagonal backstraps, criss-crossing the leg straps, and attach the quick-ejector snap to the adjusting V-ring (figure 2-70).

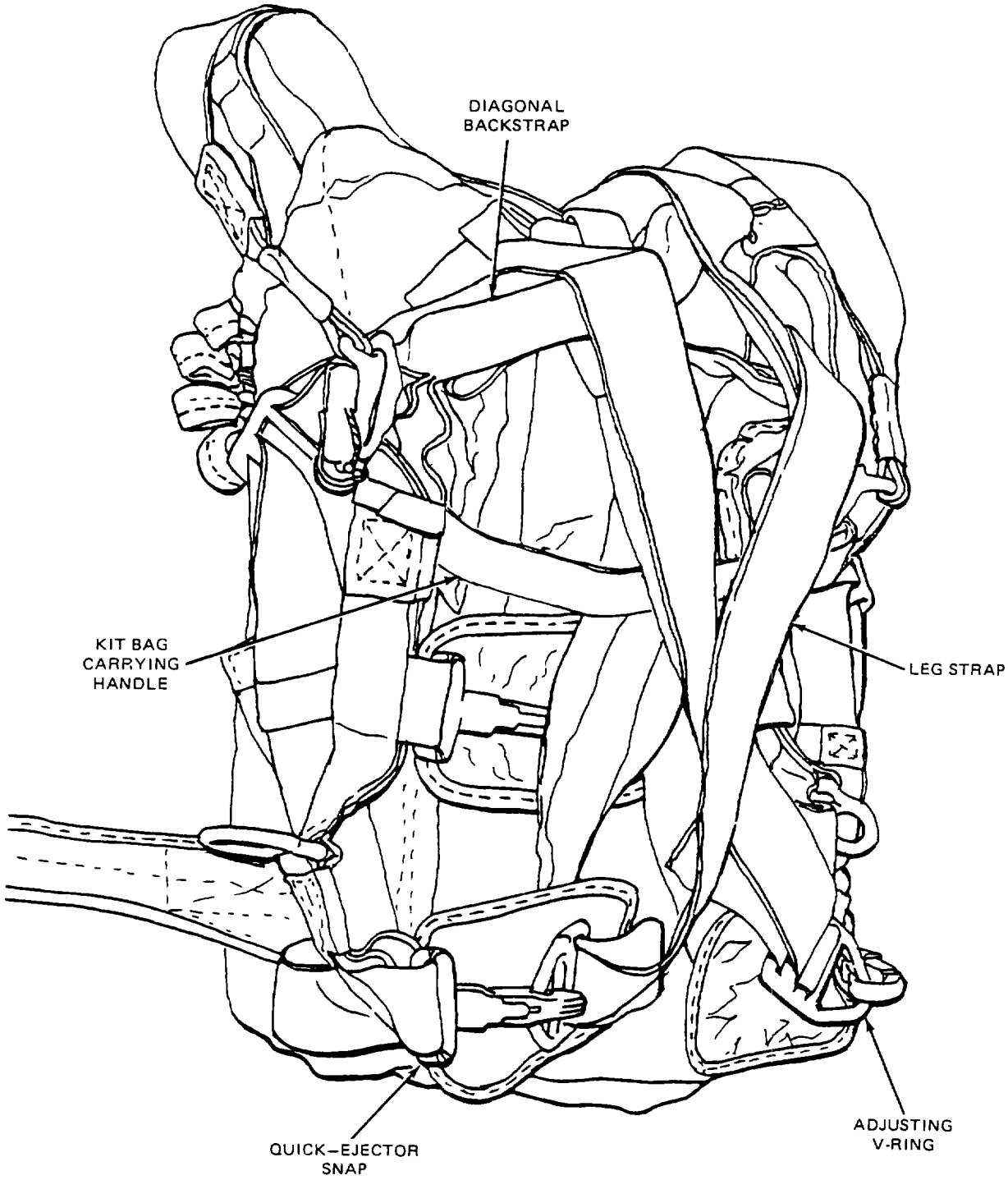


Figure 2-70. Attaching Quick-Ejector Snaps.

(3) Grasp the saddle and pull straight up. Take the waistband through the saddle and completely around the harness under the kit bag (pull tightly). Thread the waistband back through the saddle into the waistband adjuster, then back through the waistband adjuster, forming a quick-release (figure 2-71).

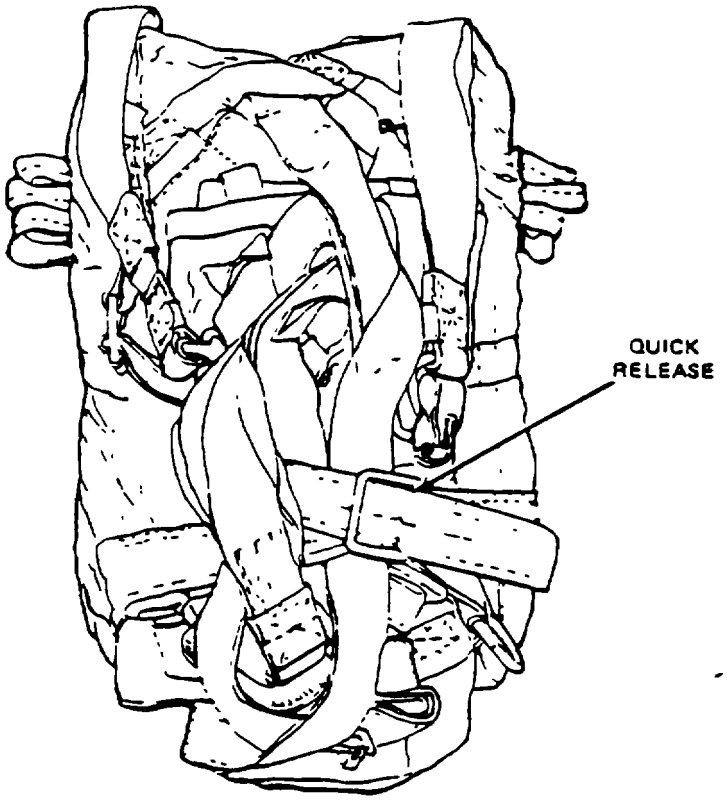


Figure 2-71. Forming a Quick-Release.

Section VI. REPAIR

NOTE

Repair and replacement of parachute components is performed In accordance with the general repair instructions In this section, and in specific paragraphs applicable to the item being repaired.

2-17. Repair Procedures.

This task covers:

a. Basting and Temporary Tacking
b. Stitching and Restitching
c. Darning
d. Zig-Zag Sewing
e. Patching

Tools.

Specified in paragraph applicable to the item being repaired.

Materials/Parts:

Specified in paragraph applicable to the item being repaired.

Personnel Required'

43E(10) Parachute Rigger

Equipment Condition

Unpacked Canopy with defects recorded and clean.

NOTE

Sewing requirements will vary according to the type of item being repaired and the type of repair being made. The type of sewing machine, type of thread, the stitch range, and the stitch pattern, if applicable, required to accomplish a sewing procedure will be specified In the paragraph applicable to the item being repaired. All original stitching that is cut during the performance of a sewing procedure will be removed from the applicable item. Immediately after the accomplishment of a machine sewing procedure, trim thread ends to a point as close as possible to the material which has been sewn.

a. Basting and Temporary Tacking. Basting and temporary tacking are hand-sewing methods used to temporarily hold layers of cloth fabric together while a repair is being performed. The following is a list of procedures which apply to basting and temporary tacking actions:

(1) Basting and temporary tacking should be made using thread which is of a contrasting color to the material being worked.

(2) Basting/temporary tacking will be performed using a single strand of size A nylon thread or ticket No. 2414 cotton thread.

(3) When basting, do not tie knots at any point In the thread length. Also, the sewing should be made with two stitches per inch.

(4) Immediately upon completion of a repair, remove a previously made basting or temporary tacking.

2-17. Repair Procedures (CONT).

b. *Stitching and Restitching.* Perform stitching and restitching as follows, referring to tables 2-2 and 2-3:

(1) *Parachute canopy assemblies.* The stitching and restitching made on parachute canopies should be accomplished with thread that is contrasting in color to the fabric being restitched. If contrasting color thread is not available, thread of matching color may be used, providing all other specifications are met. Straight stitching and restitching on parachute canopy assemblies should be locked by at least 2 inches at each end of a stitch row, when possible. Zig-zag stitching does not require locking; however, zig-zag restitching should extend at least 1/4 inch into undamaged stitching at each end, when possible. When restitching parachute canopy assemblies, stitch directly over the original stitching and follow the original stitch pattern as closely as possible.

Table 2-2 Sewing Machine Code Symbols.

Code symbol	Sewing machine
LD	SEWING MACHINE, INDUSTRIAL: General sewing; 301 stitch; light duty, NSN 3530-01-177-8590.
MD ZZ	SEWING MACHINE, INDUSTRIAL: Zig-zag; 308 stitch, medium duty; NSN 3530-01-181-1421.
LD ZZ	SEWING MACHINE, INDUSTRIAL: Zig-zag; 308 stitch; light duty, NSN 3530-01-181-1420.
HD	SEWING MACHINE, INDUSTRIAL: General sewing, 301 stitch; heavy duty, NSN 3530-01-177-8588.
MD	SEWING MACHINE, INDUSTRIAL General sewing; 301 stitch; medium duty, NSN 3530-01-177-8591.
DN	SEWING MACHINE, INDUSTRIAL. Darning; lock stitch; NSN 3530-01-177-8589.
LHD	SEWING MACHINE, INDUSTRIAL 301 stitch; light heavy duty; NSN 3530-01-186-3079.
ND	SEWING MACHINE, INDUSTRIAL: 301 stitch, double-needle; NSN 3530-01-182-2873.

Table 2-3. Stitching and Restitching Specifications

Component	Recommended sewing machine (code symbol)	Stitches per inch	Thread size
Bridle Loop	LHD	5 to 8	6
Gore Section	LD	7 to 11	E
DN	Darn	A or E	
	LD ZZ		E
Pocket Band	LD	7 to 11	E
Suspension Line	MD ZZ	7 to 11	E
V-Tab	LD	7 to 11	E
	LD ZZ		E
Apex Line	MD ZZ		E
Upper Lateral Band	MD ZZ		E
Lower Lateral Band	LD ZZ		E
Radial Seam	LD	7 to 11	E
Radial Tape	LD ZZ	7 to 11	E
Riser Assembly	LHD	5 to 8	6
Log Record Pocket	LD	7 to 11	E
Harness Assembly			
Elastic Slack Retainer Webbing	LD	7 to 11	E
Canopy Release Pad	MD	7 to 11	E
Ejector Snap Pad	MD	7 to 11	E
Horizontal/Diagonal Backstrap	LHD	5 to 8	6
Pack Tray	DN	Darn	E or A
	LD	7 to 11	E
Backstrap Keeper	LHD	5 to 8	3
Backstrap Retainer	LHD	5 to 8	3
Pack Closing Loop	LD	7 to 11	E

2-17. Repair Procedures (CONT).

Table 2-3 Stitching and Restitching Specifications (CONT).

Component	Recommended sewing machine (code symbol)	Stitches per inch	Thread size
Retainer Band Keeper	LD	7 to 11	E
Static Line Slack Retainer	LD ZZ		E
Waistband	LHD	5 to 8	3
Waistband Adjuster Panel	LHD	5 to 8	3
LD	7 to 11		E
Waistband Extension	MD	7 to 11	E
Deployment Bag	DN	Darn	E or A
Stow Loops	LHD	5 to 8	3
Edge Reinforcement Webbing	LD	7 to 11	E
Locking Stow Loop Hood	LD	7 to 11	E
Suspension Line Protector	LD	7 to 11	E
Cover Tie-down Loop			
Static Line	LHD	5 to 8	6

(2) *Other parachute items.* Stitching and restitching on the other parachute items constructed from cloth, canvas, and webbing should be accomplished with thread which matches the color of the original stitching, when possible. All straight stitching should be locked by backstitching at least 1/2 inch. Restitching should be locked by overstitching each end of the stitch formation by 1/2 inch. Zig-zag stitching does not require locking; however, zig-zag restitching should extend at least 1/4 inch into undamaged stitching at each end, when possible. Restitching should be made directly over the original stitching, following the original stitch pattern as closely as possible.

c. Darning. (Refer to Tables 2-2 and 2-3). Darning is a sewing procedure used to repair limited size holes, rips, and tears. A darning repair may be made either by hand or sewing machine, depending upon the method preferred and the availability of equipment. However, a darning machine should be used to darn small holes and tears where fabric Is missing. A darning repair will be performed using the following procedures, as appropriate:

(1) *Machine darning.* Proceed as follows:

(a) Using an authorized marking aid of contrasting color, mark a square around the damaged area and insure that the marking Is at least 1/4 inch back from each edge of the damaged area.

(b) Darn the damaged area by sewing the material in a back and forth manner, using size A or E nylon thread.

(c) Turn the material and stitch back and forth across the stitching made in (b) above until the hole or tear is completely darned (figure 2-72).

(d) If applicable, restencil Informational data, gore number(s), or identification marks using the criteria In paragraph 2-19.

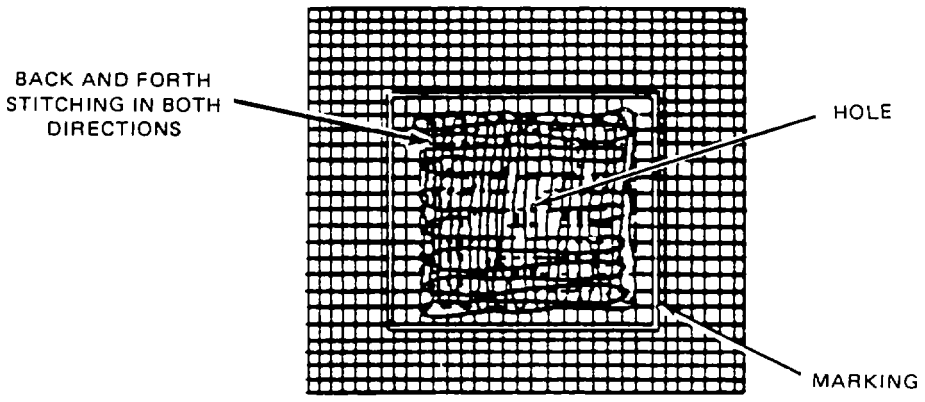


Figure 2-72. Darning Method Using a Darning Sewing Machine.

(2) *Hand darning.* When repair of a hole or tear is made by hand darning, the darn should match the original weave of the damaged material as closely as possible. Hand darning will be performed as follows:

(a) Using an authorized marking aid of contrasting color, mark a square around the damaged area and insure that the marking is at least 1/4 Inch back from each edge of the damaged area.

2-17. Repair Procedures (CONT).

(b) Using a darning needle and a length of size A or E nylon thread, begin darning at one corner of the marked area. Working parallel with the marking, pass the needle and thread back and forth through the material until the opposite diagonal corner of the marked area is reached (A, figure 2-73).

(c) Turn the material and weave the needle and thread back and forth across the stitching made in (b) above until the hole is completely darned (B, figure 2-73).

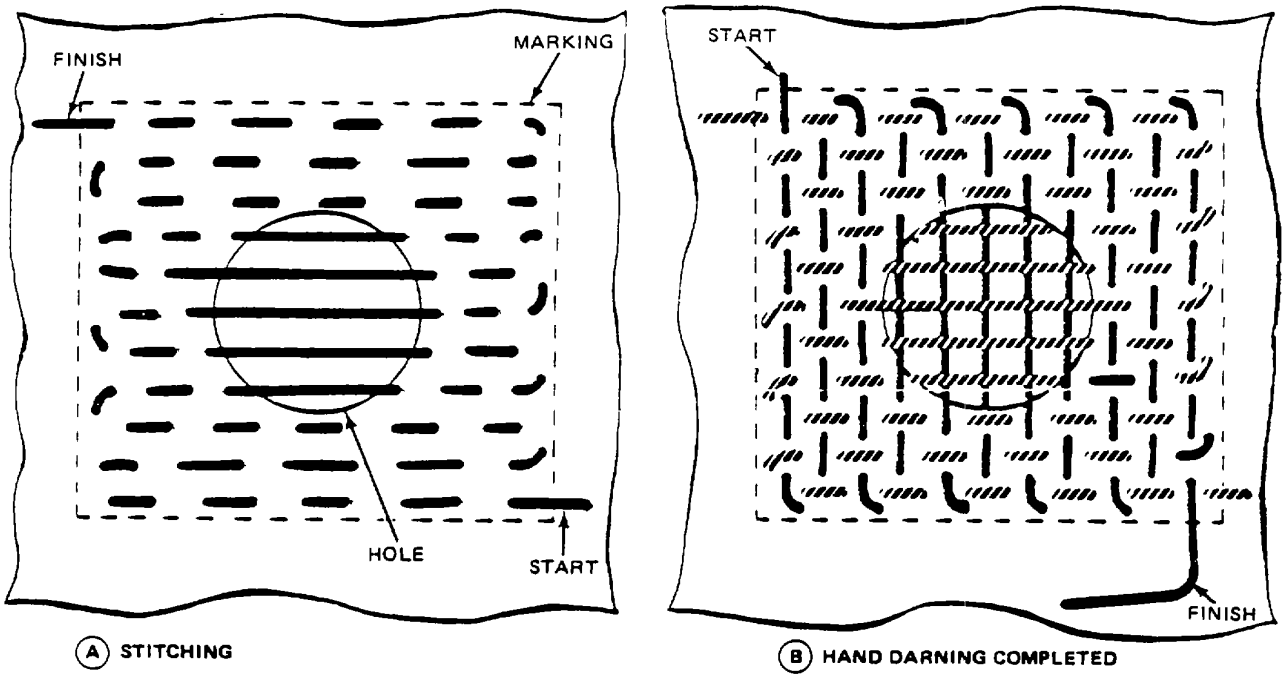


Figure 2-73. Hand Darning Method.

(d) If applicable, restencil informational data or identification marks as outlined in paragraph 2-19

d. Zig-zag Sewing. (Refer to Tables 2-2 and 2-3). Components of the T-10B, except parachute canopy, that have sustained cut or tear damage may be repaired by zig-zag sewing provided the applicable damaged area does not have any material missing and the cut or tear is straight or L-shaped. Should the damaged area be irregular shaped or have material missing, the repair will be achieved by either darning or patching, as required. A zig-zag sewing repair will be accomplished using a zig-zag sewing machine, with the following procedures:

(1) Set the sewing machine to the maximum stitch width.

(2) Beginning at a point 1/4 inch beyond one end of the cut or tear, stitch lengthwise along the damaged area to a point 1/4 inch beyond the opposite end of the cut or tear (A, figure 2-74). The cited stitching procedure will also apply to an L-shaped cut or tear (B, figure 2-74).

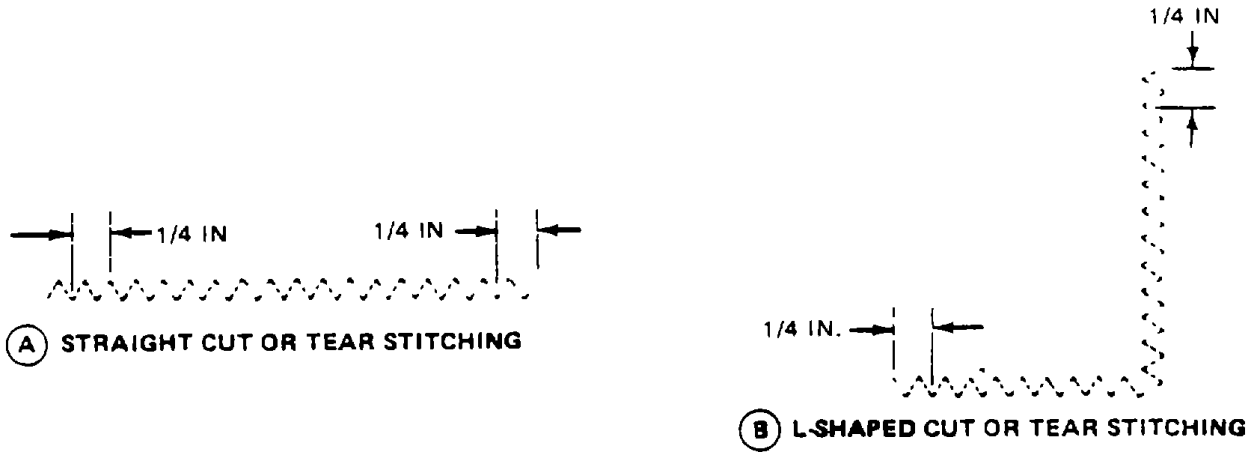


Figure 2-74. Repair Method Using a Zig-Zag Sewing Machine.

(3) If applicable, restencil informational data or identification marks as prescribed in paragraph 2-19.

e. Patching. Patching is a procedure used to repair holes which cannot be darned.

(1) *Parachute canopy patching limitations*. The following is a list of patching limitations for the T-10B parachute assembly.

WARNING

The limitations prescribed for parachute canopy patching will be stringently adhered to under all circumstances and without any deviations.

(a) A patch will not be applied to a damaged area that has been previously patched.

(b) There is no limitation to the number of patches or size of patch to each canopy gore section or gore panel. However, determination should be made as to the most economical method to be used, i.e., two or more patches versus one large patch or one large patch versus a section replacement. A patch applied to a parachute canopy may extend from radial seam to radial seam.

(c) Use no more than two mending cloth patches on a canopy section. Limit the size of the finished patch to 10 inches. Round the corners of the patches to 1-inch radius. Use size E nylon thread and sew a row of 7 to 11 stitches per inch 1/16-inch in from outer edge of patch Table 2-4 prescribes sizes of parachute mending cloth.

2-17. Repair Procedures (CONT).

Table 2-4. Mending Cloth Patching Specifications.

Damaged area size	Patch minimum size
1 inch to 1 1/2 inches	2 inches
1 1/2 inches to 2 inches	3 1/2 inches
2 inches to 3 inches	4 1/2 inches
3 inches to 5 Inches	9 inches
5 inches to 7 inches	*10 inches

*Maximum size for canopy patch is 10 inches.

NOTE

The patch may be placed on top of the net when stitching the patch to the lower lateral band.

(2) *Making a basic patch*. A basic patch is used to repair damaged cloth when the affected area is no closer than 1 Inch from a radial seam or lower lateral band. Should a damaged area be closer than 1 inch to the cited areas, a miscellaneous patch will be made as detailed in paragraph (3). There are three methods which may be used to apply a basic patch and the procedures for performing each method are outlined in paragraphs (a) and (b) as follows:

NOTE

A basic patch applied to the parachute canopy by sewing will be square or rectangular in shape. A parachute canopy basic patch constructed from adhesive nylon parachute mending cloth may be shaped, rectangular or triangular as required.

(a) *The sewn patch.* The primary method of applying a basic patch is by sewing. When using this method of patching on a parachute canopy, the patch will be applied to the inside of the canopy. The deployment bag may be patched on either the inside or the outside (The sewn patch is shown in figure 2-75.) Apply a sewn patch as follows:

1 Place the reparable item on a repair table, smooth the fabric around the damaged area, and secure the item to the table with pushpins. Do not pin the damaged area.

2 Using an authorized marking aid of contrasting color, mark a square or rectangle around the area to be patched.

3 Cut the damaged area fabric along the lines made in 2 above. Further cut the fabric diagonally at each corner to allow a 112 inch foldback in the raw edges.

4 Make a 1/2-inch foldback on each raw edge. Pin and baste each foldback to complete the prepared hole. Basting will be performed using the procedures in paragraph 2-17a.

5 Using the same type material as In original construction, mark and cut a patch 2 1/2-inches wider and longer than the inside measurements of the prepared hole.

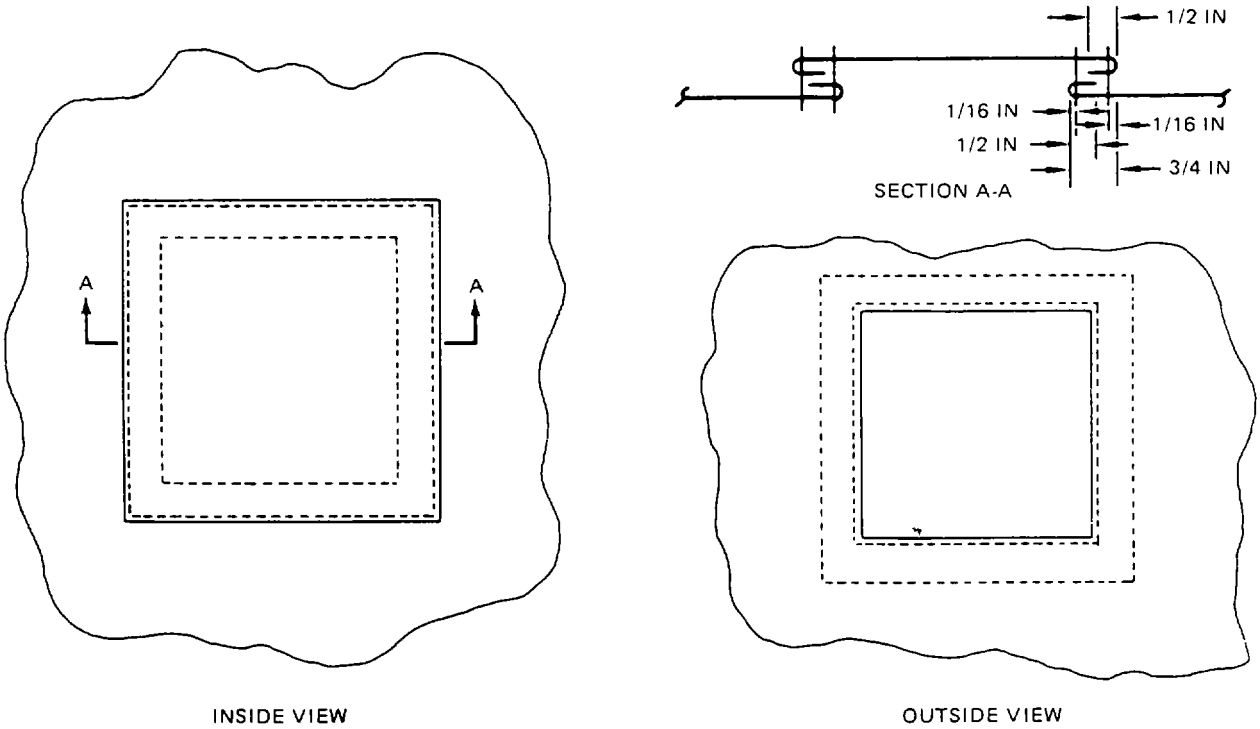


Figure 2-75. Basic Patch Application.

6 Center the patch material over the prepared hole. Pin the patch material in position.

7 Make a 1/2-inch foldunder on each edge of the patch material and baste the patch to the prepared area. Basting will be performed using the procedures in paragraph 2-17a.

8 Remove the pushpins securing the canopy to the repair table and secure the patch by stitching, using the applicable details in figure 2-78 and paragraph 2-17b. Make the first row of stitching completely around the patch. Turn the canopy over and make a second row of stitching around the prepared hole Stitching will be performed in accordance with paragraph 2-17b.

9 If applicable, restencil informational data or gore number according to procedures in paragraph 2-19.

2-17. Repair Procedures (CONT).

(b) *The parachute mending cloth patch.* A second method of applying a basic patch is by use of 36-inch-wide adhesive nylon parachute mending cloth. Patching limitations as outlined in paragraph (1), above, shall be adhered to. Apply a parachute mending cloth patch as follows (figure 2-77):

NOTE

Age life for the nylon parachute mending cloth, prior to application, is three years from the date of adhesive coating which is marked on each roll of mending cloth. Use no more than two mending cloth patches on a canopy section.

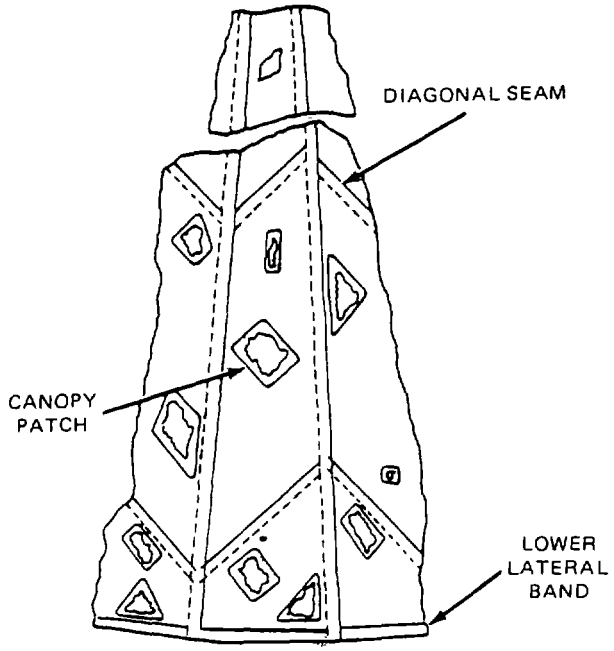


Figure 2-76. Basic patching details using parachute mending cloth.

1 Lay out the canopy with the damaged area exposed.

2 To facilitate the application of the mending cloth patch, place a 1/2- by 20- by 20-inch smooth wooden board or similar smooth, hard-finished, rigid material, except paper board, under the damaged area.

3 Trim the ragged, frayed, or severely burned areas of the canopy cloth to provide a smooth area for patch application.

4 Using an authorized marking aid of contrasting color, mark a square, triangle or rectangle, as applicable, around the damaged area.

5 Measure and cut lengths of the mending cloth to achieve the shape and size of the intended patch. Cut the patch to provide an overlap of the damaged area using the specifics in table 2-4. Round off patch corners. Patches will be prepared in duplicate to allow for application on the inside and outside of the canopy.

6 Remove the paper backing from the adhesive side of the mending cloth by forming a crease, scoring the paper with a fingernail, and peeling the paper from the adhesive coating Insure the mending cloth is not damaged when scoring the paper backing.

7 Smooth the canopy material adjacent to the damaged area on the canopy outside and place the formed mending cloth patch over the damaged area.

8 Using the edge of a packing paddle or a roller, apply pressure to smooth the patch on.

9 Apply the duplicate-shaped patch to the damaged area on the canopy inside using the procedures in 6 and 7 above. Stitch 1/16 inch in from outer edge of patch using details of tables 2-2 and 2-3.

2-17. Repair Procedures (CONT).

(3) *Applying a miscellaneous canopy patch.* A miscellaneous canopy patch, which may be irregularly shaped, is used to repair damaged canopy material when the location of the damaged area requires the patch to extend into or over a seam, reinforcement, or lateral band. Ascertain the type of patch required for the canopy, using the details In figure 2-77. A canopy gore section that cannot be patched with a basic patch as outlined in paragraph (2), above, will be patched with a miscellaneous patch. Apply a miscellaneous patch to a gore section as follows:

NOTE

Adhesive nylon parachute mending cloth will not be used in the construction or application of a miscellaneous canopy patch.

(a) Place the canopy inside out on a repair table, smooth the fabric around the damaged area, and secure the damaged gore section to the table with pushpins. Do not pin the damaged area of the gore section.

(b) As required, cut the applicable stitching to remove or lay aside items which may interfere with the patching process.

(c) Using an authorized marking aid of contrasting color, mark a rectangle or triangle around the damaged area. Make the mark 1/2 inch from any adjacent seam, reinforcement, or lateral band.

(d) Prepare the damaged area hole by cutting along the marks made in (c), above. Also make a diagonal cut at each corner of the formed hole to permit a foldback of each raw edge.

(e) To complete hole preparation, make a 1/2-inch foldback of each raw edge. Pin and baste each edge foldback using the procedures in paragraph 2-17a.

(f) Using the same type material as In original canopy construction, mark and cut a patch 2 1/2-inches wider and longer than the inside measurements of the prepared hole.

(g) Center the patch material over the prepared hole. Pin the patch material in position.

(h) Make a 1/2-inch foldunder on each edge of the patch material and baste the patch to the prepared area. Basting will be performed using the procedures in paragraph 2-17a.

(i) Remove the pushpins securing the canopy to the repair table and secure the patch by stitching according to the details in figure 2-80, using the stitching specifics outlined in tables 2-2 and 2-3. Make the first row of stitching completely around the edges of the patch. Turn the canopy right side out and make a second row of stitching around the edges of the prepared hole. Stitching will be performed In accordance with paragraph 2-17b.

(j) Reposition the canopy items removed or laid aside in (b), above, in the original location and secure each item to the canopy by restitching according to original construction details and paragraph 2-17b.

(k) If applicable, restencil informational data or gore numbers according to procedures in paragraph 2-19.

2-17. Repair Procedures (CONT).

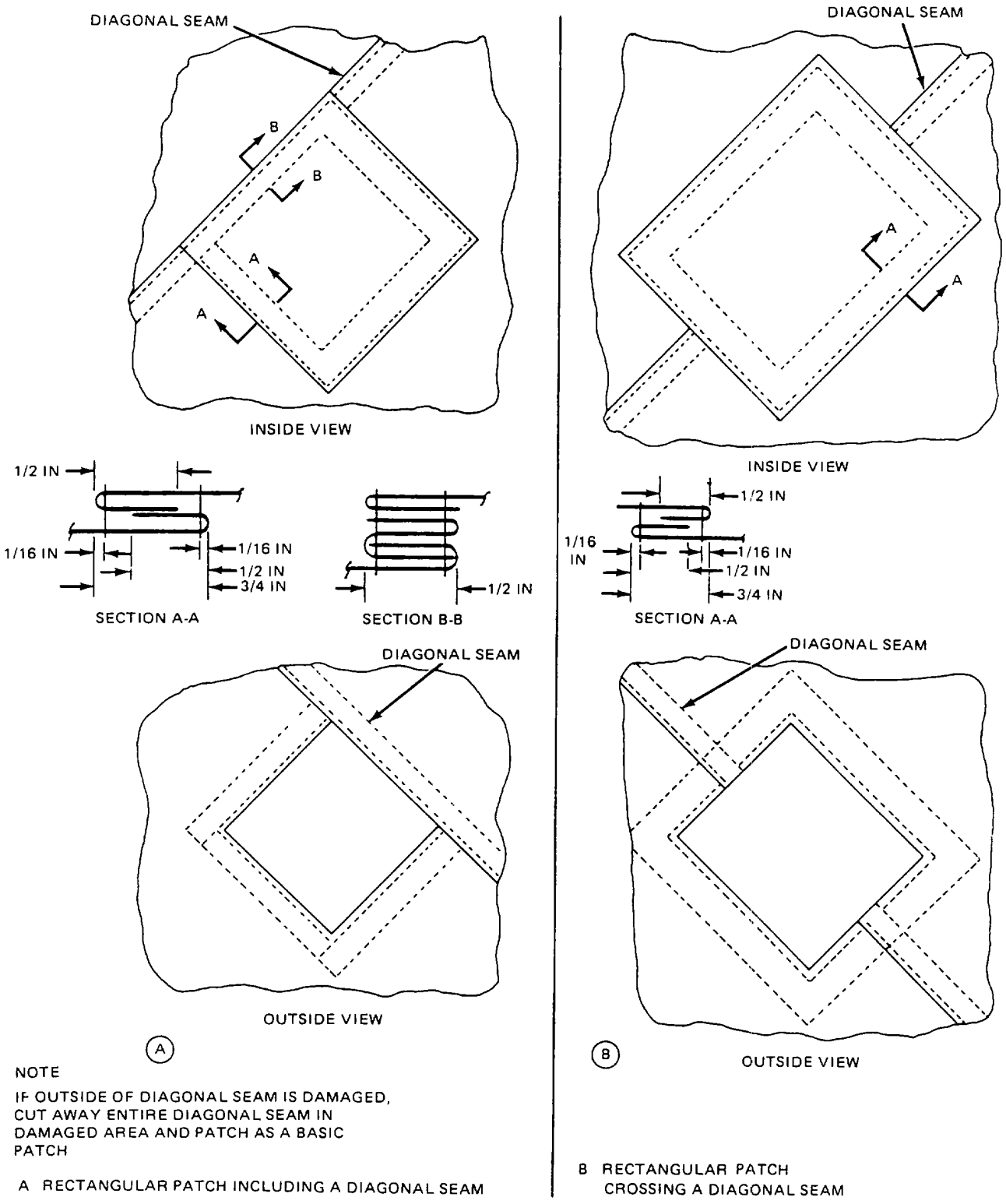
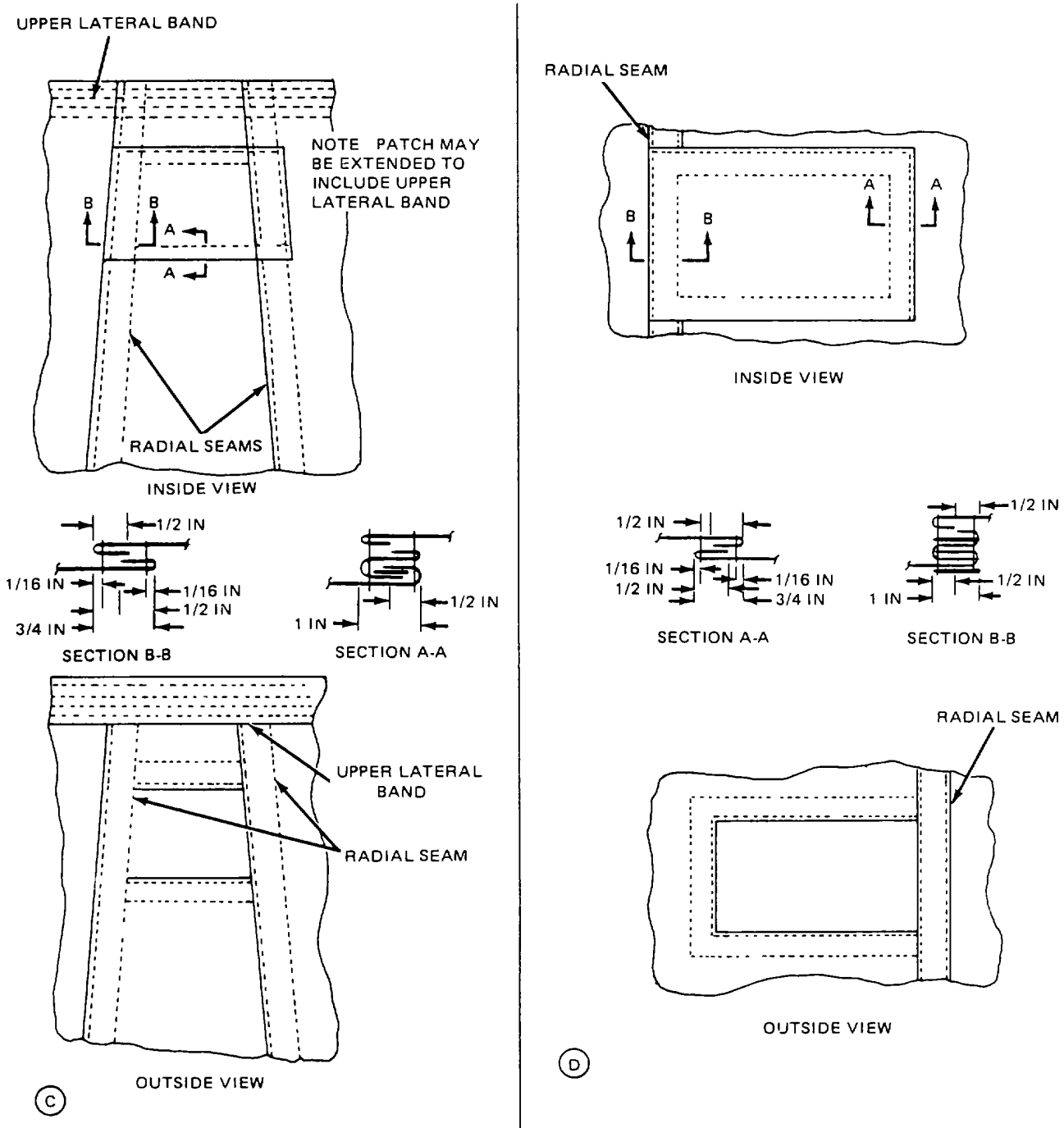


Figure 2-77. Common Miscellaneous Canopy Patches (Sheet 1 of 6).



C IRREGULAR SHAPE PATCH INCLUDING TWO RADIAL SEAMS

D RECTANGULAR PATCH INCLUDING RADIAL SEAM

Figure 2-77. Common Miscellaneous Canopy Patches (Sheet 2 of 6).

2-17. Repair Procedures (CONT).

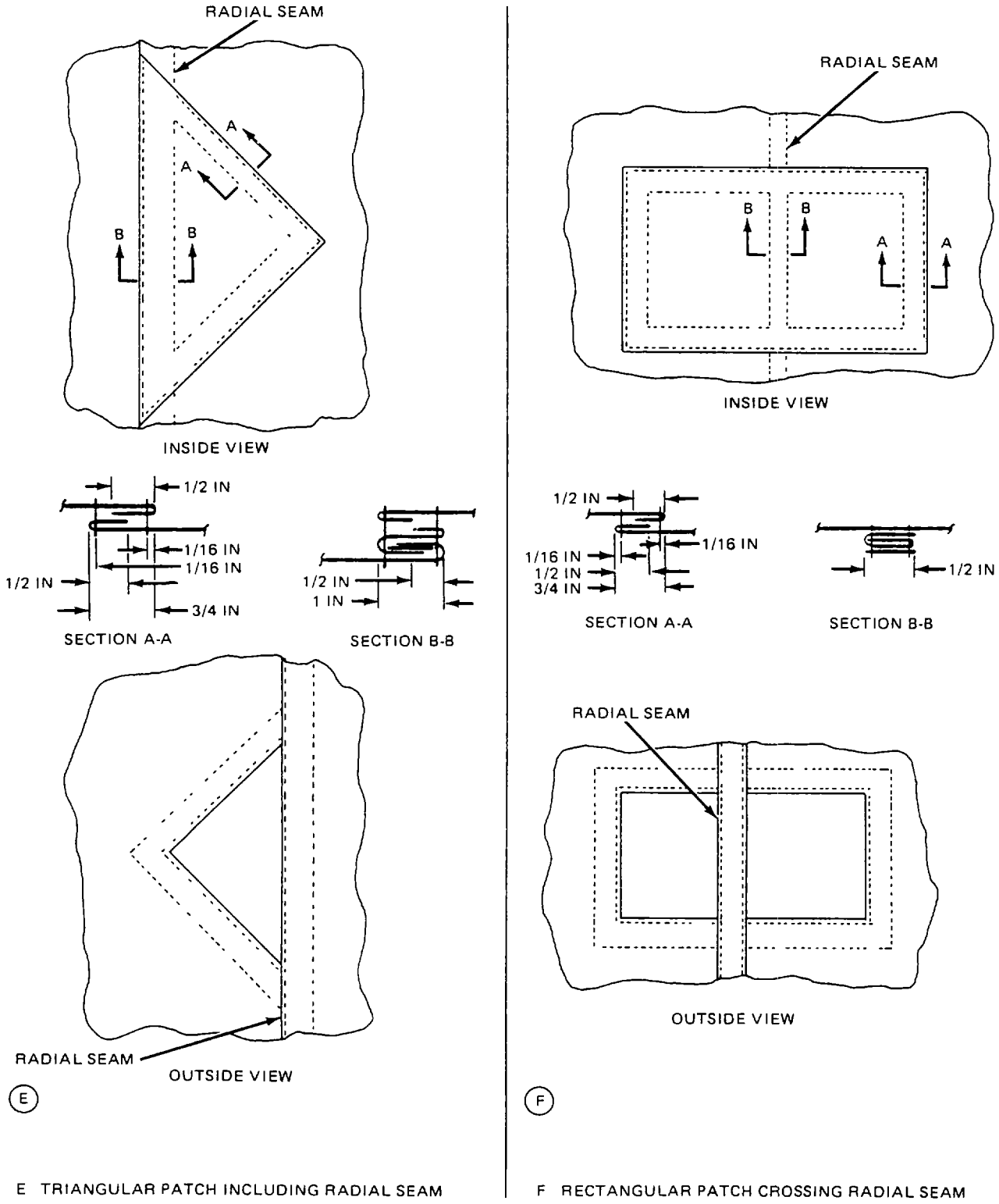
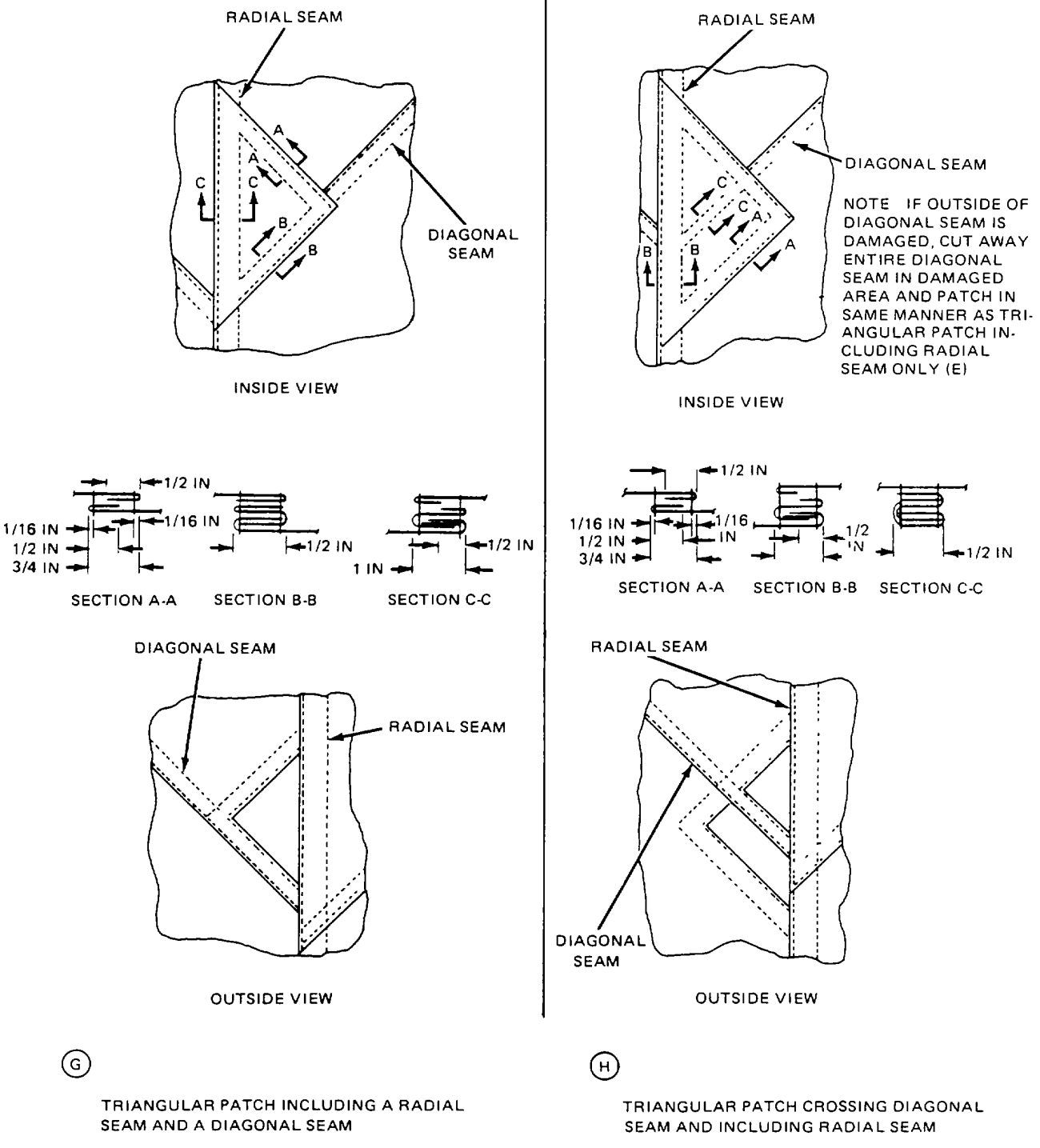


Figure 2-77. Common Miscellaneous Canopy Patches (Sheet 3 of 6).



(G) TRIANGULAR PATCH INCLUDING A RADIAL SEAM AND A DIAGONAL SEAM

(H) TRIANGULAR PATCH CROSSING DIAGONAL SEAM AND INCLUDING RADIAL SEAM

Figure 2-77. Common Miscellaneous Canopy Patches (Sheet 4 of 6).

2-17. Repair Procedures (CONT).

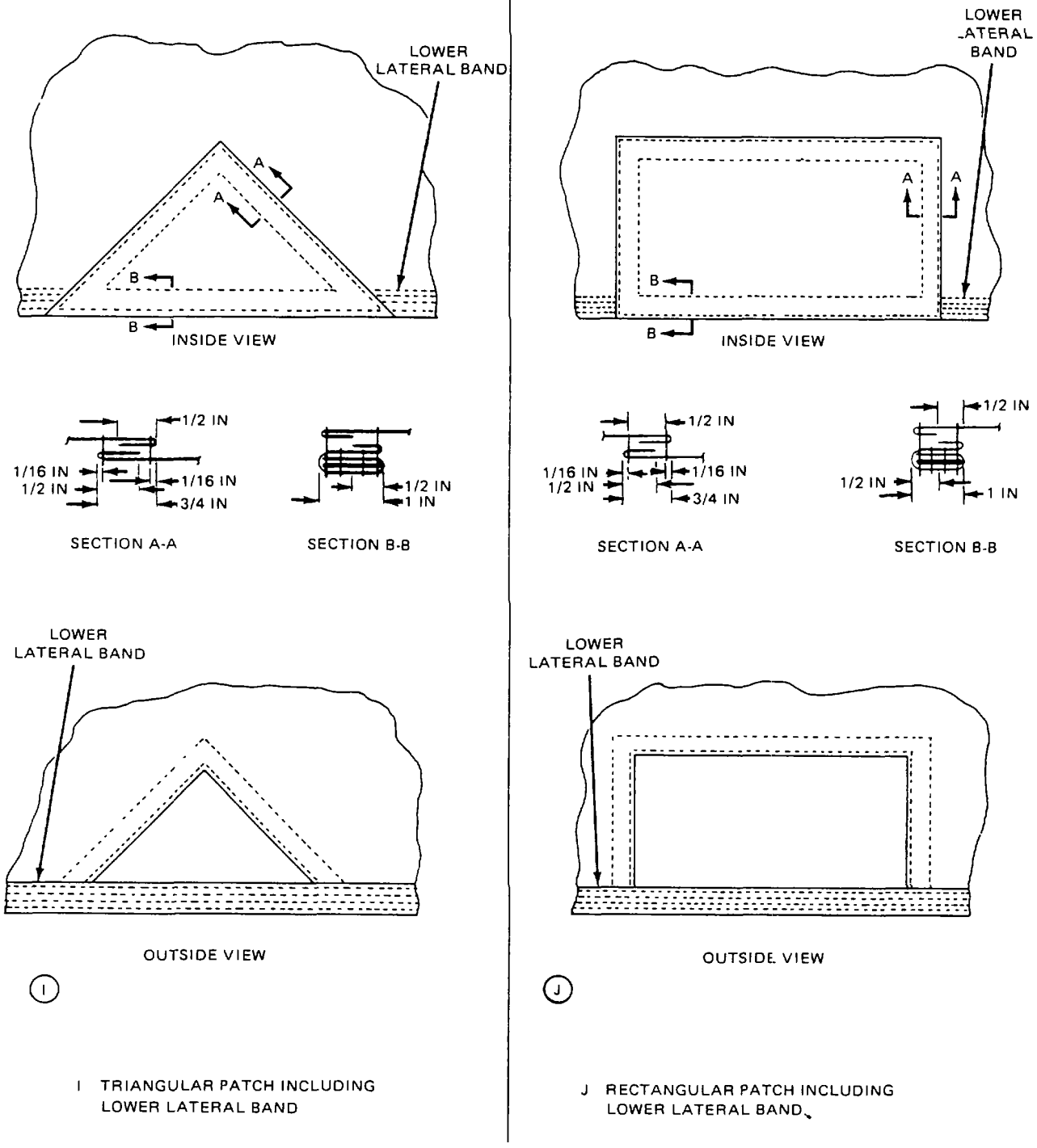
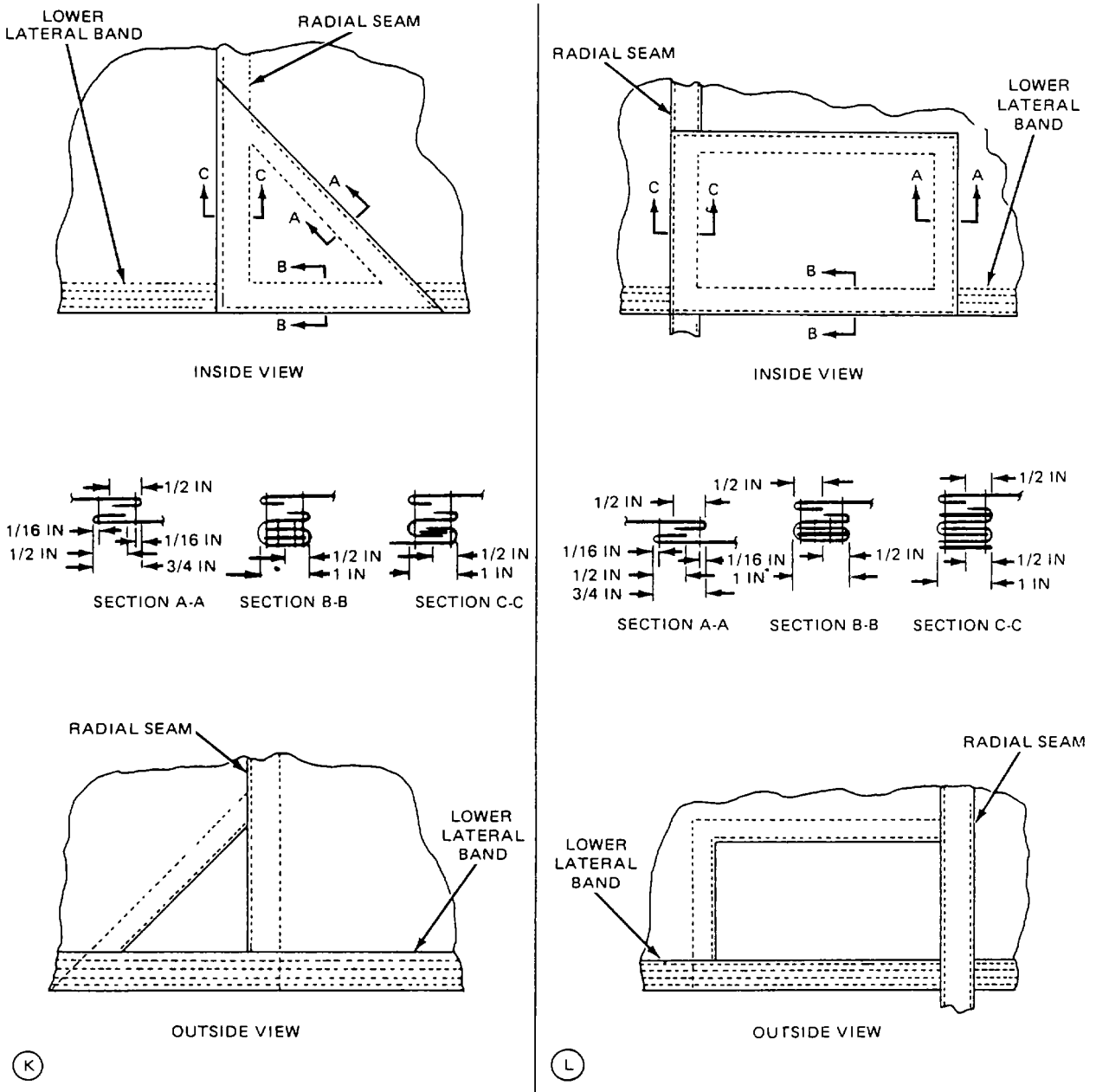


Figure 2-77. Common Miscellaneous Canopy Patches (Sheet 5 of 6).



K TRIANGULAR PATCH INCLUDING RADIAL SEAM AND LOWER LATERAL BAND

L RECTANGULAR PATCH INCLUDING RADIAL SEAM AND LOWER LATERAL BAND

Figure 2-77. Common Miscellaneous Canopy Patches (Sheet 6 of 6).

2-18. Searing and Waxing.

This task covers a. Searing b. Waxing

Tools:

Pot, Melting, Electric, Item 22, Appendix B
Knife; Hot, Metal, Item 14, Appendix B

Personnel Required:

43E(10) Parachute Rigger

Materials/Parts:

Beeswax, Item 2, Appendix D
Wax, Paraffin, Item 57, Appendix D

Equipment Condition:

Unpacked

CAUTION

Cotton tape, webbing, or cord will not be seared.

NOTE

Fabric materials such as cord, tape, and webbing that are cut for use in the maintenance of the T-10B parachute will normally be heat-seared or dipped an a melted wax mixture, as applicable, to prevent the material from fraying or unraveling. However, in some instances the preparation of the material may not be necessary and will be specified accordingly.

a. Searing. The cut ends of nylon tape, webbing, and cord lengths may be prepared by heat- searing which is performed by pressing the raw end of the material against a hot metal surface (knife) until the nylon has melted sufficiently. Avoid forming a sharp edge or lumped effect on the melted end.

b. Waxing. The fraying or unraveling of cotton or nylon tape, webbing, and cord length ends may be prevented by dipping 1/2 inch of the raw end of the material into a thoroughly melted mixture of half beeswax and half paraffin in an electric melting pot. The wax temperature should be substantial enough to insure the wax completely penetrates the material rather than just coating the exterior fabric.

2-19. Marking and Restenciling.

This task covers a. Marking b. Restenciling

Materials/Parts:

Brush, Stenciling, Item 4, Appendix D
Ink, Marking, Item 22, Appendix D
Marker, Felt Tip, Black, Item 25, Appendix D
Pen, Ball Point, Item 30, Appendix D
Stencil Board, Oiled, Item 40, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Layout on packing table or other suitable area

NOTE

Stenciling should be used whenever possible. A ball-point pen or felt tip marker should be used only where stenciling is not possible, or when stenciling devices are not available. However, only felt tip markers that contain parachute marking Ink and marked "FOR PARACHUTE MARKING" is authorized for use in marking air delivery items. Any type ball point pen using black or blue ink may be used for marking on labels only.

Original stenciled data or marking that becomes faded, illegible, obliterated, or are removed as a result of performing a repair procedure will be remarked with a ball-point pen, felt tip marker, or restenciled. All marking or restenciling will be done on or as near as possible to the original location and should conform to the original lettering type and size.

a. Marking. Using marking devices such as ballpoint pen or felt tip marker mark on, or as near as possible to, original location and conform to original lettering type and size.

b. Restenciling. Proceed as follows:

(1) Cut oiled stencilboard to original lettering type and size of data to be restenciled.

(2) Place cut stencilboard over, or as near as possible to, original marking to be restenciled.

(3) Place additional sheet of stencilboard beneath the area to be restenciled to prevent the marking ink from penetrating to other areas.

(4) Hold stencilboard In place and, using stenciling brush filled with parachute marking ink, restencil original marking.

c. Remarking and Restenciling. Remark or restencil original stenciled data or markings that become faded, illegible, obliterated or have been removed as a result of performing a repair procedure. Ensure all marking or restenciling is on, or as near as possible to, the original location and conforms to the original lettering type and size.

2-20. Bridle Loop.

This task covers: a. Repair b. Replace

Tools:

Knife, Item 13, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Sewing Machine, Heavy Duty (Table 2-2)
Shears, Item 28, Appendix B

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Unpacked, Canopy Laid Flat

Materials/Parts:

Webbing, Nylon, Type VIII, Item 67 Appendix D
Thread, Nylon, Size 6, Item 56, Appendix D

Reference:

Group No. 01, MAC, Section II, Appendix B

a. *Repair*. Repair a bridle loop requiring restitching as follows:

(1) Use a heavy-duty sewing machine to restitch any loose or broken stitches.

(2) Restitch over the original stitch pattern using nylon thread, size 6. Overstitch 1/2 inch to lock stitches.

b. *Replace*. Replace a damaged or missing bridle loop by fabricating as follows:

(1) Cut a 10-inch length of webbing, nylon, type VIII, olive drab (O.D.). Sear the ends of the webbing.

(2) Pass one end of the webbing through all the canopy vent lines. Join both webbing ends together with a 2-inch overlap (figure 2-78).

(3) Begin at a point 114 inch from one overlapped webbing end. Use a heavy duty sewing machine to secure the overlapped ends. With nylon thread, size 6, stitch a 1-1/2 inch long, single X box stitch, 5 to 8 stitches per inch.

(4) Cut and remove the damaged bridle loop.

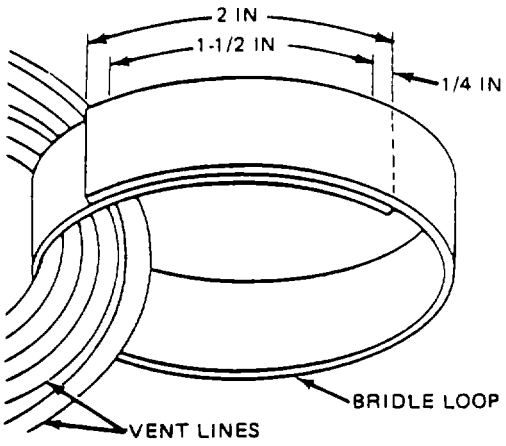


Figure 2-78. Bridle Loop Replacement details.

2-21. Vent Lines.

This task covers: a. Repair b. Replace

Tools:

Knife, Item 13, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Zig-zag Sewing Machine (Table 2-2)

Materials/Parts

Cord, Nylon, Type II, Item 14, Appendix D
Thread, Nylon, Natural, Item 50,
Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition':

Unpacked, canopy in proper layout.

Reference:

Group No. 01, MAC, Section II, Appendix B

NOTE

Repair of the vent line is accomplished at the Intermediate (DS) Maintenance level in accordance with the Maintenance Allocation Chart (MAC).

a. Repair. Repair vent lines requiring restitching, as follows.

(1) Use a zig-zag sewing machine to restitch any loose or broken stitches.

(2) Restitch over the original stitch pattern using nylon thread, size E. Overstitch 1/2 inch to lock stitches.

b. Replace. Replace missing or damaged vent lines as follows:

(1) Place canopy in proper layout on table and trace damaged vent line across apex from upper lateral band to upper lateral band.

(2) Remove damaged vent line by cutting stitching that holds line to canopy at both sides of apex.

(3) Cut a 27-inch length of type II, nylon cord. Sear or dip ends of cord.

(4) Position one end of new vent line In exact location formerly occupied by end of old line (figure 2-79).

NOTE

Measuring from the outside edge of the upper lateral band, the vent line should extend 4 inches into the radial seam.

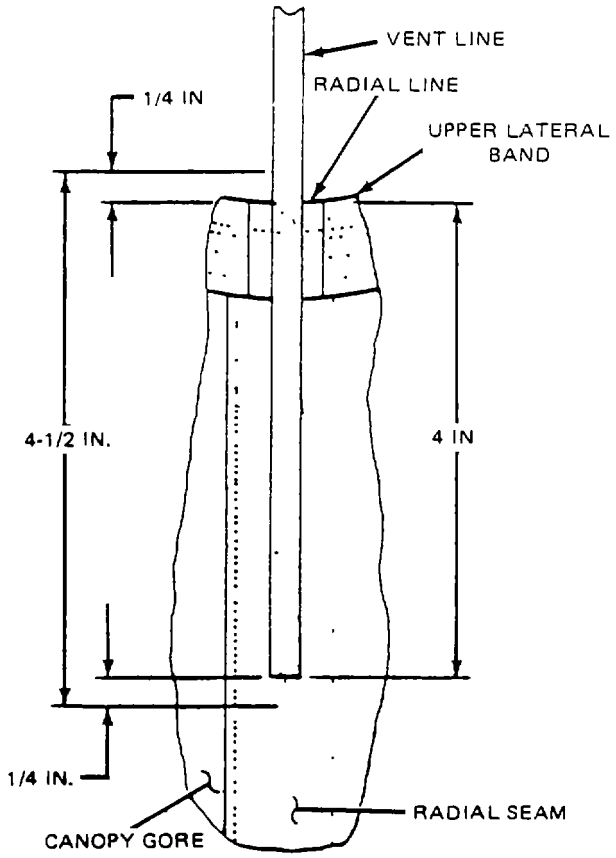


Figure 2-79. Vent Line Replacement Details.

(5) Using a zig-zag sewing machine and nylon thread, size E, stitch new line in place. Begin stitching on line 1/4 inch above upper edge of upper lateral band and sew to 1/4 inch beyond end of line, 7 to 11 stitches per inch and 1/8 inch wide.

(6) Pass remaining end of line under other vent lines, and through bridle loop as required.

(7) Position and sew remaining end of line to opposite side of canopy as in steps (4) and (5) above.

2-22. Upper Lateral Band.

This task covers Repair

Tools:

Knife, Item 13, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Pot, Melting, Electric, Item 22, Appendix B
Sewing Machine, Medium Duty (Table 2-2)
Shears, Item 28, Appendix B

Materials/Parts:

Thread, Nylon, Item 50/51, Appendix D
Webbing, Nylon, 1-inch, tubular, Item 63, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Unpacked, canopy laid flat.

References:

Group No. 01, MAC, Section II, Appendix B

a <u>*Restitching*</u>*.* Restitching of upper lateral band is authorized. Use a light duty sewing machine and size E, nylon thread of contrasting color. Stitch over the original stitch pattern. Lock each row of stitches two inches at each end.

NOTE

The upper lateral bands may be spliced only once and will not be replaced.

b. <u>*Damage Between Radial Seams*</u>*.* Repair as follows:

(1) Cut stitching of two apex/vent lines on each side of damaged area, and move lines to one side.

(2) Invert apex and smooth canopy around damaged area.

(3) Cut a piece of 1-inch tubular nylon webbing, long enough to extend 1 inch beyond outside edge of second radial seam on each side of damaged area. Sear or dip ends of webbing.

(4) Position webbing on damaged area Use a medium duty sewing machine and size E, nylon thread to stitch. Sew webbing in place with four continuous rows of stitching, 7 to 11 stitches per inch. Overstitch ends of webbing 2 inches (A, figure 2-80).

(5) Reposition apex/vent lines and sew them In place according to original construction.

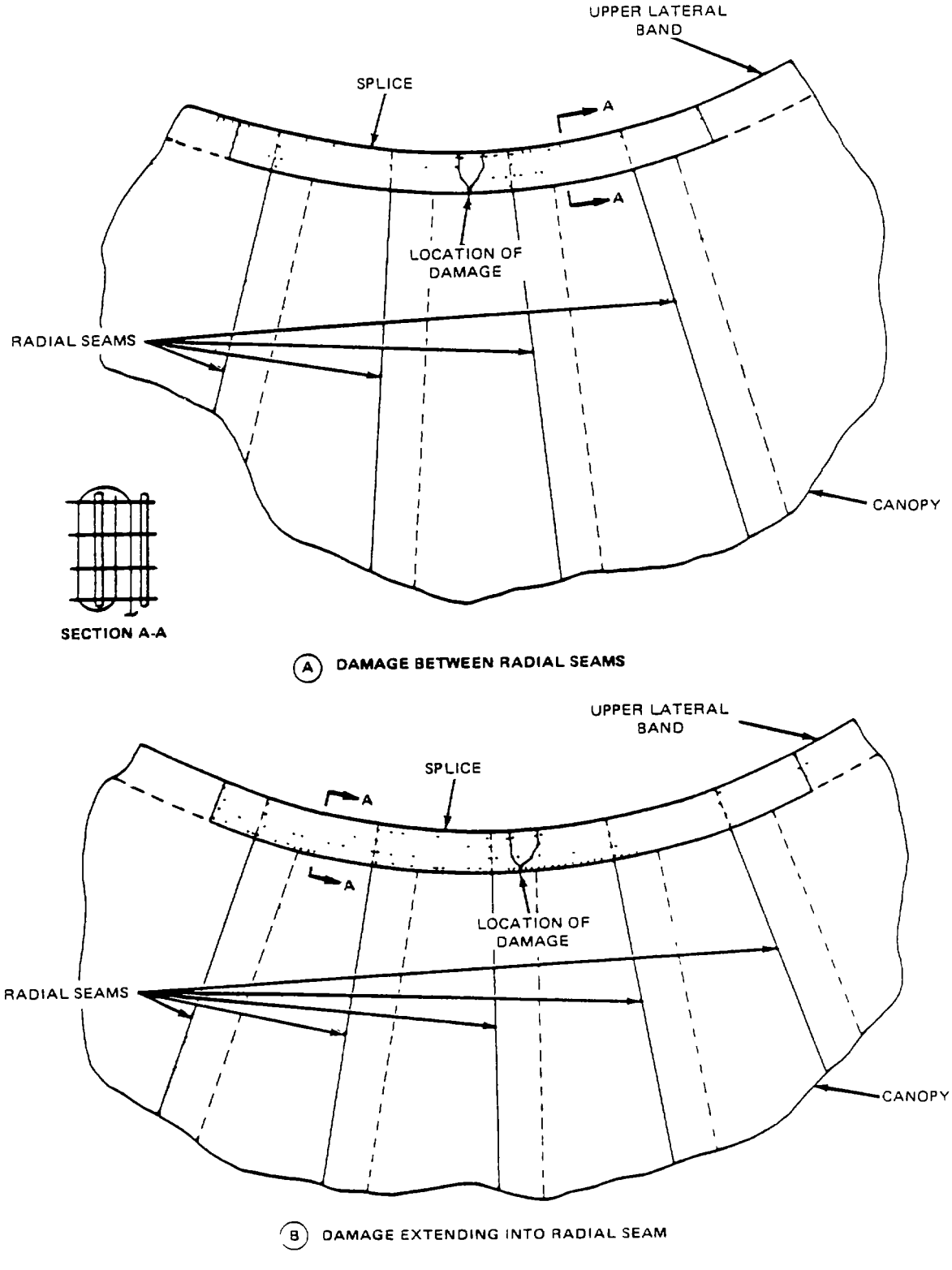


Figure 2-80. Upper Lateral Band Splicing Details.

2-22. Upper Lateral Band (CONT).

c. Damage Extending Into Radial Seam. Repair as follows:

(1) Cut stitching of apex/vent line attached to damaged radial seam and the stitching of the two apex/vent lines on each side of damaged seam. Move lines to one side.

(2) Invert apex and smooth canopy around damaged area.

(3) Cut a piece of 1-inch tubular nylon webbing long enough to extend 1 inch beyond outside edge of second radial seam on each side of damaged area. Sear or dip ends of webbing.

(4) Position webbing on damaged area Use a medium duty sewing machine and size E nylon thread to stitch. Sew webbing In place with four continuous rows of stitching, 7 to 11 stitches per inch. Overstitch ends of webbing 2 inches (B, figure 2-80).

(5) Reposition apex/vent lines and sew in place according to original construction.

2-23. Gore Section.

This task covers: a. Repair b. Replace

Tools:

Knife, Item 13, Appendix B
Needle, Basting, Item 18, Appendix B
Sewing Machine, Light Duty (Table 2-2)
Sewing Machine, Darning, Light Duty (Table 2-2)
Shears, Item 28, Appendix B

Materials/Parts.

Brush, Stenciling, Item 4, Appendix D
Cloth, Parachute Mending, Item 12, Appendix D
Cloth, Parachute, Nylon, 1.1 oz., Item 11/11A Appendix D
Thread, Cotton, Item 52, Appendix D
Thread, Nylon, Item 53, Appendix D

Materials/Parts (CONT):

Thread, Nylon, Item 50/51, Appendix D
Stencil Board, Oiled, Item 40, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Conditions:

Parachute canopy laid out on table.

References:

Group No. 01, MAC, Section II, Appendix B

a. <u>*Repair*</u>. Repair gore sections by restitching, darning, patching, or restenciling in accordance with para. 2-17 and 2-29. Darn holes that do not exceed 1/2 inch in length or diameter. Darning is limited to two holes per gore section. Stitching and darning will be as specified in table 2-3.

NOTE

Replacement of a gore section is accomplished at the intermediate (DS) maintenance level in accordance with the Maintenance Allocation Chart (MAC), Appendix B.

b. <u>*Replacement*</u>. When replacing gore sections, use 1.1-ounce ripstop pattern nylon cloth of same color as that being replaced. If the same color cloth Is not available, another color may be used. When replacing section 1 of gore 1, restencil gore number and information data block on replacement section. For other gores, stencil gore numbers as necessary.

NOTE

Mending cloth will be used for patching only.

(1) *Section 3 or 4*. Replace as follows (see figure 2-81):

(a) Invert canopy and center damaged section on work table.

(b) Smooth area around damaged section, ensuing that radial and diagonal seams are straight. Place pins through radial and diagonal seams as far above and below damaged sections as necessary.

2-23. Gore Section (CONT).

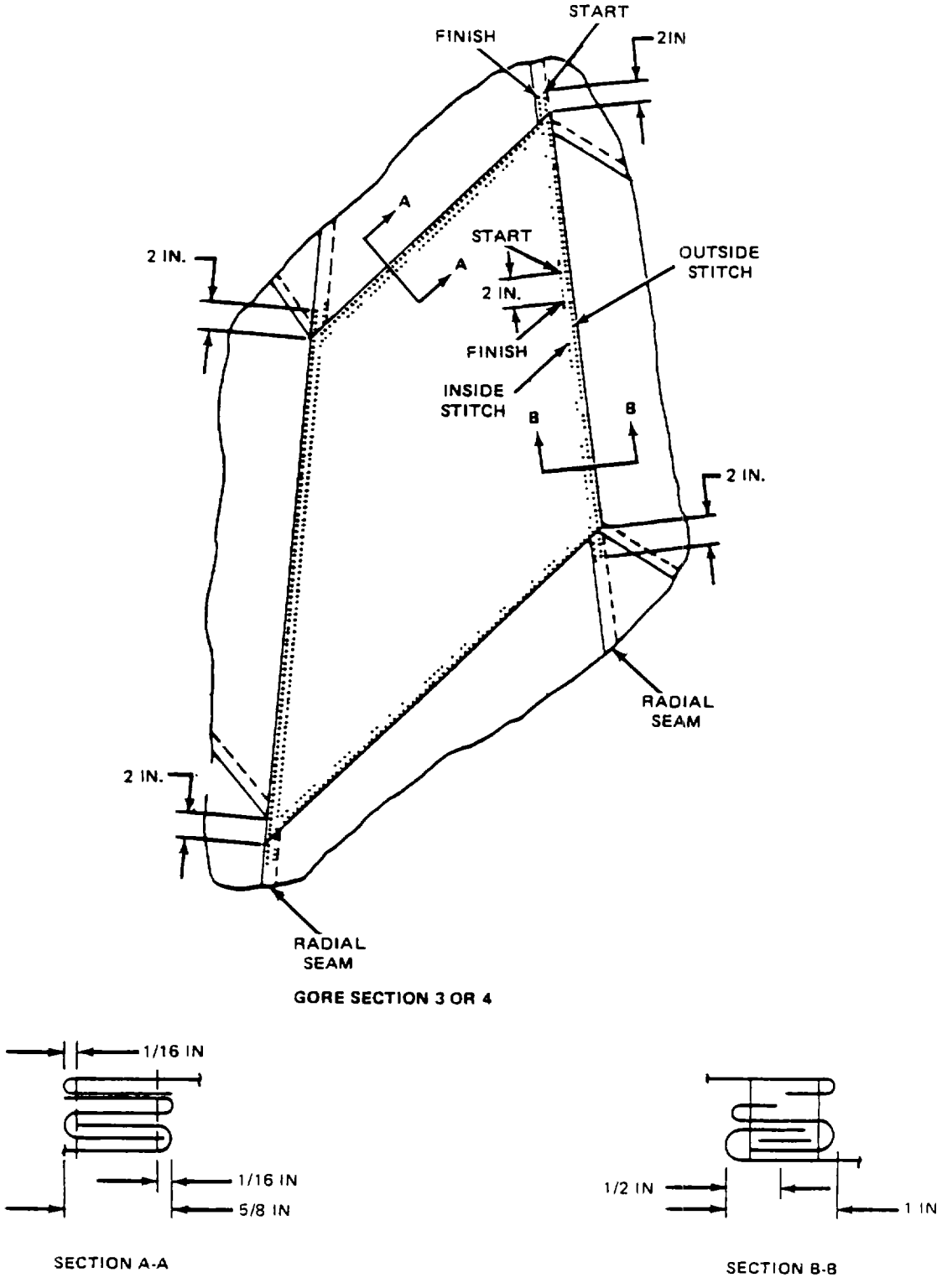


Figure 2-81. Replacing Gore Section 3 or 4.

(c) Remove damaged section by cutting fabric 1/2-inch from all seams except at the skirt and upper or lower lateral band, where section can be cut out flush with lateral band.

(d) Fold back raw edges of trimmed seams 1/2-inch and baste to seam with ticket No. A nylon thread, or ticket no. 24.4 cotton thread.

(e) Bias-cut piece of appropriate nylon parachute cloth for new section, allowing at least 3 inches of extra fabric on each raw edge.

(f) Position new fabric so that selvedged edges lie parallel to and overlap diagonal seams

(g) Turn under edges along diagonal seams 1/2-inch so that turned edges are aligned with outside edges of diagonal seams. Secure to table with pushpins.

(h) Turn under edges along radial seam so folded edges are alined with center of radial seams. Measure one inch from the outside edge of the radial seam as a guide and cut off excess material. Turn under edges along radial seam so folded edge is alined with outside edge of radial seam.

(i) Baste all edges and remove pushpins.

(j) Using a light duty sewing machine and size E nylon thread, sew a row of stitches, 7 to 11 stitches per inch, around the outside edge of the new section as shown in figure 2-81.

(k) Turn canopy right side out. Using a light duty sewing machine and size E nylon thread, sew a row of stitches, 7 to 11 stitches per inch, around the inside edge of the new section as shown in figure 2-81.

(l) Remove all basting and make certain radial tape moves freely in channel.

(2) *Section 1 or 2*. Replace as follows (see figures 2-82 and 2-83).

(a) Invert canopy and center damaged section on work table.

(b) Smooth area around damaged section, insuring that radial and diagonal seams are straight. Place pins through radial and diagonal seams as far above and below damaged sections as necessary.

(c) Remove damaged section by cutting fabric 1/2-inch from all seams except at lower lateral band, where section can be cut out flush with lateral band.

(d) If damage does not extend into corner bounded by radial seam and lower lateral band, cut fabric diagonally across corner with the warp or fill, leaving the corner intact. Leave enough fabric at corner so that when new section is installed it will not overlap pocket band or V-tab. Adapt procedures in step (1), above, to complete section replacement.

(e) If damage extends into corner bounded by radial seam and lower lateral band, cut and remove stitching that holds V-tab and pocket band (if present). Adapt procedures in step (1), above, to replace section. Then sew V-tab and pocket band in place.

(f) Fold back raw edges of trimmed seams 1/2-inch and baste to seam with size A nylon thread, or ticket no. 24.4 cotton thread.

2.23. Gore Section (CONT).

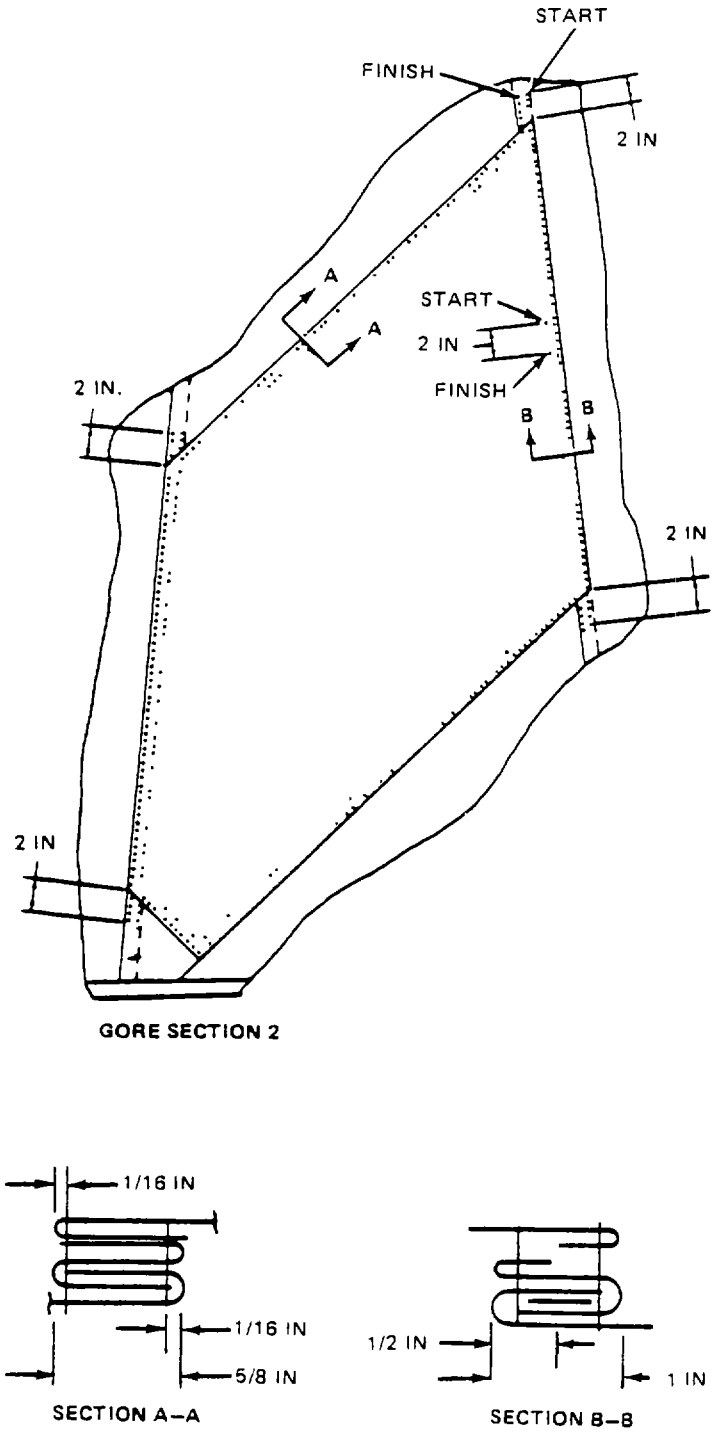


Figure 2-82. Replacing Gore Section 2.

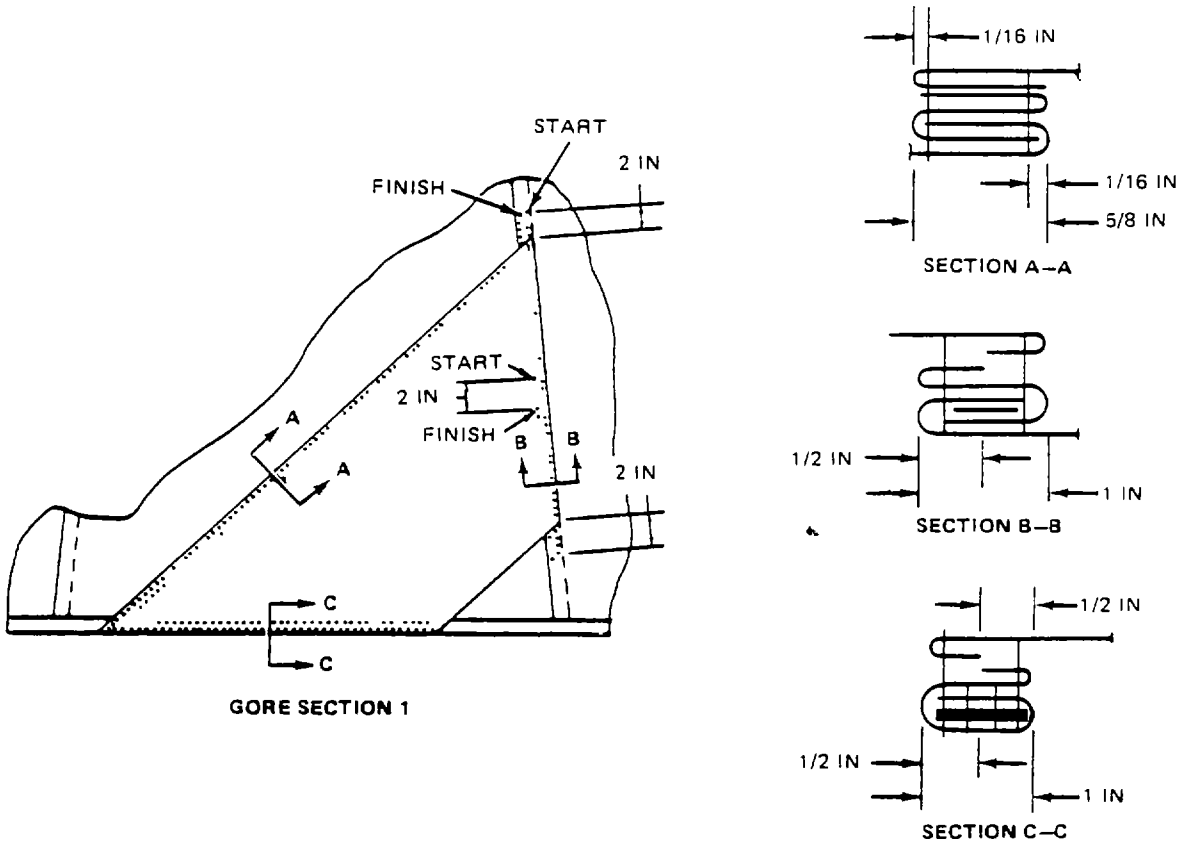


Figure 2-83. Replacing Gore Section 1.

(g) Bias-cut a piece of appropriate nylon parachute cloth for new section, allowing at least 3 inches of extra fabric on each raw edge. Position new fabric so that selvedged edges lie parallel to and overlap diagonal seams.

(h) Turn under edges along diagonal seams 1/2-inch so that turned edges are aligned with outside edges of diagonal seams. Secure to table with pushpins.

(i) Turn under edges along radial seam so folded edges are alined with center of radial seams Measure one inch from the outside edge of the radial seam as a guide and cut off excess material. Turn under edges along radial seam so folded edge Is aimed with outside edge of radial seam.

(I) Baste all edges and remove pushpins.

(k) Using a light duty sewing machine and size E nylon thread, sew a row of stitches, 7 to 11 stitches per inch, around the outside edge of new section.

(l) Turn canopy right side out. Using a light duty sewing machine and size E nylon thread, sew a row of stitches, 7 to 11 stitches per inch, around the inside edge of the new section.

(m) Remove all basting and make certain radial tape moves freely in channel.

2-23. Gore Section (CONT).

(3) *Section 5.* Replace as follows (see figure 2-84).

(a) Invert canopy and center damaged section on work table.

(b) Smooth area around damaged section, insuring that radial and diagonal seams are straight. Place pins through radial and diagonal seams as far above and below damaged sections as necessary.

(c) Remove damaged section by cutting fabric 1/2-inch from all seams except at the skirt and upper or lower lateral band, where section can be cut out flush with lateral band.

(d) Fold back raw edges of trimmed seams 1/2-inch and baste to seam with size A nylon thread, or ticket no. 24.4 cotton thread.

(e) Bias-cut a piece of appropriate nylon parachute cloth for new section, allowing at least 3 inches of extra fabric on each raw edge.

(f) Position new fabric so that selvedged edges lie parallel to and overlap diagonal seams.

(g) Turn under edges along diagonal seams 1/2-inch so that turned edges are alined with outside edges of diagonal seams. Secure to table with pushpins.

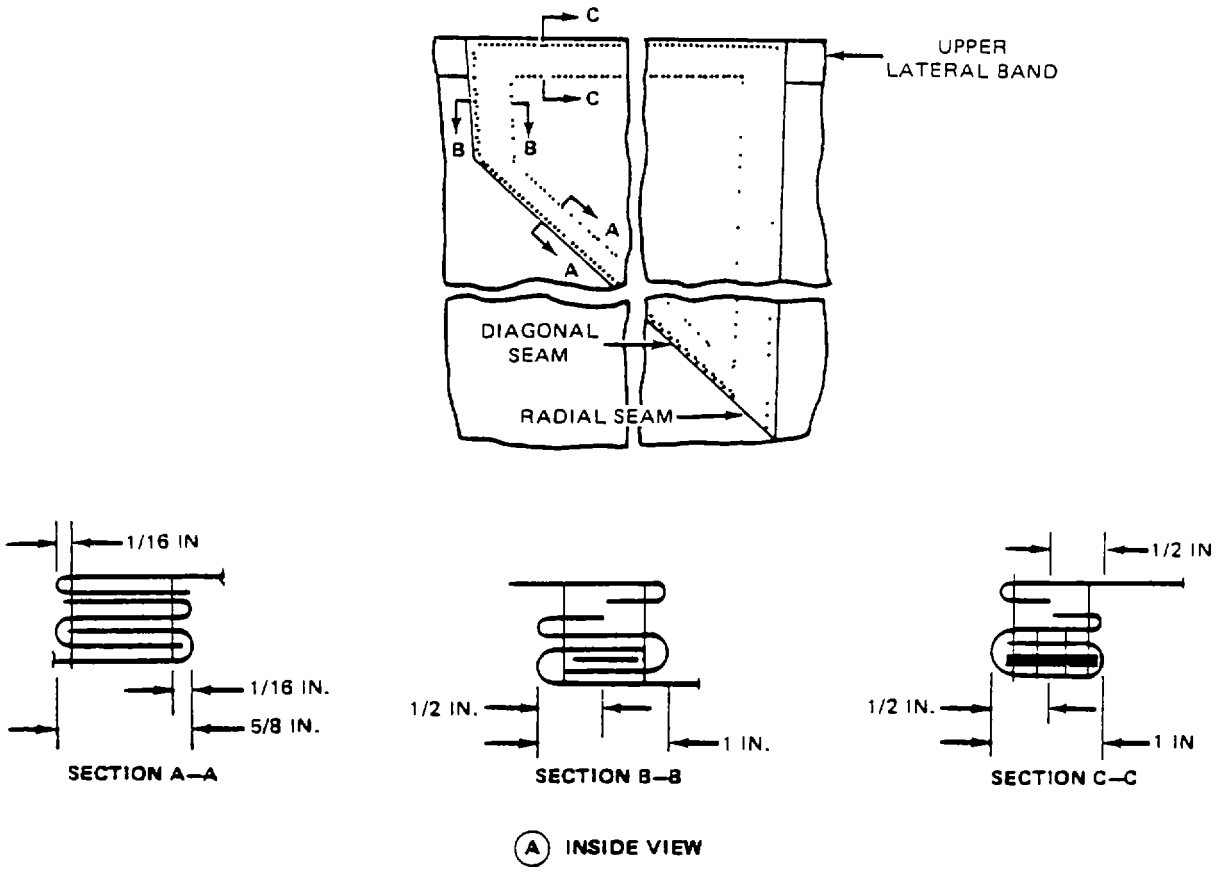
(h) Turn under edges along radial seam so folded edges are alined with center of radial seams. Measure one Inch from the outside edge of the radial seam as a guide and cut off excess material. Turn under edges along radial seam so folded edge is alined with outside edge of radial seam.

(i) Baste all edges and remove pushpins.

(j) Using a light duty sewing machine and size E, nylon thread, sew a row of stitches, 7 to 11 stitches per inch, around the outside edge of the new section.

(k) Turn canopy right side out. Using a light duty sewing machine and size E, nylon thread, sew a row of stitches, 7 to 11 stitches per Inch, around the Inside edge of the new section.

(l) Remove all basting and make certain radial tape moves freely in channel.



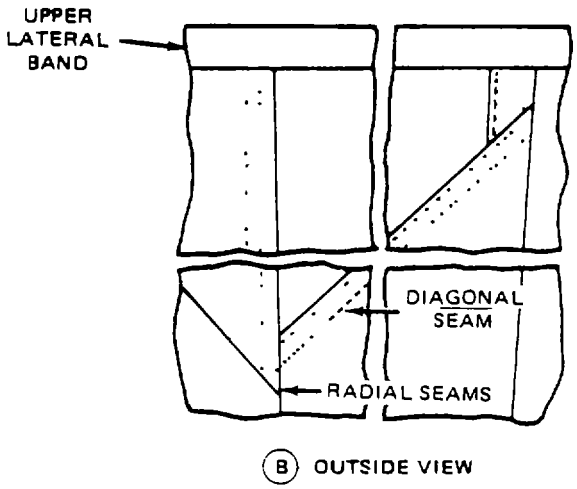


Figure 2-84. Bias Constructed Gore Section 5 Replacement.

2-24. Radial Seam.

This task covers: Repair

Tools:

Basting Needle, Item 18, Appendix B
Knife, Item 13, Appendix B
Sewing Machine, Light Duty (Table 2-2)
Shears, Item 28, Appendix B

Materials/Parts:

Cloth, Parachute, Nylon 1.1 oz, Item 11, Appendix D
Thread, Nylon, Item 50/51, Appendix D
Thread, Cotton, Item 52, Appendix D
Thread, Nylon, Item 53, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Parachute canopy laid out on table.

References:

Group No 01, MAC, Section II, Appendix B

The radial seam is repaired by patching. There is no limit to the length of a miscellaneous patch made on a canopy radial seam. In addition, a radial seam may be patched on both the inside and the outside of a canopy, as required. Patch a damaged radial seam as follows.

a Place the canopy on a repair table with the damaged side of the radial seam facing up.

b As required, cut the applicable stitching to remove or lay aside items which may interfere with the patching process.

c. Smooth the canopy material surrounding the damaged area and secure the undamaged portion of the seam to the table with pushpins. Do not pin the damaged area of the seam.

d. Using the same type material as In original canopy construction, cut a rectangular patch 3 1/2 inches wider and 4 inches longer than the damaged area. If one piece of material is not long enough to achieve the cited size, join additional pieces of cut material with 1/2-inch-wide lapped seams.

e. Fold the patch material lengthwise and aline the raw edges.

f. Center and secure radial seam patch material over the damaged area with push pins. Fold under 1/2 inch on each side of the new patch material and secure each side with pins.

g. Fold under 1 Inch at each end of the new patch material and secure with pins. Baste both sides of the new patch to the canopy using the procedures in paragraph 2-17a..

h. Remove the pins securing the canopy to the repair table. Secure the patch to the radial seam by stitching, using the procedures. In paragraph 2-17b and the stitching specifics outlined in tables 2-2 and 2-3. The patch will be secured with four rows of stitching (figure 2-85).

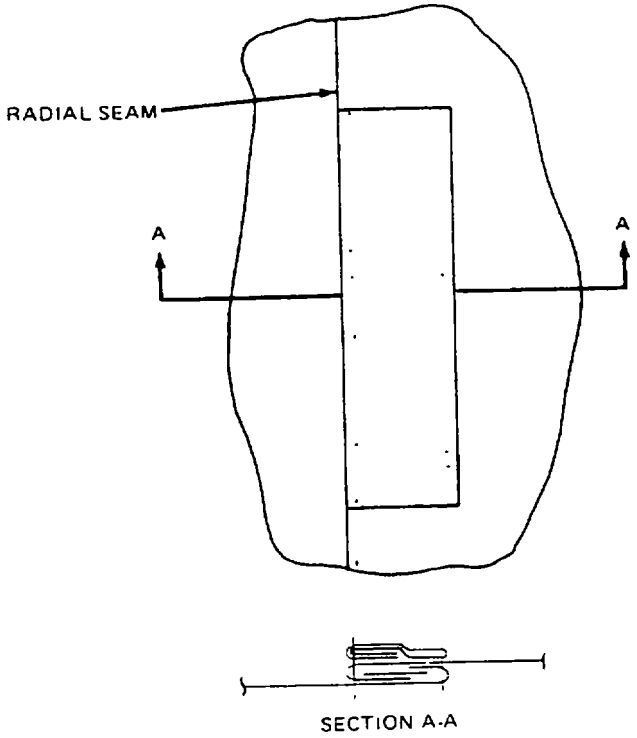


Figure 2-85. Securing a Patch on a Radial Seam.

i. When applicable, repeat the stitching procedures in h., above, on the opposite side of the radial seam channel.

j. Reposition the items removed or laid aside in b., above, in the original location and reattach each item to the canopy by restitching according to original construction details and paragraph 2-17b. Stitching will be made using the stitching specifics cited In tables 2-2 and 2-3.

2-24.1. Radial Tape.

This task covers: Replacement

Tools:

Tacking Needle, Item 19, Appendix B
Sewing Machine, Zig-Zag (Table 2-2)
Shears, Item 28, Appendix B

Materials/Parts:

Webbing, Nylon, Item 64, Appendix D
Thread, Nylon, Item 50/51, Appendix D

a. Place canopy in proper layout on repair table or repair surface, and apply partial tension to suspension lines.

b. Trace damaged radial tape from canopy skirt through radial seam channel to canopy apex.

c. Cut stitching that holds vent line and radial tape to upper lateral band and radial seam and lay aside end of vent line.

d. Cut stitching that holds suspension line and radial tape to lower lateral band and radial seam and lay aside end of suspension line. Do not remove damaged radial tape at this time.

e. Tack end of new radial tape to end of damaged radial tape at upper lateral band.

f. Grasp end of damaged radial tape at lower lateral band and pull old tape through radial seam channel until new tape appears at lower lateral band. Relieve tension from suspension lines.

g. Cut old tape from new tape at tacking. Hand tack ends of new radial tape in place at upper and lower lateral bands after taking appropriate measurement of adjacent tape.

h. Cut ends of new tape at outside edges of upper and lower, lateral bands. Reposition ends of vent line and suspension line and sew in place according to original construction.

2-25. Lower Lateral Band.

This task covers: Repair

Tools	*Personnel Required:*
Knife, Hot Metal, Item 14, Appendix B	43E(10) Parachute Rigger
Pot, Melting, Electric, Item 22, Appendix B	*Equipment Conditions:*
Sewing Machine, Light Duty (Table 2-2)	
Shears, Item 28, Appendix B	Unpacked, lying flat on repair table.
Materials/Parts.	*References:*
Beeswax, Item 2, Appendix D	Group No. 01, MAC, Appendix B, Section II
Tape, Nylon, Tubular, 1-inch Wide, Item 44, Appendix D	
Thread, Nylon, Item 50/51, Appendix D	

NOTE

The lower lateral band may be spliced in three places. In the event of damage between two suspension lines where a splice has been used previously, it must be removed and replaced. Either side may be spliced depending on location of damage.

a. *Damage Between Radial Seams.* Repair as follows (see figure 2-86):

(1) Cut stitching of suspension line, V-tab, and pocket band (when applicable) on each side of damaged area.

(2) Invert canopy and smooth canopy around damaged area.

(3) Cut a piece of 1-inch tubular nylon tape long enough to extend 6 inches on each side of damaged area.

(4) Position tape over damaged area of lateral band. Using a light duty sewing machine and size E, nylon thread, stitch in place with four continuous rows of stitching, 7 to 11 stitches per inch overstitch ends of tape 2 inches.

(5) Reposition suspension lines, V-tabs, and pocket band, and sew In place according to original construction.

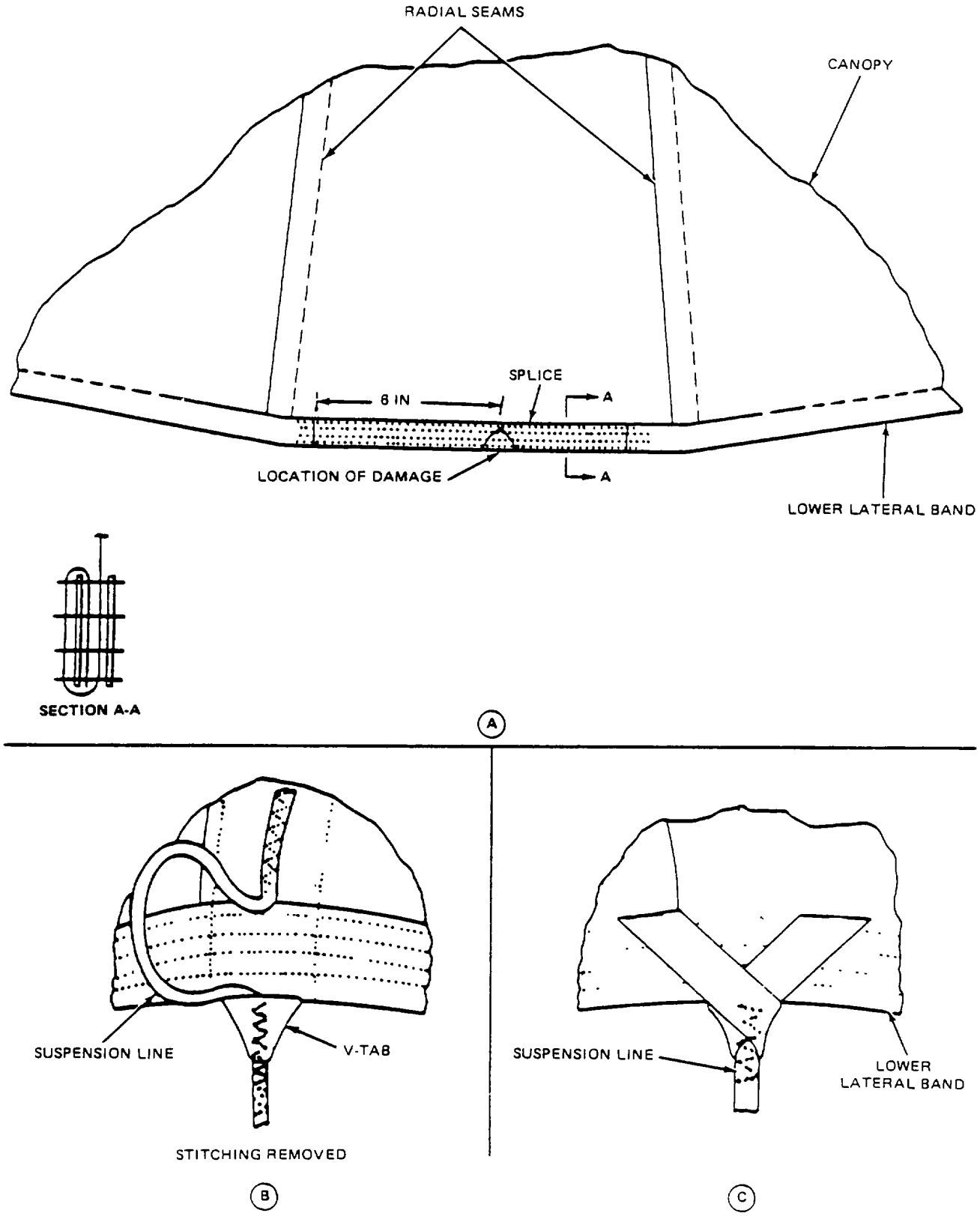


Figure 2-86. Lower Lateral Band Splicing - Damage Between Radial Seams.

2-25. Lower Lateral Band (CONT).

b. *Damage Extending Into Radial Seam.* Repair as follows (see figure 2-87).

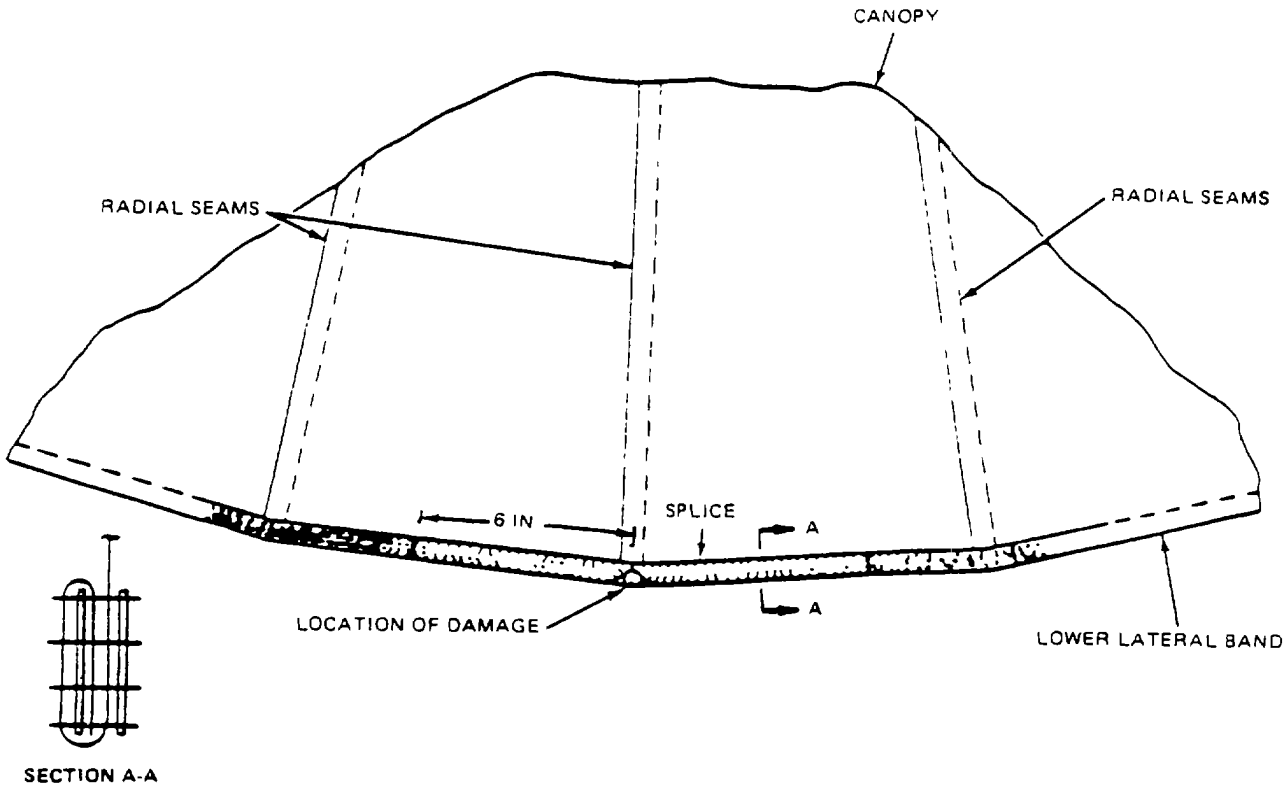


Figure 2-87. Lower Lateral Band Splicing Details - Damage Extending Into Radial Seam.

(1) Cut stitching of suspension lines, V-tabs, and pocket bands at damaged radial seam on each side of damaged area. Move these Items to one side.

(2) Invert canopy and smooth canopy around damaged area.

(3) Cut a piece of 1 -inch tubular nylon tape long enough to extend 6 inches beyond outside edge of radial seam on each side of damaged area. Sear or dip ends of webbing.

(4) Position webbing on damaged area. Using a light duty sewing machine and size E, nylon thread, sew webbing in place with four continuous rows of stitching, 7 to 11 stitches per Inch. Overstitch ends of webbing 2 inches.

(5) Reposition suspension lines, V-tabs, and pocket bands, and sew in place according to original construction.

c. *Stitching and Restitching.* Stitch and restitch with nylon thread, size E, which matches the color of the original stitching when possible Lock all straight stitching by back stitching at least 1/2 inch. Restitch directly over the original stitching Follow the original stitch patten as closely as possible.

2-26. Pocket Band

This task covers: **a. Repair** **b. Replace**

Tools.

Knife, Item 13, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Pot, Melting, Electric, Item 22, Appendix B
Sewing Machine, Light-Duty (Table 2-2)
Shears, Item 28, Appendix B

Materials/Parts

Beeswax, Item 2, Appendix D
Tape, Nylon, Tubular, Type I, Item 44, Appendix D
Thread, Nylon, Item 50/51, Appendix D

Personnel Required

43E(10) Parachute Rigger

Equipment Condition

Unpacked, lying flat on repair table

References:

Group No 01, MAC, Appendix B, Section II

a. Repair. Stitch and restitch with thread, nylon, size E which is contrasting in color. Lock all straight stitching by back stitching at least 1/2 inch. Restitch over the original stitch pattern.

b. Replacement. When installed on a parachute canopy, a pocket band will be positioned on the outside of the lower lateral band with a band end attached on each side of a suspension line, thereby allowing a free length of material to pass over the suspension line. A pocket band which is damaged will be replaced by fabricating using the following procedures.

(1) Place the canopy assembly on a repair table or other repair surface with the damaged pocket band facing up.

(2) Mark the lower lateral band at each end of the damaged pocket band length.

(3) Remove the affected pocket band from the canopy by cutting the stitching securing each of the band ends to the lower lateral band. Remove stitching on anti-inversion net and place out of way until pocket band is sewn.

(4) Fabricate a new pocket band by cutting an 8-1/4-inch length of type I tubular nylon tape and sear ends.

(5) Position the replacement pocket band length In the original pocket band location and aline the material ends with the marks made in step (2), above.

(6) Secure each end of the replacement pocket band to the lower lateral band by stitching a 2-inch-long, single-X, box-stitch formation with two double ends, 1/4 inch in from each edge, using size E, nylon thread, 7 to 11 stitches per inch (figure 2-88).

(7) Sew anti-inversion net to inside of lower lateral band.

2.26. Pocket Band (CONT).

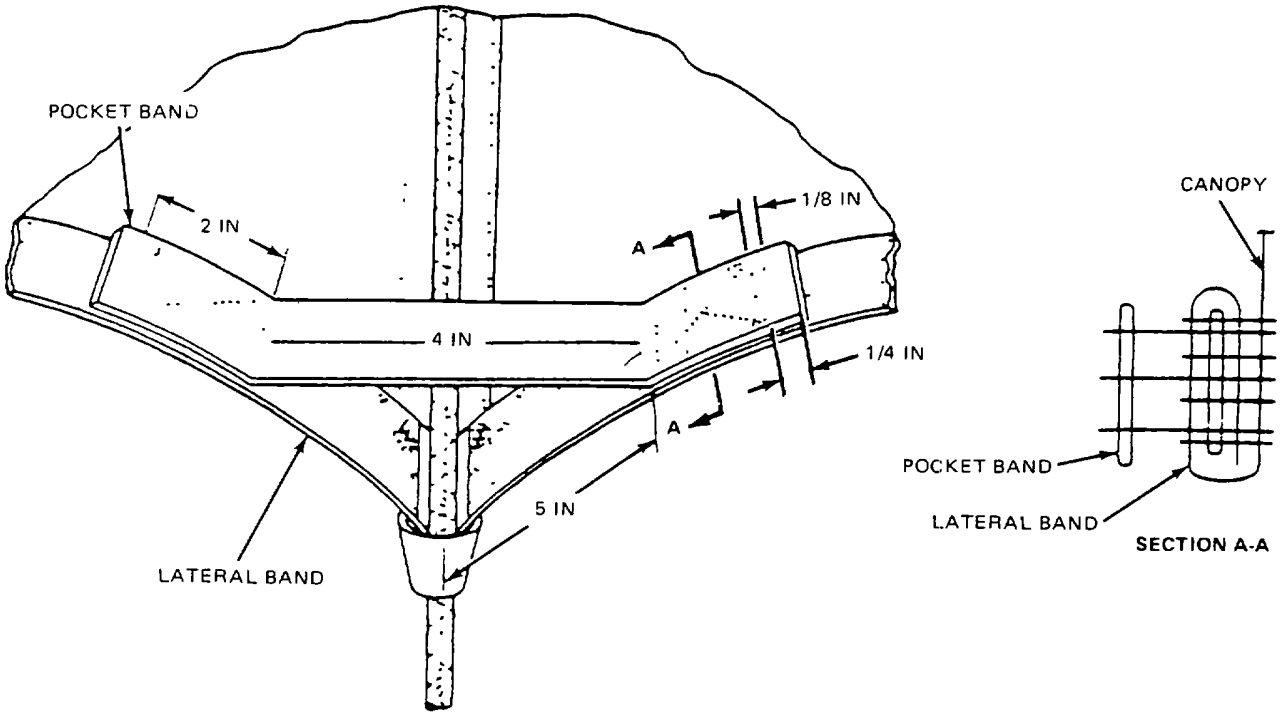


Figure 2-88. Pocket Band Replacement Details.

2-27. V-Tabs.

This task covers: **a. Repair** **b. Replace**

Tools:	*Personnel Required:*
Knife, Item 13, Appendix B Sewing Machine, Light-Duty (Table 2-2) Sewing Machine, Medium-Duty, Zig-Zag (Table 2-2) Shears, Item 28, Appendix B	43E(10) Parachute Rigger *Equipment Condition:* Unpacked, lying flat on repair table
Materials/Parts:	*References:*
Webbing, Nylon, Type I, 9/16-In., Item 64, Appendix D Thread, Nylon, Item 50151, Appendix D	Group No 01, MAC, Appendix B, Section II

a. Repair. Stitch and restitch with thread, nylon, same size and contrasting color to the original stitching, when possible. Lock stitching.

b. Replacement. Replace as follows.

(1) Cut a 5-inch length of 9/16-inch-wide type I nylon webbing. Fold webbing in half, cut free ends on a 45-degree bias, and sear ends.

(2) Position canopy on repair table, with V-portion of damaged tab up (figure 2-89).

(3) Mark suspension line at point where it crosses lower edge of lower lateral band.

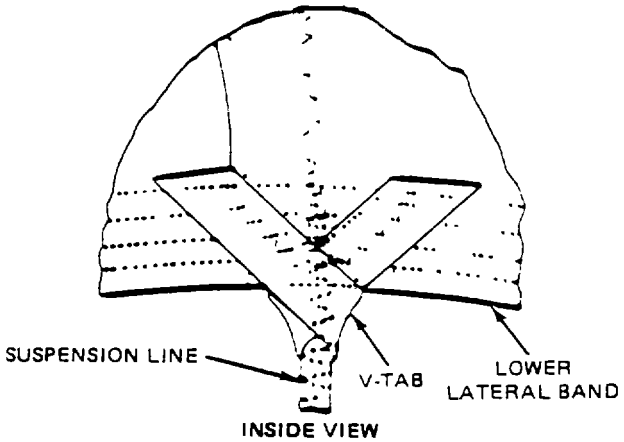


Figure 2-89. V-Tab Inside View With Stitching.

2-27. V-Tabs (CONT).

(4) Remove damaged V-tab by cutting stitching that holds tab to lower lateral band and suspension line. Cut the stitching that holds the suspension line to the lower lateral band (figure 2-90).

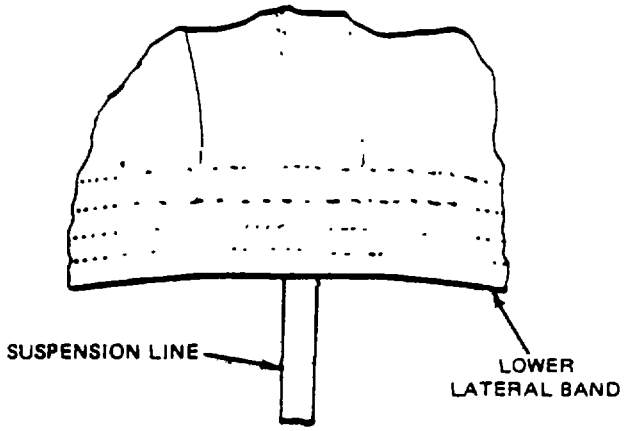


Figure 2-90. Inside View With Stitching Cut.

(5) Center new tab lengthwise under suspension line, even with lower edge of lower lateral band. Wrap tab tightly around line, forming a V on inside of lower lateral band. Handtack tab to inside of lower lateral band (A, figure 2-91).

(6) Pull suspension line up through V-tab, and to one side (B, figure 2-91).

(7) Sew V-tab to Inside of lateral band with both straight and zig-zag stitching (C, figure 2-91). Use nylon thread, size E. Hold suspension line aside while sewing V-tab.

(8) Turn canopy right side out, and reposition suspension line, making certain mark, step (3) above, is even with lower edge of lower lateral band.

(9) Using a zig-zag sewing machine and nylon thread, size E, sew suspension line in place. Begin stitching 1/4 inch below V-tab (D, figure 2-91) and use 7 to 11 stitches per inch.

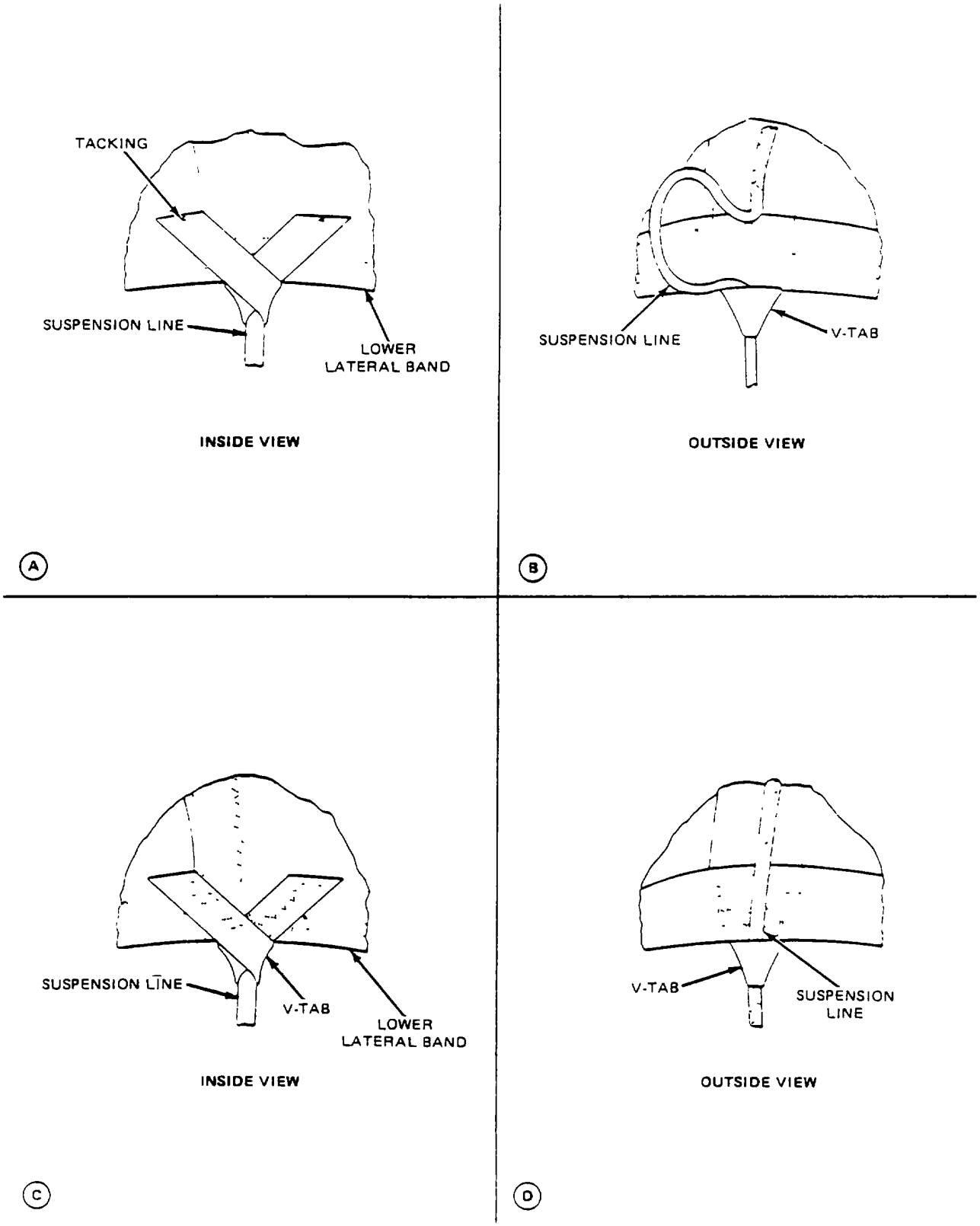


Figure 2-91. V-Tab Replacement Details.

2-28. Anti-Inversion Net.

This task covers: **a. Inspection/Repair** **b. Replace**

Tools:

Knife, Item 13, Appendix B
Sewing Machine, Light-Duty, Zig-Zag (Table 2-2)
Shears, Item 28, Appendix B

Materials/Parts:

Netting, Nylon, 3 3/4-in sq. Mesh, 18-in Width, Item 27, Appendix D
Thread, Nylon, Type E, Item 50/51, Appendix D

Personnel Required.

43E(10) Parachute Rigger

Equipment Condition:

Unpacked, lying flat on repair table.

References:

Group No 01, MAC, Appendix B, Section II

a. *Inspection and Repair*. Due to the net not bearing any weight, the objectives in making repairs to the net are, to prevent damage to the parachute's suspension lines and lower lateral bands; to avoid excessive accumulation of net material during repairs; and to maintain net in serviceable condition at minimum cost. To achieve these objectives, the following guidelines are to be followed in making inspections and repairs.

(1) A limit of two horizontal and two vertical net cords may be broken in any one net section without repair. Trim broken cord to within 1/4 inch from where the cord crosses the horizontal or vertical cord as shown. Only one unrepaired break per net is permitted (see figure 2-92).

(2) Broken net cords exceeding number specified in paragraph (1), above, and damaged net cords shall be repaired as illustrated in figure 2-93.

(3) Damaged areas in the bottom cord must be repaired In accordance with A or B, figure 2-94.

(4) If damage is in a square next to a suspension line, exceeds limits or would require zig-zag stitching to the suspension line, the netting should be cut and removed in accordance with C, figure 2-93. Carefully cut the zig-zag stitching loose from the suspension line. If line is cut, the suspension line must be replaced. Butt ends of vertical cord of new netting to the end of cut vertical cord on the suspension line. Start zig-zag stitch 1/2-inch from new netting material. Stitch on suspension line and 1/2-inch beyond end.

b. *Replacement*. If net section requires replacement, remove damaged area as follows:

(1) Cut vertical cords close to top cord sewn to lower lateral band.

(2) Cut horizontal cords, except for the top cord, to leave one square length plus one inch on outside of suspension line, where possible.

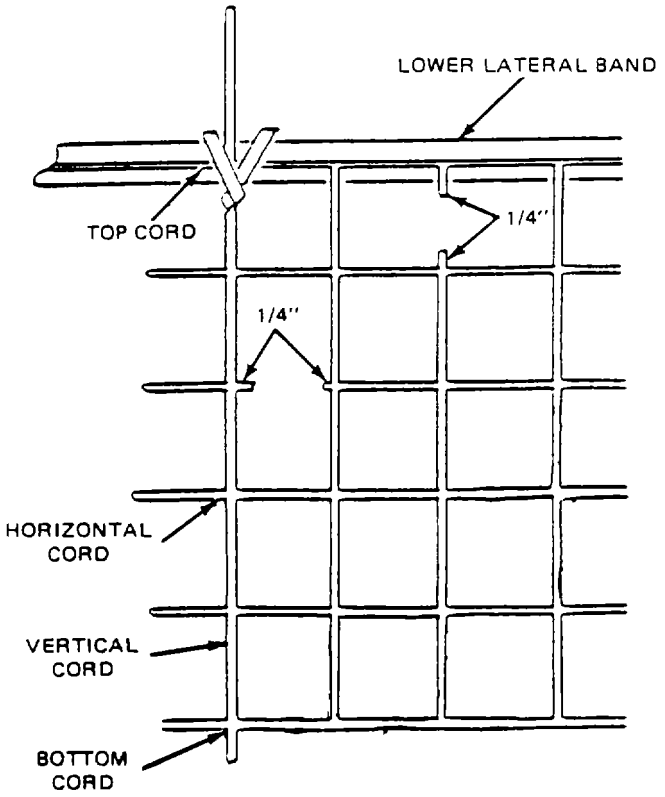


Figure 2-92. Anti-Inversion Net Repairs.

(3) Spread new piece of netting over removed section with top horizontal cord placed below old cord sewn to lower lateral band.

(4) Cut out a new section so that ends may be sewn together, using method shown in C and D, figure 2-93, as a guide.

(5) If there is insufficient horizontal cord on the inside of the suspension lines of the section being replaced to attach the replacement net, the horizontal net cords may be placed across suspension line and sewn to other cords on each side of the suspension line.

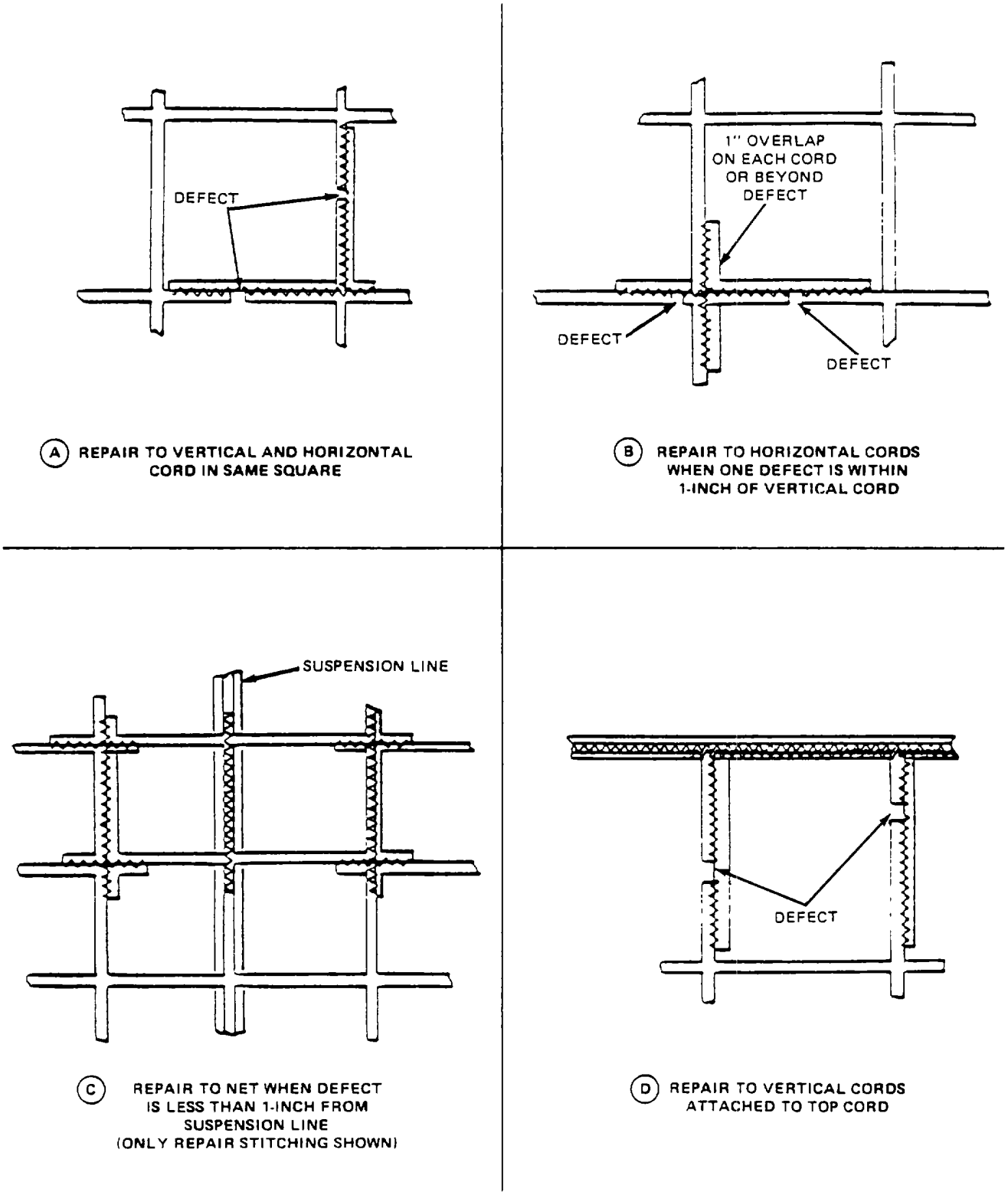
(6) Sew a minimum of one inch by skipping over the suspension line or sewing cords together for two inches in the adjacent section and the section being replaced.

(7) Avoid removal of vertical net cord from suspension line, if possible. When replacement vertical net cord must be sewn to suspension line, the old cord shall be carefully removed.

NOTE

The above procedures describe basic netting repairs normally required. This should not be construed to mean that these repairs are the only authorized repairs. Any time supervisory parachute maintenance personnel determine that other repairs are necessary to maintain the basic integrity of the net assembly, they may be made following basic criteria outlined above.

2-28. Anti-Inversion Net (CONT).



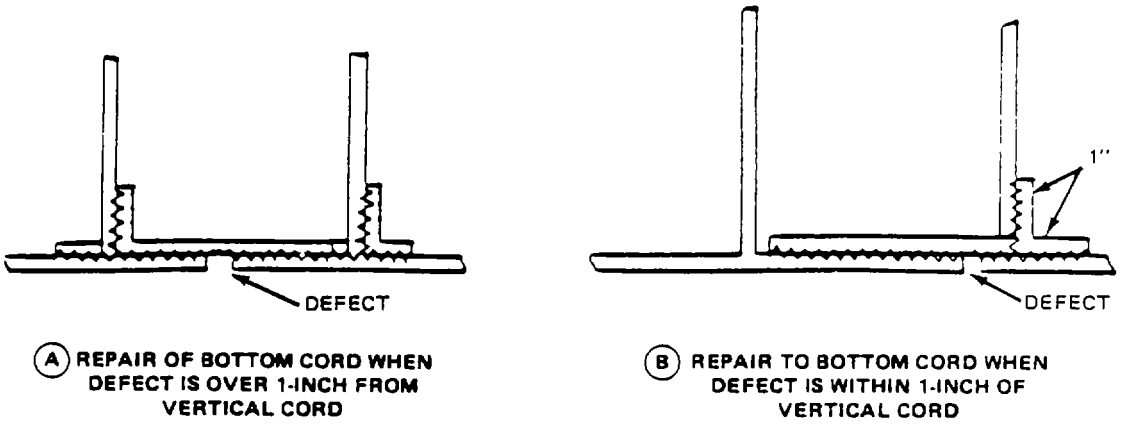
(A) REPAIR TO VERTICAL AND HORIZONTAL CORD IN SAME SQUARE

(B) REPAIR TO HORIZONTAL CORDS WHEN ONE DEFECT IS WITHIN 1-INCH OF VERTICAL CORD

(C) REPAIR TO NET WHEN DEFECT IS LESS THAN 1-INCH FROM SUSPENSION LINE (ONLY REPAIR STITCHING SHOWN)

(D) REPAIR TO VERTICAL CORDS ATTACHED TO TOP CORD

Figure 2-93. Basic Net Repairs.



(A) REPAIR OF BOTTOM CORD WHEN DEFECT IS OVER 1-INCH FROM VERTICAL CORD

(B) REPAIR TO BOTTOM CORD WHEN DEFECT IS WITHIN 1-INCH OF VERTICAL CORD

Figure 2-94. Repair of Bottom Cord.

2-29. Suspension Line.

This task covers: **a. Repair** **b. Replace**

Tools:

Knife, Item 13, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Pot, Melting, Electric, Item 22, Appendix B
Sewing Machine, Medium-Duty, Zig-zag, (Table 2-2)

Materials/Parts:

Cord, Nylon, Type II, Item 14, Appendix D
Thread, Nylon, Size E, Item 50/51, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Unpacked, lying flat on repair table.

References:

Group No 01, MAC, Appendix B, Section II

a. *Repair.* Stitch and restitch, using zig-zag pattern, 7-11 stitches per inch, with nylon thread, size E, which is contrasting in color to the material. Restitch over the original pattern.

NOTE

Replacement of the suspension line is done at the intermediate (DS) level as outlined in the Maintenance Allocation Chart (MAC), Appendix B.

b. *Replacement.* Replace a suspension line as follows.

(1) Place canopy in proper layout on repair table or repair surface, and apply partial tension to suspension lines.

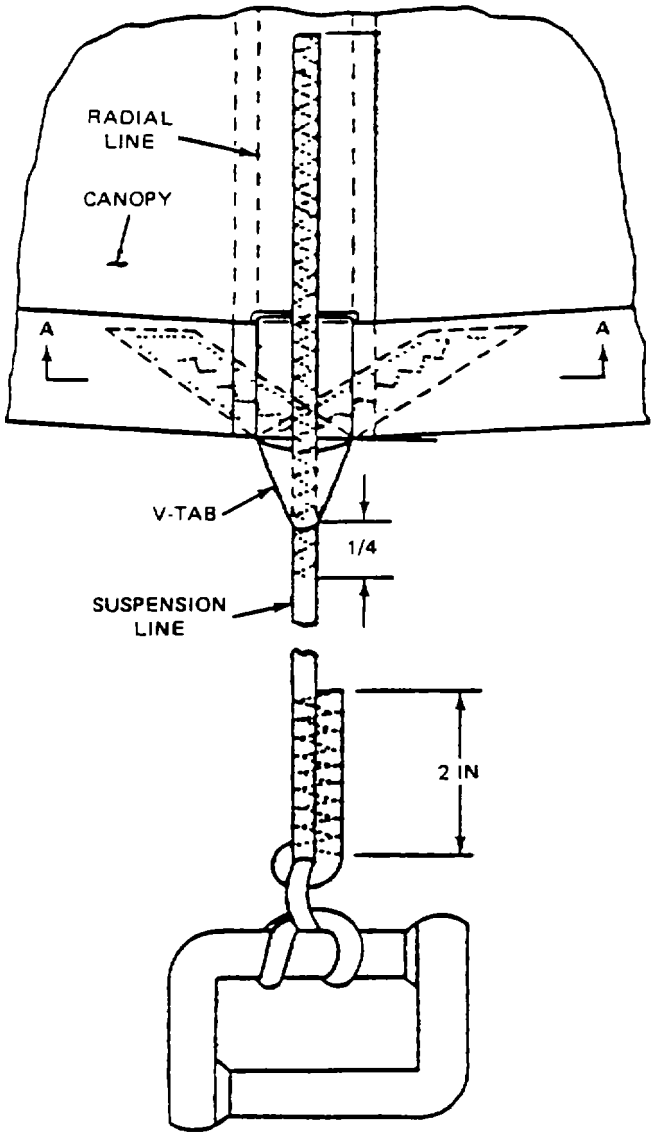
(2) Trace damaged suspension line from canopy skirt to link assembly.

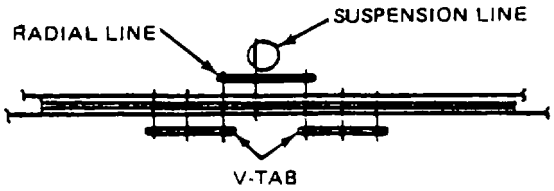
(3) Cut stitching that holds line to canopy skirt and V-tab. Do not remove V-tab unless it is damaged. Cut stitching that holds line to connector link and remove line. Cut stitching that holds anti-inversion net to suspension line.

(4) Cut a sufficient length of type II nylon cord to allow sewing through the V-tab and tying and sewing at the connector link. Sear or dip one end of cord in wax

(5) Pass seared end of new cord up through V-tab. Position seared end in exact location formerly occupied by old line, and sew In place according to details shown in figure 2-95, using a zig-zag sewing machine, size E nylon thread, 7 to 11 stitches per inch. Start sewing 1/4 inch below the V-tab.

(6) Hold adjacent line and new line tightly together at lower lateral band, and trace both lines from canopy skirt to link assembly under equal tension. Mark new line at point even with inside edge of link. Apply equal tension to both lines and check correctness of marking.





SECTION A-A

Figure 2-95. Suspension Line Replacement.

2-29. Suspension Line (CONT).

(7) Relieve tension on all lines and attach new suspension line to link assembly with a clove hitch and half hitch (see figure 2-96).

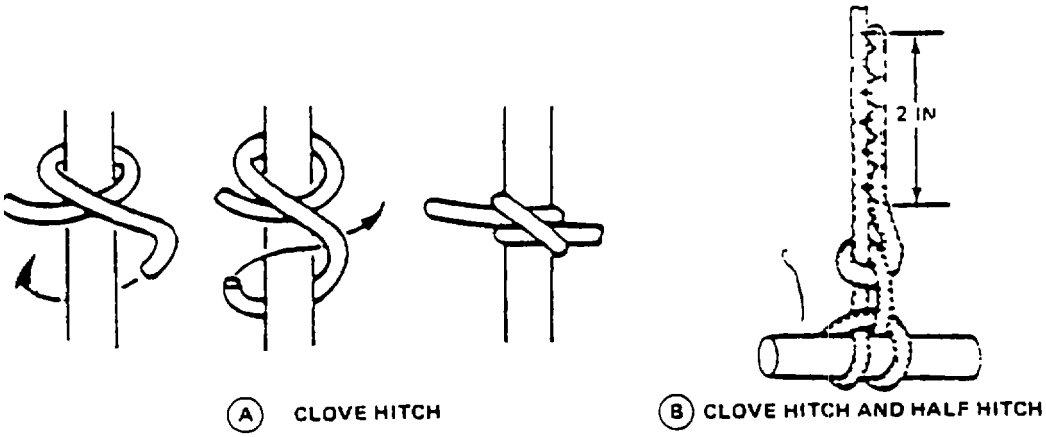


Figure 2-96. Clove Hitch and Half Hitch.

(8) The procedures above may be reversed by drawing new line down through V-tab, attaching new line to link assembly, then to the canopy skirt.

(9) Extend each tie running and toward the canopy skirt and beginning at a point 2 inches above the knots made In step (7), secure each tie running end to the replacement canopy line body by stitching a 3/16-inch-wide by 2-inch-long double-throw zig-zag stitch formation toward the connector link assembly. Finish each stitch formation as close as possible to the securing knots and trim each running end to 1/4 inch. Use nylon thread, size E and 7 to 11 stitches per inch

(10) Compare the knots securing each end of the replacement canopy line with the adjacent knots made on the connector link assembly to ensure compatibility. In addition, trace each end of the replacement line from the connector link assembly to the canopy skirt to ensure proper attachment, position, and sequence.

(11) Restitch anti-inversion net to suspension line using a zig-zag sewing machine, size E nylon thread, 7 to 11 stitches per inch.

2-30. Connector Link.

This task covers: **a. Repair** **b. Replace**

Tools:

File, Item 8, Appendix B
Mallet, Rawhide, Item 17, Appendix B
Separator, Connector Link, Item 27, Appendix B
Screwdriver, Flat Tip, Item 26, Appendix B

Materials/Parts:

Cloth, Abrasive, Item 7, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Connector links laid out on table

References:

Group No. 01, MAC, Appendix B, Section II

NOTE

L-Bar connector link assemblies are used on T-10B personnel parachutes. Quick-fit link assemblies are not to be used on the T-10B parachute.

a Repair. Repair an L-bar connector link assembly as follows:

(1) *Cleaning.* Remove burrs, rough spots, rust, or corrosion from a parachute connector link assembly by either filing with a metal file or buffing with a crocus cloth.

(2) *Replacing a locking screw.* Replace a damaged or missing locking screw on a parachute connector link with a serviceable Item from stock.

b. Replace. A parachute connector link assembly, regardless of type, which Is damaged beyond repair will be replaced with a serviceable L-bar parachute connector link assembly from stock Use the following procedures.

(1) Using a suitable sized flat-tip (slotted-head) screwdriver, remove the two locking screws from the ends of a replacement L-bar parachute connector link assembly and disassemble the link (see figure 2-97).

(2) Using a suitable sized flat-tip (slotted-head) screwdriver, remove the two locking screws from the damaged original parachute connector link assembly. Disassemble the link assembly, using a link separator, if necessary. If the connector link contains suspension lines, ensure the lines are not allowed to slide off the damaged link during the disassembly process.

(3) As applicable, position an L-bar of the replacement link assembly adjacent to the disassembled original link assembly and slide the suspension lines from the damaged link onto the replacement link L-bar.

2-30. Connector Link (CONT).

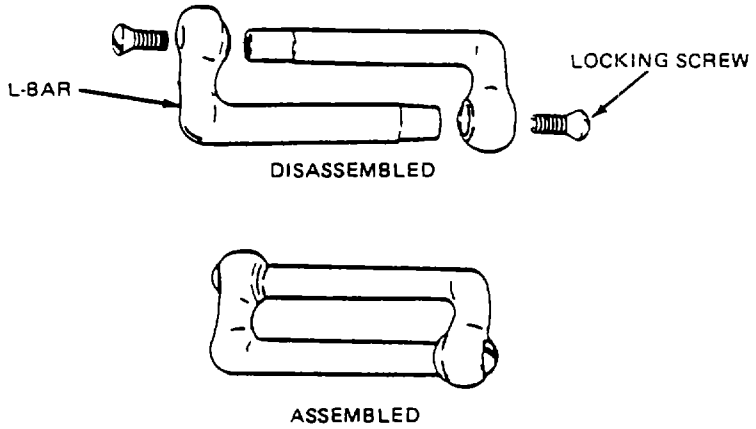


Figure 2-97. L-Bar Connector Link Assembly.

(4) If required, pass the remaining L-bar of the replacement link through the attaching loop of the adjoining component.

(5) Fit the replacement link L-bars together and ensure L-bar leg engagement by tapping the end of each L-bar with a rawhide mallet

(6) As applicable trace the suspension lines from the connector link assembly to the canopy skirt to ensure the lines are properly installed and in the correct sequence.

2-31. Risers.

This task covers: Replace

Tools:

Separator, Connector Link, Item 22, Appendix B
Screwdriver, Flat Tip, Item 26, Appendix B

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Unpacked

References:

Group No. 02, MAC, Appendix B
Section II

a. Remove old risers by removing screws and disassembling link assemblies.

b. Obtain serviceable riser assembly from stock.

c. When replacing a riser assembly, make certain that risers are not twisted and that, when the male canopy release fitting is facing down, the suspension lines are in proper sequence and location on connector links.

d. Replace log record book in accordance with paragraph 2-16.

2.32. Deployment Bag.

This task covers a. Repair b. Replace

Tools:

Knife, Item 13, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Pot, Melting, Electric, Item 22, Appendix B
Sewing Machine, Light Duty (Table 2-2)
Sewing Machine, Medium Duty (Table 2-2)
Sewing Machine, Very Heavy Duty (Table 2-2)
Shears, Item 28, Appendix B

Materials /Parts:

Beeswax, Item 2, Appendix D
Cloth, Cotton Satten, 8.8 oz, Item 8, Appendix D
Cord, Nylon, Type II, Item 14, Appendix D
Thread, Nylon, Item 50/51, Appendix D
Thread, Nylon, Item 54/55, Appendix D
Thread, Nylon, Item 56, Appendix D

Materials/Parts (CONT):

Webbing, Cotton, Type II, Item 59, Appendix D
Webbing, Nylon, Type VIII, Item 67, Appendix D
Wire, Steel, 0.080 Diameter, Item 70, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Deployment bag clean with defects recorded.

References:

Group No 03, MAC, Appendix B, Section II

a. Repair.

(1) General. Two types of deployment bags are used with the T-10B parachute deployment bag with locking loop closure and rolled stow loops (A, figure 2-98), and deployment bag with locking loop closure and manufactured woven stow loops (B, figure 2-98). Bags with manufactured woven stow loops are not stocked but may be used until unserviceable.

(2) Stitching. Stitch and restitch with thread, nylon, size E, which matches the color of the original stitching, when possible. Lock all straight stitching by backstitching at least 1/2 inch. Restitch directly over the original stitching following the original stitch pattern as closely as possible.

(3) Restenciling. If necessary, restencil bag number on suspension line protector cover in accordance with para 2-19.

(4) Suspension line stow loop. Repair stow loops as follows

(a) Permissible damage. Two manufactured woven stow loops per panel may be torn, if the tear does not exceed 1/2 the width of the loop, and the torn loops are not adjoining. Bags with tie closure may have closing loops torn up to 1/2 the width (A, figure 2-99).

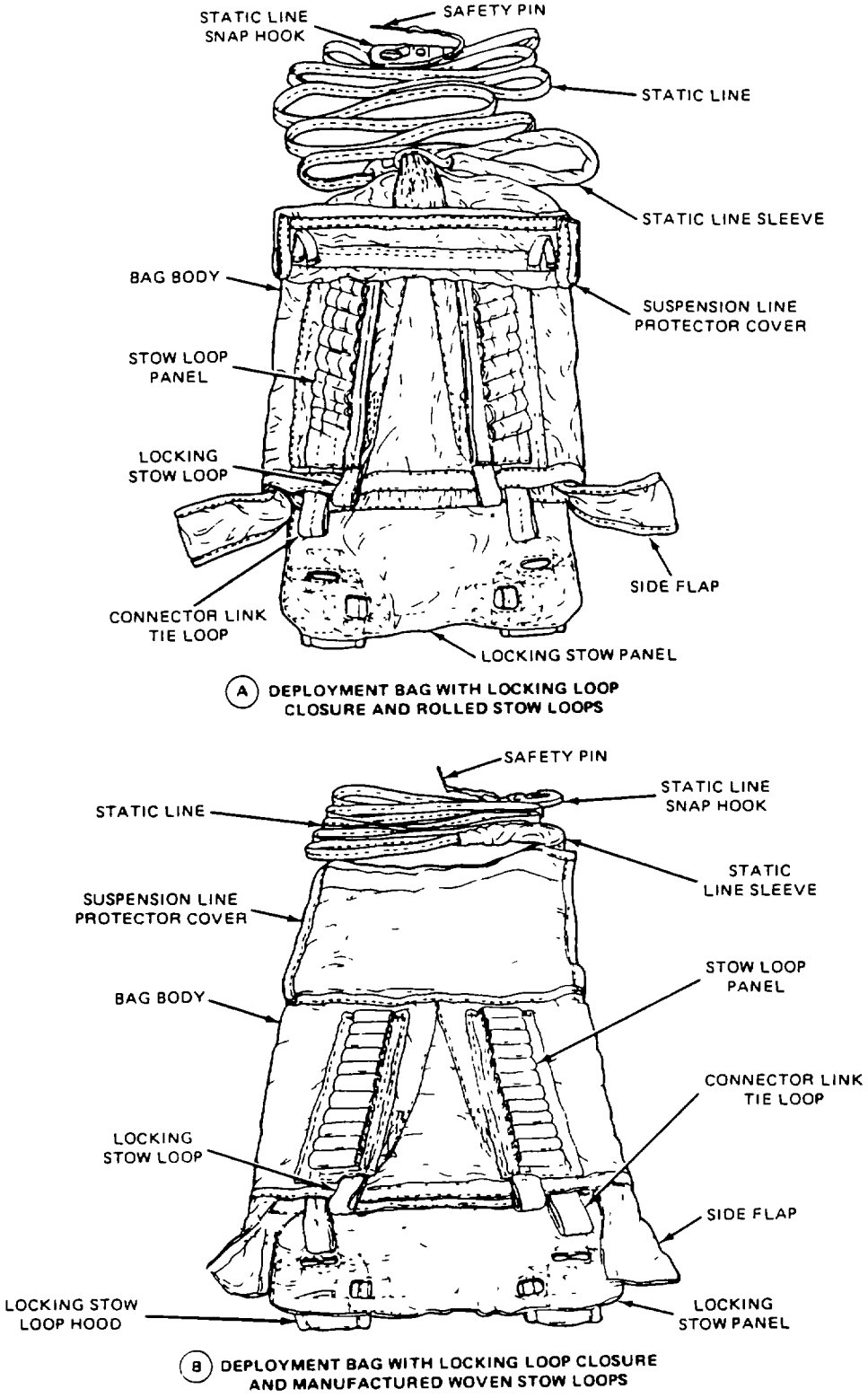


Figure 2-98. Deployment Bags with Woven and Rolled Stow Loops.

2-32. Deployment Bag (CONT).

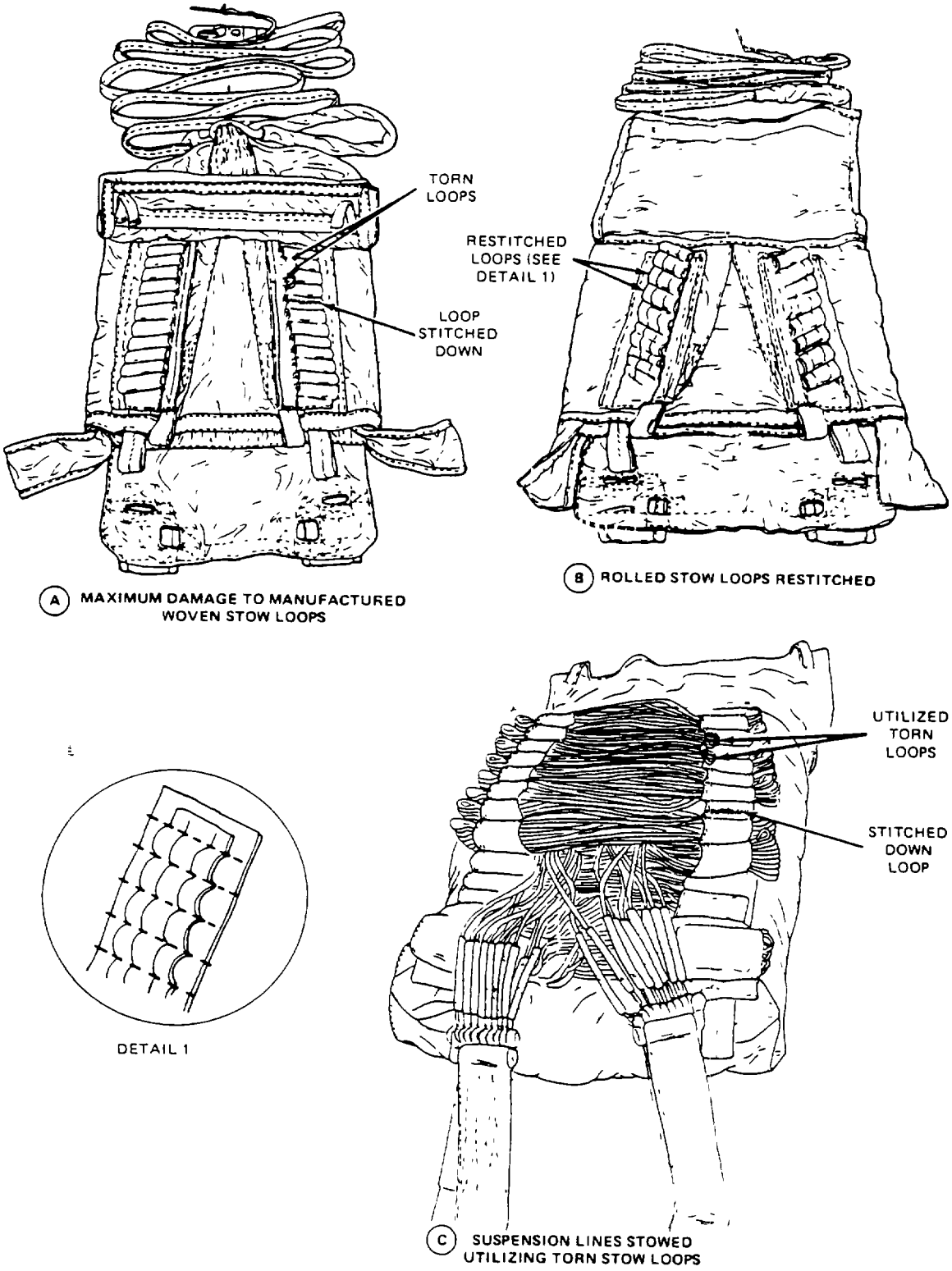


Figure 2-99. Deployment Bags Showing Maximum Damage and Repair to Suspension Line Stow Loops.

(b) Restitching. Proceed as follows

1 Manufactured woven stow loops that are torn more than half way through may be stitched down (making them unusable), provided a minimum of ten stow loops per stow panel remain. Use a medium duty sewing machine with size 3, nylon thread to stitch 7-11 stitches per inch (B, figure 2-99)

2 If fifty percent of stitching is loose or broken on one rolled stow, restitch the stow loop to the stow loop panel. If stitching in more than one adjacent rolled stow is broken more than 3/4 inch in either stow, restitch all stow loops on that side (B, figure 2-99). Use a medium duty sewing machine, size 3 nylon thread and 7 to 11 stitches per inch

(5) *Darning.* Darning is a sewing procedure used to repair limited size holes, rips, and tears in assorted airdrop Items constructed from textile material. A darning repair may be made either by hand or sewing machine, depending upon the method preferred and the availability of equipment Refer to paragraph 2-17, and use the following guidelines.

NOTE

A darning machine should be used to darn small holes and tears where fabric is missing

(a) Darn small holes or tears in the main panel, reinforcement panel, side flaps, paddle pocket, locking stow panel, suspension line protector cover, and locking stow loop hood if the holes or tears do not exceed 3/4-inch in length or diameter. Use size E nylon thread, 7-11 stitches per inch

(b) Darning of previously patched material can be performed provided darning size limitations prescribed in (1), above, are not exceeded.

(c) Machine darning Proceed as follows:

1 Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure that the marking is at least 1/4 Inch back from each edge of the damaged area.

2 Darn the damaged area by sewing the material in a back-and-forth manner.

3 Turn the material and stitch back and forth across the stitching made in step 2, above, until the hole or tear is completely darned (figure 2-100).

4 If applicable, restencil informational data, gore number(s), or identification marks in accordance with paragraph 2-19.

(6) Patching Patch holes in the suspension line protector cover that exceed 3/4-inch in length or diameter. Proceed as follows:

(a) Place the reparable item on a repair table, smooth the fabric around the damaged area, and secure the Item to the table with pushpins. Do not pin the damaged area.

(b) Using an authorized marking aid of contrasting color, mark a square or rectangle around the area to be patched.

2-32. Deployment Bag (CONT).

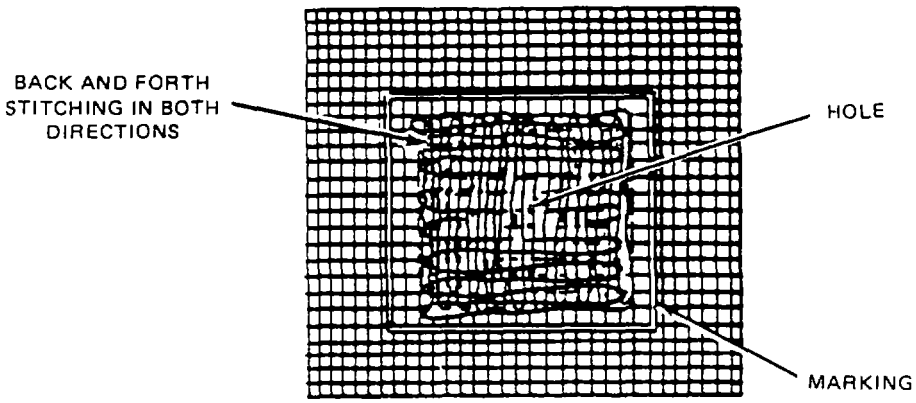


Figure 2-100. Machine Darning Method.

(c) Cut the damaged area fabric along the lines made In step (b), above. Further cut the fabric diagonally at each corner to allow a 1/2 inch foldback in the raw edges.

(d) Make a 1/2-inch foldback on each raw edge. Pin and baste each foldback to complete the prepared hole.

(e) Using the same type material as in original construction (8.8 oz. cotton sateen cloth) mark and cut a patch 2 1/2-inches wider and longer than the inside measurements of the prepared hole.

(f) Center the patch material over the prepared hole and insure the warp or filling of the patch material matches the warp or filling of the fabric being patched. Pin the patch material In position.

(g) Make a 1/2-inch fold on each edge of the patch material and baste the patch to the prepared area.

(h) Remove the pushpins securing the item to the repair table and secure the patch by stitching. Using a light duty sewing machine, size E, nylon thread, and 7 to 11 stitches per inch (figure 2-101).

(i) Turn the item over and make a second row of stitching around the prepared hole, using a light duty sewing machine, size E, nylon thread and 7 to 11 stitches per inch.

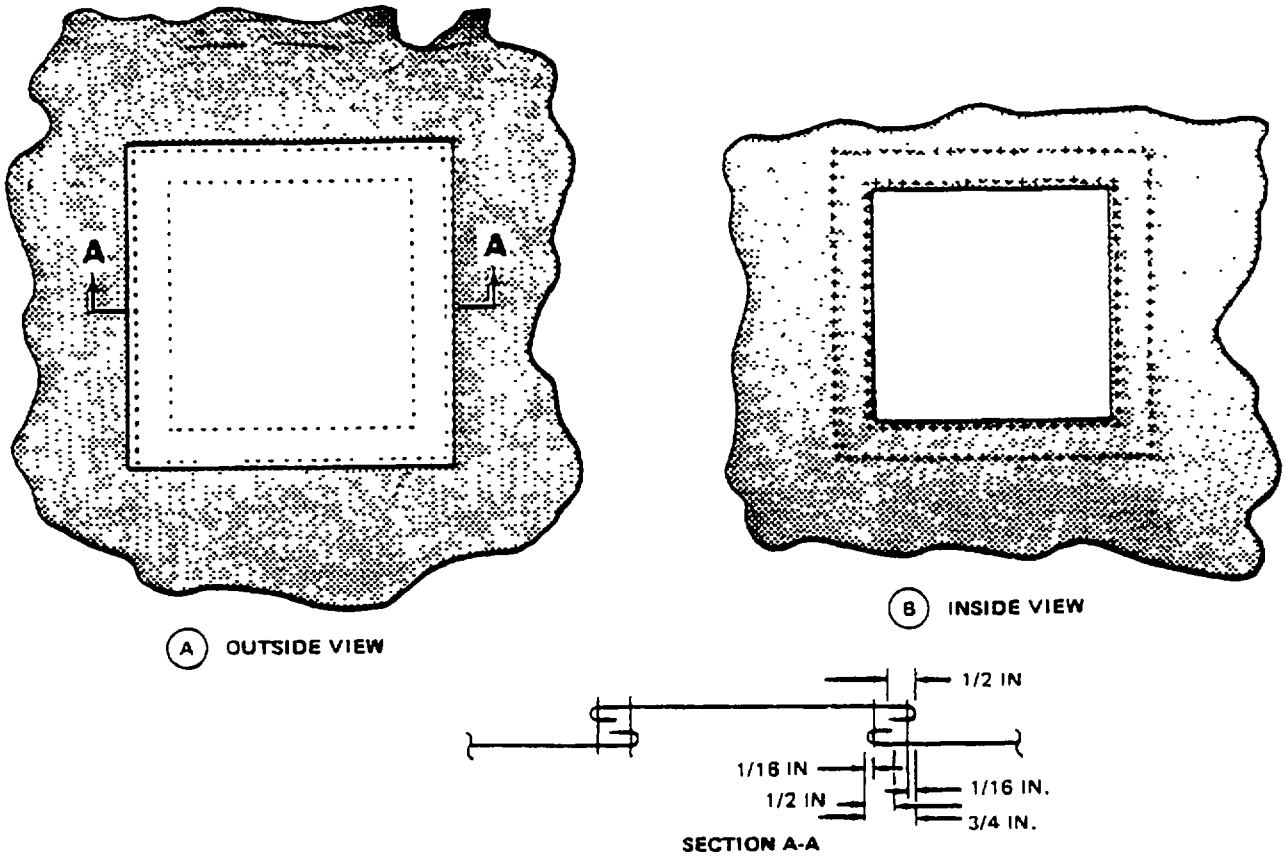


Figure 2-101. Basic Patch Application.

(7) Reinforcing webbing. Repair webbing as follows:

NOTE

Reinforcing webbing may be spliced one time.

(a) Cut a piece of type II cotton webbing long enough to extend 2 inches on each side of damaged area. Dip ends of webbing in wax (figure 2-102).

(b) Sew webbing in place with a box-stitch formation, using a light duty sewing machine, size E, nylon thread, and 7 to 11 stitches per inch.

(c) Outside stitching should be 1/8-inch in from edge of webbing. Lock stitches 1 inch.

2-32. Deployment Bag (CONT).

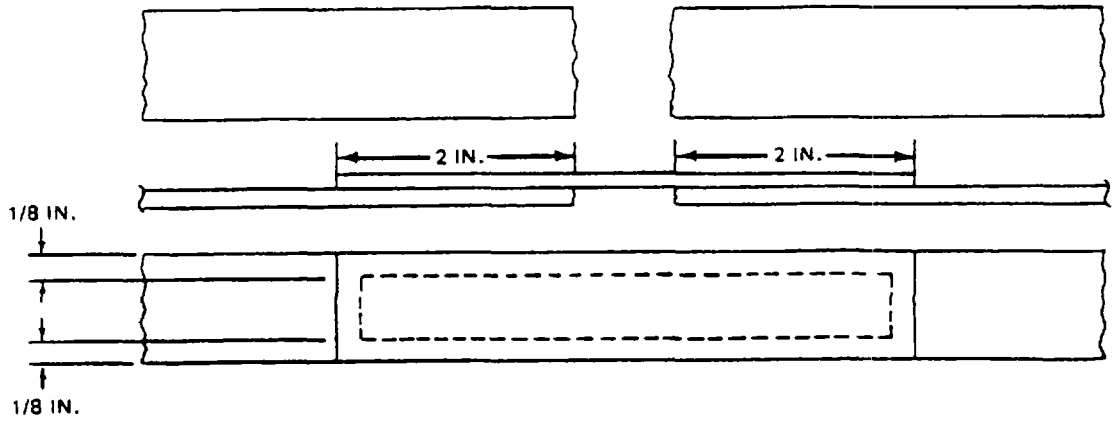


Figure 2-102. Reinforcing Webbing Repair.

Figure 2-103 Deleted

2-32. Deployment Bag (CONT).

Figure 2-104. Deleted

(8) *Locking stow loop hood*. Repair hood as follows:

(a) Cut stitching and remove damaged hood.

(b) Cut a 5 7/8-by 2 3/4-inch piece of 8.8 ounce cotton sateen cloth and turn under the 2 3/4-inch edges 1/4 Inch (A, figure 2-105).

(c) Bind the 5 7/8-inch edges with 3/4-inch type III cotton tape, and turn under ends of tape 1/2-inch. Using a light duty sewing machine, size E nylon thread, 7 to 11 stitches per inch, stitch the binding tape with two rows of stitches (B, figure 2-105).

(d) Position the prepared locking stow loop hood in the same place as the one removed. Stitch hood in place using a light duty sewing machine, size E nylon thread, 7 to 11 stitches per inch in two box X formations. Finished hood should not exceed 3 inches in width (C, figure 2-105).

(9) *Suspension line protector cover tiedown loop*. Replace tiedown loops that are burned, frayed or torn over one-half of the loop, as follows:

(a) Cut stitching, and remove damaged loop.

(b) Cut a 6-inch length of 9/26-inch type I nylon webbing, and dip ends to webbing.

(c) Position type I webbing in the same place damaged material was removed. Align the two ends of type webbing with the top of the webbing reinforcement (figure 2-106).

(d) Sew loop in place on underside of protector cover with a 3-point WW stitch formation on each end of type I webbing, staying on the webbing reinforcement. Use a light duty sewing machine, size E nylon thread and 7 to 11 stitches per Inch.

(10) *Static line assembly*. Repair or replace a static line assembly as follows:

NOTE

The only repair permissible on the static line is replacement of the safety pin and lanyard.

(a) Repair. Proceed as follows:

1 Cut a 5-inch length of 0.080-inch diameter corrosion resistant steel wire and form a 3 1/8-inch safety pin (A, figure 2-107).

2 Remove core cords from a 20-inch length of type II or type III nylon cord. Tie an overhand knot in each end and sear ends. Fold cord in half and attach to safety pin with a girth hitch (B, figure 2-107).

3 Tie an overhand knot in the cord no closer than 5 inches from the safety pin. Run one end of the cord through the static line loop where the snap hoop is attached and secure on top of the static line with a surgeon's knot and a locking knot (C, figure 2-107).

(b) Replacement. A static line assembly that is damaged beyond repair must be replaced as follows:

1 Remove damaged static line from deployment bag.

2-32. Deployment Bag (CONT).

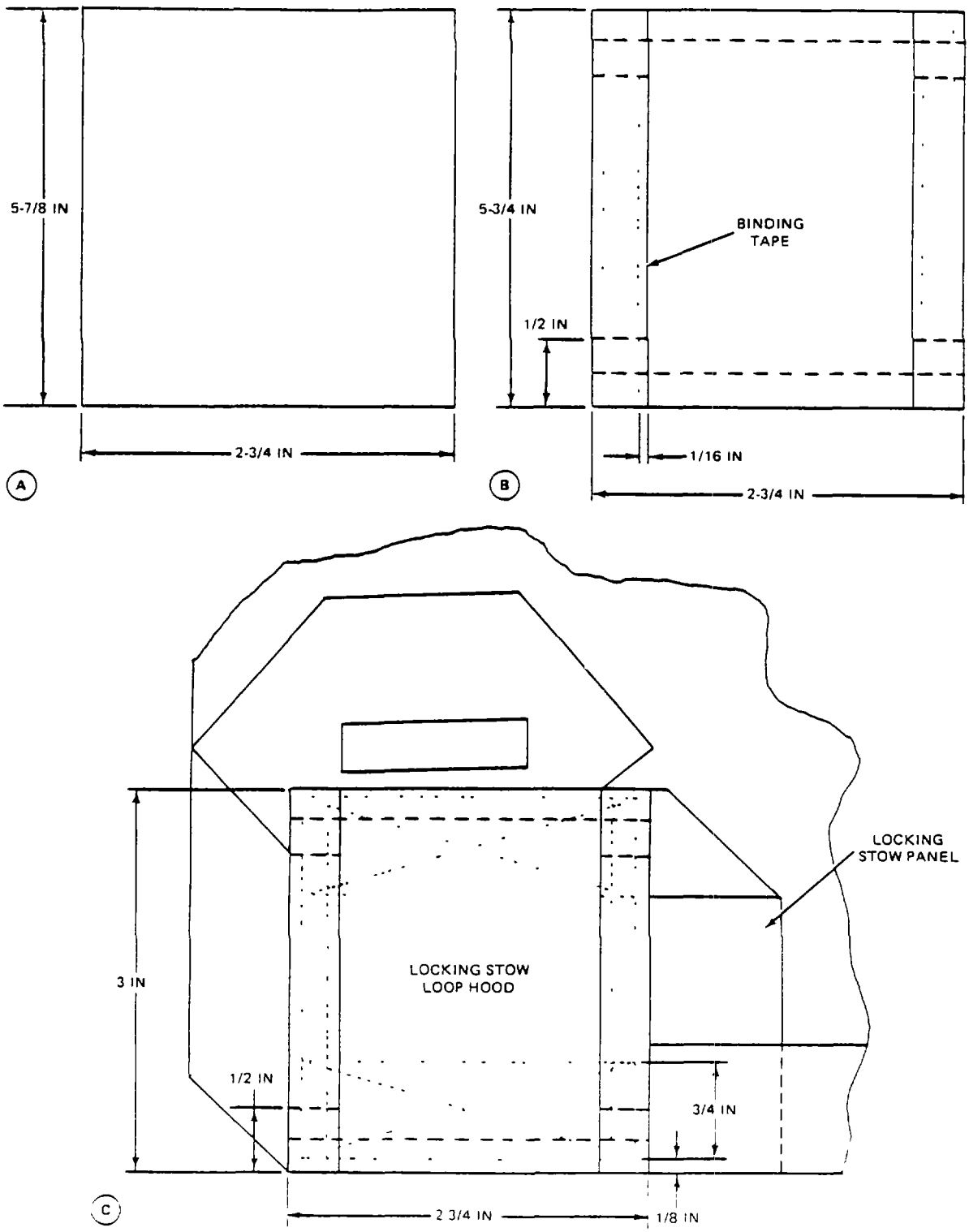


Figure 2-105. Locking Stow Loop Hood Replacement.

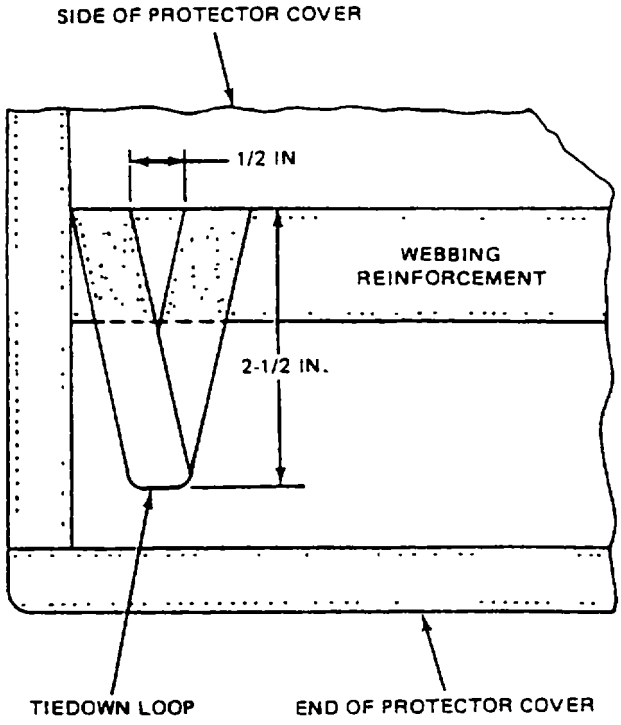


Figure 2-106. Suspension Line Protector Cover Tiedown Loop Replacement.

2 Position deployment bag with stow loop panel facing up, and pass buffer end of new line clockwise through deployment bag loops. Be sure that the folded edge of the static line is facing inward (A, figure 2-108).

3 Align the two ends of the buffer and stitch the static line in place, using a heavy duty sewing machine, size 6, nylon cord, 5 to 8 stitches per inch and a static line stitch formation 4 Inches long (B, figure 2-108).

4 Attach a serviceable snap hook to opposite end of new line, making sure that fold Is on the side opposite the snap hook button.

NOTE

The folded edge of the static line will be facing outward when passing the static line through the snap hook.

5 Stitch the static line in place with a 4-inch static line stitch formation, using a heavy duty sewing machine, size 6 nylon thread and 5 to 8 stitches per Inch (figure 2-109).

NOTE

Finished length of static line will be between 14 feet 5 3/4 inches and 14 feet 9 3/4 inches.

2-32. Deployment Bag (CONT).

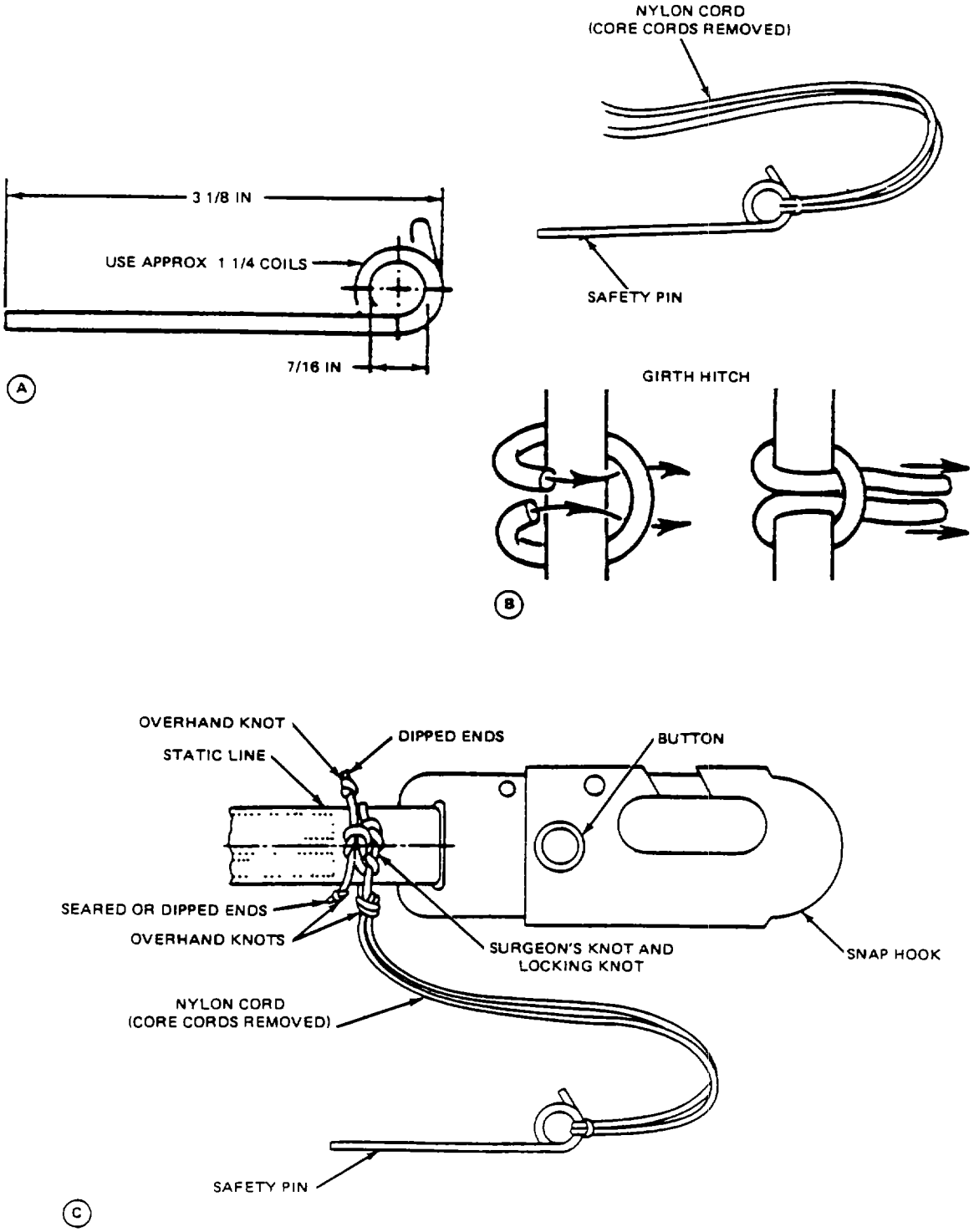


Figure 2-107. Static Line Safety Pin and Lanyard replacement.

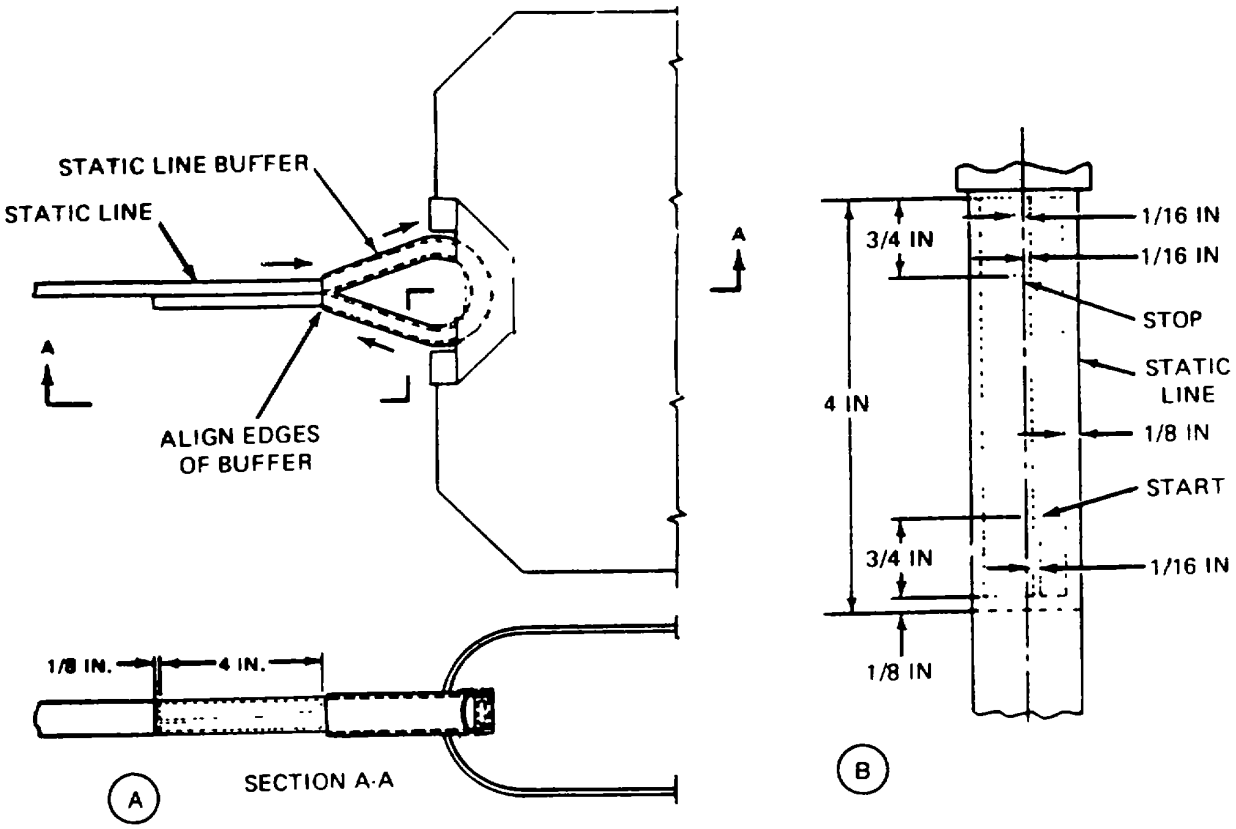


Figure 2-108. Attaching Static Line to Deployment Bag.

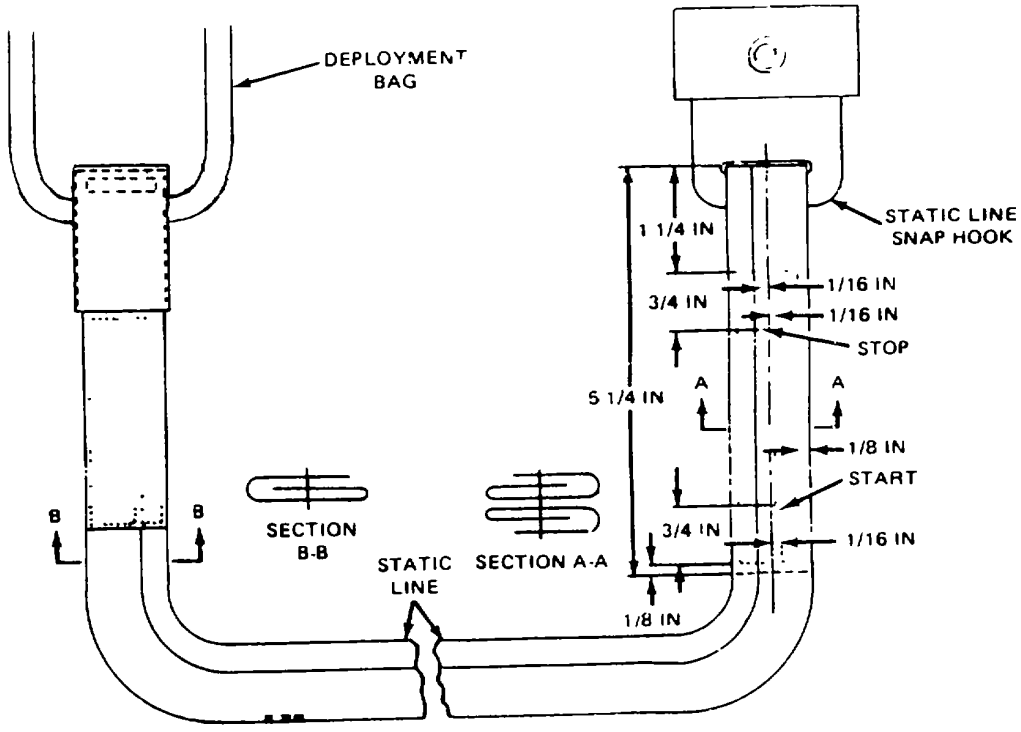


Figure 2-109. Attaching Snap Hook to Static Line.

2-32. Deployment Bag (CONT).

6 Fabricate and attach new safety pin and lanyard in accordance with repair instructions In (a), above.

(11) Static line extension. Refer to TM 10-1670-240-20.

b. *Replace.* Remove unserviceable deployment bag and replace with a serviceable one from stock.

2-33. Harness Assembly.

This task covers: a. Repair b. Replace

Tools:

Knife, Item 13, Appendix B
Sewing Machine, Medium Duty (Table 2-2)
Sewing Machine, Light Duty (Table 2-2)
Sewing Machine, Heavy Duty (Table 2-2)
Shears, Item 28, Appendix B
Tool Kit, Canopy Release, Item 30, Appendix B

Parts/Materials:

Cloth, Duck Nylon, Type Ill, Item 9, Appendix D
Felt, Type I, 3/16 inch thick, Item 19, Appendix D
Kit, Canopy Release, Item 23, Appendix D
Rubber, Cellular, 112 Inch thick, Item 34, Appendix D
Tape, Nylon, Type III, 1 inch wide, Item 45, Appendix D
Thread, Nylon Size E, Item 50/51, Appendix D
Thread, Nylon, Size 6, Item 56, Appendix D

Parts/Materials (CONT)

Webbing, Nylon, Type 1, 9/16 inch wide, Item 64, Appendix D
Webbing, Nylon, Type III, Item 65, Appendix D
Webbing, Nylon, Type XIII, Item 68, Appendix D
Webbing, Elastic, 1 inch wide, Item 61, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Harness clean, Inspected with defects recorded.

References:

Group No 04, MAC, Appendix B, Section II

a. Repair. The following repairs may be made to the harness assembly.

(1) *Handtacking*. Hand tack loose or broken tacking according to original construction.

(2) *Restenciling.* Restencil harness as necessary according to instructions In para 2-19.

(3) *Repainting canopy release*. Replace chipped paint on female fitting of canopy release with red enamel paint.

(4) Restitching. Restitch with thread that matches the size and color of the original stitching. Lock all straight stitching by back stitching at least 1/2 inch. Restitch directly over the original stitching, following the original stitch pattern as closely as possible.

b. Replacement. Replace components of harness assembly in accordance with the following procedures.

(1) Elastic retainer webbing. Replace as follows:

(a) Cut damaged retainer and remove from harness.

2-33. Harness Assembly (CONT).

(b) Cut a length of Type 1 elastic webbing 4 1/2 inches long and dip ends of webbing 1/4 inch (A, figure 2-110).

(c) Fold webbing, aligning ends and sew across webbing 1/4 inch from aligned ends. Use a light duty sewing machine, size E nylon thread, and 7 to 11 stitches per inch (B, figure 2-110).

(d) Fold both ends over along row of stitching and stitch through ends and one layer of loop 1/16 inch from webbing ends, using a light duty sewing machine, size E nylon thread, and 7 to 11 stitches per inch (C, figure 2-110).

(e) Turn loop inside out (D, figure 2-110) and slide into position onto appropriate strap.

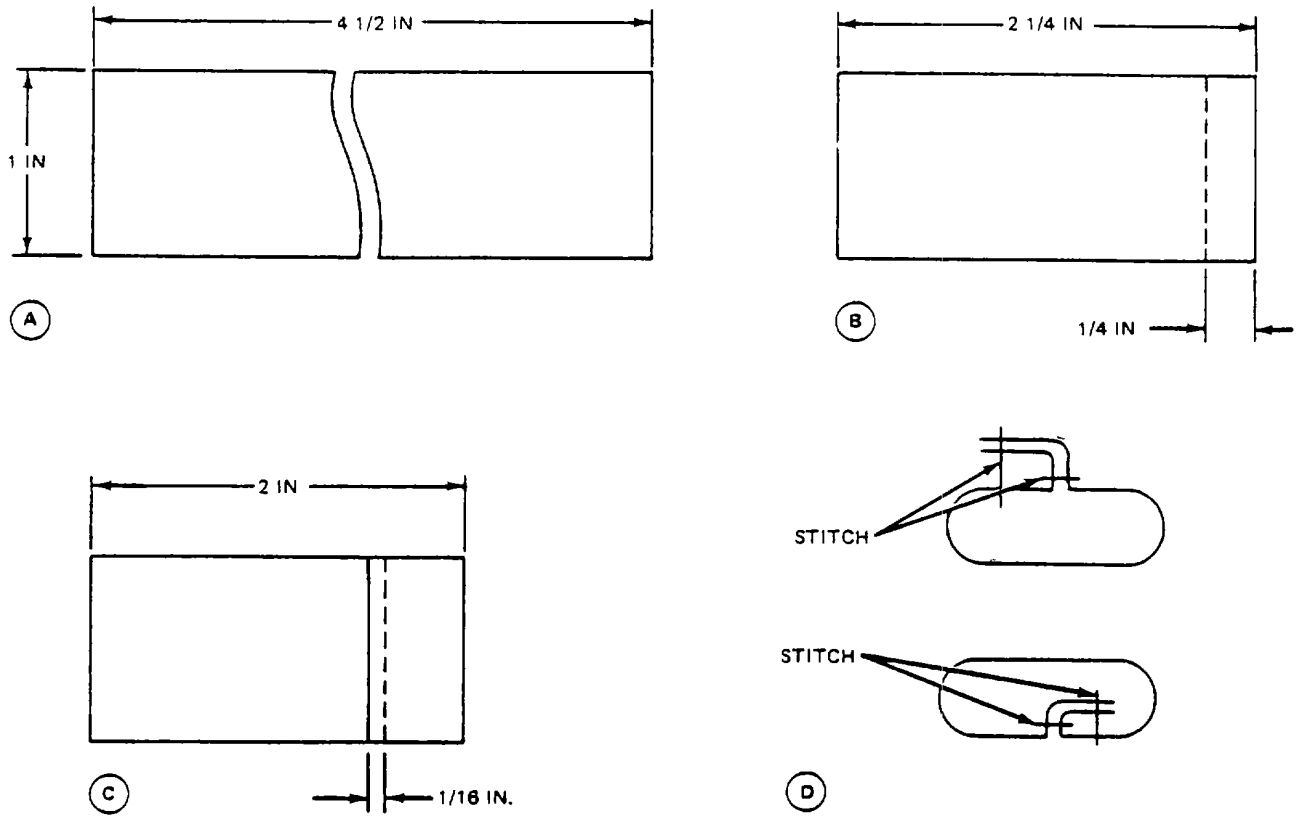


Figure 2-110. Fabrication of Elastic Retainer Webbing.

(2) Horizontal backstrap. Replace as follows (see figure 2-111):

(a) Remove damaged strap from harness assembly.

(b) Cut an 84-inch length of Type XIII nylon webbing and sear ends.

(c) Slip an elastic retainer webbing over each end of strap.

(d) Pass one end of webbing through one strap adjuster, through backstrap loops, and through other strap adjuster

(e) Roll each webbing end to form five plies. Use a heavy duty sewing machine and size 6, nylon thread to sew a box formation on the rolled webbing, using 5 to 8 stitches per Inch.

(f) Restencil date of manufacture and original date placed In service.

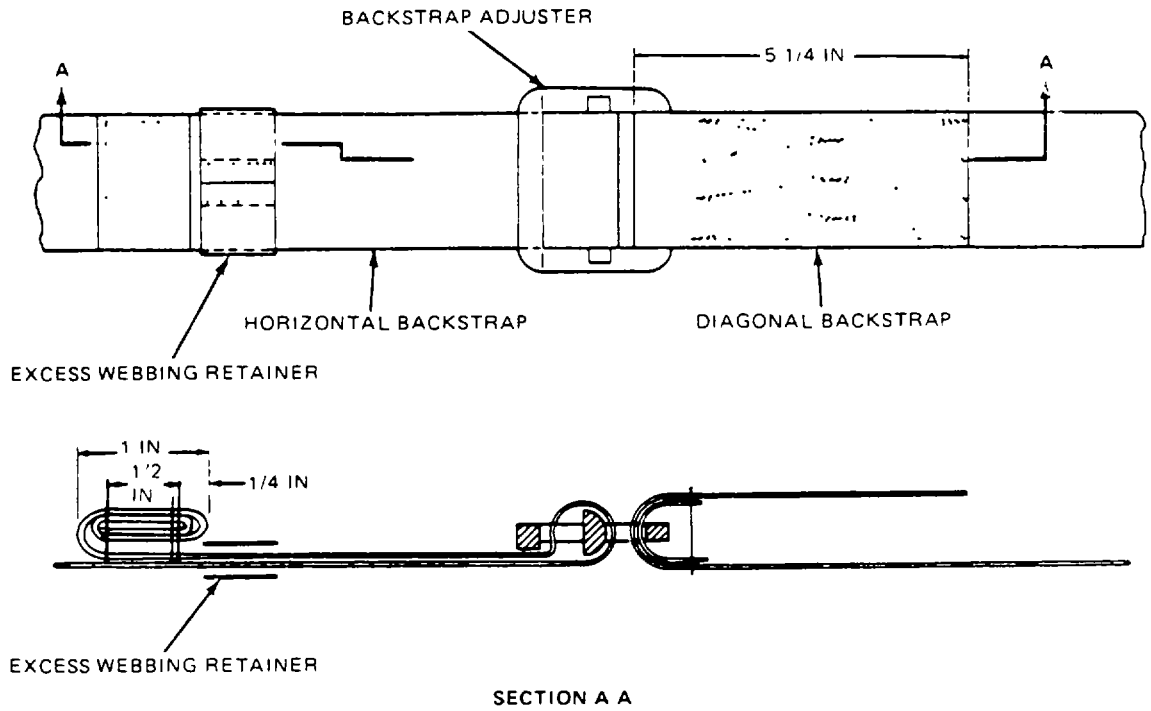


Figure 2-111. Replacement of Horizontal Back strap.

(3) Canopy release pad. Replace as follows:

(a) Cut tacking and remove unserviceable canopy release pad.

(b) Cut a piece of Type III nylon duck cloth 8 1/2 inches long and 5 3/8 inches wide (A, figure 2-112).

(c) Fold cloth in half, aligning the 5 3/8-inch side, and stitch 1/2 Inch from edge on the 5 3/8-inch side and one of the 4 1/4-inch sides. Use a light duty sewing machine, size E, nylon thread and 7 to 11 stitches per inch (B, figure 2-112).

(d) Turn sleeve inside out.

2-33. Harness Assembly (CONT).

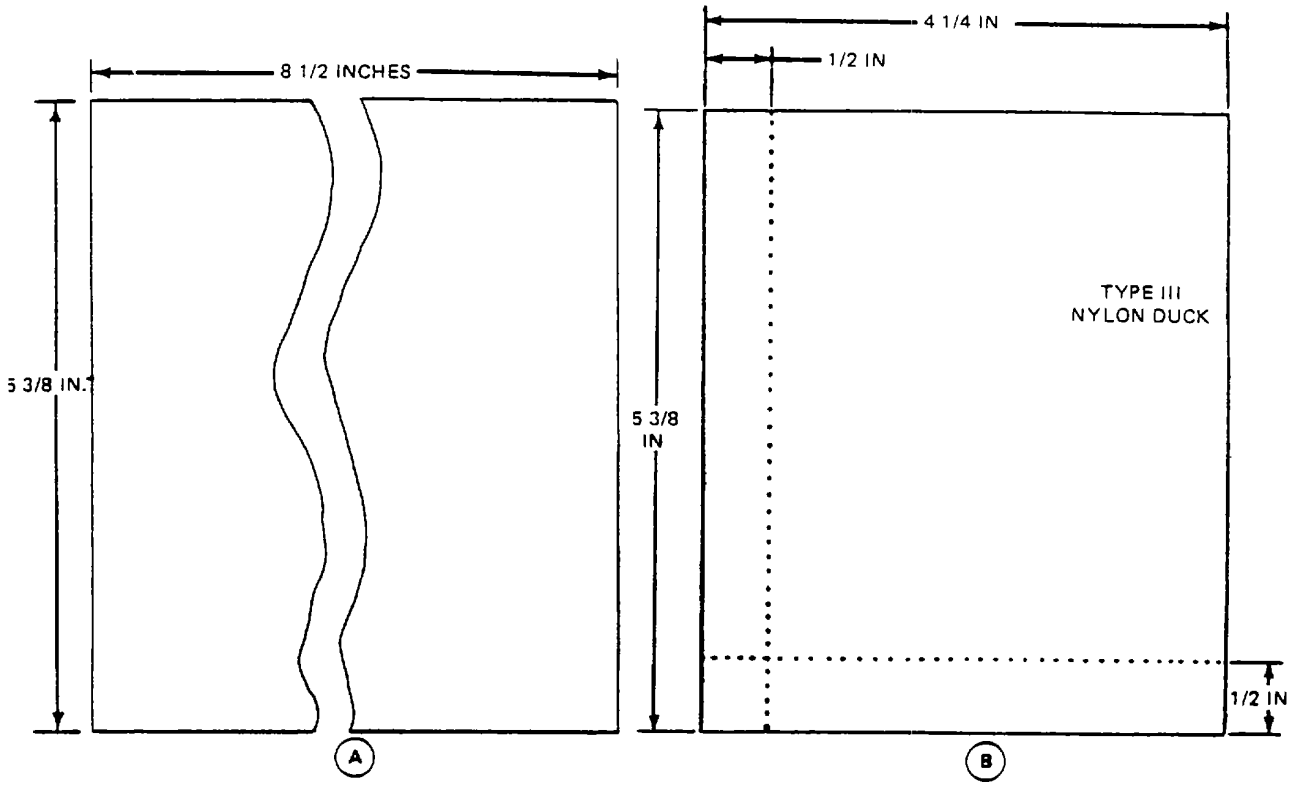


Figure 2-112. Fabrication or Canopy Release Pad.

(e) Cut a 4 5/8- by 4-inch piece of 1/2-inch thick cellular rubber, and insert it in nylon duck sleeve (1, figure 2-113).

(f) Tuck in raw edges at ends of sleeve 1/2 Inch, and stitch across each end of sleeve 1/8 inch from edge, using a light duty sewing machine, size E, nylon thread and 7 to 11 stitches per inch (B, figure 2-113).

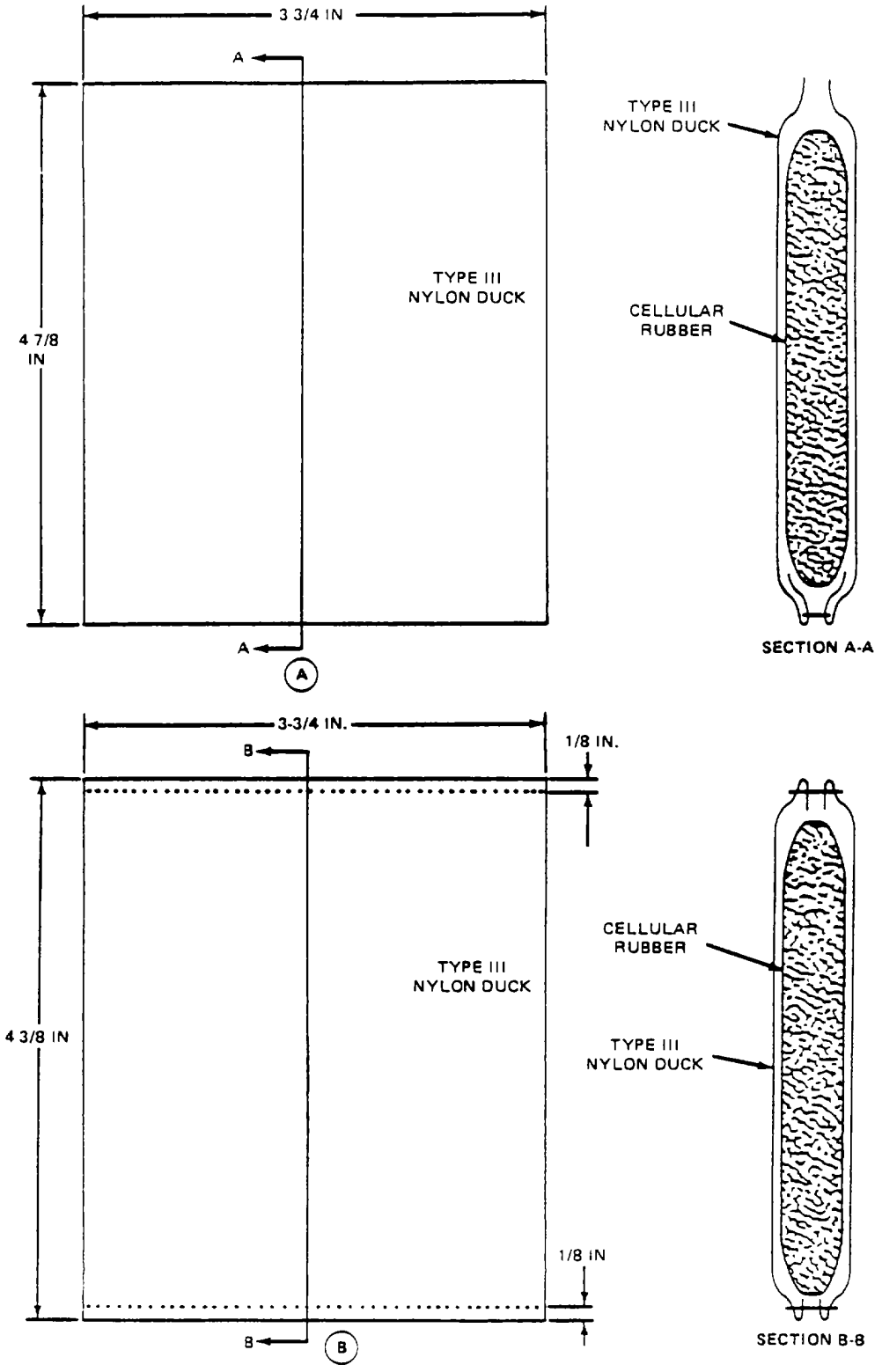


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Figure 2-113. Inserting and Securing Cellular Rubber in Sleeve.

2-33. Harness Assembly (CONT).

(g) Cut a 6-3/4-inch length of 9/16-inch Type I nylon webbing, and sear ends.

(h) Center webbing across pad 3/4 inch from one end, and stitch in place with a single-X box-stitch formation with double row of stitching at both ends, using a light duty sewing machine, size E, nylon thread and 7 to 11 stitches per inch (figure 2-114).

(i) Position pad under canopy release a shown (A, figure 2-115).

(j) Fold tab around harness webbing, and hand tack ends of tab together with two turns of doubled and waxed size No. 6 nylon thread (B, figure 2-115). Tie ends of thread with surgeon's knot and locking knot (C, figure 2-115).

(k) Hand tack opposite end of pad to harness webbing in two places with two turns of doubled and waxed size 6, nylon thread (B, figure 2-115).

(I) Tie ends of thread with surgeon's knot and locking knot (C, figure 2-115).

(4) *Elector snap pad. Replace as follows:*

(a) Cut tacking and remove damaged ejector snap pad.

(b) Cut a piece of Type I, 3116 inch thick felt, 6 inches long and 4 inches wide, and round all corners on 114 inch radius (A, figure 2-116).

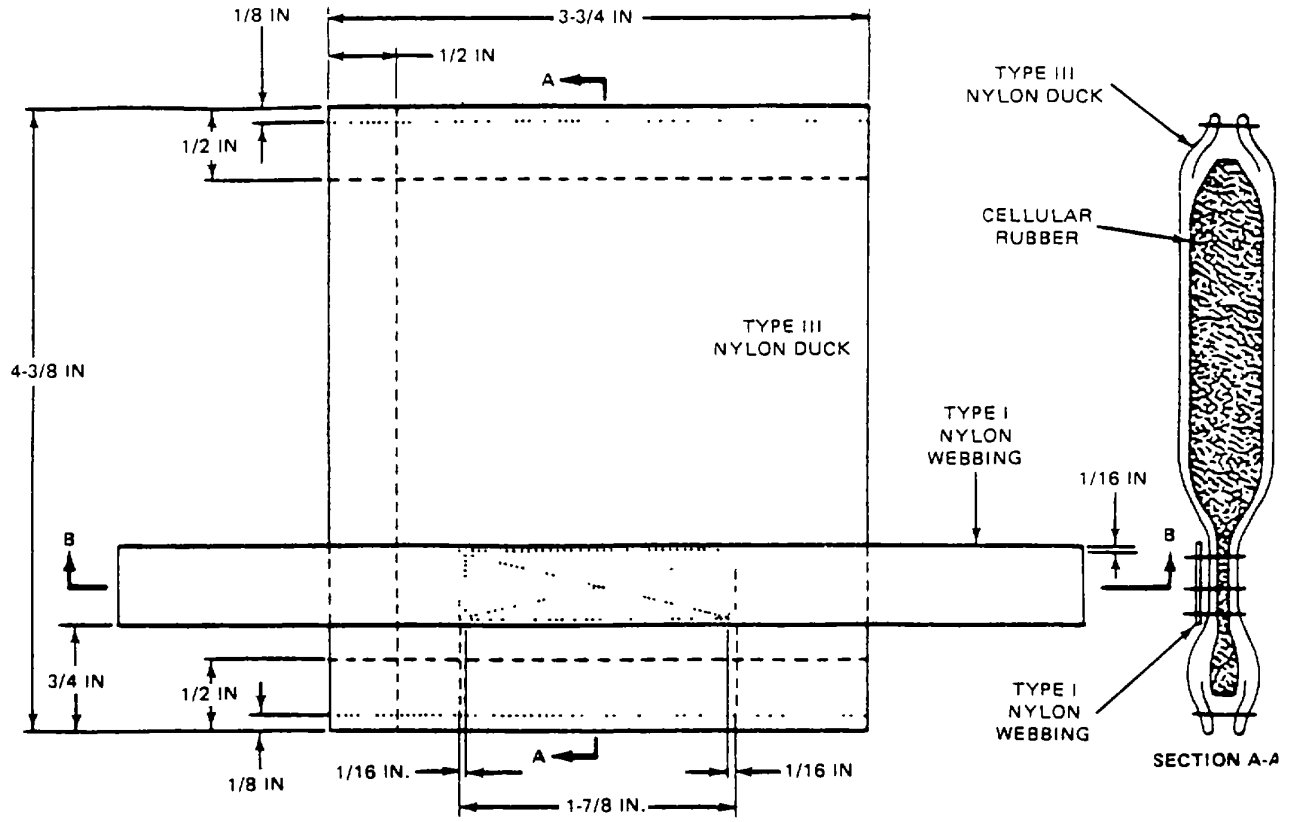
(c) Cut two pieces of olive green Type III nylon cloth, 6 inches long and 4 inches wide, and round all corners on 1/4 inch radius (B, figure 2-116).

(d) Cut a piece of Type III, 1 inch wide OD, nylon tape, 21 inches long. Sear both ends.

(e) Place the piece of felt between the two pieces of nylon cloth so that all edges are even. Make a temporary hand tack at center of pad 1 Inch in from each end (A, figure 2-117).

(f) Beginning at center of one end, bind replacement pad with length of tape cut in step (d) above. Sew tape to pad with two rows of stitching using OD, size E, nylon thread with 7 - 11 stitches per inch. Sew one row 1/8 Inch in from outer edge of pad and one row 3132 inch in from inside edge of tape. The running end of tape will overlap approximately 1 Inch (B, figure 2-117)

(g) Tack the replacement pad to snap in two places with two turns of doubled and waxed size 5 nylon thread. Secure the ties on the inside of the pad with a surgeon's knot and locking knot. Trim cord to 1 inch (figure 2-118).



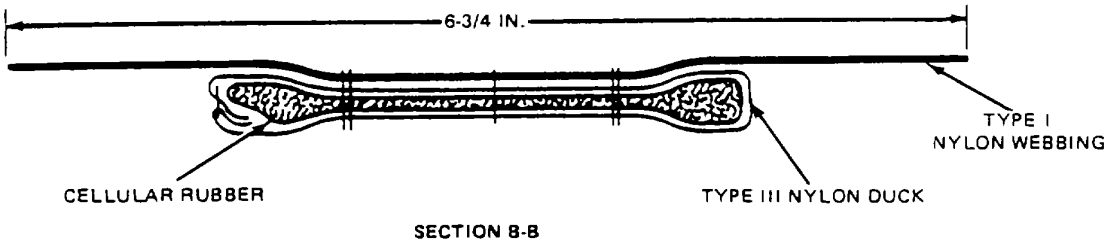


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Figure 2-114. Canopy Release Pad Construction Details.

2-33. Harness Assembly (CONT).

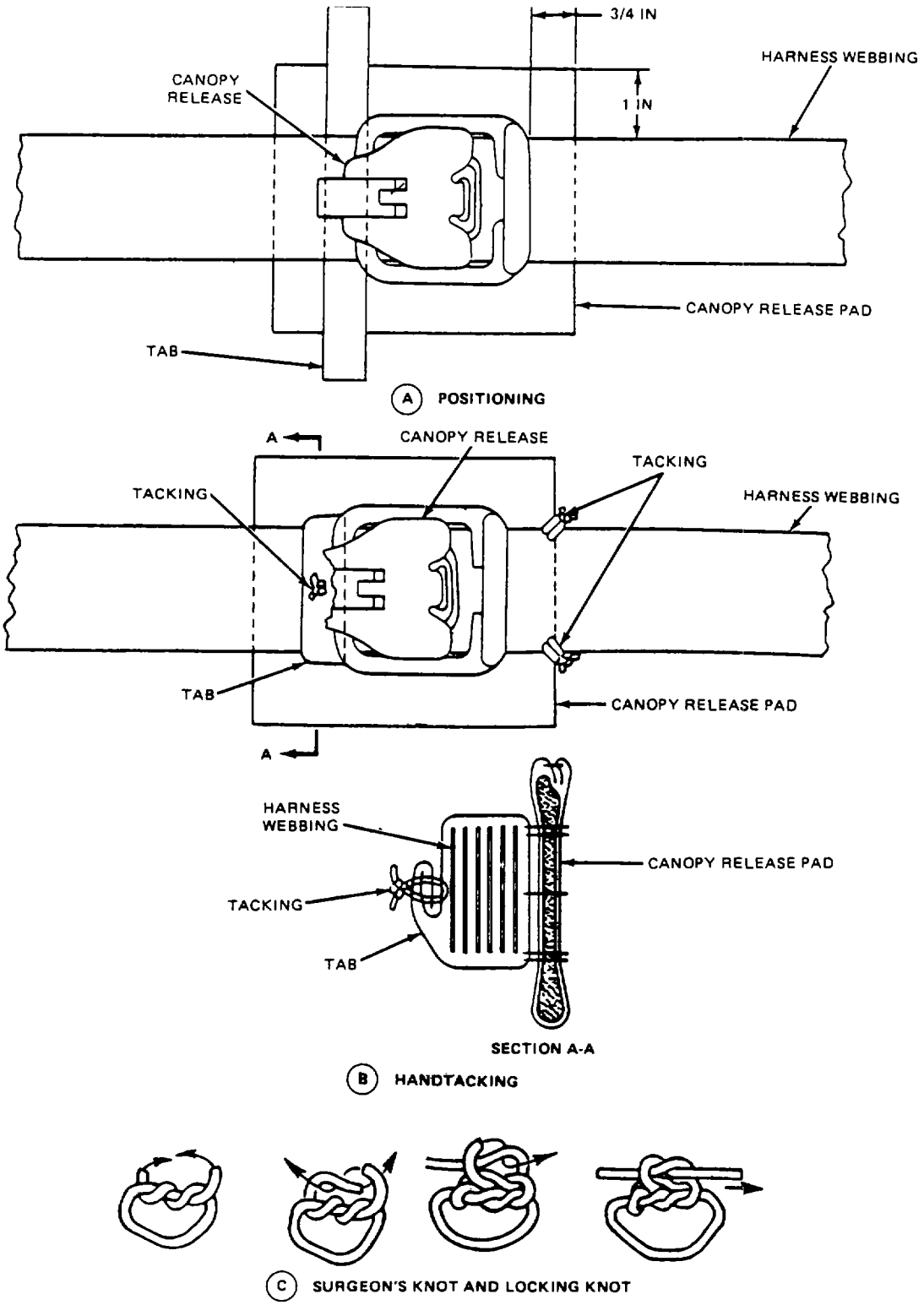

Figure 2-115. Assembly of canopy Release Pad to Harness.

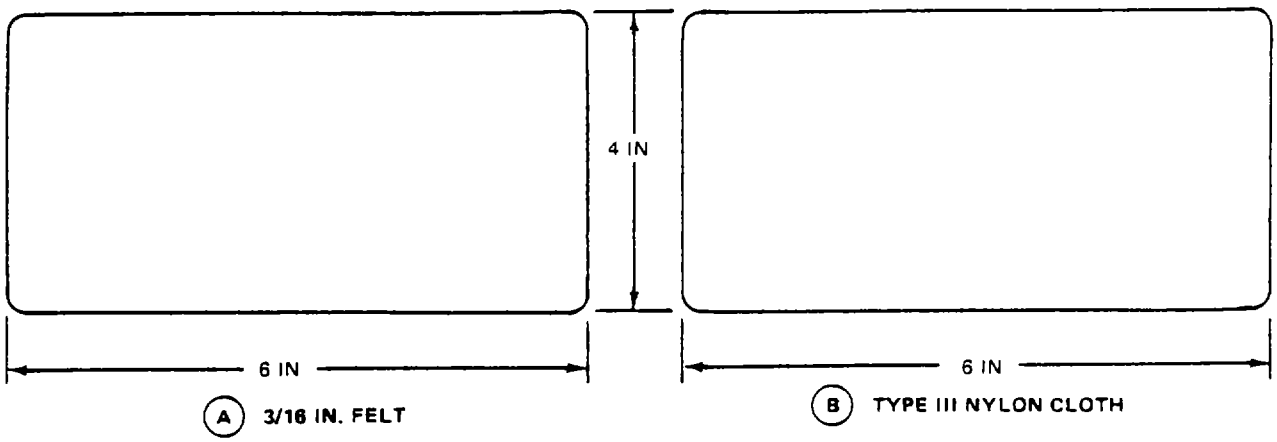

Figure 2-116. Ejector Snap Pad Pattern Layout.

2-33. Harness Assembly (CONT).

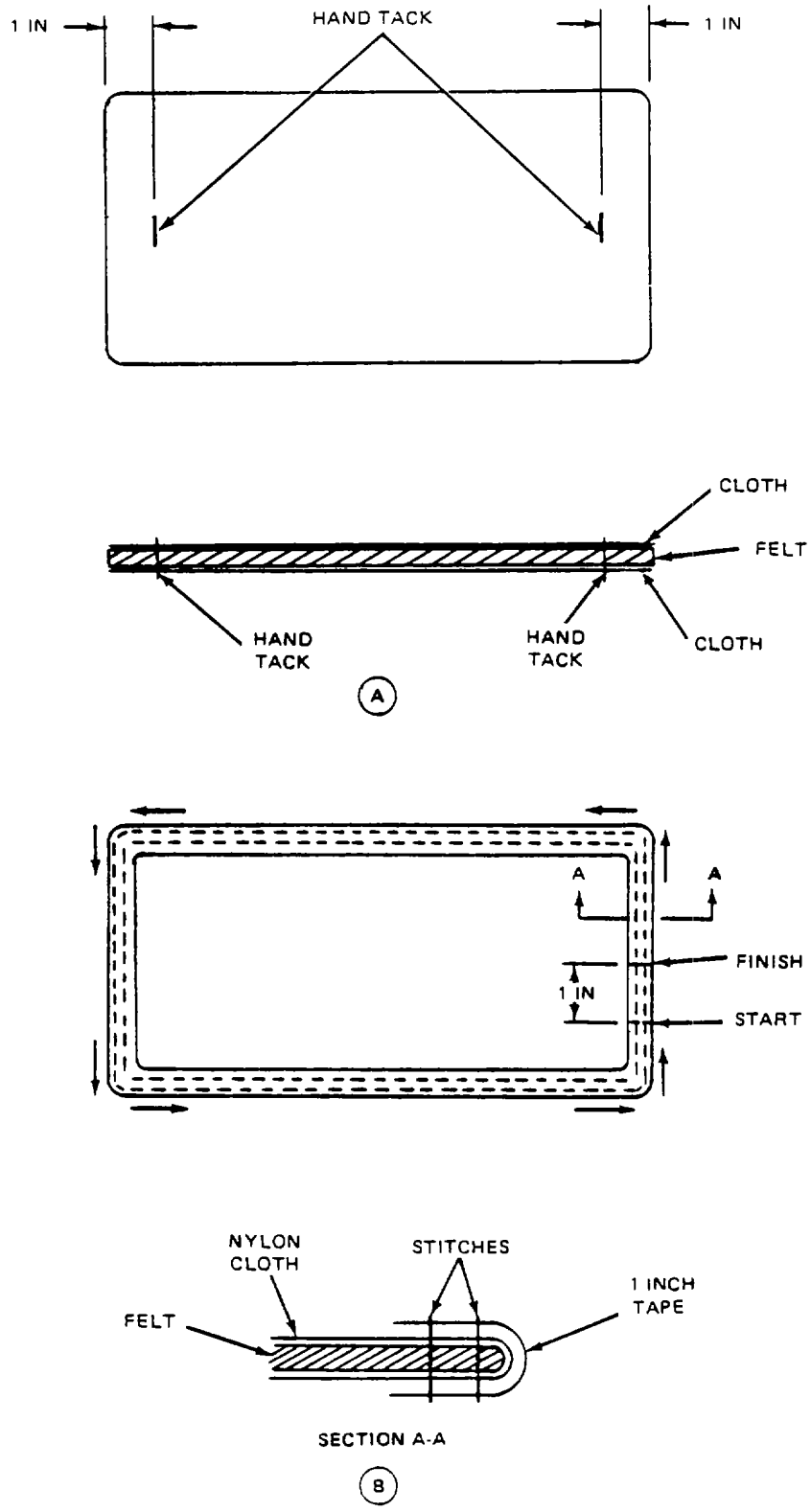

Figure 2-117. Ejector Snap Pad Construction Details.

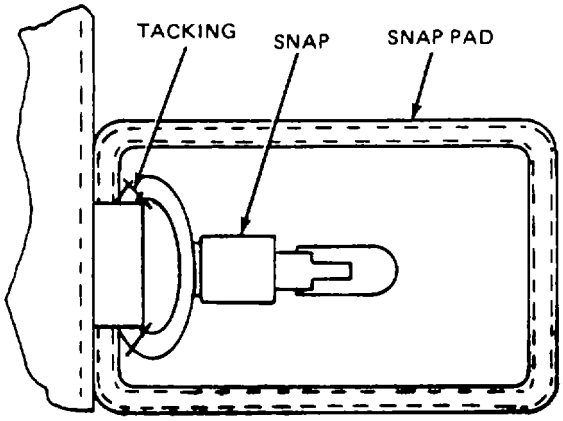

Figure 2-118. Installation of Ejector Snap Pad.

2-34. Pack Tray.

This task covers a. Repair b. Replace

Tools:

Anvil, Chuck Fastener, Item 1, Appendix B
Chuck, Item 4, Appendix B
Cutter, Single-Bow, Item 6, Appendix B
Cutter, Double-Bow, 1/2-Inch, Item 5, Appendix B
Holder, Die, Fastener, Item 10, Appendix B
Knife, Hot Metal, Item 14, Appendix B
Knife, Item 13, Appendix B
Lead, Pig, Item 15, Appendix B
Mallet, Rawhide, Item 17, Appendix B
Sewing Machine, Darning (Table 2-2)
Sewing Machine, Light Duty
Sewing Machine, Medium Duty (Table 2-2)
Sewing Machine, Heavy Duty
Sewing Machine, Zig-Zag (Table 2-2)
Shears, Item 28, Appendix B

Parts/Materials:

Cloth, Duck, Nylon, Type Ill, Item 9, Appendix D
Fastener -
Cap, Item 5, Appendix D
Post, Item 31, Appendix D
Socket, Item 36, Appendix D
Stud, Item 42, Appendix D

Parts/Materials (CONT)

Tape, Nylon, Type III, 3/4-in., Item 47, Appendix D
Thread, Nylon, Size E, Item 50, Appendix D
Thread, Nylon, Size 3, Item 54/55 Appendix D
Webbing, Cotton Elastic, Class 1, Item 61, Appendix D
Webbing, Nylon, Tape VI, Item 66, Appendix D
Webbing, Nylon, Type VIII, Item 67, Appendix D
Webbing, Nylon, Type XVII, Item 69, Appendix D

Personnel Required:

43E(10) Parachute Rigger

Equipment Condition:

Pack tray clean with all defects recorded

Reference:

Group 05, MAC, Appendix B, Section II

a. Repair.. Minor repairs to the pack tray of the T-10B parachute consist of darning small holes or tears, and splicing edge binding.

(1) *Darning.* There is no limit to the number of times the pack tray may be darned. Darn small holes or tears that do not exceed 3/4 Inch in length or diameter, adapting procedures for darning in para. 2-17.

(2) *Splicing edge binding*. Splice as follows.

(a) Cut a piece of Type III nylon tape long enough to extend 1 Inch beyond each end of damage (figure 2-119).

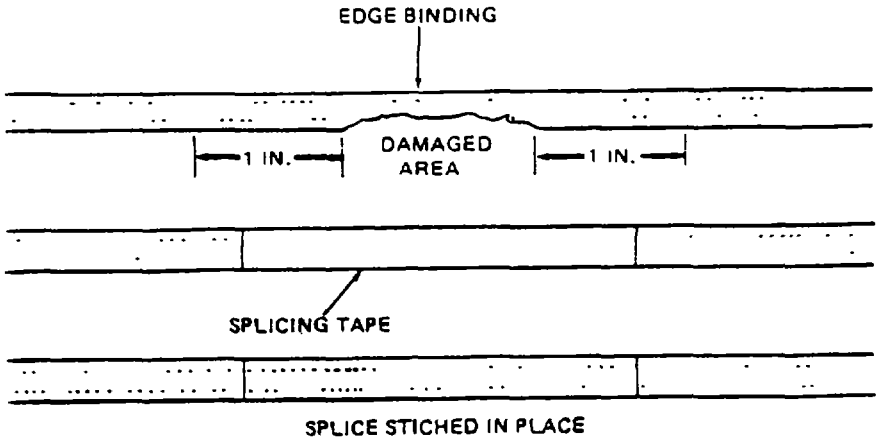

Figure 2-119. Splicing Pack Tray Edge Binding.

(b) Fold each end under 1/4 inch, center binding over damaged area, and stitch in place using a medium duty sewing machine, nylon thread, size E and 7 to 11 stitches per inch. Overstitch ends of splice at least 1/2 inch.

b. Replacement. Replace components of pack tray as follows:

(1) *Pack tray*. Remove unserviceable pack tray and replace with a new one from stock as follows:

(a) Unsnap the diagonal and horizontal backstrap keepers and remove pack tray.

(b) Place harness on new pack tray. Place diagonal and horizontal backstrap keepers over the backstraps and under the retainers and snap the keepers (figure 2-120).

(2) *Backstrap retainers*. Replace as follows:

(a) Cut stitching and remove damaged horizontal backstrap retainer and loose threads.

(b) Cut an 11 1/2-inch length of Type XVII nylon webbing for horizontal backstrap retainer

(c) Position new retainer 1 3/8 inches above the binding tape and both edges even with the stitches on each side (figure 2-121).

(d) Sew the retainer in place using a heavy duty sewing machine, size 3 nylon thread and 5 to 8 stitches per inch with two 1 5/8-inch and one 3 1/2-inch box X stitch formation with a double row on each end.

(e) Cut stitching and remove damaged diagonal backstrap retainer and loose threads.

(f) Cut a 6-inch length of Type XVII nylon webbing for each diagonal backstrap retainer to be replaced.

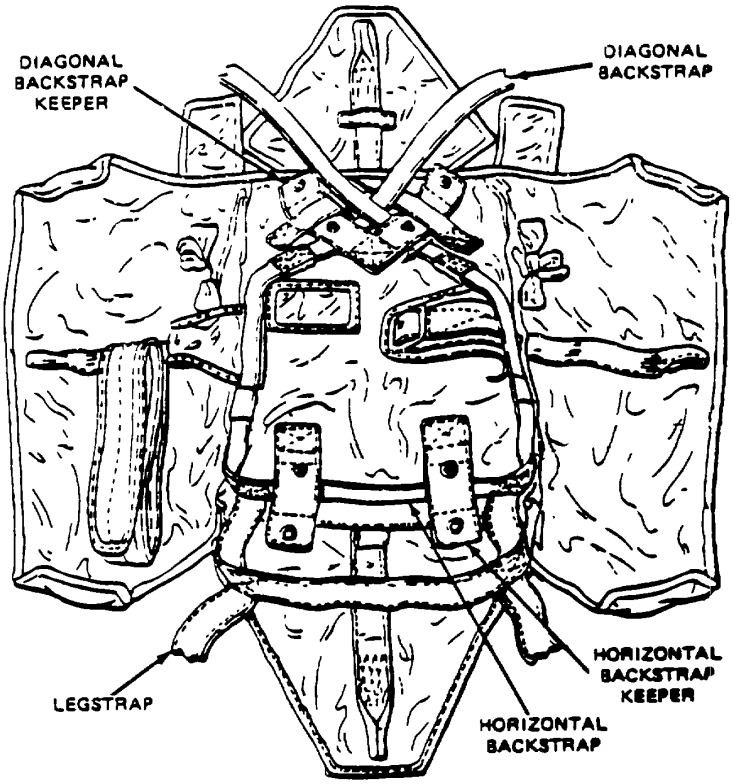

Figure 2-120. Replacement of Pack Tray.

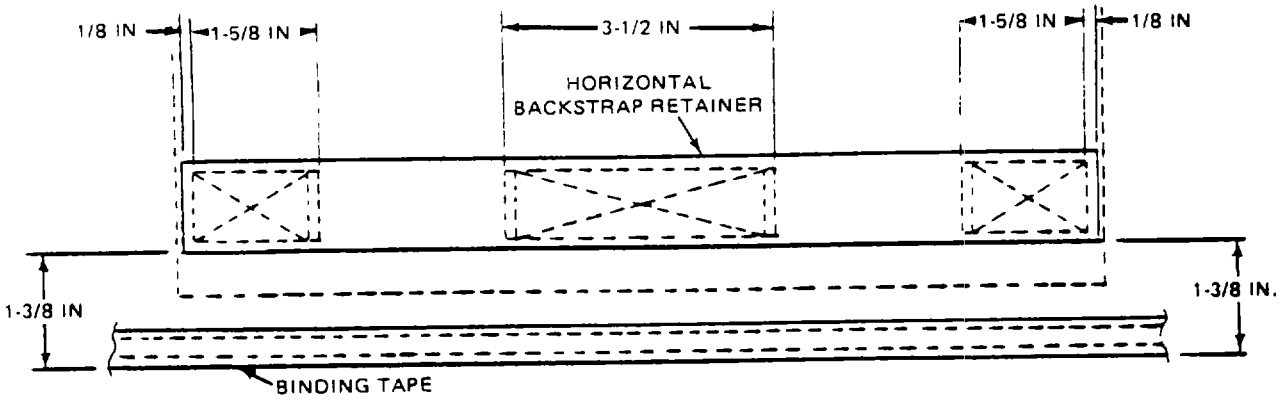

Figure 2-121. Installation of Horizontal Backstrap Retainer.

(g) Position the backstrap retainer as shown In figure 2-122 and sew In place, using a heavy duty sewing machine, size 3 nylon thread and 5 to 8 stitches per Inch, with a 1 5/8 inch box X stitch formation.

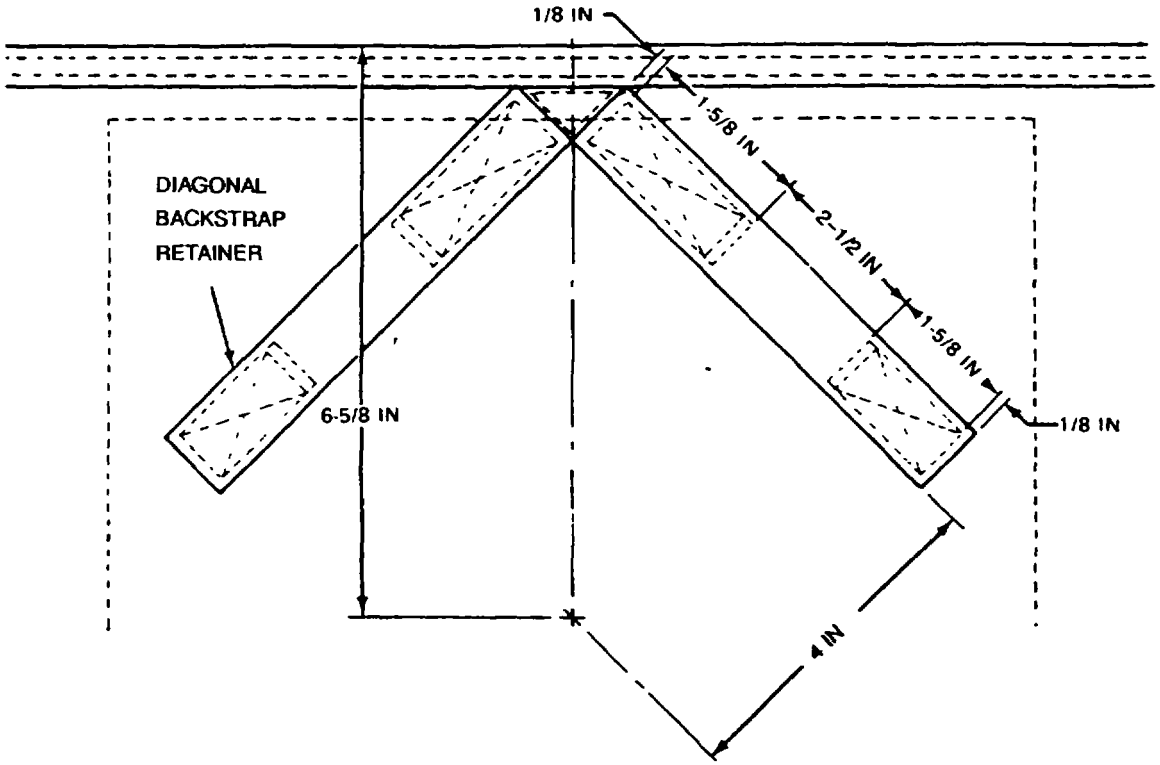

Figure 2-122. Installation of Diagonal Backstrap Keeper.

(3) *Backstrap keepers.* Replace as follows:

(a) Cut stitching and remove damaged keeper and loose threads.

(b) Cut a 7 1/8-inch length of type VI nylon webbing (A, figure 2-123) and sear ends of webbing.

(c) Fold one end under 1 inch and sew with a box X stitch formation, using a heavy duty sewing machine, size 3 nylon thread, and 5 to 8 stitches per inch.

(d) Measure 2 3/4 inches from the seared end of the webbing. Cut a 1 3/4-inch square piece of type III nylon duck and sear edges, place on the opposite side of the webbing from the folded end (B, figure 2-123).

(e) Sew the duck in place using a heavy duty sewing machine, size 3 nylon thread and 5 to 8 stitches per inch.

2-34. Pack Tray (CONT).

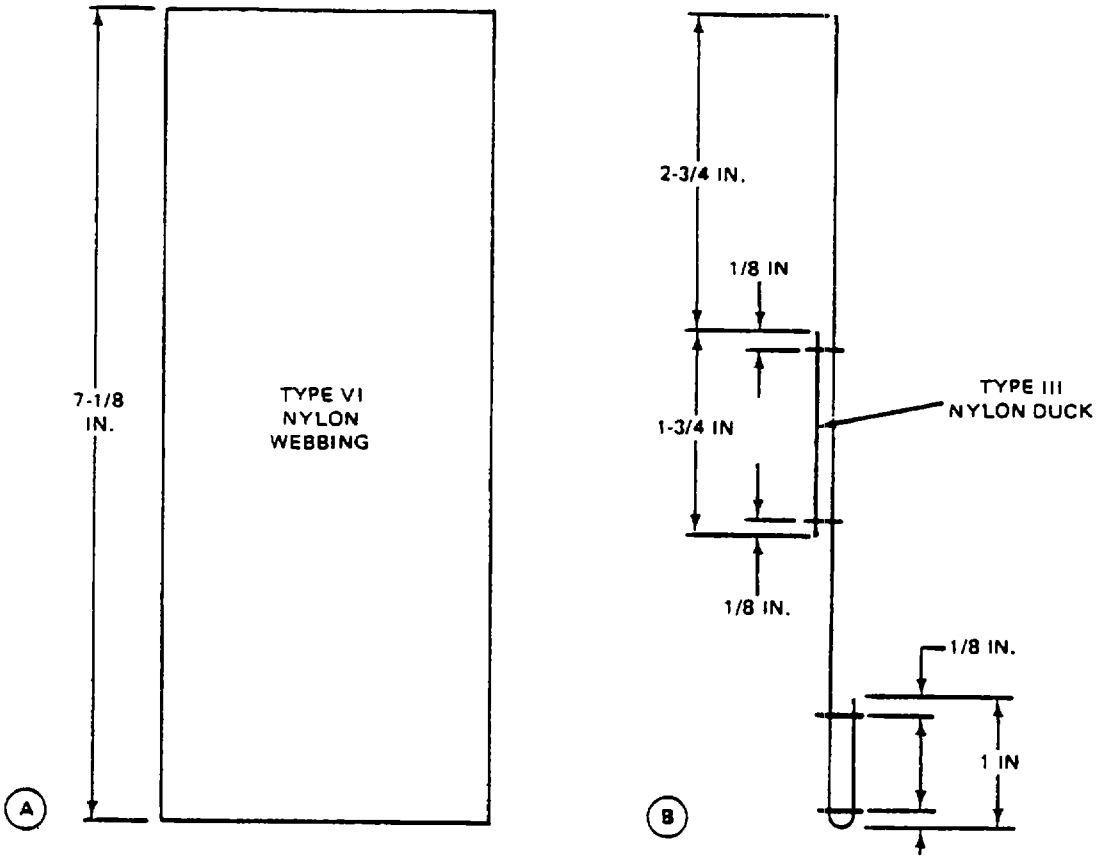

Figure 2-123. Fabrication of Backstrap Keeper.

(f) Install a socket assembly in the center of the folded end and a stud assembly in the center of the reinforcement duck, as shown in figure 2-124. Use the following installation procedure.

1 Cut the fabric for the socket and stud assemblies using a mallet and lead cutter block and an appropriate sized double- or single-bow cutter (see figure 2-125).

2 Installation of a snap fastener may be performed by three different methods. The most common method is the hand-held method that requires the use of a leather mallet (figure 2-125) or other non-steel impact device, a holder to hold the appropriate sized chuck (A, figure 2-126), and an anvil which is used to contain a compatible sized die. A second method of installing a snap fastener assembly is by use of the hand-operated press (B, figure 2-126). The hand-operated press is a lever-type device that can accommodate an appropriate sized chuck and die. When installed in the hand-operated press, the chuck and die are Individually secured in position by a threaded screw that is tightened using a suitable sized key (Allen-type hexagon wrench) or a flat-tip (common-head) screwdriver, as applicable. The third method of snap fastener Installation is by use of the foot-operated press which, except for the means of operation, functions similar to the hand-operated press.

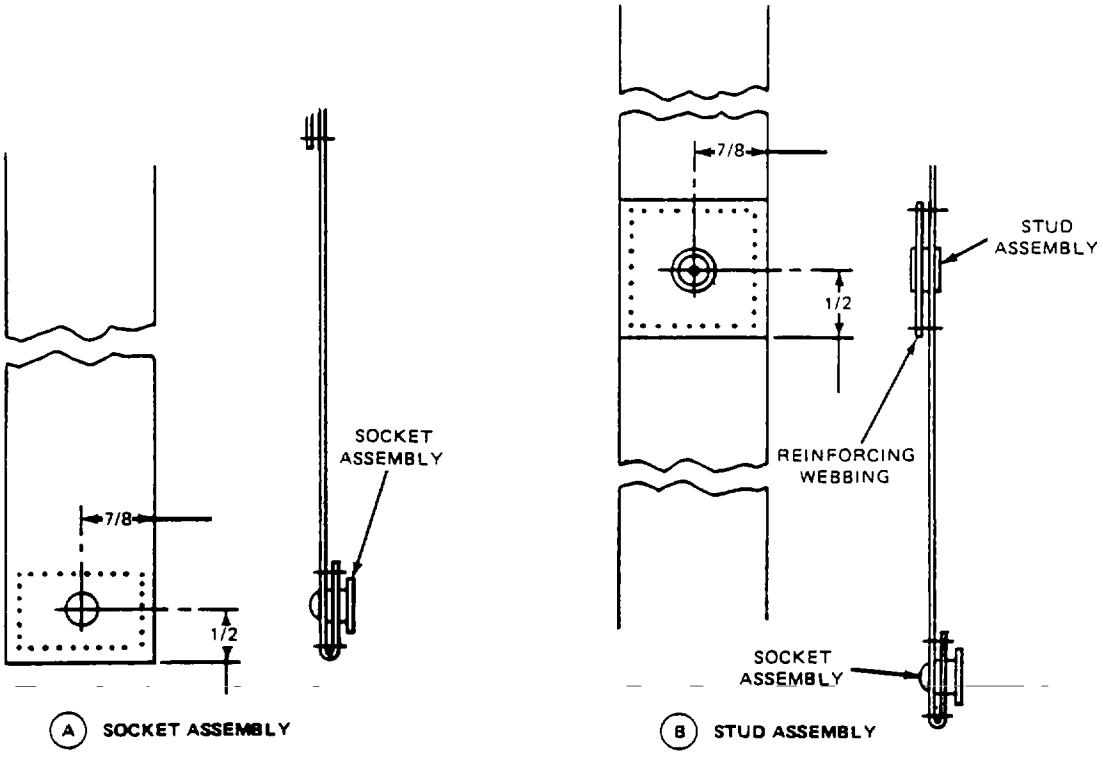

Figure 2-124. Installation of Socket and Stud Assemblies.

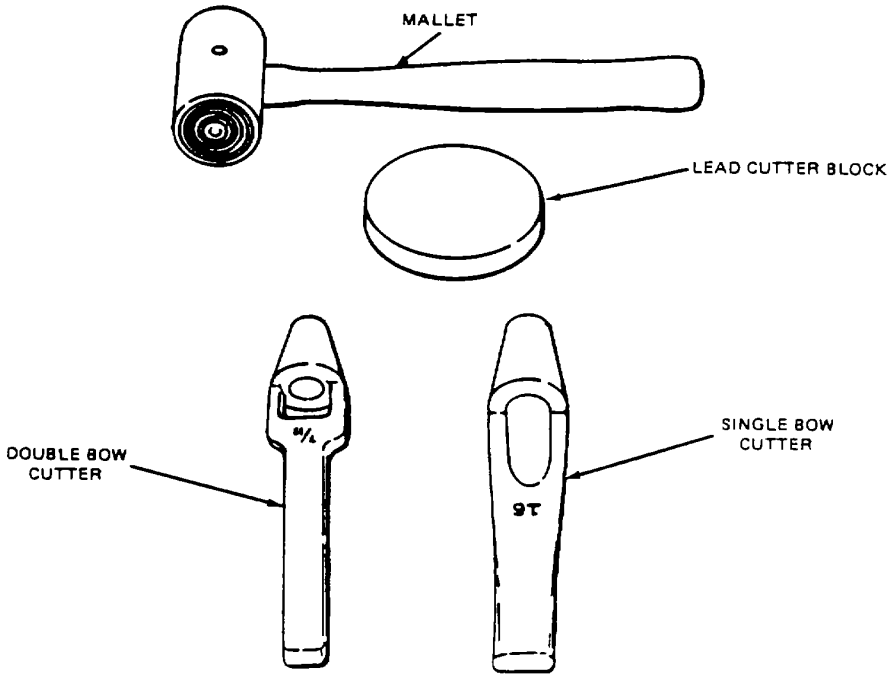

Figure 2-125. Fabric Cutting Tools for Snap Fastener Installation.

2-34. Pack Tray (CONT).

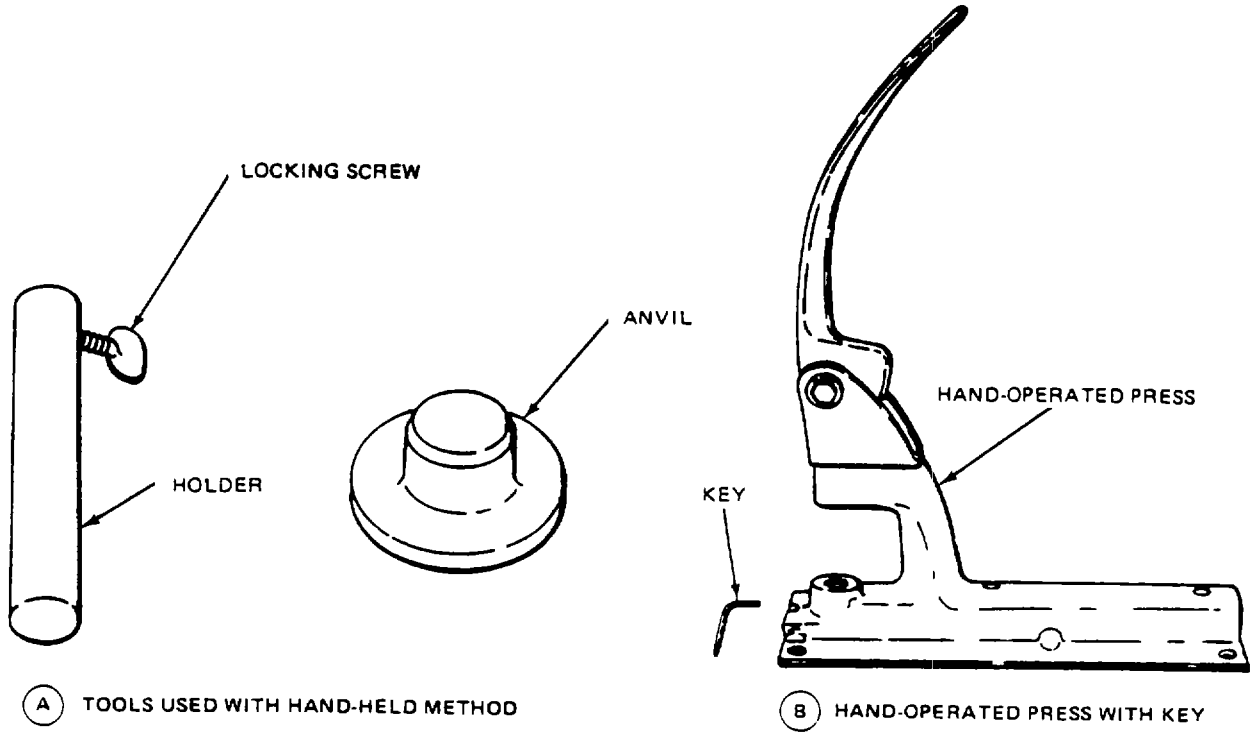

Figure 2-126. Snap fastener Installation Tools.

3 Using the specifics in Appendix B, ascertain the size die and chuck required for installing the fastener cap and socket or stud and post, as applicable.

4 Place the selected chuck in the open end of the holder and secure the chuck in place using the locking screw located on one side of the holder. Place the; appropriate die into the anvil.

5 Fit the socket or stud, as applicable, on the chuck lower end (figure 2-127). Place the cap or post, as applicable, on the die with the barrel facing up.

6 Position the material over the barrel of the cap or post. Ensure that the fastener socket or stud will be located on the proper side of the material for subsequent fastener engagement.

7 Place the socket or stud, on the barrel of the cap or post. With an applied strike from a mallet, clinch the two snap fastener components to the material.

8 Remove the clinched snap fastener components from the chuck and die set and check the seating of the joined components. If the applicable components are not properly seated, repeat the procedure in step 7 above.

9 Check the engagement of the installed snap fastener components with the opposite mating components to ensure the open and closed snapping process is accomplished without hinderance. If the snap engaging process cannot be accomplished without difficulty, replace the opposite mating snap fastener components using the procedures in 3 through 8 above.

10 As required, remove the chuck and die from the applicable snap fastener tools by reversing the procedures in step 4 above.

11 Installation of snap fastener assemblies by hand- or foot-operated press can be accomplished using the procedures above, except the chuck and die will be secured within the applicable press assembly using the available locking screws (figure 2-127).

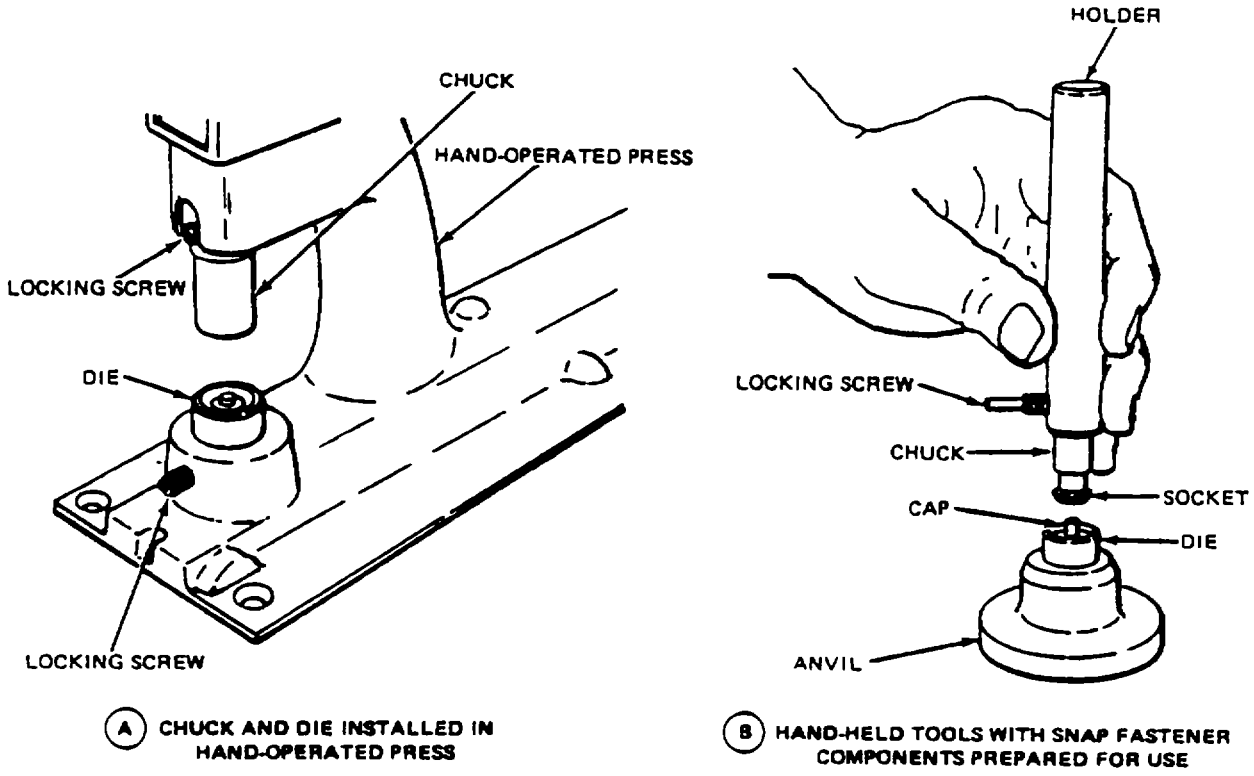

Figure 2-127. Snap Fastener Installation Tools Prepared for Use.

(g) Position the new diagonal backstrap keepers as shown in A and B, figure 2-128, and sew in place using a heavy duty sewing machine, size 3, nylon thread, 5 to 8 stitches per inch and a box X stitch formation.

(h) Position a new horizontal backstrap keeper as shown in figure 2-129. Sew keeper in place using a heavy duty sewing machine, size 3 nylon thread, 5 to 8 stitches per inch and a box X stitch formation.

2-34. Pack Tray (CONT).

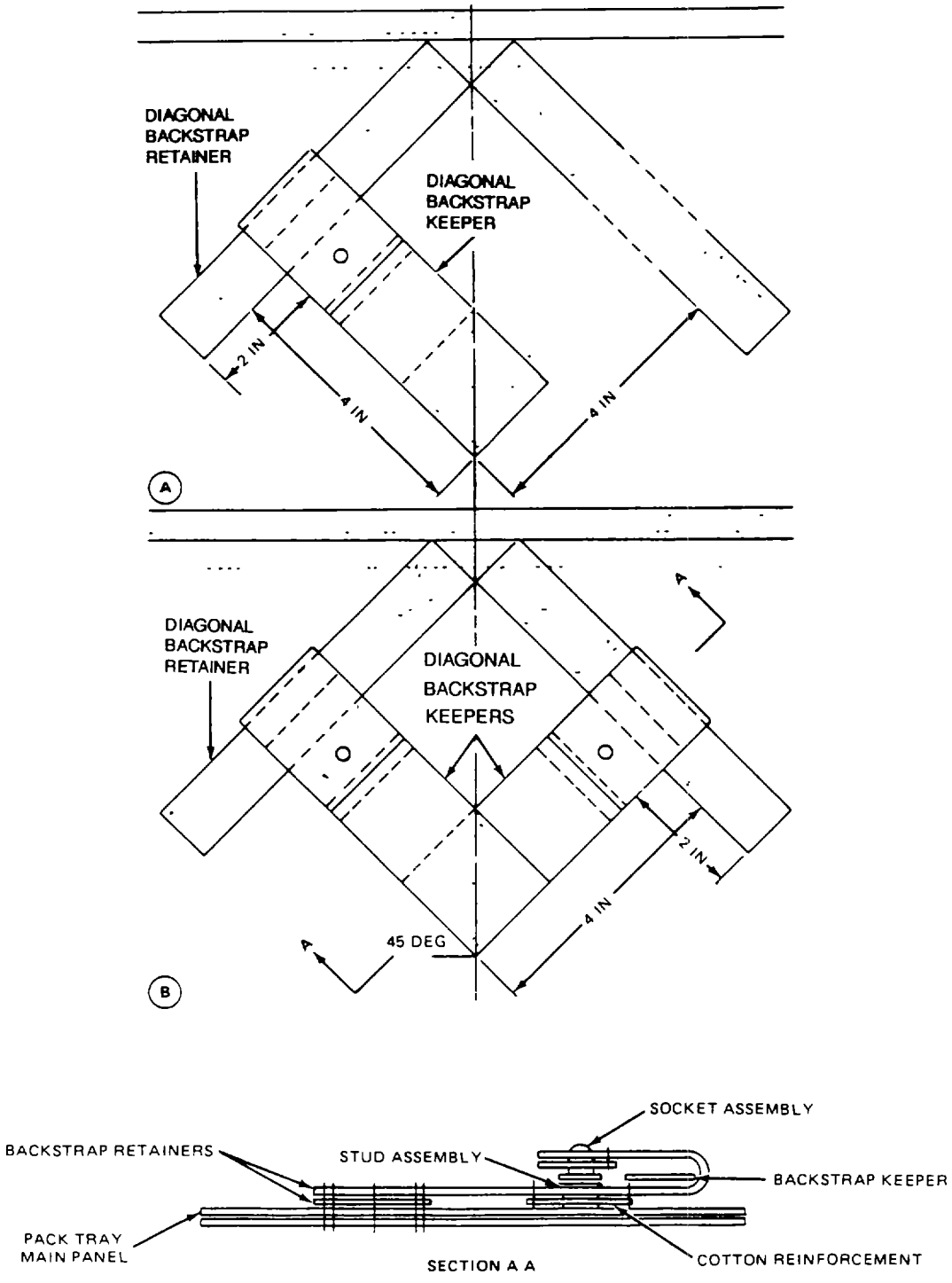

Figure 2-128. Installation of Diagonal Backstrap Keepers.

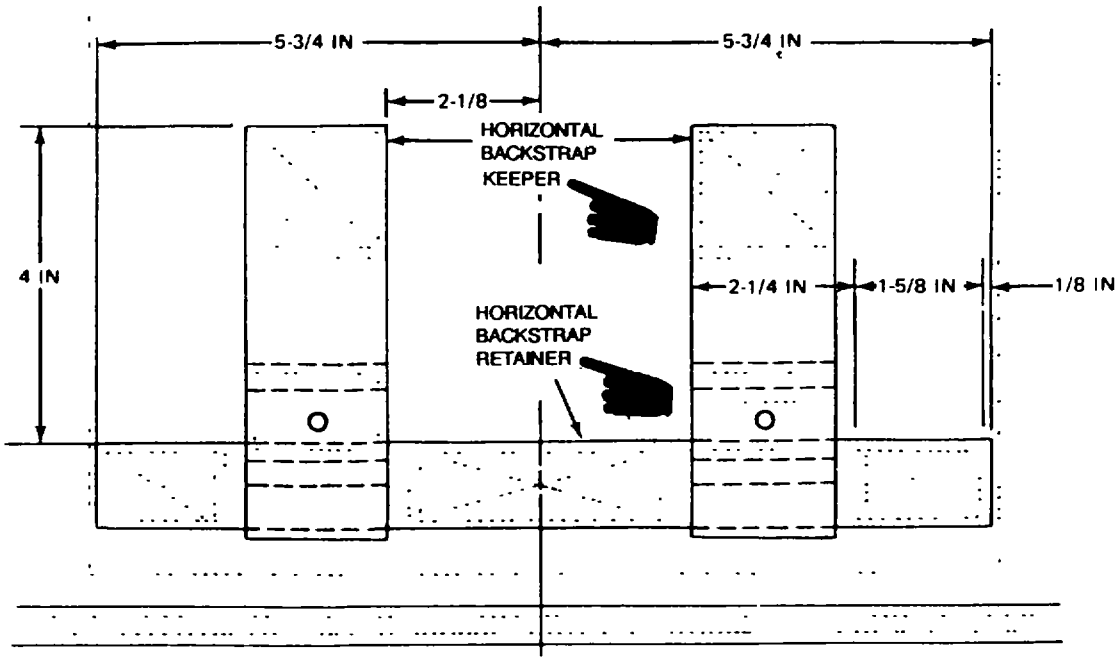

Figure 2-129. Installation of Horizontal Backstrap Keepers.

(4) *Pack closing loop*. Replace as follows:

(a) Cut damaged loop at first row of stitching securing loop to pack tray (A, figure 2-130).

(b) Cut a 12-inch length of 1 1/4-inch wide Type III nylon tape and sear the ends.

(c) Measure and mark 4 inches from each end. Fold tape between the two marks to the center of webbing and sew in place. Use a light duty sewing machine, size E nylon thread, and 7 to 11 stitches per inch (B, figure 2-130).

(d) Fold tape in center. Place on top of original stitch formation of opening loop. Sew in place using a light duty sewing machine, size E, nylon thread, 7 to 11 stitches per inch and a 4-inch WW formation (C, figure 2-130).

2-34. Pack Tray (CONT).

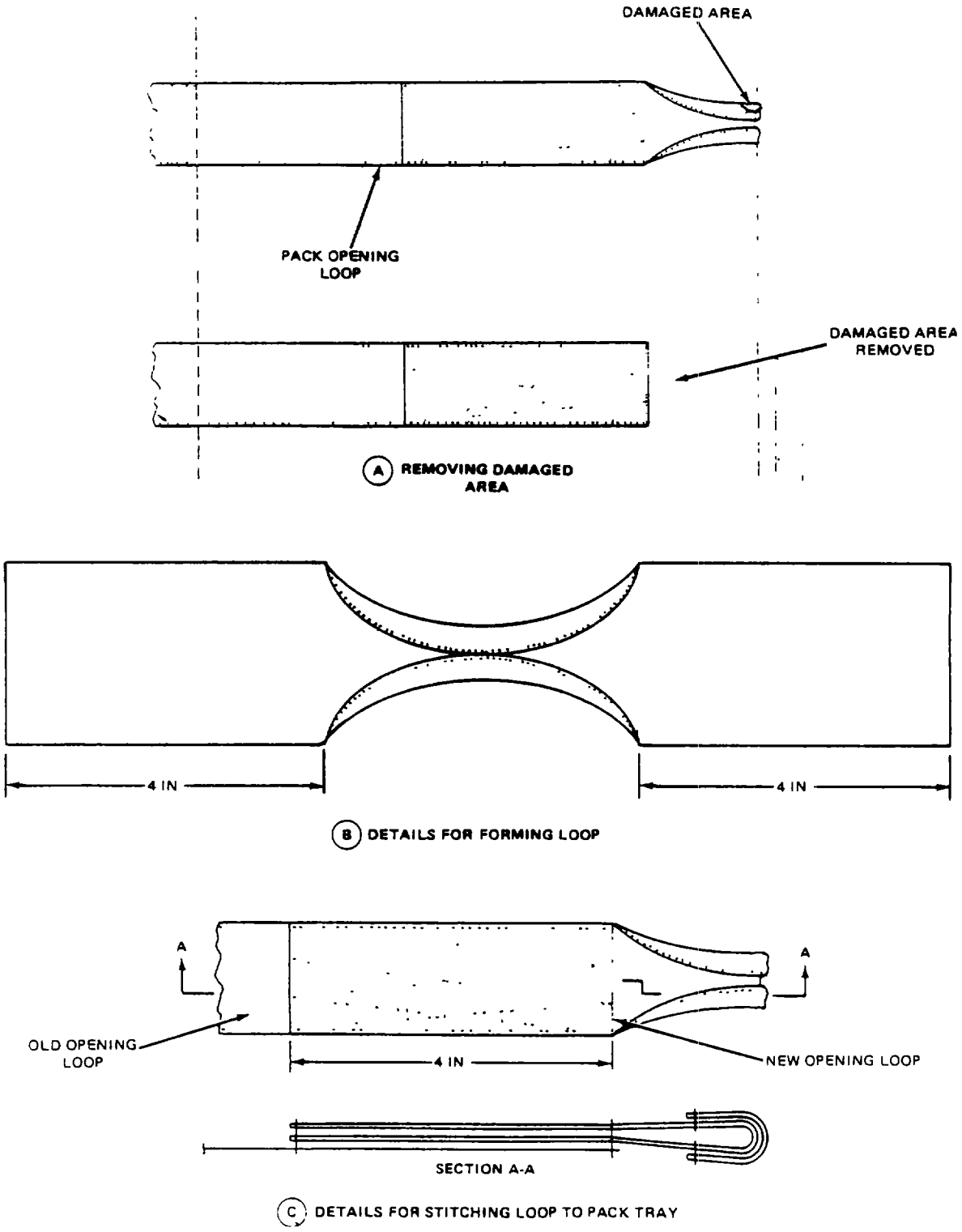

Figure 2-130. Repair of Pack Closing Loop.

(5) *Inside retainer band keeper.* Replace as follows:

(a) Cut stitching and remove damaged keeper from side flap panel.

(b) Cut an 8-inch length of 1 1/4-inch wide type III nylon tape and sear ends (A, figure 2-131).

(c) Mark tape 2 inches from each end. Fold tape between the two 2-inch marks to the center of the tape and stitch each side using a light duty sewing machine, size E, nylon thread and 7 to 11 stitches per inch (B., figure 2-131).

(d) Place tape, with folded edges up and ends turned under 1 inch in exact spot from which damaged keeper was removed, and stitch in place with a single-X box-stitch formation with double row of stitching at inside edges. Use a light duty sewing machine, size E, nylon thread and 7 to 11 stitches per inch (C, figure 2-131).

(5.1) *Outside retainer band keeper.* Replace as follows:

(a) Cut stitching and remove damaged keeper from side flap panel.

(b) Cut a 7-inch length of webbing, nylon, type IV, 1 -inch wide and sear ends.

(c) Mark webbing 1/2-inch and 11/16-inch from each end. Mark webbing 1 7/8-inch from each 11/16-inch mark.

(d) Fold the webbing under at the 1/2-inch mark and place in the exact location which damaged keeper was removed. Stitch in place with three straight rows of stitching. Use a light duty sewing machine, size E, nylon thread, 7 to 11 stitches per inch (D, figure 2-131).

(6) *Static line slack retainer.* Replace as follows:

(a) Cut stitching of damaged retainer without cutting pack body.

(b) Cut a 3 1/4-inch length of class I cotton elastic webbing (A, figure 2-132).

(c) Fold ends under 1/2 inch.

(d) Position new retainer in exact spot from which damaged retainer was removed.

(e) Stitch in place with two rows of zig-zag stitching following original construction. Use a zig-zag sewing machine, size E, nylon thread, and 7 to 11 stitches per inch. Overstitch ends 114 inch (B, figure 2-132).

(7) *Waistband.* Replace as follows:

NOTE

All unserviceable waistbands will be replaced with nylon waistbands from stock

(a) Cut stitching that secures waistband to pack tray. Remove loose threads. Ensure that pack tray material is not damaged during the cutting process.

(b) Turn under wide end of replacement waistband 5/8 inch.

(c) Position waistband on outside of pack in exact spot from which damaged waistband was removed.

2-34. Pack tray (CONT).

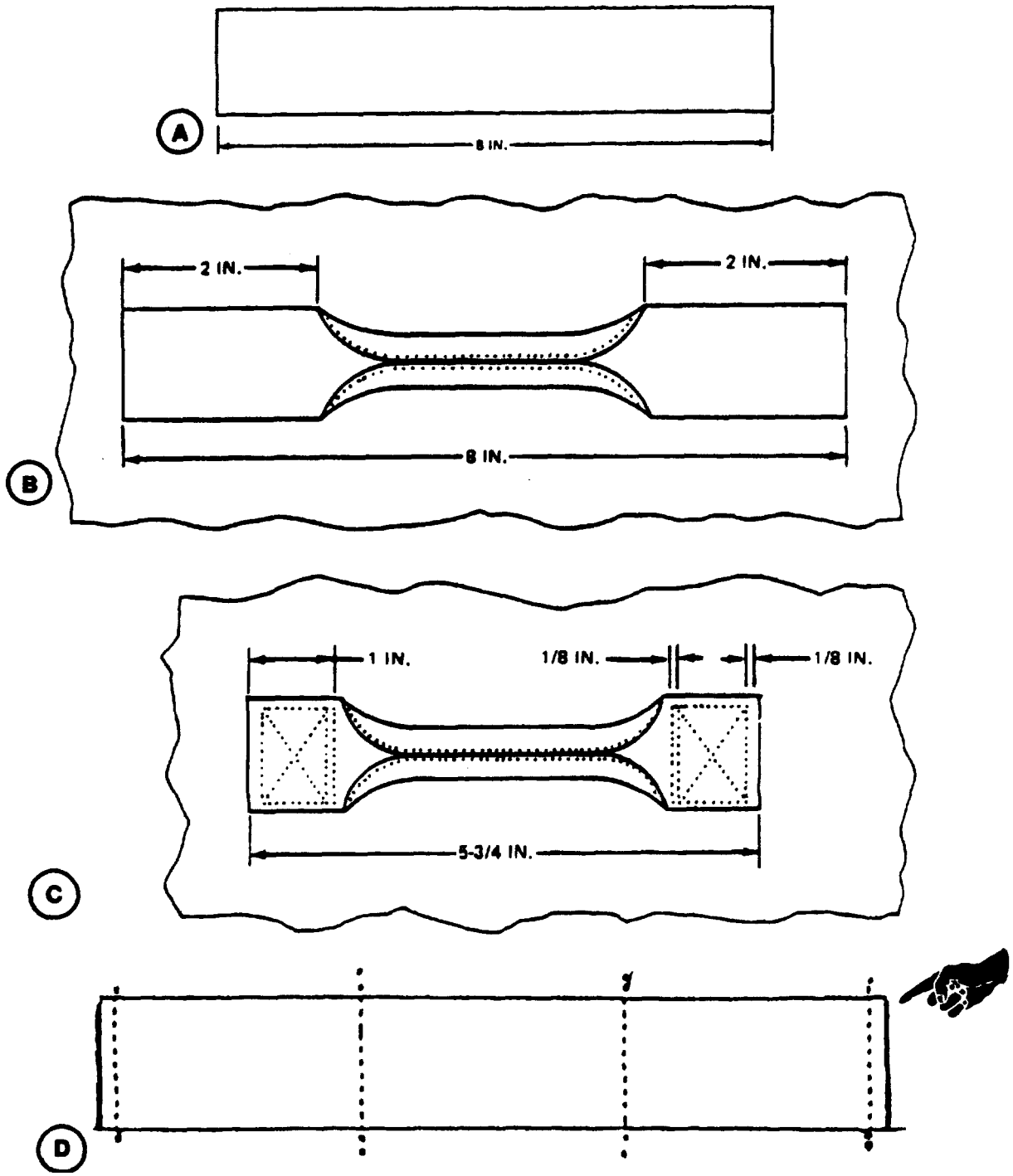

Figure 2-131. Replacement of Retainer Band Keeper.

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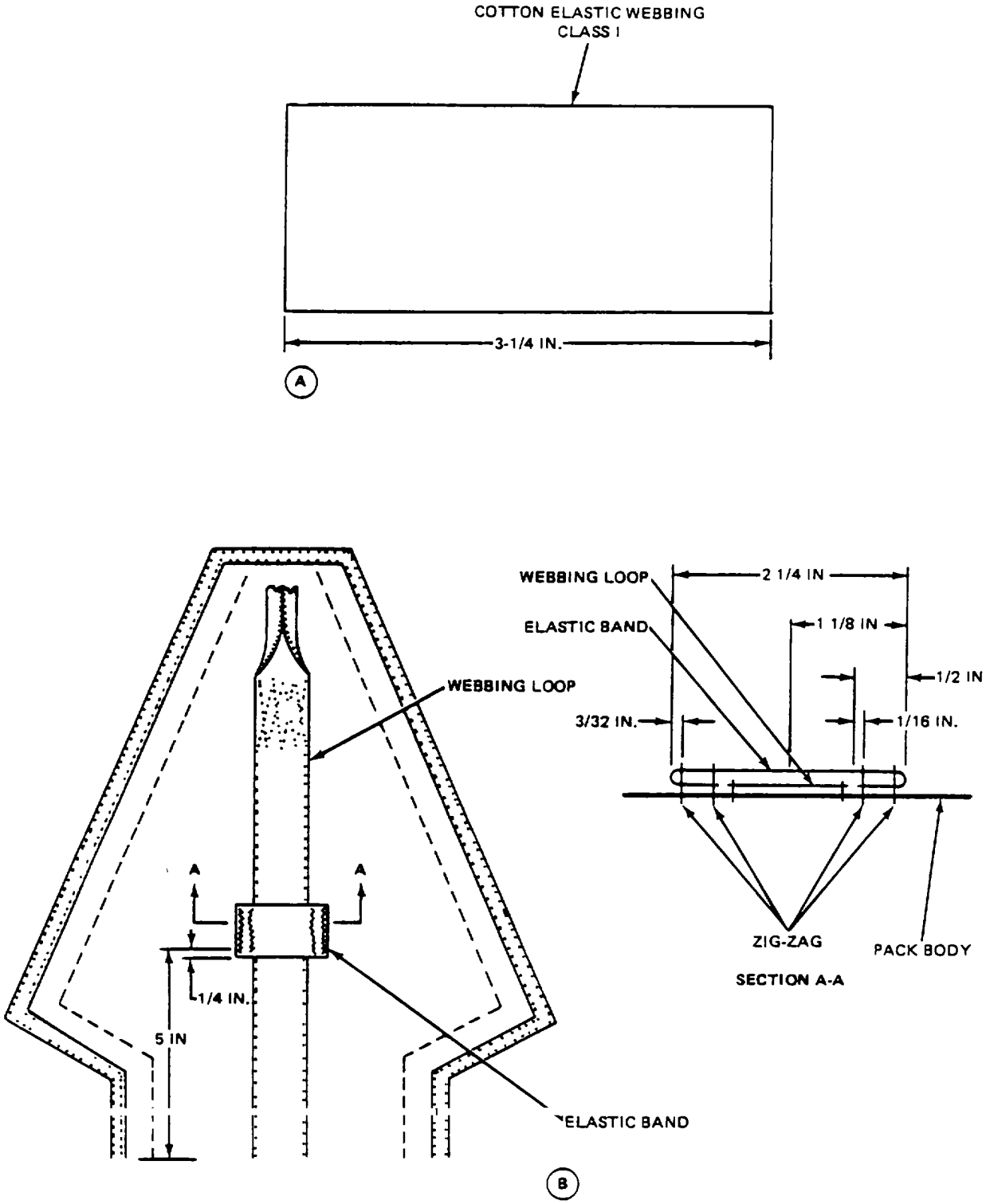


Figure 2-132. Replacement of Static Line Slack Retainer.

2-34. Pack Tray (CONT).

(d) Sew waistband using a heavy duty sewing machine, size 3 nylon thread, and 5 to 8 stitches per inch, following details of original construction (figure 2-133).

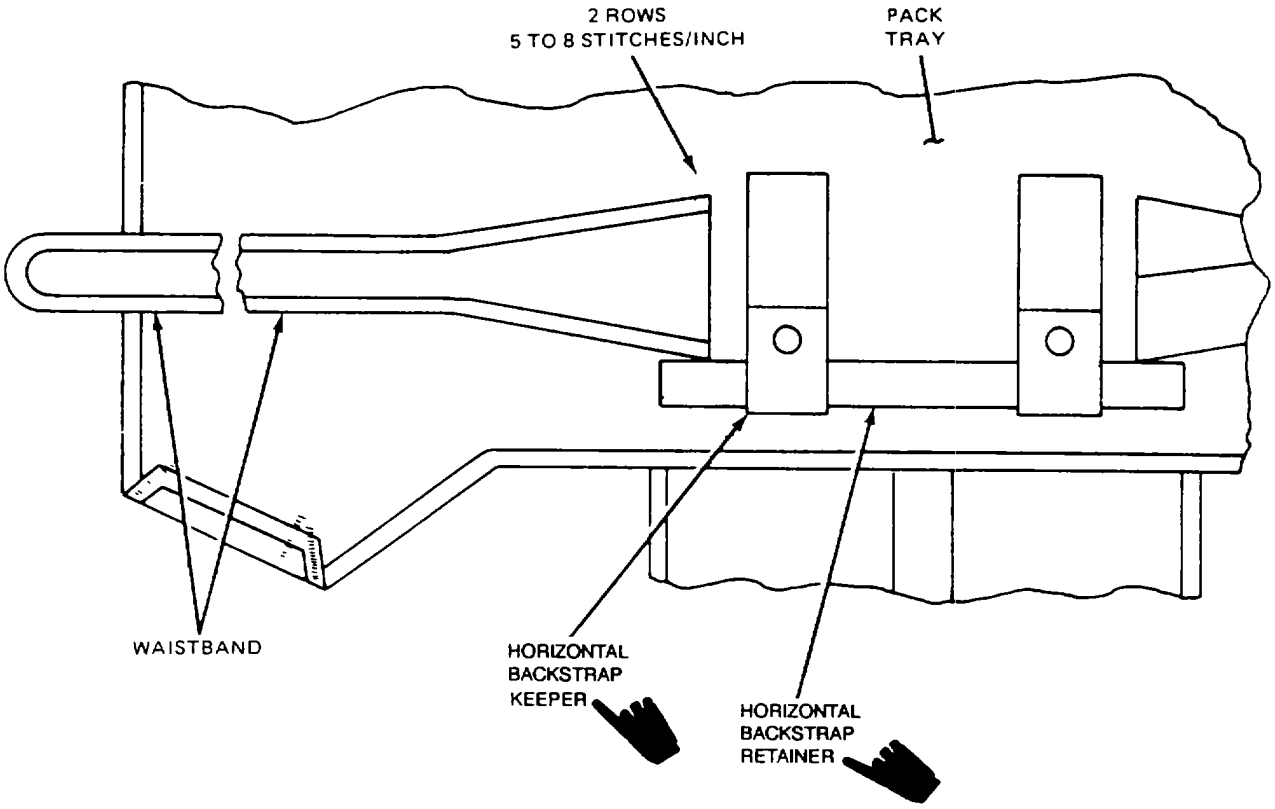


Figure 2-133. Waistband Replacement Details.

(8) *Waistband adjuster panel*. Replace a damaged waistband adjuster panel by fabricating as follows

(a) Cut the stitching which secures the original adjuster panel to the pack tray and remove the unserviceable panel. Also remove the cut stitching. Ensure the pack tray material is not damaged during the cutting process.

(b) If the metal adapter on the original adjuster panel is serviceable, cut the panel webbing and remove the adapter for further use. If the adapter is not considered serviceable, replace with a serviceable item from stock

(c) Cut a 16 1/4-inch length and a 5-inch length of 1-23/32-inch-wide, Type VIII green nylon webbing and sear the ends of both lengths.

(d) Pass the 16 1/4-inch length of webbing around the center bar of a serviceable adapter and aline the webbing ends. This length of material shall constitute the adjuster panel webbing (figure 2-134).

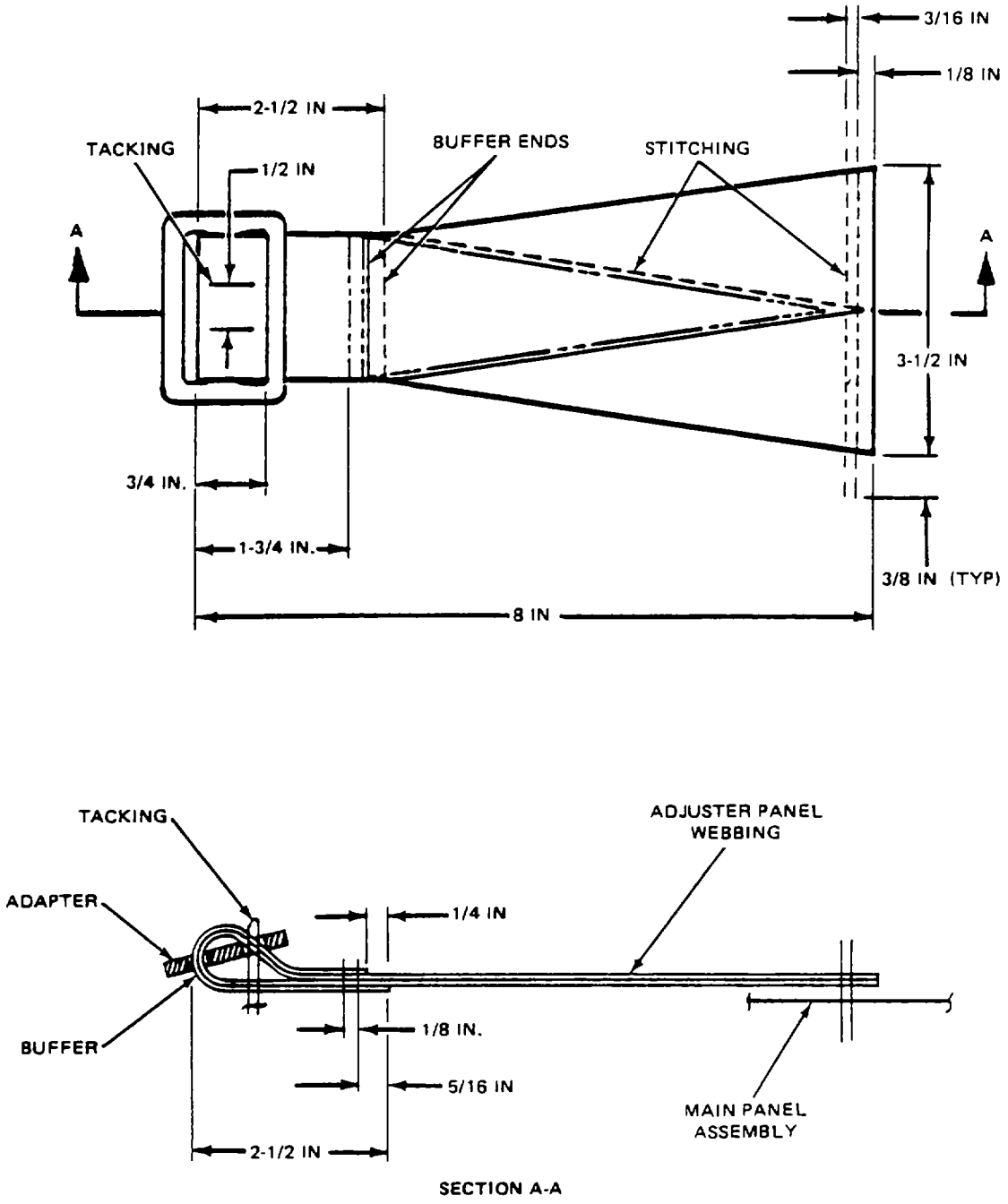


Figure 2-134. Waistband Adjuster Panel Fabrication.

2-34. Pack Tray (CONT).

(e) Insert the 5-inch webbing length under the 16 1/4-inch webbing length and pass the webbing length around the adapter center bar to form a buffer. Extend the bottom end of the buffer webbing 1/4 Inch beyond the top end.

(f) Hand-tack the buffer tightly to the adjuster panel webbing with two turns of doubled ticket No. 6 waxed nylon thread. Secure the tacking thread ends on the bottom side of the adjuster panel webbing with a square knot and trim tacking thread ends to 1/4 inch.

(g) Beginning at a point 1-3/4 inches back from where the panel webbing passes around the adapter center bar, spread the webbing loose ends to form a 3-1/2-inch width as shown in figure 2-133. Secure the formed panel webbing by stitching, using a light duty sewing machine, size E nylon thread and 7 to 11 stitches per inch.

(h) Position the fabricated adjuster panel in the original location on the pack tray and secure the panel to the pack tray main panel using a heavy duty sewing machine, size 3 nylon thread; and 5 to 8 stitches per inch.

(8) *Waistband extension*. Refer to TM 10-1670-213-23.

Section VII. PREPARATION FOR STORAGE OR SHIPMENT

2-35. Storage.

a. Storage Criteria. Administrative storage of the T-10 Parachute Assembly will be accomplished in accordance with AR 750-1 and the Instructions furnished below.

b. General Storage Requirements. To insure that serviceability standards of the stored parachute assembly are maintained, every effort will be exerted to adhere to the following storage requirements:

(1) When available, a heated building should be used to store parachutes.

(2) Parachutes will be stored in a dry, well-ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents, and direct sunlight.

(3) Parachutes will not be stored in a manner which would prevent ventilation or interfere with light fixtures, heating vents, fire fighting devices, cooling units, exits, or fire doors.

(4) Parachutes will not be stored in a damaged, dirty, or damp condition.

(5) All stored parachutes items will be marked, segregated, and located for accessibility and easy identification.

(6) Parachutes will not be stored in direct contact with any building floor or wall. Storage will be accomplished using bins, shelves, pallets, racks, or dunnage to provide airspace between the storage area floor and the equipment. If preconstructed shelving or similar storage accommodations are not available, locally fabricate storage provisions using suitable lumber or wooden boxes.

(7) All available materials handling equipment should be used as much as possible In the handling of parachutes.

(8) Periodic rotation of stock, conversion of available space, proper housekeeping policies, and strict adherence to all safety regulations will be practiced at all times.

c. Storage Specifics for Parachutes. In addition to the storage requirements stipulated in subparagraph b. above, the following is a list of specifics which must be enforced when storing parachutes:

(1) Except for those assemblies required for contingency operation, parachutes will not be stored in a packed configuration.

(2) Stored parachute assemblies will be secured from access by unauthorized personnel.

(3) A parachute which is In storage, and is administered a cyclic repack and inspection, will not be exposed to incandescent light or indirect sunlight for a period of more than 36 hours. In addition, exposure to direct sunlight should be avoided entirely.

2-36. In-Storage Inspection.

This task covers: In-storage Inspection

Personnel Required	*Equipment Condition*:
43E(10) Parachute Rigger	Unpacked

a. *General Information.* An in-storage inspection is a physical check conducted on a random sample of airdrop equipment which is located in storage.

b. Intervals. Parachutes in storage will be inspected at least semiannually and at more frequent intervals if prescribed by the local parachute maintenance officer.

c. Inspection. Inspect to insure that the back parachute is ready for issue.

(1) Check the back parachute for proper identification.

(2) Check that no damage or deterioration has been incurred.

(3) Ensure that all modifications or similar requirements have been completed.

(4) Check the adequacy of the storage facilities; efforts taken to control pests and rodents; and protection against unfavorable climatic conditions.

2-37. Shipment.

a. Initial Shipment. The initial packaging and shipping of parachutes are the responsibility of item manufacturers who are required to comply with federal and military packaging specifications as stipulated In contractual agreements. Parachutes are normally shipped to depot activities by domestic freight or parcel post, packaged to comply with overseas shipping requirements. Except for those parachutes which are unpackaged and subjected to random inspections or testing by a depot activity, parachutes received by a using unit will be contained in original packaging materials.

b. Shipping Between Maintenance Activities. The shipping of parachutes between activities will be accomplished on a signature verification basis using whatever means of transportation are available. Used parachutes and other fabric items will be tagged in accordance with TB 750-126, and rolled, folded, or placed loosely in a parachute pack, deployment bag, or other suitable container, as required. Unused parachutes will be transported in original shipping containers. During shipment, every effort will be made to protect parachute from weather elements, dust, dirt, oil, grease, and acids. Vehicles used to transport parachutes will be inspected to ensure the items are protected from the previously cited material damaging conditions.

c. Other Shipping Instructions. Parachutes destined for domestic or overseas shipment will be packaged and marked in accordance with AR 700-15, AR 55-45, TM 38-230-1, and TM 38-230-2. Shipment of parachutes will be accomplished In accordance with TM 10-1670-201-23.

2-38. Accordion Folding/Rigger Rolling.

a. Accordion Folding. Personnel parachute canopy assemblies that are not packed for use should be accordion folded prior to entry into storage To accordion fold a parachute canopy assembly, perform the following:

(1) Place the parachute canopy In proper layout under partial tension and dress the outside edges of both gore groups.

(2) Fold the left group of gores over the right group of gores (A, figure 2-135). Release tension.

(3) "Chain" the suspension lines and S-fold the "chained" lines on top of the applicable parachute pack (B, figure 2-135).

(4) Place the lower end of the canopy on top of the S-folded suspension lines and locate the lower edge of the canopy skirt at the lower end of the pack.

(5) Accordion fold the remaining canopy length neatly on top of the canopy lower end (C, figure 2-135). Turn the canopy vent under the last fold.

(6) Temporarily secure the folded canopy to the pack tray with available webbing or pack components (D, figure 2-135).

(7) Upon completion of the accordion folding process, place the folded parachute assembly in a suitable type container for storage.

b. Rigger Rolling. Personnel parachute assemblies will be rigger rolled prior to being sent to or returned from a parachute repair activity for ease of handling to prevent suspension line entanglement. Rigger roll a parachute as follows:

(1) Place the parachute in proper layout and apply partial tension.

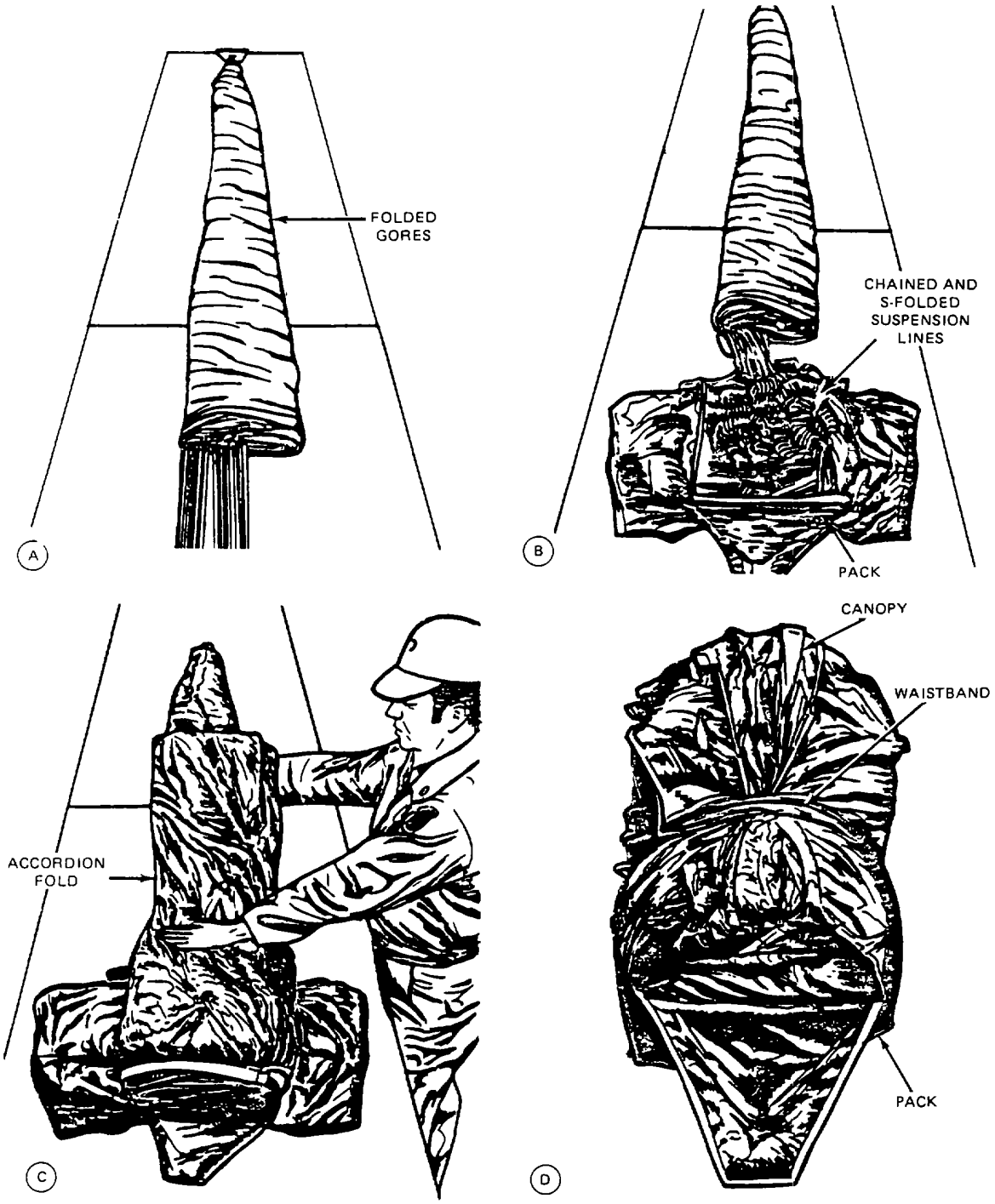
(2) Grasp the right and left suspension line groups. Using a fast circular motion, flip each of the two gore groups up and to the center radial seam. Tighten each gore group roll by hand bringing both rolled gore groups together at the center radial seam (A, figure 2-136).

(3) Release tension and disconnect the canopy vent from the vent attaching device.

(4) Fold the canopy vent down between the rolled gore groups to a point within 18 inches of the canopy skirt lower edge.

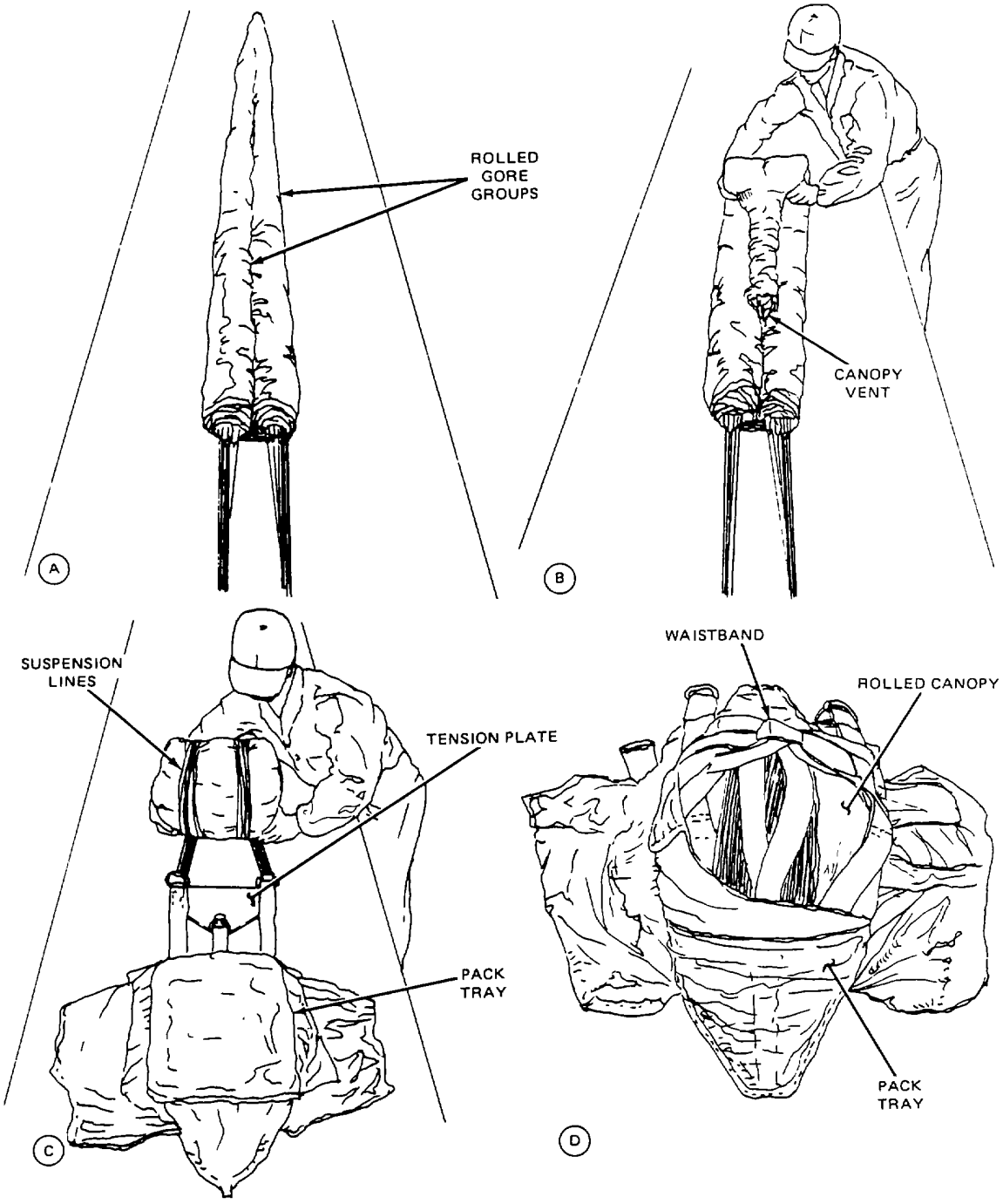
(5) Beginning at the folded upper end of the canopy, roll the canopy tightly toward the canopy skirt (B, figure 2-136). Ensure the width of the rolled canopy does not exceed the width of the applicable parachute pack tray.

2-38. Accordion Folding/Rigger Rolling (CONT).



A FOLDING OF GORE GROUPS COMPLETED
B SUSPENSION LINES STOWED ON PACK
C ACCORDION FOLDING THE CANOPY
D FOLDED CANOPY SECURED

Figure 2-135. Accordion Folding a Parachute Canopy Assembly.



A INDIVIDUAL GORE GROUP ROLLING COMPLETED
B ROLLING THE CANOPY
C SUSPENSION LINES ON ROLLED CANOPY
D ROLLED CANOPY ASSEMBLY ON PARACHUTE PACK TRAY

Figure 2-136. Rigger Rolling a Parachute Canopy Assembly.

2-38. Accordion Folding/Rigger-Rolling (CONT).

(6) Continue rolling the canopy toward the lower end of the suspension lines and risers, if applicable, locating the lines and riser webbing around the center of the roll (C, figure 2-136).

(7) As applicable, disconnect the suspension lines/risers from the attaching device and place the rolled canopy assembly on top of the pack tray.

(8) Secure the rolled canopy assembly within the confines of the pack tray using either the straps or webbing of the pack tray or a length of suitable type cord (D, figure 2-136).

APPENDIX A

REFERENCES

A-1. Scope. This appendix lists all forms, technical manuals, and miscellaneous publications referenced In this manual.

A-2. Publication Index. The following publication indexes should be consulted frequency for the latest changes or revisions of references given in this appendix and for new publications relating to the material covered in this manual:

Consolidated Index of Army Publications and Blank Forms ..... DA PAM 310-1
The Army Maintenance Management System (TAMMS) ..... DA PAM 738-750

A-3. Technical Manuals.

General Maintenance of Parachutes and Other Airdrop Equipment ..... TM 10-1670-201-23
T.O. 13C-1-41/
NAVAIR 13-1-17
Miscellaneous Airdrop Canvas, Webbing, Metal, and Wood Items ..... TM 10-1670-240-20/
T.O. 13C7-49-11
Static Line Extension ..... TM 10-1670-240-20
Accessory Set, Parachutes, Scuba ..... TM 10-1670-213-23
Preservation, Packaging, Packing of Military Supplies and
Equipment (Vols 1 and 2) ..... TM 38-230-1 and
TM 38-230-2
Equipment Maintenance Forms and Procedures ..... TM 4700-15/1
Procedures for the Destruction of Air Delivery Equipment to
Prevent Enemy Use ..... TM 43-0002-1

A-4. Field Manuals.

First Aid for Soldiers ..... FM 21-11

A-5. Army Regulations.

Dictionary of United States Army Terms ..... AR 310-25
Authorized Abbreviation and Brevity Codes ..... AR 310-50
Packaging of Material ..... AR 700-15
Army Materiel Maintenance Concepts and Policies ..... AR 750-1
Air Drop, Parachute Recovery and Aircraft Personal Escape Systems ..... AR 750-32

A-6. Technical Bulletins.

Maintenance Expenditure Limits for FSC Group 16 ..... TB 43-0002-4*
Use of Material Condition Tags and Labels on Army Aeronautical and
Air Delivery Equipment ..... TB 750-126

*Will be superceded by:
Maintenance Expenditure Limits of FSC Class 1670 ..... TB 43-0002-43

A-7. Forms.

Parachute Log Record ..... DA Form 10-42
Parachute Log Record ..... DA Form 3912
Equipment & Maintenance Worksheet ..... DA Form 2404

A-8 Air Force Technical Orders

Cleaning of Parachute Assemblies ..... T.O. 14D1-1-2
Parachute Logs and Records ..... T.O. DO-25-241

A-9 Air Force Technical Order Forms

Parachute Log ..... AFTO FM 391
Parachute Repack Inspection and Component Card ..... AFTO FM 392

A-10 Marine Corps Forms ..... MCO 1650.17
MCO 4855.10
NAVMC 10772

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. General.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance levels.

b. The Maintenance Allocation Chart (MAC) in Section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance levels.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from Section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance Functions. Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g. by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item In proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing Into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/Install. To remove and install the same Item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) In a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3d position code of the SMR code.

B-2. Maintenance Functions (CONT).

i. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, and disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure In a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e, DMWR). Overhaul is normally the highest degree of maintenance performed by the Army Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components

B-3. Explanation of Columns in the MAC, Section II.

a. Column 1, Group Number. Column 1 lists functional group code numbers the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly End item group number shall be "00".

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2 (For detailed explanation of these functions, see paragraph B-2).

d. Column 4, Maintenance Level. Column 4 specifies, by the listing of work time figure in the appropriate subcolumn(s), the level of maintenance authorized to perform the function listed in Column 3 This figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate work time figures will be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart The symbol designations for the various maintenance levels are as follows:

C - Operator or crew
O - Unit Maintenance
F - Intermediate Direct Support Maintenance
H - Intermediate General Support Maintenance
D - Depot Maintenance

e. Column 5, Tools and Equipment. Column 5 specifies by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. *Column 6. Remarks.* This column shall, when applicable, contain a letter code, In alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III.

a. *Column 1. Reference Code*. The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. *Column 2. Maintenance Category*. The lowest category of maintenance authorized to use the tool or test equipment.

c. *Column 3. Nomenclature*. Name or identification of the tool or test equipment.

d. *Column 4. National Stock Number*. The National stock number of the tool or test equipment.

e. *Column 5. Tool Number*. The manufacturer's part number

B-5. Explanation of Columns in Remarks, Section IV.

a. *Column 1. Reference Code*. The code recorded in column 6, Section II.

b *Column 2. Remarks*. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART FOR 35-FOOT DIAMETER T-10B TROOP-BACK PARACHUTE ASSEMBLY

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
00	T-10B Parachute	Inspect Service		1.0 1.0				See Section III this appendix	A, B, C, D, E, F, G
01	Canopy	Repair Replace		0.5 0.3				See Section III this appendix	A, B, C, E, F, G
0101	Bridle Loop	Repair Replace		0.1 0.3					
0102	Vent Line	Repair Replace			0.1 0.5				
0103	Upper Lateral Band	Repair		0.4					
0104	Radial Seam	Repair		0.3					
0104.1	Radial Tape	Replace			1.0				
0105	Gore Section	Repair Replace		0.4	1.0				F

Section II. MAINTENANCE ALLOCATION CHART FOR 35-FOOT DIAMETER T-10B TROOP-BACK PARACHUTE ASSEMBLY (CONT)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
0106	Lower Lateral Band	Repair		0.4					
0107	Pocket Band	Repair Replace		0.1 0.3					
0108	V-Tab	Repair Replace		0.1 0.3					
0109	Anti-Inversion Net	Inspect Repair Replace		0.1 0.3 0.8					
0110	Suspension Line	Repair Replace		0.1	 0.8				
0111	Connector Link	Repair Replace		0.2 0.3					
02	Risers	Replace		0.2				See Section III this appendix	A, C, E, G
03	Deployment Bag	Repair Replace		0.5 0.1				See Section III this appendix	B, C, E, G
0301	Reinforcing Webbing	Repair		0.2					
0302	Deleted								
0303	Deleted								
0304	Locking Stow Loop Hood	Repair Replace		0.3 0.4					
0305	Tiedown Loop	Repair Replace		0.3 0.3					
0306	Static Line Assembly	Repair Replace		0.2 0.5					
0307	Deleted								

Section II. MAINTENANCE ALLOCATION CHART FOR 35-FOOT DIAMETER T-1OB TROOP-BACK PARACHUTE ASSEMBLY (CONT)

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
04	Harness, Assembly	Repair Replace		0.5 0.4				See Section III this appendix	B, A, C, E, G
0401	Retainer Webbing	Replace		0.3					
0402	Horizontal Backstrap	Replace		0 3					
0403	Canopy Release Pad	Replace		0.4					
0404	Canopy Release	Repair		0.5					
0405	Ejector Snap Pad	Replace		0.4					
05	Pack Tray	Repair Replace		0.5 0.4				See Section III this appendix	B, C, E, G
0501	Back Strap Retainer	Replace		0.5					
0502	Back Strap Keeper	Repair Replace		0.4 0.5					
0503	Pack Closing Loop	Replace		0.2					
0504	Retainer Band Keeper	Replace		0.3					
0505	Waistband	Replace		0.4					
0506	Waistband Adjuster Panel	Replace		0.4					

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOL/TEST EQUIPMENT REF CODE (1)	MAINT. CATEGORY (2)	NOMENCLATURE (3)	NATIONAL/NATO STOCK NUMBER (4)	PN TOOL No. (5)
1	O	Anvil, Chuck Fastener	5120-00-357-6181	9902
2	O	Canopy Release Conversion (Repair) Kit	1670-00-925-5615	100860
3		Deleted		
4	O	Chuck	5120-00-343-8214	9765
5	O	Cutter, Double Bow, 1/2 inch	5110-00-180-0923	GG-P-833
6	O	Cutter, Single Bow	5110-00-180-0941	
7	O	Die	5120-00-343-8213	9764
8	O	File		
9		Hammer, Ball Peen	5120-00-187-1034	MIL-H-18745
10	O	Holder, Die, Fastener	5120-00-357-6177	192
11	O	Key, Socket Head Set (Allen Type)	5120-00-729-6392	GGGK275
12	O	Kit, Bag	8460-00-606-8366	MIL-K-41835
13	O	Knife	5110-00-162-2205	MIL-K-818
14	O	Knife, Hot Metal	3439-00-197-7656	4025
15	O	Lead, Pig, 5-Pounds	9650-00-264-5050	QQ-C-40
16	O	Line Separator	1670-00-092-8661	11-1-0017-1
17		Mallett, Rawhide	5120-00-293-3397	666-H-33
18		Needle, Basting		
19		Needle, Tacking	8315-00-262-3733	FF-N-1 80
20	O	Packing Paddle	1670-00-764-6381	11-1-0152
21	O	Packing Weight	1670-00-375-9134	66C38599
21A	O	Plate, Tension	1670-00-032-2705	11-1-99
22		Pot, Melting, Electric	5120-00-242-1276	W6441

Section III. TOOLS AND TEST EQUIPMENT REQUIREMENTS (CONT)

TOOL/TEST EQUIPMENT REF CODE (1)	MAINT. CATEGORY (2)	NOMENCLATURE (3)	NATIONAL/NATO STOCK NUMBER (4)	PN TOOL No. (5)
23		Press, Hand Operated		
24		Scale, Push-Pull		
25		Scale, Spring, 0-80 lbs	6635-00-705-5469	800
26		Screwdriver, Flat Tip		
27		Separator, Connector Link	1670-00-072-4941	11-1-176
28		Shears		
29		Stow Hook		
30		Tool Kit, Canopy Release	5180-01-319-6969	71304
31		Wrench, Allen Type, Hexagon		

Section IV. REMARKS

Reference Code	Remarks/Notes
A	During the final year of personnel canopy age life, only organizational level maintenance is authorized (reference TB 43-0002-4*). *Will be superseded by TB 43-0002-43
B	Inspect is a technical-rigger type Inspection, other Inspections in para. 2-9 and 2-13.
C	Service is cleaning & drying, shakeout and airing of equipment, and packing.
D	Service is the packing of parachutes.
E	Repair by restitching, darning, retacking, or restencil canopy panel. Repair at unit maintenance consists of darning, restitching, patching and replacement of parts authorized for unit maintenance.
F	Intermediate repair consists of replacing gore sections, suspension lines and vent lines.
G	Test all fabrics and webbing material for acidity and salt-water contamination.

APPENDIX C

REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. SCOPE. This manual lists and authorizes spare and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of unit, direct support and general support maintenance of the 35-Foot Diameter, T-10B Troop Back Parachute.. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

C-2. GENERAL. This Repair Parts and Special Tools List is divided into the following sections:

a. *Section II. Repair Parts List*. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. This list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure and item number sequence. Bulk materials are listed.

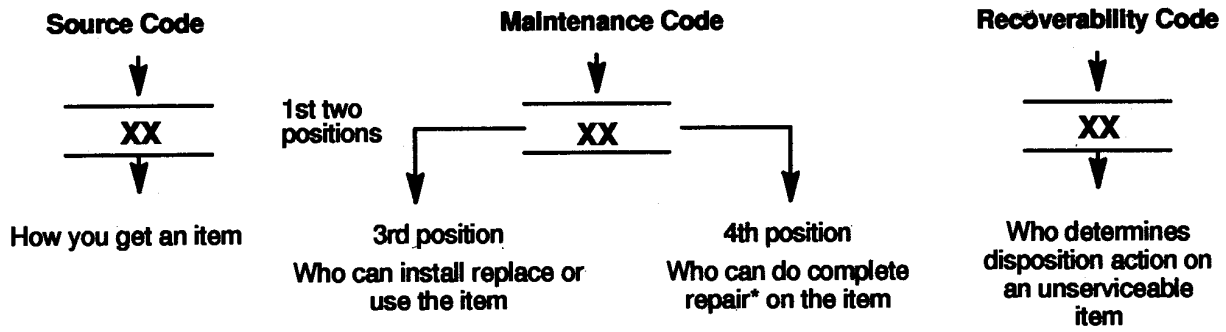
b. *Section III. Special Tools List*. (Not Applicable). No special tools are required to assemble the T-10B, 35-foot diameter parachute. Common tools are listed in Appendix B, Section III because they are required for performance of packing and maintenance procedures/tasks. These tools are authorized under Chapter 2, paragraph 2-1 of this manual.

c. *Cross-Reference Index*. A list, in National Item Identification Number (NIIN) sequence, of all national stock numbered items appearing in the listing, followed by a list in alphanumeric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross referenced to each illustration figure and item number appearance.

C-3. EXPLANATION OF COLUMNS (Section II).

a. *ITEM NO. (Column (1)).* Indicates the number used to identify items called out in the illustration.

b. *SMR Code (Column (2)).* The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction, as shown in the following breakout:



*Complete Rear: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "Repair" function in a use/user environment in order to restore serviceability to a failed item.

C-3. EXPLANATION OF COLUMNS (Section II) (CONT).

(1) Source Code. The source code tells you how you get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first two positions of the SMR code. Explanations of source codes follow.

Code	Explanation
PA PB PC PD PE PF PG	Stocked items; use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the 3d position of the SMR code.

Code	Explanation
KD KF KB	Items with these codes are not to be requested/requisitioned individually They are part of a kit which is authorized to the maintenance category indicated in the 3d position of the SMR code. The complete kit must be requisitioned and applied.

Code	Explanation
MO (Made at org AVUM level) MF (Made at DS/AVUM level) MH (Made at GS Level) ML (Made at Specialized Repair Activity (SRA)) MD (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the DESCRIPTION and USABLE ON CODE (UOC) column and listed in the Bulk Material group of the repair parts list in the RPSTL. If the item is authorized to you by the 3d position code of the SMR code, but the source code indicates it is made at a higher level, order the item from the higher level of maintenance.

Code	Explanation
AO (Assembled by org AVUM Level) AF (Assembled by DS/AVIM Level) AH (Assembled by GS Category) AL (Assembled by SRA) AD (Assembled by Depot)	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the level of maintenance indicated by the source code. If the 3d position code of the SMR code, authorizes you to replace the item, but the source code indicates the items are assembled at a higher level, order the item from the higher level of maintenance.

Code Explanation

XA - Do not requisition an "XA"-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
XB - If an "XB" item is not available from salvage, order it using the FSCM Code and part number given.
XC - Installation drawing, diagram, instruction sheet, field service drawing, that is identified by manufacturer's part number.
XD - Item is not stocked. Order an "XD"-coded item through normal supply channels using the CAGE Code and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 00-42.

(2) *Maintenance Code.* Maintenance codes tell you the level(s) of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(*a*) The maintenance code entered in the third position tells you the lowest maintenance level authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to the following levels of maintenance.

Code **Application/Explanation**

C - Crew or operator maintenance done within organizational or aviation unit maintenance.

O - Organizational or aviation unit can remove, replace, and use the item.

F - Direct support or aviation intermediate level can remove, replace, and use the item.

Code **Application/Explanation**

H - General support maintenance can remove, replace, and use the item.

L - Specialized repair activity can remove, replace, and use the item.

D - Depot can remove, replace, and use the item.

C-3. Explanation Of Columns (Section II) (CONT).

(*b*) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance level with the capability to do complete repair (i.e., perform all authorized repair functions). (NOTE: Some limited repair may be done on the item at a lower level of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR code.) This position will contain one of the following maintenance codes.

Code	Application/Explanation
O	Organizational (or aviation unit) is the lowest level that can do complete repair of the item.
F	Direct support VAVIM is the lowest level that can do complete repair of the item.
H	General support (or aviation intermediate) is the lowest level that can do complete repair of the item.
L	Specialized repair activity (designate the specialized repair activity) is the lowest level that can do complete repair of the item.
D	Depot is the lowest level that can do complete repair of the item.
Z	Nonreparable. No repair is authorized.
B	No repair is authorized. (No parts or special tools are authorized for the maintenance of a "B" coded item). However, the item may be reconditioned by adjusting, lubricating, etc., at the user level.

(3) *Recoverability code.* Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR Code as follows:

Recoverability Codes	Application/Explanation
Z	Nonreparable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in 3d position of SMR Code.
O	Reparable item. When not economically reparable, condemn and dispose of the item at organizational or aviation unit level.
F	Reparable item. When uneconomically reparable, condemn and dispose of the item at the direct support or aviation intermediate level.
H	Reparable item. When uneconomically reparable, condemn and dispose of the item at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.

C-3. Explanation Of Columns (Section II) (CONT).

Recoverability Codes	Application/Explanation
L	Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. *FSCM (Column (3)).* The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency etc., that supplies the item.

d. *PART NUMBER (Column (4)).* Indicates the primary number used by the manufacturer, (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different part number from the number listed.

e. Description and Usable on Code (UOC) (Column (5). This column includes the following information:

(1) The Federal item name and, when required, a minimum description to identify the item.

(2) The physical security classification of the item is indicated by the parenthetical entry, (insert applicable physical security classification abbreviation, e.g., Phy Sec CI (C)-Confidential, Phy Sec CI (S)-Secret, Phy Sec CI (T)-Top-Secret).

(3) Items that are included in kits and sets are listed below the name of the kit or set.

(4) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.

(5) Part numbers of bulk materials are referenced in this column in the line entry for the item to be manufactured/fabricated.

(6) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line(s) of the description (before UOC).

(7) The usable on code, when applicable (reference paragraph 5, Special Information).

(8) In the Special Tools List Section, the basis of issue (BOI) appears as the last line(s) in the entry for each special tool, special TMDE, and other special support equipment. When density of equipment supported exceeds density spread indicated in the basis of issue, the total authorization is increased proportionately.

C-3. Explanation of Columns (Section II) (CONT).

(9) The statement "End of Figure" appears just below the last item description in Column 5 for a given figure in Section II.

f. *Qty (Column (6)).* The Qty (quantity per figure column) indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing In the column in lieu of a quantity indicates that the quantity Is variable and may vary from application to application.

C-4. Special Information.

a. The "Usable on code" title appears in the lower right corner of column (5). Description. Usable on codes are shown in the right-hand margin of the description column.

b. Bulk materials required to manufacture items are listed in the Bulk Material Group of this manual. NSN's for bulk materials are also referenced in the description column of the line item entry for the item to be manufactured/fabricated. Detailed manufacturing instructions for items source coded to be manufactured or fabricated are found in this manual.

c. Detailed assembly Instructions for items source coded to be assembled from component spare/repair parts are found in this manual. Items that make up the assembly are listed immediately following the assembled item entry.

d. Line item entries for repair parts kits and sets appear as the last entries in the repair parts listing for the figure in which their parts are listed as repair parts.

e. Items which have the word Bulk in the figure number column will have an index number shown in the item number column This index number is furnished for use as a cross-reference between the National Stock Number/Part Number Index and the bulk material list in Section II.

f. In the repair parts list, some items are indented to show that they are a component or components of the item under which they are indented.

C-5. Explanation of Columns (Section IV).

a. National Stock Number (NSN) Index

(1) *Stock number column.* This column lists the NSN by National Item Identification Number (NIIN) sequence The NIIN consists of the last nine digits of the NSN, i.e.

NSN

(5305-01-574-1467).

NIIN

When using this column to locate an item, ignore the first 4 digits of the NSN. However, the complete NSN should be used when ordering items by stock number.

(2) *Fig. column*. This column lists the number of the figure where the item is identified/located. The figures are in numerical order in Section II.

C-5. Explanation of Columns (Section IV) (CONT).

(3) *Item column.* The item number identifies the item associated with the figure listed in the adjacent Fig. column This item is also identified by the NSN listed on the same line.

b. Part Number Index. Part numbers m this index are listed by part number in ascending alphanumeric sequence (i e., vertical arrangement of letter and number combination which places the first letter or digit of each group in order A through Z, followed by the numbers 0 through 9 and each following letter or digit in like order).

(1) *FSCM column.* The Federal Supply Code for Manufacturer (FSCM) is a 5-digit numeric code used to Identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(2) *Part number column.* Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

(3) *Stock number column.* This column lists the NSN for the associated part number and manufacturer Identified In the part number and FSCM columns to the left.

(4) *Fig column.* This column lists the number of the figure where the Item Is identified/ located in Section II and III.

(5) *Item column* The item number is that number assigned to the Item as it appears in the figure referenced in adjacent figure number column.

C-6. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Not Known.

(1) *First.* Using the table of contents, determine the functional group or subfunctional group to which the item belongs. This is necessary since figures are prepared for functional groups and subfunctional groups, and listings are divided into the same groups.

(2) *Second.* Find the figure covering the functional group or subfunctional group to which the item belongs.

(3) *Third.* Identify the item on the figure and note the item number of the item.

(4) *Fourth.* Refer to the Repair Parts List for the figure to find the line item entry for the item number noted on the figure.

C-5. How to Locate Repair Parts (CONT).

b. When National Stock Number or Part Number is Known.

(1) *First.* Using the Index of National Stock Numbers and Part Numbers, find the pertinent National Stock Number or part number. The NSN index is in the National Item Identification Number (NIIN)* sequence. The part numbers in the Part Number index are listed in ascending alphanumeric sequence. Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

NSN

*The NIIN consists of the last 9 digits of the NSN (i.e., 5305<u>01-675-1467</u>).

NIIN

(2) *Second*. After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

C-7. Abbreviations.

Abbreviations	Explanation
EA	Each
FT	Foot/Feet
IN	Inch/Inches
LG	Long
MTG	Mounting
NF	National Fine (Thread)

SECTION II

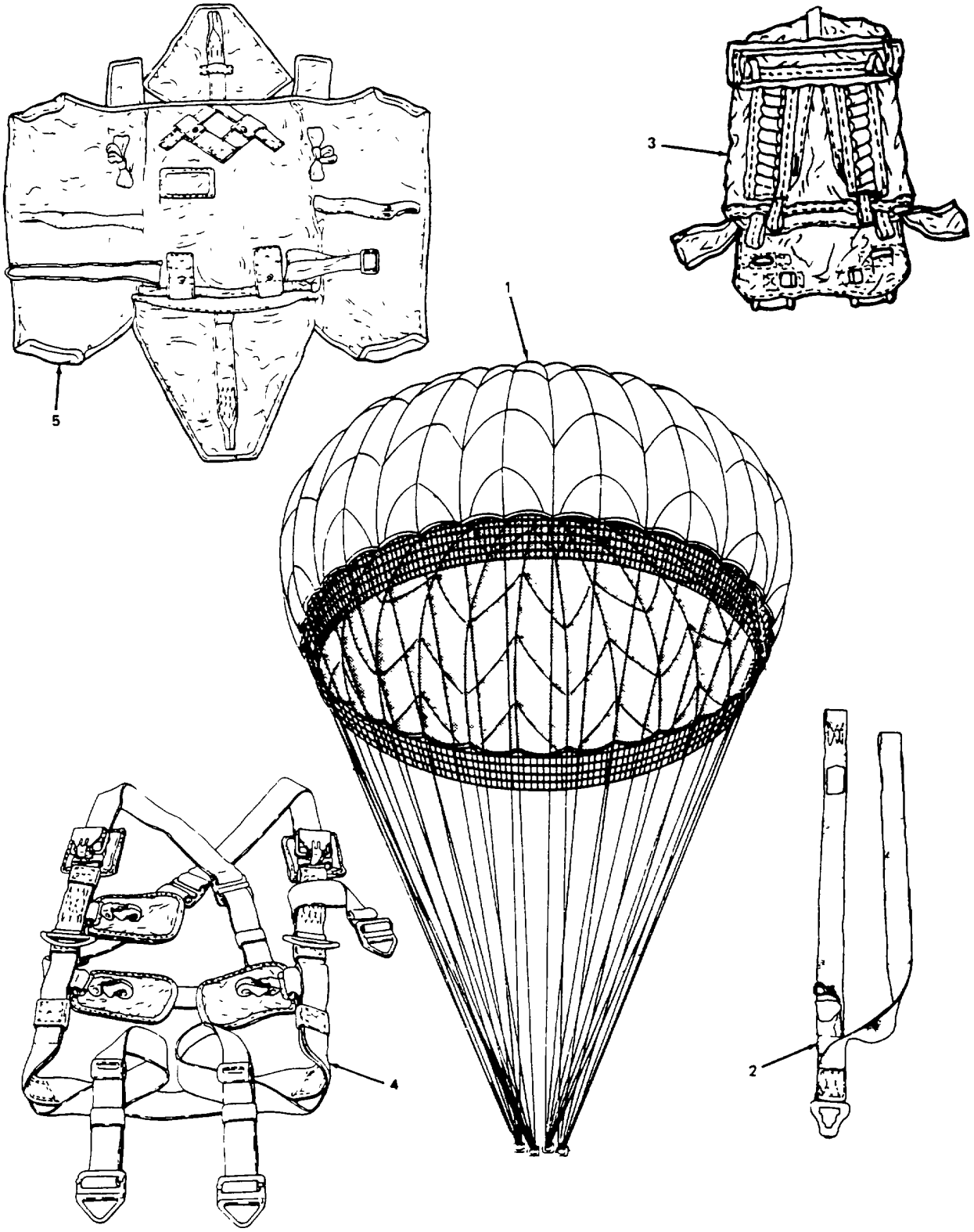


Figure C-1. T-10B Troop Back Personnel Parachute

Section II. REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USEABLE ON CODES (UOC)	(6) QTY
				GROUP 00 PARACHUTE, PERSONNEL, TROOP BACK, T-10B FIG. C-1 T-10B TROOP BACK PERSONNEL PARACHUTE 11-1-564-1	
1	PAOFF	81337	11-1-1501	CANOPY, 35 FT, W/NET T-10B	1
2	PAOOZ	81337	11-1-2149-2	RISER EXTENSION	2
3	PAOOO	98750	56D6276	BAG, DEPLOYMENT.....	1
4	PCOOO	81337	11-1-2143	HARNESS, PERSONNEL.....	1
5	PAOOO	81337	62J4342	PACK, PERSONNEL.....	1
				END OF FIGURE	

SECTION II

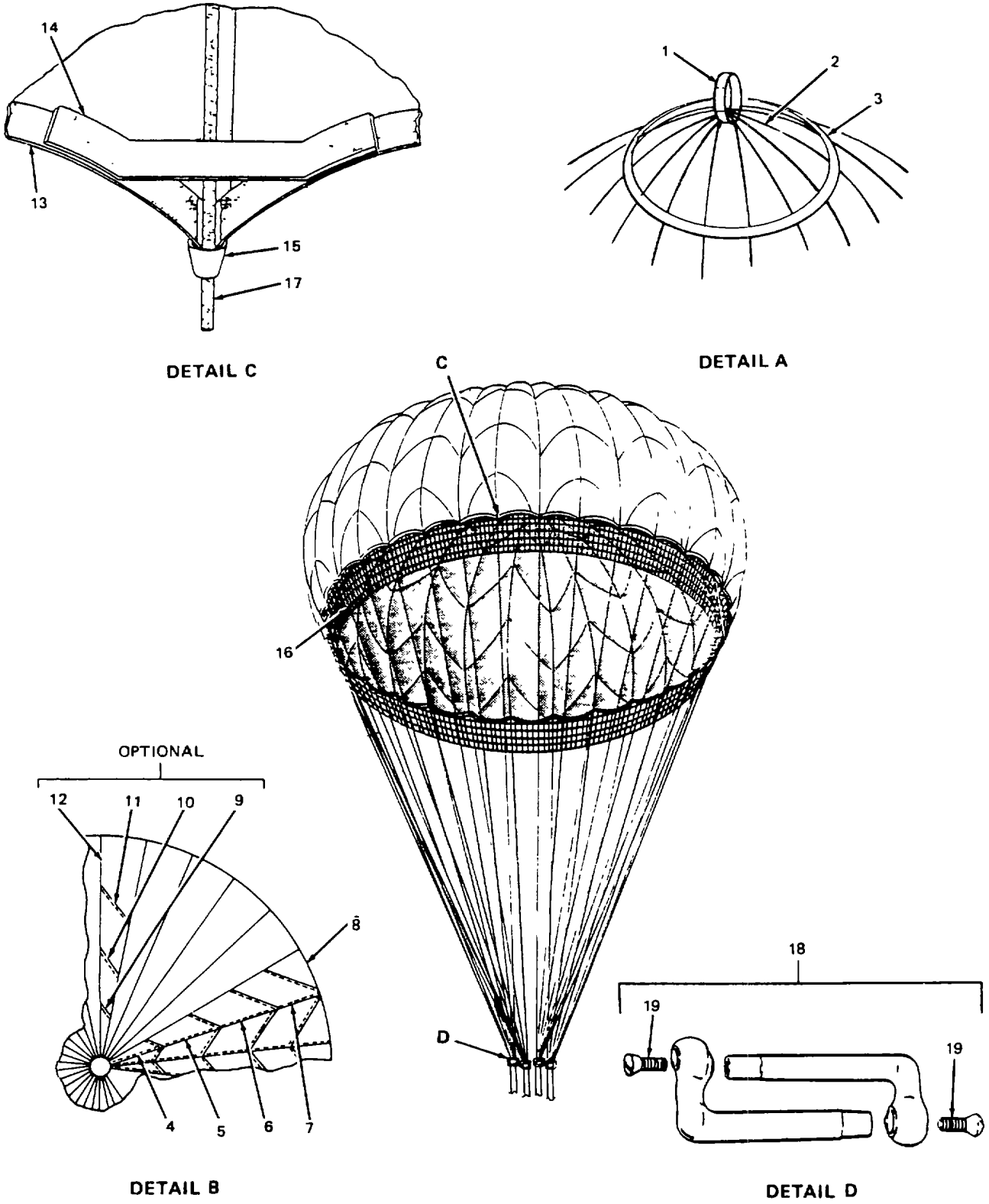


Figure C-2. Personnel Canopy w/Net T-10B

(1) ITEM NO.	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 01 CANOPY, PERSONNEL W/NET T-10B	
				FIG. C-2 PERSONNEL CANOPY W/NET T-10B 11-1-1501	
1	MOOZZ	98750	68K147-17	BRIDLE LOOP, MAKE FROM, WEBBING, NYLON P/N MIL-W-4088 TYPE 8 OD, THREAD NYLON, P/N V-T-295 TY1 CL A SIZE E NATURAL.....	1
2	MFFFF	98750	68K147-15	VENT, LINE MAKE FROM CORD, P/N MIL-C-5040, TY2 OG, THREAD NYLON P/N V-T-295 TY1 CL A SIZE E NATURAL.....	15
3	MOOOO	98750	68K147	UPPER LATERAL BAND MAKE FROM WEBBING, P/N MIL-W-5625, 1 IN. WIDE, GREEN, THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL.....	1
4	MFFOF	98750	58H6361-5	GORE, MAKE FROM CLOTH, P/N MIL-C-7020 TYPE 1, OD 36 IN. WIDE/THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL.....	30
5	MFFOF	98750	58H6361-4	GORE, MAKE FROM CLOTH, P/N MIL-C-7020, TYPE 1, OD 36 IN. WIDE/THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL.....	30
6	MFFOF	98750	58H6361-3	GORE, MAKE FROM CLOTH, P/N MIL-C-7020, TYPE 1, OD 36 IN. WIDE/THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL.....	30
7	MFFOF	98750	58H6361-2	GORE, MAKE FROM CLOTH, P/N MIL-C-7020, TYPE 1, OD 36 IN. WIDE/THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL.....	30
8	MFFOF	98750	58H6361-1	GORE, MAKE FROM CLOTH, P/N MIL-C-7020, TYPE 1, OD 36 IN. WIDE/THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL.....	30
9	MFFOF	81337	11-1-2674-4	GORE SECTION, MAKE FROM CLOTH NYLON P/N MIL-C-7020 TY1 OD 48 IN. W, THREAD NYLON, P/N V-5-295, TY1 CL A SIZE E NATURAL.....	30

SECTION II

(1) ITEM NO.	(2) SMR CODE	(3) PART FSCM	(4) NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
10	MFFOF	81337	11-1-2674-3	GORE SECTION, MAKE FROM CLOTH NYLON, P/N MIL-C-7020 TY1 OD 48 IN. W, THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL	30
11	MFFOF	81337	11-1-2674-2	GORE SECTION, MAKE FROM CLOTH NYLON, P/N MIL-C-7020 TY1 OD 48 IN. W, THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL	30
12	MFFOF	81337	11-1-2674-1	GORE, MAKE FROM CLOTH, P/N MIL-C-7020, TYPE 1, OD 36 IN. WIDE/THREAD NYLON, P/N V-T-295, TY1 CL A SIZE E NATURAL	30
13	MOOOO	98750	68K147 Section Y-Y	LOWER LATERAL BAND, MAKE FROM TAPE, P/N MIL-T-6134TY10G1IN.W,THREAD NYLON P/N V-T-295, TY1 CL A NATURAL.....	1
14	MOOOO	98750	68K147-22	POCKET BAND, MAKE FROM TAPE, P/N MIL-T-6134, TY1, OG, 1 IN. W, THREAD NYLON P/N V-T-295, TY1 CL A NATURAL.....	15
15	MOOOO	98750	68K147-19	V-TAB, MAKE FROM WEBBING, NYLON, P/N MIL-W-4088, TY1 9/16 IN. W, THREAD NYLON P/N V-T-295, TY1 CL A SIZE E NATURAL	30
16	PAOZZ	81349	MIL-C-43805	CLOTH, NETTING.	YD
17	MFFFF	98750	68K147-18	SUSPENSION LINE, MAKE FROM CORD, P/N MIL-C-5040, TY1, OD/THREAD NYLON P/N V-T-295, TY1 CL A SIZE E NATURAL.	30
18	PAOOZ	96906	MS22002-1	LINK, PARACHUTE	4
19	PAOZZ	96906	MS2202-7	SCREW	8
				END OF FIGURE	

SECTION II

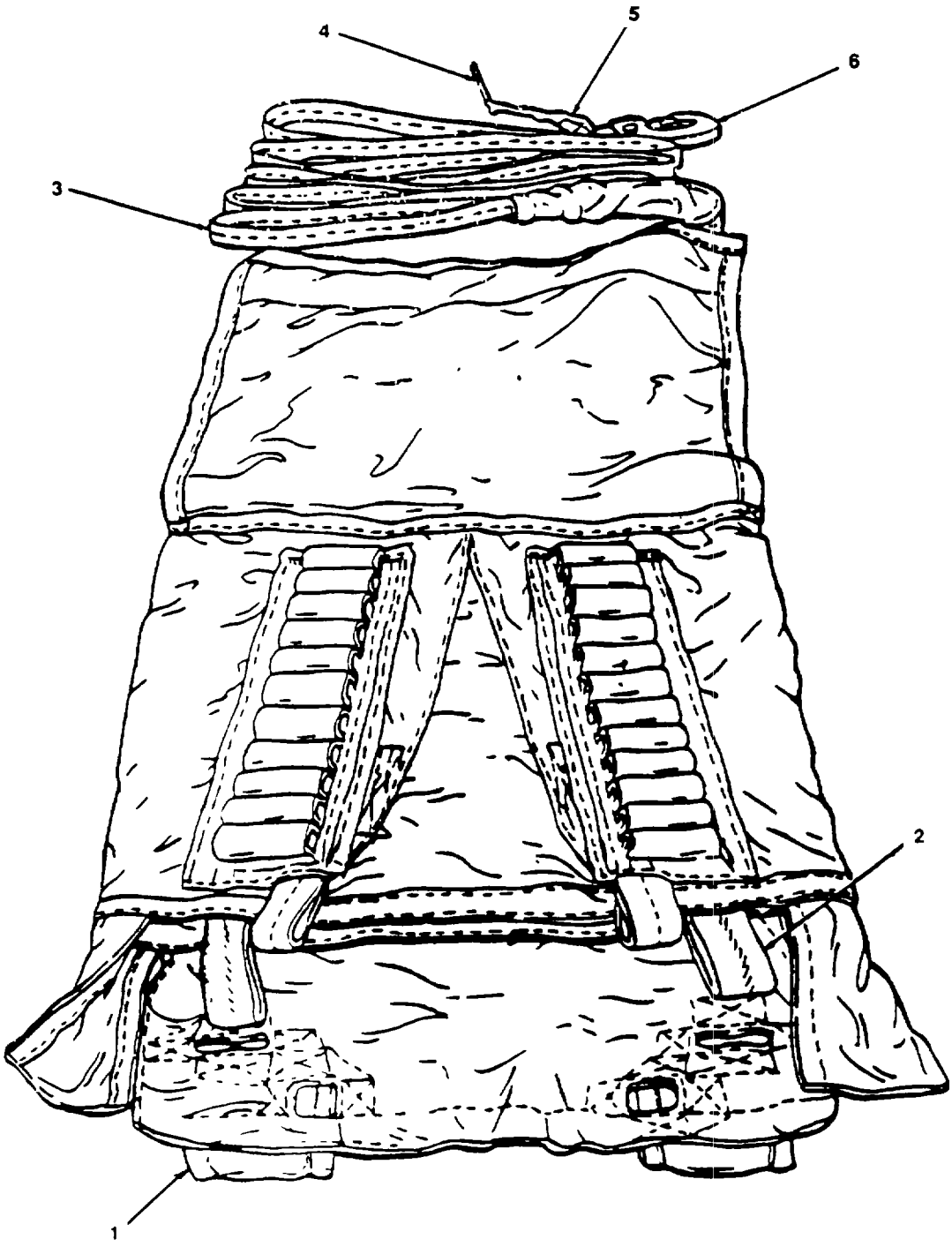


Figure C-3. Deployment Bag

SECTION II

(1) ITEM NO.	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USEABLE ON CODES (UOC)	(6) QTY
				GROUP 03 DEPLOYMENT BAG	
				FIG. C-3 DEPLOYMENT BAG 56D6276	
1	MOOZZ	81337	11-1-2594-5	LOCKING STOW LOOP HOOD, MAKE FROM CLOTH SATEEN P/N MIL-C-10296 CLASS 1 OG THREAD P/N V-T-295 TY1 CL A NATURAL SIZE E	2
2	MOOZZ	81337	11-1-2594-18	TIEDOWN LOOP, MAKE FROM WEBBING NYLON P/N MIL-W-4088 TYPE 1 9/16 IN. W THREAD NYLON P/N V-T-295 TY1 CL A NATURAL SIZE E	2
3	PAOZZ	98750	55D6481-20	STATIC LINE, PERSONNEL PARACHUTE	1
4	MOOZZ	98750	55B6261	SAFETY PIN, MAKE FROM WIRE STEEL, P/N QQ-W-423, COMPOSITION 430 CO..... TYPE 2 OG	1
5	MOOOO	98750	55D6481-5	LANYARD, MAKE FROM CORD NYLON, P/N MIL-C-5040 OG TY2, THREAD NYLON P/N ..... V-T-295 TY1 CL A OD SIZE E ..	1
6	PAOZZ	96906	MS70120	SNAP HOOK.....	1
				END OF FIGURE	

SECTION II

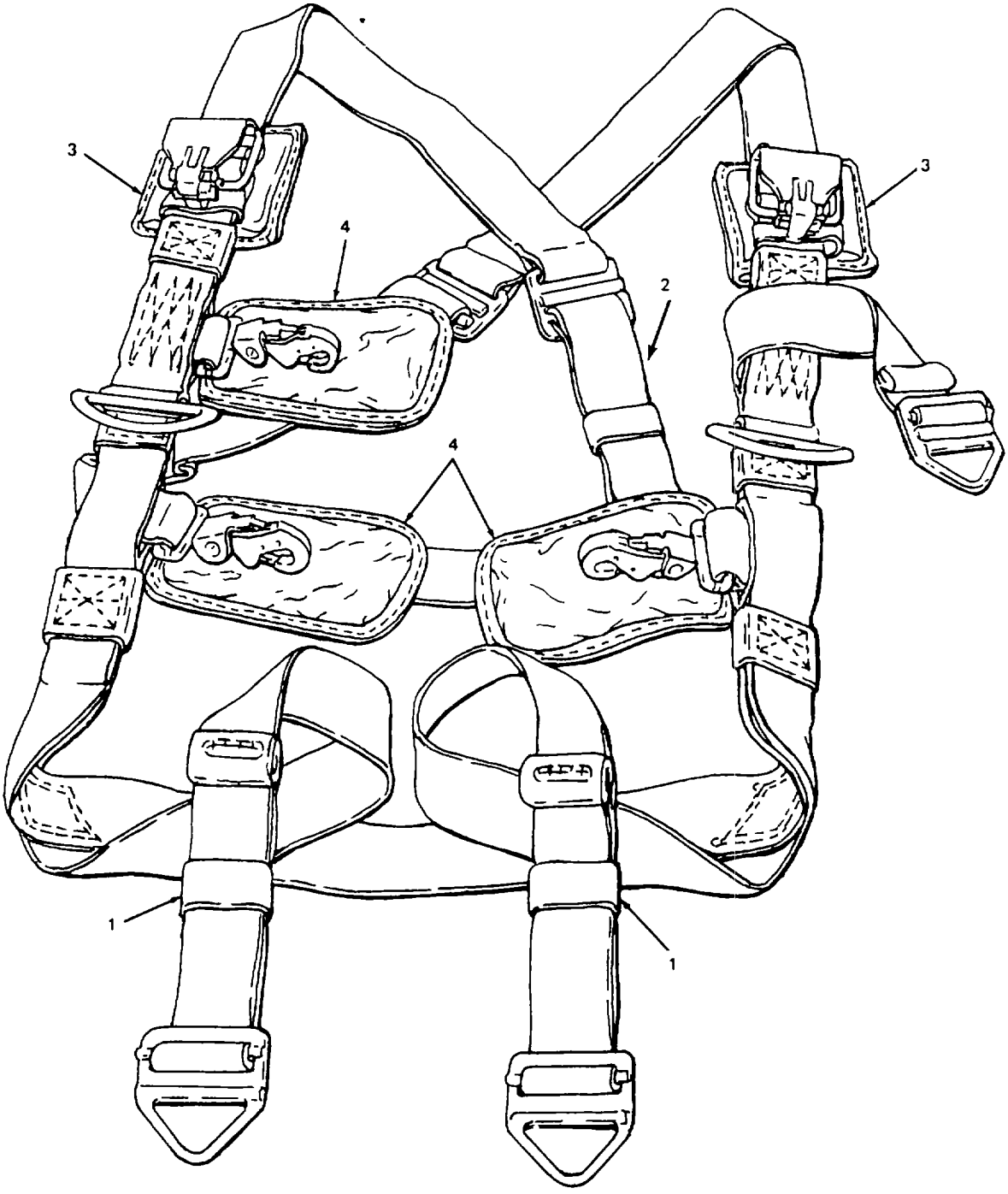


Figure C-4. Personnel Harness

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USEABLE ON CODES (UOC)	(6) QTY
				GROUP 04 HARNESS, PERSONNEL PARACHUTE FIG. C-4 PERSONNEL HARNESS 11-1-2143	
1	MOOZZ	98750	61B4384	RETAINER, WEBBING, MAKE FROM WEB-BING, NYLON, P/N MIL-W-5664 TY1 OG 1 IN W, THREAD NYLON, P/N V-T-295 TY1 CL A OG SIZE E	5
2	MOOZZ	81337	11-1-2143	HORIZONTAL BACKSTRAP, MAKE FROM WEBBING NYLON P/N MIL-W-4088 TY13 CL R THREAD NYLON P/N V-T-295 TY1 CL A OG SIZE 6.....	1
3	MOOZZ	98750	62C4319	CANOPY RELEASE PAD, MAKE FROM CLOTH NYLON TY3 CL 3 OG 106 P/N MIL-C-7219, RUBBER CELLULAR 1/2 IN. THICK TY2 GRADE A CL SOFT, P/N MIL-R-5001 THREAD NYLON P/N V-T-295, TY1 CL A OG SIZE E WEBBING NYLON TY1 9/16 IN W P/N MIL-W-4088, THREAD NYLON P/N V-T-295 TY1 CL A OG SIZE 5	2
4	MOOZZ	81337	11-1-2144-26	EJECTOR, SNAP PAD, MAKE FROM CLOTH NYLON TY3 CL 3 OG 106 P/N MIL-C-7219, FELT TY1 3/16 IN. THICK P/N C-F-106, TAPE OD NYLON TY3 1 IN. W P/N MIL-T-5038, THREAD NYLON P/N V-T-295 TY1 CL A OG SIZE E THREAD NYLON P/N V-T-295 TY1 CL A OG SIZE 5.....	3
				END OF FIGURE	

SECTION II

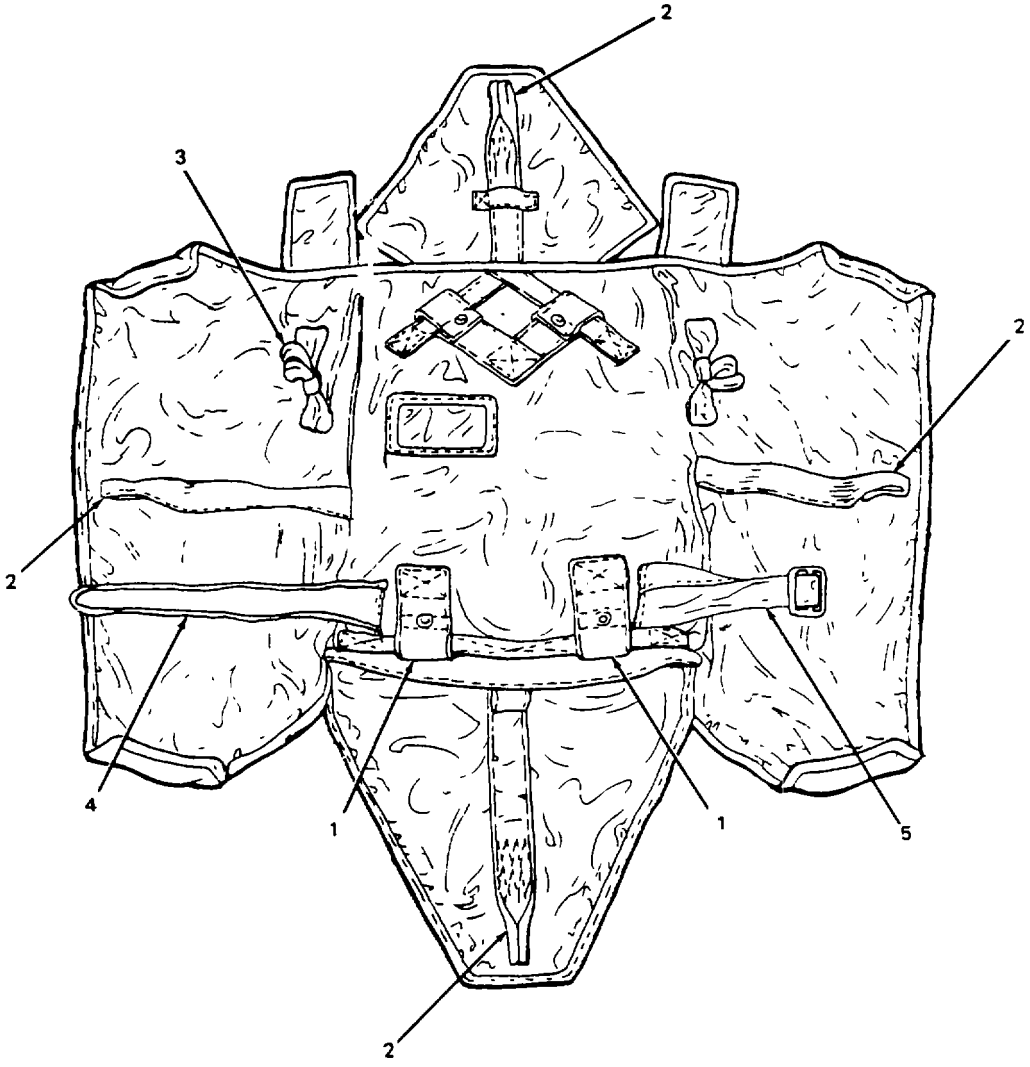


Figure C-5. Personnel Parachute Pack

SECTION II

ITEM NO.	SMR CODE	FSCM	PART NUMBER	DESCRIPTION AND USABLE ON CODES (UOC)	QTY
				GROUP 05 PACK, PERSONNEL PARACHUTE	
				FIG. C-5 PERSONNEL PARACHUTE PACK 62J4342	
1	MOOOO	98750	62J4342-4	BACK STRAP KEEPER, MAKE FROM WEBBING NYLON, P/N MIL-W-4088 TY17 CL 1 AND CL R MIL-W 27265 OD 7, THREAD NYLON V-T-295 TY1 CL A OD SIZE E.....	2
2	MOOOO	98750	62J4342-15	PACK CLOSING LOOP, MAKE FROM WEBBING NYLON, P/N MIL-W-4088 TY3 CL 1 AND CL R MIL-W-27265 OD 7, THREAD NYLON V-T-295 TY1 CL A OD SIZE E.....	4
3	MOOOO	98750	62J4342-4	RETAINING BAND, KEEPER, MAKE FROM WEBBING NYLON, P/N MIL-W-4088 TY17 CL 1 OD 7, THREAD NYLON, P/N V-T-295 TY1 CL A OD SIZE E	
4	XBOOO	98750	62J4342-20	WAISTBAND.....	1
5	XBOOO	98750	62J4342-24	WAISTBAND ADJUSTER PANEL.....	1
				END OF FIGURE	

SECTION II

(1) ITEM NO.	(2) SMR CODE	(3) FSCM	(4) PART NUMBER	(5) DESCRIPTION AND USEABLE ON CODES (UOC)	(6) QTY
				GROUP 99 BULK MATERIALS	
				FIG. BULK	
1	PBOZZ	96906	MIL-W4088	BUCKLE	EA
2	PBOZZ	96906	MS27983-1	CAP, SNAP FASTENER	BX
3	PAOZZ	81349	MIL-C-7020	CLOTH, NYLON, TY1, OG, 36 IN. W 1.1 OZ	YD
4	PAOZZ	81349	MIL-C-7020	CLOTH, NYLON, TY1, OG, 48 IN. W	YD
5	PCOZZ	81349	MIL-C-7219	CLOTH, NYLON, TY3, CL3, OG 106	YD
6	PAOZZ	81349	MIL-C-10296	CLOTH, SATEEN, CL1, OG, 56 IN. W	YD
7	PAOZZ	81349	MIL-C-5040	CORD, NYLON, TY2, OG	YD
8	PAOZZ	81348	C-F-206	FELT SHEET, TY1, 3/16 IN. THICK	SH
9	PBOZZ	96906	MS27983-4	POST, SNAP FASTENER	BX
10	PCOZZ	81349	MIL-R-5001	RUBBER, SHEET, CELLULAR, TY2, GRADE A	EA
11	PBOZZ	96906	MS27983-3	SNAP FASTENER	BX
12	PBOZZ	96906	MS27983-2	SOCKET, SNAP FASTENER	BX
13	PAOZZ	81349	MIL-T-6134	TAPE, NYLON, TUBULAR, TY I, 1 IN. W OG	YD
14	PAOZZ	81349	MIL-T-4088	TAPE, NYLON, TY1, 9/16 IN. W	YD
15	PAOZZ	81349	MIL-T-5038	TAPE, NYLON, TY3, OD, 1 IN. W	YD
16	PAOZZ	81349	MIL-W4088	TAPE, NYLON, TY3, 1-1/4 IN OD	YD
17	PAOZZ	81349	MIL-T-5038	TAPE, NYLON, TY3, 3/4 IN. W	YD
18	PAOZZ	81349	V-T-295	THREAD, NYLON, TY1 CL A OD SIZE 3	SP
19	PAOZZ	81349	V-T-295	THREAD, NYLON, TY1 CL A OD SIZE 5	SP
20	PAOZZ	81348	V-T-295	THREAD, NYLON, TY1 CL A SIZE E NATURAL	SP
21	PAOZZ	81349	V-T-295	THREAD, NYLON, TY1 CL A OG SIZE E	SP
22	PAOZZ	81348	V-T-295	THREAD, NYLON, TY1 CL A SIZE 6 NATURAL	SP
23	PAOZZ	81349	V-T-295	THREAD, NYLON, TY1 CL A SIZE 6 OG	SP
24	PAOZZ	81349	MIL-W-5625	WEBBING, NYLON, TUBULAR, 1 IN. W OG	YD
25	PCOZZ	81349	MIL-W-5664	WEBBING, NYLON, TY1, CL 1, 1 IN. W OG	YD
26	PAOZZ	81349	MIL-W-5664	WEBBING, NYLON, TY1, 9/16 IN. W OG	YD
27	PAOZZ	81349	MIL-W-4088	WEBBING, NYLON, TY7, 9/16 IN. W OD	YD
28	PAOZZ	81349	MIL-W-4088	WEBBING, NYLON, TY8, CL R 9/16 IN. W OG	YD
29	PAOZZ	81349	MIL-W-4088	WEBBING, NYLON, TY13, CL R 9/16 IN. W	YD
30	PAOZZ	81349	MIL-W-4088	WEBBING, NYLON, TY17 CL R OD 9/16 IN. W	YD
31	PBOZZ	81348	QQ-W-423-80-10	WIRE,STEEL,FORM 1 COMPOSITION 430, CONDITION A	CL

Section III. SPECIAL TOOL LIST

NOT APPLICABLE

SECTION IV

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG.	ITEM	STOCK NUMBER	FIG.	ITEM
1670-00-004-8876	1	4	8305-00-270-1291	BULK	3
1670-00-086-7780	1	5	8305-00-270-1894	BULK	23
1670-00-925-7843	4	5	8305-00-281-3013	BULK	25
1670-00-217-2421	2	22	8305-00-290-5584	BULK	8
1670-00-360-0469	3	1	8305-00-765-2863	BULK	5
1670-00-590-9909	1	3	8305-00-943-0981	BULK	6
1670-00-598-0751	1	1	8305-00-010-7033	2	16
1670-01-007-8559	1	1	8310-00-248-9716	BULK	20
1670-01-007-8563	1	2	8310-00-262-2770	BULK	18
4020-00-262-2019	BULK	7	8310-00-262-2772	BULK	19
5305-00-269-6657	2	24	8310-00-262-2777	BULK	17
5325-00-276-4908	BULK	10	8310-00-262-2780	BULK	21
5325-00-276-4978	BULK	9	8310-00-267-3027	BULK	17
5325-00-891-9073	BULK	2	8310-00-176-8083	BULK	15
5325-00-945-2577	BULK	11	8315-00-255-7675	BULK	12
8305-00-261-8585	BULK	26	8315-00-263-3604	BULK	1
8305-00-267-3009	BULK	28	8315-00-935-4741	BULK	14
8305-00-268-2455	BULK	22	9320-00-232-2473	BULK	9

SECTION IV

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81348	C-F-206	8305-00-290-5584	BULK	8
81349	MIL-C-5040	4020-00-262-2019	BULK	7
81349	MIL-C-7020	8305-01-115-9168	BULK	4
81348	MIL-C-7020	8305-00-270-1291	BULK	3
81349	MiL-C-7219	8305-00-765-2863	BULK	5
81349	MIL-C-10296	8305-00-943-0981	BULK	6
81349	MIL-C-43805	8305-01-010-7033	2	16
81349	MIL-R-5001	9320-00-232-2473	BULK	10
81349	MIL-T-5038	8315-00-176-8083	BULK	17
		8315-00-935-4741	BULK	15
81349	MIL-T-6134	8315-00-255-7675	BULK	13
81349	MIL-W-4088	8315-00-263-3604	BULK	1
			BULK	14
			BULK	27
			BULK	29
		8305-00-261-8585	BULK	28
		8305-00-267-3009	BULK	30
81349	MIL-W-5625	8305-00-268-2455	BULK	24
81349	MIL-W-5664	8305-00-270-1894	BULK	25
81349	MIL-W-5664			26
96906	MS22002-1	1670-00-217-2421	2	22
96906	MS2202-7		2	23
81337	11-1-2594-5	1670-00-360-0469	3	1
96906	MS27983-1	5325-00-891-9073	BULK	2
88044	MS27983-2	5325-00-945-2577	BULK	12
96906	MS27983-3	5325-00-276-4908	BULK	11
96906	MS27983-4	5325-00-276-4978	BULK	9
96906	MS70120		3	6
81348	QQ-W-423-080-10	9505-00-892-4616	BULK	31
81349	V-T-295	8310-00-267-3027	BULK	18
81348	V-T-295	8310-00-262-2780	BULK	23
		8310-00-262-2770	BULK	20
		8310-00-248-9716	BULK	22
		8130-00-262-2777	BULK	18
		8130-00-262-2772	BULK	21
98750	55B6261		3	4
98750	55D6481-5		3	5
98750	55D6481-20	1670-00-925-7843	3	3
98750	56D6276	1670-00-590-9909	1	3
98750	58H6361-1		2	9
98750	58H6361-2		2	8
98750	58H6361-3		2	7
98750	58H6361-4		2	6
98750	58H6361-5		2	5

SECTION IV

CROSS-REFERENCE INDEXES

PART NUMBER INDEX (CONT)

FSCM	PART NUMBER	STOCK NUMBER	FIG.	ITEM
81337	11-1-2149-2	1670-00-708-4473	1	2
98750	61B4384		4	1
98750	62J4342	1670-00-086-7780	1	5
98750	62J4342-4		5	1
98750	62J4342-4		5	3
98750	62J4342-15		5	2
98750	62J434-20		5	4
98750	62J434-24		5	5
98750	68K147-18		2	18
98570	68K147-19		2	16
98750	68K147-22		2	15
81337	11-1-1501	1670-01-007-8558	1	1
81337	11-1-2143	1670-00-004-8876	1	4
			5	2
81337	11-1-2594-5		3	1
81337	11-1-2594-18		3	2
81337	11-1-2674-1		2	13
81337	11-1-2674-2		2	12
81337	11-1-2674-3		2	11
81337	11-1-2674-4		2	10

APPENDIX D

EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

D-1. Scope. This appendix lists expendable supplies and materials you will need to operate and maintain the 35-Foot Diameter Parachute. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

D-2. Explanation of Columns.

a. Column (1) - Item Number. This number is assigned to the entry In the listing and is referenced in the narrative instructions to identify the material (e.g., "Use Cloth, Abrasive, Item 7, App. D").

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed Item. (Enter as applicable).

C - Operator/Crew
O - Organizational Maintenance - Unit Maintenance
F - Direct Support Maintenance - Intermediate Maintenance
H - General Support Maintenance - Intermediate Maintenance
D - Depot Maintenance

c. Column (3) - National Stock Number. This Is the National stock number assigned to the item; use It to request or requisition the item.

d. Column (4) - Description. Indicates the Federal item name and, if required, a description to identify the Item.

e. Column (5) - Unit of Measure (U/M). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two character alphabetical abbreviation (e.g., ea, In, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS UST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	O	1670-00-568-0323	Band, Rubber Retainer	BX
2	O	9160-00-253-1171	Beeswax, Technical 1 LB Cake	EA
3	O	7920-00-282-2470	Brush, Scrub, Household	EA
4	O	7920-00-282-2470	Brush, Stenciling	EA
5	O	5325-00-891-9073	Cap, Fastener	BX

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
6		Deleted		
7	O	5350-00-221-0872	Cloth, Abrasive	YD
8	O	8305-00-440-8326	Cloth, Cotton Sateen, 8.8 oz.	YD
9	O	8305-00-926-6870	Cloth, Duck, Nylon, Type III	YD
10	O	8305-00-433-5986	Cloth, Muslin-Cotton, Type III	YD
11	O	8305-00-270-1291	Cloth, Parachute, Nylon,1 1 oz, 36-Inch	YD
11A	O	8305-01-115-9168	Cloth, Parachute, Nylon, 1.1 oz., 48-Inch	YD
12	O	1670-00-176-1802	Cloth, Parachute Mending	YD
13		Deleted		
14	O	4020-00-262-2019	Cord, Nylon, Type II	YD
15	O	4020-00-246-0688	Cord, Nylon, Type III	YD
16	O	7930-00-281-4731	Dishwashing Compound, Hand Flake	50 lb sack
17	O	5510-00-240-0070	Dowel, Hardwood, 5/8-Inch Diameter	EA
18		Deleted		
19	O	8305-00-290-5584	Felt, Type I, 3/16-Inch Thick	SH
20	O	8315-00-106-5973	Fastener, Tape, Hook	YD
20A	O	8315-00-106-5974	Fastener, Tape, Pile	YD
21	O	7510-00-286-5362	Ink, Marking, Parachute, Strata-Blue	CN
22	O	7510-00-634-6583	Ink, Marking, Orange-Yellow	BT
23	O	1670-00-925-5615	Kit, Canopy Release	KT
24	O	9150-00-168-2000	Lubricant, Solid Film	QT
25	O	7500-00-973-1059	Marker, Felt Tip, Black	BX
26		Deleted		
27	O	8305-01-010-7033	Netting, Nylon, 3 3/4-Inch Square Mesh, 18-Inch Wide	YD
28	O	8135-00-160-7759	Paper, Kraft, Untreated	RL

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
29		Deleted		
30	O	7520-01-060-5820	Pen, Ballpoint	BX
31	O	5325-00-276-4978	Post, Fastener	BX
32	O	7390-00-205-3570	Rag, Wiping	BL
33		Deleted		
34	O	9320-00-232-2473	Rubber, Cellular, 1/2-Inch Thick	SH
35		Deleted		
36	O	5325-00-893-6243	Socket, Fastener	BX
37		Deleted		
38		Deleted		
39		Deleted		
40	O	9310-00-160-7858	Stencil Board, Oiled	SH
41		Deleted		
42	O	5325-00-276-4908	Stud, Fastener	BX
43	O	7510-00-074-4946	Tape, Adhesive, Pressure Sensitive, 1/2", yellow	RL
43A	O	7510-00-266-5016	Tape, Adhesive, 2-Inch Wide	RL
44	O	8315-00-255-7675	Tape, Nylon, Tubular, Natural, 1-Inch Wide	RL
44A	O	8315-01-238-8089	Tape, Tubular, OD-7, 1-Inch Wide	RL
45	O	8315-00-935-4741	Tape, Nylon, Type III, 1-Inch Wide	RL
46	O	8315-00-263-3604	Tape, Nylon, Type III, 1 1/4-Inch Wide, OD-7 CL R	RL
47	O	8315-00-176-8083	Tape, Nylon, Type III, 1-Inch Wide	RL
48	O	8315-00-753-5952	Tape, Nylon, Type III, 1 1/2-Inch Wide	RL
49	O	6810-00-270-9982	Tetrachloroethylene, Technical	DR
50	O	8310-00-262-2770	Thread, Nylon, Natural, Size E	TU

Section II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST (CONT)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
51	O	8310-00-262-2772	Thread, Nylon, Green Size E	TU
52	O	8310-00-261-9741	Thread, Cotton, Ticket 24/4	TU
53	O	8310-00-262-3324	Thread, Nylon, Natural, Size A	TU
54	O	8310-00-267-3027	Thread, Nylon, OD, Size 3	TU
55	O	8310-00-248-9714	Thread, Nylon, Natural Size 3	TU
56	O	8310-00-262-2780	Thread, Nylon, Size 6	TU
57	O	9160-00-285-2044	Wax, Paraffin, 1 Lb Cake	EA
58	O	8305-00-268-2411	Webbing, Textile, Cotton, Type I, 1/4-Inch Wide	YD
59	O	8305-00-260-2561	Webbing, Textile, Cotton, Type II	YD
60	O	8305-00-935-3252	Webbing, Textile, Cotton, Type VI	YD
61	O	8305-00-270-1894	Webbing, Elastic, Cotton, 1-Inch Wide	YD
62	O	8305-00-268-2453	Webbing, Textile, Nylon, Tubular, 1/2-Inch Wide	YD
63	O	8305-00-268-2455	Webbing, Textile, Nylon, Tubular, 1-Inch Wide	YD
64	O	8305-00-260-6909	Webbing, Textile, Nylon, Type I, 9/16-inch Wide	YD
65	O	8305-00-260-2562	Webbing, Textile, Nylon, Type III	YD
66	O	8305-00-281-3013	Webbing, Textile, Nylon, Type VI	YD
67	O	8305-00-263-3598	Webbing, Textile, Nylon, Type VIII	YD
68	O	8305-00-260-4586	Webbing, Textile, Nylon, Type XIII	YD
69	O	8305-00-753-3040	Webbing, Textile, Nylon, Type XVII	YD
70	O	9505-00-892-4616	Wire, Steel, 0.080-Inch Diameter	CL

APPENDIX E

ILLUSTRATED LIST OF MANUFACTURED ITEMS

Complete instructions for making items authorized to be manufactured or fabricated are located in Chapter 2, Section VI of this manual.

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ARMY TECHNICAL MANUAL **TM 10-1670-271-23&P**
AIR FORCE TECHNICAL ORDER **TO 14D1-2-464-2**
MARINE CORPS TECHNICAL MANUAL **TM 01136B-23&P/1**

By Order of the Secretaries of the Army, the Air Force and the Navy (Including the Marine Corps).

CARL E. VUONO
General, United States Army
Chief of Staff

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R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

LARRY D. WELCH, *General USAF*
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To be distributed in accordance with DA Form 12-25A, Unit, Direct Support and General Support Maintenance requirements for Parachute, Personnel, Type 35-ft. diameter, (T-10B) Troop-Back.

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These are the instructions for sending an electronic 2028

The following format must be used if submitting an electronic 2028. The subject line must be exactly the same and all fields must be included; however only the following fields are mandatory: 1, 3, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, and 27.

From: "Whomever" <whomever-avma27.army.mil>
To: mpmt%avma28st-louis-emh7.army.mil

Subject: DA Form 2028
1. **From:** Joe Smith
2. Unit: home
3. **Address:** 4300 Park
4. **City:** Hometown
5. **St:** MO
6. **Zip:** 77777
7. **Date Sent:** 19-OCT-93
8. **Pub no:** 55-2840-229-23
9. **Pub Title:** TM
10. **Publication Date:** 04-JUL-85
11. Change Number: 7
12. Submitter Rank: MSG
13. **Submitter FName:** Joe
14. Submitter MName: T
15. **Submitter LName:** Smith
16. **Submitter Phone:** 123-123-1234
17. **Problem: 1**
18. Page: 2
19. Paragraph: 3
20. Line: 4
21. NSN: 5
22. Reference: 6
23. Figure: 7
24. Table: 8
25. Item: 9
26. Total: 123
27. **Text:**

This is the text for the problem below line 27.

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN...JOT DOWN THE DOPE ABOUT IT ON THIS FORM. CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL.

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BE EXACT PIN-POINT WHERE IT IS

PAGE NO.	PARA-GRAPH	FIGURE NO.	TABLE NO.

IN THIS SPACE, TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT.

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TEAR ALONG PERFORATED LINE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS.

The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 dekagram = 10 grams = .35 ounce
1 hectogram = 10 dekagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47 acres
1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	newton-meters	1.356	metric tons	short tons	1.102
pound-inches	newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 064862-003