*TM 10-1670-269-23&P
AIR FORCE T.O. 14D1-2-462-2
MARINE CORPS TM 01135B-23&P/1
NAVSEA SS400-AL-MMO-010

TECHNICAL MANUAL

UNIT AND DIRECT SUPPORT (DS) MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST, RESERVE (T-10R) NSN 1670-00-892-4218

MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS) NSN 1670-01-420-4256

***This manual supersedes TM 10-1670-269-23&P, dated 30 August 2001**

HEADQUARTERS, DEPARTMENT OF THE ARMY

31 August 2003
PCN 184 001351 00

This warning summary contains general safety warnings and hazardous material warnings that must be understood and applied during operation and maintenance of this equipment. Failure to observe these precautions could result in serious injury or death to personnel.

WARNING

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

WARNING

Exercise extreme care when using petroleum products to destroy equipment by fire, as sever burns or DEATH could result.

WARNING

For First Aid Treatment, refer to FM 4-25.11 (FM 21-11).

WARNING

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

WARNING

Failure to remove the pull-up cords may cause a parachute malfunction resulting in severe injury or death.

WARNING

Failure to remove the ejector spring compression rods will cause a malfunction and could result in severe injury or death.

WARNING

The limitations prescribed for parachute canopy patching will be stringently adhered to under all circumstances and without any deviations. Failure to do so could result in severe injury or death.

CHANGE NO. 1

HEADQUARTERS, DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 31 AUGUST 2005

TECHNICAL MANUAL

UNIT AND DIRECT SUPPORT (DS) MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST) FOR PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST, RESERVE (T-10R) NSN 1670-00-892-4218

MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS) NSN 1670-01-420-4256

DISTRIBUTION STATEMENT A: - Approved for public release; distribution is unlimited.

TM 10-1670-269-23&P, dated 31 August 2003, is changed as follows:

1. File this sheet in the front of the manual for reference.

2. This change implements Army Maintenance Transformation and changes the Maintenance Allocation Chart (MAC) to Support Field and Sustainment Maintenance.

3. New or updated text is indicated by a vertical bar in the outer margin.

4. Added illustrations are indicated by a vertical bar adjacent to the figure number. Changed illustrations are indicated by a miniature hand adjacent to the updated area and a vertical bar adjacent to the figure number.

5. Remove old pages and insert new pages as indicated below.

Remove Pages	Insert Pages
A/(B Blank)	A/(B Blank) 2028 Front/Back

6. Replace the following work packages with their revised version.

Work Package Number
WP 0044 00

By Order of the Secretaries of the Army, Air Force, and Navy (including the Marine Corps):
C1

PETER J. SCHOOMAKER
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Marine Corps System Command

Distribution:

To be distributed in accordance with initial distribution number (IDN) 255754 requirements for TM 10-1670-269-23&P.

INSERT LATEST CHANGED PAGES/WORK PACKAGES. DESTROY SUPERSEDED DATA.

LIST OF EFFECTIVE PAGES/WORK PACKAGES

NOTE: The portion of text affected by the update is indicated by a vertical line in the outer margins of the page. Updates to illustrations are indicated by miniature pointing hands or vertical lines in the outer margins of the page in the area of the illustration changed. Zero in the "Change No." column indicates an original page or work package.

Dates of issue for the original manual and changed pages/work packages are:

Original 31 August 2003

Change 1 31 August 2005

TOTAL NUMBER OF PAGES FOR FRONT AND REAR MATTER IS 20 AND TOTAL NUMBER OF WORK PACKAGES IS 58, CONSISTING OF THE FOLLOWING:

Page/WP No.	Change No.	Page/WP No.	Change No.	Page/WP No.	Change No.
Front Cover	**0**	WP 0016 00 (2 pgs)	**0**	WP 0039 00 (2 pgs)	**0**
Warning	**0**	WP 0017 00 (2 pgs)	**0**	WP 0040 00 (4 pgs)	**0**
i - iii	**0**	WP 0018 00 (2 pgs)	**0**	WP 0041 00 (2 pgs)	**0**
iv blank	**0**	WP 0019 00 (2 pgs)	**0**	WP 0042 00 (4 pgs)	**0**
v	**0**	WP 0020 00 (2 pgs)	**0**	Chp 5 title page	**0**
vi blank	**0**	WP 0021 00 (2 pgs)	**0**	WP 0043 00 (2 pgs)	**0**
Chp 1 title page	**0**	WP 0022 00 (2 pgs)	**0**	WP 0044 00 (10 pgs)	**1**
WP 0001 00 (6 pgs)	**0**	WP 0023 00 (2 pgs)	**0**	WP 0045 00 (8 pgs)	**0**
WP 0002 00 (12 pgs)	**0**	WP 0024 00 (2 pgs)	**0**	WP 0046 00 (4 pgs)	**0**
WP 0003 00 (2 pgs)	**0**	WP 0025 00 (2 pgs)	**0**	WP 0047 00 (4 pgs)	**0**
Chp 2 title page	**0**	WP 0026 00 (2 pgs)	**0**	WP 0048 00 (4 pgs)	**0**
WP 0004 00 (10 pgs)	**0**	WP 0027 00 (2 pgs)	**0**	WP 0049 00 (4 pgs)	**0**
WP 0005 00 (6 pgs)	**0**	WP 0028 00 (22 pgs)	**0**	WP 0050 00 (6 pgs)	**0**
WP 0006 00 (2 pgs)	**0**	WP 0029 00 (4 pgs)	**0**	WP 0051 00 (4 pgs)	**0**
WP 0007 00 (6 pgs)	**0**	WP 0030 00 (2 pgs)	**0**	WP 0052 00 (4 pgs)	**0**
Chp 3 title page	**0**	WP 0031 00 (2 pgs)	**0**	WP 0053 00 (2 pgs)	**0**
WP 0008 00 (4 pgs)	**0**	WP 0032 00 (2 pgs)	**0**	WP 0054 00 (2 pgs)	**0**
WP 0009 00 (4 pgs)	**0**	WP 0033 00 (6 pgs)	**0**	WP 0055 00 (2 pgs)	**0**
WP 0010 00 (4 pgs)	**0**	Chp 4 title page	**0**	WP 0056 00 (2 pgs)	**0**
WP 0011 00 (2 pgs)	**0**	WP 0034 00 (4 pgs)	**0**	WP 0057 00 (4 pgs)	**0**
WP 0012 00 (28 pgs)	**0**	WP 0035 00 (2 pgs)	**0**	WP 0058 00 (6 pgs)	**0**
WP 0013 00 (30 pgs)	**0**	WP 0036 00 (2 pgs)	**0**	INDEX-1 – INDEX-6	**0**
WP 0014 00 (16 pgs)	**0**	WP 0037 00 (4 pgs)	**0**	Back Cover	**0**
WP 0015 00 (2 pgs)	**0**	WP 0038 00 (4 pgs)	**0**		

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MARINE CORPS TM 01135B-23&P/1
NAVSEA SS400-AL-MM0-010

HEADQUARTERS,
DEPARTMENT OF THE ARMY, AIR FORCE, NAVY,
AND HEADQUARTERS, U.S. MARINE CORPS
WASHINGTON, D.C., 31 AUGUST 2003

Technical Manual

UNIT AND DIRECT SUPPORT (DS) MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR

PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST RESERVE (T-10R) NSN 1670-00-892-4218

MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS) NSN 1670-01-420-4256

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 the procedures, please let us know. Mail your letter, 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 Soldier, Biological and Chemical Command, ATTN: AMSSB-RIM-L(N), Kansas St., Natick, MA 01760. You may also submit your recommended changes by E-mail directly to: <amssbriml@natick.army.mil>. A reply will be furnished directly to you. Instructions for sending electronic 2028 may be found at the back of this manual immediately preceding the hard copy 2028.

AIR FORCE

Reports by U.S. Air Force units should be submitted on AFTO Form 22 (Technical Order Publication Improvement Report) and forwarded to the address prescribed above for the Army. An information copy of the prepared AFTO Form 22 shall be furnished to SAAMA/MMSTR, Kelly AFB, and TX 78241-5000.

MARINE CORPS

Marine Corps personnel submit NAVMC 10772 form to Commander, ATTN: (Code 850), Marine Corps Logistics Base, 814 Radford Blvd., Albany, GA 31704-1128.

NAVY

Submit NAVSEA Form 4160/1 (REV 2-99) to Commander, NSDSA Code 5E30, NAVSURFCENDIV, 4363 Missile Way, Port Hueneme, CA 93043-4307. A reply will be sent to you.

*This manual supersedes TM 10-1670-269-23&P, dated 30 August 2001

TABLE OF CONTENTS

TABLE OF CONTENTS – Continued

WP Sequence No.

HOW TO USE THIS MANUAL

This manual contains General Information, Operating Instructions, Operator Preventive Maintenance Checks and Services (PMCS), Maintenance and Repair Instructions, Maintenance Allocation Chart (MAC), Repair Parts and Special Tools List (RPSTL), and Supporting Information for the 24-Foot Diameter Troop Chest Reserve (T-10R) Parachute and the Modified Improved Reserve Parachute System (MIRPS).

Chapter 1 contains introductory information on the T-10R and the MIRPS. Chapter 2 includes Operator Maintenance Instructions, and PMCS. Chapter 3 includes Unit Maintenance Instructions. Chapter four contains Direct Support Maintenance Instructions. Chapter 5 concludes with the MAC, the RPSTL, References, and other supporting information.

Manual Organization and Page Numbering System. The manual is divided into five major chapters that detail the topics mentioned above. Within each chapter are work packages (WPs) covering a wide range of topics. Each work package is numbered sequentially starting at page 1. The work package has its own page-numbering scheme and is independent of the page numbering used by other work packages. Each page of a work package has a page number of the form XXXX YY-ZZ where XXXX is the work package number (e.g. 0010 is work package 10) and YY is the revision number for that work package and ZZ represents the number of the page within that work package. A page number such as 0010 00-1/(2 Blank) means that 1 page contains information but page 2 of that work package has been intentionally left blank.

Finding Information. The Table of Contents (TOC) permits the reader to find information in the manual quickly. The reader should start here first when looking for a specific topic. The table of contents lists the topics contained within each chapter and the Work Package Sequence Number where it can be found.

Example: If the reader was looking for instructions on “Service upon receipt”, which is a Operator Maintenance instruction, the table of contents indicates that Operator Maintenance information can be found in Chapter 2. Scanning down the listings for Chapter 2, “Service Upon Receipt” information can be found in WP 0004 00 (Work Package 4).

An Alphabetical Index can be found at the back of the manual, and lists specific topics with the corresponding work packages.

CHAPTER 1

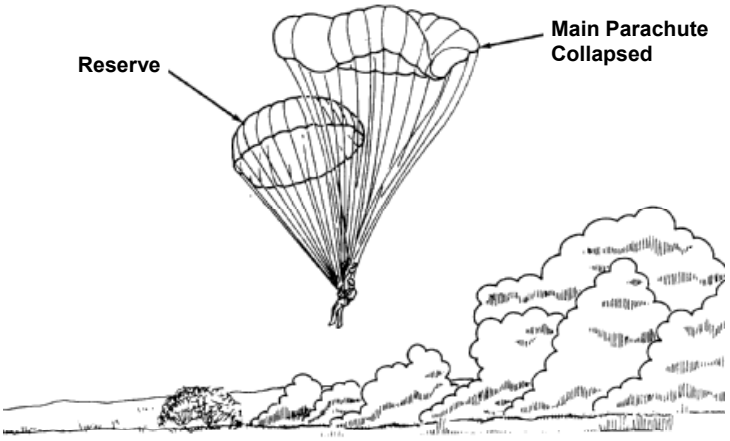
INTRODUCTORY INFORMATION FOR PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST, RESERVE (T-10R) AND THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS)

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS GENERAL INFORMATION

OVERVIEW
This work package (WP) includes the general information common to all parachute manuals and specific information pertinent to the parachutes described in this manual.

SCOPE
The scope of this manual is described in the following subparagraphs.

Type of Manual
This manual provides unit and direct support (DS) maintenance instructions for parachute NSN 1670-00-892-4218, and NSN 1670-01-420-4256. These are 24-Foot Diameter, Troop, Chest, Reserve Parachutes. Included in these instructions are procedures for packing and maintenance pertaining to the composition, inspection, repair, and replacement of individual components and assemblies. This manual also provides a Repair Parts and Special Tools List (RPSTL) located in work WP 0045 00 through WP 0052 00.



Equipment Name
24-Foot Diameter, Troop, Chest, Reserve (T-10R) Parachute, and the Modified Improved Reserve Parachute System (MIRPS).

Purpose of Equipment
These parachutes are reserve type designed to be activated manually, by means of a ripcord, by the parachutist in the event the primary parachute malfunctions. It provides capability to safely deliver an airborne trooper and individual equipment from an aircraft in flight for a vertical assault on an enemy.

MAINTENANCE FORMS, RECORDS, AND REPORTS
Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management Systems (TAMMS), and DA PAM 738-751. The Army Maintenance System – Aviation. Marine Corps personnel will refer to TM 4700-15/1, Equipment Maintenance Forms and Procedures.

REPORTING OF EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)
If the design of your parachute 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 Standard Form (SF) 368 Product Quality Deficiency Report (PQDR). Mail it to: Commander, U.S. Army Soldier and Biological Chemical Command, ATTN: AMSSB-RIM-E (N), Kansas Street, Natick, MA 01760-5052. A reply will be furnished directly to you.

CORROSION PREVENTION AND CONTROL (CPC)
Corrosion Prevention and Control (CPC) of Army materiel is a continuing concern. It is important that any corrosion problems with this item be reported so that the problem can be corrected and improvements can be made to prevent the problem in future items.

While corrosion is typically associated with rusting of metals, it can also include deterioration of other materials, such as rubber and plastic. Unusual cracking, softening, swelling, or breaking of these materials may be a corrosion problem.

If a corrosion problem is identified, it can be reported using SF 368 PQDR. Use of keywords such as "corrosion", "rust", "deterioration", or "cracking" will ensure the information is identified as a CPC problem.

The form should be submitted to the address specified in DA PAM 738-750, Functional Users Manual for the Army Maintenance Management System (TAMMS).

DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE

GENERAL INFORMATION:
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.

Authority. Destruction of a parachute 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.

Implementation Plan. All units that possess air delivery equipment should have a plan for the implementation of destruction procedures.

Training. All personnel who use or perform such functions as rigging, packing, maintenance, or storage of parachutes should receive thorough training on destruction procedures. 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.

SPECIFIC METHODS:
Specific methods of destroying Army parachutes to prevent enemy use shall be by mechanical means, fire or by use of natural surroundings.

Destruction by Mechanical Means. Demolish by using any sharp object (knife, shears, etc.) to cut, rip, tear, or slash fabric, lines, loops, straps, or tapes.

WARNING

Use extreme care when pouring gasoline or any other flammable material as a fire starter. Such materials can cause sever burns or DEATH.

Destruction by Fire. Items that can be destroyed by fire shall be burned. However, mechanical destruction should be completed first, whenever possible, before initiating destruction by fire. Loosely pile the entire parachute assembly. Burn, using gasoline, solvent, beeswax, oil, or any other flammable material as a fire starter.

Destruction by Use of Natural Surroundings. Accessible vital parts 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 parachutes.

PREPARATION FOR STORAGE OR SHIPMENT

To prepare the parachute for storage or shipment, refer to WP 0032 00.

WARRANTY INFORMATION

This equipment contains no warranty provisions.

LIST OF ACRONYMS AND ABBREVIATIONS

AFR	Air Force Regulations
BOI	Basic of Issue
°C	Centigrade
CAGEC	Commercial and Government Entity Code
Cm.	Centimeter
CPC	Corrosion Prevention and Control
C/W	Complied With
DA	Department of the Army
DA PAM	Department of the Army Pamphlet
DAD	Deployment Assistance Device
Dia	Diameter
DS	Direct Support
Dtd	Dated
EA	Each
EIR	Equipment Improvement Recommendation
F	Fahrenheit
FM	Field Manual
FSC	Federal Supply Classification

LIST OF ACRONYMS AND ABBREVIATIONS -Continued

Ft.	Feet
in.	Inches
L.	Liters
LG	Long
Lb/Lbs	Pound/Pounds
MAC	Maintenance Allocation Chart
MIL-STD	Military Standard
MIRPS	Modified Improved Reserve Parachute System
MTOE	Modified Table of Organization and Equipment
MWO	Modified Work Order
NIIN	National Item Identification Number
No.	Number
NSN	National Stock Number
OD	Olive Drab
oz.	Ounce
PMCS	Preventive Maintenance Checks and Services
PQDR	Product Quality Deficiency Report
psi	Pounds per square inch
RPSTL	Repair Parts and Special Tools List
SDR	Supply Discrepancy Report
SMR	Source, Maintenance, and Recoverability
TAMMS	The Army Maintenance Management System
TB	Technical Bulletin
TM	Technical Manual
TMDE	Test Measurement and Diagnostic Equipment
UOC	Usable on Code
U/M	Unit of Measure
WP	Work Package

Additional acronyms and abbreviations used with this manual are located in ASME Y14.38-1999.

SAFETY, CARE, AND HANDLING
The following subparagraphs summarize the safety, care, and handling requirements for the parachute assembly.

Safety. It is imperative that you observe all safety precautions specified on the warning page in the front of this manual. You must also observe specific warnings and cautions specified throughout this manual. The warnings are provided to tell you how to protect yourself from death or serious injury.

Care and Handling. Observe the following precautions:

Use care in handling packed parachutes as metal parts could cause personal injury.

Remove all jewelry when packing or performing maintenance on the parachute. Damage to the canopy materials could result from watches, rings, bracelets, etc.

Avoid grabbing the ripcord grip when handling a parachute.

Use every effort to protect the parachute from the weather elements, dust, dirt, oil, grease, and acids.

Place unpacked parachutes in aviator kit bag.

Cover canopy during periods of inactivity. Avoid prolonged exposure to sunlight, inspection lights, or florescent lights. Nylon material is subject to deterioration under ultraviolet light.

Use a heated building to store parachutes when available. Store parachute in a dry, well-ventilated location, protected from pilferage, dampness, fire, dirt, insects, rodents, and direct sunlight.

REPAIR PARTS, SPECIAL TOOLS, TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE) AND SUPPORT EQUIPMENT

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

Special Tools, (TMDE) and Support. Special Tools, TMDE, and Support Equipment are not required.

Repair Parts. Repair parts are listed and illustrated in WP 0045 00 – 0052 00 of this manual.

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS EQUIPMENT DESCRIPTION AND DATA

EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

A summary of the characteristics, capabilities, and features of the equipment is contained in the following subparagraphs.

Characteristics. These are emergency parachutes opened manually by means of a ripcord actuated by the jumper. Both parachute assemblies consist of a flat circular 24-foot diameter canopy, and a pack assembly with ripcord. The 24-Foot Type Troop Chest Reserve (T-10R) has a spring-actuated umbrella type pilot parachute with bridle line. The Modified Improved Reserve Parachute System (MIRPS) has a Deployment Assistance Device (DAD) activated pilot parachute with bridle line and apex weight.

Capabilities and Features:

Capable of supporting 350 pounds.

Lightweight and portable.

Complete assembly weight.

T-10R – 13 pounds.

MIRPS – 13.5 pounds.

Components of the Parachute Assembly:

T-10R

Pilot chute

Canopy assembly

Pack assembly

Ripcord assembly

MIRPS

Pilot chute

Bridle line w/apex weight.

Ejector spring.

Canopy assembly.

Pack assembly.

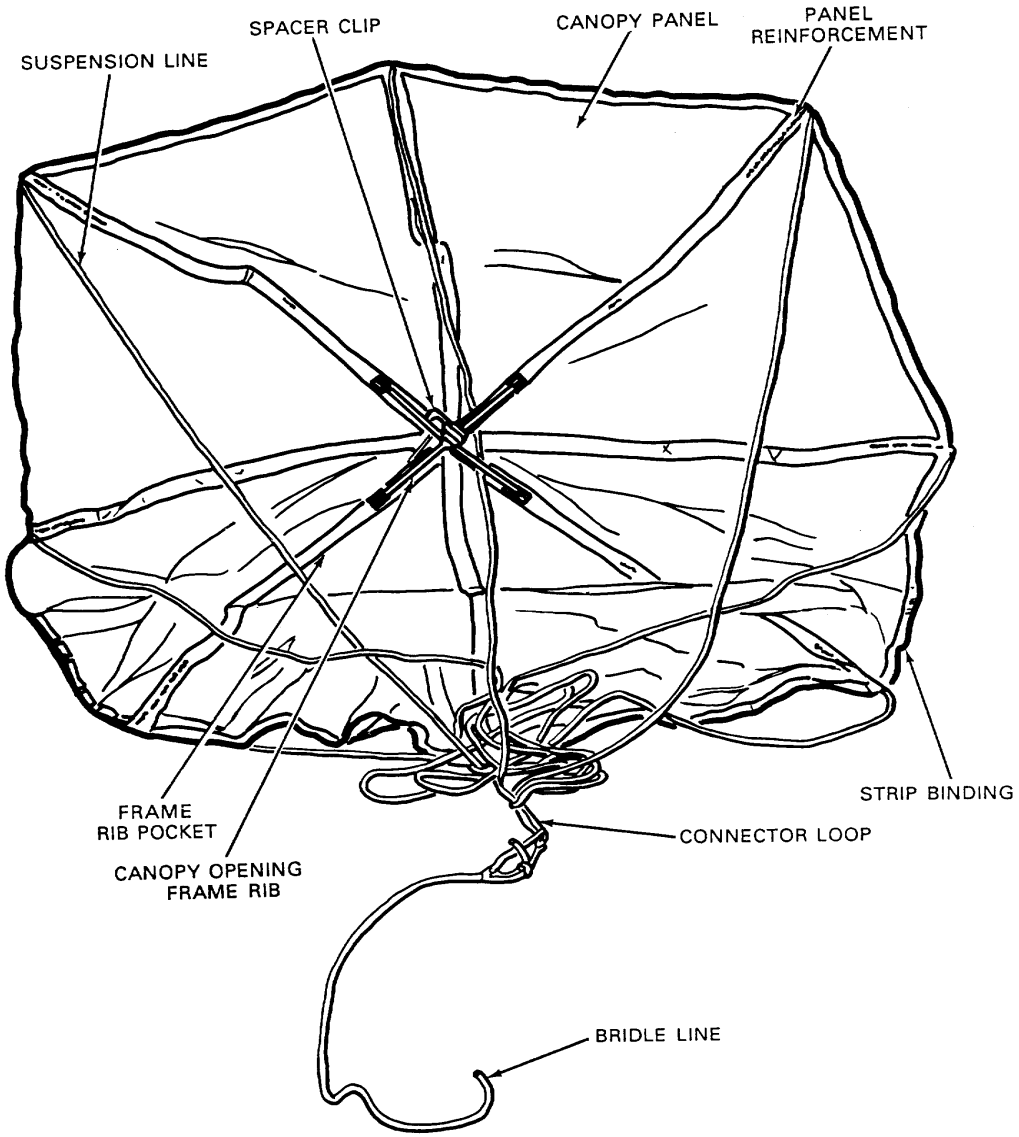
Ripcord assembly.

LOCATION AND DESCRIPTION OF MAJOR COMPONENTS

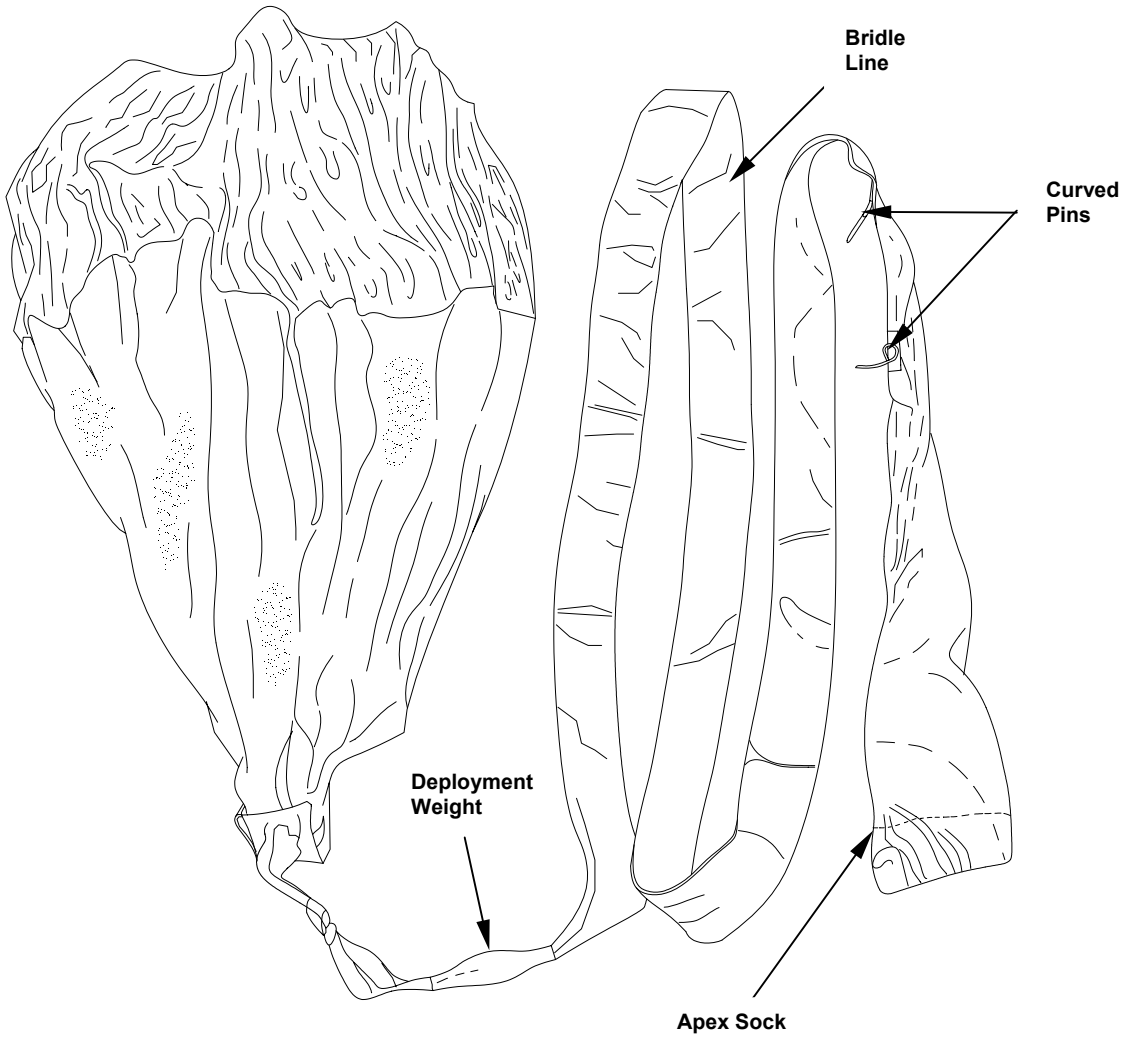
The major components of the parachutes are described and illustrated in the following subparagraphs. Specifications and data for the components are provided in this WP.

Pilot Chute. The pilot chute assists in the deployment of the parachute canopy by serving as an air anchor. The two types of pilot chutes are as follows:

The T-10R. This pilot chute consist of a 3-foot 4-inch diameter octagonal canopy constructed from 1.1-ounce ripstop nylon parachute cloth, eight nylon suspension lines, and a spring activated umbrella type opening frame with four frame ribs. The canopy is reinforced with four panel reinforcements across the diameter on the inside of the panels and by a strip binding that encircles the skirt down to the connector loop and up to the opposite side of the canopy skirt. The suspension lines are stitched together near the lowest point to form the connector loop. The connector loop is used for attaching the pilot chute to the main parachute canopy by means of the bridle line. The opening frame is positioned on the inside of the canopy. The four frame ribs are secured in four frame rib pockets either by zig-zag stitching or by hand tacking. A manually operated ripcord releases the spring activated pilot chute.



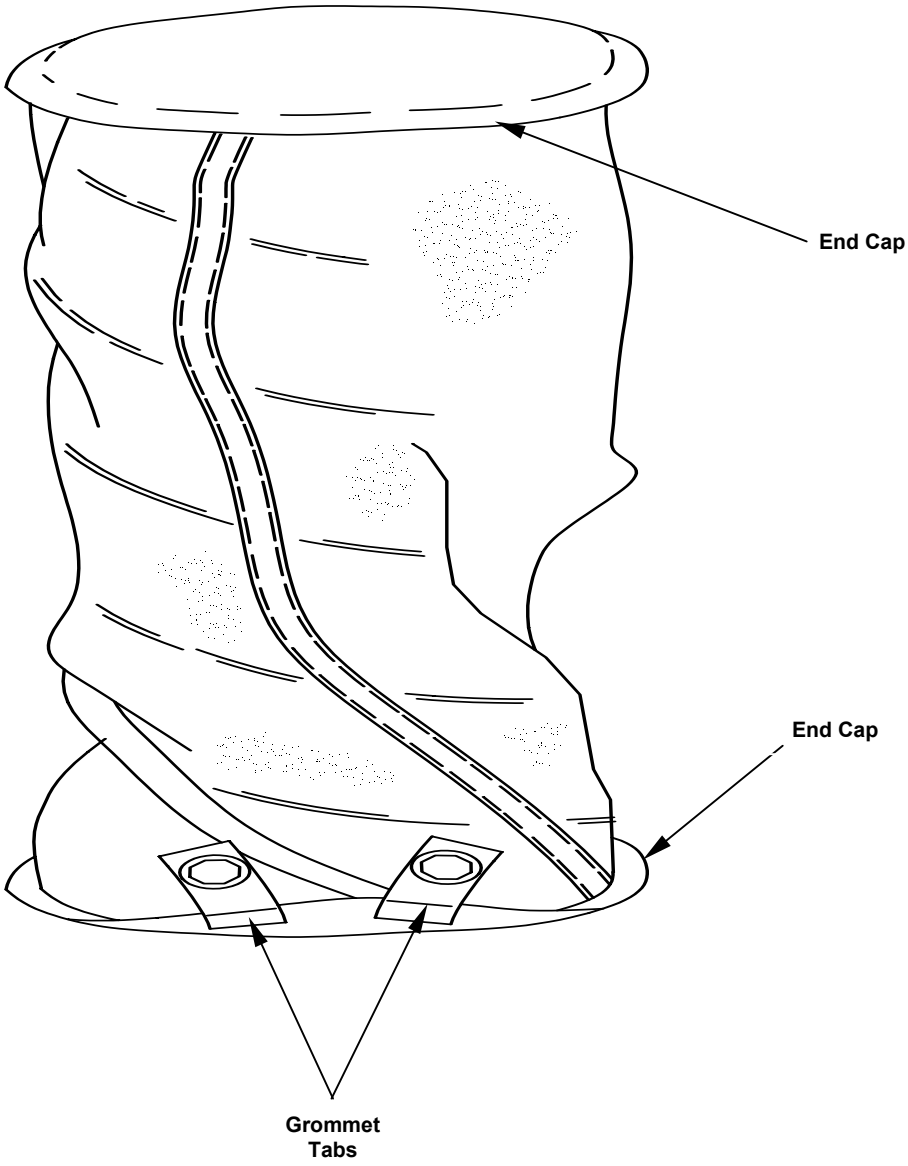
The MIRPS. This 5-foot pilot chute w/bridle pilot chute consist of a flat circular canopy constructed from type I low porosity nylon parachute cloth and marquisette netting. The netting is reinforced with six radial tapes, which form the bridle attachment loop. A centerline is attached to the type I low porosity nylon parachute cloth to speed pilot chute inflation and, also forms part of the bridle attachment loop. The pilot chute does not have suspension lines and it appears somewhat like a large ball. The bridle line assembly is 13-feet long and is constructed from 2-inch wide polyester webbing with a 4-inch loop at each end. One end of the bridle line is fitted with an apex sock, which aids in pressurizing the reserve main canopy during low speed deployments. Adjacent to the apex sock, the bridle line is fitted with two curved metal pins, which are used to secure the canopy staging flaps located in the pack assembly. The other end of the bridle line is fitted with a 5-ounce deployment weight. The deployment weight provides the necessary mass to cause positive launch of the pilot chute once the pilot chute ejector spring reaches full extension.



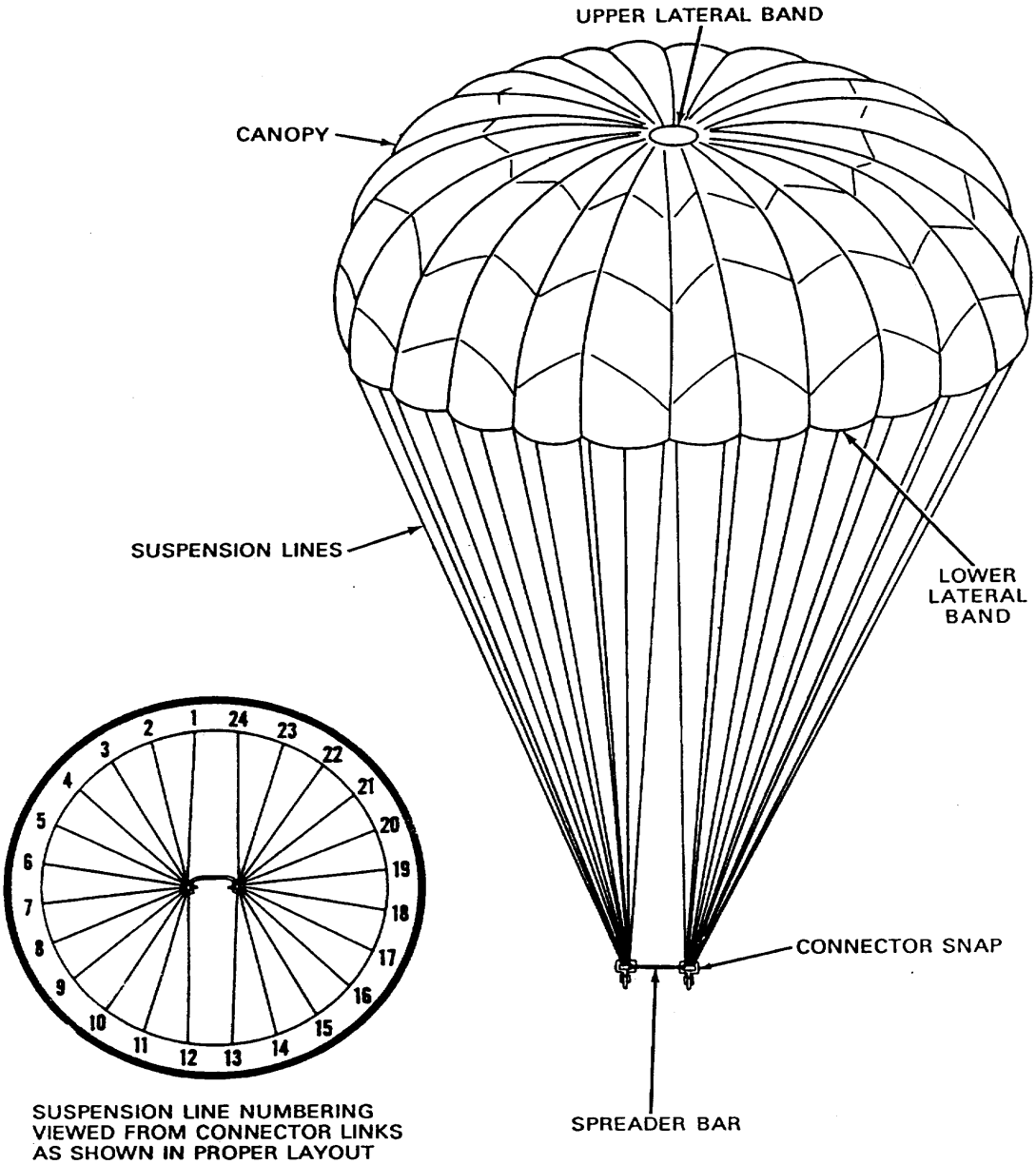
CAUTION

Use care in handling the ejector spring assembly in a compressed state. The ejector spring could prematurely actuate causing personal injury.

Ejector Spring Assembly (MIRPS). The deployment assistance device is a 30-inch long helical spring encased in marquisette netting and fitted with an end cap at each end. On one end cap, four grommet tabs are attached which are only used during packing to keep the spring in a compressed condition. Before final closing of the pack is completed the spring compression aids are removed and the grommet tabs are no longer used.

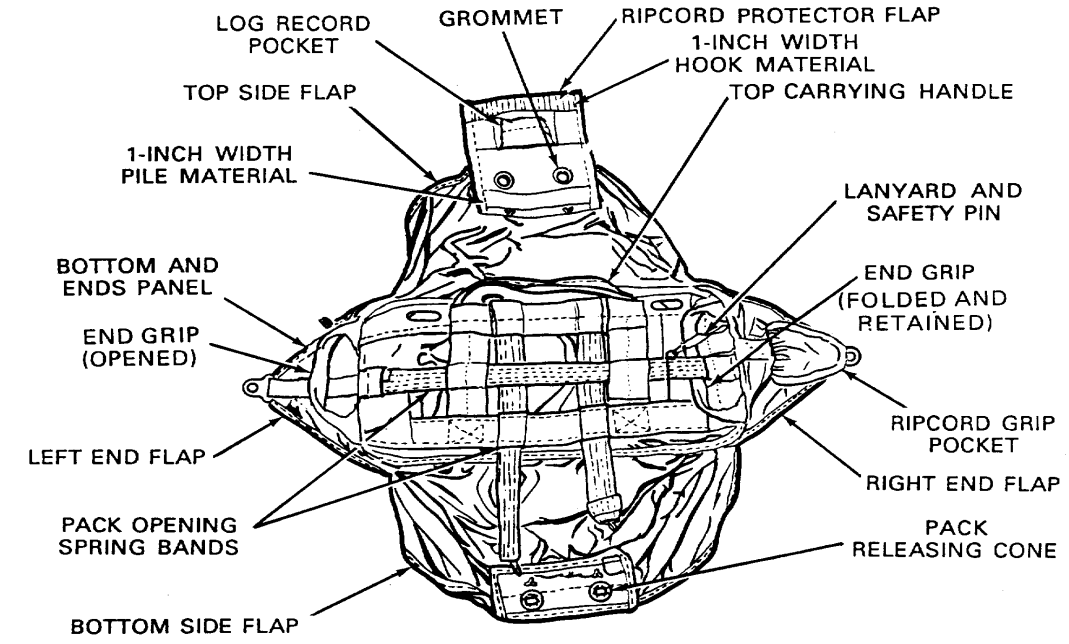


Canopy Assembly. The canopy assembly consists primarily of a 24-foot-diameter flat circular canopy construction from 1.1-ounce ripstop nylon parachute cloth. The canopy has twenty-four (24) gores, an upper lateral band, a lower lateral band, twenty-four (24) V-tabs, twenty-four (24) pocket bands, twelve (12) canopy lines, two (2) connector snaps, and a spreader bar. Each canopy gore consists of three or four sections joined together by diagonal seams. Each gore is joined to the adjacent gore by a radial seam, which forms a channel through which one radial line passes. The twelve (12) canopy lines, which run continuously from one connector snap to the other, form twenty-four (24) suspension lines, twenty-four (24) radial lines, and twelve (12) apex lines. The suspension lines are numbered counterclockwise from 1 through 24 consecutively when viewed from the connector snaps. The bridle line is used for attaching the pilot chute to the parachute canopy. The canopy assembly is attached to the pack assembly by either hand tacking the connector snaps to the pack (T-10R) or by lift–the-dot-fasteners (MIRPS).

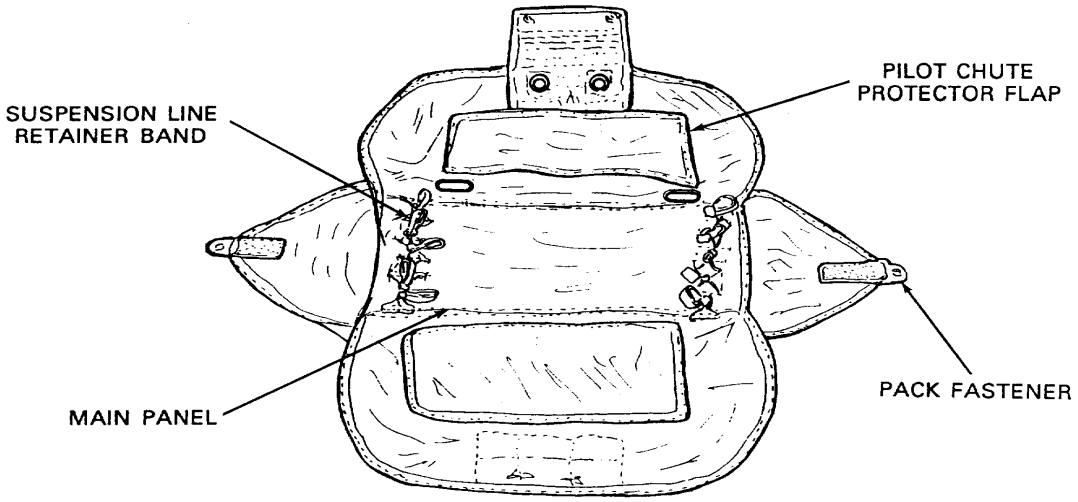


Pack Assembly. There are two different pack trays used with the 24-Foot Diameter Troop Chest Reserve Parachute Canopy. They are similar in appearance on the out side once the reserve is fully packed and closed with the exception of the MIRPS pack tray that has the ripcord grip protruding from the top center of the pack tray. In addition, an identifying yellow binding tape has been added to the ripcord protector flap to identify the MIRPS.

The T-10R. This pack tray has two major parts of the pack. They are the main panel and the bottom and end panels. The main panel forms a top-side flap and a bottom side flap, and the bottom and end panels form a right end flap and a left end flap. The main panel is positioned across the bottom and end panels, and the overlap central areas are stitched together to form the pack bottom. A rectangular shaped pack frame is enclosed in a pocket formed in the pack bottom. Two holes are provided in the bottom of the pack for the connector snaps, which are used for attaching the parachute to the primary parachute harness. Two suspension line retainer band keepers are attached on the inside near the ends of the pack bottom. A pilot chute protector flap is attached to the inside of each of the side flaps.

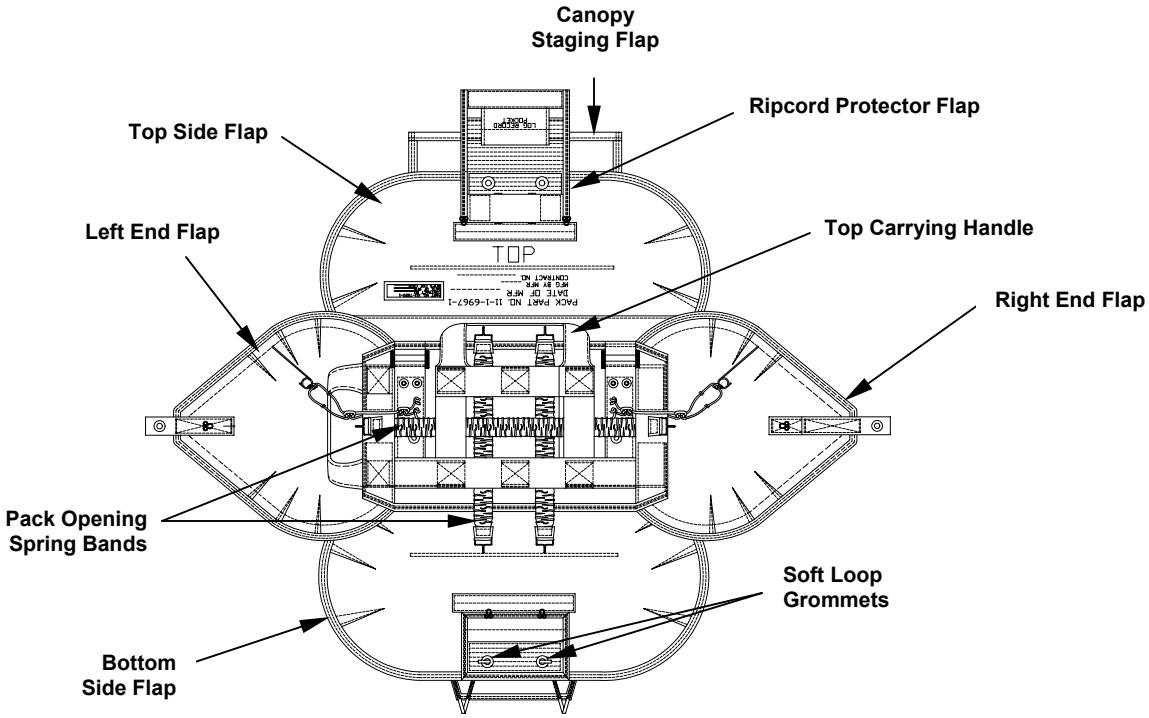


OUTSIDE VIEW

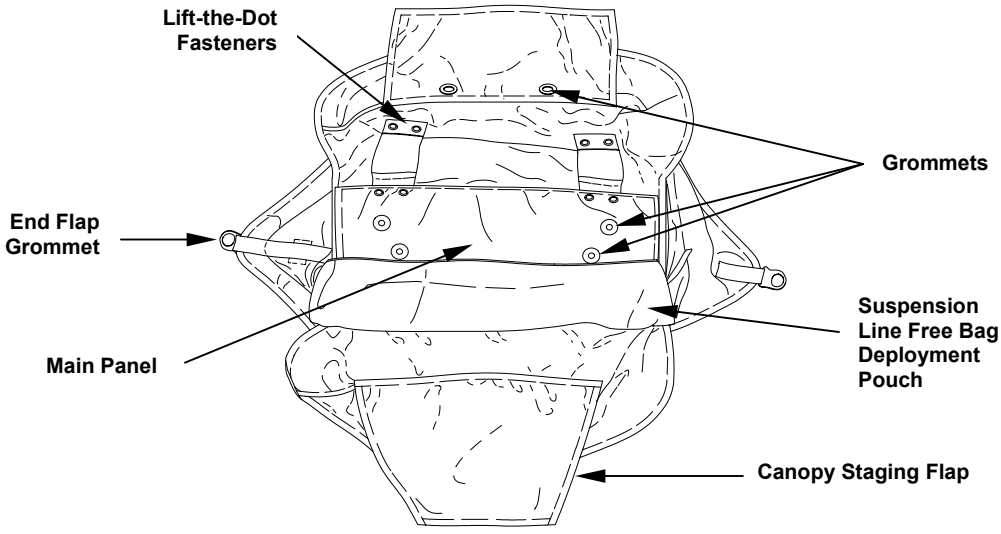


INSIDE VIEW

The MIRPS. This pack tray has two parts, the main panel, and the end panel. The main panel forms a top flap and bottom flap, and the end panel forms a right end flap and a left end flap. A rectangular shaped metal pack frame is enclosed in a pocket formed in the bottom. Two holes with lift-the-dot snap fasteners are provided in the pack for the connector snaps, which are used for attaching the parachute to the primary parachute harness. A suspension line free bag deployment pouch is located on the inside of the container on the pack bottom. Canopy staging flaps are attached to the inside on the top and bottom flaps and provides for canopy retention. The MIRPS pack tray has a center pull ripcord grip location and contains soft loop closures vs. metal cones.

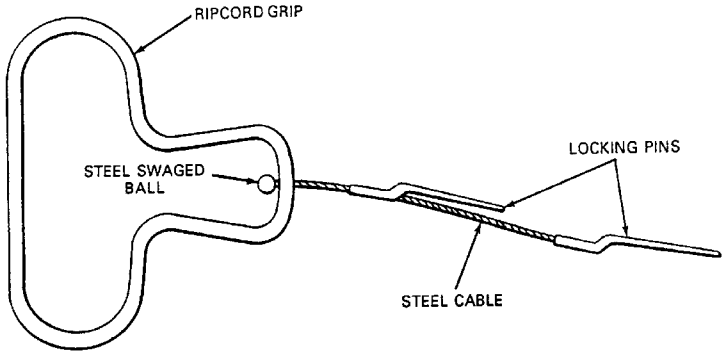


OUTSIDE VIEW

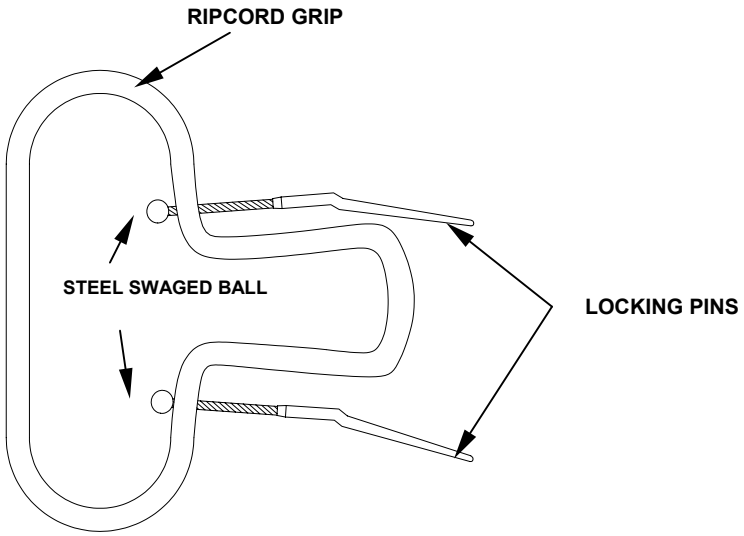


INSIDE VIEW

Ripcord (T-10R). The T-10R ripcord consists of a stainless steel grip and a flexible steel cable to which steel locking pins are swaged. The ripcord also has two ripcord pins 1 ¼-inch in length.



Ripcord (MIRPS). The MIRPS ripcord consists of a stainless steel grip and two flexible steel cables to which steel locking pins are swaged. The ripcord also has two ripcord pin assemblies mounted 2 ½-inches apart one on either side of the cloverleaf and each assembly has a 1 ¼-inch ripcord pin.



DIFFERENCE BETWEEN MODELS

The MIRPS verses the Standard 24-Foot Troop Chest Reserve (T-10R) is relatively the same parachute with the exception of a few distinguishing features. These features consist of a soft loop center pull ripcord, a deployment system, the pack assembly, and the ripcord grip. The MIRPS deployment system consists of the pilot chute, bridle assembly, and ejector spring assembly. The pack assembly contains a suspension line free bag pouch, upper and lower staging flaps, and a length of yellow binding tape sewn into the ripcord protector flap which aids in the identification of a MIRPS once the pack is complete. The MIRPS ripcord grip protrudes from the top of the pack tray and the locking system consists of a soft loop system verses metal locking cones.

EQUIPMENT DATA

The following listing summarizes the specific capabilities and limitations of the equipment and other critical data needed by the unit and direct support (DS) maintenance personnel for maintenance of the T-10R and the MIRPS.

The T-10R

Weight (packed)	Approximately 13 pounds.

Canopy Assembly

Shape	Flat circular
Diameter	24 feet
Number of gores	24
Number of sections per gore	3 or 4
Gore material	1.1-ounce ripstop nylon parachute cloth conforming to PIA-C-7020, Type I.
Number of canopy lines	12
Canopy line material	Nylon, MIL-C-5040, Type 3
Canopy line breaking strength	550 pounds
Number of apex lines	12
Number of suspension lines	24
Number of V-tabs	24
Number of pocket bands	24

Pilot Chute

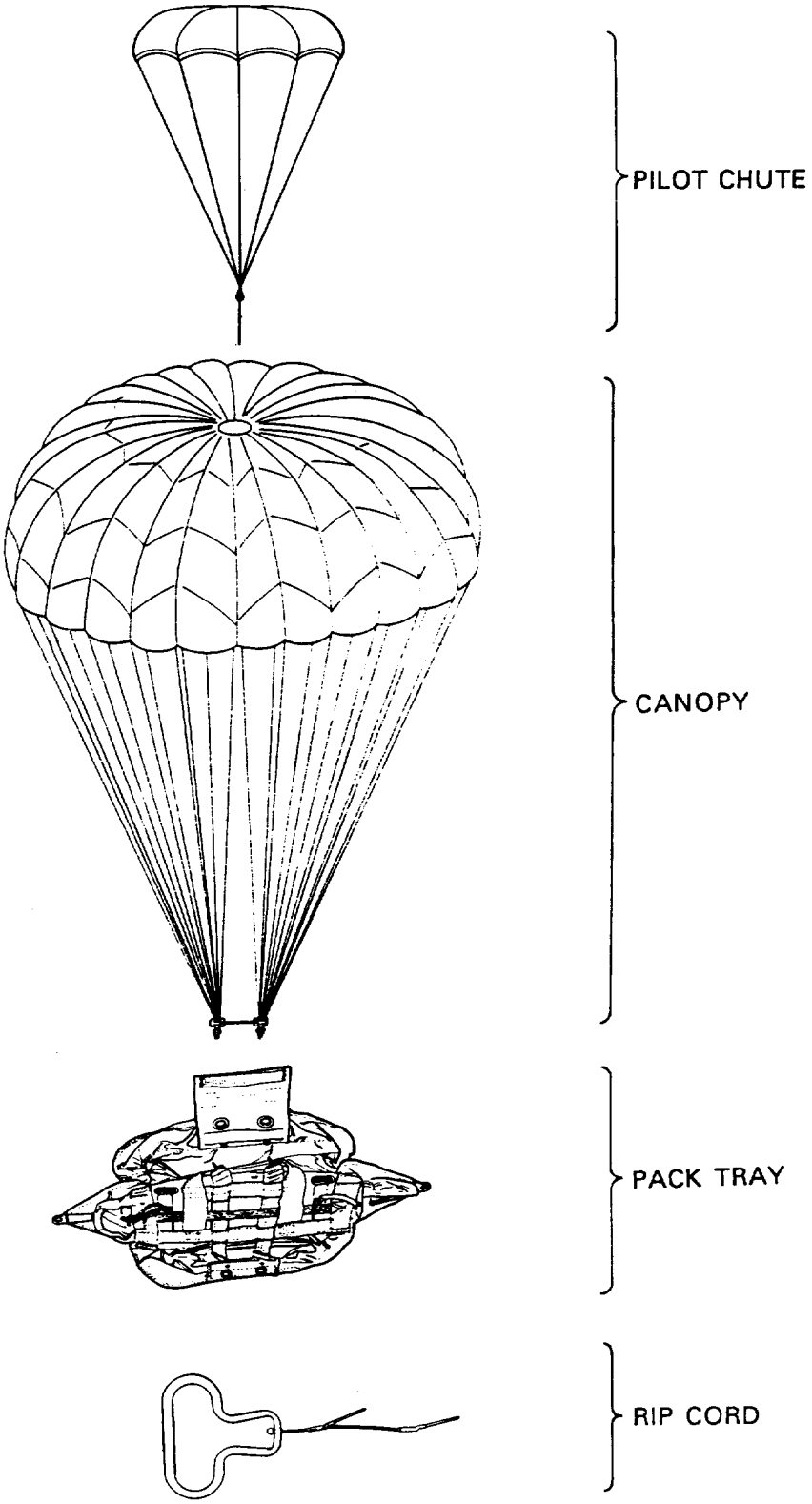
Shape	Flat octagonal
Diameter	40-inches
Canopy material	1.1-ounce ripstop nylon parachute cloth, conforming to PIA-C-7020, Type I.
Number of suspension lines	8
Suspension line material	Nylon, MIL-C-5040. Type I.
Suspension line breaking strength	100 pounds
Bridle line material	Nylon, MIL-C-5040, Type 3.
Bridle line breaking strength	550 pounds
Length of bridle line	15-inches

Pack Assembly

Panel material	7.25-ounce nylon duck, conforming to MIL-C-7219

Ripcord Assembly

Grip material	Stainless steel tubing
Grip shape	Cloverleaf
Cable material	Flexible steel
Length of cable	7 inches
Number of locking pins	2


PILOT CHUTE
CANOPY
PACK TRAY
RIP CORD

The MIRPS

Weight (packed) ---------- Approximately 13.5 pounds

Canopy Assembly

Shape	Flat circular
Diameter	24 feet
Number of gores	24
Number of sections per gore	3 or 4
Gore material	1.1-ounce ripstop nylon parachute cloth conforming to PIA-C-7020, Type I.
Number of canopy lines	12
Canopy line material	Nylon, MIL-C-5040, Type 3
Canopy line breaking strength	550 pounds
Number of apex lines	12
Number of suspension lines	24
Number of V-tabs	24
Number of pocket bands	24

Pilot Chute

Shape	Flat circular
Diameter	60-inches
Canopy material	Low porosity Type I nylon ripstop parachute cloth
Netting	PIA-C-3395
Number of Radial reinforcements	6
Radial reinforcement material	Tape, nylon, PIA-T-5038, Type 3
Center line material	Tape, nylon, PIA-T-5038, Type 3
Center line-breaking strength	400-pounds

Bridle Assembly

Bridle line material	Webbing, nylon, polyester, 2-inch
Length of bridle	13-feet

Ejector Spring Assembly

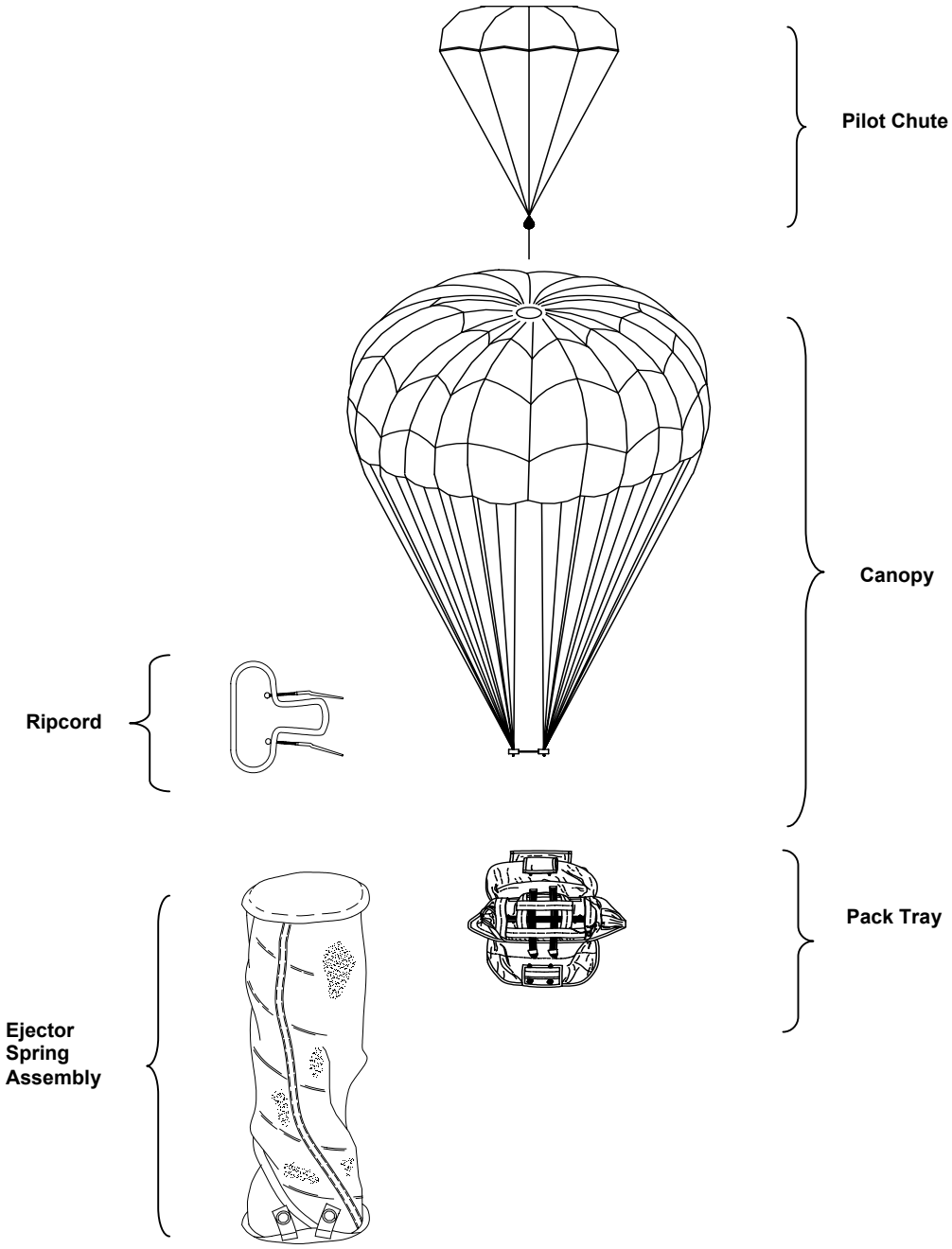
Shape	Circular
Length	30-inches
Netting	PIA-C-3395
Spring	Helical

Pack Assembly

Panel material	7.25-ounce nylon duck, conforming to MIL-C-7219

Ripcord Assembly

Grip material	Stainless steel tubing
Grip shape	Cloverleaf
Cable material	Flexible steel
Length of cables	3 ¾-inches (approximate)
Number of locking pins	2

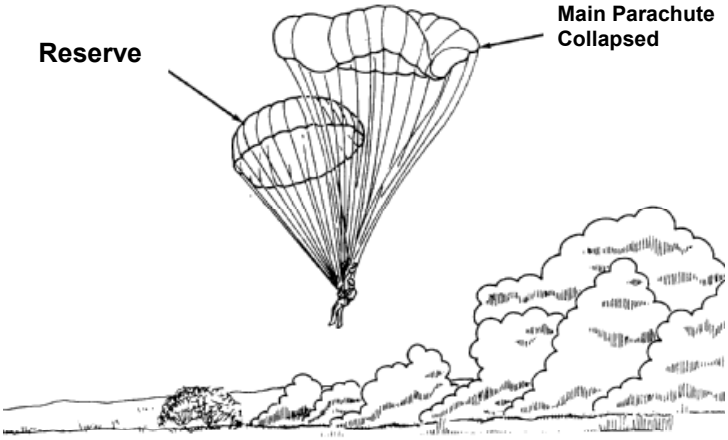


END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS THEORY OF OPERATION

THEORY OF OPERATION

The parachute is a reserve type designed parachute manually activated by means of a ripcord in the event the main parachute malfunctions. It provides secondary lift capability to safely deliver an airborne soldier and individual equipment, from an aircraft in flight, for a vertical assault on an enemy.



CHAPTER 2

OPERATOR MAINTENANCE INSTRUCTIONS FOR PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST, RESERVE (T-10R) AND THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS)

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS SERVICE UPON RECEIPT

THIS TASK COVERS:

- Initial Receipt
- Ripcord/Ripcord Grip Pocket Test for the MIRPS
- Receipt of Used Parachute
- After-Use Receipt
- Checking Unpackaged Equipment After Shipment

INITIAL SETUP:

Tools	Personnel Required
Needle, Tacking (Item 22, WP 0044 00)	92R (10) Parachute Rigger
Materials/Parts	**Equipment Condition**
Tape, Lacing and Tying (Item 24, WP 0057 00)	All Equipment shall be serviceable and ready for use.

INITIAL RECEIPT

The following describes the procedures for processing parachutes upon initial receipt.

General Procedures for the T-10R and the MIRPS. When the parachute 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 92R). The inspection performed will be a technical/rigger-type, which will be conducted as outlined in both WP 0007 00 and WP 0010 00. Upon completion of the inspection, the item(s) will be tagged as prescribed in DA PAM 738-751. Serviceable equipment may then be entered either into storage or into use in air delivery operations, as applicable. An unserviceable item will be held and reported in accordance with DA PAM 738-750.

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 ensure that the entire unpacking effort is conducted under the direct supervision of a qualified rigger (MOS 92R).

Configuration/Condition. Acceptance of new equipment from a 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 contracts are authorized to make 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.

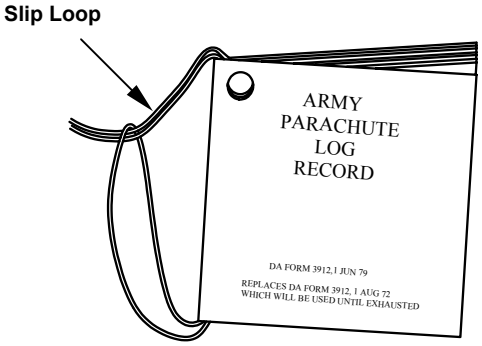
Marking Parachutes. Prior to being placed into service, personnel parachutes that have had no previous use will be marked to reflect the date of entry into service. The marking will be made on the canopy, pilot chute, and bridle assembly information data block by stenciling the lettering in ½-inch characters using the procedures in WP 0016 00. Other applicable parachute components will be marked adjacent to existing data. The stenciling data will appear as “IN-SVC” followed by the date, which will indicate the month and calendar year such as “Jan 01.” Insure the added marking does not infringe upon or obliterate any original data on the information date block.

Parachute Log Record. The Army Parachute Log Record, DA From 3912 and AFTO 391, is a historical maintenance document, which accompanies the parachute canopy and pack assemblies through out 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 an attached to a pack 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 date 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.

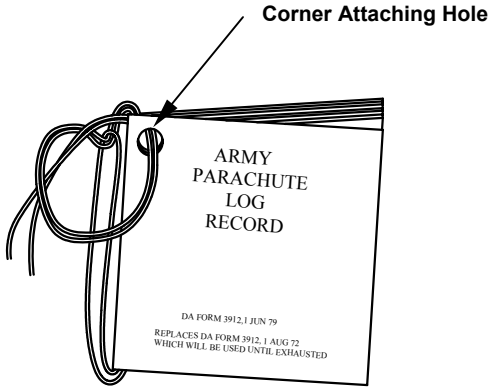
Installing Attaching Tie. Install attaching tie as follows:

1. Cut a 24-inch length of tape, lacing, and nylon, and double the lacing length.

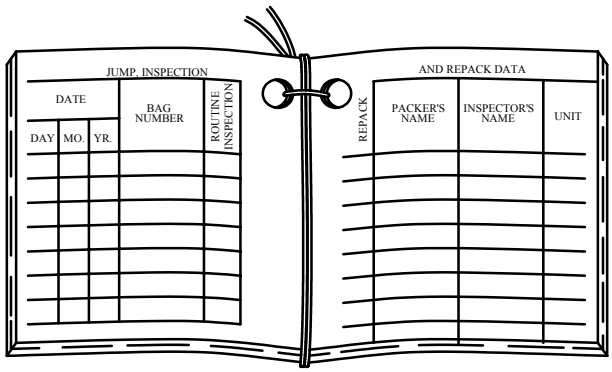
2. Pass the looped end of the double lacing length around the centerfold of the log record and form a slip loop on the outside at the log record top.



3. Pass the lacing length running ends through the corner-attaching hole from the front cover of the log record.



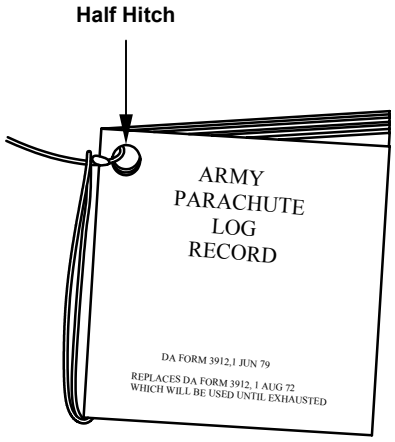
4. Ensure the running ends are routed over that part of the lacing length located along the log record centerfold.



5. Complete the attaching tie by making a half hitch on top of the slip loop made in step 2., above.

6. Thread one running end of the log record attachment tie in a tacking needle and pass the tacking needle with attached lacing end through the edge of the applicable parachute log record/inspection data pocket.

7. Remove the lacing end from the tacking needle and make a finished 10-inch log record attaching loop by securing the two lacing ends together with an overhand knot.



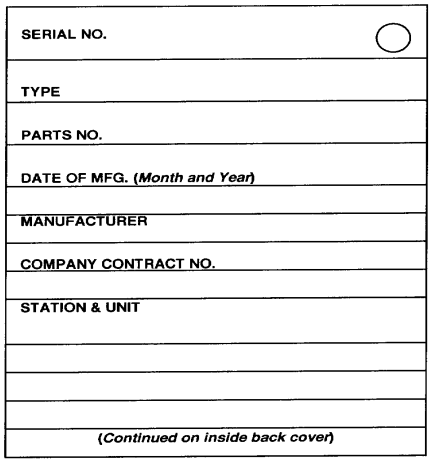
8. Insert the log record into the pocket and secure the record within the pocket using the pocket flap and applicable type flap fastener.

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 and accomplish subsequent record entries using the following procedures:

NOTE

Log record book entries will be made with a suitable 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. 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 for establishing control for maintenance, Equipment Improvement Report (EIR) and Product Quality Deficiency Report (PQDR) 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.

b. Type. Enter the parachute type.

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

d. Date of Manufacture. Enter the month and year the parachute canopy was manufactured.

e. Manufacturer. Enter the name of the parachute 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 the 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.

STATION & UNIT (*Continued*)

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.

	Modification Work Order		Compliance Record					
	MWO Number	MWO Title	Modified By *(Name)*	INSP By	UNIT	Date Day	Date MO.	Date YR.
1	10-1670-269-23&P 15 JULY 01	*Enlarge Orifice*	[illegible]	[illegible]	[illegible]	24	3	00
2	10-1670-269-23&P 15 JULY 01	*Enlarge Orifice*	C/W	[illegible]	[illegible]	24	6	01

1. Modification Work Order Compliance Completed.

2. Modification Completed By Unknown Due To Lost Original Log Record.

h. MWO Number. Enter the publication number and date of the Modification Work Order, which describes the MWO.

i. MWO Title. Enter a short, abbreviated title extracted from the MWO prescribing the work.

j. 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", which signifies the applicable MWO has been complied with.

k. Inspected By. The individual who accomplished the inspection required after modification will sign this entry with last name only.

l. 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.

m. Date. Enter the day, month, and year the modification work was completed.

4. Unit and Direct Support Repair and Inspection Date. When a parachute canopy assembly is initially receive from a supply source and a technical/rigger-type inspection is performed, the inspection accomplishment will be documented on the "Unit and Direct Support Maintenance Repair and Inspection Data" page of the individual Parachute Log Record. 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 Maintenance Advisory Message (MAM), a Ground Precautionary Message (GPM) or a Safety of Use Message (SOUM). The page completion criteria is as follows:

UNIT & INTERMEDIATE	REPAIR & INSPECTION DATA				
TYPE OF REPAIR	INSP BY	UNIT	DATE		
			DAY	MONTH	YEAR
1 → INITIAL INSPECTION	Venckus	SBCCOM	12	2	01
2 → 1 SEC and 4 Lines Replaced	Gravel	SBCCOM	3	3	01
3 → MAM 01-02 Completed	Benson	SBCCOM	10	4	01

1. Completion of Initial Inspection
2. Repair Accomplishment
3. Maintenance Advisory Message

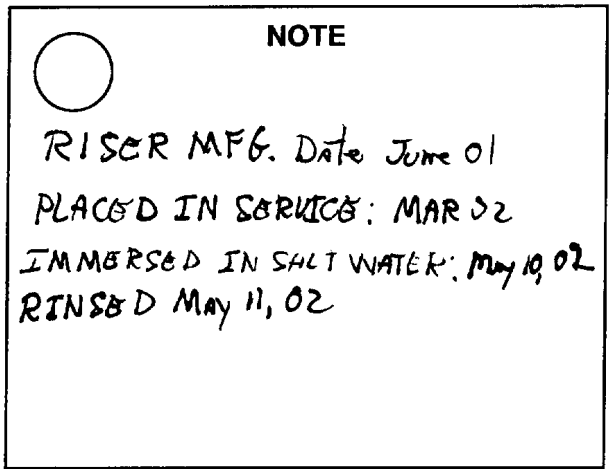
a. Type of Repair. Enter the type of repair, completion of initial inspection, repair accomplishment, or GPM, MAM or SOUM Inspection compliance.

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.

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. This shall also include the month and year the item was placed in service.



NOTE

A parachute log record that is completely filled out, lost illegible, or in an otherwise unserviceable condition, will be replaced with a serviceable log record.

6. Replacing a Filled Put or Unserviceable Log Record.

   a. Using a suitable blue or black marking device, enter NEW BOOK on the outside front cover of the replaced log record.

   b. Transcribed the information from the inside front cover of the original log record to the inside front cover of the replacement log record. If the original data is illegible or missing, use the canopy information data block to collect the required data.

   c. In the replacement log record, transcribe the initial and last entry made on the Jump Inspection, and Repack Data of the original log record.

   d. Transcribe all data from the remaining pages of the original log record; to the appropriate pages of the replacement log record.

   e. After all original data has been transcribed, destroy the log record.

7. Replace a Lost Log Record.

NOTE

Any time a log record is discovered missing from a parachute, a replacement log record will be initiated during repack or inspection, as applicable.

a. Using a suitable blue or black marking device, enter NEW BOOK at the top of the inside front cover of the replacement log record.

b. Accomplish the log record inside front cover as prescribed above.

c. The age life of the canopy will be obtained from the date place in service (initial) and other applicable data on the Jump, Inspection, and Repack Data page of the log record, as detailed above. Enter IN, if date placed in service is know. If not known, enter UNK.

d. If it can be ascertained by inspection that a previous MWO or TB has been complied with, applicable entries will be made on the appropriate page of the replacement log record.

e. Attach the replacement log record to the log record/inspection data pocket using the procedures above.

RIPCORD/RIPCORD GRIP POCKET TEST FOR THE T-10R AND THE MIRPS

Upon initial receipt of a new T-10R or MIRPS Assembly, a new T-10R or MIRPS pack tray, or a newly installed T-10R or MIRPS ripcord grip pocket, the T-10R and MIRPS will be completely packed IAW WP 0012 00 or WP 0013 00. The MIRPS will be subjected to both a 7-pound minimum and 27-pound maximum ripcord pull test, whereas the T-10R will only be subjected to the 27-pound maximum ripcord pull test.

NOTE

To conduct the T-10R ripcord pull tests, the packed T-10R shall be firmly attached by its two-connector snaps to a suitable rigid structure (hook or nail attached to a wall or 4x4 post) such that the pack tray is positioned vertically with the ripcord grip pointing down. There must be sufficient clearance beneath the vertically suspended T-10R to suspend a weight from the ripcord grip and allow it to withdraw the ripcord grip pins from the cones activating the parachute.

To conduct the MIRPS ripcord pull tests, the packed MIRPS shall be firmly attached by its two-connector snaps to a suitable rigid structure (hook or nail attached to a wall or 4x4 post) such that the pack tray is positioned horizontally with the ripcord grip pointing down. There must be sufficient clearance beneath the horizontally suspended MIRPS to suspend a weight from the ripcord grip and allow it to withdraw the ripcord grip pins from the soft loops activating the parachute.

7-POUND PULL TEST (MIRPS)

1. Rotate the ripcord grip clockwise and counter clockwise within the pocket about 45 degrees in each direction as it's being slowly withdrawn from the pocket.

WARNING

Do not rotate the grip completely around (360°) within the pocket as this may damage the ripcord pocket.

2. Reinsert the grip in the pocket and repeat the procedure in paragraph a., above four more times. This will serve to break-in a tight pocket.

WARNING

Do not stand directly in front of the MIRPS, in the event of accidental activation, being hit by the ejector spring and weight may cause sever injury. Stand off to one side of the MIRPS when conducting both the 7-pound and 27-pound pull test.

Conduct a 7-pound Minimum Ripcord Pull Test as Follows:

1. While standing to the left or right side of the MIRPS, carefully attach a 7-pound weight to the ripcord grip and *very slowly* remove your hand from under the weight to allow the weight to be slowly transferred to the ripcord grip. Do not release the weight suddenly or let it drop since this will invalidate the test. The weight must be evenly distributed around or centered on the ripcord grip to prevent the ripcord grip from tilting. The weight must not completely withdraw the ripcord pins from the soft loops or the ripcord grip completely from the pocket.

2. If the 7-pound weight causes complete withdrawal of the ripcord pins or the ripcord grip, then remove the pack tray and ripcord grip from service.

3. If the pack tray and ripcord grip are new (part of a MIRPS assembly), or a new replacement pack tray, submit a standard Form (SF) 368, Product Quality Deficiency Report (PQDR) for the new items.

4. If the pack tray is used and a new MIRPS ripcord grip pocket was applied, verify the application procedures in WP 0028 00. If applied correctly, submit a PQDR for the new ripcord grip pocket and ripcord grip.

27- POUND MAXIMUM RIPCORD PULL TEST (T-10R and MIRPS)

Conduct a 27-pound maximum ripcord pull test as follows:

1. Following successful completion of the Minimum Ripcord Pull Test (above), while standing to the left or right side of the T-10R or MIRPS, carefully attach a 27-pound weight to the ripcord grip and very slowly remove your hands from under the weight to allow the weight to be *very slowly* transferred to the ripcord grip. Do not release the weight suddenly or let it drop since this will invalidate the test.

2. The weight must be evenly distributed around or centered on the ripcord grip to prevent the grip from tilting.

3. The 27-pound weight must withdraw the ripcord pins from either the pack release cones or the soft loops and the ripcord grip from the pocket.

4. If the 27-pound weight does not withdraw the ripcord grip and pins, then remove the weight and re-inspect the ripcord pins, pack releasing cones, and the ripcord pocket to ensure there are no bent pins and ensure proper alignment of the pinholes in the pack releasing cones. Bent pins or misaligned holes can significantly increase the ripcord withdrawal force.

5. If the ripcord pins, cone holes and pocket are serviceable, carefully remove the ripcord pins and at the same time, insert temporary pins to keep the pack tray closed. Leave the ripcord grip in the pocket.

6. If the pack tray is used and a new T-10R or MIRPS ripcord grip pocket was applied, verify the application procedures in WP 0029 00. If applied correctly, submit a PQDR for the new ripcord grip pocket and ripcord grip.

7. If the MIRPS passes the 7-pound minimum and the T-10R and the MIRPS passes the 27-pound maximum ripcord pull test, repack the T-10R IAW WP 0012 00 and the MIRPS IAW WP 0013 00.

8. Annotation completion of this test (test conducted, name of tester, date completed) on the notes page of the parachute log record book (DA Form 3912), or applicable location in the NAVWPNCEN or NAVWPNS CL 13512/11 (Parachute History Record).

RECEIPT OF USED PARACHUTE
Upon initial receipt of used parachute, proceed as follows:

1. Follow procedures given in this WP and check each component for excessive wear and tear.

2. If defects or damages are discovered, process the parachute for maintenance at the maintenance level assigned by the Maintenance Allocation Chart (WP 0044 00).

AFTER-USE RECEIPT
When parachute is received at the maintenance activity following its use during air delivery, it must be given a shakeout and aired (WP 0008 00), and, if necessary, cleaned (WP 0009 00) before it can be returned to service. If a parachute is issued but not used, it does not need to be given a shakeout; however, it must be aired if it has been subjected to conditions of dampness.

CHECKING UNPACKED EQUIPMENT AFTER SHIPMENT
Inspect equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF Form 364, Supply Discrepancy Report (SDR).

Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions in DA PAM 738-750.

Check to see whether the equipment has been modified.

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS ASSEMBLING THE T-10R AND THE MIRPS PARACHUTE

THIS TASK COVERS:
- Assembly

INITIAL SETUP:

Materials/Parts
Cord, Nylon, Type III (Item 10, WP 0057 00)
Thread, Cotton, Ticket No. 8/7 (Item 37, WP 0057 00)
Webbing, Textile, Cotton, 80-lb. (Item 47, WP 0057 00)

Personnel Required
92R (10) Parachute Rigger

Equipment Condition
Parachute canopy and pilot chute in proper layout on table or other suitable area.

ASSEMBLY

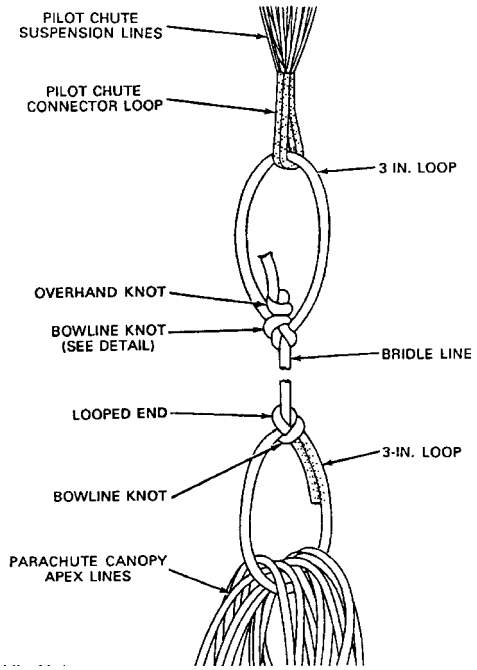
General Information
When the parachute is received from the supply activity, and before it is packed for use, it must receive a 100% Technical Rigger Inspection (TRI) prior to assembly. In the process of assembling any component, if it is found to be defective, the parachute must be processed for repair.

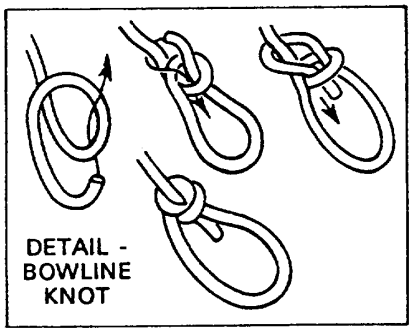
ASSEMBLING THE T-10R

Bridle Line. Install bridle line between the parachute canopy and the pilot chute as follows:

1. Attach the bridle line to the parachute canopy by passing looped end of the line through the apex lines and tying a bowline knot in the line.

2. Attach the free end of the bridle line to the connector loop of the pilot chute with a bowline knot, and secure the knot by tying an overhand knot in the end of the line and pulling it snug against the bowline knot (see illustration on next page).





ASSEMBLING THE MIRPS

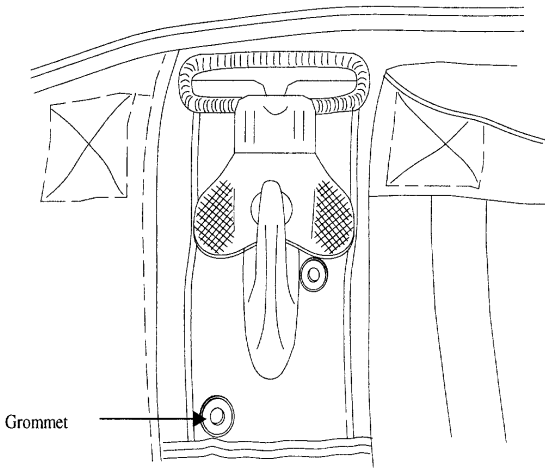
Inspection

1. Inspect the pack tray to ensure that the four grommets in the bottom of the pack tray are free of burrs and rough spots, and have a firm seating.

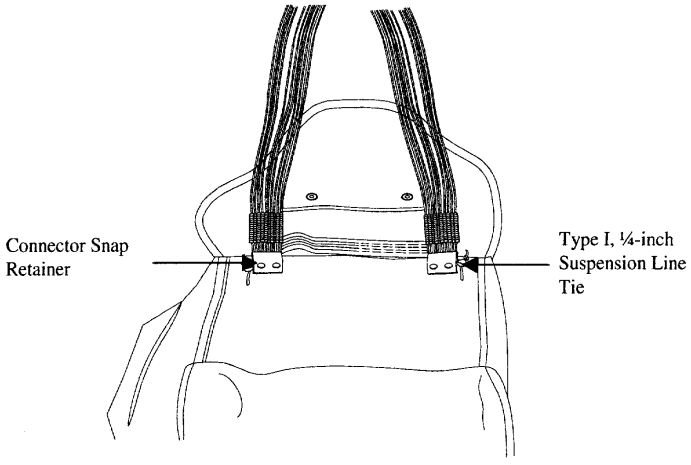
2. Fasten and inspect the lift-the-dots fasteners (4 sets) to ensure they can be released from the pack side only.

Pack Tray

1. Insert the connector snaps through the slots on the bottom inside of the tray (from inside to outside), with the opening gates facing up and positioned between the size “O” grommets.



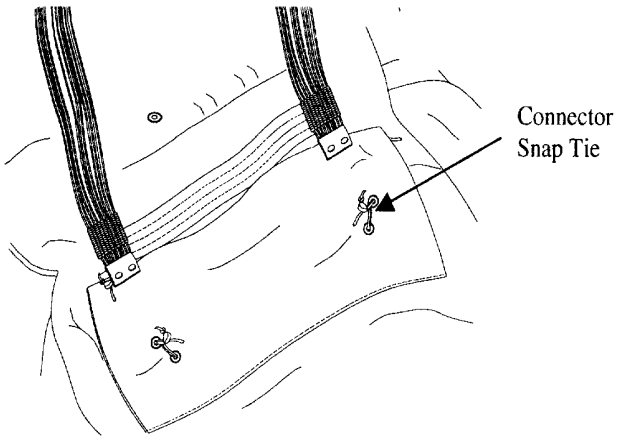
2. Pass the type VI webbing with lift-the-dots through the rectangular slot of the connector snap and secure by snapping the female portion to the male portion. Tie a suitable length of type I, ¼-inch cotton webbing around the outside portion of each connector snap just below the last suspension line. Make three turns single with type I, ¼-cotton webbing and tie with a surgeon’s knot and locking knot. Trim the ends to within 1-inch. This tie is to prevent the suspension lines from falling throught the rectangular slot after the parachute is packed.



3. Starting from the inside to the outside, secure the connector snap to the pack tray by routing two turns single gutted, type II or III nylon cord through the grommets on the bottom of the pack tray and around the hook portion of the connector snap. On the inside of the pack tray, secure with a surgeon's knot and locking knot with overhand knots in the running ends.

CAUTION

Do not catch the pack opening spring bands with the type II or type III nylon cord while securing the connector snaps.



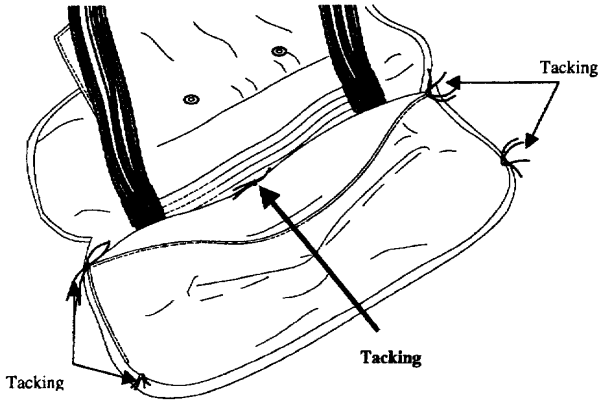
4. Tack the suspension line free bag deployment pouch to the pack tray with two turns doubled ticket no. 8/7 cotton thread as follows:

   a. Tack the two top corners of the line bag to the pack tray ensuring the tacking passes through the pack edge binding tape.

   b. Tack the top, back center of the line bag to the pack tray outside edge of binding tape ensuring the mouth of the bag is not tacked shut.

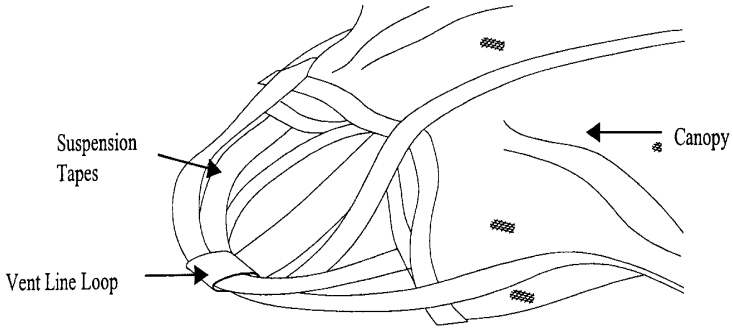
   c. Make two additional tacks on each side of the line bag, one at the bottom left and one on the bottom right of the line bag ensuring the tacking passes through the pack reinforcement.

   d. Secure tacked ends with a surgeon's knot and locking knot. Trim the ends to within 1-inch of the knots.

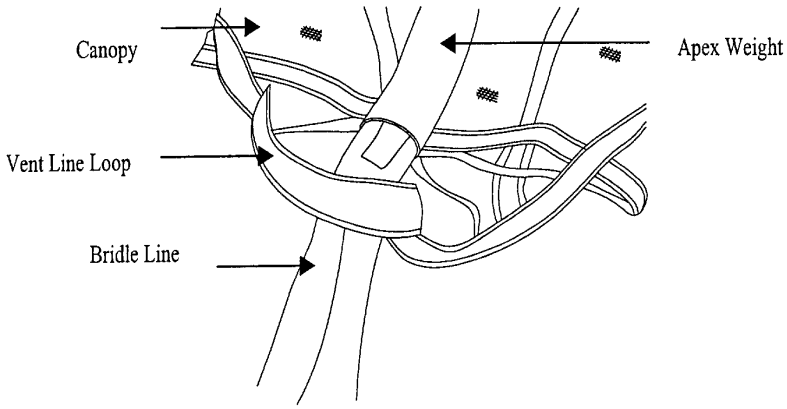


Pilot Chute Assembly. Attach the pilot chute assembly to the canopy as follows:

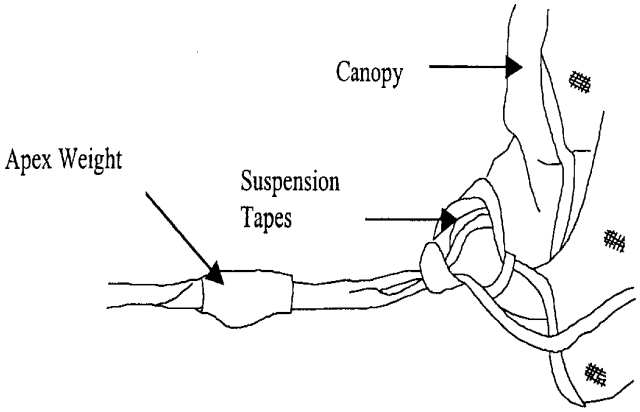
1. Dress all the suspension tapes on the pilot chute.



2. Route the weight end of the bridle line through all of the suspension tapes and vent line loop.



3. Route the apex sock end of the bridle line through the loop at the weight end of the bridle line, forming a girth hitch.



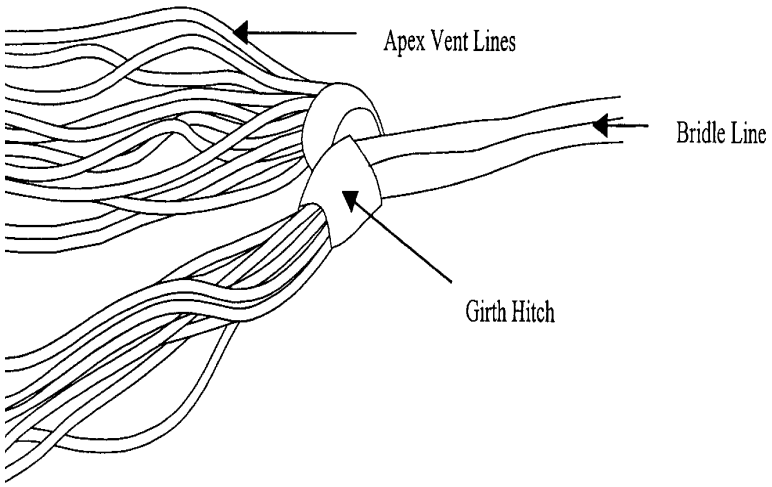
CAUTION

Failure to center the bridle line through the apex lines will prevent the upper lateral band from being properly dressed.

4. Dress the upper lateral band of the reserve parachute.

5. Route the sock end of the bridle line through the apex vent lines dividing the lines into two groups of twelve lines.

6. Route the pilot parachute through the looped end of the bridle line to form a girth hitch.



7. Ejector Spring. Conduct the ejector spring test as described in WP 0030 00 upon initial receipt and during each repack.

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PREVENTIVE MAINTENANCE CEHCKS AND SERVICES (PMCS), INTRODUCTION

GENERAL

The following paragraphs contain general information pertaining to unit and direct support maintenance procedures. Table 1 lists preventive maintenance checks and services. The purpose of PMCS is to ensure that the parachute is operational.

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 air delivery equipment maintenance officer.

PMCS Columnar Entries Table 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.

Recording Defects. All defects discovered during the inspection will be recorded using the applicable specifics in DA Pamphlet 738-750, DA PAM 738-751, and TB 43-0002-43.

Overage Items. During any inspection or at any time that an item is found to be overage (shelf/service life has expired as specified in TB 43-0002-43) the item will be removed from service, condemned, and tagged in accordance with DA PAM 738-751.

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

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 surface or suitable sized floor area. Should defect or damage be discovered, at any point during 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, Airdrop Parachute Recovery and Aircraft Personnel Escape Systems. 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 a maintenance function for further determination of economic repair and repair accomplishment, if applicable.

Parachute Repack Interval. The T-10R and the MIRPS will be repacked at a scheduled interval to insure airworthiness. When necessitated by climate/storage/use condition, the local airdrop equipment maintenance officer may require more frequent repack intervals. In this regard, of major concern would be rapid fluctuations of temperature, fluctuations around 32 degrees Fahrenheit freezing point, sustained high or low temperature, or high humidity and heavily polluted atmosphere.

The T-10R and the MIRPS will be repacked at a 365-day interval except in climatic category 7 and 8 (see note).

The T-10R and the MIRPS will be repacked at a 120-day interval in climatic category 7 and 8 (see note).

NOTE

The MIRPS requires a minimum ripcord pull test IAW WP 0031 00.

Drop-Testing Criteria. Drop testing of the T-10R and MIRPS consist of physically airdropping the item from an aircraft in flight. The drop test is used as a means of providing the serviceability of an item or checking parachute rigger proficiency and will only be performed under the supervision of qualified parachute rigger personnel who satisfy the supervisory requirements outlined in AR 750-32. Drop-testing usually will be conducted by an activity responsible for the inspection and maintenance of airdrop equipment. The criteria required to accomplish a drop test is as follows:

1. A reserve personnel parachute will be drop-tested through use of dummy only.

2. When drop-testing the reserve personnel parachute, the weight of the dummy will be proportionate with the standard design load. In addition, the drop test will be conducted under conditions, which are consistent with the requirements for a personnel jump.

3. During the drop test the deployment of the parachute will be thoroughly monitored and observed to detect any indication of malfunction or defect. A subsequent record of the drop test will be entered into the log record book.

4. Any reserve parachute that indicates any evidence of malfunction or defect during or after a drop test will be disposed of as prescribed in WP 0010 00.

5. A reserve parachute that does not reflect evidence of malfunction or defect upon completion of a drop test will be administered a technical/rigger-type inspection as outlined in WP 0010 00. If serviceable, the item may remain in use.

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

NOTE

Parachutes, which are deemed unserviceable by a packing or rigging activity, will be rigger-rolled (WP 0033 00) prior to being sent to a repair activity.

Table 1. Preventive Maintenance Checks and Services (PMCS)

B – Before **D – During** **A – After**

Item No.	Interval			Item to be Inspected	Procedures
	B	D	A		
00	•			24-Foot Diameter Chest Parachute Assembly	Verify that assembly is complete, no components missing.
	•		•		Check for proper assembly, foreign material, or stains, on log record.
01	•		•	Pilot Chute, T-10R	*Canopy Material.* Inspect for illegible markings, loose or broken stitching, and hand tacking. Check all webbing and tapes for holes, tears, burns, and snags.
	•		•		*Bridle Line*. Inspect for cuts, breaks, frays, and improper installation, loose or broken stitching.
02	•		•	Pilot Chute, MIRPS	*Canopy Material.* Inspect for illegible markings, loose or broken stitching, and hand tacking. Check all webbing and tapes for holes, tears, burns, and snags.
	•		•		*Bridle Line*. Inspect for cuts, tears, frays, snags, burns, broken or loose stitching. Check deployment weight for rust corrosion, burrs, or rough spots.
	•		•		*Curved Pins.* Inspect for rust, dust, burns, and corrosion, rough spots, dents, or missing pins.
	•		•		*Pilot Chute Fabric Materials.* Check for dampness, fungus, grease, oil, dirt, foreign material, rips, burns, cuts, frays, tears, holes, thin spots, and loose and broken stitching.

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

B – Before D – During A – After

Item No.	Interval			Item to be Inspected	Procedures
	B	D	A		
03	•		•	Canopy Assembly	*Canopy Assembly Fabric.* Inspect for rips, holes, tears, dampness, debris, frays, broken or loose stitching, and marred and illegible marks.
	•		•		*Apex Lines.* Inspect for burns, thin cords, loose or broken stitching on lateral band or radial seam.
	•		•		*Upper Lateral Band.* Inspect for holes, cuts, frays, tears, burns, and loose or broken stitching.
	•		•		*Gore Sections.* Inspect for dampness, dirt, foreign materials, holes, cuts, tears, frays, burns, loose or broken stitching, and marred or illegible markings.
	•		•		*Information Data Block.* Inspect for illegibility of data.
	•		•		*Radial Seams.* Inspect for loose and broken stitching, holes, tears.
	•		•		*Canopy Lines.* Inspect fro loose or broken stitching, holes, tears, lack of freedom within radial seams.
	•		•		*V-Tabs.* Inspect for loose or broken stitching, frays, tears, burns, and cuts.
	•		•		*Lower Lateral Band.* Inspect for loose or broken stitching, rips, snags, and burns.
	•		•		*Suspension Lines.* Inspect for loose or broken stitching, broken cords, frays, burns, and tears. Inspect for broken lines.
	•		•		*Pocket Band.* Inspect for loose or broken stitching, frays, tears, burns, and cuts.

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

B – Before D – During A – After

Item No.	Interval			Item to be Inspected	Procedures
	B	D	A		
03	•		•	Canopy Assembly (Continued)	*Connector Snaps.* Inspect for rust, burrs, rough spots, corrosion, cracks, foreign material, and loose or missing springs.
	•		•		*Spreader Bar.* Inspect for loose or broken stitching, burns, frays, and snags.
04	•		•	Pack Tray Assembly, T-10R	*Pack.* Inspect for illegible markings. Inspect all webbings, bindings, and cloth duck for lose and broken stitching and tacking, holes, tears, burns, frays and elastic retainers for elasticity. All metal components for dents, rust corrosion, burrs, breaks, and proper fitting. Pack stiffeners for bends and twist.
	•		•		*Pack Opening Spring Bands.* Inspect for loose or broken stitching and tacking, holes, tears, breaks, loss of spring tension.
	•		•		*Log Record Pocket*. Inspect for loose or broken stitching, cuts, burns, and tears.
	•		•		*Pack Releasing Cones*. In the front view of the pack-releasing cone (looking straight at the drilled hole opening), the whole position must not extend beyond the teardrop surface and break the edge of the cone surface. In addition, when rotating the cone 90° (making sure the suspected edge faces toward the individual), a broken edge or concave dip in the cone's surface must not be clearly visible.

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

B – Before D – During A – After

Item No.	Interval			Item to be Inspected	Procedures
	B	D	A		
04	•		•	Pack Tray Assembly, T-10R (Continued)	*Ripcord Grip Pocket*. Inspect for loose or broken stitching, and hand tacking, cuts and frays.
	•		•		*Retainer Webbings*. Inspect for loose or broken stitching, loss of elasticity, cuts, and frays.
	•		•		*Pack Fastener.* Inspect for loose or broken stitching, dents, rust, corrosion and burrs.
	•		•		*Pilot Chute Protector Flap.* Inspect for loose or broken stitching and tacking, holes, tears, and breaks.
	•		•		*Dressmaker's Eye.* Inspect components for rust, corrosion, burrs, breaks and proper fitting.
05	•		•	Pack Tray Assembly, MIRPS	*Pack.* Inspect for illegible markings. Inspect all webbings, bindings, cloth duck for loose and broken stitching and tacking, holes, tears, burns, frays, and elastic retainers for elasticity. All metal components for dents, rust corrosion, burrs, breaks, and proper fitting. Pack stiffeners for bends and twist.
	•		•		*Packing Open Bands*. Inspect for lose or broken stitching and tacking, holes, tears, breaks, loss of spring tension.
	•		•		*Log Record Pocket.* Inspect for loose or broken stitching, cuts, burns, frays, and tears.
	•		•		*Grommets.* Inspect components for rust, corrosion, burrs, breaks and proper fitting.

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

B – Before D – During A – After

Item No.	Interval			Item to be Inspected	Procedures
	B	D	A		
05	•		•	Pack Tray Assembly, MIRPS (Continued)	*Reserve Closing Loop Assembly.* Inspect for loose or broken stitching, cuts, and frays.
	•		•		*Ripcord Grip Pocket*. Inspect for loose or broken stitching, loss of elasticity, cuts and frays.
	•		•		*Retainer Webbings*. Inspect for loose or broken stitching, loss of elasticity, cuts, and frays.
	•		•		*Canopy Staging Flap Closing Loop.* Inspect for loose or broken stitching, holes, tears, and frays.
06	•		•	Ripcord Assembly	*Ripcord.* Inspect for rust, burns, and corrosion, rough spots, bent or missing or damaged locking pins, kinks, sharp bends, frays, breaks, or loose swages.
07	•		•	Ejector Spring Assembly	*Fabric.* Check for rips, burns, cuts, frays, tears, holes, thin spots, and loose or broken stitching.
					Spring. Check of distorted or broken springs.

END OF WORK PACKAGE

CHAPTER 3

UNIT MAINTENANCE INSTRUCTIONS FOR PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST, RESERVE (T-10R) AND THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS)

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
SHAKEOUT AND AIRING

THIS TASK COVERS:
- Shakeout
- Airing

INITIAL SETUP:

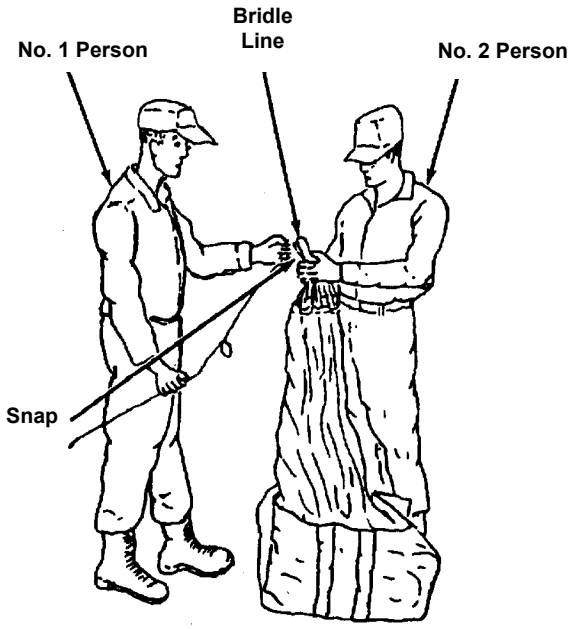
Tools
Brush, Scrub, Household (Item 3, WP 0044 00)

Personnel Required
Two, 92R (10) Parachute Rigger

Equipment Condition
Parachute suspended.

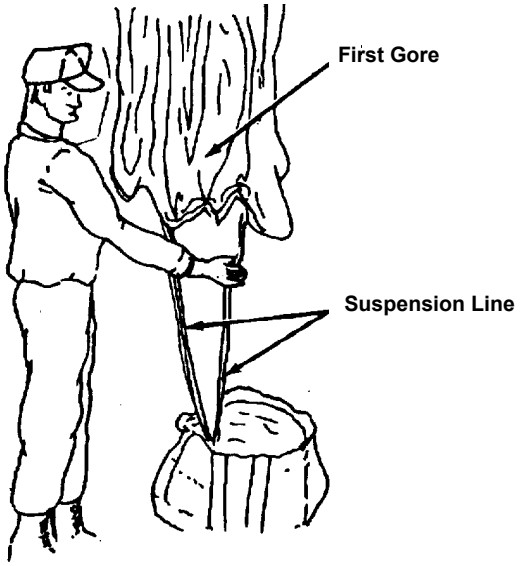
SHAKEOUT
The shakeout will be accomplished by a two-or three-person team either indoors within a shakeout room or outdoors at a shakeout tower. Each parachute will be suspended by the canopy vent and all debris removed by shaking the canopy thoroughly or by brushing with a dry, soft-bristled brush as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

1. With assistance from the no. 2 person, no. 1 person will connect the snap on a pulley rope to canopy apex lines.

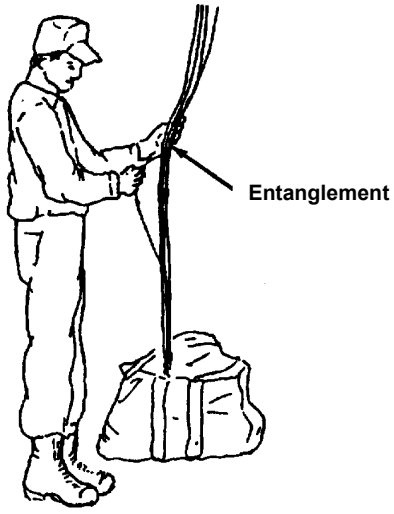


2. Through use of the pulley rope, no. 2 person will raise the canopy to a suitable height, which will enable the no. 1 person to perform shakeout on each of the canopy gores. Until the gore shaking process is completed, the no. 2 person will maintain a steady pull on the pulley rope to hold the suspended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

3. The no. 1 person will grasp any two consecutive suspension lines, one in each hand, and vigorously shake the first gore. When the gore is free of debris, 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.

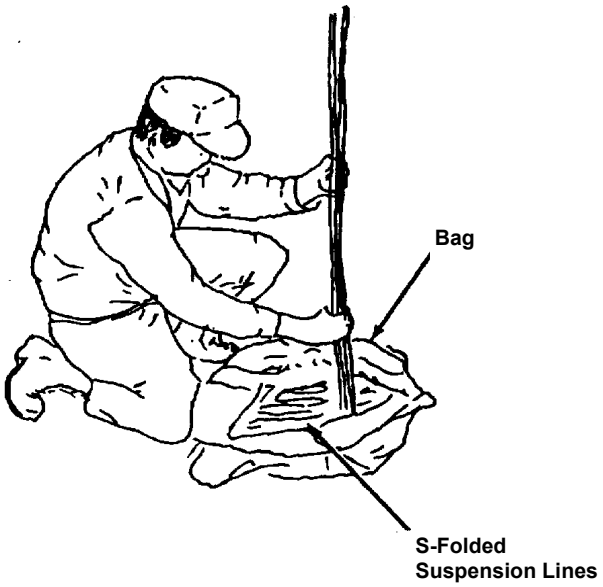


4. Once the gore shaking process is completed, the no. 2 person will slowly raise the suspended canopy higher as the no. 1 person clears suspension lines of debris and removes entanglements.



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 pack.

6. When all components are free of debris, the no. 2 person will slowly lower canopy while the no. 1 person S-folds suspension lines into the pack, or parachute bag, as applicable. After the suspension lines have been completely folded, the no. 1 person will accordion-fold canopy length on top of folded line



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.

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.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
CLEANING AND DRYING

THIS TASK COVERS:
- Cleaning fabric items with dishwashing compound
- Rinsing parachute assemblies immersed in salt-water
- Rinsing parachute assemblies immersed in fresh-water
- Drying fabric items
- Cleaning metal items

INITIAL SETUP:

Materials/Parts
Cloth, Abrasive (Item 5, WP 0057 00)
Dishwashing Compound (Item 11, WP 0057 00)
Rag, Wiping (Item 23, WP 0057 00)

Personnel Required
92R (10) Parachute Rigger

Equipment Condition
Lay out on packing table or other suitable area.

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 and 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 for cleaning must be determined by the nature of the substance to be removed.

NOTE

If soiled due to airsickness, use a solution of hand dishwashing compound to clean this type of soiling.

CLEAN FABRIC ITEMS WITH A SOLUTION OF HAND DISHWASHING COMPOUND
Use dishwashing 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 ½-cup of dishwashing compound in one gallon of warm water.

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

   c. Rinse cleaned area by repeating process with a clean portion of cloth dampened with water.

NOTE

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

RINSING PARACHUTE ASSEMBLIES IMMERSED IN SALT-WATER

If the parachute, or any of its components, has been immersed in salt-water for a period in excess of 24-hours it will be condemned. Additionally, if the parachute, or any of its nylon components, has been immersed in salt-water for a period of less than 24-hours, but cannot be rinsed within 48-hours after recovery, it will also be condemned, unless the following actions are performed. Upon removal from the salt-water, the parachute is placed in a single heavy duty plastic trash bag, the top of the bag secured closed and kept in a wet state until a rinse can be performed following normal rinse procedures. The bag must be doubled when outside temperatures exceed 85 degrees F. The bags must be inspected after transport and storage to insure the bag did not get torn and the assembly was allowed to dry. Parachutes recovered using this method must be rinsed NLT than 7-days after the salt-water immersion or 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 or the suspension lines. Within 48-hours after recovery, under the supervision of a qualified parachute rigger (MOS 92R), rinse the recovered parachute assembly as follows:

1. Place the parachute assembly in a large watertight 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 affected 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 of the suspension lines.

4. Repeat the procedures in steps a. through c., above, twice, using fresh, clean water for each rinse.

5. After the first rinse, allow the parachute assembly to drain thoroughly. Upon completion of draining, dry the assembly in accordance with procedures in paragraph, Drying Fabric Item, detailed 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 WP 0044 00.

7. Record any repairs; immersion and rinsing in the parachute log record as outlines in WP 0004 00.

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 Parachute Assemblies Immersed in Salt-Water, 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 applicable to this WP. Minor discoloration of fabric items resulting from immersion in uncontaminated fresh-water may occur.

DRYING FABRIC ITEMS

Dry fabric items as follows:

1. Suspend or elevate item in a well-ventilated room in a heated drying room.

2. Drying time may be reduced by using electrical circular fans.

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

CLEAN 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.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS INSPECTION

THIS SECTION COVERS:
- Routine
- Pack-In-Process Inspection
- Technical-Rigger Type Inspection
- In-Storage Inspection
- Equipment Disposition

INITIAL SETUP:

Equipment Condition	Personnel Required
Packed	92R (10) Parachute Rigger

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 pack. This inspection will be administered by a parachute rigger prior to use. Parachutes issued for an aerial delivery operation and not deployed will receive a routine inspection prior to being placed into ready-for-issue storage.

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. A parachute rigger other than the packer or rigger preparing the applicable equipment for use will accomplish this inspection.

NOTE

For Army personnel, the In-Process-Inspector (IP) qualifications are IAW AR 750-32.

1. The intervals at which the inspection is performed for the T-10R is as follows:
   a. After the parachute is placed in proper layout.
   b. After gores are folded and flatfold is completed.
   c. After the canopy is longfolded.
   d. After suspension lines are stowed.
   e. After the canopy is stowed and the temporary locking pins are installed.
   f. After the pilot chute is stowed.
   g. After the parachute is completely packed.
2. The intervals at which the inspection is performed for the MIRPS is as follows:
   a. After the parachute is placed in proper layout.
   b. After the gores are folded and flatfold is completed.

c. After the canopy is longfolded.

d. After suspension lines are stowed.

e. After the suspension lines are placed in suspension line pouch.

f. After the canopy is stowed, staging flaps secured (curved pins are inserted), and pulled-up cords removed.

g. After ejector spring and pilot chute are stowed.

h. After temporary closing of the pack, removal of the packing aid, and ejector spring compression rods.

i. After the complete closing of the pack.

TECHNICAL/RIGGER-TYPE INSPECTION PROCEDURES
Perform inspection as follows:

Overall Inspection. An overall inspection will be made on the T-10R and MIRPS to ascertain the following:

1. 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 3912) is enclosed and properly attached as prescribed in WP 0004 00 (Installing Attaching Tie). Further, remove the log record from the pocket and evaluate the recorded entries to insure compliance with WP 0004 00 (Accomplishing a Log Record).

2. Assembly completeness. Ensure that the applicable assembly is complete and no components or parts are missing.

3. Operational adequacy. Check item components and parts to ensure proper assembly, which includes attachment and alignment, and that assembled product functions in prescribed manner. Further, ensure that no stitch formation or sewn seam has been omitted.

4. Markings and stenciling. Inspect each assembly and components for faded, illegible, obliterated, or missing informational data, and identification numbers. Insure canopy, pilot chute, bridle assembly and ejector spring assembly contain placed in service dates IAW WP 0004 00.

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

Detailed Inspection. In addition to the overall inspection performed in step a., Overall Inspection, above, a detailed inspection will be performed on materials, which constitute assembly or component construction using the following criteria, as applicable.

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

2. Pack Releasing Cone (T-10R). In the front view of the pack-releasing cone (looking straight at the drilled hole opening), the hole position must clearly extend beyond the teardrop surface and break the edge of the cone surface. In addition, when routing the cone 90 degrees (making sure the suspected edge faces towards the individual), a broken edge, or concave dip in the cone surface must also be clearly visible. If an unserviceable cone is identified, that pack tray assembly must be removed from service and the pack release cone must be replace before the pack tray can be placed back into service. Check the position of the drilled hole on both sides of the cone to determine if the edge of the drilled hole has broken into the edge of the cone beyond the flat teardrop surface. The teardrop surface is defined as the flat surface on each side of the cone from the top of the cone to the base. The point of the teardrop faces towards the base of the cone. If the parachute is packed, apply a downward pressure on the pack fastener and grommet to expose as much of the tip of the pack-releasing cone as possible. While checking for the position of the drilled hole, move the ripcord locking pins from side to side, with out removing them from the cone, to obtain the best view of the drilled hole location. Pay particular attention to the outside edge of the drilled hole to see if it breaks the edge of pack releasing cones since that would be the area in which the pack fastener would most likely catch or hang up. The drilled hole does not have to be completely centered within the teardrop surface. If it is questionable whether or not the drilled hole is beyond the teardrop surface or has broke the edge of the cone, rotate the cone 90 degrees in both directions to see if there is a broken edge or concave dip in the cone's surface. If it has not broken the edge of the cone to cause a concave dip, it is still considered a serviceable cone.

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

4. 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.

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

6. Rubber and elastic. Inspect for burns, cuts, holes, tears, weak spots; loss of elasticity and deterioration.

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.

EQUIPMENT DISPOSITION

Air delivery equipment may be rendered unserviceable by either normal fair wear or by aging and will subsequently be repaired, modified, or condemned, as appropriate. Equipment that is uneconomically reparable (outdated) will be condemned. Disposition of air delivery equipment that is condemned, unserviceable, or for which the serviceability is questionable, will be accomplished using the following procedures, as applicable.

1. Item Requiring Repair or Modification. An air delivery item, which requires repair or modification, be tagged in accordance with DA PAM 738-751. Subsequent work on the item will be performed at the maintenance level specified for the maintenance function in the applicable support technical publication.

2. Parachutes with Exhausted Age or Service Life. Any parachute component or air delivery equipment whose age or service life has expired as specified in TB 43-0002-43 will be removed from service, condemned, and tagged as prescribed by DA PAM 738-751.

3. Disposition of Condemned Air Delivery Equipment. Condemned equipment, other than fatality parachutes will be removed from service and disposed of in accordance with current directives listed in WP 0010 00 and WP 0043 00.

4. Rejected Equipment. Equipment which, prior to use, is deemed unserviceable for use will be reported in an Equipment Improvement Recommendation (EIR) in accordance with DA PAM 738-750, as authorized by AR 750-1. Each applicable item, which is defective, will be held and safeguarded pending receipt of disposition instructions from the National Maintenance Point (NMP). In all instances, EIR exhibit material will be handled as prescribed in DA PAM 738-750. If the quality or the serviceability of an item is questionable, clarification and assistance may be obtained by contacting Commander, U.S. Army Soldier and Biological Chemical Command, ATTN: AMSSB-RIM-E (N), Kansas Street, Natick, MA 01760-5052.

5. Equipment of Doubtful Serviceability. Equipment which has had previous use and has not exceeded normal fair wear or aging criteria, but of which further serviceability is doubtful, will be tagged as prescribed in DA PAM 750-751. In addition, the equipment will be reported in an EIR in accordance with DA PAM 738-750 and AR 750-1. The item(s) in question will be held as EIR exhibit material as outlined in DA PAM 738-750 pending receipt of disposition instructions from the NMP. A maintenance activity holding EIR exhibit material will not tamper with the applicable item(s) or make any attempt to ascertain cause factors. Unnecessary handling of EIR exhibit material may disturb or alter peculiar aspects of the affected item(s), which might affect the judgment of engineering personnel who have the responsibility for final evaluation of EIR actions.

6. Equipment Immersed in Salt-Water. Any air delivery item constructed from cotton material that has been immersed in salt-water will be condemned. Cotton thread used for tacking and sewing on nylon parachute packs, which has been immersed in salt-water will only be replaced when there is visible evidenced of deterioration such as extreme discoloration or indication of broken thread. Any air delivery equipment constructed of nylon or rayon material that has been immersed in salt-water for a period less than 24-hours, but which cannot be rinsed within 48-hours after recovery will also be condemned, unless the following actions are performed. Upon removal from the salt water, the parachute is placed in a single heavy-duty plastic trash bag, the top of the bag secured closed and kept in a wet state until a rinse can be performed following normal rinse procedures. The bag must be doubled when outside temperatures exceed 85 degrees F. The bags must be inspected after transport and storage to insure the bag did not get torn and the assembly was allowed to dry. Parachutes recovered using this method must be rinsed NLT than 7-days after the salt-water immersion or be condemned. However, if the cited time limitations can be met, then immediately upon recovery, suspend or elevate the recovered equipment in a shaded area and allow the item(s) to drain for at least 5-minutes. Do not attempt to wring the equipment fabric of the suspension lines. Within 48-hours after recovery, under the supervision of a qualified parachute rigger (MOS 92R), rinse the recovered equipment as indicated in WP 0009 00.

END OF WORK PACKAGE

UNITE MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS SALT-WATER CONTAMINATION TEST

THIS SECTION COVERS:
- Inspection

INITIAL SETUP:

Equipment Condition	Personnel Required
Layout on packing surface or other suitable area	92R (10) Parachute Rigger

INSPECTION
Look for a white crystalline residue. If evidence of salt-water/fresh water contamination is found, refer to the procedures detailed below:

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 cannot be rinsed within 48-hours after recovery, it will also be condemned, unless the following actions are performed. Upon removal from the salt-water, the parachute is placed in a single heavy-duty plastic trash bag, the top of the bag secured closed and kept in a wet state until a rinse can be performed following normal rinse procedures. The bag must be doubled when outside temperatures exceed 85 degrees F. The bags must be inspected after transport and storage to insure the bag did not get torn and the assembly was allowed to dry. Parachutes recovered using this method must be rinsed NLT than 7-days after the salt-water immersion or 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 or the suspension lines. Within 48-hours after recovery, under the supervision of a qualified parachute rigger (92R), rinse the recovered parachute assembly as follows:

1. Place the parachute assembly in a large watertight 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 affected 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., detailed 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 the Drying Fabric Items procedures detailed 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 MAC in WP 0044 00.

7. Record any repair, immersion, and rinsing in the parachute log record as shown in WP 0004 00.

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 is 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 uncontaminated fresh-water, rinse and dry (see Rinsing Parachute Assembly Immersed in Salt-Water, 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 “Cleaning Fabric Items With a Solution of Hand Dishwashing Compound,” “Dry Fabric Items,” and “Clean Metal Items” paragraphs above and below. Minor discoloration of fabric items, 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.

Drying Fabric Items. Dry fabric item as follows:

1. Suspend or elevate the item in a well-ventilated room or in a heated drying room.

2. Using electrical circulating fans may reduce drying time.

3. When heat is used, the heat temperature shall not exceed 160 degrees Fahrenheit (71 degrees Celsius). The preferred temperature is 140 degrees Fahrenheit (60 degrees Celsius).

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PACKING THE TROOP CHEST RESERVE (T-10R)

THIS SECTION COVERS:

- Inspection
- Orientation
- Preparing Parachute for Proper Layout
- Remove Inversions
- Locating Suspension Lines in Proper Layout
- Folding the Gores
- Longfolding the Canopy
- Stowing Suspension Lines
- Stowing the Canopy
- Closing Pack and Stowing Pilot Chute
- Army Parachute Log Record
- Completion of Packing

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Line Separator (Item 17, WP 0044 00)
Packing Paddle (Item 23, WP 0044 00)
Packing Weights (Item 24, WP 0044 00)

Materials/Parts
Band, Rubber, Retainer (Item 1, WP 0057 00)

Equipment Condition
Parachute given a shakeout (WP 0008 00) and cleaned (WP 0009 00)

References
DA Pam 738-751; TB 43-0002-43

Personnel Required
92R (10) Parachute Rigger
92R (20) Parachute Rigger

WARNING

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

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 DA PAM 738-751. A technical/rigger-type inspection and a pack-process inspection must be performed in conjunction with each parachute repack (refer to WP 0010 00).

Technical/Rigger-type Inspection. Before each parachute is packed for air delivery, it must be given a technical-rigger inspection by the packer in accordance with WP 0010 00.

Pack-in-process Inspection. A pack-in-process inspection must be performed by a designated supervisory rigger, other than the packer. The inspection is performed to assure that the parachute is packed according to authorized packing procedures (refer to WP 0010 00).

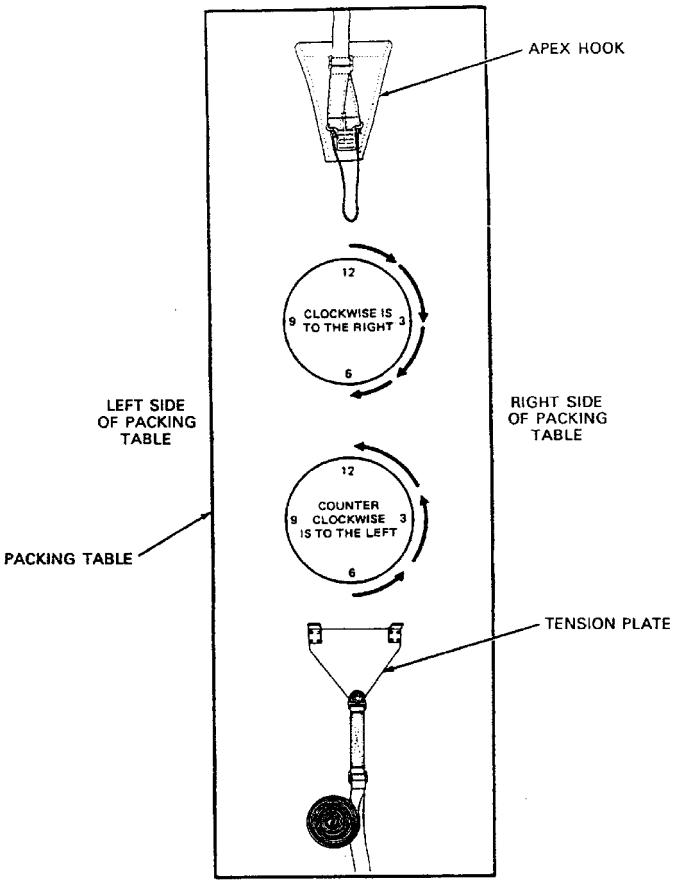
1. For the T-10R, there are seven intervals during the packing procedures.

2. For the MIRPS, there are nine intervals during the packing procedures.

ORIENTATION

Throughout this manual, all directions (right, left, upper, lower, top, bottom, clockwise, and counter clockwise) 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.

UPPER END OF PACKING TABLE



LOWER END OF PACKING TABLE, RIGGER'S POSITION

1. The Top, that portion of the equipment that is farthest from the packing surface.

2. The Bottom, that portion of the equipment that is nearest to the packing surface.

PREPARING PARACHUTE FOR PROPER LAYOUT

Prepare the parachute as follows:

1. If components of the parachute assembly are detected, assemble the parachute during layout in accordance with WP 0005 00. Place packing tools in convenient locations on the packing table. Lay the canopy assembly lengthwise on the packing table, and attach the canopy to the packing table apex hook.

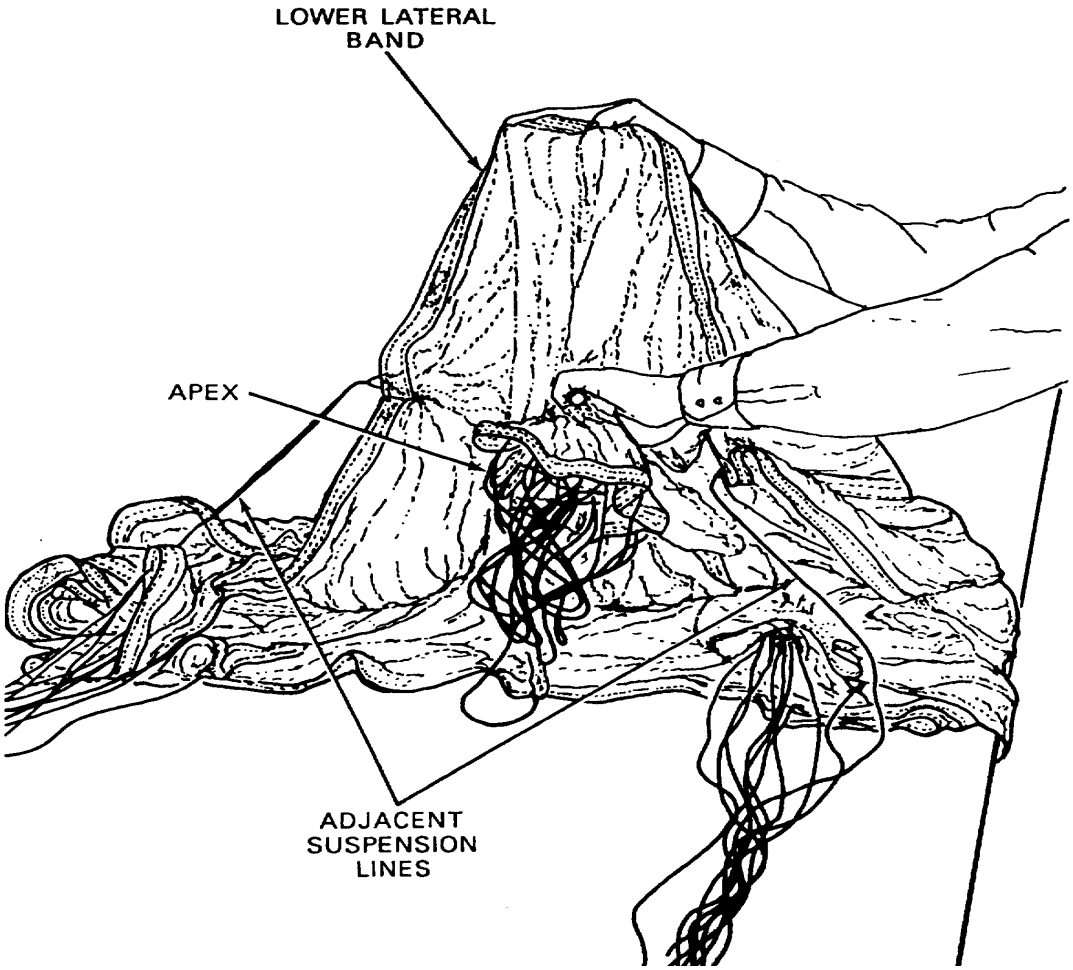
NOTE

Attach the T-10R parachute by the apex lines.

2. Attach the connector snaps to the tension plate and apply enough tension to keep the canopy on the table. Check apex lines to determine if the canopy is inverted. If the apex lines do not appear attached to the outside of the upper lateral band, the canopy is inverted.

REMOVING INVERSION
To remove inversion, proceed as follows:

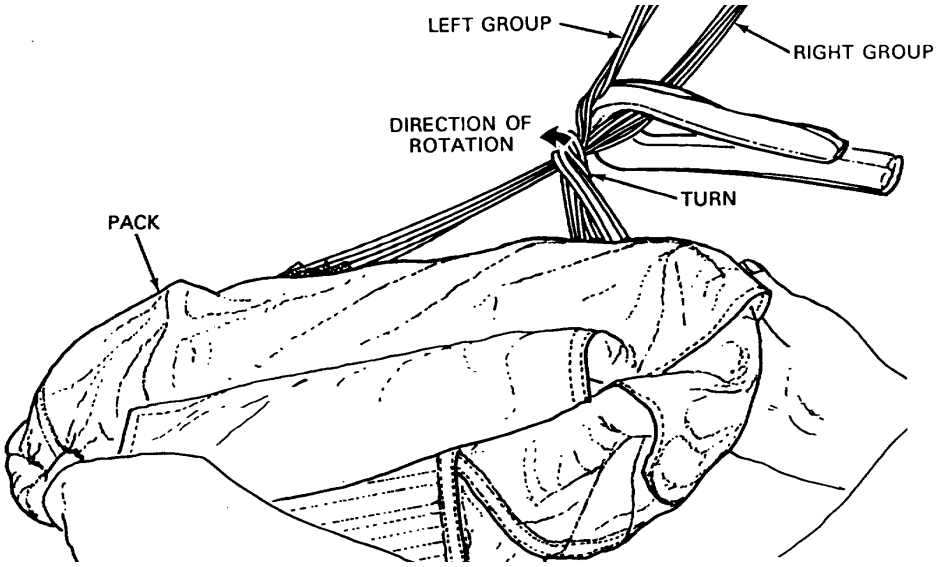
1. Remove the canopy from the apex hook, pass the apex, or pilot chute down through the canopy and out the skirt between two adjacent suspension lines.



2. Reattach the canopy to the apex hook after the inversion is removed.

LOCATING SUSPENSION LINES IN PROPER LAYOUT
Locate the top center gore of the canopy, lines 1 and 24. Divide the suspension lines into two groups (lines 1 through 12 in the left group and lines 13 through 24 in the right group). Place packing weight around the right group. Remove any turns, tangles or twists in the suspension lines as follows:

Removing Turns. A turn occurs when one group of suspension lines rotates around the other group.



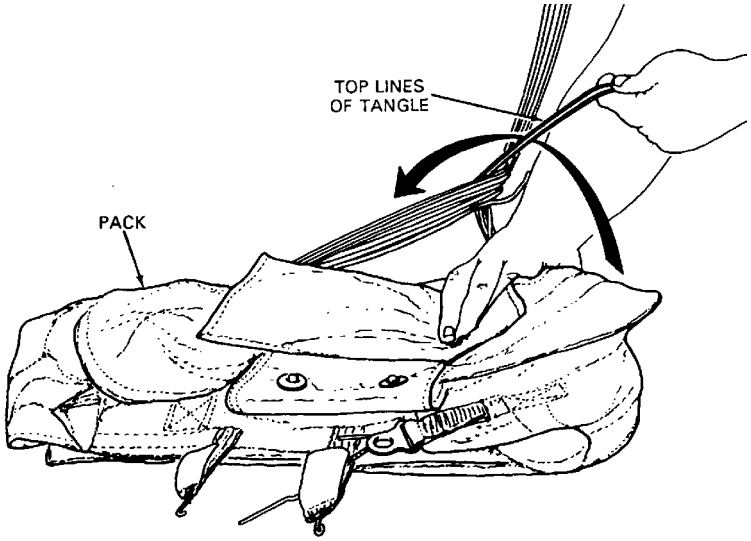
1. Detach the connector snaps from the tension plate and remove a turn by rotating the pack in the direction opposite to the direction of the turn.

2. Attach the connector snaps to the tension plate.

Removing Tangles. To remove a tangle or tangles, keep the two groups of lines separated and work the tangle, or tangles, as close to the pack as possible.

1. Detach connector snaps from tension plate.

2. 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.



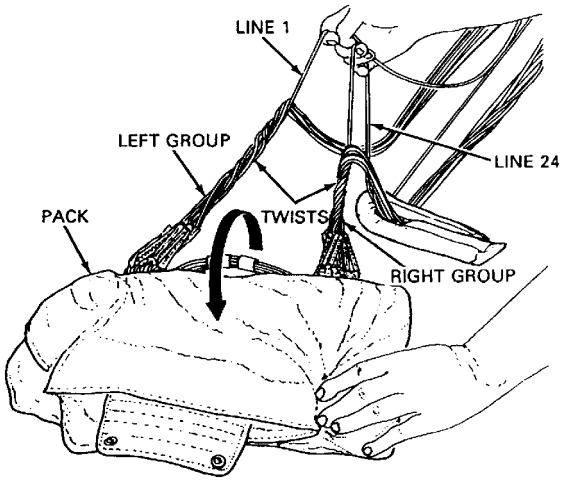
3. With the right hand, reach through the opening created by lifting the suspension lines and pull pack assembly through the opening. Do not permit pack assembly to turn.

4. Attach connector snaps to the tension plate.

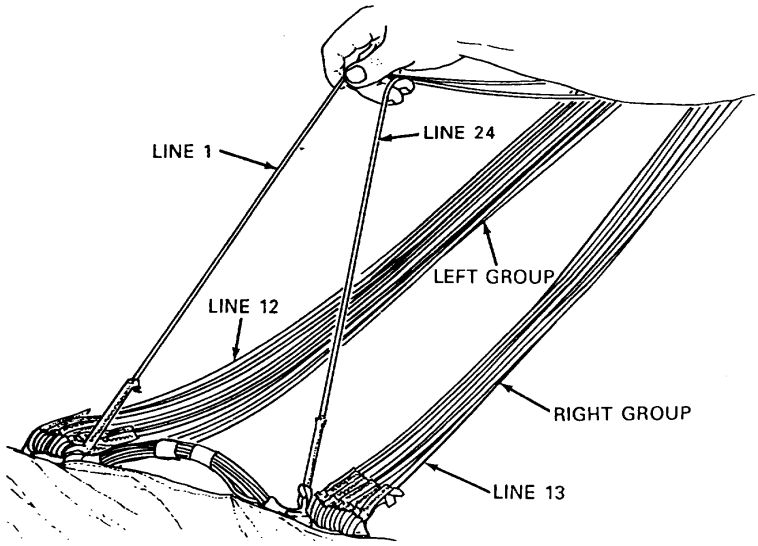
Removing Twists. A twist occurs when the suspension lines within one group become improperly crossed.

1. Grasp top inside lines (1 and 24) at skirt of canopy and trace them to connector snaps.

2. Remove twists by rotating pack assembly between two groups of suspension lines.



3. Recheck lines to ensure they are in proper position.



4. With lines 1 and 24 on the inside of the connector snaps and lines 12 and 13 on the outside of the connector snaps, the parachute is now in proper layout, ready for folding the gores.

NOTE

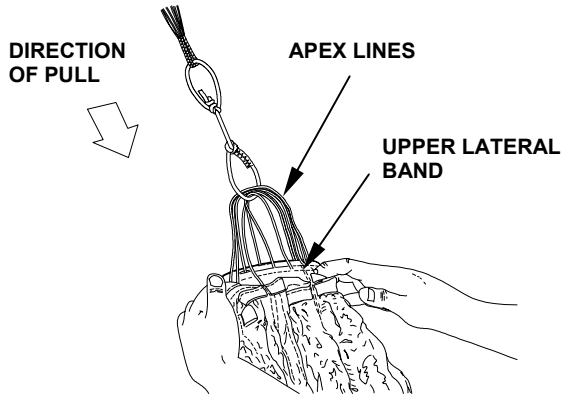
If parachute is being packed for the first time, insert ripcord grip in the pocket and remove with a twisting motion five times to flex ripcord pocket.

5. Install ripcord in ripcord grip pocket.

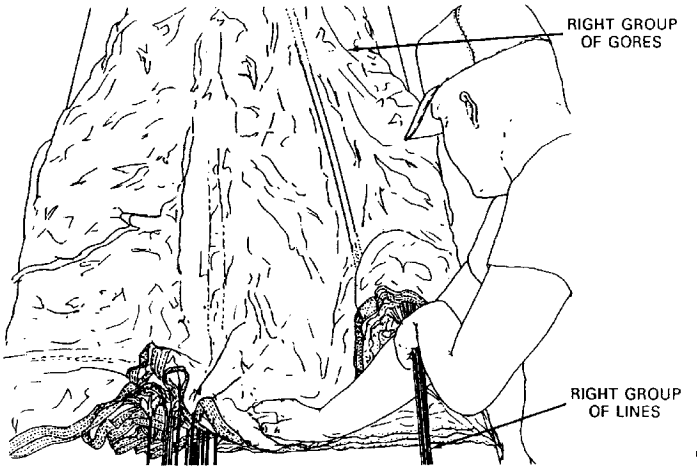
FOLDING THE GORES

After the parachute has been properly laid out, proceed as follows:

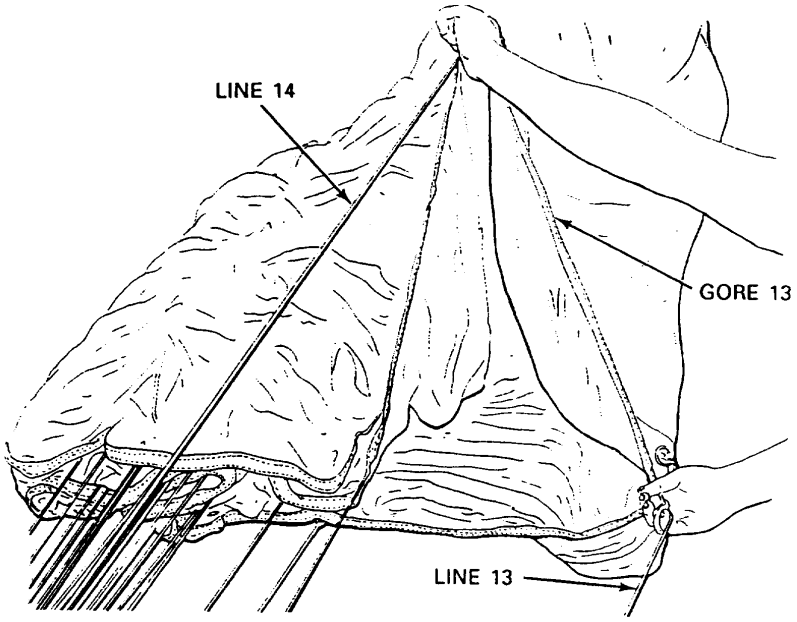
1. Move to the apex end of the table and dress the upper lateral band. Apply pressure toward the tension end of the table until the upper lateral band is aligned. Apply sufficient tension at the tension plate to hold the canopy and suspension lines taut.



2. Move to the lower lateral band of the canopy. Lift right group of suspension lines with the left hand at canopy skirt. Hold top center gores in position with the right hand, and with left hand flip right group of gores over left group.

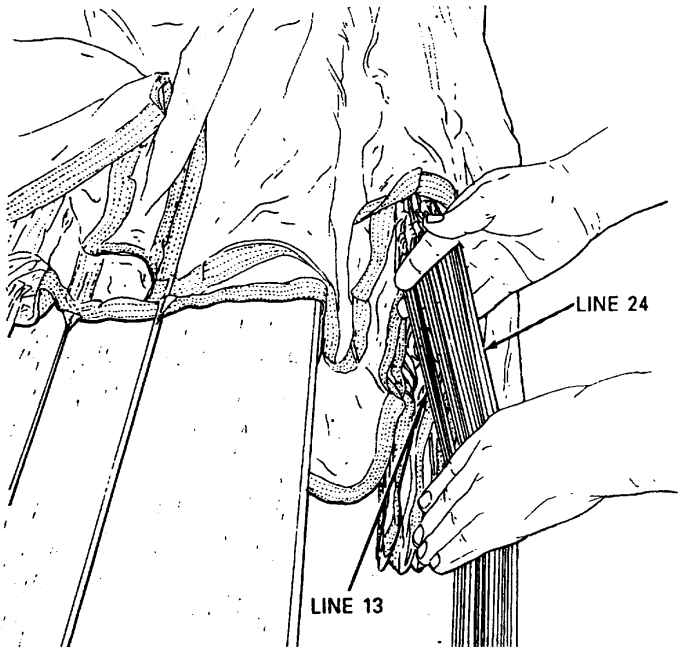


3. Start with line number 13 in the right hand. Pick up line 14 with the left hand and lift straight up until slack is removed from the lower lateral band. With a smooth continuous movement, bring the left hand over the head and, rotating down, place line 14 on top of line 13. Make certain the V-tabs are facing down.

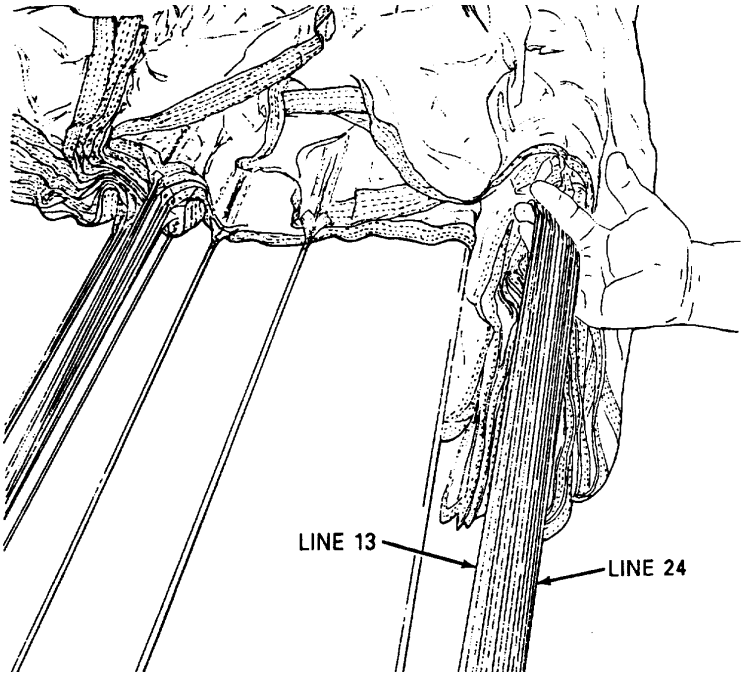


4. Continue folding gores until you reach line 24.

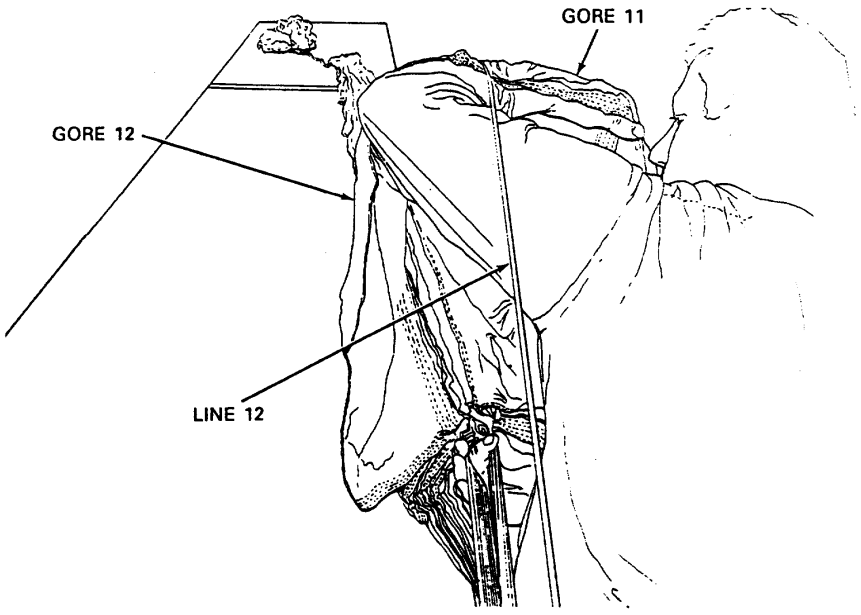
5. Hold the right group of lines with the left hand. With the right hand, fingers pointing down, scissor the right group of lines between the 1st and 2nd fingers.



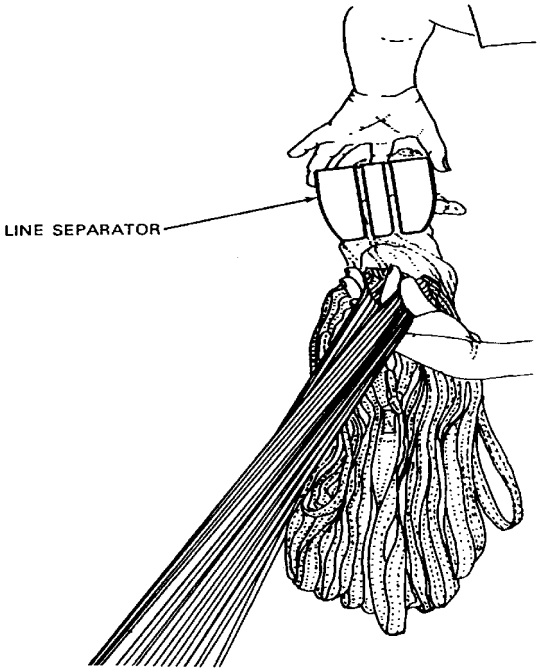
6. Rotate this group of lines clockwise until the fingers are tilted slightly upward, so that line 24 in on the bottom and line 13 is on the top.



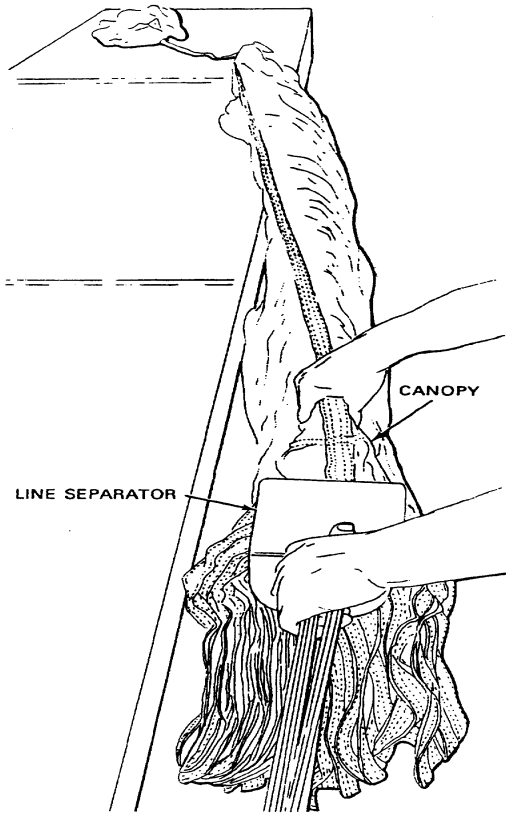
7. Starting with line 1, fold the left group of gores using the same movement as in step 3., above. Continue folding the gores until you reach suspension line no. 11. Raise suspension line no. 12 and drape the last gore on the left and the next to last gore on the right. Place suspension line no. 12 on top of other lines in the left group.



8. Insert the two groups of lines into a line separator with the left group of lines (1 through 12) in the left slot and the right group of lines (13 through 24) in the right slot.

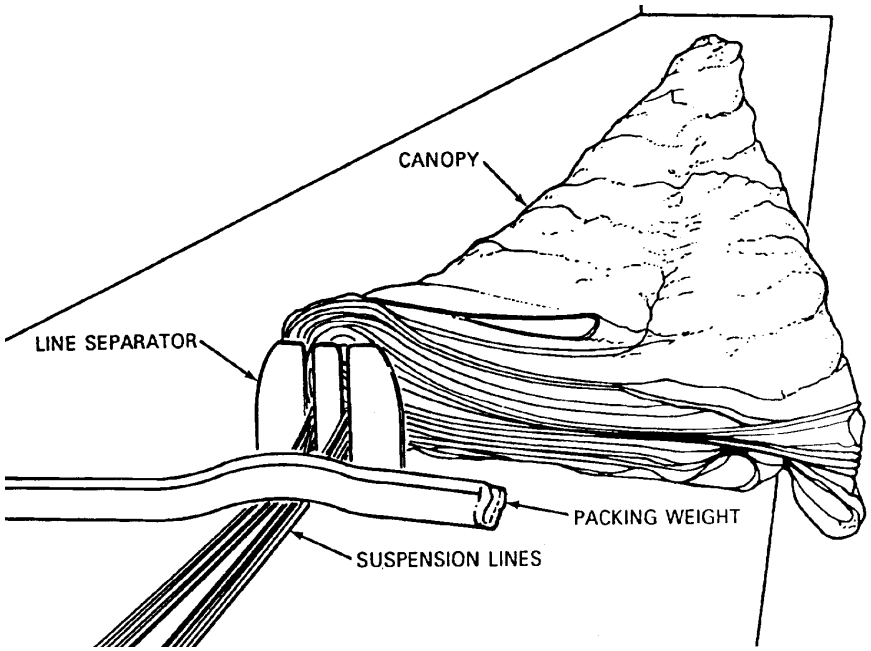


9. Hold the base of line separator (tight against canopy shirt and pull canopy off the packing table so that all gores drape to the right of table).

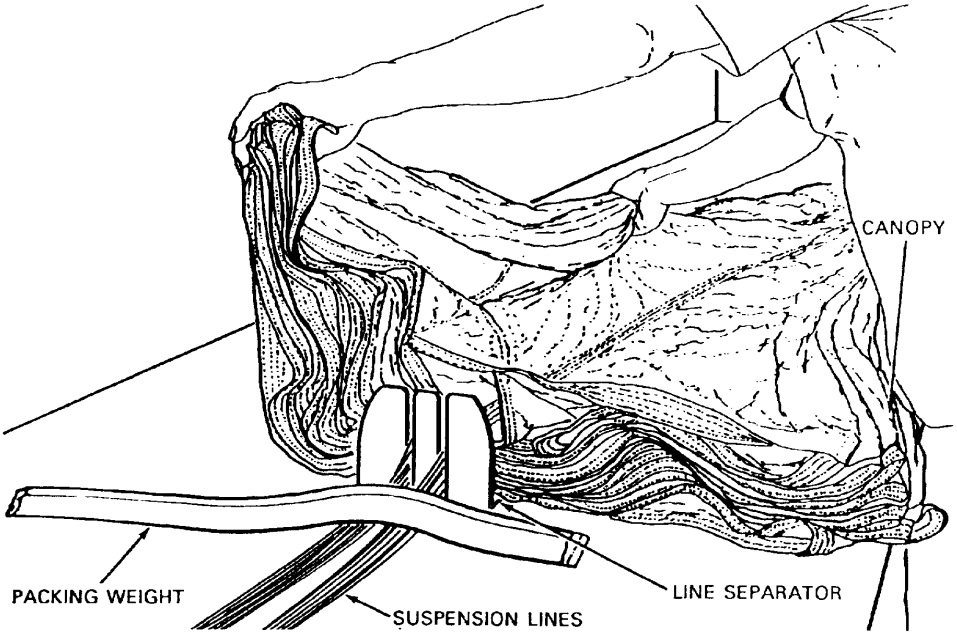


10. Turn line separator counterclockwise so that base is down and slide it back to the table.

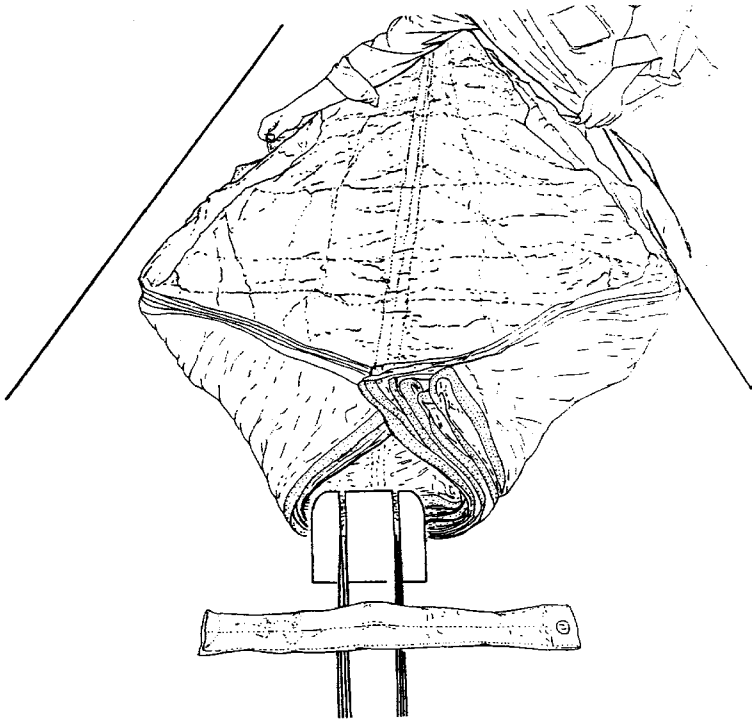
11. Place packing weight on suspension lines next to line separator.



12. Apply additional tension to suspension lines, dress gore no. 12 from lower lateral band to within 24-inches from apex, and flip left group of gores (top half) to left side of table.

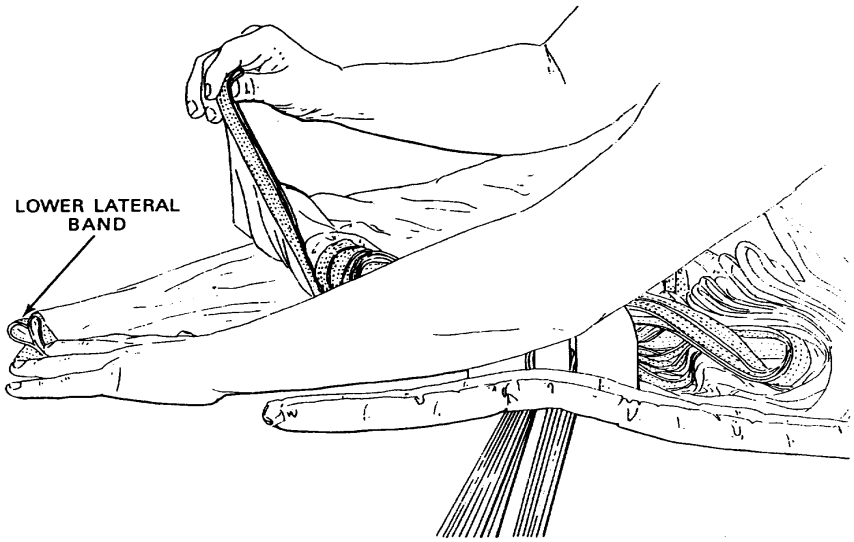


13. Fold back the right and left corners of the gores. Dress the bottom gores by pulling gently on the left and right sides of the canopy, moving from the lower lateral band to the apex.



14. Dress the top gores by pulling gently while moving to the lower lateral band. The canopy is now at a left fold.

15. Dress the lower lateral band. Dress each gore section on the lower lateral band, working from bottom to top of the left group. Repeat the procedure for the right side.

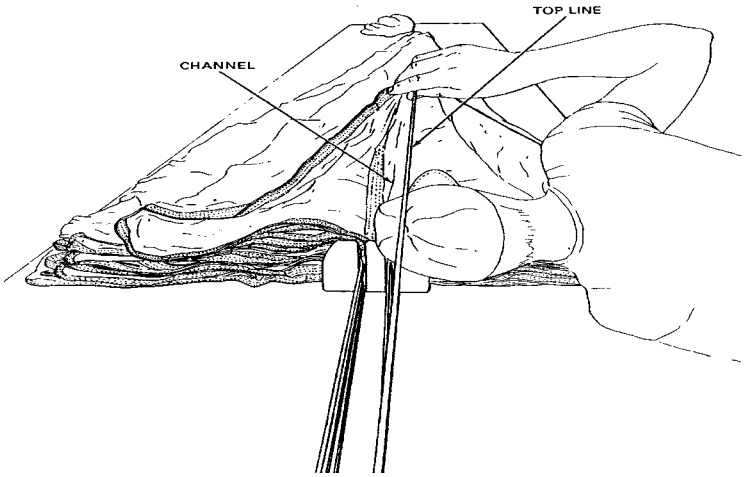


16. This completes the flatfold of the canopy.

NOTE

Count gore edges to be sure that 12 are in each group.

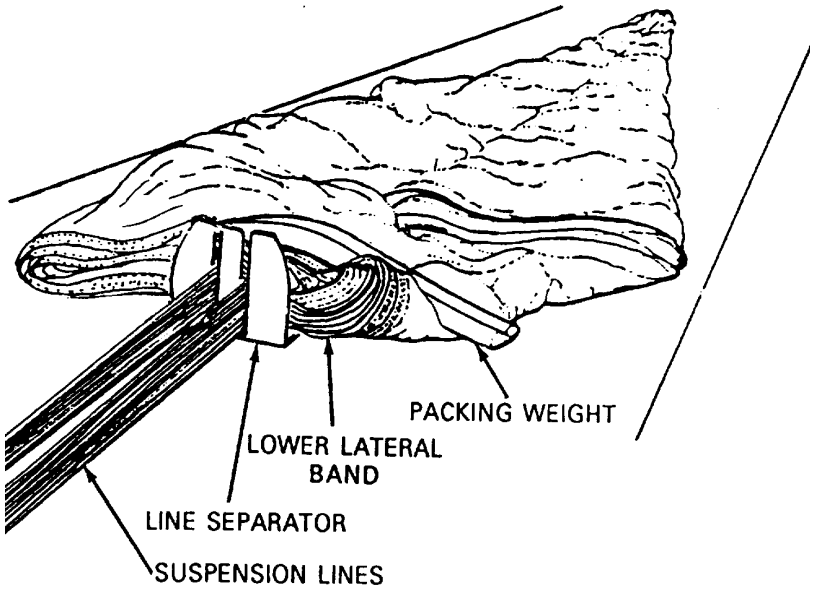
17. Raise the top radial line and check for a clear channel between the two groups of gores.



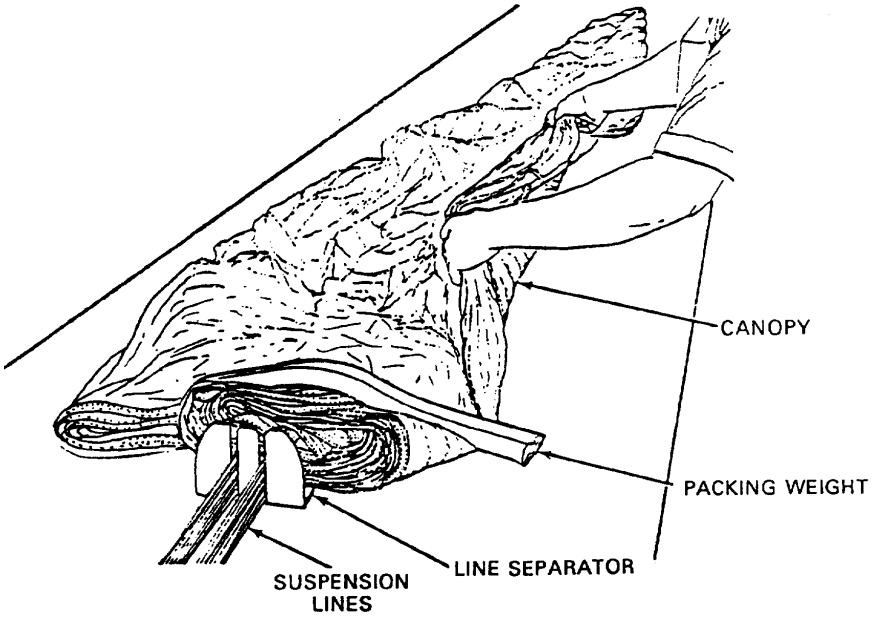
LONG FOLDING THE CANOPY

After flatfolding, the canopy is ready for longfolding. Proceed as follows:

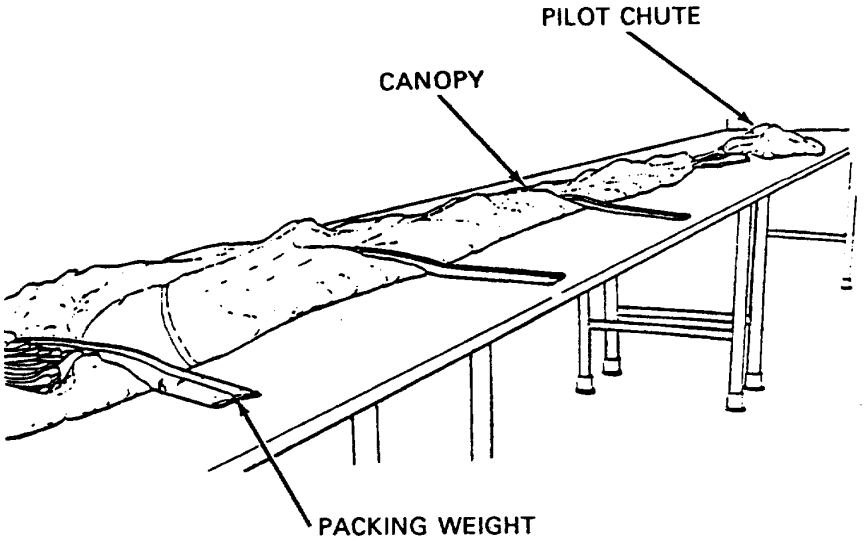
1. Fold corners of right group of gores 45 degrees so that corners slightly overlap the radial seam. Use packing weights to hold canopy in place.



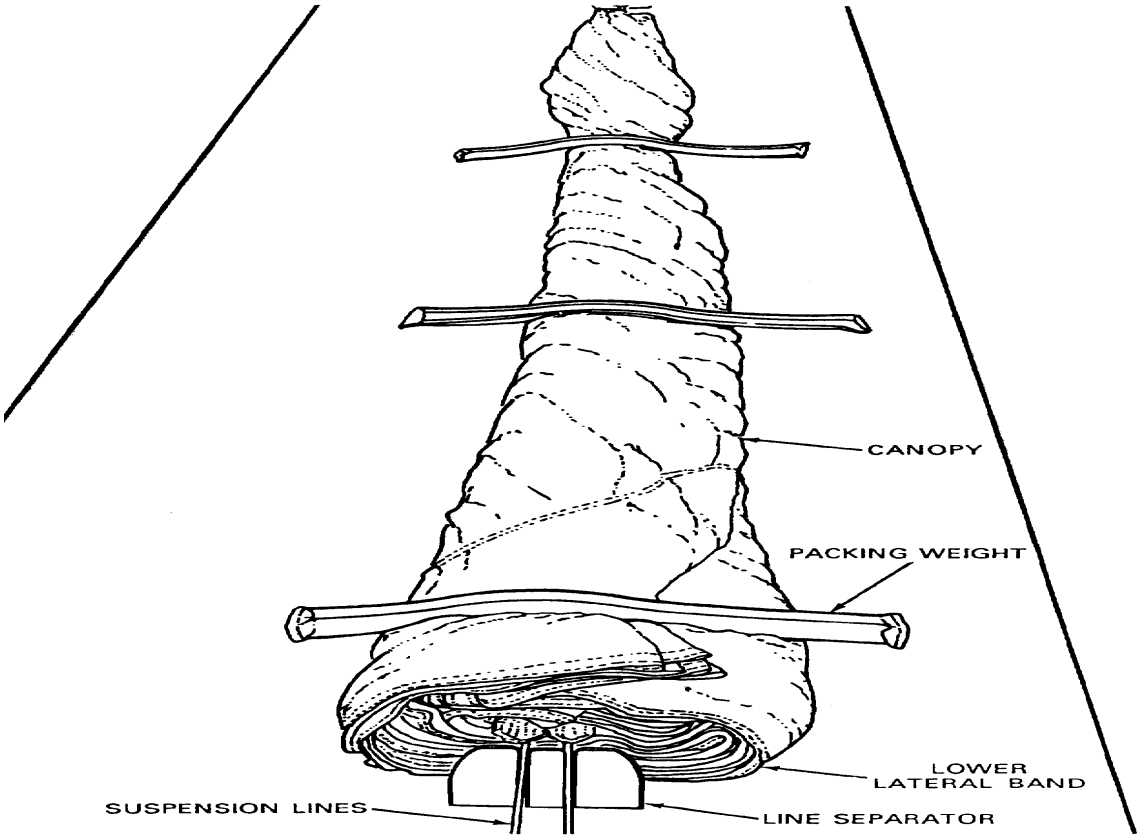
2. Grasp the edges of the right group of gores with the left hand at the break in the corner fold and the right hand approximately 2-feet from the left hand. Fold edges slightly over the radial seam (approximately 2-inches). Secure the fold with a packing weight.



3. Continue folding right group of gores working toward the apex. Taper the fold until it breaks at a point approximately 36-inches from the apex. Secure fold with packing weights.



4. Fold the left group of gores in a similar manner, adjusting packing weights to hold both groups of gores. Longfold is completed.



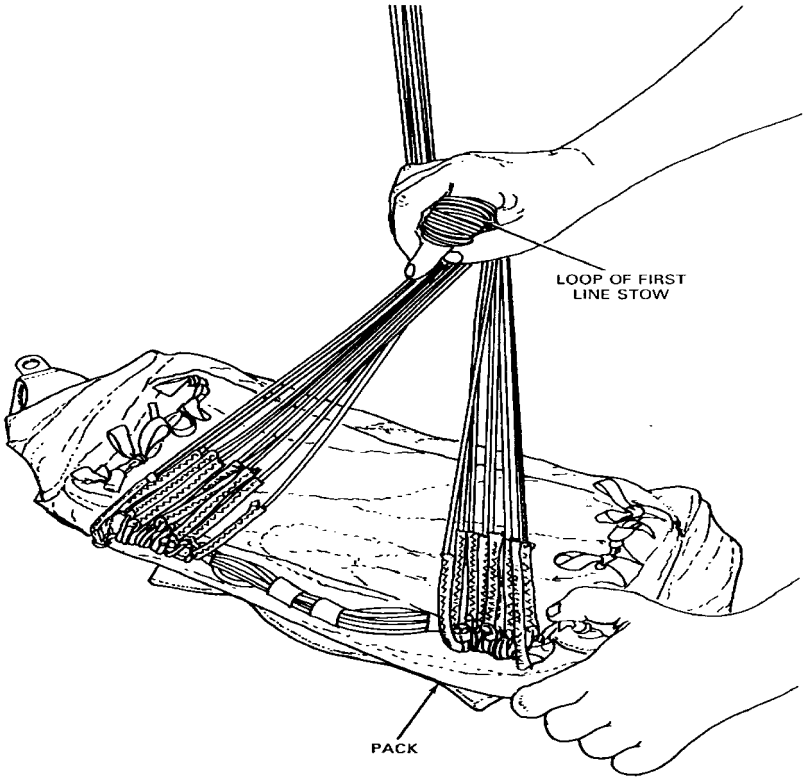
NOTE

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.

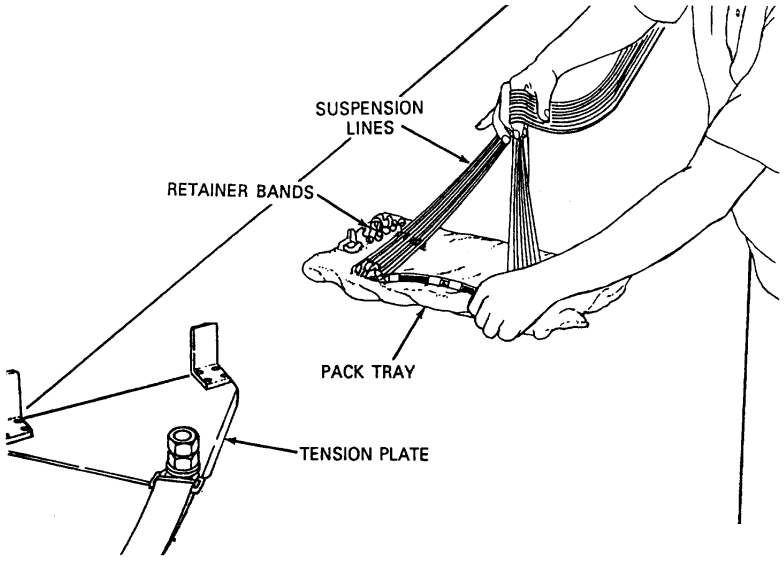
STOWING SUSPENSION LINES

Stow suspension lines as follows:

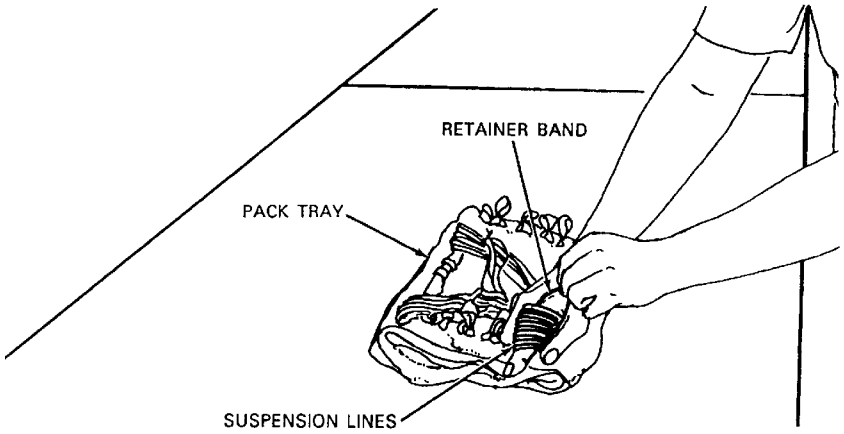
1. Release tension on suspension lines and remove pack from tension plate. Position pack inside up on a table and fold side and end flaps under pack. Replace any defective retainer bands.



2. Grasp upper edge of pack with left hand between the two groups of lines, and apply tension to lines by pulling pack toward the tension plate. Grasp both groups of lines between middle finger and forefinger approximately 12-inches above pack. Apply tension to lines with right hand, and simultaneously turn the pack ¼-turn clockwise with left hand. Allow lines to form a loop around right forefinger.

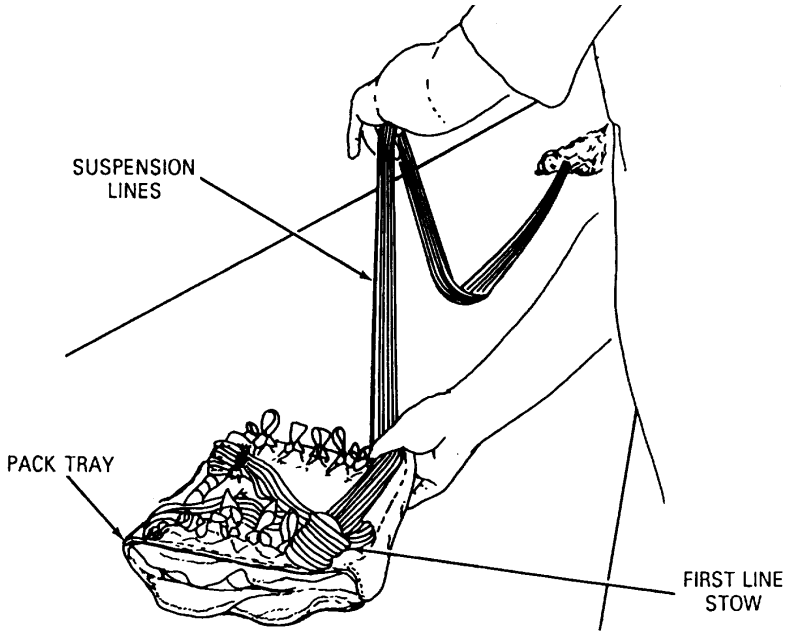


3. Slide pack toward canopy apex with left hand until the loop around the forefinger can be placed on lower right corner of pack. Cinch lines below forefinger with remaining fingers of right hand. Grasp retainer band at lower right corner of pack with thumb and forefinger of left hand, and press retainer band over looped lines and knuckles of right hand. Withdraw right hand from band and lines, securing first stow.

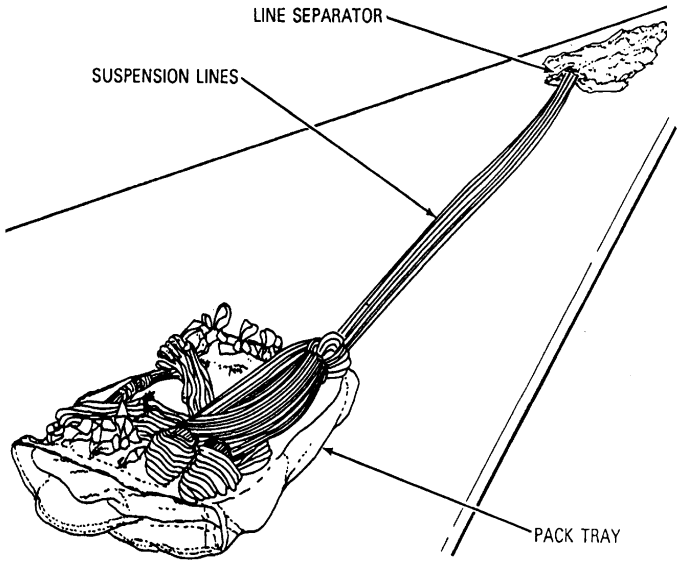


4. Grasp first line stow and lower edge of pack with left hand and apply tension to suspension lines. Grasp lines with thumb and forefinger of right hand at upper right corner of pack and grip corner of pack with fingers. Cross left hand over right forearm and grasp lines with thumb and forefinger one pack length from right hand.

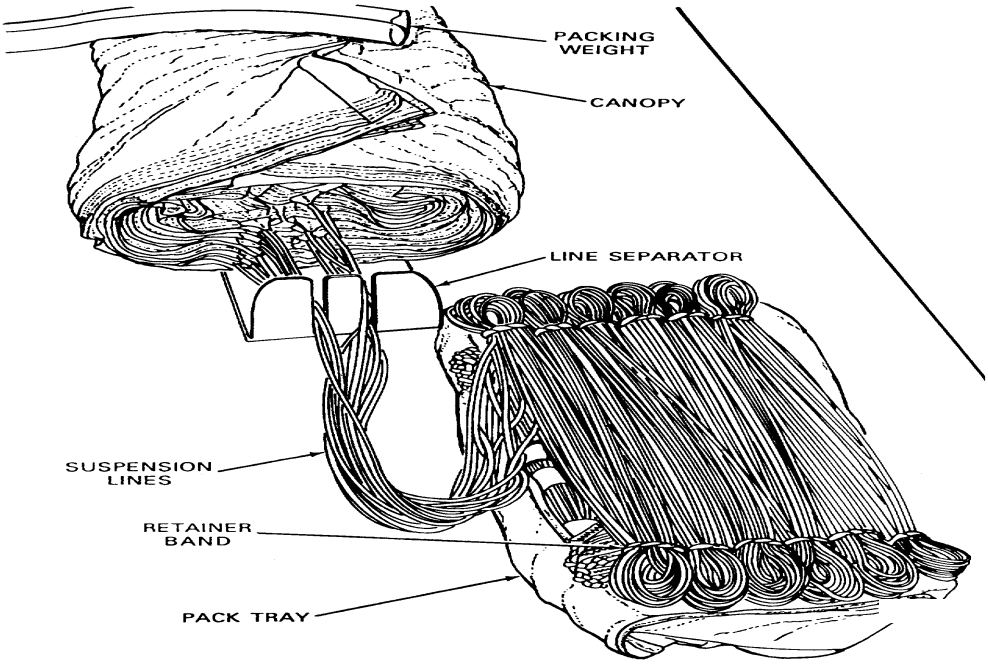
5. Slide pack one pack length toward canopy with right hand, allowing lines to form loop around each thumb.



6. Bring looped lines in left hand down even with first line stow and release tension on lines by sliding pack slightly forward. Release looped lines from left hand, and transfer looped lines in right hand to left hand. Place retainer band in upper right corner of pack over looped lines, securing second line stow. Grasp looped lines at lower end of pack with right hand. Secure third line stow with retainer band next to first stow.



7. Form and secure remaining stows, leaving 14 to 16-inches of un-stowed lines between last stow and skirt canopy.



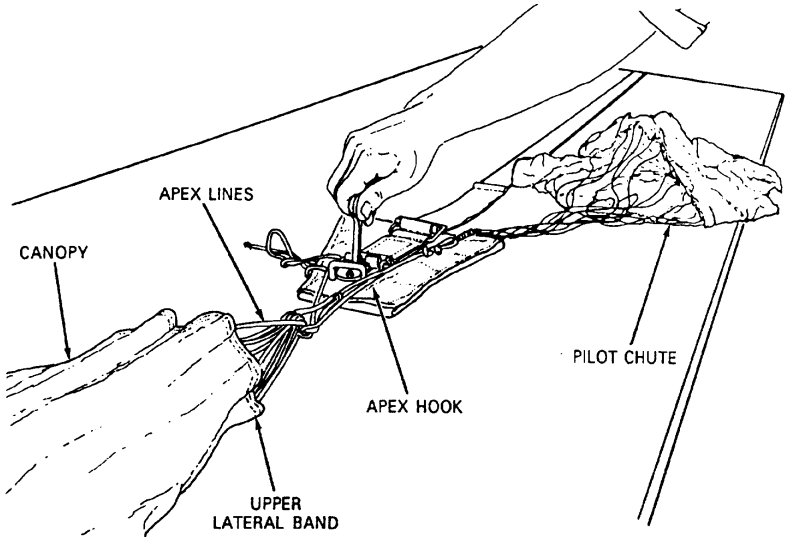
NOTE

Twelve stows are required.

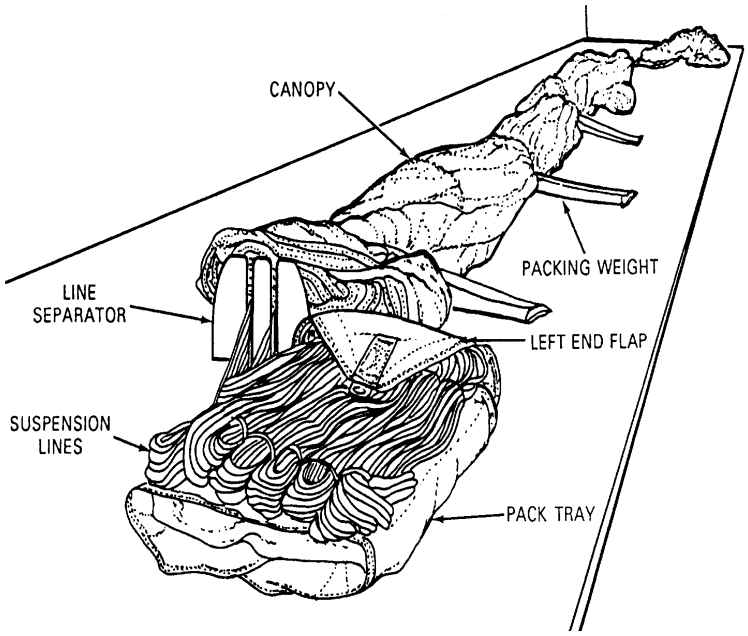
STOWING THE CANOPY

Stow the canopy over suspension lines on inside bottom of pack as follows:

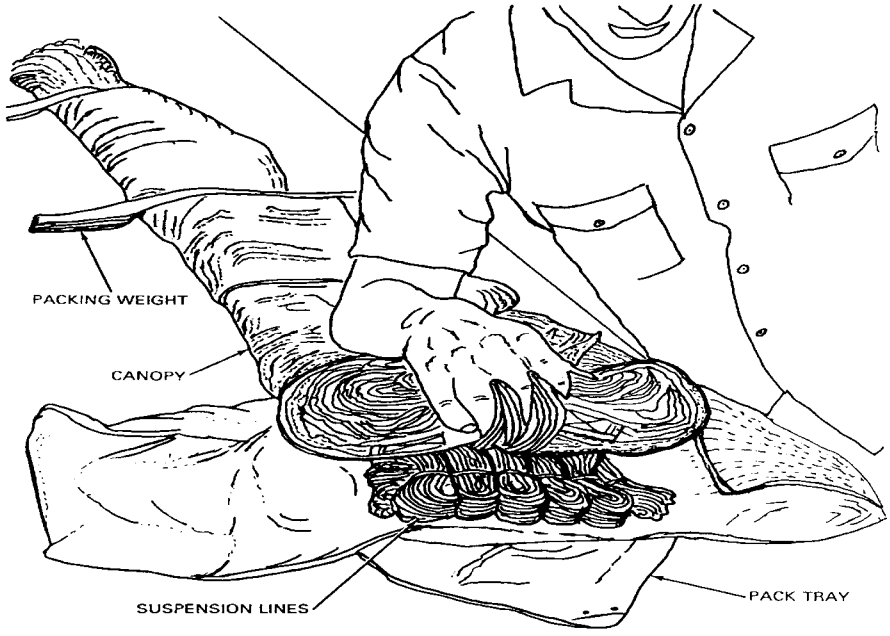
1. Release apex lines from apex hook.



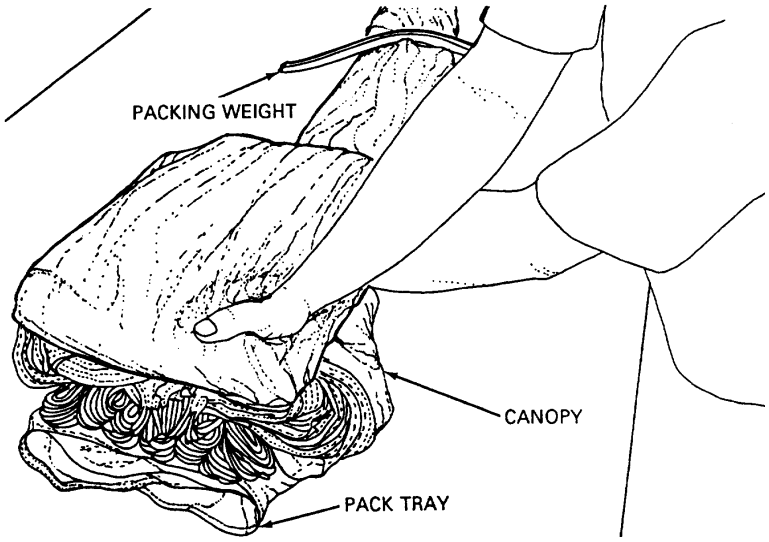
2. Fold top end flap of pack that is nearest canopy over stowed suspension lines.



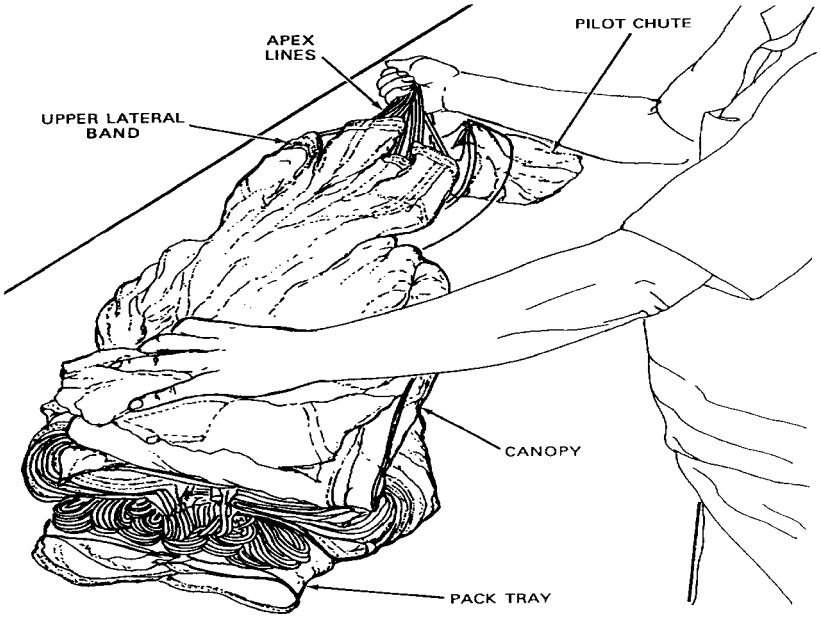
3. Remove line separator from suspension lines and grasp skirt of canopy with right hand, inserting middle finger between the two groups of lines. Position right forearm on canopy to hold folds in place. Position skirt of canopy over stowed suspension lines. Remove packing weight as necessary.



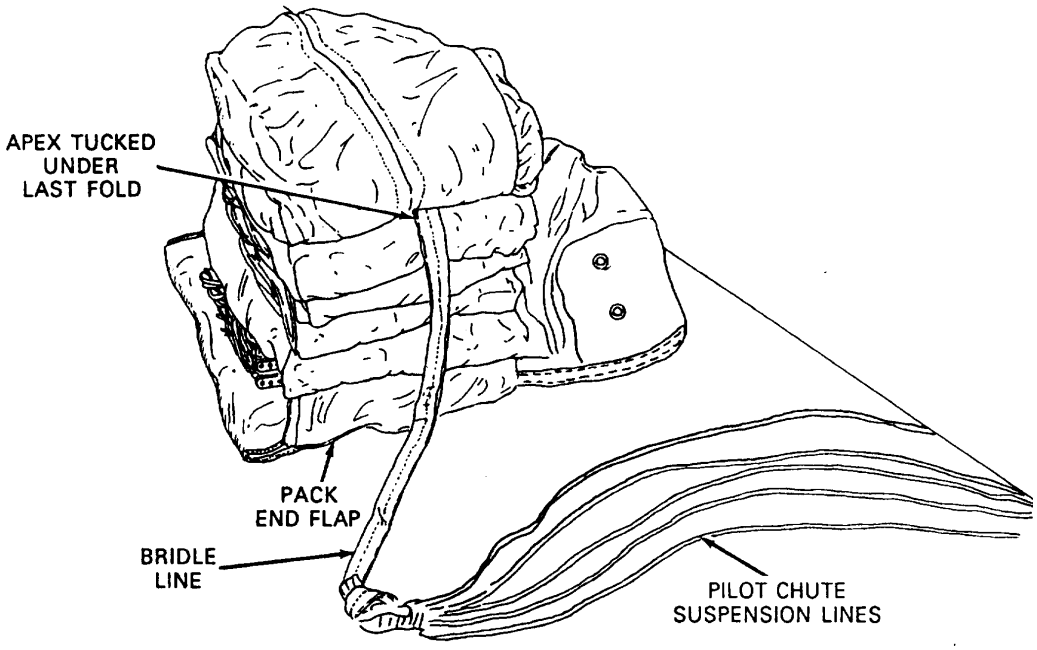
4. Make first accordion fold by placing the left hand on canopy where it crosses end of pack. Place right hand, palm up, under canopy approximately one pack length from left hand. Fold canopy on top the canopy skirt.



5. Make two additional accordion folds, adapting procedures in step d., above. Remove packing weights as necessary. With both hands, fold remainder of canopy allowing apex to extend 8-inches beyond edges of pack.



6. Turn 8-inches of canopy at the apex under the last fold, leaving the bridle line extending from the folds. Remove pack end flap from between the folded canopy and stowed suspension lines and spread the flap in the table.



CLOSING PACK AND STOWING PILOT CHUTE

The pilot chute is stowed into a partly closed pack, and then the pack is closed. Prepare to close the pack as follows:

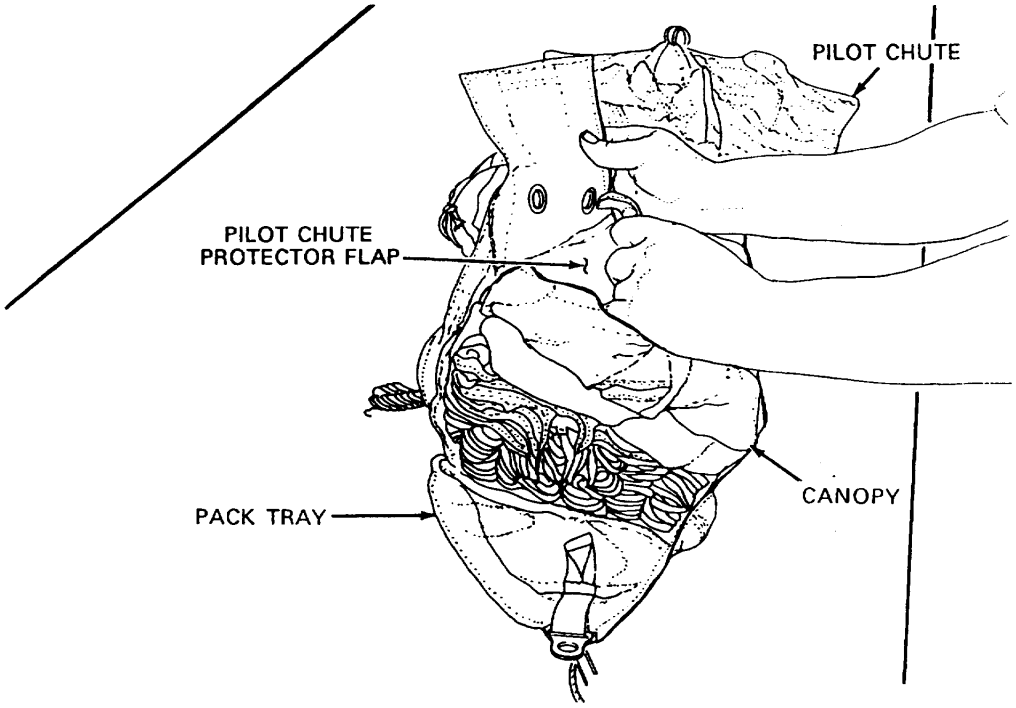
1. Install ripcord in ripcord grip pocket.

NOTE

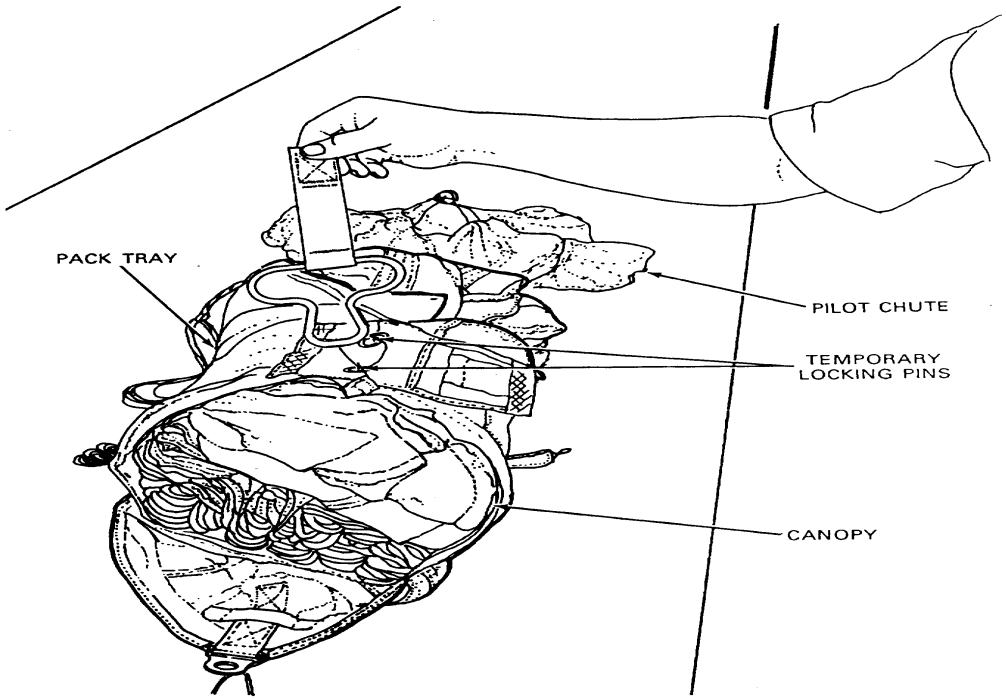
If parachute is being packed for the first time, insert ripcord grip in the pocket and remove with a twisting motion five times to flex ripcord pocket.

2. Fold grommet side flap of pack over folded canopy and hold pilot chute protector flap on top of canopy.

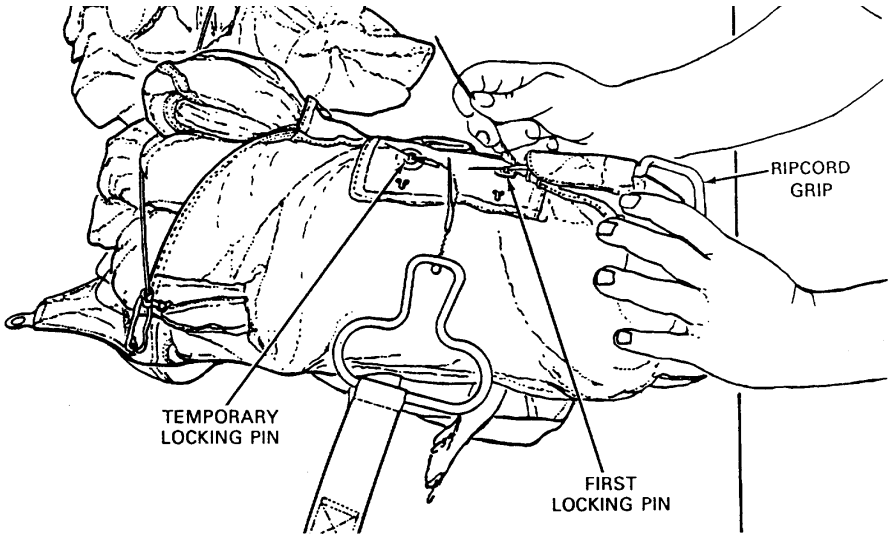
3. Fold releasing cone side flap over folded canopy, placing right pilot chute protector flap over left pilot chute protector flap.



4. Pull grommet side flap over cone side flap and insert cones into grommets. Lock cones in place with temporary locking pins.



5. Fold ripcord end flap over canopy and side flap. Release temporary locking pin, place ripcord end flap fastener over cone, and lock in place with first ripcord locking pin.

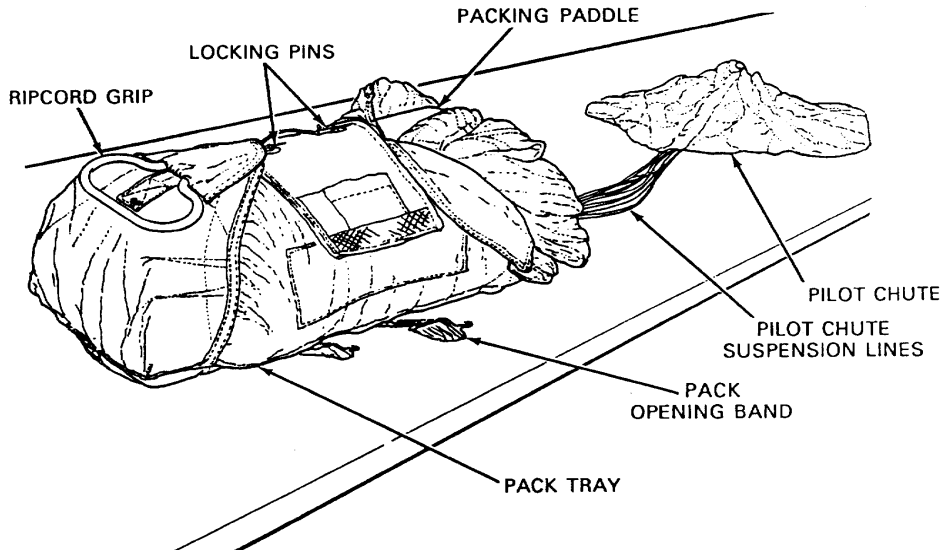


Prepare pilot chute for stowing as follows:

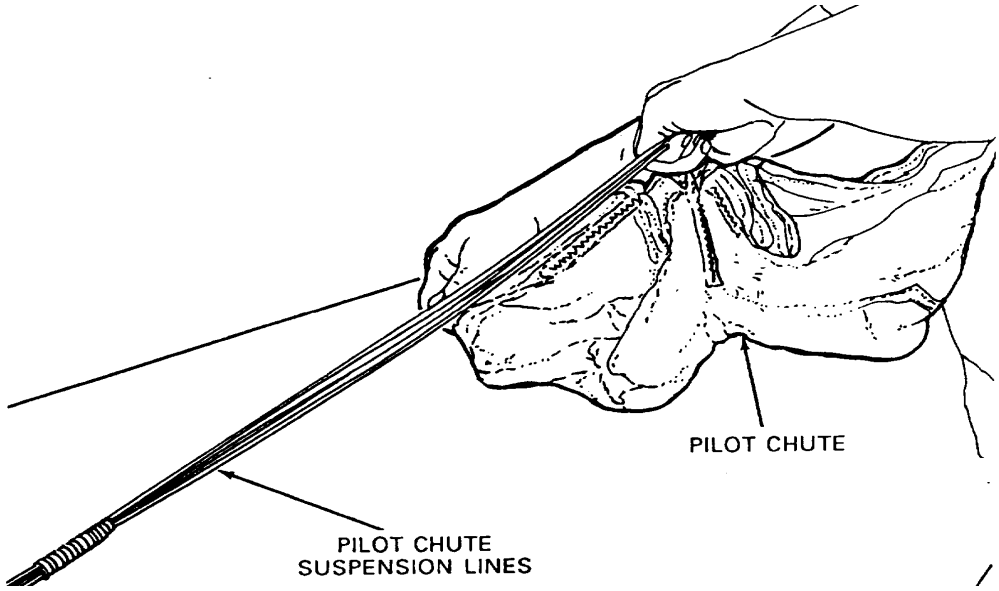
NOTE

Proper layout of the pilot chute consists of two adjacent lines free from turns, tangles and twists from the canopy skirt to the bridle attaching point.

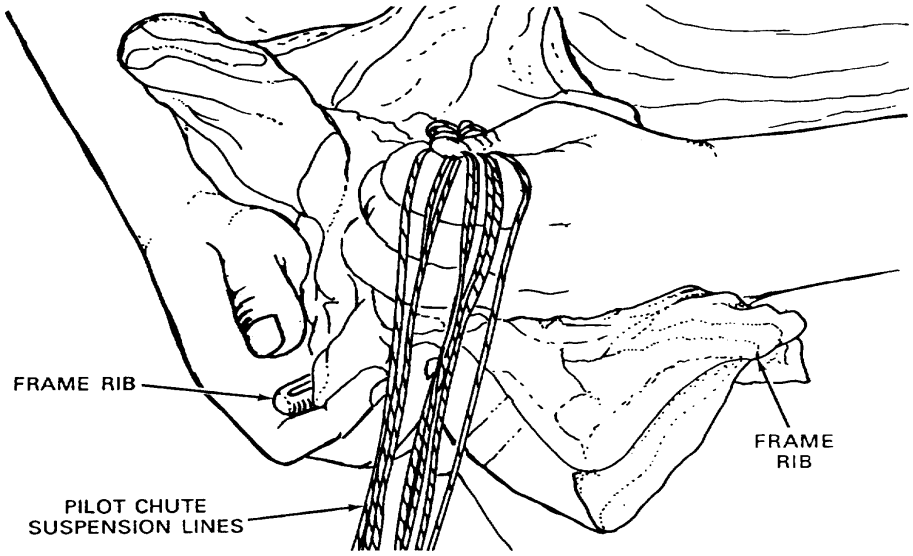
1. Insert packing paddle, on edge, between bottom side flap and pilot chute protector flaps. Remove any twists and tangles from pilot chute suspension lines, working from connector loop to skirt of canopy.



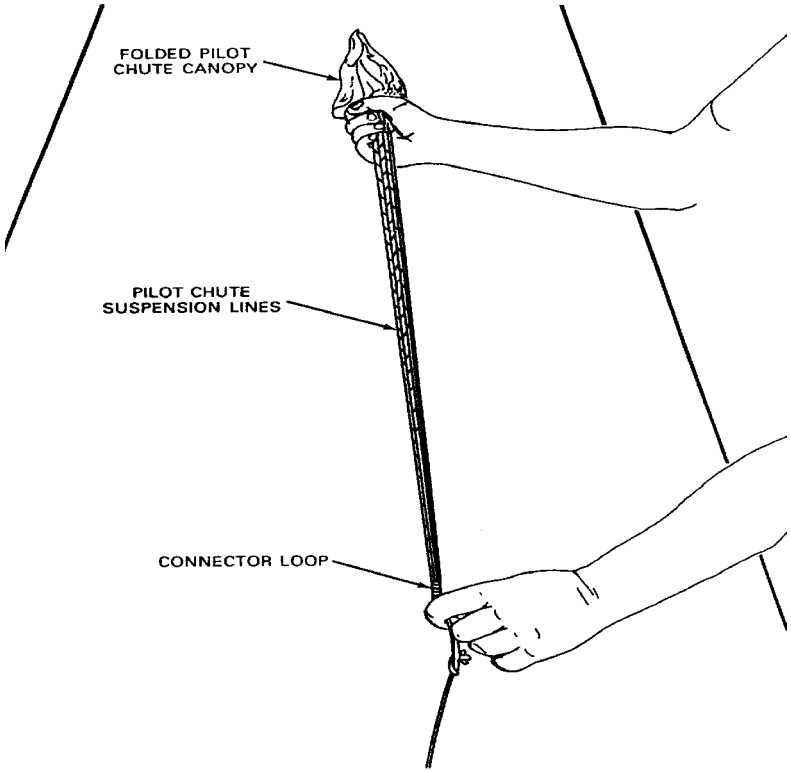
2. With the left hand, grasp suspension lines at skirt of pilot chute canopy, and place the hand over coil of opening frame. With right hand, straighten and fold the skirt inward between frame ribs.



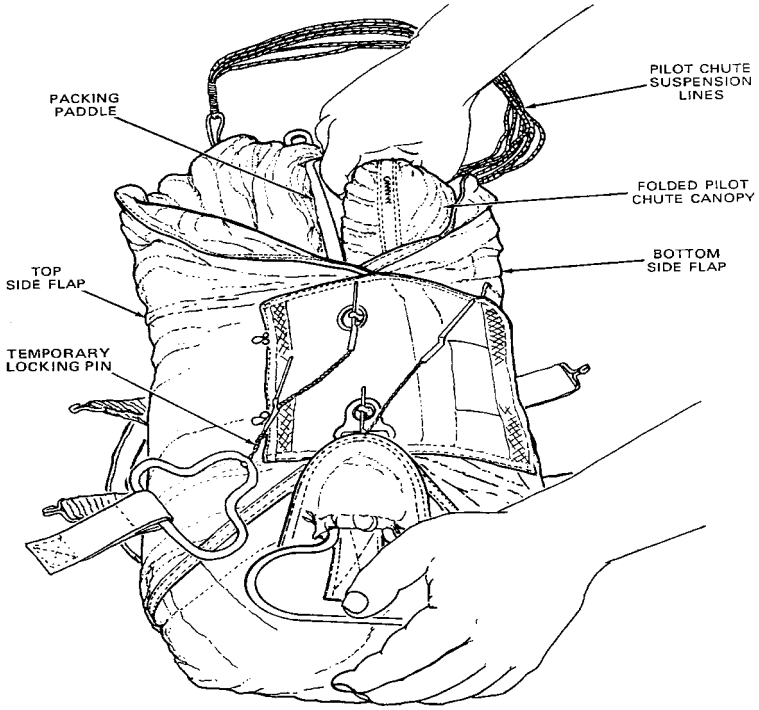
3. With the right hand, grasp one rib of opening frame. Fold frame by squeezing ribs together against the chest.



4. Place folded canopy in the right hand, and trace suspension lines from folded canopy to connector loop. Remove slack from lines by gently pulling at connector loop, being careful not to pull canopy folds from opening frame.

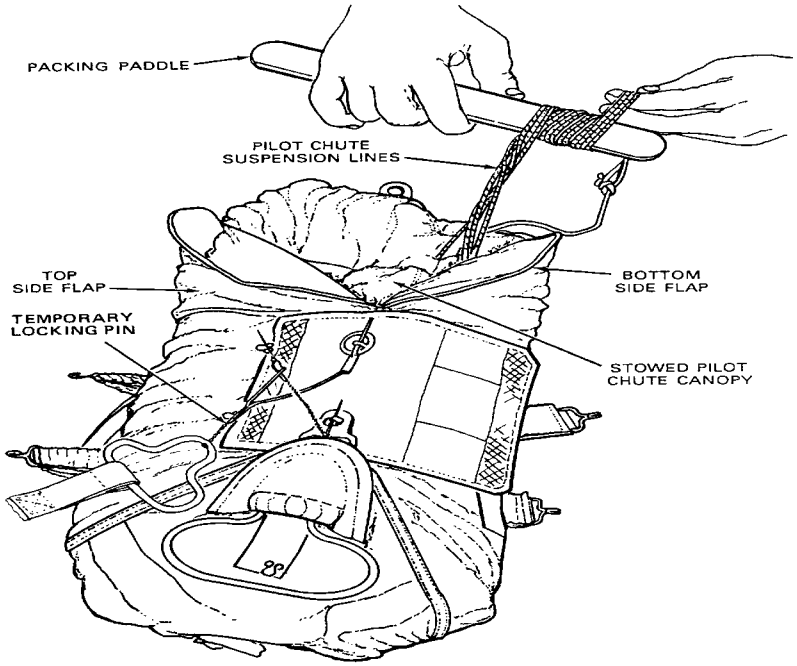


5. Stow pilot chute canopy along left side of packing paddle, between pilot chute protector flaps and bottom side flap. Make sure the apex of pilot chute canopy is directly under edge of right end flap and the rectangular clip of the pilot parachute frame is horizontal.

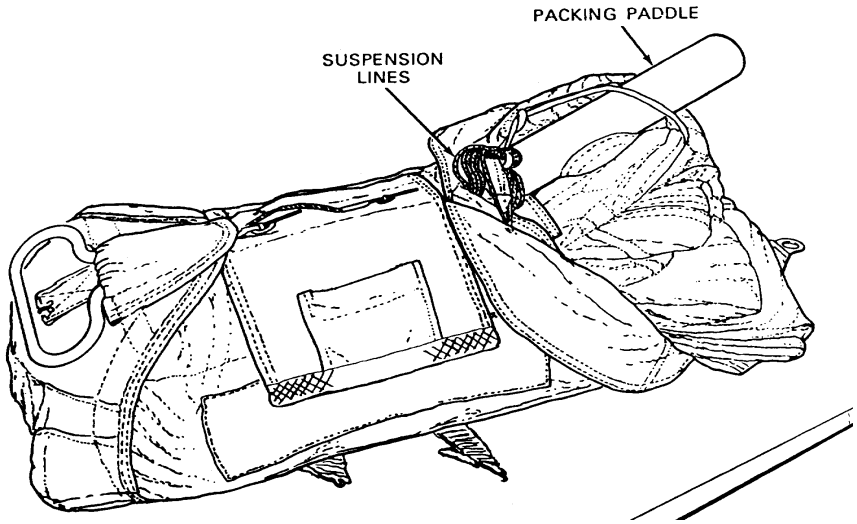


6. Remove packing paddle from pack.

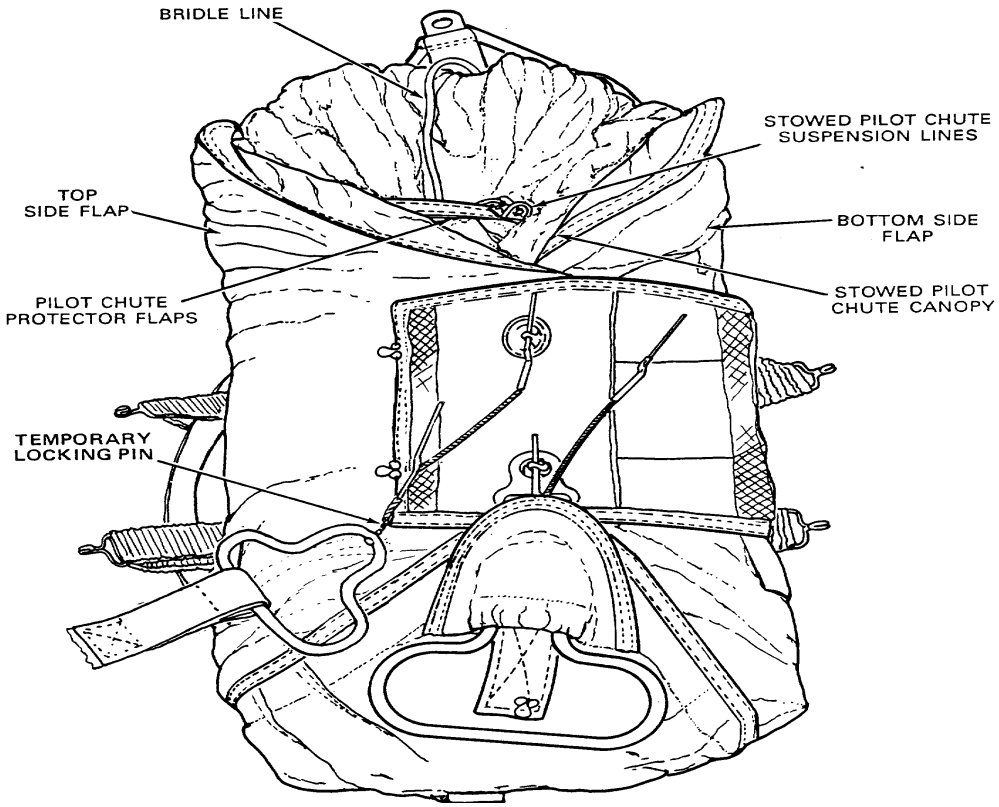
7. Starting near stowed pilot chute canopy, wind suspension lines around end of packing paddle.



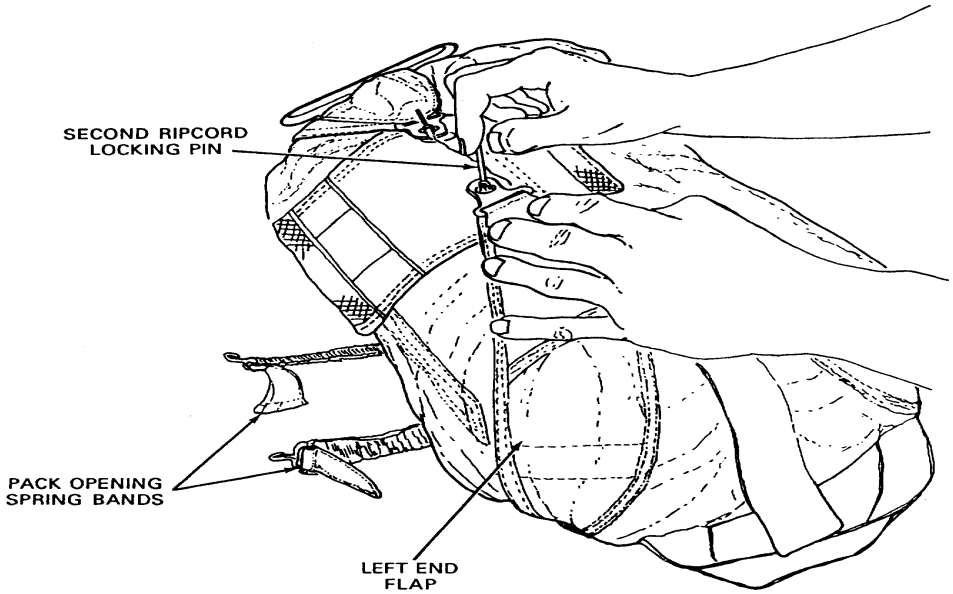
8. While holding line in place on packing table, insert end of paddle into pack between pilot chute protector flaps. Withdraw paddle, leaving lines stowed protector flaps.



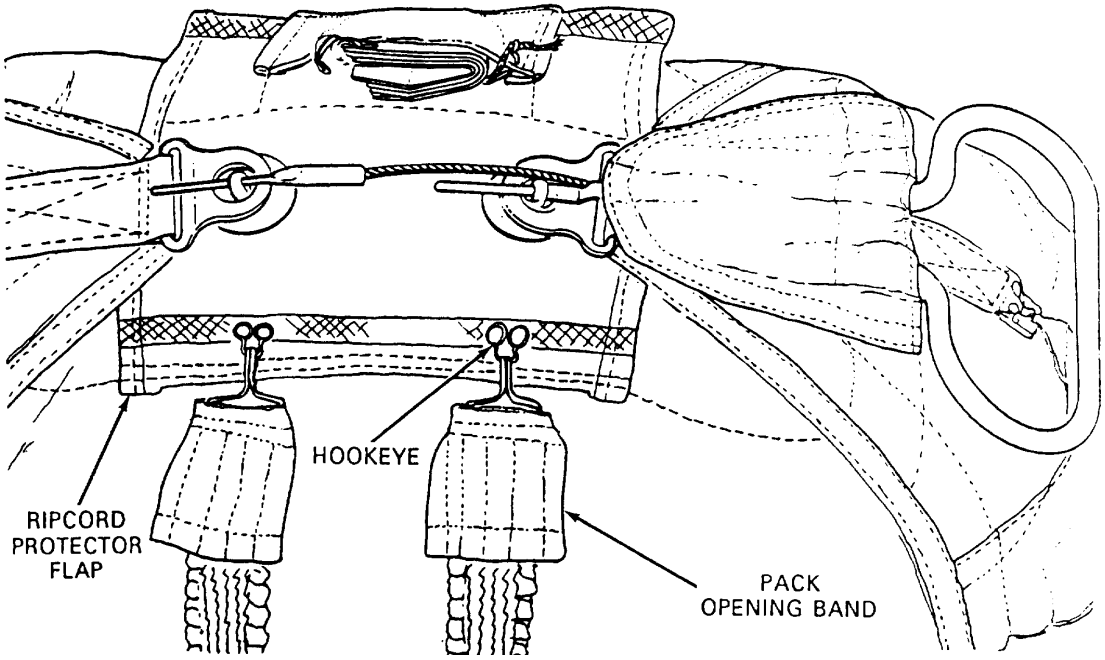
9. Tuck exposed portion of bridle line between parachute canopy and pilot chute protector flaps.



10. Pull left end flap over cone, remove temporary locking pin and secure with second ripcord locking pin. Tuck corners into pack with packing paddle.



11. Attach hooks of pack opening spring band to corresponding hook eyes on the pack. Begin with ripcord end, attach the elastic pack opening spring band to corresponding hook eyes on the pack. Continue counterclockwise until all pack opening spring bands are attached. Make certain that bands are not twisted. Band on ripcord end should not be over the carrying handle if one is present. Fold ripcord protector flap over ripcord locking pins and press hook tape in place.



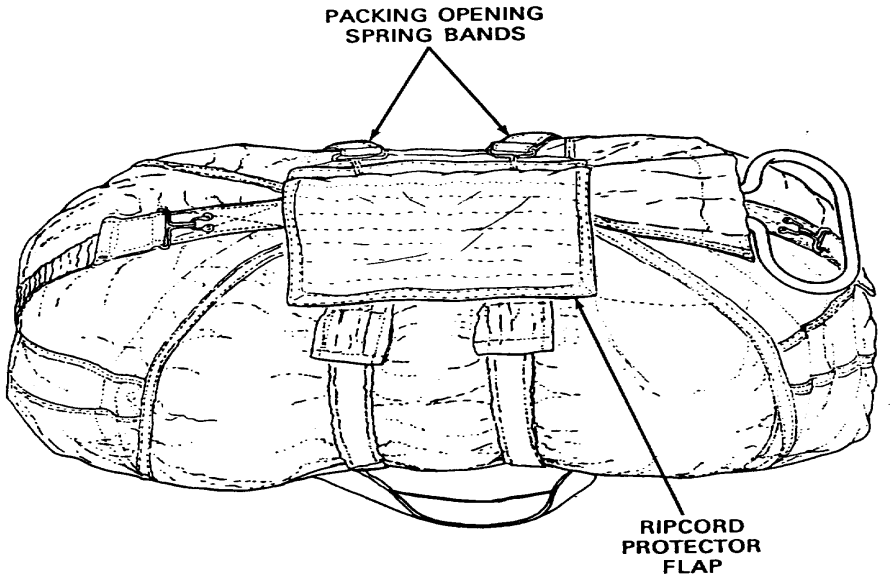
ARMY PARACHUTE LOG RECORD

Remove the log record (DA Form 3912) from the Parachute Inspection Data Pocket (Log Record Pocket) located on the ripcord protection flap (see above). Beginning with the initial packing of a parachute and each time a parachute is repacked, make entries on the "Jump, Inspection, and Repack Data" page of the log record as follows (see WP 0004 00, Accomplishing a Log Record).

1. Date. Enter the day, month, and year of each packing action.
2. Bag number. No entry required.
3. Routine inspection. No entry required.
4. Jumped or dropped. No entry required.
5. Repack. Enter a checkmark in the column each time the parachute is repacked.
6. Packer's name. The packer performing the packing will sign this entry.
7. Inspector's name. The inspector who has performed the pack-in-process inspection will sign this entry.
8. Unit. Enter the unit designation to which the packer and/or inspection are assigned.

COMPLETION OF PACKING

Install the log record in the log record pocket. Packing of the parachute is now completed.



END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PACKING THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS)

THIS SECTION COVERS:

- Inspection
- Orientation
- Preparing Parachute for Proper Layout
- Removing Inversion
- Locating Suspension Lines in Proper Layout
- Folding the Gores
- Long Folding the Canopy
- Stowing Suspension Line
- Stowing the Canopy
- Stowing the Bridle and Port Parachute
- Closing the Pack
- Completion of Packing

INITIAL SETUP:

Tools
Aid, Packing, Plastic (Item 1, WP 0044 00)
Cord, Pull-Up, 2-EA. (Item 6, WP 0044 00)
Knife (Item 14, WP 0044 00)
Line Separator (Item 17, WP 0044 00)
Packing Paddle (Item 23, WP 0044 00)
Packing Weight (Item 24, WP 0044 00)
Pin, Temporary, Locking, 2-EA. (Item 25, WP 0044 00)
Rod, Compression, 2-EA. (Item 34, WP 0044 00)
Test Set, Compression, Ejector Spring (Item 44, WP 0044 00)

Equipment Condition
Parachute given a shakeout (WP 0008 00) and cleaned (WP 0009 00)

References
DA Pam 738-751; TB 43-0002-43

Personnel Required
92R (10) Parachute Rigger
92R (20) Parachute Rigger

Materials/Parts
Band, Rubber, Retainer (Item 1, WP 0057 00)

WARNING

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

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 DA PAM 738-751. A technical/rigger-type inspection and a pack-process inspection must be performed in conjunction with each parachute repack (refer to WP 0010 00).

Technical/Rigger-type Inspection. Before each parachute is packed for air delivery, it must be given a technical-rigger inspection by the packer in accordance with WP 0010 00.

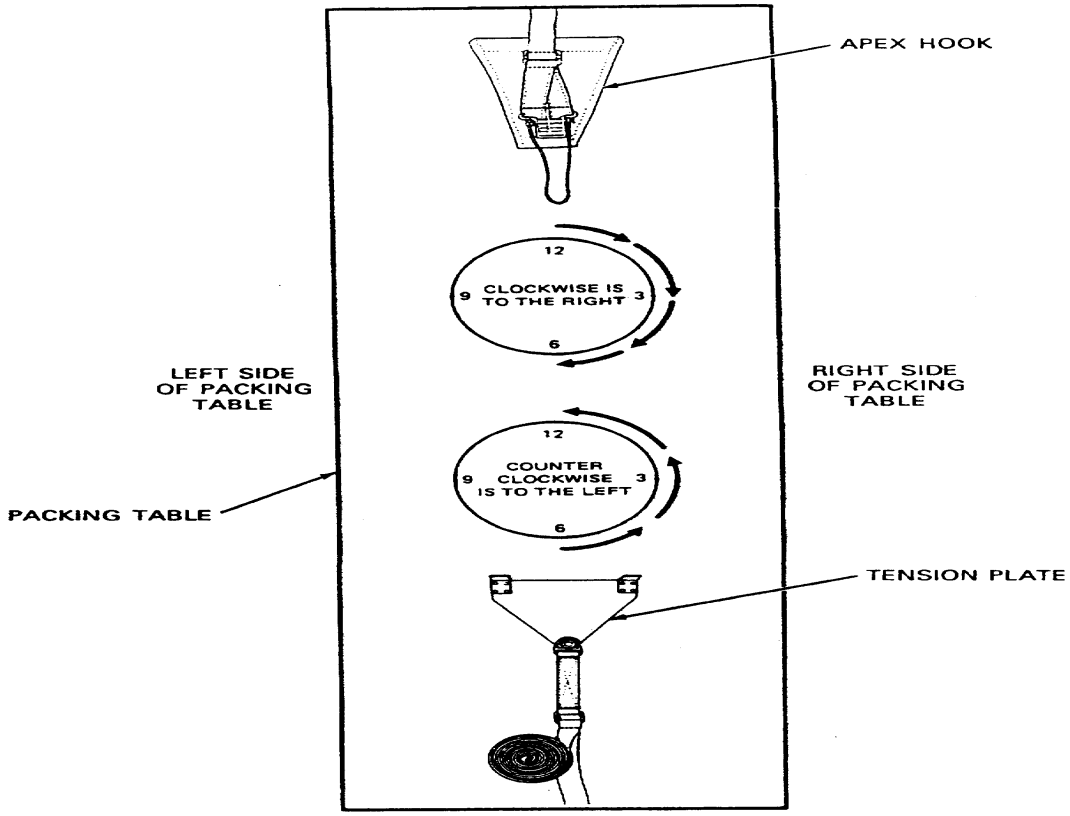
Pack-in-process Inspection. A pack-in-process inspection must be performed by a designated supervisory rigger other than the packer. For the MIRPS, there are nine intervals during the packing procedures. The inspection is performed to assure that the parachute is packed according to authorized packing procedures (refer to WP 0010 00).

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.

1. The Top, that portion of the equipment that is farthest from the packing surface.

UPPER END OF PACKING TABLE



LOWER END OF PACKING TABLE, RIGGER'S POSITION

2. The Bottom, that portion of the equipment that is nearest to the packing surface.

PREPARING PARACHUTE FOR PROPER LAYOUT

Prepare the parachute as follows:

1. If components of the parachute assembly are detected, assemble the parachute during layout in accordance with WP 0005 00. Place packing tools in convenient locations on the packing table. Lay the canopy assembly lengthwise on the packing table, and attach the canopy to the packing table apex hook.

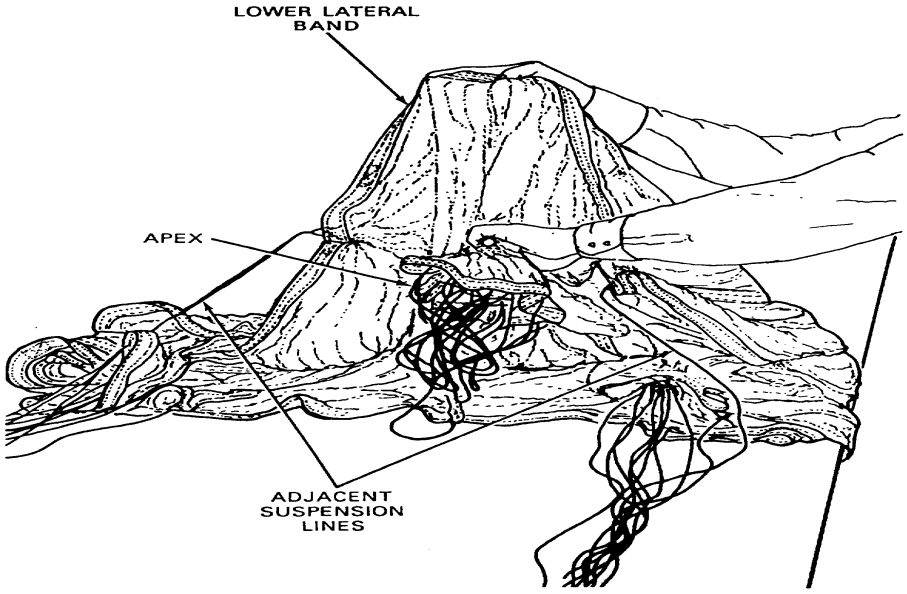
NOTE

Attach MIRPS parachute by the apex lines.

2. Attach the connector snaps to the tension plate and apply enough tension to keep the canopy on the table. Check apex lines to determine if the canopy is inverted. If the apex lines do not appear attached to the outside of the upper lateral band, the canopy is inverted.

REMOVING INVERSION
To remove inversion, proceed as follows:

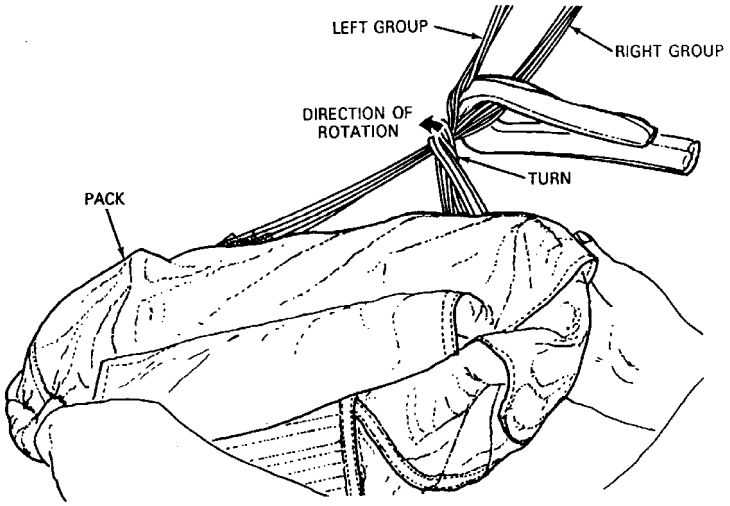
1. Remove the canopy from the apex hook, pass the apex or pilot chute down through the canopy and out the skirt between two adjacent suspension lines.



2. Reattach the canopy to the apex hook after the inversion is removed.

LOCATING SUSPENSION LINES IN PROPER LAYOUT
Locate the top center gore of the canopy, lines 1 and 24. Divide the suspension lines into two groups (lines 1 through 12 in the left group and lines 13 through 24 in the right group). Place packing weight around the right group. Remove any turns, tangles or twists in the suspension lines as follows:

Removing Turns. A turn occurs when one group of suspension lines rotates around the other group.



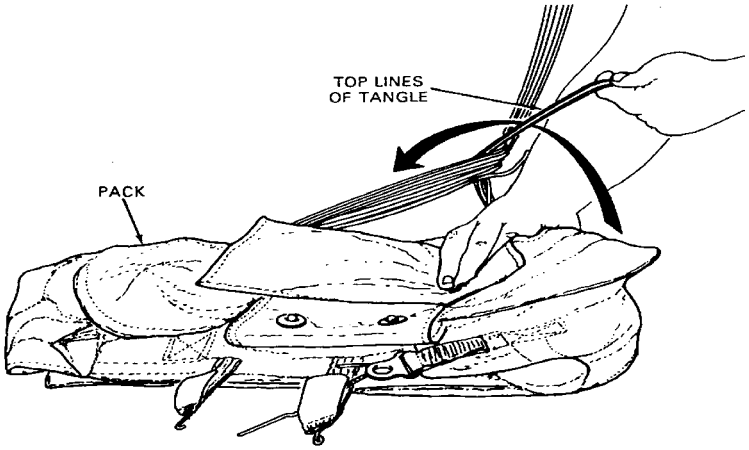
1. Detach the connector snaps from the tension plate and remove a turn by rotating the pack in the direction opposite to the direction of the turn.

2. Attach the connector snaps to the tension plate.

Removing Tangles. To remove a tangle or tangles, keep the two groups of lines separated and work the tangle, or tangles, as close to the pack as possible.

1. Detach connector snaps from tension plate.

2. 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.



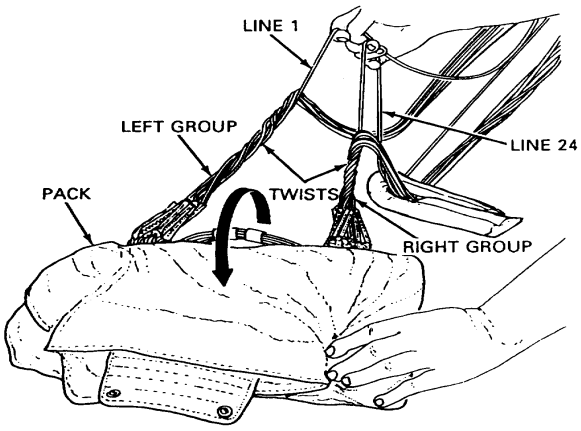
3. With the right hand, reach through the opening created by lifting the suspension lines and pull pack assembly through the opening. Do not permit pack assembly to turn.

4. Attach connector snaps to the tension plate.

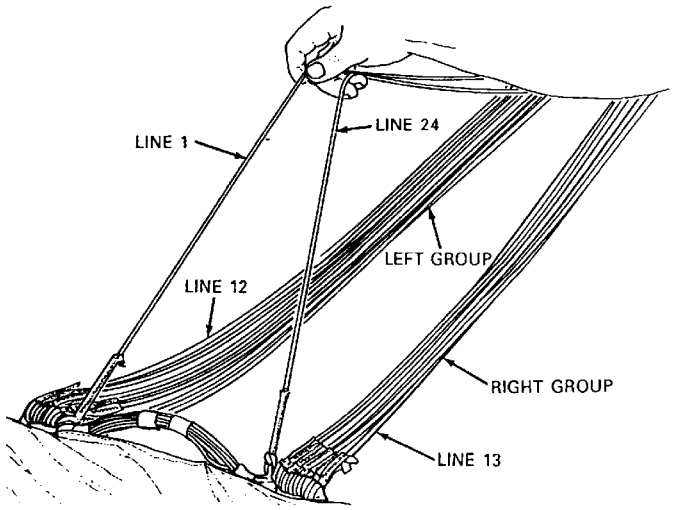
Removing Twists. A twist occurs when the suspension lines within one group become improperly crossed.

1. Grasp top inside lines (1 and 24) at skirt of canopy and trace them to connector snaps.

2. Remove twists by rotating pack assembly between two groups of suspension lines



3. Recheck lines to ensure they are in proper position.



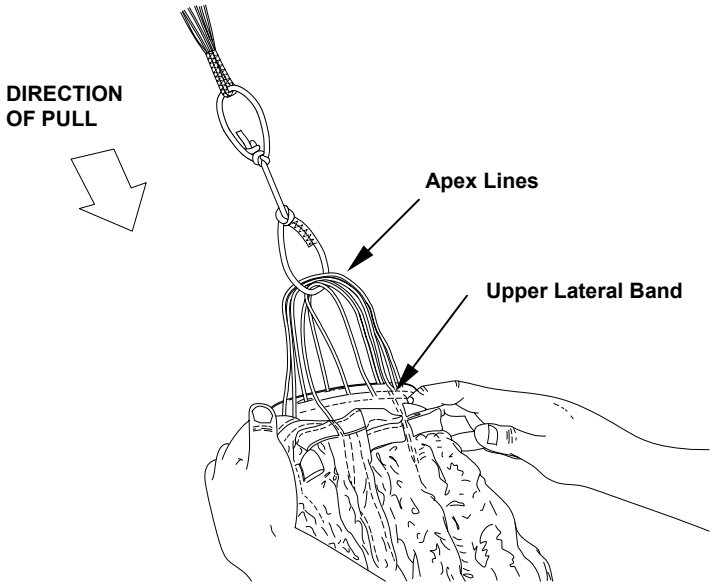
4. Perform a rigger check (1st).

5. With lines 1 and 24 on the inside of the connector snaps and lines 12 and 13 on the outside of the connector snaps, the parachute is now in proper layout, ready for folding the gores.

FOLDING THE GORES

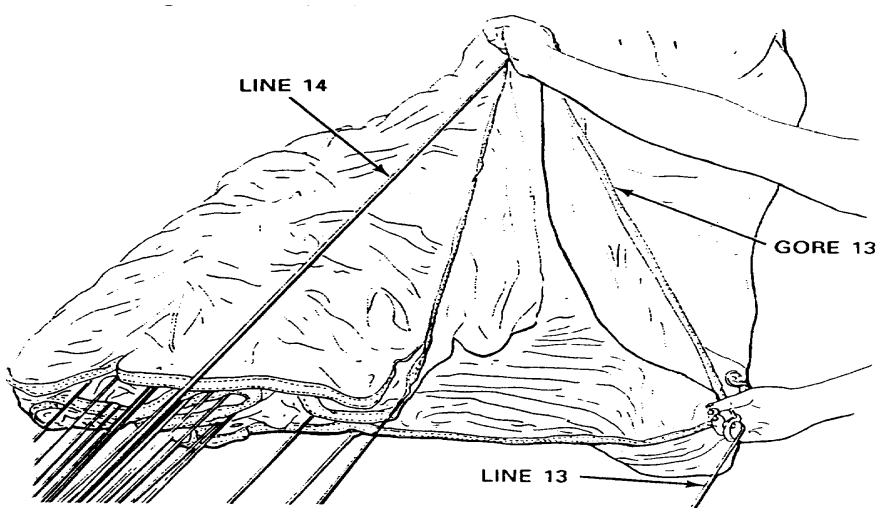
After the parachute has been properly laid out, proceed as follows:

1. Move to the apex end of the table and dress the upper lateral band. Apply pressure toward the tension end of the table until the upper lateral band is a lined. Apply sufficient tension at the tension plate to hold the canopy and suspension lines taut.



2. Move to the lower lateral band of the canopy. Lift right group of suspension lines with the left hand at canopy skirt. Hold top center gores in position with the right hand, and with left hand flip right group of gores over left group.

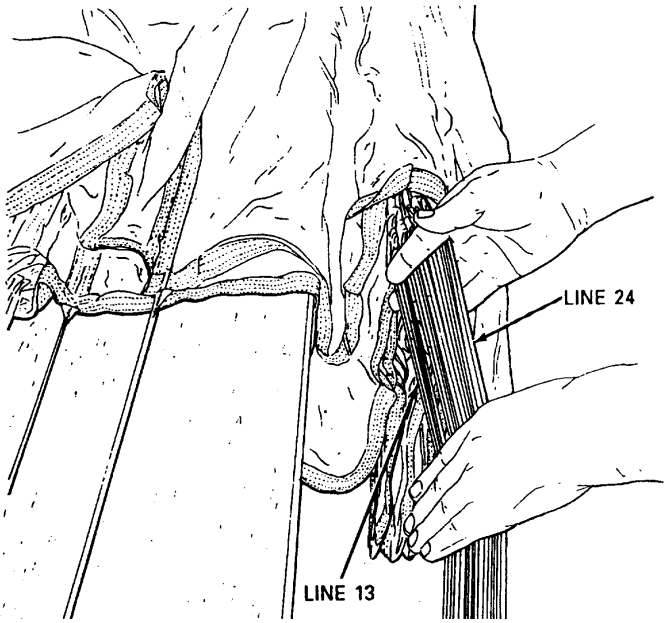
3. Start with line number 13 in the right hand. Pick up line 14 with the left hand and lift straight up until slack is removed from the lower lateral band. With a smooth continuous movement bring the left hand over the head and, rotating down, place line 14 on top of line 13. Make certain the V-tabs are facing down.



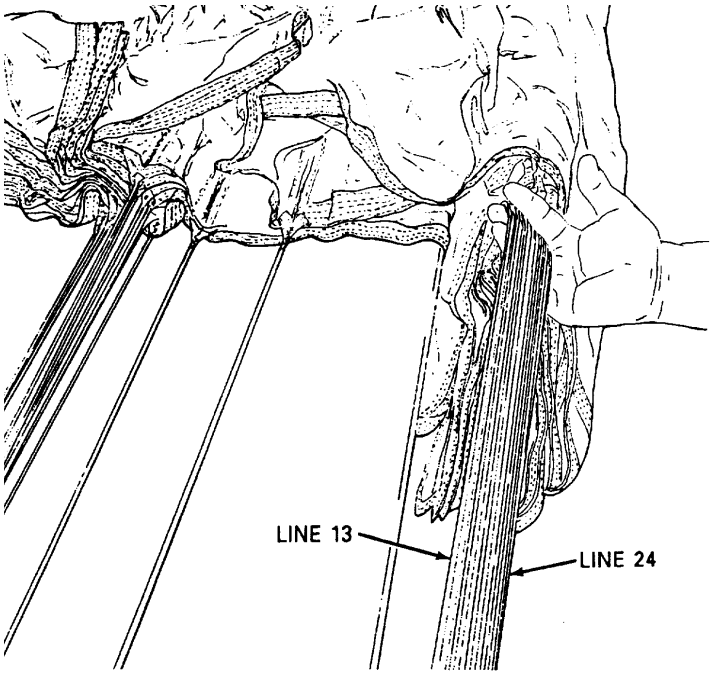
4. Continue folding gores until you reach line 24.

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.

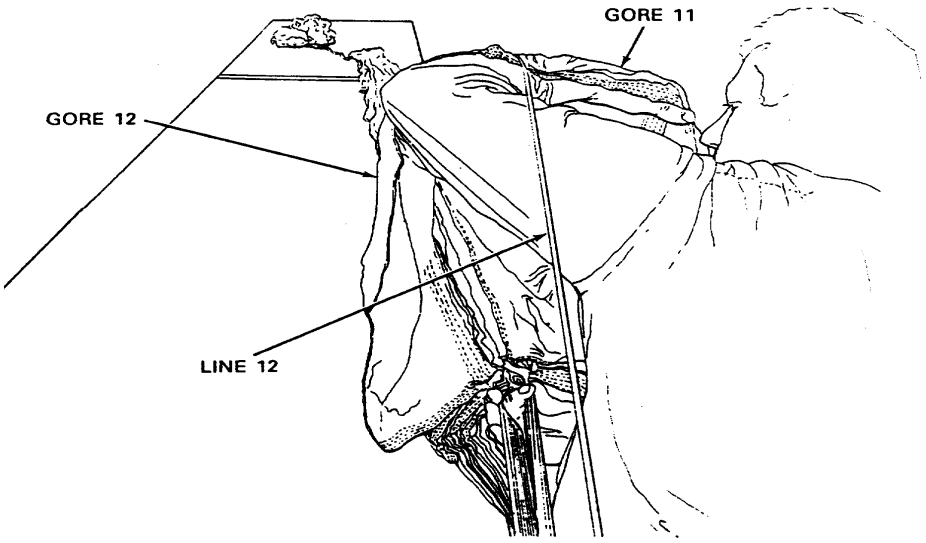
6. Hold the right group of lines with the left hand. With the right hand, fingers pointing down, scissor the right group of lines between the 1st and 2nd fingers.



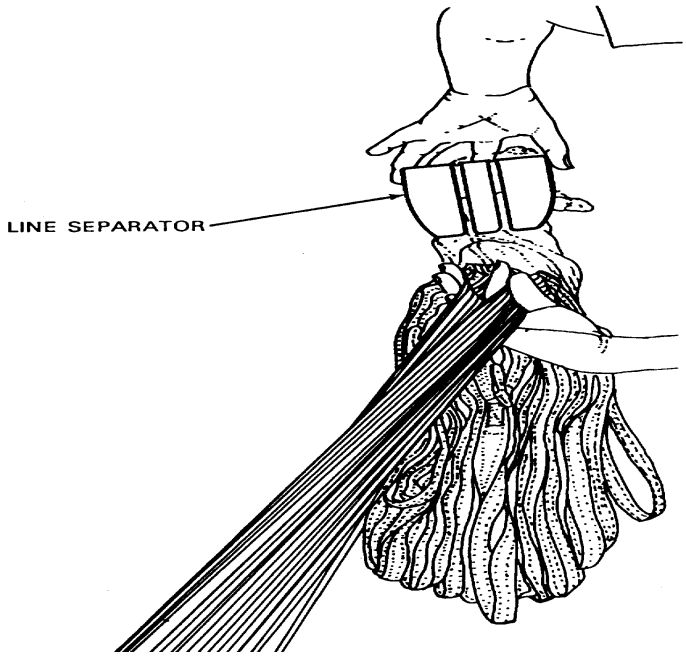
7. Rotate this group of lines clockwise until the fingers are tilted slightly upward, so that line 24 in on the bottom and line 13 is on the top.



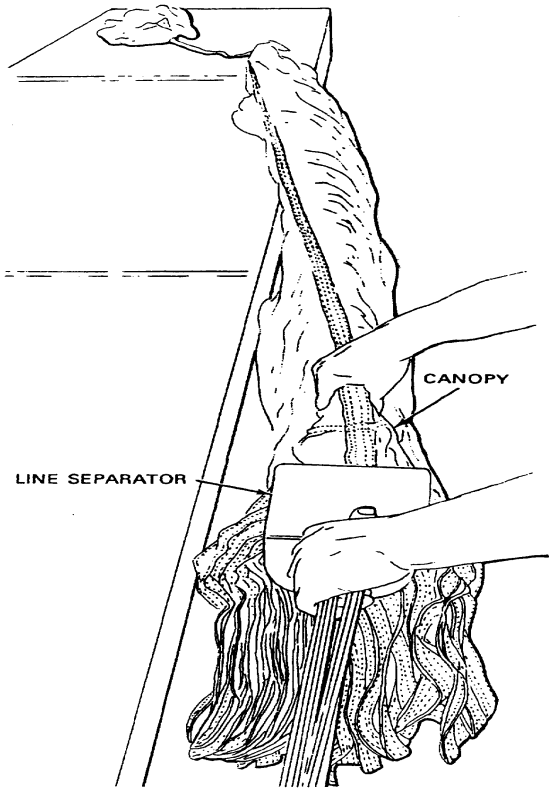
8. Starting with line 1, fold the left group of gores using the same movement as in step 3., above. Continue folding the gores until you reach suspension line no. 11. Raise suspension line no. 12 and drape the last gore on the left and the next to last gore on the right. Place suspension line no. 12 on top of other lines in the left group.



9. Insert the two groups of lines into a line separator with the left group of lines (1 through 12) in the left slot and the right group of lines (13 through 24) in the right slot.

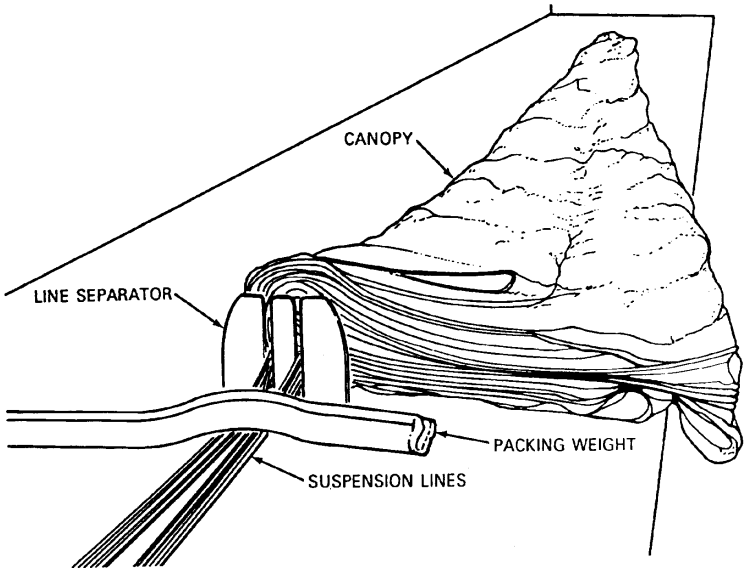


10. Hold the base of line separator (tight against canopy shirt and pull canopy off the packing table) so that all gores drape to the right of table.

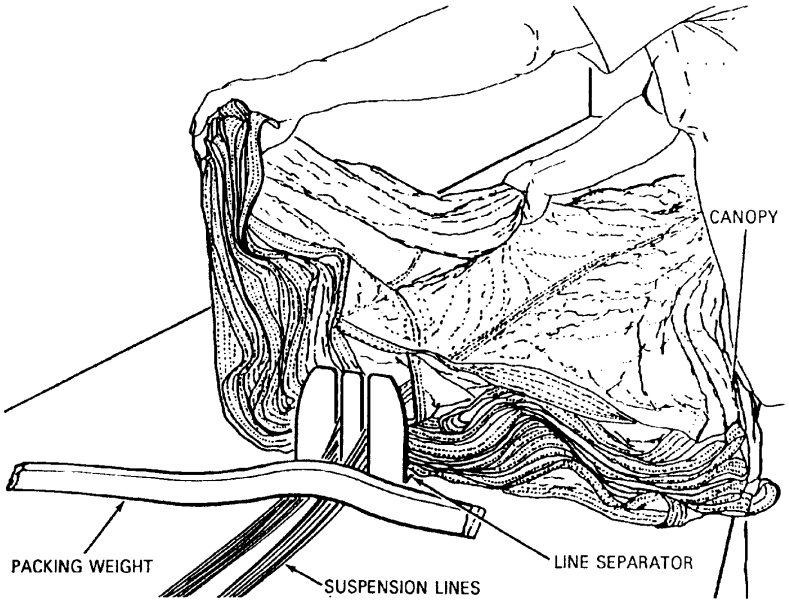


11. Turn line separator counterclockwise so that base is down and slide it back to the table.

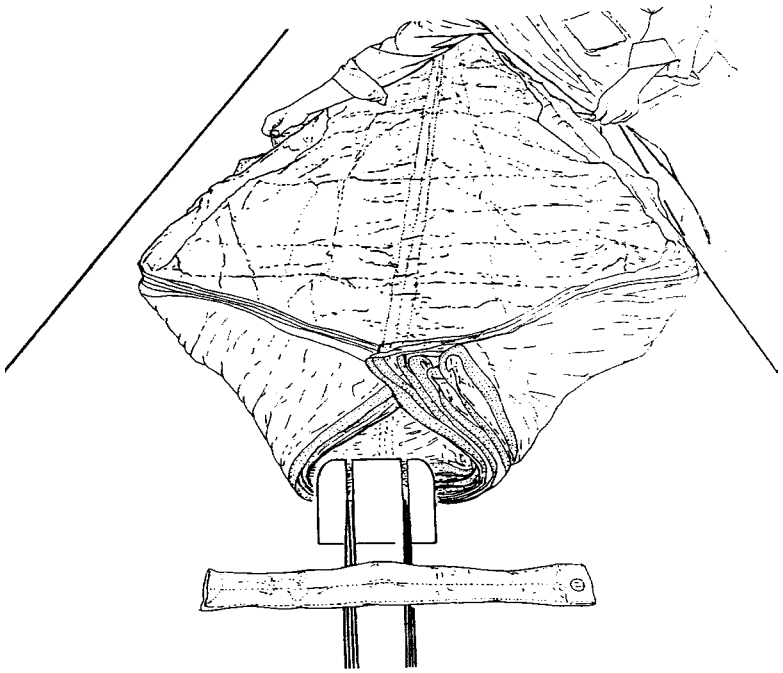
12. Place packing weight on suspension lines next to line separator.



13. Apply second tension to suspension lines, dress gore no. 12 from lower lateral band to within 24-inches from apex, and flip left group of gores (top half) to left side of table15.



14. Fold back the right and left corners of the gores. 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.



15. Dress the top gores by pulling gently while moving to the lower lateral band. The canopy is now at a left fold.

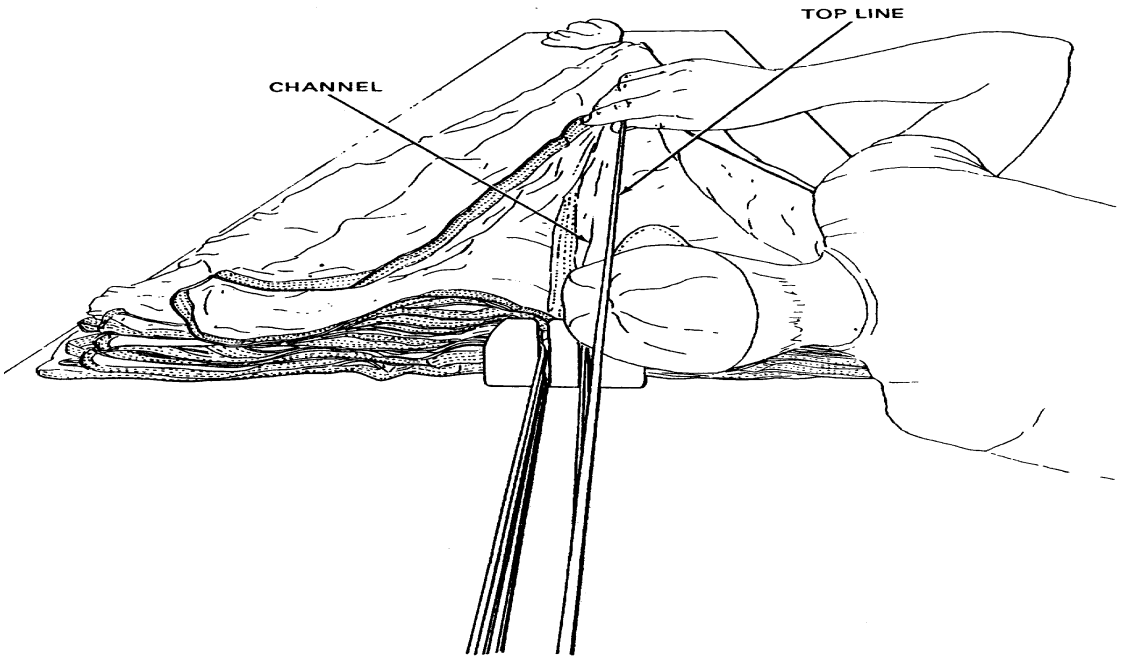
16. Dress the lower lateral band. Dress each gore section on the lower lateral band, working from bottom to top of the left group. Repeat the procedure for the right side.

17. This completes the flatfold of the canopy.

NOTE

Count gore edges to be sure that 12 are in each group.

18. Raise the top radial line and check for a clear channel between the two groups of gores.



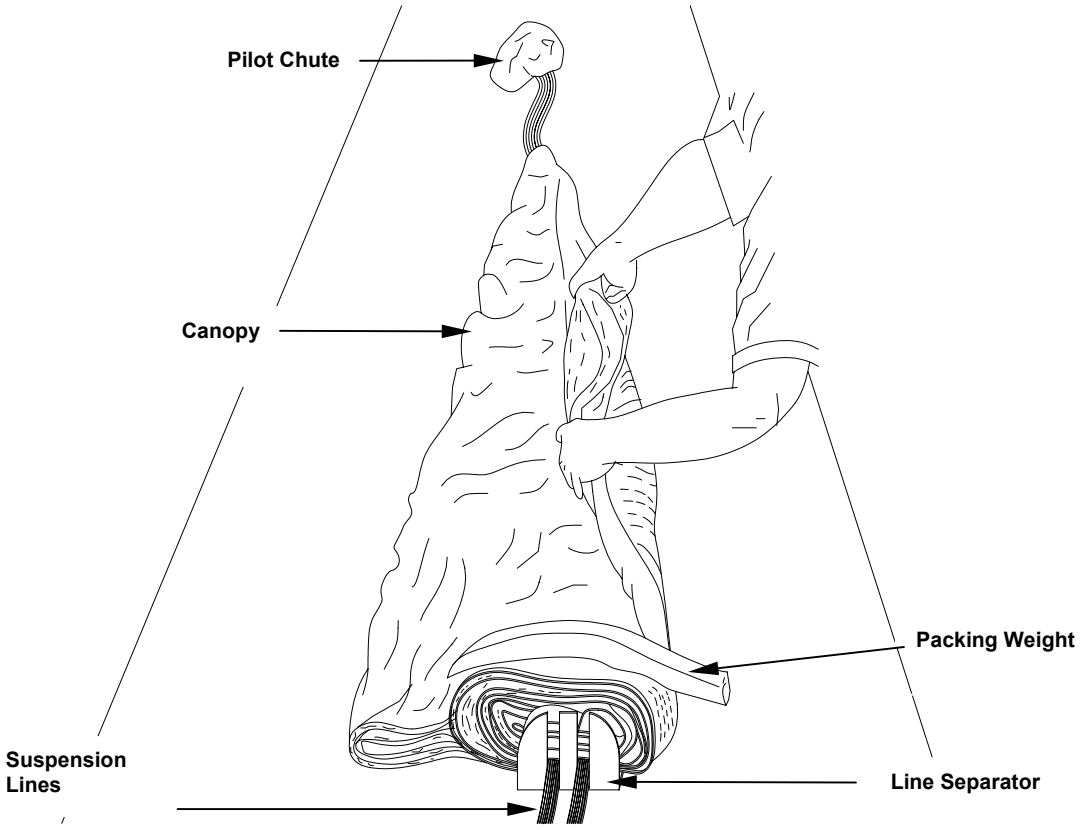
19. Perform a rigger check (2nd).

LONGFOLDING THE CANOPY

After flatfold, the canopy is ready for longfolding. Proceed as follows:

1. Grasp the right group of gores at the outermost edge of the skirt and fold them 180 degrees over the radial seam approximately 2-inches. Secure with a packing weight.

2. Continue folding the right group of gores working toward the apex. Taper the fold until it breaks at a point approximately 30-inches from the apex. Secure the fold with packing weights.

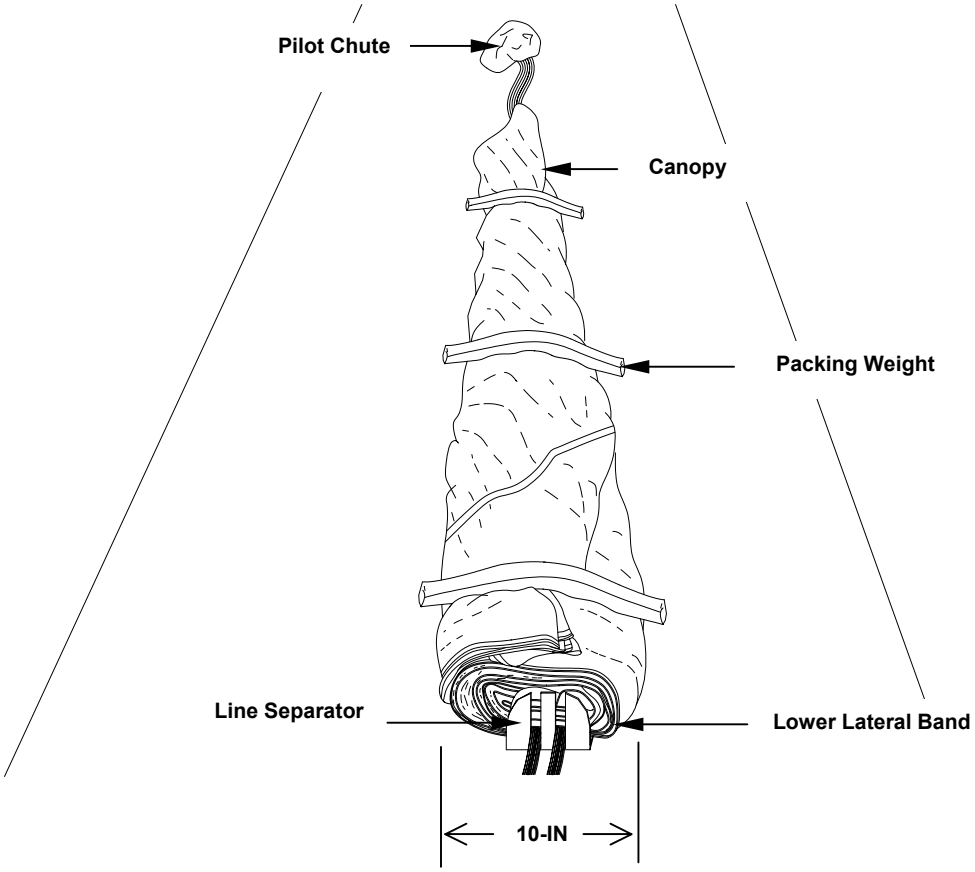


3. Fold the left group of gores over the right group of gores in a similar manner, adjusting packing weights to hold both groups of gores. Longfolding is completed.

4. Perform a rigger check (3rd).

NOTE

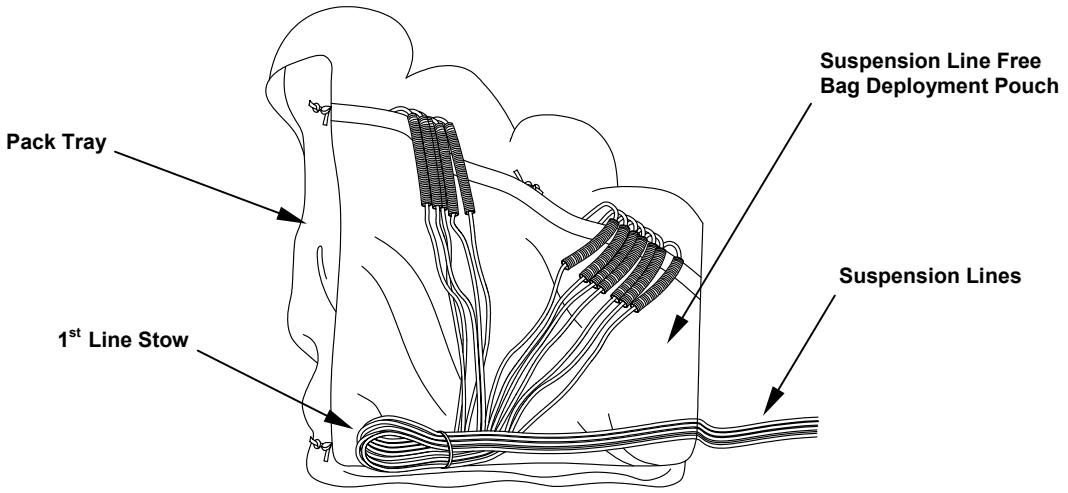
After longfolding, the parachute should be approximately 10-inches wide at the skirt (lower lateral band) and 6-inches wide where the fold breaks near the apex.



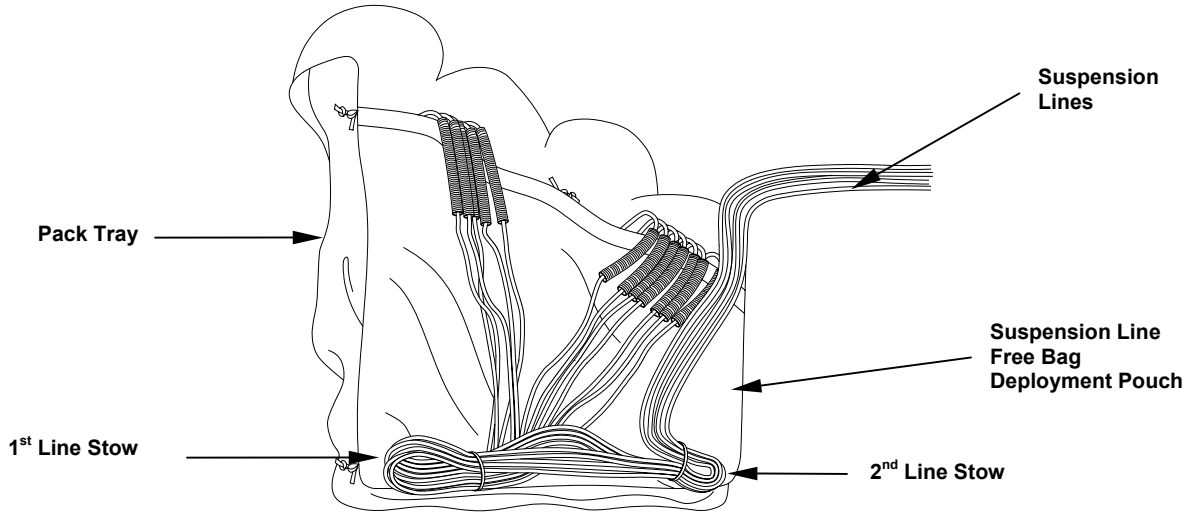
STOWING SUSPENSION LINES

1. Release tension on suspension lines and remove pack tray from tension plate. Position pack inside up on the packing table and fold side and end flaps under pack. Rotate the pack tray one-quarter turn clockwise. Open end of suspension line free bag deployment pouch toward left, rigger's view.

2. Grasp both groups of suspension lines approximately 16-inches form the pack tray. From the first stow in the suspension lines and secure with free stow retainer band ensuring stow is even with the end of the suspension line free bag deployment pouch in the lower right corner.

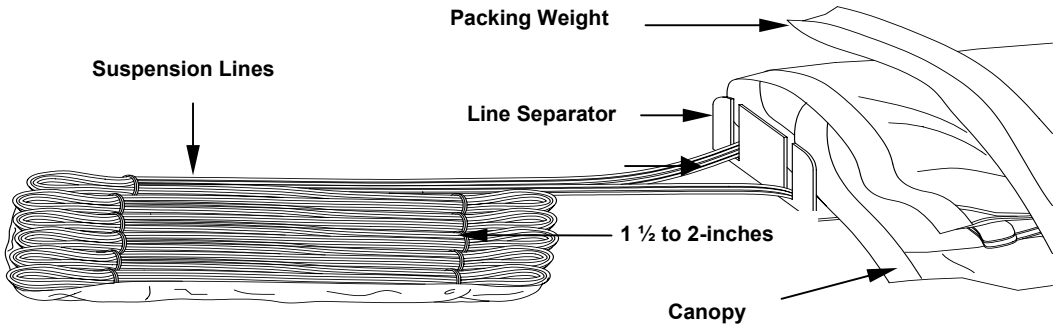


3. From second stow in the suspension lines the width of the free bag and secure with a free stow retainer band.



4. Continue stowing the suspension line in the same manner until 11 to 12 stows have been completed and 14 to 16-inches unstowed suspension lines remain between the last suspension line stow and the skirt of the canopy. Stows will equal the width of the pack tray and measure approximately 1 ½ to 2-inches from the end of the rubber band.

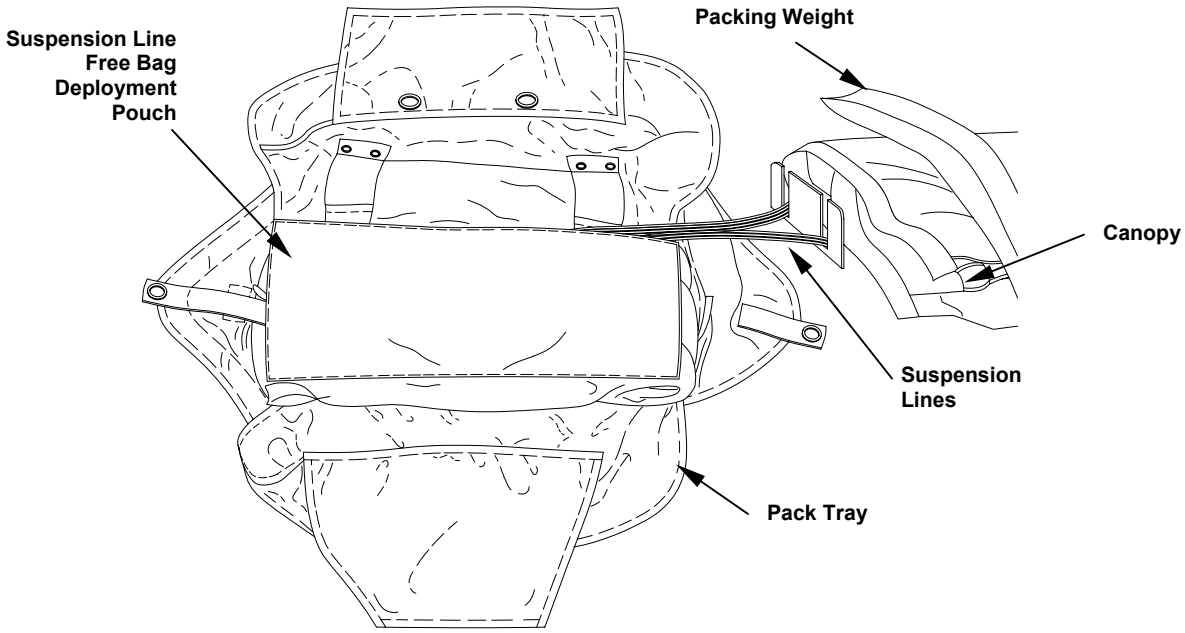
5. Perform a rigger check (4th).



6. Position stowed suspension lines inside suspension line free bag deployment pouch and extend all flaps.

NOTE

Place a packing weight under the edge of the pack tray, which is closest to the packer. Ensure the packing weight is parallel to the connector snaps and spreader bar. The pack tray now provides a flat/level base for placement of the canopy accordion folds.



7. Perform a rigger check (5th).

STOWING THE CANOPY

Stow the canopy over the suspension line free bag deployment pouch on the inside bottom of the pack tray as follows:

NOTE

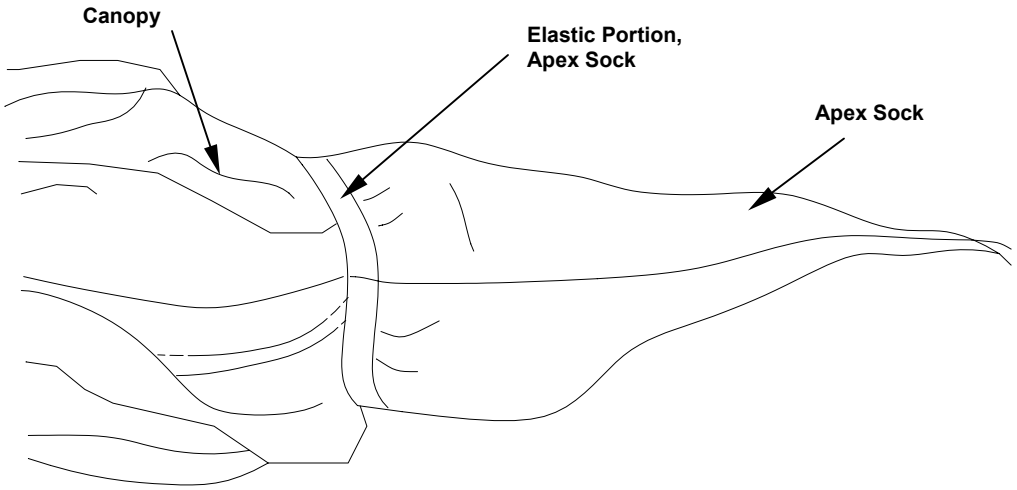
Canopy skirt will be placed at the right side end of the pack tray. Attention will be given so that the air channel separating each canopy line group is centered during the completion of the accordion folds. Failure to do so could cause the ejector spring to shift.

1. Release tension on the canopy and disconnect the tension device from the vent lines. Locate the apex sock on the bridle line and straighten.

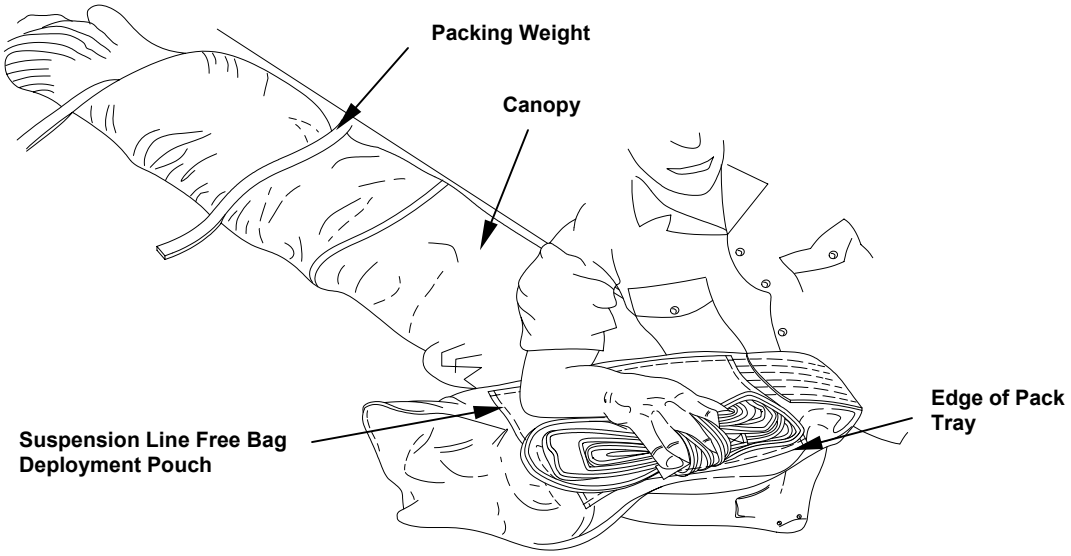
NOTE

The elastic portion of the apex sock must be positioned below the upper lateral band. Attention must be given so that both canopy line groups are centered during accordion fold. Failure to do so could cause the ejector spring to shift out if position.

2. Grasp the upper lateral band and slide the apex sock, elastic end first, over the upper lateral band.



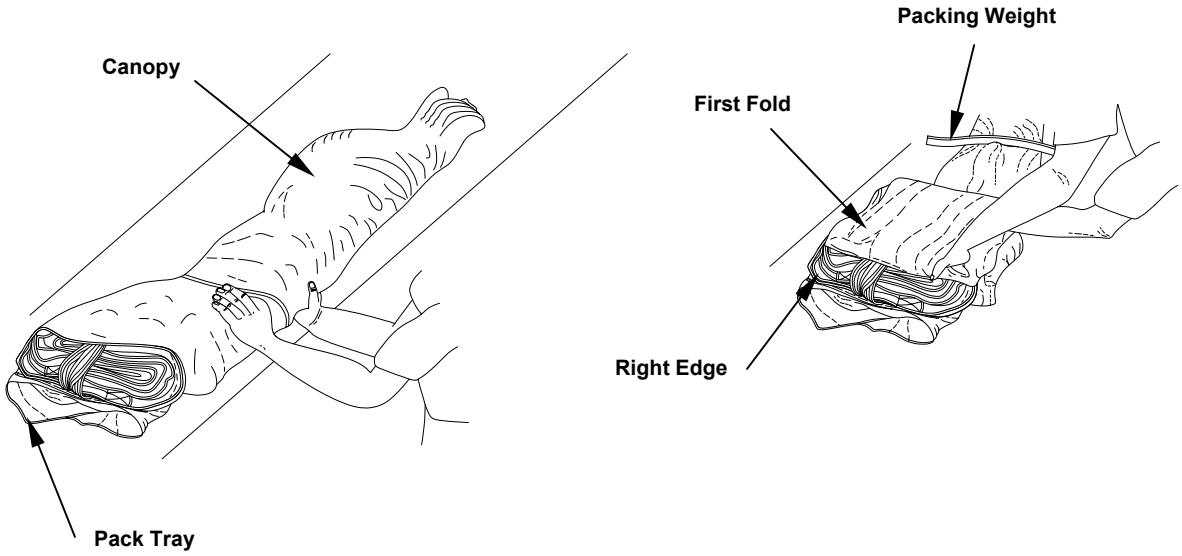
3. Remove line separator from suspension lines and skirt of canopy with right hand, inserting middle finger between the two groups of lines. Position right forearm on the canopy to hold folds in place. Position the skirt of canopy over free bag even with the edge of pack tray. Remove packing weight as necessary.



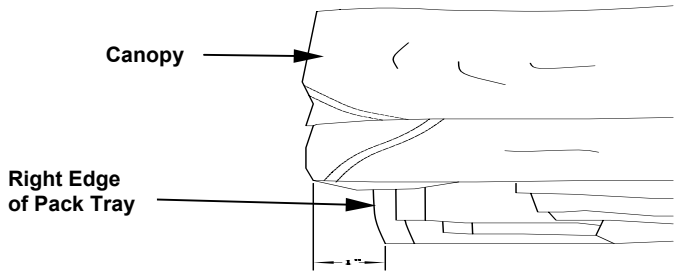
NOTE

Do not place canopy fold over canopy skirt. Canopy skirt must be exposed.

4. Make first accordion fold by placing the left hand on canopy where it crosses the right end of pack tray. Place right hand palm up under canopy approximately one pack tray length from left hand. Fold canopy on top of itself 3 to 4-inches short of the right edge of the pack tray.



5. Make second accordion fold by placing your left hand on the canopy, close to the end of pack tray on the right. Fold the canopy so it is 1-inch over the pack tray on the right. Extend the fold 1-inch over the right edge of the pack tray. Remove packing weights as necessary.



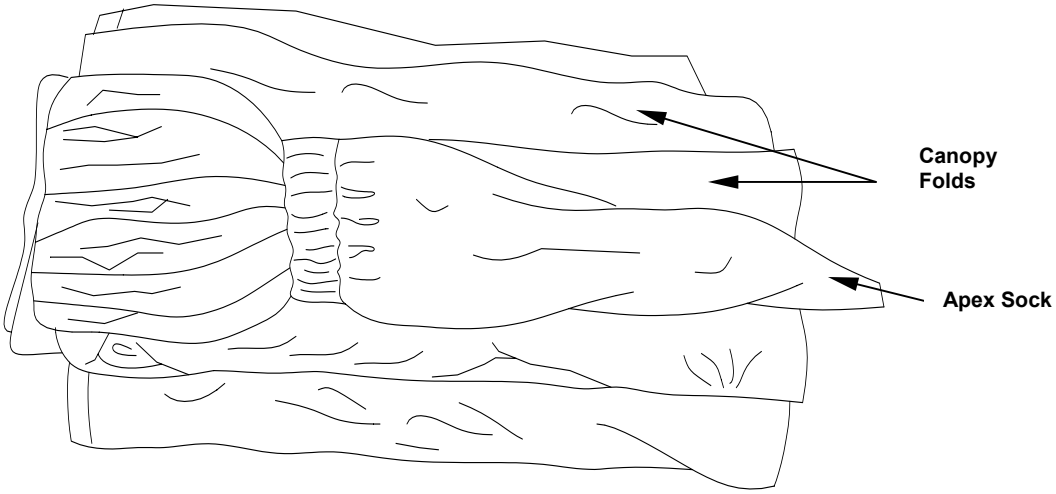
NOTE

Do not fold the apex under.

6. Make the third and final accordion fold, adapting procedures in step 5., above. Remove packing weight as necessary. Center the apex sock on top of the folded canopy ensuring that the fold on the right is even with the previous fold.

NOTE

Ensure the upper lateral band is centered, minor adjustments to the second and third accordion folds may be made if necessary.



7. Cut two 36-inch lengths of type III nylon cord (for use as pull-up cords) and remove core threads. Pass one length through each of the locking loops on the pack tray canopy-staging flap.

8. Pass the two pull-up cords through the grommets of the upper canopy-staging flap. To prevent the canopy from slipping; place your hand under the staging flap and while applying downward pressure, pull the closing lops up through the grommets, insuring both pull-up cords and staging flaps go over the apex sock.

NOTE

Curved pins shall be positioned right to left so that the loop is in the middle of the pin, and the pin moves freely.

9. Locate the two curved pins on the bridle. Starting with the pin closest to the apex sock, secure the corresponding locking loop with the curved pin. Secure the second loop with the remaining pin.

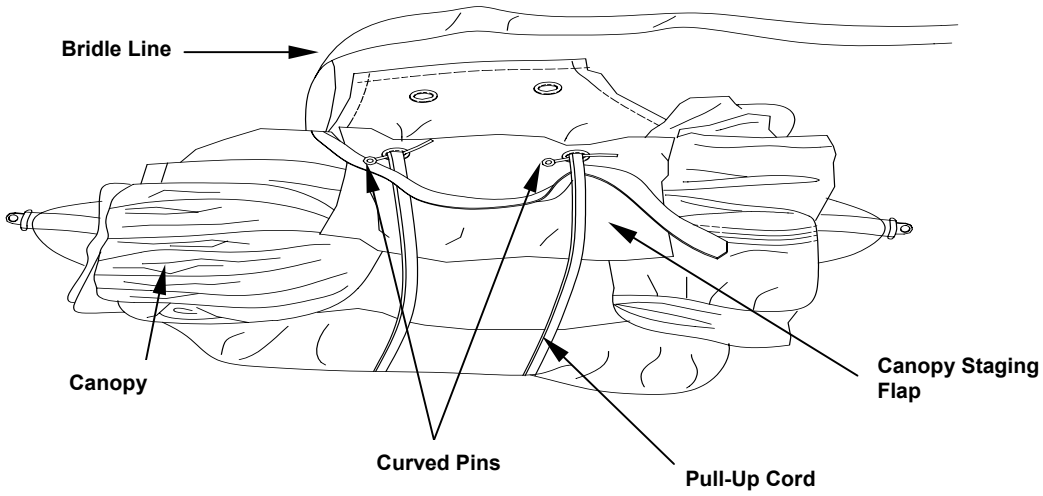
WARNING

Failure to remove the pull-up cords may cause a parachute malfunction resulting in severe injury or death.

10. Remove the two pull-up cords and set aside.

11. Place a packing weight on the center of the folded canopy and extend all flaps.

12. Perform a rigger check (6th).



STOWING THE BRIDLE AND PILOT CHUTE

The folded pilot chute is positioned on top of the compressed ejector spring and pack is prepared to close as follows:

NOTE

If parachute is being packed for the first time, conduct a 7-pound and a 27-pound pull test IAW WP 0004 00.

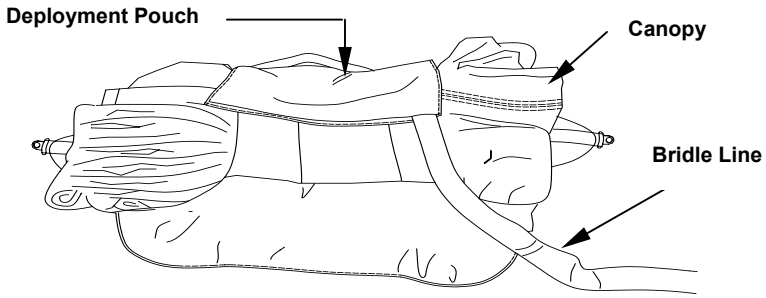
1. Compress the ejector spring ensuring that netting material is tucked in between the coils and insert the compression rods. Set aside.

2. Elongate the pilot chute bridle and pilot chute on the pack table and remove all turns and twist.

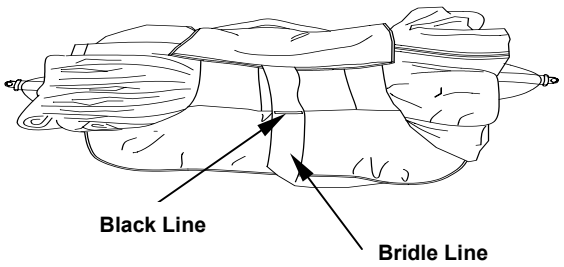
NOTE

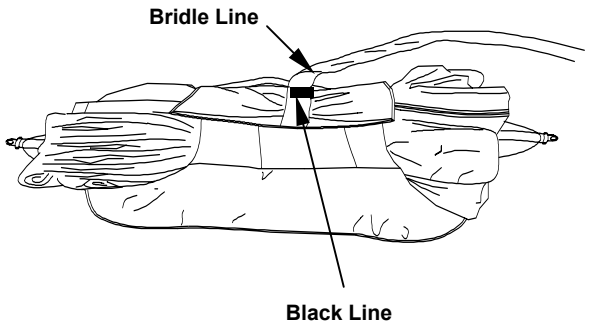
Care should be exercised when working with the bridle and pilot chute to prevent accidental puling of the curved pins from the locking loops.

3. Pass the bridle line under the right corner (rigger view) of the bridle deployment pouch. Half twist the line in the bottom center of the pouch. Beginning at the left edge of the pouch, accordion-fold the bridle line to the first black mark. Stow the folded bridle into the bridle deployment pouch. The folds should be the same width as the pouch.



4. At the black mark, pull 5-inches of deployment line out of the pouch. Fold the bridle line over the deployment pouch with the black line centered and even with the curved pins. Place the remaining line away from the packer on the table.

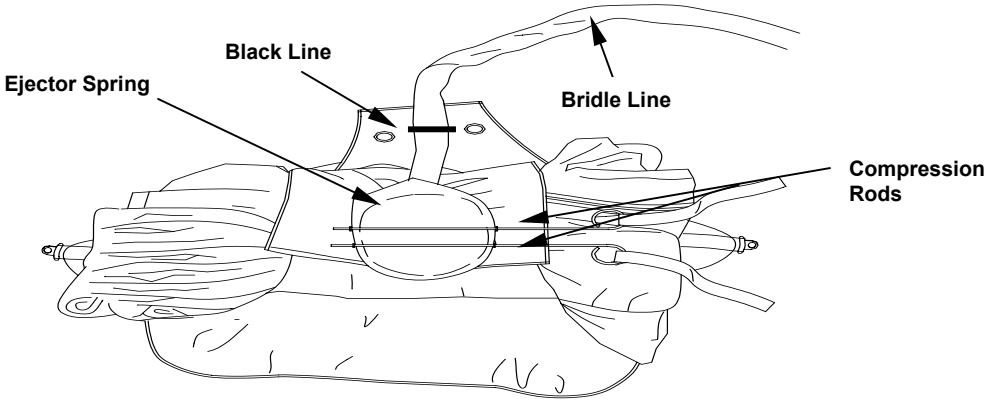




5. Center compressed ejector spring on top of deployment pouch.

NOTE

Ensure the upper lateral band is directly under the centered compressed ejector spring.



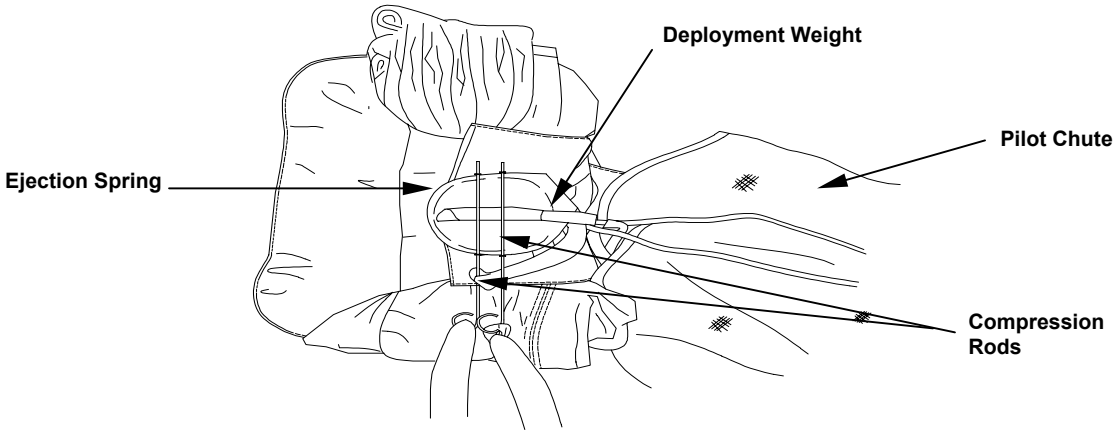
6. Rotate the pack one-quarter turn clockwise. Ensure packing weight remains under the pack tray.

7. S-fold the remaining deployment line (2 to 3-inch folds) to the second black line and insert between the spring coil. Insure that both black lines are visible.

NOTE

Stow the bridle line that is between the two curved pins under the compressed spring.

8. Pick up the deployment weight at the bridle line end and place the deployment weight under the ejector spring compression rods. Insure the deployment weight is centered on top of the spring. Tuck the excess bridle under the deployment weight.



9. Ensure there are no twists at the attachment point of the bridle line and the pilot parachute.

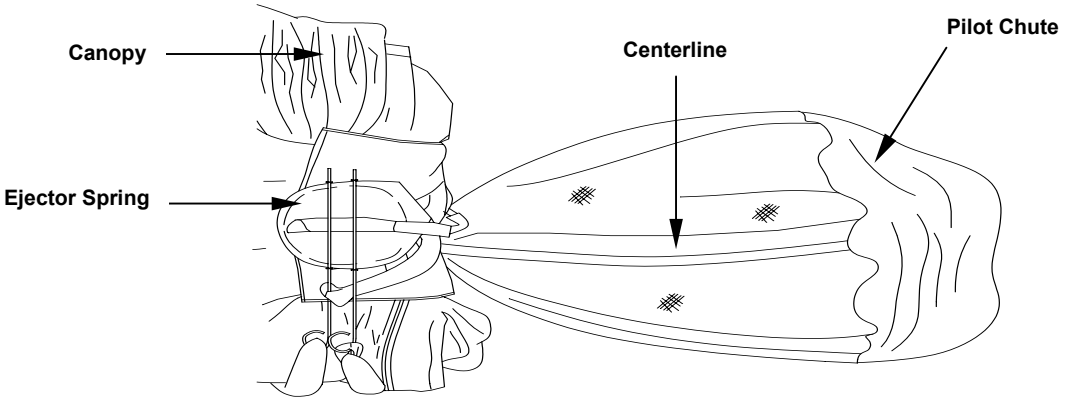
10. Spread out the pilot chute so it is laying flat on the table. Ensure that all slack is removed from the centerline.

11. Grasp the pilot chute in the middle of two radial seams where the netting material is sewn to the nylon canopy portion of the pilot chute.

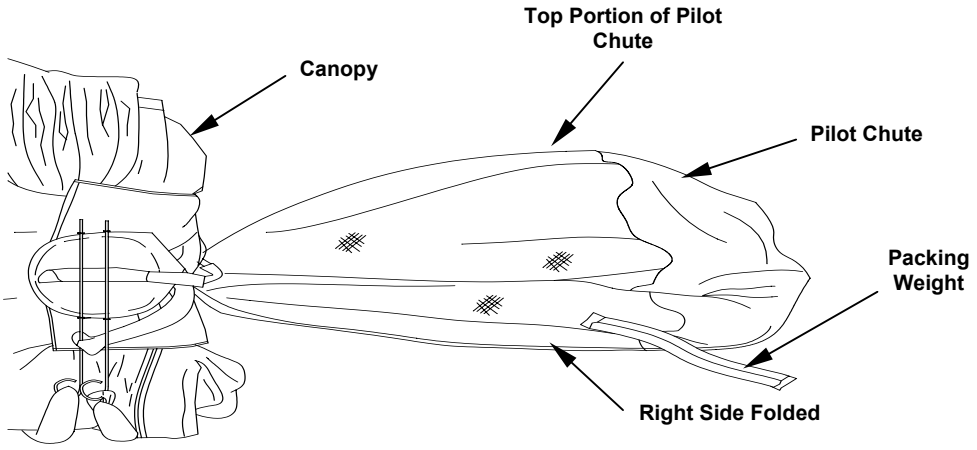
12. With the right hand, raise the pilot chute and align radial tapes. With the left hand, sweep remaining pilot chute to the left side of pack table and lay the pilot parachute down.

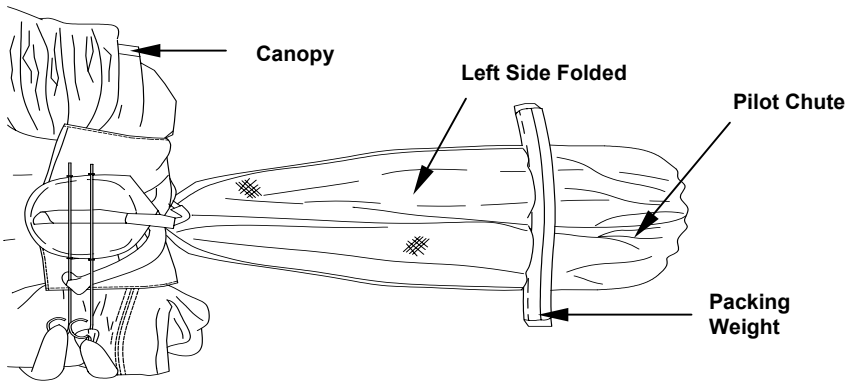
13. Continue to grasp each section on the pilot chute in the center and fold until the pilot parachute is folded.

14. Flatfold the pilot chute so there are three folds on each side with the centerline and radial tapes in the center.

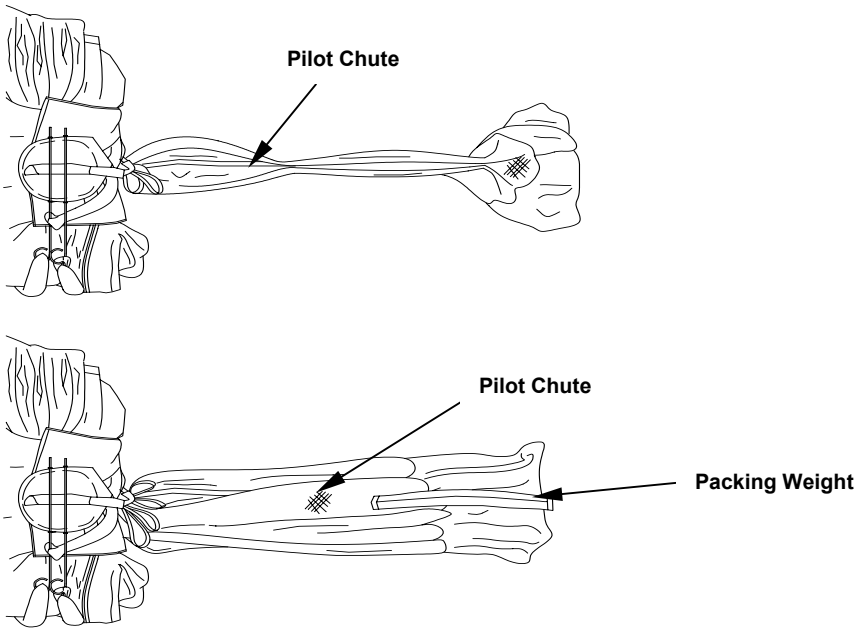


15. Fold the right side of the pilot chute 4-inches from the top portion past the radial tapes. Fold back on it self approximately 4-inches. Repeat these procedures for the left side.





16. Grasp the accordion folds together with both hands and the centered radial tapes facing up. Lift and rotate the accordion folds to the left (rigger's view) and place on pack table. Secure with a packing weight.



NOTE

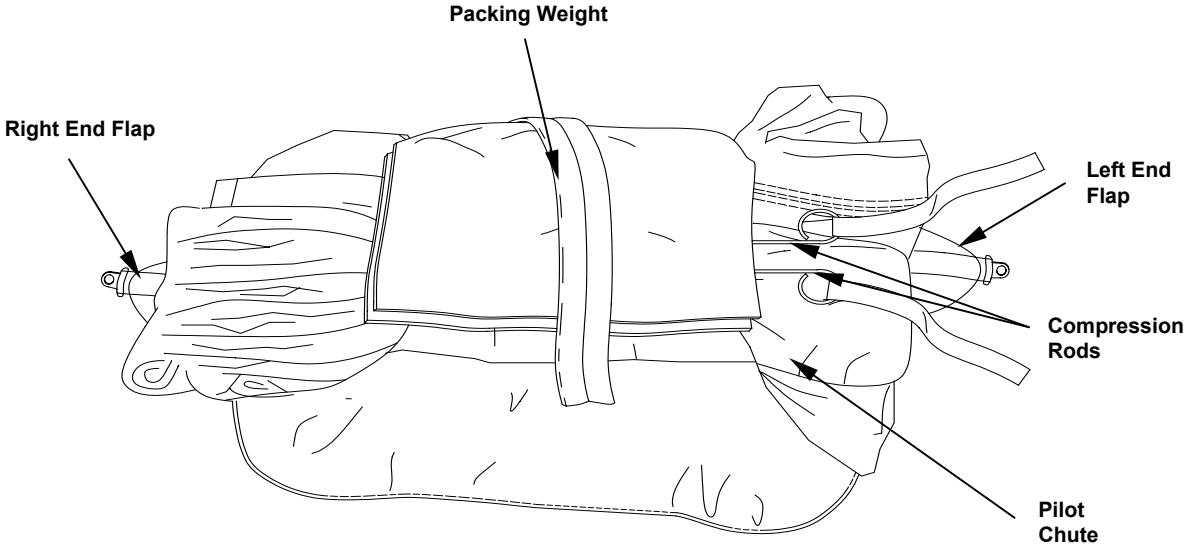
The folded pilot chute must be on top of the ejector spring.

Accordion Fold the Pilot Chute on Top of the Ejector Spring as Follows:

NOTE

All reference points are from rigger view.

1. Rotate pack one-quarter turn counter clockwise.
2. Grasp the base of the pilot cute and place it at the right edge of the compressed spring.
3. Place your left hand on the netting even with the left edge of the spring.
4. With the right hand, grasp the pilot chute end of the netting and fold the pilot chute completely over the spring so that the right edge is even with the spring (up against your left hand).
5. Remove your left hand and place your right hand on top of the netting you just folded over.
6. Place your right hand where the netting meets the fabric on the left side of the pack and rotate the fabric on top of the netting.
7. Fold the pilot chute in half over itself with the net on top.
8. Secure with a packing weight on top of pilot chute.
9. Perform a rigger check (7^{th}).



WARNING

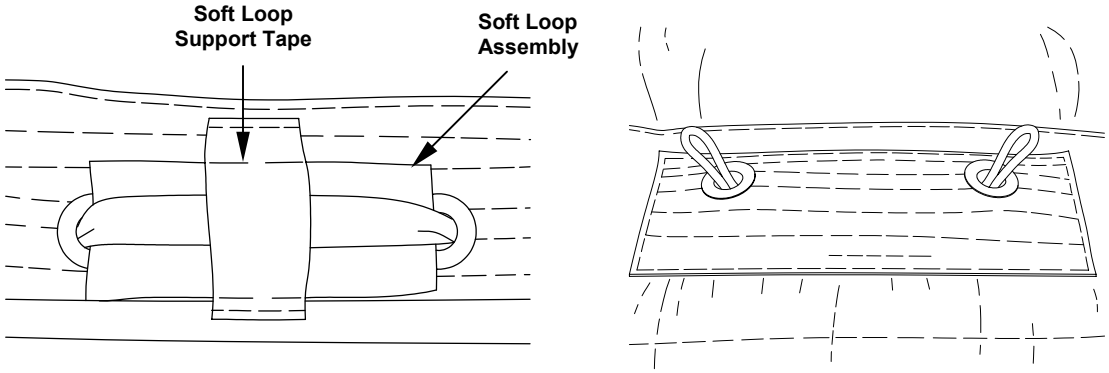
Failure to remove the ejector spring compression rods will cause a malfunction and could result in severe injury or death.

NOTE

Ensure the excess bridle line between curved pins is stowed beneath ejector spring. Before the packing aid is removed, ensure the ejector spring is centered on the pack, if not, adjust accordingly. After the ejector spring is properly positioned, remove the compression rods.

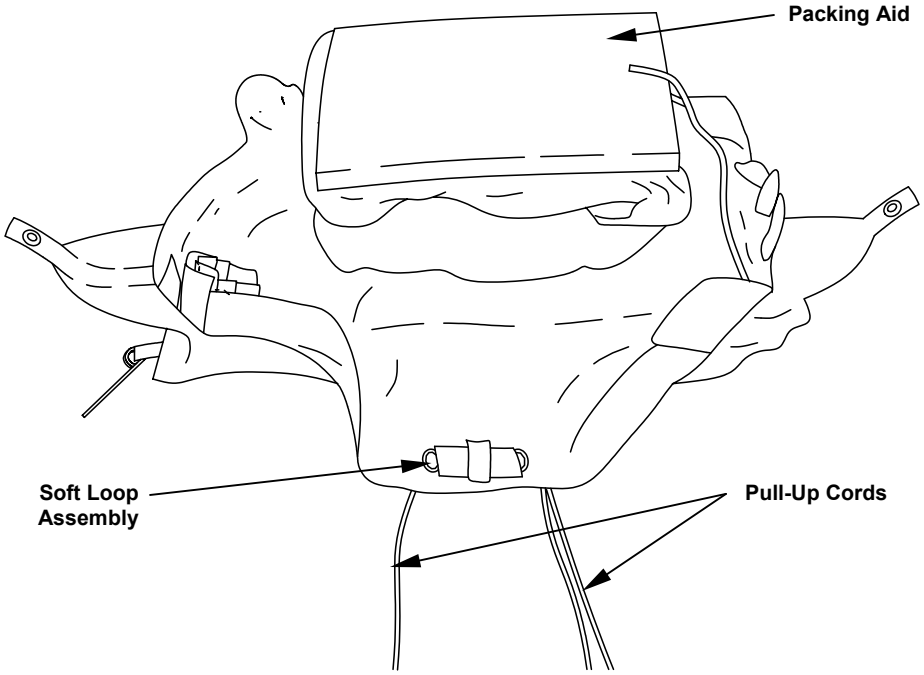
NOTE

Ensure soft loop assembly is properly installed in bottom flap grommets as shown. Soft loop assemblies will be replaced at each repack.

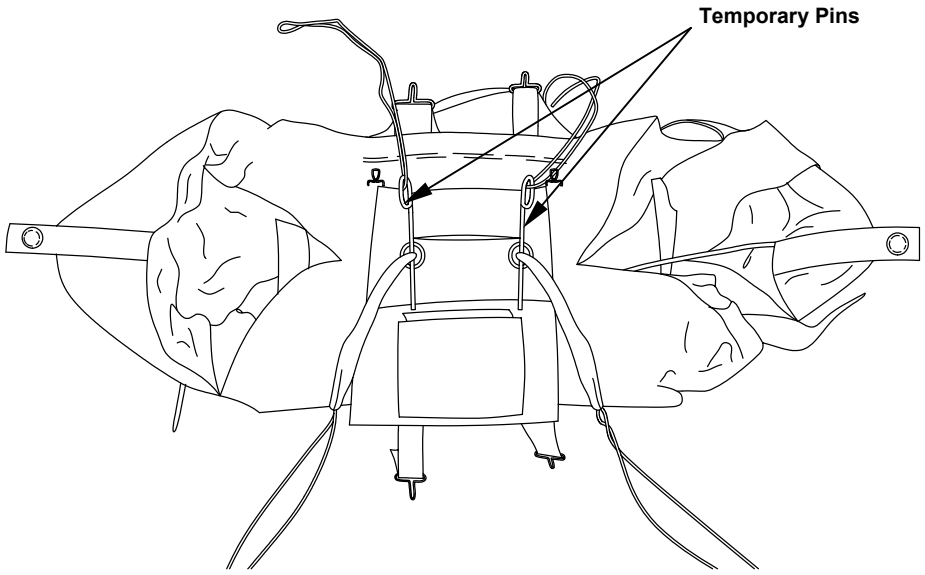


10. Insert previously removed pull-up cords through the soft loops.

11. Remove the packing weight and place the packing aid over the folded pilot chute and ejector spring ensuring they are centered on the pack.



12. Route pull-up cords through top flap grommets, pull top flap over bottom flap and lock each soft loop in place with temporary pins.



13. Remove the packing aid, ejector spring compression rods and the packing weight from under the pack tray (do not remove the pull-up cords at this time).

14. Perform a rigger check (8th).

NOTE

After the packing aid has been removed, ensure that the spring is centered on the pack, if not, adjust accordingly.

CLOSING THE PACK

After the pilot chute and ejector spring are secured under the top and bottom side flaps and the packing aid and compression rods are removed, the pack is ready for closing.

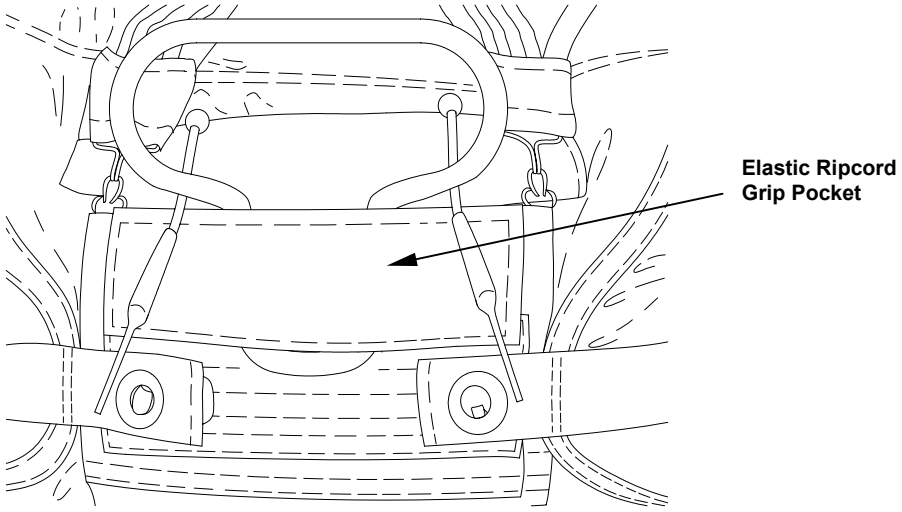
NOTE

Do not bounce of hit the pack tray during the closing process. Excessive movement could cause the ejector spring to shift out of position.

NOTE

Use of a packing paddle or suitable substitute, for additional leverage on the pull-up cord is authorized.

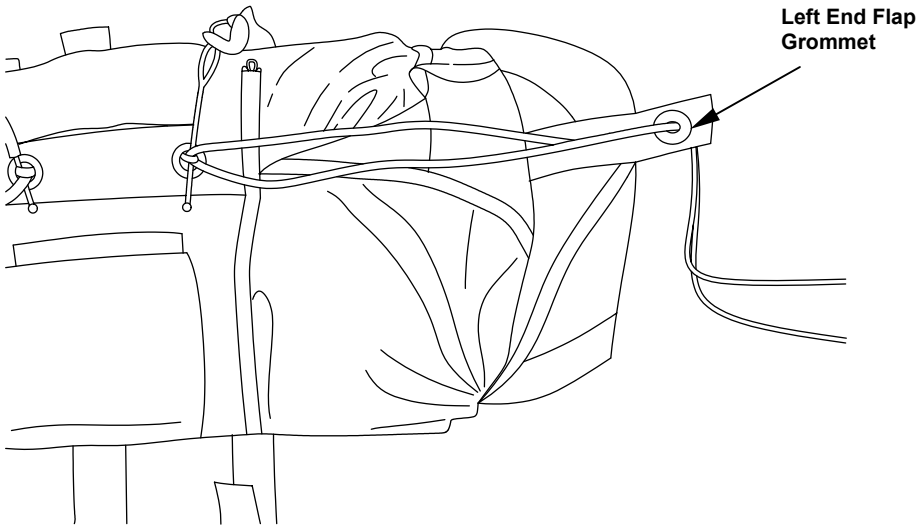
1. Partially seat ripcord handle under elastic ripcord grip pocket as shown.



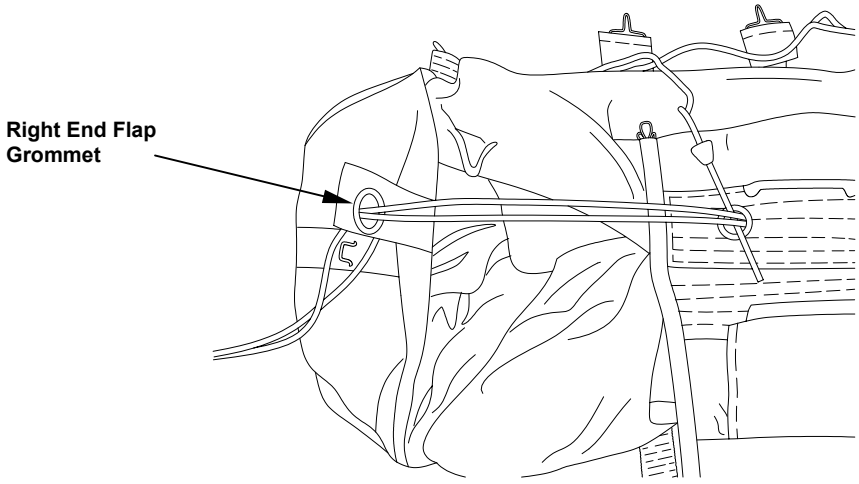
NOTE

If parachute is being packed for the first time, insure ripcord/ripcord grip pocket test for the MIRPS is conducted IAW WP 0004 00.

2. Pull left end flap over canopy and route left pull-up cord through left end flap grommet.



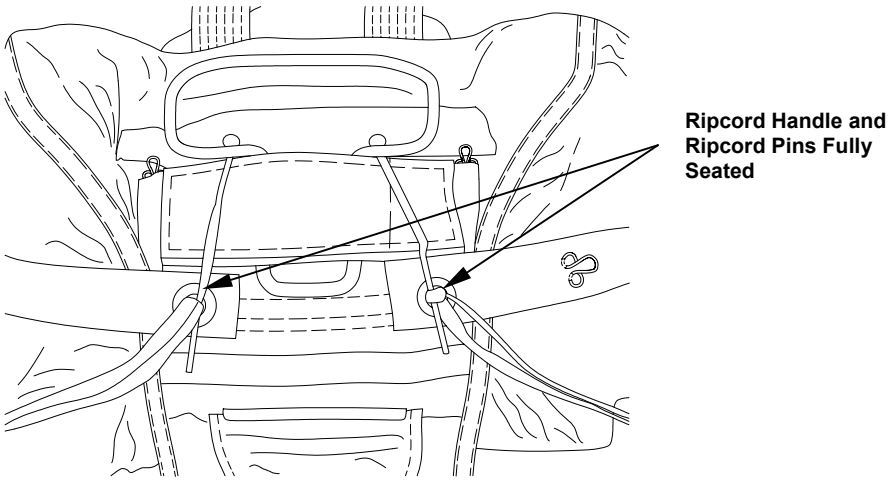
3. Pull right end flap over canopy and route pull-up cord through right end flap grommet.



4. Pull left end flap grommet over left soft loop and lock in place with ripcord pin. Ensure left temporary pin is removed at this point.

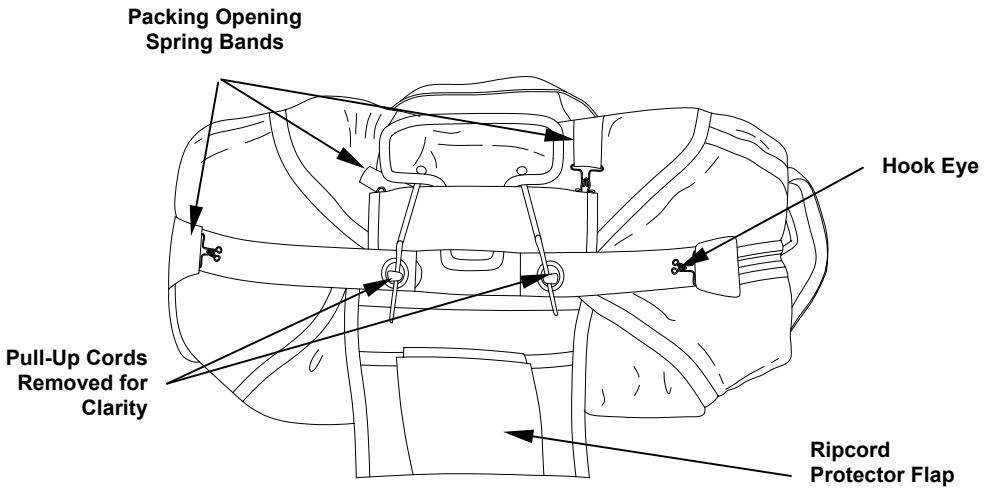
5. Pull right end flap grommet over right soft loop and lock in place with ripcord pin. Ensure right temporary pin is removed at this point.

6. Fully seat ripcord handle in elastic ripcord grip pocket and ensure ripcord pins are fully seated in the soft loops.



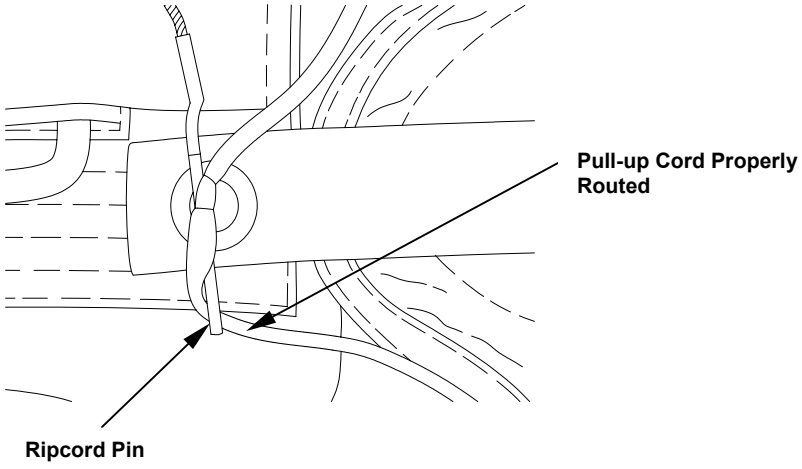
7. Dress the pack tray with a packing paddle.

8. Attach hooks of the pack opening spring bands to corresponding hook eyes on the pack tray. Begin with ripcord end and continue counterclockwise until all pack opening spring bands are attached. Make certain that bands are not twisted. Bands at ripcord location should not be over ripcord handle.



9. Perform a rigger check (9th).

10. After receiving the 9th rigger check, remove pull-up cords by routing one end of cord under locking pin and slowly withdraw pull-up cord.



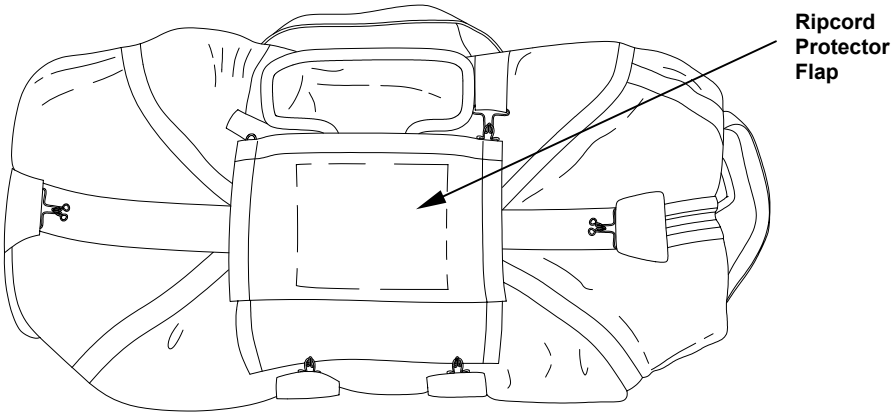
ARMY PARACHUTE LOG RECORD

Remove the log record (DA Form 3912) NAVY LOG from the Parachute Inspection Data Pocket (Log Record Pocket) located on the ripcord protection flap. Beginning with the initial packing of a parachute and each time a parachute is repacked, make entries on the "Jump, Inspection, and Repack Data" page of the log record as follows (see WP 0004 00, Accomplishing a Log Record).

1. Date. Enter the day, month, and year of each packing action.
2. Bag number. No entry required.
3. Routine inspection. No entry required.
4. Jumped or dropped. No entry required.
5. Repack. Enter a checkmark in the column each time the parachute is repacked.
6. Packer's name. The packer performing the packing will sign this entry.
7. Inspector's name. The inspector who has performed the pack-in-process inspection will sign this entry.
8. Unit. Enter the unit designation to which the packer and/or inspection are assigned.

COMPLETION OF PACKING

Install the log record in the log record pocket. Packing of the parachute is now completed.



END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
GENERAL REPAIR PROCEDURES

THIS SECTION COVERS:

- Basting and Temporary Tacking
- Stitching and Restitching
- Darning
- Zig-zag Sewing
- Patching

INITIAL SETUP:

Tools
Specified in paragraph applicable to the item being repaired.

Equipment Condition
Unpacked. Canopy with defects recorded and clean.

Materials/Parts
Band, Rubber, Retainer (Item 1, WP 0057 00)

Personnel Required
92R (10) Parachute Rigger

NOTE

Repair and replacement of parachute components is performed in accordance with the general repair instructions in this WP, and in specific WPs applicable to the item being repaired. Fabrication is a means of replacing an air delivery item component which is damaged beyond repair and which is not an issue item. Though the act of fabrication is a replacement-type action, the function is actually a method of repairing an end item. Since most fabrication pertains to components that are peculiar to parachutes, the fabrication of components, which are most general in nature, will be detailed in this WP.

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.

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 that is of a contrasting color to the material being worked.

2. Basting will be made using a single strand of size A, nylon thread.

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

4. Temporary tacking will usually be made using a length of size E nylon thread. However, an alternate type thread may be specified within the paragraph applicable to the item.

5. Immediately upon completion of a repair, remove previously made basting or temporary tacking stitches.

Stitching and Restitching. Perform stitching and restitching as follows, referring to tables 1 and 2:

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 ¼-inch into undamaged stitching at each end, when possible. When restitching parachute canopy assemblies, stitch directly over original stitching and follow the original stitch pattern as closely as possible.

Table 1. 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 3530-01-181-1420.
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 3530-01177-8588
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
BT	SEWING MACHINE, INDUSTRIAL: BARTACK; NSN 3530-00-892-4637

Table 2. Stitching and Restitching Specifications

Component	Recommended Sewing Machine (Code Symbol)	Stitches per Inch	Thread Size
Pilot Chute	LD DN	7 to 11 Darn	E A
Bridle Line	MD ZZ	7 to 11	E
Gore Section	LD DN LD ZZ	7 to 11 Darn 7 to 11	E A E
Vent Line	MD ZZ	7 to 11	E
Radial Line	LD ZZ	7 to 11	E
Suspension Line	MD ZZ	7 to 11	
Canopy Path	LD	7 to 11	E
V-Tab	LD LD ZZ	7 to 11 7 to 11	E E
Upper Lateral Band	MD	7 to 11	E
Lower Lateral Band	MD	7 to 11	E
Radial Seam	LD	7 to 11	E
Pocket Band	LD	7 to 11	E
Spreader Bar	MD	5 to 8	3
Pack Assembly	DN	Darn	E
Log Record Pocket	LD	7 to 11	E
Pilot Chute Protector Flap	LD DN	7 to 11 Darn	E E
Pile and Hook Tape	LD	7 to 11	E
Ripcord Grip Pocket	LD BT	7 to 11 42 to 48	E E
Pack Opening Spring Band	LD	7 to 11	E
Pack Fastener	LD	7 to 11	E
Grommet Hole Reinforcement	MD	7 to 11	E

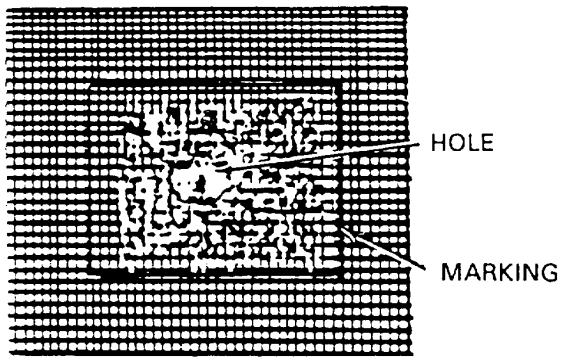
2. Other parachute items. Stitching and restitching on other parachute items constructed from cloth, canvas, and webbing should be accomplished with thread, which matches the color of the original stitching, when possible. All straight stitching should be locked by backstitching at least ½-inch. Restitching should be locked by overstitching each end of the stitch formation by ½-inch. Zig-zag stitching does not require locking; however, zig-zag restitching should extend at least ¼-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.

DARNING

Darning is a sewing procedure used to repair limited size holes, rips, and tears (refer to tables 1 and 2). 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:

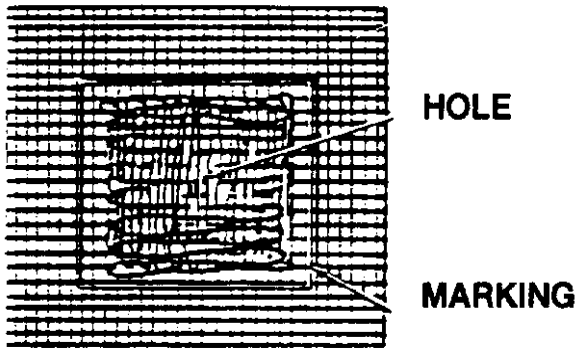
1. Machine Darning. Proceed as follows:

   a. Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure that the marking is at least ¼-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.

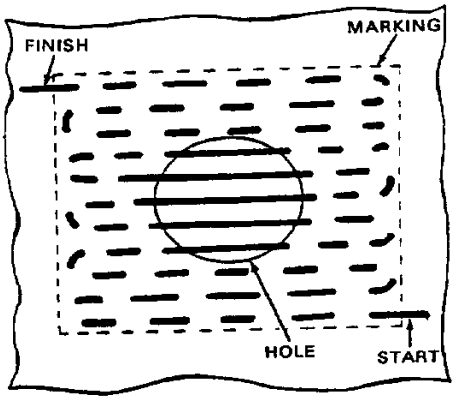
   c. Turn the material and stitch back and forth across the stitching until the hole or tear is completely darned.



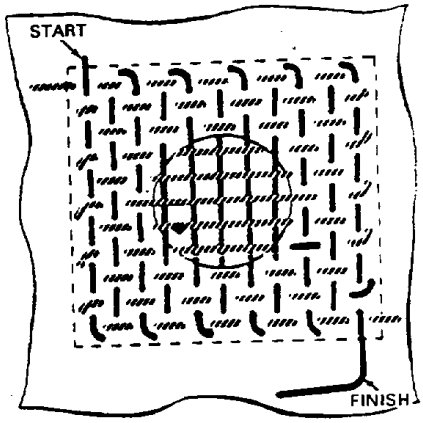
   d. If applicable, restencil informational data; gore number(s), or identification marks using the criteria outlined in WP 0004 00 and WP 0016 00.

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:

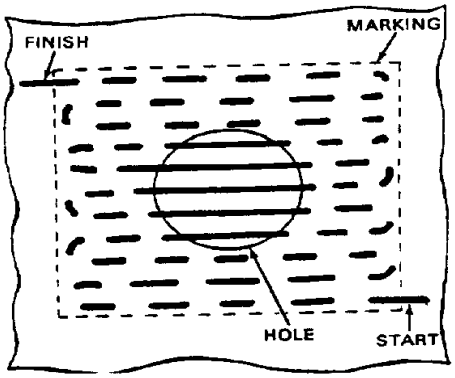
a. Using an authorized marking aid of contrasting color, mark a square around the damaged area and ensure that the marking is at least ¼-inch back from edge of the damaged area.



b. Using a darning needle and a length of size A or E nylon thread, begin darning at one corner of the marking 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.



c. Turn the material, weave the needle, and thread back and forth across the stitching made above, until the hole is completely darned.



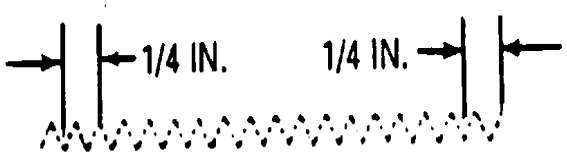
d. If applicable, restencil informational data or identification marks as outlined in WP 0004 00 and WP 0016 00.

ZIG-ZAG SEWING

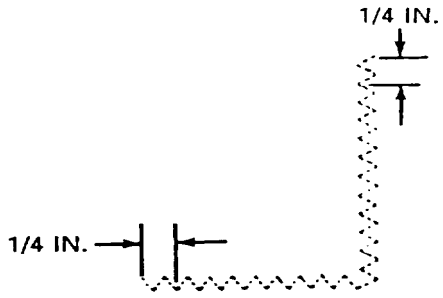
Components of the parachute assembly, except the canopy, made from textile materials that have sustained cut or tear damage may be repaired by zig-zag sewing provided the applicable damaged area does not have any material missing and the cut or tear is straight or L-shaped (refer to table 1 and 2). Should 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 with a zig-zag sewing machine, using the following procedures:

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

2. Beginning at a point ¼-inch beyond one end of the cut or tear, stitch lengthwise along the damaged area to a point ¼-inch beyond the opposite end of the cut or tear.



3. The sited stitching procedure will also apply to an L-shaped cut or tear.



4. If applicable, restencil informational data or identification marks as prescribed in WP 0016 00.

PATCHING

Patching procedure used to repair holes, which cannot be darned.

1. Parachute Canopy-patching Limitations. The following is a list of patching limitations for the 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 of 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 redial 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 corner of the patches to 1-inch radius. Use size E nylon thread and sew a row of 7 to 11 stitches per inch, $^{1}/_{6}$-inch in from outer edge of patch. Table 3 prescribes sizes of parachute mending cloth.

Table 3. Mending Cloth Patching Specifications

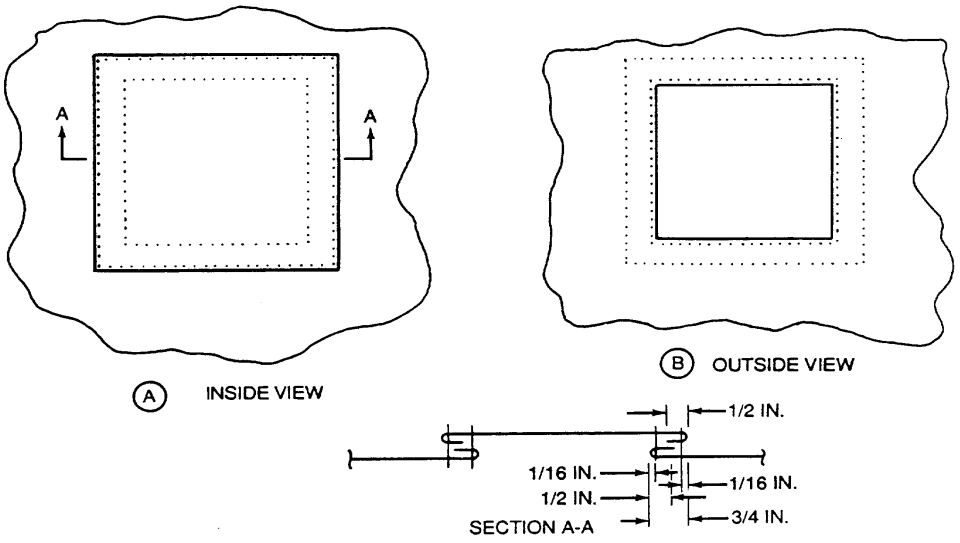
Damaged Area Size	Patch Minimum Size
1-inch to 1 ½-inch	2-inches
1 ½-inches to 2-inches	3 ½-inches
2-inches to 3-inches	4 ½-inches
3-inches to 5-inches	9-inches
5-inches to 7-inches	*10-inches
*Maximum size for canopy patch is 10-inches.	

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 below. There are three methods, which may be used to apply a basic patch, and the procedures for performing each method are outlined in steps 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 sewn patch is shown below). Apply a sewn patch as follows:



(1) Place the canopy inside out 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 and insure that one side of the marked square is parallel to the wrap or filling of the material.

(3) Cut the damaged area fabric along the lines made in step (2), above. Further, cut the fabric diagonally at each corner to allow ½-inch foldback in the raw edges.

(4) Make a ½-inch foldback on each raw edge. Pin and baste each foldback to complete the prepared hole. Basting will be performed using the procedures listed in the beginning of this WP.

(5) Using the same type of material as in original construction, mark and cut a patch 2½-inches wider and longer than the inside measurements of he prepared hole.

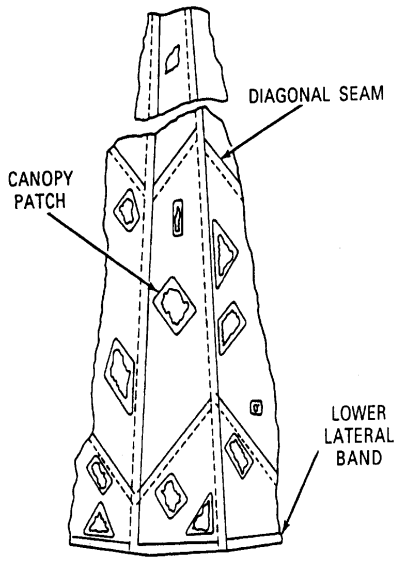
(6) Center the patch prepared material over the prepared hole and insure the wrap or filling of each patch material matches the wrap or filling of the fabric being patched. Pin the patch material in position.

(7) Make a ½-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 this WP.

(8) Remove the pushpins securing the canopy to the repair table and secure the patch by stitching, using the applicable details in the illustration above and this WP. Make the first row of stitching completely around the patch. Turn the canopy right side out and make a second row of stitching around the prepared hole. Stitching will be performed in accordance with this WP.

(9) If applicable, restencil informational data or gore number according to procedure in WP 0016 00.

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 this WP above, shall be adhered to. Apply a parachute mending cloth patch as follows:



NOTE

Age 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.

(1) Lay out the canopy with the damaged area exposed.

(2) To facilitate the application of the mending cloth patch, place a ½-inch by 20-inch by 20-inch smooth wooden board or similar smooth, hard-finished, rigid material, except paperboard, 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 and overlap of the damaged area using the specifics in table 3. Round off patch corners. Patches will be prepared in duplicates 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-shape patch to the damaged area on the canopy inside using the procedures in steps (6) and (7), above. Stitch $^{1}/_{16}$-inch in from outer edge of patch using details of tables 1 and 2.

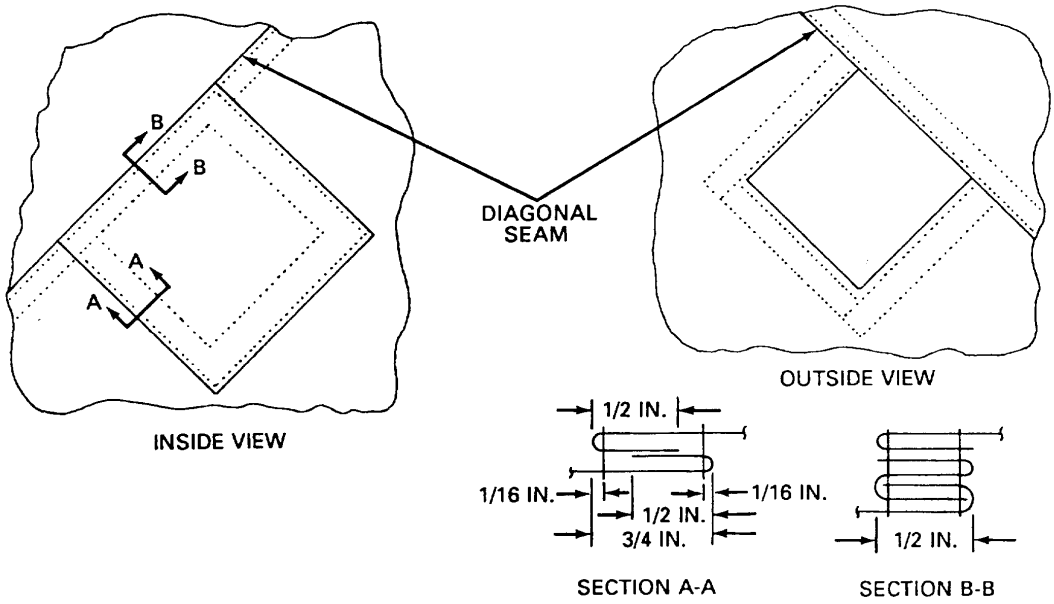
3. Applying a Miscellaneous Canopy Patch. A miscellaneous canopy patch, which may be irregularly shaped, is used to repair damaged canopy material when the location of the damaged area requires the patch to extend into or over a seam, reinforcement, or lateral band. Ascertain the type of patch required for the canopy, using the details below. Apply a miscellaneous patch to a gore section as follows:

NOTE

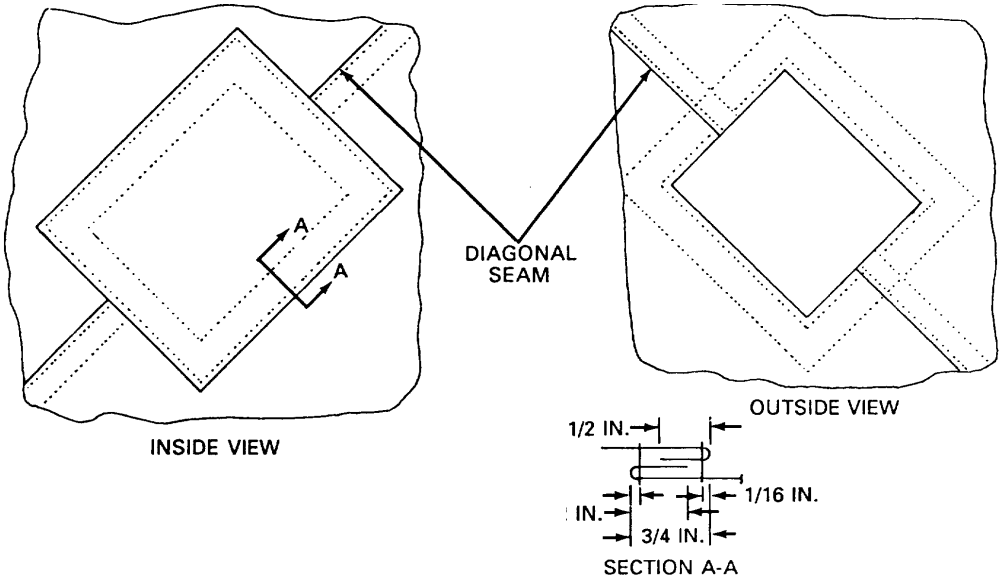
A canopy gore section that cannot be patched with a basic patch as outlined in paragraph 2, above, will be patched with a miscellaneous patch.

NOTE

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



RECTANGULAR PATCH INCLUDING A DIAGONAL SEAM



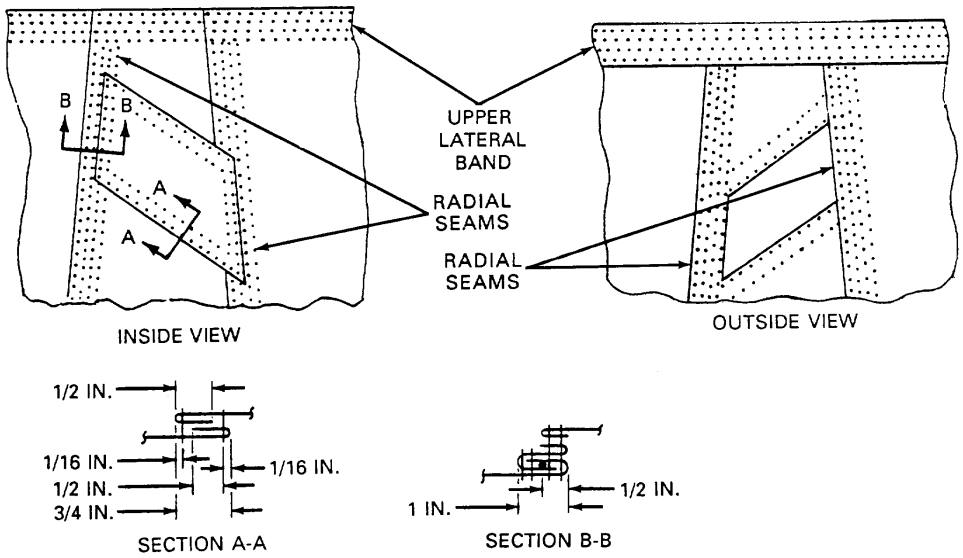
RECTANGULAR PATCH CROSSING A DIAGONAL SEAM

NOTE

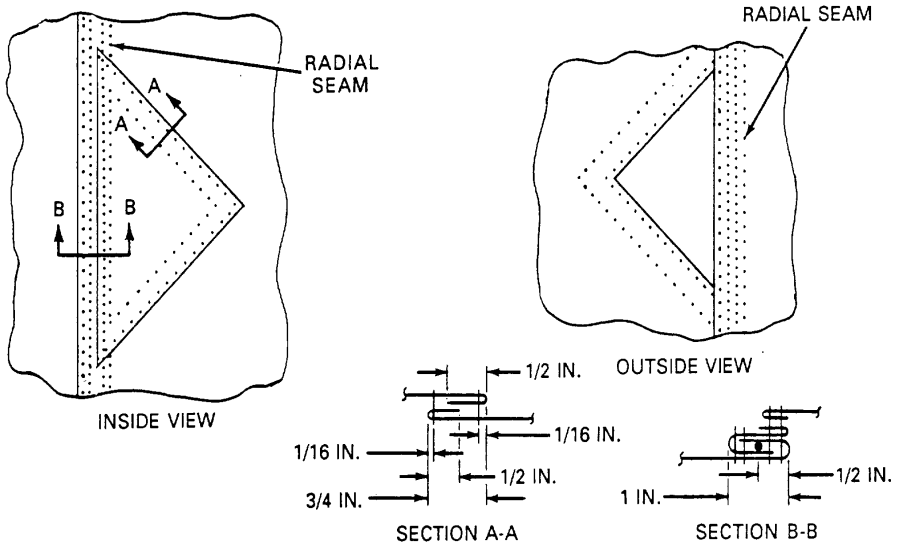
If outside of diagonal seam is damaged cut away entire diagonal seam in damaged area and patch as a basic patch.

NOTE

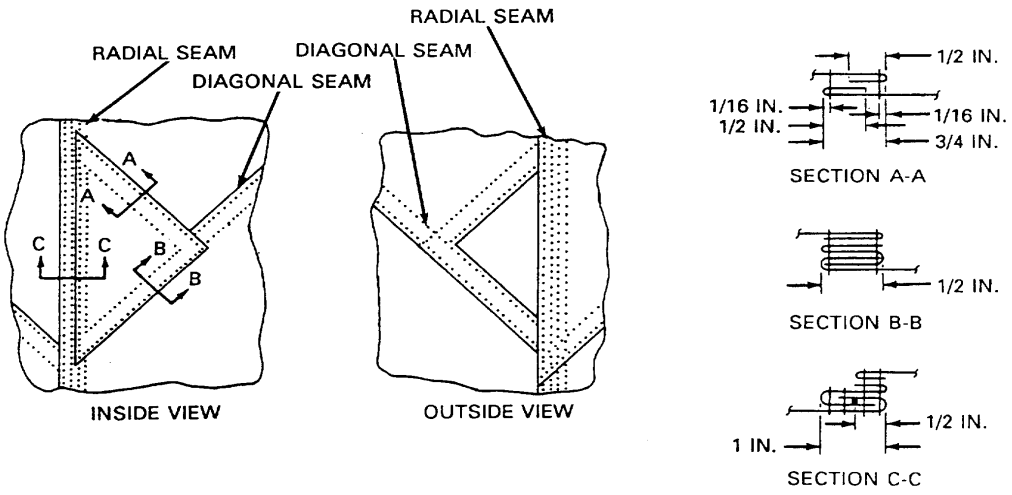
Patch may be extended to include upper lateral band.



IRREGULAR SHAPE PATCH INCLUDING TWO RADIAL SEAMS, CONTINUOUS-LINE CANOPY



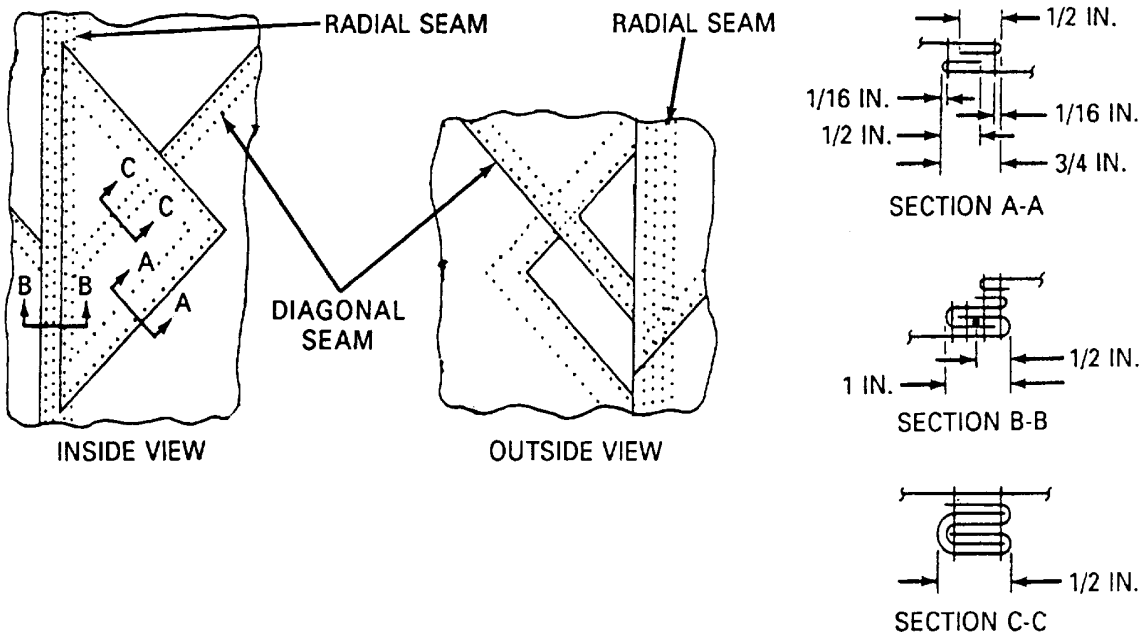
TRIANGULAR PARCH INCLUDED RADIAL SEAM, CONTINUOUS-LINE CANOPY



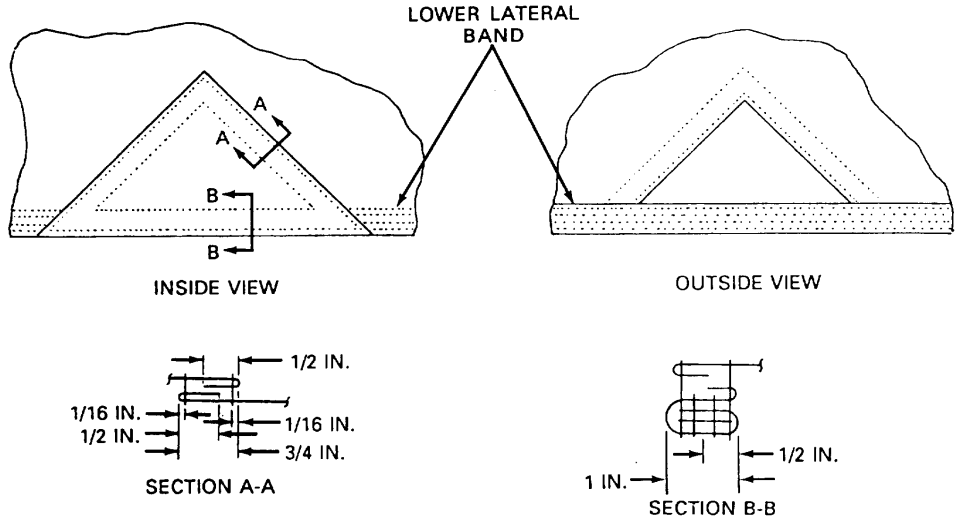
TRIANGULAR PATCH INCLUDING A RADIAL SEAM AND A DIAGONAL SEAM, CONTINUOUS-LINE CANOPY

NOTE

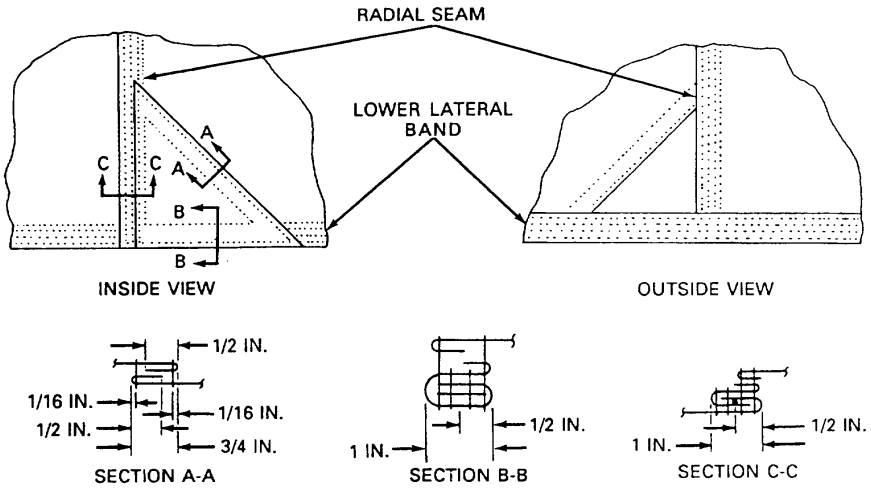
If outside of diagonal seam is damaged, cut away entire diagonal seam in damaged area and patch in same manner as triangular patch including radial seam only.



TRIANGULAR PATCH CROSSING DIAGONAL SEAM AND INCLUDING RADIAL SEAM, CONTINUOUS-LINE CANOPY



TRIANGULAR PATCH INCLUDING LOWER LATERAL BAND



TRIANGULAR PATCH INCLUDING RADIAL SEAM AND LOWER LATERAL BAND, CONTINUOUS-LINE CANOPY

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 ½-inch from any adjacent seam, reinforcement, or lateral band. Insure that one side of the marked rectangle or triangle is parallel to the warp or filling of the canopy material.

d. Prepare the damaged area hole by cutting along the marks made in step c., above. Also make a diagonal cut at each corner of the formed hole to permit a ½-inch foldback of each raw edge.

e. To complete hole preparation, make ½-inch foldback of each raw edge. Pin and baste each edge fold back using the procedures in the beginning of this WP, Basting and Temporary Tacking.

f. Using the same type material as in original canopy construction, mark and cut a patch 2½-inches wider and longer than the inside measurements of the prepared hole.

g. Center the patch material over the prepared hole. Insure the warp or filling of the patch material matches the warp or filling of the material to be patched. Pin the patch material in position.

h. Make a ½-inch foldunder on each edge of the patch material and baste the patch to the prepared area. Basting will be performed using the procedures contained in this WP.

i. Remove the pushpins securing the canopy to the repair table and the patch by stitching according to the details in illustration above, using the stitching specifications outlined in table 1 and 2. Make the first row of stitching completely around 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 this WP.

j. Reposition the canopy items removed or laid aside in step b., above, in the original location and secure each item to the canopy by restitching according to original construction details and the procedures detailed in the beginning of this WP, Stitching and Restitching.

k. If applicable, restencil informational data or gore numbers according to procedures in WP 0016 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
SEARING AND WAXING

THIS TASK COVERS:
- Searing
- Waxing

INITIAL SETUP:

Tools
Knife, Hot Metal (Item 15, WP 0044 00)
Pot, Melting, Electric (Item 29, WP 0044 00)

Materials/Parts
Beeswax, Technical (Item 3, WP 0057 00)
Wax, Paraffin (Item 45, WP 0057 00)

Equipment Condition
Unpacked

Personnel Required
92R (10) Parachute Rigger

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 parachutes will normally be heat-seared or dipped in 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.

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.

WAXING
The fraying or unraveling of cotton or nylon tape, webbing, and cord length ends may be prevented by dipping ½-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 ensure the wax completely penetrates the material rather than coating the exterior fabric.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS MARKING AND RESTENCILLING

THIS TASK COVERS:
- Marking
- Restencilling

INITIAL SETUP:

Tools
Brush, Stenciling (Item 4, WP 0044 00)

Materials/Parts
Ink, Marking (Item 16/17, WP 0057 00)
Marker, Felt Tip, Black (Item 18, WP 0057 00)
Pen, Ball Point (Item 19, WP 0057 00)
Stencil Board, Oiled (Item 27, WP 0057 00)

Equipment Condition
Layout on packing table or other suitable area.

Personnel Required
92R (10) Parachute Rigger

NOTE

Stenciling should be used whenever possible. A ballpoint pen or authorized felt tip marker should be used only where stenciling in not possible, or when stenciling devices are not available. Any type ballpoint pen using black or blue ink may be used for marking on labels only.

Original stenciling data or marking that becomes faded, illegible, obliterated, or removed as a result of performing a repair procedure will be remarked with a ballpoint 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.

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

RESTENCILING
Proceed as follows:

1. Cut oiled stencil board to original lettering type and size of data to be restenciled.
2. Place cut stencil board 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 stencil board in place and, using stenciling brush filled with parachute marking ink, restencil original marking.

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.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PILOT CHUTE

THIS SECTION COVERS:
- Repair
- Replace

INITIAL SETUP:

Tools
Sewing Machine, Darning (Item 37, WP 0044 00)
Sewing Machine, Light-Duty (Item 39, WP 0044 00)
Sewing Machine, Light-Duty, Zig-zag (Item 40, WP 0044 00)

Materials/Parts
Thread, Nylon, Size A (Item 41, WP 0057 00)
Thread, Nylon, Size E (Item 39/40, WP 0057 00)

Equipment Condition
Unpacked, canopy laid flat.

Personnel Required
92R (10) Parachute Rigger

REPAIR
Repair the T-10R pilot chute as follows:

1. Darning. Darn holes or tears that do not exceed ½-inch in length or diameter, following procedures in WP 0014 00.

2. Restitching. The restitching made on the pilot chute should be accomplished with thread that is contrasting in color to the fabric being stitched or the original thread being restitched. If contrasting color thread is not available, thread of matching color may be used. All restitching should be locked by at least 2-inches at each end of a restitched row, when possible. Stitch with size E nylon thread, 7 to 11 stitches per inch, using a zig-zag or light-duty sewing machine.

3. Marking Stenciling and Restenciling. As required, restencil and restencil identification marks using procedure in WP 0016 00.

Repair the MIRPS 5-foot pilot chute as follows:
No repairs are authorized on the MIRPS 5-foot pilot chute.

REPLACE
Replace an unserviceable pilot chute, using a serviceable item from stock.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS BRIDLE LINE

THIS SECTION COVERS:
- Replace

INITIAL SETUP:

Tools
Sewing Machine, Medium-Duty, Zig-zag (Item 42, WP 0044 00)

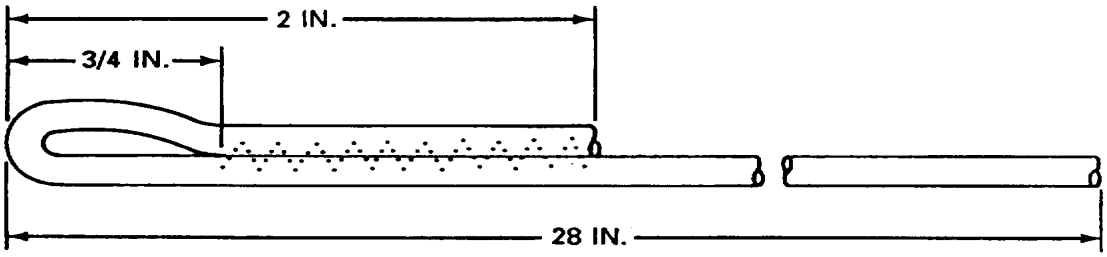
Equipment Condition
Unpacked, canopy laid flat.

Materials/Parts
Cord, Nylon, Type III (Item 10, WP 0057 00)
Thread, Nylon, Size E (Item 39/40, WP 0057 00)

Personnel Required
92R (10) Parachute Rigger

REPLACE
Replace Bridle Line for the T-10R as follows:

1. Remove damaged bridle line from canopy apex lines and pilot chute connector loop.
2. Cut a 30-inch length of type III nylon cord and sear ends.
3. Form a ¾-inch loop at one end. Stitch with size E nylon thread, 7 to 11 stitches per inch, $^{3}/_{16}$-inch wide, 1 ¼-inch long, using a medium-duty zig-zag sewing machine.



4. Reinstall bridle line in accordance with procedures in WP 0005 00.

Replace bridle line for the MIRPS as follows:

1. No repairs are authorized on the 13-foot bridle line.
2. Replace an unserviceable bridle line, using a serviceable item from stock.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS UPPER LATERAL BAND

THIS SECTION COVERS:
- Inspect

INITIAL SETUP:

Equipment Condition	Personnel Required
Unpacked, canopy laid flat	92R (10) Parachute Rigger

INSPECT
Inspect the upper lateral band in accordance with table 1, WP 0007 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS CANOPY GORE SECTION

THIS SECTION COVERS:
- Inspect

INITIAL SETUP:

Equipment Condition	Personnel Required
Unpacked, canopy laid flat	92R (10) Parachute Rigger

NOTE

If damage is located in the lower corners of the first section in the area of the "V" tabs or pocket bands, accomplish step 2., below; otherwise use procedures "Modified Gore Section Replacement Details," in section D-D (in the illustration on the following page) to preclude the removal of the "V" tabs or the pocket bands on either or both lower corners of the section being replaced.

INSPECT
Inspect the canopy in accordance with table 1, WP 0007 00. To determine the extent of canopy damage, proceed as follows:

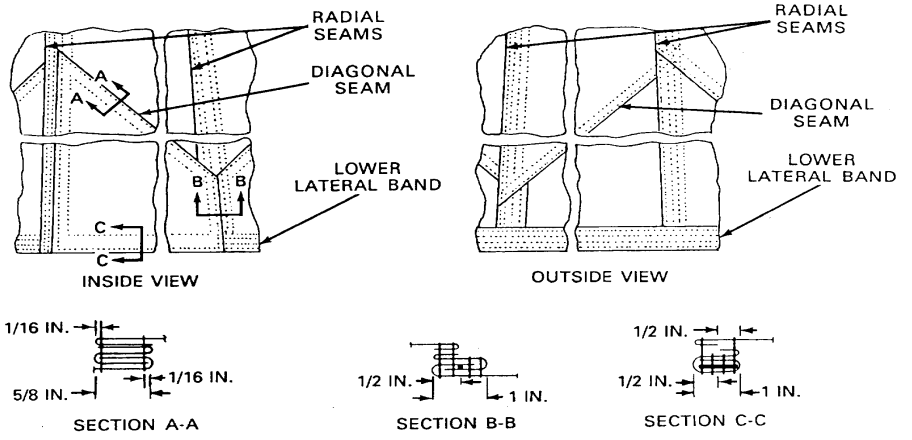
1. Invert the canopy on a repair table and locate the damaged section.

2. As required, remove or lay aside items that may interfere with the section replacement process by cutting the stitching securing the items to the canopy.

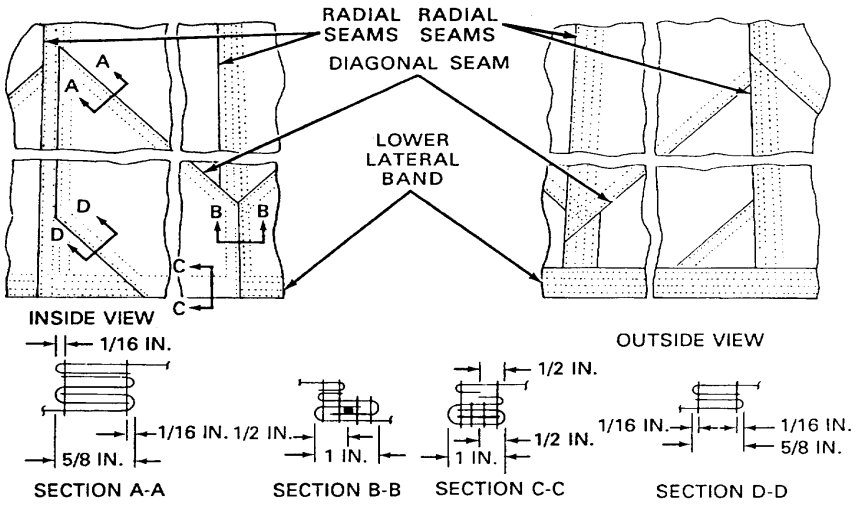
3. Smooth out the damaged gore section and secure surrounding canopy material to the repair table by placing pushpins through seams or lateral bands, as far above and below the damaged section as necessary. Insure that all adjacent seams, and lateral bands are straight and the damaged section is not distorted.

4. If patching can repair the damaged gore section, follow the procedures in WP 0014 00.

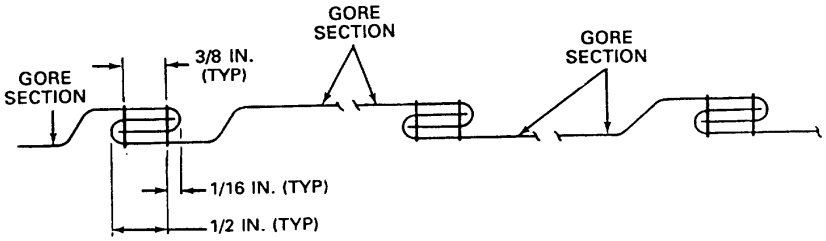
5. Any gore sections that are damaged beyond repair by patching may be replaced individually by the normal procedures, by the modified method, or in multiples, as described in direct support maintenance (WP 0038 00) and the illustrations below.



Normal Gore Section Replacement



Modified Gore Section Replacement Details



Lapped Seams Completed for Multiple Gore Section Replacement

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS RADIAL SEAM

THIS SECTION COVERS:
- Inspect

INITIAL SETUP:

Equipment Condition	Personnel Required
Unpacked. Canopy laid flat.	92R (10) Parachute Rigger

INSPECT
Inspect the radial seam in accordance with table 1, WP 0007 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS V-TAB

THIS SECTION COVERS:
- Inspect

INITIAL SETUP:

Equipment Condition	Personnel Required
Unpacked. Canopy laid Flat	92R (10) Parachute Rigger

INSPECT
Inspect the V-tabs in accordance with table 1, WP 0007 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS POCKET BAND

THIS SECTION COVERS:
- Repair
- Replace

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Knife, Hot Metal (Item 15, WP 0044 00)
Sewing Machine, Light-Duty (Item 39, WP 0044 00)
Shears (Item 43, WP 0044 00)

Materials/Parts
Tape, Nylon, Tubular, Type I (Item 34, WP 0059 00)
Thread, Nylon, Size E (Item 39/40, WP 0059 00)

Equipment Condition
Unpacked. Lying flat on repair table.

Personnel Required
92R (10) Parachute Rigger

REPAIR
Stitch and restitch with nylon thread, size E which is contrasting in color. Use 7 to 11 stitches per inch. Lock all straight stitching by back stitching at least ½-inch. Restitch directly over the original stitch pattern.

REPLACE
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 that is damaged will be replaced by fabricating using the following procedure:

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

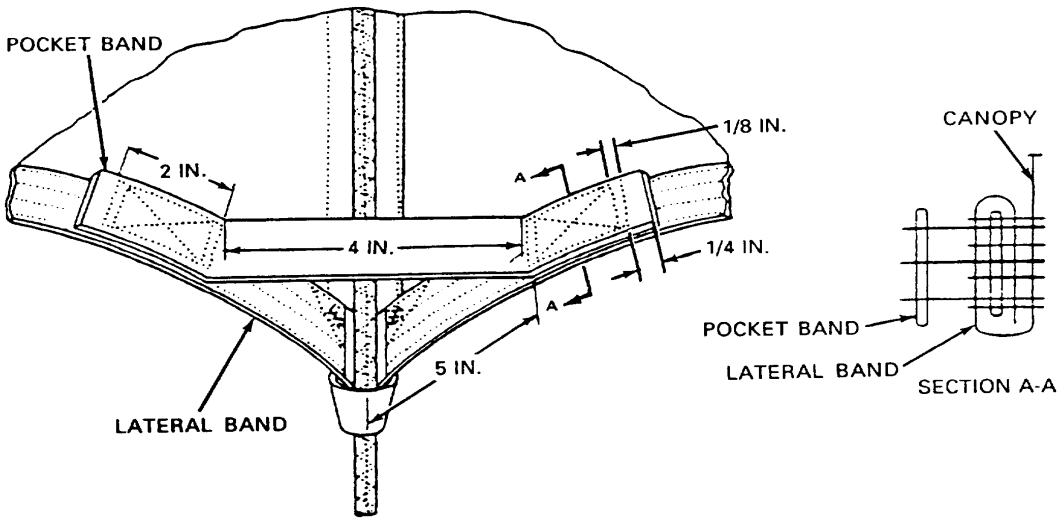
2. Mark the lower lateral band at each end of the damaged pocket band length.

3. Remove the affected pocket band from the canopy by cutting the stitching securing each of the band ends to the lower lateral band.

4. Fabricate a new pocket band by cutting an 8 ¼-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 align 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 double row each end, ¼-inch in from each end, $^{1}/_{8}$-inch from each edge and between each row, using a light-duty sewing machine, size E nylon thread, and 7 to 11 stitches per inch.



END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS LOWER LATERAL BAND

THIS SECTION COVERS:
- Inspect

INITIAL SETUP:

Equipment Condition	Personnel Required
Unpacked. Canopy laid flat.	92R (10) Parachute Rigger

INSPECT
Inspect the lower lateral band in accordance with table 1, WP 0007 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS SUSPENSION LINE

THIS SECTION COVERS:
- Inspect

INITIAL SETUP:

Equipment Condition	Personnel Required
Unpacked. Canopy in proper layout.	92R (10) Parachute Rigger

INSPECT
Inspect suspension lines in accordance with table 1, WP 0007 00.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS CONNECTOR SNAP

THIS SECTION COVERS:
- Inspect
- Repair
- Replace

INITIAL SETUP:

Tools
Bit, Drill, No. 24 (Item 2, WP 0044 00)
Drill, Electric (Item 8, WP 0044 00)
Knife (Item 14, WP 0044 00)
Needle, Tacking (Item 22, WP 0044 00)

Materials/Parts
Tape, Lacing and Tying (Item 29, WP 0057 00)
Tape, Pressure Sensitive, 1-IN Wide (Item 30, WP 0057 00)
Tape, Pressure-Sensitive, Yellow, ½-IN Wide (Item 31, WP 0057 00)
Thread, Nylon, Size 6 (Item 43, WP 0057 00)

Personnel Required
92R (10) Parachute Rigger

Equipment Condition
Lay out parachute canopy on repair table. Position pack, outside up, over connector snaps, so that top side flap of pack is toward apex end of table. Pass connector snaps through connector snap holes from underside of pack and position snaps on connector snap buffers.

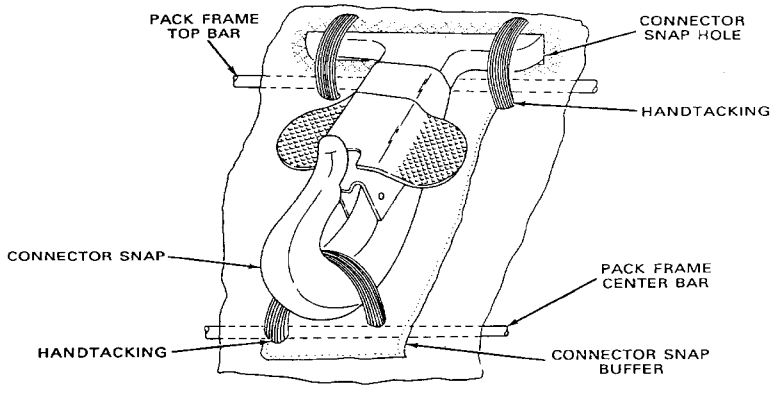
INSPECT
Inspect connector snaps in accordance with table 1, WP 0007 00.

REPAIR
Repair connector snap for the T-10R as follows:

NOTE

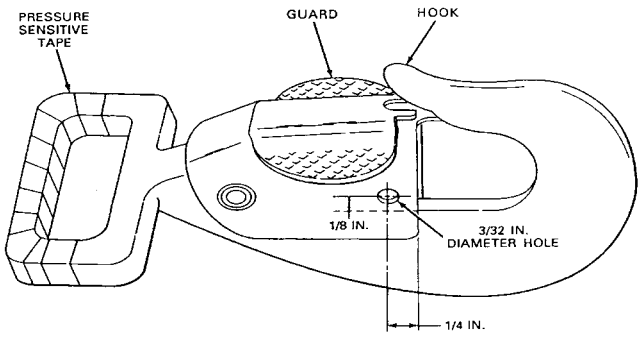
If tacking is loose or frayed, or if snaps are removed from pack for any reason, remove old tacking and retack connector snaps to the pack. Tape, lacing and typing may be used on lieu of size 6 nylon thread.

1. Using a tacking needle with double and waxed size 6 nylon thread, or tape lacing and typing hand-tack each connector snap at three points as shown. At each tacking point make five turns of the double thread starting on the inside of the pack assembly. Make sure that the thread completely encircles the frame bar at each point and that the fabric is not puckered by the tacking.



2. Tie ends of thread together on inside of pack at each tacking point with a surgeon's knot and a locking knot. Cut off free ends of thread 1-inch from knot.

3. If the connector snap is not provided with a safety pin hole, drill a $^{3}/_{32}$-inch hole through sides of snap guard according to details shown. If safety pin will not fit in hole provided, enlarge the hole by using a no. 24 (.152-inch) high-speed bit.



REPLACE

1. Replace connector snap for the T-10R as follows:

   a. Lay out parachute on repair table. Cut and remove tacking that holds snaps to pack.

   b. Cut and remove spreader bar from both connector snaps, being careful not to cut suspension lines or pack fabric.

   c. Obtain serviceable connector snap from stock.

   d. If an adequate safety-pin hole is not provided in snap guard of connector snap, either drill a hole or enlarge the hole as described in the REPAIR section, step 3., above.

   e. Wrap the upper half of the eye at the top of the connector snap with adhesive tape.

   f. Cut zig-zag stitching on free ends of suspension lines, being careful not to cut, snag, or fray the lines. Untie knots, remove the lines from snap one at a time, and install on new snap.

   g. Install suspension lines in accordance with procedures in WP 0042 00.

   h. Tack connector snap to pack following procedures in the REPAIR section, steps 1 and 2, above.

   i. Fabricate and install a new spreader bar in accordance with WP 0027 00.

2. Replace connector snap for the MIRPS by repeating procedures listed in paragraph 1, above.

3. Replacement of connector snap for the MIRPS as follows:

   a. Layout parachute on repair table. Unsnap the lift-the-dot-fastener and remove the pack tray.

   b. Repeat procedures "Replace Connector Snap for the T-10R " (steps 1b through 1i) as listed above.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS SPREADER BAR

THIS SECTION COVERS:
- Inspect
- Repair
- Replace

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)

Materials/Parts
Thread, Nylon, No. 3 (Item 42, WP 0057 00)
Webbing, Textile, Nylon, Tubular, 1.7 oz., 1-IN. (Item 59, WP 0057 00)

Equipment Condition
Parachute unpacked, laid out on repair table, pack positioned inside up.

Personnel Required
92R (10) Parachute Rigger

INSPECT
Inspect spreader bar in accordance with table 1, WP 0007 00.

REPAIR
Repair spreader bar by replacing stitches that have become loose, broken or frayed.

REPLACE
Replace a damaged spreader bar as follows (refer to illustration on following page):

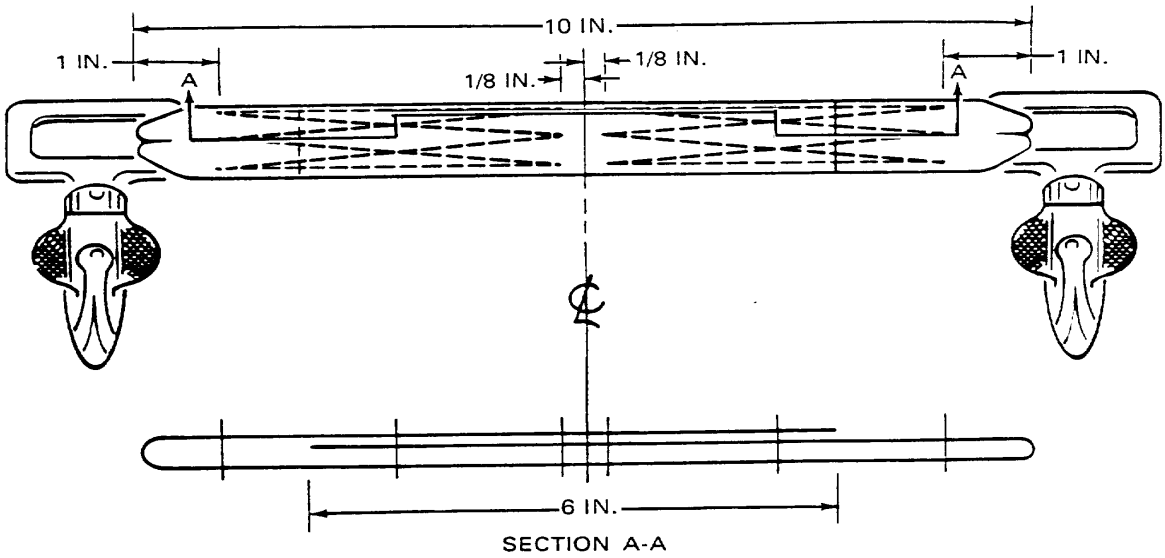
1. Cut damaged spreader bar from both connector snaps, being careful not to cut suspension lines or pack fabric.

NOTE

Current procurement includes a spreader bar made of 1-inch tubular nylon webbing stitched with a 3 point W-W-stitch pattern.

2. Sear and pass one end of a length of 1-inch nylon tubular webbing through eye of one connector snap. Pass other end through eye of other connector snap. Adjust width to 10-inches with seared end on top and with an overlap of 6-inches.

3. Sew two 3-point W-W-stitch formations with size 3 nylon thread, and 5 to 8 stitches per inch according to illustration below. This stitch formation may be made with only 3-point W-W formation, if desired, provided the total length is maintained.



SECTION A-A

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PACK TRAY ASSEMBLY FOR THE T-10R AND THE MIRPS

THIS SECTION COVERS:
- Repair
- Replace

INITIAL SETUP:

Tools
Chuck, Grommet Setting (Item 5, WP 0044 00)
Die, Grommet Setting (Item 7, WP 0044 00)
File (Item 9, WP 0044 00)
Key, Socket Head Set (Item 13, WP 0044 00)
Knife, Hot Metal (Item 15, WP 0044 00)
Mallet (Item 19, WP 0044 00)
Needle, Tacking (Item 22, WP 0044 00)
Pliers, Lineman (Item 28, WP 0044 00)
Press, Hand Chuck Die (Item 31, WP 0044 00)
Punch, Cutting, $^{5}/_{8}$-IN (Item 33, WP 0044 00)
Screwdriver, Flat Tip (Item 35, WP 0044 00)
Sewing Machine, Darning (Item 37, WP 0044 00)
Sewing Machine, Medium-Duty (Item 41, WP 0044 00)
Shears (Item 43, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Equipment Condition
Pack Laid Flat. Cleaned (WP 0009 00); Inspected (WP 0007 00 and WP 0010 00)

Personnel Required
92R (10) Parachute Rigger

Materials/Parts
Beeswax, Technical (Item 3, WP 0057 00)
Cap, Fastener (Item 4, WP 0057 00)
Cloth, Abrasive (Item 5, WP 0057 00)
Cloth, Duck, Nylon, Type III (Item 6, WP 0057 00)
Cord, Nylon, OD, Type II (Item 9, WP 0057 00)
Eye, Dressmaker's (Item 12, WP 0057 00)
Grommet, Steel Chrome (Item 15, WP 0057 00)
Pencil, Marking Aid (Item 20/21, WP 0057 00)
Post, Fastener (Item 22, WP 0057 00)
Socket, Fastener (Item 26, WP 0057 00
Stud, Fastener (Item 28, WP 0057 00)
Tape, Nylon, Type III (Item 33, WP 0057 00)
Tape, Textile, Yellow, Nylon Type III (Item 35, WP 0057 00)
Thread, Cotton, Ticket No. 8/7 (Item 37, WP 0057 00)
Thread, Nylon, OD, Size 6 (Item 43, WP 0057 00)
Thread, Nylon, OD, Size FF (Item 44, WP 0057 00)
Thread, Nylon, Size E (Item 39/40, WP 0057 00)
Thread, Nylon, Ticket No. 3 (Item 42, WP 0057 00)
Thread, Nylon, Ticket No. A (Item 41, WP 0057 00)
Wax, Paraffin (Item 45, WP 0057 00)
Webbing, Nylon, Type I, $^{9}/_{16}$-IN W. (Item 61, WP 0057 00)

REPAIR
Repair a serviceable pack tray assembly as follows:

1. Darning. Darning holes that do not exceed ¾-inch in length or diameter according to instructions detailed in WP 0014 00.

2. Retacking. Retack loose or broken tacking according to original construction.

3. Restitching. Restitch loose or broken stitching with size E nylon thread, and 7 to 11 stitches per inch, using thread that is contrasting in color to the fabric. Stitch directly over the original stitching and follow the original stitch pattern as closely as possible. If contrasting color thread is not available, thread of matching color may be used.

4. Splicing Edge Binding. Splice as follows:

   a. Trim damaged portion of edge binding. Do not remove damaged portion unless necessary.

   b. Cut a length of ¾-inch type III, nylon tape long enough to extend 1-inch on each side of damaged area.

   c. Fold under each end of tape ¼-inch.

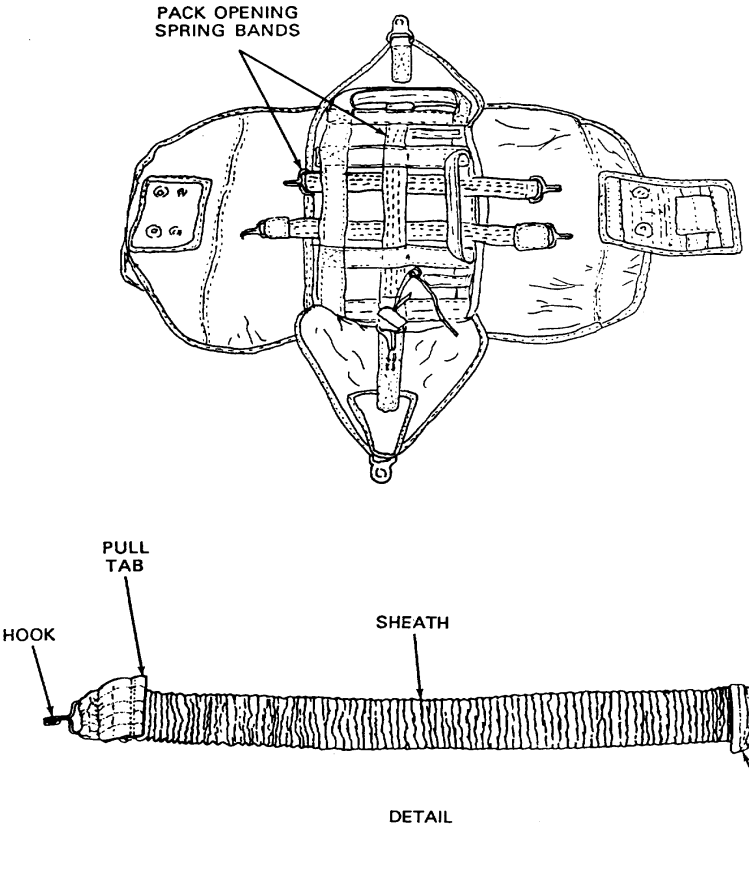
d. Fold tape in half lengthwise and center it over damaged area.

e. Sew a box-stitch formation following original construction, using a medium-duty sewing machine, size E nylon thread, and 7 to 11 stitches per inch. Lock ends of stitching at least ½-inch.

5. Pack Opening Spring Band. Replace a damaged spring band that cannot be repaired as follows:

a. Repair by restitching loose or broken stitches according to original construction.

b. Disconnect each hook of the affected band from the attaching hook-eye and remove the band from the pack.



DETAIL

c. Install a serviceable pack opening spring band in the location on the original band and ensure the pull-tabs are facing up.

6. Pack Releasing Cones (T-10R). Replace a damaged or missing releasing cone with a serviceable item from stock. Proceed as follows:

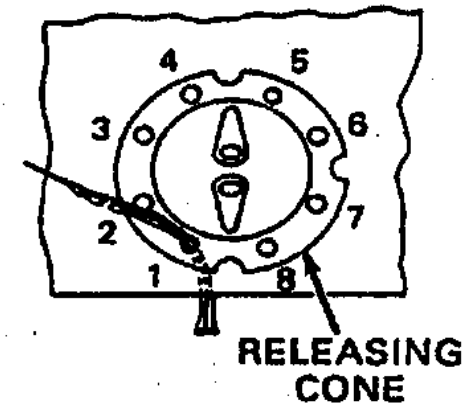
a. If applicable, cut and remove the tacking securing the original pack-releasing cone to the pack.

b. If the fabric area supporting the original pack-releasing cone has been damaged, repair the area by darning, using the procedures in WP 0014 00.

c. Position the replacement pack releasing cone in the original releasing cone location and ensure the ripcord locking pinhole at the cone top is aligned in the same direction as the original releasing cone or the other installed cone.

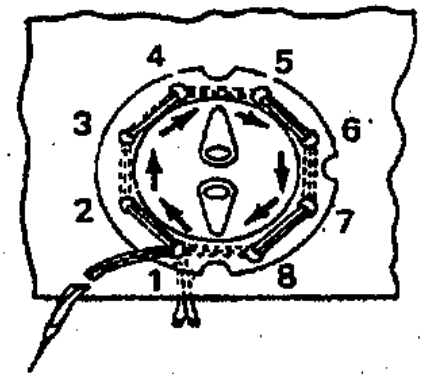
d. Using one turn double, size no. 3 waxed nylon thread, secure the replacement pack releasing cone by hand-tacking as follows:

(1) Pass a threaded tacking needle from the inside up through the parachute pack panel and through the no. 1 hole in the cone base. Allow 3-inches of the tacking thread free end to remain on the panel inside.



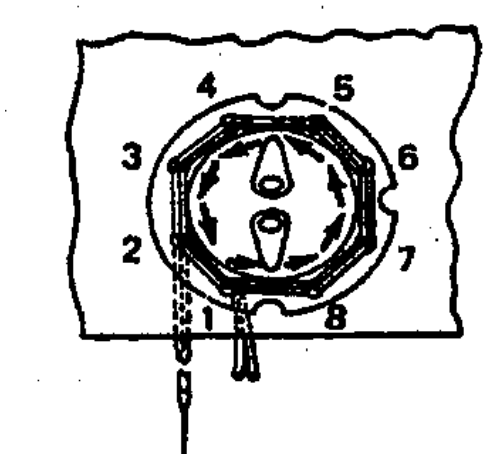
(2) Working in a counterclockwise direction, pass the needle and thread length down through hole no. 2 and the parachute pack panel, and back up through the panel hole no. 3.

(3) Continue tacking around the cone base using the procedure in step (2), above, until the needle and thread length are passed to the outside at hole no. 1. Remove all slack from the completed tacking.



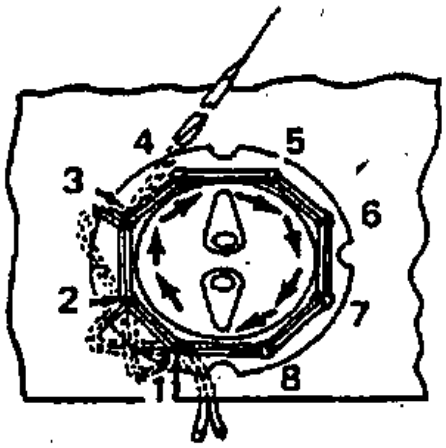
(4) Working in a counterclockwise direction, pass the needle and thread length down through hole no. 8 and the parachute pack panel, and back up through the panel and hole no. 7.

(5) Continue tacking around the cone base using the procedure in step (4), above, until the needle and thread length are passed to the panel inside at hole no. 2. Remove all slack from the completed tacking.



(6) Pass the needle and thread length up through the parachute pack panel at a point adjacent to the outside edge of the cone base and hole no.1.

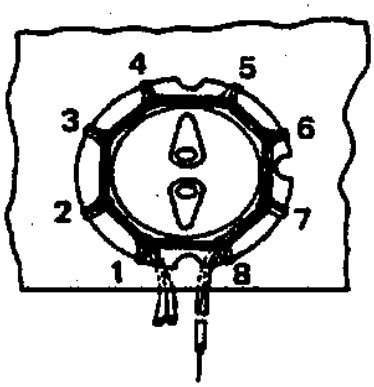
(7) Pass the needle and thread length over the outside edge of the cone base, and down through hole no. 1 to the inside of the parachute pack panel.



(8) Pass the needle and thread length back up through the parachute pack panel at a point adjacent to the outside of the cone base and hole no. 2.

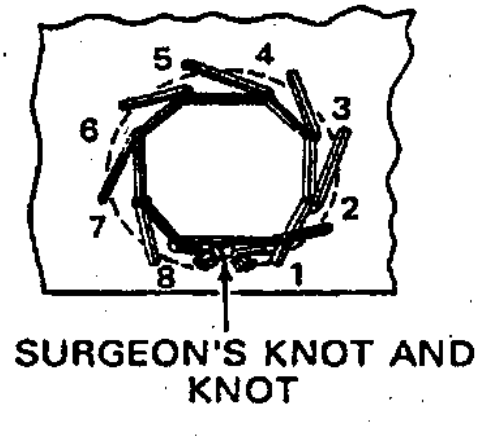
(9) Pass the needle and thread length over the outside edge of the cone base and down through hole no. 2 to the inside of the parachute pack panel.

(10) Working in a clockwise direction, continue tacking around the outside edge of the cone base using the procedures in steps ((6) and (7)), above, until the needle and thread are passed to the inside at hole no. 8.



(11) Remove all slack from the completed tacking.

(12) Remove the tacking needle from the thread length and secure the tacking loose ends on the parachute pack panel inside with a surgeon's knot and a locking knot. Trim tie ends to ¼-inch.



7. Pack Fastener (T-10R). Replace a damaged pack fastener with a serviceable item from stock as follows:

a. Left pack fastener.

(1) Cut tacking and remove pack opening band hook eye.

(2) Cut stitching, and remove pack fastener loop from end flap.

(3) Cut edge reinforcement where it passes through pack fastener slot, and remove damaged pack fastener. Trim edge reinforcement flush with edge of flap.

(4) Cut a 9-inch length of type IV, 1-inch wide nylon webbing and sear ends of new edge reinforcement to prevent fraying.

(5) Pass new edge reinforcement through fastener slot, and center fastener on reinforcement.

(6) With end flap positioned outside up, position new edge reinforcement over both edge binding and old edge reinforcement. Sew new reinforcement in place as shown in the illustration on the next page (view A). The new reinforcement should extend 4-inches along edge of flap on each side of pack fastener. Stitching will be with a medium-duty sewing machine, size E nylon thread, and 7 to 11 stitches per inch. Lock ends of stitching at least ½-inch.

(7) Fabricate a left pack fastener loop by cutting an 8-inch length of type IV, 1-inch-wide nylon webbing.

(8) Pass webbing through fastener slot, and center fastener on webbing.

(9) Fold under both ends of webbing ½-inch and align ends of flap, with flap sandwiched between ends of webbing.

(10) Sew webbing to end flap with a single-X box stitch formation with two rows of stitching at each end, according to original construction. Use a medium-duty sewing machine with size E nylon thread, 7 to 11 stitches per inch. Lock the ends of the stitching at least ½-inch.

(11) Retack spring band hook-eye to pack fastener loop, following instructions in paragraph 16, Dressmaker's Eye, detailed below.

b. Right pack fastener.

(1) Cut stitching that holds ripcord pocket to right end flap, and remove pocket.

(2) Follow procedures in a (1) through (6), detailed above.

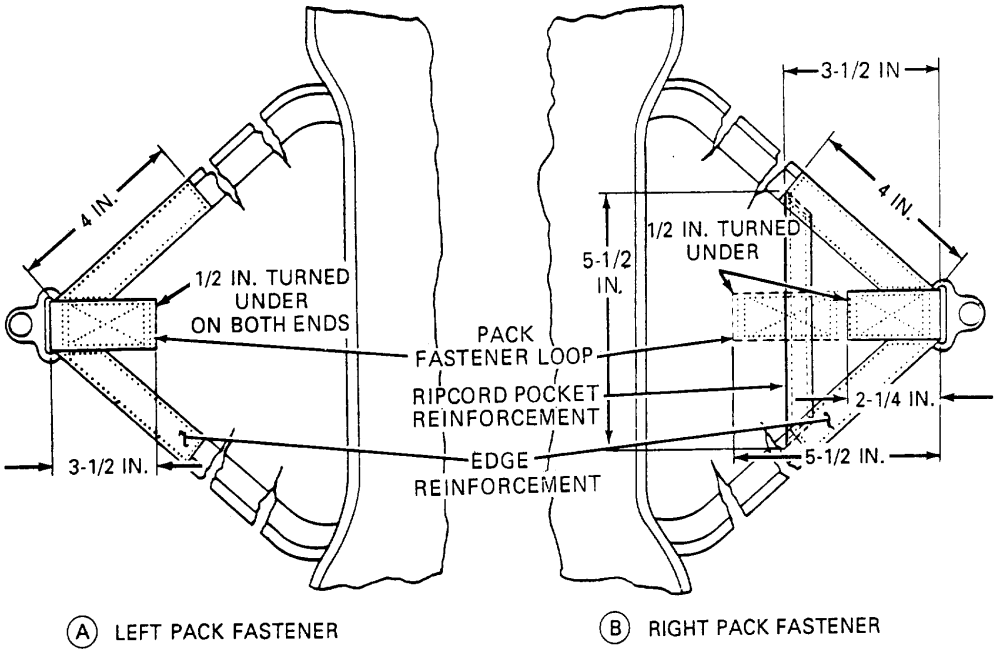
(3) Fabricate a right pack fastener loop by cutting a 9-inch length of type IV, 1-inch-wide nylon webbing.

(4) Pass webbing through fastener slot, and position webbing on end flap so that a 5 ½-inch length of webbing is on outside of flap and 2 ½-inch length is on inside (refer to illustration on the following page, view B).

(5) Turn end flap inside up. Fold under end of webbing on inside of end flap ½-inch, and align edges of webbing. Sew both plies of webbing to end flap using a single-X box-stitch formation with two rows of stitching at each end, according to original construction. Use a medium-duty sewing machine with size E nylon thread, 7 to 11 stitches per inch. Lock ends of stitching at least ½-inch.

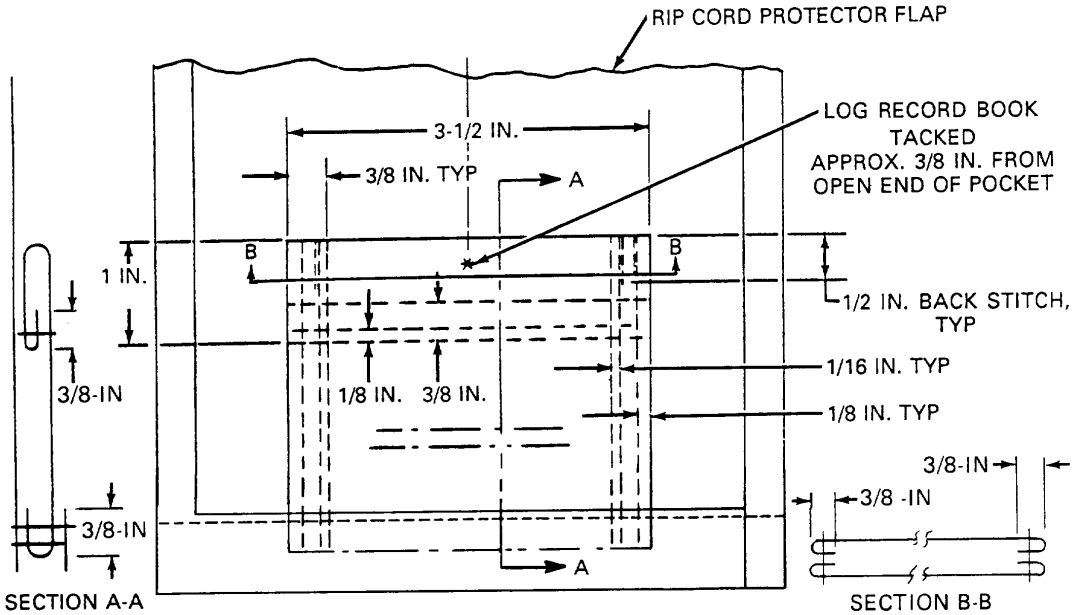
(6) Turn end flap outside up, and fold under other end of webbing ½-inch. Sew webbing to end flap with another single-X box-stitch formation according to original construction.

(7) Retack the spring-band hook-eye to pack fastener loop, following instructions in paragraph 16, Dressmaker's Eye, detailed below. Reposition ripcord grip pocket on end flap, and sew it to flap by following procedures in paragraph 9, below.



8. Log Record Pocket. If stitching in a log record becomes loose or frayed, replace as follows:

   a. Remove the damaged pocket by removing the one row of stitching that attaches the pocket to the pack. Fabricate the new log record pocket, using 7.25-ounce nylon duck and size E nylon thread. Cut a piece of nylon cloth 4 ¾-inches by 4 ¼-inches and make a fold of 1-inch with a $^{3}/_{8}$-inch fold under. Stitch with one row of size E nylon thread and 7 to 11 stitches per inch, as shown below. Fold the two sides and bottom of the pocket $^{3}/_{8}$-inch, and stitch with size E nylon thread, 7 to 11 stitches per inch, locking the stitch ½-inch on each end.



b. The log record pocket shall be relocated on the inside of the ripcord protector flap. Cut enough stitching of pile fastening tape to allow bottom of pocket to be inserted. Center the new pocket on the protector flap and sew with one row size E nylon thread through pile fastener tape and pocket. Use a medium-duty sewing machine, 7 to 11 stitches per inch, and locked ½-inch on both ends. The log record book shall be tacked to the 1 ¼-inch, type II reinforcement tape on the protector flap, with a 3-inch loop of tape, lacing, tying, and secured with a surgeon's knot.

9. Ripcord Grip Pocket (T-10R). If ripcord grip pocket cannot be repaired by re-stitching or retacking, replace pocket as follows:

NOTE

A new ripcord grip pocket was designed for the MIRPS. When replacing the standard ripcord grip pocket, refer to illustration A, below.

a. Cut stitching and bartack, and remove damaged pocket from right end flap of pack.

b. After removing bartack, reinforce end flap of pack as follows:

(1) Cut a 5 ½-inch length of 1-inch wide type IV nylon webbing. Cut on a 45-degree angle.

(2) Cut enough stitching of edge reinforcement webbing on each side of flap to insert ends of 5 ½-inch length of type IV nylon webbing. Insert webbing in original location.

(3) Sew in place with a box-stitch formation, using size E nylon thread and 7 to 11 stitches per inch.

(4) Restitch edge reinforcement and lock ends of all stitching at least ½-inch.

(5) Obtain serviceable T-10R ripcord grip pocket from stock, and place new pocket in exact location formerly occupied by the damaged pocket.

(6) Sew new pocket to end flap according to details in illustration (A) below. Use a medium-duty sewing machine, size E nylon thread and 7 to 11 stitches per inch. Lock ends of stitching at least ½-inch.

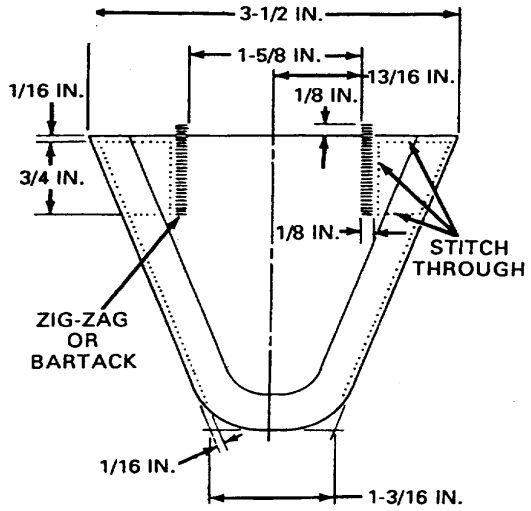


Illustration (A)

(7) Bartack or zig-zag stitch pocket to end flap according to details in illustration (A) above, using size E nylon thread. Make sure that machine stitching does not pass through hand tacking or ends of coil spring.

WARNING

The maximum pull force to open a T-10R or MIRPS parachute is 27-pounds. If pull test that follows does not actuate the reserve parachute, the pocket will be removed and replaced.

The pull force required to activate the MIRPS must be no less than 7-pounds and no more than 27-pounds.

10. Pull Test. After replacement of new ripcord grip pocket, the following checks will be performed prior to placing in service.

NOTE

To conduct the T-10R ripcord pull tests, the packed T-10R shall be firmly attached by its two-connector snaps to a suitable rigid structure (hook or nail attached to a wall or 4 by 4 post) such that the pack tray is positioned vertically with the ripcord grip pointing down. There must be sufficient clearance beneath the vertically suspended T-10R to suspend a weight from the ripcord grip and allow it to withdraw the ripcord grip pins from the cones activating the parachute.

To conduct the MIRPS ripcord pull tests, the packed MIRPS shall be firmly attached by its two-connector snaps to a suitable rigid structure (hook or nail attached to a wall or 4 by 4 post) such that the pack tray is positioned horizontally with the ripcord grip pointing down. There must be sufficient clearance beneath the horizontally suspended MIRPS to suspend a weight from the ripcord grip and allow it to withdraw the ripcord grip pins from the soft loops activating the parachute.

a. Rotate the ripcord grip clockwise and counter clockwise within the pocket about 45 degrees in each direction as it's being slowly withdrawn from the pocket.

b. Reinsert the grip in the pocket and repeat the procedure in paragraph b., above, four more times. This will serve to break-in a tight pocket.

11. Conduct a 7-Pound Minimum Ripcord Pull Test on the MIRPS as follows:

a. Carefully attach a 7-pound weight to the ripcord grip and *very slowly* remove your hand from under the weight to allow the weight to be slowly transferred to the ripcord grip. Do not release the weight suddenly or let it drop since this will invalidate the test. The weight must be evenly distributed around or centered on the ripcord grip to prevent the ripcord grip from tilting. The weight must not completely withdraw the ripcord pins from the soft loops or the ripcord grip completely from the pocket.

b. If the 7-pound weight causes complete withdrawal of the ripcord pins or the ripcord grip, then remove the pack tray and ripcord grip from service.

c. If the pack tray and ripcord grip are new (part of a MIRPS assembly), or a new replacement pack tray, submit a standard Form (SF) 368, Product Quality Deficiency Report (PQDR) for the new items.

d. If the pack tray is used and a new MIRPS ripcord grip pocket was applied, verify the application procedures in WP 0028 00. If applied correctly, submit a PQDR for the new ripcord grip pocket and ripcord grip.

12. Conduct a 27-Pound Maximum Ripcord Pull Test on the T-10R and the MIRPS as follows:

a. While standing to the left or right side of the T-10R or MIRPS, carefully attach a 27-pound weight to the ripcord grip and very slowly remove your hands from under the weight to allow the weight to be very slowly transferred to the ripcord grip. Do not release the weight suddenly or let it drop since this will invalidate the test.

b. The weight must be evenly distributed around or centered on the ripcord grip to prevent the grip from tilting.

c. The 27-pound weight must withdraw the ripcord pins from either the pack release cones or the soft loops and the ripcord grip from the pocket.

d. If the 27-pound weight does not withdraw the ripcord grip and pins, then remove the weight and re-inspect the ripcord pins, pack releasing cones, and the ripcord pocket to ensure there are no bent pins and ensure proper alignment of the pinholes in the pack releasing cones. Bent pins or misaligned holes can significantly increase the ripcord withdrawal force.

e. If the ripcord pins, cone holes and pocket are serviceable, carefully remove the ripcord pins and at the same time, insert temporary pins to keep the pack tray closed. Leave the ripcord grip in the pocket.

WARNING

Do not rotate the grip completely around (360°) within the pocket as this may damage the ripcord pocket.

f. If the pack tray is used and a new T-10R or MIRPS ripcord grip pocket was applied, verify the application procedures in WP 0028 00. If applied correctly, submit a PQDR for the new ripcord grip pocket and ripcord grip.

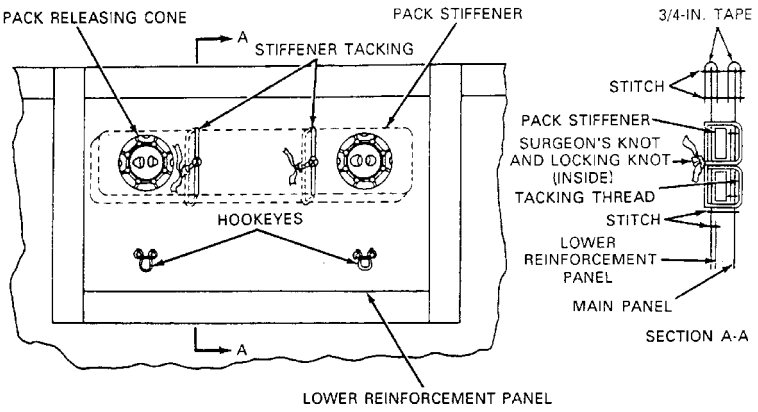
g. If the MIRPS passes the 7-pound minimum and the T-10R and the MIRPS passes the 27-pound maximum ripcord pull test, repack the T-10R IAW WP 0012 00 and the MIRPS IAW WP 0013 00.

h. Annotate completion of this test (test conducted, name of tester, date completed) on the notes page of the parachute log record book (DA Form 3912), or applicable location in the NAVWPNCEN or NAVWPNS CL 13512/11 (Parachute History Record).

13. Retainer Band Keeper. No replacement is authorized for retainer band keepers. Replace serviceable retainer rubber bands with serviceable retainer bands from stock. Attach retainer band to keeper by forming a tight slip loop around loop of keeper.

14. Cone Flap Stiffener (T-10R).

a. If tacking holding cone flap stiffener is damaged, replace tacking as follows:



(1) Cut and remove damaged tacking at one point.

(2) Pass a tacking needle threaded with doubled and waxed ticket no. 6 nylon thread up through lower reinforcement panel, stiffener hole, and main panel, allowing 2-inches for thread ends on the inside of pack flap.

(3) Pass needle down through main reinforcement panel on the outside of the stiffener.

(4) Pass needle up through lower reinforcement panel, and main panel.

(5) Pass needle down through main panel on opposite side of step (3), above, and lower reinforcement panel.

(6) Tie free ends of thread together with a surgeon’s knot and locking knot against main panel. Trim thread ends to within 1-inch of knots.

(7) Retack at other point by following steps, (1) through (6), above.

b. Replace a damaged cone or flap stiffener with a serviceable item from stock. Proceed as follows:

(1) Cut and remove tacking from damaged stiffener.

(2) Cut row of stitching along lower side of lower reinforcement panel. Cut half of row stitching along each end of panel, starting at each lower corner of panel and continuing to centerline of panel.

(3) Position new pack stiffener between lower reinforcement panel and main panel. Replace all stitching removed in step (2), above, following original construction, using a medium-duty sewing machine, and size E nylon thread, 7 to 11 stitches per inch. Retack pack stiffener, following procedures as outlined in step a., above.

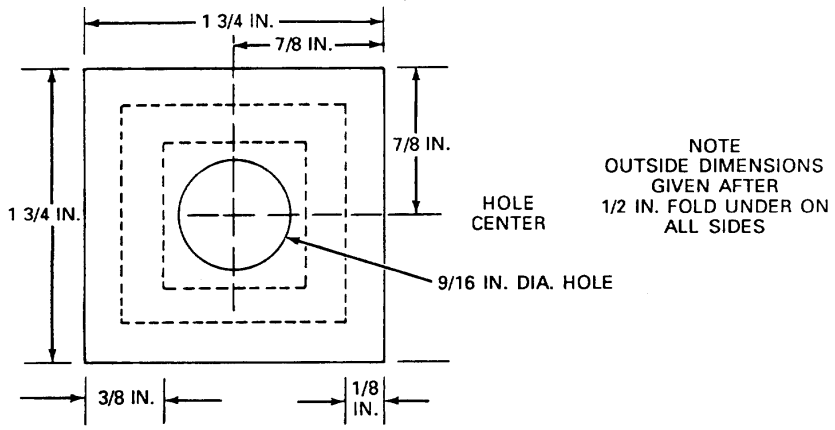
15. Grommet.

a. Repair grommet as follows:

(1) Remove burns, rough spots, rust, or corrosion from an installed grommet by filling with a file or by buffing with a crocus cloth.

(2) Reseat a lose grommet using the procedures listed in paragraph b. below.

(3) If fabric area around original grommet has been damaged, repair area by darning using procedures in WP 0014 00. If darning does not provide an adequate repair, construct a 2 ¾-inch by 2 ¾-inch sized reinforcement cloth and fold under ½-inch on all sides. After removing original grommet, sew cloth to inside with a medium-duty sewing machine, size E nylon thread, 7 to 11 stitches per inch, one row of stitches $^{1}/_{8}$-inch from inside edge and the second row $^{3}/_{8}$-inch from outside edge.



b. Replace. Proceed as follows (refer to illustration on following page):

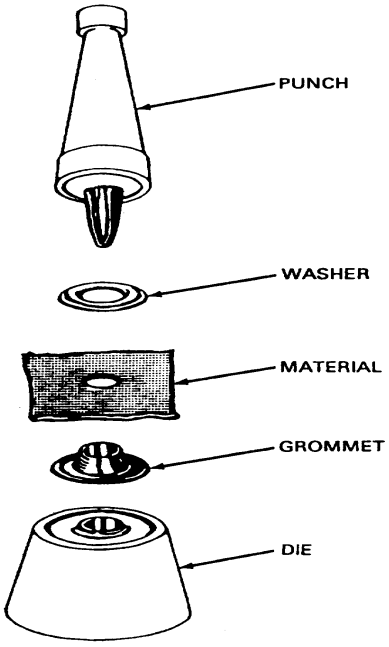
NOTE

For grommet installation by the hand-held method, refer to steps (3) through (6), below. For grommet installation by hand-or foot-operated press, refer to steps (7) through (11), below.

(1) Using a suitable type tool, lift edge of original washer at one point.

(2) Grip lifted washer edge with lineman pliers and roll washer edge back to lift washer from original grommet. Remove original grommet from material.

(3) Insert barrel of replacement grommet through accommodating hole in material and ensure grommet flange is located on same side of material as original grommet.



(4) Position grommet on die with barrel facing up, position material over grommet barrel, and place the washer over grommet barrel.

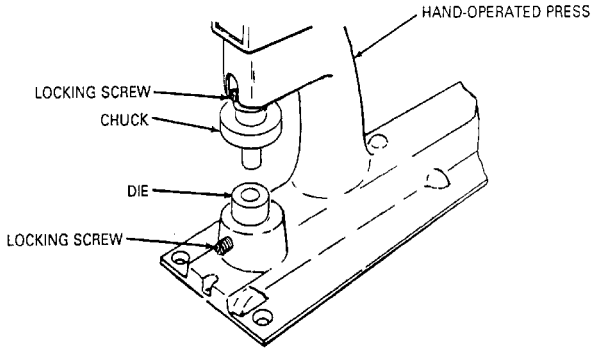
NOTE

When installing a flat grommet by the hand-held method, ensure the grommet barrel and washer are aligned to preclude off-center setting of the grommet.

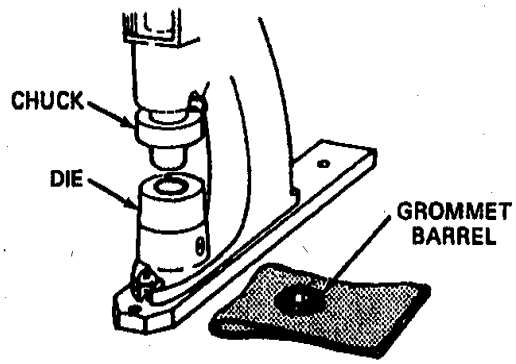
(5) Using a punch and rawhide mallet or other non-steel impact device, spread grommet barrel by hammering until barrel collar is rolled down smooth on washer. If grommet barrel splits during hammering process, remove and replace damaged grommet with a serviceable item from stock, repeating procedures in paragraph b., above.

(6) Check seating of grommet. If grommet can be turned by hand, repeat step (5) until grommet is firmly seated.

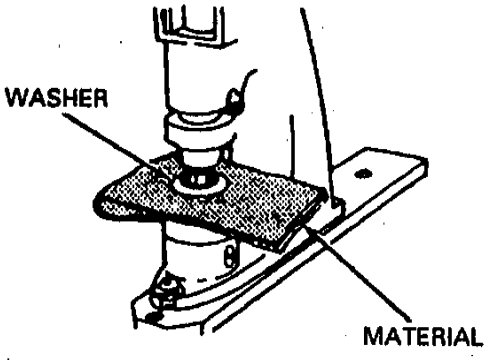
(7) Install appropriate chuck or die in hand-operated press and secure locking screws with hex wrench, or screwdriver.



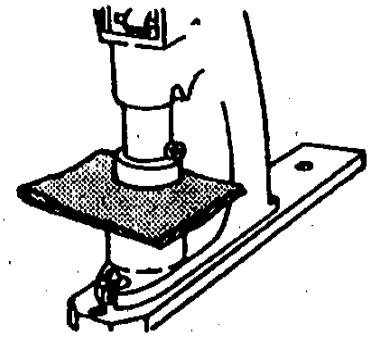
(8) Insert barrel of replacement grommet through hole in material. Ensure grommet flange is on same side of material as original grommet.



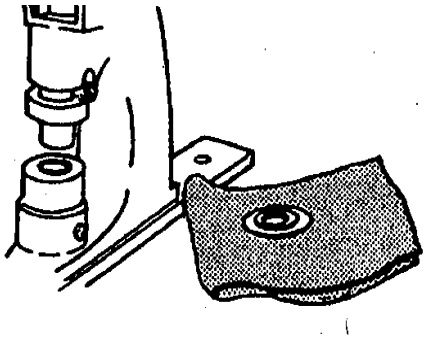
(9) Position grommet on die in press with barrel facing up and place replacement washer over barrel.



(10) Depress handle or foot pedal, spreading grommet barrel until collar is rolled down smoothly on washer.



(11) Check grommet for firm seating. If grommet can be turned by hand, repeat step (10), above, until a firm seat is achieved.



16. Dressmaker's Eye (hook-eye).

a. Retacking is the only repair function performed on a dressmaker's eye (hook-eye). Replace broken or loose tacking by adapting the procedure in paragraph b., below.

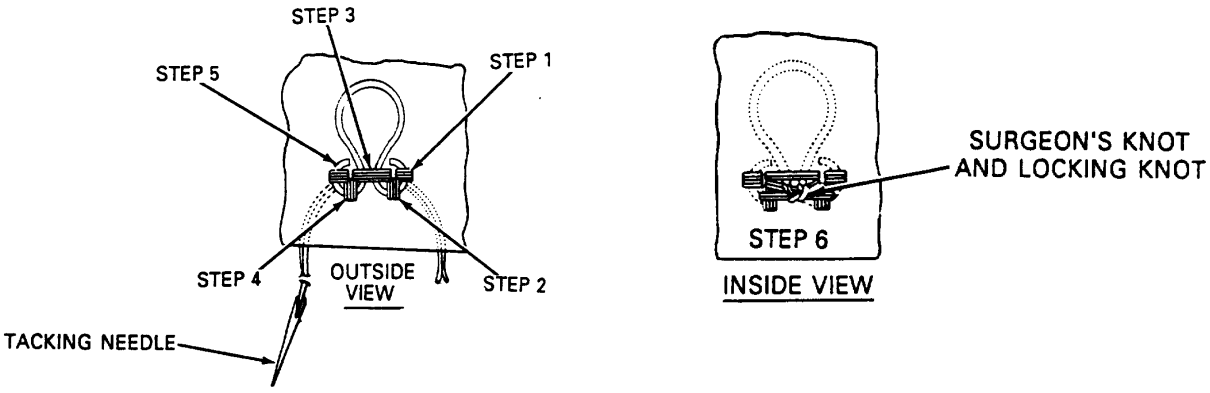
b. Replace a damaged or missing dressmaker's eye (hook-eye) with a serviceable item from stock using the following procedure:

(1) If applicable, cut and remove the tacking securing the original dressmaker's eye (hook-eye) to the parachute pack tray.

(2) If the fabric area supporting the original dressmaker's eye had been damaged, repair the area by darning, using the procedures in WP 0014 00. However, if darning does not provide an adequate repair, construct a suitable sized reinforcement of the same type material as that used in the original dressmaker's eye location. Secure the reinforcement to the inside of the damaged area using the securing procedures in WP 0014 00. Sew with size E thread, 7 to 11 stitches per inch.

(3) Position the replacement dressmaker's eye in the original eye location and ensure the elevated end of the eye is facing up to permit proper engagement of a pack opening spring band hook upon completion of installation.

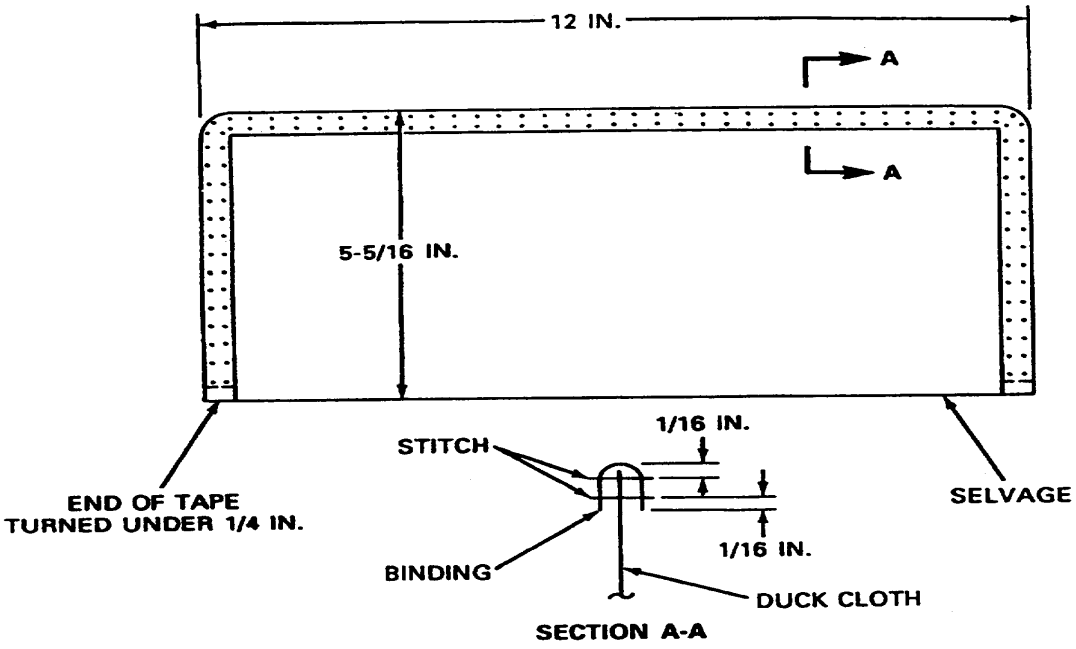
(4) Secure the replacement dressmaker's eye to the parachute pack by hand tacking using two turns double, size no. E waxed nylon thread as shown below. Secure tacking ends with a surgeon's knot and a locking knot. Trim tie ends to 1-inch.



17. Pilot Chute Protector Flap. Replace a damaged protector flap that cannot be repaired as follows:

    a. Cut stitching and remove damaged flap.

    b. Fabricate a new flap from a 12 by 5 $^{5}/_{16}$-inch piece of 7.25-ounce type III nylon duck cloth. Use salvaged edge of cloth as one of the 12-inch sides.



    c. Bind the three cut edges of the rectangle with a length of type III ¾-inch-wide nylon tape. Turn under each end of tape ¼-inch. Stitch the tape to the three cut edges with two rows of stitching using a light-duty sewing machine and size E nylon thread. Stitching will be 7 to 11 stitches per inch. Lock ends of stitching at least ¼-inch.

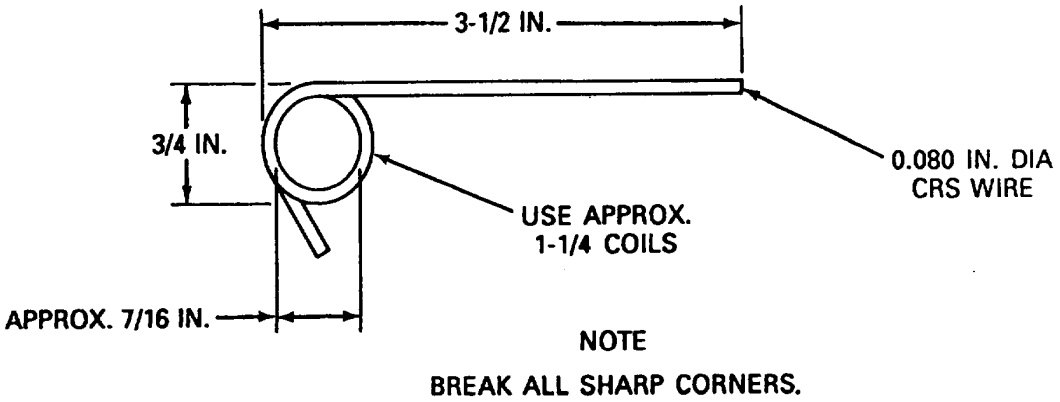
    d. Sew a new protector flap in place with one row of stitching along 12-inch bound edge, following original construction details. Use a light-duty sewing machine and size E nylon thread. Stitching will be 7 to 11 stitches per inch. Lock ends of stitching at least ½-inch.

18. Lanyard and Safety Pin. Replace a damaged lanyard or safety pin that cannot be repaired as follows (refer to illustration detailed on the following page):

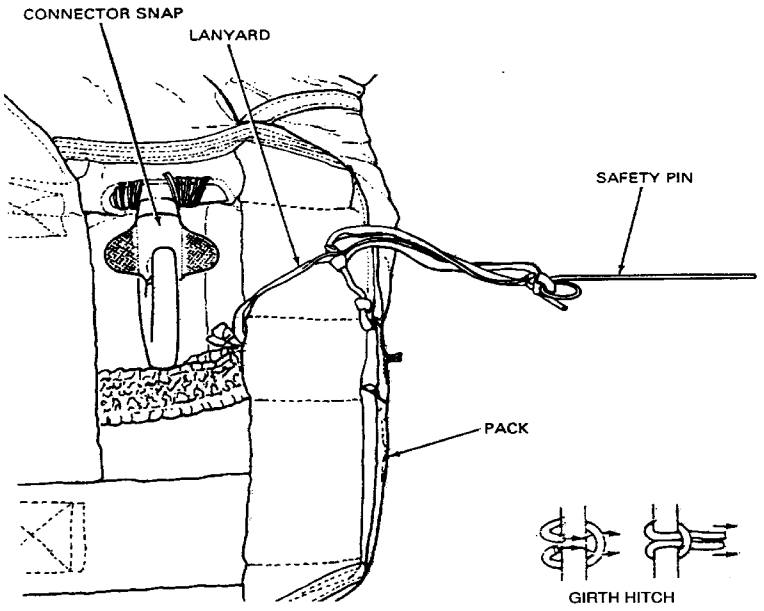
    a. Remove damaged lanyard or safety pin by cutting lanyard or untying knots that secure lanyard to pack and pin.

    b. Cut a 20-inch length of type II or III nylon cord, and remove core cords. Secure ends to cord to prevent fraying.

    c. Cut a 5-inch length of 0.080-inch diameter corrosion resisting steel wire, and form a new safety pin according to details shown in illustration detailed on the following page.



d. Attach center of cord to eye of safety pin with a girth hitch as in illustration below.



e. Tie free ends of lanyard together with a square knot at a point 4-inches from safety pin.

f. Tie free ends of lanyard tightly around center of end grip or webbing with another square knot.

g. Tie an overhand knot in each free end, pulling the knot snug against the square knot.

19. Snap Fastener. Remove and replace a snap fastener as follows:

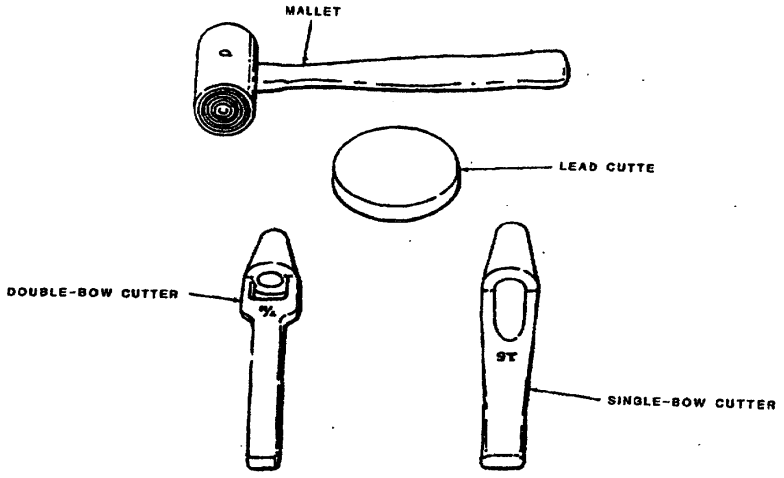
NOTE

A snap fastener consists of a cap, post, socket, and stud.

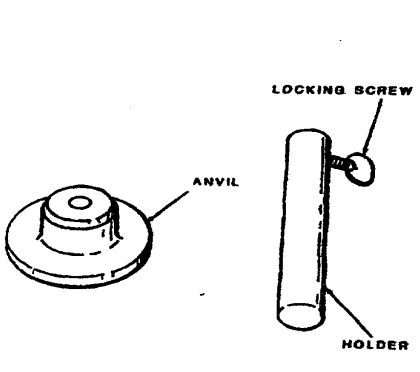
a. To remove the snap fastener, pry the cap off the stud and the post off the socket with a pair of lineman's pliers. Remove the stud from the cloth.

b. If the fabric is damaged beyond repair, replace the pack tray assembly with a serviceable item from stock.

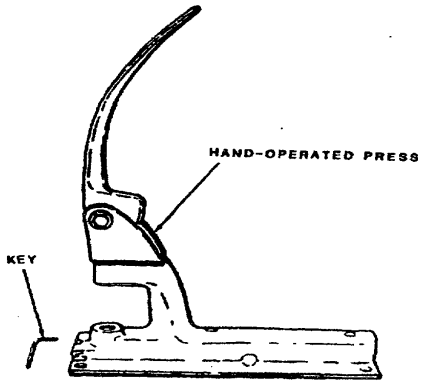
c. Installation of a snap fastener may be performed by three different methods. The most common method is the hand-held method that requires the use of a leather mallet or other non-steel impact device, a holder to hold the appropriate size chuck (see hand held tools), an anvil that is used to contain a compatible size die. A second method of installing a snap fastener is by use of the hand-operated press (see hand-operated press with key). The hand press is a level-type device that can accommodate an appropriate sized chuck and size. When installed in the hand-operated press, the chuck and die are individually secured in position by a threaded screw that is tightened by 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.



TOOLS USED WITH HAND-HELD METHOD



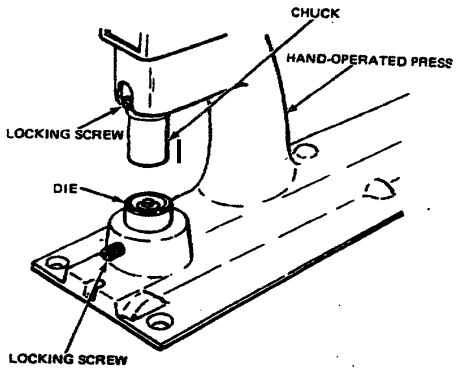
TOOLS USED WITH HAND-HELD METHOD



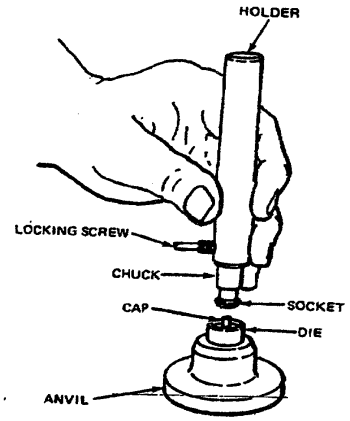
HAND-OPERATED PRESS WITH KEY

d. 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.

e. Fit the socket or stud, on the chuck lower end. Place the cap or post on the die with the barrel facing up.



CHUCK AND DIE INSTALLED IN HAND-OPERATED PRESS



HAND-HELD TOOLS WITH SNAP FASTENER COMPONENTS PREPARED FOR USE

f. Position the material over the barrel of the cap or post. Ensure that the fastener socket or stud will be located on the upper side of the material for subsequence fastener engagement.

g. Place the socket or stud on the barrel of the cap or post. With an applied strike of a mallet, clinch the two snap fastener components to the material.

h. Remove clinched snap fastener components from the chuck and die set and check the seating of the jointed components. If the applicable components are not properly seated, repeat the procedure in step g., above.

i. Check the engagement of the installed snap fastener components with the opposite mating components to ensure the opening and closed snapping process is accomplished without hindrance. If the snap engagement process cannot be accomplished without difficulty, replace the opposite mating snap fastener components using the procedures in d. through g, above.

j. As required, remove the chuck and die from the applicable snap fastener tools by reversing the procedures in step d., above.

k. 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 (see illustrations above).

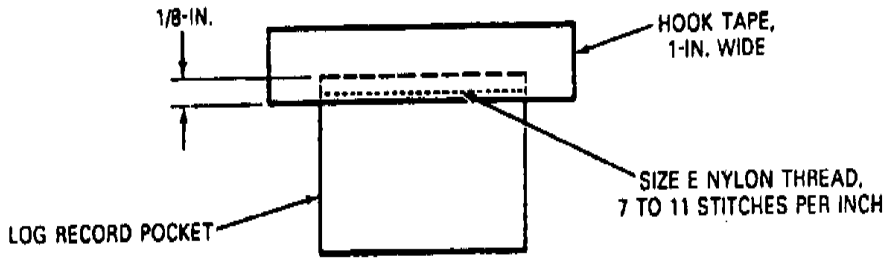
20. Hook and Pile Fastener Tape. Replace damaged hook or pile fastener tape on ripcord protector flap as follows:

a. Cut stitching attaching pile tape and remove from flap.

b. Cut stitching attaching hook tape and log record pocket to flap. Remove from flap.

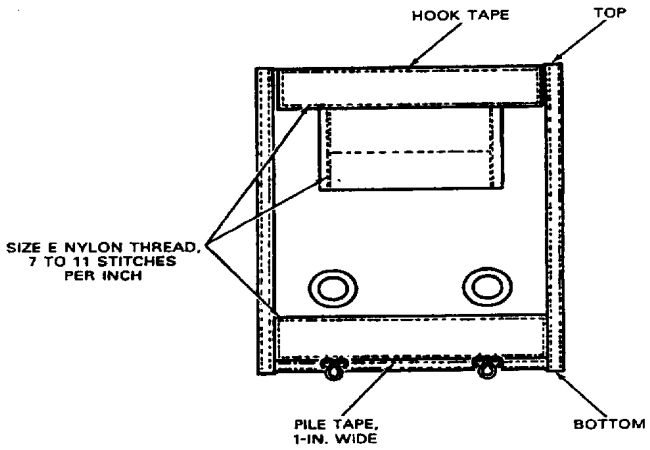
c. Cut stitching attaching hook tape to log record pocket and remove hook tape.

d. Cut a 5 ½-inch long piece of 1-inch wide hook tape and attach to log record pocket using a light-duty sewing machine with size E nylon tape, 7 to 11 stitches per inch.



e. At top of ripcord protector flap, attach log record pocket and hook tape to top of ripcord protector flap. Use a light-duty sewing machine with size E nylon thread, 7 to 11 stitches per inch, with a 1-inch lockstitch.

f. Cut a 5 ½-inch long piece of pile tape and attach it to ripcord protector flap using a light-duty sewing machine with size E nylon thread, 7 to 11 stitches per inch, with a 1-inch lockstitch.



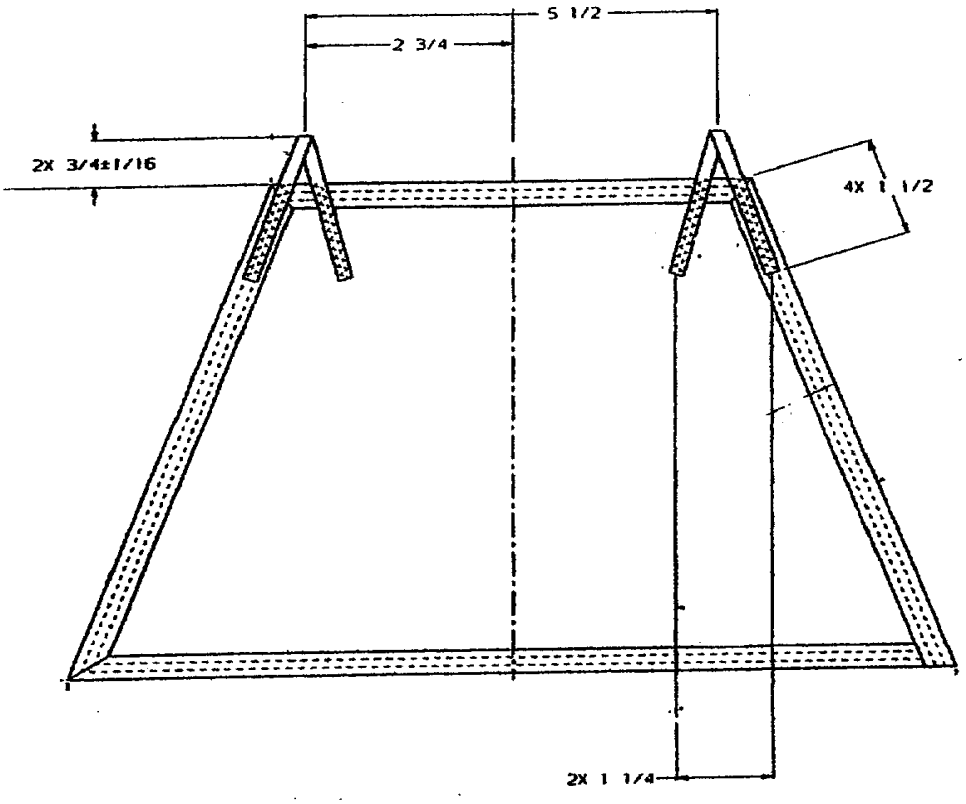
21. Canopy Staging Flap Closing Loop. Repair closing loops as follows:

a. Replace closing loops that are burned, frayed, or torn over one half of the loop.

b. Cut stitching, and remove damaged loop.

c. Cut a 5-inch length of type II nylon cord, core threads removed, and dip the ends of cord in wax.

d. Position the type II nylon cord in the same place damaged material was removed.



e. Sew loop in place on the top portion of the staging flap using a zig-zag stitch pattern 1 ½-inches in length (plus or minus $^{1}/_{8}$-inch). Use a light-duty 308 sewing machine, size E nylon thread, and 8 to 12 stitches per inch.

REPLACE

If a pack tray assembly is damaged beyond repair, replace it with a serviceable item from stock.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS RIPCORD ASSEMBLY

THIS SECTION COVERS:
- Replace
- Test

INITIAL SETUP:

Tools
Inspection Kit, Ripcord Grip (Item 12, WP 0044 00)

Personnel Required
92R (10) Parachute Rigger

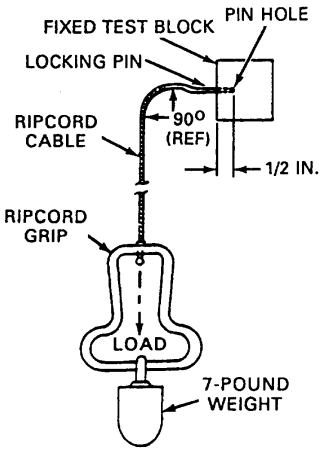
Materials/Parts
Tape, Pressure-Sensitive, Blue, ½-IN Wide (Item 32, WP 0057 00)
Tape, Pressure-Sensitive, Yellow, ½-IN Wide (Item 31, WP 0057 00)

REPLACE
Replace with a new like item from stock.

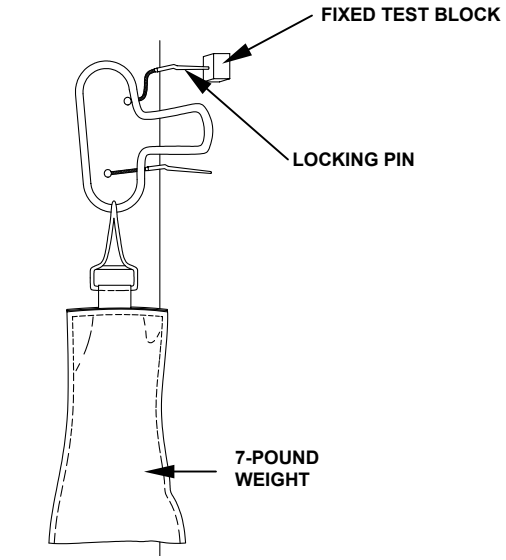
TEST

1. Perform a ripcord locking pin test on the T-10R and MIRPS ripcord grip as follows:

   a. Insert ½-inch of each locking pin end into hole of a fixed ripcord locking pin test. Ensure the block is firmly secured in the fixed position.



T-10R RIPCORD GRIP



MIRPS RIPCORD GRIP

   b. Suspend a 7-pound weight from the ripcord grip handle, exercising care to apply the load gradually without impact. The hands or lifting device, as applicable, must be fully removed from the weight.

NOTE

A ripcord-locking pin should withstand a 7-pound load without assuming a permanent set.

c. Remove the weight, rotate the locking pin one-quarter turn, and test the pin again by reapplying the load as prescribed in step b., above.

d. Repeat the procedure is step c., above, until the locking pin has been tested in four positions and rotated one-quarter turn prior to each test.

NOTE

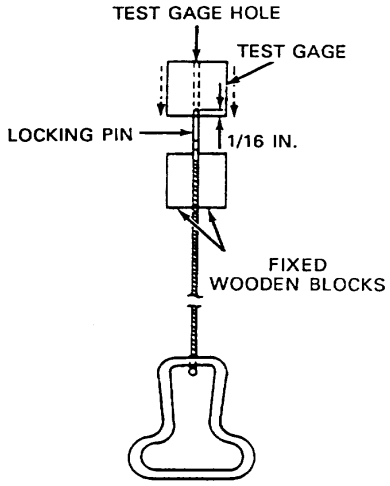
Each locking pin on a ripcord length will be tested under load in four positions.

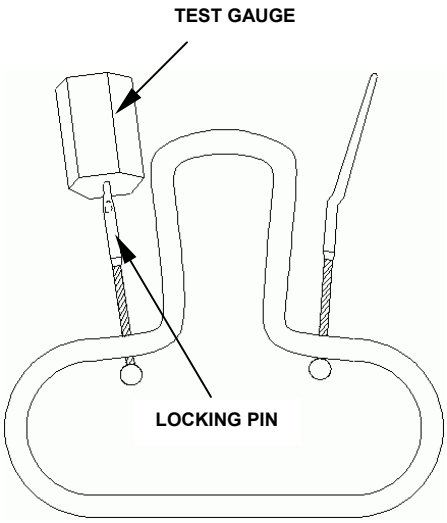
e. Remove the weight from the ripcord grip and further remove the locking pin from the test block.

f. Visually, examine the test block locking pin to ascertain if it is marred, cracked, or distorted during the test under load. If any defects are noted, the ripcord will be removed from service.

g. Repeat the procedures in steps b. through f. above, for the remaining locking pins on the ripcord length. After testing all the locking pins, if there are no visual defects apparent, each of the locking pins will then be further tested for bends.

h. Place a locking pin in a vertical position with the pin end facing upward and either clamp the pin between two wooden blocks at a point below the pin or hold between the thumb an index finger of one hand.





i. Using a test gage block, manually locate the hole in the block over the end of the secured pin, allowing for a $^{1}/_{16}$-inch maximum insertion.

j. With the axis of the gage block hole aligned with the axes of the locking pin, release the gage block and allow the block to fall freely.

k. When the weight of the gage block fails to cause full penetration on the pin into the gage block hole, the pin is excessively bent and ripcord will be removed form service.

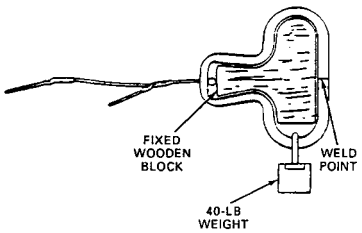
l. Repeat the procedures in steps h. through k., above, for each of the remaining locking pins on the ripcord length.

2. A ripcord, which has satisfactorily completed the locking pin test in step a., above, will be further tested to verify that the ripcord grip-tubing joint is properly welded. Test a ripcord as follows:

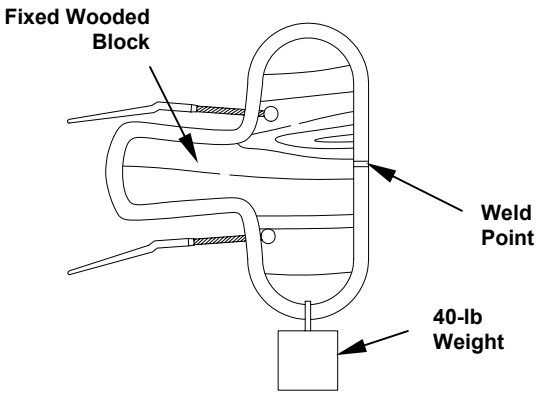
a. Position the ripcord on a fixed wooden block previously cut to a size, which will allow the grip to fit snugly.

b. Attach and suspend a 40-pound weight from the corner of the grip nearest the weld. Care will be taken to ensure that the total weight is suspended without impact. Hands or lifting devices, as applicable, must be fully removed from the weight.

T-10R RIPCORD GRIP



MIRPS RIPCORD GRIP



c. Using suitable illumination, visually inspect the welded joint for cracks or breaks. If any cracks or breaks are detected in the welded area, the ripcord will be removed from service.

d. Remove the weight from the ripcord grip and further remove the grip from the wooden block or hook, as applicable.

3. For the T-10R ripcord grip, which has been tested according to the above procedures and is considered serviceable, will be marked to indicate test accomplishment. The marking will be made by wrapping two turns of ½-inch wide yellow pressure-sensitive tape around the center of the grip tubing at a point near the weld. However, ensure the tape wrapping does not cover the welding point.

4. For the MIRPS ripcord grip, after completion the ripcord grip weight test and marking it with yellow tape, wrap two turns single ½-inch blue pressure sensitive tape on the opposite side of the yellow tape ensuring the tape wrapping does not cover the welded joint.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS EJECTOR SPRING ASSEMBLY FOR THE MIRPS

THIS SECTION COVERS:
- Repair
- Test
- Replace

INITIAL SETUP:

Equipment Condition	Personnel Required
Completely Packed	92R (10) Parachute Rigger

NOTE

The test tube (PVC pipe) and the 25-lb weight constitute the spring compression test set. The spring compression test set is locally manufactured.

REPAIR
Hand darn the material covering the spring IAW WP 0014 00. Do not exceed five darns.

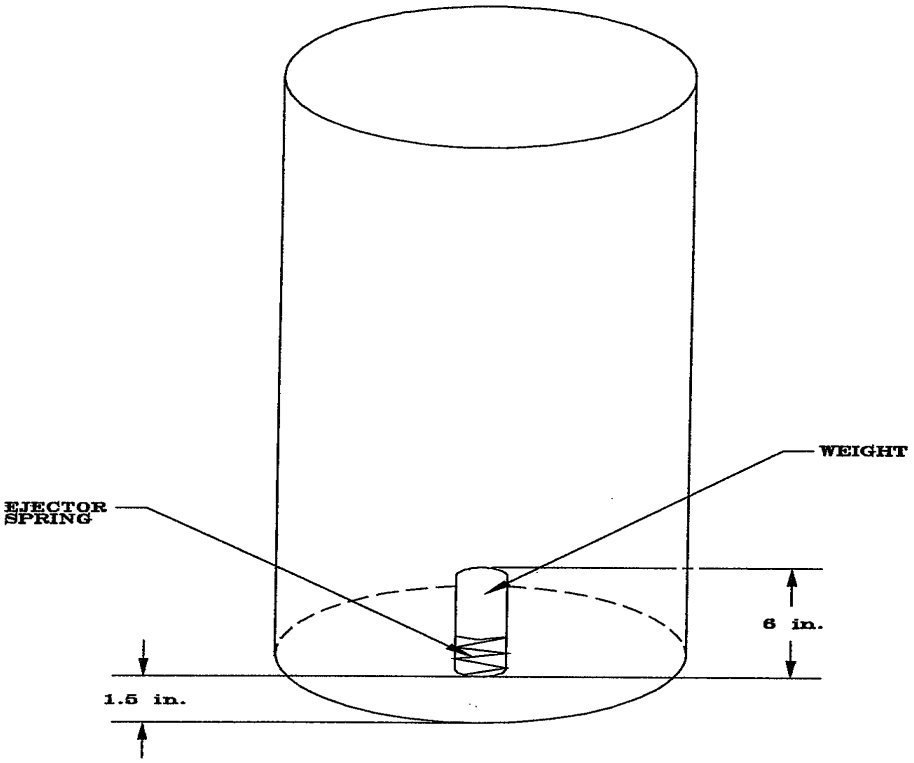
NOTE

Perform a compression test during initial receipt, during each re-pack and each time ejector spring is replaced. It may be necessary to allow the spring to remain in a relaxed state for up to 24-hours before testing (especially those that have been compressed/packed for 365-days).

TEST
Perform the spring compression test as follows:

1. Place the tube on a flat hard surface in the vertical position with the 6-inch slot closed to the floor.
2. Place the spring inside the tube.
3. Lower the 25-pound weight (slowly) onto the spring.

4. Check to ensure that the spring is visible between the 6-inch slot in the tube.



5. If the top of the spring falls above or below the slot, discard and replace the ejector spring.

CAUTION

Dropping the weight onto the spring will result in unnecessary replacement of the spring and cause irreparable damage to the material covering the spring.

REPLACE

If the ejector spring is damaged beyond repair, replace it with a new, or like new item from stock.

END OF WORK PACKAGE

UNIT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
7-POUND MINIMUM RIPCORD PULL TEST FOR THE MIRPS

THIS SECTION COVERS:
- Test

INITIAL SETUP:

Materials/Parts
Inspection Kit, Ripcord Grip (Item 12, WP 0044 00)

Personnel Required
92R (10) Parachute Rigger

Equipment Condition
Completely packed.

TEST

7-Pound Minimum Ripcord Pull Test

During the annual re-pack cycle for the MIRPS, a 7-pound ripcord pull test will be performed on each system to ensure the integrity of the ripcord grip pocket as follows:

NOTE

To conduct the minimum 7-pound pull test, the packed MIRPS shall be firmly attached by its two-connector snaps to a suitable rigid structure such that the pack tray is positioned horizontally with the ripcord grip pointing down. There must be sufficient clearance beneath the horizontally suspended MIRPS to suspend a weight from the ripcord grip and allow it to withdraw the ripcord grip.

1. Prior to unpacking the MIRPS for the annual re-pack cycle, carefully attach a 7-pound weight to the ripcord grip and *very slowly* remove your hand from under the weight to allow the weight to be slowly transferred to the ripcord grip. Do not release the weight suddenly or let it drop since this will invalidate the test. The weight must be evenly distributed around or centered on the ripcord grip to prevent the grip from tilting. The weight must not completely withdraw the ripcord pins from the soft loops or the ripcord completely from the pocket.

2. If the 7-pound weight causes complete withdrawal of the ripcord pins or the ripcord grip, then the ripcord pocket is too loose and must be replaced IAW WP 0028 00.

3. If the MIRPS passes the 7-pound minimum ripcord pull test, repack the MIRPS IAW WP 0013 00.

4. Annotate completion of this test (test conducted, name of tester, date completed) on the notes page of the parachute log record book (DA Form 3912), or applicable location in the NAVWPNCEN or NAVWPNS CL 13512/11 (Parachute History Record).

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PREPARATION FOR STORAGE

Storage Criteria. Administrative storage of air delivery equipment will be accomplished in accordance with AR 750-1 and the instructions furnished below.

General Storage Requirements. To ensure serviceability and standards of storied air delivery equipment are maintained, the following requirements must be followed:

1. When available, a heated building will be used to store parachutes and other air delivery items.

2. Air delivery equipment will be stored in a dry, well-ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents, and direct sunlight.

3. Air delivery equipment 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. Air delivery items will not be stored in a damaged, dirty, or damp condition.

5. All stored air delivery items will be marked, segregated, and located for accessibility and easy identification.

6. Air delivery equipment 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 shelving of similar storage accommodations is not available, locally fabricate construction materials (suitable lumber or wooden boxes) for storage maybe used as long as it meet those requirements outlined with in this WP.

7. All available materials handling equipment should be used as much as possible in the handling of air delivery items.

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.

Storage Specifications for Parachutes. In addition to the storage requirements mentioned within paragraph 2., above, the following is a list of specifics that must be enforced when storing parachutes:

1. Except for those assemblies required for contingency operations, parachutes will not be stored in a packed configuration.

2. Stored parachute assemblies will be secured from access by unauthorized personnel.

3. A parachute that 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.

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PREPARATION FOR SHIPMENT

THIS SECTION COVERS:

- In-Storage Inspection
- Shipment
- Accordion Folding/ Rigger Rolling

INITIAL SETUP:

Equipment Condition	Personnel Required
Packed/Unpacked	92R (10) Parachute Rigger

IN-STORAGE INSPECTION

General Information. An in-storage inspection is a physical check conducted on a random sample of parachutes, which are located in storage.

Intervals. The T-10R and the MIRPS, while in storage, will be inspected at least once every 30 calendar days and at more frequent intervals if prescribed by the local parachute maintenance officer.

Inspection. Inspect to insure that the parachute is ready for issue as follows:

1. Check the 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.

SHIPMENT

Initial Shipment. The initial package and shipping of parachutes is the responsibility of item manufacturers who are required to comply with federal and military packing 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 packing materials.

Shipping Between Maintenance Activities. The shipping of parachutes between organization and direct support maintenance activities will be accomplished on a signature verification basis using whatever means of military transportation is available. Unpacked parachutes will be tagged in accordance with DA PAM 738-751, and rolled, folded, or placed loosely in a parachute pack, deployment bag, or other suitable container, as required. Unpacked parachutes will be transported in original shipping containers. During shipment, every effort will be made to protect parachutes from weather elements, dust, oil, grease, and acids. Vehicles used to transport parachutes will be inspected to ensure the items are protected from the previously cited material damaging containers.

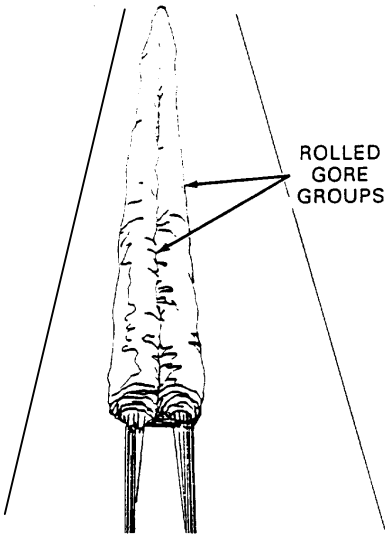
Other Shipping Instructions. Parachutes destine for domestic or overseas shipment will be packed and marked in accordance with AR 700-15, TM 38-230-1, and TM 38-230-2. Shipment of parachutes will be accomplished in accordance with TM 10-1670-201-23/T.O. 13C-1-41/NAVAIR 13-1-17.

ACCORDION FOLDING/RIGGER ROLLING

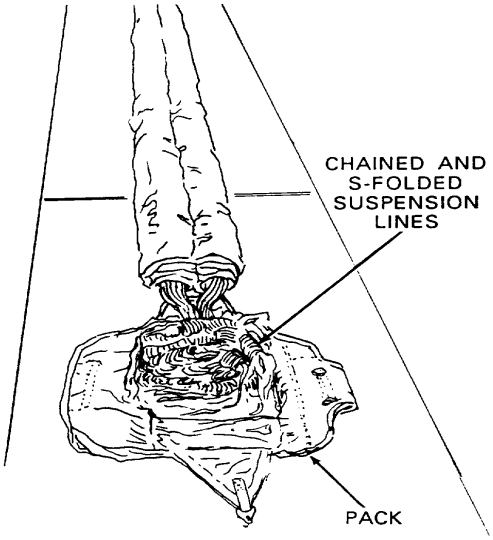
Accordion Folding. Personnel parachute canopy assemblies that are not packed for use should be accordion folded prior to entry into storage. To accordion fold a parachute canopy assembly, proceed as follows:

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. Release tension.

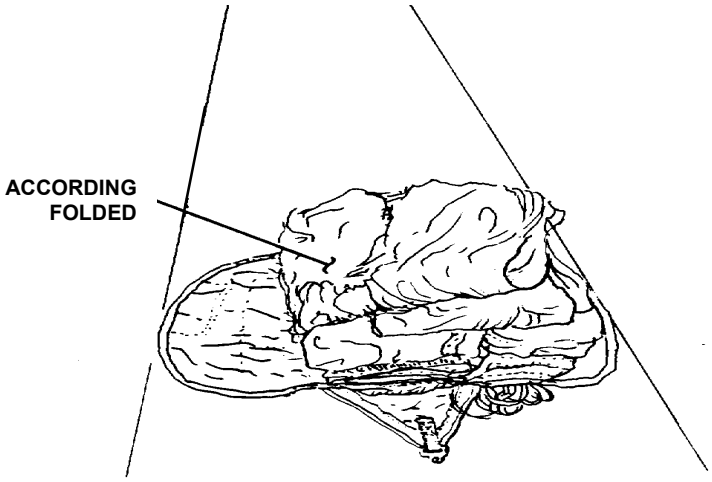


3. Daisy chain the suspension lines and S-fold the daisy chained lines on top of the applicable parachute pack.



4. Place the lower end of the canopy on top of the S-fold suspension lines and locate the lower edge of the canopy skirt at the lower end of the pack.

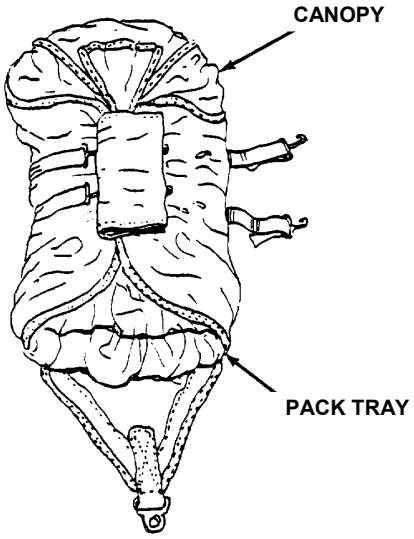
5. Accordion fold the remaining canopy length neatly on top of the canopy.



6. Secure the T-10R pilot chute by folding the frame downward and wrapping the pilot chute suspension lines around canopy.

7. Secure the MIRPS pilot chute with bridle by S-folding neatly on top of canopy.

8. Temporarily secure the folded canopy to the pack tray with the pack opening spring bands.

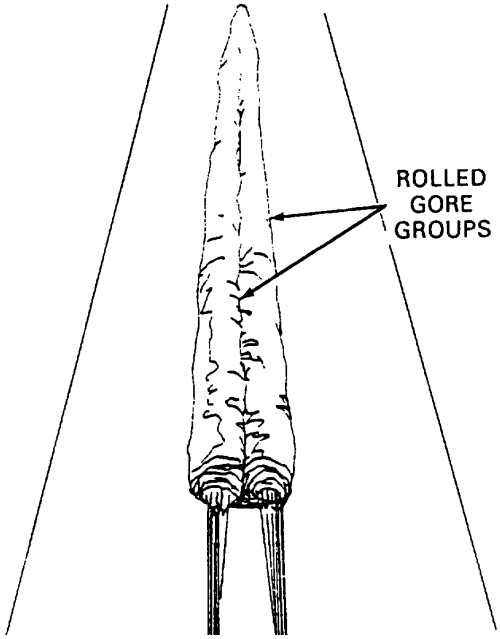


9. Upon completion of the accordion folding process, place the folded parachute assembly in a suitable type container for storage.

Rigger Rolling. Personnel parachute assemblies will be rigger rolled prior to being sent to or returned from a parachute repair activity. This allows for ease of handling and prevents 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 flat circular motion, flip each of the two gore groups up and to the center radial seam. Tighten each gore group roll by hand; bring both rolled gore groups to gather at the center radial seam.



3. Release tension and disconnect the canopy vent from the vent apex lock.

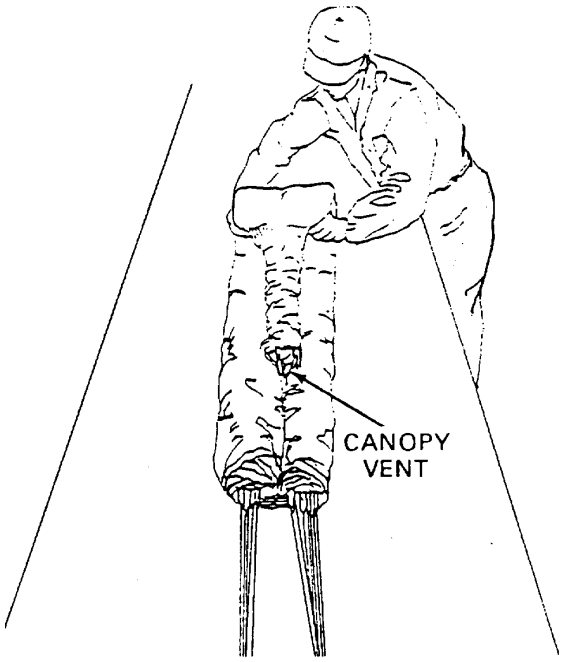
4. Secure the T-10R pilot chute by folding the frame downward and wrapping the pilot chute suspension lines around the canopy.

5. Secure the MIRPS pilot chute with bridle by neatly S-folding the canopy and wrapping the bridle line around the canopy.

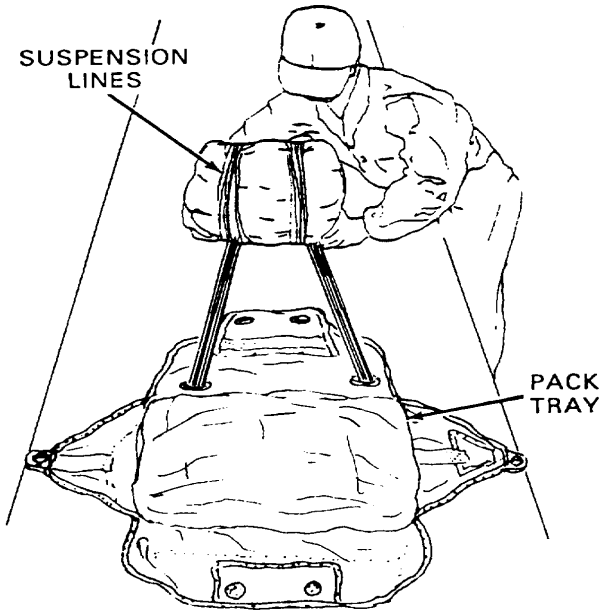
6. Fold the canopy vent down between the rolled gore groups to a point within 18-inches of the canopy skirt lower edge.

7. Depending on the type of parachute, place the 3-foot 5-inch pilot chute horizontally across the canopy vent. If applicable, place the 5-foot pilot parachute over the canopy vent.

8. Beginning at the folded upper end of the canopy, roll the canopy tightly toward the canopy skirt. Ensure the width of the rolled canopy does not exceed the width of the applicable parachute pack.

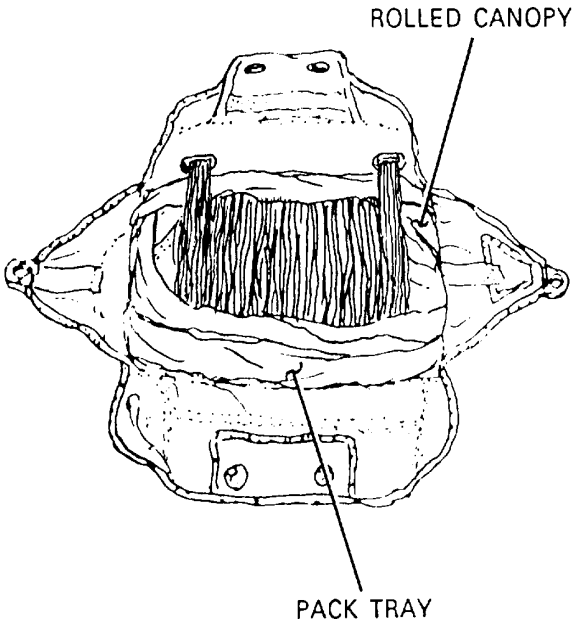


9. Continue rolling the canopy toward the lower end of the suspension lines, rolling the lines around the center of the roll.



10. Disconnect the connector snaps from the tension plate and place the rolled canopy assembly on top of the pack.

11. Secure the rolled canopy assembly within the confines of the pack using either the pack opening bands or a length of suitable type cord.



END OF WORK PACKAGE

CHAPTER 4

DIRECT SUPPORT MAINTENANCE INSTRUCTIONS
FOR
PARACHUTE, PERSONNEL TYPE:
24-FOOT DIAMETER, TROOP,
CHEST, RESERVE (T-10R)
AND THE
MODIFIED IMPROVED RESERVE
PARACHUTE SYSTEM (MIRPS)

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
GENERAL REPAIR PROCEDURES

THIS SECTION COVERS:

- Basting and Temporary Tacking
- Stitching and Restitching
- Darning
- Zig-zag Sewing
- Patching

INITIAL SETUP:

Tools
Specified in paragraph applicable to the item being repaired.

Equipment Condition
Unpacked. Canopy with defects recorded and clean.

Materials/Parts
Specified in work packages/paragraphs applicable to the item being repaired.

Personnel Required
92R (10) Parachute Rigger

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.

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 that is of a contrasting color to the material being worked.

2. Basting will be made using a single strand of size A, nylon thread.

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

4. Temporary tacking will usually be made using a length of size E nylon thread. However, an alternate type thread may be specified within the paragraph applicable to the item.

5. Immediately upon completion of a repair, remove previously made basting or temporary tacking stitches.

Stitching and Restitching. Perform stitching and restitching as follows, referring to tables 1 and 2:

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 ¼-inch into undamaged stitching at each end, when possible. When restitching parachute canopy assemblies, stitch directly over original stitching and follow the original stitch pattern as closely as possible.

Table 1. 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 3530-01-181-1420.
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 3530-01177-8588
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
BT	SEWING MACHINE, INDUSTRIAL: BARTACK; NSN 3530-00-892-4637

Table 2. Stitching and Restitching Specifications

Component	Recommended Sewing Machine (Code Symbol)	Stitches per Inch	Thread Size
Gore Section	LD DN LD ZZ	7 to 11 Darn 7 to 11 7 to 10	E A E E
Suspension Line	MD ZZ	7 to 11	E
V-Tab	LD ZZ	7 to 11 7 to 10	E E
Upper Lateral Band	MD	7 to 11	E
Lower Lateral Band	MD	7 to 11	E
Radial Seam	LD	7 to 11	E

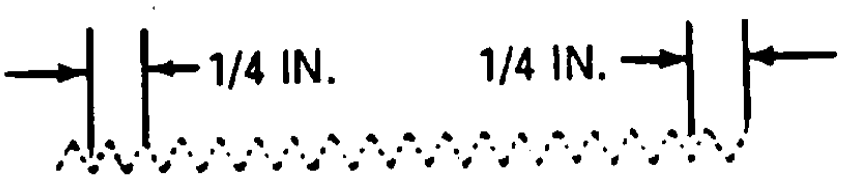
2. Other parachute items. Stitching and restitching on other parachute items constructed from cloth, canvas, and webbing should be accomplished with thread, which matches the color of the original stitching, when possible. Backstitching at least ½-inch should lock all straight stitching. Restitching should be locked by overstitching each end of the stitch formation by ½-inch. Zig-zag stitching does not require locking; however, zig-zag restitching should extend at least ¼-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.

ZIG-ZAG SEWING

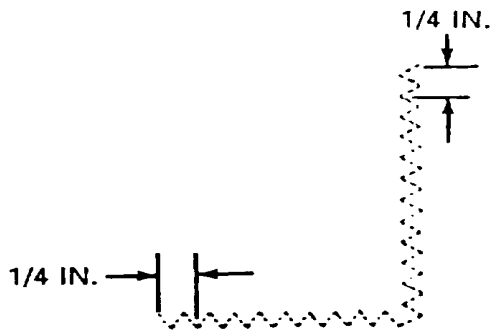
Components of the parachute assembly, except the canopy, made from textile materials that have sustained cut or tear damage may be repaired by zig-zag sewing provided the applicable damaged area does not have any material missing and the cut or tear is straight or L-shaped (refer to table 1 and 2). Should 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 with a zig-zag sewing machine, using the following procedures:

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

2. Beginning at a point ¼-inch beyond one end of the cut or tear, stitch lengthwise along the damaged area to a point ¼-inch beyond the opposite end of the cut or tear.



3. The sited stitching procedure will also apply to an L-shaped cut or tear.



4. If applicable, restencil informational data or identification marks as prescribed in WP 0016 00.

END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
MARKING AND RESTENCILING

THIS SECTION COVERS:
- Marking
- Restenciling
- Remarking and Restenciling

INITIAL SETUP:

Tools
Brush, Stenciling (Item 4, WP 0044 00)

Materials/Parts
Ink, Marking (Item 16/17, WP 0057 00)
Marker, Felt Tip, Black (Item 18, WP 0057 00)
Pen, Ball Point (Item 19, WP 0057 00)
Stencil Board, Oiled (Item 27, WP 0057 00)

Equipment Condition
Layout on packing table or other suitable area.

Personnel Required
92R (10) Parachute Rigger

NOTE

Stenciling should be used whenever possible. A ballpoint pen or authorized felt tip marker should be used only where stenciling in not possible, or when stenciling devices are not available. Any type ballpoint pen using black or blue ink may be used for marking on labels only.

Original stenciling data or marking that becomes faded, illegible, obliterated, or removed as a result of performing a repair procedure will be remarked with a ballpoint 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.

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

RESTENCILING
Proceed as follows:

1. Cut oiled stencil board to original lettering type and size of data to be restenciled.
2. Place cut stencil board 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 stencil board in place and, using stenciling brush filled with parachute marking ink, restencil original marking.

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.

END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS
SEARING AND WAXING

THIS SECTION COVERS:
- Searing
- Waxing

INITIAL SETUP:

Tools
Knife, Hot Metal (Item 15, WP 0044 00)
Pot, Melting (Item 29, WP 0044 00)

Materials/Parts
Beeswax, Technical (Item 3, WP 0057 00)
Wax, Paraffin (Item 45, WP 0057 00)

Equipment Condition
Unpacked

Personnel Required
92R (10) Parachute Rigger

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 parachutes will normally be heat-seared or dipped in 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.

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.

WAXING
The fraying or unraveling of cotton or nylon tape, webbing, and cord length ends may be prevented by dipping ½-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 ensure the wax completely penetrates the material rather than coating the exterior fabric.

END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS UPPER LATERAL BAND

THIS SECTION COVERS:
- Repair

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Knife, Hot Metal (Item 15, WP 0044 00)
Pot, Melting (Item 29, WP 0044 00)
Sewing Machine, Medium-Duty (Item 41, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Materials/Parts
Thread, Nylon, Size E (Items 39/40, WP 0057 00)
Webbing, Nylon, Tubular, 1-IN (Item 48, WP 0057 00)

Equipment Condition
Unpacked, canopy laid flat.

Personnel Required
92R (10) Parachute Rigger

1. Restitching. Restitching of upper lateral band is authorized. Use a medium-duty sewing machine size E nylon thread of contrasting color, and 7 to 11 stitches per inch. Stitch directly over the original stitch pattern as closely as possible. Lock each row of stitches at least 2-inches each end.

NOTE

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

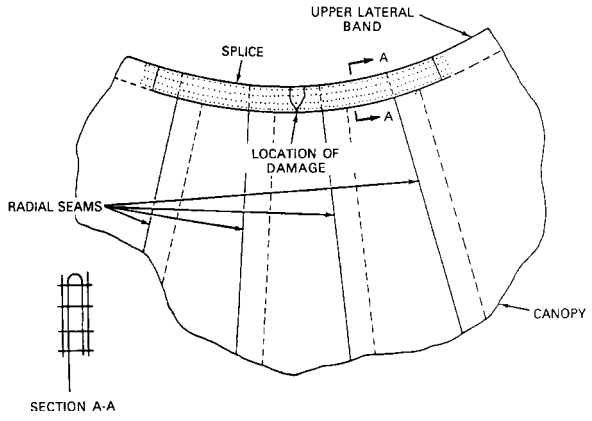
2. Damage Between Radial Seams. Repair as follows:

   a. Cut stitching of two apex/vent lines on each side of damaged area.

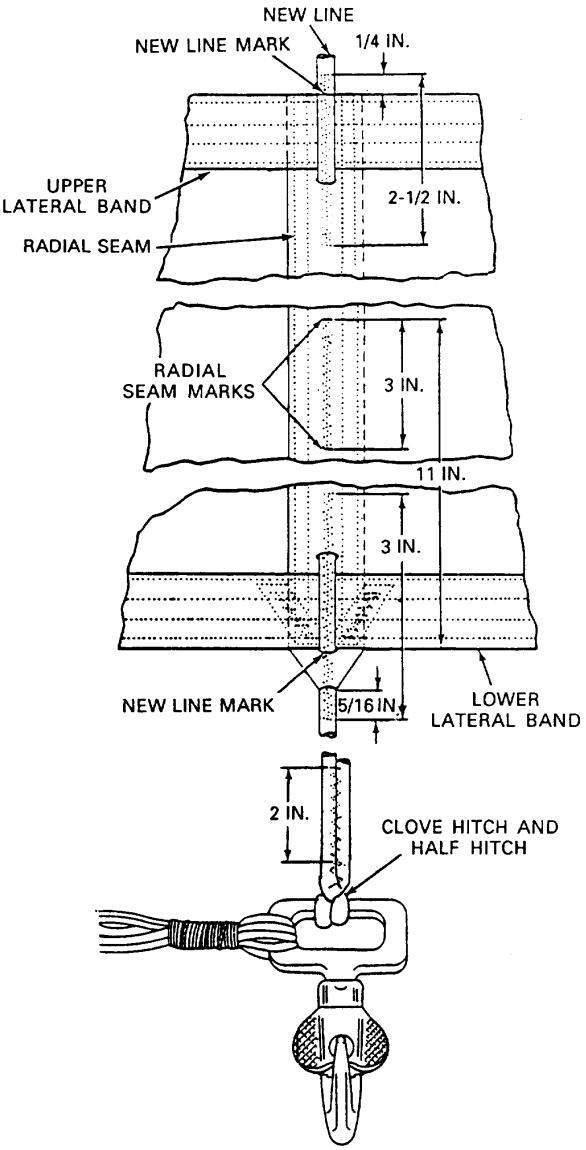
   b. Invert apex, and smooth canopy around damaged area.

   c. 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 (WP 0015 00).

   d. Using a medium-duty sewing machine with size E nylon thread, 7 to 11 stitches per inch, position webbing on damaged area and sew it in place with four continuous rows of stitches. Overstitch ends of webbing ½-inch.



e. Reposition apex/vent lines and sew in place according to original construction, using a medium-duty zig-zag sewing machine.



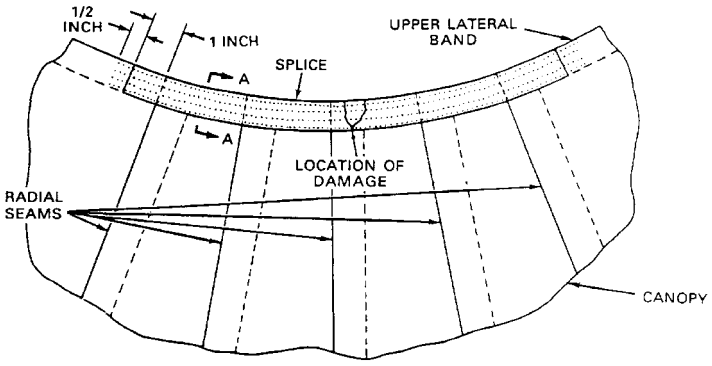
3. Damage Extending Into Radial Seam. Repair as follows:

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

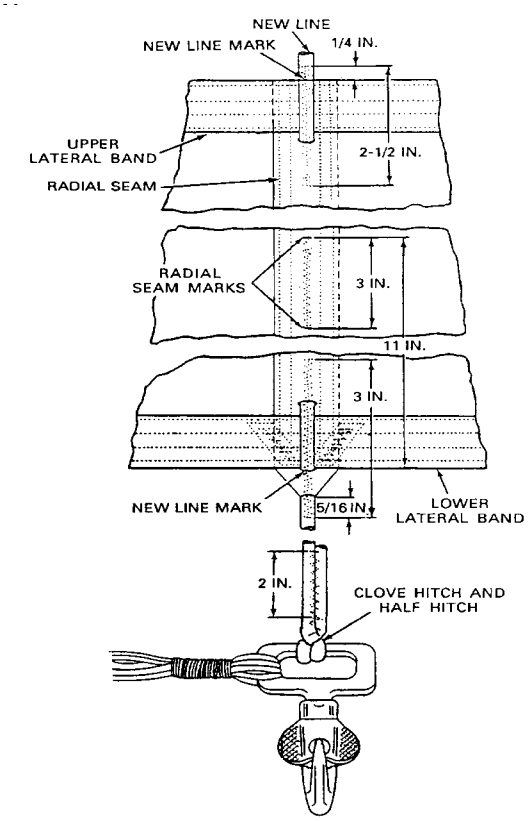
   b. Invert apex and smooth canopy around damaged area.

   c. 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. To sear or dip ends of webbing, refer to WP 0015 00.

d. Position webbing on damaged area. Use a medium-duty sewing machine and E nylon thread to stitch. Sew webbing in place with four continuous rows of stitching, 7 to 11 stitches per inch. Over stitch ends of webbing ½-inch.



e. Reposition apex/vent lines and sew in place according to original construction, using a medium-duty zig-zag sewing machine.



END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS CANOPY GORE SECTION

THIS SECTION COVERS:
- Replace

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Sewing Machine, Light-Duty (Item 39, WP 0044 00)
Shears (Item 43, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Equipment Condition
Unpacked, canopy laid flat.

Personnel Required
92R (10) Parachute Rigger

Materials/Parts
Cloth, Parachute, Nylon, Type I (Item 8, WP 0057 00)
Thread, Nylon, Size E (Items 39/40, WP 0057 00)

REPLACE

1. Normal Gore Section Replacement. Gore sections will be replaced as follows:

   a. Remove the damaged section by cutting the section material at a point ½-inch in from the inside edge of each adjustment seam or lateral band.

   b. Cut the remaining fabric diagonally at each corner to allow the raw edges to be folded back.

   c. Fold each raw edge back by ½-inch and pin and baste each folded edge to complete area preparation. Basting will be performed according to procedures in WP 0014 00.

   d. Position a piece of serviceable parachute cloth, equal to the material used in original gore section construction, over the prepared area.

   e. Cut the cloth piece to a size that will cover the entire prepared area. Allow as many salvaged edges of the cloth piece to remain as possible. Also, allow at least 3-inches of extra fabric to remain on each raw edge.

   f. Fold under each salvaged edge of the cloth piece to a width equal to the width of adjacent seams and align the cloth folded edges with the outside edges of adjacent seams or lateral bands. Secure the seams or lateral bands with pushpins.

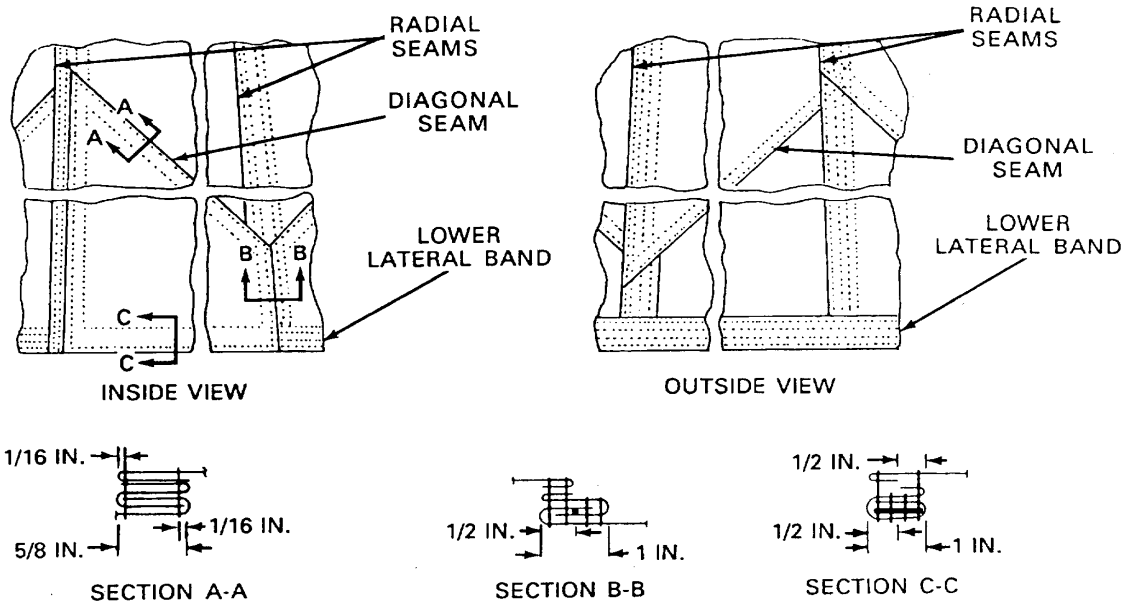
   g. Fold the raw edges of the cloth piece as follows:

      (1) Fold under the raw edges located adjacent to a seam or a lateral band, as applicable, and align the folded edges with the outside edges of the seam or lateral band. Secure the aligned edges of the applicable seam or lateral band with pushpins.

      (2) Fold under the raw edges located along radial seams that have four rows of stitching and align the folded edges with the center of the radial seams. Secure the folded edges to the radial seams with pushpins.

   h. Secure the situated replacement section cloth to the canopy material by basting along each of the folded edges. Basting will be made according to the procedures in WP 0014 00.

i. Remove the pushpins from the edges of the replacement section and machine sew the section material to the canopy inside by stitching, according to the illustration below. Use the stitching procedures in WP 0014 00 with size E nylon thread, 7 to 11 stitches per inch.



j. Turn the canopy right side out and trim the raw edges of the section material to a point ½-inch from the stitching made in step i. above.

k. On the canopy outside, stitch completely around the prepared area using the stitching criteria in step i. above.

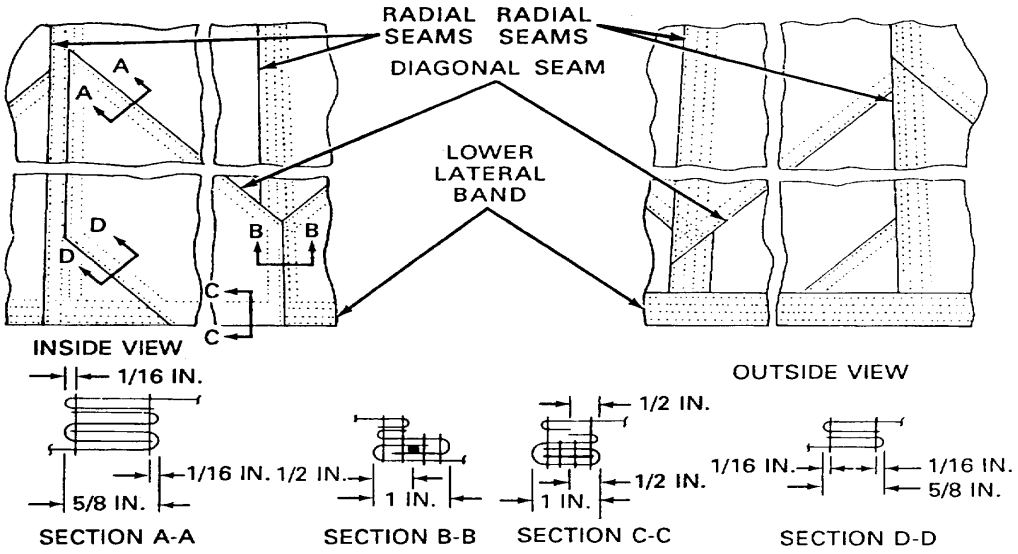
l. Reposition any item(s) removed or laid aside in the original location(s) and reattach each item to the canopy by restitching according to original construction details and WP 0014 00. Use size E nylon thread and 7 to 11 stitches per inch.

m. Stencil information data or other markings on the replacement section using the procedures in WP 0016 00.

2. Modified Gore Section Replacement. If a gore section that is located next to the lower lateral band does not have damage extending into a corner that is bounded by the lower lateral band and a radial seam, the section may be replaced using a modified method as follows:

a. When removing the damaged section, cut the section material diagonally across the corner. Allow the corner material of the original section to remain intact and allow a sufficient amount of material to remain to prevent the replacement section overlapping the pocket band.

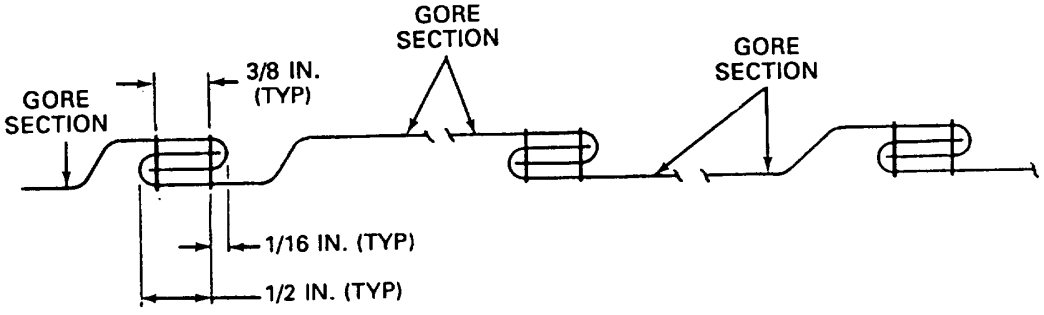
b. Except for the procedure in paragraph 1., step b., above, complete the section replacement using the applicable procedures outlined in this WP and the illustration below.



NOTE

When replacing a gore section using the modified replacement method, it is not necessary to remove the V-tab from the radial seam located alongside the damaged section.

3. Multiple Gore Section Replacement. If two or more adjustment sections require replacement, cut and remove all affected sections, including the joining diagonal seams as prescribed in this WP, above. Prepare the material for the replacement sections and joint the replacement sections together with ½-inch wide lapped seams (refer to illustration below). Install the joined replacement sections using the applicable procedures in this WP, above.



END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS RADIAL SEAM

THIS SECTION COVERS:
- Repair

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Sewing Machine, Light-Duty (Item 39, WP 0044 00)
Shears (Item 43, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Equipment Condition
Unpacked, canopy laid flat.

Personnel Required
92R (10) Parachute Rigger

Materials/Parts
Cloth, Parachute, Nylon, Type I (Item 8, WP 0057 00)
Thread, Nylon, Size E (Items 39/40, WP 0057 00)

REPAIR

1. Preparation for Patching. Prepare the radial seam for patching 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, bias-cut a rectangular patch 3 ½-inches wider and 4-inches longer than the damaged area. If one piece of material is not long enough to achieve the required size, join additional pieces of bias-cut material with ½-inch wide lapped seams.

NOTE

Patch material for a damaged area that does not exceed 1-inch need not be bias cut.

2. Patching Radial Seam. There is no limit to the length of a 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. Fold the patch material in half lengthwise and align the raw edges.

   b. Make a ½-inch fold-under on the raw edges of the patch material and baste the fold-under using the procedures in WP 0014 00.

   c. Make a 1-inch fold-under on each end of the patch material and baste each fold-over using the procedures in WP 0014 00.

d. Center the patch lengthwise over the damaged area with the folded edges facing down. Secure the patch to the canopy with pushpins and baste patch to the canopy using the procedures in WP 0014 00.

e. Remove the pins securing the canopy to the repair table. Secure the patch to the radial seam by machine sewing; using the procedures in WP 0014 00 with size E nylon thread and 7 to 11 stitches per inch. Sew the radial seam patch with four rows of stitching, using a light-duty sewing machine.

f. When applicable, repeat the stitching procedures in step e. above, for a patch on the opposite side of the radial seam channel.

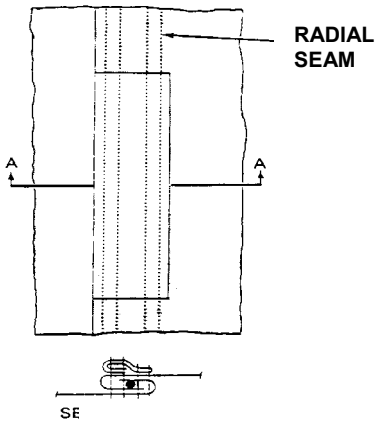


Illustration for outside patch

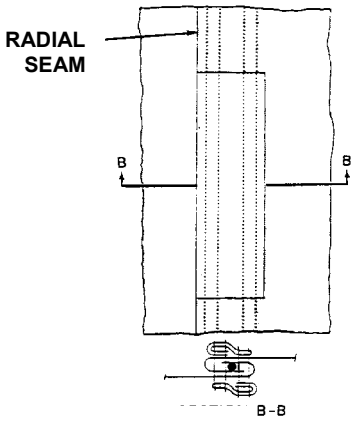


Illustration for inside patch

g. Reposition in their original locations the items removed or laid aside in paragraph 1., step b., above. Reattach each item to the canopy by restitching in accordance with original construction details and WP 0014 00. Stitch with size E nylon thread and 7 to 11 stitches per inch.

END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS V-TAB

THIS SECTION COVERS:
- Replace

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Knife, Hot Metal (Item 15, WP 0044 00)
Sewing Machine, Light-Duty (Item 39, WP 0044 00)
Sewing Machine, Light-Duty, Zig-zag (Item 40, WP 0044 00)
Shears (Item 43, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Materials/Parts
Thread, Nylon, Size E (Items 39/40, WP 0057 00)
Webbing, Nylon, Type I (Item 53, WP 0057 00)

Equipment Condition
Unpacked, canopy laid flat.

Personnel Required
92R (10) Parachute Rigger

REPLACE
If V-tab requires replacement, proceed as follows:

1. Position the canopy assembly on a repair table or other repair surface and turn the inside of the lower lateral band to the outside to place the damaged V-tab facing up.

2. Using an authorized marking aid of contrasting color, mark the suspension line, which is contained within the damaged V-tab at the point where the line intersects the lower edge of the lower lateral band.

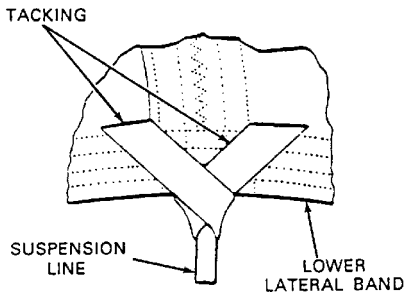
3. Remove the damaged V-tab from the canopy by cutting the stitching securing the V-tab to the lower lateral band and the suspension line.

4. Using nylon webbing, type I, cut a 5-inch length of material on a 45-degree bias and sear the ends.

5. Center the material lengthwise under the application suspension line, placing the upper edge of the material immediately adjacent to the lower edge of the lower lateral band.

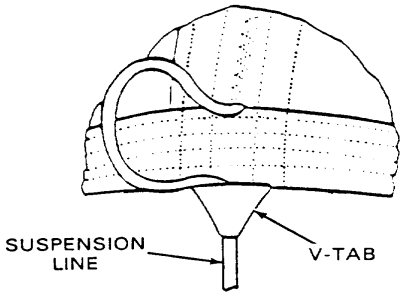
6. Working form opposite directions, pass each end of the material length over the top of the suspension line. Draw the ends snug to develop a tight wrap around the line and to form a V-shaped design on the lower lateral band inside.

7. Secure each of the replacement V-tab to the lower lateral band inside with temporary tacking. The temporary tacking will be made using the procedures in WP 0014 00. Position the V-tab ends even with the upper edge of the lower lateral.



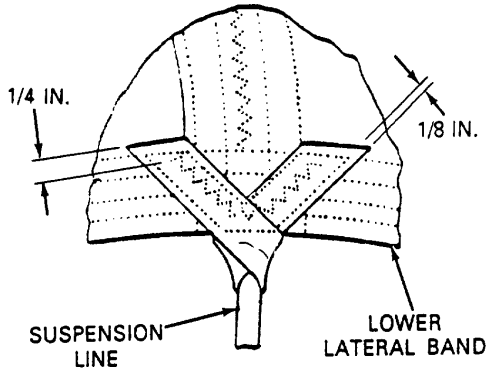
Illustration, Inside View

8. Pull a suitable length of the suspension line up through the V-tab on the outside of the lower lateral band and lay the pulled length to one side.



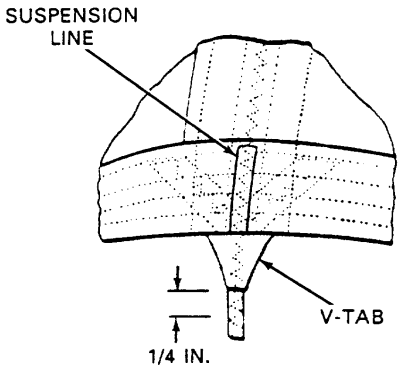
Illustration, Outside View

9. Secure the V-tab to the lower lateral band by stitching a single row of stitching along the edges of material making V-shaped design. Stitches are $^{1}/_{8}$-inch along the edges of the V-tab ends. Ensure that the pulled suspension line length is held to one side during the stitching process. Also ensure the stitching does not extend above the upper edge or below the lower edge of the lateral band. Stitch with size E nylon thread and 7 to 11 stitches per inch.



Illustration, Inside View

10. Beginning at a point ¼-inch below the V-tab bias cut end, further secure the V-tab to the lower lateral band by stitching a single row of double-throw zig-zag stitching. Stitch with size E nylon thread and 7 to 11 stitches per inch.



Illustration, Outside View

11. Turn the lower lateral band right side out and pull the suspension line length back down through the V-tab. Ensure the mark made in step 2., above, is aligned with the lower edge of the lower lateral band.

END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS LOWER LATERAL BAND

THIS SECTION COVERS:
- Repair

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Knife, Hot Metal (Item 15, WP 0044 00)
Sewing Machine, Light-Duty (Item 39, WP 0044 00)
Shears (Item 43, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Materials/Parts
Tape, Nylon, Tubular, Type I (Item 34, WP 0057 00)
Thread, Nylon, Size E (Items 39/40, WP 0057 00

Equipment Condition
Unpacked, canopy laid flat.

Personnel Required
92R (10) Parachute Rigger

REPAIR

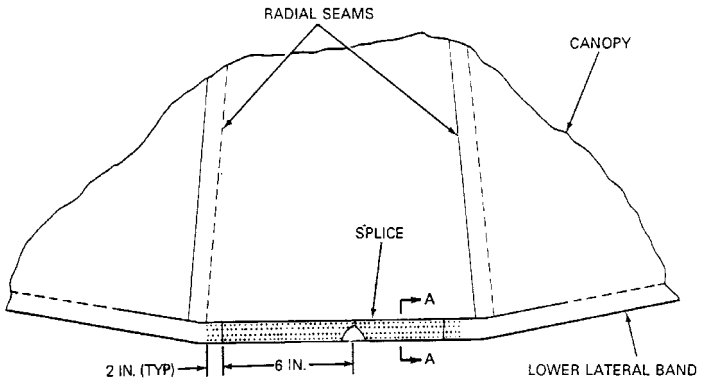
1. Restitching. Restitch using a light-duty sewing machine with size E nylon thread, which is contrasting in color to the original stitching, using 7 to 11 stitches per inch. When possible, lock all straight stitching by backstitching at least ½-inch. Restitch directly over the original stitching, following the original stitch formation as close as possible.

2. Damage to Lower Lateral Band and Between Radial Seams. Repair as follows:

   a. Cut stitching of suspension line and V-tab (when applicable) on either side of damaged area, and move these items to one side.

   b. Invert canopy and smooth canopy around damaged area.

   c. Cut a piece of 1-inch tubular nylon tape long enough to extend 6-inches on each side of damaged area. Sear ends of tape.



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

e. Reposition suspension lines and V-tabs, and sew in place according to original construction.

3. Damage to Lower Lateral Band Extending Into Radial Seam. Repair as follows:

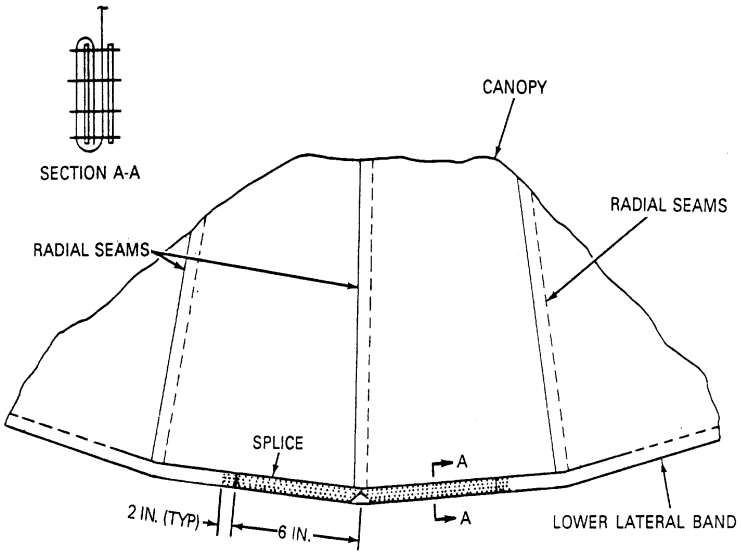
NOTE

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

a. Cut stitching of suspension lines and V-tabs at damaged radial seam and at radial seam on each side of damaged area. Move these items to one side.

b. Invert canopy and smooth around damaged area.

c. Cut a piece of 1-inch tubular nylon tape long enough to extend 6-inches on each side of damaged area. Sear ends of tape.



d. Position tape over damaged area and, using a light-duty sewing machine, stitch with size E nylon thread, and 7 to 11 stitches per inch. Sew in place with four continuous rows of stitching and overstitch ends of tape 2-inches.

e. Reposition suspension lines and V-tabs, and sew in place according to original construction.

END OF WORK PACKAGE

DIRECT SUPPORT MAINTENANCE
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS SUSPENSION LINE

THIS SECTION COVERS:
- Replace

INITIAL SETUP:

Tools
Knife (Item 14, WP 0044 00)
Pot, Melting (Item 29, WP 0044 00)
Sewing Machine, Light-Duty, Zig-zag (Item 40, WP 0044)
Sewing Machine, Medium-Duty, Zig-Zag (Item 42, WP 0044 00)
Yardstick (Item 45, WP 0044 00)

Personnel Required
92R (10) Parachute Rigger

Equipment Condition
Unpacked, canopy in proper layout.

Materials/Parts
Beeswax (Item 3, WP 0057 00)
Cord, Nylon, Type III (Item 10, WP 0057 00)
Pencil, Marking Aid (Items 20/21, WP 0057 00)
Thread, Nylon, Size E (Items 39/40, WP 0057 00)
Wax, Paraffin (Item 45, WP 0057 00)

DAMAGED SUSPENSION LINE
Place suspension lines in proper layout on repair table or repair surface, apply partial tension to suspension lines, and trace damaged line from connector snap to connector snap.

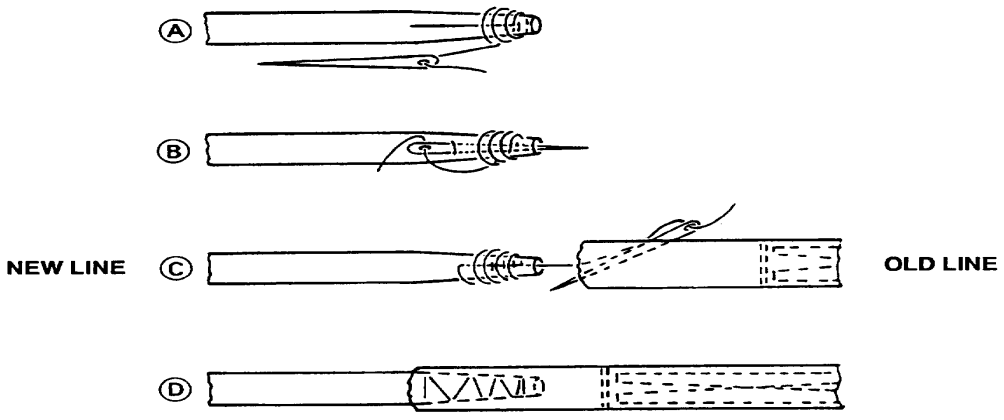
REPLACE
Replace damaged lines as follows:

1. Cut and remove all stitching that holds suspension line to canopy. Remove other items as required, allowing entire line to move freely across lateral bands, through V-tabs, and within radial seams. Do not remove V-tabs unless they are damaged.

2. Cut off damaged line (hereafter referred to as old line) 24-inches below shirt on each side of canopy.

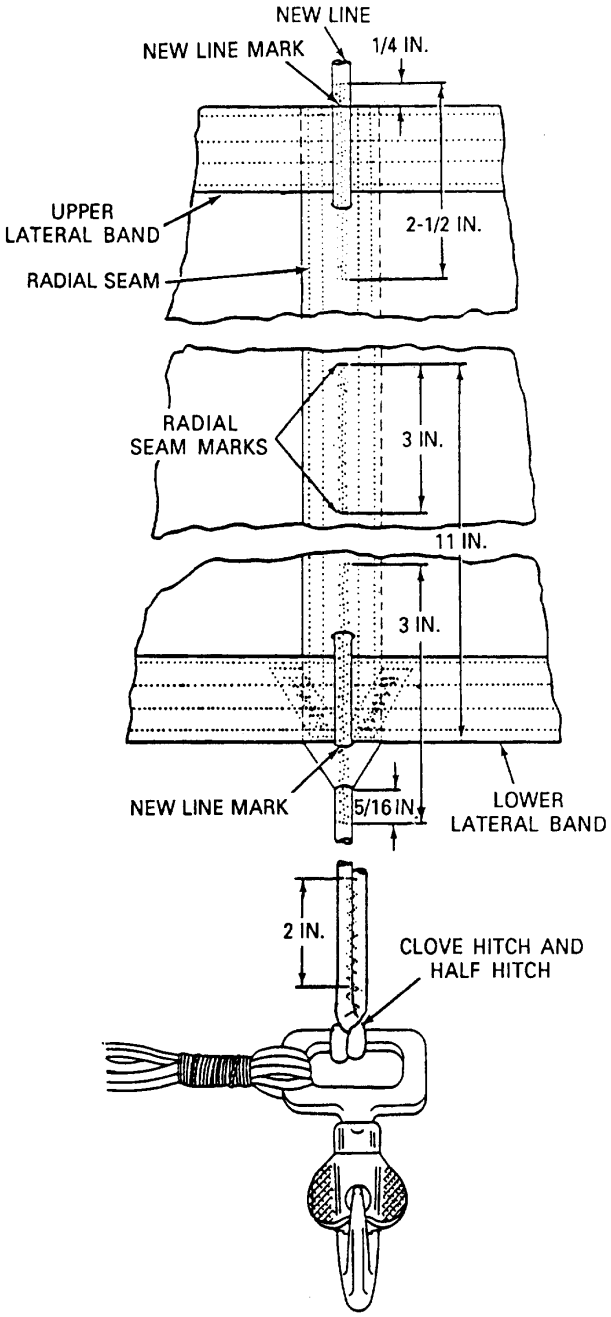
3. Select a spool of type III nylon cord (hereafter referred to as new line), and wax end of new line.

4. Insert waxed end of new line into sheath of old line at least 1-inch, and whipstitch, or otherwise temporarily secure ends together.



5. Grasp cut end of old line at opposite side of canopy skirt and pull old line. Work new line through V-tabs, channels and across apex, and down the opposite side, until end of new line extends approximately 10-inches beyond connector snaps. Cut old line from new line at whipstitching to include waxed end.

6. Make certain that approximately 10-inches of new line still extend beyond connector snap, and mark new line at point even with inside edge of snap. Cut away remaining ends of old line and tie where the old line was removed. Tie the new line at the same location where the old line was removed. Hold adjacent line and new line tightly together at snap, and trace both lines from snap to canopy skirt under equal tension. Mark new line where lines reach lower edge of lateral band. Check correctness of marking by again applying equal tension to both lines.



7. Hold adjacent line and new line tightly together at lower lateral band, grasp both lines at upper lateral band, and apply equal tension to both lines. Mark line at upper edge of upper lateral band. Check correctness of marking.

8. Hold adjacent line and new line tightly together at upper lateral band and trace both lines to opposite side of apex under equal tension. Mark new line where lines reach upper edge of upper lateral band. Check correctness of marking.

9. Hold adjacent line and new line tightly together at upper lateral band, grasp both lines at lower lateral band, and apply equal tension to both lines. Mark lines at lower edge of lower lateral band. Check correctness of marking.

10. Hold adjacent line and new line tightly together at lower lateral band, and trace both lines from canopy skirt to connector snap under equal tension. Mark new line at point even with inside ledge of snap. Check correctness of marking, and cut new line of spool at a point approximately 10-inches beyond connector snap. Tie new line at the opposite snap were the new line was removed (see illustration detailed on the previous page).

11. Relieve tension from all lines.

12. Align marks on new line with lateral bands, and sew new line to canopy at all attaching points in accordance with illustration detailed on the previous page, using size E nylon thread, and 7 to 11 stitches per inch. On canopies that have a pucker in the radial seams, make certain the radial seam is still correctly puckered after all sewing is completed.

NOTE

To provide one-inch pucker at lower lateral band, move mark from bottom of lower lateral band to top edge of lower lateral band. Smooth out canopy material and mark material 11-inches above bottom edge of lower lateral band and sew down toward lower lateral band for 3-inches. Move mark from upper edge of lower lateral band to bottom edge and sew in as shown in the illustration on the following page. Repeat procedure on opposite side of canopy and then complete sewing of the apex.

13. Reposition items removed in step 1., above, and sew in place according to original construction.

14. Sew line and free end together in accordance with above figure. Cut off excess end of line close to stitching.

15. Compare knots with adjacent knots, and trace line from connector snap to canopy skirt for correctness of attachment and position.

16. Attach remaining free end of new line to opposite connector snap by repeating the procedures in steps 14. and 15., above.

END OF WORK PACKAGE

CHAPTER 5

SUPPORTING INFORMATION
FOR
PARACHUTE, PERSONNEL TYPE: 24-FOOT DIAMETER, TROOP, CHEST, RESERVE (T-10R) AND THE MODIFIED IMPROVED RESERVE PARACHUTE SYSTEM (MIRPS)

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS REFERENCES

This appendix lists all forms, technical manuals, and miscellaneous publications referenced, or to be used with this manual.

PAMPHLETS

DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 738-750	The Army Maintenance Management System (TAMMS)
DA PAM 738-751	The Army Maintenance Management System (Aviation) (TAMMS)A

TECHNICAL MANUALS

TM 10-1670-201-23/ T.O. 13C-1-41/ NAVAIR 13-1-17	General Maintenance of Parachutes and Other Airdrop Equipment
TM 38-230-1 and TM 38-230-2	Preservation, Packaging, Packing of Military Supplies and Equipment (Vols. 1 and 2)
TM 43-0002-1	Procedures for the Destruction of Air Delivery Equipment to Prevent Enemy Use

FIELD MANUALS

FM 4-25.11 (FM 21-11)	First-Aid for Soldiers

ARMY REGULATIONS

AR 310-25	Dictionary of United States Army Terms
AR 310-50	Authorized Abbreviation and Brevity Codes
AR 700-15	Packaging of Material
AR 70-38	Research and Development, Test and Evaluation of Material for Extreme Climatic Condition
AR 750-1	Army Material Maintenance Concepts and Policies
AR 750-32	Air Drop, Parachute Recovery, and Aircraft Personnel Escape Systems

TECHNICAL BULLETINS

TB 43-0002-43	Maintenance Expenditure Limits for FSC Group 16

JOINT REGULATIONS

AFR 55-10 AR 59-4 OPNAVINST 4630-24B MCO 13480.1B	Joint Airdrop Inspection Records, Malfunction Investigations, and Activity Reporting

FORMS

DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA Form 3912	The Army Parachute Log Record
DA Form 6	Packing Improvement Report
SF 364	Supply Discrepancy Report (SDR)
SF 368	Product Quality Deficiency Report (PQDR)

END OF WORK PACKAGE

SUPPORTING INFORMATION
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS MAINTENANCE ALLOCATION CHART (MAC)

THIS WORK PACKAGE COVERS:
- Introduction
- Maintenance Functions
- Explanation of Columns in the MAC
- Explanation of Columns in Tool and Test Equipment Requirements
- Explanation of Column in Remarks

INTRODUCTION

The Army Maintenance System MAC

This introduction provides a general explanation of all maintenance and repair functions authorized at the two maintenance levels under the Two-Level Maintenance System concept.

The MAC (immediately following the introduction) 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 shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown on the MAC in column (4) as:

Field – includes two columns, Unit maintenance and Direct Support maintenance. The Unit maintenance column is divided again into two more subcolumns, C for Operator or Crew and O for Unit maintenance.

Sustainment – includes two subcolumns, General Support (H) and Depot (D).

The tools and test equipment requirements (immediately following the MAC) list the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.

The remarks (immediately following the tools and test equipment requirements) contain supplemental instructions and explanatory notes for a particular maintenance function.

Maintenance Functions

Maintenance functions are limited to and defined as follows:

1. 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.) This includes scheduled inspection and gagings and evaluation of cannon tubes.

2. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, i.e., load testing of lift devices and hydrostatic testing of pressure hoses.

3. Service. Operations required periodically to keep an item in proper operating condition, e.g., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases. This includes scheduled exercising and purging of recoil mechanisms. The following are examples of service functions:

   a. Unpack. To remove from packing box for service or when required for the performance of maintenance operations.

   b. Repack. To return item to packing box after service and other maintenance operations.

c. Clean. To rid the item of contamination.

d. Touch up. To spot paint scratched or blistered surfaces.

e. Mark. To restore obliterated identification.

4. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or position, or by setting the operating characteristics to specified parameters.

5. Align. To adjust specified variable elements of an item to bring about optimum or desired performance

6. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments of test, measuring, and diagnostic equipment 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.

7. 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.

8. Paint. To prepare and spray color coats of paint so that the ammunition can be identified and protected. The color indicating primary use is applied, preferably, to the entire exterior surface as the background color of the item. Other markings are to be repainted as original so as to retain proper ammunition identification.

9. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. “Replace” is authorized by the MAC and assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.

10. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, 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.

NOTE

The following definitions are applicable to the “repair” maintenance function:

Services. Inspect, test, service, adjust, align, calibrate, and/or replace.

Fault location/troubleshooting. The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).

Disassembly/assembly. The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, that is assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).

Actions. Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.

11. 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. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

12. 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 material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (e.g., hours/miles) considered in classifying Army equipment/components.

Explanation of Columns in the MAC

Column (1) Group Number. Column (1) lists Functional Group Code (FGC) numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).

Column (2) Component/Assembly. Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

Column (3) Maintenance Function. Column (3) lists the functions to be performed on the item listed in column (2). (For a detailed explanation of these functions refer to “Maintenance Functions” outlined above).

Column (4) Maintenance Level. Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time 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 varies at different maintenance levels, appropriate work time figures are to 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 time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Field:

C Operator or Crew maintenance
O Unit maintenance
F Direct Support maintenance

Sustainment:

L Specialized Repair Activity
H General Support maintenance
D Depot maintenance

NOTE

The “L” maintenance level is not included in column (4) of the MAC. Functions to this level of maintenance are identified by work time figure in the “H” column of column (4), and an associated reference code is used in the REMARKS column (6). This code is keyed to the remarks and the SRA complete repair application is explained there.

Column (5) Tools and Equipment Reference Code. Column (5) specifies, by code, those common tool sets (not individual tools), common Test, Measurement and Diagnostic Equipment (TMDE), and special tools, special TMDE, and support special equipment required to perform the designated function. Codes are keyed to the entries in the tools and test equipment table.

Column (6) Remarks Code. When applicable, this column contains a letter code, in alphabetic order, which is keyed to the remarks table entries.

Explanation of Columns in the Tools and Test Equipment Requirements

Column (1) – Tool or Test Equipment Reference Code. The tool or test equipment reference code correlates with a code used in column (5) of the MAC.

Column (2) – Maintenance Level. The lowest level of maintenance authorized to use the tool or test equipment.

Column (3) – Nomenclature. Name or identification of the tool or test equipment.

Column (4) – National Stock Number (NSN). The NSN of the tool or test equipment.

Column (5) – Tool Number. The manufacturer's part number.

Explanation of Columns in Remarks

Column (1) – Remarks Code. The code recorded in column (6) of the MAC.

Column (2) – Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC.

Table 1. Maintenance Allocation Chart for the 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
00	24-FOOT DIAMETER TROOP CHEST RESERVE PARACHUTE ASSEMBLY	Inspect Test Service		0.5 0.5 0.5					A, B, C
01	PILOT CHUTE (T-10R, MIRPS)	Inspect Repair Replace		0.2 0.2 0.2					A
0101	BRIDLE LINE	Inspect Replace		0.1 0.2					A
02	CANOPY ASSEMBLY	Inspect Repair		0.3 0.5					A
0201	UPPER LATERAL BAND	Inspect Repair		0.1	 0.5				A
0202	CANOPY GORE SECTION	Inspect Replace		0.2	 1.0				A, D, E
0203	RADIAL SEAM	Inspect Repair		0.1	 0.5				A
0204	V-TAB	Inspect Replace		0.1	 0.5				A
0205	POCKET BAND	Inspect Repair Replace		0.1 0.5 0.5					A
0206	LOWER LATERAL BAND	Inspect Repair		0.1	 0.5				A, F
0207	SUSPENSION LINE	Inspect Replace		0.1	 0.1				A
0208	CONNECTOR SNAP	Inspect Repair Replace		0.1 0.1 0.3					A
0209	SPREADER BAR	Inspect Repair Replace		0.1 0.1 0.3					A, G
03	PACK TRAY ASSEMBLY (T-10R, MIRPS)	Inspect Repair Replace		0.1 0.5 0.3					A
0301	PACK OPENING SPRING BAND	Inspect Replace		0.1 0.3					A

Table 1. Maintenance Allocation Chart for the 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS—Continued.

(1) GROUP NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL					(5) TOOLS AND EQUIPMENT REFERENCE CODE	(6) REMARKS CODE
			FIELD			SUSTAINMENT			
			UNIT		DIRECT SUPPORT	GENERAL SUPPORT	DEPOT		
			C	O	F	H	D		
0302	PACK RELEASING CONE (T-10R)	Inspect Replace		0.1 0.3					A, H
0303	PACK FASTENER (T-10R)	Inspect Replace		0.1 0.3					A
0304	LOG RECORD POCKET	Inspect Replace		0.1 0.3					A
0305	RIPCORD GRIP POCKET (T-10R)	Inspect Repair Replace Test		0.1 0.2 0.3 0.5					A, H, I, J
0306	CONE FLAP STIFFENER (T-10R)	Inspect Repair Replace		0.1 0.3 0.4					A
0307	GROMMET	Inspect Repair Replace		0.1 0.2 0.1					A, K
0308	DRESS-MAKER'S EYE	Inspect Repair Replace		0.1 0.1 0.1					A, H
0309	PILOT CHUTE PROTECTOR FLAP	Inspect Repair Replace		0.1 0.1 0.1					A
0310	LANYARD AND SAFETY PIN	Inspect Replace		0.1 0.1					A
0311	SNAP FASTENER	Inspect Replace		0.1 0.1					A
0312	HOOK AND PILE FASTENER TAPE	Inspect Replace		0.1 0.1					A
0313	EJECTOR SPRING ASSEMBLY (MIRPS)	Inspect Repair Test Replace		0.1 0.5 0.1 0.3					A
0314	SOFT LOOP ASSEMBLY	Replace		0.1					A
0315	CANOPY STAGING FLAP CLOSING LOOP	Inspect Repair Replace		0.1 0.5 0.5					A, E
04	RIPCORD ASSEMBLY	Inspect Replace Test		0.1 0.2 0.5					A

Table 2. Tool and Test Equipment Requirements for the 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS.

(1) TOOL OR TEST EQUIPMENT REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
1	O	Aid, Packing, Plastic	SBCCOM, Natick	
2	O	Bit, Drill, No. 24	5133-00-189-9269	GGG-D-751
3	O	Brush, Scrub, Household	7920-00-068-7903	H-B-515
4	O	Brush, Stenciling	7520-00-248-9285	H-B-621
5	O	Chuck, Grommet Setting	5120-00-343-8216	9767 (83058)
6	O	Cord, Pull-Up	Locally Manufactured	
7	O	Die, Grommet Setting	3460-00-329-3346	9766 (83058)
8	O	Drill, Electric, $^{3}/_{32}$-IN, 2 ¼-IN Long	5133-00-227-9648	GGG-D-751
9	O	File, Flat, 1-IN.	5110-00-249-2850	GGG-F-325
10	O	Hammer, Ball Peen, 16-oz.	5120-00-114-5499	GGG-H-86
11	O	Holder, Die, Fastener	5120-00-357-6177	192
12	O	Inspection Kit, Ripcord Grip	1670-00-910-3866	11-1-0595
13	O	Key, Socket Head Set (Allen Type)	5120-00-729-6392	GGG-K-275
14	O	Knife	5110-00-162-2205	MIL-K-818C
15	O	Knife, Hot Metal	3439-01-197-7656	4025 (78976)
16	O	Lead, Pig, 5-Pounds	9650-00-264-5050	QQ-C-40
17	O	Line Separator	1670-00-092-8661	11-1-17-1
18	O	Machine, Stencil Cutting	7490-00-164-0541	A-A-2722
19	O	Mallet, Rawhide	5120-00-293-3397	GGG-H-33
20	O	Needle Assortment	8315-00-281-9484	FF-N-180
21	O	Needle, Basting	8315-00-281-9484	FF-N-180
22	O	Needle, Tacking	8315-00-262-3733	FF-N-180
23	O	Packing Paddle	1670-00-764-6381	11-1-152
24	O	Packing Weight	1670-00-375-9134	66C38599
25	O	Pin, Temporary Locking	Locally Manufactured	
26	O	Plate, Tension	1670-00-032-2705	11-1-99
27	O	Pliers, Large, Diagonal Cut	5110-00-222-2708	GGG-P-468
28	O	Pliers, Lineman	5120-00-756-1156	GGG-P-471
29	O	Pot, Melting, Electric	5120-00-242-1276	WG441
30	O	Press, Hand Operated	5120-00-880-0619	A741

Table 2. Tool and Test Equipment Requirements for the 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS—Continued.

(1) TOOL OR TEST EQUIPMENT REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL STOCK NUMBER	(5) TOOL NUMBER
31	O	Press, Hand, Chuck and Die	5120-00-244-9195	M-483 9830580
32	O	Punch, Center	5120-00-221-1072	GGG-P-831
33	O	Punch, Cutting	5110-00-180-0924	GGG-P-833
34	O	Rods, Compression	Locally Manufactured	
35	O	Screwdriver, Flat Tip, ¼-IN by 6-IN	5120-00-596-8653	GGG-S-121
36	O	Sewing Machine, Bartack	WP 0014 00	
37	O	Sewing Machine, Darning	WP 0014 00	
38	O	Sewing Machine, Heavy-Duty	WP 0014 00	
39	O	Sewing Machine, Light-Duty	WP 0014 00	
40	O	Sewing Machine, Light-Duty, Zig-Zag	WP 0014 00	
41	O	Sewing Machine, Medium-Duty	WP 0014 00	
42	O	Sewing Machine, Medium-Duty, Zig-Zag	WP 0014 00	
43	O	Shears	5110-00-223-6370	GGG-S-278
44	O	Test Set, Compression, Ejector Spring Assembly	Locally Manufactured	
45	O	Yardstick	5120-00-985-6610	GGG-Y-0035

Table 3. Remarks Codes for the 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS.

(1) REMARKS CODE	(2) REMARKS
A	Inspect is a Technical Rigger Type Inspection.
B	Service is cleaning of equipment.
C	Service is the packing of parachutes.
D	Repair by restitching, darning, or restenciling the canopy panel.
E	Repair at the unit maintenance level consists of darning, restitching, patching and the replacement of parts authorized for unit maintenance. Direct support repair consists of replacing gore sections.
F	Repair by stitching.
G	Fabricate.
H	Retack.
I	Repair by darning, retacking, restitching, splicing edge binding and repairing grommets. Replacement of parts authorized by/for unit maintenance.
J	Perform pull test.
K	Reseat, fabricate, and install grommet reinforcement.

END OF WORK PACKAGE

SUPPORTING INFORMATION
24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS REPAIR PARTS AND SPECIAL TOOLS LIST (RPSTL), INTRODUCTION

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 organizational, direct support, and general support maintenance of the 24-Foot Diameter Troop Chest Reserve (T-10R) Parachute and the MIRPS. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools, as indicated by the Source, Maintenance and Recoverability (SMR) codes.

GENERAL INFORMATION
This Repair Parts and Special Tools List is divided into the following sections:

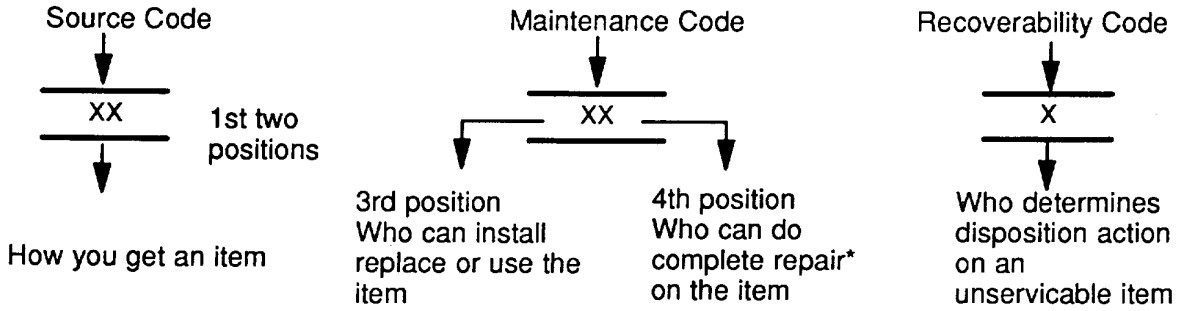
WP 0046 00, Repair Parts List. A list of spares and repair parts authorized by this RPSTL is for use in the performance of maintenance. The list also includes parts that must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending alphanumeric sequence, with the parts in each group listed in ascending figure, and item, number sequence. Bulk materials are listed.

Special Tools List. (Not Applicable). No special tools are required to assemble the 24-Foot Diameter Troop Chest Reserve (T-10R) Parachute and the MIRPS. Common tools are listed in WP 0055 00 because they are required for performance of packing and maintenance procedures/tasks. These tools are authorized under Chapter 1, WP 0001 00 of this manual.

Cross Reference Indexes. A list, in National Item Identification Number (NIIN) sequence, of all National Stock Numbers (NSN) appearing in the listings (WP 0056 00), followed by a list in alphanumeric sequence of all part numbers appearing in the listings (WP 0057 00). National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

EXPLANATION OF COLUMNS
Column 1, Item No. Indicates the number used to identify items called out in the illustration.

Column 2, SMR Code. The Source, Maintenance, and Recoverability (SMR) code is a 5-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instructions, as shown in the following breakout:



*Complete Repair: Maintenance capacity, capability, and authority to perform all the corrective maintenance tasks of the REPAIR function in a use/user environment in order to restore serviceability to a failed item.

Source Code. The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Source codes are always the first and second positions of the SMR code. Explanations of source codes follow:

SOURCE 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 3rd position of the SMR code.
KD KF KF	Items with these codes are not to be requested/ requisitioned individually. They are part of a kit that is authorized to the maintenance category indicated in the 3rd position of the SMR code. The complete kit must be requisitioned and applied.
MO – (Made at org/AVUM Level) MF – (Made at DS/AVUM Level) MH – (Made at GS Level) ML – (Made at Specialized Repair Act (SRA)) MD – (Made at Depot)	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material that 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 3rd 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.
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 3rd position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher level, order the item from the higher level of maintenance.
XA -	Do not requisition an XA-coded item. Order its next higher assembly. (Also, refer to the NOTE below.)
XB -	If and XB-coded item is not available from salvage, order it using the CAGEC and the given part number.
XC -	The installation drawing, diagram, instruction sheet, and field service drawing that is identified by manufacturers part number.
XD -	Item is not stocked. Order an XD-coded item through normal supply channels using the CAGEC and the part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchanged, 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 item restricted by requirements of AR 750-1.

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 follow:

Third position. 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 one of the following levels of maintenance.

MAINTENANCE CODE	APPLICATION/EXPLANATION
C -	Crew or operator maintenance done within organizational or aviation unit maintenance.
O -	Organizational or aviation unit category can remove, replace, and use the item.
F -	Direct support or aviation intermediate level can remove, replace, and use the item.
H -	General Support level can remove, replace, and use the item.
L -	Specialized repair activity can remove, replace, and use the item.
D -	Depot level can remove, replace, and use the item.

Fourth position. 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.) 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.

MAINTENANCE CODE	APPLICATION/EXPLANATION
O -	Organizational (or aviation unit) is the lowest level that can do complete repair of the item.
F -	Direct support (or aviation intermediate) is the lowest level that can do complete repair of the item.

MAINTENANCE CODE - Continued	APPLICATION/ EXPLANATION - Continued
H -	General support 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 -	Non-repairable. 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.

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 CODE	APPLICATION/EXPLANATION
Z -	Non-repairable item. When unserviceable, condemn and dispose of the item at the level of maintenance shown in the 3rd position of the SMR Code.
O -	Repairable item. When uneconomically reparable, condemn and dispose of the item at organizational or aviation unit level.
F -	Repairable item. When uneconomically repairable, condemn and dispose of the item at the direct support or aviation intermediate level.
H -	Repairable item. When uneconomically repairable, condemn and dispose of the item at the general support level.
D -	Repairable item. When beyond the lower level repair capability, return to depot. Condemnation and disposal of item not authorized below depot level.

RECOVERABILITY CODE - Continued	APPLICATION/EXPLANATION - Continued
L -	Repairable 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.

Column 3, CAGE Code. The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code that is used to identify the manufacturer, distributor, or Government agency that supplies the item.

Column 4, Part Number. 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 part ordered.

Column 5, Description and Usable on Code (UOC). This column includes the following information:

1. The Federal item name and, when repaired, 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 for bulk materials are referenced in this column in the line item entry for the item to be manufactured/fabricated.
6. When the item is not used will 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 (see the “SPECIAL INFORMATION” paragraph below).
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 BOI, the total authorization is increased proportionately.

9. The statement END OF FIGURE appears just below the last item description in Column 5 for a given figure.

Column 6, QTY. 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, sub functional 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.

SPECIAL INFORMATION

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. Identification of the usable on codes used in the RPSTL are:

Code:	Used On:
DWF	1670-00-892-4218
FMX	1670-01-420-4256

Bulk materials required to manufacture items are listed in the Bulk Material group of this manual. NSNs 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.

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.

Line item entries for repair part kits and sets appear as the last entries in the repair part listing for the figure in which their parts are listed as repair parts.

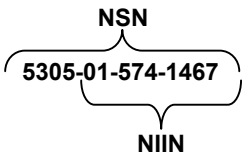
Items that have the word Bulk in the figure number column will have an index number shown in the item number column. This index number is furnished for use as a cross-reference between the National Stock Number/Part Number Index and the bulk material list.

In the repair parts list, some items are indented to show that they are components of the item under which they are indented.

EXPLANATION OF COLUMNS

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.



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.

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.

Part Number Index. Part numbers in 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. CAGEC column. The Commercial and Government Entity Code 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) that 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 CAGEC columns to the left.

4. Fig. column. This column lists the number of the figure where the item is identified/located.

5. Item column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

HOW TO LOCATE REPAIR PARTS

When National Stock Number or Part Number is Not Known.

1. First. Using the table of contents, determine the functional group or sub-functional group to which the item belongs. This is necessary since the figures are prepared for functional groups and sub-functional groups, and listings are divided into the same groups.

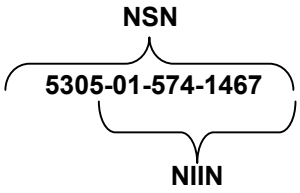
2. Second. Find the item on the figure covering the functional group or sub-functional group to which the item belongs.

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.

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.



*The NIIN consists of the last 9 digits of the NSN, as shown above.

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.

END OF WORK PACKAGE

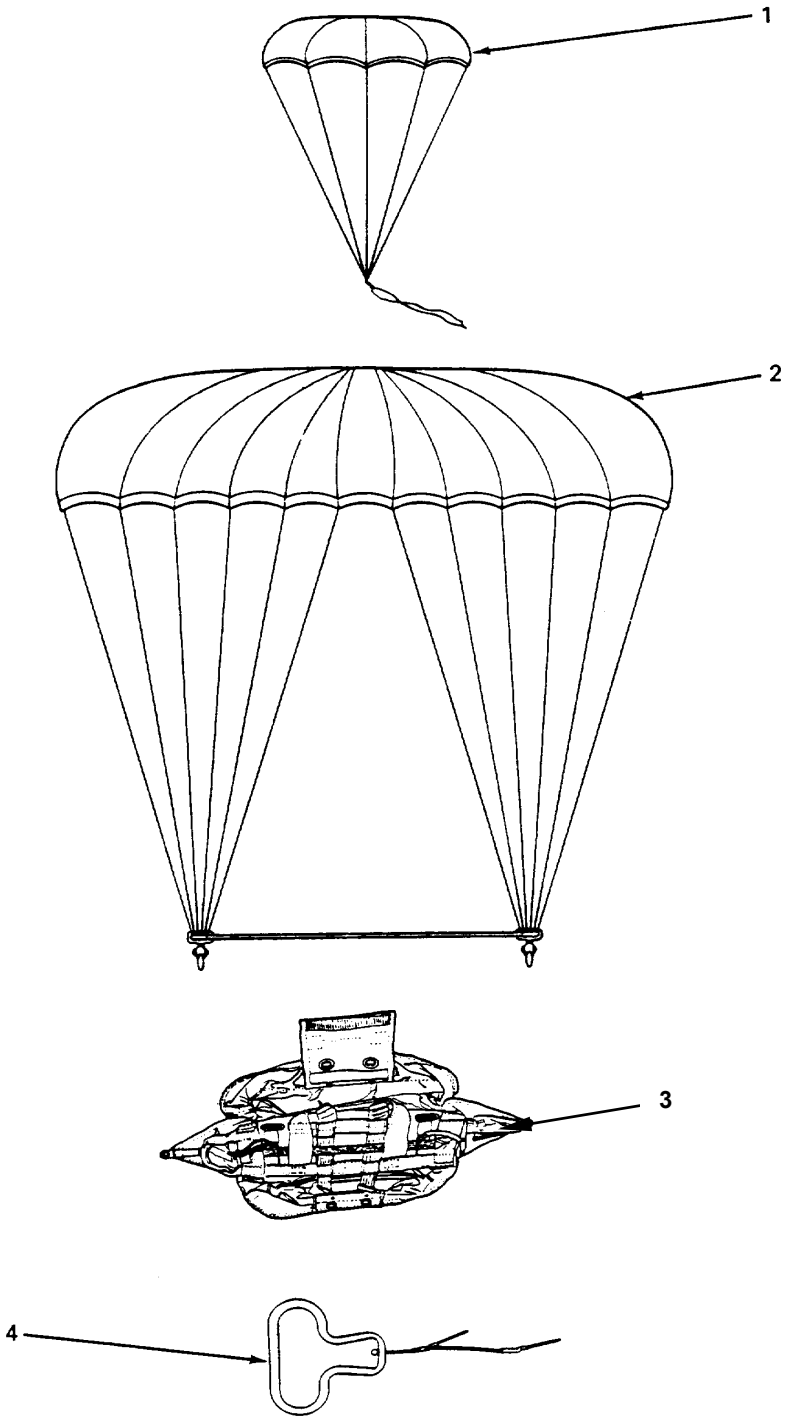


Figure 1. 24-Foot Diameter Troop Chest Reserve (T-10R) Parachute Assembly

GROUP 00 24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) AND THE MIRPS REPAIR PARTS LIST

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 00, 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS Figure 1, 24-Foot Diameter Troop Chest Reserve (T-10R) Parachute Assembly, 62C4317						
1	PAOOO	1670-00-251-6603	98750	49J7161-2	Pilot Chute UOC: DWF	1
2	PAOOO	1670-00-622-4462	98750	48J7156-3	Canopy, Assembly, Parachute Troop Reserve, 24 FT, UOC: DWF, FMX	1
3	PAOOO	1670-00-951-6417	98750	62J4346-10	Pack, Personnel, Parachute, Chest, Assembly, Nylon UOC: DWF	1
4	PAOOZ	1670-00-063-4500	98750	62C4250	Rip Cord, Parachute UOC: DWF	1
END OF FIGURE						

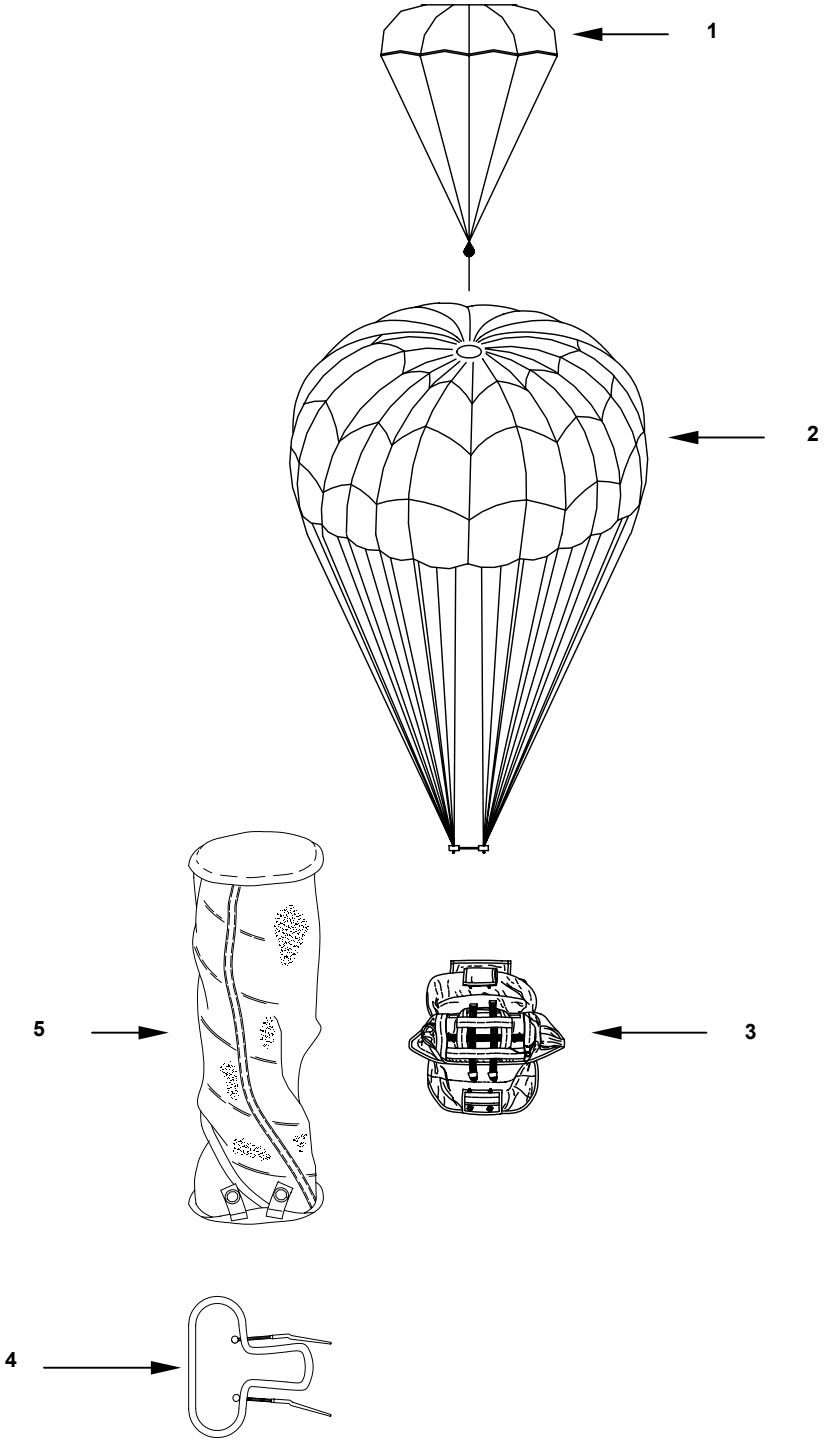


Figure 2. Modified Improved Reserve Parachute System (MIRPS)

GROUP 00 24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) AND THE MIRPS REPAIR PARTS LIST

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 00, 24-Foot Diameter Troop Chest Reserve (T-10R) and the MIRPS Figure 2, Modified Improved Reserve Parachute System (MIRPS), 11-1-4012-1						
1	PAOZZ	1670-01-457-7897	81337	11-1-6966-1	Pilot Chute UOC: FMX	1
2	PAOOO	1670-00-622-4462	98750	48J7156-3	Canopy, Assembly, Parachute Troop Reserve, 24 FT, UOC: DWF, FMX	1
3	PAOOO	1670-01-436-4798	81337		Pack, Personnel, Parachute, Chest, Assembly, Nylon UOC: FMX	1
4	PAOZZ	1670-01-468-9174	81337		Rip Cord, Parachute UOC: FMX	1
5	PAOOO	1670-01-457-7901	81337	11-1-4040-1	Spring, Compression UOC: FMX	1
END OF FIGURE						

GROUP 01 PILOT CHUTE (T-10R, MIRPS)

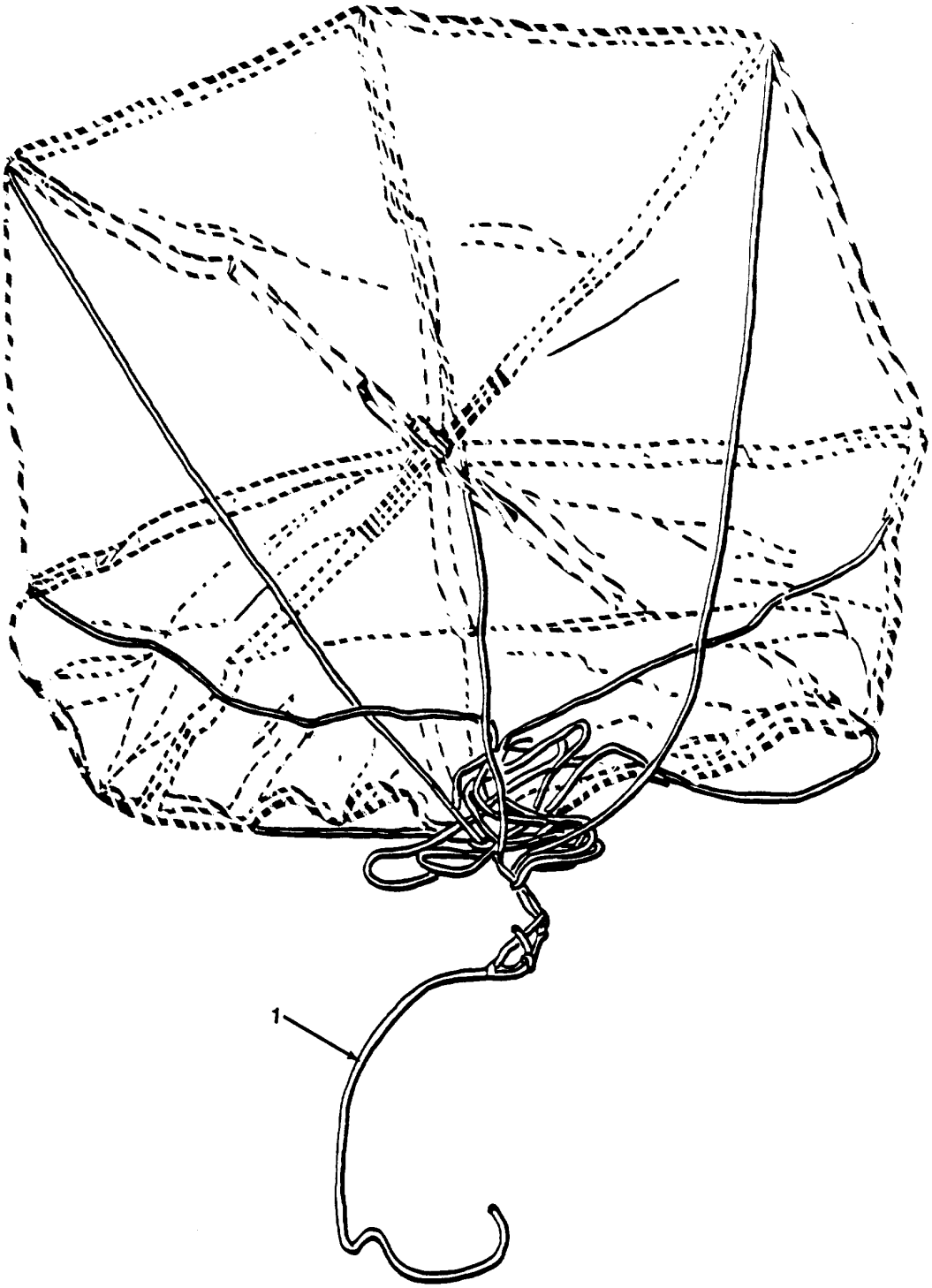


Figure 3. T-10R Pilot Chute and Bridle Line Assembly

GROUP 01 PILOT CHUTE (T-10R, MIRPS)
REPAIR PARTS LIST

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 01, Pilot Chute (T-10R, MIRPS) Figure 3, Pilot Chute (T-10R) and Bridle Line Assembly, 49J7161-2						
1	MOOOO		98750	44G26459-7	Bridle Line, Made From Cord, Nylon, OD Type III, PN PIA-C-5040, Thread, Nylon, Green, Size E, Type I, Class A, PV V-T-295 UOC: DWF	1
END OF FIGURE						

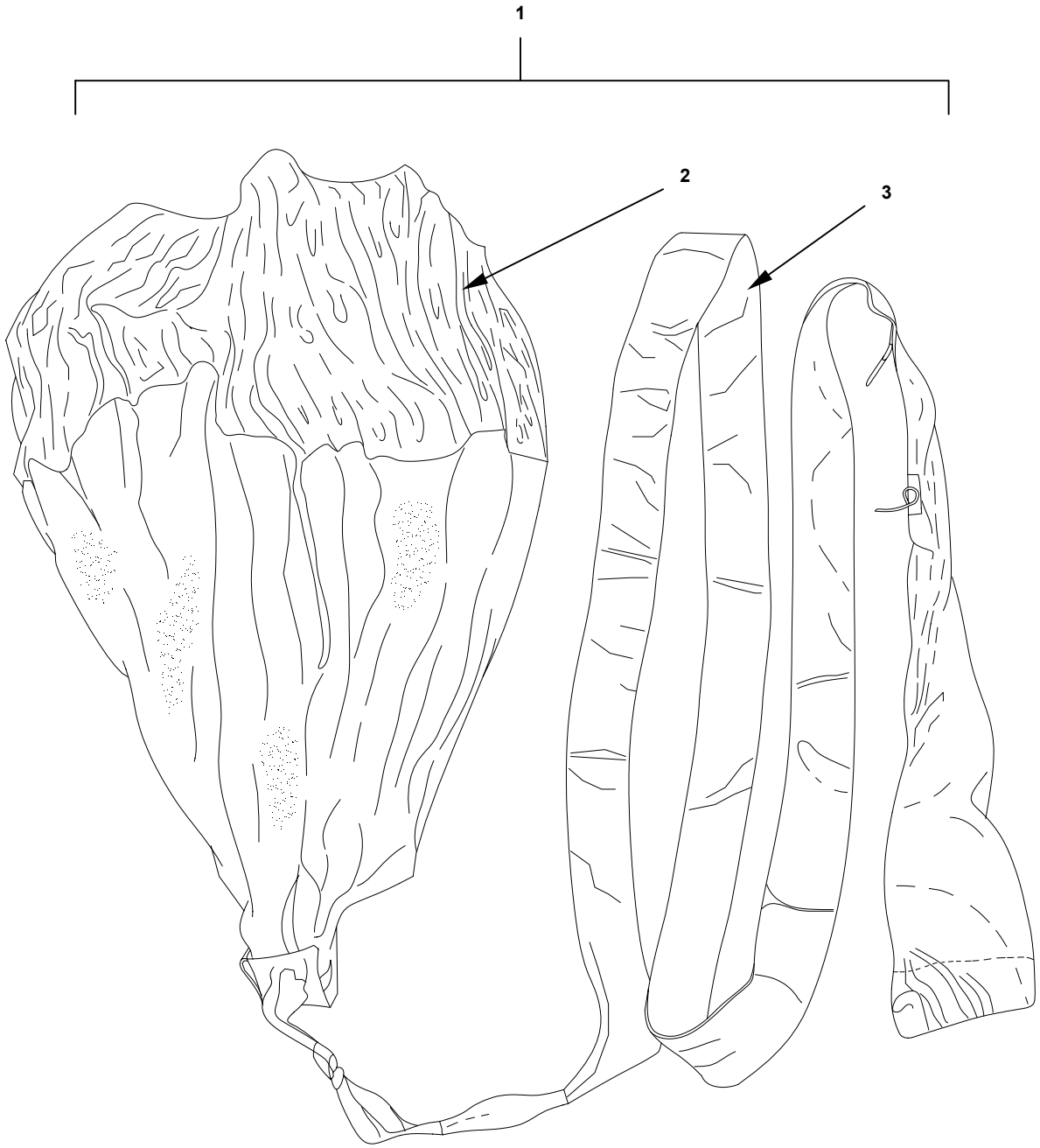


Figure 4. MIRPS Pilot Chute and Bridle Line Assembly

GROUP 01 PILOT CHUTE (T-10R, MIRPS)
REPAIR PARTS LIST

(1) ITEM NO	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 01, Pilot Chute (T-10R, MIRPS) Figure 4, MIRPS Pilot Chute and Bridle Line Assembly, 11-1-6966-1						
1	PAOZZ	1670-01-457-7897	81337	11-1-6966-1	Pilot Chute W/Bridle Assembly UOC: FMX	1
2	PAOZZ	1670-01-476-2984	81337	11-1-4014-1	Pilot Chute UOC: FMX	1
3	PAOZZ	1670-01-461-0071	81337	11-1-4018	Bridle Assembly UOC: FMX	1
END OF FIGURE						

GROUP 02 CANOPY ASSEMBLY

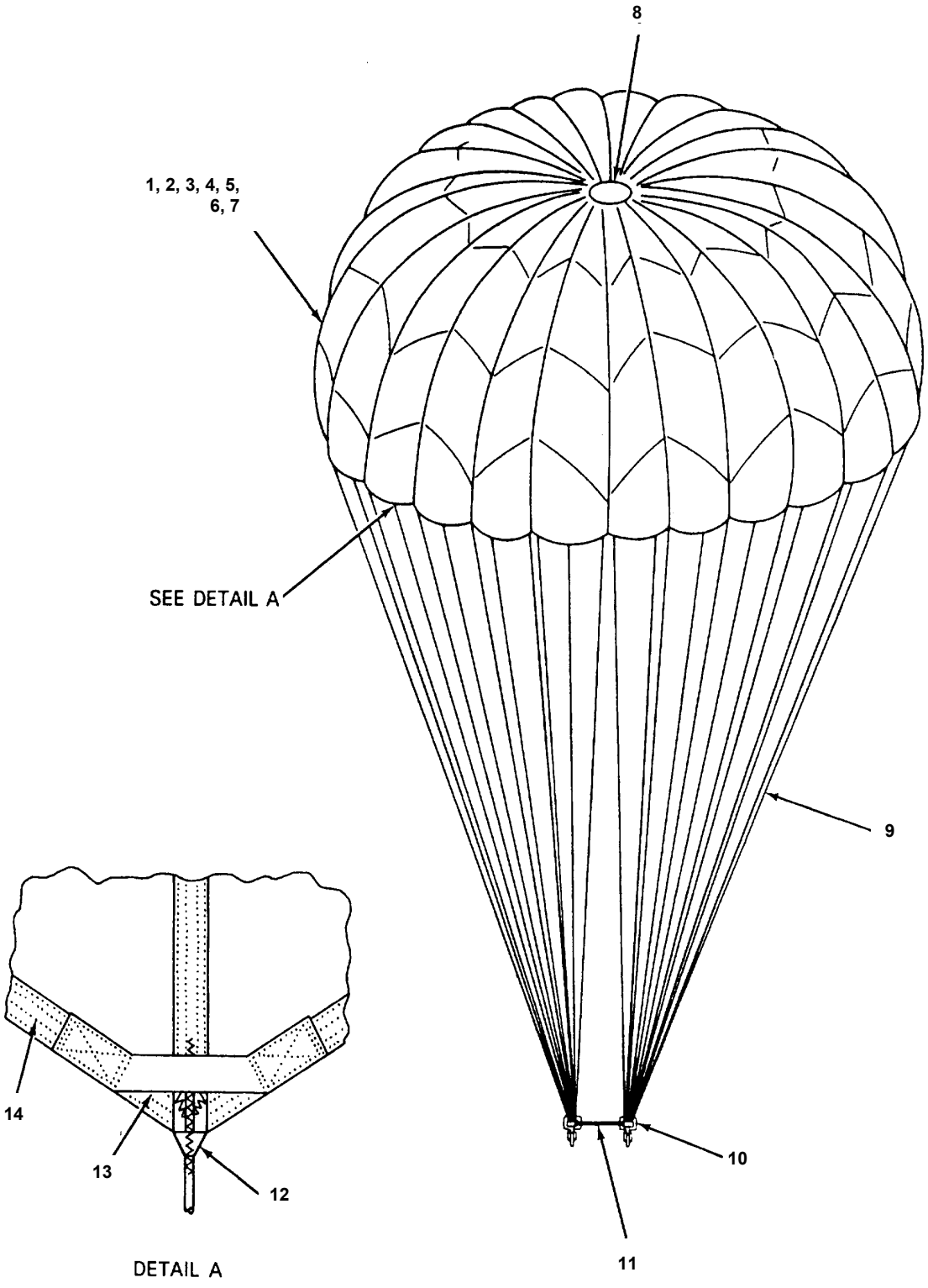


Figure 5. Parachute Canopy Assembly

GROUP 02 CANOPY ASSEMBLY
REPAIR PARTS LIST

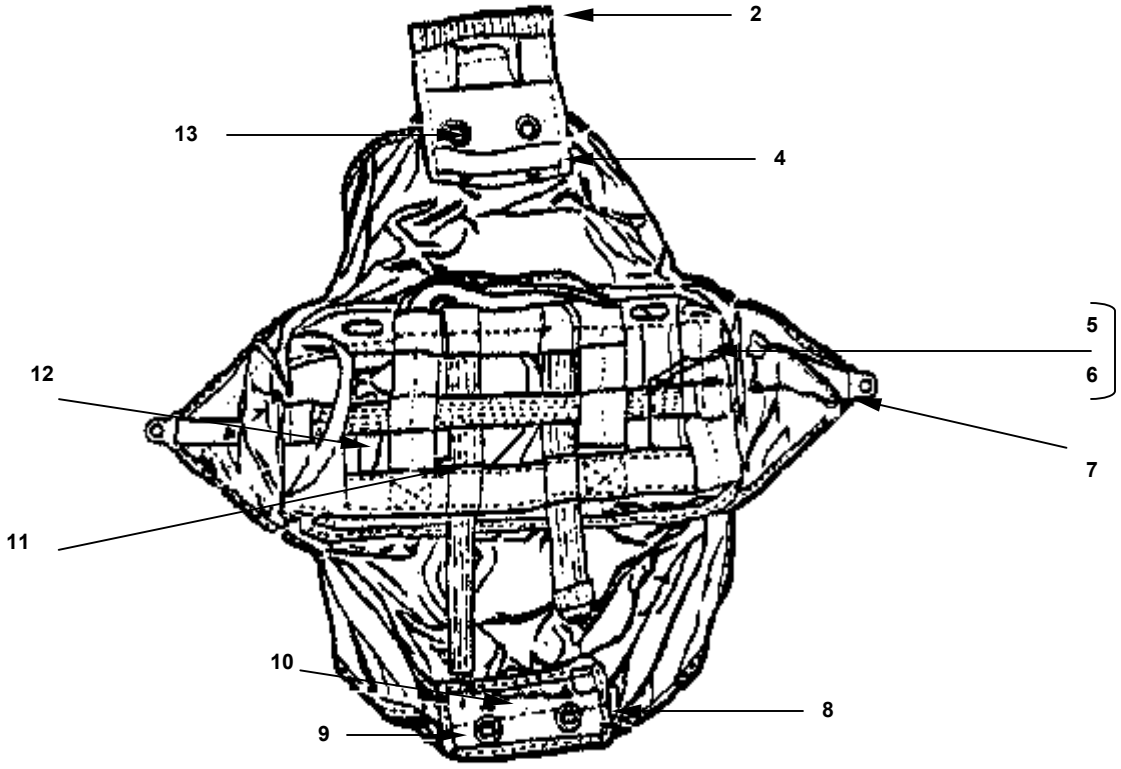
(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 02, Canopy Assembly Figure 5, Parachute Canopy Assembly, 48J7156-3						
1	MFFZZ		98750	42J2002-1	Section-Gore, 24-Ft, Make From Cloth, Nylon OG, 1.1 Oz, 36-IN Wide, Type I, P/N PIA-C-7020, Thread Nylon Green Size E Type I, Class A, P/N V-T-295. UOC: DWF, FMX	1
2	MFFZZ		98750	42J2002-2	Section Gore, 24 Ft, Make From Cloth, Nylon, OG, 1.1 Oz, 36-IN Wide, Type I, P/N PIA-C-7020, Thread, Nylon, Green, Size E, Type I Class A, P/N V-T-295. UOC: DWF, FMX	1
3	MFFZZ		98750	42J2002-3	Section Gore, 24 Ft, Make From Cloth, Nylon, OG, 1.1 OZ, 36 IN Wide, Type I, P/N MIL-C-7020, Thread, Nylon, Green, Size E Type I, Class A P/N V-T-295. UOC: DWF, FMX	1
4	MFFZZ		98750	42J2002-4	Section Gore, 24 Ft, Make From Cloth, Nylon, OG, 1.1 OZ, 36 IN Wide, Type I P/N PIA-C-7020, Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1

GROUP 02 CANOPY ASSEMBLY
REPAIR PARTS LIST

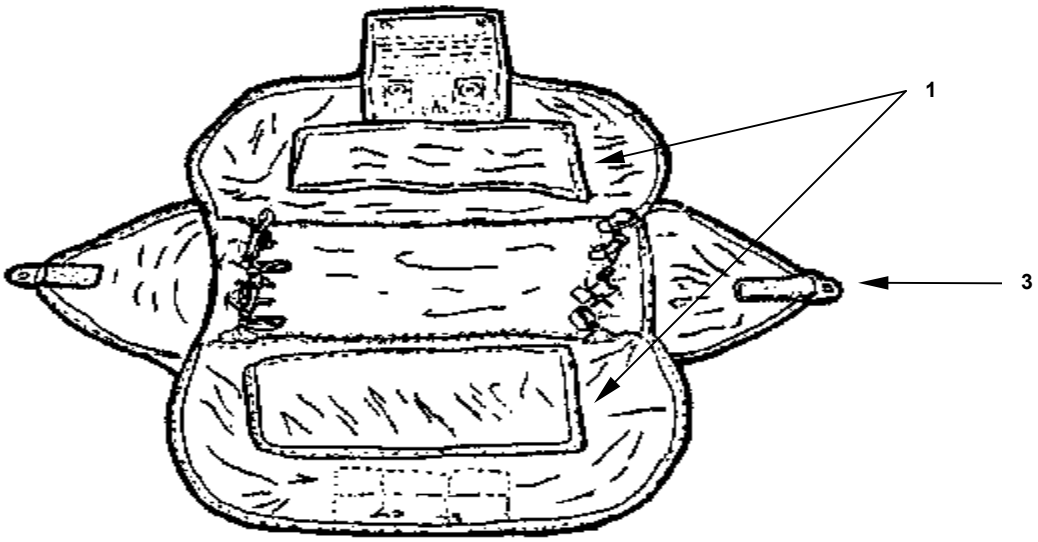
(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
5	MFFZZ		81337	11-1-2675-1	Section Gore, 24-Ft, Make From Cloth, Nylon, OG, 1.1-OZ, 48-IN Wide, Type I, P/N PIA-C-7020, Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
6	MFFZZ		81337	11-1-2675-2	Section Gore, 24 Ft, Make From Cloth, Nylon, OG, 1.1 OZ, 48 IN Wide, Type I, P/N PIA-C-7020, Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
7	MFFZZ		81337	11-1-2675-3	Section Gore, 24 Ft, Make From Cloth, Nylon, OG, 1.1 OZ, 48-IN Wide, Type I, P/N PIA-C-7020, Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
8	MOOOO		98750	48J7156 Section B-B	Upper Lateral Band, Make From Webbing, Textile, Green, Nylon, Tubular, 1-IN Wide, P/N PIA-W-5625, Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
9	MFFZZ		98750	44G26459-15	Suspension Line, Make From Cord, Nylon, OD, Type III, P/N PIA-C-5040, Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1

GROUP 02 CANOPY ASSEMBLY
REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
10	PAOOZ	5340-00-377-6642	96906	PS70121-1	Snap Connector, Parachute, Troop Chest Type, Pack, UOC: DWF, FMX	1
11	MOOOO		98750	44G26459-11	Spreader Bar, Make From Webbing, Nylon, Tubular, 1-IN Wide, and Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
12	MOOOO		98750	48J7156 Section G-G and H-H	V-Tab, Make From Webbing, Textile, Green, Nylon, 9/16-IN Wide, Type I, P/N MIL-W-4088, and Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
13	MOOOO		98750	48J7156 Section J-J	Pocket Band, Make From Tape, Textile, Green, Nylon, Tubular, 1-IN Wide, Type I, P/N Mil-T-6134, and Thread, Nylon, Green, Size E Type I, Class 2, P/N V-T-295 UOC: DWF, FMX	1
14	MOOOO		98750	48J7156 Section A-A	Lower Lateral Band, Make From Tape, Tubular, Nylon, 1-IN Wide, and Thread, Nylon, Green, Size E Type I, Class A, P/N V-T-295 UOC: DWF, FMX	1
END OF FIGURE						



OUTER VIEW



INSIDE VIEW

Figure 6. T-10R Pack Tray Assembly

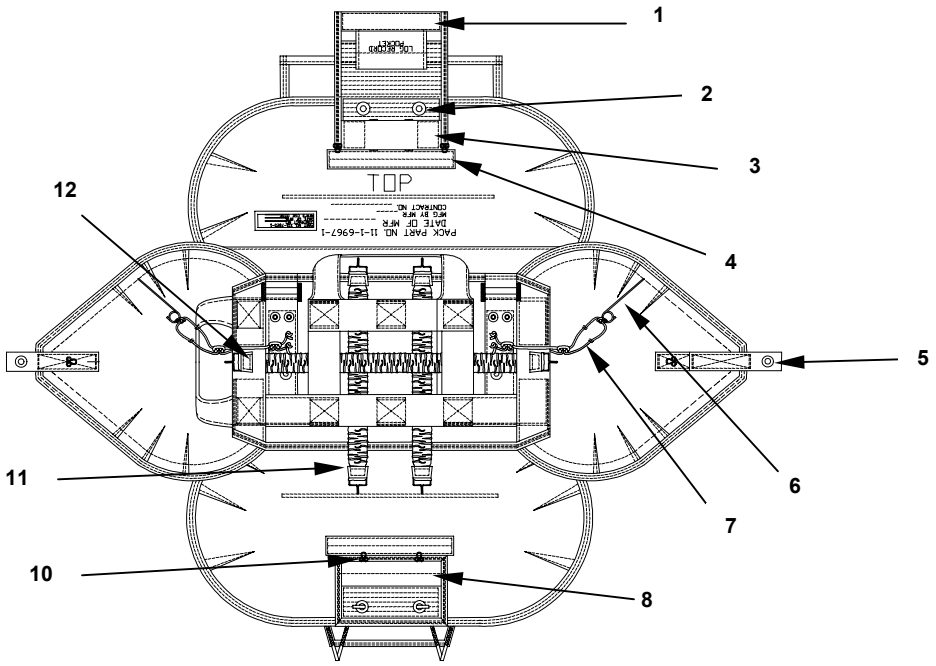
GROUP 03 PACK TRAY ASSEMBLY (T-10R, MIRPS)
REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 03, Pack Tray Assembly Figure 6, T-10R Pack Tray Assembly, 62J4346-10						
1	MOOOO		98750	62J4340-3	Pilot Chute, Flap Panel, Cotton, Make From Cloth Duck, OD, 12.29 Oz, Type I Class 1 Tape, OD, Cotton, ¾-IN Wide Type 3, P/N Mil-T-5661, and Thread, Nylon, OD, Size E Type I, Class A, P/N V-T-295 UOC: DWF	1
2	MOOOO		58536	A-A-55126	Fastener, Tape, Hook, 1-IN Wide, Type II, Class I, CG483, and Thread, Nylon, Green, Size E, Type I Class A, P/N V-T-295 UOC: DWF, FMX.	AR
3	PAOZZ	1670-00-360-0338	96906	MS70092	Fastener, Parachute Pack UOC: DWF	2
4	MOOOO		58536	A-A-55126	Fastener, Tape, Pile, 1-IN Wide, Type II, Class I, CG483, and Thread, Nylon, Green, Size E, Type I Class A, P/N V-T-295 UOC: DWF, FMX.	AR
5	MOOOO		98750	M5040-3-C	Lanyard, Make From Cord, Nylon, OD, Type III, P/N MIL-C-5040 UOC: DWF, FMX	1
6	MOOOO		98750	55B6261	Safety Wire, Locking, Make From Wire, Steel, Non-Corrosion, P/N ASTM-A580, UOC: DWF, FMX	1

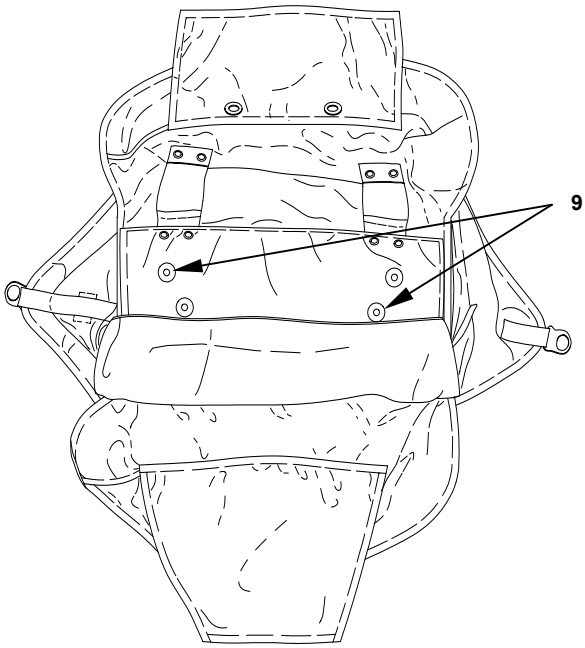
GROUP 03 PACK TRAY ASSEMBLY (T-10R, MIRPS)
REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
7	PCOZZ	1670-00-868-8463	98750	62C4318	Pocket, Parachute, Ripcord Grip UOC: DWF	1
8	PAOZZ	1670-00-491-0948	96906	MS27763-1	Cone, Releasing, Parachute Pack UOC: DWF	2
9	XBOOO		98750	45A28142	Stiffener, Parachute, Chest, Pack Cone, Replace with Serviceable Like Item from Unserviceable Pack Tray UOC: DWF, FMX	1
10	PAOZZ	8315-00-222-1418	98750	50A6153	Eye, Dressmaker's UOC: DWF, FMX	6
11	PAOZZ	1670-00-702-5360	98750	PS70105-3A	Band, Spring, Parachute 12 ½-IN Long UOC: DWF, FMX	2
12	PAOZZ	1670-00-702-5369	98750	MS70105-2A	Band, Spring, Parachute 16 ½-IN Long UOC: DWF, FMX	1
13	XDOOO		96906	MS22048GC1	Grommet, Metallic, With Washer UOC: DWF	2
END OF FIGURE						

GROUP 03 PACK TRAY ASSEMBLY (T-10R, MIRPS)



OUTSIDE VIEW



INSIDE VIEW

Figure 7. Pack Tray Assembly for the MIRPS

GROUP 03 PACK TRAY ASSEMBLY (T-10R, MIRPS)
REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 03, Pack Tray Assembly Figure 7, Pack Tray Assembly for the MIRPS, 11-1-6967-1						
1	MOOOO		58536	A-A-55126	Fastener, Tape, Pile, 1-IN Wide, Type II, Class I, CG483, and Thread, Nylon, Green, Size E, Type I Class A, P/N V-T-295 UOC: DWF, FMX	AR
2	PAOZZ	5325-01-506-9046	57771	#ORRGSW305 SS	Grommet, Rolled Rim, Spur Washer, 305, Stainless Steal, No. O UOC: DWF	2
3	PAOZZ	1670-01-485-1646	81337		Pocket, Parachute Ripcord Grip UOC: FMX	1
4	MOOOO		58536	A-A-55126	Fastener, Tape, Hook, 1-IN Wide, Type II, Class I, CG483, and Thread, Nylon, Green, Size E, Type I Class A, P/N V-T-295 UOC: DWF, FMX	AR
5	PAOZZ	5325-01-506-9046	57771	#ORRGSW305 SS	Grommet, Rolled Rim, Spur Washer, 305, Stainless Steal, No. O UOC: DWF	2
6	MOOOO		98750	55B6261	Safety Wire, Locking, Make From Wire, Steel, Non-Corrosion, P/N ASTM-A580, UOC: DWF, FMX	1
7	MOOOO		98750	M5040-3-C	Lanyard, Make From Cord, Nylon, OD, Type III, P/N MIL-C-5040 UOC: DWF, FMX	1

GROUP 03 PACK TRAY ASSEMBLY (T-10R, MIRPS)
REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
8	XBOOO		98750	45A28142	Stiffener, Parachute, Chest, Pack Cone, Replace with Serviceable Like Item from Unserviceable Pack Tray UOC: DWF, FMX	1
9	MOOOO		96906	MS20230BS10	Grommet, Spur, Assembly UOC: DWF, FMX	4
10	PAOZZ	8315-00-222-1418	98750	50A6153	Eye, Dressmaker's UOC: DWF, FMX	6
11	PAOZZ	1670-00-702-5360	96906	PS70105-3A	Band, Spring, Parachute 12 ½-IN Long UOC: DWF, FMX	2
12	PAOZZ	1670-00-702-5369	96906	MS70105-2A	Band, Spring, Parachute 16 ½-IN Long UOC: DWF, FMX	1
END OF FIGURE						

GROUP 99 BULK MATERIALS
REPAIR PARTS LIST

(1) ITEM NO.	(2) SMR CODE	(3) NSN	(4) CAGEC	(5) PART NO.	(6) DESCRIPTION AND USABLE ON CODE (UOC)	(7) QTY
Group 99, Bulk Materials						
1	PAOZZ	8305-00-115-9168	81349	PIA-C-7020	Cloth, Parachute, Nylon 1.1-OZ Ripstop, Olive Drab 48-IN Wide	V
2	PAOZZ	4020-00-246-0688	81349	PIA-C-5040	Cord, Fibrous OD, Type III	V
3	PAOZZ	8315-00-176-8083	81349	PIA-T-5038	Tape, Textile, Nylon, Green, ¾-IN Wide, Type III	V
4	PAOZZ	8315-00-255-7675	81349	MIL-T-6143	Tape, Textile, Tubular, Type I, 1-IN Wide, OD	V
5	PAOZZ	8310-00-262-2772	81348	V-T-295	Thread, Nylon, Green, Size E, Type I, Class A	V
6	PAOZZ	8305-00-268-2455	81349	PIA-W-5625	Webbing, Textile, Nylon, Green, Tubular, 1-IN	V
7	PAOZZ	8305-00-260-6909	81349	PIA-W-4088	Webbing, Textile, Nylon, Green, $^{9}/_{16}$-IN Wide	V
8	PAOZZ	8305-00-261-8579	81349	PIA-T-5038	Webbing, Textile, Nylon, OD, 1-IN Wide, Type IV	V
9	PAOZZ	8305-00-281-3315	81349	PIA-W-5665	Webbing, Textile, Cotton, OD, 1-IN Wide, Type II Class 2B	V
10	PAOZZ	9509-00-892-4616	81348	ASTM-A580	Wire, Non-Electrical, 10 Lb Coil	V
END OF FIGURE						

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS SPECIAL TOOLS LIST

SPECIAL TOOLS LIST

(Not Applicable)

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS NATIONAL STOCK NUMBER (NSN) INDEX

NATIONAL STOCK NUMBER INDEX		
STOCK NUMBER	**FIGURE**	**ITEM**
1670-00-063-4500	1	4
8305-00-115-9168	BULK	1
8315-00-176-8083	BULK	3
8315-00-222-1418	6	10
8315-00-222-1418	7	10
4020-00-246-0688	BULK	2
1670-00-251-6603	1	1
8315-00-255-7675	BULK	4
8305-00-260-6909	BULK	7
8305-00-261-8579	BULK	8
8310-00-262-2772	BULK	5
8305-00-268-2455	BULK	6
8305-00-281-3315	BULK	9
1670-00-360-0338	6	3
5340-00-377-6642	5	10
1670-00-491-0948	6	8
1670-00-622-4462	1	2
1670-00-622-4462	2	2
1670-00-702-5360	6	11
1670-00-702-5360	7	11
1670-00-702-5369	6	12
1670-00-702-5369	7	12
1670-00-868-8463	6	7
9509-00-892-4616	BULK	10
1670-00-951-6417	1	3
1670-01-436-4798	2	3
1670-01-457-7897	2	1
1670-01-457-7897	4	1
1670-01-457-7901	2	5
1670-01-461-0071	4	3
1670-01-468-9174	2	4
1670-01-476-2984	4	2
1670-01-485-1646	7	3
END OF INDEX		

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS PART NUMBER INDEX

PART NUMBER INDEX		
PART NUMBER	**FIGURE**	**ITEM**
11-1-2675-1	5	5
11-1-2675-2	5	6
11-1-2675-3	5	7
11-1-4014-1	4	2
11-1-4018	4	3
11-1-4040-1	2	5
11-1-6966-1	2	1
11-1-6966-1	4	1
42J2002-1	5	1
42J2002-2	5	2
42J2002-3	5	3
42J2002-4	5	4
44G26459-11	5	11
44G26459-15	5	9
44G26459-7	3	1
45A28142	6	9
45A28142	7	8
48J7156 Section B-B	5	8
48J7156 Section J-J	5	13
48J7156 Section A-A	5	14
48J7156 Section G-G and H-H	5	12
48J7156-3	1	2
48J7156-3	2	2
49J7161-2	1	1
50A6153	6	10
50A6153	7	10
55B6261	6	6
55B6261	7	6
PART NUMBER	**FIGURE**	**ITEM**
62C4250	1	4
62C4318	6	7
62J4340-3	6	1
62J4346-10	1	3
A-A-55126	6	2
A-A-55126	6	4
A-A-55126	7	1
A-A-55126	7	4
ASTM-A580	BULK	10
M5040-3-C	6	5
M5040-3-C	7	7
MIL-T-6143	BULK	4
MS20230BS10	7	9
MS22048GC1	6	13
MS27763-1	6	8
MS70092	6	3
MS70105-2A	6	12
MS70105-2A	7	12
PIA-C-5040	BULK	2
PIA-C-7020	BULK	1
PIA-T-5038	BULK	3
PIA-T-5038	BULK	8
PIA-W-4088	BULK	7
PIA-W-5625	BULK	6
PIA-W-5665	BULK	9
PS70105-3A	6	11
PS70105-3A	7	11
PS70121-1	5	10
V-T-295	BULK	5
END OF INDEX		

END OF WORK PACKAGE

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND THE MIRPS EXPENDABLE/DURABLE MATERIAL LIST

SCOPE

This work package lists expendable and durable items that you will need to operate and maintain the 24-Foot Diameter Troop Chest Reserve Parachute and the MIRPS. These items are authorized to you by CTA 50-970, Expendable/Durable Items (Except Medical, Class V Repair Parts, and Heraldic Items) or CTA 8-100, Army Medical Department Expendable/Durable Items.

EXPLANATION OF COLUMNS

Column (1), Item Number. This number is assigned to the entry in the list and is referenced in the narrative instructions to identify the item (e.g., Use Cloth, Abrasive (Item 5, WP 0058 00)).

Column (2), Level. This column identifies the lowest level of maintenance that requires the listed item:

C – Operator/Crew
O – Organizational Maintenance – Unit Maintenance
F – Direct Support Maintenance
H – General Support Maintenance
D – Depot Maintenance

Column (3), National Stock Number. This is the NSN assigned to the item; use it to request or requisition the item.

Column (4), Item Name, Description, Commercial and Government Entity Code (CAGEC), and Part Number (P/N). This column provides the other information you need to identify the item.

Column (5), Unit of Measure (U/M). This code shows the physical measurement or count of an item such as gallon, dozen, gross, etc.

Table 1. Expendable/Durable Supplies and Materials List

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) UNIT OF MEASURE
1	O	1670-00-568-0323	Band, Rubber, Retainer	BX
2	O	7510-01-459-5471	Band, Rubber (MIRPS)	LB
3	O	9160-00-253-1171	Beeswax, Technical	LB
4	O	5325-00-891-9073	Cap, Fastener, Snap	EA
5	O	5350-00-221-8072	Cloth, Abrasive	BK
6	O	8305-00-765-2863	Cloth, Duck, Nylon, Sage Green, 7.25 oz, Type III	YD
7	O	1670-00-176-1802	Cloth, Parachute Mending, Nylon, Olive Drab	YD
8	O	8305-01-115-9168	Cloth, Parachute, Nylon, Olive Green, Type I 48-IN	YD

Table 1. Expendable/Durable Supplies and Materials List - continued

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) UNIT OF MEASURE
9	O	4020-00-262-2019	Cord, Nylon, OD, Nylon Core, Type II	YD
10	O	4020-00-246-0688	Cord, Nylon, OD, Nylon Core, Type III	YD
11	O	7930-00-281-4731	Dishwashing Compound, Hand	YD
12	O	8315-00-222-1418	Eye, Dressmaker's	GR
13	O	8315-00-106-5973	Fastener Tape, Hook	YD
14	O	8315-00-106-5974	Fastener Tape, Pile	YD
15	O	5325-00-275-5972	Grommet, Steel, Chrome, No.5 w/ Washer	GR
16	O	7510-00-634-6583	Ink, Marking Parachute, Orange-Yellow	BT
17	O	7510-00-286-5362	Ink, Marking, Parachute, Strata Blue	BT
18	O	7520-00-973-1059	Marker, Felt-Tip, Black	BX
19	O	7520-01-060-5820	Pen, Ball-Point (81348) GG-B-0060	EA
20	O	7510-00-240-1525	Pencil, Marking Aid, White (81348) A-A-87	EA
21	O	7510-00-264-4612	Pencil, Marking Aid, Yellow (81348) A-A-87	EA
22	O	5325-00-276-4978	Post, Fastener, Snap	HD
23	O	7920-00-205-3570	Rag, Wiping	BE
24	O	9320-00-232-2473	Rubber Sheet, Cellular	SH
25	O	9320-00-241-9752	Rubber Sheet, Solid	SH
26	O	5325-00-945-2577	Socket, Fastener, Snap	EA
27	O	9310-00-160-7858	Stencil Board, Oiled, Type II (81348) UU-S-625	SH
28	O	5325-00-276-4908	Stud Fastener	HD
29	O	4020-00-753-6555	Tape, Lacing and Tying	YD
30	O	7510-00-074-4946	Tape, Pressure Sensitive, White, 1-IN Wide	RO
31	O	7510-00-550-7125	Tape, Pressure Sensitive, Yellow, ½-IN Wide	RO
32	O	7510-00-550-7124	Tape, Pressure-Sensitive, Blue ½-IN Wide	RO
33	O	8315-00-176-8083	Tape, Textile, Green, Nylon, Type III	YD
34	O	8315-00-255-7675	Tape, Textile, Natural, Nylon Wrap, Cotton Filling, Tubular, Type I, 1-IN	YD
35	O	8315-00-253-6265	Tape, Textile, Natural, Nylon, Type III, ¾-IN	YD
36	O	8315-00-844-2358	Tape, Textile, Yellow, Nylon, Type III, ¾-IN	YD

Table 1. Expendable/Durable Supplies and Materials List - continued

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) ITEM NAME, DESCRIPTION, CAGEC, PART NUMBER	(5) UNIT OF MEASURE
37	O	8310-00-917-3945	Thread, Cotton, Natural Finish, Ticket No. 8/7	YD
38	O	8310-00-244-0603	Thread, Nylon, Green, A/A Finish, Ticket No. A	TU
39	O	8310-00-262-2772	Thread, Nylon, Green, Natural Finish, Size E	TU
40	O	8310-00-262-2770	Thread, Nylon, Natural, Natural Finish, Size E	TU
41	O	8310-00-262-3324	Thread, Nylon, Natural, Natural Finish, Size A	TU
42	O	8310-00-267-3027	Thread, Nylon, Olive Drab, Natural Finish, No. 3	TU
43	O	8310-00-262-2780	Thread, Nylon, Olive Drag, Natural Finish, Size 6	YD
44	O	8310-00-267-3024	Thread, Nylon, Olive Drab, Size FF	TU
45	O	9160-00-285-2044	Wax, Paraffin, Technical	LB
46	O	8305-00-263-3602	Webbing, Textile, Black One Side, White One Side, Cotton, Elastic, 1½-IN	YD
47	O	8305-00-268-2411	Webbing, Textile, Cotton, 80-lbs	YD
48	O	8305-00-260-6910	Webbing Textile, OD Nylon, 1-Inch-Wide Tubular	YD
49	O	8305-00-268-2455	Webbing, Textile, Green, Nylon, Tubular, 1-IN, 1.7-OZ.	YD
50	O	8305-00-281-3013	Webbing, Textile, Green Nylon, Type VI	YD
51	O	8305-00-268-2451	Webbing, Textile, Natural, Nylon, Tubular	YD
52	O	8305-00-268-2451	Webbing, Textile, Natural, Nylon, Tubular, 0.95 oz., ¾-IN	YD
53	O	8305-00-263-3939	Webbing, Textile, Natural, Nylon, Type 1	YD
54	O	8305-00-261-8579	Webbing, Textile, Olive Drab, Nylon, Type V	YD
55	O	8305-00-261-8579	Webbing, Textile, Olive Drab, Nylon, Type V	YD
56	O	8305-00-281-3012	Webbing, Textile, Olive Drab, Nylon, Type XII	YD
57	O	9509-00-892-4616	Wire, Steel, Composition 430, QQ-W-423-80-10, Form 1, Condition A	RL
58	O	8305-00-263-2472	Webbing, Textile, Green, Nylon, Type IV, 1.5-IN	YD
59	O	8305-00-268-2452	Webbing, Textile, Natural, Nylon, Tubular, 1.7 oz., 1-IN	YD
60	O	8310-00-917-3945	Thread, Cotton, Natural, 8/7	TU
61	O	8305-00-261-8856	Webbing, Textile, Green, Nylon, Type I, $^{9}/_{16}$-IN	YD

24-FOOT DIAMETER TROOP CHEST RESERVE (T-10R) PARACHUTE AND MIRPS ILLUSTRATED LIST OF MANUFACTURED ITEMS

INTRODUCTION

Scope
This work package includes complete instructions for making items authorized to be manufactured or fabricated at the unit maintenance level.

How to Use the Index of Manufactured Items
A part number index in alphanumeric order is provided for cross-referencing the part number of the item to be manufactured to the page which covers fabrication criteria.

Part Number	CAGE Code	Nomenclature
N/A	N/A	Test Tube
N/A	N/A	25-Pound Weight

Explanation of the Illustrations of Manufactured Items
All instructions needed by maintenance personnel to manufacture the item are included on the illustrations. All bulk materials needed for manufacture of an item are listed by part number or specification number in a tabular list on the illustration.

TEST TUBE

CAUTION

Based on the manufacturer, the inside diameter of the PVC pipe may vary. Purchases the PVC pipe prior to the fabrication of the 25-pound weigh. Slight dimensional changes may be necessary to ensure the 25-pound weight fits inside the PVC pipe. Failure to procure the PVC pipe first may result in the improper fit of the 25-pound weight.

Tools
Drill, Electric, $^{5}/_{8}$-IN Chuck (Item 27, WP 0044 00)
Welding Machine

Materials/Parts
Pipe, PVC, 8-IN
Sheet Metal, Aluminum, $^{1}/_{8}$-IN Thick
Rod, Aluminum, $^{3}/_{8}$-IN Diameter
Weighted Material
Test Set, Spring Compression (Composition of assembled components listed above.)

Fabricate the test tube as follows:

1. Acquire a piece of pipe (PVC pipe) with an inside dimension of 8-inches (minimum). The outside dimensions should be around 8 ½-inches.

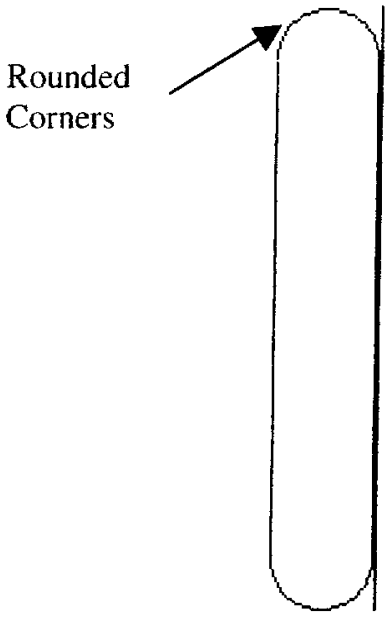
2. Cut the pipe to a length of 36-inches and determine a top and bottom.

3. Install the inspection slot by placing a mark 1 ½-inches up from the bottom. Make an additional mark 7-½-inches up from the bottom.

4. Cut a 1-inch wide slot from the 1 ½-inch mark to the 7-½-inch mark. The top and bottom slots are rounded, but this is not required.

NOTE

The purpose of the slot is to view the spring when compressed under the 25-pound weight.



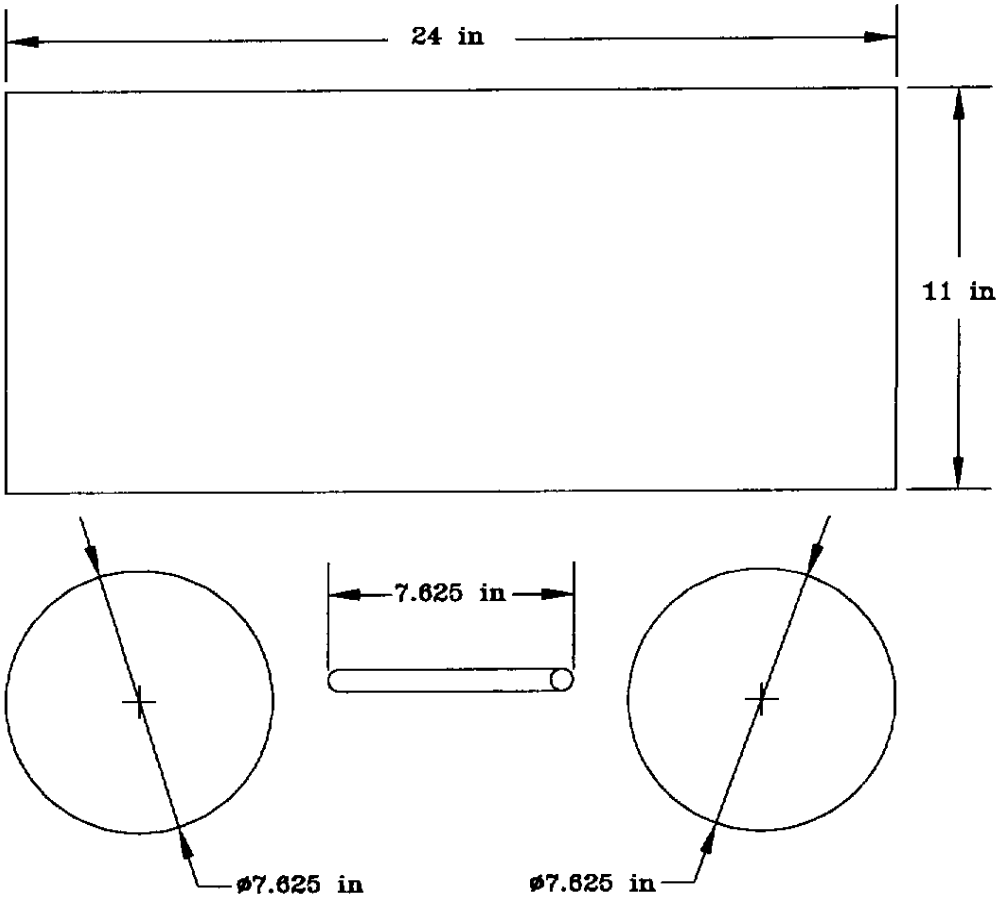
25-POUND WEIGHT
Fabricate the 25-lb weight as follows:

1. From $^{1}/_{8}$-inch thick aluminum sheet metal, cut one piece 24-inches by 11-inches and two circulate pieces 7 $^{5}/_{8}$-inches in diameter.

2. From a $^{3}/_{8}$-inch diameter aluminum rod, cut one piece 7 $^{5}/_{8}$-inches in length.

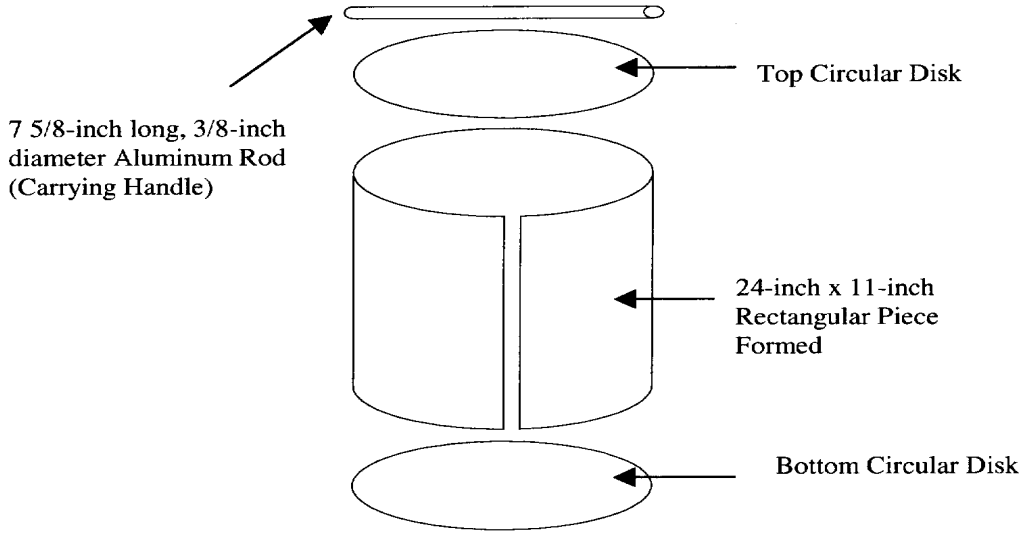
NOTE

The rectangular piece will form the body of the 25-pound weight, the $^{3}/_{8}$-inch diameter rod will form the carrying handle, and the two circular disks will form the top and bottom of the cylinder used to retain the weight material placed inside.



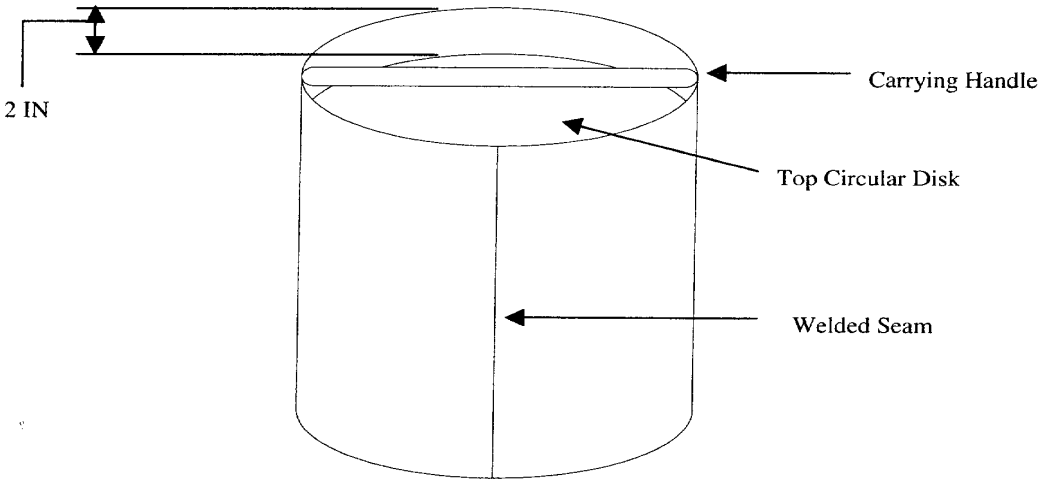
3. Form the rectangular piece to conform to the circumference of the two circular disks.

4. Position the top disk 2-inches down from the top of the rectangular piece when the weld is made to join the pieces. This allows room for the installation of the 7 $^{5}/_{8}$-inch long, $^{3}/_{8}$-inch diameter aluminum rod, which will be used as the carrying handle.



5. Position the bottom disk flush with the bottom of the rectangular piece when the weld is made.

6. Position the carrying handle even with the top of the rectangular piece and weld in place.



NOTE

The overall weight when complete will not exceed 25-pounds. Weight higher than 25-pounds will result in unnecessary replacement of ejector spring.

7. Drill a hole in the top disk. Do not make the diameter of the hole any larger than needed to fill the weight.

8. Suggested materials for weight include BBs, birdshot, or sand. Fill the cylinder to no less than 24-lbs, 12-oz and no more than 24-lbs, 15-oz.

9. Permanently close the hole ensuring no filter weight loss occurs. Welding the hole closed is recommended.

END OF WORK PACKAGE

ALPHABETICAL INDEX

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Subject **WP Sequence No. – Page No.**

Z

By Order of the Secretaries of the Army, Air Force, and Navy (including the Marine Corps):

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:

JOEL B. HUDSON
Administrative Assistant to the
Secretary of the Army
0318806

MICHAEL E. RYAN
GENERAL, USAF
Chief of Staff

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Commander, Air Force Materiel Command

D.G. MORRAL
Rear Admiral, USN
Program Executive Officer
For Expeditionary Warfare
Naval Sea Systems Command

R.P. SHOCKEY
Director, Program Support
Marine Corps System Command

DISTRIBUTION:

To be distributed in accordance with initial distribution number (IDN) 255754 requirements for TM 10-1670-269-23&P.

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: amssbriml@natick.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 PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE *21 October 2003*

TO: *(Forward to proponent of publication or form) (Include ZIP Code)* COMMANDER U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND ATTN: AMSSB-RIM-L KANSAS STREET NATICK, MA 01760-5052	FROM: *(Activity and location) (Include ZIP Code)* *PFC Jane Doe* *CO A 3rd Engineer BR* *Ft. Leonardwood, MO 63108*

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 10-1670-296-23&P	30 October 2002	Unit Manual for Ancillary Equipment for Low Velocity Air Drop Systems

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON ***(Provide exact wording of recommended changes, if possible).***
	0036 00-2				*1*	*In table 1, Sewing Machine Code Symbols, the second sewing machine code symbol should be MD ZZ not MD 22.* *Change the manual to show Sewing Machine, Industrial: Zig-Zag; 308 stitch; medium-duty; NSN 3530-01-181-1421 as a MD ZZ code symbol.*

**Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE
Jane Doe, PFC	508-233-4141	Jane Doe *Jane Doe*

DA FORM 2028, FEB 74 REPLACES DA FORM 2028, 1 DEC 68, WHICH WILL BE USED. USAPPC V3.00

TO: (*Forward direct to addressee listed in publication)*	FROM: (*Activity and location) (Include ZIP Code)*	DATE
COMMANDER U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND ATTN: AMSSB-RIM-L KANSAS STREET NATICK, MA 01760-5052	*PFC Jane Doe* *CO A 3rd Engineer BR* *Ft. Leonardwood, MO 63108*	*21 October 2003*

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 10-1670-296-23&P	30 October 2002	Unit Manual for Ancillary Equipment for Low Velocity Air Drop Systems

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION
0066 00-1					*4*			*Callout 16 in figure 4 is pointed to a D-Ring. In the Repair Parts List key for figure 4, item 16 is called a Snap Hook. Please correct one or the other.*

PART III – REMARKS (*Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

UASPPC V3.00

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS For use of this form, see AR 25-30; the proponent agency is ODISC4.	Use Part II *(reverse)* for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).	DATE
TO: *(Forward to proponent of publication or form) (Include ZIP Code)* Commander, U.S. Army Soldier Biological and Chemical Command ATTN: AMSSB-RIM-L(N) Kansas Street Natick, MA 01760-5052	FROM: *(Activity and location) (Include ZIP Code)*	

PART I – ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS

PUBLICATION/FORM NUMBER	DATE	TITLE
TM 10-1670-269-23&P	31 August 2003	24-Foot Diameter Troop Chest Reserve (T-10R) Parachute and the MIRPS

ITEM NO.	PAGE NO.	PARA-GRAPH	LINE NO. *	FIGURE NO.	TABLE NO.	RECOMMENDED CHANGES AND REASON *(Provide exact wording of recommended changes, if possible).*

**Reference to line numbers within the paragraph or subparagraph.*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

TO: (*Forward direct to addressee listed in publication)*	FROM: (*Activity and location) (Include ZIP Code)*	DATE
Commander, U.S. Army Soldier Biological and Chemical Command, ATTN: AMSSB-RIM-L(N) Kansas Street Natick, MA 01760-5052		

PART II – REPAIR PARTS AND SPECIAL TOOL LISTS AND SUPPLY CATALOGS/SUPPLY MANUALS

PUBLICATION NUMBER	DATE	TITLE
TM 10-1670-269-23&P	31 August 2003	24-Foot Diameter Troop Chest Reserve (T-10R) Parachute and the MIRPS

PAGE NO.	COLM NO.	LINE NO.	NATIONAL STOCK NUMBER	REFERENCE NO.	FIGURE NO.	ITEM NO.	TOTAL NO. OF MAJOR ITEMS SUPPORTED	RECOMMENDED ACTION

PART III – REMARKS (*Any general remarks or recommendations, or suggestions for improvement of publications and blank forms. Additional blank sheets may be used if more space is needed.)*

TYPED NAME, GRADE OR TITLE	TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION	SIGNATURE

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

Liquid Measure

1 centiliter = 10 milliliters = .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

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigrams = .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

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 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: 068486-000