TECHNICAL MANUAL

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST

HIGH ALTITUDE AIRDROP RESUPPLY SYSTEM: 500 POUND CAPACITY

HEADQUARTERS, DEPARTMENTS OF THE ARMY
AND AIR FORCE

29 AUGUST 1984

WARNING

PRECAUTIONARY DATA

Personnel performing operations, procedures, and practices which are included or implied in this technical manual shall observe the following instructions. Disregard of these warnings may result in serious or fatal injury to personnel.

The altitude sensor parachute staging unit (ASPSU) contains a class C explosive in the cutter mechanism of the cutter module. Procedure steps shall be followed to prevent early activation and possible personal injury. When the security pin is pulled the explosive will discharge in 5 seconds.

Keep fingers or foreign objects away from webbing cutter slot at all times as blade could cause serious personnel injury.

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

Insure that pressure chamber on ASPSU test set is depressurized before attempting to open chamber door as personnel injury may result.

For First Aid Treatment, refer to FM 21-11.

TECHNICAL MANUAL

No. 10-1670-267-12&P

HEADQUARTERS
DEPARTMENTS OF THE ARMY AND THE AIR FORCE
WASHINGTON, D.C., 29 August 1984

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST FOR HIGH ALTITUDE AIRDROP RESUPPLY SYSTEM: 500 POUND CAPACITY

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 direct to: Commander, US Army Troop Support Command, ATTN: DRSTR-MPS, 4300 Goodfellow Blvd., St. Louis, MO 63120. A reply will be furnished to you.

AIR FORCE

Reports by US 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, TX 78241.

Page

LIST OF ILLUSTRATIONS

LIST OF TABLES

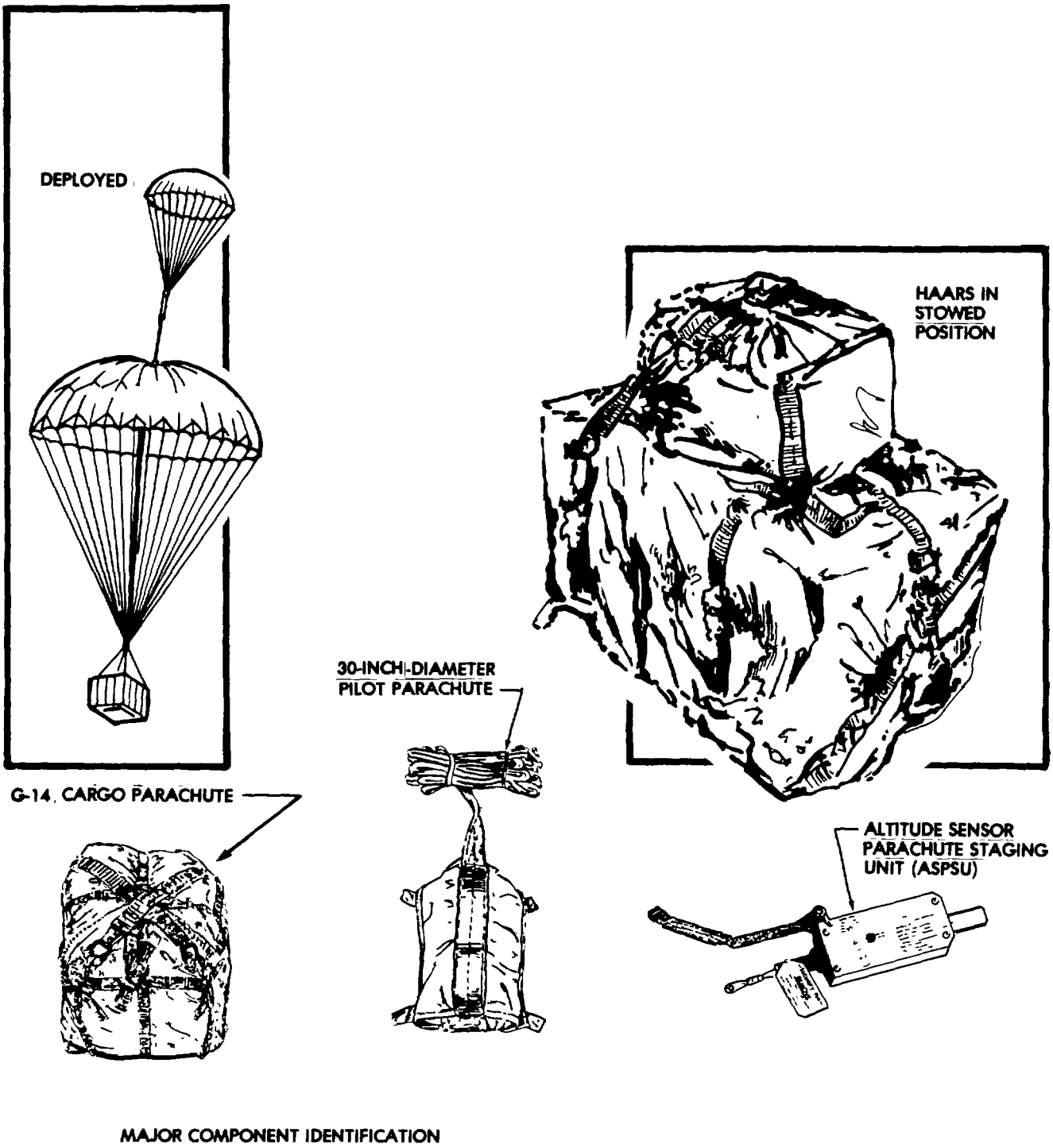


Figure 1-1. High Altitude Airdrop Resupply System (HAARS): 500 Pound Capacity

CHAPTER 1
INTRODUCTION

SECTION I. GENERAL INFORMATION

1-1. Scope.

Type of Manual: Operator and Organizational

Equipment Name: High Altitude Airdrop Resupply System (HAARS): 500 Pound Capacity

Purpose of Equipment: Provide airdrops from high altitudes to avoid detection of aircraft from enemy ground forces

1-2. Maintenance forms, records, and reports.

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA Pamphlet 738-750, The Army Maintenance Management System (TAMMS).

1-3. Reporting equipment improvement recommendations (EIR's). If your parachute system needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander, US Army Troop Support Command, ATTN: DRSTR-QX, 4300 Goodfellow Blvd., St. Louis, MO 63120. We'll send you a reply.

1-4. Destruction of Army materiel to prevent enemy use.

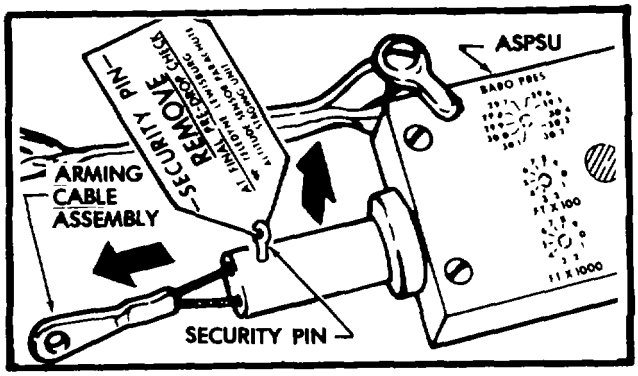
a. Instruction for destruction of the 500 pound High Altitude Airdrop Resupply System are contained in TM 750- 244-1-1/T.O. 13C3-1-10.

b. Instructions for destruction of the cutter module, (cutter), are contained in TM 750-244-5-1 and as follows:

WARNING

Explosive will discharge in 5 seconds.

- Pull out security pin.
- Pull arming cable assembly and get rid of Altitude Sensor Parachute Staging Unit (ASPSU) in an area away from personnel.
- After explosive has discharged, destroy the sensor module by destroying the printed circuit board.



1-5. Preparation for storage or shipment. For storage, refer to TM 740-90-1. Additional requirements are contained in TM 10-1670-201-23 T 0. 13C-1-41 Preparations for storage and shipment for the cutter module is contained in TM 9-1370-203-20&P.

1-6. Nomenclature cross-reference list.

Common Name	Official Nomenclature
HAARS 500 Lbs.	High Altitude Airdrop Resupply System
G-14	G-14 34-foot-diameter cargo parachute
30-inch Pilot chute	30-inch-diameter pilot parachute
ASPSU	Altitude Sensor Parachute Staging Unit
A-21	A-21 Aerial Delivery Cargo Bag
Sensor	Sensor module
Cutter	Cutter module

SECTION II. EQUIPMENT DESCRIPTION AND DATA

1-7. Equipment characteristics, capabilities, and features.

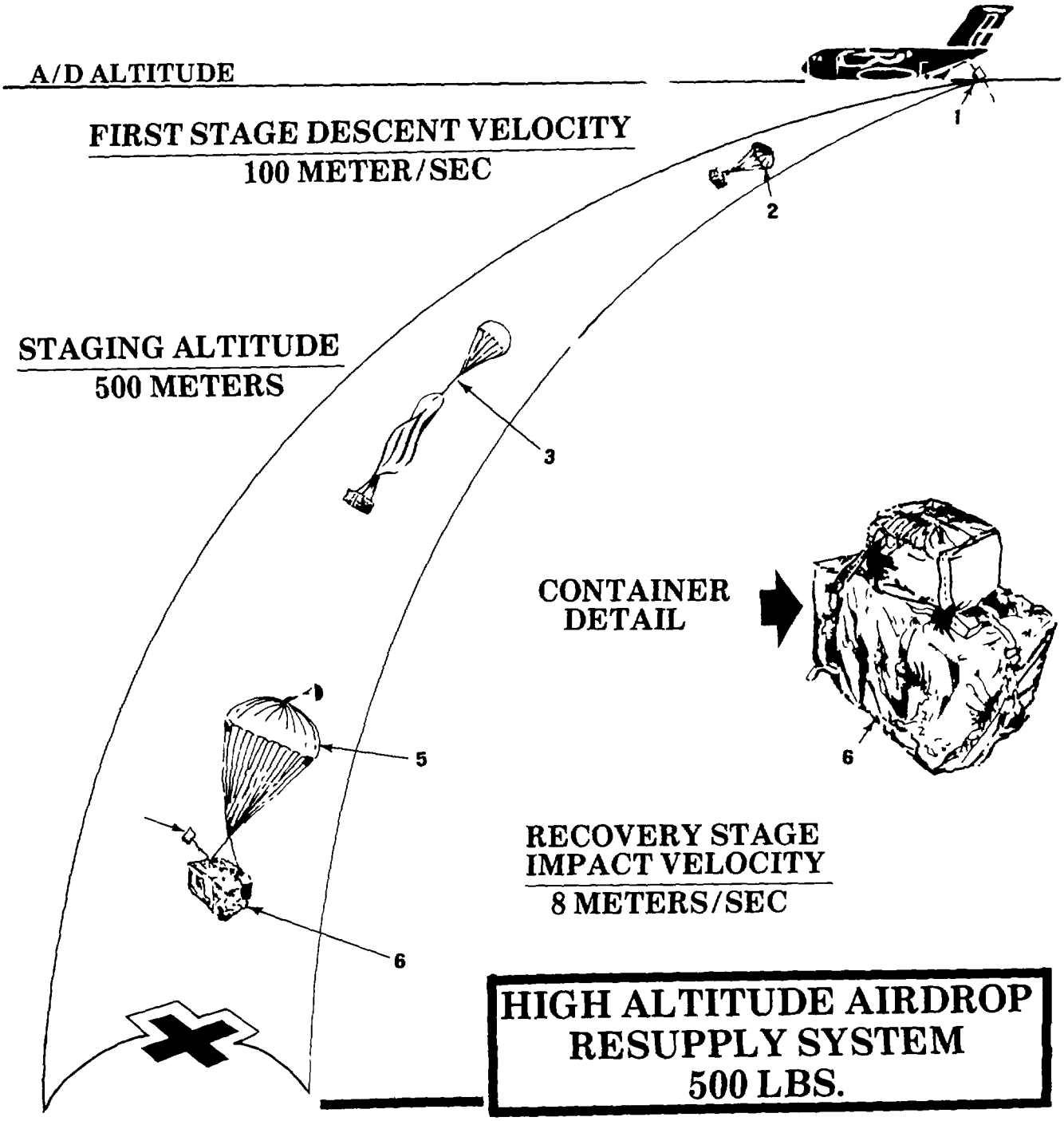
CHARACTERICS

Delivers high altitude containers from an aircraft flying at an altitude of 2,000 - 25,000 feet.

CAPABILITIES AND FEATURES

- 500 pound capacity
- All weather operational
- Highly portable
- Components of the system
-
  a. G-14 34-foot-diameter cargo parachute
  b. 30-inch-diameter pilot parachute with 60-inch long static line
  c. A-21 Aerial Delivery Cargo Bag
  d. 60-inch-long connector straps (2)
  e. Altitude Sensor Parachute Staging Unit

1-8. Location and description of major components.



1-8. Location and description of major components (cont.)

60-INCH-LONG STATIC LINE AND PILOT PARACHUTE BAG (1). The static line and parachute bag are a one-piece unit.

30-INCH-DIAMETER PILOT PARACHUTE (2). A 30-inch-diameter flat octagonal nylon canopy. Refer to TM 10-1670-215-23/T.O. 13C5-1-102 for more of a detailed description.

60-INCH-LONG-CONNECTOR STRAP (2). A 1 3/4-inch-wide type X nylon webbing with a loop formed at each end.

ALTITUDE SENSOR PARACHUTE STAGING UNIT (ASPSU) (4). A mechanical device consisting of an explosive module, which contains a cutter, and a sensor module, containg electronic controls.

G-14 34-FOOT-DIAMETER CARGO PARACHUTE (5). A 34-foot-diameter flat-circular cotton canopy. Refer to TM 10-1670-215-23/T.O. 13Cd-1-102 for more of a detailed description.

A-21 Aerial Delivery Cargo Bag (6). Consists of a sling and cover. Refer to TM 10-1670-240-20/T.O. 13C7-49-11 for more of a detailed description.

1-9. Differences between models. No model differences exist for the HAARS.

1-10. Equipment data. The equipment data summarizes the specific capabilities and limitations of the equipment and other critical data needed by the operator and organizational maintenance personnel for operation and maintenance of the HAARS.

TABLE 1-1. EQUIPMENT DATA

Equipment data pertaining to major components of the HAARS are listed in the following maintenance manuals:

TM 10-1670-215-23/T.O. 13C5-1-102
- G-14 cargo parachute and deployment bag

TM 10-1670-240-20/T.O. 13C7-49-11
- A-21 Aerial Delivery Cargo Bag
- 60-inch-long connector strap

30-inch-diameter pilot chute
Pilot deployment bag with 60-inch static line
70-inch shear strap
Deployment line

Altitude Sensor Parachute Staging Unit (ASPSU).

Staging altitude	100 feet to 990 feet altitude activation range in 100 foot increments referenced to standard sea level barometric pressure
Accuracy	100 to 4,900 feet; +150 feet 5,000 to 9,900 feet; + 250 feet
Time to activation	3.0 to 115 seconds, following arming
Altitude selection	Two controls; Ft x 1000 and Ft x 100 Select thousands of feet 0 to 9 and hundreds of feet 0 to 9
Arming pin pull force	18 lbs., nominal; 12 lbs. minimum, 30 lbs. Maximum
Local barometric pressure selection	One control; ten positions, labeled 29.5 to 30.4 inches of mercury, in 0.1 inch increments
Arming delay	3.5 seconds nominal; 3.0 seconds minimum, 4.0 seconds maximum
Operating life	a. Altitude Sensor Module, FTL3648-1: Until a malfunction occurs. b. Cutter Module, FTL3648-2; one (1) air drop
Storage environment	Temperature: -70°F (-57°0 C) to + 1600F (71° C) Humidity: up to 90% relative @ 1040F (400C) Altitude: Sea level to 50,000 ft.
Operational environment	Temperature: -650F (-540 C) to -1200°F (490 C) Humidity: up to 90% relative @ 1040 F (400 C) Altitude: Sea level to 30,000 ft.
Autoignition	ASPSU will not self activate when exposed to temperature up to 250OF (121.10 C)
Radio frequency interference	ASPSU operation not degraded by presence of electromagnetic energy or RF fields encountered in the air drop environment
Tag security	Tag and Safety Pin. Pulled prior to ASPSU arming.

1-11. Safety, Care and Handling. The ASPSU contains a class C explosive device (pyrotechnic). The following instructions shall be observed.

a. Safety

(*1)* Requirements for Safety. Requirements for safety, care, and handling of pyrotechnic items and accessories are included in TM 9-1300-206, TM 9-1370-203-20&P, and AR 385-64, as applicable.

(*2)* Specific Safety Precautions.

(a) Pyrotechnics are more dangerous than many other types of ammunition, because they are more easily activated. Items with primers should be guarded to prevent a blow on the primer, because such a low could activate the item.

(b) Pyrotechnics must never be exposed to moisture. Items showing any signs of moisture should be forwarded to authorized personnel for disposal.

(c) Protect pyrotechnics from temperatures below -65OF (-540C) or above 1400° F (600C)

(d) Pyrotechnics (except standard emergency use items) should not be left indefinitely in aircraft. They should be removed and restored to their original condition and packing.

b. Care and Handling

(1) Military pyrotechnics must be handled with care at all times. Besides the hazardous pyrotechnics composition, pyrotechnics are composed of sensitive elements, such as, friction compositions and primers.

(2) In order to keep military pyrotechnics in a serviceable condition and ready for immediate use, the following general rules apply.

(a) Store pyrotechnics in a dry, well-ventilated place, out of direct sunlight, and protect against excessive or variable temperatures.

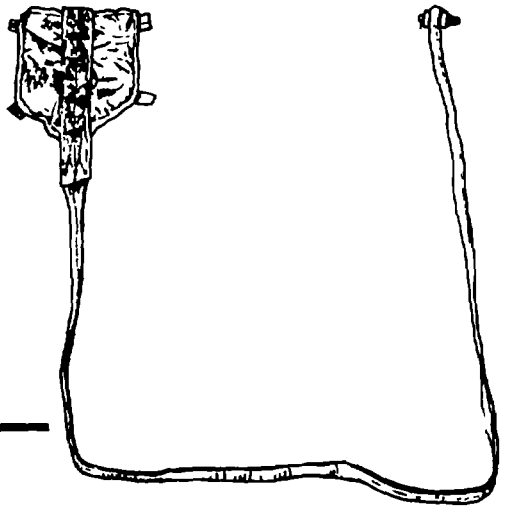
(b) Handle pyrotechnics with care and protect against shock.

(c) Do not drop or throw boxed pyrotechnics.

SECTION III. TECHNICAL PRINCIPLES OF OPERATION

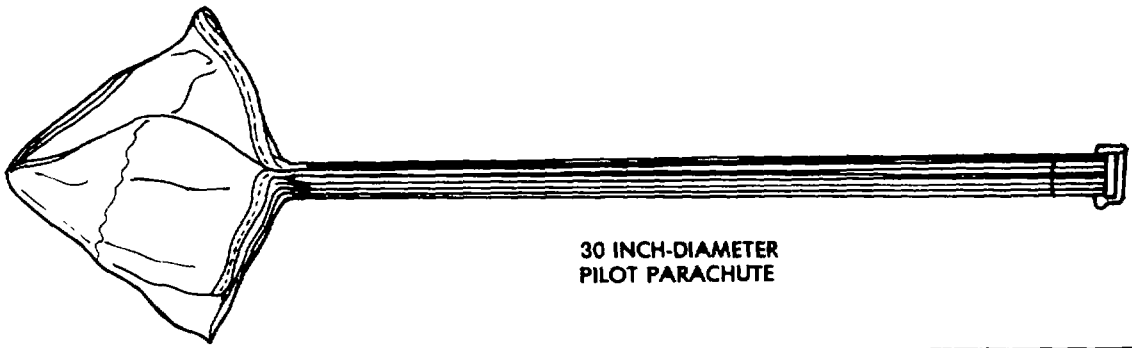
1-12. Functional description. This section contains a functional description of the HAARS operation.

60 INCH-LONG STATIC LINE
AND PILOT PARACHUTE BAG



Bag used to accomodate the 30-inch pilot chute. Static line deploys the 30-inch pilot parachute.

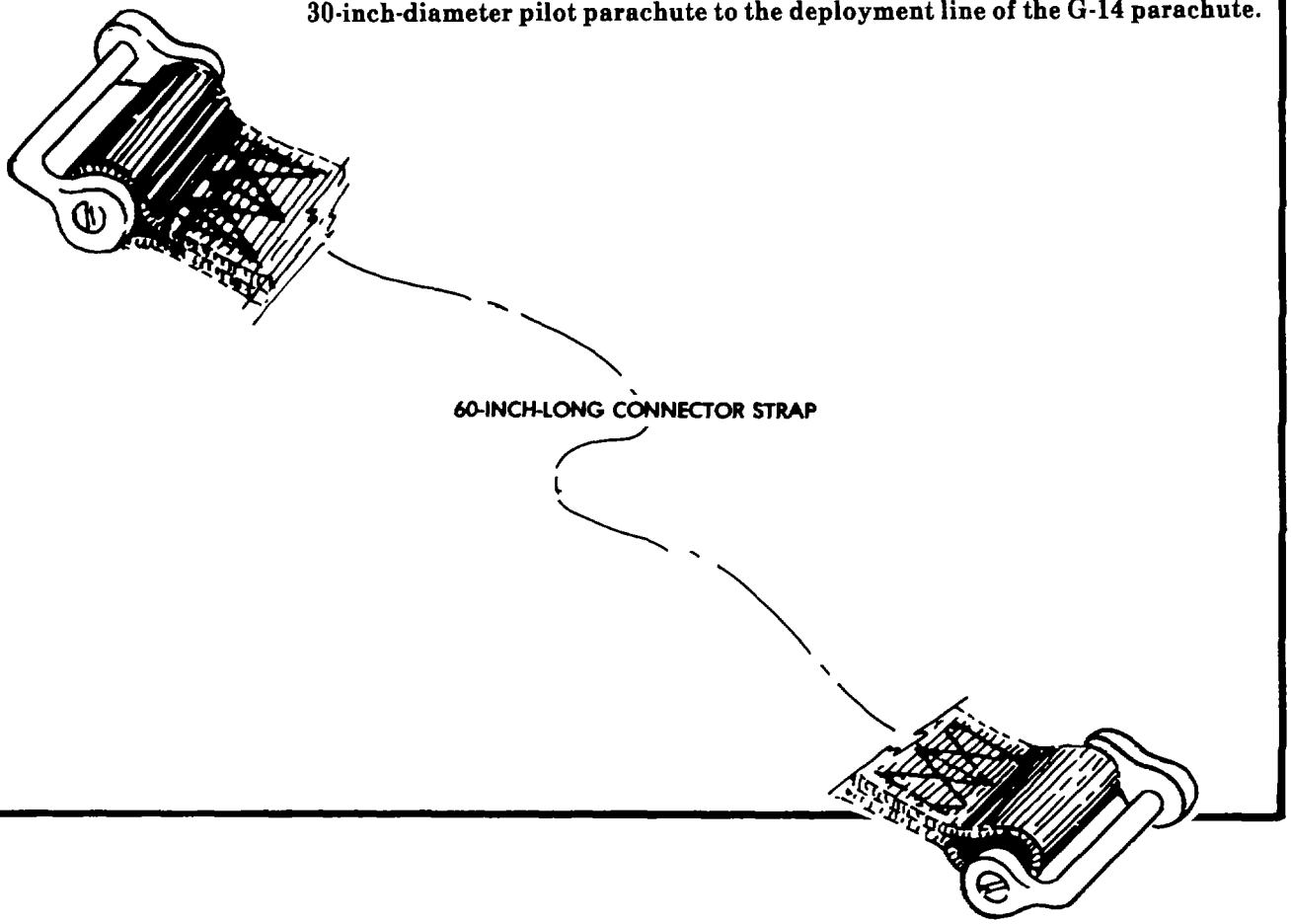
Stabilizes fall of airdrop load during the first of a two-staged airdrop action until a time delay action accurs. The chute then exerts force on a 60-inch-long connector strap to deploy the G-14 parachute.



30 INCH-DIAMETER
PILOT PARACHUTE

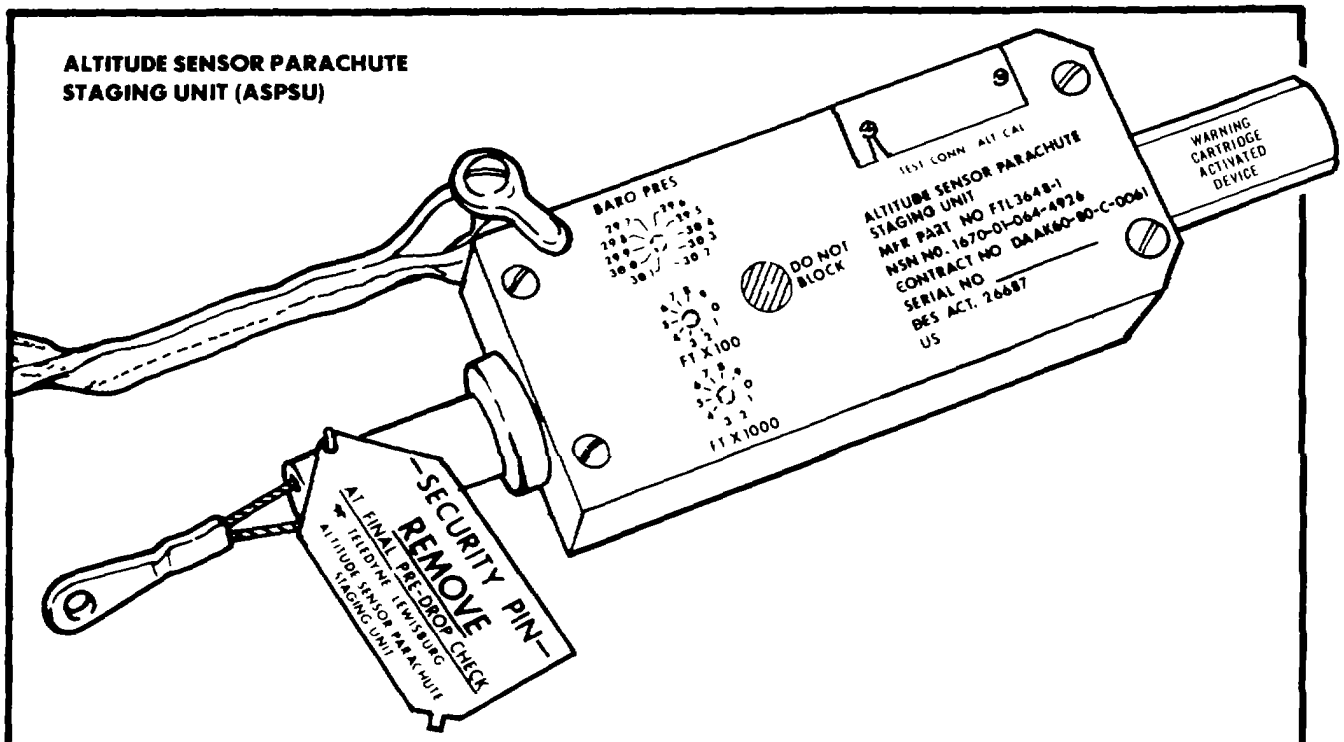
1-12. Functional description (cont).

60-inch-long connector straps are used to connect the 30-inch-diameter pilot parachute to the deployment line of the G-14 parachute.



53 INCH DEPLOYMENT LINE
USED TO DISPLAY THE G-14 CARGO PARACHUTE

1-12. Functional description (cont).



The purpose of the ASPSU is to cut the webbing which retains the deployment bag on the 34-foot-diameter cargo parachute. The cutting action occurs at a predetermined altitude, controlling the point at which the cargo parachute is deployed.

A typical mission profile, related to the ASPSU, may include, but not be limited to a sequence of events:

- Rigging the ASPSU to the load.
- Selecting activation altitude and local barometric setting.
- Removing safety tag and pin.
- Arming the ASPSU at exit of the load from the aircraft by first stage parachute.

Since the intent of the mission is to accurately deliver cargo from high altitudes, i e., the cargo free falls from altitudes in the range of 20,000 to 30,000 feet above MSL to the activation altitude which may be as low as 1000 feet AGL.

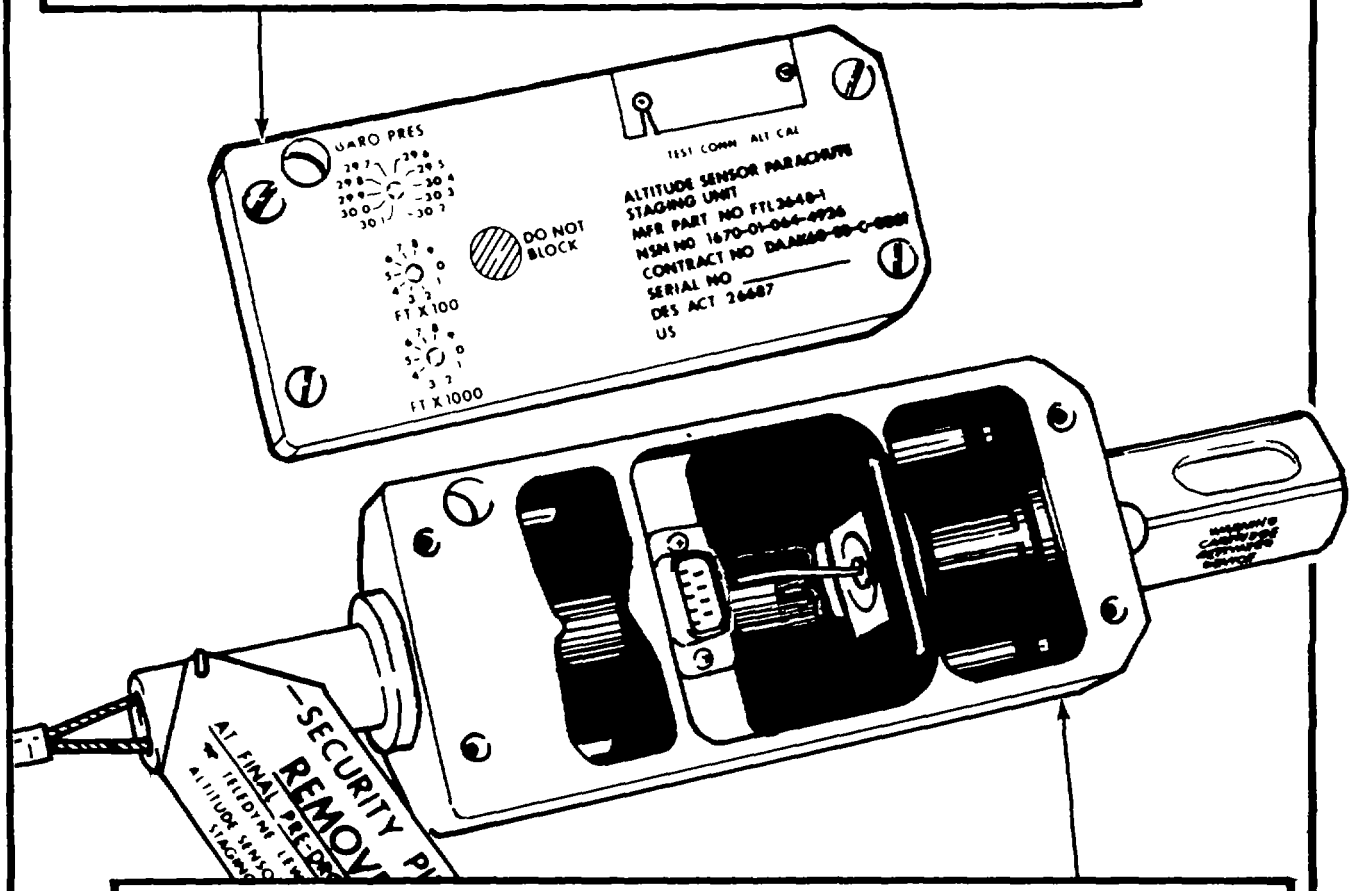
1-12. Functional description (cont).

ALTITUDE SENSOR PARACHUTE STAGING UNIT (ASPSU) (cont)

The ASPSU is a reuseable altitude sensor module coupled to a refurbishable cutter/thermal battery module specifically designed to sever webbing in reefed, staged or other aerial cargo delivery systems

The ASPSU is designed such that the reuseable sensor module and one-time use cutter module are joined by four captive screws. Electrical interface between the two modules is provided by mated connectors.

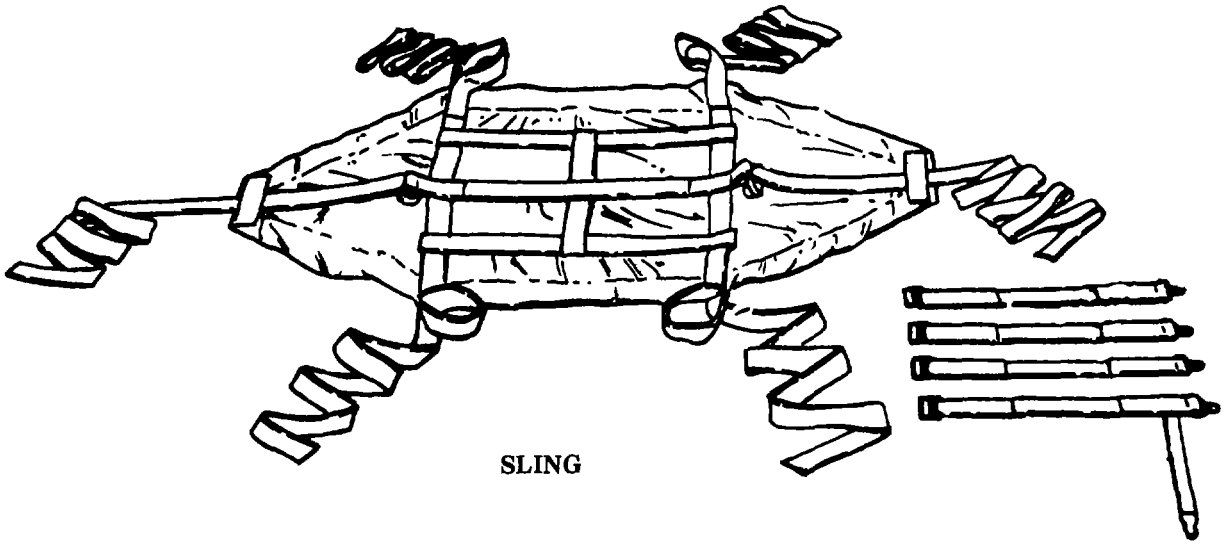
The Altitude Sensor Module, FTL3648-1 is the reuseable portion of the device which contains the sensor electronics, altitude activation controls and barometric set control. Test jacks are provided to permit non-destructive testing and calibration of the ASPSU



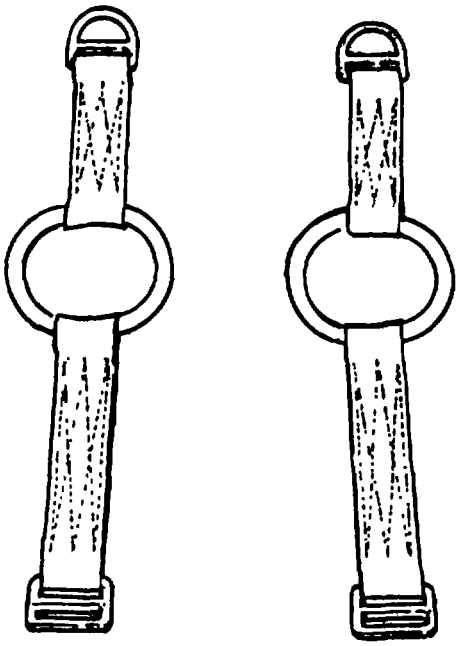
The Cutter Module, FTL3648-2 is a one-time use device which contains the thermal battery furnishing d.c power to the sensor electronics, arming cable mechanism and webbing cutter.

1-12. Functional description (cont).

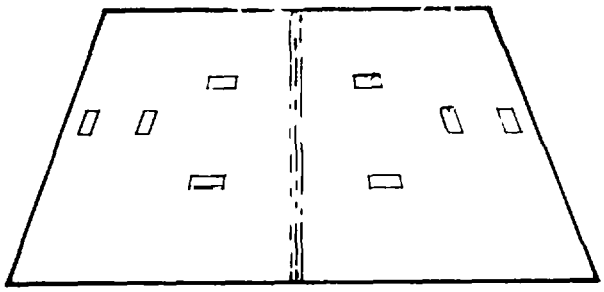
A-21 AERIAL DELIVERY CARGO BAG
AN ADJUSTABLE CONTAINER USED TO DELIVER VARIOUS CONFIGURATIONS OF AIRDROP LOADS ON THE DROP ZONE



SLING



STRAPS WITH RING



COVER BOTTOM VIEW

1-12. Functional description (cont).

70-inch shear strap secures
the G-14 parachute to the container
until the shear strap is cut by the ASPSU

CHAPTER 2
OPERATING INSTRUCTIONS

SECTION I.
DESCRIPTION AND USE OF OPERATOR'S CONTROLS AND INDICATORS

2-1. Altitude sensor parachute staging unit (ASPSU) controls.

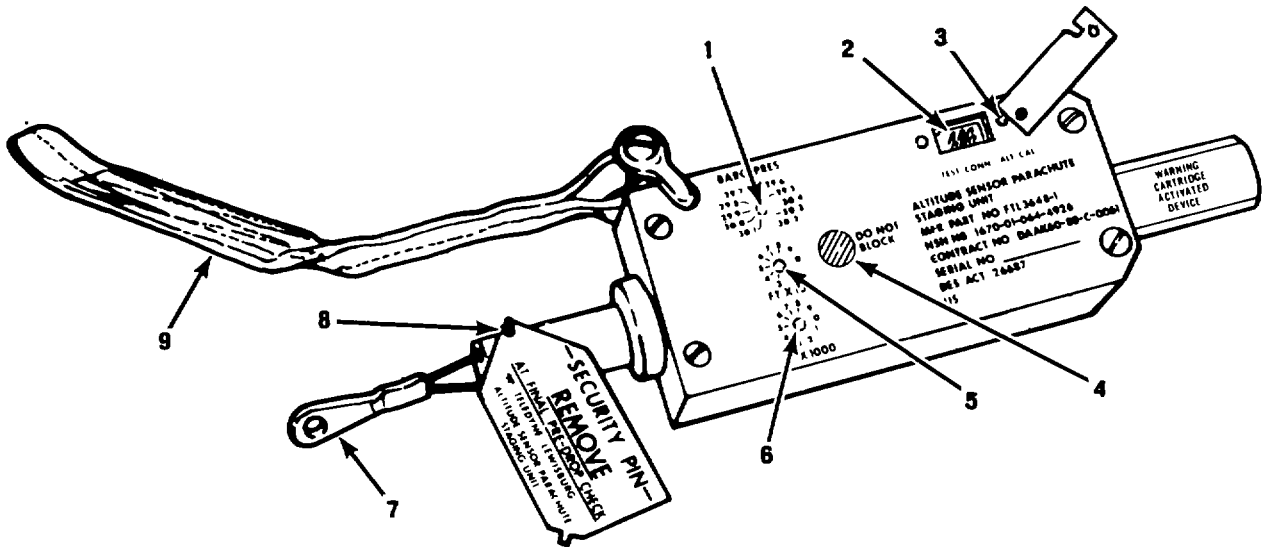


TABLE 2-1. ALTITUDE SENSOR PARACHUTE STAGING UNIT CONTROLS.

Key	Control or Indicator	Function
1	BAROMETER PRESSURE	Selector switch controls the ASPSU at the desired barometric pressure setting. The slot-head switch turns to 10 settings of 0.1 inch increments (29.5 to 30.4 inch of mercury).
2	TEST CONNECTOR	Supplies AC power to the ASPSU for Non-Destructive Testing.
3	ADJUSTMENT SCREW	Adjusts altitude accuracy set point during adjustment procedure.
4	PRESSURE RELEASE	Allows barometric pressure buildup to escape PORT
5	FT x 100	Selector switch controls altitude sensor at the desired hundreds of feet setting. The slotted-head switch turns to 10 settings of 100 feet increments (0 to9).
6	FT x 1000	Selector switch controls altitude sensor at the desired thousands of feet setting. The slotted-head switch turns to 10 settings of 100 feet increments (0 to 9).

TABLE 2-1. ALTITUDE SENSOR PARACHUTE STAGING UNIT CONTROLS (CONT).

Key	Control or Indicator	Function
7	ARMING CABLE ASSEMBLY	An arming device which, when removed from the cutter module, allows activation of the DC thermal battery.
8	SECURITY PIN	Prevents discharge of DC thermal battery contained in cutter module of the ASPSU.
9	RETENTION LINE	Secures the ASPSU to the HAARS

SECTION II.
OPERATOR PREVENTATIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-2. General. While operating the HAARS system the required PMCS shall be followed. PMCS for the G-14 Cargo Parachute is listed in TM 10-1670-215-23/T.O. 13C5-1-102. PMCS for the A-21 Cargo Bag is listed in TM 10-1670-240-20/T.O. 13C7-491-11. PMCS for the 500 pound HAARS shall be accomplished in the following order:

a. BEFORE YOU OPERATE. Always keep in mind the CAUTIONS and WARNINGS. Perform your before (B) PMCS.

b. WHILE YOU OPERATE. Always keep in mind the CAUTIONS and WARNINGS. Perform your during (D) PMCS.

c. AFTER YOU OPERATE. Be sure to perform your after (A) PMCS.

d. IF YOUR ASPSU FAILS TO OPERATE. Turn the unit into supply as unserviceable. Report this action using the proper forms, see DA Pamphlet 738-750.

2-3. PMCS Procedures.

a. Table 2-2 provides a logical arrangement of maintenance checks and services. The purpose of the PMCS is to assure you that the 500 pound HAARS is operational.

b. PMCS will be performed before, during, and after operation thereby assuring that the 500 pound HAARS will operate when needed; is operating prior to drop; and will be ready to operate when needed for another airdrop.

c. PMCS columnar entries in Table 2-2.

(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 check is to be performed.

(5) Equipment is not ready/available if: This column contains the reason that will cause the equipment to be classified as not ready/available.

TABLE 2-2. OPERATOR PREVENTIVE MAINTENANCE CHECKS AND SERVICES

B - Before D- During A - After

Item No.	Interval B	Interval D	Interval A	Item to be Inspected	Procedures Check for and have repaired or adjusted as necessary	Equipment is Not Ready/ Available if
1	•			70-inch shear strap	Check for cuts, burns, abrasions, broken or missing stitches, foreign substance on strap.	Cuts or foreign substance other than dirt.
2	•		•	Deployment bag and static line pilot parachute.	Check for cuts, burns, abrasions, broken or missing stitches, foreign substance on bag or line.	Cuts or foreign substance other than dirt.
3	•		•	30-inch diameter pilot parachute	Check for burns or tears of canopy. Broken, cut or burns on suspension lines.	Canopy is torn suspension lines broken, cut or frayed.
4	•		•	Deployment line	Check for cuts, burns, abrasions, broken or missing stitches, foreign substance on line.	Cuts or foreign substance other than dirt.
	•	•	•	Sensor	Check for dents or cracks. (2)	
6	•		• (1)	Cutter	Dents or cracks. Check to insure cutter has not been fired.	Prematurely fired.

In the event the drop is canceled.

(2) If the dents or cracks are excessive, perform an operational test to determine whether the sensor is serviceable.

SECTION III. OPERATION UNDER USUAL CONDITIONS

See TM 10-1670-265-12&P/T.O. 13C7-1-21 and Table 2-2 of this manual for operation under usual conditions.

CHAPTER 3
OPERATOR MAINTENANCE INSTRUCTIONS

Operator maintenance does not apply to the HAARS System. If a condition is discovered which requires maintenance, report the condition to organizational maintenance.

CHAPTER 4
ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

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

4-1. Common tools and equipment. Common tools and equipment used in the packing of the G-14 parachute are prescribed in TM 10-1670-215-23/T.O. 13C5-1-102 and authorized by the applicable unit Table of Organizational Equipment (TOE). Field expedient items are detailed in TM 10-1670-201-23 T.O. 13C-1-41.

4-2. Special tools, TMDE, and support equipment. An ASPSU test set P/N FLT4240, NSN 1670-01-064-4925 provides testing of the ASPSU.

4-3. Repair parts. Repair parts are listed and illustrated in Appendix C of this manual.

SECTION II. SERVICE UPON RECEIPT

4-4. Service upon receipt. Refer to TM 10-1670-215-23/T.O. 13C5-1-102 for service upon receipt of the G-14 parachute. Instructions for the ASPSU and 30-inch pilot parachute are provided as follows:

4-5. Unpacking. Remove and discard packing from ASPSU and 30-inch pilot parachute.

4-6. Checking unpacked equipment.

a. Inspect the ASPSU and 30-inch pilot parachute for damage incurred during shipment. If the ASPSU or 30-inch pilot parachute has been damaged, report the damage on SF 364, Reports of Discrepancies.

b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with the instructions of TM 38-750.

4-7. Deprocessing unpacked equipment. Not required for the ASPSU or 30-inch pilot parachute.

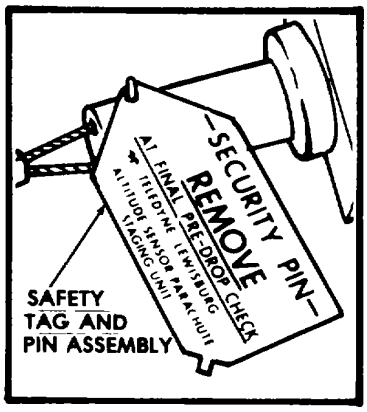
4-8. Installation instructions.

a. Tools required.

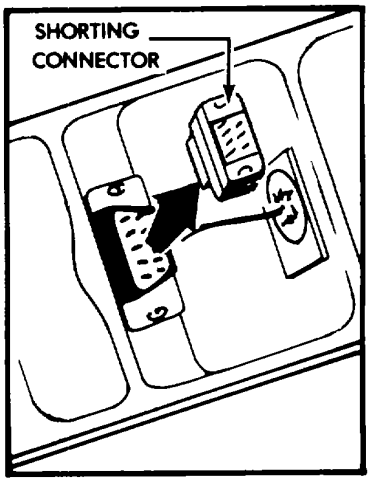
Rigger's knife, NSN 5110-00-162-2205

b. Assembly of ASPSU.

(1) Insure safety tag and pin assembly is securely attached to the arming cable assembly.

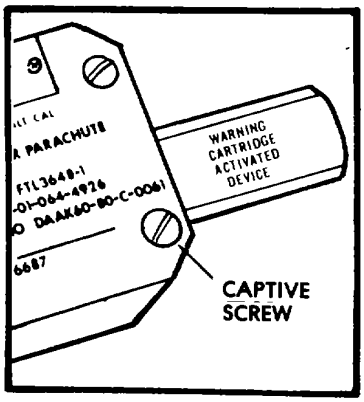


(2) Remove and discard the shorting connector from the cutter module.



(3) Join the two modules together by alining modules using the beveled end of each and the retainer holes as guides. Pressing the units together mates the electrical interface connector.

(4) Lock the two modules together by screwing down the four captive screws until tight.



NOTE

Installation of retainer line will not be performed until ASPSU is rigged on the HAARS.

SECTION III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-9. All PMCS required for the 500 pound HAARS are listed in Table 2-2. PMCS for the G-14 are listed in TM 10-1670-215-23/T.O. 13C5-1-102 and the A-21 cargo bag PMCS are listed in TM 10-1670-240-20/T.O. 13C7-49-11.

SECTION IV. TROUBLESHOOTING

4-10. Troubleshooting does not apply to the HAARS System. Maintenance tests and adjustments are performed using the ASPSU test set P/N FLT4240 prior to the rigging of the HAARS. If adjustment cannot be accomplished, turn the unit into supply as unserviceable and obtain a serviceable unit.

SECTION V. MAINTENANCE PROCEDURES

4-11. Maintenance procedures.

a. Scope. This section contains maintenance procedures which are the responsibility of the organizational technician as authorized by the maintenance allocation chart (MAC) and the Source, Maintenance and Recoverability (SMR) coded items; that are identified in the repair parts and special tools list (RPSTL).

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

c. Parachute maintenance. Maintenance procedures for the G-14 are provided in TM 10-1670-215-23/T.O. 13C5-1-102. Maintenance procedures for the ASPSU are provided in TM 10-1670-265-12&P/T.O. 13C7-1-21.

SECTION VI.
MAINTENANCE PROCEDURES FOR 70-INCH SHEAR STRAP

4-12. 70-Inch Shear Strap - Inspect 4-12

This task covers: Inspection

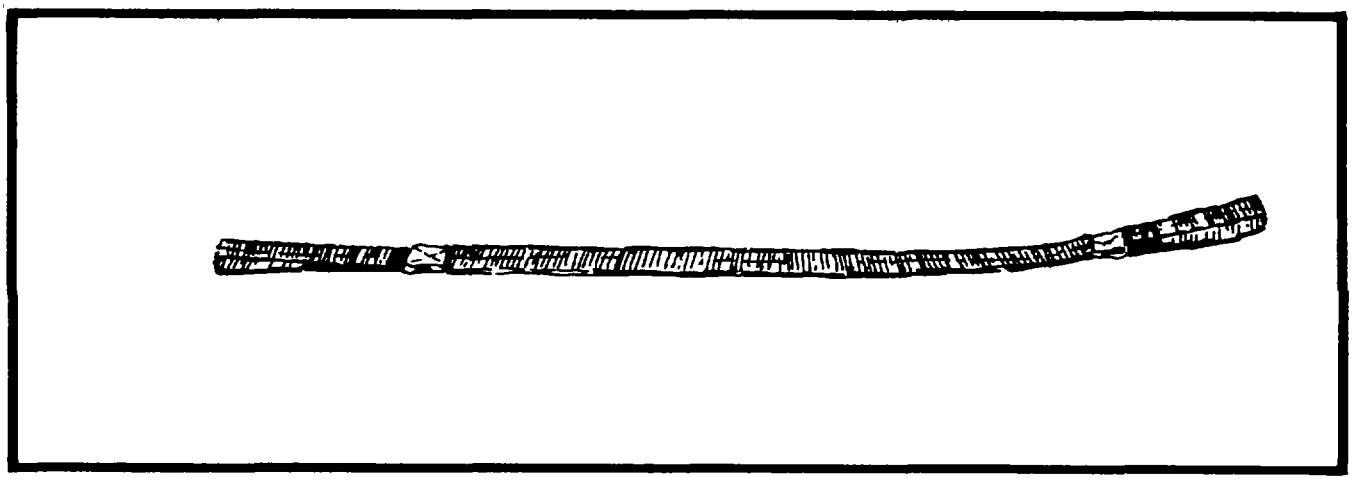
INITIAL SETUP

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

NOTE:
The instructions pertain to the functional group number sequence 01 in the MAC and the RPSTL.

INSPECTION



1. Foreign material and stains inspection. Inspect for the presence of dirt or similar type foreign material. Also check for evidence of mildew, moisture, oil, grease, pitch, resin, or contamination by salt water.

2. Detailed inspection. 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.

END OF TASK

4-13. 70-Inch Shear Strap - Service 4-13

This task covers: Cleaning

INITIAL SETUP

Tools:
Brush, scrub, household, NSN 7920-00-282-2470

Materials:
Tetrachloroethylene - item 1, Appendix D
Dish washing compound - item 2, Appendix D
Rag, wiping - item 3, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

Equipment Condition:
70-Inch Shear Strap not attached to load

Special Environmental Condition:
Ventilation required as repeated or prolonged inhalation of the cleaning solvent vapors can be detrimental to human health.

General Safety Instructions:

WARNING

Due to flammable properties and nylon-damaging substances, cleaning solvents other than tetrachloroethylene will not be used in the spot-cleaning of airdrop equipment. Tetrachloroethylene will only be used in areas where substantial

Prolonged inhalation of the solvent vapors can be detrimental to human health. In addition, avoid prolonged or repeated contact of the solvent fluid with areas of the skin. Tetrachloroethylene must not be taken internally.

CAUTION

If, during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to a direct support 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:
The instructions pertain to the functional group number sequence 01 in the MAC and RPSTL.

GO TO NEXT PAGE

CLEANING

1. General. Cleaning should be held to a minimum and performed only when it is necessary to eliminate a possible malfunction or material deterioration.

2. Cleaning. The cleaning procedures are as follows:

a. Brushing. Gently brush with a soft-bristle brush.

b. Spot-cleaning.

WARNING

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

CAUTION

If, during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to a direct support 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.

Tetrachloroethylene:

(1) Spot - clean by rubbing the soiled area with a clean cloth dampened with tetrachloroethylene (Item 1, Appendix D).

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

(3) Do not wring out the rinsed area if an excess amount of cleaning solvent is applied. Allow the item to dry thoroughly.

Dishwashing detergent:

(1) Tetrachoroethylene may be substituted by a solution composed of one-half cup of hand dishwashing detergent (Item 2, Appendix D) dissolved in one gallon of warm water.

(2) Rinse the cleaned area with fresh, clean water and allow to dry thoroughly.

(3) Do not wring out the material which has been cleaned and rinsed.

GO TO NEXT PAGE

CLEANING (Cont)

c. Drying.

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

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

(3) When heat is used, the heat temperature shall not exceed 160°F (73°C). The preferred temperature is 140°F (60°C).

(4) Fabric or woolen items will not be dried in direct sunlight or by laying an item out on the ground, except in an emergency.

END OF TASK

4-14. 70-Inch Shear Strap - Replace 4-14

This task covers: Replacement.

INITIAL SETUP

Personnel Required: 3 (for installation)
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

NOTE:
The instructions pertain to the functional group number sequence 01 in the MAC and RPSTL.

Replace with a serviceable item from stock.

END OF TASK

4-15. 70-Inch Shear Strap - Repair 4-15

This task covers: Repair

INITIAL SETUP

Tools:
Heavy duty sewing machine

Materials:
Thread - Item 4, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

Equipment Condition:
Shear Strap after inspection

NOTE:
The instructions pertain to the functional group number sequence 01 in the MAC and RPSTL.

REPAIR

1. Stitching. Stitch and restitch with thread (Item 4, Appendix D) which matches the color of the original stitching, when possible. Lock all straight stitching by backstitching at least 1/2 inch. Restitch by overstitching each end of the stitch formation by 1/2 inch. Restitch directly over the original stitching, following the original stitch pattern as closely as possible.

2. Marking and Restenciling. As required, restencil identification marks using the procedures in TM 10-1670-201-23 T.O. 13C-1-41. The number to be stenciled is "11-1-2681". Use ink marking (Item 11, Appendix D).

END OF TASK

SECTION VII
MAINTENANCE PROCEDURES FOR PILOT PARACHUTE DEPLOYMENT BAG AND STATIC LINE

4-16. Pilot Parachute Deployment Bag and Static Line-Inspect 4-16

This task covers: Inspection

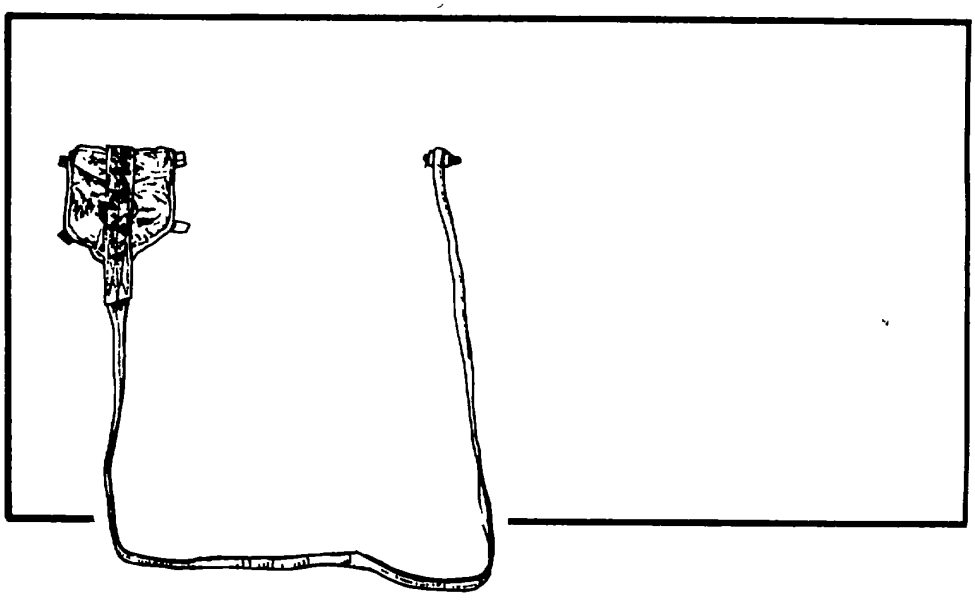
INITIAL SETUP

NOTE:
The instructions pertain to the functional group number sequence 02 in the MAC and the RPSTL.

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O.13C-1-41

INSPECTION



1. Foreign material and stains inspection. Inspect for the presence of dirt or similar type foreign material. Also check for evidence of mildew, moisture, oil, grease, pitch, resin, or contamination by salt water.

2. Detailed inspection. 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.

END OF TASK

4-17. Pilot Parachute Deployment Bag and Static Line-Service 4-17

This task covers: Cleaning

INITIAL SETUP

Tools:
Brush, scrub, household, NSN 7920-00-282-2470

Materials:
Tetrachloroethylene - item 1, Appendix D
Dish washing compound - item 2, Appendix D
Rag, wiping - item 3, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23/T.O. 13C-1-41

Equipment Condition:
Pilot Parachute Deployment Bag and Static Line
After used for drop.

Special Environmental Condition:
Ventilation required as repeated or prolonged inhalation of the cleaning solvent vapors can be detrimental to human health.

General Safety Instructions:

WARNING

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

WARNING

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 a direct support 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:
The instructions pertain to the functional group number sequence 02 in the MAC and RPSTL.

GO TO NEXT PAGE

CLEANING

1. General. The practice of cleaning should be held to a minimum and performed only when it is necessary to eliminate a malfunction potential of the possibility of material deterioration.

2. Cleaning. The cleaning procedures are as follows:
   a. Brushing. Gently brush with a soft-bristle brush.
   b. Spot-cleaning.

WARNING

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

WARNING

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 a direct support 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.

Tetrachloroethylene:

(1) Spot-clean by rubbing the soiled area with a clean cloth dampened with tetrachloroethylene (Item 1, Appendix D).

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

(3) Do not wring out the rinsed area if an excess amount of cleaning solvent is applied. Allow the item to dry thoroughly.

Dishwashing detergent:

(1) Tetrachoroethylene may be substituted by a solution composed of one-half cup of hand dishwashing detergent (Item 2, Appendix D) dissolved in one gallon of warm water.

(2) Rinse the cleaned area with fresh, clean water and allow to dry thoroughly.

(3) Do not wring out the material which has been cleaned and rinsed.

GO TO NEXT PAGE

CLEANING (Cont)

(1) Suspend or elevate in a well ventilated room or in a heated drying room.
(2) Drying time may be reduced by using electric circulating fans.
(3) When heat is used, the heat temperature shall not exceed 160°F(73°C). The preferred temperature is 140°F(60°C).
(4) Fabric or woolen items will not be dried in direct sunlight or by laying an item out on the ground, except in an emergency.

END OF TASK

4-18. Pilot Parachute Deployment Bag and Static Line-Replace 4-18

This task covers: Replacement

INITIAL SETUP

Personnel Required: 3 (for installation)
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

NOTE:
The instructions pertain to the functional group number sequence 02 in the MAC and RPSTL.

Replace with a serviceable item from stock.

END OF TASK

4-19. Pilot Parachute Deployment Bag and Static Line-Repair 4-19

This task covers: Repairs

INITIAL SETUP

Tools:
Heavy duty sewing machine

Materials:
Thread-Item 4, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O.13C-1-41

Equipment Condition:
Deployment Bag after inspection

NOTE:
The instructions pertain to the functional group number sequence 02 in the MAC and RPSTL.

REPAIR

1. Stitching. Stitching and restitching should be accomplished with thread (Item 4, Appendix D) which matches the color of the original stitching, when possible. All straight stitching should be locked by backstitching at least 1/2 inch. Restitching should be locked by overstitching each end of the stitch formation by 1/2 inch. Restitching should be made directly over the original stitching, following the original stitch pattern as closely as possible.

2. Marking and Restenciling. As required, restencil identification marks using the procedures in TM 10-1670-201-23 T.O. 13C-1-41. The number to be stenciled is "11-1-2676". Use ink marking (Item 11, Appendix D).

END OF TASK

SECTION VIII
MAINTENANCE PROCEDURES FOR PILOT PARACHUTE

4-20. Pilot Parachute-Inspect 4-20

This task covers: Inspection

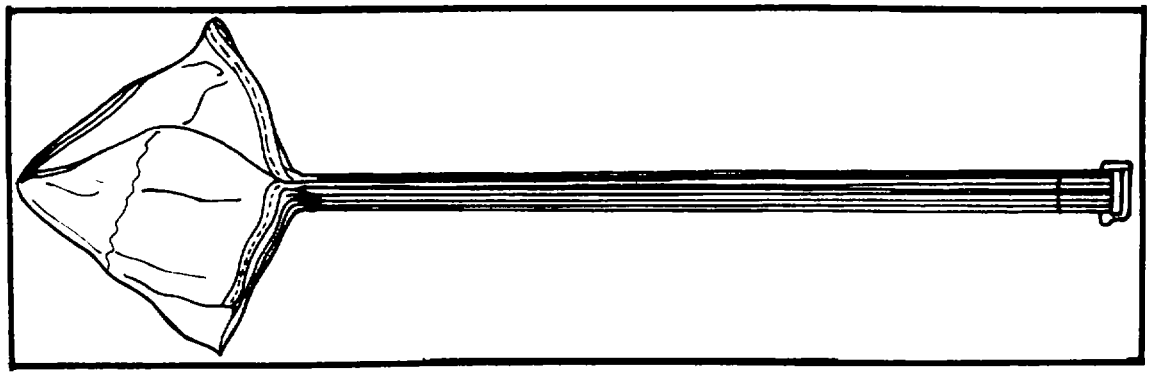
INITIAL SETUP

Personnel Required:
43E(1P) Parachute rigger

NOTE:
The instructions pertain to the functional group number sequence 03 in the MAC and the RPSTL.

Reference Information:
TM 10-1670-201-23 T.O.13C-1-41

INSPECTION



1. Foreign material and stains inspection. Inspect for the presence of dirt or similar type foreign material. Also check for evidence of mildew, moisture, oil, grease, pitch, resin, or contamination by salt water.

2. Detailed inspection. Inspect for breaks, burns, cuts, frays, holes, snags, tears, and loose missing or broken stitching, and weaving; weak spots, wear, and deterioration. Inspect for broken, cut or frayed suspension lines.

END OF TASK

4-21. Pilot Parachute-Service 4-21

This task covers: Cleaning

INITIAL SETUP

Tools:
Brush, scrub, household, NSN 7920-00-282-2470

Materials:
Tetrachloroethylene-item 1, Appendix D
Dish washing compound-item 2, Appendix D
Rag, wiping-item 3, Appendix D

.

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23/T.O. 13C-1-41

Equipment Condition:
Pilot Parachute after use

Special Environmental Condition:
Ventilation required as repeated or prolonged inhalation of the cleaning solvent vapors can be detrimental to human health.

General Safety Instructions:

WARNING

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

CAUTION

If, during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to a direct support 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:
The instructions pertain to the functional group number sequence 03 in the MAC and RPSTL.

GO TO NEXT PAGE

CLEANING

1. General. The practice of cleaning should be held to a minimum and performed only when it is necessary to eliminate a malfunction potential of the possibility of material deterioration.
2. Cleaning. The cleaning procedures are as follows:
   a. Brushing. Gently brush with a soft-bristle brush.
   b. Spot-cleaning.

WARNING

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

CAUTION

If, during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to a direct support 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.

Tetrachloroethylene:

(1) Spot-clean by rubbing the soiled area with a clean cloth dampened with tetrachloroethylene (Item 1, Appendix D).

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

(3) Do not wring out the rinsed area if an excess amount of cleaning solvent is applied. Allow the item to dry thoroughly.

Dishwashing detergent:

(1) Tetrachoroethylene may be substituted by a solution composed of one-half cup of hand dishwashing detergent (Item 2, Appendix D) dissolved in one gallon of warm water.

(2) Rinse the cleaned area with fresh, clean water and allow to dry thoroughly.

(3) Do not wring out the material which has been cleaned and rinsed.

GO TO NEXT PAGE

CLEANING (Cont)

c. Drying.

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

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

(3) When heat is used, the heat temperature shall not exceed 160°F (73°C). The preferred temperature is 140°F (60°C).

(4) Fabric or woolen items will not be dried in direct sunlight or by laying an item out on the ground, except in an emergency.

END OF TASK

4-22. Pilot Parachute-Service **4-22**

This task covers: Packing

INITIAL SETUP

Tools:
Riggers Knife 5110-00-162-2205

Materials:
Thread-Item 6, Appendix D
Retainer Band Item 12, Appendix D

Personnel Required: (1)
43E(1P) Parachute Rigger

NOTE:
The instructions pertain to the Functional Group Sequence 03 in the MAC and RPSTL.

1. General information.
A pack-in-process inspection shall be conducted by a rigger supervisor, other than the packer, during the service of the (packing process). This inspection is required to insure that only authorized packing procedures are used. The prescribed intervals to conduct the pack-in-process inspection for the high altitude airdrop resupply system pilot parachute is as follows:

a. After canopy is placed in proper layout.
b. Gore folding completed.
c. Canopy stowage completed.
d. Stowage of suspension lines, and connector strap.
e. Deployment bag closure completed.

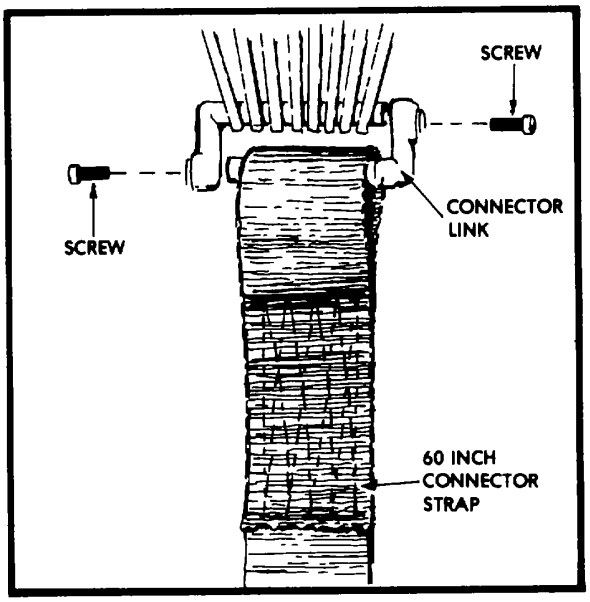
END OF GENERAL INFORMATION

GO TO NEXT PAGE

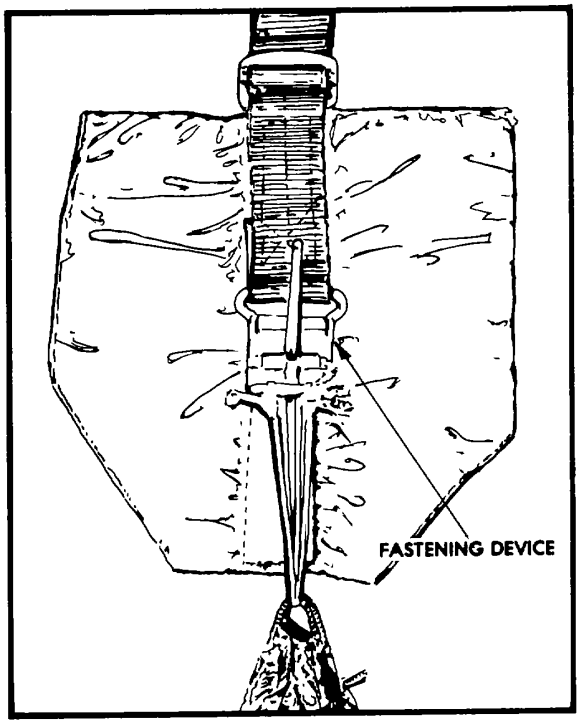
4-22. Pilot Parachute-Service (Cont) **4-22**

Packing (Cont)

2. Attach a 60-inch connector strap to the connector link of the 30-inch pilot parachute.



3. Attach the pilot parachute to the apex end of the table Fastening Device.



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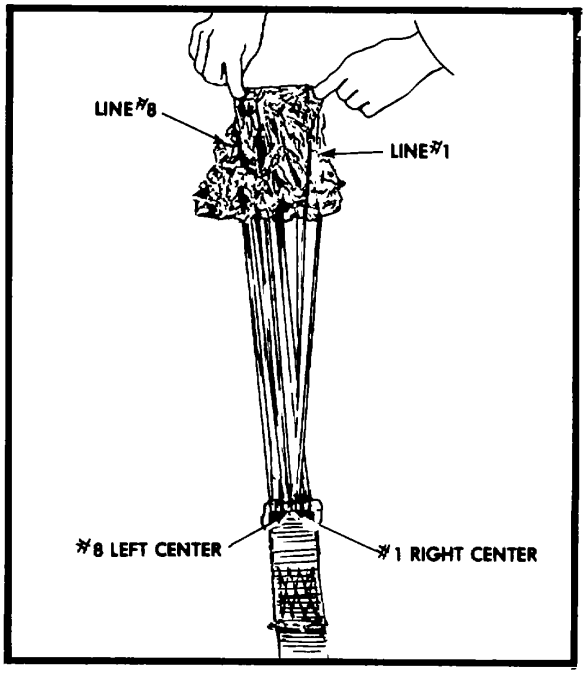
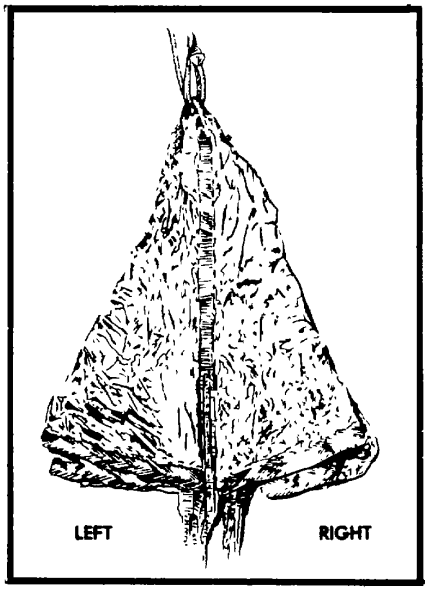
Packing (Cont)

4. Check for proper layout. Line # 1 right center of connector link. Line #8 left center of connector link.



5. Make four gore folds to the right side of suspension lines and four gore folds to the left of the suspension lines.



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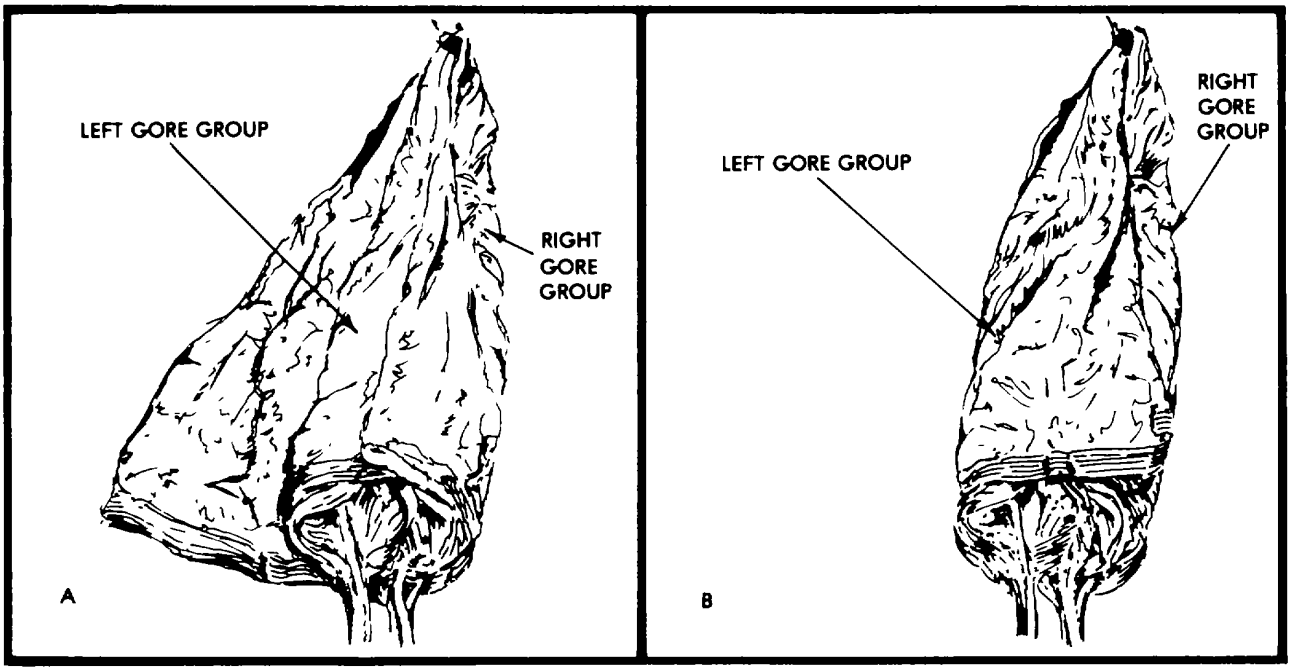
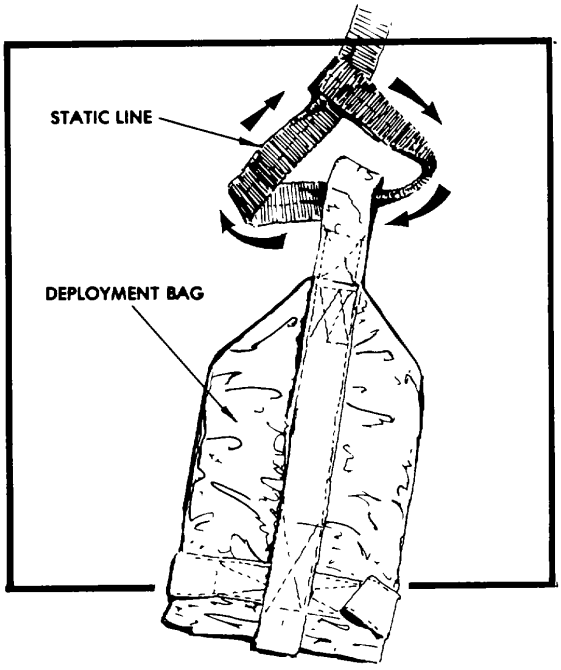
4-22. Pilot Parachute-Service (Cont) **4-22**

Packing (Cont)

6. Fold the right group of gores over the canopy center and fold the left group over the right group of gores.



7. Attach the Static Line to the Deployment Bag by threading the static line through the attaching loop and back through its' own loop.



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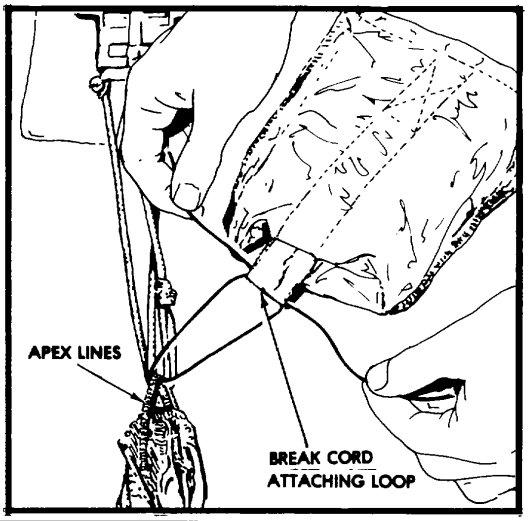
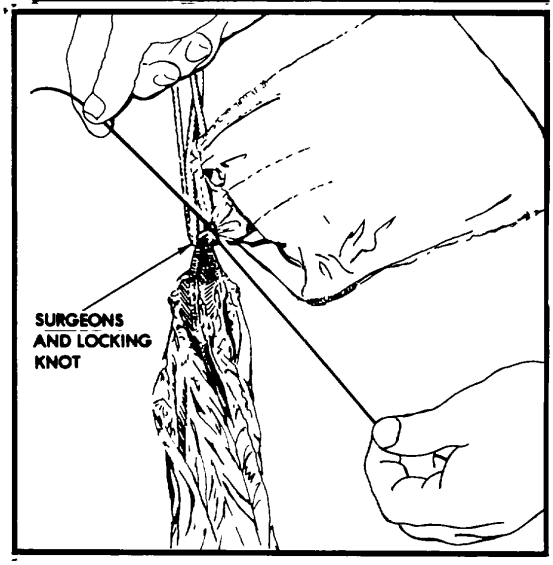
Packing (Cont)

8. Fold the Deployment Bag back so that the Break Cord attaching loop is exposed.

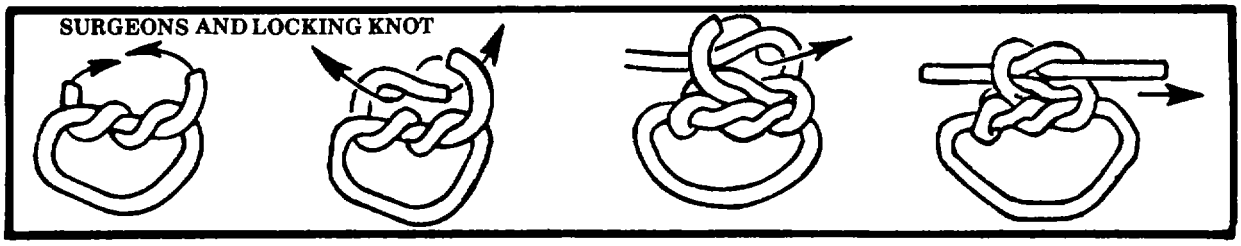


9. Using a length of cotton thread ticket #5 pass a running end through the attaching loop of the deployment bag, through the apex lines and back through the opposite side of the attaching loop of the deployment bag.

10. Pull the thread tight and tie a surgeons and locking knot on top of the attaching loop.



11. Trim the excess ends to 1-inch.



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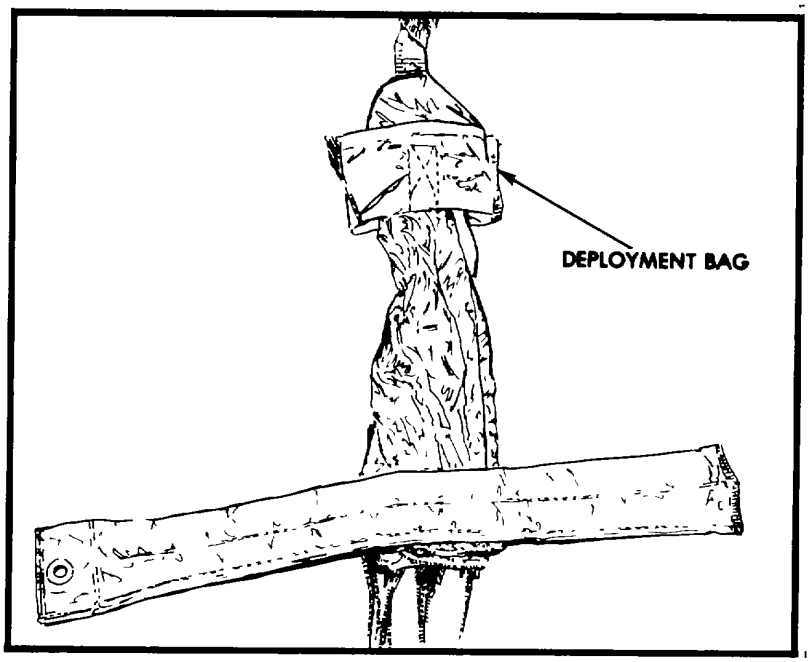
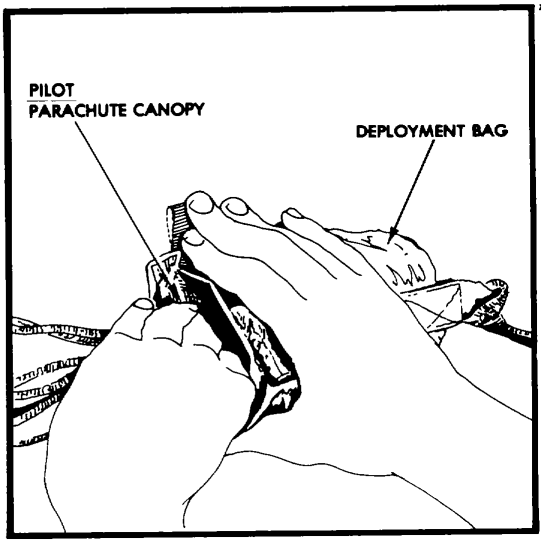
Packing (Cont)

12. Place the open end of the Deployment Bag over the apex of the Pilot Parachute.



13. Unfold the Deployment Bag and stow the Pilot Parachute Canopy inside the Deployment Bag.



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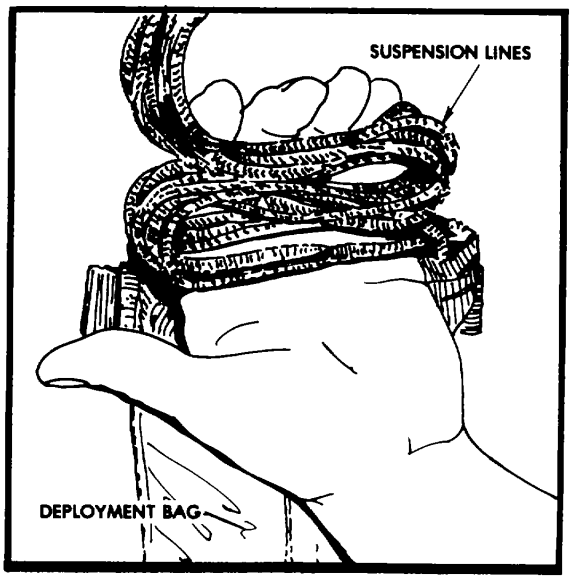
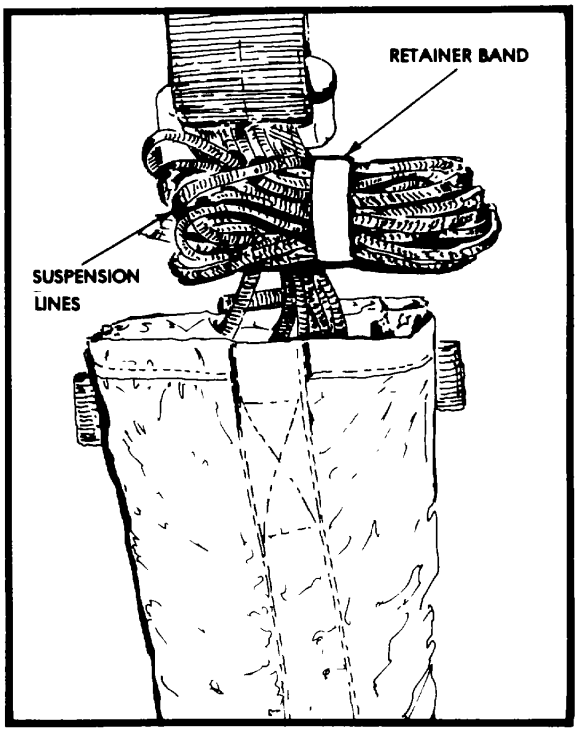
Packing (Cont)

14. Starting at the skirt of the canopy, S-Fold the Suspension Lines the width of the Deployment Bag until the Connector Link is replaced.



15. Place a Retainer Band around the S-Folded Suspension Lines.



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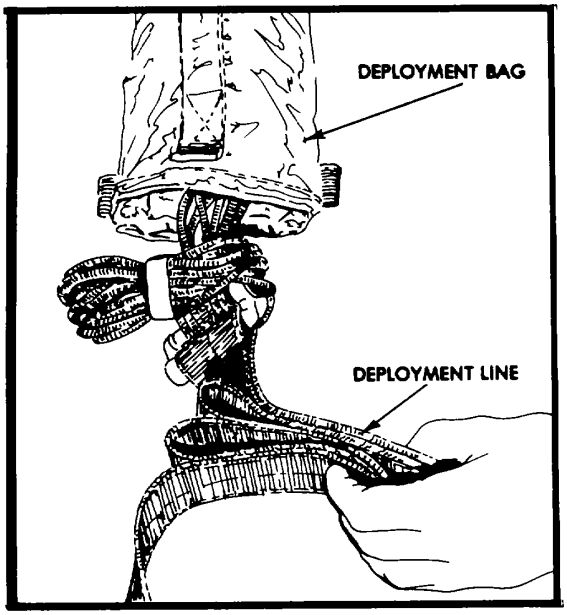
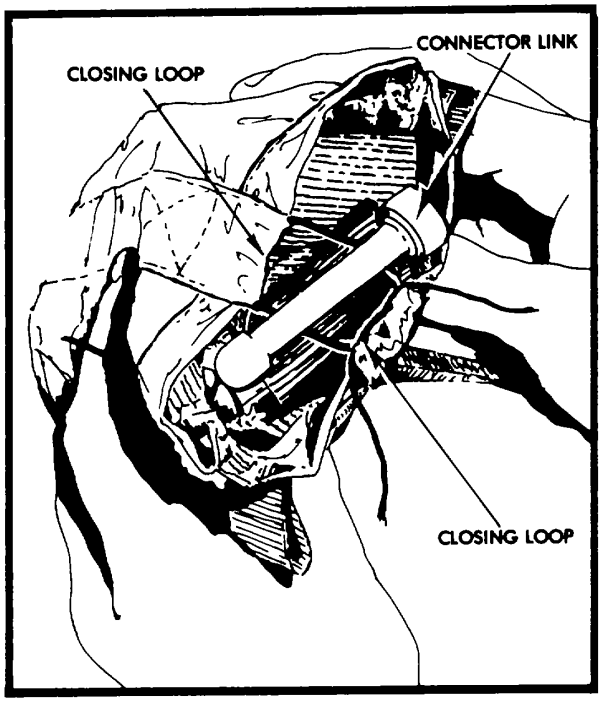
Packing (Cont)

16. S-Fold the 60-inch Deployment Line the width of the Deployment Bag.



17. Place the S-Folded Suspension Lines and Deployment Line into the Deployment Bag. Insure that the Connector Link is paralleled with the opening of the Deployment Bag.

18. Using Cotton Ticket #5 make a closing the by passing a running end through the closing loop, through the Connector Link, through the other Closing Loop, through the Connector Link again and back through the original Closing Loop.



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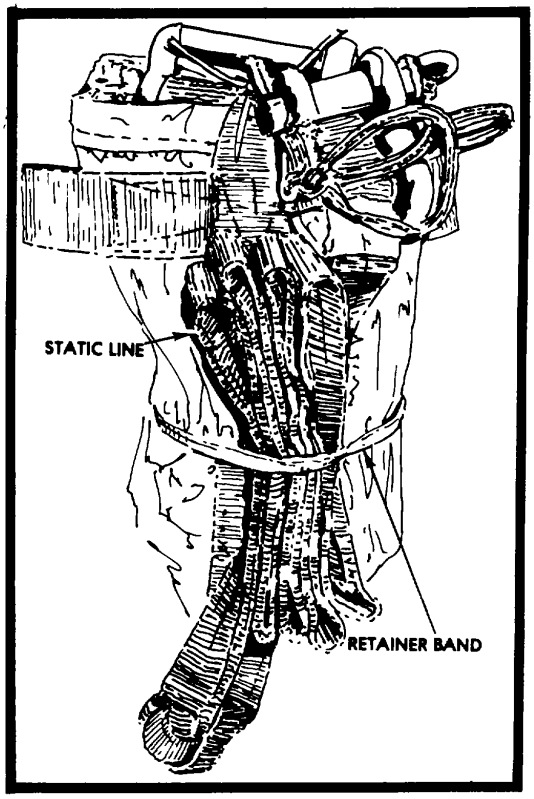
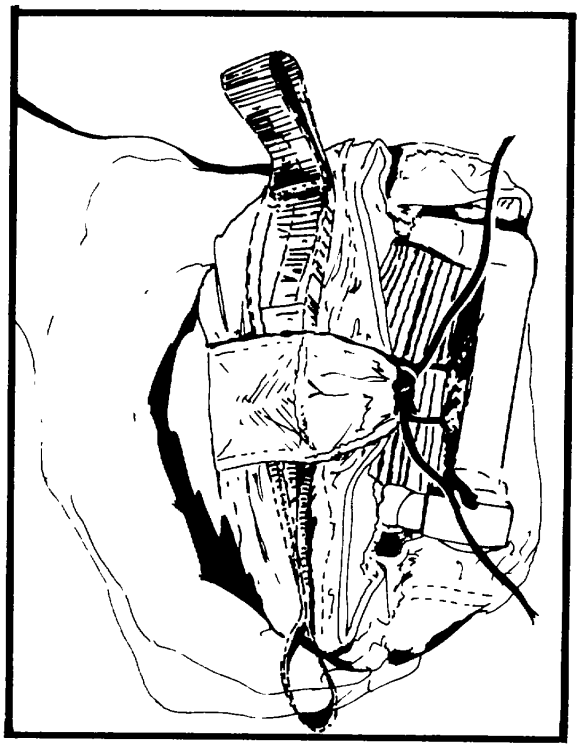
Packing (Cont)

19. Pull the thread #5 tight and the a Surgeons and Locking Knot on top of the Closing Loop. Trim ends to 2-inches.





20. S-Fold Static Line on top of Pilot Parachute and secure with a Retainer Band.

END OF TASK

4-23.Pilot Parachute - Replace **4-23**

This task covers: Replacement

INITIAL SETUP

Personnel Required: 3 (for installation)
43E(1P) Parachute rigger

Reference information:
TM 10-1670-201-23 T.O. 13C-1-41

NOTE:
The instructions pertain to the functional group number sequence 03 in the MAC and RPSTL.

If item is determined to be unserviceable replace with a serviceable item from stock.

END OF TASK

4-24. Pilot Parachute - Repair 4-24

This task covers: Repairs

INITIAL SETUP

Tools:
Light duty sewing machine
Zig zag sewing machine

Materials:
Thread-Item 4, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O.13C-1-41

Equipment Condition:
Pilot parachute after inspection
and cleaning

NOTE'
The instructions pertain to the functional group number sequence 03 in the MAC and RPSTL.

Repair

1. Stitching. Stitching and restitching should be accomplished with thread (Item 4, Appendix D) which matches the color of the original stitching, when possible. All straight stitching should be locked by backstitching at least 1/2 inch. Restitching should be locked by overstitching each end of the stitch formation by 1/2 inch. Restitching should be made directly over the original stitching, following the original stitch pattern as closely as possible.

2. Marking and Restenciling as required, restencil identification marks using the procedures in TM 101670-201-23/T.O.13C-1-41. The number to be stenciled is "11-1-2679-1". Use ink marking (Item 11, appendix D).

END OF TASK

SECTION IX
MAINTENANCE PROCEDURES FOR DEPLOYMENT LINE

4-25. Deployment Line - Inspect 4-25

This task covers: Inspection

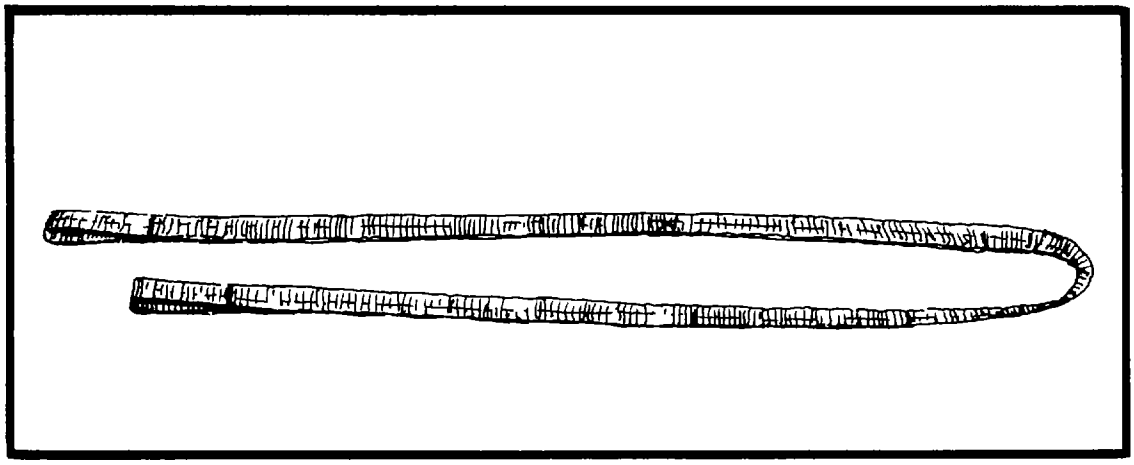
INITIAL SETUP

Personnel Required:
43E(1P) parachute rigger

Reference Information:
TM 10-1670-201-23 T.O.13C-1-41

NOTE:
The instructions pertain to the functional group number sequence 04 in the MAC and the RPSTL.

INSPECTION



1. Foreign material and stains inspection. Inspect for the presence of dirt or similar type foreign material. Also check for evidence of mildew, moisture, oil, grease, pitch, resin, or contamination by salt water.

2. Detailed inspection. 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.

END OF TASK

4-26. Deployment Line - Service 4-26

This task covers: Cleaning

INITIAL SETUP

Tools:
Brush, scrub, household, NSN 7920-00-282-2470

Materials:
Tetrachloroethylene-item 1, Appendix D
Dish washing compound-item 2, Appendix D
Rag, wiping-item 3, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Equipment Condition:
Deployment Line after use

Special Environmental Condition:
Ventilation required as repeated or prolonged inhalation of the cleaning solvent vapors can be detrimental to human health.

General Safety Instructions:

WARNING

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

CAUTION

If, during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to a direct support 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:
The instructions pertain to the functional group number sequence 04 in the MAC and RPSTL.

GO TO NEXT PAGE

CLEANING

1. General. The practice of cleaning should be held to a minimum and performed only when it is necessary to eliminate a malfunction potential of the possibility of material deterioration.
2. Cleaning. The cleaning procedures are as follows:
   a. Brushing. Gently brush with a soft-bristle brush.
   b. Spot-cleaning.

WARNING

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

CAUTION

If, during the cleaning there exists a possibility that the substance to be removed contains acid or some other equally destructive ingredient, the item will be evacuated to a direct support 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.

Tetrachloroethylene:

(1) Spot-clean by rubbing the soiled area with a clean cloth dampened with tetrachloroethylene (Item 1, Appendix D).

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

(3) Do not wring out the rinsed area if an excess amount of cleaning solvent is applied. Allow the item to dry thoroughly.

Dishwashing detergent:

(1) Tetrachoroethylene may be substituted by a solution composed of one-half cup of hand dishwashing detergent (Item 2, Appendix D) dissolved in one gallon of warm water.

(2) Rinse the cleaned area with fresh, clean water and allow to dry thoroughly.

(3) Do not wring out the material which has been cleaned and rinsed.

GO TO NEXT PAGE

CLEANING (Cont)

c. Drying.

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

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

(3) When heat is used, the heat temperature shall not exceed 160°F (73°C). The preferred temperature is 140°F (60°C).

(4) Fabric or woolen items will not be dried in direct sunlight or by laying an item out on the ground, except in an emergency.

END OF TASK

4-27. Deployment Line-Replace **4-27**

This task covers: Replacement

INITIAL SETUP

Personnel Required: 3 (for installation)
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

NOTE:
The instructions pertain to the functional group number sequence 04 in the MAC and RPSTL.

If item is determined to be unserviceable replace with serviceable item from stock.

END OF TASK

4-28. Deployment Line-Repair 4-28

This task covers: Repairs

INITIAL SETUP

Tools:
Heavy duty sewing machine

Materials:
Thread-Item 4, Appendix D

Personnel Required:
43E(1P) Parachute rigger

Reference Information:
TM 10-1670-201-23 T.O. 13C-1-41

Equipment Condition:
Deployment Line after inspection

NOTE:
The instructions pertain to the functional group number sequence 04 in the MAC and RPSTL.

Repair
1. Stitching. Stitching and restitching should be accomplished with thread (Item 4, Appendix D), which matches the color of the original stitching, when possible. All straight stitching should be locked by backstitching at least 1/2 inch. Restitching should be locked by overstitching each end of the stitch formation by 1/2 inch. Restitching should be made directly over the original stitching, following the original stitch pattern as closely as possible.
2. Marking and Restenciling. As required, restencil identification marks using the procedures in TM 10-1670-201-23 T.O. 13C-1-41. The number to be stenciled is "11-1-2680". Use ink marking (Item 11, Appendix D).

END OF TASK

SECTION X
MAINTENANCE PROCEDURES FOR G-14 CARGO PARACHUTE

4-29. G-14 Cargo Parachute - Service 4-29

This Task Covers: Packing

INITIAL SETUP

Tools.
Rigger's Knife NSN 5110-00-162-2205

Materials:
Webbing Tablar 1/2 inch wide Item 10, Appendix D
Webbing Cotton 1/4 inch wide Item 7, Appendix D

Personnel Required:
43E(1P) Parachute Rigger

Reference Information:
TM 10-1670-215-23/T.O. 13C5-1-102

Equipment Condition:
G-14 Parachute Packed IAW
TM 10-1670-215-23/T.O. 13C5-1-102

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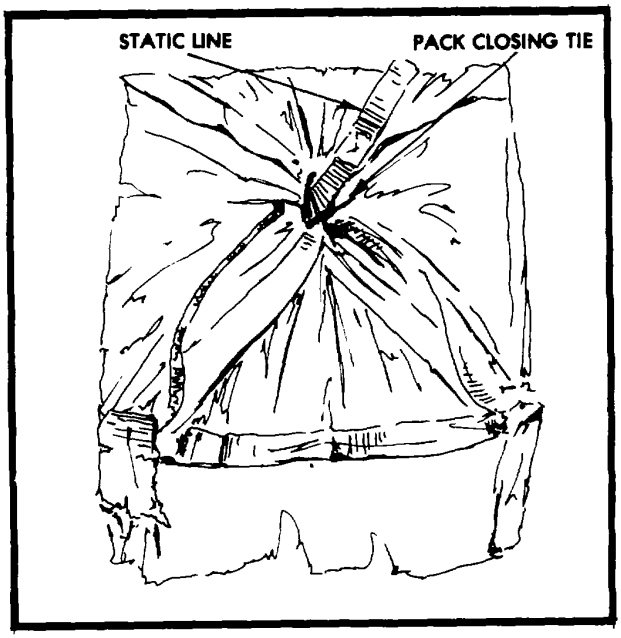
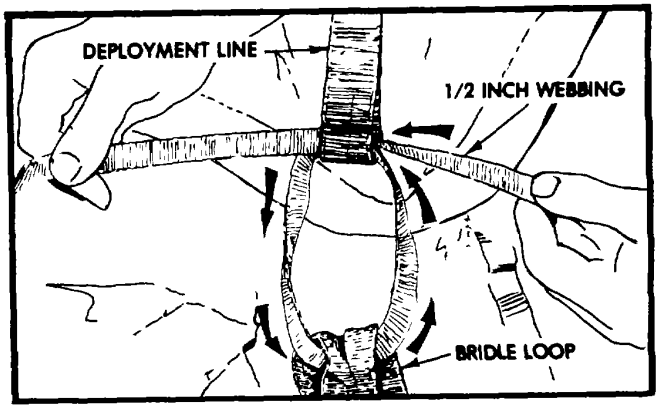
Packing (Cont)

1. Remove the pack closing tie and the static line from the packed G-14.



2. Attach the deployment line with a length of 1/2 webbing. Start by passing a running end through the loop on the end of the deployment line, through the Bridle Loop and back through the loop of the Deployment Line. The running ends should be sticking out opposite sides of the deployment line loop.



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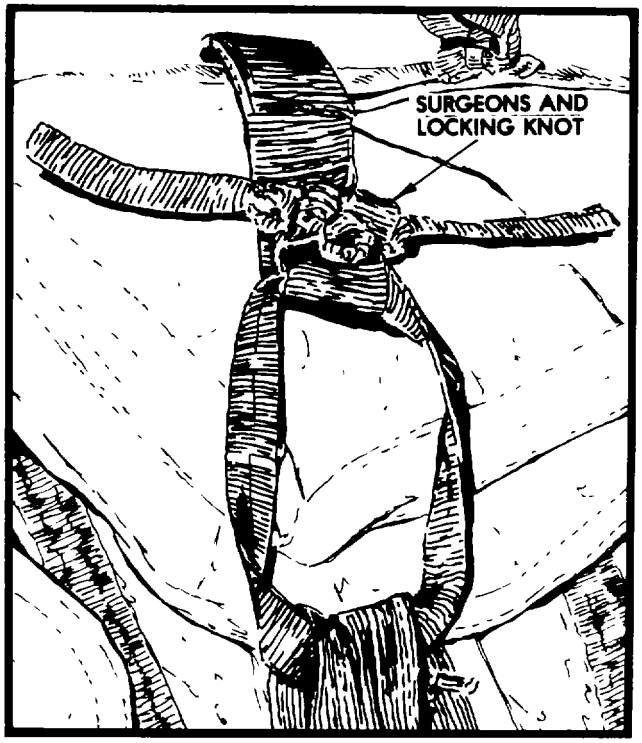
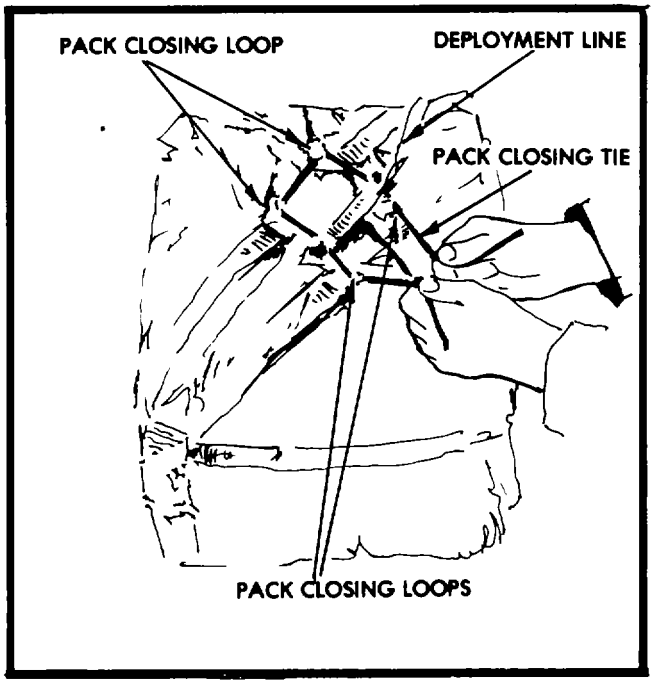
Packing (Cont)

3. Leave a four inch loop in the webbing and tie a Surgeons and Locking Knot on top of the Deployment Knots in the running end.



4. Make a Pack Closing Tie using 1/4 inch webbing. Start by running one end through the right side loop, through the top loop, through the left side loop, through the pack opening loop on the Deployment Line and through the bottom closing loop.



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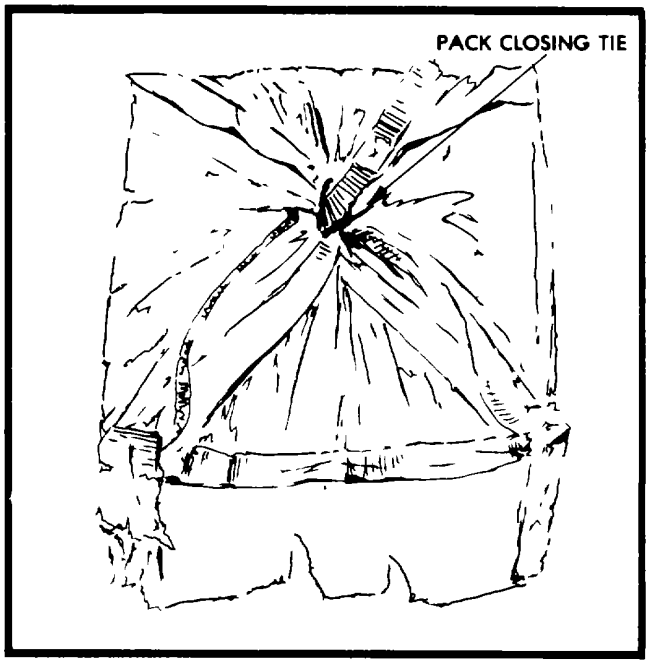
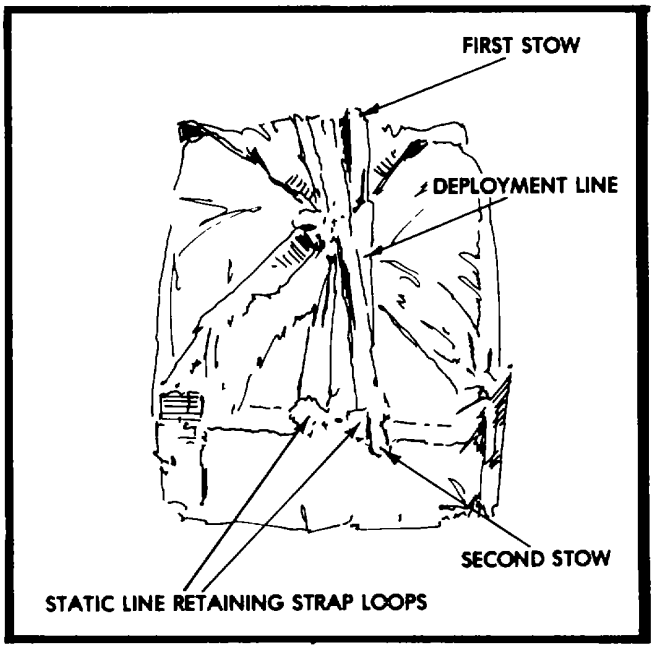
Packing (Cont)

5. Draw the webbing length tight and secure the webbing ends with a Surgeons and Locking Knot. Trim tie ends to 2 inches.



6. Stow the Deployment Line forming the first stow at the upper right of the pack and the second stow at the lower right. Make each stow extend 2 inches beyond the outer edge of the static line retaining strap. Secure each stow with an installed rubber retainer band.



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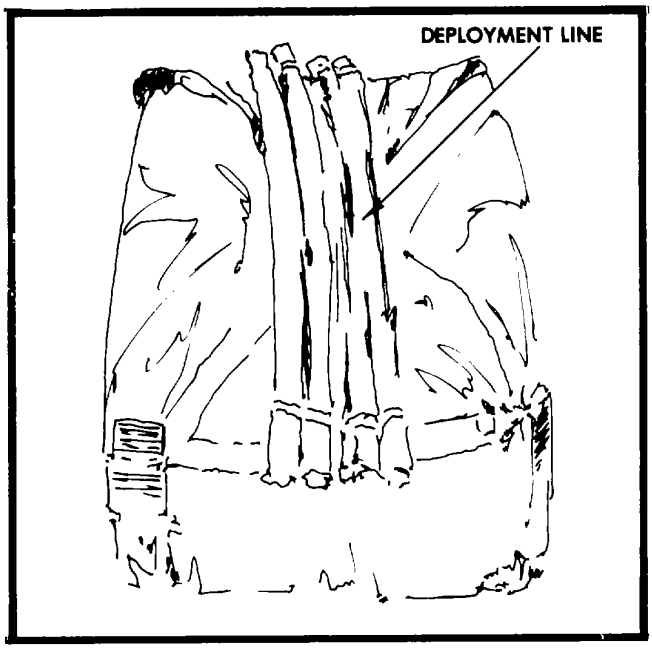
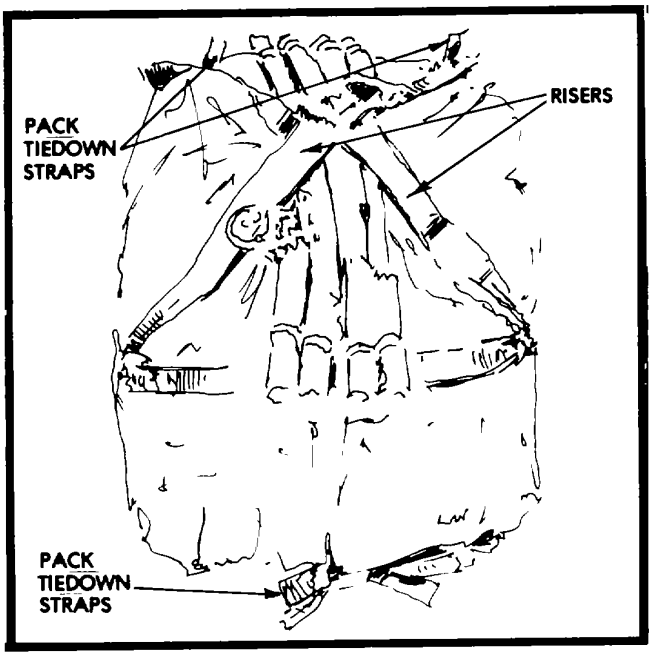
Packing (Cont)

7. Continue stowing the Deployment Line alternately from right to left until the deployment line is completely stowed.



8. Fold the Risers across the top of the pack and temporarily secure each of the Riser devises with a Pack Tiedown Strap on the upper end of the pack.

9. Identify the parachute is packed for HAARS.



END OF TASK

SECTION XI

MAINTENANCE PROCEDURES FOR TITE ALTITUDE

SENSOR PARACHUTE STAGING UNIT

4-30. All maintenance functions for the Altitude Sensor Parachute Staging Unit are provided in TM 10-1670-265-12 & P/T.O. 13C7-1-21.

SECTION XII
PREPARATION FOR STORAGE OR SHIPMENT

4-31. Administrative Storage.

a. Storage Criteria.

Administrative storage of airdrop equipment will be accomplished in accordance with TM 740-90-1, AR 750-1, and the instructions furnished below.

b. General Storage Requirements.

To insure that serviceability standards of stored airdrop equipment are maintained, every effort will be exerted to adhere to the following storage requirements:

(1) When available, a heated building should be used to store parachutes and other airdrop items.

(2) Airdrop equipment will be stored in a dry, well-ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents, and direct sunlight.

(3) Airdrop 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) Airdrop items will not be stored in a damaged, dirty, or damp condition.

(5) All stored airdrop items will be marked, segregated, and located for accessibility and easy identification.

(6) Airdrop 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 preconstructed shelving or similar storage accommodations are not available, locally fabricate storage provisions using suitable lumber or wooden boxes.

(7) All available materials handling equipment should be used as much as possible in the handling of airdrop 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.

c. Storage Specifics for Parachutes.

In addition to the storage requirements stipulated in subparagraph b above, the following is a list of specifics which must be enforced when storing parachutes:

(1) Except for those assemblies required for contingency operation, parachutes will not be stored in a packed configuration.

(2) Stored parachute assemblies will be secured from access by unauthorized personnel.

(3) A parachute which is in storage, and is administered a cyclic repack and inspection, will not be exposed in incandescent light or indirect sunlight for a period of more than 36 hours. In addition, exposure to direct sunlight should be avoided entirely.

4-32. Shipment.

a. Initial Shipment.

The initial packaging and shipping of airdrop equipment is the responsibility of item manufacturers who are required to comply with federal and military packaging specifications as stipulated in contractural agreements. Airdrop equipment is normally shipped to depot activities by domestic freight or parcel post, packaged to comply with overseas shipping requirements. Except for those airdrop items which are unpackaged and subjected to random inspections or testing by a depot activity, airdrop equipment received by a using unit will be contained in original packaging materials.

b. Shipping Between Maintenance Activities.

The shipping of airdrop equipment between organizational and direct support maintenance activities will be accomplished on a signature verification basis using whatever means of available transportation. Used parachutes and other fabric items will be tagged in accordance with TB 750-126, and rolled, folded, or placed loosely in a parachute pack, deployment bag, or other suitable container, as required. Used wood and metal airdrop items will be tagged as prescribed in TB 750-126 and placed into a suitable type container, if necessary. Unused airdrop equipment will be transported in original shipping containers. During shipment, every effort will be made to protect airdrop items from weather elements, dust, dirt, oil, grease, and acids. Vehicles used to transport parachutes will be inspected to insure the items are protected from the previously cited material damaging conditions.

c. Other Shipping Instructions.

Airdrop equipment destined for domestic or overseas shipment will be packaged and marked in accordance with AR 700-15, TM 38-230-1, and TM 38-230-2.

APPENDIX A
REFERENCES

A-1. Publication Indexes

The following publication indexes should be consulted frequently for the latest changes or revisions of references given in this appendix and for new publications relating to the materiel covered in this manual:

DA Pam 310-1	Index of Army Publications and Blank Forms
DA Pam 738-750	The Army Maintenance Management System (TAMMS)

A-2. Technical Manuals

TM 9-1300-206	Ammunition and explosives standards
TM 9-1370-203-20P	Military Pyrotechnics
TM 10-1670-201-23 T.O. 13C-1-41	General Maintenance of Parachutes and Other Airdrop Equipment
TM 10-1670-215-23/ T.O. 13C5-1-102	12-Foot-Diameter High-Velocity, G-13 24-Foot-Diameter, 26-Foot-Diameter High-Velocity, G-14 34-Foot-Diameter, 38-Foot-Diameter RCAT, G-12C and G-12D 64-Foot-Diameter, G-11A 100-Foot-Diameter, 15-Foot-Diameter Extraction, 22-Foot-Diameter Extraction, 21-Foot-Diameter Extraction, 3-Foot-Square Pilot
TM 10-1670-240-20/ T.O. 13C7-49-11	Miscellaneous Airdrop Canvas, Webbing, Metal, and Wood Items
TM 10-1670-265-12&P T.O. 13C7-1-21	High Altitude Airdrop Resupply System: 2000 Pounds Capacity
TM 10-1670-266-13&P	Altitude Sensor Parachute Staging Unit Test Set
TM 38-230-1 and TM 38-230-2	Preservation, Packaging, Packing of Military Supplies and Equipment (vols 1 and 2)
TM 38-750	The Army Maintenance Management System (TAMMS)
TM 740-90-1	Administrative Storage of Equipment
TM 750-244-1-1/ T.O. 13C3-1-10	Procedures for the Destruction of Air Delivery Equipment to Prevent Enemy Use
TM 750-244-5-1	Destruction of Conventional Ammunition and Improved Conventional Munitions to Prevent Enemy Use

A-3. Field Manuals

FM 10-500	Airdrop of Supplies and Equipment: General Information for Rigging Airdrop Platform.
FM 21-11	First Aid Data

A-4. Army Regulations

AR 310-25	Dictionary of United States Army Terms
AR 310-50	Authorized Abbreviation and Bevity Codes
AR 385-64	Requirements for safety, care, and handling of pyrotechnics items and accessories
AR 55-45	Military Standard Transportation and Movement Procedures (MILSTAMP)
AR 735-11	Accounting for Lost, Damaged, and Destroyed Property
AR 700-15	Preservation, Packaging, Packing, and Markings of Items of Supply
AR 750-1	Army Material Maintenance Concepts and Policies

A-5. Technical Bulletins

TB 750-99-16	Maintenance Expenditure Limits for FSC Group 16
TB 750-126	Use of Material Condition Tags and Labels on Army Aeronautical and Air Delivery Equipment

APPENDIX B
MAINTENANCE ALLOCATION CHART

SECTION I. INTRODUCTION

B-1. General.

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. Maintenance functions. Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Test. To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition i.e, to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/Install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place.

"Replace" is authorized by the MAC and is shown as the 3d position code of the SMR code.

i. Repair. The application of maintenance services, including fault location/troubleshooting, removal/installation, and dissassembly/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.

B-2. Maintenance functions (cont.)

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

B-3. Explanation of Columns in the MAC, Section II.

a. Column 1. Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00".

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.).

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

C	Operator or crew
O	Organizational Maintenance
F	Direct Support Maintenance
H	General Support Maintenance
D	Depot Maintenance

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III.

a. Column 1. Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, Section II, Column 5.

b. Column 2, Maintenance Category. The lowest category of maintenance authorized to use the tool or test equipment.

B-4. Explanation of Columns in Tool and Test Equipment Requirements, Section III (cont.).

c. Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National stock number of the tool or test equipment.

e. Column 5, Tool Number. The manufacturer's part number.

B-5. Explanation of Columns in Remarks, Section IV.

a. Column 1, Reference Code. The code recorded in column 6, Section II.

b. Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

SECTION II. MAINTENANCE ALLOCATION CHART FOR HIGH ALTITUDE AIRDROP RESUPPLY SYSTEM (HAARS)

(1) NUMBER	(2) COMPONENT/ ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY C	O	F	H	D	(5) TOOLS AND EQPT	(6) REMARKS
00	Components of 500 lb HAARS								
01	70 in-shear strap	Inspect Service Replace Repair		0.1 0.2 0.1 0.2					
02	Pilot Parachute Deployment Bag and Static Line	Inspect Service Replace Repair		0.1 0 2 0.1 0 2					
03	Pilot Parachute, 30-inch	Inspect Service Replace Repair		0.1 0.4 0.1 0.1					
04	Deployment Line	Inspect Service Replace Repair		0.1 0.2 0.1 0.1					
05	G-14 Cargo Parachute	Service		0.2					A
06	Altitude Sensor Parachute Staging Unit								B

SECTION III. TOOLS AND TEST EQUIPMENT REQUIREMENTS FOR HIGH ALTITUDE AIRDROP RESUPPLY SYSTEM (HAARS) 500 POUND CAPACITY

(Not Required)

SECTION IV. REMARKS

Reference Code	Remarks
A.	Maintenance functions such as Inspect, Repair and Replace; and the Repair Parts and Special Tools List (RPSTL) for the G-14 are provided in TM 10-1670-215-23/T.O. 13C5-1-102.
B.	All maintenance functions for the Altitude Sensor Parachute Staging Unit are provided in TM 10-1670-265-12&P/T.O. 13C7-1-21.

APPENDIX C
REPAIR PARTS AND SPECIAL TOOLS LIST
(Current as of 30 November 1982)

Section I. INTRODUCTION

C-1. Scope. This appendix lists spares and repair parts; special tools; test, measurement and diagnostic equipment (TMDE); and other special support equipment required for performance of Organizational Maintenance of the High Altitude Airdrop Resupply System (HAARS). It authorizes the requisitioning and issue of spares and repair parts as indicated by the source and maintenance codes.

C-2. General. This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized for use in the performance of maintenance Parts list are composed of functional groups in numeric sequence, with the parts in each group listed in figure and item number sequence Bulk materials are listed in NSN sequence.

b. Section III Special Tools List. A list of special tools, special TMDE, and other special support equipment authorized for the performance of maintenance.

c. Section IV. National Stock Number and Part Number Index. A list, in National Item Identification Number (NIIN) sequence of all National Stock Numbers (NSN) appearing in the listings, followed by a list, In alphanumeric sequence, of all part numbers appearing in the listings National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance.

C-3. Explanation of Columns.

a. Illustration. This column is divided as follows:

(1) Figure Number. Indicates the figure number of the illustration on which the item is shown.

(2) Item Number. The number used to identify each item called out in the illustration.

b. Source, Maintenance and Recoverability (SMR) Codes.

(1) Source Code. Source codes indicate the manner of acquiring support items for maintenance, repair or overhaul of end items Source codes are entered in the first and second positions of the Uniform SMR Code format as follows:

Code	Definition
PA	Item procured and stocked for anticipated or known usage.
AO	Item to be assembled at organizational level.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Uniform SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace and use the support item. The maintenance code entered in the third position will indicate the following level of maintenance:

Code	Application/Explanation
O	Support item is removed, replaced, used at the organizational level.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

Code	Application/Explanation
O	The lowest maintenance level capable of complete repair of the support item is the organizational level
F	The lowest maintenance level capable of complete repair of the support item is the Direct Support level.
L	Repair restricted to the US Army Metrology and Calibration Center (USAMCC), Specialized Repair Activity.
Z	Nonreparable. No repair is authorized.

(3) Recoverability Code. Recoverability codes are assigned to support items to indicate the disposition action on unserviceable items The recoverability code is entered in the fifth position of the Uniform SMR Code format as follows:

Code	Definition
Z	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
F	Reparable item. When uneconomically reparable, condemn and dispose at the Direct Support level.
L	Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repair activity level.

c. National Stock Number. Indicates the National stock number assigned to the item and which will be used for requisitioning.

d. Federal Supply Code for Manufacturer (FSCM). The FSCM is a 5-digit numeric code listed in SB 708-42 which is used to identify the manufacturer, distributor, or Government agency, etc.

e. 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 a stock numbered item is requisitioned, the item received may have a different part number than the part being replaced.

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in., pr, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc.).

C-4. Special Information. In the parts list, some items are indented to show that they are a component or components of the item under which they are indented.

C-5. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Unknown:

(1) First. Find the illustration covering the functional group to which the item belongs.

(2) Second. Identify the item on the illustration and note the illustration figure and item number of the item.

(3) Third. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known.

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in ascending NIIN sequence followed by a list of part numbers in alphanumeric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list

C-6. Abbreviations. Not Applicable**.**

SECTION II. REPAIR PARTS LIST

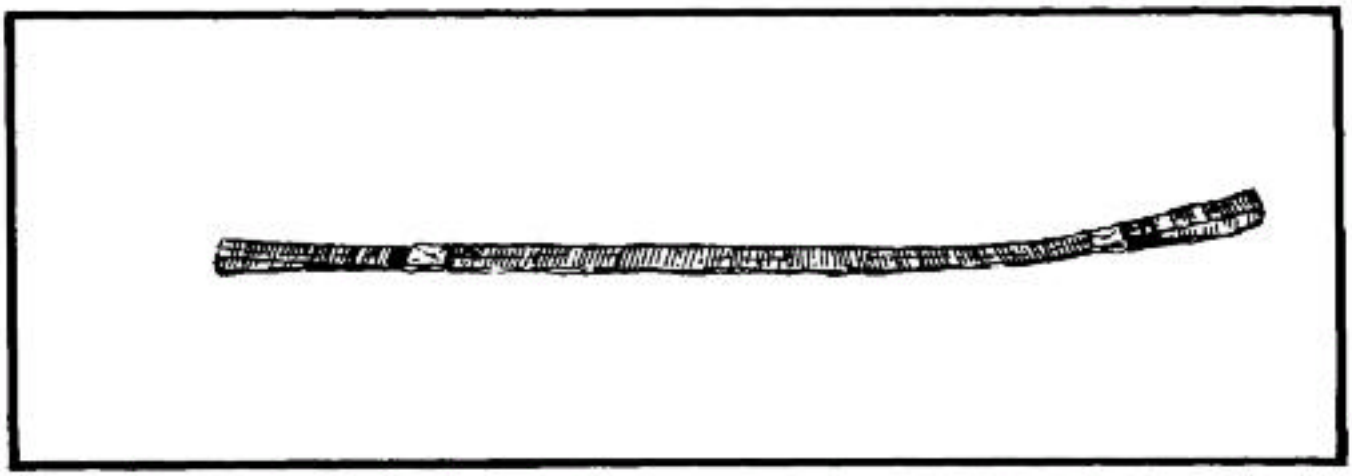


Figure C-1. 70-Inch Shear Strap

(1) ILLUSTRATION (a) FIG NO.	(1) ILLUSTRATION (b) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) FSCM	(5) PART NUMBER	(6) DESCRIPTION UNUSABLE ON CODE	(7) U/M	(8) QTY INC IN UNIT
						GROUP 01-70 INCH SHEAR STRAP		
C-1	1	PAOOO	1670-01-121-0767	81337	11-1-2681	70 INCH SHEAR STRAP	EA	1

SECTION II. REPAIR PARTS LIST

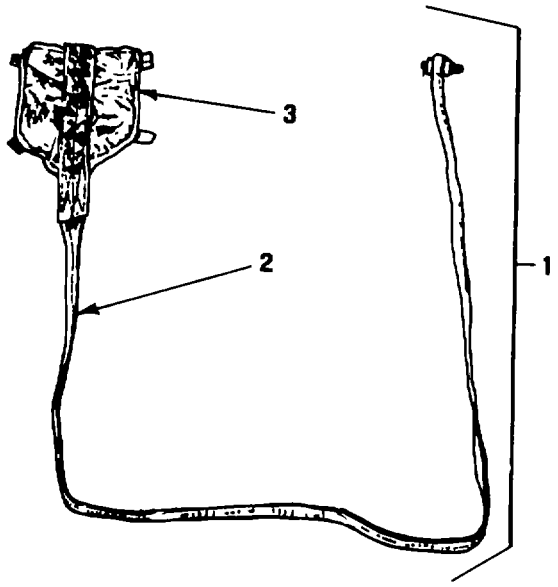


Figure C-2. Deployment Bag and Static Line

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION (7)		(8) QTY
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	*USABLE ON CODE*	U/M	INC IN UNIT
						GROUP 02-PILOT PARACHUTE DEPLOYMENT BAG & STATIC LINE		
C-2	1	PAOOO	1670-01-121-0954	81337	11-1-2676	DEPLOYMENT BAG AND STATIC LINE		
C-2	2	PAOOO	1670-01-121-0765	81337	11-1-2678	*STATIC LINE		
C-2	3	PAOOO	1670-01-121-0955	81337	11-1-2677	*DEPLOYMENT BAG		

SECTION II. REPAIR PARTS LIST

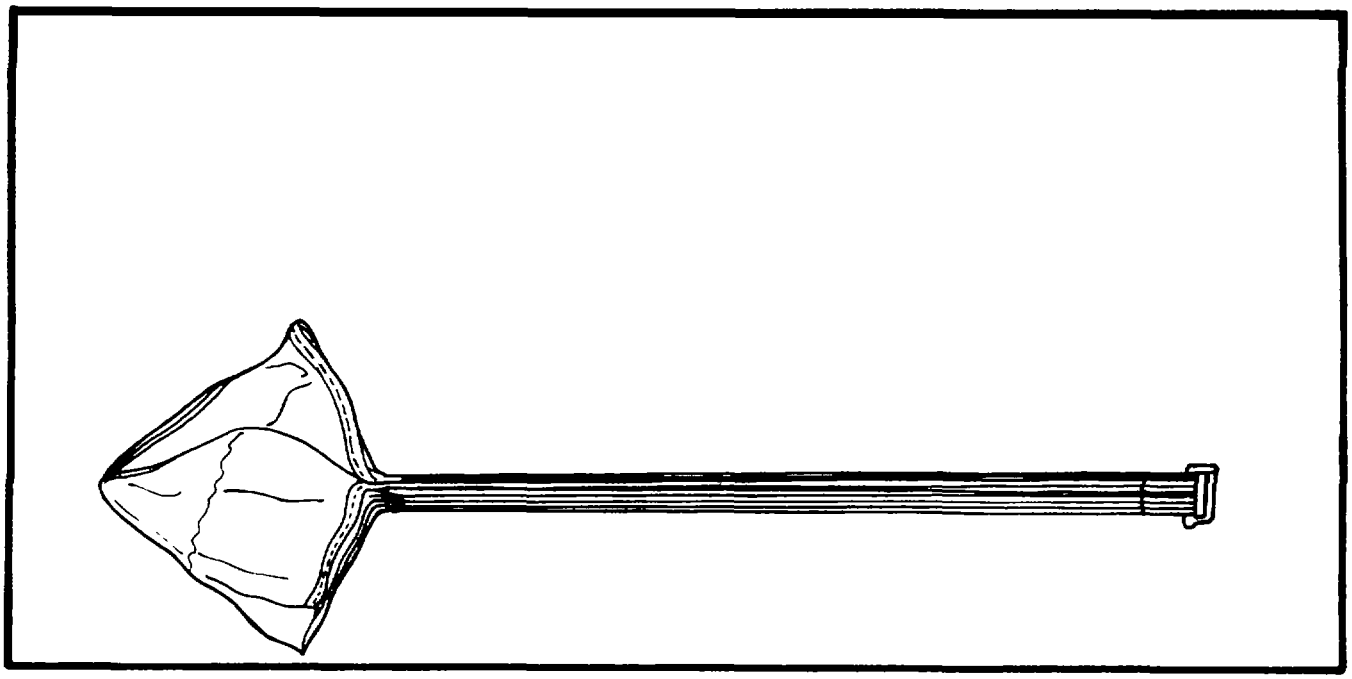


Figure C-3. 30-Inch Diameter Pilot Parachute

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION (7)		(8) QTY
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	*USABLE ON CODE*	U/M	INC IN UNIT
						GROUP 03-30 INCH PILOT PARACHUTE		
C-3		PAOOO	1670-01-121-5819	81337	11-1-2679-1	30 INCH PILOT PARACHUTE		

SECTION II. REPAIR PARTS LIST

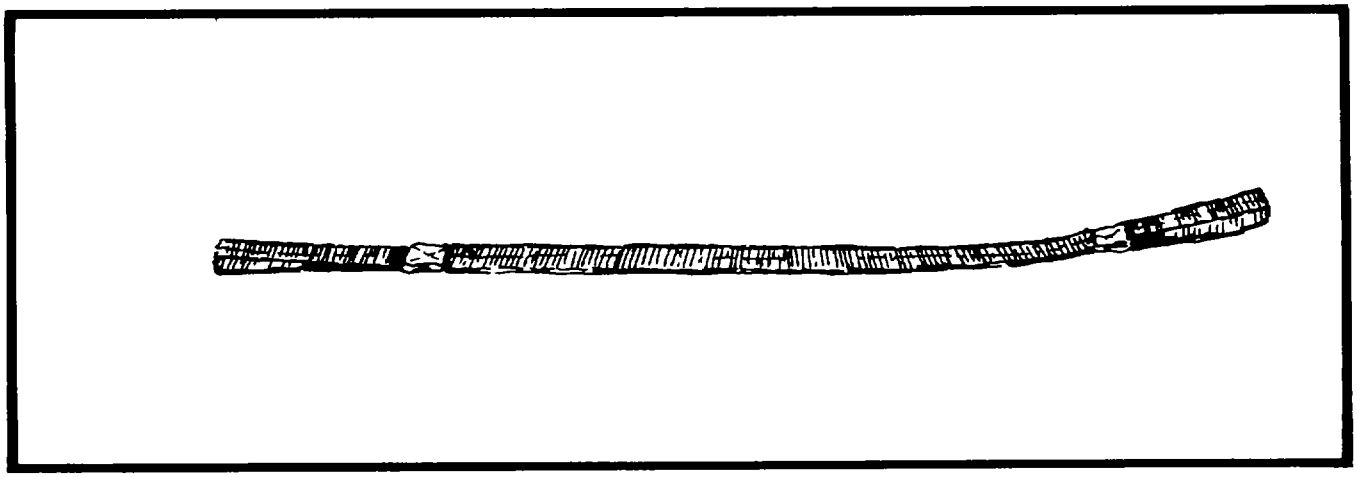


Figure C-4. Deployment Line

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8) QTY
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	*USABLE ON CODE*	U/M	INC IN UNIT
						GROUP 04- DEPLOYMENT LINE		
C-4	1	PAOOO	1670-01-121-0766	81337	11-1-2680	DEPLOYMENT LINE		

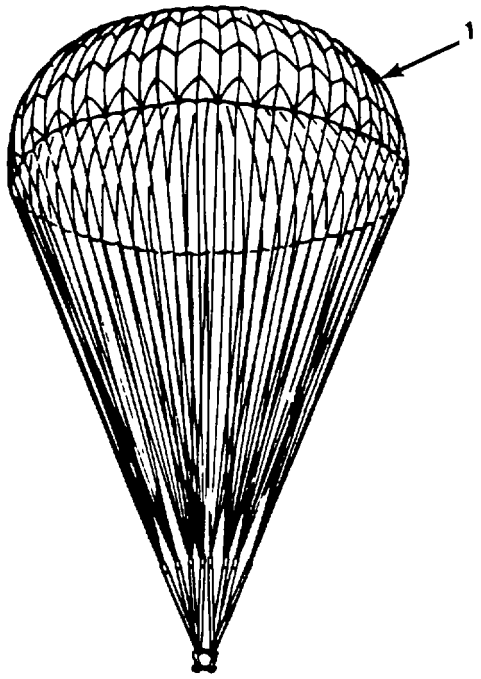


Figure C-5. G-14 Cargo Parachute

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8) QTY
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	*USABLE ON CODE*	U/M	INC IN UNIT
						GROUP 05-G-14 CARGO PARACHUTE		
C-5	1	PAOOF	1670-00-999-2658	81337	11-1-578	G-14 34 FOOT DIAMETER CARGO PARACHUTE	EA	1

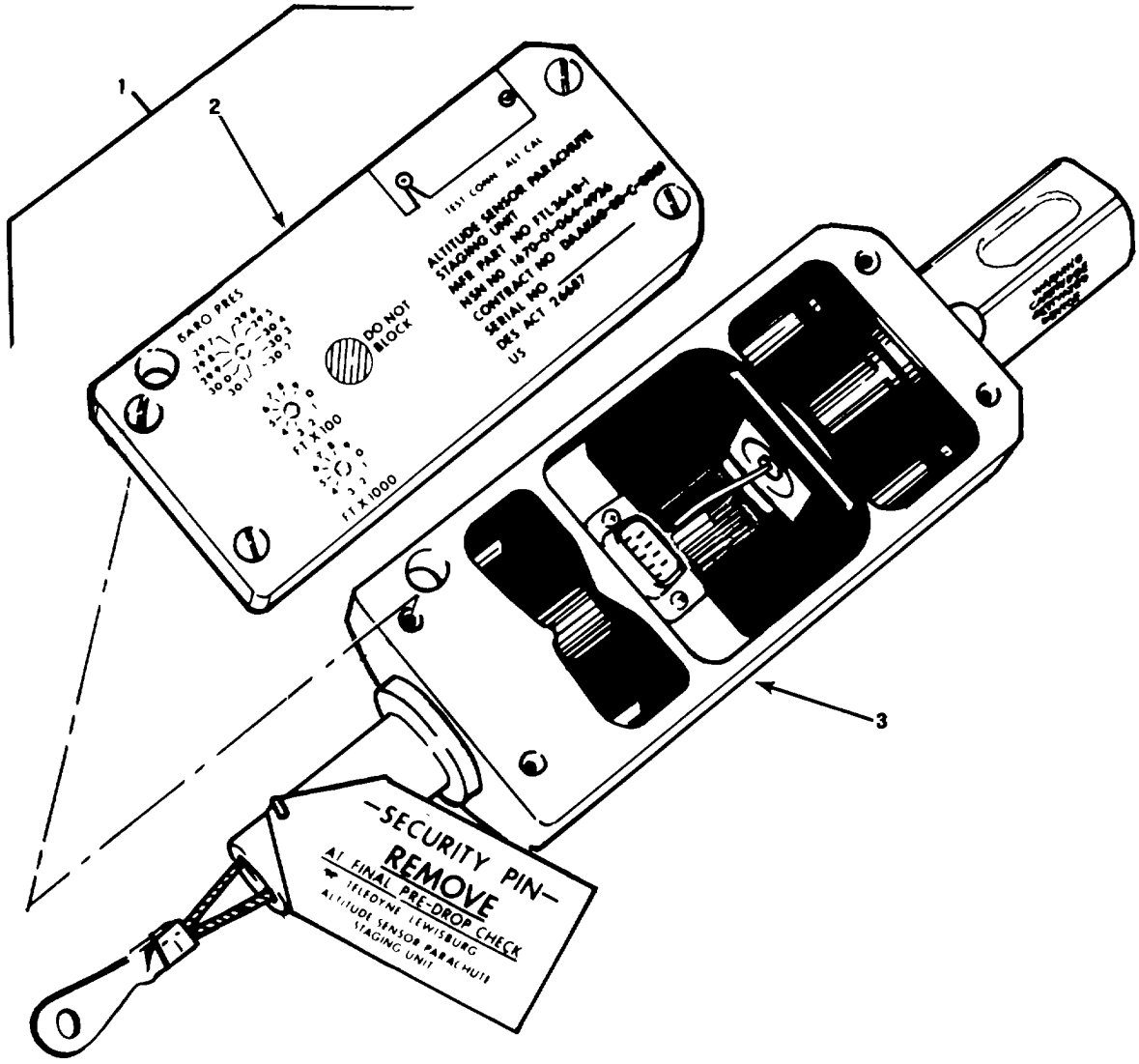


Figure C-6. Altitude Sensor Parachute Staging Unit

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6)	(7)	(8)
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	DESCRIPTION *USABLE ON CODE*	U/M	QTY INC IN UNIT
						GROUP 06-ALTITUDE SENSOR PARACHUTE STAGING UNIT		
C-6	1	AOOZZ	1670-01-071-5022	26687	FLT3648	ALTITUDE SENSOR PARACHUTE STAGING UNIT	EA	1
C-6	2	PAOZZ	1670-01-064-4926	26687	FLT3648-1	*SENSOR MODULE	EA	1
C-6	3	PAOZZ	1377-01-064-4927	26687	FLT3648-2	*CUTTER MODULE	EA	1

SECTION III. SPECIAL TOOLS LIST

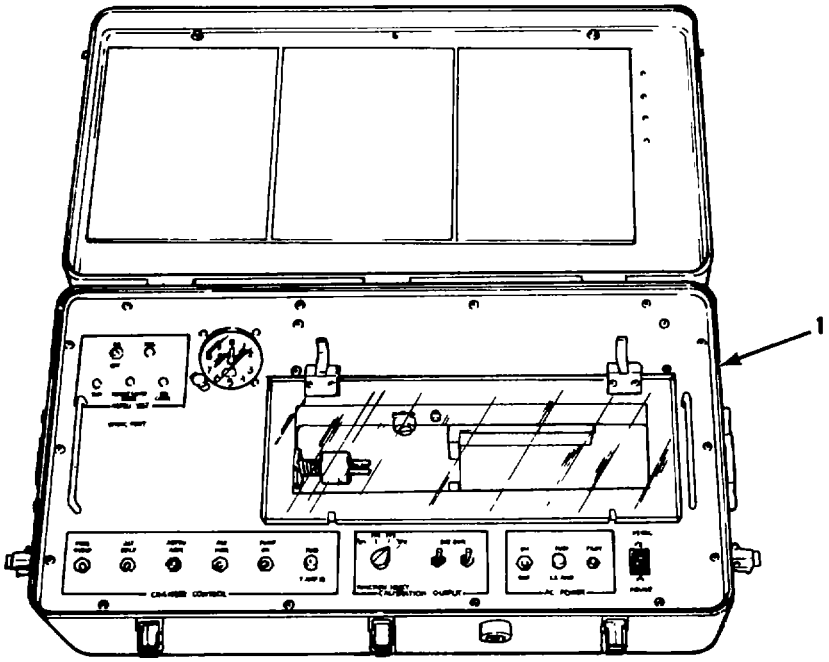


Figure C-7. Altitude Sensor Parachute Staging Unit Test Set

(1) ILLUSTRATION		(2)	(3)	(4)	(5)	(6) DESCRIPTION	(7)	(8) QTY
(a) FIG NO	(b) ITEM NO	SMR CODE	NATIONAL STOCK NUMBER	FSCM	PART NUMBER	*USABLE ON CODE*	U/M	INC IN UNIT
						GROUP 07-TEST SET ASSEMBLY, ALTITUDE SENSOR PARACHUTE STAGING UNIT		
C-7	1	PAOLL	1670-01-064-4925	26687	FLT4240-1	TEST SET ASSEMBLY	EA	1

SECTION IV. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

STOCK NUMBER	FIG. NO.	ITEM NO.	PART NUMBER	FSCM	FIG. NO.	ITEM NO.
1670-00-999-2658	C-5	1	FLT 3648	26687	C-6	1
1670-01-064-4925	C-7	1	FLT 3648-1	26687	C-6	2
1670-01-064-4926	C-6	2	FLT 3648-2	26687	C-6	3
1377-01-064-4927	C-6	3	FLT 4240-1	26687	C-7	1
1670-01-071-5022	C-6	1	11-1-2676	81337	C-2	1
1670-01-121-0765	C-2	2	11-1-2677	81337	C-2	3
1670-01-121-0766	C-4	1	11-1-2678	81337	C-2	2
1670-01-121-0767	C-1	1	11-1-2679-1	81337	C-3	1
1670-01-121-0954	C-2	1	11-1-2680	81337	C-4	1
1670-01-121-0955	C-2	3	11-1-2681	81337	C-1	1
1670-01-121-5819	C-3	1	11-1-578	81337	C-5	1

APPENDIX D
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

SECTION I. INTRODUCTION

D-1. SCOPE. This appendix lists expendable supplies and materials you will need to operate and maintain the HAARS. This listing is for informational purposes only and is not authority to requisition the listed items. 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.

D-2. EXPLANATION OF COLUMNS.

a. Column (1) - Item number This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e g, "Use cleaning compound, item 5, App. D").

b. Column (2) - Level This column Identifies the lowest level of maintenance that requires the listed item (enter as applicable)

C - Operator/Crew
O - Organizational Maintenance
F - Direct Support Maintenance
H - General Support Maintenance

c. Column (3) - National Stock Number This :s the National stock number assigned to the item; use it to request or requisition the item.

d. Column (4) - Description Indicates the Federal item name and, if required, a description to identify the Item The last line for each item indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

e. Column (5) - Unit of Measure (U/M) Indicates the measure used in performing the actual maintenance function This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

SECTION II.
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS

Item Number	Level	National Stock Number	Description	U/M
1	O	6810-00-270-9982	Tetrachloroethylene, Technical	dr
2	O	7930-00-281-4731	Dish Washing Compound, hand flake	50 lb sack
3	O	7920-00-205-3570	Rag, wiping	be
4	O	8310-00-248-9716	Thread, nylon, size no. 6	yd
5	O	8305-00-433-5986	Cloth, muslin-cotton, type III	ft
6	O	8310-00-917-3445	Thread, cotton-ticket no. 5	yd
7	O	8305-00-268-2411	Webbing, textile-cotton, type I, 1/4-inch wide	ft
8	O	1670-00-368-7486	Strap, webbing, 60-inch	ea
9	O	7510-00-663-0196	Tape, pressure sensitive, 2-inch wide, type 3, O.D.	ro
10	O	8305-00-268-2453	Webbing, textile-nylon, tubular, 1/2-inch wide	ft
11	O	7510-00-286-5362	Ink, marking, parachute-strata-blue	pt
12	O	1670-00-568-0323	Band, rubber retainer	bx

INDEX

INDEX

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The Metric System and Equivalents

Linear Measure

1 centimeter = 10 millimeters = .39 inch
1 decimeter = 10 centimeters = 3.94 inches
1 meter = 10 decimeters = 39.37 inches
1 dekameter = 10 meters = 32.8 feet
1 hectometer = 10 dekameters = 328.08 feet
1 kilometer = 10 hectometers = 3,280.8 feet

Weights

1 centigram = 10 milligrams = .15 grain
1 decigram = 10 centigrams = 1.54 grains
1 gram = 10 decigram = .035 ounce
1 decagram = 10 grams = .35 ounce
acres
1 hectogram = 10 decagrams = 3.52 ounces
1 kilogram = 10 hectograms = 2.2 pounds
1 quintal = 100 kilograms = 220.46 pounds
1 metric ton = 10 quintals = 1.1 short tons

Liquid Measure

1 centiliter = 10 milliters = .34 fl. ounce
1 deciliter = 10 centiliters = 3.38 fl. ounces
1 liter = 10 deciliters = 33.81 fl. ounces
1 dekaliter = 10 liters = 2.64 gallons
1 hectoliter = 10 dekaliters = 26.42 gallons
1 kiloliter = 10 hectoliters = 264.18 gallons

Square Measure

1 sq. centimeter = 100 sq. millimeters = .155 sq. inch
1 sq. decimeter = 100 sq. centimeters = 15.5 sq. inches
1 sq. meter (centare) = 100 sq. decimeters = 10.76 sq. feet
1 sq. dekameter (are) = 100 sq. meters = 1,076.4 sq. feet
1 sq. hectometer (hectare) = 100 sq. dekameters = 2.47

1 sq. kilometer = 100 sq. hectometers = .386 sq. mile

Cubic Measure

1 cu. centimeter = 1000 cu. millimeters = .06 cu. inch
1 cu. decimeter = 1000 cu. centimeters = 61.02 cu. inches
1 cu. meter = 1000 cu. decimeters = 35.31 cu. feet

Approximate Conversion Factors

To change	*To*	*Multiply by*	*To change*	*To*	*Multiply by*
inches	centimeters	2.540	ounce-inches	Newton-meters	.007062
feet	meters	.305	centimeters	inches	.394
yards	meters	.914	meters	feet	3.280
miles	kilometers	1.609	meters	yards	1.094
square inches	square centimeters	6.451	kilometers	miles	.621
square feet	square meters	.093	square centimeters	square inches	.155
square yards	square meters	.836	square meters	square feet	10.764
square miles	square kilometers	2.590	square meters	square yards	1.196
acres	square hectometers	.405	square kilometers	square miles	.386
cubic feet	cubic meters	.028	square hectometers	acres	2.471
cubic yards	cubic meters	.765	cubic meters	cubic feet	35.315
fluid ounces	milliliters	29,573	cubic meters	cubic yards	1.308
pints	liters	.473	milliliters	fluid ounces	.034
quarts	liters	.946	liters	pints	2.113
gallons	liters	3.785	liters	quarts	1.057
ounces	grams	28.349	liters	gallons	.264
pounds	kilograms	.454	grams	ounces	.035
short tons	metric tons	.907	kilograms	pounds	2.205
pound-feet	Newton-meters	1.356	metric tons	short tons	1.102
pound-inches	Newton-meters	.11296			

Temperature (Exact)

°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

PIN: 056226-000