



Owner's Manual for Packing and Maintenance
of the
**TPDS Hang-Up Rescue Parachute
(H.U.R.P.)**



TACTICAL PARACHUTE DELIVERY SYSTEMS, Inc.

4035 Correia Drive
Zephyrhills, FL 33542 USA

Phone: +1.813.782.7482
Fax: +1.813.788.2799
E-mail: info@tpdsairborne.com
Website: www.tpdsairborne.com



Tactical Parachute Delivery Systems, Inc.

6520 Fort King Road
Zephyrhills, FL 33542
Phone: 813.782.7482
Fax: 813.788.2799

STATEMENT OF CONFORMANCE

This letter is to inform that all components of the **Hang-Up Rescue Parachute (H.U.R.P.)** by **TPDS, Inc.** are manufactured using Federal Aviation Administration (FAA) Technical Standard Order (TSO) requirements of the Federal Aviation Regulation 14 Code of Federal Regulations Part 21, Subpart O.

Furthermore; the H.U.R.P.meets all Military Standards and Specifications.

Sincerely,

Henri Pohjolainen
President

Tactical Parachute Delivery Systems, Inc.



WARNING!

PARACHUTING IS A HIGH RISK ACTIVITY WHICH CAN CAUSE OR RESULT IN SERIOUS INJURY OR DEATH.

The following information must be read and understood before any use of this equipment:

USER KNOWS THE RISKS OF PARACHUTING AND ACCEPTS THAT:

Parachuting can cause **death** and/or **serious injuries**. Many of these deaths and injuries can be attributed to equipment problems or malfunctions.

Parachuting equipment can fail, even if all possible precautions are taken by the user, the equipment manufacturers and everyone else involved with the jump.

Failure to activate the main or reserve parachute (or follow emergency procedures) at a safe altitude, and/or equipment failure can result in **severe injury or death**.

IT IS THE USER'S RESPONSIBILITY TO:

Receive proper training before any use of all parachuting equipment.
Be extremely careful and cautious.

Read and Understand all owner's and operating manuals for all parachuting equipment.

Thoroughly check all parachuting equipment and replace any defective or worn component prior to use.

Review emergency procedures before each use of this and all parachuting equipment.

Check equipment warnings –

WARNING!

DO NOT EXCEED EQUIPMENT LIMITATIONS!

Never violate the training and experience requirements for the specific equipment use.

DISCLAIMER – STATEMENT OF WARRANTY

Because of the unavoidable dangers involved in the use of this and all parachute equipment – **Tactical Parachute Delivery Systems, Inc.**, (including but not limited to all owners, officers, staff, and employees), hereafter referred to as “**TPDS**” makes no warranties of any kind, expressed or implied. The liability of the seller is limited to replacing defective parts found upon examination by the manufacturer to be defective in material or workmanship within 7 days after purchase and found not to have been caused by an accident, improper use, alteration, tampering, abuse or lack of care on the part of the purchaser.

By using this equipment or allowing it to be used by others, owner/buyer waives any liability of **TPDS** for personal injuries or any other damages arising from such use. Any promise or representations inconsistent with or in addition to the **Statement of Warranty** are not authorized by **TPDS** and shall not be binding.

!WARNING!

Parachuting is a hazardous activity that can result in serious injury or death. Failure to follow all warnings, instructions, and required procedures may result in serious injury or **DEATH!** Parachutes sometimes malfunction even when they are properly designed, built, assembled, packed, maintained and used.

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Chapter 1

Product Information

1.1 Tactical Parachute Delivery Systems, Inc. (TPDS)

TPDS, Inc. is committed to providing you with the latest, most versatile and dependable parachuting system available on the market today.

TPDS can provide you with a *Parachute Rescue System* designed to suit or exceed the expectations of your demanding and changing environment with each assembly built.

If your operation requires a custom solution, please feel free to contact us.

This manual should provide you with the necessary information to assemble, pack and maintain the *H.U.R.P.* Parachute Assembly.

1.2 Hang-Up Rescue Parachute System (HURP) Specifications

Materials:

Deployment Bag: 10 oz. Army Duck Fabric

Storage Bag: 1000 Denier Nylon Cordura (Orange)

Webbing:

Main Risers-

1 23/32" (4.3 cm.) wide Type 7 Mil-W-4088

Tensile Strength **6000 lbs. / 2721 kg.**

Static-line-

3/4" Tubular Nylon, Mil-W-5625

Tensile Strength **2300 lbs. / 1045 kg.**

Hardware:

Separable Connector Links-

MS22002-1

Tensile Strength **3000 lbs. / 1360 kg.**

Static-line Snap-

MS70120

Tensile Strength **1750 lbs. / 800 kg.**

Carabineer-

USR-71-CTL

Tensile Strength **9000 lbs. / 4082 kg.**

Lines:

#525 Polyester Braid

Tensile Strength **525 lbs. / 238 kg.**



Size:

Deployment Bag (packed) - 10” high x 14” wide x 21” long
25.4 cm. x 35.56 cm. x 53.34 cm.

Weight:

Deployment Bag (packed) - 25 lbs. (11.34 kg.)

Fabric Colors:

Orange

Harness Colors:

Olive Drab Green

1.3 H.U.R.P. Capabilities and Features

The *H.U.R.P.* is a complete assembly of military equipment manufactured to the highest standards using the best **Military Specification** materials available in today’s market.

The *H.U.R.P.* is manufactured in the United States in a facility that is Federal Aviation Administration (**FAA**) certified for manufacturing parachute equipment.

These high standards of materials and workmanship will provide years of quality service.

The *H.U.R.P.* provides the capability to safely rescue a soldier with individual equipment from an in-flight “in-tow” situation while still airborne.



1.4 Main Parachute Features

Main Parachute:

HURP- 401 - 42 ft. diameter non-steerable round

Capabilities and Features:

The **H.U.R.P. Main Parachute** -

The **H.U.R.P.** Main Parachute is a parabolic canopy with netting in the vent slots to optimize rate of descent and minimize oscillation and anti-inversion netting at the skirt.

The Main canopy has 28 gores and is block constructed using low porosity, high UV resistant rip-stop nylon fabric. Very little air passes through the material, resulting in slower-than-normal rate of descent and consequently softer landings, especially welcomed at higher field elevations or with heavy payloads.

It has 28 lines made of 525 lbs. Polyester Braid Cord.

The **H.U.R.P.** Main Parachute provides the capability to safely rescue a soldier with individual equipment from an in-flight “in-tow” situation while still airborne.

This system features a static line deployment of the Main Parachute.

It has a maximum weight limit of 450 lbs. (204 kg.) at 150 kts.

The **H.U.R.P.** Main Parachute is limited to use in winds not exceeding 35 knots at altitude and 16 knots at the surface.



TPDS- H.U.R.P. Front View

- Static Line Cover Flaps
- Static Line
- Static Line Stows
- Main Line Cover Flap
- Static Line Snap
- Static Line Snap Pocket
- Main Risers



TPDS- H.U.R.P. Back View

- Main Riser Stow Pocket
- Main Riser Stow Bands
- Main Risers
- Main Line Cover Flap
- Static Line Carabineer
- Carabineer Stow Band



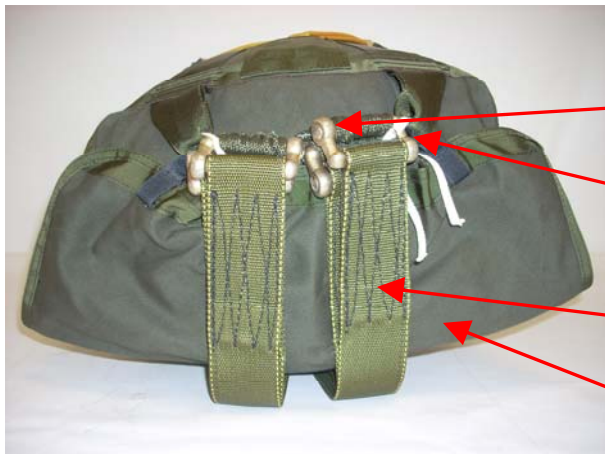
TPDS- H.U.R.P. **Line Stows**

- Main Line Cover Flap
- Cotton Stow Bands
- Main Parachute Lines- Dacron 525#
- Deployment Bag to Riser Connectors
- Main Riser Connector Links
- Main Risers T-7



TPDS- H.U.R.P. **Top View**

- Static Line Stow Covers
- Static Line
- Static Line to Deployment Bag Connection
- Deployment Bag



TPDS- H.U.R.P. **Bottom View**

- Main Risers Connector Links
- 80# Break-tape Riser to D-Bag Connection
- Main Risers T-7
- Main Line Cover Flap



Chapter 2

Inspection Processes

2.1 Inspection Procedures Table

<u>Item to Inspect</u>	<u>Procedure</u>
Complete Assembly	Verify that assembly is complete. Verify proper assembly and that system is clean and free from foreign materials.
Canopy	Inspect for rips, holes, tears, burns, dampness, foreign materials, completeness of stitching.
Apex	Inspect for cuts, breaks, burns, and completeness of stitching on the radial seam and lateral band..
Upper Lateral Band	Inspect for cuts, holes, burns, and completeness of stitching.
Gore Sections	Inspect for rips, holes, tears, burns, dampness completeness of stitching and legible markings.
Middle Lateral Band	Inspect for cuts, holes, burns, and completeness of stitching.
Vented Gores	Inspect netting for cuts, holes, breaks, burns, tears, and completeness of stitching.
Lower Lateral Band	Inspect for cuts, holes, burns, and completeness of stitching.

Radial Seams	Inspect for cuts, holes, tears, and completeness of stitching.
Information Panel	Inspect for legibility.
Line Attachment Tapes	Inspect for cuts, holes, tears, burns, and completeness of stitching.
Anti-Inversion Netting	Inspect for cuts, holes, tears, burns, and completeness of stitching.
Lines	Inspect for continuity, cuts, snags, broken lines, burns, and completeness of stitching.
Connector Links	Inspect for corrosion, burrs, rough spots, cracks, loose or missing screws or stripped threads.
Risers	Inspect for cuts, holes, tears, burns, and completeness of stitching. Inspect 5 cord “box X” on end of riser for completeness of stitching.
Carabineer	Inspect for corrosion, burrs, rough spots, cracks, loose or stripped threads. Inspect for carabineer to function properly.
Deployment Bag	Inspect for cuts, holes, tears, burns, and completeness of stitching. Inspect Velcro for wear and completeness of stitching. Inspect rubber bands and rubber band retainers.
Static Line	Inspect Snap and Safety Pin for corrosion and smooth operation. Inspect Static line for completeness of stitching, burns, holes and tears.



Chapter 3

Tools

Use this page to record which tools are used during the packing of your TPDS, Inc. H.U.R.P. Mark which tools, and how many were used for packing and document all tools after work is complete.

3.1 Tool Check List

Tool used:

Pre-packing

Post-packing

Shot Bags _____ used _____ used

Line Separator _____ used _____ used

Packing Paddle _____ used _____ used

Temporary Pins _____ used _____ used

Packing Hook _____ used _____ used

Tension Plate _____ used _____ used

Tension Hook _____ used _____ used

Link Separator Tool _____ used _____ used

Scissors _____ used _____ used

Screw Driver _____ used _____ used

Additional Tools: _____ used _____ used

_____ used _____ used

_____ used _____ used

_____ used _____ used

_____ used _____ used

_____ used _____ used

_____ used _____ used

_____ used _____ used





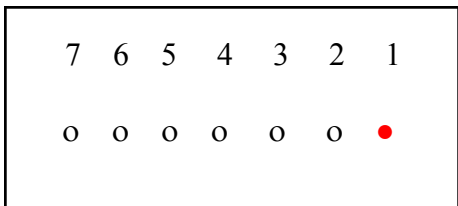
Chapter 4
Assembly

4.1 Line Continuity- Main Parachute.

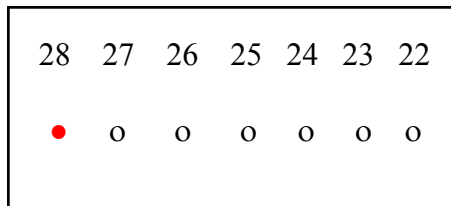
****BEFORE ASSEMBLY****

Inspect the canopy, be sure it is free of debris and the continuity of the lines is correct.

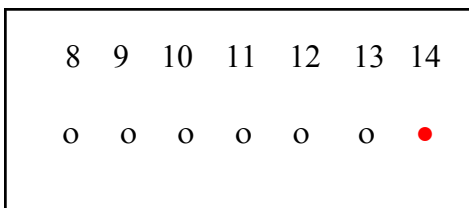
Line Continuity for the H.U.R.P. Main Parachute



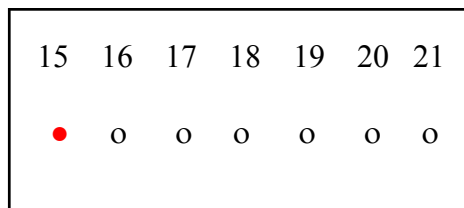
Left Rear Riser



Right Rear Riser



Left Front Riser



Right Front Riser

4.2 Assemble the Main Parachute to the Main Risers.



Fig. 1

Begin by laying out the Main Parachute on the packing table. (fig. # 1)



Fig. 2

With the Apex of the Canopy hooked to the table ring or hook, be sure that the line group 1-14 is on the left side and that the line group 15-28 is on the right side. (fig. # 2)

Line #1 and Line #28 should be on top.



Fig. 3

Remove the two (2) screws from the sides of the Separable Connector Link. (HURP- 103) (fig. # 3)



Fig. 4

Use a link separator tool to open the connector link. (fig. # 4)

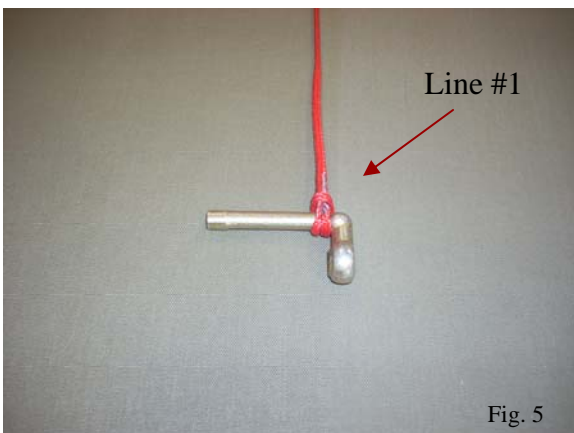


Fig. 5

Pick up line #1 at the skirt and follow it down to the end loop. Place it onto the separated connector link. (fig. # 5)

It is very important not to twist the line as you follow it to the loop. Every effort should be made to keep the lines straight from the skirt to the link.

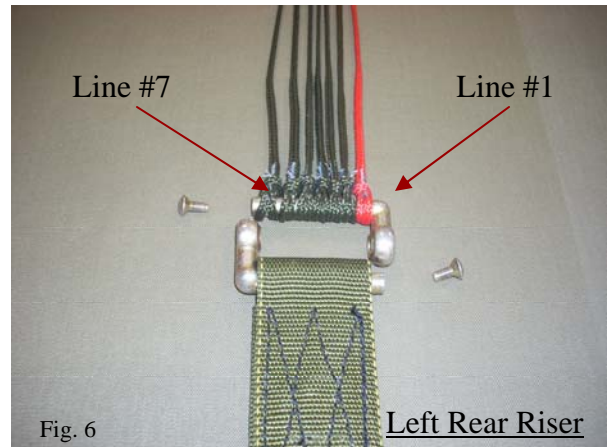


Fig. 6

Continue to place lines #2 - #7 onto the link. (fig. # 6)

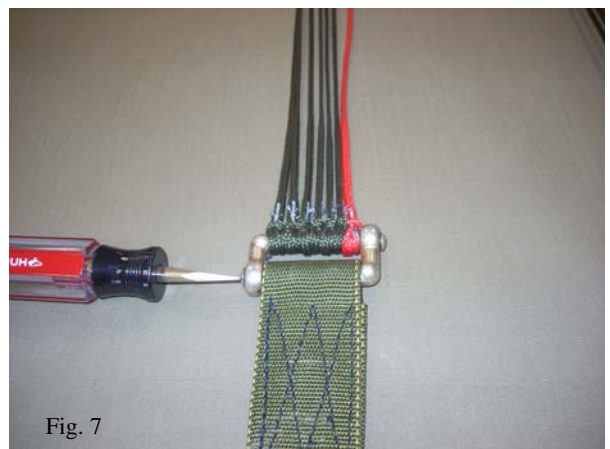
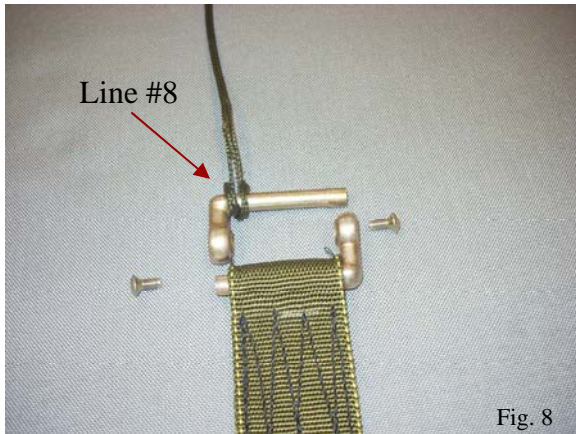
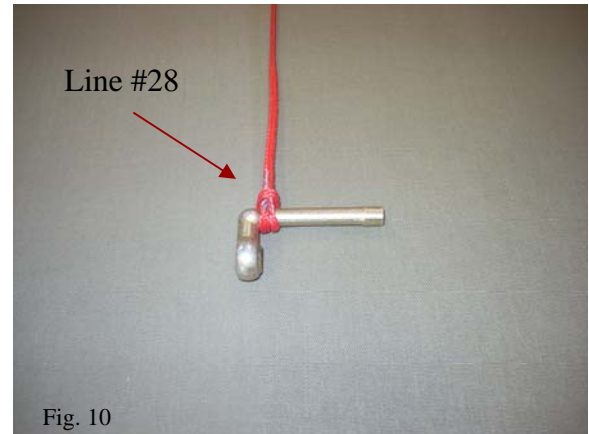


Fig. 7

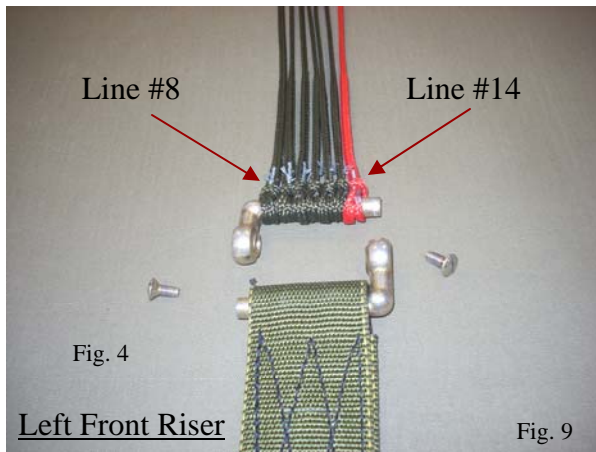
Pass the other half of the Separable Connector Link through the **Left Rear Riser** and the buffer, tighten the screws as shown. (fig. # 7)



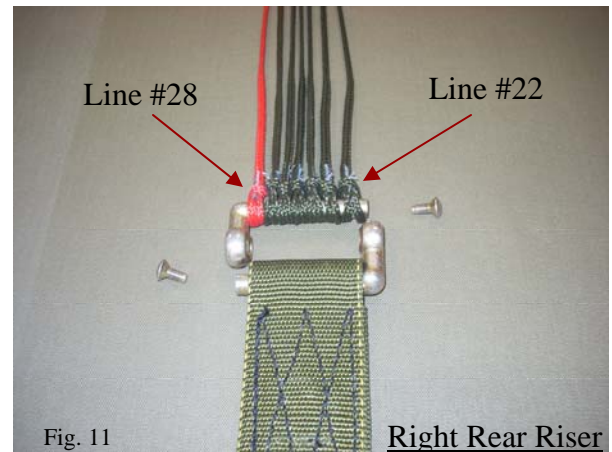
Open another connector link and begin by placing line # 8 onto the link.
Keep the lines straight to the link.
(fig. # 8)



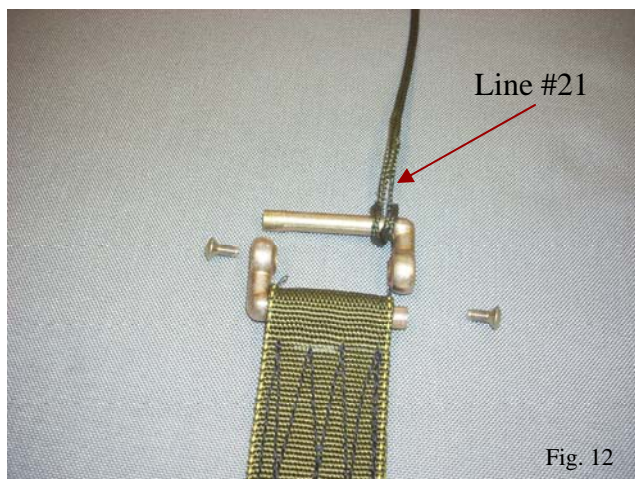
Open a 3rd connector link and begin by placing line # 28 onto the link.
Keep the lines straight to the link.
(fig. # 10)



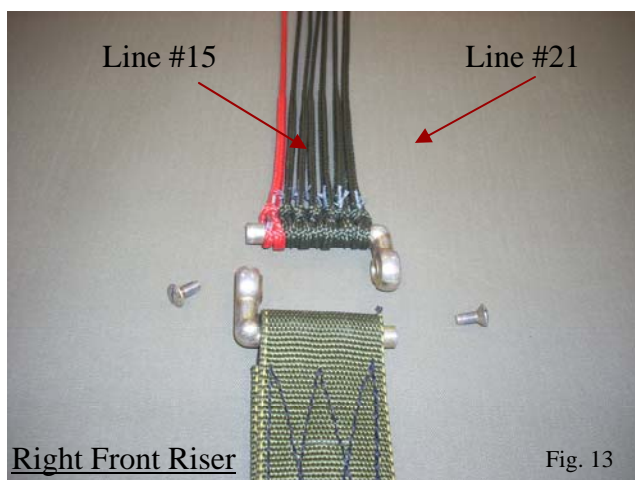
Continue to place lines #9 - #14 onto the link.
Pass the other half of the Separable Connector Link through the **Left Front Riser** and the buffer, tighten the screws as shown. (fig. # 9)



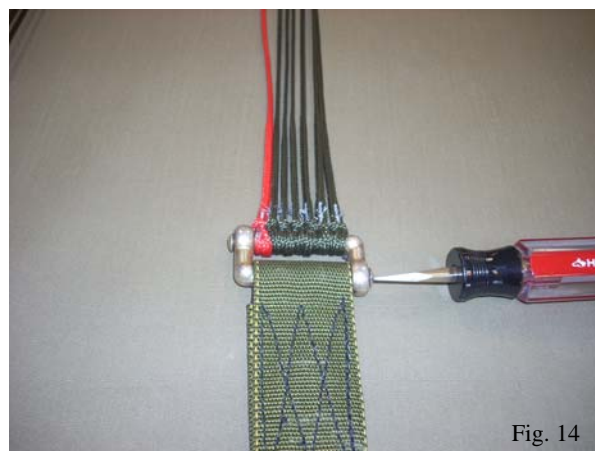
Continue to place lines #27 - #22 onto the link.
Pass the other half of the Separable Connector Link through the **Right Rear Riser** and the buffer, tighten the screws as shown. (fig. # 11)



Finally, open a 4th connector link and begin by placing line #21 onto the link. (fig. # 12)



Continue to place lines #20 - #15 onto the link. (fig. # 13)



Pass the other half of the Separable Connector Link through the **Right Front Riser** and the buffer, tighten the screws as shown. (fig. # 14)

All the lines should now be on the Risers in the correct order.

See page 1 for the line continuity chart.

4.3 Assemble the Static Line and Deployment Bag.



Fig. 15

Begin by placing the Static-line cord through the loop at the bottom of the Deployment Bag. (*fig. #15*)



Fig. 17

Pull the Static Line cord through the loop. (*fig. #17*)

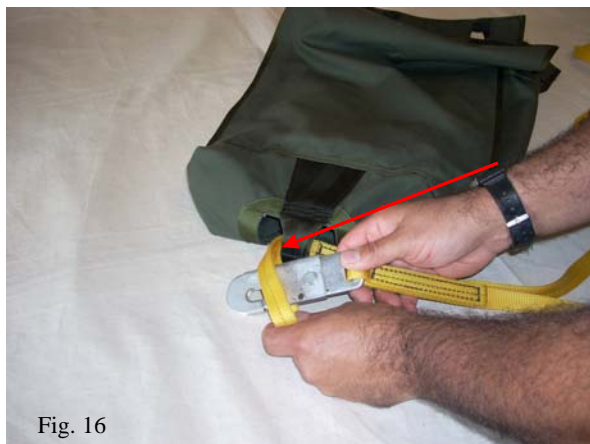


Fig. 16

Next, feed the Static Line snap through the end loop of the Static Line cord. (*fig. #16*)



Fig. 18

Tighten the knot formed. (*fig. #18*)

You are now ready to begin packing the H.U.R.P. Main Parachute.



Chapter 5

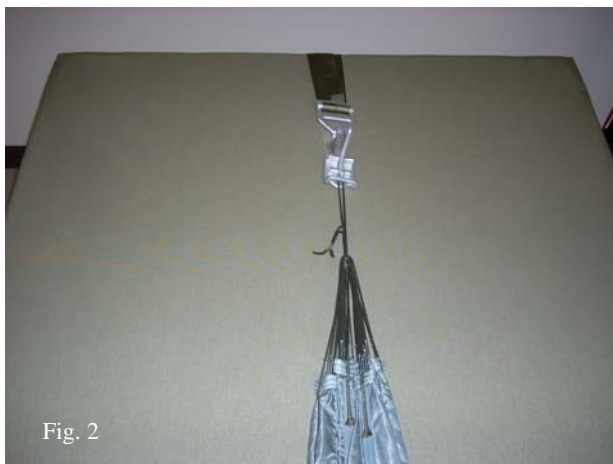
Main Packing

5.1 Packing the Main Canopy.

5.1.1 Preparing and Line Check.



Lay the canopy on the table or floor with the risers flat, not twisted and links on the tension plate. (fig. # 1)



Hook up the apex to the table ring or hook. (fig. # 2)



Check suspension lines for proper layout using four-line check method. (fig. # 3)

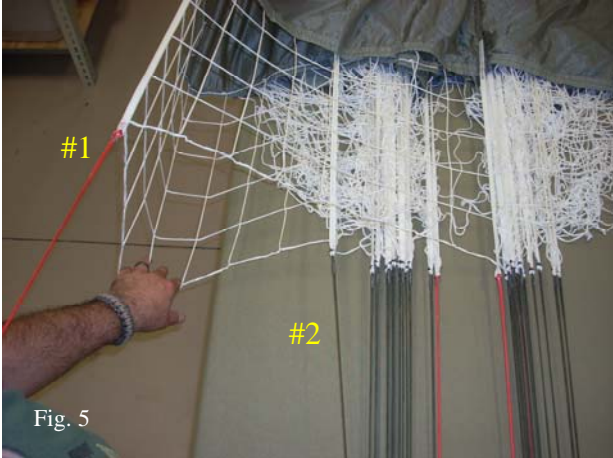
Suspension lines 1-28 are divided into two groups, 1-14 in the left group and 15-28 in the right group.

Remove any twists and tangles in the lines.

5.1.2 Flaking the H.U.R.P. Parachute.



Pictured above is the top of the **HURP** Parachute with data placard. (fig. #4)



Flake one side of the canopy. Be sure to clear the material from between the lines. (fig. #5)



Continue until all panels are flaked. (fig. #6)



Carefully lay the left side down on to the floor or table. (fig. #7)



Flake the right side of the canopy. Carefully lay the right side down on to the floor or table.



Fig. 8

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



Fig. 9

Dressing the Skirt

Neatly stack the left and right side of the lower lateral band and anti-inversion netting, making sure no material is in the center part of the folded canopy. (fig. # 9)

5.1.3 Long Folding the Main Parachute.



Fig. 9

Fold the Left Side of the canopy over the center and place shot bags over folded canopy. (fig. # 9)



Fig. 10

Fold the Right Side of the canopy over the left side and place shot bags over folded canopy. (fig. # 10)

You are now ready to attach the Canopy Apex to the Deployment Bag.

5.2 Attaching the Canopy Apex to the Static Line Cord Using # 80 Cotton Break-Tape. (INV-209)

Follow the Instructions in Chp. 4.3 for attaching the Static Line Cord to the Deployment Bag.



Turn the Deployment Bag inside-out so that the Static Line is showing as above. (fig.#11)



Pass a length of #80 Cotton Break-tape through the Static Line Loop and the apex lines.(fig.#12)



Pass the #80 Cotton Break-tape through a second time (2x). (fig.#13)



Fig. 14



Tie a Surgeon's Knot and two overhand knots. (fig.#14)



Fig. 15

Trim the #80 Cotton Break-tape leaving an inch to two inches (1-2") of tail. (fig.#15)



Fig. 16

Turn the bag right side out. Be certain that all of the apex lines are inside the bag. (fig.#16)



Fig. 17

From the inside of the Deployment Bag. (fig.#17)

5.3 Stowing the Canopy into the Deployment Bag.



Fig. 18

Hold the Deployment Bag open and grasp the canopy near the apex. Place the apex of the canopy into the bottom of the bag, move to one side. (fig. # 18)



Fig. 19

Grasp the canopy and make your next stow in the bag slightly longer than the width of the deployment bag and place inside the bag. (fig. # 19)



Fig. 20

Continue folding until the entire canopy is "S" folded inside of the Deployment Bag. (fig. # 20)



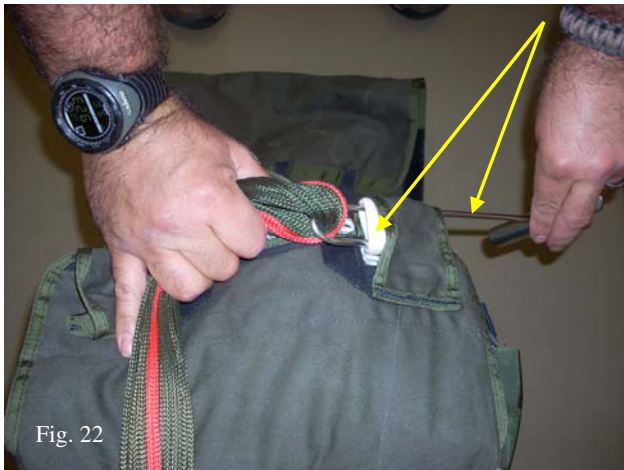
Fig. 21

Remove shot bags as you go. (fig. # 21)

Stand the Deployment Bag with the folded canopy inside, upright to neatly dress the canopy and the bag.

Finish with the lines centered on top of the Deployment Bag.

5.4 Closing the Deployment Bag.



Close the Deployment Bag by passing the two (2) large cotton loops through the slots of the closing flap. Using a packing hook, stow two (2) inches of lines in the either side cotton loop. While holding the stowed lines in place, reach across with the packing hook and stow another two inches of line in the opposite side loop. (*fig. # 22 and fig. # 23*)

NOTE!

Now that the canopy is contained safely into the deployment bag, it is a good opportunity to flatten the deployment bag by using calculated yet forceful slaps to the bag. Flattening and making the bag neat now will ensure a neat pack job, as well as making it easier to close in later steps.

5.5 Stowing the Suspension Lines.



Fig. 24

Hold the last stow with one hand and with the other using a packing stow hook reach diagonally all the way up to the bottom of the bag and make the next stow. (fig. 24 & 25)



Fig. 25

These stows should stick out of the cotton loops a **maximum of 1"**, no more. (fig. #24 & fig. 25)



Fig. 26

Continue to stow the lines alternating between right and left until approximately 8"-20" of lines remain unstowed. (fig. # 26)



Fig. 27

Cover the stowed lines with the flap attached to the Deployment Bag.

Mate the Velcro on the sides of the bag. (fig. #27)

5.6 Securing the Risers to the Deployment Bag.



Pull the Line Cover Flap over the stowed lines. (fig. #28)



Pass a length of 80# break-tape through the 5/8" T-4 loop, the T-8 loop, both connector links then the 5/8" T-4. (fig. #29)



Tie an Surgeon's Knot. (fig. #30)



Tighten the knot formed. (fig. #31)



Tie an Over-hand knot. (fig. #32)



Fig. 33

Tighten the knot formed. (fig. #33)



Fig. 34

Tie another Over-hand knot. (fig. #34)



Fig. 35

Tighten the knot formed.

Trim the tails of the 80# Break-tape. (fig. #35)



Fig. 36

Repeat these steps for the other Riser. (fig. #36)

5.7 Stowing the Risers to the Deployment Bag.



With the Risers secured to the Deployment Bag bring the group up and over the top of the Deployment Bag towards the left corner. (fig. #37)



Bring the Riser back down towards the opposite end and stow the Riser in the rubber band. (fig. #39)



Stow the Riser under the rubber band. (fig. #38)



Bring the Risers back up towards the opposite end and stow in the rubber band. (fig. #40)



Fig. 41

Bring the Riser back down towards the opposite end and stow the Riser in the rubber band. (fig. #41)



Fig. 42

Bring the Risers back up towards the opposite end and stow in the rubber band. (fig. #42)



Fig. 43

Stow the Carabiner in the rubber band. (fig. #43)



Fig. 44

Tuck the Risers under the flaps. (fig. #44)

5.8 Stowing the Static-line.



After securing the Risers to the Deployment Bag secure the Static-line to the other side of the Deployment Bag. (fig. #45)



Stow 2" - 3" of Static-line in the first rubber band. (fig. #47)



Begin by bringing the Static-line to the Right side of the Deployment Bag. (fig. #46)



Stow 2" - 3" of Static-line in the first rubber band on the opposite side. (fig. #48)



Continue to stow 2" - 3" of Static-line in each rubber band alternating back and forth from left to right. (fig. #49)



Tuck the Static-line under the Static-line Covers. (fig. #51)



Stow the Static-line Snap into the pocket.

H.U.R.P. ready for the Mission. (fig. #52)



Chapter 6

Hang-Up Rescue Parachute (H.U.R.P.)
Parts List

PART #

Manufactured Parts

TPDS-HURP-100	Hang-Up Rescue Parachute Assembly Complete
TPDS-HURP-101	Main Parachute Risers – (Pair)
TPDS-HURP-102	Riser Separable Connector Links – MS22002-1 – x4
TPDS-HURP-103	Main Parachute Deployment Bag
TPDS-HURP-104	Static Line w/Snap – (specify length)
TPDS-HURP-105	Carabineer- 1 ea.
TPDS-HURP-106	Hook Knife – 1 ea.
TPDS-HURP-107	Carry Bag
TPDS-HURP-200	80 lbs. Break-tape – (Roll)
TPDS-HURP-201	Deployment Bag Rubber Bands – 50
TPDS-HURP-202	1000 Denier Nylon Cordura – (m)
TPDS-HURP-203	10 oz. Army Duck Fabric
TPDS-HURP-204	Main Canopy Material – MIL-C-44378
TPDS-HURP-205	Suspension Line – Polyester Braided -3511-525 Commercial



TPDS-HURP-206 Red Suspension Line- Polyester Braided-3511-525 Commercial

TPDS-HURP-401 Main Parachute - 42' Non-Steerable Round

TPDS-HURP-700 Hang-Up Rescue Parachute (HURP) **Manual**



Chapter 7

Spare Parts



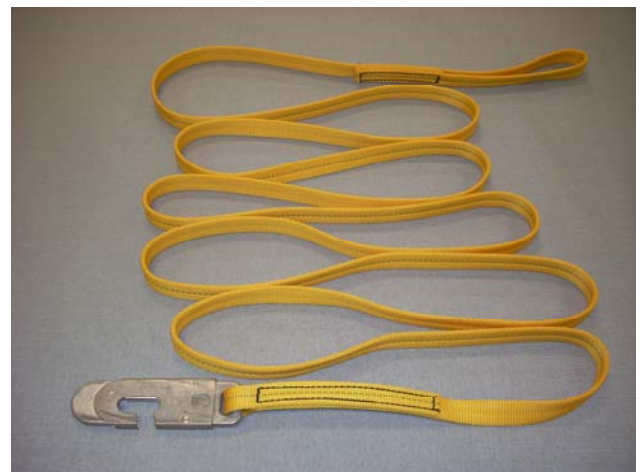
TPDS-HURP-101 MAIN RISERS



TPDS-HURP-103 DEPLOYMENT BAG



TPDS-HURP-102 SEPARABLE
CONNECTOR LINK MS22002-1



TPDS-HURP-104 STATIC-LINE with SNAP



TPDS-HURP-105 CARABINEER



TPDS-HURP-200 #80 BREAK-TAPE



TPDS-HURP-106 RAZOR KNIFE



TPDS-HURP-201 RUBBER BANDS



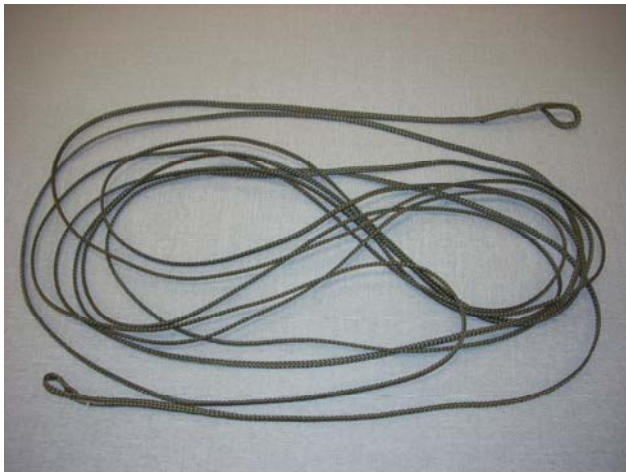
TPDS-HURP-107 CARRY BAG



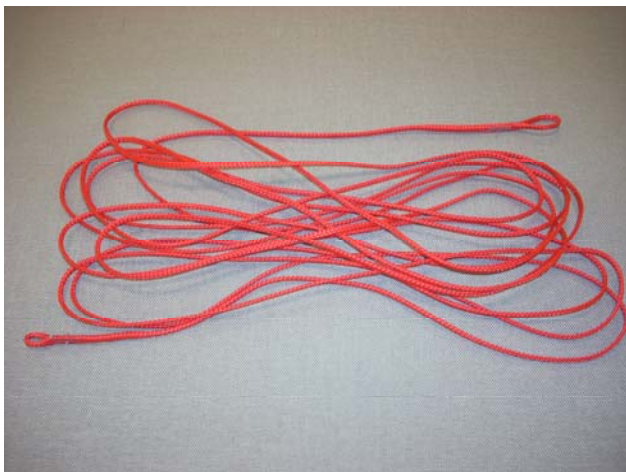
TPDS-HURP-203 DEPLOYMENT BAG MATERIAL



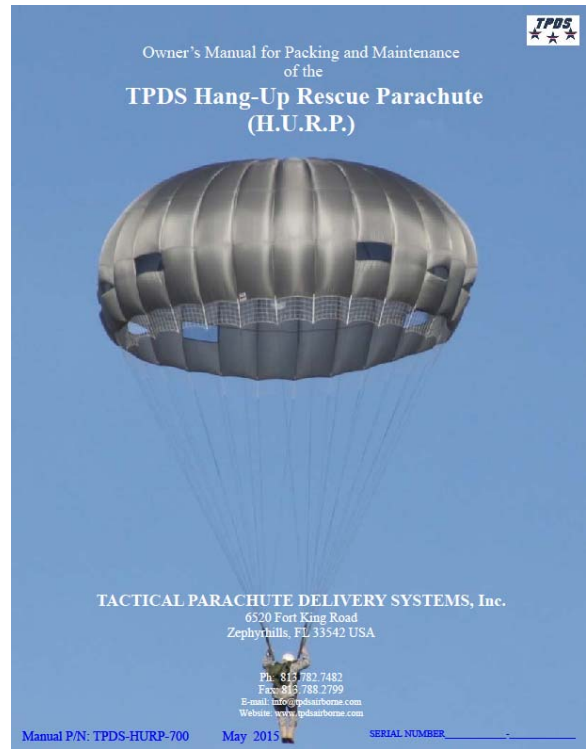
TPDS-HURP-204 PARACHUTE FABRIC



TPDS-HURP-205 MAIN LINES



TPDS-HURP-206 MAIN CENTER LINES



TPDS-HURP-700 OWNER'S MANUAL



Chapter 8

Care and Maintenance

8.1 General Storage Requirements

To ensure that serviceability standards of the **TPDS, Inc. H.U.R.P.** is maintained, every effort will be exerted to adhere to the following general storage requirements:

1. When available, a climate controlled building should be used to store the **TPDS H.U.R.P.**
2. The **TPDS H.U.R.P.** shall be stored in a dry, well ventilated location and protected from pilferage, dampness, fire, dirt, insects, rodents and direct sunlight.
3. The **TPDS H.U.R.P.** 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. The **TPDS H.U.R.P.** will **NOT** be stored in a damaged, dirty or damp condition.
5. The **TPDS H.U.R.P.** 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.
6. Proper housekeeping policies and strict adherence to all safety regulations will be practiced at all times.

8.2 Storage Specifics for Parachutes

In addition to the storage requirements stipulated in the **General Storage Requirements**, the following is a list of specifics that must be enforced when storing parachutes.

1. Except for those assemblies required for contingency operations, parachutes will **NOT** be stored in a packed configuration.
2. Stored parachute assemblies will be secured from access by unauthorized personnel.
3. A parachute that is in storage, and is administered a cyclic repack and inspection, will **NOT** be exposed to incandescent light or indirect sunlight for a period of more than 36 hours. In addition, exposure to direct sunlight will be avoided entirely.

8.3 In-Storage Inspection

General Information:

1. An in-storage inspection is a physical check conducted on a random sample of parachutes that are located in storage.
2. Parachutes in storage will be inspected at least once every **180 calendar days** and at more frequent intervals if prescribed by the local parachute maintenance officer.
3. Inspect the parachute to ensure that it is ready for use.
4. Check to be sure the parachute has the proper identification.
5. Check that no damage or deterioration has incurred.
6. Check the adequacy of the storage facilities, efforts have been taken to control pests and rodents, and protection against unfavorable climatic conditions.



8.4 Water Contamination Guide

If the **TPDS H.U.R.P.** or any of its components have been **immersed in salt-water for more than 24 hours the equipment will be condemned.**

If the Harness / Container or any of its components have been immersed in water, be it fresh or salt-water, the Harness / Container and any of the components immersed shall be rinsed immediately or placed in a double plastic bag with the top securely closed to keep the contents in a wet state until they can be rinsed. **If they cannot be rinsed within 24 hours, they will be condemned.**

! CAUTION !

REMOVE ALL INSTRUMENTS BEFORE RINSING THE H.U.R.P. AND THE COMPONENTS.

FOLLOW THESE INSTRUCTIONS FOR RINSING AFTER WATER IMMERSION.

1. Place the equipment in a large container filled with enough fresh water to completely cover it.
2. Agitate the contents of the container by hand for **5** minutes.
3. Remove the equipment from the container and suspend or elevate it in a shaded area for a period of 5-10 minutes to allow it to drain. **Do NOT Wring** the fabric or suspension lines of a parachute canopy.
4. Repeat the procedures in steps 1, 2 & 3 above, twice, using fresh, clean water for each rinse.

5. After the 3rd rinse, allow the equipment to drain thoroughly. Upon completion of draining, dry the equipment by elevating or suspending the item in a well ventilated room or a heated drying room with the temperature not to exceed 130° Fahrenheit or 55° Celsius. When heat is used it shall not exceed 105° F. or 40° C. The preferred temperature is 90° F. / 32° C. The use of electric circulating fans will reduce the drying time.
6. When dried, perform a technical / rigger type inspection of the equipment. Corroded metal components or corrosion stained fabrics or suspension lines will be either repaired or replaced.
7. Record the immersion and rinsing and any repairs made to the equipment in the parachute log record.



Chapter 9

Limitations

9.1 Hang-Up Rescue Parachute (H.U.R.P.) Limitations

20 year Maximum Life Limitations for TPDS Canopies

Without further limitations, each *H.U.R.P.* has a maximum life limitation of **20 years** from the date of manufacture. This consists of a maximum shelf life of 10 years followed by a maximum service life limitation of 10 years from the date the harness/parachute was placed into service. Further limitations include:

	<u>H.U.R.P.</u>
Shelf life	10 years
Service Life Limitation	10 years
Useful Life Limitation	20 deployments

If at any time the unit is discovered to be **B.E.R.** (beyond economical repair) it will be removed from service and dispositioned by the equipment activity officer.



Chapter 10
Repairs

10.1 Repair Guidelines

Stitching and restitching on parachute items constructed from cloth, canvas, and webbing should be accomplished with thread, which matches the color of the original stitching, when possible.

All straight stitching should be 7-11 stitches per inch, and locked by over stitching the existing stitching by at least 2-inches. Zigzag stitching should extend at least 1/2-inch into undamaged stitching at each end. Re-stitching should be made directly over the original stitching, following the original stitch pattern as closely as possible.

All thread on the canopy should be VT-295E, Type II, Class A, Size E, VY, and sewn with a light or medium duty machine.

Canopy

Type of Repair

Limitations

Re-stitching:	No limit as to length or number.
Patch, single side:	Size Limit: Maximum 50% of panel area. Limit of 3 per panel, 15 per canopy.
Panel replacement:	Limit 9 per canopy
Radial Seams:	Size Limit: 12", no more than 4 per canopy.
Lateral bands:	Size Limit: 2", no more than 10 per canopy
Upper	Size Limit: 4", Limit 1 per canopy
Lower	Size Limit: 36", Limit 4 per canopy

Static Line

A Damaged Static Line should be replaced.

Deployment Bag

Standard military single side patches or replacement of the damaged area is authorized.

Carabineers

Damaged carabineers should be replaced.



10.2 Keeping Track of Repairs and Packing

Data Card

Data cards should not be discarded or replaced. When filled, they should be attached to the new card so that a complete log of packing, repairs, and alterations is recorded. This is the history of the parachute.

Note!

Darning and Ripstop Tape are **NOT** authorized for Certified Canopies as they may weaken the fabric. Single side patches are recommended for even small damaged areas.



NOTES:



Tactical Parachute Delivery Systems, Inc.

6520 Fort King Rd.

Zephyrhills, Florida, 33542

U.S.A.

Phone: + 1. 813. 782. 7482

Fax: + 1. 813. 788. 2799

Email: info@tpdsairborne.com

Website: www.tpdsairborne.com
