

# THE UNITED STATES ARMY JUMPMaster SCHOOL



## STUDENT STUDY GUIDE

APRIL 2025

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# JUMPMaster STUDENT INFORMATION SHEET

**Class #** \_\_\_\_\_

**Roster #** \_\_\_\_\_

1. \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
NAME (LAST, FIRST, MI) RANK SSN MALE / FEMALE
2. USA USMC USAF USN ALLIED ACTIVE DUTY RESERVE NATIONAL GUARD  
MOS YRS IN SERVICE DATE OF RANK
3. \_\_\_\_\_  
DATE OF BIRTH AGE MARRIED: YES / NO
4. \_\_\_\_\_  
PRESENT UNIT / ORGANIZATION
5. \_\_\_\_\_  
UNIT / ORGANIZATION UPON COMPLETION OF COURSE
6. BATTALION COMMANDER: \_\_\_\_\_ PHONE NUMBER: \_\_\_\_\_  
EMAIL ADDRESS: \_\_\_\_\_
7. TDY ADDRESS: \_\_\_\_\_  
BLDG. # ROOM # PHONE #
8. HOME ADDRESS: \_\_\_\_\_  
PHONE #: \_\_\_\_\_
9. NEXT OF KIN: \_\_\_\_\_ RELATIONSHIP: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
PHONE #: \_\_\_\_\_
10. IF TDY, IS NEXT OF KIN WITH YOU? YES / NO
11. ARE YOU PRESENTLY ASSIGNED TO A JUMP SLOT? YES / NO
12. HAVE YOU ATTENDED A JUMPMaster COURSE BEFORE? YES / NO
13. DO YOU HAVE A PROFILE? YES / NO IF YES, WHAT? \_\_\_\_\_
14. HAVE YOU EVER BEEN A HOT OR COLD WEATHER CASUALTY? YES / NO HOT / COLD
15. DID YOU RECEIVE A 90 DAY SLIP? YES / NO
16. HOW MUCH NOTIFICATION DID YOU HAVE PRIOR TO COURSE START? \_\_\_\_\_
17. HOW MANY JUMPS DO YOU HAVE? \_\_\_\_\_
18. TIME ON JUMP STATUS? \_\_\_\_\_

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DEPARTMENT OF THE ARMY  
HEADQUARTERS, HEADQUARTERS COMPANY  
1<sup>ST</sup> BATTALION, 507<sup>TH</sup> PARACHUTE INFANTRY REGIMENT  
6541 BENJAMIN AVENUE  
FORT BENNING, GEORGIA 31905-4405

ATSH-TPP-H-JMSTR

April 2025

MEMORANDUM FOR RECORD

**SUBJECT:** Jumpmaster Course Student Conduct, Graduation Requirements and Grading Criteria.

The purpose of this memorandum is to outline the requirements for a student to successfully complete THE United States Army Jumpmaster Course within the administrative point system and all graded exams.

1. Students attending THE Jumpmaster Course must conduct themselves in an appropriate and disciplined manner, on-duty and off-duty. Students who violate provisions of the Uniform Code of Military Justice (UCMJ) will be quickly disciplined, and may be permanently dropped from training with subsequent assignment as a non-graduate. You will receive a briefing from your NCOIC on your conduct while assigned to the Jumpmaster Course. Any violation of the items in the briefing may result in being dropped from the course.
2. Students must meet the following requirements on all exams in order to graduate from THE US Army Jumpmaster Course:
  - a. **Nomenclature Exam.** Student will be presented with 25 items of equipment chosen on a random basis. Student must score a minimum of 70% to receive a "GO".
  - b. **Actions During Decent Exam (Pre-Jump).** Student will be given 30 minutes in which to recite Actions During Decent in its entirety. Student must score a minimum of 70% to receive a "GO".
  - c. **Written Exam.** Student will be given one hour to answer 100 questions, to include True/False, Multiple Choice, and Fill-in the Blank. Student must score a minimum of 70% to receive a "GO". In addition to the tested material, students may lose 16 points on the exam for not following the instructions given during the test brief.
  - d. **JMPI Exam.** Student will have five minutes in which to JMPI three jumpers, one wearing combat equipment, two hollywood jumpers. Using proper sequence, and proper nomenclature while identifying all deficiencies. Student must score a minimum of 70% to receive a "GO".
  - e. **Practical Work inside the Aircraft (PWAC) Exam.** Students will be graded on hand and arm signals, and door check procedures, in an Air Force fixed wing aircraft while in flight. Student must score a minimum of 70% to receive a "GO". In addition to the tested material, students may lose points on the exam for improper rigging of equipment, or failure to follow instructions.
  - f. **Safety Duties Exam.** Students will be graded on their ability to conduct actions of a Safety while in flight. This exam begins with the inspection of the aircraft and ends when the Safety retrieves deployment bags back inside the aircraft. Students must score a minimum of 70% to receive a "GO".
3. Students will be given one retest for each exam (Nomenclature, Actions During Decent, Written, PWAC, Safety Duties) where they fail to meet the 70% standard. Students must score a minimum of 70% on any retest in order to receive a "GO." Passing scores on a retest will count towards the student's grade point average as 70%. Students that fail to achieve the 70% standard on a retest will be dropped from the course.
4. Students who maintain an 80% or higher grade on the Nomenclature, SAT, and the Written Examination will be considered "Re-Entry Qualified." Re-Entry Qualified students will receive two additional attempts

to pass the JMPI test. Students that fail to maintain re-entry status will still receive three attempts on the JMPI test.

5. The use of administrative points will assist the cadre in enforcing standards throughout the course.

Students will begin the course with 100 administrative points and may lose re-entry status if accrued administrative points drop below 80%. Students may be assessed administrative points for any of the following reasons:

- |                                                         |                      |
|---------------------------------------------------------|----------------------|
| a. Reporting Late to informal Block Instruction         | -16 Each Time        |
| b. Sleeping in Class                                    | -16 Each Time        |
| c. Failure to Follow Instructions                       | -16 Each Time        |
| d. Improper Rigging Procedures                          | -5 Each Time         |
| e. Improper Donning Procedures                          | -5 Each Time         |
| f. Activation of Reserve/Main (1 <sup>ST</sup> Offense) | Loss of Re-entry     |
| g. Activation of Reserve/Main (2 <sup>ND</sup> Offense) | Released from Course |
| h. Rigging Deficiencies During PWAC (MINOR)             | -5 Each Time         |
| i. Rigging Deficiencies During PWAC (MAJOR)             | -21 Each Time        |
| j. Create an Unsafe Act (Drop/Throw Static Line)        | -35 Each Time        |
| k. Serious Offense (DUI, Arrest, Confinement)           | Released from Course |
| l. Disrespect Towards an Instructor                     | Released from Course |
| m. Miss Formal Block of Instruction (Doors locked)      | Released from Course |
| n. Miss Two Hours of Training                           | Released from Course |

6. The point of contact for this memorandum is the undersigned, available at (706) 545-5412.

//Original Signed//  
 WILLIAM P. MCCLELLAN  
 SFC, USA BRANCH  
 CHIEF

By signing this memorandum I acknowledge that I understand the course graduation requirements, testing, and administrative grading systems. I acknowledge that if I fail to meet the standard I will be dropped from the course.

## JUMPMASER SCHOOL EXAMINATIONS TASK CONDITIONS AND STANDARD

### Nomenclature Examination:

Task – Correctly Identify 18 of 25 items of equipment using proper nomenclature.

Conditions – In a classroom environment, given an answer sheet, pen, and a Primary Instructor.

Standard – Each Student must be able to properly identify 18 of 25 items of equipment, using proper nomenclature with correct spelling, to obtain a minimum score of 70 percent.

### Pre-Jump Examination:

Task – Recite Pre-Jump.

Conditions – In a semi-private environment, given a GTA card, and an Instructor in a one on one situation.

Standard – In 30 minutes or less, each Student must be able to give Pre-Jump Training to an Instructor in its entirety and obtain a minimum score of 70 percent.

### Written examination:

Task – Correctly answer 70 out of 100 questions on a written examination.

Conditions – In a classroom environment, given an answer sheet with scratch paper, a pen, a test booklet, and 60 minutes to complete the examination.

Standard – Each Student must be able to correctly answer 70 out of 100 questions pertaining to information that is covered in the Student Study Guide to obtain a minimum score of 70 percent.

### Practical Work in the Aircraft (PWAC):

Task – Conduct practical work in the aircraft.

Conditions – In a controlled environment, given an Operations Briefing, Sustained Airborne Training, and a High Performance Fixed Wing Aircraft.

Standard – Each Student must perform actions of a Primary or Assistant Jumpmaster while in flight (Hand and Arm Signals, Door Safety Check) and obtain minimum score of 70 percent.

### Jumpmaster Personnel Inspection (JMPI examination):

Task – Conduct JMPI on three Jumpers in 5 Minutes or Less.

Conditions – In a controlled environment, given three Jumpers wearing the following equipment:

- o T-11 Main Parachute Rigged with a Five Foot Universal Static Line Extension, T-11 Single Pin Reserve Parachute, UPRB, Helmet, MAWC, and MOLLE 4000 rigged with a IHSPR and a HPTLL.
- o T-11 Main Parachute, T-11 Single Pin Reserve Parachute, UPRB, and a helmet.
- o T-11 Main Parachute, T-11 Single Pin Reserve Parachute, UPRB, and a helmet.

Standard- Each Student must inspect all three Jumpers utilizing the proper sequence, identifying and calling out any deficiencies they may find or create, using proper nomenclature, within five minutes, and without activating a main or reserve parachute.

- o Student can not miss 1 Major-Total.
- o Student can not miss more than 2 Minors-Total.

### Safety Duties Examination

Task – Conduct Duties of a Safety while in flight.

Conditions – In a controlled environment, given an aircraft inspection checklist, a PJ/AJ, and Jumpers prepared to exit.

Standard – Each Student must perform the actions of a Safety (inspection of the aircraft/duties in flight) and obtain a minimum score of 70%.

# REFERENCES COMMONLY USED THROUGHOUT THE U.S. ARMY JUMPMASER SCHOOL

- DAFMAN 11-231 – Computed Air Release Point Procedures
- DAFMAN 13-217 – Drop Zone and Landing Zone Operations
- FM 3-21.38 – Pathfinder Operations
- FM 3-99 – Airborne and Air Assault Operations
- TC 3-21.220 – Static Line Parachuting Techniques and Training
- TM 10-1670-332-23&P – Technical Manual Field Maintenance Manual Including Repair Parts And Special Tools List For Advanced Emergency Bailout Parachute (AEBP) System
- TM 10-1670-326-23&P – Technical Manual Field Maintenance Manual Including Repair Parts And Special Tools List For T-11 Personnel Parachute System
- TM 4-48.03 – Airdrop of Supplies and Equipment: Rigging Containers
- AFMAN 1C-130-9 – Technical Manual Cargo Loading Manual All USAF Series C-130 Aircraft
- AFMAN 1C-130J-9 – Technical Manual Cargo Loading Manual All USAF Series C-130J Aircraft
- AFMAN 1C-17A-1-4 – Supplemental Flight Manual Airdrop Mission Crew Manual USAF Series C-17A Aircraft

# **T-11 PERSONNEL PARACHUTES**

## **TC 3-21.220 Chapter 2**

### **T-11 MAIN PARACHUTE**

The T-11 series parachute is used during static line airborne operations. The T-11 series is a non-steerable canopy.

WEIGHT ○ Approx. 38 lbs.

DIAMETER ○ Nominal: 28.6 feet

○ Modified Cruciform Planform in design

#### **SAFE DROP SPEEDS**

- 150 knots Maximum
- 50 knots Minimum

#### **AVG. DEPLOYMENT TIME**

- 6.5 seconds

#### **RATE OF DESCENT**

- Approximately 18.5 feet per second with a suspended weight of 400 lbs.

The main parachute consists of ten major components:

- 1) \*Universal static line modified
- 2) Deployment bag
- 3) Drogue parachute
- 4) Bridle assembly
- 5) Deployment sleeve
- 6) Canopy assembly
- 7) Slider
- 8) \*Riser assembly
- 9) \*Harness assembly
- 10) \*Pack tray

Asterisk (\*) denotes only items seen or touched while performing JMPL on a properly rigged jumper.

### **UNIVERSAL STATIC LINE MODIFIED**

#### **UNIVERSAL STATIC LINE SNAP HOOK**

The universal static line snap hook is the universal static line modified's point of attachment to the aircraft's anchor line cable. It consists of a dual locking spring opening gate with a Rivet pin located approximately center mass.

#### **DIMENSIONS**

- Approx. 6 inches in length and approx. 2 inches wide

#### **MATERIAL**

- Type 4140 steel

#### **RATED CAPACITY**

- 1,750 lbs.

#### **UNIVERSAL STATIC LINE MODIFIED**

#### **LENGTH**

- Approx. 15 feet

#### **MATERIAL**

- 3/4 inch, tube edge, type 6.6 nylon webbing, yellow in color

#### **TENSILE STRENGTH**

- 4,000 lbs.

**MAIN CURVED PIN**

The main curved pin is located approximately 12 feet from the universal static line snap hook.

**LENGTH**

- Approx. 1.3 inches

**MATERIAL**

- Stainless steel

**MAIN CURVED PIN SECURING TIE**

The main curved pin securing tie secures the main curved pin in place, and prevents premature activation of the main parachute.

**LENGTH**

- A sufficient amount

**MATERIAL**

- 8/4 Orange cotton thread

**TENSILE STRENGTH**

- Approx. 15lbs.

**MAIN CURVED PIN ATTACHING LOOP**

The main curved pin attaching loop secures the main curved pin to the universal static line modified.

**MATERIAL**

- 3/8 inch wide Type I preshrunk nylon webbing. It may be green or white in color.

**TENSILE STRENGTH**

- 200 lbs.

**MAIN CURVED PIN COVER**

The main curved pin cover protects the main curved pin and main curved pin attaching loop.

**LENGTH**

- Approx. 6 inches

**MATERIAL**

- Cotton duck material

**STATIC LINE SLEEVE**

The static line sleeve prevents nylon-to-nylon contact between the universal static line modified and the pack tray.

**LENGTH**

- Approx. 27 inches

**MATERIAL**

- Cotton duck material

**RISER ASSEMBLY**

When attached to the canopy, the riser assemblies provide four individual risers.

**RISERS****LENGTH**

- Approx. 28 inches

**MATERIAL**

- Type VII nylon webbing

**TENSILE STRENGTH**

- 5500 lbs.

**SLIP ASSIST LOOP**

The slip assist loops are formed into the risers and sewn with reinforced stitching. They provide the jumper a means of securing a hand hold when executing slips.

**MATERIAL**

- Type VII nylon webbing

**SLIP ASSIST TAB**

There are 3 slip assist tabs sewn to the front of each riser. The slip assist tabs aid the jumper in executing slips.

**MATERIAL**

- Type XVII nylon webbing

**ARMY PARACHUTE LOG RECORD STOW POCKET**

The Army Parachute Log Record Stow pocket is sewn to the rear risers. It is utilized to store the DA Form 3912, Army Parachute Log Record. There must be an Army Parachute Log Record in one or the other riser assemblies.

**MALE FITTING CANOPY RELEASE ASSEMBLY****MATERIAL**

- Cadmium plated forged steel alloy

**RATED CAPACITY**

- 2500 lbs.

**HARNESS ASSEMBLY**

The harness assembly consists of a right and left upper main lift web assemblies and the lower saddle assembly.

**MATERIAL**

- Primarily constructed of Type VII nylon webbing

**TENSILE STRENGTH**

- 5500 lbs.

The harness assembly consists of the following items:

- 1) Canopy release assembly
- 2) "D" Rings
- 3) Main lift web
- 4) Tuck pocket
- 5) Chest strap
- 6) Chest strap friction adapter
- 7) Webbing retainer
- 8) Equipment ring
- 9) Ejector snap
- 10) "L" shaped ejector snap pad
- 11) Triangle link
- 12) Saddle
- 13) Leg straps
- 14) Quick fit "V" ring
- 15) Diagonal back strap
- 16) Sizing channels
- 17) Diagonal back strap pad
- 18) Back strap adjuster
- 19) Horizontal back strap

There are nine points of adjustment on the harness assembly. They are:

1. Chest strap
2. Main lift web (2)
3. Leg strap (2)
4. Sizing channel (2)
5. Horizontal back strap (2)

#### **FEMALE FITTING CANOPY RELEASE ASSEMBLY**

The heel of the male fitting canopy release assembly sits in the groove of the female fitting canopy release assembly.

##### **MATERIAL**

- Cadmium plated forged steel alloy

##### **RATED CAPACITY**

- 2500 lbs.

#### **LATCH**

The latch is utilized to secure the male fitting canopy release assembly to the female fitting canopy release assembly.

#### **CABLE LOOP**

The cable loop is approximately 2 inches in diameter. When pulled, the cable loop disengages the latch, which separates the male fitting canopy release assembly from the female fitting canopy release assembly. This allows the jumper to recover from the drag.

##### **MATERIAL**

- Flexible stainless steel aircraft cable

##### **RATED CAPACITY**

- 920 lbs.

#### **SAFETY CLIP**

The safety clip secures the cable loop inside the canopy release assembly and prevents foreign material from entering the canopy release assembly.

#### **CANOPY RELEASE ASSEMBLY**

When completely assembled, the rated capacity is 5000 lbs.

#### **“D” RINGS**

The “D” rings serve as points of attachment for the reserve parachute.

##### **MATERIAL**

- Cadmium plated forged steel alloy

##### **RATED CAPACITY**

- 5000 lbs.

#### **MAIN LIFT WEB**

The main lift web is adjustable and serves as 2 points of adjustment on the harness. The main lift web consists of the main lift web tuck tab assembly, the main lift web adjustment strap and the main lift web adjuster.

##### **LENGTH**

- Approximately 25 inches

##### **MATERIAL**

- Type VII nylon webbing and Type VIII nylon webbing

##### **TENSILE STRENGTH**

- 6000 lbs.

#### **MAIN LIFT WEB TUCK TAB ASSEMBLY**

The main lift web tuck tab assembly consists of a snap fastener and tuck tab.

**MAIN LIFT WEB ADJUSTMENT STRAP****MATERIAL**

- 1 ply of Type VII nylon webbing and 1 ply Type VIII nylon webbing

**MAIN LIFT WEB ADJUSTER****MATERIAL**

- Cadmium plated forged steel alloy

**RATED CAPACITY**

- 2500 lbs.

**TUCK POCKET**

The main lift web is adjusted to 2 of the 3 sizes by inserting the tuck tab into the tuck pocket.

**CHEST STRAP**

The chest strap is sewn to the left main lift web. It serves as another point of adjustment on the parachute harness. There is a tabbed portion formed at the end of the chest strap.

**LENGTH**

- Approx. 23 inches

**MATERIAL**

- Type VII nylon webbing

**TENSILE STRENGTH**

- 5500 lbs.

**CHEST STRAP FRICTION ADAPTER**

The chest strap is secured to the chest strap friction adapter located on the right main lift web.

**LENGTH**

- Approx. 2 inches

**MATERIAL**

- Cadmium plated forged steel alloy

**RATED CAPACITY**

- 500 lbs.

**WEBBING RETAINER**

There are a total of 6 webbing retainers on the parachute harness. They can be replaced by a retainer band if they are not present or serviceable.

**MATERIAL**

- Type I elastic webbing

**EQUIPMENT RING**

The equipment rings are located just below the chest strap on the main lift web. They are used to secure items of combat equipment.

**MATERIAL**

- Cadmium plated forged steel alloy

**RATED CAPACITY**

- 2500 lbs.

**EJECTOR SNAP**

The ejector snaps for the leg straps are located on the main lift web below the main lift web adjusters.

**MATERIAL**

- Cadmium plated forged steel alloy

**RATED CAPACITY**

- 2500 lbs.

The ejector snap consists of three sub components.

They are:

- 1) ACTIVATING LEVER
- 2) BALL DETENT
- 3) OPENING GATE

#### **“L” SHAPED EJECTOR SNAP PAD**

Located just below each ejector snap is the “L” shaped ejector snap pad. This is an added comfort feature and does not have to be present for the parachute harness to be serviceable.

#### **MATERIAL**

- Nylon duck cloth filled with ¼ inch thick cellular urethane foam

#### **TRIANGLE LINK**

The triangle links are located just below the leg strap ejector snaps. They serve as points of attachment for the ejector snap on the hook pile tape lower line.

#### **MATERIAL**

- Cadmium plated forged steel alloy

#### **RATED CAPACITY**

- 500 lbs.

#### **SADDLE**

Continuation of the main lift web and routed under the jumper's buttocks.

#### **MATERIAL**

- Type VII nylon webbing

#### **TENSILE STRENGTH**

- 5500 lbs.

#### **LEG STRAPS**

The leg straps are sewn midway through the saddle. They serve as 2 more points of adjustment on the parachute harness.

#### **LENGTH**

- Approx. 28 inches

#### **MATERIAL**

- Type VII nylon webbing

#### **TENSILE STRENGTH**

- 5500 lbs.

#### **QUICK FIT V-RING**

One quick fit V-ring is located at the end of each leg strap. They are attached to the appropriate ejector snap.

#### **MATERIAL**

- Cadmium plated forged steel alloy

#### **RATED CAPACITY**

- 2500 lbs.

#### **DIAGONAL BACK STRAP**

The diagonal back straps form an “X” across the jumpers back. They can be sized in five sizes and serve as 2 points of adjustment on the parachute harness.

#### **LENGTH**

- Approx. 20 inches

#### **MATERIAL**

- Two plies of Type VII nylon webbing

#### **TENSILE STRENGTH**

- 5500 lbs.

## **SIZING CHANNELS**

The sizing channels are numbered 1-5. There is no set size for any given jumper, however, when properly sized, the canopy release assemblies should be located in the hollows of the jumper's shoulders, just below the collar bones.

## **DIAGONAL BACK STRAP PAD**

The diagonal back strap pad is an added comfort feature and does not have to be present for the parachute harness to be serviceable.

### **DIMENSIONS**

- Approx. 12 ¼ inches at the longest point and approx. 3 ½ inches at the widest point.

### **MATERIAL**

- Nylon duck cloth filled with ¼ inch thick cellular urethane foam

## **BACK STRAP ADJUSTERS**

The back strap adjusters are located at the end of each diagonal back strap.

### **MATERIAL**

- Cadmium plated forged steel alloy

### **RATED CAPACITY**

- 2500 lbs.

## **HORIZONTAL BACK STRAP**

The horizontal back strap is routed through the lower portion of the back strap adjuster, through the main lift web, across the small of the jumpers back, through the opposite main lift web and into the opposite back strap adjuster. It serves as 2 more points of adjustment on the parachute harness.

### **LENGTH**

- Approx. 105 inches

### **MATERIAL**

- Type VII nylon webbing

### **TENSILE STRENGTH**

- 5500 lbs.

## **PACK TRAY ASSEMBLY**

### **DIMENSIONS**

- Approx. 20 inches long by 16 inches wide by 14 inches deep

### **MATERIAL**

- Nylon duck cloth weighing approximately 7.25 ounces per square yard.

The pack tray assembly consists of the following items:

- 1) Diagonal back strap retainer
- 2) Diagonal back strap keeper
- 3) Directional snap fastener
- 4) Horizontal back strap retainer
- 5) Horizontal back strap keeper
- 6) Waistband
- 7) Waistband adjuster panel
- 8) Metal adjuster
- 9) Pack closing flaps
- 10) Grommets
- 11) Main closing loop

**DIAGONAL BACK STRAP RETAINER**

The diagonal back strap retainers are sewn to the upper portion of the pack tray.

**LENGTH**

- Approx. 5 ½ inches

**MATERIAL**

- Type VIII nylon webbing

**TENSILE STRENGTH**

- 2500 lbs.

**DIAGONAL BACK STRAP KEEPER**

The diagonal back strap keepers are sewn to the upper portion of the pack tray.

**LENGTH**

- Approx. 13 inches

**MATERIAL**

- Type XVII nylon webbing

**TENSILE STRENGTH**

- 2500 lbs.

**DIRECTIONAL SNAP FASTENER**

The diagonal back strap retainers are routed through the appropriate sizing channel on the diagonal back strap then under and back over the diagonal back strap keepers, and are secured back to themselves by the directional snap fasteners.

**HORIZONTAL BACK STRAP RETAINERS**

The horizontal back strap retainers are sewn to the lower portion of the pack tray.

**LENGTH**

- Approx. 5 ½ inches

**MATERIAL**

- Type VIII nylon webbing

**TENSILE STRENGTH**

- 2500 lbs.

**HORIZONTAL BACK STRAP KEEPER**

The horizontal back strap keeper is sewn to the lower portion of the pack tray.

**LENGTH**

- Approx. 12 inches

**MATERIAL**

- Type XVII nylon webbing

**TENSILE STRENGTH**

- 2500 lbs.

**DIRECTIONAL SNAP FASTENER**

The horizontal back strap is secured to the pack tray by routing the horizontal back strap retainers over the horizontal back strap, then under and back over the horizontal back strap keepers and secured back to themselves by the directional snap fasteners.

**WAISTBAND**

The waist band is sewn to the bottom right corner of the pack tray.

**LENGTH**

- Approx. 43 inches

**MATERIAL**

- Type VIII nylon webbing

**TENSILE STRENGTH**

- 4000 lbs.

**WAISTBAND ADJUSTER PANEL**

The waistband adjuster panel is sewn to the bottom left corner of the pack tray. It consists of a nylon portion and the metal adjuster.

**NYLON PORTION****LENGTH**

- Approximately 7 inches

**MATERIAL**

- Type VII nylon webbing

**TENSILE STRENGTH**

- 6000 lbs.

**METAL ADJUSTER (METALLIC PORTION)****LENGTH**

- Approximately 2 ¼ inches long by 2 inches wide

**MATERIAL**

- Cadmium plated forged steel alloy

**RATED CAPACITY**

- 1000 lbs.

**PACK CLOSING FLAPS**

There are four pack closing flaps. There is a top, bottom, left and right pack closing flap.

**MATERIAL**

- Nylon duck cloth

**WEIGHT**

- Approximately 7.25 ounces per square yard

**GROMMETS**

Attached to all four pack closing flaps is a grommet. The grommets cannot be bent, cracked or corroded to be serviceable.

**MATERIAL**

- Stainless Steel

**MAIN CLOSING LOOP**

Attached to the left pack closing flap.

**MATERIAL**

- White Spectra cord

**TENSILE STRENGTH**

- 700 lbs.

**STATIC LINE SLACK RETAINER LOOP**

The static line slack retainer loop is sewn to the top pack closing flap. The Static Line Slack Retainer Loop is approximately 2.75" in length.

**MATERIAL**

- 9/16 of an inch wide Type I nylon webbing

**TENSILE STRENGTH**

- 500 lbs.

**STATIC LINE SLACK RETAINER BAND**

The static line slack retainer band is attached to the static line slack retainer loop. The T-11 main parachute **MUST HAVE 2** serviceable static line slack retainer bands attached to the static line slack retainer loop in order for the pack tray to be serviceable.

**MATERIAL**

- 2 inch heavy duty retainer bands

**MAIN CURVED PIN PROTECTOR FLAP**

The main curved pin protector flap is present to protect the main curved pin from damage and premature activation. The main curved pin protector flap is attached to the top pack closing flap.

**TUCK FLAP**

The tuck flap is the storage location for the main curved pin protector flap.

**OUTER STATIC LINE STOW BAR**

The outer static line stow bars are sewn to the left and right pack closing flaps.

**LENGTH**

- Approximately 4 inches

**MATERIAL**

- 9/16 of an inch wide Type I nylon webbing

**TENSILE STRENGTH**

- 500 lbs.

**INNER STATIC LINE STOW BAR**

The inner static line stow bars are sewn to the left and right pack closing flaps.

**LENGTH**

- Approximately 5 ½ inches

**MATERIAL**

- 9/16 of an inch wide Type I nylon webbing

**TENSILE STRENGTH**

- 500 lbs.

**T-11 RESERVE SINGLE PIN PARACHUTE**

The T-11 reserve single pin parachute is a troop chest mounted, ripcord center pull, emergency type parachute that is activated by the jumper, with either hand, in the event of a malfunction of the main parachute. Approximate rate of descent is 26 feet per second with a suspended weight of 382 pounds.

**WEIGHT**

- Approximately 14.8 lbs.

**DIAMETER**

- Nominal: Approximately 29 feet
- Aero conical in design

The T-11 reserve single pin parachute consists of eight major components:

- 1) \*Ripcord assembly
- 2) \*Reserve Closing Loop
- 3) \*Pack Opening Spring Band
- 4) Ejector Spring Assembly
- 5) Reserve Extractor
- 6) Reserve Canopy
- 7) \*Reserve Risers
- 8) \*Reserve Pack Tray

Asterisk (\*) denotes only items seen or touched while performing JMPI on a properly rigged jumper.

## **RESERVE RISER ASSEMBLY**

### **RESERVE RISER**

#### **MATERIAL**

- Type VIII nylon webbing

#### **LENGTH**

- Approximately 48 inches

#### **TENSILE STRENGTH**

- 3600 lbs.

### **CONNECTOR SNAP**

#### **MATERIAL**

- Cadmium plated forged steel alloy

#### **RATED CAPACITY**

- 4200 lbs.

### **CONNECTOR SNAP RETAINING TIE**

Each connector snap is secured to the reserve pack tray by a connector snap retaining tie.

#### **LENGTH**

- Approximately 24 inches

#### **MATERIAL**

- One turn of Lacing and Tying tape

#### **TENSILE STRENGTH**

- 50 lbs.

## **RESERVE PACK TRAY ASSEMBLY**

### **RESERVE PACK TRAY**

#### **MATERIAL**

- Nylon duck cloth

#### **WEIGHT**

- Approximately 7.25 ounces per square yard

### **PACK CLOSING FLAP**

The reserve pack tray consists of a top, bottom, left and right pack closing flap. All pack closing flaps have one grommet and are labeled 1,2,3,4 denoting the sequential order in which they are closed during the packing process.

### **TUCK POCKET**

One tuck pocket is sewn to each of the four pack closing flaps. The tuck pockets are used to secure the rip cord assembly to the reserve parachute.

**CARRYING HANDLE**

The carrying handle aids the jumper in carrying the reserve parachute around the departure air field.

**LENGTH**

- Approximately 19 ¼ inches

**MATERIAL**

- Type VIII nylon webbing

**TENSILE STRENGTH**

- 4000 lbs.

**SPREADER BAR TIE**

The spreader bar ties are routed around the internal spreader bar, through both grommets, and secured by a surgeons knot with overhand knots with its ends trimmed to 1 inch.

**LENGTH**

- Approximately 10 inches

**MATERIAL**

- Guttred red Type III nylon cord

**ARMY PARACHUTE LOG RECORD STOW POCKET**

The Army Parachute Log Record stow pocket is utilized to store the DA Form 3912, Army Parachute Log Record. There must be an Army Parachute Log Record present in the reserve pack tray for the reserve parachute to be serviceable.

**WAISTBAND RETAINER**

The waistband retainers are sewn to the rear of the reserve pack tray. The waistband is routed behind both waistband retainers, keeping the reserve snug to the jumper's body.

**LENGTH**

- Approximately 4 ½ inches

**MATERIAL**

- Type VIII nylon webbing

**TENSILE STRENGTH**

- 4000 lbs.

**RESERVE CLOSING LOOP**

The Reserve Closing Loop is a modified MC-6 closing loop. It is a prefabricated loop attached by reinforced stitching to a tabbed portion of nylon webbing.

**LENGTH**

- Approximately 2 ½" long

**MATERIAL**

- White Spectra cord

**TENSILE STRENGTH**

- 700 lbs.

**PACK OPENING SPRING BAND**

The pack opening spring band is an elastic band that contains 5 stainless steel spring formed wires with a tabbed portion at each end, 2 x hooks, and 2 x dressmaker eyes, that aides the reserve extractor in deployment by pulling the left and right pack closing flaps away during the deployment sequence.

**RIPCORDER ASSEMBLY**

The ripcord assembly requires more than 15.8 lbs. of pull in order to activate the reserve parachute. The ripcord assembly includes the following:

- 1) Tuck tab
- 2) Ripcord handle

**CARRYING HANDLE**

3) Curved Pin Lanyard Attaching Loop

4) Curved pin lanyard

5) Curved pin

6) Plastic Window

**TUCK TABS**

The rip cord assembly has a top, bottom and 2 side tuck tabs that are specified by name.

**RIPCORD HANDLE**

The ripcord handle is red in color and secured to the ripcord assembly by 2 box "X" stitches.

**CURVED PIN LANYARD ATTACHING LOOP**

The main curved pin attaching loop secures the curved pin lanyard to the ripcord assembly.

**MATERIAL**

- o 3/8-inch-wide Type I preshrunk nylon webbing. It is grey in color.

**TENSILE STRENGTH**

- o 200 lbs.

**CURVED PIN LANYARD**

The curved pin lanyard is attached to the curved pin and curved pin lanyard attaching loop on the back of the ripcord assembly.

**MATERIAL**

- o Dacron cord. It is white in color.

**TENSILE STRENGTH**

- o 600 lbs.

**CURVED PIN**

There is a curved pin is attached to the end of the curved pin lanyard and cannot be bent, cracked or corroded to be serviceable.

**MATERIAL**

- o Stainless steel

**PLASTIC WINDOW**

The Plastic Window is a viewing window for the internal closing and activation components of the Reserve Parachute.

**MATERIAL**

- o 15 Millimeter Clear Plastic Vinyl

The following information covers the deployment sequence of the T-11 Main Canopy with a jumper exiting an aircraft while in flight, traveling at approximately 130 knots.

#### DEPLOYMENT SEQUENCE:

**“GO”:** The jumper will enter their first point of performance (proper exit, check body position, and count), and remain there until they reach the end of their “6,000” count.

- Jumper’s body weight deploys the Universal Static Line Modified (USLM) down to the main curved pin and main closing loop.

**“1,000”:** Initial deployment

- The main curved pin will be removed from the main closing loop and the deployment bag, with the canopy assembly inside, will be pulled free from the main pack tray.
- The risers will be pulled to their full length by the deployment bag leaving the main pack tray.

**“2,000”:** Suspension line deployment

- The connector link ties break and the suspension lines will be pulled free from the suspension line stow loops.
- The last two stows of suspension lines will be pulled free from the suspension line locking stow loops.
- This allows the deployment bag to open and the deployment sleeve, with the canopy inside, and the drogue parachute to be removed from the deployment bag.

**“3,000”:** Initial inflation begins

- The drogue parachute inflates and begins to remove the deployment sleeve from the canopy assembly.
- The skirt of the canopy catches air and assists the drogue parachute in removing the deployment sleeve.

**“4,000”:** Inflation continues

- The canopy will inflate from the apex (top) to the skirt (bottom).

**“5,000”:** Full slider tension

- The slider will be fully extended by the tension of the suspension lines.

**“6,000”:** Slider descent

- The slider will begin to move down the suspension lines until it rests approximately six feet above the jumpers head.
- This completes the opening sequence for the T-11 main parachute.



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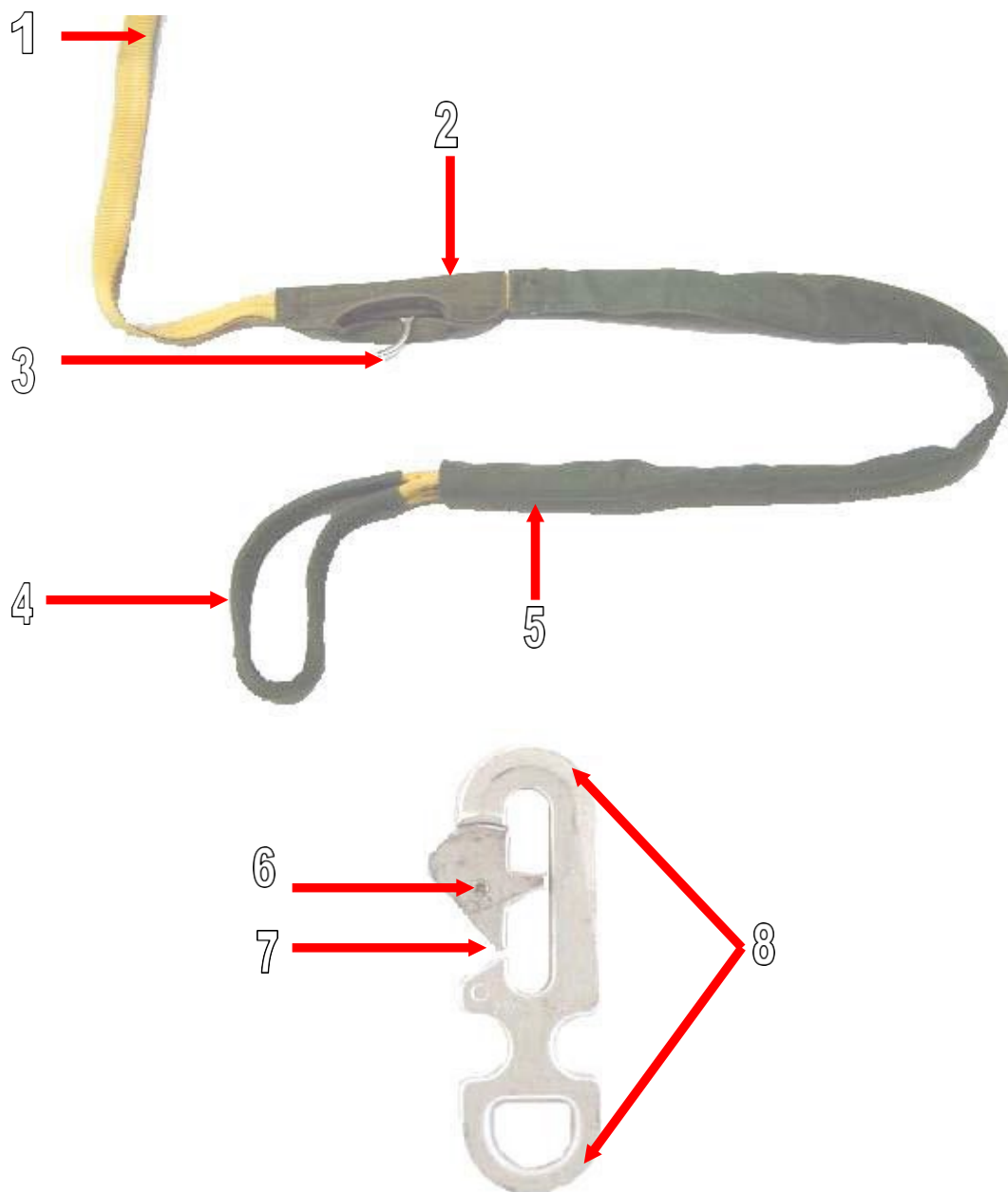
**NOMENCLATURE FOR T-11 ATPS**

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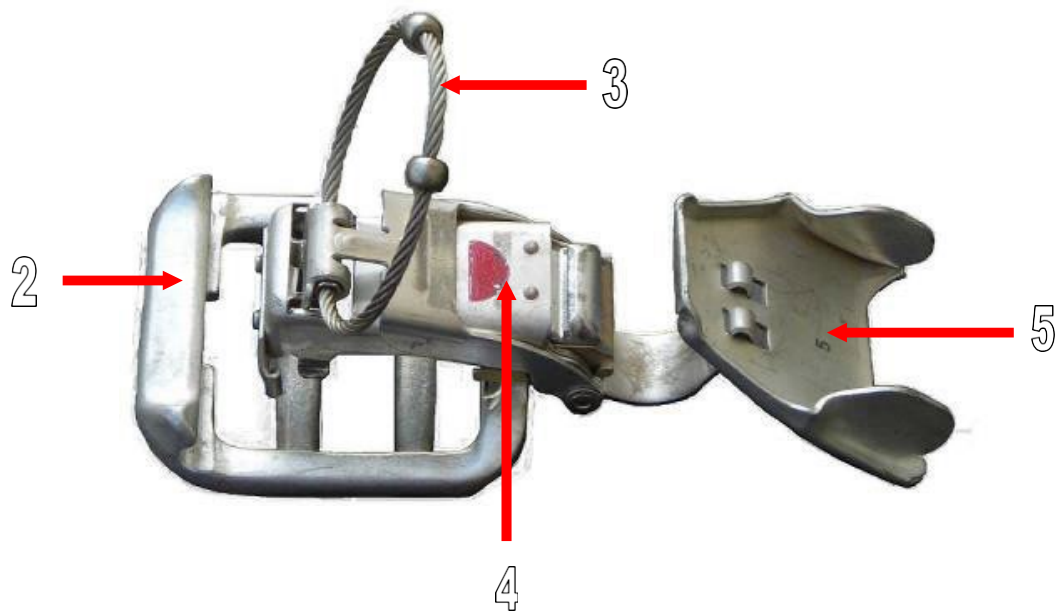
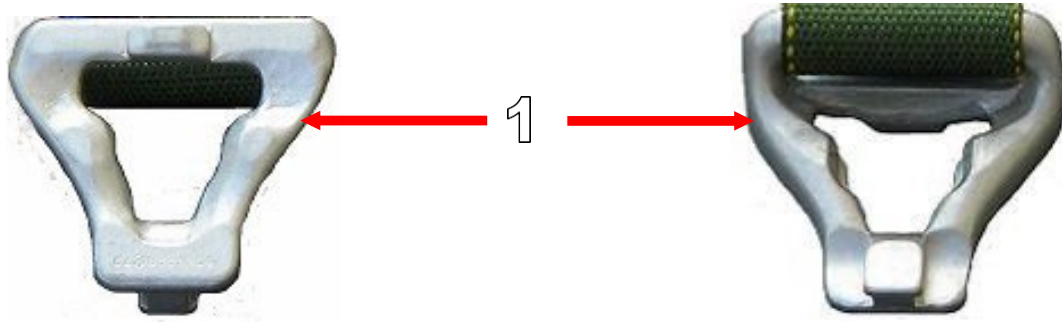
1. 5 Foot Universal Static Line Extension
2. Cotton Buffer



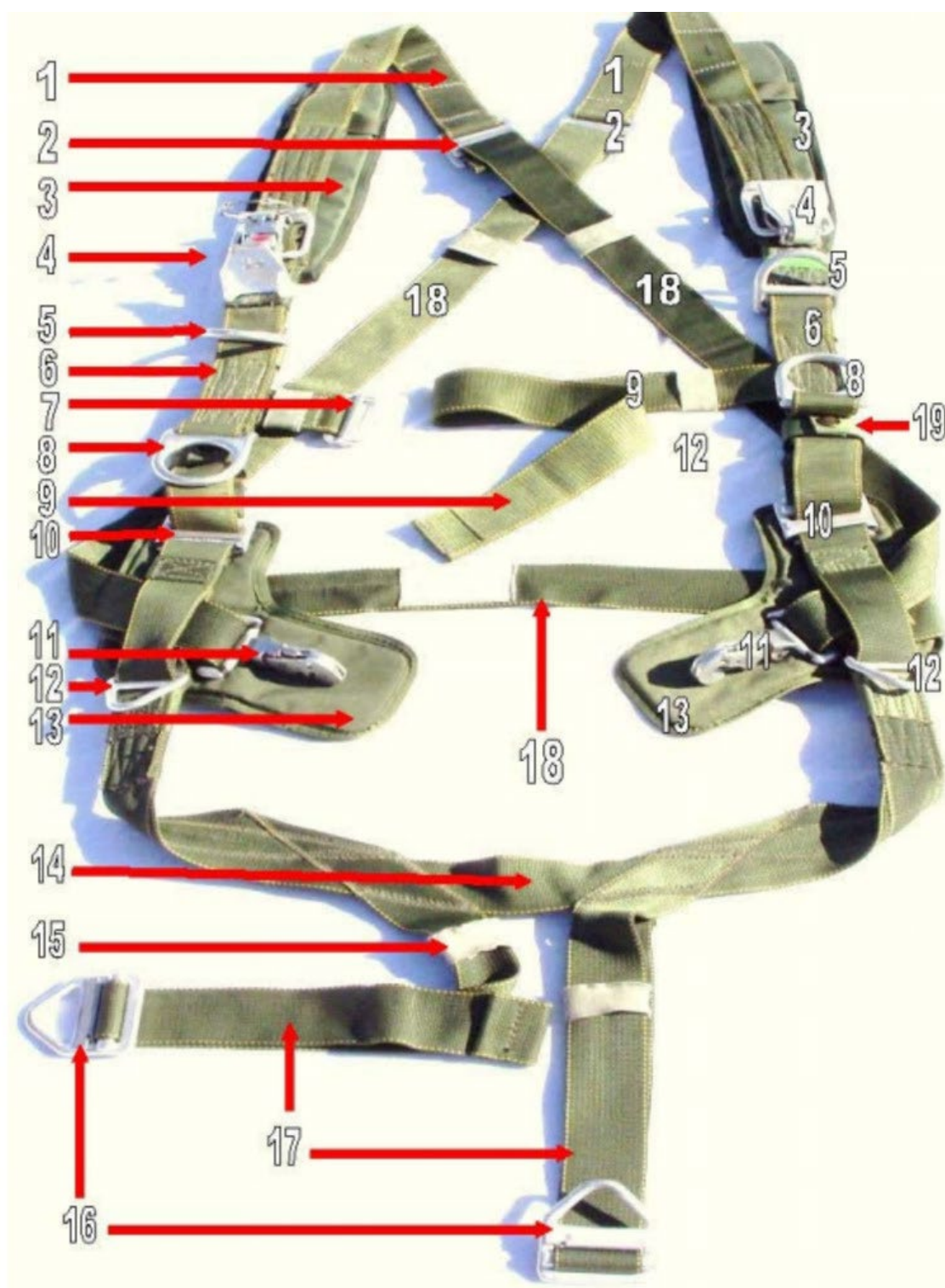
1. Universal Static Line Modified
2. Main Curved Pin Cover
3. Main Curved Pin
4. Cotton Buffer
5. Static Line Sleeve
6. Rivet Pin
7. Spring Opening Gate
8. Universal Static Line Snap Hook



1. Male Fitting Canopy Release Assembly
2. Female Fitting Canopy Release Assembly
3. Cable Loop
4. Latch
5. Safety Clip

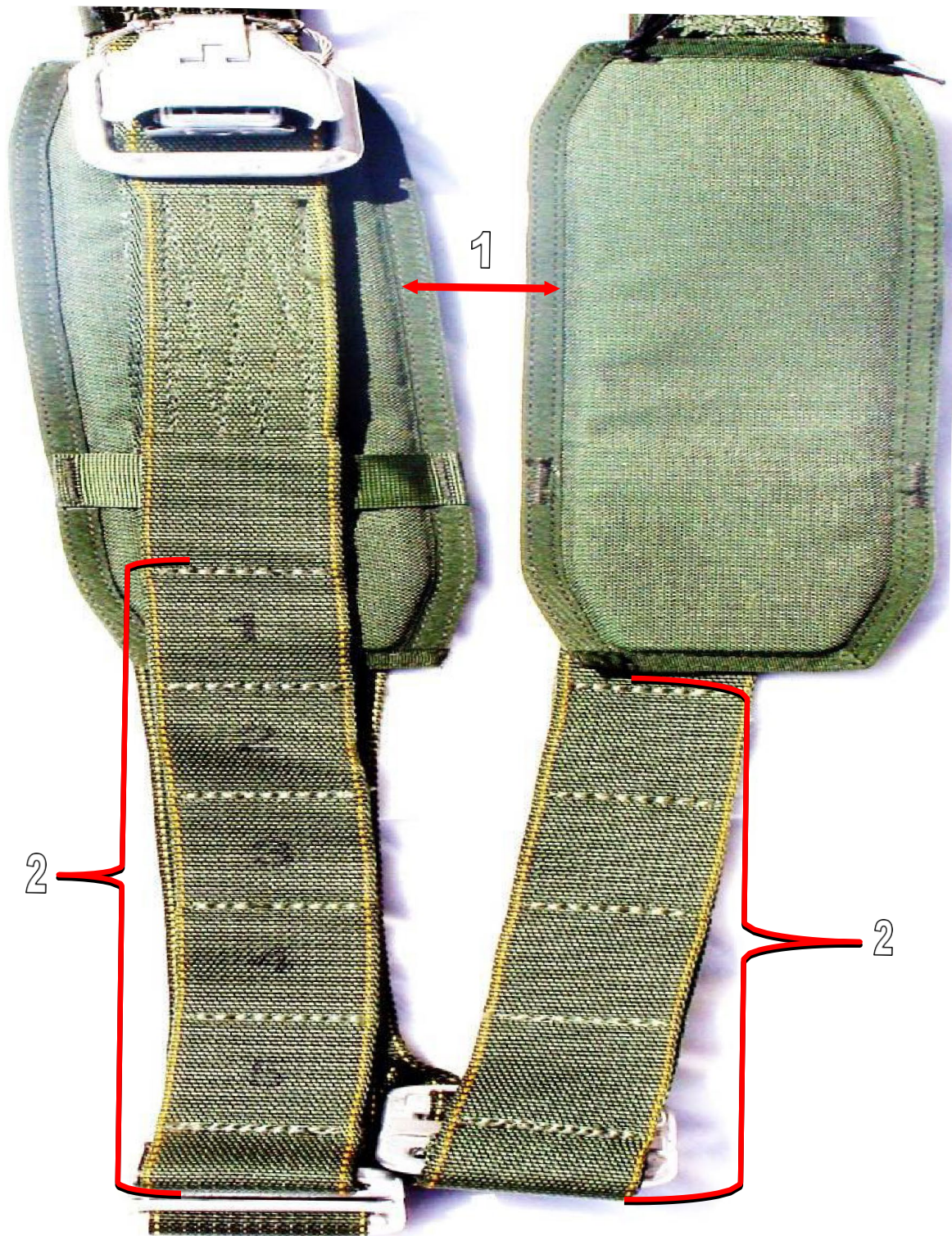


1. Diagonal Backstrap
2. Backstrap Adjuster
3. Diagonal Backstrap Pad
4. Canopy Release Assembly
5. D-Ring
6. Main Lift Web
7. Chest Strap Friction Adapter
8. Equipment Ring
9. Chest Strap
10. Main Lift Web Adjuster
11. Ejector Snap
12. Triangle Link
13. L-Shaped Ejector Snap Pad
14. Saddle
15. Webbing Retainer
16. Quick Fit “V” Ring
17. Leg Strap
18. Horizontal Backstrap
19. Main Lift Web Tuck Tab Assembly



1. Diagonal Backstrap Pad

2. Sizing Channel



1. Tuck Pocket
2. Main Lift Web Tuck Tab Assembly

SMALL

1

MEDIUM

1

LARGE

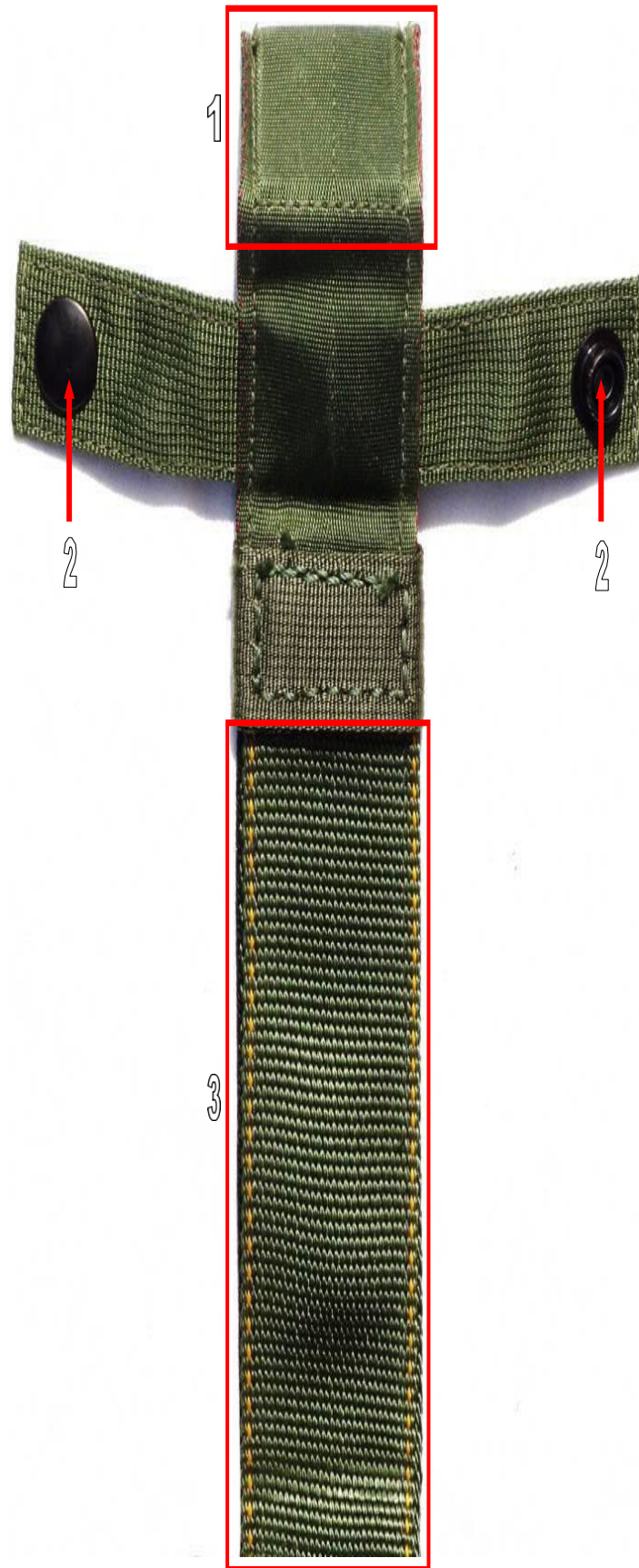
2



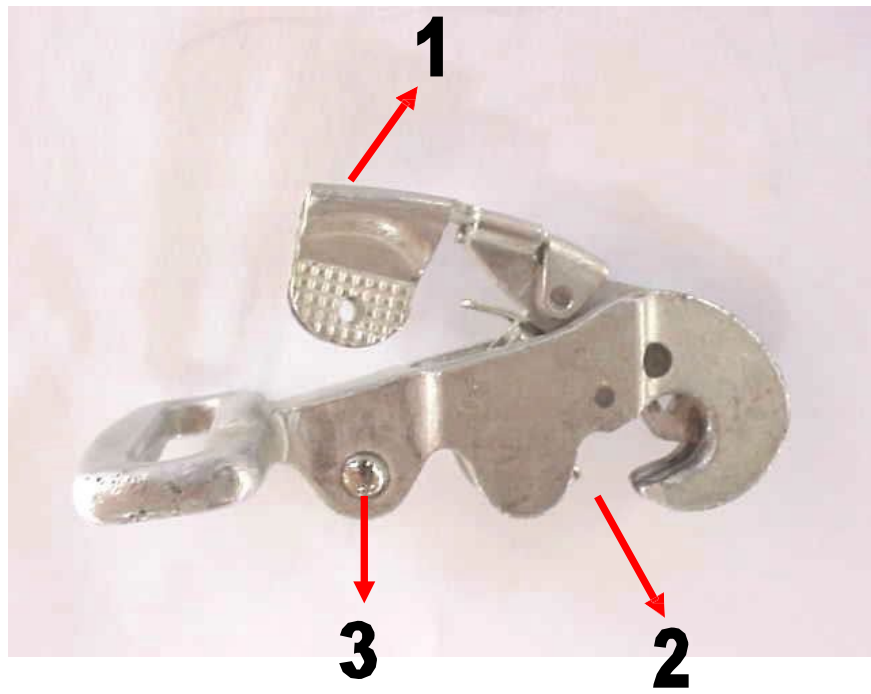
1. Tuck Pocket
2. Main Lift Web Tuck Tab Assembly
3. Main Lift Web Adjustment Strap



1. Tuck Tab
2. Snap Fastener
3. Main Lift Web Adjustment Strap



1. Activating Lever
2. Opening Gate
3. Ball Detent



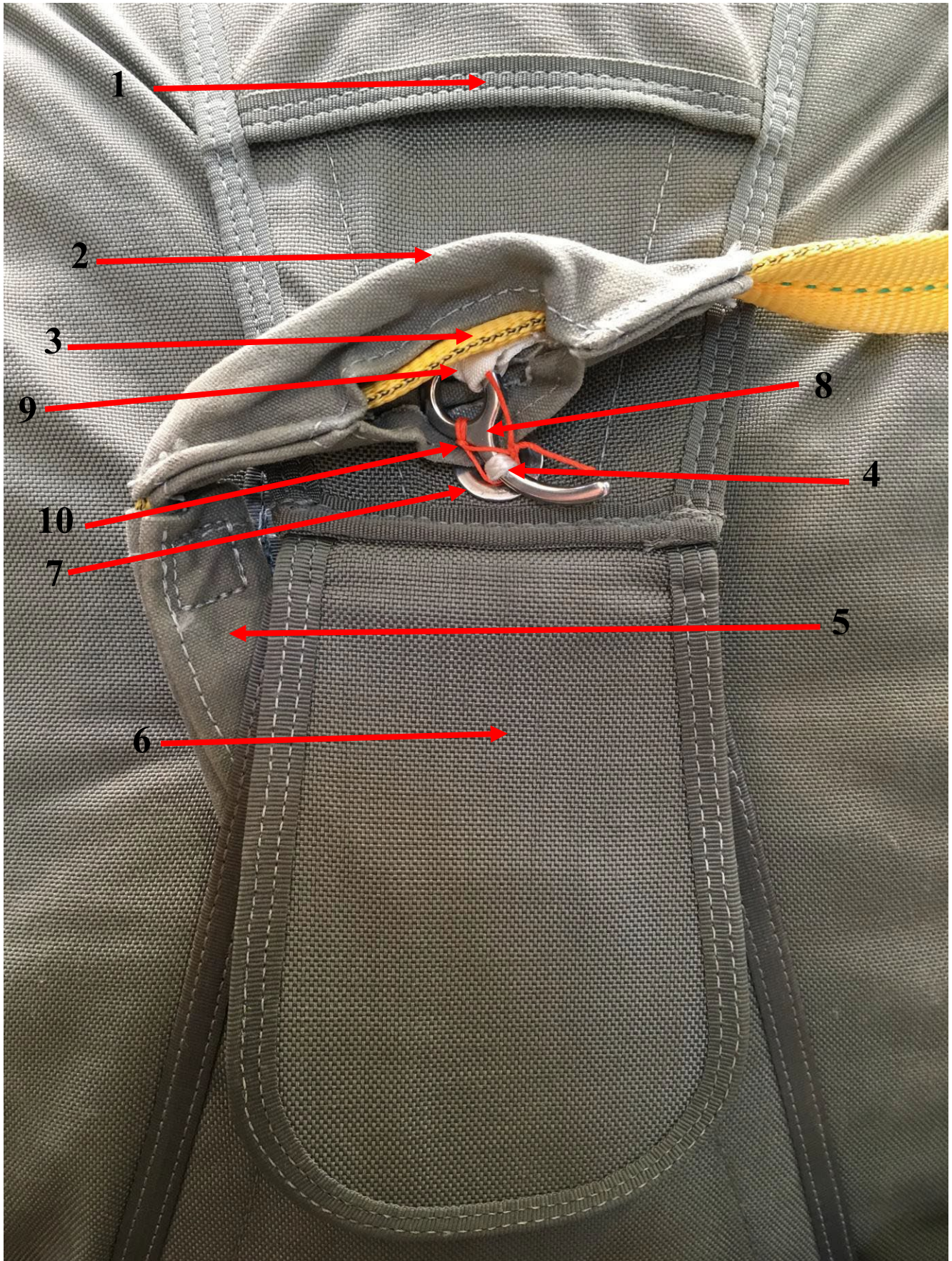
1. Waistband
2. Horizontal Backstrap Keeper
3. Waistband Adjuster Panel
4. Metal Adjuster
5. Horizontal Backstrap Retainer
6. Diagonal Backstrap Retainer
7. Diagonal Backstrap Keeper
8. Directional Snap Fastener



1. Static Line Slack Retainer Loop
2. Static Line Slack Retainer Band
3. Inner Static Line Stow Bar
4. Outer Static Line Stow Bar
5. Tuck Flap
6. Main Curved Pin Protector Flap
7. Pack Closing Flap



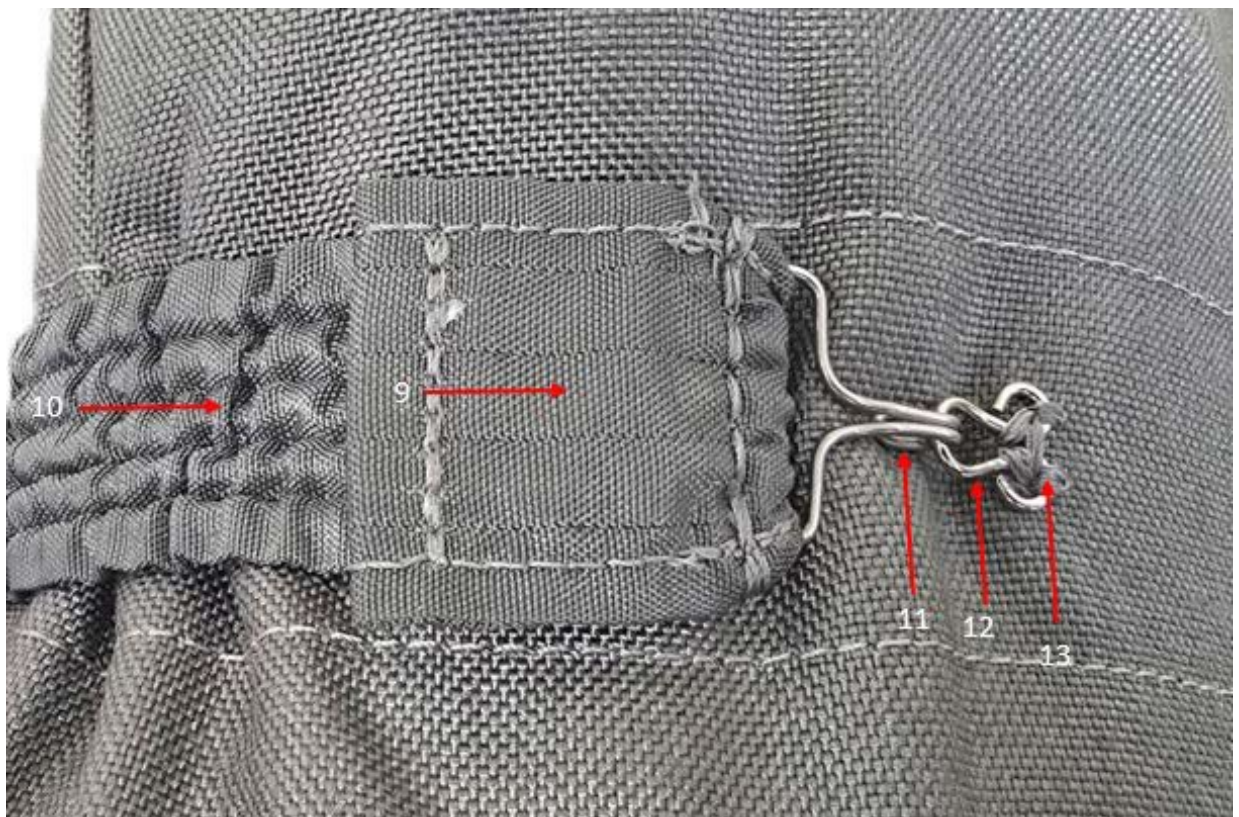
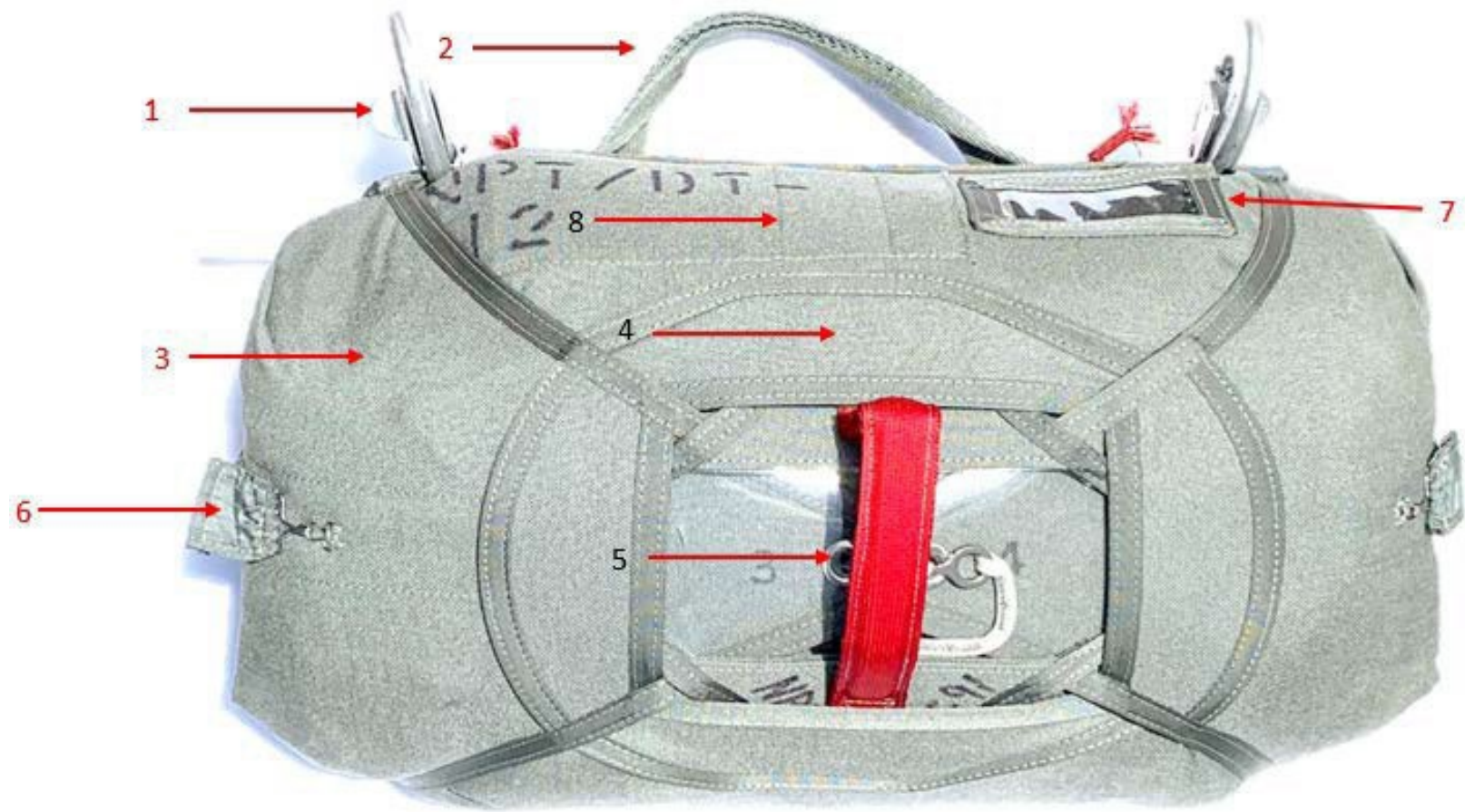
1. Tuck Flap
2. Main Curved Pin Cover
3. Universal Static Line Modified
4. Main Closing Loop
5. Static Line Sleeve
6. Main Curved Pin Protector Flap
7. Grommet
8. Main Curved Pin
9. Main Curved Pin Attaching Loop
10. Main Curved Pin Securing Tie



1. Slip Assist Loop
2. Slip Assist Tab
3. Army Parachute Log Record Stow Pocket
4. Army Parachute Log Record
5. Male Fitting Canopy Release Assembly



1. Connector Snap
2. Carrying Handle
3. Pack Closing Flap
4. Tuck Pocket
5. Ripcord Assembly
6. Pack Opening Spring Band
7. Automatic Activation Device Control Unit  
Pocket
8. Automatic Activation Device Processing  
Unit Pocket
9. Pull Tab
10. Sheath
11. Hook
12. Dressmaker Eye
13. Size E Waxed Nylon Thread



1. Connector Snap
2. Connector Snap Retaining Tie
3. Automatic Activation Device Control Unit Pocket
4. Automatic Activation Device Processing Unit Pocket
5. Spreader Bar Tie
6. Grommet



1. Spreader Bar Tie
2. Grommet
3. Army Parachute Log Record
4. Army Parachute Log Record Stow Pocket
5. Pack Opening Spring Band Retainer
6. Pack Opening Spring Band
7. Waistband Retainer



1. Tuck Pocket
2. Pack Closing Flap
3. Curved Pin
4. Reserve Closing Loop
5. Grommet
6. Curved Pin Lanyard
7. Curved Pin Lanyard Attaching Loop
8. Data Block



## TC 3-21.220 Chapters 3 & 8

Sustained Airborne Training (SAT) will consist of three phases. The three phases are highly recommended to be conducted in the order listed below. Commanders should only authorize a deviation to the training plan if training requirements or apparatus restrictions do not allow. This order of events is the logical progression of training for the airborne operation. SAT is performance-oriented training. The Primary Jumpmaster should introduce the JM Team to all jumpers on their aircraft. During SAT, the JM performing the training needs to be heard by all jumpers. ALL JM's and leaders must make aggressive and positive on-the-spot corrections. The entire Jumpmaster Team should treat this training and ensure jumpers are treating this training as if they are inside the aircraft. Ensure jumpers are executing their actions in the aircraft down to the smallest detail. SAT instills confidence in those jumpers who you are leading for the duration of the airborne operation until they exit your aircraft. Prior to conducting SAT, ensure the Jumpmaster Team inspects the helmets, ID tags, ID cards, and performs a technical inspection of the jumper's combat equipment when applicable. The three phases of SAT are:

- 1) Actions in the Aircraft Brief (SERJT/E) and Mock Door Training
- 2) Pre-Jump Training
- 3) Parachute Landing Falls (PLF's)

### Actions Inside the Aircraft (SERJT/E) and Mock Door Training

The bullets listed below serve as the standard guideline that will be followed. You can always add information to your brief, but will never take away from the standard outlined, so long as the fundamentals never change. This brief follows the logical progression of a jumper safely exiting an aircraft (Static Line Control and Exiting Procedures) followed by all subsequent adverse actions (Red Light Procedures, Jump Refusals, Towed Jumper Procedures).

During the first half of the brief, jumpers will be oriented around the mock door, receiving the brief from a well-rehearsed Jumpmaster Team. Prior to beginning the second half of the brief (Emergency Procedures), jumpers will be placed in reverse chalk order and loaded into the mock up for the brief as well as performance oriented training. If using a non-standard or foreign A/C where the specific Emergency Procedures are not known, they may be briefed by the loadmaster, but all actions involving the Jumpmaster Team must be rehearsed. The standard guideline is as follows:

- A. Static Line Control
  - i. Hook Up
  - ii. Bite
  - iii. Arm Position
  - iv. Control of Static Line
- B. Exiting Procedures
  - i. "Stand-by" (actions of the number one jumper and safety)
  - ii. Movement to door/ramp
  - iii. Proper hand off of static line to safety
  - iv. Proper exit (1<sup>st</sup> Point of Performance)
- C. Red Light Procedures
  - i. Reasons for red light
  - ii. Actions of the JM team
  - iii. Actions of the jumpers
- D. Jump Refusals
  - i. Jumpmaster actions ( 3 x physical and verbal)
  - ii. Safety removes jumper and gives lawful order
  - iii. Jumpmaster controls jump door
  - iv. Positive control and transfer of Jump Refusal to DACO
- E. Towed Jumper Procedures
  - i. Jumper Actions (conscious/ unconscious)
  - ii. Jumpmaster Actions/ Identification (green/ yellow)

\*\*\*The following should be conducted by the JM Team WITH jumpers inside aircraft\*\*\*

- F. Emergency Procedures
  - i. Ground Evacuation (1 continuous ring of the alarm bell).
- G. Crash Landing / Ditching (6 short rings of the alarm bell).
- H. Activation of reserve inside Aircraft
  - 1. Doors Closed
  - 2. Doors Open (Fore)
  - 3. Doors Open (Aft)
- I. Fire in Flight.
- J. Bailout ( 3 short rings of the alarm bell followed by 1 long continuous ring, or an oral warning) STAND-UP, HOOK-UP GO.
- K. Mock Door Training-The Jumpmaster Team may exit the jumpers from the mock doors as many times as they feel necessary, however, they are required to perform at least two exits, with the last exit being conducted as planned for the airborne operation at the Airborne Commanders discretion.

**\*\*\* ALL TOPICS MUST BE COVERED. THE TRAINING MUST BE TAILORED TO THE AIRCRAFT THAT IS BEING UTILIZED. TRAINING MUST TAKE PLACE NO LATER THAN 24 HOURS PRIOR TO TAKE OFF. IF TRAINING IS SCHEDULED AND CONDUCTED OVER 24 HOURS BEFORE TAKE OFF, UP TO 48 HOURS, AN O-6 MUST GIVE APPROVAL \*\*\***

### **PRE-JUMP TRAINING**

- Prior to Pre-Jump Training, place the jumpers into a formation that allows the Jumpmaster to easily control them and make on the spot corrections. The extended rectangular formation and the horseshoe formation are the two preferred formations.
- Although Pre-Jump Training can be given by anyone on the Jumpmaster Team, the Primary Jumpmaster can delegate authority but not responsibility.
- Holding, running, one riser slips, and other information can be inserted into Pre-Jump Training as the Airborne Commander sees fit. Discussing the use of slip assist loops, slip assist tabs, or control lines are recommended when covering the fourth point of performance.
- Pre-Jump Training is tailored to fit the mission, however emergency landings will always be covered due to the many variables involved with emergency situations; i.e. if jumpers have to conduct an emergency bailout over unfamiliar terrain or water.
- Pre-Jump Training is performance-oriented training and the Jumpmaster Team must ensure that the jumpers are performing the actions as they are being covered. During Pre-Jump Training, use the "HIT IT" exercise as often as needed to keep the jumpers actively involved. Jumpmasters will refer to their unit ASOPs for additional guidance.
- When jumping the MC-6 series parachute from rotary wing aircraft, jumpers will extend their count from a 4000 count to a 6000 count.
- Due to the drift characteristics of the parachute system, the T-11 should not be jumped from a rotary winged aircraft; however, if a justified, mature risk assessment is approved, the jumper would count to 8000. The minimum drop altitude would be IAW TC 21.220, Chapter 17.
- The JM version of Mock Door Training and Pre-Jump Training for the T-11 ATPS and MC-6 Series Parachute given to jumpers can be found in TC 3-21.220 Appendix E.

### **PARACHUTE LANDING FALLS**

- At a minimum, four correct PLF's will be conducted. Can only observe one at time with a maximum of five graded per iteration.
- The PLF platform should be, at a minimum, 24 inches in height.
- Jumpers must complete one satisfactory PLF in each of the cardinal directions. (e.g. Front Left, Front Right, Rear Left, Rear Right) Any unsatisfactory PLF's must be redone.
- Jumpmasters should ensure that jumpers are assuming the proper "Prepare to Land" attitude prior to jumping from the platform. Jumpers should not shift their knees or rotate their upper body prior to jumping from the platform.

## Pre-Jump Training (T-11 ATPS))

### THE FIVE POINTS OF PERFORMANCE:

The first point of performance is **PROPER EXIT, CHECK BODY POSITION, and COUNT.**

**“JUMPERS HIT IT.”** Upon exiting the aircraft, snap into a good tight body position. Keep your eyes open, chin on your chest, elbows tight into your sides, hands on the end of the reserve with your fingers spread. Bend forward at the waist, keeping your feet and knees together, knees locked to the rear, and count to 6000.

At the end of your 6000 count, immediately go into your second point of performance, **CHECK CANOPY AND GAIN CANOPY CONTROL AND IMMEDIATELY COMPARE YOUR RATE OF DESCENT WITH FELLOW JUMPERS.**

Reach up to the elbow locked position and secure the front set of risers in each hand, simultaneously conducting a 360-degree check of your canopy. Your slider should be fully extended and begin to slide down the suspension lines. Move immediately into comparing your rate of descent with your fellow jumpers. If you are falling faster than your fellow jumpers or you cannot compare your rate of descent, activate your reserve parachute using the **pull drop method**. If, during your second point of performance you find you have twist and you are not falling faster than fellow jumpers, reach up and grasp a set of risers in each hand, thumbs down, knuckles to the rear. Pull the risers apart, and begin a vigorous bicycling motion. When the last twist comes out, immediately **CHECK CANOPY AND GAIN CANOPY CONTROL.**

Your third point of performance is **KEEP A SHARP LOOKOUT AT ALL TIMES AND CONSTANTLY COMPARE YOUR RATE OF DESCENT.**

Remember the three rules of the air and repeat them after me: **always look before you slip, always slip in the opposite direction to avoid collisions, and the lower jumper always has the right of way.** Avoid fellow jumpers all the way to the ground by maintaining a 25-foot separation and continue to compare your rate of descent with fellow jumpers. During your third point of performance, release all appropriate equipment tie downs.

This brings you to your fourth point of performance, which is **PREPARE TO LAND.**

At approximately 200 feet AGL or treetop level, look below you to ensure there are no fellow jumpers and lower your equipment, then slip into the wind. Attempt to utilize the slip assist loops or slip assist tabs and execute a two-riser slip opposite your direction of drift. If the wind is blowing from your left, reach up with both hands and grasp the left set of risers and pull them deep into your chest until you land. If the wind is blowing from your front, reach up with both hands and grasp the front set of risers and pull them deep into your chest until you land. If the wind is blowing from your right, reach up with both hands and grasp the right set of risers and pull them deep into your chest until you land. If the wind is blowing from your rear, reach up with both hands and grasp the rear set of risers, and pull them deep into your chest until you land. After you have slipped into the wind, you will assume a landing attitude by keeping your feet and knees together, knees slightly bent, elbows tight into your sides, with your head and eyes on the horizon until you land. If you decide to pull a one-riser slip, at approximately 200 feet above ground level or tree top level, look below you to ensure there are no fellow jumpers and lower your equipment. At 100 feet AGL, you will execute a one riser slip by grabbing 1-3 arm lengths depending on the wind After you have slipped into the wind, you will assume a landing attitude by keeping your feet and knees together, knees slightly bent, elbows tight into your sides, with your head and eyes on the horizon. When the balls of your feet make contact with the ground, put your chin down to your chest and execute a proper parachute landing fall. (PLF).

The fifth point of performance is **LAND.**

You will make a proper parachute landing fall (PLF) by hitting all five points of contact. Touch them, and repeat them after me: 1) **BALLS OF YOUR FEET**, 2) **CALF**, 3) **THIGH**, 4) **BUTTOCKS** and 5) **PULL UP MUSCLE**. You will never attempt to make a standing landing.

Remain on the ground and activate both of your canopy release assemblies using either the “**hand to shoulder**” method or the “**hand assist**” method. To activate your canopy release assembly using the “**hand to shoulder**” method, reach up with either hand and grasp the corresponding safety clip. Pull out and down on the safety clip, exposing the cable loop. Insert the thumb, from bottom to top, through the cable loop. Turn your head in the opposite direction, and pull out and down on the cable loop. To activate your canopy release assembly using the “**hand assist**” method, reach up and grasp the corresponding safety clip. Pull out and down on the safety clip, exposing the cable loop. Insert the thumb, from bottom to top, through the cable loop. Reinforce that hand with the other. Turn your head in the opposite direction and pull out and down on the cable loop. Place your weapon into operation and remove the parachute harness.

The next item I will cover is **RECOVERY OF EQUIPMENT**.

Once you are out of the parachute harness, remove all air items from the equipment rings. Unzip and turn the universal parachutist recovery bag right side out. Place the parachute harness inside the universal parachutist recovery bag with the smooth side facing up. Secure the risers and place them under the parachute harness.

**Non-Tactical:** Elongate the suspension lines and canopy, removing all debris. Once you reach the bridle line, secure the drogue parachute and deployment sleeve in one hand and begin to figure-eight roll your canopy and suspension lines all the way to the UPRB, leaving the drogue parachute, deployment sleeve, and bridle assembly on top of the main canopy.

**Tactical:** Remain on a knee at the universal parachutist recovery bag. Begin pulling the suspension lines and canopy towards the universal parachutist recovery bag, stuffing them in as you go. Place the drogue parachute, deployment sleeve, and bridle assembly on top of the main canopy.

Snap, do not zip, the universal parachutist recovery bag. Place the reserve parachute in the reserve parachute stowage pocket. Secure all of your equipment, conduct a 360-degree check of your area, and move out to your assembly area.

The next item I will cover is the **ACTIVATION OF THE RESERVE PARACHUTE**.

To activate the reserve parachute, you will use the pull drop method. “**JUMPERS HIT IT**,” maintain a good, tight body position. Grasp the rip cord handle with either hand. Throw your head back and to the rear, pull out on the rip cord handle, and drop it. Your reserve parachute will activate. Ensure neither hand is in front of the reserve parachute as it deploys. After you activate your reserve parachute, secure the reserve risers. At approximately 200 feet AGL, slip into the wind and prepare to land.

The next item I will cover is **TOWED JUMPER PROCEDURES**

“**JUMPERS HIT IT**” If you become a towed jumper and are being towed by your universal static line modified and are unconscious you will be retrieved back inside the aircraft. If you are conscious, maintain a good tight body position with both hands covering your ripcord handle and an attempt will be made to retrieve you inside the aircraft. As you near the paratroop door, DO NOT REACH FOR US; continue to protect your ripcord handle. If you cannot be retrieved, your universal static line modified will be cut. Once you feel yourself falling free from the aircraft, count to 6000 and activate your reserve parachute using the **PULL DROP METHOD**.

If you are being towed by your equipment, regardless of whether you are conscious or unconscious, that item of equipment will be cut or jogged free and your main canopy will deploy.

The next item I will cover is **MALFUNCTIONS**.

Remember to continue to check your canopy for any damage or irregularities and compare your rate of descent throughout your entire jump. If at any time you cannot compare your rate of descent or you are falling faster than your fellow jumpers, immediately activate your reserve parachute using the **PULL DROP METHOD**.

The next item I will cover is **COLLISIONS AND ENTANGLEMENTS**.

**"JUMPERS HIT IT". "CHECK CANOPY AND GAIN CANOPY CONTROL AND IMMEDIATELY COMPARE YOUR RATE OF DESCENT WITH FELLOW JUMPERS"**. If you see another jumper approaching, immediately look and then slip away. If you cannot avoid the collision, assume a spread eagle body position and attempt to bounce off the jumper's canopy and/or suspension lines, and immediately look and then slip away. If you pass through the suspension lines and you become entangled, snap into a modified position of attention. With either hand, protect your ripcord handle. With the opposite hand, attempt to weave your way out of the suspension lines the same way you entered. Once clear, immediately look and then slip away. If you become entangled, the higher jumper will climb down to the lower jumper using the hand under hand method. Once both jumpers are even, they will face each other and grasp each other's left main lift web. Both jumpers will discuss which PLF they will execute. Both jumpers will conduct the same PLF. Neither jumper will execute a front PLF. Both jumpers will continue to observe their canopies all the way to the ground. If one canopy collapses, both jumpers will ride the one good canopy all the way to the ground. If both canopies collapse, both jumpers will immediately turn away, in order to create a clear path, and activate their reserve parachute using the **PULL DROP METHOD**. Should you find yourself on another jumper's canopy, without rolling, use whatever means necessary to get off of the canopy and immediately activate your reserve parachute. Attempt to avoid the 4 corner vents on the canopy. Should you fall through a corner vent, stay where you are and be prepared to conduct a PLF. If you have another jumper on top of your canopy, continually compare your rate of descent. If you are falling faster than fellow jumpers, immediately activate your reserve parachute using the **PULL DROP METHOD**.

The next item I will cover is **EMERGENCY LANDINGS**.

The first emergency landing I will cover is the **TREE LANDING**.

If you are drifting towards the trees, immediately look and then slip away. If you cannot avoid the trees and have lowered your equipment, look below you to ensure there are no fellow jumpers and jettison your equipment, making a mental note of where it lands. If you have not lowered your equipment, keep it on you to provide extra protection while passing through the trees. At approximately 200 feet AGL, assume a good landing attitude by keeping your feet and knees together, knees slightly bent, and chin on your chest. When you make contact with the trees, rotate your hands in front of your face with your elbows high. Be prepared to execute a proper PLF if you pass through the trees. If you get hung up in the trees and you do not feel you can safely lower yourself to the ground, stay where you are and wait for assistance.

If you decide to climb down, jettison all unneeded equipment. Ensure that you maintain your helmet. Activate the quick release in your waistband. With either hand, apply inward pressure on the ripcord assembly. With the opposite hand, remove the top tuck tab. Maintain steady inward pressure and with the opposite hand, insert it behind the ripcord assembly and apply inward pressure. Grasp the ripcord handle with the opposite hand, pull it and drop it. With both hands, control the activation of the reserve parachute to the ground, ensuring that all suspension lines and risers are completely deployed. Disconnect the left connector snap and rotate the reserve to the right. Attach the left connector snap to the triangle link on your right side. Seat yourself well into the saddle. Activate the quick release in the chest strap and completely remove the chest strap from the chest strap friction adapter. Grasp the right main lift web with either hand below the canopy release assembly and, with the other hand, activate the leg strap ejector snaps and climb down the outside of the reserve parachute.

Caution must be taken when climbing down the T-11 Reserve suspension lines because of the slippery coating applied to the suspension lines. Remember, when in doubt, stay where you are and wait for assistance.

The next emergency landing I will cover is the **WIRE LANDING**.

If you are drifting towards wires, immediately look and try to slip away. If you cannot avoid the wires, look below you to ensure there are no fellow jumpers and jettison your equipment, making a mental note of where it lands. Ensure that you maintain your helmet. Assume a landing attitude by keeping your feet and knees together, exaggerating the bend in your knees, eyes open, chin on your chest with your back arched. Place the palms of your hands high on the inside of the front set of risers with the elbows locked. When you make contact with the wires, begin a vigorous rocking motion in an attempt to pass through the wires. Be prepared to execute a proper PLF, in the event you pass through the wires. If you get hung up in the wires, do not attempt to lower yourself to the ground. Stay where you are and wait for assistance.

The next emergency landing I will cover is the **WATER LANDING**.

If you are drifting towards a body of water, immediately look then slip away. If you cannot avoid the water, look below you to ensure there are no fellow jumpers, lower and jettison your equipment, making a mental note of where it lands. Next, jettison your helmet, again making a mental note of where it lands. Activate the quick release in the waistband. Disconnect the left connector snap and rotate the reserve parachute to the right. Seat yourself well into the saddle and activate the quick release in the chest strap, completely removing the chest strap from the chest strap friction adapter. Regain canopy control. Prior to entering the water, assume a landing attitude by keeping your feet and knees together, knees slightly bent, and place your hands on both leg strap ejector snaps. When the balls of your feet make contact with the water, activate both leg strap ejector snaps, arch your back, throw your arms above your head, and slide out of the parachute harness. Be prepared to execute a proper PLF if the water is shallow. Swim upwind, or upstream, away from the canopy. If the canopy comes down on top of you, locate a seam, and follow it to the skirt of the canopy.

The next item I will cover is **LIFE PRESERVERS**.

When jumping a life preserver and you are unable to slip away from the water, lower your combat equipment, activate your life preserver, then jettison your combat equipment prior to making contact with the water. Be prepared to execute a proper PLF if the water is shallow. Once in the water, activate both canopy release assemblies.

The next item I will cover is **NIGHT JUMPS**.

When conducting night jumps, be sure to give your canopy an extra look. If you have any reason to believe you are falling faster than fellow jumpers, immediately activate your reserve parachute. Maintain noise discipline and a good interval between fellow jumpers. Be prepared to conduct a PLF because you will hit the ground approximately 5 to 10 seconds before you think you will.

The next item I will cover is **INSTRUMENT METEOROLOGICAL CONDITIONS (IMC)**.

When jumping under IMC, do not lower your equipment until you have passed through the clouds. Do not slip unless you have to avoid a collision. If you have any type of malfunction or any reason to believe you are falling faster than fellow jumpers, you must immediately activate your reserve parachute using the **PULL DROP METHOD** because you cannot compare your rate of descent with fellow jumpers. Ensure you recheck your canopy once you pass through the clouds.

The final item I will cover is **PARACHUTE LANDING FALLS**: We will now move to the PLF platform and conduct one satisfactory PLF in each of the four directions.

## **ITEMS THAT MUST BE COVERED DURING PRE-JUMP TRAINING**

FIVE POINTS OF PERFORMANCE

RECOVERY OF EQUIPMENT

ACTIVATION OF THE T-11 RESERVE PARACHUTE

TOWED JUMPERS PROCEDURES

MALFUNCTIONS

COLLISIONS AND ENTANGLEMENTS

EMERGENCY LANDINGS:

- a. TREE LANDING
- b. WIRE LANDING
- c. WATER LANDING

LIFE PRESERVERS

NIGHT JUMPS

INSTRUMENT METEOROLOGICAL CONDITIONS (IMC)

PARACHUTE LANDING FALLS

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# **Individual Equipment Containers**

## **TC 3-21.220 Chapter 2 & 12**

### **ADVANCED COMBAT HELMET**

- Available in 4 sizes: S, M, L and XL.

The Advanced Combat Helmet consists of 3 Major Components:

- Helmet shell
- Suspension Pad System
- Modified Chinstrap Assembly or Head-Loc "H" Nape Retention System

### **HELMET SHELL**

The Advanced Combat Helmet must not be excessively worn or damaged and the outer rim of the helmet shell must be free of any sharp or protruding edges.

### **SUSPENSION PADS**

- All 7 suspension pads must be present and serviceable.
- Suspension pads cannot be substituted for any reason when conducting airborne operations.
- All seven suspension pads will be the same size, do not mix and match pad sizes or manufacturers.
- A Set Includes: 4 Oval Pads, 1 Crown Pad, 2 Trapezoid Pads
- Size 6: 3/4 Inch Thick, Size 8: 1 Inch Thick

### **MODIFIED CHINSTRAP ASSEMBLY**

- 4 Ballistic Mounting Screws
- 4 Adjustable Buckles
- 4 Adjustable Straps
- Chinstrap Fastener
- Long Portion Chinstrap
- Short Portion Chinstrap
- Nape Pad

### **HEAD-LOC "H" NAPE RETENTION SYSTEM**

- 4 Head-Loc Sliders
- 4 Adjustable Straps
- Chinstrap Fastener
- Long Portion Chinstrap
- Short Portion Chinstrap
- H-Nape Pad (w/ H-Nape Pad Retaining Strap)
- 1 Head-Loc H-Nape Pad Head Loc Slider
- 2 Head-Loc Attaching Straps
- 2 Plastic Oval Links

### **MODULAR AIRBORNE WEAPONS CASE**

The Modular Airborne Weapons Case is a modular, fully adjustable, padded, reinforced design, multi-purpose airdrop container that can be rigged with a variety of weapons and equipment in a single container, reducing the number of modified legacy containers currently fielded.

### **MATERIAL**

- Cordura 1000 Material

DIMENSION: Small

NSN: 1670-01-618-5844

- Width: 14 inches wide at its widest point down to 7 inches at the bottom
- Length: 43.5 inches; adjustable to 34.5 inches.
- Maximum Internal Weight Capacity: 65 lbs.
- Weapons: M4/M16 Series Rifle / M249 SAW

DIMENSION: Large  
NSN 1670-01-618-5845

- Width: 16 inches wide at its widest point down to 11 inches at the bottom
- Length: 52.5 inches; adjustable to 41 inches.
- Maximum Internal Weight Capacity: 85 lbs.
- Weapons: M240B / 60MM Mortar Tuber

The Modular Airborne Weapons Case consists of the following items:

(Exterior)

- Snap Shackle
    - Yellow Safety Lanyard
    - Locking Pin
    - Opening Gate
  - Attachment Strap
  - Friction Adaptor
  - Adjusting Strap
  - Pouch Attachment Ladder System Webbing (Internal and External)
  - Compression Strap with Quick Release Buckles
  - Vertical Nylon Equipment Hangers
  - Adjustable Nose Cone
  - Carrying Handle
  - Horizontal Nylon Equipment Hangers
  - Lower Tie Down Strap
  - Lower Tie Down Strap Stow Pocket
  - Upper Tie Down Tape
  - Closing Flap
  - Slide Fastener
  - Slide Fastener and Tabbed Thong
  - Upper Spring Stop
  - Snap Fasteners
- (Interior)
- Rifle Butt Stow Pocket
  - Internal Pockets
  - Internal Padded Divider
  - Nose Cone Securing Straps

\*\*\*ONLY ONE PRIMARY WEAPON SYSTEM SHOULD BE RIGGED INSIDE THE MAWC\*\*\*

\*\*\*PAD AND TAPE THERMAL OR VARIABLE OPTICS AND BFA's, IF PRESENT\*\*\*

\*\*\* AUTHORIZED EXPENDABLES FOR RIGGING THE MAWC INCLUDE THE FOLLOWING: PBHC, RETAINER BANDS, 1/4 INCH COTTON WEBBING, BUBBLE WRAP\*\*\*

When Preparing the Modular Airborne Weapons Case:

- 1) You will first insert the weapon, muzzle down, forward assist up, on top of the internal padded divider.
- 2) Adjust the nose cone securing straps to accommodate the length of the weapon system. Ensure that the pile tape protector flap is properly stowed to allow the hook and pile tape to properly bind.
- 3) Close the case by mating the hook and pile tape, secure the snap fasteners and engage the slide fastener and tabbed thong.
- 4) Secure the compression straps with quick release buckles.
- 5) Stow the free running ends of the compression straps in their webbing retainers.

## **INTEGRATED HARNESS SINGLE POINT RELEASE**

- Constructed of Type VIII Nylon Webbing
- Tensile Strength of 4000 Pounds

The Harness Single Point Release consists of the following items:

- Release Handle Assembly: Release Handle, Release Handle Lanyard, Release Handle Cable
- Release Handle Cross Strap
- Attaching Loops: White, Green, and Red
- Female Portion Leg Strap Release Assembly
- Cable Loop Retainer
- Webbing Retainer
- Grommet
- Male Portion Leg Strap Release Assembly
- Equipment Retainer Straps
- Friction Adapter
- 2 Adjustable Equipment Ring Attaching Straps

## **MOLLE 4K**

MOLLE 4K stands for Modular Lightweight Load-Carrying Equipment.

The MOLLE 4K comes in 1 size. It cannot be jumped with a width over 30 inches. It has over 4000 cubic inches of internal storage with an internal radio pouch.

The MOLLE 4K consists of the following items:

- MOLLE 4K Pack
- External molded frame
- 2 Adjustable Shoulder Carrying Straps
- Kidney Pad
- 3 outer accessory pouches

## **HOOK PILE TAPE LOWERING LINE**

The hook pile tape lowering line allows the jumper to lower their combat equipment during their fourth point of performance.

- Constructed of 1 Inch Tubular Nylon
- Tensile Strength of 4000 Lbs
- 15 Ft in Length

The Hook-Pile Tape Lowering Line consists of the following items:

- Ejector Snap with Attached Yellow Safety Lanyard
- Retainer Flap
- Hook-Pile Tabs
- Looped-End Hook Pile Tape Lowering Line

## **MODIFIED HOOK PILE TAPE LOWERING LINE**

- Used when the AT4JP or DMJP is lowered as a tandem load.
- The first set of hook pile tabs are 46 to 48 inches from the ejector snap
- The hook tab closest to the ejector snap has been moved an additional 24 inches away from the ejector snap, for a total of 36 inches.
- The blue strata mark is 16 to 18 inches from the ejector snap
- The modification can be implemented by a local rigger unit.

The following markings are required:

- Stencil with half-inch high characters on retainer flap using blue parachute marking ink: "AT4JP modified (MOD)."
- Stencil a one-eighth-inch line (blue) across the web width on each side of the lowering line, 12 inches from the folded web edge ejector snap end.

### **UNIVERSAL PARACHUTIST RECOVERY BAG**

- The UPRB is designed as a carriage and storage container for military free fall and static line parachute systems.
- The main storage compartment is capable of holding the T-11 main parachute canopy and an activated reserve canopy. A storage pocket on the outside of the bag is designed for storing a packed T-11 reserve parachute.
- The UPRB is not waterproof and is not designed to provide protection from wet weather or damp ground. Reserves may be issued in the UPRB to aid in handling and to prevent damage or unintentional opening.

The Universal Parachutist Recovery Bag consists of:

- Two Leg Strap Retainers
- Two Carrying Handles
- Two Adjustable Shoulder Carrying Straps
- Reserve Parachute Stowage Pocket
- Two Zippers and Nine Snaps

When Donning the UPRB:

- Ensure the open end of the UPRB is facing upward. The direction of the trapezoid-sewn portion has no bearing on how the UPRB is worn on the jumper.
- Ensure the leg strap retainer is facing out and both left and right leg straps are routed from bottom to top behind the leg strap retainer.
- The quick-fit V-ring is securely fastened to the quick-ejector snaps, ensuring the ejector snap activating level is secured and seated properly.



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## **NOMENCLATURE FOR INDIVIDUAL EQUIPMENT CONTAINERS**

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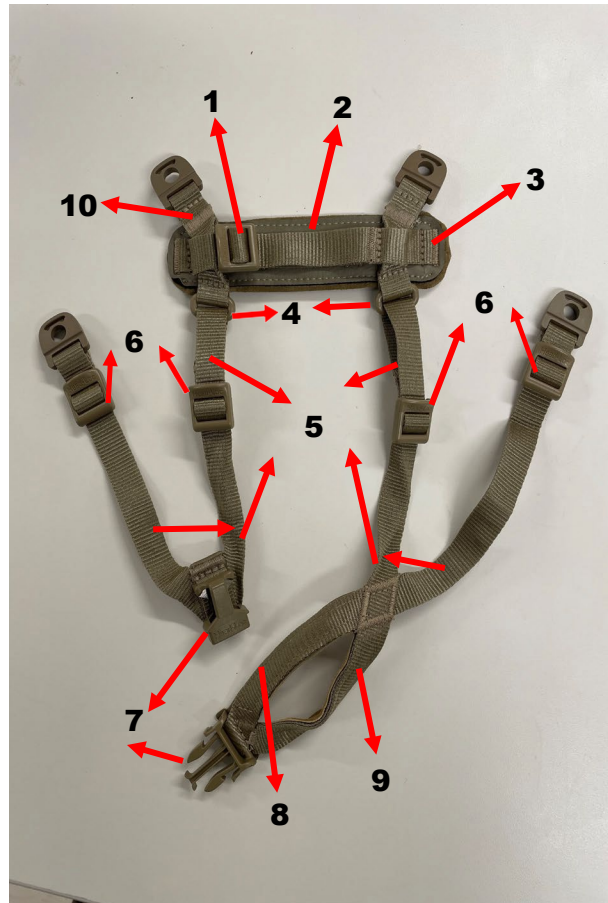
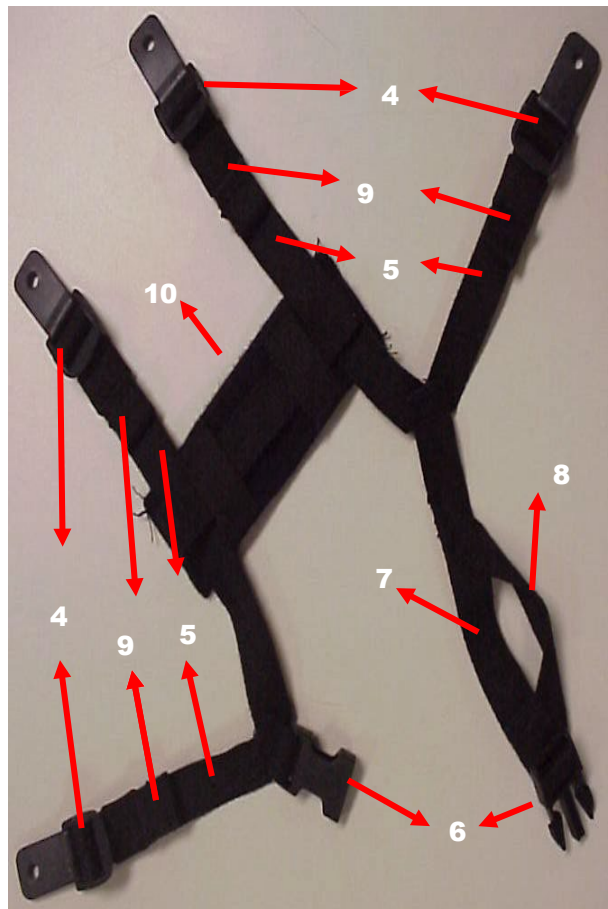
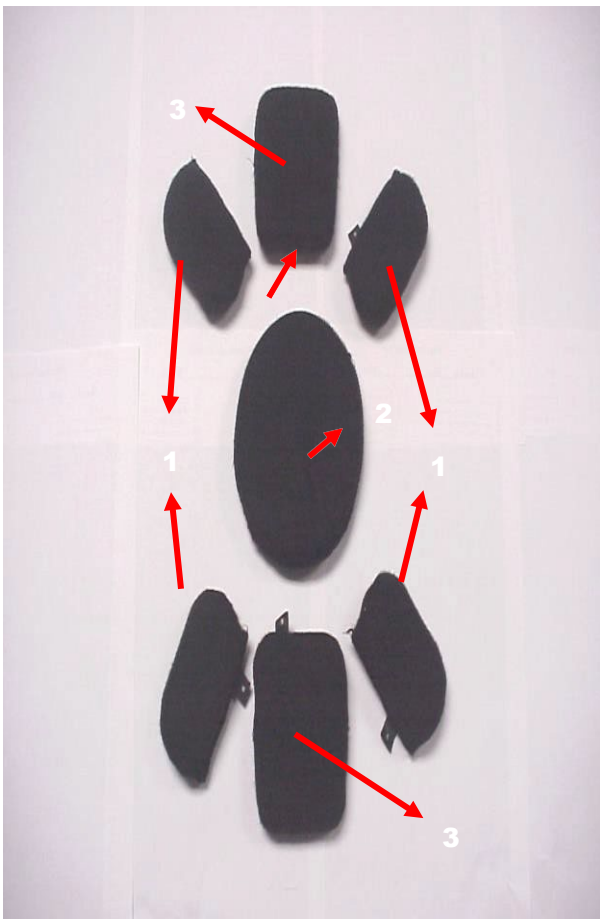
1. Oval Pad
2. Crown Pad
3. Trapezoid Pad

**Modified Chinstrap Assembly**

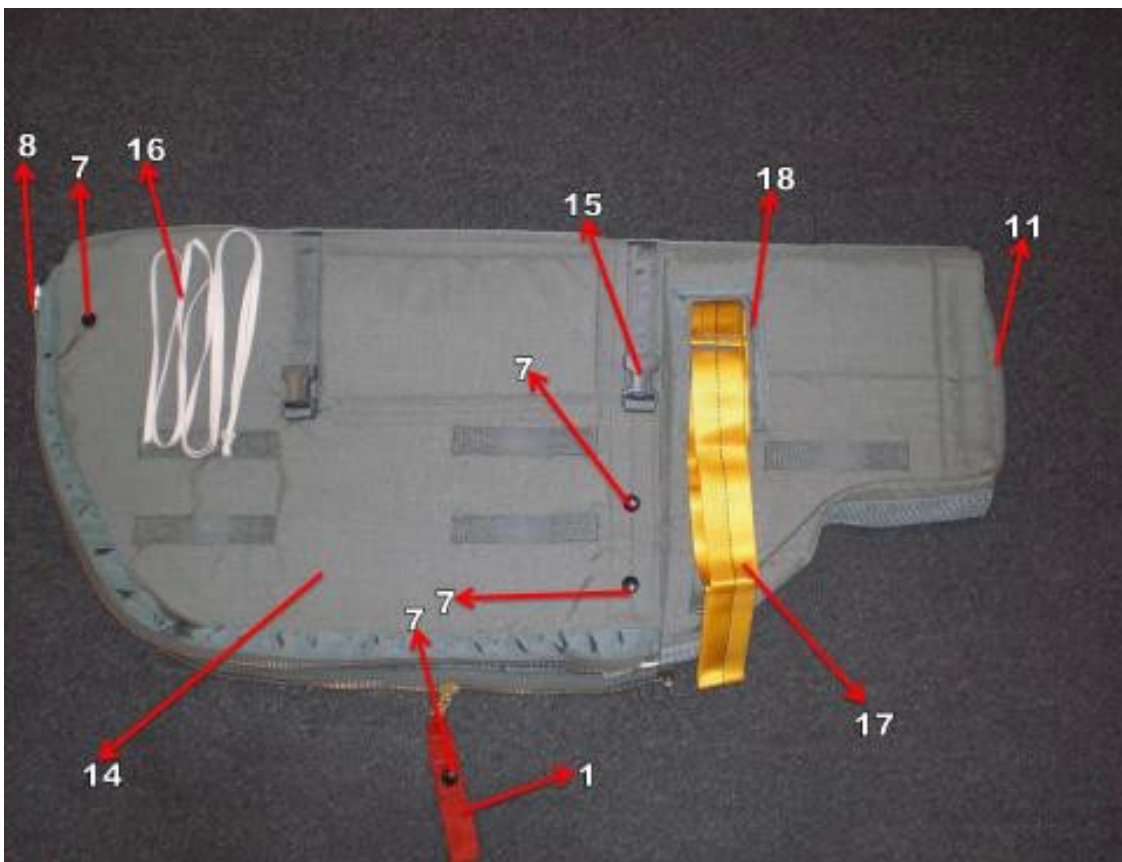
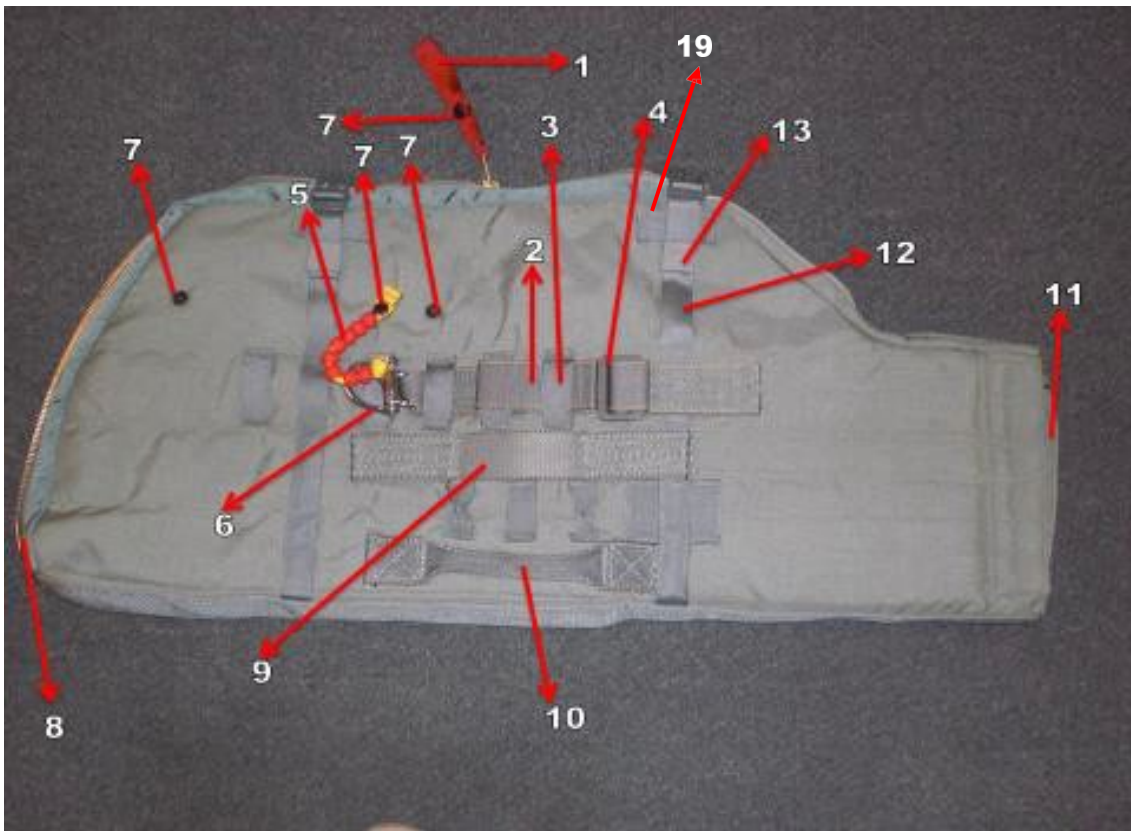
4. Adjustable Buckle
5. Adjustable Strap
6. Chinstrap Fastener
7. Long Portion Chinstrap
8. Short Portion Chinstrap
9. Webbing Retainer
10. Nape Pad
11. Hook Disk

**Head Loc H Nape Retention System**

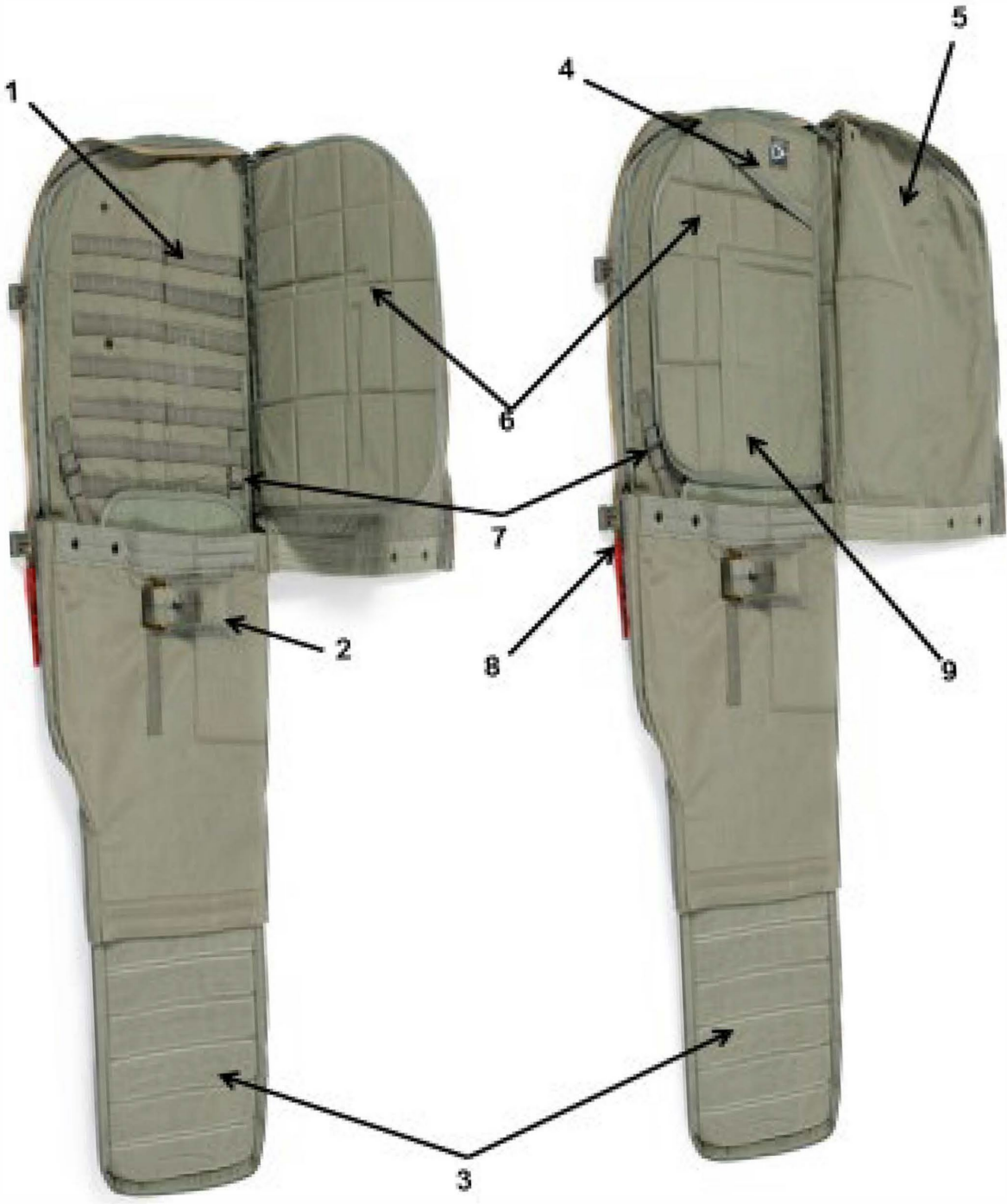
1. H-Nape Pad Head Loc Slider
2. H-Nape Pad
3. Nape Pad Retaining Strap
4. Plastic Oval Link
5. Adjustable Strap
6. Head Loc Slider
7. Chinstrap Buckle
8. Long Portion Chinstrap
9. Short Portion Chinstrap
10. Head Loc Attaching Strap



1. Slide Fastener and Tabbed Thong
2. Adjusting Strap
3. Pouch Attachment Ladder System Webbing
4. Friction Adapter
5. Yellow Safety Lanyard
6. Snap Shackle
7. Snap Fastener
8. Upper Spring Stop
9. Attachment Strap
10. Carrying Handle
11. Adjustable Nose Cone
12. Compression Strap
13. Webbing Retainer
14. Closing Flap
15. Quick Release Buckle
16. Upper Tie Down Tape
17. Lower Tie Down Strap
18. Lower Tie Down Strap Stow Pocket
19. Vertical Nylon Equipment Hanger



1. Pouch Attachment Ladder System Webbing
2. Lower Tie Down Strap Stow Pocket
3. Pile Tape
4. Rifle Butt Stow Pocket
5. Closing Flap
6. Internal Padded Divider
7. Nose Cone Securing Strap
8. Slide Fastener and Tabbed Thong
9. Internal Pocket



1. Snap Shackle With Yellow Safety Lanyard

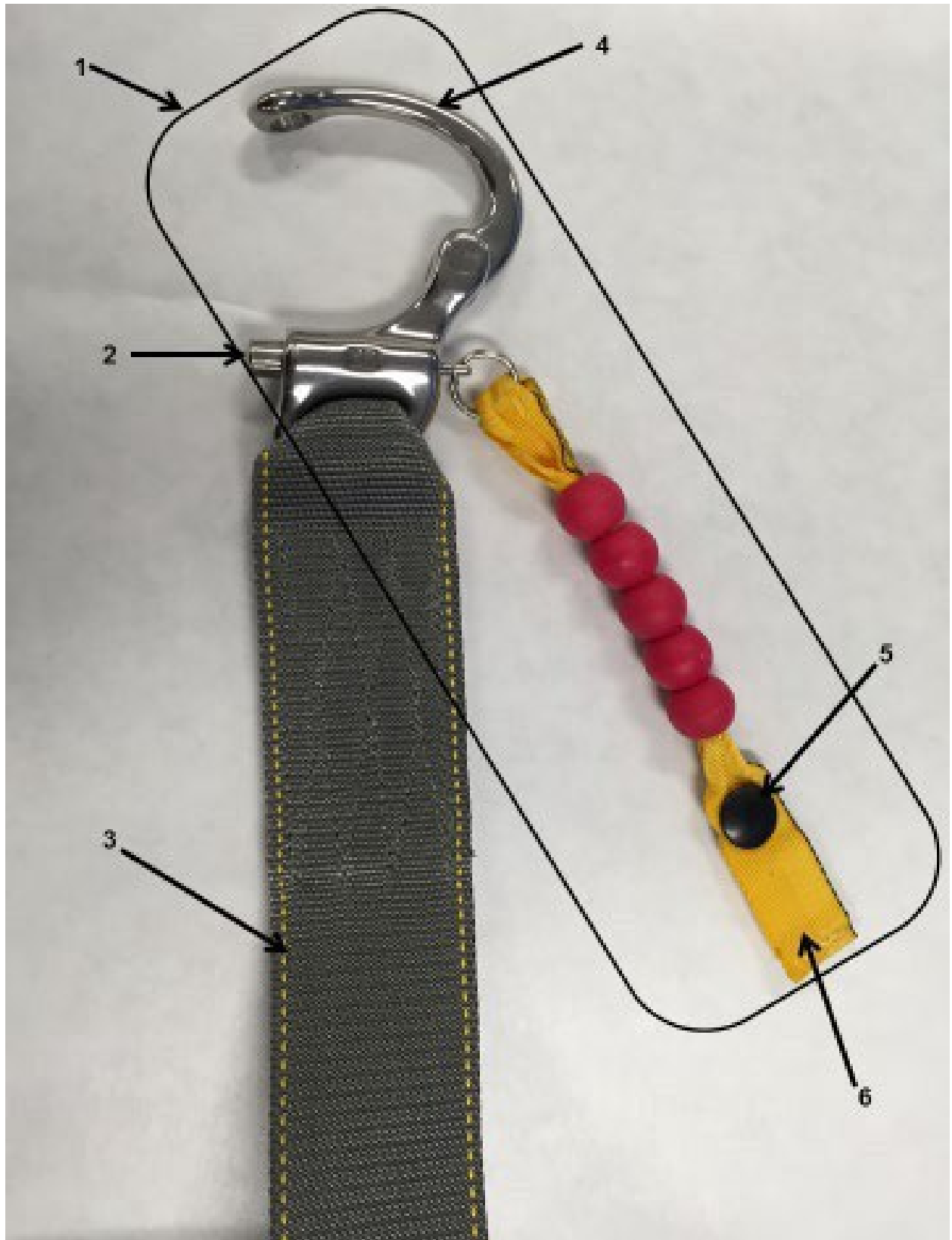
2. Locking Pin

3. Adjusting Strap

4. Opening Gate

5. Snap Fastener

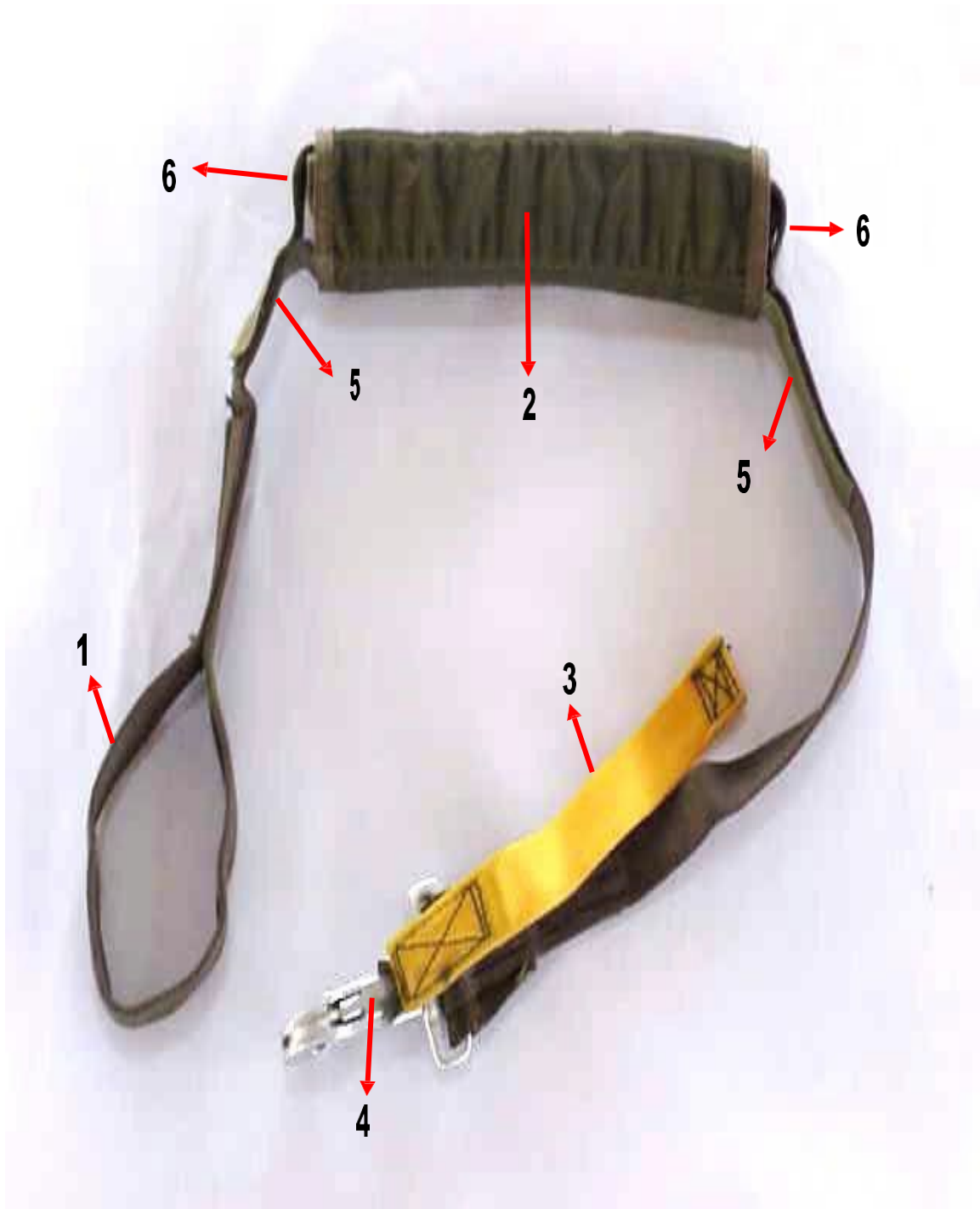
6. Yellow Safety Lanyard



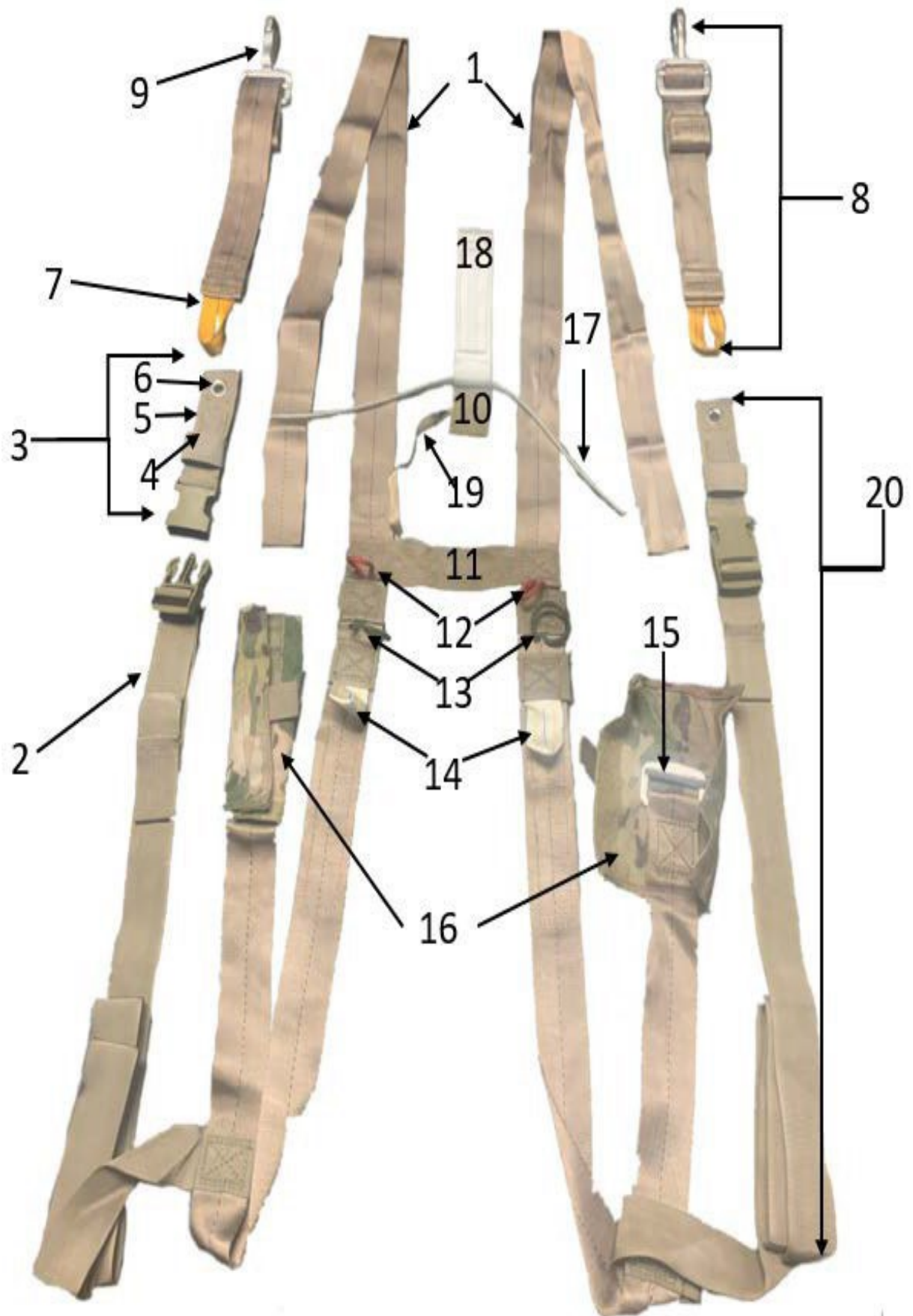
1. Slide Fastener and Tabbed Thong
2. Upper Spring Stop
3. Snap Fastener



1. Looped End Hook Pile Tape Lowering Line
2. Retainer Flap
3. Yellow Safety Lanyard
4. Ejector Snap
5. Hook Tab
6. Pile Tab

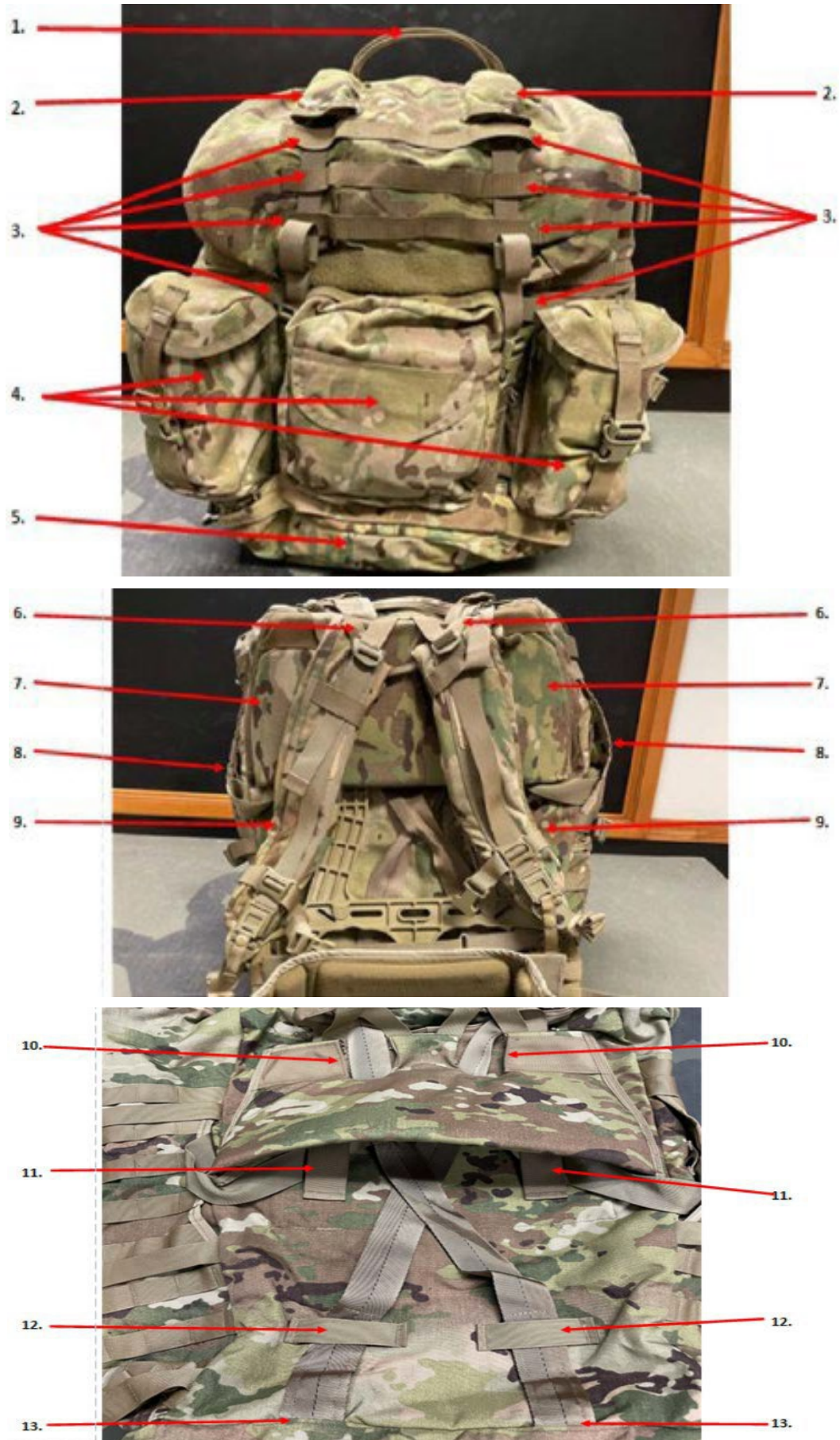


1. Equipment retainer strap
2. Male portion leg strap release assembly
3. Female portion leg strap release assembly
4. Webbing retainer
5. Cable loop retainer
6. Grommet
7. Yellow Attaching loop
8. Adjustable Equipment Ring attaching strap
9. Snap hook
10. Release handle assembly
11. Release handle cross strap
12. Red attaching loop
13. Green attaching loop
14. White attaching loop
15. Friction adapter
16. Friction adapter protective cover
17. Release handle cable
18. Release handle
19. Release handle lanyard
20. Adjustable leg strap



**Modular lightweight load carrying equipment (MOLLE) 4000**

1. Carrying Handle
2. Friction Adapter Stowage Pocket
3. Air Item Routing Channel(Front)
4. Outer Accessory Pouch
5. Air Item Stowage Pocket
6. "V" Shaped Load Lifter
7. Back Pad
8. Adjustable Leg Strap Stowage Pocket
9. Adjustable Shoulder Carrying Strap
10. "U" Shaped Channel
11. Adjustable Leg Strap Routing Channel
12. Air Item Routing Channel(Rear)
13. Air Item Stowage Pocket Pass Through Slot



# **“A” Series Containers**

## **TC 3-21.220 Chapter 14**

## **TM 4-48.03 Chapters 3-6**

### **A-7A CARGO SLING**

The A-7A cargo sling consists of the following three components:

- 1) (1) Strap
- 2) Friction Adapter
- 3) (1) “D” Ring

### **STRAP**

Length ○ 188 inches

Material ○ Type X Cotton or Type VII Nylon

### **CHARACTERISTICS**

Weight ○ 8 lbs. (Complete set: 4 Straps, 4 “D” Rings)

T-10 Cargo Parachute (Cargo Parachute Not Included)

- Maximum weight: 500 lbs.
- Minimum Weight: 90 lbs.
- It is recommended that the load does not exceed 350 lbs for training.

Maximum Dimensions

- 30 inches Wide
- 48 inches Long/Deep
- 66 inches High (to include the Cargo Parachute)

Minimum Dimensions

- Must be large enough to stabilize the cargo parachute

### **LOAD CONFIGURATIONS**

- 2 Strap Load  
90-300 lbs.
- 3 Strap Load  
300-400 lbs.
- 4 Strap Load  
400-500 lbs.

When Rigging the A-7A Cargo Sling as a 3 Strap Load conduct the following actions:

- 1 strap is laid out as the main strap, thick lip portion of the friction bar facing down and away from the load
- 2 straps will be laid out parallel to each other over the main strap approximately 14 to 16 inches apart, thick lip portion of the friction bar facing down and away from the load
- Center the load on the straps, rough side toward the friction adapters of the parallel straps
- Route free running end of main strap through all appropriate handles on the load
- Route free running end of main strap through both “D” rings
- Secure the main strap tightly
- Roll all excess webbing hand over hand toward the load
  - Secure with ¼ inch cotton webbing using a surgeon’s knot locking knot
- Parallel straps are routed from inside to outside or outside to inside through the “D” rings
- Secure the 2 parallel straps tightly
- S-Fold or roll all excess webbing hand over hand toward the load, without creating a ramp-like effect
  - Secure with ¼ inch cotton webbing using a surgeon’s knot locking knot

- Excess webbing should not protrude above the top of the load.
- The load will have a rough side and a smooth side.

When Attaching the T-10 Cargo Parachute You Must Ensure:

- The risers go directly to their attaching points, the "D" rings or either cargo strap
- Place the T-10 cargo parachute on top of the load
- Ensure the bottom portion of the T-10 cargo parachute is on the opposite end of the rolled excess webbing of the main strap
- Secure a sufficient length of ¼ inch cotton webbing and tie a nonslip knot to the "D" ring located beneath the T-10 cargo parachute
- Route the free running end of ¼ inch cotton webbing behind the break cord attaching loop and through the pack opening loop that has been formed by the universal static line
- Route the free running end of ¼ inch cotton webbing under all remaining universal static line and form a truckers hitch at about the halfway point across the T-10 cargo parachute
- Continue to route the free running end of ¼ inch cotton webbing through the opposite "D" ring and then back through the truckers hitch
- Pull the free running end of ¼ inch cotton webbing down applying pressure toward the top of the cargo parachute, securing the cargo parachute tightly to the load
- Tie the free running end of ¼ inch cotton webbing to the "D" ring with a nonslip knot.

Inspection of the T-10 Cargo Parachute Includes the Following Actions:

- Universal Static Line Snap Hook is attached to the outboard anchor line cable with the spring opening gate facing the skin of the aircraft
- Inspect the universal static line to ensure it has no cuts, frays or burns all the way to the pack opening loop and "Static Line, Cargo Only" is stenciled on it with blue strata paint
- Two risers complete with clevis, clevis pin, and safety wire and lanyard are attached to the load. Ensure safety wires are bent and have metal-to-metal contact. If a cotter pin is used, the ends must be bent at a minimum 45 degree angle
- Connector Link Tie is constructed of one turn of ¼ inch cotton webbing and secured with a surgeon's knot locking knot.
- Conduct an inspection of the securing tie ensuring it is constructed of ¼" cotton webbing and is securing the parachute tight to the load and routed underneath the Universal Static Line.

## **A-21 CARGO BAG**

System Weight

- 18 Pounds

The A-21 Cargo bag has four major components. They are:

- 1) Canvas Cover
- 2) Sling Assembly with Scuff Pad
- 3) Quick Release Assembly
- 4) 2 'O' Ring Straps

### **CANVAS COVER**

Material ○ Cotton Duck Material

Dimensions ○ 97 inches by 115 inches

### **SLING ASSEMBLY WITH SCUFF PAD**

Consists of:

- 1 Main Strap, 188 inches in Length
- 2 Side Straps, 144 inches in Length
- 4 Carrying Handles

Dimensions

- 30 Inches by 48 Inches

Consists of:

- Quick Release Device with Safety Clip
- 1 Fixed Strap
- 3 Quick Release Straps

**'O' RING STRAP**

Consists of:

- (1) 4 inch steel rod ring
- (1) 9 Inch strap terminating at a friction adapter
- (1) 7 Inch strap terminating at a "D" Ring

Maximum Dimensions

- 30 inches Wide
  - 48 inches Long/Deep
  - 66 inches High (to include the cargo parachute)
- \*Can be extended to 69 inches high if rigging the stinger missile or 90mm recoilless rifle.

T-10 Cargo Parachute (Cargo parachute not included)

- Maximum weight: 500 lbs.
- Minimum weight: 90 lbs.
- It is recommended that the load does not exceed 350 lbs. for Training.

**THREE SAFETY FEATURES OF THE A-21 CARGO BAG:**

- 1) Safety Fork and Lanyard
- 2) Turn to Unlock
- 3) Strike/Press to Release

When Rigging the A-21 Cargo Bag conduct the Following Actions:

- Spread the canvas cover out with the strap keepers facing up
- Sling assembly with scuff pad is centered on the canvas cover with the carrying handles facing down
  - Thread the straps through the strap keepers
- Flip the canvas cover and sling assembly with scuff pad over
- Center the load
- Wrap the load, side flaps first
- Neatly fold the excess material of the end flaps
- Attach the quick release straps to the quick release assembly with the thick lip portion of the friction bar facing down away from the load
- Center the quick release assembly on the top of the load with the rotating disk facing up
- Route the free running ends of the main strap through the friction adapters on the ring straps
  - Do not tighten
- Route the quick release straps over the top of the steel rod ring
- Place a half turn in the quick release straps so they come underneath the steel rod ring to the side of the load
- Route the free running ends of the side straps through the strap fasteners of the quick release straps
- Alternately tighten the main strap and the side straps, keeping the quick release assembly centered on the load
- Fold excess webbing hand under hand toward the load
  - Secure with ¼ inch cotton webbing using a surgeon's knot locking knot
  - Ensure the excess does not protrude below the bottom of the load

\*\*\* Attaching procedures for the A-21 cargo bag and A-7A cargo sling are similar. The points of attachment for the securing tie on the A-7A cargo sling are the "D" ring or either cargo strap. The points of attachment for the securing tie on the A-21 cargo bag are the steel rod ring of the ring strap group, the main strap, or either side strap. \*\*\*

## **LOAD DATA CARDS**

- A load data card must be present on the outside of all A-Series containers.
- The load data card is a 5 inch x 8 inch card with the following information: Unit, Chalk, Contents, and Gross Weight.
- TC 3-21.220 Chapter 14 (Figure 14-10) provides an example of a Load Data Card for future reference.
- TM 4-48.03 Chapter 1, Section 6 provides additional requirement information for computing the minimum weight of A-series containers

# **Duties and Responsibilities of the Jumpmaster & Safety**

## **TC 3-21.220 Chapters 7-10**

### **KEY PERSONNEL PREREQUISITES (Ch. 7)**

The initial training and follow-on refresher training of key personnel are of major concern to commanders. The proper training and supervision of key personnel ensure that correct procedures and operational safety measures are followed during airborne operations. No member of the Jumpmaster Team may serve as the Airborne Commander during the Airborne Operation being conducted.

### **PRIMARY JUMPMASTER**

- Be a Commissioned officer, Warrant Officer, NCO (E5 or above) (Army, Navy), USMC Cpl, or USAF SRA.
- Be JM Qualified. The JM must be a graduate from an authorized JM Course: USAIS JM School, USAAAS JM School, USAF JM School (CCT), or USASOC JM Course.
- Be a Current Jumper and JM. The JM must have performed JM duties on a high performance fixed wing aircraft within the past 180 days; or completed a JM Refresher course within the past 180 days.
  - Novice Rated: PJ or AJ
  - Advanced Rated (Senior or Master): PJ, AJ, or Safety
- Perform AJ duties TWICE and safety duties TWICE.
- The Primary Jumpmaster may delegate authority, but can NEVER delegate responsibility.

### **ASSISTANT JUMPMASTER**

- Be a Commissioned Officer, Warrant Officer, or NCO (Army, Navy) (E5 or above), USMC Cpl, or USAF SRA.
- Be a Current Jumper and JM.
- Perform Safety Duties TWICE.

### **SAFETY PERSONNEL**

- Be a Commissioned Officer, Warrant officer, or NCO (E5 or above) (Army, Navy), USMC Cpl, or USAF SRA.
- Be a Current Jumper and Current/Qualified Jumpmaster.

### **BASELINING REQUIREMENTS**

In order to "Baseline, a new graduate must perform two safeties and an AJ within 180 days from certification. No further baselining requirements are needed unless the JM has to attend JMR.

### **JUMPMASTER DUTIES AT THE UNIT AREA (Ch. 8)**

The success of airborne operations depends mainly on how well the PJ executes their duties. They must receive mission briefings, conduct sustained airborne training, supervise rigging of equipment, and move to the departure airfield, all within a rigid time schedule. A key factor in the JM duties is the mission briefing. H hour (time on target [TOT]) is established at this time and the backward planning process begins.

Upon notification of designation as PJ, the individual obtains, or is provided, the following information:

- Mission and Ground Tactical Plan
- Air Movement Plan
- Transportation Plan
- Tactical Cross Load
- Weather Decision Times
- Type of Aircraft for the operation and Special Items of Equipment or A-series Containers Aboard Aircraft.
- Aircraft Tail Numbers, Chalk Numbers, and Parking Spots
- Landing Plan
- Parachute Turn-In Plan
- Medical Plan
- Airborne Timeline

## OPERATIONS BRIEF

As soon as practical after the initial manifest call, the Airborne Commander should ensure a MACO Briefing is conducted. <sup>04</sup>MACO stands for Marshalling Area Control Officer. This briefing should include the following information:

- Drop Zone
- Type of Aircraft
- Chalk Number(s)
- Type of Parachute(s)
- Briefing on Serial Numbers, CDS, HE, Airlands, etc. (IF a part of a larger airborne operation)
- Weather Decision Time (for GO, NO GO decision)
- Type of Individual Equipment and Separate Equipment Troops are Jumping (AIRPAC, PDB, PJP, ALICE, MOLLE, SMJP, AT4JP, MAWC's)
- Airborne Timeline
- Length of Flight
- In-flight Emergencies
- Time on Target
- Direction of Flight over DZ
- Drop Altitude
- Predicted Winds on the DZ and Direction
- Route Checkpoints
- Drop Zone Assembly Aids and Area
- Turn-In Plan
- FMC
- Medical
- Obstacles On or Near the DZ

## JUMPMaster AND SAFETY DUTIES AT THE DEPARTURE AIRFIELD (Ch. 9)

Time is a critical factor at the departure airfield. The following events occur at the same time to allow the unit to meet station time:

- Departure Airfield Control Officer (DACO)/JM Update Briefing
- Manifest Distribution
- JM/Aircrew Initial Coordination
- Aircraft Inspection
- Control of Parachute Issue by JM Team
- Rigging/Inspection of Parachutists
- Loading of the aircraft

The PJ usually turns control of the chalk(s) over to the AJ and Safeties while accomplishing update briefings and aircrew coordination. The AJ and safeties control parachute issue and prepare for rigging/inspection of the chalk.

## DACO/JM UPDATE BRIEFING

Upon arrival at the airfield, a member of the JM team (usually the PJ will report to the DACO (Departure Airfield Control Officer) for an update briefing to include:

- Change in the Station Time
- Change in the Overall Operations Plan
- Current Conditions on DZ
- Parking Plan of Aircraft
- Coordination with the USAF Guide
- Action for incidents on aircraft or drop zone, such as jump refusal, towed parachutist, or *any* parachute malfunction
- Any OVERALL CHANGES

## MANIFEST DISTRIBUTION

Normally, there are six manifests (DA Form 1306, Statement of Jump and Loading Manifest) which are distributed as follows:

- Departure Airfield Control Officer—1+Original
- Primary Jumpmaster—1
- Pilot or his Representative—1
- Parachute Issue Facility—1
- Unit Suspense File—1

## JM/AIRCREW COORDINATION

After DACO coordination, a member of the JM team should proceed to the aircraft for coordination. Normally, the aircraft is open with a crew member on board one hour before station time. The first item to discuss is aircraft configuration, in accordance with the unit mission. If the aircraft is incorrectly configured, the requesting unit has the option to accept or reject it. Other items to be discussed, verified, or agreed upon include:

- Control of Door
- Drop Altitude, Speed, and Heading
- Racetracks
- Towed Parachutist Procedures
- Emergency On-board
- Time Warnings and Checkpoints
- Type of Drop
- Type of Parachutes
- Load Time
- Station Time (Critical Time: All Jumpers Seated On-board of Aircraft. Helmets On and Seat Belts Fastened)
- Take-off Time
- Initial contact time with CCT or DZSTL
- TOT
- Additional Details: Emphasize to the aircrew the importance of accurate direction and velocity of DZ winds (before the one-minute time warning) and accurate time warnings.

## AIRCRAFT INSPECTION

The PJ is responsible for this inspection, but may delegate the authority to a member of the JM Team. A member of the JM team, accompanied by a crew member (usually a USAF Loadmaster), inspects the aircraft and coordinates any activities related to the airborne operation.

The member of the JM team must check the exterior and interior portions of the aircraft directly related to the airborne operation. The inspection of the aircraft is the PJM's responsibility. However, it is normally delegated down to a Safety.

While the aircraft is being inspected, a member of the JM team controls the chalk, making sure personnel remain in assigned sticks and are accounted for at all times (AIRBORNE TIMELINE CAN CHANGE AND SHIFT LEFT/RIGHT).

## PARACHUTE ISSUE

On top of supervising parachute draw/issue, Safeties must draw the following:

- Extra Universal Parachutist Recovery Bags (1 per 30 jumpers) or Aviator's Kit Bags (1 per 15 jumpers)  
(The extra universal parachutist recovery bags are used to store the static lines and deployment bags after the jump. The extra universal parachutist recovery bags are placed in or with the safety kit.)
- At least TWO Extra Reserve Parachutes.
- Four Sets of T-11R Inserts for the PJ/AJs and door bundle pushers, if needed.

## **JUMPMaster PERSONNEL INSPECTION (JMPI)**

All current and qualified JM personnel assist in rigging, inspecting, and correcting deficiencies as directed by the PJ. The PJ's role during JMPI is to observe and supervise. The PJ should only perform JMPI to facilitate meeting tstation time. After JMPI of a combat equipped jumper is complete, leg strap release assemblies will be routed as follows:

- Right Door, Right Leg Free, Always Around Weapons Case.
- Left Door, Left Leg Free, Always Around Weapons Case.
- Units Are Authorized to Enforce Using Both Leg Straps.

*Note:* Non-Current JMs can only run a corrections station until they receive JM Refresher.

## **FINAL DACO COORDINATION**

A member of the JM Team will report to the DACO for any special or last minute instructions.

## **MOVEMENT ON THE AIRFIELD**

After JMPI, Safety Personnel load the parachutists aboard the aircraft IAW time agreed upon between Army and Air Force units.

## **LOADING THE AIRCRAFT**

Parachutists are loaded in the aircraft in reverse chalk order. During loading, Safety Personnel move forward in the aircraft ahead of the chalk and supervise seating of the chalk to ensure that all seats are filled, seat belts are fastened, and that personnel are in proper stick order. They also assist in loading equipment aboard the aircraft. The aircrew briefing (to the jumpers) may be given before or after loading the aircraft, but must be completed before takeoff.

## **JUMPMaster AND SAFETY DUTIES IN FLIGHT (Ch. 10)**

- Enforce Flight Rules and Regulations.
- Issue Time Warnings
- Issue Jump Commands
- Perform Door Safety Checks
- Perform Outside Air Safety Checks
- Perform In-flight Rigging Mission
- Control Exit of all parachutists
- Maintain Visual on Jump Caution Lights
- Observe for any unsafe conditions that may occur
- Eject Door Bundles

### **IN GENERAL, THE JM TEAM MUST:**

- NEVER Sacrifice Safety for ANY Reason
- Rehearse Jumpmaster Procedures on the ground
- Hook up before opening jump doors or ramp
- Face open jump door or tailgate when in flight
- Maintain firm handhold on aircraft when working in/near open jump door or ramp
- **Do not allow anyone in/near open jump door without advanced combat helmet, or equivalent, and safety harness or parachute.**

### **SAFETIES**

- Safety Personnel have one of the most important duties during an Airborne operation: properly and safely handling USLM's during exit.
- Proper handling of USLM's can prevent serious injury or death and is vital to mission accomplishment.
- Furthermore, during in-flight rigging missions, Safety Personnel assist in parachute issue, monitor buddy-rigging, JMPI, and operate correction stations as directed by the PJ.
- During flight, Safeties constantly monitor the condition of all paratroopers and distribute air sickness bags where needed.
- After paratroopers are standing, Safeties move forward (toward the cockpit) in the aircraft.
- Safeties must be alert for and correct any excess webbing or loose hook pile tape lowering lines.

- Once they have checked the last paratrooper, and after the command HOOK UP, Safeties return to the aft end of the aircraft. While moving to the aft end, Safeties check the entire length of each jumper's universal static line modified for proper routing from its point of attachment, at the anchor line cable, to the first stow.
- Safeties position themselves near the trail edge of the jump door and control the static line for the JM as he/she performs the door safety check and outside air safety check.
- Safeties take static lines while the JM controls the flow of paratroopers.
- Safeties take static lines with the lead hand and pass them to the trail hand, ensuring the static line is firmly seated against the intermediate anchor line cable support.
- After all paratroopers have exited, including PJ and AJ, the safety visually clears to the rear of the jump door, then gives the **opposite safety** a thumbs-up signal. This indicates that all paratroopers are free and clear of the aircraft.
- Safety personnel and the Loadmaster retrieve the deployment bags and store in UPRBs or AKBs.
- Upon return to the departure airfield, Safeties turn in all air items left on board the aircraft to the storage facility and obtain a receipt. They also turn over any unit or personal equipment left aboard the aircraft to the DACO, as well as all personnel who did not jump.

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## TC 3-21.220 Chapter 17

### SPECIAL CONSIDERATIONS FOR GROUND/SAT

- o Show the correct movement procedures to the aircraft and actions inside the aircraft.
- o Movement in Aircraft: the pilot is briefed to expect rapid shifts in the aircraft's center of gravity during stand up, hook up, and exit of jumpers.
- o Reserve Parachute: crowded conditions inside the cargo compartment could cause accidental activation of a reserve parachute, creating an extremely hazardous situation. During movement, the rip cord handle of the reserve parachute is protected by placing the right hand and forearm over the front of the reserve. This method allows the jumper to control the reserve canopy in case of accidental activation.
- o Space Limitations: the total number of jumpers and air delivery containers must conform to the weight and space limitations of the specific aircraft involved.
- o Extended count: This is due to the slower forward speed of rotary-wing aircraft (normally 90 knots), the downward rotor wash, and the (time) interval between exit and full deployment. The T-11 ATPS and MC-6 series parachute requires about an additional 100 feet of altitude. The jumper extends the normal 4000 count to a 6000 count with the MC-6 and 6000 count to an 8000 count with the T-11 ATPS.

### UH-60A BLACKHAWK

#### CHARACTERISTICS

- o Four Blade, Twin Turbine, Medium Lift single main rotor Helicopter
  - o 8 CE Jumpers. If door gunner/crew chief is present or required, the number is reduced to 6 CE Jumpers.
  - o Drop speed - 65 to 75 knots, 70 knot-optimum.
  - o Drop altitude - 1500 ft. AGL (minimum).
  - o 6000 count for MC-6 and 8000 count for T-11\*\*
- \*\*T-11 ATPS should not be jumped above 1250 feet AGL. Due to the drift characteristics of the parachute, the jumper may drift off of the surveyed drop zone.

#### PREPARATION

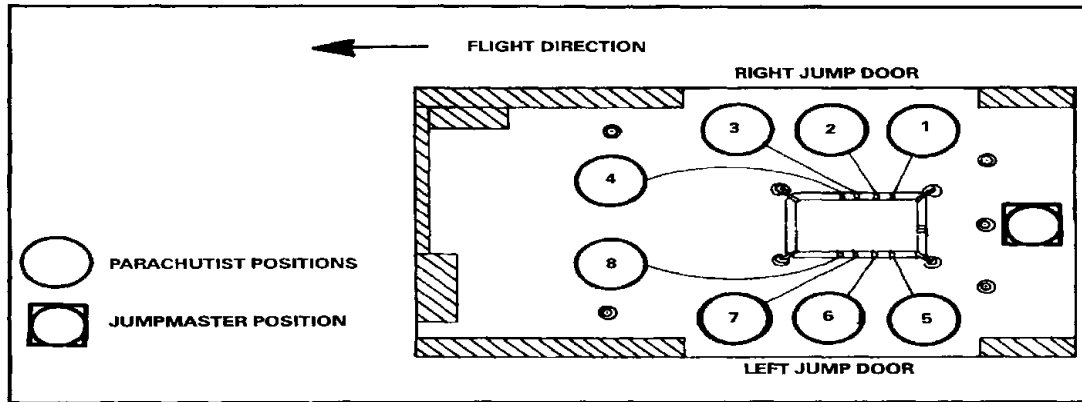
- o Lock both cargo doors in the open position
- o Remove seats and seat belts in the cargo compartment (except as required by aircraft crew and static jumpmaster)
- o Tape cargo floor troop seat and tie-down fitting wells in front of the cargo doors
- o Tape sharp edges and tie-down fitting wells on the cargo floor and door jambs that could cut or fray static lines or snag parachutists' equipment
- o Tape the weather stripping on cargo doors below the door catch
- o Tape up 18 to 24 inches from the cargo compartment
- o Install floor mounted modified anchor line system to the center of the cargo floor and safety belts
- o Ensure that the cargo doors can still be closed for long flights or arctic conditions
- o Tape the radio frequency antenna using a web of tape to ensure that the deployment bags cannot get wrapped around it

#### INSPECTION

- o All protruding & sharp objects are padded and taped
- o Lower leading and trail edges of both doors padded and taped and locked in open position
- o Anchor line system is complete, serviceable, and properly installed
- o 3 modified C3A safety belts are installed; 2 seat belts 112" to 86" long and 1 seat belt 86" to 60" long
- o Headset/helmet intercom cable secured overhead
- o The intercom extension cord secured overhead
- o All loose objects in the cargo compartment are removed or secured forward
- o Safety harnesses and backpack type emergency parachutes are available for the jumpmaster and the crew chief, as required

- Load in reverse order starting with #8
- Jumpers #1-4 load through starboard (right) side door
- Jumpers #5-8 load through port (left) side door
- Jumper #4 reverse right with right hand
- Jumper #8 reverse right with left hand
- Jumpmaster stows excess static line from bottom to top
- Spring opening gate faces toward the front of aircraft

## SEATING ARRANGEMENT



## JUMP COMMANDS

- GET READY
  - Issued 4 minutes or less from drop time with the aircraft level and on final approach. All seat belts are removed and pushed to the rear. The Jumpmaster visually checks to insure they are clear from jumpers and equipment.
- CHECK STATIC LINES
  - The jumpers will lean slightly forward to create space for the Jumpmaster to inspect each jumper's static line for proper routing.
  - The Jumpmaster checks the routing of each static line from the pack tray to the point of attachment to the aircraft's modified anchor line system, ensuring the excess USLM is routed from bottom to top through the static line slack retainer band.
- CHECK EQUIPMENT
  - Each jumper checks his own equipment.
- SOUND OFF FOR EQUIPMENT CHECK
  - Jumpers # 1-8 (in order) give a verbal "Okay" AND a Thumbs Up to the Jumpmaster.
- SIT IN THE DOOR
  - The Jumpmaster will issue this command 30 seconds from the drop time. This command is omitted if the jumpers are already sitting in the door on short flights. Jumpers #4 and 8 remain in place.
- STAND BY
  - Issued 8-10 seconds before the command "GO". Jumpers #4 and 8 remain in place.
- GO
  - This command is verbal along with an individual tap out. Jumpers exit in numerical sequence. As soon as #3 clears the door, #4 moves into the door and waits for his tap out. The same procedure is repeated for the other side. The Jumpmaster controls the exit of each jumper maintaining a two second interval.

## SAFETY CONSIDERATIONS

- Jumpmaster wears headset for communication with Pilot/Crew Chief and DZSTL or DZSO
- Approach the A/C when instructed to do so by the Crew Chief
- Load the A/C when instructed to do so by the Jumpmaster
- Always protect ripcord handle
- Retrieve static lines inside the aircraft and place them inside an AKB or UPRB; Do not unhook them from the modified anchor line until the A/C has landed unless the doors have been closed
- Jumpmaster DOES NOT jump

**CHARACTERISTICS**

- Tandem rotor, heavy lift transport helicopter
- Maximum of 28 combat equipped jumpers
- Drop speed - 80 to 110 knots, 90 knots optimum
- Drop altitude – minimum of 1,500 feet AGL (or 1,250 feet AGL if drop speed is 90 knots or greater)
- 6000 count for MC-6 and 8000 count for T-11\*\*

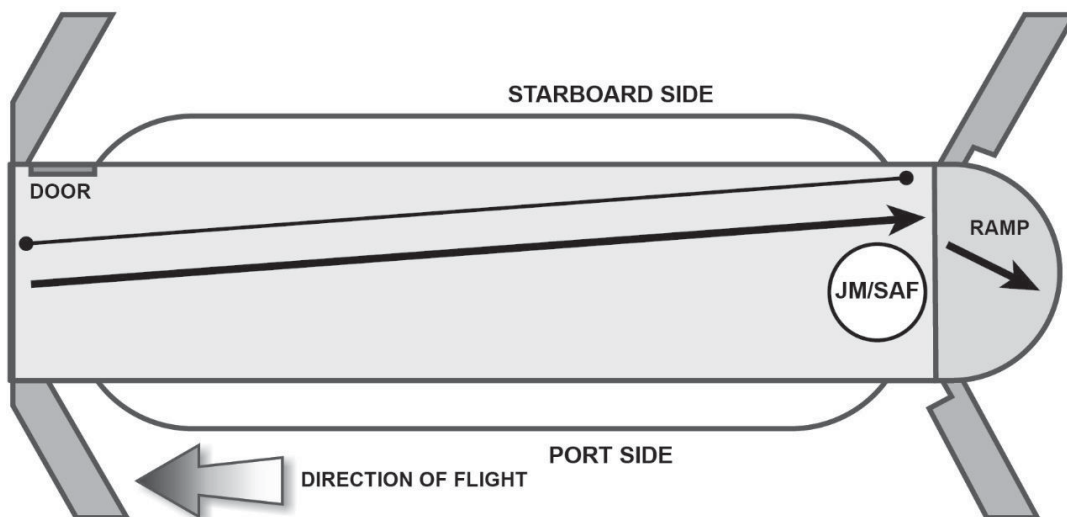
\*\*T-11 parachute should not be jumped above 1250 feet AGL. Due to the characteristics of the parachute, the jumper may drift off of the surveyed drop zone.

**PREPARATION AND INSPECTION**

- Safety belts available for each jumper
- Seats are securely fastened in the down position and can easily be lifted and secured
- Ramp is clean and free of oil and water
- Head phones available and function properly
- Anchor line cable - secured and serviceable

**JUMP COMMANDS**

- GET READY
  - Issued after the six minute time warning. All seat belts are removed.
- PORT SIDE PERSONNEL, STAND UP
  - Jumpers on the port side of the aircraft stand up and secure their seats in the “up” position (if required).
- STARBOARD SIDE PERSONNEL, STAND UP
  - Jumpers on the starboard side of the aircraft stand up and secure their seats in the “up” position (if required).
- HOOK UP
  - On this command, odd-numbered personnel hook up, followed by even-numbered personnel, who hook up between the odd-numbered personnel to form one continuous stick of 28 jumpers. The opening gate of the static line snap hook faces the starboard side of the aircraft
  - After hooking up, the static line is controlled by each jumper in a reverse bight at waist level in the left hand.
- CHECK STATIC LINES
- CHECK EQUIPMENT
- SOUND OFF FOR EQUIPMENT CHECK
- STAND BY
  - Issued 8-10 seconds before the command “GO”. Jumper #1 assumes a standing position at the ramp hinge (near center) of the aircraft.
- GO:
  - Jumper #1 walks off the port side corner of the ramp. The jumpmaster controls the flow from his location on the port side near the ramp hinge, maintaining a one second interval between jumpers.



- Best ramp angle is 3 degrees below horizontal
- Ramp is not opened until all paratroopers have hooked up to the anchor line cable
- Jumpmaster wears a safety harness, a BA-22 parachute or an Advanced Emergency Bailout Parachute (AEPB)
- If the JM is jumping, a Static Safety is required.
- Always protect ripcord handle

**JUMPMaster CURRENCY PREREQUISITES FOR A ROTARY-WING/NONSTANDARD AIRCRAFT**

- To perform duties of the PJ on a rotary-wing/nonstandard aircraft, the JM must first meet the performance requirements of the PJ on a fixed-wing aircraft.
- Once a Jumpmaster has become current on a fixed-wing, high performance aircraft, the Jumpmaster may maintain currency from a rotary-wing/nonstandard aircraft with the exception of aircraft utilizing exits from a seated position (UH-60, UH-1, etc.) during a 180 day period. However, the next Jumpmaster duty counted for currency must be from a fixed-wing, high performance aircraft within 180 days from the date of the rotary-wing/non-standard aircraft duty.
- A Jumpmaster cannot maintain currency with two consecutive Jumpmaster duties from a rotary-winged/nonstandard aircraft.
- This allows all Jumpmasters one year to execute Jumpmaster duties from a fixed-wing, high performance, aircraft to maintain currency.

## TC 3-21.220 Chapter 16

### **C-130 HERCULES**

#### **CHARACTERISTICS**

- Medium range, high-wing transport aircraft that comes in several models
- Powered by four turbo prop engines
- Drop speeds are between 125-135 knots (130 knots being optimum)

#### **FOR AIRBORNE OPERATIONS IT COMES EQUIPPED WITH:**

- Two paratroop doors- 72 inches in height, 36 inches in width
- Four anchor line cables - each can accommodate a maximum of 20 jumpers.
- Each Anchor Line Cable is Constructed of 7 Strands (7 Wires Each).

- **Anchor Line Cables:**

➤ *Anchor Line Cables must be free of all broken or frayed wires. If a broken or frayed wire is discovered during the aircraft inspection, that cable must be replaced or not utilized during that airborne operation.*

- Seven sets of jump caution lights (2 lights per set, for a total of 14 lights)
- 3 Minute slow down
- Towed Parachutist Retrieval System – 1 per door (both must be serviceable)
- Over the Ramp operations are possible
- Wind Deflector extends 15 1/2 inches from the skin of the aircraft

#### **TWO SEATING CONFIGURATIONS**

- Tactical Airdrop Personnel (TAP)
- Armored Tactical Airdrop Personnel (ATAP)

#### **THREE BASIC SEATING ARRANGEMENTS**

- Mass Operations
- In-Flight Rigging Mission
- Over the Ramp Operations

#### **MASS OPERATIONS**

- Accommodates 62 combat equipped jumpers
- 64 seats required
- 6 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 2 Non Jumping Safeties
  - 2 USAF Loadmasters

#### **IN-FLIGHT RIGGING MISSION**

These procedures should be used on all flights of 4 hours or more in duration.

In-flight rigging conserves the energy of the jumpers and maximizes comfort for as long as possible.

- Accommodates 52 combat equipped jumpers
- 54 seats required
- 10 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 4 Additional JM's from chalk
  - 2 Non Jumping Safeties
  - 2 USAF Loadmasters

#### **OVER THE RAMP OPERATIONS**

- Accommodates 40 combat equipped personnel
- 42 seats required
- Same Supervisory PAX as Mass Operations

**CHARACTERISTICS**

- Medium range, high-wing transport aircraft that comes in several models
- Powered by four turbo prop engines
- Drop speeds are between 125-135 knots (130 knots being optimum)

**FOR AIRBORNE OPERATIONS IT COMES EQUIPPED WITH**

- Two paratroop doors-72 inches in height, 36 inches in width
- Four anchor line cables - each can accommodate a maximum of 31 jumpers.
- Each Anchor Line Cable is Constructed of 7 Strands(7 Wires Each).
- Anchor Line Cables:
- Anchor Line Cables must be free of all broken or frayed wires. If a broken or frayed wire is discovered during the aircraft inspection, that cable must be replaced or not utilized during that airborne operation.
- Seven sets of jump caution lights (2 lights per set for a total of 14 lights)
- Towed Parachutist Retrieval System – 1 per door (both must be serviceable)
- Over the Ramp operations are possible
- Wind deflector extends 15 ½ inches from the skin of the aircraft

**TWO SEATING CONFIGURATIONS**

- Tactical Airdrop Personnel (TAP)
- Armored Tactical Airdrop Personnel (ATAP)

**THREE BASIC SEATING ARRANGEMENTS**

- Mass Operations
- In-Flight rigging mission
- Over the Ramp Operations

**MASS OPERATIONS**

- Accommodates 76 combat equipped jumpers
- 78 seats required
- 6 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 2 Non Jumping Safeties
  - 2 USAF Loadmasters

**IN-FLIGHT RIGGING MISSION**

- Accommodates 74 combat equipped jumpers
- 76 seats required
- 12 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 6 Additional JMs from Chalk
  - 2 Non Jumping Safeties
  - 2 USAF Loadmasters

**OVER THE RAMP OPERATIONS**

- Accommodates 54 combat equipped personnel
- 56 seats required
- Same Supervisory PAX as Mass Operations

## EXITING PROCEDURES



### WHEN CONDUCTING OVER THE RAMP OPERATIONS:

- o The anchor line cables (only two are used—one on each side) are rigged from the forward outboard anchor line cable attachments to the aft inboard anchor line cable attachments. The anchor line cable stop (a small clevis, padded and taped) must be installed on the anchor line cable 20 inches forward of the aft anchor line cable attachment bracket
- o Maximum 20 jumpers per cable
- o Static line is controlled by each jumper in a reverse bight
- o Exit the tail gate at a 30 degree angle away from anchor line cable being used

|                                  |                          | AIRCRAFT PLATFORM      |                                                                                 |                        |                                                                                 |                        |                                                                                          |
|----------------------------------|--------------------------|------------------------|---------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------|------------------------|------------------------------------------------------------------------------------------|
|                                  |                          | C-130 HERCULES         |                                                                                 | C-130 J30 HERCULES     |                                                                                 | C-17 GLOBEMASTER III   |                                                                                          |
| THREE BASIC SEATING ARRANGEMENTS | MASS OPERATIONS          | JUMPERS:               | 62                                                                              | JUMPERS:               | 76                                                                              | JUMPERS:               | 100                                                                                      |
|                                  |                          | SEATS:                 | 64                                                                              | SEATS:                 | 78                                                                              | SEATS:                 | 102                                                                                      |
|                                  |                          | SUPERVISORY PERSONNEL: | 6<br>(1 PJ, 1 AJ, 2 NON JUMPING SAFETES, 2 USAF LOADMASTERS)                    | SUPERVISORY PERSONNEL: | 6<br>(1 PJ, 1 AJ, 2 NON JUMPING SAFETES, 2 USAF LOADMASTERS)                    | SUPERVISORY PERSONNEL: | 5<br>(1 PJ, 1 AJ, 2 NON JUMPING SAFETES, 1 USAF LOADMASTER, 1 RIGGER)                    |
|                                  | INFLIGHT RIGGING MISSION | JUMPERS:               | 52                                                                              | JUMPERS:               | 74                                                                              | JUMPERS:               | 100                                                                                      |
|                                  |                          | SEATS:                 | 54                                                                              | SEATS:                 | 76                                                                              | SEATS:                 | 102                                                                                      |
|                                  |                          | SUPERVISORY PERSONNEL: | 10<br>(1 PJ, 1 AJ, 4 ADDITIONAL JMS, 2 NON JUMPING SAFETES, 2 USAF LOADMASTERS) | SUPERVISORY PERSONNEL: | 12<br>(1 PJ, 1 AJ, 6 ADDITIONAL JMS, 2 NON JUMPING SAFETES, 2 USAF LOADMASTERS) | SUPERVISORY PERSONNEL: | 12<br>(1 PJ, 1 AJ, 6 ADDITIONAL JMS, 2 NON JUMPING SAFETES, 1 USAF LOADMASTER, 1 RIGGER) |
|                                  | OVER THE RAMP OPERATIONS | JUMPERS:               | 40                                                                              | JUMPERS:               | 54                                                                              | JUMPERS:               | NOT AUTHORIZED                                                                           |
|                                  |                          | SEATS:                 | 42                                                                              | SEATS:                 | 56                                                                              | SEATS:                 |                                                                                          |
|                                  |                          | SUPERVISORY PERSONNEL: | 6<br>(1 PJ, 1 AJ, 2 NON JUMPING SAFETES, 2 USAF LOADMASTERS)                    | SUPERVISORY PERSONNEL: | 6<br>(1 PJ, 1 AJ, 2 NON JUMPING SAFETES, 2 USAF LOADMASTERS)                    | SUPERVISORY PERSONNEL: |                                                                                          |

## C-17 GLOBEMASTER III

### CHARACTERISTICS

- Swept wing, four engine, turbofan aircraft
- Can carry large payloads inter-continental distances without refueling
- In-flight refueling capability increases the deployment range
- Drop speed of 130 Knots +/- 3 Kts.
- 12 sets of jump caution lights (each set consists of 3 lights for a total of 36 lights)
- 6 Minute slow down
- Four anchor line cables, each constructed of Seven Strands (7 Wires Each).
- **Anchor Line Cables:**
  - **Anchor Line Cables must be free of all broken or frayed wires. If a broken or frayed wire is discovered during the aircraft inspection, that cable must be replaced or not utilized during that airborne operation.**
    - 27 Outboard
    - 24 Inboard
- 2 Static Line Retrieval Systems
- Dedicated Antenna for TACSAT
- 1 USAF Loadmaster
- A/C must have a deck angle of 6-7 degrees below horizontal to compensate for the stall speed of the aircraft.
- There is a total of 102 seats available for use.
- Wind deflector extends 35 degrees plus or minus 5 degrees from the skin of the aircraft.
- Over the ramp operations are not authorized on the C-17 GLOBEMASTER III.

### TWO BASIC SEATING ARRANGEMENTS (100 Combat Equipped Jumpers)

- Mass Operations
- In-Flight Rigging Mission

### MASS OPERATIONS

- 5 Supervisory Personnel
  - 1 Primary JM
  - 1 Assistant JM
  - 2 Non Jumping safeties
  - 1 USAF Loadmaster

### IN-FLIGHT RIGGING MISSION

- **12 Supervisory Personnel**
  - 1 Primary JM
  - 1 Assistant JM
  - 6 Additional from Chalk
  - 2 Non Jumping Safeties
  - 1 USAF Loadmaster
  - **1 Rigger for in-flight rigging is mandatory on a C-17 for 5 Foot Universal Static Line Extension configuration alterations or additions**

The difference in the required duties of the Drop Zone Safety Officer (DZSO) as opposed to the Drop Zone Support Team Leader (DZSTL) is tied to whether or not the mission is supported by an Air Force Combat Control Team. As a result of a signed Memorandum of Agreement (MOA), we are training you to perform duties for select Computed Air Release Point (CARP) operations without the presence of CCT. Therefore, your designation for those operations will become Drop Zone Support Team Leader (DZSTL).

### **DZSO**

When acting as the DZSO, you are the Airborne Commander's direct representative on the ground.

### **DZSO PREREQUISITES**

- Must be an Officer, Warrant Officer, or NCO (USAF must be SRA and USMC must be CPL).
- Must be a current and qualified Jumpmaster.
- Must have observed DZSO duties on a personnel or heavy equipment drop at least once.
- Performed duties as A/DZSO once.
- Must perform duties once every 180 days on a successful airborne operation to remain current.

### **ADZSO PREREQUISITES**

- Must be an Officer, Warrant Officer, or NCO (USAF must be SRA and USMC must be CPL).
- Must be a current and qualified Jumpmaster for personnel or heavy equipment drop.
- Must be certified as an A/DSO by attended one of the approved JM courses
- Must perform duties once every 180 days on a successful airborne operation to remain current or completed a Jumpmaster refresher course.

### **DZSTL**

When acting as the DZSTL you are the Direct Representative of the Airborne Commander and the Air Lift Commander.

### **DZSTL PREREQUISITES**

- Must be an Officer, Warrant Officer, NCO (USAF must be SRA and USMC must be CPL).
- Must have received training on conducting airdrop operations without the support of a CCT (Observed and Assisted).
- Must perform duties once every 180 days on a successful airborne operation to remain current.

### **DUTIES AND RESPONSIBILITIES OF THE DZSO AND DZSTL**

The DZSO and DZSTL have specific duties and responsibilities they must perform before, during and after the airborne operation, including:

- Attends pre-mission briefings
- Coordinates with CCT, if required
- Opens the DZ through range control and closes it when accountability of all personnel, air items, and equipment is complete.
- Has the DZ fully operational one hour prior to drop time
- Ensures that all water obstacles are covered by a boat detail
- A boat detail is required if the water obstacle is more than four feet deep and 40 feet wide and is within 1000 meters from any portion of the surveyed DZ
- Conduct recon of DZ prior to execution of the mission for obstacles or safety hazards
- Establishes communications with the DACO NLT one hour prior to Drop Time
- Ensures that power is shut down to all power lines (if possible) near the drop zone NLT 15 minutes prior to drop time
- Co-locates with USAF CCT NLT one hour prior to drop time and takes initial wind readings, if required.
- Monitors surface winds from the Point of Impact (PI)
- Assistant DZSO/DZSTL monitors surface winds from the highest point of elevation or trail edge of DZ

- Establishes 10 minute window 12 MINUTES prior to drop time
  - Give a GO or NO GO 2 minutes prior to drop time
- Relays No Drop Signal if:
  - Surface winds exceed 13 knots within 10 minutes of the actual drop for personnel drops
  - An unsafe act is observed on ground or in the air
- DZSO/DZSTL will have positive communication with the A/DZSO or A/DZSTL, if needed, and the senior medic
- Controls all medical evacuations (ground or air)
- Operates all visual acquisition aids
- Submits post mission reports properly
- Ensures that no unauthorized vehicles are on the DZ
- Ensures all helicopters operating in the vicinity keep at least 1 km from the DZ NLT 10 min prior to TOT (Transition Frequency)
- Is familiar with the duties of the Malfunctions Officer/NCO IAW AR 59-4
- Notifies DACO of any significant activities during operation
- Assists the Airborne Commander in the development of a written risk assessment for high and extremely high risk events
- The DZSO and DZSTL must co-locate at the point of impact (for personnel drops) NLT 15 minutes before drop time. The A/DZSO is at the highest point of the drop zone or trail edge of DZ. For combination airdrop operations, the DZSO/DZSTL must follow the procedures for heavy drop operations, but observe the jumpers as they exit the aircraft
- Relays a ground weather decision and CLEAR TO DROP or NO DROP signal to the lead aircraft two minutes before the drop for each pass
- During night drops, ensures all lights that are on or next to the drop zone and are not a part of the Drop Zone Marking System are turned off five minutes before drop time and remain off during the drop (except those lights that mark obstacles)
- Contact the pilot of the aircraft immediately after the drop and ask if any personnel or equipment did not drop. He relays this information to the airborne commander on the drop zone

### **COMPLETE CONTROL GROUP**

PERSONNEL AIRDROPS- MULTIPLE AIRCRAFT OR SINGLE AIRCRAFT OPERATIONS ON A DZ OF 2100 METERS OR MORE IN LENGTH OR MORE THAN 20 SECONDS OF EXIT TIME (GREEN LIGHT)

- 1 DZSO or DZSTL and 1 Assistant DZSO or DZSTL
- 2 Medical Personnel with 2 FLAs (equipped with supplies and radios)
- MALFO w/ Camera and Radio
- Parachute Recovery Detail
- Parachute Turn-In Detail (with vehicles)
- 2 Radios – DZSO, DZSTL and A/DZSO, A/DZSTL
- 3 Wind Measuring Devices: DIC 3, TURBOMETER, AN/PMQ-3A
- 2 Compasses
- VS-17 Panels
- Binoculars, Strobe Light, Signal Mirror
- Smoke Grenades (as required)
- Vehicles (as required)
- Road Guards (as required)
- Pi-Ball Kit (If applicable)
- Military Police (if applicable)
- Boat Detail (if applicable)

### **PARTIAL CONTROL GROUP**

PERSONNEL AIRDROPS-SINGLE AIRCRAFT OPERATIONS ON A DZ LESS THAN 2100 METERS IN LENGTH OR LESS THAN 20 SECONDS OF GREEN LIGHT

- 1 DZSO, DZSTL
- 1 Radio
- 1 Compass
- 1 Medic with 1 FLA (Medical Supplies, Necessary Personnel, Radio)
- All other requirements remain unchanged

### **DZSTL ADDITIONAL SUPPORT REQUIREMENTS FOR NIGHT-TIME MISSIONS**

- Minimum of 11 Omni-Directional White Lights
- 1 Colored Filter to Fit One Omin-Directional Light
- 1 Amber Rotating Beacon
- Red Star Clusters (if required)
- 2 Sets of Night Vision Goggles

### **PUBLICATIONS**

- INSTALLATION RANGE REGULATION
- MOST RECENT MAP SHEET OF THE AREA
- COPY OF UNIT ASOP
- ANY OTHER LOCALLY REQUIRED REGULATIONS
- COPY OF DROP ZONE SURVEY
- AR 59-4 Joint Airdrop Inspection Records ,Malfunction/Incident Investigations, and Activity Reporting
- TC 3-21.220
- BLANK FORMS NEEDED FOR MISSION

Prior to execution of the Airborne Operation, the DZSO, DZSTL & A/DZSO, A/DZSTL must attend a detailed Pre-Mission Briefing. If possible, this should be done directly with the aircrew. If it is not possible, the unit's S3 Air should provide the minimum essential information. The following checklist should be used as a guide to insure all the pertinent information has been provided:

- JA/ATT (Joint Airborne/Air Transportability Training) Mission Sequence Number
- Type and Number of Aircraft
- Type of Drop
- Type of Release
- Type of Parachutes
- Verify DZ Name/Location
- Verify Current DZ Survey Data
- TOT(s) or Block time
- No Drop Procedures.
- Number of Jumpers or Bundles, CDS, HE
- DZ Markings
  - RAM
  - Panels/Lights
  - Smoke/Flares
  - Emergency no drop procedures
  - Mission cancellation indication
- DZ Support
  - Communications Available
  - Frequencies/Call Signs
  - Visual Acquisition Aids
  - NAV AIDS
- Aircraft/Mission Commander: POC Information
- DZSO/DZSTL Name, Rank, Unit and Telephone Number
- Post Mission Report Paperwork/Worksheets for Closure Report

## DROP ZONE SURVEYS

There are 2 types of Drop Zone surveys:

- Tactical Assessment of Drop Zone- Valid for 24 hours or until Mission Complete (Last Suspended Object)
- AF IMT 3823-which would be located in the ZAR Valid for 5 years from the date of the MAJCOM approval signature

### AF IMT 3823

- All information needed concerning the drop zone is on the AF IMT 3823.
  - The Air Force has a listing of all available drop zones that were approved for use. The list is called the **Zone Availability Report (ZAR)**. This list is attainable through the Air Force. ZAR is compiled from inputs provided by 21<sup>st</sup> AF, McGuire AFB, NJ and 22<sup>nd</sup> AF, Travis AFB, CA. It identifies drop zones, landing zones, and extraction zones available in CONUS for use by the Air Mobility Command.
- Instructions for filling out AF IMT 3823 can be found in the Pathfinder FM 3-21.38.
- All Obstacles within a 1000 meters of DZ must be identified.
- Once AF IMT 3823 has been completed, it must be verified by the first O-6 of the supported unit.
- Completed AF IMT 3823 is good for 5 years from date of MAJCOM approval signature.
- AF IMT 3823 requires 3 signatures for the surveyed Drop Zone to be included in the ZAR.

The columns of the AF IMT 3823 are explained below and all blocks require an entry including "N/A" if applicable.

1a. DZ name

1b. ZAR index number (AF drop zone website reference number)

2a. Country

2b. State

3. Map sheet and series

information 4a1. Date DZ was surveyed

4a2. Name and rank of surveyor

4a3. Contact phone number

4a4. Surveyor's name

4b. DZ approval or disapproval by mission type and day use

4c. Date approved for ground operations

4d. Date of safety of flight review

4e. Date of MAJCOM approval – DZ survey is good for five years from this date

5a. Controlling unit or agency

5b. Memorandum of understanding /land use agreement

5c. Contact phone number

5d. Range control frequencies (FM/UHF)

5e. Contact phone number

6a-c. Dimensional data (length, width, radius)

6d-f. PI distances from the lead edge of the DZ

7a-d. DZ axis data (direction of flight)

8a-d. Ground point elevations

9a-f. DZ coordinates

9g. Point of origin data (prominent terrain feature used to help find PI)

9h. DZ center point and PI grid locations

9i. DZ corners (grid coordinates for the corners of the DZ)

10. DZ diagram or digital photographic

11. Remarks (all hazards/ restrictions and pertinent information about the DZ)

12. Photograph available

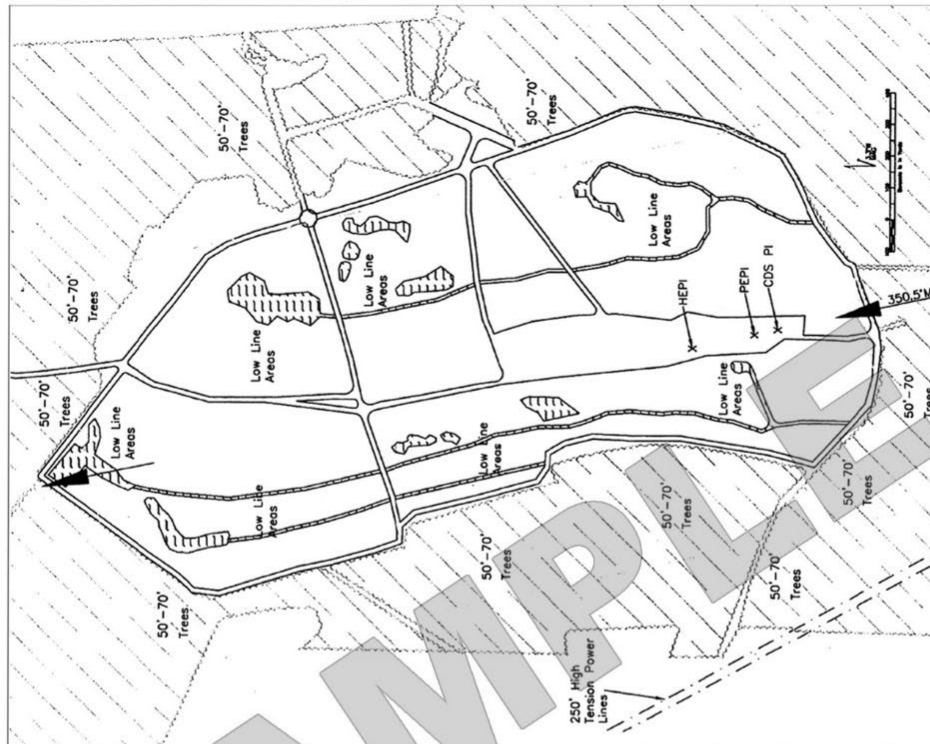
13. Low level routes available

| AIRBORNE UNIT ASSUMES RESPONSIBILITY FOR PERSONNEL INJURY AND EQUIPMENT DAMAGE ON DZ              |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|----------------------------------|-----------------------------------|-----------------------------|-------|
| <b>DROP ZONE SURVEY</b>                                                                           | 1A. DZ NAME<br>FRYAR DZ                                                           |                                                                                                 |     | 1B. ZAR INDEX NO.<br>88                                                                                                                          |                                     | 2A. COUNTRY<br>USA               |                                   | 2B. STATE<br>ALABAMA        |       |
|                                                                                                   | 3. MAP SERIES/SHEET NUMBER/ EDITION/ DATE OF MAP<br>V 745-S FORT BENNING MIM 2014 |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| <b>4. SURVEY APPROVAL/DISAPPROVAL DATA</b>                                                        |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| 4A1. DATE SURVEYED<br>20140801                                                                    |                                                                                   | 4A2. TYPED NAME AND GRADE OF SURVEYOR<br>AVA BROWN, TSGT, USAF                                  |     |                                                                                                                                                  | 4A3. PHONE NUMBER (DSN)<br>999-9999 |                                  | 4A4. UNIT<br>HHC 1/507TH PIR      |                             |       |
| 4B. DROP ZONE APPROVAL/DISAPPROVAL<br>A = APPROVED<br>D = DISAPPROVED                             | FOR                                                                               | CDS/CRL/CRS                                                                                     | PER | HE                                                                                                                                               | MFF                                 | SATB                             | CRRC                              | HSLADS                      | HVCDS |
|                                                                                                   | DAY                                                                               | A                                                                                               | A   | A                                                                                                                                                | A                                   | A                                | D                                 | A                           | A     |
|                                                                                                   | NIGHT                                                                             | A                                                                                               | A   | A                                                                                                                                                | A                                   | A                                | D                                 | A                           | A     |
| 4C. DATE APPROVED FOR GROUND OPERATIONS                                                           |                                                                                   | NAME, GRADE AND SERVICE OF APPROVAL AUTHORITY<br>LIAM SMITH, CPT, USAF                          |     |                                                                                                                                                  |                                     | PHONE NUMBER (DSN)<br>888-8888   |                                   | SIGNATURE<br><br>Liam Smith |       |
|                                                                                                   |                                                                                   | UNIT AND LOCATION<br>15 STS/DO POPE AFB, NC 12345                                               |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| 4D. DATE SAFETY OF FLIGHT REVIEW APPROVED<br><br>20140131                                         |                                                                                   | NAME AND GRADE OF REVIEWING OFFICER<br>NOAH WILLIAMS, MAJ, USAF                                 |     |                                                                                                                                                  | PHONE NUMBER (DSN)<br>777-7777      |                                  | SIGNATURE<br><br>Noah Williams    |                             |       |
|                                                                                                   |                                                                                   | UNIT AND LOCATION<br>300 OSS /OSK CHARLESTON AFB, SC 54321                                      |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| 4E. DATE OF MAJCOM APPROVAL                                                                       |                                                                                   | NAME AND GRADE OF APPROVING AUTHORITY<br>JAMES WILSON, COL, USAF                                |     |                                                                                                                                                  | PHONE NUMBER (DSN)<br>666-6666      |                                  | SIGNATURE<br><br>James Wilson     |                             |       |
|                                                                                                   |                                                                                   | UNIT AND LOCATION<br>666 OG/CC CHARLESTON AFB, SC 54321                                         |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| <b>5. COORDINATING ACTIVITIES</b>                                                                 |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| A. DZ CONTROLLING AGENCY OR UNIT<br>LAWSON ARMY AIRFIELD, FT BENNING, GA                          |                                                                                   |                                                                                                 |     | B. MEMORANDUM OF UNDERSTANDING/LAND USE<br>YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> ATTACHED <input type="checkbox"/> |                                     |                                  | C. PHONE NUMBER (DSN)<br>555-5555 |                             |       |
| D. RANGE CONTROL<br>RANGE CONTROL FM 01.10 / UHF 111.5 (SKYWATCH)                                 |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  | E. PHONE NUMBER (DSN)<br>444-4444 |                             |       |
| <b>6. DZ DIMENSIONS (YDS/MTRS) (FOR CIRCULAR DZ, ENTER RADIUS ONLY)</b>                           |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| A. LENGTH<br>2500 YDS                                                                             |                                                                                   | B. WIDTH<br>1300 YDS                                                                            |     | C. RADIUS<br>N/A                                                                                                                                 |                                     |                                  |                                   |                             |       |
| POINT OF IMPACT DISTANCES FROM DZ LEADING EDGE                                                    |                                                                                   | D. CDS PI<br>275 YDS                                                                            |     | E. PE PI<br>350 YDS                                                                                                                              |                                     | F. HE PI<br>550 YDS              |                                   |                             |       |
| <b>7. DZ AXIS DATA (OPTIONAL FOR CIRCULAR DZ)</b>                                                 |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| A. MAGNETIC<br>350.5                                                                              |                                                                                   | B. GRID (MGRS)<br>347.2                                                                         |     | C. TRUE<br>348                                                                                                                                   |                                     | D. SOURCE/DATE OF VARIATION DATA |                                   |                             |       |
| 8. GROUND POINT ELEVATION                                                                         |                                                                                   | A. CDS PI<br>300'                                                                               |     | B. HE PI<br>300'                                                                                                                                 |                                     | C. PE PI<br>300'                 |                                   | D. HIGHEST<br>323'          |       |
| <b>9. DZ COORDINATES</b>                                                                          |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| A. SPHEROID<br>1866 CLARKE                                                                        |                                                                                   | B. DATUM<br>1927 NA                                                                             |     | C. GRID ZONE<br>16 S                                                                                                                             |                                     | D. EASTING<br>6                  |                                   | E. NORTHING<br>35           |       |
| F. GPS DERIVED COORDINATES<br>YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> |                                                                                   | G. POINT OF ORIGIN<br>FL 92963 72166 SW corner of bus parking pad. PPI 1069 yds at 221 degrees. |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| H. POINT                                                                                          |                                                                                   | MGRS COORDINATES                                                                                |     | WGS84 LATITUDE (D-M.MM)                                                                                                                          |                                     |                                  | WGS84 LONGITUDE (D-M.MM)          |                             |       |
| DZ CENTERPOINT                                                                                    |                                                                                   | FL 92196 72200                                                                                  |     | 32 16.317' N                                                                                                                                     |                                     |                                  | 084 57.561' W                     |                             |       |
| CDS PI                                                                                            |                                                                                   | FL 92383 71383                                                                                  |     | 32 15.844' N                                                                                                                                     |                                     |                                  | 084 57.452' W                     |                             |       |
| PE PI                                                                                             |                                                                                   | FL 92368 71396                                                                                  |     | 32 15.881' N                                                                                                                                     |                                     |                                  | 084 57.487' W                     |                             |       |
| HE PI                                                                                             |                                                                                   | FL 92331 71574                                                                                  |     | 32 15.977' N                                                                                                                                     |                                     |                                  | 084 57.482' W                     |                             |       |
| <b>I. DZ CORNERS MGRS COORDINATES</b>                                                             |                                                                                   |                                                                                                 |     |                                                                                                                                                  |                                     |                                  |                                   |                             |       |
| LEFT LEADING EDGE<br>FL 91855 70958                                                               |                                                                                   |                                                                                                 |     | RIGHT LEADING EDGE<br>FL 93017 71207                                                                                                             |                                     |                                  |                                   |                             |       |
| LEFT TRAILING EDGE<br>FL 91240 73150                                                              |                                                                                   |                                                                                                 |     | RIGHT TRAILING EDGE<br>FL 92538 73442                                                                                                            |                                     |                                  |                                   |                             |       |

DZ NAME

FRYAR DZ

# 10. DZ DIAGRAM



|           |                  |           |                               |
|-----------|------------------|-----------|-------------------------------|
| Name:     | Fryar Drop Zone  | Date:     | 22 July 2003                  |
| Location: | Fort Benning, GA | Lat/Long: | 30° 16.317' N - 84° 57.561' W |
|           |                  | Datum:    | WGS-84                        |
|           |                  | Surveyor: | TSGT Matthew Mc Menamin       |

## 11. REMARKS

1. User accepts responsibility for damage to equipment and injury to personnel resulting from the airdrops of AMC aircraft.
2. Prior coordination is required before entry to R-3002.
3. Drop Zone is within Lawson AAF control zone. Left traffic only. Aircraft must maintain contact with control tower during airdrop operations on 119.05 / 269.525 / 288.275. Drop Zone frequencies are UHF 234.5 / VHF 141.8 FM 52.90.
4. Lawson AAF located 3NM @ 340 degrees. Dekkar Airstrip is located 1.2nm @ 030 degrees.
5. Chattahoochee river is located 030-190 degrees between 2.0-3.2 NM.
6. Jump towers 250' AGL are located 4.8 NM @ 350 degrees.
7. ILS approach to Rwy 33 passes 600 meters of eastern border of the DZ.
8. Highest obstruction is the 2249' MSL tower located 9 MN ENE, an additional tower 840' MSL is on DZ centerline 4.5NM prior to DZ.
9. Pond located within the NW section of DZ approximately, 120x100 yds in size. Water depth is 9 ft.
10. Boat support required for all personnel mass tactical and formation airdrops to Fryer DZ. Boat support will include personnel for safety in accordance with local regulations.
11. 70' and 90' treeline encroaches the left side and trailing edge of DZ.
12. 250' High tension power lines are located within 200 yds of the left leading edge of the DZ. Powerlines run SE to NW. Additional power lines are located 500 yds from departure end of DZ centerline.
13. Offset Personnel PI coordinates are standard 250 yards adjacent to the PEPI abeam left and right. The following coordinates are recommended: Left offset N 32 degrees 15.846', W 084 degrees 57.068. Right offset N 32 degrees 15.894', W 084 degrees 57.321'.

## 12. PHOTOGRAPH AVAILABLE

YES ☐

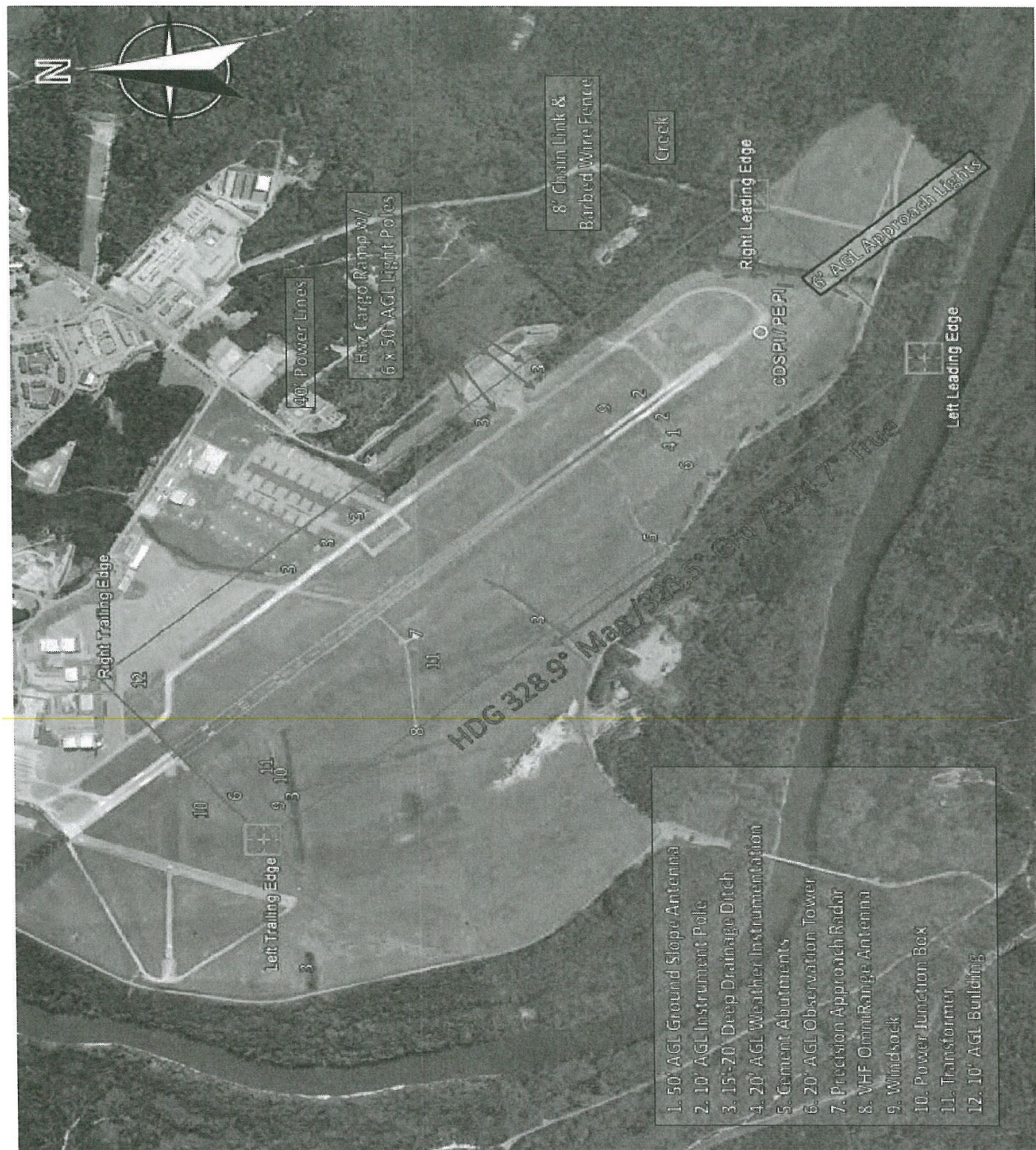
NO ☐

## LOW LEVEL ROUTES

☐ NONE AVAILABLE

☐ ROUTE NAME/DESIGNATOR

AF IMT 3823, 20021001, V2 (REVERSE)



## AF IMT 4304 STRIKE REPORT

The AF IMT 4304 is essentially a score card for the Air Force. Since the release point is computed by the aircrew on a CARP drop zone, the Air Force must have some documentation on the crew's performance.

The clock direction and distance from the PI will be recorded on the AF IMT 4304 and forwarded to higher headquarters.

Upon completion these should be forwarded through the proper channels (S3, GLO, ALCE, AF Representative)

- A "PI" strike is given on the Strike Report if first parachute suspended item lands within **25 yards** of the point of impact. There are 3 methods of scoring distance on a strike report: measured, paced, and **estimated**.

The following is a list of the blocks and an explanation of the contents on the AF IMT 4304:

1. DATE: Enter date and year. Use either calendar or Julian date. When a "time" is required use local or GMT consistent with the date.
2. LOCATION: Enter DZ name
3. CCT AND UNIT: DZSTL name and unit
4. DZ/LZ CONTROL OFFICER AND UNIT
5. DROP ZONE SAFETY OFFICER AND UNIT
6. LINE NO: One line filled out for each pass of each aircraft. No drop passes should use a line number also. The remarks column should reflect the reason for the no drop situation.
7. TYPE ACFT: Mission design series
8. UNIT: Unit of aircraft
9. CALL SIGN: Call sign of lead and, if applicable, formation position number
10. TYPE MISSION: Refer to legend for abbreviations. Your initial appropriate training will dictate what type of drop zone you are qualified to operate.
11. ETA: Estimated time of arrival, estimated TOT, or S3 air brief. Keep the unit of time consistent throughout the form
12. ATA/ATD: Actual time of every pass and actual time of departure
13. STRIKE REPORT:
  - a. YDS: Distance first suspended object lands from PI.
  - b. CLOCK: Use direction of flight as the 12 o'clock and its back azimuth as the 6 o'clock, estimate direction from PI to first jumper/ container/ pallet. If item and conditions permit, the actual measurement is preferred
14. LZ: Mark the "S" box if a landing occurred between the beginning of the touchdown zone and the first 500 feet. If the landing was not successful (i.e., go-around), short of the touchdown zone or 500 feet beyond the beginning of the touchdown zone, mark the "U" box and provide comments in the REMARKS box
15. SURF WIND: Surface wind direction in degrees, and velocity in knots
16. SCORE METHOD: Refer to LEGEND for abbreviations
17. MEAN EFFECTIVE WIND: Time taken and at what altitude
  - a. TIME: Self-explanatory
  - b. ALT: Should be drop altitude
  - c. DIR & VEL: Wind direction in degrees and velocity in knots
18. REMARKS: Enter remarks as appropriate

## DROP ZONE/LANDING ZONE CONTROL LOG

DATE \_\_\_\_\_

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## **Computed Air Release Point (CARP)**

**TC 3-21.220 Chapters 7, 20-23 & DAFMAN 13-217**

### **CARP DROP ZONES**

CARP drop zones are used by high performance fixed wing aircraft. The navigator on board the aircraft calculates the release point. The DZSO or the DZSTL has the responsibility of marking the drop zone and ensuring that it is of the proper size to support the mission.

### **OPERATION TYPES**

- Personnel Drops
- CDS Drops
- Heavy Equipment Drops

### **CARP PROBLEM SETUP**

| Planning Altitude _____ |                 |
|-------------------------|-----------------|
| Width                   | Length          |
| <b>1</b>                |                 |
| <b>N</b>                |                 |
| <b>A</b>                |                 |
| <b>N</b>                | <b>XXXXXXXX</b> |
| <b>A</b>                | <b>XXXXXXXX</b> |
| <b>S</b>                | <b>XXXXXXXX</b> |
| <b>Total</b>            |                 |

## PLANNING ALTITUDES

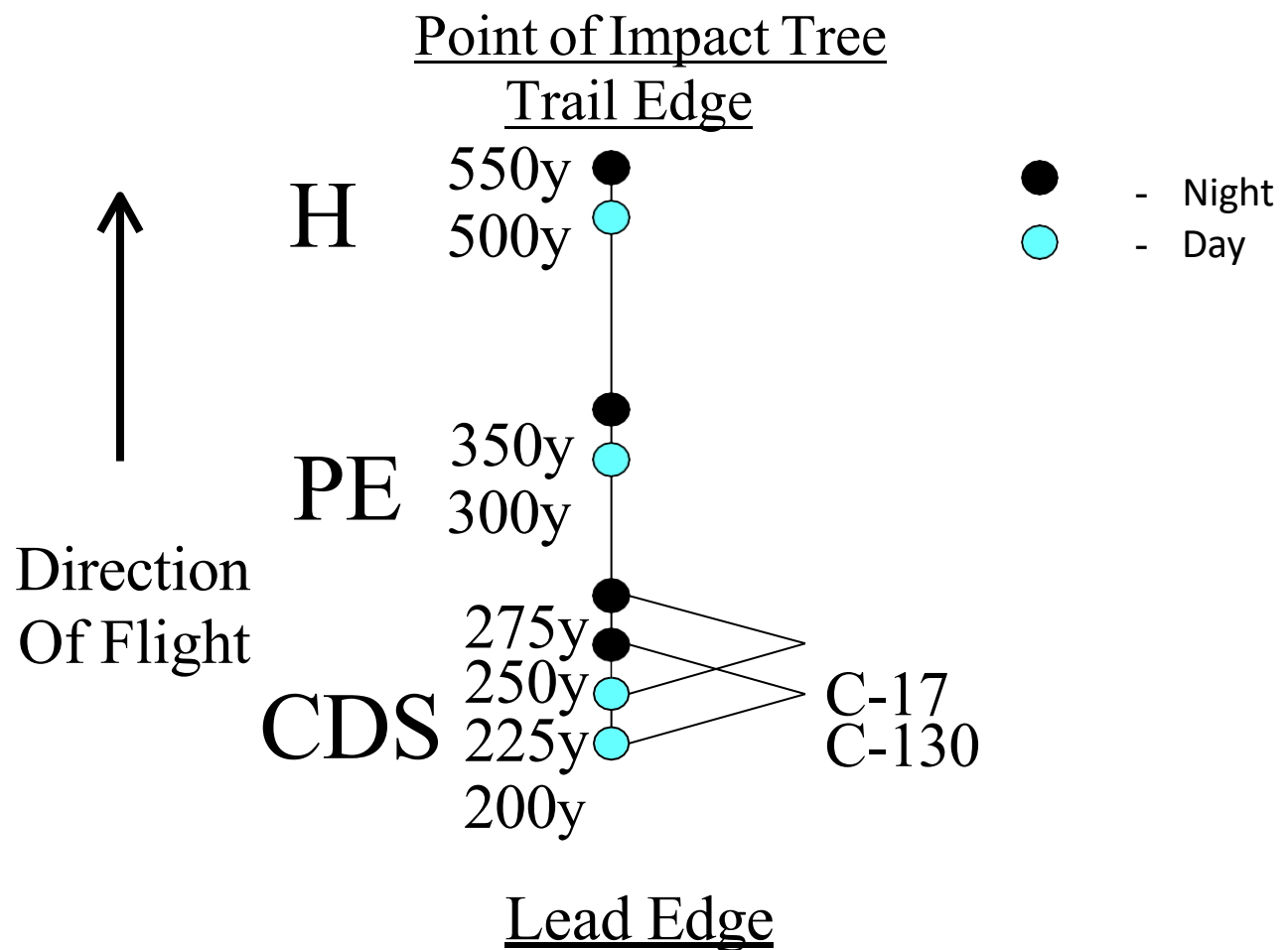
- Personnel
  - 1000 FT AGL
- Heavy Equipment
  - 1100 FT AGL
- **(1) MINIMUM SIZE REQUIREMENTS FOR ONE JUMPER OR PLATFORM**
  - Personnel
    - 600 yards in width x 600 yards in length
  - Heavy Equipment
    - 600 yards in width x 1000 yards in length
  - CDS
    - Requirements for Setting up CARP drop zones can be found in AFI 13-217 Drop Zone and Landing Zone Operations

## SIZE ADDITIONS

- **(N)** Night (1800-0600)
  - Add an additional 100 yards to both the length and the width
  - Hours of darkness are generally from 1800 – 0600
- **(A)** Altitude
  - Add an additional 30 yards to both the length and width for every 100 feet over the minimum planning altitude
- **(N)** Not in Trail Formation
  - C-130: 100 yards to width (one time only)
  - C-17 HE: 100 yards to width (one time only), cannot have more than 3 C-17's in a formation
  - C-17 PE: 640 yards to width for 2x C-17's; 1200 yards to width for 3x C-17's, cannot have more than 3 C-17's in a formation, CANNOT BE IN TRAIL \*\*\*This is only applicable when using center PI\*\*\*
- **(A)** Additional Jumpers or HE Platforms
  - Add an additional 75 yards to the length for each additional jumper
  - Add an additional 400 yards to the length for each additional HE platform on a C-130
  - Add an additional 500 yards to the length for each additional HE platform on a C-17 or C-5

## DOOR EXITING PROCEDURES FOR PERSONNEL

- ADEPT Option 1(**A**lternate **D**oor **E**xiting **P**rocedures for **T**raining)
  - One door, one pass; half the jumpers minus 1
- ADEPT Option 2
  - One door followed by the other door, one pass; total jumpers minus 1
- Mass Exit
  - For even number of total jumpers, divide in half
  - For odd number of total jumpers, divide in half and use lower number
- **(S)** Station Keeping Equipment (SKE)
  - When used, add 400 yards to width (one time only)
  - SKE is a use of the instrumental navigation system, in order to keep aircraft separated during adverse weather conditions
  - NOTE: Do not account for SKE with C-17 personnel formations; it is already included in the basic formation width as per Rule 2D
  - Compare SKE with not in trail; use whichever is larger, cancels out the smaller



### POINT OF IMPACT (PI) LOCATIONS

The PI is determined by the type of operation being executed. All PI's will be measured from the lead edge of the drop zone and centerline.

- CDS (C-130)
  - Day
    - Minimum of 200 yards
  - Night
    - Minimum of 250 yards
- PEPI - Personnel Point of Impact
- CDS (C-17) – No GPS
  - Day
    - Minimum of 225 yards
  - Night
    - Minimum of 275 yards

- HEPI - Heavy Equipment Point of Impact

- Personnel (C-130/C-17)
  - Day
    - Minimum of 300 yards
  - Night
    - Minimum of 350 yards
- HE (C-130/C-17)
  - Day
    - Minimum of 500 yards
  - Night
    - Minimum of 550 yards

## **CARP PI MARKINGS**

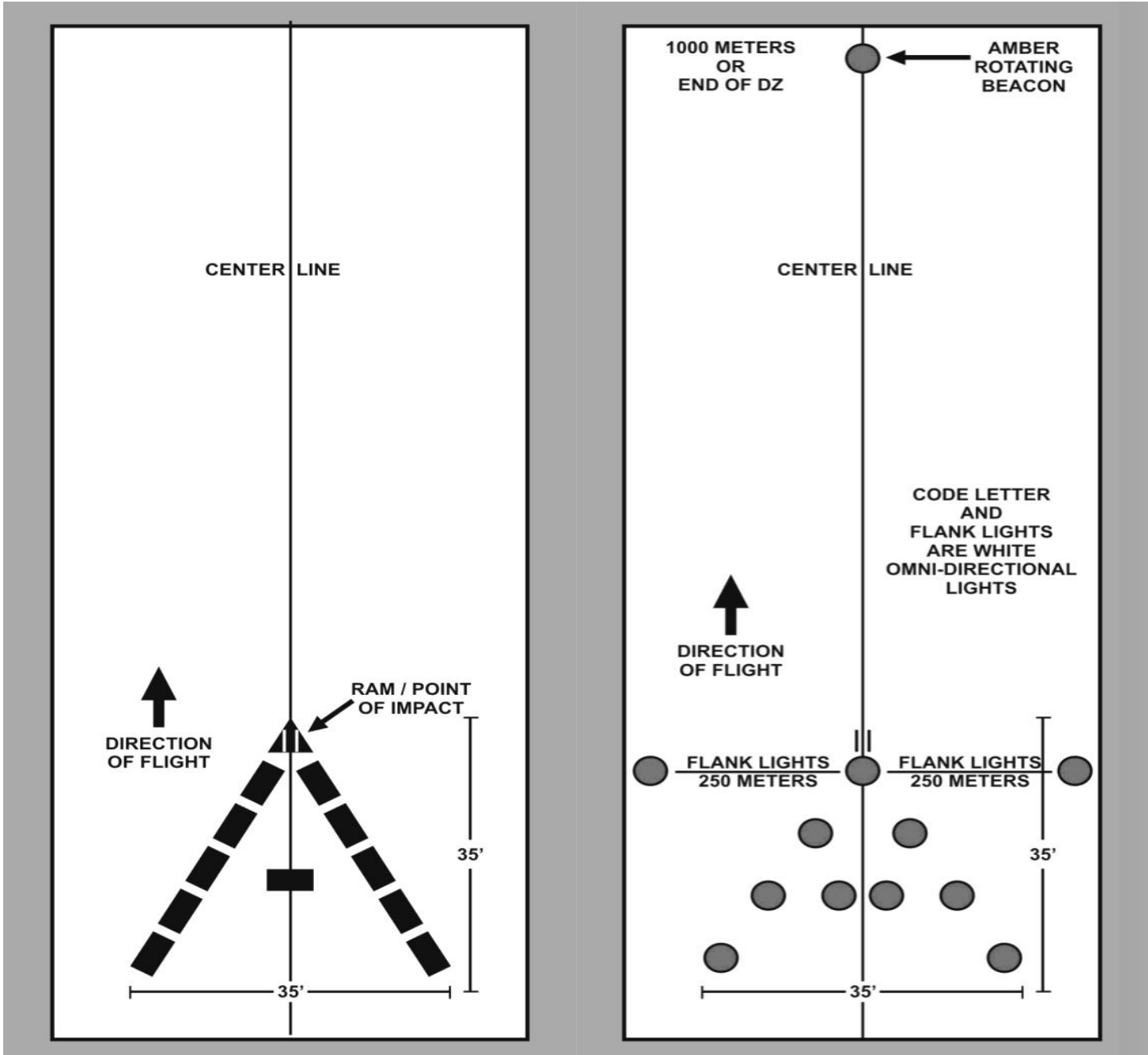
- PRIMARY MEANS OF MARKING THE DROP ZONE IS A RAISED ANGLE MARKER (RAM).
- A RAM must be triangular in shape measure 6 feet in Length by 6 feet in Width and be raised to at least a 60 Degree Angle.
- Code Letters for Rectangular DZ
  - J, C, A, R & S
- Circular or Random Approach DZ
  - H & O

## **DAY TIME MARKINGS**

- Minimum of nine (9) VS-17 Panels for the Code Letter
- At least 35 feet x 35 feet
- Only the PI Must be Marked
- Center the Top of the Code Letter at the Base of the RAM
- Color and Code Letter will be pre-coordinated and the color will be contrasting with the surrounding area

## **NIGHT TIME MARKINGS**

- Minimum of nine (9) Omni-directional white lights for the code letter
- At least 35 feet x 35 feet
- If used, Flanker Lights will be Omni-directional white lights located 250 meters to the left and right abeam of the PI
- If used, trail edge of the DZ or 1000 meters centerline from the PI, whichever comes first, must be marked with an Amber Rotating Beacon
- Beacons are not considered lights



CODE LETTERS

VS-17  
PANELS:  
USE DURING  
DAYLIGHT  
OPERATIONS.

LIGHTS:  
USE DURING  
NIGHT  
OPERATIONS.

ICA  
RS  
HO

ICA  
RS  
HO

## CONTROL CENTER

The control center is where the DZSO/ DZSTL is located to control and observe the operation. The location is determined by the type of operation.

## CDS

- 200 yards from the PI at the 6 o'clock

## PERSONNEL

- At the PI

## HEAVY

- 300 yards from the PI at the 6 o'clock

## AWADS, HIGH VELOCITY, CEILINGS OF 600 FEET OR LESS and FREE DROPS

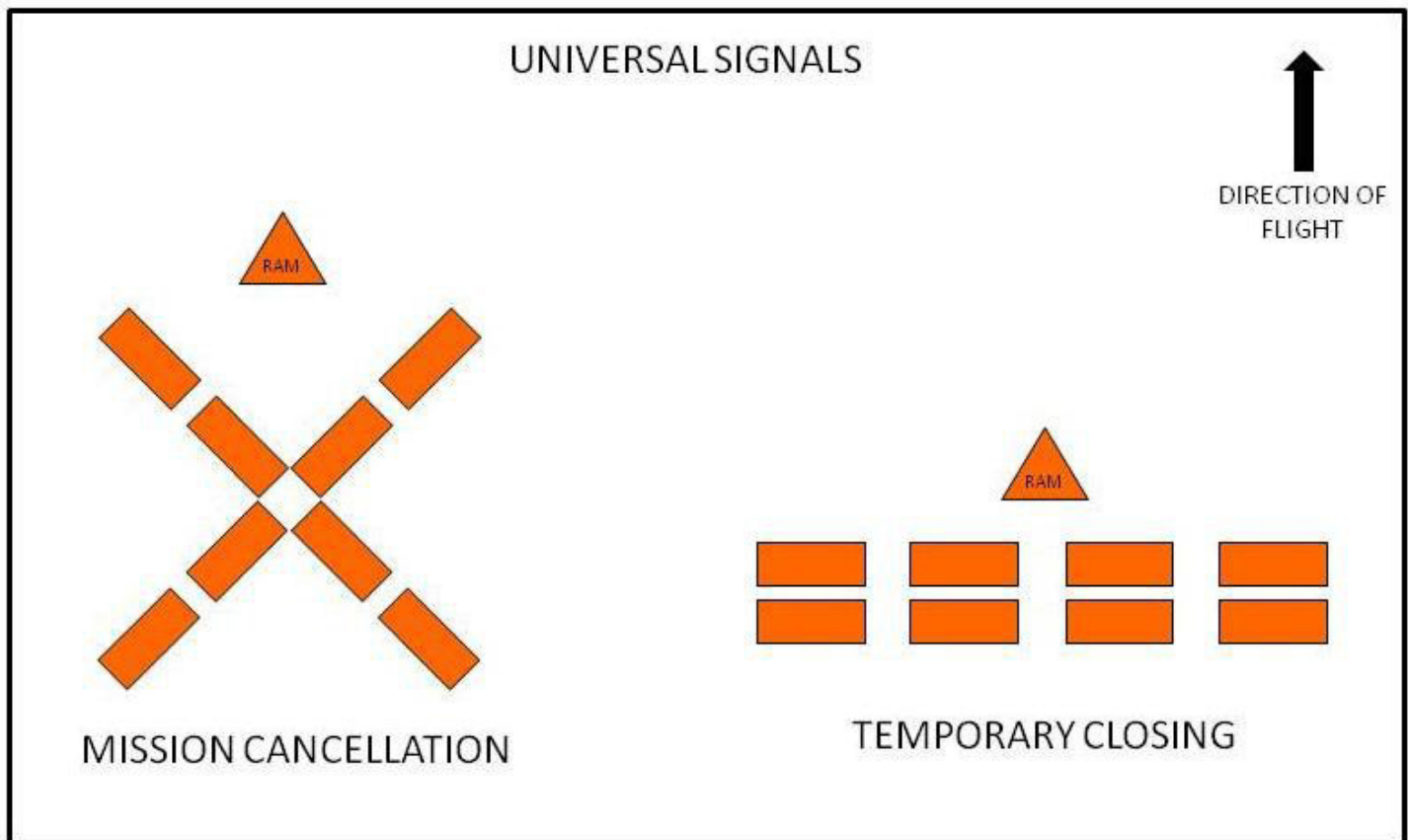
- Off the DZ at the Best Vantage Point  
**AWADS** – Adverse Weather Aerial Delivery System

## NO DROP SITUATIONS

It may become necessary for you as the DZSO/DZSTL to temporarily halt a jump or to declare a no drop or mission cancellation.

## DECLARING NO DROP:

- Initiate red smoke, Red **Always** Means No Drop.
- Scramble or remove the code letter, if present
- Other means of communicating a No-Drop could be an air traffic control light, signal mirror, flares or any specific means covered by the crew in the pilot brief.



The Universal Temporary Closing of the DZ signal is to place two parallel bars made of four VS-17 panels each, perpendicular to the direction of flight.

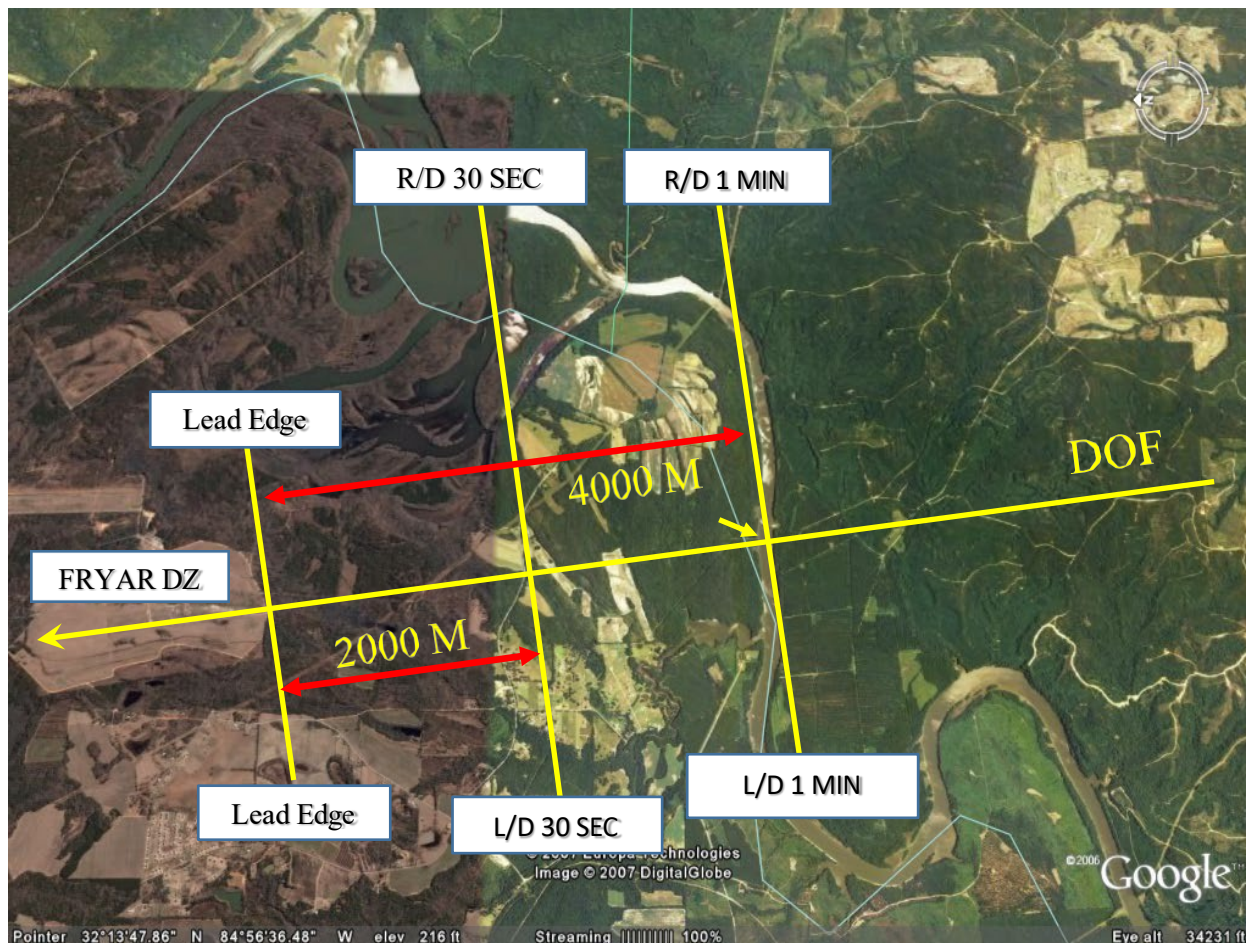
The Universal Mission Cancellation of the DZ signal is to form an "X" out of eight VS-17 panels on the PI.

## AUTHORIZED WIND MEASURING DEVICES

Anemometers—Services should only use approved anemometers to measure surface winds during all personnel and cargo parachute operations. **THE APPROVED ANEMOMETERS ARE THE DIC-3 AND TURBOMETER.** The DIC-3, and Turbometer cannot be calibrated; they must be given an expedient check just before use :

- Ensure fresh batteries are installed in the anemometer.
- Check the anemometer in a no wind condition such as in a vehicle cab or a building. Turn on the anemometer and, if any reading other than zero registers, the anemometer is not fit for use and must be discarded.
- Use a three anemometer check by comparing the reading on three anemometers in identical conditions.
- Discard the one anemometer that doesn't read the same as the other two
- The Turbometer must be held within 20 degrees of wind line with the wind entering the rear of the meter to ensure accurate readings.
- Other anemometers not tested and recommended for use should be employed only after a risk assessment is completed.
- Regardless of the method or device used to measure DZ winds, the airborne commander is responsible for ensuring SURFACE winds on the DZ do not exceed:
  - 13 knots during static line personnel airdrops (land)
  - 17 knots during static line personnel airdrops (water)
  - 13 knots during heavy equipment airdrops without ground disconnects
  - 17 knots during heavy equipment airdrops with ground disconnects
- There are no wind restrictions at drop altitude unless dictated by the jumping units ASOP.

## PROCESS FOR DETERMINING 1 MINUTE/30 SECOND REFERENCE POINTS:



**Turbo Meter:** This is an electronic wind speed indicator. It provides wind speed accurately and is pocket size for convenience. The turbo meter has four scales which are displayed on a three digit light Emitting Diode display. The scales are knots per hour, feet per second, meters per second, and miles per hour. For best results, keep axis of turbo meter within 20 degrees of the direction of wind. NSN: 1670 00-T33-900

**Amber Rotating Beacon:** Electric driven light which provides amber rotating light for trail edge marker on a night CARP drop zone. NSN: Local purchase item.

**VS-17 Marker Panel Aerial:** Two sided panel. One side is fluorescent orange, sometimes referred to as international orange. The other side is cerise, commonly referred to as red. The panel is 2 feet wide and 6 feet long. It has six tie down points used to attach the panel to stakes. It also has three snap fasteners on the short ends in the stow pocket. It should be folded up so the olive drab (OD) green is showing. The color of the panel used should best contrast the surrounding area. NSN: 8345-00-174-6865

**Light, Marker, Ground Obstruction:** Also known as the beanbag light. It is powered by one BA-200. The color of the light can be changed with the use of interchangeable colored plastic domes. These can be used in light holes or on the surface, secured with tent pegs, or by filling the bottom with sand or rocks. NSN: 6230-00-115-9996

**Mirror, Emergency Signaling, Type II:** The signal mirror, when used properly, can be used to signal aircraft by reflecting sunlight. There is a set of instructions on the back of the signal mirror for proper use and aiming. The signal mirror can still be used on hazy days. One misconception is that it can only be used when facing the sun. It can be used in all directions and can be seen as far as the horizon will go. NSN: 6350-00-105-1252

**Pilot Balloon:** The Pi-Ball is a ten or thirty gram rubber balloon that, when filled with helium to the specified circumference, is used to measure the mean effective wind, which is the average wind from the ground to drop altitude.

Balloon Meteorological 10 Gram: 57 Inch Day, 74 Inch Night NSN: 6660-00-663-7933

Balloon Meteorological 30 Gram: 75 Inch Day, 94 Inch Night NSN: 6660-00-663-8159

**Lighting Unit (Pi-Ball):** This light is attached to the Pi-Ball for night operations. The Pi-Ball is inflated to a greater dimension to compensate for the weight of the light so that the same ascension rate is achieved. The Pi-Ball light has a wet cell battery that is activated by water, or fluid. When temperatures fall below 50 degrees, the Pi-Ball light activates faster by using warm water. NSN: 6660-00-839-4927

**Drift Scale:** Slide type scale that uses a 90 degree angle to measure the ascent of the pi-ball for determining the mean effective wind. Locally produced by TASC (a protractor with a string through the center with a weight can be used). Also for this purpose, the Thedolite, NSN 6675-00-861-7939, Pocket Transit (with built in clinometer) NSN 6675-00-641-5735, and the Clinometer, NSN 6675-00-313-9730 can be used.

## DZST GUIDE TO REFERENCES

- DAFMAN 13-217
- AFMAN 11-231
- AFMAN 11-2C130v3
- AFMAN 11-2C17v3
- TC 3-21.220
- FM 3-21.38
- TC 31-24
- Memorandum of Agreement, Airdrop Operations Without Combat Control Teams (CCTs).

# **DEFICIENCIES**

## **TC 3-21.220 Chapter 9**

### **TYPES OF DEFICIENCIES**

**MAJOR DEFICIENCY: (-35 points)** could cause death, serious injury, loss of military equipment OR questions the integrity of how the parachute was packed.

EXAMPLE) TABBED PORTION CHEST STRAP NOT FACING CHEST STRAP FRICTION ADAPTER  
EXAMPLE) LEFT CONNECTOR SNAP RETAINING TIE MISSING

**MINOR DEFICIENCY: (-11 points)** could cause possible injury to jumper, discomfort when worn, or deviates from the prescribed rigging procedures outline in TC 3-21.220 or Unit ASOP.

EXAMPLE) MAIN LIFT WEB TUCK TAB ASSEMBLY NOT PROPERLY ASSEMBLED  
EXAMPLE) SADDLE TWISTED

### **CATEGORIES OF DEFICIENCIES**

The cards will have two categories of deficiencies:

**JUMPER-RIGGED DEFICIENCIES:** Deficiencies that the jumper will create when donning the parachute.

EXAMPLE) LEG STRAPS TWISTED  
EXAMPLE) CHEST STRAP MISROUTED AROUND MAIN LIFT WEB

**PRE-RIGGED DEFICIENCIES:** Deficiencies that the instructors have already placed in the parachute rigs (in a specific location, using specific material, visual to a specific point)

EXAMPLE) FOREIGN MATTER IN LEFT CANOPY RELEASE ASSEMBLY  
EXAMPLE) UNIVERSAL STATIC LINE MODIFIED CUT (IN A VARIETY OF LOCATIONS)

### **WHEN CALLING DEFICIENCIES, TELL US THREE THINGS.....**

1. **WHAT IS IT?** Item of equipment (USE PROPER NOMENCLATURE!!)
2. **WHERE IS IT?** In relation to the jumper (left/right, front/rear).
3. **WHAT IS WRONG WITH IT?** Not properly assembled foreign matter/reversed etc.

It can be in any order! However, if you say exactly what is on the cards, there is no room for the instructor to misinterpret what it is you are saying. Spend less time thinking of "what if's". Spend more time studying talk-throughs, nomenclature, and the deficiency list found in your study guide.

### **CORRECTIONS:**

**CORRECTING SEQUENCE:** Not required to call "correction" when correcting a sequence violation, go back to where you were last correct (being your last control point) and continue. HOWEVER, calling "correction" will regain the instructor's attention back on you. **CORRECTING A "CALLED DEFICIENCY":** MUST call "correction" when correcting a deficiency.

EXAMPLE) LEFT LEG STRAP TWISTED... CORRECTION, RIGHT LEG STRAP TWISTED.

### **SEQUENCE VIOLATIONS:**

A sequence violation is described as any deviation, performed by the Jumpmaster, with either the eyes or the hands, from the approved JMPI sequence (THIS INCLUDES INSPECTIONS AND TRANSITIONS).

## NOTES:

- These are mistakes that are commonly seen during JMPI circles:
  - MASKING THE STATIC LINE
- FISH HOOKING
- PINCHING
- OVERLAPPING OF STATIC LINE STRANDS
- CAN NOT RAKE STATIC LINE
- LIKE ITEMS- If the Jumpmaster sees "FOREIGN MATTER IN THE RIGHT CANOPY RELEASE ASSEMBLY", it can also be in the left canopy release assembly, Hollywood or Combat. This goes for all "Like Items of equipment"
- USE PROPER SEQUENCE EVEN WHEN THERE IS A DEFICIENCY EXAMPLES:
  - WAISTBAND/WAISTBAND ADJUSTOR PANEL MISROUTED BEHIND HORIZONTAL BACKSTRAP
  - NO QUICK RELEASE IN WAISTBAND
  - GIRTH HITCH UNIVERSAL STATIC LINE MODIFIED REVERSED
  - LAST STRAND OF UNIVERSAL STATIC LINE MODIFIED MISROUTED FROM LEFT OUTER STATIC LINE STOW BAR
  - LEFT/RIGHT ADJUSTABLE "D" RING ATTACHING STRAP REVERSED
- NO CASTING SPELLS! Advanced Combat Helmet, Hook Pile Tape Lowering Line
- YOU CAN NOT CALL DEFICIENCIES EARLY: POINT OF INSPECTION, NOT LINE OF SIGHT.
- NO Abbreviations
- MUST CALL ALL DEFICIENCIES PRIOR TO THE "SEAL OF APPROVAL" (for the corresponding jumper to get credit for that deficiency).
- IF YOU CREATE A DEFICIENCY AND YOU DO NOT CALL IT, YOU EARN THE POINT VALUE FOR THAT DEFICIENCY

## KEYS TO SUCCESS:

- SHADOW BOXING
- TRANSITIONS
- STUDY NOMENCLATURE
- KNOWING SIDES
- WEAR EQUIPMENT LIKE YOU SHOULD
- REHAB
- DO NOT SACRIFICE SEQUENCE FOR SPEED.

## **JMPI TEST**

- Task – Conduct JMPI on three Jumpers in 5 Minutes of Less.
- Conditions – In a controlled environment, given three Jumpers wearing the following equipment:
  1. T-11 main parachute configured with a 5 foot universal static line extension, T-11 reserve single pin parachute, a universal parachutist recovery bag, helmet, modular airborne weapons case, MOLLE 4000, rigged with a integrated harness single point release and a hook pile tape lowering line (rigged to be jumped and lowered as a tandem load).
  2. T-11 main parachute, T-11 reserve single pin parachute, universal parachutist recovery bag, and a helmet.
  3. T-11 main parachute, T-11 reserve single pin parachute, universal parachutist recovery bag, and a helmet.
- Standard – Each Student must inspect all three Jumpers utilizing the proper sequence, identifying and calling of any deficiencies they may find or create, using proper nomenclature, within five minutes, and without activating a main or reserve parachute.

## **GRADING**

- IMPROPER SEQUENCE **-35 POINTS**
- MISSED MINOR DEFICIENCY **-11 POINTS**
- MISSED MAJOR DEFICIENCY **-35 POINTS**
- IMPROPER HAND PLACEMENT **-35 POINTS**
- FAILURE TO INSPECT **-35 POINTS**
- OVER ON TIME **-35 POINTS**
- MASKING STATIC LINE **-35 POINTS**
- IMPROPER COMMAND OR NOT CALLING A COMMAND **-35 POINTS**

## **JMPI Deficiencies**

The deficiencies below are some of the more common deficiencies that a Jumpmaster will come across. This is not to say that other deficiencies do not exist. Focus on the fact that some of these deficiencies are visual while others are physical. Focus on the point of inspection, not that it is in your line of sight. By the middle of the second week, students should have come across every deficiency that is testable and see it multiple times on different sides or in different locations.

### **FRONT OF ADVANCED COMBAT HELMET**

|                                                                |     |
|----------------------------------------------------------------|-----|
| FRONT RIGHT/LEFT BOLT END EXPOSED                              | -35 |
| FRONT TRAPEZOID PAD MISSING                                    | -35 |
| EXCESS WEBBING FRONT RIGHT / LEFT ADJUSTABLE STRAP NOT SECURED | -11 |
| CHINSTRAP TWISTED                                              | -11 |

### **CANOPY RELEASE ASSEMBLIES**

|                                                             |     |
|-------------------------------------------------------------|-----|
| RIGHT / LEFT CANOPY RELEASE ASSEMBLY NOT PROPERLY ASSEMBLED | -35 |
| FOREIGN MATTER RIGHT / LEFT CANOPY RELEASE ASSEMBLY         | -35 |

**T-11 PARACHUTE HARNESS**

|                                                                            |     |
|----------------------------------------------------------------------------|-----|
| CHEST STRAP MISROUTED AROUND MAIN LIFT WEB                                 | -11 |
| CHEST STRAP TWISTED                                                        | -11 |
| EXCESS WEBBING CHEST STRAP NOT SECURED                                     | -11 |
| EXCESS WEBBING CHEST STRAP SECURED TO THE QUICK RELEASE                    | -11 |
| NO QUICK RELEASE IN CHEST STRAP                                            | -35 |
| QUICK RELEASE IN CHEST STRAP NOT SECURED                                   | -11 |
| EXCESS WEBBING CHEST STRAP ROLLED                                          | -35 |
| TABBED PORTION CHEST STRAP NOT FACING TOWARDS CHEST STRAP FRICTION ADAPTER | -35 |
| WAISTBAND MISROUTED UNDER HORIZONTAL BACKSTRAP                             | -11 |
| WAISTBAND MISROUTED UNDER RIGHT / LEFT MAIN LIFT WEB                       | -11 |
| WAISTBAND MISROUTED OVER RIGHT / LEFT EQUIPMENT RING                       | -11 |
| WAISTBAND NOT ROUTED THROUGH RIGHT / LEFT WAISTBAND RETAINER               | -11 |
| WAISTBAND TWISTED                                                          | -11 |
| NO QUICK RELEASE IN WAISTBAND                                              | -35 |
| IMPROPER QUICK RELEASE IN WAISTBAND (CPT'S BARS / DEAD MAN'S HITCH)        | -35 |
| WAISTBAND ADJUSTER PANEL TWISTED                                           | -11 |
| WAISTBAND ADJUSTER PANEL MISROUTED UNDER HORIZONTAL BACKSTRAP              | -11 |
| MAIN LIFT WEB MISSIZED                                                     | -11 |
| RIGHT / LEFT TUCK TAB NOT SECURED                                          | -11 |
| RIGHT / LEFT SNAP FASTENER NOT SECURED                                     | -11 |

**T-11 RESERVE SINGLE PIN PARACHUTE**

|                                                                                   |     |
|-----------------------------------------------------------------------------------|-----|
| ARMY PARACHUTE LOG RECORD MISSING                                                 | -35 |
| CURVED PIN LANYARD TWISTED                                                        | -35 |
| CURVED PIN REVERSED                                                               | -35 |
| CURVED PIN LANYARD!CUT                                                            | -35 |
| RIGHT / LEFT CONNECTOR SNAP RETAINING TIE MISSING                                 | -35 |
| EXPOSED CANOPY RESERVE PARACHUTE                                                  | -35 |
| RIGHT / LEFTSPREADER BAR TIE NOT SECURED                                          | -35 |
| CURVED PIN MISROUTED LEFT TO RIGHT                                                | -35 |
| PACK OPENING SPRING BAND NOT ROUTED THROUGH THE PACK OPENING SPRING BAND RETAINER | -35 |
| WINDOW CRACKED                                                                    | -35 |
| WIRE SPRING BAND EXPOSED                                                          | -35 |
| RIPCORDER ASSEMBLY UPSIDE DOWN                                                    | -35 |
| HOOK UNSECURED (LEFT/RIGHT)                                                       | -35 |
| PACK CLOSING FLAPS NOT PROPERLY ASSEMBLED                                         | -35 |
| PACK OPENING SPRING BAND TWISTED                                                  | -35 |

**LEGSTRAPS / UNIVERSAL PARACHUTIST RECOVERY BAG**

|                                                                         |     |
|-------------------------------------------------------------------------|-----|
| LEG STRAPS CROSSED                                                      | -11 |
| RIGHT / LEFT LEG STRAP TWISTED                                          | -11 |
| RIGHT / LEFT LEG STRAP EXCESS WEBBING NOT SECURED                       | -11 |
| RIGHT / LEFT LEG STRAP EJECTOR SNAP WILL NOT SEAT                       | -35 |
| EXCESS WEBBING RIGHT / LEFT LEG STRAP MISROUTED OVER LEG STRAP RETAINER | -11 |
| RIGHT / LEFT LEG STRAP NOT ROUTED THROUGH LEG STRAP RETAINER            | -11 |
| UNIVERSAL PARACHUTIST RECOVERY BAG UPSIDE DOWN                          | -11 |
| UNIVERSAL PARACHUTIST RECOVERY BAG MISSING                              | -11 |

**UNIVERSAL STATIC LINE MODIFIED**

|                                                                                         |     |
|-----------------------------------------------------------------------------------------|-----|
| GIRTH HITCH UNIVERSAL STATIC LINE REVERSED                                              | -35 |
| UNIVERSAL STATIC LINE MODIFIED CUT                                                      | -35 |
| UNIVERSAL STATIC LINE MODIFIED MISROUTED AROUND RIGHT / LEFT INNER STATIC LINE STOW BAR | -35 |
| UNIVERSAL STATIC LINE MODIFIED MISROUTED AROUND RIGHT / LEFT OUTER STATIC LINE STOW BAR | -35 |
| IMPROPER MAIN CURVED PIN SECURING TIE                                                   | -35 |

**FIVE FOOT UNIVERSAL STATIC LINE EXTENSION**

|                                                                |     |
|----------------------------------------------------------------|-----|
| COTTON BUFFER CUT                                              | -35 |
| GIRTH HITCH FIVE FOOT UNIVERSAL STATIC LINE EXTENSION REVERSED | -35 |
| FALSE GIRTH HITCH IN FIVE FOOT UNIVERSAL STATIC LINE EXTENSION | -35 |

**REAR OF ADVANCED COMBAT HELMET**

|                                                               |     |
|---------------------------------------------------------------|-----|
| REAR LEFT / RIGHT BOLT END EXPOSED                            | -35 |
| REAR TRAPEZOID PAD MISSING                                    | -35 |
| EXCESS WEBBING REAR LEFT / RIGHT ADJUSTABLE STRAP NOT SECURED | -11 |
| NAPE PAD MISSING                                              | -11 |
| NAPE PAD REVERSED/NAPE PAD NOT PROPERLY ASSEMBLED             | -11 |

**RISER ASSEMBLIES**

|                                                       |     |
|-------------------------------------------------------|-----|
| LEFT / RIGHT RISER ASSEMBLY TWISTED                   | -35 |
| ARMY PARACHUTE LOG RECORD MISSING FROM RISER ASSEMBLY | -35 |

**MAIN PACK TRAY**

|                                                                                      |     |
|--------------------------------------------------------------------------------------|-----|
| DIAGONAL BACK STRAPS MISSIZED                                                        | -11 |
| EXCESS WEBBING RIGHT / LEFT HORIZONTAL BACK STRAP NOT SECURED                        | -11 |
| HORIZONTAL BACK STRAP NOT ROUTED THROUGH RIGHT / LEFT HORIZONTAL BACK STRAP RETAINER | -11 |
| STATIC LINE SLACK RETAINER BAND MISSING                                              | -11 |
| MAIN CLOSING LOOP CUT                                                                | -35 |
| LEFT / RIGHT LEG STRAP MISROUTED AROUND SADDLE                                       | -11 |
| SADDLE TWISTED                                                                       | -11 |

## MODULAR AIRBORNE WEAPONS CASE

|                                                                                       |     |
|---------------------------------------------------------------------------------------|-----|
| SNAP SHACKLE REVERSED                                                                 | -11 |
| SNAP SHACKLE NOT OUTERMOST ITEM OF EQUIPMENT ON LEFT EQUIPMENT RING                   | -11 |
| SNAP FASTENER YELLOW SAFETY LANYARD NOT SECURED                                       | -11 |
| EXCESS ADJUSTING STRAP NOT PROPERLY SECURED                                           | -11 |
| ADJUSTING STRAP NOT PROPERLY ROUTED THROUGH FRICTION ADAPTER                          | -11 |
| TOP/BOTTOM COMPRESSION STRAP NOT ROUTED THROUGH VERTICAL NYLON EQUIPMENT HANGER       | -11 |
| TOP/BOTTOM QUICK RELEASE BUCKLE NOT SECURED                                           | -11 |
| EXCESS WEBBING TOP/BOTTOM COMPRESSION STRAP NOT SECURED                               | -11 |
| SNAP FASTENER SLIDE FASTENER AND TABBED THONG NOT SECURED                             | -11 |
| UPPER TIE DOWN TAPE NOT ROUTED THROUGH VERTICAL NYLON EQUIPMENT HANGER                | -11 |
| WEAPON REVERSED                                                                       | -11 |
| UPPER TIE DOWN TAPE NOT PROPERLY SECURED TO HORIZONTAL BACKSTRAP                      | -11 |
| UPPER TIE DOWN TAPE NOT ROUTED THROUGH VERTICAL NYLON EQUIPMENT HANGER                | -11 |
| UPPER TIE DOWN TAPE NOT PROPERLY ROUTED THROUGH EQUIPMENT RING                        | -11 |
| UPPER TIE DOWN TAPE NOT ROUTED THROUGH EQUIPMENT RING                                 | -11 |
| UPPER TIE DOWN TAPE NOT ROUTED THROUGH TABBED PORTION SLIDE FASTENER AND TABBED THONG | -11 |
| ADJUSTABLE NOSE CONE NOT SECURED                                                      | -35 |

## MOLLE 4K, INTEGRATED HARNESS SINGLE POINT RELEASE, AND HOOK PILE TAPE LOWERING LINE 130

|                                                                                            |     |
|--------------------------------------------------------------------------------------------|-----|
| EXCESS WEBBING ADJUSTABLE SHOULDER CARRYING STRAP ROLLED                                   | -11 |
| EJECTOR SNAP HOOK PILE TAPE LOWERING LINE REVERSED                                         | -35 |
| HOOK PILE TAPE LOWERING LINE MISROUTED UNDER LEFT ADJUSTABLE SHOULDER CARRYING STRAP       | -11 |
| EJECTOR SNAP HOOK PILE TAPE LOWERING LINE WILL NOT SEAT                                    | -35 |
| HOOK PILE TAPE LOWERING LINE MISROUTED THROUGH CARRYING HANDLE                             | -11 |
| EQUIPMENT RETAINER STRAP NOT ROUTED THROUGH AIR ITEM ROUTING CHANNEL (REAR OF MOLLE FRAME) | -11 |
| GIRTH HITCH HOOK PILE TAPE LOWERING LINE ROUTED EAST / WEST                                | -11 |
| ADJUSTABLE SHOULDER CARRYING STRAPS NOT ROUTED THROUGH CARRYING HANDLE                     | -11 |
| RELEASE HANDLE LANYARD TWISTED                                                             | -11 |
| RELEASE HANDLE REVERSED                                                                    | -11 |
| RIGHT / LEFT ADJUSTABLE EQUIPMENT RING ATTACHING STRAP REVERSED                            | -11 |
| RIGHT / LEFT ADJUSTABLE EQUIPMENT RING ATTACHING STRAP TWISTED                             | -11 |
| EQUIPMENT RETAINER STRAPS NOT ROUTED THROUGH AIR ITEM ROUTING CHANNEL (FRONT)              | -11 |
| EQUIPMENT RETAINER STRAP MISROUTED OVER ADJUSTABLE SHOULDER CARRYING STRAP                 | -11 |
| GREEN ATTACHING LOOP ROUTED OVER RIGHT/LEFT GROMMET                                        | -11 |
| GREEN ATTACHING LOOP MISROUTED THROUGH RIGHT / LEFT GROMMET                                | -11 |
| RELEASE HANDLE CABLE NOT ROUTED THROUGH RELEASE HANDLE CROSS STRAP                         | -11 |
| RELEASE HANDLE LANYARD MISROUTED AROUND RELEASE HANDLE CROSS STRAP                         | -11 |
| EXCESS WEBBING EQUIPMENT RETAINER STRAPS SECURED TO QUICK RELEASES                         | -11 |
| EQUIPMENT RETAINER STRAPS NOT ROUTED THROUGH AIR ITEM STOWAGE POCKET ROUTING CHANNEL       | -11 |
| EXCESS WEBBING EQUIPMENT RETAINER STRAPS ROLLED                                            | -11 |
| NO QUICK RELEASE IN EQUIPMENT RETAINER STRAPS                                              | -11 |

\*\*\*ALICE PACK AND MOLLE DEFICIENCIES ARE NOT INCLUDED IN THIS LIST\*\*\*

## **T-11 Hollywood JMPI Sequence**

### **TC 3-21.220 Chapter 9**

#### **NOTE: PREPARE THE JUMPER FOR INSPECTION**

Prior to inspecting a jumper, the Jumpmaster will prepare the jumper for inspection. The only person authorized to place the jumper into JMPI configuration is the Jumpmaster who will inspect that jumper. Look at the Canopy Release Assemblies to ensure they are seated in the hollows of the jumper's shoulders, below the collar bones at approximately name tape level. Look at the riser assemblies to ensure that the type of parachute being inspected is a T-11 parachute and does not have Blue Confluence Wrap. Move behind the jumper and remove the Main Curved Pin Protector Flap from the Tuck Flap. Ensure the Main Curved Pin is fully seated, and the Main Curved Pin Securing Tie is present and properly secured. Disconnect the Universal Static Line Snap Hook from the right Outer Static Line Stow Bar; ensure the Spring Opening Gate has spring tension. Conduct a physical and visual inspection of both sides of the double sewn portion of the Universal Static Line Modified, ensuring the stitching is present on both sides, there are three stitches sewn over the raw edge and it is not burned, cut, or frayed. Remove all excess Universal Static Line Modified from the Static Line Slack Retainer Band on the Static Line Slack Retainer Loop, remove all twists and route the Universal Static Line Modified through the Static Line Slack Retainer Band and over the jumper's shoulder corresponding with the paratroop door the jumper is to exit. Avoid breaking unnecessary stows. Secure the Universal Static Line Snap Hook to the Carrying Handle of the T-11 Reserve Single Pin parachute, with the Spring Opening Gate facing the jumper. Conduct a visual inspection of the two clear windows on the T-11 Reserve-Single Pin to ensure that they are not distorted or damaged and you can effectively view the internal components. Finally, you will conduct a visual inspection of the Pack Opening Spring Band to ensure that it is properly secured with both hooks. After completing a Jumpmaster Personnel Inspection, you will place the jumper into the jump configuration. You may now begin your inspection.

**ADVANCED COMBAT HELMET (FRONT)** : Place both hands, fingers and thumbs extended and joined, fingertips pointing skyward, palms facing the jumper on the right side of the Advanced Combat Helmet. The left hand is the control hand; the right hand is the working hand. With the working hand trace across the rim of the Advanced Combat Helmet feeling for any sharp or protruding edges that may cut or damage the jumper's Universal Static Line Modified upon exiting the aircraft. Once both hands are parallel place the thumbs on the rim of the Advanced Combat Helmet and tilt the jumpers head to the rear. Conduct a visual inspection to ensure the three Suspension Pads are present, they are flush with the outer rim, and the Oval Pads are covering the bolt ends. If the jumper is wearing a Modified Chinstrap Assembly, place the right index finger on the front left Adjustable Buckle, to ensure it is free of all cracked components, is serviceable, the front left Adjustable Strap is properly routed through it and the free running end is secured in the Webbing Retainer. Trace the front left Adjustable Strap down. Ensure it is not twisted, cut or frayed to the Chinstrap Fastener, ensure the Chinstrap Fastener is free of all cracked components and properly secured. Trace the Long Portion Chinstrap, under the jumper's chin to ensure it is not twisted, cut or frayed, to where it is sewn into the front right Adjustable Strap. Trace the front right Adjustable Strap up, ensure it is not twisted, cut or frayed, to the front right Adjustable Buckle. Ensure it is free of all cracked components, it is serviceable, the front right Adjustable Strap is properly routed through it, and the free running end is secured in the Webbing Retainer. Place the right index finger on the right side of the Short Portion Chinstrap, trace it across the front of the jumper's chin, ensure it is not twisted, cut or frayed and drop both hands. If the jumper is wearing the Head-Loc H-Nape Retention System, place the right index finger on the front left Adjustable Strap from where it emerges from the helmet shell. Trace the front left Adjustable Strap down ensuring it is not twisted, cut, or frayed until contact is made with the front left Head-Loc Slider, ensure it is free of all cracked components and is serviceable. Continue to trace the front left Adjustable Strap down ensuring that it is not twisted, cut, or frayed until contact is made with the Chinstrap Buckle. Ensure that it is free of all cracked components, it is serviceable and is properly secured. Trace the Long Portion Chinstrap under the jumpers' chin, ensuring that it is not twisted, cut, or frayed to where it is sewn into the front right Adjustable Strap. Trace the front right Adjustable Strap up ensuring that it is not twisted, cut, or frayed until contact is made with the front right Head-Loc Slider, ensure that it is free of all cracked components and is serviceable. Continue to trace the front right Adjustable Strap up ensuring it is not twisted, cut, or frayed to wear it disappears into the helmet shell. Place

the right index finger on the right side of the Short Portion Chinstrap and trace it across the front of the jumpers' chin ensuring it is not twisted, cut, or frayed then drop both hands.

## **CANOPY RELEASE ASSEMBLY**

We begin with the Canopy Release Assembly opposite the Universal Static Line Modified. Since the Universal Static Line Modified is routed over the jumper's right shoulder, the inspection begins with the jumper's left Canopy Release Assembly. Look at the left Canopy Release Assembly; tap it with the knuckles of the right hand one time to ensure that it sounds solid. (*Jumpers, this is your key to place both hands on top of your Advanced Combat Helmet*). With your right hand form a knife cutting edge, fingers extended and joined, palm facing towards you, the jumpmaster, and insert it behind the Main Lift Web just below the Canopy Release Assembly. Place your right thumb on the outside corner of the Canopy Release Assembly and rotate it ¼ turn to the outside. With your head and eyes approximately six to eight inches away conduct a visual inspection to ensure the Male Fitting Canopy Release Assembly is properly secured by the Female Fitting Canopy Release Assembly and properly secured by the Latch. Furthermore, ensure the Cable Loop is properly secured by the Safety Clip and the Canopy Release Assembly is free of all dirt or foreign material that will keep it from seating completely. Now let the Canopy Release Assembly return back to its normal position. Keep your right hand in place. With your left hand secure the Universal Static Line Modified and rotate it over to your right thumb and secure it in place. Look at the right Canopy Release Assembly; tap it with the knuckles of the left hand one time to ensure that it sounds solid. With your left hand form a knife cutting edge, fingers extended and joined palm facing towards you, the jumpmaster, and insert it behind the Main Lift Web just below the Canopy Release Assembly. Place your left thumb on the outside corner of the Canopy Release Assembly and rotate it ¼ turn to the outside and conduct the same inspection. Now let the Canopy Release Assembly return back to its normal position.

## **MAIN LIFT WEB**

Leave the right hand in place. Look at the left hand and the right Main Lift Web. First make note of which of the three sizes the Main Lift Web is configured. Keep this in mind and ensure the Main Lift Web Tuck Tab Assembly is properly assembled and the Snap Fastener is secure. With the left-hand trace down the Main Lift Web, ensure it is not twisted, cut, or frayed, until you make contact with the Main Lift Web Adjuster. Leave the left hand in place. Look at the right hand and conduct the same inspection. Ensure the left Main Lift Web Tuck Tab Assembly is in the same location as the right Main Lift Web Tuck Tab Assembly. Leave the right hand in place.

## **CHEST STRAP**

Look at the Chest Strap to ensure that it is not misrouted around the left Main Lift Web. With the left-hand palm facing the Reserve Parachute, grasp the Carrying Handle and lift up and out. Insert the right hand, fingers and thumb extended and joined, fingertips pointing downward, palm facing you, the Jumpmaster, from top to bottom behind the Chest Strap, next to where it is sewn into the left Main Lift Web. Trace the Chest Strap, ensure that it is not twisted, cut or frayed, until you make contact with the Chest Strap Friction Adapter. Visually inspect to ensure it has a two to three finger quick release, that is secured in its Webbing Retainer, the free running end has been "S" folded or accordion folded, not rolled, and secured in its Webbing Retainer with the tab portion is on top and facing towards the Chest Strap Friction Adapter. Continue to trace the Chest Strap, ensure it is not twisted, cut or frayed, next to where it is sewn into the right Main Lift Web. Leave the right hand in place.

## **WAIST BAND**

Remove the left hand, lean to the jumper's right side. Insert the left hand, fingers and thumb extended and joined, fingertips pointing skyward, palm facing you, the jumpmaster, from bottom to the top behind the Waistband next to where it is sewn to the Pack Tray. Look at the Waistband where it is sewn to the Pack Tray to ensure it is secured to the Pack Tray by a box "X" stitch, with at least 50 percent of the stitching present. Trace the Waistband forward, ensure it is not twisted, cut, frayed; been misrouted behind the Horizontal Backstrap or right Main Lift Web. Continue tracing the Waistband forward until the right Waistband Retainer rests in the palm of your left hand. Leave the left hand in place and remove the right hand from behind the Chest Strap and insert it fingers, and thumb extended and joined, fingertips pointing skyward, palm facing you, the jumpmaster, from bottom to top behind the Reserve Parachute so the left Waistband Retainer rests in the palm of the right hand. Make fingertip to fingertip contact and conduct a physical inspection to ensure the Waistband is not twisted and has been routed through both Waistband Retainers. Leave the left hand in place, and with the right hand continue to trace the Waistband back. Ensure it is not twisted, cut, frayed and has not

been misrouted behind the left Main Lift Web, until the Metal Adjuster rests in the palm of the right hand. Remove the left hand from behind the Reserve Parachute and insert the index and middle fingers from top to bottom into the quick release formed by the Waistband. Ensure it is no more than three fingers, no less than two, and it is not a false quick release. Remove the index and middle fingers from the quick release and with the index finger and thumb pinch off the free running end of the Waistband where it emerges from the Metal Adjuster. Trace the free running end of the Waistband to ensure it is not cut, torn, or frayed and is easily accessible to the jumper until the fingers fall off the end. With the left-hand, palm facing the Reserve Parachute grasp the Carrying Handle the Reserve Parachute and look at the right hand and the Waistband Adjuster Panel. With the right hand trace the Waistband Adjuster Panel back, ensure it is not twisted, cut, or frayed, and has not been misrouted behind the Horizontal Back Strap to where it is sewn to the Pack Tray. Ensure it is properly secured to the Pack Tray by a box "X" stitch, with at least 50 percent of the stitching present.

## **T-11 RESERVE SINGLE PIN PARACHUTE**

With the right hand, knuckles facing towards the pack tray, palm facing skyward, form a fist with the thumb pointing away from you. Pinch off the Pack Opening Spring Band's pull tab on the left side of the reserve parachute. Pull it slightly towards the center of the reserve parachute and conduct a visual inspection. Look at the Pack Opening Spring Band to ensure it is routed through the left Pack Opening Spring Band Retainer, on the rear of the reserve parachute, it has elasticity, and none of the five (5) wire springs are broken or exposed. Now release the pull tab and let it pop back into place. With the right hand, form a fist with index finger exposed. Pluck the Opening Gate one time, to ensure it is properly secured to the left D-ring, it has spring tension, has not been safetied, and the Opening Gate facing the jumper, with the Butterfly Portion to the outside. With the left hand, lift up and out on the Carrying Handle. Conduct a visual Inspection of the left Connector Snap Retaining Tie, to ensure it is present and serviceable. Then visually inspect the left Spreader Bar Tie to ensure that it is properly routed through both grommets and is secured with a surgeon's knot locking knot with overhand knots. Insert the right index finger from top to bottom into the Army Parachute Log Record Stow Pocket and conduct a visual and physical inspection to ensure an Army Parachute Log Record is present. Withdraw the right index finger. While continuing to lift up and out, transfer control of the Carrying Handle from the left hand to the right hand, palm facing the reserve parachute. Conduct the same visual inspection of the right Spreader Bar Tie and the right Connector Snap Retaining Tie. Now allow the reserve parachute to return to its natural position leaving your right hand in place and inspect the Right Connector Snap with the index finger of the left hand in the same manner. Leave your right hand in place. With the left-hand knuckles facing towards the pack tray, palm facing skyward, form a fist with the thumb pointing away from you. Pinch off the Pack Opening Spring Band's pull tab on the right side of the reserve parachute. Pull it slightly towards the center of the reserve and conduct a visual inspection. Look at the Pack Opening Spring Band to ensure it is routed through the right Pack Opening Spring Band Retainer on the rear of the reserve; it has elasticity, and none of the five (5) wire springs are broken or exposed. Now release the pull tab and let it pop back into place. Drop both hands. With the left hand form a knife cutting edge, palm facing towards the Jumpmaster, and sweep the Carrying Handle, and Universal Static Line Snap Hook towards the jumper. Place your hands on the left and right Pack Closing Flaps, ensuring the Ripcord Assembly is not masked. With your head and eyes approximately 6 to 8 inches away, visually inspect the Ripcord Assembly, to ensure the window is not cracked, broken, or distorted. Ensure all four Tuck Tabs are secure and the left Pack Closing Flap is secured over the right Pack Closing Flap. Visually inspect the Curved Pin Lanyard Attaching Loop to ensure it is free of all cuts, frays or burns. Visually inspect the Curved Pin Lanyard in its entirety from its point of attachment to the Curved Pin, ensuring it is routed over the left Pack Closing Flap, it is not twisted, cut, frayed or burned, and it is properly attached to the Curved Pin. Visually inspect the Curved Pin to ensure it is not bent, cracked or corroded and is properly routed through the Reserve Closing Loop from left to right, and the tip is pointing skyward. Visually inspect the Reserve Closing Loop to ensure it is not cut, frayed, or burned and has not been punctured in any manner. Visually inspect the grommets to ensure they are not bent, cracked or corroded. Drop both hands. An overall inspection of the reserve parachute must be conducted to ensure it is free of grease, oil, dirt, mud, tears and exposed canopy. Place both hands, fingers and thumbs extended and joined, palms facing the reserve parachute, on the top right corner. Take care not to cover up the seam. The left hand is the control hand, the right hand is the working hand. With the head and eyes approximately 6 to 8 inches from the working hand, trace across the top Pack Closing Flap, down the left Pack Closing Flap. Bend over so you can see what you are doing, and trace across the bottom Pack Closing Flap. Turn the working hand over so the pinky finger leads the way, and trace up the right Pack Closing Flap, until skin-to-skin contact is made with the control hand. Raise the control hand up out of the way, and trace where the control hand had been. Raise the reserve parachute to the jumper and issue the command of **"Hold, Squat."**

## **LEG STRAPS**

Insert the index and middle finger of each hand from outside to inside, behind the Leg Straps, below the Universal Parachutist Recovery Bag where the natural pocket is formed. Simultaneously slide both hands back towards the Saddle, to ensure the Leg Straps are not crossed. Leave the right hand in place. With the left hand trace the right Leg Strap up, ensure it is not twisted, cut, or frayed, until contact is made with the right Leg Strap Retainer, now remove the index finger and middle finger of the left hand and reinsert them just above the right Leg Strap Retainer and trace up the right Leg Strap to ensure it is not twisted, cut, or frayed and the Excess Webbing is properly routed behind the Leg Strap Retainer and is secured in the Webbing Retainer until contact is made with the Quick Fit "V" Ring. With the thumb, press in on the Activating Lever of the Ejector Snap to ensure it is properly seated over the Ball Detent and is free of foreign matter that would keep it from seating completely. Leave the left hand and thumb in place and look at the left Leg Strap. With the right hand conduct the same inspection of the left Leg Strap. Now leave both hands and thumbs in place. Rock back on your heels and conduct a visual inspection to ensure the Universal Parachutist Recovery Bag is present, neither Leg Strap Retainer is cut or frayed more than 50 percent and the folded portions are facing skyward. Once satisfied with the inspection, stand up in front of your jumper, and issue the jumper the command of **"RECOVER."**

## **UNIVERSAL STATIC LINE MODIFIED**

With the right hand grasp the Universal Static Line Snap Hook ensuring the Spring Opening Gate facing towards the jumper. Open the right hand and let the Universal Static Line Snap Hook rest in the palm. Place the index finger of the left hand on the girth hitch of the Universal Static Line Modified. Ensure the girth hitch has not been reversed and the green I.D. marking thread is present. Place the index finger of the left hand in the vicinity of the Rivet Pin, ensuring you do not cover it and to ensure it is present, free of rust and corrosion. With the right hand, re-grasp the Universal Static Line Snap Hook and hold it perpendicular to the Reserve Parachute with the Spring Opening Gate facing towards the jumper. With the left hand, palm facing the jumper, thumb pointing downward, grasp the Universal Static Line Modified just above the Universal Static Line Snap Hook. Rotate the Universal Static Line Modified down and to the jumper's right and push it toward the Universal Static Line Snap Hook. Visually inspect inside the girth hitch to ensure it is free of all cuts, frays and burns. With the index finger or thumb of the right hand push the girth hitch back towards the Universal Static Line Snap Hook and again visually inspect inside the girth hitch for any cuts, frays or burns. Redress the girth hitch down around the narrow portion of the Universal Static Line Snap Hook and release the Universal Static Line Modified with the left hand. Since the Universal Static Line Modified is routed over the right shoulder; with the index finger and thumb of the right hand, form an "O" around the Universal Static Line Modified just above the Universal Static Line Snap Hook you will still see metal. Raise the right hand up and tilt your "O" towards you, simultaneously inspecting the Universal Static Line Modified as it passes through the "O" to ensure it is free of all cuts, frays, or burns. Raise the right hand as high as it can go, or until you feel resistance and issue the jumper the command **"TURN"**. Once the jumper has completed the turn, the right hand should have been raised high enough so as to keep the Universal Static Line Modified tight between the control hand and the first stow. Place the index finger, or index and middle finger of the left hand behind the Universal Static Line Modified below the right-hand making skin-to-skin contact. Trace the Universal Static Line Modified down ensure it is free of all cuts, frays, burns and it has not been misrouted under or through either Riser Assembly, to the Static Line Slack Retainer Band, remove the index finger or index and middle finger from behind the Universal Static Line Modified. Reinsert your index finger or index and middle finger behind the Universal Static Line Modified just below the Static Line Slack Retainer Band and trace down to the first stow. With either hand, form a bight in the Universal Static Line Modified and look at the Static Line Slack Retainer Loop. Ensure it is present, serviceable and two serviceable Static Line Slack Retainer Bands are attached. Place the bight on top of the Pack Tray and control it with either hand. This hand becomes the control hand. The opposite hand becomes the working hand. With the index finger and thumb of the working hand pinch off the first stow and pull it one to two inches toward the center of the Pack Tray. Look behind the first stow and ensure the Universal Static Line Modified is free of cuts, frays, or burns and has not been misrouted around the Static Line Stow Bar. Release the first stow and let it pop back into place. Note: When tracing the Universal Static Line Modified towards you, only the index finger will be used. When tracing away from you, the index finger or thumb may be used. Insert the index finger or thumb of the working hand from bottom to top behind the first strand of Universal Static Line Modified as close as possible to the first stow. Trace the first strand of Universal Static Line Modified, ensure that it is free of all cuts, frays, or burns to the second stow. With the index finger and thumb of the working hand pinch it off and pull one to two inches towards the center of the Pack Tray and conduct the same inspection. Continue to inspect the Universal Static Line Modified in the same manner to the

Main Curved Pin Cover. Ensure the last strand of Universal Static Line Modified is routed from the right Outer Static Line Stow Bar. With the index finger of the working hand gently lift up on the Main Curved Pin Cover. Inspect the Main Curved Pin Attaching Loop to ensure that it is properly attached to both the Universal Static Line Modified and the Main Curved Pin. Visually inspect the Main Curved Pin from its point of attachment to ensure it is not bent, cracked or corroded and is properly routed from left to right through the Main Closing Loop. Visually inspect to ensure the Main Curved Pin Securing Tie is present and made of only one turn of 8/4 orange cotton thread, and that it is secured by a surgeon's knot locking knot with the ends trimmed to approximately one inch. Visually inspect the Main Closing Loop to ensure it is not, cut, frayed, or burned and the Main Curved Pin is not puncturing it in any manner. Conduct a visual inspection of the Grommet to ensure it is not bent, cracked, or corroded. With the index finger and thumb of the working hand gently lift up on the Main Curved Pin Protector Flap and conduct a visual inspection of the Main Closing Loop, ensure it is not twisted, cut, frayed, or burned and the Grommet is not bent, cracked, or corroded. Stand up behind the jumper.

### **ADVANCED COMBAT HELMET (REAR)**

Place both hands fingers and thumbs extended and joined, fingertips pointing skyward, palms facing the jumper on the left side of the Advance Combat Helmet. The left hand is the control hand and the right hand is the working hand. With the working hand trace across the rim of the Advance Combat Helmet feeling for any sharp or protruding edges that may cut or damage the jumper's Universal Static Line Modified upon exiting the aircraft. Once the hands are parallel place the thumbs on the rim of the Advance Combat Helmet and tilt the jumper's head forward. Conduct a visual inspection to ensure the Oval Pads are covering the bolt ends, they are flush with the outer rim of the Advanced Combat Helmet and the rear Trapezoid Pad is flush or protruding slightly past the rim of the Advanced Combat Helmet, no more than ½ inch. If the Jumper is wearing a Modified Chinstrap Assembly, place the right index finger on the rear right Adjustable Buckle. Ensure it is free of all cracked components and is serviceable and the rear right Adjustable Strap is properly routed through it and the free running end is secured in the Webbing Retainer. Trace the rear right Adjustable Strap down, ensure it is not twisted, cut or frayed until contact is made with the Long Portion Chinstrap. Leave the right index finger in place. Place the left index finger on the rear left Adjustable Buckle and conduct the same inspection all the way to the Chin Strap Fastener. Leave the left index finger in place. Conduct a visual inspection of the Nape Pad to ensure it is present, secure, serviceable, and has not been reversed. If the jumper is wearing the Head-Loc H-Nape Retention System, place the right index on the rear right Head-Loc Attaching Strap from where it emerges from the rim of the Advanced Combat Helmet, trace the Head-Loc Attaching Strap down ensuring it is not twisted, cut, or frayed and is routed through the Nape Pad Retaining Strap until contact is made with the rear right plastic Oval Link, ensure it is free of all cracked components and is serviceable. Continue to trace down, picking up the inspection of the rear right Adjustable Strap until contact is made with the rear right Head-Loc Slider. Ensure it is free of all cracked components and is serviceable. Continue to trace the rear right Adjustable Strap down, ensuring it is not twisted, cut, or frayed to where it's sewn into the Long Portion Chinstrap. Leave the right index finger in place. Place the left index finger on the rear left Head-Loc Attaching Strap from where it emerges from the rim of the Advanced Combat Helmet, conduct the same inspection all the way until contact is made with the Chinstrap Buckle. Keep both hands in place. Conduct a visual inspection of the Nape Pad to ensure that it is present and serviceable, next visually inspect the H-Nape Pad Head-Loc Slider and ensure that it is ensure that it is free of all cracked components and is serviceable.

### **RISER ASSEMBLIES**

Reach over the jumper's shoulders and grasp a Riser Assembly in each hand just above the Canopy Release Assemblies. Since these are like items of equipment either Riser Assembly can be inspected first. However, for this talk through we will begin the inspection with the left Riser Assembly. Give the left Riser Assembly a sharp tug to the rear. Open the left hand to form a distinguishable "L". Apply upward pressure with the left thumb and trace the Riser Assembly rearward, conducting a physical and visual inspection to ensure that an Army Parachute Log Record is present, and the Riser Assembly is not twisted, cut, or frayed to where it disappears into the Main Pack Tray. Leave the left hand in place. With the right hand conduct the same inspection on the right Riser Assembly. You must ensure that only one Riser Assembly contains an Army Parachute Log Record.

### **PACKTRAY**

An overall inspection of the Pack Tray must be conducted to ensure the Pack Tray is free of grease, oil, dirt, mud or tears. Place both hands fingers and thumbs extended and joined palms facing the Pack Tray on the top left corner of the Pack Tray. The left hand is the control hand and the right hand is the working hand. With the head and eyes 6 to 8 inches away from the working hand trace across the top Pack Closing Flap, down the right Pack Closing Flap, bend over so you can see what you're doing and trace across the bottom Pack Closing Flap. Turn the working hand over so the pinky finger is leading the way and trace up the left Pack Closing Flap until skin to skin contact is made with the control hand. Raise the control hand up out of the way and trace where the control hand had been. Form knife-edges with both hands, palms facing the jumpmaster and issue the command "ARCH YOUR BACK".

## **DIAGONAL/HORIZONTAL BACKSTRAPS**

Insert both hands behind the Diagonal Back Straps where the natural pocket is formed. Ensure that your thumbs rest just below the "X" formed by the Diagonal Back Strap Retainers. Look at the Diagonal Back Straps to ensure they are properly routed over the appropriate shoulder, and the top Diagonal Back Strap has one more row of exposed stitching than the bottom. Look at the Diagonal Back Strap Retainers to ensure they are routed through the Sizing Channels on the Diagonal Back Straps. The Diagonal Back Strap Retainers are routed around the Diagonal Back Strap Keeper and the Directional Snap Fasteners are secure. To further ensure the Directional Snap Fasteners are secure, with both thumbs, pluck the tab portion on the Diagonal Back Strap Retainers upward from bottom to top. Lean to your left and with the left hand, trace down the Diagonal Back Strap to ensure it is not twisted, cut or frayed to the Back Strap Adjuster. Grasp the Back Strap Adjuster with the left hand, it will remain there for the remainder of the inspection. Lean to your right and look at your right hand. With the right hand trace down the Diagonal Back Strap, ensure it is not twisted, cut or frayed. Bypass the Back Strap Adjuster and pick up the inspection of the Horizontal Back Strap. Trace down, ensure it is not twisted, cut, or frayed, the excess webbing is secured in its Webbing Retainer and nothing has been misrouted behind it until it disappears into the right Main Lift Web. Withdraw the right hand from under the Horizontal Back Strap, and reinsert it, fingers and thumb extended and joined, fingertips pointing skyward, palm facing the jumpmaster, from bottom to top behind the Horizontal Back Strap where it reemerges from the right Main Lift Web. Issue the jumper the command of, "**BEND.**" Place your left shoulder on the bottom Pack Closing Flap and push up on the bottom of the Pack Tray. Simultaneously, with your left hand pull down on the Back Strap Adjuster in order to create space. With your head and eyes approximately six to eight inches away trace the Horizontal Back Strap across the small of the jumper's back to ensure that Horizontal Back Strap is not twisted, cut or frayed, that the Horizontal Back Strap Retainers are routed over the Horizontal Back Strap, under and over the Horizontal Back Strap Keeper and secured to themselves with Directional Snap Fasteners and that nothing is misrouted behind the Horizontal Back Strap. Continue tracing until your right pinky finger makes contact with the Main Lift Web. Withdraw the right hand from behind the Horizontal Back Strap, and reinsert it, from top to bottom behind the Horizontal Back Strap and behind the Waistband Adjustor Panel. Trace the Horizontal Back Strap down to where it reemerges from the left Main Lift Web. Trace up until you make skin-to-skin contact with the left hand ensuring it is not twisted, cut, frayed, the excess webbing is secured in its Webbing Retainer, and nothing has been misrouted behind it. Remove the right hand and get left hip to head with your jumper.

## **SADDLE**

Place the fingertips of the right hand, fingers and thumb extended and joined, palm facing the jumper, on the lower portion of the jumper's left Main Lift Web Adjuster. With your fingertips leading the way trace down the lower portion of the Main Lift Web transitioning to the jumper's Saddle ensure it is not twisted, cut, frayed or been inverted, and neither Leg Strap has been misrouted around the Saddle. Continue to trace until your fingertips make contact with the lower portion of the right Main Lift Web Adjuster. Keep your left hand in place. With the right hand reach back and get a hand full of air and issue the Jumper that good seal of approval by tapping the jumper on the buttocks and issuing the command "**RECOVER**".

## **PLACE THE JUMPER INTO JUMP CONFIGURATION**

After the Jumpmaster has completed a JMPI, they will place the jumper into Jump Configuration. The only person authorized to place the jumper into Jump Configuration is the Jumpmaster who inspected that jumper. Move in front of the jumper. Trace the Universal Static Line Modified from the Universal Static Line Snap Hook to ensure that the Universal Static Line Modified is routed over the shoulder corresponding with the door the jumper is to exit. Once behind the jumper, the Jumpmaster will remove all slack from the Universal Static Line Modified, and establish a new stow on an appropriate Static Line Stow Bar, if necessary. The Jumpmaster will

ensure the Main Curved Pin is fully seated, and the Main Curved Pin Securing Tie is present and properly secured. Then, reinsert the Main Curved Pin Protector Flap into the Tuck Flap ensuring that it is routed behind all strands of Universal Static Line Modified.

# **T-11 Combat Equipment JMPI Sequence**

## **TC 3-21.220 Chapter 9**

### **Place the Jumper into JMPI Configuration, T-11 ATTPS configured with 5' USLE, with T-11 R-SP, Combat Equipment**

Prior to inspecting a jumper, the Jumpmaster will prepare the jumper for inspection. The only person authorized to place the jumper into JMPI configuration is the Jumpmaster who will inspect that jumper. Look at the Canopy Release Assemblies to ensure they are seated in the hollows of the jumper's shoulders, below the collar bones at approximately name tape level. Look at the Riser Assemblies to ensure that the type of parachute being inspected is a T-11 parachute and does not have Blue Confluence Wrap. Move behind the jumper and remove the Main Curved Pin Protector Flap from the Tuck Flap. Ensure the Main Curved Pin is fully seated, and the Main Curved Pin Securing Tie is present and properly secured. When jumping a C-17 and the Five Foot Universal Static Line Extension is present, ensure the Green ID marking thread on the Universal Static Line Modified and the Universal Static Line Extension is on top and outside the loop. With the index finger and thumb of both hands pinch off the double sewn portion of both the end of the Cotton Buffer of the Five Foot Universal Static Line Extension and the end Upper Looped Portion of the Universal Static Line Modified. Ensure the Five Foot Universal Static Line Extension is properly girth hitched to the Universal Static Line Modified: Push in on the girth hitch at the upper looped portion of the Universal Static Line Modified and the Cotton Buffer of the Five Foot Universal Static Line Extension to ensure that the girth hitch is COMPLETELY separated. Then visually inspect both the Upper Looped Portion of the Universal Static Line Modified and the Cotton Buffer of the Five Foot Universal Static Line Extension for any burns, cuts, or frays. \* Ensure the double sewn portion of the Five Foot Universal Static Line Extension is routed through the Upper Looped Portion of the Universal Static Line Modified, and the double sewn portion of the Universal Static Line Modified is routed through the Cotton Buffer of the Five Foot Universal Static Line Extension. Redress the girth hitch. Then ensure the girth hitch is centered between two Inner Static Line Stows. Disconnect the Universal Static Line Snap Hook from the right Outer Static Line Stow Bar; ensure the Spring Opening Gate has spring tension. Conduct a physical and visual inspection of both sides of the double sewn portion of the Universal Static Line Modified, ensuring the stitching is present on both sides, there are three stitches sewn over the raw edge and it is not burned, cut, or frayed. Remove all excess Universal Static Line Modified from the Static Line Slack Retainer Band on the Static Line Slack Retainer Loop, remove all twists and route the Universal Static Line Modified through the Static Line Slack Retainer Band over the jumper's shoulder corresponding with the paratroop door the jumper is to exit. Avoid breaking unnecessary stows. Secure the Universal Static Line Snap Hook to the Carrying Handle of the T-11 Reserve Single Pin parachute, with the Spring Opening Gate facing the jumper. Conduct a visual inspection of the two clear windows on the T-11 Reserve-Single Pin to ensure that they are not distorted or damaged and you can effectively view the internal components. Next you will conduct a visual inspection of the Pack Opening Spring Band to ensure that it is properly secured with both Hooks. Take a knee in front of your jumper and open the Friction Adapter Protective Covers, fully exposing the 2-3 finger quick releases and excess webbing of the Equipment Retainer Straps. After completing a Jumpmaster Personnel Inspection, you will place the jumper into the jump configuration. You may now begin your inspection. Now that you are familiar with the inspection sequence for a Hollywood jumper the sequence for a Combat Equipped jumper will now be discussed. The inspection sequence for a Combat Equipped jumper is the same as for a Hollywood equipped jumper down to the Waistband.

### **INSPECTION OF COMBAT EQUIPMENT:**

#### **WAIST BAND**

Insert your right hand, fingers and thumb extended and joined, fingertips pointed downward, palm facing towards you, the jumpmaster, from top to bottom behind the Chest Strap next to where it is sewn to the right Main Lift Web. Insert the left hand, fingers and thumb extended and joined, fingertips pointing skyward, palm facing you the jumpmaster, from bottom to the top behind the Waistband next to where it is sewn to the Pack Tray. Look at the Waistband where it is sewn to the Pack Tray to ensure it is secured to the Pack Tray by a box "X" stitch, with at least 50 percent of the stitching present. Trace the Waistband forward, ensure it is not twisted, cut, frayed, or been misrouted behind the Horizontal Back Strap and routed over the right Main Lift Web and under the right Equipment Ring. Continue tracing the Waistband forward until the right Waistband Retainer rests in the palm of the left hand. Leave the left hand in place. Remove the right hand from behind the Chest Strap and insert it, fingers and thumb extended and joined, fingertips pointing skyward, palm facing the jumpmaster, outside and around the left Adjustable Equipment Ring Attaching Strap behind the reserve

parachute so the left Waistband Retainer rests in the palm of the right hand. Make fingertip to fingertip contact and conduct a physical inspection to ensure the Waistband is not twisted, cut or frayed and has been routed through both Waistband Retainers. Leave the right hand in place and remove your left hand from behind the reserve parachute, place it palm facing the reserve parachute on the left Pack Closing Flap. Completely remove the right hand from behind the Waistband Retainer and with the right forearm push out on the lead edge of the Modular Airborne Weapons Case for the first time. Look at the Waistband to ensure it is not twisted, cut, or frayed, has been properly routed over the left Main Lift Web and under the left Equipment Ring. With the right hand, grasp the trail edge of the Modular Airborne Weapons Case and pull it forward. With the right hand, fingers and thumb extended and joined, fingertips pointing skyward, palm facing the jumpmaster, insert it from bottom to top behind the Metal Adjuster. Remove the left hand from the left Pack Closing Flap of the reserve parachute and insert the index finger and middle finger of the left hand from top to bottom into the quick release formed by the Waistband. Ensure that it is no more than three fingers, no less than two and it is not a false quick release. Remove the index finger and middle finger from the quick release and with the index finger and thumb of the left-hand pinch off the free running end of the Waistband where it emerges from the Metal Adjuster. Trace the free running end of the Waistband, ensure it is not cut, torn, or frayed and is easily accessible to the jumper until the fingers fall off the end. Place the left-hand palm facing the reserve parachute back on the left pack Closing Flap of the reserve parachute and look at the right hand and the Waistband Adjuster Panel. With the right hand trace the Waistband Adjuster Panel back. Ensure that it is not twisted, cut, or frayed, and has not been misrouted behind the Horizontal Back Strap to where it is sewn to the Pack Tray. Ensure it is properly secured to the Pack Tray by a box "X" stitch, with at least 50 percent of the stitching present. Completely remove the right hand from behind the Waistband Adjuster Panel. With the right forearm, push out on the lead edge of the Modular Airborne Weapons Case for the second time.

### **MODULAR AIRBORNE WEAPONS CASE**

The Modular Airborne Weapons Case will be inspected in its entirety prior to inspecting the reserve parachute. The inspection of the Modular Airborne Weapons Case begins with its point of attachment the Snap Shackle. Look at the Snap Shackle to ensure it is the outermost item of equipment on the left Equipment Ring, and the Opening Gate is facing the Jumper. With the right thumb and index finger rotate the Snap Shackle a  $\frac{1}{4}$  of a turn so the opening gate is facing towards the jumper and conduct a visual inspection of the Locking Pin to ensure it is fully seated. Conduct a visual inspection to ensure the Yellow Safety Lanyard is present and is secured to the appropriate Snap Fastener. Now with your right hand form a fist leaving your index finger exposed and place it on the Adjusting Strap where it is attached to the Snap Shackle. Trace down the Adjusting Strap ensuring that it is properly routed through all of the Pouch Attachment Ladder System Webbing until you come into contact with the Friction Adapter. Leave your right index finger in place and visually inspect for proper routing ensuring the Adjusting Strap is routed through the Friction Adapter from top to bottom then routed up over the bottom and under the top to keep the Adjusting Strap from slipping. Visually inspect to ensure as much of the excess webbing of the Adjusting Strap is stowed under the Pouch Attachment Ladder System Webbing as possible. (Note: You must ensure the excess webbing of the Adjusting Strap is not routed over the Snap Shackle.) Once satisfied with your inspection, continue tracing down the inside of the Modular Airborne Weapons Case until your right index finger naturally falls off the end. With the right hand, form a knife cutting edge, fingers and thumb extended and joined, palm facing skyward and trace from front to rear along the bottom of the Modular Airborne Weapons Case to ensure the muzzle of the weapon is not protruding. With the palm of your right hand gently lift up on the base of the Adjustable Nose Cone to ensure that the Nose Cone Securing Straps are tightened, and the Hook and Pile Tape is properly secured. Place the index finger of the right hand on the Quick Release Buckle at the bottom of the Closing Flap and visually inspect to insure it is free of all cracked components and properly secured. Then visually inspect to ensure the free running end of the Compression Strap has been secured in the Webbing Retainer. Continue to trace up the Slide Fastener to ensure it is secured with all teeth engaged until you make contact with the second set of Quick Release Buckles, conduct the same visual inspection. Then visually inspect to ensure the free running end of the Compression Strap has been secured in the Webbing Retainer. Now continue tracing the Slide Fastener until you make contact with the Slide Fastener and Tabbed Thong. Leave your index finger in place and conduct a visual inspection of the Upper Spring Stop to ensure the spring portion is present and serviceable. With the index finger of the right hand, form a hook and insert it from back to front into the window created in the Tabbed Thong Portion of the Slide Fastener and Tabbed Thong and gently pull up on the Slide Fastener and Tabbed Thong to ensure it is secured by the Snap Fastener and the Upper Tie Down Tape is properly routed through it. Now, with the right hand form a knife cutting edge, fingers and thumb extended and joined, palm facing the Modular Airborne Weapons Case and trace down approximately 10 to 12 inches from the top of the Modular Airborne Weapons Case and give it a sharp slap, feeling for the forward assist of the M4/M16 series rifle or the charging handle of the M249 SAW. With the index finger and thumb of the right hand, pinch off the

bowknot of the Upper Tie Down Tape on the lead edge of the Modular Airborne Weapons Case. Visually inspect to ensure that the Upper Tie Down Tape is properly routed behind the Vertical Nylon Equipment Hanger, through the small window in the Tabbed Thong Portion of the Slide Fastener and Tabbed Thong, and is properly routed around the Modular Airborne Weapons Case, through the small cut away portion of the Equipment Ring from bottom to top and is secured by a single or double loop bow knot. With the left hand, secure the Carrying Handle of the reserve parachute, palm facing the reserve. This concludes the inspection of the Modular Airborne Weapons Case. With the right-hand knuckles facing towards the Pack Tray, palm facing skyward, form a fist with the thumb pointing away from you, pinch off the Pack Opening Spring Band's Pull Tab on the left side of the reserve parachute. Pull it slightly towards the center of the reserve and conduct a visual inspection. Look at the Pack Opening Spring Band to ensure it is routed through the left Pack Opening Spring Band Retainer on the rear of the reserve parachute, it has elasticity, and none of the five (5) wire springs are broken or exposed. If the Modular Airborne Weapons Case is in your line of sight and hinders your inspection, release the Pull Tab and with your right forearm and push out on the lead edge of the Modular Airborne Weapons Case. Then resecure the Pack Opening Spring Band Pull Tab and conduct the inspection as previously described down to the command of **"Hold"**

### **MOLLE 4000**

You will begin the inspection of the Integrated Harness Single Point Release beginning with the Adjustable Equipment Ring Attaching Straps. These are like items of equipment so either one can be inspected first, however for the purpose of this talk through you will begin with the right Adjustable Equipment Ring Attaching Strap. Simultaneously, with both hands form fists with your index fingers exposed. Place your index fingers on top of the Snap Hooks of the Adjustable Equipment Ring Attaching Straps. Focus your attention to your left hand. Conduct a visual inspection to ensure that the Snap Hook is not bent, cracked, corroded or distorted out of shape and that the opening gate is facing towards the jumper. With the index finger of the left hand, finger the opening gate one time to ensure that it is properly secured to the right Equipment Ring, it has spring tension and has not been reversed. With the left thumb flip the free running end of the right Adjustable Equipment Ring Attaching Strap out of the way. Place the left index finger on the black intermittent stitching on the front of the right Adjustable Equipment Ring Attaching Strap just below the Snap Hook. Trace down the right Adjustable Equipment Ring Attaching Strap ensuring that it is not twisted, cut, or frayed until contact is made with the Yellow Attaching Loop. Trace down the color coated Attaching Loops and ensure that they are not twisted, cut or frayed and the White Attaching Loop is routed from bottom to top through the Yellow Attaching Loop, the Green Attaching Loop is routed from bottom to top through the White Attaching Loop, the Red Attaching Loop is routed from bottom to top through the Green Attaching Loop, and routed from bottom to top through the Grommet on the Female Portion Leg Strap Release Assembly. Continue tracing until the index finger of the left-hand rests on the single box "X" stitch on the Release Handle Cross Strap. Look at the Release Handle Cable where it emerges from the Release Handle Cross Strap. Ensure the Release Handle Cable is properly routed through the Red Attaching Loop and secured by the Cable Loop Retainer. Leave the left index finger in place and with your right hand; conduct the same inspection on the left Adjustable Equipment Ring Attaching Strap until your right index finger rests on the single box "X" stitch on the Release Handle Cross Strap. Focus your attention on the Release Handle. With the right index finger and thumb, index finger on top, thumb on the bottom lift up gently on the Release Handle. Ensure the Release Handle and Release Handle Cable is properly routed between the two plies of the Release Handle Cross Strap and the Release Handle is secured by the Hook and Pile Tabs, is not reversed or upside down. Now form a hook with your right index finger and insert it from outside to inside and gently lift up on the Release Handle Lanyard, to ensure it is not twisted more than one half twist, cut, frayed or misrouted around the Equipment Retainer Strap or the Release Handle Cross Strap. Place your right index finger back on the single box "X" stitch on the Release Handle Cross Strap. Visually inspect to ensure that the Equipment Retainer Straps are properly routed through the Air Item Routing Channels inside the Air Items Stowage Pocket. Simultaneously with both hands trace the Equipment Retainer Straps down ensuring they are not twisted, cut or frayed, and both Equipment Retainer Straps are routed through the same number of Air Item Routing Channels until your fingers rest on top of the Friction Adapters; behind the two to three finger quick releases of the Equipment Retainer Straps. Simultaneously, you will inspect the 2-3 finger quick releases of the Equipment Retainer Straps by placing the index and middle finger of each hand, palm facing you, on the outside of the quick releases. Visually inspect the free running ends of the Equipment Retainer Straps to ensure that they are "S" folded or accordion folded, never rolled and are secured with one turn of masking tape or two turns of retainer band, one or the other never both. With the index fingers of each hand, lightly tap the free running ends of the Equipment Retainer Straps to ensure that they are secure. Secure the sides of the MOLLE 4000 and raise it to

your eye level, conduct a visual inspection to ensure the Equipment Retainer Straps are routed through the Friction Adapter Stowage Pockets, the “V” Shaped Load Lifters on top of the pack, and behind the MOLLE 4000 Frame. Raise the MOLLE 4000 to the jumper and issue the command “HOLD”. (Jumpers you will secure the top of the MOLLE 4000 and hold it up high). Simultaneously place the index fingers of both hands on the Equipment Retainer Straps where they re-emerge from under the MOLLE 4000. Now with both hands trace down the Equipment Retainer Straps ensuring they are not twisted, cut or frayed, they form an “X” configuration on the back of the MOLLE 4000 pack. Bypass the girth hitch of the Hook Pile Tape Lowering Line and continue your inspection until your fingers rest on the frame of the MOLLE 4000 frame. Leave your index fingers in place and conduct a visual inspection of the Equipment Retainer Straps to ensure they are properly routed through the Air Item Routing Channels. With the thumb and index fingers of each hand, form an “O” around the base of the Adjustable Shoulder Carrying Straps, whenever possible the free running ends should be on top of your hands. Simultaneously pull out to ensure they are properly secured to the MOLLE 4000. Visually inspect the free running ends of the Adjustable Shoulder Carrying Straps to ensure they are S-folded or accordion folded, never rolled, and secured with either one turn of masking tape or two turns of retainer bands, one or the other never both. With the index fingers of each hand, lightly tap the free running ends of the adjustable shoulder carrying straps to ensure they are secure.

### **HOOK PILE TAPE LOWERING LINE**

Place the left hand in the small of your back and with the index finger of your right-hand place it on the Hook Pile Tape Lowering Line just to the left of the girth hitch. You will visually inspect to ensure the girth hitch is properly routed north to south, south to north, but never east to west. With your right index finger trace the Hook Pile Tape Lowering Line ensuring that the Hook Pile Tape Lowering Line is properly routed over the left Adjustable Shoulder Carrying Strap until you make contact with the first set of Hook and Pile Tabs. Visually inspect to ensure the Hook and Pile Tabs are present and secured and there are no S-folds protruding from the end of the Retainer Flap. Continue to inspect down the Retainer Flap ensuring that it is secured to the MOLLE 4000 pack by two sets of girth hitched retainer bands on either end of the Retainer Flap. Continue to trace down until you make contact with the second set of Hook and Pile Tabs, once again ensure they are present and secured and there are no S-folds protruding from the end of the Retainer Flap. Continue to trace the Hook Pile Tape Lowering Line until your index finger disappears behind the Modular Airborne Weapons Case. Visually inspect to ensure the Hook Pile Tape Lowering Line is properly routed between the main body of the Modular Airborne Weapons Case and the Attachment Strap. Leave your right index finger in place. Route your left hand over your right forearm and secure the trail edge of the Modular Airborne Weapons Case and pull it forward. Make a mental note of where your right index finger is, remove your right index finger and place it back on the Hook Pile Tape Lowering Line where it just was. Continue to trace up until you make contact with the Ejector Snap ensuring the Hook Pile Tape Lowering Line is not routed through the Carrying Handle. With the right thumb press in on the Activating Lever to ensure that it is properly seated over the Ball Detent, free of all foreign matter that will keep it from seating completely, the Opening Gate is facing the jumper and is secured to the Triangle Link. Turn the Ejector Snap ¼ turn away from the jumper to ensure the Small Tooth is present. Visually inspect the Yellow Safety Lanyard to ensure that it is serviceable, and it has not been wired, tied, or taped down. Drop both hands and move back to the front of the jumper and issue the command “SQUAT”.

### **LEG STRAPS**

Insert the index and middle finger of each hand from outside to inside, behind the Leg Straps, below the Universal Parachutist Recovery Bag where the natural pocket is formed. Simultaneously slide both hands back towards the Saddle, to ensure the Leg Straps are not crossed. Leave the right hand in place. With the left hand trace the right Leg Strap up, ensure it is not twisted, cut, or frayed, until contact is made with the right Leg Strap Retainer, now remove the index finger and middle finger of the left hand and reinsert them just above the right Leg Strap Retainer and trace up the right Leg Strap to ensure it is not twisted, cut, or frayed and the excess webbing is properly routed behind the Leg Strap Retainer and is secured in the Webbing Retainer until contact is made with the Quick Fit “V” Ring. With the thumb, press in on the Activating Lever of the Ejector Snap to ensure it is properly seated over the Ball Detent and is free of foreign matter that would keep it from seating completely. Leave the left hand and thumb in place and look at the left Leg Strap. With the right hand conduct the same inspection of the left Leg Strap. Once you have skin to metal contact, you may remove your right hand and use your right forearm to lift up and out on the Modular Airborne Weapons Case. Then place your right thumb on the Activating Lever of the Ejector Snap. Now leave both hands and thumbs in place. Rock back on your heels and conduct a visual inspection to ensure the Universal Parachutist Recovery Bag is

present, neither Leg Strap Retainer is cut or frayed more than 50 percent and the folded portions are facing skyward. Once satisfied with the inspection, stand up in front of your jumper. Secure the sides of the MOLLE 4000 and issue the command of **"RECOVER"**. (Jumpers pick up on the reserve parachute and jumpmasters simply allow the MOLLE 4000 to rotate between your body and the jumper's body.)

### **UNIVERSAL STATIC LINE MODIFIED**

With the right hand grasp the Universal Static Line Snap Hook ensuring the Spring Opening Gate facing towards the jumper. Open the right hand and let the Universal Static Line Snap Hook rest in the palm. Place the index finger of the left hand on the girth hitch of the Universal Static Line Modified. Ensure the girth hitch has not been reversed and the green I.D. marking thread is present. With the index finger of the left hand, tap in the vicinity of the Rivet Pin, ensuring you do not cover it and ensure it is present, secure, and free of rust and corrosion. With the right hand, re-grasp the Universal Static Line Snap Hook and hold it perpendicular to the reserve parachute with the Spring Opening Gate facing towards the jumper. With the left hand, palm facing the jumper, thumb pointing downward, grasp the Universal Static Line Modified above the Universal Static Line Snap Hook. Rotate the Universal Static Line Modified down and to the jumper's right and push it toward the Universal Static Line Snap Hook. Visually inspect inside the girth hitch to ensure it is free of all cuts, frays and burns. With the index finger or thumb of the right hand push the girth hitch back towards the Universal Static Line Snap Hook and again visually inspect inside the girth hitch for any cuts, frays or burns. Redress the girth hitch down around the narrow portion of the Universal Static Line Snap Hook. Since the Universal Static Line Modified is routed over the left shoulder; with the index finger and thumb of the left hand, form an "O" around the Universal Static Line Modified just above the Universal Static Line Snap Hook, you will still see metal. Now drop the right hand. Raise the left hand up and tilt your "O" towards you, simultaneously inspecting the Universal Static Line Modified as it passes through the "O" to ensure it is free of all cuts, frays, or burns. Raise the left hand as high as it can go, or until you feel resistance and issue the jumper the command **"TURN"**. Once the jumper has completed the turn, the left hand should have been raised high enough so as to keep the Universal Static Line Modified tight between the left hand and the first stow. Place the index finger, or index and middle finger of the right hand behind the Universal Static Line Modified below the left-hand making skin-to-skin contact. Trace the Universal Static Line Modified down ensure it is free of all cuts, frays, burns and it has not been misrouted under or through either Riser Assembly to the Static Line Slack Retainer Band. Withdraw the index finger or index and middle finger and place below the Static Line Slack Retainer Band and continue to trace the Universal Static Line Modified to the first stow. With either hand, form a bight in the Universal Static Line Modified and look at the Static Line Slack Retainer Loop. Ensure it is present, serviceable and two serviceable Static Line Slack Retainer Bands are attached. Place the bight on top of the Pack Tray and control it with either hand. This hand becomes the control hand. The opposite hand becomes the working hand. With the index finger and thumb of the working hand pinch off the first stow and pull it one to two inches toward the center of the pack tray. Look behind the first stow and ensure the Universal Static Line Modified is free of cuts, frays, or burns and has not been misrouted around the Static Line Stow Bar. Release the first stow and let it pop back into place. (Note: When tracing the Universal Static Line modified towards you, only the index finger will be used. When tracing away from you, only the thumb may be used.) Insert the index finger or thumb of the working hand from bottom to top behind the first strand of Universal Static Line Modified as close as possible to the first stow. Trace the first strand of Universal Static Line Modified, ensure that it is free of all cuts, frays, or burns to the second stow. With the index finger and thumb of the working hand, pinch it off and pull one to two inches towards the center of the pack tray and conduct the same inspection. When jumping a C-17 and the Five Foot Universal Static Line Extension is present, when the index finger or thumb of the working hand makes contact with the girth hitch formed by the Five Foot Universal Static Line Extension and the Universal Static Line Modified leave your working hand in place and conduct a visual inspection to ensure the Green I.D. marking thread on the Universal Static Line Modified and the Five Foot Universal Static Line Extension is on top and outside the loop. Remove your control hand from the top of the Pack Tray and your working hand from behind the Universal Static Line Modified. With the index finger and thumb of both hands pinch off the double sewn portion of both the end of the Cotton Buffer of the Five Foot Universal Static Line Extension and the end upper looped portion of the Universal Static Line Modified. Ensure the Five Foot Universal Static Line Extension is properly girth hitched to the Universal Static Line Modified; push in on the girth hitch at the upper looped portion of the Universal Static Line Modified and the Cotton Buffer of the Five Foot Universal Static Line Extension to ensure that the girth hitch is COMPLETELY separated. Then visually inspect both the upper looped portion of the Universal Static Line Modified and the Cotton Buffer of the Five Foot Universal Static Line Extension for any burns, cuts, or frays. \* Ensure the double sewn portion of the Five

Foot Universal Static Line Extension is routed through the upper looped portion of the Universal Static Line Modified, and the double sewn portion of the Universal Static Line Modified is routed through the Cotton Buffer of the Five Foot Universal Static Line Extension. Redress the girth hitch. Then ensure the girth hitch is centered between two Inner Static Line Stows. With either hand regrip the excess Universal Static Line Modified and control it on top of the Pack Tray. This hand becomes the control hand, the opposite hand becomes the working hand. Insert the index finger or thumb of the working hand from bottom to top behind the strand of Universal Static Line at the end of the Five Foot Universal Static Line Extension making contact with the girth hitch formed by the Five Foot Universal Static Line Extension and the upper looped portion of the Universal Static Line Modified. Continue to trace the Universal Static Line Modified in the same manner, bypassing the girth hitch to the Main Curved Pin Cover. The remainder of the inspection continues in the same manner as a Hollywood jumper all the way to the command of **"BEND"**.

## **HORIZONTAL BACK STRAP**

Withdraw the right hand from behind the Horizontal Back Strap, and reinsert it, from top to bottom behind the Horizontal Back Strap and behind the Waistband Adjuster Panel. Trace the Horizontal Back Strap down to where it reemerges from the left Main Lift Web. Trace up the Horizontal Back Strap ensuring it is not twisted, cut or frayed until you make contact with the Upper Tie Down Tape, keep your right hand in place and visually inspect to ensure the Upper Tie Down Tape is constructed of one turn  $\frac{1}{4}$ " Cotton Webbing, is not cut, frayed, burned, or excessively worn, and is girth hitched to the Horizontal Back Strap, below the excess webbing and above the Waistband Adjuster Panel. Furthermore, ensure that the Upper Tie Down Tape is properly routed around the Modular Airborne Weapons Case. Continue tracing up the Horizontal Back Strap ensuring it is not twisted, cut, frayed, the excess webbing is secured in its Webbing Retainer, and nothing has been misrouted behind it until you make skin-to-skin contact with the left hand. The remainder of the inspection continues in the same manner as a Hollywood jumper all the way to the command of **"RECOVER"**.

## **Place the Jumper into Jump Configuration**

After the Jumpmaster has completed their Jumpmaster Personnel Inspection, they will place the jumper into Jump Configuration. The only person authorized to place the jumper into Jump Configuration is the Jumpmaster who inspected that jumper. Move in front of the jumper. Trace the Universal Static Line Modified from the Universal Static Line Snap Hook to ensure that the Universal Static Line Modified is routed over the shoulder corresponding with the door the jumper is to exit. Once behind the jumper, the Jumpmaster will remove all slack from the Universal Static Line Modified and establish a new stow on an appropriate Static Line Stow Bar, if necessary. When jumping a C-17 and the Five Foot Universal Static Line Extension is present, ensure the Green I.D. marking thread on the Universal Static Line Modified and the Universal Static Line Extension is on top and outside the loop. With the index finger and thumb of both hands pinch off the double sewn portion of both the end of the Cotton Buffer of the Five Foot Universal Static Line Extension and the end upper looped portion of the Universal Static Line Modified. Ensure the Five Foot Universal Static Line Extension is properly girth hitched to the Universal Static Line Modified: Push in on the girth hitch at the upper looped portion of the Universal Static Line Modified and the Cotton Buffer of the Five Foot Universal Static Line Extension to ensure that the girth hitch is COMPLETELY separated. Then visually inspect both the upper looped portion of the Universal Static Line Modified and the Cotton Buffer of the Five Foot Universal Static Line Extension for any burns, cuts, or frays. \* Ensure the double sewn portion of the Five Foot Universal Static Line Extension is routed through the upper looped portion of the Universal Static Line Modified, and the double sewn portion of the Universal Static Line Modified is routed through the Cotton Buffer of the Five Foot Universal Static Line Extension. Redress the girth hitch. Then ensure the girth hitch is centered between two Inner Static Line Stows. The Jumpmaster will ensure the Main Curved Pin is fully seated, and the Main Curved Pin Securing Tie is present and properly secured. Then, reinsert the Main Curved Pin Protector Flap into the Tuck Flap ensuring that it is routed behind all strands of Universal Static Line Modified. Move to the front of your jumper. Raise the MOLLE 4000 up so that the top of the MOLLE 4000 Frame is flush with the bottom Pack Closing Flap of the T-11 Reserve Single Pin Parachute. The jumpers will remove the slack from the Adjustable Equipment Ring Attaching Straps. Ensure that the Frame of the MOLLE 4000 is flush with the body of the jumper and is not protruding excessively from the front of the jumper. Disconnect the Male Portion Leg Strap Release Assembly from the Female Portion Leg Strap Release Assembly on the jumper's left side. Remove all excess webbing and route the left Leg Strap through the jumper's legs from front to rear, around the jumper's left leg and above the knee, around the main body of the Modular Airborne Weapons Case and

then reconnect the Male Portion Leg Strap Release Assembly to the Female Portion Leg Strap Release Assembly on the jumpers left side. Remove all slack ensuring that the Adjustable Leg Stap is riding above the jumper's knee. Secure the excess webbing inside the Webbing Retainer on the Female Portion Leg Strap Release Assembly. The right Adjustable Leg Strap is routed in the same manner as the left Adjustable Leg Strap except for routing the Adjustable Leg Strap around the main body of the Modular Airborne Weapons Case. Take a knee in front of your jumper. Close the Friction Adapter Protective Covers ensuring that the 2-3 finger quick releases and excess webbing of the Equipment Retainer Straps are completely covered.



# Practical Work in the Aircraft

## TC 3-21.220 Chapters 5, 10 & 16

### FOUR REQUIRED TIME WARNINGS

All time warnings begin and end at shoulder level in a closed fist.

- **(1) “20 Minutes”**

As the Jumpmaster issues the verbal command **“TWENTY MINUTES”** extend hands and arms forward while spreading the fingers and thumbs, then return to shoulder level in closed fists. This motion will be repeated twice.

- **(2) “10 Minutes”**

As the Jumpmaster issues the verbal command **“TEN MINUTES”**, extend hands and arms forward while spreading the fingers and thumbs, then return to shoulder level in closed fists.

- **(3) “1 Minute”**

The Jumpmaster will issue the one minute time warning by releasing the lead edge of the door, leaning back, keeping their foot centered on the platform, facing their jumpers extending the index finger or raising the lead arm and extending the index finger, sounding off with **“ONE MINUTE”**.



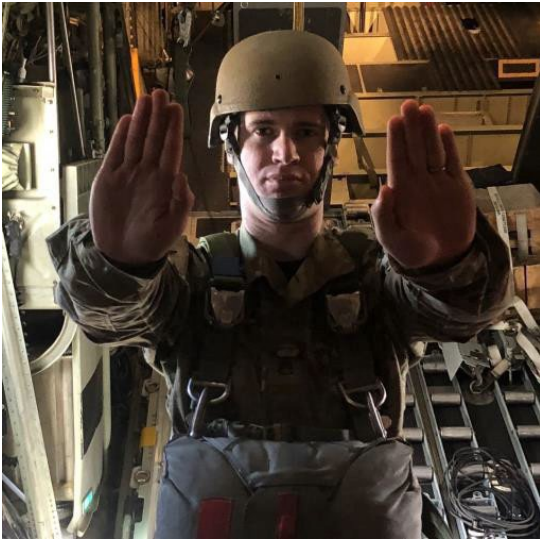
- **(4) “30 Seconds”**

The Jumpmaster will issue the 30 second time warning by releasing the lead edge of the door, leaning back, keeping their foot centered on the platform, facing their jumpers with the index finger and thumb approximately 1 inch apart, and sound off with **“30 SECONDS”**. Jumpmaster students may also execute this command by raising their lead arm and conducting the actions previously described.



## 1. "Get Ready"

- It begins at shoulder level, all fingers and thumbs extended and joined, palms facing the jumpers.
- As the Jumpmaster issues the verbal command "**GET READY**", extend both arms straightforward until the elbows lock, ensuring that the palms remain facing the jumpers.



## 2. "Outboard Personnel, Stand-Up"

- This jump command is executed in two parts. The first part begins at shoulder level, centered on the chest, index and middle fingers extended and joined, remaining fingers and thumbs curled to the palm.
- As the Jumpmaster issues the verbal command "**OUTBOARD PERSONNEL**" the arms are extended down to the sides at a 45-degree angle. As the Jumpmaster issues the verbal command "**STAND UP**", first extend and join all fingers and thumbs, rotate the hands so the palms face up, and then raise the arms straight overhead keeping the elbows locked.



### 3. "Inboard Personnel, Stand-up"

- This jump command is also executed in two parts. The first part begins at shoulder level, centered on the chest, once again, index and middle fingers extended and joined, all remaining fingers and thumbs curled to the palm. As the Jumpmaster issues the verbal command **"INBOARD PERSONNEL"**, the arms are extended towards the inboard seats until the elbows lock. As the Jumpmaster issues the verbal command **"STAND UP"** the arms are first moved back to the sides and down, all fingers and thumbs are extended and joined, the hands are rotated so the palms face up, and then raise the arms straight overhead keeping the elbows locked.



### 4. "Hook Up"

- This jump command begins at shoulder level. A hook will be formed in the index finger of each hand. All remaining fingers and thumbs form fists. As the Jumpmaster issues the verbal command **"HOOK UP"**, move the arms in a pumping motion, up and down. This motion must be repeated a minimum of three times.



## 5. "Check Static Lines"

- This is a plural command since there will normally be more than one static line attached to the anchor line cable. This jump command begins at eye level, index fingers and thumbs forming an "O", remaining fingers extended and joined, palms facing each other and the knife edge of the hands facing the jumpers.
- As the Jumpmaster issues the verbal command "**CHECK STATIC LINES**", extend the arms straight forward to a near elbow locked position, ensuring the knife-edge of the hands remain facing the jumpers. This motion must be repeated a minimum of three times.
- After this command is given, it will be followed by a secondary command of; "**Last two jumpers turn and face the skin of the aircraft. Second to last jumper check the last jumper's static line.**"



## 6. "Check Equipment"

- This jump command will begin with the fingertips centered on the chest, all fingers and thumbs extended and joined, palms facing the chest. As the Jumpmaster issues the verbal command "**CHECK EQUIPMENT**", extend the arms to the sides at shoulder level, and then bend the arms at the elbow, bringing the fingertips back to the center of the chest.
- This motion must be repeated a minimum of 3 times.
- After issuing this command, the Jumpmaster will observe their stick of jumpers as they check their equipment by leaning to the left and then to the right. Once the Jumpmaster sees that all movement has ceased, they will give their fellow jumpmaster a thumbs up. However, for testing purposes, they will issue this thumbs up to the safety.
- At this time the Jumpmaster is free to check their equipment. They will check at a minimum, the front rim of the advanced combat helmet, their chinstrap, the quick release in the chest strap, both leg straps, and the ejector snap for the hook pile tape lowering line.



## 7. "Sound off for Equipment Check"

- The Jumpmaster will form their hands into cups and place the thumbs behind the ears, with the remainder of the hands cupped alongside the outer rim of the advanced combat helmet. As the Jumpmaster issues the verbal command **"SOUND OFF FOR EQUIPMENT CHECK"**, they will drop the hands and wait until they receive **"ALL OKAY JUMPMaster"** from the #1 Jumper.



## 8. "STAND BY"

- This jump command begins at shoulder level, index and middle finger extended and joined, all remaining fingers and thumbs are curled to the palm. As the Jumpmaster issues the verbal command **"STAND BY"** they will move their arms in an arcing motion down to the sides at a 45-degree angle.



## 9. "GO"

- The Jumpmaster will give the first jumper a sharp tap on the buttocks while sounding off with the command **"GO"**.

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- The Jumpmasters will position the Door Bundle/JM Team will Hook-Up Special Items of Equipment to Their Respective Jumpers
- Hooks Up Door Bundle to Outboard Anchor Line
- Inspects Door Bundle

## SEQUENCE OF EVENTS FOR THE PURPOSES OF PWAC TESTING

Load Master: **“Jumpmaster, you have 10 Minutes.”**

The Jumpmaster will remove their seatbelt, placing it behind them, ensuring it does not become routed around any equipment. Stand up. Face the aft end of the aircraft. Remove their universal static line snap hook from the carrying handle of the T-11 reserve parachute. Hook up the universal static line snap hook to the inboard anchor line cable ensuring the spring opening gate faces towards the skin of the aircraft. Form a four in the hand, two below bight in the appropriate hand. Extend their arm to the elbow locked position. Release the universal static line modified. Turn towards the skin of the aircraft. Immediately begin issuing time warning and jump commands beginning with "10 minutes". **"10 Minutes"**

- 1) **Get Ready**
  - 2) **Outboard Personnel Stand-Up**
  - 3) **In-Board Personnel Stand-Up**
  - 4) **Hook-Up (3 Times)**
  - 5) **Check Static Lines (3 Times) "Last Two Jumpers Turn and Face The Skin of th Aircraft. Second to Last Jumper Check the Last Jumper's Static Line"**
  - 6) **Check Equipment (3 Times) Lean Left/Right. Wait for Movement to Cease. "Thumbs Up" to Grader. Check Your Equipment.**
  - 7) **Sound OFF For Equipment Check**
- After receiving, **"ALL OK, JUMPMASTER"**, the Jumpmaster will regain control of their universal static line snap hook. Next, use both hands and pull the universal static line snap hook and universal static line modified over the outboard shoulder. Form a four in the hand two below bight in the outboard hand.
  - Turn towards the skin of the aircraft. Open the hand and remove the twist that has been incorporated in the bight. Reform the four in the hand two below bight.
  - Inspect their universal static line modified by plucking the spring opening gate, tracing down the universal static line modified until it disappears in the hand, insert two fingers in the two below bight, trace the universal static line modified from where it leaves the hand until it disappears over the shoulder.
  - Leave the hand in place and say **"number one Jumper, check my static line"**.
  - The Jumpmasters are now waiting for the aircrew to complete their slow-down checklist (during this time, ensure you maintain ripcord handle awareness). **\*\*\*SAFETIES WILL ALSO INSPECT THE JM'S STATIC LINE\*\*\***

## C-130 THREE MINUTE SLOW DOWN CHECKLIST- (Performed by the Loadmaster):

- 1) Slow Aircraft to Drop Speed
- 2) Deploy Air Deflector
- 3) Open Paratroop Door
- 4) Position Jump Platform

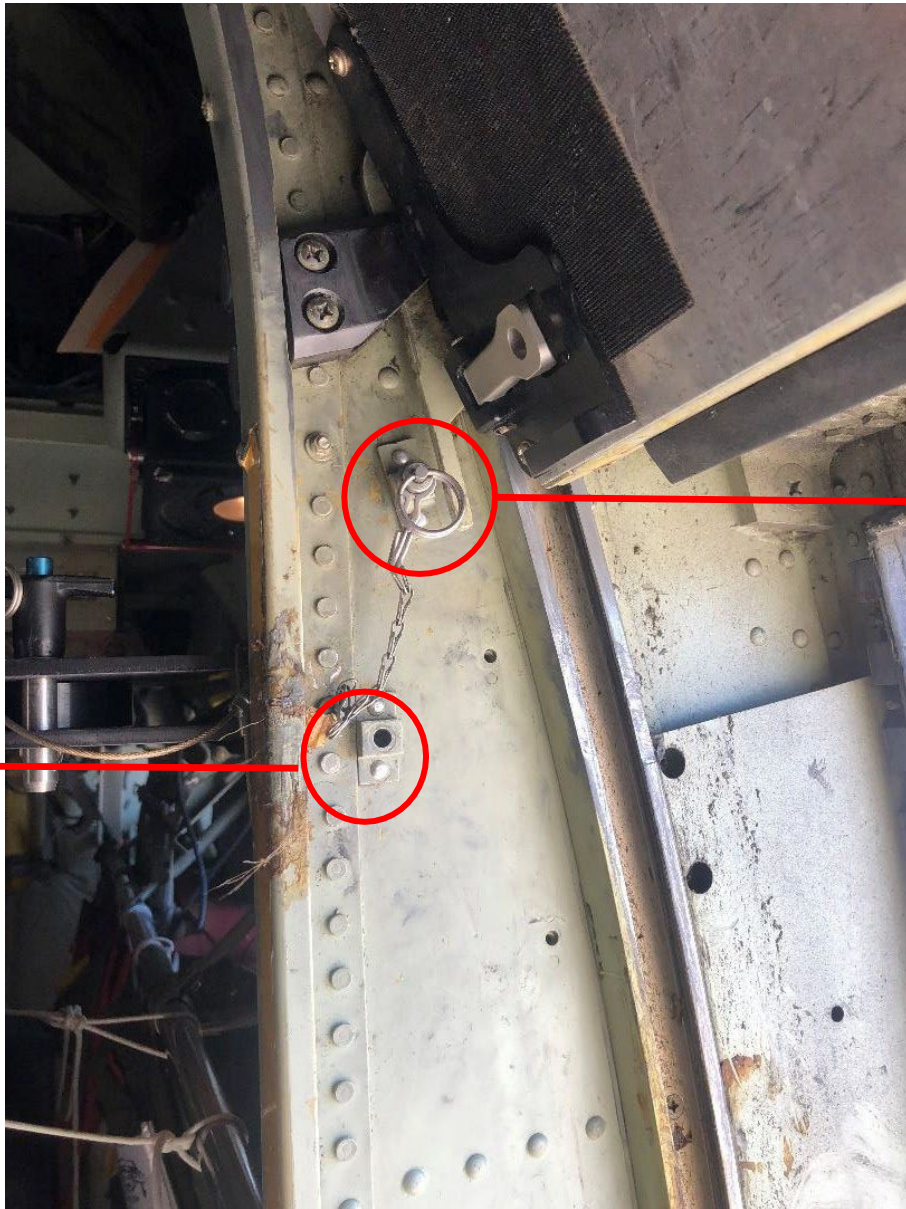
**Load Master/Jumpmaster Instructor (Grader): "Army Your Door"**

## DOOR CHECK PROCEDURE (C-130)

- Before beginning the door safety check, confirm with the loadmaster that the aircraft is at proper drop speed.
- Grasp the lead edge of the jump door, make eye to eye contact with the safety and say "Safety, control my Static Line".
- Safety personnel will conduct a visual inspection of the rip cord assembly to ensure it is fully seated and the inserts are in place before taking control of the static line.
- Once the Safety has control of the Jumpmaster's static line, the JM will rotate into the door centering their body without any portion of the feet touching the jump platform.

Before conducting the 'Door Safety Check', Jumpmasters MUST ensure the door is in the open position. To do this, the Jumpmaster will reach up with their lead hand and ensure the 'PIP' Pin is in place on the C-130, which is located on the top of the lead edge of the Paratroop door.

Storage  
Location



Jump Location  
(Must be here during  
door check)

**Jump Platform:**

- Kick the lead down-lock one time with the lead foot, place foot back in starting position behind yellow caution line.



- Kick trail down-lock one time with the trail foot. Place trail foot on center of platform without touching any part of the yellow painted portion.
- Shift weight to trail foot and ensure the jump platform will hold the jumper's weight.
- This is the "Door Relaxed Position" from which you will perform the remainder of your duties up to the time of placing door bundles or jumpers in the door.



- Starting at the top, trace down to the trail down-lock, then back to top. Re-grasp the trail edge. While tracing the edge of the paratroop door, the hand cannot break contact. If contact is broken the JM must restart trace at the starting point.

**Wind Deflector:**

- Lean head towards trail edge and look in direction of flight (for the purposes of PWAC Testing, JM will nod three times).

**Clear to the Rear:**

- Bend forward at the waist to an elbow locked position. Keeping both heels flat, visually check at a minimum to the rear and below the aircraft.
- The Jumpmaster is encouraged to conduct a 360 degree check to maintain situational awareness.
- The Jumpmaster will then return back to the "Door Relaxed Position" and observe for check points in route to the drop zone.



- **1<sup>ST</sup> Check Point:** Face stick of jumpers, sound off with “**1 Minute**”.



- **2<sup>ND</sup> Check Point:** Face stick of jumpers, sound off with “**30 Seconds**”.

### **Final Clear to the Rear:**

- Bend forward at the waist to an elbow locked position, keeping both heels flat on the floor, and conduct a final check to the rear of the aircraft. Return back to the "Door Relaxed Position".



- Maintain a firm handhold on the door. Both Jumpmasters will remove their trail foot from the jump platform, release the door with their lead hand, and turn toward the cargo area.
- Once the Jumpmaster has planted both feet, they then will release the door with their trail hand, make eye-to-eye contact and give each other the thumbs-up signal with the lead hand, indicating that they are not aware of any unsafe conditions and that they are ready to exit personnel.



- After the thumbs up signal has been given the Jumpmasters will issue the 8th jump command, "STAND BY". The Jumpmasters will then move to the center of the cargo compartment, bisect the lead edge of the jump door, and re-gain control of their static line from their safety.
- Safety personnel will grasp the #1 jumper's static line with the lead hand and pass it to the trail hand and control it until the jumper exits.



## 9th : "GO"

- PJ will continue to observe the jump caution lights.
- AJ will observe the actions of the primary door by looking under or over either shoulder with their feet firmly planted on the ground.
- Once the jump caution lights turns green, PJ will issue the command "GO" to his #1 jumper.
- The AJ, after seeing the PJ issue the command, they will turn and check the jump caution light, and then issue "GO" to his #1 jumper.
- Once the AJ's last jumper has cleared the door, the AJ will transfer control of his static line to the safety, center himself in the jump door, recheck jump caution lights (point at it for testing purposes) and exit.
- The PJ, after seeing the AJ clear their door, will turn, transfer control of his static line to the safety, center himself in the jump door, recheck jump caution lights (point at it for testing purposes) and exit.

- Slow the Aircraft to Drop Speed
- Deploy the Air Deflector
- Open the Paratroop Door

### DOOR CHECK PROCEDURE (C-17)

Before beginning the door safety check, confirm with the loadmaster that the aircraft is at proper drop speed. Grasp lead of the jump door, make eye to eye contact with safety and say "Safety, Control my Static Line". Rotate into the door centering your body inside the door, and secure the trail edge of the paratroop door with the trail hand.

#### Door Lock:

- JM will release their grasp with the trail hand, grasp the troop door lifting bar, and attempt to pull the troop door lifting bar down to the door up-lock to ensure it is secure. They will also visually inspect the locking mechanism in the upper lead edge of the troop door to ensure that it is secured.



- The Jumpmasters then will place their lead foot centered on the jump platform.

#### Trail Edge:

- With the lead hand, form a knife cutting edge and trace the paratroop door, inspecting for any sharp or protruding edges which may cut or fray the Jumper's universal static line modified upon exiting the aircraft. Starting from the 12 o'clock position of the paratroop door, trace across the top, down the trail edge of the paratroop door, to the 6 o'clock position on the jump platform.

- Once the 6 o'clock position on the jump platform is met, trace back up from the 6 o'clock position on the jump platform, up the trail edge of the paratroop door, to the 12 o'clock position on the paratroop door.

**NOTE:** while tracing the edge of the paratroop door, the hand cannot break contact. If contact is broken, the JM must restart trace at the starting point.



- With the lead hand, secure the handle "million dollar handle", located in the fuselage of the aircraft on the lead edge of the paratroop door.



### Air Deflector:

- JM will lean toward the trail edge of the door and look in the direction of flight to ensure the air deflector is deployed (for the purposes of PWAC Testing, he/she will nod three times).

### Clear to the Rear

- JMs will step onto the platform with both feet centered on the jump platform, bend forward at the waist to an elbow locked position and visually check, at a minimum, to the rear and below the aircraft.
- The Jumpmaster is encouraged to conduct a 360 degree check to maintain situational awareness.
- JM will then return back to the door relaxed position and observe for check points.
- All other procedures remain the same as for a C-130 Door Check FOR THE PURPOSES OF PWAC TESTING.



**\*\*\*NOTE ONCE THE JMS ROTATE BACK INSIDE THE AIRCRAFT, COVER THEIR RIPCORD HANDLES WITH THEIR TRAIL HAND, AND GIVE THE THUMBS UP SIGNAL TO THE EACH OTHER, JMS WILL NOT ISSUE THE COMMAND "STANDBY" UNTIL THE AMBER LIGHT HAS ILLUMINATED SIGNALING THEY ARE 30 SECONDS AWAY FROM THEIR RELEASE POINT BASED OFF CARP.**

## DOOR BUNDLE INSPECTION

- Point of attachment to the A/C: Universal Static Line Snap Hook is attached to the outboard anchor line cable with the spring opening gate facing the skin of the aircraft.
- Inspect the universal static line to ensure it has no cuts, frays or burns, all the way to the buffer loop and "Static Line, Cargo Only" is stenciled on it with blue strata paint.
- Point of attachment to the door bundle: Two risers complete, with clevis, clevis pin, and safety wire and lanyard and are attached to the load. Ensure safety wires are bent and have metal to metal contact. If a cotter pin is used, the ends must be bent at a minimum 45 degree angle.
- Connector Link Tie: ensure it is constructed of **ONE TURN** of ¼ inch cotton webbing and secured with a surgeon's knot locking knot.
- Conduct an inspection of the Securing Tie ensuring it is constructed of **ONE TURN** of ¼" cotton webbing and is securing the parachute tight to the load and routed underneath the Universal Static Line.
- Overall inspection of the Door Bundle: ensure no loose or excess webbing.
- Finally, slap the smooth side of the Door Bundle ensuring it faces the trail edge of the door.

## DOOR BUNDLE EJECTION PROCEDURES

- After the final clear to the rear, the jumpmaster's rotate back inside the aircraft, exchange thumbs up and issue the command **STANDBY**. The jumpmaster will regain control of their static line from the safety with the trail hand and secure the number one jumpers static line with the lead hand. The number one jumper and safety will position their door bundle on the jump platform so that it is on its balance point.
- The number one jumper will position his lead hand on the lead edge of the paratroop door, and his trail hand will be controlling the load. His head and eyes will be on the safety.
- The safety will position his lead hand controlling the load and his trail hand will have a firm grasp on the trail edge of the door. **The safety will also ensure that the static line of the cargo parachute is routed over their trail shoulder.**
- The jumpmaster will keep their eyes on the jumpers and the jump caution light. When the jump caution light turns green, the jumpmaster will issue the command "**GO**" to the safety and the number one jumper. They will then push the door bundle off the platform, ensuring it does not tumble through the risers.
- After the door bundle has been ejected, the number one jumper will rotate back into the aircraft and receive his static line from the Jumpmaster. The safety will conduct a clear to the rear to ensure the door bundle has not been towed.
- **The safety will issue a thumbs up to the jumpmaster to let him know that the door bundle is clear,** then return to his normal position and prepare to receive the 1st jumper's static line. Then the jumpmaster will make eye contact with the opposite Jumpmaster and exchange a thumbs up signal, meaning the door bundles have been ejected, that neither person knows of any unsafe condition, and that each is ready to exit personnel.
- The jumpmaster will then center their body on the lead edge of the jump door and give the number 1 jumper the command to standby. The Jumpmaster rechecks the jump caution light to ensure it is still green, then issue the ninth jump command "**GO**".

**\*\*\*DO NOT EXIT JUMPERS UNTIL ALL DOOR BUNDLES HAVE CLEARED THE AIRCRAFT\*\*\***

**\*\*\*IF THE NUMBER ONE JUMPER PUSHED A DOOR BUNDLE, THE NUMBER 1 JUMPER MUST BE JUMPMASER QUALIFIED (BUT DOES NOT HAVE TO BE CURRENT) AND MUST HAVE T-11 INSERTS **IF WEARING T-11 RESERVE**\*\*\***

- After the command of **“In-Board Personnel, Stand Up”**, the Safeties move towards the forward portion of the aircraft assisting Jumpers in standing up and raising seats if necessary.
- On the command of **“Check Static Lines”**, the Safety will observe the Jumpers checking their universal static lines modified and the universal static line modified of the Jumper in front of them.
- After the supplementary command of **“Last Two Jumpers Turn Towards the Skin of the Aircraft, Second to Last Jumper Check the Last Jumper’s Static Line”**, the Safety will observe both Jumpers turning towards the skin of the aircraft and the second to last Jumper checking the last Jumper’s universal static line modified.



- Once both Jumpers are facing towards the aft end of the aircraft, the Safety will begin inspecting each Jumper’s universal static line modified, starting with the last Jumper.
- The Safety will begin the inspection by manipulating the spring opening gate of the universal static line snap hook, ensuring the spring opening gate is facing towards the skin the aircraft and it is fully seated on the anchor line cable.
- Trace down from the universal static line snap hook to the Jumper’s hand, ensuring the universal static line modified is not twisted, the Jumper is not touching the double sewn reinforced portion, and the Jumper is holding their bight at approximately eye level.



- Insert two fingers into the bight to ensure the Jumper has a proper four in the hand, two below bight and the Jumper is holding the bight in the correct hand.

- Trace the universal static line modified from the Jumper's hand over their shoulder ensuring it is not misrouted underneath the Jumper's shoulder, it is routed over the appropriate shoulder, and the Jumper's elbow is high. Continue to trace all the way to the first stow or the static line slack retainer band ensuring there is not an excessive amount of slack. If there is slack in the universal static line modified, stow it in the static line slack retainer band.



- Inspect the outside of the universal static line modified working once to the left and once to the right.



- Ensure there are no broken stows, the universal static line modified has not been misrouted around the stows, and no portion of the universal static line modified is within one inch of the bottom of the main curved pin protector flap.
- As the Safety moves to the next Jumper, the Safety will give the Jumper words of encouragement, for example: **“Make eye to eye contact with me”, “I am your Safety”, “Hand me Your Static Line”**
- When the Safety reaches the Jumpmaster, wait for the number one Jumper to inspect the Jumpmaster's universal static line modified. Once the number one Jumper is done with their inspection, inspect the Jumpmaster's universal static line modified using the exact same criteria as the inspection of the Jumpers.
- The Safety will take up a position near the paratroop door and wait for the Loadmaster to say “Army, Your Door”.



- Once the Loadmaster has handed over control of the paratroop door, the Jumpmaster will extend their arm to the elbow locked position and sound off with **“Safety, Control My Static Line”**.



- Before the Safety takes control of the Jumpmaster's universal static line modified, conduct a visual inspection of the Jumpmaster's ripcord assembly to ensure the T-11 reserve parachute tuck tab inserts are properly inserted/secured in the top tuck and bottom tuck tabs.
- The Safety moves to the Jumpmaster and takes control of their universal static line modified using knuckle to knuckle contact.
- Secure the universal static line modified between the palm and the thumb.
- Remove the universal static line modified from the Jumpmaster's hand by pulling in opposing directions.



- As the Jumpmaster rotates into the paratroop door, maintain control of the universal static line modified, between your palm and the thumb, and push the universal static line snap hook against the intermediate anchor line support bracket with the trail hand. The lead hand should be near the Jumpmaster's pack tray to prevent any stows from breaking free. As the Jumpmaster conducts the paratroop door check, the Safety will observe the Jumpers to ensure there are no unsafe conditions. As the Jumpmaster leans out for the initial clear to the rear OR for the final clear to the rear, follow them with the lead hand to prevent any stows from breaking free. Continue to observe the Jumpers for any unsafe conditions.



- As the Jumpmaster rotates back inside the aircraft, rotate with them and start forming their bight. With the high hand form a fist with your index and middle finger extended and joined and place them high on the universal static line modified. Slide the index and middle finger down the universal static line modified while raising the low hand.



- Leave the index and middle finger in the bight and present it to the Jumpmaster after they have received their third and final thumbs up, issued the command of “STAND-BY”, bisect the lead edge of the paratroop door, and reach for it with their trail hand.
- Once the Jumpmaster has control of their universal static line modified, move to the number one Jumper and take control of their universal static line modified.



- As the #1 Jumper rotates into the paratroop door, move with them and bisect the trail edge of the paratroop door. Pin the #1 Jumper's universal static line snap hook against the intermediate anchor line support bracket with the trail hand, then with the lead hand reach forward for the number two Jumper's universal static line modified.
- On the command of “GO”, begin raking the universal static lines modified. Keep your hands formed into knife cutting edges with fingers and thumb extended and joined. Take each Jumper's universal static line modified with the lead hand at the double sewn reinforced portion. Pull the universal static line modified approximately halfway across the paratroop door and then use the trail hand to push it against the intermediate anchor line support bracket. Never cross your hands. Control only the double sewn reinforced portion.



- Once all Jumpers exit, the Jumpmaster will transfer control of his/her USML to the safety. Once again, take control of the Jumpmaster's universal static line modified. Keep it up and out of the way as the JM exits the aircraft.



- After the Jumpmaster or the last Jumper on that pass exits, immediately conduct a Towed Jumper check. Secure the lead and trail edge of the paratroop door, place the trail foot on the jump platform, go out to the elbow locked position, and conduct a thorough inspection to ensure there are no towed Jumpers.
- If a Jumper is towed, rotate back inside the aircraft and immediately inform the Loadmasters & JMs (remaining on the A/C) to begin Towed Jumper Procedures depending on the situation at hand. If no Jumpers are being towed, rotate back inside the aircraft and give a thumbs up to the Safety on the opposite paratroop door.



- Once both Safeties have acknowledged there are no towed Jumpers, the Safeties and Loadmasters will begin retrieving the deployment bags. Once the deployment bags have been retrieved, the paratroop doors will be closed. Begin process of preparing to download gear, equipment, remaining personnel. Reconfigure A/C IAW how it was upon loading the A/C.

### **Common Issues That Safeties May Encounter:**

- Ejector Snap HPTLL Not Secured
- Leg Straps Loose/Not Secured
- Excess HPTLL (Folds From Retainer Flap)
- Jumper Not Fit to Jump (Incoherent/Sickness)\*\*\*
- First 3 Jumpers- Arms Locked
- Wrong Anchor Line Cable-Hook Up/TPRS
- Snap Hook (Opening Gate)
- Bite In Wrong Hand
- Improper Bite (4 In Hand/2 Below)
- Static Line Routed Over Wrong Shoulder
- Elbow/Arm Locked
- SL Misrouted Under Arm
- SL Misrouted Under Riser Assembly
- Excess SL (Any Excess SL)
- Stow (Inner/Outer Broken)
- Strand Misrouted Under MCPFF
- MCPFF Not in Tuck Flap
- Rip Cord Handle Awareness

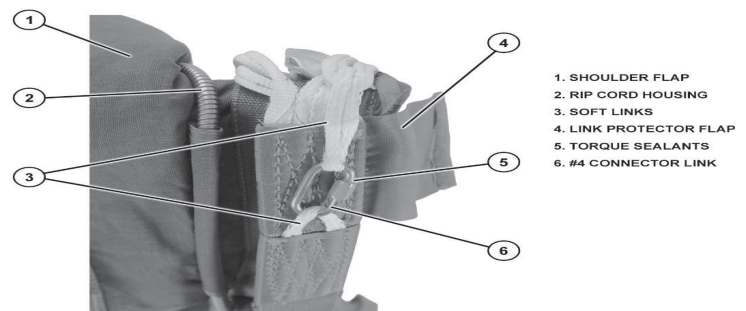
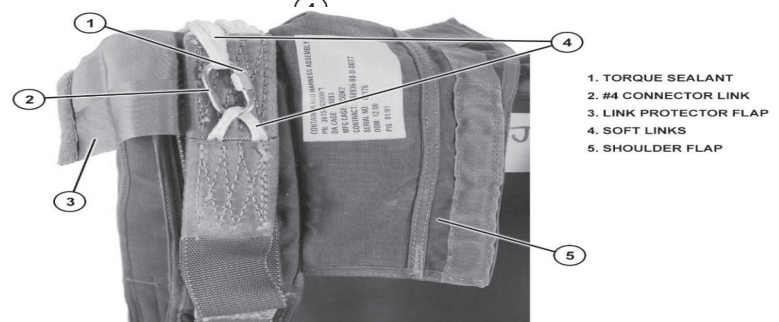
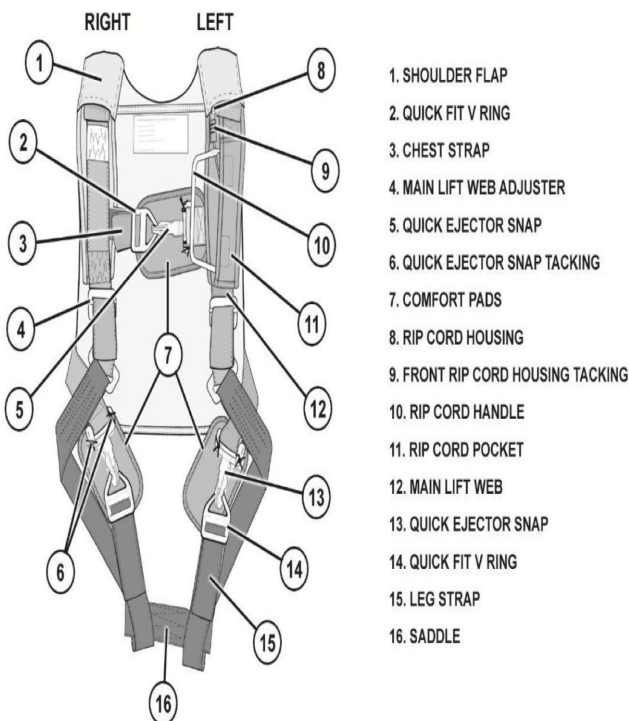
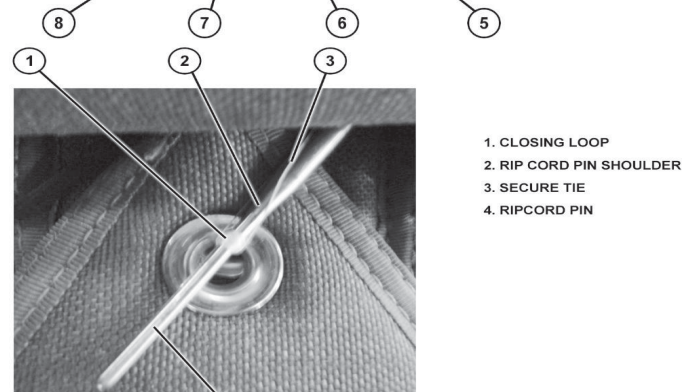
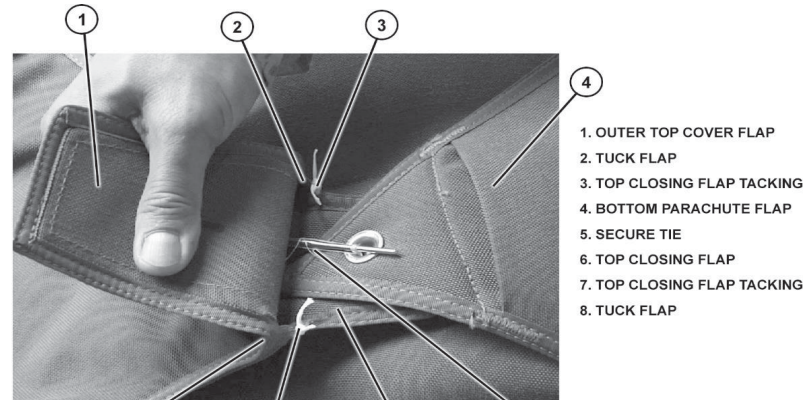
## TC 3-21.220 Chapter 9

- The Advanced Emergency Bailout Parachute (AEBP) is a lightweight emergency parachute with a 26-foot extended skirt canopy.
- The canopy is made from low-porosity material that is vacuum sealed to protect the main canopy from physical and environmental hazards.
- The container is made up of durable canvas weave material and is used to store the sealed canopy assembly and pilot chute. The harness is used for securing and supporting the Airborne Soldier.

\*\*\* If vacuum loss occurs, the AEBP is still serviceable for the mission. After the completion of the mission, the AEBP must be repacked.\*\*\*

### CHARACTERISTICS

- Minimum Operational Altitude: 585 FT AGL
- Total Jumper Weight: 300 Pounds
- Max Exit Speed: 130 Knots
- System Weight: 17 Pounds
- System Height: 18.5 Inches
- System Width: 14.75 Inches
- System Thickness: 3 Inches
- System Life: 14 Years
- System Repack Cycle: 5.5 Years
- System Inspection Cycle: 1 Year
- Diameter: 26 Ft
- Rate of Decent: 24 FPS
- Color: 36 % White and Orange, 14% Sand and NATO Green



1. 1 x C-130 is dropping 10 x jumpers, using ADEPT option 1, at 1250' AGL, not using SKE.
2. 1 x C-17 is dropping 55 x jumpers, using ADEPT option 2, at 1100' AGL, at night.
3. 1 x C-130 is dropping 20 x jumpers, using ADEPT option 2, at 1000' AGL, using SKE.
4. 1 x C-17 is dropping 2 x HE platforms, from 1500' AGL, at night, not using SKE.
5. 2 x C-130s, flying in trail, are dropping 60 x jumpers each, using mass exit, from 1250' AGL, at night, using SKE.
6. 2 x C-17s, flying not in trail, are dropping 4 x HE platforms each, from 1100' AGL, not using SKE.
7. 2 x C-17s are dropping 95 x jumpers each, using mass exit, from 1000' AGL, at night.
8. 4 x C-130s, flying not in trail, are dropping 3 x HE platforms each, from 1300' AGL, using SKE.
9. 3 x C-17s are dropping 60 x jumpers each, using mass exit, from 1200' AGL, at night, not using SKE.
10. 2 x aircraft, flying not in trail, dropping at 1250' AGL, at night, using SKE:  
1st aircraft: C-130, dropping 3 x HE platforms.  
2nd aircraft: C-130, dropping 60 x jumpers, using mass exit.
11. 2 x aircraft, flying not in trail, dropping at 1400' AGL, not using SKE:  
1st aircraft: C-17, dropping 4 x HE platforms, and 20 x jumpers using mass exit.  
2nd aircraft: C-17, dropping 80 x jumpers, using mass exit.
12. 2 x aircraft, flying not in trail, dropping at 1250' AGL, not using SKE:  
1st aircraft: C-130, dropping 50 x jumpers, using ADEPT option 2.  
2nd aircraft: C-130, dropping 4 x HE platforms.

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| A |   |   |
| S |   |   |

9)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

10)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

10)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

11)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

11)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

12)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

12)

|   | W | L |
|---|---|---|
| 1 |   |   |
| N |   |   |
| A |   |   |
| N |   |   |
| A |   |   |
| S |   |   |

## CARP ANSWER KEY

|    |          |           |         |                       |
|----|----------|-----------|---------|-----------------------|
| 1) | Planning | Altitude: | 1000    |                       |
|    |          | W         | L       |                       |
|    | 1        | 600       | 600     |                       |
|    | N        | 0         | 0       |                       |
|    | A        | 60        | 60      |                       |
|    | N        | 0         | XXXXX   |                       |
|    | A        | XXXXX     | 300     |                       |
|    | S        | 0         | XXXXX   | Written Answer        |
|    | Total    | 660yds    | 960yds  | W=660yds x L=960yds   |
| 2) | Planning | Altitude: | 1000    |                       |
|    |          | W         | L       |                       |
|    | 1        | 600       | 600     |                       |
|    | N        | 100       | 100     |                       |
|    | A        | 30        | 30      |                       |
|    | N        | 0         | XXXXX   |                       |
|    | A        | XXXXX     | 4050    |                       |
|    | S        | 0         | XXXXX   | Written Answer        |
|    | Total    | 730yds    | 4780yds | W=730yds x L=4780yds  |
| 3) | Planning | Altitude: | 1000    |                       |
|    |          | W         | L       |                       |
|    | 1        | 600       | 600     |                       |
|    | N        | 0         | 0       |                       |
|    | A        | 0         | 0       |                       |
|    | N        | 0         | XXXXX   |                       |
|    | A        | XXXXX     | 1425    |                       |
|    | S        | 400       | XXXXX   | Written Answer        |
|    | Total    | 1000yds   | 2025yds | W=1000yds x L=2025yds |
| 4) | Planning | Altitude: | 1100    |                       |
|    |          | W         | L       |                       |
|    | 1        | 600       | 1000    |                       |
|    | N        | 100       | 100     |                       |
|    | A        | 120       | 120     |                       |
|    | N        | 0         | XXXXX   |                       |
|    | A        | XXXXX     | 500     |                       |
|    | S        | 0         | XXXXX   | Written Answer        |
|    | Total    | 820yds    | 1720yds | W=820yds x L=1720yds  |
| 5) | Planning | Altitude: | 1000    |                       |
|    |          | W         | L       |                       |
|    | 1        | 600       | 600     |                       |
|    | N        | 100       | 100     |                       |
|    | A        | 60        | 60      |                       |
|    | N        | 0         | XXXXX   |                       |
|    | A        | XXXXX     | 2250    |                       |
|    | S        | 400       | XXXXX   | Written Answer        |
|    | Total    | 1160yds   | 3010yds | W=1160yds x L=3010yds |

|                                       |          |           |                       |                |           |      |
|---------------------------------------|----------|-----------|-----------------------|----------------|-----------|------|
| 6)                                    | Planning | Altitude: | 1100                  |                |           |      |
|                                       |          | W         | L                     |                |           |      |
|                                       | 1        | 600       | 1000                  |                |           |      |
|                                       | N        | 0         | 0                     |                |           |      |
|                                       | A        | 0         | 0                     |                |           |      |
|                                       | N        | 100       | XXXXX                 |                |           |      |
|                                       | A        | XXXXX     | 1500                  |                |           |      |
|                                       | S        | 0         | XXXXX                 | Written Answer |           |      |
| Total                                 | 700yds   | 2500yds   | W=700yds x L=2500yds  |                |           |      |
| 7)                                    | Planning | Altitude: | 1000                  |                |           |      |
|                                       | W        | L         |                       |                |           |      |
| 1                                     | 600      | 600       |                       |                |           |      |
| N                                     | 100      | 100       |                       |                |           |      |
| A                                     | 0        | 0         |                       |                |           |      |
| N                                     | 640      | XXXXX     |                       |                |           |      |
| A                                     | XXXXX    | 3525      |                       |                |           |      |
| S                                     | 0        | XXXXX     | Written Answer        |                |           |      |
| Total                                 | 1340yds  | 4225yds   | W=1340yds x L=4225yds |                |           |      |
| 8)                                    | Planning | Altitude: | 1100                  |                |           |      |
|                                       | W        | L         |                       |                |           |      |
| 1                                     | 600      | 1000      |                       |                |           |      |
| N                                     | 0        | 0         |                       |                |           |      |
| A                                     | 60       | 60        |                       |                |           |      |
| N                                     | 0        | XXXXX     |                       |                |           |      |
| A                                     | XXXXX    | 800       |                       |                |           |      |
| S                                     | 400      | XXXXX     | Written Answer        |                |           |      |
| Total                                 | 1060yds  | 1860yds   | W=1060yds x L=1860yds |                |           |      |
| 9)                                    | Planning | Altitude: | 1000                  |                |           |      |
|                                       | W        | L         |                       |                |           |      |
| 1                                     | 600      | 600       |                       |                |           |      |
| N                                     | 100      | 100       |                       |                |           |      |
| A                                     | 60       | 60        |                       |                |           |      |
| N                                     | 1200     | XXXXXX    |                       |                |           |      |
| A                                     | XXXXXX   | 2250      |                       |                |           |      |
| S                                     | 0        | XXXXXX    | Written Answer        |                |           |      |
| Total                                 | 1960yds  | 3010yds   | W=1960yds x L=3010yds |                |           |      |
| 10)                                   | Planning | Altitude: | 1100                  | Planning       | Altitude: | 1000 |
|                                       | W        | L         |                       | W              | L         |      |
| 1                                     | 600      | 1000      | 1                     | 600            | 600       |      |
| N                                     | 100      | 100       | N                     | 100            | 100       |      |
| A                                     | 30       | 30        | A                     | 60             | 60        |      |
| N                                     | 0        | XXXXXX    | N                     | 0              | XXXXXX    |      |
| A                                     | XXXXXX   | 800       | A                     | XXXXXX         | 2250      |      |
| S                                     | 400      | XXXXXX    | S                     | 400            | XXXXXX    |      |
| Total                                 | 1130yds  | 1930yds   | Total                 | 1160yds        | 3010yds   |      |
| Written Answer: W=1160yds x L=3010yds |          |           |                       |                |           |      |
| 11                                    | Planning | Altitude: | 1100                  | Planning       | Altitude: | 1000 |
|                                       | W        | L         |                       | W              | L         |      |
| 1                                     | 600      | 1000      | 1                     | 600            | 600       |      |
| N                                     | 0        | 0         | N                     | 0              | 0         |      |
| A                                     | 90       | 90        | A                     | 120            | 120       |      |
| N                                     | 100      | XXXXXX    | N                     | 640            | XXXXXX    |      |
| A                                     | XXXXXX   | 1500      | A                     | XXXXXX         | 3000      |      |
| S                                     | 0        | XXXXXX    | S                     | 0              | XXXXXX    |      |
| Total                                 | 790yds   | 2590yds   | Total                 | 1360yds        | 3720yds   |      |
| Written Answer: W=1360yds x L=3720yds |          |           |                       |                |           |      |
| 12                                    | Planning | Altitude: | 1000                  | Planning       | Altitude: | 1100 |
|                                       | W        | L         |                       | W              | L         |      |
| 1                                     | 600      | 600       | 1                     | 600            | 1000      |      |
| N                                     | 0        | 0         | N                     | 0              | 0         |      |
| A                                     | 60       | 60        | A                     | 30             | 30        |      |
| N                                     | 100      | XXXXXX    | N                     | 100            | XXXXXX    |      |
| A                                     | XXXXXX   | 3675      | A                     | XXXXXX         | 1200      |      |
| S                                     | 0        | XXXXXX    | S                     | 0              | XXXXXX    |      |
| Total                                 | 760yds   | 4335yds   | Total                 | 730yds         | 2230yds   |      |
| Written Answer: W=760yds x L=4335yds  |          |           |                       |                |           |      |



**SCRATCH PAPER**



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