

**BY ORDER OF THE COMMANDER
AIR EDUCATION AND TRAINING
COMMAND**

**AIR EDUCATION AND TRAINING
COMMAND INSTRUCTION 36-2625**

12 JANUARY 2015

Personnel

**PROCEDURES FOR OVERWATER
PARASAIL TRAINING (OWPT)**



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This instruction implements AFPD 36-26, *Total Force Development*. It establishes procedures and responsibilities for safe and realistic overwater post-egress parachute training for AETC units conducting this training and for AETC Course S-V86-A, Water Survival Training, Parachuting. This training, designated OWPT, is designed to help personnel (1) Develop confidence in their ability to survive an overwater parachute descent, (2) control the parachute during descent, and (3) correctly execute a parachute water entry, a parachute high-wind drag or canopy release, and/or a canopy disentanglement in the water. This instruction applies to all AETC units conducting OWPT, specifically the 336 Training Group, Fairchild AFB WA, and its Detachment 2, 66th Training Squadron, NAS Pensacola FL. It applies to all students (active duty, Air National Guard, and Air Force Reserve Command) who are enrolled in OWPT. **NOTE:** The use of any specific commercial product, commodity, or service in this publication does not imply endorsement by the US Air Force. Submit suggested changes to this instruction on AF Form 847, *Recommendation for Change of Publication*, to AETC/A3F approval authority for changes. AETC/A3F is the waiver authority for this instruction. Field units below MAJCOM level will supplement this instruction. They will coordinate supplements to this instruction with AETC/A3FS before approval. The authorities to waive wing/unit level requirements in this publication are identified with a Tier ("T-0, T-1, T-2, T-3") number following the compliance statement. See AFI 33-360, *Publications and Forms Management*, Table 1.1 for a description of the authorities associated with the Tier numbers. Submit requests for waivers through the chain of command to the appropriate Tier waiver approval authority, or alternately, to the Publication OPR for non-tiered compliance items. Failure to observe prohibitions and mandatory provisions

of this Instruction by military personnel is a violation of Article 92, *Uniform Code of Military Justice* (UCMJ). Violations may result in administrative disciplinary action without regard to otherwise applicable criminal or civil sanctions for violations of related laws. See **Attachment 1** for a glossary of references and supporting information. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of in accordance with (IAW) Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS).

SUMMARY OF CHANGES

This document has been substantially revised and must be completely reviewed. Significant revisions include **Chapter 8**, which defines student equipment, wear procedures, student demonstration of equipment, inspection requirements, and environmental constraints. **Attachment 1** through **Attachment 12** have been added to further define equipment and requirements for proper use.

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1. Objective. The objective of Overwater Parasail Training (OWPT) is to allow aircrew members who rely on the parachute as their primary means of aircraft egress to become proficient at performing overwater post-egress checklist procedures, steering a parachute, preparing to land in the water, and releasing the parachute to avoid being dragged in high-wind conditions. OWPT is the vital link between an overwater in-flight emergency bailout or ejection and an aircrew's effort to survive at sea and get safely recovered.

2. Overview of OWPT:

2.1. The parasail (also referred to as an ascending trainer) is a parachute specially designed to incorporate airfoil-lifting capabilities. Forward speed is obtained by a series of ports or slots that exhaust air aft. The parasail is constructed of low porosity nylon to permit a high percentage of escaping air to be diverted out of the parasail, providing forward thrust.

2.2. The parasail is towed aloft by a boat fitted with a specially designed tow winch equipped with enough tow line to permit a safe margin of operation for the altitude of intended flight.

2.3. The student is outfitted with the parachute harness, protective equipment, and a life preserver unit (LPU) used on his or her assigned aircraft.

2.4. Following a safety check by OWPT staff, the student is attached to a tow line fitted with a student- operated release system.

2.5. Using the parasail, the student is towed to approximately 500 feet (a height that allows the average student a 16- to 22-second descent). The student releases the tow line in order to start a free parachute descent and then performs overwater post-egress checklist procedures.

3. Prerequisite Training:

3.1. Prior to the first parasail flight, each student will:

3.1.1. Receive training on overwater post-egress parachuting to include practice clearing common parachute malfunctions and performing the overwater post-egress checklist procedures in the suspended harness ring trainer. **(T-2)**

3.1.2. Practice overwater post-egress checklist procedures in the parachute descent trainer. **(T-2)** If the parachute descent trainer is not available, the student will practice descent checklist procedures on land or in the suspended harness ring trainer. **(T-2)**

3.1.3. Practice parachute disentanglement procedures in the water. **(T-2)**

3.1.4. Practice high-wind parachute drag procedures, as a minimum, one front and one back drag while underway in the water. **(T-2)**

4. Responsibilities. Overwater parasail operations require specialized watercraft. These operations also require specially modified and maintained aircrew flight equipment and operational equipment. Due to the uniqueness of the AETC OWPT mission, the following responsibilities apply:

4.1. AETC/A3FS will oversee AETC OWPT operations, procedures, and equipment. In addition, AETC/A3FS will provide AETC staff coordination as necessary to ensure continuity of operations in this unique training mission. AETC units (other than Det 2, 66

TRS) wishing to conduct a form of OWPT must consult AETC/A3FS about equipment specifications, watercraft procedures, and safety guidelines.

4.2. AFICA/KT will execute procuring contracting office (PCO) authority and accomplish resulting watercraft and parasail acquisitions.

4.3. AETC/A4RT will develop and provide guidance/instructions on the control and management of AF watercraft 22 feet or longer to base level Vehicle Management activities as required.

4.4. AETC/A5RZ will acquire new watercraft, including cost modeling and analysis of alternatives when new watercraft are required. Requirements determinations will be made by AETC/A3FS (driven by mission issues) and validated.

4.5. The 336 TRG/CC will ensure procedures are developed and implemented in a local supplement to outline a well-defined and documented program. **(T-2)** Procedures will include safety and emergency procedures. **(T-2)** The 336 TRG/CC is also responsible for mission certification of the OWPT program. **(T-2)** **NOTE:** Certification is defined as the authority to approve for “live” use in the OWPT program after an operational evaluation is completed by Det 2, 66 TRS.

4.6. Det 2, 66 TRS, is responsible for:

4.6.1. Providing AETC with practical technical expertise on OWPT watercraft, equipment, and procedures. **(T-2)**

4.6.2. Conducting market research of commercial parasail watercraft and equipment. **(T-2)**

4.6.3. Evaluating the operational safety, suitability, and effectiveness of commercial watercraft and equipment being considered for purchase by AETC. **(T-2)**

4.6.4. Operational evaluations leading to mission certification of commercial watercraft and equipment for use in OWPT. **(T-2)**

4.6.5. Modification and fabrication of OWPT unique equipment (standard government issue or commercially procured) for safety and/or functionality. **(T-2)** Individuals authorized to modify and fabricate such equipment are Aircrew Flight Equipment (AFE) Specialists (Air Force Specialty Code 1POX1). This AFSC is the point of contact for the care, use, maintenance, and repair of all approved AFE equipment. The commercial vendor is also authorized to repair commercial parasails. Ensure life support equipment is inspected and packed according to the local supplement to this instruction. **(T-2)**

4.6.6. Development and documentation (supplemental guidance) of:

4.6.6.1. Inspection procedures and cycles to ensure mission safety for the OWPT equipment. **(T-2)**

4.6.6.1.1. Build-up, inspection, repair, and functional test (as applicable) for the following items are outlined in paragraph 8 of this instruction. **(T-2)**

4.6.6.1.2. OWPT Aircrew Flight Equipment will be routinely inspected as outlined in **Figure A2.1** **(T-2)**

4.6.6.2. Safe and effective procedures for all OWPT operations. **(T-2)**

4.6.6.3. All military and civilian crew positions and certification procedures for OWPT operations. (T-2)

4.7. The unit commander is responsible for:

4.7.1. The overall quality and safety of OWPT training and compliance with this and local supplements. (T-2)

4.7.2. Appointing a unit representative as the equipment custodian for all managed watercraft maintained in the supply system. (T-2)

4.7.3. Submitting an AF Form 601, *Equipment Action Request*, for new authorizations or changes to existing watercraft authorizations in accordance with AFMAN 23-122, *Material Management Procedures*, Section 5D, 5.4.8 and 5.4.9. (T-2)

4.7.4. Submitting a request for dispositions instructions for excess or uneconomically repairable watercraft within 30 calendar days from the date the asset become excess. IAW AFMAN 23-122, Section 5D, 5.4.13.3.1. (T-2)

5. OWPT Requirements

5.1. Training Area. The OWPT training area must be large enough to simultaneously sail two students. (T-2) It must have distinguishable boundaries so “notice to mariners” may be broadcast on local marine band channels. (T-2)

6. Watercraft. OWPT requires enough watercraft based on the programmed flying training to safely launch, monitor, and recover students engaged in training. (T-2)

7. Medical Support:

7.1. Each OWPT package will be supported by a rescue swimmer and an emergency medical technician-Basic (EMT-B). (T-2) **NOTE:** One person may not perform both of these duties.

7.2. The rescue swimmer must be a graduate of Navy Course A-050-0500, Surface Rescue Swimmer. (T-2)

7.3. The EMT-B must be nationally certified and maintain currency. (T-2)

8. OWPT Equipment: OWPT (student) AFE assemblies (to include bay ops equipment) and respective training devices will be inspected to ensure they are safe, properly configured, and operational for use as training use only devices to meet requirements/activities of the USAF Water Survival Course curriculum. (T-2) **NOTE:** All student gear/devices used for training and maintained by AFE will be stenciled “FOR TRAINING USE ONLY” to the greatest extent possible. (T-2)

8.1. Harness. All student harness will be equipped with one of three standard canopy releases (J1, Koch II, or Frost). (T-2)

8.1.1. Torso harness (PCU-15/P & PCU16/P) will be post-flighted weekly (following water operations) to ensure accountability and serviceability. (T-2) (See [Attachment 3](#) for inspection requirements and Table A3.1 for overhaulin materials). **NOTE:** Interval preflight and safety checks are performed by students and SERE staff members.

- 8.1.1.1. Torso harness will be configured with three life preserver attachment D-rings (see [Attachment 3](#)). (T-2)
 - 8.1.2. A safety hook v-ring/webbing attachment will be installed on all student torso harnesses (see [Attachment 3](#)). (T-2)
- 8.2. Helmet. An impact resistant helmet will be used by each student for safety purposes. (T-2)
 - 8.2.1. Pro-Tec helmets will be utilized by students and will be accounted/inspected weekly to ensure serviceability. (T-2) Helmets will be tracked in Flight Equipment Records Management System (FERMS). (T-2) Inspections will be conducted IAW AFI 11-301, *Aircrew Flight Equipment Program* and the AETC Sup I regarding Training Use Only equipment. (T-2)
 - 8.2.2. Inspect the helmet for the following utilizing manufactures guidance (**Note:** If any item is found and cannot be easily corrected the item will be removed from service and actions taken to procure a replacement). (T-2)
 - 8.2.2.1. Ensure helmet has no cracks, tears, or holes. (T-2)
 - 8.2.2.2. Ensure hardware (Chin strap) is not broken and can be secured properly. (T-2)
 - 8.2.2.3. Ensure inner helmet lining is secure and not ripped or damaged. (T-2)
- 8.3. Life Preserver Units (LPU). LPUs will be modified to a training version for students. (T-2) **NOTE:** Demonstration LPU-9/Ps containers utilized by instructors will have the breakaway zipper removed and replacement with 2-inch hook and pile Velcro on either side of container opening is authorized. (T-2)
 - 8.3.1. Life preservers are inflated orally by students and safety checked by student/SERE staff. All preservers failing to remain inflated will be removed from the training environment and given to AFE for inspection/review (see [Attachment 4](#)). (T-2)
 - 8.3.2. LPU-10/Ps will be maintained as per guidance established in [Attachment 5](#). (T-2)
 - 8.3.3. Contracted ruggedized Student life preservers (simulating LPU-9/P & 38/Ps) will be visually inspected/accounted for weekly (see [Attachment 4](#) for inspection/repair/build-up requirements). (T-2)
 - 8.3.3.1. The ruggedized life preserver will have a MA-1 inflator installed on each cell in order to meet contract and training requirements. (T-2)
 - 8.3.4. Instructors LPU-9/P and LPU-10/P Demonstration Preservers, will be inspected annually and documented in FERMS. (T-2)
 - 8.3.4.1. The demonstration LPUs (following each class' functional inflation demonstration) will be deflated and repacked utilizing modified containers IAW [Attachments 4](#) and [Attachment 5](#). (T-2)
- 8.4. Gloves. Students will wear nomex flight gloves during OWPT. During Cold weather operations, neoprene dive gloves may be substituted for flight gloves. (T-2)

8.5. Clothing. A flight suit will be used during OWPT. (T-2)

8.5.1. Wetsuits are mandatory when the water temperature is below 60 degrees Fahrenheit. (T-2) They are optional above that temperature.

8.5.2. Anti-exposure or immersion suits and/or wet suits are mandatory when the wind chill is below 50 degrees Fahrenheit. (T-2) They are optional above that temperature.

8.6. Student Survival Kit.

8.6.1. Student survival kits will be configured, inspected, and repaired IAW **Attachment 6**. (T-2) **NOTE:** The student survival kit is built to function and resemble an ML-4 survival kit and is locally manufactured due to limited ML-4 kits in the inventory, cost, and durability.

8.6.1.1. The student kits will contain items identified in **Attachment 6** and will be inspected/repacked weekly (at the end of each course) to ensure serviceability and accountability. (T-2)

8.6.2. Instructor LRU-16/P Demonstration Life Rafts, will be inspected annually and documented in FERMS. (T-2)

8.6.2.1. The demonstration LRU-16/Ps (following each class' functional inflation demonstration) will be deflated and repacked IAW Technical Manual 14S-1-102, *Maintenance instruction with Illustrated Parts Breakdown* with the following deviations. (T-2)

8.6.2.1.1. Rafts will upon initial placement in service functionally tested and inspected. Only the initial functional test will be stenciled. (T-2) **NOTE:** Instructor demonstration kits/rafts are activated as a training aid for students only and do not require periodic functional tests beyond demonstrations. Only the initial functional test will be performed and documented/stenciled on the raft IAW 14S-1-102. (T-2)

8.7. Student Ruggedized One-Man Life Rafts. (Yellow cell for safety applications) will be inflated, inspected, and accounted for weekly (following each classes) as outlined in **Attachment 7** for inspection/repair/build-up requirements (Refer to Figure A7.1). (T-2)

8.7.1. The ruggedized life raft will also be reworked; a brass ring will be placed at the separation point of the floor inflation tube and heat-shrink covering applied. (T-2)

8.7.2. The raft will be attached to the survival kit by snap clip on lanyard to one of the four boarding handles. (T-2) CO2 canister will not be installed on any ruggedized raft packed in a kit. (T-2)

8.8. Parasails. Will be inspected annually. (T-2)

8.8.1. Parasail inspections will be documented on AFTO Form 392, *Parachute Repack Inspection and Component Record* and patches tracked on card in the repair history section. (T-2)

8.8.2. Parasails will be assembled, inspected, maintained, and repaired as outlined in **Attachment 8** and manufacturers owner's guidance's. (T-2)

8.9. F2B (20 Man) life rafts. Will be accounted for weekly. (T-2) All rafts will be inspected and inflation tested annually to meet training use only requirements. (T-2) Life Rafts will be over hauled and accessory containers packed IAW [Attachment 9](#). (T-2)

8.9.1. Life rafts will have CO2 bottles removed and ports will be plugged with a 3/8" solid plug in order for raft to remain inflated and as a safety practice for training operations. (T-2)

8.10. Tow yokes and Drop and Drag Assemblies. Are locally manufactured and will be constructed IAW [Attachment 10](#) and [Attachment 11](#). (T-2)

8.11. Condemning Equipment: Equipment will be condemned when the equipment possess a safety hazard, probable failure, fails inflation test and/ or inspections outlined within the respective Technical Orders, Owner's manuals, and/or this instruction. (T-2) Training equipment used may exceed service life requirements and technical order limitations as long as safety is not compromised and the item can be rendered by certified AFE specialist as serviceable for training use. Equipment will be removed from service if any doubt of serviceability exists. (T-2) Condemned equipment will be stripped of all serviceable parts/items and returned to stock or retained locally for repair/replacement parts. (T-2) Turn-in condemned equipment in accordance with DOD 4160.21-M. (T-2) Ensure equipment has been cut or mutilated (made unfit for intended purpose) as to prevent repair or restoration. (T-2)

9. OWPT Weather Constraints.

9.1. Wind. Parasail launches will not be accomplished when steady-state winds are in excess of 20 knots (kts) or when wind gusts exceed 10 kts when winds are already at 10 kts or greater. (T-2)

9.2. **Lightning.** OWPT staff will monitor available equipment, maintain communication with the local weather office, and make every effort to determine the location and direction a storm is heading. (T-2) When lightning is within 5 nautical miles of operations, all parasail operations will be suspended until lightning is outside the 5 nautical mile range. (T-2)

9.3. **Reduced Ceiling and Visibility.** Students must be visible to all boats at all times. (T-2) Training will be suspended when inclement weather reduces the ceiling to 600 feet and visibility to 1/2 mile or otherwise prevents OWPT staff from seeing all training. (T-2) Training will also be suspended if safe boating operations are jeopardized. Training may resume once conditions permit. (T-2)

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Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

- DoD 4160.21-M, *Defense Material Disposition Manual*, August 1997
- AFPD 36-26, *Total Force Development*, 27 September 2011
- AFI 11-301V1, *Aircrew Flight Equipment Program*, 25 February 2009
- AFI 24-302, *Vehicle Management*, 26 June 2012
- AFMAN 23-122, *Material Management Procedures*, 8 August 2013
- AFMAN 37-139, *Records Disposition Schedule* (will become AFMAN 33-322, Volume 4)
- Custom Chutes INC., *Parasail Maintenance*, 4 May 2005
- Pro-Tec INC, *Bucky Classic Owner's Manual*, 1 January 2011
- Technical Manual 14S-1-102-11, *Maintenance Instruction with Illustrated Parts Breakdown*, 18 April 2013
- USAF Flotation Equipment Life Rafts LRU-16/P and LRU-17/P Life Preserver LPU-9/P*
- Technical Manual 14S-1-102-21, *Maintenance instruction with Illustrated Parts Breakdown*, 9 August 2011
- TO 14D3-11-1's *Securing Harness Accessory Rings*, 16 January 1989
- USAF Flotation Equipment LRU-1/P, F-2B, 20-MAN VPLR, and 25-MAN Life Rafts LPU-3/P, LPU-6/P, LPU-10/P, A-A-50652, AND MB-1 Life Preservers*, 9 August 2011

Prescribed Forms

This instruction does not include any prescribed forms.

Adopted Forms

- AF Form 601, *Equipment Action Request*
- AF Form 615, *Unit Watercraft Operations and Cost Summary Report*
- AF Form 847, *Recommendation for Change of Publication*
- AFTO Form 392, *Parachute Repack Inspection and Component Record*
- DD Form 1577-2, *Unserviceable (Repairable) Tag Materiel*

Abbreviations and Acronyms

- A FE**—Aircrew Flight Equipment
- AFMAN**—Air Force Manual
- AFRIMS**—Air Force Records Information Management System
- AFTO**—Air Force Technical Order
- CA/CRL**—Custodian Authorization/Custody Receipt Listing

EMT—Emergency Medical Technician

EMT—B—Emergency Medical Technician-Basic

FERMS—Flight Equipment Records Management System

IAW—In Accordance With

LPU—Life Preserver Unit

LRU—Life Raft Unit

OWPT—Overwater Parasail Training

PCO—Procuring Contracting Office

RDS—Records Disposition Schedule

T.O.—Technical Order

Attachment 2

AFE EQUIPMENT ROUTINE INSPECTION REQUIREMENTS/SCHEDULE

Figure A2.1. AFE Equipment Routine Inspection Requirements/Schedule

ITEM NOUN	INSPECTION Prior to use (by student/SERE)	INTERVALS			
		Weekly	30 Days	180 Days	Annually
Custom Chute Parasail	X (Note 3)				X
46 Man Life Raft (Note 1)					X
F2B 20 Man Life Raft (Note 1)	X (Note 3)			X	
Torso Harness PCU-4, 15/P & 16/P	X (Note 3)			X	
Ruggedized Student LPU (LPU- 9/P & 38/P version) (Note 1)	X (Note 3)			X	
LPU-10/P*	X (Note 3)			X	
Locally Manufactured Student survival kit	X	X			
Multi Place Life Raft Accessory Kit (Reverse Osmosis Pump (Note 2))	X			X	
Student Pro-Tec Helmet	X (Note 3)			X	
<p>Note 1: Requires inflation test during weekly, 30 day, 180 day, and/or annual inspections.</p> <p>Note 2: Inspection will be performed to ensure only that the pump functions and allows water to pass through. However, it is important that no water be consumed from this device. The training aid will be clearly marked “DO NOT DRINK” AND “FOR TRAINING USE ONLY”.</p> <p>Note 3: A post-flight will be performed following each training session.</p>					

Attachment 3

TORSO HARNESS

A3.1. Purpose: The PCU-4, 15 & 16/P student torso harness are designed to secure students to parasail, drop and drag riggings, slide tower assemblies, and attachment of appropriate survival components/flotation devices. The torso harness is utilized to provide a realistic hands-on application for completion of objective requirements for OWPT. The following is a listing of materials and maintenance requirements (Refer to [Figure A3.1](#) and [Figure A3.2](#) as necessary):

Table A3.1. Overhaul Materials.

2-inch webbing	“D” ring
1-inch webbing	“V” ring
Kock (female) release (as applicable)	Ejector snaps
J-1 (female) release (as applicable)	Size “E” nylon thread
Frost (female) release (as applicable)	

A3.2. Build Up. NOTE: Service life for equipment will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely.

A3.2.1. Attach applicable release fitting, chest strap and leg strap v-ring & ejector snaps, as outlined in TO 14D3-11-1, *Securing Harness Accessory Rings*.

A3.2.1.1. V-ring will be modified as follow: Remove spring loaded tension break device from v-ring (this action must be performed due to swelling of webbing upon getting wet).

A3.2.2. Cut a 10-inch section of 2-inch webbing.

A3.2.3. Fold webbing in half, route v-ring to center fold.

A3.2.4. Secure V-ring and webbing to torso harness 6-inches above left canopy release, by sewing (using six-cord or FF thread) webbing to torso harness webbing (with the “v” of the v-ring pointing toward the front of the harness) using a box “X” stitching pattern.

A3.2.5. LPU D-ring attachment to torso harness:

A3.2.5.1. Secure one D-ring and webbing to back side of torso harness at the point where torso harness shoulder straps cross.

A3.2.5.1.1. Sew D-ring and webbing using a box stitch (D-ring facing up toward neck area) using a box “X” stitching pattern using size “E” nylon thread.

A3.2.5.1.2. Secure second and third d-rings by measuring 6-inches below the point where the torso harness shoulder straps cross, and positioning the d-rings 1-inch from edge of the harness vest material level with the 6-inch on each side of the harness.

A3.2.6. Sew lower accessory ring as per TO 14D3-11-1’s.

A3.2.7. Stencil in 1/2" to 1" lettering local ID number and “FOR TRAINING USE ONLY.”

A3.3. Repair. NOTE: Repairs such as darning and sewing of the harness vest material is permitted to exceed maximum allowable repairs, as long as, safety is not compromised.

A3.3.1. Repairs will be performed per Technical Order 14D3-11-1.

A3.3.2. Repairs to webbing material such as the sling, chest strap, shoulder straps are limited to sewing vest material or safety v-ring hook to the assembly. NO DARNES TO WEBBING MATERIAL, any other repair other than explained here is not authorized and entire assembly will be condemned and removed from service.

A3.4. Inspection. NOTE: Service life for flotation equipment will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely.

A3.4.1. Inspect to ensure harness is stenciled as per buildup instructs (re-stencil as necessary).

A3.4.2. Inspect safety V-ring attachment.

A3.4.2.1. Ensure V-ring is secured 6-inches above left release fitting.

A3.4.2.2. Ensure no broken stitching and webbing is secured with a boxed stitch pattern.

A3.4.3. Inspect Torso harness IAW TO 14D3-11-1.

A3.4.3.1. Torso harness used "FOR TRAINING USE ONLY" are permitted to exceed service life requirements and allowable repairs (discretion will be used to ensure that assemblies met the intent of the TO and do not compromise safety).

A3.4.3.2. Corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment; i.e. the assemblies function smoothly, grommets are secure, and fittings/releases operate properly.

A3.4.4. Lubricate all components (releases, ejector snaps etc...) using locally procured General Purpose Lubricant and preservative (NSN 9150-00-458-0075).

Figure A3.1. Student Harness.

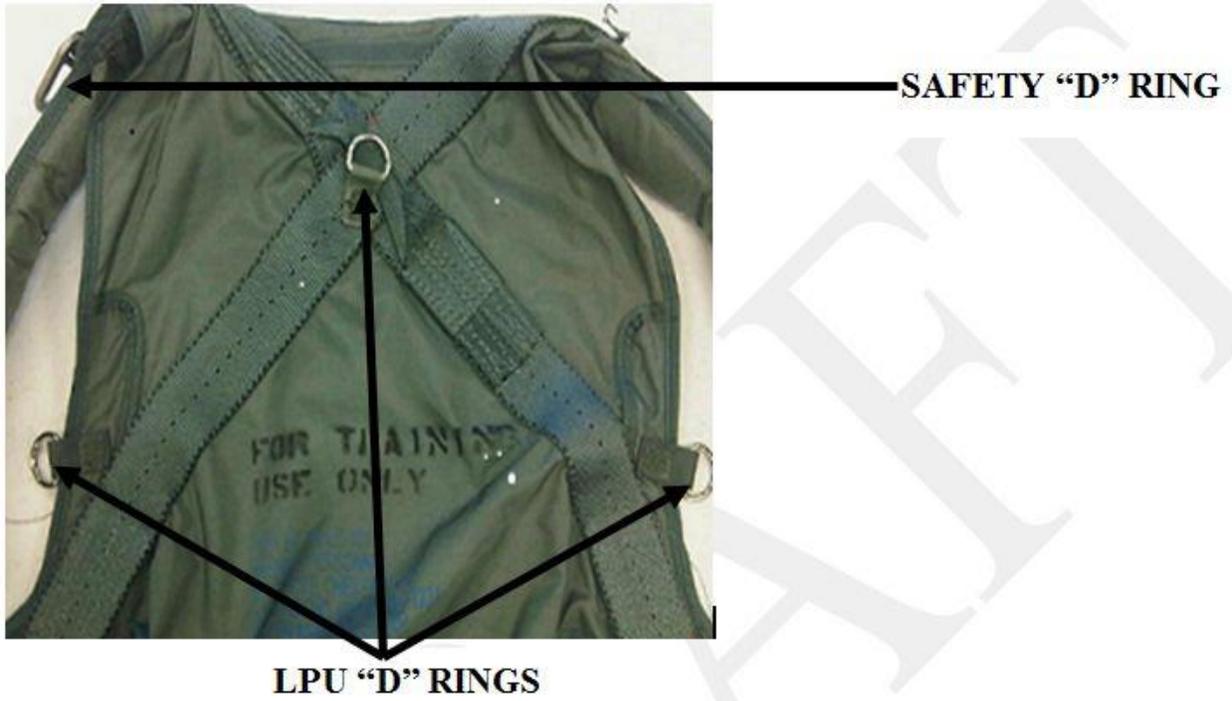


Figure A3.2 . Safety Hook.



Attachment 4

CONTRACTED STUDENT LIFE PRESERVER (LPU-9/P DESIGN) BUILD-UP AND INSPECTION PROCEDURES

A4.1. Purpose: The contracted student life preserver is designed to resemble the LPU-9/P visually and functionally. The preserver is to provide flotation and realistic hands-on application for completion of objective requirements for OWPT. The following is a listing of materials and maintenance requirements (refer to [Figure A4.1](#)).

A4.2. Overhaul Materials:

A4.2.1. 6 X 2-inch nylon webbing.

A4.2.2. Harness clips.

A4.2.3. MA-1 Inflators.

A4.3. Build Up. NOTE: Service life for flotation equipment will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely.

A4.3.1. Perform inspection and leakage test as per this attachment.

A4.3.2. Fabricate and a 6-inch long x 2 -inch wide piece of nylon webbing securing an attachment clip to one end by routing material through clip and secure material by sewing a box pattern over the routed excess (excess must be a minimum of 1”).

A4.3.3. Sew fabricated harness clip to the free end of the webbing (with the clip facing down) to the webbing (centered) on aft side of cell.

A4.3.4. Install MA-1 inflators on front and aft of the preserver.

A4.3.5. Stencil “FOR TRAINING USE ONLY” and local ID at the top of the fwd side of cell in ½-inch letters.

A4.4. Inspection.

A4.4.1. Inspect the cell and all webbing for holes, cuts tears, seam separations. Stains and fading of rubber and fabric are acceptable.

A4.4.2. Inspect all metal components to ensure assemblies function/operate properly, smoothly. **NOTE:** Minor surface corrosion on hardware may be removed with a soft bristle wire brush. Minimal corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment; i.e. the inflation assembly functions smoothly, grommets are secure, pressure fittings seal, etc.

A4.4.3. Inspect oral inflation valve for cracks, security of attachment, ease of operation, and other evidence of corrosion. **NOTE:** Oral inflation valves will be removed and sanitized with appropriate sanitizing agent.

A4.4.4. Inspect any other parts for wear or other damage and security of attachment.

A4.4.5. Ensure Cell is stenciled “FOR TRAINING USE ONLY” and local ID in 1/2-inch lettering at top of the fwd side of the cell.

A4.4.6. Perform leakage test if holes or tears are discovered on or in the cell body.

A4.4.7. Demonstration preserver. **NOTE:** LPU container will be reworked by removing the breakaway zipper from the LPU-9/P and replaced by sewing a 2-inch hook and pile Velcro on sides of container to facilitate opening/closing.

A4.4.7.1. Demo preservers only will be packed as outlined in TO 14S-1-102-11.

A4.5. Leakage Test.

A4.5.1. Inflate cell (under test) fully using a suitable air source.

A4.5.2. After a one hour period the preserver should have remained fully inflated. If preserver has deflated, check for leaks by applying a mild soap and water solution. Locate leakage area(s), and mark area(s) with china marker. Rinse preserver with fresh water, air dry and repair in accordance with Chapter 6 of T.O. 14S-1-102-11. **NOTE:** LPUs are authorized to exceed patching and repair limitations set by TO in order to render serviceable for training use only (discretion will be used to ensure repairs do not limit or compromise safety and/or function of the preserver).

A4.5.3. Check valve stem for leaks on the valve core with soap solution. Rinse preserver with fresh water, air dry and repair (refer to chapter 6 of T.O. 14S-1-102-11).

A4.5.4. Assemblies unable to meet inflation requirements following reasonable repairs will be removed from service.

Figure A4.1. Ruggedized LPU.



Attachment 5

LPU-10/P LIFE PRESERVER (STUDENT) BUILD-UP/ INSPECTION PROCEDURES

A5.1. Purpose. The student LPU-10/P preserver is to provide flotation and realistic hands-on application for completion of objective requirements for OWPT. The following is a listing of materials and maintenance requirements (refer to [Figure 5.1](#)):

A5.2. Overhaul Materials:

A5.2.1. 28 gram (painted) yellow CO2 bottle.

A5.3. Build-up.

A5.3.1. Perform inspection and leakage test requirements as outlined in this attachment.

A5.3.2. Install an EMPTY yellow bottle on both flotation cell inflators.

A5.3.3. Stencil “FOR TRAINING USE ONLY” and local ID on each life preserver cell in 1/2-inch letters (refer to [Figure 5.1](#)).

A5.3.4. Inspection stamp on cell will not be performed (due to emersion in salt water consistently washing away stamp). **NOTE:** Service life for flotation equipment will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely.

A5.4. Inspection.

A5.4.1. Inspect the cell and all webbing for holes, cuts tears, seam separations. **NOTE:** Stains and fading of rubber and fabric are acceptable.

A5.4.2. Inspect all metal components to ensure assemblies function/operate properly, smoothly. **NOTE:** Minor surface corrosion on hardware may be removed with a soft bristle wire brush. Minimal corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment; i.e. the inflation assembly functions smoothly, grommets are secure, pressure fittings seal, etc...

A5.4.3. Inspect oral inflation valves for cracks, corrosion, security of attachment, and ease of operation. **NOTE:** Oral inflation valves will be removed and sanitized with appropriate sanitizing agent.

A5.4.4. Inspect any other parts for wear or other damage and security of attachment to include inflator assemblies.

A5.4.5. Ensure each flotation cell inflator has an **EMPTY** yellow CO2 bottle installed and is properly secured to inflator. **NOTE:** Safety ties are not required on the inflator or locking pin as directed by the T.O.

A5.4.6. Ensure Cell is stenciled “FOR TRAINING USE ONLY” and local ID in 1/2-inch lettering.

A5.4.7. Perform leakage test.

A5.4.8. Class room Demonstration preserver.

A5.4.8.1. Will be packed as outlined in 14S-1-102-11. **NOTE:** The LPU-10/P closure tacking/safety ties are not required on the inflator or locking pin as directed by the T.O.

A5.5. Leakage Test.

A5.5.1. Inflate cell (under test) fully using a suitable air source.

A5.5.2. After a one hour period the preserver should have remained fully inflated. If preserver has deflated, check for leaks by applying a mild soap and water solution. Locate leakage area(s), and mark area(s) with china marker. Rinse preserver with fresh water, air dry and repair in accordance with Chapter 6 of T.O. 14S-1-102-11. **NOTE:** LPUs are authorized to exceed patching and repair limitations set by TO in order to render serviceable for training use only (discretion will be used to ensure repairs do not limit or compromise safety and/or function of the preserver).

A5.5.3. Check valve stem for leaks on the valve core with soap solution rinse preserver with fresh water, air dry and repair (refer to Chapter 6 of T.O. 14S-1-102-21).

A5.5.4. Assemblies unable to meet inflation requirements following reasonable repairs will be removed from service.

Figure A5.1. LPU-10/P Fwd View.



ATTACHMENT 6

STUDENT SURVIVAL KIT BUILD-UP, MAINTENANCE, AND INSPECTION PROCEDURES

A6.1. Purpose. The locally manufactured student life preserver is designed to resemble the ML-4 survival kit visually and functionally (refer to [Figure A6.1](#)). The kit is to provide a realistic hands-on application for completion of objective requirements for OWPT. The following is a listing of materials and maintenance requirements.

A6.2. Overhaul Materials:

- A6.2.1. Black Cordora material (local purchase).
- A6.2.2. Velcro hook and pile.
- A6.2.3. B-12 snaps.
- A6.2.4. Ripcord handle (Local Manufacture).
- A6.2.5. Yellow 10 inch tubular foam (Pool “Noodle”) from AIMD)
- A6.2.6. 2 inch olive drab webbing.
- A6.2.7. Connector Snap PS70121-2.
- A6.2.8. 9/16 Tubular olive drab tubular webbing W9555R
- A6.2.9. Quick Ejector Adjustable PS22018.
- A6.2.10. Blue net material.
- A6.2.11. Swivel snap hook.
- A6.2.12. Type III 550 Cord.
- A6.2.13. 1-Inch Tubular Nylon Webbing-Olive.
- A6.2.14. 1-Inch Binding Tape-Black W9850R.
- A6.2.15. Drab W9615R.

A6.3. Required Components:

- A6.3.1. Student one-man training life raft.
- A6.3.2. Signal mirror.
- A6.3.3. Whistle.
- A6.3.4. Raft repair plug.

A6.4. Build Up:

- A6.4.1. Using the metal template, trace and cut out on black Cordora. Ensure the holes for hook, pile and webbing are marked from the metal template and transferred to the Cordora.
- A6.4.2. Cut out hook and pile and sew in respective locations.
- A6.4.3. Cut out 2 pieces of 2 inch webbing 6 inches long. Sew these pieces in their respective locations on the inside of the kit.

A6.4.4. Cut 1 inch tubular webbing to 8 inches and sew to the 2 inch webbing on inside of kit (Ensure that there is enough slack in this webbing to attach retention line).

A6.4.5. Cut 2 inch webbing to 18 inches and sew 1 B-12 snap on each end using a “box X” stitch. Sew to the seat kit in respective location.

A6.4.6. Cut 2 inch webbing 3 inches long. Sew webbing to respective location as ripcord handle retainer.

A6.4.7. Cut 1 inch tubular webbing to 12 inches. Sew webbing to ripcord handle and top flap on seat kit, ensuring that webbing is routed through ripcord retainer webbing.

A6.4.8. Sew (using Size E Nylon thread) binding tape around edge of material using the binding machine. If using medium weight machine, sew 2 lines around edge.

A6.4.9. Sew edges of kit together 3 inches with a Zigzag Stitch.

A6.4.10. Cut blue net material 12 inches by 24 inches and sew 11 inches of hook to the 12 inch side and 11 inches of pile to opposite 12 inch side. Fold material over onto itself and sew together creating a pouch.

A6.4.11. Cut 3 pieces of 550 cord to 3 inches and sear ends. Sew each piece of the 550 cord to the inside of the pouch, creating a loop with each piece of cord.

A6.4.12. Cut 1 inch tubular webbing to 45 inches. Fold one end over and sew, creating a 6 inch loop. Sew blue pouch to line approximately 15 inches from opposite end that the 6 inch loop was sewn. Attach swivel hook to end that does not have 6 inch loop sewn.

A6.4.13. Slide 10 inch piece of tubular foam on end that has the 6 inch and larks head knot the webbing to the seat kit on the 8 inch long piece of tubular webbing that has slack in it.

A6.4.14. Stencil in 1/2" to 1" lettering “FOR TRAINING USE ONLY” and local ID.

A6.5. Inspection:

A6.5.1. Inspections will be conducted on each student kit weekly after use.

A6.5.2. Inspect for cuts, tears, holes, ripped seams, security of attachment/functionality of items.

A6.5.3. Inspect survival kit (blue bag) for cuts, tears, holes, ripped seams, security of attachment of items. **NOTE:** Minor surface corrosion on hardware may be removed with a soft bristle wire brush. Minimal corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment; i.e. the inflation assembly functions smoothly, grommets are secure, pressure fittings seal, etc.

A6.5.4. Remove and replace rusted raft repair plugs and corroded mirrors. **NOTE:** Service life for flotation equipment and/or components will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely. Equipment will be tracked in FERMS. Inspections will be conducted IAW AFI 11-301V1 and the AETC Sup I regarding Training Use Only equipment.

A6.6. Repair:

A6.6.1. Darn or Patch small holes or tears (use Size E Nylon thread).

A6.6.2. To repair loose/broken stitching, sew new stitching over the damaged stitching, and overstitch good stitching 1.5 inches on either side of damaged area (use Size E Nylon thread).

A6.6.3. To repair B-12 or swivel snaps, lubricate moving parts or replace.

Figure A6.1. Student Kit Container



Attachment 7

RUGGEDIZED ONE-MAN (STUDENT) LIFE RAFT INSPECTION/MAINTENANCE/REPAIR

A7.1. Purpose. The contracted student life rafts are designed to resemble the LRU-16/P one-man life raft visually and functionally. The raft is to provide flotation and realistic hands-on application for completion of objective requirements for OWPT. The following is a listing of materials and maintenance requirements (Refer to [Figure A7.1](#)):

A7.2. Overhaul Materials:

A7.2.1. Brass clip ring.

A7.2.2. Type III 550 Cord.

A7.3. Build-up:

A7.3.1. Install a brass ring at the separation point of the floor inflation tube.

A7.3.2. Secure brass ring by gluing ends of inflation tubes to one another. **NOTE:** Use MIL-A-5540 glue and allow 72 hours for glue to cure (this action prevents students from separating/losing the floor inflation tube).

A7.3.3. Remove the brass ring from main oral inflation valve.

A7.3.4. Attach a 5 foot lanyard (Type III 550 cord) to the sea anchor and secure to the life raft sea anchor attachment point.

A7.3.5. Stencil "For Training Use Only" in 1-inch letters on main cell.

A7.4. Inspection:

A7.4.1. Ensure main cell, spray shield, and inflatable floor are clean dry, and serviceable.

A7.4.2. Ensure no holes cuts, tears, seam separations. **NOTE:** Stains and fading of rubber and fabric are acceptable.

A7.4.3. Ensure security of attachment for all additional items to include, main oral inflation tube for main cell, inflatable floors and spray shield are installed and operate properly. **NOTE:** Minor surface corrosion on hardware may be removed with a soft bristle wire brush. Minimal corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment; i.e. the inflation assembly functions smoothly, grommets are secure, pressure fittings seal, etc. **NOTE:** Service life for flotation equipment will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely.

A7.4.4. Perform Leakage test. **NOTE:** Ensure oral inflation valves for the main tube, inflatable floor, and spray shield are removed and sanitized with appropriate sanitizing agent.

A7.5. Leakage Test:

A7.5.1. Inflate main cell fully.

A7.5.2. Inflate floor and spray shield to dimpled effect.

A7.5.3. Allow 15 minutes for pressure to stabilize, readjust pressure if necessary.

A7.5.4. After a one hour period ensure all cells are fully inflated. If leakage has occurred or is perceived check for leaks by applying a mild soap and water solution as needed. Locate leakage area(s), and mark area(s) with china marker. Rinse soap solution from application areas with fresh water, air dry and repair in accordance with Chapter 6 of T.O. 14S-1-102-11. **NOTE:** Life rafts are authorized to exceed patching and repair limitations set by TO in order to render serviceable for training use only (discretion will be used to ensure repairs do not limit or compromise safety and/or function of the preserver. Life rafts spray shield and floor dimples that have separated will be removed from student use and may be utilized for basin ops only.

A7.5.5. Check valve stem for leaks on the valve core with soap solution rinse preserver with fresh water, air dry and repair (refer to chapter 6 of T.O. 14S-1-102-11). **NOTE:** Twist valves on the spray shield and floor found to not function or leak may be removed and replaced with an oral inflation valve with knurled ring.

A7.5.6. Assemblies unable to meet inflation requirements following reasonable repairs will be removed from service.

Figure A7.1. Student One Man Life Raft Aft View.



Aft view of raft Stenciled "FOR TRAINING USE ONLY"

ATTACHMENT 8

CUSTOM CHUTE PARASAIL BUILD-UP, REPAIR, AND INSPECTION PROCEDURES

A8.1. Purpose. The following procedures are to ensure the highest quality maintenance, inspection and accountability of the detachment's parasail inventory. The parasail provides a realistic hands-on application for completion of objective requirements for OWPT. The following is a listing of materials and maintenance requirements (Refer to [Figure A8.1](#) as necessary):

A8.2. Overhaul Materials:

- A8.2.1. Parasail Mending Cloth.
- A8.2.2. Sewing machine.
- A8.2.3. Pelican hooks with hot dogs.
- A8.2.4. V-ring.
- A8.2.5. Wire brush.
- A8.2.6. Tech 70 thread.
- A8.2.7. General Purpose Lubricant.

A8.3. Build Up:

- A8.3.1. Upon receipt of new parasail, install 1 (ea) pelican hook with hot dogs to each riser, ensure latch opens forward and down. Hot dog handles are braided 550 cord encased in (red) heat shrink tubing.
- A8.3.2. Mark local ID number at apex band and information panel.
- A8.3.3. Update local ID card located in parasail card box located in parachute section to reflect new information (S/N, DOM, and local ID).

A8.4. Weekly Post Flight Inspection:

- A8.4.1. Ensure pelican hooks are secured to risers and are not rusted or corroded. Rust/corrosion that can be wire brushed away will not be suitable justification for replacement unless rust interferes or prevent the proper operation. Ensure pelican hook operates/releases by actuating (pulling) release handle. The release handle should function freely and easily. Replace the release handle if it requires excessive force to operate, binds, or fails to function.
- A8.4.2. Lubricate pelican hooks as outlined in [paragraph A8.4.3.4](#) of Inspections below.
- A8.4.3. Inspection: (will be accomplished annually using the following procedures).
 - A8.4.3.1. Ensure pelican hooks are secured to risers.
 - A8.4.3.2. Ensure pelican hooks are not excessively rusted or corroded. **NOTE:** Rust/corrosion that can be wire brushed away will not be suitable justification for replacement unless rust interferes or prevents the proper operation.

A8.4.3.3. The release handle should function freely and easily. Replace the release handle if it requires excessive force to operate, binds, or fails to function.

A8.4.3.4. Lubricate all hooks using General Purpose Lubricant (NSN 9150-00-458-0075). **NOTE:** Use proper PPE when using spray and ensure lubricant overspray does not contaminate any fabric. Remove contaminants as outlined in accordance with Custom Chute Inc Maintenance Manual.

A8.4.3.5. Inspect each parasail in accordance with Custom Chute Inc Parasail Maintenance Manual. **NOTE:** Minor surface corrosion on hardware may be removed with a soft bristle wire brush. Minimal corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment. **NOTE:** Panels are described as individual sections of a gore. The chute is a 16 gore modern parasail.

A8.4.3.6. Mark holes/areas to be repaired with tape and identify Gore at apex (with tape) to ensure all items are repaired and identified.

A8.4.3.7. Perform blow test IAW Custom Chute manual. If failed proceed as follows:

A8.4.3.7.1. Ensure Local ID tag is marked as outlined in build up instruction above.

A8.4.3.7.2. Verify parasail information is accurate on AFTO form 392 (serial #, local ID, &, DOM).

A8.4.3.7.3. Document inspection on applicable AFTO 392 and ensure all patches have been documented.

A8.5. Repair:

A8.6. Canopy:

A8.6.1. Repair parasail assembly as outlined in Custom Chutes Inc Parasail Maintenance manual and this instruction. **NOTE:** Panels are described as individual sections of a gore. The chute is a 16 gore modern parasail.

A8.6.2. Pelican Hooks: Replace unserviceable Pelican hooks (Refer to [Figure A8.1](#)).

A8.6.3. Broken Seams will be stitched as follows:

A8.6.3.1. Six stitches per inch in double needle straight stitch.

A8.6.3.2. Five stitches per inch on webbing.

A8.6.3.3. Five stitches per inch on all zigzag stitches.

A8.7. Turn in for Maintenance:

A8.7.1. Identify parasail requiring maintenance by documenting and affixing a laminated DD Form 1577-2 (Green Tag) located in parasail maintenance area to the parasail's apex.

A8.7.2. Required information on DD Form 1577-2, *Unserviceable (Repairable) Tag Materiel* includes the following areas (items are highlighted in orange on the tag):

A8.7.2.1. Serial number / Local control number (i.e. 012346 / J-99).

A8.7.2.2. Detailed discrepancy noted (i.e. pulls hard right).

A8.7.2.3. Name of person who identified discrepancy.

A8.7.3. Rigger roll parasail into bag and place in vidmar under table marked “Due Insp”.

A8.7.4. If necessary coordinate item for manufacturer panel replacement.

Figure A8.1. Pelican Hook with Hotdog Lanyard.



ATTACHMENT 9

F2B 20 MAN ACCESSORY SURVIVAL KIT (STUDENT GEAR)

A9.1. Purpose. The following items will be packed in F2B accessory containers for Training Use Only. Refer to **Figure A9.1** as necessary.

A9.2. Required Components:

- A9.2.1. 1 each Water Bag, (3 pint or 5 quart).
- A9.2.2. 1 each Desalter Kit, (1 bag & 1 chemical bar).
- A9.2.3. 10 each Water Flex Packs.
- A9.2.4. 1 each Sunscreen lotion.
- A9.2.5. 2 each Signal Mirrors.
- A9.2.6. 2 each Whistles.
- A9.2.7. 4 each Raft Repair Plugs (one set of pliers).
- A9.2.8. 1 each Raft Pump.
- A9.2.9. 2 each Sponges.
- A9.2.10. 1 each Bailing Buckets.
- A9.2.11. 1 each Raft Canopy.
- A9.2.12. 7 each Canopy Support Rods.
- A9.2.13. 1 each Canopy Mast (2 sections).
- A9.2.14. 1 each Sea Anchor (packed outside of Accessory Kit).

A9.3. Build-up:

- A9.3.1. Cut three piece 1-inch tubular webbing 6 feet long.
- A9.3.2. Attach fast tec clips male and female fitting to each end of webbing sew Female end of the clip in place using size E nylon thread.
- A9.3.3. Affix tubular webbing through container stows in three locations (Refer to **Figure A9.1**).
- A9.3.4. Attach retention line to container at stows.
- A9.3.5. Attach a swivel snap hook to free end of sea anchor.
- A9.3.6. Stencil outer container in 1-inch letters "FOR TRAINING USE ONLY and local ID."

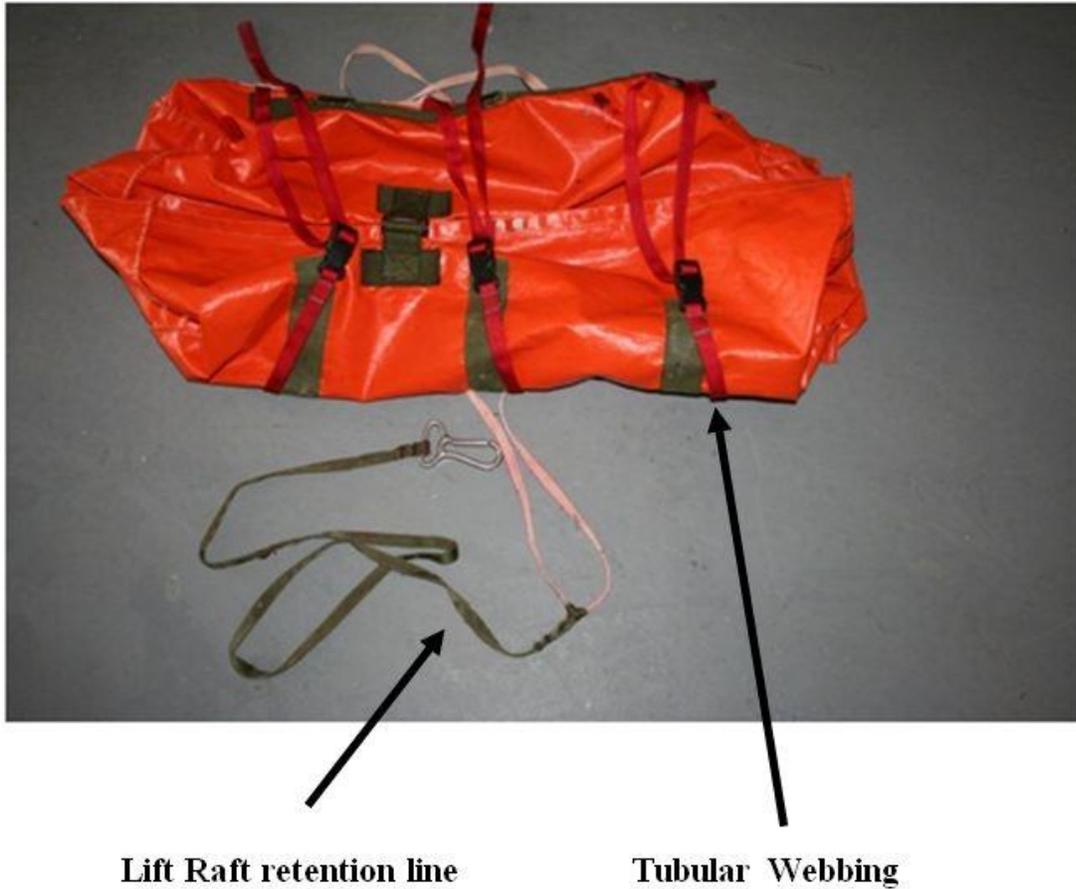
A9.4. INSPECTION/PACK:

- A9.4.1. Inspect and pack the accessory container IAW TO 14S-1-102-21. **NOTE:** ALL components (except the FLEX PACK Water) are FOR TRAINING USE ONLY. These components are permitted deviations from the inspection/repair limiting criteria as long as deviations/repairs do not compromise the safety of the user/individual using the item.

A9.4.2. Ensure stenciled outer container in 1-inch letters “FOR TRAINING USE ONLY” and local ID.

A9.4.2.1. Attach accessory kit blue local manufactured bags to the kit storing all components in each. ***ENSURE INNER BAGS WITH LINE ARE ATTACHED TO THE OUTSIDE OF THE KIT.**

Figure A9.1. Accessory Container.



ATTACHMENT 10

TOW YOKE BUILD-UP PROCEDURES

A10.1. Purpose. Tow yokes are used during water survival parasail operations, as an attachment point or parasail tow by our Monarch boats. This assembly is a required safety device that permits the accomplishments of objectives of OWPT. This document establishes the build-up procedure of the drop/drag harness assembly (Refer to [Figure A10.1](#) as necessary).

A10.2. Overhaul Materials:

A10.2.1. Type VIII 1 ¾-inch nylon textile webbing 50-inch long.

A10.2.2. 8 inch hook and 8 inch pile Velcro.

A10.2.3. 2 stainless steel V-rings.

A10.3. Build-up:

A10.3.1. Cut a piece of 1 ¾-inch textile webbing 70 inches long.

A10.3.2. Mark at mid section of 70 inch textile webbing measure and mark 3 inches in both directions from the center line.

A10.3.3. Fold webbing lengthwise and sew from marked points in “C” pattern (use FF and/or six-cord thread).

A10.3.4. Work webbing to form a 4-inch loop (refer to Figure 10) and sew with a Box “X” stitching pattern.

A10.3.5. Measure from box “X” pattern 12 inches down remaining webbing on both sides and mark.

A10.3.6. Route ring onto webbing and place at marked point. Secure v-ring by sewing 4-inch box “X” pattern and remove excess webbing with heat knife at a minimum of ¼-inch from box “X” stitching (re-accomplish steps for both sides of webbing).

A10.3.7. Secure 8-inch of hook on one side of webbing under side and pile on the opposing side. (see [Figure A10.1](#))

Figure A10.1. Fwd View of Tow Yoke.



ATTACHMENT 11

DROP/DROP ASSEMBLY BUILD-UP PROCEDURES

A11.1. Purpose. The drop/drop harness assembly is a required safety device that permits the accomplishments of objectives (parachute drag) for OWPT. This document establishes the build-up procedure of the drop/drop harness assembly (Refer to Figure A11.1. as necessary).

A11.2. Overhaul Materials:

Table A11.1. Drop/Drop Harness Overhaul Materials.

Type VIII webbing 11ft long	Type VIII webbing 6-inches long
Hook and Pile Velcro cut ten inches long (2 sets)	2 PCU-4/P male fittings
2 Frost male fittings	2 Koch II male fittings
2 stainless steel nuts and bolts	2 stainless steel V-rings (one for premium package)

A11.2.1. 1 ½ inch PVC pipe 15 inches long with ends cut at 45-degree angles.

A11.2.2. Type VIII webbing 6 ½- inches long with ends seared to a 45-degree angle.

A11.3. Build-up:

A11.3.1. Cut a piece of green Type VIII webbing 11 feet long and sear both ends.

A11.3.2. Fold webbing in half, mark the center point, and install two stainless steel V-rings **(one for premium package)**.

A11.3.3. Measure 33 inches from center mark to each side, fold each side up, measure and mark both sides of webbing 22-inch and 32-inch from the top leaving 1-inch gap from the bottom on both sides of webbing, attach the Velcro between these marks on the inside of webbing, ensure Velcro mates properly and install male PCU-4/P fitting.

A11.3.4. Mark 13 ½-inch and 15 ½- inch from the center point down each side **or** 16-inches and 18-inches up from the bottom and sew a 2-inch Box X with 6 cord nylon.

A11.3.5. Mark free-end of webbing **(on top)** 21” from PCU-4/P end and mark 19 ½-inch from PCU-4/P on the adjacent webbing **(on the table)**, align marks and sew a 2” box X. This forms a 1 ½-inch loop 18 inches from the PCU-4/P end, which is used to house the PVC pipe. Sear ¼” holes in the center of the loops thru the back piece of webbing for the screw attachments.

A11.3.6. Place the PVC pipe in the loops and drill holes in the pipe and attach to the harness using the nuts and bolts.

A11.3.7. Re-enforce the top of the harness with the 2 pieces of webbing by first placing the webbing with the ends cut to 45 degree angles parallel with the PVC pipe directly under V-

rings and then fold the 6-inch piece evenly thru the V-rings enclosing the top of the harness and other webbing and sew a box X using 6 cord to secure the webbing.

A11.3.8. Attach the Frost and Koch II male fittings on the PCU-4/P end allowing free movement of the fittings between the Velcro. Ensure the fittings are installed as if being worn.

A11.3.9. Grind down the PCU-4/P so that it fits into the female attachment on the torso harness. **NOTE:** End product should look like [Figure A11.1](#)

Figure A11.1. Drop and Drag Tow Yoke Assembly.



Attachment 12

F2B 20 MAN LIFE RAFT BUILD-UP, INSPECTION, & REPAIR INSPECTION, REPACK, REPAIR, & MAINTENANCE.

A12.1. Purpose. The F2B 20 man life rafts are utilized during OWPT to provide students an actual hands on application for completion of objective requirements. This attachment establishes the build-up, inspection, repack, repair, and maintenance procedures as follows:

A12.2. Overhaul Materials: Solid Plug Bar 3/8-inch.

A12.3. Build-up:

A12.3.1. Perform inspection and leakage test as per this attachment.

A12.3.2. Remove sea anchor.

A12.3.3. Remove Survival kit retention line.

A12.3.4. Stencil in 1-inch on both cells near boarding ramps "FOR TRAINING USE ONLY" and local ID in 12" lettering.

A12.3.5. If inlet check valve has been removed (Mercedes Emblem), install 3/8-inch solid plug bar at CO2 bottle connection port as applicable (Refer to [Figure A12.1](#)).

A12.4. Inspection: (Will be accomplished annually using the following procedures).

A12.4.1. Perform Inspection IAW TO 14S-1-102-21.

A12.4.2. Life rafts will not be packed; rafts not in service will be folded and stored as shop stock. **NOTE: 1)** Life Rafts are authorized to exceed patching and repair limitations set by TO in order to render serviceable for training use only (discretion will be used to ensure repairs do not limit or compromise safety and/or function of the preserver. **2)** Minor surface corrosion on hardware may be removed with a soft bristle wire brush. Minimal corrosion on metal surfaces is acceptable if it does not interfere with the normal operation of the equipment; i.e. the inflation assembly functions smoothly, grommets are secure, pressure fittings seal, etc. **3)** Stains and fading of rubber and fabric are acceptable. **4)** Service life for flotation equipment will be determined by condition rather than age. Equipment passing tests and inspections will remain in service indefinitely.

A12.5. Leakage Test:

A12.5.1. Perform Inspection IAW TO 14S-1-102-21.

Figure A12.1. Solid Plug Bar 3/8-Inch.



3/8 inch solid plug bar in CO2 ports

Attachment 13

PRO-TEC (STUDENT) HELMET INSPECTION

A13.1. Purpose. The Pro-Tec helmet are utilize during objectives for OWPT to provide students proper personal protective equipment while performing objective based tasks. The helmet also affords the visual identification for the instructors and staff of the course to better identify those students whom self identify a reduced swimming capability and/or phobia of heights. This attachment establishes the inspection and maintenance procedures as follows (Refer to [Figure A13.1](#))

A13.2. Inspection:

A13.2.1. Student Pro-Tec helmets will be tracked in FERMS. Inspections will be conducted IAW AFI11-301V1 and the AETC Sup I regarding Training Use Only equipment.

A13.2.2. Inspect exterior of the helmet to ensure no cuts, cracks, and/or dents. Helmets found with these items will be removed from service.

A13.2.3. Ensure helmet chin strap and buckle is not excessive frayed and/or broken.
NOTE: Helmets will be inspected utilizing manufactures guidance.

Figure A13.1. Pro-Tec Helmet.

