

LESSON PLAN

JANUARY 2004

COURSE TITLE: Rescue Swimmer Refresher
Course, Q-050-0604

TERMINAL OBJECTIVE:
Partially supported by this lesson topic:

CLASSIFICATION: Unclassified

4.0 Upon completion of this unit of instruction, the student will demonstrate approach and carry procedures to a survivor, release and escape procedures, and a rescue in preparation for a recovery per NWP 3-50.1 without injury to personnel or damage to equipment.

LESSON PLAN NUMBER: 4.3

LESSON TOPIC: Parachute Disentanglement

ALLOTTED LESSON TIME: 1.0 Classroom
12.0 Laboratory

INSTRUCTIONAL SUPPORT:

Enabling Objectives:
Completely supported by this lesson topic:

1 Classroom Instructor
1 Laboratory Instructor
Safety personnel as required per Annex E of Curriculum Outline

4.15 List the procedures for parachute disentanglement for the Quick Fitting and Integrated Torso Harnesses as outlined in NWP 3-50.1

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR 13-1-6 Series Manuals

4.16 Demonstrate procedures for parachute disentanglement for the Quick Fitting and Integrated Torso Harness.

INSTRUCTIONAL AIDS:

1. Integrated Torso Harness
2. Quick Donning Back Pack Harness
3. LRU-1 Life Raft
4. Parachute

4.17 List the procedures for parachute disentanglement from a ballooned canopy.

4.18 Demonstrate procedures for executing parachute disentanglement for the ballooned canopy.

4.19 List procedural steps for survivor emergency flotation for both

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- | | |
|-----------------------------------|---|
| 5. SKU/RSSK | conscious/unconscious survivor. |
| 6. Helmets | 4.20 Demonstrate emergency flotation procedures for a conscious/unconscious survivor while in a simulated rescue situation. |
| 7. SV-2/LPU-21/LPU-28/LPU-30/MK-1 | |
| 8. Multi-person raft | 4.21 List the procedures for parachute disentanglement for multiple victim rescue. |
| 9. MBU-12 Oxygen Mask | |
| 10. SAR Tactics Handout (4.3 HO) | 4.22 Demonstrate the procedures for parachute disentanglement for the multiple victim rescue. |
| | 4.23 List the specific dangers of a night parachute disentanglement during a rescue scenario. |
| | 4.24 Demonstrate a night parachute disentanglement IAW NWP 3-50.1 |

CRITERION TEST:

Student will correctly demonstrate the procedures presented in this lesson.

HOMEWORK: None.

INTRODUCTION

- A. Establish Contact

Display name and lesson topic.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Introduce self, give rank, current job.
2. State background, schools, duty stations, etc.
3. State question and answer policy.
4. Review training time out policy.
5. Ask the following questions:
 - a. Has anyone gone to the hospital/branch clinic for treatment within 24 hours, and are you taking any medications?
 - b. Has anyone taken over-the-counter medications within 24 hours?
 - c. Are there any potentially disqualifying illnesses/conditions for which you are currently being evaluated?

Refer questionable cases to the department's senior medical representative for disposition.

- B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

C. Establish Readiness

1. Motivating Statements

Aviation personnel who have bailed out or ejected from their aircraft and are entangled in the parachute present the Rescue Swimmer with both the greatest challenge and the greatest danger. The swimmer must act swiftly and efficiently in disentangling the survivor before the parachute sinks and the survivor is pulled down with the parachute.

Establish importance and relevance of lesson material using personal experience or anecdote.

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Parachute Disentanglement

b. Major Teaching Points:

- (1) Disentanglement Procedures for Quick Fitting Harness
- (2) Disentanglement Procedures for the Integrated Torso Harness
- (3) Bubbled Canopy Procedures
- (4) Emergency Flotation Procedures
- (5) Raft Extraction Procedures
- (6) SAR Tactics Basic Guidelines

PRESENTATION

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE

Equipment worn by the survivor determines the procedures to be used in parachute disentanglement.

WARNING

The parachute shall never be allowed to come between the Rescue Swimmer and the survivor, as the rescue swimmer could lose sight of the survivor or could become entangled in the parachute or suspension lines.

NOTE

Should the survivor be entangled in a submerged parachute and the rescue swimmer is unable to extract the survivor in sufficient time. The survivor may then be attached to the rescue hook by the rescue swimmer. This helps maintain the survivor's head above the water while the rescue swimmer disentangles the parachute. Under no circumstances shall the survivor be hoisted out of the water while the parachute is attached

- A. Disentanglement Procedures for Quick Fit Harness, US Navy Chest Pack, and Back Pack Harness.
 - 1. ASSESS situation to determine if survivor(s) are conscious, unconscious passive, or active. Assessing the situation begins before water entry.
 - 2. ESTABLISH communication to determine the condition of the survivor and make approach.

Emphasize the repeated steps, but in lesser detail

Inform students that situation may change at any moment.

State that rear surface approach is preferred.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

3. Grasp survivor's harness between the shoulder blades and pull survivor into wind and away from parachute. Obtain control of survivor "ICIC."
4. Remove OXYGEN MASK if applicable.

Stress "in close in control" (ICIC).

NOTE

Check for breathing. Give two breaths if required. Continue giving rescue breaths during disentanglement not to exceed 60 seconds between breaths until survivor hoisted free of water.

WARNING

Loss of ABC's is a serious life threatening condition requiring immediate medical treatment. This condition takes precedence and survivor should be recovered by fastest means possible.

5. CLEAR head, neck and chest area. If survivor is conscious ask about any known injuries or conditions.

WARNING

Survivor may be wearing the LPP-1 flotation device; therefore, Rescue Swimmer shall disconnect the chest quick ejector snaps before inflating the device. Inflating the LPP-1 before disconnecting ejector snaps could crush survivor's chest.

NOTE

If the survivor is wearing a chest pack, one of the butterfly spring snaps that connect the pack

DISCUSSION POINT

to the harness, must be released to gain access to the chest quickly.

6. Disconnect survivor's quick ejector snap and INFLATE flotation (manually or orally, if necessary).

a. When the SPH-3C or HGU-54/P helmet is worn with the LPP-1/1A life preserver, do not inflate vest until chin strap is loosened or helmet is removed.

NOTE

Suspension lines shall be cut only if necessary. Utilize a pocket shroud cutter.

7. DISENTANGLEMENT head to toe check for injuries during disentanglement procedures.

a. Remove shoulder straps-clear arms, cross arms on survivor's chest.

b. Using spine as a reference submerge and proceed hand over hand along the back, always keeping one hand on survivor, and release the survivor's quick ejector snaps on survivor legs.

RELATED INSTRUCTOR ACTIVITY

Display and demonstrate operation of quick ejector snap.

Explain to students the hazards involved using an open-blade knife while cutting suspension lines.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE

If survivor has a suspected back injury. Use the side of the survivor as a reference, proceed hand over hand along the side, keeping one hand on the survivor, remove all debris, suspension lines, and leg quick ejector snaps.

- c. Remove the parachute suspension lines from the survivor using the spinal cord as a reference, submerge and proceed hand over hand along the back, always keeping one hand on survivor. Submerge as many times as necessary to remove all suspension lines.

Indicate that this is different, there are no Koch fittings to release risers and SKU to get rid of on this harness.

WARNING

Do not use the washboard method if survivor has back injury.

- 8. TOW survivor clear, if the survivor is still not free of the harness or parachute, use the washboard method.
 - a. With both hands hold the survivor by the back of flotation device.
 - b. In quick succession, push and pull survivor fore and aft. Make sure that the survivor's head is kept above water.
- 9. Discard RAFT (if applicable)
- 10. Perform FINAL CHECK to ensure that all shroud lines and parachute are clear.

Emphasize importance of final check especially if swimmer inadvertently swims into parachute.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE

At the discretion of the Rescue Swimmer the raft may be punctured with a knife and sunk before, during or after the survivor has been removed.

- 11. SIGNAL rescue platform.
- 12. As the rescue platform is approaching, ensure the area is clear. Connect survivor's "V" ring to Rescue Swimmer's harness.

B. Disentanglement procedures for Integrated Torso Harness

Write key words on board or show transparency.

- 1. ASSESS situation to determine if survivor(s) are conscious, unconscious passive, or active. Assessing the situation begins before water entry. The situation may change at any moment.
- 2. ESTABLISH communication to determine the condition of the survivor and make approach.
- 3. Grasp survivor's harness between the shoulder blades and pull survivor into wind and away from parachute. Obtain control of survivor "ICIC."
- 4. Remove OXYGEN MASK if applicable.

State that rear surface approach is preferred.

Stress "in close in control" (ICIC).

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE

Check for breathing. Give two breaths if required. Continue giving rescue breaths during disentanglement not to exceed 60 seconds between breaths until survivor hoisted free of water.

WARNING

Loss of ABC's is a serious life threatening condition requiring immediate medical treatment. This condition takes precedence and survivor should be recovered by fastest means possible.

5. CLEAR head, neck and chest area. If survivor is conscious ask about any known injuries or conditions.

6. INFLATE floatation (if necessary)

7. Perform DISENTANGLEMENT from head to toe.
 - a. Disconnect parachute risers by releasing shoulder Koch fittings and place survivors arms across their chest.

 - b. Using spinal cord of the survivor as a reference, submerge and proceed hand over hand, always keeping one hand on the survivor, and remove all suspension lines. Submerge as many times as required to remove suspension lines.

Display and demonstrate operation of Koch fittings.

Emphasize: Submerge as many times as necessary to complete the following steps, this does not have to be accomplished in one breath.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE

Suspension lines shall be cut only if necessary. Utilize a pocket shroud line cutter.

WARNING

If survivor has a suspected back injury. Use the side of the survivor as a reference, proceed hand over hand along side, remove all debris, suspension lines and minikoch fittings.

- c. Release oxygen hose from SKU/RSSK (if necessary). Then release SKU/RSSK minikoch fittings in survivor's lap.
- d. Continue disentanglement procedures.

WARNING

Do not use washboard method if survivor has back injury.

8. TOW survivor clear of parachute. If still entangled, Step 7 must be repeated or washboard method may be used. Cut shroud lines as a last resort.

9. Perform FINAL CHECK to ensure that all shroud lines and parachute are clear.

10. Discard RAFT. Liferaft must be discarded prior to final check.

Explain washboard method and importance of not cutting shroud lines.

DISCUSSION POINT

NOTE

At the discretion of the Rescue Swimmer the raft may be punctured with a knife and sunk before, during or after the survivor has been removed.

11. SIGNAL rescue platform.
 - a. DAY Arm raised, thumbs up.
 - b. NIGHT Arm raised, waving high intensity chemlight.
12. As the helicopter is approaching, ensure the area is clear. Connect survivor's gated "D" ring to Rescue Swimmer's harness.

C. Ballooned Canopy Procedures

1. Establish communications during approach to survivor.

WARNING

Do not go under canopy; it may collapse and trap survivor and swimmer.

2. Determine survivor's position under the canopy by looking underwater or by establishing communications and swim to chute edge closest to survivor and opposite the apex, then execute a quick reverse.
3. Lift edge of canopy and gather it into hook of one arm or pull on a shroud line to bring survivor to edge of canopy.

RELATED INSTRUCTOR ACTIVITY

Emphasize importance of final check especially if swimmer inadvertently swims into parachute.

Explain ballooned canopy.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. With free arm, turn survivor around and grip back of harness.
5. In one motion, pull survivor back and remove parachute canopy from over their head.
6. With survivor out from under the parachute, continue to pull survivor into the wind and away from the parachute canopy.
7. When well clear of parachute canopy, use disentanglement procedures applicable to type of harness the survivor is wearing.

D. Survivor Emergency Flotation Procedures

NOTE

When survivor has damaged or no flotation, the swimmer may give up his/her SAR-1 vest. If the swimmer chooses to give up flotation, the following conscious and unconscious survivor procedures shall be used:

1. Conscious Survivor
 - a. Approach the survivor and establish communications, using the front surface approach.
 - b. Upon reaching a distance of 6 to 8 feet from the survivor, execute a quick reverse.
 - c. Remove swimmer's mask, unclip and remove SAR-1, and then replace mask.
 - d. Inflate SAR-1, hold onto end of SAR-1

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

strap, and pass to survivor. Instruct survivor to place SAR-1 over head with pocket facing out.

- e. While survivor is donning SAR-1, the swimmer shall swim around to the right and behind survivor with strap in right hand.
 - f. Place left hand cross-chest under SAR-1 and grasp buckle. Bring strap under both arms and clip into buckle. Tighten strap.
 - g. Perform disentanglement procedures.
 - h. Complete rescue using normal procedures.
2. Unconscious Survivor.
- a. Approach the survivor using the front surface approach and establish communications or determine unresponsiveness.
 - b. Upon reaching a distance of an arm's length from the survivor, execute a quick reverse.
 - c. Remove swimmer's mask, unclip and remove SAR-1, and then replace mask.
 - d. Inflate SAR-1, place swimmer's right through neck hole with pocket facing in.
 - e. Use front surface approach.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

NOTE

Remove survivor's oxygen mask/helmet/cranial if applicable.

- f. Place SAR-1 over survivor's head with pocket facing out. This is done with the right arm while keeping survivor in a left-hand cross-chest carry.
- g. Place left hand cross-chest under SAR-1 and grasp buckle. Bring strap under both arms and clip into buckle. Tighten strap.
- h. Check for breathing. Give two breaths if required.
- i. Perform disentanglement procedures.
- j. Complete rescue using normal procedures.

E. Raft Extraction Procedures

WARNING

Liferaft must be discarded prior to final check.

NOTE

The point at which disentanglement in the liferaft becomes unfeasible is the point where the swimmer should extract the survivor from the raft. Once the survivor is in the water, the swimmer resumes disentanglement procedures from where the swimmer left off.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- A. Three effective methods of removing the survivor from the raft are as follows:

WARNING

Do not use this method if the survivor has a possible back injury.

- 1.a. The swimmer positions behind the survivor, the swimmers knees will be against the liferaft and will have a firm grasp of the survivors harness/flight suit between the shoulder blades.
- b. Simultaneously, the swimmer pulls the survivor up and over the raft lobe and pushes down and away with knees against the raft lobes.
- c. Once the survivor is in the water, continue disentanglement procedures.

WARNING

Do not use this method if the survivor has a possible back injury.

- 2.a. The swimmer positions himself behind the survivor, and will have a firm grasp of the survivors harness/flight suit between the shoulder blades.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. The swimmer will roll the survivor and raft either to the left or right. Inform the survivor if practical. Normally the swimmer will rock the survivor/raft twice to the side to gain momentum. The third time, the swimmer will roll the survivor into the water. Next, the swimmer immediately rights the survivor.
- c. Continue disentanglement procedures from where previously left off.

WARNING

Use the following method if survivor has a possible back injury.

- 3.a. Swimmer positions himself behind the survivor with a firm grasp of the survivors harness/flightsuit.
- b. With one hand, the swimmer removes his knife while maintaining control of the survivor with the other, and uses the knife to deflate the raft.

WARNING

This is done well clear of the survivor ensuring not to injure the survivor or swimmer.

- c. While raft is deflating, swimmer stows knife.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- d. Swimmer tows survivor clear of the raft and continues disentanglement procedures.

F. SAR Tactics Basic Guidelines

Give handout to students (4.3 HO)

1. Access the situation from Rescue Platform

- a. Rule #1 NEVER PASS A SURVIVOR
- b. Rule #2 SURVEY ALL SURVIVORS ON THE SCENE
- c. Rule #3 WORST RIDES UP FIRST

Read from handout

Read from handout

Read from handout

NOTE

Safeing a man-overboard/free floater consists of head, neck and chest, inflate flotation or buddy tow them to a raft and have them board it or hold on to the side.

Safeing a quick fit harness/backpack consists of a head, neck and chest, release chest quick-ejector, check flotation, sweep shoulder straps off.

Safeing a PCU torso harness consists of removing O2 mask, head, neck and chest, check flotation, and releasing shoulder koch fittings.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION

A. Ensure students receive the classroom instructions and observe a dry-land demonstration prior to any practical experience.

TRAINING: Instructor performs dry-land procedures and slowly disentangles a survivor wearing a standard parachute harness, while another RSS instructor talks through the procedures.

B. Instructor shall observe and critique the performance of each student for successful disentanglement and rescue of survivor/survivors. Instructors shall vary scenarios, ensuring realistic situations. Instructors may draw from personal experiences. Simulated scenarios are as follows:

Students (staff instructor if there is not enough students to play survivor) shall serve as "passive" survivors. They shall wear all aircrew flight equipment for the standard parachute harness. Survivors shall have an inflated LPU on and have several shroud lines around their legs and several over their heads.

1. A simulated conscious Man-Overboard without any flotation. The student simulating the Man-Overboard shall wear a wetsuit and a non-inflated LPU-28/LPP-1/LPU-30/MK-1 for minimum flotation.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

2. A simulated unconscious aircraft passenger wearing a partially inflated LPU-28/LPP-1 and cranial/helmet.

3. A simulated survivor wearing a NB series quick donning back pack type parachute with fully inflated LPU-21 and helmet.

Students outfitted in complete Rescue Swimmer gear will line up on the side of the pool and one at a time shall enter the water using standard water entry procedures.

Instructor shall ensure all pool drain covers are installed prior to commencing any disentanglement training.

EVALUATION

Student will correctly demonstrate the procedures presented in this lesson.

ASSIGNMENT

None.