

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer  
Course, Q-050-600  
Q-050-602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 3.5

LESSON TOPIC: Direct Deployment

ALLOTTED LESSON TIME: 1.0 Classroom  
2.5 Laboratory

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor  
1 Laboratory Instructor  
Safety personnel and additional instructors  
as required per Annex E, Staffing  
Requirements, Curriculum Outline

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1 Naval Search and Rescue Manual
2. NTTP 1-01 Series

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

3.0 Upon completion of this unit of instruction, the student will demonstrate the proper rescue techniques of military and civilian personnel, day or night, utilizing appropriate SAR equipment for at-sea and overland rescues as outlined in NWP 3-50.1 and OPNAVINST 3130.6 series without injury to personnel or damage to equipment.

Enabling Objective:

Completely supported by this lesson topic

3.9 List maritime direct deployment procedural steps for survivor recovery, to include maritime direct deployment hand signals.

3.10 Demonstrate maritime direct deployment procedural steps for survivor recovery, to include maritime direct deployment hand signals.

CRITERION TEST: Job Sheet 3-5, written test

HOMEWORK: None

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. Rescue Swimmer's Equipment

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

INTRODUCTION:

A. Establish Contact

Display name and lesson topic

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 or 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 or conditions for which you are currently being evaluated?

Refer questionable cases to department medical representative for disposition.

B. State Lesson Objective

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Motivating Statements

U.S. Naval helicopter crews are routinely faced with situations where traditional rescue swimmer deployment procedures are inadequate. Direct deployment can be used effectively in surf, heavy seas, high winds, moving water, ice, off cliffs and structures. It should only be used when the crew has determined that it will be the best method for recovery of a survivor. The primary difference between direct deployment and traditional rescue crewman deployment procedures is the rescue crewman remains attached to the hoist throughout the evolution and survivor recovery is made using the quick stop. Direct deployment procedures are expedient and the rescue swimmer is typically ready for hoisting with the survivor about one to two minutes after initial contact.

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

2. Lesson Overview

Briefly outline material to be covered.

**The wave generator may be used during all non-testable portions of this lesson as approved by the Training Chief.**

a. Lesson Topic: Direct Deployment

b. Major Teaching Points:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- (1) General maritime direct deployment information.
- (2) Maritime direct deployment hand signals.
- (3) Maritime direct deployment rescue swimmer procedures.
- (4) Maritime double lift in water procedures.
- (5) Maritime direct deployment survivor recovery procedures.

PRESENTATION:

A. General Maritime Direct Deployment

1. TRI-SAR Harness

- a. The first harness designed to combine the security of a full body harness, comfort of a seat harness and safety of integrated flotation.
- b. Constructed of MIL-SPEC types 8 and 13 nylon webbing and features low profile flotation and quick adjusting stainless steel hardware.
- c. Harness enables the swimmer to be hoisted in

the upright, slightly reclined seated position to allow total use of the hands.

- d. Integrated flotation vest features a low profile, easy to swim in design with user variable buoyancy up to 35 lbs. Flotation cell is encased entirely in a heavy weight, puncture/abrasion resistant nylon cover.

2. Quick Strop Harness

- a. The quick strop provides a quick safe means of hoisting uninjured personnel.
- b. Constructed of MIL-SPEC webbing and stainless steel hardware.
- c. The strop is placed under the survivors arms, around the survivors back or over the survivors head in one quick motion.
- d. To prevent the survivor from slipping out, a slide buckle is slid down the strop and attached to an adjustable crotch safety strap, which is stored in a zipper pocket on the rear of the strop.
- e. Instructions and pictorials are printed on the strop.

B. General Maritime Direct Deployment Acronyms used:

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. DD - Direct Deployment
2. RS - Rescue Swimmer
3. QS - Quick Strop
4. CC - Crew Chief
5. TSH - TRI-SAR Harness

C. General Maritime Direct Deployment

1. The QS shall only be used in conjunction with the TSH for DD and recovery of survivors.
2. The decision to use DD procedures on a survivor with a known or suspected head, neck, spinal or other severe injury should only be exercised when the use of traditional survivor recovery procedures would place the lives of the RS and/or survivor at greater risk.
3. Direct deployment procedures should not be used on aviators who have ejected from aircraft or if the survivor is entangled in a parachute.
4. The QS shall not be deployed to survivors without the RS. The survivors may not know how to properly use it.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

D. Maritime Direct Deployment hand signals.

**Note**

All hand signals should be given in a large and exaggerated manner to prevent misinterpretation by the flight crew.

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| 1. Down: Either RS arm held straight out from the side of the body, bent at the elbow 90 degrees so hand is pointing down, index finger extended, swiveling from the elbow down, in a circular motion.   | Demonstrate |
| 2. Up: Either RS arm held straight out from the side of the body, palm facing up, sweeping the arm in an up and down motion touching the top of the head and then back to the perpendicular position. The arm should not go below 90 degrees from the body on the down portion of the sweep. | Demonstrate |
| 3. Level off: Either RS arm held straight out from the side of the body, 90 degrees, hand flat palm facing down waving in a rhythmic motion from left to right.  | Demonstrate |
| 4. Left: Left arm held straight out to the side of the body, index finger pointed out ward.  | Demonstrate |
| 5. Right: Right arm held straight out to the side of the body, index finger pointed outward.   | Demonstrate |
| 6. Deploy LPP1/A or LPU-33 (Personal Flotation   | Demonstrate |

Device): Palm of either hand placed on top of head. (only one hand will be placed on top or head for this signal).

**Note**

The RS cannot remove the flotation device on the TRI-SAR harness during a rescue. Therefore, when utilizing the TRI-SAR harness during a traditional rescue and the need arises to provide flotation to a survivor the hand signal for Deploy LPP1/A or LPU-33 shall be utilized.

E. Maritime Direct Deployment Procedures

1. The CC opens the cabin door and brings the rescue hook into the helicopter for RS hook-up.

**Note**

Being hooked into more than one safety device (gunner belt, crew seat restraint belt, Double rescue hook) at one time may be hazardous to the RS should the helicopter encounter and emergency and have to ditch. The CC shall ensure that the RS is immediately released from the gunner's belt once the RS is properly hooked into the large rescue hook and the CC has positive physical control of the RS.

**Note**

The SAR helicopter breathing device holster (SHBD holster) shall be removed from the TSH assembly of the RS prior to deployment (Day or Night) from the helicopter.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

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| 2. | The RS sits on the cabin deck, with gunners belt on and hooks up to the large end of the double rescue hook in the following order:   |             |
| a. | TSH lifting V-ring (always first)   | Demonstrate |
| b. | Rescue strop (for double lift recovery only)  | Demonstrate |
| c. | Quick strop (always last)   | Demonstrate |
| 3. | The detachable lifting strap of the QS can be identified by the red band of webbing located next to the detachable lifting straps V-ring assembly.  | Demonstrate |
| a. | Ensure the detachable lifting strap is routed through the friction lock prior to hook-up.   | Demonstrate |
| b. | Ensure the detachable lifting strap V-ring is always the last object hooked up to the large rescue hook.  | Emphasize   |
| c. | The RS should slide the QS friction keeper as far out as possible, ensuring as large an opening as possible is maintained in the QS assembly. This will make employment of the QS over the survivor's head and shoulder easier. | Demonstrate |
| 4. | RS routes the QS over the preferred shoulder and maintains control of it until employed on the survivor. When RS is satisfied, gives the CC a thumbs up signal.   |             |

5. CC grabs the back of the RS's TSH and taps the RS once on the Chest.
  - a. Upon receiving the signal (one tap on the chest) the RS releases the gunner's belt.
6. CC maintains positive control of RS and directs the RS to the cabin door.
7. After the helicopter has established a steady hover and permission is granted to lower the RS. CC gives RS three taps on the shoulder. The RS then gives the CC thumbs up signal.
8. The CC hoists the RS off of the deck. RS then adjusts straps for fit and comfort, when satisfied, RS gives the CC a thumbs up signal meaning ready to be hoisted.

**Note**

As the RS is entering the water the RS shall maintain visual contact with the survivor.

9. The RS should be placed in the water no more than 2 to 3 feet away from survivor. This is accomplished by the RS directing CC with hand signals.
10. The "I am all right" hand signal is not used for DD procedures by the RS.

**Note**

The rescue strop shall not be used for DD, unless it is in conjunction with the QS for DD double lift procedures.

**WARNING**

The QS shall only be used with the TRI-SAR harness for DD and recovery of survivors.

**WARNING**

If the survivor is placed in the QS device facing away from the swimmer there is a possibility of the survivor being injured and/or rendered unconscious due to the extreme pressure placed on the chest area. Placing the survivor in this manner shall only be performed as a last resort in an extreme situation (i.e. swift water rescue, heavy surf, etc.) in which the RS may get only one chance to put the survivor in the QS or the required to place the survivor in the QS correctly would threaten the life of the RS or the survivor.

11. The RS shall attempt to face the survivor and grab the survivor's arm that coincides with the arm that the RS has the QS positioned on (i.e. the RS's right hand grabs the survivors left if they are facing each other). Demonstrate

**Note**

The detachable lifting strap of the QS can be identified by the red band of the webbing located next to the detachable lifting strap's V-ring assembly.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

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| 12. The RS slides the QS off his/her arm and along the survivor's arm, placing the QS over the survivor's head and shoulders. The QS may also be applied by:<br><br>a. Moving the QS over the survivor's feet up the legs and torso.<br><br>b. Disconnecting the QS's detachable lifting V strap from the large end of the double rescue hook and pulling it through the friction keeper. | Demonstrate |
| 13. The RS then places the QS up into the armpits and high on the survivor's back. Then slides the friction keeper as close as possible to the survivor keeping constant pressure on the friction keeper and both straps of the QS with one hand.   | Demonstrate |

**WARNING**

**The safety strap shall be properly secured when placing an unconscious survivor in the QS.**

**WARNING**

**During and actual rescue, the safety strap should be properly used unless it will cause the rescuer and survivor greater risk.**

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| 14. Securing the safety strap is accomplished by routing the hook located at the end of the strap between the survivors legs, then connect the hook | Demonstrate |
|---|-------------|

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

to the large side of the friction keeper.

15. The RS then signals "Ready for pick-up".

Show training video of Direct Deployment.

F. Double lift Procedures

**Note**

When dealing with severe hypothermia, the double lift method may be utilized. The standard rescue strop is utilized in conjunction with the quick strop, lifting the survivor semi-supine position.

1. The rescue strop is attached between the TRS and the QS on the double rescue hook.

Demonstrate

2. Once in the water place the rescue strop around the survivor according to the NWP 3-50.1 series manual.

Demonstrate

3. Then slide down the legs and slide the QS up the legs and under the knees.

Demonstrate

4. Secure the friction keeper.

Demonstrate

5. Signal "Ready for pick-up".

6. RS maintains positive control of the survivor while being hoisted.

Show training video of double lift.

SUMMARY

A. State Lesson Objective

Turn to cover page for

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

B. Review Major Teaching Points

objectives

Briefly summarize

APPLICATION:

Students shall perform one single quick strop retrieval,  
and one duel quick strop retrieval.

EVALUATION: None

ASSIGNMENT: None