

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer
Courses, Q-050-0500
Q-050-0602

CLASSIFICATION: Unclassified

LESSON TOPIC NUMBER: 4.9

LESSON TOPIC: SAR Tactics

ALLOTTED LESSON TIME: 1.5 Classroom
19.0 Laboratory
17.0 Exam

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCE:

1. NTPP 3-50.1, Naval Search and Rescue Manual
2. Quartermaster 3&2 (sea state chart)
3. NWP 3-22.5 SAR TACAID

INSTRUCTIONAL AID:

1. Trainee Guide

TERMINAL OBJECTIVE:

Partially supported by this lesson topic:

- 3.0 Upon completion of this unit of instruction the student will demonstrate 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 without injury to personnel or damage to equipment.

Enabling Objectives:

Completely supported by this lesson topic:

- 3.42 State the five stages of Search and Rescue operations.
- 3.43 Describe the SAR area conditions and survivor conditions which will allow for the execution of a multiple victim rescue.
- 3.44 Develop a rescue plan to effect a rescue of multiple survivors, when given a rescue scenario.
- 3.45 Describe the procedures for recovery of survivors from a motor whale boat/RHIB boat and forecastle.

3.46 Identify hand signals applicable to the specific rescue, when given a rescue scenario.

3.47 Demonstrate the procedures for parachute disentanglement of multiple victims in a simulated rescue scenario.

CRITERION TEST: Job Sheet 4.9, written test.

HOMEWORK: None

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.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating statements

During this lesson, you will receive all the information needed to provide a sound, safe search and rescue (SAR) tactics foundation. Although it is not possible to provide answers to all the different rescue scenarios, applying these basics principles will enable you to deal with any situation that arises.

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: SAR Tactics

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- b. Major Teaching Points:
- (1) The Search and Rescue System
 - (2) Rescue Platforms
 - (3) Rescue Scene Initial Assessment
 - (4) Conditions for Multiple Rescues
 - (5) Swimmer Deployment
 - (6) Survivor/s and Swimmer Recovery Procedures

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. Search and Rescue System

The search and rescue system is a system that consists of a sequence of events called stages. Each stage represents a part of the logical approach to the overall rescue operation.

1. Awareness stage - SAR system becomes aware of incident.
2. Initial Action Stage - SAR facilities are alerted.
3. Planning Stage - Plan of operations is developed.
4. Operations Stage - SAR facilities proceed to the rescue scene, conduct search, rescue survivors, assist distressed craft, provide emergency care for survivors and deliver to suitable medical facility.

NOTE

The NTTP 3-50.1 contains information for the safe and effective application of search and rescue (SAR) procedures and the execution of SAR operations. However, it is not a substitute for sound judgment. A dynamic SAR environment may require on-site deviations or modifications from procedures prescribed therein to successfully accomplish a SAR mission. The existing risk of deviation must continually be weighted against the benefit of deviation from the NTTP 3-50.1. Some examples of areas where deviations or modifications of procedures are most strongly advised against are as follows: The proper application and use of rescue equipment restraint straps, safety straps and safety devices as mandated by the

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NTTP 3-50.1 manual.

If a rescue crewmember makes the decision not properly utilize/apply any of the above mentioned safety devices or deviate from authorized procedures he/she shall communicate his/her intentions to the rest of the SAR crew prior to deviation. This will help utilize the full potential and experience of the crew to make a decision to deviate from authorized procedures.

In all cases, all associated risks should be weighed prior to a decision to deviate from or modify a procedure as set forth in the NTTP 3-50.1.

5. Mission Conclusion Stage - SAR platforms return to base. Rescue swimmer assists in completion of rescue report.

B. Rescue Platforms

NOTE

The helicopter is normally the primary means of rescue during all weather day and night operations, except when the weather is below 300 feet and 1 mile visibility, then Motor-Whale Boat or Forecastle will be used. However, the goal is to use the fastest and most effective rescue platform for the given situation. Whichever is first on the scene will effect the rescue unless unable. The others should stay clear so as not to hamper the rescue operation and remain ready to assist if needed.

1. Helicopter
2. Motor whaleboat or RHIB (Rigid Hull Inflatable Boat)

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3. Forecastle

C. Rescue Scene Initial Assessment (from Rescue Platform)

Upon arrival at the accident scene, assess the situation. Assessment begins in the rescue platform prior to swimmer deployment. The following factors should be determined prior to rescue swimmer deployment.

Review with students Information Sheet 4.9-1 in Trainee Guide.

Explain the three rules of SAR tactics basic guidelines

NOTE

Swimmer must be aware that the situation can change.

1. Number of survivors
2. Location of survivors and their relation to, and distance from, each other and the rescue craft
3. Visible injuries to the survivors:
 - a. Conscious/unconscious
 - b. Visible bleeding
4. Flotation devices inflated/not inflated
5. Parachute entanglement problem/presence of ballooned parachute.
6. Sea state/wind direction/water temperature.
7. Fuel in the water.
8. Debris littering the scene and its relation to survivors.

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9. Presence of sea predators.
10. Feasibility of attempting multiple/single rescue.
11. Rescue order established according to apparent injuries. The worst injured survivor shall be rescued first.

D. Conditions for Multiple Rescues

1. A multiple rescue occurs when there is more than one survivor and the rescue swimmer remains in the water aiding in the recovery of survivors.
2. Factors which should be considered before attempting a multiple rescue;
 - a. Sea state.
 - b. Visibility.
 - c. Your location.
 - d. Distance between survivors.

Remind students of the basic rules for SAR Tactics

WARNING

To avoid fatigue, the rescue swimmer shall avoid multiple rescues when a great deal of swimming is required between survivors. Additionally, the reduced visibility during night/IFR rescues makes multiple rescues hazardous.

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3. In the event of a multiple rescue the rescue swimmer shall.
 - a. Signal the helicopter to deploy raft(s).
 - b. Inflate the raft(s) if necessary and commence boarding the survivors into the raft(s).

E. Swimmer Deployment

1. Day - 10 FT 10 KTS or 15 FT 0 KTS, on command from the helicopter aircraft commander (HAC), the crew chief will give the swimmer the signal to jump.

Night - the swimmer will be lowered to the water using the hoist for safety.

F. Survivor/s and Swimmer Recovery Procedures

NOTE

Should a survivor be entangled in a submerged parachute and the rescue swimmer is unable to extract the survivor in sufficient time, a hover should be established directly over the survivor. The survivor may then be attached to the rescue hook by the rescue swimmer. The survivor's head may be maintained above the water while the rescue swimmer disentangles the parachute and readies the survivor for hoisting. The hoist operator shall adjust the hoist to compensate for hover variations to maintain the survivor's position. Under no circumstances shall the survivor be hoisted out of the water while the parachute is attached.

1. Motor whaleboat/RHIB and helicopter recoveries shall be performed per NWP 3-50.1.

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NOTE

Prior to all rescue boat deployments, Aviations SAR swimmers shall familiarize themselves with Rescue Boat recovery procedures as outlined in NTTP 3-50.1.

The Rescue Boat shall remain close, but stay clear of the rescue until the helicopter rotating anti-collision lights are turned off. At this signal, the Rescue Boat will assume the responsibility for the rescue.

2. All recoveries of personnel in the water shall be attempted with the survivor facing the gunwale of the boat.
3. Ship-Alongside Rescue
 - a. When helicopter is not available.
 - b. The sea precludes lowering of boat/RHIB.
 - c. When the rescue can be accomplished more expeditiously by ship.

NOTE

When directed from the bridge, every attempt should be made by the deck recovery detail to deploy life rings, yellow low padded monkey fist, etc., to gain contact or positive control of the survivor. If the distance is too great, a swimmer should be lowered into the water.

4. Shipboard recovery (Forecastle)
 1. Hoisting

DISCUSSION POINT

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- a. Primary means for hoisting personnel from the water to the forecandle is the J-Bar Davit system with modified rescue strop attached. Advantages:
 - 1. Aircrew survivors are familiar with the strop.
 - 2. Rescue strop floats.
 - 3. The rescue strop can be tossed a short distance, which is an advantage over nets, litter, and seats that must be brought directly over or under the survivor.

- 5. Helicopter recovery procedures
 - a. The rescue swimmer signals the helicopter to move in for pick up.
 - b. Rescue swimmer places survivor in the appropriate rescue device.
 - c. Swimmer signals ready for hoisting.
 - d. Crewchief hoists/assists survivor and swimmer into the helicopter.

- 6. First Aid
 - a. On board rescue platform, First Aid and treatment for shock shall be administered to survivor as necessary for shock.

Explain to students that the use of the J-bar davit and snatch block makes the task easier.

DISCUSSION POINT

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NOTE

Rescue reports show that almost all survivors are in some form of shock.

DISCUSSION POINT

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SUMMARY:

- A. State Lesson Objectives
- B. Review Major Teaching Points

Turn to cover page for objectives.
Briefly summarize.

APPLICATION:

NOTE

It is unrealistic for a survivor to act aggressively and chase the rescue swimmer. This is an impractical simulation of an active drowning victim as defined by the American Red Cross (Life guarding manual, pg. 56); GAO report (pg. 17) calls "belligerent and aggressive victims is a poor teaching method and an ineffective way to mentally condition students to perform under stress." Survivors **SHALL** be briefed to exhibit the following characteristics as detailed by the ARC:

1. Struggle to keep the face above water in an effort to breathe.
2. Have arms extended to the side, pressing down for support. There is no supporting kick.
3. Have a vertical body position in the water.
4. Struggles at the surface, unable to move forward, for approximately 20 to 60 seconds before submerging.

IN NO CASE WILL THE SURVIVOR CHASE THE RESCUE SWIMMER.

SAFETY NOTES: Students shall wear a complete set of rescue swimmers equipment including a Tri-SAR harness during all training sessions. The mishap plan shall be activated by any of the instructors, safety observers, or pool monitors whenever he observes an accident/injury. Instructor shall ensure all pool drain covers are installed prior to commencing any disentanglement training.

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Multi and Final Multi Scenarios shall be three person scenarios and shall include at least one Integrated Torso Harness and two more survivors from the three listed below.

MULTI SCENARIO

Survivor #1

Equipment... Integrated Torso Harness, with parachute, HGU helmet, MBU-12 oxygen mask, SKU/RSSK

Survivor #2

Equipment... CMU-33, HGU helmet

Survivor #3

Equipment... Free floater with flotation

NOTE

Each student should receive a minimum of four Multi Scenarios, more if time permits. The team leader will determine staging and characteristics of survivors i.e. (consciousness of survivors, raft use, ballooned chute, injuries, ect...) for all scenarios. Multi Scenarios may include approaches/carries, releases/escapes, water entry, combative survivor and all other objectives that were taught throughout the course. During multi scenarios a litter shall be used during at least two scenarios, more if time permits.

FINAL MULTI SCENARIO

The team leader will determine staging and characteristics of survivors i.e. (consciousness of survivors, raft use, ballooned chute, injuries, ect...) for scenario. Final Multi Scenarios are intended to assess the students overall knowledge of course objectives and may include

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approaches/carries, releases/escapes, water entry, combative survivor and all other objectives that were taught throughout the course. A litter shall be used during all final multi scenarios. Job sheets from applicable lesson topics shall be used for Final Multi Scenario, for example the job sheet for Integrated Torso shall be used to grade that portion of the final.

EVALUATION: Final multiple and written test.

ASSIGNMENT: None.