

Aviation Rescue Swimmer Course

Search and Rescue (SAR) Tactics
LT 4.9

INTRODUCTION

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 will enable you to deal with any situation that arises.

OBJECTIVES

- State the five stages of the Search and Rescue Operations.
- Describe SAR area conditions, and survivor conditions which will allow for the execution of a multiple victim rescue.
- Develop a rescue plan to effect a rescue of multiple survivors, when given a rescue scenario.

OBJECTIVES

- Describe procedures for recovery of survivors from motor whale boat/RIB boat, and forecastle.
- Identify hand signals applicable to the specific rescue, when given a rescue scenario.
- Demonstrate procedures for parachute disentanglement of multiple victims in a simulated rescue scenario.

Search and Rescue System

- The search and rescue system is a system which consist of a sequence of events called stages. Each stage represents a part of the logical approach to the overall rescue operation.
 - Awareness Stage- SAR system becomes aware of incident.
 - Initial Action Stage- SAR Facilities are alerted.
 - Planning Stage- Plan of operations is developed.
 - 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.

Search and Rescue System

NOTE

The 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 onsite deviations or modifications from procedures prescribed therein to successfully accomplish a SAR mission.

Search and Rescue System

NOTE cont.

The existing risk of deviation must continually be weighed against the benefit of deviating from the 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 3-50.1

Search and Rescue System

■ **NOTE cont.**

- If a rescue crew member makes the decision not to properly utilize/apply any of the above mentioned safety devices or deviates from authorized procedures, he/she shall communicate his/her intentions to the rest of the Search and Rescue Unit (SRU) 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 3-50.1.

SEARCH AND RESCUE SYSTEM

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

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. 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.

RESCUE PLATFORMS

- Helicopter
- Motor Whaleboat or RIB (Rigid Hull Inflatable Boat)
- Forecastle

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.

NOTE

Swimmer must be aware that the situation can change.

Rescue Scene Initial Assessment (from Rescue Platform):

- Number of survivors
- Location of survivors and their relation to, and the distance from, each other and the rescue craft.
- Visible injuries to the survivors:
 - a. Conscious/unconscious
 - b. Visible bleeding
- Flotation devices inflated/not inflated.

Rescue Scene Initial Assessment (from Rescue Platform):

- Parachute entanglement problem/presence of ballooned parachute.
- Sea state/wind direction/water temperature.
- Fuel in the water.
- Debris littering the scene and its relation to survivors.
- Presence of sea predators.
- Feasibility of attempting multiple/single rescue.
- Rescue order established according to apparent injuries. The worst injured survivor shall be rescued first.

Conditions for Multiple Rescues:

- 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.
- Factors which should be considered before attempting a multiple rescue:
 - Sea State
 - Visibility
 - Your Location
 - Distance between survivors.

Conditions for Multiple Rescues:

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.

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

Swimmer Deployment:

- Day- 10ft and 10kts or 15ft 0kts, 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.

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.

Survivor/s and Swimmer Recovery Procedures

- Motor whaleboat/RIB and helicopter recoveries shall be performed per 3-50.1

NOTE

Prior to all rescue boat deployments, Aviation SAR swimmers shall familiarize themselves with Rescue Boat recovery procedures as outlined in the 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.

Survivor/s and Swimmer Recovery Procedures

■ Rescue Position

- All recoveries of personnel in the water shall be attempted with the survivor facing the gunwale of the boat.

■ Ship-Alongside Rescue

- When helicopter is not available.
- The sea precludes lowering of boat/RIB.
- When the rescue can be accomplished more expeditiously by ship.

Survivor/s and Swimmer Recovery Procedures:

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 great, a swimmer should be lowered into the water.

- Shipboard recovery (Forecastle)
 - Primary means for hoisting personnel from the water to the forecastle is the J-Bar Davit system with a modified rescue strop attached.

Survivor/s and Swimmer Recovery Procedures

Advantages:

- Aircrew survivors are familiar with the strop.
- Rescue strop floats.
- 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.

Survivor/s and Swimmer Recovery Procedures

■ Helicopter recovery Procedures

- The rescue swimmer signals the helicopter to move in for pick up.
- Rescue swimmer places survivor in the appropriate rescue device.
- Swimmer signals ready for hoisting.
- Crew chief hoist/assists survivor and swimmer into the helo.

Survivor/s and Swimmer Recovery Procedures:

■ First Aid

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

NOTE

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

"Safing" of Survivors

NOTE

During the course of a rescue, the swimmer may determine that there is a need to physically disengage from the survivor prior to completing the rescue/recovery. Once the rescue swimmer begins a disentanglement on a survivor, the swimmer shall not disengage until the survivor has been "Safed." This will be termed as "Safing the Survivor."

"Safing" of Survivors (Cont.)

The following conditions shall be met before the survivor is considered "Safe":

- The survivor is breathing and has no apparent, immediate, life threatening injuries.
- The survivor is wearing operable flotation, or is in an operable life raft.
- The survivor is completely free of entanglement, and is not attached to a parachute.
- If at night, the rescue swimmer should attach a lighting device to the survivor (strobe light, chemical light, ect.)

"Safing" of Survivors (Cont.)

NOTE

The rescue swimmer should NEVER pass a survivor by. Approach each survivor as you come across them. Obtain positive "ICIC" and determine whether the survivor has any life threatening injuries. If the survivor does not have any life threatening injuries he/she may be "Safed" and you can continue on to the next survivor. If a survivor has any type of life threatening injury he/she cannot be "Safed" and shall be extracted immediately via the fastest means possible.

"Safing" of Survivors (Cont.)

Listed below are some conditions that would preclude the rescue swimmer from disengaging from a survivor prior to rescue completion.

- If survivor does not have operable flotation and rescuing the survivor would be quicker than "Safing" them.
- If the survivor has apparent, immediate life threatening injuries (not breathing, unconscious, severe bleeding, ect.).
- Environmental concerns such as sea predators, heavy sea state, water temperature, restricted visibility, ect.

Review

- What is normally the primary means of rescue during all-weather day and night operations?

– *Helicopter*



Review

- Swimmer deployment from the helo during day operations is what?
 - 10 and 10 or 15 and 0



QUESTIONS?

