

**OUTLINE SHEET 4.3  
PRIMARY RESCUE DEVICES  
AND PROCEDURES**

**ENABLING OBJECTIVES:**

3.29 Explain the functional operation of the following Rescue Devices per NWP 3-50.1:

- a. Double Rescue Hook
- b. Modified Rescue Strop
- c. Quick Strop
- d. Rescue Net
- e. Rescue litter/SAR MEDEVAC Litter, Trail Line and Gloves
- f. Rescue Seat

3.30 Demonstrate procedures for placing a survivor into the following rescue devices in a water environment:

- a. Double Rescue Hook
- b. Modified Rescue Strop
- c. Rescue Litter/SAR MEDEVAC Litter

**TOPIC OUTLINE**

**A. COMMUNICATION PROCEDURES:**

1. Efficient communications keeps pilot, hoist operator, deck crew and swimmer aware of a developing rescue situation and allows rescue platform to provide needed support to swimmer (i.e. deployment of rescue devices).
2. The radio offers an optimal secondary means of communications.
3. \_\_\_\_\_ are the primary means of communication between Rescue Swimmer and the rescue platform in a maritime environment.
  - a. All crewmembers must be familiar with the meaning of standard hand signals.  
(Turn to Diagram Sheet 4.3-1, page 114)

**B. DOUBLE RESCUE HOOK**

1. The Double Rescue Hook is the \_\_\_\_\_.
- a. All other rescue devices can only be used with the Double Rescue Hook.
- b. Load ratings of the Double Rescue Hook (per the NAVAIR 13-1-6.5):
  - (1) Large hook, rated at \_\_\_\_\_ lbs., shall be the only hook to hoist \_\_\_\_\_.
  - (2) Small hook, rated at \_\_\_\_\_ lbs., is to be used only for lightweight items such as mail.

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- (3) The equipment ring, rated at \_\_\_\_\_ lbs., is used to hoist light equipment and mail.

c. Nigh-time Illumination

- (1) Attach chemlight strap to \_\_\_\_\_ and attach \_\_\_\_\_ to strap.

2. Procedures for helo-deployed rescue hook.

**WARNING**

Never touch any rescue devise before it is \_\_\_\_\_, as doing so may cause electrical shock. Helicopter rotors can build up a significant static electrical charge.

a. Procedures for hoisting swimmer alone:

- (1) Signal for pickup.
- (2) Allow hook to \_\_\_\_\_.
- (3) Connect “V”-ring to large hook.
- (4) Perform safety check.
  - (a) \_\_\_\_\_.
  - (b) \_\_\_\_\_.
- (5) Signal for “up-hoist”.

b. Procedures for hoisting survivor alone:

- (1) Signal for pick-up.
- (2) Allow hook to ground.
- (3) Connect survivor’s \_\_\_\_\_ (center of chest) or \_\_\_\_\_ (right shoulder) to large hook.
- (4) Perform \_\_\_\_\_ to ensure survivor is not entangled in the hoist cable.
- (5) Signal for “up-hoist”.

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c. Procedures for hoisting survivor and swimmer simultaneously:

- (1) Connect the Rescue Swimmer’s \_\_\_\_\_ to the survivor’s lifting device.
- (2) Signal ready for pickup.
- (3) Allow hook to ground.
- (4) Connect \_\_\_\_\_ of Rescue Swimmer’s harness to large rescue hook.
- (5) Perform \_\_\_\_\_.
- (6) Signal for up hoist.

**WARNING**

Do not place fingers in or around the \_\_\_\_\_ spring due to the possibility of a crushing injury during hoisting operations when the hoist reaches the upper limit switch.

**C. MODIFIED RESCUE STROP**

1. Rescue device used with Double Rescue Hook. The Modified Rescue Strop is a buoyant device with a red waterproof cover designed to accommodate \_\_\_\_\_ survivor. A webbing strap runs through the cover and has a “V”-ring at both ends for attaching the \_\_\_\_\_. Two arm retainer straps are attached \_\_\_\_\_.
2. Night-time Illumination  
  
\_\_\_\_\_ Chemlights are attached to the chemlight strap. Strap is attached to Rescue Strop lower “V”-ring by the crewman.
3. Procedures for use:

**NOTE**

Arm retainer straps shall be in the \_\_\_\_\_ position when lowering the Rescue Strop.

- a. Signal for pick-up.
- b. Allow rescue device to touch water.
- c. Approach hoist with survivor in an appropriate carry.
- d. Working \_\_\_\_\_ the survivor, with the arm retainer straps \_\_\_\_\_, the Rescue Swimmer shall pass the \_\_\_\_\_ of the strop under one arm, around the back and under the other arm.

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- e. Connect the Rescue Strop free end lifting “V”-ring to the large hook.
- f. Position the Rescue Strop tightly under the survivor’s \_\_\_\_\_ and on the upper half of the \_\_\_\_\_.

**WARNING**

Arm retainer straps shall always be used when hoisting survivor with the Rescue Strop. This prevents the survivor’s arms from \_\_\_\_\_.

- g. Pass the arm retainer straps \_\_\_\_\_ the survivor’s arms, route \_\_\_\_\_ and across the survivor’s chest.
- h. Connect the snap-hook arm retainer strap to the “V”-ring arm retainer strap.
- i. Pull webbing on the “V”-ring arm retainer strap until the arm retainer straps are secured tightly around the survivor’s arms.
- j. If swimmer is to be hoisted, connect swimmer’s lifting \_\_\_\_\_ to large hook.
- k. \_\_\_\_\_.
- l. Signal ready to be hoisted.
- m. Rescue Swimmer and survivor are hoisted up to the aircraft. After reaching the aircraft, the Rescue Swimmer and crewman shall assist the survivor inside the aircraft.
- n. Once the survivor is inside and on the deck of the aircraft, the Rescue Swimmer shall maintain \_\_\_\_\_ of the survivor until the crewman gives a thumbs up. A thumbs up indicates to the Rescue Swimmer that the crewman has the survivor in positive control within the aircraft.

**D. RESCUE NET**

- 1. Conically-Shaped Bird Cage.

**WARNING**

In order to utilize the net, the \_\_\_\_\_ must be locked in place to prevent the net from collapsing on the survivors. Collapsing of net could result in the survivor(s) drowning.

- 2. Primary used for \_\_\_\_\_ rescue.
- 3. Never send \_\_\_\_\_ victim up alone in rescue net.

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- 4. Flotation for two persons.
- 5. A “V”-strap is provided for \_\_\_\_\_.
- 6. Nighttime illumination.

Two chemlights are attached to the strap. Chemlight straps are attached to nylon rope \_\_\_\_\_ on both sides of the net opening.

- 7. Procedures:
  - a. Signal for net.
  - b. Allow device to ground.
  - c. Place Rescue Net opening directly in front of the Rescue Swimmer \_\_\_\_\_ disconnecting it from the rescue hook.
  - d. Place survivor in a collar/equipment tow and swim into rescue net backwards while positioning the survivor on either side of the net \_\_\_\_\_.
  - e. Ensure that the survivor’s body is entirely in the net.

**WARNING**

Survivor shall not attempt to get out of the rescue net until \_\_\_\_\_.

- f. Place one arm across the net.
- g. Signal for up hoist.
- h. When net reaches the helicopter, the crewman shall hook up the \_\_\_\_\_ from the Rescue Net to the \_\_\_\_\_. The crewman shall assist the survivor inside the helicopter.

**E. RESCUE LITTER/SAR MEDEVAC LITTER**

- 2. Litter Characteristics:
  - a. Both are for use with suspected \_\_\_\_\_ victims and \_\_\_\_\_ survivors.
  - b. Both are designed to be used \_\_\_\_\_ or in water with \_\_\_\_\_ assemblies.
  - c. Rescue Litter requires a flotation kit for over water use. When flotation is installed litter floats with patients head slightly reclined from the vertical.

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**WARNING**

If survivor is wearing the bright orange Quick Donning Anti-Exposure Suit it may counteract the self-righting feature of the Rescue Litter and the SAR MEDEVAC Litter.

- d. Both have a two piece rescue litter hoisting sling, which are attached to the Double Rescue Hook. Sling is color coded short \_\_\_\_\_ and long \_\_\_\_\_.
- e. The SAR MEDEVAC Litter folds in half and can be stored in a backpack and weighs approx. \_\_\_\_\_. It can be hoisted \_\_\_\_\_ or \_\_\_\_\_ with its own sling, making it especially useful in restricted access situations. Overland, two rescuers can carry the litter between them using the two adjustable carrying harnesses
- b. Night-time illumination.

Two chemlights are attached to each strap. One strap is attached to the \_\_\_\_\_ of the litter, one to the \_\_\_\_\_.

- g. Both litters utilize a \_\_\_\_\_ controlled by the swimmer in the water to control litter deployment and stabilize the litter during hoisting.

(1) \_\_\_\_\_.

(2) Three eights inch thick polyethylene, diamond-braided rope.

(3) A weak link is incorporated, designed to break if the trail line becomes entangled.

(4) Gloves and line are deployed together via a \_\_\_\_\_ shot bag.

3. Securing Survivor to the Rescue Litter:

- a. Rescue Litter has \_\_\_\_\_ straps. They are stowed with four retaining straps.

b. Procedures for securing survivor:

- (1) The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.
- (2) Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor's chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.
- (3) Next, working from the chest strap down, secure the rest of the restraint straps.
- (4) Once the restraint straps are secured, attach the chest pad over survivor's arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however,

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flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to helicopter when hoisted.

4. Securing survivor to the SAR MEDEVAC Litter:

- a. Litter will need to be assembled by \_\_\_\_\_ prior to lowering to swimmer.
- b. Litter has integral \_\_\_\_\_ and head restraint, four patient restraint straps, one chest flotation pad assembly strap, and one \_\_\_\_\_ assembly.

d. Procedure for securing survivor:

(1) The rescue swimmer shall guide the survivor into the positioned litter by using the collar tow or equipment carry.

(2) Once positioned, the swimmer shall take the top restraint strap from the front of the litter and secure it around the survivor's chest. The strap is pulled loose from the right side, placed under the arms but over the chest, and attached to the fitting on the left.

(3) Next, working from the chest strap down, secure the rest of the restraint straps

(4) Properly adjust foot restraint assembly.

(5) Once the restraint straps are secured, attach the chest pad over survivor's arms. The rescue swimmer may encounter some difficulty if survivor has flotation; however, flotation shall not be removed. Instead, remove chest pad from litter and continue with rescue. If practical swimmer will return chest pad back to helicopter when hoisted.

(6) Secure head restraint assembly if possible. Do not remove survivor's helmet if \_\_\_\_\_ Injury is suspected.

4. General Litter procedures:

- a. Signal for litter. (\_\_\_\_\_ will come out first.)

**WARNING**

The weight bag shall be deployed so as not to strike Rescue Swimmer or survivor.

- b. The \_\_\_\_\_ shall deploy the trail line ensuring that it is attached to the litter. The gloves shall be tied on by a slipknot locate just above the weight bag.

**WARNING**

The rescue swimmer \_\_\_\_\_ wear trail line or authorized rescue swimmer gloves with leather palms in order to prevent rope burns to the hands.

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- c. Put on gloves
- d. The Rescue Swimmer shall pull on the trail line gently until the entire line is deployed.
- e. Signal \_\_\_\_\_ indicating ready for litter.
- f. Use trail line to \_\_\_\_\_ the litter and pull it into position as it is lowered.
- g. Allow rescue device to touch water.
- h. \_\_\_\_\_ Hoisting slings from rescue hook, placing hoisting slings outside litter. Do not \_\_\_\_\_.
- i. Position survivor on litter, adhering to warning regarding survivor’s buoyancy and self-righting feature of the litter.
- j. Secure survivor using procedures appropriate to the litter.
- k. Ready the Rescue Litter hoisting sling and signal the aircraft to \_\_\_\_\_.
- l. Hook the rescue Litter hoisting sling (both sides) to the large hook.
- m. Conduct pre-hoisting safety check, ensuring survivor is securely within litter, litter is attached to large hook, \_\_\_\_\_ (aircraft dependant), sling cables are in correct positioning, \_\_\_\_\_, and cable is clear and not wrapped \_\_\_\_\_.
- n. Signal for up-hoist.

**NOTE**

Extreme care shall be utilized during trail line evolutions in \_\_\_\_\_. Cease hoisting immediately if the weighted bag becomes snagged on the bottom. Hoisting when this occurs may cause possible harm to personnel and/or equipment.

- p. Swimmer remains in water, taking a slight \_\_\_\_\_ on trail line, stabilizing the hoist, and keeping the litter oriented \_\_\_\_\_ to the longitudinal axis of the rescue platform. Upon reaching the rescue platform, maneuver survivor aboard per platform specific procedures.
- q. When litter is at the aircraft entrance, the swimmer shall use the trail line to maneuver the litter such that the survivor.

**NOTE**

The confined space in the H60 cabin requires the litter to enter feet first in order for the crewman to properly attend to the survivor.

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- r. With the litter and \_\_\_\_\_ on board, the crewman shall lower the hoist cable and recover \_\_\_\_\_.

**F. RESCUE SEAT**

1. \_\_\_\_\_ for sitting.
2. Bright \_\_\_\_\_ flotation collar for high visibility.
3. Swimmer or survivor must lower the flukes.
4. Two adjustable yellow safety straps with friction adjusters.
5. Used for both \_\_\_\_\_ rescue.
6. Night-time illumination.
  - a. Chemlights are attached to the rescue hook equipment ring.
7. Procedures for use:
  - a. Signal for device.
  - b. Allow device to ground.
  - c. Pull down fluke and have survivor sit on it, facing the rescue seat.

**NOTE**

If survivor is wearing an inflated LPU life preserver, \_\_\_\_\_ prior to attaching the adjustable safety strap.

- d. Pass adjustable safety straps under rider's \_\_\_\_\_ and around their \_\_\_\_\_ and secure strap to the v-ring tighten until survivor is secured against flotation collar.
- e. Have survivor wrap arms and legs around flotation collar.
- f. Perform final \_\_\_\_\_.
- c. Signal for "up-hoist".

**NOTE**

If the swimmer elects to be hoisted with the survivor, the rescue swimmer shall wear the adjustable safety strap in the same manner as the survivor.

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**G. NIGHT UTILIZATION OF RESCUE DEVICES.**

Normal hook up procedures are used at night. Chemlights are attached as appropriate.

**WARNING**

Due to low visibility at night, the Rescue Swimmer must pay particular attention to ensure all safety straps, harnesses, ect. Are properly installed. Failure to do so could result in \_\_\_\_\_ to the survivor/Rescue Swimmer.

**H. RESCUE EQUIPMENT INSPECTION.**

1. Visual inspection prior to use.
  - a. Inspect fabric for cuts, deterioration, and \_\_\_\_\_.
  - b. Inspect seams for proper adhesion and stitching.
  - c. Inspect all hardware for security of \_\_\_\_\_, and if applicable, ease of operation.
  - d. Check for sharp edges and projections.
  - e. \_\_\_\_\_ inspection cycle for equipment conducted by maintenance personnel.

**WARNING**

Unauthorized modification to, and deviation from, prescribed life support and survival equipment by individual crewmembers could create unknown safety hazards.