

LESSON PLAN

January 2007

COURSE TITLE: Surface Rescue Swimmer
Course, A-050-0500

TERMINAL OBJECTIVE:
Completely supported by this lesson topic:

CLASSIFICATION: Unclassified

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 rescues, as outlined in NTTP 3-50.1 and OPNAVINST 3130.6 series, without injury to personnel or damage to equipment.

LESSON TOPIC NUMBER: 4.10

LESSON TOPIC: Inanimate Object Recovery

ALLOTTED LESSON TIME: 1.0 Classroom
5.5 Laboratory

INSTRUCTIONAL SUPPORT:

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

Enabling Objectives:
Completely supported by this lesson topic:

INSTRUCTIONAL REFERENCE:

1. NAVAIR 01-230HLC-1M
2. SW515-AO-010/MK46

- 3.45 List the procedures for recovering a REXTORP/Drone.
- 3.46 List the safety precautions for recovering a REXTORP/Drone.
- 3.47 Perform procedures for recovering a REXTORP/Drone.

INSTRUCTIONAL AIDS:

1. REXTORP MK46/Dummy MK46 Training Torpedo
2. Tag line
3. Hoisting strap

CRITERION TEST: Written test.

Performance test.

HOMEWORK: None.

4. Nose cage
5. Polypropylene line
6. Snap hook
7. Air compressor
8. Pneumatic hoist
9. Storage rack
10. Portable pole
11. Pole snare

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. Reiterate the 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 senior officer in the training activity or his medical department representative for disposition.

B. State Lesson Objectives

Turn to cover page of Lesson Plan and paraphrase objectives.

C. Establish Readiness

1. Motivating Statements
2. Lesson Overview

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

Briefly outline material to be

DISCUSSION POINT

- a. Lesson Topic: Inanimate Object Recovery
- b. Major Teaching Points:
 - (1) OSCAR
 - (2) Torpedoes
 - (3) Drones
 - (4) Miscellaneous

RELATED INSTRUCTOR ACTIVITY

covered.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION

A. OSCAR

1. Description
 - a. Kapok filled mannequin
 - b. Typically bright orange
 - c. Used for training of ship's personnel
2. Recovery Method (Commanding Officer's decision)
 - a. Normally from the forecastle by deck division with grapnel hook.
 - b. Alternate methods are from the forecastle or rescue boat with rescue swimmer (method of choice for this topic).
3. Procedures
 - a. Swimmer is deployed from forecastle (via rescue strop) or from rescue boat.
 - b. Rescue swimmer should complete disentanglement procedures (to hone skills).
 - c. Recover via rescue strop or litter to forecastle or into rescue boat.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

4. Safety Precautions

When in close proximity of the rescue vehicle, inanimate objects shall be kept between the swimmer and the rescue vehicle to provide a buffer zone. OSCAR poses no danger to the swimmer. However, the swimmer should not "drop his guard" and become lax. Ever present dangers are:

- a. Ship's hull.
- b. Rescue boat propeller or screw
- c. Sea predators or jellyfish.
- d. Sea state

B. Torpedoes

WARNING

OTTO Fuel II is highly toxic, failure to observe all safety precautions contained in SW515-AO-010/MK46 could result in injury or death.

The only torpedo that the rescue swimmer is authorized to enter the water to recover is the REXTORP (MK46 training shape). The hazards of Otto Fuel II, used in other torpedoes, make a waterborne recovery too dangerous.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

1. Description of Recoverable Exercise Torpedo (REXTORP)
 - a. Length - 102"
 - b. Diameter - 12.75"
 - c. Weight - 517 lbs. with ballast and 337 pounds without ballast.
 - d. Fuel - None
 - e. Propulsion - None (has two non-functional propellers).
 - f. Ballast - A total of six separate lead weights totaling 180 lbs.
 - g. Color:
 - (1) Nose is anodized orange/red.
 - (2) Ballast section is anodized orange with a blue band.
 - (3) All other sections are a natural anodized finish.
 - (4) Propellers are anodized red.
 - h. Floating Characteristics - When surfaced, the REXTORP floats at a vertical attitude with approximately 10" of the nose exposed above the surface.
2. Recovery Methods

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Torpedo Retriever - This method is accomplished with the use of poles, snares, and cages. The weapon is hauled aboard ship via a ramp or crane. The use of a motor whale/RHIB eliminates the requirement to deploy a swimmer.
 - b. Helicopter
 - c. Shipboard via davit and hoist (due to weight).
 - (1) Assisted by swimmer (method of choice for this topic).
 - (2) Assisted by boat crew (requires calm seas).
3. Procedures
- a. Swimmer prepares for normal deployment from forecastle or rescue boat.
 - b. Swimmer deploys.

Remind swimmer of Qualification/Certification program prior to handling ammunition.

WARNING

Due to floating characteristics of the REXTORP it is extremely difficult to move in rough water. The swimmer shall never place themselves between the REXTORP and the ship. Injury or death to swimmer could result.

- c. Signal for nose cage.

DISCUSSION POINT

(Used because torpedoes do not have an attachment point for the tow line)

- d. Approach and inspect.
- e. Install nose cage.

CAUTION

Insure handle on the nose cage is used to prevent injury to hands.

- f. Signal ship or rescue boat to haul REXTORP alongside ship.
- g. Signal ship for hoisting strap.
- h. Install hoisting strap with a double wrap around body of REXTORP at center of gravity (may require adjustment to balance REXTORP).
- i. Signal ship for up hoist.
- j. Swimmer is recovered.

4. Safety Precautions

- a. DO NOT attempt a waterborne recovery of other types of torpedoes due to the hazards of Otto Fuel II.

C. Drones

There are numerous types of drones that the rescue swimmer might recover. A drone is an unmanned

RELATED INSTRUCTOR ACTIVITY

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

flying object used to simulate planes, missiles, etc. For this topic the MQM-74C will be discussed.

1. Description
 - a. Length - 12', 7"
 - b. Wingspan - 5', 6"
 - c. Flotation - Nose cone, fuel tank, oil smoke tank, and aft flotation bag.
 - d. Color - International orange.
2. Recovery Methods
 - a. Helicopter
 - b. Shipboard via davit and hoist (due to weight).
 - (1) Assisted by swimmer (method of choice for this topic).
 - (2) Assisted by boat crew (requires calm seas).
3. Procedures
 - a. Swimmer prepares for normal deployment from forecastle or rescue boat.
 - b. Deploy with tow line.
 - c. Approach drone with care.

DISCUSSION POINT

- d. Attach tow line to recovery ring.
- e. Place two half hitches on drones nose with tow line.
- f. Signal ship or rescue boat to haul drone alongside ship.
- g. Signal ship for hoist.
- h. Attach hoist to recovery ring, the tow line becomes the tag line for swimmer to guide drone.
- i. Signal ship for up hoist.
- j. Swimmer is recovered.

WARNING

Watch for the drone parachute. It should release automatically upon impact with the water. If not, it is easily unhooked and allowed to sink.

Care should be exercised to avoid the sharp edges of the wings when attaching the tow line to the recovery ring located above the wings.

D. Miscellaneous

WARNING

RELATED INSTRUCTOR ACTIVITY

The parachute may still be attached and the edges of wings are sharp and may be submerged.

Demonstrate 2 half hitches and explain that this is done to make the drone track straight as it is towed to the ship.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

If the swimmer is tasked to recover debris from an aircraft mishap, extreme caution should be utilized to avoid injury from hazards and unexpended ordnance, i.e.: parachute ballistic spreaders, ejection seat ordnance, etc.. Information concerning these hazards can be obtained from your ships safety officer and the Material Safety Data Sheet.

1. Other objects may range from a bag of garbage to a bale of marijuana.
2. Recovery Methods; apply basic drone/rextorp recovery procedures to other objects.
3. Rescue swimmers shall not be endangered in order to recover an inanimate object.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION:

Instructor will demonstrate recovery procedures for REXTORP in the pool while observing safety precautions.

Students will complete REXTORP recovery procedures under instruction while observing safety precautions.

EVALUATION:

Written test.

ASSIGNMENT: None