

LESSON PLAN

JANUARY 2004

COURSE TITLE: Aviation Rescue Swimmer
Courses, Q-050-0600
Q-050-0602

CLASSIFICATION: Unclassified

LESSON PLAN NUMBER: 4.6

LESSON TOPIC: Survivor Marker/Locator
Devices

ALLOTTED LESSON TIME: 1.0 Classroom

INSTRUCTIONAL SUPPORT:

1 Classroom Instructor

INSTRUCTIONAL REFERENCES:

1. NWP 3-50.1, Naval Search and Rescue Manual
2. NAVAIR 00-80T-101, NATOPS Survival Manual
3. NAVAIR 11-15-7, Pyrotechnic, Screening, Marking, and Countermeasure Devices

INSTRUCTIONAL AIDS:

1. Trainee Guide
2. MK-25 Marine Location Marker
3. MK-58 Marine Location Marker

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:

- 3.37 Explain the purpose and hazards of the following Survivor Marker/Locator Devices.
 - a. MK-25 Marine Location Marker
 - b. MK-58 Marine Location Marker
 - c. Electric Marine Marker Light
 - d. MK-13/MK-124 MOD 0 Day/Night Distress Flare
 - e. MK-79 Pencil Flare
 - f. Signal Mirror
 - g. Sea Dye Marker

CRITERION TEST: Written test

HOMEWORK: None

4. Electric Marine Marker Light
5. MK-13/MK-124 MOD 0 Day/Night Distress Flare
6. MK-79 Pencil Flare
7. Signal Mirror
8. Sea Dye Marker

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

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

2. Lesson Overview

Briefly outline material to be covered.

a. Lesson Topic: Survivor Marker/Locator Devices

b. Major Teaching Point(s):

(1) Survivor Markers

(2) Survivor Signaling Devices

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

PRESENTATION:

A. Survivor Markers

1. Survivor markers are devices launched by aircraft/ships to provide day or night reference points to the position of survivors.
2. Procedures for deploying pyrotechnic devices are contained in the NAVAIR 11-15-07.

WARNING

Should fuel be observed or suspected to be present in the water, pyrotechnic devices SHALL NOT BE USED due to ignition hazards.

WARNING

All flares burn "white hot" and can cause serious burns if allowed to come into contact with skin.

WARNING

Avoid breathing potentially hazardous pyrotechnic fumes.

- | | | |
|----|---|-----------------|
| 3. | MK-25 Marine Location Marker | Display Marker. |
| | a. Produces smoke and light; burn time 10-20 minutes. | |
| 4. | MK-58 Marine Location Marker | Display Marker. |
| | a. Produces a yellow flame and white smoke; burn time 45 minutes. | |

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

5. Electric Marine Marking Lights

Battery powered, an alternative to pyrotechnic devices when flammables are present or suspected.

B. Survivor Signaling Devices

1. MK-13/MK-124 MOD 0 Flares

Display Flare

- a. This signal is used for day or night distress signaling as appropriate by personnel on land or at sea.
- b. Emits orange smoke for day use and red flames for night use.
- c. Burn time for each is approximately 20 seconds.
- d. MK-124 is the replacement for the MK-13 and is intended use is the same as MK-13, but is designed for single hand operation.

2. MK-79 Signal Kit Personal Distress (Pencil Flare)

Display Flare

- a. Intended to be used by downed air crewmembers or personnel in life rafts as a distress signaling device.
- b. Produces a single red star display at a minimum altitude of 250 feet.
- c. Burns for a minimum of 4.5 seconds.

3. Non-pyrotechnic Visual Signaling Devices

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

- a. Includes lights, strobes, mirrors.
 - b. Pose no hazard to swimmers.
4. Sea Dye Markers
- a. A dye packet which dissolves in sea water, creating a large, highly visible fluorescent signal. Standard Navy issue is a bright green color; other colors may be used.
 - b. The dissolved dye poses no hazard to swimmers.

DISCUSSION POINT

RELATED INSTRUCTOR ACTIVITY

SUMMARY:

A. State Lesson Objectives

Turn to cover page for objectives.

B. Review Major Teaching Points

Briefly summarize.

APPLICATION: None

EVALUATION: Written test

ASSIGNMENT: None