

INSTRUCTOR GUIDE

COURSE: FIREFIGHTER PRE-BASIC

SESSION REFERENCE: 5

TOPIC: SUPPLY LINES AND SALVAGE

LEVEL OF INSTRUCTION:

TIME REQUIRED: THREE HOURS

MATERIALS: TWO FULLY EQUIPPED PUMPERS
STATIC AND PRESSURIZED WATER SOURCES

REFERENCES: ESSENTIALS OF FIRE FIGHTING, FOURTH EDITION,
IFSTA, CHAPTERS 11 AND 12
MINIMUM PRE-BASIC TRAINING PROGRAM FOR
FIREFIGHTER TRAINEES IN MARYLAND, MARYLAND
FIRE-RESCUE EDUCATION AND TRAINING COMMISSION

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PREPARATION:

MOTIVATION:

OBJECTIVE (SPO): The firefighter will demonstrate a basic knowledge of the hose use to supply water to the fire scene, the appliances required to move water, hose loads, and lays used for supply at the emergency scene along with the basic techniques to conserve property during a fire situation.

OVERVIEW:

Supply Lines and Salvage

- * Introduction to Supply Line Operation
- * Hose Loads
- * Hose Lays
- * Salvage Operations

SESSION 5

SUPPLY LINES AND SALVAGE

- SPO OBJECTIVE (SPO): The firefighter will demonstrate a basic knowledge of the hose use to supply water to the fire scene, the appliances required to move water, hose loads, and lays used for supply at the emergency scene along with the basic techniques to conserve property during a fire situation.
- EO 5-1 Describe the various sources of water used in fire suppression and characteristics of hose used to move that water from the source to the emergency scene.
- EO 5-2 Demonstrate the various hose loads used for supply hose.
- EO 5-3 Demonstrate the hose lays used to place hose for supplying water to the emergency scene.
- EO 5-4 Demonstrate a basic knowledge of salvage operations.

This lesson should be delivered as a combination of demonstration and student practice with the minimum amount of time spent on lecture. This material is designed to give the student some basic information on supply line operations and salvage. It is not intended to replace a Firefighter I program nor make the individuals fully-functional firefighters. It includes some basic information that any new firefighter should know to assist in an exterior mode on the fireground. Instructor should have apparatus, supply hose, and salvage covers available for display, demonstration, and handling.

I. INTRODUCTION TO SUPPLY LINE OPERATIONS (5-1)

A. Sources of Water

1. Pressurized systems - hydrant systems
2. Static sources - ponds, lakes, swimming pools, etc.
3. Apparatus tanks - water carried by the apparatus

B. Hose Construction

1. Rubber lined, fabric covered - used for supply and attack lines, sizes range from 1-inch to 5-inch
2. Rubber lined, reinforced, rubber covered - used for obtaining water from static sources, sizes range from 2-1/2-inch to 6-inch
3. Polymer impregnated - used for attack or supply lines, sizes range from 1-1/2-inch to 5-inch

C. Hose Couplings

1. Three- or five piece threaded coupling - male end fix with exposed threads, female end swivels, equipped with rocker lugs for tightening and loosening
2. Storz - quarter-turn coupling with sexless ends

D. Hose and Coupling Damage

1. Apparatus driving over it
2. Heat and flame
3. Abrasion from dragging
4. Chemical damage from fire runoff
5. Rupturing from over pressurizing

E. Hose Appliances

1. Double male - used to join two female couplings
2. Double female - used to join two male couplings
3. Reducer/increaser - used to connect couplings of different diameters
4. Wye - used to divide one line into two
5. Siamese - used to combine two lines into one
6. Humat valve - used to connect hose to a hydrant, turn the hydrant on, and still permit other apparatus to connect to the hydrant without shutting it down
7. Ball valve/hydrant gate valve - used to stop the flow of water in a hoseline
8. Spanner wrench - used to tighten or loosen hose couplings
9. Hydrant wrench - used to turn the operating nut on a hydrant
10. Nozzle - used to control water flow and pattern on an attack line or master stream device

II. HOSE LOADS (5-2)

- A. Flat Load - the hose is laid flat in the hosebed with the folds in each layer staggered to reduce damage to the hose
- B. Accordion - the hose is laid on its edge in the hosebed with alternating folds staggered - this load must be packed tight to prevent layers from setting into layers below

III. HOSE LAYS (5-3)

A. Straight Lay

1. Supply line is laid from the water source to the fire
2. If threaded couplings are used, a female connection is needed if the hose is to be connected to a hydrant
3. Humat valve may be connected to end of supply hose
4. Connect the Humat valve to the hydrant

B. Reverse Lay

1. Supply line is laid from the fire to the water source
2. If threaded couplings are used, a male connection is needed to connect to a siamese for a standpipe or sprinkler system or another engine at the scene
3. If the engine is laying hose to a hydrant, a soft sleeve will be used to connect to the hydrant
4. If water is being taken from a static source, may require setting up for draft

C. Split Hose Lays

1. Combination of a forward lay and a reverse lay
2. Utilizes two pumpers to complete
3. May require a double female or a double male to connect, dependent on how the supply line is loaded on the engines

D. Review Various Hose Lays and Means of Obtaining Water

1. Laying single and dual lines in each type of lay with necessary appliances based on hose bed configuration
2. Direct connection to hydrants and use of various hydrant appliances
3. Opening the hydrant
4. Setting up for draft from dry hydrant and static source
5. Setting up portable tank

E. Water Source Devices

1. Hydrant devices
 - a. Humat valve
 - b. Hydrant gate
 - c. Ball valve

2. Static source devices
 - a. Siamese (clappered)
 - b. Gated siamese
3. Water supply devices
 - a. Gates wye
 - b. Gated manifold

IV. SALVAGE OPERATIONS (5-4)

- A. Salvage is a means of conserving property by reducing the damage not directly related to the fire
- B. Salvage includes
 1. Covering furniture and equipment to protect it from water
 2. Removing smoke to reduce smoke damage
 3. Properly applying water to reduce water damage
 4. Forcible entry with the least amount of property damage
- D. Folding Covers (One person fold using two people)
 1. Open cover and place on clean, flat surface
 2. Identify center of cover
 3. Grasp the cover with the outside hand midway between the center and the edge to be folded
 4. Place the other hand on the cover as a pivot midway between the outside hand and the center
 5. Bring the fold over to the center of the cover which creates an inside fold (center) and an outside fold
 6. Grasp the cover corner with the outside hand
 7. Place the other hand as a pivot on the cover over the outside fold
 8. Bring this outside edge over to the center and place it on top of and in line with the previously placed first fold

9. Fold the other half of the cover in the same manner
10. Straighten the folds if they are not straight
11. Fold over about 12 inches at each end of the cover to make clean, even ends for the completed roll
12. Start the roll by rolling and compressing one end into a tight compact roll; roll toward the opposite end
13. Tuck in any wrinkles that form ahead of the roll as the roll progresses

D. Covering Items

1. Place items to be covered in a stack while protecting breakables to the extent possible
2. Avoid placing items against walls or under openings in the ceiling
3. Use rugs or drapes for padding
4. Use furniture with legs to get other items off the floor
5. Place cover over items to be covered and proceed to unfold
6. Attempt to keep the cover in an A-shaped pattern so that water runs off and does not settle in the middle
7. Tuck edges under items

REVIEW:

Supply Lines and Salvage

- * Introduction to Supply Line Operation
- * Hose Loads
- * Hose Lays
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REMOTIVATION:

ASSIGNMENT:

EVALUATION: