

INSTRUCTOR GUIDE

COURSE: FIREFIGHTER PRE-BASIC

SESSION REFERENCE: 6

TOPIC: ATTACK LINES

LEVEL OF INSTRUCTION:

TIME REQUIRED: THREE HOURS

MATERIALS: ONE FULLY EQUIPPED PUMPER
STRUCTURE FOR USE IN ADVANCING HOSE

REFERENCES: ESSENTIALS OF FIRE FIGHTING, FOURTH EDITION,
IFSTA, CHAPTERS 12 AND 13
MINIMUM PRE-BASIC TRAINING PROGRAM FOR
FIREFIGHTER TRAINEES IN MARYLAND, MARYLAND
FIRE-RESCUE EDUCATION AND TRAINING COMMISSION

PREPARATION:

MOTIVATION:

OBJECTIVE (SPO): The firefighter will demonstrate a general understanding of the various methods of advancing an attack line into a structure and the basic principles of fire attack.

OVERVIEW:

ATTACK LINES

- * Introduction to Attack Lines
- * Advancing Attack Lines
- * Fire Attack

SESSION 6

ATTACK LINES

SPO The firefighter will demonstrate a general understanding of the various methods of advancing an attack line into a structure and the basic principles of fire attack.

EO 6-1 Explain the application and use of attack lines.

EO 6-2 Demonstrate advancing attack lines into a structure.

EO 6-3 Demonstrate a basic knowledge related to the placement of fire streams at structural fires.

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 attack line operations. 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 and attack hose and nozzles available for display, demonstration, and handling.

I. INTRODUCTION TO ATTACK LINES (6-1)

A. Use and Application of Attack Lines

1. Consist of hoselines of 1-1/2-inch, 1-3/4-inch, 2-inch, and 2-1/2-inch
2. Generally pre-connected to the apparatus and equipped with a nozzle
3. In lengths of at least 150 feet

B. Nozzles and Hose Adapters

1. Combination nozzle - adjustable patterns from straight stream to wide angle fog; may have adjustable flow by adjustment ring or automatic flow with variable flow based on nozzle pressure - flow from 65 to 350 GPM
2. Solid stream nozzle - smooth bore tip for straight stream; may have multiple tips for different flows - flow from 150 to 350 GPM

C. Attack Line Hose Loads

1. Minuteman load - hose load includes a certain amount, generally 100 feet, of shoulder load as part of the overall load; nozzle is positioned in middle of load
2. Stack load - hose stacked with ears protruding for ease in pulling; nozzle is on top of load

II. ADVANCING ATTACK LINES (6-2)

NOTE: In order to demonstrate the various methods of pulling hose, the instructor may have to have the hose repacked prior to the pulling demonstrations.

A. Pulling Attack Lines

1. Minuteman load
 - a. Pull shoulder load beginning at nozzle and all hose above it by grabbing nozzle and hose above it and placing it on the shoulder
 - b. Pull hose out of the hosebed so that about four feet is on your shoulder
 - c. Continue moving forward until all the shoulder load has cleared the hosebed
 - d. Turn around and pull the exposed ear so that the remaining hose is removed from the hosebed
 - e. Walk toward the structure while allowing the hose on the ground to stretch out
 - f. Once the hose on the ground has been stretched out, the hose on the shoulder will start stretching out
 - g. Hose remaining on the shoulder should be placed near the entrance to the structure and stretched out to avoid any kinking in the hose

2. Stack load
 - a. Pull several layers of hose and the nozzle
 - b. Pull hose out of the hosebed so that about four feet is on the shoulder
 - c. Continue moving forward until all the hose has cleared the hosebed
 - d. Attempt to turn the hose on the shoulder over so that the nozzle is on the bottom of the stack
 - e. Turn around and pull the exposed ear so that the remaining hose is removed from the hosebed
 - f. Walk toward the structure while allowing the hose on the ground to stretch out
 - g. Once the hose on the ground has been stretched out, the hose on the shoulder will start stretching out

- h. Hose remaining on the shoulder should be placed near the entrance to the structure and flaked out to avoid any kinking in the hose

B. Advancing Attack Lines into a Structure

1. After line has been charged, open nozzle to bleed air and check nozzle pattern
2. All personnel on the hoseline should be on the same side of the hose
3. Check door to see if it is hot before opening
4. For doors that open in, stay to the side of the door to prevent fire blowing out the door and exposing the firefighters (may want to consider putting a short piece of rope on the doorknob in case there is a need to pull the door closed)
5. For doors that open out, stay behind the door
6. Once the door is open, move in slowly making sure that the floor is strong enough to support the firefighters
7. Stay low to improve visibility and reduce exposure to heat and gases
8. Feel the walls and floor and check the ceiling periodically to make sure there is no fire above, below, or beside the firefighters as they move into the structure
9. Attack the fire as described in the next section
10. Personnel should monitor the attack crew to make sure that they have enough hose to reach the fire; this may require some personnel to drop back to assist in moving hose through doors and around corners

C. Advancing an Attack Line Up a Stairway

1. Once inside the structure and locating an up stairway, move slowly up the stairway taking care to monitor any fire that may be under the stairway

2. Feel the stairs while proceeding to make sure that they will support the weight of the firefighters
3. Once at the top of the stairs proceed with advancing the hoseline
4. Attack the fire as described in the next section

D. Advancing an Attack Line Down a Stairway

1. Once inside the structure and locating a down stairway, move slowly down the stairway taking care to monitor any fire that may be under the stairway
2. Feel the stairs while proceeding to make sure that they will support the weight of the firefighters
3. Monitor the heat level while proceeding down the stairs in the event that the heat level is reaching the point of flashing in the lower level and sending that heat up the stairs
4. Once at the bottom of the stairs proceed with advancing the hoseline
5. Attack the fire as described in the next section

E. Advancing an Uncharged Line up a Ladder

1. Place the needed hose at the base of the ladder
2. The first firefighter ascending the ladder will take the nozzle
3. The hoseline is placed under the left or right arm, depending on the side of the ladder being exited (hose should be on the same side)
4. The hoseline crosses the chest with the nozzle draped over the opposite shoulder
5. The next firefighter will be approximately 15 feet behind the first firefighter with approximately 25 feet of hose between the two firefighters
6. The excess hose will be draped over the side of the ladder on which the firefighters will exit
7. Additional firefighters will be positioned on the ladder as needed every 15 feet with 25 feet of hose between them

8. Once the first firefighter reaches the top of the ladder, they will enter the opening or roof with the hoseline
9. The second firefighter will proceed to the top of the ladder, take a leg lock, advance any additional hose that is needed, and then proceed to assist the first firefighter
10. Other firefighters will take leg locks on the ladder and hand advance hose
11. Once adequate hose has been advanced, the other firefighters on the ladder will exit and the line will be charged
12. A firefighter will go up the ladder and, using a rope hose tool, secure the hose the center of the ladder at each ladder section
13. Attack the fire as described in the next section

F. Advancing a Charged Line up a Ladder

1. Place the needed hose at the base of the ladder
2. The first firefighter ascending the ladder will take the nozzle in one hand while holding onto the ladder beam with the other hand
3. The firefighter will proceed up the ladder
4. The next firefighter will be approximately 15 feet behind the first firefighter holding onto the hose with one hand and the ladder beam with the other hand
5. Additional firefighters will be positioned on the ladder as needed every 15 feet
6. Once the first firefighter reaches the top of the ladder, they will enter the opening or roof with the hoseline
7. The second firefighter will proceed to the top of the ladder, take a leg lock, advance any additional hose that is needed, and then proceed to assist the first firefighter
8. Other firefighters will take leg locks on the ladder and hand advance hose

9. Once adequate hose has been advanced, the other firefighters on the ladder will exit and the line will be charged
10. A firefighter will go up the ladder and, using a rope hose tool, secure the hose the center of the ladder at each ladder section
11. Attack the fire as described in the next section

G. Standpipe Operations

1. Equipment

- a. 150 feet of 1-1/2-inch or 1-3/4-inch hose
- b. Nozzle
- c. Gated wye
- d. Pipe wrench in the event the hand wheel on outlet missing
- e. Secondary standpipe pack consisting of 2-inch or 2-1/2-inch hose
- f. Short section (5 feet) of 2-1/2-inch or 3-inch hose to go between outlet and gated wye
- g. Gated wye may be equipped with 1-1/2-inch to 2-1/2-inch increaser to permit connection of larger attack hose

2. Beginning attack operations

- a. Connect to outlet in stairwell on floor below the fire floor
- b. Pull excess hose up stairway toward next floor before charging
- c. Be careful not to impede evacuation or allow great volumes of smoke in stairway
- d. Attack the fire as described in the next section

3. Fire department siamese

- a. Water should be pumped into any standpipe system being used for firefighting

- b. At least two lines should be connected
 - 1) First line to left intake and charged
 - 2) Second line to right intake
- c. If supply line cannot be connected to siamese, water can be supplied to system through outlet on first floor
- d. Pumper should be positioned within 50 feet

H. Master Stream Operations

- 1. A master stream device is a device that flow at least 350 GPM through either an apparatus mounted appliance, a ground mounted appliance, or an elevated appliance
- 2. Water supply for master streams
 - a. Pumper at water source sending water to pumper at fire
 - b. Adequate number of supply lines laid between pumpers and from pumper at fire to master stream device
 - c. No more than 100 feet of hose between pumper at fire and master stream device
- 3. Use of master stream devices
 - a. Fire attack
 - b. Back-up
 - c. Exposure protection
- 4. Setting up master stream
 - 1. Requires at least two hoselines at least 3 inches in diameter
 - 2. Hoselines should be connected to the intact siamese

III. FIRE ATTACK (6-3)

A. Initial Attack

- 1. Direct attack

- a. Used for smaller fires or lower heat levels in the room
 - b. Water is applied directly to fire rather than area above fire
 - c. Narrow fog or straight stream used
2. Indirect attack - fog stream used to attack fire from outside building
 - a. Should not be used to fight fire in occupied building
 - b. Quick interior attack should not be made in building undergoing demolition, abandoned, had previous fires or under construction
 - c. If large intense fire encountered, may be necessary to knock down or control fire from outside using solid stream before making interior attack
 3. Combination attack
 - a. Used when entire area has high heat level
 - b. Consists of applying water to fire and area above fire
 - c. Pattern includes the T, Z, and O

B. Solid Stream Versus Fog Stream

1. For safest and most effective operation where people in area, solid stream or fog nozzle on straight stream position should be used
 - a. Aid rescue
 - b. Reduce steam production
2. Use of fog should be restricted to unoccupied confined spaces
3. When building adequately ventilated opposite direction from fog nozzle, fog stream can be used
 - a. No more than 30-degree angle
 - b. Produces reach and fog pattern

C. Effective Stream Operation

1. Use solid stream nozzles or set fog nozzles on straight stream setting
2. Stay low upon entering fire area to let heat and gases vent before moving in
3. Before door to fire area opened, all firefighters should be positioned on same side of entrance and remain low
4. Crack nozzle and bleed air out of line ahead of water
5. If fire shows at top of door as opened, ceiling should be hit with solid or straight stream to cool and control fire gases
6. Sweep floor with stream to cool burning debris and hot surfaces
7. Do not open stream until fire can be hit unless firefighter safety involved
8. Direct the stream at the base of fire if localized
9. As the advance is made, the angle of stream should be lowered and an attempt made to hit the main body of fire
10. When the main body of fire knocked down, shut down the stream and let the area vent
11. When the fire is knocked down, shut down the nozzle
12. Upon entering an area which is very hot and finding no fire, withdraw immediately and check the area below
13. When attacking basement fire down interior stairs, straight stream should be used because fog will generate steam

D. Attack Line Practical

1. Advance an uncharged 1-1/2-inch, 1-3/4-inch, or 2-inch line up an interior stairs to a location above the ground floor.
2. Advance a charged 1-1/2-inch, 1-3/4-inch, or 2-inch line up an interior stairs to a location above the ground floor.

3. Advance a charged 1-1/2-inch, 1-3/4-inch, or 2-inch line down an interior stairs to a location below the entry floor.
4. Advance an uncharged 1-1/2-inch, 1-3/4-inch, or 2-inch line up a ladder to a floor above the ground floor.
5. Advance a charged 1-1/2-inch, 1-3/4-inch, or 2-inch line up a ladder to a floor above the ground floor.
6. Advance an uncharged 1-1/2-inch, 1-3/4-inch, or 2-inch line to the floor below the fire floor, connect it to the standpipe connection, charge it, and advance it to the fire floor. After charged, extend the line to a higher floor.
7. Set up and establish a water supply from the attack pumper to a fire protective system using multiple lines of 2-1/2-inch or 3-inch hose.
8. Repack the attack line in a flat and minuteman load.
9. Repack a standpipe pack.

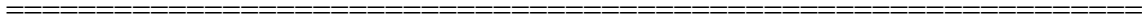
REVIEW:

ATTACK LINES

- * Introduction to Attack Lines
- * Advancing Attack Lines
- * Fire Attack

REMOTIVATION:

ASSIGNMENT:



EVALUATION: