

HOSELINE ADVANCEMENT

DISCIPLINE: Fire Training
DATE PREPARED: 2/20/2023
TIME REQUIRED: 2-3 Hours

OVERVIEW and PURPOSE:

- 1) Deploying and operating fire hose on the fireground is made more efficient when working as a team.
- 2) The purpose of this training is to review and build on basic skills with the emphasis on improving efficiency and teamwork.
- 3) While skills such as advancing attack lines may appear to be something very basic, there is no harm by working to maintain and/or improve proficiency.
- 4) Firefighter safety will be emphasized and will be enhanced greatly through hands-on practice in a controlled setting.

OBJECTIVE:

The objective of this training is to improve hose handling and hose operation skills and to practice working as a team. Firefighters will demonstrate a general understanding of the various methods of advancing an attack line into a structure.

ENABLING OBJECTIVES:

- 1) Explain the application and use of attack lines.
- 2) Demonstrate advancing attack lines into a structure.
- 3) Review key positions on an attack line.
- 4) Review the responsibilities of the nozzle firefighter position when executing a hose stretch.
- 5) Review skills needed to communicate and operate in an effective nozzle firefighter role in both ideal and realistic manpower situations.
- 6) Provide realistic hands on training to develop confidence and proficiency as the nozzle firefighter in fireground evolutions.

LESSON PLAN:

This training should include minimal instruction and maximum skills practice and should be conducted in teams of two-to-four firefighters advancing the hoseline, plus a simulated Incident Commander (IC) and a pump operator.

INTRODUCTION TO ATTACK LINES

- I. Use and application of attack lines.
 - a. Fire hose – a flexible, portable tube manufactured from watertight materials in 50 to 100 foot lengths that is used to transport water from a source or pump to the point where it is discharged to extinguish fire.
 - b. Attack hose – hose that is used by trained firefighters to combat fire.
 - c. Attack lines generally consist of a 1 ½-inch, 1 ¾-inch, 2-inch, and 2 ½-inch hoseline.
 - d. Generally, are pre-connected to the apparatus and equipped with a nozzle.

- i. Pre-connect – attack hose connected to a discharge when the hose is loaded; this shortens the time it takes to deploy the hose for firefighting.
 - e. In lengths of at least 200 feet.
 - II. Hose Line Selection
 - a. Consider the limitations of various sizes of hose.
 - b. Friction loss – loss of pressure created by the turbulence of water moving against the interior walls of firehose, pipes, fittings, and adapters.
 - i. Friction loss is primarily affected by three factors:
 - 1. Flow
 - 2. Length of hose lay.
 - 3. Hose diameter
 - ii. Friction loss can be overcome by:
 - 1. Increasing the hose size
 - 2. Adding additional parallel hoseline(s)
 - 3. Increasing pump pressure
 - iii. 1 ½-inch, 1 ¾-inch, 2-inch attack lines should not exceed 300 feet.
 - iv. 2 ½-inch attack lines should not exceed 500 feet.
 - c. Range of nozzle flows for combination nozzle with recommended nozzle pressure of 100 psi:
 - i. 1 ½-inch – 30 to 125 gpm
 - ii. 1 ¾-inch & 2-inch – 95 to 200 gpm
 - iii. 2 ½-inch – 125 to 250 gpm
 - d. Other considerations
 - i. Staffing to advance and operate the attack line.
 - ii. Water flow requirements.
 - iii. Location of and access to the fire.
 - iv. Ability to deploy the attack line quickly and efficiently.
 - v. Attack line length choices.
- III. Attack Line Stack Load – hose stacked with ears protruding for ease in pulling; nozzle is on top of load.
 - a. Connect a female coupling to the discharge.
 - b. Place an ear in the first full fold.
 - c. Continue to load the hose until it has all been placed in the hose bed (remember to stagger every other fold to reduce damage to the hose).
 - d. Place the nozzle on top of the stack.

ADVANCING ATTACK LINES

- I. Pulling Attack Lines From Apparatus
 - a. Pull several folds of hose and the nozzle out of the hose bed so that about four feet is on the shoulder.
 - b. Attempt to turn the hose on the shoulder over so that the nozzle is on the bottom of the stack.
 - c. Continue moving forward until all the hose 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 to stretch out.
 - g. Hose remaining on the shoulder should be placed near the entrance to the structure and flaked out to avoid any kinking in the hose.
- II. Advancing A Charged Attack Line (Working Line Drag Method)
- a. Stand alongside a single attack line at a coupling or nozzle.
 - b. Face the direction of travel.
 - c. Place the hose over the shoulder with a coupling in front, resting on the chest.
 - d. Hold the coupling in place and pull with the shoulder.
 - e. Position additional firefighters at each coupling to assist in advancing the hose.
- III. Advancing Attack Lines Into A Structure
- a. Confirm order with an officer to advance a line into the structure.
 - b. After line has been charged, open nozzle to bleed air and check nozzle pattern.
 - c. All personnel on the hoseline should be on the same side of the hose.
 - d. Check door to see if it is hot before opening.
 - i. 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).
 - ii. For doors that open out, stay behind the door.
 - e. Once the door is open, move in slowly making sure that the floor is strong enough to support the firefighters.
 - f. Stay low to improve visibility and reduce exposure to heat and gases.
 - g. 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.
 - h. Whenever possible, position firefighters at critical points (obstructions and corners) to help feed the hose.
- IV. Advancing An Attack Line Up A Stairway
- a. Once inside the structure and locating a stairway leading to an above floor, move slowly up the stairway taking care to monitor any fire that may be under the stairway.
 - b. Feel the stairs while proceeding to make sure that they will support the weight of the firefighters.
 - c. Once at the top of the stairs proceed with advancing the hoseline.
 - d. Whenever possible, position firefighters at critical points (obstructions and corners) to help feed the hose.
- V. Advancing An Attack Line Down A Stairway
- a. 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.
 - b. Feel the stairs while proceeding to make sure that they will support the weight of the firefighters.
 - c. Monitor the heat level while proceeding down the stairs.
 - d. Once at the bottom of the stairs proceed with advancing the hoseline.
 - e. Whenever possible, position firefighters at critical points (obstructions and corners) to help feed the hose.
- VI. Advancing An Uncharged Line Up A Ladder
- a. Place the needed hose at the base of the ladder.

- b. The first firefighter ascending the ladder will take the nozzle.
 - c. Place the line over shoulders and climb the ladder.
 - d. The next firefighter will be approximately 10-15 feet behind the first firefighter with approximately 25 feet of hose between the two firefighters.
 - e. The excess hose will be draped over the side of the ladder on which the firefighters will exit.
 - f. Additional firefighters will be positioned on the ladder as needed every 15 feet with excess hose between them.
 - g. Once the first firefighter reaches the top of the ladder, they will enter the opening or access roof with the hoseline after sounding the floor for stability.
 - h. 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.
 - i. The fire hose should be secured to the top rung of the ladder with a hose strap tool or utility strap, tying a clove hitch if using a utility strap.
- VII. Advancing A Charged Line Up A Ladder
- a. Position one firefighter heeling the ladder and the remaining firefighters on the same side of hose facing nozzle spaced about 6 to 8 feet.
 - b. One firefighter will ascend the ladder.
 - i. Either with the nozzle in one hand while holding the ladder beam with the other hand, OR
 - ii. Without the nozzle, lock in with a leg lock leaving hands free to control and advance the hose. Firefighters below will feed the hose to the nozzle firefighter.
 - c. Once at the top of the ladder with the charged attack line, the firefighter will enter the opening or access roof with the hoseline after sounding the floor for stability.
 - d. 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.
 - e. The fire hose should be secured to the top rung of the ladder with a hose strap tool or utility strap, tying a clove hitch if using a utility strap.

EVOLUTIONS:

EVOLUTION 1: ADVANCE A CHARGED ATTACK LINE INTO A STRUCTURE

- 1) Advance a charged 1 ¾-inch attack line into the structure as a team to the target, the rear firefighter should drop back to assist moving hose around pinch points.
- 2) Maintain team integrity and communication.

EVOLUTION 2: ADVANCE A CHARGED ATTACK LINE UP A STAIRWAY

- 1) Advance a charged 1 ¾-inch attack line into the structure as a team to the base of the stairs, the rear firefighter should drop back to assist moving hose around pinch points.
- 2) Proceed up the stairs, ensuring the sound the stairs for integrity.
- 3) Maintain team integrity and communication.

EVOLUTION 3: ADVANCE A CHARGED ATTACK LINE UP A LADDER

- 1) Advance a charged 1 ¾-inch attack line into the structure as a team to the base of the stairs, the rear firefighter should drop back to assist moving hose around pinch points.
- 2) Proceed up the ladder, entering into the opening.
- 3) Secure the attack line to the top rung of the ladder.
- 4) Maintain team integrity and communication.

STUDENT PERFORMANCE OBJECTIVE:

Given the information from the lecture and demonstration, the students will be able to show proficiency in advancing attack lines safely and efficiently.

PPE/Equipment Required for Each Participant: (check all that apply)

X	Helmet	X	SCBA
X	Eye Protection	X	Radio
	Hearing Protection		Other Resp. Protection
X	Bunker Coat		(Type): _____
X	Hood		
X	Bunter Pants		
X	Safety Boots		
	Other (Specify): _____		

- 1) List the basic steps required to safely complete evolution.
 - a) Check all PPE for proper donning before entry.
 - b) Hydration
- 2) Identify potential accidents or hazards.
 - a) Trip and fall hazards.
- 3) Determine recommended safety procedures.
 - a) Perform a walk-through of the facility by showing the route for rotations to be completed.
 - b) Ensure all PPE is properly worn when in the IDLH environment.

MEDICAL PLAN:

- 1) BLS will be on the scene to provide care.
- 2) If medical transport or further care is needed, 911 will be called by the instructor in charge, and an ambulance will be dispatched from the local county department for transport.
- 3) If there is a need for air transport, it will be dispatched through local county 911.

TRAINING ACTIVITIES:

1. Lead Instructor (LI) will review the objectives with the class and thoroughly explain the training activities and evolutions.
2. Baseline pulse will be taken and recorded.

3. Safety walkthrough of the building will be completed by personnel prior to the beginning of operations.
4. LI will set up training attack teams consisting of 2 to 4 firefighters.
5. Each firefighter should have an opportunity to act as the nozzle firefighter and a rear firefighter.
6. All personnel will return to rehab and have their pulse checked and recorded once each evolution is complete.
7. After Action Review (AAR) will be conducted using the following format:
 - a. What was supposed to happen?
 - b. What actually happened?
 - c. What can we do better?
 - d. Time will be allotted for the restacking of attack lines on fire apparatus.