

Firefighter Skills Review: Ground Ladders

Instructor Guide

Session Reference: 2

Topic: Ground Ladders

Level of Instruction:

Time Required: 3 Hours

Materials: Various Ground Ladders

References:

- Truck Company Fireground Operations, Second Edition, Chapters 9 and 8
- Essentials of Fire Fighting, Fourth Edition, IFSTA, Chapter 9

PREPARATION:

Motivation:

Objective (SPO):

The student will demonstrate a basic understanding of ground ladder operations, positioning fire streams with ladders, carrying ground ladders, raising ground ladders, and climbing ground ladders.

Overview:

Ground Ladders

- Ground ladder operations
- Placement of ladders and climbing techniques
- Positioning fire fighting steams
- Ground ladder practical

Session 2 Ground Ladders

- SPO 2-1 The student will demonstrate a basic understanding of ground ladder operations, positioning fire streams with ladders, carrying ground ladders, raising ground ladders, and climbing ground ladders.
- EO 2-1-1 Identify the purpose of fire service ladders.
- EO 2-1-2 Demonstrate the proper placement of ladders and a safe climbing technique as it pertains to advancing hoselines.
- EO 2-1-3 Describe the techniques of using ground ladders to support fire streams.
- EO 2-1-4 Raise all portable ladders carried on the apparatus using the flat or beam raise, and climb correctly the full length of those ladders (NFPA 1001 (1997) 3-3.5).

I. Ground Ladder Operations (2-1-1)

A. Introduction

1. Within height and personnel limitations, ground ladders can be effective in number of operations
2. Some uses same as aerial units, but others unique
 - a. Gaining access to fire building and exposed buildings
 - b. Advancing hoselines when stairways are used by people escaping
 - c. Replacing damaged stairways
 - d. Removing trapped victims
 - e. Removing people from crowded fire escapes
 - f. Getting from one roof level to another
 - g. Reinforcing weakened building features

B. Ladder Work

1. Ladder work should be assigned to those performing truck duties
2. If laddering duties not specifically assigned, rescue or fire attack operations can be delayed
3. Ladder operations affect the efficiency of most other fireground operations

C. Handling Ground Ladders

1. Several ways to carry ground ladders from apparatus
2. Method used should require least maneuvering and time
3. There should be no need to lay ladder on ground after carrying to building and before raising it
4. One way to avoid extra movement is to carry it with rungs and trusses parallel to ground - once

butt in position near wall, lower to ground while upper part of ladder raised from shoulder height

5. Ladder can then be pivoted and extended if necessary
6. Two- and three-person ladders can be quickly placed for beam raise
7. Two-person ladder is carried with fire fighters on opposite corners
8. Three-person ladder carried with two fire fighters at each end of one truss and one in the middle on other truss
9. Four person ladders carried by two fire fighters at each end and additional crew members at or near middle
10. If manufacturer makes no recommendation, position fly section away from building
11. Climbing angle is determined by height of raise and distance from butt to building - butt to building distance one-quarter of height of raise

D. Safety

1. Be careful of overhead obstructions, especially electric wires
2. Once ladder raised, should be tied in to building or braced by fire fighter
3. Ladder should not be overloaded - fire fighters should be at least ten feet apart at normal climbing angle
4. If climbing angle decreased or hose being carried up, distance between those on ladder should be increased to twenty feet
5. Once ladder used to enter building, it should be left in place as exit

II. Advancing Hoselines (2-1-2)

A. Placing Ladders

1. Should be placed where they will be of use in overall operation
2. Size up will indicate where building may have to be entered
3. Occasionally, properly positioned ladders will not be needed, possibly because fire was quickly controlled from other positions
4. Avoid placing ladders in front of building entrance

B. Climbing Ladders

1. Fire fighters carrying lines should be at least fifteen feet apart
2. Hose should be grasped at couplings with loops hanging off side of ladder
3. Once line advanced into building, it should be moved clear of ladder so it hangs down face of building

III. Positioning Fire Fighting Streams (2-1-3)

- #### A. Ladders can be used to hold and position streams being directed into building
1. Topmost three or four rungs extend over sill and into window, line is tied to ladder so stream is directed through window opening
 2. Ladder is raised over window with top placed against wall above, line is tied to ladder, and stream directed onto fire
- #### B. Ladder should be tied to building if possible
1. Ladder in windows tied in with rope hose tool
 2. Ladder against wall tied to pike pole placed across inside of lower window
- #### C. Hoseline should be tied to ladder in manner that will allow rope to absorb some of reaction of line when nozzle opened
1. Not tied rigidly to ladder rungs

2. Suspended between rungs
- D. Can be used to knock down fire ahead of crews advancing interior lines
- E. Ladders streams should be shut down as interior lines approach
- F. Once ladder stream has knocked down fire, it can be shut down, untied, advanced, recharged, and used for interior attack
 1. Allow smoke or steam to clear area
 2. Check interior conditions
 3. Enter window only when second fire fighter has climbed to position immediately outside window to assist in advancing line and back up

IV. Ground Ladder Practical (2-1-4)

- A. Demonstrate the following using ground ladders:
 1. One, two, and three person beam carries
 2. Two, three, and four flat person carries
 3. One, two, three, and four person raises
 4. Placement for fire fighting, rescue, and roof operations
 5. Climbing

SUMMARY

Student Performance Objective:

The student will demonstrate a basic understanding of ground ladder operations, positioning fire streams with ladders, carrying ground ladders, raising ground ladders, and climbing ground ladders.

Review:

Ground Ladders

- Ground ladder operations
- Placement of ladders and climbing techniques
- Positioning fire fighting streams
- Ground ladder practical

Remotivation:

Assignment:

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Evaluation: