



Edgerton Fire Protection District

Skill Drill #109 - Ground Ladders

Objective

Ensuring that ground ladders are quickly and properly placed at fire scenes is a crucial to ensuring the safety of firefighters operating at structure fires. Members participating in this drill shall show competence in safely deploying ground ladders using various methods.

Preparation

Ladder Carries

- Bend your knees keeping your back as straight as possible, and lift with your legs, NOT WITH YOUR BACK OR ARMS.
- When two or more firefighters are lifting a ladder, they should lift on the command of a firefighter in the butt position who can see the entire operation. Any firefighter who is not ready should make it known immediately so that the lift will be delayed. Lifting must be done in unison.
- Carry the forward end of the ladder slightly lowered to provide better balance. All ground ladders should be carried with the butt end forward. Roof ladders should be carried with the tip end forward.

One-Firefighter Low-Shoulder Carry

- Some single or roof ladders may be safely carried and raised by one firefighter. The low-shoulder carry involves resting the ladder's upper beam on the firefighter's shoulder, while the firefighter's arm goes between two rungs.

Two-Firefighter Low-Shoulder Carry

- Although the two-firefighter low-shoulder carry may be used with Single or roof ladders, it is most commonly used for 24, 28 and 35-foot ladders. The two-firefighter low-shoulder carry gives firefighters excellent control of the ladder. The forward firefighter places the free hand over the upper butt spur. This is done to prevent injury in case there is a collision with someone while the ladder is being carried.



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Three-Firefighter Flat-Shoulder Carry

- The three-firefighter flat-shoulder carry is typically used on extension ladders 35 feet. This method has two firefighters, one at each end on one side ladder, and one firefighter on the other side in the middle.

Four-Firefighter Flat-Shoulder Carry

- The same flat-shoulder method used by three firefighters for carrying ladders by four firefighters except that there is a change in the positioning of the firefighters to accommodate the fourth firefighter. When four firefighters use the flat-shoulder carry, two are positioned at each end of the ladder, opposite each other.

Two-Firefighter Arm's Length On-Edge Carry

- The two-firefighter arm's length on-edge carry is best performed with lightweight ladders. The two-firefighter arm's length on-edge carry is based on the fact that the firefighters are positioned on the bed section (widest) side ladder when it is in the vertical position.

Ladder Raises/Positioning

Check for Overhead Obstructions!

One Firefighter Raise

Inspect work area for wires, etc

Lower the ladder butt to the ground with butt spurs against wall and fly facing wall

Raise ladder upright until it rests against the building using hand-over-hand method

Pull base of ladder away from building

Balance ladder in a vertical position, one foot at butt of one beam, and ladder steadied with instep, knee and leg

Extend fly section by pulling halyard straight down to maintain balance

Engage ladder locks at the desired elevation

Lean ladder against building and tie off the halyard



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Pull ladder butt out from building to proper climbing angle

Two Firefighter Flat Raise

- | | |
|----------------|--|
| Firefighter #1 | Place the butt end on the ground |
| Firefighter #2 | Rest the ladder beam on a shoulder |
| Firefighter #1 | Heel the ladder by standing on the bottom rung |
| Firefighter #1 | Crouch down to grasp a convenient rung or the beams with both hands |
| Firefighter #1 | Lean Back |
| Firefighter #2 | Step beneath ladder |
| Firefighter #2 | Grasp a convenient rung with both hands |
| Firefighter #2 | Advance hand-over-hand down the rungs toward the butt end until the ladder is in a vertical position |

Pivot ladder so that fly is facing away from the building. Tie off the halyard.

Three Firefighter Flat Raise

Ladders 35 feet or longer should be raised by at least 3 firefighters. To raise a ladder using the flat raise method with three firefighters, follow the same procedures for the two firefighter flat raise. The third firefighter assists the second firefighter in raising the ladder.

Ladder Positioning

- Ladder at least two points on different sides of the building
- Avoid placing ladders over openings such as windows and doors where they might be exposed to heat or direct flame contact.



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- Take advantage of strong points in building construction (such as corners) when placing ladders.
- Avoid placing ladders where they may come into contact with overhead obstructions such as wires, tree limbs, or signs.
- Avoid placing ladders in front of doors or other paths of travel that firefighters or evacuees will need to use.

Discuss how to select ladders for a specific place or function:

- Residential stories are 8 to 10 feet (2 m to 3 m); there is usually 3 feet (1 m) from windowsill to floor.
- Commercial stories are 12 feet (4 m); there is usually 4 feet (1.3 m) from windowsill to floor.
- Roof - The ladder should extend five (5) rungs above the roof level.
- Rescue from a window opening - The ladder tip should be at windowsill level.
- Ventilation or side access - The ladder tip should be even with the top of the window.
- Actual reach - It is a foot or two (0.5 m) less than the marked length.
- When one ladder must be removed to access another ladder on the apparatus, place the first ladder back on the apparatus.

Tying the Halyard

Pull halyard taut around two convenient rungs. Tie off excess with a clove hitch and overhand safety.



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Drill

Participants shall wear the appropriate PPE according to their assigned task. Participants will show that they are competent in the following evolutions:

1. As a team of 4, raise the 40' bangor ladder to the roof of the training tower. Each team member shall then carry a roof ladder up the ladder, place it on the roof and then bring the ladder back to the ground.
2. Successfully raise all ladders on Engine 78 and Quint 70.
3. Working as the MPO, raise ladders on Engine 78 using 1 person.
4. In 1 and 2 person teams, assemble extension ladder, roof ladder, roof hook, and chainsaw together. Move assembly to side of training tower and raise ground ladder.

Evaluator Talking Points

What methods worked the best? Why?

Is there anything that can be done to improve this training?