

This Month's *Working Fire...*

©2005 - Spirit Sports

Volume 04-8: August 2004
Approx. Program Length 56:17

Incident Analysis

FIRELINE

Anchorage Residential Fire **Anchorage, KY**

Approx. length: 8:30

Heavy smoke and fire was showing when Anchorage Fire & Rescue rolled up on this fairly isolated residential structure which was already 50% involved. First-in crews started with tank water and the possibility of a rescue. The second-in company laid hose to a hydrant 1,000 feet away plus a 300-foot supply line was also used. Water supply was an issue at this fire. A rescue crew attempted to search from an entry off a back deck but was turned back by heavy smoke and fire. It was learned the owners were out of town so a fire attack was begun in earnest with 2-inch attack lines. Because of 2-degree weather, plenty of backups were needed. EMS helped keep firefighters warm in rehab. The cause turned out to be electrical in nature. For more information, contact Assistant Chief Larry Heaphy, Anchorage Fire & Rescue, 1400 Evergreen Road, Anchorage, KY 40223 or call him at (502) 245-6755.

Tanker Truck Rescue **Wilmington, DE**

Approx. length: 10:07

Two workers cleaning out a gasoline tanker truck were overcome by vapors. Rescuers arrived to find the two men unconscious with a couple of inches of gasoline in the bottom of the tanker. A haz-mat response was declared; a decon team was ordered. One man came to when rescuers found him and he exited by himself. The other man was in another compartment in the tanker and had to be located, then removed. An incident with a good overview of all the preparation that's necessary for this kind of a rescue. It also covers relationships with firms who might present haz-mat situations. For more information, contact Battalion Chief Raymond G. Brock, Wilmington Fire Department, 300 N. Walnut Street, Wilmington, DE 19801 or contact him at (302) 576-3950.

HANDS-ON

Fireground Operations, Part I

Approx. length: 11:35

This is the first of a multi-part series on fireground operations covering scenarios conducted at night at a training tower facility on search and rescue, forcible entry, and simulations on single and multi-stories. For more information, contact Assistant Chief Steve Rhinehart, Maryland Height Fire Protection District, 2600 Schuetz Road, Maryland Heights, MO 63043 or call him at 314-298-4400.

Incident Analysis

Flat Roof Operations, Part I

Approx. length: 7:19

This is the first of a two-part series on flat roof operations. This month the basics of roof work are covered including ventilation, skylights, draft-stops, and scuttle covers. For more information contact Battalion Chief Ted Corporandy, San Francisco Fire Department, 698 Second Street San Francisco, CA 94107-2015 or contact him at 415-558-3200.

FIRE MEDICS

Lifting & Carrying Patients

Approx. length: 13:16

According to VFIS Insurance, one of the largest insurers of fire and EMS departments, dropped patients is one of the biggest causes of insurance casualties involving EMS organizations. This month we review the basics of lifting and transporting patients on stretchers and cots and the proper way they should be loaded into an ambulance, including stretcher features, coordinated lifts, lifting heavy patients, precautions transporting over uneven ground, and more. For more information, contact Lt. Rick Lane, Paramedic Training Officer, 4149 Old Mill Parkway, St. Peters, MO 63376 or contact him at (636) 441-1354.

EVOLUTIONS 2000

Kramer vs. Kramer: Traditional vs. Evolving Roles

Approx. length: 2:30

Working Fire and Professor/Chief Bill Kramer presents our Continuing Education segment that's worth one credit from the University of Cincinnati. This month, Bill debates which whether fire departments should equip and train for the traditional role of fire suppression or for new missions such as EMS, haz-mat, and technical rescues. For more information, contact the Open Learning Fire Service Program, College of Applied Science, 2220 Victory Parkway, ML #103, Cincinnati, Ohio 45206 or call 513-556-6583.

Incident Analysis

From the Departments Involved...

DISCUSSION QUESTIONS FOR THIS MONTH'S INCIDENTS

The departments involved in this month's incidents pose some discussion questions that you can use as discussion-starters in your own department's training sessions.

Anchorage House Fire / Anchorage, KY

Assistant Chief Larry Heaphy, Anchorage (KY) Fire & Rescue:

1. Do you know what to expect right off the bat when you hear the dispatched address? If you knew it was an area with water supply problems, would you be able to deal with it?
2. The narrow drive leading up to the house caused problems for staging. How would you handle it?
3. This residence was pretty well involved by the time we arrived. Had there been no report of occupants inside, would you have gone defensive immediately?
4. It was bitterly cold the night of the response. How do you staff when dealing with extremely cold weather?

Tanker Truck Rescue / Wilmington, DE

Battalion Chief Raymond G. Brock, Wilmington Fire Department:

1. When we made entry there were a couple of inches of gasoline in the bottom of the tanker, the response took on a big haz-mat profile. At that point, what would have been your next step?
2. We opted for supplied air in this response because of restricted size openings in the tanker baffles. Would that have been your decision and would you have been prepared to make it?
3. As this was a confined space, monitoring of the atmosphere inside the tanker and injecting air into the compartment were a normal part of preparing for the rescue. What else should be checked or performed in preparation for such a rescue?
4. Don't forget to consider the possibility of explosion. Keep a charged hoseline nearby.

Hands-On Training

Fireground Operations, Part I

Objectives

After watching this program the student shall:

1. gain experience in tactical skills such as forcible entry
2. observe the importance of training readiness through simulated conditions
3. see participants gain experience in the role of Incident Commander.

Standards and Regulations

This training is consistent with NFPA 1500 and appropriate OSHA regulations and practices.

Training Outline

I. LIVE SCENARIOS PREPARATION

A. Search Team

1. Search team readiness
2. Appropriate PPE and SCBA,
3. Rescue search tools (halligan, axe)

B. Fire Suppression

1. Fire attack team readiness
2. Appropriate PPE and SCBA,
3. Charged hoseline

C. Command & Support

1. Incident Commander role
2. Rapid Intervention Team (R.I.T.) standing by

II. SEARCH & RESCUE, SINGLE-STORY

A. Scenario begins: Size-up

1. First-in crews arrive; size-up is conducted.
2. We have a single-story structure with fire and possible occupants
3. Incident Commander establishes sectors
4. IC establishes response teams.
5. Accountability report is taken.

Answers to the quiz on page 6:

1. False
2. True
3. True
4. c.
5. e.

Fireground Operations, Part I

B. Search & Rescue Operation

1. With the possibility of occupants to be rescued, I.C. strikes second alarm which should also add EMS.
2. Search team enters.
3. Incident Command is advised of their progress.
4. Thermal Imager is used.

C. Fire Suppression Operation

1. Elects to enter through rear of structure.
2. Encounter bars on rear door (simulated)
 - a. Bars on doors are simulated by a station drill at the rear of the building where burglar bars and lock shackles must be cut before entry can be made to the structure.
 - b. In this case, a circular saw (K-12 style) was used for cutting.
3. Fire suppression team makes entry.
4. PPV fan is brought to rear of structure to help with ventilation.

D. Scenario Outcome

1. Search team exits; two patients are retrieved;
2. Suppression team exits; fire is knocked down, structure is ventilated.
3. R.I.T. not a factor.

E. Post-Analysis

1. Accountability Checks
 - a. When asking for an accountability check, there is a new protocol that departments are starting to employ: ask for Emergency Traffic first. This gives a chance for someone with problems to be heard before the accountability check which will tie up the radio for awhile and cover up an emergency.
 - b. Be sure accountability tags are left at Command Center. Important for all mutual aid companies to understand the same procedure!
2. When calling for a second alarm, review your sectors as originally set up. Assign a Safety Officer, an Accountability Officer, an Operations Officer, if necessary; whatever it takes. Also add EMS with a second alarm.
3. Be sure and notify utilities to cut off services.
4. In general, an incident of this type should follow **RECEO**: first, consider the need for **R**escue, then check for **E**xposures, then **C**onfine the fire, **E**xtinguish it, and conduct **O**verhaul. It's a good order for IC to follow.
 - a. Also ventilate and salvage where possible.

Fireground Operations, Part I: Quiz

Date _____

Chief/T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False: Accountability is one of those things that different departments do their own way and we have to make the best of it.
2. True or False: In a scenario, certain tasks may have to be done before the exercise can continue.
3. True or False: Calling for Emergency Traffic is a good thing before an Accountability Report.
4. Which of the following would you NOT do upon calling a second alarm?
 - a. Appoint a Safety Officer.
 - b. Call for additional EMS.
 - c. Do a size-up.
 - d. Increase span of control.
 - e. None of the above
5. Which is the correct order?
 - a. Extinguish -- Exposure -- Rescue -- Overhaul -- Confine It
 - b. Confine It -- Overhaul -- Exposure -- Exposure -- Rescue
 - c. Overhaul -- Exposure -- Confine It -- Rescue -- Extinguish
 - d. Rescue -- Confine It -- Exposure -- Extinguish -- Overhaul
 - e. None of the above

(Answers can be found at the top of page 5)

Hands-On Training

Flat Roof Operations, Part I

Objectives

After watching this program the student shall:

1. gain familiarity with roof operations
2. learn when ventilation is appropriate and when it is not
3. learn the importance of roof structures and how they affect ventilation.

Standards and Regulations

This training is consistent with NFPA 1500 and appropriate OSHA regulations and practices.

Training Outline

I. PREPARATION

A. Tools

1. Full PPE including air pack
2. Chain saw or rotary saw
3. A rope bag
4. Forcible Entry tools: "The Irons"
 - a. Halligan bar
 - b. Flat-head axe
 - c. Halligan Hook, also known as the New York Roof Hook

B. Upon arrival on the roof

1. Size up what kind of roof you have.
 - a. "2-by" construction is typical; 2 x 12, 2 x 14.
 - a. Flat roofs are more difficult to ventilate than a peaked roof
2. It's critical to open the penthouse door (the door to the roof) immediately.
 - a. Use Forcible Entry tools to force the door open, if necessary.
3. Check for bodies or patients on the inside of the door or the stairway leading up to it.
4. Disable the door in the "open" position.

Flat Roof Operations, Part I

II. VENTILATION (non-penetrating)

A. When to do it

Ventilate the roof for a top-floor or attic fire.

EXCEPTION: a balloon-frame structure; then ventilate no matter what floor the fire is on.

1. Check light wells and skylights for fire location or trapped occupants.
2. Check the rear and sides of the building for the same thing. Occupants could be out on a ledge.

A. Opening a Skylight

1. Take the pick of the axe or the point of the Halligan and strike the corner of a window pane gently.
2. The falling glass will alert firefighters working on the top floor that you're about to open up the skylight.
3. Strike it once and wait -- to give firefighters below a chance to move off to the side.
4. Use short, chopping strokes and try to loosen the glass and pull it back on to the roof.
5. Once the glass is removed, take the Halligan Hook and reach down in and open the draft-stop, if there is one.
 - a. Don't use the hook end; use the pole end.
 - b. The hook may catch on the glass or lath.
6. The draft-stop will prevent you from ventilating the top floor.

B. Opening a Return

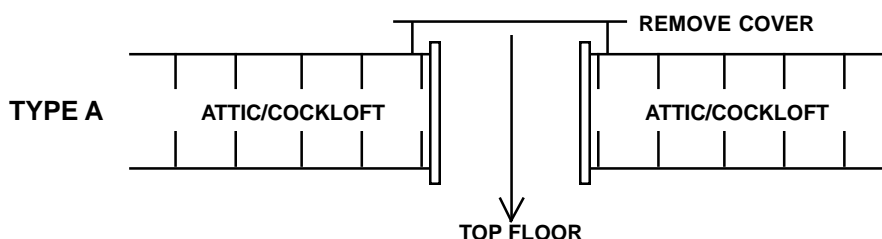
1. This may be necessary when overhauling or checking for fire extension.
2. If there is active fire in the attic or cockloft, you will be putting a hole in the roof at this location.

ASK YOURSELF: IS THIS WHERE YOU WANT TO PUT A HOLE?

3. It's important, because the fire will be drawn to the opening. You don't want to make the fire run a great distance to get to the opening.

C. Checking Scuttle Covers

1. They are of two types:
 - a. Those that access the top floor:

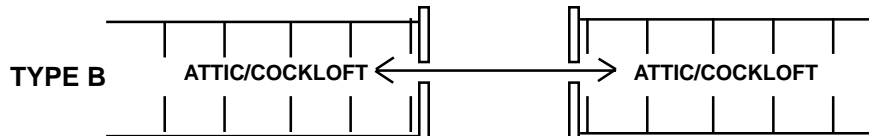


Answers to the quiz on page 10:

1. True 2. False 3. True 4. b. 5. a.

Flat Roof Operations, Part I

b. Those that access the attic or cockloft space:



2. Once opened, use your Hook to probe the sides of the shaft to see which type you have.
 - a. Sometimes the shaft accesses a closet. If so, use the Hook and try and open the closet door.
3. If the scuttle is like Type A, you can vent the top floor this way. Venting smoke makes it a little more uncomfortable for firefighters and occupants because smoke will be drawn by them on its way to ventilation. You can leave the scuttle cover off with this type.
4. If the scuttle is like Type B, LOOK OUT! If there's fire in the attic or cockloft, it will be drawn toward that opening! Leave the scuttle cover ON with this type unless, based on where the fire is, this is where you want the ventilation opening. If the fire is on the other side of the building, CLOSE IT!

C. Removing Vent Caps

1. You can remove vent caps, but with mechanical ventilators that spin, they are more effective if left alone.
2. Don't take a vent cap off unless you determine it is drawing the fire to a location you don't want it to go. In that case, smack it with an axe to disable it.

Flat Roof Operations, Part I : Quiz

Date _____

Chief/T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False: A size-up is a great way to begin roof operations.
2. True or False: You want to keep the penthouse door locked at all times to keep occupants off the roof.
3. True or False: You definitely should bring forcible entry tools up with you.
4. Which of the following would you NOT manipulate for roof ventilation?
 - a. Scuttle covers
 - b. Roof cap.
 - c. Draft-stop
 - d. Returns
 - e. All of the above
5. What is the best reason you have to be careful with scuttle covers?
 - a. You may draw the fire from a distant area which you don't want.
 - b. You may draw the fire from a distant area which you do want.
 - c. Firefighters and occupants on the top floor will love it.
 - d. You want it to be over a closet.
 - e. None of the above

(Answers can be found at the top of page 9)

Fire Medics

Lifting & Transporting Patients

Objectives

After watching this program the student shall:

1. understand that dropped patients is one of the biggest areas of insurance casualties.
2. learn the structural features that are common to most stretchers/cots
3. be aware of the dangers inherent in lifting and transporting patients.

Standards and Regulations

This training is consistent with NFPA 1500 and appropriate OSHA regulations.

Training Outline

I. STRETCHER / COT

Not all cots/stretchers are the same; but most have comparable features. Compare these with the brand your department uses. Be familiar with different brands, especially if a mutual aid department uses one different from yours.

A. Construction/Features

1. All roll stretchers designed for ambulances will fit and lock safely inside.
2. They share:
 - a. undercarriage release handles
 - b. releases which are at the front and back of the stretcher
 - c. an adjustable backrest
 - d. a series of safety bars with multi-positions
 - e. different levers and control handles for moving the patient safely.
 - f. patient restraining devices (shoulder harness and belt straps) based on national standards
 - g. a multi-position locking bar, allowing for different heights of rescuers. These can pull down and out of the way for tight space situations.
 - h. locks on opposing wheels so you can lock the stretcher on uneven ground on-scene, such as at a motor vehicle accident scene.
3. For heavier patients or a four-point lift maneuver, stretchers often have pull-out side bars or side handles, beneficial for stabilizing and controlling the stretcher.

Lifting & Transporting Patients

4. A safety bar which works in tandem with a safety hook positioned in the floor at the rear of the ambulance. This prevents the stretcher from rolling out the back of the vehicle.

II. OPERATIONS

A. Personnel

1. The safest operation of a stretcher involves a rescuer at the head and foot of the cot, allowing control and balance from both ends.

B. Stretcher Positions

1. Most stretchers can be raised and lowered at four different levels:
 - a. the highest position is the load position
 - b. then the high-roll position
 - c. an intermediate position
 - d. and the low-roll position.
2. Based on certain injuries such as a back, a complicated fracture of a long bone, or a heavy patient, you may need to lower the cot to the loaded, "in ambulance" position by collapsing the frame intentionally outside the ambulance. This gets the cot very close to the ground, minimizing the lifting of such patients.
3. Save your back and use the stretcher positions to your advantage!

C. Coordinating a Lift

1. Rescuers must communicate with each other when initiating a lift. One rescuer should do a 1-2-3 count to coordinate the lift. This is especially important on uneven terrain where the stretcher could be tipped.
2. Depending on the model you have, your stretcher may have a locking load position where the head end of the stretcher raises slightly.
3. As the stretcher is pushed into the back of the ambulance, the front guide wheels hang just above the floor of the ambulance. The front rescuer releases a safety handle, allowing the stretcher undercarriage to collapse, as the rear rescuer lifts and slides the cot into the ambulance.
4. **The undercarriage will only collapse if the safety handle is released. Stay away from it if that's NOT what you want!**

D. Locking the stretcher in the ambulance

1. The stretcher is slid into the ambulance, into a receiving device which catches the front wheels of the cot.
2. The rear of the stretcher is then slid into a locking mechanism on the side of the ambulance at the rear.

Lifting & Transporting Patients

3. When locked in place, the rear safety bar will drop down, catching the safety hook on the floor of the ambulance.
4. Only by lifting the safety bar up (so it will clear the hook) can the stretcher be removed from the ambulance.
5. **It's very important that the stretcher is locked in place for safe transport to the hospital.**

E. Removing the stretcher from the ambulance

1. When removing the cot from the back of the ambulance, be sure to let the undercarriage and wheels fall to their full extended position (un-collapse, if you will) and that they LOCK in place.
2. You can't control the environment and conditions under which you'll operate the stretcher, but you can control the position of the stretcher. **BE SURE YOU HAVE CONTROL AT ALL TIMES!**

F. Safety Restraining Devices

1. Safety restraining devices are used to maintain your patient's position on the stretcher and to keep them safely restrained.
2. Depending on their injury or condition, you may not be able to use the shoulder harness.
 - a. An example might be where head immobilization packaging is being used. However, you can still use backboard straps or webbing that should be supplied with your stretcher.

G. Altering the shape of the stretcher

1. In certain confined or small spaces, you can alter the shape of the frame of the cot to accommodate tight hallways, for example.
2. Lowering the head section of the frame and raising the backrest will shorten the stretcher by about 18 inches.
3. This will make the cot more maneuverable in tight areas.

III. HEAVY PATIENTS

A. Four-Point Lifting

1. Most stretchers will accommodate a patient weighing around 650 lbs.
2. Heavier patients may demand you roll the stretcher with up to four rescuers (four-point control): the normal front-and-back rescuers and one on each side.
3. Take advantage of the slide-out bars for lifting the cot if they are available.

Answers to the quiz on page 15:

1. False 2. False 3. True 4. e. 5. c.

Lifting & Transporting Patients

4. To accommodate heavier patients, most stretchers offer devices which allow you to drop the side bars and extend the stretcher bed sideways. Be sure that your safety straps are rigged accordingly to provide the best safety and security of such patients.

B. Loading

1. To load a heavy patient, reposition the rescuers so two are at the rear of the stretcher.
2. One of the side rescuers releases the undercarriage mechanism, allowing the underframe to collapse.
3. The other three lift the stretcher into the ambulance, maintaining its balance.

Lifting & Transporting Patients: Quiz

Date _____

Chief/T.O. _____

Firefighter (print) _____

Education Credits/
Hours/Units _____

Signature _____

Select the best answer:

1. True or False: Heavy patients should easily be lifted by two people.
2. True or False: Transporting patients over long distances in the low-roll position is good for your back.
3. True or False: Depending on their injury or condition, you may not be able to use the shoulder harness.
4. Which of the following does **not** belong?
 - a. Undercarriage release handles
 - b. Patient restraining devices/shoulder harness and belt straps
 - c. An adjustable back rest
 - d. A series of safety bars with multi-positions
 - e. None of the above
5. Based on this training, which procedure is correct?
 - a. Most stretchers only have a load position.
 - b. Talking to your partner while lifting is distracting.
 - c. In certain confined or small spaces, you can alter the shape of the frame of the cot to accommodate tight hallways, for example.
 - d. If the stretcher won't lock inside the ambulance for some reason, it's okay if it's only a short ride.
 - e. All of the above.

(Answers can be found at the top of page 14)

Evolutions 2000

University of Cincinnati Continuing Education Program

Traditional vs. Evolving Roles

If you're enrolled in the **Open Learning Fire Service Program** at the **University of Cincinnati**, here's your opportunity this month to earn one college credit hour for watching *Working Fire*.

VOLUME 04-8

Traditional vs. Evolving Roles

Complete written responses to the following three essay questions:

1. In your opinion should fire departments drill, train, and equip themselves more for their traditional role of fire suppressions or for new missions such as EMS, haz-mat, and technical rescue? Briefly explain.
2. How would you say the answer to Question 1 has changed over time or why has it not changed?
3. What change in emphasis would you recommend for your organization or why would you not recommend any?

Submit your responses to:

**Mr. Bill Kramer
University of Cincinnati
College of Applied Science
2220 Victory Parkway, ML #103
Cincinnati, OH 45206**

ENROLLMENT INFORMATION:

For more information on enrolling in the Open Learning program to gain college credit, call *Working Fire* at 800-516-3473 for a brochure or, to register directly, call the University of Cincinnati at 513-556-6583. Associate and Bachelors programs are available. Call to have your transcripts evaluated.