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JUNE NEWSLETTER- FALLING OBJECTS

Struck by, or contact with a falling object is the third leading cause of firefighter deaths. According to the NFPA's annual death and injury survey only stress and being caught and trapped in a fire kill more firefighters. There are many falling objects that can kill and injure firefighters during a fire. Broken glass, slate shingles, coping stones, tools accidentally dropped, window air conditioners, smoldering mattresses, stuffed chairs, wood trim, cornices, TV antennas, flower boxes, loose bricks from parapets, chimneys and more can fall from buildings and kill or injure firefighters. These deadly airborne missiles are called "falling objects" and cause firefighter death and injury.

However one of the most common falling objects around a burning building is broken glass from venting windows during search and rescue and smoldering rubbish discarded out windows during overhaul stage of a fire.

Who is responsible when a firefighter inside a burning building performing search and rescue breaks a window of a smoke and heat filled room and the falling glass injures a firefighter operating on the ground around the perimeter of the burning building? Is it the firefighter who broke the window or the firefighter on the ground?



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The perimeter of a burning building is one of the most dangerous areas on the fireground. The front sidewalk, side alley and rear yard are danger zones for falling objects. Firefighters must raise ladders, operate hose streams, vent windows and conduct forcible entry around the perimeter of a burning building and they are frequently injured by falling objects. During a fire we must be aware of falling object dangers from above. As soon as the assigned task is complete at the perimeter of the burning building, we should either enter the building or withdraw from the danger zone of falling objects.

Several firefighters performing a primary search in a burning building can create a rainstorm of broken glass around the front, side or rear of a building. Firefighters working below can be cut by this falling glass. Glass in a residential building window is one sixteenth or one eighth of an inch thick and it is subdivided into small windowpanes. Glass in a commercial building is much more dangerous because it is thicker and heavier commercial building window glass can be one quarter or one half inch thick and weigh 2-1/2-pounds or 5 pounds per square foot. This means an 8 by 4-foot display window of 1/2 inch thick glass when broken by a firefighter to vent smoke can create four, 40 pound, and razor sharp glass shards. A firefighter could be decapitated by one of these falling objects. So, firefighters operating around the perimeter of a building where glass windows are being vented should beware.

Accountability

The answer to the question posed at the beginning of this paragraph is, it is the firefighter outside the burning building is responsible when injured from falling glass. The firefighter inside, who broke the glass, is not responsible. This is because the firefighter inside is operating in a dangerous superheated, smoke filled fire environment searching for life. However, let's change the question and the stage of the fire operation. Who is responsible for an injury that occurs after the fire has been controlled, when during overhauling operations a smoldering object is thrown out of a window, or a glass is knocked out of a window frame and it strikes a firefighter below? Is it the firefighter

inside or the firefighter outside? The answer, now, is the firefighter inside. Why? It's because the firefighter operating inside the building is not working in a life-threatening environment. The fire is out, the rescue operations have ended, and his actions must be more controlled. Firefighters inside a burned out structure performing overhaul and salvage should never throw any smoldering object out a window or trim glass shards by knocking them outside, unless the area below has been cleared and a firefighter is standing guard, outside, at ground level. It is not sufficient to yell, "Watch out below" and then throws a smoldering chair or mattress out a window.

Safe procedures

The following are recommended safe operating procedure to take when a smoldering object must be thrown out of a window during overhauling or glass shards removed during salvage:

1. Obtain permission from the officer in command of the fire.
2. Notify, or assign, a firefighter outside the building to clear the area of civilians and act as a safety guard.
3. After the area is clear, the firefighter acting as guard signals when to throw the smoldering objects out or breaks off the jagged glass shards.
4. When all objects have been discarded out the window, notify the firefighter below assigned as a safety guard.

Several years ago, at a fire I responded to, a company extinguished a small blaze in a stuffed chair. They removed a badly burned man who had fallen asleep in the chair with a cigarette and started the fire. Firefighters dragged the smoldering chair to a window, pushed it out on to a fire escape and threw it over the rail into a back yard. Unfortunately, a firefighter assigned the outside vent position was in the rear yard about to climb the fire escape. He was struck with the smoldering char, knocked unconscious, suffered a disabling head injury and was forced to leave the fire service.

Lessons Learned:

1. Do not throw objects from a window during overhaul unless the area is clear, and you have been signaled to do so by another firefighter acting as a guide. (see above safe operating procedure) .
2. When trimming broken glass from windows, knock the glass shard inside, not outside.



3. When assigned to operate around the perimeter of a burning building, be aware of the danger of falling objects and wear proper protective clothing. A well-fitted helmet, gloves and an eye-shield in the down position can protect you.
4. When venting windows from inside, attempt to open the window before breaking glass. Double paned windows in new and renovated buildings can be more quickly and fully opened manually than by breaking glass.
5. If a window is vented by breaking glass from the inside, to warn firefighters outside, first break a small section, and then take the entire window out.
6. A stuffed chair or mattress left inside a building after a fire has been extinguished can rekindle and kill people in a second fire after the firefighters leave the scene. It must be removed from the building. If it can not be thrown out a window, and if it must be dragging out a hallway, make sure it is completely extinguished. Fresh air in the hallway can cause the chair to burst into flame. So have a portable extinguisher or hose-line in the hall nearby ready to quench a flash fire. Completely extinguish the smoldering object once it is outside. Never take a smoldering piece of furniture down to the street an elevator. There have been several incident where building superintendent tried this and they were burned to a crisp inside the descending elevator with the flaming piece of furniture.
7. Realize commercial glass is more dangerous when broken than residential glass. The thickness and weight of falling glass pieces can cause serious lacerations and cut hose-lines.
8. The perimeter of a burning building is a dangerous place. After completing your assignment there, go inside the building or withdraw outside the collapse danger zone.



Firefighters questions:

1. In contact or falling objects account for what amount of firefighter deaths and Injury?

- A. It is the first leading cause of firefighter death and injury
- B. It is the second leading cause of death
- C. It is the third leading cause of death
- D. It is the fourth leading cause of deaths

Answer_____

2. The persons responsible for an injury caused by falling glass from window venting during the search and rescue phase of firefighting is?

- A. The firefighter inside venting the window
- B. The firefighter outside operating around the perimeter of the building
- C. The firefighter acting as a guide
- D. None of the above

Answer_____

3. The person responsible for an injury caused by smoldering mattress thrown from a window during overhauling is?

- A. the firefighter throwing the mattress out the window
- B. The firefighter outside operating around the perimeter of the building struck by the falling object.
- C. The company chauffeur
- D. None of the above

Answer_____



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4. Which one of the following is not a common falling object danger during a fire?
- A. A window air conditioner that falls out of a window opened for venting
 - B. A chimney top knocked over by a hose stream
 - C. A tool slipping out of a firefighters hand while trimming a window during overhaul
 - D. Cats jumping from windows escaping flames

Answer_____

5. Which one of the following is an incorrect answer regarding throwing smoldering material from windows during overhaul?
- A. Never do it
 - B. Notify the officer in command for assistance of a safety guide such as a pump operator
 - C. Only discard material out a window after the safety guide states all clear
 - D. When finished discarding material out window notify the safety guide

Answer_____



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ANSWERS

Answers: 1-C; 2-B;3-A; 4-D;5-A

