



# BFFA'S FIRE OPS 101

## TRUCK OPERATIONS, ROOF-TOP VENTILATION

Ventilation of a structure during a fire is vital and time sensitive to fire fighting efforts, and its importance can not be overlooked. Ventilation facilitates entry into the structure, locating the seat of the fire, aids in rescue operations and decreases the danger to trapped occupants by reducing the temperature and removing the hot toxic gases. Additionally, ventilation reduces the chances of a flashover or a backdraft. Ventilating a structure directly aids fire fighting tactics and suppression efforts. Without it, fire attack crews would not be able to enter a structure due to the extreme temperatures and zero visibility conditions.

Ventilation provides a systematic method of;

- Facilitating entry into the structure
- Aiding fire attack crews in locating the fire
- Expediting rescue efforts
- Increasing the survivability of trapped occupants
- Removing super heated gasses and smoke
- Increasing visibility for suppression crews
- Preventing the spread of heated gasses and smoke to uninvolved areas
- Reducing the potential for a flashover (*High temperatures in a room cause the ignition of all the combustible contents a room*)
- Controlling backdraft conditions (*When hot unburned gasses that are trapped in a room have insufficient oxygen to burn. The needed oxygen for the gasses to ignite is supplied when fire crews open the door to an involved room, resulting in an explosion*)

Some of the safety concerns while operating on a roof are apparent - for instance, maintain a sure footing! There are many concerns that a Truck crew must be diligent to, some of these are:

- Recognizing at what point the fire is at before laddering a roof,
- Once on the roof, identifying where the fire is, and what type of hole needs to be cut,
- Familiar with building construction techniques, some of which can pose grave danger to fire crews operating on a roof that has been exposed to fire and heat,
- Spending as little time on a roof as possible, you have many other jobs to perform!

Truck companies provide specialty skills and equipment involved in:

- Horizontal ventilation
- Search and rescue operations
- Forcible entry
- Auto extrication (Removing patients from a car using the “Jaws of Life”)
- Technical rope rescue
- Shoring of collapsed structures
- Aerial operations
- Large ground ladder utilization