Never in Vain Drill
November 29

At Fired Up Training Services, LLC we are devoted to passing on life saving information to our Brother Firefighters. The Never in Vain Drill is a series of drills and training topics based on a line of duty death in the fire services’ history. They are in no way intended on placing blame or are armchair quarterbacking. They are simply passed on as a learning tool so that no firefighter ever dies in vain.

November 29, 2003 – Lancaster, MA, 76 Mill St, 2nd Alarm Fire
Firefighter Martin "Marty" McNamara V

The victim and another firefighter were in the basement applying water to the fire on the ceiling. A Deputy Chief in the basement reported to Incident Command that the fire was knocked down and requested ventilation. A positive pressure ventilation (PPV) fan was started at the front door as the basement windows were vented. Suddenly, thick black smoke filled the entire basement area as the hoseline became covered by debris falling from shelving in the basement. The Deputy Chief called for a Mayday as he was running out of air just after he told the crew to exit the basement. He was assisted from the structure, fell unconscious, and was rushed to a hospital. The victim’s rescue, however, was hampered by the heightened fire conditions. The victim was recovered approximately 1 ½ hours later and transported to a local hospital where he was pronounced dead.

Summary from NIOSH report http://www.cdc.gov/niosh/fire/reports/face200402.html

Training Topic

Many advocates of positive pressure ventilation (PPV) believe that a gasoline-powered blower should be in place during the initial stages of fire attack. While there have been studies that demonstrate some benefits of this tactic, we believe that there are many potential downsides that must be considered before starting the fan. Like the Bresnan distributor, high-expansion foam, and the piercing nozzle, positive pressure is a tool that has a time and a place on the fireground. It must, however, be used with due consideration of some critical factors.

Hands On Training

Successful interior operations often depend on ventilation. Ventilation minimizes the time needed to locate the fire, reduces danger to victims and increases visibility.

PPV is the use of a gasoline power blower at an entrance to force fresh air into the structure. An exhaust opening must be provided to allow for smoke and heat to exit. The technique can be very effective in clearing smoke from the interior of a building. The timing of any ventilation becomes critical with lightweight construction.

Truss and TJI construction are now common in many areas. These light weight methods are more prone to collapse. Fires intensified by PPV could lead to earlier failure.
extremely important and must be coordinated with fire attack activities. Portable radio communications between teams and Command help facilitate this interaction.

According to John Mittendorf, in his book *Truck Company Operations*, you may not want to use positive pressure:

- With balloon frame construction
- With attic fires
- When the location of the fire is unknown
- During vent-enter-search operations
- During search and rescue
- During overhaul

While positive pressure has been demonstrated to reduce heat and toxic gases in some scenarios, it is the unknown factors that can cause issues. If the location of the fire is unknown or is hidden in voids, the fire can be intensified and driven into other areas. If the location of victims in relationship to the fire and the exhaust opening is unknown, we could drive fire at them.

Some questions are important when considering positive pressure:

1) Is the team well trained and proficient in its use?
2) Do you have the fire located and controlled?
3) Have all civilian victims been accounted for and are firefighters clear of the exit path of the products of combustion?
4) Can the exhaust and entrance points be controlled and have the effects of wind conditions been accounted for?
5) Is a radio-equipped member positioned near the fan to quickly shut it off should the fan cause fire extension?

If the answer to any of these questions is no, then hold off on starting the fan. It is important to continue size-up throughout the incident. If conditions worsen following any tactic, it is wise to reconsider the tactic.

**Questions for discussion**

1) What is your fire department’s SOP on positive pressure ventilation?
2) What situations would you use the fan?
3) What additional considerations can you think of in determining if PPV is appropriate?