

# HOSE SECUREMENT

When hose lines or other appliances are unintentionally deployed from moving apparatus, consequences can range from public embarrassment of the Emergency Service Organization (ESO) up to serious property damage, personal injury and/or fatal injuries. In recent years, there have been numerous documented incidents of death, injury and property damage resulting from hose lines falling from apparatus during response. Typically, unintentionally deployed hose lines go unnoticed until after the incident has occurred. This bulletin provides some suggestions to help prevent such occurrences.

## CASE EXAMPLE

In Pittsburgh, PA, a young girl died of head injuries a day after she and a friend were hit by a nozzle on a fire hose that became uncoiled as a truck rushed past her to a fire. The young girl and her friend were struck as they stood in the yard near her home. The Fire Chief said the girl's death was a tragic accident resulting from a 30-foot section of a 150-foot hose on the side of a truck coming loose from the truck's side compartment as the truck sped to a clothes dryer fire about a block from where the girls were hit by the nozzle.

The Chief went on to say the department, and especially those five members on the truck, are badly shaken. "We're here to help people, not hurt them," the Fire Chief said. Neighbors said the fire hose whipped through several adjoining yards, knocking over plants and breaking a birdbath before the girls were struck. The Fire Chief said the firefighters could not hear the hose dragging because of the truck's siren and diesel engine.



The most effective way to reduce the risk of these types of incidents is through positive securement of hose lines and equipment mounted to the outside of apparatus. National Fire Protection Association (NFPA) 1901, Standard for Automotive Fire Apparatus Section 15.10.7 reads: "Any hose storage area shall be equipped with a positive means to prevent unintentional deployment of the hose from the top, sides, front, and rear of the hose storage area while the apparatus is underway in normal operations."

The wording of the NFPA Standard allows for some discretion in the types of systems used to positively secure the hose to the apparatus. There have been a number of products developed by manufacturers to aid in preventing inadvertent deployment of fire hose. These products include fully enclosed hose bed covers, buckled straps, webbing,

mesh, wind deflectors, and other material restraints or a combination of restraints.

To prevent inadvertent deployment of the nozzle or equipment from the vehicle, consider:

- The control of both wind lift and movement of the hose from road vibration;
- The wear effects on the securement device from water, UV exposure, and abrasion against the apparatus frame and hose couplings; and
- The securement of hose connected nozzles and portable equipment.



## Summary

Hose lines are a vital asset to a fire apparatus and the crews that use them. However, they can present a danger to life and property if not secured properly. We have suggested a few methods available to ESOs to secure their hose lines and consideration should be given to the product that best fits your department's needs. Whatever method is used, verifying that hose lines are positively secured should be a part of your organization's routine vehicle inspection process.