



Ladder Trucks and Power lines- An Electrifying Combination!

A recent incident involving a Maine Fire Department occurred when they extended the aerial on the ladder truck and made contact with overhead powerlines. The electrical current that passed through the ladder and truck was sufficient enough to ignite one of tires on fire and compromised the integrity of the vehicle components, resulting in extensive damage. Fortunately no one was injured by this event, but the potential for fatality or serious injuries was high.

Maine is not alone in experiencing such a loss. In 2014, Columbia, Missouri suffered a similar event and tragically, in Pennsylvania and Kentucky, firefighters were electrocuted when they contacted power lines while working from aerial apparatus.

Due to the extremely high potential for loss of life and property, MMA Risk Management Services is requesting that all members of the firefighting community learn from these catastrophic events and review and update their SOP's and training protocols for working near energized conductors above 600 volts so that these accidents can be avoided.



Furthermore, aerial apparatus are often used to suspend the flag over routes for special events. On occasion these routes are in close proximity to power lines with the associated risk of accidental contact by the extended ladders. It is important to note that it may not be necessary to have contact with a powerline for the aerial device and apparatus to become energized.

The National Institute for Occupational Safety and Health investigated the Pennsylvania fatality, and recommended the following **Lessons Learned**:

- Fire departments should develop, implement, and enforce written standard operating guidelines for working in proximity to overhead powerlines.
- Visually inspect the surroundings above and around the apparatus prior to extending aerials and always consider powerlines as energized.
- Ensure that a distance of **at least 20 feet** is maintained between aerial devices and overhead powerlines.
- Ensure that a Safety Officer is assigned to the apparatus.
- Ensure that firefighters receive periodic safety training specific to all tasks they are expected to perform.
- Use alternating current proximity warning devices to detect electrical current when working near potentially energized powerlines as a *secondary* or *redundant* means of protection.



- Follow apparatus manufacturer's safety warnings.

The last thing we want is for anyone to be seriously injured or worse from a preventable incident. MMA Risk Management Services is asking that all members learn from these events and update their SOP's and train all staff on safety measures so that these accidents can be avoided.

The NIOSH report on the Pennsylvania fatality contains more detail on these steps and can be accessed at: <https://www.cdc.gov/niosh/fire/reports/face200801.html>

NIOSH's Fire Fighter Fatality Investigation and Prevention site can be reached at: <https://www.cdc.gov/niosh/fire/default.html>