



## ELECTRICAL FIRES IN COMMERCIAL VEHICLES “SNOW PLOW TRUCKS”



The NYS OFPC Arson Bureau has recently investigated three fire incidents involving fires in large commercial vehicles outfitted as snow plow trucks. The incidents involved various commercial vehicle manufacturers spanning a date range from 2005-2008, all outfitted with snow plow and sander bodies, with one incident resulting in fire damage to the vehicle and two incidents with fire extending to the Highway Department garage complex. These fire incidents represent significant dollar loss to vital equipment in addition to the catastrophic devastation to a municipality's infrastructure.

**Common Fault** - The cause of these recent fires appears related to the electrical systems of these large commercial vehicles. Fire Investigation revealed electrical short circuiting as a result of worn electrical cable insulation as shown in photo A.

These failures appear to occur where large capacity electrical cables interact or come in contact with the chassis frame or short to ground. Additional electrical equipment problems have been discovered attributable to missing or improper fusing of installed equipment.

As a result of these devastating fires and others of a similar nature during past winter seasons, the Office of Fire Prevention & Control urges all agencies who operate commercial snow plow vehicles to consider the following fire prevention measures as part of your agencies preventive maintenance program;



Photo A

## Prevention Measures -

1. **Inspect** battery cables and vehicle electrical distribution wiring for signs of wear, chaffing or contact with the frame and secure as necessary to prevent abrasion as illustrated in photo B.
2. **Inspect** the Fuse protection of the electrical system to assure proper fusing of circuits and secondary equipment. Fuse protection should include fail safe protection from incidents of a main electrical cable short or failure. Consult the vehicle manufacturer as necessary for guidance.
3. **Routinely** maintain all electrical connections to assure they remain tight and free from corrosion.
4. **Follow** all manufacture recommendations for the proper installation and operation of the vehicle electrical system to include all aftermarket equipment requiring electrical connection to the vehicle systems.
5. **Inspect** fuel and hydraulic lines for signs of wear and repair and secure as necessary to prevent abrasion.
6. **Protect your facility** by ensuring the building complex is free of common fire hazards and that suitable fire prevention measures are in place and working, to include an effective early fire detection alarm system.



Photo B



*The destruction pictured illustrates the damage caused by such incident in a facility without early warning detection.*



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