



# Training notes from the woods & the classroom

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## Fires On Equipment

*By Lee Schauman*

One of the most devastating occurrences on the logging site is the loss of equipment because of fire. And for the most part, it is lack of proper maintenance and/or periodic inspections to find potential problems. That's particularly true of possible electrical problems not detected early.

Fires started by electrical short circuits are believed to start at least one third of all equipment fires. Wiring and battery cables are subject to unusual wear. Wiring insulation can become abraded or torn causing short circuits. This condition, along with accumulations of oil, fuel, and debris is a disaster waiting to happen. When doing the daily check, pay attention to areas where wiring might go through machine frames. Be sure grommets are in place, that harnesses are not tattered or worn, that insulation is not worn to expose wiring. Where wiring might be rubbing against other machine parts, put extra protection around the wiring to prevent it from shorting or becoming exposed. Fix any damage immediately to help prevent fires.

Another area of a potential heat source is the braking system. Brakes that might be dragging, or emergency systems that aren't released, especially on older machines, can be a lethal source of heat that can potentially start an equipment fire. Be sure that brake systems are in good repair, and that the machine can't move with brakes engaged.

Another cause of fire is flammable material coming in contact with hot engine parts. Housekeeping is the key to prevention in this type of fire. Newly purchased woods equipment is relatively safe from fire, but when working on the job, leaves, needles, twigs and other debris can quickly accumulate in corners and in partially enclosed areas. All debris should be removed daily to prevent accumulation and the possibility of it drying out to tinder dry conditions.

Finally, the exhaust system generates a tremendous amount of heat and fumes during machine operation. Exhaust systems in poor condition can lead to overheating and/or engine damage, and can cause equipment or forest fires. They can also cause the operator to become ill when fumes enter the operators station. Keep your exhaust system in good repair, and correct damaged systems immediately. Some machines provide an insulation kit for exhaust systems within the engine compartment. This is a viable option that can't be overlooked to prevent engine compartment fires.

### FIRE PREVENTION GUIDELINES

1. Keep the engine compartment clean
2. Stop leaks and inspect electrical circuits regularly

3. Stop engine while fueling, and NO SMOKING
4. Maintain a charged fire extinguisher
5. Remove debris daily
6. Inspect the exhaust system and repair when necessary.

Having a properly charged and working fire extinguisher provided on each piece of equipment is paramount to preventing catastrophic machine fires. Factory installed fire suppression systems is also an option on most new equipment and should also be considered. Some insurance companies may be insisting on this already, or are contemplating it in the future. In any event, properly working fire extinguishers appropriate in size for the piece of equipment must be installed on the equipment for easy and quick access.

Fire prevention is knowing the three elements necessary to have a fire. Eliminate one and you stop or prevent the fire. FUEL, OXYGEN, HEAT!!!

Operate Safe!

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Minnesota Logger Education Program  
Dave Chura, Executive Director  
301 W 1<sup>st</sup> Street; Suite 510  
Duluth, MN 55802  
218-722-5442 · [dchura@mllep.org](mailto:dchura@mllep.org) · [www.mllep.org](http://www.mllep.org)