

MAFES Dawg Tracks

November 4, 2013



Hand and
Power Tool



Power tools and hand tools are “Modus Operandi” in our university work, as well as industry wide. They are labor and time savers. Abusive use, disregard of safety rules and unfamiliarity with the equipment all can lead to a serious injury. Like all types of equipment, the operators must remain focused while using these types of appliances to avoid an injury.

According to the WorkSafe Center, power tool injuries account for as many as 400,000 annual emergency room visits. The most common types of tools responsible for these ER visits are:

- Power Nailers - 37,000 visits per year
- Chain Saws - 36,000 visits per year
- Table Saws - 29,000 visits each year
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6% of workplace fatalities, with entities working 11 or more employees, are the direct result of electrocutions at their jobs. Workplace injuries reach out much farther than just medical costs. Other factors involved are:

- ~~ Morale
- ~~ Effects on family members
- ~~ Job skill replacement
- ~~ Costs of hiring and training new employees.
- ~~ Group health insurance costs
- ~~ Loss productivity
- ~~ Tight employment labor market

According to the Missouri Employers Mutual Insurance, the average cost of a lost-time claim is \$20,000. With the right focus and commitment to safety, this figure could be greatly reduced. Following are some safety tips that, if practiced, will help you to avoid joining the lists of injury statistics:

GENERAL TIPS-

- ✓ Use the right tool for the job. Match the tool to the task.
- ✓ Examine the tools before you begin a project. On power tools, check the cords for frays, cuts, etc.; check saw blades for proper sharpening and on the saw itself that the chain is properly adjusted. For drills and circular saws, that they are in proper working condition. Tools that are not in good working order should be taken out of service and reported to the maintenance manager or supervisor. Hand tools must be in acceptable working condition. For example, you don't need to use a punch or chisel with a “mushroom” top on it or a hammer with a loose handle.
- ✓ On power tools, always read the instruction manual and get completely familiar with all the texts.
- ✓ Check to be sure that the plugs have 3-prongs. All power tools should be equipped with 3-prong plugs and should be approved by Underwriters Laboratories.
- ✓ Make sure that all guards and shields are in place and are in good working order.
- ✓ Always wear the required PPE for the job. For example, when drilling, cutting, sanding or scraping, always wear glasses, face mask or a face shield.

- ✓ Avoid using power tools in wet or moist conditions. Try to have GFCIs for your plugs. If not available, try to get management to allow the installation. GFCIs in wet or moist areas with 60 inches are a requirement by the Miss. State Electrical Code and also are a viable safety enhancement.
- ✓ Do not wear loose clothing, dangling jewelry or other loose obstacles that could get caught in a revolving shaft, a pulley or a power tool. If you have long hair, be sure to keep it tied or pulled back with a band or string. I was attending a regional seminar yesterday and a prime example of this was used. A young lady working in a laboratory at Yale University was working on a research project (with long hair), alone at night. She was found dead the next morning, resulting from her hair getting caught in an unguarded pulley. Death was ruled as suffocation and broken neck.
- ✓ Disconnect tools before making adjustments, changing attachments or other machine adjustments.
- ✓ Maintain solid footing, grip the tool securely and maintain an awareness of your surroundings.

OTHER HELPFUL TIPS-

- Keep fingers away from saw blades. Clamp materials down and keep all guards in place. When using a table saw, using a push block to assist in feeding the blade is a good safety tip.
- Do not use compressed air to clean people.
- When you are doing electrical work, be sure to use insulated, rated tools.
- When you use pneumatic tools, be sure to have a safety clip or a retainer installed to prevent the hoses or equipment from coming apart. Never point pneumatic tools at a person.
- All hand grinders must be used with the guards and handles in place.
- As mentioned above, make sure that punches, chisels, and wedges are free of “mushroomed” tops.
- Wooden hammer handles, shovel handles, etc. must be free of splinters and cracks.
- Abrasion wheels for grinders must be free of cracks or defects.
- When working in flammable environments, make sure that your tools are made from spark-resistant materials such as brass, plastic, aluminum or wood which will prevent ignition sources.
- When using a power saw, do not stand directly in front of the saw, but stand to the side, keeping your hands away from the blade.
- Always be aware of the potential for having a “kickback” when using chainsaws, drills, or circular saws. If a hand saw gets into a bind, you can muscle it out and start over. A power saw turning at thousands of revolutions per/min. can cause the material you're cutting to fly back into you, possibly causing a serious injury.

Safety Rules are Your Best Tools

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