



RISK MANAGEMENT ADVISORY

Utica National Insurance Risk Management Department Bulletin

Construction Series

Think Safety!

Use of Hand Tools and Power Tools

Business Case

Hand injuries from the use of hand tools and power tools account for 10% of occupational injuries. The average Workers Compensation case costs employers approximately \$2,000. However, many injuries are serious and involve amputation of fingers and hands.

General Solutions

- Read the owner's manual before using a new power tool.
- Never use any tool – power or manual – unless you are trained to do so.
- Inspect power tools before each use and replace or repair if parts are worn or damaged.
- Inspect screws, nuts, bolts and moveable parts to make sure they are tightened.
- Before plugging or unplugging tools, be sure power switch is turned to "OFF."
- Never clean or repair a tool unless power is disconnected. (Repair tools only if you are trained to do so.)
- When working on ladders or scaffolding, rest power tools on a flat surface or in a bin by itself. (A falling tool can seriously injure a co-worker or bystander.)
- Use a ground fault circuit interrupter when working with power tools.
- Do not wear rings, jewelry or loose clothing when operating power tools.
- Wear Personal Protective Equipment (PPE), such as face shields, safety goggles, disposable masks, etc., as required.
- Use your tool only for the specific task it was designed to perform.
- Avoid using tools that force the hand or wrist into awkward positions.
- Tools should be well-balanced and should fit the hand comfortably.
- Tools should not be so heavy that they strain the arm and shoulder.
- Do not use tools that require excessive force to use.
- Tool handles should be designed to minimize the grip force needed. (For example, they are not slippery.)
- Handles should have soft grips that don't cut into your hand.
- Only cutting tools are used to cut metal strapping or banding that secures cargo.

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Solutions – Inspection

- Tools should be inspected daily before use and are kept clean and in good repair. They should be checked for sharpness, chips, “mushrooming,” wear and metal fatigue before use. Periodic checks should be made for tightness of bolts, nuts and screws.
- Damaged, defective or worn tools should be tagged and removed from service until repaired.

Solutions – Work Practices

- Workers should use only tools with which they have experience or on which they have been trained.
- Tools should be used only on secure and stable work surfaces. Work should be secured with a vise or clamps, if necessary.
- Workers using tools should stand on a clean, dry surface to prevent slipping.
- Work surfaces should be adjusted to minimize reaching, bending and other awkward postures.
- Tasks should be varied so the same tool isn’t used all day, straining the hand.
- Work areas should be well-lighted.
- Direct knives away from the body during cutting.
- Spark-resistant tools should be used where sources of ignition are prohibited due to the presence of flammable materials.

Solutions – Personal Protective Equipment

- If necessary, personal protective equipment (PPE) should be provided by the Religious Institution and worn by workers. The types used should be appropriate for the work.
- Workers using tools should always wear safety glasses with side shields or other eye/face protection. Eye and face protection should meet the requirements of American National Standards Institute.
- When work with tools involves potential risk of cuts, burns, or harmful physical or chemical agents, workers should use appropriate hand protection. (Exception: Not required if gloves might become caught in moving parts or machinery). If gloves are used, tools must still be gripped easily.
- When using tools, workers potentially exposed to foot injuries from crushing or penetrating actions, hot surfaces, falling objects or hazardous substances, or who work in abnormally wet locations, should use appropriate foot protection such as steel-toed safety shoes and/or boots.

Solutions – Storage and Maintenance

- Tools should be stored in pouches or other appropriate containers when they are not being used. Sharp-edged or pointed tools (knives, etc.) should be kept in sheaths, not in workers’ pockets.
- Tools should not be left on ladders, scaffolds or overhead work spaces.
- Tool belts should be used, especially when workers are on ladders.
- Tools should be protected from contact with oil, hot surfaces and chemicals that might damage them.
- Tools should be kept clean and sharp.

Recommended use of this Alert:

- New hire training and orientation and tool box meetings.
- Pre-job Planning.
- Job Safety Analysis.
- Accident Investigation.

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