

General Safety for all Hand Tools

Always wear safety approved eye protection

•Tool usage often involves forces that are much higher and more concentrated than most tool users realize. Because of this, failures often result in material fragments being thrown at a high rate of speed. Eye protection, such as safety-rated glasses or goggles, is essential when using any type of hand tool.

Use proper hand protection

•Depending on the task, it may be advisable to wear gloves to protect hands from cuts and abrasion. Select gloves that provide the proper degree of protection while assuring an adequate level of sensory feedback so the worker can maintain complete control of the tool they are using.

Dress appropriately for the job

Along with proper eye and hand protection, steel toe shoes may be advisable. Avoid loose fitting clothing and remove all jewelry.

Follow good ergonomic practice

Simply stated, ergonomics attempts to fit the work to the worker by analyzing four things: the worker, the workplace, the task, and the tool. As such, proper hand tool selection is only one part of good ergonomic practice. Additionally, the frequency of tool use and the degree of repetitive motion required by the work are key factors in determining the need for special “ergonomically designed” hand tools. If a task involves constant use of a single tool and highly repetitive motion for long periods, specially designed tools are recommended, however in most cases, a common sense approach to hand tool ergonomics is the proper recommendation:

- The tool should function effectively. For example, a pair of tin snips should easily cut thin sheet metal without the need for excessive force.
- The tool should fit the operator. Not only should the tool fit a user’s hand properly, but it should also match the operator’s work capacity and skill.
- The tool should not produce fatigue
- The tool should provide sensory feedback. You should be able to sense pressure, impact, texture, etc.
- Smooth cylinders are generally not the best shape for most tool handles
- Form fitting handles (with ridges to fit the fingers) should be avoided
- Handle materials should provide enough friction for an adequate grip
- Tools should be designed to allow a “power grip” (fingers wrapped completely around tool, providing the strongest grip) wherever possible
- “Pinch grip” positioning (as in holding a pencil, where the fingertips apply relatively high force) should be avoided, since it increases the chance of injury

Transport tools safely

•Whenever possible, carry tools in a toolbox. When you must carry individual tools, keep sharp tools, such as screwdrivers, pointed down.

Never alter or repair a tool

- Never modify or attempt to repair a tool by welding, grinding, or any other method.
- Worn out or damaged tools should be discarded and replaced. The only exception to this is tools that the manufacturer specifically states can be resharpened; even then, resharpening should be done by experienced firm that specializes in tool maintenance.

Be aware of other workers in your area

- Don't count on others to look out for your safety. Be alert to co-workers using hand tools or engaging in activities that might present a hazard to you; take appropriate action to ensure you are protected from danger.

Maintain your tools

- Periodically check your tools for wear. Make it a habit to clean tools before putting them away. Tools with moving parts should be lubricated on a regular basis.

Use tools for their intended purpose only

- Tools are made to do specific jobs, but it is often more convenient to use the tool you have with you for the task at hand. Don't do it; get the right tool for the job.
- When working in areas made hazardous by the presence of flammable vapors or dust, use only non-sparking tools made specifically for that purpose.
- When working near electrical circuits, make sure you are using tools protected with high dielectric insulation specifically made for that purpose. Do not use tools with standard cushion grips in such cases, as they offer no protection against electrical shock

Never expose to excessive heat

- Excessive heat, such as that produced by a blowtorch or electric heating coils, can make hand tools brittle or weak, creating a danger to the user. Avoid exposing tools to flame or any extreme heat source.

General Safety Guidelines for measuring tools

Always wear safety approved eye protection

- As previously stated, eye protection is essential when using any type of hand tool.

Control the retraction of measuring tapes

- The end hooks of tapes retracted too quickly may whip around violently, possibly hitting the user.