

HAND/POWER TOOL SAFETY

Statistics tell us that hand and power tools are involved in thousands of accidents and injuries every year. Many of them are serious, some even fatal. Employees have lost their eyesight, severed tendons, broken bones, and suffered infections from puncture wounds, all because of unsafe practices with hand tools or use of tools that were poorly designed for the specific job.

The purpose of this handout is to provide a basic overview of the common hand and power tools that are found in work areas throughout the county.

HAND TOOLS - Hand tools are non-powered, which includes wrenches, chisels, screw drivers, hammers, etc. The greatest hazards posed by hand tools results from misuse and improper maintenance.

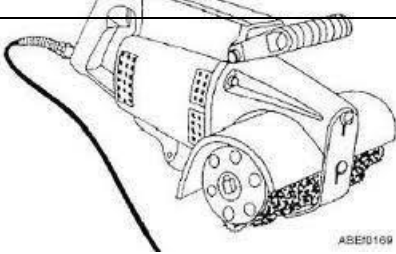
SAFE PRACTICES FOR HAND TOOLS:



Select the right tool for the job - Striking hardened faces of hand tools together (such as using a carpenter's hammer to strike another hammer, hatchet, or metal chisel), using a file for a pry, a wrench for a hammer, using a 'cheater', and pliers instead of the proper wrench.

Keep tools in good working condition - Wrenches with cracked work jaws, screw drivers with broken points or broken handles, hammers with loose heads, dull saws, and extension cords or electric tools with broken plugs, improper or removed grounding prongs, or split insulation are examples of tools in poor conditions. Tools that have deteriorated in this manner must be taken out of service.

Use tools the right way - Screwdrivers applied to objects held in the hand, knives pulled toward the body, and failure to ground electrical equipment are common causes of accidents. Always use the tool according to the manufacturer's instructions.



ELECTRIC POWER TOOLS - Electric power tools require an electrical source to actuate the device. Common examples include grinders, drills, and soldering irons. The most serious hazards associated with electric tools are burns and shocks. Electrical shock can lead to heart failure - Even a small amount of current (less than 60 milliamps) can stop or interrupt normal heart rhythm. An electrical shock can also cause the user to fall off a ladder or other elevated work surface and be injured due to the fall.

SAFE PRACTICES FOR POWER TOOLS:

1. Only qualified personnel shall operate powered hand tools.
2. All hand tools shall be inspected for safe operation.
3. Remove all damaged portable electric tools from use and tag > "Do Not Use."
4. Use all guards supplied by the manufacturer.
5. Power tools shall have a constant pressure switch that allows turn on/turn-off with the same finger.
6. Never disconnect the tool from the electrical outlet by pulling on the cord.
7. Disconnect tools before changing attachments such as blades, bits, and cutters.
8. If the tool is not double insulated it must have a three-wire cord and be plugged into a properly grounded receptacle.

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PNEUMATIC POWER TOOLS

Pneumatic tools are powered by compressed air and include needle guns, impact wrenches, drills, hammers and grinders.

SAFE PRACTICES FOR PNEUMATIC TOOLS:

Serious, sometimes fatal injuries can be caused by compressed air being injected into the body through the skin or into a body opening, such as your mouth or ear. Internal human blood vessels and organs will rupture at much lower pressures than those found in compressed airlines. Compressed air shall not be used for cleaning clothing unless fitted with an approved pressure reducer.

All hoses and fittings shall be properly rated and sized. Radiator type hose clamps are not an acceptable method for repairing air- line connectors – Fittings must be permanently secured with a crimp on compression collar. Do not “play” with air powered tools or equipment.

To prevent hose whipping, always bleed air pressure from the compressor side of the line before disconnecting an extension hose.

All Chicago-style hose couplers must be pinned when in use.

Never replace compressed air with oxygen or other gases.

Noise is another hazard. Working with noisy tools for extended periods of time such as chipping hammers, needle guns and jack hammers require proper hearing protection.

GENERAL SAFETY THAT APPLIES TO ALL HAND AND POWER TOOLS

CARRYING TOOLS

Never carry tools, which in any way could interfere with using both hands freely on a ladder or while climbing on a structure. Use a tool bag, bucket, or similar container to hoist tools from the ground to the job. Return tools in the same manner. Never bring tools down by hand, carry in pant/shirt pockets, or by dropping them to the ground.

PERSONAL PROTECTIVE EQUIPMENT

Appropriate personal protective equipment (safety glasses, face shield, goggles, gloves, etc.) must be worn to protect from hazards while using any power or hand tools.

GUARDS

Hazardous moving parts of a power tool need to be safeguarded. For example, belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other reciprocating, rotating, or moving parts of equipment must be guarded if such parts are exposed to contact by employees.

Guards, as necessary, should be provided to protect the operator and others from:

1. Point of operation
2. In-running nip points
3. Rotating parts, and
4. Flying chips and sparks

SAFETY FIRST!

*Always inspect the tools you use prior to use! Insure that it is serviceable and designed for the job.