



JOB AID

HAND

AND POWER TOOL SAFETY

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Hand and Power Tool Safety

Since hand and power tools are so common, workers are constantly exposed to a variety of hazards. Without taking some basic safety precautions, the very tool that makes their job easy and efficient may one day be the cause of a tragic accident.

Hand Tools: Hazards and Precautions

Hazards associated with hand tools include cuts and scrapes, broken bones, injuries from being hit by falling objects, injuries from tripping over tools, and electric shock and burns. These injuries can be very severe and are often life-changing, both on the job and off.

Important precautions to prevent these injuries include:

- Wear the proper personal protective equipment (PPE) to protect your eyes, face, hands, feet and other body parts. Hearing and/or respiratory protection are also necessary in some situations
- Don't use tools that are broken, bent, chipped or cracked
- Mark any worn, damaged or defective tools and store them in a secure place, marking "out of service" on the container so that others do not attempt to use them
- Use the right tool for the job and don't use makeshift or improvised tools
- Tie off your tools and containers to keep tools from falling off elevated platforms and scaffolds
- Use sheaths and holsters for carrying sharp tools
- Cut in a direction that is away from your body
- Sharpen tools so they require less force and perform the way you expect **Tool-**

specific precautions for hand tools include:

Striking tools

- Don't strike objects with the side of a hammer
- Don't strike two hammers together
- Keep hands and tool handles free of oil, grease and moisture

Tightening and loosening tools

- Fit the screwdriver to the job
- Keep fingers away from the screwdriver tip
- Don't use pliers or a hammer on a screwdriver

Cutting tools

- Avoid chisels with "mushroomed" or cracked heads

- Always carry a tool by the handle
- Never point the blade toward yourself or a co-worker

Scissor-type tools

- Don't force pliers by using a hammer on them
- Only use electrical insulated cutters around electrical wires

Prying tools

- Use tools that have both a grip and a heel
- Never use makeshift pry bars
- Pull rather than push the tool if possible to avoid losing your balance

Digging tools

- Don't twist your spine when shoveling
- Use the ball of the foot to push the shovel
- Switch hands and feet used on the shovel
- Make sure the top of the shovel and your shoes are not overly muddy, greasy or slippery

Smoothing tools

- Grasp the handle of the file or rasp with one hand and the toe with the other hand

Toolboxes

- Tape or file down sharp edges
- Lock wheels
- Lock drawers when moving
- Never stand on toolboxes, chests or cabinets
- Avoid overfilling top drawers, and open just one drawer at a time

Power Tools: Hazards and Precautions

Hazards associated with power tools include cuts, crushing injuries, inhalation hazards (dust and other airborne particles), electric shock, fire and explosions. Important precautions to prevent these injuries include:

- Wear the proper PPE
- Keep tools sharp, clean and well-maintained

- Never detach or disable a safety guard
- Never pull on the cord or the hose when disconnecting a tool
- Carry tools by the handle, not the cord
- Keep cords and hoses away from heat, oil or sharp edges
- Make sure that all cords are disconnected when they are not in use • Use clamps and vises to secure your work, freeing your hands
- Avoid unintentional starting by disconnecting the energy source

Tool-specific precautions for power tools include:

Electrical tools

- Store tools in a dry area
- Use tools intended for damp locations if you must work in them
- Wear gloves unless they create an unsafe condition

Powered abrasive wheel tools

- Perform sound testing – If a wheel is good, it will have a clear metallic ring • Run equipment for 30 seconds or more to ensure wheel is mounted properly
- Make sure the wheel fits the spindle
- Ensure side guards are in place

Pneumatic tools

- Use screens to protect workers from flying debris
- Attach short wires or positive locking devices to hoses
- Use safety clips
- Be in firm contact with the work surface before discharging the tool
- Never point a pneumatic tool toward yourself or others

Cartridge (powder or explosive) tools

- Never use in explosive or flammable atmospheres
- Choose the caliber of powder cartridge needed for the tool and application • Never point the tool at anyone
- Keep hands away from the barrel end
- Don't load until ready to use

- Don't leave a loaded tool unattended
- Always perform a test fire
- Be in firm contact with the work surface before discharging the tool
- Do NOT use on thin materials such as plywood or drywall
- Unload immediately after use

Hydraulic power tools

- Always use the manufacturer-recommended fluid, which should be effective enough to operate at the most extreme temperatures
- Never use your hands to search for leaks. Instead, use a piece of cardboard or wood • Before disconnecting lines, be sure to relieve pressure. Before applying pressure, be sure connections are tight and fittings and hoses are not damaged
- Always use the manufacturer's recommended safe operating pressures for the hoses, valves, pipes, filters and other fittings