

Hazard Review

- **Cuts, abrasions**
- **Eye injuries**
- **Repetitive strain injuries**
- **Sprain**

Related Safe Work Practices

- **Ladders**
- **Lifting, Body Mechanics and Ergonomics**
- **Pruning**

Personal Protective Equipment

- **Appropriate gloves**
- **Safety face-shields (as needed)**
- **Safety footwear**
- **Safety glasses**

Authority

- **CCR Title 8 Section 1699, 3428, 6263, 6330**

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This safe work practice has been broken down into two sections:

- A. General
- B. Specific Hand Tools
 - Cant Hooks, Peavies, Tongs etc.
 - Chopping Tools (Axes)
 - Climbing Ropes, Spurs
 - Hammers, Mauls etc.
 - Mattocks and Picks
 - Stake Drivers
 - Sledgehammers
 - Utility Knives, Boxcutters
 - Wedges
 - Wrenches

The General section provides information that applies to just about every situation. The section on Specific Hand Tools gives information that may be specific or unique to a particular tool.

A. GENERAL

Before

1. Complete required training. This includes:
 - a review of the manufacturer's operating manuals.
 - training on this SWP and those listed as related. These must be completed before the initial assignment and every 2 years thereafter.
2. Use the right tool for the job and as per the manufacturer's instructions; for example, use a screwdriver as screwdriver, not as a chisel.
3. Make sure that tools are in good condition before you use them.
4. Use the right sized tool for the job.
5. Don the personal protective equipment as noted above to prevent personal injury whenever using striking tools, or other tools that might shatter or send debris or objects flying.
6. A climbing line or handline should be used for raising and lowering tools. Tools should be raised or lowered in a manner so the cutting edge will not contact the rope. When climbing (ladder or tree for example), don't carry tools in your hands, other than tools used to assist you in climbing. Tools (other than ropes) shall not be thrown up to a worker who is elevated or from worker to worker while elevated.
7. Maintain a safe working distance from other workers while using hand tools.

During

1. Don't do the following:
 - Use the tools inappropriately (example: testing cutting edges on your fingers rather than on scrap metal).
 - Work with your body in an awkward position. Some tools are designed in a way that forces you to work with excessive strain on your wrist, arm, shoulder or back. Also make sure you have enough space to work, and can keep your body at a comfortable angle to the work.
 - Use exceptionally hard hammers, wedges, and similar tools when softer ones are appropriate.

- Throw or drop tools from trees unless warning has been given, the ground area is clear, and the act of dropping will not endanger personnel or damage the tool.
2. When working on ladders or lifts, be sure to secure your tools so that they can't fall off and injure someone below. (*see Ladders*)
 3. Use tools on a stable work surface.
 4. Use tools in a well-lighted area.
 5. Try to use tools that lessen the force required for operation.
 6. Keep tools where they belong. Don't leave them on a ladder, scaffolding or overhead workspace where they may fall on someone or trip them.
 7. Carry tools properly. Use a tool belt, bag or box, especially if climbing on ladders. Tools shall not be carried in hands while climbing.
 8. Employees shall maintain a safe working distance from other employees when using hand tools.
 9. Working with sharp tools:
 - Keep blades sharp; dull tools are more hazardous than sharp ones, if used properly.
 - Let the cutting surface do the work; don't force it.
 - Keep knives in sheaths.
 - Always cut away from yourself (exception: draw knives).
 - Stay alert.
 - Store them properly so that others cannot be hurt by them.
 10. Ordinary iron or steel hand tools can produce spark when you use them. If you are working near a flammable substance (such as gasoline), it is best to use spark resistant tools. Spark resistant tools are usually made of brass, plastic, aluminum or wood.
 11. Hand tools shall be sheathed or boxed if transported with passengers in the passenger compartment of a vehicle. If not contained in a box, the sheathed tools shall be fastened to the vehicle.

After

1. Remove defective tools from service.

2. Battered, laminated, or crystallized iron wedges, chisels, punches, hammers, and similar equipment, mushroomed more than 1/4-inch from the body of the tool, shall be replaced or properly repaired.
3. Store the tools properly so that others cannot be hurt by them.
4. Keep your tools clean. Use brushes with handles to clean saw blade or other types of blade teeth.¹

B. SPECIFIC TOOLS

Cant hooks, Peavies, Tongs, etc.

- When hooks are used for loading, they shall be of the spiked bell type. The spike shall project beyond the lip of the cup, and both spike and lip shall be kept sharp.
- Loading hooks shall be kept in good repair and equipped with hand ropes.
- When there is danger of tongs or hooks pulling out of the logs, straps shall be used. Tongs may be used on extra large logs, provided the logs are barked and notched sufficiently for a secure hold.
- Hooks should be firmly set before applying pressure.
- Tools with cracked, splintered or weakened handles should not be used.
- Be sure all workers are warned and are in the clear before logs are moved.
- The points of the hooks shall be at least 2 inches long, and shall be kept sharp.

Chopping Tools (Axes)

- Chopping tools that have loose or cracked heads or splintered handles shall not be used.
- Chopping tools should not be used while working aloft.
- Chopping tools shall be swung away from the feet, legs, and body, using the minimum power practical for control.
- Chopping tools shall not be driven as wedges or used to drive wedges.

Climbing Ropes, Spurs

- Climbing ropes shall be used when working aloft in trees. These ropes shall have a minimum diameter of 1/2-inch and shall be 3 or 4 strand, first- grade manila, with a nominal breaking strength of 2,300 pounds, or its equivalent in strength and durability.
- Polypropylene or other synthetic ropes having similar low melting points shall not be used.
- Climbing ropes shall not be used to lower limbs or other parts of trees.
- Climber spurs shall be of the tree-climbing type and shall have gaffs of the type and length suitable for the tree being climbed.

¹ RPD Industrial Investigation, EHS Case #3144, DOI 7/10/06

Hammers, Mauls, etc.

- Wood, rubber or high-impact plastic mauls, sledges or hammers should be used when striking wood-handled chisels or gouges.

Mattocks and Picks

- The blade eye shall be tight-fitting and wedges so that it cannot slide down the handle.
- When swinging mattocks and picks, have a secure grip and firm footing, and be clear of overhead hazards.

Stake Drivers

- Try to plan this work for when you are feeling energetic, and not fatigued. Past injury has occurred when staff attempted to use this tool when fatigued.
- Check stake for structural integrity. Don't use old or damaged stakes.²
- Do not use while on a ladder.
- Let the tool do the work - lift and drop.
- Use good body mechanics when lifting the driver (e.g. bend knees instead of back, keep tool close to body; see *Lifting, Body Mechanics and Ergonomics*). Take breaks as needed.

Sledgehammers³

- Protective safety glasses and heavy-duty work gloves must be worn when using a sledgehammer.
- Carry sledges at your side by gripping the handle near the head, holding the tool away from your body as you walk.
- Use both hands when working with a sledgehammer as the head can weigh upwards of 8 lbs. Using both hands will reduce the likelihood of repetitive strain injury.
- If the hammer has a wooden handle, protect it from extreme dampness and drying. Too much dampness can cause the wood to swell and eventually crack; too much dryness can cause shrinkage, and loosen the head.
- Never use a hammer with a chipped head.
- Save your back and make it easy by bending your knees and bringing the weight close to your body to lift it. Straighten your knees a little at the top of the swing. Then let the hammer fall using its own weight. Check the hammer head often for looseness.
- If the head on a wooden handle becomes loose, try driving additional wedges into the top. If that doesn't work, or if the handle shrinks, cracks, or breaks, replace the handle.

Utility Knives, Boxcutters^{4,5}

² RPD Industrial Investigation, EHS Case #3641, DOI 11/16/07

³ Readers Digest: Sledge Hammers: <http://www.rd.com/home/home-and-garden/sledge-hammer/article12945.html>

⁴ Razor Knife Safety, Boise Packaging; <http://siri.uvm.edu/ppt/razorknifesafety/>

⁵ RPD Industrial Investigation, EHS Case #2934 (DOI 10/4/05)

- Be sure that the blades are properly seated before using, and that the box cutter is properly closed or fastened together before use.
- If you are opening a container, there may be instructions on how to open. If so, read before opening.
- Always pull, never push the box cutter.
- Don't cut towards your body. Make sure no body parts are in the cutting path.
- Take your time.
- When not using the box cutter, make sure the blade is retracted.
- Use only sharp blades. When a blade starts to tear instead of cut, its time to get a new blade.
- Do not use box cutter blades to open cans or pry loose objects. Do not bend or apply side load forces to the blade.
- When changing a blade:
 - Carefully remove the blade from the knife.
 - Always hold the blade on the non-sharp side.
 - Discard the used blade in a safe place. Carefully wrap it in several layers of tape to cover sharp sides and points if putting in standard garbage can. Or dispose of in a metal scrap bin.
- Make sure to re-assemble the knife correctly. Make sure the screw is tight.

Wedges

- Check for cracks before use.
- Ensure the wedges are properly pointed and tempered. Tools with mushroomed heads shall not be used.
- Only wood, plastic, or soft-metal wedges shall be used to stop pinching while operating power saws.

Wrenches^{6,7}

- To prevent slipping, make sure that the pipe or fitting is clean and the wrench jaws are sharp and kept clean of oil and debris.
- Pull; do not push. Pulling is easier to control if there is a sudden release of pressure.
- Use short, steady pulls rather than quick, jerky motions.

⁶ RPD Industrial Investigation, EHS Case #3413, DOI 4/9/07

⁷ Hand Tool Safety, Texas A&M; <http://engineering.tamu.edu/safety/new/templates/shopaf/handtool.htm>