

Clover Safe notes are intended primarily for 4-H volunteers and members nine years and older

#49 DRILL PRESS SAFETY

According to U.S. Consumer Products Safety Commission data, approximately 3,100 people received hospital treatment for power drill injuries during 2009. Most injuries involved lacerations and punctures to fingers and hands. Other injuries included corneal abrasions, foreign bodies in the eye, and hand and finger contusions. Most of these drill press injuries were due to operator error or inattention and could have been avoided.



Photograph Courtesy of the University of California 4-H Archives

Pre-Use Activities

- Thoroughly review and understand information provided in the drill press operator's manual with particular attention given to descriptions of safety procedures.
- Before using, always inspect the drill press for damage or disrepair. In addition, assure both the drill press chuck and spindle are functioning properly and inspect the electrical cord and plug.
- If the drill press fails your inspection, inform your group leader, parent, or guardian and remove it from use.

Operating Precautions

- Always wear safety glasses, face shield, or goggles when using a drill press.
- Never wear gloves, a tie, loose clothing, a watch, rings, or jewelry when using a drill press. Tie long hair back or secure under a cap.
- Use scrap stock to support the underside of the stock to be drilled. Center punch the drill-hole location.
- Use a clamp or vise to securely fasten the stock to the drill press table. Clamp cylindrical (round) stock into a V-block. Never attempt to hand-hold stock while drilling.
- Insert bit straight into drill chuck and tighten securely with the chuck key. Remove chuck key from the drill chuck before starting the drill press.
- On a variable speed drill, change the speed while the drill is operating. Otherwise, make all drill press adjustments with the power shut off.
- Keep hands and fingers at least four inches from rotating drill bits.
- Turn the drill press off before looking up or away from the work piece being drilled.
- When drilling metal, use cutting oil to lubricate the bit.
- Do not exceed the recommended speeds for the type and size of drill bit being used or composition of the stock being drilled. Use a slow speed for large holes and a faster speed for smaller holes.
- Feed the drill or bit smoothly into the workpiece. When drilling deep holes, frequently raise the drill bit from the hole to remove cuttings and cool the bit.
- Never stop the rotation of the drill chuck and spindle with your hands or fingers.
- If a workpiece comes loose or is seized by the drill, shut the drill off without endangering yourself.
- If a drill bit binds, turn off the drill press and carefully turn drill chuck backwards by hand to free the drill bit.
- Always clean the drill press table and work area and return drill bits and clamps to assigned locations upon completion of the drilling task. Use a stick or brush to remove chips and shavings. Never use your fingers.
- If you are injured by a drill press, notify your project leader, parent, or guardian. Seek medical attention if the injury is serious.

Note: Portions of Clover Safe #49 were developed from information provided by Richard Mahacek, County Director and 4-H Advisor, Merced County Cooperative Extension.