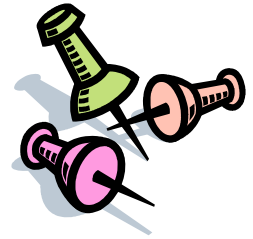




# Safety Note

UNIVERSITY OF CALIFORNIA  
AGRICULTURE AND NATURAL RESOURCES  
ENVIRONMENTAL HEALTH AND SAFETY



Safety Note #101

## METAL LATHE SAFETY



*Photograph Courtesy Kearney REC*

Metal lathes are designed to rotate at variable speeds which can exceed 6,000 rpm on some machines. As a result, the metal piece being fabricated is capable of throwing or spinning off sharp and hot pieces of metal. According to information available from the Consumer Product Safety Commission, common injuries experienced while using a lathe include foreign bodies in the eye, fractured fingers, and lacerations to the hands and fingers. California Code of Regulations Title 8, Section 3203 (7) requires employees be trained on the equipment they use in the workplace.

### Pre-Use Activities

- Thoroughly review and understand information provided in the metal lathe operator's manual with particular attention given to descriptions of safety procedures.
- Before using, always inspect the metal lathe for damage, disrepair, or missing parts, including assessing whether any shear pins are broken. Make sure all shields and guards are securely in place.
- If a metal lathe fails the pre-use inspection, notify your supervisor and remove the lathe from service by attaching a red tag that states "DO NOT USE." Complete red tag with appropriate information.

### Operating Precautions

- Always wear safety glasses with side protectors when using a metal lathe.
- Never wear gloves, a tie, loose clothing, a watch, rings, or jewelry when using a metal lathe. Tie long hair back or secure under a cap.
- Before starting, determine that the work piece is properly centered and securely clamped in the chuck. Always remove the chuck key from the chuck before starting the metal lathe.
- Keep metal lathe cutting tools sharp. Do not use damaged or broken metal lathe cutting tools.
- Always center drill the work piece and use a live tail-stock for stability when the work piece is turning.
- Keep your hands and fingers away from metal lathe moving parts and cutting tools.
- Follow recommended specifications for speeds of rotation and feed and depth of cut for the metal being turned.
- Prior to starting, assure the adjustment for the cutting tool and tool rest is set slightly above the center of the work piece.
- Do not measure work or attempt to adjust a chuck or work piece while it is rotating.
- Start the metal lathe at a slow speed and then gradually increase the rotational speed.
- Never reach across the rotating chuck or work piece while performing filing or burnishing operations.
- Always back the cutting tool away from the metal being turned and then turn off the metal lathe before adjusting or removing a work piece. Do not use your hand to brake or stop a rotating chuck.
- When finished, clean the metal lathe work area. Use a brush, rather than your fingers or hands, to sweep up waste metal shavings, cuttings, and swarf.
- Disconnect the power source before performing metal lathe maintenance.