

Safety Talk

Machine Guarding



THE UNIVERSITY OF
CHICAGO



Unguarded machine parts have the potential to cause severe workplace injuries. Injuries such as bruises, lacerations, crushed or broken bones, amputations, burns, blindness, or electrical shocks.

Important points to remember for machine guards:

1. Ensure all guards are in place and in good condition prior to using a tool or machine.
2. Remove machines from service if the guards are missing or in disrepair.
3. Follow lockout/tagout if you need to remove guards to perform servicing or maintenance.
4. Ensure other safety devices on the machine or tool are working (e.g. emergency shut-offs, interlocks, etc.).
5. Never operate machines or power tools while wearing loose clothing, hair, or jewelry.
6. Remember, some hand power tools also require machine guards.

Three areas that need safeguarding:

Point of operation: The point on the machine where work is performed on the material

- Mechanical actions such as: cutting, grinding, shearing, bending, punching, stamping, etc.
- Sometimes the work piece can be a moving hazard – use fixtures and anti-kickback devices when required.

Power transmission apparatus: All components of the mechanical system which transmit energy to the part of the machine performing the work.

- Parts such as: belts, gears, flywheels, chains, pulleys, springs, spindles, shafts, etc.
- Commonly overlooked on machines that are not used as tools (e.g. air handling units, pumps, etc.).

Other moving parts: Include all parts of the machine that move while it is working.

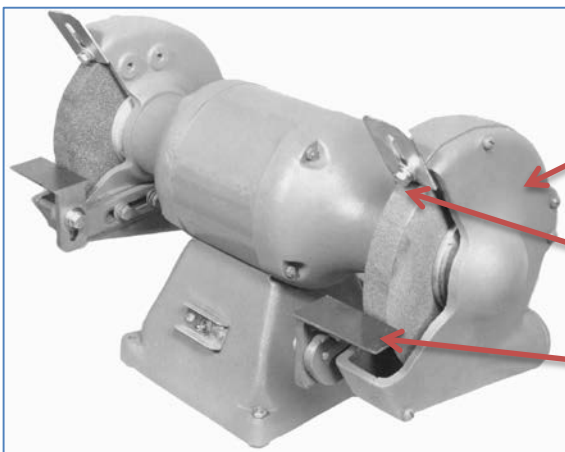


Self-adjusting guard for table saw blade



Guard enclosing power transmission apparatus

Guards for abrasive grinders are commonly overlooked. Guarding on these machines protects against exploding wheels and pinch points.



Guarding requirements for grinders:

Enclosure – 75% of the grinding wheel must be enclosed;

Tongue guard – must be adjusted to within 1/4" of the grinding wheel; and

Work rest – must be adjusted to within 1/8" of the grinding wheel

REVIEW THE FOLLOWING
ADDITIONAL
INFORMATION:

*Hand and Portable
Power Tools Policy*

Lockout/Tagout Policy

*Machine Guarding
Policy*