



# Machine Guarding- Safety Talk

October 2011

According to the Bureau of Labor Statistics, over **800 workers** in the United States were killed machine-related accidents. That's almost **20%** of all work-related fatalities!

Every one of these fatalities could have been prevented. We must be diligent and aware of safety whenever operating or working with machines.

Moving parts on machines must be guarded because they can cause injuries such as: bruises, lacerations, crushed or broken bones, amputations, burns, or electrical shocks.

Points on a machine that require guarding include:

**Point of operation** is where the work is performed by the machine on a work piece.

- 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.



Self-adjusting guard for table saw blade

**Power transmission apparatus** are machine parts that transmit energy.

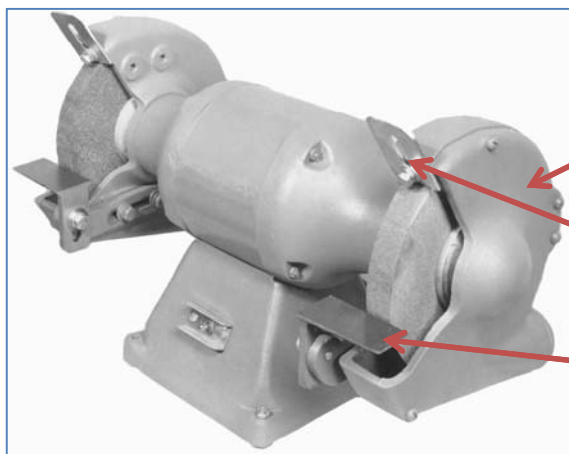
- Parts such as: belts, gears, flywheels, chains, pulleys, springs, spindles, shafts, etc.
- Commonly overlooked on machines that are not used as tools (e.g. air handling units, pumps, etc.).



Guard enclosing power transmission apparatus

**Other moving parts** include all parts of the machine that move while it is working.

Guards for abrasive grinders are commonly overlooked. Guarding on these machines protect against exploding wheel 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

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!

**ADDITIONAL INFORMATION:**

*Review the following policies on the Environmental Health and Safety website:*

*Hand and Portable Power Tools, Lockout/Tagout, and Machine Guarding*