



# MACHINE GUARDING

Toolbox Talks for the members of Iowa Association of Municipal Utilities

Summer 2015

The moving parts of machines, power tools and equipment have the potential to cause severe workplace injuries, such as crushed fingers or hands, amputations, burns, or blindness. Becoming entangled in an unguarded machine may also result in fatalities. Safeguards are absolutely essential for protection from these serious but preventable injuries.

All machines consist of three fundamental components and each of these components can present hazards that require safeguarding:

1. The Point of Operation (the area where the machine is doing what it is designed to do);
2. Power Transmission Apparatus (the mechanical system that transmits energy to the machine, like a belt & pulley or chain & sprocket);
3. Other Moving Parts (all other parts of the machine that move while the machine is working).

Safeguards must be installed and maintained so that they meet these minimum general requirements: Prevent contact with hazardous moving parts; be secure; protect from falling objects so that they cannot become lodged in the machine or become a projectile, create no interference with machine operation and allow for safe lubrication without being removed.

There are 4 basic types of guards: **Fixed Guards** which are affixed to the machine & have no moving parts; **Interlocking Guards** that automatically shut off the machine if they are opened or removed & the machine will not start until they are back in place; **Adjustable Guards** that rely on manual adjustment of the openings when the sizes of material change; **Self-Adjusting Guards** that move as the material passes through the openings.



- Causes for machine-related injuries include reaching in to “unjam” equipment, not using lockout/tagout, unauthorized persons doing maintenance or using the machines, and missing or loose machine guards.

Remember! Machine guards require basic preventive maintenance to provide protection.