



# Machine Guarding

HS99-147D (3-08)

A 5-Minute Safety Training Aid

Machinery related injuries are some of the worst in the industry today. Workers get caught in machines and suffer severe injuries such as crushed arms, legs, severed fingers, or blindness, and some are even killed. Can these injuries and deaths be prevented? Of course they can, with the proper use of machine guards.

Mechanical hazards occur in the following areas:

1. Point of Operation - the point where work is performed on the material, such as cutting, shaping, boring, or forming of stock.
2. Power Transmission Apparatus - all components of the mechanical system which transmit energy to the part of the machine performing the work. These components include flywheels, pulleys, belts, connecting rods, couplings, cams, spindles, chains, cranks, and gears.
3. Other Moving Parts - all parts of the machine which move while the machine is working. These can include reciprocating, rotating, and transverse moving parts, as well as feed mechanisms and auxiliary parts of the machine.

To prevent injury from any of these hazards, guards must be in place and never removed while work is in progress.

Knowing how a safeguard protects workers is just as important as having the machine guard itself in place. The machine guard protects the worker from harm by:

1. Preventing contact: the guard must prevent any part of a worker's body or clothing from making contact with dangerous moving parts.
2. *Securing*: all machine guards must be securely affixed to the machine to prevent tampering or removal.
3. *Protecting from falling objects*: a machine guard ensures that no objects can fall into moving parts and thus become deadly projectiles.
4. *Creating no new hazards*: an additional hazard such as having a jagged edge or shear point must not be created by the guard itself.

5. *Creating no interference*: machine guards must not impede workers in the performance of their jobs. A machine guard provides safety and enhances efficiency.

The following instruction and hands-on-training for machine operators is recommended:

1. Description and identification of hazards associated with particular machines
2. How machine guards provide protection from the hazards involved
3. How and why machine guards are used
4. Under what circumstances, and by whom, machine guards can be removed.
5. What to do if a machine guard is missing, damaged, or does not provide adequate protection.

The bottom line is if a machine has been designed with a guard in place, do not tamper with or remove it!

***Remember, practice safety, don't learn it by accident.***

