



Moving machine parts have the potential for causing severe workplace injuries, such as crushed fingers or hands, amputations, burns, or blindness. Safeguards are essential for protecting workers from these needless and preventable injuries. Any machine part, function, or process that may cause injury must be safeguarded. When the operation of a machine or accidental contact with it can injure the operator or others in the vicinity, the hazards must be either eliminated or controlled.

Before you operate any machine you must be authorized and know how to operate it safely. An inspection of all equipment should be done before any machine is turned on. Items to be inspected prior to the operation of a machine will vary with the type of machine.

## Requirements for all Safeguards

1. Safeguards must prevent workers' hands, arms, and other body parts from making contact with dangerous moving parts.
2. Safeguards must be firmly secured and not easily removable.
3. Safeguards must ensure that no object will fall into the moving parts.
4. Safeguards must permit safe, comfortable, and relatively easy operation of the machine.
5. Machines must be oiled without removing the safeguard.
6. A system for shutting down the machinery before safeguards are removed must be developed.

### The point of operation:

1. Must be safeguarded.
2. Keep the operator's hands, fingers, body out of the danger area.
3. Must be inspected to determine if it has been tampered with or removed.

### Power transmission apparatus:

1. Any unguarded gears, sprockets, pulleys, or flywheels on the apparatus must be guarded.
2. Exposed belts or chain drives must be guarded.
3. Exposed set screws, key ways, collars, etc. must be guarded.
4. Starting and stopping controls must be within easy reach of the operator.
5. If there is more than one operator, separate controls must be provided.

### Other moving parts:

1. Safeguards must be provided for all hazardous moving parts of the machine including auxiliary parts.

## Machinery Maintenance and Repair

1. Maintenance workers must receive up-to-date instruction on the machines they service.
2. Maintenance workers must lock out the machine from its power sources before beginning repairs.
3. Where several maintenance persons work on the same machine, multiple lockout devices must be used.
4. Maintenance persons must use appropriate and safe equipment in their repair work.



Machine operators should protect themselves from machine hazards by wearing proper protective equipment. Safety glasses and face shields or goggles should be worn where machines cause particles to fly through the air, such as chips coming from a lathe or grinder. Loose clothing should not be worn around rotating machinery because it can get caught in the machine and pull the machine operator into the machine.

Long hair should be contained so it will not get caught in rotating machine parts. Safety shoes are recommended where people are placing heavy materials in and out of machines. Avoid wearing jewelry such as rings and necklaces.

The area around machines should be kept orderly. Good housekeeping is important. Scrap material, chips and cuttings should not accumulate. Keep air hoses and

extension cords out of the way so they don't become tripping hazards.

Machine maintenance is important. Do your part to keep machines properly repaired, lubricated and adjusted. Clean up excess lubricants so they don't get on the floor and cause a slipping hazard.

All of the switches and valves that control machines should be clearly marked. Check your machine for emergency stop switches; they should be located on or near the machine so the machine can be turned off quickly if a malfunction occurs.

IMPORTANT NOTICE - The information and suggestions presented by Michigan Millers Mutual Insurance Company in this Safety Talks Toolkit Bulletin are for your consideration in your loss prevention efforts. They are not intended to be complete or definitive in identifying all hazards associated with your business, preventing workplace accidents, or complying with any safety related, or other, laws or regulations. You are encouraged to alter them to fit the specific hazards of your business and to have your legal counsel review all of your plans and company policies.