



SAFETY UNLIMITED, INC.

# Weekly Safety Meeting

## Preventing Amputations

Amputations are some of the most serious and debilitating workplace injuries. They are widespread and involve a variety of activities and equipment. Amputations occur most often when workers operate unguarded or inadequately safeguarded mechanical power presses, power press brakes, powered and non-powered conveyors, printing presses, roll-forming and roll bending machines, food slicers, meat grinders, meat-cutting band saws, drill presses, and milling machines as well as shears, grinders, and slitters.

Last year, OSHA received reports of more than 2,600 amputations nationwide. Machine guarding landed in the eighth spot on the agency's most cited violations, something the agency says contributes directly to most amputation causes. Lockout/tagout citations were in the number five spots.

These injuries also happen during materials handling activities and when using forklifts and doors, as well as trash compactors and powered and non-powered hand tools. Besides normal operation, the following activities involving stationary machines also expose workers to potential amputation hazards: setting up, threading, preparing, adjusting, cleaning, lubricating, and maintaining machines as well as clearing jams

### **Mechanical components present amputation hazards:**

- Point of operation—the area of a machine where it performs work on material;
- Power-transmission apparatuses—flywheels, pulleys, belts, chains, couplings, spindles, cams, and gears, in addition to connecting rods and other machine components that transmit energy; and
- Other moving parts—machine components that move during machine operation such as reciprocating, rotating, and transverse moving parts as well as auxiliary machine parts.

### **Mechanical motion is hazardous:**

All mechanical motion is potentially hazardous. In addition to in-running nip points (“pinch points”)—which occur when two parts move together and at least one moves in a rotary or circular motion that gears, rollers, belt drives, and pulleys generate—the following are the most common types of hazardous mechanical motion:

- Rotating—circular movement of couplings, cams, clutches, flywheels, and spindles, as well as shaft ends and rotating collars that may grip clothing or otherwise force a body part into a dangerous location;

- Reciprocating—back-and-forth or up-and down action that may strike or entrap a worker between a moving part and a fixed object;
- Transversing—movement in a straight, continuous line that may strike or catch a worker in a pinch or shear point created between the moving part and a fixed object;
- Cutting—action generated during sawing, boring, drilling, milling, slicing, and slitting;
- Punching—motion resulting when a machine moves a slide (ram) to stamp blank metal or other material;
- Shearing—movement of a powered slide or knife during metal trimming or shearing; and
- Bending—action occurring when power is applied to a slide to draw or form metal or other materials.

### **Amputation protection:**

Work practices, employee training, and administrative controls can help prevent and control amputation hazards

- Remember to stay alert for hazards so you won't become one more accident statistic.
- You can do a quality job without rushing.
- Maintain a positive attitude and keep your mind on your work.
- This is just common sense--something smart workers use!

### **OSHA offers the following tips to help workers avoid amputations:**

- Use guards as physical barriers from hazardous areas.
- Don't bypass, remove, or tamper with machine guards.
- Use devices to help prevent contact with machinery points of operation. Devices can interrupt the normal cycle of the machine when the operator's hands are at the point of operation.
- Use proper lock-out/tag-out procedures on all equipment.
- Ensure employees are trained in the safe use of equipment.
- Modify work practices as needed for safety.

### **Remember:**

Take the time to recognize, identify, manage, and control amputation hazards in your workplace. Focus on eliminating as many of these hazards as possible then look to use effective engineering controls to protect yourself and coworkers from amputation injuries. With heightened awareness and a few preventative measures, most amputations can be avoided.

**ALWAYS KEEP YOUR "GUARD" UP...WHEN WORKING  
WITH POWERED EQUIPMENT!!!**

