Machine Guards Meeting Kit

WHAT'S AT STAKE

If a machine has a part, function, or process which can cause injury, it needs a safeguard. Guards are installed on machinery to protect you and others from injury. This means that when a machine is in operation, its guards must be in place. A guard must never be bypassed or removed during use. If a guard is removed for machine cleaning or repairing, it must be put back into place before reuse or storage.

WHAT'S THE DANGER

TYPES OF HAZARDS/DANGERS

The three basic types of hazardous mechanical motions and actions are:

- **Hazardous Motions –** including rotating machine parts, reciprocating motions (sliding parts or up/down motions), and transverse motions (materials moving in a continuous line);
- **Points of Operation –** the areas where the machine cuts, shapes, bores, or bends the stock being fed through it;
- **Pinch Points and Shear Points –** the area where a part of the body or clothing could be caught between a moving part and a stationary object. This would include power transmission apparatuses such as flywheels, pulleys, belts, chains, couplings, spindles, cams, gears, connecting rods and other machine components that transmit energy.

There are also non-mechanical hazards that can injure machine operators or personnel working in the vicinity of machinery. These hazards include flying splinters, chips or debris; splashes, sparks or sprays that are created when the machine is operating. These hazards can be prevented through the use of machine guarding and wearing/use of required personal protective equipment (PPE).

HOW TO PROTECT YOURSELF

SAFEGUARDING METHODS

There are five (5) general types of machine safeguards that can be used to protect workers and personnel in the immediate vicinity of machinery.

- **Guards –** these are physical barriers that prevent contact. They can be fixed, interlocked, adjustable, or self-adjusting.
- **Devices –** these limit or prevent access to the hazardous area. These can be presence-sensing devices, pullback or restraint straps, safety trip controls, two-hand controls, or gates.
- **Automated Feeding and Ejection Mechanisms –** These eliminate the operator's exposure to the point of operation while handling stock (materials).
- **Machine Location or Distance –** this method removes the hazard from the operator's work area.
- **Miscellaneous Aids –** these methods can be used to protect both operators and people in the immediate vicinity of operating machinery. Examples include shields to contain chips, sparks, sprays or other forms of flying debris; holding tools that an operator can use to handle materials going into the point of operation; and awareness barriers to warn people about hazards in the area.

WORKER TRAINING

Many machine guards and other safety features may be unfamiliar to their operators. They may not understand all the hazards of the machine they are supposed to use, and might not realize that long hair, jewelry or loose clothing could get caught in the moving parts. Training can help them recognize these and other issues in their work area.

Training on how to operate equipment must address all the hazards associated with each machine and help workers understand how each safeguard protects them from harm.

WORKER MACHINE GUARD OVERVIEW

Before beginning any work on a machine, check its moving parts to make sure that all guards are properly functioning and securely in place. Checking the guards should be part of your regular daily inspection. Missing or damaged guards should be reported to your supervisor.

Make sure you understand and follow lockout/tagout rules for use, maintenance, and repair of moving machinery. Don’t let breakdowns, jammed work, or broken parts cause you to forget safety procedures. Power should be turned off and switches locked and tagged during repair and moving equipment should be blocked to protect against stored energy and checked that they work properly.

Pay attention when working with or around moving machines. Keep yourself—and your hands—away from moving parts of machinery.

BEST MACHINE GUARDING SAFETY CHECKLIST

1. Never remove or try to defeat machine safeguards.
2. Don’t create new hazards, such as allowing objects to fall into the moving parts or by creating a new pinch point.
3. Report problems with machine safeguards to your supervisor immediately.
4. Never leave machines unattended with parts still moving. Remember that parts may still be moving after the machine has been turned off.
5. Remove guards only when the machine has been locked out and tagged out.
6. If possible, lubricate machine parts without removing the safeguard; otherwise, turn the machine off and lock it out before lubricating.
7. Operate equipment only when guards are in place and properly adjusted.
8. Do not use unauthorized or damaged guards.
9. Do not wear loose clothing, jewelry, or long hair around machines—these increase the risk of being caught in the machinery.
10. Ask your supervisor if you have any questions about a

machine safety or how to work with machine guards safely.

FINAL WORD

Workers should always be vigilant and aware of the surrounding when working in and around machinery. Ensure that all machinery is properly safeguarded to prevent the exposure of any part of a worker’s body to hazardous aspects of the machine’s operation.