



Machine Shop Safety – Getting Started

Loss Control Bulletin

Machine shops produce parts used throughout our industrial complex. The machinery used can be complex and dangerous to operate without proper training. Machinery that can cut, drill, and mill through metal can easily cause amputations, lacerations, burns, crushing injuries, abrasions, and even death when improperly operated.

Rotating parts, metal chips, razor-like shavings, dust and fumes generated during machining typically increase the risk of injuries to workers who are not careful or operate equipment without required protection. Machine shop owners can help prevent worker injuries by following a few simple steps. These steps include understanding the OSHA regulations for machine guarding, job hazard analyses, keeping machine guards in place, and providing on-going inspection and training programs.

OSHA regulations address machine guarding by restricting access to rotating parts and points of operation during operations. Machine shop operators must be familiar with regulations to ensure that machines are properly guarded. Depending on the type of machinery involved, guards may include shields or enclosures designed to prevent workers from placing their hands at the point of operations, in nip and pinch points, and near rotating parts. Factory installed guards should not be removed unless they are designed to be taken off for a specific purpose.

When necessary, regulations also require employers to provide personal protective equipment (PPE) to protect employees from potential injuries.

To assure compliance with OSHA regulations, every employer must implement and maintain an Injury and Illness Prevention Program (IIPP) that addresses the specific hazards of their operations. The program should designate a safety coordinator and include systems for self-inspections, correction of hazards identified, accident investigations, enforcement of safety practices, communicating safety to employees, and training employees.

Job hazard analyses are a good way to identify the hazards present in a job by reviewing each task performed.

Each job step is examined for hazards and methods chosen to control or reduce the hazards that could cause injury to the worker. Antiquated machines may need to be replaced and maintenance schedules written.

Identifying hazards and poorly planned procedures that endanger workers are the first steps towards improving worker safety.

Workers must be trained in the safe operation of the machinery they are assigned to operate. Written procedures and initial training should be provided to new workers, and when equipment changes are made. In addition, when new tasks are assigned to a worker, safety training should be conducted before the worker is permitted to do the task.



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If hazardous chemicals are used, employees must be trained with information provided in the material data safety sheet (MSDS). Training also should include how to use personal protective equipment (PPE), what to do in case an emergency evacuation is indicated, and the proper control measures to follow in the event of a spill.

Employers' primary responsibility is to prevent employees from being injured on the job. A safe and healthy workforce can help assure the productivity and profitability of the company.