

MIOSHA Fact Sheet



Pinch Points

What are pinch points?

A pinch point is any point at which it is possible for a person or part of a person's body to be caught between moving parts of a machine, or between the moving and stationary parts of a machine, or between material and any part of the machine. If an employee places any part of their body in a pinch point, the limb or body part can be cut, fractured, amputated, crushed, or otherwise injured. Pinch points can also prevent a person from escaping or removing themselves from the pinch point.

How are pinch points different from points of operation?

A point of operation is the location on a machine where work is performed upon the material being processed (for example, where a metal part is stamped, or where a piece of wood is cut). A point of operation can be and often is a pinch point. A pinch point may or may not be a point of operation.

What machines have pinch points?

Pinch points are ubiquitous in the manufacturing environment. They can be found on metal-forming machines, power presses, conveyors, robotic machines, powered rollers, assembling machines, plastic molding machinery, printing presses, powered benders, press brakes, and power transmission equipment. They also include powered doors, covers, and hatches like overhead, powered garage doors. Powered garage doors can create a pinch point between the moving door and the floor or door frame that can strike or trap unwary people standing beneath or walking through them!

Are there MIOSHA standards that cover pinch points?

Yes. MIOSHA recognizes pinch points in a number of standards to protect employees. The term "pinch point" may or may not be used in the standard to describe the machines and conditions that need guarding to prevent pinch-point injuries.

These are the **Michigan General Industry Safety and Health Standards** that contain language about pinch points or require some form of guarding or other control to protect exposed employees from pinch points.

Click on each hyperlink to quickly access each specific standard on the MIOSHA website.

- Michigan Occupational Safety and Health Act, [Act 154](#), Section 408.1011, General Duty Clause
- General Industry Safety and Health Standard, [Part 1. General Provisions](#)
- General Industry Safety and Health Standard, [Part 14. Conveyors](#)
- General Industry Safety and Health Standard, [Part 17. Refuse Packer Units](#)
- General Industry Safety and Health Standard, [Part 21. Powered Industrial Trucks](#)
- General Industry Safety and Health Standard, [Part 22. Tractors](#)
- General Industry Safety and Health Standard, [Part 23. Hydraulic Power Presses](#)
- General Industry Safety and Health Standard, [Part 24. Mechanical Power Presses](#)
- General Industry Safety and Health Standard, [Part 26. Metalworking Machinery](#)
- General Industry Safety and Health Standard, [Part 49. Slings](#)
- General Industry Safety and Health Standard, [Part 62. Plastic Molding](#)

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- General Industry Safety and Health Standard, [Part 63. Pulp, Paper, and Paperboard Mills](#)
- General Industry Safety and Health Standard, [Part 71. Laundry and Dry Cleaning Machinery and Operations](#)
- General Industry Safety and Health Standard, [Part 72. Automotive Service Operations](#)
- General Industry Safety and Health Standard, [Part 81. Baking Operations](#)

What can employers do to protect employees?

The major thing employers can do, and are required to do, is make a careful evaluation of the machines and operations within their workplaces to identify pinch points. After identifying them, the next step is to eliminate the pinch points, guard the pinch points to prevent employee contact with the pinch points, or otherwise institute controls that prevent employee access to the pinch point. An example of the latter control method would be a two-hand control set a safe distance from the pinch point that requires the machine operator to use both hands to depress buttons to cycle the machine through the pinch point. After eliminating or preventing access to the pinch points, an employer must train all the employees about the reasons for the control measures and the hazards created by the pinch points and what injury a pinch point might cause.

- **Guards** are specifically intended to create a physical barrier to prevent anyone from reaching into, through, over, under, or around the guard to make contact with, or at, the pinch point.
- **Training** is required to teach the employees what the guards are designed to do and the reason for the protective barrier, and to instruct the employees not to tamper, modify, circumvent, or remove the guards EXCEPT under very specific cases when repair work might be necessary by trained and qualified employees.

Are employees required to do anything about pinch points?

Yes. Employees have a specific duty not to remove, displace, damage, destroy, carry off, tamper, modify, or interfere with any guarding or employees utilizing guarding placed upon machinery by their employer of manufacturer unless they have been especially trained, instructed, and designated by their employer and understand, know, and utilize alternative forms of protection while repairing, troubleshooting, servicing, or lubricating any machinery.

If any employee discovers an un-guarded pinch point, they need to report the hazard to their supervisor or employer immediately.