



### Machine Operation Guidelines:

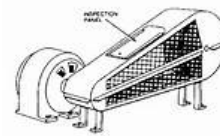
1. Are the guards firmly secured and not easily removable
2. Inspect all equipment before use. Do not operate if it is damaged or has not been properly serviced.
3. Verify there are no unguarded gears, sprockets, pulleys or flywheels on the apparatus.
4. Immediately report any machine with a missing or disable guard to your supervisor.
5. The machine should automatically shut down when the guard is removed.
6. Verify the starting and stopping controls are within easy reach of the operator.
7. Know how to turn equipment on and off before operating.
8. Always wear eye and face protection to prevent injuries from flying chips or sparks.
9. Never remove, disable, or de-activate machine guards and safety devices.
10. Never try to remove, disable, or reach through or around a guard while the machine is operating.
11. Follow operating instructions for each specific machine.
12. Never use machines with moving parts unless you have been trained to do so.

### Machine Guarding e-Tool

<https://www.osha.gov/SLTC/etools/machineguarding/index.html>

### Types of Guards:

1. Fixed – provides barrier.
2. Self-adjusting – Provides a barrier that moves according to the size of the material.
3. Adjustable – Provides a barrier that may be adjusted to facilitate a variety of production operations.
4. Interlocking –Shuts off or disengages power and prevents starting of machine when guard is open or moved.



### Machine Requiring Guarding:

1. Point of Operation – where machine performs work on the material being processed).
2. Pinch Point – anywhere a part of the body can get caught between two objects.
3. Ingoing Nip Points – where moving parts contact or come close to other parts.
4. Rotating Parts – rollers, grinding wheels, or circular blades.
5. Traversing – movement in straight, continuous line that may strike or catch an employee in a pinch or shear point between a moving and fixed object.
6. Reciprocating – back-and-forth or up-and-down motion that may trap/strike an employee between the moving object and a fixed object.
7. Power Transmission – pulleys, belts, connecting rods, flywheels, gears, couplings, spindles, cams, cranks and chains.