



Woodworking Tech Guide

29 CFR 1910.213

Health and Environmental Systems Lab/Occupational Safety and Health Division of the Georgia Tech Research Institute

Woodworking operations can be hazardous, particularly when machines are used improperly or without safeguards. Workers operating woodworking equipment can suffer injuries such as laceration, amputation, severed fingers and eye injuries. Only operators that have received the proper safety training should be allowed to operate woodworking machinery and only properly guarded equipment in good operating condition should be used. Woodworking equipment is covered under OSHA's 29 CFR 1910.213. In FY 2005, paragraphs within this standard were cited 1,062 times by OSHA compliance officers. Wood kitchen cabinets (SIC 2434) and millwork (SIC 2431) were cited more than any other industries covered by OSHA. To protect workers the three items below taken together are most important.

1. Equipment Safeguarding 2. Operator Training 3. Inspection and Maintenance
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General Requirements for Woodworking Equipment

- While performing maintenance on woodworking equipment, always follow the requirements set forth in the control of hazardous energy (Lockout/Tagout) 1910.147.
- All belts, pulleys, gears, shafts, and moving parts must be guarded in accordance with the specific requirements of 1910.219.
- Anchor all woodworking equipment that is designed for a fixed location.
- Frames and all exposed electrical parts must be properly grounded and guarded.
- Power driven woodworking machinery must be provided with a disconnect capable of being locked in the off position.
- Where injury to the operator might result if motors were to restart after power failures, provision shall be made to prevent machines from automatically restarting upon restoration of power.
- Combs or featherboards shall be used when standard guards can't be used.
- On/Off controls shall be installed on each machine.
- Arbors shall be properly guarded on all saws.
- Perform routine maintenance on all equipment.
- Have employees use push sticks in conjunction with guarding when possible.

WEB Resources:

- www.oshainfo.gatech.edu (Georgia Tech's Website)
- <http://www.osha.gov/SLTC/etools/sawmills/index.html> (OSHA Sawmill E-tool)
- <http://www.osha.gov/SLTC/etools/woodworking/index.html> (OSHA's woodworking eTool)
- <http://www.osha.gov/Publications/osh3157.pdf#search='woodworking%20safety'>
- http://www.woodzone.com/articles/shop_safety.htm (10 Safety Tips to Post in Your Shop)

Specific Machine Guarding Requirements

The equipment listed below was sometimes found to be improperly safeguarded during safety audits conducted by Georgia Tech consultants in FY 2005.

Table Saws (cross cutting and ripping operations):

- Guards installed over the upper and lower blades.
- A spreader bar to prevent the wood from binding.
- Anti-kickbacks fingers to prevent the wood from being kicked back to the operator.

Radial Arm Saws:

- The upper and lower blades guarded.
- Anti-kickbacks fingers to prevent the wood from being kicked back toward the operator.
- A automatic return device that will gently return the cutting head to its original position (by spring, counterweight, or gravity)
- The rotation of the blade marked in the direction of travel.
- An adjustable stop to prevent unintended forward travel.

Shapers:

- A cup guard above the cutting head to prevent access.
- A double-spindle shaper provided with spindle starting and stopping device.

Planers:

- The planer blades properly guarded (hoods are usually acceptable as guards, if totally enclosed).
- Feed rolls properly guarded.

Jointers:

- A spring guard over the jointer head, the guard should self retract after the cut has been performed.

Belt Sanders:

- Ingoing nip points along the belt enclosed with a guard.
- Unused portions of the belt sander completely enclosed in a guard.

Lathes:

- The rotating chuck or drilling bit should guarded with a retractable or U- shaped guard to restrict access.

Bandsaws:

- The unused portion of the blade completely guarded beyond the guide rollers, while performing cuts.
- The bandsaw provided with a tension device to ensure that the blade does not break due to improper tension.
- The feed rollers completely enclosed in a guard.

Drill Presses/Milling Machines:

- The rotating chuck and drill guarded with a retractable or U- shaped guard to restrict access.

Veneer cutters:

- Knives guarded to prevent accidental contact.
- The clippers installed with a automatic feed or a guard so that employee fingers can't come into contact with the knife while feeding or removing stock.