



EXECUTIVE SUMMARY

The majority of student injuries that result in liability claims to CIRMA members occur in Technology Education classes—and most of these involve woodworking saws. The financial loss to the school and the personal loss to the student is often high and sometimes life-altering. Other Tech Ed courses in automotive work, masonry, electronics, welding or robotics, for example, also pose significant safety risks to students. The failure to train, the failure to warn of dangers, the failure to properly supervise, and allowing the use of faulty, unsafe equipment have contributed to the finding of negligence against schools.

SCENARIO

During the third week of the new school year, an 11th grade boy severed his left thumb on a vertical band saw during Tech Ed. The boy was working on a wooden key-chain holder which included curved cuts through the wood stock. Vertical band saws require the operator to hand-feed and manipulate the stock against the blade to saw along a predetermined line. The saw operator must also keep the stock flat and exert the proper cutting force. The teacher was working with another group of students when the injury occurred. The machine guard had been broken by another student the week before.

First aid was provided at the time of injury but the thumb could not be reattached in surgery. The student's medical costs, legal defense, and the settlement totaled nearly \$250,000. Although band saws are relatively safe compared to other woodworking machines, when an injury does occur, it is often a serious one, such as an amputation.

CAUSES OF LOSS

- Student did not receive adequate safety instruction.
- There was no guard on the band saw at time of injury.
- Only minimal training on the use of the saw was provided before the injury happened.
- There was no signed acknowledgment form of safety training or safety demonstrations.
- The curriculum did not clearly define the safety training for specific equipment in the wood shop.
- There were push sticks available to students, but all were in use by others at the time of incident.

LESSONS LEARNED

- Teachers, including substitutes, should understand safety requirements and be able to provide safety training to students.
- Safety training should be specified for students; training may include lectures, demonstrations, or group activities.
- Before being allowed to operate equipment, students should be required to demonstrate safety skills and to sign an acknowledgment form that lists the specific safety rules and hazards.
- All shop tools and power equipment should be inspected by the teacher before the start of class. (This can be an informal walk-around to verify guards are in place and safety equipment is available.)
- Visible warning signs should be posted on or near equipment stating the potential hazards.
- Ensure that a teacher is actively supervising students at all times when equipment is being operated by students.
- Proper safety attire, including safety glasses, must be required at all times (no dangling jewelry, loose clothing, loose hair or open-toed shoes).
- Ensure all applicable ConnOSHA standards are met.

For saws in particular:

- Guard the entire blade except at the point of operation of band saws. Require a self-adjusting guard for the portion of the blade between the sliding guide and the upper saw so that it raises and lowers with the guide.
- Require use of a push stick or manual feed arm to control the stock.

RESOURCE

<https://www.osha.gov/etools/woodworking>

For more information on this topic, please contact your CIRMA Risk Management Consultant.