



### Student Handout

#### Guarding

Guards are designed to protect you from contact with the saw blade. The rim speed of a 10" circular saw blade is approximately 225 km/h. The saw blade does not differentiate between you and the stock. It only takes a split second to amputate your fingers. Guards protect you against unforeseen and unpredictable circumstances, such as kickbacks or jammed materials, including accidental contact with the blade.

#### Examples of hazards

- hands too close to the blade – an accident can happen when the stock unexpectedly moves or your hands slip
- inadequate support for stock
- jammed stock
- saw guard not properly adjusted and maintained
- kickbacks, which are more likely to occur when you are:
  - ripping solid wood
  - using a dull saw blade or the wrong blade for the application
  - cutting with the bottom of the blade gullet more than 1/4" above the top of the stock
  - not using a splitter or anti-kickback device when ripping
  - cutting poor-quality lumber



#### Safety tips

- Whenever possible, use a push stick to move stock. Customize push sticks for the application.
- Use an outfeed table of adequate length to support long work pieces during the cutting process. Avoid reaching over the blade to retrieve the stock or waste piece. If the saw does not have an outfeed table, ask someone to assist you.
- Keep your hands as far away from the blade as possible while maintaining control of the stock.

*Continued on page 2*

### Guarding – page 2

#### Safety tips (continued)

- If stock gets jammed between the fence and the blade, stop the saw, wait for the blade to come to a complete stop, and then clear the stock from the saw.
- Watch to see if there is excess clearance between the top of the stock and the guard. If needed, adjust the guard so it effectively covers the blade.
- If a guard is missing, report it to your instructor or supervisor.
- A guard alone is not a guarantee against injury. Operators must also use safe work practices. The following are examples of safe work practices for your table and panel saws.
  - **Guard height** - For guards that do not self-adjust to the material height, make sure there is minimal clearance between the guard and the top of the material. This helps to maintain the effectiveness of the guard.
  - **Blade height** - Operators often set the saw blade far higher than it needs to be. The gullet on the blade is designed to clear waste material, and the blade will function effectively with the blade height set so the bottom of the gullet clears the top of the material by no more than ¼". Setting the blade higher than that only increases the risk of injury to the operator.
  - **Hand position** - Even with the guard in place, it is possible for the operator to be seriously injured. There is always some risk of injury when hand feeding the saw, so determine safe hand positions for different applications, and make the use of push sticks or other safety devices.
  - **Removing the guard** - The guard belongs on the saw except in infrequent circumstances where its removal is necessary for a specific cutting operation. Determine when and under what conditions the guard may be removed, and specify the safety devices that must be used during that cutting operation. The vast majority of amputation injuries involving table saws occur on unguarded saws.

