

Introduction:

This manual represents general information useful in cases involving power saws. Power saws are an example of a product with an inherent hazard. Inherent hazards are hazards that are caused by the function of the product, in the case of saws, cutting. Power saws include table saws, circular saws, chop saws, mitre saws, band saws, and several other configurations. The authors are both experienced mechanical engineers with 50 years of combined experience. The substance of the manual results from the authors serving as expert witness or consultant on numerous accidents involving product liability lawsuits, and it comes from experience designing and building machines and products.

The general discussion related to the priority list for safety engineering design published by the National Safety Council and most textbooks on the subject of safety is of the utmost importance. This information is published in Chapter 1. If a jury does not understand the principles in the following section, justice will not be served. Lawyers should remember that defendants are inclined to disregard the priority list of safety engineering design. As a result, the authors have seen warnings and/or training treated as solution to safety when the hazard could be removed through design or guarding. Equally true is the fact that if higher priority protection is used, the defendants are not required to supply the lower priority hazard safeguarding methods. The whole safety issue is represented in one statement – A product is unreasonably dangerous and defectively designed if there are methods of providing a higher level of safeguarding that exist and are economically feasible that are not used in the product.

It is important to remember there are occasionally unnecessary hazard built into machines and products. Sometimes guards are needed to protect from the ridiculous. Machine

designers are often negligent in putting too much force into a point of operation. Some machines such as pinsetters in bowling alleys replace weak human beings. Pinsetters are so powerful that they can crush mechanics to death. A simple slip-clutch would take away the need of a guard with this machine. When the force is reduced the hazard goes away.