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PRODUCTS LIABILITY

An Interactive Qualifying Project Report

submitted to the Faculty

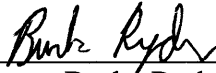
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by



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## **Abstract**

The Products Liability IQP deals with how engineering effects lawsuits. The groups are presented with the documents of three court cases and are asked to present a case summary. The groups then present one side of each case in a mock trial to a jury of their peers. The jury returns a verdict based on the presentations. The verdict and is discussed and compared with the actual outcome of the cases, which is then revealed.

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# **Chapter 1: AN ENGINEER IN THE COURTROOM**

## **1.1 Introduction:**

An Engineer in the Courtroom by William J. Lux explains all aspects of litigation and what the engineer's role is in court. The book describes about accidents, assisting attorneys, deposition, and how one should conduct oneself in certain situations. Based on the author's experience with cases involving machinery and earth-moving equipment, the book will give a good idea of what to expect from these types of cases. The engineer must be able to understand the legal process so that he is effective in court and not intimidated. In short, this book will educate and prepare engineers for the litigation process.

## **1.2 The Nature of Accidents:**

An accident, with respect to the courtroom, occurs when something unexpected happens and there is personal injury or loss. There are many different ways that accidents can happen. Among these are:

**Collision:** A Collision is when two things try to occupy a space at the same time. This includes all types of motor vehicle accidents, whether it be two cars hitting or a car hitting a person. Other collisions are airplane crashes, people running into each other, and people hitting machines.

**Slip and Fall:** These accidents involve only the person injured and the surface they are in contact with. A slip refers to any loss of traction with the floor or surface. People can fall in a number of ways, including tripping, scuffing, and falling due to dizziness. A person can also lose their step support or balance, or even fall off ladder.

**Loss of Control:** This type of accident occurs when a person is controlling a machine, activity, or process, and they lose that control. This can be caused when part of a car fails (brakes, steering), or a machine unexpectedly moves or turns on.

**Hit by Falling Object:** This also includes being hit by a rolling object. Size and distance of the fall do not matter, all are categorized here.

**Fire:** This includes combustion of any sort where a victim's body, clothing, or property is damaged. This may be caused from Chemical Burns, Explosions, Radiation, or Burns from contact with hot surfaces.

**Struck by Moving Projectile:** Anything flying through the air can cause injury. Also included are firearms and war.

**Natural or Environmental Factors:** Nature can cause injury in all sorts of ways, not just storms and natural disasters. Consider Heat, Cold, Lack of Water, Animal Attacks, Wind, and Lighting.

Other basic kinds of accidents are Suffocation, which includes drowning, Electrocution, Poisoning, Shock and Vibration, Entanglement, Cuts and Abrasions, Homicide, Suicide, and Legal Intervention (capital punishment).

### **1.3 Why Go To Court?:**

Anytime that a product or power has been misused, people can take their case to court to seek justice. People use different inventions for different purposes, and the law decides which uses are illegal. This system acts as protection for people and as a deterrent to companies who would make unsafe products. This is the field where Product Liability lies. Everyone has the right to go to court and seek a settlement if they are victims of an accident from faulty products or people. The person or company at fault may be ordered to compensate the victim based on their injury or loss.

### **1.4 Avoiding Litigation:**

The best way to avoid litigation is to eliminate the hazard and just not have accidents. Of course, accidents will always happen, but there are ways that an engineer can prevent litigation.

**Avoiding or reducing litigation:** This consists of six parts:

1. Avoid the Accident – eliminate the hazard and find ways to safely go through potential accident situations. ?
2. Protect from the Accident – either shield people from a hazard or keep people away from dangerous areas.
3. Make the Accident Safe – this means that you make an accident harmless so if it does happen, no one will get hurt.
4. Warn of an Impending Accident – warning devices that are used appropriately and effectively are helpful when an accident is about to happen.

5. Warn of the Possibility of an Accident – a worker or operator of a device is told ahead of time that an accident is possible under certain situations.
6. Protect the Operator (or Other Personal) from the Accident if it Should Happen – when an accident is happening, measure should be taken to reduce the potential injury of the operator.

In the design process an engineer should include considerations of all adverse affects of the product, and design it with safety as the major consideration. A good designer should foresee all possible uses, misuses, and environments through which a product will be operated and subjected to. An engineer must make reasonable choices during the design process, but perfection is not required or even possible. Proper documentation of such choices, decisions, their reasons, and the use of good professional judgement on the part of the designer is required. Finally, an engineer must warn future operators of hazards that are hidden and cannot be eliminated, and provide a way for the user to communicate all feedback while also providing good instructions for the possible use and maintenance of the product.

### **1.5 The Litigation Process:**

Litigation can be broken down into basic steps. The first step is the Claim. A claim begins the lawsuit and is the filing of a complaint by a victim against a defendant. The defense then responds to the claim by either agreeing with the complaint or denying the charges. If the complaint is the denied, the discoveries process begins. Each side is allowed to gather information relevant to the case, by means of Interrogations, Requests

for Production, Requests for Admission, Inspections, and Depositions. After all this is complete, the case may either go to trial or be settled.

### **1.6 Engineers and Engineering Information:**

The job of the engineer in the courtroom is to give information that would not be easily known by the judge or jury. He may either testify his opinion on a certain matter, or simply explain the technicalities of something. Engineering Information consists of data and design about some device's design. This may include blueprints or notices and papers releasing the design. The Plaintiff will use this information to challenge the design and claim that if the design were different, the accident would not have occurred. Conversely, the defendant will use engineering information to show that the machine or device was built safely.

### **1.7 How the Engineer Can Help the Attorney:**

Since an engineer knows more about the technical aspects of a product and a lawyer knows more about the legal aspects, there must be a special relationship formed between the two that allows them to work together. An engineer is needed to explain technical concepts to an attorney that he may have a difficult time understanding what is going on in a given situation. Such as the uses and applications of a certain product, tests and analyses performed on a certain product. They can explain product system parts, machine operations, and the design and development processes involved. An engineer can help answer questions such as, why a product is successful, and how the product was developed, tested, and evaluated. An engineer can help the attorney by providing engineering literature pertinent to a case, listing all possibilities of use of a product, and



assisting with the actual examinations, interviews, and depositions. An engineer may help with translation of technical information into simpler terms for the jury and possible explanations of a complex technical process, as well as, evaluations of the risks involved with certain designs. Also the engineer must testify, listen, and react to testimony as both a technical person and layman to assist the jury in making an educated verdict should a case make it to trial.

### **1.8 The Discovery Process:**

The Discovery Process is the gathering of information to be used as evidence in a case. A major portion of this process is Interrogatories. Engineers will be interrogated about all aspects of a machine or device, disclosing both names and information. An important tool in abetting witnesses into following a path of questioning an attorney has pre-determined is to ask questions that he/she already knows the answers to, which can confirm to the jury what is believed to have happened. An attorney will attempt to gather absolute proof of guilt, sometimes called the “Smoking Gun”. This information will obviously show that a company was not as safe as it should have been. An alternative to asking many questions in court is a Request for Production. These requests, which include any documents regarding the production of or records of a machine, may reveal information and data in large quantities that could not be easily achieved from interrogations. Another strategy is Requests for Admission, in which one admits some truth completely to the court.

## **1.9 The Deposition:**

A Deposition takes place outside the courtroom and prior to a trial. They consist of questioning of witnesses by attorneys. The deposition is aimed at ending the case before it goes to trial, or may be used as practice for the trial. One of the deposition's most important functions is to aid a lawyer in seeking out information needed to discredit or impeach any witness, by making it appear that a witness is not giving valid testimony. Also, it can be a means of learning the plans and strategies of the opposing side. Some basic rules are offered to engineers when they are in deposition. These are listen to the question, pause before answering, answer only when asked, answer truthfully and completely, do not volunteer information that isn't asked, and finally do not argue your point with the opposing side.

## **1.10 The Trial:**

The trial is the point where a decision will be made in court. Most cases do not reach trial, only the ones where the opposing sides agree that their case can only be settled by a judge and jury. The jury must first be selected, and it will consist of a group of 6 or 12 unbiased people. The trial begins with opening statements from each side, in which each will explain what they intend on proving. The plaintiff will then present his side of the story. He will present witnesses, evidence, and any other information that they hope will convince the jury. The defendant will then respond with their case, in which they too will try to convince the jury that they are right and not the plaintiff. After both sides have presented their cases, each will make final arguments which summarize their points. At this point the decision goes to the jury, who enter deliberation. After

discussing the case and considering all the information presented by both side, the jury will either return a verdict or declare a hung jury if they are deadlocked. Finally the verdict is announced.

Appearance and conduct in the courtroom are important during a trial. An engineer should dress professionally and always address the judge as “your honor”. Those present in the courtroom will include the judge, the court clerk, the court reporter, the marshal, the jury, and both parties involved.

### **1.11 Questions:**

All questions asked of an engineer must be answered truthfully. This must always be followed. An attorney is free to ask specific or general questions, open and closed questions, leading and non-leading questions, formal and casual questions, simple and complex questions, and probing and outlining questions. An engineer must be aware of what type of person is asking the questions, what questions are being asked, and how the questions are being asked. All of these must be considered when answering the questions, and all answers should be given in short, simple sentences. Inflection and voice pitch changes can allow any lawyer to lend certain meaning to questions, and the engineer should respond accordingly. The careful wording of questions or answers can carry far greater meaning than the mere words used.

### **1.12 Accident Reconstruction:**

In any story given in a courtroom, there are usually pieces missing. To fill in the missing parts, the accident is reconstructed by an expert. It is this person’s job to determine the most probably scenarios for the accident. The expert recreates the accident

using some information given already and some that he determines based on the circumstances. There are six main rules that an engineer should abide by in order to provide a valid and believable accident reconstruction. They are as follows. They must agree with the laws of physics, and with the majority of information and evidence available. The reconstruction must be able to be explained in layman's terms. An engineer should not be biased or produce big surprises. The reconstruction must be able to withstand attacks and scrutiny. If an engineer follows these suggestions his/her accident reconstruction should prove to be an important tool to help an attorney win a case.

### **1.13 Definitions and Techniques Employed by Attorneys:**

**Adverse Witness:** A witness called to testify by the opposing attorney

**Balance of Evidence:** The comparative weights of the evidence used by both sides

**BAR:** a.) A location of legal activity

b.) "BAR Association", a grouping of attorneys

c.) Prevent or keep out

**Charge:** Instruct or a complaint brought up against you

**Hearsay:** Something other than what a witness experienced, saw, or heard first hand

**Proximate cause:** An action or event without which the accident would not have happened

**Puffery:** Exaggeration or overstatement of a product in order to sell it

**Tort:** A legal wrong committed

### **1.14 War Stories:**

The following is another set of tips that can be used by engineers and lawyers to help in accomplishing their intended goals. Never ask too many similar questions and

don't fight or argue with the witnesses. Cross-examination should be kept short and know the answers before any questions are asked. Always attempt to tell a story and paint a vivid picture for the court that is easy for the jury to understand. Remember to stop when the point has been made, don't assume anything, listen carefully, and plan ahead. Don't try to fool the judge and jury.

### **1.15 Tips for the Engineer Involved in Litigation:**

Final tips for an engineer in the courtroom:

Don't try to run the game

Always be truthful

Don't become frightened or overcome

Be prepared to listen and follow directions

Follow instructions precisely and accurately

Tell the truth

## **Chapter 2: PRODUCTS LIABILITY: In a Nutshell**

### **2.1 Definition and Scope:**

#### **2.1.1 Product:**

A product is a tangible personal property or good; however, product liability law today has extended beyond personal-tangible goods. Several rules govern the process of deciding how product liability law is applied to a situation. The first rule states that product liability law is not restricted to cases involving products, and it can be applied to very specific situations. The situation is defined when the defendant is in the best position to spread the loss and prevent the injury. Tort/Product Liability can also apply to other public concerns such as freedom of speech and the difficulties of proof.

#### **2.1.2 Defect:**

A defect is defined as the reason for imposing liability, against a product supplier, due to the supply of a defective product.

**Product Defects:** There are three types of product defects, which are termed as actionable wrongs. The first is a manufacturing or production flaw. This is a random flaw, which is not typical of the product. The second is a design defect, which is an inadequacy in the design of the product. The last type is a defective warning or instruction. Misrepresentation is not technically a defect, however it fits under this category none the less. An important consideration when examining the topic of defects, is the difference between a production and a design defect. The reason for this consideration is that strict liability applies only to production defects. A second consideration is necessary when dealing with the topic of misrepresentation. Misrepresentation is not easily distinguishable, from other defects, for three reasons. The first is that the product may carry express representations. The second is that the products' appearance

may imply safety. The last reason is that inadequate warnings and misrepresentations are unable to be separated.

**Conceptual Standards for determining defectiveness:** The term “defect” is used to describe any actionably wrong with the product when it leaves the sellers’ hand. A distinction exists between a dangerously defective product and an unmerchantable product, especially when the only loss is an economic one.

**1.) Consumer Expectations:** There is a strict definition for the term “unreasonable danger.”

“The article sold must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics.” In design cases, expert evidence is necessary if defectiveness is to be established. “The foundation of a consumer expectation case is usually shaped by expert testimony, regardless of whether the case is brought in strict liability or in negligence.

**2.) Presumed Seller Knowledge:** Strict liability, when based on innocent misrepresentation, does not require a risk-benefit analysis.

**3.) Risk-Benefit Balancing:** Risk-Benefit analysis is used by the courts in the determination of design defects. There is a seven step standard used in risk-benefit analysis:

- a.) The usefulness and desirability of a product.
- b.) The likelihood and probable seriousness of injury from the product.
- c.) The availability of a substitute product that would meet the same need and not be as unsafe.
- d.) The manufactures ability to eliminate the danger without impairing the usefulness or making the product too expensive.
- e.) The users’ ability to avoid the danger.
- f.) The users’ anticipated awareness of the danger.
- g.) The feasibility on the part of the manufacturer, of spreading the risk of loss by pricing or insurance.

**4.) State of the Art:** The burden of eliminating a danger may be greater than the risk that the danger itself creates. It is possible for a product to be deemed unavoidably unsafe. This situation requires the absence of the knowledge or ability to eliminate a danger.

**5.) Unavoidably Unsafe Products:** Strict liability does not apply in the case of an unavoidably unsafe product.

**6.) Defect and Unreasonable Danger:** The Burden of proof of negligence, in a case of an unreasonably dangerous product, lies with the plaintiff.

### **2.1.3 Sale:**

A sale is the passing of title from the seller to the buyer for a price.

## **2.2 The Cause of Actions and Damages:**

### **2.2.1 Negligence:**

Negligence arises in various ways. These ways all have to do with the inadequacies in: inspection, processing, packaging, warning, design, marketing, or in any manner in which the defendant fails to uphold a reasonable standard of care. The Plaintiff is responsible for demonstrating that the accident is not possible in the absence of negligence. In addition, the plaintiff must show that it was the defendants duty to eliminate the danger. Lastly, the plaintiff must, with evidence, remove responsibility for the accident from all parties except the defendant.

### **2.2.2 Statutory Violations:**

This form of cause of action relies directly on the terms of the statute or the intent of a legislative or regulatory body.



### **2.2.3 Reckless Misconduct, Concealment, and Deceit:**

Reckless misconduct justifies the recovery of damages for emotional distress. This form of distress is not otherwise unrecoverable.

### **2.2.4 Strict Liability:**

**Implied Obligations:** a. The warranty of merchantability

1.) Unless excluded or modified, a warranty that the goods shall be merchantable is implied in a contract for their sale if the seller is a merchant with respect to goods of that kind.

2.) Merchantability is contingent upon the following:

a.) Must pass without objection in the trade under the contract description.

b.) In the case of fungible goods, must be of average quality within the description.

c.) Must be fit for the ordinary purposes for which such goods are used.

d.) Must run, within the variations permitted by the agreement, of even kind, quality and quantity within each unit and among all units involved.

e.) Must be adequately contained, packaged, and labeled as the agreement may require.

f.) Must conform to the promises or affirmations of fact made on the container or label if any exists.

3.) Implied warranties are permitted to arise during the course of dealing or usage of trade, unless otherwise permitted

a.) The warranty of fitness for a particular purpose: Strict liability applies in the case of particular purpose warranty. This is unusual and worth mention because strict liability does not normally apply in merchantability or strict tort.

b.) Strict Tort Products Liability

Tort Law states:

1.) One who sells a defective or unreasonably dangerous product to a consumer is liable for physical harm caused to the consumer or his property if:

a.) The seller is engaged in the business of selling such a product, and

b.) It is expected to and does reach the consumer without substantial change in the condition in which it was sold.

The above law applies regardless of whether the seller has exercised all possible care in preparation. This law also applies if there is no contractual agreement between the buyer and the seller.

c.) Abnormal danger

There is a list of standards, which determine whether a product is abnormally dangerous.

The existence of a high degree of risk

1.) The likelihood that the harm will be great

2.) The inability to eliminate the risk through the exercise of reasonable care.

3.) The extent to which the activity is not a common usage

4.) The inappropriateness of the activity to the place where it is carried on.

5.) The extent to which its value to the community is outweighed by its dangerous attributes.

d.) Misrepresentation: a. Express warranty

1.) Express warranty by the seller

a.) Any statement or promise by the seller, which relates the goods, establishes an express warranty, which must be conformed to by the seller.

b.) Any description, which is used, in the making of a bargain, must be accurate at the time of sale.

c.) Any model used in the creation of a bargain must be accurate at the time of sale.

2.) The seller creates an express warranty, even without using the word "warranty", if an affirmation of the value of the goods is given.

e.) Strict tort

Strict tort states that a seller is still liable for harm done by a product sold even if:

- 1.) It is not made negligently or fraudulently, and
- 2.) The consumer has not bought the product under any form of contract.

### **2.2.5 Damages:**

General: The plaintiff is entitled to recover for any foreseeable damages, in tort or warranty.

Emotional Distress: There are differing opinions on whether recovery is an option for sufferers of emotional distress, assuming there are no accompanying physical damage. If physical damage exists, recovery can be made based on emotional distress.

Punitive Damages: Very few plaintiffs are awarded punitive damages in cases of personal injury.

Joint and Several Liabilities: Joint liability is imposed when the damages are practically indivisible.

## **2.3 The Parties:**

### **2.3.1 Plaintiffs:**

A person who sues any products defendant for the purpose of recovering personal injuries. This person could be a buyer, user, consumer, or any bystander who could be in harms' way.

### **2.3.2 Defendant Seller of New Products:**

Manufacturers: In the case of a manufacturer, there are a variety of parties who may be sued. The final assembler may be sued as well as any manufacturer of any component part. These parties may be sued if the part is defective. However, even if the component meets the

specifications, the manufacturer is still at fault if there is a foreseeable risk involved with installing the component into the final product. The manufacturer is responsible for its product before and after it is assembled. It is responsible for the components, which go into the product and the assembly of the product, even if they don't actually produce the components or assemble the product themselves. If a manufacturer's name is on the product, they are responsible for any problems, which occur.

**Middlemen and Retailers:** The retailers are not liable for any latent defects in a product, unless the defect could have been found under routine inspection. "The Sealed Container Doctrine is a term of art used to relieve non-manufacturing sellers of implied strict liability for latent defects not discoverable by reasonable inspection, whether or not the product is sold in a sealed container. This doctrine, however does not apply to cases of misrepresentation. This also doesn't apply if there is any attempt at a repair or a re-build. In this case the retailer is considered the new manufacturer. A middleman may also be found guilty, on some level, if it receives a commission from the sale of a defective product. If the middleman doesn't receive any commission, then it most likely won't be held liable.

### **2.3.3 Defendant Used-Product Sellers:**

A seller cannot be held responsible for a product after it has left the chain of distribution, assuming it is not a case of misrepresentation or a design defect. Also the seller cannot be found liable if it is "not equipped to pass on the quality of the goods and had no direct impact on the continuing relationship with the manufacturer." The only time that this does not hold true is in the case of a regular used product seller. They are still considered part of the chain of distribution, and thus are liable.

### **2.3.4 Defendant Successor Corporations of Product Sellers:**

This section deals with the buying and selling of entire businesses, and how the responsibility for previously manufactured parts is distributed. There are two major rules in this area of product liability. First is the Turner Rule, which spells out how the buyer of business can be liable for the defective products of the previous owner. The Turner Rule states: “1.) continuity of management, personnel, physical location, assets, and general business of the predecessor; 2.) Dissolution of the predecessor as soon as legally and practically possible; assumption by the successor of all liabilities of the predecessor necessary for the continuation of normal business operations; and 4.) A holding out of itself to the public by the successor of the effective continuation of the predecessor.” The second product liability is the Ray Theory, which comes into play when the successor gains control of all or substantially all of the manufacturing assets of the predecessor. “It is based on policies based on virtual destruction of remedies against the predecessor through the acquisition, the ability of the successor to spread the risk, and the fairness requiring it to do so as burden reasonably attached to the benefit of acquiring the good will of the predecessor.”

### **2.3.5 Defendant Lessors, Bailors, and Licensors of Products:**

Lessors are liable for any injury, which occurs to the customer when using the lessor’s defective product. This is true provided the defect occurs during the rental period. A long time lease is considered the same as the purchase of a product. In general, the lessor is held responsible if he either “marketed or placed the product in the stream of commerce.”

### **2.3.6 Defendant Employer-Suppliers of Products:**

Employers are held liable for certain injuries, which occur to employees in the workplace. These instances include the cases where the employer knew about a potential problem area on a machine and did nothing about it.

### **2.3.7 Defendant Providers of Services:**

**Representational Conduct:** In this category there are three types of people who can be held strictly liable. They are: product certifiers, trade associations, trademark licensors franchisers, and advertisers. This would be due to misrepresentation of a defective product.

**Professional Services:** The providers of professional services are not held responsible under strict liability, whereas the providers of non-professional services are. Also, product related services are covered by strict liability.

**Pure Service Transactions:** Strict product liability does not apply when a pure service is provided and where no product is involved.

### **2.3.8 Defendant Real Estate Suppliers:**

**Builder-Vendors:** Builders of dwellings or buildings are strictly liable for injury cause by defective construction. This applies whether the building is large or small. Liability is based on the assumption that the contractor should have superior knowledge and skill regarding the construction of the building.

**Lessors:** Lessors are required to upkeep the building which they are leasing out. The person leasing the property has the right to expect the dwelling to be well maintained, up to the level at the time that the lease was signed.

**Occupiers of Premises:** The landlord is strictly liable for injuries caused by a latent defect, if present at the time of the lease. A landlord is considered part of the production and

marketing enterprise. This rule holds true unless an occupier's actions can be considered abnormally dangerous. In that case, the occupier is liable.

### **2.3.9 Contribution and Indemnity:**

One who is found intentionally liable is not entitled to contribution. The Indemnity Doctrine says that “one passively or secondarily at fault was permitted to recover in full against one who is actively or primarily at fault.” Some courts say that there is recovery relative to the amount of fault laid upon a person. This is called comparative fault.

## **2.4 Factors Affecting Choice of Remedies, Jurisdiction, and Procedure:**

### **2.4.1 Reliance:**

“Proof of reliance is expressly as a condition to recovery for conscious, negligent, and innocent misrepresentation resulting in personal injury.” However the express warranty provision says that “an affirmation merely of the value of the goods or a statement purporting to be merely the seller’s opinion or commendation of the goods does not create a warranty.” In order to recover for a breach of express warranty, one has to show that the consumer relied on the assurance of the advertisements when buying a product. If there happens to be an inadequate warning, and that is the basis for a case, there must be proof that the warning was relied on. Otherwise, misrepresentation cannot be claimed.

### **2.4.2 Disclaimers and limitations of Remedies:**

In general: “A disclaimer arises when no remedy is given, while a limitation of remedies exists when the plaintiff is given some remedy which may be different from or less than that otherwise provided by law.” Contractual restrictions can not be used to avoid strict liability in the

situations of negligence or warranty. The only time when contractual restrictions are valid against liability is when product liability is not applicable.

**General Requirements:**

- (a.) **Conspicuousness and Clarity:** Lack of inconspicuousness and clarity will invalidate disclaimers. Writing a disclaimer in small print or hiding it on the back of a form is grounds for invalidation. The disclaimer must be written in “clear and unequivocal terms and contain language which is close enough to express negligence that doubt is removed as to the parties intent.”
- (b.) **Timeliness:** A disclaimer must be delivered before a sale takes place or a contract is signed.
- (c.) **Fulfillment of Essential Purpose:** “Where circumstances cause an exclusive or limited remedy to fail of its essential purpose, remedy may be had.” In most cases this statement comes into play when a seller fails to fix a defect in a reasonable amount of time.
- (d.) **Conscionability:** If a contract or a contract clause is found to be unconscionable, or leave a buyer with no options, it can be denied or accepted without the unconscionable clause.

**As Affected by the Claims Asserted:** Disclaimers of fraud, deceit or negligence are not valid. A complete disclaimer of liability is, in most cases, found invalid assuming personal injury is involved. This is a result of the idea that in a case of personal injury, at least a minimal remedy is written into any sales contract. In addition, disclaimers tend to be invalidated if their purpose or result is the relief of obligation imposed by a statute.

**Scope and Effect of Disclaimers:** Only a party who is directly or indirectly part of an agreement is bound by a disclaimer.

**2.4.3 Recovery of Solely Economic Loss:**

**The Rule and its Rationale:** A plaintiff cannot recover if he or she has suffered a solely economic loss, as a result of a defective product. This applies in the case of negligence or strict



liability. The rationale behind this rule has multiple parts. The first is that “product recovery, whether in tort or warranty, is limited to foreseeable damages.” The second rationale is that negligence and personal injury are not disclaimable. The rule is valid regardless of privity between the plaintiff and the defendant. Solely economic loss is not insurable under product liability because a proof of an “occurrence” is necessary for indemnity to be received.

**Definitions of Solely Economic Loss:** “Economic loss is typically defined as loss in value, loss of use, cost of replacement, lost profits, and damage to a business’ reputation, where no physical accident is involved.”

#### **2.4.4 Notice of Breach:**

“Where a tender has been accepted...”...the buyer must, within a reasonable amount of time after he discovers or should have discovered any breach, notify the seller of the breach or be barred from any remedy.” This is a protection for the seller. It allows them to prepare for a possible claim against them.

#### **2.4.5 Wrongful Death:**

A breach of warranty or negligence may be considered a wrongful act, thus may be subject to a wrongful death action. This is due to the fact that culpability exists “in the consciousness and understanding of all right thinking persons.”

#### **2.4.6 Procedural Considerations:**

**Jurisdiction:** a. Statutory Causes of Action: In the case were an express warranty is breached by a defendant, state consumer protection statutes gives the plaintiff the right to treble damages and also to collect for attorney’s fees. There is a private right of action, established by

Congress, for damages where someone is injured due to a violation of a Consumer-Product-Safety-Rule. These are both examples of causes of action brought on by statutes.

(a.) Minimum Contacts of the Defendant: A defendant cannot be found liable for a defect, which occurs outside of his former state. If a retailer does not avail himself “ of the privilege of conducting business in the former state” or “to serve directly or indirectly” in the market, then they cannot be held liable. However, if the manufacturer intends to make a profit from a national market, then the specific state does not exclude the manufacturer from liability.

(b.) Class-Actions and Multi-District Litigation: There are four types of class actions: “1. Where there is a risk of inconsistent or varying adjudication; 2. Where adjudication of some claims will, as a practical matter, be disposed of the claims of others not a party to the litigation; 3. Where the defendant has acted or refused to act on grounds generally applicable to a class, making final injunctive or declaratory reliefs appropriate; 4. Where questions of fact or law common to the members of the class predominate over the questions affecting only individual members.” The first three types are mandatory for all members of the class to follow. The fourth type gives an option. The multi-district litigation statute states that similar pending litigation from one district can be used in pre-trial matters in other districts.

(c.) Inconsistent Verdicts and Erroneous Instructions: Every court treats these issues differently. Some say that a defective product does not necessarily breach warranty and vice-versa. Some however disagree and say “If any counts in a declaration are good, a verdict for entire damages shall be applied to such good counts.”

(d.) Res. Judicata: Collateral estoppel is a term which, “precludes relitigation of an issue that has been finally determined in a prior litigation between the same parties or their privies or relitigation of an issue by one party where that issue has been finally determined against that same party in a previous litigation.” Non-mutual defense collateral-estoppel is used when a plaintiff tries to sue a defendant on an issue dealt with in a prior suit. Non-mutual offensive collateral estoppel is used when a defendant tries to relitigate a prior issue.

(e.) Choice of Law: If a federal law decides that its own rule is procedural, federal law is applied over the forum states' law. In the case of change of venue, the transferor court sets the conflict rules for the transferee court. A state must have a significant number of contacts involved in the case in order to apply its own law.

#### **2.4.7 Statutory Compliance:**

Compliance with applicable statutes means that the product is inherently not defective.

#### **2.4.8 Defense Contract Specifications:**

**Non Government Specifications:** If the specifications are conformed to, the manufacturer is not liable. Unless the products "are so defective and dangerous that a reasonably competent contractor 'would realize that there was a grave chance that his product would be dangerously unsafe'."

**Government Specifications:** A manufacturer is not liable for a defective product it is in accordance with government contract specifications. There are four elements to this statement: 1. "The approval of the design by the United States must involve a discretionary function"; 2. The United States must have "approved reasonably safe specifications"; 3. "The product must have conformed to those specifications" and ; the supplier must have "warned the United States about the dangers in the use of the equipment that were known to the supplier but not to the United States."

#### **2.4.9 Statutes of Limitation:**

**The Applicable Statute:** Two or more statute could apply to a case. Either a warranty statute or a personal injury statute or both could be applied. A statute of repose is a limitation whose period runs between two fixed dates, regardless of the situation.

**Date of Accrual:** An accrual date is the date at which the statute of limitations takes effect. Three common types of these dates are: “1.) Date of the injury, 2.) Date when the plaintiff had reason to know about the claim, 3.) Date when the plaintiff, in the exercise of reasonable care, should have known of the claim.”

**Tolling Exceptions:** A statutory period has the ability to be tolled, or stayed. A reason for this would be the happening of an event, which prevents the period “from beginning or continuing to run as it would otherwise do in the absence of the events occurrence.”

#### **2.4.10 Statutory Retrenchments:**

Some issues covered by these retrenchments, or limitations are: “limitations on the amount of chargeable contingent fees; elimination of the collateral source rule; provision for the periodic payment of judgements; elimination of strict liability and the adoption of the product state of the art defense; elimination or restriction of recovery for punitive damages.

### **2.5 Production and Design Defects:**

#### **2.5.1 Production defects:**

In a manufacturing defect case, the plaintiff proves that the product is defective by showing that it does not agree with the manufacturer’s specifications. However if a manufacturer determined that a 20% failure rate was acceptable, none of the products falling within this range of failure should be considered defective. Random defectiveness is probably what is taken into account by the concept of production defect. It is not always a useful means of distinguishing production from design defects, if the idea is intended to refer to the rate of failure.

### **2.5.2 Design Defects:**

**The Theory of Liability:** There are many different views as to what constitutes as liability. The most widely exercised standard of liability is some form of risk-utility analysis. Risk-utility analysis is where the liability of the manufacturer depends upon a departure from certain standards of care. This is basically a matter of negligence on the part of the manufacturer, but many courts would have us believe that their focus is on the product rather than the manufacturer's conduct. Although a jury will take into account the judgement or decision, in other words "conduct" of the manufacturer. However, in strict liability cases, industry custom or usage is irrelevant to the issue of the defect. Instead, the factors of the degree of danger posed by the challenged design, the probability that such a danger could occur, the mechanical feasibility of a safer alternate design, and the adverse consequences to the product and to the consumer that would result from an alternate design. One view as to what design defectiveness is in strict liability is whether the product did not perform under normal conditions as an ordinary consumer would expect, also if the plaintiff proves that the product's design caused his injury and the defendant fails to show that the benefits of the challenged design outweighs the risk of danger inherent in such a design. However a product that fills a requires/critical need and can be designed in only one way should be viewed differently.

**Polycentricity:** Sometimes conscious design decisions are described as "polycentric" or "many centered problems", in which each point of a decision is related to all of the others. This describes how some flaws in design may result from concisely inputting one design, which is safe under most conditions, but flawed under lower percentage conditions. Thus trade-offs in the design of a product involve safety, utility, and cost. It is the manufacturers judgment as to whether the trade-off are acceptable, if the trade-offs are known to the public, but still accepted by it. This concept of "trade-off" makes deciding product liability a more complex process. In the Bowman court, it was thought that the jury should be instructed to consider the probability and seriousness of potential injury, and the ability of the manufacturer to design a safer product

without jeopardizing any of the functions and the effectiveness of the product. Opponents of polycentricity say that when a manufacturer places market considerations before the design of a safe product, that is when a design is thought to be liable and unreasonably dangerous.

**The Relation of Design and Warning Defects:** The failure to warn of an obvious danger in the product is a case of liability, but to warn of an obvious danger that can be avoided through a feasible alternate design can also be seen as liable. Thus placement of written warning labels and notices, does not release the manufacturer of all of their responsibility in the safety of a product. Lack of mechanically engineered warning may also be a case of design defect, as in the case of *Simms vs. Thiede* (1990). Depending on the situation at hand, the degree of liability due to warning or lack thereof is dependant on the view as to whether the warning is adequate and/or the manufacturer neglected to warn the consumer of the dangers.

**Obviousness of Danger:** Is a manufacturer liable for a product that has obvious dangers, and is misused by the consumer in such a way that he injures himself? That depends on the product and whether adequate safe guards can be implemented and if the dangers were unreasonable. However the obvious danger defense conflicts with the defense of assumption of the risk. To establish assumption of the risk, it must be shown that the plaintiff discovered the defect, fully understood the danger that it presented, and disregarded this known danger and exposed himself to it anyway. In a case of truly obvious danger, the failure to adequately warn of such a danger or hazard that is apparent to the ordinary user is not unreasonably dangerous, as stated by the Tennessee Product Liability Act, Tenn. Code Ann. 29-28-105(d).

**Crashworthiness:** Crashworthiness is a term used to describe the capability of a product to protect against increased injury from an accident caused by something or someone other than the product. This is mostly used in connection with automobile collisions, as in fuel tank crashworthiness, but may also include such events as when a fire extinguisher fails to work, or a burglar alarm malfunction. Most courts find that most products must be reasonably designed

against foreseeable accidents. Injuries resulting from unforeseeable accidents, however, are not the responsibility of the manufacturer.

## **2.6 Inadequate Warnings and Instructions, and Misrepresentations:**

### **2.6.1 Warnings and Instructions:**

**In General:** A plaintiff is not required to make an election between pursuing a case on a strict products liability theory of either design defect or failure to warn. A plaintiff may proceed with both theories if both are viable. A warning is distinguished from an instruction, in that instructions are calculated primarily to secure the efficient use of a product, while warnings are design to insure safe use. A warning must describe the nature and the extent of the danger involved. For example, a jury could find that a warning on dishwasher soap was inadequate. The warning stated that the soap was corrosive, but it did not warn that the product could cause blindness. Warning may need to detail not only the toxic qualities of the product, but also a safe means of disposal. A manufacturer may be required to warn of the absence of an antidote in the case of a dangerous poison. In addition, it should take into account the environment in which its product will be used when fashioning warnings. In most cases a warning is required in order to enable the plaintiff to use the product in such a way as to avoid a concealed danger. The plaintiff could not complain that a warning with clearer or stronger content would have made a difference if the plaintiff had failed to read the warning that was given. On the other hand, the plaintiff has the burden of showing that, had a warning been given, it would have cause him/her to avoid the accident. If a danger is obvious, it is not required for a warning to be given, but determining cases of defective design is complicated. Sometimes expert testimony is required to determine the adequacy of warnings to a specialized group, such as doctors.

**The Standard of Liability:** There is a substantial division of authority regarding whether negligence or a strict liability is to be used in failure to warn cases. With today's world

consumers, it is hard from them to protect themselves from risk of serious dangers caused by the products they purchase. The manufacturer is better equipped with the knowledge of the product and can handle with more ease. Therefore, the consumer must rely on the integrity and competency of the business community. In addition, by imposing on the manufacturers the cost of failures to discover hazards, we create an incentive for them to invest more actively in safety research. Liability can also be judged by scientific knowability. If a known defect or hazard could be deemed knowable at the time of production through applying research or performing tests that were available at the time, then the manufacturer is liable and negligent in producing the dangerous product. However, it's hard for juries to understand this "scientific knowability" and judge upon these given complex issues. The effort, time, and money applied to safety research is also analyzed to see if the manufacture put up a decent effort in discovering flaws and defects in their products. The state-of-the-art is usually determined in terms of the scientific or technological knowledge available at a given time, while the negligence standard of due care is defined in terms of what a person knew, had reason to know, or should have known regarding a danger and the means of avoiding it. These two standards are not necessarily the same, even for a manufacturer with assumed expert knowledge in the field, since the reasonable person cannot always be expected to know that which is knowable.

**Persons to be Reached:** A warning is mandatory only on specific dangers that an expert is unaware. Commonly experts need not be warned if products they are using are in their field of knowledge. However, there may be specific dangers of which the expert is unaware, and thus needs to be forewarned. An intermediary is required to give warning to the consumers if they have knowledge of the defects, dangers, and/or past accidents. However, some intermediaries have no knowledge of defects. In most cases of doctors prescribing drugs, the warning can be issued to only the doctor, this is called the "learned intermediary rule" for prescription drugs. In some cases, however, the warning has to be given directly to the consumer via package insert or



warning, such as in the case where it is foreseeable that a drug will be used or administered without the intervention of a doctor or learned intermediary.

**Countervailing Representations:** Misrepresentation of a warning can occur when the warning is downplayed or misleading. Counteractive words that describe the products safety, when in fact it was misleading can make the warning more inadequate. In some cases, salespersons, or manufacturer's detail men, emphasize it's products effectiveness, while downplaying or not warning of the defects can also count as misrepresentation. Pictures, and/or appearance of safety can also be a misrepresentation of safety if the pictures or appearance show how safe a product is, when actually it isn't. A variety of circumstances surrounding the packaging, marketing, and appearance of a product may serve to counteract any warnings that are given. Adequacy of a warning depends upon the environment in which the product is marketed.

**Post-Sale Duties to Warn:** In some cases, a warning is necessary post-sale if a dangerous defect is discovered or known in the product sold. A negligent failure to warn can also exist at the time of sale. The post-sale duty may be greater than one of just warning, as in cases where the product needed to be recalled or repaired. However, in cases where corporation A buys out corporation B, corporation A is not liable for products sold by it's predecessor. On the other hand, corporation A, has the obligation to warn of dangers associated with products sold by it's predecessor if they discover a defect in the product sold by it's predecessor.

**Allergic Users:** Warnings are subjected based on a substantial or appreciable number of persons contingent to the allergy. This is where the defendant should have known of the risk. The definition for substantial or appreciable number is not easy to define. There has been one case where 373 complaints out of 82 million sales were considered sufficient. Common allergies such as eggs or strawberries need not be warned by the seller, but may be requires to warn that products contain ingredients that are known allergens.

## **2.6.2 Misrepresentations:**

Misrepresentation can be based on deceit, negligence, strict tort, or strict warranty. There is no need for a defect on a product to be shown other than the plaintiff's injury is caused by misrepresentation of the supplier. Sometimes misrepresentations arise from the appearance of the product itself. A number of product defenses and liability limitations can be avoided if strict liability for misrepresentation is imposed.

## **2.7 Problems of Proof:**

### **2.7.1 Cause-in-Fact:**

A plaintiff must show that the defect existed when the product left the defendant's control. He must reasonably eliminate alternative causes not attributed to the defendant.

The plaintiff in a strict liability action is not required to disprove every possible alternative explanation of the injury in order to have the case submitted to the jury. The plaintiff need only show that the material fact to be proved may be logically and reasonably be inferred from the circumstantial evidence.

Some courts have rejected the market share basis of liability for similar products that have varying degrees of harmfulness, on the ground that the market proportion rationale is inapplicable since the proportion of the market sold does not necessarily reflect the proportion of injuries likely caused by a defendant.

Often the concept of foreseeability is used to describe occurrences that can reasonably be anticipated, while proximate cause is used to describe occurrences that are the "direct", "natural", or "probable" result of another event.

### 2.7.2 Proximate Cause and Foreseeability:

In “strict liability the knowledge of the article’s propensity to inflict harm as it did is assumed regardless of whether the manufacturer or seller foresaw or reasonably should have foreseen the danger.” But before a manufacturer or other seller is strictly liable for injury inflicted by a product, the product must be foreseeable, while only foreseeability of use is required in strict liability.

**Misuse:** Affirmation defense by some courts. Misuse is not treated as a bar to recovery unless it is considered unforeseeable. Unforeseeable misuse is considered a bar. Misuse, when attributable to the plaintiff rather than a third person is closely related to contributory negligence and assumption of the risk. The fact that the plaintiff himself is guilty of criminal conduct in his acquisition or use of a product will not necessarily bar his recovery on the grounds of unforeseeable contributory negligence or assumption of the risk(Rest 2d of Torts 889).

**Alteration:** A special problem of misuse concerns the alteration of a product. A substantial alteration that causes the accident may be unforeseeable, barring recovery, unless the alteration should have been anticipated because of the characteristics of the product that invite or encourage the change. Where a defendant furnishes a defectively constructed product, it is foreseeable that the product may be defectively modified in an attempt to correct the original defect.

**Damages:** Sec. 435 of the Rest. 2d of Torts states, 1. If the actor’s conduct is a substantial factor in bringing about harm to another, the fact that the actor neither foresaw nor should have foreseen the extent of the harm or the manner in which it occurred does not prevent him from being liable. 2. The actor’s conduct may be held not to be a legal cause of harm to another where after the event and looking back from the harm to the actor’s negligent conduct, it appears to the court highly extraordinary that it should have brought about the harm.

### 2.7.3 Plaintiff Misconduct, and Comparative Fault:

Three types of plaintiff misconduct that can bar or limit the plaintiff's right to recovery are:

1. **Contributory negligence:** the failure of the plaintiff to take reasonable actions for his own safety.
2. **Assumption of the risk:** a knowing and voluntary confrontation of an appreciated risk.
3. **Misuse including alteration of the product:** the use of a product in a foreseeable or unforeseeable manner.

Contributory negligence and assumption of the risk are usually treated as defenses, with the burden of proof on the defendant. Contributory negligence is determined by a reasonable person standard, based on the knowledge of the plaintiff. The danger can be latent, but discovered by the plaintiff. A plaintiff may be aware of one risk without appreciating another.

The effect of plaintiff misconduct in strict liability: Some courts hold that contributory negligence is no defense in a strict products liability action, but that assumption of the risk is a defense. Contributory negligence of the plaintiff is not a defense when such negligence consists merely of a failure to discover the defect in the product, or to guard against the possibility of its existence.

Comparative Fault: Comparative fault has been widely adopted, either by statute or judicial decision. Three principle patterns of comparison: 1. Her fault is less than that of the defendant. 2. If it is not more than that of the defendant. 3. If the defendant is at fault to any degree.

Pure comparative fault is preferred by commentators and is the method usually chosen by judicial adoption. If the plaintiff is permitted to recover, their recovery will be proportionally reduced by the percentage of the fault, if any, attributable to themselves. Thus a plaintiff found 30% at fault can recover 70% of the damage.

Where there is more than one defendant, the general rule is to retain joint and several liability in comparative fault.

The reasons for retaining joint liability in a comparative fault, even where the plaintiff is also at fault: 1. The feasibility of apportioning fault on a comparative basis does not render an indivisible injury “divisible” for purposes of the joint and several liability rule. 2. In those instances where the plaintiff is not guilty of negligence, he would be forced to bear a portion of the loss should one of the tortfeasors prove financially unable to satisfy his share of the damages. 3. Even in cases that share a plaintiff is partially at fault, his culpability is not equivalent to that of the defendant. The plaintiff’s negligence relates only to a lack of due care for his own safety, while the defendant’s negligence relates to a lack of due care for the safety of others; the latter is tortious, but the former is not. 4. Elimination of joint and several liability would work a serious and unwarranted deleterious effect on the ability of an injured plaintiff to obtain adequate compensation for his injuries.

Comparative fault is widely applied to unreasonable assumption of the risk. Some courts apply comparative fault to conduct based on plaintiff misuse of the product. Some courts compare relative fault, others relative causation, and still others a combination of these factors in determining comparative fault or comparative responsibility. Some states by statute apply comparative fault to strict liability action.

#### **2.7.4 Subsequent Remedial Measures:**

Evidence of the subsequent measures is not admissible to prove negligence or culpable conduct in connection with the event. This rule does not require the exclusion of evidence of subsequent measures when offered for another purpose, such as proving ownership, control, or feasibility of precautionary measures, if controverted, or impeachment. The rule is generally held to exclude evidence of remedial measures only if taken by the defendant after the plaintiff’s injury, and it does not exclude evidence of such measures taken before the injury.

The rule does not exclude:

Evidence of remedial measures taken by one other than the defendant.

Evidence of remedial measures taken a defendant after the plaintiff's accident when these measures are involuntarily undertaken. The rule does not apply unless the evidence concerns conduct that can fairly be described as a remedial measure.

Evidence of subsequent remedial measures may be admitted, even in a negligence case, if offered for some purpose other than that of showing negligence or culpable conduct.

R.407 states that evidence of subsequent remedial measures is admissible when offered to prove "feasibility of precautionary measure, if controverted, or impeachment." The feasibility of providing a safer design or warning is often a principle issue in product litigation.

### **2.7.5 Miscellaneous Problems of Proof:**

**History of unsafe and safe use:** Evidence of unsafe use and of prior accidents with similar products is admissible for a variety of purposes, which include proof of notice of the alleged defect by the defendant, the magnitude of the danger, the foreseeability of user conduct, the defendant's ability to correct the defect, and causation.

**Spoliation:** It occurs when a person willfully or negligently disposes of product evidence vital to a litigant's case. The person who disposes of the evidence may be held liable to the litigant for the damages they likely could have recovered. The disposer may be the product supplier or another owing a duty to preserve the evidence.

**Expert Testimony:** Expert testimony may be essential in a products liability lawsuit to establish a prima facie case of defectiveness, causation, damage, and other issues in the suit. Expert testimony is admissible if it will aid the fact finder in its determination of an issue in the suit. Experts may be lay persons, in the sense of lacking academic credentials, provided they have acquired specialized knowledge through experience with a product.

**State of the Art and Industry Custom:** Courts have difficulty distinguishing between state of the art and the industry custom, and a number of courts permit evidence of industry custom to show state of the art. State of the art is defined as the scientific or technological knowledge available or existing when a product is marketed.

**Codes, Reports, and Technical Literature:** Safety codes drawn up by industry sponsors associations are admissible on the issue of defectiveness, due care, and other disputed issues in a case.

**Discovery:** The use and abuse of discovery have become controversial issues in civil litigation, including product liability.

### **Chapter 3: Boring Machine Case**

In September of 1993, Roberto Ortiz was using a boring machine at work when he lost his middle finger. The machine he was operating was manufactured by B.M Root. Ortiz has filed suit against the manufacturer, B.M. Root, as well as the Diehl Company, which merged with B.M Root. Ortiz seeks compensation for his injuries, time lost at work, and emotional distress.

A complaint was filed by the plaintiff which contained the following main charges:

- I. Root manufactured an unsafe machine
- II. Root warranted the machine's safety
- III. Diehl Machines merged with Root and failed to safely audit the boring machine
- IV. Diehl Machines warranted the machine's safety
- V. Boshco sold the unsafe machine
- VI. Boshco warranted the machine's safety

In response to these charges, lawyers from Diehl interrogated the plaintiff. According to Ortiz, he was trying to operate an air hose to clean wood chips away from the machine when the accident occurred. This air hose was partly broken and wasn't even the right air hose for that particular machine. The only way to get air pressure was to press down on a valve in the hose. Ortiz was wearing gloves to do this because it allowed him to create more pressure on the air valve without causing pain. He wasn't getting enough air pressure so he used both hands. One of his hands slipped off the hose



and was the glove was caught in a spindle. His middle finger was torn off his right, dominant hand.

The Diehl Company also interrogated Ortiz. The plaintiff was asked about his responsibilities at Kimball and the events leading up to the accident. Ortiz's regular duties at Kimball included setting up and running the Root boring machine. The guard that had previously been on the machine obscured the view of the board that was being drilled. The only available visibility was obscured by the use of wire mesh in the guard. This caused several small accidents. It was a managerial decision to remove the guard because the Kimball Company felt that the guard would cause more harm than good. Ortiz found out about the guard being removed only after the accident. Ortiz claims that the Diehl failed to warn about the dangers of operating the boring machine. He claims that there was no 'point of operation' guard, which is required by ANSI and OSHA standards.

OSHA wrote a letter to Kimball following the accident, which contained a complaint. The complaint required a response from Kimball, which stated that the problem with the guard on the boring machine had been fixed and the situation had been addressed. OSHA also stated that they performed random inspections of companies that have had incidents reports to make sure that their regulations had been met. The boss of Kimball companies told OSHA of past plans to use Plexiglas in the guard in place of wire mesh to improve visibility and to protect workers from the spindles of the boring machine. This plan had been cast aside due to expected failure of the guard's effectiveness; however, the plan would now be implemented. Kimball's letter also stated that they could not meet OSHA standard 29 CFR 1910.213 as well as OSHA standard 29

CFR 1910.212. These rules require a guard on the machine and that the guard would not create accidents itself, respectively. Kimball sent a follow-up letter approximately one month later stating that the Plexiglas guard was now being implemented. This guard was like the one before it, except that this one had Plexiglas in place of the wire mesh. The original reason why the Plexiglas guard was not put in place was because the workers thought that grease would collect on it and reduce visibility.

The plaintiff's lawyers interrogated a representative from the Diehl machine company. The representative from Diehl claimed that the Diehl Company never merged with B.M. Root. He also claims that the Diehl Company forwarded info to distributors of Root machines about safety warnings. He states that the plaintiff "failed to use reasonable care" while operating the boring machine.

The plaintiff produced documents for Diehl, who then requested more. These documents included absolutely everything that had to do the Root boring machine, including instruction manuals, general reviews, everything put out by the Root machine, and articles about the machine. Also in all this literature is a letter from 1986 involving warning signs for all Root machines. The letter stated that Root would provide warning signs for free and also offered prices for safety guards on the boring machines. The literature contains another letter from 1992 informing Kimball that the Diehl Company was in the process of merging with B.M. Root.

There are several ANSI standards that are applicable to boring machines. They are summarized here:

- Any guard on the machine must not be removable by common hand tools.

- It is the employer's responsibility to be sure that the operators of the machine are properly trained and experienced.
- It is the employer's responsibility to make sure that the guards are in place.
- The employee must know be aware of the ANSI standards that are relevant to their line of work.
- When a fixed guard is in place, they must prevent entry to pinch points and the point of operation must also be guarded.
- The guard should not cause any pinch points itself.
- Presence sensing guards are also mentioned. These devices create a visual and/or audio warning when the hazard area has been breached.
- Safety markings must be in plain view of the operator.
- The machine's shut-off must be reasonably located and easily accessible.

The Root machine complied with most of these standards. However, the employer (Kimball) removed the guard, the guard did cause pinch points, and presence sensing guard were not in use, although these are not required. Also, according to our interpretation of the photographs we viewed of the machine, the shut-off switch was too far out of reach.

Following the production of documents, lawyers from the defendants deposed G. Dejardins. Dejardins was a witness in the case and was a co-worker of the plaintiff, Mr. Ortiz. He claims that the workers removed the safety guards on the boring machine because there was a pinch point between the guard and the board being drilled. There was also a lack of visibility caused by the guard. Mr. Dejardins also stated that he had tried to find a safer machine than the one that Kimball was using. Despite his efforts, he

found that the Root machine was the safest on the market and that there had been no major changes in boring machines since the time they bought the current one.

Mr. Dejardins also answered questions involving workers wearing gloves. He said that workers routinely wore gloves while on the job. It was perfectly acceptable practice to wear gloves around the drilling machine, but not when working directly with the drilling machine. Apparently from his deposition, this witness felt that the plaintiff used accepted practice while using the boring machine and it was through no fault of his own that he lost his middle finger.

Daniel McKenzie was another witness to the case and a co-worker of Mr. Ortiz who was deposed by lawyers of the defendants. He said that while cleaning the boring machines, as Mr. Ortiz was at the time of the accident, it is not common practice to completely turn off the machine. To specify, you must stop the cycle motion of the table and board being lowered and raised to the spindles, but you do not have to shut off the spindles themselves. Mr. Ortiz had properly complied with this procedure. An interesting point that Mr. McKenzie mentioned was this: the guard would not have necessarily prevented the accident from occurring, because it is still possible to touch the spindles. It would have been more difficult to touch the spindles, however, if the guard was in place.

Igor Paul is an expert witness from MIT who was called in to give his opinion about the case. His work began on November 3, 1994 when he met with Ortiz at MIT. He was asked to evaluate the design of the machine and the circumstances of the accident. He had to write a report relative to his professional opinion. He received photographs of

the equipment, brochure containing information about the equipment, and a description of the accident from the plaintiff.

Paul was informed of the circumstances surrounding the glove and that the air hose being used was faulty. He claims that the air hose is a “red herring” and that the accident could have happened even with a working air hose. Although Paul says that the machine should be turned off prior to cleaning, he claims that Ortiz was unaware that the machine was supposed to be turned off during cleaning and doubts the existence of warning signs at the time of the accident. He says that the employer cannot be consistently relied upon to provide a completely safe workplace.

Paul had made his decisions about this case in a report written in 1995. He places the blame of the accident on the “improper and unsafe design of the machine.” B.M. Root should have made an inter-locking guard for the machine because the guard in use made the accident more likely to happen by impeding the operator’s vision. Paul concluded his deposition by stating that the cause of the accident was “improper, inadequate and defective safety design.”

We have now heard from all relevant sources in regards to this accident. Here is a summary of facts as we see them: the guard that was manufactured by B.M. Root, for the boring machine, failed to comply with all OSHA and ANSI standards. This machine was the safest available on the market. There was apparent partial negligence by Kimball Companies’ removal of the guard, providing of a faulty air hose, and failure to prevent Ortiz from wearing gloves in the vicinity of the moving spindles. However, the lawsuit is against the manufacturer and distributors and not the employer. In conclusion we feel that the defendants are at fault and that Roberto Ortiz should be compensated for his loss.

## **Chapter 4: Minivan Car Seat Case**

Robin Laflamme was involved in a car accident on October 25, 1995. She was driving her 1994 Plymouth Voyager and rear-ended another car at a stop sign. Mrs. Laflamme claims that when she tried to apply the brake, her seat slid back and she was not able to stop the car in time. No one was seriously injured from the collision, but there was some repair needed to both cars. Mrs. Laflamme did suffer some back and neck injuries for which she received therapy. Mr. and Mrs. Laflamme filed suit against Daimler-Chrysler and Maine Line Auto Center. The plaintiffs claim that the seat was not properly designed and that Maine Line Auto Center failed to fix the problem despite several complaints.

The total damage to the Laflamme's 1994 Chrysler Voyager was \$2040.51. Chrysler paid for repairs and rental expenses for the first 47 days following the accident. The Laflamme's required a rental car for an additional 29 days, for which they paid \$30 a day.

Prior to this accident, Robin Laflamme visited a chiropractor and physical therapist about neck and back problems. She disclosed to her chiropractor problems with her car seat sliding back, claiming these contributed to her conditions. After the accident, she also claims to have had problems with her hip, legs, and buttocks, which were not present prior to the accident.

Mrs. Laflamme owns and operates a cleaning business and used the van for transportation involved with her work. In the past she had worked 40-50 hour weeks. This made her approximately \$12,000 in gross revenue yearly. Since the accident, she

claims that she can work no more than 16 hours each week because of her injuries sustained.

The sexual relationship between the Laflammes has also suffered since the accident. Previously, the couple had sex regularly, about three or four times weekly. After the accident they had no sex for 6-7 months, and then only every week or two. Mrs. Laflamme required surgery from her injuries, which again resulted in the couple not having sex for another 6-7 months. The couple is seeking a loss of consortium claim because Mr. Laflamme says that his wife is not the same companion she used to be.

About 6 months after purchasing the vehicles, Mrs. Laflamme noticed that the driver's seat would occasionally slide back when she tried to accelerate and brake. Normally she would adjust the seat and shake it to make sure it was in place. Even after getting the seat to lock into position, it would still slide back sometimes. Apparently, when she would press on one of the pedals, it would naturally push her against the back of the seat, and this would sometimes cause the whole seat to slide back. She tried to explain this to her family, but they were skeptical, and said that she must not have locked it into position correctly. In fact, her husband still did not believe her until he saw it happen himself. Mr. Laflamme witnessed the seat sliding partially back several times and all the way back twice. The car was brought in to Maine Line Auto Center be fixed a couple times. The first time was on 10/24/93. The issue was not solved due to the fact that the mechanics could not recreate the problem reported. The seat would not slide back when locked into position. The van was brought in again on 10/2/95. Again the problem was not solved.

The National Highway Traffic Safety Administration offers a service called the Auto Safety Hotline. This is a phone number that motorists can call to report a problem with their vehicle. Four such claims were made against Daimler-Chrysler minivans of this model and year. In these motorist complaint, such injuries were mentioned as injured backs and broken wrists. All claimed loss of control of the vehicle due to the seat sliding back.

A Technical Service Bulletin, or TSB, is a document that reports a possible condition that may arise for certain vehicles and gives instructions on how to fix the problem. Two TSB's exist that deal with seat of the 1991-1994 Daimler-Chrysler Voyager. The bulletins are numbered 23-32-93 and 23-23-94, and they contain the same information. They both state that one side of the manual seat adjuster may not latch as smoothly as the other side. This requires the occupant to shift their weight to get the seat to lock into place. However, neither bulletin mention a problem with the seat sliding back, as it did for the Laflamms. In general, when a TSB does not exactly match the problem, as in this case, Chrysler leaves it to the dealer's discretion whether or not to follow the TSB.

Eric Clark is an engineer on the production seat engineering team at Daimler-Chrysler. In his deposition he talks about his views on the accident. His major role as a member of the seat-engineering group is to take the preliminary design and production-ize it, making it ready and capable for production. There was a major redesign in the minivans' seats in 1991. This is the same design in use for the 1994 model, just like the one Robin Laflamme was driving. Clark claims no knowledge of any complaints about the stability of the seat. After being asked about the Technical Service Bulletin 23-32-93,



he stated, "I do not know the specific information or the source that created the need for TSB 23-32-93."

Mark Crossman is in charge of the overall performance of vehicle crash tests for Daimler-Chrysler and was deposed for this case. On April 21, 1993, he noticed seat movement in a frontal impact crash test in the Voyager. Crossman states that it is "desirable for seats not to shift." Duh. He also stated that the seat shift was an unexpected result. Glad this guy's in charge. When this problem arose, he delegated it down to Mr. Turkovich, who is manager of the seat system-engineering group. Mr. Turkovich apologized for the test failure and Crossman place responsibility on him to fix it. In Mr. Turkovich's report, he stated that the test was "unsuccessful due to left femur results." Femur load did not satisfy the FMVSS208 limit. In spite of these failures, Mark Crossman, stated the van "did not violate any federal motor vehicle standards." He claims the test in question was a very severe test at 35 MPH, much higher than required by law. Crossman also states that he "would not design a vehicle, and we as a company would not design a vehicle whose seats shift during crashes."

Dan Dammer is mechanical engineer for Daimler-Chrysler. He says that the two TSB are basically the same, one just updates the other for the next year. He claims that these bulletins do represent a safety issue. He states that the NHTSA receives complaints and forwards them to the manufacturer.

Kenneth Morton works on TSB's and was deposed for this case. According to Morton, TSB's are merely information about a problem, and people can assess and deal with problem however they choose. Morton explains that when a problem is brought before automotive technicians, it is standard operating procedure to search for TSB's

relating to the issue. He would have expected the technician to install new seat tracks to fix the problem with the Laflammes' vehicle.

Maine Line Auto Center went out and hired a consultant, Gerald Byron, to inspect the situation and report his observations. Byron talked to Dwayne Briggs of the auto center. He found out the dealership could not recreate the problem that the Laflamme's reported and therefore did not fix the seat. He also discovered that the TSB's were not even looked at when the vehicle was brought in previously. Upon inspecting the seat, Byron found that he in fact could recreate the seat-sliding problem as reported. Byron had seen this problem in the past with other companies but never with Chrysler. He thinks that following the TSB would have fixed the problem.

Based on the crash tests, the reported problems, and the TSB's it is reasonable to believe that Daimler-Chrysler knew of the seat problem and did nothing to fix it. According to Engineering Standards from Chrysler Corporation's Vehicle Engineering Office, the seat latching mechanism must engage positively, without hesitation, and in a consistent manner. Clearly the Laflamme's vehicle did not comply with this standard. We feel Daimler-Chrysler is at fault.

Maine Line Auto Center, despite two complaints from the Laflammes, failed to properly address the issue of the seat sliding back after locking into place. They also failed to consult the TSB's relating to this issue. They claimed they could not recreate the problem, however Gerald Byron did so. We feel that Maine Line Auto Center should share some of the responsibility for this accident and that both them and Daimler-Chrysler should compensate the plaintiffs.

## **Chapter 5: Tree Spader Case**

The plaintiff Michael Heath is an employee of Stewart's Nursery at Turner Falls, MA. He claims he was injured on April 1, 1996 while operating a tree spader. Michael severely injured his left hand in the Vermeer "The Diggin' Dutchman" TS-40 tree spade mounted on a M-485 model tractor. He is suing the manufacturer of the tree spader, Vermeer Manufacturing Company for \$5 million. The main counts against the defendant are negligence and carelessness in design, and that the design was defective and dangerous resulting in extreme physical and mental pain suffered. The plaintiff also claims that Vermeer failed to warn of foreseeable dangers.

The Vermeer TS-40 tree spader is used for uprooting and transplanting small trees. In this particular situation it was being used for moving crab trees for landscaping applications. Gary Stafford, who was specifically trained on this machine, was operating the tractor. The TS-40 was driven up to the tree with the gates open. The gates were then closed and the tree was uprooted and raised to the recommended height of 24-26 inches above ground. The tree is then ready to be lowered into a wire basket. This is the only time when a second worker should be assisting the operator. Using a shovel, the plaintiff attempted to flatten the root ball of the tree. This was to help the tree stand up straight when in the basket. When preparing to lower the tree into the basket, the plaintiff realized the tree was not lined up correctly. At first the plaintiff used his left hand to hold the tree in place. Heath then switched hands and held onto the tree with his right hand. At this point Heath claims he unknowingly put his left hand in a pinch point between the blade and the frame. When the spade blades retracted to drop the tree, his

left hand was caught. At all times during this sequence, the plaintiff claims he was standing on the ground.

Heath's left hand was crushed at the palm, severely injuring his four digits. Surgeons were able to save most of his hand, except for the loss of his index finger, and the top of his middle finger. There is now a metal screw in between the second and third knuckle of what remains of his middle finger. He also suffers from decreased range of motion and loss of feeling in his left hand.

Wilson G. Dobson is a professional engineer working for the plaintiff as an expert witness. It is in Dobson's opinion that Vermeer had the responsibility to eliminate the hazard of the pinch point. He claims in his letter that this could be done by preventing the blade from closing the gap between itself and the frame. He refers to OSHA standard 29CFR 19.10.212 and states that if Vermeer could not eliminate the danger by design, a guard should be in place such as a "proximity warning device" to alert a user when his hand was in a pinch point. He claims that it is obvious that a pinch point exists and that a warning sign should be present. In conclusion of his letter, Dobson states that the machine is defective because it has unguarded pinch points.

In the defendant's deposition, they state that no injuries similar to the plaintiff's have been caused and no similar lawsuits have been brought forth. All safety instructions for the TS-40 are in the operating manual and state that hands should be kept clear of the machine when in operation. The defendant claims that it was negligence on the part of tractor operator Gary Stafford to allow Heath to climb into the machine platform. Prior to sale, Vermeer was not aware of any documents written about hand safety on tree spades, and therefore no safety tests were conducted for hand injuries. The main

argument of the defendant is that the pinch point on the TS-40 where the plaintiff was injured is higher than a person could foreseeably place their hand.

ANSI standard B15.1 – 1984 involves mechanical power transmission apparatus. The TS-40 falls into this classification and therefore is subject to these standards. The ANSI standard states that all motion hazards shall be eliminated by design or guard. It also mentions a presence sensing mechanism as a safety device, as suggested by Wilson G. Dobson. This device would stop normal motion of the machine if the operator accidentally entered the pinch point area.

The defense of the defendant claims that the TS-40 was in fact in proper accordance with all relevant standards involving the pinch point between the tree spade blade and the frame. Ivan R. Brand, director of product safety for Vermeer, claims that pinch point is out of reach and is therefore guarded by *safety distance guarding*. The pinch point on the TS-40 is 77 inches from the bottom of the frame. According to the document Human Factors in Design, the 95<sup>th</sup> percentile of humans have a 94 inch overhead reach, making the 77 inches of the TS-40 insufficient. However, the only time that a second worker should be near the machine is when it is raised to a height of 24-26 inches above the ground. Effectively moving the pinch point to a height of 101-103 inches, the pinch point is then out of reach. Brand states in his deposition that there simply is no pinch point if you cannot reach it, and therefore no reason to alter the design of the TS-40 or warn and protect from any such pinch point.

Following the letter he wrote describing his argument, Wilson G. Dobson was deposed. Dobson was told that the Vermeer defense team argued that the TS-40 was not defective because it had safety distance guarding. Dobson responded by explaining

that safety by distance guarding is not a valid defense because a person could reach the pinch point under special circumstances, such as when using a ladder or climbing on top of the frame of the TS-40. Dobson states that while none of these circumstance occurred during the accident, the machine is defective regardless because it has an exposed pinch point.

It should be noted that the plaintiff's character is not of the highest caliber. He has a criminal history and is a repeat drug offender. Therefore his testimony could be called into question. Heath claims he ~~was~~ did not enter the platform of the machine until after Gary Stafford realized he was injured and lowered the blade. Heath does not know why he had his left hand above the blade, and says he was well aware that me would be seriously injured if his hand were there when the blades were fully retracted. It does not seem possible that Heath could have been in a position to have his hand crushed if he were standing on the ground outside the machine as he said he was. No one else in the vicinity of the accident actually saw what happened. Gary Stafford and the other members of the crew did not see the plaintiff until after his hand had been freed. It is possible that Mr. Heath was not where he says he was at the time he was injured. However, this is not the issue at hand. The issue is whether the TS-40 is defective because of an unguarded pinch point.

At the time of the accident, the plaintiff was merely attempting to do his job. His claims and testimony lead one to believe that his actions were within the range of reasonable operation of the TS-40. The fact that this injury did occur under these circumstances makes the pinch point in question a foreseeable danger and therefore subject to previously mentioned safety standards. Although Vermeer says that no one

should be on top of the platform during operation, it should have known that someone might do it anyway in special cases.

Vermeer should be held accountable for the unguarded pinch point and should now be forced by the courts to fix this problem. As for awarding the plaintiff \$5 million for his injuries, we feel this is too much considering that his testimony is questionable. We would recommend a smaller compensation.

## **Chapter 6: Trial Summary**

The Products Liability IQP was concluded by a presentation of what we had learned throughout the year. Next year's Products Liability group was asked to serve as a jury and we were to present both sides of each of the three trials. Mr. Hagglund explained to the jury a little background on each case, as well as what Products Liability cases are all about. He also noted that his personal depositions on the cases were not given to us.

Each group in the IQP picked whether they would represent the plaintiff or the defendant on each case. My partner and I chose to argue for the plaintiff in every case. Starting with the Boring Machine case, those groups that represented the plaintiff explained their points first, followed by the defendants. Jurors could then ask questions about the case. Some exhibits were used in the presentations, such as videos, ANSI standards, diagrams and photographs.

Following each of the case presentations, the jury was broken into two groups and left to deliberate for a few minutes. They were given forms to fill in asking who was at fault for each case and how much money should be awarded. When the jury returned, they presented their decisions. Both groups had the same the decisions, and they are as follows:

Boring Machine – defendant (plaintiff receives no money)

Car Seat – plaintiff (Daimler-Chrysler responsible for 2/3 of the money, Maine

Line Auto 1/3, no money specified)

Tree Spader – defendant (plaintiff receives no money)



Since my partner and I were arguing for the plaintiff in all three cases, the jury only agreed with us on the seat adjuster case.

Following the trial, Mr. Hagglund revealed to us the actual results of the cases as they happened. None of the three cases actually made it to trial because, as Mr. Hagglund explained, it is cheaper for the defendants in most cases to settle rather than go to trial and risk a large settlement, not to mention lawyer fees. Here were the results:

Boring Machine – settled for \$80,000.

Car Seat – settled for an undisclosed amount.

Tree Spader – settled for \$80,000

Most cases like these never actually go to trial. It is less expensive for everyone to settle out of court, usually for much less than was originally asked for.

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