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Chapter 1: An Engineer In the Courtroom

1.1 - Introduction

This book was written as a tool for an engineer to be able to be able to succeed and be comfortable during the litigation process. It has many helpful tips that help the engineer to be able to assist his company in a trial. It helps the engineer to understand what types of accident lead to a trial, whether or not he should participate in the trial, and how to conduct himself in the trial. It also gives a basic understanding of the litigation process as a whole and what to expect in discovery, deposition, and trial.

1.2 – Nature of Accidents

An accident is defined as an occurrence that is unexpected and is also an occurrence that causes loss or injury, which can be expressed in some form of economic terms. There are several types of accidents that are mentioned in this chapter and have to be looked at in totally different ways. The most frequent types of accidents are collision, which is when two bodies are trying to occupy the same space at the same time, slip and fall accidents, and loss of control accidents, when either a mechanical malfunction takes place or a personal mistake is present. The rest of the main group of accident types are as follows: hit by a falling object, suffocation, electrocution, poisoning, shock & vibration, entanglement, cuts & abrasions, fire, struck by projectile, natural factors, and homicide.

1.3 – Why Go To Court

This chapter discusses the many different reasons why a person would bring the issue of a company's liability to a product to court. There are numerous reasons why a person would take a company to court and every citizen has the right to do so if they feel they are the victims of a poor product. A Reason for questioning the liability of a product are that it does not meet its expectations, it is unreasonably dangerous, it is defective, it doesn't warn of unexpected dangers, it is not made according to its specifications, it is misrepresented, or it does not have proper instructions. This chapter also helps the engineer to avoid the litigation process because it shows what defaults in a product would merit a lawsuit. It also discusses how blame is assigned for a product failure. The owner/operator is at fault if he does not use the product according to the instructions, if he misuses the product, or if he does not maintain, repair, and inspect the product. In general however the fault falls on the person or party who could have prevented the accident.

1.4 – Avoiding Litigation

The primary way in which litigation can be avoided, is by taking the time during the design phase of a product to design an effective safety system or mechanism for your product. If accidents can be prevented through the use of an effective safety system, then there will be no need for litigation because there will be no case to be brought up. The main goal a designer should try to reach is to design a product that contains shields or guards against accidents, in other words make hazards hard to reach. This guard or shield could be in several forms and each product should be dealt with individually when

deciding which safety measure should be used. A designer should also make sure not to implement too many safeguards because any more than one or two becomes repetitive and useless. Sometimes however an accident cannot be avoided and it is for this case that a designer should provide warnings to help operators avoid such accidents and also provide steps that can be taken if certain accidents occur. These two safety methods put more responsibility on the operator and take some of the responsibility away from the manufacturer. The designer should also provide a method for the operator to give feedback on the product and any problems that they may have found in the product. There never will be a perfect product that is free from all accidents but the key in designing a product is trying to foresee and prevent as many accidents as possible.

1.5 – The Litigation Process

In this chapter Lux describes the process of litigation. The purpose of this is to give the engineer some idea of what goes on in the courtroom so he can understand his role in the process better.

The process of litigation can be broken down into three separate processes. The first step of litigation is the claims process. This is where the plaintiff summons the defendant and he expresses his concerns to the defendant about their product. The next step in the process is the response and defense. During this step, the defendant responds to the plaintiff's complaint and tries to prove that their product is not faulty. These two steps are done to prevent any frivolous claims from going into a long courtroom process. The final step of the process is the discovery process. This process begins once it is apparent that the problem will not be settled out of court and that the plaintiff has a case

against the defendant. The discovery process consists of interrogations, inspections, investigations, requests for production of documents and other materials, depositions, and finally, the trial.

1.6 – Engineers and Engineering Information

This chapter of the book discusses what kind of engineering information can be useful in the litigation process and why it is important. Engineering information can be anything from blueprints and records to an eyewitness. Other engineering information can come straight from the expert witnesses themselves so their expertise can be used to prove or disprove fault. Lux suggests in this chapter the engineer should keep documentation that was useful in the design of a product for later use in case of a lawsuit, but extraneous material should not be kept.

1.7 – How the Engineer Can Help the Attorney

In order to be the most successful in the courtroom the engineer of the product in question must cooperate fully with the attorney. An engineer is more knowledgeable in the technical aspects of a product while the attorney is going to be more knowledgeable in the legal aspects that need to be used to win the case. The engineer must explain the technical aspects of a product to the attorney so the attorney can understand exactly the process in which the product was developed and how exactly the product works. The engineer will also be responsible for providing any engineering literature that may be needed to help reinforce the case. The jury will also need the engineer to testify in the

case on a technical and layperson level in an effort to make an educated verdict for the trial.

1.8 – The Discovery Process

The discovery process is very important to the attorneys because this is their first chance to interrogate witnesses and find out the extent of their knowledge. During this process and attorney will request evidence from these witnesses in an attempt to prove a point to the jury and show them the significance in what evidence is shown. An attorney will also try to confirm a line of questioning with a particular witness in an attempt to confirm to the jury what is believed to have happened as far as the case is concerned. An attorney during the discovery process is searching for the one piece of evidence that is irrefutable proof that swings the case in their favor. This process of gathering evidence and interrogating witnesses leads into the deposition, which is the formal testimony taken before the beginning of the trial.

1.9 – The Deposition

The deposition is one of the most useful tools for an attorney when putting together a case to bring to trial. During the deposition the attorney will gather facts and information from witnesses in an attempt to solidify their case. An attorney will also try to gather information that will discredit the validity of certain opposing witnesses. The deposition is also a way the attorneys will gain an understanding of the strategies of the opposing side.

When answering questions during the deposition an engineer should follow certain steps to ensure that he gives the best information for the success of his case. An engineer should listen carefully to the questions at hand and answer only the questions being asked and not provide extra information. The engineer should also make sure he doesn't argue with the opposition, he should just answer the questions asked in the most truthful and complete way possible.

1.10 – The Trial

The purpose for the trial is so that two disputing parties who cannot agree on a suitable resolution to the problem at hand. There are approximately eight steps that are taken through the trial process. Picking a jury from a jury venue is the first step that must be taken in the trial process. Once the jury is selected and court is under way each side is given the opportunity to make opening statements. The opening statement portion of the trial gives each attorney from both sides of the discussion a chance to tell jurors what the case is all about and to give the jurors an idea of what evidence to expect later on in the trial. The next step is for the plaintiff to present his case to the court. During this portion of the proceedings the plaintiff's attorney presents all witnesses, evidence, and other information to convince the jury that his client is right. After the plaintiff presents his case, the defendant is given a chance to make his side of the case heard. In this portion of the proceedings the defense attorney presents any testimony that refutes the plaintiff's argument. After both of the sides have been heard each attorney is given a chance to make one final statement to the jury in order to help to sway the jury in their favor. Once

the final arguments have been concluded the jurors will deliberate and come to a verdict based on the facts.

There are four main people in the courtroom. They are the judge, who is in charge of the court, the court clerk, who is the office manager of the courtroom, the court reporter, who takes the proceedings down for record keeping purposes, and the marshal, who is responsible for keeping order and security in the courtroom. When in the courtroom always remember to dress properly and address the officials in the court professionally.

1.11 – Questions

This chapter is about the litigation process and about how a specialist should go about answering questions during a trial or deposition. It talks about the many different types of questions that could be asked of a specialist and gives a number of different examples of trials featuring specialists answering questions.

One main point that was stressed in this chapter was that the person answering the questions should always tell the truth, whether on the stand or off the stand. The book also states that although the specialist should always tell the truth the way a question is answer depends on many different stipulations.

The basic factors for how a question should be answered are the various situations, the type of question, who the questioner is, and the way the question is asked. There are many different situations in which a question can be asked to a specialist that relate to a trial. It could be in a trial, a deposition, in the office, on the street, and many more. These different situations merit different answers. For example, if the question is

asked by the person's boss in his office then he should answer with a detailed explanation, but if the question is asked in a courtroom by a lawyer most of the time a simple yes or no answer is desired.

The different types of questions that can be asked specific or general, open or closed, leading or non-leading, formal or casual, polite or serious, rhetorical or interrogating, simple or complex, probing or outlining. General questions are questions that have simple answers so they should be answered politely and quickly, open questions on the other hand require much more lengthy answers and a simply yes or no would not be acceptable. Another type of question that is asked frequently is the leading question; this is a question that suggests the answer so a simple yes is all that is usually required.

Another point made by the book, was that the meaning of the answer could be changed by putting emphasis on different parts of the question. Also stated was that when answering a question, the specialist should make sure that all assumptions made by the interrogator are truthful. If this is not done it will confuse the jury and make the specialist look like he is not listening.

1.12 – Accident Reconstruction

The accident reconstruction should be one of the most important factors when a jury is deciding a case. The accident reconstruction has enabled many attorneys to prove or disprove the claims that have been brought up in trial. An engineer should explain the accident reconstruction in the following ways to ensure that it will result in a believable and valid account. The engineer should explain the account in layman's terms, the account should produce no big surprises, the account must be able to withstand scrutiny,

and the account must agree with the laws of physics. If the engineer follows all of these guidelines the account reconstruction should be an effective tool for the attorney to swing the case in his direction.

1.13 – Definitions and Techniques Employed by Attorneys

Chapter thirteen defines certain terms associated with the courtroom and attorneys. It discusses that an adverse witness is a witness called to testify by the opposing attorney. Chapter thirteen also discusses the balance of evidence, which are the comparative weights of the evidence used by both sides. BAR is also discussed in this chapter and is given a number of definitions, (a) a location of legal activity, (b) a grouping of attorneys, and (c) prevent or keep out. There are also terms such as charge, hearsay, proximate cause, puffery, and tort that are defined in full in chapter thirteen. This chapter serves as a terminology background for the courtroom for an engineer.

1.14 – War Stories

War Stories are stories that an attorney will tell other attorneys in their spare time for enjoyment. These stories have valuable information that can be found by the listener. This chapter talks about some of these stories, which have a list of important things that an expert witness should think about. This chapter discusses the dos and don'ts of interrogating witnesses and describes how Cross-examination should be done. This chapter basically lists the facts an expert witness should know, such as a judge has the

right to shorten a trial, a trial is a game of presentation and the best presentation that convinces the jury wins, etc.

1.15 – Tips for the Engineer Involved in Litigation

This chapter gives the engineer guidelines he should follow in order to help his attorney develop the best case possible. It tells how the engineer should assist the attorney, always be truthful and to never be afraid to present what the engineer knows to the attorney. The engineer should only use the information that he feels will help him win the case and should beware of trick questions. The major goal for an engineer involved in litigation is to tell the truth even if it hurts your case.

Chapter II: The Art Of Advocacy Skills in Action

2.1 - Opening Statements

This video discusses the methods that lawyers use when giving an opening statement. The opening statement is a very important part of the trial. The video says that the opening statement may do more to convince the jury then the evidence presented during the bulk of the trial.

Jurors use many different techniques when giving an opening statement. For the prosecutions opening statement the goal of the opening statement is to establish a connection between the jurors and the victim. One thing that a lawyer will try to do is to build a picture of the situation by telling a narrative story. Another technique they use is to ask questions of the jury that they are already wondering, like why the defendant is responsible for the damages. Another important thing is to be repetitive with important points to make sure the jury remembers these points. They will also talk about the holes in the defenses case to try eliminate these issues right away. To close the statement they will tell the jury what is the right thing for them to do.

2.2 – Direct Examination

The direct examination is the portion of the trial where the lawyers ask questions of their own witnesses. Evidence is given in this portion of the case and visual aids are often used to support the case. Much of the background of the case is often presented to the jury as well. Also presented during this section are the financial issues. This section of the trial tends to be long and can be boring so it is vital that the lawyer keeps this portion short and interesting enough to maintain the attention of the jury. The plaintiff is

often examined during the direct examination and it is important to give the plaintiff time to speak his feelings about his injury and to let the victim carry the case.

2.3 – Cross Examination

Cross-examination is the part of the trial where the lawyers will try to discredit the defense's witnesses and point out flaws in the defense's case. It is important that the lawyer shows that he is in control of the witness. He should lead the witness into saying what he wants him to say by using leading questions and he should avoid asking open questions unless the lawyer knows exactly what the answer should be. Otherwise he could end up supporting the defense's case. The lawyer should also question the credibility of the witness by showing that he has something to gain by testifying or that he is not qualified to be used as an expert witness.

2.4 – Cross Examination of Non-medical Experts

During this section of the trial the lawyer will try to attack the credibility of the defense's non-medical experts. The lawyer will try to amplify, modify, or destroy certain aspects of the defense's case. Many lawyers will try forcing the witness in to contradicting himself to show that the witness is either lying or is incompetent. The lawyer will most likely use low-risk, closed, and leading questions when cross examining so the witness can not speak freely.

2.5 – Conclusions and Closing Arguments

At this point in the trial all the evidence has been presented and the witnesses have made their points. Now it is up to the lawyers to make their closing arguments and reinforce the key points of the case to the jury and to bring everything together. It is very important during this section that the lawyer keeps the attention of the jury by using excitement and suspense. The lawyer will usually state five or six different key points throughout the argument using body language and tone of voice to reinforce these points. In the example used in video 8 the lawyer tries to show the jury that the injuries could have been avoided if the company took proper safety precautions. He shows that the company chose profit over safety and that that is the wrong thing to do. He also tries to give the jury an idea of what product liability laws are in order to show that these laws were broken.

After the lawyer has proved that the company is at fault for the injury he must come up with a monetary value that will be acceptable for compensation and why the victim is entitled to this compensation.

The first losses that the lawyer speaks of are out-of-pocket losses. These are the obvious losses, due to the fact that the victim will no longer be able to work and for the current and future medical expenses. The next type of losses the lawyer speaks of are general losses. These losses are much harder to put a monetary value to. The losses he spoke of were that the victim was no longer a complete person. He would no longer be able to do a lot of things that he enjoyed like hunting and fishing and playing sports. Also stressed was the physical pain and suffering that he will have to live with because of the accident.

Overall he wanted the jury to believe that he was a reasonable person. He was very open with jury during the closing argument and he talked about things that the jury could relate to. To close the case he ended with three main points, duty, obligation, and finality. He emphasized how important this case was and that the jury was obligated to act as the conscience for the entire community and that the jury's decision would be final.

2.6 – 60 Minutes: A Classic Cover Up

This video was about the Ford Mustang's 1966 model. There was a problem with the gas tank in this model and as a result someone died due to a rear end collision. According to crash tests that were done on the car, when the car was hit from behind the gas tank would explode killing everyone in the car. Ford has been sued more that 50 times for this problem. Ford has stated that the problem was known when the car was created and that there is not enough evidence to prove they are at fault. The parents of the victim have not sued Ford, but they are on a safety campaign for people not to use the classic Mustang.

Chapter III: Roberto Ortiz vs. B.M. Root Company

3.1 – Introduction

On September 7th, 1993, while attempting to clean a boring machine with an air hose, Roberto Ortiz caught his hand in the machine and his middle finger was torn off. Roberto Ortiz is now suing the maker of this machine for negligence. This section of the paper will give all the background of the case and decide who is at fault for the injury.

3.2 – Background

B.M. Root was the company that designed and manufactured the boring machine, Root Model 311. It was first produced on September 12th, 1941 and was discontinued on March 8th, 1990. The entire B.M. Root product line was later transferred to Diehl Machines on June 19th, 1992.

The Root Model 311 in question was produced by B.M. Root and was later handed over to Diehl Machines. At some undetermined point prior to the sale of this machine to the Kimble Company a warning label was removed from the machine. The warnings on the label were as follows,

1. Do not operate the machine without all guards and covers in position.
2. Stop machine before making adjustments or cleaning chips from work area.

The reason for the removal of the warning label is not known.

The machine was purchased from B.M. Root by Kimble Company in the mid 80's. When this machine was purchased it had a mesh guard on the front of it, which was used as a safety precaution. Kimble Company believed that this guard was unsafe because it reduced the visibility of the spindles. Also, the materials hit the guard during

the operation of the machine reducing efficiency and putting the workers at risk. Because of this the guard was left open during the use of the machine and was finally completely removed in 1987.

Kimble Company was the employer of Roberto Ortiz during the time of his accident. The Kimble Company purchased Root Model 311 from Diehl Machines prior to Mr. Ortiz's employment. Kimble Company hired Mr. Ortiz during the month of July 1993. Mr. Ortiz's duties for his job were to set up, clean, and run the boring machine. Prior to the accident he had been working with the machine for 6 months and had been trained on how to use the machine by a fellow co-worker.

The accident occurred on September 7th, 1993, while Mr. Ortiz was cleaning the machine. The method that he used to clean the machine of sawdust, which was taught to him by a fellow co-worker, was to use an air hose to blow out the sawdust while the machine is running. This method required him to reach his hand into the machine so the air can clear out the sawdust. On this particular occasion he was wearing gloves and the machine was turned on. The air hose was not working properly so he had to use two hands to push the air hose piston into position. While cleaning the machine, he lost his balance and his hand slipped off the air hose piston into the running spindle, ripping off his middle finger.

3.3 – Safety Requirements

The department of labor and the American National Standards committee have set up many different requirements for the operation and manufacturing of machinery in order to protect the rights and ensure the safety of workers. All the rules pertinent to this case will be discussed in this section.

3.3.1 - Department of Labor (Occupational Safety & Health Requirements)

A general requirement for all dangerous machinery is that the machine should have one or more safe guards to protect the worker from rotary parts and flying chips. There was a guard on the Vertical Borer Machine Model 311 but the Kimble Company removed this guard. Another rule, which is also important to note, is that the Guard should be affixed to the machine where possible and secured elsewhere if for any reason attachment directly to the machine is not possible. The next part of this rule is the most important. This states that the guard should not offer any accident hazards in itself. According to the Kimble Company the guard did cause problems and put the workers at risk, so if this assumption was correct then they were correct in removing the guard. But, according to the first rule a safe guard must be in place at the point of operation so it was someone's responsibility to provide a safeguard that was not hazardous in itself.

Another rule states that the point of operation of machines whose operation exposes an employee to injury must be guarded. The guarding device shall be designed and constructed as to prevent the operator from having any part oft his body in the danger zone during the operation cycle. The rule says that it is not the fault of the operator for

putting his hand into the machine because the machine should have been designed so this was impossible during the operation of the machine.

3.3.2 – American National Standards

One of the rules of the American National Standards committee says that the manufacturer of the machinery should eliminate any possible hazards by designing, where practical, or providing protection against the hazard. Where the hazard cannot be eliminated by design or protection the manufacturer shall warn against the hazard by affixing a sign or tag. The Vertical Borer Model 311 was designed with a guard but the guard could be removed and the machine could still be operated with the guard removed. Following the previously stated rule it could have been impractical to only allow operation of the machine with the guard closed, so B.M. Root company had affixed a warning sign stating that the machine should not be operated without the guard in place. But this label was removed. The person or persons who removed this label are not known so no fault can be placed on anyone for the removal. The B.M. Root company should however have known that this label was required on the machine and should have put a new one on before selling the machine to the Kimble Company.

3.4 – Depositions

In this section we will discuss the Depositions given during the investigation of the case.

3.4.1 – Roberto Ortiz's Deposition

Ortiz stated in his deposition that the lever on the air hose was broken and used two hands to push on the air nozzle or piston. When he put his hands on the nozzle he lost his balance and his hand slipped and his glove became caught in the spindle. Ortiz claimed that he made Donny, his supervisor, aware of the problem two weeks prior to the accident and nothing was done about it. Ortiz also stated that he was never instructed on how to properly use the machine in question. In Ortiz's deposition he also made it clear that when he did return to work there was a guard on the machine.

3.4.2 – Gerard Desjardins' (plant manager) Deposition

Desjardins explained that the reason that the guard was not on the machine was that the workers had opened the guard and worked without it and never informed him of the lack of the guard. The guard had remained on for a couple of years until it was removed by a worker. He also states that he never informed BA Root of the guard problem because he was unaware that there was a problem.

3.4.3 – Robert Dialessi's Deposition

Dialessi was the wood department production manager for the Kimball Company and stated in his deposition that the safety guard made it hard for the workers to hold the wood in place. He also said that he was unaware of the air hose problem and that he could easily switch the nozzles. Dialessi made it clear that the Standard Operating Procedures were told verbally and not given in written form. He visibly saw no problems in the operation of the machine.

3.4.4 – Igor Paul's Deposition

In the deposition of Igor Paul he describes how B.M. Root is to blame and how the boring machine was unsafe both with and without the guard that had been removed. He states, "In the interest of operator safety, We urge you to guard the operators from the possibility of exposure to the danger of rotating boring bits".(p.36) Paul points out how Ortiz was not even aware he was supposed to turn the machine off when he was going to use the hose because the warning signs were "improper, inadequate, and ineffective". Igor Paul states his professional opinion when he states, "In my professional opinion the cause of this accident was improper, inadequate, and defective safety design of the Root Multispindle Boring Press in not providing effective safety guarding for this equipment".(p.91)

3.5 – Conclusion

Through analyzing the case and all the facts given in the investigation of it we feel that BM Root is at fault for designing a faulty guard on the boring machine. This guard only had about 50% visibility through it, and it did not allow enough space for the workers to properly hold the materials that they were cutting. This problem in the guard caused the workers to remove the guard. The problems with the guard and the lack of proper safety labels on the machine were the cause of the accident in question and BM Root should be held responsible.

Chapter IV: Leflamme Vs. Daimler – Chrysler

4.1 – Introduction

On October 25th, 1995, while driving a 1994 Plymouth Voyager, Robin LaFlamme, rear-ended another vehicle. She claims that the cause of this accident was because the drivers seat slid back while she was attempting to break causing her to be unable to brake properly. She is suing Daimler – Chrysler for designing a faulty seat.

4.2 – Background

Prior to the accident, on 10/2/95, Mrs. LeFlamme experienced a problem with the seat sliding backward unexpectedly. She brought the car to Prime Auto, the dealer where the car was purchased, and they examined the seat. The dealership tried to reproduce the problem but they couldn't so they refused to fix the seat.

Then on 10/5/95 the problem occurred again while Mrs. Leflamme was driving the vehicle and she injured her back. She checked into the hospital complaining about pain in her neck and shoulder area. After the second seat malfunction she took the car back to the dealer and they were able to reproduce the problem so they attempted to fix the seat according to the instructions provided by the Daimler – Chrysler Corporation.

The problem did not occur again until 10/25/95 and this time it caused Mrs. Leflamme to rear end another vehicle. Mrs. Leflamme was traveling west down Commercial St. in her Plymouth Voyager when Teresa Boother stopped at the St. John's

rotary and Mrs. Leflamme was unable to stop her car and rear ended Mrs. Boother. According to Mrs. Leflamme, when she tried to apply the brakes the force of her pushing on the brakes caused the seat to slide backward and then she was unable to push the brakes because the seat slid back too far.

The damage estimates to Mrs. Leflamme's vehicle were set at 300 dollars and the damages to Mrs. Boother's vehicle was set to 500 dollars. Following the accident Mrs. Leflamme experienced further aggravation to her upper back and neck area. She checked into the hospital again on 11/2/95 and was prescribed Valium to help her sleep and Motrin for the pain and inflammation.

Mrs. Leflamme then issued a lawsuit against the Daimler – Chrysler Corporation for negligence in designing a safe seat.

4.3 – Technical Service Bulletin

In January of 1994 a Technical Service Bulletin (TSB) was released by the Daimler – Chrysler Corporation saying that some vehicles of make and model 1991 - 1994 Caravan/Voyager may exhibit a condition where one side of the manual seat adjuster may not latch as smoothly as the other side. Included was a repair procedure that should be followed by the dealer to fix the problem. The procedure was to elongate the rear hole of the inboard riser by .08'' on each side. This procedure was followed by Prime Auto the second time the vehicle was brought in by Mrs. Leflamme and was tested according to the TSB.

4.4 – Deposition of Mark Crossman

Mark Crossman is a Development Engineer for the Chrysler Corporation who worked on a safety in the minivan platform during the period from 1990-1993. In 1994 he became the Product Development Specialist for Chrysler. In 1993, Mark became aware of frontal impact crash tests that showed movement in a Chrysler minivan seat. The results from this test, which was held on April 21, 1993, showed that the seat had forward movement during the crash. Mark also stated that vehicle VC4822 was involved in the test on April 21st.

4.5 – Deposition of Eric Clark

Eric Clark was a member of the "lead seat engineering group" for the Daimler Chrysler Corporation until April of 1987. In April 1987, Eric was transferred to the production seat engineering group. This group was responsible to take a preliminary design and productionize it, which means to make the product production ready and capable for production. Clark states that he was involved in a major redesign of the minivan seat between 1991 and 1990, which began in September of 1986. Clark was a part of the development process of the minivan seat. He worked on the design of the front seat with the manual adjuster for the '91 model while he was in the lead seat engineering group. When Clark switched groups in '87 the design of this seat was not complete and therefore this responsibility was carried over to his new group. Clark believed that the root cause of the problem with the seats is the machines at the Windsor factory not being adjustable and piercing holes out of a square. This cause prompted

Clark to release the TSB 23-32-98, which explains in detail the corrective measures that can be taken to fix the problem.

4.6 – Deposition of Dan Dammar

Dan Dammar is a Mechanical Engineer who has been employed by Daimler Chrysler for nine years. Dammar stated that there was "no" mechanical redesign for the 1991 model of the actual seat back. Dan discussed "Minivan Issue Tracking Reports" (MITS) that are issued when there are issues that come up on the proving grounds. In the MITS for this particular case it was stated that, "Driver seat does not engage fully when adjusted and ratchets back. The manual adjuster-adjust driver seat does not engage fully when adjusted forward. The seat ratchets backward when the vehicle is moving forward. This problem has been detected on vehicles PG55H and P657H." One major point that Dammar avoided during the deposition is that the seat hole positions are not square and this causes problems in locking the seat in place. Dammar would not comment on whether or not there should have been a recall on the seat.

4.7 – Deposition of Kenneth Martin

Kenneth Martin was the Technical Advisor for the Daimler Chrysler Corporation. He receives information from a person who is requesting a technical service bulletin, and responds. Martin explained that he did not, however, have a specific procedure for a condition that might affect vehicle safety. Ken's strongest point was that if the technician

had looked up TSB 23-23-94, then instead of replacing the old seats with the new ones they would have repaired the old ones.

4.8 – Deposition of Joseph Ozdowy

Joseph Ozdowy is a manufacturing director, plant manager at an assembly plant in Cordoba, Argentina. The plant that he works in manufactures Jeep Cherokees and Grand Cherokees and he is the highest-ranking Chrysler person there. Ozdowy worked at the Windsor assembly plant as a Resident Engineering Manager and created processes that must be followed in order to build a vehicle and he was also in charge of making sure processes were being following. Ozdowy recalled that one side of the minivan seat would latch before the other and in order to latch the other side one would have to move their body in a peculiar manner. Ozdowy was not aware of the frontal impact tests that had been done that showed the movement in the driver seat until the weekend before he gave his deposition. He believes that the root of this problem lies in the fact that one side of the seat latches before the other and the probable reason for this is the four holes that the seat was attached to were cut out of a square.

4.5 – Conclusion

After analyzing all the facts and the depositions we believe that the Daimler – Chrysler Corporation is responsible for the seat malfunction and the accident. We believe that the seat design was poor because it did not lock into place. The Chrysler Corporation then tried to cover this problem up by sending out a Technical Service

Bulletin to fix the problem. The solution they came up with was not sufficient to fix the problem though, because this alteration was made on Mrs. Leflamme's Plymouth Voyager and then shortly after this fix, the problem occurred again. Because Chrysler failed to issue a recall or issue a working solution to the problem they are liable for any damages caused because of the seat malfunction.

Chapter 5: Products Liability In a Nutshell

5.1 – Definition and Scope

Products and Liability explains what product liability is and all the processes involved in a court case involving product liability. The first section of this book explains what a product is and what a defect in that product is.

A product is usually thought of as some tangible good or property but in the case of product liability that definition for a product is much product. It is any goods or services proving by one individual or group to another. For example electricity from the electric company could be considered a product in a case of product liability. An animal or plant or even a set of instructions could be considered a product.

The next section of the chapter discusses what a defect is. Determining if a product has a defect or not is a very difficult part of a product liability case. This is partly because there are many different views on what is and what isn't a defect. The most common assumption is that there are three types of defects. The first and most common defect is the **manufacturing defect** or **production flaw**. The second is a **design defect**. And the third is that the product has **defective warnings** or **instructions**. There is also another condition that is sometimes considered a defect. This is when a product is mislabeled or the accused party misleads the user. This defect is called **misrepresentation**. Another aspect that is taken in to consideration when determining whether a product is defective is whether that defect was unavoidable or not or whether the defect is justifiable. For example, the vaccine which cures rabies, which is a disease that is terminal if not tended to, can have very harmful side-affects. This is not a "defect" however because without it the patient would certainly die, so the risk is justifiable.

5.2 – The Causes of Actions and Damages

One cause of action is negligence. In product liability the basic definition of negligence is when a certain party fails to meet the standards of care of a reasonable person which in turn causes injury to another party. This can arise in many different ways. Some examples of negligence are through inadequate inspection, processing packaging, warnings, design, and marketing. This negligence can cause a product to be defective as defined in the previous chapter.

Another cause of action for liability is a statuary violation. This case arises when the defendant has violated a penal statute set up for the protection of the plaintiff. One example of this is when, during the sale of an automobile, a defect, which was known by the seller, was intentionally concealed in order to sell the vehicle. The statute is called the lemon law.

The next section of this chapter discusses damages. There are two main types of damages that can result from a defective product. One is emotional distress and the other is punitive damage. Punitive damages are rather straightforward; any physical injury caused by negligence of a party involved with the defective product that the injury can be judged for punitive damages. For the defendant to be considered liable for the damages however the damages must be deemed foreseeable as well.

Emotional distress can arise from a defective product. And if it is proven that the emotional distress experienced by the plaintiff could have been foreseen by the defendant and this was caused by a defect in the product then the defendant can be found negligent

in preventing these damages. For example in the case of Volkswagen of America V. Dillard, Dillard claimed that mental anguish was caused by him having to repeatedly repair his newly purchased car because it was defective. He won this case because it was deemed that this emotional distress fell under the terms of "injury to person."

5.3 – The Parties

The chapter discusses all the parties involved in a case of product liability. The party discussed is the plaintiff. A plaintiff may sue any product's defendant on any available theory to recover for an injury of emotional or punitive nature. The plaintiff can be anyone that was affected by the negligence of the defendant and the defect of the product. This means that the plaintiff does not necessarily have to be the buyer, user, or consumer. It could be a bystander who was unwillingly affected by the product.

The other party in a product liability case is the defendant. The three most common types of defendants in a product's liability case are manufacturers, middlemen, and retailers. A manufacturer is anyone who designs or creates a product. Any manufacturer who has anything to do with the creation of the product may be sued for liability. It does not necessarily have to be the manufacturer who put all the pieces together who is at fault. The specific manufacturer may sue the manufacturer of the specific part that was faulty in the product if the defect was foreseeable. A manufacturer may also be liable for the downstream misassembly of a product by a retailer, dealer, or consumer.

A middleman or retailer may also be found at fault for injury caused by a defective product. If the middleman or retailer is not involved in the inspection, testing,

or assembly of the product in anyway however then it is usually deemed they can not be at fault for a defect in the product.

5.4 – Factors Affecting Choice of Remedies, Jurisdiction, and Procedure

In general, this chapter discusses coming up with procedures for solutions depending on the product reliability, applicable laws, and proper jurisdiction. It describes when it is needed to prove product reliance, how to determine liability on warrantees, whether there will be a recovery of economic loss, and dealing with a wrongful death.

Proof of reliance is needed with a case of conscious misrepresentation, negligent misrepresentation, and innocent misrepresentation. The case of Hebron Public School v. US Gypsum, however, the court claimed that product reliance was not needed to be proven because the warranty claim was "grounded in tort", and "not in contract." A representation may be relevant in determining foreseeable use, as well as reliance of a product. If a plaintiff fails to be able to prove that a warning was read, then no proof of reliance needs to be given. In any case, a clearly visible warning would greatly help the chances of any company.

The doctrine of strict tort product liability was developed primarily to avoid the contractual restrictions on liability available in warranty law. One substantial problem when regarding this sort of liability is the nature of the damage. If there is personal injury, courts allow recovery time under strict tort without regard to whether the person is a lay person or a businessperson. For any other type of damage, the courts will rule whether the strict tort law applies.

When a plaintiff has suffered solely economic loss from a defective product through either negligence or strict liability, many courts rule that they will not recover in tort. Sole economic loss is defined typically as a loss in value, loss of use, cost of replacement, lost profits, and damage to business reputation. This means that there is no sudden physical accident has occurred. Some courts require a substantial personal injury in order to rule for tort. There is a division of authority as to whether a claim is one for economic loss or one for personal injury.

Generally most deaths are a result of recklessness, negligence, or strict liability. The majority of courts allow a wrongful death action to be brought in warranty, as well as in tort. They find that a breach of warranty may be a wrongful act. In order for a wrongful death to be in warranty, the person should be a conscientious and right-thinking one.

5.5 – Production and Design Defects

This chapter determines the difference between a production flaw and a design defect. A design defect is when the product is defective and will not conform to the manufacturer's specifications. A production flaw is generally considered a defect in a product that happens not very often, and could be completely random. The failure rate of a product can also turn on the environment, as well as on the formula for construction.

To determine liability of the manufacturer the court must determine whether or not the defect was due to the design of the product. The risk-utility balancing test is used to determine whether the problem resides with defect or consumer negligence. A product may be found defective if the plaintiff shows that the product failed to perform safely and

as stated by the manufacturer. The plaintiff must have used this product, however, in the manner and environment for which it was intended. It may also be found defective if it caused the plaintiff personal injury and the manufacturer cannot prove that the benefit of the product outweighs the risk and danger of the use of the product.

5.6 – Inadequate Warnings and Instructions, and Misrepresentations

A warning is designed to insure safe use of a product. It is distinguished from an instruction, which is calculated to insure the efficient use of the product. To be adequate, a warning must describe fully the nature and extent of the danger involved. The warning may not only need to include the danger of use, but also the necessary means of safe disposal of the product.

Most warning cases are concerned with the issue of the knowability of the danger, or of a method of preventing the danger. The cases are to decide whether negligence of strict liability should apply. It may be difficult in some cases to determine whether the damage was caused from negligence or from a defective product. In order for the court to decide with the plaintiff, the plaintiff must normally show knowability or preventability as of the time of trial. If the plaintiff is considered to be an expert in the field of use of the product in question, a court may not rule in his favor. The court most often will not fault the manufacturer in the case that an employee was not given the proper warning about a product by his employer. The same is true about prescription drug warnings, where it is the responsibility of the doctor to issue the warning, and not the manufacturer.

5.7 – Problems of Proof

The main task in any product liability case is to prove that the defect occurred because of a fault of someone involved in the design or manufacturing process, not because of a mishap by the user of the product. The plaintiff accomplishes this by showing that he/she used the product correctly, the product was in good working condition, and the product has not incurred substantial damage while in the possession of the plaintiff. The next thing the plaintiff must prove is that the accident occurred as a direct result of the plaintiff's actions and something could have been done to prevent it. For example, if a proper guard was placed on the boring machine in the case of "Ortiz vs. B.M. Root", it would have drastically changed Ortiz's behavior and probably wouldn't have resulted in an accident. It may seem very obvious that someone buying and using an inherently dangerous object would know of the danger associated with a particular product, but all parties involved with the design, sale, and manufacture of the product must still warn of any dangers.

Sometimes, a manufacturer could not be at fault in a product liability case. If the plaintiff has clearly misused the product in question, then the manufacturer is no longer at fault and the fault lies with the plaintiff. This misuse is described as using the product in a way that the product was never intended. A customer must be made aware of any and all dangers associated with a product so he/she can therefore avoid the dangerous situations. If a manufacturer has made the consumer aware of the dangers and an accident does occur it is more than likely a accident in which the fault lies with the consumer.

The fault in a product liability case can be shared in certain circumstances, and this example is called comparative fault. There are three areas of comparative fault, the plaintiff can be at fault more than the defendant, the defendant can be at fault more than the plaintiff, or equal blame can be shared between the two parties. This chapter outlines how to determine who is at fault and why and what methods need to be used in order to determine the blame in any particular case.

Chapter VI: Michael Heath vs. Vermeer Manufacturing Company

6.1- Background

On April 1, 1996 Michael Heath seriously injured his left hand while operating a power tree spade machine in Deerfield, Massachusetts for Stewards Nursery. He had been worked for the Stewards Nursery for four days prior to the accident. However he had worked for the Stewards Nursery in the past but had left and returned.

The operator of the machine was Jay Stafford. He had been working for the Stewards Nursery for three weeks prior to the accident. Heaths left hand was caught in a nip point between the spade blade and the top frame of the tree spade machine while Stafford was raising the spade blade in the front of the machine. Heath's right hand was holding the tree in place and his other hand was presumably placed on the blade to balance himself. When Stafford heard or saw Heath screaming and jumping around waving his right hand in the air Stafford lowered the blade, shut of the machine and exited the cab of the machine. When Stafford saw Heath he was standing inside the frame of the machine holding his hand. Another co-worker gave him a shirt to wrap his wound and then Heath went to a hospital for medical attention.

6.2 – Plaintiff's Answers to Defendant's Interrogation

Heath is suing the Vermeer Manufacturing Company, the designers and producers of the tree-spading machine, for negligence and carelessness in the design, selling, and distribution of the machine. He claims that the machine was defective for two reasons. He believes that the machine should have had a guard on the nip point so that it would be impossible for him to inadvertently put his hand there and get it caught between the

bladed and the frame. He also says it is unsafe because when the machine was running he could not see or hear any warning signs from the machine operator that the blade was going to be raised. Heath demands damages and judgement against the defendant in the amount of double and triple the amount of $5,000,000.

Heaths complete story on the sequence of events that led up to accident and what happened immediately after the accident are as follows. Heath and a co-worker centered the base of the tree on the platform of the machine. Then the operator activated the blades to make the hole to remove the tree. After the tree was out of the ground, the machine moved forward a few feet to place the tree in the basket. The operator was bringing the blade back up and that is when his left hand got caught between the top of the blade and the spade frame while he was concentrating on the tree to make sure it didn't tip over. After realizing that his hand was caught in the machine, he was screaming and waiving his arm so the operator could see him and lower the blade. The operator lowered the blade and shut off the engine. The operator ran over to the company truck and tied the tailgate shut. Another co-worker threw him a shirt to wrap around his hand. That worker walked him over to the truck. He got in and was brought to Franklin Medical Center in Greenfield, MA.

The medical expert for Heath was Dr. Thomas S. Echeverria. He claims that as a result of the left hand crush injury on April 1st, 1996, the plaintiff was left with a significant functional and sensory loss of the left hand as well as significant scaring and disfigurement which is permanent. His grip strength was measured at 45 in his left hand and 120 in his right hand. Also the medical expenses were $31,611.57 from Franklin Medical Center and $5,613.00 from Franklin Orthopedic group.

6.3 – Defendant's Answers to Plaintiff's Interrogation

Ivan Brand, a product safety manager for the Vermeer Manufacturing Company, described the events in question during this interrogation. He explained the Vermeer's TS-40's were designed in 1984 and 1985 and were sold to the plaintiff's company on September 19, 1985. Brand informed the plaintiff that John Macht, Tom Chesser, and himself were the engineers that designed the particular machine in question. These machines were manufactured between 1985 and 1989, and there are no test results of the spade machine before it was distributed. Prior to this incident there were no complaints or injuries as a result of the tree spade and therefore it was felt that tests were not needed.

Brand describes the position of the two workers at the time of the accident. He states that Jay Stafford, the operator of the machine, allowed Michael Heath, to climb inside the machine platform. At the time of the incident the spades were raised and allegedly the plaintiff's hand was caught between the top of the blade and the block at the top of the frame. However, there have never been any similar injuries caused by this spading machine, and there have never been any prior claimed defects about this machine. The statement that has been made by the Vermeer Manufacturing Company is that they, "could not foresee the combination of concurrent actions required to bring about a hand injury at the top of the tree spade."

6.4 – Deposition of Wilson Dobson

Wilson Dobson is the expert witness for the plaintiff's case. He gave his deposition on August 23, 2000. Mr. Mummolo, the plaintiff's attorney, contacted Dobson, in January of 1998 to examine the tree spading machine and see what the cause of the accident was. Heath demonstrated for Dobson what exactly happened during the time of his accident. He showed Dobson that his hand was positioned at the top of the spade blade and his other hand was steadying the tree in the center of the frame at the time of the accident. One key point that Heath made to Dobson was that his feet were located on the ground. The platform could have been anywhere from nearly flat to the ground, to nearly two feet above it. This makes a significant difference when looking at this case because the top of the frame, where his hand would have been crushed, is located at 92'' above the bottom of the frame. The frame would have to have been located on the ground in order for him to be standing on the ground when his hand was crushed.

Dobson explained the defects of the tree-spading machine in his testimony. He viewed that there was a design defect in the existence of a nip point that is unguarded. The designers used the argument of "guarding by location", but Dobson argues that this is a "bogus argument". "The premise of guarding by location is that the hazard is sufficiently removed from people working with a piece of machinery that they cannot come in contact with it."(48) "I believe that with just a couple inches different movement in terms of the location of the platform that the hazardous location was reachable by Mr. Heath."(51) The tree spading machine failed to meet the 95 percentile adult male, because the adult male can reach 94'' flat footed and the top of the blade is only 92'' off

of the ground. Dobson suggested two ways in which the defect can be repaired. The manufacturer could limit the retraction of the spade so that it can't come up to form a pinch point, or it could be designed so there is always an opening between the top of the spade and the block at the top of the tower. Dobson also pointed out that there were no guarding standards that apply to this case because the standards in OSHA apply to the employer not the manufacturer, and there aren't any ANSI standards. Dobson believes that the product is "defective for having an unguarded pinch point that could be eliminated by design and the design is defective for failure to have warnings alerting the user to the existence and severity of the hazard."

6.5 – Deposition Ivan R. Brand

Ivan R. Brand is the Product Safety Manager for the Vermeer Manufacturing Company. Brand is not licensed as a professional engineer in a capacity and has been with the company since 1976. Brand states that the top of the tower is out of reach during any kind of work at the tree spade, where two people can be anticipated and thus the machine is "guarded by location". There is a nip point from the top of the blade to the machine frame but it's impossible to reach. Brand also mentions that there is a statement in the manual to keep your hands and feet away from moving parts or power-driven parts. Brand's major point was that it is impossible to reach that nip point unless you stand on the side of the platform. Another point that Brand brings up is that there is no reason to climb on top of the platform while the machine is being used as intended. The last item Brand mentions is the Warning Signs that are clearly posted for the user protection. The warnings read, "For your protection, keep all shields in place and

secured while machine is operating. Moving within can cause severe personal injury.", and "Crushing injury or death possible if tree spade drops. Never work or stand under raised tree spade." Brand believes that Heath is at fault due to misuse of the machinery because if the warnings are observed then an accident should not occur.

6.6 – The Deposition of Michael Heath

Michael Heath was a laborer for Stewards Nursery. In his deposition Mr. Callan, the defense attorney for Vermeer Machine Company, interrogated him. The defense started out by establishing the character of Mr. Heath. It was revealed that Mr. Heath had lost his driver's license twice for failure to pay speeding tickets. It also was revealed that he had been incarcerated for possession and distribution of cocaine. Then following his release from prison he was again incarcerated for possession and being under the influence of drugs.

After establishing the poor character of Mr. Heath, Mr. Callan began to ask questions about the case. Mr. Heath said that he had learned how to use the machine by word of mouth and by hands on visual instruction and that he was never taught to put his hand on the blade. At the time of the accident Mr. Heath said that the frame was between two to two and a half feet off the ground because they were lowering the tree into a burlap sack. Mr. Heath also strongly insisted that he was standing on the ground, leaning into the frame and holding the tree, when his left hand was pinched. He also says that when his hand was pinched it was at about forehead level. Meaning that his hand was about 67" – 68" off the ground.

When he was asked why his hand was on the blade Heath says that he did not put his hand on it. He does not know how his hand got there. Also in reference to the defect that Heath claimed in the machine that a warning sign should have been incorporated into it so he would know when the blade was raising. Mr. Callan asked him if he knew that the blade was moving up while he was holding the tree. Mr. Heath said that he was aware that the blade was moving up. So if Mr. Heath knew that the blade was moving up then a warning sign would not have prevented this injury.

6.7 – Conclusion

The Vermeer Corporation is not at fault for this incident because the company could not have foreseen the specific sequence of events that led up to the accident. Also Heath's character was established to be poor because of his many drug convictions and it was apparent that he was either incompetent or he was lying during his deposition. He says that the frame was two feet off the ground. He also says that he was standing on the ground. He also says that when his hand was pinched it was at forehead level. Then after his hand was pinched he said that he jumped inside the platform. He also said that he does not know how his hand got on the blade. The pinch point is about 92" off the ground so the only way that his hand could have been at forehead level when pinched is if he was standing on the platform. 92" minus 24" is 68", which is about forehead level for Mr. Heath. After his hand was released from the machine he then jumped inside the frame. Because he was standing on the frame and because there is no foreseeable reason for anyone to stand on the frame during operation of the machine, the Vermeer Company is not at fault for the accident.