

HEAVY TRUCK CRASHWORTHINESS
AN EMERGING AREA IN PRODUCT LIABILITY LITIGATION



Mike Rice¹ came to his demise un-expectantly and suddenly when silver metallic looking aluminum cab guard placed behind him on the tractor to protect him from forward shifting logs failed. Mike was a log truck driver who was hauling a less than full load of tree tops when he approached the crest of a hill and un-expectantly encountered a passenger car trying to limp its way to a service station at the bottom of the hill. The disabled vehicle had been left on the side of the road by the owner because he could not make it safely down to the service station the day before. However, the next day he came back with his sister who was going to trail him down to the service station to have the car repaired. It is without dispute that this vehicle should not have entered the highway on the back side of a crest of a hill in an area with the speed limit of 55 mph that log trucks travel frequently without a flag man at the top of the hill to warn oncoming

¹ For Confidential Reasons Actual Names of the Plaintiffs mentioned have been changed

drivers. As a result of this decision, Mike's life turned for the worse when he slammed his brakes trying to avoid killing the occupant of the disabled vehicle. Mike struck a grove of trees head on traveling only 17 mph. This was a wreck that should have been easily survivable, but the "Cab Guard" failed and allowed the logs to slide forward, crushing the cab and killing Mike. Even though it was designed and sold as a safety device to protect the truck driver from logs shifting forward, the aluminum cab guard was not able to withstand the forces in this relative low speed wreck. When it failed, there was nearly three feet of intrusion into the occupant compartment and Mike was killed as a result.

The "Cab Guard" was manufactured, designed and sold to log truck operators as a safety device to guard the cab. However, the manufacturer's own internal testing is adequate and proves it will not protect truck drivers in many foreseeable collisions. One manufacturer's corporate representative testified that he now realizes a "Cab Guard" should not be used on log trailers. Nevertheless, they are still out on the road being used on log trucks. Unfortunately, the crashworthiness of heavy trucks has been historically over-looked and poor designs are all too common an occurrence in the heavy trucks industry. My work in the heavy truck industry reveals "Cab Guards" are only the tip of the iceberg. Defective roof structures and defective seatbelts are also common problems in heavy trucks.

Statistical evidence shows that nearly 1,000 heavy truck occupants are killed in crashes every year. In the 1980s, the National Highway Traffic Safety Administration ("NHTSA") sponsored a number of research papers that evaluated statistical information related to heavy truck crashes in the United States. The reports consistently found that

the primary contributing factor to heavy truck occupant fatalities were injuries caused by ejection and rollover which involved severe cab deformation and occupant entrapment. The same reports consistently found that the best way to reduce heavy truck occupant fatalities was to enhance the structural integrity of the cabs, and improve methods to reduce occupant impacts with the interior surfaces of the vehicles. Despite this overwhelming evidence, heavy truck crashworthiness and cab roof strength is not regulated by the federal government. In contrast, passenger car manufacturers are required to pass minimum roof strength and crashworthiness standards found in the Federal Motor Vehicle Safety Standards.

Although the crashworthiness of heavy truck cabs is not regulated in the United States, there have been foreign standards in place for years. Heavy trucks sold in foreign countries are required to meet a variety of crashworthiness and roof strength standards including the Swedish standard and the ECE Rule 29 standard. These foreign standards require cab strength testing by static and dynamic loads. These particular tests require impacts to the roof, rear of the cab, front of the cab and the A pillars of the cab.

Apparently, in response to the overwhelming research data, American heavy truck manufacturers undertook the “Heavy Truck Crashworthiness Study” in conjunction with the Society of Automotive Engineers (“SAE”) during the late 1990s. This study culminated in an SAE recommended practice for testing the strength of heavy truck cabs. Unfortunately, the test does not simulate actual forces that would be imparted into a heavy truck cab that rolled over while traveling down the highway. As a result, heavy trucks manufactured in the United States still provide unsafe cabs of thin

aluminum with fiberglass roofs. Therefore, truck occupant fatalities continue to occur in the event of rollovers. It is very difficult for a heavy truck driver to survive a wreck when the roof and cab structure disintegrate around him during a wreck and fail to maintain reasonable occupant survival space.

With such bleak statistics and an almost nonexistent regulatory history, it's no wonder that heavy truck crashworthiness is an emerging area of product liability litigation. Product liability cases are often overlooked in single vehicle accidents - especially in accidents involving large trucks. However, theories of defect apply equally to 18-wheelers as they do to passenger cars. For example, defective roofs and seatbelts cause injuries in 18-wheeler truck accidents as well as passenger car wrecks. So, it is important to keep your eyes open while investigating an 18-wheeler accident so that you don't miss important product liability issues such as defective cab guards, roof structures and seatbelts.

Defective Cab Guards

Cab guards or headache racks are required as front-end structures on 18-wheelers that pull flat bed trailers and log trailers. The purpose of a cab guard is to prevent shifting cargo from contacting the cab of a heavy truck. Many cab guards are designed of welded heat treated aluminum which results in a weakening of the cab guard over time. The weakening of the cab guard due to fatigue stress is relatively unknown to drivers. Many welding requirements established by national organizations are not followed by cab guard manufacturers. The failure to follow such guidelines result in poor welds, poor quality control, and poorly designed cab guards for their intended purpose of protecting truck occupants.

A cab guard is installed on a truck to ensure that a truck driver's load does not intrude into the cab. Instead of designing and manufacturing a cab guard that works, the company mentioned in the example at the beginning of this article used poor design and fabrication and inferior welding procedures that resulted in a failure, causing Mike's death. The company did this to save money and therefore, put profits over the safety of its consumers. It even claimed and advertised that its cab guard met the minimum Federal standards and provided maximum protection, even though no such standard exists. Federal Motor Carrier Standards that apply to the trucking company require the cab guard to be able to withstand one half of the load applied uniformly across the back of the guard. Cab guard manufacturers claim this is the standard they have to meet even though it does not apply to manufacturers. The company never tested the cab guard model on Tom's truck. An Alabama jury awarded a \$12 million verdict to Tom's mother in the product liability lawsuit against the manufacturer of the defective truck cab guard.

Defective Roof Structures

Since there are no NHTSA standards that apply to large trucks, in many cases, manufacturers totally ignore the need for improvements in design that would make their vehicles safer. A prime example of this is in connection with weak roof structures.

In 2007, after a week of trial in Alabama State Court, our firm was involved in the settlement of a wrongful death case. We represented the child and mother of a truck driver who was killed when the 10 wheel straight line truck he was driving rolled over on a Mississippi highway. The driver was operating his vehicle well within the speed limit when two of his tires got off the road and the truck turned over. When the truck came to

rest it was upside down. The roof of the cab failed and resulted in the driver being crushed by the structure.

The sad truth is that heavy truck cabs like this one could very easily be made much stronger. The industry formed a Heavy Truck Task Force Committee several years ago. This committee hired an engineering firm to study real world rollovers to assist them with developing a recommended practice. During one of the meetings the engineering firm recommended that manufacturers increase roof strength by over 200% to reduce roof crush to six inches. Instead of following this recommendation, the Task Force criticized the recommendation. The industry has also criticized any design changes that would make roof structures safer, but would cost more money.

Another important suggestion was made to the Task Force. This time, an engineer from the firm hired by SAE, with Finite Element Analysis, modeled a roll cage that would increase roof strength. In addition to modeling the cab, the engineer used a computer simulation to show how much stronger a roof is with a roll cage than without one. Roll cages, in use in NASCAR and other arenas, have been around for many years. Again, instead of taking the opportunity to save lives, the Committee instructed this engineer to destroy his file on the roll cage. Rather than developing better roofs with current technology, the industry continues its policy of defending unreasonably weak cab roofs and allowing truck drivers to die needlessly. This engineer testified at our trial before the case settled and told the jury exactly what had happened.

The trial revealed evidence that most heavy trucks have totally inadequate roof structures. The study of heavy truck roof issues mentioned above was designed solely

to hold off government regulation. The manufacturers actually dominated the work of the allegedly independent group doing the study. The purpose of the study was supposedly to recommend roof strength tests. The heavy truck engineers insisted, successfully, that evidence of alternative and stronger design recommendations be removed from the final report. This crashworthiness case dealt with a prime example of how manufacturers cut corners and ignore safety in order to increase corporate profits. The amount of the settlement, the names of the parties and the make and model of the vehicle are all confidential.

Defective Seatbelts

Another product defect that causes injuries in heavy truck accidents is defective seat belts. In January of 2007, before jury selection in a Montgomery County, Alabama Circuit Court, our firm settled a defective seat belt case with Indiana Mills & Manufacturing, Inc. of Westfield, Indiana, ("IMMI") for the family of Joe Freeman.

Mr. Freeman, a truck driver, was involved in an offset frontal collision. Neither vehicle was going more than 50 miles per hour at impact. Mr. Freeman's truck went off the right shoulder of the roadway and he lost control, rolling the tractor trailer over on its side. Freeman, who was wearing his seat belt, was ejected when the seat belt buckle failed. He was thrown through the windshield of his truck and killed when he struck the pavement. Had the seat belt worked, Mr. Freeman would have walked away from the collision with no injuries. Instead, because of the defective buckle, he was killed. The initial collision was one that wouldn't have resulted in a fatality had the seat belt buckle not failed.

IMMI was the manufacturer of the seat belt buckle in the truck Mr. Freeman was driving. The seat belt buckle was defective in that it intermittently failed to latch and was prone to a false-latch condition in which it appeared to be latched when it was not. IMMI had known that their buckles were defective and dangerous long before the truck driven by Mr. Freeman was even manufactured. In fact, IMMI had known that the design of the buckle was bad from the very beginning. IMMI knew that the defect would create a highly hazardous and dangerous condition in the event a frontal collision occurred involving a truck equipped with that particular seat belt system. Shockingly, IMMI had known about this possibility for at least three years.

IMMI knows that there are now 15,000 trucks on the road that have the very same defective IMMI buckles. Yet, there has been no recall of the buckles. In fact, there has been no attempt to even notify the owners of the trucks which are still being used on the highway. Once this lawsuit was filed, however, IMMI did inspect and replace all of the Defective Seat Belts for the trucks owned by Mr. Freeman's employer. However, no other owners have been notified. There is in effect what is known as a silent recall for the defective seat belts, which means that the owner of a truck with a bad belt can bring their truck in and get a safe seat belt installed at no cost.

This company's utter disdain for human life and vehicle safety resulted in the loss of one known life and has put thousands of other truck drivers at great risk. Because of IMMI, Mr. Freeman died a horribly tragic death. After the settlement, all documents and deposition testimony from the case against IMMI were released from a previously entered protective order and made public. However, the amount of the settlement is confidential.

The accidental deaths mentioned in these examples are unfortunately very common occurrences. Truck drivers make up one of the largest professions in the United States, spending countless hours on the road. They do this while driving vehicles that are less regulated than our own passenger cars and trucks. Without more regulation, these men and women will continue to risk their lives daily to keep America running - sometimes not even knowing how dangerous their jobs are.