

DON'T FORGET ABOUT THE CAR:

IDENTIFYING POTENTIAL CRASHWORTHINESS CASES

A young woman is driving home on a rural two lane highway. The sun has fallen below the tree line as she signals a left turn onto her home street. She slows down and oncoming traffic forces her to stop. So she sits stopped with her turn signal blinking. Behind her, a teenage driver is paying more attention to his girlfriend in the passenger seat of his pickup than the road. He slams into the back of the woman's vehicle at 35 mph. The woman hits the top of her head on something in the backseat and suffers a C1-C2 bilateral facet dislocation that renders her quadriplegic.

The woman contacts you, signs a retainer and you go to work. Your phone calls and letters reveal that there is only \$30,000 in liability coverage and the defendant has no significant assets. She only has \$100,000 in UIM coverage – less than 20% of her past medical bills. So is this a case where your client will be left grossly undercompensated?

Before you answer “yes” and advise your client to sign a general release for the policy limits, consider the potential main defendant in your case – the manufacturer of your client's vehicle. In other words, determine whether your client has a viable product liability claim against the auto manufacturer?

Automobile product liability cases can provide compensation that not only helps make the lives of catastrophically injured people as comfortable as possible, but to fund basic care necessary for their health and well-being.

This article briefly summarizes some common automobile crashworthiness defect claims and how to identify them.

BACKGROUND

“Crashworthiness” refers to the manner in which the vehicle protected – or failed to protect – occupants in an accident, thereby increasing the severity of the injuries.

Minnesota has long recognized the crashworthiness, or “second collision,” doctrine.ⁱ Plaintiffs in crashworthiness cases have the burden of proving that the alleged defect was a substantial factor in causing their increased injuries, but need not show specifically which injuries would have occurred but for the defect and which injuries were enhanced.ⁱⁱ Further, if a plaintiff's damages can be apportioned between different phases of a crash, the defendant bears the burden of showing as much.ⁱⁱⁱ In other words, Minnesota recognizes the inherent difficulty in proving which portion of an accident sequence caused specific injuries to a victim. Rather than saddling plaintiffs

with this burden, our courts have determined it is better to leave this burden to defendants than to send injury victims away uncompensated.

1. The role of federal safety standards.

The National Highway Safety Administration (“NHTSA”) is tasked with promulgating standards to help keep American motorists safe. NHTSA has thus adopted the Federal Motor Vehicle Safety Standards (FMVSS). These are standards with which every automobile in the United States – with very few exceptions – must comply.

NHTSA, however, generally does not test vehicles to assure they comply with FMVSS. Instead, the auto manufacturers self-certify their vehicles. They either run their own tests and deem the vehicle compliant, or hire testing services that do the same. The manufacturers then submit compliance documents to NHTSA. Engineering data, testing and some reports can be accessed at http://www-nrd.nhtsa.dot.gov/database/nrd-11/veh_db.html. The database is searchable by vehicle, test and other parameters.

A manufacturer’s representation that it satisfies a particular FMVSS standard, however, is not infallible. First, manufacturer’s tests and data are not always perfect. In fact, juries have found that manufacturers failed to comply with federal standards despite NHTSA’s approval on the manufacturer’s reports.

Second, in most cases, compliance with FMVSS standards does not isolate a manufacturer from liability through federal preemption. While the Act preempts state regulations^{iv}, compliance with a motor safety standard prescribed under the Act generally does not preempt common law suits.^v

And last, the language promulgating the FMVSS states the standards are meant to be a “minimum standard for motor vehicle performance.”^{vi} This significant language helps juries understand that the standards are not the be-all, end-all, but rather constitute bare minimum requirements.

Thus, with a few exceptions, compliance with the federal standards alone does not bar a common law crashworthiness case.

2. Recalls, bulletins and complaints.

At a minimum, lawyers faced with a badly injured client and inadequate insurance coverage should determine whether any of the involved vehicles have been

the subject of a federal recall, technical service bulletin, prior consumer complaints or a NHTSA defect investigation. NHTSA posts all of this information on its web site. Simply log onto www.nhtsa.dot.gov/cars/.

SEATBELT DEFECTS

According to the NHTSA, seat belts save more than 10,000 lives in the United States every year. Wearing a seatbelt is the most effective way to prevent injury or death in accidents. During the accident, a properly designed seat belt will prevent passengers from being thrown about or ejected from the vehicle and will distribute the forces of impact to the strongest areas of the body – the hips, shoulders and chest. But if a vehicle’s seat belts are poorly designed or manufactured, serious injury or death can result.

While evidence of seat belt use is typically barred by Minnesota’s seat belt “gag rule”, the rule does not apply to cases involving allegations of defects in the seatbelt system. Minn. Stat. §169.685, subd. 4 provides in part:

[The gag rule] does not affect the right of a person to bring an action for damages arising out of an incident that involves a defectively designed, manufactured, installed, or operating seat belt or passenger restraint system.”

1. Signs of a potential seat belt failure.

Of course, seat belt performance issues vary widely from case to case. But the following scenarios may indicate a seat belt problem:

- Both serious and non-serious injuries to belted occupants. For example, one belted occupant walks away while another belted occupant is paralyzed or suffers a serious head injury;
- An injured occupant is found wearing a loose-fitting seat belt. This could indicate excess slack caused by improper retractor performance;
- An occupant is found unbelted but witnesses swear the occupant was belted before the crash. Better yet, the occupant has seat belt marks on her body, but was unbelted after the crash. All of these could indicate unlatching or false-latching of the seatbelt buckle;
- Serious injuries in only moderately severe crashes. When restraint systems work properly, occupants typically are not seriously injured in moderate speed crashes; or
- The seat belt webbing is torn or ripped or the seat belt is pulled loose from one or more of its anchors.

The following discusses several potential seat-belt system defects and failure modes.

2. The unlatching seat belt buckle.

It goes without saying that a person has to wear a seat belt for it to provide any protection. But sometimes, people buckle up and because of defects in the seat belt buckle, the buckle unlatches during an accident. If witnesses will testify that your client was wearing her seatbelt before the crash or your client had seat belt marks on her body, be careful about discounting those recollections.

The following defects may have caused the buckle to unlatch.

a. **False latch.** Sometimes seat belts look, feel, and sound like they are locked when they aren't fully engaged. This is called false or partial latching. Defects can include manufacturing variances in the internal buckle components or design flaws that prevent the buckle from locking the latch plate into place. Some buckles are susceptible to small items like coins lodging inside the buckle. If one of these conditions exists and the forces in an accident act on a person or the buckle, partially latched buckles tend to release. Indeed, some manufacturers have launched full-scale product recalls to deal with these situations.

b. **Inertial release.** Most seatbelt buckles are one of two types: side release and end release buckles. Both types are shown below:



End release buckle	Side release buckle
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Both end and side release buckles have been shown to unlatch during crashes. On a side release buckle, the inertial release happens when a force is applied to the back of the buckle. The inertial energy is transformed into the spring of the buckle and releases the tension on the latch plate, allowing it to open.

In some end release buckles, if a sharp vertical load is applied through the bottom of the buckle (often in a rollover or similar crash where there is a blow to the underside of the vehicle) the buckle can unlatch. Without a simple and proper lock for the buckle latch, the button's static inertia makes the button tend to stay in place while the rest of the buckle moves up relative to the button, simulating a person pressing the button down to open the buckle.

c. Inadvertent actuation. Some buckle buttons are poorly designed with release buttons that are too big. Big buttons can be inadvertently depressed by something inside the car like a loose object or an elbow. Inadvertent actuation can unlatch a buckle, leaving the occupant unprotected.

3. Is the overall seatbelt design safe?

Some seat belt systems are just poorly designed. They don't fit some occupants properly or don't do enough to protect occupants in foreseeable crashes. The following are a few examples.

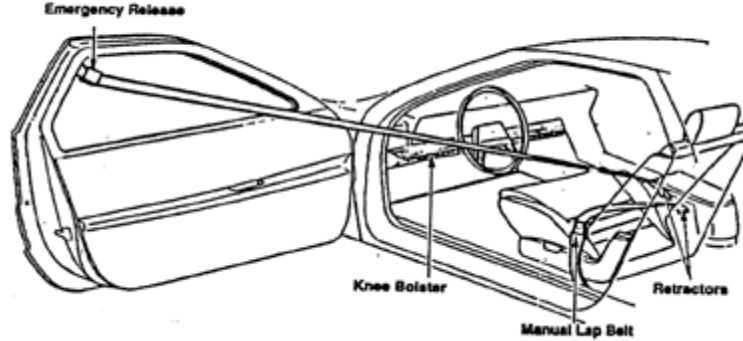
a. Door-mounted seatbelts.

In 1969, the U.S. Department of Transportation (DOT) took steps to require airbags or other "passive" restraints in all motor vehicles, the thinking being that cars needed to protect occupants who chose not to wear their seatbelts. In other words, vehicles needed "passive" restraint systems that worked even if the operator didn't buckle up. But airbags were expensive to design, make and implement. So rather than implementing airbag designs in all of their vehicles, many auto makers chose to use automatic belts as a cheaper form of passive restraints.

Automatic belt systems tend not to fit many occupants properly. The top of the shoulder belt is mounted on the door or door frame, the belt often crosses against the neck – rather than the clavicle – of shorter occupants. Belts across throats cause horrific trachea and cervical spine injuries, especially in frontal crashes.

One particularly bad design, the door mounted automatic seatbelt, is shown below.

Two-Point Non-Motorized Automatic Shoulder Belt



This design is especially troublesome because, in addition to the belt fit problems, if the door opens in the crash, the occupant is essentially left unbelted next to an open door.

To spot potential belt-fit cases, look for medical evidence of the belt crossing across the neck. This may include superficial abrasions or bruising, crushing injuries to the trachea and throat or cervical spine injuries, often bilateral locked facets.

b. **Lap belt only.** As the name suggests, lap belt only systems do not have a shoulder belt and thus rely on the lap belt to restrain the occupant. These systems have typically been used in rear seats – especially in the center rear position.

In frontal collisions, rather than spreading the load across an occupant's bony shoulder and rib-cage, a lap belt transfers all of the energy to an occupant's abdomen. This phenomenon is even more dangerous when the belt and seat configuration allows the occupant to slide – or "submarine" – under the belt. When an occupant submerges under a lap belt, the belt loads into the abdominal organs rather than the bony pelvis. This loading can cause internal organ damage that is often fatal. Further, the lap belt across the abdomen acts as a fulcrum about which the body hinges. This unnatural movement often leads to spinal cord injury and paralysis.

There are some opinions holding "lap-belt only" claims are preempted. Despite the preemption issue, there are still viable claims that the submarine phenomenon is exacerbated by improperly designed seats that do not have enough structure to hold an occupant against the seat back during a crash.

In spotting these claims look for abrasions and bruising across the abdomen, abdominal organ injuries, and lumbar or upper thoracic level spinal injuries.

4. Torn or ripped belt webbing.

When the seatbelt tears or is ripped in half during an accident, something has probably gone wrong. Seat belt webbing is designed to withstand the forces of most survivable collisions without ripping or tearing. Torn or ripped webbing might happen

because of a defect or manufacturing flaw in the webbing itself, such as material or weaving deficiencies.

Ripped or torn webbing might also be the consequence of some other vehicle defect. Any defect that allows excessive slack or payout of the webbing can cause the belt to be "snap-loaded" - loaded too rapidly, which can sever the webbing. Sharp or protruding edges of vehicle components can also cut through the seat belt.

AIRBAG (OR LACK OF AIRBAG) DEFECTS

1. In general.

Airbags protect occupants by spreading the loads in a crash and preventing occupants from hitting interior vehicle surfaces. But sometimes, airbags do more harm than good. Although you wouldn't guess it after watching "safety" commercials showing extreme slow-motion airbag deployments, airbag deployments are violent events. In fact, the airbags themselves generally deploy at speeds of 90-220 mph. Given the force involved, problems happen when occupants are in the airbag deployment zone – especially when leaning forward or sideways, the bag deploys too late, the bags deploy in low-speed crashes or the airbag strikes the occupant under the head or neck. These scenarios can cause paralyzing injuries or even death. "Smart" airbag systems are designed to prevent some of the problems created by airbags firing into "out-of-position occupants." But the systems don't always work properly and not all vehicles are equipped with this available technology.

Signs of potential cases include severe spinal cord and head injuries in an occupant whose airbag deployed.

Of course, the failure of an airbag to deploy in high-speed crashes – especially frontal crashes – can also cause catastrophic injuries.

Last, while data stored in a vehicle's recorder system or "black box" is always important, it is critical that this data be properly preserved and downloaded in airbag cases.

2. Lack of Side Airbags

A report from the Insurance Institute for Highway Safety finds that side airbags save lives and may ultimately be as vital as seat belts – especially when they offer head protection. Statistics show that every year, 9,000 people in the United States alone die in side-impact car crashes, which is 30% of all vehicle-occupant deaths. Using government data on driver's-side collisions, the report found that drivers whose vehicles

had side air bags with head protection were 53% less likely to die than those without them.

Manufacturers have known how to install side-impact airbags for decades, but many either didn't include them at all or only offered them as options. If your client was seriously injured in a side-impact case the vehicle was not equipped with side airbags, they may have a viable crashworthiness claim.

SEAT BACK FAILURES

Strong seatbacks prevent front seat occupants from striking structures or other occupants in the rear seat. In rear-end crashes the vehicle is shoved forward. The occupant, following Newton's laws, wants to remain where she is. The end result is that the occupant is forced rearward relative to the vehicle and into her seatback. In these situations, the seatback should stay up to keep the occupant upright and in the occupant area.

When seat backs collapse rearward, the occupants "ramp up" the seatback and into unfriendly surfaces behind them, often resulting in catastrophic head and neck injuries. Or, in situations with particularly tragic consequences, the front seat occupant ramps up a collapsed seat back and into a child seated in the rear seat. A collapsed seatback may look something like this:



Far too many people are hurt and killed each year because of weak and collapsing seatbacks. Unfortunately, NHTSA has not provided much help. FMVSS 207 deals with seating systems and the strength of seatbacks in rear end collisions. The standard is generally regarded – even by some manufacturers – as inadequate. In fact, lawn chairs and cardboard seats have been tested and meet the federal standard.

If the front seat occupant sustained serious head or neck injuries in a rear-end accident, or if someone in the rear seat was hurt by the front seat occupant shooting into the rear seat, look for a collapsed front seat back.

STRUCTURAL DEFECTS

Experts – including manufacturers – have recognized the importance of occupant “survival space” for decades. The structure around the occupant compartment should form a protective cocoon around the occupants in all types of crashes: frontals, side impacts, rear impacts and rollovers. In other words, the structures must be strong and the interior surfaces should be able to absorb energy from occupant contact rather than injuring the occupant. While some manufacturers may attempt to distance themselves from these principles, several have promotional literature touting their vehicle’s robust structures. In fact, some manufacturers brag that their vehicles are equipped with “safety cages” to protect occupants in crashes.

Some structural, or safety cage, defects include:

- Excessive damage or intrusion to the dash/instrument panel;
- Intrusion of the toe board into the occupant compartment causing lower body injuries;
- Rearward movement of the steering column that may lead to improper airbag deployment and enhanced injuries;
- Inadequate door frame structure that leads to excessive intrusion or even failed door latches and locks; and
- Poor roof structure that leads to injuries in rollover and vehicle override crashes.

These defects can often be fixed by using higher gauges or more steel in structural members, using structural foams in open sections or filling in unnecessary holes in structural sections.

In general, look for excessive structural intrusion into the occupant compartment. These may include excessive roof crush, steering columns pushed into the driver, or collapsing side beams.

CONCLUSION

The next time you’re faced with bad injuries and inadequate coverage in an auto accident case, take the time to look at the vehicle and research potential defects. Our clients deserve justice and fair compensation, not a settlement that will only pay for a few months of their medical care. In some cases, the only way to get a just and fair recovery is by pursuing a crashworthiness case.

ⁱ See, e.g. *Mitchell v. Volkswagenwerk, AG*, 669 F.2d 1199 (8th Cir. 1982) (applying Minnesota law).

ⁱⁱ *Id.*

ⁱⁱⁱ *Id.* at 1208.

^{iv} 49 U.S.C. § 30103(b).

^v 49 U.S.C. § 30103(e).

^{vi} 49 U.S.C. § 30101 *et seq.*