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**Boca Raton Resort
501 E. Camino Real
Boca Raton, FL 33432**

Roundtable 3: Thursday, April 10, 2014 (3:30 pm – 4:30 pm)

Keep on Rollin' Without Rollin' Over

The Advent of Anti- Roll Over Technology in the Transportation Industry

I. Introduction

Rollover and Loss-of-Control crashes have historically comprised a significant portion of truck tractor and bus crashes across the US. Emerging technology in the form of ESC (Electronic Stability Control) Systems and RSC (Roll Stability Control) Systems, is helping to reduce the numbers of these crashes annually, by taking active control of a vehicle and applying corrective action, when a truck's movements become unstable. The National Highway Traffic Safety Administration (NHTSA) in recognizing their effectiveness, has announced that ESC systems will be mandated for certain commercial vehicles in 2014. This panel will look at the emerging technology, and will examine the roles and effectiveness of both ESC and RSC in reducing the incidents of crashes resulting from vehicle instability. It will address the cost benefit analysis, and will hopefully end with a vivid discussion of the potential pitfalls associated with unleashing new technology products onto the marketplace.

Statistics

The US DOT Reports TT combination vehicles account for 72% of all large truck fatality crashes annually. Overall these types of vehicles account for over 150,000 accidents each year, of which 29,000 are injury related. BY COMPARISON Single unit trucks account for 146,000 accidents and 24,000 injuries annually. While this might not seem like much of a difference, 2,338 fatalities occurred in TT accidents while only 880 in single units. Additionally, there are 4,000 more rollover crashes in combination TT vehicles than in single unit truck.

FMCSA Study

THE FMCSA performed an in depth study and analysis of rollover accidents, in 2010. The study found that in these large truck accidents almost half were Due to failure to adjust the speed to curves in the road, resulting in horrific roil overs. [show video?]. The study further found that the second largest

contributing factor was inattention to the roadway, dozing, distraction leading to sudden directional changes, over-steering, over-correcting or not steering enough to stay in one lane of travel. [show video]

NHTSA Study:

The NHTSA since '06 has tested TT w/ stability control systems, and analyzed crash data. There are generally two systems available for use in large haul tractor trailers: RSC and ESC. RSC and ESC technology were introduced in '02 and '05 respectively. RSC prevents roll overs, but are unable to prevent accidents like the second video. ESC on the other hand, also helps maintain directional control, eliminating other loss of control accidents.

Development of RSC and ESC Technology

The significant reduction in the amount of and severity of crashes by using these 2 types of technology RSC and ESC has led the NHTSA to propose that all large TT's with a weight of over 26,000 pounds be fitted with the technology and ESC device by the year 2014.

There is a lot of debate in the industry over whether this particular device is the most cost and benefit appropriate. Additionally, the industry wonders what the mandatory implementation of FMVSS 136 will bring. We will set up a real world fact pattern and talk about the technology, the risk management issues, and the liability issues.

II. Application of Technology in the Real World

***FACTS:** Assume that the following is happening a year from now: ABC Trucking is a national carrier with approximately 2500 tractors on the roadway. On July 15, 2015, ABC Trucking had unit 4527 involved in an accident on Highway 123 in Charlotte, North Carolina. An afternoon thunderstorm coupled with a roadway curve had caused a passenger van (2005 Toyota Sienna) to lose control and spin out and resulted in a minor accident with another vehicle (Ford Fusion). As a result of this first accident, the right through and right shoulder of Highway 123 were obstructed. ABC Trucking unit 4527 was traveling behind the Toyota approximately 300-feet. The driver of unit 4527, Mr. John Sloan, attempted to steer to the left to avoid the obstructed right lane. However, unit 4527 made contact to the Toyota and resulted in the death of the driver (Mr. Taylor) and serious injury to the right front passenger (Mrs. Taylor).*

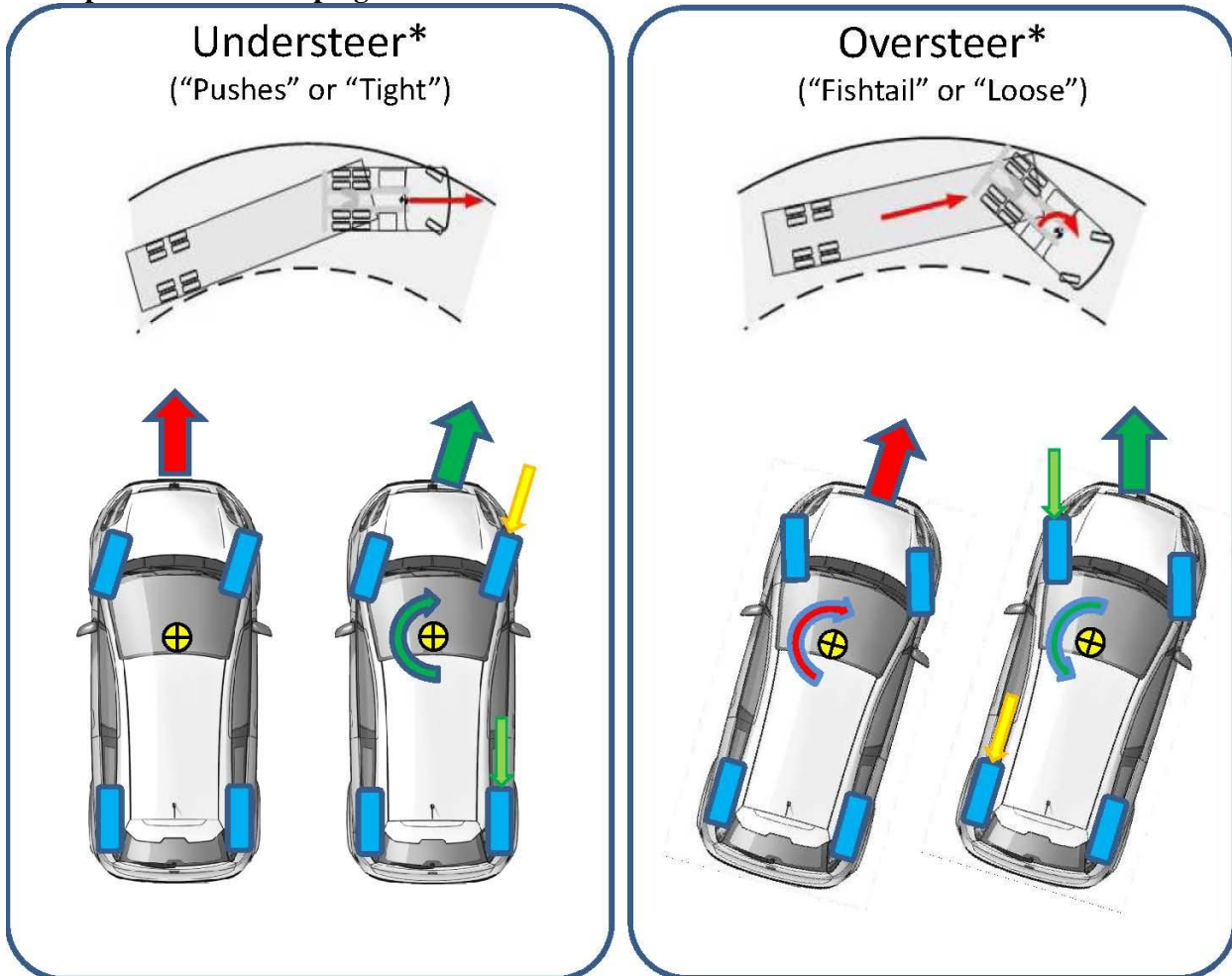
***Allegations:** ABC Trucking had a policy that they replace their power units every three years or 400,000 miles. The subject unit was 4 years old with 615,452 miles. Given its age, it was not equipped with ESC. Had it been replaced at 3 years, the 2014 model unit would have been equipped with ESC like the others purchased by ABC at that time. Had the subject power unit had ESC, the subject accident would have been avoided and the subject fatality and serious injury to the father/mother of two children would have been avoided.*

**Table E-1
Summary of Benefits
(Undiscounted)**

	Low Range of Benefits			High Range of Benefits		
	Rollover Crashes	Loss-of-Control Crashes	Total	Rollover Crashes	Loss-of-Control Crashes	Total
Crashes	1,332	475	1,807	1,854	475	2,329
Fatalities	27	22	49	38	22	60
Injuries (AIS 1-5)	537	112	649	746	112	858
PDOVs	797	390	1,187	1,109	390	1,499

PDOVs: property damage only vehicles

Description of the developing accident:



The ESC and RSC technology work together to significantly reduce accidents.

III. Risk Analysis

The following factors are at play in implementing the technology:

Cost Benefit per accident:

- With the average cost of a non-fatal rollover averaging \$200,000 and one associated with a fatality often exceeding \$1 million, the cost of equipping vehicles with stability control has been proven to be well worth the investment.

Cost Benefit Industry Wide:

- According to a recent study, requiring stability control systems alone could cost the trucking industry in the U.S. as much as \$100 million, but the savings from avoiding costly accidents is estimated to be threefold.

Why It's Needed?

- Accidents happen. In fact, 2012 saw the first increase in motor vehicle related fatalities reported since 2005. Commercial vehicle accidents followed this trend with an increase of 3.7% in fatalities from 2011 to 2012, despite stricter regulations to control drivers' hours of service, the use of electronic hand-held devices, and other measures intended to make our highways safer.

Legal Costs:

- According to initial information collected from attorney, insurer, and carrier interviews, and separately verified by three transportation attorneys interviewed as part of this analysis, legal costs relating to court costs, attorney fees, and out-of-pocket settlements vary considerably, depending on negligence, crash type, and crash severity. The legal fees cost category included crash reconstruction costs, expert witness fees, and fees paid to attorneys. The court costs include legal filing fees, court reporter fees, deposition fees,

and other miscellaneous costs relating to filing or completing litigation. These average costs are shown in Table 8 for each type of rollover crash. Table 8. Average Legal Fees and Court Costs per Rollover Crash Cost Category	PDO	Injury	Fatal
Legal Fees	\$20,000	\$25,000	\$100,000
Court Costs	\$10,000	\$10,000	\$ 10,000
Total	\$30,000	\$35,000	\$110,000

The out-of-pocket settlement costs are expenses paid to claimants, including punitive and compensatory damages. The median settlement cost per fatality is \$700,000. The average settlement cost per injury was calculated by a weighted average of the percentage of the incapacitating injuries multiplied by the highest settlement cost of \$500,000 for injuries in a range of settlement costs for rollovers, added to the percentage of non-incapacitating injuries multiplied by the lowest settlement cost of \$25,000 for injuries in a range of settlement costs for injuries. According to the GES data, approximately 30 percent of the rollovers estimated to be preventable by RSC systems involved incapacitating injuries, while 70 percent

involved non-incapacitating injuries. As a result, the weighted average cost of an injury in a rollover crash preventable by an RSC system is \$167,500. For this analysis, the costs per injury or fatality depended on the average number of injuries and fatalities in crashes preventable by the RSC systems. GES data provided the numbers of injuries and fatalities in the crashes preventable by the stability control systems, which were used to calculate the average number of injuries in injury crashes and the average number of injuries and fatalities in fatal crashes. Table 9 presents these results. A detailed summary of the numbers of injuries and fatalities per year in rollovers is provided in Appendix C.

Table 9. Average Annual Numbers of Injuries and Fatalities per Rollover Crash, 2001–2005 Crash Type	Number of Crashes	Number of Injuries in Crashes	Number of Injuries per Crash	Number of Fatalities in Crashes	Number of Fatalities per Crash
Injury Crashes	2,079	2,368	1.1	N/A	N/A
Fatal Crashes	137	89	0.7	137	1.0

IV. Legal Considerations.¹

FMVSS 136

If the proposed rule becomes final as drafted, it could have implications in trucking-related litigation. For example, the presence of these systems may give rise to new product liability lawsuits against their manufacturers and manufacturers of truck tractors. Additionally, new claims against trucking companies, shippers and brokers relating to the presence or absence of the technology, or the maintenance and upkeep of the systems may find their way into courts.

The transportation industry, in general, has benefited from much technological advancement such as anti-lock brake systems, airbags and passive restraint systems, many of which are regulated by NHTSA, and all of which have spawned litigation. Arguably, some of the same legal issues can arise with the implementation of RSS technology. In fact, a comparison can be drawn between the ESC mandate and other Federal Motor Vehicle Safety Standards in order to demonstrate some of the potential legal implications of the rule.

Preemption

The proposed rule could spark further debate on the pre-emptive effect of state tort law claims under the National Traffic and Motor Vehicle Safety Act of 1966, 15 U.S.C. § 1381 *et seq.* (“Safety Act”). For example, the United States Supreme Court discussed the federal pre-emption doctrine as it relates to the Safety Act in *Freightliner Corp. v. Myrick*, 514 U.S. 280 (1995). In *Myrick*, the accident victims alleged that the absence of an anti-lock brake system constituted a negligent design that rendered the tractor truck defective.² The manufacturer argued that the state law claims were pre-empted by the Safety Act and

¹ This portion of the written materials was originally published in an article titled Roll Stability Systems: Pending federal regulations and tractor trailer accident litigation. This article was published on October 22, 2013 in the *Westlaw Journal, Automotive*, Vol. 33, Issue 9. It was written by Kate Lawson, Esq. and Dennis Keene, Esq. of Hunter Maclean Exley & Dunn, P.C. in Savannah, Georgia, and Melanie R. Cheairs, Esq. of Lorange & Thompson, P.C.

² 514 U.S. at 283.

FMVSS No. 121, which standard imposed stopping distances and vehicle stability requirements.³ The Court noted that NHTSA amended FMVSS 121 such that it no longer applied to trucks and trailers.⁴ Because the pre-emption clause applies only where a vehicle safety standard is “in effect” and there was no NHTSA regulation establishing a standard for commercial motor vehicle equipment performance as it related to anti-lock brakes, the Court held that states were free to establish, or to continue in effect, their own safety standards.⁵

More recently, the Supreme Court again addressed the pre-emptive effect of the Safety Act in *Williamson v. Mazda Motor of America, Inc.*, 562 U.S. --, 131 S.Ct. 1131 (2011). In reversing a state court’s finding that the Safety Act pre-empted a common law tort claim in light of the history of FMVSS 208 (relating to seat belt requirements in motor vehicles) the Court noted that there was no significant federal regulatory objective at odds with the tort claim.⁶ Although the majority in *Williamson* acknowledged no express pre-emption existed due to the Safety Act’s saving clause, the Court focused its discussion on implied pre-emption principles before determining that the state tort claim was not preempted.⁷

The Court reached the opposite conclusion concerning the pre-emptive effect of FMVSS 208 in *Geier v. American Honda Motor Co.*, 529 U.S. 861 (2000) wherein it ruled that standard 208 and the Safety Act *did* pre-empt a state tort suit based on the failure of a manufacturer to install airbags in a vehicle. The distinction between *Geier* and *Williamson* lies in the intentions of the drafters of FMVSS 208 – in the former the tort claim directly conflicted with the standard’s underlying purpose whereas that was not the case in the latter. Interestingly, Justice Thomas’ concurring opinion in *Williamson* called into question whether any state common law claim is pre-empted by the Safety Act due to the Safety Act’s saving clause which, “explicitly preserv[es] state common-law actions.”⁸ Justice Thomas also questioned whether a court should even consider an implied pre-emption analysis in light of the express language of the Safety Act.

However, as Supreme Court jurisprudence now stands, where there is a specific federal standard addressing the vehicle performance at issue, the safety standard can potentially pre-empt claims brought pursuant to state statutes, regulations and common law.⁹ The focus will simply be on an implied pre-emption analysis and the regulatory objectives at the time the rule was implemented. Therefore, if FMVSS 136 becomes final, it could affect an accident victim’s right to pursue a state common law action premised on issues relating to the use of the system.¹⁰

Strict and Product Liability Claims:

Assuming FMVSS 136 does not pre-empt tort claims, accident victims will remain free to pursue state common law and statutory-based actions sounding in strict liability and negligence. For example, in *Lindsey v. Navistar Intl. Transportation Corp.*, 150 F.3d 1307 (11th Cir. 1998), the Eleventh Circuit affirmed the district court’s finding that the absence of a manual limiting valve in a tractor’s brake system constituted a design defect that resulted in a tractor truck jackknifing during an accident. Applying Georgia law, the court, sitting as trier of fact, employed a risk-utility analysis in determining whether the design was defective. That analysis incorporates the concept of “reasonableness”, and requires a

³ The Safety Act gives the Secretary of Transportation the authority to establish appropriate federal standards for motor vehicle and vehicle equipment performance that meet motor vehicle safety objectives. *Id.* at 283-84.

⁴ *Myrick*, 514 U.S. at 285.

⁵ *Id.* at 284.

⁶ 131 S.Ct. at 1133.

⁷ *Id.* at 1136.

⁸ *Williamson*, 131 S.Ct. 1141 (J. Thomas, concur.) citing *Wyeth v. Levine*, 555 U.S. 555 (2009).

⁹ *Gracia v. Volvo Europa Truck, Naamloze Vennootschap*, 112 F.3d 291 (7th Cir. 1997).

¹⁰ With the heated debate ATRI, ATA and other organizations have made concerning the validity of the science behind NHTSA’s proposal, it is also plausible that any such rule will be challenged in court. Such a challenge can place the status of FMVSS 136, in the same position as FMVSS 121 at the time of *Myrick*.

balancing between the risks inherent in a product design and the utility of the product so designed. During trial, the plaintiff presented evidence that manual limiting devices were available in the United States at a fairly small cost. The district court also found that the improvement of stopping capability outweighed the possibility that a driver might forget to deactivate the manual limiting valve in some situations, which could cause an accident. Therefore, the court concluded, the trial court did not err in finding that the failure to include the technology on the tractor at issue constituted a design defect.¹¹

Considering the types of claims asserted in *Lindsey* and the statistics discussed in Sections I and II above, tort actions could require a trier of fact to apply a given state's design defect analysis, be it a risk-utility/balancing or other test, to decide whether the absence of an ESC system constitutes a defect. Neither NHTSA's analysis nor any other studies, indicate any significant risks associated with using these systems. Therefore, the failure to install such a system, even absent the regulatory requirement, could potentially lead to a design defect finding.

Negligence Claims:

Arguably, this exposure could extend to brokers, freight forwarders and other parties for the negligent hiring of trucking companies that fail to utilize RSS technology. The nature of these claims would be similar to claims these entities currently face in commercial motor vehicle accident litigation wherein they contracted with trucking companies to haul goods, an accident ensues, and those companies have low safety ratings.

Potential legal issues may also loom for manufacturers and owners of older power units that do not have an RSS installed. Although NHTSA's study concluded that there would be no current requirement to retrofit older tractors, it is seeking comment on this issue to determine whether a supplemental Notice of Proposed Rulemaking is needed.¹² Manufacturers who offer RSC or ESC systems as optional equipment (or do not offer it at all) in certain model years when the technology was available, but not yet mandated, run the risk of legal exposure for not including the safety device on all equipment it sold. In short, the improper maintenance argument exists that a manufacturer of a post- 2002 model year tractor *should have* installed an RSS. Moreover, trucking companies with power units without an RSS, or those that lease drivers whose tractors are not equipped with such a system, may be exposed to tort-based lawsuits in this regard. Following this logic, and in keeping with current trends in the plaintiffs' bar, brokers, shippers and freight forwarders may face similar exposure for the hiring of trucking companies that do not employ RSS technology.

Courts and juries will be left to address several issues: whether failing to install this equipment constitutes a defect, what the industry standards were and availability of the technology at the time the tractor was manufactured, and what liability do the myriad of parties involved face. The outcome of such assessments will invariably be unique to each case.

¹¹ 150 F.3d. at 1315.

¹² FMVSS 136, p. E-9. According to NHTSA, retrofitting ESC or RSC does not appear feasible, because of the complexities associated with integrating the new technology with the older vehicles' engine, braking, local communication, and electronic control unit. Moreover, at the time of the preliminary impact analysis, no ESC or RSC retrofitting tools were available. *Id.*