Statement of

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Before the
HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
SUBCOMMITTEE ON HIGHWAYS AND TRANSIT

Hearing on:

April 29, 2015
**Introduction**

Chairman Graves, Ranking Member Norton, members of the Subcommittee, my name is Tom Kretsinger and I am the President and Chief Executive Officer of American Central Transport (ACT). ACT is a premium service truckload carrier operating over 300 trucks and serving major shippers throughout the eastern half of the United States. At ACT, we pride ourselves on our corporate culture and commitment to safety. We have adopted a “by the book” philosophy which has resulted in ACT becoming one of the safest, most reliable motor carriers in the country.

Today I testify on behalf of the American Trucking Associations (ATA). ATA is the national trade association for the trucking industry and is a federation of affiliated State trucking associations, conferences, and organizations that together have more than 35,000 motor carrier members representing every type and class of motor carrier in the country. Like ACT, ATA has a proud tradition of supporting progressive safety initiatives. Thank you for the opportunity to testify.

Mr. Chairman, today I will speak about the trucking industry’s safety record and ways to continue this long-term trend. I will also talk about a fundamental change in the government’s approach to truck safety that is needed to make further, significant gains in truck safety. Meaningful improvements will require an acknowledgement of the principal causes of truck crashes and a commitment to making appropriate countermeasures the highest priority. It will also require a shift from the current “rules and enforcement” centric model, to one that promotes the voluntary adoption of safety technologies and initiatives.

**The Industry’s Safety Record**

The trucking industry has an impressive safety record and is near its safest point in history. For example:

- The truck-involved fatality rate has decreased 74% since 1975, the first year the U.S. Department of Transportation (DOT) began keeping records.\(^1\)
- From 2003 to 2013, the number of truck-involved fatalities fell by 21% and the number of truck-involved injuries fell by 22%.\(^2\)
- From 2003 to 2013, the truck-involved fatality rate per 100 million vehicle miles traveled dropped 38%.\(^3\)

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- In actual numbers, there were 975 fewer fatalities in 2013\(^4\) (the most recent year for which data are available) than in 2002—remarkable progress in light of the trucking industry driving 60 billion more miles in 2012 (compared to 2002).\(^5\)
- The truck-involved injury rate has decreased 56% since 1993.\(^6\)
- Over the past decade alone, the truck-involved injury rate dropped by 26%.\(^7\)

To continue this trend will require a greater focus on the causes of truck crashes and a focus on appropriate countermeasures. Specifically, according to multiple studies, data, and other indicators, the vast majority of large truck crashes are the result of driver behaviors and errors. Only a small percentage of large truck crashes are attributable to vehicle defects. For instance, FMCSA’s Large Truck Crash Causation Study found that driver error was the “critical reason” behind 87% of crashes studied.\(^8\) Similarly, the Unsafe Driving BASIC in FMCSA’s CSA Safety Measurement System, which captures moving violations and other unsafe driving behaviors, is the measurement category with the strongest correlation to crash risk. A recent FMCSA study found that, on average, fleets with high scores\(^9\) in this category have 93% higher future crash rates than fleets with low scores.\(^10\)

Understanding the role of driver behavior in crash causation sheds additional light on how FMCSA’s use of enforcement funding and resulting activity can be more cost-effective. For example, FMCSA’s Safety Program Effectiveness Measurement Report, dated November 2014, shows that on-road traffic enforcement activity is far more effective at preventing future crashes than standard roadside inspection activity. The latter typically involves a vehicle inspection to

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\(^4\) Ibid
\(^7\) Ibid.
\(^9\) High scores in this context means above the threshold for enforcement intervention selection which, for most carriers, is set at the 65\(^{th}\) percentile.
\(^10\) Low scores in this context means below enforcement intervention selection thresholds.
detect component defects and a review of the driver’s paper work (e.g. hours of service records of duty status) and credentials (e.g., license and medical examiner’s certificate). The former, traffic enforcement, consists of on-road monitoring of driver behavior (e.g., moving violations) coupled with some form of limited inspection activity (e.g., a “walk-around” inspection of vehicle components).

FMCSA’s aforementioned report reflects that for every 1,000 traffic enforcements 12.05 crashes are prevented compared to 2.7 crashes per 1,000 standard roadside inspections. In other words, traffic enforcements are more than four times more effective at preventing crashes and saving lives.\textsuperscript{11} Unfortunately, figures available on FMCSA’s website indicate that traffic enforcements only comprise a small portion of field enforcement interventions (e.g., 10%) and suggest that this percentage has been dropping steadily over the past seven years. The agency should find this trend both alarming and compelling.

FMCSA’s program effectiveness document points out that the “evaluation provides FMCSA and State MCSAP partners with a quantitative basis for optimizing the allocation of safety resources in the field.” This statement is true, but it appears as though FMCSA and its state partners have not actually used the evaluation for this purpose. If the agency and states had done so, we would have observed an increase in traffic enforcement activity, not a decline. Though ATA is not advocating for any specific solution to this disparity at this time (e.g., certain percentage of funds dedicated solely to traffic enforcement activity), we are concerned about the balance between roadside vehicle inspections and traffic enforcement and, moreover, the apparent downward trend in the latter. FMCSA should consider “optimizing the allocation of safety resources” as the program effectiveness documents suggests and take into account the four-fold efficacy of traffic enforcement activity.

Proper focus also requires an honest acknowledgement of the role other motorists play in fatal truck crashes. According to a recent FMCSA report,\textsuperscript{12} and consistent with previous research on the subject,\textsuperscript{13} 70% of fatal crashes involving a large truck and a passenger vehicle are initiated by the actions of, or are the fault of, passenger motorists. For instance, large trucks are three times more likely to be struck in the rear in two-vehicle fatal truck crashes.\textsuperscript{14} Also, in 88% of fatal head-on collisions between a large truck and a passenger vehicle, the passenger vehicle crossed the median into the truck’s lane of travel.\textsuperscript{15} Hence, to be effective in reducing commercial motor vehicle crashes, FMCSA must embrace a broader focus and place heavy emphasis on the role other motorists play in these events.

\textsuperscript{11} FMCSA Safety Program Effectiveness Measurement: Intervention Model Fiscal Year 2009, FMCSA, April 2013.
The long term improvement in truck safety is due, in part, to industry-supported initiatives. For example, ATA was an early advocate of mandatory drug and alcohol testing, the commercial driver’s license program, a ban on radar detectors in trucks, and the recently proposed clearinghouse of drug and alcohol test results. The industry continues to call for additional initiatives that will improve safety, particularly in the technology arena, such as the mandatory use of electronic logging devices to track hours of service compliance, a national system to alert employers of drivers’ moving violations in a timely fashion, the mandatory use of speed limiters on trucks, and stability control systems to prevent rollovers and loss of control crashes.

These technologies and safety initiatives fall into two broad categories: 1) Those that the government will likely mandate by regulation; and 2) those that fleets will increasingly adopt voluntarily. The following is a discussion of ATA’s views on soon-to-be mandated technologies and safety initiatives, and on ways to better incent fleets to voluntarily adopt others.

Regulated Technologies

The Federal Motor Carrier Safety Administration and the National Highway Traffic Safety Administration (NHTSA) are in varying stages of developing regulations to require the use of several safety-based technologies and tools. The following is a discussion of each.

Electronic Logging Devices

The Moving Ahead for Progress in the 21st Century Act (MAP-21) required that FMCSA publish a final rule to mandate that all drivers required to maintain records of duty status use electronic logging devices (ELDs). ATA supports such a requirement since ELDs are the most reliable and accurate way to track compliance to the HOS regulations. Also, FMCSA data generated in the context of other initiatives demonstrates a clear correlation between hours of service compliance and safety. ATA applauds FMCSA on the February, 2014 publication of its Supplemental Notice of Proposed Rulemaking (SNPRM) on this matter and encourages the agency to quickly publish a final rule.

ATA has urged FMCSA to explore ways that the agency can actively promote voluntary ELD adoption, in advance of a mandate, through the use of incentives. Given the known benefits of ELD use and recognizing that a mandatory adoption deadline is still a few years away, incentives for voluntary adoption are appropriate. Moreover, providing them would help balance some of the enforcement disparities and competitive disadvantages that early adopters currently face.
Speed Limiters
In 2006, ATA and Roadsafe America petitioned the National Highway Traffic Safety Administration (NHTSA) and FMCSA to require that speed limiters on all commercial motor vehicles over 26,000 lbs be set to limit their top speed. In late 2010, NHTSA granted the petitions and agreed to conduct a rulemaking on setting the limiters on newly manufactured vehicles. FMCSA later announced it would conduct a companion rulemaking, presumably to prohibit device tampering and perhaps to require that limiters be set on existing vehicles, not just new ones.

Arguably, this mandate could have a more profound impact on safety than any other. Vehicle speed is the single greatest contributor to highway crashes. For instance, according to the Federal Motor Carrier Safety Administration’s (FMCSA) Large Truck and Bus Crash Facts 2013, driving too fast for conditions or in excess of posted speed limits by the truck driver were factors in 14.3 percent of single-vehicle crashes and 6.6 percent of multiple-vehicle crashes that resulted in a fatality, more than any other factor. Also, according to the University of Michigan’s Trucks Involved in Fatal Accidents data, speeding on the part of the truck driver was cited in fatal accidents involving a large truck 8.1 percent of the time. In addition, the FMCSA Large Truck Crash Causation Study found that “Traveling too fast for conditions” was cited as the critical pre-crash event in 18 percent (weighted estimate) of crashes where the truck was assigned the critical reason for the crash. This was the single most frequently cited factor in crashes where trucks were assigned a critical reason for the event.

Everyone knows that speed kills, and speed continues to be the single biggest contributor to fatal crashes. The role speed plays in crashes is both straightforward and intuitive. Faster speeds lengthen stopping distances. Speed reduces a driver’s time to react to unforeseen circumstances and take evasive maneuvers to avoid a crash. When a crash does occur, speed increases the severity of the event.

ATA appreciates that NHTSA and FMCSA have agreed to act on our petition. However, given the role of speed in crashes, both agencies have dragged their feet for far too long and must give this issue greater priority and urgency. Once the proposed rules are issued, ATA urges that they quickly finalize and implement them.

Stability Control Systems
NHTSA is currently developing a final rule to require stability control systems on all new trucks. These systems actively reduce the throttle and apply the brakes to decelerate a vehicle if sensors detect instability or that the risk of rollover is otherwise high. They are particularly useful in situations where a truck is negotiating a sharp curve.

Studies done by both FMCSA and NHTSA have concluded that stability control systems would reduce rollover and loss-of-control crashes. For instance, a study done by the American

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16 Trucks Involved in Fatal Accidents, The University of Michigan Transportation Research Institute, Center for National Truck and Bus Statistics, Ann Arbor, MI, March 2011, Page 49, UMTRI 2011-15
Transportation Research Institute (ATRI), for the Federal Motor Carrier Safety Administration (FMCSA), estimated that roll stability control (RSC) is 37 to 53% effective against rollovers.\textsuperscript{18} For this reason, ATA supports mandating stability control systems and is calling for NHTSA to provide some flexibility in its final rule.

There are two principal types of stability systems: Roll Stability Control (RSC) and Electronic Stability Control (ESC). RSC systems typically activate when the truck is at risk of experiencing an un-tripped rollover. ESC systems will activate when rollover instability is detected - as well as when loss of control crashes are likely due to vehicle instability (e.g. jackknife). NHTSA’s proposal called for mandating the latter, ESC. However, for some fleets in certain environments, RSC would be equally (if not more) beneficial.

The American trucking industry is extremely diverse with operations ranging from private fleets to for-hire; from truckload to less-than-truckload; from dry vans to refrigerated and flat-bed; from bottom dump to container; refuse, auto transporter and long combination vehicles; and from long haul to short haul, local cartage to the continuation of international movements. A one-size mandate does not fit all in the trucking industry. Hence, some flexibility is appropriate and necessary.

\textit{Employer Notification Systems}

Because crashes are so often the result of driver behavior (rather than vehicle defects), fleets carefully monitor driver performance, including both moving violations and crashes. Not surprisingly, research has demonstrated that many moving violations are strong predictors of future crash involvement. For instance, according to an ATRI analysis, a driver convicted of improper passing or making an improper turn or erratic lane change is at least 80% more likely to be involved in a future crash. Given these findings, it logically follows that fleets would benefit from timely notification of drivers’ moving violations and other licensure actions (e.g., revocations and suspensions).

Federal safety regulations currently require fleets to, at a minimum, query each driver’s motor vehicle record at least annually. Some conduct such checks more frequently; while others participate in state-based systems that proactively notify them upon a change in the driver’s license record (e.g., the addition of a conviction for a moving violation). The benefit of such proactive employer notification systems (ENS) is clear: more timely information. A fleet enrolled in a state-based ENS may learn of a moving violation months sooner than they would by relying solely on an annual review of the driver’s motor vehicle record. Accordingly, they can take preventive action (e.g., coaching, discipline, termination) before a crash occurs.

Recognizing this benefit, ATA has long called on FMCSA to implement a national ENS. Over a decade ago, in 2004, FMCSA completed a \textit{Driver Violation Notification Service Feasibility Study} which concluded that a national ENS could save approximately 15 lives per year and avoid up to 373 injuries and 6,828 crashes per year. Subsequently, two States – Colorado and

\textsuperscript{18} \textit{Analysis of Benefits and Costs of Roll Stability Control Systems for the Trucking Industry}, American Transportation Research Institute, February 2009, Page 4.
Minnesota – participated in an ENS pilot program mandated by the Transportation Equity Act for the 21st Century (TEA-21). Nearly 1,100 drivers participated in the pilot which generated 229 notifications to the drivers’ employers. In its final report on the pilot, FMCSA estimated that a national system would prevent between 2,500 and 3,500 crashes and generate $240.5 million in societal safety benefits annually.

In MAP-21, Congress mandated that within 12 months FMCSA establish standards for state systems that automatically notify motor carriers of drivers’ moving violations and other driver record changes (e.g., suspensions). Further, within 24 months FMCSA was to develop recommendations and a plan for implementing a national system to perform these functions. Regrettably, FMCSA missed both deadlines and, as a result, the significant safety benefits of a national ENS have not been achieved.

Given the recognized role that driver behavior plays in crashes, and the benefits confirmed by prior research, ATA urges FMCSA to make development on a national ENS system one of its highest priorities.

Voluntary Technology Adoption

In addition to technologies and safety tools being considered for regulatory mandates, there are a number of them that fleets have adopted voluntarily. The following is discussion of several and their respective benefits.

Video Event Recorders

Video event recorders are devices mounted on the windshield of the truck (typically behind the rearview mirror) that continuously record and overwrite what occurs inside and outside the vehicle. These recordings are saved when risky driving or a collision are detected. The system then alerts the driver’s supervisor (e.g., safety director, dispatcher) and provides the video clip of the event to facilitate a conversation coaching appropriate corrective action.

Video event recorders are becoming increasingly popular in the trucking industry. Originally these devices were perceived primarily as a post-crash exoneration toll (e.g., video shows other party at fault). However, fleets quickly began to realize the benefits of being alerted to risky driving behaviors and the opportunity to provide subsequent driver coaching to prevent future crashes. In fact, a 2010 FMCSA study, conducted by the Virginia Tech Transportation Institute found that video-based driver behavior monitoring systems are effective at reducing risky driving behaviors.\(^1\) Specifically, the number of risky driving events fell by up to 52.2% in those vehicles equipped with video recorder safety technology\(^2\). As these positive results have become increasingly clear, fleets have expressed a growing interest in the technology.


\(^{2}\) Ibid.
**Blind Spot Warning Systems**
Blind spot warning systems use sensor technology that detects objects in vehicle blind spots and provides a visual warning (normally in the side view mirror). The system can provide 360 degrees of electronic coverage around the vehicle, whether it is moving slowly or at highway speed. Warnings can be visual, audible, or vibrating. To achieve 360 degree coverage, tractor-semitrailers must have sensors on both the tractor and semitrailer.

**Forward Collision Warning Systems**
Forward Collision Warning Systems (FCWS) are radar-based systems that detect vehicles and objects in the forward path of the truck, determine distance, difference in relative speed, and azimuth between them. They then provide the driver with audible and/or visual warnings of these vehicles or objects so that he/she can take appropriate action. For instance, if a small car suddenly cuts in front of a truck, the system will promptly alert the driver. This is especially helpful when the driver’s line of sight from the cab prevents the driver from seeing such obstacles. FCWS provides progressively more urgent warnings as objects become closer. This feedback improves driver behavior by encouraging safe following distances.

FCWS may also be integrated with an adaptive cruise control (ACC) system which automatically keeps a safe following distance between the truck and the vehicle in front of it. Used in combination, FCWS and ACC have the potential to prevent rear-end collisions. However, such systems do not automatically decelerate or stop the truck; they merely keep it from gaining on the vehicle in front of it. More advanced devices called collision mitigation braking systems (CMBS) slow the vehicle when an imminent collision is detected.

**Lane Departure Warning Systems**
Lane Departure Warning Systems (LDWS) are forward looking, vision-based systems consisting of a main unit and small video camera mounted on the vehicle’s windshield that record data on the roadway ahead. They alert drivers of unintended lane changes or lane departures when the vehicle is traveling above a certain speed threshold and the vehicle’s turn signal is not being used. These systems do not prevent lane departure or control the vehicle when such movement is detected; rather they alert the driver to the event so he/she can take appropriate action. Such technology can help reduce certain types of crashes such as same direction side-swipes, trucks entering into oncoming lanes of travel, and trucks departing the roadway.

**Forward Collision Avoidance and Mitigation Systems (F-CAMS)**
F-CAMS are forward looking radar-based systems that combine FCWS with automatic Collision Mitigation Braking (CMB) capability. The FCW feature generates visual, audible, and/or haptic warnings when the vehicle comes within a predefined distance and closing rate of another vehicle. If the driver does not respond with a braking input, and if the threat continues to worsen, then the F-CAMS automatically apply the brakes to avoid a collision when one is determined to be imminent.

**Hair Testing For Drugs**
An increasing number of motor carriers are conducting pre-employment and random drug tests using drivers’ hair as a testing sample. Hair tests provide a better, longer picture of an
applicant’s past drug use and are more difficult than other testing methods to subvert. However, since urine is the only sample type permitted under Department of Transportation regulations, companies that voluntarily conduct hair tests must do so in addition to mandatory urine tests. This duplicated time and expense deters fleets from adopting this more effective testing method. To help eliminate this redundancy and incent more fleets to conduct hair testing, ATA supports recently introduced legislation that would, among other things, authorize FMCSA to allow fleets to conduct hair tests in lieu of urine tests – upon applying for such an exemption.

**The Role of Regulation in Technologies and Safety Initiatives**

Stakeholders and the government alike have often deliberated over the role of regulation in promoting the use of new and promising technologies and safety initiatives. In some cases regulation is appropriate, especially when a particular solution is cost-effective for all segments of a diverse industry. Also, regulation is sometimes necessary to ensure widespread adoption of technologies and solutions with substantial and cost-beneficial safety outcomes. However, when a single solution is only fitting for a portion of the regulated community, or when the safety benefits of a solution are not fully known, it is more appropriate to encourage voluntary adoption.

However, FMCSA’s current efforts aimed at improving commercial motor vehicle safety are largely limited to a single approach, the compliance and enforcement model. To address problems and drive change, the agency issues regulations and attempts to enforce them with its own staff and with the assistance of state enforcement partners. Yet, this approach is limited in its reach and effectiveness. FMCSA only has sufficient resources to conduct comprehensive audits on proximately 3% of the motor carrier population annually, limiting the deterrence against non-compliance. Further, it ignores the many other ways, including more effective ones, to compel positive behavioral change. In other words, using the “carrot and the stick” model, FMCSA is focused on using the “stick” but has not embraced using both the carrot and the stick, when necessary.

In order to promote highway safety and speed the adoption of advanced truck safety technology, it would be appropriate for the government to provide incentives to the industry for the adoption of emerging safety technologies and safety management systems designed to prevent or reduce the severity of commercial motor vehicle crashes. Further, the government should fund research that evaluates the performance of these devices and systems to weigh the benefits of more widespread adoption. By doing so, the government could better understand the costs, benefits, and merits of use in various industry segments. Specifically, ATA would support legislation requiring NHTSA to conduct research evaluating motor carrier safety performance resulting from the implementation of these technologies and related safety management systems. The agency could promote participation by giving fleets a 50% funding match on new technology procurement in return for an agreement to provide data from these systems to better inform NHTSA’s research.
A Gold Standard Program

Another way the government could bring about further safety improvements would be to incent fleets to voluntarily adopt innovative safety tools and technologies. This is not to suggest that fleets need be incented to comply with existing rules. Instead, the FMCSA could recognize and reward fleets that exceed minimum compliance requirements. The agency could publicly acknowledge those that have invested in voluntary safety technologies (e.g., Internet listing). Further, FMCSA could provide some mathematical “credit” in its safety scoring system for these motor carriers. In short, the agency, working in partnership with the industry, could establish criteria for meeting a “Gold Standard” within the industry (e.g., adoption of a minimum number of specific technologies and/or safety initiatives) and reward fleets that meet these criteria.

Just last week, FMCSA issued a Notice and Request for Public Comment to this end. This was just the first step toward considering how a motor carrier’s voluntarily adoption of emerging tools and technologies could be factored into evaluating the carrier’s safety posture. Such a “Beyond Compliance” initiative would include programs and tools that exceed regulatory requirements and reduce crash risk. ATA applauds FMCSA on taking this first step and encourages the agency to work closely with the industry on putting such a program in place.

Such incentives and recognition would have several benefits. Obviously, it would encourage fleets to adopt safety technologies absent a regulatory mandate. Sometimes the industry-wide benefits of imposing them are not well-understood. In these cases, greater voluntary adoption would also help the government better gather data to understand the benefits of these safety tools and evaluate the appropriateness of future mandates. For instance, data on the benefits of lane departure warning systems were generated in the passenger vehicle environment and their applicability to commercial motor vehicle safety is not known.

Conclusion

Mr. Chairman, thank you for the opportunity to offer ATA’s views on the role of technology and safety initiatives in improving truck safety. As I mentioned at the beginning of my testimony, the trucking industry is justifiably proud of its long-term safety record. However, to continue this trend will require more creative approaches, beyond the current compliance and enforcement model (i.e., the stick). But first, Federal agencies must recognize the most common causes of truck crashes, like driver behavior and speed, and prioritize their actions accordingly. Moreover, all stakeholders – Federal agencies, Congress, the regulated industry – should explore how measures to promote voluntary adoption of new technologies and safety initiatives could drive further truck safety improvements. This will require a departure from the historic, single-faceted, compliance and enforcement model, and will open pathways to additional safety gains. These opportunities certainly exist with respect to initiatives that don’t lend themselves to a “one-size-fits-all” regulatory mandate approach or to those that are too new for the safety benefits to be fully known.

ATA urges FMCSA to establish a new partnership with the trucking industry to create a “Gold-Standard Program” for progressive fleets that are early adopters of emerging safety tools and technologies.