DOT Docket No. FMCSA-2018-0037
Docket Management Facility, M-30
U.S. Department of Transportation
West Building, Ground Floor Room
W12-140 1200
New Jersey Avenue, S.E.
Washington, D.C. 20590-0001

Request for Comments Concerning Federal Motor Carrier Safety Regulations (FMCSRs) That May Be a Barrier to the Safe Testing and Deployment of Automated Driving Systems-Equipped Commercial Motor Vehicles on Public Roads 83 Federal Register 12933, March 26, 2018

These comments are filed jointly by the Truck Safety Coalition (TSC), Citizens for Reliable and Safe Highways (CRASH), Parents Against Tired Truckers (PATT) and our volunteers, who are the family and friends of truck crash victims and survivors seeking truck safety advances. We write these comments in response to the Federal Motor Carrier Safety Administration (FMCSA) request for comments on existing Federal Motor Carrier Safety Regulations (FMCSR) that may need to be amended to facilitate the safe introduction of commercial motor vehicles (CMVs) equipped with automated driving systems (ADS). TSC welcomes the potential safety benefits of autonomous technologies in trucking, but in order for that to occur, the FMCSA must work with a diverse coalition of stakeholders to develop an oversight framework that prioritizes safety first.

Truck Safety Continues to Decline

Truck crashes and injuries are at their highest levels in 20 years, and truck crash deaths have spiked 28 percent since 2009. In that same time between 2009 and 2016 (the most recent year of available data), truck vehicle miles were effectively stagnant. This means that truck crash involvement, truck crash injury, and truck crash fatality rates have all increased over the past seven years. In short, truck safety is in dire decline.

All Possible Solutions Must Be Pursued Safely

The deployment of autonomous technology in trucking is approaching rapidly. Yet, the speed at which the technological advancements in trucking are occurring does not absolve the Department of Transportation (DOT) of its responsibility to promote safety across an industry that engages in interstate commerce on publicly funded roads. The DOT must go beyond a weak voluntary agreement and develop a regulatory framework that protects public safety without stymying innovation.

As we approach a future where driver-assisted and autonomous commercial motor vehicles will be operating alongside driver-operated vehicles, it will become increasingly important for the federal government to ensure that the tests used to determine the effectiveness of a technology are standardized. Failure to create agreed upon methods and metrics to determine success, could result in trucks operating with unreliable and unsafe technologies and testing that does not accurately assess whether a technology will perform as it is intended. This creates two potential problems: 1) a

technology designed to make our roads safer will instead diminish road safety, and 2) the public's confidence in this technology will erode, making it more difficult to roll out on a large scale.

No exemptions for trucks

The Truck Safety Coalition supports several recommendations that we believe will make sure that the rollout of Autonomous Vehicles (AV) technology in trucks is both safe and smooth:

There should be no exemption for commercial motor vehicles from federal legislation regarding the development and deployment of autonomous vehicle technology. Although trucks and cars should face different performance and testing standards, federal oversight for trucks is critical.

Manufacturers of AV Technology Requirements

- AV systems must comply with Federal Motor Vehicle Safety Standards without any exemptions
- AV systems must meet or exceed a "functional safety standard" as to be determined by the National Highway Traffic Safety Administration (NHSTA)
- AV systems must meet or exceed a minimum cybersecurity standard as to be issued by the Secretary within three years of enactment of this legislation
- Submit a detailed report that analyzes the safety performance of automated driving systems and automated vehicles
- Remove from operation any autonomous commercial motor vehicle with a defect
- Determine whether a defect affects one vehicle or if the defect is fleet-wide
- Report all fatal, injury and property damage only crashes involving driver-assisted and autonomous trucks to NHTSA
- Establish a privacy plan

Motor Carrier Requirements

- Apply for additional operation authority
- An operator with a valid commercial driver's license must be in the autonomous commercial motor vehicle at all times
    - The operator shall have an additional endorsement on his CDL denoting that he has been adequately trained to manage the AV technologies in the truck

Secretary of Transportation Requirements

- Establish a database for autonomous commercial vehicles. Information should include:
    - Vehicle's identification number
    - Manufacturer, make, model and trim information
    - Level of automation and operational design domain of each of the vehicle's automated driving systems
    - Any exemptions from federal motor vehicle safety standards granted to the vehicle
- Promulgate a regulation on driver engagement

- Determine any additional enforcement measures pertaining to AV technology that state and local law enforcement should consider during roadside inspections
- Request and direct additional resources to NHTSA and the FMCSA to develop regulations and execute enforcement efforts relating to AV technology.

TSC Supports Mandating Existing Advanced Technologies to Improve Truck Safety

Autonomous technologies have the potential to prevent and mitigate thousands of truck crashes resulting from human error. As stated above, TSC wants to ensure that the process for testing and developing advanced technologies in trucks does not jeopardize public safety. As we continue to determine the details of the regulatory framework associated with AV technology in CMVs, we will continue to educate policy-makers, other stakeholders, and the public about proven technologies that are available today in large trucks but still not required, like automatic emergency braking (AEB) and heavy vehicle speed limiters.

Automatic Emergency Braking

Automatic emergency braking is not a new technology that remains unstudied. Quite the contrary. The European Union mandated AEB on large trucks back in 2012, requiring all new trucks to be equipped with it by 2015. Here in the U.S., motor carriers have been using AEB long enough to establish its effectiveness and reliability. In fact, one trucking company saw their number of rear-end collisions decrease by nearly 80 percent from 2003 to 2015 after equipping their fleet with an active system of collision avoidance and mitigation.

Another large trucking company performed an internal study over a 30-month period on approximately 12,600 of its trucks to determine the extent to which a suite of safety technologies (AEB, electronic stability control (ESC), and lane departure warning) installed on the trucks in its fleet reduced the frequency of various types of collisions. The results were clear and compelling: trucks equipped with the suite of safety systems had a lower crash rate and frequency of engagement in risky driving behavior compared to vehicles without such systems; these trucks exhibited a 71 percent reduction in rear-end collisions and a 63 percent decrease in unsafe following behaviors.

The Truck Safety Coalition has been a leading voice advocating for a mandate for automatic emergency braking in all large trucks. In 2015, we filed a petition to initiate a rulemaking requiring commercial motor vehicles to be equipped with forward collision avoidance and mitigation (F-CAM), which includes automatic emergency braking. The National Highway Traffic Safety Administration (NHTSA) granted the petition in October of 2015. Unfortunately, there has been little action taken since then and almost no information as to what steps NHTSA is taking to further this important rulemaking.

Speed Limiters

Mandating speed limiters be set on all trucks is a commonsense step to improving truck safety that will produce more net benefits than costs. Since the 1990s, speed limiter technology has been built into all truck engine control modules, which eliminates the cost of installing this life saving technology.

Additionally, motor carriers will see a return on investment by reducing their speed-related, at-fault crashes – some of the deadliest and costliest types of truck crashes. In fact, the Ontario Ministry of Transportation found that speed-related, at-fault truck crashes dropped by 73 percent after Ontario's truck speed limiter mandate took effect.

Along with Road Safe America, our organization has been at the forefront of advocating for the required use of speed limiters as the rule slogs its way through a decade of delays since the FMCSA and NHTSA granted the petition for rulemaking in 2006. In that time, we have provided ample comments in response to requests from NHTSA and FMCSA that underscore the potential benefits associated with speed limiters being set at a reasonable maximum speed. We have also included a plethora of research that dispels many of the false arguments posed by opponents of speed limiters, including, but not limited to, the myth that speed limiters will lead to speed differentials, which will then lead to an increase in crashes. This claim is erroneous. Not only did the aforementioned Ontario study specifically address and debunk it, but several other countries and U.S. companies have employed speed limiters for a long enough time to discredit it as well.

Automatic emergency braking and speed limiters serve as building blocks to achieving a fully autonomous truck, and, more importantly, can improve safety today, rather than several years from now. Additionally, we strongly support the mandates requiring the use of electronic logging devices and electronic stability control, and remain vehemently opposed to any attempt to weaken, delay, or grant exemptions to these lifesaving regulations. Instead of solely focusing on the future of trucking, the FMCSA has a duty to finalize incomplete agency actions – like a heavy vehicle speed limiter rule – and to defend rules that have a significant positive impact on truck safety – like the ELD mandate – in order to save lives today amidst a rising number of truck crashes, injuries, and deaths.

Conclusion

While automated driving systems may improve truck safety by reducing crashes and mitigating the severity of crashes that do occur, policy-makers should proceed with caution. There are still far too many unknowns regarding autonomous commercial motor vehicles, and public roads are the wrong location for private companies to test their products. Before it is safe for driverless big-rigs to operate alongside the public, the DOT and relevant agencies must determine the benchmarks of adequate testing and the extent of federal oversight in pursuit of these advanced technologies in trucking. Policy-makers must also understand the effects of existing safety standards and regulations on developing automated CMVS while simultaneously figuring out what additional safeguards are needed to ensure that the process for proving these technologies as well as the final products are as safe as possible.