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Request for Comments Concerning Federal Motor Carrier Safety Regulations (FMCSRs) Which 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

Advocates for Highway and Auto Safety (Advocates) files these comments in response to the Federal Motor Carrier Safety Administration (FMCSA, Agency) 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).[1] Advocates believes that automated technology has the potential to significantly reduce crashes involving CMVs. However, the advent of this technology must not be used as an excuse to eviscerate critical safety regulations administered by FMCSA.

Crashes Involving Commercial Motor Vehicles are a Serious Threat to Public Safety

Truck crashes continue to occur at an alarmingly high rate. In 2016, 4,317 people were killed in crashes involving large trucks.[2] This is an increase of 5.4 percent from the previous year and an increase of 28 percent since 2009.[3] The number of 2016 fatalities is also the highest since 2007.[4] Additionally, 116,000 people were injured in crashes involving large trucks in 2015, the latest year for which injury data is available. This is a 57 percent increase since 2009.[5]In fatal two-vehicle crashes between a large truck and a passenger motor vehicle, 97 percent of the fatalities were occupants of the passenger vehicle.[6]

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[1] 83 FR 12933 (Mar. 26, 2018).
[2] Traffic Safety Facts Research Note: 2016 Motor Vehicle Crashes: Overview, NHTSA, Oct. 2017, DOT HS 812 456, available at https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812456 (2016 Overview).
[3] 2016 Overview; and Traffic Safety Facts 2015, A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System, NHTSA, DOT HS 812 384. (2015 Annual Report).
[4] 2016 Overview.
[5] 2015 Annual Report.
[6] 2015 Annual Report, Table 74, p. 127.

Since 1990, when Advocates first started tracking crashes involving motorcoaches, there have been more than 200 crashes and fires resulting in at least 484 deaths and 4,618 injuries including notable and horrific crashes in New Orleans, Louisiana (1999), Atlanta, Georgia (2007), Mexican Hat, Utah (2008), Orland, California (2014) and Palm Springs, California (2016).[7] The cost to society from crashes involving commercial motor vehicles (CMVs) was estimated to be $118 billion in 2015.[8]

While automated technology has the potential, in the long term, to make significant and lasting reductions in this mortality and morbidity toll, the emergence of experimental CMVs and, their interactions (for the foreseeable future) with conventional motor vehicles, demands the same level of federal and state oversight of operating safety as is now applied to conventional CMVs.

Advocates Has Consistently Promoted Advanced Technologies to Save Lives and Prevent Injuries

Advocates has always enthusiastically championed safety technology for CMVs and for good reason. It is one of the most effective strategies for preventing deaths and injuries. As part of the Moving Ahead for Progress in 21st Century Act (MAP-21), Advocates fought for a provision that required the Secretary to consider placing stability enhancing technology in all motorcoaches.[9] In 2015, NHTSA issued a final rule requiring electronic stability control (ESC) on most large trucks and motorcoaches.[10] Also in 2015, Advocates filed a petition with the National Highway Traffic Safety Administration (NHTSA) seeking the issuance of a rule to require forward collision avoidance and mitigation braking systems (F-CAM), also known as automatic emergency braking (AEB), on CMVs with a gross vehicle weight rating (GVWR) of 10,000 pounds (lbs.) or more.[11] The agency granted the petition in October of that year.[12]

Advocates has also fought relentlessly for technology to address driver fatigue in CMVs. Truck driver fatigue has for decades been a well-known safety problem. In fact, the National Transportation Safety Board (NTSB) has repeatedly cited fatigue as a major contributor to truck

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[7] National Transportation Safety Board (NTSB), Motorcoach Run-Off-The-Road, New Orleans, Louisiana, May 9, 1999, Report No. HAR-01-01 (Aug. 28, 2001) available at: https://www.ntsb.gov/investigations/AccidentReports/Reports/HAR0101.pdf; NTSB, Motorcoach Override of Elevated Exit Ramp Interstate 75, Report No.: HAR-08-01 (July 8, 2008), available at: https://www.ntsb.gov/investigations/AccidentReports/Reports/HAR0801.pdf; NTSB, Motorcoach Run-Off-the-Road and Rollover U.S. Route 163 Mexican Hat, Utah January 6, 2008, Report No.: HAR-09-01 (Apr. 21, 2009), available at: https://www.ntsb.gov/investigations/AccidentReports/Reports/HAR0901.pdf; Ian Lovett, *In an Instant, a Bus to College Was a Fiery Trap*, N.Y. Times, Apr. 11, 2014, available at: http://www.nytimes.com/2014/04/12/us/orland-california-bus-crash.html. Ciaran McEvoy and Jonah Engel Bromwich, *At Least 13 Killed in Bus Crash on California Highway*, N.Y. Times, Oct. 23, 2016, available at: http://www.nytimes.com/2016/10/24/us/california-bus-crash.html

[8] 2017 Pocket Guide to large Truck and Bus Statistics, June 2017, Table 4-22, p. 46, FMCSA.

[9] Pub. L. 112–141, Sec. 32703 (2012).

[10] 80 FR 36050 (Jun. 23, 2015).

[11] Petition for Rulemaking: Requesting Issuance of a Rule to Require the Use of Forward Collision Avoidance and Mitigation Systems for Commercial Motor Vehicles, Docket No.: NHTSA-2015-099.

[12] 80 FR 62487 (Oct. 16, 2015).

crashes and included reducing fatigue related crashes on its 2016 Most Wanted List of safety changes.[13] Advocates sought the installation of electronic logging devices (ELDs) to record drivers' hours of service in order to increase HOS compliance and thereby reduce driver fatigue and fatigue related crashes. Advocates supported FMCSA's efforts and final rule to require the use of these devices.

Finally, Advocates has consistently supported the use of speed limiting devices for CMVs because, as FMCSA has documented, high speed crashes involving CMVs are far more deadly than those that occur at lower speeds. As such, Advocates filed comments with FMCSA and NHTSA urging that the devices be required on most CMVs.[14]

Each of these technologies has been shown to have saved or has the potential to save countless lives and prevent numerous injuries. Requiring technology such as speed limiters throughout the CMV fleet that will greatly enhance safety must remain a top priority for FMCSA while automated technology continues to be developed.

FMCSA Must Focus on Completing Delayed Safety Rulemakings and Strengthening Driver Protections

Congress, in FMCSA's enabling statute, expressly directed that "[i]n carrying out its duties, the Administration shall consider the assignment and maintenance of safety as the highest priority, recognizing the clear intent, encouragement, and dedication of Congress to the furtherance of the highest degree of safety in motor carrier transportation."[15] In furtherance of this safety mission, FMCSA must not place exclusive focus on the development of automated commercial motor vehicles (ACMVs) to the detriment of other safety advances that have already been shown to improve safety. Although the advent of automated technology presents an opportunity to improve CMV safety in the future, the FMCSA must not lose sight of the fact that CMV crash, fatality and injury statistics are dramatically increasing right now, and immediate measures must be taken to improve the safety of the existing fleet of CMVs. The emergence of ACMVs cannot take precedence over delayed rulemaking proceedings that will improve safety, or be used as an excuse to downgrade or eliminate critical safety regulations currently administered and enforced by the agency. Several regulatory actions by the agency remain incomplete although they will have a significant impact on safety including the implementation of speed limiting devices,[16] addressing drivers afflicted with obstructive sleep apnea,[17] and establishing a program for the state inspection of passenger carrying vehicles.[18]

[13] National Transportation Safety Board, 2016 Most Wanted List, accessed at ntsb.gov/safety/mwl/Documents/MWL2016_Brochure_web.pdf
[14] Advocates for Highway and Auto Safety, Docket No. FMCSA-2014-0083 (Dec. 7, 2016).
[15] 49 U.S.C. § 113(b) (1999).
[16] 81 FR 61942 (Sep. 7, 2016).
[17] 81 FR 12642 (Mar. 10, 2016).
[18] 81 FR 24769 (Apr. 27, 2016).

Automated Commercial Motor Vehicles Must be Subject to Robust Federal Regulations

The public safety protections provided by the FMCSRs become no less important or applicable simply because a CMV has been equipped with an ADS. In fact, additional substantial public safety concerns are presented by ACMVs. Automated technology is very much in its infancy as evidenced by the series of fatal and serious crashes that occurred earlier this year involving automated passenger motor vehicles.[19] If those incidents had involved ACMVs the results could have been catastrophic and the death and injury toll could have been much worse. The most current pressing safety shortcomings associated with automated vehicle technology, which include the ADS properly detecting and reacting to other road users, driver engagement, and cybersecurity, are exponentially amplified with an ACMV. Therefore, ACMVs must be subject to robust federal regulations that place public safety as its highest priority.

The FMCSR's preclude the placement of ADS systems into CMVs that have not been proven to be able to safely operate on public roads. As noted in the agency's request for comments, FMCSA tasked the U.S. Department of Transportation's Volpe Center to undertake a preliminary review of the FMSCRs "to identify regulations that may relate to the development and safe introduction of ADS."[20] The report (Volpe Report) that accompanied this review notes that several sections of the FMCSRs "could be interpreted to preclude automated driving systems, particularly those that have not undergone sufficiently rigorous development, testing, and validation processes" from being installed on CMVs.[21] In fact, the report notes that section 393.3 states "[t]he use of additional equipment or accessories in a manner that decreases the safety of operation of a commercial motor vehicle in interstate commerce is prohibited."[22] The report also notes that developing ADS for CMVs may pose fewer challenges than systems for passenger vehicles because CMVs often operate on limited highways and such an environment is easier for ADS to master.[23] Yet, several of the crashes noted above involving passenger vehicles equipped with ADS occurred on limited access highways. These serious incidents highlight how far the technology must progress before it can be widely used in a safe manner. As ADS are still developing, especially those systems for CMVs, they should not be used in CMVs until they have been thoroughly tested to ensure that they in fact improve the safe operations of such vehicles.

[19] Peter Valdes-Dapena, Tesla in Autopilot mode crashes into fire truck, CNN Tech, (Jan. 24, 2018); Everett Rosenfield, Tempe police release video of deadly Uber accident, CNBC (Mar. 21, 2018); David Shephardson, U.S. opens probe into fatal Tesla crash, fire in California, Reuters (Mar. 27, 2018); Karma Allen, Tesla Model S was in Autopilot mode during Utah crash, driver says, ABC News (May 15, 2018).
[20] 83 FR 12933 (Mar. 26, 2018).
[21] Review of the Federal Motor Carrier Safety Regulations for Automated Commercial Vehicles, Volpe National Transportation Systems Center, Summary Report, pg. 9, Report No.: FMCSA-RRT-17-013 (Mar. 2018).
[22] *Id.*
[23] *Id.* at pg. 1.

The Development of Automated Commercial Motor Vehicles Does Not Merit Weakening Critical Safety Regulations

There is wide agreement between a variety of stakeholders including labor groups, industry, driver organizations and safety advocates that, for the foreseeable future, regardless of their level of automation, CMVs and ACMVs must have an operator with a valid commercial driver's license in the vehicle at all times. In fact, the Volpe Report notes that the physical equipment of a CMV such as brakes and tires degrade over time while their performance may remain acceptable and an experienced human operator will take note of such realties and make the appropriate adjustments to ensure the safe operation of the vehicle.[24] An ADS system may not be capable of making such adjustments and determinations that can only be made after years of experience operating a CMV on the vastly diverse array of public roads in varying environmental factors. This is just one of many situations where a human operator of a CMV will be needed to ensure the safe operation of an ACMV. Therefore, Advocates supports FMCSA's prior conclusion that the FMCSRs require that "a trained commercial driver must be behind the wheel at all times, regardless of any automated driving technologies available on the CMV...."[25] There has been no evidence presented in the Volpe Report or is Advocates aware of any other credible data, study or demonstration to justify otherwise.

Human drivers in ACMVs will also need to be alert to monitor not only the standard operations of the truck but the ADS as well. Therefore, the agency should not alter the current prohibition on drivers using a hand-held cellular phone or texting while operating a CMV. Moreover, for automated systems that require a human to take control from the ADS (Levels 2 and 3); the driver must be engaged in the driving task at all times. Therefore, FMCSA should develop additional regulations to ensure drivers of ACMVs are alert and able to take control of an ACMV when necessary. Finally, the development of ADS for CMVs in no way warrant the weakening of critical safety regulations administered by the agency such as those that apply to driver hours-of-service, licensing requirements, entry level training and medical qualifications.

Finally, as automated technology develops, FMCSA should consider several common sense measurers to help ensure that ACMVs are deployed safely and responsibly. As noted in Section 4.5 of the Volpe Report, the agency should consider requiring carriers using ACMVs to apply for additional operating authority and that drivers operating an ACMV must have an additional endorsement on their CDL to ensure they have been properly trained to monitor and, if need be, to operate an ACMV. These additional common sense safeguards should be based on specific requirements for the operation of ACMVs. In addition, FMCSA will need to consider the additional measures that will be needed to ensure that ACMVs respond to state and local law enforcement authorities and requirements, and what measures must be taken to properly evaluate an ACMV during roadside inspections.

[24] *Id.* at pg. 37.
[25] 83 FR 12935.

Conclusion

Automated technology has the potential to significantly reduce crashes involving CMVs. With appropriate oversight, the safe development and use of ACMVs can be accomplished at the same time the agency continues to vigorously pursue important safety rules and technological advances, some of which are fundamental components for the future safe operation of ACMVs. The advent of this technology must not be used as an excuse to weaken or degrade critical safety regulations administered by FMCSA, or to delay adoption of lifesaving technologies and programs to improve safety that should be implemented without further delay.

Shaun Kildare
Director of Research

Peter Kurdock
Deputy General Counsel