



November 26, 2019

James C. Owens, Acting Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue SE
West Building Ground Floor, Room W12-140
Washington, DC 20590-0001

Submitted electronically via www.regulations.gov

**RE: Advance Notice of Proposed Rulemaking; Rear Seat Belt Reminders
Docket No. NHTSA-2019-0093**

Dear Acting Administrator Owens:

The Center for Auto Safety (Center) appreciates the opportunity to comment on the agency's Advance Notice of Proposed Rulemaking (ANPRM) regarding rear seat belt reminders. The Center, founded in 1970, is an independent, non-profit, member-driven consumer advocacy organization dedicated to improving vehicle safety, quality, and fuel economy for our members and all drivers, passengers, and pedestrians across the country. On behalf of our members nationwide, the Center urges the National Highway Traffic Safety Administration (NHTSA) to follow the direction of Congress and to propose, without further delay, a rule that requires rear seat belt warning systems be installed in all new passenger vehicles as soon as possible.

Over the last five decades the Center has focused on advancing safety technology for consumers from airbags to anti-lock brakes, and from electronic stability control to automatic emergency brakes. We have also been at the forefront of protecting consumer rights, from advocating for lemon laws in every state to fighting to see recall repairs be free of charge to consumers. That is why we remain disappointed by NHTSA's decades-long failure to take concrete steps towards a rule mandating protecting rear occupants through the incorporation of seat belt reminders, a technology which can save lives immediately. Instead of focusing on the cars of today, however, NHTSA appears to prefer to spend its limited time and resources issuing annual voluntary guidance documents¹ on the theoretical self-driving vehicles of tomorrow and work to roll back

¹ *Automated Vehicles 3.0 - Preparing for the Future of Transportation*, U.S. DEP'T OF TRANSP. (Oct. 4, 2018), <https://www.transportation.gov/av/3>; *Automated Driving Systems (ADS): A Vision for Safety 2.0*, U.S. DEP'T OF TRANSP. (Sept. 12, 2017); <https://www.transportation.gov/av/3>. *Federal Automated Vehicles Policy*, U.S. DEP'T OF TRANSP. (Sept. 12, 2016), <https://www.transportation.gov/AV/federal-automated-vehicles-policy-september-2016>.

popular fuel economy standards.² That America's leadership role in car safety has been surpassed by our European counterparts is no longer up for any fact-based debate. One need only look to the European New Car Assessment Programme (Euro NCAP) which has been recommending rear seat belt reminders since at least 2004, resulting in such reminders saving the lives of European consumers since 2009.³

A. NHTSA's Continued Rulemaking Delays

NHTSA has long recognized the safety value of seatbelt warnings. The agency began encouraging manufacturers in 2002 to adopt such warnings in non-driver positions.⁴ Yet seventeen years later only 13% of vehicles sold in the US provide rear seat belt reminders.⁵ In 2007, Public Citizen and Advocates for Highway and Auto Safety filed a petition for rulemaking, which was granted but remained unacted upon by NHTSA for another five years until 2012.⁶ In 2012, a full decade after NHTSA suggested manufacturers do something about seatbelt warnings in the back seat, Congress stepped in and passed MAP-21,⁷ because there was no evidence the agency was moving forward with mandated rear seat belt reminders absent the law being changed.

By setting a three-year deadline in MAP-21 for the Department of Transportation (DOT) to publish a final rule, Congress clearly indicated that as a matter of public safety, rear seat belt warnings deserve the DOT's priority consideration. Critically, the date of required promulgation of a final rule was October 1, 2015 which is over 4 years ago. Accordingly, more than seven years after the passage of MAP-21, all the DOT has to show when it comes to this safety feature demanded by Congress is a phone survey, and a broad list of questions for the public rather than firm steps to be taken to ensure rapid adoption of seat belt reminder technology to protect the public.

It is important to remember what is at stake here – safety technology which could help reduce the nearly 1,000 deaths⁸ which befall rear seat unbelted passengers annually. Even

² Tony Barboza, *Trump fuel economy rollback is based on misleading and shoddy calculations, study finds*, L.A. TIMES, Dec. 6, 2018, <https://www.latimes.com/local/lanow/la-me-ln-auto-emissions-20181206-story.html>.

³ *Seat Belt Reminder Assessment Protocol*, EUROPEAN NEW CAR ASSESSMENT PROGRAMME (June 2004), www.vdrsud.com/ancap_datasheets/xprotocol_archive/EuroNCAP/Euro-NCAP-Seat%20Belt%20Reminder%20Assessment%20Protocol%20V1-0b.pdf (last accessed Nov. 22, 2019); see Mike McCarthy & Matthias Seidl, *Benefit Assessment for Fitment of Seat Belt Reminder (SBR) Systems to MI Passenger Seat Positions and to Other Vehicle Types 1*, TRANSP. RESEARCH LAB. (2014), <http://ec.europa.eu/DocsRoom/documents/6662/attachments/1/translations/en/renditions/native> (last accessed Nov. 22, 2019) ("[T]he fitment of SBRs to all seat positions of [passenger] vehicles has been rewarded by Euro NCAP since 2009 . . .").

⁴ Federal Motor Vehicle Safety Standards; Occupant Crash Protection, 84 Fed. Reg. 51,076, 51,081 (Sept. 27, 2019).

⁵ *Id.* at 51,079.

⁶ Docket No. NHTSA–2010–0061–0002 (petition); see 84 Fed. Reg. at 51081 (petition granted).

⁷ Moving Ahead for Progress in the 21st Century Act, Pub. L. No. 112-141, § 31503, 126 Stat. 405, 774-75 (2012) (codified at 49 U.S.C. § 30127 note).

⁸ See, e.g., Nat'l Ctr. for Statistics and Analysis, Nat'l Highway Traffic Safety Admin., *DOT HS 812 153, Occupant Protection: 2013 Data 3* (2015) (927 killed in 2013); *DOT HS 812 262, Occupant Protection: 2014 Data 3* (2016) (869 killed in 2014); *DOT HS 812 374, Occupant Protection in Passenger Vehicles:*

this ANPRM was only published because two consumer groups, the Center and Kids and Cars, went to court and filed a writ of mandamus to compel the DOT to issue a regulation after missing the Congressionally mandated final-rule deadline considerably.⁹ Sadly, even in the best case scenario, the earliest this ANPRM might result in a final rule requiring all new cars provide seatbelt warnings in the rear is sometime in the middle to the end of the next decade.

It is important here to note that under MAP-21, a law passed by Congress and signed by the President, the DOT is required to set a new deadline or explain to Congress why a rear seat belt warnings does not meet the requirements and considerations in subsections (a) and (b) of 49 U.S.C. § 30111. Yet, seven years after the passage of that law, the DOT has neither set a new final-rule deadline nor even given Congress the courtesy of an explanation. The Center believes a mandatory rear seat belt warning system meets the relevant subsections of 49 U.S.C. § 30111. Moreover, NHTSA's safety mission requires steps be taken to reduce deaths and injuries from motor vehicle crashes. Mandatory rear seat belt warning systems can do exactly that.

B. Effectiveness and Consumer Acceptance

In 2016, the Insurance Institute for Highway Safety (IIHS) surveyed 1,172 respondents who had ridden in the back seat during the preceding six months; 75% of the respondents said they would be more likely to wear the rear seat belt if someone in the car reminded them, 62% would if there was an audible belt reminder, and 50% would if there was a visual belt reminder.¹⁰ Audible and visual reminders help the driver encourage others to wear their seat belts. NHTSA's own survey has showed that 65% of the drivers found the rear belt warning system made it easier to encourage rear passengers to buckle up; among those passengers who unbuckled during a trip, 77% eventually refastened the belt.¹¹

As NHTSA is aware, rear seat belt use is considerably lower than front seat belt use. "Even those who normally wore their seat belts in the front seat were less inclined to wear their seat belts in the rear."¹² Given the disparity in seat belt usage from the front to the rear seat, there is a huge opportunity for rear seat belt use to improve. A 2012 study in Japan found that audiovisual rear belt warnings motivated up to 95% of the initially

2015 Data 3 (2017) (966 killed in 2015); DOT HS 812 494, *Occupant Protection in Passenger Vehicles: 2016 Data 5* (2018) (943 killed in 2016).

⁹ *Kids and Cars, Inc. v. Chao*, Case 1:17-cv-01660, Doc. 1 (D.D.C. filed Aug. 16, 2017) (complaint), available at <https://www.autosafety.org/wp-content/uploads/2017/08/FiledComplaint.pdf>; *In re Kids and Cars, Inc.*, Case 17-1229, Doc. 1702061 (D.C. Cir. filed Oct. 30, 2017) (writ of mandamus), available at <https://www.autosafety.org/wp-content/uploads/2017/08/Peition-for-Writ-of-Mandamus-10-30-17.pdf>. See generally Fredrick Kunkle, *The U.S. Needs to Move Forward on Rear-Seat Safety Belts*, WASH. POST (Mar. 20, 2018), <https://www.washingtonpost.com/news/tripping/wp/2018/03/20/the-u-s-needs-to-move-forward-on-rear-seat-safety-belts/>.

¹⁰ Highway Loss Data Inst., Ins. Inst. for Highway Safety, *Unbelted: Adults Admit They Often Skip Belts in Rear Seat*, 52 STATUS REP. 1, 3 (Aug. 3, 2017), available at <https://www.iihs.org/api/datastore/document/status-report/pdf/52/5> (last accessed Nov. 26, 2019).

¹¹ Paul Schroeder & Melanie Wilbur, *Survey of Principal Drivers of Vehicles with a Rear Seat Belt Reminder System*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN. (2015).

¹² Federal Motor Vehicle Safety Standards; Occupant Crash Protection, 84 Fed. Reg. 51,076 (Sept. 27, 2019).

unrestrained rear passengers to buckle up.¹³ The need for rear seat protection grows almost daily with number of rear seat passengers increasing in recent years by almost 8% according to NHTSA's own figures¹⁴ as well as the rise of rideshare vehicles likely increasing the number of rear-seated passengers on the road.¹⁵ Moreover, studies have found rear seat passengers in rideshare or taxis (for hire vehicles) are less likely to buckle up than those in privately owned (not for hire) vehicles.¹⁶

In 2012, IIHS surveyed consumer acceptance of driver seat belt warnings. The survey showed that most motorists supported enhanced belt reminders that were "more persistent and intense" than what most automakers offered at the time.¹⁷ NHTSA's own survey has found high level of satisfaction among drivers with a vehicle equipped with rear belt warnings, more than half of whom indicated it was important for their next vehicle to have such a feature.¹⁸

C. Technological and Economic Feasibility

As NHTSA is aware, the technology for a rear seat belt warning system is readily available. Volvo has been offering such a system in the U.S. market since 2009, and at least four other manufacturers currently offer a rear seat belt warning system in the United States. Technical challenges, if any, do not prevent making such a system available on a larger scale, since the European Union (EU) already requires all new models be equipped with such a system. As of now, the EU approves a new model only if the vehicle has both a visual warning that indicates unfastened seat belts for occupied rear seats, and a second-level audio-visual warning that indicates a rear belt has been unfastened while the vehicle is in normal operation.¹⁹ The Alliance of Automobile Manufacturers, whose members build 70% of passenger vehicles in the United States,²⁰ has stated that if NHTSA requires a rear seat belt warning system, the automakers would prefer the standards already adopted in Europe.²¹ Vehicles currently with a rear seat belt warning system in the U.S. market already meet the European standards. In other words, while it is important for the purpose of building a rulemaking record to confirm the

¹³ Thierry Mousel et al., *Advanced Seat Belt Reminder System for Rear Seat Passengers 3-4* (Int'l Tech. Conference on the Enhanced Safety of Vehicles Paper No. 13-0306), <https://www-esv.nhtsa.dot.gov/Proceedings/24/files/24ESV-000018.PDF> (last accessed Oct. 29, 2019).

¹⁴ Li, R., Pickrell, T. M. (2019, February). *Occupant restraint use in 2017: Results from the NOPUS controlled intersection study* (Report No. DOT HS 812 594). Washington, DC: National Highway Traffic Safety Administration, at:

<https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812594.pdf>

¹⁵ Aarian Marshall, *A Third of Americans Use Ride-Hail. Uber and Lyft Need More*, *Wired*, Jan. 8, 2019, <https://www.wired.com/story/uber-lyft-ride-hail-stats-pew-research/> (last accessed Nov. 26, 2019).

¹⁶ Jessica Jermakian & Rebecca Weast, *Passenger use of and attitudes toward rear seat belts*. *J. Safety Research* 66, p. 113-119, Feb. 2018, <https://doi.org/10.1016/j.jsr.2017.12.006> (last accessed Nov. 26, 2019); Kenneth Nemire, *Seat belt use by adult rear seat passengers in private passenger, taxi, and rideshare vehicles*, Proceedings of the Human Factors and Ergonomics Society Annual Meeting, Oct. 20, 2017, <https://doi.org/10.1177/1541931213601896> (last accessed Nov. 26, 2019).

¹⁷ Ins. Inst. for Highway Safety, *supra* note 10, at 4.

¹⁸ Schroeder, *supra* note 11.

¹⁹ 2018 O.J. (L 109) 33 (permitting the driver to cancel a first-level rear seat belt warning).

²⁰ *We are the Voice for a United Auto Industry*, ALLIANCE OF AUTO. MFRS., <https://autoalliance.org/about-the-alliance/> (last visited Oct. 8, 2019).

²¹ Kunkle, *supra* note 9.

technological and economic feasibility of requiring a life-saving warning system - it is not in question.

D. Benefits and Costs

Meanwhile, the United States has been losing almost a thousand unrestrained rear passengers each year.²² In 2017 alone, (the most recent year for which full NHTSA data are available) at least 891 unrestrained rear occupants were killed, and this number does not include the 155 deaths of occupants sitting behind the second row and the 184 deaths where it was unclear whether the occupants were restrained.²³ A 2014 joint study by IIHS and the Children's Hospital of Philadelphia analyzed crashes between 2007 and 2012 using two federal crash databases: the National Automotive Sampling System Crashworthiness Data System (NASS-CDS) and the Fatality Analysis Reporting System (FARS).²⁴ The study found that "Restraint use is an important risk factor for injury. The risk of serious injury was nearly 8 times higher among unrestrained rear-row occupants as compared with those using restraints."²⁵ Children usually sit in the back row, and they may unfasten their seat belt out of boredom during a trip. NHTSA itself has identified rear seat belt reminders as one of the safety features that help protect children.²⁶

Furthermore, unrestrained rear occupants endanger not only their own lives but also those of other occupants. Rear seat belts protect the driver as well as rear occupants because a frontal crash can project the bodies of unrestrained rear occupants at the driver at full speed.²⁷ A 2012 joint study by the University of Virginia and Polytechnic University of Catalonia analyzed crash data from 2001 to 2009 using multivariate logistic regression analysis.²⁸ The study indicated that, with all other conditions remaining the same, a restrained driver is 137% more likely to sustain a fatal injury when the left rear passenger is unrestrained; if there are additional unrestrained rear passengers in the rear row, the likelihood of driver fatality due to an unrestrained rear left passenger further increased by as much as 197%.²⁹

²² See *supra* note 8.

²³ Nat'l Ctr. for Statistics and Analysis, Nat'l Highway Traffic Safety Admin., *DOT HS 812 691, Occupant Protection in Passenger Vehicles: 2017 Data 5* (2019).

²⁴ Highway Loss Data Inst., Ins. Inst. for Highway Safety, *Laying the Groundwork for Safety Improvements for Back-Seat Occupants: Restraint System Changes Might Make Sitting in Back Even Safer, Especially for Adults*, 49 STATUS REP. 6 (Dec. 23, 2014), available at <https://www.iihs.org/api/datastore/document/status-report/pdf/49/11> (last accessed Oct. 29, 2019).

²⁵ *Id.*

²⁶ *Keeping Kids Safe: A Parent's Guide to Protecting Children in and Around Cars 2-3*, NAT'L HIGHWAY TRAFFIC SAFETY ADMIN., https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13237-parents_guide_playing_it_safe_tagged_0.pdf (last accessed Oct. 29, 2019).

²⁷ See Ins. Inst. for Highway Safety, *supra* note 7, at 3 ("In the rear seat a lap/shoulder belt is the primary means of protection in a frontal crash. Without it, bodies can hit hard surfaces or other people at full speed, leading to serious injuries.")

²⁸ Dipan Bose et al., *Increased Risk of Driver Fatality due to Unrestrained Rear-Seat Passengers in Severe Frontal Crashes*, SCIENCE DIRECT (Feb. 11, 2013), <https://www.sciencedirect.com/science/article/abs/pii/S0001457512004241?via%3Dihub>.

²⁹ *Id.*

The Center notes the ANPRM asks questions about costs and benefits of moving forward with this rule. NHTSA's own analysis and research suggests "lap/shoulder belts reduce fatality risk by 44% compared to unrestrained rear seat occupants of passenger cars."³⁰ Presuming 44% of the 891 killed in 2017 rear seat passengers wore safety belts as a result of a warning such a change could perhaps save as many as 392 lives a year thus annually saving our economy more than \$3.6 billion.³¹ Yet, more importantly, such information is irrelevant with respect to moving forward on this rulemaking because in 2012, Congress enacted MAP-21 to mandate the rear seat belt warning system. The Center believes that by enacting MAP-21, Congress has already made a judgment that the benefits of such a system would outweigh the costs, thus negating the standard cost/benefit analysis for rule promulgation.

E. Responses to NHTSA Questions in the ANPRM

1. Should the warning be visual-only, audible-only, or audio-visual?
The warning should initially be both audio and visual. Absent evidence of either mode's superiority as per the ANPRM, including both audio and visual signals encompasses all drivers and passengers who might have differing responses to the different modes, assuring maximal compliance. If empirical evidence emerges of a substantial preference for one over the other, the standard could then be amended.

2. Triggering conditions.
The Center believes that the rear seat belt warning should initially be triggered at the earliest reasonable opportunity (e.g. upon ignition and prior to drive system engagement) and should not be delayed until the vehicle drive subsystem is engaged or some other subsequent driving event. Typical driver responses to a signal that a seat belt is not engaged, such as turning in the seat to visually confirm restraint use or assisting a needy passenger, is a distraction from the driving task. The driver and passengers must have every opportunity to assure their safety before initiating vehicle motion. Delaying the rear seat belt alert runs counter to this principle and could unnecessarily endanger the vehicle occupants. A rear seat belt use alert should not be linked to the vehicle's speed and/or transmission position or any other criteria except engine ignition and driver occupancy or equivalent readiness to operate. It is also important to

³⁰ Kahane, C. J. (2015). *Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes*. Report No. DOT HS 812 069. Washington, DC: National Highway Traffic Safety Administration.
<https://crashstats.nhtsa.dot.gov/#/>

³¹ Kathryn Thomson & Carlos Monje, *Guidance on Treatment of the Economic Value of a Statistical Life (VSL) in U.S. Department of Transportation Analyses – 2015 Adjustment*, U.S. DEP'T OF TRANSP. (June 17, 2015),
<https://www.transportation.gov/sites/dot.gov/files/docs/2015%20Revised%20Value%20of%20a%20Statistical%20Life%20Guidance.pdf> (last accessed Nov. 22, 2019).

include driver notification of change of status for rear seat belt use. Children can and do detach seat belts while in motion. Other passengers may also. Drivers should be notified both for passenger safety and to assure their compliance with applicable motor vehicle laws which in some states require rear seat belt use.³² The occupant's continued safety requires driver vigilance that does not interfere with the driving task. This is best accomplished by driver notification in the event of rear seat belt disengagement or reengagement.

3. Alternative warning systems.

The Center believes that NHTSA should require whatever signal system is empirically determined to cause the highest compliance. There is no evidence to date that shows increased compliance from a rear seat belt warning that differs from the type of audio-visual warning that is currently required for the driver's seat belt. If such evidence is found as a result of future research NHTSA should then consider adding those additional features to the requirement. Potentially better should not be allowed to be the enemy of current good.

4. Occupant detection technology.

Occupant detection is a well-developed technology that has been deployed for many years in vehicles sold in the US. The residual technical challenges for rear seat belts appear to be mostly associated with accommodating certain child restraint systems. The Center believes that occupant detection with the option of temporary driver override for the duration of an individual trip is a reasonable approach that balances notification with recognition that seats may be occupied by objects other than unrestrained human occupants.

7. Seat occupancy criteria.

If the warning system includes an individual trip driver override capability, then the seat occupancy criteria are simplified. The Center believes that the occupancy criterion should be based on the smallest weight of a child that can reasonably be expected to be restrained by seat belt rather than a child restraint system (CRS). A weight of 20 lb. is consistent with all state laws for CRS use.³³ When combined with driver override capability, these criteria are not expected to be a hardship for either manufacturers or drivers.

³² *Seat Belt Laws: A State by State Guide*, ETAGS, <https://www.etags.com/blog/seat-belt-laws-a-state-by-state-guide/> (last visited Nov. 22, 2019).

³³ *Digest of Motor Laws: Child Passenger Safety*, AAA, <https://drivinglaws.aaa.com/tag/child-passenger-safety/> (last visited Nov. 22, 2019).

8. Making the system resistant to intentional and inadvertent defeat.
The Center believes that highest priority should be assigned to implementing a proven rear seat belt warning system that effectively notifies driver and passengers to both seat belt disengagement prior to travel and to seat belt engagement change while underway. Mechanisms to make the system resistant to intentional defeat are desirable but are a distraction from the main goal since, as pointed out in the ANPRM, there are many ways for someone determined to defeat such a beneficial system to accomplish the task, and there is a role for both local and state law enforcement to assure compliance with seat belt usage laws. The rear seat belt warning system design should include appropriate requirements for inadvertent defeat.

9. Electrical Connection Requirements.
There are many design options available and a preferred solution should not be part of the requirement. NHTSA should instead focus on including a mandatory reliability requirement (e.g. a lifetime warranty) in the standard, allowing designers the maximum latitude in accomplishing that objective while simultaneously assuring passenger and driver safety for the vehicle's lifetime.

F. Conclusion

The Center has long supported motor vehicle safety standards that increase the use of seat belts and has consistently advocated incorporating available safety technology into motor vehicle safety standards wherever possible. Accordingly, while it is years late, we welcome this rulemaking and urge a swift review of comments. We also look forward to a proposed rule in the coming months completing a need that NHTSA itself identified 17 years ago: rear occupants may forget to fasten their seatbelts, not fasten them correctly, or be children who remove their seat belts while traveling. As far too many families have learned through tragedy, there is a serious risk of injury or death for unrestrained passengers. Fortunately, as NHTSA has recognized since making safety belts (FMVSS 209) the very first rule, the technology saves lives and a simple warning can mean the difference between life and death.

A decade after NHTSA highlighted the need for warnings in 2002, Congress concluded a mandatory rear seat belt warning system would clearly benefit the American public and made it the law. Most automakers have already acknowledged they are capable of meeting European standards, so technological feasibility is not in doubt. Further, there is no question that if a mandated standard were in place, fewer injuries and deaths would occur, because a warning would go off every time a rear seat belt was not fastened. The change-of-status warning is particularly effective in helping parents who cannot always make sure their children in the back seat remain fastened. A rear belt warning system will save lives, reduce injuries, and alleviate the economic burden from traffic accidents.

The opportunity to save lives, particularly children's lives who are often back seat occupants, is why the Center joined a lawsuit to force NHTSA's hand. We are glad to see the day rapidly approaching that a long overdue safety standard might finally be enacted. The technology is readily available. There is simply no plausible reason for NHTSA to further delay a congressional mandate and the agency's statutory mission to put a seatbelt warning in the back seat.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Levine". The signature is fluid and cursive, with a large initial "J" and "L".

Jason Levine
Executive Director
Center for Auto Safety