



July 7, 2023

Docket No.: NHTSA-2023-0012

Docket Management Facility
U.S. Department of Transportation
West Building, Ground Floor
Room W12-140
1200 New Jersey Avenue, S.E.
Washington, D.C. 20590-0001
Filed via www.regulations.gov.

**Side Underride Guards
Advanced Notice of Proposed Rulemaking
88 Federal Register 24535, April 21, 2023**

Advocates for Highway and Auto Safety (Advocates) files these comments in response to the National Highway Traffic Safety Administration's (NHTSA) Advanced Notice of Proposed Rulemaking (ANPRM) on side underride guards on trailers and semitrailers.¹

Fatal Truck Crashes Continue to Occur at an Alarming High Rate with Large Associated Societal and Financial Costs

In 2021, 5,788 people were killed and nearly 155,000 people were injured in crashes involving large trucks.² Since 2009, the number of fatalities in large truck crashes has increased by 71 percent.³ In the first six months of 2022, traffic fatalities in crashes involving at least one large truck were up 10 percent; 2,811 people were killed.⁴ 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.⁵ According the Insurance Institute for Highway Safety (IIHS), side underride crashes result in hundreds of lives lost and serious injuries each year.⁶

¹ 88 FR 24535 (Apr. 21, 2023).

² Overview of Motor Vehicle Traffic Crashes in 2021, NHTSA, Apr. 2023, DOT HS 813 435.

³ *Id.* and Traffic Safety Facts 2020: A Compilation of Motor Vehicle Crash Data, NHTSA, Oct. 2022, DOT HS 813 375. Note, the 71 percent figure represents the overall change in the number of fatalities in large truck involved crashes from 2009 to 2021. However, between 2015 and 2016 there was a change in data collection at U.S. DOT that could affect this calculation. From 2009 to 2015 the number of fatalities in truck-involved crashes increased by 21 percent, and between 2016 to 2021, it increased by 24 percent.

⁴ Traffic Safety Facts: Crash Stats; Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories Through June 2022, NHTSA, Dec. 2022, DOT HS 813 405.

⁵ IIHS, Large Trucks. See: <https://www.iihs.org/topics/large-trucks>.

⁶ IIHS, Side Underride Guards; Advanced Notice of Proposed Rulemaking, Comment ID: NHTSA-2023-0012-0092, pg. 7 (May 19, 2023) (IIHS Comments to ANPRM).

The cost to society from crashes involving large trucks and buses was estimated to be \$143 billion in 2020, the latest year for which data is available.⁷ When adjusted solely for inflation, this figure amounts to over \$166 billion.⁸

Side Underride Guards Have Been Proven to be Effective and Will Save Lives

As NHTSA states in the ANPRM, IIHS conducted crash testing of side underride guards in 2017 that demonstrated the device's effectiveness.⁹ IIHS conducted crashes at both 35 and 40 miles-per-hour (MPH).¹⁰ At both speeds the side underride guard which was tested prevented the vehicle from traveling under the side of the trailer resulting in no passenger compartment intrusion of the test vehicle.¹¹ Moreover, the side underride guard tested by IIHS is currently available for purchase to the public.¹² Requiring side underride guards on trailers could save many lives and prevent numerous serious debilitating injuries over the long use life of a trailer.

NHTSA's Analysis of the Benefits of Side Underride Guards is Deeply Flawed

NHTSA states in the ANRPM that side underride guards could save 17 lives and prevent 69 serious injuries annually. The agency grossly underestimates the lives that could be saved by underride guards by as much as ten times because of several glaring errors.¹³ NHTSA needlessly relied on a target population of fatal crashes that is far too restrictive as demonstrated by a thorough analysis of the agency's own data by IIHS.¹⁴ In fact, two thirds of fatalities involving side underride crashes were not captured by the target population included by NHTSA in the ANPRM.¹⁵ In addition, NHTSA failed to include any benefits derived from side guards intended for motor vehicles also preventing deaths and injuries involving motorcyclists and other vulnerable road users such as pedestrians and bicyclists.¹⁶ Between 2017-2023, over 100 pedestrians, bicyclists and motorcyclists were killed in underride crashes on average annually.¹⁷ Thus, the benefits derived from preventing or mitigating even a small percentage of these crashes is significant yet NHTSA fails to include such data in the agency's analysis in the ANPRM.

The U.S. Government Accountability Office (U.S. GAO), NHTSA and numerous stakeholders have detailed the difficulty in properly identifying underride crashes.¹⁸ Yet, IIHS determined that the agency's analysis in the ANRPM once again vastly undercounts the occurrence of

⁷ 2022 Pocket Guide to Large Truck and Bus Statistics, FMCSA, Dec. 2022, RRA-22-007.

⁸ CPI Inflation Calculator, BLS, Jan. 2020 to Jan. 2023, available at https://www.bls.gov/data/inflation_calculator.htm.

⁹ 88 FR 24538.

¹⁰ IIHS, Side guard on semitrailer prevents underride in 40 mph test (Aug. 29, 2017).

¹¹ *Id.*

¹² *Id.*

¹³ IIHS Comments to ANPRM, pg 1.

¹⁴ *Id.* at pgs. 1-2.

¹⁵ *Id.* at pg 2.

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ U.S. GAO, Truck Underride Guards: Improved Data Collection, Inspections and Research Needed, GAO-19-264 (Mar. 2022).

underride crashes.¹⁹ While Advocates appreciates the agency's efforts to better identify these events, a review of police crash reports alone without the review of photographic crash evidence suffers from the same issues as a query utilizing underride codes in NHTSA's Fatality Analysis Reporting System (FARS).²⁰ In addition, research has demonstrated that underride occurred in nearly 70 percent of fatal crashes involving the side of trailer.²¹ Yet, the agency assumes in the ANPRM that underride did not occur in these events unless there is evidence to the contrary.²² This faulty assumption resulted in the agency determining that only 53 percent of fatal crashes involving the side of a trailer entailed underride.²³ Such a low figure is contradicted by substantial independent research.²⁴

NHTSA, having failed to conduct its own crash testing of side underride guards, relies on the two crash tests performed by IIHS in 2017 to make the misguided assumption that a side guard could not prevent or mitigate underride if a crash occurs above that speed of 40 MPH. Yet, IIHS notes in its comments to the ANRPM that such an assumption is incorrect and results in yet another instance of the agency failing to account for the actual benefits of requiring side underride guards on trailers.²⁵ In fact, IIHS notes there are safety benefits that would result from a side underride guard in crashes where the speed exceeded 40 MPH.²⁶ Moreover, the agency uses faulty data points to determine the speed and severity of a crash to determine crashes that exceeded 40 MPH resulting in a significant number of subject crashes being improperly excluded from its analyses.²⁷ In order to properly identify the occurrences of underride crashes and accurately estimate the benefits that would be derived from this proven safety technology, Advocates urges NHTSA to undertake the research methods detailed by IIHS in its comments to the ANRPM.²⁸

While NHTSA notes the estimated costs of installing side underride guards on trailers will not be insignificant, these devastating crashes result in impacts that are not often included in a statistical cost-benefit analysis. For every single death and serious injury, there is a horrific ripple effect forever changing the lives of children, parents, friends, and communities. An accurate cost-benefit analysis cannot be conducted until NHTSA corrects the serious flaws noted above.

Conclusion

In order for NHTSA to fulfill its statutory mission to save lives and prevent injuries resulting from crashes on our Nation's roads, the agency must continue its works to avert and mitigate side underrides involving trailers and semi-trailers through the installation of guards that have

¹⁹ IIHS Comments to ANPRM, pgs. 3-4.

²⁰ *Id.* at pg. 3.

²¹ *Id.*

²² *Id.*

²³ *Id.* at pg. 4.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.* at pgs. 4-6.

²⁸ *Id.* at pgs. 6-7.

been proven to be effective. As such, Advocates urges NHTSA to amend and advance this rulemaking without further delay or lives will needlessly be lost.



Peter Kurdock
General Counsel



Shaun Kildare
Senior Director of Research