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Acting Administrator Ann Carlson
National Highway Traffic Safety Administration
1200 New Jersey Avenue, SE, West Building
Washington, DC 20590
Filed via www.regulations.gov

RE: Side Underride Guards; Advanced Notice of Proposed Rulemaking
Docket No. NHTSA-2023-0012

Dear Ms. Carlson:

The following submission is in response to NHTSA's request for comments regarding its report "Side Impact Guards for Combination Truck Trailer: Cost-Benefit Analysis," in which the Agency evaluated the effects of equipping new trailers and semitrailers with side underride guards.¹

Safety Research & Strategies is a multi-disciplined group specializing in product safety, with particular expertise in motor vehicle issues. Our company examines hundreds of vehicle-related death and injury crashes each year. We also examine technology, data and develop strategies and solutions for addressing harm caused by potentially defective products and practices for a wide range of clients including attorneys, engineers, supplier and technology companies and government.

NHTSA's cost-benefit analysis estimated that side underride guards would save 17.2 lives and prevent 69 serious injuries per year, concluding that a side underride requirement would not be cost effective.² However, the agency's conclusion is based on overly restrictive crash criteria, which unsurprisingly, leads to an underestimate of the actual cost-benefits of side-underride guards. IIHS succinctly addresses the problems associated with NHTSA's choice to restrict its FARS inclusion criteria to two-vehicle crashes involving one passenger vehicle and one tractor-trailer in which the passenger vehicle's initial impact location was coded as front or roof, and the truck's initial impact location was coded as side or undercarriage.³ As frequent reviewers of police crash reports and FARS we concur with IIHS that: crashes in which a passenger vehicle

¹ Side Underride Guards; Advanced Notice of Proposed Rulemaking. Docket No. NHTSA-2023-0012. 88 FR 24535. Apr. 21, 2023.

² Side Underride Guards; Advanced Notice of Proposed Rulemaking. Docket No. NHTSA-2023-0012. 88 FR 24535. Apr. 21, 2023. Page 24539.

³ Matthew Brumbelow. Comments to Side Underride Guards; Advanced Notice of Proposed Rulemaking, Comment ID: NHTSA-2023-0012-0092. May 19, 2023.

underrides a large truck often involve additional vehicles; many truck side underrides involve passenger vehicles with initial impacts that are not coded as frontal; and using clock locations of 2-4 o'clock and 8-10 o'clock crashes as truck side impacts, 1 and 11 o'clock as front crashes, and 5 and 7 o'clock as rear crashes are not valid for large truck incidents. When examined cumulatively the agency's choices effected the outcome by limiting the incidents included in its analysis.

While NHTSA's analysis attempts to mitigate some of the shortcomings of using the FARS data, by conducting a review of the underlying reports, NHTSA specifically noted that many of the crash reports didn't include photographs or photographs were unavailable, thus further limiting its ability to determine the accuracy of the reporting officers in defining side underride.⁴

As NHTSA noted, FARS data are based on police reports, and that the "impact velocity was estimated using estimated speed (if available), posted speed limit, evidence of braking, and witness interviews."⁵ However, NHTSA's analysis relied on vehicle speed estimates to exclude all crashes in which the speed was noted as greater than 40 mph knowing that the speed estimates are often inaccurate. These restrictions also assume that side underride guards would provide no benefit in such incidents without attempting to assess the benefits of side impact guards, particularly in higher speed crashes.^{6 7}

NHTSA's limitations, which excluded crashes involving more than two vehicles, means that fatal crashes like the 2016 incident in Lake County, Florida (FARS Case Number 122375) shown below are not accounted for in the agency's calculations:



⁴ Office of Regulatory Analysis and Evaluation, National Center for Statistics and Analysis. "Side impact guards for combination truck-trailers: Cost-benefit analysis." *Report No. DOT HS 813 404*. National Highway Traffic Safety Administration. March, 2023. Page 26.

⁵ Office of Regulatory Analysis and Evaluation, National Center for Statistics and Analysis. "Side impact guards for combination truck-trailers: Cost-benefit analysis." *Report No. DOT HS 813 404*. National Highway Traffic Safety Administration. March, 2023. Page 25.

⁶ IIHS. "Side guard on semitrailer prevents underride in 40 mph test." Aug. 29, 2017.

⁷ Side Underride Guards; Advanced Notice of Proposed Rulemaking. Docket No. NHTSA-2023-0012. 88 FR 24535. Apr. 21, 2023. Page 24539.



[NOTE: The above crash was coded in FARS as “No Underride or Override Noted.”]

In summary, because of its narrow inclusion criteria, NHTSA’s cost-benefit estimates of the potential lives saved by the implementation of side underride guards, the agency significantly underestimates the benefits of requiring these safety features. A more inclusive analysis of the available data is needed in order to provide a more accurate estimate. In addition, NHTSA should reinstitute the Large Truck Crash Causation Study (LTCCS) with a focus on obtaining accurate information on underride crashes and other critical factors associated with truck crashes. NHTSA should also update the FARS coding manual to provide a standardized definition of underride and override crashes, including rear underride, side underride and front underride crashes; require a check box for underride on every state police report; and provide additional training to State FARS analysts and State local police departments about how to identify and record underride crashes as suggested in Eric Hein’s April 21, 2023 petition.⁸

Sincerely,

Sean Kane, President Safety Research and Strategies

Salena Zellers, MS BME

⁸ Eric Hein. FARS Petition. April 21, 2023.