

SIDE UNDERRIDE GAURDS; ADVANCED NOTICE OF PROPOSED RULEMAKING

Federal Document Management System Docket ID, Docket DOT-NHTSA-2023-0012

Please accept this comment in support of conducting additional research and reevaluating the statistics and cost benefit analysis presently considered. Based upon the comments filed to date, it seems clear that NHTSA needs to reevaluate what has been published to allow for a more comprehensive approach on side underride guards to better understand their overall effectiveness, and assess the feasibility, benefits, costs, and other impacts of installing side underride guards on trailers and semi-trailers. Specifically, please give meaningful consideration and/or reconsideration to the comment published by Matthew Brumbelow, Senior Research Engineer for the Insurance Institute for Highway Safety (IIHS). Mr. Brumbelow has published articles on this topic. He is considered a reasonably reliable and authoritative thought-leader on this topic. He states, “[s]pecifically, we estimate the number of lives that could be saved by a side underride guard standard is up to ten times the number reported by NHTSA.”

Crash data has been less than uniform nationally when it comes to crash reporting of underride data. The crash data that is submitted by each State is entered into the Fatality Analysis Reporting (FARS) and the Crash Report Sampling System (CRSS). This data is cited as “essential to NHTSA’s traffic safety activities.” Objectively speaking, underride data is grossly undercounted because only seventeen (17) states have an underride field on their police crash report. This means that thirty-three (33) states are submitting little to no data to FARS to accurately reflect the number of underride/override crashes occurring nationally.

Interestingly, this is a decades long problem as evidenced by an article entitled “Death Count May Be Too Low” published by the Institute for Highway Safety (IIHS) in their “Status Report,” volume 27, No. 9, dated July 11, 1992. The problem is highlighted in the first paragraph, “[u]nderride crashes may happen more than twice as often as the National Highway Traffic Safety Administration (NHTSA) recognizes.” The article further states, “[p]olice reports don’t always include enough information to determine whether individual crashes involve underride, so the crashes don’t get coded as such in NHTSA’s data system.” Proposals for underride rulemaking have been abandoned in 1967, 1969, 1970, 1977, and 1981, partially because the data is not accurately quantifying the number of underride crashes. In 1992, IIHS further states that “[r]eferring to the likely underreporting of underrides, the Institute says NHTSA should amend its data-gathering processes to more accurately identify such crashes.” NHTSA can use this comment period and the comments made by many thought-leaders on this topic to fix this issue by revisiting the data with a more reasonable criteria of inclusion rather than the overly restrictive inclusion criteria utilized.

In the interests of justice and equity, it is important that we, as a nation, do better at recording crash data to fully appreciate and obtain objective data on the true count for side underride fatalities in a car versus truck crash. Both NHTSA and the FMCSA should be applauded for additional efforts to protect the rear of semi-trailers, and the same needs to happen with the rear of single-unit trucks and the sides of commercial vehicles. If regulators and manufacturers care about preventing underride to the rear 102.67 inches of the back of commercial trailers, then regulators and manufacturers should also care about preventing underride to the 267 inches (the length of a fuel efficiency, aerodynamic skirt) on each side of the trailer too. Regulators are protecting 8.5 feet from underride in the rear then why not the 22.25 feet on each side? Multiple 22.25 feet x 2 to represent each trailer side equals a total of 44.5 feet for the potential for an underride crash resulting in passenger compartment intrusion and lives lost.

The author of this comment serves as an elected Executive Officer of both the American Association for Justice's Trucking Litigation Group and of the Academy of Truck Accident Attorneys. The members of each group are attorneys representing victims and survivors of truck crashes. Many of the catastrophic or fatal car versus truck crashes involve passenger compartment intrusion demonstrating an underride / override component of the crash. From my work in this industry over the last two decades, I know for a fact based on personal knowledge and experience, coupled with the fact that there are over 5,000 commercial motor vehicle fatalities annually, NHTSA's estimate that only 17.2 side underride deaths per year is erroneous, and such undercounting harms NHTSA's credibility.

NHTSA seems to further shed doubt on the 17.2 statistic regarding its 2017 sampling of crashes, "[o]f the 184 police crash reports reviewed in the 2017 FARS data files, NHTSA determined that 92 crashes of a light passenger vehicle into the side of tractor-trailers involved underride while FARS reported only 59 fatalities in crashes with underride. Based on this information, NHTSA estimated the actual number of fatalities associated with side underride was 78 percent higher than reported in FARS..."

Curiously, NHTSA's 17.2/year estimate excludes cars that crash into the side of single-unit trucks and does not include vulnerable road users (bicyclists and pedestrians) who would also benefit from side underride protection. Additionally, NHTSA uses an impact speed of 40mph or less. It is well documented that side underride crashes result in fatalities due to geometric mismatches between the trucks and the passenger cars. It begs the question, on what basis was the 40mph reporting threshold determined? Was this a stated speed in the crash report? Or is this the electronically recorded Delta-v taken from the vehicle's electronics or black box? Delta-v is the commonplace notation used in physics to denote a change in velocity between pre-collision and post-collision trajectories of a vehicle. The Delta-v is the key denominator to utilize when determining survivability of a crash. Did NHTSA use the Delta-v or simply the stated speeds when reviewing the 2017 sampling of crashes? For instance, two vehicles going at highway speeds interacting with one another would have a much lower Delta-v than a car traveling at 40mph into a stopped commercial vehicle. Yet, NHTSA likely excluded crashes from its analysis because the reported speeds were at highway speeds over 40mph and did not take into consideration the actual Delta-v recorded on the striking car's crash data recorder (black box).

While it is understood that the survivability goes down in higher speed crashes, to simply throw out crashes that would otherwise afford the occupants the benefits of their car's safety engineering at higher speeds is inequitable because it does not reflect the true nature of these crashes. A car hitting the side of a trailer at any speed has no chance without side impact guard. Whereas even at 45, 50, or 55 mph or greater, the chances of survival go up exponentially if there is vehicle crash compatibility between collision partners (that is, there is compatibility of heights for the energy absorbing bumpers and vehicle crumple zones).

Currently, IIHS and others utilize 45 mph in crash tests. Given typical city through street speeds of 45 mph, typical rural highway speeds of 55 mph, and typical limited access highway speeds of 70 mph, to limit the number of fatalities counted to crashes involving speeds of 40 mph or less is not based in science or experience and is unfair to voters and taxpayers who are the common victims of underride crashes at speeds over 40mph. While it is well documented that the trailer manufacturers and the trucking industry does not desire a side underride guard standard, it is understood by all participants that the cost of such guards is minimal and would be passed onto society at large by way of immeasurably miniscule increases

in freight charges. One can imagine that it might cost a penny more, for example, to ship one-hundred loaves of bread. Given such small figures, the cost-benefit analysis easily favors voters and taxpayers.

Hopefully, meaningful review of the other public comments will result in further research and analysis regarding the reliability of the data relating to the true number of side underride fatalities. It is recommended that possibly the Department of Transportation's Office of Inspector General (OIG) perform an investigation and review of the individuals responsible for endorsing the 17.2 fatality statistic. It is very likely that the individuals responsible for endorsing this statistic have traveled, lectured, and spent time at industry trade association(s)' "annual convention(s)" or "summer meetings" with industry trade association(s)' leadership. It may help NHTSA's credibility to have the OIG investigate these individuals and confirm, one way or the other, whether the data has been inadvertently or deliberately influenced by special interests. The rationale and basis behind this recommendation can be found in the ProPublica investigative report dated June 22, 2023 entitled, "[DOT Researchers Suggested a Way to Make Big Trucks Safer. After Meeting With Lobbyists, Agency Officials Rejected the Idea.](#)" The individuals responsible for the data, along with the data, should be analyzed, and debated accordingly between and among all stakeholders in the ongoing search to have the best and safest transportation system in the world.

If you have any questions, the author of this comment, Andy Young, can be reached at andy@truckaccidents.com.