



Owner-Operator Independent Drivers Association

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The Honorable Sophie Shulman
Deputy Administrator
National Highway Traffic Safety Administration
U.S. Department of Transportation
1200 New Jersey Avenue, SE
Washington, D.C. 20590

Re: Docket # NHTSA-2023-0012, “Side Underride Guards Advance Notice of Proposed Rulemaking”

Dear Deputy Administrator Shulman,

The Owner-Operator Independent Drivers Association (OOIDA) is the largest trade association representing the views of small-business truckers and professional truck drivers. OOIDA has over 150,000 members located in all fifty states that collectively own and operate more than 240,000 individual heavy-duty trucks. OOIDA’s mission is to promote and protect the interests of its members on any issues that might impact their economic well-being, working conditions, and the safe operation of commercial motor vehicles (CMVs) on our nation’s highways.

OOIDA opposes efforts that would mandate the installation of side underride guards on CMV trailers and semitrailers. Over the last several years, the National Highway Traffic Safety Administration (NHTSA) has considered numerous options involving side underride guards, but has consistently concluded a federal mandate would be impractical and costly, thus outweighing possible safety benefits. Advancing any side underride mandate disregards this reality and ignores the safety, economic, and operational concerns that have been raised by small-business truckers.

Pursuant to Section 23011(c) of the Bipartisan Infrastructure Law, the latest NHTSA research estimated that the total discounted annual cost of equipping new trailers and semitrailers with side underride guards ranged between \$970 million and \$1.2 billion. According to NHTSA, “the total discounted lifetime costs of equipping new trailers with side guards are estimated to be between approximately \$3,930 and \$4,630 per trailer at a 3-percent discount rate (between approximately \$3,740 and \$4,300 per trailer at a 7% discount rate), or six to nine times as large as the corresponding estimated safety benefits.”¹ Furthermore, these estimates do not account for a variety

¹ Office of Regulatory Analysis and Evaluation, National Center for Statistics and Analysis. (2023, April). Side impact guards for combination truck-trailers: Cost-benefit analysis (Report No. DOT HS 813 404). National Highway Traffic Safety Administration, pg. 59.

of factors that will increase the total costs for equipping CMVs with side underrides including: operational feasibility; the strengthening of the beams, frame rails, and floor of the trailer; the effects on port and loading dock operations; freight capacity; modifications to infrastructure; vehicle maintenance; or the practicability of intermodal operations. These costs will elevate any side underride requirement well over \$1 billion, making it one of the costliest federal trucking mandates in history. Any move by the agency to advance such a measure is premature and shortsighted.

OOIDA provides the following responses to the questions presented in the Advance Notice of Proposed Rulemaking (ANPRM). Other stakeholders can better address any questions that have been omitted.

1. The injury target population was obtained by reviewing crash data and estimating side underride underreporting in FARS through PCR reviews. We seek comment on the estimated injury target population resulting from underride crashes with PCI into the side of trailers.

NHTSA estimated that the actual number of fatalities associated with side underride was 78 percent higher than reported in the Fatality Analysis Reporting System (FARS). However, the report only examined one-year of crash data from 2017. This is an insufficient sample to determine an accurate injury target population resulting from underride crashes with PCI into the side of trailers. We also acknowledge reporting inconsistencies in police accident reports across different states which contributes to data concerns across DOT agencies. OOIDA has supported the universal adoption of the Model Minimum Uniform Crash Criteria (MMUCC) in order to improve DOT data quality. Without consistent and standardized data, there will always be shortcomings in gathering accurate crash reporting information. We have recommended that NHTSA, along with their federal partners, should strongly encourage states to increase their level of compatibility with MMUCC through various means including grants, partnerships, and guidance.

NHTSA must examine a wider range of FARS data in conjunction with other sources to more accurately assess estimated injury target population. The 2017 police crash report (PCR) review using FARS data did not account for critical information such as road conditions or geographic area. We are also unclear if the review analyzed specific characteristics of the combination truck (CT) that was involved in collision. We believe these and other factors would provide a more comprehensive analysis of side underride crash information. NHTSA acknowledges these challenges in their assessment –

- *“We acknowledge that there is uncertainty in at least some of the evidence evaluated to establish impact speed status.”²*
- *“We acknowledge that there is remaining uncertainty in the designation of underride status due to incomplete information.”³*

We note that NHTSA did consider the impacts of potential underestimation of total national side underrides in their cost-benefit analysis (CBA). The CBA states, “Thus, after applying the highest potential underreporting factor derived from the FARS-PCR review, benefits increase relative to our

² Ibid, pg. 25.

³ Ibid.

central case, but are still much lower than estimated costs.”⁴ The CBA still found lifetime costs of equipping new trailers and semitrailers with side underride guards six to nine times the corresponding estimated safety benefits while omitting operational costs.

2. The agency assumed side underride guard effectiveness of 97 percent for fatalities and 85 percent for serious injuries in light vehicle crashes with PCI into the sides of trailers at speeds up to 40 miles per hour (mph). We seek comment on this effectiveness estimate.

Again, assessing the effectiveness of this estimate is difficult considering the lack of information. NHTSA made two major assumptions in their analysis, (1) they assumed that side underrides occur where a side guard would be located, and (2) they assumed a zero percent failure rate of side guards in preventing underride for vehicles that strike the side guard at speeds of 40 mph or less. It does not appear that the agency considered the possibility of varying PCI angles, nor did they consider a multitude of trailer configurations. Therefore, it is plausible that the agency is overestimating the effectiveness against fatalities and serious injuries.

3. In estimating benefits, the agency assumed that side impact guards would mitigate fatalities and injuries in light vehicle impacts with PCI into the sides of trailers at impact speeds up to 40 mph. We recognize, however, that benefits may accrue from underride crashes at speeds higher than 40 mph. We seek information on quantifying possible benefits of side impact guards in crashes at speeds above 40 mph.

We believe more real-world research and practical study is warranted before quantifying possible benefits of side impact guards in crashes at speeds above 40 mph. NHTSA states, “Travel speeds are higher than speed limits, on average, which would lead to a tendency for impact speeds in crashes without braking to be in excess of the posted speed limit. Conversely, sufficient pre-crash braking would reduce impact speeds below the speed limit. The PCR review accounted for both of these factors at the individual crash level, and thus these factors are internalized to the extent the evidence allowed in our estimation of the target population.”⁵

We are aware that side underride devices are in production and have been tested in certain conditions. However, we have some concerns about these conditions. Mainly, has the equipment been tested in practical highway settings where speeds are routinely higher than 40 mph? In 2017, the Insurance Institute for Highway Safety (IIHS) conducted testing of a device designed to protect against side underrides, known as the AngelWing manufactured by AirFlow Deflector. While these tests showed promising results, they were conducted at speeds of 35 mph and 40 mph. The IIHS tests also featured a singular light passenger vehicle (LPV) and a singular, stationary commercial truck. Other tests have been held in controlled, restricted areas that do not simulate actual highways.⁶ We would like to know more information on the effectiveness of the equipment at speeds above 40 mph and would also be interested in analyzing the effects of side impact guards when other vehicles are present. In testing videos, we have noticed that the LPV seemingly bounces off the side impact guard and away from the CMV. We are curious if this reaction would impact other vehicles traveling on highways.

⁴ Ibid, pg. 9.

⁵ Ibid, pg. 25.

⁶ <https://www.newsobserver.com/news/local/article265742746.html>

5. In estimating benefits, NHTSA did not account for the potential effects of advanced driver assistance technologies (ADAS) which could reduce the number of crashes independently of the presence of underride guards. The agency requests data on additional factors that affect the estimated benefits of side underride guards on trailers and semitrailers.

There might be potential benefits of advanced driver assistance technologies (ADAS) that could help reduce the number of crashes independently from the presence of underride guards. There are generally always *potential* benefits associated with safety technologies, but just like underride guards, the equipment should be proven as practical, cost-effective, and successful at improving highway safety before it's mandated for any vehicles.

Experienced truck drivers are the safest drivers and we need to do everything possible to keep experienced truckers in the workforce and keep our roadways safe. An experienced driver is much safer than an inexperienced driver relying on unproven technology. NHTSA notes throughout the ANPRM that the costs would range in the thousands of dollars for carriers and drivers. These higher costs will be especially detrimental for small-business truckers and independent owner-operators, who are the safest and most experienced drivers across the industry.

Other factors that would help mitigate instances of side underride crashes would be general driver education and outreach about how to operate around CMVs, additional measures to prevent distracted driving, as well as improving driver retention within the trucking industry through a variety of measures.

6. In estimating costs, the agency did not include the cost and weight of strengthening the beams, frame rails, and floor of the trailer to accommodate side underride guards. NHTSA seeks information on changes that would be required and the additional costs resulting from these changes.

Requiring side underride guards on new trucks would increase costs for strengthening the beams, frame rails, and floors of the trailer. We concur with NHTSA estimates that the costs would be in the thousands of dollars per trailer. We estimate that the installation of the equipment would displace nearly 1,000 pounds of a truck's payload. Reallocating nearly half a ton of freight from every truck currently on the road would create a monumental loss of capacity within our industry. To compensate for this dramatic loss, the number of trucks on American highways would surge and intensify pressure to increase minimum weight allowances for CMVs. The unintended consequences of adding more trucks on our nation's roads could eliminate any assumed safety benefits associated with the mandated use of side underrides.

8. NHTSA did not take into consideration the practicability and feasibility of side underride guards on trailer and semitrailer operations. Could side underride guards scrape or snag on the road surface when the vehicle travels over humped surfaces such as a highway-rail crossing, or when the vehicle enters a steep loading dock ramp? Could this interaction of side underride guards with the ground disable movement of the trailer and significantly damage the side underride guards, thereby requiring their replacement? We seek information on the effects of side underride guards on trailer and semitrailer operations.

NHTSA cannot move forward with any side underride rulemaking without fully considering the practicability and feasibility of side underride guards on trailer and semitrailer operations. There are numerous concerns limiting the real-world practicality of these devices. For example, installation of the equipment would unquestionably create challenges for truckers navigating high curbs, properly utilizing spread-axle trailer configurations, conducting DOT-required trailer inspections, and accessing vital equipment located under the trailer.

The installation of side underride equipment could also make trailer inspections more difficult, especially at roadside. This would hinder roadside inspectors from detecting frame damage, the condition of shock absorbers, brake adjustments, and other equipment fitness. Mandatory pre- and post-trip inspections for drivers could be harder to complete accurately and would likely take more time, potentially withholding earnings for drivers that are paid only by the mile. These outcomes would all diminish driver and vehicle safety.

OOIDA has notably heard from drivers about the dangers of traversing highway-rail crossings with side underrides attached to their trailers. In 2022, there were more than 2,000 highway-rail crossing collisions in the U.S. and more than 30,000 reports of blocked crossings submitted to the Federal Railroad Administration's public complaint portal.⁷ When CMVs get grounded on highway-rail crossings, there are obvious safety concerns. Furthermore, these events cause equipment damage and other expenses. Additionally, there are Federal Motor Carrier Safety Regulations that disqualify drivers if they fail to negotiate a rail crossing because of insufficient undercarriage clearance.

Drivers have expressed potential maintenance concerns resulting in damage from curbs, roundabouts, raised humps on roads, speed bumps in parking lots, loading dock ramps, and various other highway features that the equipment would undoubtedly encounter. We believe these interactions would damage the side underride guards, forcing additional repair and possibly replacement costs. These damages could also force a driver out-of-service that would result in additional downtime costs. It's unclear if any of these costs would be covered by vehicle insurance policies or equipment warranties. Again, these escalating costs would all have harmful safety outcomes as motor carriers/drivers would have less funding for routine maintenance and other vehicle-related upkeep.

There are also reasonably foreseeable liability questions which may result from a government mandate of underride equipment. For example, underride equipment could sustain damage from (or cause damage to) exit ramps, on ramps, interchanges, intersections, and hills which were not designed or constructed to provide clearance for side underride equipment. In these situations, due to sovereign immunity at the federal and state level for claims relating to negligent roadway design and construction, motor carriers will be unable to recover damage costs sustained from underride equipment on poorly designed or constructed areas of the current infrastructure. Similarly, motor carriers will find themselves facing liability for damage caused by underride equipment. Both of these scenarios require the motor carrier, or its insurer if the policy provides applicable coverage, to bear the cost of resulting damage.

⁷ <https://railroads.dot.gov/about-fra/communications/newsroom/press-releases/biden-harris-administration-announces-funding-63-0>

Further, we would want to know if these devices can withstand poor weather conditions, including cold temperatures, wind, rain, ice and snow. Would drivers be able to safely remove accumulation that might build up on the equipment during inclement weather? These are just some of the possible practical questions and concerns that NHTSA would need to consider prior to formulating any type of side underride guard requirement.

9. The analysis did not account for the effects of side underride guards on port and loading dock operations and freight capacity, and the practicability and feasibility of side underride guards in intermodal operations. We seek information on the effects of side underride guards on intermodal operations.

Many of the same practical and operational concerns would apply in port and loading dock operations, especially maneuverability in and out of these facilities. The diverse nature of the trucking industry necessitates various infrastructure across the spectrum of these locations. We believe some locations may need to undergo major overhauls to adapt for additional trailer dimensions and/or configurations.

As previously mentioned, the additional weight for side underride equipment would reallocate nearly half a ton of freight from every truck currently on the road which would create a loss of capacity within the industry. If CMVs cannot operate efficiently in ports, loading docks, or intermodal facilities because of operational challenges with side underrides, then that would exacerbate capacity concerns and create further stresses on the supply chain.

Nobody cares about road safety more than truck drivers and every single truck driver wants to operate in a safe environment to return home just like drivers in passenger vehicles. NHTSA has considered numerous options involving side underride guards, but has consistently concluded a federal mandate would be impractical and costly, thus outweighing any safety benefits. Any potential mandate also fails to recognize numerous other issues limiting the practicality of side underride guards. The latest NHTSA analysis indicates that a side underride requirement comes with a roughly \$1 billion price tag without even accounting for various operational cost estimates. Any move by the agency to advance such a measure is premature and shortsighted.

Thank you,



Todd Spencer
President & CEO
Owner-Operator Independent Drivers Association, Inc.