

Response to [ODI Denial of Petition](#) to Recall Trailers Without Side Guards
July 15, 2022

page	Excerpt from ODI Petition Denial	Advocate Response
1	INFORMATION REDACTED PURSUANT TO THE FREEDOM OF INFORMATION ACT (FOIA)	<p>Specifically what information was redacted and for what reasons? Please provide a detailed explanation.</p> <p>Will this redacted information be made available to the Advisory Committee on Underride Protection (ACUP) and the Secretary, so that they may make fully-informed recommendations and decisions?</p>
1	“NHTSA opened Defect Petition DP21-004 to evaluate petitioners’ request. After a review of the petition and other information, NHTSA has concluded that the issues presented by the petitioners will be examined in work undertaken pursuant to congressional direction under the Bipartisan Infrastructure Law. Accordingly, the agency has denied the petition.”	Please elaborate as the Bipartisan Infrastructure Law requires research regarding side underride and consideration of a side guard regulation for <i>new</i> trailers -- whereas the safety defect petition applies to correcting a safety defect on <i>existing</i> trailers.
2	“The concept is that a barrier of sufficient strength extends downward from the trailer side to fill the space between the trailer floor and the ground.”	Right. This is necessary due to the basic problem of underride -- a geometric mismatch between the bottom of large trucks and the bumper height of passenger vehicles which allows the lower vehicle to easily slide under the truck when there is no barrier strong enough to prevent that deadly occurrence.
2	“While petitioners allege that a lack of SUGs also poses a safety hazard to vulnerable road users (e.g., pedestrians), that results in death and injury, SUGs—the lack of which petitioners assert constitutes a defect here— are devices that are specifically intended to prevent a vehicle (not necessarily a vulnerable road user) from underriding a trailer.”	<p>It is our understanding, from crash reconstructionists and researchers, that even if the regulation does not spell out the need to protect VRUs, the fact is that the installation of side guards WILL protect them from falling under trailers and being run over by the tires.</p> <p>Should not that therefore be considered when one is assessing the extent of the problem and the efficacy of a solution?</p> <p>VRU underride graphic</p> <p>Pedestrian-Bike Side Guards for Trucks:</p>

		How They Work Advocate Fact Sheet on Flaws in FMCSA Side Guard Research												
2	<p>“ODI has received three (3) complaints, other than those from the petitioners, related to trailer underride.”</p>	<p>Does ODI consider FARS data when reviewing a petition for a safety defect investigation?</p> <p>Back of the Envelope Math: How many side underride deaths since March 19, 1969?</p> <p>FARS Underride Data By State & Point of Impact, 1994-2015</p> <p>How many complaints are adequate to justify a safety defects investigation?</p>												
2	<p>“Although NHTSA’s Early Warning Reporting (EWR) regulations do not have a specific code for underride, searching the Death and Injury (D&I) EWR data identified five (5) reports citing underride.”</p> <table><tr><th>Year Reported to NHTSA</th><th>Model Year of Trailer</th></tr><tr><td>2021</td><td>2019</td></tr><tr><td>2021</td><td>2015</td></tr><tr><td>2013</td><td>2007</td></tr><tr><td>2006</td><td>1998</td></tr><tr><td>2018</td><td>Unknown</td></tr></table>	Year Reported to NHTSA	Model Year of Trailer	2021	2019	2021	2015	2013	2007	2006	1998	2018	Unknown	<p>Did this search look specifically for side underride or simply “underride”?</p> <p>Does NHTSA ODI have a system for flagging traffic fatalities reported through the EWR reports?</p> <p>What is done with this information?</p> <p>How useful is EWR at addressing previously unidentified safety defects of which the public and legal community are largely unaware and for which they are unlikely to file lawsuits?</p> <p>How would NHTSA identify and fine manufacturers who have not appropriately submitted a report of a fatality?</p> <p>How can underride be identified as an EWR problem if there is no specific code for underride? Does ODI have any plans to rectify this situation?</p> <p>Check this document for side underrides in 2004Q4 (Stoughton) & 2015Q4 (Utility) and rear in 2013Q2 (Great Dane): Trailer EWR Fatality Records</p> <p>What’s the intent of Early Warning Reporting & what’s it done to end</p>
Year Reported to NHTSA	Model Year of Trailer													
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		underride?
3	<p>“Letters were sent to the following trailer manufacturers: Great Dane; Hyundai Translead; Kentucky Trailer; Stoughton; Strick Trailers; Utility Trailer Manufacturing; Vanguard; and Wabash.”</p> <p>“ODI concluded that the eight manufacturers surveyed represent nearly 100% of the subject vehicle population.”</p>	What about Manac in Canada? Many Manac trailers are purchased by U.S. companies and driven across the border.
3	“assessment of the current in-service subject vehicle population. Based on the responses, the total vehicle population is estimated to be 2.45 million trailers.”	
3	“Title 49 of the Code of Federal Regulations (CFR) Part 579 requires the trailer manufacturers to report whenever they receive an allegation that a defect resulted in a death or injury. The manufacturers responded that they are typically unaware of underride events unless legal action is brought against them, or as in one case, the trailer is brought in for repairs.”	<p>As mentioned in the discussion of EWR, because there is no side guard standard, there have been a limited number of side underride lawsuits.</p> <p>So, is this situation being used as a reason for justifying the decision to not pursue an investigation or issue an order for a recall?</p>
3	“ODI reviewed additional sources to better understand the petitioners’ claim that at least 500 deaths and 5,000 injuries occur annually due to side underride crashes. A 2012 article by Matthew Brumbelow titled “Potential Benefits of Underride Guards in Large Truck Side Crashes” included a statistical analysis of Trucks Involved in Fatal Accidents (TIFA).”	Potential benefits of underride guards in large truck side crashes , Matthew Brumbelow, 2012
4	“Brumbelow noted that not all fatalities and injuries were due to vehicle underride and that not all injuries in crashes with side underride could be mitigated by side underride guards, because of the impact location, lack of restraint use, high deceleration levels, and other factors.”	<p>Was there some reason that the explanation for the denial of our petition for an investigation did not <i>a/so</i> include Brumbelow’s conclusions about the severity of injuries caused by underride and how many injuries (AIS 3) & deaths could have been prevented by the installation of side guards?</p> <p>“In 143 of the 206 cases, the truck side impact produced the most severe injury</p>

		sustained by a passenger vehicle occupant. In the other cases, no passenger vehicle occupant was injured or the most severe injury was due to an event preceding or following the truck side impact. Forty-nine of these occupants sustained injuries coded as level 3 or higher on the abbreviated injury scale (AIS) or were killed. SUGs could have reduced injury severity in 76 of the 143 cases, including 38 of the 49 cases with an AIS = 3 coded injury or fatality.”
4	<p>“Multiple manufacturers have conducted testing of various SUG devices, and some of the manufacturers queried by NHTSA tested that guard on their trailers. According to the manufacturers, in certain cases, either the trailers and/or the guard experienced structural damage when the guard was fitted to a trailer and subjected to the manufacturer’s validation testing. The guard failed the validation test, in other words.”</p>	No details were provided in the explanation about what constituted failure.
5	<p>“The manufacturer reported that, while the guard-equipped trailer passed two of the three tests, it failed the overload portion.”</p>	No further details were provided.
5	<p>“This manufacturer has had three customer inquiries about SUGs in the past ten years. The manufacturer stated that at a customer’s request it would install an SUG.”</p>	Does ODI use the actions of commercial customers to validate the neglect of a manufacturer to provide a greater measure of safety to the traveling public?
5	<p>“One other manufacturer noted that it offers a prototypical side-impact guard as optional equipment where specifications are consistent with a side-impact guard and it is determined the guard will not result in an unsafe condition.”</p>	So, this confirms that the engineering process of safety product development can lead to both variation in design and improvement in outcome if sufficient resources are devoted to the effort.
5	<p>“Multiple manufacturers also reviewed the IIHS crash test of the guard to which petitioners refer. Manufacturers expressed concerns over various aspects of testing.”</p> <p>“The manufacturer had reservations about performance of the guard, given that the weighting and loading criteria in the IIHS</p>	<p>Do we plan on letting manufacturers criticize outside safety research while neglecting to make suitable effort themselves to correct a known unreasonable risk of serious injury and death due to their product?</p> <p>Was there any mention by the</p>

test was not the same as that used for IIHS rear-impact tests, and also expressed concern about exposure to real-world conditions, including with regard to damage to the trailer and attendant safety risks.”


manufacturers, or discussion at ODI in consideration of the petition, of the comparison between the two crash tests of the AngelWing side guard at the IIHS on March 30 and 31, 2017? Was there any reference to the startling difference to the outcomes of a crash *with* and *without* a side guard?




Exactly what are the expectations and speculations about the outcomes of real world crashes with the side of a trailer -- with and without a side guard?





Did anyone from ODI talk about this petition with [Larry Minor](#) (FMCSA), who was the only one from the USDOT who attended the [DC Underride Crash Test Event](#) in an Audi Field parking lot on March 26, 2019, where two side guards were crash tested and one crash test was executed on a trailer with no side guard installed?

		
5-6	<p>“One manufacturer also noted that the IIHS test involved only a perpendicular impact at the center of the SUG. For comparison, FMVSS 223/224 requires testing along multiple locations of the rear guard. Crash data also shows a significant number of real-world events involve collisions at acute and obtuse angles, and no such tests are known to have been conducted with this guard.”</p>	<p>Whether or not this manufacturer is aware of prior research, is ODI aware of FEA testing of scenarios other than perpendicular collisions?</p> <p>Computer Modeling and Evaluation Of Side Underride Protective Device Designs</p> <p>Protecting-Passenger-Vehicles-from-Side-Underride-With-Heavy-Trucks.pdf</p>
6	<p>“The petitioners claim that since 2010, this guard has been installed on a small number of semi-trailers that logged over one million miles of use delivering loads without negative road clearance issues, structural deficiencies or issues with loading or unloading at docks. A manufacturer response indicated that this statement is based on one trailer operating a dedicated route. This is typical mileage for such an operation, as most trucks average 100,000 miles per year. A dedicated route means the trailer sees the same loading and unloading facilities and travels the same terrain.”</p>	<p>What is the point here? I have heard lots of speculation from the industry about potential operational issues without accompanying documentation.</p> <p>Actually, this is not the only guard that is on the road and the only company providing feedback.</p> <p>Transport Companies Provide Feedback on Side Guard Operational Issues</p> <p>Should we be concerned about side guards getting hung up on railroad tracks?</p> <p>Operational Issues with AngelWing Side Guard</p>
6	<p>“Furthermore, this manufacturer response stated that this unit is part of a multi-trailer fleet, and that the fleet has not added more of these guards to the rest of its trailers.”</p>	<p>Okay. . . Duh! There is no encouragement from the government to do so.</p> <p>It has been clearly shown that corporate entities are poorly motivated to adopt safety technology unless they are required to do so by government.</p> <p>The Domain of Truck and Bus Safety Research, pp. 139-141: “An added complication for safety technologies is that the beneficiaries of heavy-truck safety are primarily other drivers, not the owners or drivers of the trucks. In a highly competitive business atmosphere, truck buyers are not easily motivated to</p>

		<p>purchase new technologies solely for the public good. Added equipment must also contribute to their company's profitability in some way and thereby enable them to compete with other companies that have not purchased the same technologies. For this reason, many new safety technologies that are developed and demonstrated are very slow to be deployed. Those safety devices that do gain widespread acceptance generally have secondary—ancillary functions or capabilities that offer a short-term payback to the buyer.</p> <p>Given these realities, the federal government plays an important role in the process of introducing new safety technologies into the commercial market. Large demonstration programs, involving broad involvement of all the suppliers of a given technology and all the medium- to heavy-truck manufacturers are essential to creating both a sufficient body of data and evidence that a product or technology performs well, in addition to a sense within the industry that the product will be cost-effective and, therefore, worth buying. It is a difficult task to create this critical mass and one that often only the government can accomplish.</p> <p>In some cases, regulation may be the only way to achieve significant deployment.”</p>
6	<p>“More broadly, certain manufacturers noted that SUGs may be compatible with some trailer and fleet operations, although there was the suggestion that a “one size fits all” approach is not possible in the U.S. commercial vehicle market, where vehicles are designed and purchased for specific operations or for versatility necessitated by the fleet’s operation.”</p>	<p>I’m not sure who started this “one size fits all” rumor, but it didn’t come from safety advocates. In fact, the STOP Underrides Bill calls for a performance standard -- fully anticipating that engineers are capable of meeting the task and love the challenge of solving problems.</p> <p>Building a Consensus Side Guard Standard</p>  <p>Check out this detailed discussion of side guards & specialty trucks (to which industry was invited): Collaborative Discussion of Side Guard Challenges on</p>

		<p>Specialty Trucks</p> <p>And note this recent Saturday project of removing an AngelWing side guard system from a 53' truck and moving it to a smaller trailer -- with the help of a volunteer crew who had never previously installed an AngelWing:</p> <p>Another Side Guard On The Road</p>   <p>A fully-guarded trailer hits the road – ready to STOP underride!</p>  <p>See extensive documentation of decades of underride research and reports: Timeline in Development of a Consensus Side Guard Standard</p>
6	<p>“ Multiple manufacturers are working on SUG designs, and several manufacturers have filed patents for their designs, although trailer manufacturers pointed out challenges. One manufacturer noted it had not, to date, identified a feasible design to prevent underride while not compromising the structural or operational capabilities of the trailer.”</p>	<p>It is, of course, no surprise that the majority of manufacturers would hesitate to devote unlimited resources to developing a product without adequate motivation to do so.</p> <p>Note how many times it took Great Dane Trailers to come up with a satisfactory Rear Impact Guard design to receive the IIHS TOUGHGuard Award:</p>

		<p>“Great Dane approached its redesign by looking at the whole guard and attachment as an entire system – developing and testing more than 60 iterations, which included both structural and material improvements.”</p> <p>Underride Guard Patents</p>
6	<p>“Another manufacturer developing a prototype observed that testing is scheduled, but cited potential material shortages and shipping delays.”</p>	
6	<p>“Furthermore, it appears there is a hesitancy on the part of at least some manufacturers in the industry to develop SUGs without research from NHTSA on their effectiveness and cost.”</p>	<p>Do not ODI safety defect investigations adhere to a different set of procedures and requirements than NHTSA safety regulation rulemaking procedures?</p> <p>What more do you need than the clear evidence of a century of deaths and the already-available research on solutions?</p>
6-7	<p>“NHTSA is authorized to issue an order requiring notification and remedy of a defect if the agency’s investigation shows a defect in the design, construction, or performance of a motor vehicle that presents an unreasonable risk to safety. 49 U.S.C. §§ 30102(a)(9), 30118. Factors the agency may consider when deciding whether to grant or deny a defect petition “include, among others, allocation of agency resources, agency priorities and the likelihood of success in litigation which might arise from the order.” 49 C.F.R. § 552.8. The above discussion illustrates that the complex issues that the petitioners present would benefit from additional information and data.”</p>	<p>Risk-Based Processes for Safety Defect Analysis and Management of Recalls</p> <p>Clearly, the denial of our petition signifies the “washing of hands” by ODI to address a known unreasonable risk.</p> <p>Industry themselves have admitted the risk of death -- including in 2000: “A Safety Rule, A Fatal Flaw”: Industry Discussed Underride Rules in 2000</p>

		 <p>I discovered a U.S. News & World Report article, published on October 2, 2000, entitled, “A Safety Rule, A Fatal Flaw.” I find it enlightening that the trailer manufacturers conceded twenty-two years ago, “underride guards can save lives.” They further admitted that if they had some guidance on technical specifications from the National Highway Traffic Safety Administration (NHTSA), then they could add side guards to trailers. But the manufacturers were unwilling to spend money doing so unless they were required to install them.</p>
7	<p>“NHTSA does not prescribe a specific remedy even where a safety defect is identified, but the agency may set performance standards for equipment—and recognizing a need for further research and evaluation of SUGs, Congress included in section 23011 of the Bipartisan Infrastructure Law (BIL) (November 15, 2021) several provisions that relate to side underride issues.”</p>	<p>It’s curious that you would reference the underride section of IIJA when it requires a side guard regulation “if warranted” on <i>new</i> trailers -- not a retrofit or recall.</p> <p>We will, therefore, be looking forward to hearing about ACUP discussion of this situation.</p>
8	<p>“Based on the available information and agency experience, ODI believes the issues raised by the petitioners are best addressed through the congressionally-directed evaluation of SUGs under section 23011 of the BIL. As the issues presented by the petitioners are being addressed pursuant to such direction, NHTSA has decided not to open a defect investigation, and the petition is denied.”</p>	<p>Unfortunately, ACUP discussion of this issue does not guarantee action on a safety defect investigation and recall as there is no mandate from Congress to do so. That falls on the shoulders of ODI, and we plan to hold you accountable for appropriately addressing these deaths & severe injuries now and going forward.</p> <p>Furthermore, it is more-than-confusing to have ODI decline to investigate</p>

		<p>documented death-by-underride because of uncertainty about technology efficacy and speculation about operational issues. Aren't these, in fact, two separate administrative actions?</p> <ul style="list-style-type: none"> • Identification of a safety defect which results in severe injuries and horrific deaths. • Issuing an order to manufacturers to remedy said defect by finding solutions to remedy the safety defect. <p>Does not the recall order, by its very nature, put the onus on the manufacturer to solve the problem -- which will include addressing operational issues?</p> <p>Why then are we waiting for NHTSA to do research about those operational issues?</p> <p>Is this how you handle AUTO safety defect investigations?</p>
8	<p>"The denial of this petition does not foreclose the agency from taking further action if warranted or making a future finding that a safety-related defect exists based upon additional information the agency may receive."</p>	<p>We are glad that you understand this and are providing you with documentation of NHTSA legal counsel decisions in that regard:</p> <p>1981 NHTSA Interpretation of Denial of Safety Defect Petition</p> <p>1988 NHTSA Interpretation to Suzuki 'No Defect'</p> <p>1998 NHTSA Interpretation of Safety Defect</p> <p>"The denial of this petition does not foreclose the agency from taking further action if warranted or making a future finding that a safety-related defect exists based upon additional information the agency may receive."</p> <p>In recognition of the foregoing factors, Congress has provided that compliance with a safety standard does not constitute a defense in a product liability suit. Section 108(c) (15 U.S.C. 1397(c)) of the Act provides that compliance with a motor vehicle safety standard "does not exempt any person from liability under common law." The House Report (H.R. Rep. No. 1776, 89th Cong., 2d Sess. (1966)) on section 108(c) states that, "It is intended, and this subsection specifically establishes, that compliance with safety standards is not to be a defense or otherwise to affect the rights of parties under common law particularly those relating to warranty, contract, and tort liability."</p>

	<p>Likewise, compliance with a Federal motor vehicle safety standard does not presumptively mean that the design chosen by a manufacturer is safe. Congress gave the agency the authority to order manufacturers to notify owners about safety-related defects in their vehicles and to remedy those defects (15 u.s.c. 1411-1420). On occasion, the agency has required manufacturers to conduct defect notification and remedy campaigns even though the vehicle complied with applicable Federal motor vehicle safety standards.</p> <p>Always keep in mind the Department's National Roadway Safety Strategy commitment which is to be reflected in all Departmental decisions -- at least that's <i>my</i> understanding:</p> <p>"The Department of Transportation and NHTSA seek to foster innovation and safe adoption of these technologies, which, if done right, hold great promise to improve roadway safety," reads a press release from the NHTSA on the report. "NHTSA is collecting this data on advanced vehicle technologies and exploring other opportunities to support safe innovation as part of NHTSA's core responsibility to ensure vehicle safety." Morgan & Morgan retained by family of couple who died when Tesla crashed into parked semi</p>
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