

## **Response to Intermodal Side Guard Concerns; Evidence Indicates That Addition of Side Guards Will Not Detrimentially Affect Intermodal Chassis Operations**

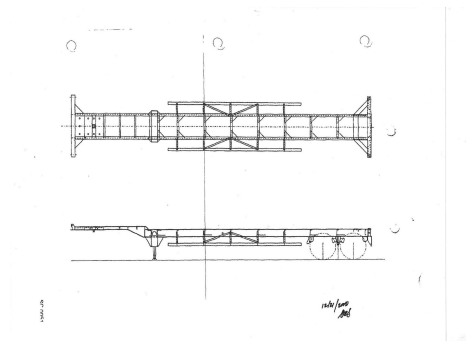
In response to a recent letter by the Institute of International Container Lessors (IICL), we are drafting this response to correct misinformation regarding predicted issues of integrating side guards onto intermodal chassis. The engineering answers are simple and compelling that the alleged issues raised by the IICL are easily overcome by sound design and/or are not applicable to this argument.

First, all side guard designs proposed for intermodal chassis to date do not interfere or limit the ability of ports to stack the chassis ([2000 Strick Trailers Intermodal Design](#)). The stack of five chassis, shown in photograph one of the first page of the letter provided by IICL, are chassis shipping to customer (evidenced by stack frame guides and ratchet straps). If these chassis were equipped with side guards, the overall stack height would increase slightly (by approximately one guard height). However, guarded chassis would be easier and safer to stack and transport as the guard lower rails provide wide flat mating surfaces.

Secondly, chassis with generators attached to the lower frame would provide underride resistance in the area of the generator and would require minor design modification to connect guarding into existing mount points on the generator and to extend the guards on either end of the generator. Combo or slider chassis could be equipped with slider side guards as described by Batzer et al or could be exempted from underride requirements.

We are unaware of any side underride guard manufactured at any time or place that has a weight of 4,000 lb. Reasonable designs to guard a 53 ft semi trailer weigh between 200 lb and 800 lb. Side guards designed to work with intermodal chassis will not be significantly heavier.

Finally, other areas of the world already recognize the hazard of unguarded chassis trailers and rely on guarded intermodal chassis without issue. In fact, one U.S. trailer manufacturer already has a proposed design for equipping intermodal chassis with a side guard ([2000 Strick Trailers Intermodal Design](#)):



*Strick Trailers side guard design, 2000*



*Side guards found on intermodal chassis internationally.*

Following is additional documentation to address concerns raised by the industry association about side guards on intermodal chassis, including weight and the supposed inability to stack the chassis.

1. Weight Issue:

- Finally, the addition of new underride guards would significantly increase the gross weight of any intermodal chassis. Chassis already make up on average about 10% of the current 80,000 pound gross vehicle weight limit for trucks. **The addition of underride guards, which are estimated to weigh around 4,000 pounds,** would increase the weight of intermodal chassis significantly.

*When carrying containers loaded with cargo, that increased weight could violate various state and federal maximum truck weight laws. An increase of the estimated **4,000 pounds** would also, by necessity, mean that these trucks would carry 4,000 fewer pounds of cargo at a time, increasing the amount of chassis and containers that are on the roads. This would heighten pressure on the supply chain at a time when the supply chain can ill afford it, while increasing the environmental impact of surface transportation by having more trucks on the roads to carry the same amount of cargo. (pp. 2-3, [IICL Underride Guards Background Paper](#))*

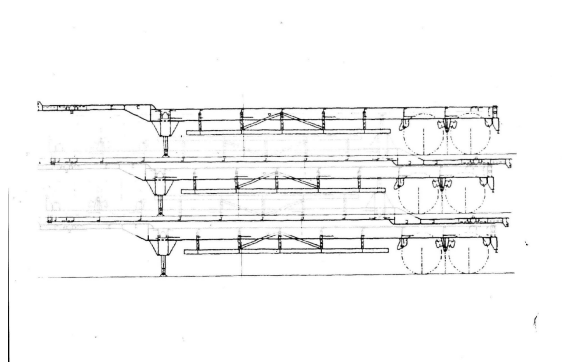
- IN CONTRAST, as an example of one side guard currently on the market, see Airflow Deflector's website for information about the weight of *AngelWing*:

*Weighing in at between **150 – 800 pounds**, depending upon the configuration,*

*Includes all mounting hardware, <https://airflowdeflector.com/sideunderride/>*

2. Ability to stack intermodal chassis:

- While the currently effective rear underride guards do not hamper supply chain efficiency, the addition of side underride guards could greatly affect terminal operations, which **rely on the ability to stack intermodal chassis** to move goods quickly while taking up as little space on the terminal as possible (see below picture). Without the ability to stack, intermodal chassis would require hundreds of additional acres of space for storage. (p. 1, [IICL Underride Guards Background Paper](#))
- According to Perry Ponder, the engineer who designed the AngelWing side guard, if the horizontal bar rests outside the landing legs, and it would, there's no reason they can't stack. Note this drawing of three stacked intermodal chassis with side guards -- which contradicts the speculation by the industry association:



3. The IICL also made this statement: "Most importantly for this legislation, our members report that there have been no fatalities identified over the last five years from side underride incidents involving chassis." (p. 3, [IICL Underride Guards Background Paper](#)) However, please note this fatal side underride crash in Indiana in 2018 - **intermodal chassis fatal side underride** - [Man dies in Kosciusko County crash with semi](#)



4. In their appeal for exemption from a side underride mandate, the IICL appears to overlook the *comprehensive* nature of underride. Underride occurs because of a geometric mismatch between the bottom of a large truck and the bumpers of passenger vehicles -- whether on the rear, sides, or front. Underride protective devices are engineering solutions to correct that oversight and save lives.

*On a larger scale, inspection and repair processes for intermodal chassis are well established and in place throughout the United States. Equipment in-service problems after departing the marine terminals are minimal, and accidents resulting from intermodal chassis equipment failures are virtually nonexistent. (p. 3, [IICL Underride Guards Background Paper](#))* (Note: to see these recommended practices, go to p. 153 - [AAR Intermodal Interchange Rules](#))

I appreciate the attention given to the repair processes for existing *rear* guards on intermodal chassis. (Note: to see these recommended practices, go to p. 153 - [AAR Intermodal Interchange Rules](#).) However, the point being made above by the IICL is irrelevant to the danger of potential *side* underride crashes with intermodal chassis which are not equipped with side guards.

By striving to maintain the integrity of Rear Impact Guards (ICC Bumpers, Mansfield Guard, Rear Underride Guard), the IICL has thankfully acknowledged the importance of doing so in order to improve the capability of the device to prevent rear underride, Passenger Compartment Intrusion, and unimaginable loss. Let's take that awareness and commitment and apply it to the same situation on the two sides of an intermodal chassis.

When all is said and done, after side guard rulemaking is completed, the industry will, of course, have the ability to apply for an exemption if they are still convinced that side guards on intermodal chassis are not feasible. Here is the website to do so: [Petitions for Rulemaking, Exemption, and Retrospective Review](#).

Also, more relevant information can be found here: [Collaborative Discussion of Side Guard Challenges on Specialty Trucks](#)

**Discussion of Side Guards for Specialty Trucks – Underride Engineering Subcommittee:**  
[Examples of side guards on Intermodal Chassis](#)

Respectfully submitted,  
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*On behalf of families of underride victims*

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