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NHTSA - DEFECT PETITION DP 21-004

STOUGHTON TRAILERS, LLC's PRELIMINARY RESPONSES TO ODI DECEMBER 9, 2021 INFORMATION REQUESTS

DATED: JANUARY 10, 2022

The preliminary responses of Stoughton Trailers, LLC ("Stoughton") to the information requests from NHTSA ODI, dated December 9, 2021, are as follows:

1. State by model year the number of subject vehicles Stoughton has manufactured for sale or lease in theUnited States since 2006.

Stoughton Trailers Data for Side Impact Guard Information

Jan 3 2022

CONFIDENTIAL Production Volume Information

Year	Dry Vans Built	Units with Side Impact Guards
2006	[redacted]	0
2007		0
2008		0
2009		0
2010		0
2011		0
2012		0
2013		0
2014		0
2015		0
2016		0
2017		0
2018		0
2019		0
2020		0
2021		0
		0

Include by model year the number of subject vehicles which were manufactured by Stoughton with sideunderride guards as original equipment. Zero

2. State the current or estimated number of Stoughton subject vehicles still in service for all model years.

[redacted]	total estimated population of Stoughton dry vans in service

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3. Please report Stoughton current percent of the subject vehicle market share.

   Estimated at [redacted]

4. Provide a brief summary of any and all reports, claims, or other notices received by Stoughton, or of whichStoughton is otherwise aware, which relate to, or may relate to, the alleged defect in the subject vehicles orvehicles equipped with side underride guards.

   Stoughton disputes that its vehicles are defective because they are manufactured without side underride guards and that lack of side underride guards constitutes a vehicle safety defect.

   The topic of effective side underride guards presents numerous, complicated technical engineering, business, public policy, and safety questions. As described below, the AngelWing is not a satisfactory solution for many reasons. As also described below, Stoughton has been working diligently since 2017 on developing and testing its own potential designs for an optional side underride guard, considering a myriad of factors. Stoughton understands that its competitors are engaged in similar undertakings. Stoughton humbly suggests that this topic would be much more suitable for the normal agency rulemaking process, to consider a potential FMVSS, rather than addressing it in the context of the current Petition.

   Stoughton has received only two claims alleging injury from side underride collisions with Stoughton vehicles, both of which are over ten years ago and one of which was dismissed on summary judgment by the court:

   1. *Riley, et al. vs Stoughton Trailers, LLC, et al.*, USDC – E.D. Texas (Marshall Div.) case no. 2-03-CV176 TJW (apparently resolved prior to 2005);

   2. *Sadigh vs Stoughton Trailers, et al.*, No. 1-08-0150 (Ill. App. 1st Dist. 2009), *reh'g denied* (Ill. App. 1st Dist. 2009), 924 N.E.2nd 460, 235 Ill 2nd 604 (2010)(dismissed on summary judgment, with court finding **no duty under Illinois common law to design or manufacture a vehicle with which it is safe to collide**). Under *Sadigh* and similar holdings, one could argue that passenger cars that are not designed to be of sufficient height to prevent side underrides are defective, or at least that persons who buy low profile passenger cars assume the risk.

   Stoughton has not received and is not aware of any other claims or notices alleging death or injury from side underride collisions with Stoughton vehicles.

5. Does Stoughton currently offer side underride guards as standard or optional equipment? If yes, is it a Stoughton design or from another supplier? If from another supplier, identify the supplier and provide theircontact information.

   Stoughton does not offer any side underride guards for purchase as OEM installed equipment or as aftermarket parts.

6. Produce copies of all installation, service, warranty, and other documents that relate to, or may relate to, thesubject component in the subject vehicles.

   Not applicable: see answer to question 5

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7. Provide a brief summary of all assessments, analyses, tests, test results, studies, surveys, simulations, investigations, inquiries and/or evaluations that relate to, or may relate to the subject component that havebeen conducted, are being conducted, are planned, or are being planned by, or for, Stoughton.

- Stoughton conducted initial evaluations of the AngelWing/Airflow Deflector, an aftermarket offering, and found it to be deficient and unacceptable in numerous respects. Most importantly, it was deficient in magnitude of impact, perpendicular to the overall trailer and SIG combination. Stoughton also was concerned regarding its capability in the longitudinal direction, its low ground clearance (propensity to "bottom out" on grade crossings and in other circumstances), its rigid design, its very high weight and cost, and the manufacturer's apparently quite limited production capacity and lack of high volume production experience. Engineers from other trailer manufacturers also expressed concerns regarding high centering with the AngelWing, causing compromise to general trailer structure. [redacted]

- Since 2017, Stoughton has been working to develop its own design of a lightweight, effective, affordable side guard to offer as optional equipment that overcomes as many of the operational challenges as possible [redacted]

- [redacted]

8. Anglewing is one aftermarket manufacturer of side underride guards. Please assess the compatibility of thisproduct with Stoughton trailers. See the following link for additional information: http://www.angelwingskirts.com/

a. Effect, if any, this guard will have on the structural integrity of Stoughton trailers;
Unknown, but significant concerns exist -- see response to question 7. Rather than further investigating this aftermarket component, Stoughton focused its efforts on independent development work on its own proprietary design components.

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b. The approximate weight adding this side underride guard will add to Stoughton trailers;

- 680 lbs. without aerodynamic panel: this does not include considerations of overall structural design change required to manage added stresses induced by the added stiffness in the local area of installation

c. The approximate reduction in cargo carrying capacity adding this side underride guard will have onStoughton trailers;

- At a minimum the weight discussed in 8b above

d. Effect, if any, this guard will have on the durability and service life of Stoughton trailers;

- Unknown

e. The approximate cost, including materials and labor for installation of these guards both on newproduction and in-service Stoughton units;

- The price of an AngelWing side guard as purchased by Stoughton trailers was approximately $3000 in 2019. This was before the price of raw material (steel) increased 2.5x in the past 9 months. This does not include the cost of installation nor the added floor space required at a production facility to include the option and maintain production capacities. These additional costs are not known but are believed to be significant.
- In addition the unknown effect on the cost imposed on the redesign of the Stoughton trailer to manage the added stresses as discussed in 8b.

f. Effect, if any, this guard will have on the maneuverability and operating environment compatibility ofStoughton trailers;

- See concerns detailed in response to question 7. For maneuvering and operating, the chief concerns are the high centering potential is substantially increased, the low ground clearance, and the excessive weight.
- In review of the TTMA's recommended practice RP-109 Trailer Ground Clearance, this installation would be considered high risk.

g. Your assessment of the effectiveness this side underride guard would have preventing injury and death ofother roadway users when installed on Stoughton trailers

- Lack of sufficient data on which to base conclusion

i. Your assessment of any additional concerns, issues, or benefits this sideunderride guard may have.

- Concerns, in addition to those stated in number 7:
  - Increased number of trailers on the road due to reduction of payload capacity caused by high weight of device
    - Increased number of units on the road with inexperienced drivers
    - More targets for passenger vehicles to encounter
    - Overall traffic congestion
    - Reduced visual access to the underside of the trailer due to blocked area beneath trailer
  - Potential for road hazards
    - due to added maintenance of additional structure
    - Formation of ice build-up and release into traffic
    - Inspection groups unable to identify potential hazards due to obstructed view
    - The guards or components of the guards could be damaged and disengaged from the trailer in transit, creating dangerous obstacles in the roadway.
  - Increased operational costs
    - Increased aerodynamic drag

- Restrictions due to ground clearance reduction causing rerouting of travel
- Reduced access to under-body components (i.e. fuel tanks, tire carriers, tool boxes,air and electric lines,…)

- Structural compromise of base unit
  - Installation of under-unit structure changes stiffness of standard product
  - High center engagement may cause hang-up or base unit structure compromise
  - Design of side impact guard may induce reactions to base unit not standard to operation

9. Safetyskirt is one aftermarket manufacturer of side underride guards. Please assess the compatibility of thisproduct with Stoughton trailers. See link for additional information: https://www.trailerguards.com/

a. Effect, if any, this guard will have on the structural integrity of Stoughton trailers;
- Unknown

b. The approximate weight adding this side underride guard will add to Stoughton trailers;
- Unknown

c. The approximate reduction in cargo carrying capacity adding this side underride guard will have onStoughton trailers;
- Unknown

d. Effect, if any, this guard will have on the durability and service life of Stoughton trailers;
- Unknown

e. The approximate cost, including materials and labor for installation of these guards both on newproduction and in-service Stoughton units;
- Unknown

f. Effect, if any, this guard will have on the maneuverability and operating environment compatibility ofStoughton trailers;
- Unknown

g. Your assessment of the effectiveness this side underride guard would have preventing injury and death ofother roadway users when installed on Stoughton trailers
- Unknown

i. Your assessment of any additional concerns, issues, or benefits this sideunderride guard may have.
- Stoughton has not evaluated this product.

10. Furnish Stoughton's assessment of the following in today's transportation system:

a. The feasibility of side underride guards.
- Stoughton's analysis and development work remains ongoing

b. The industry financial cost of side underride guards
- The AngelWing guards will add well over $3000 to the cost of each trailer (based on Angelwing option), plus trailer re-design to accommodate, plus installation costs
- any side underride guard would add significant cost to new vehicles, plus the cost to retrofit hundreds of thousands of existing vehicles.
- The guards will require frequent inspections and maintenance
- The guards will make accessing the underside of the trailer more difficult for

performing maintenance.

- Creating an installation space within the trailer production plant will produce a bottle neck and constrain trailer production. The guards are large, requiring significant internal space for storage.The guards are heavy and will require mechanical assistance to move within the plant.
- Additional laborers will need to be hired to install the guards. Installation will be challenging given the size, weight and install location on the trailer.

c. The effectiveness side underride guards may have preventing traffic crash injuries and fatalities;

- Unknown without significant additional testing and analysis

d. The potential changes in the US transportation system side underride guards may require;

- See answers to 8a and 10b, as preliminary responses

e. The reports included with this inquiry.

[redacted]

Respectfully submitted,

STOUGHTON TRAILERS, LLC

By: _____
Gary L. Fenton

Its: Chief Design Officer

Dated: January 10, 2022