



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. NHTSA-2020-0005; Notice 1]

Daimler Trucks North America, LLC, Receipt of Petition for Decision of Inconsequential Noncompliance

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Receipt of petition.

SUMMARY: Daimler Trucks North America, LLC (DTNA) has determined that certain model year (MY) 2011 - 2021 Thomas Built Buses Saf-T-Liner HDX school buses do not fully comply with Federal Motor Vehicle Safety Standard (FMVSS) No. 222, *School Bus Passenger Seating and Crash Protection*. DTNA filed a noncompliance report dated December 17, 2019, and later amended the report on January 16, 2020. DTNA subsequently petitioned NHTSA on January 16, 2020, for a decision that the subject noncompliance is inconsequential as it relates to motor vehicle safety. This notice announces receipt of DTNA's petition.

DATES: Send comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Interested persons are invited to submit written data, views, and arguments on this petition. Comments must refer to the docket and notice number cited in the title of this notice and submitted by any of the following methods:

- Mail: Send comments by mail addressed to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., Washington, DC 20590.

- Hand Delivery: Deliver comments by hand to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, S.E., Washington, DC 20590. The Docket Section is open on weekdays from 10 am to 5 pm except for Federal holidays.
- Electronically: Submit comments electronically by logging onto the Federal Docket Management System (FDMS) website at <https://www.regulations.gov/>. Follow the online instructions for submitting comments.
- Comments may also be faxed to (202) 493-2251.

Comments must be written in the English language, and be no greater than 15 pages in length, although there is no limit to the length of necessary attachments to the comments. If comments are submitted in hard copy form, please ensure that two copies are provided. If you wish to receive confirmation that comments you have submitted by mail were received, please enclose a stamped, self-addressed postcard with the comments. Note that all comments received will be posted without change to https://www.regulations.gov, including any personal information provided.

All comments and supporting materials received before the close of business on the closing date indicated above will be filed in the docket and will be considered. All comments and supporting materials received after the closing date will also be filed and will be considered to the fullest extent possible.

When the petition is granted or denied, notice of the decision will also be published in the *Federal Register* pursuant to the authority indicated at the end of this notice.

All comments, background documentation, and supporting materials submitted to the docket may be viewed by anyone at the address and times given above. The documents may also

be viewed on the internet at <https://www.regulations.gov> by following the online instructions for accessing the docket. The docket ID number for this petition is shown in the heading of this notice.

DOT's complete Privacy Act Statement is available for review in a Federal Register notice published on April 11, 2000 (65 FR 19477-78).

SUPPLEMENTARY INFORMATION:

I. Overview: DTNA has determined that certain MY 2011-2021 Thomas Built Saf-T-Liner HDX school buses do not fully comply with the requirements of paragraph S5.2.3 of FMVSS No. 222, *School Bus Passenger Seating and Crash Protection* (49 CFR 571.222). DTNA filed a noncompliance report dated December 17, 2019, and later amended their report on January 16, 2020, pursuant to 49 CFR part 573, *Defect and Noncompliance Responsibility and Reports*. DTNA subsequently petitioned NHTSA on January 16, 2020, for an exemption from the notification and remedy requirements of 49 U.S.C. Chapter 301 on the basis that this noncompliance is inconsequential as it relates to motor vehicle safety, pursuant to 49 U.S.C. 30118(d) and 30120(h) and 49 CFR part 556, *Exemption for Inconsequential Defect or Noncompliance*.

This notice of receipt of DTNA's petition is published under 49 U.S.C. 30118 and 30120 and does not represent any agency decision or other exercise of judgment concerning the merits of the petition.

II. Buses Involved: Approximately 7,601 MY 2011-2021 Thomas Built Saf-T-Liner HDX school buses manufactured between October 21, 2009, and December 16, 2019, are potentially involved.

III. Noncompliance: DTNA explains that the noncompliance is that the subject school buses are equipped with a wall-mounted restraining barrier that does not meet the requirements specified in paragraph S5.2.3 of FMVSS No. 222. Specifically, when tested according to the test procedure, the restraining barrier did not meet the force/deflection curve or deflection requirements because the upper loading bar contacted the trim panel on the front entry door of the bus causing the upper loading bar force to exceed the allowable limit.

IV. Rule Requirements: Paragraph S5.2.3 of FMVSS No. 222 includes the requirements relevant to this petition. When force is applied to the restraining barrier in the same manner as specified in paragraphs S5.1.3.1 through S5.1.3.4 for seating performance tests the restraining barrier:

(a) Force/deflection curve shall fall within the zone specified in Figure 1;

V. Summary of DTNA's Petition: The following views and arguments presented in this section, V. Summary of DTNA's Petition, are the views and arguments provided by DTNA. They have not been evaluated by the Agency and do not reflect the views of the Agency. DTNA described the subject noncompliance and stated their belief that the noncompliance is inconsequential as it relates to motor vehicle safety.

In support of its petition, DTNA submitted the following reasoning:

1. *Background and description of the noncompliance:* DTNA found that it had modified the restraining barrier design in October 2009 following an update to FMVSS No. 222 to increase the seat back height requirement to 24 inches. For aesthetic purposes and not for functional or compliance reasons, DTNA similarly adjusted the profiles (slope and angle) of the restraining barrier to match the new higher seatback height. To do so, DTNA added approximately 5/8 inch of foam padding to each side of the restraining barrier. Notably, the foam was added onto

the outside of the frame of the barrier - doing so did not widen the frame structure itself. The additional padding is used for cosmetic purposes (to promote uniformity of design of the seat profiles at that time) and is not needed to provide protection beyond the construction of the restraining barrier itself.

2. *Analysis:* DTNA says that the purpose of the restraining barrier is to provide compartmentalization for occupants of the first row of school bus seats where there is not a seat back to offer protection. FMVSS No. 222 includes a series of performance requirements for school bus frontal barriers which includes distance between the barrier and the seat (S5.2.1), the barrier height and position (S5.2.2), and barrier forward performance (S5.2.3). The purpose of the barrier forward performance requirement at S5.2.3 is to ensure the front barrier can withstand the impact of certain set forces while at the same time maintaining component integrity.
3. *The forces measured in testing are a product of the test apparatus that would not occur in the real world.* DTNA says that the effect of the additional foam outside the restraining barrier frame was to slightly widen the restraining barrier. Now, with a wider restraining barrier, the placement of the upper restraining barrier is moved outwards so that it now encounters the door frame trim. With a wider restraining barrier, based on its calculated placement per the test procedure, the corresponding length of the upper loading bar becomes longer than that of the prior design. When the upper loading bar deployed, it contacted the front entrance door trim and caused the upper loading bar to exceed the force limits.

The behavior of the upper loading bar is a product of the test procedure and does not represent the behavior of the barrier in actual use conditions. Prior to the 2009 design change; there was an approximately two-inch gap at the height where the upper loading arm was placed. This design well exceeded the minimum requirements as indicated above. With the design change in 2009, that space was filled in with soft foam, but the effect of doing so did not have any impact on the performance or integrity of the barrier itself.

DTNA has since conducted its own analysis of the restraining barrier performance in the design tested by the Agency as well as the prior design. The results of that testing demonstrate that the additional foam creates approximately 11 mm (.43 inches) of interference between the upper loading bar on the right side of the vehicle and the bus entrance door frame. The additional foam was not intended to and does not provide any safety or functional benefit. Even though the prior design of the restraining barrier left a small gap between the bus sidewall and the barrier itself, the barrier was more than sufficient to meet the performance forward requirements. The addition of foam for cosmetic purposes in 2009 does not deter from the safety of the barrier.

Removing the additional 5/8 inches of foam padding would eliminate the potential for any interference with the upper loading bar as it then cannot come into physical contact with the doorframe. The previous small gap in space did not expose occupants to an increased risk of harm (as demonstrated by the lack of any reports from the field potentially related to this issue), and the more recent

addition of the foam also does not create any safety concerns beyond the operation of the test itself.

4. *The current restraining barrier addresses the unreasonable risk to safety identified by FMVSS No. 222.* DTNA says that the purpose of a restraining barrier is to compartmentalize and contain passengers located in the first row of seats in the event of a crash or sharp deceleration. The forward performance test evaluates the strength of the restraining barrier in a forward impact and to deflect in a controlled manner as it absorbs the energy of the occupant striking the barrier.

The restraining barrier is intended to provide an equivalent level of compartmentalization as does the seat back for the rearward seats. The safety benefit of compartmentalization is realized through the height of the restraining barrier (or seatback) as a restraining barrier that is too low could increase the likelihood that in a forward crash, an occupant could be thrown over the barrier. This view is consistent with the requirement that the height and position of the restraining barrier match or “coincide” with that of the seatback. Because FMVSS No. 222 defines the unreasonable risk to safety as the potential for being thrown over the barrier, it is the height and position of the barrier that mitigate against this risk.

Additionally, while the surface area of the barrier must at least coincide with the surface area of the seatback, any additional width of the barrier that extends beyond the frame of the barrier and thus is surplus material that does not address the unreasonable risk to safety identified by the standard. DTNA says

that the Agency has previously recognized that a “restraining barrier must therefore only coincide with or lie outside of the seatback surface required by S5.1.2. If a seat back surface exceeds the size required in Standard 222, the size of the restraining barrier need not coincide.” *Letter to Wort*, August 11, 1987.

The reverse also holds true. For the subject buses, the surface area of the barrier is larger than that of the seat back and exceeds the area required by S5.2.1. While the restraining barrier surface area can be larger than the seat back, the unreasonable risk to safety is addressed by maximizing the effects of compartmentalization by ensuring the perimeter of the restraining barrier coincides with the surface area of the seatback.

DTNA says that the test procedure considers the need to assess the portion of the barrier that is intended to bear the force of the loading. DTNA believes that when creating the test procedure, the Agency intentionally limited the length of the loading bar to be approximately 4 inches shorter than the width of the seat back or restraining barrier. DTNA says NHTSA declined to reduce the size of the range to two inches because it wanted “to ensure loads would be transferred to the seat structure without collapse of the seat back” and to discourage manufacturers from adding a narrow structural member to meet the requirements. *See* 39 FR 27585 (July 30, 1974). In other words, the objective of the forward performance test is to measure the operation and structural integrity of the restraining barrier by ensuring the loads are concentrated in the core of the structure itself and not the periphery of the structure which could cause it to unnecessarily collapse.

Thus, the additional foam installed outwards of the retaining barrier frame has no bearing on the forward performance of the restraining barrier.

5. DTNA has corrected this issue in production by adjusting the location of the installation of the barrier by moving it away from the wall by $\frac{3}{4}$ inch. Doing so ensures that in any future testing, the loading bar will not encounter the door frame.
6. Finally, DTNA has used this seating design for over a decade. It is not aware of any consumer complaints or reports of accidents or injuries related to the forward displacement of the restraining barrier.

DTNA's complete petition and all supporting documents are available by logging onto the Federal Docket Management System (FDMS) website at <https://www.regulations.gov> and by following the online search instructions to locate the docket number as listed in the title of this notice.

DTNA concluded by expressing the belief that the subject noncompliance is inconsequential as it relates to motor vehicle safety, and that its petition to be exempted from providing notification of the noncompliance, as required by 49 U.S.C. 30118, and a remedy for the noncompliance, as required by 49 U.S.C. 30120, should be granted.

NHTSA notes that the statutory provisions (49 U.S.C. 30118(d) and 30120(h)) that permit manufacturers to file petitions for a determination of inconsequentiality allow NHTSA to exempt manufacturers only from the duties found in sections 30118 and 30120, respectively, to notify owners, purchasers, and dealers of a defect or noncompliance and to remedy the defect or noncompliance. Therefore, any decision on this petition only applies to the subject buses that DTNA no longer controlled at the time it determined that the noncompliance existed. However,

any decision on this petition does not relieve vehicle distributors and dealers of the prohibitions on the sale, offer for sale, or introduction or delivery for introduction into interstate commerce of the noncompliant buses under their control after DTNA notified them that the subject noncompliance existed.

(Authority: 49 U.S.C. 30118, 30120: delegations of authority at 49 CFR 1.95 and 501.8)

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Billing Code 4910-59-P

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