NEW FLYER OF AMERICA

February 11, 2022

Dr. Steven Cliff
Deputy Administrator
National Highway Traffic Safety Administration
1200 New Jersey Avenue, S.E.
Washington, DC 20590

VIA FEDERAL EXPRESS FOR FILING in Docket No. NHTSA-2021-0088
VIA FAX to Assistant Chief Counsel, Deirdre Fujita, Esq., 202.366.3820.

Re: Reconsideration Request to Clarify Transit Bus Definition in FMVSS No. 227,
Bus Rollover Integrity Rule, 86 Fed. Reg. 74270 (Dec. 29, 2021)

Dear Dr. Cliff:

Please consider this letter as a petition to reconsider and to refine a narrow but commercially important definition for the term "transit bus" in the recently promulgated final rule for bus rollover integrity ("Rollover Rule"). This request is submitted by New Flyer of America Inc. (NFA), which makes transit buses.

As explained below, NFA respectfully asks NHTSA to clarify and refine this definition, so that physically identical buses designed, built, and marketed as transit buses are not subjected to inconsistent, unsupported, and very costly rollover protection requirements that were never intended to apply to such vehicle types and are unnecessary to protect the traveling public.

Discussion

I. Rollover Risks for Transit Buses Are Much Lower Than for Over-the-Road Buses, Regardless of Who Operates the Transit Bus.

A. Many Transit Buses Are Unintentionally Subject to the Rollover Rule Because of the Poorly Worded "Transit Bus" Definition in the Rule.

Congress intended the Motorcoach Enhanced Safety Act of 2012 to require manufacturers to make over-the-road buses, also known as motor coaches, to higher standards in order to reduce the risk of death or injury to the traveling public in the event of a rollover accident. That statute incorporates a physical definition of over-the-road buses (OTRBs), consistent with other statutory provisions: "a bus characterized by an elevated passenger deck located over a baggage compartment." Motorcoach Enhanced Safety Act of 2012, Pub. L. 112-141, Div. C, Title II, § 32702(6), 126 Stat. 809 (July 6, 2012), citing section 3038(a)(2) of the Transportation Equity Act for the 21st Century, Pub. L 105-178, § 3038(a)(3), 112 Stat 107, June 9, 1998.

The ORTB definition in NHTSA's Rollover Rule repeats this statutory language. 49 C.F.R. § 571.227, S4.

The statute also intended to exempt "transit buses" from the Rollover Rule because their physical characteristics and ordinary operations make them much less likely to suffer rollover accidents. In this case, however, the statute defined the term "transit bus" based on its "use in public transportation provided by, or on behalf of, a public transportation agency," Motorcoach Enhanced Safety Act, § 32702(6)(A), rather than defining "transit bus" based on the physical characteristics of the vehicle.[1]

The Rollover Rule transit bus definition limited the exempt transit buses to those "equipped with a stop-request system ***sold for public transportation provided by, or on behalf of, a State or local government*** and that is not an over-the-road bus." 49 C.F.R. § 571.227, S4. (Emphasis supplied). In adopting this language, NHTSA used the identical "transit bus" definition from the lap/shoulder belt rule for buses found in FMVSS 208, 49 C.F.R. § 571.208, S.4.4.1.

Though based in part on physical characteristics, this transit bus definition will exclude or include the same model transit bus depending on who uses it, rather than based on either the bus design or the kind of use. Thus, under this definition, a transit bus sold to a municipal transit agency will be exempt, but if the same model is sold to a private entity or federal agency for the same kind of low speed, frequent stop duty cycle, it will be subject to the Rollover Rule. These non-exempt applications may include National Park Service shuttles, airport rental car shuttles, or private campus shuttles. These duty cycles – and the negligible rollover risk associated with them – are the same as those for transit buses operated by local or state transit agencies.

NFA and its sister company, ARBOC Specialty Vehicles, LLC, estimate that together they annually sell about 25 to 35 transit type buses that would NOT be exempt from the rollover rule. Some of these are expected to be sold to the General Services Administration (GSA) for lease to various federal agencies, as on military bases or national parks. Many are expected to be sold for use in airport shuttle buses to rental car lots and parking areas. Some are expected to be sold to private universities.

While the numbers vary widely by year, NFA estimates that its competitors are likely to sell roughly three times the number of non-exempt transit buses as NFA and its sister companies do. Thus, NFA estimates that NHTSA's current transit bus definition fails to exempt somewhere between 80 to 120 transit buses a year from the Rollover Rule. But there is no material physical difference between these non-exempt transit buses and the same or similar models sold to local and state transit agencies and their contractors for similar duty. The practical problems created by the failure of the current definition to exclude such transit buses from the Rollover Rule are thus significant.

B. Safety Data about Rollover Bus Accidents Demonstrate That All Transit Buses Should Be Exempt from the Rollover Rule.

[1] The statute also exempted school buses, which are subject to a different set of standards.

Consistent with Congress's clear focus on motor coach and intercity transportation, NHTSA wrote FMVSS 227 and developed its rulemaking record by concentrating on motor coaches as well as a smaller class of "other" buses used in higher speed, inter-city and inter-state travel. As discussed in the Federal Register notices for both the proposed and final rules, that focus on motor coaches and "other" buses (but not transit buses) is justified by NHTSA's Fatality Analysis Reporting System [FARS] data about rollover crashes and fatalities and injuries in those rollovers of motor coaches and similar vehicles. As the Notice of Proposed Rulemaking states, "the FARS database recognizes the vehicle body type of over-the-road buses as cross-country/intercity buses." 79 Fed. Reg. 46094, n. 14. Indeed, in the Notice of Proposed Rulemaking states that "***Transit bus and school bus body types were excluded from the analysis*** because they are easily recognized and categories as such by crash investigators and those coding FARS data. Thus, those vehicles are unlikely to be miscoded as other buses." 79 Fed. Reg. 46096, n. 31 (emphasis supplied).

NHTSA recognized that transit buses are much safer than ORTBs in its Occupant Crash Protection Rule ("Bus Seat Belt Rule"): "Our analysis of FARS data showed that, for buses with a GVWR greater than 11,793 kg (26,000 lb), the ***bus body type with the fewest fatalities was "transit buses.***" 78 Fed. Reg. 70437 (Nov. 25, 2013) (emphasis supplied).

Similarly, in the August 6, 2014 Notice of Proposed Rulemaking for the rollover standard, NHTSA stated that;

> The FARS data from 2000-2009 show that, **for all bus body types with a GVWR greater than 11,793 kg (26,000 lb), transit buses have the fewest fatalities** at 8.2 percent or 23 out of 281. These same data show that there were 20 fatal crashes involving occupants of urban transit buses, resulting in fatalities of 11 drivers and 12 were passengers. Thus, fatal transit bus crashes involve about one fatality on average. In summary, there are many fewer total fatalities and fatalities per crash for transit buses, and thus a significantly lower risk than in the other buses covered by today's proposed rule.

79 Fed. Reg. 46104 (emphasis supplied). NHTSA stated that there "is a significantly lower crash risk . . . due in part to the stop-and-go manner of transit bus operation." *Id.* (emphasis supplied).

NFA's transit buses include a "telematics" system that collects operating data to assist the operators in diagnosing bus operational issues onsite. NFA sought representative data on airport rental and parking shuttle operations from its 44 buses at one major U.S. airport for the period from January 31 to February 4, 2022. These data show an average speed of 9.03 mph.

Similar information was sought from five NFA transit buses operating at two universities from February 1-4, 2022. The average speeds at both universities were under 5 mph.

Needless to say, these average speeds are far slower than typical ORTB operations. These data sets show that NHTSA's assumption about slower speed operations by transit buses are a result of the kind of operations, e.g. airport or university local shuttle, rather than arising from the status of the operator,

whether the bus is operated by a public agency or a private party. There is no reason to believe that rollover risks increase when the same model transit bus used by municipal operators is instead operated in a similar stop-and-go duty cycle by a private university, an airport parking concessionaire, or by the National Park Service.

NFA has also analyzed the data from the Bus in Fatal Accidents (BIFA) database from 1999 to 2010 to determine how many fatal transit bus rollover accidents occurred in that period. See Trucks in Fatal Accidents (TIFA) and Buses in Fatal Accidents (BIFA) | NHTSA.[2]

Of the 23 people who died in heavy transit bus accidents from 2000 to 2009, the period covered by NHTSA's 2014 analysis, two of them died in fatal heavy transit bus rollover accidents. One of these fatalities occurred in a heavy transit bus rollover accident in Los Angeles in 2007 and the other in a heavy transit bus rollover accident in 2009. The data show that the Los Angeles incident involved a vehicle operated by the local transit agency; the data in the 2009 incident does not show what entity operated the bus. The rate of rollover accidents is much lower for transit buses than for OTRBs; of that small number, there is no indication that any involved either federal or private operators as opposed to municipal agencies.

Unlike NHTSA's data analysis, however, the transit bus regulatory definition is NOT based on the "easily recognized" transit bus body type. Instead, it would appear that privately operated airport shuttle buses for rental cars and parking would be required to have rollover protection, but identical models operated by the local transit authority would be exempt. Similarly, if a private university purchases a transit bus identical to the model operated by the local municipality, the university bus may have to have rollover protection and the local transit bus will not, even though the university bus operates at slow speeds, just like the local transit authority does.

There is no safety justification for this strange result, since the detailed BIFA data show only two fatal transit bus rollover accidents in a decade, at least one of which occurred in a transit bus operated by a municipal agency. As NHTSA has reported in multiple proceedings, transit buses—by body type and duty cycle, not operator -- have much better safety records than ORTBs. That safety record does not support requiring any transit bus model to install rollover protections.

There is ***no*** evidence in the record to support discriminating against some transit bus operators because they are not state or local agencies or their contractors. The "transit bus" definition should be clarified and amended so that transit buses built for slow speed, frequent stop duty cycles are exempt from the Rollover Rule, regardless of who operates them.

II. NHTSA's Rulemaking Failed to Address the Very High Compliance Costs for Transit Buses That Are Not Exempt from This Rule.

[2] As explained there, these data were collected by the University of Michigan's Transportation Research Institute for that time period, adding information to the information in Fatality Analysis Reporting System (FARS) used by NHTSA in formulating this rule.

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NHTSA calculated a figure for lives saved annually by the rule, using several different sets of assumptions about discount rates and seat belt use in ORTBs and in "other buses," but not transit buses. The highest calculated figure is 2.45 lives per year saved by implementation of the Rollover Rule.

NHTSA also identified substantial costs per life saved, ranging from a low of $2.48M to a high of $6.38M "per equivalent life saved." The range of costs depends on assumptions about discount rates and seat belt use.

All of those saved lives, however, are in the categories for over-the-road buses and similar vehicles rather than transit buses, because NHTSA excluded transit bus body type figures from its analysis, as noted above.

NHTSA reported 114 fatalities in 32 rollover accidents from 2000 to 2009 involving ORTBs and similar vehicles. By contrast, there were only two fatalities in the two transit bus rollover accidents in the same period.[3] Moreover, at least one of those two transit bus rollover accidents involved a transit bus operated by a municipal agency, while the operator of the other bus that suffered a fatal rollover is unclear from the BIFA data. The rulemaking record thus shows no fatalities in any transit bus rollover accident where the bus was operated by any federal agency or any private operator, whether a university, a rental car shuttle bus, or a private company operating the transit bus at its campus.

For ORTBs, NHTSA identified substantial costs per life saved, ranging from a low of $2.48M to a high of $6.38M "per equivalent life saved." NHTSA calculated these cost figures using the much larger number of fatalities in rollover accidents involving ORTBs and "other" buses, a category that excluded "transit bus" body types. The far lower accident and fatality rates for transit buses mean that the compliance costs for transit bus rollover protection are much higher per life saved and injury avoided.

Based on NHTSA's cost-benefit analysis, there is good justification for excluding ***all*** transit buses from the rollover rule. By contrast, there is ***no*** safety justification for imposing the rollover protection requirements on transit bus models sold to private operators such airport shuttles, private universities, or sold to the General Services Administration for leasing to the National Park Service, while exempting state and municipal entities from such requirements when operating the same model vehicle.

Unfortunately, the Final Regulatory Evaluation (FRE) for the Bus Rollover Standard was NOT posted in the rulemaking docket for the public to review until late Thursday, February 10, even though petitions for reconsideration are due on Monday, February 14, 2022. The 118 page FRE is a critical document for understanding the analysis underlying the final standard and evaluating whether to petition for reconsideration. This omission occurred even though the December 29, 2021 Federal Register notice

[3] For the different period (2004-2018) reported in the notice publishing the final rule, there were 56 fatal rollover crashes involving ORTBs and "other" buses (not transit buses), and 189 occupant fatalities. 86 Fed. Reg. 74298. NFA did not find BIFA data allowing determination of whether any transit bus rollover fatalities occurred after 2010.

mistakenly asserts that the FRE ***had been posted and was available for downloading from the docket.*** 86 Fed. Reg. 74298, n. 124.[4]

The FRE does not appear to include any analysis of the compliance costs or lives saved for transit buses, because NHTSA incorrectly assumed that its transit bus definition exempted all such vehicles. As explained above, that assumption is erroneous and may affect as many at 120 transit buses a year.

NHTSA's FRE, pp. 71-81, analyzes compliance costs, but focuses only on ORTB manufacturers and includes nothing for the costs of transit bus manufacture. NHTSA's analysis reports that some ORTB manufacturers are already in compliance with the European Standard, ECE R.66, and so reduces its cost estimates as well as its estimates for the collective increased vehicle weight resulting from compliance.

By contrast, there is no reason to believe that any transit bus manufacturer has been building its buses to comply with ECE R.66. Thus, building compliant heavy duty transit buses will result in larger unit cost increases than NHTSA assumed in its compliance analysis.

Using the cost figures reported by NHTSA for ORTBs, it is clear that the added compliance costs will also be quite substantial for non-exempt transit buses, and that these costs will fall both upon manufacturers and upon operators, many of which are non-profit entities such as private universities. According to the Federal Register notice, these cost increases include increased material costs and increased fuel consumption. The FRE contains no analysis of these increased costs and higher fuel consumption for transit buses.

Judging by the December 29, 2021 Federal Register Notice, NHTSA's analysis failed to consider the following costs and serious adverse effects of the transit bus definition, including negative environmental results and increased road wear:

(a) **Increased Manufacturing Costs for Separate Versions of Transit Buses.** These costs include the cost of preparing a different design for the non-exempt transit buses, testing that design for compliance with the rule, and setting up different production tooling for the different, rollover protected model of the transit bus. Because of the limited size of the non-exempt transit bus market, these increased design, testing and tooling costs will have to be spread over very few vehicles, threatening substantial cost increases. Alternatively, manufacturers may simply decide not to offer new transit buses for such non-exempt operators, leaving ORTBs as the only new bus alternative, even though they carry fewer passengers when standees are considered;

[4] The failure to post the FRE is a serious problem because that FRE reportedly contains the detailed economic analysis and compliance cost estimates. *Id.* Without that document, NFA cannot effectively review and check NHTSA's underlying analytical work. By separate February 10, 2022 letter to NHTSA, NFA's counsel requested an additional thirty days to file a revised petition for reconsideration, a revision including discussion of the FRE.

(b) **Increased Emissions.** Increasing weight increases emissions, as NHTSA is well aware from corporate average fuel economy (CAFE) rules it adopted in coordination with greenhouse gas (GHG) rules adopted by the federal Environmental Protection Agency (EPA). *See, e.g.,* 86 Fed. Reg. 49602 (Sept. 3, 2021) (NHTSA proposed revision to CAFE rules, taking 282 pages in the Federal Register, including detailed discussions of weight reduction and emissions). One of the primary means of controlling GHG emissions is by reducing vehicle weight, but this rule adds as much as 784 pounds of steel according to NHTSA. 86 Fed. Reg. 74298. The Rollover Rule notice does not discuss or analyze these substantial adverse environmental impacts, a significant and troubling omission.

(c) **Increased Road Wear and Repair.** Road wear is correlated with vehicle weight; damage increases with vehicle weight. Road wear increases quickly for the heaviest vehicles, which is the reason the Federal Highway Act sets maximum weights for trucks and other vehicles and requires states to implement programs to prevent overweight trucks on the roads. 23 U.S.C. § 127 (Vehicle Weight Limitations – Interstate System), § 141 (state enforcement of maximum vehicle size and weights). The NHTSA Federal Register notice publishing the final Bus Rollover Rule does not analyze or discuss this substantial road repair cost to all levels of government that will result from this significant weight increase.

NHTSA's apparent failure to consider these important cost factors and adverse effects for vehicles affected by the Rollover Rule suggests that the Rollover Rule's factual basis is seriously flawed, especially in its unsupported imposition of these requirements to transit buses operated by entities other than state or local agencies (or their contractors).

III. Recommended Revision of Transit Bus Definition

NFA respectfully requests that the "transit bus" definition in 49 C.F.R. § 571.227, S4, be revised to read as follows:

"Transit bus" means a bus that:

(a) Is not an over-the-road bus;
(b) is designed and built for primary use in a slow speed, frequent stop duty cycle such as urban street use, university campus shuttles, military bases, airport parking or rental car shuttles, and similar applications;
(c) is marketed for slow speed, frequent stop duty cycles, not only to public transportation agencies but also to federal agencies and private entities for such duty; and
(d) is offered for sale with a stop-request system.

Subsection (a) comes from the current definition.

Subsection (b) makes clear that to be exempt from the Rollover Rule, the vehicle is to be designed and built for use in classic slow-speed, frequent stop transit applications, giving examples that may not be run by or on behalf of state or local transit agencies, but have the same kind of low speed duty cycle.

Subsection (c) requires that these vehicle models be offered for sale to state and local transit agencies and their contractors, as well as to federal agencies and private entities for use on frequent stop, slow speed duty, so that there is no later confusion about the broad scope of the transit bus exemption.

Subsection (d) requires that the vehicle model be offered with the option for a stop-request system, similar to the current requirement. (In some university and airport settings, the operator drives a fixed route and does not necessarily use a stop request system.)

IV. Relief Requested

NFA asks that NHTSA revise the "transit bus" definition in the Rollover Rule as explained in this petition, so that the same model transit buses will face the same safety requirements rather than different and very costly requirements based on the legal form of the operator.

Respectfully submitted,

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