

White Paper

Why the National Congress on School Transportation should endorse seat belts on school buses

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### Abstract

The public is used to seat belts in automobiles, and would generally question why seat belts are not in school buses. Meanwhile, school bus administrators are aware of the special safety construction features of a school bus, which reduce the likelihood of an accident causing injury or death. Those features include closely spaced, well padded seats, with high seat backs. This bus seat construction is known as compartmentalization, and tends to keep the occupant in a safe, confined space in the event of an accident. The issue of seat belts on school buses remains a highly debated topic, because of the two opposing viewpoints. According to the Connecticut Office of Legislative Research ([COLR], 2009) currently six states have seat belt laws: California, Florida, New Jersey, New York, Louisiana, and Texas; and furthermore 14 states considered school bus seat belt bills in 2008. This paper will examine the arguments for not having seat belts on school buses, will suggest that seat belts should be installed on school buses, and will propose a method to promote an increase the number of school buses with seat belts.

On March 29, 2006, the West Brook Texas High School girls' soccer team was on a charter bus transportation trip to go to the Houston area for a playoff game. Students were doing routine student activities on the bus: watching a movie, studying, talking, or napping. The rain was pounding, clouding some windows. Suddenly, the driver swerved to avoid unexpected debris in the road. Quickly the bus rolled over onto its left side. Some students were pinned under the bus (Reid & Krift, 2006). After the chaos was over, two students, senior Alicia Bonura and sophomore Ashley Brown, were dead. Sixteen students were injured, including Devin Martindale who had her left arm amputated (Hancock, 2006).

Allison Forman recalls regaining consciousness while still pinned under the bus. "I listened to the sounds of Devin's screams as ants covered her body . . . it is hard to remain calm when you reach up to touch your head and your hand is immediately covered in blood" (Forman, 2010). After a month of elbow and hand reconstruction surgeries, and over a year of physical therapy, Allison lives with the limited range in her left elbow, which eliminates her being able to perform many routine activities such as holding change in the palm of her hand. Allison says every day we all make safety choices such as buckling up in a car. But when riding in bus without seat belts, you are not given that choice, and "it cost me two friends, the full use of my left arm and the chance at a normal life" (Forman, 2010).

The school bus industry does not give many students the seat belt safety choice. Just six states have seat belt on school bus laws: California, Florida, New Jersey, New York, Louisiana, and Texas (Connecticut Office of Legislative Research [COLR], 2009). The Texas law is expected to be implemented this fall (Kennington, 2010). The Louisiana law does not go into effect until funding is provided to pay for the seat belts. The Connecticut Office of Legislative Research reports that 14 states considered school bus seat belt bills in 2008 (COLR, 2009) In

addition, current Federal law requires two-point lap seat belts in the construction of Type A school buses that weigh less than 10,000 pounds, because of their unique size, design, and construction (United States National Highway Traffic Safety Administration [US NHTSA], 2008, p. 62745). A new federal law requiring three-point lap/shoulder seat belts in these small school buses goes into effect in September of 2011. Also, many school districts use school buses with seat belts for early education programs.

The school bus industry has had valid reasons for resisting seat belts on school buses in the past. Two point lap belts were the main original type of seat belts on school buses. The National Transportation Safety Board has stated, for its six case studies in its review of school bus crashworthiness, that “. . . lap belts probably would not have affected the total number of deaths in those accidents” (United States National Transportation Safety Board [US NTSB], 1999, p. 2). The NTSB report further discusses a whipping action when using lap belts, likely causing more head injuries than if no lap belts were used (US NTSB, 1999, p. 23 & p. 27). Another reason for resisting seat belts on school buses was that originally there could only be two of the lap/shoulder belts per bench seat in a bus. Thus, a bench seat that normally would hold three elementary students could only hold two buckled students when equipped with three point lap/shoulder belts. It is believed the reduction in school bus capacity would result in more students using other more dangerous means of getting to and from school. These other means getting to and from school would result in more death and injuries to students (US NHTSA, 2008, p. 62751).

However, in the fall of 2008, three companies introduced “flexible seating systems”. Under these systems the “lap/shoulder belts are reconfigurable to accommodate either three smaller students or two larger students”, without the need for a school bus capacity loss (US

NHTSA, 2008, p. 62751). It appears that a common bus configuration will be a maxi-spaced 72 passenger seating arrangement in a 77 passenger school bus body (Anderson, 2010). With the flexible seats, the seat back does not have the traditional tapered top, making it harder for students to walk down the aisle. The maxi-spaced 72 passenger seating arrangement in a 77 passenger school bus body allows for some staggering of seat backs, making it easier for students to walk down the aisle.

What are the current arguments exists against seat belts on school buses? First, it has been stated that in emergency evacuation situations such as a fire on the bus, students could be stuck in their seat until someone unbuckled their seat belt. Actually for the students generally transported on school buses, i.e. grade Kindergarten students through grade 12 students, the students already know how to buckle and unbuckle seat belts. In fact stores such as Babies R' Us sell seat belt locks to prevent toddlers from unlocking seat belts (tdm1175, 2006). Unbuckling seat belts would be a complication in an emergency school bus evacuation, but it is wrong to imply that many or all of the students would be waiting for someone to unbuckle their seat belt.

Second, it has been stated that students would not use the seat belts. In fact, it has generally been reported that, in areas where seat belts are on school buses, elementary students use the belts, but secondary students do not use the belts (Vits, 2010). This problem could be solved by requiring seat belt usage within the school district's student behavior policy, along with strict enforcement of the policy. A related topic is that the seat belts must be adjusted properly to be effective. A seat belt training policy should also be in place for students who put on seat belts by themselves in school buses.

A third argument against seat belts on school buses is the legal liability risk to school bus operators. However, States could follow the method used by the State of Minnesota to deal with

this issue. Students are required by law to use the seat belts if the school bus is equipped with a seat belt. But the school bus operator is immune from liability if the injured party in a school bus was not wearing a seat belt (Minnesota Statute 169.447, subd., 2a., Appendix A)

The final major argument against using seat belts on school buses is the cost. Seat belts on newly constructed school buses are estimated to cost between \$7,000 and \$16,000 depending upon local circumstances and market conditions (Roscoe, 2010, & Vits, 2010). Retrofitting used school buses is not recommended. For retrofitting there would be the seat belt costs to be paid all at once, along with the additional labor cost to install the bench seats, and the uncertainty if the floor strength of the used school busses are adequate for the impact force resulting from accidents with used buses equipped with seat belts (Lampartner, 2010). The National Highway Traffic Safety Administration reports the nationwide seat belt cost would be between “\$183 and \$252 million” for all school buses, and “save about 2 lives per year” and “prevent 1,900 crash injuries per year” (US NHTSA, 2008, p. 62751). Some would argue the additional cost for seat belts, i.e. the cost between \$7,000 and \$16,000, would result in a reduction in school bus service, resulting and students using other more dangerous means of getting to and from school. As stated earlier, these other means would result in more injuries and death to students.

However, it is likely the seat belt costs on newly constructed school busses would be absorbed without a major reduction in transportation service. Cal Lemon reports that, for model-year 2007 school buses, the engine cost increased about \$7,000 per bus for compliance with new federal Environmental Protection Agency regulations, but the pupil transportation industry adjusted to the new annual costs without a major reduction in service (LeMon, 2008). If requiring seat belts on school buses increases the cost of a school bus about \$11,000, as has been

suggested might be common for Texas this fall (Vits, 2010), or some other amount, the pupil transportation industry can again adjust to the new annual cost.

The introduction of flexible seating has been the wind of change in the seat belts on school bus argument. Currently, if one school district in a state requires seat belts on school buses, that district looks like a lone ranger. If a state requires seat belts on school buses statewide, it appears that the politicians in that state have capitulated to parental pressure, because the politicians did not want to appear to be opposed to student safety. The school bus community prides itself in providing safe student transportation. The student transportation community should adjust its sails to the wind of change and support flexible seating systems on school buses as a means to improve student safety for student transportation. The National School Transportation Congress is the main student transportation community means of developing school bus construction standards. The National School Transportation Congress should endorse seat belts on newly constructed school buses. The next Alicia and the next Ashley and the next Devin and the next Allison that are in a school bus accident are relying upon us to give them a choice to be able to wear seat belts in school buses.

Appendix A - Minnesota Statute 169.447, subd., 2a.

(d) A passenger on a school bus equipped with lap belts or lap and shoulder belts must use these lap belts or lap and shoulder belts unless the passenger, or if the passenger is a minor, the passenger's parent or guardian, has notified the school district in writing that the passenger does not intend to wear the lap belt or lap and shoulder belt.

(e) In an action for personal injury or wrongful death against a school district, a school bus operator under contract with a school district, or any agent or employee of a school district or operator, or against a volunteer, no such person or entity shall be held liable solely because the injured party was not wearing a safety belt; provided, however, that nothing contained herein shall be construed to grant immunity from liability for failure to:

(1) maintain in operating order any equipment required by statute, rule, or school district policy; or

(2) comply with an applicable statute, rule, or school district policy.

(f) In an action for personal injury or wrongful death, a school district, a school bus contract operator, any agent or employee of a school district or operator, or a volunteer is not liable for failing to assist any child with the adjustment, fastening, unfastening, or other use of the lap belt or lap and shoulder belt.



## Appendix B – Personal and social cost savings with seat belts on school busses

In the NHTSA final rule (US NHTSA, 2008, p. 62752) the West Brook Bus Crash Families (WBBCF) pointed out the types of savings that should be considered for the decision to use seat belts on school busses. WBBCF comments pertained to the “. . . associated reductions in personal and societal costs due to lap/shoulder belts in terms of medical, insurance, and liability expense, physical disability and trauma, emotional trauma, and lost education days . . .”. The prevention of multiple million dollar lawsuits and prevention of tens of millions of dollar lawsuits can go a long way toward offsetting the cost of seat belts on school buses.

### Appendix C – Phase in concern

As stated in this paper, the implementation of installing seat belts on school buses should occur with newly constructed school buses. The retrofitting of used school buses is not recommended. Installing seat belts only on newly constructed school busses will create a situation where some school buses would have seat belts and some school buses would not have seat belts, at the local school district level. Thus, some students would be offered a safer school bus with seat belts than other students whose school buses do not have seat belts. Parents may lobby for their students to receive transportation in the safer school buses with seat belts. This issue would not be resolved until the full phase in of school buses with seat belts.

## References

- Anderson, J. (2010, February 24). [Personal letter to Lt. Ed Carroll of the Minnesota State Patrol]. 3 point seat belts in IC school buses.
- Connecticut Office of Legislative Research. (2009). Seat belts on school buses. Retrieved March 17, 2010, from <http://www.cga.ct.gov/2009/rpt/2009-R-0419.htm>
- Forman, A. (2010, March 19).[Personal interview by email to the Author]. Human element questions.
- Hancock, M. (2006, July 29). School bus seat belts. Retrieved March 4, 2010, from <http://markhancock.blogspot.com/2006/07/school-bus-seatbelts.html>
- Kennington, C. (2010, March 15). [Personal conversation by telephone].
- Lampartner, R. (2010, March 17). [Personal conversation by telephone].
- LeMon, C. (2008, October). The people have spoken, are we listening: A position paper on lap/shoulder belt restraints in school buses. Paper presented at the annual meeting of the National Association of State Directors of Transportation Service, Grand Rapids, Michigan. Archived by *School Transportation News*, [http://stnonline.com/images/stories/pdfs/seatbelts\\_cal\\_lemon.pdf](http://stnonline.com/images/stories/pdfs/seatbelts_cal_lemon.pdf)
- Minnesota Statute 169.447, subd. 2a. (2009). Retrieved March 17, 2010, from

<https://www.revisor.mn.gov/statutes/?id=169.447>

Reid, J., & Krift, F.A. (2006, September 5, Posted 2008, June 17). Passenger describes horror of crashing bus. Retrieved March 3, 2010, from

<http://www.beaumontenterprise.com/news/21028639.html>

Roscoe, M. (2010, March 15). [Personal conversation by telephone].

tdm1175. (4 years ago). Yahoo! Answers, seat belt lock for child's' safety seat, Babies 'R Us sells car seat belt safety devices. Retrieved March 23, 2010, from

<http://answers.yahoo.com/question/index?qid=20060829112227AAuYABE>

United States Department of Transportation National Highway Traffic Safety Administration.

(2008). 49 CFR Part 571 Docket No. NHTSA-2008-0163 Federal Motor Vehicle Safety Standards; seating systems, occupant crash protection seat belt assembly anchorages, school bus passenger seating and crash protection. United States Federal Register, Washington DC.

United States National Transportation Safety Board. (1999). Highway special investigative report, bus crashworthiness issues, NTSB/SIR-99/04. Washington DC.

Vits, C. (2010, March 15). [Personal conversation by telephone].

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The opinions expressed in this paper are those of the author.

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