



Seat Belts on Large School Buses

Seat Belts on School Bus Public Meeting
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Overview



- **NHTSA's position on seat belts on school buses**
- **Rulemaking actions since the 2007 public meeting**
- **Seeking new information**
- **Information to facilitate discussion**

NHTSA's Position on Seat Belts on Large School Buses



- **School buses are the safest form of school transportation in the U.S.**
 - The agency encourages all students to ride school buses to and from school.
- **NHTSA continuously assesses how school buses can be made safer, but has always been cautious of the unintended consequences of reducing school bus ridership.**
- **Decision to install seat belts on school buses is left to States and local jurisdictions.**
 - Local authorities are best positioned to weigh the benefits and consequences of seat belts and assess overall safety specific to their school transportation programs.

NHTSA's Position on Seat Belts on Large School Buses - Continued



- **Seat belts further enhance protection already provided by compartmentalization.**
- **Federal standards ensure no degradation of compartmentalization when seat belts are installed.**
- **Recommend that those States and local districts requiring seat belts on school buses also provide training to drivers and students on their proper use.**
- **Section 402 and certain other grant funds may be used for purchase and installation of seat belts on school buses.**
 - Must be included in State Highway Safety Plan
 - Cannot be used for the purchase of school buses



Rulemaking Actions Since the 2007 Public Meeting

2008 Final Rule



- **Increased seat back height to improve compartmentalization**
- **Required lap/shoulder belts for small school buses (GVWR < 10,000 lb)**
 - Lap belts previously required
- **Established performance requirements for lap/shoulder belts on small school buses and for voluntarily installed seat belts (lap only or lap/shoulder belts) on large school buses**
 - Ensures compartmentalization is not compromised by addition of seat belts
 - Provisions for flexible seating and dual frame seats
- **Lap belts are not prohibited on large school buses**
 - Real world data show lap belts can have a positive effect in rollover and side crashes with no real world evidence of increased safety risk.

2011 Denial of Petition for Rulemaking



- Assuming 100% seat belt use, a Federal mandate for lap/shoulder belts could save 2 lives annually.
- Average incremental cost of equipping a large school bus with lap/shoulder belts without loss in capacity = \$7,346 - \$10,296.
- Greater cost to buy and operate a school bus with seat belts may reduce the number of school buses available for pupil transportation.
- Students will use alternative, less safe means of getting to and from school.
 - This could result in an increase of 10 to 19 school transportation fatalities annually.

Seeking New Information



- **NHTSA has evaluated the issue of belts on school buses for many years and continuously seeks updated information to ensure we are appropriately addressing this matter.**
 - Are there new technologies and strategies to improve school bus safety and overall school transportation safety?
 - What is the experience of school districts and States that have seat belts on school buses? How are these States obtaining sufficient school transportation funds?
- **This public meeting is for seeking new information and strategies on ways to improve school bus safety and overall school transportation safety.**



Information to Facilitate Discussion

Large School Bus Passenger Fatalities

Average Annual Fatalities of school age child occupants of large school buses by crash mode

Crash mode	Front	Side	Rear	Rollover
No. of Fatalities	1.3	0.7	0.5	1.3
% Fatalities	34.2%	18.4%	13.2%	34.2%

2004-2013 10-year period FARS Data files

- **Approximately 4 school age children (5 – 18 years old) who are occupants of large school buses are killed annually.**
 - In contrast , 11, 977 passenger car occupants were killed in 2013
- **Fatalities per 100 million miles traveled by school age children to and from school:**
 - School buses = 0.01
 - Passenger vehicles = 0.70

Annual School Transportation Fatalities



Average annual fatalities among school age children in the United States during school transportation time.

Transportation Mode	No. of Fatalities	% of Fataliteis
Occupants of Large School Bus	3.4	0.6%
Occupants of Passenger Vehicles	453.3	77.7%
Pedestrians near and around loading/unloading zone of school bus	11.6	2.0%
Pedestrians (other)	60.9	10.4%
Bicyclists	19.4	3.3%
Occupants of other vehicles	34.8	6.0%

FARS data for 10 school years from 2003-2004 to 2012-2013

What Makes Large School Buses so Safe?



- **School buses have to meet more Federal safety standards than any other type of motor vehicle.**
 - Compartmentalization
 - Overhead flashing lights and a stop arm for halting traffic during loading and unloading students
- **Greater weight and elevated passenger deck**
 - Lower crash accelerations and impact loads to the occupant compartment.
- **Conspicuous yellow color bus**
- **School bus operation**
 - Generally low speed stop and go travel with well trained drivers.

2010 Alabama School Bus Seat Belt Pilot Project



- **In 2010, the University Transportation Center for Alabama conducted a study to evaluate the need for seat belts in school buses**
 - Explored implementation of lap/shoulder belts on school buses
 - Pilot study determined rate of seat belt use and cost-effectiveness of requiring lap/shoulder belts.
- **Benefits = 0.1 lives saved, 8 injuries prevented annually**
- **Net Benefits (benefits – cost) = -\$104 Million to -\$125 Million**
- **School bus safety funding better spent on reducing fatalities in loading/unloading zone of school buses rather than on seat belts.**
 - 6 pupil fatalities in school bus loading/unloading zone in past 10 years.
 - 5 school bus occupant fatalities in past 37 years.

States Requiring Seat Belts on School Buses



- **Currently 6 States require seat belts on large school buses:**
 - Florida, New York, and New Jersey require lap belts
 - California requires lap/shoulder belts but does not require school districts to provide school bus transportation service.
 - Texas requires lap/shoulder belts but State legislature has not provided funds
 - Louisiana requires lap belts but State legislature has not provided funds
- **Use of seat belts**
 - Florida provides training to bus drivers and students – requires students to wear the available lap belts
 - New York and New Jersey do not require lap belt use and do not provide training
 - California requires students to use lap/shoulder belts.

Seat Belt Use Rate



- **Seat belts are only effective if they are used. They are most effective when used properly.**
- **If the decision is made to install seat belts on school buses, local districts should also consider programs to ensure they are used properly by all students on every school bus ride.**
- **Seat belt use in the 2010 Alabama Pilot Study – 170,000 observations:**
 - Average seat belt use rate was 61.5% (range: 2% to 95%)
 - Most important factor influencing seat belt use was a caring driver who consistently encouraged seat belt use.
 - Other factors include age of students, presence of aide on bus, time of day, and length of route.
 - Improper belt use was about 8%
- **Anecdotal information in California indicates that middle school and high school students are significantly less likely to wear lap/shoulder belts than elementary school students.**

School Bus Production



Percentage production of Type A (small bus cutaway chassis), Type C (conventional school bus), Type D (flat nose school bus)

(During 13 months from July 2014 to July 2015)

Types of Seats on School Buses	Manufacturer A	Manufacturer B
Buses with Lap Belts Installed at Factory	24%	20%
Buses with Lap/Shoulder Belts Installed at Factory	9%	7%
Buses with Seats “Capable” of Having Lap Belts Installed by Customer at a Later Date	50%	25%
Buses with Standard School Bus Seats (No Possibility of Installing any Type of Belt Afterwards)	17%	48%

Data from two major school bus manufacturers

Loss in School Bus Capacity



- **Previous school bus seat designs with lap/shoulder belts reduced school bus capacity in two ways:**
 1. Thicker seat backs take more floor space and result in loss of one or more rows in a bus
 2. To maintain minimum width between seat buckle latches, one seat is lost per row.
- **No loss in school bus capacity with current school bus seat designs with lap/shoulder belts for most seat configurations.**
 - No loss in floor space (thinner seat backs)
 - Flex seating (accommodates 3 elementary school students and 2 middle/high school students)



Questions?