



Why Don't School Buses Have Seat Belts?

If seat-belts have proven to be lifesavers in passenger vehicles, why are seat-belts not available on school buses?

A multitude of research from Transport Canada and other North American safety research sources demonstrate, surprisingly, that seatbelts on school buses do not provide any significant safety benefit. In fact, crash tests have shown that seatbelts on buses create more drawbacks than advantages.

Crash tests of three different sizes of school buses were conducted in 1984: one small bus, one van conversion type bus and one large bus. Using unbelted and belted dummies, the tests indicated that the use of a lap belt of forward-facing seats could increase the risk of head injuries during a severe frontal collision.

In a head-on collision (the most common type of bus accident), an occupant with a lap belt would experience more severe or fatal head and neck injuries. The lap belt would hold a person's pelvis firmly in place only to allow the torso to crack like a whip, with the head striking a seat back or a hard object with greater force than if the whole body had been thrown.

Further investigation showed that the combination lap and shoulder belts would require stiffer seats which could increase injury to unbelted students. Also the lap-shoulder belts provided no added protection in a sideways crash: a child would shake loose from the shoulder belt.

Moreover, the lap belts increased the chance of abdominal injuries because of "submarining" (caused by the lap belt riding up onto the abdomen area, where there is no bone structure to prevent injury to internal organs). Tests showed that because of children's varying sizes and activity on the bus the lap belts would move out of position, risking injuries to internal organs.

Also in an emergency, the use of seatbelts could hinder evacuation. Young children should not be placed in a situation where they must be responsible for their own safety.

Transport Canada tried other options

In 1986 Transport Canada designed, fabricated and tested five different types of seats with restraints in an effort to improve rider protection. The rear-facing seat provided the greatest potential for occupant protection during frontal and near-frontal collisions. In a head-on collision, the crash forces would be spread over the back of a rear-facing occupant instead of being concentrated on the head. However, motion sickness was found to be an unworkable drawback of the rear-facing seats.

.....cont'd





SAFETY ON THE SCHOOL BUS—page 2

It is important to note that although school buses do not have an overt safety belt system like a passenger vehicle, federal standards require a multitude of passive safety systems engineered into them.

School buses are the safest of all vehicles on the road

It is also worth noting that compared to riding in a passenger vehicle, children are 16 times safer riding in a school bus.

Moreover, many more children are killed outside of the school bus than inside; for instance, 40 per cent of all road fatalities to children aged 5 to 9 occur when they are pedestrians.

Statistically, the school bus is the safest of all vehicles on Canadian roads.

