

CPS in Other Vehicles

OBJECTIVES

- Identify appropriate car seats and booster seats by vehicle type.
- Explain current recommendations for car seats and booster seats in other vehicles.

APPROPRIATE CAR SEATS AND BOOSTER SEATS BY VEHICLE TYPE

Vehicle design affects the correct selection and use of car seats and booster seats. CPS Technicians must understand **how** vehicle design impacts the correct use of car seats and booster seats in all modes of transportation.

Pickup Trucks

Occupant restraint standards are the same for pickup trucks as for passenger cars.

- ☑ Car seats and booster seats are crash tested on forward-facing vehicle seats and cannot be secured on a pickup truck's side-facing jump seat.
- ☑ Undersized (or small) rear bench seats may not allow enough space between front and rear-seating areas to achieve the correct recline angle for a rear-facing car seat.
- ☑ As with car seats and booster seats in passenger cars, according to most manufacturers, a car seat in a pickup truck must have 80 percent of the base supported by the vehicle seat with no more than a 20 percent overhang on the front edge of the vehicle seat. Some models require 100 percent of the car seat to be on the vehicle seat and some have indicators (lines) on the seat to show how much must be placed on it.
- ☑ Cargo areas are **NOT** designed for passenger seating under any circumstances. Children and adults can be easily thrown from cargo areas at relatively slow speeds as a result of a sharp turn.
- ☑ Only manufacturer approved seating positions can be used (check the owner's manual for recommendations on cargo areas and also center seating positions).

Some regular-cab and extended-cab pickup trucks with frontal passenger air bags have on-off switches for the frontal passenger air bag.

15-Passenger Vans

- ☑ Many childcare providers or schools use 15-passenger vans to transport multiple children. At times, they overload the vehicle. Fully loaded, 15-passenger vans cause the center of gravity to shift rearward and upward, increasing the likelihood of a rollover.
- ☑ **NEVER** load the roof. This cargo will be above the center of gravity of the vehicle and will increase the likelihood of a rollover.



15-passenger vans can pose dangers

15-Passenger Vans (continued)

- ☑ It is important that the van be operated by experienced drivers who should:
 - Understand and be familiar with the handling characteristics of their vans, especially when fully loaded.
 - Load the van front to back in order to balance and distribute the weight.
- ☑ To reduce the risk of 15-passenger van rollovers, manufacturers:
 - Widen the vehicle and/or reduce its height.
 - Impose structural standards for school buses.
 - Equip them with laminated side windows.
 - Provide emergency exits.
 - Equip them with extra signs and signals.
 - Require a commercial driver's license.
 - Equip them with dual rear wheels.

WEBSITE RESOURCES ON CAR SEATS AND BOOSTER SEATS IN OTHER VEHICLES

- <http://www.nhtsa.gov>
- www.nts.gov/publicatn/1999/sir9904.pdf
- www.aap.org
- www.nasdpts.org
- www.headstartinfo.org

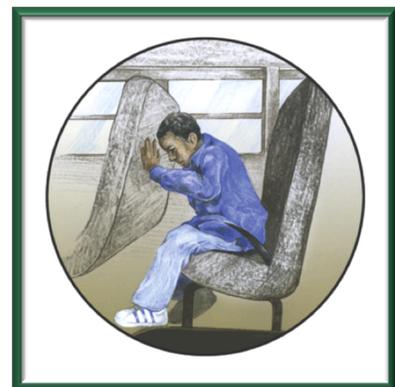
School Buses

School bus transportation is the safest form of ground transportation. School buses are nearly eight times safer than passenger vehicles.

- ☑ Buses are larger and heavier than most other vehicles. Crash forces are distributed throughout the vehicle differently and are also experienced by the occupants differently.
- ☑ Passenger seating and crash protection, known as “**compartmentalization**,” is required on school buses.
 - Seats on school buses must have flexible, energy-absorbent, high seat backs (a minimum of 24 inches from the hip reference point).
 - The combination of energy-absorbent seat backs and narrow spacing creates a compartment within which each occupant is confined in a crash.
- ☑ Small school buses (weighing less than 10,000 pounds) are required to have seat belts. Lower anchors are also required in at least two seating positions. Tether anchors are **NOT** required in school buses.



LATCH on a school bus



Compartmentalization on a school bus

Getting to and from the bus is more dangerous than riding the bus!

NHTSA School Bus Safety Recommendations

NHTSA recommendations for infants and preschool age children on buses are as follows:

- ☑ Preschool age children should be properly restrained in car seats meeting FMVSS 213 when they ride on a school bus.
- ☑ Retrofitting seat belts on existing school bus seats is possible only when manufacturer instructions are followed.
- ☑ Tethers are **NOT** commonly used on school buses.
- ☑ For more information, go to <http://www.nhtsa.gov/School-Buses>



Child Passenger Safety Options for School Buses

An Individual Education Plan (IEP) is for children between the ages of 3 and 21 and is developed to support each child’s special needs. The transportation needs of the child are a related service that should be included in the IEP.

Children under age 3 who have special health care needs receive the same kind of services through an Individual Family Service Plan (IFSP) that considers the family needs of the child as they receive early intervention services and therapy.

Options for children who need car seats on a school bus include:

- ☑ Integrated car seats
- ☑ Conventional car seats
- ☑ Harnesses and vests
- ☑ Wheeled transportation devices

In addition, safety vests are options for children 20 pounds or more when other car seats will not meet the child’s needs.



School bus car seat options

“As Chairman of the National Transportation Safety Board, I've seen firsthand how proper child restraint use has saved lives. As a CPS Technician, I know that it is imperative to teach parents about the importance of properly restraining their children at all times. When it comes to flying, that means buying a seat for every child and using a child safety seat for infants and toddlers.”

Deborah A.P. Hersman
NTSB

Car Seats on Airplanes

The Department of Transportation's Federal Aviation Administration (FAA) encourages, but does **NOT** require, the use of car seats on airplanes for children under the age of 2.

- Airlines currently allow children under the age of 2 to fly free of charge as lap children.
 - Some airlines offer discounts so caregivers can be guaranteed their children can travel in a car seat.
 - Caregivers should always verify car seat policies with the airline on which they are traveling.
- Turbulence (rough flying) can happen with little or no warning. The safest place for children during turbulence or in an emergency is in an approved car seat.



Car seats are the safest place for children on airplanes

Any car seat used on an airplane must have a label stating it is certified for aircraft use.

- Use a rear-facing car seat for infants younger than 1 and less than 20 pounds.
- Use a forward-facing car seat for children weighing 20 to 40 pounds.
- Use the airplane seat belt for children over 40 pounds.

The FAA has approved the AmSafe Aviation CARES device. The FAA recently established guidelines for the use of this restraint system for use on planes only – **NOT** in vehicles.

- CARES uses an additional belt and shoulder harness that goes around the seat back and attaches to the passenger lap belt.
- It is designed for children weighing between 22 and 44 pounds who are less than 40 inches and can sit unassisted.

For FAA CPS requirements, see http://www.faa.gov/passengers/fly_children. For a Safe Ride News Fact Sheet on Airplane Travel With Babies, see <http://www.saferidenews.com>.

Car Seats and Booster Seats in Emergency Vehicles

Emergency vehicles may have side or rear-facing vehicle seats. There are no standards for crash testing a car seat or booster seat on a side-facing or rear-facing vehicle seat. A car seat or booster seat should **NOT** be used in these seating positions.

- Rear-facing car seats are made to face backward on a forward-facing vehicle seat. They **CANNOT** be safely installed on a rear-facing ambulance seat.
- If possible, non-patient children in an emergency situation should be transported in another vehicle. Car seats and booster seats should be secured with seat belts anchored only in locations considered safe in a crash.
- Emergency services should develop and follow guidelines to transport children safely.
- A car seat or booster seat should **NOT** be installed in police vehicles if a prisoner screen is present. This screen does not allow enough space for the forward movement of the child's head. Plastic or prisoner seats are also not compatible with car seats and booster seats and **CANNOT** be used.
- In cases where police equipment is present and correct installation is not possible, police officers will need to find another way to transport the child.

NOTE: It is important to secure the EMS provider and equipment. Children are only as safe as the environment around them. Flying unrestrained medics and equipment can be extremely hazardous.

Resources for Car Seats and Booster Seats in Other Vehicles

Resources you can find on the NCPSTB website related to car seats and booster seats in other vehicles include:

- *Guidelines for the Safe Transportation of Pre-school Age Children in School Buses*
- *AAP School Transportation Safety*
- *AAP Restraint Use on Aircraft*
- *Crash Protection for Children in Ambulances*

An additional resource is:

Recommendations for the Safe Transport of Children in Emergency Ground Ambulances (National Association of State EMS Officials at <http://www.nasemso.org> and Pediatric Emergency Care Council at <http://www.nasemso.org/Councils/PEDS/index.asp>).



1. What are some factors to consider when selecting a car seat or booster seat for a pickup truck?

2. What are some factors to consider when selecting a car seat or booster seat for a school bus?

3. What are some factors to consider when selecting a car seat to use on an airplane?

4. What are some factors to consider when selecting a car seat or booster seat for an emergency vehicle?
