

# At Issue

A RISK MANAGEMENT NEWSLETTER FOR  
ELEMENTARY AND SECONDARY SCHOOLS



## Selected Bus Fleet

By: **Stephen Cerro**, Senior Risk Control Specialist,  
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## Safe-Driving Practices

Bus fleet safety training and controls, when properly established, practiced and maintained, are the most effective means of protecting against loss. Driver health and attitude play an equally important role.

Backing, side-swipes, tail-swing accidents, and rear-end type accidents are common bus accidents.

The following information highlights these exposures and identifies measures to help reduce and prevent losses from occurring.

### EXPOSURES & PREVENTION:

#### 1. BACKING

Backing accidents are one of the most common to school bus fleets. It is difficult to see what's behind the bus even with the best mirror adjustment. This is especially true when it is foggy or dark. We recommend not backing-up buses while on school grounds.

- **First Rule:** Avoid backing your bus whenever possible. It is better to drive around the block, instead.
- **Second Rule:** Know how much space it takes to successfully back up your bus. Bus lengths, widths and turning radiuses vary and each one is different. The way a bus drives also affects how it handles in such situations.
- **Third Rule:** Avoid routes that require backing.

#### In those situations where backing is unavoidable:

- Always know what is behind you before you attempt to back up.
- Use an adult spotter, when available, to act as a guide to warn about obstacles, approaching persons and/or to warn traffic.
- Ask for quiet from students so that you can hear your spotter as you begin to back up.
- If a driver needs to get out and observe the scene — do so. It decreases the likelihood of an accident. The driver should keep the bus in park; set the parking brake, turn on flashers, and remove the keys from the ignition. Never leave the bus unattended with the engine running.

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- Look for hazards such as nearby children, pets/animals, fixed objects (light poles, trees, etc.), terrain concerns (soft or muddy areas, potholes, and tire hazards) and other motorists.
- Check for clearance-related obstructions, such as low-hanging trees and wires.
- Approach the vehicle from the back and immediately enter the bus, make all of your visual checks and begin to back. The more time that passes between when you enter the vehicle and when you begin to back, the greater the chance that the environment behind the vehicle has changed.
- Back into an area with less traffic and fewer objects.
- When backing, your hazard lights should be on.
- Sound your horn prior to backing, wait three seconds for people to get clear.
- Use all your mirrors.
- Back slowly, and don't back up any farther than necessary.
- Practice backing when you can, such as in a drive refresher course.

**Other suggestions:** We recommend backup alarms on every bus. Additionally, backup camera systems with backup alert sensors are the ideal types of systems to employ if you cannot avoid backing up even if it is only on an occasional basis.

## 2. SIDESWIPE

Another common type of bus accident is sideswipes. In some educational institutions, sideswipes are the leading accident type. This is especially true when buses have to negotiate narrow streets, streets with parking on both sides, tight-turning intersections or congested areas. Sideswipes most often occur when changing lanes, when drifting into an adjacent lane, when attempting to avoid oncoming vehicles or when traveling too closely to other vehicles such as parked cars or other objects.

### We recommend the following:

- Keep your bus in its own lane of traffic.
- Avoid narrow streets and crowded roadways, if possible.
- Right Turns: The entire bus needs to be able to clear the curb at the corner.
- Left Turns: Keep your bus in its own lane of traffic.
- Stay as close to the middle of your lane as possible.
- Pay attention: Do not eat, apply makeup, adjust the radio, text or talk on a cell phone.
- Check the "blind spots" before intentionally changing lanes.
- Get enough sleep every night (8 hours preferred).
- Some medications or the use of alcoholic drinks can cause drowsiness that affect perceptions that lead to sideswipe accidents.

- Slow down, excessive speed and/or loss of directional control on a wet or icy roadway are frequent causes of sideswipes.
- Plan ahead to avoid sudden evasive maneuvering, like swerving to avoid debris.
- Do not follow the vehicle ahead too closely especially if it is another bus or truck that obstructs your vision ahead.

## 3. TAIL-SWING ACCIDENTS

Like sideswipe accidents, tail-swing accidents occur when buses have to negotiate narrow streets, streets with parking on both sides, tight-turning intersections or congested areas. Occasionally, other drivers attempt to pass while the bus is making the turn.

### To help prevent the tail end of the bus from striking other vehicles and objects we recommend the following:

- Make sure that the bus tail will be far enough away from parked cars, light poles and other fixed objects throughout the arc of the swing.
- Signal your intentions early.
- Turn smoothly and gradually.

## 4. REAR-END ACCIDENTS

Following too closely, not paying attention to changing traffic conditions, being distracted, following too close on slippery roads and reacting too slowly often result in striking the vehicle in front in the rear.

### To reduce the chance of a rear-end accident, consider the following:

- Don't rush. If running late, do not try to make up the time by rushing. If late for a specific event, pull over and contact the appropriate party to let them know and then proceed at a safe speed. Always give yourself plenty of time to reach your destination so you can arrive on time.
- Watch not only the vehicle directly in front of you, but scan ahead to be ready for quick slowdowns, accidents or items that suddenly fall out or off of other vehicles.
- Give yourself and your bus a space cushion of at least 4 seconds to the vehicle in front of you.
- In deteriorating weather, make sure you have at least 5 seconds of cushion. Why is this important?
  - Because it takes time to react to a dangerous situation,
  - It takes time to apply the brakes and,
  - It takes more time for the brakes to stop the bus in inclement weather.
- Stay alert and aware.
- Avoid sudden stops.
- At intersections, stay at least 10 feet behind the bumper of the vehicle you are following or far enough back that you can see the rear wheels of that vehicle.
- Buses entering or leaving school grounds must stay at least 100 feet away from each other.



- Buses traveling together (for field trips, music, art or sports events) should stay 1,000 feet apart.
- NEVER text, email or talk on cell phones while the vehicle is in motion.

**ADDITIONAL RESOURCES:**

Pupil Transportation Safety Institute, [www.ptsi.org](http://www.ptsi.org)  
 National Transportation Safety Board, [www.nts.gov](http://www.nts.gov)  
 National Highway Transportation Safety Administration, [www.nhtsa.gov](http://www.nhtsa.gov)  
 The National Association for Pupil Transportation, [www.naptonline.org](http://www.naptonline.org)  
 The National School Transportation Association, [www.yellowbuses.org](http://www.yellowbuses.org)  
 The American School Bus Council, [www.americanschoolbuscouncil.org](http://www.americanschoolbuscouncil.org)  
 The National Safety Council, [www.nsc.org](http://www.nsc.org)  
 The National Association of State Directors of Pupil Transportation Services, [www.nasdpts.org](http://www.nasdpts.org)



# Motor Vehicles

## MANAGING BLIND SPOTS

By: **Robert Bambino, CPCU, ARM**  
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In 2008, the National Highway Traffic Safety Council reported there were approximately 48,000 reported injuries from backover and other backing crashes, including 463 fatalities. The majority of these accidents involved passenger vehicles. A backover is a crash which occurs when a driver reverses into and injures or kills a nonoccupant such as a pedestrian or a bicyclist.

Sixty-percent of the fatalities and twenty-percent of the injuries occurring from other backing crashes involved backing into a fixed object, such as a tree or pole. However, the bulk of the injuries (80 percent) and a sizeable proportion of the fatalities (40 percent) in other backing crashes occur in collisions between backing vehicles and other motor vehicles in transport. At Wright Specialty Insurance, losses resulting from backing are a leading loss driver under the Commercial Automobile Policy. There are different hazards and conditions that lead to accidents when drivers are not able to adequately see behind and to the sides of their vehicle. Blind spots are a major issue.

**BLIND SPOTS**

Blind spots can extend to both the front and rear of a vehicle. The size of the blind spot is

Average Blind Spots to the Rear for a 5'8" Driver			
Two Door Coupes and Sports Cars	13'	Small SUVs	13'
Small Four-Door Sedans	12'	Midsized SUVs	18'
Midsized Sedans	13'	Large SUVs	19'
Large Sedans	13'	Minivans	15'
Wagons and Hatchbacks	9'	Pickups	24'

*(Consumer Reports. The Danger of Blind Zones - March 2012)*

dependent on the height of the driver and the size of the vehicle. The chart below shows the average blind spots to the rear for a 5'8" driver.

In a medium-sized truck, the driver experiences a blind spot extending 16' to the front and 160' to the rear of the vehicle. As a rule, shorter drivers and larger vehicles create larger blind spots.

- **Limited Visibility** also leads to driver blind spots — particularly of the area behind and around the vehicle. This can be a result of blocked rear windows, mirrors or obstructions around the vehicle — such as landscaping, carts, trash cans and pedestrians.
- **Use Your Head!** A quick glance over your shoulder is an easy, quick way to see if there are obstructions to the sides of the vehicles.
- **Blocked or obstructed mirrors and windows.** Overloading a vehicle, not clearing snow or ice or failing to clean-off fogged exterior windows also exacerbates blind spots.
- **Mirror Adjustments.** See the corresponding article in this edition of At Issue.



# Mirror Adjustment

## KNOW WHAT IS AROUND YOUR VEHICLE AT ALL TIMES

By: Andrew L. Graham, ARM, Department Manager - Risk Management Services, Wright Specialty Insurance

First rule of backing? Do not back! Why is this? Backing accidents are some of the most common vehicle accidents reported because our ability to know what is around us at all times is compromised by:

- drivers facing forward,
- items blocking vision,
- height off the ground for buses,
- environmental factors such as darkness or inclement weather, or
- delays in moving the vehicle after the area around it has been checked.

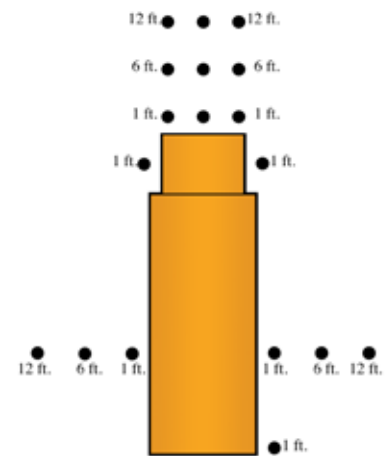
Having the correct mirrors and having those mirrors positioned correctly can virtually eliminate accidents related to poor visibility around the vehicle when backing, changing lanes or pulling away from the curb (for buses). Drivers often blame blind spots for causing an accident, but for the most part these can be eliminated with proper mirror positioning. For private passenger cars and pickup trucks, the front and side mirrors should provide a seamless picture of where nearby vehicles are while driving. Typically, the side mirrors are angled too far in, thus not providing enough visibility to the side of the vehicle. So the first step for passenger cars, vans and small buses is to sit in the driver's seat, lean toward the driver's side window and then adjust the mirror to see the side of the driver's vehicle. Next lean toward the center of the vehicle and adjust the passenger side mirror to see the side of the passenger side of the vehicle. This will expand the side vision significantly.

For larger vehicles such as school and commercial buses, mirrors play an even greater role because visibility is further reduced by distance and blocked rear vision. Federal Motor Vehicle

Safety Standard 111 sets forth field of vision requirements, establishing danger zones around the bus. Compliance with the details of FMVSS 111 ensures that mirrors are adjusted correctly thus eliminating the danger zones. To best address the danger zones and help ensure that mirrors are positioned optimally, mirror adjustment stations have been designed as a template for users to easily make mirror changes. Below are several resources that explain the details of FMVSS 111 and the correct way to design a mirror adjustment station. This can help your drivers adjust the mirrors to maximize visibility in the rear, at the sides and in front of the vehicle thus eliminating the common danger zones associated with these vehicles.

<http://www.ptsj.org/downloads/pdf/MirrorAdjustmentGridSpecifications.pdf>  
<http://www.nhtsa.gov/cars/rules/import/FMVSS/>  
<http://www.law.cornell.edu/cfr/text/49/571.111>

Mirror Grid Specifications  
Field of Vision Chart



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